



Full wwPDB X-ray Structure Validation Report ⓘ

Feb 1, 2016 – 09:42 PM GMT

PDB ID : 4V5Y
Title : Crystal structure of the bacterial ribosome from Escherichia coli in complex with paromomycin and ribosome recycling factor (RRF).
Authors : Borovinskaya, M.A.; Pai, R.D.; Zhang, W.; Schuwirth, B.-S.; Holton, J.M.; Hirokawa, G.; Kaji, H.; Kaji, A.; Cate, J.H.D.
Deposited on : 2007-06-19
Resolution : 4.45 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.
We welcome your comments at validation@mail.wwpdb.org
A user guide is available at
<http://wwpdb.org/validation/2016/XrayValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

The following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

MolProbity : 4.02b-467
Mogul : 1.7 (RC4), CSD as536be (2015)
Xtriage (Phenix) : 1.9-1692
EDS : rb-20026688
Percentile statistics : 20151230.v01 (using entries in the PDB archive December 30th 2015)
Refmac : 5.8.0135
CCP4 : 6.5.0
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : trunk26865

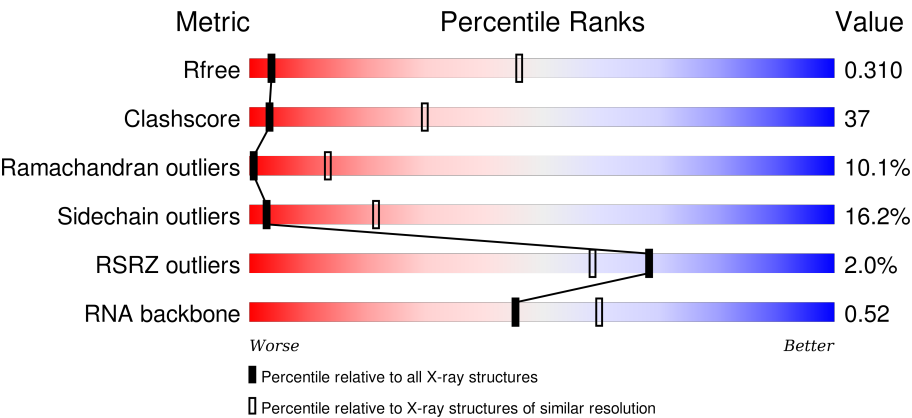
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 4.45 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R _{free}	91344	1070 (5.30-3.60)
Clashscore	102246	1003 (5.30-3.62)
Ramachandran outliers	100387	1116 (5.30-3.60)
Sidechain outliers	100360	1098 (5.30-3.60)
RSRZ outliers	91569	1074 (5.30-3.60)
RNA backbone	2183	1090 (6.00-2.80)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	AA	1542	<div><div>2%</div><div>23%64%12%</div><div></div></div>
1	CA	1542	<div><div>%</div><div>24%63%11%</div><div></div></div>
2	AC	232	<div><div>2%</div><div>28%47%13%11%</div><div></div></div>
2	CC	232	<div><div>%</div><div>30%45%13%11%</div><div></div></div>

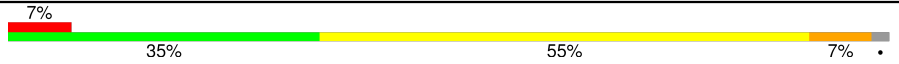
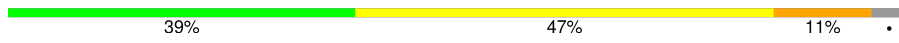

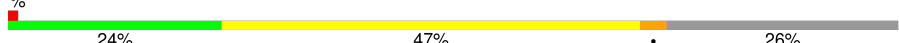
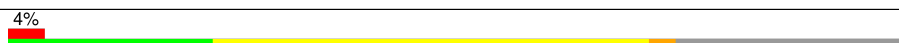
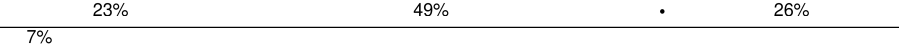
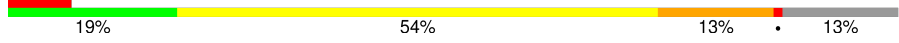
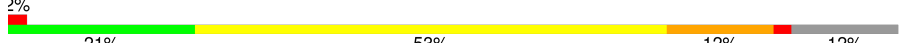
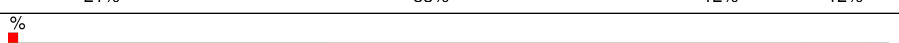

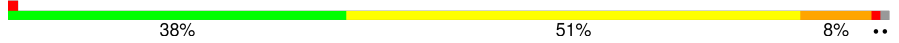

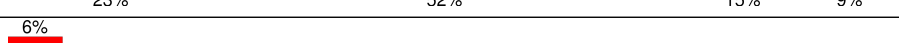
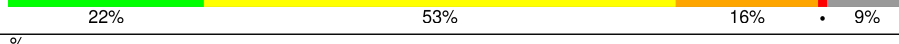
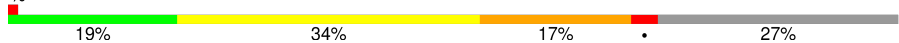
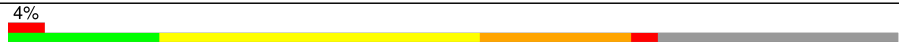
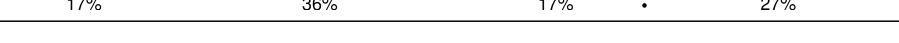
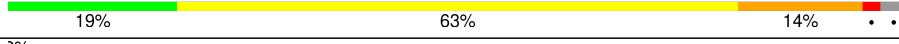
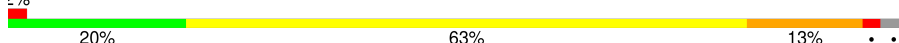
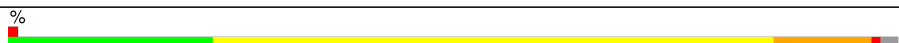
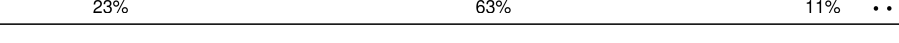
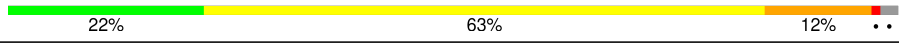

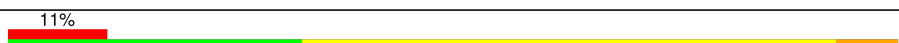

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Mol	Chain	Length	Quality of chain
3	AD	205	
3	CD	205	
4	AE	166	
4	CE	166	
5	AF	135	
5	CF	135	
6	AG	178	
6	CG	178	
7	AH	129	
7	CH	129	
8	AI	129	
8	CI	129	
9	AJ	103	
9	CJ	103	
10	AK	128	
10	CK	128	
11	AL	123	
11	CL	123	
12	AM	117	
12	CM	117	
13	AN	100	
13	CN	100	
14	AO	89	
14	CO	89	
15	AP	82	




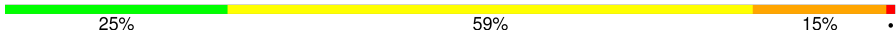
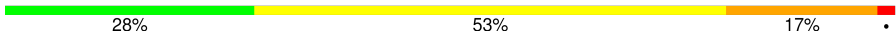
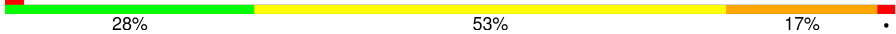
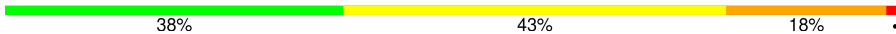
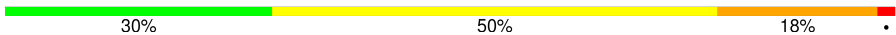
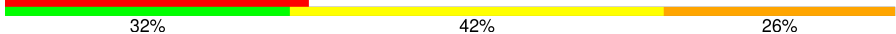
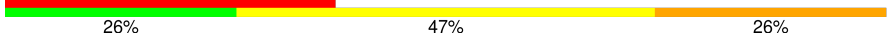
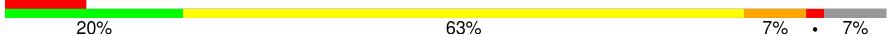
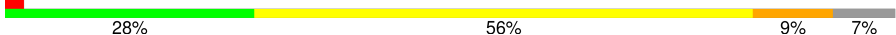
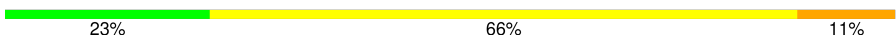
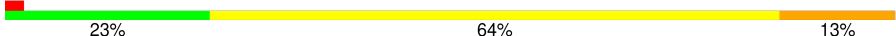




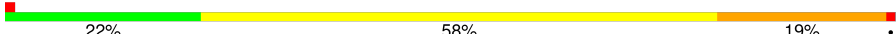
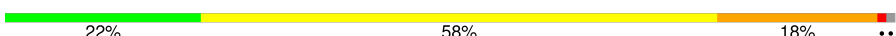





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Mol	Chain	Length	Quality of chain
15	CP	82	
16	AQ	83	
16	CQ	83	
17	AR	74	
17	CR	74	
18	AS	91	
18	CS	91	
19	AT	86	
19	CT	86	
20	AB	240	
20	CB	240	
21	AU	70	
21	CU	70	
22	BA	120	
22	DA	120	
23	BB	2904	
23	DB	2904	
24	BI	141	
24	DI	141	
25	BC	272	
25	DC	272	
26	BD	209	
26	DD	209	
27	BK	123	
27	DK	123	

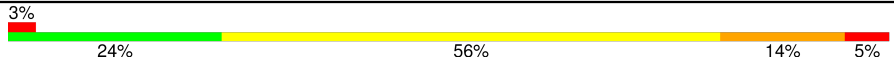
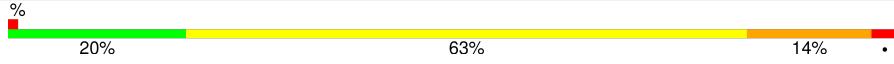
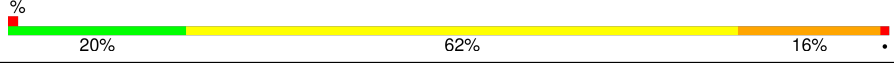
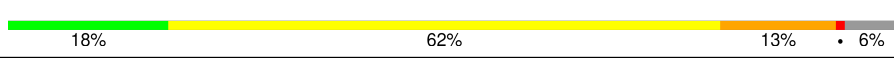
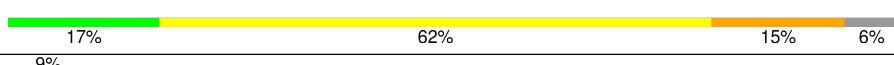
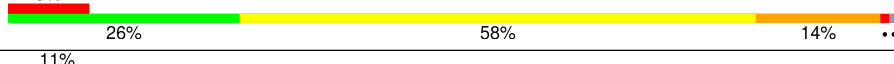
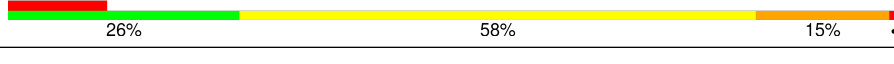
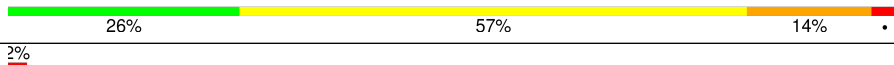
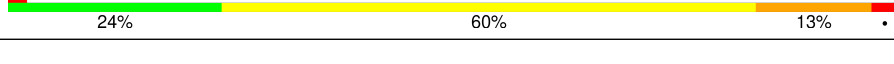
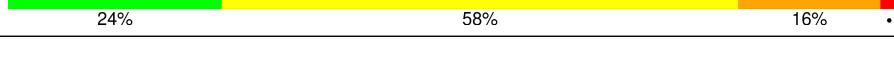
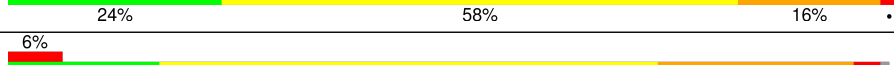
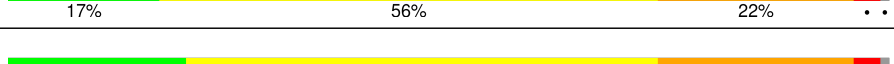
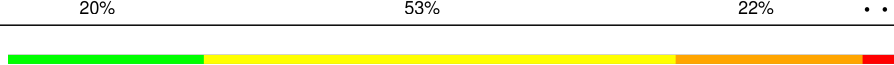
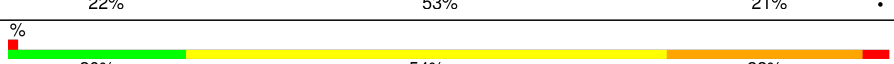
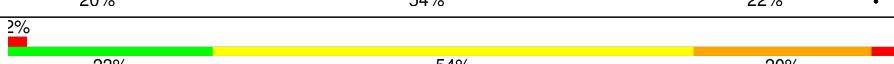
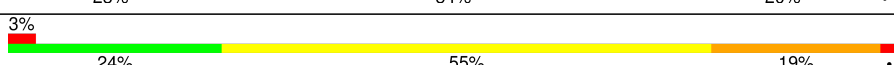
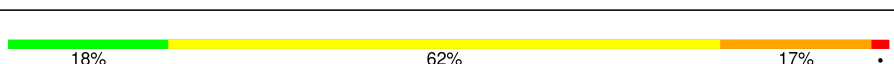
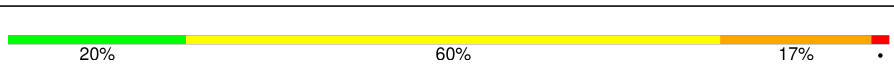
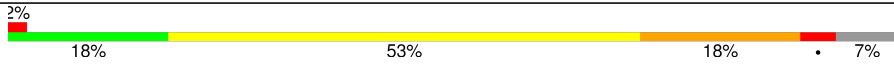
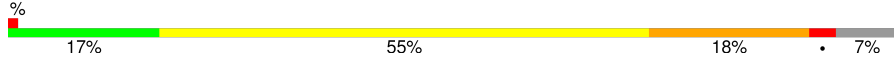
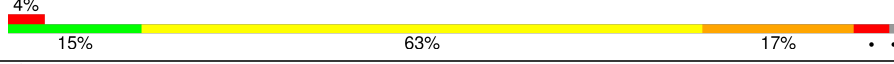
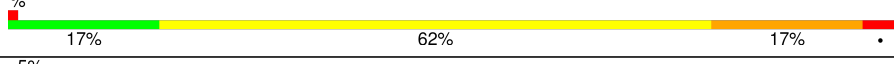



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Mol	Chain	Length	Quality of chain
28	BP	114	
28	DP	114	
29	BE	201	
29	DE	201	
30	BY	58	
30	DY	58	
31	B0	56	
31	D0	56	
32	B4	38	
32	D4	38	
33	B1	54	
33	D1	54	
34	B3	64	
34	D3	64	
35	BV	94	
35	DV	94	
36	B2	46	
36	D2	46	
37	BL	144	
37	DL	144	
38	BM	136	
38	DM	136	
39	BX	63	
39	DX	63	
40	BH	149	

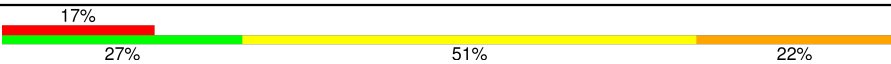

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Mol	Chain	Length	Quality of chain
40	DH	149	
41	BJ	142	
41	DJ	142	
42	BN	127	
42	DN	127	
43	BO	117	
43	DO	117	
44	BQ	117	
44	DQ	117	
45	BS	110	
45	DS	110	
46	BU	103	
46	DU	103	
47	BF	178	
47	DF	178	
48	BG	176	
48	DG	176	
49	BR	103	
49	DR	103	
50	BT	100	
50	DT	100	
51	BZ	78	
51	DZ	78	
52	BW	84	
52	DW	84	

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Mol	Chain	Length	Quality of chain
53	B6	185	
53	D6	185	

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
54	MG	AA	1615	-	-	-	X
54	MG	AA	1619	-	-	-	X
54	MG	AA	1633	-	-	-	X
54	MG	AA	1643	-	-	-	X
54	MG	AA	1644	-	-	-	X
54	MG	BB	3013	-	-	-	X
54	MG	BB	3108	-	-	-	X
54	MG	CA	1604	-	-	-	X
54	MG	DB	3035	-	-	-	X
55	PAR	BB	3111	-	-	-	X
55	PAR	DB	3112	-	-	-	X

2 Entry composition

There are 57 unique types of molecules in this entry. The entry contains 287128 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a RNA chain called 16S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	AA	1530	Total	C	N	O	P	0	0	0
			32831	14642	6024	10635	1530			
1	CA	1530	Total	C	N	O	P	0	0	0
			32831	14642	6024	10635	1530			

- Molecule 2 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	AC	206	Total	C	N	O	S	0	0	0
			1624	1028	305	288	3			
2	CC	206	Total	C	N	O	S	0	0	0
			1624	1028	305	288	3			

- Molecule 3 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	AD	205	Total	C	N	O	S	0	0	0
			1643	1026	315	298	4			
3	CD	205	Total	C	N	O	S	0	0	0
			1643	1026	315	298	4			

- Molecule 4 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	AE	150	Total	C	N	O	S	0	0	0
			1105	687	211	201	6			
4	CE	150	Total	C	N	O	S	0	0	0
			1105	687	211	201	6			

- Molecule 5 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	AF	100	Total	C	N	O	S	0	0	0
			817	515	148	148	6			
5	CF	100	Total	C	N	O	S	0	0	0
			817	515	148	148	6			

- Molecule 6 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	AG	150	Total	C	N	O	S	0	0	0
			1174	730	226	214	4			
6	CG	152	Total	C	N	O	S	0	0	0
			1196	745	230	217	4			

- Molecule 7 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	AH	129	Total	C	N	O	S	0	0	0
			979	616	173	184	6			
7	CH	129	Total	C	N	O	S	0	0	0
			979	616	173	184	6			

- Molecule 8 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	AI	127	Total	C	N	O	S	0	0	0
			1022	634	206	179	3			
8	CI	127	Total	C	N	O	S	0	0	0
			1022	634	206	179	3			

- Molecule 9 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	AJ	98	Total	C	N	O	S	0	0	0
			786	493	150	142	1			
9	CJ	98	Total	C	N	O	S	0	0	0
			786	493	150	142	1			

- Molecule 10 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	AK	117	Total	C	N	O	S	0	0	0
			877	540	174	160	3			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	CK	117	Total	C	N	O	S	0	0	0
			877	540	174	160	3			

- Molecule 11 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	AL	123	Total	C	N	O	S	0	0	0
			955	590	196	165	4			
11	CL	123	Total	C	N	O	S	0	0	0
			955	590	196	165	4			

- Molecule 12 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	AM	114	Total	C	N	O	S	0	0	0
			883	546	178	156	3			
12	CM	113	Total	C	N	O	S	0	0	0
			876	541	177	155	3			

- Molecule 13 is a protein called 30S ribosomal protein S14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	AN	96	Total	C	N	O	S	0	0	0
			774	483	160	128	3			
13	CN	96	Total	C	N	O	S	0	0	0
			774	483	160	128	3			

- Molecule 14 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	AO	88	Total	C	N	O	S	0	0	0
			714	439	144	130	1			
14	CO	88	Total	C	N	O	S	0	0	0
			714	439	144	130	1			

- Molecule 15 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	AP	82	Total	C	N	O	S	0	0	0
			649	406	128	114	1			
15	CP	80	Total	C	N	O	S	0	0	0
			638	400	126	111	1			

- Molecule 16 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	AQ	80	Total	C	N	O	S	0	0	0
			648	411	121	113	3			
16	CQ	81	Total	C	N	O	S	0	0	0
			657	417	122	115	3			

- Molecule 17 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
17	AR	55	Total	C	N	O	0	0	0
			455	288	86	81			
17	CR	55	Total	C	N	O	0	0	0
			455	288	86	81			

- Molecule 18 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	AS	79	Total	C	N	O	S	0	0	0
			637	408	120	107	2			
18	CS	80	Total	C	N	O	S	0	0	0
			644	413	121	108	2			

- Molecule 19 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AT	85	Total	C	N	O	S	0	0	0
			665	411	137	114	3			
19	CT	85	Total	C	N	O	S	0	0	0
			665	411	137	114	3			

- Molecule 20 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	AB	218	Total	C	N	O	S	0	0	0
			1704	1081	305	311	7			
20	CB	218	Total	C	N	O	S	0	0	0
			1704	1081	305	311	7			

- Molecule 21 is a protein called 30S ribosomal protein S21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	AU	51	Total	C	N	O	S	0	0	0
			425	265	86	73	1			
21	CU	51	Total	C	N	O	S	0	0	0
			425	265	86	73	1			

- Molecule 22 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	BA	117	Total	C	N	O	P	0	0	0
			2507	1116	459	815	117			
22	DA	117	Total	C	N	O	P	0	0	0
			2507	1116	459	815	117			

- Molecule 23 is a RNA chain called 23S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	BB	2841	Total	C	N	O	P	0	0	0
			60995	27210	11229	19715	2841			
23	DB	2841	Total	C	N	O	P	0	0	0
			60995	27210	11229	19715	2841			

- Molecule 24 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	BI	141	Total	C	N	O	S	0	0	0
			1032	651	179	196	6			
24	DI	141	Total	C	N	O	S	0	0	0
			1032	651	179	196	6			

- Molecule 25 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	BC	271	Total	C	N	O	S	0	0	0
			2082	1288	423	364	7			
25	DC	271	Total	C	N	O	S	0	0	0
			2082	1288	423	364	7			

- Molecule 26 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	BD	209	Total	C	N	O	S	0	0	0
			1565	979	288	294	4			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	DD	209	Total	C	N	O	S	0	0	0
			1565	979	288	294	4			

- Molecule 27 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	BK	121	Total	C	N	O	S	0	0	0
			930	582	179	164	5			
27	DK	121	Total	C	N	O	S	0	0	0
			930	582	179	164	5			

- Molecule 28 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	BP	114	Total	C	N	O	S	0	0	0
			917	574	179	163	1			
28	DP	114	Total	C	N	O	S	0	0	0
			917	574	179	163	1			

- Molecule 29 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	BE	201	Total	C	N	O	S	0	0	0
			1552	974	283	290	5			
29	DE	201	Total	C	N	O	S	0	0	0
			1552	974	283	290	5			

- Molecule 30 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	BY	58	Total	C	N	O	S	0	0	0
			449	281	87	79	2			
30	DY	58	Total	C	N	O	S	0	0	0
			449	281	87	79	2			

- Molecule 31 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	B0	56	Total	C	N	O	S	0	0	0
			444	269	94	80	1			
31	D0	56	Total	C	N	O	S	0	0	0
			444	269	94	80	1			

- Molecule 32 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	B4	38	Total	C	N	O	S	0	0	0
			302	185	65	48	4			
32	D4	38	Total	C	N	O	S	0	0	0
			302	185	65	48	4			

- Molecule 33 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
33	B1	50	Total	C	N	O	0	0	0
			409	263	75	71			
33	D1	50	Total	C	N	O	0	0	0
			409	263	75	71			

- Molecule 34 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	B3	64	Total	C	N	O	S	0	0	0
			504	323	105	74	2			
34	D3	64	Total	C	N	O	S	0	0	0
			504	323	105	74	2			

- Molecule 35 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	BV	94	Total	C	N	O	S	0	0	0
			753	479	137	134	3			
35	DV	94	Total	C	N	O	S	0	0	0
			753	479	137	134	3			

- Molecule 36 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	B2	46	Total	C	N	O	S	0	0	0
			377	228	90	57	2			
36	D2	46	Total	C	N	O	S	0	0	0
			377	228	90	57	2			

- Molecule 37 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	BL	143	Total	C	N	O	S	0	0	0
			1045	649	206	189	1			
37	DL	143	Total	C	N	O	S	0	0	0
			1045	649	206	189	1			

- Molecule 38 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	BM	136	Total	C	N	O	S	0	0	0
			1074	686	205	177	6			
38	DM	136	Total	C	N	O	S	0	0	0
			1074	686	205	177	6			

- Molecule 39 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	BX	63	Total	C	N	O	S	0	0	0
			509	313	99	95	2			
39	DX	63	Total	C	N	O	S	0	0	0
			509	313	99	95	2			

- Molecule 40 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	BH	149	Total	C	N	O	S	0	0	0
			1111	699	197	214	1			
40	DH	149	Total	C	N	O	S	0	0	0
			1111	699	197	214	1			

- Molecule 41 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	BJ	142	Total	C	N	O	S	0	0	0
			1129	714	212	199	4			
41	DJ	142	Total	C	N	O	S	0	0	0
			1129	714	212	199	4			

- Molecule 42 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	BN	120	Total	C	N	O	S	0	0	0
			960	593	196	166	5			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	DN	120	Total	C	N	O	S	0	0	0
			960	593	196	166	5			

- Molecule 43 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	BO	116	Total	C	N	O		0	0	0
			892	552	178	162				
43	DO	116	Total	C	N	O		0	0	0
			892	552	178	162				

- Molecule 44 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	BQ	117	Total	C	N	O		0	0	0
			947	604	192	151				
44	DQ	117	Total	C	N	O		0	0	0
			947	604	192	151				

- Molecule 45 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	BS	110	Total	C	N	O	S	0	0	0
			857	532	166	156	3			
45	DS	110	Total	C	N	O	S	0	0	0
			857	532	166	156	3			

- Molecule 46 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	BU	102	Total	C	N	O		0	0	0
			779	492	146	141				
46	DU	102	Total	C	N	O		0	0	0
			779	492	146	141				

- Molecule 47 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	BF	178	Total	C	N	O	S	0	0	0
			1420	905	251	258	6			
47	DF	178	Total	C	N	O	S	0	0	0
			1420	905	251	258	6			

- Molecule 48 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	BG	176	Total	C	N	O	S	0	0	0
			1323	832	243	246	2			
48	DG	176	Total	C	N	O	S	0	0	0
			1323	832	243	246	2			

- Molecule 49 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
49	BR	103	Total	C	N	O	S	0	0	0
			816	516	153	145	2			
49	DR	103	Total	C	N	O	S	0	0	0
			816	516	153	145	2			

- Molecule 50 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	BT	93	Total	C	N	O	S	0	0	0
			738	466	139	131	2			
50	DT	93	Total	C	N	O	S	0	0	0
			738	466	139	131	2			

- Molecule 51 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	BZ	77	Total	C	N	O	S	0	0	0
			625	388	129	106	2			
51	DZ	77	Total	C	N	O	S	0	0	0
			625	388	129	106	2			

- Molecule 52 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	BW	79	Total	C	N	O	S	0	0	0
			596	367	120	108	1			
52	DW	79	Total	C	N	O	S	0	0	0
			596	367	120	108	1			

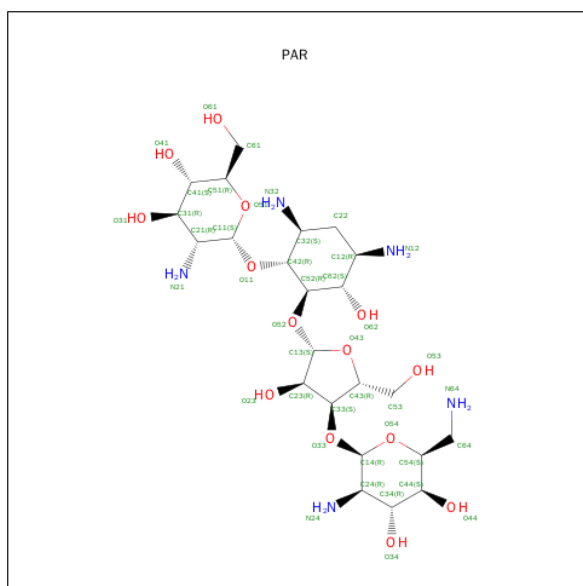
- Molecule 53 is a protein called 50S ribosomal protein RRF.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	B6	185	Total	C	N	O	S	0	0	0
			1478	924	270	282	2			
53	D6	185	Total	C	N	O	S	0	0	0
			1478	924	270	282	2			

- Molecule 54 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
54	DB	111	Total	Mg	0	0
			111	111		
54	BB	110	Total	Mg	0	0
			110	110		
54	AA	60	Total	Mg	0	0
			60	60		
54	CA	61	Total	Mg	0	0
			61	61		
54	CE	1	Total	Mg	0	0
			1	1		

- Molecule 55 is PAROMOMYCIN (three-letter code: PAR) (formula: C₂₃H₄₅N₅O₁₄).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
55	AA	1	Total	C	N	O	0	0
			42	23	5	14		
55	BB	1	Total	C	N	O	0	0
			42	23	5	14		
55	CA	1	Total	C	N	O	0	0
			42	23	5	14		

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
55	DB	1	Total	C	N	O	0	0
			42	23	5	14		

- Molecule 56 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	B4	1	Total	Zn	0	0
			1	1		
56	D4	1	Total	Zn	0	0
			1	1		

- Molecule 57 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	AA	291	Total	O	0	0
			291	291		
57	AL	3	Total	O	0	0
			3	3		
57	AN	4	Total	O	0	0
			4	4		
57	AT	2	Total	O	0	0
			2	2		
57	BB	495	Total	O	0	0
			495	495		
57	BC	6	Total	O	0	0
			6	6		
57	BD	1	Total	O	0	0
			1	1		
57	BE	2	Total	O	0	0
			2	2		
57	BL	1	Total	O	0	0
			1	1		
57	BT	1	Total	O	0	0
			1	1		
57	CA	296	Total	O	0	0
			296	296		
57	CE	3	Total	O	0	0
			3	3		
57	CL	4	Total	O	0	0
			4	4		
57	CN	4	Total	O	0	0
			4	4		

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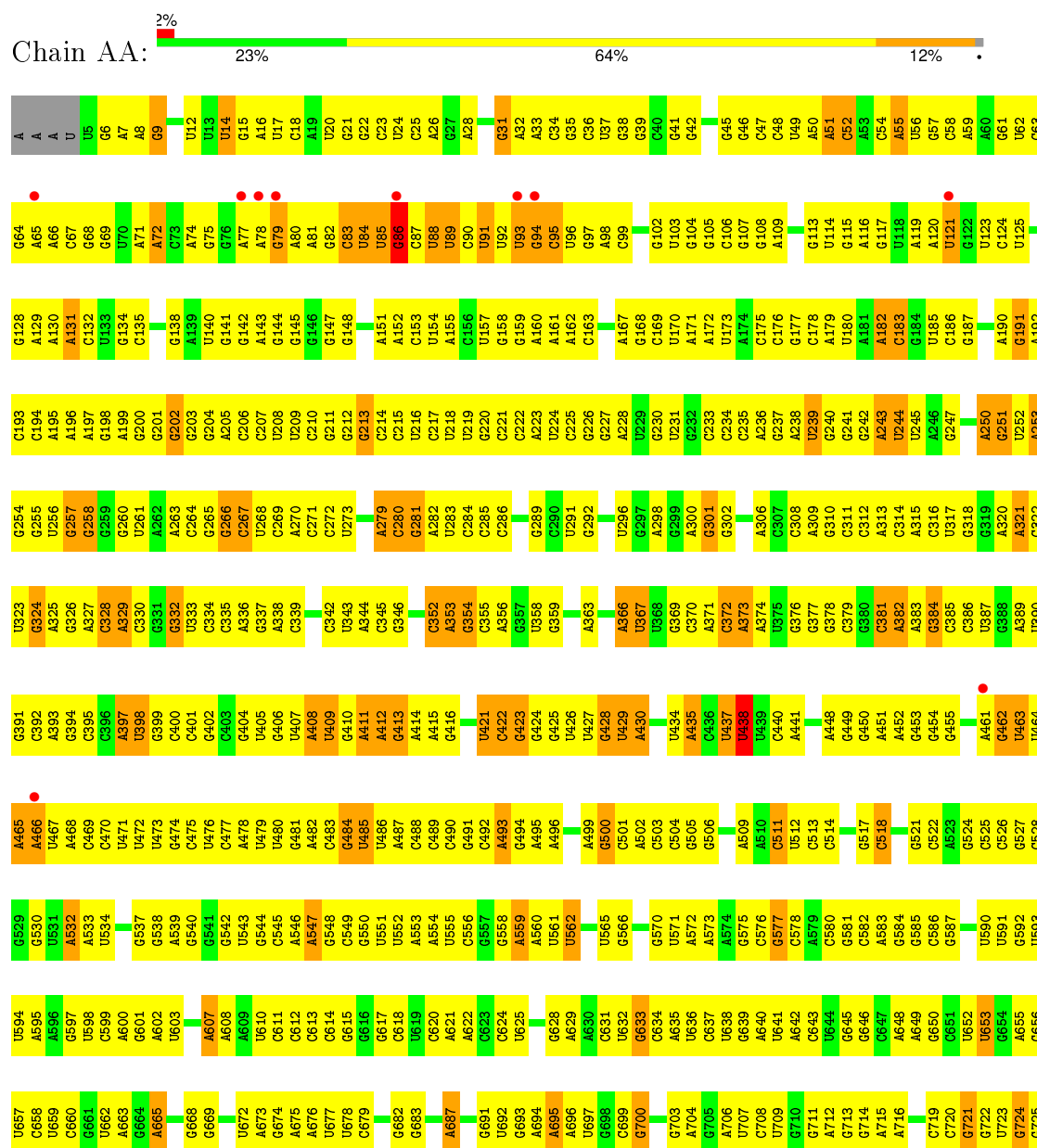
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	CP	1	Total 1	O 1	0	0
57	CT	1	Total 1	O 1	0	0
57	DB	502	Total 502	O 502	0	0
57	DC	4	Total 4	O 4	0	0
57	DD	1	Total 1	O 1	0	0
57	DE	1	Total 1	O 1	0	0
57	DL	2	Total 2	O 2	0	0
57	DQ	1	Total 1	O 1	0	0
57	DR	1	Total 1	O 1	0	0

3 Residue-property plots

These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density ($RSRZ > 2$). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

• Molecule 1: 16S rRNA

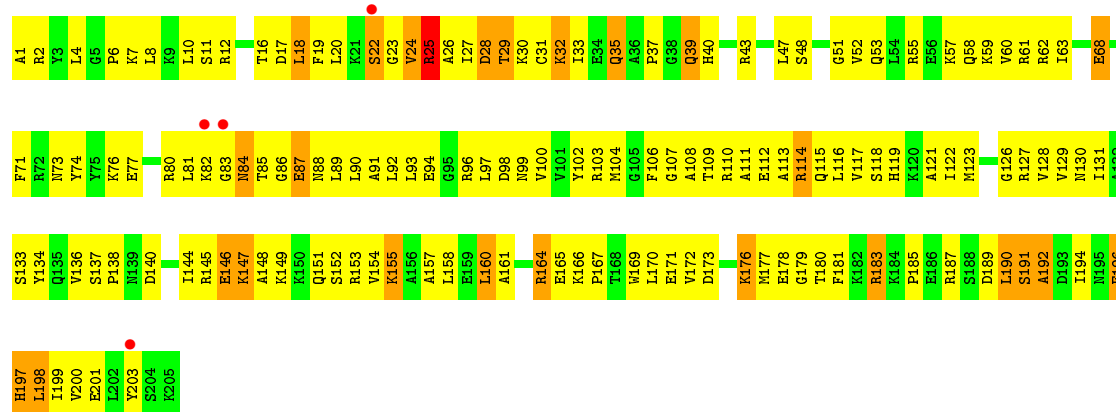


A1080	A1081	A1082	A1083	A1084	U1085	U1086	U1087	U1091	A1092	A1093	U1094	U1095	U1096	C1097	C1098	C1099	C1100	A1101	A1102	A1103	C1104	A1105	C1106	C1109	A1110	A1111	C1112	C1113	C1114	U1115	U1118	C1119	C1120	U1121	U1122	U1123	U1124	U1125	U1126	U1127	C1128	C1132	C1133	C1136	C1137	C1138	C1139	C1140	C1141	C1142	C1143	C1144	A1145	A1146																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
A1019	G1020	A1021	A1022	U1023	U1024	U1025	U1026	C1027	C1028	U1029	U1030	C1031	C1032	C1033	C1034	A1035	A1036	C1037	C1038	A1103	C1039	U1040	G1041	A1042	U1043	C1044	C1045	A1046	G1047	U1048	C1114	U1049	G1050	G1053	C1054	A1055	U1056	G1057	U1058	C1059	U1060	G1061	U1062	C1063	G1064	U1065	C1066	A1067	C1068	C1069	U1070	C1071	G1072	U1073	U1076	G1077	U1078	C1079	A1145	A1146																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
U952	G953	G954	U955	U956	U957	A958	A959	U960	U961	G966	C967	A968	A969	C970	G971	C972	G973	A974	A975	G976	A977	A978	C979	C980	U981	U982	A983	C984	C985	U986	G987	U991	U992	G993	A994	C995	A996	U997	C998	C999	A1000	C1001	C1002	G1003	A1004	A1005	C1006	U1007	U1008	U1009	U1010	C1011	A1012	G1013	A1014	U1015	A1016																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
C877	A878	C879	C880	C881	C882	C883	U884	C885	C886	C887	G888	C889	A900	A901	G902	G903	U904	U905	A906	A907	A908	A909	C910	C911	C912	U913	A914	A915	U916	C917	A918	A919	U920	U921	G922	A923	C924	C925	U926	U927	U928	U929	U930	U931	U932	U933	A934	C935	C936	G939	C940	A946	C947	C948	A949	U950	C951																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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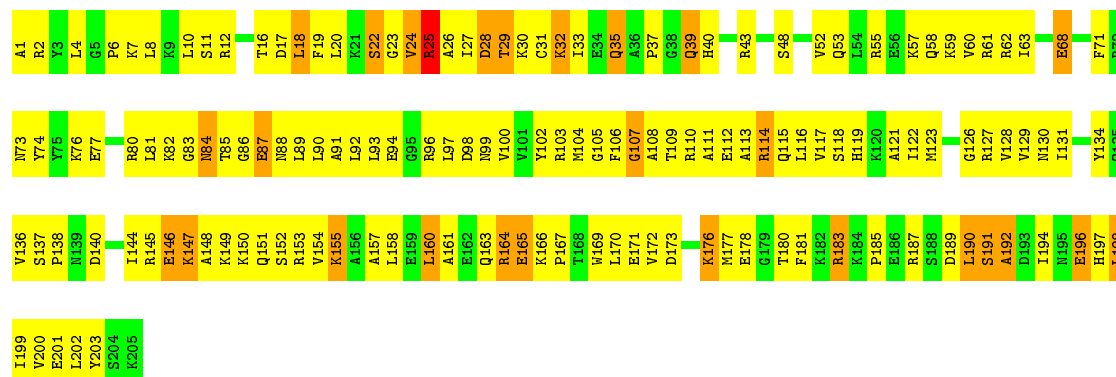
• Molecule 3: 30S ribosomal protein S4

Chain AD: 29% 28% 59% 12%



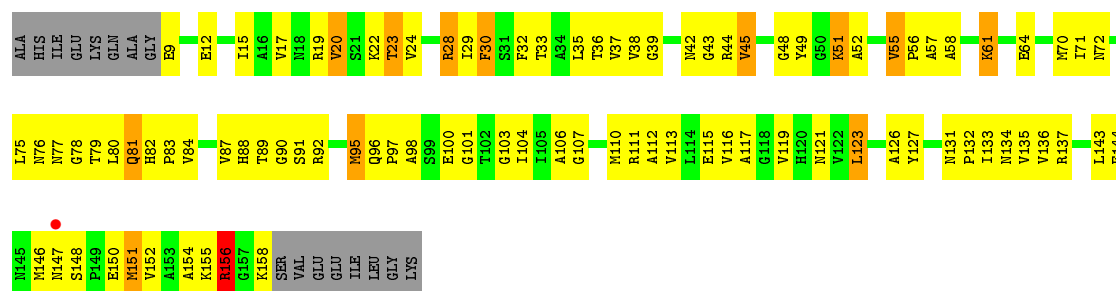
• Molecule 3: 30S ribosomal protein S4

Chain CD: 28% 59% 13%

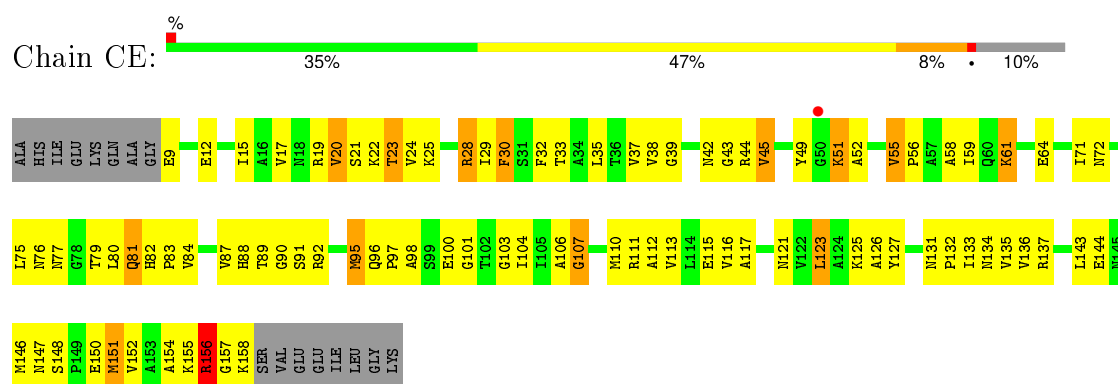


• Molecule 4: 30S ribosomal protein S5

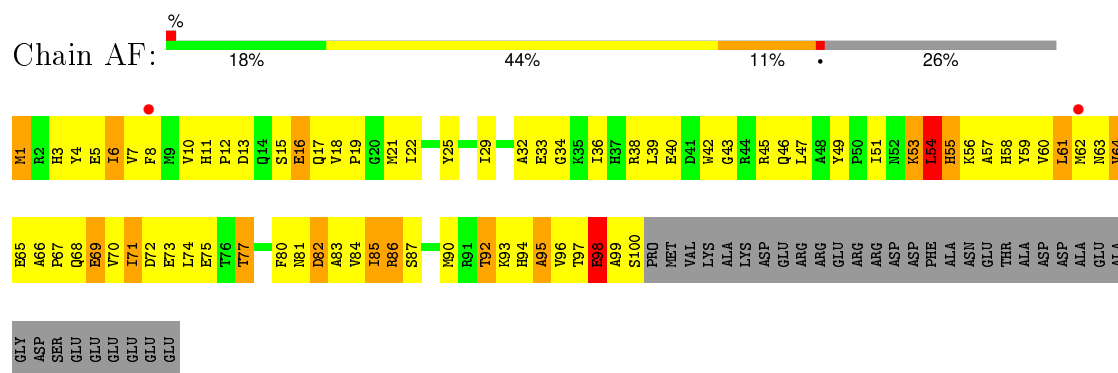
Chain AE: 34% 48% 7% 10%



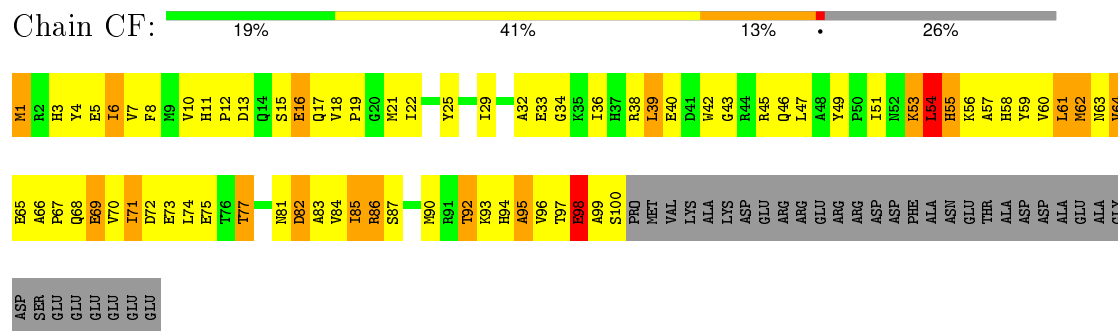
• Molecule 4: 30S ribosomal protein S5



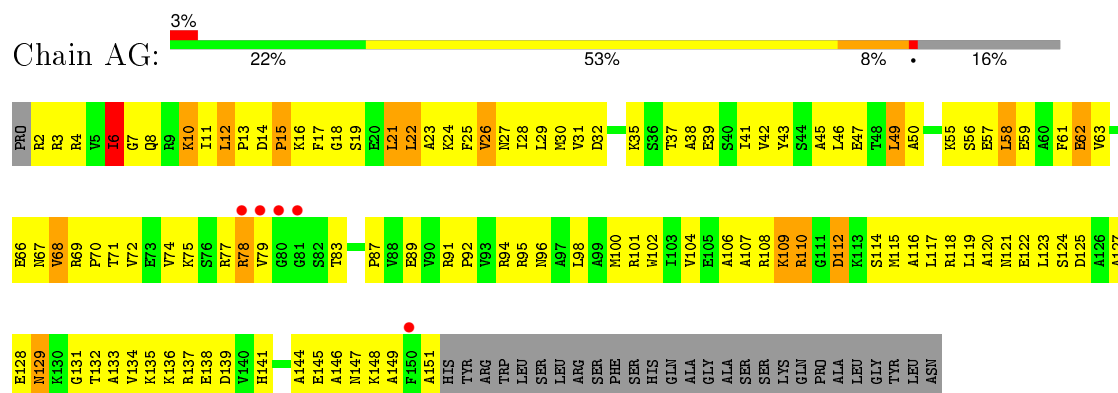
- Molecule 5: 30S ribosomal protein S6



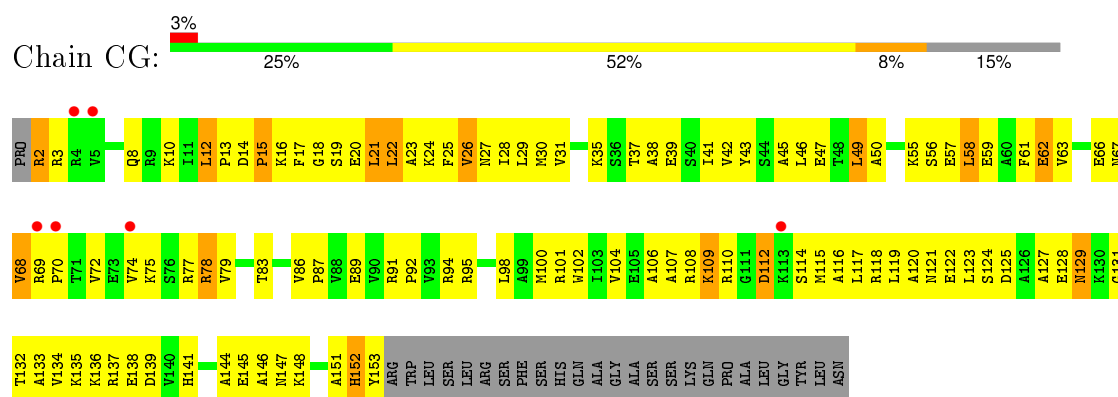
- Molecule 5: 30S ribosomal protein S6



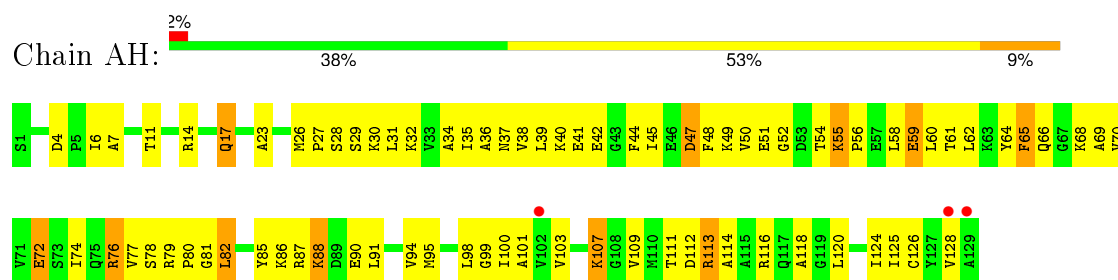
- Molecule 6: 30S ribosomal protein S7



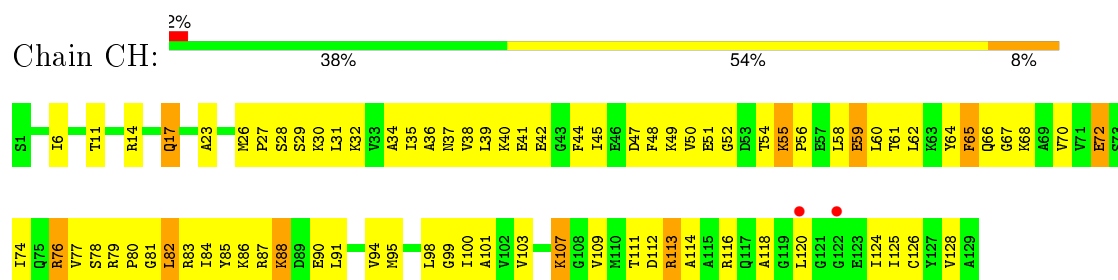
- Molecule 6: 30S ribosomal protein S7



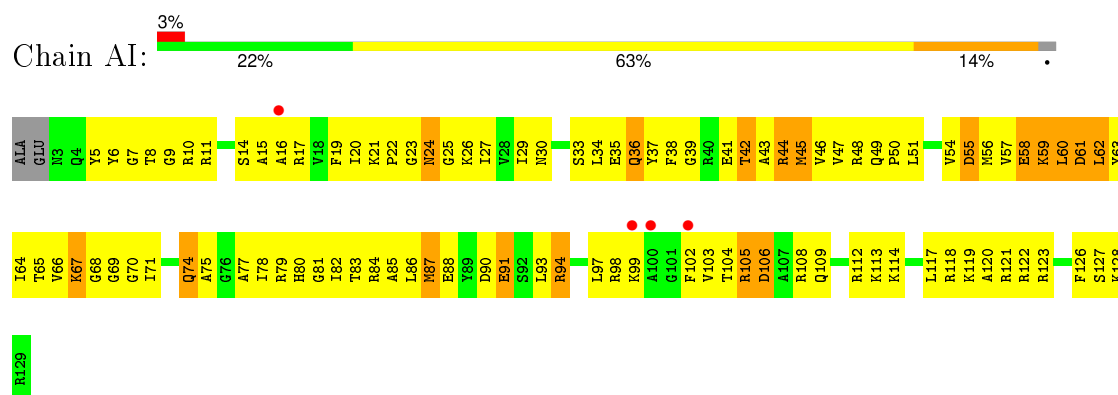
• Molecule 7: 30S ribosomal protein S8



• Molecule 7: 30S ribosomal protein S8

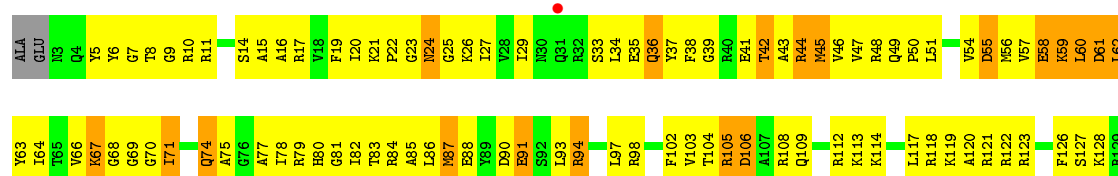


• Molecule 8: 30S ribosomal protein S9

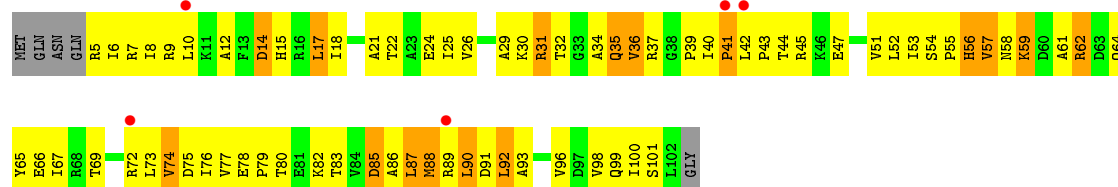


• Molecule 8: 30S ribosomal protein S9

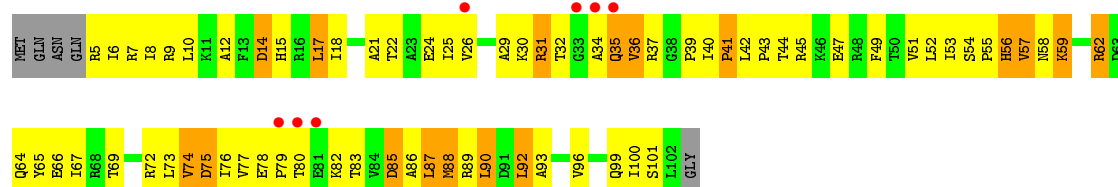




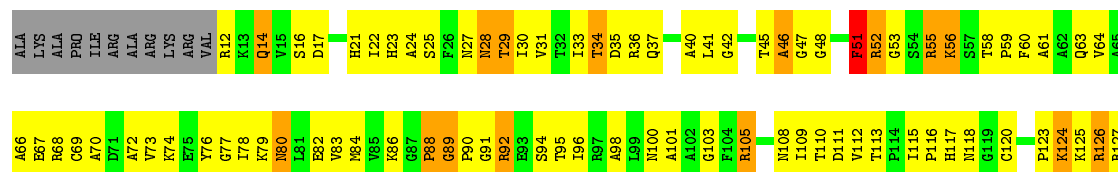
• Molecule 9: 30S ribosomal protein S10



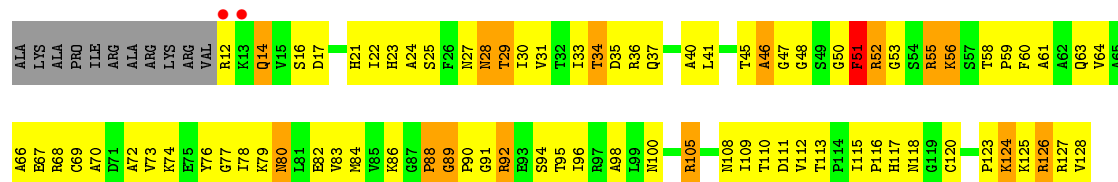
• Molecule 9: 30S ribosomal protein S10



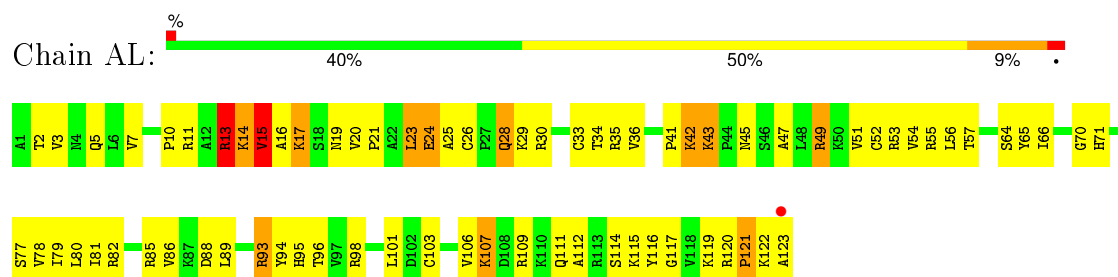
• Molecule 10: 30S ribosomal protein S11



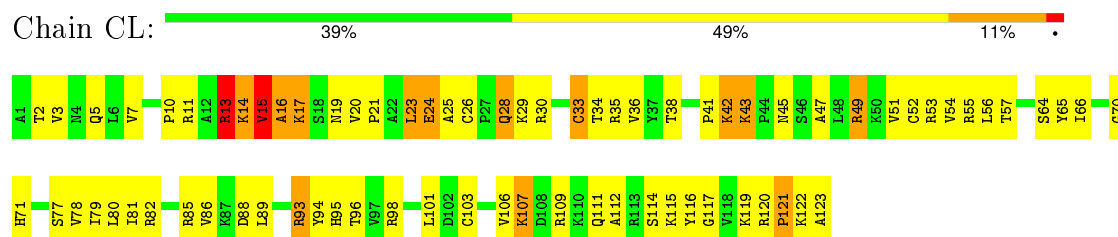
• Molecule 10: 30S ribosomal protein S11



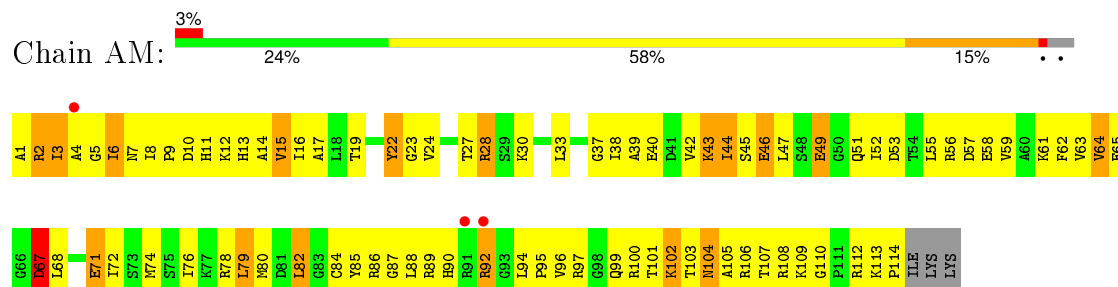
- Molecule 11: 30S ribosomal protein S12



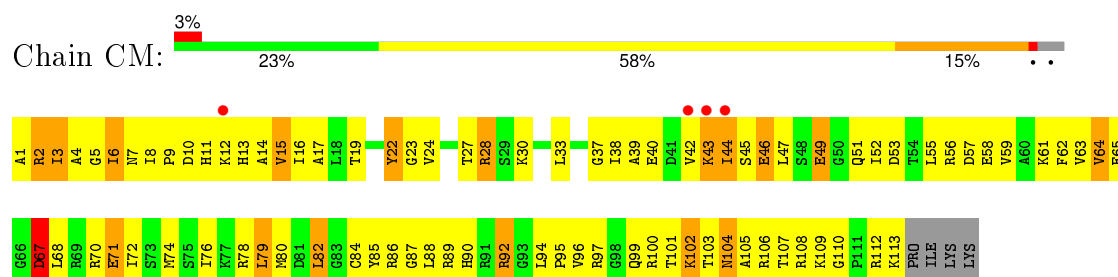
- Molecule 11: 30S ribosomal protein S12



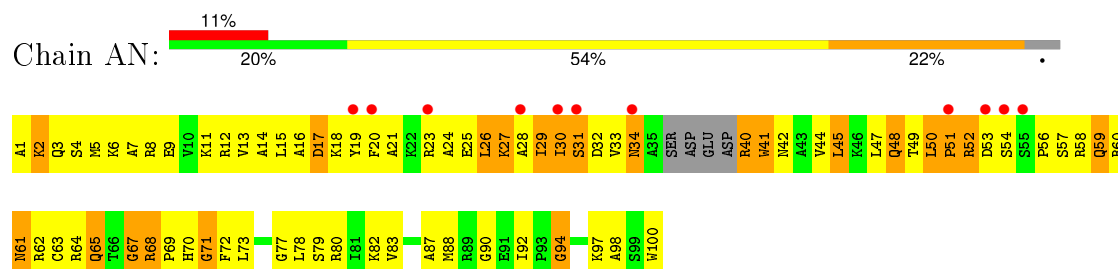
- Molecule 12: 30S ribosomal protein S13



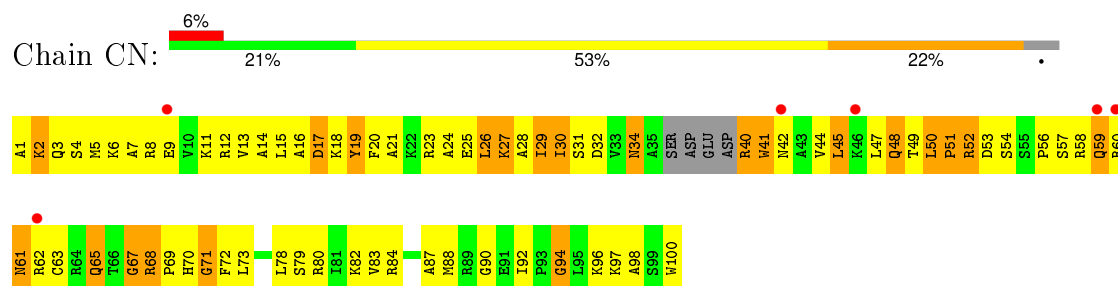
- Molecule 12: 30S ribosomal protein S13



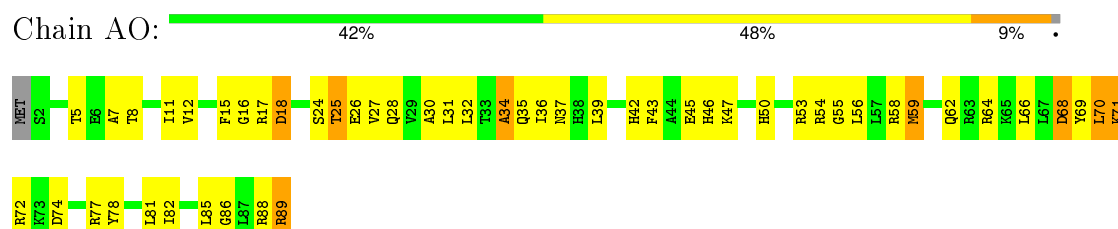
- Molecule 13: 30S ribosomal protein S14



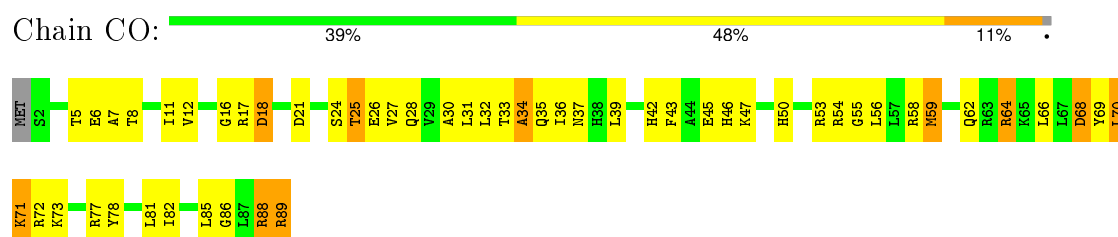
- Molecule 13: 30S ribosomal protein S14



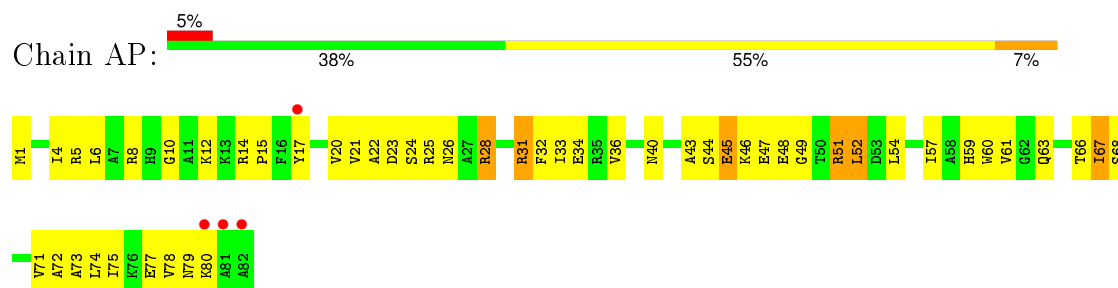
- Molecule 14: 30S ribosomal protein S15



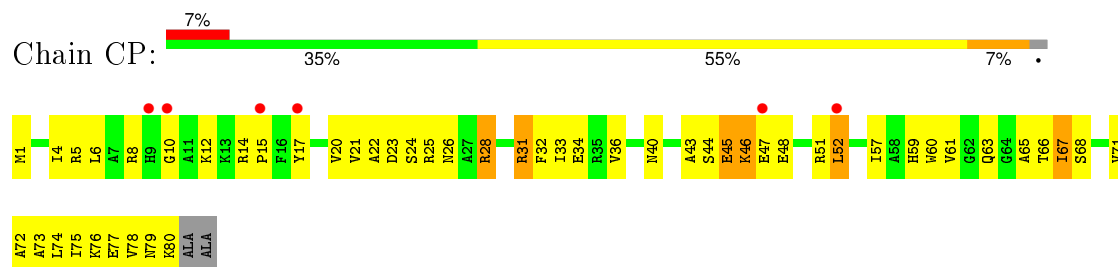
- Molecule 14: 30S ribosomal protein S15



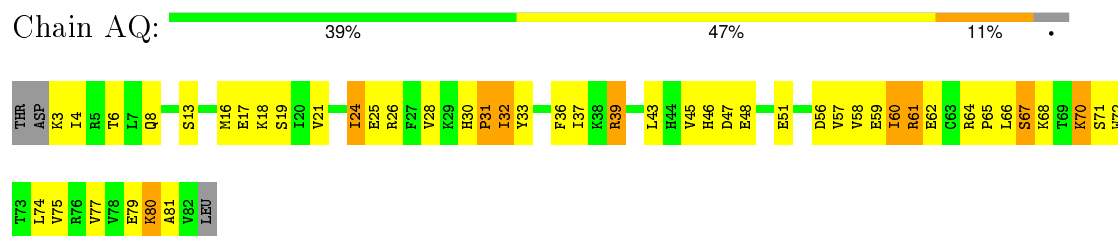
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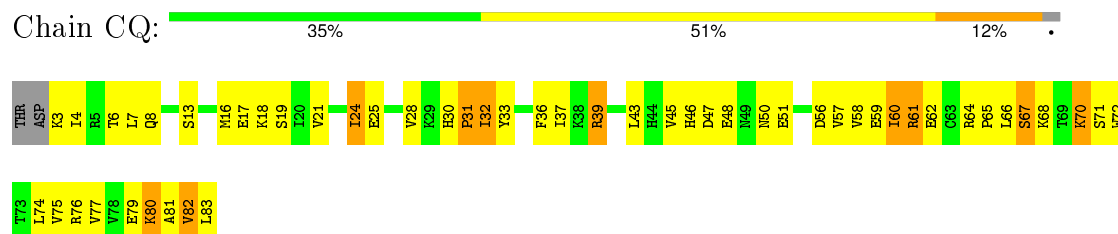
- Molecule 15: 30S ribosomal protein S16



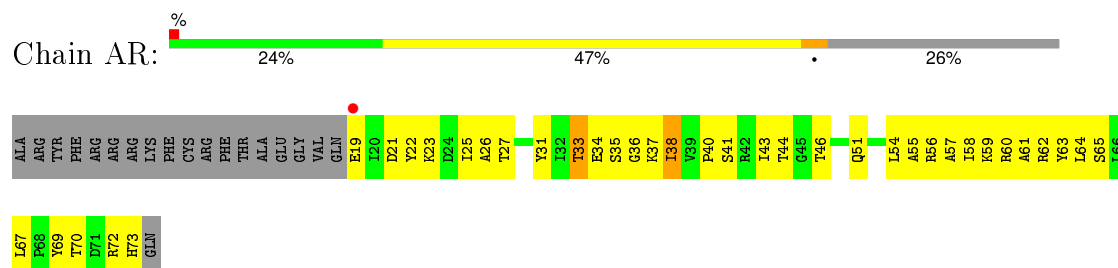
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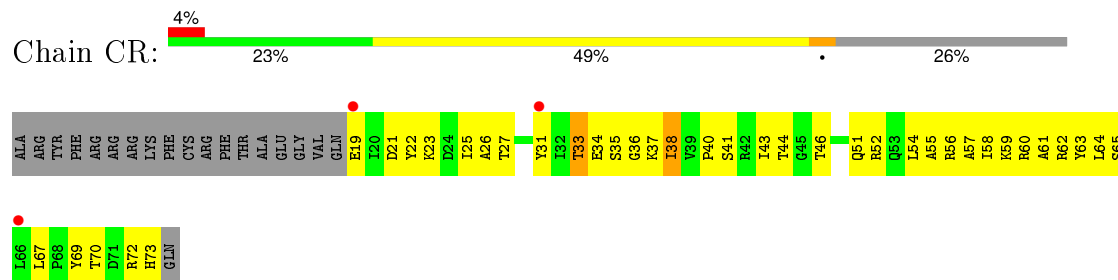
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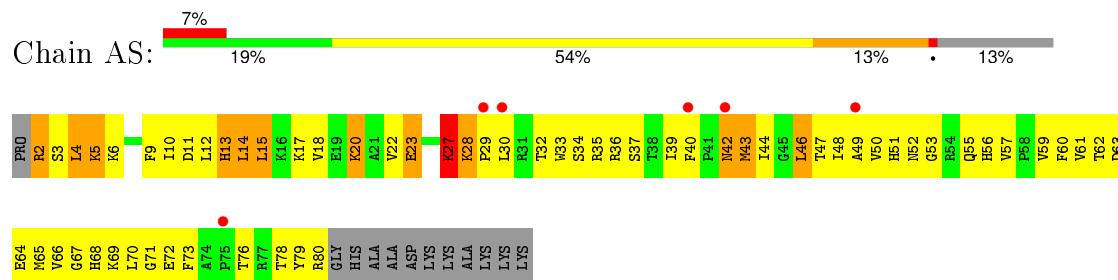
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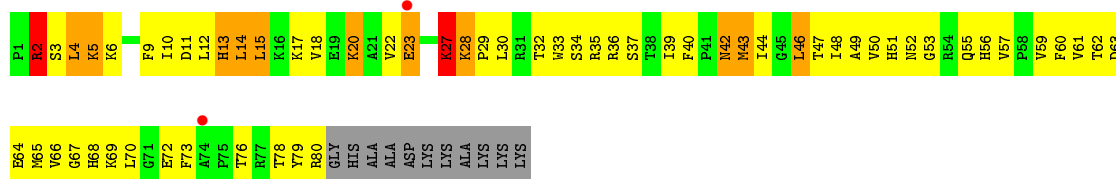
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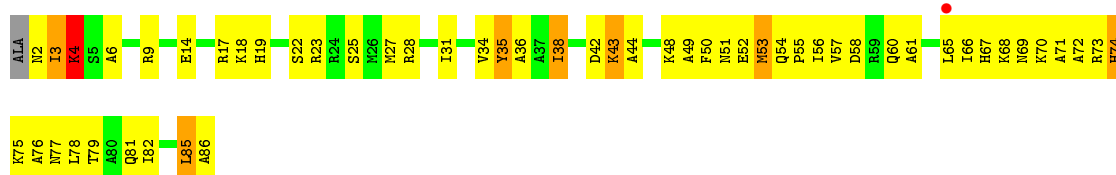
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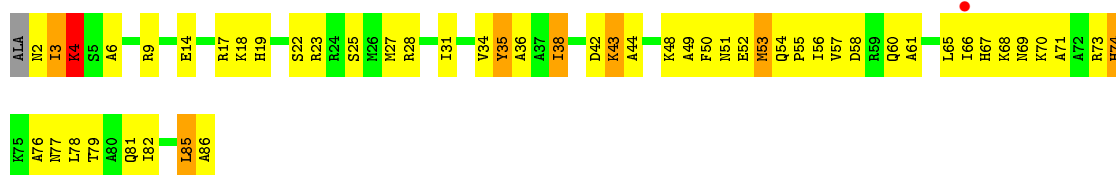
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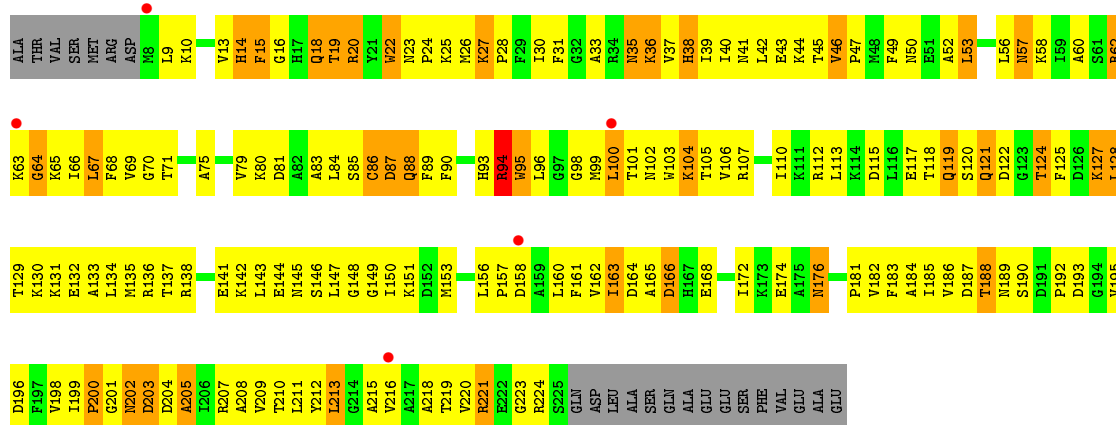
• Molecule 19: 30S ribosomal protein S20



• Molecule 19: 30S ribosomal protein S20

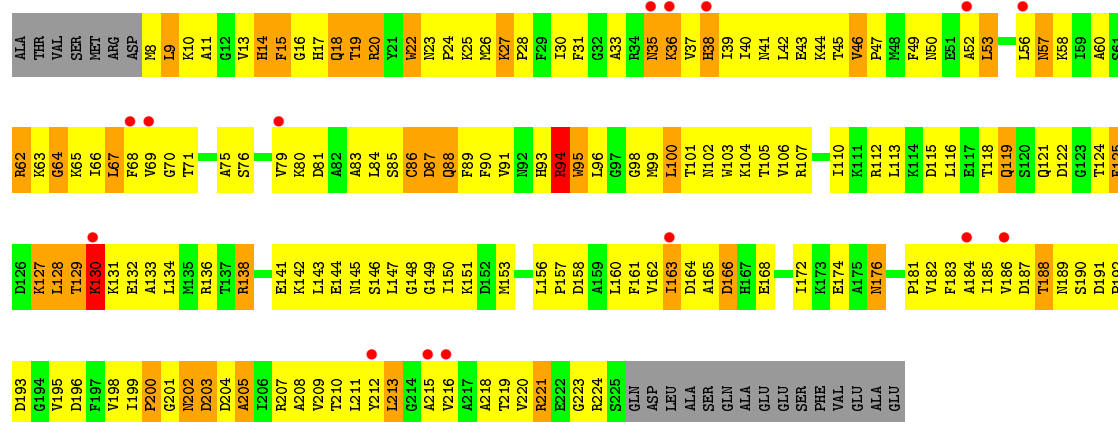


• Molecule 20: 30S ribosomal protein S2

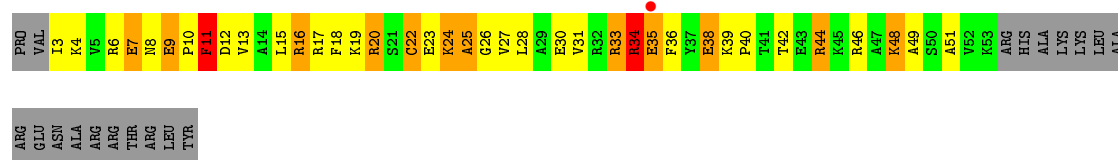
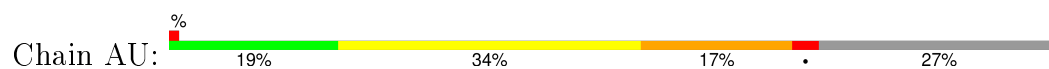


• Molecule 20: 30S ribosomal protein S2

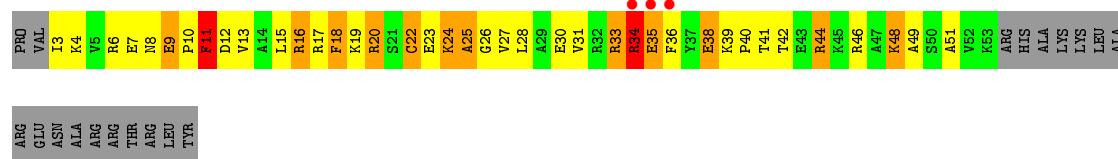
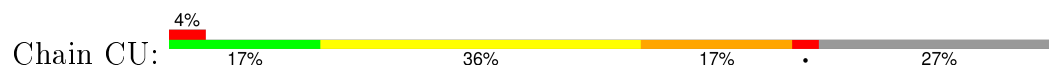




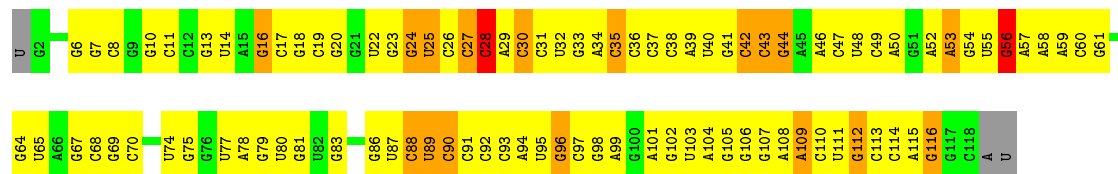
• Molecule 21: 30S ribosomal protein S21



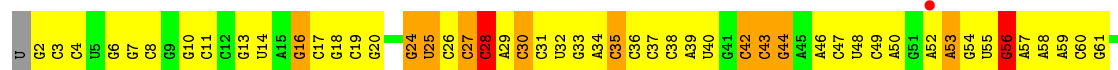
• Molecule 21: 30S ribosomal protein S21

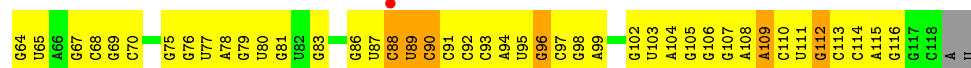


• Molecule 22: 5S rRNA

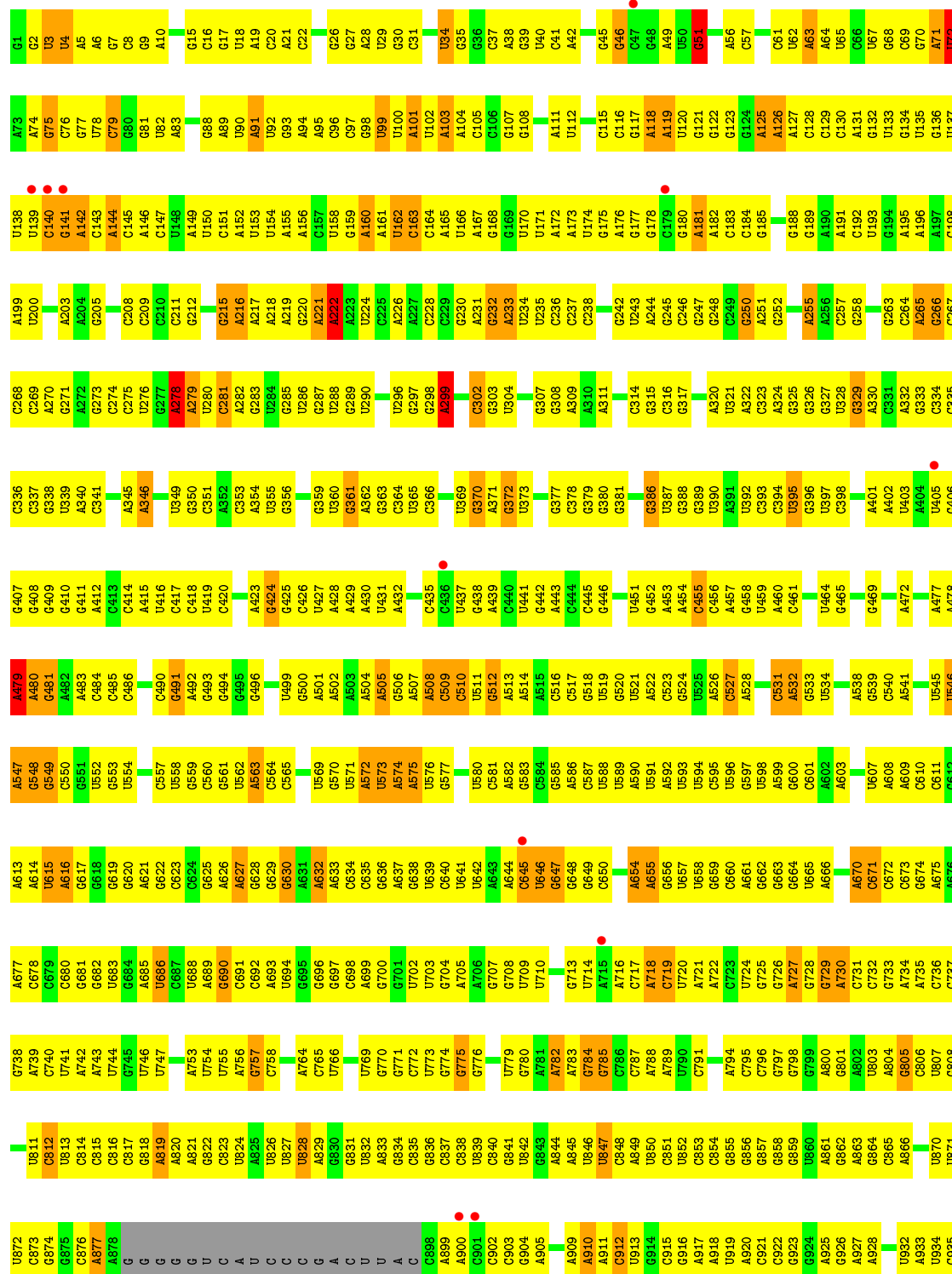


• Molecule 22: 5S rRNA





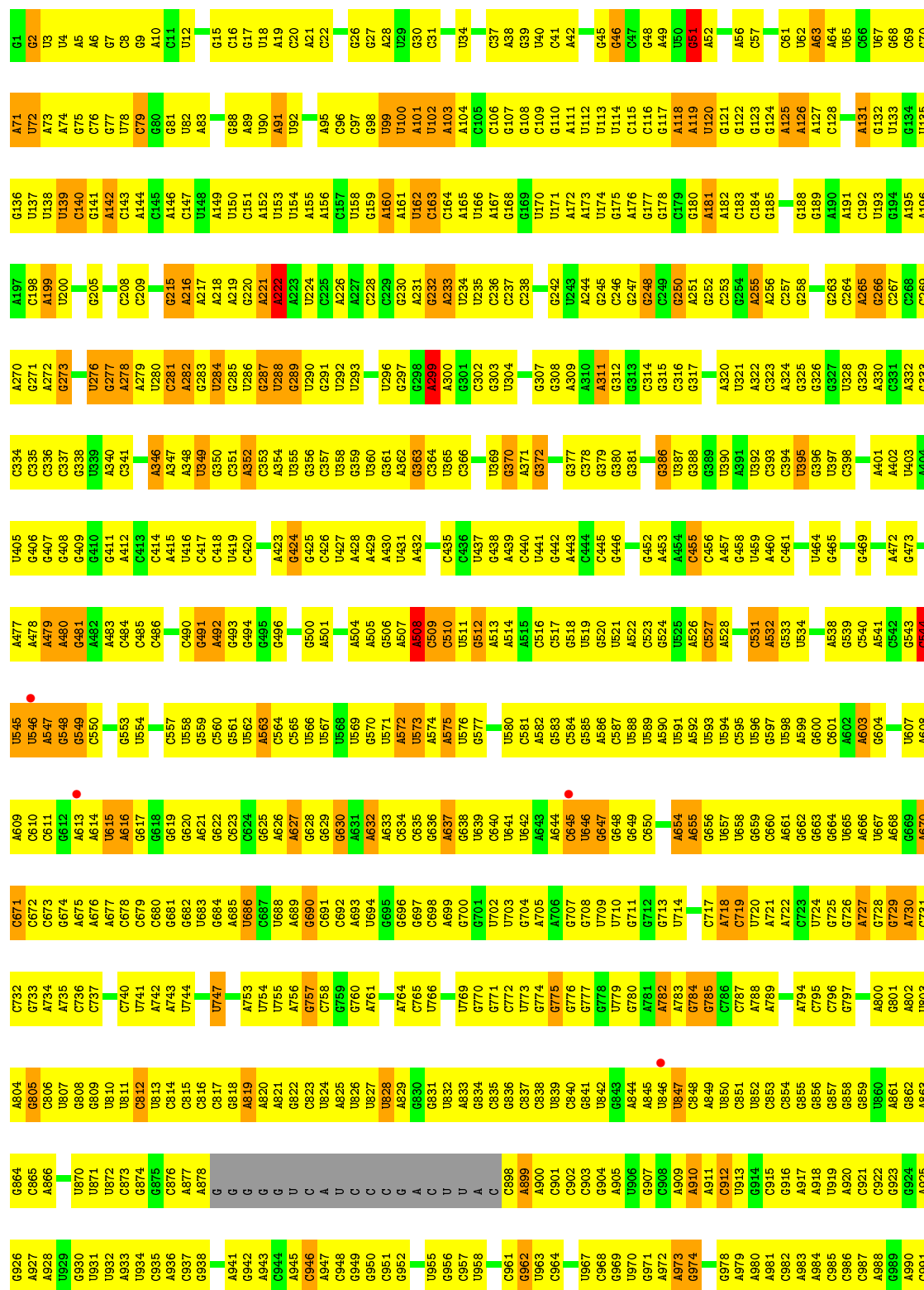
• Molecule 23: 23S rRNA



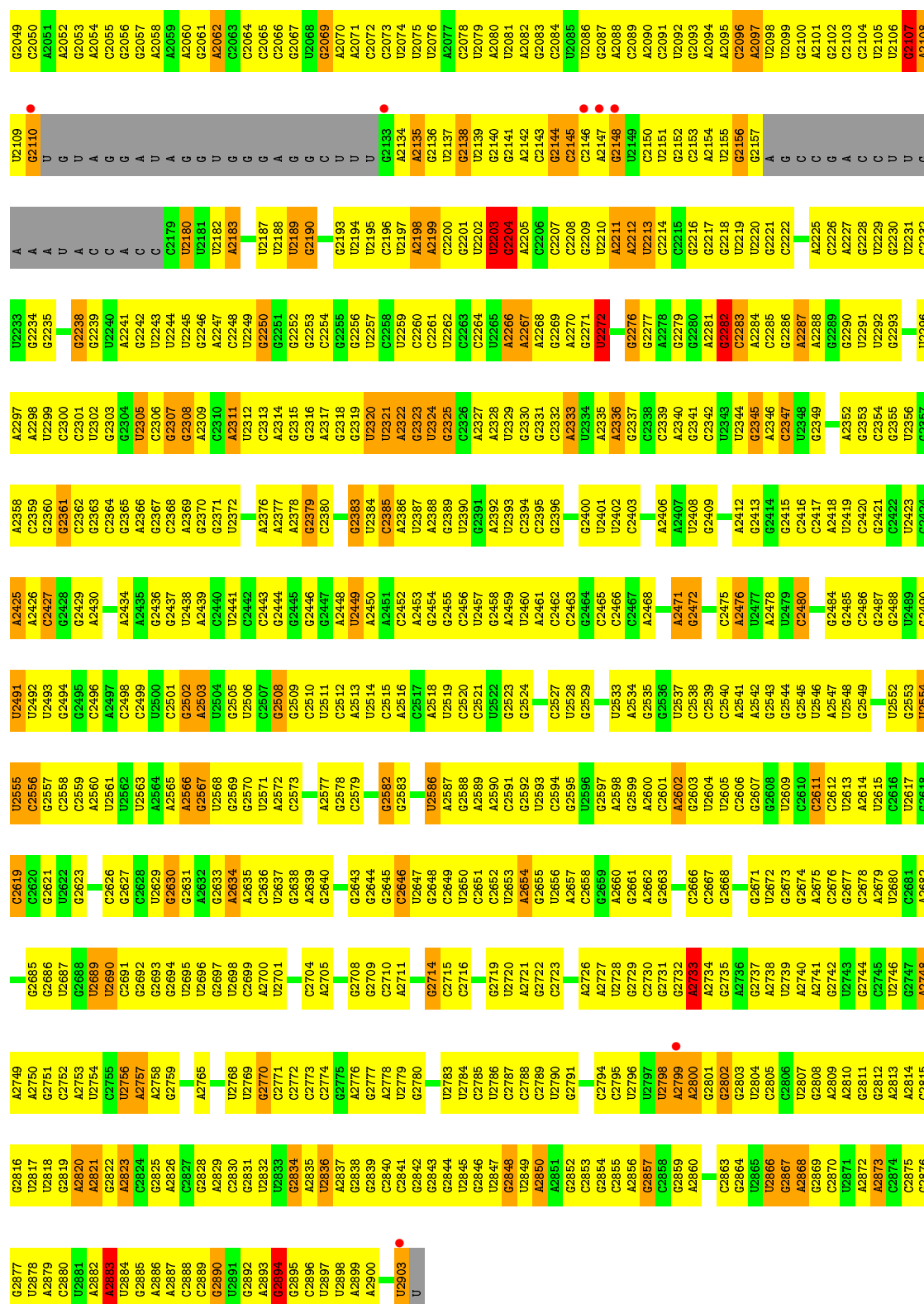




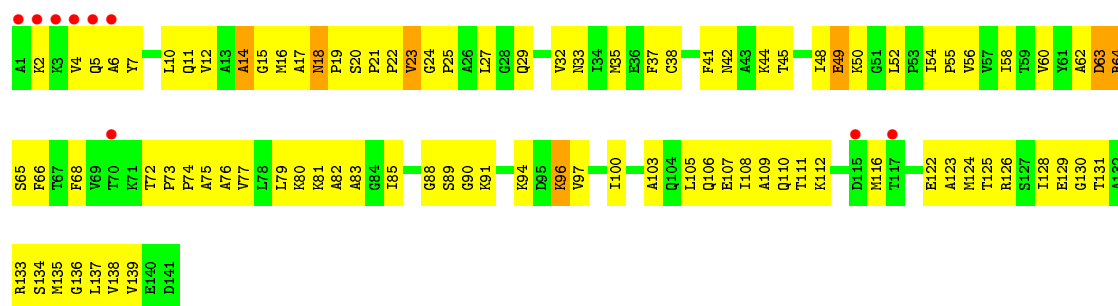
● Molecule 23: 23S rRNA

Chain DB: 

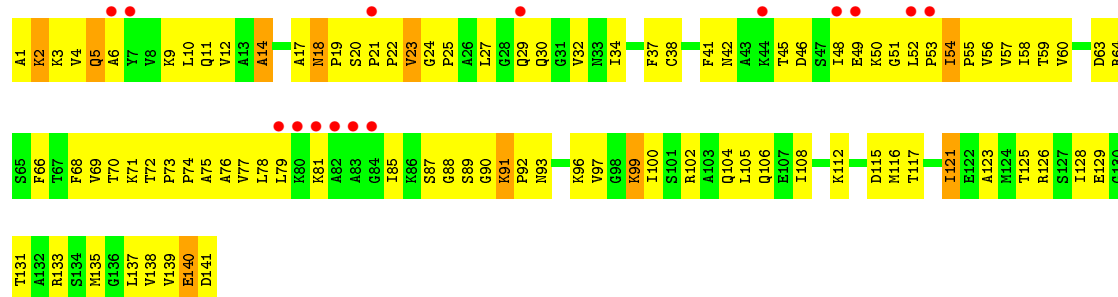
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A1848	A1849	A1850	A1853	A1854	A1855	A1856	A1857	A1858	A1859	A1860	A1861	A1862	A1863	A1864	A1865	A1866	A1867	A1868	A1869	A1870	A1871	A1872	A1873	A1874	A1875	A1876	A1877	A1878	A1879	A1880	A1881	A1882	A1883	A1884	A1885	A1886	A1887	A1888	A1889	A1890	A1891	A1892	A1893	A1894	A1895	A1896	A1897	A1898	A1899	A1900	A1901	A1902	A1903	A1904	A1905	A1906	A1907	A1908	A1909	A1910	A1911	A1912	A1913	A1914	A1915	A1916	A1917	A1918	A1919	A1920	A1921	A1922	A1923	A1924	A1925	A1926	A1927	A1928	A1929	A1930	A1931	A1932	A1933	A1934	A1935	A1936	A1937	A1938	A1939	A1940	A1941	A1942	A1943	A1944	A1945	A1946	A1947	A1948	A1949	A1950	A1951	A1952	A1953	A1954	A1955	A1956	A1957	A1958	A1959	A1960	A1961	A1962	A1963	A1964	A1965	A1966	A1967	A1968	A1969	A1970	A1971	A1972	A1973	A1974	A1975	A1976	A1977	A1978	A1979	A1980	A1981	A1982	A1983	A1984	A1985	A1986	A1987	A1988	A1989	A1990	A1991	A1992	A1993	A1994	A1995	A1996	A1997	A1998	A1999	A2000	A2001	A2002	A2003	A2004	A2005	A2006	A2007	A2008	A2009	A2010	A2011	A2012	A2013	A2014	A2015	A2016	A2017	A2018	A2019	A2020	A2021	A2022	A2023	A2024	A2025	A2026	A2027	A2028	A2029	A2030	A2031	A2032	A2033	A2034	A2035	A2036	A2037	A2038	A2039	A2040	A2041	A2042	A2043	A2044	A2045	A2046	A2047	A2048	A2049	A2050	A2051	A2052	A2053	A2054	A2055	A2056	A2057	A2058	A2059	A2060	A2061	A2062	A2063	A2064	A2065	A2066	A2067	A2068	A2069	A2070	A2071	A2072	A2073	A2074	A2075	A2076	A2077	A2078	A2079	A2080	A2081	A2082	A2083	A2084	A2085	A2086	A2087	A2088	A2089	A2090	A2091	A2092	A2093	A2094	A2095	A2096	A2097	A2098	A2099	A2100	A2101	A2102	A2103	A2104	A2105	A2106	A2107	A2108	A2109	A2110	A2111	A2112	A2113	A2114	A2115	A2116	A2117	A2118	A2119	A2120	A2121	A2122	A2123	A2124	A2125	A2126	A2127	A2128	A2129	A2130	A2131	A2132	A2133	A2134	A2135	A2136	A2137	A2138	A2139	A2140	A2141	A2142	A2143	A2144	A2145	A2146	A2147	A2148	A2149	A2150	A2151	A2152	A2153	A2154	A2155	A2156	A2157	A2158	A2159	A2160	A2161	A2162	A2163	A2164	A2165	A2166	A2167	A2168	A2169	A2170	A2171	A2172	A2173	A2174	A2175	A2176	A2177	A2178	A2179	A2180	A2181	A2182	A2183	A2184	A2185	A2186	A2187	A2188	A2189	A2190	A2191	A2192	A2193	A2194	A2195	A2196	A2197	A2198	A2199	A2200	A2201	A2202	A2203	A2204	A2205	A2206	A2207	A2208	A2209	A2210	A2211	A2212	A2213	A2214	A2215	A2216	A2217	A2218	A2219	A2220	A2221	A2222	A2223	A2224	A2225	A2226	A2227	A2228	A2229	A2230	A2231	A2232	A2233	A2234	A2235	A2236	A2237	A2238	A2239	A2240	A2241	A2242	A2243	A2244	A2245	A2246	A2247	A2248	A2249	A2250	A2251	A2252	A2253	A2254	A2255	A2256	A2257	A2258	A2259	A2260	A2261	A2262	A2263	A2264	A2265	A2266	A2267	A2268	A2269	A2270	A2271	A2272	A2273	A2274	A2275	A2276	A2277	A2278	A2279	A2280	A2281	A2282	A2283	A2284	A2285	A2286	A2287	A2288	A2289	A2290	A2291	A2292	A2293	A2294	A2295	A2296	A2297	A2298	A2299	A2300	A2301	A2302	A2303	A2304	A2305	A2306	A2307	A2308	A2309	A2310	A2311	A2312	A2313	A2314	A2315	A2316	A2317	A2318	A2319	A2320	A2321	A2322	A2323	A2324	A2325	A2326	A2327	A2328	A2329	A2330	A2331	A2332	A2333	A2334	A2335	A2336	A2337	A2338	A2339	A2340	A2341	A2342	A2343	A2344	A2345	A2346	A2347	A2348	A2349	A2350	A2351	A2352	A2353	A2354	A2355	A2356	A2357	A2358	A2359	A2360	A2361	A2362	A2363	A2364	A2365	A2366	A2367	A2368	A2369	A2370	A2371	A2372	A2373	A2374	A2375	A2376	A2377	A2378	A2379	A2380	A2381	A2382	A2383	A2384	A2385	A2386	A2387	A2388	A2389	A2390	A2391	A2392	A2393	A2394	A2395	A2396	A2397	A2398	A2399	A2400	A2401	A2402	A2403	A2404	A2405	A2406	A2407	A2408	A2409	A2410	A2411	A2412	A2413	A2414	A2415	A2416	A2417	A2418	A2419	A2420	A2421	A2422	A2423	A2424	A2425	A2426	A2427	A2428	A2429	A2430	A2431	A2432	A2433	A2434	A2435	A2436	A2437	A2438	A2439	A2440	A2441	A2442	A2443	A2444	A2445	A2446	A2447	A2448	A2449	A2450	A2451	A2452	A2453	A2454	A2455	A2456	A2457	A2458	A2459	A2460	A2461	A2462	A2463	A2464	A2465	A2466	A2467	A2468	A2469	A2470	A2471	A2472	A2473	A2474	A2475	A2476	A2477	A2478	A2479	A2480	A2481	A2482	A2483	A2484	A2485	A2486	A2487	A2488	A2489	A2490	A2491	A2492	A2493	A2494	A2495	A2496	A2497	A2498	A2499	A2500	A2501	A2502	A2503	A2504	A2505	A2506	A2507	A2508	A2509	A2510	A2511	A2512	A2513	A2514	A2515	A2516	A2517	A2518	A2519	A2520	A2521	A2522	A2523	A2524	A2525	A2526	A2527	A2528	A2529	A2530	A2531	A2532	A2533	A2534	A2535	A2536	A2537	A2538	A2539	A2540	A2541	A2542	A2543	A2544	A2545	A2546	A2547	A2548	A2549	A2550	A2551	A2552	A2553	A2554	A2555	A2556	A2557	A2558	A2559	A2560	A2561	A2562	A2563	A2564	A2565	A2566	A2567	A2568	A2569	A2570	A2571	A2572	A2573	A2574	A2575	A2576	A2577	A2578	A2579	A2580	A2581	A2582	A2583	A2584	A2585	A2586	A2587	A2588	A2589	A2590	A2591	A2592	A2593	A2594	A2595	A2596	A2597	A2598	A2599	A2600	A2601	A2602	A2603	A2604	A2605	A2606	A2607	A2608	A2609	A2610	A2611	A2612	A2613	A2614	A2615	A2616	A2617	A2618	A2619	A2620	A2621	A2622	A2623	A2624	A2625	A2626	A2627	A2628	A2629	A2630	A2631	A2632	A2633	A2634	A2635	A2636	A2637	A2638	A2639	A2640	A2641	A2642	A2643	A2644	A2645	A2646	A2647	A2648	A2649	A2650	A2651	A2652	A2653	A2654	A2655	A2656	A2657	A2658	A2659	A2660	A2661	A2662	A2663	A2664	A2665	A2666	A2667	A2668	A2669	A2670	A2671	A2672	A2673	A2674	A2675	A2676	A2677	A2678	A2679	A2680	A2681	A2682	A2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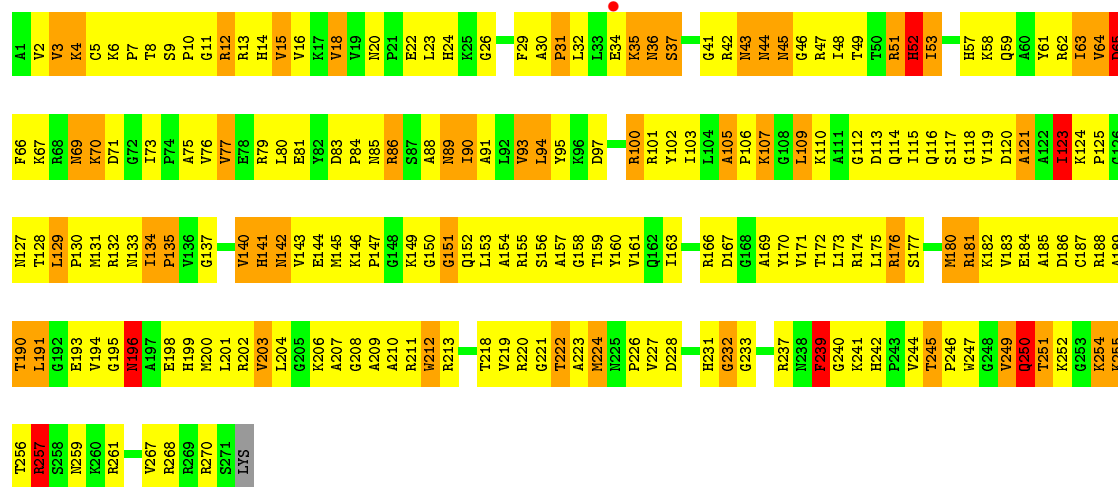
● Molecule 24: 50S ribosomal protein L11



• Molecule 24: 50S ribosomal protein L11

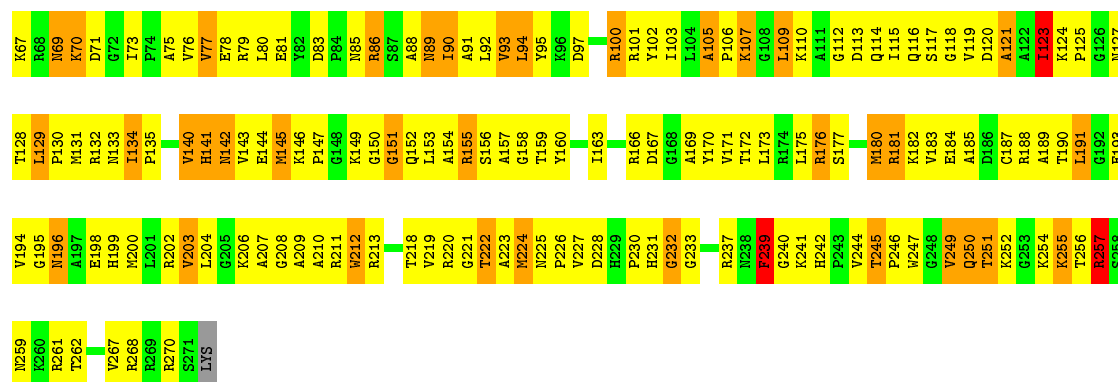


• Molecule 25: 50S ribosomal protein L2

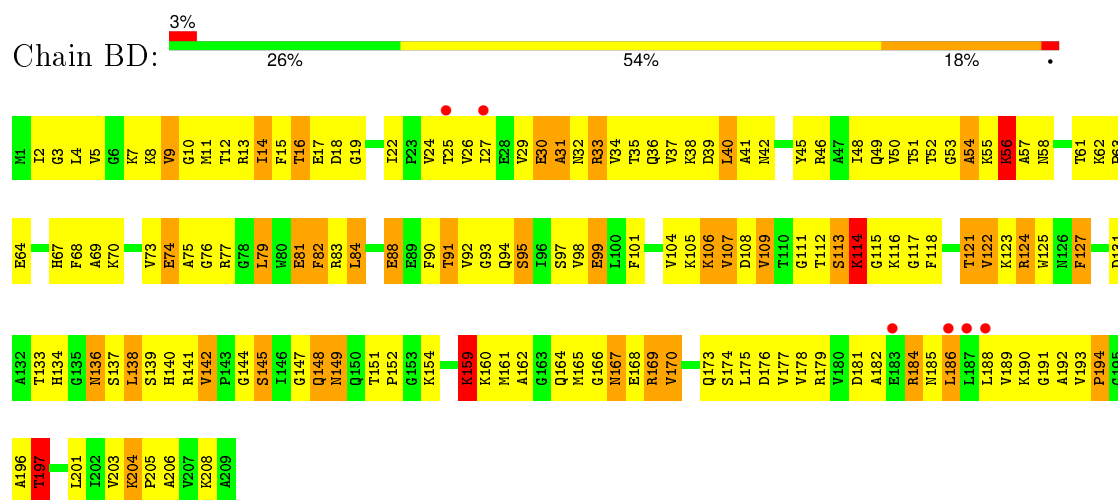


• Molecule 25: 50S ribosomal protein L2

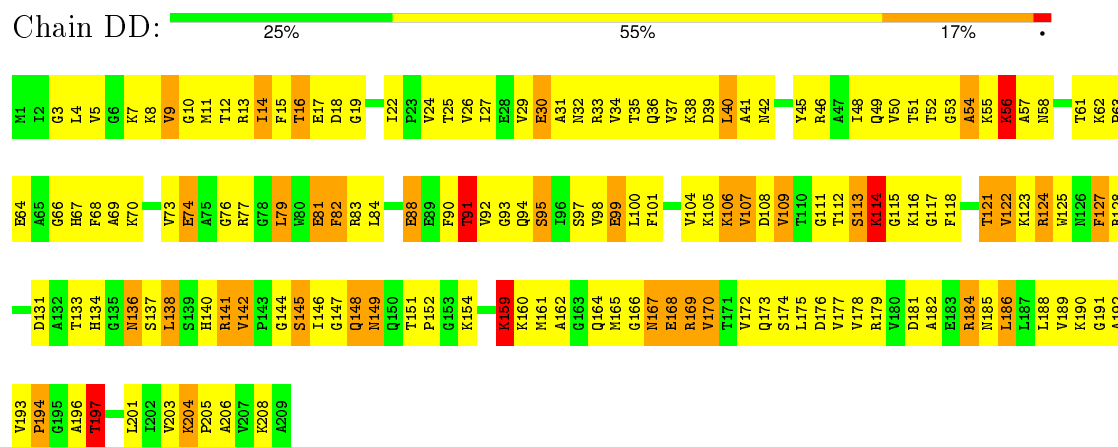




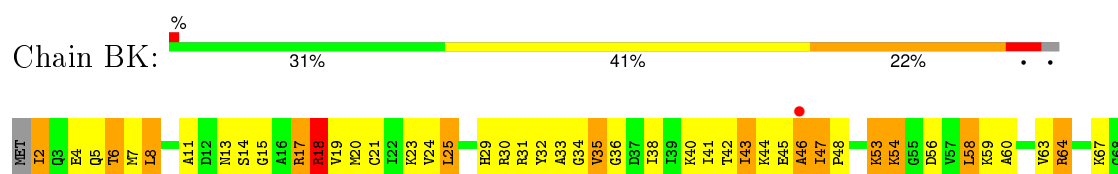
• Molecule 26: 50S ribosomal protein L3

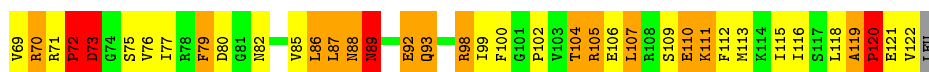


• Molecule 26: 50S ribosomal protein L3



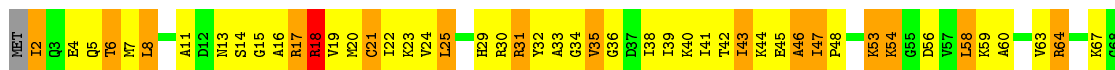
• Molecule 27: 50S ribosomal protein L14





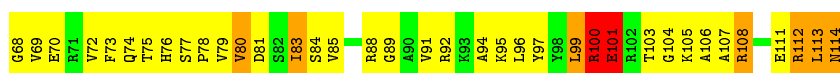
• Molecule 27: 50S ribosomal protein L14

Chain DK: 27% 44% 24% . .



• Molecule 28: 50S ribosomal protein L19

Chain BP: 25% 58% 13% .



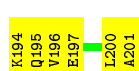
• Molecule 28: 50S ribosomal protein L19

Chain DP: 25% 59% 12% .

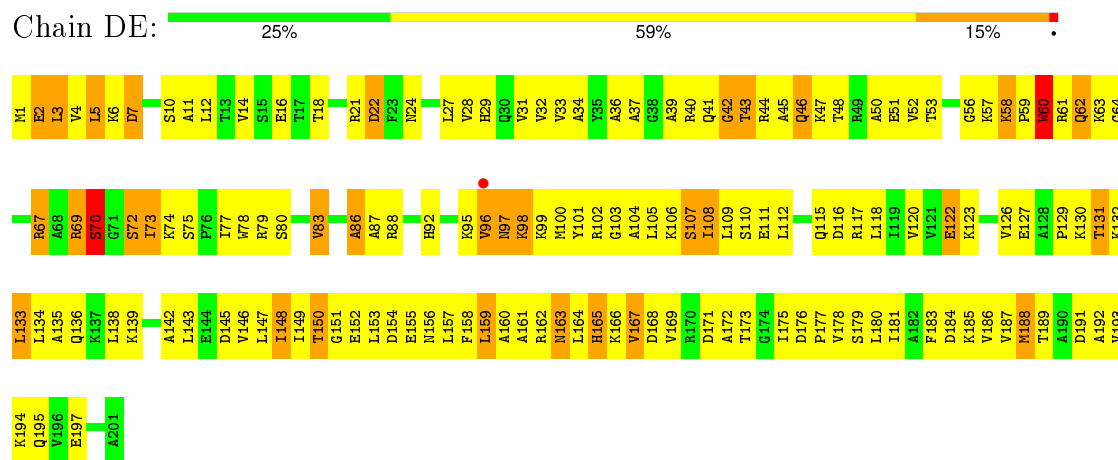


• Molecule 29: 50S ribosomal protein L4

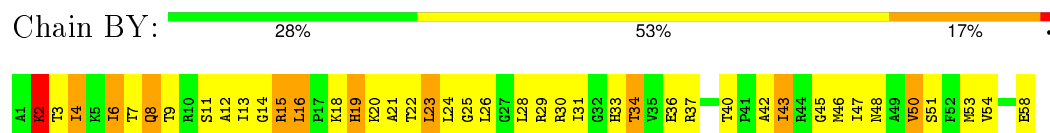
Chain BE: 22% 63% 14% .



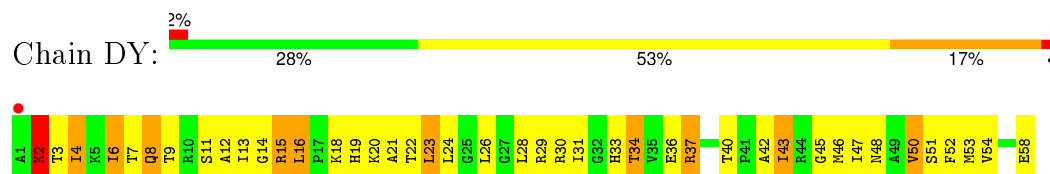
• Molecule 29: 50S ribosomal protein L4



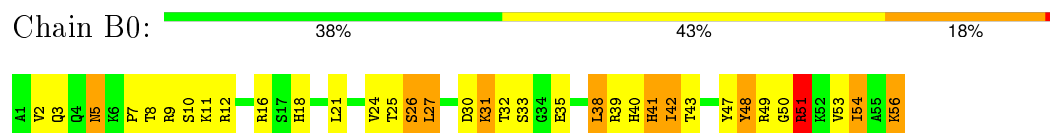
- Molecule 30: 50S ribosomal protein L30



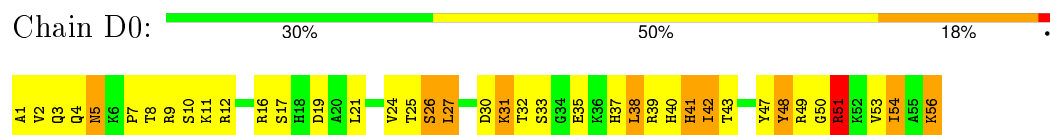
- Molecule 30: 50S ribosomal protein L30



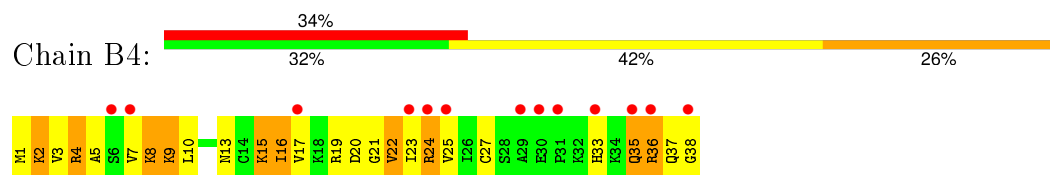
- Molecule 31: 50S ribosomal protein L32



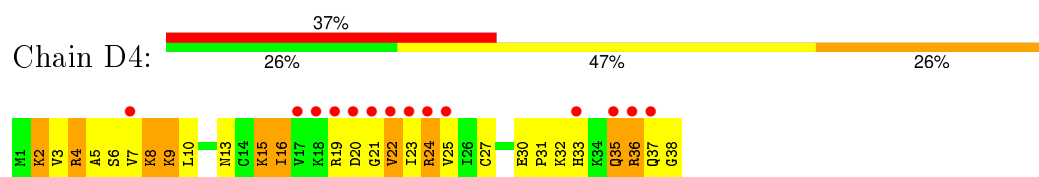
- Molecule 31: 50S ribosomal protein L32



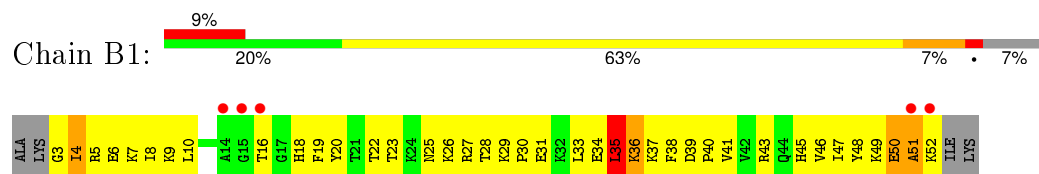
- Molecule 32: 50S ribosomal protein L36



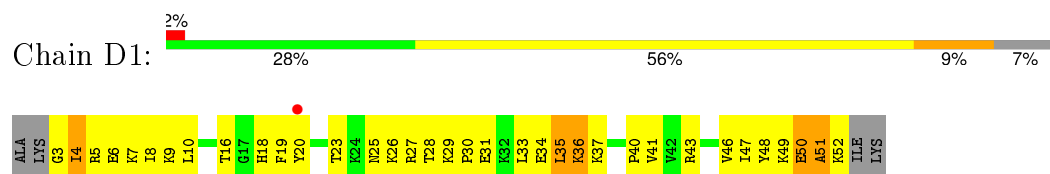
- Molecule 32: 50S ribosomal protein L36



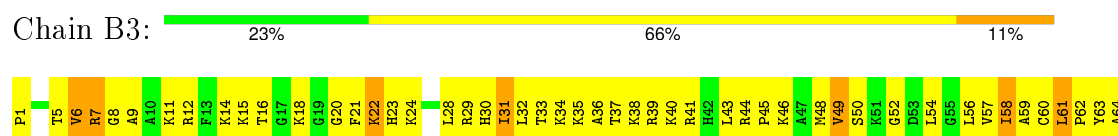
- Molecule 33: 50S ribosomal protein L33



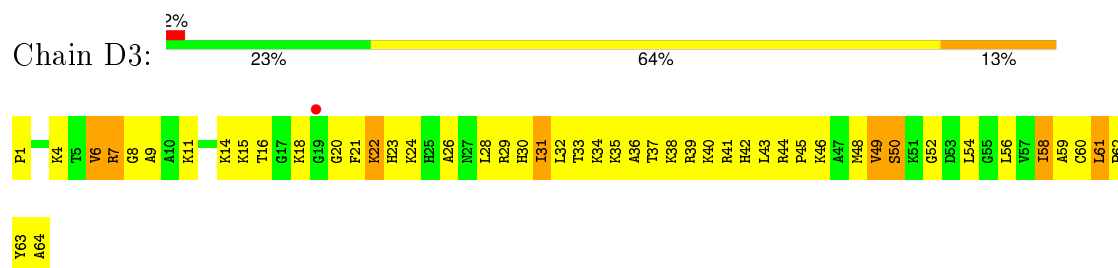
- Molecule 33: 50S ribosomal protein L33



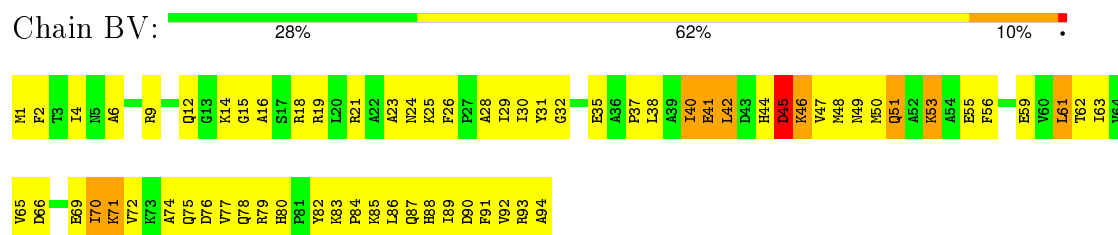
- Molecule 34: 50S ribosomal protein L35



- Molecule 34: 50S ribosomal protein L35

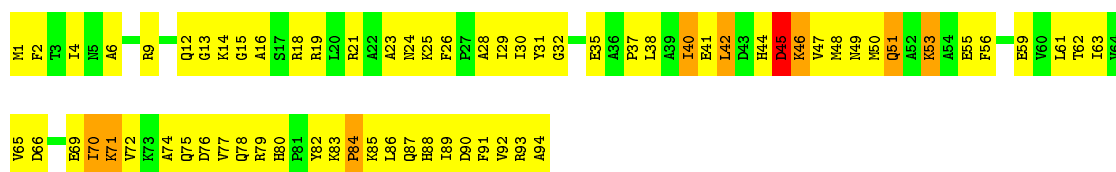


- Molecule 35: 50S ribosomal protein L25

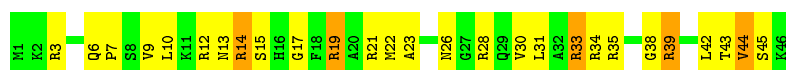


- Molecule 35: 50S ribosomal protein L25

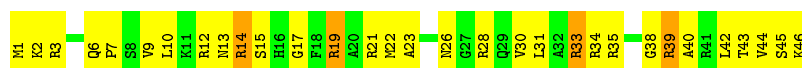
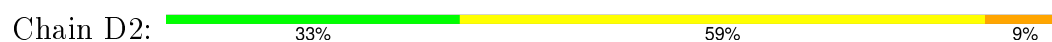




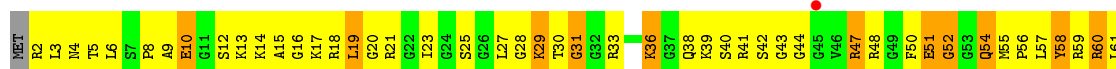
- Molecule 36: 50S ribosomal protein L34



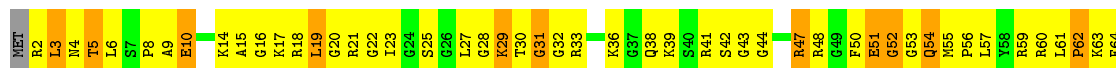
- Molecule 36: 50S ribosomal protein L34



- Molecule 37: 50S ribosomal protein L15

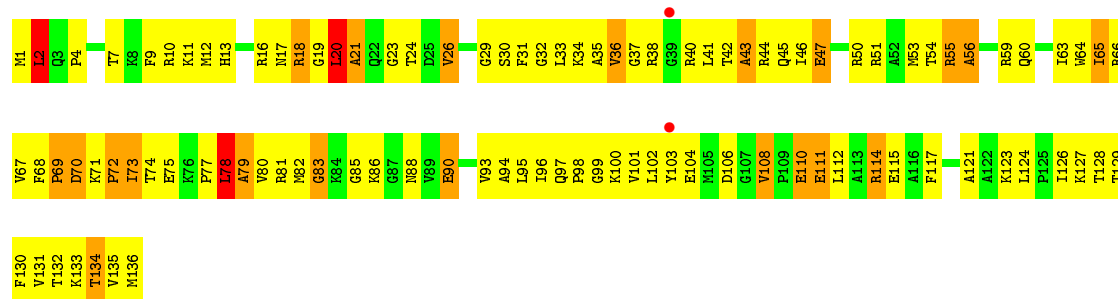


- Molecule 37: 50S ribosomal protein L15

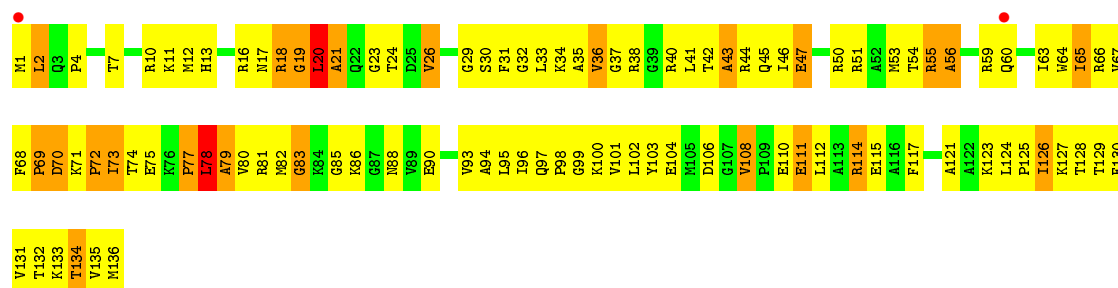


- Molecule 38: 50S ribosomal protein L16

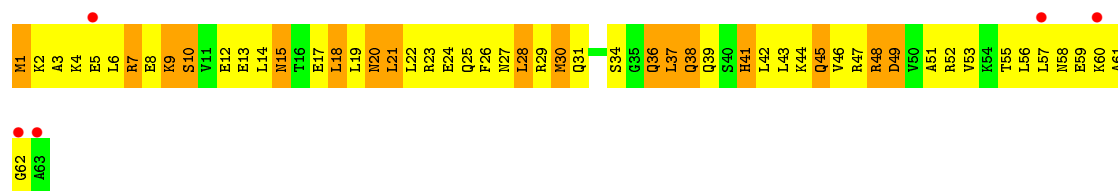
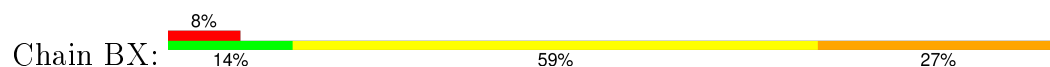




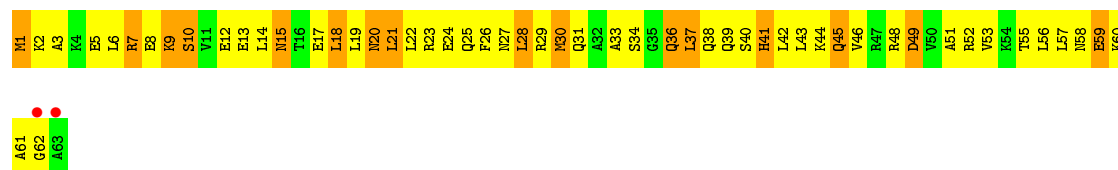
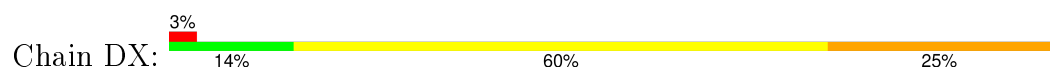
- Molecule 38: 50S ribosomal protein L16



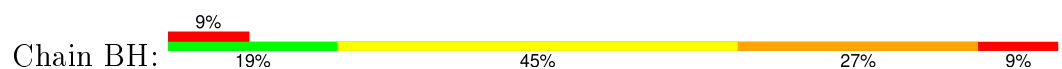
- Molecule 39: 50S ribosomal protein L29

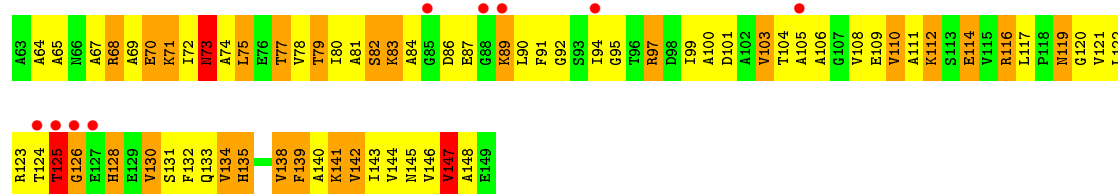


- Molecule 39: 50S ribosomal protein L29

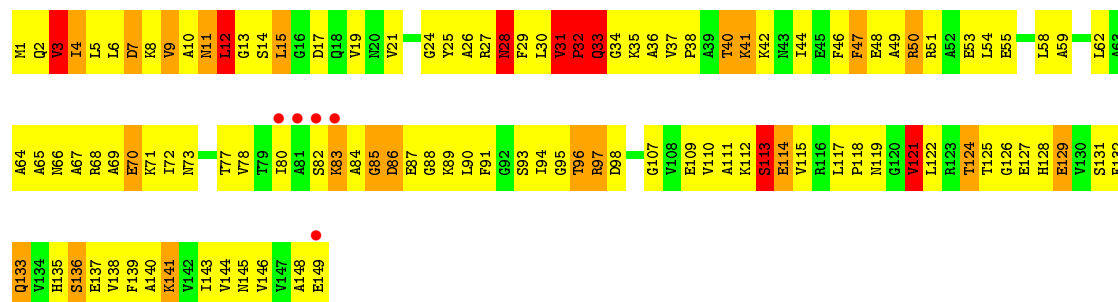


- Molecule 40: 50S ribosomal protein L9

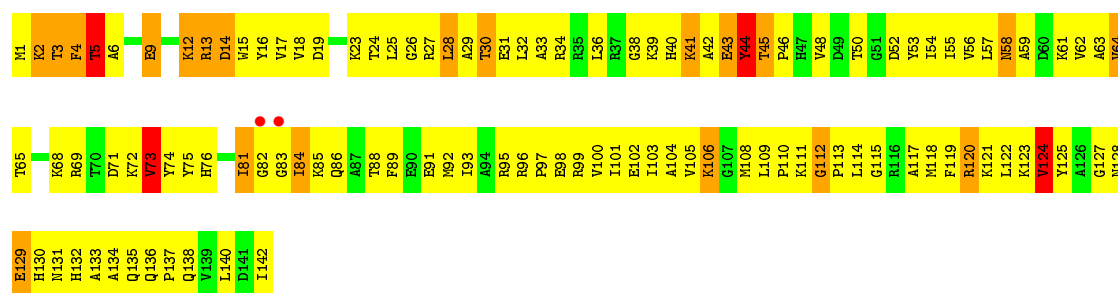




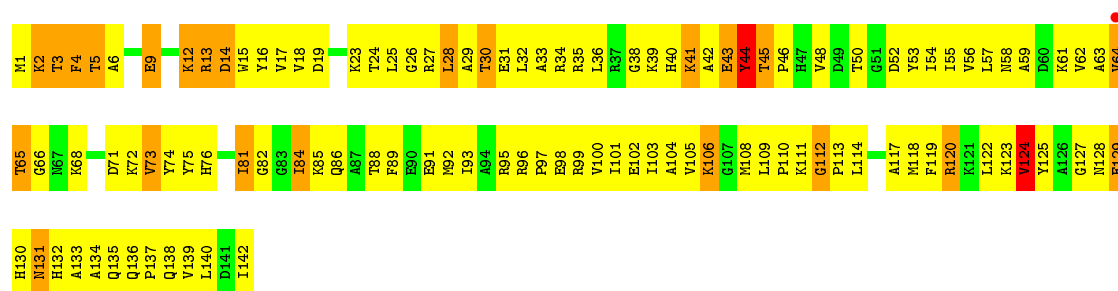
• Molecule 40: 50S ribosomal protein L9



• Molecule 41: 50S ribosomal protein L13

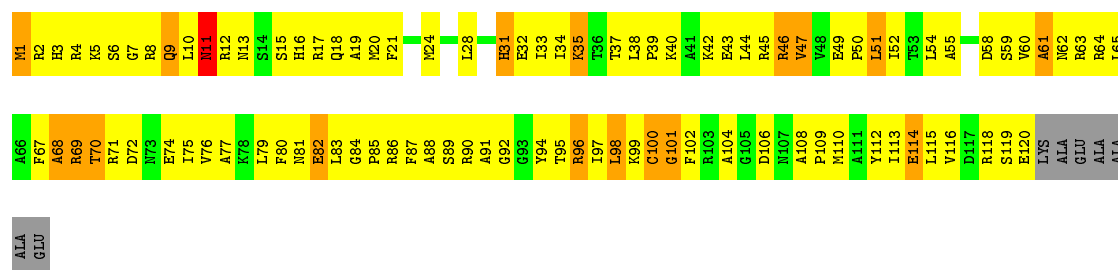


• Molecule 41: 50S ribosomal protein L13



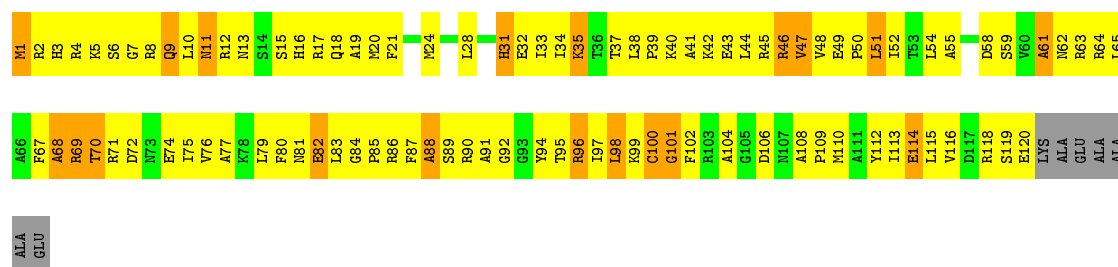
• Molecule 42: 50S ribosomal protein L17





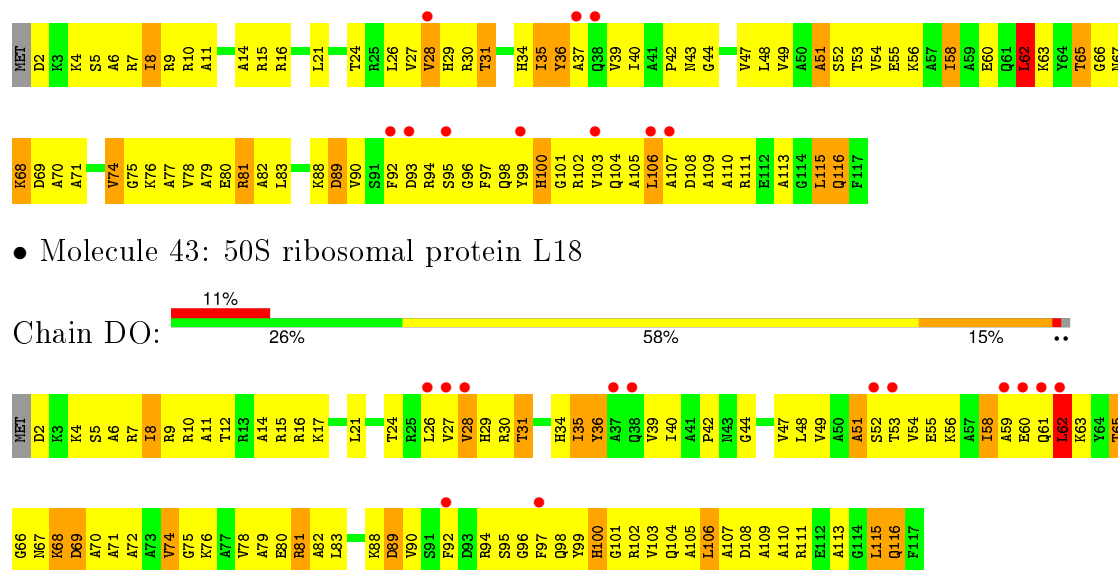
• Molecule 42: 50S ribosomal protein L17

Chain DN: 17% 62% 15% 6%



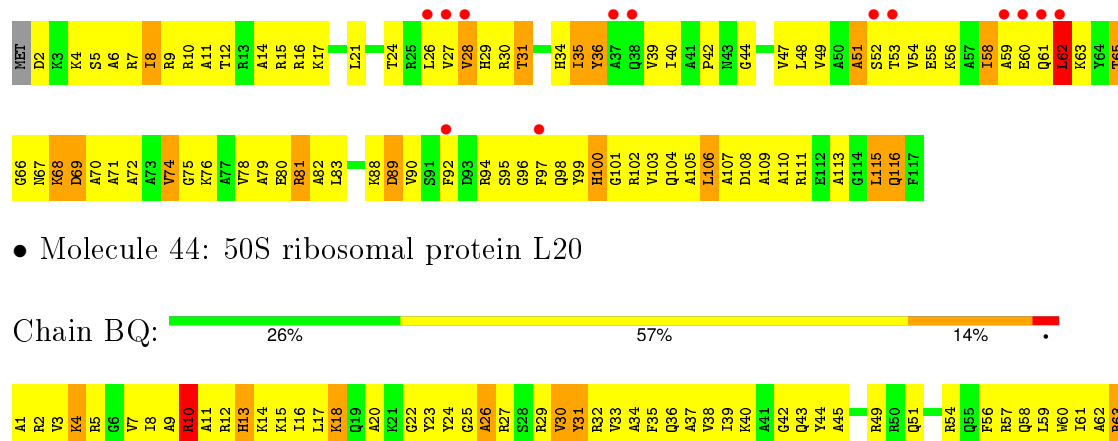
• Molecule 43: 50S ribosomal protein L18

Chain BO: 9% 26% 58% 14% ..



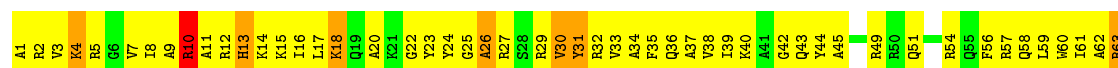
• Molecule 43: 50S ribosomal protein L18

Chain DO: 11% 26% 58% 15% ..



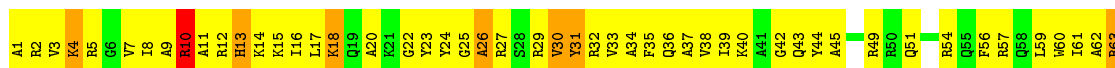
• Molecule 44: 50S ribosomal protein L20

Chain BQ: 26% 57% 14%

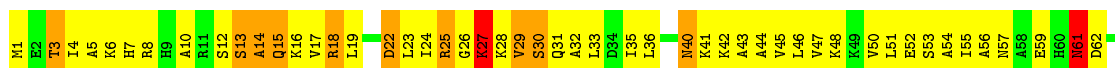




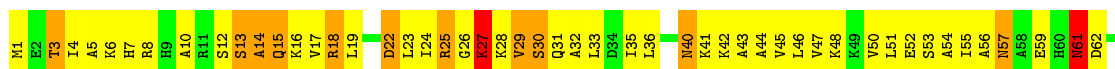
• Molecule 44: 50S ribosomal protein L20



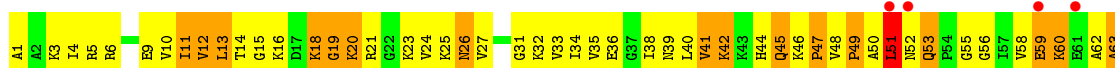
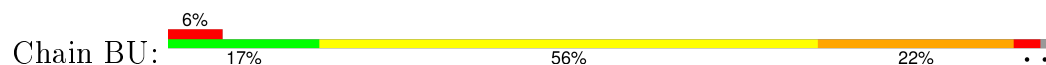
• Molecule 45: 50S ribosomal protein L22



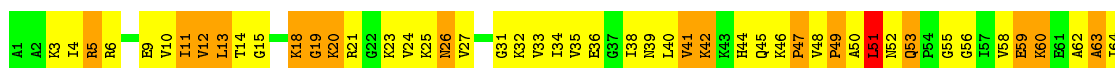
• Molecule 45: 50S ribosomal protein L22



• Molecule 46: 50S ribosomal protein L24



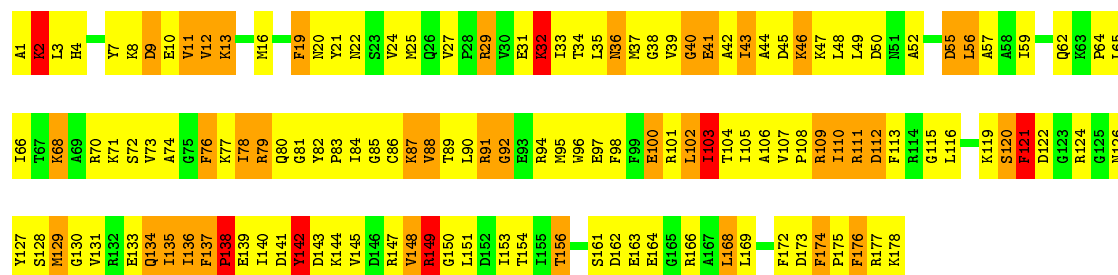
• Molecule 46: 50S ribosomal protein L24





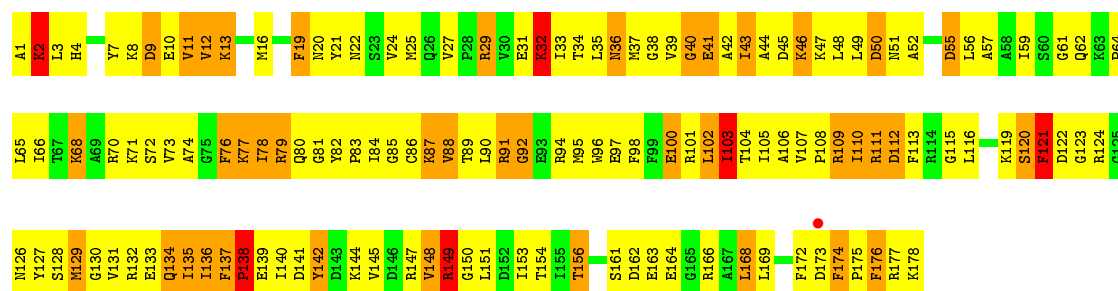
• Molecule 47: 50S ribosomal protein L5

Chain BF: 22% 53% 21%



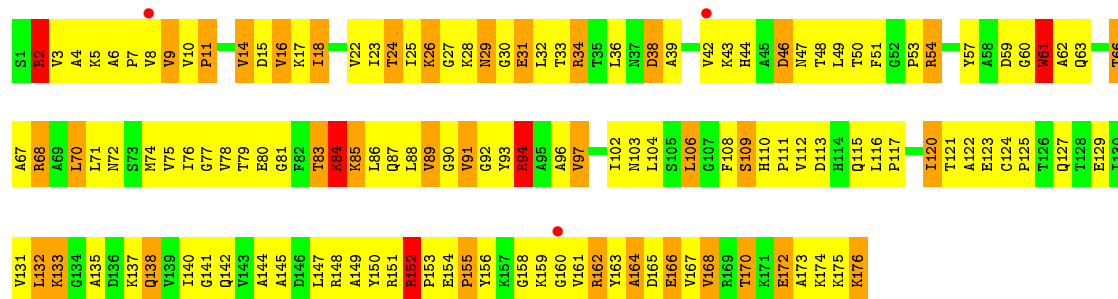
• Molecule 47: 50S ribosomal protein L5

Chain DF: 20% 54% 22%



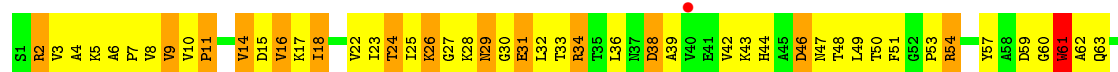
• Molecule 48: 50S ribosomal protein L6

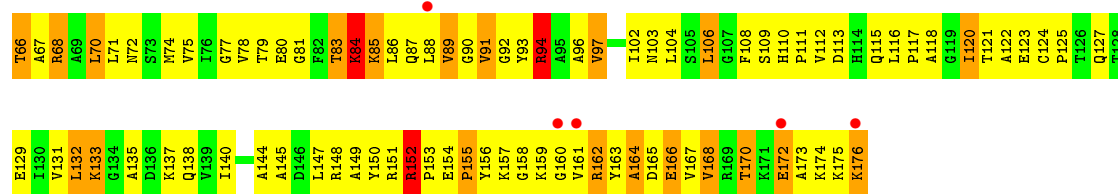
Chain BG: 23% 54% 20%



• Molecule 48: 50S ribosomal protein L6

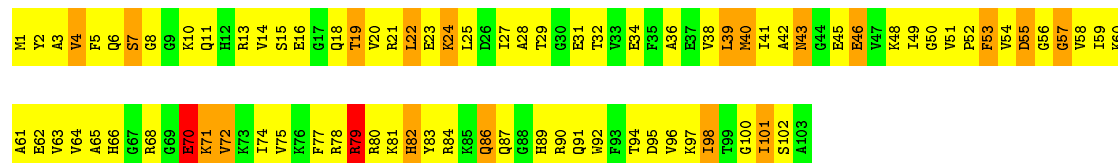
Chain DG: 24% 55% 19%





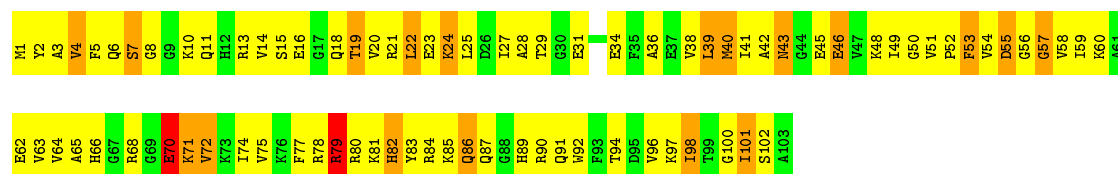
• Molecule 49: 50S ribosomal protein L21

Chain BR: 18% 62% 17%



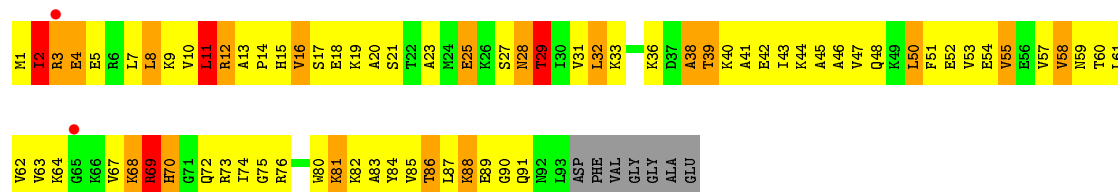
• Molecule 49: 50S ribosomal protein L21

Chain DR: 20% 60% 17%



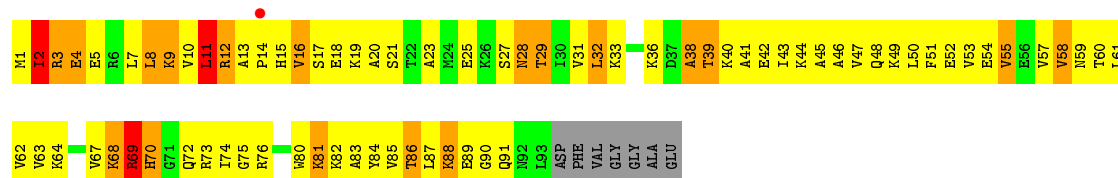
• Molecule 50: 50S ribosomal protein L23

Chain BT: 2% 18% 53% 18% 7%



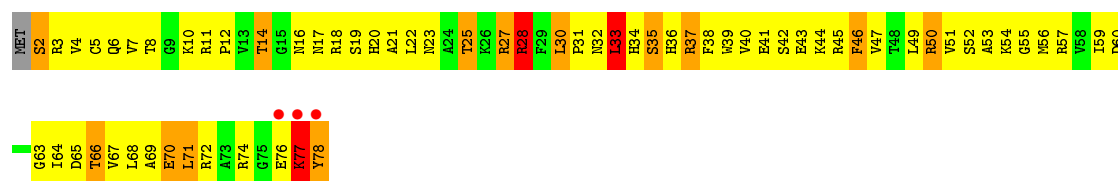
• Molecule 50: 50S ribosomal protein L23

Chain DT: 17% 55% 18% 7%

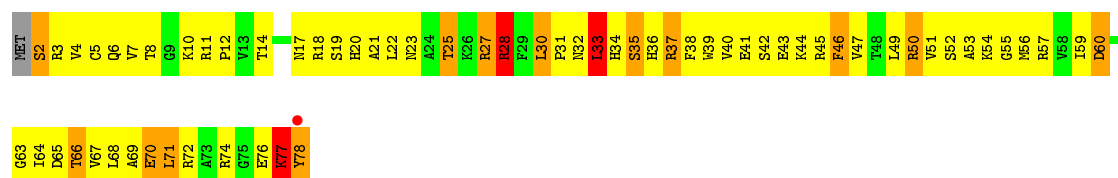


• Molecule 51: 50S ribosomal protein L28

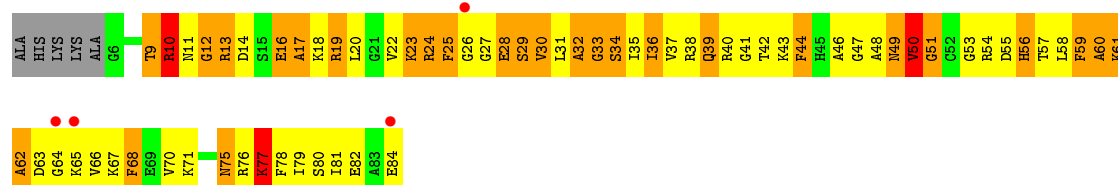
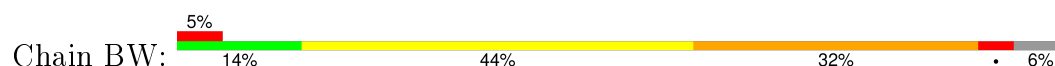
Chain BZ: 4% 15% 63% 17%



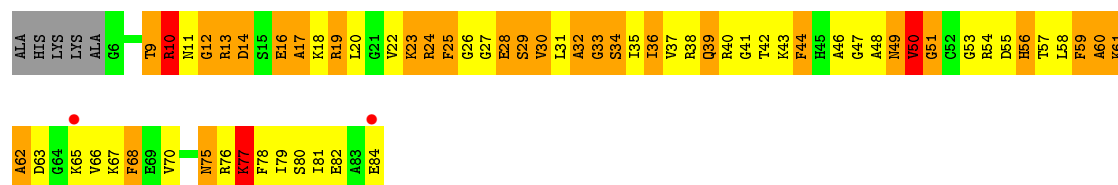
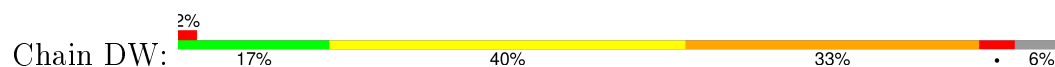
- Molecule 51: 50S ribosomal protein L28



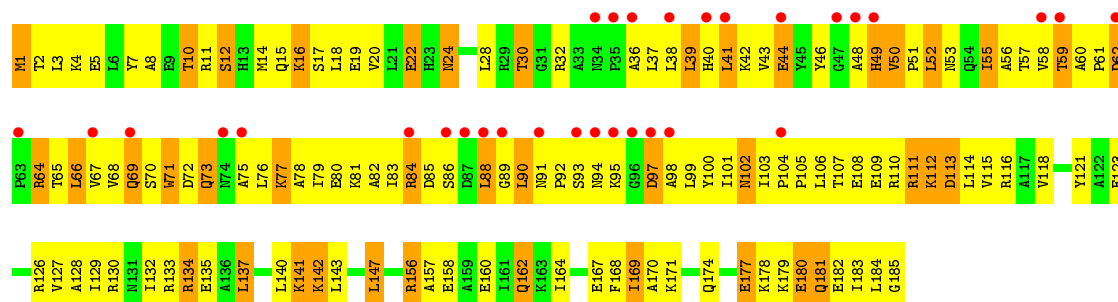
- Molecule 52: 50S ribosomal protein L27



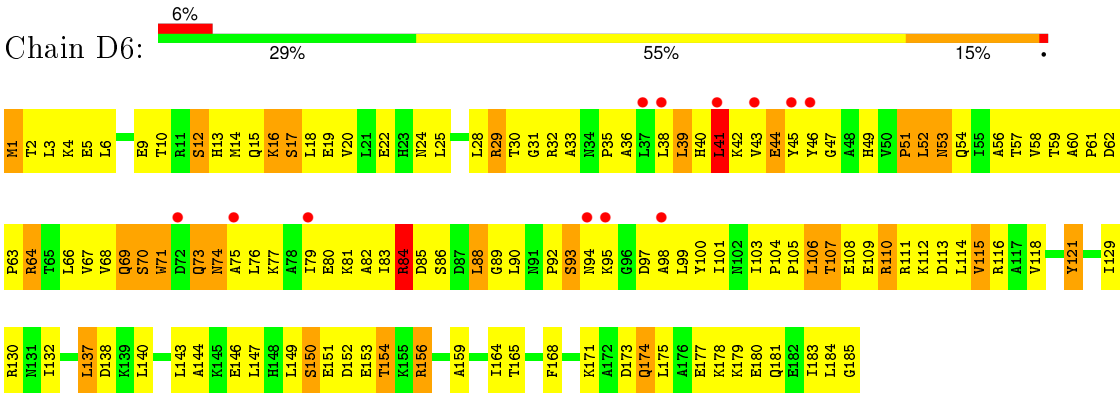
- Molecule 52: 50S ribosomal protein L27



- Molecule 53: 50S ribosomal protein RRF



- Molecule 53: 50S ribosomal protein RRF



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	208.87Å 378.75Å 738.26Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	40.00 – 4.45 69.15 – 4.45	Depositor EDS
% Data completeness (in resolution range)	95.7 (40.00-4.45) 95.6 (69.15-4.45)	Depositor EDS
R_{merge}	0.10	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.39 (at 4.46Å)	Xtriage
Refinement program	CNS	Depositor
R, R_{free}	0.263 , 0.309 0.268 , 0.310	Depositor DCC
R_{free} test set	15488 reflections (4.54%)	DCC
Wilson B-factor (Å ²)	150.5	Xtriage
Anisotropy	0.297	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.17 , 59.3	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning ²	$\langle L \rangle = 0.48$, $\langle L^2 \rangle = 0.31$	Xtriage
Outliers	0 of 341454 reflections	Xtriage
F_o, F_c correlation	0.91	EDS
Total number of atoms	287128	wwPDB-VP
Average B, all atoms (Å ²)	72.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.03% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.375 respectively for untwinned datasets, and 0.333, 0.2 for perfectly twinned datasets.

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: ZN, MG, PAR

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	AA	0.28	1/36762 (0.0%)	0.76	6/57350 (0.0%)
1	CA	0.28	1/36762 (0.0%)	0.76	10/57350 (0.0%)
2	AC	0.23	0/1651	0.44	0/2225
2	CC	0.23	0/1651	0.44	0/2225
3	AD	0.23	0/1665	0.44	0/2227
3	CD	0.23	0/1665	0.44	0/2227
4	AE	0.23	0/1118	0.45	0/1504
4	CE	0.24	0/1118	0.45	0/1504
5	AF	0.24	0/835	0.45	0/1128
5	CF	0.24	0/835	0.45	0/1128
6	AG	0.23	0/1187	0.45	0/1591
6	CG	0.23	0/1211	0.45	0/1624
7	AH	0.23	0/989	0.44	0/1326
7	CH	0.23	0/989	0.44	0/1326
8	AI	0.24	0/1034	0.45	0/1375
8	CI	0.24	0/1034	0.45	0/1375
9	AJ	0.22	0/796	0.49	0/1077
9	CJ	0.22	0/796	0.48	0/1077
10	AK	0.24	0/893	0.46	0/1205
10	CK	0.24	0/893	0.46	0/1205
11	AL	0.22	0/969	0.48	0/1300
11	CL	0.22	0/969	0.48	0/1300
12	AM	0.21	0/892	0.45	0/1193
12	CM	0.21	0/884	0.45	0/1181
13	AN	0.24	0/785	0.46	0/1043
13	CN	0.24	0/785	0.46	0/1043
14	AO	0.23	0/722	0.47	0/964
14	CO	0.23	0/722	0.47	0/964
15	AP	0.25	0/659	0.46	0/884
15	CP	0.25	0/648	0.46	0/870
16	AQ	0.23	0/657	0.47	0/881
16	CQ	0.24	0/666	0.47	0/892

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	AR	0.23	0/462	0.45	0/621
17	CR	0.23	0/462	0.45	0/621
18	AS	0.25	0/652	0.46	0/877
18	CS	0.25	0/660	0.47	0/888
19	AT	0.24	0/671	0.40	0/888
19	CT	0.24	0/671	0.40	0/888
20	AB	0.25	0/1735	0.45	0/2338
20	CB	0.25	0/1735	0.45	0/2338
21	AU	0.26	0/430	0.48	0/570
21	CU	0.26	0/430	0.47	0/570
22	BA	0.55	6/2803 (0.2%)	0.83	7/4371 (0.2%)
22	DA	0.56	6/2803 (0.2%)	0.83	7/4371 (0.2%)
23	BB	0.31	8/68314 (0.0%)	0.79	41/106569 (0.0%)
23	DB	0.31	7/68314 (0.0%)	0.79	38/106569 (0.0%)
24	BI	0.24	0/1046	0.47	0/1410
24	DI	0.25	0/1046	0.48	0/1410
25	BC	0.22	0/2121	0.48	0/2852
25	DC	0.22	0/2121	0.48	0/2852
26	BD	0.24	0/1586	0.48	0/2134
26	DD	0.24	0/1586	0.48	0/2134
27	BK	0.24	0/939	0.55	0/1258
27	DK	0.24	0/939	0.55	0/1258
28	BP	0.24	0/929	0.51	0/1242
28	DP	0.24	0/929	0.51	0/1242
29	BE	0.24	0/1571	0.50	0/2113
29	DE	0.24	0/1571	0.50	0/2113
30	BY	0.23	0/453	0.49	0/605
30	DY	0.23	0/453	0.49	0/605
31	B0	0.22	0/450	0.55	0/599
31	D0	0.22	0/450	0.55	0/599
32	B4	0.23	0/303	0.47	0/397
32	D4	0.23	0/303	0.47	0/397
33	B1	0.27	0/416	0.49	0/554
33	D1	0.27	0/416	0.49	0/554
34	B3	0.24	0/513	0.48	0/676
34	D3	0.24	0/513	0.48	0/676
35	BV	0.25	0/766	0.43	0/1025
35	DV	0.25	0/766	0.42	0/1025
36	B2	0.26	0/380	0.46	0/498
36	D2	0.26	0/380	0.46	0/498
37	BL	0.24	0/1054	0.48	0/1403
37	DL	0.23	0/1054	0.48	0/1403
38	BM	0.25	0/1093	0.48	0/1460

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
38	DM	0.25	0/1093	0.48	0/1460
39	BX	0.24	0/510	0.54	0/677
39	DX	0.24	0/510	0.54	0/677
40	BH	0.25	0/1122	0.47	0/1515
40	DH	0.25	0/1122	0.49	0/1515
41	BJ	0.24	0/1152	0.48	0/1551
41	DJ	0.24	0/1152	0.48	0/1551
42	BN	0.24	0/973	0.52	0/1301
42	DN	0.24	0/973	0.52	0/1301
43	BO	0.23	0/902	0.48	0/1209
43	DO	0.23	0/902	0.48	0/1209
44	BQ	0.25	0/960	0.49	0/1278
44	DQ	0.25	0/960	0.49	0/1278
45	BS	0.22	0/864	0.52	0/1156
45	DS	0.22	0/864	0.52	0/1156
46	BU	0.25	0/787	0.47	0/1051
46	DU	0.25	0/787	0.47	0/1051
47	BF	0.26	0/1444	0.51	0/1937
47	DF	0.26	0/1444	0.52	0/1937
48	BG	0.23	0/1343	0.46	0/1816
48	DG	0.23	0/1343	0.46	0/1816
49	BR	0.25	0/829	0.48	0/1107
49	DR	0.25	0/829	0.48	0/1107
50	BT	0.23	0/744	0.55	0/994
50	DT	0.23	0/744	0.55	0/994
51	BZ	0.25	0/635	0.52	0/848
51	DZ	0.25	0/635	0.52	0/848
52	BW	0.28	0/603	0.51	0/797
52	DW	0.27	0/603	0.51	0/797
53	B6	0.23	0/1497	0.48	0/2017
53	D6	0.24	0/1497	0.47	0/2017
All	All	0.29	29/309354 (0.0%)	0.71	109/462003 (0.0%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	AA	0	14
1	CA	0	12
22	BA	0	2

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Mol	Chain	#Chirality outliers	#Planarity outliers
22	DA	0	2
23	BB	0	50
23	DB	0	48
All	All	0	128

All (29) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	BB	1086	A	C5-C6	-16.24	1.26	1.41
23	DB	1086	A	C5-C6	-16.14	1.26	1.41
22	DA	28	C	C2-O2	-14.83	1.11	1.24
22	BA	28	C	C2-O2	-14.74	1.11	1.24
23	DB	2276	G	O3'-P	-14.11	1.44	1.61
23	DB	1088	A	C6-N1	-10.66	1.28	1.35
23	BB	1088	A	C6-N1	-10.60	1.28	1.35
23	BB	2276	G	O3'-P	-10.35	1.48	1.61
22	DA	56	G	C2-N2	10.01	1.44	1.34
22	BA	56	G	C2-N2	9.96	1.44	1.34
22	BA	28	C	N3-C4	-9.82	1.27	1.33
22	DA	28	C	N3-C4	-9.78	1.27	1.33
23	BB	2318	G	O3'-P	9.68	1.72	1.61
22	DA	28	C	N1-C6	-8.22	1.32	1.37
22	BA	28	C	N1-C6	-8.15	1.32	1.37
23	DB	1060	U	C2-N3	7.86	1.43	1.37
23	BB	1060	U	C2-N3	7.85	1.43	1.37
22	BA	28	C	C2-N3	-7.53	1.29	1.35
22	DA	28	C	C2-N3	-7.52	1.29	1.35
23	BB	1086	A	N3-C4	-7.06	1.30	1.34
23	DB	1086	A	N3-C4	-6.86	1.30	1.34
23	DB	2267	A	C5-C6	-6.59	1.35	1.41
23	BB	2267	A	C5-C6	-6.42	1.35	1.41
23	DB	1086	A	N7-C5	-6.28	1.35	1.39
23	BB	1086	A	N7-C5	-6.28	1.35	1.39
22	DA	28	C	C5-C6	-6.05	1.29	1.34
22	BA	28	C	C5-C6	-5.92	1.29	1.34
1	CA	495	A	N3-C4	-5.48	1.31	1.34
1	AA	495	A	N3-C4	-5.38	1.31	1.34

All (109) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DB	2204	G	O5'-P-OP1	-29.74	75.02	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BB	2204	G	O5'-P-OP2	-28.61	76.37	110.70
23	BB	2791	G	O5'-P-OP1	-27.22	78.03	110.70
23	DB	2791	G	O5'-P-OP2	-26.58	78.80	110.70
23	BB	2791	G	O5'-P-OP2	18.87	133.34	110.70
23	DB	2791	G	O5'-P-OP1	18.79	133.25	110.70
23	BB	2204	G	O5'-P-OP1	17.85	132.12	110.70
23	DB	2204	G	O5'-P-OP2	17.59	131.81	110.70
23	BB	2790	U	OP1-P-O3'	14.91	138.00	105.20
23	DB	2790	U	OP2-P-O3'	14.83	137.83	105.20
23	DB	2203	U	OP1-P-O3'	14.37	136.81	105.20
23	BB	2203	U	OP2-P-O3'	14.21	136.47	105.20
22	DA	56	G	N3-C2-N2	8.93	126.15	119.90
22	BA	56	G	N3-C2-N2	8.91	126.14	119.90
23	BB	1552	A	N9-C1'-C2'	-8.88	102.23	112.00
23	DB	1552	A	N9-C1'-C2'	-8.85	102.26	112.00
1	AA	765	G	N9-C1'-C2'	-8.27	102.90	112.00
23	BB	1088	A	N1-C6-N6	-8.24	113.66	118.60
23	DB	1088	A	N1-C6-N6	-8.23	113.66	118.60
1	CA	765	G	N9-C1'-C2'	-8.20	102.97	112.00
23	DB	2323	G	O3'-P-O5'	-8.19	88.44	104.00
23	BB	1439	A	N9-C1'-C2'	-7.95	103.26	112.00
23	DB	1439	A	N9-C1'-C2'	-7.91	103.30	112.00
23	DB	1060	U	C5-C4-O4	-7.28	121.53	125.90
23	BB	1060	U	C5-C4-O4	-7.26	121.54	125.90
23	BB	690	G	C5'-C4'-C3'	-7.24	104.42	116.00
23	BB	1086	A	C4-C5-C6	7.17	120.58	117.00
23	BB	2283	C	O5'-P-OP2	-7.15	99.26	105.70
23	DB	1086	A	C4-C5-C6	7.10	120.55	117.00
1	CA	1049	U	O5'-P-OP1	-6.90	99.49	105.70
23	BB	2733	A	N9-C1'-C2'	-6.75	104.57	112.00
1	CA	1432	G	N9-C1'-C2'	-6.74	104.58	112.00
1	AA	1432	G	N9-C1'-C2'	-6.71	104.62	112.00
23	DB	2733	A	N9-C1'-C2'	-6.69	104.64	112.00
23	DB	690	G	C5'-C4'-C3'	-6.69	105.30	116.00
22	BA	28	C	C5-C6-N1	-6.61	117.70	121.00
23	BB	2894	G	N9-C1'-C2'	-6.60	104.74	112.00
1	AA	1301	U	N1-C1'-C2'	6.60	122.58	114.00
23	DB	2894	G	N9-C1'-C2'	-6.59	104.75	112.00
1	CA	1301	U	N1-C1'-C2'	6.58	122.56	114.00
22	DA	28	C	C5-C6-N1	-6.53	117.73	121.00
22	DA	27	C	C5'-C4'-C3'	-6.51	105.59	116.00
23	DB	2619	C	C5'-C4'-C3'	-6.48	105.63	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BB	2790	U	O3'-P-O5'	-6.45	91.74	104.00
23	BB	2759	G	C5'-C4'-C3'	-6.42	105.72	116.00
23	BB	1088	A	C5-C6-N6	6.37	128.80	123.70
23	DB	1088	A	C5-C6-N6	6.35	128.78	123.70
22	DA	56	G	N1-C2-N2	-6.33	110.50	116.20
23	BB	2323	G	P-O3'-C3'	6.33	127.29	119.70
1	CA	1424	U	C5'-C4'-C3'	-6.32	105.89	116.00
22	BA	56	G	N1-C2-N2	-6.31	110.53	116.20
23	DB	2790	U	O3'-P-O5'	-6.26	92.10	104.00
23	BB	1086	A	C6-C5-N7	-6.18	127.97	132.30
23	DB	1086	A	C6-C5-N7	-6.14	128.00	132.30
22	BA	27	C	C5'-C4'-C3'	-6.04	106.34	116.00
23	DB	2203	U	O3'-P-O5'	-5.95	92.69	104.00
23	DB	508	A	C4'-C3'-O3'	-5.93	96.95	109.40
23	BB	2746	U	C4'-C3'-O3'	5.90	124.81	113.00
1	CA	1250	A	C5'-C4'-C3'	5.89	125.43	116.00
23	BB	2323	G	O3'-P-O5'	-5.88	92.83	104.00
23	DB	131	A	C5'-C4'-C3'	5.87	125.39	116.00
23	BB	1043	C	C4'-C3'-O3'	5.87	124.74	113.00
23	BB	1126	A	C5'-C4'-C3'	-5.87	106.61	116.00
23	DB	1047	G	C5'-C4'-C3'	-5.85	106.64	116.00
23	BB	2480	C	C5'-C4'-C3'	5.83	125.33	116.00
23	DB	2267	A	C5-C6-N6	-5.82	119.04	123.70
23	BB	2267	A	C5-C6-N6	-5.82	119.04	123.70
22	BA	28	C	N3-C2-O2	-5.77	117.86	121.90
22	DA	28	C	N3-C2-O2	-5.74	117.88	121.90
23	DB	2267	A	C4-N9-C1'	5.74	136.63	126.30
23	BB	2267	A	C4-N9-C1'	5.73	136.61	126.30
23	DB	2480	C	C5'-C4'-C3'	5.72	125.16	116.00
23	DB	1397	U	C5'-C4'-C3'	-5.69	106.89	116.00
23	BB	2108	A	C4'-C3'-O3'	5.67	124.33	113.00
23	BB	1060	U	N1-C2-O2	-5.66	118.84	122.80
22	DA	28	C	C2-N3-C4	-5.65	117.07	119.90
23	DB	1118	C	C4'-C3'-O3'	5.65	124.30	113.00
23	BB	1086	A	C2-N3-C4	-5.64	107.78	110.60
22	BA	28	C	C2-N3-C4	-5.63	117.08	119.90
23	DB	1060	U	N1-C2-O2	-5.62	118.86	122.80
23	BB	508	A	C4'-C3'-O3'	-5.58	97.68	109.40
23	DB	1086	A	C2-N3-C4	-5.58	107.81	110.60
23	DB	2324	U	P-O5'-C5'	5.50	129.70	120.90
23	BB	1397	U	C5'-C4'-C3'	-5.49	107.22	116.00
1	AA	1250	A	C5'-C4'-C3'	5.45	124.72	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BB	278	A	C5'-C4'-C3'	-5.43	107.31	116.00
1	CA	1534	A	C2'-C3'-O3'	-5.42	97.57	109.50
23	BB	2272	U	C5-C4-O4	-5.41	122.66	125.90
23	BB	2203	U	O3'-P-O5'	-5.40	93.74	104.00
23	BB	1060	U	N3-C2-O2	5.35	125.95	122.20
1	CA	1049	U	C5'-C4'-O4'	5.31	115.47	109.10
23	DB	2267	A	C8-N9-C1'	-5.30	118.16	127.70
23	BB	2267	A	C8-N9-C1'	-5.28	118.20	127.70
23	DB	2272	U	C5-C4-O4	-5.27	122.74	125.90
1	CA	434	U	C5'-C4'-C3'	-5.26	107.58	116.00
23	DB	1060	U	N3-C2-O2	5.26	125.88	122.20
23	DB	544	C	C4'-C3'-O3'	5.24	123.47	113.00
22	DA	28	C	O4'-C1'-N1	5.23	112.38	108.20
22	BA	28	C	O4'-C1'-N1	5.18	112.34	108.20
23	DB	1350	C	C5'-C4'-C3'	-5.17	107.72	116.00
23	DB	1126	A	C5'-C4'-O4'	5.17	115.30	109.10
23	BB	72	U	C5'-C4'-C3'	-5.15	107.76	116.00
1	AA	1397	C	C5'-C4'-C3'	-5.14	107.77	116.00
23	BB	479	A	C4'-C3'-O3'	-5.11	98.67	109.40
1	AA	86	G	N9-C1'-C2'	5.07	120.60	114.00
23	BB	2903	U	C4'-C3'-O3'	5.06	123.12	113.00
23	BB	2745	C	C5'-C4'-C3'	-5.06	107.91	116.00
1	CA	855	U	C5'-C4'-C3'	-5.00	107.99	116.00
23	DB	2282	G	C5'-C4'-C3'	-5.00	108.00	116.00

There are no chirality outliers.

All (128) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	AA	1048	G	Sidechain
1	AA	1331	G	Sidechain
1	AA	1432	G	Sidechain
1	AA	1441	A	Sidechain
1	AA	187	G	Sidechain
1	AA	281	G	Sidechain
1	AA	324	G	Sidechain
1	AA	437	U	Sidechain
1	AA	438	U	Sidechain
1	AA	496	A	Sidechain
1	AA	575	G	Sidechain
1	AA	703	G	Sidechain
1	AA	78	A	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	86	G	Sidechain
22	BA	28	C	Sidechain
22	BA	56	G	Sidechain
23	BB	1047	G	Sidechain
23	BB	1060	U	Sidechain
23	BB	1086	A	Sidechain
23	BB	1088	A	Sidechain
23	BB	1111	A	Sidechain
23	BB	1247	A	Sidechain
23	BB	1377	G	Sidechain
23	BB	1426	G	Sidechain
23	BB	1432	G	Sidechain
23	BB	1439	A	Sidechain
23	BB	1476	U	Sidechain
23	BB	1546	G	Sidechain
23	BB	1572	A	Sidechain
23	BB	1722	A	Sidechain
23	BB	1734	G	Sidechain
23	BB	1814	G	Sidechain
23	BB	1828	G	Sidechain
23	BB	2062	A	Sidechain
23	BB	2108	A	Sidechain
23	BB	221	A	Sidechain
23	BB	222	A	Sidechain
23	BB	2272	U	Sidechain
23	BB	2279	G	Sidechain
23	BB	232	G	Sidechain
23	BB	2446	G	Sidechain
23	BB	2454	G	Sidechain
23	BB	2471	A	Sidechain
23	BB	2480	C	Sidechain
23	BB	2503	A	Sidechain
23	BB	2508	G	Sidechain
23	BB	2587	A	Sidechain
23	BB	2638	G	Sidechain
23	BB	2733	A	Sidechain
23	BB	2770	G	Sidechain
23	BB	2834	G	Sidechain
23	BB	2848	G	Sidechain
23	BB	2857	G	Sidechain
23	BB	2868	A	Sidechain
23	BB	2883	A	Sidechain

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Mol	Chain	Res	Type	Group
23	BB	2890	G	Sidechain
23	BB	299	A	Sidechain
23	BB	361	G	Sidechain
23	BB	370	G	Sidechain
23	BB	500	G	Sidechain
23	BB	51	G	Sidechain
23	BB	562	U	Sidechain
23	BB	630	G	Sidechain
23	BB	727	A	Sidechain
23	BB	729	G	Sidechain
23	BB	757	G	Sidechain
1	CA	1048	G	Sidechain
1	CA	1331	G	Sidechain
1	CA	1432	G	Sidechain
1	CA	1441	A	Sidechain
1	CA	187	G	Sidechain
1	CA	281	G	Sidechain
1	CA	324	G	Sidechain
1	CA	437	U	Sidechain
1	CA	438	U	Sidechain
1	CA	496	A	Sidechain
1	CA	575	G	Sidechain
1	CA	703	G	Sidechain
22	DA	28	C	Sidechain
22	DA	56	G	Sidechain
23	DB	1047	G	Sidechain
23	DB	1060	U	Sidechain
23	DB	1086	A	Sidechain
23	DB	1088	A	Sidechain
23	DB	1247	A	Sidechain
23	DB	1377	G	Sidechain
23	DB	1426	G	Sidechain
23	DB	1432	G	Sidechain
23	DB	1439	A	Sidechain
23	DB	1476	U	Sidechain
23	DB	1546	G	Sidechain
23	DB	1572	A	Sidechain
23	DB	1722	A	Sidechain
23	DB	1734	G	Sidechain
23	DB	1814	G	Sidechain
23	DB	1828	G	Sidechain
23	DB	2062	A	Sidechain

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Mol	Chain	Res	Type	Group
23	DB	2107	G	Sidechain
23	DB	221	A	Sidechain
23	DB	222	A	Sidechain
23	DB	2272	U	Sidechain
23	DB	2279	G	Sidechain
23	DB	232	G	Sidechain
23	DB	2446	G	Sidechain
23	DB	2454	G	Sidechain
23	DB	2471	A	Sidechain
23	DB	2480	C	Sidechain
23	DB	2503	A	Sidechain
23	DB	2508	G	Sidechain
23	DB	2587	A	Sidechain
23	DB	2638	G	Sidechain
23	DB	2733	A	Sidechain
23	DB	2770	G	Sidechain
23	DB	2834	G	Sidechain
23	DB	2848	G	Sidechain
23	DB	2857	G	Sidechain
23	DB	2868	A	Sidechain
23	DB	2883	A	Sidechain
23	DB	2890	G	Sidechain
23	DB	299	A	Sidechain
23	DB	370	G	Sidechain
23	DB	500	G	Sidechain
23	DB	51	G	Sidechain
23	DB	562	U	Sidechain
23	DB	630	G	Sidechain
23	DB	727	A	Sidechain
23	DB	729	G	Sidechain
23	DB	757	G	Sidechain

5.2 Too-close contacts

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	32831	0	16521	1250	0
1	CA	32831	0	16521	1242	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	AC	1624	0	1699	139	0
2	CC	1624	0	1699	141	0
3	AD	1643	0	1710	173	0
3	CD	1643	0	1710	170	0
4	AE	1105	0	1148	99	0
4	CE	1105	0	1148	104	0
5	AF	817	0	808	83	0
5	CF	817	0	808	80	0
6	AG	1174	0	1230	115	0
6	CG	1196	0	1246	98	0
7	AH	979	0	1034	94	0
7	CH	979	0	1034	90	0
8	AI	1022	0	1070	142	0
8	CI	1022	0	1070	134	0
9	AJ	786	0	828	79	0
9	CJ	786	0	828	85	0
10	AK	877	0	887	108	0
10	CK	877	0	887	99	0
11	AL	955	0	1019	82	0
11	CL	955	0	1019	82	0
12	AM	883	0	944	105	0
12	CM	876	0	937	108	0
13	AN	774	0	827	113	0
13	CN	774	0	827	117	0
14	AO	714	0	734	47	0
14	CO	714	0	734	48	0
15	AP	649	0	666	51	0
15	CP	638	0	656	53	0
16	AQ	648	0	691	58	0
16	CQ	657	0	702	61	0
17	AR	455	0	478	45	0
17	CR	455	0	478	49	0
18	AS	637	0	665	89	0
18	CS	644	0	675	88	0
19	AT	665	0	714	58	0
19	CT	665	0	714	55	0
20	AB	1704	0	1732	189	0
20	CB	1704	0	1732	206	0
21	AU	425	0	449	77	0
21	CU	425	0	449	70	0
22	BA	2507	0	1270	119	0
22	DA	2507	0	1270	119	1

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
23	BB	60995	0	30679	2401	0
23	DB	60995	0	30677	2528	1
24	BI	1032	0	1088	117	0
24	DI	1032	0	1088	185	0
25	BC	2082	0	2157	254	0
25	DC	2082	0	2157	253	0
26	BD	1565	0	1616	196	0
26	DD	1565	0	1616	200	0
27	BK	930	0	1000	107	0
27	DK	930	0	1000	114	0
28	BP	917	0	965	102	0
28	DP	917	0	965	99	0
29	BE	1552	0	1619	211	0
29	DE	1552	0	1619	196	0
30	BY	449	0	491	51	0
30	DY	449	0	491	51	0
31	B0	444	0	461	56	0
31	D0	444	0	461	53	0
32	B4	302	0	340	34	0
32	D4	302	0	341	40	0
33	B1	409	0	440	48	0
33	D1	409	0	440	44	0
34	B3	504	0	574	51	0
34	D3	504	0	574	52	0
35	BV	753	0	780	90	0
35	DV	753	0	780	101	0
36	B2	377	0	418	36	0
36	D2	377	0	418	38	0
37	BL	1045	0	1117	163	0
37	DL	1045	0	1117	163	0
38	BM	1074	0	1157	117	0
38	DM	1074	0	1157	121	0
39	BX	509	0	543	70	0
39	DX	509	0	543	66	0
40	BH	1111	0	1148	207	0
40	DH	1111	0	1148	144	0
41	BJ	1129	0	1162	144	0
41	DJ	1129	0	1162	146	0
42	BN	960	0	1000	123	0
42	DN	960	0	1000	121	0
43	BO	892	0	923	104	0
43	DO	892	0	923	113	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
44	BQ	947	0	1022	156	0
44	DQ	947	0	1022	160	0
45	BS	857	0	922	106	0
45	DS	857	0	922	109	0
46	BU	779	0	834	117	0
46	DU	779	0	834	116	0
47	BF	1420	0	1460	236	0
47	DF	1420	0	1460	248	0
48	BG	1323	0	1374	200	0
48	DG	1323	0	1374	195	0
49	BR	816	0	839	124	0
49	DR	816	0	839	127	0
50	BT	738	0	807	120	0
50	DT	738	0	807	116	0
51	BZ	625	0	652	77	0
51	DZ	625	0	652	71	0
52	BW	596	0	610	124	0
52	DW	596	0	610	130	0
53	B6	1478	0	1526	187	0
53	D6	1478	0	1526	166	0
54	AA	60	0	0	0	0
54	BB	110	0	0	0	0
54	CA	61	0	0	0	0
54	CE	1	0	0	0	0
54	DB	111	0	0	0	0
55	AA	42	0	45	3	0
55	BB	42	0	45	1	0
55	CA	42	0	45	2	0
55	DB	42	0	45	1	0
56	B4	1	0	0	0	0
56	D4	1	0	0	0	0
57	AA	291	0	0	5	0
57	AL	3	0	0	0	0
57	AN	4	0	0	0	0
57	AT	2	0	0	0	0
57	BB	495	0	0	8	0
57	BC	6	0	0	0	0
57	BD	1	0	0	0	0
57	BE	2	0	0	0	0
57	BL	1	0	0	0	0
57	BT	1	0	0	0	0
57	CA	296	0	0	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
57	CE	3	0	0	0	0
57	CL	4	0	0	0	0
57	CN	4	0	0	0	0
57	CP	1	0	0	0	0
57	CT	1	0	0	0	0
57	DB	502	0	0	15	0
57	DC	4	0	0	0	0
57	DD	1	0	0	0	0
57	DE	1	0	0	0	0
57	DL	2	0	0	0	0
57	DQ	1	0	0	0	0
57	DR	1	0	0	0	0
All	All	287128	0	193895	17520	1

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 37.

All (17520) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1099:G:H8	24:DI:3:LYS:N	1.37	1.19
49:DR:60:LYS:H	49:DR:100:GLY:HA3	1.08	1.15
40:BH:31:VAL:HB	40:BH:32:PRO:HD2	1.28	1.15
2:CC:126:ARG:HH22	2:CC:190:THR:HG23	1.09	1.14
50:DT:5:GLU:HA	50:DT:8:LEU:HB2	1.30	1.13
2:AC:126:ARG:HH22	2:AC:190:THR:HG23	1.08	1.13
50:BT:5:GLU:HA	50:BT:8:LEU:HB2	1.28	1.12
49:BR:60:LYS:H	49:BR:100:GLY:HA3	1.09	1.10
10:CK:124:LYS:HA	21:CU:34:ARG:HB3	1.33	1.10
40:DH:31:VAL:HB	40:DH:32:PRO:HD2	1.29	1.09
10:AK:124:LYS:HA	21:AU:34:ARG:HB3	1.34	1.09
23:BB:855:G:H21	52:BW:23:LYS:HG2	1.14	1.08
25:BC:129:LEU:HD23	25:BC:130:PRO:HD2	1.33	1.08
23:DB:1099:G:C8	24:DI:3:LYS:N	2.22	1.07
52:BW:17:ALA:HA	52:BW:35:ILE:HG23	1.34	1.07
52:DW:39:GLN:HG3	52:DW:42:THR:HB	1.35	1.06
25:BC:77:VAL:HG23	25:BC:112:GLY:H	1.21	1.05
48:BG:43:LYS:HB2	48:BG:50:THR:HB	1.38	1.05
40:DH:133:GLN:HB3	40:DH:139:PHE:HB3	1.39	1.05
25:DC:129:LEU:HD23	25:DC:130:PRO:HD2	1.37	1.05
44:BQ:30:VAL:HG13	44:BQ:31:TYR:H	1.14	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AK:33:ILE:HB	10:AK:73:VAL:HG11	1.38	1.04
25:DC:77:VAL:HG23	25:DC:112:GLY:H	1.22	1.04
21:CU:36:PHE:HB3	21:CU:40:PRO:HD3	1.39	1.04
48:BG:89:VAL:HB	48:BG:159:LYS:HA	1.36	1.04
44:DQ:30:VAL:HG13	44:DQ:31:TYR:H	1.15	1.04
52:BW:39:GLN:HG3	52:BW:42:THR:HB	1.35	1.04
9:CJ:9:ARG:HB2	9:CJ:99:GLN:HB3	1.40	1.04
23:DB:1098:A:H3'	24:DI:3:LYS:HA	1.40	1.03
52:DW:17:ALA:HA	52:DW:35:ILE:HG23	1.35	1.03
47:BF:62:GLN:HE22	47:BF:90:LEU:HD13	1.22	1.03
34:B3:49:VAL:HG21	34:B3:54:LEU:HD13	1.39	1.03
6:AG:149:ALA:HB2	10:AK:55:ARG:HE	1.17	1.03
21:AU:36:PHE:HB3	21:AU:40:PRO:HD3	1.38	1.03
1:CA:932:C:H5''	6:CG:3:ARG:HD2	1.40	1.02
10:CK:33:ILE:HB	10:CK:73:VAL:HG11	1.40	1.02
27:DK:35:VAL:HG23	27:DK:36:GLY:H	1.22	1.02
23:DB:1099:G:O5'	24:DI:4:VAL:N	1.91	1.02
48:DG:43:LYS:HB2	48:DG:50:THR:HB	1.40	1.02
25:BC:144:GLU:HA	25:BC:151:GLY:HA2	1.42	1.01
1:CA:1533:C:H2'	1:CA:1534:A:H3'	1.41	1.01
37:DL:123:ARG:HA	37:DL:143:GLU:HB3	1.42	1.01
37:BL:123:ARG:HA	37:BL:143:GLU:HB3	1.42	1.01
5:CF:92:THR:HG22	5:CF:94:HIS:H	1.25	1.01
20:AB:163:ILE:HG23	20:AB:164:ASP:H	1.26	1.00
16:AQ:6:THR:HG22	16:AQ:61:ARG:HB3	1.42	1.00
48:DG:89:VAL:HB	48:DG:159:LYS:HA	1.40	1.00
40:BH:116:ARG:HB2	40:BH:133:GLN:HB2	1.44	1.00
23:DB:1098:A:H3'	24:DI:3:LYS:CA	1.90	1.00
25:DC:144:GLU:HA	25:DC:151:GLY:HA2	1.40	1.00
34:D3:49:VAL:HG21	34:D3:54:LEU:HD13	1.43	1.00
27:BK:35:VAL:HG23	27:BK:36:GLY:H	1.24	1.00
26:BD:5:VAL:H	26:BD:32:ASN:HD21	1.06	1.00
16:CQ:6:THR:HG22	16:CQ:61:ARG:HB3	1.44	0.99
53:D6:92:PRO:HA	53:D6:101:ILE:HG12	1.44	0.99
47:DF:62:GLN:HE22	47:DF:90:LEU:HD13	1.24	0.99
52:DW:51:GLY:HA3	52:DW:59:PHE:HB2	1.45	0.99
53:B6:32:ARG:HE	53:B6:37:LEU:HD23	1.24	0.99
23:DB:855:G:H21	52:DW:23:LYS:HG2	1.27	0.99
23:DB:1420:A:H2'	23:DB:2211:A:H62	1.28	0.99
23:DB:812:C:H4'	44:DQ:12:ARG:HH22	1.25	0.99
40:BH:82:SER:H	40:BH:146:VAL:HG13	1.26	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:20:ILE:HA	8:CI:62:LEU:HD12	1.45	0.98
47:DF:115:GLY:HA3	47:DF:177:ARG:HD2	1.45	0.98
53:B6:77:LYS:HE2	53:B6:94:ASN:HD21	1.23	0.98
38:DM:59:ARG:HH11	38:DM:60:GLN:HB3	1.27	0.98
1:CA:1348:U:H4'	8:CI:121:ARG:HG3	1.43	0.98
41:BJ:17:VAL:HG23	41:BJ:137:PRO:HB2	1.44	0.98
25:DC:196:ASN:HD22	25:DC:199:HIS:HB2	1.29	0.98
44:DQ:63:ARG:HH12	44:DQ:96:ASP:HB2	1.28	0.97
20:CB:163:ILE:HG23	20:CB:164:ASP:H	1.28	0.97
27:DK:47:ILE:HG12	27:DK:48:PRO:HD2	1.46	0.97
8:AI:20:ILE:HA	8:AI:62:LEU:HD12	1.43	0.97
1:AA:1348:U:H4'	8:AI:121:ARG:HG3	1.42	0.97
9:AJ:9:ARG:HB2	9:AJ:99:GLN:HB3	1.43	0.97
5:AF:92:THR:HG22	5:AF:94:HIS:H	1.26	0.97
28:DP:63:ILE:HA	28:DP:68:GLY:HA2	1.46	0.97
51:DZ:5:CYS:HB3	51:DZ:10:LYS:H	1.30	0.97
53:B6:42:LYS:HA	53:B6:51:PRO:HA	1.43	0.96
35:DV:62:THR:HA	35:DV:71:LYS:HA	1.48	0.96
38:BM:59:ARG:HH11	38:BM:60:GLN:HB3	1.31	0.95
47:BF:36:ASN:HA	47:BF:87:LYS:HA	1.49	0.95
47:DF:71:LYS:HE2	47:DF:73:VAL:HB	1.47	0.95
30:DY:8:GLN:HG2	30:DY:31:ILE:HA	1.47	0.95
23:BB:100:U:O2	23:BB:100:U:H2'	1.65	0.95
27:BK:47:ILE:HG12	27:BK:48:PRO:HD2	1.49	0.95
1:CA:1493:A:H2'	23:DB:1913:A:H61	1.31	0.95
53:B6:55:ILE:HG23	53:B6:56:ALA:H	1.29	0.95
25:BC:128:THR:HA	25:BC:190:THR:HA	1.48	0.95
23:BB:1420:A:H2'	23:BB:2211:A:H62	1.28	0.95
23:BB:141:G:H1	50:BT:2:ILE:HD12	1.32	0.95
26:DD:5:VAL:H	26:DD:32:ASN:HD21	1.05	0.95
1:AA:981:U:H4'	13:AN:60:ARG:HD2	1.48	0.95
35:BV:62:THR:HA	35:BV:71:LYS:HA	1.49	0.94
53:D6:35:PRO:HD3	53:D6:60:ALA:HB2	1.48	0.94
53:D6:84:ARG:H	53:D6:84:ARG:HE	1.13	0.94
28:BP:63:ILE:HA	28:BP:68:GLY:HA2	1.47	0.94
37:DL:79:LEU:HG	37:DL:112:LEU:HA	1.49	0.94
38:DM:17:ASN:HD21	38:DM:95:LEU:HG	1.32	0.94
51:DZ:40:VAL:HG21	51:DZ:43:GLU:HB3	1.46	0.94
47:BF:115:GLY:HA3	47:BF:177:ARG:HD2	1.49	0.94
41:DJ:17:VAL:HG23	41:DJ:137:PRO:HB2	1.46	0.94
53:B6:67:VAL:HB	53:B6:98:ALA:HB1	1.50	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:45:ASP:HB3	47:DF:48:LEU:HD22	1.50	0.94
13:CN:68:ARG:HB3	13:CN:68:ARG:HH11	1.31	0.94
23:DB:142:A:H2'	23:DB:143:C:C6	2.03	0.94
45:DS:3:THR:HB	45:DS:62:ASP:HB2	1.50	0.93
50:DT:53:VAL:HG11	50:DT:87:LEU:HD13	1.47	0.93
45:BS:3:THR:HB	45:BS:62:ASP:HB2	1.48	0.93
43:DO:53:THR:HB	43:DO:65:THR:HG22	1.50	0.93
2:AC:63:ILE:HD12	2:AC:98:ALA:HB2	1.49	0.93
48:DG:34:ARG:HH11	48:DG:34:ARG:H	1.17	0.93
52:BW:51:GLY:HA3	52:BW:59:PHE:HB2	1.50	0.93
1:AA:1296:C:H4'	1:AA:1302:C:H41	1.30	0.93
23:DB:2393:U:H5''	37:DL:62:PRO:HG3	1.50	0.93
29:DE:58:LYS:H	29:DE:58:LYS:NZ	1.67	0.93
1:AA:600:A:H5''	7:AH:88:LYS:HD2	1.51	0.93
1:CA:600:A:H5''	7:CH:88:LYS:HD2	1.51	0.93
29:BE:108:ILE:HD11	29:BE:181:ILE:HB	1.50	0.93
25:DC:128:THR:HA	25:DC:190:THR:HA	1.51	0.93
30:DY:16:LEU:H	30:DY:16:LEU:HD22	1.32	0.93
38:BM:17:ASN:HD21	38:BM:95:LEU:HG	1.34	0.93
42:DN:37:THR:HG22	42:DN:39:PRO:HD2	1.50	0.93
38:DM:35:ALA:HB3	38:DM:99:GLY:H	1.33	0.93
52:DW:24:ARG:HA	52:DW:66:VAL:H	1.33	0.92
53:B6:66:LEU:HD12	53:B6:103:ILE:HD11	1.48	0.92
23:DB:2548:U:H1'	27:DK:23:LYS:NZ	1.84	0.92
1:CA:981:U:H4'	13:CN:60:ARG:HD2	1.47	0.92
50:BT:53:VAL:HG11	50:BT:87:LEU:HD13	1.50	0.92
47:DF:36:ASN:HA	47:DF:87:LYS:HA	1.50	0.92
1:CA:1296:C:H4'	1:CA:1302:C:H41	1.32	0.92
25:DC:76:VAL:HG12	25:DC:114:GLN:HG2	1.52	0.92
44:BQ:63:ARG:HH12	44:BQ:96:ASP:HB2	1.33	0.92
48:BG:34:ARG:H	48:BG:34:ARG:HH11	1.17	0.92
47:DF:147:ARG:HD2	47:DF:148:VAL:HG22	1.51	0.92
3:CD:25:ARG:HH11	3:CD:26:ALA:H	1.16	0.92
22:DA:2:G:H2'	22:DA:3:C:C6	2.05	0.92
1:CA:1328:C:H5''	12:CM:27:THR:HG21	1.50	0.92
40:BH:100:ALA:HB3	40:BH:112:LYS:HA	1.50	0.92
7:CH:86:LYS:HD2	7:CH:90:GLU:HG2	1.50	0.92
51:BZ:5:CYS:HB3	51:BZ:10:LYS:H	1.35	0.92
13:AN:68:ARG:HB3	13:AN:68:ARG:HH11	1.33	0.92
25:BC:76:VAL:HG12	25:BC:114:GLN:HG2	1.52	0.91
46:DU:84:PHE:O	46:DU:85:ARG:HB2	1.70	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1328:C:H5'	12:AM:27:THR:HG21	1.53	0.91
40:DH:77:THR:HG22	40:DH:143:ILE:HB	1.49	0.91
46:BU:84:PHE:O	46:BU:85:ARG:HB2	1.69	0.91
53:B6:129:ILE:HA	53:B6:132:ILE:HD12	1.52	0.91
48:BG:15:ASP:HB2	48:BG:26:LYS:H	1.35	0.91
47:BF:71:LYS:HE2	47:BF:73:VAL:HB	1.49	0.91
42:BN:37:THR:HG22	42:BN:39:PRO:HD2	1.53	0.91
12:AM:106:ARG:HH12	12:AM:109:LYS:HD2	1.36	0.91
34:D3:37:THR:HA	34:D3:40:LYS:HE2	1.53	0.91
53:D6:38:LEU:HD22	53:D6:83:ILE:HD12	1.51	0.91
7:AH:86:LYS:HD2	7:AH:90:GLU:HG2	1.52	0.91
25:BC:64:VAL:O	25:BC:65:ASP:HB3	1.71	0.90
43:BO:53:THR:HB	43:BO:65:THR:HG22	1.53	0.90
23:BB:79:C:HO2'	23:BB:346:A:H1'	1.37	0.90
30:BY:8:GLN:HG2	30:BY:31:ILE:HA	1.52	0.90
47:DF:42:ALA:HA	47:DF:48:LEU:HD21	1.52	0.90
3:AD:25:ARG:HH11	3:AD:26:ALA:H	1.18	0.90
52:BW:24:ARG:HA	52:BW:66:VAL:H	1.33	0.90
23:BB:1203:U:H1'	37:BL:4:ASN:HD21	1.33	0.90
1:AA:1206:G:H4'	2:AC:192:TYR:HA	1.51	0.90
30:BY:16:LEU:H	30:BY:16:LEU:HD22	1.34	0.90
53:B6:44:GLU:HA	53:B6:49:HIS:HA	1.52	0.90
51:BZ:40:VAL:HG21	51:BZ:43:GLU:HB3	1.50	0.90
33:B1:26:LYS:HD3	33:B1:52:LYS:HB3	1.53	0.90
1:AA:411:A:H62	1:AA:413:G:H21	1.20	0.90
20:AB:162:VAL:HG13	20:AB:184:ALA:HB2	1.54	0.90
50:BT:39:THR:HG22	50:BT:42:GLU:HG2	1.52	0.90
42:BN:83:LEU:HA	42:BN:86:ARG:HB2	1.52	0.90
23:DB:1060:U:N3	23:DB:1088:A:N7	2.20	0.90
23:BB:855:G:N2	52:BW:23:LYS:HG2	1.85	0.90
34:B3:37:THR:HA	34:B3:40:LYS:HE2	1.51	0.90
23:BB:670:A:H4'	23:BB:671:C:H5'	1.52	0.89
23:BB:1060:U:N3	23:BB:1088:A:N7	2.20	0.89
1:CA:1060:U:H4'	9:CJ:54:SER:HB2	1.54	0.89
47:BF:42:ALA:HA	47:BF:48:LEU:HD21	1.52	0.89
37:BL:51:GLU:HG3	37:BL:56:PRO:HA	1.54	0.89
1:CA:1206:G:H4'	2:CC:192:TYR:HA	1.54	0.89
47:BF:45:ASP:HB3	47:BF:48:LEU:HD22	1.53	0.89
12:CM:52:ILE:HG23	12:CM:56:ARG:HH12	1.38	0.89
1:AA:1277:C:HO2'	1:AA:1279:G:H8	1.19	0.89
5:AF:29:ILE:HG21	5:AF:64:VAL:HG11	1.54	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:95:PHE:HE1	46:DU:102:ILE:HB	1.37	0.89
40:BH:31:VAL:HB	40:BH:32:PRO:CD	2.02	0.89
47:DF:43:ILE:HG23	47:DF:44:ALA:H	1.35	0.89
47:BF:43:ILE:HG23	47:BF:44:ALA:H	1.36	0.89
40:BH:84:ALA:HA	40:BH:90:LEU:HA	1.54	0.89
47:BF:11:VAL:HG12	47:BF:12:VAL:H	1.37	0.89
40:BH:7:ASP:HA	40:BH:15:LEU:HD22	1.53	0.89
40:DH:31:VAL:HB	40:DH:32:PRO:CD	2.03	0.89
52:DW:49:ASN:HB3	52:DW:81:ILE:HG12	1.54	0.89
37:BL:79:LEU:HG	37:BL:112:LEU:HA	1.53	0.89
23:BB:812:C:H4'	44:BQ:12:ARG:HH22	1.35	0.89
23:BB:1076:C:H4'	24:BI:94:LYS:HE3	1.53	0.89
40:BH:116:ARG:HB3	40:BH:131:SER:HB2	1.54	0.89
25:BC:180:MET:HB3	25:BC:267:VAL:HB	1.53	0.89
23:DB:1099:G:H8	24:DI:3:LYS:H	1.00	0.89
2:CC:126:ARG:NH2	2:CC:190:THR:HG23	1.88	0.89
40:BH:81:ALA:HA	40:BH:146:VAL:HA	1.55	0.89
23:BB:322:A:H3'	29:BE:163:ASN:HD21	1.36	0.89
42:DN:83:LEU:HA	42:DN:86:ARG:HB2	1.52	0.89
23:BB:1458:U:H5''	23:BB:1459:G:H5'	1.55	0.89
40:DH:84:ALA:HB1	40:DH:88:GLY:HA2	1.53	0.89
40:DH:5:LEU:HD13	40:DH:13:GLY:HA2	1.54	0.89
48:DG:15:ASP:HB2	48:DG:26:LYS:H	1.38	0.88
43:DO:88:LYS:HE2	43:DO:116:GLN:HB2	1.54	0.88
40:DH:7:ASP:HA	40:DH:15:LEU:HD22	1.55	0.88
47:BF:147:ARG:HD2	47:BF:148:VAL:HG22	1.54	0.88
1:AA:1060:U:H4'	9:AJ:54:SER:HB2	1.55	0.88
1:AA:812:G:HO2'	1:AA:813:U:H6	0.92	0.88
38:BM:35:ALA:HB3	38:BM:99:GLY:H	1.37	0.88
2:AC:76:ILE:HA	2:AC:83:VAL:HG23	1.56	0.88
25:BC:105:ALA:HB1	25:BC:109:LEU:HD12	1.55	0.88
45:DS:76:VAL:HG12	45:DS:103:ILE:HA	1.53	0.88
5:CF:29:ILE:HG21	5:CF:64:VAL:HG11	1.53	0.88
2:CC:63:ILE:HD12	2:CC:98:ALA:HB2	1.53	0.88
49:DR:7:SER:HB2	49:DR:22:LEU:HB3	1.55	0.88
42:BN:101:GLY:HA2	42:BN:110:MET:H	1.38	0.88
4:AE:37:VAL:HG11	4:AE:113:VAL:HG12	1.56	0.88
29:BE:5:LEU:HD12	29:BE:10:SER:HB2	1.53	0.88
25:DC:144:GLU:HG3	25:DC:151:GLY:H	1.38	0.88
29:DE:59:PRO:HB2	29:DE:67:ARG:HH22	1.35	0.88
23:DB:1168:G:H2'	23:DB:1169:A:C8	2.08	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1141:U:H4'	23:DB:1142:A:O4'	1.73	0.87
47:DF:11:VAL:HG12	47:DF:12:VAL:H	1.38	0.87
25:BC:196:ASN:HD22	25:BC:199:HIS:HB2	1.38	0.87
53:D6:74:ASN:H	53:D6:74:ASN:HD22	1.19	0.87
1:CA:411:A:H62	1:CA:413:G:H21	1.21	0.87
35:BV:80:HIS:HD2	35:BV:82:TYR:H	1.20	0.87
29:DE:108:ILE:HD11	29:DE:181:ILE:HB	1.55	0.87
43:BO:88:LYS:HE2	43:BO:116:GLN:HB2	1.54	0.87
2:AC:126:ARG:NH2	2:AC:190:THR:HG23	1.88	0.87
7:AH:36:ALA:HA	7:AH:39:LEU:HD12	1.55	0.87
23:BB:2305:U:H5''	47:BF:130:GLY:HA3	1.57	0.87
10:AK:111:ASP:HB2	21:AU:19:LYS:HE3	1.57	0.87
41:DJ:25:LEU:HD22	41:DJ:26:GLY:H	1.39	0.87
24:BI:27:LEU:HD23	24:BI:27:LEU:H	1.39	0.87
12:CM:106:ARG:HH12	12:CM:109:LYS:HD2	1.38	0.87
23:DB:1019:U:H2'	23:DB:1020:A:C8	2.09	0.87
47:BF:65:LEU:H	47:BF:88:VAL:HG22	1.40	0.86
20:CB:162:VAL:HG13	20:CB:184:ALA:HB2	1.55	0.86
4:CE:131:ASN:HD21	4:CE:133:ILE:HB	1.38	0.86
38:BM:121:ALA:HA	38:BM:124:LEU:HD12	1.54	0.86
41:BJ:25:LEU:HD22	41:BJ:26:GLY:H	1.40	0.86
23:BB:2306:C:H3'	23:BB:2307:G:C5'	2.04	0.86
10:AK:34:THR:HB	10:AK:40:ALA:HA	1.57	0.86
1:CA:812:G:HO2'	1:CA:813:U:H6	0.89	0.86
18:CS:48:ILE:HB	18:CS:59:VAL:HG23	1.57	0.86
37:DL:89:VAL:HG23	37:DL:123:ARG:HG3	1.57	0.86
4:CE:37:VAL:HG11	4:CE:113:VAL:HG12	1.56	0.86
45:BS:76:VAL:HG12	45:BS:103:ILE:HA	1.55	0.86
20:AB:46:VAL:HG13	20:AB:47:PRO:HD3	1.57	0.86
20:CB:46:VAL:HG13	20:CB:47:PRO:HD3	1.57	0.86
12:AM:52:ILE:HG23	12:AM:56:ARG:HH12	1.38	0.86
29:BE:59:PRO:HB2	29:BE:67:ARG:HH22	1.41	0.86
42:DN:101:GLY:HA2	42:DN:110:MET:H	1.38	0.86
23:BB:2108:A:H2'	23:BB:2109:U:H4'	1.57	0.86
23:DB:670:A:H4'	23:DB:671:C:H5'	1.57	0.86
52:BW:49:ASN:HB3	52:BW:81:ILE:HG12	1.56	0.86
47:BF:34:THR:HA	47:BF:89:THR:HA	1.57	0.86
18:AS:48:ILE:HB	18:AS:59:VAL:HG23	1.57	0.86
23:BB:1019:U:H2'	23:BB:1020:A:C8	2.10	0.86
41:DJ:81:ILE:HG23	41:DJ:82:GLY:H	1.40	0.86
10:AK:86:LYS:HB3	10:AK:112:VAL:HG23	1.56	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:D1:26:LYS:HD3	33:D1:52:LYS:HB3	1.57	0.86
25:DC:180:MET:HB3	25:DC:267:VAL:HB	1.55	0.86
23:BB:1141:U:H4'	23:BB:1142:A:O4'	1.75	0.86
46:BU:85:ARG:HD3	46:BU:86:PHE:H	1.38	0.86
4:AE:131:ASN:HD21	4:AE:133:ILE:HB	1.37	0.86
49:BR:7:SER:HB2	49:BR:22:LEU:HB3	1.56	0.86
47:DF:34:THR:HA	47:DF:89:THR:HA	1.57	0.86
11:AL:49:ARG:HG2	11:AL:89:LEU:HD21	1.57	0.86
25:DC:105:ALA:HB1	25:DC:109:LEU:HD12	1.55	0.86
6:AG:149:ALA:H	10:AK:55:ARG:HH21	1.20	0.86
8:AI:26:LYS:H	8:AI:61:ASP:HB3	1.41	0.86
46:DU:85:ARG:HD3	46:DU:86:PHE:H	1.38	0.86
10:AK:91:GLY:HA2	10:AK:94:SER:HB3	1.57	0.86
10:CK:34:THR:HB	10:CK:40:ALA:HA	1.57	0.86
23:BB:1024:G:H3'	23:BB:1025:G:H5''	1.58	0.86
38:DM:126:ILE:H	38:DM:126:ILE:HD12	1.41	0.86
23:BB:2866:U:H4'	23:BB:2867:G:H4'	1.57	0.86
52:DW:39:GLN:HG2	52:DW:40:ARG:N	1.91	0.85
8:AI:94:ARG:HH11	8:AI:94:ARG:HB3	1.41	0.85
25:DC:64:VAL:O	25:DC:65:ASP:HB3	1.72	0.85
23:DB:2306:C:H3'	23:DB:2307:G:C5'	2.05	0.85
43:DO:49:VAL:HG21	43:DO:82:ALA:HB2	1.58	0.85
29:BE:58:LYS:NZ	29:BE:58:LYS:H	1.73	0.85
10:CK:86:LYS:HB3	10:CK:112:VAL:HG23	1.56	0.85
25:DC:144:GLU:HG3	25:DC:151:GLY:N	1.90	0.85
47:DF:65:LEU:H	47:DF:88:VAL:HG22	1.41	0.85
23:BB:2472:G:H2'	23:BB:2475:C:H42	1.38	0.85
51:BZ:54:LYS:HA	51:BZ:57:ARG:HD3	1.59	0.85
52:BW:39:GLN:HG2	52:BW:40:ARG:N	1.92	0.85
37:BL:89:VAL:HG23	37:BL:123:ARG:HG3	1.58	0.85
22:DA:2:G:H2'	22:DA:3:C:H6	1.41	0.85
13:AN:73:LEU:HD12	13:AN:83:VAL:HG21	1.58	0.85
23:BB:1060:U:C5	24:BI:131:THR:HG22	2.11	0.85
23:DB:1244:A:H5''	37:DL:8:PRO:HD3	1.55	0.85
46:DU:46:LYS:HG2	46:DU:47:PRO:HD2	1.58	0.85
9:AJ:57:VAL:HG22	9:AJ:58:ASN:H	1.41	0.85
1:AA:79:G:H2'	1:AA:80:A:C8	2.12	0.85
2:CC:76:ILE:HA	2:CC:83:VAL:HG23	1.57	0.85
51:DZ:54:LYS:HA	51:DZ:57:ARG:HD3	1.57	0.85
50:DT:39:THR:HG22	50:DT:42:GLU:HG2	1.57	0.85
6:CG:74:VAL:HA	6:CG:87:PRO:HA	1.59	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DE:136:GLN:HE22	29:DE:139:LYS:HD3	1.42	0.85
25:DC:16:VAL:HB	25:DC:203:VAL:HB	1.56	0.85
32:B4:2:LYS:HG2	32:B4:4:ARG:HE	1.42	0.85
22:DA:98:G:H1	35:DV:14:LYS:HB2	1.41	0.85
26:DD:62:LYS:HD2	26:DD:62:LYS:H	1.42	0.85
7:CH:36:ALA:HA	7:CH:39:LEU:HD12	1.56	0.85
3:AD:173:ASP:HB3	3:AD:178:GLU:HB2	1.57	0.85
9:AJ:55:PRO:HA	13:AN:80:ARG:NH2	1.91	0.85
40:BH:80:ILE:HD12	40:BH:144:VAL:HG22	1.59	0.84
37:DL:116:VAL:HG13	37:DL:117:THR:H	1.42	0.84
53:D6:174:GLN:NE2	53:D6:175:LEU:HD12	1.92	0.84
48:DG:96:ALA:HB3	48:DG:103:ASN:HB3	1.59	0.84
50:BT:57:VAL:HG22	50:BT:58:VAL:H	1.42	0.84
16:AQ:60:ILE:HG22	16:AQ:74:LEU:HA	1.59	0.84
23:BB:2389:G:H5''	23:BB:2390:U:H5'	1.59	0.84
23:DB:2472:G:H2'	23:DB:2475:C:H42	1.42	0.84
33:B1:49:LYS:HG3	33:B1:50:GLU:H	1.41	0.84
37:BL:116:VAL:HG13	37:BL:117:THR:H	1.41	0.84
23:BB:1244:A:H5''	37:BL:8:PRO:HD3	1.59	0.84
41:BJ:81:ILE:HG23	41:BJ:82:GLY:H	1.41	0.84
45:DS:52:GLU:HA	45:DS:55:ILE:HG22	1.59	0.84
25:BC:144:GLU:HG3	25:BC:151:GLY:H	1.42	0.84
40:BH:103:VAL:HG23	40:BH:110:VAL:HG21	1.59	0.84
26:DD:7:LYS:HB2	26:DD:77:ARG:HH12	1.42	0.84
33:D1:49:LYS:HG3	33:D1:50:GLU:H	1.40	0.84
38:DM:121:ALA:HA	38:DM:124:LEU:HD12	1.57	0.84
39:DX:3:ALA:HA	39:DX:6:LEU:HD23	1.59	0.84
24:DI:27:LEU:HD23	24:DI:27:LEU:H	1.42	0.84
23:DB:1099:G:H8	24:DI:3:LYS:CA	1.89	0.84
5:CF:3:HIS:HB2	5:CF:92:THR:HA	1.57	0.84
24:DI:11:GLN:HG2	24:DI:55:PRO:HB3	1.60	0.84
6:AG:112:ASP:HB2	6:AG:118:ARG:HG2	1.57	0.84
23:BB:2751:G:H5'	48:BG:2:ARG:HD2	1.59	0.84
23:BB:2787:C:H1'	26:BD:63:PRO:HG3	1.59	0.84
2:CC:106:ARG:HD2	2:CC:106:ARG:H	1.42	0.84
37:DL:51:GLU:HG3	37:DL:56:PRO:HA	1.60	0.84
47:DF:62:GLN:HG3	47:DF:91:ARG:HH11	1.40	0.84
47:DF:137:PHE:HB2	47:DF:138:PRO:HD2	1.60	0.84
23:DB:972:A:H3'	23:DB:973:A:H5''	1.60	0.84
6:CG:2:ARG:HH11	6:CG:2:ARG:HB3	1.42	0.84
52:BW:43:LYS:HD2	52:BW:79:ILE:HD11	1.58	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AG:74:VAL:HA	6:AG:87:PRO:HA	1.58	0.84
37:DL:124:GLY:N	37:DL:143:GLU:HG3	1.93	0.84
40:BH:5:LEU:HD13	40:BH:13:GLY:HA2	1.60	0.84
53:B6:109:GLU:HA	53:B6:112:LYS:HE3	1.58	0.84
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.12	0.84
1:AA:1412:C:H2'	1:AA:1413:A:H8	1.42	0.84
23:DB:1024:G:H3'	23:DB:1025:G:H5''	1.57	0.84
23:BB:1173:U:H2'	23:BB:1174:U:H4'	1.59	0.84
23:BB:532:A:H4'	23:BB:533:G:C8	2.13	0.84
1:AA:865:A:H5'	1:AA:1078:U:O4	1.77	0.84
46:DU:27:VAL:HG23	46:DU:33:VAL:HG12	1.59	0.84
12:AM:85:TYR:HA	12:AM:88:LEU:HD12	1.59	0.84
40:BH:108:VAL:HG12	40:BH:109:GLU:H	1.43	0.84
1:AA:72:A:H61	1:AA:98:A:H2	1.26	0.84
23:DB:161:A:H3'	23:DB:162:U:H5''	1.59	0.84
46:BU:46:LYS:HG2	46:BU:47:PRO:HD2	1.58	0.84
3:CD:173:ASP:HB3	3:CD:178:GLU:HB2	1.57	0.84
11:CL:49:ARG:HG2	11:CL:89:LEU:HD21	1.59	0.84
25:BC:143:VAL:HB	25:BC:153:LEU:HB2	1.60	0.83
40:DH:129:GLU:HA	40:DH:143:ILE:HA	1.60	0.83
46:BU:27:VAL:HG23	46:BU:33:VAL:HG12	1.58	0.83
52:BW:9:THR:HG23	52:BW:10:ARG:HD3	1.58	0.83
23:BB:1032:A:H1'	32:B4:23:ILE:HD13	1.59	0.83
33:D1:7:LYS:HD3	34:D3:33:THR:HG21	1.59	0.83
16:CQ:60:ILE:HG22	16:CQ:74:LEU:HA	1.58	0.83
23:BB:161:A:H3'	23:BB:162:U:H5''	1.60	0.83
23:DB:27:G:H22	23:DB:512:G:H2'	1.43	0.83
52:DW:39:GLN:HG3	52:DW:42:THR:CB	2.07	0.83
53:B6:32:ARG:HH12	53:B6:88:LEU:HD23	1.43	0.83
50:DT:57:VAL:HG22	50:DT:58:VAL:H	1.43	0.83
38:DM:50:ARG:HA	38:DM:53:MET:HE3	1.60	0.83
6:CG:112:ASP:HB2	6:CG:118:ARG:HG2	1.60	0.83
37:DL:6:LEU:H	37:DL:6:LEU:HD23	1.43	0.83
46:BU:95:PHE:HE1	46:BU:102:ILE:HB	1.43	0.83
10:CK:91:GLY:HA2	10:CK:94:SER:HB3	1.60	0.83
23:DB:2267:A:C8	23:DB:2267:A:H3'	2.13	0.83
29:DE:5:LEU:HD12	29:DE:10:SER:HB2	1.60	0.83
20:AB:221:ARG:HB3	20:AB:221:ARG:HH11	1.43	0.83
23:DB:532:A:H4'	23:DB:533:G:C8	2.13	0.83
37:BL:124:GLY:N	37:BL:143:GLU:HG3	1.92	0.83
20:CB:202:ASN:ND2	20:CB:204:ASP:H	1.77	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:B4:7:VAL:HG23	32:B4:35:GLN:HB2	1.59	0.83
13:AN:51:PRO:HB2	13:AN:54:SER:HB3	1.60	0.83
44:DQ:81:GLY:HA3	44:DQ:112:ALA:HB1	1.59	0.83
20:CB:221:ARG:HH11	20:CB:221:ARG:HB3	1.44	0.83
47:DF:87:LYS:HG3	47:DF:88:VAL:H	1.43	0.83
17:AR:62:ARG:HD3	17:AR:69:TYR:HA	1.59	0.83
13:CN:73:LEU:HD12	13:CN:83:VAL:HG21	1.61	0.83
37:DL:29:LYS:HG3	37:DL:30:THR:HG23	1.60	0.83
46:BU:12:VAL:HG22	46:BU:69:VAL:HG12	1.58	0.83
23:BB:2039:U:H2'	23:BB:2040:G:H8	1.44	0.83
9:CJ:57:VAL:HG22	9:CJ:58:ASN:H	1.43	0.83
23:DB:1287:A:OP1	42:DN:104:ALA:HB3	1.79	0.83
19:AT:4:LYS:HE3	19:AT:6:ALA:H	1.44	0.83
52:BW:39:GLN:HG3	52:BW:42:THR:CB	2.08	0.83
44:BQ:30:VAL:HG13	44:BQ:31:TYR:N	1.93	0.83
48:BG:96:ALA:HB3	48:BG:103:ASN:HB3	1.60	0.83
40:DH:90:LEU:HD12	40:DH:90:LEU:H	1.41	0.83
23:BB:2267:A:C8	23:BB:2267:A:H3'	2.13	0.83
8:CI:33:SER:HB3	8:CI:36:GLN:HB2	1.61	0.83
10:CK:111:ASP:HB2	21:CU:19:LYS:HE3	1.61	0.83
23:BB:2886:A:H62	31:B0:39:ARG:NE	1.75	0.83
52:DW:43:LYS:HD2	52:DW:79:ILE:HD11	1.59	0.83
48:BG:16:VAL:HG13	48:BG:49:LEU:HD11	1.60	0.83
23:BB:2267:A:H8	23:BB:2267:A:H3'	1.43	0.83
15:AP:6:LEU:HB3	15:AP:17:TYR:HB3	1.60	0.83
1:CA:699:C:H2'	1:CA:700:G:H5''	1.59	0.83
9:CJ:55:PRO:HA	13:CN:80:ARG:NH2	1.94	0.83
21:AU:48:LYS:HA	21:AU:51:ALA:HB3	1.58	0.83
2:AC:5:HIS:HB3	13:AN:88:MET:SD	2.18	0.83
23:DB:2866:U:H4'	23:DB:2867:G:H4'	1.59	0.83
2:AC:106:ARG:HD2	2:AC:106:ARG:H	1.44	0.83
44:DQ:57:ARG:HH12	44:DQ:61:ILE:HD11	1.43	0.82
23:BB:1060:U:C2	23:BB:1088:A:N7	2.47	0.82
23:DB:2267:A:H3'	23:DB:2267:A:H8	1.43	0.82
53:B6:162:GLN:HA	53:B6:162:GLN:HE21	1.41	0.82
23:DB:2389:G:H5''	23:DB:2390:U:H5'	1.61	0.82
8:AI:33:SER:HB3	8:AI:36:GLN:HB2	1.59	0.82
23:DB:850:U:H5''	30:DY:18:LYS:HD3	1.60	0.82
53:D6:31:GLY:HA2	53:D6:106:LEU:HD13	1.61	0.82
40:BH:128:HIS:HB3	40:BH:144:VAL:HB	1.61	0.82
24:DI:121:ILE:HD13	24:DI:121:ILE:H	1.44	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1323:G:H2'	1:CA:1324:A:H8	1.43	0.82
26:DD:107:VAL:HG13	26:DD:203:VAL:HG23	1.59	0.82
23:DB:45:G:H5'	23:DB:46:G:H5'	1.60	0.82
2:AC:149:LYS:HB3	2:AC:200:TRP:HB2	1.61	0.82
32:D4:7:VAL:HG23	32:D4:35:GLN:HB2	1.62	0.82
48:DG:148:ARG:HA	48:DG:161:VAL:HB	1.61	0.82
29:BE:149:ILE:HD11	29:BE:172:ALA:HA	1.61	0.82
52:BW:65:LYS:HG3	52:BW:84:GLU:HB3	1.61	0.82
44:DQ:30:VAL:HG13	44:DQ:31:TYR:N	1.93	0.82
53:B6:41:LEU:HD11	53:B6:88:LEU:HD11	1.60	0.82
40:DH:90:LEU:HD23	40:DH:94:ILE:HD13	1.58	0.82
1:CA:243:A:H4'	1:CA:244:U:H5'	1.62	0.82
3:CD:138:PRO:HA	3:CD:181:PHE:HD2	1.44	0.82
52:DW:9:THR:HG23	52:DW:10:ARG:HD3	1.61	0.82
44:BQ:81:GLY:HA3	44:BQ:112:ALA:HB1	1.62	0.82
29:BE:136:GLN:HE22	29:BE:139:LYS:HD3	1.43	0.82
23:BB:1082:U:C4	23:BB:1086:A:C2	2.67	0.82
37:BL:143:GLU:HG2	37:BL:144:GLU:H	1.45	0.82
5:AF:3:HIS:HB2	5:AF:92:THR:HA	1.61	0.82
28:DP:91:VAL:HG11	28:DP:96:LEU:HD11	1.60	0.82
23:DB:2502:G:H5'	23:DB:2503:A:H5''	1.59	0.82
23:DB:1099:G:P	24:DI:4:VAL:H	2.02	0.82
51:DZ:7:VAL:HG13	51:DZ:8:THR:HG23	1.62	0.82
47:DF:49:LEU:HD11	47:DF:66:ILE:HD12	1.61	0.82
23:DB:328:U:H4'	46:DU:65:GLN:HE22	1.45	0.82
41:DJ:1:MET:HG2	41:DJ:2:LYS:HG2	1.62	0.82
23:DB:2039:U:H2'	23:DB:2040:G:H8	1.44	0.82
23:BB:141:G:N1	50:BT:2:ILE:HD12	1.93	0.82
28:BP:91:VAL:HG11	28:BP:96:LEU:HD11	1.62	0.82
12:CM:85:TYR:HA	12:CM:88:LEU:HD12	1.61	0.82
2:AC:48:LYS:H	2:AC:48:LYS:HD3	1.45	0.82
44:BQ:57:ARG:HH12	44:BQ:61:ILE:HD11	1.43	0.82
13:CN:51:PRO:HB2	13:CN:54:SER:HB3	1.60	0.82
23:DB:1082:U:C4	23:DB:1086:A:C2	2.67	0.82
23:BB:2331:G:H21	23:BB:2336:A:H8	1.27	0.81
23:DB:1060:U:C2	23:DB:1088:A:N7	2.48	0.81
23:BB:547:A:H3'	23:BB:548:G:H8	1.45	0.81
23:BB:972:A:H3'	23:BB:973:A:H5''	1.61	0.81
51:BZ:64:ILE:H	51:BZ:64:ILE:HD12	1.44	0.81
20:AB:202:ASN:ND2	20:AB:204:ASP:H	1.77	0.81
10:AK:22:ILE:HG12	10:AK:31:VAL:HG12	1.62	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DO:67:ASN:HB3	43:DO:70:ALA:HB2	1.63	0.81
2:AC:120:THR:HB	2:AC:188:ALA:HB2	1.62	0.81
1:AA:1288:A:N1	1:AA:1371:G:H1'	1.96	0.81
43:BO:49:VAL:HG21	43:BO:82:ALA:HB2	1.60	0.81
23:DB:2379:G:H5'	43:DO:21:LEU:HD11	1.62	0.81
35:DV:80:HIS:HD2	35:DV:82:TYR:H	1.23	0.81
26:DD:29:VAL:HB	26:DD:98:VAL:HG22	1.62	0.81
23:DB:1458:U:H5''	23:DB:1459:G:H5'	1.61	0.81
1:AA:1238:A:H5'	1:AA:1336:C:N4	1.94	0.81
26:BD:7:LYS:HB2	26:BD:77:ARG:HH12	1.44	0.81
23:DB:636:G:H3'	37:DL:128:THR:HG21	1.62	0.81
31:B0:27:LEU:H	31:B0:27:LEU:HD12	1.45	0.81
23:BB:45:G:H5'	23:BB:46:G:H5'	1.60	0.81
39:DX:28:LEU:HD13	39:DX:37:LEU:HD11	1.61	0.81
22:DA:104:A:H2'	22:DA:105:G:O4'	1.81	0.81
30:DY:4:ILE:HD12	30:DY:58:GLU:HG3	1.63	0.81
23:BB:2502:G:H5'	23:BB:2503:A:H5''	1.61	0.81
48:DG:16:VAL:HG13	48:DG:49:LEU:HD11	1.62	0.81
1:CA:1323:G:H2'	1:CA:1324:A:C8	2.14	0.81
23:BB:2769:U:H2'	23:BB:2770:G:H8	1.46	0.81
3:AD:138:PRO:HA	3:AD:181:PHE:HD2	1.45	0.81
48:BG:148:ARG:HA	48:BG:161:VAL:HB	1.62	0.81
23:DB:2484:G:OP1	38:DM:44:ARG:HD3	1.79	0.81
47:BF:128:SER:HB3	47:BF:154:THR:HG23	1.62	0.81
24:BI:129:GLU:HB3	24:BI:133:ARG:HH12	1.42	0.81
23:DB:2108:A:H5''	23:DB:2150:C:H4'	1.63	0.81
1:AA:1323:G:H2'	1:AA:1324:A:H8	1.45	0.81
51:DZ:64:ILE:HD12	51:DZ:64:ILE:H	1.44	0.81
39:BX:3:ALA:HA	39:BX:6:LEU:HD23	1.61	0.81
25:BC:144:GLU:HG3	25:BC:151:GLY:N	1.94	0.81
9:CJ:36:VAL:HG22	9:CJ:76:ILE:HG22	1.63	0.81
15:CP:6:LEU:HB3	15:CP:17:TYR:HB3	1.62	0.81
45:BS:66:ILE:H	45:BS:66:ILE:HD13	1.45	0.81
52:DW:65:LYS:HG3	52:DW:84:GLU:HB3	1.62	0.81
23:BB:79:C:O2'	23:BB:346:A:H1'	1.80	0.81
47:BF:137:PHE:HB2	47:BF:138:PRO:HD2	1.60	0.81
18:CS:30:LEU:HB2	18:CS:48:ILE:HG23	1.63	0.81
42:BN:72:ASP:HB3	42:BN:75:ILE:HG12	1.62	0.81
1:AA:1432:G:H5'	28:BP:105:LYS:HG2	1.61	0.81
23:DB:1412:U:H2'	23:DB:1413:A:H8	1.46	0.81
25:BC:16:VAL:HB	25:BC:203:VAL:HB	1.62	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DE:161:ALA:HA	29:DE:164:LEU:HB2	1.62	0.81
26:BD:62:LYS:HD2	26:BD:62:LYS:H	1.44	0.81
1:CA:120:A:H2'	1:CA:121:U:H5''	1.60	0.81
27:BK:54:LYS:H	27:BK:54:LYS:HD2	1.45	0.81
27:DK:41:ILE:HG13	27:DK:42:THR:H	1.46	0.81
20:AB:198:VAL:HG12	20:AB:200:PRO:HD3	1.63	0.81
41:BJ:57:LEU:HG	41:BJ:128:ASN:H	1.44	0.80
24:BI:55:PRO:HD3	24:BI:74:PRO:HD3	1.63	0.80
32:D4:2:LYS:HG2	32:D4:4:ARG:HE	1.46	0.80
17:CR:62:ARG:HD3	17:CR:69:TYR:HA	1.61	0.80
31:D0:27:LEU:H	31:D0:27:LEU:HD12	1.46	0.80
53:D6:1:MET:HB3	53:D6:143:LEU:HD21	1.64	0.80
37:DL:143:GLU:HG2	37:DL:144:GLU:H	1.43	0.80
40:BH:82:SER:N	40:BH:146:VAL:HG13	1.96	0.80
8:AI:21:LYS:O	8:AI:60:LEU:HB2	1.81	0.80
42:BN:101:GLY:HA2	42:BN:110:MET:N	1.95	0.80
18:AS:30:LEU:HB2	18:AS:48:ILE:HG23	1.62	0.80
10:CK:22:ILE:HG12	10:CK:31:VAL:HG12	1.62	0.80
37:BL:6:LEU:H	37:BL:6:LEU:HD23	1.44	0.80
53:B6:20:VAL:O	53:B6:24:ASN:HB2	1.81	0.80
48:DG:8:VAL:HG11	48:DG:49:LEU:HB2	1.62	0.80
1:AA:203:G:H1'	1:AA:465:A:N6	1.97	0.80
23:DB:2722:G:H4'	42:DN:4:ARG:HB2	1.62	0.80
45:DS:66:ILE:H	45:DS:66:ILE:HD13	1.46	0.80
27:DK:71:ARG:HG3	27:DK:105:ARG:NH2	1.96	0.80
23:DB:2141:G:H2'	23:DB:2142:A:C8	2.15	0.80
48:DG:120:ILE:HD11	48:DG:132:LEU:HB2	1.62	0.80
23:BB:1060:U:H5	24:BI:131:THR:HG22	1.46	0.80
23:DB:1168:G:H2'	23:DB:1169:A:H8	1.45	0.80
1:AA:978:A:H5'	1:AA:1362:A:N6	1.96	0.80
23:DB:1283:G:H22	23:DB:1286:A:H5'	1.46	0.80
8:CI:94:ARG:HH11	8:CI:94:ARG:HB3	1.45	0.80
29:DE:149:ILE:HD11	29:DE:172:ALA:HA	1.61	0.80
52:DW:37:VAL:HG12	52:DW:38:ARG:H	1.46	0.80
48:BG:120:ILE:HD11	48:BG:132:LEU:HB2	1.63	0.80
1:AA:411:A:N6	1:AA:413:G:H21	1.79	0.80
22:BA:104:A:H2'	22:BA:105:G:O4'	1.81	0.80
1:AA:699:C:H2'	1:AA:700:G:H5''	1.62	0.80
23:BB:968:C:H2'	23:BB:969:G:H8	1.46	0.80
42:BN:114:GLU:HG2	42:BN:115:LEU:N	1.95	0.80
8:CI:21:LYS:O	8:CI:60:LEU:HB2	1.81	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BQ:77:LYS:HE2	44:BQ:116:LEU:HD23	1.63	0.80
23:DB:2787:C:H1'	26:DD:63:PRO:HG3	1.64	0.80
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.15	0.80
45:BS:52:GLU:HA	45:BS:55:ILE:HG22	1.62	0.80
29:DE:189:THR:HG23	29:DE:192:ALA:H	1.45	0.80
30:BY:4:ILE:HD12	30:BY:58:GLU:HG3	1.64	0.80
23:BB:590:A:H2'	23:BB:591:U:C6	2.17	0.80
23:BB:27:G:H22	23:BB:512:G:H2'	1.45	0.80
1:CA:1236:A:H4'	1:CA:1304:G:H4'	1.64	0.80
23:DB:845:A:H2'	23:DB:846:U:H5''	1.64	0.80
26:BD:91:THR:HG23	26:BD:92:VAL:H	1.46	0.80
47:BF:111:ARG:NH2	47:BF:113:PHE:HB2	1.96	0.80
24:DI:21:PRO:HB2	24:DI:22:PRO:HD3	1.64	0.80
46:DU:12:VAL:HG22	46:DU:69:VAL:HG12	1.63	0.80
20:AB:53:LEU:HD11	20:AB:216:VAL:HG12	1.64	0.80
26:BD:107:VAL:HG13	26:BD:203:VAL:HG23	1.63	0.80
51:BZ:7:VAL:HG13	51:BZ:8:THR:HG23	1.64	0.80
42:DN:101:GLY:HA2	42:DN:110:MET:N	1.96	0.80
27:DK:54:LYS:H	27:DK:54:LYS:HD2	1.46	0.80
19:CT:4:LYS:HE3	19:CT:6:ALA:H	1.45	0.80
23:BB:571:U:H3'	49:BR:80:ARG:NH1	1.96	0.80
23:BB:2444:G:OP2	29:BE:63:LYS:HD2	1.82	0.80
40:BH:83:LYS:HB3	40:BH:91:PHE:HB2	1.64	0.80
44:DQ:77:LYS:HE2	44:DQ:116:LEU:HD23	1.63	0.80
23:DB:2769:U:H2'	23:DB:2770:G:H8	1.45	0.80
25:DC:75:ALA:HB2	25:DC:95:TYR:HA	1.63	0.80
37:BL:29:LYS:HG3	37:BL:30:THR:HG23	1.62	0.80
1:AA:1238:A:H5'	1:AA:1336:C:H41	1.47	0.80
26:BD:29:VAL:HB	26:BD:98:VAL:HG22	1.64	0.80
40:BH:14:SER:HB2	40:BH:17:ASP:HB2	1.63	0.80
5:CF:38:ARG:HH21	5:CF:63:ASN:ND2	1.78	0.80
52:BW:37:VAL:HG12	52:BW:38:ARG:H	1.46	0.80
8:CI:26:LYS:H	8:CI:61:ASP:HB3	1.47	0.80
23:BB:345:A:H1'	23:BB:346:A:H2	1.45	0.80
29:BE:189:THR:HG23	29:BE:192:ALA:H	1.45	0.80
2:CC:120:THR:HB	2:CC:188:ALA:HB2	1.62	0.80
20:CB:198:VAL:HG12	20:CB:200:PRO:HD3	1.63	0.80
23:BB:845:A:H2'	23:BB:846:U:H5''	1.64	0.80
38:DM:43:ALA:O	38:DM:46:ILE:HG12	1.82	0.80
46:BU:80:ASP:HB2	46:BU:95:PHE:HB3	1.63	0.79
1:CA:1238:A:H5'	1:CA:1336:C:N4	1.97	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:79:THR:HG22	48:BG:80:GLU:HG2	1.64	0.79
38:BM:50:ARG:HA	38:BM:53:MET:HE2	1.64	0.79
2:CC:48:LYS:HD3	2:CC:48:LYS:H	1.46	0.79
47:DF:111:ARG:NH2	47:DF:113:PHE:HB2	1.96	0.79
45:BS:24:ILE:HD11	45:BS:36:LEU:HD11	1.64	0.79
29:DE:145:ASP:HA	29:DE:166:LYS:HB3	1.62	0.79
27:BK:41:ILE:HG13	27:BK:42:THR:H	1.46	0.79
43:BO:67:ASN:HB3	43:BO:70:ALA:HB2	1.62	0.79
1:CA:437:U:H2'	1:CA:438:U:O4'	1.82	0.79
22:BA:52:A:OP1	22:BA:52:A:H4'	1.82	0.79
22:DA:52:A:H4'	22:DA:52:A:OP1	1.82	0.79
41:BJ:1:MET:HG2	41:BJ:2:LYS:HG2	1.63	0.79
29:BE:145:ASP:HA	29:BE:166:LYS:HB3	1.63	0.79
23:DB:1019:U:H2'	23:DB:1020:A:H8	1.46	0.79
1:AA:116:A:H61	1:AA:313:A:H1'	1.45	0.79
3:AD:187:ARG:HH12	3:AD:191:SER:HA	1.45	0.79
23:DB:1722:A:H2'	23:DB:1723:G:H8	1.47	0.79
23:DB:2886:A:H62	31:D0:39:ARG:NE	1.80	0.79
29:BE:147:LEU:HB3	29:BE:186:VAL:HG23	1.64	0.79
23:DB:2849:U:H4'	23:DB:2850:A:H5'	1.65	0.79
27:BK:71:ARG:HG3	27:BK:105:ARG:NH2	1.98	0.79
23:DB:590:A:H2'	23:DB:591:U:C6	2.16	0.79
40:DH:14:SER:HB2	40:DH:17:ASP:HB2	1.63	0.79
1:CA:1288:A:N1	1:CA:1371:G:H1'	1.97	0.79
11:CL:56:LEU:HD21	11:CL:81:ILE:HG13	1.64	0.79
42:DN:72:ASP:HB3	42:DN:75:ILE:HG12	1.63	0.79
42:DN:33:ILE:HG22	42:DN:114:GLU:HB2	1.63	0.79
21:CU:33:ARG:CZ	21:CU:34:ARG:HG2	2.12	0.79
41:DJ:57:LEU:HG	41:DJ:128:ASN:H	1.46	0.79
1:CA:21:G:H2'	1:CA:22:G:C8	2.18	0.79
1:CA:1412:C:H2'	1:CA:1413:A:H8	1.46	0.79
38:BM:126:ILE:HD12	38:BM:126:ILE:H	1.46	0.79
8:CI:38:PHE:HZ	8:CI:74:GLN:HB3	1.48	0.79
2:CC:149:LYS:HB3	2:CC:200:TRP:HB2	1.63	0.79
47:BF:87:LYS:HG3	47:BF:88:VAL:H	1.46	0.79
49:DR:6:GLN:HE22	49:DR:10:LYS:N	1.81	0.79
49:BR:6:GLN:HE22	49:BR:10:LYS:N	1.80	0.79
1:CA:978:A:H5'	1:CA:1362:A:N6	1.98	0.79
12:AM:3:ILE:HA	12:AM:56:ARG:HG2	1.64	0.79
43:DO:58:ILE:HG22	43:DO:62:LEU:HD23	1.64	0.79
23:DB:1654:A:O2'	26:DD:118:PHE:HB2	1.82	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DN:70:THR:HB	42:DN:75:ILE:HD11	1.64	0.79
49:BR:49:ILE:HD13	49:BR:53:PHE:N	1.98	0.79
15:CP:26:ASN:HD21	15:CP:31:ARG:HD3	1.48	0.79
23:BB:855:G:H21	52:BW:23:LYS:CG	1.95	0.79
8:AI:56:MET:HA	8:AI:59:LYS:HB2	1.65	0.79
4:AE:35:LEU:HD21	4:AE:136:VAL:HG11	1.65	0.79
38:BM:19:GLY:HA2	38:BM:98:PRO:HD2	1.64	0.79
27:DK:99:ILE:HB	27:DK:118:LEU:HD22	1.66	0.79
40:BH:73:ASN:HB3	40:BH:141:LYS:HZ3	1.48	0.79
23:DB:1099:G:OP2	24:DI:3:LYS:HA	1.82	0.78
23:DB:855:G:N2	52:DW:23:LYS:HG2	1.97	0.78
47:BF:49:LEU:HD11	47:BF:66:ILE:HD12	1.64	0.78
1:CA:920:U:H2'	1:CA:921:U:C6	2.18	0.78
9:AJ:52:LEU:HA	9:AJ:62:ARG:HA	1.65	0.78
42:DN:114:GLU:HG2	42:DN:115:LEU:N	1.95	0.78
49:DR:49:ILE:HD13	49:DR:53:PHE:N	1.98	0.78
46:DU:80:ASP:HB2	46:DU:95:PHE:HB3	1.66	0.78
1:CA:411:A:N6	1:CA:413:G:H21	1.81	0.78
43:BO:58:ILE:HG22	43:BO:62:LEU:HD23	1.65	0.78
2:CC:149:LYS:HA	2:CC:168:ARG:HB2	1.65	0.78
44:BQ:109:VAL:HG12	44:BQ:113:LYS:HE3	1.66	0.78
24:BI:21:PRO:HB2	24:BI:22:PRO:HD3	1.63	0.78
29:DE:69:ARG:O	29:DE:70:SER:HB3	1.81	0.78
2:AC:69:THR:HG21	2:AC:75:VAL:HG21	1.64	0.78
27:BK:99:ILE:HB	27:BK:118:LEU:HD22	1.65	0.78
1:AA:21:G:H2'	1:AA:22:G:C8	2.18	0.78
47:BF:62:GLN:HG3	47:BF:91:ARG:HH11	1.48	0.78
40:DH:78:VAL:HB	40:DH:144:VAL:HG13	1.65	0.78
13:AN:30:ILE:H	13:AN:30:ILE:HD12	1.49	0.78
23:DB:2346:A:H3'	23:DB:2347:C:H5''	1.65	0.78
26:DD:178:VAL:HB	26:DD:188:LEU:HB2	1.66	0.78
37:DL:103:ILE:H	37:DL:103:ILE:HD12	1.48	0.78
23:DB:1338:G:H4'	50:DT:18:GLU:HG3	1.64	0.78
23:BB:2143:C:H2'	23:BB:2144:G:O4'	1.83	0.78
38:BM:55:ARG:HH21	38:BM:55:ARG:HA	1.47	0.78
53:D6:56:ALA:HB2	53:D6:79:ILE:HD13	1.65	0.78
39:BX:28:LEU:HD13	39:BX:37:LEU:HD11	1.63	0.78
39:BX:31:GLN:HG2	39:BX:37:LEU:HB2	1.66	0.78
47:DF:109:ARG:HB3	47:DF:135:ILE:HD12	1.66	0.78
21:CU:48:LYS:HA	21:CU:51:ALA:HB3	1.63	0.78
10:CK:24:ALA:HA	10:CK:29:THR:HG23	1.65	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CK:83:VAL:HB	10:CK:109:ILE:HG23	1.65	0.78
23:BB:1412:U:H2'	23:BB:1413:A:H8	1.48	0.78
23:DB:9:G:H21	23:DB:10:A:H62	1.29	0.78
1:AA:437:U:H2'	1:AA:438:U:O4'	1.83	0.78
23:DB:1099:G:P	24:DI:3:LYS:HA	2.23	0.78
23:BB:918:A:H2'	23:BB:919:U:H5'	1.65	0.78
25:DC:77:VAL:HG23	25:DC:112:GLY:N	1.99	0.78
1:AA:920:U:H2'	1:AA:921:U:C6	2.19	0.78
23:DB:140:C:H4'	23:DB:141:G:C6	2.18	0.78
23:DB:1796:U:H2'	23:DB:1797:G:H8	1.48	0.78
48:DG:30:GLY:HA3	48:DG:78:VAL:HA	1.66	0.78
38:DM:19:GLY:HA2	38:DM:98:PRO:HD2	1.64	0.78
8:CI:56:MET:HA	8:CI:59:LYS:HB2	1.66	0.78
23:DB:968:C:H2'	23:DB:969:G:H8	1.47	0.78
47:BF:163:GLU:HA	47:BF:166:ARG:HH11	1.49	0.78
44:BQ:10:ARG:HH21	44:BQ:14:LYS:HD3	1.49	0.78
23:BB:2867:G:H2'	23:BB:2867:G:N3	1.98	0.78
2:AC:149:LYS:HA	2:AC:168:ARG:HB2	1.65	0.78
23:DB:1412:U:H2'	23:DB:1413:A:C8	2.19	0.78
24:DI:45:THR:HA	24:DI:48:ILE:HG22	1.66	0.78
35:BV:40:ILE:HD13	35:BV:40:ILE:H	1.48	0.78
1:CA:116:A:H61	1:CA:313:A:H1'	1.48	0.78
34:B3:22:LYS:HA	34:B3:48:MET:HA	1.66	0.78
21:CU:36:PHE:CB	21:CU:40:PRO:HD3	2.14	0.78
8:AI:24:ASN:ND2	8:AI:25:GLY:H	1.82	0.78
12:CM:3:ILE:HA	12:CM:56:ARG:HG2	1.65	0.78
1:AA:1347:G:N2	1:AA:1373:G:H2'	1.99	0.78
3:CD:187:ARG:HH12	3:CD:191:SER:HA	1.48	0.78
1:CA:1347:G:N2	1:CA:1373:G:H2'	1.99	0.78
48:DG:79:THR:HG22	48:DG:80:GLU:HG2	1.66	0.78
38:DM:55:ARG:HH21	38:DM:55:ARG:HA	1.47	0.78
40:BH:68:ARG:NH1	40:BH:134:VAL:HG21	1.99	0.78
51:DZ:5:CYS:HB3	51:DZ:10:LYS:N	1.99	0.78
35:BV:4:ILE:HB	35:BV:63:ILE:HA	1.66	0.78
35:DV:40:ILE:HD13	35:DV:40:ILE:H	1.49	0.78
44:DQ:10:ARG:HH21	44:DQ:14:LYS:HD3	1.49	0.78
23:BB:460:A:H4'	50:BT:72:GLN:HB2	1.64	0.78
26:BD:178:VAL:HB	26:BD:188:LEU:HB2	1.66	0.78
23:DB:918:A:H2'	23:DB:919:U:H5'	1.64	0.77
8:AI:25:GLY:HA2	8:AI:60:LEU:O	1.83	0.77
26:DD:51:THR:CG2	26:DD:76:GLY:HA3	2.14	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:149:ARG:HA	47:DF:149:ARG:HH11	1.48	0.77
1:CA:1238:A:H5'	1:CA:1336:C:H41	1.49	0.77
26:BD:10:GLY:HA3	26:BD:26:VAL:H	1.49	0.77
47:DF:35:LEU:HD23	47:DF:153:ILE:HG12	1.66	0.77
27:BK:58:LEU:HD11	27:BK:86:LEU:HB3	1.66	0.77
11:CL:78:VAL:HG12	11:CL:101:LEU:HD13	1.65	0.77
49:DR:60:LYS:N	49:DR:100:GLY:HA3	1.94	0.77
47:DF:126:ASN:HB3	47:DF:156:THR:HA	1.67	0.77
9:CJ:52:LEU:HA	9:CJ:62:ARG:HA	1.65	0.77
23:BB:1287:A:OP1	42:BN:104:ALA:HB3	1.84	0.77
1:CA:279:A:H5''	1:CA:280:C:H3'	1.66	0.77
29:BE:176:ASP:HB3	29:BE:179:SER:HB2	1.67	0.77
9:CJ:8:ILE:HG13	9:CJ:100:ILE:HG22	1.65	0.77
46:BU:58:VAL:HG12	46:BU:59:GLU:H	1.48	0.77
51:DZ:31:PRO:HB2	51:DZ:33:LEU:HD11	1.64	0.77
25:BC:75:ALA:HB2	25:BC:95:TYR:HA	1.65	0.77
40:DH:127:GLU:HA	40:DH:145:ASN:HA	1.65	0.77
29:BE:161:ALA:HA	29:BE:164:LEU:HB2	1.65	0.77
1:CA:18:C:H4'	1:CA:1078:U:O2	1.84	0.77
23:BB:172:A:H2'	23:BB:173:A:C8	2.20	0.77
1:AA:1299:A:H2'	1:AA:1301:U:H1'	1.66	0.77
23:BB:9:G:H21	23:BB:10:A:H62	1.30	0.77
38:DM:40:ARG:HD3	38:DM:93:VAL:HG21	1.65	0.77
23:DB:1098:A:H2'	24:DI:4:VAL:N	1.99	0.77
47:DF:40:GLY:HA2	47:DF:84:ILE:HG23	1.66	0.77
10:AK:22:ILE:HG21	10:AK:95:THR:HG21	1.67	0.77
10:CK:22:ILE:HG21	10:CK:95:THR:HG21	1.66	0.77
23:DB:2867:G:N3	23:DB:2867:G:H2'	1.99	0.77
23:BB:2148:G:H3'	23:BB:2149:U:O4'	1.84	0.77
4:CE:52:ALA:HB2	4:CE:61:LYS:HE2	1.66	0.77
1:AA:843:U:H5'	1:AA:844:G:N7	1.99	0.77
23:BB:364:C:H2'	23:BB:365:U:C6	2.19	0.77
6:CG:145:GLU:HA	6:CG:148:LYS:HB2	1.66	0.77
35:BV:79:ARG:HA	35:BV:86:LEU:HA	1.67	0.77
33:D1:33:LEU:H	33:D1:51:ALA:HB3	1.50	0.77
47:DF:128:SER:HB3	47:DF:154:THR:HG23	1.66	0.77
22:BA:28:C:C5	22:BA:56:G:N2	2.53	0.77
4:CE:23:THR:HA	4:CE:28:ARG:HA	1.66	0.77
45:DS:24:ILE:HG22	45:DS:71:VAL:HG11	1.67	0.77
43:BO:11:ALA:HB2	43:BO:96:GLY:N	1.99	0.77
23:BB:1283:G:H22	23:BB:1286:A:H5'	1.49	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:715:A:H2'	1:AA:716:A:H8	1.49	0.77
23:BB:1416:G:HO2'	23:BB:1417:C:H6	1.33	0.77
49:BR:60:LYS:N	49:BR:100:GLY:HA3	1.94	0.77
53:B6:43:VAL:HB	53:B6:55:ILE:HG21	1.65	0.77
45:DS:24:ILE:HD11	45:DS:36:LEU:HD11	1.66	0.77
45:BS:24:ILE:HG22	45:BS:71:VAL:HG11	1.66	0.77
29:DE:147:LEU:HB3	29:DE:186:VAL:HG23	1.64	0.77
23:DB:1778:U:H2'	23:DB:1784:A:N6	2.00	0.77
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.18	0.77
1:CA:203:G:H1'	1:CA:465:A:N6	1.99	0.77
1:AA:243:A:H4'	1:AA:244:U:H5'	1.64	0.77
52:DW:67:LYS:O	52:DW:68:PHE:HB2	1.85	0.77
2:CC:137:VAL:HA	2:CC:148:ILE:HD13	1.65	0.77
43:DO:11:ALA:HB2	43:DO:96:GLY:N	1.99	0.77
52:BW:67:LYS:O	52:BW:68:PHE:HB2	1.83	0.77
1:AA:120:A:H2'	1:AA:121:U:H5''	1.66	0.77
26:DD:151:THR:HB	26:DD:152:PRO:HD3	1.66	0.77
2:CC:69:THR:HG21	2:CC:75:VAL:HG21	1.66	0.77
24:DI:72:THR:HG21	24:DI:112:LYS:HA	1.67	0.77
7:AH:49:LYS:HB3	7:AH:59:GLU:HB2	1.65	0.77
23:BB:287:G:H2'	23:BB:288:U:C6	2.19	0.77
24:BI:106:GLN:O	24:BI:110:GLN:HG3	1.85	0.77
26:BD:105:LYS:H	26:BD:106:LYS:HZ3	1.33	0.76
47:BF:66:ILE:HD11	47:BF:83:PRO:HB3	1.67	0.76
23:BB:321:U:OP2	29:BE:130:LYS:HA	1.84	0.76
23:BB:2849:U:H4'	23:BB:2850:A:H5'	1.66	0.76
13:CN:30:ILE:H	13:CN:30:ILE:HD12	1.50	0.76
26:DD:68:PHE:HB3	26:DD:73:VAL:HG23	1.67	0.76
1:AA:1221:G:O3'	18:AS:76:THR:HG21	1.85	0.76
11:AL:78:VAL:HG12	11:AL:101:LEU:HD13	1.66	0.76
23:DB:571:U:H3'	49:DR:80:ARG:NH1	1.99	0.76
21:AU:33:ARG:CZ	21:AU:34:ARG:HG2	2.14	0.76
53:D6:73:GLN:HA	53:D6:76:LEU:HD12	1.67	0.76
23:DB:328:U:H4'	46:DU:65:GLN:NE2	2.00	0.76
23:BB:2548:U:H1'	27:BK:23:LYS:NZ	2.01	0.76
42:BN:70:THR:HB	42:BN:75:ILE:HD11	1.66	0.76
23:BB:850:U:H5''	30:BY:18:LYS:HD3	1.66	0.76
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.20	0.76
24:DI:105:LEU:HD13	24:DI:129:GLU:HG2	1.66	0.76
26:DD:91:THR:HG23	26:DD:92:VAL:H	1.49	0.76
48:BG:8:VAL:HG11	48:BG:49:LEU:HB2	1.67	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:40:GLY:HA2	47:BF:84:ILE:HG23	1.66	0.76
24:BI:27:LEU:HD12	24:BI:32:VAL:HG11	1.66	0.76
1:CA:1221:G:O3'	18:CS:76:THR:HG21	1.85	0.76
23:DB:2141:G:H2'	23:DB:2142:A:H8	1.50	0.76
47:BF:35:LEU:HD23	47:BF:153:ILE:HG12	1.67	0.76
23:DB:1551:A:H3'	23:DB:1552:A:H5''	1.68	0.76
25:DC:196:ASN:ND2	25:DC:199:HIS:HB2	1.99	0.76
22:DA:28:C:C5	22:DA:56:G:N2	2.54	0.76
33:B1:33:LEU:H	33:B1:51:ALA:HB3	1.50	0.76
23:DB:571:U:H3'	49:DR:80:ARG:HH12	1.51	0.76
26:DD:186:LEU:HD21	28:DP:3:ILE:HD11	1.68	0.76
53:B6:118:VAL:HG11	53:B6:180:GLU:HB2	1.67	0.76
21:AU:36:PHE:CB	21:AU:40:PRO:HD3	2.14	0.76
13:CN:5:MET:HB3	13:CN:62:ARG:HH12	1.51	0.76
29:BE:155:GLU:HA	29:BE:158:PHE:HB3	1.67	0.76
29:BE:69:ARG:O	29:BE:70:SER:HB3	1.85	0.76
23:BB:1558:C:H4'	23:BB:1559:U:H5'	1.65	0.76
23:BB:1722:A:H2'	23:BB:1723:G:H8	1.49	0.76
36:B2:34:ARG:HB3	36:B2:39:ARG:HB2	1.64	0.76
23:DB:455:C:N3	23:DB:472:A:H2'	2.00	0.76
1:AA:1236:A:H4'	1:AA:1304:G:H4'	1.66	0.76
26:BD:51:THR:CG2	26:BD:76:GLY:HA3	2.16	0.76
44:DQ:86:SER:HB2	49:DR:51:VAL:HA	1.68	0.76
44:DQ:4:LYS:HZ1	44:DQ:7:VAL:HG22	1.51	0.76
1:AA:82:G:H2'	1:AA:84:U:H5	1.50	0.76
9:AJ:17:LEU:HD22	9:AJ:96:VAL:HG13	1.68	0.76
40:DH:72:ILE:HD11	40:DH:140:ALA:HB3	1.66	0.76
47:BF:126:ASN:HB3	47:BF:156:THR:HA	1.68	0.76
47:BF:109:ARG:HB3	47:BF:135:ILE:HD12	1.68	0.76
23:BB:1019:U:H2'	23:BB:1020:A:H8	1.49	0.76
32:B4:23:ILE:HB	32:B4:38:GLY:HA3	1.66	0.76
1:AA:279:A:H5''	1:AA:280:C:H3'	1.67	0.76
23:DB:1700:A:H2'	23:DB:1701:A:H5'	1.67	0.76
23:DB:1080:A:H2'	23:DB:1081:U:H6	1.50	0.76
44:BQ:26:ALA:O	44:BQ:30:VAL:HG12	1.86	0.76
51:BZ:31:PRO:HB2	51:BZ:33:LEU:HD11	1.68	0.76
3:AD:24:VAL:HG23	3:AD:25:ARG:H	1.50	0.76
4:AE:23:THR:HA	4:AE:28:ARG:HA	1.68	0.76
46:DU:47:PRO:HD3	46:DU:55:GLY:HA3	1.67	0.76
46:DU:12:VAL:HA	46:DU:69:VAL:HA	1.68	0.76
44:DQ:109:VAL:HG12	44:DQ:113:LYS:HE3	1.66	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:151:THR:HB	26:BD:152:PRO:HD3	1.67	0.76
24:BI:33:ASN:HD21	24:BI:64:ARG:HH11	1.34	0.76
29:DE:176:ASP:HB3	29:DE:179:SER:HB2	1.67	0.76
48:BG:9:VAL:HG12	48:BG:11:PRO:HD3	1.68	0.76
43:DO:89:ASP:HA	43:DO:116:GLN:O	1.86	0.76
38:DM:36:VAL:HB	38:DM:127:LYS:O	1.86	0.76
48:BG:166:GLU:HG2	48:BG:168:VAL:HG23	1.67	0.76
20:CB:53:LEU:HD11	20:CB:216:VAL:HG12	1.66	0.76
23:BB:1338:G:H4'	50:BT:18:GLU:HG3	1.65	0.76
11:AL:51:VAL:HG12	11:AL:52:CYS:H	1.50	0.76
1:CA:843:U:H5'	1:CA:844:G:N7	2.00	0.76
36:D2:21:ARG:HG2	36:D2:31:LEU:HG	1.68	0.76
25:BC:77:VAL:HG23	25:BC:112:GLY:N	1.99	0.76
25:DC:144:GLU:HB3	25:DC:187:CYS:HB3	1.68	0.76
23:BB:1178:C:H2'	23:BB:1179:G:C8	2.21	0.76
46:BU:47:PRO:HD3	46:BU:55:GLY:HA3	1.68	0.76
21:CU:3:ILE:HD13	21:CU:19:LYS:HA	1.68	0.76
23:BB:125:A:H3'	23:BB:126:A:C5'	2.15	0.76
23:BB:1437:C:H2'	23:BB:1438:U:C6	2.21	0.76
23:BB:1551:A:H3'	23:BB:1552:A:H5''	1.67	0.76
25:DC:156:SER:O	25:DC:194:VAL:HG11	1.85	0.76
14:CO:89:ARG:HA	14:CO:89:ARG:HH11	1.51	0.76
23:DB:1099:G:H5''	24:DI:3:LYS:N	2.01	0.75
7:AH:77:VAL:HG23	7:AH:126:CYS:HA	1.68	0.75
49:DR:4:VAL:O	49:DR:38:VAL:HA	1.86	0.75
23:DB:1548:A:H2'	23:DB:1549:A:C8	2.21	0.75
25:BC:156:SER:O	25:BC:194:VAL:HG11	1.85	0.75
9:CJ:17:LEU:HD22	9:CJ:96:VAL:HG13	1.68	0.75
48:BG:30:GLY:HA3	48:BG:78:VAL:HA	1.66	0.75
25:BC:43:ASN:ND2	25:BC:44:ASN:H	1.84	0.75
47:BF:149:ARG:HA	47:BF:149:ARG:HH11	1.52	0.75
20:CB:31:PHE:HB2	20:CB:41:ASN:HA	1.68	0.75
53:D6:174:GLN:HE21	53:D6:175:LEU:N	1.85	0.75
35:DV:79:ARG:HA	35:DV:86:LEU:HA	1.67	0.75
42:BN:33:ILE:HG22	42:BN:114:GLU:HB2	1.67	0.75
23:BB:2185:U:H2'	23:BB:2186:G:C8	2.21	0.75
20:CB:143:LEU:HD22	20:CB:147:LEU:HD12	1.68	0.75
9:AJ:8:ILE:HG13	9:AJ:100:ILE:HG22	1.67	0.75
20:AB:143:LEU:HD22	20:AB:147:LEU:HD12	1.68	0.75
23:BB:1104:C:H2'	23:BB:1105:U:H6	1.50	0.75
48:DG:115:GLN:H	48:DG:115:GLN:CD	1.90	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CH:11:THR:HG22	7:CH:14:ARG:HH12	1.49	0.75
12:CM:49:GLU:O	12:CM:52:ILE:HG22	1.86	0.75
47:DF:102:LEU:HA	47:DF:106:ALA:CB	2.17	0.75
2:AC:137:VAL:HA	2:AC:148:ILE:HD13	1.68	0.75
3:CD:137:SER:HB2	3:CD:138:PRO:HD2	1.66	0.75
23:DB:2243:U:H2'	23:DB:2244:U:C6	2.21	0.75
2:CC:5:HIS:HB3	13:CN:88:MET:SD	2.26	0.75
40:DH:46:PHE:HA	40:DH:50:ARG:HH21	1.52	0.75
23:DB:2102:G:H2'	23:DB:2103:C:O4'	1.86	0.75
23:DB:2331:G:H21	23:DB:2336:A:H8	1.30	0.75
40:BH:6:LEU:HD13	40:BH:36:ALA:HA	1.66	0.75
23:BB:1447:C:H2'	23:BB:1448:G:H8	1.51	0.75
23:DB:2425:A:H5'	23:DB:2427:C:O4'	1.87	0.75
26:BD:186:LEU:HD21	28:BP:3:ILE:HD11	1.67	0.75
23:DB:2615:U:H1'	31:D0:3:GLN:HB3	1.68	0.75
34:D3:22:LYS:HA	34:D3:48:MET:HA	1.66	0.75
38:BM:43:ALA:O	38:BM:46:ILE:HG12	1.86	0.75
23:DB:2769:U:H2'	23:DB:2770:G:C8	2.22	0.75
23:BB:845:A:C2	23:BB:847:U:H1'	2.22	0.75
1:CA:1338:G:H2'	1:CA:1339:A:C8	2.21	0.75
23:BB:2743:U:H2'	23:BB:2744:G:O4'	1.86	0.75
23:BB:2653:U:O2'	48:BG:109:SER:HB2	1.85	0.75
11:AL:56:LEU:HD21	11:AL:81:ILE:HG13	1.68	0.75
4:AE:81:GLN:H	4:AE:146:MET:HE3	1.51	0.75
47:DF:31:GLU:HB3	47:DF:156:THR:O	1.87	0.75
18:AS:18:VAL:HG21	18:AS:43:MET:HB3	1.69	0.75
23:BB:1092:C:OP1	23:BB:2475:C:H4'	1.86	0.75
50:DT:21:SER:O	50:DT:25:GLU:HB2	1.86	0.75
20:AB:96:LEU:HD21	20:AB:146:SER:HB2	1.69	0.75
26:BD:37:VAL:HG23	26:BD:91:THR:HA	1.68	0.75
35:DV:4:ILE:HB	35:DV:63:ILE:HA	1.68	0.75
12:CM:38:ILE:HG13	12:CM:55:LEU:HD21	1.69	0.75
3:AD:137:SER:HB2	3:AD:138:PRO:HD2	1.67	0.75
51:DZ:17:ASN:HB2	51:DZ:25:THR:OG1	1.86	0.75
1:CA:1299:A:H2'	1:CA:1301:U:H1'	1.67	0.75
20:AB:120:SER:HA	20:AB:125:PHE:HB3	1.69	0.75
47:DF:163:GLU:HA	47:DF:166:ARG:HH11	1.51	0.75
8:CI:24:ASN:ND2	8:CI:25:GLY:H	1.85	0.75
12:CM:70:ARG:HH21	47:DF:136:ILE:HB	1.51	0.75
37:DL:56:PRO:HD2	37:DL:59:ARG:HG3	1.68	0.75
32:D4:23:ILE:HB	32:D4:38:GLY:HA3	1.69	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:84:LYS:HG2	48:BG:85:LYS:H	1.52	0.75
53:D6:43:VAL:HG21	53:D6:52:LEU:HD12	1.69	0.75
50:BT:29:THR:HA	50:BT:86:THR:HA	1.69	0.75
53:D6:174:GLN:HE22	53:D6:175:LEU:HD12	1.49	0.75
8:CI:87:MET:HG2	8:CI:91:GLU:HG2	1.68	0.75
26:DD:10:GLY:HA3	26:DD:26:VAL:H	1.50	0.75
38:DM:114:ARG:HB2	38:DM:114:ARG:HH21	1.51	0.75
16:CQ:57:VAL:HB	16:CQ:79:GLU:HB3	1.69	0.75
45:BS:81:SER:HA	45:BS:99:ARG:HA	1.69	0.75
26:BD:106:LYS:HB3	26:BD:206:ALA:H	1.51	0.74
24:DI:55:PRO:HD3	24:DI:74:PRO:HD3	1.68	0.74
48:DG:166:GLU:HG2	48:DG:168:VAL:HG23	1.68	0.74
27:DK:102:PRO:HA	27:DK:120:PRO:HB3	1.69	0.74
28:BP:4:ILE:HG22	28:BP:5:LYS:H	1.51	0.74
45:DS:81:SER:HA	45:DS:99:ARG:HA	1.68	0.74
16:AQ:57:VAL:HB	16:AQ:79:GLU:HB3	1.67	0.74
44:DQ:26:ALA:O	44:DQ:30:VAL:HG12	1.86	0.74
53:D6:53:ASN:HD22	53:D6:53:ASN:H	1.35	0.74
53:D6:53:ASN:ND2	53:D6:53:ASN:H	1.83	0.74
23:DB:137:U:H2'	23:DB:138:U:O4'	1.87	0.74
50:DT:29:THR:HA	50:DT:86:THR:HA	1.69	0.74
23:BB:1082:U:N3	23:BB:1086:A:C2	2.55	0.74
1:AA:1338:G:H2'	1:AA:1339:A:C8	2.22	0.74
39:DX:31:GLN:HG2	39:DX:37:LEU:HB2	1.67	0.74
27:DK:41:ILE:HG13	27:DK:42:THR:N	2.02	0.74
23:BB:172:A:H2'	23:BB:173:A:H8	1.51	0.74
23:DB:1324:G:H1'	23:DB:1616:A:N6	2.01	0.74
43:DO:5:SER:HA	43:DO:8:ILE:HD12	1.69	0.74
1:CA:1004:A:H2'	1:CA:1005:A:O4'	1.87	0.74
25:DC:43:ASN:ND2	25:DC:44:ASN:H	1.85	0.74
25:DC:91:ALA:HB2	25:DC:105:ALA:HB2	1.68	0.74
48:DG:9:VAL:HG12	48:DG:11:PRO:HD3	1.67	0.74
26:DD:30:GLU:HG3	26:DD:52:THR:HG22	1.68	0.74
21:AU:3:ILE:HD13	21:AU:19:LYS:HA	1.69	0.74
23:BB:1081:U:H5'	24:BI:126:ARG:HD2	1.69	0.74
26:DD:114:LYS:HB2	26:DD:116:LYS:HE3	1.69	0.74
23:DB:1447:C:H2'	23:DB:1448:G:H8	1.52	0.74
1:CA:270:A:H2'	1:CA:271:C:C6	2.22	0.74
49:DR:31:GLU:H	49:DR:63:VAL:HG22	1.53	0.74
37:BL:103:ILE:H	37:BL:103:ILE:HD12	1.50	0.74
8:AI:117:LEU:HD22	8:AI:123:ARG:HG2	1.70	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:122:ASP:OD2	20:CB:124:THR:HG22	1.87	0.74
23:DB:2331:G:O2'	52:DW:40:ARG:HB2	1.87	0.74
43:DO:51:ALA:HB3	43:DO:78:VAL:HG22	1.70	0.74
8:AI:87:MET:HG2	8:AI:91:GLU:HG2	1.69	0.74
23:BB:873:C:H4'	38:BM:64:TRP:HE1	1.51	0.74
23:BB:1412:U:H2'	23:BB:1413:A:C8	2.21	0.74
38:DM:19:GLY:H	38:DM:38:ARG:HH12	1.35	0.74
45:DS:43:ALA:HA	45:DS:46:LEU:HD12	1.69	0.74
53:D6:110:ARG:HB3	53:D6:110:ARG:HH11	1.51	0.74
1:AA:108:G:H5'	1:AA:109:A:H5''	1.68	0.74
23:DB:172:A:H2'	23:DB:173:A:C8	2.22	0.74
28:DP:89:GLY:HA2	28:DP:112:ARG:N	2.03	0.74
1:CA:673:A:H2'	1:CA:674:G:C8	2.21	0.74
23:DB:580:U:H2'	23:DB:581:C:C6	2.22	0.74
8:AI:23:GLY:H	8:AI:60:LEU:HA	1.52	0.74
40:BH:105:ALA:HB3	40:BH:108:VAL:HG21	1.68	0.74
44:BQ:86:SER:HB2	49:BR:51:VAL:HA	1.70	0.74
1:AA:269:C:H2'	1:AA:270:A:C8	2.23	0.74
1:CA:108:G:H5'	1:CA:109:A:H5''	1.70	0.74
23:DB:1911:U:H2'	23:DB:1918:A:N1	2.02	0.74
23:BB:2425:A:H5'	23:BB:2427:C:O4'	1.88	0.74
48:BG:15:ASP:HB3	48:BG:25:ILE:HA	1.68	0.74
23:BB:287:G:H2'	23:BB:288:U:H6	1.52	0.74
23:DB:1437:C:H2'	23:DB:1438:U:C6	2.21	0.74
5:CF:98:GLU:HG2	5:CF:99:ALA:N	2.03	0.74
2:AC:154:GLY:HA3	2:AC:162:ALA:HB1	1.69	0.74
23:DB:775:G:H4'	23:DB:776:G:H5'	1.69	0.74
10:AK:24:ALA:HA	10:AK:29:THR:HG23	1.69	0.74
1:AA:1011:C:H2'	1:AA:1012:A:C8	2.21	0.74
23:DB:1804:C:OP1	25:DC:256:THR:HB	1.88	0.74
29:DE:155:GLU:HA	29:DE:158:PHE:HB3	1.67	0.74
23:BB:923:G:H1'	52:BW:23:LYS:HZ2	1.51	0.74
7:CH:77:VAL:HG23	7:CH:126:CYS:HA	1.69	0.74
42:DN:38:LEU:HB3	42:DN:39:PRO:HD3	1.69	0.74
36:B2:21:ARG:HG2	36:B2:31:LEU:HG	1.67	0.74
36:D2:34:ARG:HB3	36:D2:39:ARG:HB2	1.67	0.74
1:CA:33:A:H2'	1:CA:34:C:H6	1.52	0.74
23:BB:62:U:H3'	23:BB:63:A:C8	2.23	0.74
53:B6:102:ASN:N	53:B6:102:ASN:HD22	1.86	0.74
47:BF:31:GLU:HB3	47:BF:156:THR:O	1.87	0.74
8:CI:23:GLY:H	8:CI:60:LEU:HA	1.53	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B6:84:ARG:HA	53:B6:89:GLY:HA2	1.70	0.74
35:BV:72:VAL:HG12	35:BV:94:ALA:H	1.53	0.74
29:BE:29:HIS:NE2	37:BL:8:PRO:HG3	2.02	0.74
19:CT:2:ASN:ND2	19:CT:3:ILE:H	1.86	0.74
23:DB:172:A:H2'	23:DB:173:A:H8	1.53	0.74
27:DK:53:LYS:H	27:DK:53:LYS:HD3	1.53	0.74
51:BZ:14:THR:HA	51:BZ:28:ARG:HA	1.70	0.74
51:DZ:76:GLU:HG3	51:DZ:77:LYS:H	1.52	0.74
41:DJ:24:THR:HA	41:DJ:63:ALA:HB3	1.70	0.74
47:BF:102:LEU:HA	47:BF:106:ALA:CB	2.17	0.74
21:CU:24:LYS:HD2	21:CU:25:ALA:H	1.50	0.74
44:BQ:4:LYS:NZ	44:BQ:7:VAL:HG22	2.03	0.74
1:AA:270:A:H2'	1:AA:271:C:C6	2.22	0.74
23:BB:775:G:H4'	23:BB:776:G:H5'	1.69	0.74
31:B0:31:LYS:HD2	31:B0:31:LYS:H	1.52	0.74
23:BB:181:A:H2'	23:BB:182:A:C8	2.23	0.74
33:B1:7:LYS:HD3	34:B3:33:THR:HG21	1.68	0.74
6:CG:78:ARG:HG2	6:CG:83:THR:HG22	1.67	0.74
2:CC:129:PHE:HE2	2:CC:165:GLU:HG2	1.53	0.74
3:AD:103:ARG:HH21	3:AD:110:ARG:HH22	1.35	0.74
1:AA:93:U:H5''	1:AA:94:G:OP2	1.88	0.74
53:D6:109:GLU:HA	53:D6:112:LYS:HE3	1.69	0.74
23:DB:191:A:H2'	23:DB:192:C:C6	2.22	0.74
23:DB:1579:A:H2'	23:DB:1580:A:C8	2.23	0.74
20:AB:187:ASP:OD1	20:AB:203:ASP:HB3	1.87	0.74
8:AI:38:PHE:HZ	8:AI:74:GLN:HB3	1.51	0.74
26:DD:5:VAL:H	26:DD:32:ASN:ND2	1.84	0.74
3:CD:25:ARG:HD3	3:CD:26:ALA:N	2.03	0.74
23:BB:2393:U:H5''	37:BL:62:PRO:HG3	1.67	0.74
19:AT:2:ASN:ND2	19:AT:3:ILE:H	1.86	0.74
23:DB:1082:U:N3	23:DB:1086:A:C2	2.55	0.74
38:BM:36:VAL:HB	38:BM:127:LYS:O	1.88	0.74
23:BB:38:A:O2'	29:BE:43:THR:HA	1.87	0.74
1:AA:41:G:H2'	1:AA:42:G:C8	2.23	0.74
2:AC:26:LYS:HG3	2:AC:27:GLU:H	1.53	0.74
23:DB:276:U:H3	23:DB:362:A:H61	1.36	0.74
1:AA:320:A:H2'	1:AA:321:A:C8	2.23	0.74
12:CM:9:PRO:HB2	12:CM:17:ALA:HB1	1.70	0.73
20:CB:96:LEU:H	20:CB:99:MET:HE3	1.53	0.73
20:AB:27:LYS:HA	20:AB:30:ILE:HD12	1.68	0.73
48:BG:155:PRO:HA	48:BG:170:THR:HG22	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AF:38:ARG:HH21	5:AF:63:ASN:ND2	1.85	0.73
40:BH:90:LEU:HD11	40:BH:146:VAL:HG12	1.69	0.73
40:DH:6:LEU:HD13	40:DH:36:ALA:HA	1.69	0.73
44:DQ:4:LYS:NZ	44:DQ:7:VAL:HG22	2.03	0.73
23:DB:62:U:H3'	23:DB:63:A:C8	2.22	0.73
23:BB:1790:C:O2'	25:BC:207:ALA:HB2	1.89	0.73
52:DW:35:ILE:HA	52:DW:57:THR:HG23	1.69	0.73
48:DG:84:LYS:HG2	48:DG:85:LYS:H	1.51	0.73
37:BL:79:LEU:HB2	37:BL:113:ALA:H	1.52	0.73
1:CA:812:G:O2'	1:CA:813:U:H6	1.69	0.73
23:BB:2267:A:C8	23:BB:2267:A:C3'	2.71	0.73
27:DK:71:ARG:HG3	27:DK:105:ARG:HH21	1.53	0.73
23:DB:2078:C:H2'	23:DB:2079:U:C6	2.24	0.73
23:DB:1098:A:H2'	24:DI:4:VAL:CA	2.18	0.73
6:AG:145:GLU:HA	6:AG:148:LYS:HB2	1.69	0.73
40:BH:78:VAL:HG21	40:BH:142:VAL:HG12	1.67	0.73
8:AI:34:LEU:HD11	8:AI:47:VAL:HG21	1.69	0.73
42:BN:38:LEU:HB3	42:BN:39:PRO:HD3	1.69	0.73
47:BF:110:ILE:HA	47:BF:111:ARG:CZ	2.19	0.73
10:AK:83:VAL:HB	10:AK:109:ILE:HG23	1.68	0.73
18:AS:4:LEU:HD11	18:AS:9:PHE:HB3	1.68	0.73
46:BU:12:VAL:HA	46:BU:69:VAL:HA	1.69	0.73
49:BR:4:VAL:O	49:BR:38:VAL:HA	1.88	0.73
46:DU:35:VAL:HB	46:DU:38:ILE:HG21	1.71	0.73
1:CA:715:A:H2'	1:CA:716:A:H8	1.54	0.73
1:AA:1057:G:H4'	2:AC:196:GLY:H	1.52	0.73
43:BO:5:SER:HA	43:BO:8:ILE:HD12	1.70	0.73
25:DC:91:ALA:CB	25:DC:105:ALA:HB2	2.18	0.73
53:D6:80:GLU:HA	53:D6:83:ILE:HG12	1.69	0.73
8:CI:25:GLY:HA2	8:CI:60:LEU:O	1.89	0.73
38:DM:35:ALA:HB3	38:DM:99:GLY:N	2.04	0.73
4:CE:35:LEU:HD21	4:CE:136:VAL:HG11	1.70	0.73
24:DI:20:SER:HB3	24:DI:21:PRO:HD3	1.68	0.73
23:BB:2443:C:H2'	23:BB:2444:G:H8	1.53	0.73
28:DP:4:ILE:HG22	28:DP:5:LYS:H	1.54	0.73
40:BH:125:THR:HA	40:BH:146:VAL:HB	1.70	0.73
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.23	0.73
23:DB:62:U:C2'	23:DB:63:A:H5'	2.19	0.73
23:BB:773:U:H5'	23:BB:774:G:OP2	1.87	0.73
14:CO:24:SER:HB3	14:CO:27:VAL:HG23	1.70	0.73
37:DL:79:LEU:HB2	37:DL:113:ALA:H	1.50	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CN:68:ARG:HH12	13:CN:70:HIS:HB2	1.54	0.73
53:B6:108:GLU:HA	53:B6:111:ARG:HB2	1.70	0.73
23:BB:2769:U:H2'	23:BB:2770:G:C8	2.23	0.73
1:AA:85:U:O3'	1:AA:86:G:H4'	1.89	0.73
46:DU:26:ASN:N	46:DU:26:ASN:HD22	1.85	0.73
31:D0:31:LYS:H	31:D0:31:LYS:HD2	1.54	0.73
26:BD:68:PHE:HB3	26:BD:73:VAL:HG23	1.71	0.73
23:DB:558:U:OP1	41:DJ:113:PRO:HG2	1.89	0.73
46:DU:58:VAL:HG12	46:DU:59:GLU:H	1.52	0.73
27:DK:35:VAL:HG23	27:DK:36:GLY:N	2.02	0.73
47:DF:110:ILE:HA	47:DF:111:ARG:CZ	2.18	0.73
23:BB:1548:A:H2'	23:BB:1549:A:C8	2.24	0.73
46:BU:34:ILE:HG12	46:BU:63:ALA:HB2	1.71	0.73
23:DB:181:A:H2'	23:DB:182:A:C8	2.24	0.73
21:AU:10:PRO:HB2	2:CC:71:ARG:HD3	1.71	0.73
25:DC:143:VAL:HB	25:DC:153:LEU:HB2	1.69	0.73
47:DF:62:GLN:HG3	47:DF:91:ARG:NH1	2.02	0.73
8:CI:20:ILE:HD13	8:CI:85:ALA:HB3	1.69	0.73
29:BE:58:LYS:HZ3	29:BE:58:LYS:H	1.37	0.73
26:DD:37:VAL:HG23	26:DD:91:THR:HA	1.70	0.73
23:BB:1104:C:H2'	23:BB:1105:U:C6	2.24	0.73
23:BB:1324:G:H1'	23:BB:1616:A:N6	2.04	0.73
7:CH:49:LYS:HB3	7:CH:59:GLU:HB2	1.69	0.73
40:DH:115:VAL:HB	40:DH:132:PHE:CD1	2.23	0.73
52:BW:35:ILE:HA	52:BW:57:THR:HG23	1.71	0.73
40:BH:97:ARG:HA	40:BH:112:LYS:HB2	1.70	0.73
25:BC:91:ALA:HB2	25:BC:105:ALA:HB2	1.69	0.73
37:BL:56:PRO:HD2	37:BL:59:ARG:HG3	1.68	0.73
13:AN:30:ILE:HG22	13:AN:41:TRP:HB2	1.71	0.73
13:CN:30:ILE:HG22	13:CN:41:TRP:HB2	1.71	0.73
26:BD:24:VAL:HG21	26:BD:188:LEU:HB3	1.71	0.73
23:DB:1681:G:N3	23:DB:1762:A:H2'	2.03	0.73
23:DB:1131:G:N2	23:DB:2024:G:H21	1.87	0.73
11:CL:51:VAL:HG12	11:CL:52:CYS:H	1.52	0.73
1:AA:973:G:H3'	1:AA:974:A:H5''	1.69	0.73
48:BG:115:GLN:CD	48:BG:115:GLN:H	1.91	0.73
23:DB:2144:G:O2'	23:DB:2145:C:H5'	1.89	0.73
29:DE:148:ILE:HD13	29:DE:187:VAL:HG21	1.69	0.73
25:BC:144:GLU:HB3	25:BC:187:CYS:HB3	1.71	0.72
1:AA:1216:A:H5''	13:AN:4:SER:HB3	1.69	0.72
47:DF:66:ILE:HD11	47:DF:83:PRO:HB3	1.71	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BN:102:PHE:H	42:BN:109:PRO:HA	1.52	0.72
24:BI:20:SER:HB3	24:BI:21:PRO:HD3	1.69	0.72
23:BB:280:U:H2'	23:BB:281:C:C6	2.24	0.72
1:AA:1004:A:H2'	1:AA:1005:A:O4'	1.89	0.72
5:AF:98:GLU:HG2	5:AF:99:ALA:N	2.03	0.72
23:BB:1681:G:N3	23:BB:1762:A:H2'	2.03	0.72
51:BZ:17:ASN:HB2	51:BZ:25:THR:OG1	1.89	0.72
23:DB:1099:G:O4'	24:DI:3:LYS:C	2.27	0.72
8:AI:26:LYS:N	8:AI:61:ASP:HB3	2.03	0.72
50:BT:11:LEU:HD22	50:BT:11:LEU:H	1.54	0.72
12:AM:49:GLU:O	12:AM:52:ILE:HG22	1.87	0.72
10:CK:28:ASN:HD21	10:CK:47:GLY:H	1.37	0.72
1:CA:973:G:H3'	1:CA:974:A:H5''	1.70	0.72
8:CI:34:LEU:HD11	8:CI:47:VAL:HG21	1.71	0.72
26:DD:51:THR:HG21	26:DD:76:GLY:HA3	1.71	0.72
25:BC:91:ALA:CB	25:BC:105:ALA:HB2	2.19	0.72
43:BO:89:ASP:HA	43:BO:116:GLN:O	1.89	0.72
23:BB:2734:A:H2'	23:BB:2735:G:H5'	1.71	0.72
1:CA:269:C:H2'	1:CA:270:A:C8	2.25	0.72
3:AD:103:ARG:HH21	3:AD:110:ARG:NH2	1.87	0.72
14:AO:89:ARG:HA	14:AO:89:ARG:HH11	1.54	0.72
12:AM:9:PRO:HB2	12:AM:17:ALA:HB1	1.70	0.72
23:DB:90:U:H3'	23:DB:91:A:H5''	1.69	0.72
10:AK:45:THR:HG23	10:AK:48:GLY:HA3	1.71	0.72
28:BP:26:GLU:HB3	28:BP:84:SER:HB3	1.70	0.72
1:CA:41:G:H2'	1:CA:42:G:C8	2.23	0.72
10:CK:45:THR:HG23	10:CK:48:GLY:HA3	1.71	0.72
35:BV:42:LEU:HD23	35:BV:42:LEU:H	1.55	0.72
23:BB:90:U:H3'	23:BB:91:A:H5''	1.70	0.72
53:D6:84:ARG:H	53:D6:84:ARG:NE	1.88	0.72
52:DW:49:ASN:HB2	52:DW:61:LYS:H	1.54	0.72
24:BI:77:VAL:HA	24:BI:80:LYS:HE2	1.72	0.72
1:CA:946:A:H2'	1:CA:947:G:C8	2.23	0.72
18:CS:48:ILE:HG22	18:CS:49:ALA:H	1.54	0.72
24:BI:122:GLU:O	24:BI:126:ARG:HG3	1.89	0.72
22:BA:75:G:H1	22:BA:102:G:N2	1.88	0.72
23:BB:616:A:H3'	23:BB:617:G:H8	1.54	0.72
23:DB:2548:U:H1'	27:DK:23:LYS:HZ1	1.53	0.72
23:DB:1778:U:H2'	23:DB:1784:A:H62	1.54	0.72
9:AJ:44:THR:HG23	9:AJ:69:THR:O	1.90	0.72
2:AC:59:PRO:HG2	2:AC:62:SER:OG	1.89	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AU:40:PRO:HA	21:AU:44:ARG:HD3	1.72	0.72
48:BG:17:LYS:HB3	48:BG:24:THR:H	1.54	0.72
51:BZ:76:GLU:HG3	51:BZ:77:LYS:H	1.53	0.72
23:BB:322:A:C3'	29:BE:163:ASN:HD21	2.03	0.72
23:DB:2267:A:C8	23:DB:2267:A:C3'	2.71	0.72
26:DD:186:LEU:HD11	28:DP:3:ILE:HG13	1.72	0.72
23:BB:62:U:C2'	23:BB:63:A:H5'	2.19	0.72
20:CB:96:LEU:HD21	20:CB:146:SER:HB2	1.72	0.72
10:AK:105:ARG:NH2	21:AU:10:PRO:HB3	2.05	0.72
49:BR:24:LYS:HA	49:BR:94:THR:HG23	1.71	0.72
23:DB:215:G:H4'	23:DB:216:A:H4'	1.71	0.72
43:BO:76:LYS:O	43:BO:80:GLU:HG2	1.90	0.72
51:DZ:14:THR:HA	51:DZ:28:ARG:HA	1.72	0.72
23:BB:191:A:H2'	23:BB:192:C:C6	2.24	0.72
9:AJ:36:VAL:HG22	9:AJ:76:ILE:HG22	1.70	0.72
23:BB:2155:U:H2'	23:BB:2156:G:O4'	1.90	0.72
27:DK:58:LEU:HD11	27:DK:86:LEU:HB3	1.70	0.72
48:DG:9:VAL:HA	48:DG:48:THR:HG22	1.69	0.72
47:DF:34:THR:HG22	47:DF:89:THR:HG22	1.72	0.72
50:BT:21:SER:O	50:BT:25:GLU:HB2	1.88	0.72
1:CA:17:U:H2'	1:CA:18:C:C6	2.24	0.72
22:BA:32:U:H1'	22:BA:52:A:N7	2.05	0.72
44:BQ:104:ALA:HA	49:BR:46:GLU:CD	2.10	0.72
1:CA:706:A:H4'	10:CK:30:ILE:HD11	1.72	0.72
20:CB:60:ALA:HA	20:CB:64:GLY:HA3	1.70	0.72
20:AB:96:LEU:H	20:AB:99:MET:HE3	1.53	0.72
49:DR:31:GLU:H	49:DR:63:VAL:CG2	2.02	0.72
23:DB:2720:U:H5''	28:DP:52:ARG:HH21	1.54	0.72
23:BB:2722:G:H4'	42:BN:4:ARG:HB2	1.70	0.72
3:CD:90:LEU:HA	3:CD:93:LEU:HD12	1.71	0.72
23:DB:2795:C:H2'	23:DB:2796:U:O4'	1.90	0.72
26:BD:111:GLY:H	26:BD:194:PRO:CG	2.02	0.72
20:CB:187:ASP:OD1	20:CB:203:ASP:HB3	1.90	0.72
3:CD:24:VAL:HG23	3:CD:25:ARG:H	1.54	0.72
23:DB:1060:U:C4	23:DB:1088:A:N6	2.58	0.72
23:BB:1076:C:H4'	24:BI:94:LYS:CE	2.19	0.72
23:DB:1080:A:H4'	24:DI:126:ARG:CD	2.19	0.72
23:DB:98:G:H2'	23:DB:99:U:H5''	1.71	0.72
23:DB:1558:C:H4'	23:DB:1559:U:H5'	1.69	0.72
2:CC:154:GLY:HA3	2:CC:162:ALA:HB1	1.70	0.72
23:DB:2052:A:O4'	26:DD:147:GLY:HA3	1.90	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1210:G:H5'	23:BB:1212:G:O4'	1.90	0.72
23:BB:580:U:H2'	23:BB:581:C:C6	2.24	0.72
4:AE:44:ARG:HA	4:AE:71:ILE:O	1.90	0.72
23:BB:858:G:N3	23:BB:2268:A:H2'	2.04	0.72
53:B6:32:ARG:NH1	53:B6:88:LEU:HD23	2.04	0.72
51:DZ:6:GLN:NE2	51:DZ:50:ARG:H	1.87	0.72
48:DG:17:LYS:HB3	48:DG:24:THR:H	1.54	0.72
13:AN:68:ARG:HH12	13:AN:70:HIS:HB2	1.54	0.72
1:AA:1361:G:H2'	1:AA:1362:A:H5''	1.72	0.72
24:DI:105:LEU:HD11	24:DI:139:VAL:HG21	1.69	0.72
26:BD:114:LYS:HB2	26:BD:116:LYS:HE3	1.72	0.72
1:AA:337:G:H2'	1:AA:338:A:C8	2.25	0.72
29:DE:194:LYS:O	29:DE:197:GLU:HB3	1.90	0.72
1:AA:552:U:H5'	11:AL:82:ARG:HH11	1.53	0.72
23:BB:1804:C:OP1	25:BC:256:THR:HB	1.90	0.72
3:AD:94:GLU:HG2	3:AD:185:PRO:HG3	1.72	0.72
1:CA:301:G:H2'	1:CA:302:G:H8	1.54	0.72
43:DO:76:LYS:O	43:DO:80:GLU:HG2	1.88	0.72
23:DB:2189:U:H2'	23:DB:2190:G:H5''	1.70	0.72
1:AA:301:G:H2'	1:AA:302:G:H8	1.54	0.72
42:BN:24:MET:HE3	42:BN:44:LEU:HB2	1.71	0.72
14:AO:24:SER:HB3	14:AO:27:VAL:HG23	1.71	0.72
52:DW:35:ILE:HG13	52:DW:57:THR:OG1	1.90	0.72
23:DB:1287:A:H3'	23:DB:1288:G:N2	2.04	0.72
5:CF:38:ARG:HH21	5:CF:63:ASN:HD21	1.38	0.72
27:BK:112:PHE:O	27:BK:115:ILE:HG22	1.90	0.72
49:DR:24:LYS:HA	49:DR:94:THR:HG23	1.71	0.72
15:AP:26:ASN:HD21	15:AP:31:ARG:HD3	1.53	0.72
41:BJ:24:THR:HA	41:BJ:63:ALA:HB3	1.70	0.71
26:DD:106:LYS:HB3	26:DD:206:ALA:H	1.54	0.71
22:DA:28:C:N4	22:DA:56:G:N1	2.38	0.71
48:DG:26:LYS:HG2	48:DG:27:GLY:N	2.04	0.71
29:DE:60:TRP:O	29:DE:61:ARG:HB2	1.89	0.71
3:AD:25:ARG:HD3	3:AD:26:ALA:N	2.04	0.71
23:BB:320:A:H4'	23:BB:322:A:N7	2.05	0.71
1:AA:1369:C:H2'	1:AA:1370:G:C8	2.25	0.71
27:BK:41:ILE:HG13	27:BK:42:THR:N	2.03	0.71
39:DX:20:ASN:N	39:DX:20:ASN:HD22	1.88	0.71
25:DC:32:LEU:HD22	25:DC:63:ILE:HG13	1.72	0.71
23:DB:357:C:H2'	23:DB:358:U:C6	2.25	0.71
41:BJ:23:LYS:HE3	41:BJ:142:ILE:HG12	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AQ:13:SER:HB3	16:AQ:21:VAL:HB	1.70	0.71
23:BB:1796:U:H2'	23:BB:1797:G:H8	1.55	0.71
12:AM:89:ARG:NH2	12:AM:94:LEU:HD12	2.05	0.71
53:D6:52:LEU:HD11	53:D6:79:ILE:HG23	1.72	0.71
42:DN:102:PHE:H	42:DN:109:PRO:HA	1.53	0.71
23:DB:1125:G:H4'	32:D4:37:GLN:NE2	2.04	0.71
26:DD:34:VAL:HA	26:DD:50:VAL:HG12	1.71	0.71
48:BG:71:LEU:HA	48:BG:74:MET:SD	2.30	0.71
23:BB:581:C:H2'	23:BB:582:A:C8	2.25	0.71
16:CQ:13:SER:HB3	16:CQ:21:VAL:HB	1.72	0.71
38:BM:114:ARG:HH21	38:BM:114:ARG:HB2	1.54	0.71
23:DB:773:U:H5'	23:DB:774:G:OP2	1.89	0.71
23:BB:2073:C:H5''	25:BC:227:VAL:HG12	1.72	0.71
4:CE:44:ARG:HA	4:CE:71:ILE:O	1.90	0.71
36:B2:30:VAL:HA	36:B2:33:ARG:NH2	2.04	0.71
48:BG:9:VAL:HA	48:BG:48:THR:HG22	1.71	0.71
23:DB:855:G:H21	52:DW:23:LYS:CG	2.03	0.71
13:AN:5:MET:HB3	13:AN:62:ARG:HH12	1.55	0.71
47:BF:78:ILE:H	47:BF:79:ARG:HH11	1.38	0.71
1:CA:1361:G:H2'	1:CA:1362:A:H5''	1.70	0.71
10:CK:31:VAL:HG21	10:CK:66:ALA:HA	1.72	0.71
29:DE:143:LEU:HB3	29:DE:146:VAL:HG21	1.72	0.71
27:BK:102:PRO:HA	27:BK:120:PRO:HB3	1.71	0.71
1:AA:22:G:H2'	1:AA:23:C:C6	2.25	0.71
3:AD:116:LEU:HB3	3:AD:122:ILE:HD11	1.71	0.71
1:CA:674:G:H2'	1:CA:675:A:H8	1.54	0.71
1:AA:1011:C:H2'	1:AA:1012:A:H8	1.55	0.71
23:DB:1365:A:OP2	51:DZ:3:ARG:HB2	1.90	0.71
6:AG:78:ARG:HG2	6:AG:83:THR:HG22	1.72	0.71
1:AA:674:G:H2'	1:AA:675:A:H8	1.55	0.71
1:CA:493:A:H5'	1:CA:494:G:OP2	1.91	0.71
20:CB:202:ASN:HD22	20:CB:203:ASP:N	1.88	0.71
51:BZ:5:CYS:HB3	51:BZ:10:LYS:N	2.04	0.71
1:AA:522:C:H41	11:AL:49:ARG:HH22	1.38	0.71
29:BE:60:TRP:O	29:BE:61:ARG:HB2	1.90	0.71
13:AN:11:LYS:O	13:AN:15:LEU:HG	1.91	0.71
10:AK:28:ASN:HD21	10:AK:47:GLY:H	1.38	0.71
1:CA:33:A:H2'	1:CA:34:C:C6	2.25	0.71
1:CA:1057:G:H4'	2:CC:196:GLY:H	1.53	0.71
46:BU:26:ASN:HD22	46:BU:26:ASN:N	1.85	0.71
1:AA:33:A:H2'	1:AA:34:C:H6	1.54	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:117:LEU:HD22	8:CI:123:ARG:HG2	1.72	0.71
23:DB:1274:A:N3	23:DB:1297:C:H1'	2.05	0.71
41:DJ:73:VAL:HG23	41:DJ:74:TYR:H	1.56	0.71
22:BA:28:C:N4	22:BA:56:G:N1	2.38	0.71
50:DT:2:ILE:HB	50:DT:3:ARG:HD3	1.72	0.71
40:BH:108:VAL:HG12	40:BH:109:GLU:N	2.04	0.71
23:DB:784:G:O2'	23:DB:785:G:H5''	1.90	0.71
15:CP:40:ASN:HD21	15:CP:43:ALA:N	1.89	0.71
23:DB:320:A:H4'	23:DB:322:A:N7	2.04	0.71
1:AA:957:U:H4'	18:AS:78:THR:HB	1.71	0.71
1:CA:1216:A:H5''	13:CN:4:SER:HB3	1.69	0.71
41:BJ:3:THR:HG21	44:BQ:60:TRP:HE1	1.55	0.71
48:BG:26:LYS:HG2	48:BG:27:GLY:N	2.03	0.71
23:BB:1060:U:C4	23:BB:1088:A:N6	2.58	0.71
9:CJ:51:VAL:CG2	13:CN:80:ARG:HB2	2.21	0.71
23:DB:2741:A:H2'	23:DB:2742:G:O4'	1.89	0.71
23:BB:30:G:H2'	23:BB:31:C:C6	2.25	0.71
38:BM:19:GLY:HA2	38:BM:97:GLN:HB2	1.71	0.71
1:CA:41:G:H2'	1:CA:42:G:H8	1.55	0.71
14:AO:70:LEU:HD12	14:AO:78:TYR:HB2	1.71	0.71
12:CM:89:ARG:NH2	12:CM:94:LEU:HD12	2.04	0.71
23:BB:2615:U:H1'	31:B0:3:GLN:HB3	1.72	0.71
1:CA:195:A:H2'	1:CA:196:A:C8	2.25	0.71
1:CA:957:U:H4'	18:CS:78:THR:HB	1.71	0.71
2:CC:26:LYS:HG3	2:CC:27:GLU:H	1.56	0.71
10:CK:124:LYS:HA	21:CU:34:ARG:CB	2.18	0.71
53:B6:51:PRO:O	53:B6:55:ILE:HG22	1.91	0.71
38:BM:71:LYS:HD3	38:BM:95:LEU:HD13	1.73	0.71
40:DH:94:ILE:HG22	40:DH:122:LEU:HG	1.73	0.71
21:AU:24:LYS:HD2	21:AU:25:ALA:H	1.55	0.71
26:BD:186:LEU:HD11	28:BP:3:ILE:HG13	1.73	0.71
23:BB:2741:A:H2'	23:BB:2742:G:O4'	1.90	0.71
23:DB:2529:G:H5''	48:DG:174:LYS:HB2	1.72	0.71
23:BB:1138:G:H2'	23:BB:1139:G:O4'	1.91	0.71
42:DN:24:MET:HE3	42:DN:44:LEU:HB2	1.73	0.71
1:CA:927:G:H4'	1:CA:1503:A:N7	2.06	0.71
23:DB:1097:U:H2'	23:DB:1098:A:O4'	1.90	0.71
23:DB:2387:U:H1'	52:DW:38:ARG:CZ	2.21	0.71
21:CU:40:PRO:HA	21:CU:44:ARG:HD3	1.73	0.71
26:BD:105:LYS:HD2	26:BD:177:VAL:HG22	1.72	0.71
8:CI:5:TYR:HB2	8:CI:20:ILE:HB	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CS:18:VAL:HG21	18:CS:43:MET:HB3	1.73	0.71
23:BB:571:U:H3'	49:BR:80:ARG:HH12	1.56	0.71
46:DU:11:ILE:HG22	46:DU:70:ALA:HB3	1.72	0.71
23:DB:2075:U:H2'	23:DB:2238:G:N2	2.06	0.71
39:BX:20:ASN:HD22	39:BX:20:ASN:N	1.89	0.71
1:AA:706:A:H4'	10:AK:30:ILE:HD11	1.72	0.71
23:DB:2602:A:H2'	23:DB:2602:A:N3	2.05	0.71
24:DI:85:ILE:HD13	24:DI:137:LEU:HD21	1.73	0.71
1:CA:320:A:H2'	1:CA:321:A:C8	2.25	0.71
25:BC:183:VAL:HG13	25:BC:185:ALA:H	1.55	0.71
25:DC:183:VAL:HG13	25:DC:185:ALA:H	1.55	0.71
40:BH:84:ALA:HA	40:BH:90:LEU:CA	2.21	0.71
50:BT:2:ILE:HB	50:BT:3:ARG:HD3	1.73	0.71
1:CA:522:C:H41	11:CL:49:ARG:HH22	1.38	0.71
23:BB:2264:C:H41	52:BW:11:ASN:ND2	1.89	0.71
23:DB:2107:G:H2'	23:DB:2108:A:C8	2.25	0.71
20:AB:60:ALA:HA	20:AB:64:GLY:HA3	1.71	0.71
49:DR:4:VAL:HG23	49:DR:39:LEU:H	1.55	0.71
4:AE:39:GLY:HA3	4:AE:116:VAL:HB	1.73	0.71
1:AA:1086:U:H3	1:AA:1099:G:H22	1.39	0.71
23:DB:858:G:N3	23:DB:2268:A:H2'	2.06	0.71
23:BB:2746:U:H4'	48:BG:137:LYS:HG3	1.71	0.71
28:BP:89:GLY:HA2	28:BP:112:ARG:N	2.06	0.71
2:AC:142:ARG:HH21	2:AC:143:LEU:HD21	1.54	0.71
23:BB:2602:A:N3	23:BB:2602:A:H2'	2.05	0.71
23:BB:2241:A:H2'	23:BB:2242:G:C8	2.26	0.71
52:BW:43:LYS:HB3	52:BW:58:LEU:HD11	1.73	0.71
22:DA:43:C:O2'	47:DF:91:ARG:HD2	1.91	0.71
1:CA:429:U:H3'	3:CD:8:LEU:HD23	1.71	0.71
51:BZ:71:LEU:HD13	51:BZ:76:GLU:HB3	1.72	0.71
29:BE:130:LYS:HB2	29:BE:133:LEU:HG	1.72	0.71
12:AM:38:ILE:HG13	12:AM:55:LEU:HD21	1.70	0.71
27:BK:71:ARG:HG3	27:BK:105:ARG:HH21	1.56	0.71
29:DE:130:LYS:HB2	29:DE:133:LEU:HG	1.71	0.71
14:CO:70:LEU:HD12	14:CO:78:TYR:HB2	1.71	0.71
28:DP:26:GLU:HB3	28:DP:84:SER:HB3	1.72	0.71
23:BB:1274:A:N3	23:BB:1297:C:H1'	2.05	0.71
19:CT:66:ILE:HG23	19:CT:70:LYS:HB3	1.73	0.71
52:BW:58:LEU:HD12	52:BW:79:ILE:HD12	1.73	0.70
23:DB:1790:C:H2'	23:DB:1791:A:C8	2.26	0.70
13:CN:11:LYS:O	13:CN:15:LEU:HG	1.92	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DM:42:THR:HB	38:DM:45:GLN:HG3	1.73	0.70
23:DB:845:A:C2	23:DB:847:U:H1'	2.26	0.70
20:AB:113:LEU:HD12	20:AB:143:LEU:HB3	1.74	0.70
1:CA:1071:C:H2'	1:CA:1072:G:H8	1.55	0.70
26:BD:14:ILE:HG22	26:BD:22:ILE:O	1.90	0.70
23:BB:131:A:H2'	23:BB:132:G:H8	1.56	0.70
40:BH:78:VAL:HB	40:BH:143:ILE:HD12	1.73	0.70
23:BB:1458:U:C5'	23:BB:1459:G:H5'	2.21	0.70
40:DH:125:THR:HA	40:DH:146:VAL:HB	1.72	0.70
4:AE:15:ILE:HD12	4:AE:35:LEU:HG	1.73	0.70
34:D3:30:HIS:H	34:D3:32:LEU:HD21	1.56	0.70
23:BB:215:G:H4'	23:BB:216:A:H4'	1.73	0.70
23:DB:1550:C:H2'	23:DB:1551:A:H8	1.56	0.70
46:BU:11:ILE:HG22	46:BU:70:ALA:HB3	1.72	0.70
1:CA:474:G:H2'	1:CA:475:C:C6	2.26	0.70
1:CA:1011:C:H2'	1:CA:1012:A:C8	2.26	0.70
16:AQ:16:MET:HB2	16:AQ:19:SER:HB2	1.73	0.70
27:BK:87:LEU:HB2	27:BK:93:GLN:O	1.91	0.70
9:CJ:44:THR:HG23	9:CJ:69:THR:O	1.91	0.70
3:AD:90:LEU:HA	3:AD:93:LEU:HD12	1.73	0.70
1:CA:238:A:H2'	1:CA:239:U:H5''	1.73	0.70
23:DB:1099:G:H5''	24:DI:2:LYS:C	2.11	0.70
44:DQ:30:VAL:CG1	44:DQ:33:VAL:HG22	2.21	0.70
23:DB:138:U:O3'	23:DB:139:U:H3'	1.91	0.70
23:BB:162:U:H4'	23:BB:163:C:OP1	1.91	0.70
29:BE:175:ILE:HD11	29:BE:180:LEU:HD11	1.73	0.70
23:BB:721:A:H2'	23:BB:722:A:C8	2.26	0.70
1:CA:552:U:H5'	11:CL:82:ARG:HH11	1.56	0.70
23:BB:2297:A:H61	23:BB:2319:G:H1'	1.56	0.70
12:AM:2:ARG:HG3	12:AM:6:ILE:H	1.54	0.70
23:BB:2795:C:H2'	23:BB:2796:U:O4'	1.90	0.70
23:BB:2840:C:OP1	42:BN:50:PRO:HA	1.91	0.70
1:AA:532:A:N7	2:AC:192:TYR:HD2	1.87	0.70
52:BW:35:ILE:HG13	52:BW:57:THR:OG1	1.91	0.70
22:BA:43:C:O2'	47:BF:91:ARG:HD2	1.92	0.70
8:AI:47:VAL:HG23	8:AI:48:ARG:HG3	1.72	0.70
13:AN:71:GLY:O	13:AN:79:SER:HA	1.92	0.70
1:AA:946:A:H2'	1:AA:947:G:C8	2.26	0.70
23:BB:163:C:H2'	23:BB:164:C:O4'	1.92	0.70
9:CJ:52:LEU:HD21	9:CJ:59:LYS:HA	1.72	0.70
49:BR:78:ARG:HB3	49:BR:83:TYR:HB3	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1287:A:H3'	23:BB:1288:G:N2	2.05	0.70
1:AA:82:G:H2'	1:AA:84:U:C5	2.26	0.70
1:CA:1048:G:O3'	1:CA:1049:U:H3'	1.91	0.70
40:BH:18:GLN:NE2	40:BH:44:ILE:HG21	2.07	0.70
28:DP:31:VAL:HG12	28:DP:38:ARG:O	1.91	0.70
1:CA:9:G:H5'	4:CE:107:GLY:HA3	1.74	0.70
50:BT:59:ASN:O	50:BT:84:TYR:HB2	1.89	0.70
40:BH:122:LEU:HD12	40:BH:122:LEU:H	1.55	0.70
1:AA:1254:A:H5'	1:AA:1356:G:H4'	1.74	0.70
52:DW:43:LYS:HB3	52:DW:58:LEU:HD11	1.73	0.70
16:CQ:45:VAL:HG11	16:CQ:60:ILE:HG21	1.74	0.70
53:B6:95:LYS:HB3	53:B6:100:TYR:HE2	1.55	0.70
23:DB:636:G:H3'	37:DL:128:THR:CG2	2.20	0.70
48:DG:15:ASP:HB3	48:DG:25:ILE:HA	1.72	0.70
23:BB:1241:A:H2'	23:BB:1242:U:H5'	1.74	0.70
33:B1:26:LYS:HB2	33:B1:52:LYS:NZ	2.06	0.70
20:AB:31:PHE:HB2	20:AB:41:ASN:HA	1.72	0.70
23:DB:592:A:H2'	23:DB:593:U:C6	2.26	0.70
1:AA:41:G:H2'	1:AA:42:G:H8	1.54	0.70
23:BB:1654:A:O2'	26:BD:118:PHE:HB2	1.91	0.70
1:CA:337:G:H2'	1:CA:338:A:C8	2.26	0.70
19:AT:66:ILE:HG23	19:AT:70:LYS:HB3	1.71	0.70
23:BB:1485:U:H2'	23:BB:1486:U:C6	2.25	0.70
16:CQ:16:MET:HB2	16:CQ:19:SER:HB2	1.74	0.70
37:DL:90:VAL:HB	37:DL:122:VAL:HA	1.74	0.70
8:CI:47:VAL:HG23	8:CI:48:ARG:HG3	1.72	0.70
1:CA:1369:C:H2'	1:CA:1370:G:C8	2.26	0.70
23:DB:2734:A:H2'	23:DB:2735:G:H5'	1.74	0.70
38:DM:126:ILE:HG22	38:DM:127:LYS:H	1.56	0.70
42:BN:34:ILE:HB	42:BN:113:ILE:HG22	1.74	0.70
3:CD:116:LEU:HB3	3:CD:122:ILE:HD11	1.73	0.70
38:DM:19:GLY:N	38:DM:38:ARG:HH22	1.89	0.70
9:AJ:8:ILE:HB	9:AJ:74:VAL:HB	1.72	0.70
23:DB:276:U:H2'	23:DB:278:A:C2	2.27	0.70
1:AA:33:A:H2'	1:AA:34:C:C6	2.27	0.70
10:CK:105:ARG:NH2	21:CU:10:PRO:HB3	2.05	0.70
35:BV:9:ARG:NH2	35:BV:12:GLN:HA	2.06	0.70
23:BB:2591:C:H2'	23:BB:2592:G:C8	2.27	0.70
10:AK:110:THR:HG22	21:AU:4:LYS:HA	1.74	0.70
10:AK:126:ARG:HB2	21:AU:33:ARG:HD2	1.73	0.70
38:DM:19:GLY:HA2	38:DM:97:GLN:HB2	1.72	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1071:C:H2'	1:AA:1072:G:H8	1.56	0.70
23:DB:224:U:O4	23:DB:420:C:H5'	1.91	0.70
4:CE:76:ASN:HB2	4:CE:81:GLN:NE2	2.07	0.70
7:AH:11:THR:HG22	7:AH:14:ARG:HH12	1.56	0.70
52:BW:49:ASN:HB2	52:BW:61:LYS:H	1.56	0.70
37:BL:90:VAL:HB	37:BL:122:VAL:HA	1.74	0.70
48:DG:104:LEU:HB2	48:DG:112:VAL:HB	1.74	0.70
26:BD:34:VAL:HG12	26:BD:94:GLN:H	1.57	0.70
37:BL:30:THR:O	37:BL:33:ARG:HG2	1.91	0.70
27:DK:112:PHE:O	27:DK:115:ILE:HG22	1.92	0.70
1:AA:1273:C:H2'	1:AA:1274:A:O4'	1.92	0.70
27:DK:60:ALA:HA	27:DK:87:LEU:HD23	1.74	0.70
7:CH:51:GLU:HG2	7:CH:52:GLY:H	1.56	0.70
23:BB:558:U:OP1	41:BJ:113:PRO:HG2	1.91	0.70
23:DB:264:C:O2'	23:DB:265:A:H5''	1.92	0.70
11:AL:98:ARG:HA	11:AL:103:CYS:SG	2.31	0.70
4:AE:52:ALA:HB2	4:AE:61:LYS:HE2	1.74	0.70
1:AA:1048:G:O3'	1:AA:1049:U:H3'	1.91	0.70
15:AP:40:ASN:HD21	15:AP:43:ALA:N	1.89	0.70
23:BB:98:G:H2'	23:BB:99:U:H5''	1.73	0.70
9:AJ:24:GLU:HG2	9:AJ:90:LEU:HD21	1.74	0.70
53:B6:60:ALA:HA	53:B6:66:LEU:HA	1.72	0.70
35:DV:72:VAL:HG12	35:DV:94:ALA:H	1.55	0.70
23:DB:2379:G:H2'	23:DB:2380:C:C6	2.27	0.70
35:DV:9:ARG:NH2	35:DV:12:GLN:HA	2.07	0.70
1:CA:335:C:H2'	1:CA:336:A:C8	2.27	0.70
50:DT:59:ASN:O	50:DT:84:TYR:HB2	1.91	0.70
1:AA:9:G:H5'	4:AE:107:GLY:HA3	1.74	0.70
39:BX:34:SER:HB2	39:BX:36:GLN:OE1	1.92	0.70
23:DB:616:A:H3'	23:DB:617:G:H8	1.55	0.70
23:BB:49:A:H5''	23:BB:51:G:O4'	1.91	0.70
1:CA:1137:C:H1'	1:CA:1138:G:C2	2.26	0.70
23:BB:2356:U:H5''	52:BW:16:GLU:HG3	1.73	0.70
35:DV:42:LEU:H	35:DV:42:LEU:HD23	1.57	0.70
23:DB:2328:A:H2'	23:DB:2329:U:C6	2.27	0.70
20:AB:202:ASN:HD22	20:AB:203:ASP:N	1.89	0.70
23:BB:1139:G:O2'	23:BB:1140:C:H5'	1.92	0.70
46:BU:35:VAL:HB	46:BU:38:ILE:HG21	1.72	0.70
29:BE:194:LYS:O	29:BE:197:GLU:HB3	1.91	0.70
23:DB:1210:G:H5'	23:DB:1212:G:O4'	1.91	0.70
1:AA:1479:C:H2'	1:AA:1480:A:H8	1.57	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:264:C:O2'	23:BB:265:A:H5''	1.91	0.70
36:D2:30:VAL:HA	36:D2:33:ARG:NH2	2.07	0.70
8:CI:9:GLY:HA2	8:CI:80:HIS:CD2	2.27	0.70
37:BL:90:VAL:HB	37:BL:122:VAL:HG12	1.74	0.69
47:BF:107:VAL:O	47:BF:110:ILE:HG22	1.92	0.69
47:BF:105:ILE:O	47:BF:109:ARG:HB2	1.91	0.69
1:AA:922:G:H4'	4:AE:24:VAL:HA	1.74	0.69
23:BB:968:C:H2'	23:BB:969:G:C8	2.26	0.69
23:BB:2444:G:P	29:BE:63:LYS:HD2	2.32	0.69
44:BQ:104:ALA:HA	49:BR:46:GLU:OE1	1.92	0.69
23:DB:968:C:H2'	23:DB:969:G:C8	2.26	0.69
49:DR:8:GLY:HA3	49:DR:23:GLU:HB2	1.74	0.69
20:CB:95:TRP:HH2	20:CB:100:LEU:HB2	1.55	0.69
49:BR:31:GLU:H	49:BR:63:VAL:HG22	1.56	0.69
49:DR:68:ARG:NH1	49:DR:90:ARG:HD3	2.06	0.69
23:DB:2591:C:H2'	23:DB:2592:G:C8	2.26	0.69
23:BB:836:G:H2'	23:BB:837:C:C6	2.26	0.69
34:B3:30:HIS:H	34:B3:32:LEU:HD21	1.56	0.69
40:BH:73:ASN:N	40:BH:73:ASN:HD22	1.89	0.69
26:BD:148:GLN:HG3	26:BD:152:PRO:HG2	1.73	0.69
15:CP:40:ASN:HD21	15:CP:43:ALA:H	1.39	0.69
1:CA:195:A:H1'	1:CA:222:C:O2'	1.92	0.69
23:BB:645:C:H4'	23:BB:646:U:OP2	1.92	0.69
43:BO:47:VAL:HG12	43:BO:48:LEU:H	1.57	0.69
35:BV:29:ILE:HG13	35:BV:88:HIS:HE1	1.57	0.69
23:BB:1583:A:H5''	23:BB:1584:U:OP1	1.91	0.69
27:BK:53:LYS:H	27:BK:53:LYS:HD3	1.55	0.69
3:AD:84:ASN:ND2	4:AE:101:GLY:HA3	2.07	0.69
49:BR:19:THR:HB	49:BR:97:LYS:HA	1.74	0.69
26:BD:30:GLU:HG3	26:BD:52:THR:HG22	1.74	0.69
47:DF:107:VAL:O	47:DF:110:ILE:HG22	1.93	0.69
23:BB:2144:G:H2'	23:BB:2146:C:OP2	1.92	0.69
23:BB:1550:C:H2'	23:BB:1551:A:H8	1.57	0.69
11:AL:20:VAL:HG12	11:AL:93:ARG:HB3	1.74	0.69
20:AB:95:TRP:HH2	20:AB:100:LEU:HB2	1.57	0.69
1:AA:673:A:H2'	1:AA:674:G:C8	2.27	0.69
23:DB:1138:G:H2'	23:DB:1139:G:O4'	1.92	0.69
35:DV:29:ILE:HG13	35:DV:88:HIS:HE1	1.57	0.69
23:DB:721:A:H2'	23:DB:722:A:H8	1.57	0.69
23:BB:64:A:H2'	23:BB:65:U:C6	2.27	0.69
43:BO:24:THR:HG22	43:BO:42:PRO:HD3	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BK:35:VAL:HG23	27:BK:36:GLY:N	2.04	0.69
30:DY:15:ARG:O	30:DY:20:LYS:HE3	1.93	0.69
18:AS:42:ASN:ND2	18:AS:43:MET:HG2	2.07	0.69
9:AJ:51:VAL:CG2	13:AN:80:ARG:HB2	2.22	0.69
23:BB:1178:C:H2'	23:BB:1179:G:H8	1.56	0.69
38:BM:126:ILE:HG22	38:BM:127:LYS:H	1.57	0.69
38:BM:19:GLY:N	38:BM:38:ARG:HH22	1.90	0.69
23:BB:784:G:O2'	23:BB:785:G:H5''	1.93	0.69
23:BB:118:A:OP2	23:BB:119:A:H2'	1.92	0.69
1:AA:238:A:H2'	1:AA:239:U:H5''	1.73	0.69
52:DW:58:LEU:HD12	52:DW:79:ILE:HD12	1.73	0.69
53:B6:69:GLN:NE2	53:B6:98:ALA:HB2	2.07	0.69
23:BB:1012:U:O4	41:BJ:30:THR:HG21	1.91	0.69
23:BB:670:A:H5''	37:BL:42:SER:HB2	1.73	0.69
18:CS:4:LEU:HD11	18:CS:9:PHE:HB3	1.72	0.69
49:DR:78:ARG:HB3	49:DR:83:TYR:HB3	1.73	0.69
35:DV:79:ARG:NH1	38:DM:134:THR:HG21	2.07	0.69
1:AA:22:G:H2'	1:AA:23:C:H6	1.56	0.69
26:DD:34:VAL:HB	26:DD:48:ILE:HD11	1.74	0.69
16:CQ:16:MET:CB	16:CQ:19:SER:HB2	2.22	0.69
1:CA:1163:A:H2'	1:CA:1164:G:H8	1.56	0.69
23:DB:1149:G:H2'	23:DB:1150:C:C6	2.26	0.69
49:BR:68:ARG:NH1	49:BR:90:ARG:HD3	2.07	0.69
3:AD:192:ALA:HB3	3:AD:194:ILE:HG22	1.72	0.69
23:BB:1935:G:H1'	23:BB:1964:G:N2	2.07	0.69
23:BB:2078:C:H2'	23:BB:2079:U:C6	2.28	0.69
20:AB:163:ILE:HG23	20:AB:164:ASP:N	2.04	0.69
52:DW:51:GLY:HA3	52:DW:59:PHE:CB	2.22	0.69
40:BH:79:THR:HA	40:BH:145:ASN:HB2	1.75	0.69
38:BM:71:LYS:HE3	38:BM:73:ILE:HD11	1.75	0.69
24:DI:9:LYS:HG2	24:DI:57:VAL:HG13	1.75	0.69
34:D3:31:ILE:HD11	34:D3:34:LYS:HD3	1.74	0.69
48:BG:167:VAL:HG23	48:BG:168:VAL:H	1.56	0.69
42:DN:34:ILE:HB	42:DN:113:ILE:HG22	1.75	0.69
23:DB:1199:U:H5'	44:DQ:4:LYS:HD3	1.75	0.69
27:BK:60:ALA:HA	27:BK:87:LEU:HD23	1.74	0.69
23:DB:125:A:H3'	23:DB:126:A:H5''	1.74	0.69
23:BB:274:C:H2'	23:BB:275:C:O4'	1.92	0.69
9:CJ:37:ARG:NE	9:CJ:37:ARG:HA	2.07	0.69
3:CD:169:TRP:CE2	3:CD:185:PRO:HB3	2.28	0.69
23:DB:37:C:O2'	29:DE:45:ALA:HA	1.93	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:48:THR:HG22	29:BE:86:ALA:HB3	1.75	0.69
8:AI:48:ARG:HA	8:AI:51:LEU:HD12	1.74	0.69
51:BZ:6:GLN:NE2	51:BZ:50:ARG:H	1.90	0.69
9:AJ:52:LEU:HD21	9:AJ:59:LYS:HA	1.73	0.69
2:AC:8:GLY:HA3	13:AN:88:MET:SD	2.32	0.69
23:BB:2732:G:H3'	23:BB:2733:A:H5'	1.74	0.69
23:BB:592:A:H2'	23:BB:593:U:C6	2.27	0.69
1:CA:1347:G:H22	1:CA:1373:G:H2'	1.58	0.69
13:CN:87:ALA:HB2	13:CN:92:ILE:HD12	1.75	0.69
49:BR:8:GLY:HA3	49:BR:23:GLU:HB2	1.75	0.69
23:DB:1854:A:N6	23:DB:1888:G:H1'	2.08	0.69
1:AA:1137:C:H1'	1:AA:1138:G:C2	2.27	0.69
23:DB:1727:C:H2'	23:DB:1728:C:H6	1.57	0.69
47:BF:34:THR:HG22	47:BF:89:THR:HG22	1.74	0.69
53:B6:58:VAL:HG22	53:B6:68:VAL:HG13	1.75	0.69
44:DQ:57:ARG:NH1	44:DQ:61:ILE:HD11	2.06	0.69
38:DM:71:LYS:HD3	38:DM:95:LEU:HD13	1.73	0.69
23:DB:2732:G:H3'	23:DB:2733:A:H5'	1.74	0.69
3:AD:160:LEU:H	3:AD:160:LEU:HD13	1.57	0.69
18:AS:48:ILE:HG22	18:AS:49:ALA:H	1.56	0.69
45:DS:26:GLY:H	45:DS:71:VAL:HG13	1.57	0.69
20:CB:27:LYS:HA	20:CB:30:ILE:HD12	1.74	0.69
49:BR:4:VAL:HG23	49:BR:39:LEU:H	1.58	0.69
29:BE:109:LEU:HD13	29:BE:180:LEU:HD13	1.75	0.69
26:DD:148:GLN:HG3	26:DD:152:PRO:HG2	1.75	0.69
23:DB:361:G:O2'	23:DB:362:A:H5'	1.92	0.69
41:DJ:117:ALA:HA	41:DJ:120:ARG:HD2	1.74	0.69
49:BR:31:GLU:H	49:BR:63:VAL:CG2	2.05	0.69
23:DB:721:A:H2'	23:DB:722:A:C8	2.28	0.69
39:DX:17:GLU:OE1	39:DX:21:LEU:HD11	1.93	0.69
1:AA:17:U:H2'	1:AA:18:C:C6	2.27	0.69
23:BB:1149:G:H2'	23:BB:1150:C:C6	2.27	0.69
6:AG:108:ARG:HA	6:AG:115:MET:HE1	1.73	0.69
2:CC:96:VAL:HB	2:CC:97:PRO:HD2	1.75	0.69
38:DM:41:LEU:HB2	38:DM:94:ALA:HB3	1.73	0.69
6:CG:58:LEU:H	6:CG:58:LEU:HD23	1.58	0.69
23:DB:354:A:H2'	23:DB:355:U:C6	2.27	0.69
23:DB:1666:G:O3'	27:DK:6:THR:HG23	1.92	0.69
26:BD:5:VAL:H	26:BD:32:ASN:ND2	1.85	0.69
16:CQ:46:HIS:HB2	16:CQ:70:LYS:HE2	1.75	0.69
40:BH:84:ALA:HB2	40:BH:147:VAL:O	1.93	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:16:A:O2'	1:CA:17:U:H5'	1.93	0.69
23:DB:2283:C:H5''	23:DB:2389:G:O2'	1.93	0.69
1:CA:22:G:H2'	1:CA:23:C:H6	1.58	0.69
26:DD:24:VAL:HG21	26:DD:188:LEU:HB3	1.75	0.69
23:DB:117:G:H5'	23:DB:126:A:H8	1.57	0.69
23:DB:1935:G:H1'	23:DB:1964:G:N2	2.06	0.69
23:BB:1131:G:N2	23:BB:2024:G:H21	1.90	0.69
23:BB:455:C:N3	23:BB:472:A:H2'	2.07	0.69
23:BB:2346:A:H3'	23:BB:2347:C:H5''	1.72	0.69
40:BH:124:THR:O	40:BH:125:THR:HB	1.91	0.69
23:DB:974:G:OP2	49:DR:78:ARG:HD3	1.93	0.69
48:DG:148:ARG:HB2	48:DG:152:ARG:NH2	2.08	0.69
45:BS:27:LYS:O	45:BS:32:ALA:HB2	1.91	0.69
11:CL:20:VAL:HG12	11:CL:93:ARG:HB3	1.74	0.69
4:AE:76:ASN:HB2	4:AE:81:GLN:NE2	2.08	0.69
45:DS:25:ARG:HE	45:DS:73:LYS:NZ	1.91	0.69
33:D1:46:VAL:HG22	33:D1:47:ILE:H	1.57	0.69
1:AA:493:A:H5'	1:AA:494:G:OP2	1.92	0.69
23:DB:2557:G:H2'	23:DB:2558:C:C6	2.28	0.69
47:BF:161:SER:OG	47:BF:164:GLU:HG3	1.93	0.69
38:BM:40:ARG:HD3	38:BM:93:VAL:HG21	1.73	0.69
29:BE:148:ILE:HD13	29:BE:187:VAL:HG21	1.74	0.69
6:AG:58:LEU:HD23	6:AG:58:LEU:H	1.58	0.69
23:DB:1098:A:OP2	24:DI:3:LYS:HG2	1.92	0.68
47:BF:64:PRO:HA	47:BF:88:VAL:CG2	2.23	0.68
27:BK:43:ILE:HG22	27:BK:54:LYS:HA	1.76	0.68
23:BB:170:U:H2'	23:BB:171:U:C6	2.28	0.68
23:DB:1199:U:H2'	23:DB:1200:C:C6	2.28	0.68
23:DB:170:U:H2'	23:DB:171:U:C6	2.28	0.68
19:CT:61:ALA:HA	19:CT:67:HIS:H	1.58	0.68
23:BB:152:A:H2'	23:BB:153:U:C6	2.27	0.68
3:CD:103:ARG:HH21	3:CD:110:ARG:HH22	1.39	0.68
23:BB:1812:U:H2'	23:BB:1813:G:H8	1.58	0.68
22:BA:13:G:H2'	22:BA:14:U:H5''	1.75	0.68
10:AK:31:VAL:HG21	10:AK:66:ALA:HA	1.75	0.68
23:DB:163:C:H2'	23:DB:164:C:O4'	1.94	0.68
1:AA:1347:G:H22	1:AA:1373:G:H2'	1.58	0.68
1:CA:235:C:H2'	1:CA:236:A:H8	1.57	0.68
15:AP:40:ASN:HD21	15:AP:43:ALA:H	1.42	0.68
7:CH:28:SER:OG	7:CH:56:PRO:HB2	1.93	0.68
6:CG:108:ARG:HA	6:CG:115:MET:HE1	1.74	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AN:17:ASP:O	13:AN:21:ALA:HB3	1.94	0.68
23:DB:645:C:H4'	23:DB:646:U:OP2	1.92	0.68
39:BX:17:GLU:OE1	39:BX:21:LEU:HD11	1.92	0.68
26:BD:111:GLY:H	26:BD:194:PRO:HG2	1.58	0.68
23:DB:630:G:N2	23:DB:632:A:H3'	2.07	0.68
41:DJ:36:LEU:HD11	41:DJ:122:LEU:HB2	1.75	0.68
13:CN:71:GLY:O	13:CN:79:SER:HA	1.93	0.68
47:BF:103:ILE:HD11	47:BF:174:PHE:HA	1.75	0.68
29:BE:143:LEU:HB3	29:BE:146:VAL:HG21	1.74	0.68
36:B2:21:ARG:HH21	36:B2:43:THR:HG21	1.58	0.68
35:BV:28:ALA:HA	35:BV:88:HIS:ND1	2.09	0.68
35:DV:28:ALA:HA	35:DV:88:HIS:ND1	2.08	0.68
23:DB:1727:C:H2'	23:DB:1728:C:C6	2.28	0.68
1:AA:636:U:H2'	1:AA:637:C:C6	2.29	0.68
1:AA:484:G:H4'	1:AA:485:U:H5''	1.76	0.68
23:DB:152:A:H2'	23:DB:153:U:C6	2.29	0.68
23:DB:836:G:H2'	23:DB:837:C:C6	2.27	0.68
23:BB:121:G:H2'	23:BB:122:G:H8	1.57	0.68
37:BL:47:ARG:HG2	37:BL:50:PHE:HB2	1.75	0.68
38:DM:71:LYS:HE3	38:DM:73:ILE:HD11	1.73	0.68
44:BQ:60:TRP:O	44:BQ:64:ILE:HG12	1.94	0.68
50:DT:11:LEU:H	50:DT:11:LEU:HD22	1.57	0.68
2:CC:26:LYS:HE2	2:CC:27:GLU:HG3	1.74	0.68
1:AA:1048:G:H4'	13:AN:2:LYS:NZ	2.08	0.68
23:BB:947:A:HO2'	23:BB:984:A:H2	1.40	0.68
28:DP:20:ARG:HG3	28:DP:21:PRO:HD2	1.74	0.68
16:CQ:24:ILE:HD11	16:CQ:43:LEU:HD13	1.74	0.68
33:B1:46:VAL:HG22	33:B1:47:ILE:H	1.57	0.68
2:CC:59:PRO:HG2	2:CC:62:SER:OG	1.93	0.68
2:AC:96:VAL:HB	2:AC:97:PRO:HD2	1.75	0.68
48:DG:155:PRO:HA	48:DG:170:THR:HG22	1.74	0.68
23:DB:64:A:H2'	23:DB:65:U:C6	2.28	0.68
37:DL:90:VAL:HB	37:DL:122:VAL:HG12	1.74	0.68
26:BD:51:THR:HG21	26:BD:76:GLY:HA3	1.74	0.68
23:BB:1060:U:O2	23:BB:1088:A:N7	2.27	0.68
47:DF:105:ILE:O	47:DF:109:ARG:HB2	1.94	0.68
39:DX:7:ARG:NH1	39:DX:7:ARG:HB2	2.08	0.68
23:DB:2886:A:H3'	23:DB:2887:A:H8	1.58	0.68
23:BB:848:C:H2'	23:BB:849:A:C8	2.29	0.68
23:DB:581:C:H2'	23:DB:582:A:C8	2.27	0.68
10:AK:28:ASN:ND2	10:AK:46:ALA:HB3	2.07	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:169:TRP:CE2	3:AD:185:PRO:HB3	2.27	0.68
23:BB:1700:A:H2'	23:BB:1701:A:H5'	1.75	0.68
23:DB:1597:A:H5''	23:DB:1598:A:H5'	1.73	0.68
1:AA:195:A:H1'	1:AA:222:C:O2'	1.93	0.68
1:AA:474:G:H2'	1:AA:475:C:C6	2.29	0.68
43:DO:24:THR:HG22	43:DO:42:PRO:HD3	1.75	0.68
1:CA:859:G:H2'	1:CA:860:A:C8	2.28	0.68
25:DC:86:ARG:NH1	25:DC:86:ARG:HB3	2.08	0.68
23:DB:49:A:H5''	23:DB:51:G:O4'	1.94	0.68
40:DH:96:THR:HG23	40:DH:97:ARG:H	1.58	0.68
40:DH:96:THR:HG23	40:DH:97:ARG:HD3	1.75	0.68
23:DB:1386:C:H2'	23:DB:1387:A:C8	2.29	0.68
40:BH:100:ALA:HB1	40:BH:132:PHE:HE1	1.58	0.68
8:AI:20:ILE:HD13	8:AI:85:ALA:HB3	1.74	0.68
40:DH:80:ILE:HD11	40:DH:146:VAL:HG13	1.75	0.68
40:DH:94:ILE:O	40:DH:122:LEU:HB2	1.93	0.68
18:CS:47:THR:HG23	18:CS:60:PHE:HE1	1.59	0.68
23:DB:2471:A:O2'	23:DB:2472:G:H8	1.77	0.68
23:BB:2751:G:H5'	48:BG:2:ARG:CD	2.23	0.68
45:BS:24:ILE:HG23	45:BS:32:ALA:HB1	1.76	0.68
1:AA:203:G:H1'	1:AA:465:A:H61	1.58	0.68
23:BB:721:A:H2'	23:BB:722:A:H8	1.58	0.68
3:CD:94:GLU:HG2	3:CD:185:PRO:HG3	1.76	0.68
23:BB:2379:G:H2'	23:BB:2380:C:C6	2.28	0.68
24:BI:105:LEU:HD11	24:BI:139:VAL:HG11	1.75	0.68
23:DB:96:C:H4'	39:DX:41:HIS:ND1	2.08	0.68
5:CF:16:GLU:CD	5:CF:16:GLU:H	1.97	0.68
23:DB:919:U:H2'	23:DB:920:A:C8	2.28	0.68
44:DQ:91:ARG:HG2	44:DQ:93:ILE:HG22	1.75	0.68
23:BB:142:A:H2'	23:BB:143:C:C6	2.29	0.68
4:AE:89:THR:HG21	4:AE:134:ASN:ND2	2.08	0.68
53:D6:177:GLU:O	53:D6:181:GLN:HG3	1.93	0.68
37:DL:30:THR:O	37:DL:33:ARG:HG2	1.92	0.68
13:CN:24:ALA:O	13:CN:27:LYS:HG2	1.93	0.68
39:BX:7:ARG:NH1	39:BX:7:ARG:HB2	2.09	0.68
48:DG:71:LEU:HA	48:DG:74:MET:SD	2.33	0.68
23:BB:90:U:H3'	23:BB:91:A:C5'	2.24	0.68
16:AQ:16:MET:CB	16:AQ:19:SER:HB2	2.24	0.68
19:AT:66:ILE:HG13	19:AT:70:LYS:HE3	1.74	0.68
27:DK:87:LEU:HB2	27:DK:93:GLN:O	1.93	0.68
23:DB:1853:A:N1	23:DB:2087:G:H1'	2.08	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DV:53:LYS:NZ	35:DV:53:LYS:HA	2.08	0.68
23:BB:2557:G:H2'	23:BB:2558:C:C6	2.28	0.68
1:CA:707:U:H2'	1:CA:708:C:C6	2.29	0.68
22:DA:13:G:H2'	22:DA:14:U:H5''	1.76	0.68
23:DB:281:C:H2'	23:DB:282:A:C8	2.29	0.68
26:DD:33:ARG:CZ	26:DD:74:GLU:HB3	2.23	0.68
1:AA:1423:G:H2'	1:AA:1424:U:H6	1.59	0.68
37:BL:123:ARG:HA	37:BL:143:GLU:CB	2.22	0.68
26:BD:34:VAL:CG1	26:BD:94:GLN:H	2.05	0.68
1:AA:812:G:O2'	1:AA:813:U:H6	1.73	0.68
23:DB:141:G:N3	23:DB:141:G:H3'	2.07	0.68
38:BM:19:GLY:H	38:BM:38:ARG:HH12	1.39	0.68
23:BB:2630:G:H2'	23:BB:2631:G:H8	1.58	0.68
23:BB:2328:A:H2'	23:BB:2329:U:C6	2.28	0.68
23:BB:1021:A:H61	23:BB:1142:A:N6	1.92	0.68
23:DB:848:C:H2'	23:DB:849:A:C8	2.29	0.68
44:DQ:104:ALA:HA	49:DR:46:GLU:OE1	1.94	0.68
44:DQ:10:ARG:HB2	44:DQ:10:ARG:NH1	2.08	0.68
23:BB:125:A:H5'	36:B2:19:ARG:HG3	1.76	0.68
28:DP:52:ARG:HH11	28:DP:52:ARG:HG2	1.59	0.68
1:CA:193:C:H2'	1:CA:194:C:C6	2.29	0.68
46:BU:72:PHE:HA	46:BU:78:LYS:O	1.94	0.68
23:DB:1469:A:H2'	23:DB:1470:A:H8	1.58	0.68
23:BB:1827:U:O2'	23:BB:1828:G:H5'	1.94	0.68
5:AF:53:LYS:HA	5:AF:53:LYS:HE2	1.75	0.68
23:BB:1854:A:N6	23:BB:1888:G:H1'	2.09	0.68
2:AC:129:PHE:HE2	2:AC:165:GLU:HG2	1.56	0.68
52:BW:24:ARG:HD2	52:BW:65:LYS:HG2	1.76	0.68
48:BG:68:ARG:HH12	48:BG:72:ASN:HD22	1.40	0.68
21:CU:36:PHE:HA	21:CU:39:LYS:HE3	1.76	0.68
48:DG:68:ARG:HH12	48:DG:72:ASN:HD22	1.42	0.68
3:CD:160:LEU:H	3:CD:160:LEU:HD13	1.58	0.68
38:BM:35:ALA:HB3	38:BM:99:GLY:N	2.07	0.68
33:D1:34:GLU:HB3	33:D1:49:LYS:HD3	1.76	0.68
16:AQ:45:VAL:HG11	16:AQ:60:ILE:HG21	1.76	0.68
13:AN:87:ALA:HB2	13:AN:92:ILE:HD12	1.74	0.68
42:DN:65:LEU:HD11	42:DN:69:ARG:CZ	2.24	0.68
34:B3:31:ILE:HD11	34:B3:34:LYS:HD3	1.74	0.68
1:CA:1137:C:O2'	1:CA:1138:G:H5''	1.94	0.68
23:DB:1241:A:H2'	23:DB:1242:U:H5'	1.76	0.68
3:CD:192:ALA:HB3	3:CD:194:ILE:HG22	1.76	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DE:175:ILE:HD11	29:DE:180:LEU:HD11	1.76	0.68
1:AA:621:A:H2'	1:AA:622:A:C8	2.28	0.68
23:BB:919:U:H2'	23:BB:920:A:C8	2.29	0.67
40:BH:90:LEU:HD11	40:BH:146:VAL:CG1	2.22	0.67
1:CA:1302:C:OP2	12:CM:16:ILE:HD11	1.94	0.67
44:BQ:91:ARG:HG2	44:BQ:93:ILE:HG22	1.75	0.67
16:AQ:59:GLU:O	16:AQ:75:VAL:HG22	1.93	0.67
38:DM:42:THR:O	38:DM:44:ARG:N	2.28	0.67
39:DX:48:ARG:O	39:DX:51:ALA:HB3	1.94	0.67
29:DE:48:THR:HG22	29:DE:86:ALA:HB3	1.76	0.67
1:AA:602:A:O2'	1:AA:603:U:H5'	1.93	0.67
1:AA:848:C:H2'	1:AA:849:G:O4'	1.94	0.67
5:AF:80:PHE:CZ	25:BC:123:ILE:HG12	2.28	0.67
12:CM:2:ARG:HG3	12:CM:6:ILE:H	1.59	0.67
1:CA:147:G:H2'	1:CA:148:G:H8	1.58	0.67
23:BB:2269:G:H4'	52:BW:19:ARG:NH1	2.09	0.67
52:BW:49:ASN:HB2	52:BW:60:ALA:HA	1.76	0.67
8:CI:26:LYS:N	8:CI:61:ASP:HB3	2.09	0.67
43:BO:34:HIS:HB3	43:BO:36:TYR:HE2	1.58	0.67
23:BB:594:U:H2'	23:BB:595:C:H6	1.60	0.67
23:BB:2443:C:H2'	23:BB:2444:G:C8	2.30	0.67
43:BO:62:LEU:HD11	43:BO:70:ALA:HA	1.77	0.67
1:CA:22:G:H2'	1:CA:23:C:C6	2.28	0.67
5:AF:6:ILE:HG23	5:AF:62:MET:HB3	1.77	0.67
23:DB:115:C:O2'	23:DB:116:C:H5'	1.94	0.67
1:CA:1521:C:H2'	1:CA:1522:U:C6	2.29	0.67
6:CG:56:SER:HB3	6:CG:59:GLU:HG3	1.75	0.67
23:DB:540:C:H2'	23:DB:541:A:H8	1.57	0.67
1:CA:1477:U:H2'	1:CA:1478:U:C6	2.29	0.67
45:DS:31:GLN:O	45:DS:35:ILE:HG12	1.94	0.67
1:AA:780:A:O2'	1:AA:781:A:H5''	1.94	0.67
23:DB:1485:U:H2'	23:DB:1486:U:C6	2.29	0.67
52:DW:18:LYS:HA	52:DW:36:ILE:HG12	1.75	0.67
40:BH:128:HIS:CE1	40:BH:130:VAL:HG13	2.29	0.67
51:DZ:5:CYS:CB	51:DZ:10:LYS:H	2.07	0.67
41:DJ:17:VAL:HG22	41:DJ:55:ILE:HD11	1.76	0.67
1:AA:429:U:H3'	3:AD:8:LEU:HD23	1.76	0.67
23:DB:162:U:H4'	23:DB:163:C:OP1	1.92	0.67
9:CJ:8:ILE:HB	9:CJ:74:VAL:HB	1.74	0.67
26:DD:148:GLN:O	26:DD:149:ASN:HB2	1.94	0.67
23:DB:30:G:H2'	23:DB:31:C:C6	2.28	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:148:GLN:HB2	26:BD:152:PRO:HG2	1.76	0.67
1:AA:335:C:H2'	1:AA:336:A:C8	2.29	0.67
51:DZ:11:ARG:HB3	51:DZ:12:PRO:HD2	1.77	0.67
40:BH:41:LYS:HA	40:BH:44:ILE:HG13	1.76	0.67
28:DP:31:VAL:O	28:DP:32:VAL:HB	1.93	0.67
23:DB:717:C:H3'	23:DB:718:A:H5''	1.76	0.67
23:DB:742:A:H2'	23:DB:743:A:H8	1.60	0.67
23:BB:1579:A:H2'	23:BB:1580:A:C8	2.30	0.67
1:CA:802:A:H2'	1:CA:803:G:O4'	1.95	0.67
27:DK:35:VAL:HG12	27:DK:69:VAL:HG22	1.76	0.67
51:DZ:5:CYS:HB2	51:DZ:10:LYS:HB3	1.76	0.67
33:B1:34:GLU:HB3	33:B1:49:LYS:HD3	1.75	0.67
23:DB:1060:U:O2	23:DB:1088:A:N7	2.27	0.67
40:DH:88:GLY:O	40:DH:124:THR:HA	1.94	0.67
48:BG:148:ARG:HB2	48:BG:152:ARG:NH2	2.09	0.67
23:BB:181:A:H2'	23:BB:182:A:H8	1.56	0.67
46:DU:34:ILE:HG12	46:DU:63:ALA:HB2	1.75	0.67
23:DB:1469:A:H2'	23:DB:1470:A:C8	2.30	0.67
23:BB:609:A:H2'	23:BB:610:C:O4'	1.94	0.67
41:DJ:23:LYS:HE3	41:DJ:142:ILE:HG12	1.76	0.67
1:CA:806:C:H2'	1:CA:807:A:C8	2.29	0.67
23:DB:1509:A:H5'	23:DB:1510:G:H5'	1.75	0.67
23:BB:1735:A:H2'	23:BB:1736:U:C6	2.30	0.67
1:CA:834:U:H2'	1:CA:835:U:C6	2.30	0.67
6:AG:14:ASP:HB3	6:AG:18:GLY:H	1.58	0.67
1:CA:484:G:H4'	1:CA:485:U:H5''	1.76	0.67
23:DB:1373:A:H2'	23:DB:1374:G:O4'	1.95	0.67
46:DU:48:VAL:C	46:DU:53:GLN:HG3	2.15	0.67
26:BD:33:ARG:CZ	26:BD:74:GLU:HB3	2.24	0.67
26:DD:105:LYS:H	26:DD:106:LYS:HZ3	1.42	0.67
3:AD:25:ARG:HB2	3:AD:25:ARG:HH11	1.60	0.67
18:AS:49:ALA:HA	18:AS:57:VAL:O	1.95	0.67
23:BB:2886:A:H3'	23:BB:2887:A:H8	1.57	0.67
13:CN:26:LEU:HD11	13:CN:44:VAL:HG22	1.76	0.67
23:BB:364:C:H2'	23:BB:365:U:H6	1.55	0.67
23:BB:1309:G:OP1	36:B2:9:VAL:HG12	1.94	0.67
2:AC:26:LYS:HE2	2:AC:27:GLU:HG3	1.75	0.67
46:DU:70:ALA:HB1	46:DU:79:ALA:CB	2.24	0.67
4:CE:39:GLY:HA3	4:CE:116:VAL:HB	1.75	0.67
3:CD:103:ARG:HH21	3:CD:110:ARG:NH2	1.93	0.67
23:DB:2341:G:H2'	23:DB:2342:C:C6	2.30	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1273:C:H2'	1:CA:1274:A:O4'	1.93	0.67
25:DC:244:VAL:HB	25:DC:249:VAL:H	1.59	0.67
49:DR:72:VAL:HG23	49:DR:89:HIS:HB3	1.74	0.67
22:DA:25:U:OP1	22:DA:25:U:H3'	1.94	0.67
25:DC:149:LYS:HD3	25:DC:152:GLN:HE22	1.60	0.67
47:DF:64:PRO:HA	47:DF:88:VAL:CG2	2.24	0.67
53:B6:77:LYS:CE	53:B6:94:ASN:HD21	2.02	0.67
7:CH:6:ILE:HB	7:CH:76:ARG:NH1	2.10	0.67
49:BR:5:PHE:O	49:BR:11:GLN:HA	1.95	0.67
51:BZ:40:VAL:HG22	51:BZ:45:ARG:O	1.95	0.67
24:DI:73:PRO:HG2	24:DI:78:LEU:HD21	1.75	0.67
13:AN:24:ALA:O	13:AN:27:LYS:HG2	1.94	0.67
23:BB:974:G:OP2	49:BR:78:ARG:HD3	1.95	0.67
24:BI:25:PRO:O	24:BI:29:GLN:HG2	1.95	0.67
2:CC:116:ALA:O	2:CC:119:ILE:HG22	1.95	0.67
1:AA:195:A:H2'	1:AA:196:A:C8	2.28	0.67
23:DB:1872:A:H2'	23:DB:1873:G:O4'	1.95	0.67
23:DB:414:C:H2'	23:DB:415:A:C8	2.30	0.67
2:AC:122:GLN:HB3	2:AC:127:VAL:HG21	1.77	0.67
23:DB:1390:U:O2'	23:DB:1391:U:H5'	1.94	0.67
10:AK:124:LYS:HA	21:AU:34:ARG:CB	2.20	0.67
52:BW:18:LYS:HA	52:BW:36:ILE:HG12	1.74	0.67
40:BH:65:ALA:O	40:BH:68:ARG:HD2	1.94	0.67
52:DW:24:ARG:HD2	52:DW:65:LYS:HG2	1.75	0.67
41:DJ:3:THR:HG21	44:DQ:60:TRP:HE1	1.59	0.67
26:DD:105:LYS:HD2	26:DD:177:VAL:HG22	1.77	0.67
47:DF:103:ILE:HD11	47:DF:174:PHE:HA	1.75	0.67
18:AS:27:LYS:HG3	18:AS:28:LYS:HD2	1.75	0.67
23:DB:1283:G:N2	23:DB:1286:A:H5'	2.08	0.67
23:DB:362:A:N3	23:DB:362:A:H2'	2.10	0.67
23:BB:1778:U:H2'	23:BB:1784:A:N6	2.09	0.67
8:AI:9:GLY:HA2	8:AI:80:HIS:CD2	2.28	0.67
1:CA:621:A:H2'	1:CA:622:A:C8	2.30	0.67
9:CJ:24:GLU:HG2	9:CJ:90:LEU:HD21	1.76	0.67
57:DB:3574:HOH:O	25:DC:230:PRO:HA	1.93	0.67
25:BC:32:LEU:O	25:BC:63:ILE:HG12	1.94	0.67
1:CA:848:C:H2'	1:CA:849:G:O4'	1.95	0.67
23:DB:365:U:H2'	23:DB:366:C:C6	2.29	0.67
29:DE:22:ASP:O	29:DE:107:SER:HB2	1.95	0.67
28:BP:31:VAL:HG12	28:BP:38:ARG:O	1.94	0.67
24:BI:10:LEU:HD13	24:BI:12:VAL:HG13	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CK:126:ARG:HB2	21:CU:33:ARG:HD2	1.76	0.67
52:DW:49:ASN:HB2	52:DW:60:ALA:HA	1.76	0.67
8:CI:48:ARG:HA	8:CI:51:LEU:HD12	1.77	0.67
51:DZ:33:LEU:HA	51:DZ:52:SER:HA	1.77	0.67
23:DB:2305:U:H5''	47:DF:130:GLY:HA3	1.75	0.67
7:AH:6:ILE:HB	7:AH:76:ARG:NH1	2.09	0.67
43:BO:51:ALA:HB3	43:BO:78:VAL:HG22	1.77	0.67
18:CS:42:ASN:ND2	18:CS:43:MET:HG2	2.09	0.67
23:BB:2749:A:H3'	23:BB:2750:A:H5''	1.77	0.67
23:DB:27:G:N2	23:DB:512:G:H2'	2.09	0.67
13:CN:26:LEU:HG	13:CN:30:ILE:HD13	1.75	0.67
23:BB:2645:G:H3'	23:BB:2646:C:H5'	1.76	0.67
49:DR:39:LEU:HA	49:DR:53:PHE:HA	1.77	0.67
23:DB:90:U:H3'	23:DB:91:A:C5'	2.25	0.67
19:CT:66:ILE:HG13	19:CT:70:LYS:HE3	1.76	0.67
1:CA:335:C:H2'	1:CA:336:A:H8	1.60	0.67
29:DE:109:LEU:HD13	29:DE:180:LEU:HD13	1.75	0.67
23:BB:1597:A:H5''	23:BB:1598:A:H5'	1.76	0.67
23:BB:704:G:H2'	23:BB:726:G:H22	1.59	0.67
1:AA:926:G:N2	1:AA:1505:G:H2'	2.09	0.67
20:CB:63:LYS:HA	20:CB:224:ARG:HH11	1.60	0.67
40:BH:27:ARG:H	40:BH:31:VAL:CG2	2.08	0.67
41:BJ:17:VAL:HG22	41:BJ:55:ILE:HD11	1.77	0.67
48:DG:15:ASP:CB	48:DG:26:LYS:H	2.07	0.67
34:D3:40:LYS:HA	34:D3:43:LEU:HD12	1.76	0.67
1:CA:17:U:H2'	1:CA:18:C:H6	1.57	0.67
12:AM:10:ASP:HA	12:AM:44:ILE:HD13	1.77	0.67
1:AA:1320:C:OP2	18:AS:2:ARG:HA	1.94	0.67
23:DB:1790:C:O2'	25:DC:207:ALA:HB2	1.94	0.67
16:AQ:46:HIS:HB2	16:AQ:70:LYS:HE2	1.76	0.67
23:BB:1172:C:H3'	23:BB:1173:U:C6	2.29	0.67
23:DB:848:C:H2'	23:DB:849:A:H8	1.59	0.67
13:CN:27:LYS:HG3	13:CN:28:ALA:H	1.60	0.67
23:DB:2591:C:H2'	23:DB:2592:G:H8	1.60	0.67
23:DB:1139:G:O2'	23:DB:1140:C:H5'	1.94	0.67
23:BB:2091:C:H1'	51:BZ:34:HIS:CD2	2.30	0.67
1:CA:1254:A:H5'	1:CA:1356:G:H4'	1.75	0.67
28:BP:20:ARG:HG3	28:BP:21:PRO:HD2	1.75	0.67
38:BM:42:THR:HB	38:BM:45:GLN:HG3	1.75	0.67
16:AQ:24:ILE:HD11	16:AQ:43:LEU:HD13	1.76	0.67
53:D6:81:LYS:HA	53:D6:84:ARG:NH2	2.09	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B6:55:ILE:HG23	53:B6:56:ALA:N	2.08	0.67
29:DE:58:LYS:C	29:DE:60:TRP:H	1.98	0.67
47:BF:78:ILE:H	47:BF:79:ARG:NH1	1.93	0.67
18:CS:27:LYS:HG3	18:CS:28:LYS:HD2	1.77	0.67
23:BB:1176:U:H3'	23:BB:1177:G:H8	1.59	0.67
32:D4:24:ARG:HG2	32:D4:36:ARG:HG3	1.77	0.67
18:CS:5:LYS:C	18:CS:6:LYS:HD2	2.15	0.67
23:BB:27:G:N2	23:BB:512:G:H2'	2.09	0.67
20:AB:57:ASN:HB2	20:AB:219:THR:O	1.95	0.67
23:BB:1727:C:H2'	23:BB:1728:C:H6	1.60	0.67
23:DB:1558:C:H4'	23:DB:1559:U:C5'	2.25	0.67
49:BR:28:ALA:O	49:BR:63:VAL:HG21	1.95	0.67
9:CJ:37:ARG:NH1	9:CJ:77:VAL:HG21	2.10	0.67
28:BP:31:VAL:O	28:BP:32:VAL:HB	1.95	0.67
23:BB:2484:G:OP1	38:BM:44:ARG:HD3	1.95	0.67
7:AH:51:GLU:HG2	7:AH:52:GLY:H	1.59	0.67
26:DD:14:ILE:HG22	26:DD:22:ILE:O	1.95	0.67
23:BB:2720:U:H5''	28:BP:52:ARG:HH21	1.60	0.67
1:CA:736:C:H2'	1:CA:737:C:C6	2.30	0.67
20:CB:185:ILE:HA	20:CB:199:ILE:HB	1.77	0.67
53:B6:18:LEU:HD21	53:B6:171:LYS:HD2	1.77	0.67
47:BF:62:GLN:HG3	47:BF:91:ARG:NH1	2.10	0.66
6:AG:149:ALA:N	10:AK:55:ARG:HH21	1.91	0.66
16:CQ:59:GLU:O	16:CQ:75:VAL:HG22	1.95	0.66
53:B6:42:LYS:HB3	53:B6:49:HIS:O	1.95	0.66
47:DF:78:ILE:H	47:DF:79:ARG:HH11	1.41	0.66
43:DO:34:HIS:HB3	43:DO:36:TYR:HE2	1.60	0.66
47:DF:37:MET:HE1	47:DF:149:ARG:HD2	1.77	0.66
4:AE:113:VAL:HG11	4:AE:136:VAL:HG23	1.77	0.66
12:CM:109:LYS:HD3	12:CM:113:LYS:HE3	1.77	0.66
1:CA:922:G:H4'	4:CE:24:VAL:HA	1.76	0.66
18:CS:43:MET:O	18:CS:46:LEU:HB2	1.95	0.66
25:DC:204:LEU:HD23	25:DC:209:ALA:HB1	1.76	0.66
3:CD:171:GLU:HB2	3:CD:180:THR:HB	1.77	0.66
29:DE:109:LEU:HD12	29:DE:112:LEU:HD12	1.76	0.66
20:AB:20:ARG:CZ	20:AB:20:ARG:HA	2.24	0.66
30:BY:40:THR:O	30:BY:43:ILE:HG23	1.95	0.66
45:BS:43:ALA:HA	45:BS:46:LEU:HD12	1.75	0.66
2:AC:6:PRO:HA	2:AC:9:ILE:HG22	1.76	0.66
1:AA:147:G:H2'	1:AA:148:G:H8	1.59	0.66
9:CJ:9:ARG:CB	9:CJ:99:GLN:HB3	2.23	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:134:VAL:HG13	40:BH:135:HIS:H	1.59	0.66
5:AF:64:VAL:HG12	5:AF:65:GLU:H	1.59	0.66
45:DS:27:LYS:O	45:DS:32:ALA:HB2	1.95	0.66
30:DY:2:LYS:H	30:DY:2:LYS:HD3	1.59	0.66
23:DB:594:U:H2'	23:DB:595:C:H6	1.60	0.66
23:DB:38:A:O2'	29:DE:43:THR:HA	1.95	0.66
1:AA:634:C:H2'	1:AA:635:A:H8	1.59	0.66
23:BB:2001:C:H4'	23:BB:2689:U:O2'	1.95	0.66
3:CD:84:ASN:ND2	4:CE:101:GLY:HA3	2.09	0.66
20:AB:185:ILE:HA	20:AB:199:ILE:HB	1.77	0.66
1:CA:1461:G:H2'	1:CA:1462:C:H6	1.59	0.66
20:CB:20:ARG:CZ	20:CB:20:ARG:HA	2.25	0.66
23:DB:21:A:H2'	23:DB:22:C:C6	2.30	0.66
2:CC:6:PRO:HA	2:CC:9:ILE:HG22	1.77	0.66
23:BB:296:U:H2'	23:BB:297:G:H8	1.59	0.66
23:DB:1176:U:H2'	23:DB:1177:G:C8	2.30	0.66
23:DB:704:G:H2'	23:DB:726:G:H22	1.60	0.66
13:CN:17:ASP:O	13:CN:21:ALA:HB3	1.94	0.66
25:DC:94:LEU:HD13	25:DC:100:ARG:HD3	1.76	0.66
41:BJ:43:GLU:O	41:BJ:45:THR:N	2.28	0.66
34:B3:40:LYS:HA	34:B3:43:LEU:HD12	1.77	0.66
42:DN:85:PRO:HA	42:DN:88:ALA:HB2	1.77	0.66
13:AN:27:LYS:HG3	13:AN:28:ALA:H	1.60	0.66
1:AA:1237:C:H3'	1:AA:1336:C:H41	1.58	0.66
23:BB:1558:C:H4'	23:BB:1559:U:C5'	2.24	0.66
1:AA:108:G:O6	19:AT:9:ARG:HG2	1.96	0.66
1:AA:269:C:H2'	1:AA:270:A:H8	1.58	0.66
26:BD:113:SER:HB3	26:BD:167:ASN:N	2.10	0.66
23:BB:2591:C:H2'	23:BB:2592:G:H8	1.59	0.66
1:AA:16:A:O2'	1:AA:17:U:H5'	1.94	0.66
35:BV:53:LYS:HA	35:BV:53:LYS:NZ	2.10	0.66
40:BH:2:GLN:O	40:BH:3:VAL:HG22	1.96	0.66
3:CD:97:LEU:HB2	3:CD:134:TYR:HB3	1.76	0.66
1:CA:1314:C:H41	18:CS:3:SER:HB3	1.60	0.66
48:BG:104:LEU:HB2	48:BG:112:VAL:HB	1.78	0.66
44:DQ:60:TRP:O	44:DQ:64:ILE:HG12	1.94	0.66
5:AF:29:ILE:HG22	5:AF:34:GLY:HA3	1.77	0.66
44:BQ:57:ARG:NH1	44:BQ:61:ILE:HD11	2.10	0.66
23:BB:594:U:H2'	23:BB:595:C:C6	2.31	0.66
11:CL:85:ARG:HA	11:CL:93:ARG:HA	1.78	0.66
10:CK:28:ASN:ND2	10:CK:46:ALA:HB3	2.09	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1727:C:H2'	23:BB:1728:C:C6	2.30	0.66
23:DB:1080:A:H4'	24:DI:126:ARG:HD3	1.77	0.66
1:CA:108:G:O6	19:CT:9:ARG:HG2	1.95	0.66
1:CA:336:A:O2'	1:CA:337:G:H5'	1.95	0.66
1:CA:1521:C:H2'	1:CA:1522:U:H6	1.61	0.66
39:DX:34:SER:HB2	39:DX:36:GLN:OE1	1.96	0.66
4:AE:106:ALA:HB1	4:AE:110:MET:HB3	1.78	0.66
49:DR:2:TYR:HB2	49:DR:42:ALA:HB2	1.78	0.66
23:BB:224:U:O4	23:BB:420:C:H5'	1.95	0.66
23:DB:1583:A:H5''	23:DB:1584:U:OP1	1.95	0.66
16:CQ:8:GLN:HA	16:CQ:59:GLU:HA	1.78	0.66
51:DZ:71:LEU:HD13	51:DZ:76:GLU:HB3	1.75	0.66
25:BC:67:LYS:HD3	25:BC:150:GLY:HA2	1.76	0.66
23:DB:1458:U:C5'	23:DB:1459:G:H5'	2.26	0.66
26:DD:113:SER:HB3	26:DD:167:ASN:N	2.10	0.66
23:BB:848:C:H2'	23:BB:849:A:H8	1.60	0.66
20:CB:83:ALA:O	20:CB:88:GLN:HB2	1.96	0.66
23:DB:2080:A:OP1	51:DZ:20:HIS:HB3	1.95	0.66
15:AP:25:ARG:HD3	15:AP:25:ARG:H	1.60	0.66
12:AM:87:GLY:HA2	12:AM:90:HIS:HD2	1.60	0.66
1:CA:1163:A:H2'	1:CA:1164:G:C8	2.31	0.66
38:BM:42:THR:O	38:BM:44:ARG:N	2.29	0.66
1:CA:517:G:H22	1:CA:533:A:P	2.18	0.66
37:DL:47:ARG:HG2	37:DL:50:PHE:HB2	1.75	0.66
1:CA:634:C:H2'	1:CA:635:A:H8	1.61	0.66
41:BJ:105:VAL:O	41:BJ:109:LEU:HG	1.96	0.66
53:B6:3:LEU:HD12	53:B6:143:LEU:HD23	1.78	0.66
2:AC:119:ILE:HG21	2:AC:197:VAL:HG11	1.78	0.66
23:DB:1735:A:H2'	23:DB:1736:U:C6	2.31	0.66
23:DB:2138:G:H2'	23:DB:2139:U:O4'	1.96	0.66
40:BH:27:ARG:HH11	51:BZ:64:ILE:HD11	1.61	0.66
41:BJ:58:ASN:HA	41:BJ:127:GLY:CA	2.26	0.66
41:DJ:58:ASN:HA	41:DJ:127:GLY:CA	2.25	0.66
47:BF:71:LYS:HG2	47:BF:73:VAL:H	1.61	0.66
47:DF:102:LEU:HA	47:DF:106:ALA:HB2	1.78	0.66
21:AU:3:ILE:HG21	21:AU:19:LYS:HG3	1.76	0.66
29:DE:29:HIS:NE2	37:DL:8:PRO:HG3	2.10	0.66
2:CC:8:GLY:HA3	13:CN:88:MET:SD	2.35	0.66
28:BP:52:ARG:HH11	28:BP:52:ARG:HG2	1.59	0.66
1:CA:602:A:O2'	1:CA:603:U:H5'	1.96	0.66
23:DB:609:A:H2'	23:DB:610:C:O4'	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CL:14:LYS:HG2	11:CL:15:VAL:N	2.11	0.66
20:AB:83:ALA:O	20:AB:88:GLN:HB2	1.96	0.66
42:DN:97:ILE:HD12	42:DN:98:LEU:N	2.11	0.66
23:BB:1390:U:O2'	23:BB:1391:U:H5'	1.95	0.66
23:DB:2027:G:O2'	23:DB:2028:U:H5'	1.95	0.66
1:CA:1027:C:H2'	1:CA:1028:C:C6	2.31	0.66
23:BB:1872:A:H2'	23:BB:1873:G:O4'	1.96	0.66
6:CG:14:ASP:HB3	6:CG:18:GLY:H	1.58	0.66
23:BB:526:A:N6	23:BB:2626:C:H4'	2.11	0.66
1:AA:1532:U:C2	1:AA:1534:A:H5'	2.30	0.66
23:BB:2066:C:O2'	23:BB:2067:G:H5'	1.95	0.66
44:BQ:30:VAL:CG1	44:BQ:33:VAL:HG22	2.25	0.66
48:DG:17:LYS:HA	48:DG:17:LYS:HZ2	1.61	0.66
47:DF:101:ARG:CZ	47:DF:138:PRO:HB2	2.26	0.66
23:DB:1033:U:H5	32:D4:15:LYS:HE3	1.60	0.66
23:DB:982:C:O2	23:DB:982:C:H5'	1.96	0.66
23:BB:547:A:H3'	23:BB:548:G:C8	2.29	0.66
53:B6:114:LEU:O	53:B6:118:VAL:HG23	1.95	0.66
1:AA:1002:G:H2'	1:AA:1003:G:O4'	1.95	0.66
1:AA:1137:C:O2'	1:AA:1138:G:H5'	1.96	0.66
23:DB:1173:U:H2'	23:DB:1174:U:C6	2.30	0.66
1:CA:1314:C:N4	18:CS:3:SER:HB3	2.10	0.66
1:CA:135:C:O2	15:CP:1:MET:HB2	1.95	0.66
1:AA:1329:A:OP1	12:AM:28:ARG:HB2	1.96	0.66
49:BR:2:TYR:HB2	49:BR:42:ALA:HB2	1.77	0.66
23:BB:1469:A:H2'	23:BB:1470:A:H8	1.60	0.66
41:DJ:64:VAL:O	41:DJ:68:LYS:HD2	1.96	0.66
5:CF:64:VAL:HG12	5:CF:65:GLU:H	1.61	0.66
53:B6:51:PRO:HG2	53:B6:53:ASN:OD1	1.96	0.66
8:CI:59:LYS:HB3	8:CI:60:LEU:HD23	1.78	0.66
47:DF:71:LYS:HG2	47:DF:73:VAL:H	1.61	0.66
25:BC:94:LEU:HB2	25:BC:100:ARG:HD3	1.78	0.66
3:CD:25:ARG:HH11	3:CD:26:ALA:N	1.91	0.66
46:DU:95:PHE:CE1	46:DU:102:ILE:HB	2.27	0.66
23:BB:1023:U:H2'	23:BB:1024:G:H5'	1.77	0.66
20:AB:120:SER:HA	20:AB:125:PHE:CB	2.26	0.66
1:AA:17:U:H2'	1:AA:18:C:H6	1.61	0.66
1:CA:636:U:H2'	1:CA:637:C:C6	2.31	0.66
1:AA:868:C:H2'	1:AA:869:G:O4'	1.94	0.66
42:DN:90:ARG:HB3	42:DN:94:TYR:CE1	2.31	0.66
50:DT:54:GLU:HG3	50:DT:90:GLY:H	1.61	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DR:34:GLU:HG2	49:DR:60:LYS:HG2	1.77	0.66
21:AU:36:PHE:HA	21:AU:39:LYS:HE3	1.76	0.66
12:CM:44:ILE:HA	12:CM:47:LEU:HD12	1.77	0.66
23:DB:1021:A:H61	23:DB:1142:A:N6	1.94	0.66
31:B0:21:LEU:HD13	45:BS:23:LEU:HD11	1.78	0.66
32:D4:7:VAL:HG13	32:D4:8:LYS:H	1.60	0.66
48:DG:167:VAL:HG23	48:DG:168:VAL:H	1.60	0.66
23:DB:1796:U:H2'	23:DB:1797:G:C8	2.30	0.66
26:DD:34:VAL:CG1	26:DD:94:GLN:H	2.09	0.66
23:BB:1387:A:H2'	23:BB:1388:G:H8	1.60	0.66
23:DB:2241:A:H2'	23:DB:2242:G:C8	2.31	0.66
23:DB:2153:C:H2'	23:DB:2154:A:C8	2.31	0.66
23:BB:1594:U:H2'	23:BB:1595:C:C6	2.29	0.66
20:AB:26:MET:SD	20:AB:192:PRO:HD3	2.36	0.66
40:DH:2:GLN:O	40:DH:3:VAL:HG22	1.95	0.66
1:AA:1009:U:H1'	1:AA:1021:A:C2	2.31	0.66
27:BK:63:VAL:HG21	27:BK:85:VAL:HG23	1.76	0.66
11:AL:17:LYS:N	11:AL:17:LYS:HE3	2.11	0.66
1:CA:408:A:OP1	3:CD:111:ALA:HB3	1.95	0.66
40:DH:27:ARG:H	40:DH:31:VAL:CG2	2.09	0.66
6:AG:149:ALA:CB	10:AK:55:ARG:HE	2.01	0.66
26:DD:111:GLY:H	26:DD:194:PRO:CG	2.08	0.66
38:DM:35:ALA:HB2	38:DM:100:LYS:H	1.60	0.66
48:BG:15:ASP:CB	48:BG:26:LYS:H	2.07	0.66
23:BB:1203:U:H4'	37:BL:3:LEU:HD12	1.78	0.66
26:DD:148:GLN:HB2	26:DD:152:PRO:HG2	1.76	0.66
23:DB:1080:A:H2'	23:DB:1081:U:C6	2.30	0.66
26:BD:148:GLN:O	26:BD:149:ASN:HB2	1.96	0.66
25:BC:158:GLY:N	25:BC:194:VAL:HG13	2.11	0.66
29:DE:154:ASP:OD2	29:DE:157:LEU:HB3	1.96	0.66
23:DB:62:U:H3'	23:DB:63:A:H8	1.61	0.66
1:CA:235:C:H2'	1:CA:236:A:C8	2.31	0.66
45:DS:95:ARG:HG3	45:DS:97:LEU:HD13	1.78	0.66
23:DB:2377:A:H2'	23:DB:2378:A:C8	2.31	0.66
3:AD:2:ARG:NH1	3:AD:114:ARG:HG3	2.11	0.66
41:BJ:73:VAL:HG23	41:BJ:74:TYR:H	1.61	0.66
47:DF:161:SER:OG	47:DF:164:GLU:HG3	1.94	0.66
41:DJ:136:GLN:N	41:DJ:137:PRO:HD3	2.11	0.65
23:BB:107:G:O2'	23:BB:108:G:H5'	1.96	0.65
20:CB:44:LYS:C	20:CB:47:PRO:HD2	2.16	0.65
23:BB:2039:U:H2'	23:BB:2040:G:C8	2.28	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1283:G:N2	23:BB:1286:A:H5'	2.09	0.65
23:DB:1437:C:H2'	23:DB:1438:U:H6	1.61	0.65
23:DB:62:U:O2'	23:DB:63:A:H5'	1.96	0.65
3:CD:53:GLN:HA	3:CD:198:LEU:HD22	1.78	0.65
1:AA:193:C:H2'	1:AA:194:C:C6	2.31	0.65
1:CA:868:C:H2'	1:CA:869:G:O4'	1.96	0.65
23:BB:1853:A:N1	23:BB:2087:G:H1'	2.11	0.65
1:CA:780:A:O2'	1:CA:781:A:H5''	1.95	0.65
23:BB:2022:U:O2'	23:BB:2617:U:H5'	1.96	0.65
1:CA:1086:U:H3	1:CA:1099:G:H22	1.43	0.65
33:D1:3:GLY:O	33:D1:4:ILE:HG12	1.96	0.65
20:AB:63:LYS:HA	20:AB:224:ARG:HH11	1.60	0.65
2:CC:104:GLU:HG2	2:CC:105:VAL:H	1.61	0.65
23:BB:2246:G:H2'	23:BB:2247:A:C8	2.31	0.65
8:AI:5:TYR:HB2	8:AI:20:ILE:HB	1.77	0.65
25:DC:94:LEU:HB2	25:DC:100:ARG:HD3	1.77	0.65
32:B4:2:LYS:HG2	32:B4:4:ARG:NE	2.12	0.65
32:D4:3:VAL:HG23	32:D4:4:ARG:H	1.61	0.65
23:DB:2884:U:O2	31:D0:49:ARG:HG2	1.97	0.65
40:DH:73:ASN:OD1	40:DH:140:ALA:HB1	1.95	0.65
36:D2:21:ARG:HD2	36:D2:43:THR:HG21	1.77	0.65
23:DB:181:A:H2'	23:DB:182:A:H8	1.59	0.65
23:DB:2529:G:H4'	48:DG:174:LYS:HG3	1.77	0.65
23:BB:2841:C:H2'	23:BB:2842:G:C8	2.30	0.65
39:DX:56:LEU:C	39:DX:58:ASN:H	2.00	0.65
1:AA:860:A:H2'	1:AA:861:G:O4'	1.96	0.65
38:BM:30:SER:HA	38:BM:133:LYS:HB2	1.78	0.65
23:DB:1594:U:H2'	23:DB:1595:C:C6	2.31	0.65
1:AA:408:A:OP1	3:AD:111:ALA:HB3	1.97	0.65
15:CP:57:ILE:O	15:CP:61:VAL:HG23	1.96	0.65
23:BB:1739:A:H2'	23:BB:1740:G:O4'	1.96	0.65
37:BL:74:THR:HA	37:BL:107:PHE:O	1.95	0.65
23:DB:2875:C:H2'	23:DB:2876:G:H8	1.61	0.65
12:CM:28:ARG:NH2	12:CM:62:PHE:HB2	2.11	0.65
49:BR:34:GLU:HG2	49:BR:60:LYS:HG2	1.79	0.65
23:DB:2748:A:H4'	48:DG:3:VAL:HG21	1.78	0.65
40:BH:116:ARG:NH1	40:BH:139:PHE:HB2	2.12	0.65
53:B6:77:LYS:O	53:B6:81:LYS:HG2	1.96	0.65
1:AA:764:C:C2'	1:AA:765:G:H5'	2.26	0.65
18:AS:5:LYS:C	18:AS:6:LYS:HD2	2.17	0.65
23:BB:1177:G:H2'	23:BB:1178:C:C6	2.32	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:32:U:H1'	22:DA:52:A:N7	2.11	0.65
44:DQ:104:ALA:HA	49:DR:46:GLU:CD	2.15	0.65
1:CA:203:G:H1'	1:CA:465:A:H61	1.60	0.65
23:DB:1174:U:H1'	23:DB:1176:U:C2	2.30	0.65
7:AH:55:LYS:HZ1	7:AH:55:LYS:HA	1.62	0.65
23:BB:2243:U:H2'	23:BB:2244:U:C6	2.30	0.65
22:DA:37:C:H2'	22:DA:38:C:O4'	1.97	0.65
1:CA:57:G:H2'	1:CA:58:C:C6	2.32	0.65
39:BX:48:ARG:O	39:BX:51:ALA:HB3	1.96	0.65
1:AA:802:A:H2'	1:AA:803:G:O4'	1.95	0.65
23:DB:2385:C:H2'	23:DB:2386:A:C8	2.32	0.65
40:BH:114:GLU:HB3	40:BH:134:VAL:HA	1.79	0.65
23:DB:2443:C:H2'	23:DB:2444:G:H8	1.61	0.65
24:DI:72:THR:HG22	24:DI:115:ASP:OD2	1.96	0.65
47:BF:2:LYS:HD2	47:BF:100:GLU:HG2	1.79	0.65
1:CA:764:C:C2'	1:CA:765:G:H5'	2.26	0.65
12:CM:78:ARG:O	12:CM:82:LEU:HB2	1.96	0.65
18:AS:18:VAL:CG2	18:AS:43:MET:HB3	2.26	0.65
13:AN:53:ASP:HA	13:AN:58:ARG:CD	2.26	0.65
23:BB:982:C:O2	23:BB:982:C:H5'	1.96	0.65
13:CN:53:ASP:HA	13:CN:58:ARG:CD	2.25	0.65
3:AD:116:LEU:HD21	3:AD:153:ARG:HD2	1.78	0.65
11:AL:85:ARG:HA	11:AL:93:ARG:HA	1.78	0.65
40:DH:113:SER:N	40:DH:132:PHE:HE1	1.94	0.65
2:AC:116:ALA:O	2:AC:119:ILE:HG22	1.96	0.65
1:AA:736:C:H2'	1:AA:737:C:C6	2.31	0.65
1:CA:577:G:O2'	1:CA:578:C:H5'	1.97	0.65
53:B6:14:MET:HB3	53:B6:168:PHE:CD2	2.32	0.65
23:BB:345:A:H1'	23:BB:346:A:C2	2.31	0.65
23:BB:321:U:H1'	29:BE:162:ARG:HH11	1.61	0.65
45:DS:29:VAL:HA	45:DS:32:ALA:HB3	1.78	0.65
24:DI:27:LEU:HD12	24:DI:32:VAL:HG11	1.76	0.65
24:DI:25:PRO:O	24:DI:29:GLN:HG3	1.96	0.65
49:DR:49:ILE:HD13	49:DR:53:PHE:H	1.60	0.65
36:D2:21:ARG:HH21	36:D2:43:THR:HG21	1.60	0.65
1:AA:336:A:O2'	1:AA:337:G:H5'	1.97	0.65
23:BB:717:C:H3'	23:BB:718:A:H5''	1.77	0.65
1:AA:239:U:H4'	1:AA:239:U:OP1	1.96	0.65
29:BE:46:GLN:HG3	29:BE:87:ALA:HB3	1.79	0.65
1:AA:781:A:H2'	1:AA:782:A:H5'	1.76	0.65
23:DB:2710:C:H2'	23:DB:2711:A:H8	1.60	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:68:G:H5'	1:AA:171:A:H1'	1.78	0.65
9:AJ:37:ARG:NE	9:AJ:37:ARG:HA	2.11	0.65
27:DK:24:VAL:HG13	27:DK:33:ALA:HB2	1.78	0.65
23:DB:811:U:OP2	37:DL:20:GLY:HA2	1.97	0.65
27:DK:63:VAL:HG21	27:DK:85:VAL:HG23	1.76	0.65
25:DC:41:GLY:HA3	25:DC:53:ILE:HG21	1.78	0.65
47:DF:65:LEU:HD23	47:DF:87:LYS:HD2	1.78	0.65
27:DK:47:ILE:CG1	27:DK:48:PRO:HD2	2.24	0.65
8:AI:64:ILE:HD12	8:AI:64:ILE:H	1.61	0.65
25:BC:128:THR:HA	25:BC:190:THR:CA	2.25	0.65
13:AN:25:GLU:HB2	13:AN:29:ILE:HD11	1.78	0.65
2:CC:72:PRO:O	2:CC:76:ILE:HG12	1.96	0.65
32:B4:7:VAL:HB	32:B4:36:ARG:O	1.97	0.65
21:CU:3:ILE:HG21	21:CU:19:LYS:HG3	1.76	0.65
23:DB:1460:U:H4'	23:DB:1461:C:O5'	1.97	0.65
49:BR:49:ILE:HD13	49:BR:53:PHE:H	1.59	0.65
23:DB:2897:U:H2'	23:DB:2898:U:C6	2.32	0.65
1:CA:270:A:H2'	1:CA:271:C:H6	1.59	0.65
23:BB:773:U:H4'	25:BC:45:ASN:O	1.97	0.65
3:AD:171:GLU:HB2	3:AD:180:THR:HB	1.78	0.65
23:DB:857:G:C2'	23:DB:858:G:H5'	2.27	0.65
23:BB:121:G:H2'	23:BB:122:G:C8	2.31	0.65
23:DB:1178:C:H2'	23:DB:1179:G:C8	2.32	0.65
6:CG:21:LEU:HG	6:CG:22:LEU:H	1.61	0.65
3:CD:2:ARG:NH1	3:CD:114:ARG:HG3	2.12	0.65
23:BB:1993:U:H4'	26:BD:133:THR:HG22	1.78	0.65
39:DX:39:GLN:HB3	39:DX:42:LEU:HD13	1.77	0.65
23:BB:2579:C:O2'	26:BD:136:ASN:HA	1.97	0.65
23:DB:2630:G:H2'	23:DB:2631:G:H8	1.62	0.65
1:CA:501:C:H2'	1:CA:502:A:H8	1.62	0.65
9:AJ:22:THR:OG1	9:AJ:72:ARG:HG3	1.96	0.65
23:BB:2216:G:H2'	23:BB:2217:G:H8	1.62	0.65
6:CG:102:TRP:HZ3	6:CG:137:ARG:HB2	1.62	0.65
40:DH:62:LEU:HG	40:DH:66:ASN:ND2	2.11	0.65
1:AA:1521:C:H2'	1:AA:1522:U:C6	2.32	0.65
23:DB:1739:A:H2'	23:DB:1740:G:O4'	1.96	0.65
25:BC:86:ARG:NH1	25:BC:86:ARG:HB3	2.11	0.65
48:BG:84:LYS:HG3	48:BG:131:VAL:CA	2.27	0.65
44:DQ:27:ARG:HA	44:DQ:33:VAL:HG23	1.79	0.65
26:BD:34:VAL:HA	26:BD:50:VAL:HG12	1.77	0.65
41:BJ:136:GLN:N	41:BJ:137:PRO:HD3	2.11	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DJ:43:GLU:O	41:DJ:45:THR:N	2.29	0.65
23:DB:851:C:O4'	30:DY:46:MET:HG2	1.96	0.65
26:DD:34:VAL:HG12	26:DD:94:GLN:H	1.61	0.65
20:CB:57:ASN:HB2	20:CB:219:THR:O	1.97	0.65
23:BB:1790:C:H2'	23:BB:1791:A:C8	2.32	0.65
45:BS:6:LYS:HB3	45:BS:104:THR:HA	1.78	0.65
23:BB:1386:C:H2'	23:BB:1387:A:C8	2.32	0.65
23:BB:1469:A:H2'	23:BB:1470:A:C8	2.32	0.65
1:CA:524:G:H2'	1:CA:525:C:C6	2.32	0.65
1:AA:6:G:H4'	1:AA:298:A:H4'	1.79	0.65
15:CP:76:LYS:NZ	15:CP:80:LYS:HD3	2.11	0.65
23:BB:2229:U:H2'	23:BB:2230:G:H8	1.62	0.65
1:AA:1163:A:H2'	1:AA:1164:G:H8	1.62	0.65
22:DA:111:U:H2'	22:DA:112:G:C8	2.32	0.65
2:AC:81:GLU:HG3	2:AC:82:ASP:N	2.11	0.65
37:DL:123:ARG:HA	37:DL:143:GLU:CB	2.21	0.65
53:D6:77:LYS:O	53:D6:81:LYS:HG3	1.96	0.65
1:AA:920:U:H2'	1:AA:921:U:H6	1.62	0.65
1:AA:1316:G:N2	1:AA:1318:A:H3'	2.11	0.65
32:B4:7:VAL:HG13	32:B4:8:LYS:H	1.60	0.65
45:BS:22:ASP:HA	45:BS:25:ARG:NH1	2.12	0.65
36:B2:21:ARG:HD2	36:B2:43:THR:HG21	1.78	0.65
1:CA:1478:U:H2'	1:CA:1479:C:C6	2.32	0.65
1:CA:781:A:H2'	1:CA:782:A:H5'	1.78	0.65
1:AA:859:G:H2'	1:AA:860:A:C8	2.31	0.65
23:BB:2246:G:H2'	23:BB:2247:A:H8	1.61	0.65
23:BB:2567:G:H2'	23:BB:2568:U:C6	2.32	0.65
23:BB:1192:G:O2'	23:BB:1193:G:H5'	1.96	0.65
1:CA:394:G:H2'	1:CA:395:C:H6	1.59	0.65
23:DB:2852:G:H2'	23:DB:2853:C:C6	2.31	0.65
23:DB:1813:G:N3	25:DC:49:THR:HG21	2.11	0.65
3:AD:97:LEU:HB2	3:AD:134:TYR:HB3	1.77	0.65
1:AA:806:C:H2'	1:AA:807:A:C8	2.32	0.65
23:BB:2461:A:H2'	23:BB:2462:C:C6	2.32	0.65
40:DH:31:VAL:O	40:DH:32:PRO:C	2.34	0.65
23:DB:1827:U:O2'	23:DB:1828:G:H5'	1.97	0.65
23:DB:1012:U:O4	41:DJ:30:THR:HG21	1.97	0.65
25:BC:196:ASN:ND2	25:BC:199:HIS:HB2	2.11	0.65
16:AQ:46:HIS:HB2	16:AQ:66:LEU:HD13	1.79	0.65
23:BB:1171:G:C4	23:BB:1172:C:H1'	2.32	0.65
21:CU:24:LYS:HD2	21:CU:25:ALA:N	2.12	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DI:42:ASN:HA	24:DI:45:THR:OG1	1.96	0.65
49:DR:28:ALA:O	49:DR:63:VAL:HG21	1.96	0.65
46:DU:72:PHE:HA	46:DU:78:LYS:O	1.97	0.65
23:BB:2820:A:OP1	42:BN:4:ARG:HA	1.97	0.65
39:BX:17:GLU:HB3	39:BX:53:VAL:HG11	1.77	0.65
1:CA:1524:C:H2'	1:CA:1525:G:C8	2.32	0.65
23:DB:1181:U:H2'	23:DB:1182:G:H8	1.60	0.65
23:BB:1593:A:H2'	23:BB:1594:U:C6	2.31	0.65
4:CE:106:ALA:HB1	4:CE:110:MET:HB3	1.77	0.65
1:AA:793:U:O2	1:AA:1516:G:H4'	1.97	0.65
20:CB:172:ILE:HG22	20:CB:176:ASN:HD21	1.61	0.65
23:DB:2461:A:H2'	23:DB:2462:C:C6	2.32	0.65
39:BX:39:GLN:HB3	39:BX:42:LEU:HD13	1.78	0.65
25:DC:239:PHE:O	25:DC:241:LYS:HG3	1.96	0.65
22:BA:25:U:OP1	22:BA:25:U:H3'	1.96	0.65
23:DB:1192:G:O2'	23:DB:1193:G:H5'	1.96	0.65
25:DC:67:LYS:HD3	25:DC:150:GLY:HA2	1.77	0.65
23:BB:21:A:H2'	23:BB:22:C:C6	2.32	0.65
40:BH:90:LEU:HD21	40:BH:146:VAL:HG11	1.79	0.65
1:AA:1314:C:N4	18:AS:3:SER:HB3	2.12	0.65
23:DB:1788:C:O2'	23:DB:1789:A:H5'	1.97	0.65
23:DB:594:U:H2'	23:DB:595:C:C6	2.31	0.65
15:CP:25:ARG:HD3	15:CP:25:ARG:H	1.61	0.65
46:DU:78:LYS:HD3	46:DU:79:ALA:H	1.61	0.65
23:DB:559:G:H21	44:DQ:51:GLN:NE2	1.95	0.65
46:BU:70:ALA:HB1	46:BU:79:ALA:CB	2.27	0.65
23:DB:1150:C:H2'	23:DB:1151:A:H8	1.61	0.65
15:AP:57:ILE:O	15:AP:61:VAL:HG23	1.97	0.65
49:DR:19:THR:HB	49:DR:97:LYS:HA	1.78	0.65
5:CF:53:LYS:HE2	5:CF:53:LYS:HA	1.79	0.65
40:BH:57:LYS:HG3	40:BH:58:LEU:N	2.12	0.65
23:DB:1355:G:O2'	23:DB:1356:G:H5'	1.97	0.65
10:CK:110:THR:HG22	21:CU:4:LYS:HA	1.79	0.65
23:BB:664:G:H2'	23:BB:665:U:H6	1.62	0.65
46:BU:48:VAL:C	46:BU:53:GLN:HG3	2.16	0.65
23:BB:2710:C:H2'	23:BB:2711:A:H8	1.62	0.65
23:DB:1571:A:H2'	23:DB:1572:A:C8	2.32	0.65
23:DB:1821:A:H2'	23:DB:1822:C:C6	2.31	0.64
25:DC:64:VAL:HG11	25:DC:66:PHE:CE2	2.32	0.64
5:CF:29:ILE:HG22	5:CF:34:GLY:HA3	1.79	0.64
16:CQ:46:HIS:HB2	16:CQ:66:LEU:HD13	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:85:ARG:HD3	46:BU:86:PHE:N	2.12	0.64
23:DB:27:G:H1'	23:DB:513:A:N6	2.12	0.64
27:DK:43:ILE:HG22	27:DK:54:LYS:HA	1.78	0.64
23:BB:593:U:H2'	23:BB:594:U:C6	2.33	0.64
1:AA:1239:A:H62	1:AA:1299:A:H62	1.44	0.64
1:CA:1002:G:H2'	1:CA:1003:G:O4'	1.96	0.64
1:AA:270:A:H2'	1:AA:271:C:H6	1.61	0.64
1:CA:108:G:C6	19:CT:9:ARG:HG2	2.32	0.64
23:DB:321:U:H1'	29:DE:162:ARG:HH11	1.62	0.64
23:BB:2135:A:H3'	23:BB:2136:G:H8	1.62	0.64
1:AA:264:C:O2'	16:AQ:65:PRO:HG2	1.98	0.64
1:CA:147:G:H2'	1:CA:148:G:C8	2.31	0.64
1:AA:147:G:H2'	1:AA:148:G:C8	2.32	0.64
23:DB:1812:U:H2'	23:DB:1813:G:H8	1.60	0.64
23:DB:1684:G:H2'	23:DB:1685:C:H6	1.61	0.64
3:CD:148:ALA:O	3:CD:151:GLN:HB2	1.97	0.64
37:BL:143:GLU:CG	37:BL:144:GLU:H	2.10	0.64
26:BD:34:VAL:HB	26:BD:48:ILE:HD11	1.78	0.64
25:DC:14:HIS:O	25:DC:203:VAL:HG11	1.97	0.64
37:BL:19:LEU:O	37:BL:21:ARG:HG2	1.97	0.64
45:BS:25:ARG:HE	45:BS:73:LYS:NZ	1.95	0.64
49:DR:66:HIS:ND1	49:DR:94:THR:HG22	2.12	0.64
28:DP:20:ARG:O	28:DP:46:VAL:HG21	1.98	0.64
23:DB:742:A:H2'	23:DB:743:A:C8	2.33	0.64
6:CG:21:LEU:H	6:CG:21:LEU:HD23	1.62	0.64
23:DB:309:A:H4'	46:DU:15:GLY:HA3	1.79	0.64
23:BB:2097:A:H2'	23:BB:2098:U:C6	2.32	0.64
25:DC:219:VAL:HG12	25:DC:224:MET:HE2	1.78	0.64
1:AA:394:G:H2'	1:AA:395:C:H6	1.60	0.64
1:CA:371:A:O2'	1:CA:372:C:H5'	1.97	0.64
19:CT:43:LYS:HE2	19:CT:44:ALA:H	1.61	0.64
1:AA:797:C:O2'	1:AA:798:U:H5'	1.98	0.64
1:CA:1009:U:H1'	1:CA:1021:A:C2	2.32	0.64
23:BB:693:A:H2'	23:BB:694:U:C6	2.32	0.64
3:AD:88:ASN:O	3:AD:92:LEU:HD23	1.97	0.64
7:AH:28:SER:OG	7:AH:56:PRO:HB2	1.96	0.64
6:AG:66:GLU:HA	6:AG:69:ARG:HD2	1.79	0.64
25:BC:94:LEU:HD13	25:BC:100:ARG:HD3	1.79	0.64
51:DZ:40:VAL:HG22	51:DZ:45:ARG:O	1.98	0.64
3:CD:25:ARG:NH1	3:CD:26:ALA:H	1.92	0.64
47:BF:102:LEU:HA	47:BF:106:ALA:HB2	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CE:15:ILE:HD12	4:CE:35:LEU:HG	1.79	0.64
23:BB:27:G:H1'	23:BB:513:A:N6	2.13	0.64
35:BV:40:ILE:HD13	35:BV:40:ILE:N	2.12	0.64
23:BB:170:U:H2'	23:BB:171:U:H6	1.60	0.64
23:DB:1443:U:H2'	23:DB:1444:G:H8	1.62	0.64
23:DB:1550:C:H2'	23:DB:1551:A:C8	2.32	0.64
40:DH:67:ALA:O	40:DH:70:GLU:HG3	1.96	0.64
24:DI:126:ARG:HB3	24:DI:126:ARG:HH11	1.62	0.64
23:BB:1442:U:H2'	23:BB:1443:U:C6	2.32	0.64
45:DS:6:LYS:HB3	45:DS:104:THR:HA	1.79	0.64
23:DB:170:U:H2'	23:DB:171:U:H6	1.62	0.64
23:BB:1778:U:H2'	23:BB:1784:A:H62	1.61	0.64
11:AL:106:VAL:HG23	11:AL:116:TYR:HB3	1.79	0.64
6:AG:21:LEU:H	6:AG:21:LEU:HD23	1.63	0.64
23:DB:1866:A:H2'	23:DB:1867:G:O4'	1.97	0.64
19:CT:60:GLN:HB3	19:CT:65:LEU:HD23	1.77	0.64
23:DB:521:U:H2'	23:DB:522:A:C8	2.33	0.64
23:BB:1000:A:H2'	23:BB:1001:A:C8	2.32	0.64
45:BS:95:ARG:HG3	45:BS:97:LEU:HD13	1.79	0.64
33:B1:3:GLY:O	33:B1:4:ILE:HG12	1.98	0.64
1:CA:678:U:H2'	1:CA:679:C:C6	2.33	0.64
1:AA:1053:G:N7	1:AA:1200:C:H5"	2.11	0.64
52:DW:49:ASN:HB3	52:DW:81:ILE:CG1	2.28	0.64
29:DE:58:LYS:HZ2	29:DE:58:LYS:H	1.43	0.64
12:CM:12:LYS:HB3	12:CM:16:ILE:HG23	1.79	0.64
53:B6:111:ARG:O	53:B6:115:VAL:HG23	1.97	0.64
29:BE:136:GLN:NE2	29:BE:139:LYS:HD3	2.12	0.64
24:BI:129:GLU:HB3	24:BI:133:ARG:NH1	2.11	0.64
45:BS:26:GLY:H	45:BS:71:VAL:HG13	1.60	0.64
24:DI:41:PHE:O	24:DI:45:THR:HG23	1.98	0.64
48:BG:30:GLY:CA	48:BG:78:VAL:HA	2.28	0.64
2:CC:119:ILE:HG21	2:CC:197:VAL:HG11	1.79	0.64
46:DU:35:VAL:HB	46:DU:38:ILE:CG2	2.27	0.64
1:CA:1011:C:H2'	1:CA:1012:A:H8	1.61	0.64
1:CA:255:G:H2'	1:CA:256:U:C6	2.33	0.64
4:CE:81:GLN:H	4:CE:146:MET:HE3	1.61	0.64
23:BB:557:C:H2'	23:BB:558:U:C6	2.33	0.64
39:DX:21:LEU:HA	39:DX:25:GLN:HE21	1.62	0.64
44:BQ:101:ASP:HB2	49:BR:2:TYR:OH	1.98	0.64
23:DB:2841:C:H2'	23:DB:2842:G:C8	2.31	0.64
39:BX:56:LEU:C	39:BX:58:ASN:H	2.01	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2066:C:O2'	23:DB:2067:G:H5'	1.96	0.64
23:DB:2635:A:H5'	26:DD:79:LEU:HD23	1.80	0.64
24:BI:7:TYR:HB2	24:BI:58:ILE:O	1.97	0.64
20:CB:52:ALA:O	20:CB:56:LEU:HB2	1.98	0.64
23:DB:1915:U:O5'	23:DB:1915:U:H6	1.81	0.64
23:DB:664:G:H2'	23:DB:665:U:H6	1.61	0.64
52:DW:23:LYS:C	52:DW:66:VAL:HB	2.18	0.64
41:DJ:18:VAL:HG12	41:DJ:54:ILE:HD11	1.79	0.64
41:BJ:44:TYR:CD2	44:BQ:59:LEU:HD21	2.31	0.64
23:BB:2849:U:H4'	23:BB:2850:A:C5'	2.28	0.64
32:B4:3:VAL:HG23	32:B4:4:ARG:H	1.62	0.64
16:AQ:8:GLN:HA	16:AQ:59:GLU:HA	1.80	0.64
23:DB:819:A:H5'	23:DB:973:A:N1	2.13	0.64
23:BB:2884:U:O2	31:B0:49:ARG:HG2	1.98	0.64
15:AP:68:SER:OG	15:AP:71:VAL:HG12	1.98	0.64
23:BB:1447:C:H2'	23:BB:1448:G:C8	2.33	0.64
1:CA:1239:A:H62	1:CA:1299:A:H62	1.44	0.64
14:CO:26:GLU:HA	14:CO:81:LEU:HD11	1.78	0.64
22:BA:75:G:H1	22:BA:102:G:H22	1.42	0.64
26:BD:113:SER:HB2	26:BD:168:GLU:H	1.61	0.64
19:AT:61:ALA:HA	19:AT:67:HIS:H	1.60	0.64
23:DB:125:A:H3'	23:DB:126:A:C5'	2.28	0.64
39:BX:21:LEU:HA	39:BX:25:GLN:HE21	1.62	0.64
23:DB:1387:A:H2'	23:DB:1388:G:H8	1.62	0.64
37:DL:3:LEU:O	37:DL:5:THR:HG23	1.98	0.64
29:DE:46:GLN:HG3	29:DE:87:ALA:HB3	1.77	0.64
12:CM:6:ILE:O	12:CM:8:ILE:HG23	1.97	0.64
23:BB:75:G:H4'	39:BX:48:ARG:HH22	1.62	0.64
45:BS:84:ARG:HB3	45:BS:96:ILE:HG23	1.79	0.64
23:BB:1889:A:H2'	23:BB:1890:A:C8	2.33	0.64
14:CO:11:ILE:HD11	14:CO:30:ALA:HB1	1.80	0.64
23:DB:1406:U:H2'	23:DB:1407:G:H8	1.61	0.64
23:DB:1042:G:H2'	23:DB:1043:C:C6	2.31	0.64
9:CJ:22:THR:OG1	9:CJ:72:ARG:HG3	1.97	0.64
23:BB:1355:G:O2'	23:BB:1356:G:H5'	1.96	0.64
23:BB:2027:G:O2'	23:BB:2028:U:H5'	1.97	0.64
23:BB:753:A:H2'	23:BB:754:U:C6	2.32	0.64
49:BR:72:VAL:HG23	49:BR:89:HIS:HB3	1.80	0.64
43:DO:47:VAL:HG12	43:DO:48:LEU:H	1.61	0.64
23:BB:328:U:H4'	46:BU:65:GLN:NE2	2.13	0.64
23:DB:2415:G:H4'	37:DL:66:PHE:HB2	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DT:68:LYS:O	50:DT:69:ARG:HB3	1.98	0.64
52:BW:23:LYS:HZ3	52:BW:24:ARG:HG3	1.62	0.64
23:BB:1821:A:H2'	23:BB:1822:C:C6	2.32	0.64
37:DL:123:ARG:HH11	37:DL:123:ARG:HB3	1.63	0.64
25:BC:116:GLN:HG2	25:BC:117:SER:H	1.62	0.64
30:DY:40:THR:O	30:DY:43:ILE:HG23	1.98	0.64
51:BZ:33:LEU:HA	51:BZ:52:SER:HA	1.79	0.64
30:BY:15:ARG:O	30:BY:20:LYS:HE3	1.97	0.64
1:CA:1225:A:H3'	1:CA:1226:C:C6	2.32	0.64
18:AS:43:MET:O	18:AS:46:LEU:HB2	1.96	0.64
29:DE:149:ILE:HG23	29:DE:188:MET:HA	1.78	0.64
48:DG:30:GLY:CA	48:DG:78:VAL:HA	2.27	0.64
40:DH:113:SER:HB2	40:DH:132:PHE:HZ	1.62	0.64
42:DN:90:ARG:HB3	42:DN:94:TYR:HE1	1.61	0.64
23:DB:1593:A:H2'	23:DB:1594:U:C6	2.33	0.64
2:CC:81:GLU:HG3	2:CC:82:ASP:N	2.13	0.64
23:BB:1166:G:H2'	23:BB:1167:C:C6	2.33	0.64
1:AA:407:U:O2'	3:AD:112:GLU:HG3	1.97	0.64
23:DB:1381:G:C2'	23:DB:1382:G:H5'	2.27	0.64
23:DB:296:U:H2'	23:DB:297:G:H8	1.62	0.64
23:DB:937:C:H2'	23:DB:938:G:H8	1.63	0.64
44:DQ:30:VAL:HG11	44:DQ:33:VAL:HG22	1.79	0.64
41:DJ:44:TYR:CD2	44:DQ:59:LEU:HD21	2.33	0.64
50:BT:1:MET:HG3	50:BT:2:ILE:H	1.61	0.64
46:BU:3:LYS:HD3	46:BU:82:VAL:HG21	1.79	0.64
22:BA:28:C:C4	22:BA:56:G:N1	2.66	0.64
4:CE:113:VAL:HG11	4:CE:136:VAL:HG23	1.80	0.64
45:BS:29:VAL:HA	45:BS:32:ALA:HB3	1.80	0.64
23:DB:2884:U:H2'	23:DB:2885:G:C8	2.32	0.64
1:CA:269:C:H2'	1:CA:270:A:H8	1.61	0.64
1:AA:108:G:C6	19:AT:9:ARG:HG2	2.32	0.64
23:BB:1486:U:H2'	23:BB:1487:U:H6	1.63	0.64
1:CA:254:G:OP1	16:CQ:68:LYS:O	2.15	0.64
39:BX:1:MET:O	39:BX:5:GLU:HG2	1.98	0.64
6:CG:134:VAL:O	6:CG:138:GLU:HG3	1.97	0.64
1:AA:366:A:H1'	1:AA:395:C:O2	1.98	0.64
1:CA:678:U:H2'	1:CA:679:C:H6	1.62	0.64
50:DT:69:ARG:HG2	50:DT:73:ARG:O	1.98	0.64
1:AA:1007:U:H2'	1:AA:1008:U:C6	2.33	0.64
43:DO:9:ARG:HG3	43:DO:10:ARG:N	2.13	0.64
23:DB:1259:G:H2'	23:DB:1260:A:H8	1.63	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CH:94:VAL:HG23	7:CH:101:ALA:HB2	1.80	0.64
51:BZ:11:ARG:HB3	51:BZ:12:PRO:HD2	1.79	0.64
1:AA:1225:A:H3'	1:AA:1226:C:C6	2.32	0.64
11:CL:79:ILE:HG22	11:CL:103:CYS:HB2	1.80	0.64
52:BW:35:ILE:HG12	52:BW:35:ILE:O	1.97	0.64
23:BB:18:U:H2'	23:BB:19:A:H8	1.63	0.64
44:DQ:86:SER:CB	49:DR:51:VAL:HA	2.28	0.64
35:DV:62:THR:HB	35:DV:71:LYS:HG2	1.79	0.64
42:DN:8:ARG:HH21	42:DN:39:PRO:HB3	1.62	0.64
44:BQ:63:ARG:HH21	44:BQ:64:ILE:HD11	1.61	0.64
29:DE:136:GLN:NE2	29:DE:139:LYS:HD3	2.12	0.64
23:BB:2751:G:N3	23:BB:2751:G:H2'	2.12	0.64
38:DM:30:SER:HA	38:DM:133:LYS:HB2	1.79	0.64
40:DH:4:ILE:HG22	40:DH:17:ASP:N	2.12	0.64
25:DC:158:GLY:N	25:DC:194:VAL:HG13	2.13	0.64
23:BB:1486:U:H2'	23:BB:1487:U:C6	2.32	0.64
23:DB:1486:U:H2'	23:DB:1487:U:C6	2.32	0.64
23:DB:18:U:H2'	23:DB:19:A:H8	1.62	0.64
23:DB:2246:G:H2'	23:DB:2247:A:C8	2.33	0.64
1:AA:57:G:H2'	1:AA:58:C:C6	2.33	0.64
19:AT:60:GLN:HB3	19:AT:65:LEU:HD23	1.79	0.64
20:CB:26:MET:SD	20:CB:192:PRO:HD3	2.38	0.64
2:AC:104:GLU:HG2	2:AC:105:VAL:H	1.62	0.64
22:BA:111:U:H2'	22:BA:112:G:C8	2.33	0.64
11:CL:35:ARG:NH1	53:D6:104:PRO:HB3	2.13	0.64
23:DB:2385:C:H2'	23:DB:2386:A:H8	1.61	0.64
23:BB:2019:A:H4'	44:BQ:33:VAL:HG11	1.78	0.64
44:BQ:27:ARG:HA	44:BQ:33:VAL:HG23	1.79	0.64
53:B6:42:LYS:HG2	53:B6:51:PRO:HB3	1.80	0.64
53:B6:75:ALA:O	53:B6:79:ILE:HD12	1.98	0.64
13:CN:65:GLN:HG2	13:CN:82:LYS:HE2	1.80	0.64
23:DB:1256:G:H21	29:DE:77:ILE:HG22	1.62	0.64
42:BN:8:ARG:HH21	42:BN:39:PRO:HB3	1.61	0.64
23:BB:2306:C:H3'	23:BB:2307:G:H5''	1.79	0.64
47:DF:8:LYS:HA	47:DF:12:VAL:HG21	1.80	0.64
23:DB:1789:A:P	25:DC:220:ARG:HD3	2.38	0.64
29:BE:109:LEU:HD12	29:BE:112:LEU:HD12	1.78	0.64
1:CA:1003:G:N2	1:CA:1005:A:H5'	2.12	0.64
23:BB:131:A:H2'	23:BB:132:G:C8	2.32	0.64
23:DB:1582:C:H2'	23:DB:1583:A:O4'	1.98	0.64
23:DB:1381:G:H2'	23:DB:1382:G:H5'	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1226:C:C4	12:AM:102:LYS:HB3	2.33	0.64
52:DW:77:LYS:NZ	52:DW:77:LYS:H	1.96	0.64
38:DM:108:VAL:HG13	38:DM:112:LEU:HB3	1.78	0.64
6:AG:135:LYS:HD3	6:AG:136:LYS:N	2.12	0.64
23:DB:1000:A:H2'	23:DB:1001:A:C8	2.32	0.64
1:AA:213:G:H3'	1:AA:214:C:H6	1.63	0.64
10:AK:16:SER:HA	10:AK:78:ILE:HA	1.80	0.64
6:CG:68:VAL:HG11	6:CG:133:ALA:HB1	1.79	0.64
26:DD:16:THR:O	28:DP:78:PRO:HG2	1.98	0.64
23:BB:2801:G:H2'	23:BB:2802:G:C8	2.33	0.64
25:BC:219:VAL:HG12	25:BC:224:MET:HE2	1.79	0.64
3:AD:148:ALA:O	3:AD:151:GLN:HB2	1.98	0.64
23:BB:857:G:C2'	23:BB:858:G:H5'	2.28	0.64
20:CB:163:ILE:HG23	20:CB:164:ASP:N	2.07	0.64
5:AF:36:ILE:HA	5:AF:64:VAL:HG13	1.80	0.64
26:DD:111:GLY:H	26:DD:194:PRO:HG2	1.62	0.64
47:DF:37:MET:SD	47:DF:52:ALA:HB1	2.38	0.64
23:BB:1460:U:H4'	23:BB:1461:C:O5'	1.98	0.64
18:AS:47:THR:HG23	18:AS:60:PHE:HE1	1.63	0.64
33:D1:26:LYS:HB2	33:D1:52:LYS:NZ	2.13	0.64
23:BB:2472:G:C2'	23:BB:2475:C:H42	2.11	0.64
1:AA:97:G:H2'	1:AA:98:A:O4'	1.98	0.64
23:DB:873:C:H2'	23:DB:874:G:H8	1.63	0.64
23:BB:873:C:H4'	38:BM:64:TRP:NE1	2.13	0.64
1:AA:1391:U:H2'	1:AA:1392:G:H8	1.60	0.64
1:CA:239:U:OP1	1:CA:239:U:H4'	1.98	0.64
1:AA:1513:A:H2'	1:AA:1514:G:C8	2.33	0.64
25:DC:116:GLN:HG2	25:DC:117:SER:H	1.63	0.64
3:AD:60:VAL:HA	3:AD:63:ILE:HD12	1.80	0.64
23:DB:526:A:N6	23:DB:2626:C:H4'	2.13	0.64
42:DN:15:SER:O	42:DN:18:GLN:HB2	1.98	0.64
1:CA:1006:G:H2'	1:CA:1007:U:C6	2.33	0.64
45:BS:82:MET:HB2	45:BS:98:LYS:HB2	1.80	0.64
23:DB:543:G:H2'	23:DB:544:C:H4'	1.81	0.64
23:BB:2880:C:O4'	42:BN:91:ALA:HB3	1.98	0.64
20:CB:8:MET:CG	20:CB:9:LEU:H	2.11	0.64
11:AL:120:ARG:HG3	11:AL:121:PRO:HD2	1.79	0.64
50:BT:12:ARG:NH1	50:BT:12:ARG:HB3	2.12	0.64
1:CA:1404:C:H2'	1:CA:1405:G:C8	2.33	0.64
23:DB:2498:C:O2'	23:DB:2499:C:H5'	1.97	0.63
5:CF:3:HIS:CG	5:CF:92:THR:HG23	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:100:U:C2'	23:BB:100:U:O2	2.42	0.63
23:BB:138:U:O5'	23:BB:138:U:H6	1.81	0.63
23:DB:2360:G:H4'	37:DL:61:LEU:HD11	1.79	0.63
51:BZ:71:LEU:O	51:BZ:74:ARG:HG2	1.97	0.63
23:BB:1060:U:OP2	24:BI:74:PRO:HA	1.98	0.63
23:BB:2471:A:O2'	23:BB:2472:G:H8	1.81	0.63
45:DS:24:ILE:HG23	45:DS:32:ALA:HB1	1.78	0.63
32:B4:24:ARG:HG2	32:B4:36:ARG:HG3	1.78	0.63
23:DB:2849:U:H4'	23:DB:2850:A:C5'	2.28	0.63
23:DB:2379:G:H2'	23:DB:2380:C:H6	1.63	0.63
7:AH:47:ASP:CG	7:AH:48:PHE:H	2.01	0.63
11:AL:66:ILE:HG21	11:AL:71:HIS:HB3	1.79	0.63
23:BB:1443:U:H2'	23:BB:1444:G:H8	1.63	0.63
46:BU:39:ASN:HB3	46:BU:62:ALA:HB3	1.80	0.63
46:BU:35:VAL:HB	46:BU:38:ILE:CG2	2.28	0.63
1:CA:1048:G:H4'	13:CN:2:LYS:NZ	2.12	0.63
23:BB:559:G:H21	44:BQ:51:GLN:NE2	1.94	0.63
36:D2:9:VAL:HG13	36:D2:10:LEU:N	2.13	0.63
23:DB:2139:U:O2'	23:DB:2140:G:H5'	1.97	0.63
20:AB:172:ILE:HG22	20:AB:176:ASN:HD21	1.62	0.63
45:BS:31:GLN:O	45:BS:35:ILE:HG12	1.97	0.63
25:BC:239:PHE:O	25:BC:241:LYS:HG3	1.98	0.63
14:AO:11:ILE:HD11	14:AO:30:ALA:HB1	1.81	0.63
1:AA:1029:U:H2'	1:AA:1031:C:N3	2.14	0.63
42:BN:15:SER:O	42:BN:18:GLN:HB2	1.98	0.63
5:AF:47:LEU:HD21	5:AF:57:ALA:HB3	1.79	0.63
11:CL:17:LYS:HE3	11:CL:17:LYS:N	2.13	0.63
52:BW:51:GLY:HA3	52:BW:59:PHE:CB	2.27	0.63
37:DL:143:GLU:CG	37:DL:144:GLU:H	2.09	0.63
27:BK:35:VAL:HG12	27:BK:69:VAL:HG22	1.79	0.63
53:D6:58:VAL:HG22	53:D6:68:VAL:HG22	1.80	0.63
53:D6:68:VAL:HG21	53:D6:99:LEU:HD12	1.80	0.63
26:DD:105:LYS:H	26:DD:106:LYS:NZ	1.95	0.63
48:BG:17:LYS:NZ	48:BG:18:ILE:H	1.95	0.63
23:DB:1060:U:O4	23:DB:1088:A:N6	2.31	0.63
12:CM:10:ASP:HA	12:CM:44:ILE:HD13	1.80	0.63
4:AE:28:ARG:NH2	4:AE:30:PHE:HA	2.13	0.63
23:BB:675:A:H5'	29:BE:60:TRP:HE1	1.63	0.63
50:DT:11:LEU:HD21	50:DT:46:ALA:HB1	1.80	0.63
23:BB:2897:U:H2'	23:BB:2898:U:C6	2.34	0.63
3:AD:53:GLN:HA	3:AD:198:LEU:HD22	1.78	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AG:14:ASP:HB3	6:AG:19:SER:H	1.63	0.63
1:CA:1329:A:OP1	12:CM:28:ARG:HB2	1.97	0.63
1:CA:501:C:H2'	1:CA:502:A:C8	2.33	0.63
6:AG:134:VAL:O	6:AG:138:GLU:HG3	1.98	0.63
1:CA:793:U:O2	1:CA:1516:G:H4'	1.98	0.63
23:DB:200:U:H5''	51:DZ:22:LEU:O	1.98	0.63
23:BB:632:A:H2'	23:BB:633:A:C8	2.32	0.63
10:CK:16:SER:HA	10:CK:78:ILE:HA	1.79	0.63
25:BC:166:ARG:HB2	25:BC:171:VAL:HG22	1.79	0.63
23:BB:1666:G:O3'	27:BK:6:THR:HG23	1.97	0.63
1:AA:1141:C:H2'	1:AA:1142:G:H8	1.63	0.63
20:AB:128:LEU:HG	20:AB:132:GLU:HG2	1.80	0.63
24:BI:89:SER:HA	24:BI:97:VAL:HG21	1.80	0.63
38:BM:68:PHE:CG	38:BM:69:PRO:HD2	2.33	0.63
6:AG:4:ARG:NE	6:AG:6:ILE:HG23	2.14	0.63
53:D6:61:PRO:HD2	53:D6:66:LEU:HA	1.80	0.63
40:BH:82:SER:HB3	40:BH:92:GLY:O	1.99	0.63
12:AM:44:ILE:HA	12:AM:47:LEU:HD12	1.79	0.63
10:CK:58:THR:HB	10:CK:59:PRO:HD2	1.81	0.63
15:CP:4:ILE:HG12	15:CP:21:VAL:HG22	1.79	0.63
5:CF:66:ALA:HB1	5:CF:67:PRO:HD2	1.80	0.63
49:BR:39:LEU:HA	49:BR:53:PHE:HA	1.80	0.63
23:DB:1081:U:H5'	24:DI:126:ARG:NH1	2.13	0.63
23:BB:1437:C:H2'	23:BB:1438:U:H6	1.60	0.63
1:CA:1343:G:H2'	1:CA:1344:C:C6	2.33	0.63
23:DB:1486:U:H2'	23:DB:1487:U:H6	1.63	0.63
1:AA:1006:G:H2'	1:AA:1007:U:H6	1.64	0.63
23:BB:630:G:N2	23:BB:632:A:H3'	2.14	0.63
23:DB:2540:C:H2'	23:DB:2541:A:C8	2.33	0.63
23:DB:1923:U:H2'	23:DB:1924:C:H6	1.64	0.63
23:BB:1373:A:H2'	23:BB:1374:G:O4'	1.98	0.63
23:DB:1636:U:H2'	23:DB:1637:A:H8	1.64	0.63
23:BB:2512:C:H2'	23:BB:2513:A:O4'	1.98	0.63
1:CA:87:C:H2'	1:CA:88:U:H5''	1.79	0.63
37:DL:74:THR:HA	37:DL:107:PHE:O	1.97	0.63
2:CC:122:GLN:HB3	2:CC:127:VAL:HG21	1.80	0.63
52:DW:23:LYS:HZ3	52:DW:24:ARG:HG3	1.61	0.63
8:AI:59:LYS:HB3	8:AI:60:LEU:HD23	1.78	0.63
7:AH:94:VAL:HG23	7:AH:101:ALA:HB2	1.79	0.63
42:BN:85:PRO:HA	42:BN:88:ALA:HB2	1.81	0.63
29:BE:154:ASP:OD2	29:BE:157:LEU:HB3	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:413:G:H2'	1:CA:428:G:H21	1.62	0.63
4:CE:19:ARG:O	4:CE:20:VAL:HB	1.98	0.63
18:CS:62:THR:HG22	18:CS:63:ASP:H	1.62	0.63
31:B0:21:LEU:HD12	45:BS:19:LEU:O	1.98	0.63
23:DB:850:U:O2'	30:DY:22:THR:HG22	1.99	0.63
43:DO:62:LEU:HD11	43:DO:70:ALA:HA	1.79	0.63
23:BB:27:G:H1'	23:BB:513:A:H61	1.62	0.63
1:CA:1391:U:H2'	1:CA:1392:G:H8	1.63	0.63
14:CO:25:THR:HB	14:CO:70:LEU:HD23	1.79	0.63
1:AA:235:C:H2'	1:AA:236:A:C8	2.34	0.63
39:DX:1:MET:O	39:DX:5:GLU:HG2	1.98	0.63
23:DB:1508:A:H2'	23:DB:1509:A:C2	2.34	0.63
9:AJ:37:ARG:NH1	9:AJ:77:VAL:HG21	2.14	0.63
1:CA:676:A:H2'	1:CA:677:U:C6	2.33	0.63
27:BK:24:VAL:HG13	27:BK:33:ALA:HB2	1.81	0.63
6:AG:24:LYS:O	6:AG:28:ILE:HG12	1.99	0.63
23:BB:1040:A:H2	23:BB:1115:G:H22	1.46	0.63
15:AP:5:ARG:HH21	15:AP:24:SER:HA	1.64	0.63
9:CJ:92:LEU:H	9:CJ:92:LEU:HD22	1.62	0.63
23:DB:1099:G:C8	24:DI:3:LYS:CA	2.79	0.63
47:DF:64:PRO:HA	47:DF:88:VAL:HG22	1.80	0.63
22:DA:28:C:C4	22:DA:56:G:N1	2.67	0.63
3:CD:25:ARG:HB2	3:CD:25:ARG:HH11	1.63	0.63
51:BZ:5:CYS:HB2	51:BZ:10:LYS:HB3	1.79	0.63
3:AD:25:ARG:NH1	3:AD:26:ALA:H	1.93	0.63
23:DB:2471:A:HO2'	23:DB:2472:G:H8	1.47	0.63
23:BB:2884:U:H2'	23:BB:2885:G:C8	2.34	0.63
24:DI:121:ILE:N	24:DI:121:ILE:HD13	2.13	0.63
15:CP:68:SER:OG	15:CP:71:VAL:HG12	1.99	0.63
45:BS:24:ILE:HG12	45:BS:36:LEU:HD21	1.81	0.63
23:DB:2898:U:H2'	23:DB:2899:A:C8	2.34	0.63
44:BQ:10:ARG:HA	44:BQ:13:HIS:HB2	1.79	0.63
23:BB:1550:C:H2'	23:BB:1551:A:C8	2.32	0.63
42:BN:49:GLU:HB2	42:BN:50:PRO:HD3	1.81	0.63
3:CD:169:TRP:HB2	3:CD:183:ARG:HD2	1.81	0.63
23:BB:1993:U:H4'	26:BD:133:THR:CG2	2.28	0.63
11:CL:98:ARG:HA	11:CL:103:CYS:SG	2.38	0.63
11:CL:120:ARG:HG3	11:CL:121:PRO:HD2	1.79	0.63
11:AL:14:LYS:HG2	11:AL:15:VAL:N	2.14	0.63
23:BB:2377:A:H2'	23:BB:2378:A:C8	2.34	0.63
17:AR:41:SER:HB2	17:AR:51:GLN:HG2	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:D6:63:PRO:HD2	53:D6:64:ARG:NH1	2.14	0.63
1:CA:213:G:H3'	1:CA:214:C:H6	1.62	0.63
20:CB:23:ASN:HD22	20:CB:24:PRO:HD2	1.63	0.63
50:DT:12:ARG:NH1	50:DT:12:ARG:HB3	2.12	0.63
1:CA:880:C:H2'	1:CA:881:G:H8	1.64	0.63
1:CA:1053:G:N7	1:CA:1200:C:H5''	2.13	0.63
23:BB:2064:C:H2'	23:BB:2065:C:C6	2.32	0.63
41:DJ:45:THR:H	41:DJ:46:PRO:HD3	1.62	0.63
47:DF:78:ILE:H	47:DF:79:ARG:NH1	1.97	0.63
23:DB:2645:G:H3'	23:DB:2646:C:H5'	1.79	0.63
30:BY:12:ALA:HA	30:BY:15:ARG:HD3	1.81	0.63
23:BB:1060:U:O4	23:BB:1088:A:N6	2.31	0.63
46:DU:80:ASP:HB3	46:DU:96:LYS:N	2.13	0.63
1:CA:920:U:O2'	1:CA:1081:A:H4'	1.98	0.63
1:AA:1314:C:H41	18:AS:3:SER:HB3	1.63	0.63
33:D1:33:LEU:N	33:D1:51:ALA:HB3	2.12	0.63
23:DB:2039:U:H2'	23:DB:2040:G:C8	2.29	0.63
23:DB:1551:A:C3'	23:DB:1552:A:H5''	2.28	0.63
29:DE:158:PHE:HA	29:DE:169:VAL:HG21	1.81	0.63
23:BB:2230:G:H2'	23:BB:2231:U:C6	2.34	0.63
23:DB:2415:G:H2'	23:DB:2416:C:C6	2.34	0.63
1:CA:1053:G:C3'	1:CA:1054:C:H5'	2.27	0.63
1:AA:707:U:H2'	1:AA:708:C:C6	2.34	0.63
28:DP:24:THR:O	28:DP:25:VAL:HG22	1.99	0.63
25:BC:244:VAL:HB	25:BC:249:VAL:H	1.64	0.63
23:DB:2216:G:H2'	23:DB:2217:G:H8	1.63	0.63
2:CC:142:ARG:HH21	2:CC:143:LEU:HD21	1.63	0.63
23:BB:1326:U:H2'	23:BB:1327:A:H8	1.63	0.63
1:CA:1141:C:H2'	1:CA:1142:G:H8	1.64	0.63
23:BB:506:G:H5''	23:BB:509:C:O2'	1.99	0.63
23:BB:2386:A:H2'	23:BB:2387:U:C6	2.34	0.63
23:BB:922:C:H1'	52:BW:22:VAL:HG21	1.79	0.63
52:BW:49:ASN:O	52:BW:50:VAL:HG13	1.99	0.63
52:DW:49:ASN:O	52:DW:50:VAL:HG13	1.98	0.63
18:CS:49:ALA:HA	18:CS:57:VAL:O	1.97	0.63
23:DB:873:C:H4'	38:DM:64:TRP:HE1	1.63	0.63
30:DY:18:LYS:O	30:DY:22:THR:HG23	1.99	0.63
3:AD:187:ARG:NH1	3:AD:191:SER:HA	2.13	0.63
1:CA:876:C:H1'	7:CH:11:THR:HG21	1.81	0.63
23:DB:2720:U:H5''	28:DP:52:ARG:NH2	2.13	0.63
1:AA:335:C:H2'	1:AA:336:A:H8	1.64	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AO:26:GLU:HA	14:AO:81:LEU:HD11	1.80	0.63
23:DB:2557:G:H2'	23:DB:2558:C:H6	1.64	0.63
6:CG:66:GLU:HA	6:CG:69:ARG:HD2	1.79	0.63
20:CB:8:MET:SD	20:CB:9:LEU:N	2.72	0.63
45:DS:82:MET:HB2	45:DS:98:LYS:HB2	1.81	0.63
23:DB:693:A:H2'	23:DB:694:U:C6	2.34	0.63
23:BB:1259:G:H2'	23:BB:1260:A:H8	1.64	0.63
6:CG:135:LYS:HD3	6:CG:136:LYS:N	2.13	0.63
47:BF:32:LYS:HA	47:BF:95:MET:HG3	1.80	0.63
20:AB:14:HIS:HB2	20:AB:208:ALA:HB2	1.80	0.63
5:AF:3:HIS:CD2	5:AF:65:GLU:HG3	2.33	0.63
23:DB:632:A:H2'	23:DB:633:A:C8	2.32	0.63
13:CN:68:ARG:HB3	13:CN:68:ARG:NH1	2.10	0.63
44:BQ:90:ASP:O	44:BQ:94:LEU:HB2	1.98	0.63
1:AA:1271:A:H5'	1:AA:1314:C:H5''	1.81	0.63
32:D4:7:VAL:HB	32:D4:36:ARG:O	1.99	0.63
1:CA:1237:C:H3'	1:CA:1336:C:H41	1.63	0.63
31:D0:43:THR:OG1	31:D0:47:TYR:HB2	1.99	0.63
37:BL:102:GLY:O	37:BL:105:ILE:HG12	1.99	0.63
1:CA:806:C:H2'	1:CA:807:A:H8	1.64	0.63
8:AI:14:SER:HA	8:AI:68:GLY:O	1.99	0.63
30:BY:29:ARG:H	30:BY:33:HIS:CD2	2.17	0.63
23:BB:2875:C:H2'	23:BB:2876:G:H8	1.62	0.63
23:DB:269:C:H2'	23:DB:270:A:H8	1.63	0.63
29:BE:22:ASP:O	29:BE:107:SER:HB2	1.97	0.63
1:AA:135:C:O2	15:AP:1:MET:HB2	1.99	0.63
50:BT:69:ARG:HG2	50:BT:73:ARG:O	1.99	0.63
23:BB:1407:G:H2'	23:BB:1408:G:H8	1.64	0.63
52:BW:49:ASN:HB3	52:BW:81:ILE:CG1	2.29	0.63
23:DB:947:A:HO2'	23:DB:984:A:H2	1.47	0.63
52:DW:81:ILE:O	52:DW:81:ILE:HG13	1.99	0.63
1:AA:1148:U:O4'	8:AI:17:ARG:HD3	1.99	0.63
13:AN:60:ARG:HG3	13:AN:62:ARG:HG3	1.81	0.63
47:BF:111:ARG:HH22	47:BF:113:PHE:HB2	1.62	0.63
13:AN:26:LEU:HD11	13:AN:44:VAL:HG22	1.81	0.63
23:BB:1024:G:C3'	23:BB:1025:G:H5''	2.27	0.63
43:DO:63:LYS:HD3	43:DO:67:ASN:OD1	1.99	0.63
27:DK:118:LEU:O	27:DK:120:PRO:HD2	1.98	0.63
23:BB:1551:A:C3'	23:BB:1552:A:H5''	2.28	0.63
23:BB:62:U:H3'	23:BB:63:A:H8	1.62	0.63
1:AA:1524:C:H2'	1:AA:1525:G:C8	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CT:57:VAL:HG23	19:CT:58:ASP:H	1.64	0.63
53:D6:63:PRO:HD2	53:D6:64:ARG:CZ	2.29	0.63
23:BB:2698:U:H2'	23:BB:2699:C:C6	2.34	0.63
23:DB:2776:A:H4'	23:DB:2777:G:H5''	1.79	0.63
23:DB:2064:C:H2'	23:DB:2065:C:C6	2.34	0.63
23:DB:2093:G:O5'	40:DH:24:GLY:HA3	1.99	0.63
1:AA:1027:C:H2'	1:AA:1028:C:C6	2.34	0.63
1:CA:451:A:H4'	1:CA:452:A:O4'	1.99	0.63
23:DB:1166:G:H2'	23:DB:1167:C:C6	2.34	0.63
9:CJ:80:THR:HB	9:CJ:83:THR:OG1	1.99	0.63
41:BJ:117:ALA:HA	41:BJ:120:ARG:HD2	1.79	0.63
1:AA:524:G:H2'	1:AA:525:C:C6	2.33	0.63
23:BB:1939:U:H6	23:BB:1939:U:H5'	1.64	0.63
5:AF:66:ALA:HB1	5:AF:67:PRO:HD2	1.80	0.63
1:AA:1461:G:H2'	1:AA:1462:C:H6	1.63	0.63
23:DB:1958:C:O2'	23:DB:1959:G:H5'	1.99	0.63
40:BH:31:VAL:O	40:BH:32:PRO:C	2.34	0.62
40:BH:31:VAL:CB	40:BH:32:PRO:CD	2.77	0.62
40:BH:134:VAL:HG13	40:BH:138:VAL:O	1.98	0.62
53:D6:36:ALA:HA	53:D6:39:LEU:CD2	2.29	0.62
20:CB:14:HIS:HB2	20:CB:208:ALA:HB2	1.79	0.62
47:DF:43:ILE:HB	47:DF:82:TYR:OH	1.98	0.62
30:DY:12:ALA:HA	30:DY:15:ARG:HD3	1.81	0.62
38:DM:35:ALA:CB	38:DM:100:LYS:H	2.12	0.62
3:CD:29:THR:HG22	3:CD:30:LYS:H	1.64	0.62
46:DU:85:ARG:HD3	46:DU:86:PHE:N	2.12	0.62
47:BF:37:MET:SD	47:BF:52:ALA:HB1	2.39	0.62
47:DF:102:LEU:HD22	47:DF:103:ILE:H	1.64	0.62
37:DL:19:LEU:O	37:DL:21:ARG:HG2	1.99	0.62
35:DV:40:ILE:N	35:DV:40:ILE:HD13	2.13	0.62
23:BB:2547:A:H2'	23:BB:2548:U:C6	2.34	0.62
24:DI:20:SER:O	24:DI:25:PRO:HD2	1.99	0.62
24:BI:20:SER:O	24:BI:25:PRO:HD2	1.99	0.62
46:DU:21:ARG:HD3	46:DU:72:PHE:CG	2.34	0.62
14:CO:78:TYR:CZ	14:CO:82:ILE:HD11	2.34	0.62
23:DB:2086:U:H2'	23:DB:2087:G:C8	2.33	0.62
1:CA:620:C:H2'	1:CA:621:A:C8	2.34	0.62
42:DN:49:GLU:HB2	42:DN:50:PRO:HD3	1.80	0.62
40:BH:47:PHE:HA	40:BH:50:ARG:NH2	2.14	0.62
23:DB:1684:G:H2'	23:DB:1685:C:C6	2.33	0.62
1:AA:1006:G:H2'	1:AA:1007:U:C6	2.33	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DW:41:GLY:HA2	52:DW:44:PHE:CD2	2.34	0.62
1:AA:1377:A:H2'	6:AG:6:ILE:HD11	1.81	0.62
52:BW:41:GLY:HA2	52:BW:44:PHE:CD2	2.34	0.62
48:DG:54:ARG:HB3	48:DG:57:TYR:CD1	2.34	0.62
23:DB:1505:A:H2'	23:DB:1506:U:C6	2.34	0.62
23:BB:1381:G:H2'	23:BB:1382:G:H5'	1.79	0.62
1:CA:6:G:H4'	1:CA:298:A:H4'	1.81	0.62
41:BJ:124:VAL:HG23	41:BJ:125:TYR:H	1.64	0.62
42:BN:58:ASP:O	42:BN:59:SER:HB3	1.99	0.62
25:DC:128:THR:HA	25:DC:190:THR:CA	2.28	0.62
23:DB:573:U:O2'	23:DB:574:A:H3'	1.99	0.62
47:BF:64:PRO:HA	47:BF:88:VAL:HG22	1.81	0.62
21:AU:38:GLU:C	21:AU:40:PRO:HD2	2.19	0.62
33:B1:33:LEU:N	33:B1:51:ALA:HB3	2.12	0.62
1:AA:413:G:H2'	1:AA:428:G:H21	1.64	0.62
24:BI:11:GLN:HA	24:BI:55:PRO:HA	1.80	0.62
2:AC:72:PRO:O	2:AC:76:ILE:HG12	1.99	0.62
13:AN:26:LEU:HG	13:AN:30:ILE:HD13	1.80	0.62
53:D6:16:LYS:O	53:D6:20:VAL:HG23	1.98	0.62
27:BK:8:LEU:N	27:BK:8:LEU:HD12	2.14	0.62
44:DQ:10:ARG:HA	44:DQ:13:HIS:HB2	1.81	0.62
23:BB:1796:U:H2'	23:BB:1797:G:C8	2.34	0.62
1:AA:255:G:H2'	1:AA:256:U:C6	2.33	0.62
23:DB:1407:G:H2'	23:DB:1408:G:H8	1.64	0.62
19:AT:43:LYS:HE2	19:AT:44:ALA:H	1.63	0.62
1:AA:927:G:O2'	1:AA:928:G:H5'	1.99	0.62
23:BB:1904:G:H1'	23:BB:1927:A:N1	2.13	0.62
23:DB:2182:U:H2'	23:DB:2183:A:C8	2.34	0.62
23:DB:2001:C:H4'	23:DB:2689:U:O2'	1.97	0.62
23:DB:2199:A:H5'	23:DB:2200:C:OP2	1.99	0.62
23:BB:2075:U:H2'	23:BB:2238:G:N2	2.14	0.62
10:AK:51:PHE:HB2	10:AK:55:ARG:HB3	1.81	0.62
26:BD:37:VAL:CG2	26:BD:91:THR:HA	2.29	0.62
38:BM:59:ARG:NH1	38:BM:60:GLN:HB3	2.10	0.62
12:AM:12:LYS:HB3	12:AM:16:ILE:HG23	1.81	0.62
23:DB:2393:U:H5''	37:DL:62:PRO:CG	2.28	0.62
29:DE:58:LYS:HE2	29:DE:60:TRP:HD1	1.64	0.62
46:BU:85:ARG:HA	46:BU:85:ARG:NE	2.12	0.62
47:BF:76:PHE:HD2	47:BF:78:ILE:HD13	1.65	0.62
47:DF:2:LYS:HD2	47:DF:100:GLU:HG2	1.80	0.62
25:DC:18:VAL:O	25:DC:18:VAL:HG13	1.98	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DI:27:LEU:CD2	24:DI:27:LEU:H	2.12	0.62
25:BC:14:HIS:O	25:BC:203:VAL:HG11	1.99	0.62
27:DK:8:LEU:HD12	27:DK:8:LEU:N	2.13	0.62
43:BO:63:LYS:HD3	43:BO:67:ASN:OD1	1.99	0.62
23:BB:171:U:H2'	23:BB:172:A:C8	2.34	0.62
20:CB:125:PHE:HA	20:CB:127:LYS:NZ	2.14	0.62
23:BB:863:A:H2'	23:BB:864:G:C8	2.34	0.62
45:BS:6:LYS:HD3	45:BS:104:THR:HG23	1.81	0.62
6:AG:56:SER:HB3	6:AG:59:GLU:HG3	1.81	0.62
23:DB:664:G:H2'	23:DB:665:U:C6	2.34	0.62
1:CA:1006:G:H2'	1:CA:1007:U:H6	1.63	0.62
23:DB:547:A:N1	23:DB:548:G:H1'	2.15	0.62
20:AB:165:ALA:HA	20:AB:172:ILE:HD11	1.82	0.62
23:BB:2875:C:H2'	23:BB:2876:G:C8	2.35	0.62
26:DD:108:ASP:OD2	26:DD:173:GLN:HA	1.99	0.62
1:AA:1180:A:P	8:AI:98:ARG:HH22	2.22	0.62
23:BB:350:G:H2'	23:BB:351:C:C6	2.34	0.62
23:BB:2758:A:H2'	23:BB:2759:G:O4'	1.99	0.62
23:DB:2091:C:H1'	51:DZ:34:HIS:CD2	2.33	0.62
28:BP:24:THR:O	28:BP:25:VAL:HG22	1.99	0.62
1:AA:678:U:H2'	1:AA:679:C:C6	2.34	0.62
1:CA:1384:C:H2'	1:CA:1385:G:H8	1.64	0.62
16:CQ:80:LYS:H	16:CQ:80:LYS:HD2	1.64	0.62
23:BB:2019:A:H2	23:BB:2035:G:H22	1.47	0.62
53:D6:36:ALA:HA	53:D6:39:LEU:HD23	1.81	0.62
44:DQ:63:ARG:HH21	44:DQ:64:ILE:HD11	1.64	0.62
51:BZ:7:VAL:HG21	51:BZ:59:ILE:HD11	1.80	0.62
12:CM:47:LEU:HD13	12:CM:51:GLN:O	1.99	0.62
29:BE:58:LYS:C	29:BE:60:TRP:H	2.01	0.62
50:DT:1:MET:HG3	50:DT:2:ILE:H	1.64	0.62
23:DB:580:U:H2'	23:DB:581:C:H6	1.63	0.62
23:DB:557:C:H2'	23:DB:558:U:C6	2.35	0.62
50:BT:82:LYS:HD2	50:BT:84:TYR:HE1	1.64	0.62
50:DT:82:LYS:HD2	50:DT:84:TYR:HE1	1.64	0.62
1:AA:235:C:H2'	1:AA:236:A:H8	1.61	0.62
23:DB:1178:C:H2'	23:DB:1179:G:H8	1.63	0.62
40:DH:59:ALA:O	40:DH:62:LEU:HD22	1.99	0.62
6:AG:102:TRP:HZ3	6:AG:137:ARG:HB2	1.64	0.62
20:CB:8:MET:HB2	20:CB:11:ALA:HB3	1.82	0.62
1:CA:1515:G:O2'	1:CA:1516:G:H5'	1.99	0.62
38:BM:41:LEU:HB2	38:BM:94:ALA:HB3	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CJ:29:ALA:O	9:CJ:32:THR:HG22	1.99	0.62
1:AA:481:G:HO2'	1:AA:482:A:H8	1.47	0.62
4:AE:19:ARG:O	4:AE:20:VAL:HB	1.99	0.62
23:DB:833:A:H1'	37:DL:52:GLY:H	1.62	0.62
23:BB:1913:A:H4'	23:BB:1914:C:H5''	1.81	0.62
9:AJ:92:LEU:H	9:AJ:92:LEU:HD22	1.64	0.62
40:DH:131:SER:HB2	40:DH:141:LYS:HG3	1.81	0.62
42:BN:65:LEU:HD11	42:BN:69:ARG:CZ	2.29	0.62
25:DC:140:VAL:HG12	25:DC:141:HIS:H	1.63	0.62
48:DG:84:LYS:HG3	48:DG:131:VAL:CA	2.28	0.62
26:BD:105:LYS:H	26:BD:106:LYS:NZ	1.97	0.62
51:DZ:7:VAL:HG21	51:DZ:59:ILE:HD11	1.80	0.62
25:BC:64:VAL:HG11	25:BC:66:PHE:CE2	2.35	0.62
3:AD:25:ARG:HH11	3:AD:26:ALA:N	1.93	0.62
10:AK:58:THR:HB	10:AK:59:PRO:HD2	1.80	0.62
18:CS:30:LEU:HD12	18:CS:48:ILE:HG12	1.81	0.62
9:AJ:55:PRO:HA	13:AN:80:ARG:HH22	1.64	0.62
1:AA:98:A:O2'	1:AA:99:C:H5'	1.99	0.62
37:DL:18:ARG:C	37:DL:19:LEU:HD12	2.20	0.62
23:BB:1080:A:O2'	24:BI:126:ARG:HB2	1.98	0.62
53:D6:1:MET:HB3	53:D6:143:LEU:HD11	1.79	0.62
23:DB:593:U:H2'	23:DB:594:U:C6	2.33	0.62
44:BQ:10:ARG:NH1	44:BQ:10:ARG:HB2	2.14	0.62
7:CH:11:THR:HA	7:CH:14:ARG:NH1	2.14	0.62
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.34	0.62
23:DB:38:A:N3	29:DE:43:THR:HB	2.15	0.62
6:AG:41:ILE:HG21	6:AG:115:MET:HG3	1.82	0.62
1:AA:1423:G:H2'	1:AA:1424:U:C6	2.33	0.62
45:DS:84:ARG:HB3	45:DS:96:ILE:HG23	1.81	0.62
1:CA:676:A:H2'	1:CA:677:U:H6	1.64	0.62
23:BB:1381:G:C2'	23:BB:1382:G:H5'	2.28	0.62
17:CR:41:SER:HB2	17:CR:51:GLN:HG2	1.80	0.62
23:DB:899:A:H3'	23:DB:900:A:C8	2.35	0.62
15:CP:5:ARG:HH21	15:CP:24:SER:HA	1.63	0.62
23:BB:540:C:H2'	23:BB:541:A:H8	1.64	0.62
23:DB:2194:U:H2'	23:DB:2195:U:H6	1.64	0.62
16:CQ:30:HIS:CE1	16:CQ:32:ILE:HG22	2.35	0.62
3:CD:58:GLN:O	3:CD:62:ARG:HG2	1.99	0.62
6:CG:24:LYS:O	6:CG:28:ILE:HG12	1.98	0.62
1:AA:532:A:N6	2:AC:191:THR:HB	2.14	0.62
52:BW:39:GLN:NE2	52:BW:43:LYS:HB2	2.14	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:D6:90:LEU:O	53:D6:92:PRO:HD3	2.00	0.62
44:DQ:63:ARG:NH2	44:DQ:96:ASP:HA	2.14	0.62
8:AI:62:LEU:HD22	8:AI:62:LEU:H	1.63	0.62
7:AH:76:ARG:HG3	7:AH:77:VAL:N	2.15	0.62
53:B6:128:ALA:O	53:B6:132:ILE:HG13	1.98	0.62
22:BA:24:G:N7	22:BA:56:G:H2'	2.15	0.62
29:DE:105:LEU:HA	29:DE:108:ILE:HG22	1.80	0.62
12:CM:78:ARG:HH22	18:CS:68:HIS:CE1	2.18	0.62
37:BL:18:ARG:C	37:BL:19:LEU:HD12	2.19	0.62
31:B0:43:THR:OG1	31:B0:47:TYR:HB2	1.99	0.62
23:DB:2380:C:H5'	43:DO:17:LYS:NZ	2.15	0.62
40:BH:4:ILE:HG22	40:BH:17:ASP:N	2.15	0.62
5:CF:1:MET:SD	5:CF:67:PRO:HD3	2.40	0.62
23:DB:2895:G:H2'	23:DB:2896:C:C6	2.34	0.62
23:DB:1440:U:H2'	23:DB:1441:G:H8	1.64	0.62
20:CB:113:LEU:HD12	20:CB:143:LEU:HB3	1.81	0.62
35:BV:42:LEU:HD12	35:BV:47:VAL:HG21	1.82	0.62
1:AA:551:U:O2'	11:AL:82:ARG:HD2	1.99	0.62
7:AH:11:THR:HA	7:AH:14:ARG:NH1	2.15	0.62
6:AG:21:LEU:HG	6:AG:22:LEU:H	1.63	0.62
8:AI:9:GLY:HA3	8:AI:81:GLY:N	2.14	0.62
1:AA:216:U:H2'	1:AA:217:C:C6	2.34	0.62
23:BB:634:C:H2'	23:BB:635:C:H6	1.65	0.62
17:CR:40:PRO:HD2	17:CR:43:ILE:HD12	1.82	0.62
6:CG:91:ARG:HB3	6:CG:92:PRO:HD2	1.82	0.62
23:DB:2400:G:O2'	23:DB:2401:U:H5'	1.98	0.62
23:BB:1509:A:H5'	23:BB:1510:G:H5'	1.81	0.62
23:BB:414:C:H2'	23:BB:415:A:C8	2.33	0.62
41:DJ:124:VAL:HG23	41:DJ:125:TYR:H	1.65	0.62
23:BB:2455:G:H2'	23:BB:2456:C:C6	2.34	0.62
23:DB:1100:C:H2'	23:DB:1101:U:H6	1.63	0.62
53:D6:40:HIS:O	53:D6:51:PRO:HA	2.00	0.62
35:BV:62:THR:HB	35:BV:71:LYS:HG2	1.82	0.62
30:DY:6:ILE:O	30:DY:34:THR:HA	2.00	0.62
13:CN:60:ARG:HG3	13:CN:62:ARG:HG3	1.81	0.62
18:AS:10:ILE:HG22	18:AS:37:SER:HB3	1.82	0.62
23:BB:372:G:O2'	51:BZ:54:LYS:HE2	2.00	0.62
23:DB:2849:U:N3	23:DB:2867:G:C8	2.66	0.62
23:BB:819:A:H5'	23:BB:973:A:N1	2.14	0.62
23:BB:1081:U:C5'	24:BI:126:ARG:HD2	2.28	0.62
25:BC:18:VAL:O	25:BC:18:VAL:HG13	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:D4:2:LYS:HG2	32:D4:4:ARG:NE	2.14	0.62
23:DB:1657:U:O2'	23:DB:1658:C:H5'	1.99	0.62
27:DK:118:LEU:C	27:DK:120:PRO:HD2	2.19	0.62
23:DB:1199:U:H2'	23:DB:1200:C:H6	1.65	0.62
23:BB:125:A:OP2	36:B2:19:ARG:HD2	2.00	0.62
7:CH:47:ASP:CG	7:CH:48:PHE:H	2.02	0.62
3:CD:197:HIS:O	3:CD:200:VAL:HG22	2.00	0.62
12:AM:6:ILE:O	12:AM:8:ILE:HG23	1.98	0.62
23:BB:1354:A:H2'	23:BB:1355:G:O4'	1.99	0.62
23:DB:1001:A:H2'	23:DB:1002:G:O4'	1.99	0.62
15:AP:59:HIS:O	15:AP:63:GLN:HG3	1.99	0.62
8:CI:14:SER:HA	8:CI:68:GLY:O	2.00	0.62
23:DB:1315:C:H2'	23:DB:1316:U:C6	2.34	0.62
6:AG:91:ARG:HB3	6:AG:92:PRO:HD2	1.80	0.62
1:AA:398:U:H2'	1:AA:399:G:H8	1.63	0.62
1:CA:1432:G:H1'	1:CA:1468:A:N6	2.15	0.62
7:CH:113:ARG:HH21	7:CH:114:ALA:HA	1.63	0.62
44:DQ:65:ASN:O	44:DQ:69:ARG:HB2	1.98	0.62
23:DB:2021:C:OP1	31:D0:8:THR:HG21	1.99	0.62
23:DB:2353:G:N3	52:DW:30:VAL:HG13	2.15	0.62
23:DB:626:A:H2'	37:DL:78:ARG:NH1	2.15	0.62
50:BT:54:GLU:HG3	50:BT:90:GLY:H	1.63	0.62
1:CA:920:U:H2'	1:CA:921:U:H6	1.61	0.62
23:DB:27:G:H1'	23:DB:513:A:H61	1.62	0.62
42:BN:97:ILE:HD12	42:BN:98:LEU:N	2.15	0.62
26:DD:113:SER:HB2	26:DD:168:GLU:H	1.64	0.62
1:AA:1003:G:N2	1:AA:1005:A:H5'	2.14	0.62
1:CA:492:C:H2'	1:CA:493:A:N3	2.15	0.62
39:BX:20:ASN:O	39:BX:24:GLU:HB3	1.99	0.62
23:DB:743:A:O2'	23:DB:744:U:H5'	2.00	0.62
23:BB:2720:U:H5''	28:BP:52:ARG:NH2	2.15	0.62
2:AC:78:LYS:HG3	2:AC:81:GLU:CB	2.29	0.62
20:CB:165:ALA:HA	20:CB:172:ILE:HD11	1.82	0.62
26:DD:79:LEU:HD22	26:DD:79:LEU:N	2.15	0.62
23:DB:1406:U:H2'	23:DB:1407:G:C8	2.34	0.62
1:AA:678:U:H2'	1:AA:679:C:H6	1.64	0.62
23:BB:955:U:H5''	38:BM:86:LYS:HD2	1.82	0.62
1:CA:1067:A:H4'	1:CA:1068:G:O5'	1.99	0.62
1:AA:370:C:O2'	1:AA:371:A:H5'	2.00	0.62
23:DB:1782:U:H3'	57:DB:3607:HOH:O	1.99	0.62
23:DB:780:G:H1	25:DC:228:ASP:CG	2.02	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1889:A:H2'	23:DB:1890:A:C8	2.35	0.62
1:CA:285:C:H2'	1:CA:286:C:H6	1.64	0.62
23:BB:1564:C:H2'	23:BB:1565:C:C6	2.34	0.62
23:BB:2415:G:H2'	23:BB:2416:C:C6	2.34	0.62
23:BB:1219:U:H2'	23:BB:1220:G:H8	1.64	0.62
22:DA:7:G:H5''	43:DO:29:HIS:CD2	2.35	0.62
5:AF:3:HIS:CG	5:AF:92:THR:HG23	2.34	0.62
51:DZ:71:LEU:O	51:DZ:74:ARG:HG2	2.00	0.62
13:AN:65:GLN:HG2	13:AN:82:LYS:HE2	1.82	0.62
47:BF:8:LYS:HA	47:BF:12:VAL:HG21	1.82	0.62
42:DN:83:LEU:HA	42:DN:86:ARG:CB	2.27	0.62
23:BB:2788:C:H2'	23:BB:2789:C:C6	2.35	0.62
53:D6:107:THR:O	53:D6:111:ARG:HG3	2.00	0.62
25:DC:32:LEU:O	25:DC:63:ILE:HG12	1.99	0.62
12:AM:1:ALA:C	12:AM:8:ILE:HG22	2.20	0.62
23:BB:2247:A:H3'	57:BB:3266:HOH:O	1.98	0.62
23:DB:2246:G:H2'	23:DB:2247:A:H8	1.65	0.62
1:AA:1494:G:H5'	23:BB:1913:A:C6	2.35	0.62
23:DB:2698:U:H2'	23:DB:2699:C:C6	2.34	0.62
29:BE:34:ALA:HB2	29:BE:96:VAL:HG21	1.82	0.62
26:BD:125:TRP:CG	26:BD:160:LYS:HB3	2.35	0.62
3:CD:88:ASN:O	3:CD:92:LEU:HD23	1.99	0.62
44:BQ:65:ASN:O	44:BQ:69:ARG:HB2	1.99	0.62
1:AA:577:G:O2'	1:AA:578:C:H5'	2.00	0.62
23:DB:272:A:H2'	23:DB:273:G:C8	2.35	0.62
23:DB:184:C:H2'	23:DB:185:G:H8	1.65	0.62
2:CC:131:ARG:HG2	2:CC:131:ARG:HH11	1.64	0.62
1:AA:1169:A:H2'	1:AA:1170:A:C8	2.35	0.62
29:DE:34:ALA:HB2	29:DE:96:VAL:HG21	1.82	0.62
8:AI:34:LEU:HD21	8:AI:48:ARG:HE	1.64	0.62
46:BU:3:LYS:HD3	46:BU:82:VAL:CG2	2.30	0.62
45:DS:17:VAL:C	45:DS:19:LEU:H	2.03	0.62
47:DF:102:LEU:HA	47:DF:106:ALA:HB3	1.82	0.62
47:DF:111:ARG:HH22	47:DF:113:PHE:HB2	1.62	0.62
33:D1:20:TYR:CD2	33:D1:37:LYS:HD3	2.35	0.62
23:DB:139:U:O2'	50:DT:1:MET:HB2	1.99	0.62
22:DA:98:G:N1	35:DV:14:LYS:HB2	2.14	0.62
6:CG:122:GLU:OE1	6:CG:131:GLY:HA3	2.00	0.62
23:BB:1196:C:H2'	23:BB:1197:G:C8	2.34	0.62
38:BM:64:TRP:HB2	38:BM:104:GLU:HB2	1.81	0.62
46:DU:26:ASN:HD21	46:DU:34:ILE:HD12	1.63	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:169:TRP:HB2	3:AD:183:ARG:HD2	1.82	0.62
11:AL:107:LYS:H	11:AL:107:LYS:NZ	1.98	0.62
1:CA:707:U:H2'	1:CA:708:C:H6	1.64	0.62
25:BC:32:LEU:HD22	25:BC:63:ILE:HG13	1.82	0.62
50:BT:68:LYS:O	50:BT:69:ARG:HB3	1.98	0.62
23:DB:1947:C:H2'	23:DB:1948:G:H8	1.64	0.62
23:BB:1866:A:H2'	23:BB:1867:G:O4'	2.00	0.62
23:BB:2852:G:H2'	23:BB:2853:C:C6	2.35	0.62
23:DB:2578:G:C5	26:DD:145:SER:HB2	2.35	0.62
10:CK:51:PHE:HB2	10:CK:55:ARG:HB3	1.82	0.62
22:BA:7:G:H5''	43:BO:29:HIS:CD2	2.35	0.62
23:BB:2605:U:H2'	23:BB:2606:C:C6	2.35	0.62
23:BB:1306:C:H2'	23:BB:1307:A:H8	1.64	0.62
23:BB:417:C:H2'	23:BB:418:C:C6	2.34	0.62
8:CI:34:LEU:HD21	8:CI:48:ARG:HE	1.63	0.61
44:BQ:80:ASN:O	44:BQ:83:LYS:HB3	2.00	0.61
12:AM:52:ILE:HD12	12:AM:55:LEU:HD12	1.81	0.61
53:B6:112:LYS:HB2	53:B6:116:ARG:HH21	1.65	0.61
23:BB:1176:U:H3'	23:BB:1177:G:C8	2.34	0.61
29:BE:149:ILE:HG23	29:BE:188:MET:HA	1.80	0.61
23:BB:1199:U:H2'	23:BB:1200:C:C6	2.35	0.61
37:DL:102:GLY:O	37:DL:105:ILE:HG12	2.00	0.61
23:DB:2073:C:H5''	25:DC:227:VAL:HG12	1.81	0.61
7:AH:40:LYS:HD2	7:AH:47:ASP:HA	1.82	0.61
23:DB:1442:U:H2'	23:DB:1443:U:C6	2.34	0.61
4:AE:154:ALA:HB1	7:AH:65:PHE:CZ	2.35	0.61
1:AA:1072:G:H21	20:AB:105:THR:HG21	1.64	0.61
45:DS:6:LYS:HD3	45:DS:104:THR:HG23	1.81	0.61
23:DB:321:U:OP2	29:DE:130:LYS:HD3	1.99	0.61
1:CA:301:G:H2'	1:CA:302:G:C8	2.33	0.61
1:AA:301:G:H2'	1:AA:302:G:C8	2.32	0.61
14:AO:78:TYR:CZ	14:AO:82:ILE:HD11	2.35	0.61
42:BN:90:ARG:HB3	42:BN:94:TYR:CE1	2.35	0.61
8:CI:9:GLY:HA3	8:CI:81:GLY:N	2.15	0.61
23:DB:1203:U:H4'	37:DL:3:LEU:HD12	1.81	0.61
16:CQ:80:LYS:H	16:CQ:80:LYS:CD	2.13	0.61
23:DB:900:A:O2'	23:DB:901:C:H5'	2.00	0.61
53:D6:14:MET:SD	53:D6:164:ILE:HG22	2.40	0.61
29:DE:1:MET:HB3	29:DE:14:VAL:O	2.00	0.61
1:CA:1307:U:H2'	1:CA:1308:U:C6	2.35	0.61
53:D6:44:GLU:HA	53:D6:49:HIS:HA	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1307:U:H2'	1:AA:1308:U:C6	2.35	0.61
23:BB:5:A:H2'	23:BB:6:A:C8	2.35	0.61
23:DB:2756:U:H1'	23:DB:2757:A:H5''	1.82	0.61
23:DB:909:A:H2'	23:DB:912:C:H5	1.65	0.61
1:CA:570:G:H2'	1:CA:571:U:C6	2.35	0.61
24:BI:85:ILE:HD13	24:BI:137:LEU:HD21	1.80	0.61
23:BB:1046:A:C3'	23:BB:1047:G:H5''	2.30	0.61
23:BB:139:U:H3'	23:BB:140:C:H4'	1.82	0.61
1:CA:783:C:O2'	1:CA:784:A:H5'	1.99	0.61
1:AA:939:G:H5'	6:AG:101:ARG:NH1	2.15	0.61
23:BB:2540:C:H2'	23:BB:2541:A:C8	2.34	0.61
52:BW:81:ILE:O	52:BW:81:ILE:HG13	2.00	0.61
1:AA:1527:U:H2'	1:AA:1528:U:C6	2.36	0.61
41:BJ:25:LEU:HD13	41:BJ:26:GLY:N	2.14	0.61
23:DB:996:A:C4'	44:DQ:91:ARG:HH11	2.12	0.61
23:DB:2306:C:H3'	23:DB:2307:G:H5''	1.82	0.61
42:BN:37:THR:OG1	42:BN:40:LYS:HE2	2.00	0.61
24:DI:112:LYS:O	24:DI:116:MET:HG3	2.00	0.61
1:CA:1316:G:N2	1:CA:1318:A:H3'	2.15	0.61
1:CA:1320:C:H41	18:CS:36:ARG:HE	1.48	0.61
39:BX:6:LEU:O	39:BX:7:ARG:HB3	2.00	0.61
17:CR:33:THR:HG23	17:CR:37:LYS:O	1.99	0.61
3:CD:154:VAL:HG23	3:CD:155:LYS:H	1.65	0.61
23:DB:591:U:H1'	34:D3:1:PRO:N	2.15	0.61
44:BQ:105:PHE:O	44:BQ:109:VAL:HG23	2.00	0.61
5:AF:80:PHE:HE1	25:BC:135:PRO:HG2	1.64	0.61
23:DB:19:A:H2'	23:DB:20:C:C6	2.34	0.61
19:CT:79:THR:HA	19:CT:82:ILE:HG12	1.82	0.61
11:CL:107:LYS:H	11:CL:107:LYS:NZ	1.98	0.61
23:BB:2276:G:OP2	38:BM:85:GLY:N	2.32	0.61
23:DB:120:U:H4'	23:DB:121:G:H5''	1.82	0.61
23:DB:2071:A:H2'	23:DB:2072:C:C6	2.34	0.61
53:B6:2:THR:OG1	53:B6:5:GLU:HG3	2.00	0.61
23:DB:1152:C:H3'	57:DB:3274:HOH:O	2.00	0.61
53:D6:113:ASP:HA	53:D6:116:ARG:CD	2.30	0.61
22:DA:39:A:H2	22:DA:46:A:H61	1.48	0.61
23:BB:1947:C:H2'	23:BB:1948:G:H8	1.65	0.61
35:DV:49:ASN:N	35:DV:49:ASN:HD22	1.98	0.61
23:BB:2071:A:H2'	23:BB:2072:C:C6	2.35	0.61
26:BD:121:THR:HB	26:BD:127:PHE:CD1	2.34	0.61
25:BC:130:PRO:HG2	25:BC:133:ASN:HD22	1.64	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:116:LEU:HD23	48:BG:121:THR:HA	1.83	0.61
47:BF:65:LEU:HD23	47:BF:87:LYS:HD2	1.82	0.61
10:CK:33:ILE:HG13	10:CK:73:VAL:HG21	1.83	0.61
50:BT:11:LEU:HD21	50:BT:46:ALA:HB1	1.81	0.61
12:CM:12:LYS:HD2	12:CM:16:ILE:HD13	1.81	0.61
1:AA:1080:A:H5'	4:AE:51:LYS:HZ3	1.64	0.61
47:DF:168:LEU:HD13	47:DF:169:LEU:H	1.66	0.61
45:DS:24:ILE:HG12	45:DS:36:LEU:HD21	1.81	0.61
23:BB:1173:U:H2'	23:BB:1174:U:C4'	2.28	0.61
48:BG:153:PRO:HG3	48:BG:162:ARG:HB3	1.82	0.61
45:BS:55:ILE:HD12	45:BS:107:VAL:HG21	1.82	0.61
30:BY:2:LYS:HD3	30:BY:2:LYS:H	1.64	0.61
1:CA:308:C:H2'	1:CA:309:A:H8	1.64	0.61
24:BI:18:ASN:N	24:BI:19:PRO:HD2	2.14	0.61
23:BB:2898:U:H2'	23:BB:2899:A:C8	2.36	0.61
23:DB:784:G:C6	25:DC:227:VAL:HG11	2.34	0.61
23:DB:1447:C:H2'	23:DB:1448:G:C8	2.35	0.61
23:BB:1788:C:O2'	23:BB:1789:A:H5'	2.00	0.61
45:BS:83:LYS:HD3	45:BS:97:LEU:HD11	1.82	0.61
23:DB:71:A:H4'	23:DB:72:U:H5'	1.81	0.61
1:CA:1169:A:H2'	1:CA:1170:A:C8	2.35	0.61
23:BB:909:A:H2'	23:BB:912:C:H5	1.64	0.61
23:DB:2455:G:H2'	23:DB:2456:C:C6	2.34	0.61
20:AB:52:ALA:O	20:AB:56:LEU:HB2	2.00	0.61
38:DM:82:MET:HE3	38:DM:83:GLY:H	1.65	0.61
6:CG:77:ARG:HG3	6:CG:79:VAL:HG23	1.82	0.61
26:BD:79:LEU:N	26:BD:79:LEU:HD22	2.15	0.61
52:BW:23:LYS:C	52:BW:66:VAL:HB	2.19	0.61
23:DB:2210:U:N3	23:DB:2212:A:N7	2.48	0.61
29:BE:105:LEU:HA	29:BE:108:ILE:HG22	1.82	0.61
46:DU:3:LYS:HD3	46:DU:82:VAL:HG21	1.82	0.61
29:BE:145:ASP:HB3	29:BE:184:ASP:HB2	1.82	0.61
38:BM:21:ALA:HB2	38:BM:100:LYS:HG2	1.82	0.61
50:DT:57:VAL:HG13	50:DT:58:VAL:N	2.16	0.61
21:CU:24:LYS:HZ3	21:CU:25:ALA:H	1.47	0.61
35:DV:80:HIS:CD2	35:DV:83:LYS:HB2	2.35	0.61
1:AA:1432:G:H5'	28:BP:105:LYS:CG	2.29	0.61
23:DB:2615:U:C2	31:D0:3:GLN:HA	2.36	0.61
41:DJ:110:PRO:HB2	41:DJ:111:LYS:HE3	1.82	0.61
23:DB:773:U:H4'	25:DC:45:ASN:O	1.99	0.61
1:CA:321:A:O2'	1:CA:322:C:H5'	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:220:G:H1	23:BB:427:U:H2'	1.65	0.61
49:DR:71:LYS:HG3	49:DR:72:VAL:N	2.14	0.61
23:DB:1583:A:H4'	23:DB:1585:C:C4	2.36	0.61
6:CG:14:ASP:HB3	6:CG:19:SER:H	1.64	0.61
1:AA:171:A:H2'	1:AA:172:A:C8	2.36	0.61
23:DB:1376:C:H3'	57:DB:3278:HOH:O	2.00	0.61
25:BC:61:TYR:HA	25:BC:85:ASN:HD21	1.64	0.61
1:AA:390:U:H2'	1:AA:391:G:C8	2.34	0.61
1:CA:390:U:H2'	1:CA:391:G:C8	2.35	0.61
1:AA:501:C:H1'	1:AA:549:C:H1'	1.81	0.61
1:AA:505:G:H4'	1:AA:534:U:C4	2.35	0.61
24:DI:1:ALA:HB1	24:DI:2:LYS:HD2	1.81	0.61
23:DB:1098:A:C8	24:DI:3:LYS:HB3	2.34	0.61
25:DC:103:ILE:HG22	25:DC:105:ALA:H	1.65	0.61
21:CU:38:GLU:C	21:CU:40:PRO:HD2	2.20	0.61
53:D6:51:PRO:HB2	53:D6:53:ASN:ND2	2.16	0.61
49:DR:5:PHE:O	49:DR:11:GLN:HA	2.00	0.61
44:BQ:63:ARG:NH2	44:BQ:96:ASP:HA	2.16	0.61
46:BU:85:ARG:HH11	46:BU:86:PHE:H	1.47	0.61
12:CM:38:ILE:HG22	12:CM:42:VAL:HG21	1.82	0.61
23:BB:2810:A:H2'	23:BB:2811:G:O4'	2.01	0.61
46:BU:80:ASP:HB3	46:BU:96:LYS:N	2.15	0.61
13:CN:25:GLU:HB2	13:CN:29:ILE:HD11	1.81	0.61
1:CA:1313:U:OP2	18:CS:5:LYS:HA	2.00	0.61
44:BQ:4:LYS:HZ1	44:BQ:7:VAL:HG22	1.65	0.61
42:DN:33:ILE:HD12	42:DN:33:ILE:O	2.00	0.61
27:BK:13:ASN:HD21	27:BK:98:ARG:H	1.48	0.61
4:AE:158:LYS:NZ	7:AH:65:PHE:HA	2.16	0.61
46:BU:21:ARG:HD3	46:BU:72:PHE:CG	2.36	0.61
4:CE:82:HIS:HB2	4:CE:83:PRO:HD2	1.83	0.61
23:BB:2086:U:H2'	23:BB:2087:G:C8	2.36	0.61
23:BB:1432:G:H2'	23:BB:1433:A:C8	2.35	0.61
23:BB:2229:U:H2'	23:BB:2230:G:C8	2.35	0.61
19:CT:35:TYR:O	19:CT:38:ILE:HG22	2.01	0.61
6:AG:62:GLU:O	6:AG:66:GLU:HG3	2.01	0.61
23:BB:634:C:H2'	23:BB:635:C:C6	2.35	0.61
23:DB:833:A:H1'	37:DL:52:GLY:N	2.15	0.61
15:CP:74:LEU:O	15:CP:78:VAL:HG12	2.01	0.61
23:DB:2230:G:H2'	23:DB:2231:U:C6	2.36	0.61
23:BB:923:G:H1'	52:BW:23:LYS:NZ	2.16	0.61
52:DW:39:GLN:NE2	52:DW:43:LYS:HB2	2.16	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:122:ALA:HA	48:BG:132:LEU:HA	1.82	0.61
47:DF:32:LYS:HA	47:DF:95:MET:HG3	1.81	0.61
8:AI:29:ILE:HA	8:AI:64:ILE:HB	1.82	0.61
22:DA:28:C:OP1	43:DO:31:THR:HG21	2.00	0.61
1:AA:1302:C:OP2	12:AM:16:ILE:HD11	2.00	0.61
41:BJ:45:THR:H	41:BJ:46:PRO:HD3	1.64	0.61
42:BN:83:LEU:HA	42:BN:86:ARG:CB	2.27	0.61
31:D0:21:LEU:HD12	45:DS:19:LEU:O	2.00	0.61
1:CA:812:G:H2'	1:CA:812:G:N3	2.15	0.61
18:CS:18:VAL:CG2	18:CS:43:MET:HB3	2.30	0.61
45:BS:17:VAL:C	45:BS:19:LEU:H	2.03	0.61
12:AM:38:ILE:HG22	12:AM:42:VAL:HG21	1.81	0.61
33:D1:8:ILE:HD11	33:D1:52:LYS:HB2	1.82	0.61
23:DB:139:U:H3	50:DT:49:LYS:HE2	1.65	0.61
32:B4:7:VAL:HG23	32:B4:35:GLN:CB	2.28	0.61
17:CR:34:GLU:HB2	21:CU:18:PHE:CZ	2.36	0.61
29:BE:188:MET:HE3	29:BE:193:VAL:HG13	1.82	0.61
44:BQ:107:ALA:HB1	49:BR:48:LYS:HE3	1.81	0.61
30:BY:18:LYS:O	30:BY:22:THR:HG23	2.01	0.61
26:DD:37:VAL:CG2	26:DD:91:THR:HA	2.30	0.61
23:BB:38:A:N3	29:BE:43:THR:HB	2.16	0.61
1:AA:237:G:H2'	1:AA:238:A:H8	1.66	0.61
23:DB:1203:U:H1'	37:DL:4:ASN:HD21	1.65	0.61
1:AA:1021:A:H2'	1:AA:1022:A:O4'	2.00	0.61
23:DB:2710:C:H2'	23:DB:2711:A:C8	2.36	0.61
23:BB:664:G:H2'	23:BB:665:U:C6	2.35	0.61
49:BR:71:LYS:HG3	49:BR:72:VAL:N	2.16	0.61
1:CA:214:C:H2'	1:CA:215:C:C6	2.36	0.61
1:CA:216:U:H2'	1:CA:217:C:C6	2.34	0.61
23:BB:1406:U:H2'	23:BB:1407:G:C8	2.36	0.61
23:BB:1406:U:H2'	23:BB:1407:G:H8	1.64	0.61
23:DB:2022:U:O2'	23:DB:2617:U:H5'	2.01	0.61
23:DB:2229:U:H2'	23:DB:2230:G:H8	1.65	0.61
23:BB:2292:U:H2'	23:BB:2293:G:H8	1.66	0.61
26:DD:125:TRP:CG	26:DD:160:LYS:HB3	2.35	0.61
23:BB:742:A:H2'	23:BB:743:A:C8	2.36	0.61
23:DB:2567:G:H2'	23:DB:2568:U:C6	2.36	0.61
48:DG:123:GLU:HG2	48:DG:124:CYS:N	2.16	0.61
52:DW:37:VAL:HG13	52:DW:55:ASP:O	2.00	0.61
48:DG:122:ALA:HA	48:DG:132:LEU:HA	1.83	0.61
8:AI:46:VAL:HA	8:AI:49:GLN:HG3	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:115:GLY:HA2	47:BF:177:ARG:HH11	1.66	0.61
23:BB:2199:A:H5'	23:BB:2200:C:OP2	2.01	0.61
37:BL:42:SER:C	37:BL:44:GLY:H	2.04	0.61
29:BE:158:PHE:HA	29:BE:169:VAL:HG21	1.81	0.61
4:CE:28:ARG:NH2	4:CE:30:PHE:HA	2.15	0.61
1:AA:1313:U:OP2	18:AS:5:LYS:HA	1.99	0.61
18:AS:39:ILE:HB	18:AS:66:VAL:HA	1.83	0.61
17:CR:34:GLU:H	17:CR:34:GLU:CD	2.04	0.61
23:BB:1082:U:N3	23:BB:1086:A:C6	2.69	0.61
23:BB:28:A:N6	23:BB:512:G:H1'	2.16	0.61
46:BU:26:ASN:HD21	46:BU:34:ILE:HD12	1.65	0.61
1:CA:551:U:O2'	11:CL:82:ARG:HD2	2.01	0.61
42:BN:90:ARG:HB3	42:BN:94:TYR:HE1	1.65	0.61
1:CA:859:G:H2'	1:CA:860:A:H8	1.64	0.61
25:DC:245:THR:O	25:DC:247:TRP:N	2.34	0.61
1:CA:366:A:H1'	1:CA:395:C:O2	2.00	0.61
1:AA:1515:G:O2'	1:AA:1516:G:H5'	2.00	0.61
20:CB:160:LEU:HD23	20:CB:181:PRO:O	2.01	0.61
23:DB:937:C:H2'	23:DB:938:G:C8	2.36	0.61
23:BB:2092:U:H4'	23:BB:2093:G:O5'	2.01	0.61
21:AU:11:PHE:O	21:AU:13:VAL:N	2.34	0.61
1:AA:746:A:H2'	1:AA:747:A:C8	2.36	0.61
27:DK:13:ASN:HD21	27:DK:98:ARG:H	1.48	0.61
50:DT:32:LEU:H	50:DT:83:ALA:HB3	1.66	0.61
2:AC:131:ARG:HG2	2:AC:131:ARG:HH11	1.64	0.61
5:AF:16:GLU:H	5:AF:16:GLU:CD	2.02	0.61
6:CG:23:ALA:O	6:CG:26:VAL:HG22	2.01	0.61
52:BW:18:LYS:HG3	52:BW:19:ARG:CZ	2.31	0.61
23:DB:2354:C:H4'	52:DW:31:LEU:HD22	1.81	0.61
26:BD:106:LYS:HB3	26:BD:206:ALA:N	2.15	0.61
41:BJ:25:LEU:HD22	41:BJ:26:GLY:N	2.14	0.61
41:BJ:36:LEU:HD11	41:BJ:122:LEU:HB2	1.82	0.61
47:BF:101:ARG:CZ	47:BF:138:PRO:HB2	2.30	0.61
1:AA:1060:U:C4'	9:AJ:54:SER:HB2	2.30	0.61
53:D6:74:ASN:HD22	53:D6:74:ASN:N	1.93	0.61
21:AU:24:LYS:HZ3	21:AU:25:ALA:H	1.49	0.61
12:AM:78:ARG:O	12:AM:82:LEU:HB2	2.00	0.61
53:D6:18:LEU:HD22	53:D6:168:PHE:CD2	2.36	0.61
45:DS:26:GLY:N	45:DS:71:VAL:HG13	2.15	0.61
17:AR:33:THR:HG23	17:AR:37:LYS:O	2.00	0.61
23:BB:873:C:H2'	23:BB:874:G:H8	1.63	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DS:22:ASP:HA	45:DS:25:ARG:NH1	2.15	0.61
53:D6:29:ARG:HD3	53:D6:110:ARG:NH2	2.15	0.61
23:DB:171:U:H2'	23:DB:172:A:C8	2.36	0.61
1:CA:300:A:H2'	1:CA:301:G:O4'	2.01	0.61
1:AA:1049:U:H6	1:AA:1049:U:H5'	1.65	0.61
35:DV:42:LEU:HD12	35:DV:47:VAL:HG21	1.83	0.61
23:BB:2379:G:H2'	23:BB:2380:C:H6	1.63	0.61
23:DB:1484:U:H2'	23:DB:1485:U:C6	2.36	0.61
23:DB:16:C:O2'	23:DB:17:G:H5'	1.99	0.61
23:DB:307:G:H2'	23:DB:309:A:OP2	2.00	0.61
1:AA:676:A:H2'	1:AA:677:U:C6	2.35	0.61
23:BB:523:C:H4'	23:BB:540:C:O2	2.00	0.61
23:BB:129:C:H2'	23:BB:130:C:C6	2.36	0.61
20:AB:23:ASN:HD22	20:AB:24:PRO:HD2	1.65	0.61
23:DB:962:G:N2	23:DB:2250:G:H1	1.99	0.61
18:CS:32:THR:HG22	18:CS:34:SER:H	1.65	0.61
23:DB:506:G:H5''	23:DB:509:C:O2'	2.01	0.61
51:BZ:66:THR:O	51:BZ:69:ALA:HB3	2.01	0.61
23:BB:184:C:H2'	23:BB:185:G:H8	1.65	0.61
23:BB:2498:C:O2'	23:BB:2499:C:H5'	2.00	0.61
23:DB:1993:U:H4'	26:DD:133:THR:HG22	1.83	0.61
40:BH:80:ILE:HB	40:BH:144:VAL:HG13	1.83	0.61
20:CB:184:ALA:HB3	20:CB:195:VAL:HG21	1.82	0.61
29:DE:58:LYS:H	29:DE:58:LYS:HZ3	1.47	0.61
45:DS:16:LYS:O	45:DS:19:LEU:HB3	2.01	0.61
23:BB:2109:U:H2'	23:BB:2110:G:H5'	1.83	0.61
1:AA:1320:C:N3	18:AS:35:ARG:HD3	2.16	0.61
45:DS:55:ILE:HD12	45:DS:107:VAL:HG21	1.83	0.61
46:BU:95:PHE:CE1	46:BU:102:ILE:HB	2.32	0.61
23:DB:1082:U:N3	23:DB:1086:A:C6	2.69	0.61
25:BC:12:ARG:HA	25:BC:15:VAL:HG23	1.81	0.61
44:BQ:86:SER:CB	49:BR:51:VAL:HA	2.31	0.61
27:BK:118:LEU:C	27:BK:120:PRO:HD2	2.21	0.61
23:DB:1196:C:H2'	23:DB:1197:G:C8	2.35	0.61
23:BB:2186:G:H2'	23:BB:2187:U:C6	2.35	0.61
23:DB:2243:U:H2'	23:DB:2244:U:H6	1.62	0.61
14:AO:25:THR:HB	14:AO:70:LEU:HD23	1.82	0.61
41:BJ:112:GLY:H	41:BJ:113:PRO:HD2	1.65	0.61
23:BB:1150:C:H2'	23:BB:1151:A:H8	1.66	0.61
35:DV:53:LYS:HB3	35:DV:55:GLU:OE1	2.01	0.61
30:BY:6:ILE:O	30:BY:34:THR:HA	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:18:U:H2'	23:DB:19:A:C8	2.36	0.61
20:AB:85:SER:O	20:AB:86:CYS:HB2	2.01	0.61
23:DB:2875:C:H2'	23:DB:2876:G:C8	2.36	0.61
22:DA:111:U:H2'	22:DA:112:G:H8	1.65	0.61
1:AA:676:A:H2'	1:AA:677:U:H6	1.65	0.61
3:CD:60:VAL:HA	3:CD:63:ILE:HD12	1.81	0.61
4:AE:96:GLN:HB3	4:AE:123:LEU:HD12	1.82	0.61
23:DB:1939:U:H5'	23:DB:1939:U:H6	1.65	0.61
23:BB:1315:C:H2'	23:BB:1316:U:C6	2.35	0.61
25:DC:143:VAL:HG12	25:DC:144:GLU:N	2.16	0.61
25:DC:146:LYS:HB3	25:DC:147:PRO:HD2	1.82	0.61
25:DC:166:ARG:HB2	25:DC:171:VAL:HG22	1.82	0.61
10:CK:33:ILE:HG12	10:CK:69:CYS:SG	2.41	0.61
53:B6:59:THR:HG23	53:B6:67:VAL:HG23	1.82	0.61
38:BM:59:ARG:HE	38:BM:60:GLN:H	1.49	0.61
23:DB:636:G:O5'	37:DL:128:THR:HG22	2.00	0.61
41:DJ:25:LEU:HD13	41:DJ:26:GLY:N	2.15	0.61
22:DA:24:G:N7	22:DA:56:G:H2'	2.16	0.61
48:BG:17:LYS:HA	48:BG:17:LYS:HZ2	1.65	0.61
51:BZ:5:CYS:CB	51:BZ:10:LYS:H	2.12	0.61
13:AN:68:ARG:NH1	13:AN:68:ARG:HB3	2.11	0.61
3:AD:29:THR:HG22	3:AD:30:LYS:H	1.66	0.61
47:BF:102:LEU:HD22	47:BF:103:ILE:H	1.64	0.61
47:BF:24:VAL:O	47:BF:27:VAL:HG22	2.01	0.61
23:BB:321:U:OP2	29:BE:130:LYS:HD3	2.00	0.61
1:AA:919:A:O2'	1:AA:920:U:H5'	2.01	0.61
47:DF:102:LEU:HD13	47:DF:103:ILE:HB	1.82	0.61
4:CE:89:THR:HG21	4:CE:134:ASN:ND2	2.15	0.61
25:DC:12:ARG:HA	25:DC:15:VAL:HG23	1.83	0.61
53:D6:17:SER:O	53:D6:20:VAL:HB	2.00	0.61
39:DX:6:LEU:O	39:DX:7:ARG:HB3	2.00	0.61
24:DI:32:VAL:HG22	24:DI:60:VAL:HG21	1.83	0.61
23:DB:1024:G:C3'	23:DB:1025:G:H5''	2.27	0.61
25:BC:204:LEU:HD23	25:BC:209:ALA:HB1	1.82	0.61
23:DB:2722:G:H2'	23:DB:2723:C:H6	1.66	0.61
23:DB:1796:U:O2'	23:DB:1797:G:H5'	2.01	0.61
3:CD:187:ARG:NH1	3:CD:191:SER:HA	2.16	0.61
11:CL:66:ILE:HG21	11:CL:71:HIS:HB3	1.82	0.61
1:AA:636:U:H2'	1:AA:637:C:H6	1.65	0.61
23:DB:523:C:H4'	23:DB:540:C:O2	2.01	0.61
1:CA:1461:G:H2'	1:CA:1462:C:C6	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:782:A:N3	25:DC:224:MET:HB3	2.15	0.61
1:CA:1007:U:H2'	1:CA:1008:U:C6	2.35	0.61
42:BN:12:ARG:HG3	42:BN:13:ASN:H	1.66	0.61
25:BC:245:THR:O	25:BC:247:TRP:N	2.34	0.61
48:DG:54:ARG:HB3	48:DG:57:TYR:HD1	1.64	0.61
23:DB:899:A:H3'	23:DB:900:A:H8	1.65	0.61
6:AG:77:ARG:HG3	6:AG:79:VAL:HG23	1.83	0.61
23:DB:401:A:H2'	23:DB:402:A:C8	2.36	0.61
6:AG:68:VAL:HG11	6:AG:133:ALA:HB1	1.82	0.61
23:DB:794:A:H2'	23:DB:795:C:C6	2.36	0.61
15:CP:59:HIS:O	15:CP:63:GLN:HG3	2.01	0.61
1:CA:1278:G:H4'	1:CA:1279:G:C5'	2.31	0.61
23:DB:2292:U:H2'	23:DB:2293:G:H8	1.66	0.61
20:AB:133:ALA:O	20:AB:137:THR:HG23	2.00	0.61
23:BB:870:U:O2'	23:BB:871:U:H5'	2.00	0.61
43:BO:9:ARG:HG3	43:BO:10:ARG:N	2.16	0.61
1:CA:797:C:O2'	1:CA:798:U:H5'	1.99	0.61
40:DH:31:VAL:CB	40:DH:32:PRO:CD	2.77	0.60
23:BB:2748:A:H4'	48:BG:3:VAL:HG21	1.81	0.60
23:DB:2019:A:H2	23:DB:2035:G:H22	1.49	0.60
53:D6:92:PRO:HA	53:D6:101:ILE:CG1	2.28	0.60
38:DM:59:ARG:HE	38:DM:60:GLN:H	1.48	0.60
38:DM:59:ARG:NH1	38:DM:60:GLN:HB3	2.07	0.60
8:AI:83:THR:HA	8:AI:86:LEU:HD22	1.82	0.60
51:DZ:77:LYS:HD2	51:DZ:78:TYR:H	1.65	0.60
38:DM:21:ALA:HB2	38:DM:100:LYS:HG2	1.83	0.60
38:BM:35:ALA:HB2	38:BM:100:LYS:H	1.64	0.60
35:BV:80:HIS:CD2	35:BV:83:LYS:HB2	2.36	0.60
12:AM:47:LEU:HD13	12:AM:51:GLN:O	1.99	0.60
23:DB:2267:A:O5'	23:DB:2267:A:H8	1.83	0.60
23:BB:2267:A:H8	23:BB:2267:A:C3'	2.10	0.60
23:DB:2722:G:H2'	23:DB:2723:C:C6	2.36	0.60
23:BB:1283:G:N2	23:BB:1285:A:H3'	2.16	0.60
1:AA:715:A:H2'	1:AA:716:A:C8	2.34	0.60
24:DI:123:ALA:HA	24:DI:126:ARG:HH12	1.65	0.60
20:CB:125:PHE:HA	20:CB:127:LYS:HZ1	1.66	0.60
23:BB:37:C:O2'	29:BE:45:ALA:HA	2.01	0.60
1:AA:876:C:H1'	7:AH:11:THR:HG21	1.82	0.60
43:BO:47:VAL:HG12	43:BO:48:LEU:N	2.16	0.60
23:DB:1149:G:H2'	23:DB:1150:C:H6	1.64	0.60
38:DM:68:PHE:CG	38:DM:69:PRO:HD2	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:19:A:H2'	23:DB:20:C:H6	1.66	0.60
23:BB:1387:A:H5'	23:BB:1469:A:H1'	1.83	0.60
23:BB:2183:A:H2'	23:BB:2184:A:C8	2.35	0.60
1:AA:1190:G:OP1	2:AC:3:LYS:HA	2.00	0.60
23:DB:2363:G:O2'	23:DB:2364:C:H5'	2.01	0.60
1:CA:1190:G:OP1	2:CC:3:LYS:HA	2.01	0.60
41:DJ:29:ALA:HA	41:DJ:32:LEU:HD12	1.81	0.60
23:BB:401:A:H2'	23:BB:402:A:C8	2.36	0.60
23:DB:2671:G:H2'	23:DB:2672:U:C6	2.36	0.60
23:DB:100:U:OP1	23:DB:100:U:H3'	2.01	0.60
38:BM:108:VAL:HG13	38:BM:112:LEU:HB3	1.82	0.60
23:DB:2412:A:H2'	23:DB:2413:G:O4'	1.99	0.60
25:BC:143:VAL:HG12	25:BC:144:GLU:N	2.16	0.60
44:BQ:18:LYS:C	44:BQ:20:ALA:H	2.05	0.60
48:DG:106:LEU:HD12	48:DG:151:ARG:HD3	1.82	0.60
53:D6:57:THR:O	53:D6:69:GLN:N	2.34	0.60
23:DB:2366:A:H4'	52:DW:61:LYS:HE2	1.83	0.60
8:CI:64:ILE:H	8:CI:64:ILE:HD12	1.65	0.60
41:DJ:40:HIS:CE1	41:DJ:41:LYS:HG3	2.36	0.60
46:DU:85:ARG:NE	46:DU:85:ARG:HA	2.15	0.60
34:B3:39:ARG:O	34:B3:43:LEU:HG	2.01	0.60
35:BV:80:HIS:CG	35:BV:83:LYS:HB2	2.36	0.60
20:AB:44:LYS:C	20:AB:47:PRO:HD2	2.22	0.60
23:BB:1170:C:H2'	23:BB:1171:G:C8	2.36	0.60
1:AA:1432:G:H1'	1:AA:1468:A:N6	2.15	0.60
1:AA:1469:C:H2'	1:AA:1470:U:O4'	2.00	0.60
23:BB:30:G:OP1	44:BQ:4:LYS:HG2	2.01	0.60
23:DB:1440:U:H2'	23:DB:1441:G:C8	2.35	0.60
36:B2:9:VAL:HG13	36:B2:10:LEU:N	2.15	0.60
4:AE:82:HIS:HB2	4:AE:83:PRO:HD2	1.83	0.60
23:DB:63:A:H2'	23:DB:63:A:OP2	2.01	0.60
23:BB:1656:C:H2'	23:BB:1657:U:H6	1.65	0.60
1:AA:254:G:OP1	16:AQ:68:LYS:O	2.18	0.60
23:DB:1248:G:OP1	44:DQ:1:ALA:HB3	2.01	0.60
23:DB:2153:C:H2'	23:DB:2154:A:H8	1.67	0.60
40:BH:57:LYS:NZ	40:BH:58:LEU:HD13	2.16	0.60
3:AD:58:GLN:O	3:AD:62:ARG:HG2	2.00	0.60
23:DB:1930:G:H2'	23:DB:1968:G:C6	2.36	0.60
1:AA:539:A:H2'	1:AA:540:G:C8	2.36	0.60
17:AR:40:PRO:HD2	17:AR:43:ILE:HD12	1.83	0.60
1:AA:1067:A:H4'	1:AA:1068:G:O5'	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1061:U:O4'	23:DB:1070:A:H1'	2.00	0.60
41:DJ:13:ARG:O	41:DJ:52:ASP:HA	2.01	0.60
23:BB:2671:G:H2'	23:BB:2672:U:C6	2.36	0.60
23:BB:2704:C:H2'	23:BB:2705:A:O4'	2.02	0.60
23:BB:2341:G:H2'	23:BB:2342:C:C6	2.35	0.60
25:BC:41:GLY:HA3	25:BC:53:ILE:HG21	1.82	0.60
26:DD:30:GLU:HG3	26:DD:52:THR:CG2	2.30	0.60
41:DJ:25:LEU:HD22	41:DJ:26:GLY:N	2.13	0.60
1:AA:1296:C:C4'	1:AA:1302:C:H41	2.10	0.60
3:CD:26:ALA:HA	3:CD:30:LYS:HE3	1.83	0.60
22:BA:30:C:H2'	22:BA:31:C:H5'	1.84	0.60
1:AA:1260:G:H4'	1:AA:1283:U:O2'	2.02	0.60
47:DF:107:VAL:HG11	47:DF:175:PRO:HG3	1.83	0.60
1:CA:1320:C:N3	18:CS:35:ARG:HD3	2.16	0.60
37:DL:42:SER:C	37:DL:44:GLY:H	2.05	0.60
1:AA:1319:A:H4'	1:AA:1320:C:OP1	2.01	0.60
18:AS:62:THR:HG22	18:AS:63:ASP:H	1.67	0.60
38:DM:126:ILE:N	38:DM:126:ILE:HD12	2.14	0.60
23:DB:2740:A:H2'	23:DB:2741:A:C8	2.37	0.60
5:CF:6:ILE:HG23	5:CF:62:MET:HB3	1.83	0.60
3:CD:116:LEU:HD21	3:CD:153:ARG:HD2	1.82	0.60
23:BB:2146:C:H1'	23:BB:2147:A:H4'	1.83	0.60
23:BB:2895:G:H2'	23:BB:2896:C:C6	2.35	0.60
26:BD:148:GLN:CG	26:BD:152:PRO:HG2	2.30	0.60
29:DE:130:LYS:C	29:DE:132:LYS:H	2.05	0.60
27:BK:88:ASN:HB3	27:BK:92:GLU:O	2.01	0.60
10:CK:17:ASP:HB3	10:CK:80:ASN:ND2	2.17	0.60
23:DB:2136:G:N1	23:DB:2156:G:H1'	2.16	0.60
12:AM:28:ARG:NH2	12:AM:62:PHE:HB2	2.17	0.60
39:BX:13:GLU:HB2	39:BX:57:LEU:HD13	1.84	0.60
23:BB:2710:C:H2'	23:BB:2711:A:C8	2.37	0.60
1:CA:1021:A:H2'	1:CA:1022:A:O4'	2.02	0.60
11:CL:106:VAL:HG23	11:CL:116:TYR:HB3	1.82	0.60
23:BB:2800:A:H2'	23:BB:2801:G:O4'	2.01	0.60
20:CB:8:MET:HB2	20:CB:11:ALA:CB	2.31	0.60
23:DB:1636:U:H2'	23:DB:1637:A:C8	2.36	0.60
1:CA:482:A:H2'	1:CA:483:C:O4'	2.00	0.60
1:AA:371:A:O2'	1:AA:372:C:H5'	2.01	0.60
1:CA:426:U:H4'	3:CD:39:GLN:HA	1.83	0.60
23:BB:2737:G:H2'	23:BB:2738:A:C8	2.35	0.60
23:BB:2370:G:H2'	23:BB:2371:G:O4'	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2801:G:H2'	23:DB:2802:G:C8	2.35	0.60
23:DB:417:C:H2'	23:DB:418:C:C6	2.36	0.60
1:CA:1180:A:P	8:CI:98:ARG:HH22	2.24	0.60
48:BG:123:GLU:HG2	48:BG:124:CYS:N	2.15	0.60
1:CA:1035:A:H2'	1:CA:1036:A:H8	1.67	0.60
16:AQ:30:HIS:CE1	16:AQ:32:ILE:HG22	2.36	0.60
23:DB:923:G:H1'	52:DW:23:LYS:HZ2	1.67	0.60
53:B6:60:ALA:HB2	53:B6:66:LEU:HG	1.83	0.60
8:AI:67:LYS:HB2	8:AI:67:LYS:HZ3	1.66	0.60
13:CN:79:SER:O	13:CN:83:VAL:HG23	2.02	0.60
40:DH:77:THR:HA	40:DH:143:ILE:O	1.99	0.60
33:B1:26:LYS:HB2	33:B1:52:LYS:HZ2	1.66	0.60
4:CE:22:LYS:HB3	4:CE:29:ILE:HB	1.84	0.60
1:AA:1320:C:H41	18:AS:36:ARG:HE	1.47	0.60
46:BU:81:ARG:HH21	46:BU:81:ARG:H	1.49	0.60
23:DB:1028:A:H2'	23:DB:1029:A:C8	2.36	0.60
13:CN:48:GLN:O	13:CN:51:PRO:HD2	2.02	0.60
23:BB:1440:U:H2'	23:BB:1441:G:C8	2.37	0.60
36:D2:26:ASN:O	36:D2:30:VAL:HG23	2.00	0.60
6:CG:41:ILE:HG21	6:CG:115:MET:HG3	1.82	0.60
1:CA:1513:A:H2'	1:CA:1514:G:C8	2.35	0.60
23:DB:2194:U:H2'	23:DB:2195:U:C6	2.35	0.60
23:BB:2093:G:O5'	40:BH:24:GLY:HA3	2.01	0.60
23:BB:2052:A:O4'	26:BD:147:GLY:HA3	2.01	0.60
23:DB:870:U:O2'	23:DB:871:U:H5'	2.01	0.60
23:BB:1365:A:OP2	51:BZ:3:ARG:HB2	2.01	0.60
23:DB:1416:G:HO2'	23:DB:1417:C:H6	1.47	0.60
23:BB:817:C:H2'	23:BB:818:G:O4'	2.00	0.60
1:CA:746:A:H2'	1:CA:747:A:C8	2.35	0.60
23:BB:1205:A:N1	29:BE:165:HIS:HB2	2.16	0.60
23:BB:307:G:H2'	23:BB:309:A:OP2	2.02	0.60
23:BB:1859:U:H2'	23:BB:1860:G:C8	2.37	0.60
23:BB:19:A:H2'	23:BB:20:C:C6	2.37	0.60
20:AB:184:ALA:HB3	20:AB:195:VAL:HG21	1.83	0.60
23:DB:634:C:H2'	23:DB:635:C:C6	2.36	0.60
1:CA:1218:C:H2'	1:CA:1219:A:C8	2.36	0.60
24:DI:128:ILE:HA	24:DI:131:THR:HG23	1.83	0.60
4:AE:131:ASN:O	4:AE:135:VAL:HG23	2.02	0.60
50:DT:57:VAL:HG12	50:DT:86:THR:OG1	2.01	0.60
13:CN:12:ARG:HA	13:CN:15:LEU:HD12	1.83	0.60
23:BB:1081:U:H4'	24:BI:123:ALA:HB1	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DQ:105:PHE:O	44:DQ:109:VAL:HG23	2.01	0.60
23:BB:2630:G:H2'	23:BB:2631:G:C8	2.36	0.60
28:BP:20:ARG:O	28:BP:46:VAL:HG21	2.01	0.60
1:AA:1163:A:H2'	1:AA:1164:G:C8	2.36	0.60
40:BH:50:ARG:O	40:BH:54:LEU:HD21	2.01	0.60
23:BB:2284:A:OP2	33:B1:5:ARG:HG3	2.02	0.60
23:DB:934:U:H2'	23:DB:935:C:C6	2.37	0.60
19:AT:57:VAL:HG23	19:AT:58:ASP:H	1.66	0.60
23:DB:2252:G:O2'	23:DB:2253:G:H5'	2.02	0.60
4:CE:96:GLN:HB3	4:CE:123:LEU:HD12	1.84	0.60
23:DB:2685:G:O2'	23:DB:2686:G:H5'	2.00	0.60
23:DB:1564:C:H2'	23:DB:1565:C:C6	2.36	0.60
23:DB:2751:G:O2'	23:DB:2752:C:H5'	2.02	0.60
22:DA:30:C:H2'	22:DA:31:C:H5'	1.84	0.60
44:BQ:96:ASP:C	44:BQ:98:ALA:H	2.05	0.60
42:BN:55:ALA:HA	42:BN:80:PHE:CE1	2.36	0.60
47:BF:110:ILE:HA	47:BF:111:ARG:NH1	2.15	0.60
23:DB:1023:U:H2'	23:DB:1024:G:H5'	1.82	0.60
48:DG:162:ARG:HG3	48:DG:166:GLU:OE2	2.02	0.60
1:AA:35:G:H2'	1:AA:36:C:C6	2.36	0.60
3:AD:197:HIS:O	3:AD:200:VAL:HG22	2.02	0.60
23:BB:1812:U:H2'	23:BB:1813:G:C8	2.36	0.60
39:DX:5:GLU:O	39:DX:8:GLU:HG2	2.01	0.60
23:BB:693:A:H2'	23:BB:694:U:H6	1.66	0.60
1:AA:707:U:H4'	10:AK:21:HIS:CD2	2.36	0.60
5:AF:1:MET:SD	5:AF:67:PRO:HD3	2.42	0.60
23:DB:2070:A:H2'	23:DB:2071:A:C8	2.37	0.60
23:DB:2605:U:H2'	23:DB:2606:C:C6	2.37	0.60
23:DB:1920:C:N4	55:DB:3112:PAR:H122	1.99	0.60
23:BB:2860:A:O5'	23:BB:2860:A:H8	1.85	0.60
23:BB:479:A:N3	23:BB:481:G:H5''	2.17	0.60
23:DB:1099:G:O5'	24:DI:4:VAL:HG12	2.01	0.60
25:DC:64:VAL:HG11	25:DC:66:PHE:CZ	2.37	0.60
37:DL:143:GLU:HG2	37:DL:144:GLU:N	2.16	0.60
51:DZ:40:VAL:CG2	51:DZ:43:GLU:HB3	2.26	0.60
23:DB:2443:C:H2'	23:DB:2444:G:C8	2.36	0.60
7:CH:76:ARG:HG3	7:CH:77:VAL:N	2.16	0.60
50:BT:57:VAL:HG13	50:BT:58:VAL:N	2.17	0.60
29:DE:59:PRO:HB2	29:DE:67:ARG:NH2	2.14	0.60
47:DF:110:ILE:HA	47:DF:111:ARG:NH1	2.16	0.60
23:DB:670:A:H5''	37:DL:42:SER:HB2	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DV:80:HIS:CG	35:DV:83:LYS:HB2	2.36	0.60
1:CA:1414:U:H2'	1:CA:1415:G:H8	1.67	0.60
23:DB:1199:U:C5'	44:DQ:4:LYS:HD3	2.32	0.60
23:DB:2103:C:H3'	23:DB:2104:C:C2	2.37	0.60
41:DJ:112:GLY:H	41:DJ:113:PRO:HD2	1.66	0.60
49:BR:66:HIS:ND1	49:BR:94:THR:HG22	2.17	0.60
23:BB:1794:A:H2'	23:BB:1795:C:H6	1.67	0.60
4:CE:12:GLU:HG2	4:CE:38:VAL:HG22	1.84	0.60
12:CM:87:GLY:HA2	12:CM:90:HIS:HD2	1.65	0.60
3:AD:201:GLU:OE1	4:AE:104:ILE:HG22	2.02	0.60
40:BH:44:ILE:HG22	40:BH:51:ARG:HH12	1.66	0.60
23:DB:1236:G:H1'	23:DB:1237:A:H8	1.66	0.60
23:DB:96:C:H4'	39:DX:41:HIS:CE1	2.37	0.60
2:AC:129:PHE:CD2	2:AC:156:LEU:HD22	2.37	0.60
1:CA:1029:U:H2'	1:CA:1031:C:N3	2.17	0.60
23:DB:1571:A:H2'	23:DB:1572:A:H8	1.67	0.60
23:DB:1042:G:H2'	23:DB:1043:C:H6	1.67	0.60
1:CA:1469:C:H2'	1:CA:1470:U:O4'	2.02	0.60
23:BB:3:U:O2'	23:BB:4:U:H6	1.85	0.60
23:DB:1937:A:N7	23:DB:1939:U:H2'	2.16	0.60
3:CD:115:GLN:HG3	3:CD:119:HIS:CE1	2.37	0.60
23:DB:1306:C:H2'	23:DB:1307:A:H8	1.67	0.60
23:BB:2286:G:H4'	23:BB:2287:A:O4'	2.02	0.60
45:DS:90:LYS:HD2	45:DS:92:ARG:NH1	2.16	0.60
42:DN:58:ASP:O	42:DN:59:SER:HB3	2.01	0.60
9:AJ:66:GLU:HB3	13:AN:98:ALA:HB2	1.84	0.60
43:DO:79:ALA:O	43:DO:83:LEU:HB2	2.01	0.60
1:CA:1280:A:O4'	9:CJ:43:PRO:HG3	2.02	0.60
37:BL:23:ILE:HD12	37:BL:23:ILE:H	1.66	0.60
51:DZ:66:THR:O	51:DZ:69:ALA:HB3	2.02	0.60
33:D1:18:HIS:NE2	33:D1:40:PRO:HD2	2.17	0.60
23:DB:5:A:H2'	23:DB:6:A:C8	2.37	0.60
37:DL:23:ILE:HD12	37:DL:23:ILE:H	1.67	0.60
23:BB:1236:G:H1'	23:BB:1237:A:H8	1.66	0.60
21:AU:42:THR:HB	21:AU:46:ARG:HE	1.67	0.60
8:CI:62:LEU:HD22	8:CI:62:LEU:H	1.66	0.60
30:DY:43:ILE:O	30:DY:47:ILE:HG12	2.01	0.60
23:DB:2547:A:H2'	23:DB:2548:U:C6	2.37	0.60
50:BT:57:VAL:HG12	50:BT:86:THR:OG1	2.01	0.60
12:CM:52:ILE:HD12	12:CM:55:LEU:HD12	1.84	0.60
47:DF:7:TYR:O	47:DF:11:VAL:HB	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:140:C:H4'	23:DB:141:G:C5	2.36	0.60
23:BB:2750:A:H8	23:BB:2750:A:OP1	1.85	0.60
32:B4:8:LYS:O	32:B4:25:VAL:HG21	2.02	0.60
13:AN:51:PRO:HB2	13:AN:54:SER:CB	2.31	0.60
17:CR:34:GLU:HB2	21:CU:18:PHE:HZ	1.67	0.60
21:CU:24:LYS:CD	21:CU:25:ALA:H	2.15	0.60
1:CA:35:G:H2'	1:CA:36:C:C6	2.37	0.60
1:AA:1004:A:C8	1:AA:1025:U:H1'	2.36	0.60
46:BU:10:VAL:O	46:BU:21:ARG:HA	2.01	0.60
6:CG:62:GLU:O	6:CG:66:GLU:HG3	2.01	0.60
23:DB:2341:G:H2'	23:DB:2342:C:H6	1.67	0.60
1:AA:1532:U:H2'	1:AA:1533:C:H3'	1.83	0.60
23:BB:1001:A:H2'	23:BB:1002:G:O4'	2.02	0.60
1:AA:1053:G:C3'	1:AA:1054:C:H5'	2.31	0.60
1:AA:1226:C:H2'	12:AM:101:THR:OG1	2.01	0.60
23:DB:6:A:H2'	23:DB:7:G:H8	1.66	0.60
43:BO:108:ASP:HA	43:BO:111:ARG:HB3	1.83	0.60
23:BB:682:G:O2'	23:BB:683:U:H5'	2.02	0.60
3:AD:165:GLU:HG3	3:AD:166:LYS:H	1.67	0.60
22:BA:37:C:H2'	22:BA:38:C:O4'	2.02	0.60
50:BT:48:GLN:HE21	50:BT:48:GLN:HA	1.66	0.60
20:AB:112:ARG:HA	20:AB:115:ASP:OD2	2.01	0.60
23:DB:1291:C:O2'	23:DB:1292:G:H5'	2.02	0.60
23:BB:222:A:N1	23:BB:233:A:H5''	2.17	0.60
23:BB:1054:A:H2'	23:BB:1055:G:C8	2.35	0.60
23:BB:1513:U:O2'	23:BB:1514:G:H5'	2.02	0.60
25:DC:130:PRO:HG2	25:DC:133:ASN:HD22	1.65	0.60
10:AK:33:ILE:HG13	10:AK:73:VAL:HG21	1.82	0.60
48:BG:84:LYS:HG3	48:BG:131:VAL:C	2.22	0.60
44:DQ:18:LYS:C	44:DQ:20:ALA:H	2.05	0.60
23:DB:2019:A:H4'	44:DQ:33:VAL:HG11	1.84	0.60
53:D6:39:LEU:O	53:D6:39:LEU:HD12	2.01	0.60
53:D6:59:THR:HG22	53:D6:67:VAL:CG2	2.31	0.60
1:AA:1218:C:H2'	1:AA:1219:A:C8	2.36	0.60
46:DU:83:GLY:O	46:DU:93:ARG:HA	2.02	0.60
47:BF:102:LEU:HD13	47:BF:103:ILE:HB	1.84	0.60
42:DN:77:ALA:O	42:DN:81:ASN:HB2	2.02	0.60
31:D0:21:LEU:HD13	45:DS:23:LEU:HD11	1.84	0.60
1:AA:918:A:H2'	1:AA:919:A:C8	2.37	0.60
1:CA:413:G:H2'	1:CA:428:G:N2	2.17	0.60
50:DT:38:ALA:O	50:DT:39:THR:HB	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2267:A:H8	23:BB:2267:A:O5'	1.84	0.60
23:DB:1278:C:O3'	42:DN:34:ILE:HG23	2.02	0.60
40:BH:72:ILE:HG23	40:BH:140:ALA:CB	2.32	0.60
26:BD:8:LYS:HD3	26:BD:197:THR:H	1.67	0.60
1:CA:272:C:H2'	1:CA:273:U:H6	1.67	0.60
23:DB:1386:C:H2'	23:DB:1387:A:H8	1.66	0.60
23:BB:2578:G:C5	26:BD:145:SER:HB2	2.36	0.60
1:AA:501:C:H2'	1:AA:502:A:H8	1.65	0.60
1:CA:423:G:H2'	1:CA:424:G:O4'	2.02	0.60
5:AF:81:ASN:OD1	5:AF:83:ALA:HB3	2.02	0.60
30:DY:29:ARG:H	30:DY:33:HIS:CD2	2.19	0.60
23:DB:1219:U:H2'	23:DB:1220:G:H8	1.67	0.60
3:AD:71:PHE:O	3:AD:74:TYR:HB2	2.02	0.60
1:CA:518:C:H2'	1:CA:530:G:C8	2.37	0.60
23:DB:1326:U:H2'	23:DB:1327:A:H8	1.66	0.60
41:BJ:40:HIS:CE1	41:BJ:41:LYS:HG3	2.36	0.60
40:BH:67:ALA:O	40:BH:71:LYS:HB2	2.01	0.60
28:DP:97:TYR:O	28:DP:100:ARG:HB2	2.02	0.60
33:B1:18:HIS:NE2	33:B1:40:PRO:HD2	2.17	0.60
23:BB:1571:A:H2'	23:BB:1572:A:C8	2.36	0.60
23:BB:1401:G:H2'	23:BB:1402:U:C6	2.37	0.60
1:AA:880:C:H2'	1:AA:881:G:H8	1.65	0.60
23:DB:2:G:O2'	23:DB:3:U:H5'	2.01	0.60
40:DH:31:VAL:O	40:DH:33:GLN:N	2.34	0.60
40:BH:89:LYS:HZ1	40:BH:123:ARG:HB3	1.67	0.60
1:CA:1147:C:O2'	8:CI:17:ARG:HD2	2.02	0.60
47:DF:78:ILE:N	47:DF:78:ILE:HD12	2.17	0.60
3:CD:25:ARG:HD3	3:CD:25:ARG:C	2.22	0.60
47:BF:102:LEU:HA	47:BF:106:ALA:HB3	1.82	0.60
17:AR:34:GLU:H	17:AR:34:GLU:CD	2.05	0.60
10:CK:88:PRO:HD3	21:CU:28:LEU:HD11	1.84	0.60
45:DS:29:VAL:HG23	45:DS:70:LYS:HA	1.84	0.60
31:B0:41:HIS:HB2	42:BN:99:LYS:O	2.01	0.60
3:AD:158:LEU:HA	3:AD:161:ALA:HB2	1.84	0.60
23:BB:1484:U:H2'	23:BB:1485:U:C6	2.37	0.60
45:DS:83:LYS:HD3	45:DS:97:LEU:HD11	1.84	0.60
40:BH:47:PHE:HA	40:BH:50:ARG:HH21	1.65	0.60
1:CA:481:G:HO2'	1:CA:482:A:H8	1.48	0.60
23:DB:2579:C:O2'	26:DD:136:ASN:HA	2.01	0.60
53:B6:1:MET:HA	53:B6:5:GLU:OE2	2.02	0.60
23:BB:2292:U:H2'	23:BB:2293:G:C8	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CO:55:GLY:O	14:CO:59:MET:HG2	2.02	0.60
9:AJ:29:ALA:O	9:AJ:32:THR:HG22	2.01	0.60
3:CD:77:GLU:HA	3:CD:80:ARG:HG2	1.84	0.60
41:BJ:13:ARG:O	41:BJ:52:ASP:HA	2.02	0.60
31:D0:9:ARG:O	31:D0:12:ARG:HB3	2.02	0.60
31:B0:54:ILE:H	42:BN:118:ARG:HH12	1.48	0.60
3:CD:165:GLU:HG3	3:CD:166:LYS:H	1.67	0.60
20:AB:94:ARG:N	20:AB:94:ARG:HE	1.99	0.60
4:AE:43:GLY:O	4:AE:72:ASN:HA	2.02	0.60
23:DB:2487:G:H2'	23:DB:2488:G:C8	2.37	0.60
22:DA:60:C:H2'	22:DA:61:G:H8	1.66	0.60
23:BB:856:G:H1'	52:BW:23:LYS:HB3	1.84	0.59
25:BC:170:TYR:HE2	25:BC:184:GLU:HG2	1.67	0.59
48:DG:8:VAL:HG11	48:DG:49:LEU:CB	2.31	0.59
37:BL:123:ARG:HH11	37:BL:123:ARG:HB3	1.65	0.59
23:DB:917:A:H2'	23:DB:918:A:O4'	2.02	0.59
53:B6:39:LEU:HD12	53:B6:40:HIS:N	2.17	0.59
47:DF:72:SER:HB2	47:DF:80:GLN:HA	1.82	0.59
50:BT:38:ALA:O	50:BT:39:THR:HB	2.02	0.59
38:BM:35:ALA:CB	38:BM:100:LYS:H	2.15	0.59
23:DB:1789:A:OP2	25:DC:220:ARG:HD3	2.01	0.59
23:DB:2389:G:C5'	23:DB:2390:U:H5'	2.32	0.59
48:DG:145:ALA:HA	48:DG:148:ARG:HG3	1.83	0.59
3:CD:158:LEU:HA	3:CD:161:ALA:HB2	1.84	0.59
20:AB:102:ASN:OD1	20:AB:105:THR:HB	2.01	0.59
23:DB:2148:G:H2'	23:DB:2148:G:N3	2.17	0.59
23:BB:1657:U:O2'	23:BB:1658:C:H5'	2.02	0.59
4:CE:158:LYS:NZ	7:CH:65:PHE:HA	2.16	0.59
30:BY:43:ILE:O	30:BY:47:ILE:HG12	2.02	0.59
23:DB:1354:A:H2'	23:DB:1355:G:O4'	2.01	0.59
1:AA:215:C:H2'	1:AA:216:U:C6	2.37	0.59
20:AB:160:LEU:HD23	20:AB:181:PRO:O	2.02	0.59
23:BB:742:A:H2'	23:BB:743:A:H8	1.66	0.59
23:DB:863:A:H2'	23:DB:864:G:C8	2.36	0.59
35:DV:6:ALA:O	35:DV:65:VAL:HG12	2.02	0.59
1:AA:1463:U:H2'	1:AA:1464:U:C6	2.37	0.59
1:AA:834:U:H2'	1:AA:835:U:C6	2.36	0.59
23:DB:1599:U:H2'	23:DB:1600:C:C6	2.36	0.59
23:BB:1919:A:H2'	23:BB:1920:C:H5'	1.84	0.59
23:BB:1744:A:H2'	23:BB:1745:A:C8	2.37	0.59
23:DB:1473:G:O2'	23:DB:1474:U:H5'	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:828:U:H4'	23:DB:831:G:N1	2.16	0.59
20:CB:128:LEU:HD22	20:CB:129:THR:H	1.67	0.59
24:DI:1:ALA:C	24:DI:2:LYS:HD2	2.22	0.59
52:DW:35:ILE:O	52:DW:35:ILE:HG12	2.00	0.59
47:BF:33:ILE:HD13	47:BF:95:MET:HG2	1.84	0.59
52:DW:23:LYS:HD2	52:DW:24:ARG:N	2.17	0.59
40:BH:94:ILE:HB	40:BH:121:VAL:HB	1.83	0.59
8:CI:83:THR:HA	8:CI:86:LEU:HD22	1.83	0.59
44:DQ:63:ARG:HH12	44:DQ:96:ASP:CB	2.09	0.59
44:DQ:93:ILE:HG23	44:DQ:94:LEU:HD22	1.84	0.59
23:BB:143:C:H2'	23:BB:144:A:C8	2.37	0.59
23:DB:634:C:H2'	23:DB:635:C:H6	1.66	0.59
43:DO:74:VAL:O	43:DO:78:VAL:HG23	2.02	0.59
24:BI:91:LYS:HB2	24:BI:94:LYS:HD2	1.83	0.59
1:AA:812:G:H2'	1:AA:812:G:N3	2.16	0.59
47:DF:102:LEU:HD22	47:DF:103:ILE:N	2.16	0.59
53:B6:109:GLU:HA	53:B6:112:LYS:CE	2.32	0.59
26:DD:124:ARG:HA	26:DD:165:MET:CE	2.32	0.59
42:BN:31:HIS:O	42:BN:33:ILE:HG13	2.02	0.59
40:BH:73:ASN:HD22	40:BH:74:ALA:H	1.48	0.59
23:BB:1722:A:H2'	23:BB:1723:G:C8	2.34	0.59
14:CO:70:LEU:HD11	14:CO:77:ARG:HB2	1.84	0.59
4:AE:12:GLU:HG2	4:AE:38:VAL:HG22	1.84	0.59
46:BU:78:LYS:HD3	46:BU:79:ALA:H	1.66	0.59
23:BB:118:A:N3	23:BB:178:G:H1'	2.17	0.59
1:CA:860:A:H2'	1:CA:861:G:O4'	2.01	0.59
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.37	0.59
1:AA:806:C:H2'	1:AA:807:A:H8	1.67	0.59
23:BB:1042:G:H2'	23:BB:1043:C:C6	2.36	0.59
1:AA:482:A:H2'	1:AA:483:C:O4'	2.02	0.59
23:DB:1316:U:O2'	23:DB:1317:G:H5'	2.01	0.59
1:AA:390:U:H2'	1:AA:391:G:H8	1.67	0.59
23:DB:402:A:H2'	23:DB:403:U:O4'	2.01	0.59
23:DB:2292:U:H2'	23:DB:2293:G:C8	2.37	0.59
23:BB:402:A:H2'	23:BB:403:U:O4'	2.02	0.59
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.37	0.59
3:CD:71:PHE:O	3:CD:74:TYR:HB2	2.02	0.59
22:BA:94:A:OP1	35:BV:19:ARG:HD3	2.02	0.59
1:CA:818:G:H3'	1:CA:819:A:H5''	1.83	0.59
23:DB:1346:G:O2'	23:DB:1347:A:H5'	2.02	0.59
22:BA:60:C:H2'	22:BA:61:G:H8	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:392:U:O2'	23:BB:393:C:H5'	2.03	0.59
40:DH:135:HIS:HB3	40:DH:138:VAL:HB	1.84	0.59
23:DB:753:A:H2'	23:DB:754:U:C6	2.37	0.59
1:AA:517:G:H22	1:AA:533:A:P	2.24	0.59
41:DJ:4:PHE:HB3	41:DJ:44:TYR:CD1	2.37	0.59
41:DJ:6:ALA:HB3	41:DJ:45:THR:HG21	1.84	0.59
29:DE:58:LYS:C	29:DE:60:TRP:N	2.56	0.59
23:BB:79:C:HO2'	23:BB:346:A:C1'	2.12	0.59
47:BF:11:VAL:HG21	47:BF:172:PHE:CE1	2.37	0.59
23:BB:1440:U:H2'	23:BB:1441:G:H8	1.67	0.59
1:AA:1072:G:N2	20:AB:105:THR:HG21	2.16	0.59
1:AA:1342:C:H2'	1:AA:1343:G:H8	1.67	0.59
23:DB:173:A:H2'	23:DB:174:U:C6	2.37	0.59
23:BB:784:G:C6	25:BC:227:VAL:HG11	2.37	0.59
1:CA:237:G:H2'	1:CA:238:A:H8	1.67	0.59
39:DX:17:GLU:HB3	39:DX:53:VAL:HG11	1.84	0.59
23:BB:1149:G:H2'	23:BB:1150:C:H6	1.67	0.59
23:BB:71:A:H4'	23:BB:72:U:H5'	1.84	0.59
1:AA:1521:C:H2'	1:AA:1522:U:H6	1.66	0.59
1:CA:370:C:O2'	1:CA:371:A:H5'	2.02	0.59
52:DW:77:LYS:N	52:DW:77:LYS:HZ2	2.00	0.59
6:AG:24:LYS:HA	6:AG:27:ASN:HD22	1.67	0.59
22:BA:49:C:H2'	22:BA:50:A:H8	1.68	0.59
23:DB:826:U:H2'	23:DB:828:U:O4'	2.02	0.59
48:BG:54:ARG:HB3	48:BG:57:TYR:CD1	2.37	0.59
23:DB:2704:C:H2'	23:DB:2705:A:O4'	2.02	0.59
1:CA:1527:U:H2'	1:CA:1528:U:C6	2.36	0.59
23:DB:315:G:H2'	23:DB:316:C:C6	2.37	0.59
1:AA:570:G:H2'	1:AA:571:U:C6	2.37	0.59
26:BD:117:GLY:HA2	26:BD:164:GLN:NE2	2.17	0.59
22:DA:16:G:O2'	22:DA:17:C:H5'	2.03	0.59
45:BS:5:ALA:HB3	45:BS:54:ALA:HB2	1.84	0.59
23:DB:441:U:H2'	23:DB:442:G:C8	2.37	0.59
42:DN:19:ALA:C	42:DN:21:PHE:H	2.06	0.59
1:CA:1480:A:H2'	1:CA:1481:U:C6	2.38	0.59
23:BB:492:A:H2'	23:BB:493:G:O4'	2.01	0.59
53:B6:178:LYS:O	53:B6:181:GLN:HG3	2.01	0.59
23:DB:1098:A:P	24:DI:3:LYS:HG2	2.43	0.59
52:BW:23:LYS:HD2	52:BW:24:ARG:N	2.17	0.59
44:BQ:30:VAL:HG11	44:BQ:33:VAL:HG22	1.84	0.59
26:BD:204:LYS:HB2	26:BD:205:PRO:HD2	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:D6:67:VAL:HA	53:D6:99:LEU:O	2.01	0.59
47:DF:32:LYS:HB2	47:DF:90:LEU:O	2.03	0.59
8:CI:29:ILE:HA	8:CI:64:ILE:HB	1.83	0.59
13:CN:63:CYS:HB2	13:CN:79:SER:HB3	1.85	0.59
34:D3:39:ARG:O	34:D3:43:LEU:HG	2.03	0.59
51:BZ:40:VAL:CG2	51:BZ:43:GLU:HB3	2.30	0.59
42:BN:77:ALA:O	42:BN:81:ASN:HB2	2.02	0.59
13:CN:51:PRO:HB2	13:CN:54:SER:CB	2.31	0.59
23:DB:1655:A:H5'	26:DD:118:PHE:HB2	1.83	0.59
46:DU:10:VAL:O	46:DU:21:ARG:HA	2.02	0.59
29:DE:148:ILE:HA	29:DE:187:VAL:HB	1.82	0.59
1:AA:300:A:H2'	1:AA:301:G:O4'	2.03	0.59
39:DX:20:ASN:O	39:DX:24:GLU:HB3	2.02	0.59
12:CM:1:ALA:C	12:CM:8:ILE:HG22	2.23	0.59
1:CA:1524:C:H2'	1:CA:1525:G:H8	1.67	0.59
1:CA:1271:A:H5'	1:CA:1314:C:H5''	1.83	0.59
7:CH:100:ILE:HG13	7:CH:128:VAL:O	2.02	0.59
1:CA:1008:U:H5''	13:CN:23:ARG:HH22	1.67	0.59
52:BW:77:LYS:H	52:BW:77:LYS:NZ	2.01	0.59
1:AA:398:U:H2'	1:AA:399:G:C8	2.37	0.59
23:DB:2229:U:H2'	23:DB:2230:G:C8	2.38	0.59
23:DB:794:A:H2'	23:DB:795:C:H6	1.66	0.59
4:CE:55:VAL:N	4:CE:56:PRO:HD2	2.18	0.59
1:AA:182:A:O2'	1:AA:183:C:H5''	2.02	0.59
27:DK:76:VAL:H	28:DP:72:VAL:HG23	1.68	0.59
3:AD:16:THR:HG22	3:AD:17:ASP:N	2.17	0.59
1:CA:539:A:H2'	1:CA:540:G:C8	2.38	0.59
21:CU:11:PHE:O	21:CU:13:VAL:N	2.34	0.59
41:BJ:64:VAL:O	41:BJ:68:LYS:HD2	2.01	0.59
26:DD:117:GLY:HA2	26:DD:164:GLN:CD	2.23	0.59
23:DB:2860:A:H8	23:DB:2860:A:O5'	1.85	0.59
35:DV:70:ILE:HD13	35:DV:70:ILE:N	2.16	0.59
23:BB:1505:A:H2'	23:BB:1506:U:C6	2.38	0.59
23:BB:324:A:H2'	23:BB:325:G:O4'	2.02	0.59
47:BF:32:LYS:H	47:BF:95:MET:HE1	1.67	0.59
13:AN:60:ARG:O	13:AN:62:ARG:N	2.35	0.59
41:DJ:127:GLY:O	41:DJ:128:ASN:HB2	2.02	0.59
29:BE:108:ILE:O	29:BE:108:ILE:HD13	2.02	0.59
13:AN:79:SER:O	13:AN:83:VAL:HG23	2.03	0.59
25:BC:103:ILE:HG22	25:BC:105:ALA:H	1.66	0.59
10:AK:92:ARG:HE	21:AU:20:ARG:HH22	1.51	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AU:3:ILE:HD11	21:AU:23:GLU:HB2	1.83	0.59
4:CE:131:ASN:O	4:CE:135:VAL:HG23	2.02	0.59
23:DB:817:C:H2'	23:DB:818:G:O4'	2.02	0.59
1:CA:1326:U:H2'	1:CA:1327:C:C6	2.37	0.59
23:DB:2380:C:H5'	43:DO:17:LYS:HZ3	1.67	0.59
23:BB:2675:A:N1	23:BB:2732:G:O6	2.36	0.59
48:BG:162:ARG:HG3	48:BG:166:GLU:OE2	2.03	0.59
1:AA:308:C:H2'	1:AA:309:A:H8	1.67	0.59
36:B2:30:VAL:HA	36:B2:33:ARG:HH22	1.67	0.59
1:CA:253:A:H2'	1:CA:254:G:H8	1.68	0.59
4:CE:154:ALA:HB1	7:CH:65:PHE:CZ	2.37	0.59
1:AA:620:C:H2'	1:AA:621:A:C8	2.37	0.59
25:DC:244:VAL:HB	25:DC:249:VAL:N	2.17	0.59
23:BB:2097:A:H2'	23:BB:2098:U:H6	1.67	0.59
6:AG:129:ASN:HA	6:AG:134:VAL:HG21	1.84	0.59
25:DC:71:ASP:HA	25:DC:117:SER:O	2.02	0.59
23:DB:682:G:O2'	23:DB:683:U:H5'	2.03	0.59
22:BA:98:G:H1	35:BV:14:LYS:HB2	1.66	0.59
23:DB:2286:G:H4'	23:DB:2287:A:O4'	2.02	0.59
23:BB:2400:G:O2'	23:BB:2401:U:H5'	2.01	0.59
42:BN:19:ALA:C	42:BN:21:PHE:H	2.05	0.59
44:DQ:34:ALA:O	44:DQ:37:ALA:HB3	2.02	0.59
1:CA:430:A:OP1	3:CD:8:LEU:HB2	2.03	0.59
47:BF:72:SER:HB2	47:BF:80:GLN:HA	1.83	0.59
1:AA:764:C:H2'	1:AA:765:G:H5'	1.84	0.59
47:DF:24:VAL:O	47:DF:27:VAL:HG22	2.03	0.59
24:BI:27:LEU:CD2	24:BI:27:LEU:H	2.14	0.59
45:BS:18:ARG:HB3	45:BS:76:VAL:CG2	2.31	0.59
50:DT:28:ASN:HA	50:DT:91:GLN:HE22	1.66	0.59
23:DB:161:A:C3'	23:DB:162:U:H5''	2.32	0.59
23:DB:1032:A:H1'	32:D4:23:ILE:HD13	1.84	0.59
23:DB:1082:U:C2	23:DB:1086:A:C6	2.91	0.59
1:AA:1326:U:H2'	1:AA:1327:C:C6	2.37	0.59
23:DB:1548:A:H2'	23:DB:1549:A:H8	1.62	0.59
23:DB:1439:A:C6	23:DB:1552:A:N7	2.71	0.59
23:BB:1548:A:H2'	23:BB:1549:A:H8	1.67	0.59
12:AM:95:PRO:HD3	12:AM:108:ARG:HG2	1.85	0.59
43:DO:24:THR:OG1	43:DO:90:VAL:HG12	2.02	0.59
39:DX:13:GLU:HB2	39:DX:57:LEU:HD13	1.84	0.59
23:DB:1592:C:H2'	23:DB:1593:A:H8	1.67	0.59
23:DB:1812:U:H2'	23:DB:1813:G:C8	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2092:U:H4'	23:DB:2093:G:O5'	2.03	0.59
23:BB:2070:A:H2'	23:BB:2071:A:C8	2.38	0.59
23:BB:573:U:O2'	23:BB:574:A:H3'	2.02	0.59
26:DD:117:GLY:HA2	26:DD:164:GLN:NE2	2.18	0.59
37:BL:132:ARG:O	37:BL:136:GLU:HG3	2.03	0.59
1:CA:512:U:O2'	1:CA:513:C:H5'	2.03	0.59
23:BB:709:U:H2'	23:BB:710:U:C6	2.38	0.59
43:BO:79:ALA:O	43:BO:83:LEU:HB2	2.01	0.59
23:BB:1535:A:H3'	23:BB:1536:C:H6	1.66	0.59
23:BB:2662:A:H2'	23:BB:2663:G:O4'	2.03	0.59
23:BB:2760:C:O2'	23:BB:2761:A:H5'	2.02	0.59
23:DB:2746:U:H4'	48:DG:137:LYS:HG3	1.85	0.59
31:B0:9:ARG:O	31:B0:12:ARG:HB3	2.01	0.59
3:CD:16:THR:HG22	3:CD:17:ASP:N	2.18	0.59
23:BB:936:A:H2'	23:BB:937:C:C6	2.37	0.59
23:DB:2356:U:H5''	52:DW:16:GLU:HG3	1.84	0.59
25:DC:123:ILE:HD12	25:DC:191:LEU:CD1	2.32	0.59
3:AD:77:GLU:HA	3:AD:80:ARG:HG2	1.83	0.59
23:DB:479:A:N3	23:DB:481:G:H5''	2.17	0.59
40:BH:31:VAL:O	40:BH:33:GLN:N	2.35	0.59
52:BW:37:VAL:HG12	52:BW:38:ARG:N	2.18	0.59
22:BA:42:C:C5	47:BF:65:LEU:HD22	2.38	0.59
21:AU:39:LYS:N	21:AU:40:PRO:HD2	2.18	0.59
48:DG:116:LEU:HD23	48:DG:121:THR:HA	1.84	0.59
47:DF:34:THR:OG1	47:DF:154:THR:HB	2.03	0.59
53:B6:70:SER:OG	53:B6:75:ALA:HB3	2.03	0.59
1:CA:1148:U:O4'	8:CI:17:ARG:HD3	2.03	0.59
44:DQ:91:ARG:HE	49:DR:11:GLN:HB2	1.68	0.59
27:BK:47:ILE:CG1	27:BK:48:PRO:HD2	2.27	0.59
23:BB:1203:U:H3'	23:BB:1204:A:C5'	2.32	0.59
47:BF:134:GLN:H	47:BF:150:GLY:H	1.50	0.59
47:BF:7:TYR:O	47:BF:11:VAL:HB	2.02	0.59
29:BE:146:VAL:HA	29:BE:185:LYS:O	2.02	0.59
47:DF:134:GLN:C	47:DF:136:ILE:H	2.06	0.59
21:AU:24:LYS:HD2	21:AU:25:ALA:N	2.17	0.59
1:CA:1080:A:H5''	4:CE:20:VAL:HG11	1.84	0.59
29:BE:61:ARG:NH1	29:BE:64:GLY:HA3	2.17	0.59
50:DT:43:ILE:O	50:DT:47:VAL:HG23	2.02	0.59
23:DB:2788:C:H2'	23:DB:2789:C:C6	2.37	0.59
2:AC:8:GLY:HA2	2:AC:11:LEU:HG	1.84	0.59
48:DG:153:PRO:HG3	48:DG:162:ARG:HB3	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1250:A:H2'	1:AA:1251:A:C8	2.37	0.59
23:DB:1656:C:H2'	23:DB:1657:U:H6	1.67	0.59
27:BK:105:ARG:HB3	27:BK:122:VAL:HG12	1.85	0.59
1:AA:1342:C:H2'	1:AA:1343:G:C8	2.37	0.59
43:BO:76:LYS:HG3	43:BO:113:ALA:HB1	1.83	0.59
23:BB:2680:U:OP2	26:BD:114:LYS:HB3	2.03	0.59
23:BB:1582:C:H2'	23:BB:1583:A:O4'	2.02	0.59
29:DE:109:LEU:O	29:DE:112:LEU:HB2	2.03	0.59
1:AA:737:C:H2'	1:AA:738:C:H6	1.68	0.59
23:BB:1508:A:H2'	23:BB:1509:A:C2	2.37	0.59
23:BB:129:C:H2'	23:BB:130:C:H6	1.67	0.59
20:CB:128:LEU:HD13	20:CB:129:THR:N	2.18	0.59
23:BB:1425:G:H2'	23:BB:1426:G:C8	2.38	0.59
50:DT:48:GLN:HA	50:DT:48:GLN:HE21	1.67	0.59
1:AA:659:U:O2'	1:AA:660:C:H5'	2.02	0.59
23:DB:2261:C:O2'	23:DB:2262:U:H5'	2.02	0.59
53:B6:123:GLU:O	53:B6:127:VAL:HG23	2.02	0.59
23:BB:2708:G:H2'	23:BB:2709:G:H8	1.67	0.59
23:DB:1535:A:H3'	23:DB:1536:C:H6	1.67	0.59
23:BB:2783:U:H2'	23:BB:2784:U:C6	2.38	0.59
3:CD:48:SER:O	3:CD:52:VAL:HG23	2.03	0.59
23:BB:942:G:H2'	23:BB:943:A:O4'	2.02	0.59
53:B6:142:LYS:HE3	53:B6:142:LYS:HA	1.84	0.59
44:DQ:80:ASN:O	44:DQ:83:LYS:HB3	2.03	0.59
13:CN:78:LEU:HD23	13:CN:82:LYS:HB3	1.85	0.59
23:DB:2675:A:N1	23:DB:2732:G:O6	2.36	0.59
41:BJ:4:PHE:HB3	41:BJ:44:TYR:CD1	2.38	0.59
53:D6:45:TYR:OH	53:D6:74:ASN:HB2	2.02	0.59
23:BB:675:A:H4'	29:BE:60:TRP:CZ2	2.37	0.59
26:BD:62:LYS:HB2	26:BD:63:PRO:HD3	1.84	0.59
17:CR:55:ALA:HA	17:CR:58:ILE:HD12	1.83	0.59
5:CF:68:GLN:O	5:CF:71:ILE:HG23	2.03	0.59
1:CA:1332:A:H2'	1:CA:1333:A:C8	2.38	0.59
3:AD:154:VAL:HG23	3:AD:155:LYS:H	1.66	0.59
23:BB:173:A:H2'	23:BB:174:U:C6	2.38	0.59
23:DB:2243:U:O2'	23:DB:2244:U:H5'	2.03	0.59
46:DU:39:ASN:HB3	46:DU:62:ALA:HB3	1.84	0.59
14:AO:26:GLU:HG3	14:AO:77:ARG:NH1	2.17	0.59
12:AM:95:PRO:HB2	12:AM:99:GLN:OE1	2.03	0.59
23:BB:2841:C:H2'	23:BB:2842:G:H8	1.68	0.59
23:BB:1813:G:N3	25:BC:49:THR:HG21	2.18	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2379:G:H5'	43:BO:21:LEU:HD11	1.84	0.59
23:BB:1684:G:H2'	23:BB:1685:C:C6	2.37	0.59
23:DB:2804:U:H2'	23:DB:2805:C:C6	2.38	0.59
1:AA:586:C:H5''	7:AH:81:GLY:HA2	1.84	0.59
23:DB:2369:A:O2'	23:DB:2370:G:H5'	2.03	0.59
23:DB:2041:U:H2'	23:DB:2042:A:C8	2.38	0.59
1:AA:950:U:H2'	1:AA:951:G:C8	2.37	0.59
1:CA:476:U:O2'	1:CA:477:C:H5'	2.03	0.59
1:AA:783:C:O2'	1:AA:784:A:H5'	2.02	0.59
23:BB:315:G:H2'	23:BB:316:C:C6	2.38	0.59
23:DB:286:U:H2'	23:DB:287:G:H8	1.67	0.59
23:DB:2783:U:H2'	23:DB:2784:U:C6	2.38	0.59
23:BB:2815:C:H2'	23:BB:2816:G:H8	1.68	0.59
23:DB:492:A:H2'	23:DB:493:G:O4'	2.03	0.59
26:DD:204:LYS:HB2	26:DD:205:PRO:HD2	1.84	0.59
51:BZ:77:LYS:HD2	51:BZ:78:TYR:H	1.67	0.59
3:AD:25:ARG:C	3:AD:25:ARG:HD3	2.23	0.59
12:CM:82:LEU:HD22	18:CS:73:PHE:HE2	1.67	0.59
18:AS:28:LYS:HD2	18:AS:28:LYS:H	1.68	0.59
23:DB:2472:G:C2'	23:DB:2475:C:H42	2.14	0.59
23:DB:28:A:N6	23:DB:512:G:H1'	2.18	0.59
48:BG:152:ARG:HH22	48:BG:162:ARG:HA	1.66	0.59
40:BH:73:ASN:HB3	40:BH:141:LYS:NZ	2.17	0.59
35:BV:30:ILE:HG12	35:BV:91:PHE:HB2	1.85	0.59
23:DB:1080:A:H4'	24:DI:126:ARG:HD2	1.84	0.59
23:BB:1657:U:O2'	26:BD:138:LEU:HD12	2.03	0.59
11:AL:79:ILE:HG22	11:AL:103:CYS:HB2	1.84	0.59
29:BE:148:ILE:HA	29:BE:187:VAL:HB	1.84	0.59
23:BB:2243:U:O2'	23:BB:2244:U:H5'	2.03	0.59
2:CC:78:LYS:HG3	2:CC:81:GLU:CB	2.33	0.59
1:CA:1432:G:H1'	1:CA:1468:A:H61	1.68	0.59
23:BB:934:U:H2'	23:BB:935:C:C6	2.38	0.59
18:AS:32:THR:HG22	18:AS:34:SER:H	1.66	0.59
34:D3:44:ARG:N	34:D3:45:PRO:HD2	2.17	0.59
23:BB:176:A:O2'	23:BB:177:G:H5'	2.03	0.59
1:CA:562:U:H1'	11:CL:11:ARG:HB3	1.84	0.59
23:DB:709:U:H2'	23:DB:710:U:C6	2.38	0.59
23:BB:2412:A:H2'	23:BB:2413:G:O4'	2.03	0.59
1:CA:692:U:H2'	1:CA:693:G:H3'	1.83	0.59
14:AO:55:GLY:O	14:AO:59:MET:HG2	2.02	0.59
27:BK:76:VAL:H	28:BP:72:VAL:HG23	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AB:62:ARG:H	20:AB:62:ARG:HD2	1.67	0.59
1:AA:1332:A:H2'	1:AA:1333:A:C8	2.38	0.59
52:BW:37:VAL:HG13	52:BW:55:ASP:O	2.03	0.59
25:BC:146:LYS:HB3	25:BC:147:PRO:HD2	1.83	0.59
23:DB:1824:G:OP1	25:DC:51:ARG:HD3	2.03	0.59
23:DB:532:A:N3	23:DB:532:A:H2'	2.17	0.59
47:BF:32:LYS:HB2	47:BF:90:LEU:O	2.03	0.59
41:DJ:55:ILE:HG13	41:DJ:55:ILE:O	2.03	0.59
30:DY:50:VAL:O	30:DY:54:VAL:HG22	2.02	0.59
42:DN:37:THR:OG1	42:DN:40:LYS:HE2	2.03	0.59
13:CN:60:ARG:O	13:CN:62:ARG:N	2.36	0.59
50:BT:28:ASN:HA	50:BT:91:GLN:HE22	1.68	0.59
23:BB:1242:U:H2'	23:BB:1243:C:C6	2.38	0.59
42:DN:55:ALA:HA	42:DN:80:PHE:CE1	2.38	0.59
29:DE:108:ILE:HD13	29:DE:108:ILE:O	2.02	0.59
18:CS:10:ILE:HG22	18:CS:37:SER:HB3	1.84	0.59
23:BB:2749:A:C3'	23:BB:2750:A:H5''	2.33	0.59
23:BB:1028:A:H2'	23:BB:1029:A:C8	2.37	0.59
13:AN:12:ARG:HA	13:AN:15:LEU:HD12	1.85	0.59
23:DB:2264:C:H41	52:DW:11:ASN:HD21	1.49	0.59
44:BQ:9:ALA:C	44:BQ:11:ALA:H	2.05	0.59
20:CB:112:ARG:HA	20:CB:115:ASP:OD2	2.03	0.59
23:DB:277:G:H4'	23:DB:278:A:C5	2.38	0.59
14:AO:70:LEU:HD11	14:AO:77:ARG:HB2	1.85	0.59
12:CM:95:PRO:HB2	12:CM:99:GLN:OE1	2.03	0.59
28:BP:88:ARG:HG3	28:BP:112:ARG:HB3	1.85	0.59
23:BB:644:A:O2'	23:BB:645:C:H5'	2.03	0.59
23:DB:1729:U:H3'	23:DB:1730:C:O4'	2.03	0.59
33:B1:20:TYR:CD2	33:B1:37:LYS:HD3	2.37	0.59
23:BB:151:C:H2'	23:BB:152:A:H8	1.68	0.59
23:DB:644:A:O2'	23:DB:645:C:H5'	2.03	0.59
39:DX:9:LYS:O	39:DX:13:GLU:HG2	2.03	0.59
23:DB:1432:G:H2'	23:DB:1433:A:C8	2.38	0.59
23:DB:2840:C:OP1	42:DN:50:PRO:HA	2.03	0.59
1:CA:285:C:H2'	1:CA:286:C:C6	2.38	0.59
1:AA:499:A:H4'	1:AA:500:G:H5'	1.85	0.59
11:AL:3:VAL:O	11:AL:7:VAL:HG23	2.03	0.59
15:AP:20:VAL:HG23	15:AP:34:GLU:O	2.02	0.59
1:AA:451:A:N6	1:AA:480:U:H2'	2.18	0.59
2:AC:21:TRP:CH2	2:AC:31:ASN:HB3	2.37	0.59
23:BB:1346:G:O2'	23:BB:1347:A:H5'	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:285:C:H2'	1:AA:286:C:H6	1.68	0.59
45:BS:40:ASN:O	45:BS:41:LYS:HG3	2.02	0.59
23:DB:1897:G:O2'	23:DB:1898:U:H5'	2.03	0.59
23:DB:2825:G:H2'	23:DB:2826:A:H5'	1.85	0.59
1:AA:1035:A:H2'	1:AA:1036:A:H8	1.67	0.59
9:AJ:85:ASP:HA	9:AJ:88:MET:SD	2.42	0.59
1:AA:1039:G:H2'	1:AA:1040:U:C6	2.38	0.59
22:BA:86:G:H2'	22:BA:87:U:O4'	2.03	0.59
34:B3:44:ARG:N	34:B3:45:PRO:HD2	2.17	0.59
23:DB:1113:U:O2'	23:DB:1114:C:H5'	2.03	0.59
23:BB:2363:G:O2'	23:BB:2364:C:H5'	2.03	0.59
25:DC:170:TYR:HE2	25:DC:184:GLU:HG2	1.67	0.58
26:BD:101:PHE:HE2	26:BD:205:PRO:HD3	1.67	0.58
41:BJ:18:VAL:HG12	41:BJ:54:ILE:HD11	1.83	0.58
7:AH:94:VAL:HG21	7:AH:100:ILE:O	2.03	0.58
1:AA:430:A:OP1	3:AD:8:LEU:HB2	2.02	0.58
6:AG:107:ALA:O	6:AG:110:ARG:HB2	2.03	0.58
15:AP:4:ILE:HG12	15:AP:21:VAL:HG22	1.85	0.58
23:BB:1082:U:C2	23:BB:1086:A:C6	2.91	0.58
23:BB:2548:U:H1'	27:BK:23:LYS:HZ1	1.66	0.58
15:CP:4:ILE:HB	15:CP:67:ILE:HD12	1.84	0.58
38:BM:50:ARG:HA	38:BM:53:MET:CE	2.32	0.58
23:DB:1722:A:H2'	23:DB:1723:G:C8	2.33	0.58
23:DB:2899:A:H2'	23:DB:2900:A:C8	2.38	0.58
23:DB:1794:A:H2'	23:DB:1795:C:H6	1.67	0.58
43:DO:11:ALA:HB2	43:DO:96:GLY:H	1.67	0.58
26:DD:148:GLN:CG	26:DD:152:PRO:HG2	2.31	0.58
23:BB:1442:U:H2'	23:BB:1443:U:H6	1.68	0.58
1:AA:93:U:O5'	1:AA:93:U:H6	1.85	0.58
26:BD:124:ARG:HA	26:BD:165:MET:CE	2.33	0.58
43:DO:76:LYS:HG3	43:DO:113:ALA:HB1	1.83	0.58
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.38	0.58
1:CA:264:C:O2'	16:CQ:65:PRO:HG2	2.02	0.58
23:BB:278:A:H2'	23:BB:278:A:N3	2.16	0.58
1:AA:441:A:H61	1:AA:493:A:N6	2.01	0.58
6:CG:104:VAL:O	6:CG:108:ARG:HG3	2.03	0.58
22:DA:13:G:C2'	22:DA:14:U:H5''	2.33	0.58
1:CA:735:C:O2'	1:CA:736:C:H5'	2.02	0.58
23:DB:608:A:H2'	23:DB:609:A:C8	2.38	0.58
19:AT:38:ILE:HG12	19:AT:85:LEU:HD13	1.84	0.58
1:AA:501:C:H2'	1:AA:502:A:C8	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2031:A:C6	23:BB:2498:C:H1'	2.38	0.58
26:DD:121:THR:HB	26:DD:127:PHE:CD1	2.37	0.58
23:BB:1709:U:H2'	23:BB:1710:G:H8	1.68	0.58
23:DB:222:A:N1	23:DB:233:A:H5''	2.18	0.58
26:DD:67:HIS:O	26:DD:70:LYS:HB3	2.03	0.58
22:BA:39:A:H2	22:BA:46:A:H61	1.48	0.58
23:BB:1097:U:H2'	23:BB:1098:A:H5'	1.85	0.58
49:DR:43:ASN:ND2	49:DR:45:GLU:H	2.01	0.58
25:BC:2:VAL:HG23	25:BC:3:VAL:H	1.67	0.58
1:CA:1030:U:O2	1:CA:1030:U:H2'	2.02	0.58
35:BV:70:ILE:N	35:BV:70:ILE:HD13	2.17	0.58
7:AH:107:LYS:HE3	7:AH:107:LYS:HA	1.84	0.58
16:AQ:80:LYS:HD2	16:AQ:80:LYS:H	1.68	0.58
1:CA:398:U:H2'	1:CA:399:G:H8	1.66	0.58
23:DB:1098:A:C2'	24:DI:4:VAL:N	2.65	0.58
48:BG:84:LYS:CG	48:BG:85:LYS:H	2.16	0.58
22:DA:42:C:C5	47:DF:65:LEU:HD22	2.38	0.58
41:BJ:26:GLY:O	41:BJ:30:THR:HG22	2.02	0.58
44:DQ:90:ASP:O	44:DQ:94:LEU:HB2	2.02	0.58
9:AJ:9:ARG:CB	9:AJ:99:GLN:HB3	2.27	0.58
48:DG:17:LYS:NZ	48:DG:18:ILE:H	2.01	0.58
24:DI:78:LEU:HA	24:DI:81:LYS:HE2	1.85	0.58
18:AS:30:LEU:HD12	18:AS:48:ILE:HG12	1.83	0.58
46:DU:46:LYS:HZ1	46:DU:47:PRO:HG2	1.68	0.58
26:BD:149:ASN:O	26:BD:152:PRO:HD2	2.03	0.58
23:DB:192:C:H2'	23:DB:193:U:H5'	1.84	0.58
10:AK:17:ASP:HB3	10:AK:80:ASN:ND2	2.17	0.58
23:BB:1655:A:H5'	26:BD:118:PHE:HB2	1.85	0.58
3:AD:90:LEU:HD21	3:AD:196:GLU:HB3	1.85	0.58
7:CH:51:GLU:HG2	7:CH:52:GLY:N	2.19	0.58
23:BB:836:G:H2'	23:BB:837:C:H6	1.67	0.58
23:DB:1667:G:OP1	27:DK:6:THR:HA	2.02	0.58
1:AA:492:C:H2'	1:AA:493:A:N3	2.19	0.58
20:CB:63:LYS:HG2	20:CB:224:ARG:NH1	2.17	0.58
1:CA:636:U:H2'	1:CA:637:C:H6	1.67	0.58
23:BB:96:C:O2'	23:BB:97:C:H5'	2.02	0.58
1:AA:1524:C:H2'	1:AA:1525:G:H8	1.68	0.58
1:AA:1008:U:H5''	13:AN:23:ARG:HH22	1.67	0.58
19:AT:82:ILE:HA	19:AT:85:LEU:HD22	1.84	0.58
37:BL:110:VAL:HB	37:BL:127:VAL:HG23	1.84	0.58
1:CA:1387:G:H2'	1:CA:1388:C:C6	2.37	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:6:A:H2'	23:BB:7:G:H8	1.68	0.58
23:DB:2800:A:H2'	23:DB:2801:G:O4'	2.03	0.58
23:BB:222:A:N6	23:BB:232:G:H1'	2.18	0.58
48:BG:54:ARG:HB3	48:BG:57:TYR:HD1	1.68	0.58
27:DK:70:ARG:HB3	27:DK:76:VAL:HG22	1.86	0.58
1:AA:451:A:H4'	1:AA:452:A:O4'	2.02	0.58
1:AA:45:G:H2'	1:AA:46:G:H8	1.67	0.58
46:BU:25:LYS:HE3	46:BU:36:GLU:HG3	1.85	0.58
1:CA:659:U:O2'	1:CA:660:C:H5'	2.03	0.58
50:BT:32:LEU:H	50:BT:83:ALA:HB3	1.68	0.58
23:BB:2053:G:O2'	23:BB:2054:A:H5'	2.03	0.58
1:CA:1517:G:H1'	23:DB:1919:A:O3'	2.03	0.58
20:CB:156:LEU:H	20:CB:156:LEU:HD12	1.69	0.58
1:AA:1030:U:H2'	1:AA:1030:U:O2	2.03	0.58
9:CJ:85:ASP:HA	9:CJ:88:MET:SD	2.43	0.58
23:BB:1798:U:OP1	25:BC:257:ARG:HB2	2.03	0.58
50:DT:5:GLU:HA	50:DT:8:LEU:CB	2.20	0.58
23:BB:2385:C:H2'	23:BB:2386:A:C8	2.38	0.58
23:BB:2313:C:H4'	47:BF:87:LYS:HB3	1.85	0.58
41:BJ:29:ALA:HA	41:BJ:32:LEU:HD12	1.84	0.58
46:DU:3:LYS:HD3	46:DU:82:VAL:CG2	2.32	0.58
37:BL:3:LEU:O	37:BL:5:THR:HG23	2.02	0.58
24:DI:108:ILE:HG22	24:DI:128:ILE:HD13	1.85	0.58
1:CA:1060:U:C4'	9:CJ:54:SER:HB2	2.30	0.58
47:BF:78:ILE:N	47:BF:79:ARG:HH11	2.01	0.58
23:BB:322:A:P	29:BE:163:ASN:HD22	2.27	0.58
40:DH:93:SER:O	40:DH:94:ILE:HD12	2.03	0.58
47:DF:134:GLN:O	47:DF:136:ILE:N	2.37	0.58
45:BS:16:LYS:O	45:BS:19:LEU:HB3	2.02	0.58
1:AA:1316:G:H22	1:AA:1318:A:H3'	1.68	0.58
27:DK:105:ARG:HB3	27:DK:122:VAL:HG12	1.85	0.58
23:DB:590:A:H2'	23:DB:591:U:H6	1.68	0.58
23:DB:2899:A:H2'	23:DB:2900:A:H8	1.68	0.58
26:DD:8:LYS:HD3	26:DD:197:THR:H	1.69	0.58
23:BB:62:U:O2'	23:BB:63:A:H5'	2.03	0.58
23:BB:1485:U:H2'	23:BB:1486:U:H6	1.69	0.58
23:DB:125:A:C6	36:D2:10:LEU:HD23	2.38	0.58
23:DB:414:C:H2'	23:DB:415:A:H8	1.68	0.58
23:BB:296:U:H2'	23:BB:297:G:C8	2.37	0.58
23:BB:419:U:H2'	23:BB:420:C:C6	2.37	0.58
1:AA:736:C:H2'	1:AA:737:C:H6	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:328:U:H4'	46:BU:65:GLN:HE22	1.68	0.58
23:BB:1219:U:H2'	23:BB:1220:G:C8	2.37	0.58
5:CF:47:LEU:HD21	5:CF:57:ALA:HB3	1.86	0.58
49:BR:43:ASN:ND2	49:BR:45:GLU:H	2.01	0.58
29:DE:98:LYS:O	29:DE:102:ARG:HG2	2.04	0.58
1:AA:1280:A:O4'	9:AJ:43:PRO:HG3	2.03	0.58
23:BB:2438:U:O2'	23:BB:2439:A:H5''	2.03	0.58
1:CA:1039:G:H2'	1:CA:1040:U:C6	2.38	0.58
23:BB:1599:U:H2'	23:BB:1600:C:C6	2.37	0.58
23:DB:1098:A:H3'	24:DI:3:LYS:C	2.24	0.58
23:BB:2331:G:O2'	52:BW:40:ARG:HB2	2.04	0.58
23:DB:1820:U:H4'	23:DB:1821:A:OP2	2.03	0.58
21:CU:42:THR:HB	21:CU:46:ARG:HE	1.68	0.58
48:DG:84:LYS:HG3	48:DG:131:VAL:C	2.24	0.58
47:DF:33:ILE:HD13	47:DF:95:MET:HG2	1.85	0.58
23:DB:856:G:H1'	52:DW:23:LYS:HB3	1.84	0.58
1:AA:1147:C:O2'	8:AI:17:ARG:HD2	2.02	0.58
25:BC:140:VAL:HG12	25:BC:141:HIS:H	1.67	0.58
26:DD:101:PHE:HE2	26:DD:205:PRO:HD3	1.68	0.58
26:DD:106:LYS:HB3	26:DD:206:ALA:N	2.18	0.58
45:DS:3:THR:HB	45:DS:62:ASP:CB	2.31	0.58
44:BQ:93:ILE:HG23	44:BQ:94:LEU:HD22	1.85	0.58
29:BE:130:LYS:C	29:BE:132:LYS:H	2.05	0.58
46:DU:46:LYS:NZ	46:DU:47:PRO:HG2	2.18	0.58
35:DV:44:HIS:HE1	35:DV:86:LEU:H	1.50	0.58
15:CP:6:LEU:CD1	15:CP:71:VAL:HB	2.34	0.58
1:AA:1432:G:H1'	1:AA:1468:A:H61	1.68	0.58
45:DS:56:ALA:O	45:DS:59:GLU:HB2	2.02	0.58
23:DB:2885:G:H2'	23:DB:2886:A:O4'	2.03	0.58
40:DH:4:ILE:H	40:DH:4:ILE:HD12	1.67	0.58
9:AJ:15:HIS:HA	9:AJ:18:ILE:HG22	1.84	0.58
23:DB:321:U:H1'	29:DE:162:ARG:NH1	2.18	0.58
14:CO:26:GLU:HG3	14:CO:77:ARG:NH1	2.19	0.58
23:DB:2144:G:N3	23:DB:2146:C:H5'	2.17	0.58
23:BB:581:C:H2'	23:BB:582:A:H8	1.65	0.58
23:DB:1387:A:H5'	23:DB:1469:A:H1'	1.85	0.58
22:BA:111:U:H2'	22:BA:112:G:H8	1.66	0.58
1:CA:1465:A:H2'	1:CA:1466:C:C6	2.39	0.58
23:BB:2635:A:H5'	26:BD:79:LEU:HD23	1.84	0.58
1:CA:390:U:H2'	1:CA:391:G:H8	1.67	0.58
23:DB:1993:U:H4'	26:DD:133:THR:CG2	2.32	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:680:C:H2'	23:BB:681:G:H8	1.68	0.58
23:DB:1219:U:H2'	23:DB:1220:G:C8	2.38	0.58
23:BB:1684:G:H2'	23:BB:1685:C:H6	1.67	0.58
22:DA:89:U:H5'	22:DA:90:C:C6	2.38	0.58
2:AC:16:PRO:HG2	2:AC:53:ARG:NH2	2.18	0.58
23:BB:1061:U:H4'	23:BB:1070:A:O3'	2.04	0.58
23:BB:2776:A:H4'	23:BB:2777:G:H5''	1.85	0.58
23:DB:813:U:H2'	23:DB:814:C:H6	1.68	0.58
12:CM:43:LYS:HB2	12:CM:46:GLU:HG3	1.86	0.58
23:DB:102:U:O2	23:DB:102:U:H5''	2.03	0.58
23:BB:2261:C:O2'	23:BB:2262:U:H5'	2.03	0.58
23:DB:1099:G:C5'	24:DI:3:LYS:N	2.66	0.58
23:BB:917:A:H2'	23:BB:918:A:O4'	2.03	0.58
48:BG:84:LYS:HB3	48:BG:132:LEU:O	2.03	0.58
5:CF:36:ILE:HA	5:CF:64:VAL:HG13	1.84	0.58
40:BH:116:ARG:CZ	40:BH:131:SER:HB3	2.33	0.58
50:BT:1:MET:C	50:BT:2:ILE:HD13	2.24	0.58
12:AM:12:LYS:HD2	12:AM:16:ILE:HD13	1.83	0.58
1:CA:1217:C:OP1	13:CN:8:ARG:HD2	2.04	0.58
13:CN:9:GLU:OE2	13:CN:60:ARG:HG2	2.03	0.58
13:AN:78:LEU:HD23	13:AN:82:LYS:HB3	1.85	0.58
3:AD:160:LEU:N	3:AD:160:LEU:HD13	2.17	0.58
3:AD:26:ALA:HA	3:AD:30:LYS:HE3	1.84	0.58
47:BF:107:VAL:HG11	47:BF:175:PRO:HG3	1.86	0.58
37:BL:79:LEU:HB3	37:BL:115:GLU:O	2.03	0.58
38:BM:34:LYS:HB3	38:BM:129:THR:HG22	1.85	0.58
1:CA:764:C:H2'	1:CA:765:G:H5'	1.85	0.58
12:AM:78:ARG:HH22	18:AS:68:HIS:CE1	2.22	0.58
38:DM:126:ILE:HG22	38:DM:127:LYS:N	2.19	0.58
35:DV:30:ILE:HD12	35:DV:38:LEU:HD23	1.84	0.58
35:DV:80:HIS:CD2	35:DV:83:LYS:H	2.22	0.58
48:BG:145:ALA:HA	48:BG:148:ARG:HG3	1.85	0.58
40:DH:47:PHE:HB3	40:DH:51:ARG:NH2	2.19	0.58
23:BB:1439:A:C6	23:BB:1552:A:N7	2.72	0.58
23:BB:2134:A:H2'	23:BB:2135:A:H8	1.69	0.58
1:CA:707:U:H4'	10:CK:21:HIS:CD2	2.38	0.58
44:DQ:101:ASP:HB2	49:DR:2:TYR:OH	2.03	0.58
23:BB:2023:C:H4'	23:BB:2617:U:O3'	2.04	0.58
20:AB:63:LYS:HG2	20:AB:224:ARG:NH1	2.17	0.58
23:DB:1258:U:H2'	23:DB:1259:G:C8	2.37	0.58
52:BW:46:ALA:HB2	52:BW:78:PHE:HD1	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2199:A:H3'	23:DB:2200:C:H6	1.69	0.58
1:AA:373:A:H2'	1:AA:374:A:H8	1.69	0.58
27:BK:70:ARG:HB3	27:BK:76:VAL:HG22	1.84	0.58
1:AA:470:C:H2'	1:AA:471:U:C6	2.38	0.58
41:DJ:72:LYS:HB2	41:DJ:89:PHE:H	1.69	0.58
4:CE:100:GLU:HA	4:CE:121:ASN:ND2	2.18	0.58
1:AA:128:G:H2'	1:AA:129:A:C8	2.39	0.58
23:BB:962:G:N2	23:BB:2250:G:H1	2.01	0.58
23:DB:649:G:H2'	23:DB:650:C:C6	2.38	0.58
1:AA:426:U:H4'	3:AD:39:GLN:HA	1.85	0.58
1:CA:328:C:H4'	1:CA:329:A:H5''	1.84	0.58
44:BQ:30:VAL:O	44:BQ:31:TYR:HB2	2.04	0.58
23:DB:570:G:H2'	23:DB:2030:A:N7	2.17	0.58
23:DB:946:C:H2'	23:DB:947:A:H8	1.69	0.58
53:D6:68:VAL:O	53:D6:98:ALA:HA	2.04	0.58
23:DB:923:G:H1'	52:DW:23:LYS:NZ	2.18	0.58
8:CI:20:ILE:HG23	8:CI:60:LEU:CD1	2.34	0.58
8:AI:62:LEU:N	8:AI:62:LEU:HD22	2.19	0.58
47:DF:76:PHE:HD2	47:DF:78:ILE:HD13	1.68	0.58
29:BE:150:THR:HG21	29:BE:153:LEU:HA	1.86	0.58
40:DH:119:ASN:OD1	40:DH:121:VAL:HG13	2.03	0.58
40:DH:85:GLY:H	40:DH:89:LYS:C	2.06	0.58
1:CA:1319:A:H4'	1:CA:1320:C:OP1	2.03	0.58
1:AA:1250:A:H4'	8:AI:69:GLY:H	1.68	0.58
23:DB:2379:G:C5'	43:DO:21:LEU:HD11	2.32	0.58
31:D0:48:TYR:CG	31:D0:49:ARG:N	2.71	0.58
1:CA:1004:A:C8	1:CA:1025:U:H1'	2.38	0.58
23:DB:98:G:C2'	23:DB:99:U:H5''	2.34	0.58
12:AM:2:ARG:HG3	12:AM:6:ILE:N	2.19	0.58
23:BB:64:A:H2'	23:BB:65:U:H6	1.66	0.58
36:D2:10:LEU:HD11	36:D2:14:ARG:CZ	2.34	0.58
39:BX:49:ASP:O	39:BX:53:VAL:HG23	2.04	0.58
1:CA:1009:U:H5'	1:CA:1010:U:OP2	2.02	0.58
19:AT:35:TYR:O	19:AT:38:ILE:HG22	2.02	0.58
6:CG:24:LYS:HA	6:CG:27:ASN:HD22	1.67	0.58
29:DE:103:GLY:O	29:DE:106:LYS:HB2	2.03	0.58
1:AA:1458:G:H5''	19:AT:25:SER:HB2	1.85	0.58
23:BB:2553:G:H2'	23:BB:2554:U:C4'	2.33	0.58
23:BB:521:U:H2'	23:BB:522:A:C8	2.38	0.58
23:BB:2569:G:O2'	23:BB:2570:G:H5'	2.04	0.58
53:B6:19:GLU:HA	53:B6:22:GLU:HB2	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1341:G:H3'	23:BB:1397:U:O2	2.03	0.58
1:AA:1507:A:H2'	1:AA:1508:A:C8	2.37	0.58
12:AM:64:VAL:HA	12:AM:68:LEU:CD1	2.34	0.58
23:DB:2678:C:H2'	23:DB:2679:A:C8	2.38	0.58
23:BB:690:G:H2'	23:BB:691:C:O4'	2.03	0.58
23:BB:1881:C:H2'	23:BB:1882:U:O4'	2.03	0.58
23:BB:18:U:H2'	23:BB:19:A:C8	2.37	0.58
44:DQ:30:VAL:O	44:DQ:31:TYR:HB2	2.03	0.58
1:CA:1250:A:H4'	8:CI:69:GLY:H	1.68	0.58
53:B6:10:THR:HG22	53:B6:14:MET:CE	2.34	0.58
1:AA:522:C:H41	11:AL:49:ARG:NH2	2.01	0.58
6:AG:122:GLU:OE1	6:AG:131:GLY:HA3	2.04	0.58
1:CA:522:C:H41	11:CL:49:ARG:NH2	2.00	0.58
23:DB:850:U:H2'	23:DB:851:C:C6	2.39	0.58
27:BK:118:LEU:O	27:BK:120:PRO:HD2	2.02	0.58
29:BE:109:LEU:O	29:BE:112:LEU:HB2	2.03	0.58
1:AA:844:G:H2'	1:AA:845:A:C8	2.39	0.58
20:CB:79:VAL:HG12	20:CB:90:PHE:HB2	1.86	0.58
40:DH:113:SER:H	40:DH:132:PHE:HE1	1.51	0.58
1:CA:1048:G:H4'	13:CN:2:LYS:HZ2	1.68	0.58
39:DX:8:GLU:HB2	39:DX:13:GLU:OE1	2.03	0.58
23:DB:1374:G:H2'	23:DB:1375:U:C6	2.39	0.58
23:DB:296:U:H2'	23:DB:297:G:C8	2.38	0.58
19:AT:79:THR:HA	19:AT:82:ILE:HG12	1.85	0.58
23:DB:544:C:H2'	23:DB:545:U:C4	2.38	0.58
1:AA:1461:G:H2'	1:AA:1462:C:C6	2.38	0.58
25:BC:61:TYR:HA	25:BC:85:ASN:ND2	2.19	0.58
1:CA:591:U:OP1	7:CH:30:LYS:HE2	2.03	0.58
23:DB:324:A:H2'	23:DB:325:G:O4'	2.03	0.58
23:DB:1857:G:N2	23:DB:1884:G:H2'	2.19	0.58
23:BB:904:G:H2'	23:BB:905:A:H8	1.67	0.58
19:AT:49:ALA:O	19:AT:52:GLU:HG2	2.04	0.58
24:BI:5:GLN:HG2	24:BI:6:ALA:N	2.18	0.58
3:CD:146:GLU:HA	3:CD:149:LYS:HG2	1.85	0.58
40:DH:41:LYS:O	40:DH:44:ILE:HG12	2.03	0.58
28:DP:103:THR:HG22	28:DP:104:GLY:H	1.68	0.58
23:BB:826:U:H2'	23:BB:828:U:O4'	2.04	0.58
2:CC:21:TRP:CH2	2:CC:31:ASN:HB3	2.39	0.58
23:DB:654:A:H2'	23:DB:655:A:H5''	1.86	0.58
23:DB:1899:A:O2'	23:DB:1900:A:H5''	2.02	0.58
1:AA:90:C:H2'	1:AA:91:U:C5	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AE:55:VAL:N	4:AE:56:PRO:HD2	2.18	0.58
7:CH:107:LYS:HA	7:CH:107:LYS:HE3	1.86	0.58
23:DB:690:G:H2'	23:DB:691:C:O4'	2.03	0.58
4:CE:43:GLY:O	4:CE:72:ASN:HA	2.04	0.58
29:DE:31:VAL:HG21	29:DE:104:ALA:HB2	1.85	0.58
47:BF:62:GLN:NE2	47:BF:90:LEU:HD13	2.06	0.58
6:AG:146:ALA:HA	10:AK:55:ARG:HH12	1.68	0.58
40:BH:68:ARG:HB3	40:BH:134:VAL:HG11	1.86	0.58
26:BD:30:GLU:HG3	26:BD:52:THR:CG2	2.33	0.58
53:B6:83:ILE:O	53:B6:88:LEU:HB2	2.03	0.58
8:CI:46:VAL:HA	8:CI:49:GLN:HG3	1.85	0.58
8:CI:79:ARG:HA	8:CI:82:ILE:HD12	1.86	0.58
41:DJ:44:TYR:CE2	44:DQ:59:LEU:HD11	2.38	0.58
25:BC:128:THR:HG23	25:BC:190:THR:HG22	1.86	0.58
12:AM:106:ARG:HD3	12:AM:110:GLY:O	2.03	0.58
25:BC:64:VAL:HG11	25:BC:66:PHE:CZ	2.39	0.58
43:BO:74:VAL:O	43:BO:78:VAL:HG23	2.04	0.58
1:AA:413:G:H2'	1:AA:428:G:N2	2.19	0.58
47:DF:11:VAL:HG12	47:DF:12:VAL:N	2.15	0.58
47:DF:134:GLN:H	47:DF:150:GLY:H	1.52	0.58
18:AS:35:ARG:HB3	18:AS:50:VAL:CG1	2.34	0.58
10:AK:91:GLY:O	10:AK:95:THR:HG22	2.03	0.58
23:DB:138:U:H2'	23:DB:140:C:N1	2.18	0.58
32:B4:24:ARG:HG2	32:B4:36:ARG:CG	2.33	0.58
32:D4:24:ARG:HG2	32:D4:36:ARG:CG	2.34	0.58
29:DE:146:VAL:HA	29:DE:185:LYS:O	2.04	0.58
44:DQ:107:ALA:HB1	49:DR:48:LYS:HE3	1.85	0.58
3:AD:116:LEU:O	3:AD:121:ALA:HB3	2.03	0.58
23:BB:1789:A:P	25:BC:220:ARG:HD3	2.44	0.58
23:BB:2722:G:H2'	23:BB:2723:C:C6	2.39	0.58
1:CA:193:C:H2'	1:CA:194:C:C5	2.39	0.58
41:BJ:96:ARG:N	41:BJ:97:PRO:HD3	2.19	0.58
27:DK:88:ASN:HB3	27:DK:92:GLU:O	2.04	0.58
23:BB:2230:G:H2'	23:BB:2231:U:H6	1.69	0.58
23:DB:1351:C:O2'	23:DB:1571:A:H1'	2.03	0.58
1:CA:777:A:H2'	1:CA:778:G:H8	1.69	0.58
1:CA:1512:U:H2'	1:CA:1513:A:H8	1.67	0.58
23:BB:2369:A:O2'	23:BB:2370:G:H5'	2.04	0.58
23:DB:441:U:H2'	23:DB:442:G:H8	1.68	0.58
23:BB:937:C:H2'	23:BB:938:G:H8	1.69	0.58
23:BB:1429:G:H2'	23:BB:1430:G:H8	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AT:27:MET:O	19:AT:31:ILE:HG13	2.04	0.58
25:DC:221:GLY:C	25:DC:223:ALA:H	2.07	0.58
23:BB:2835:A:N6	23:BB:2878:U:H2'	2.19	0.58
23:DB:2662:A:H2'	23:DB:2663:G:O4'	2.03	0.58
1:AA:512:U:O2'	1:AA:513:C:H5'	2.04	0.58
26:BD:67:HIS:O	26:BD:70:LYS:HB3	2.03	0.58
7:AH:26:MET:HB2	7:AH:27:PRO:HD2	1.86	0.58
25:BC:170:TYR:CD2	25:BC:184:GLU:HA	2.38	0.58
6:AG:149:ALA:HB2	10:AK:55:ARG:NE	2.02	0.58
47:DF:65:LEU:N	47:DF:88:VAL:HG22	2.17	0.58
47:DF:32:LYS:H	47:DF:95:MET:HE1	1.67	0.58
8:AI:70:GLY:O	8:AI:74:GLN:HB2	2.04	0.58
26:DD:106:LYS:HB3	26:DD:206:ALA:HB3	1.86	0.58
26:DD:107:VAL:HA	26:DD:204:LYS:O	2.04	0.58
41:DJ:26:GLY:O	41:DJ:30:THR:HG22	2.03	0.58
41:DJ:19:ASP:OD2	41:DJ:58:ASN:HB2	2.04	0.58
25:DC:75:ALA:CB	25:DC:95:TYR:HA	2.32	0.58
47:BF:168:LEU:HD13	47:BF:169:LEU:H	1.69	0.58
1:AA:764:C:N4	1:AA:812:G:H1	2.02	0.58
1:CA:918:A:H2'	1:CA:919:A:C8	2.39	0.58
18:CS:27:LYS:NZ	18:CS:27:LYS:HB3	2.18	0.58
25:DC:16:VAL:H	25:DC:203:VAL:HG12	1.68	0.58
23:DB:2810:A:H2'	23:DB:2811:G:O4'	2.03	0.58
38:DM:64:TRP:HB2	38:DM:104:GLU:HB2	1.85	0.58
42:BN:33:ILE:O	42:BN:33:ILE:HD12	2.04	0.58
2:CC:8:GLY:HA2	2:CC:11:LEU:HG	1.85	0.58
5:AF:38:ARG:HH21	5:AF:63:ASN:HD21	1.48	0.58
3:CD:90:LEU:HD21	3:CD:196:GLU:HB3	1.85	0.58
23:BB:2753:A:H2'	23:BB:2754:U:C6	2.39	0.58
42:BN:49:GLU:OE2	42:BN:95:THR:HG22	2.03	0.58
23:DB:220:G:H1	23:DB:427:U:H2'	1.69	0.58
6:AG:19:SER:OG	6:AG:22:LEU:HB2	2.04	0.58
42:DN:12:ARG:HG3	42:DN:13:ASN:H	1.68	0.58
1:CA:1308:U:OP2	12:CM:97:ARG:HD3	2.03	0.58
23:BB:1709:U:H2'	23:BB:1710:G:C8	2.39	0.58
41:DJ:96:ARG:N	41:DJ:97:PRO:HD3	2.19	0.58
48:DG:87:GLN:HG2	48:DG:164:ALA:HA	1.84	0.58
1:AA:1151:A:HO2'	1:AA:1152:A:H8	1.51	0.58
29:BE:122:GLU:O	29:BE:123:LYS:HB2	2.04	0.58
15:AP:74:LEU:O	15:AP:78:VAL:HG12	2.04	0.58
23:DB:1419:A:H2'	23:DB:1421:G:N7	2.19	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:39:G:O2'	23:BB:40:U:H5'	2.04	0.58
23:BB:2041:U:H2'	23:BB:2042:A:C8	2.38	0.58
1:AA:692:U:H2'	1:AA:693:G:H3'	1.84	0.58
23:DB:1092:C:H2'	23:DB:1093:G:H5'	1.86	0.58
23:BB:1117:C:H2'	23:BB:1118:C:H6	1.69	0.58
1:CA:204:G:H1'	1:CA:466:A:N7	2.19	0.58
3:AD:115:GLN:HG3	3:AD:119:HIS:CE1	2.38	0.58
27:DK:109:SER:HB2	27:DK:111:LYS:HE2	1.85	0.58
25:DC:170:TYR:CD2	25:DC:184:GLU:HA	2.38	0.58
10:AK:33:ILE:HG12	10:AK:69:CYS:SG	2.44	0.58
40:BH:116:ARG:CB	40:BH:133:GLN:HB2	2.27	0.58
40:BH:99:ILE:CD1	40:BH:144:VAL:HG21	2.34	0.58
41:BJ:55:ILE:O	41:BJ:55:ILE:HG13	2.04	0.58
46:DU:85:ARG:HH11	46:DU:86:PHE:H	1.50	0.58
47:DF:109:ARG:CB	47:DF:135:ILE:HD12	2.34	0.58
29:BE:58:LYS:HE2	29:BE:60:TRP:HD1	1.68	0.58
26:DD:62:LYS:HB2	26:DD:63:PRO:HD3	1.86	0.58
45:DS:27:LYS:HD2	45:DS:27:LYS:H	1.68	0.58
24:DI:121:ILE:CD1	24:DI:121:ILE:H	2.14	0.58
25:BC:209:ALA:O	25:BC:213:ARG:HB2	2.04	0.58
1:CA:719:C:O2	17:CR:37:LYS:HA	2.03	0.58
26:DD:113:SER:HB3	26:DD:167:ASN:CA	2.34	0.58
34:B3:22:LYS:HD2	34:B3:46:LYS:HB2	1.85	0.58
36:D2:21:ARG:HH21	36:D2:43:THR:CG2	2.17	0.58
20:AB:95:TRP:CZ2	20:AB:100:LEU:HD13	2.39	0.58
23:DB:581:C:H2'	23:DB:582:A:H8	1.67	0.58
7:CH:40:LYS:HD2	7:CH:47:ASP:HA	1.85	0.58
3:AD:196:GLU:O	3:AD:199:ILE:HG12	2.03	0.58
41:BJ:110:PRO:HB2	41:BJ:111:LYS:HE3	1.86	0.58
36:D2:33:ARG:HH21	36:D2:33:ARG:HB2	1.68	0.58
52:DW:44:PHE:HB3	52:DW:78:PHE:CD1	2.39	0.58
23:DB:1930:G:H2'	23:DB:1968:G:O6	2.03	0.58
22:BA:95:U:H2'	22:BA:96:G:C8	2.39	0.58
23:BB:2095:A:H2'	23:BB:2096:C:C6	2.39	0.58
9:CJ:40:ILE:HD12	9:CJ:73:LEU:HD12	1.86	0.58
5:CF:81:ASN:OD1	5:CF:83:ALA:HB3	2.03	0.58
22:DA:35:C:H2'	22:DA:36:C:C5'	2.34	0.58
19:CT:49:ALA:O	19:CT:52:GLU:HG2	2.04	0.58
26:BD:15:PHE:H	26:BD:15:PHE:HD1	1.51	0.58
34:B3:7:ARG:HH11	34:B3:7:ARG:HG3	1.68	0.58
25:DC:2:VAL:HG23	25:DC:3:VAL:H	1.67	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:505:G:H4'	1:CA:534:U:C4	2.39	0.58
21:CU:39:LYS:N	21:CU:40:PRO:HD2	2.18	0.57
8:CI:56:MET:CG	8:CI:57:VAL:H	2.17	0.57
8:CI:61:ASP:C	8:CI:62:LEU:HD13	2.24	0.57
23:BB:996:A:C4'	44:BQ:91:ARG:HH11	2.15	0.57
23:BB:2849:U:N3	23:BB:2867:G:C8	2.72	0.57
23:BB:981:A:H2'	23:BB:982:C:H5''	1.85	0.57
31:B0:42:ILE:HG12	42:BN:99:LYS:O	2.04	0.57
23:BB:1082:U:O4	23:BB:1086:A:C2	2.57	0.57
17:CR:38:ILE:H	17:CR:38:ILE:HD13	1.69	0.57
37:BL:6:LEU:H	37:BL:6:LEU:CD2	2.17	0.57
3:AD:122:ILE:O	3:AD:128:VAL:HG23	2.04	0.57
23:BB:2899:A:H2'	23:BB:2900:A:C8	2.39	0.57
23:BB:362:A:H3'	23:BB:363:G:H8	1.68	0.57
44:DQ:9:ALA:C	44:DQ:11:ALA:H	2.06	0.57
1:CA:844:G:H2'	1:CA:845:A:C8	2.39	0.57
34:D3:22:LYS:HD2	34:D3:46:LYS:HB2	1.86	0.57
21:AU:10:PRO:HB2	2:CC:71:ARG:CD	2.34	0.57
1:CA:926:G:H3'	1:CA:1505:G:H21	1.69	0.57
23:DB:2590:A:H2'	23:DB:2591:C:C6	2.39	0.57
23:BB:946:C:H2'	23:BB:947:A:H8	1.68	0.57
20:CB:94:ARG:N	20:CB:94:ARG:HE	2.01	0.57
19:CT:82:ILE:HA	19:CT:85:LEU:HD22	1.86	0.57
45:BS:31:GLN:C	45:BS:33:LEU:H	2.07	0.57
23:BB:1258:U:H2'	23:BB:1259:G:C8	2.39	0.57
1:CA:1463:U:H2'	1:CA:1464:U:C6	2.39	0.57
23:BB:743:A:O2'	23:BB:744:U:H5'	2.04	0.57
1:AA:662:U:H2'	1:AA:663:A:C8	2.39	0.57
1:CA:1481:U:O2'	1:CA:1482:G:H5'	2.03	0.57
1:CA:611:C:H2'	1:CA:612:C:H6	1.69	0.57
43:DO:108:ASP:HA	43:DO:111:ARG:HB3	1.85	0.57
23:BB:1291:C:O2'	23:BB:1292:G:H5'	2.04	0.57
23:DB:1720:U:O2'	23:DB:1721:G:H5'	2.04	0.57
35:BV:49:ASN:HD22	35:BV:49:ASN:N	2.02	0.57
23:DB:1647:U:H3'	23:DB:1647:U:P	2.44	0.57
23:BB:794:A:H2'	23:BB:795:C:C6	2.39	0.57
47:BF:34:THR:OG1	47:BF:154:THR:HB	2.04	0.57
26:BD:106:LYS:HB3	26:BD:206:ALA:HB3	1.85	0.57
23:DB:854:C:O2'	23:DB:855:G:H5'	2.03	0.57
30:DY:8:GLN:CG	30:DY:31:ILE:HA	2.27	0.57
47:BF:134:GLN:C	47:BF:136:ILE:H	2.08	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1278:G:H4'	1:AA:1279:G:C5'	2.34	0.57
47:BF:102:LEU:HD22	47:BF:103:ILE:N	2.17	0.57
45:BS:18:ARG:HB3	45:BS:76:VAL:HG22	1.85	0.57
13:AN:48:GLN:O	13:AN:51:PRO:HD2	2.04	0.57
15:AP:6:LEU:CD1	15:AP:71:VAL:HB	2.34	0.57
3:CD:187:ARG:O	3:CD:191:SER:HB3	2.04	0.57
1:AA:1389:C:H2'	1:AA:1390:U:C6	2.39	0.57
23:BB:850:U:O2'	30:BY:22:THR:HG22	2.04	0.57
14:CO:24:SER:HB3	14:CO:27:VAL:CG2	2.33	0.57
23:BB:580:U:H2'	23:BB:581:C:H6	1.66	0.57
12:CM:95:PRO:HD3	12:CM:108:ARG:HG2	1.85	0.57
38:BM:40:ARG:HB2	38:BM:93:VAL:CG2	2.34	0.57
39:BX:5:GLU:O	39:BX:8:GLU:HG2	2.04	0.57
23:DB:1682:G:H2'	23:DB:1683:U:C6	2.38	0.57
21:CU:11:PHE:O	21:CU:13:VAL:HG12	2.03	0.57
1:AA:1150:A:H1'	1:AA:1280:A:N6	2.18	0.57
23:BB:828:U:H4'	23:BB:831:G:N1	2.18	0.57
38:BM:82:MET:HE3	38:BM:83:GLY:H	1.69	0.57
1:CA:586:C:H5''	7:CH:81:GLY:HA2	1.86	0.57
44:BQ:40:LYS:HA	44:BQ:43:GLN:OE1	2.04	0.57
38:BM:67:VAL:HG11	38:BM:102:LEU:HD13	1.86	0.57
17:CR:36:GLY:HA3	17:CR:70:THR:HA	1.85	0.57
23:DB:2812:G:H2'	23:DB:2813:A:C8	2.39	0.57
23:DB:1513:U:O2'	23:DB:1514:G:H5'	2.03	0.57
23:DB:2737:G:H2'	23:DB:2738:A:C8	2.39	0.57
23:BB:654:A:H2'	23:BB:655:A:H5''	1.86	0.57
21:AU:8:ASN:O	21:AU:9:GLU:HB3	2.04	0.57
3:AD:48:SER:O	3:AD:52:VAL:HG23	2.04	0.57
23:DB:443:A:OP1	29:DE:40:ARG:HD2	2.04	0.57
23:DB:904:G:H2'	23:DB:905:A:H8	1.68	0.57
24:BI:96:LYS:N	24:BI:96:LYS:HD2	2.20	0.57
1:AA:518:C:H2'	1:AA:530:G:C8	2.39	0.57
23:DB:1047:G:H1'	23:DB:1110:G:N2	2.18	0.57
23:DB:942:G:H2'	23:DB:943:A:O4'	2.03	0.57
23:BB:1820:U:H4'	23:BB:1821:A:OP2	2.04	0.57
47:BF:65:LEU:O	47:BF:86:CYS:HA	2.04	0.57
35:DV:63:ILE:HD13	35:DV:72:VAL:HG22	1.86	0.57
47:BF:43:ILE:HB	47:BF:82:TYR:OH	2.04	0.57
45:DS:18:ARG:HB3	45:DS:76:VAL:CG2	2.34	0.57
45:DS:18:ARG:HB3	45:DS:76:VAL:HG22	1.86	0.57
1:CA:1226:C:C4	12:CM:102:LYS:HB3	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:950:U:H2'	1:CA:951:G:C8	2.39	0.57
18:CS:39:ILE:HG12	18:CS:70:LEU:HD12	1.86	0.57
1:AA:978:A:H5'	1:AA:1362:A:H62	1.69	0.57
23:BB:2487:G:H2'	23:BB:2488:G:C8	2.39	0.57
10:CK:92:ARG:HE	21:CU:20:ARG:HH22	1.51	0.57
48:BG:148:ARG:HA	48:BG:161:VAL:CB	2.34	0.57
38:DM:40:ARG:HB2	38:DM:93:VAL:CG2	2.33	0.57
1:AA:843:U:OP2	1:AA:843:U:H4'	2.04	0.57
23:BB:1729:U:H3'	23:BB:1730:C:O4'	2.05	0.57
9:CJ:15:HIS:HA	9:CJ:18:ILE:HG22	1.86	0.57
23:BB:2723:C:H5''	42:BN:1:MET:HE2	1.87	0.57
1:CA:1071:C:H2'	1:CA:1072:G:C8	2.38	0.57
23:DB:1728:C:H2'	23:DB:1730:C:O2	2.05	0.57
1:AA:859:G:H2'	1:AA:860:A:H8	1.68	0.57
23:DB:2630:G:H2'	23:DB:2631:G:C8	2.39	0.57
1:AA:57:G:H2'	1:AA:58:C:H6	1.69	0.57
1:AA:213:G:H5''	1:AA:214:C:H5	1.69	0.57
23:BB:1816:C:H3'	25:BC:61:TYR:CE2	2.39	0.57
21:AU:11:PHE:O	21:AU:11:PHE:HD1	1.87	0.57
23:BB:2340:A:H2'	23:BB:2341:G:H8	1.70	0.57
22:DA:86:G:H2'	22:DA:87:U:O4'	2.04	0.57
23:DB:2813:A:H2'	23:DB:2814:A:C8	2.40	0.57
53:D6:25:LEU:HD21	53:D6:118:VAL:HG13	1.86	0.57
1:CA:1260:G:H4'	1:CA:1283:U:O2'	2.05	0.57
23:BB:1636:U:H2'	23:BB:1637:A:H8	1.68	0.57
23:BB:269:C:H2'	23:BB:270:A:H8	1.69	0.57
23:DB:1744:A:H2'	23:DB:1745:A:C8	2.40	0.57
24:BI:75:ALA:HB2	24:BI:112:LYS:HE2	1.85	0.57
23:BB:1930:G:H2'	23:BB:1968:G:O6	2.05	0.57
23:BB:1958:C:O2'	23:BB:1959:G:H5'	2.04	0.57
2:CC:190:THR:HG22	2:CC:191:THR:N	2.19	0.57
52:DW:39:GLN:HG2	52:DW:40:ARG:H	1.68	0.57
23:BB:532:A:N3	23:BB:532:A:H2'	2.18	0.57
5:CF:3:HIS:CD2	5:CF:65:GLU:HG3	2.39	0.57
41:BJ:19:ASP:OD2	41:BJ:58:ASN:HB2	2.05	0.57
25:BC:71:ASP:HA	25:BC:117:SER:O	2.04	0.57
1:CA:1060:U:C5	2:CC:1:GLY:HA3	2.38	0.57
47:BF:41:GLU:O	47:BF:43:ILE:HG22	2.05	0.57
1:CA:1206:G:H2'	1:CA:1207:G:O4'	2.05	0.57
37:DL:6:LEU:H	37:DL:6:LEU:CD2	2.15	0.57
9:CJ:57:VAL:HG13	9:CJ:58:ASN:N	2.18	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:B0:38:LEU:HD23	31:B0:39:ARG:H	1.69	0.57
4:AE:148:SER:HB2	4:AE:150:GLU:OE1	2.04	0.57
36:B2:26:ASN:O	36:B2:30:VAL:HG23	2.04	0.57
1:CA:441:A:H61	1:CA:493:A:N6	2.02	0.57
41:BJ:72:LYS:HB2	41:BJ:89:PHE:H	1.68	0.57
1:AA:1095:U:H2'	1:AA:1096:C:C6	2.40	0.57
40:BH:44:ILE:C	40:BH:46:PHE:H	2.07	0.57
35:BV:28:ALA:HA	35:BV:88:HIS:CE1	2.39	0.57
5:AF:80:PHE:CE1	25:BC:135:PRO:HG2	2.38	0.57
34:D3:62:PRO:HG2	37:DL:48:ARG:NH2	2.19	0.57
1:AA:404:G:O2'	1:AA:405:U:H5'	2.04	0.57
1:AA:1123:U:H4'	9:AJ:39:PRO:HD2	1.86	0.57
39:DX:39:GLN:O	39:DX:42:LEU:HB2	2.05	0.57
23:DB:1259:G:H2'	23:DB:1260:A:C8	2.39	0.57
1:CA:215:C:H2'	1:CA:216:U:C6	2.39	0.57
23:DB:833:A:C1'	37:DL:52:GLY:H	2.18	0.57
1:AA:399:G:H2'	1:AA:400:C:C6	2.40	0.57
26:DD:136:ASN:HD21	26:DD:140:HIS:N	2.03	0.57
23:BB:2537:U:H2'	23:BB:2538:C:C6	2.39	0.57
23:DB:2512:C:H2'	23:DB:2513:A:O4'	2.04	0.57
23:BB:1419:A:H2'	23:BB:1421:G:N7	2.19	0.57
1:CA:407:U:O2'	3:CD:112:GLU:HG3	2.04	0.57
25:DC:61:TYR:HA	25:DC:85:ASN:HD21	1.69	0.57
1:CA:1450:U:H2'	1:CA:1452:C:C5	2.39	0.57
23:DB:1709:U:H2'	23:DB:1710:G:H8	1.70	0.57
23:DB:1164:C:H2'	23:DB:1165:A:H8	1.69	0.57
23:BB:833:A:H1'	37:BL:52:GLY:N	2.19	0.57
23:DB:1716:U:H2'	23:DB:1717:A:H8	1.70	0.57
26:DD:15:PHE:HD1	26:DD:15:PHE:H	1.52	0.57
14:AO:35:GLN:O	14:AO:39:LEU:HD13	2.05	0.57
48:BG:87:GLN:HG2	48:BG:164:ALA:HA	1.86	0.57
20:CB:62:ARG:H	20:CB:62:ARG:HD2	1.70	0.57
23:DB:1015:U:H2'	23:DB:1016:G:C8	2.39	0.57
23:DB:576:U:H2'	23:DB:577:G:C8	2.39	0.57
1:CA:414:A:H2'	1:CA:415:A:O4'	2.04	0.57
40:BH:130:VAL:HG21	40:BH:144:VAL:HG23	1.87	0.57
44:DQ:86:SER:HB2	49:DR:50:GLY:O	2.04	0.57
7:AH:87:ARG:H	7:AH:90:GLU:HB3	1.70	0.57
3:CD:28:ASP:HB2	3:CD:33:ILE:HG21	1.85	0.57
40:DH:127:GLU:HB2	40:DH:143:ILE:CG2	2.33	0.57
47:BF:78:ILE:HD12	47:BF:78:ILE:N	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BM:34:LYS:HE2	38:BM:99:GLY:HA2	1.87	0.57
47:DF:168:LEU:HD13	47:DF:169:LEU:N	2.19	0.57
50:DT:38:ALA:HB1	50:DT:43:ILE:HD11	1.85	0.57
6:CG:110:ARG:HB2	6:CG:118:ARG:HB3	1.87	0.57
23:DB:2267:A:C3'	23:DB:2267:A:H8	2.10	0.57
35:DV:48:MET:O	35:DV:51:GLN:HG3	2.03	0.57
23:DB:2106:U:O2	23:DB:2106:U:H2'	2.03	0.57
49:DR:40:MET:HG3	49:DR:48:LYS:HA	1.87	0.57
1:CA:313:A:H2'	1:CA:314:C:C6	2.39	0.57
23:BB:1725:U:O2'	23:BB:1726:C:H5'	2.04	0.57
1:CA:268:U:H2'	1:CA:269:C:C6	2.39	0.57
1:AA:272:C:H2'	1:AA:273:U:H6	1.68	0.57
23:BB:155:A:H2'	23:BB:156:A:C8	2.40	0.57
23:BB:2557:G:H2'	23:BB:2558:C:H6	1.66	0.57
6:CG:63:VAL:HA	6:CG:66:GLU:CD	2.25	0.57
23:DB:2841:C:H2'	23:DB:2842:G:H8	1.69	0.57
43:DO:47:VAL:HG12	43:DO:48:LEU:N	2.18	0.57
1:CA:1513:A:H2'	1:CA:1514:G:H8	1.70	0.57
23:BB:1259:G:H2'	23:BB:1260:A:C8	2.40	0.57
23:DB:2370:G:H2'	23:DB:2371:G:O4'	2.03	0.57
24:BI:109:ALA:HB1	24:BI:124:MET:HG3	1.86	0.57
1:AA:1450:U:H2'	1:AA:1452:C:C5	2.39	0.57
2:AC:14:VAL:O	2:AC:15:LYS:HD2	2.04	0.57
41:DJ:105:VAL:O	41:DJ:109:LEU:HG	2.04	0.57
23:DB:1927:A:O2'	23:DB:1928:A:H5'	2.03	0.57
23:DB:2633:G:H2'	23:DB:2634:A:O4'	2.05	0.57
1:AA:204:G:H1'	1:AA:466:A:N7	2.20	0.57
23:DB:2648:G:H2'	23:DB:2649:C:O4'	2.04	0.57
23:BB:2322:A:N6	23:BB:2333:A:H62	2.02	0.57
23:BB:111:A:O2'	23:BB:112:U:H5'	2.04	0.57
23:DB:1760:C:H2'	23:DB:1761:C:O4'	2.04	0.57
45:DS:5:ALA:HB3	45:DS:54:ALA:HB2	1.85	0.57
52:BW:23:LYS:NZ	52:BW:24:ARG:HG3	2.20	0.57
52:BW:33:GLY:O	52:BW:34:SER:HB2	2.04	0.57
23:DB:2327:A:H2'	23:DB:2328:A:C8	2.39	0.57
47:BF:65:LEU:N	47:BF:88:VAL:HG22	2.16	0.57
26:BD:107:VAL:HA	26:BD:204:LYS:O	2.04	0.57
53:D6:80:GLU:OE1	53:D6:99:LEU:HD22	2.05	0.57
26:DD:109:VAL:HG11	26:DD:193:VAL:HG11	1.85	0.57
44:BQ:57:ARG:HH11	44:BQ:57:ARG:HG2	1.68	0.57
47:DF:149:ARG:HA	47:DF:149:ARG:NH1	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:58:LYS:C	29:BE:60:TRP:N	2.57	0.57
23:BB:2389:G:C5'	23:BB:2390:U:H5'	2.33	0.57
1:CA:699:C:C2'	1:CA:700:G:H5''	2.33	0.57
23:DB:2264:C:H41	52:DW:11:ASN:ND2	2.02	0.57
24:DI:125:THR:O	24:DI:129:GLU:HG3	2.05	0.57
23:DB:1688:U:O2	23:DB:1700:A:H5'	2.05	0.57
46:BU:34:ILE:HG12	46:BU:63:ALA:CB	2.34	0.57
23:BB:1794:A:H2'	23:BB:1795:C:C6	2.39	0.57
23:BB:1805:A:N3	25:BC:49:THR:CG2	2.68	0.57
23:DB:540:C:H2'	23:DB:541:A:C8	2.39	0.57
30:BY:50:VAL:O	30:BY:54:VAL:HG22	2.04	0.57
50:DT:54:GLU:HG3	50:DT:90:GLY:N	2.20	0.57
1:AA:1123:U:O2'	1:AA:1124:G:H5'	2.05	0.57
39:DX:39:GLN:HB2	39:DX:42:LEU:HD22	1.86	0.57
40:BH:42:LYS:O	40:BH:47:PHE:HB2	2.04	0.57
23:DB:2635:A:H4'	26:DD:79:LEU:HB2	1.87	0.57
1:AA:1008:U:H5''	13:AN:23:ARG:NH2	2.20	0.57
23:DB:543:G:C6	23:DB:544:C:H1'	2.39	0.57
1:CA:373:A:H2'	1:CA:374:A:H8	1.68	0.57
1:CA:451:A:N6	1:CA:480:U:H2'	2.19	0.57
23:BB:417:C:H2'	23:BB:418:C:H6	1.68	0.57
23:DB:1061:U:H4'	23:DB:1070:A:O3'	2.03	0.57
23:BB:1351:C:O2'	23:BB:1571:A:H1'	2.05	0.57
25:DC:69:ASN:O	25:DC:70:LYS:C	2.42	0.57
1:CA:1151:A:HO2'	1:CA:1152:A:H8	1.53	0.57
28:BP:97:TYR:O	28:BP:100:ARG:HB2	2.04	0.57
22:BA:91:C:H2'	22:BA:92:C:H6	1.70	0.57
48:BG:174:LYS:NZ	48:BG:176:LYS:HG2	2.20	0.57
6:AG:23:ALA:O	6:AG:26:VAL:HG22	2.03	0.57
1:AA:414:A:H2'	1:AA:415:A:O4'	2.05	0.57
11:AL:122:LYS:HG3	11:AL:123:ALA:H	1.70	0.57
23:DB:2324:U:H3'	23:DB:2325:G:H5''	1.85	0.57
23:BB:16:C:O2'	23:BB:17:G:H5'	2.04	0.57
23:DB:2035:G:H4'	23:DB:2036:C:OP2	2.03	0.57
52:DW:59:PHE:O	52:DW:60:ALA:CB	2.52	0.57
8:CI:82:ILE:O	8:CI:86:LEU:HD13	2.04	0.57
44:DQ:96:ASP:C	44:DQ:98:ALA:H	2.07	0.57
8:AI:20:ILE:HG23	8:AI:60:LEU:CD1	2.34	0.57
1:AA:1217:C:OP1	13:AN:8:ARG:HD2	2.03	0.57
37:DL:110:VAL:HB	37:DL:127:VAL:HG23	1.85	0.57
1:CA:429:U:H1'	1:CA:430:A:H5''	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:83:GLY:O	46:BU:93:ARG:HA	2.04	0.57
46:DU:81:ARG:HH21	46:DU:81:ARG:H	1.51	0.57
40:DH:82:SER:OG	40:DH:94:ILE:HD11	2.05	0.57
23:DB:1021:A:H62	23:DB:1141:U:H3	1.52	0.57
7:AH:35:ILE:O	7:AH:39:LEU:HG	2.05	0.57
18:AS:27:LYS:NZ	18:AS:27:LYS:HB3	2.19	0.57
26:DD:116:LYS:HB2	26:DD:165:MET:HB3	1.87	0.57
23:DB:2898:U:H2'	23:DB:2899:A:H8	1.69	0.57
43:BO:11:ALA:HB2	43:BO:96:GLY:H	1.68	0.57
23:DB:1443:U:H2'	23:DB:1444:G:C8	2.39	0.57
20:CB:85:SER:O	20:CB:86:CYS:HB2	2.04	0.57
53:B6:102:ASN:HD22	53:B6:102:ASN:H	1.51	0.57
1:AA:93:U:H3'	1:AA:94:G:H5''	1.86	0.57
1:CA:1342:C:H2'	1:CA:1343:G:C8	2.39	0.57
29:BE:46:GLN:HB2	29:BE:87:ALA:O	2.05	0.57
1:AA:735:C:O2'	1:AA:736:C:H5'	2.05	0.57
19:CT:38:ILE:HG12	19:CT:85:LEU:HD13	1.86	0.57
23:BB:1667:G:OP1	27:BK:6:THR:HA	2.04	0.57
23:DB:2537:U:H2'	23:DB:2538:C:C6	2.39	0.57
1:AA:707:U:H2'	1:AA:708:C:H6	1.70	0.57
52:BW:44:PHE:O	52:BW:78:PHE:HA	2.05	0.57
23:DB:2182:U:H2'	23:DB:2183:A:H8	1.69	0.57
23:BB:2290:G:H2'	23:BB:2291:U:C6	2.39	0.57
21:CU:11:PHE:O	21:CU:11:PHE:HD1	1.87	0.57
23:DB:950:G:H2'	23:DB:951:C:C6	2.40	0.57
23:DB:234:U:H2'	23:DB:235:U:H6	1.69	0.57
37:DL:131:ALA:C	37:DL:133:ALA:H	2.08	0.57
26:BD:108:ASP:OD2	26:BD:173:GLN:HA	2.03	0.57
23:DB:2636:C:H4'	26:DD:81:GLU:OE2	2.03	0.57
1:CA:182:A:O2'	1:CA:183:C:H5''	2.04	0.57
24:DI:37:PHE:CZ	24:DI:58:ILE:HD11	2.39	0.57
19:CT:27:MET:O	19:CT:31:ILE:HG13	2.05	0.57
1:CA:128:G:H2'	1:CA:129:A:C8	2.40	0.57
46:DU:25:LYS:HE3	46:DU:36:GLU:HG3	1.86	0.57
23:DB:392:U:O2'	23:DB:393:C:H5'	2.05	0.57
40:BH:27:ARG:H	40:BH:31:VAL:HG21	1.69	0.57
27:DK:35:VAL:HG12	27:DK:69:VAL:CG2	2.35	0.57
53:D6:59:THR:O	53:D6:61:PRO:HD3	2.05	0.57
8:AI:23:GLY:N	8:AI:60:LEU:HA	2.20	0.57
25:BC:69:ASN:O	25:BC:70:LYS:C	2.42	0.57
25:BC:94:LEU:HB2	25:BC:100:ARG:CD	2.35	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DL:79:LEU:HB3	37:DL:115:GLU:O	2.05	0.57
22:BA:28:C:OP1	43:BO:31:THR:HG21	2.05	0.57
3:AD:28:ASP:HB2	3:AD:33:ILE:HG21	1.85	0.57
24:DI:71:LYS:HB3	24:DI:115:ASP:OD2	2.04	0.57
37:BL:57:LEU:C	37:BL:59:ARG:H	2.07	0.57
10:AK:111:ASP:HB2	21:AU:19:LYS:CE	2.33	0.57
18:CS:15:LEU:O	18:CS:18:VAL:HG12	2.05	0.57
37:BL:17:LYS:HD2	37:BL:19:LEU:HD11	1.86	0.57
37:DL:57:LEU:C	37:DL:59:ARG:H	2.08	0.57
31:B0:48:TYR:CG	31:B0:49:ARG:N	2.72	0.57
29:BE:151:GLY:CA	29:BE:195:GLN:HE22	2.18	0.57
35:DV:30:ILE:HG12	35:DV:91:PHE:HB2	1.85	0.57
27:DK:71:ARG:HB3	27:DK:72:PRO:HD2	1.86	0.57
23:BB:591:U:H1'	34:B3:1:PRO:N	2.19	0.57
24:DI:45:THR:CA	24:DI:48:ILE:HG22	2.33	0.57
29:DE:150:THR:HG21	29:DE:153:LEU:HA	1.85	0.57
46:DU:11:ILE:CG2	46:DU:70:ALA:HB3	2.34	0.57
31:D0:33:SER:C	31:D0:35:GLU:H	2.08	0.57
3:CD:196:GLU:O	3:CD:199:ILE:HG12	2.05	0.57
36:B2:33:ARG:HH21	36:B2:33:ARG:HB2	1.70	0.57
8:CI:123:ARG:HB3	8:CI:123:ARG:NH1	2.20	0.57
12:CM:90:HIS:HA	12:CM:108:ARG:HH22	1.69	0.57
23:BB:2615:U:C2	31:B0:3:GLN:HA	2.39	0.57
46:BU:11:ILE:CG2	46:BU:70:ALA:HB3	2.34	0.57
23:BB:1487:U:H2'	23:BB:1488:C:C6	2.40	0.57
24:BI:105:LEU:HD11	24:BI:139:VAL:CG1	2.34	0.57
29:DE:46:GLN:HB2	29:DE:87:ALA:O	2.04	0.57
20:AB:83:ALA:HB3	20:AB:90:PHE:HB3	1.87	0.57
1:AA:1009:U:H5'	1:AA:1010:U:OP2	2.04	0.57
39:BX:9:LYS:O	39:BX:13:GLU:HG2	2.04	0.57
23:BB:2188:U:H2'	23:BB:2189:U:C6	2.40	0.57
1:CA:1468:A:O2'	1:CA:1469:C:H5'	2.05	0.57
23:DB:417:C:H2'	23:DB:418:C:H6	1.68	0.57
42:DN:61:ALA:C	42:DN:63:ARG:H	2.08	0.57
23:DB:2487:G:H2'	23:DB:2488:G:H8	1.70	0.57
23:DB:222:A:N6	23:DB:232:G:H1'	2.20	0.57
23:BB:833:A:H1'	37:BL:52:GLY:H	1.69	0.57
24:DI:99:LYS:HD3	24:DI:99:LYS:H	1.69	0.57
51:BZ:41:GLU:O	51:BZ:44:LYS:HD2	2.05	0.57
1:CA:903:G:O2'	1:CA:904:U:H5'	2.05	0.57
25:BC:270:ARG:HB3	25:BC:270:ARG:NH1	2.20	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:485:C:O2'	23:BB:486:C:H5'	2.03	0.57
23:BB:1760:C:H2'	23:BB:1761:C:O4'	2.05	0.57
1:AA:545:C:H5''	3:AD:68:GLU:HG2	1.85	0.57
23:BB:1647:U:H3'	23:BB:1647:U:P	2.44	0.57
23:DB:127:A:N7	36:D2:46:LYS:HE2	2.20	0.57
40:DH:32:PRO:O	40:DH:33:GLN:HB2	2.04	0.57
48:BG:68:ARG:HH12	48:BG:72:ASN:ND2	2.02	0.57
26:BD:32:ASN:HA	26:BD:51:THR:O	2.05	0.57
53:B6:59:THR:HG23	53:B6:67:VAL:CG2	2.35	0.57
47:DF:115:GLY:HA2	47:DF:177:ARG:HH11	1.67	0.57
23:BB:1021:A:H62	23:BB:1141:U:H3	1.52	0.57
8:AI:79:ARG:O	8:AI:83:THR:HG22	2.04	0.57
38:DM:34:LYS:HE2	38:DM:99:GLY:HA2	1.85	0.57
44:BQ:91:ARG:CZ	49:BR:11:GLN:H	2.18	0.57
23:BB:988:A:P	30:BY:11:SER:HB3	2.45	0.57
47:DF:141:ASP:CB	47:DF:144:LYS:HB2	2.35	0.57
23:BB:1119:U:OP1	35:BV:83:LYS:HE3	2.04	0.57
1:AA:1319:A:H3'	18:AS:2:ARG:HA	1.86	0.57
23:BB:2867:G:N3	23:BB:2867:G:C2'	2.68	0.57
50:DT:50:LEU:HD22	50:DT:50:LEU:H	1.70	0.57
7:CH:35:ILE:O	7:CH:39:LEU:HG	2.04	0.57
23:BB:587:C:O2'	37:BL:19:LEU:HD13	2.05	0.57
11:CL:86:VAL:HB	11:CL:89:LEU:HB2	1.86	0.57
23:BB:2264:C:H41	52:BW:11:ASN:HD21	1.52	0.57
29:BE:188:MET:HG2	29:BE:193:VAL:HG22	1.87	0.57
1:AA:1370:G:O2'	1:AA:1371:G:H5'	2.05	0.57
23:DB:2379:G:H5'	43:DO:21:LEU:CD1	2.33	0.57
35:DV:80:HIS:HB3	35:DV:83:LYS:O	2.05	0.57
23:BB:1080:A:H2'	23:BB:1081:U:H6	1.70	0.57
45:BS:56:ALA:O	45:BS:59:GLU:HB2	2.04	0.57
29:DE:145:ASP:HB3	29:DE:184:ASP:HB2	1.87	0.57
29:DE:115:GLN:HE22	37:DL:2:ARG:HD3	1.68	0.57
38:BM:126:ILE:HG22	38:BM:127:LYS:N	2.18	0.57
23:DB:1338:G:H4'	50:DT:18:GLU:CG	2.34	0.57
4:AE:155:LYS:O	4:AE:158:LYS:HE3	2.04	0.57
1:AA:268:U:H2'	1:AA:269:C:C6	2.38	0.57
23:BB:1789:A:OP2	25:BC:220:ARG:HD3	2.04	0.57
23:DB:1725:U:O2'	23:DB:1726:C:H5'	2.05	0.57
22:BA:13:G:C2'	22:BA:14:U:H5''	2.33	0.57
23:DB:2028:U:H2'	23:DB:2029:G:C8	2.39	0.57
6:CG:129:ASN:HA	6:CG:134:VAL:HG21	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1513:A:H2'	1:AA:1514:G:H8	1.67	0.57
1:AA:214:C:H2'	1:AA:215:C:C6	2.39	0.57
14:AO:8:THR:O	14:AO:12:VAL:HG23	2.04	0.57
52:BW:44:PHE:HB3	52:BW:78:PHE:CD1	2.40	0.57
1:AA:1308:U:OP2	12:AM:97:ARG:HD3	2.05	0.57
3:CD:39:GLN:HG3	3:CD:40:HIS:N	2.19	0.57
43:BO:79:ALA:HA	43:BO:115:LEU:HD23	1.87	0.57
1:CA:692:U:H2'	1:CA:694:A:OP2	2.05	0.57
23:BB:1636:U:H2'	23:BB:1637:A:C8	2.39	0.57
23:BB:1930:G:H2'	23:BB:1968:G:C6	2.38	0.57
23:DB:1709:U:H2'	23:DB:1710:G:C8	2.40	0.57
2:AC:13:ILE:O	2:AC:14:VAL:HG22	2.05	0.57
23:BB:2333:A:H5'	23:BB:2335:A:H1'	1.87	0.57
28:DP:30:TRP:HD1	28:DP:39:LEU:HG	1.70	0.57
23:BB:2660:A:H2'	23:BB:2661:G:C8	2.40	0.57
2:CC:16:PRO:HG2	2:CC:53:ARG:NH2	2.20	0.57
23:DB:956:G:OP2	38:DM:86:LYS:HE2	2.05	0.57
23:BB:1534:U:H6	23:BB:1534:U:O5'	1.88	0.57
23:BB:2804:U:H2'	23:BB:2805:C:C6	2.39	0.57
23:BB:2035:G:H4'	23:BB:2036:C:OP2	2.04	0.57
20:AB:202:ASN:C	20:AB:202:ASN:HD22	2.07	0.57
53:D6:30:THR:C	53:D6:32:ARG:H	2.07	0.57
52:DW:23:LYS:O	52:DW:66:VAL:HB	2.04	0.57
8:CI:70:GLY:O	8:CI:74:GLN:HB2	2.04	0.57
26:DD:104:VAL:HA	26:DD:106:LYS:HZ3	1.70	0.57
23:DB:633:A:O5'	23:DB:633:A:H8	1.87	0.57
43:DO:51:ALA:O	43:DO:74:VAL:HG13	2.05	0.57
7:AH:100:ILE:HG13	7:AH:128:VAL:O	2.05	0.57
46:DU:73:ASN:C	46:DU:75:ALA:H	2.08	0.57
40:DH:80:ILE:HD11	40:DH:146:VAL:HA	1.87	0.57
47:DF:131:VAL:C	47:DF:133:GLU:H	2.07	0.57
35:BV:80:HIS:HB3	35:BV:83:LYS:O	2.05	0.57
1:CA:1226:C:H2'	12:CM:101:THR:OG1	2.04	0.57
1:CA:1360:A:H2'	1:CA:1361:G:O4'	2.05	0.57
50:DT:40:LYS:HG2	50:DT:60:THR:HG23	1.87	0.57
32:D4:7:VAL:HG23	32:D4:35:GLN:CB	2.32	0.57
23:BB:546:U:H5'	23:BB:548:G:O6	2.05	0.57
1:CA:719:C:O2'	17:CR:37:LYS:HB2	2.05	0.57
23:DB:2723:C:H5''	42:DN:1:MET:HE2	1.87	0.57
23:DB:1283:G:N2	23:DB:1285:A:H3'	2.20	0.57
23:BB:513:A:O5'	23:BB:513:A:H8	1.88	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DQ:10:ARG:HB2	44:DQ:10:ARG:CZ	2.33	0.57
23:BB:1443:U:H2'	23:BB:1444:G:C8	2.40	0.57
20:AB:103:TRP:O	20:AB:107:ARG:HG2	2.05	0.57
1:CA:1301:U:H2'	1:CA:1301:U:O2	2.04	0.57
23:DB:151:C:H2'	23:DB:152:A:H8	1.68	0.57
23:BB:2216:G:H2'	23:BB:2217:G:C8	2.39	0.57
1:CA:394:G:H2'	1:CA:395:C:C6	2.39	0.57
23:BB:2099:U:H2'	23:BB:2100:G:H8	1.70	0.57
23:DB:936:A:H2'	23:DB:937:C:C6	2.39	0.57
26:BD:117:GLY:HA2	26:BD:164:GLN:CD	2.25	0.57
23:BB:2496:C:OP1	38:BM:82:MET:HB2	2.05	0.57
23:DB:1164:C:H2'	23:DB:1165:A:C8	2.40	0.57
23:DB:993:G:H1'	49:DR:91:GLN:NE2	2.19	0.57
23:BB:1716:U:H2'	23:BB:1717:A:H8	1.70	0.57
13:AN:14:ALA:O	13:AN:18:LYS:HG3	2.05	0.57
23:BB:1475:G:H4'	23:BB:1476:U:O5'	2.05	0.57
29:BE:31:VAL:HG21	29:BE:104:ALA:HB2	1.86	0.57
23:BB:1120:G:O2'	23:BB:1121:C:H5'	2.04	0.57
23:DB:485:C:O2'	23:DB:486:C:H5'	2.04	0.57
15:CP:20:VAL:HG23	15:CP:34:GLU:O	2.05	0.57
23:DB:1859:U:H2'	23:DB:1860:G:C8	2.40	0.57
23:BB:2633:G:H2'	23:BB:2634:A:O4'	2.05	0.57
52:BW:39:GLN:HG2	52:BW:40:ARG:H	1.69	0.56
52:BW:23:LYS:O	52:BW:66:VAL:HB	2.04	0.56
25:DC:143:VAL:HG12	25:DC:144:GLU:H	1.68	0.56
44:BQ:29:ARG:HH11	44:BQ:29:ARG:HG2	1.69	0.56
22:BA:43:C:H1'	47:BF:91:ARG:NH2	2.20	0.56
40:BH:133:GLN:HA	40:BH:139:PHE:CB	2.35	0.56
40:BH:134:VAL:HG22	40:BH:135:HIS:N	2.17	0.56
53:D6:56:ALA:HB1	53:D6:70:SER:HB2	1.87	0.56
53:D6:70:SER:HB3	53:D6:76:LEU:CD2	2.35	0.56
52:DW:48:ALA:HB3	52:DW:81:ILE:O	2.05	0.56
20:CB:202:ASN:C	20:CB:202:ASN:HD22	2.08	0.56
7:CH:87:ARG:H	7:CH:90:GLU:HB3	1.70	0.56
53:B6:126:ARG:HD3	53:B6:169:ILE:HD12	1.87	0.56
43:DO:88:LYS:HG2	43:DO:89:ASP:N	2.20	0.56
35:BV:80:HIS:CD2	35:BV:83:LYS:H	2.23	0.56
23:DB:138:U:H4'	23:DB:139:U:H2'	1.86	0.56
50:DT:55:VAL:HG13	50:DT:85:VAL:HG12	1.87	0.56
45:DS:52:GLU:HA	45:DS:55:ILE:CG2	2.33	0.56
6:CG:107:ALA:O	6:CG:110:ARG:HB2	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DK:20:MET:C	27:DK:41:ILE:HD12	2.25	0.56
29:DE:151:GLY:CA	29:DE:195:GLN:HE22	2.18	0.56
42:BN:32:GLU:O	42:BN:114:GLU:HA	2.05	0.56
35:BV:30:ILE:HD12	35:BV:38:LEU:HD23	1.87	0.56
1:AA:1390:U:H2'	1:AA:1391:U:C6	2.40	0.56
9:CJ:14:ASP:OD1	9:CJ:17:LEU:HB2	2.05	0.56
23:BB:192:C:H2'	23:BB:193:U:H5'	1.86	0.56
23:DB:419:U:H2'	23:DB:420:C:C6	2.39	0.56
36:D2:30:VAL:HA	36:D2:33:ARG:HH22	1.68	0.56
26:DD:33:ARG:NE	26:DD:74:GLU:HB3	2.20	0.56
2:AC:156:LEU:HD11	2:AC:165:GLU:HB2	1.87	0.56
23:BB:2847:U:H5''	28:BP:94:ALA:CB	2.34	0.56
1:AA:68:G:H2'	1:AA:69:G:O4'	2.05	0.56
23:BB:2457:U:C2'	23:BB:2458:G:H5'	2.35	0.56
52:DW:77:LYS:HZ2	52:DW:77:LYS:H	1.51	0.56
23:BB:2880:C:C1'	42:BN:91:ALA:HB3	2.34	0.56
23:DB:2577:A:H5''	23:DB:2578:G:H5'	1.87	0.56
23:BB:1046:A:H3'	23:BB:1047:G:H5''	1.87	0.56
41:DJ:103:ILE:HA	41:DJ:106:LYS:HB3	1.87	0.56
23:BB:2648:G:H2'	23:BB:2649:C:O4'	2.04	0.56
49:BR:36:ALA:HA	49:BR:58:VAL:HA	1.87	0.56
28:BP:103:THR:HG22	28:BP:104:GLY:H	1.70	0.56
23:DB:2708:G:H2'	23:DB:2709:G:H8	1.69	0.56
22:DA:109:A:H2'	22:DA:110:C:C6	2.40	0.56
7:CH:37:ASN:O	7:CH:41:GLU:HG2	2.05	0.56
9:AJ:80:THR:HB	9:AJ:83:THR:OG1	2.03	0.56
27:BK:109:SER:HB2	27:BK:111:LYS:HE2	1.87	0.56
23:DB:460:A:H2'	23:DB:461:C:O4'	2.05	0.56
1:CA:1488:G:H2'	1:CA:1489:G:H8	1.70	0.56
30:DY:21:ALA:O	30:DY:24:LEU:HB3	2.04	0.56
23:DB:1098:A:C3'	24:DI:4:VAL:N	2.68	0.56
25:DC:90:ILE:CD1	25:DC:102:TYR:HB3	2.36	0.56
22:BA:42:C:O4'	47:BF:65:LEU:HB2	2.05	0.56
53:B6:79:ILE:HA	53:B6:82:ALA:HB3	1.87	0.56
23:DB:2359:C:H2'	23:DB:2360:G:C8	2.40	0.56
13:AN:79:SER:OG	13:AN:82:LYS:HG2	2.05	0.56
23:BB:2393:U:H5'	37:BL:60:ARG:O	2.06	0.56
9:AJ:57:VAL:HG13	9:AJ:58:ASN:N	2.20	0.56
16:AQ:60:ILE:HA	16:AQ:75:VAL:HG13	1.85	0.56
23:DB:2867:G:N3	23:DB:2867:G:C2'	2.68	0.56
23:DB:1082:U:O4	23:DB:1086:A:C2	2.57	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1392:G:O2'	1:CA:1393:U:H5'	2.05	0.56
23:DB:2078:C:H2'	23:DB:2079:U:H6	1.68	0.56
23:BB:2297:A:N6	23:BB:2319:G:H1'	2.19	0.56
39:DX:49:ASP:O	39:DX:53:VAL:HG23	2.05	0.56
23:DB:1203:U:H3'	23:DB:1204:A:C5'	2.34	0.56
25:DC:245:THR:C	25:DC:247:TRP:H	2.09	0.56
53:B6:143:LEU:O	53:B6:147:LEU:HG	2.04	0.56
1:CA:501:C:H1'	1:CA:549:C:H1'	1.85	0.56
1:CA:369:G:O2'	1:CA:370:C:H5'	2.05	0.56
23:BB:1166:G:H2'	23:BB:1167:C:H6	1.70	0.56
23:BB:633:A:O5'	23:BB:633:A:H8	1.88	0.56
23:DB:2216:G:H2'	23:DB:2217:G:C8	2.40	0.56
26:BD:125:TRP:CD2	26:BD:160:LYS:HB3	2.40	0.56
1:AA:562:U:H1'	11:AL:11:ARG:HB3	1.85	0.56
6:AG:70:PRO:O	6:AG:95:ARG:HG3	2.06	0.56
23:DB:2438:U:O2'	23:DB:2439:A:H5''	2.05	0.56
7:AH:113:ARG:HH21	7:AH:114:ALA:HA	1.70	0.56
1:CA:1095:U:H2'	1:CA:1096:C:C6	2.40	0.56
44:DQ:40:LYS:HA	44:DQ:43:GLN:OE1	2.04	0.56
22:BA:109:A:H2'	22:BA:110:C:C6	2.40	0.56
40:BH:32:PRO:O	40:BH:33:GLN:HB2	2.03	0.56
52:BW:59:PHE:O	52:BW:60:ALA:CB	2.52	0.56
41:BJ:36:LEU:HD12	41:BJ:118:MET:O	2.04	0.56
44:DQ:91:ARG:CZ	49:DR:11:GLN:H	2.18	0.56
8:AI:46:VAL:O	8:AI:79:ARG:HG3	2.05	0.56
1:AA:1348:U:C4'	8:AI:121:ARG:HG3	2.27	0.56
26:DD:7:LYS:HB2	26:DD:77:ARG:NH1	2.18	0.56
26:DD:4:LEU:HD23	26:DD:101:PHE:CE1	2.40	0.56
47:DF:41:GLU:O	47:DF:43:ILE:HG22	2.05	0.56
22:DA:27:C:N4	22:DA:28:C:N4	2.54	0.56
7:AH:94:VAL:HG12	7:AH:99:GLY:HA3	1.87	0.56
50:BT:40:LYS:HG2	50:BT:60:THR:HG23	1.87	0.56
1:CA:1296:C:H4'	1:CA:1302:C:N4	2.13	0.56
25:DC:76:VAL:CG1	25:DC:114:GLN:HG2	2.32	0.56
25:DC:94:LEU:HB2	25:DC:100:ARG:CD	2.35	0.56
22:DA:2:G:O2'	22:DA:3:C:H5'	2.05	0.56
42:BN:38:LEU:O	42:BN:42:LYS:HG3	2.06	0.56
12:CM:44:ILE:HA	12:CM:47:LEU:CD1	2.36	0.56
43:DO:88:LYS:HG2	43:DO:89:ASP:H	1.70	0.56
47:DF:11:VAL:HG21	47:DF:172:PHE:CE1	2.40	0.56
47:DF:137:PHE:HB2	47:DF:138:PRO:CD	2.33	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BV:44:HIS:HE1	35:BV:86:LEU:H	1.51	0.56
1:CA:1080:A:H2'	1:CA:1081:A:H5'	1.87	0.56
1:CA:922:G:H2'	1:CA:923:A:C8	2.40	0.56
10:AK:22:ILE:HD13	10:AK:95:THR:CG2	2.35	0.56
43:DO:26:LEU:HB2	43:DO:39:VAL:HG22	1.88	0.56
6:AG:114:SER:O	6:AG:118:ARG:HG3	2.05	0.56
52:BW:10:ARG:O	52:BW:11:ASN:HB2	2.06	0.56
21:CU:19:LYS:HD3	21:CU:20:ARG:HH21	1.69	0.56
23:DB:979:A:H3'	23:DB:980:A:C5'	2.35	0.56
23:DB:1655:A:H2'	23:DB:1656:C:O4'	2.05	0.56
23:DB:2722:G:O2'	23:DB:2723:C:H5'	2.06	0.56
29:DE:189:THR:O	29:DE:193:VAL:HG23	2.04	0.56
31:D0:41:HIS:HB2	42:DN:99:LYS:O	2.05	0.56
40:DH:14:SER:HB2	40:DH:17:ASP:CB	2.35	0.56
1:CA:909:A:H2'	1:CA:910:C:O4'	2.06	0.56
44:BQ:104:ALA:O	44:BQ:105:PHE:HB3	2.05	0.56
49:BR:39:LEU:O	49:BR:40:MET:HB2	2.04	0.56
36:B2:21:ARG:HH21	36:B2:43:THR:CG2	2.17	0.56
1:AA:1071:C:H2'	1:AA:1072:G:C8	2.39	0.56
2:CC:129:PHE:CD2	2:CC:156:LEU:HD22	2.40	0.56
23:BB:2135:A:C2	23:BB:2136:G:H1'	2.40	0.56
12:AM:95:PRO:N	12:AM:108:ARG:HG2	2.20	0.56
23:BB:1785:A:O2'	23:BB:1786:A:H5'	2.05	0.56
27:DK:87:LEU:HD12	27:DK:92:GLU:HA	1.87	0.56
23:DB:125:A:C2	36:D2:10:LEU:HA	2.40	0.56
23:DB:155:A:H2'	23:DB:156:A:C8	2.40	0.56
23:DB:836:G:H2'	23:DB:837:C:H6	1.68	0.56
1:AA:193:C:H2'	1:AA:194:C:C5	2.40	0.56
23:BB:1824:G:OP1	25:BC:51:ARG:HD3	2.05	0.56
23:DB:1487:U:H2'	23:DB:1488:C:C6	2.40	0.56
23:DB:1488:C:O2'	23:DB:1489:C:H5'	2.05	0.56
23:DB:1429:G:H2'	23:DB:1430:G:H8	1.71	0.56
20:AB:79:VAL:HG12	20:AB:90:PHE:HB2	1.87	0.56
42:DN:47:VAL:C	42:DN:50:PRO:HD2	2.25	0.56
39:BX:39:GLN:O	39:BX:42:LEU:HB2	2.04	0.56
39:BX:39:GLN:HB2	39:BX:42:LEU:HD22	1.86	0.56
1:AA:394:G:H2'	1:AA:395:C:C6	2.40	0.56
14:CO:8:THR:O	14:CO:12:VAL:HG23	2.04	0.56
11:CL:64:SER:OG	11:CL:96:THR:HG23	2.04	0.56
1:CA:1008:U:H5''	13:CN:23:ARG:NH2	2.21	0.56
23:DB:547:A:H2'	23:DB:547:A:N3	2.19	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AG:4:ARG:HE	6:AG:6:ILE:HG23	1.69	0.56
20:AB:128:LEU:HD13	20:AB:129:THR:H	1.69	0.56
23:BB:1374:G:H2'	23:BB:1375:U:C6	2.40	0.56
23:DB:1923:U:H2'	23:DB:1924:C:C6	2.40	0.56
25:BC:244:VAL:HB	25:BC:249:VAL:N	2.20	0.56
23:BB:1403:A:O2'	23:BB:1404:C:H5'	2.04	0.56
11:CL:7:VAL:HG22	16:CQ:33:TYR:HD1	1.70	0.56
26:BD:122:VAL:HA	26:BD:127:PHE:H	1.70	0.56
23:BB:570:G:H2'	23:BB:2030:A:N7	2.19	0.56
1:CA:796:C:OP1	10:CK:127:ARG:HB3	2.05	0.56
23:BB:1573:G:H2'	23:BB:1574:C:H5'	1.88	0.56
1:AA:950:U:H2'	1:AA:951:G:H8	1.69	0.56
3:AD:39:GLN:HG3	3:AD:40:HIS:N	2.20	0.56
34:B3:7:ARG:HG3	34:B3:7:ARG:NH1	2.19	0.56
1:AA:825:A:H2'	1:AA:826:C:H6	1.70	0.56
1:CA:628:G:O2'	1:CA:629:A:H5'	2.05	0.56
23:DB:2276:G:OP2	38:DM:85:GLY:N	2.38	0.56
1:CA:55:A:OP2	1:CA:352:C:N4	2.37	0.56
1:CA:939:G:H5'	6:CG:101:ARG:NH1	2.20	0.56
1:CA:54:C:H2'	1:CA:352:C:H41	1.69	0.56
1:CA:154:U:H2'	1:CA:155:A:C8	2.39	0.56
23:BB:1164:C:H2'	23:BB:1165:A:H8	1.70	0.56
5:CF:43:GLY:HA2	5:CF:58:HIS:NE2	2.21	0.56
21:CU:26:GLY:O	21:CU:30:GLU:HB2	2.06	0.56
13:CN:14:ALA:O	13:CN:18:LYS:HG3	2.05	0.56
49:BR:91:GLN:HG3	49:BR:92:TRP:H	1.70	0.56
23:DB:2691:C:H2'	23:DB:2692:G:H8	1.70	0.56
29:BE:103:GLY:O	29:BE:106:LYS:HB2	2.05	0.56
23:BB:1857:G:N2	23:BB:1884:G:H2'	2.19	0.56
1:AA:1206:G:H2'	1:AA:1207:G:O4'	2.06	0.56
48:DG:84:LYS:HB3	48:DG:132:LEU:O	2.05	0.56
26:BD:7:LYS:HB2	26:BD:77:ARG:NH1	2.17	0.56
8:CI:79:ARG:NH2	8:CI:102:PHE:HA	2.21	0.56
8:CI:46:VAL:O	8:CI:79:ARG:HG3	2.05	0.56
8:AI:20:ILE:HG23	8:AI:60:LEU:HD11	1.87	0.56
8:AI:55:ASP:HB2	8:AI:59:LYS:HG3	1.87	0.56
26:DD:25:THR:HG21	26:DD:193:VAL:HG22	1.88	0.56
41:DJ:58:ASN:HA	41:DJ:127:GLY:HA3	1.86	0.56
50:BT:55:VAL:HG13	50:BT:85:VAL:HG12	1.88	0.56
33:B1:34:GLU:HA	33:B1:48:TYR:O	2.06	0.56
47:DF:135:ILE:HD11	47:DF:137:PHE:CD1	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:764:C:N4	1:CA:812:G:H1	2.03	0.56
18:CS:35:ARG:HB3	18:CS:50:VAL:CG1	2.35	0.56
53:D6:19:GLU:HA	53:D6:22:GLU:HG3	1.88	0.56
21:CU:19:LYS:HB2	21:CU:20:ARG:HE	1.69	0.56
23:DB:981:A:H2'	23:DB:982:C:H5''	1.86	0.56
22:DA:78:A:H2'	22:DA:79:G:O4'	2.05	0.56
1:CA:719:C:H2'	17:CR:38:ILE:CD1	2.35	0.56
23:BB:28:A:H61	23:BB:512:G:H1'	1.69	0.56
1:CA:715:A:H2'	1:CA:716:A:C8	2.37	0.56
3:CD:201:GLU:OE1	4:CE:104:ILE:HG22	2.06	0.56
35:DV:28:ALA:HA	35:DV:88:HIS:CE1	2.40	0.56
1:CA:1123:U:H4'	9:CJ:39:PRO:HD2	1.87	0.56
1:CA:635:A:H2'	1:CA:636:U:H6	1.70	0.56
26:BD:136:ASN:HD21	26:BD:140:HIS:N	2.03	0.56
1:CA:502:A:H2'	1:CA:503:C:H6	1.71	0.56
50:BT:69:ARG:HB2	50:BT:69:ARG:HH11	1.70	0.56
26:BD:159:LYS:O	26:BD:161:MET:HG2	2.05	0.56
10:CK:61:ALA:O	10:CK:64:VAL:HG12	2.05	0.56
11:AL:7:VAL:HG22	16:AQ:33:TYR:HD1	1.71	0.56
1:CA:398:U:H2'	1:CA:399:G:C8	2.40	0.56
41:DJ:93:ILE:O	41:DJ:97:PRO:HG3	2.05	0.56
1:CA:612:C:H2'	1:CA:613:C:C6	2.41	0.56
6:CG:35:LYS:O	6:CG:39:GLU:HG3	2.05	0.56
22:DA:95:U:H2'	22:DA:96:G:C8	2.39	0.56
23:DB:1881:C:H2'	23:DB:1882:U:O4'	2.06	0.56
23:DB:1885:A:H3'	23:DB:1886:U:C6	2.40	0.56
2:CC:13:ILE:H	2:CC:13:ILE:HD13	1.70	0.56
23:BB:2021:C:OP1	31:B0:8:THR:HG21	2.05	0.56
33:D1:10:LEU:O	33:D1:19:PHE:HB2	2.05	0.56
23:BB:549:G:H3'	23:BB:549:G:OP2	2.06	0.56
1:CA:779:C:H5''	10:CK:123:PRO:HB3	1.88	0.56
25:BC:221:GLY:C	25:BC:223:ALA:H	2.09	0.56
44:BQ:24:TYR:O	44:BQ:27:ARG:HB2	2.06	0.56
53:D6:51:PRO:HB2	53:D6:53:ASN:HD21	1.70	0.56
23:DB:855:G:N3	52:DW:23:LYS:HE3	2.21	0.56
53:B6:58:VAL:HG12	53:B6:59:THR:N	2.20	0.56
25:BC:75:ALA:CB	25:BC:95:TYR:HA	2.33	0.56
23:DB:673:C:C2'	23:DB:674:G:H5'	2.36	0.56
29:DE:61:ARG:NH1	29:DE:64:GLY:HA3	2.21	0.56
42:DN:38:LEU:O	42:DN:42:LYS:HG3	2.05	0.56
44:BQ:94:LEU:HD21	49:BR:11:GLN:HB2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:160:LEU:N	3:CD:160:LEU:HD13	2.18	0.56
47:BF:168:LEU:HD13	47:BF:169:LEU:N	2.21	0.56
29:BE:134:LEU:HD21	29:BE:161:ALA:HB2	1.87	0.56
17:AR:34:GLU:HB2	21:AU:18:PHE:CZ	2.40	0.56
12:AM:44:ILE:HD12	12:AM:45:SER:H	1.70	0.56
50:DT:1:MET:C	50:DT:2:ILE:HD13	2.26	0.56
38:DM:50:ARG:HA	38:DM:53:MET:CE	2.33	0.56
10:CK:111:ASP:HB2	21:CU:19:LYS:CE	2.34	0.56
29:BE:189:THR:O	29:BE:193:VAL:HG23	2.05	0.56
1:CA:1313:U:OP1	18:CS:6:LYS:HD3	2.06	0.56
45:BS:26:GLY:N	45:BS:71:VAL:HG13	2.20	0.56
45:BS:27:LYS:H	45:BS:27:LYS:HD2	1.71	0.56
28:DP:112:ARG:HH11	28:DP:112:ARG:HB2	1.71	0.56
29:BE:47:LYS:HB3	29:BE:51:GLU:HB2	1.87	0.56
2:AC:61:LYS:O	2:AC:96:VAL:HB	2.04	0.56
23:DB:17:G:H2'	23:DB:18:U:C6	2.41	0.56
11:CL:54:VAL:HG21	11:CL:79:ILE:HD11	1.87	0.56
52:DW:44:PHE:O	52:DW:78:PHE:HA	2.05	0.56
25:BC:245:THR:C	25:BC:247:TRP:H	2.09	0.56
23:BB:309:A:H4'	46:BU:15:GLY:HA3	1.88	0.56
25:DC:123:ILE:O	25:DC:123:ILE:HG13	2.04	0.56
1:AA:638:U:H2'	1:AA:639:G:O4'	2.06	0.56
1:AA:154:U:H2'	1:AA:155:A:C8	2.40	0.56
23:DB:408:G:O2'	23:DB:409:G:H5'	2.05	0.56
23:BB:596:U:H2'	23:BB:597:G:C8	2.41	0.56
23:BB:596:U:H2'	23:BB:597:G:H8	1.70	0.56
21:AU:26:GLY:O	21:AU:30:GLU:HB2	2.06	0.56
21:AU:27:VAL:O	21:AU:31:VAL:HG23	2.05	0.56
1:CA:731:G:O2'	1:CA:732:C:H5'	2.05	0.56
1:AA:591:U:H2'	1:AA:592:G:H8	1.70	0.56
23:DB:659:G:H4'	29:DE:95:LYS:HB3	1.87	0.56
23:BB:2888:C:H2'	23:BB:2889:C:C6	2.40	0.56
20:AB:156:LEU:HD12	20:AB:156:LEU:H	1.71	0.56
1:AA:1175:G:O2'	1:AA:1176:A:H5'	2.05	0.56
23:BB:2902:C:C2	23:BB:2903:U:H5	2.24	0.56
23:BB:2352:A:H2'	23:BB:2353:G:O4'	2.06	0.56
23:DB:2386:A:H2'	23:DB:2387:U:C6	2.40	0.56
52:DW:18:LYS:HG3	52:DW:19:ARG:CZ	2.35	0.56
48:BG:10:VAL:HG12	48:BG:10:VAL:O	2.04	0.56
23:DB:1826:G:H2'	23:DB:1827:U:H6	1.70	0.56
6:AG:145:GLU:C	6:AG:147:ASN:H	2.08	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CQ:60:ILE:HA	16:CQ:75:VAL:HG13	1.87	0.56
53:D6:32:ARG:O	53:D6:103:ILE:HG12	2.06	0.56
53:D6:80:GLU:HG3	53:D6:92:PRO:HB3	1.86	0.56
41:BJ:58:ASN:HA	41:BJ:127:GLY:HA3	1.86	0.56
41:BJ:127:GLY:O	41:BJ:128:ASN:HB2	2.04	0.56
7:AH:86:LYS:HB3	7:AH:90:GLU:HB3	1.88	0.56
44:BQ:91:ARG:HB2	44:BQ:94:LEU:HD23	1.88	0.56
47:BF:137:PHE:HB2	47:BF:138:PRO:CD	2.34	0.56
1:AA:1060:U:C5	2:AC:1:GLY:HA3	2.40	0.56
23:BB:161:A:C3'	23:BB:162:U:H5''	2.33	0.56
30:DY:2:LYS:CD	30:DY:2:LYS:H	2.18	0.56
23:BB:2144:G:O2'	23:BB:2146:C:H5'	2.06	0.56
2:CC:156:LEU:HD11	2:CC:165:GLU:HB2	1.87	0.56
14:AO:77:ARG:O	14:AO:81:LEU:HB2	2.06	0.56
4:CE:45:VAL:O	4:CE:71:ILE:HG22	2.06	0.56
50:BT:80:TRP:CZ3	50:BT:82:LYS:HG2	2.41	0.56
23:DB:1242:U:H2'	23:DB:1243:C:C6	2.40	0.56
1:CA:737:C:H2'	1:CA:738:C:H6	1.71	0.56
42:DN:49:GLU:OE2	42:DN:95:THR:HG22	2.05	0.56
50:DT:69:ARG:HB2	50:DT:69:ARG:HH11	1.71	0.56
23:BB:782:A:N3	25:BC:224:MET:HB3	2.20	0.56
22:BA:41:G:H21	23:BB:2340:A:H5'	1.70	0.56
23:BB:1859:U:H2'	23:BB:1860:G:H8	1.70	0.56
44:DQ:43:GLN:NE2	49:DR:77:PHE:HB3	2.21	0.56
1:AA:591:U:OP1	7:AH:30:LYS:HE2	2.06	0.56
22:BA:10:G:H2'	22:BA:11:C:O4'	2.06	0.56
1:AA:696:A:H2'	1:AA:697:U:C6	2.40	0.56
12:CM:92:ARG:HE	12:CM:92:ARG:HA	1.71	0.56
23:BB:2080:A:OP1	51:BZ:20:HIS:HB3	2.05	0.56
4:AE:100:GLU:HA	4:AE:121:ASN:ND2	2.21	0.56
7:AH:37:ASN:O	7:AH:41:GLU:HG2	2.04	0.56
23:DB:2834:G:H2'	23:DB:2879:A:H61	1.71	0.56
23:DB:2888:C:H2'	23:DB:2889:C:C6	2.41	0.56
1:AA:909:A:H2'	1:AA:910:C:O4'	2.05	0.56
23:DB:2269:G:H4'	52:DW:19:ARG:NH1	2.20	0.56
23:BB:19:A:H2'	23:BB:20:C:H6	1.70	0.56
48:DG:10:VAL:HG23	48:DG:48:THR:HA	1.88	0.56
40:BH:68:ARG:CZ	40:BH:134:VAL:HG21	2.36	0.56
26:BD:25:THR:HG21	26:BD:193:VAL:HG22	1.88	0.56
53:D6:32:ARG:HH22	53:D6:88:LEU:C	2.08	0.56
8:CI:22:PRO:HA	8:CI:60:LEU:CB	2.36	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:67:LYS:NZ	8:CI:67:LYS:HB2	2.20	0.56
41:DJ:45:THR:HG21	41:DJ:50:THR:HG21	1.88	0.56
41:DJ:56:VAL:HG12	41:DJ:57:LEU:N	2.21	0.56
48:BG:34:ARG:HD3	48:BG:34:ARG:N	2.21	0.56
24:BI:76:ALA:O	24:BI:80:LYS:HG3	2.06	0.56
23:BB:673:C:C2'	23:BB:674:G:H5'	2.36	0.56
23:DB:2868:A:H2'	23:DB:2869:G:C8	2.41	0.56
48:DG:148:ARG:HA	48:DG:161:VAL:CB	2.32	0.56
15:CP:72:ALA:HA	15:CP:75:ILE:HD12	1.87	0.56
29:DE:131:THR:HB	29:DE:164:LEU:HG	1.87	0.56
26:DD:118:PHE:HE2	42:DN:1:MET:SD	2.28	0.56
23:BB:27:G:HO2'	23:BB:28:A:H8	1.52	0.56
31:D0:39:ARG:HG3	31:D0:39:ARG:HH11	1.71	0.56
40:BH:73:ASN:ND2	40:BH:74:ALA:H	2.02	0.56
44:DQ:104:ALA:O	44:DQ:105:PHE:HB3	2.06	0.56
44:BQ:10:ARG:CZ	44:BQ:10:ARG:HB2	2.36	0.56
20:CB:83:ALA:HB3	20:CB:90:PHE:HB3	1.88	0.56
20:AB:102:ASN:O	20:AB:106:VAL:HG23	2.06	0.56
3:AD:96:ARG:O	3:AD:100:VAL:HG23	2.05	0.56
13:CN:2:LYS:O	13:CN:6:LYS:HB2	2.06	0.56
11:AL:54:VAL:HG21	11:AL:79:ILE:HD11	1.88	0.56
23:BB:649:G:H2'	23:BB:650:C:C6	2.40	0.56
23:DB:152:A:H2'	23:DB:153:U:H6	1.71	0.56
23:BB:945:A:H3'	23:BB:946:C:H5''	1.88	0.56
23:BB:1826:G:H2'	23:BB:1827:U:H6	1.70	0.56
25:DC:242:HIS:O	25:DC:244:VAL:HG13	2.06	0.56
29:DE:21:ARG:HG3	29:DE:22:ASP:N	2.20	0.56
24:BI:10:LEU:HD12	24:BI:10:LEU:O	2.05	0.56
3:CD:2:ARG:HG3	3:CD:114:ARG:NH1	2.20	0.56
23:BB:753:A:H2'	23:BB:754:U:H6	1.69	0.56
11:CL:3:VAL:O	11:CL:7:VAL:HG23	2.06	0.56
1:CA:284:C:H2'	1:CA:285:C:H6	1.70	0.56
1:CA:1150:A:H1'	1:CA:1280:A:N6	2.21	0.56
51:DZ:70:GLU:O	51:DZ:72:ARG:N	2.38	0.56
1:CA:692:U:C2	1:CA:694:A:H5''	2.41	0.56
22:BA:89:U:H5'	22:BA:90:C:C6	2.40	0.56
1:CA:399:G:H2'	1:CA:400:C:C6	2.41	0.56
23:BB:1117:C:H2'	23:BB:1118:C:C6	2.40	0.56
29:BE:98:LYS:O	29:BE:102:ARG:HG2	2.06	0.56
29:BE:72:SER:C	29:BE:74:LYS:H	2.08	0.56
23:DB:2553:G:H2'	23:DB:2554:U:C4'	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2685:G:O2'	23:BB:2686:G:H5'	2.05	0.56
23:BB:576:U:H2'	23:BB:577:G:C8	2.41	0.56
23:DB:2491:U:H5''	23:DB:2570:G:H5''	1.87	0.56
53:D6:129:ILE:O	53:D6:132:ILE:HB	2.06	0.56
1:AA:1186:G:H21	13:AN:100:TRP:C	2.09	0.56
23:BB:2825:G:H2'	23:BB:2826:A:H5'	1.88	0.56
23:BB:950:G:H2'	23:BB:951:C:C6	2.41	0.56
1:AA:423:G:H2'	1:AA:424:G:O4'	2.05	0.56
23:DB:1098:A:H3'	24:DI:3:LYS:CB	2.35	0.56
23:DB:2031:A:C6	23:DB:2498:C:H1'	2.40	0.56
44:DQ:24:TYR:O	44:DQ:27:ARG:HB2	2.06	0.56
10:AK:61:ALA:O	10:AK:64:VAL:HG12	2.06	0.56
48:DG:68:ARG:HH12	48:DG:72:ASN:ND2	2.03	0.56
48:DG:6:ALA:HB3	48:DG:68:ARG:NE	2.21	0.56
48:DG:9:VAL:H	48:DG:48:THR:HB	1.70	0.56
40:BH:135:HIS:HB2	40:BH:138:VAL:HB	1.88	0.56
52:DW:23:LYS:NZ	52:DW:24:ARG:HG3	2.21	0.56
8:AI:56:MET:CG	8:AI:57:VAL:H	2.19	0.56
51:DZ:6:GLN:HE21	51:DZ:50:ARG:H	1.53	0.56
35:DV:63:ILE:N	35:DV:63:ILE:HD12	2.20	0.56
23:DB:2547:A:H5'	23:DB:2566:A:C2	2.41	0.56
33:B1:8:ILE:HD11	33:B1:52:LYS:HB2	1.87	0.56
24:DI:49:GLU:CB	24:DI:52:LEU:HD12	2.36	0.56
24:DI:54:ILE:HD13	24:DI:55:PRO:N	2.21	0.56
38:BM:35:ALA:HB2	38:BM:100:LYS:HB2	1.87	0.56
10:AK:92:ARG:HH21	21:AU:24:LYS:HG2	1.71	0.56
1:CA:919:A:O2'	1:CA:920:U:H5'	2.05	0.56
18:CS:29:PRO:HA	18:CS:47:THR:O	2.06	0.56
23:BB:2749:A:OP1	23:BB:2751:G:H5''	2.06	0.56
46:BU:46:LYS:NZ	46:BU:47:PRO:HG2	2.21	0.56
1:AA:719:C:O2	17:AR:37:LYS:HA	2.05	0.56
15:AP:4:ILE:HB	15:AP:67:ILE:HD12	1.86	0.56
13:CN:12:ARG:HG2	13:CN:53:ASP:HB3	1.88	0.56
45:BS:55:ILE:HD12	45:BS:69:LEU:HD23	1.88	0.56
23:DB:1794:A:H2'	23:DB:1795:C:C6	2.40	0.56
6:CG:145:GLU:C	6:CG:147:ASN:H	2.07	0.56
23:DB:1442:U:H2'	23:DB:1443:U:H6	1.70	0.56
40:DH:72:ILE:CD1	40:DH:140:ALA:HB3	2.35	0.56
23:BB:1338:G:H4'	50:BT:18:GLU:CG	2.36	0.56
9:CJ:17:LEU:HD22	9:CJ:96:VAL:CG1	2.35	0.56
46:DU:78:LYS:CD	46:DU:79:ALA:H	2.19	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:558:U:O3'	41:DJ:111:LYS:HD3	2.06	0.56
41:BJ:103:ILE:HA	41:BJ:106:LYS:HB3	1.88	0.56
7:CH:66:GLN:C	7:CH:68:LYS:H	2.09	0.56
23:DB:264:C:C2'	23:DB:265:A:H5''	2.35	0.56
43:BO:24:THR:OG1	43:BO:90:VAL:HG12	2.06	0.56
23:DB:2284:A:OP2	33:D1:5:ARG:HG3	2.04	0.56
1:AA:796:C:OP1	10:AK:127:ARG:HB3	2.05	0.56
23:DB:1258:U:H2'	23:DB:1259:G:H8	1.68	0.56
1:CA:1463:U:OP1	28:DP:108:ARG:HD2	2.06	0.56
51:BZ:70:GLU:O	51:BZ:72:ARG:N	2.39	0.56
1:AA:1465:A:H2'	1:AA:1466:C:C6	2.41	0.56
1:CA:818:G:C3'	1:CA:819:A:H5''	2.36	0.56
23:DB:479:A:O2'	23:DB:481:G:H5'	2.06	0.56
23:BB:1899:A:O2'	23:BB:1900:A:H5''	2.05	0.56
23:BB:441:U:H2'	23:BB:442:G:C8	2.41	0.56
23:BB:1640:A:H2'	23:BB:1641:A:C8	2.40	0.56
23:DB:807:U:H2'	23:DB:808:G:H8	1.70	0.56
23:DB:564:C:H1'	44:DQ:36:GLN:OE1	2.06	0.56
23:DB:289:G:H2'	23:DB:290:U:C6	2.40	0.56
23:BB:135:U:H2'	23:BB:136:G:C8	2.40	0.56
23:BB:2729:G:H2'	23:BB:2730:C:C6	2.41	0.56
23:BB:17:G:H2'	23:BB:18:U:C6	2.41	0.56
48:BG:88:LEU:HD13	48:BG:93:TYR:HB3	1.87	0.56
26:BD:109:VAL:HG11	26:BD:193:VAL:HG11	1.86	0.56
53:B6:92:PRO:HB3	53:B6:100:TYR:O	2.05	0.56
50:BT:50:LEU:H	50:BT:50:LEU:HD22	1.70	0.56
40:DH:85:GLY:HA2	40:DH:91:PHE:CZ	2.40	0.56
35:BV:48:MET:O	35:BV:51:GLN:HG3	2.05	0.56
1:AA:1313:U:OP1	18:AS:6:LYS:HD3	2.06	0.56
50:DT:47:VAL:HG13	50:DT:51:PHE:HD1	1.71	0.56
23:DB:1566:A:H5'	25:DC:213:ARG:NH2	2.21	0.56
23:DB:9:G:N2	23:DB:10:A:H62	2.01	0.56
23:BB:10:A:H61	23:BB:2895:G:H1'	1.70	0.56
23:BB:279:A:H2'	23:BB:280:U:H5'	1.88	0.56
1:AA:1057:G:H5''	2:AC:153:SER:HB2	1.87	0.56
23:BB:1487:U:H2'	23:BB:1488:C:H6	1.69	0.56
23:DB:37:C:O2'	23:DB:38:A:H5'	2.06	0.56
23:DB:355:U:H2'	23:DB:356:G:C8	2.41	0.56
1:AA:634:C:H2'	1:AA:635:A:C8	2.39	0.56
28:BP:38:ARG:HH21	28:BP:38:ARG:HB2	1.70	0.56
19:CT:38:ILE:O	19:CT:38:ILE:HD13	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CT:53:MET:O	19:CT:57:VAL:HG22	2.06	0.56
23:BB:1353:A:H2'	23:BB:1354:A:C8	2.41	0.56
7:CH:44:PHE:HA	7:CH:70:VAL:HG11	1.87	0.56
1:CA:1140:C:O2'	1:CA:1141:C:H5'	2.05	0.56
23:BB:2537:U:H2'	23:BB:2538:C:H6	1.71	0.56
16:AQ:80:LYS:CD	16:AQ:80:LYS:H	2.18	0.56
23:BB:2570:G:H2'	23:BB:2571:U:O4'	2.06	0.56
23:DB:2678:C:H2'	23:DB:2679:A:H8	1.71	0.56
1:CA:204:G:H2'	1:CA:205:A:H8	1.71	0.56
23:DB:2814:A:H4'	31:D0:25:THR:HG21	1.88	0.56
23:DB:1716:U:H2'	23:DB:1717:A:C8	2.41	0.56
22:BA:91:C:H2'	22:BA:92:C:C6	2.41	0.56
1:CA:250:A:H1'	1:CA:252:U:C5	2.41	0.56
1:CA:1186:G:H21	13:CN:100:TRP:C	2.09	0.56
29:DE:72:SER:C	29:DE:74:LYS:H	2.09	0.56
29:DE:122:GLU:O	29:DE:123:LYS:HB2	2.05	0.56
49:DR:36:ALA:HA	49:DR:58:VAL:HA	1.88	0.56
1:CA:45:G:H2'	1:CA:46:G:H8	1.70	0.56
23:DB:1534:U:O5'	23:DB:1534:U:H6	1.89	0.56
23:BB:2359:C:H2'	23:BB:2360:G:C8	2.41	0.56
2:AC:190:THR:HG22	2:AC:191:THR:N	2.19	0.56
21:AU:40:PRO:O	21:AU:44:ARG:HB2	2.06	0.56
53:D6:39:LEU:HA	53:D6:52:LEU:HB3	1.87	0.56
47:DF:65:LEU:O	47:DF:86:CYS:HA	2.06	0.56
20:CB:69:VAL:HB	20:CB:162:VAL:HB	1.88	0.56
35:BV:63:ILE:HD13	35:BV:72:VAL:HG22	1.88	0.56
50:BT:54:GLU:HG3	50:BT:90:GLY:N	2.21	0.56
23:DB:1060:U:C5	24:DI:131:THR:HG22	2.41	0.56
23:BB:2885:G:H2'	23:BB:2886:A:O4'	2.05	0.56
3:CD:122:ILE:O	3:CD:128:VAL:HG23	2.06	0.56
31:D0:38:LEU:HD23	31:D0:39:ARG:H	1.71	0.56
42:DN:72:ASP:OD1	42:DN:75:ILE:HG23	2.06	0.56
27:DK:115:ILE:HG23	27:DK:116:ILE:N	2.21	0.56
23:DB:1793:C:H2'	23:DB:1794:A:C8	2.40	0.56
48:DG:67:ALA:O	48:DG:71:LEU:HD23	2.05	0.56
23:BB:1105:U:O2'	23:BB:1106:G:H5'	2.06	0.56
1:CA:36:C:O3'	11:CL:119:LYS:HA	2.06	0.56
23:BB:63:A:H2'	23:BB:63:A:OP2	2.05	0.56
5:AF:68:GLN:O	5:AF:71:ILE:HG23	2.05	0.56
46:BU:26:ASN:N	46:BU:26:ASN:ND2	2.53	0.56
26:BD:116:LYS:HB2	26:BD:165:MET:HB3	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AP:23:ASP:O	15:AP:26:ASN:HB2	2.06	0.56
1:AA:253:A:H2'	1:AA:254:G:H8	1.71	0.56
13:AN:2:LYS:O	13:AN:6:LYS:HB2	2.05	0.56
1:AA:926:G:H21	1:AA:1505:G:H2'	1.70	0.56
1:CA:502:A:H4'	1:CA:550:G:H4'	1.88	0.56
23:DB:833:A:H2'	23:DB:834:G:C8	2.41	0.56
23:DB:899:A:H2'	23:DB:900:A:O4'	2.05	0.56
26:DD:125:TRP:CD2	26:DD:160:LYS:HB3	2.42	0.56
21:AU:11:PHE:O	21:AU:13:VAL:HG12	2.06	0.56
23:BB:1061:U:O4'	23:BB:1070:A:H1'	2.06	0.56
23:BB:1716:U:H2'	23:BB:1717:A:C8	2.41	0.56
31:B0:33:SER:C	31:B0:35:GLU:H	2.09	0.56
23:DB:1205:A:H4'	23:DB:1206:G:OP2	2.04	0.56
23:BB:1015:U:H2'	23:BB:1016:G:C8	2.41	0.56
1:CA:83:C:O2'	1:CA:84:U:H2'	2.06	0.56
20:AB:10:LYS:O	20:AB:13:VAL:HG23	2.06	0.56
23:BB:1821:A:H2'	23:BB:1822:C:H6	1.70	0.55
53:B6:95:LYS:HB3	53:B6:100:TYR:CE2	2.37	0.55
8:CI:62:LEU:HD22	8:CI:62:LEU:N	2.21	0.55
23:DB:2393:U:H5'	37:DL:60:ARG:O	2.05	0.55
50:BT:39:THR:HG22	50:BT:42:GLU:CG	2.32	0.55
50:BT:43:ILE:O	50:BT:46:ALA:HB3	2.06	0.55
41:BJ:6:ALA:HB3	41:BJ:45:THR:HG21	1.87	0.55
12:CM:52:ILE:HG23	12:CM:56:ARG:NH1	2.16	0.55
33:D1:8:ILE:HD12	33:D1:51:ALA:HA	1.88	0.55
23:DB:513:A:O5'	23:DB:513:A:H8	1.89	0.55
1:AA:719:C:O2'	17:AR:37:LYS:HB2	2.05	0.55
37:DL:17:LYS:HD2	37:DL:19:LEU:HD11	1.88	0.55
23:BB:2834:G:H2'	23:BB:2879:A:N6	2.21	0.55
23:BB:45:G:C5'	23:BB:46:G:H5'	2.35	0.55
15:CP:52:LEU:HD21	15:CP:75:ILE:HG12	1.88	0.55
23:DB:2820:A:OP1	42:DN:4:ARG:HA	2.07	0.55
42:DN:31:HIS:O	42:DN:33:ILE:HG13	2.06	0.55
15:CP:23:ASP:O	15:CP:26:ASN:HB2	2.06	0.55
23:BB:2899:A:H2'	23:BB:2900:A:H8	1.71	0.55
23:DB:453:A:H4'	23:DB:472:A:N6	2.21	0.55
48:BG:67:ALA:O	48:BG:71:LEU:HD23	2.06	0.55
37:BL:93:ASN:O	37:BL:95:LEU:N	2.39	0.55
20:CB:119:GLN:HA	20:CB:124:THR:CG2	2.36	0.55
45:DS:51:LEU:C	45:DS:53:SER:H	2.10	0.55
26:BD:113:SER:HB3	26:BD:167:ASN:CA	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AO:24:SER:HB3	14:AO:27:VAL:CG2	2.35	0.55
28:DP:38:ARG:HH21	28:DP:38:ARG:HB2	1.70	0.55
28:DP:31:VAL:HG11	28:DP:38:ARG:HG3	1.88	0.55
8:CI:7:GLY:HA3	8:CI:81:GLY:O	2.06	0.55
2:CC:61:LYS:O	2:CC:96:VAL:HB	2.06	0.55
3:AD:18:LEU:HD12	3:AD:63:ILE:HG12	1.88	0.55
24:BI:89:SER:HB2	24:BI:136:GLY:HA3	1.87	0.55
1:CA:1062:U:H2'	1:CA:1063:C:C6	2.40	0.55
39:DX:33:ALA:HB1	50:DT:14:PRO:HD2	1.88	0.55
23:DB:871:U:H2'	23:DB:872:U:H6	1.72	0.55
23:BB:818:G:H3'	23:BB:1187:G:H22	1.70	0.55
1:AA:611:C:H2'	1:AA:612:C:H6	1.71	0.55
10:AK:52:ARG:HH11	10:AK:53:GLY:H	1.54	0.55
44:BQ:43:GLN:NE2	49:BR:77:PHE:HB3	2.20	0.55
1:AA:204:G:H2'	1:AA:205:A:H8	1.71	0.55
23:DB:659:G:H4'	29:DE:95:LYS:HD2	1.88	0.55
37:DL:132:ARG:O	37:DL:136:GLU:HG3	2.06	0.55
1:CA:761:G:H2'	1:CA:762:U:C6	2.41	0.55
23:BB:780:G:H1	25:BC:228:ASP:CG	2.10	0.55
3:AD:146:GLU:HA	3:AD:149:LYS:HG2	1.86	0.55
37:BL:143:GLU:HG2	37:BL:144:GLU:N	2.17	0.55
38:DM:35:ALA:HB2	38:DM:100:LYS:HB2	1.88	0.55
42:BN:83:LEU:CA	42:BN:86:ARG:HB2	2.30	0.55
1:AA:922:G:H2'	1:AA:923:A:C8	2.41	0.55
1:CA:1079:G:H2'	1:CA:1080:A:C8	2.41	0.55
18:CS:39:ILE:HB	18:CS:66:VAL:HA	1.88	0.55
53:D6:12:SER:O	53:D6:16:LYS:HD2	2.06	0.55
20:CB:221:ARG:CB	20:CB:221:ARG:HH11	2.18	0.55
17:AR:55:ALA:HA	17:AR:58:ILE:HD12	1.88	0.55
23:BB:2834:G:H2'	23:BB:2879:A:H61	1.70	0.55
23:BB:2645:G:H3'	23:BB:2646:C:C5'	2.35	0.55
3:CD:116:LEU:O	3:CD:121:ALA:HB3	2.07	0.55
1:CA:308:C:H2'	1:CA:309:A:C8	2.41	0.55
1:CA:1390:U:H2'	1:CA:1391:U:C6	2.41	0.55
50:BT:18:GLU:C	50:BT:20:ALA:H	2.10	0.55
23:DB:322:A:H5'	23:DB:340:A:H1'	1.87	0.55
42:BN:47:VAL:C	42:BN:50:PRO:HD2	2.26	0.55
23:BB:1592:C:H2'	23:BB:1593:A:H8	1.70	0.55
25:DC:123:ILE:HD12	25:DC:191:LEU:HD11	1.87	0.55
1:CA:1154:G:O2'	1:CA:1155:A:H5'	2.06	0.55
48:DG:91:VAL:HG23	48:DG:92:GLY:H	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1720:U:O2'	23:BB:1721:G:H5'	2.05	0.55
1:CA:1483:A:H2'	1:CA:1484:C:O4'	2.06	0.55
1:CA:62:U:H2'	1:CA:63:C:C6	2.41	0.55
37:DL:25:SER:O	37:DL:27:LEU:HD12	2.06	0.55
23:BB:408:G:O2'	23:BB:409:G:H5'	2.07	0.55
25:BC:124:LYS:HG3	25:BC:125:PRO:HD2	1.88	0.55
23:DB:660:C:H2'	23:DB:661:A:H8	1.70	0.55
48:DG:10:VAL:HG12	48:DG:10:VAL:O	2.05	0.55
41:DJ:38:GLY:O	41:DJ:43:GLU:HB2	2.06	0.55
25:BC:71:ASP:OD2	25:BC:118:GLY:HA2	2.06	0.55
41:BJ:4:PHE:CG	41:BJ:5:THR:N	2.74	0.55
3:CD:26:ALA:HA	3:CD:30:LYS:CE	2.36	0.55
30:BY:8:GLN:CG	30:BY:31:ILE:HA	2.31	0.55
47:DF:7:TYR:HA	47:DF:11:VAL:CG2	2.36	0.55
10:AK:88:PRO:HD3	21:AU:28:LEU:HD11	1.89	0.55
23:BB:1256:G:H21	29:BE:77:ILE:HG22	1.71	0.55
25:DC:209:ALA:HA	25:DC:212:TRP:NE1	2.21	0.55
10:CK:22:ILE:HD13	10:CK:95:THR:CG2	2.34	0.55
26:BD:29:VAL:O	26:BD:185:ASN:HB3	2.07	0.55
23:DB:1785:A:O2'	23:DB:1786:A:H5'	2.06	0.55
20:CB:60:ALA:HB1	20:CB:220:VAL:HG13	1.87	0.55
23:BB:1553:A:O2'	23:BB:1554:U:H2'	2.07	0.55
38:DM:114:ARG:HA	38:DM:130:PHE:CE1	2.41	0.55
43:DO:5:SER:HA	43:DO:8:ILE:CD1	2.34	0.55
23:BB:1656:C:H2'	23:BB:1657:U:C6	2.41	0.55
23:BB:1792:G:O2'	23:BB:1793:C:H5'	2.06	0.55
12:AM:89:ARG:HB2	12:AM:96:VAL:HG22	1.88	0.55
38:BM:114:ARG:HA	38:BM:130:PHE:CE1	2.42	0.55
48:DG:174:LYS:NZ	48:DG:176:LYS:HG2	2.22	0.55
23:DB:2840:C:H2'	23:DB:2841:C:H6	1.72	0.55
1:CA:499:A:H4'	1:CA:500:G:H5'	1.88	0.55
1:CA:524:G:H2'	1:CA:525:C:H6	1.70	0.55
40:BH:57:LYS:NZ	40:BH:58:LEU:HD22	2.22	0.55
23:DB:1349:C:H2'	23:DB:1350:C:H6	1.71	0.55
1:CA:1405:G:O2'	1:CA:1406:U:H5'	2.06	0.55
1:CA:1512:U:H2'	1:CA:1513:A:C8	2.42	0.55
1:CA:213:G:H3'	1:CA:214:C:C6	2.42	0.55
29:BE:21:ARG:HG3	29:BE:22:ASP:N	2.19	0.55
3:CD:18:LEU:HD12	3:CD:63:ILE:HG12	1.87	0.55
23:BB:3:U:HO2'	23:BB:4:U:H6	1.54	0.55
33:B1:10:LEU:O	33:B1:19:PHE:HB2	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1047:G:O3'	23:DB:1048:A:H8	1.89	0.55
23:BB:993:G:H1'	49:BR:91:GLN:NE2	2.22	0.55
2:CC:13:ILE:O	2:CC:14:VAL:HG22	2.06	0.55
7:CH:26:MET:HB2	7:CH:27:PRO:HD2	1.89	0.55
23:BB:1520:U:H2'	23:BB:1521:G:O4'	2.06	0.55
15:AP:73:ALA:O	15:AP:77:GLU:HG3	2.07	0.55
34:D3:7:ARG:HG3	34:D3:7:ARG:HH11	1.71	0.55
24:BI:14:ALA:HB1	24:BI:50:LYS:HA	1.87	0.55
49:DR:14:VAL:HG22	49:DR:15:SER:N	2.22	0.55
1:CA:358:U:H2'	1:CA:359:G:C8	2.41	0.55
1:CA:638:U:H2'	1:CA:639:G:O4'	2.06	0.55
1:CA:1458:G:H5''	19:CT:25:SER:HB2	1.88	0.55
1:AA:761:G:H2'	1:AA:762:U:C6	2.42	0.55
1:CA:642:A:H2'	1:CA:643:C:H6	1.71	0.55
23:BB:1473:G:O2'	23:BB:1474:U:H5'	2.06	0.55
6:CG:72:VAL:HG12	6:CG:89:GLU:HG3	1.87	0.55
45:DS:40:ASN:O	45:DS:41:LYS:HG3	2.05	0.55
1:CA:95:C:O2	1:CA:95:C:H2'	2.05	0.55
23:DB:2835:A:N6	23:DB:2878:U:H2'	2.21	0.55
23:DB:2053:G:O2'	23:DB:2054:A:H5'	2.06	0.55
23:BB:2385:C:H2'	23:BB:2386:A:H8	1.71	0.55
23:BB:2384:U:H5''	23:BB:2386:A:OP1	2.05	0.55
25:DC:128:THR:HG23	25:DC:190:THR:HG22	1.89	0.55
44:BQ:26:ALA:HB1	44:BQ:30:VAL:HG11	1.88	0.55
22:DA:42:C:O4'	47:DF:65:LEU:HB2	2.06	0.55
8:CI:55:ASP:HB2	8:CI:59:LYS:HG3	1.88	0.55
8:CI:79:ARG:O	8:CI:83:THR:HG22	2.06	0.55
51:DZ:35:SER:HA	51:DZ:49:LEU:O	2.05	0.55
48:DG:34:ARG:HD3	48:DG:34:ARG:N	2.20	0.55
50:BT:17:SER:N	50:BT:21:SER:OG	2.39	0.55
29:BE:5:LEU:CD1	29:BE:10:SER:HB2	2.31	0.55
12:CM:106:ARG:HD3	12:CM:110:GLY:O	2.06	0.55
28:BP:91:VAL:O	28:BP:92:ARG:HB3	2.07	0.55
26:BD:148:GLN:CB	26:BD:152:PRO:HG2	2.36	0.55
25:DC:156:SER:HB3	25:DC:159:THR:HG21	1.88	0.55
1:CA:674:G:H2'	1:CA:675:A:C8	2.39	0.55
29:DE:148:ILE:HD13	29:DE:187:VAL:CG2	2.36	0.55
1:CA:1342:C:H2'	1:CA:1343:G:H8	1.72	0.55
27:BK:59:LYS:HD3	27:BK:89:ASN:HA	1.88	0.55
11:AL:33:CYS:HA	11:AL:54:VAL:HA	1.87	0.55
23:BB:264:C:C2'	23:BB:265:A:H5''	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:453:A:H4'	23:BB:472:A:N6	2.21	0.55
1:CA:635:A:H2'	1:CA:636:U:C6	2.42	0.55
23:DB:693:A:H2'	23:DB:694:U:H6	1.69	0.55
23:DB:2195:U:O2'	23:DB:2196:C:H5'	2.07	0.55
31:D0:8:THR:HG23	31:D0:11:LYS:H	1.70	0.55
1:CA:784:A:H2'	1:CA:785:G:H8	1.72	0.55
23:DB:2230:G:H2'	23:DB:2231:U:H6	1.71	0.55
51:BZ:63:GLY:O	51:BZ:67:VAL:HG23	2.07	0.55
1:AA:533:A:H5''	57:AA:1892:HOH:O	2.06	0.55
23:BB:2814:A:H2'	23:BB:2815:C:H6	1.71	0.55
10:CK:52:ARG:HH11	10:CK:53:GLY:H	1.53	0.55
1:AA:285:C:H2'	1:AA:286:C:C6	2.41	0.55
23:DB:1014:A:O2'	23:DB:1015:U:H5'	2.05	0.55
23:DB:2636:C:H2'	23:DB:2637:U:C6	2.42	0.55
23:BB:1164:C:H2'	23:BB:1165:A:C8	2.42	0.55
42:DN:7:GLY:HA2	42:DN:46:ARG:HH11	1.72	0.55
23:BB:2197:U:O2'	23:BB:2198:A:H2'	2.06	0.55
23:DB:2520:C:O2'	23:DB:2521:C:H5'	2.06	0.55
38:DM:67:VAL:HG11	38:DM:102:LEU:HD13	1.89	0.55
23:DB:452:G:OP1	29:DE:53:THR:HG23	2.07	0.55
1:CA:449:G:H2'	1:CA:450:G:C8	2.41	0.55
1:AA:104:G:O2'	1:AA:105:G:H5'	2.07	0.55
4:CE:87:VAL:HG23	4:CE:91:SER:O	2.07	0.55
23:DB:598:U:H2'	23:DB:599:A:H8	1.71	0.55
45:BS:10:ALA:HB3	45:BS:101:SER:OG	2.06	0.55
23:BB:83:A:N1	23:BB:101:A:H5'	2.21	0.55
30:BY:21:ALA:O	30:BY:24:LEU:HB3	2.06	0.55
5:AF:86:ARG:NH1	17:AR:64:LEU:HD12	2.21	0.55
23:DB:2573:C:H3'	57:DB:3629:HOH:O	2.04	0.55
43:DO:94:ARG:O	43:DO:97:PHE:HB2	2.06	0.55
23:DB:2666:C:O2	23:DB:2666:C:O4'	2.23	0.55
23:DB:106:C:H2'	23:DB:107:G:H8	1.71	0.55
40:BH:27:ARG:HG2	40:BH:27:ARG:HH21	1.71	0.55
23:BB:1822:C:O2'	23:BB:1823:G:H5'	2.07	0.55
48:BG:6:ALA:HB3	48:BG:68:ARG:NE	2.22	0.55
8:CI:50:PRO:O	8:CI:54:VAL:HG22	2.06	0.55
8:AI:22:PRO:HA	8:AI:60:LEU:CB	2.35	0.55
8:AI:79:ARG:HA	8:AI:82:ILE:HD12	1.87	0.55
48:DG:24:THR:C	48:DG:25:ILE:HD12	2.27	0.55
40:DH:80:ILE:O	40:DH:80:ILE:HD12	2.07	0.55
47:DF:168:LEU:O	47:DF:169:LEU:HB2	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AQ:45:VAL:HG12	16:AQ:46:HIS:N	2.22	0.55
23:BB:589:U:H2'	23:BB:590:A:C8	2.42	0.55
20:CB:16:GLY:CA	20:CB:40:ILE:H	2.19	0.55
1:AA:314:C:O2'	1:AA:315:A:H5'	2.07	0.55
27:BK:71:ARG:HB3	27:BK:72:PRO:HD2	1.88	0.55
49:BR:3:ALA:O	49:BR:4:VAL:HG13	2.06	0.55
1:AA:1301:U:O2	1:AA:1301:U:H2'	2.04	0.55
23:BB:9:G:N2	23:BB:10:A:H62	2.04	0.55
23:DB:1784:A:H4'	23:DB:1785:A:O5'	2.07	0.55
26:DD:9:VAL:O	28:DP:4:ILE:HD11	2.06	0.55
27:BK:59:LYS:HD2	27:BK:89:ASN:ND2	2.22	0.55
23:BB:2590:A:H2'	23:BB:2591:C:C6	2.41	0.55
1:AA:484:G:H4'	1:AA:485:U:C5'	2.37	0.55
23:BB:608:A:H2'	23:BB:609:A:C8	2.41	0.55
1:CA:484:G:H4'	1:CA:485:U:C5'	2.37	0.55
28:BP:50:ARG:HD3	28:BP:56:SER:HB3	1.89	0.55
45:BS:51:LEU:C	45:BS:53:SER:H	2.10	0.55
39:BX:8:GLU:HB2	39:BX:13:GLU:OE1	2.06	0.55
23:DB:2537:U:H2'	23:DB:2538:C:H6	1.71	0.55
23:BB:350:G:H2'	23:BB:351:C:H6	1.71	0.55
23:BB:2708:G:O2'	23:BB:2709:G:H5'	2.06	0.55
1:CA:505:G:H2'	1:CA:506:G:H8	1.72	0.55
1:CA:545:C:H5''	3:CD:68:GLU:HG2	1.88	0.55
23:DB:1640:A:H2'	23:DB:1641:A:C8	2.41	0.55
23:BB:2102:G:N3	23:BB:2102:G:H2'	2.22	0.55
1:AA:608:A:H3'	57:AA:1895:HOH:O	2.05	0.55
50:BT:5:GLU:HA	50:BT:8:LEU:CB	2.19	0.55
20:AB:204:ASP:CG	20:AB:205:ALA:H	2.10	0.55
23:DB:2352:A:H2'	23:DB:2353:G:O4'	2.07	0.55
47:DF:71:LYS:O	47:DF:73:VAL:HG23	2.06	0.55
23:DB:987:C:H2'	23:DB:988:A:O4'	2.07	0.55
38:DM:34:LYS:HB3	38:DM:129:THR:HG22	1.87	0.55
50:BT:39:THR:CG2	50:BT:42:GLU:H	2.20	0.55
25:BC:109:LEU:H	25:BC:109:LEU:CD2	2.20	0.55
30:BY:8:GLN:OE1	30:BY:23:LEU:HD11	2.07	0.55
1:CA:865:A:H2'	1:CA:866:C:C6	2.41	0.55
43:DO:39:VAL:HB	43:DO:49:VAL:HG22	1.88	0.55
23:DB:28:A:H61	23:DB:512:G:H1'	1.71	0.55
29:DE:117:ARG:HA	29:DE:185:LYS:HG2	1.88	0.55
23:BB:590:A:H2'	23:BB:591:U:H6	1.69	0.55
23:BB:1199:U:H2'	23:BB:1200:C:H6	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1339:A:H2'	1:CA:1340:A:O4'	2.06	0.55
23:DB:1792:G:O2'	23:DB:1793:C:H5'	2.07	0.55
23:BB:1439:A:N7	23:BB:1440:U:N1	2.54	0.55
25:BC:156:SER:HB3	25:BC:159:THR:HG21	1.88	0.55
20:CB:103:TRP:O	20:CB:107:ARG:HG2	2.07	0.55
28:DP:50:ARG:HD3	28:DP:56:SER:HB3	1.88	0.55
23:BB:1793:C:H2'	23:BB:1794:A:C8	2.41	0.55
1:CA:1343:G:H4'	8:CI:123:ARG:O	2.06	0.55
13:AN:1:ALA:HB1	13:AN:6:LYS:HE2	1.89	0.55
1:AA:617:G:H4'	15:AP:46:LYS:NZ	2.22	0.55
46:DU:53:GLN:HG2	46:DU:53:GLN:O	2.07	0.55
28:BP:31:VAL:HG11	28:BP:38:ARG:HG3	1.87	0.55
35:BV:53:LYS:HB3	35:BV:55:GLU:OE1	2.06	0.55
1:CA:1329:A:O2'	1:CA:1330:U:H5'	2.05	0.55
23:BB:665:U:O2'	23:BB:666:A:H5'	2.07	0.55
2:CC:82:ASP:O	2:CC:86:LEU:HG	2.06	0.55
1:CA:373:A:H1'	1:CA:481:G:N3	2.22	0.55
23:BB:2341:G:H2'	23:BB:2342:C:H6	1.71	0.55
23:DB:2859:G:H2'	23:DB:2860:A:C8	2.42	0.55
23:DB:1109:C:H3'	23:DB:1110:G:C8	2.41	0.55
1:CA:182:A:N3	1:CA:182:A:H5''	2.21	0.55
31:B0:8:THR:HG23	31:B0:11:LYS:H	1.72	0.55
1:AA:696:A:H2'	1:AA:697:U:H6	1.71	0.55
35:BV:6:ALA:O	35:BV:65:VAL:HG12	2.06	0.55
23:BB:244:A:H1'	23:BB:255:A:N6	2.22	0.55
17:CR:56:ARG:O	17:CR:60:ARG:HG2	2.07	0.55
42:DN:2:ARG:HA	42:DN:5:LYS:HD3	1.88	0.55
47:BF:121:PHE:HB3	47:BF:127:TYR:CZ	2.41	0.55
38:DM:78:LEU:O	38:DM:80:VAL:HG12	2.06	0.55
17:AR:36:GLY:HA3	17:AR:70:THR:HA	1.89	0.55
1:CA:384:G:H2'	1:CA:385:C:C6	2.42	0.55
23:DB:2660:A:H2'	23:DB:2661:G:C8	2.42	0.55
1:CA:104:G:O2'	1:CA:105:G:H5'	2.06	0.55
21:CU:8:ASN:O	21:CU:9:GLU:HB3	2.06	0.55
6:AG:109:LYS:HA	6:AG:109:LYS:HE2	1.89	0.55
44:BQ:16:ILE:O	44:BQ:18:LYS:N	2.40	0.55
48:BG:89:VAL:CB	48:BG:159:LYS:HA	2.25	0.55
48:DG:97:VAL:HA	48:DG:102:ILE:HA	1.88	0.55
48:DG:84:LYS:CG	48:DG:85:LYS:H	2.16	0.55
40:BH:78:VAL:HG11	40:BH:103:VAL:HG12	1.88	0.55
1:CA:1250:A:H2'	1:CA:1251:A:C8	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DQ:94:LEU:CD1	49:DR:13:ARG:HB2	2.37	0.55
8:AI:61:ASP:C	8:AI:62:LEU:HD13	2.27	0.55
7:CH:86:LYS:HB3	7:CH:90:GLU:HB3	1.89	0.55
50:BT:25:GLU:HA	50:BT:29:THR:O	2.06	0.55
25:DC:93:VAL:HG13	25:DC:94:LEU:N	2.22	0.55
41:BJ:45:THR:HG21	41:BJ:50:THR:HG21	1.89	0.55
51:BZ:35:SER:HA	51:BZ:49:LEU:O	2.06	0.55
1:CA:978:A:H5'	1:CA:1362:A:H62	1.71	0.55
53:D6:180:GLU:O	53:D6:184:LEU:HG	2.06	0.55
37:BL:116:VAL:HG13	37:BL:117:THR:N	2.19	0.55
23:DB:818:G:H3'	23:DB:1187:G:H22	1.71	0.55
20:AB:221:ARG:CB	20:AB:221:ARG:HH11	2.18	0.55
48:DG:152:ARG:HH22	48:DG:162:ARG:HA	1.70	0.55
48:BG:152:ARG:NH2	48:BG:162:ARG:HA	2.21	0.55
45:BS:29:VAL:HG23	45:BS:70:LYS:HA	1.87	0.55
24:BI:17:ALA:O	24:BI:18:ASN:HB3	2.06	0.55
23:BB:365:U:H2'	23:BB:366:C:C6	2.42	0.55
20:CB:144:GLU:O	20:CB:148:GLY:HA3	2.07	0.55
23:BB:2740:A:H2'	23:BB:2741:A:C8	2.41	0.55
23:BB:63:A:H8	23:BB:63:A:OP2	1.90	0.55
43:BO:4:LYS:O	43:BO:8:ILE:HG13	2.07	0.55
14:CO:77:ARG:O	14:CO:81:LEU:HB2	2.07	0.55
23:BB:616:A:H4'	29:BE:101:TYR:CE2	2.42	0.55
19:CT:66:ILE:HG22	19:CT:67:HIS:N	2.22	0.55
1:AA:473:U:H2'	1:AA:474:G:H8	1.72	0.55
12:CM:2:ARG:HG3	12:CM:6:ILE:N	2.21	0.55
2:AC:78:LYS:HG3	2:AC:81:GLU:HB2	1.89	0.55
23:DB:1915:U:H5''	57:DB:3486:HOH:O	2.05	0.55
23:DB:2415:G:C4'	37:DL:66:PHE:HB2	2.37	0.55
1:CA:1384:C:H2'	1:CA:1385:G:C8	2.42	0.55
23:BB:2540:C:H2'	23:BB:2541:A:H8	1.72	0.55
23:BB:741:U:H2'	23:BB:742:A:C8	2.41	0.55
23:DB:2676:C:O2'	23:DB:2677:G:H5'	2.07	0.55
24:BI:112:LYS:O	24:BI:116:MET:HG3	2.06	0.55
23:DB:575:A:O2'	23:DB:576:U:H5'	2.06	0.55
22:DA:94:A:OP1	35:DV:19:ARG:HD3	2.05	0.55
23:DB:596:U:H2'	23:DB:597:G:C8	2.42	0.55
23:DB:2729:G:H2'	23:DB:2730:C:C6	2.42	0.55
23:DB:176:A:O2'	23:DB:177:G:H5'	2.07	0.55
41:BJ:130:HIS:HD2	41:BJ:132:HIS:HB2	1.71	0.55
23:DB:1849:G:H2'	23:DB:1850:G:H8	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:234:U:H2'	23:BB:235:U:H6	1.71	0.55
25:BC:149:LYS:HD3	25:BC:152:GLN:HE22	1.71	0.55
52:DW:33:GLY:O	52:DW:34:SER:HB2	2.06	0.55
48:BG:84:LYS:HG3	48:BG:132:LEU:N	2.22	0.55
53:D6:86:SER:HB3	53:D6:88:LEU:HD13	1.87	0.55
8:CI:27:ILE:HD13	8:CI:34:LEU:HD22	1.89	0.55
41:BJ:56:VAL:HG12	41:BJ:57:LEU:N	2.22	0.55
8:AI:24:ASN:HD21	8:AI:26:LYS:HG3	1.72	0.55
7:CH:87:ARG:N	7:CH:90:GLU:HB3	2.22	0.55
22:BA:27:C:N4	22:BA:28:C:N4	2.55	0.55
24:BI:77:VAL:HA	24:BI:80:LYS:CE	2.37	0.55
47:BF:168:LEU:O	47:BF:169:LEU:HB2	2.06	0.55
40:DH:90:LEU:CD1	40:DH:90:LEU:H	2.15	0.55
35:BV:26:PHE:CE2	35:BV:44:HIS:HA	2.42	0.55
12:AM:44:ILE:HA	12:AM:47:LEU:CD1	2.37	0.55
1:AA:1314:C:H2'	1:AA:1315:U:C6	2.42	0.55
23:DB:141:G:C6	50:DT:2:ILE:HG23	2.42	0.55
17:AR:38:ILE:H	17:AR:38:ILE:HD13	1.72	0.55
22:DA:107:G:O2'	22:DA:108:A:H5'	2.07	0.55
3:AD:187:ARG:O	3:AD:191:SER:HB3	2.06	0.55
23:DB:969:G:H2'	23:DB:970:U:H6	1.72	0.55
53:B6:118:VAL:HG21	53:B6:183:ILE:HG21	1.88	0.55
1:CA:843:U:OP2	1:CA:843:U:H4'	2.05	0.55
23:BB:116:C:O2'	23:BB:117:G:H5'	2.06	0.55
11:AL:20:VAL:HG23	11:AL:20:VAL:O	2.07	0.55
23:DB:63:A:OP2	23:DB:63:A:H8	1.90	0.55
23:BB:2722:G:H2'	23:BB:2723:C:H6	1.72	0.55
1:CA:1070:U:H2'	1:CA:1071:C:C6	2.41	0.55
23:DB:1309:G:OP1	36:D2:9:VAL:HG12	2.07	0.55
6:AG:104:VAL:O	6:AG:108:ARG:HG3	2.07	0.55
23:DB:740:C:O2'	23:DB:741:U:H5'	2.07	0.55
23:DB:2340:A:H2'	23:DB:2341:G:H8	1.71	0.55
24:BI:58:ILE:N	24:BI:58:ILE:HD12	2.21	0.55
23:BB:1353:A:H2'	23:BB:1354:A:H8	1.72	0.55
23:BB:2801:G:H2'	23:BB:2802:G:H8	1.70	0.55
42:BN:61:ALA:C	42:BN:63:ARG:H	2.09	0.55
1:CA:1464:U:H2'	1:CA:1465:A:C8	2.42	0.55
20:AB:25:LYS:HD3	20:AB:193:ASP:OD1	2.06	0.55
23:DB:286:U:H2'	23:DB:287:G:C8	2.42	0.55
23:DB:460:A:H4'	50:DT:72:GLN:HB2	1.88	0.55
23:BB:2728:U:H2'	23:BB:2729:G:H8	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:355:U:H2'	23:BB:356:G:H8	1.71	0.55
1:CA:721:G:H4'	1:CA:722:G:O4'	2.06	0.55
1:CA:649:A:H2'	1:CA:650:G:O4'	2.07	0.55
7:CH:17:GLN:HE21	7:CH:17:GLN:HA	1.70	0.55
1:CA:1132:C:H2'	1:CA:1133:G:C8	2.42	0.55
1:CA:696:A:H2'	1:CA:697:U:C6	2.42	0.55
52:BW:48:ALA:HB3	52:BW:81:ILE:O	2.06	0.55
48:BG:97:VAL:HA	48:BG:102:ILE:HA	1.89	0.55
44:DQ:26:ALA:HB1	44:DQ:30:VAL:HG11	1.88	0.55
10:CK:73:VAL:O	10:CK:76:TYR:HB2	2.07	0.55
51:DZ:51:VAL:HG11	51:DZ:56:MET:HG3	1.87	0.55
45:BS:3:THR:HB	45:BS:62:ASP:CB	2.29	0.55
23:DB:2645:G:H3'	23:DB:2646:C:C5'	2.37	0.55
25:BC:90:ILE:CD1	25:BC:102:TYR:HB3	2.37	0.55
47:BF:84:ILE:HG22	47:BF:84:ILE:O	2.07	0.55
1:AA:1079:G:H2'	1:AA:1080:A:C8	2.41	0.55
1:CA:923:A:H2'	1:CA:924:C:C6	2.42	0.55
13:AN:29:ILE:HB	13:AN:30:ILE:HD12	1.89	0.55
23:DB:972:A:OP2	23:DB:974:G:H5''	2.07	0.55
10:CK:91:GLY:O	10:CK:95:THR:HG22	2.06	0.55
23:DB:45:G:C5'	23:DB:46:G:H5'	2.33	0.55
40:DH:4:ILE:HG22	40:DH:17:ASP:H	1.71	0.55
23:BB:1728:C:H2'	23:BB:1730:C:O2	2.06	0.55
23:BB:1789:A:H2'	23:BB:1790:C:C6	2.41	0.55
26:BD:118:PHE:HE2	42:BN:1:MET:SD	2.29	0.55
12:AM:95:PRO:CD	12:AM:108:ARG:HG2	2.36	0.55
39:BX:20:ASN:ND2	39:BX:20:ASN:N	2.55	0.55
1:CA:551:U:H2'	1:CA:552:U:C6	2.42	0.55
1:CA:254:G:O2'	1:CA:255:G:H5'	2.07	0.55
23:BB:1582:C:H3'	23:BB:1583:A:C2	2.41	0.55
6:CG:50:ALA:CB	6:CG:57:GLU:HG3	2.37	0.55
23:BB:2577:A:H5''	23:BB:2578:G:H5'	1.88	0.55
1:AA:1225:A:H3'	1:AA:1226:C:H6	1.72	0.55
23:DB:545:U:H2'	23:DB:546:U:H4'	1.89	0.55
23:BB:479:A:O2'	23:BB:481:G:H5'	2.07	0.55
23:BB:937:C:H2'	23:BB:938:G:C8	2.41	0.55
23:BB:1682:G:H2'	23:BB:1683:U:C6	2.41	0.55
1:CA:591:U:H2'	1:CA:592:G:H8	1.71	0.55
23:BB:528:A:N1	23:BB:2042:A:H2'	2.21	0.55
23:DB:1047:G:H1'	23:DB:1110:G:H22	1.71	0.55
2:CC:14:VAL:O	2:CC:15:LYS:HD2	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:D3:7:ARG:NH1	34:D3:7:ARG:HG3	2.22	0.55
1:CA:157:U:O2'	1:CA:158:G:H5'	2.07	0.55
1:AA:476:U:O2'	1:AA:477:C:H5'	2.07	0.55
1:AA:487:A:H2'	1:AA:488:C:O4'	2.07	0.55
12:AM:43:LYS:HB2	12:AM:46:GLU:HG3	1.87	0.55
1:AA:779:C:H5''	10:AK:123:PRO:HB3	1.89	0.55
23:DB:1477:A:H2'	23:DB:1478:G:O4'	2.07	0.55
1:CA:852:G:H2'	1:CA:853:C:C6	2.42	0.55
12:AM:92:ARG:HE	12:AM:92:ARG:HA	1.72	0.55
23:DB:1395:A:H4'	23:DB:1397:U:C5	2.42	0.55
1:AA:28:A:N3	1:AA:296:U:H4'	2.21	0.55
1:CA:1507:A:H2'	1:CA:1508:A:C8	2.41	0.55
23:DB:1117:C:H2'	23:DB:1118:C:H6	1.71	0.55
23:DB:1117:C:H2'	23:DB:1118:C:C6	2.42	0.55
23:DB:1100:C:H2'	23:DB:1101:U:C6	2.42	0.55
23:DB:1100:C:OP2	24:DI:2:LYS:HB3	2.06	0.55
23:DB:1822:C:O2'	23:DB:1823:G:H5'	2.06	0.55
21:CU:40:PRO:O	21:CU:44:ARG:HB2	2.07	0.55
48:BG:106:LEU:HD12	48:BG:151:ARG:HD3	1.89	0.55
30:DY:8:GLN:HB3	30:DY:31:ILE:C	2.26	0.55
47:BF:115:GLY:CA	47:BF:177:ARG:HD2	2.32	0.55
41:BJ:38:GLY:O	41:BJ:43:GLU:HB2	2.07	0.55
44:BQ:91:ARG:HB2	49:BR:11:GLN:NE2	2.21	0.55
47:BF:101:ARG:HA	47:BF:105:ILE:HD12	1.88	0.55
47:BF:109:ARG:CB	47:BF:135:ILE:HD12	2.35	0.55
42:DN:80:PHE:O	42:DN:85:PRO:HD3	2.07	0.55
47:DF:16:MET:O	47:DF:20:ASN:HA	2.07	0.55
20:CB:46:VAL:HA	20:CB:49:PHE:CD2	2.41	0.55
1:AA:1360:A:H2'	1:AA:1361:G:O4'	2.07	0.55
25:DC:16:VAL:CB	25:DC:203:VAL:HB	2.34	0.55
40:BH:8:LYS:O	40:BH:13:GLY:HA3	2.07	0.55
46:BU:73:ASN:C	46:BU:75:ALA:H	2.09	0.55
31:B0:39:ARG:HH11	31:B0:39:ARG:HG3	1.71	0.55
23:DB:549:G:H2'	41:DJ:2:LYS:HE3	1.89	0.55
13:CN:7:ALA:O	13:CN:11:LYS:HG2	2.06	0.55
43:BO:26:LEU:HB2	43:BO:39:VAL:HG22	1.88	0.55
48:BG:153:PRO:HG3	48:BG:162:ARG:CB	2.37	0.55
27:BK:54:LYS:HD2	27:BK:54:LYS:N	2.20	0.55
26:DD:141:ARG:O	26:DD:142:VAL:HG13	2.07	0.55
48:BG:74:MET:O	48:BG:78:VAL:HG13	2.06	0.55
49:DR:68:ARG:NH2	49:DR:90:ARG:HB2	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:869:G:H5'	1:CA:872:A:O4'	2.07	0.55
3:AD:118:SER:HA	3:AD:130:ASN:HB2	1.89	0.55
23:DB:1487:U:H2'	23:DB:1488:C:H6	1.72	0.55
1:CA:634:C:H2'	1:CA:635:A:C8	2.41	0.55
1:CA:57:G:H2'	1:CA:58:C:H6	1.69	0.55
23:BB:1937:A:N7	23:BB:1939:U:H2'	2.22	0.55
22:BA:6:G:H2'	22:BA:7:G:H8	1.70	0.55
1:AA:784:A:H2'	1:AA:785:G:H8	1.72	0.55
23:DB:285:G:H2'	23:DB:286:U:O4'	2.07	0.55
41:DJ:103:ILE:HD12	41:DJ:104:ALA:N	2.22	0.55
23:DB:2677:G:H2'	23:DB:2678:C:C6	2.41	0.55
23:BB:134:G:H2'	23:BB:135:U:C6	2.42	0.55
1:AA:649:A:H2'	1:AA:650:G:O4'	2.07	0.55
1:AA:1499:A:O2'	1:AA:1500:A:H5'	2.07	0.55
1:CA:28:A:N3	1:CA:296:U:H4'	2.22	0.55
1:CA:1486:G:H2'	1:CA:1487:G:O4'	2.06	0.55
9:CJ:66:GLU:HB3	13:CN:98:ALA:HB2	1.88	0.55
1:AA:628:G:O2'	1:AA:629:A:H5'	2.07	0.55
1:CA:71:A:O2'	1:CA:72:A:H5'	2.07	0.55
37:BL:131:ALA:C	37:BL:133:ALA:H	2.09	0.55
44:BQ:34:ALA:O	44:BQ:37:ALA:HB3	2.07	0.54
23:DB:572:A:H3'	23:DB:573:U:O4'	2.07	0.54
44:DQ:26:ALA:HB1	44:DQ:30:VAL:CG1	2.36	0.54
20:AB:164:ASP:CG	20:AB:203:ASP:HB2	2.27	0.54
26:BD:4:LEU:HD23	26:BD:101:PHE:CE1	2.42	0.54
26:BD:106:LYS:HB3	26:BD:206:ALA:CB	2.38	0.54
44:DQ:63:ARG:NH1	44:DQ:96:ASP:HB2	2.09	0.54
23:DB:2394:C:OP1	37:DL:63:LYS:HG2	2.07	0.54
50:BT:38:ALA:HB1	50:BT:43:ILE:HD11	1.89	0.54
1:CA:1296:C:C4'	1:CA:1302:C:H41	2.11	0.54
44:BQ:91:ARG:NH1	49:BR:10:LYS:HB3	2.22	0.54
48:BG:17:LYS:HZ2	48:BG:18:ILE:H	1.53	0.54
47:BF:71:LYS:O	47:BF:73:VAL:HG23	2.07	0.54
1:CA:1060:U:H2'	1:CA:1061:G:H8	1.72	0.54
37:BL:113:ALA:HB3	37:BL:115:GLU:OE1	2.06	0.54
45:DS:13:SER:OG	45:DS:14:ALA:N	2.40	0.54
47:DF:7:TYR:O	47:DF:12:VAL:HG23	2.06	0.54
35:BV:44:HIS:CE1	35:BV:85:LYS:HB2	2.43	0.54
13:AN:7:ALA:O	13:AN:11:LYS:HG2	2.06	0.54
32:D4:5:ALA:HA	32:D4:37:GLN:HE21	1.72	0.54
23:DB:1656:C:H2'	23:DB:1657:U:C6	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:107:G:O2'	22:BA:108:A:H5'	2.06	0.54
31:D0:38:LEU:HB3	31:D0:41:HIS:NE2	2.22	0.54
11:CL:20:VAL:O	11:CL:20:VAL:HG23	2.07	0.54
2:AC:51:VAL:HA	2:AC:69:THR:HA	1.89	0.54
23:DB:967:U:H2'	23:DB:968:C:C6	2.42	0.54
7:AH:49:LYS:O	7:AH:59:GLU:N	2.39	0.54
1:CA:272:C:H2'	1:CA:273:U:C6	2.41	0.54
1:AA:551:U:H2'	1:AA:552:U:C6	2.41	0.54
12:AM:90:HIS:HA	12:AM:108:ARG:HH22	1.71	0.54
12:CM:95:PRO:N	12:CM:108:ARG:HG2	2.21	0.54
23:DB:2529:G:H4'	48:DG:174:LYS:CG	2.36	0.54
1:CA:926:G:N2	1:CA:1505:G:H2'	2.22	0.54
4:CE:152:VAL:HG21	7:CH:98:LEU:HB3	1.88	0.54
35:DV:31:TYR:HB3	35:DV:37:PRO:HG3	1.89	0.54
6:CG:50:ALA:HB2	6:CG:57:GLU:HG3	1.88	0.54
25:BC:123:ILE:HD12	25:BC:191:LEU:CD1	2.36	0.54
1:CA:736:C:H2'	1:CA:737:C:H6	1.67	0.54
1:AA:1329:A:O2'	1:AA:1330:U:H5'	2.07	0.54
44:DQ:65:ASN:HB2	44:DQ:75:TYR:HB2	1.89	0.54
23:BB:1205:A:H4'	23:BB:1206:G:OP2	2.05	0.54
23:DB:2041:U:H2'	23:DB:2042:A:H8	1.72	0.54
23:BB:962:G:H21	23:BB:2250:G:H22	1.55	0.54
23:DB:1513:U:H2'	23:DB:1514:G:C8	2.43	0.54
48:BG:87:GLN:HE21	48:BG:164:ALA:HA	1.72	0.54
23:DB:564:C:O2'	23:DB:565:C:H5'	2.07	0.54
23:BB:136:G:H2'	23:BB:137:U:C6	2.41	0.54
23:DB:596:U:H2'	23:DB:597:G:H8	1.72	0.54
1:AA:818:G:H3'	1:AA:819:A:H5''	1.88	0.54
1:CA:171:A:H2'	1:CA:172:A:C8	2.42	0.54
1:AA:74:A:O2'	1:AA:75:G:H5'	2.07	0.54
23:DB:445:C:O2'	23:DB:446:G:H5'	2.06	0.54
1:CA:470:C:H2'	1:CA:471:U:C6	2.42	0.54
22:BA:78:A:H2'	22:BA:79:G:O4'	2.06	0.54
24:DI:63:ASP:O	24:DI:64:ARG:HB2	2.06	0.54
1:CA:317:U:H2'	1:CA:318:G:H8	1.72	0.54
1:AA:903:G:O2'	1:AA:904:U:H5'	2.07	0.54
26:BD:51:THR:HG22	26:BD:52:THR:N	2.23	0.54
53:D6:76:LEU:HD21	53:D6:97:ASP:O	2.07	0.54
25:BC:93:VAL:HG13	25:BC:94:LEU:N	2.22	0.54
29:BE:105:LEU:HD21	29:BE:177:PRO:HA	1.87	0.54
48:BG:34:ARG:HG2	48:BG:34:ARG:HH11	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:131:VAL:C	47:BF:133:GLU:H	2.10	0.54
43:BO:88:LYS:HG2	43:BO:89:ASP:H	1.72	0.54
1:CA:17:U:O2'	1:CA:18:C:H5'	2.06	0.54
23:DB:139:U:H3	50:DT:49:LYS:CE	2.20	0.54
6:AG:110:ARG:HB2	6:AG:118:ARG:HB3	1.89	0.54
40:BH:105:ALA:HB3	40:BH:108:VAL:CG2	2.36	0.54
23:BB:2487:G:H2'	23:BB:2488:G:H8	1.72	0.54
25:BC:202:ARG:NH1	25:BC:213:ARG:NE	2.55	0.54
20:AB:16:GLY:CA	20:AB:40:ILE:H	2.20	0.54
5:CF:6:ILE:HG13	5:CF:6:ILE:O	2.07	0.54
1:AA:21:G:H2'	1:AA:22:G:H8	1.70	0.54
23:DB:10:A:H61	23:DB:2895:G:H1'	1.72	0.54
48:DG:74:MET:O	48:DG:78:VAL:HG13	2.07	0.54
26:DD:8:LYS:CD	26:DD:197:THR:H	2.20	0.54
28:DP:3:ILE:HG23	28:DP:4:ILE:HG13	1.88	0.54
9:AJ:17:LEU:HD22	9:AJ:96:VAL:CG1	2.36	0.54
4:AE:152:VAL:HA	4:AE:155:LYS:HD3	1.89	0.54
1:AA:1343:G:H4'	8:AI:123:ARG:O	2.07	0.54
1:AA:321:A:O2'	1:AA:322:C:H5'	2.07	0.54
1:AA:1000:A:H2'	1:AA:1001:C:C6	2.43	0.54
9:AJ:36:VAL:HA	9:AJ:76:ILE:HA	1.89	0.54
23:BB:784:G:N1	25:BC:227:VAL:HG11	2.21	0.54
1:CA:617:G:H4'	15:CP:46:LYS:NZ	2.22	0.54
27:DK:88:ASN:ND2	27:DK:88:ASN:C	2.61	0.54
23:BB:98:G:C2'	23:BB:99:U:H5''	2.37	0.54
6:AG:21:LEU:HG	6:AG:22:LEU:N	2.21	0.54
30:BY:40:THR:HG22	30:BY:42:ALA:H	1.72	0.54
46:BU:53:GLN:O	46:BU:53:GLN:HG2	2.07	0.54
7:CH:100:ILE:HD11	7:CH:128:VAL:HB	1.90	0.54
23:BB:1915:U:H2'	23:BB:1916:A:C8	2.42	0.54
22:BA:49:C:H2'	22:BA:50:A:C8	2.42	0.54
23:DB:2290:G:H2'	23:DB:2291:U:C6	2.42	0.54
1:CA:425:G:H2'	1:CA:426:U:C6	2.42	0.54
23:BB:1571:A:H2'	23:BB:1572:A:H8	1.71	0.54
48:BG:38:ASP:CG	48:BG:39:ALA:H	2.10	0.54
26:DD:122:VAL:HA	26:DD:127:PHE:H	1.72	0.54
1:AA:45:G:H2'	1:AA:46:G:C8	2.42	0.54
23:DB:813:U:H2'	23:DB:814:C:C6	2.42	0.54
19:CT:48:LYS:O	19:CT:52:GLU:HB3	2.07	0.54
23:BB:794:A:H2'	23:BB:795:C:H6	1.71	0.54
23:DB:2815:C:H2'	23:DB:2816:G:H8	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1451:U:H5''	1:CA:1452:C:OP2	2.08	0.54
1:CA:1484:C:O2'	1:CA:1485:U:H5'	2.07	0.54
23:DB:1300:G:H4'	23:DB:1301:A:O5'	2.05	0.54
1:AA:731:G:O2'	1:AA:732:C:H5'	2.06	0.54
23:DB:2494:G:H4'	38:DM:79:ALA:HB2	1.89	0.54
23:DB:2095:A:H3'	23:DB:2096:C:H6	1.71	0.54
53:D6:93:SER:HB3	53:D6:100:TYR:O	2.07	0.54
23:DB:1276:A:O2'	23:DB:1277:G:H5'	2.06	0.54
7:AH:17:GLN:HA	7:AH:17:GLN:HE21	1.70	0.54
1:CA:404:G:O2'	1:CA:405:U:H5'	2.07	0.54
23:DB:2384:U:H5''	23:DB:2386:A:OP1	2.08	0.54
52:DW:37:VAL:HG12	52:DW:38:ARG:N	2.18	0.54
44:BQ:34:ALA:O	44:BQ:38:VAL:HG23	2.07	0.54
21:CU:42:THR:O	21:CU:46:ARG:HG3	2.08	0.54
40:BH:124:THR:O	40:BH:125:THR:CB	2.54	0.54
1:CA:1370:G:O2'	1:CA:1371:G:H5'	2.07	0.54
44:DQ:83:LYS:NZ	44:DQ:87:VAL:HA	2.23	0.54
47:BF:115:GLY:CA	47:BF:177:ARG:HH11	2.21	0.54
47:BF:1:ALA:O	47:BF:4:HIS:HB3	2.07	0.54
23:BB:322:A:H5'	23:BB:340:A:H1'	1.89	0.54
40:DH:86:ASP:HB2	40:DH:89:LYS:HD3	1.89	0.54
1:AA:1060:U:H2'	1:AA:1061:G:H8	1.72	0.54
45:DS:8:ARG:HB3	45:DS:102:HIS:CE1	2.42	0.54
33:D1:34:GLU:HA	33:D1:48:TYR:O	2.07	0.54
23:BB:674:G:O3'	29:BE:60:TRP:CZ2	2.61	0.54
15:CP:66:THR:O	15:CP:67:ILE:HB	2.07	0.54
45:BS:52:GLU:HA	45:BS:55:ILE:CG2	2.36	0.54
1:AA:1468:A:O2'	1:AA:1469:C:H5'	2.08	0.54
25:BC:16:VAL:H	25:BC:203:VAL:HG12	1.73	0.54
25:BC:18:VAL:HG11	25:BC:202:ARG:HD2	1.90	0.54
23:BB:1198:U:H2'	23:BB:1199:U:C6	2.42	0.54
11:CL:24:GLU:HB2	11:CL:26:CYS:SG	2.48	0.54
49:DR:39:LEU:CB	49:DR:49:ILE:HG12	2.37	0.54
23:DB:1553:A:O2'	23:DB:1554:U:H2'	2.07	0.54
9:AJ:14:ASP:OD1	9:AJ:17:LEU:HB2	2.07	0.54
43:DO:4:LYS:O	43:DO:8:ILE:HG13	2.07	0.54
28:DP:88:ARG:HG3	28:DP:112:ARG:HB3	1.88	0.54
23:BB:2073:C:C5'	25:BC:227:VAL:HG12	2.37	0.54
28:BP:112:ARG:HB2	28:BP:112:ARG:HH11	1.72	0.54
23:BB:714:U:H1'	23:BB:717:C:H5	1.72	0.54
39:DX:18:LEU:HA	39:DX:21:LEU:HD12	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AG:57:GLU:H	6:AG:57:GLU:CD	2.10	0.54
45:DS:30:SER:O	45:DS:33:LEU:HB2	2.07	0.54
1:AA:213:G:H3'	1:AA:214:C:C6	2.42	0.54
23:BB:184:C:H2'	23:BB:185:G:C8	2.43	0.54
23:DB:1563:U:H2'	23:DB:1564:C:C6	2.42	0.54
23:DB:1292:G:H2'	23:DB:1293:C:C6	2.43	0.54
53:B6:181:GLN:O	53:B6:185:GLY:HA3	2.08	0.54
23:BB:2814:A:H4'	31:B0:25:THR:HG21	1.88	0.54
23:BB:904:G:H2'	23:BB:905:A:C8	2.42	0.54
23:BB:831:G:H2'	23:BB:832:U:O4'	2.08	0.54
23:DB:955:U:H5''	38:DM:86:LYS:HD2	1.89	0.54
2:CC:13:ILE:N	2:CC:13:ILE:HD13	2.23	0.54
23:DB:1341:G:H3'	23:DB:1397:U:O2	2.06	0.54
43:BO:105:ALA:C	43:BO:107:ALA:H	2.11	0.54
27:BK:25:LEU:HD13	27:BK:38:ILE:HG22	1.90	0.54
17:AR:61:ALA:HB3	17:AR:67:LEU:HD12	1.89	0.54
23:BB:1299:G:H4'	23:BB:1301:A:H1'	1.88	0.54
1:AA:975:A:H4'	1:AA:976:G:OP2	2.07	0.54
25:DC:175:LEU:HD11	25:DC:181:ARG:HG3	1.90	0.54
48:DG:132:LEU:O	48:DG:132:LEU:HD12	2.08	0.54
53:D6:59:THR:HG22	53:D6:67:VAL:HG23	1.89	0.54
53:D6:98:ALA:O	53:D6:99:LEU:HD23	2.08	0.54
20:CB:204:ASP:CG	20:CB:205:ALA:H	2.10	0.54
24:DI:79:LEU:HD11	24:DI:131:THR:OG1	2.07	0.54
23:BB:1459:G:H5''	23:BB:1460:U:OP1	2.06	0.54
40:DH:88:GLY:HA3	40:DH:125:THR:OG1	2.07	0.54
1:CA:950:U:H2'	1:CA:951:G:H8	1.73	0.54
4:CE:136:VAL:HG13	4:CE:137:ARG:N	2.22	0.54
18:AS:51:HIS:HA	18:AS:55:GLN:O	2.07	0.54
8:AI:94:ARG:CB	8:AI:94:ARG:HH11	2.17	0.54
23:BB:2834:G:H1'	23:BB:2883:A:N6	2.23	0.54
48:DG:145:ALA:HA	48:DG:148:ARG:CG	2.38	0.54
24:DI:17:ALA:O	24:DI:18:ASN:CB	2.55	0.54
47:BF:162:ASP:O	47:BF:166:ARG:HD2	2.06	0.54
23:DB:784:G:N1	25:DC:227:VAL:HG11	2.21	0.54
1:AA:1392:G:O2'	1:AA:1393:U:H5'	2.07	0.54
26:DD:148:GLN:CB	26:DD:152:PRO:HG2	2.37	0.54
26:DD:9:VAL:HA	26:DD:197:THR:HG23	1.89	0.54
36:B2:21:ARG:HG2	36:B2:31:LEU:CG	2.38	0.54
23:DB:1080:A:O2'	24:DI:126:ARG:HD2	2.08	0.54
23:BB:1441:G:H2'	23:BB:1442:U:C6	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:D6:109:GLU:O	53:D6:112:LYS:HB2	2.07	0.54
43:BO:5:SER:HA	43:BO:8:ILE:CD1	2.35	0.54
3:AD:185:PRO:HB2	3:AD:190:LEU:HG	1.89	0.54
12:CM:89:ARG:HB2	12:CM:96:VAL:HG22	1.88	0.54
24:DI:85:ILE:CD1	24:DI:137:LEU:HD21	2.37	0.54
23:BB:2840:C:H2'	23:BB:2841:C:H6	1.71	0.54
13:CN:1:ALA:HB1	13:CN:6:LYS:HE2	1.89	0.54
10:CK:80:ASN:HB3	10:CK:105:ARG:HB3	1.90	0.54
11:AL:64:SER:OG	11:AL:96:THR:HG23	2.06	0.54
50:DT:80:TRP:CZ3	50:DT:82:LYS:HG2	2.42	0.54
23:DB:1508:A:H5'	23:DB:1509:A:C6	2.43	0.54
1:CA:1314:C:H2'	1:CA:1315:U:C6	2.42	0.54
11:CL:33:CYS:HA	11:CL:54:VAL:HA	1.90	0.54
1:AA:1141:C:H2'	1:AA:1142:G:C8	2.42	0.54
23:DB:1637:A:H2'	23:DB:1638:C:C6	2.42	0.54
37:BL:23:ILE:HG13	49:BR:82:HIS:CE1	2.42	0.54
1:AA:1451:U:H5''	1:AA:1452:C:OP2	2.07	0.54
49:DR:91:GLN:HG3	49:DR:92:TRP:H	1.72	0.54
23:BB:575:A:O2'	23:BB:576:U:H5'	2.07	0.54
1:AA:730:G:O2'	1:AA:766:A:H5'	2.07	0.54
23:BB:1849:G:H2'	23:BB:1850:G:H8	1.72	0.54
23:BB:443:A:OP1	29:BE:40:ARG:HD2	2.07	0.54
23:DB:1464:G:H2'	23:DB:1465:G:H8	1.71	0.54
23:DB:1104:C:H2'	23:DB:1105:U:C6	2.43	0.54
23:BB:1885:A:H3'	23:BB:1886:U:C6	2.42	0.54
52:DW:32:ALA:C	52:DW:34:SER:H	2.10	0.54
48:BG:51:PHE:CD2	48:BG:68:ARG:HG2	2.43	0.54
44:BQ:26:ALA:HB1	44:BQ:30:VAL:CG1	2.38	0.54
22:BA:43:C:H2'	22:BA:44:G:H5''	1.90	0.54
26:BD:111:GLY:H	26:BD:194:PRO:HG3	1.72	0.54
37:DL:113:ALA:HB3	37:DL:115:GLU:OE1	2.07	0.54
7:AH:87:ARG:N	7:AH:90:GLU:HB3	2.23	0.54
30:DY:7:THR:HG23	30:DY:34:THR:OG1	2.08	0.54
50:BT:47:VAL:HG13	50:BT:51:PHE:HD1	1.72	0.54
48:BG:26:LYS:HA	48:BG:32:LEU:HA	1.90	0.54
51:BZ:51:VAL:HG11	51:BZ:56:MET:HG3	1.90	0.54
47:BF:7:TYR:HA	47:BF:11:VAL:CG2	2.38	0.54
29:BE:154:ASP:OD1	29:BE:156:ASN:HB3	2.07	0.54
1:CA:1317:C:OP1	13:CN:56:PRO:HD2	2.06	0.54
25:DC:16:VAL:N	25:DC:203:VAL:HG12	2.23	0.54
21:CU:3:ILE:HD11	21:CU:23:GLU:HB2	1.87	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AP:54:LEU:HD22	15:AP:80:LYS:HE3	1.89	0.54
32:D4:8:LYS:O	32:D4:25:VAL:HG21	2.08	0.54
48:DG:148:ARG:HB2	48:DG:152:ARG:HH21	1.73	0.54
27:DK:8:LEU:H	27:DK:8:LEU:HD12	1.73	0.54
20:AB:40:ILE:HG21	20:AB:200:PRO:O	2.07	0.54
42:BN:34:ILE:O	42:BN:112:TYR:HA	2.08	0.54
10:CK:83:VAL:CB	10:CK:109:ILE:HG23	2.37	0.54
23:DB:1549:A:H2'	23:DB:1550:C:C6	2.43	0.54
28:BP:3:ILE:HG23	28:BP:4:ILE:HG13	1.88	0.54
1:AA:1073:U:H4'	20:AB:104:LYS:HE3	1.89	0.54
3:AD:89:LEU:HD23	3:AD:199:ILE:HD11	1.90	0.54
20:CB:95:TRP:CZ2	20:CB:100:LEU:HD13	2.43	0.54
33:B1:47:ILE:H	33:B1:47:ILE:HD12	1.73	0.54
20:CB:172:ILE:HG22	20:CB:176:ASN:ND2	2.23	0.54
23:DB:1401:G:H2'	23:DB:1402:U:C6	2.42	0.54
45:BS:30:SER:O	45:BS:33:LEU:HB2	2.07	0.54
1:AA:373:A:H1'	1:AA:481:G:N3	2.23	0.54
50:BT:44:LYS:O	50:BT:48:GLN:HG2	2.08	0.54
41:DJ:72:LYS:HB2	41:DJ:89:PHE:HB2	1.89	0.54
23:BB:2491:U:H5''	23:BB:2570:G:H5''	1.90	0.54
1:AA:692:U:H2'	1:AA:694:A:OP2	2.08	0.54
23:BB:2728:U:H2'	23:BB:2729:G:C8	2.42	0.54
26:BD:174:SER:O	26:BD:175:LEU:HB2	2.07	0.54
1:AA:477:C:H2'	1:AA:478:A:C8	2.43	0.54
12:AM:43:LYS:O	12:AM:46:GLU:HG3	2.08	0.54
23:BB:861:A:H2'	23:BB:862:G:O4'	2.07	0.54
23:BB:1010:A:N3	23:BB:1153:C:H1'	2.23	0.54
25:BC:261:ARG:HG2	25:BC:261:ARG:O	2.08	0.54
1:AA:54:C:H2'	1:AA:352:C:H41	1.72	0.54
23:BB:813:U:H2'	23:BB:814:C:C6	2.43	0.54
3:CD:87:GLU:OE1	3:CD:91:ALA:HB2	2.08	0.54
23:BB:1276:A:O2'	23:BB:1277:G:H5'	2.07	0.54
23:DB:2543:G:H2'	23:DB:2544:G:O4'	2.07	0.54
23:BB:2677:G:H2'	23:BB:2678:C:C6	2.43	0.54
5:AF:43:GLY:HA2	5:AF:58:HIS:NE2	2.21	0.54
23:BB:806:C:O2'	23:BB:807:U:H5'	2.08	0.54
23:DB:1295:C:H2'	23:DB:1296:G:C8	2.43	0.54
28:BP:30:TRP:HD1	28:BP:39:LEU:HG	1.73	0.54
23:BB:2543:G:H2'	23:BB:2544:G:O4'	2.07	0.54
40:DH:27:ARG:H	40:DH:31:VAL:HG21	1.71	0.54
25:BC:143:VAL:HG12	25:BC:144:GLU:H	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2355:G:H4'	52:DW:20:LEU:CD1	2.37	0.54
23:DB:1821:A:H2'	23:DB:1822:C:H6	1.69	0.54
25:DC:141:HIS:HB3	25:DC:190:THR:OG1	2.07	0.54
11:CL:38:THR:OG1	53:D6:84:ARG:HG2	2.07	0.54
23:DB:856:G:C1'	52:DW:23:LYS:HB3	2.38	0.54
53:B6:58:VAL:HG12	53:B6:59:THR:H	1.73	0.54
40:BH:121:VAL:HG21	40:BH:128:HIS:NE2	2.23	0.54
40:BH:81:ALA:CB	40:BH:147:VAL:HG23	2.37	0.54
1:AA:1219:A:H2'	1:AA:1220:G:H8	1.73	0.54
48:DG:26:LYS:HA	48:DG:32:LEU:HA	1.90	0.54
47:BF:103:ILE:HD11	47:BF:174:PHE:CA	2.36	0.54
47:DF:133:GLU:HA	47:DF:150:GLY:HA2	1.90	0.54
10:AK:92:ARG:NH2	21:AU:24:LYS:HG2	2.22	0.54
1:AA:979:C:H1'	1:AA:1317:C:H41	1.72	0.54
29:BE:28:VAL:O	29:BE:32:VAL:HG13	2.07	0.54
15:AP:75:ILE:HG22	15:AP:80:LYS:HD2	1.89	0.54
29:DE:134:LEU:HD21	29:DE:161:ALA:HB2	1.89	0.54
20:AB:60:ALA:HB1	20:AB:220:VAL:HG13	1.89	0.54
20:CB:15:PHE:HA	20:CB:42:LEU:HD21	1.90	0.54
38:BM:126:ILE:HD12	38:BM:126:ILE:N	2.20	0.54
44:BQ:86:SER:HB2	49:BR:50:GLY:O	2.08	0.54
49:DR:39:LEU:HB2	49:DR:49:ILE:HG12	1.88	0.54
50:DT:18:GLU:C	50:DT:20:ALA:H	2.11	0.54
29:DE:176:ASP:OD1	29:DE:178:VAL:HG12	2.07	0.54
1:AA:551:U:H2'	1:AA:552:U:H6	1.72	0.54
27:BK:88:ASN:HD22	27:BK:89:ASN:N	2.05	0.54
1:CA:254:G:H4'	16:CQ:19:SER:OG	2.08	0.54
20:CB:95:TRP:CH2	20:CB:100:LEU:HB2	2.41	0.54
23:BB:2419:U:H2'	23:BB:2420:C:C6	2.43	0.54
23:BB:1583:A:H4'	23:BB:1585:C:C4	2.43	0.54
39:DX:21:LEU:HA	39:DX:25:GLN:HB3	1.89	0.54
24:BI:100:ILE:O	24:BI:139:VAL:HA	2.07	0.54
23:DB:1249:U:H4'	44:DQ:3:VAL:HG11	1.90	0.54
7:AH:51:GLU:HG2	7:AH:52:GLY:N	2.23	0.54
23:DB:2852:G:H2'	23:DB:2853:C:H6	1.71	0.54
19:CT:50:PHE:O	19:CT:53:MET:HG3	2.08	0.54
11:CL:33:CYS:HB2	11:CL:77:SER:O	2.07	0.54
23:DB:528:A:N1	23:DB:2042:A:H2'	2.22	0.54
29:DE:18:THR:HA	29:DE:106:LYS:HD3	1.90	0.54
23:DB:904:G:H2'	23:DB:905:A:C8	2.43	0.54
23:DB:2570:G:H2'	23:DB:2571:U:O4'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:355:U:H2'	23:BB:356:G:C8	2.43	0.54
23:BB:877:A:H2	23:BB:900:A:N7	2.05	0.54
23:DB:1742:U:H2'	23:DB:1743:G:C8	2.43	0.54
22:DA:10:G:H2'	22:DA:11:C:O4'	2.08	0.54
4:AE:22:LYS:HB3	4:AE:29:ILE:HB	1.90	0.54
23:BB:2210:U:N3	23:BB:2212:A:N7	2.54	0.54
1:CA:462:G:H2'	1:CA:463:U:C6	2.43	0.54
23:BB:394:C:H2'	23:BB:395:U:O4'	2.08	0.54
1:CA:1013:G:H2'	1:CA:1015:G:OP2	2.07	0.54
23:DB:1577:C:H2'	23:DB:1578:U:C6	2.42	0.54
1:AA:721:G:H4'	1:AA:722:G:O4'	2.07	0.54
25:DC:65:ASP:CG	25:DC:65:ASP:O	2.46	0.54
53:B6:58:VAL:HG22	53:B6:68:VAL:HA	1.89	0.54
53:B6:68:VAL:HG21	53:B6:99:LEU:HD12	1.90	0.54
8:CI:20:ILE:HG23	8:CI:60:LEU:HD11	1.88	0.54
41:DJ:4:PHE:CG	41:DJ:5:THR:N	2.75	0.54
8:AI:50:PRO:O	8:AI:54:VAL:HG22	2.07	0.54
43:DO:35:ILE:HG21	43:DO:71:ALA:CB	2.38	0.54
23:BB:996:A:H4'	44:BQ:91:ARG:HH11	1.71	0.54
42:BN:80:PHE:O	42:BN:85:PRO:HD3	2.08	0.54
47:BF:7:TYR:O	47:BF:12:VAL:HG23	2.08	0.54
43:BO:88:LYS:HG2	43:BO:89:ASP:N	2.23	0.54
12:AM:79:LEU:CD2	12:AM:86:ARG:HH21	2.21	0.54
23:BB:675:A:H4'	29:BE:60:TRP:HZ2	1.71	0.54
50:DT:50:LEU:HD22	50:DT:50:LEU:N	2.23	0.54
45:DS:66:ILE:HD13	45:DS:66:ILE:N	2.20	0.54
26:BD:9:VAL:O	28:BP:4:ILE:HD11	2.08	0.54
28:BP:3:ILE:HG23	28:BP:4:ILE:N	2.23	0.54
1:CA:1058:G:OP1	2:CC:198:LYS:HE3	2.07	0.54
23:BB:37:C:O2'	23:BB:38:A:H5'	2.08	0.54
39:DX:20:ASN:N	39:DX:20:ASN:ND2	2.54	0.54
1:CA:1343:G:H2'	1:CA:1344:C:H6	1.73	0.54
19:CT:68:LYS:HA	19:CT:68:LYS:HE2	1.90	0.54
37:BL:47:ARG:HG3	37:BL:48:ARG:N	2.22	0.54
1:CA:1254:A:O4'	1:CA:1356:G:H5''	2.08	0.54
1:AA:1533:C:O2'	1:AA:1534:A:H5''	2.07	0.54
1:AA:1512:U:H2'	1:AA:1513:A:H8	1.73	0.54
23:DB:2415:G:H2'	23:DB:2416:C:H6	1.72	0.54
25:DC:71:ASP:OD2	25:DC:118:GLY:HA2	2.08	0.54
23:DB:2700:A:H2'	23:DB:2701:U:H6	1.73	0.54
51:DZ:69:ALA:HA	51:DZ:72:ARG:NH1	2.23	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DT:44:LYS:O	50:DT:48:GLN:HG2	2.08	0.54
23:DB:2369:A:H2'	23:DB:2370:G:H8	1.71	0.54
1:AA:284:C:H2'	1:AA:285:C:H6	1.72	0.54
1:CA:730:G:O2'	1:CA:766:A:H5'	2.07	0.54
23:BB:441:U:H2'	23:BB:442:G:H8	1.73	0.54
1:CA:98:A:H2'	1:CA:99:C:C6	2.43	0.54
12:AM:58:GLU:O	12:AM:61:LYS:HG2	2.08	0.54
23:DB:189:G:H2'	23:DB:205:G:H22	1.73	0.54
23:DB:1676:A:H2'	23:DB:1677:A:O4'	2.07	0.54
48:BG:132:LEU:O	48:BG:132:LEU:HD12	2.08	0.54
52:DW:49:ASN:HA	52:DW:61:LYS:HB2	1.90	0.54
8:CI:23:GLY:N	8:CI:60:LEU:HA	2.20	0.54
20:CB:14:HIS:HD2	20:CB:202:ASN:H	1.53	0.54
41:BJ:44:TYR:CE2	44:BQ:59:LEU:HD11	2.43	0.54
23:BB:2199:A:H3'	23:BB:2200:C:H6	1.71	0.54
47:BF:134:GLN:O	47:BF:136:ILE:N	2.40	0.54
40:DH:87:GLU:HB2	40:DH:89:LYS:NZ	2.23	0.54
47:DF:174:PHE:HB3	47:DF:176:PHE:CD1	2.43	0.54
18:AS:39:ILE:HG12	18:AS:70:LEU:HD12	1.89	0.54
10:CK:88:PRO:HD3	21:CU:28:LEU:CD1	2.37	0.54
30:DY:2:LYS:HE3	30:DY:58:GLU:HB3	1.89	0.54
11:CL:26:CYS:SG	11:CL:29:LYS:HE2	2.48	0.54
27:BK:115:ILE:HG23	27:BK:116:ILE:N	2.22	0.54
1:AA:1239:A:N6	1:AA:1299:A:H62	2.05	0.54
23:DB:1439:A:N7	23:DB:1440:U:N1	2.55	0.54
36:B2:10:LEU:HD11	36:B2:14:ARG:CZ	2.38	0.54
40:DH:113:SER:HB2	40:DH:132:PHE:CZ	2.43	0.54
1:AA:337:G:H2'	1:AA:338:A:H8	1.71	0.54
14:AO:81:LEU:HD23	14:AO:85:LEU:HD13	1.89	0.54
23:BB:1796:U:O2'	23:BB:1797:G:H5'	2.07	0.54
41:BJ:99:ARG:O	41:BJ:103:ILE:HG13	2.08	0.54
1:AA:706:A:C4'	10:AK:30:ILE:HD11	2.38	0.54
27:BK:87:LEU:HD12	27:BK:92:GLU:HA	1.89	0.54
23:BB:1488:C:O2'	23:BB:1489:C:H5'	2.07	0.54
1:CA:253:A:H2'	1:CA:254:G:C8	2.42	0.54
23:BB:1688:U:O2	23:BB:1700:A:H5'	2.08	0.54
45:DS:31:GLN:C	45:DS:33:LEU:H	2.09	0.54
1:CA:734:G:O2'	17:CR:59:LYS:HD3	2.08	0.54
6:CG:21:LEU:HG	6:CG:22:LEU:N	2.21	0.54
23:BB:1387:A:H2'	23:BB:1388:G:C8	2.41	0.54
1:CA:677:U:H1'	10:CK:120:CYS:SG	2.48	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:D6:33:ALA:CB	53:D6:63:PRO:HA	2.38	0.54
17:CR:31:TYR:CG	17:CR:54:LEU:HD11	2.43	0.54
23:BB:2415:G:H2'	23:BB:2416:C:H6	1.72	0.54
23:BB:2635:A:H4'	26:BD:79:LEU:HB2	1.90	0.54
23:DB:831:G:H2'	23:DB:832:U:O4'	2.07	0.54
1:CA:477:C:H2'	1:CA:478:A:C8	2.43	0.54
23:BB:1395:A:H4'	23:BB:1397:U:C5	2.42	0.54
2:AC:13:ILE:HD13	2:AC:13:ILE:N	2.23	0.54
23:BB:2196:C:H2'	23:BB:2197:U:C6	2.43	0.54
23:DB:1119:U:O2'	23:DB:1120:G:H5'	2.08	0.54
1:AA:55:A:OP2	1:AA:352:C:N4	2.40	0.54
23:BB:423:A:H5''	23:BB:424:G:H5'	1.89	0.54
22:BA:16:G:O2'	22:BA:17:C:H5'	2.07	0.54
52:BW:75:ASN:O	52:BW:76:ARG:HB2	2.08	0.54
25:DC:124:LYS:HG3	25:DC:125:PRO:HD2	1.89	0.54
22:BA:35:C:H2'	22:BA:36:C:C5'	2.37	0.54
23:DB:1339:G:N2	23:DB:1603:A:H1'	2.22	0.54
23:DB:2822:G:H2'	23:DB:2823:A:H5''	1.90	0.54
2:CC:181:ILE:HD12	2:CC:181:ILE:N	2.23	0.54
23:BB:2666:C:O4'	23:BB:2666:C:O2	2.24	0.54
42:BN:7:GLY:HA2	42:BN:46:ARG:HH11	1.73	0.54
40:BH:1:MET:HB3	40:BH:21:VAL:O	2.08	0.54
1:AA:113:G:O4'	1:AA:354:G:H4'	2.07	0.54
19:AT:14:GLU:OE2	19:AT:18:LYS:HE2	2.08	0.54
19:AT:19:HIS:O	19:AT:23:ARG:HG2	2.08	0.54
48:BG:93:TYR:C	48:BG:94:ARG:HG3	2.27	0.54
20:AB:187:ASP:H	20:AB:190:SER:HB2	1.73	0.54
48:DG:84:LYS:HG3	48:DG:132:LEU:N	2.23	0.54
26:BD:105:LYS:N	26:BD:106:LYS:HZ3	2.03	0.54
53:B6:72:ASP:HB3	53:B6:75:ALA:HB2	1.88	0.54
47:DF:115:GLY:CA	47:DF:177:ARG:HH11	2.20	0.54
41:DJ:45:THR:N	41:DJ:46:PRO:HD3	2.21	0.54
44:DQ:77:LYS:HA	44:DQ:80:ASN:HB3	1.90	0.54
35:DV:72:VAL:HB	35:DV:92:VAL:O	2.08	0.54
48:DG:34:ARG:HH11	48:DG:34:ARG:HG2	1.72	0.54
44:BQ:57:ARG:NH1	44:BQ:57:ARG:HG2	2.22	0.54
25:BC:65:ASP:CG	25:BC:65:ASP:O	2.46	0.54
1:AA:429:U:H1'	1:AA:430:A:H5''	1.90	0.54
1:AA:978:A:H5'	1:AA:1362:A:H61	1.73	0.54
11:AL:86:VAL:HB	11:AL:89:LEU:HB2	1.88	0.54
1:AA:332:G:O2'	1:AA:333:U:H5'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AP:6:LEU:HD23	15:AP:17:TYR:HB2	1.90	0.54
13:CN:51:PRO:HG2	13:CN:52:ARG:H	1.73	0.54
43:DO:58:ILE:HG22	43:DO:62:LEU:CD2	2.36	0.54
1:AA:1339:A:H2'	1:AA:1340:A:O4'	2.08	0.54
42:BN:72:ASP:OD1	42:BN:75:ILE:HG23	2.07	0.54
23:BB:1566:A:H5'	25:BC:213:ARG:NH2	2.23	0.54
27:BK:20:MET:C	27:BK:41:ILE:HD12	2.28	0.54
27:DK:105:ARG:HD2	27:DK:122:VAL:HG11	1.90	0.54
1:CA:1414:U:H2'	1:CA:1415:G:C8	2.43	0.54
10:CK:23:HIS:O	10:CK:29:THR:HA	2.08	0.54
27:BK:58:LEU:CD1	27:BK:86:LEU:HB3	2.38	0.54
23:BB:8:C:O2'	23:BB:9:G:H5'	2.08	0.54
23:DB:1197:G:O2'	23:DB:1198:U:H5'	2.07	0.54
20:CB:65:LYS:HB2	20:CB:158:ASP:H	1.73	0.54
23:BB:125:A:H3'	23:BB:126:A:H5''	1.90	0.54
1:CA:1239:A:N6	1:CA:1299:A:H62	2.06	0.54
20:CB:119:GLN:NE2	20:CB:124:THR:HG23	2.22	0.54
1:AA:272:C:H2'	1:AA:273:U:C6	2.42	0.54
23:BB:2822:G:H2'	23:BB:2823:A:H5''	1.90	0.54
1:AA:254:G:H4'	16:AQ:19:SER:OG	2.08	0.54
1:CA:239:U:C5'	1:CA:239:U:H6	2.21	0.54
11:AL:106:VAL:CG2	11:AL:116:TYR:HB3	2.38	0.54
23:DB:64:A:H2'	23:DB:65:U:H6	1.68	0.54
23:DB:1582:C:H3'	23:DB:1583:A:C2	2.42	0.54
11:CL:79:ILE:HD12	11:CL:96:THR:HG22	1.90	0.54
19:AT:53:MET:O	19:AT:57:VAL:HG22	2.08	0.54
1:CA:1499:A:O2'	1:CA:1500:A:H5'	2.08	0.54
38:BM:4:PRO:HG3	38:BM:68:PHE:HE2	1.73	0.54
1:AA:1494:G:O2'	1:AA:1495:U:H5'	2.08	0.54
23:DB:2455:G:H2'	23:DB:2456:C:H6	1.72	0.54
23:BB:871:U:H2'	23:BB:872:U:H6	1.73	0.54
20:CB:129:THR:C	20:CB:131:LYS:H	2.10	0.54
1:AA:1332:A:H2'	1:AA:1333:A:H8	1.73	0.54
23:DB:2569:G:O2'	23:DB:2570:G:H5'	2.07	0.54
1:CA:168:G:O2'	1:CA:169:C:H5'	2.08	0.54
23:DB:1301:A:O2'	23:DB:1302:A:H2'	2.08	0.54
23:DB:1499:C:H2'	23:DB:1500:G:H8	1.73	0.54
23:BB:1897:G:O2'	23:BB:1898:U:H5'	2.08	0.54
34:D3:56:LEU:O	34:D3:59:ALA:HB3	2.08	0.54
1:CA:1175:G:O2'	1:CA:1176:A:H5'	2.07	0.54
23:DB:2097:A:H2'	23:DB:2098:U:C6	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1464:G:H2'	23:BB:1465:G:H8	1.73	0.54
25:BC:175:LEU:HD11	25:BC:181:ARG:HG3	1.90	0.54
23:DB:429:A:H2'	23:DB:430:A:C8	2.43	0.54
23:BB:657:U:H2'	23:BB:658:U:C6	2.43	0.54
34:B3:50:SER:C	34:B3:52:GLY:H	2.12	0.54
17:AR:19:GLU:HG3	17:AR:54:LEU:HD12	1.90	0.54
23:BB:2636:C:H2'	23:BB:2637:U:C6	2.42	0.54
23:BB:564:C:O2'	23:BB:565:C:H5'	2.08	0.54
23:DB:1825:U:H2'	23:DB:1826:G:H8	1.73	0.54
48:DG:93:TYR:C	48:DG:94:ARG:HG3	2.28	0.54
40:BH:80:ILE:HD12	40:BH:144:VAL:CG2	2.34	0.54
20:CB:69:VAL:HB	20:CB:162:VAL:CB	2.38	0.54
1:AA:1219:A:H2'	1:AA:1220:G:C8	2.43	0.54
30:DY:40:THR:HG22	30:DY:42:ALA:H	1.73	0.54
44:BQ:91:ARG:HE	49:BR:11:GLN:HB2	1.73	0.54
40:DH:127:GLU:H	40:DH:127:GLU:CD	2.12	0.54
43:BO:35:ILE:HG22	43:BO:53:THR:HG23	1.89	0.54
47:BF:141:ASP:CB	47:BF:144:LYS:HB2	2.38	0.54
42:DN:83:LEU:CA	42:DN:86:ARG:HB2	2.31	0.54
1:AA:923:A:H2'	1:AA:924:C:C6	2.43	0.54
47:DF:101:ARG:NH1	47:DF:138:PRO:HB2	2.22	0.54
12:AM:82:LEU:HD22	18:AS:73:PHE:HE2	1.72	0.54
23:BB:2868:A:H2'	23:BB:2869:G:C8	2.43	0.54
23:BB:2468:A:H2'	23:BB:2476:A:C6	2.43	0.54
53:B6:113:ASP:HA	53:B6:116:ARG:NE	2.22	0.54
11:CL:86:VAL:HG11	11:CL:89:LEU:HD23	1.89	0.54
13:CN:41:TRP:O	13:CN:44:VAL:HG12	2.08	0.54
49:BR:39:LEU:HD22	49:BR:53:PHE:HD1	1.73	0.54
5:AF:6:ILE:O	5:AF:6:ILE:HG13	2.07	0.54
4:AE:45:VAL:O	4:AE:71:ILE:HG22	2.08	0.54
23:BB:1386:C:H2'	23:BB:1387:A:H8	1.71	0.54
23:BB:2243:U:H2'	23:BB:2244:U:H6	1.73	0.54
23:DB:1353:A:H2'	23:DB:1354:A:C8	2.43	0.54
23:DB:665:U:O2'	23:DB:666:A:H5'	2.08	0.54
14:CO:7:ALA:O	14:CO:11:ILE:HG22	2.08	0.54
20:AB:172:ILE:HG22	20:AB:176:ASN:ND2	2.23	0.54
5:AF:47:LEU:HD21	5:AF:57:ALA:CB	2.38	0.54
1:CA:87:C:C2'	1:CA:88:U:H5''	2.38	0.54
1:AA:677:U:H2'	1:AA:678:U:C6	2.43	0.54
1:AA:1170:A:H2'	1:AA:1171:A:O4'	2.08	0.54
43:DO:79:ALA:HA	43:DO:115:LEU:HD23	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2835:A:H61	23:BB:2878:U:H2'	1.72	0.54
23:DB:2814:A:H2'	23:DB:2815:C:H6	1.72	0.54
2:AC:13:ILE:H	2:AC:13:ILE:HD13	1.73	0.54
23:BB:2322:A:N6	23:BB:2333:A:N6	2.55	0.54
23:BB:2678:C:H2'	23:BB:2679:A:C8	2.42	0.54
12:CM:64:VAL:HA	12:CM:68:LEU:CD1	2.38	0.54
23:BB:445:C:O2'	23:BB:446:G:H5'	2.08	0.54
23:DB:423:A:H5''	23:DB:424:G:H5'	1.89	0.54
1:CA:820:U:H4'	1:CA:821:G:OP2	2.08	0.54
51:DZ:41:GLU:O	51:DZ:44:LYS:HD2	2.07	0.54
1:CA:487:A:H2'	1:CA:488:C:O4'	2.08	0.54
23:BB:1965:C:H5''	23:BB:1966:A:H2'	1.88	0.54
26:DD:38:LYS:HD3	26:DD:45:TYR:OH	2.08	0.54
26:DD:45:TYR:HD2	26:DD:83:ARG:HD3	1.71	0.54
23:DB:1495:A:H2'	23:DB:1496:A:C8	2.43	0.54
23:BB:1820:U:OP1	25:BC:176:ARG:HD2	2.08	0.53
48:BG:9:VAL:H	48:BG:48:THR:HB	1.73	0.53
20:AB:210:THR:HA	20:AB:213:LEU:HB2	1.89	0.53
40:BH:133:GLN:HA	40:BH:139:PHE:HB3	1.90	0.53
27:BK:35:VAL:HG12	27:BK:69:VAL:CG2	2.37	0.53
53:B6:42:LYS:HA	53:B6:51:PRO:CA	2.28	0.53
1:CA:1351:U:O2'	1:CA:1352:C:H5'	2.08	0.53
44:DQ:57:ARG:HG2	44:DQ:57:ARG:HH11	1.73	0.53
5:AF:93:LYS:O	5:AF:94:HIS:HB2	2.07	0.53
50:BT:50:LEU:N	50:BT:50:LEU:HD22	2.23	0.53
41:BJ:45:THR:N	41:BJ:46:PRO:HD3	2.22	0.53
47:BF:43:ILE:HG13	47:BF:44:ALA:N	2.23	0.53
29:BE:117:ARG:HA	29:BE:185:LYS:HG2	1.90	0.53
47:DF:103:ILE:HD11	47:DF:174:PHE:CA	2.37	0.53
13:AN:41:TRP:O	13:AN:44:VAL:HG12	2.07	0.53
1:AA:1320:C:H41	18:AS:36:ARG:HB3	1.74	0.53
20:AB:15:PHE:HA	20:AB:42:LEU:HD11	1.89	0.53
26:DD:124:ARG:HA	26:DD:165:MET:HE3	1.89	0.53
29:DE:188:MET:HE3	29:DE:193:VAL:HG13	1.89	0.53
42:DN:32:GLU:O	42:DN:114:GLU:HA	2.08	0.53
38:BM:18:ARG:C	38:BM:38:ARG:HH22	2.11	0.53
1:AA:86:G:O2'	1:AA:88:U:H5	1.91	0.53
1:AA:1070:U:H2'	1:AA:1071:C:C6	2.42	0.53
37:BL:95:LEU:HB2	37:BL:101:ILE:HG13	1.88	0.53
23:BB:2747:G:O6	23:BB:2755:C:H5''	2.07	0.53
4:CE:148:SER:HB2	4:CE:150:GLU:OE1	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BV:29:ILE:HD13	35:BV:31:TYR:CE2	2.44	0.53
1:CA:662:U:H2'	1:CA:663:A:C8	2.42	0.53
26:BD:33:ARG:NE	26:BD:74:GLU:HB3	2.23	0.53
23:BB:1593:A:H2'	23:BB:1594:U:H6	1.71	0.53
2:CC:46:LEU:HB3	2:CC:49:ALA:CB	2.38	0.53
24:BI:89:SER:HA	24:BI:97:VAL:CG2	2.38	0.53
23:DB:269:C:H2'	23:DB:270:A:C8	2.43	0.53
42:BN:51:LEU:HD11	42:BN:69:ARG:HG3	1.90	0.53
23:DB:2496:C:OP1	38:DM:82:MET:HB2	2.09	0.53
1:AA:389:A:H2'	1:AA:389:A:N3	2.23	0.53
27:DK:98:ARG:HE	27:DK:98:ARG:N	2.06	0.53
43:DO:66:GLY:HA2	43:DO:102:ARG:NE	2.23	0.53
23:DB:1475:G:H4'	23:DB:1476:U:O5'	2.07	0.53
53:D6:144:ALA:HA	53:D6:149:LEU:HG	1.90	0.53
6:AG:72:VAL:HG12	6:AG:89:GLU:HG3	1.89	0.53
1:CA:542:G:O2'	1:CA:543:U:H5'	2.08	0.53
52:DW:75:ASN:O	52:DW:76:ARG:HB2	2.07	0.53
23:DB:1528:A:H2'	23:DB:1529:G:O4'	2.08	0.53
45:BS:90:LYS:HD2	45:BS:92:ARG:NH1	2.23	0.53
1:AA:328:C:H4'	1:AA:329:A:H5''	1.90	0.53
25:DC:66:PHE:HB2	25:DC:150:GLY:O	2.09	0.53
20:AB:69:VAL:HG12	20:AB:168:GLU:HG3	1.90	0.53
20:AB:14:HIS:HD2	20:AB:202:ASN:H	1.55	0.53
22:DA:43:C:H2'	22:DA:44:G:H5''	1.91	0.53
23:BB:1022:G:N2	23:BB:1142:A:N1	2.55	0.53
20:CB:69:VAL:O	20:CB:163:ILE:HG22	2.07	0.53
5:AF:3:HIS:N	5:AF:3:HIS:CD2	2.76	0.53
26:DD:106:LYS:O	26:DD:107:VAL:HB	2.08	0.53
37:DL:110:VAL:HG23	37:DL:126:ARG:O	2.08	0.53
47:DF:40:GLY:HA2	47:DF:84:ILE:CG2	2.36	0.53
47:DF:78:ILE:N	47:DF:79:ARG:HH11	2.05	0.53
25:BC:80:LEU:HD11	25:BC:109:LEU:HG	1.91	0.53
33:B1:33:LEU:HB3	33:B1:51:ALA:CB	2.38	0.53
23:BB:673:C:H2'	23:BB:674:G:H5'	1.90	0.53
23:BB:675:A:OP1	29:BE:60:TRP:NE1	2.41	0.53
50:DT:47:VAL:HG13	50:DT:51:PHE:CD1	2.42	0.53
46:BU:27:VAL:CG2	46:BU:33:VAL:HG12	2.35	0.53
21:CU:16:ARG:NE	21:CU:16:ARG:HA	2.24	0.53
52:DW:10:ARG:O	52:DW:11:ASN:HB2	2.07	0.53
9:CJ:36:VAL:HA	9:CJ:76:ILE:HA	1.89	0.53
23:DB:1657:U:O2'	26:DD:138:LEU:HD12	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:699:C:C2'	1:AA:700:G:H5''	2.35	0.53
23:BB:967:U:H2'	23:BB:968:C:C6	2.43	0.53
1:CA:332:G:O2'	1:CA:333:U:H5'	2.08	0.53
31:D0:38:LEU:HB3	31:D0:41:HIS:CD2	2.43	0.53
23:BB:171:U:H2'	23:BB:172:A:H8	1.72	0.53
38:DM:40:ARG:HB2	38:DM:93:VAL:HG22	1.89	0.53
2:CC:51:VAL:HA	2:CC:69:THR:HA	1.89	0.53
26:BD:8:LYS:CD	26:BD:197:THR:H	2.21	0.53
2:AC:26:LYS:HG3	2:AC:27:GLU:N	2.23	0.53
23:DB:62:U:H2'	23:DB:63:A:O4'	2.09	0.53
23:DB:559:G:H21	44:DQ:51:GLN:HE22	1.56	0.53
22:BA:74:U:O5'	22:BA:74:U:H6	1.90	0.53
41:BJ:72:LYS:HB2	41:BJ:89:PHE:HB2	1.90	0.53
23:DB:1236:G:H1'	23:DB:1237:A:C8	2.43	0.53
39:BX:21:LEU:HA	39:BX:25:GLN:HB3	1.89	0.53
23:DB:1429:G:O2'	23:DB:1430:G:H5'	2.08	0.53
6:CG:19:SER:OG	6:CG:22:LEU:HB2	2.07	0.53
1:AA:737:C:H2'	1:AA:738:C:C6	2.43	0.53
23:BB:1889:A:H2'	23:BB:1890:A:H8	1.71	0.53
19:AT:50:PHE:O	19:AT:53:MET:HG3	2.08	0.53
23:BB:2700:A:H2'	23:BB:2701:U:H6	1.73	0.53
23:DB:1166:G:H2'	23:DB:1167:C:H6	1.72	0.53
26:DD:159:LYS:O	26:DD:161:MET:HG2	2.08	0.53
50:DT:32:LEU:O	50:DT:83:ALA:HB2	2.08	0.53
23:BB:1316:U:O2'	23:BB:1317:G:H5'	2.07	0.53
41:DJ:29:ALA:O	41:DJ:32:LEU:HB2	2.07	0.53
23:DB:680:C:H2'	23:DB:681:G:H8	1.73	0.53
23:BB:1347:A:H2'	23:BB:1348:C:O4'	2.08	0.53
19:AT:48:LYS:O	19:AT:52:GLU:HB3	2.08	0.53
23:BB:833:A:H2'	23:BB:834:G:C8	2.42	0.53
35:DV:16:ALA:HA	35:DV:19:ARG:HE	1.73	0.53
23:DB:1299:G:H4'	23:DB:1301:A:H1'	1.90	0.53
20:CB:93:HIS:CD2	20:CB:145:ASN:HB3	2.43	0.53
1:AA:1154:G:O2'	1:AA:1155:A:H5'	2.08	0.53
1:AA:386:C:O2'	1:AA:387:U:H5'	2.08	0.53
47:DF:119:LYS:HA	47:DF:121:PHE:CE1	2.42	0.53
23:DB:244:A:H1'	23:DB:255:A:N6	2.23	0.53
25:DC:131:MET:HE1	25:DC:143:VAL:HG13	1.91	0.53
23:BB:2033:A:O2'	23:BB:2035:G:OP2	2.24	0.53
37:BL:141:LYS:HZ3	37:BL:143:GLU:HA	1.74	0.53
5:CF:93:LYS:O	5:CF:94:HIS:HB2	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:163:ILE:CG2	20:CB:164:ASP:H	2.12	0.53
25:BC:76:VAL:HA	25:BC:113:ASP:O	2.09	0.53
13:CN:79:SER:OG	13:CN:82:LYS:HG2	2.07	0.53
47:BF:135:ILE:HD11	47:BF:137:PHE:CD1	2.42	0.53
21:AU:16:ARG:HA	21:AU:16:ARG:NE	2.24	0.53
18:CS:51:HIS:HA	18:CS:55:GLN:O	2.08	0.53
50:DT:17:SER:N	50:DT:21:SER:OG	2.40	0.53
50:DT:25:GLU:HA	50:DT:29:THR:O	2.08	0.53
53:D6:174:GLN:CD	53:D6:178:LYS:HE2	2.28	0.53
41:BJ:81:ILE:HG23	41:BJ:82:GLY:N	2.20	0.53
29:DE:5:LEU:CD1	29:DE:10:SER:HB2	2.37	0.53
53:B6:162:GLN:HA	53:B6:162:GLN:NE2	2.18	0.53
13:CN:40:ARG:HH12	18:CS:6:LYS:HB2	1.73	0.53
43:BO:39:VAL:HB	43:BO:49:VAL:HG22	1.89	0.53
35:DV:44:HIS:CE1	35:DV:85:LYS:HB2	2.43	0.53
44:BQ:4:LYS:HZ3	44:BQ:7:VAL:HG22	1.73	0.53
11:AL:24:GLU:HB2	11:AL:26:CYS:SG	2.48	0.53
23:BB:2722:G:O2'	23:BB:2723:C:H5'	2.07	0.53
3:CD:197:HIS:ND1	3:CD:198:LEU:N	2.57	0.53
6:CG:57:GLU:H	6:CG:57:GLU:CD	2.12	0.53
23:DB:281:C:H2'	23:DB:282:A:H8	1.73	0.53
23:DB:741:U:H2'	23:DB:742:A:C8	2.43	0.53
26:DD:14:ILE:HA	28:DP:11:GLN:HE22	1.72	0.53
19:AT:57:VAL:HG23	19:AT:58:ASP:N	2.22	0.53
52:DW:46:ALA:HB2	52:DW:78:PHE:HD1	1.73	0.53
6:AG:134:VAL:HB	6:AG:137:ARG:NH2	2.24	0.53
50:BT:69:ARG:HG2	50:BT:73:ARG:C	2.29	0.53
23:BB:1563:U:H2'	23:BB:1564:C:C6	2.43	0.53
23:BB:1220:G:H2'	23:BB:1221:C:C6	2.43	0.53
23:BB:4:U:H2'	23:BB:5:A:H8	1.74	0.53
23:BB:1947:C:H2'	23:BB:1948:G:C8	2.44	0.53
23:BB:1315:C:H2'	23:BB:1316:U:H6	1.73	0.53
1:AA:182:A:H5''	1:AA:182:A:N3	2.23	0.53
1:AA:612:C:H2'	1:AA:613:C:C6	2.43	0.53
23:DB:285:G:O2'	23:DB:286:U:H5'	2.08	0.53
23:BB:813:U:H2'	23:BB:814:C:H6	1.71	0.53
42:BN:7:GLY:HA2	42:BN:46:ARG:NH1	2.23	0.53
47:DF:121:PHE:HB3	47:DF:127:TYR:CZ	2.43	0.53
1:CA:607:A:H2'	1:CA:608:A:C8	2.44	0.53
23:BB:1528:A:H2'	23:BB:1529:G:O4'	2.08	0.53
23:BB:250:G:H2'	23:BB:251:A:C8	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:898:G:N2	1:AA:900:A:H3'	2.23	0.53
46:BU:13:LEU:HD12	46:BU:68:ASN:O	2.08	0.53
7:CH:55:LYS:HZ1	7:CH:55:LYS:HA	1.73	0.53
1:CA:825:A:H2'	1:CA:826:C:H6	1.74	0.53
22:BA:64:G:H2'	22:BA:65:U:C6	2.44	0.53
1:CA:386:C:O2'	1:CA:387:U:H5'	2.08	0.53
48:BG:154:GLU:OE2	48:BG:156:TYR:HB2	2.08	0.53
23:DB:39:G:O2'	23:DB:40:U:H5'	2.09	0.53
48:DG:154:GLU:C	48:DG:156:TYR:H	2.12	0.53
23:DB:1827:U:C2'	23:DB:1828:G:H5'	2.39	0.53
37:DL:125:LEU:H	37:DL:143:GLU:HG3	1.74	0.53
20:CB:164:ASP:CG	20:CB:203:ASP:HB2	2.29	0.53
37:DL:79:LEU:CG	37:DL:112:LEU:HA	2.32	0.53
41:DJ:36:LEU:HD12	41:DJ:118:MET:O	2.09	0.53
7:AH:44:PHE:HA	7:AH:70:VAL:HG11	1.90	0.53
24:BI:11:GLN:O	24:BI:11:GLN:HG3	2.07	0.53
23:BB:321:U:H4'	29:BE:159:LEU:O	2.09	0.53
17:AR:34:GLU:HB2	21:AU:18:PHE:HZ	1.72	0.53
1:AA:1317:C:H3'	1:AA:1318:A:H8	1.73	0.53
1:AA:719:C:H2'	17:AR:38:ILE:CD1	2.38	0.53
23:BB:2884:U:H4'	31:B0:49:ARG:NH2	2.24	0.53
24:BI:18:ASN:N	24:BI:19:PRO:CD	2.71	0.53
37:DL:95:LEU:HD13	37:DL:101:ILE:HG13	1.90	0.53
48:DG:30:GLY:H	48:DG:78:VAL:HA	1.73	0.53
24:DI:45:THR:HA	24:DI:48:ILE:CG2	2.38	0.53
28:DP:3:ILE:C	28:DP:3:ILE:HD13	2.28	0.53
28:DP:3:ILE:HG23	28:DP:4:ILE:N	2.24	0.53
23:DB:559:G:P	41:DJ:111:LYS:HD3	2.48	0.53
23:BB:2155:U:H2'	23:BB:2156:G:C8	2.43	0.53
23:DB:322:A:H3'	29:DE:163:ASN:HD21	1.72	0.53
23:DB:2529:G:O2'	48:DG:174:LYS:HE2	2.09	0.53
1:AA:1254:A:O4'	1:AA:1356:G:H5''	2.08	0.53
27:DK:59:LYS:HD2	27:DK:89:ASN:ND2	2.22	0.53
27:DK:88:ASN:HD22	27:DK:89:ASN:N	2.06	0.53
1:CA:1123:U:O2'	1:CA:1124:G:H5'	2.07	0.53
23:DB:1240:U:O2'	23:DB:1241:A:H5'	2.09	0.53
5:AF:80:PHE:CE1	25:BC:123:ILE:HG12	2.43	0.53
40:BH:57:LYS:O	40:BH:61:VAL:HG12	2.08	0.53
23:DB:545:U:H2'	23:DB:548:G:OP2	2.09	0.53
1:CA:452:A:H2'	1:CA:453:G:O4'	2.09	0.53
23:BB:2455:G:H2'	23:BB:2456:C:H6	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1315:C:H2'	23:DB:1316:U:H6	1.71	0.53
43:BO:28:VAL:O	43:BO:28:VAL:HG13	2.09	0.53
23:BB:680:C:H2'	23:BB:681:G:C8	2.43	0.53
1:CA:693:G:H2'	1:CA:694:A:O4'	2.08	0.53
23:BB:1429:G:O2'	23:BB:1430:G:H5'	2.07	0.53
23:DB:2816:G:O2'	23:DB:2817:U:H5'	2.08	0.53
25:BC:177:SER:O	25:BC:270:ARG:HG3	2.08	0.53
23:DB:2888:C:H2'	23:DB:2889:C:H6	1.73	0.53
42:DN:7:GLY:HA2	42:DN:46:ARG:NH1	2.24	0.53
23:DB:303:G:H2'	23:DB:304:U:C6	2.43	0.53
2:AC:174:LEU:HD12	2:AC:174:LEU:H	1.73	0.53
53:B6:7:TYR:CE1	53:B6:160:GLU:HG2	2.44	0.53
19:AT:54:GLN:N	19:AT:55:PRO:HD2	2.23	0.53
15:CP:73:ALA:O	15:CP:77:GLU:HG3	2.08	0.53
5:CF:85:ILE:HG22	5:CF:86:ARG:N	2.24	0.53
23:BB:1109:C:H3'	23:BB:1110:G:C8	2.43	0.53
26:BD:40:LEU:HD12	26:BD:41:ALA:N	2.24	0.53
26:BD:45:TYR:HD2	26:BD:83:ARG:HD3	1.73	0.53
23:DB:464:U:H2'	23:DB:465:G:O4'	2.08	0.53
40:BH:130:VAL:HG21	40:BH:144:VAL:CG2	2.38	0.53
40:BH:80:ILE:H	40:BH:145:ASN:H	1.56	0.53
8:AI:56:MET:C	8:AI:58:GLU:H	2.11	0.53
23:BB:141:G:H1	50:BT:2:ILE:CD1	2.12	0.53
41:DJ:59:ALA:C	41:DJ:61:LYS:H	2.11	0.53
29:DE:58:LYS:HE2	29:DE:60:TRP:CD1	2.43	0.53
23:DB:2733:A:H2'	23:DB:2734:A:O4'	2.08	0.53
23:BB:1060:U:C4	24:BI:131:THR:HG22	2.43	0.53
45:DS:14:ALA:O	45:DS:18:ARG:HG2	2.09	0.53
1:AA:1317:C:OP1	13:AN:56:PRO:HD2	2.09	0.53
50:DT:39:THR:CG2	50:DT:42:GLU:H	2.21	0.53
23:DB:851:C:O2'	30:DY:45:GLY:HA3	2.09	0.53
23:DB:45:G:H5'	23:DB:46:G:OP1	2.09	0.53
1:AA:1351:U:O2'	1:AA:1352:C:H5'	2.08	0.53
26:DD:170:VAL:O	26:DD:170:VAL:HG23	2.08	0.53
1:AA:313:A:H2'	1:AA:314:C:C6	2.44	0.53
42:DN:72:ASP:OD2	42:DN:74:GLU:HB3	2.09	0.53
1:CA:706:A:C4'	10:CK:30:ILE:HD11	2.39	0.53
47:BF:163:GLU:HA	47:BF:166:ARG:HD3	1.90	0.53
7:AH:66:GLN:C	7:AH:68:LYS:H	2.10	0.53
46:DU:34:ILE:HG12	46:DU:63:ALA:CB	2.38	0.53
3:CD:89:LEU:HD23	3:CD:199:ILE:HD11	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AM:80:MET:HA	12:AM:87:GLY:HA3	1.91	0.53
3:AD:197:HIS:ND1	3:AD:198:LEU:N	2.56	0.53
23:DB:1726:C:H2'	23:DB:1727:C:C6	2.43	0.53
23:BB:1150:C:O2'	23:BB:1151:A:H5'	2.08	0.53
4:AE:110:MET:SD	4:AE:126:ALA:HB2	2.49	0.53
26:BD:133:THR:HG23	26:BD:134:HIS:N	2.24	0.53
23:DB:2460:U:H2'	23:DB:2461:A:H8	1.73	0.53
19:CT:57:VAL:HG23	19:CT:58:ASP:N	2.23	0.53
23:DB:1405:U:H2'	23:DB:1406:U:C6	2.44	0.53
1:CA:1516:G:H2'	1:CA:1518:A:OP2	2.09	0.53
1:AA:1140:C:O2'	1:AA:1141:C:H5'	2.08	0.53
23:BB:1258:U:H2'	23:BB:1259:G:H8	1.72	0.53
50:BT:69:ARG:HG3	50:BT:70:HIS:N	2.24	0.53
1:AA:677:U:H1'	10:AK:120:CYS:SG	2.49	0.53
23:BB:540:C:H2'	23:BB:541:A:C8	2.43	0.53
23:DB:2825:G:H5''	23:DB:2825:G:N3	2.23	0.53
23:DB:649:G:H2'	23:DB:650:C:H6	1.73	0.53
23:DB:807:U:H2'	23:DB:808:G:C8	2.43	0.53
1:AA:607:A:H2'	1:AA:608:A:C8	2.43	0.53
1:AA:607:A:H2'	1:AA:608:A:H8	1.73	0.53
1:AA:818:G:C3'	1:AA:819:A:H5''	2.38	0.53
23:BB:1300:G:H4'	23:BB:1301:A:O5'	2.07	0.53
26:BD:97:SER:HB3	26:BD:99:GLU:HG3	1.90	0.53
24:BI:81:LYS:HG3	24:BI:82:ALA:N	2.23	0.53
45:BS:72:THR:CG2	45:BS:108:SER:HB3	2.38	0.53
19:CT:54:GLN:N	19:CT:55:PRO:HD2	2.23	0.53
23:DB:394:C:H2'	23:DB:395:U:O4'	2.08	0.53
40:DH:27:ARG:NH1	51:DZ:60:ASP:HA	2.22	0.53
48:BG:16:VAL:HG11	48:BG:44:HIS:CE1	2.44	0.53
10:AK:51:PHE:CZ	10:AK:61:ALA:HA	2.44	0.53
21:AU:42:THR:O	21:AU:46:ARG:HG3	2.09	0.53
48:DG:88:LEU:HD13	48:DG:93:TYR:HB3	1.89	0.53
40:BH:89:LYS:HZ1	40:BH:123:ARG:CB	2.21	0.53
8:CI:20:ILE:HD13	8:CI:85:ALA:CB	2.39	0.53
8:AI:27:ILE:HD13	8:AI:34:LEU:HD22	1.90	0.53
47:BF:133:GLU:HA	47:BF:150:GLY:HA2	1.90	0.53
13:AN:40:ARG:HH12	18:AS:6:LYS:HB2	1.73	0.53
33:D1:26:LYS:HB2	33:D1:52:LYS:HZ2	1.73	0.53
23:DB:141:G:N2	23:DB:141:G:OP2	2.42	0.53
23:BB:2834:G:O6	23:BB:2879:A:H2'	2.08	0.53
31:B0:41:HIS:HB3	42:BN:99:LYS:HB2	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1350:A:H2'	1:AA:1351:U:C6	2.43	0.53
9:CJ:5:ARG:HG2	9:CJ:79:PRO:HD3	1.91	0.53
1:AA:86:G:N3	1:AA:87:C:N4	2.56	0.53
14:CO:81:LEU:HD23	14:CO:85:LEU:HD13	1.90	0.53
46:DU:39:ASN:CG	46:DU:62:ALA:HB3	2.29	0.53
26:BD:14:ILE:O	26:BD:14:ILE:HG23	2.09	0.53
23:BB:2592:G:H2'	23:BB:2593:U:O4'	2.09	0.53
27:DK:59:LYS:HD3	27:DK:89:ASN:HA	1.90	0.53
35:BV:29:ILE:HG13	35:BV:88:HIS:CE1	2.40	0.53
6:AG:50:ALA:CB	6:AG:57:GLU:HG3	2.38	0.53
25:BC:123:ILE:HG13	25:BC:123:ILE:O	2.07	0.53
23:DB:2136:G:O2'	23:DB:2137:U:H5'	2.09	0.53
27:DK:2:ILE:HD12	27:DK:2:ILE:N	2.24	0.53
23:BB:2190:G:O2'	23:BB:2191:A:H5'	2.09	0.53
50:DT:69:ARG:HG2	50:DT:73:ARG:C	2.29	0.53
19:AT:78:LEU:O	19:AT:82:ILE:HG23	2.09	0.53
1:CA:1514:G:H2'	1:CA:1515:G:H8	1.73	0.53
1:CA:1470:U:O2'	1:CA:1471:U:H5'	2.08	0.53
23:BB:416:U:H2'	23:BB:417:C:C6	2.44	0.53
23:BB:572:A:H3'	23:BB:573:U:O4'	2.08	0.53
23:BB:2784:U:O2'	23:BB:2785:C:H5'	2.08	0.53
34:D3:38:LYS:HG3	34:D3:41:ARG:NH1	2.24	0.53
1:AA:451:A:C6	1:AA:480:U:H2'	2.43	0.53
5:CF:18:VAL:O	5:CF:22:ILE:HG13	2.07	0.53
23:BB:2888:C:H2'	23:BB:2889:C:H6	1.72	0.53
23:DB:2834:G:H2'	23:DB:2879:A:N6	2.23	0.53
12:AM:43:LYS:HB2	12:AM:46:GLU:CG	2.38	0.53
1:CA:993:G:N2	1:CA:996:A:N6	2.57	0.53
18:AS:69:LYS:O	18:AS:72:GLU:HG2	2.08	0.53
23:DB:1520:U:H2'	23:DB:1521:G:O4'	2.09	0.53
2:CC:174:LEU:H	2:CC:174:LEU:HD12	1.74	0.53
51:DZ:53:ALA:O	51:DZ:55:GLY:N	2.38	0.53
23:BB:2691:C:H2'	23:BB:2692:G:H8	1.74	0.53
23:BB:1107:G:H2'	23:BB:1108:U:C6	2.44	0.53
34:B3:56:LEU:O	34:B3:59:ALA:HB3	2.08	0.53
1:AA:162:A:H2'	1:AA:163:C:O4'	2.09	0.53
23:BB:2252:G:O2'	23:BB:2253:G:H5'	2.09	0.53
10:AK:73:VAL:O	10:AK:76:TYR:HB2	2.09	0.53
23:DB:2030:A:H4'	23:DB:2031:A:H5'	1.89	0.53
8:AI:42:THR:O	8:AI:45:MET:HG2	2.09	0.53
8:AI:82:ILE:O	8:AI:86:LEU:HD13	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:113:LYS:HA	8:AI:120:ALA:HB2	1.91	0.53
50:BT:57:VAL:HG22	50:BT:58:VAL:N	2.20	0.53
25:DC:76:VAL:HA	25:DC:113:ASP:O	2.07	0.53
44:BQ:63:ARG:HH12	44:BQ:96:ASP:CB	2.13	0.53
49:BR:6:GLN:HE22	49:BR:10:LYS:H	1.56	0.53
48:BG:24:THR:C	48:BG:25:ILE:HD12	2.29	0.53
23:BB:987:C:H2'	23:BB:988:A:O4'	2.09	0.53
24:DI:52:LEU:HD22	24:DI:81:LYS:HD3	1.91	0.53
29:BE:134:LEU:CD2	29:BE:161:ALA:HB2	2.39	0.53
1:AA:1080:A:H2'	1:AA:1081:A:H5'	1.90	0.53
20:AB:46:VAL:HA	20:AB:49:PHE:CD2	2.43	0.53
25:DC:209:ALA:O	25:DC:213:ARG:HB2	2.07	0.53
24:DI:32:VAL:HG22	24:DI:60:VAL:CG2	2.39	0.53
13:AN:51:PRO:HG2	13:AN:52:ARG:H	1.72	0.53
31:B0:38:LEU:HB3	31:B0:41:HIS:NE2	2.24	0.53
3:CD:138:PRO:HA	3:CD:181:PHE:CD2	2.35	0.53
45:BS:36:LEU:H	45:BS:36:LEU:HD22	1.74	0.53
22:BA:32:U:C4'	22:BA:52:A:H62	2.22	0.53
37:DL:95:LEU:HA	37:DL:98:ALA:HB3	1.91	0.53
23:DB:1777:U:O2'	23:DB:1778:U:H5'	2.08	0.53
1:AA:1074:G:O3'	20:AB:101:THR:OG1	2.21	0.53
20:AB:101:THR:HG22	20:AB:174:GLU:OE1	2.09	0.53
40:DH:113:SER:N	40:DH:132:PHE:CE1	2.75	0.53
12:CM:95:PRO:CD	12:CM:108:ARG:HG2	2.37	0.53
27:DK:89:ASN:C	27:DK:89:ASN:HD22	2.12	0.53
11:AL:109:ARG:HH21	11:AL:112:ALA:HB3	1.73	0.53
23:BB:2078:C:H2'	23:BB:2079:U:H6	1.73	0.53
25:BC:123:ILE:HD12	25:BC:191:LEU:HD11	1.91	0.53
23:DB:1389:G:O2'	23:DB:1390:U:H5'	2.08	0.53
5:CF:53:LYS:HD3	5:CF:54:LEU:H	1.74	0.53
23:DB:1351:C:H4'	23:DB:1572:A:O4'	2.08	0.53
23:DB:2540:C:H2'	23:DB:2541:A:H8	1.72	0.53
1:CA:451:A:C6	1:CA:480:U:H2'	2.44	0.53
44:BQ:65:ASN:HB2	44:BQ:75:TYR:HB2	1.91	0.53
23:BB:2854:G:H2'	23:BB:2855:C:C6	2.44	0.53
41:DJ:130:HIS:HD2	41:DJ:132:HIS:HB2	1.72	0.53
40:DH:135:HIS:CG	40:DH:136:SER:N	2.77	0.53
22:BA:90:C:OP1	38:BM:16:ARG:HB2	2.09	0.53
23:BB:2496:C:H5'	38:BM:82:MET:HG3	1.91	0.53
23:DB:2708:G:O2'	23:DB:2709:G:H5'	2.08	0.53
23:DB:930:G:H1'	30:DY:24:LEU:HD11	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2543:G:H2'	23:DB:2544:G:C8	2.44	0.53
23:DB:1295:C:H2'	23:DB:1296:G:H8	1.73	0.53
23:DB:79:C:O2'	23:DB:346:A:H1'	2.08	0.53
1:AA:645:G:O2'	1:AA:646:G:H5'	2.08	0.53
1:AA:1289:A:H2'	1:AA:1290:G:H5'	1.90	0.53
23:DB:1031:G:H4'	32:D4:6:SER:HB3	1.90	0.53
24:DI:5:GLN:O	24:DI:6:ALA:HB3	2.08	0.53
1:CA:560:A:H4'	1:CA:561:U:H5''	1.90	0.53
23:BB:2324:U:H3'	23:BB:2325:G:H5''	1.90	0.53
17:AR:63:TYR:CD2	17:AR:63:TYR:N	2.75	0.53
18:CS:79:TYR:CE1	18:CS:80:ARG:HG3	2.44	0.53
42:BN:54:LEU:CD1	42:BN:62:ASN:HB3	2.38	0.53
1:CA:975:A:H4'	1:CA:976:G:OP2	2.07	0.53
23:DB:1099:G:C8	24:DI:3:LYS:HB2	2.44	0.53
48:BG:10:VAL:HG23	48:BG:48:THR:HA	1.89	0.53
23:DB:922:C:H1'	52:DW:22:VAL:HG21	1.90	0.53
40:BH:97:ARG:O	40:BH:101:ASP:HB2	2.08	0.53
8:AI:44:ARG:HH11	8:AI:44:ARG:HG2	1.73	0.53
1:AA:948:C:O2'	1:AA:949:A:H5'	2.08	0.53
34:D3:36:ALA:O	34:D3:39:ARG:HB3	2.09	0.53
12:CM:14:ALA:HB1	12:CM:33:LEU:HD21	1.91	0.53
47:BF:111:ARG:O	47:BF:112:ASP:HB2	2.08	0.53
40:DH:5:LEU:HD13	40:DH:13:GLY:CA	2.34	0.53
47:DF:141:ASP:HB2	47:DF:144:LYS:HB2	1.90	0.53
29:DE:105:LEU:HD21	29:DE:177:PRO:HA	1.89	0.53
21:AU:24:LYS:CD	21:AU:25:ALA:H	2.20	0.53
1:CA:1081:A:OP1	4:CE:21:SER:O	2.26	0.53
1:CA:1320:C:H41	18:CS:36:ARG:HB3	1.72	0.53
1:CA:979:C:H1'	1:CA:1317:C:H41	1.74	0.53
33:D1:33:LEU:HB3	33:D1:51:ALA:CB	2.38	0.53
23:BB:979:A:H3'	23:BB:980:A:C5'	2.39	0.53
48:DG:153:PRO:HG3	48:DG:162:ARG:CB	2.39	0.53
28:DP:91:VAL:O	28:DP:92:ARG:HB3	2.09	0.53
46:DU:32:LYS:HA	46:DU:65:GLN:HA	1.90	0.53
3:AD:138:PRO:HA	3:AD:181:PHE:CD2	2.35	0.53
45:BS:70:LYS:HD3	45:BS:110:ARG:O	2.08	0.53
25:BC:209:ALA:HA	25:BC:212:TRP:NE1	2.23	0.53
27:BK:8:LEU:H	27:BK:8:LEU:HD12	1.74	0.53
49:DR:39:LEU:O	49:DR:40:MET:HB2	2.08	0.53
11:AL:28:GLN:HB2	11:AL:80:LEU:HG	1.90	0.53
10:AK:80:ASN:HB3	10:AK:105:ARG:HB3	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DK:58:LEU:N	27:DK:58:LEU:HD23	2.23	0.53
1:CA:473:U:H2'	1:CA:474:G:H8	1.74	0.53
1:AA:237:G:H2'	1:AA:238:A:C8	2.44	0.53
3:CD:94:GLU:HA	3:CD:99:ASN:ND2	2.24	0.53
3:AD:129:VAL:HG12	3:AD:131:ILE:H	1.74	0.53
1:CA:833:G:O2'	1:CA:834:U:H5'	2.09	0.53
3:CD:118:SER:HA	3:CD:130:ASN:HB2	1.89	0.53
23:BB:2845:U:O2'	23:BB:2846:G:H5'	2.08	0.53
23:DB:1181:U:H2'	23:DB:1182:G:C8	2.41	0.53
1:AA:168:G:O2'	1:AA:169:C:H5'	2.09	0.53
1:AA:449:G:H2'	1:AA:450:G:C8	2.43	0.53
23:BB:2604:U:O2'	23:BB:2605:U:H5'	2.09	0.53
23:BB:2369:A:H2'	23:BB:2370:G:H8	1.74	0.53
23:BB:934:U:H2'	23:BB:935:C:H6	1.74	0.53
23:BB:2813:A:H2'	23:BB:2814:A:C8	2.43	0.53
23:BB:2041:U:H2'	23:BB:2042:A:H8	1.73	0.53
1:AA:590:U:H2'	1:AA:591:U:C6	2.44	0.53
5:AF:7:VAL:HG11	17:AR:64:LEU:HD21	1.90	0.53
23:DB:2821:A:OP2	26:DD:115:GLY:HA3	2.09	0.53
23:BB:2636:C:H4'	26:BD:81:GLU:OE2	2.09	0.53
30:DY:13:ILE:HG22	30:DY:14:GLY:N	2.24	0.53
4:CE:42:ASN:O	4:CE:75:LEU:HD12	2.09	0.53
23:DB:1835:G:H2'	23:DB:1836:C:C6	2.44	0.53
23:DB:1153:C:H2'	23:DB:1154:G:O4'	2.08	0.53
23:DB:1268:A:H2'	23:DB:1269:A:O4'	2.09	0.53
34:B3:21:PHE:CE1	34:B3:58:ILE:HG12	2.44	0.53
6:CG:12:LEU:HD22	6:CG:13:PRO:HD2	1.90	0.53
23:DB:947:A:H2'	23:DB:948:C:H6	1.74	0.53
26:BD:106:LYS:O	26:BD:107:VAL:HB	2.08	0.53
53:B6:38:LEU:HD22	53:B6:41:LEU:HD22	1.91	0.53
8:CI:56:MET:C	8:CI:58:GLU:H	2.11	0.53
44:DQ:63:ARG:HH22	44:DQ:96:ASP:CA	2.22	0.53
30:DY:8:GLN:OE1	30:DY:23:LEU:HD11	2.09	0.53
23:DB:1060:U:OP2	24:DI:74:PRO:HA	2.09	0.53
29:BE:138:LEU:HB3	29:BE:143:LEU:O	2.08	0.53
42:DN:52:ILE:HD13	42:DN:87:PHE:CD2	2.44	0.53
1:AA:764:C:N4	1:AA:812:G:N1	2.57	0.53
23:DB:1021:A:H61	23:DB:1142:A:H61	1.56	0.53
47:DF:101:ARG:HA	47:DF:105:ILE:HD12	1.90	0.53
47:DF:7:TYR:OH	47:DF:29:ARG:HG3	2.09	0.53
45:BS:14:ALA:O	45:BS:18:ARG:HG2	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2471:A:O2'	23:DB:2472:G:O5'	2.27	0.53
37:DL:56:PRO:O	37:DL:59:ARG:HB2	2.09	0.53
23:BB:972:A:OP2	23:BB:974:G:H5''	2.09	0.53
23:DB:1459:G:H5''	23:DB:1460:U:OP1	2.08	0.53
23:BB:2733:A:H2'	23:BB:2734:A:O4'	2.08	0.53
48:DG:30:GLY:HA3	48:DG:78:VAL:HG12	1.90	0.53
23:BB:460:A:H2'	23:BB:461:C:O4'	2.09	0.53
40:DH:70:GLU:HA	40:DH:73:ASN:HB2	1.89	0.53
9:AJ:7:ARG:NH1	9:AJ:101:SER:HB2	2.24	0.53
26:BD:9:VAL:HA	26:BD:197:THR:HG23	1.91	0.53
37:BL:95:LEU:HB2	37:BL:101:ILE:CG1	2.39	0.53
20:CB:124:THR:HG23	20:CB:124:THR:O	2.09	0.53
23:DB:582:A:H2'	23:DB:583:G:H8	1.74	0.53
29:DE:155:GLU:O	29:DE:159:LEU:HB2	2.09	0.53
1:CA:1057:G:H5''	2:CC:153:SER:HB2	1.89	0.53
46:DU:26:ASN:ND2	46:DU:26:ASN:N	2.52	0.53
1:CA:551:U:H2'	1:CA:552:U:H6	1.73	0.53
4:CE:155:LYS:O	4:CE:158:LYS:HE3	2.08	0.53
23:BB:273:G:O2'	23:BB:274:C:H5'	2.09	0.53
29:DE:46:GLN:HB3	29:DE:86:ALA:HA	1.91	0.53
29:DE:48:THR:O	29:DE:52:VAL:HG23	2.09	0.53
44:DQ:2:ARG:HG3	44:DQ:3:VAL:H	1.74	0.53
1:CA:87:C:C3'	1:CA:88:U:H5''	2.39	0.53
23:DB:2023:C:H4'	23:DB:2617:U:O3'	2.09	0.53
23:BB:222:A:H61	23:BB:232:G:H1'	1.72	0.53
23:BB:2812:G:H2'	23:BB:2813:A:C8	2.43	0.53
50:BT:32:LEU:O	50:BT:83:ALA:HB2	2.09	0.53
23:BB:2439:A:N7	23:BB:2586:U:H4'	2.24	0.53
1:AA:129:A:H1'	1:AA:130:A:C8	2.44	0.53
1:AA:1152:A:H2'	1:AA:1153:G:H8	1.72	0.53
23:BB:2889:C:O2'	23:BB:2890:G:H5'	2.09	0.53
5:AF:18:VAL:HG11	5:AF:58:HIS:NE2	2.24	0.53
23:DB:1495:A:O2'	23:DB:1496:A:H5'	2.09	0.53
41:DJ:88:THR:HG22	41:DJ:91:GLU:HG3	1.91	0.53
2:AC:181:ILE:N	2:AC:181:ILE:HD12	2.23	0.53
23:DB:2652:C:H2'	23:DB:2653:U:O4'	2.09	0.53
23:DB:1714:U:H3'	23:DB:1715:G:C5'	2.39	0.53
25:DC:270:ARG:NH1	25:DC:270:ARG:HB3	2.24	0.53
1:CA:89:U:H2'	1:CA:90:C:C6	2.44	0.53
25:DC:109:LEU:H	25:DC:109:LEU:CD2	2.22	0.53
25:DC:119:VAL:HG13	25:DC:133:ASN:HD21	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DL:121:THR:HA	37:DL:141:LYS:HB3	1.91	0.53
52:DW:22:VAL:O	52:DW:23:LYS:HG3	2.09	0.53
53:B6:68:VAL:HB	53:B6:99:LEU:HG	1.90	0.53
1:AA:981:U:C4'	13:AN:60:ARG:HD2	2.32	0.53
48:DG:34:ARG:HG2	48:DG:34:ARG:NH1	2.24	0.53
7:AH:44:PHE:HE2	7:AH:100:ILE:HG12	1.74	0.53
1:CA:597:G:H2'	1:CA:598:U:H5'	1.90	0.53
44:BQ:59:LEU:HD13	44:BQ:60:TRP:N	2.24	0.53
44:BQ:93:ILE:O	44:BQ:96:ASP:HB3	2.09	0.53
23:BB:1203:U:H3'	23:BB:1204:A:H5''	1.89	0.53
23:BB:2108:A:H2'	23:BB:2109:U:C4'	2.35	0.53
23:DB:2468:A:H2'	23:DB:2476:A:C6	2.43	0.53
8:CI:36:GLN:N	8:CI:36:GLN:HE21	2.07	0.53
31:B0:38:LEU:HB3	31:B0:41:HIS:CD2	2.44	0.53
13:CN:29:ILE:HB	13:CN:30:ILE:HD12	1.91	0.53
23:BB:2734:A:C2'	23:BB:2735:G:H5'	2.37	0.53
29:DE:138:LEU:HB3	29:DE:143:LEU:O	2.09	0.53
20:AB:65:LYS:HB2	20:AB:158:ASP:H	1.74	0.53
49:DR:39:LEU:HD22	49:DR:53:PHE:HD1	1.74	0.53
23:BB:850:U:H2'	23:BB:851:C:C6	2.44	0.53
24:DI:129:GLU:HB3	24:DI:133:ARG:HH12	1.73	0.53
4:AE:152:VAL:HG21	7:AH:98:LEU:HB3	1.90	0.53
23:DB:2146:C:H4'	23:DB:2148:G:C1'	2.39	0.53
23:DB:2846:G:H2'	23:DB:2847:U:C6	2.43	0.53
23:DB:2845:U:O2'	23:DB:2846:G:H5'	2.09	0.53
26:BD:170:VAL:O	26:BD:170:VAL:HG23	2.09	0.53
1:CA:255:G:H2'	1:CA:256:U:H6	1.73	0.53
33:D1:47:ILE:H	33:D1:47:ILE:HD12	1.73	0.53
3:CD:129:VAL:HG12	3:CD:131:ILE:H	1.74	0.53
23:DB:705:A:N6	23:DB:726:G:O2'	2.42	0.53
1:CA:393:A:O2'	1:CA:394:G:H5'	2.08	0.53
1:CA:677:U:H2'	1:CA:678:U:C6	2.44	0.53
37:BL:110:VAL:HG23	37:BL:126:ARG:O	2.09	0.53
50:DT:12:ARG:HH11	50:DT:12:ARG:HB3	1.74	0.53
23:DB:2196:C:H2'	23:DB:2197:U:C6	2.44	0.53
16:CQ:30:HIS:CG	16:CQ:33:TYR:HB2	2.43	0.53
23:BB:4:U:H2'	23:BB:5:A:C8	2.44	0.53
43:BO:110:ALA:O	43:BO:115:LEU:HB2	2.09	0.53
1:AA:452:A:H2'	1:AA:453:G:O4'	2.09	0.53
23:BB:1097:U:C2'	23:BB:1098:A:H5'	2.38	0.53
23:BB:2553:G:H2'	23:BB:2554:U:O4'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:806:C:O2'	23:DB:807:U:H5'	2.08	0.53
23:BB:2543:G:H2'	23:BB:2544:G:C8	2.44	0.53
48:BG:154:GLU:C	48:BG:156:TYR:H	2.12	0.53
24:BI:52:LEU:HD21	24:BI:81:LYS:HZ2	1.74	0.53
29:DE:47:LYS:HA	29:DE:51:GLU:OE2	2.09	0.53
1:AA:1477:U:H2'	1:AA:1478:U:C6	2.44	0.53
23:DB:1234:U:O2'	23:DB:1235:G:H5'	2.08	0.53
1:AA:1102:A:H2'	1:AA:1103:C:C6	2.44	0.53
23:BB:724:U:H2'	23:BB:725:G:O4'	2.09	0.53
1:CA:911:U:H2'	1:CA:912:C:C6	2.44	0.53
21:CU:27:VAL:O	21:CU:31:VAL:HG23	2.08	0.53
25:DC:261:ARG:O	25:DC:261:ARG:HG2	2.08	0.53
23:DB:2758:A:H2'	23:DB:2759:G:O4'	2.09	0.53
23:BB:1671:U:H2'	23:BB:1673:G:OP2	2.09	0.53
6:AG:35:LYS:O	6:AG:39:GLU:HG3	2.08	0.53
23:BB:598:U:H2'	23:BB:599:A:H8	1.74	0.53
23:BB:533:G:H2'	23:BB:534:U:C6	2.43	0.52
23:BB:1021:A:H61	23:BB:1142:A:H61	1.55	0.52
20:CB:210:THR:HA	20:CB:213:LEU:HB2	1.91	0.52
35:DV:1:MET:O	35:DV:62:THR:HG23	2.08	0.52
25:BC:128:THR:OG1	25:BC:190:THR:HG22	2.09	0.52
47:BF:177:ARG:HA	47:BF:177:ARG:NE	2.24	0.52
7:CH:77:VAL:HG11	7:CH:124:ILE:HG21	1.91	0.52
44:BQ:56:PHE:HA	44:BQ:59:LEU:HB3	1.90	0.52
25:BC:66:PHE:HB2	25:BC:150:GLY:O	2.08	0.52
37:BL:56:PRO:O	37:BL:59:ARG:HB2	2.07	0.52
21:AU:19:LYS:HB2	21:AU:20:ARG:HE	1.74	0.52
1:CA:1227:A:H5''	12:CM:113:LYS:HD2	1.91	0.52
18:CS:20:LYS:NZ	18:CS:27:LYS:HD2	2.24	0.52
12:AM:14:ALA:HB1	12:AM:33:LEU:HD21	1.90	0.52
15:AP:66:THR:O	15:AP:67:ILE:HB	2.09	0.52
15:AP:52:LEU:HD21	15:AP:75:ILE:HG12	1.91	0.52
23:DB:2868:A:H2'	23:DB:2869:G:H8	1.74	0.52
48:DG:152:ARG:NH2	48:DG:162:ARG:HA	2.24	0.52
23:BB:1188:U:O2'	23:BB:1189:A:H5'	2.09	0.52
1:CA:309:A:O2'	1:CA:310:G:H5'	2.10	0.52
40:BH:73:ASN:ND2	40:BH:73:ASN:N	2.58	0.52
49:DR:16:GLU:HG2	49:DR:101:ILE:HG13	1.91	0.52
28:BP:3:ILE:HD13	28:BP:3:ILE:C	2.30	0.52
23:BB:863:A:H2'	23:BB:864:G:H8	1.74	0.52
28:DP:52:ARG:HB2	28:DP:55:HIS:O	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1654:A:H2'	23:BB:1655:A:H8	1.75	0.52
23:BB:1784:A:H4'	23:BB:1785:A:O5'	2.08	0.52
48:DG:174:LYS:HZ2	48:DG:176:LYS:HG2	1.73	0.52
27:BK:89:ASN:C	27:BK:89:ASN:HD22	2.13	0.52
23:BB:559:G:H21	44:BQ:51:GLN:HE22	1.57	0.52
1:AA:1162:C:H2'	1:AA:1163:A:C8	2.44	0.52
5:CF:54:LEU:N	5:CF:54:LEU:HD13	2.24	0.52
23:BB:2098:U:H2'	23:BB:2099:U:O4'	2.08	0.52
6:AG:59:GLU:O	6:AG:63:VAL:HG23	2.09	0.52
19:AT:38:ILE:HD13	19:AT:38:ILE:O	2.09	0.52
23:DB:184:C:H2'	23:DB:185:G:C8	2.43	0.52
1:CA:389:A:H2'	1:CA:389:A:N3	2.23	0.52
23:DB:1562:U:H2'	23:DB:1563:U:C6	2.43	0.52
23:DB:861:A:H2'	23:DB:862:G:O4'	2.09	0.52
1:AA:833:G:O2'	1:AA:834:U:H5'	2.09	0.52
23:DB:1537:G:H5''	23:DB:1537:G:N3	2.25	0.52
25:DC:61:TYR:HA	25:DC:85:ASN:ND2	2.24	0.52
23:DB:2728:U:H2'	23:DB:2729:G:C8	2.44	0.52
17:CR:63:TYR:CD2	17:CR:63:TYR:N	2.76	0.52
24:BI:49:GLU:CG	24:BI:54:ILE:HD11	2.39	0.52
23:DB:347:A:H2'	23:DB:348:A:C8	2.44	0.52
1:AA:820:U:H4'	1:AA:821:G:OP2	2.09	0.52
23:DB:406:G:O2'	23:DB:407:G:H5'	2.09	0.52
26:BD:141:ARG:O	26:BD:142:VAL:HG13	2.09	0.52
1:CA:162:A:H2'	1:CA:163:C:O4'	2.08	0.52
45:DS:10:ALA:HB3	45:DS:101:SER:OG	2.08	0.52
43:DO:105:ALA:C	43:DO:107:ALA:H	2.11	0.52
6:CG:70:PRO:O	6:CG:95:ARG:HG3	2.09	0.52
26:DD:97:SER:HB3	26:DD:99:GLU:HG3	1.91	0.52
23:BB:2600:A:O2'	23:BB:2601:C:H5'	2.09	0.52
23:DB:2213:U:C2'	23:DB:2213:U:O2	2.58	0.52
1:AA:250:A:H1'	1:AA:252:U:C5	2.44	0.52
1:AA:157:U:O2'	1:AA:158:G:H5'	2.09	0.52
26:DD:176:ASP:HB2	26:DD:190:LYS:HG2	1.90	0.52
4:AE:87:VAL:HG23	4:AE:91:SER:O	2.09	0.52
23:BB:854:C:O2'	23:BB:855:G:H5'	2.09	0.52
47:DF:32:LYS:HA	47:DF:95:MET:SD	2.50	0.52
53:B6:41:LEU:HD21	53:B6:88:LEU:HD13	1.90	0.52
48:DG:26:LYS:HA	48:DG:32:LEU:H	1.74	0.52
44:BQ:83:LYS:NZ	44:BQ:87:VAL:HA	2.24	0.52
1:AA:410:G:H2'	1:AA:429:U:C5	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AJ:53:ILE:HG23	9:AJ:54:SER:H	1.75	0.52
13:AN:20:PHE:HB3	13:AN:24:ALA:HB2	1.91	0.52
18:AS:42:ASN:H	18:AS:42:ASN:HD22	1.57	0.52
46:DU:47:PRO:CD	46:DU:55:GLY:HA3	2.38	0.52
23:DB:135:U:H2'	23:DB:136:G:C8	2.45	0.52
17:AR:33:THR:C	17:AR:35:SER:H	2.13	0.52
1:AA:1472:U:H2'	1:AA:1473:G:C8	2.44	0.52
3:CD:113:ALA:O	3:CD:116:LEU:HB2	2.10	0.52
23:DB:783:A:H8	23:DB:784:G:H4'	1.74	0.52
20:CB:68:PHE:HA	20:CB:161:PHE:O	2.09	0.52
20:CB:57:ASN:HA	20:CB:60:ALA:HB3	1.91	0.52
57:BB:3457:HOH:O	37:BL:99:ASN:HB3	2.09	0.52
20:CB:101:THR:HG22	20:CB:174:GLU:OE1	2.09	0.52
1:AA:253:A:H2'	1:AA:254:G:C8	2.44	0.52
1:AA:255:G:H2'	1:AA:256:U:H6	1.73	0.52
23:BB:275:C:C2'	23:BB:276:U:H5'	2.39	0.52
20:AB:68:PHE:CD1	20:AB:83:ALA:HB2	2.45	0.52
50:DT:69:ARG:HG3	50:DT:70:HIS:N	2.24	0.52
23:DB:1947:C:H2'	23:DB:1948:G:C8	2.44	0.52
23:BB:1220:G:H2'	23:BB:1221:C:H6	1.73	0.52
23:BB:1063:G:H1'	24:BI:134:SER:O	2.10	0.52
1:AA:505:G:H2'	1:AA:506:G:H8	1.73	0.52
33:D1:40:PRO:O	33:D1:43:ARG:HG2	2.08	0.52
33:B1:18:HIS:CD2	33:B1:40:PRO:HD2	2.45	0.52
22:BA:93:C:O2'	22:BA:94:A:H5'	2.09	0.52
53:B6:178:LYS:O	53:B6:182:GLU:HG3	2.10	0.52
22:DA:90:C:OP1	38:DM:16:ARG:HB2	2.09	0.52
12:CM:43:LYS:HB2	12:CM:46:GLU:CG	2.39	0.52
31:D0:25:THR:O	31:D0:26:SER:HB3	2.09	0.52
23:DB:1011:G:O2'	23:DB:1013:C:H5''	2.08	0.52
23:DB:950:G:H2'	23:DB:951:C:H6	1.73	0.52
1:CA:1096:C:H2'	1:CA:1097:C:H6	1.73	0.52
23:BB:1253:A:H4'	23:BB:1254:A:OP2	2.08	0.52
1:CA:405:U:O4	3:CD:1:ALA:HA	2.09	0.52
1:AA:811:C:H4'	1:AA:900:A:N6	2.24	0.52
23:DB:1036:G:O2'	23:DB:1037:G:H5'	2.10	0.52
23:DB:771:G:O2'	23:DB:772:C:H5'	2.09	0.52
23:BB:2204:G:O2'	23:BB:2205:A:H5'	2.09	0.52
23:DB:1159:U:H2'	23:DB:1160:G:H8	1.73	0.52
23:DB:1747:U:H2'	23:DB:1748:C:H6	1.74	0.52
6:CG:49:LEU:HD12	6:CG:124:SER:OG	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1747:U:H2'	23:BB:1748:C:H6	1.74	0.52
29:BE:1:MET:HB3	29:BE:14:VAL:O	2.09	0.52
1:AA:317:U:H2'	1:AA:318:G:H8	1.74	0.52
23:BB:2213:U:C2'	23:BB:2213:U:O2	2.57	0.52
28:DP:113:LEU:O	28:DP:113:LEU:HD23	2.09	0.52
1:AA:1084:G:H2'	1:AA:1085:U:C6	2.45	0.52
24:DI:92:PRO:O	24:DI:93:ASN:HB2	2.09	0.52
52:BW:22:VAL:O	52:BW:23:LYS:HG3	2.10	0.52
23:DB:1826:G:H2'	23:DB:1827:U:C6	2.44	0.52
40:BH:83:LYS:HB2	40:BH:92:GLY:N	2.24	0.52
1:CA:1287:A:H2'	1:CA:1288:A:C8	2.44	0.52
41:DJ:44:TYR:O	41:DJ:45:THR:HB	2.09	0.52
44:DQ:91:ARG:HB2	49:DR:11:GLN:NE2	2.25	0.52
30:DY:11:SER:HA	30:DY:31:ILE:HG22	1.91	0.52
26:DD:107:VAL:HG12	26:DD:109:VAL:HG23	1.90	0.52
35:BV:72:VAL:HB	35:BV:92:VAL:O	2.09	0.52
47:DF:43:ILE:HG23	47:DF:44:ALA:N	2.15	0.52
23:BB:670:A:H4'	23:BB:671:C:C5'	2.32	0.52
23:BB:1060:U:O2	23:BB:1088:A:C8	2.63	0.52
45:BS:15:GLN:HA	45:BS:18:ARG:CG	2.39	0.52
12:AM:42:VAL:HB	12:AM:47:LEU:HD21	1.91	0.52
18:AS:66:VAL:HG23	18:AS:67:GLY:H	1.74	0.52
23:BB:1174:U:HO2'	23:BB:1176:U:H5	1.54	0.52
13:CN:20:PHE:HB3	13:CN:24:ALA:HB2	1.91	0.52
35:DV:26:PHE:CE2	35:DV:44:HIS:HA	2.44	0.52
25:BC:209:ALA:HA	25:BC:212:TRP:CE2	2.45	0.52
40:BH:4:ILE:HD12	40:BH:4:ILE:H	1.74	0.52
26:DD:149:ASN:O	26:DD:152:PRO:HD2	2.08	0.52
23:BB:1427:A:H5''	23:BB:1559:U:O2	2.10	0.52
27:DK:75:SER:HB2	28:DP:73:PHE:HA	1.91	0.52
1:AA:308:C:H2'	1:AA:309:A:C8	2.43	0.52
1:AA:1533:C:C3'	1:AA:1534:A:H5''	2.39	0.52
1:AA:869:G:H5'	1:AA:872:A:O4'	2.10	0.52
23:BB:96:C:H4'	39:BX:41:HIS:CE1	2.44	0.52
23:DB:1353:A:H2'	23:DB:1354:A:H8	1.74	0.52
1:AA:1142:G:C2	1:AA:1143:G:H1'	2.45	0.52
1:CA:213:G:H5''	1:CA:214:C:H5	1.74	0.52
52:BW:46:ALA:HB2	52:BW:78:PHE:CD1	2.44	0.52
1:CA:1064:G:OP1	1:CA:1386:G:H4'	2.09	0.52
23:DB:1939:U:O2	23:DB:1967:C:H4'	2.09	0.52
23:DB:1347:A:H2'	23:DB:1348:C:O4'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CE:32:PHE:CE2	4:CE:55:VAL:HG22	2.45	0.52
12:AM:63:VAL:CG1	12:AM:67:ASP:HB2	2.40	0.52
1:AA:513:C:H2'	1:AA:514:C:H6	1.74	0.52
22:DA:49:C:H2'	22:DA:50:A:H8	1.75	0.52
37:DL:129:LYS:HA	37:DL:132:ARG:HG2	1.91	0.52
5:AF:85:ILE:HG22	5:AF:86:ARG:N	2.24	0.52
17:CR:21:ASP:OD1	17:CR:23:LYS:HD2	2.10	0.52
23:BB:2303:G:H1'	47:BF:122:ASP:OD1	2.09	0.52
23:BB:1201:U:H2'	23:BB:1202:G:H8	1.75	0.52
44:BQ:35:PHE:O	44:BQ:39:ILE:HG12	2.09	0.52
16:AQ:28:VAL:HG12	16:AQ:37:ILE:O	2.10	0.52
36:D2:22:MET:SD	36:D2:28:ARG:HG2	2.49	0.52
20:AB:93:HIS:CD2	20:AB:145:ASN:HB3	2.45	0.52
1:CA:898:G:N2	1:CA:900:A:H3'	2.24	0.52
19:CT:19:HIS:O	19:CT:23:ARG:HG2	2.08	0.52
17:CR:44:THR:C	17:CR:46:THR:H	2.13	0.52
23:BB:1753:G:N2	23:BB:1755:A:H3'	2.25	0.52
23:BB:1676:A:H2'	23:BB:1677:A:O4'	2.10	0.52
23:DB:1099:G:H4'	24:DI:4:VAL:CG1	2.39	0.52
24:DI:2:LYS:NZ	24:DI:2:LYS:HB3	2.25	0.52
48:BG:8:VAL:HG11	48:BG:49:LEU:CB	2.37	0.52
48:BG:84:LYS:HB2	48:BG:132:LEU:H	1.74	0.52
23:DB:947:A:H2'	23:DB:948:C:C6	2.44	0.52
53:B6:64:ARG:HA	53:B6:103:ILE:HB	1.90	0.52
40:BH:100:ALA:CB	40:BH:112:LYS:HA	2.32	0.52
8:CI:67:LYS:HZ3	8:CI:67:LYS:HB2	1.74	0.52
44:DQ:56:PHE:HA	44:DQ:59:LEU:HB3	1.92	0.52
25:BC:76:VAL:CG1	25:BC:114:GLN:HG2	2.33	0.52
26:DD:51:THR:HG22	26:DD:52:THR:N	2.24	0.52
43:DO:51:ALA:HB3	43:DO:78:VAL:CG2	2.39	0.52
50:BT:43:ILE:O	50:BT:47:VAL:HG23	2.09	0.52
50:BT:47:VAL:HG13	50:BT:51:PHE:CD1	2.44	0.52
53:B6:126:ARG:HA	53:B6:129:ILE:HD12	1.92	0.52
1:AA:411:A:H62	1:AA:413:G:N2	1.98	0.52
47:BF:142:TYR:CD1	47:BF:142:TYR:N	2.76	0.52
29:BE:131:THR:HB	29:BE:164:LEU:HG	1.90	0.52
42:DN:76:VAL:HA	42:DN:79:LEU:HD12	1.90	0.52
1:AA:1060:U:H2'	1:AA:1061:G:C8	2.44	0.52
47:DF:141:ASP:O	47:DF:145:VAL:HG13	2.10	0.52
35:BV:26:PHE:HE2	35:BV:44:HIS:HA	1.75	0.52
1:CA:1318:A:H4'	18:CS:9:PHE:CE1	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BK:43:ILE:CG2	27:BK:54:LYS:HA	2.40	0.52
40:BH:14:SER:HB2	40:BH:17:ASP:CB	2.36	0.52
23:BB:279:A:C2	23:BB:362:A:H4'	2.45	0.52
53:B6:180:GLU:HA	53:B6:183:ILE:HG22	1.92	0.52
23:BB:1549:A:H2'	23:BB:1550:C:C6	2.44	0.52
20:CB:127:LYS:HD2	20:CB:127:LYS:O	2.09	0.52
51:BZ:28:ARG:HG2	51:BZ:28:ARG:O	2.09	0.52
31:B0:31:LYS:N	31:B0:31:LYS:HD2	2.23	0.52
1:AA:36:C:O3'	11:AL:119:LYS:HA	2.09	0.52
23:DB:857:G:H2'	23:DB:858:G:H5'	1.91	0.52
46:BU:78:LYS:CD	46:BU:79:ALA:H	2.22	0.52
23:BB:275:C:H2'	23:BB:276:U:O4'	2.09	0.52
23:DB:1387:A:H2'	23:DB:1388:G:C8	2.43	0.52
23:DB:2138:G:H2'	23:DB:2139:U:C6	2.44	0.52
19:AT:42:ASP:HA	19:AT:43:LYS:NZ	2.25	0.52
1:CA:284:C:H2'	1:CA:285:C:C6	2.45	0.52
43:BO:68:LYS:HA	43:BO:102:ARG:HG2	1.92	0.52
23:BB:2030:A:H4'	23:BB:2031:A:H5'	1.89	0.52
23:DB:2801:G:H2'	23:DB:2802:G:H8	1.73	0.52
53:B6:12:SER:O	53:B6:16:LYS:HD2	2.09	0.52
47:BF:119:LYS:HA	47:BF:121:PHE:CE1	2.44	0.52
1:AA:731:G:H5'	1:AA:766:A:H4'	1.90	0.52
1:CA:607:A:H2'	1:CA:608:A:H8	1.73	0.52
23:DB:1010:A:N3	23:DB:1153:C:H1'	2.24	0.52
1:CA:89:U:H2'	1:CA:90:C:H6	1.75	0.52
23:DB:1774:C:O2	23:DB:1774:C:H2'	2.10	0.52
43:BO:94:ARG:O	43:BO:97:PHE:HB2	2.10	0.52
23:DB:1994:C:O2'	23:DB:1995:U:H5'	2.09	0.52
23:DB:627:A:H4'	23:DB:628:G:OP1	2.09	0.52
23:DB:732:C:O2'	23:DB:733:G:H5'	2.09	0.52
23:DB:292:U:O2'	23:DB:293:U:H5'	2.09	0.52
50:DT:36:LYS:O	50:DT:36:LYS:HD3	2.10	0.52
1:AA:993:G:N2	1:AA:996:A:N6	2.56	0.52
25:BC:134:ILE:HG13	25:BC:134:ILE:O	2.08	0.52
23:DB:1820:U:OP1	25:DC:176:ARG:HD2	2.10	0.52
48:DG:51:PHE:CD2	48:DG:68:ARG:HG2	2.44	0.52
37:DL:141:LYS:NZ	37:DL:143:GLU:HA	2.24	0.52
48:DG:122:ALA:HB2	48:DG:132:LEU:HB3	1.92	0.52
22:DA:43:C:H1'	47:DF:91:ARG:NH2	2.25	0.52
8:CI:24:ASN:HD21	8:CI:26:LYS:HG3	1.74	0.52
44:DQ:57:ARG:HA	44:DQ:60:TRP:CE3	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DJ:56:VAL:HG12	41:DJ:57:LEU:H	1.75	0.52
43:DO:35:ILE:HG22	43:DO:53:THR:HG23	1.90	0.52
34:D3:50:SER:C	34:D3:52:GLY:H	2.13	0.52
3:CD:157:ALA:O	3:CD:160:LEU:HD22	2.09	0.52
42:DN:79:LEU:HA	42:DN:83:LEU:CD1	2.39	0.52
47:BF:149:ARG:HA	47:BF:149:ARG:NH1	2.23	0.52
47:DF:111:ARG:O	47:DF:112:ASP:HB2	2.09	0.52
1:CA:1317:C:H3'	1:CA:1318:A:H8	1.75	0.52
18:AS:20:LYS:NZ	18:AS:27:LYS:HD2	2.24	0.52
23:DB:2789:C:O2	23:DB:2892:G:H5''	2.10	0.52
24:DI:24:GLY:HA2	24:DI:34:ILE:HD12	1.90	0.52
6:CG:114:SER:O	6:CG:118:ARG:HG3	2.10	0.52
46:BU:81:ARG:HB2	46:BU:96:LYS:CG	2.39	0.52
46:BU:12:VAL:HG22	46:BU:69:VAL:CG1	2.37	0.52
13:CN:27:LYS:HA	13:CN:31:SER:HB2	1.91	0.52
45:BS:36:LEU:N	45:BS:36:LEU:HD22	2.24	0.52
20:AB:15:PHE:HA	20:AB:42:LEU:HD21	1.91	0.52
26:DD:114:LYS:HE3	26:DD:116:LYS:NZ	2.25	0.52
30:BY:2:LYS:HE3	30:BY:58:GLU:HB3	1.91	0.52
3:CD:154:VAL:O	3:CD:158:LEU:HD12	2.09	0.52
42:DN:51:LEU:HD11	42:DN:69:ARG:HG3	1.91	0.52
49:BR:40:MET:O	49:BR:41:ILE:HD13	2.10	0.52
29:BE:176:ASP:OD1	29:BE:178:VAL:HG12	2.10	0.52
20:AB:144:GLU:O	20:AB:148:GLY:HA3	2.09	0.52
23:DB:276:U:O2	23:DB:362:A:N1	2.43	0.52
23:DB:278:A:H3'	23:DB:278:A:OP2	2.08	0.52
51:DZ:28:ARG:O	51:DZ:28:ARG:HG2	2.10	0.52
19:AT:66:ILE:HG22	19:AT:67:HIS:N	2.24	0.52
4:CE:80:LEU:HA	4:CE:146:MET:HE1	1.90	0.52
1:AA:238:A:C2'	1:AA:239:U:H5''	2.39	0.52
1:AA:635:A:H2'	1:AA:636:U:H6	1.74	0.52
23:DB:151:C:H2'	23:DB:152:A:C8	2.44	0.52
30:BY:40:THR:HB	30:BY:43:ILE:HG22	1.91	0.52
50:DT:54:GLU:CB	50:DT:88:LYS:HB2	2.39	0.52
3:AD:2:ARG:HG3	3:AD:114:ARG:NH1	2.24	0.52
23:DB:1593:A:H2'	23:DB:1594:U:H6	1.73	0.52
23:BB:72:U:H1'	39:BX:51:ALA:CB	2.39	0.52
1:CA:777:A:H2'	1:CA:778:G:C8	2.45	0.52
23:DB:934:U:H2'	23:DB:935:C:H6	1.73	0.52
23:BB:414:C:H2'	23:BB:415:A:H8	1.73	0.52
23:DB:962:G:H21	23:DB:2250:G:H22	1.57	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1317:G:H2'	23:BB:1318:U:O4'	2.10	0.52
37:BL:23:ILE:HD12	37:BL:23:ILE:N	2.24	0.52
23:DB:7:G:H4'	41:DJ:15:TRP:CH2	2.43	0.52
23:DB:2746:U:H5''	48:DG:137:LYS:HG3	1.92	0.52
23:BB:2814:A:H2'	23:BB:2815:C:C6	2.45	0.52
50:BT:61:LEU:HD12	50:BT:62:VAL:O	2.09	0.52
22:DA:50:A:OP1	43:DO:68:LYS:HB2	2.10	0.52
23:BB:1637:A:H2'	23:BB:1638:C:C6	2.44	0.52
41:DJ:109:LEU:CD1	41:DJ:119:PHE:HB2	2.39	0.52
29:BE:18:THR:HA	29:BE:106:LYS:HD3	1.91	0.52
1:CA:731:G:H5'	1:CA:766:A:H4'	1.91	0.52
23:DB:1577:C:H2'	23:DB:1578:U:O4'	2.10	0.52
23:BB:600:G:H2'	23:BB:601:C:C6	2.45	0.52
24:BI:23:VAL:HG23	24:BI:24:GLY:N	2.25	0.52
49:BR:20:VAL:HG12	49:BR:21:ARG:H	1.75	0.52
23:DB:82:U:H2'	23:DB:83:A:O4'	2.10	0.52
23:DB:132:G:H2'	23:DB:133:U:C6	2.44	0.52
1:AA:384:G:H2'	1:AA:385:C:C6	2.44	0.52
23:DB:336:C:O2'	23:DB:337:C:H5'	2.09	0.52
9:AJ:40:ILE:HD12	9:AJ:73:LEU:HD12	1.91	0.52
6:CG:45:ALA:HB3	6:CG:119:LEU:HD23	1.91	0.52
23:BB:1532:A:H2'	23:BB:1532:A:N3	2.25	0.52
7:AH:34:ALA:O	7:AH:38:VAL:HG23	2.10	0.52
23:BB:1870:C:H5''	23:BB:1871:A:C6	2.45	0.52
12:CM:58:GLU:O	12:CM:61:LYS:HG2	2.09	0.52
25:BC:222:THR:HA	25:BC:231:HIS:O	2.10	0.52
23:DB:2033:A:O2'	23:DB:2035:G:OP2	2.26	0.52
20:AB:69:VAL:HB	20:AB:162:VAL:HB	1.91	0.52
40:BH:68:ARG:HG3	40:BH:138:VAL:O	2.10	0.52
53:B6:67:VAL:HG12	53:B6:99:LEU:O	2.08	0.52
53:B6:83:ILE:HG23	53:B6:90:LEU:HD12	1.91	0.52
25:BC:116:GLN:O	25:BC:127:ASN:HA	2.10	0.52
1:AA:1014:A:N3	1:AA:1219:A:H1'	2.24	0.52
22:DA:28:C:N4	22:DA:56:G:H1	2.05	0.52
25:BC:107:LYS:O	25:BC:109:LEU:HD22	2.10	0.52
47:BF:107:VAL:N	47:BF:108:PRO:CD	2.73	0.52
42:DN:87:PHE:C	42:DN:89:SER:H	2.13	0.52
47:BF:37:MET:HE1	47:BF:149:ARG:HD2	1.91	0.52
20:AB:45:THR:HG22	20:AB:49:PHE:CZ	2.44	0.52
12:AM:10:ASP:O	12:AM:11:HIS:HB2	2.09	0.52
12:AM:14:ALA:HB2	12:AM:42:VAL:HG23	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AS:15:LEU:O	18:AS:18:VAL:HG12	2.09	0.52
18:AS:42:ASN:N	18:AS:42:ASN:HD22	2.08	0.52
45:DS:70:LYS:HD3	45:DS:110:ARG:O	2.10	0.52
9:CJ:59:LYS:HB2	9:CJ:62:ARG:NH2	2.25	0.52
23:DB:2105:U:H2'	23:DB:2106:U:O4'	2.10	0.52
29:DE:134:LEU:CD2	29:DE:161:ALA:HB2	2.40	0.52
29:DE:134:LEU:O	29:DE:138:LEU:HG	2.09	0.52
17:CR:33:THR:C	17:CR:35:SER:H	2.12	0.52
44:BQ:111:LYS:HZ3	49:BR:50:GLY:HA2	1.75	0.52
49:BR:16:GLU:HG2	49:BR:101:ILE:HG13	1.91	0.52
48:DG:30:GLY:N	48:DG:78:VAL:HA	2.24	0.52
40:DH:64:ALA:O	40:DH:68:ARG:HG2	2.10	0.52
48:BG:30:GLY:H	48:BG:78:VAL:HA	1.74	0.52
1:AA:674:G:H2'	1:AA:675:A:C8	2.41	0.52
46:BU:35:VAL:HB	46:BU:38:ILE:CB	2.40	0.52
35:DV:29:ILE:HD13	35:DV:31:TYR:CE2	2.44	0.52
23:BB:2344:U:H4'	23:BB:2345:G:OP1	2.09	0.52
23:BB:151:C:H2'	23:BB:152:A:C8	2.44	0.52
23:DB:642:U:O2	23:DB:644:A:H3'	2.10	0.52
1:CA:1521:C:O2'	1:CA:1522:U:H5'	2.10	0.52
23:BB:704:G:H1'	23:BB:727:A:N6	2.24	0.52
3:CD:84:ASN:ND2	3:CD:86:GLY:H	2.08	0.52
37:DL:47:ARG:HG3	37:DL:48:ARG:N	2.24	0.52
39:BX:9:LYS:NZ	39:BX:60:LYS:HE3	2.25	0.52
1:AA:377:G:H2'	1:AA:378:G:H8	1.75	0.52
52:BW:77:LYS:O	52:BW:78:PHE:HB2	2.09	0.52
3:CD:10:LEU:HB3	3:CD:62:ARG:HD3	1.92	0.52
23:DB:272:A:H2'	23:DB:273:G:H8	1.74	0.52
23:BB:573:U:N3	23:BB:2031:A:OP1	2.38	0.52
1:AA:1464:U:H2'	1:AA:1465:A:C8	2.45	0.52
23:DB:222:A:H61	23:DB:232:G:H1'	1.73	0.52
23:BB:1477:A:H2'	23:BB:1478:G:O4'	2.09	0.52
3:AD:149:LYS:HB2	3:AD:177:MET:HG3	1.92	0.52
1:CA:696:A:H2'	1:CA:697:U:H6	1.73	0.52
48:DG:154:GLU:OE2	48:DG:156:TYR:HB2	2.09	0.52
23:BB:1994:C:O2'	23:BB:1995:U:H5'	2.10	0.52
23:DB:1230:A:H2'	23:DB:1231:U:C6	2.45	0.52
1:CA:640:A:O2'	1:CA:641:U:H5'	2.09	0.52
23:BB:1835:G:H2'	23:BB:1836:C:C6	2.44	0.52
23:BB:2520:C:O2'	23:BB:2521:C:H5'	2.10	0.52
23:BB:2436:G:O2'	23:BB:2437:G:H5'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:29:LEU:O	6:CG:29:LEU:HD23	2.10	0.52
23:BB:1732:C:H2'	23:BB:1732:C:OP1	2.10	0.52
6:AG:29:LEU:HD23	6:AG:29:LEU:O	2.10	0.52
38:BM:78:LEU:O	38:BM:80:VAL:HG12	2.10	0.52
1:CA:1234:C:H1'	1:CA:1364:U:O2	2.10	0.52
23:DB:1099:G:C5'	24:DI:4:VAL:HG12	2.40	0.52
52:BW:32:ALA:C	52:BW:34:SER:H	2.12	0.52
23:DB:2354:C:H4'	52:DW:31:LEU:CD2	2.39	0.52
47:BF:64:PRO:HA	47:BF:88:VAL:HG21	1.90	0.52
37:BL:121:THR:HA	37:BL:141:LYS:HB3	1.91	0.52
47:DF:33:ILE:O	47:DF:90:LEU:N	2.42	0.52
49:DR:6:GLN:HE22	49:DR:10:LYS:H	1.55	0.52
20:CB:187:ASP:H	20:CB:190:SER:HB2	1.75	0.52
50:BT:1:MET:CG	50:BT:2:ILE:H	2.23	0.52
35:BV:1:MET:O	35:BV:62:THR:HG23	2.09	0.52
23:DB:2548:U:H1'	27:DK:23:LYS:HZ3	1.71	0.52
3:AD:26:ALA:HA	3:AD:30:LYS:CE	2.40	0.52
29:BE:155:GLU:O	29:BE:159:LEU:HB2	2.08	0.52
18:CS:51:HIS:HB2	18:CS:56:HIS:CE1	2.45	0.52
23:DB:372:G:O2'	51:DZ:54:LYS:HE2	2.10	0.52
25:DC:209:ALA:HA	25:DC:212:TRP:CE2	2.45	0.52
45:DS:36:LEU:HD22	45:DS:36:LEU:H	1.75	0.52
23:BB:1125:G:H4'	32:B4:37:GLN:NE2	2.25	0.52
10:CK:92:ARG:HH21	21:CU:24:LYS:HG2	1.74	0.52
53:B6:133:ARG:NH1	53:B6:162:GLN:HE22	2.07	0.52
32:D4:15:LYS:O	32:D4:15:LYS:HE2	2.10	0.52
23:DB:1123:C:O2'	23:DB:1124:G:H5'	2.10	0.52
48:DG:166:GLU:CG	48:DG:168:VAL:HG23	2.39	0.52
29:DE:149:ILE:HG23	29:DE:188:MET:CA	2.40	0.52
23:BB:969:G:H2'	23:BB:970:U:H6	1.74	0.52
1:CA:1332:A:H2'	1:CA:1333:A:H8	1.73	0.52
49:DR:3:ALA:O	49:DR:4:VAL:HG13	2.09	0.52
37:DL:95:LEU:HB2	37:DL:101:ILE:CG1	2.40	0.52
1:AA:841:C:H2'	1:AA:843:U:OP2	2.10	0.52
1:AA:86:G:C2	1:AA:87:C:N4	2.77	0.52
23:BB:125:A:H5'	36:B2:19:ARG:CG	2.40	0.52
20:AB:107:ARG:HA	20:AB:110:ILE:HD12	1.92	0.52
40:DH:49:ALA:HB3	40:DH:50:ARG:NH2	2.24	0.52
47:DF:162:ASP:O	47:DF:166:ARG:HD2	2.10	0.52
1:CA:1000:A:H2'	1:CA:1001:C:C6	2.45	0.52
20:AB:27:LYS:HB3	20:AB:28:PRO:HD3	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:70:ALA:HB1	46:DU:79:ALA:HB3	1.90	0.52
4:CE:84:VAL:CG1	4:CE:146:MET:HB3	2.40	0.52
35:BV:31:TYR:HB3	35:BV:37:PRO:HG3	1.91	0.52
23:DB:126:A:OP2	36:D2:19:ARG:HB2	2.08	0.52
1:CA:502:A:H2'	1:CA:503:C:C6	2.44	0.52
1:AA:1522:U:O2'	1:AA:1523:G:H5'	2.09	0.52
1:AA:1512:U:H2'	1:AA:1513:A:C8	2.45	0.52
23:BB:2002:G:OP1	42:BN:13:ASN:HA	2.10	0.52
1:AA:1142:G:H3'	1:AA:1143:G:H8	1.74	0.52
1:CA:1141:C:H2'	1:CA:1142:G:C8	2.43	0.52
23:DB:1317:G:H2'	23:DB:1318:U:O4'	2.10	0.52
23:BB:1562:U:H2'	23:BB:1563:U:C6	2.45	0.52
53:D6:113:ASP:HA	53:D6:116:ARG:HD3	1.90	0.52
23:BB:1351:C:H4'	23:BB:1572:A:O4'	2.10	0.52
23:DB:1599:U:H2'	23:DB:1600:C:H6	1.75	0.52
23:DB:2814:A:H2'	23:DB:2815:C:C6	2.45	0.52
23:DB:1253:A:H4'	23:DB:1254:A:OP2	2.09	0.52
23:DB:2439:A:N7	23:DB:2586:U:H4'	2.25	0.52
5:AF:86:ARG:HH11	17:AR:64:LEU:HD12	1.73	0.52
29:DE:47:LYS:HB3	29:DE:51:GLU:HB2	1.90	0.52
11:CL:122:LYS:HG3	11:CL:123:ALA:H	1.74	0.52
23:DB:69:C:O2'	23:DB:70:G:H5'	2.10	0.52
24:DI:102:ARG:HG3	24:DI:141:ASP:HB2	1.92	0.52
23:DB:686:U:H1'	36:D2:6:GLN:O	2.10	0.52
1:AA:1069:C:O2'	1:AA:1192:C:H1'	2.09	0.52
23:BB:1714:U:H3'	23:BB:1715:G:H5'	1.92	0.52
36:B2:13:ASN:O	36:B2:17:GLY:N	2.43	0.52
37:BL:92:LEU:HD23	37:BL:92:LEU:H	1.74	0.52
23:DB:1479:G:O2'	23:DB:1480:C:H5'	2.10	0.52
23:BB:1414:C:H2'	23:BB:1415:U:H6	1.75	0.52
23:BB:920:A:H2'	23:BB:921:C:O4'	2.09	0.52
44:DQ:34:ALA:O	44:DQ:38:VAL:HG23	2.09	0.52
10:CK:70:ALA:C	10:CK:72:ALA:H	2.12	0.52
47:DF:64:PRO:HA	47:DF:88:VAL:HG21	1.92	0.52
23:DB:996:A:H4'	44:DQ:91:ARG:HH11	1.73	0.52
12:AM:13:HIS:HB3	12:AM:40:GLU:O	2.09	0.52
23:DB:2358:A:H61	37:DL:54:GLN:HE22	1.58	0.52
12:CM:13:HIS:HB3	12:CM:40:GLU:O	2.09	0.52
48:BG:15:ASP:OD2	48:BG:17:LYS:HB2	2.09	0.52
29:BE:153:LEU:HG	29:BE:154:ASP:H	1.75	0.52
47:DF:169:LEU:HD22	47:DF:174:PHE:CE1	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BV:23:ALA:O	35:BV:24:ASN:HB2	2.10	0.52
18:AS:51:HIS:HB2	18:AS:56:HIS:CE1	2.44	0.52
11:AL:49:ARG:HD2	11:AL:49:ARG:N	2.24	0.52
25:DC:15:VAL:HG22	25:DC:204:LEU:O	2.10	0.52
45:DS:55:ILE:HD12	45:DS:69:LEU:HD23	1.91	0.52
48:BG:145:ALA:HA	48:BG:148:ARG:CG	2.39	0.52
20:AB:64:GLY:O	20:AB:66:ILE:HG12	2.09	0.52
42:DN:28:LEU:HD23	42:DN:113:ILE:HG23	1.90	0.52
37:DL:93:ASN:O	37:DL:95:LEU:N	2.38	0.52
23:DB:2897:U:H2'	23:DB:2898:U:H6	1.73	0.52
34:B3:22:LYS:HB2	34:B3:48:MET:SD	2.50	0.52
27:BK:58:LEU:N	27:BK:58:LEU:HD23	2.24	0.52
24:DI:100:ILE:O	24:DI:139:VAL:HA	2.10	0.52
5:AF:4:TYR:O	5:AF:63:ASN:HA	2.10	0.52
51:BZ:17:ASN:HD22	51:BZ:25:THR:HB	1.75	0.52
23:BB:1655:A:H2'	23:BB:1656:C:O4'	2.09	0.52
26:BD:124:ARG:HA	26:BD:165:MET:HE3	1.90	0.52
27:BK:60:ALA:HA	27:BK:87:LEU:CD2	2.39	0.52
23:DB:713:G:O2'	23:DB:714:U:H5'	2.10	0.52
29:BE:48:THR:C	29:BE:50:ALA:H	2.12	0.52
39:BX:18:LEU:HA	39:BX:21:LEU:HD12	1.91	0.52
1:AA:621:A:H2'	1:AA:622:A:H8	1.74	0.52
23:DB:2026:U:H2'	23:DB:2027:G:H8	1.75	0.52
2:AC:82:ASP:O	2:AC:86:LEU:HG	2.10	0.52
1:AA:392:C:H2'	1:AA:393:A:H8	1.75	0.52
52:DW:77:LYS:O	52:DW:78:PHE:HB2	2.10	0.52
1:CA:1142:G:C2	1:CA:1143:G:H1'	2.44	0.52
9:CJ:80:THR:HG21	9:CJ:82:LYS:NZ	2.25	0.52
48:DG:38:ASP:CG	48:DG:39:ALA:H	2.13	0.52
23:DB:2286:G:H5'	23:DB:2286:G:C8	2.45	0.52
50:DT:45:ALA:O	50:DT:48:GLN:HB2	2.10	0.52
1:CA:590:U:H2'	1:CA:591:U:C6	2.45	0.52
24:DI:99:LYS:HD3	24:DI:99:LYS:N	2.24	0.52
23:BB:81:G:H2'	23:BB:82:U:O4'	2.10	0.52
23:DB:175:G:O2'	23:DB:176:A:H5'	2.10	0.52
23:BB:1252:G:N2	44:BQ:32:ARG:HB3	2.24	0.52
24:BI:23:VAL:HG23	24:BI:24:GLY:H	1.74	0.52
22:DA:91:C:H2'	22:DA:92:C:C6	2.45	0.52
7:AH:118:ALA:HB3	7:AH:120:LEU:HD22	1.92	0.52
47:DF:56:LEU:HD22	47:DF:59:ILE:HD12	1.92	0.52
3:CD:145:ARG:NH2	3:CD:147:LYS:HE2	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1366:C:H2'	1:CA:1367:C:H6	1.75	0.52
25:DC:226:PRO:HA	25:DC:232:GLY:HA3	1.92	0.52
6:AG:12:LEU:HD22	6:AG:13:PRO:HD2	1.90	0.52
23:BB:1577:C:H2'	23:BB:1578:U:C6	2.45	0.52
23:BB:406:G:O2'	23:BB:407:G:H5'	2.10	0.52
23:DB:2226:C:H2'	23:DB:2227:A:H8	1.74	0.52
1:CA:223:A:H2'	1:CA:224:U:C6	2.45	0.52
1:CA:227:G:H2'	1:CA:228:A:C8	2.45	0.52
23:BB:2639:A:H2'	23:BB:2640:G:O4'	2.10	0.52
25:DC:141:HIS:HB3	25:DC:190:THR:HG1	1.74	0.52
23:DB:533:G:H2'	23:DB:534:U:C6	2.45	0.52
47:BF:31:GLU:O	47:BF:32:LYS:HD3	2.10	0.52
37:BL:124:GLY:H	37:BL:143:GLU:HG3	1.75	0.52
37:BL:125:LEU:H	37:BL:143:GLU:HG3	1.74	0.52
27:BK:35:VAL:CG2	27:BK:36:GLY:H	2.07	0.52
1:CA:1250:A:H4'	8:CI:69:GLY:N	2.24	0.52
8:AI:67:LYS:NZ	8:AI:67:LYS:HB2	2.22	0.52
51:DZ:38:PHE:CE2	51:DZ:51:VAL:HG21	2.45	0.52
23:BB:141:G:C6	50:BT:2:ILE:HD12	2.44	0.52
1:AA:1296:C:H4'	1:AA:1302:C:N4	2.11	0.52
50:BT:54:GLU:CB	50:BT:88:LYS:HB2	2.40	0.52
1:CA:410:G:P	3:CD:25:ARG:HE	2.33	0.52
1:CA:410:G:H2'	1:CA:429:U:C5	2.45	0.52
53:B6:126:ARG:O	53:B6:130:ARG:HG2	2.10	0.52
1:CA:1060:U:H2'	1:CA:1061:G:C8	2.45	0.52
40:DH:8:LYS:O	40:DH:13:GLY:HA3	2.10	0.52
1:CA:764:C:O2'	1:CA:765:G:H5'	2.10	0.52
23:DB:165:A:H2'	23:DB:166:U:C6	2.44	0.52
10:CK:22:ILE:HD13	10:CK:95:THR:HG21	1.91	0.52
23:BB:978:G:O2'	23:BB:979:A:H5'	2.10	0.52
1:AA:1250:A:H4'	8:AI:69:GLY:N	2.25	0.52
35:DV:51:GLN:NE2	35:DV:79:ARG:HH22	2.07	0.52
5:CF:6:ILE:HD11	5:CF:8:PHE:CD2	2.45	0.52
44:BQ:86:SER:O	44:BQ:88:GLU:N	2.42	0.52
23:DB:1441:G:H2'	23:DB:1442:U:C6	2.45	0.52
20:CB:68:PHE:CD1	20:CB:83:ALA:HB2	2.44	0.52
48:BG:30:GLY:N	48:BG:78:VAL:HA	2.25	0.52
53:D6:110:ARG:NH1	53:D6:110:ARG:HB3	2.21	0.52
29:DE:153:LEU:HG	29:DE:154:ASP:H	1.75	0.52
26:BD:114:LYS:HE3	26:BD:116:LYS:NZ	2.25	0.52
3:AD:94:GLU:HA	3:AD:99:ASN:ND2	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DK:60:ALA:HA	27:DK:87:LEU:CD2	2.39	0.52
6:AG:50:ALA:HB2	6:AG:57:GLU:HG3	1.90	0.52
39:BX:17:GLU:HB3	39:BX:53:VAL:CG1	2.39	0.52
37:BL:47:ARG:HH21	37:BL:47:ARG:CB	2.23	0.52
23:BB:1824:G:O2'	23:BB:1825:U:H5'	2.10	0.52
23:DB:364:C:H2'	23:DB:365:U:C6	2.44	0.52
23:BB:75:G:H4'	39:BX:48:ARG:NH2	2.25	0.52
4:CE:110:MET:SD	4:CE:126:ALA:HB2	2.50	0.52
1:AA:1516:G:H2'	1:AA:1518:A:OP2	2.09	0.52
26:BD:121:THR:C	26:BD:123:LYS:H	2.14	0.52
23:DB:2671:G:H2'	23:DB:2672:U:H6	1.74	0.52
23:BB:2859:G:H2'	23:BB:2860:A:C8	2.43	0.52
23:DB:1220:G:H2'	23:DB:1221:C:H6	1.75	0.52
35:BV:16:ALA:HA	35:BV:19:ARG:HE	1.74	0.52
23:DB:2784:U:O2'	23:DB:2785:C:H5'	2.09	0.52
1:CA:1152:A:H2'	1:CA:1153:G:H8	1.75	0.52
27:BK:107:LEU:C	27:BK:109:SER:H	2.13	0.52
23:BB:236:C:O2'	23:BB:237:C:H5'	2.10	0.52
25:BC:181:ARG:HD3	25:BC:182:LYS:H	1.74	0.52
5:CF:85:ILE:HG22	5:CF:86:ARG:H	1.75	0.52
23:DB:1714:U:H3'	23:DB:1715:G:H5'	1.91	0.52
1:CA:810:C:O2'	1:CA:811:C:H5'	2.10	0.52
23:BB:732:C:O2'	23:BB:733:G:H5'	2.10	0.52
11:AL:34:THR:HG21	11:AL:53:ARG:HH21	1.75	0.52
37:BL:41:ARG:HH21	37:BL:41:ARG:HG2	1.75	0.52
51:DZ:30:LEU:HD23	51:DZ:30:LEU:N	2.25	0.52
50:BT:36:LYS:O	50:BT:36:LYS:HD3	2.09	0.52
23:DB:1825:U:H2'	23:DB:1826:G:C8	2.45	0.52
37:BL:141:LYS:NZ	37:BL:143:GLU:HA	2.24	0.52
16:CQ:45:VAL:HG12	16:CQ:46:HIS:N	2.25	0.52
23:DB:920:A:H2'	23:DB:921:C:O4'	2.09	0.52
23:DB:2734:A:C2'	23:DB:2735:G:H5'	2.40	0.52
1:CA:1219:A:H2'	1:CA:1220:G:C8	2.45	0.52
44:BQ:94:LEU:HG	49:BR:11:GLN:HE21	1.75	0.52
51:BZ:30:LEU:N	51:BZ:30:LEU:HD23	2.25	0.52
53:B6:10:THR:HG22	53:B6:14:MET:HE3	1.92	0.52
23:BB:1059:G:N2	24:BI:130:GLY:HA3	2.25	0.52
2:CC:84:GLU:OE2	2:CC:87:ARG:HD3	2.10	0.52
1:CA:1316:G:H22	1:CA:1318:A:H3'	1.73	0.52
45:BS:47:VAL:HG12	45:BS:103:ILE:CG2	2.40	0.52
18:AS:29:PRO:HA	18:AS:47:THR:O	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DJ:81:ILE:HG23	41:DJ:82:GLY:N	2.18	0.52
23:DB:135:U:H2'	23:DB:136:G:H8	1.74	0.52
9:AJ:59:LYS:HB2	9:AJ:62:ARG:NH2	2.24	0.52
16:AQ:59:GLU:O	16:AQ:74:LEU:HD22	2.10	0.52
45:DS:36:LEU:HD22	45:DS:36:LEU:N	2.25	0.52
15:AP:72:ALA:HA	15:AP:75:ILE:HD12	1.92	0.52
35:DV:23:ALA:O	35:DV:24:ASN:HB2	2.10	0.52
20:CB:40:ILE:HG21	20:CB:200:PRO:O	2.09	0.52
20:CB:15:PHE:HA	20:CB:42:LEU:HD11	1.90	0.52
1:AA:312:C:H2'	1:AA:313:A:C8	2.45	0.52
38:DM:18:ARG:C	38:DM:38:ARG:HH22	2.13	0.52
23:BB:1724:G:H2'	23:BB:1725:U:C6	2.45	0.52
23:BB:1445:G:H2'	23:BB:1446:C:C6	2.44	0.52
38:BM:2:LEU:CD2	38:BM:46:ILE:HD11	2.39	0.52
20:AB:99:MET:HA	20:AB:106:VAL:HG21	1.92	0.52
37:BL:95:LEU:HD13	37:BL:101:ILE:HG13	1.92	0.52
23:DB:582:A:H2'	23:DB:583:G:C8	2.45	0.52
23:DB:358:U:H2'	23:DB:359:G:C8	2.45	0.52
38:DM:4:PRO:HG3	38:DM:68:PHE:HE2	1.74	0.52
23:DB:2339:C:H2'	23:DB:2340:A:C8	2.45	0.52
1:AA:1514:G:H2'	1:AA:1515:G:H8	1.74	0.52
7:CH:94:VAL:HG21	7:CH:100:ILE:O	2.10	0.52
1:AA:215:C:H2'	1:AA:216:U:H6	1.73	0.52
23:DB:547:A:C6	23:DB:548:G:H1'	2.45	0.52
23:BB:1561:C:H2'	23:BB:1562:U:C6	2.45	0.52
20:AB:18:GLN:HB2	20:AB:188:THR:OG1	2.10	0.52
23:BB:1236:G:H1'	23:BB:1237:A:C8	2.44	0.52
34:D3:41:ARG:HG3	34:D3:44:ARG:NH2	2.25	0.52
43:DO:28:VAL:O	43:DO:28:VAL:HG13	2.10	0.52
44:BQ:40:LYS:HD2	44:BQ:44:TYR:CE1	2.44	0.52
23:DB:2648:G:H2'	23:DB:2649:C:C6	2.45	0.52
23:DB:1859:U:H2'	23:DB:1860:G:H8	1.75	0.52
37:DL:136:GLU:HA	37:DL:140:GLY:H	1.74	0.52
23:BB:1465:G:H2'	23:BB:1466:U:C6	2.45	0.52
17:AR:31:TYR:CG	17:AR:54:LEU:HD11	2.44	0.52
34:B3:15:LYS:HA	34:B3:21:PHE:HA	1.92	0.52
1:AA:724:G:O2'	1:AA:725:G:H5'	2.10	0.52
1:AA:642:A:H2'	1:AA:643:C:H6	1.75	0.52
23:BB:167:A:H2'	23:BB:168:G:O4'	2.10	0.52
23:DB:1319:C:O2'	23:DB:1320:C:H5'	2.09	0.52
42:DN:54:LEU:CD1	42:DN:62:ASN:HB3	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1613:G:H2'	23:DB:1617:C:H42	1.74	0.52
23:BB:41:C:H2'	23:BB:42:A:O4'	2.09	0.52
23:BB:925:A:O2'	23:BB:926:G:H5'	2.09	0.52
23:DB:2100:G:H3'	23:DB:2101:A:H8	1.75	0.52
1:CA:363:A:P	11:CL:57:THR:HG21	2.50	0.52
50:BT:67:VAL:HG23	50:BT:75:GLY:O	2.10	0.52
23:BB:1767:G:O2'	23:BB:1768:C:H5'	2.09	0.52
1:AA:614:C:O2'	1:AA:615:G:H5'	2.10	0.52
49:BR:14:VAL:HG21	49:BR:98:ILE:HG12	1.92	0.52
45:DS:72:THR:CG2	45:DS:108:SER:HB3	2.40	0.52
14:CO:35:GLN:O	14:CO:39:LEU:HD13	2.09	0.52
24:DI:2:LYS:C	24:DI:3:LYS:HD2	2.31	0.51
23:DB:1098:A:C4	24:DI:3:LYS:O	2.63	0.51
26:BD:104:VAL:HA	26:BD:106:LYS:HZ3	1.75	0.51
44:DQ:91:ARG:HB2	44:DQ:94:LEU:HD23	1.92	0.51
8:AI:66:VAL:HG11	8:AI:78:ILE:HD11	1.93	0.51
26:DD:106:LYS:HB3	26:DD:206:ALA:CB	2.39	0.51
26:DD:32:ASN:HA	26:DD:51:THR:O	2.09	0.51
47:DF:43:ILE:HG13	47:DF:44:ALA:N	2.26	0.51
47:DF:46:LYS:O	47:DF:49:LEU:HB3	2.09	0.51
23:DB:1652:A:OP1	42:DN:8:ARG:HD3	2.10	0.51
41:BJ:44:TYR:O	41:BJ:45:THR:HB	2.10	0.51
48:BG:34:ARG:NH1	48:BG:34:ARG:HG2	2.24	0.51
3:CD:29:THR:HG22	3:CD:30:LYS:N	2.24	0.51
3:AD:29:THR:HG22	3:AD:30:LYS:N	2.25	0.51
24:DI:79:LEU:HD12	24:DI:135:MET:SD	2.50	0.51
45:BS:13:SER:OG	45:BS:16:LYS:HB2	2.11	0.51
23:DB:589:U:H2'	23:DB:590:A:C8	2.45	0.51
42:DN:34:ILE:O	42:DN:112:TYR:HA	2.09	0.51
29:DE:69:ARG:O	29:DE:70:SER:CB	2.56	0.51
1:AA:1239:A:H4'	1:AA:1240:U:H5'	1.92	0.51
23:BB:125:A:H3'	23:BB:126:A:H5'	1.91	0.51
1:CA:1239:A:H4'	1:CA:1240:U:H5'	1.92	0.51
23:DB:360:U:H2'	23:DB:361:G:C8	2.45	0.51
23:BB:2590:A:H2'	23:BB:2591:C:H6	1.76	0.51
23:DB:1150:C:O2'	23:DB:1151:A:H5'	2.10	0.51
49:BR:68:ARG:NH2	49:BR:90:ARG:HB2	2.25	0.51
23:DB:1724:G:H2'	23:DB:1725:U:C6	2.46	0.51
22:BA:13:G:H1'	22:BA:69:G:N2	2.25	0.51
1:CA:737:C:H2'	1:CA:738:C:C6	2.44	0.51
20:AB:68:PHE:HA	20:AB:161:PHE:O	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1523:G:O2'	1:AA:1524:C:H5'	2.10	0.51
19:CT:78:LEU:O	19:CT:82:ILE:HG23	2.09	0.51
9:CJ:10:LEU:HD11	9:CJ:25:ILE:HD12	1.90	0.51
2:CC:78:LYS:HG3	2:CC:81:GLU:HB2	1.92	0.51
11:CL:107:LYS:H	11:CL:107:LYS:HZ2	1.57	0.51
20:CB:25:LYS:HD3	20:CB:193:ASP:OD1	2.10	0.51
23:DB:877:A:O2'	23:DB:878:A:H5'	2.10	0.51
23:BB:955:U:OP1	38:BM:86:LYS:HE3	2.10	0.51
2:AC:131:ARG:HG2	2:AC:131:ARG:NH1	2.25	0.51
23:DB:2253:G:H22	53:D6:152:ASP:CG	2.13	0.51
23:DB:2604:U:O2'	23:DB:2605:U:H5'	2.11	0.51
23:DB:864:G:O2'	23:DB:865:C:H5'	2.11	0.51
23:DB:2728:U:H2'	23:DB:2729:G:H8	1.75	0.51
1:CA:852:G:H2'	1:CA:853:C:H6	1.73	0.51
26:DD:40:LEU:HD12	26:DD:41:ALA:N	2.24	0.51
23:BB:1526:C:O2'	23:BB:1527:G:H5'	2.10	0.51
48:DG:173:ALA:HB3	48:DG:175:LYS:NZ	2.25	0.51
10:AK:35:ASP:OD1	10:AK:37:GLN:HB2	2.09	0.51
23:DB:925:A:O2'	23:DB:926:G:H5'	2.10	0.51
23:DB:1332:G:N3	23:DB:1332:G:H2'	2.24	0.51
23:BB:464:U:H2'	23:BB:465:G:O4'	2.10	0.51
1:CA:558:G:C8	1:CA:559:A:H2'	2.46	0.51
18:AS:79:TYR:CE1	18:AS:80:ARG:HG3	2.45	0.51
1:AA:1243:C:H2'	1:AA:1244:G:H8	1.75	0.51
21:CU:46:ARG:O	21:CU:49:ALA:HB3	2.10	0.51
20:AB:69:VAL:O	20:AB:163:ILE:HG22	2.10	0.51
23:DB:2365:G:H4'	52:DW:59:PHE:CE1	2.45	0.51
40:BH:78:VAL:HG21	40:BH:142:VAL:CG1	2.36	0.51
26:DD:4:LEU:HD12	26:DD:32:ASN:HB2	1.92	0.51
35:BV:63:ILE:HD12	35:BV:63:ILE:N	2.23	0.51
23:DB:2359:C:O2'	23:DB:2360:G:H5'	2.10	0.51
1:CA:1014:A:C2	1:CA:1219:A:H1'	2.46	0.51
46:DU:82:VAL:HG13	46:DU:93:ARG:HB3	1.91	0.51
47:BF:46:LYS:O	47:BF:49:LEU:HB3	2.10	0.51
47:BF:174:PHE:HB3	47:BF:176:PHE:CD1	2.45	0.51
3:AD:173:ASP:CB	3:AD:178:GLU:HB2	2.36	0.51
29:BE:29:HIS:CD2	37:BL:8:PRO:HA	2.44	0.51
23:DB:1287:A:H3'	23:DB:1288:G:H21	1.74	0.51
23:BB:2734:A:N6	23:BB:2770:G:H1'	2.24	0.51
45:BS:36:LEU:H	45:BS:36:LEU:CD2	2.22	0.51
42:BN:28:LEU:HD23	42:BN:113:ILE:HG23	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2895:G:H2'	23:BB:2896:C:H6	1.75	0.51
20:AB:95:TRP:CH2	20:AB:100:LEU:HB2	2.42	0.51
38:DM:31:PHE:HB3	38:DM:130:PHE:CZ	2.46	0.51
37:BL:95:LEU:HA	37:BL:98:ALA:HB3	1.90	0.51
23:DB:560:C:H2'	23:DB:561:G:O4'	2.10	0.51
23:DB:1007:C:O3'	41:DJ:110:PRO:HB3	2.09	0.51
26:BD:168:GLU:O	26:BD:170:VAL:HG22	2.09	0.51
23:DB:99:U:O2	23:DB:99:U:H5'	2.09	0.51
8:CI:123:ARG:HB3	8:CI:123:ARG:CZ	2.39	0.51
27:BK:88:ASN:C	27:BK:88:ASN:ND2	2.61	0.51
1:CA:237:G:H2'	1:CA:238:A:C8	2.45	0.51
1:CA:337:G:H2'	1:CA:338:A:H8	1.71	0.51
23:BB:642:U:O2	23:BB:644:A:H3'	2.09	0.51
23:BB:1809:A:H2'	23:BB:1810:A:C8	2.45	0.51
23:BB:946:C:H2'	23:BB:947:A:C8	2.45	0.51
23:BB:1826:G:H2'	23:BB:1827:U:C6	2.45	0.51
23:BB:1827:U:C2'	23:BB:1828:G:H5'	2.41	0.51
23:DB:1485:U:H2'	23:DB:1486:U:H6	1.74	0.51
1:CA:833:G:H2'	1:CA:834:U:C6	2.45	0.51
23:BB:1998:A:H2'	23:BB:1999:C:H6	1.75	0.51
1:CA:1086:U:H2'	1:CA:1087:G:H8	1.74	0.51
1:AA:67:C:H4'	1:AA:172:A:C4'	2.40	0.51
2:AC:46:LEU:HB3	2:AC:49:ALA:CB	2.39	0.51
1:CA:1471:U:O2'	1:CA:1472:U:H5'	2.10	0.51
1:AA:369:G:O2'	1:AA:370:C:H5'	2.10	0.51
26:DD:133:THR:HG23	26:DD:134:HIS:CD2	2.45	0.51
23:BB:2339:C:H2'	23:BB:2340:A:C8	2.46	0.51
16:AQ:30:HIS:CG	16:AQ:33:TYR:HB2	2.45	0.51
33:D1:18:HIS:CD2	33:D1:40:PRO:HD2	2.45	0.51
37:BL:136:GLU:HA	37:BL:140:GLY:H	1.74	0.51
23:DB:2260:C:O2'	23:DB:2261:C:H5'	2.09	0.51
22:DA:49:C:H2'	22:DA:50:A:C8	2.46	0.51
43:DO:68:LYS:HA	43:DO:102:ARG:HG2	1.90	0.51
23:DB:127:A:C8	36:D2:46:LYS:HE2	2.46	0.51
23:DB:2889:C:O2'	23:DB:2890:G:H5'	2.10	0.51
1:CA:546:A:P	3:CD:68:GLU:HB3	2.51	0.51
23:DB:1234:U:H2'	23:DB:1235:G:O4'	2.11	0.51
23:BB:1577:C:H2'	23:BB:1578:U:O4'	2.10	0.51
1:AA:1105:A:H2'	1:AA:1106:G:H8	1.75	0.51
23:BB:189:G:H2'	23:BB:205:G:H22	1.75	0.51
1:CA:724:G:O2'	1:CA:725:G:H5'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1425:G:H2'	23:DB:1426:G:C8	2.45	0.51
1:CA:106:C:H2'	1:CA:107:G:H8	1.74	0.51
42:BN:2:ARG:HA	42:BN:5:LYS:HD3	1.92	0.51
1:CA:1310:G:O2'	1:CA:1311:A:H5'	2.10	0.51
23:BB:2329:U:H2'	23:BB:2330:G:C8	2.46	0.51
52:DW:36:ILE:HB	52:DW:39:GLN:NE2	2.24	0.51
52:DW:43:LYS:HB3	52:DW:58:LEU:CD1	2.40	0.51
10:AK:70:ALA:C	10:AK:72:ALA:H	2.13	0.51
23:DB:945:A:H3'	23:DB:946:C:H5''	1.91	0.51
47:BF:32:LYS:HA	47:BF:95:MET:SD	2.50	0.51
48:DG:85:LYS:HA	48:DG:131:VAL:HG12	1.92	0.51
16:CQ:59:GLU:O	16:CQ:74:LEU:HD22	2.10	0.51
16:CQ:60:ILE:HD13	16:CQ:60:ILE:H	1.76	0.51
40:BH:78:VAL:H	40:BH:143:ILE:HD11	1.75	0.51
8:CI:113:LYS:HA	8:CI:120:ALA:HB2	1.92	0.51
23:DB:2358:A:H2'	23:DB:2359:C:C6	2.46	0.51
44:BQ:57:ARG:HA	44:BQ:60:TRP:CE3	2.45	0.51
22:BA:28:C:N4	22:BA:56:G:H1	2.05	0.51
12:CM:10:ASP:O	12:CM:11:HIS:HB2	2.10	0.51
47:BF:7:TYR:OH	47:BF:29:ARG:HG3	2.10	0.51
40:DH:126:GLY:N	40:DH:146:VAL:HB	2.26	0.51
21:AU:19:LYS:HD3	21:AU:20:ARG:HH21	1.75	0.51
18:CS:69:LYS:O	18:CS:72:GLU:HG2	2.11	0.51
11:AL:86:VAL:HG11	11:AL:89:LEU:HD23	1.92	0.51
50:DT:43:ILE:O	50:DT:46:ALA:HB3	2.11	0.51
25:DC:204:LEU:HD23	25:DC:209:ALA:CB	2.40	0.51
23:BB:1180:U:O2'	23:BB:1181:U:H5'	2.10	0.51
20:AB:65:LYS:HA	20:AB:89:PHE:HE1	1.76	0.51
20:CB:27:LYS:HB3	20:CB:28:PRO:HD3	1.91	0.51
3:AD:154:VAL:O	3:AD:158:LEU:HD12	2.10	0.51
23:BB:363:G:H2'	23:BB:364:C:C6	2.46	0.51
40:DH:73:ASN:CG	40:DH:140:ALA:HB1	2.31	0.51
10:AK:23:HIS:O	10:AK:29:THR:HA	2.10	0.51
1:AA:320:A:H2'	1:AA:321:A:H8	1.74	0.51
7:CH:49:LYS:O	7:CH:59:GLU:N	2.43	0.51
11:CL:52:CYS:SG	11:CL:66:ILE:HD11	2.50	0.51
22:BA:101:A:H2'	22:BA:102:G:O4'	2.11	0.51
23:BB:2773:C:H5''	26:BD:169:ARG:HB2	1.91	0.51
14:AO:85:LEU:N	14:AO:85:LEU:HD12	2.24	0.51
24:DI:85:ILE:HD12	24:DI:87:SER:O	2.10	0.51
2:AC:139:ASN:O	2:AC:143:LEU:HD23	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1048:G:H4'	13:AN:2:LYS:HZ1	1.73	0.51
35:DV:29:ILE:HG13	35:DV:88:HIS:CE1	2.41	0.51
1:AA:239:U:C5'	1:AA:239:U:H6	2.24	0.51
29:DE:173:THR:C	29:DE:175:ILE:H	2.13	0.51
45:BS:42:LYS:O	45:BS:45:VAL:HG22	2.10	0.51
1:CA:1461:G:O2'	1:CA:1462:C:H5'	2.11	0.51
23:DB:1177:G:H2'	23:DB:1178:C:C6	2.45	0.51
50:DT:54:GLU:HG3	50:DT:89:GLU:H	1.75	0.51
46:BU:32:LYS:HA	46:BU:65:GLN:HA	1.92	0.51
1:AA:1007:U:H2'	1:AA:1008:U:H6	1.74	0.51
11:CL:109:ARG:HH21	11:CL:112:ALA:HB3	1.75	0.51
17:CR:19:GLU:HG3	17:CR:54:LEU:HD12	1.92	0.51
23:BB:909:A:H2'	23:BB:912:C:C5	2.45	0.51
23:BB:1319:C:O2'	23:BB:1320:C:H5'	2.09	0.51
23:DB:755:U:H2'	23:DB:756:A:C8	2.46	0.51
23:DB:2356:U:C5'	52:DW:16:GLU:HG3	2.40	0.51
50:BT:62:VAL:HG12	50:BT:63:VAL:N	2.26	0.51
1:CA:83:C:H1'	1:CA:84:U:C6	2.45	0.51
5:AF:15:SER:HA	5:AF:18:VAL:HG23	1.91	0.51
5:CF:7:VAL:HG11	17:CR:64:LEU:HD21	1.92	0.51
1:AA:560:A:H5'	1:AA:566:G:N2	2.25	0.51
1:AA:878:A:H5''	7:AH:80:PRO:HG2	1.91	0.51
1:AA:31:G:N7	1:AA:306:A:H1'	2.26	0.51
1:CA:49:U:O2'	1:CA:50:A:H2'	2.10	0.51
23:BB:477:A:H2'	23:BB:478:A:C8	2.45	0.51
23:DB:1083:U:H2'	23:DB:1085:A:OP2	2.10	0.51
1:CA:930:C:H2'	1:CA:931:C:H6	1.76	0.51
1:CA:190:A:O5'	1:CA:190:A:H8	1.93	0.51
1:CA:131:A:H2'	1:CA:132:C:C6	2.45	0.51
1:CA:882:C:O2'	1:CA:883:C:H5'	2.10	0.51
24:DI:1:ALA:CB	24:DI:2:LYS:HD2	2.40	0.51
25:DC:91:ALA:HB3	25:DC:105:ALA:HB2	1.92	0.51
47:DF:177:ARG:HA	47:DF:177:ARG:NE	2.26	0.51
20:CB:14:HIS:CD2	20:CB:202:ASN:H	2.29	0.51
13:AN:9:GLU:OE2	13:AN:60:ARG:HG2	2.10	0.51
23:DB:672:C:O2'	23:DB:673:C:H5'	2.11	0.51
30:DY:40:THR:HB	30:DY:43:ILE:HG22	1.92	0.51
23:DB:2674:G:H4'	27:DK:30:ARG:HG3	1.91	0.51
1:CA:1219:A:H2'	1:CA:1220:G:H8	1.75	0.51
44:BQ:96:ASP:C	44:BQ:98:ALA:N	2.64	0.51
3:CD:164:ARG:HG2	3:CD:164:ARG:HH11	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:158:PHE:HA	29:BE:169:VAL:CG2	2.41	0.51
47:DF:131:VAL:HG22	47:DF:151:LEU:O	2.10	0.51
18:AS:28:LYS:HB2	18:AS:29:PRO:HD2	1.93	0.51
10:AK:22:ILE:HD13	10:AK:95:THR:HG21	1.91	0.51
23:DB:165:A:H2'	23:DB:166:U:H6	1.76	0.51
23:DB:587:C:N3	37:DL:33:ARG:NH2	2.58	0.51
8:AI:36:GLN:N	8:AI:36:GLN:HE21	2.09	0.51
29:BE:149:ILE:HG23	29:BE:188:MET:CA	2.40	0.51
1:CA:719:C:H1'	17:CR:37:LYS:HB2	1.92	0.51
26:DD:168:GLU:O	26:DD:170:VAL:HG13	2.09	0.51
23:BB:873:C:H2'	23:BB:874:G:C8	2.44	0.51
24:BI:17:ALA:O	24:BI:18:ASN:CB	2.59	0.51
38:DM:19:GLY:N	38:DM:38:ARG:NH2	2.58	0.51
23:DB:969:G:H2'	23:DB:970:U:C6	2.45	0.51
26:BD:148:GLN:HG3	26:BD:152:PRO:CG	2.41	0.51
20:CB:70:GLY:HA3	20:CB:79:VAL:HG21	1.92	0.51
45:BS:81:SER:HB3	45:BS:99:ARG:HB3	1.93	0.51
43:DO:2:ASP:OD2	43:DO:4:LYS:HB3	2.10	0.51
1:CA:552:U:H2'	1:CA:553:A:C8	2.46	0.51
11:AL:79:ILE:HD12	11:AL:96:THR:HG22	1.93	0.51
23:BB:152:A:H2'	23:BB:153:U:H6	1.71	0.51
28:BP:52:ARG:HG2	28:BP:52:ARG:NH1	2.25	0.51
23:DB:2135:A:O2'	23:DB:2136:G:H5'	2.11	0.51
23:BB:2457:U:O2'	23:BB:2458:G:H5'	2.10	0.51
23:DB:2776:A:H4'	23:DB:2777:G:C5'	2.40	0.51
1:AA:1179:A:H2'	1:AA:1180:A:O4'	2.11	0.51
23:BB:1063:G:H4'	24:BI:135:MET:CB	2.40	0.51
1:AA:539:A:H2'	1:AA:540:G:H8	1.75	0.51
51:DZ:63:GLY:O	51:DZ:67:VAL:HG23	2.09	0.51
37:DL:23:ILE:HD12	37:DL:23:ILE:N	2.25	0.51
23:DB:1220:G:H2'	23:DB:1221:C:C6	2.46	0.51
26:DD:121:THR:C	26:DD:123:LYS:H	2.14	0.51
25:DC:42:ARG:HD2	25:DC:48:ILE:HG12	1.91	0.51
1:CA:1283:U:O2'	1:CA:1284:C:H5'	2.11	0.51
23:BB:82:U:H2'	23:BB:83:A:O4'	2.10	0.51
23:DB:2226:C:H2'	23:DB:2227:A:C8	2.46	0.51
1:CA:614:C:O2'	1:CA:615:G:H5'	2.10	0.51
1:AA:852:G:H2'	1:AA:853:C:C6	2.46	0.51
1:CA:645:G:O2'	1:CA:646:G:H5'	2.11	0.51
10:AK:63:GLN:HG3	10:AK:98:ALA:HB2	1.93	0.51
23:BB:1833:C:O2'	23:BB:1834:U:H5'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DH:1:MET:HB3	40:DH:21:VAL:O	2.10	0.51
43:DO:81:ARG:HD3	43:DO:81:ARG:H	1.75	0.51
23:DB:2329:U:H2'	23:DB:2330:G:C8	2.46	0.51
48:BG:106:LEU:O	48:BG:108:PHE:HD1	1.94	0.51
47:BF:33:ILE:O	47:BF:90:LEU:N	2.43	0.51
37:DL:124:GLY:N	37:DL:143:GLU:CG	2.72	0.51
26:BD:107:VAL:HG12	26:BD:109:VAL:HG23	1.91	0.51
8:CI:19:PHE:HB2	8:CI:63:TYR:HB3	1.91	0.51
41:BJ:59:ALA:C	41:BJ:61:LYS:H	2.13	0.51
44:DQ:93:ILE:O	44:DQ:96:ASP:HB3	2.10	0.51
1:AA:1013:G:H2'	1:AA:1015:G:OP2	2.11	0.51
41:DJ:18:VAL:CG1	41:DJ:54:ILE:HD11	2.40	0.51
1:CA:1220:G:H21	18:CS:53:GLY:HA2	1.75	0.51
48:BG:25:ILE:O	48:BG:32:LEU:HA	2.10	0.51
51:BZ:38:PHE:CE2	51:BZ:51:VAL:HG21	2.44	0.51
51:BZ:45:ARG:HE	51:BZ:47:VAL:CG1	2.23	0.51
47:BF:133:GLU:HA	47:BF:150:GLY:CA	2.40	0.51
40:DH:125:THR:HG22	40:DH:146:VAL:HG12	1.92	0.51
4:CE:17:VAL:HG23	4:CE:33:THR:O	2.11	0.51
46:DU:27:VAL:CG2	46:DU:33:VAL:HG12	2.36	0.51
27:BK:7:MET:SD	27:BK:20:MET:HB2	2.51	0.51
20:AB:15:PHE:HD1	20:AB:16:GLY:N	2.08	0.51
1:AA:312:C:H2'	1:AA:313:A:H8	1.76	0.51
40:BH:73:ASN:ND2	40:BH:74:ALA:N	2.58	0.51
20:CB:64:GLY:O	20:CB:66:ILE:HG12	2.09	0.51
23:BB:1551:A:H2'	23:BB:1552:A:O4'	2.11	0.51
2:CC:183:TYR:HE1	2:CC:198:LYS:HB3	1.75	0.51
1:CA:1102:A:H2'	1:CA:1103:C:C6	2.46	0.51
5:AF:6:ILE:HD11	5:AF:8:PHE:CD2	2.45	0.51
14:CO:85:LEU:N	14:CO:85:LEU:HD12	2.25	0.51
1:CA:1048:G:H5''	13:CN:2:LYS:HD2	1.93	0.51
16:CQ:16:MET:HB3	16:CQ:19:SER:HB2	1.91	0.51
4:CE:84:VAL:HG11	4:CE:146:MET:HB3	1.93	0.51
49:BR:31:GLU:O	49:BR:63:VAL:HG22	2.11	0.51
1:CA:1161:C:O2'	1:CA:1162:C:H5'	2.11	0.51
3:CD:96:ARG:O	3:CD:100:VAL:HG23	2.10	0.51
39:DX:18:LEU:HD12	39:DX:22:LEU:HD22	1.92	0.51
23:DB:150:U:H2'	23:DB:151:C:C6	2.45	0.51
25:DC:86:ARG:HB3	25:DC:86:ARG:CZ	2.41	0.51
23:BB:2846:G:H2'	23:BB:2847:U:C6	2.46	0.51
39:BX:56:LEU:O	39:BX:57:LEU:HB3	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:734:G:O2'	17:AR:59:LYS:HD3	2.11	0.51
6:CG:134:VAL:HB	6:CG:137:ARG:NH2	2.26	0.51
23:DB:1805:A:N3	25:DC:49:THR:CG2	2.74	0.51
19:CT:42:ASP:HA	19:CT:43:LYS:NZ	2.25	0.51
11:CL:106:VAL:CG2	11:CL:116:TYR:HB3	2.41	0.51
23:DB:2002:G:OP1	42:DN:13:ASN:HA	2.10	0.51
27:BK:2:ILE:HG23	27:BK:33:ALA:O	2.11	0.51
23:DB:2217:G:O2'	23:DB:2218:G:H5'	2.11	0.51
23:BB:1405:U:H2'	23:BB:1406:U:C6	2.46	0.51
22:BA:50:A:OP1	43:BO:68:LYS:HB2	2.11	0.51
53:D6:14:MET:CE	53:D6:165:THR:HA	2.40	0.51
23:BB:2671:G:H2'	23:BB:2672:U:H6	1.75	0.51
23:BB:1513:U:H2'	23:BB:1514:G:C8	2.45	0.51
23:BB:1349:C:H2'	23:BB:1350:C:H6	1.75	0.51
23:DB:528:A:C2	23:DB:2042:A:H2'	2.45	0.51
31:B0:25:THR:O	31:B0:26:SER:HB3	2.09	0.51
22:BA:87:U:H2'	22:BA:88:C:H5''	1.93	0.51
23:DB:1045:C:H4'	23:DB:1046:A:H5''	1.91	0.51
23:DB:2835:A:H61	23:DB:2878:U:H2'	1.74	0.51
1:CA:448:A:H2'	1:CA:449:G:C8	2.46	0.51
25:DC:259:ASN:C	25:DC:261:ARG:H	2.13	0.51
23:BB:1714:U:H3'	23:BB:1715:G:C5'	2.39	0.51
23:DB:2600:A:O2'	23:DB:2601:C:H5'	2.10	0.51
1:CA:1244:G:H2'	1:CA:1245:C:C6	2.46	0.51
14:CO:50:HIS:O	14:CO:53:ARG:HB3	2.10	0.51
23:DB:1965:C:H5''	23:DB:1966:A:H2'	1.93	0.51
16:CQ:28:VAL:HG12	16:CQ:37:ILE:O	2.11	0.51
23:DB:1050:A:H2'	23:DB:1051:G:O4'	2.11	0.51
1:CA:31:G:N7	1:CA:306:A:H1'	2.26	0.51
23:DB:1009:A:P	41:DJ:39:LYS:HZ2	2.33	0.51
1:AA:790:A:H2'	1:AA:791:G:C8	2.46	0.51
23:BB:1495:A:H2'	23:BB:1496:A:C8	2.46	0.51
23:BB:1499:C:H2'	23:BB:1500:G:H8	1.75	0.51
37:DL:41:ARG:HG2	37:DL:41:ARG:HH21	1.75	0.51
17:AR:21:ASP:OD1	17:AR:23:LYS:HD2	2.10	0.51
9:AJ:10:LEU:HD11	9:AJ:25:ILE:HD12	1.92	0.51
23:DB:103:A:H3'	23:DB:104:A:H8	1.75	0.51
52:BW:66:VAL:HA	52:BW:81:ILE:HG22	1.93	0.51
23:DB:2331:G:O2'	23:DB:2332:C:H5'	2.11	0.51
23:DB:2366:A:H2'	23:DB:2367:G:O4'	2.10	0.51
23:DB:852:U:H2'	23:DB:853:C:C6	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DW:49:ASN:HB2	52:DW:61:LYS:N	2.24	0.51
22:BA:83:G:OP1	30:BY:16:LEU:HD21	2.11	0.51
24:DI:116:MET:HE1	24:DI:128:ILE:HG13	1.93	0.51
23:BB:626:A:H2'	37:BL:78:ARG:NH1	2.26	0.51
47:DF:110:ILE:CG2	47:DF:113:PHE:HB3	2.40	0.51
43:DO:26:LEU:HD13	43:DO:39:VAL:HG23	1.92	0.51
23:BB:587:C:N3	37:BL:33:ARG:NH2	2.59	0.51
11:CL:49:ARG:N	11:CL:49:ARG:HD2	2.26	0.51
23:DB:873:C:H4'	38:DM:64:TRP:NE1	2.24	0.51
23:BB:2038:G:H2'	23:BB:2039:U:C6	2.46	0.51
31:B0:32:THR:OG1	31:B0:50:GLY:HA2	2.11	0.51
2:AC:149:LYS:HB2	2:AC:168:ARG:HG3	1.93	0.51
23:BB:45:G:H5'	23:BB:46:G:OP1	2.10	0.51
27:BK:42:THR:O	27:BK:44:LYS:HG2	2.11	0.51
28:DP:4:ILE:O	28:DP:6:GLN:N	2.42	0.51
34:D3:15:LYS:HA	34:D3:21:PHE:HA	1.91	0.51
4:AE:80:LEU:HA	4:AE:146:MET:HE1	1.90	0.51
23:DB:191:A:H2'	23:DB:192:C:H6	1.73	0.51
41:DJ:114:LEU:O	41:DJ:117:ALA:HB3	2.11	0.51
23:BB:1779:U:C5	23:BB:1784:A:N7	2.78	0.51
41:BJ:93:ILE:O	41:BJ:97:PRO:HG3	2.10	0.51
23:BB:132:G:H2'	23:BB:133:U:C6	2.46	0.51
29:BE:46:GLN:HB3	29:BE:86:ALA:HA	1.92	0.51
6:CG:41:ILE:HG21	6:CG:115:MET:CG	2.41	0.51
39:BX:18:LEU:HD12	39:BX:22:LEU:HD22	1.93	0.51
33:D1:3:GLY:C	33:D1:5:ARG:H	2.13	0.51
20:AB:87:ASP:HB2	20:AB:224:ARG:CZ	2.40	0.51
23:DB:1351:C:H2'	23:DB:1352:U:O4'	2.11	0.51
23:DB:1403:A:O2'	23:DB:1404:C:H5'	2.10	0.51
2:CC:86:LEU:O	2:CC:90:VAL:HG23	2.11	0.51
20:CB:18:GLN:HB2	20:CB:188:THR:OG1	2.11	0.51
25:BC:242:HIS:O	25:BC:244:VAL:HG13	2.10	0.51
3:CD:11:SER:HA	3:CD:18:LEU:CD2	2.41	0.51
22:DA:6:G:H2'	22:DA:7:G:H8	1.76	0.51
23:DB:2455:G:O2'	23:DB:2456:C:H5'	2.11	0.51
23:DB:5:A:H2'	23:DB:6:A:H8	1.76	0.51
23:DB:753:A:H2'	23:DB:754:U:H6	1.73	0.51
23:BB:1683:U:H2'	23:BB:1684:G:C8	2.46	0.51
1:AA:1041:G:O2'	1:AA:1042:A:H5'	2.11	0.51
29:DE:98:LYS:HG2	29:DE:99:LYS:N	2.25	0.51
1:CA:358:U:H2'	1:CA:359:G:H8	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CE:87:VAL:HG22	4:CE:88:HIS:N	2.25	0.51
5:AF:85:ILE:HG22	5:AF:86:ARG:H	1.75	0.51
25:BC:259:ASN:C	25:BC:261:ARG:H	2.14	0.51
53:D6:150:SER:O	53:D6:154:THR:HG23	2.10	0.51
23:DB:81:G:H2'	23:DB:82:U:O4'	2.10	0.51
23:BB:1339:G:N2	23:BB:1603:A:H1'	2.26	0.51
23:BB:2104:C:H2'	23:BB:2105:U:H6	1.76	0.51
40:BH:62:LEU:N	40:BH:62:LEU:HD12	2.25	0.51
20:CB:10:LYS:O	20:CB:13:VAL:HG23	2.10	0.51
23:BB:2594:C:O2'	23:BB:2595:G:H5'	2.11	0.51
23:DB:538:A:H2'	23:DB:539:G:O4'	2.11	0.51
2:AC:113:LYS:HE3	2:AC:117:ASP:OD1	2.11	0.51
26:BD:46:ARG:HH12	26:BD:88:GLU:HG3	1.75	0.51
1:AA:885:G:O2'	1:AA:886:G:H5'	2.11	0.51
51:BZ:18:ARG:HA	51:BZ:23:ASN:O	2.10	0.51
23:DB:2221:G:O2'	23:DB:2222:C:H5'	2.11	0.51
23:BB:1234:U:O2'	23:BB:1235:G:H5'	2.11	0.51
23:BB:242:G:H5''	34:B3:63:TYR:CE2	2.45	0.51
23:BB:217:A:H2'	23:BB:218:A:O4'	2.11	0.51
23:BB:857:G:H2'	23:BB:858:G:H5'	1.91	0.51
48:BG:122:ALA:HB2	48:BG:132:LEU:HB3	1.92	0.51
21:AU:46:ARG:O	21:AU:49:ALA:HB3	2.10	0.51
48:DG:84:LYS:HB2	48:DG:132:LEU:H	1.76	0.51
8:AI:64:ILE:HD12	8:AI:64:ILE:N	2.25	0.51
1:AA:1014:A:C2	1:AA:1219:A:H1'	2.45	0.51
48:DG:25:ILE:O	48:DG:32:LEU:HA	2.11	0.51
23:DB:673:C:H2'	23:DB:674:G:H5'	1.91	0.51
1:CA:598:U:H2'	1:CA:599:C:C6	2.45	0.51
50:BT:54:GLU:HG3	50:BT:89:GLU:H	1.75	0.51
51:BZ:6:GLN:HE21	51:BZ:50:ARG:H	1.57	0.51
30:BY:16:LEU:H	30:BY:16:LEU:CD2	2.13	0.51
33:B1:8:ILE:HD12	33:B1:51:ALA:HA	1.92	0.51
47:BF:40:GLY:HA2	47:BF:84:ILE:CG2	2.40	0.51
12:CM:56:ARG:O	12:CM:59:VAL:HG12	2.11	0.51
47:BF:148:VAL:O	47:BF:149:ARG:HG2	2.10	0.51
49:DR:20:VAL:HG12	49:DR:21:ARG:H	1.76	0.51
47:DF:107:VAL:N	47:DF:108:PRO:CD	2.74	0.51
18:CS:28:LYS:HB2	18:CS:29:PRO:HD2	1.93	0.51
38:DM:96:ILE:HD11	38:DM:126:ILE:HG12	1.93	0.51
25:DC:15:VAL:HA	25:DC:203:VAL:HG12	1.92	0.51
53:D6:15:GLN:HA	53:D6:168:PHE:HE2	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AQ:74:LEU:HD22	16:AQ:75:VAL:N	2.26	0.51
45:DS:36:LEU:H	45:DS:36:LEU:CD2	2.23	0.51
23:DB:160:A:H2'	23:DB:161:A:C8	2.46	0.51
32:B4:5:ALA:HA	32:B4:37:GLN:HE21	1.76	0.51
2:AC:140:ALA:HB3	2:AC:148:ILE:HD12	1.93	0.51
23:DB:2037:A:H2'	23:DB:2038:G:H8	1.75	0.51
23:BB:1197:G:O2'	23:BB:1198:U:H5'	2.11	0.51
22:BA:32:U:H4'	22:BA:52:A:H62	1.76	0.51
22:DA:32:U:C4'	22:DA:52:A:H62	2.23	0.51
23:BB:2147:A:H5'	23:BB:2148:G:C4'	2.40	0.51
23:BB:2898:U:H2'	23:BB:2899:A:H8	1.73	0.51
1:CA:1392:G:H2'	1:CA:1393:U:C6	2.45	0.51
23:DB:1198:U:H2'	23:DB:1199:U:C6	2.46	0.51
1:AA:279:A:C5'	1:AA:280:C:H3'	2.40	0.51
25:BC:43:ASN:ND2	25:BC:44:ASN:N	2.55	0.51
23:DB:279:A:H2'	23:DB:280:U:H5'	1.91	0.51
41:BJ:72:LYS:CB	41:BJ:89:PHE:H	2.24	0.51
1:AA:1086:U:H2'	1:AA:1087:G:H8	1.75	0.51
46:BU:70:ALA:HB1	46:BU:79:ALA:HB3	1.91	0.51
23:BB:2843:G:O2'	23:BB:2844:G:H5'	2.11	0.51
23:DB:1241:A:H2'	23:DB:1242:U:C5'	2.41	0.51
8:AI:7:GLY:HA3	8:AI:81:GLY:O	2.11	0.51
28:BP:31:VAL:CG1	28:BP:38:ARG:HG3	2.41	0.51
23:DB:2457:U:C2'	23:DB:2458:G:H5'	2.41	0.51
3:AD:10:LEU:HB3	3:AD:62:ARG:HD3	1.91	0.51
23:BB:636:G:H3'	37:BL:128:THR:HG21	1.93	0.51
10:CK:77:GLY:O	10:CK:79:LYS:HE3	2.11	0.51
43:BO:66:GLY:HA2	43:BO:102:ARG:NE	2.25	0.51
1:CA:1170:A:H2'	1:CA:1171:A:O4'	2.10	0.51
23:BB:1599:U:H2'	23:BB:1600:C:H6	1.76	0.51
23:DB:1856:U:H2'	23:DB:1857:G:H5'	1.91	0.51
23:BB:1292:G:H2'	23:BB:1293:C:C6	2.45	0.51
23:DB:951:C:O2'	23:DB:952:G:H5'	2.10	0.51
27:BK:109:SER:HB2	27:BK:111:LYS:HG2	1.93	0.51
23:BB:2359:C:O2'	23:BB:2360:G:H5'	2.11	0.51
42:BN:54:LEU:HD11	42:BN:62:ASN:HB3	1.92	0.51
41:BJ:88:THR:HG22	41:BJ:91:GLU:HG3	1.92	0.51
1:CA:1198:G:H2'	1:CA:1199:U:C6	2.46	0.51
1:AA:777:A:H2'	1:AA:778:G:H8	1.75	0.51
49:BR:74:ILE:HB	49:BR:87:GLN:O	2.11	0.51
6:CG:86:VAL:HG13	6:CG:151:ALA:O	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:640:C:H2'	23:DB:641:U:C6	2.46	0.51
37:DL:92:LEU:HD23	37:DL:92:LEU:H	1.75	0.51
23:DB:195:A:H61	23:DB:198:C:H3'	1.76	0.51
14:AO:62:GLN:O	14:AO:66:LEU:HD23	2.11	0.51
47:DF:10:GLU:O	47:DF:13:LYS:HG3	2.11	0.51
23:DB:2880:C:C1'	42:DN:91:ALA:HB3	2.41	0.51
1:CA:885:G:O2'	1:CA:886:G:H5'	2.11	0.51
23:BB:1669:A:O3'	23:BB:2549:G:H5'	2.10	0.51
3:AD:145:ARG:HB3	3:AD:147:LYS:HD2	1.93	0.51
49:DR:34:GLU:OE1	49:DR:60:LYS:HE2	2.11	0.51
23:BB:2366:A:H2'	23:BB:2367:G:O4'	2.11	0.51
44:BQ:30:VAL:CG1	44:BQ:31:TYR:N	2.65	0.51
5:CF:3:HIS:CD2	5:CF:3:HIS:N	2.77	0.51
8:CI:22:PRO:HA	8:CI:60:LEU:HB3	1.93	0.51
53:B6:81:LYS:O	53:B6:84:ARG:HG2	2.10	0.51
44:DQ:59:LEU:HD13	44:DQ:60:TRP:N	2.25	0.51
20:CB:69:VAL:HG12	20:CB:168:GLU:HG3	1.92	0.51
38:DM:17:ASN:ND2	38:DM:95:LEU:HG	2.14	0.51
2:AC:84:GLU:OE2	2:AC:87:ARG:HD3	2.10	0.51
50:BT:41:ALA:C	50:BT:43:ILE:H	2.12	0.51
13:AN:63:CYS:HB3	13:AN:67:GLY:N	2.26	0.51
33:B1:49:LYS:HG3	33:B1:50:GLU:N	2.20	0.51
47:BF:12:VAL:O	47:BF:16:MET:HG2	2.10	0.51
47:BF:137:PHE:O	47:BF:139:GLU:N	2.43	0.51
42:BN:106:ASP:C	42:BN:108:ALA:H	2.13	0.51
42:BN:108:ALA:O	42:BN:110:MET:HE3	2.10	0.51
1:AA:1399:C:H1'	57:AA:1973:HOH:O	2.11	0.51
4:AE:136:VAL:HG13	4:AE:137:ARG:N	2.25	0.51
35:BV:51:GLN:NE2	35:BV:79:ARG:HH22	2.09	0.51
1:CA:764:C:N4	1:CA:812:G:N1	2.59	0.51
23:BB:673:C:C4'	29:BE:77:ILE:HD11	2.40	0.51
50:DT:41:ALA:C	50:DT:43:ILE:H	2.13	0.51
23:DB:1789:A:H2'	23:DB:1790:C:C6	2.46	0.51
23:DB:2471:A:O2'	23:DB:2472:G:C8	2.55	0.51
23:BB:663:G:OP1	37:BL:17:LYS:HG2	2.11	0.51
23:BB:165:A:H2'	23:BB:166:U:C6	2.46	0.51
23:BB:2547:A:H5'	23:BB:2566:A:C2	2.46	0.51
23:BB:2674:G:H4'	27:BK:30:ARG:HG3	1.92	0.51
20:AB:38:HIS:O	20:AB:39:ILE:HD13	2.11	0.51
27:DK:105:ARG:HD2	27:DK:122:VAL:CG1	2.40	0.51
3:AD:113:ALA:O	3:AD:116:LEU:HB2	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1793:C:H2'	23:DB:1794:A:H8	1.76	0.51
23:DB:1445:G:H2'	23:DB:1446:C:C6	2.46	0.51
4:AE:84:VAL:CG1	4:AE:146:MET:HB3	2.41	0.51
20:CB:99:MET:HA	20:CB:106:VAL:HG21	1.92	0.51
14:CO:16:GLY:HA2	14:CO:27:VAL:HG22	1.92	0.51
1:AA:1096:C:H2'	1:AA:1097:C:H6	1.76	0.51
1:CA:238:A:C2'	1:CA:239:U:H5''	2.39	0.51
23:BB:1007:C:O3'	41:BJ:110:PRO:HB3	2.11	0.51
23:BB:263:G:H2'	23:BB:264:C:O4'	2.11	0.51
6:CG:58:LEU:HA	6:CG:61:PHE:HB3	1.93	0.51
38:BM:40:ARG:HB2	38:BM:93:VAL:HG22	1.92	0.51
30:BY:7:THR:HG23	30:BY:34:THR:OG1	2.11	0.51
37:DL:47:ARG:CB	37:DL:47:ARG:HH21	2.23	0.51
43:DO:52:SER:OG	43:DO:54:VAL:HG12	2.11	0.51
23:DB:2093:G:O2'	23:DB:2094:A:H5'	2.11	0.51
10:CK:51:PHE:CZ	10:CK:61:ALA:HA	2.46	0.51
23:BB:2605:U:H2'	23:BB:2606:C:C5	2.46	0.51
23:DB:863:A:H2'	23:DB:864:G:H8	1.75	0.51
40:DH:135:HIS:CG	40:DH:136:SER:H	2.28	0.51
1:AA:425:G:H2'	1:AA:426:U:C6	2.46	0.51
1:CA:129:A:H1'	1:CA:130:A:C8	2.46	0.51
29:BE:98:LYS:HG2	29:BE:99:LYS:N	2.25	0.51
53:B6:4:LYS:HA	53:B6:7:TYR:CD2	2.46	0.51
22:DA:91:C:H2'	22:DA:92:C:H6	1.76	0.51
23:BB:1773:A:N7	23:BB:1829:A:H1'	2.26	0.51
6:AG:119:LEU:O	6:AG:123:LEU:HG	2.11	0.51
23:BB:538:A:H2'	23:BB:539:G:O4'	2.10	0.51
1:CA:66:A:H4'	1:CA:173:U:C4	2.46	0.51
1:AA:1491:G:H3'	55:AA:1661:PAR:O31	2.11	0.51
8:CI:11:ARG:HA	8:CI:105:ARG:NH1	2.26	0.51
23:BB:1842:G:H2'	23:BB:1843:C:C6	2.46	0.51
27:DK:25:LEU:HD13	27:DK:38:ILE:HG22	1.93	0.51
24:DI:10:LEU:HD12	24:DI:10:LEU:O	2.10	0.51
53:B6:71:TRP:CE3	53:B6:71:TRP:HA	2.45	0.51
6:CG:121:ASN:HD22	6:CG:121:ASN:N	2.07	0.51
53:D6:137:LEU:O	53:D6:140:LEU:HB3	2.11	0.51
1:AA:358:U:H2'	1:AA:359:G:C8	2.45	0.51
1:CA:233:C:O2'	1:CA:234:C:H5'	2.11	0.51
23:DB:1767:G:O2'	23:DB:1768:C:H5'	2.11	0.51
23:BB:2355:G:H4'	52:BW:20:LEU:CD1	2.41	0.51
23:BB:853:C:H2'	23:BB:854:C:H6	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BW:43:LYS:HB3	52:BW:58:LEU:CD1	2.40	0.51
23:DB:569:U:H2'	23:DB:570:G:O4'	2.11	0.51
48:DG:9:VAL:HA	48:DG:48:THR:CG2	2.41	0.51
26:BD:104:VAL:O	26:BD:177:VAL:HG21	2.10	0.51
53:D6:70:SER:HB3	53:D6:76:LEU:HD21	1.92	0.51
23:DB:917:A:C2	23:DB:918:A:H1'	2.45	0.51
53:B6:104:PRO:HB2	53:B6:105:PRO:CD	2.40	0.51
40:BH:128:HIS:NE2	40:BH:130:VAL:HG13	2.26	0.51
8:CI:19:PHE:O	8:CI:62:LEU:HA	2.10	0.51
44:DQ:91:ARG:HH21	44:DQ:94:LEU:HD21	1.75	0.51
8:AI:79:ARG:NH2	8:AI:102:PHE:HA	2.26	0.51
26:DD:104:VAL:O	26:DD:177:VAL:HG21	2.11	0.51
47:DF:79:ARG:HE	47:DF:79:ARG:N	2.09	0.51
46:BU:82:VAL:HG13	46:BU:93:ARG:HB3	1.91	0.51
53:B6:14:MET:SD	53:B6:129:ILE:HG23	2.51	0.51
46:DU:81:ARG:HB2	46:DU:96:LYS:CG	2.41	0.51
47:BF:141:ASP:HB2	47:BF:144:LYS:HB2	1.92	0.51
42:BN:102:PHE:N	42:BN:109:PRO:HA	2.24	0.51
18:CS:28:LYS:H	18:CS:28:LYS:HD2	1.76	0.51
45:BS:13:SER:OG	45:BS:14:ALA:N	2.40	0.51
13:AN:30:ILE:CG2	13:AN:41:TRP:HB2	2.40	0.51
10:AK:88:PRO:HD3	21:AU:28:LEU:CD1	2.41	0.51
50:DT:23:ALA:C	50:DT:25:GLU:H	2.15	0.51
45:DS:26:GLY:O	45:DS:28:LYS:N	2.44	0.51
23:BB:2789:C:O2	23:BB:2892:G:H5''	2.10	0.51
23:DB:973:A:H1'	23:DB:1188:U:C5	2.46	0.51
40:BH:5:LEU:HD13	40:BH:13:GLY:CA	2.38	0.51
23:DB:26:G:H1'	23:DB:514:A:N6	2.26	0.51
22:DA:103:U:O2'	22:DA:104:A:H5'	2.11	0.51
48:BG:148:ARG:HB2	48:BG:152:ARG:HH21	1.74	0.51
40:BH:4:ILE:HG22	40:BH:17:ASP:H	1.75	0.51
20:CB:16:GLY:HA2	20:CB:40:ILE:CG1	2.41	0.51
1:CA:1237:C:H3'	1:CA:1238:A:H5'	1.92	0.51
1:AA:437:U:H4'	3:AD:153:ARG:NH1	2.26	0.51
23:BB:1439:A:N7	23:BB:1440:U:C2	2.79	0.51
1:AA:1343:G:H2'	1:AA:1344:C:H6	1.76	0.51
23:BB:91:A:H1'	23:BB:92:U:C6	2.46	0.51
9:AJ:76:ILE:O	9:AJ:76:ILE:HD12	2.11	0.51
41:BJ:89:PHE:CE1	41:BJ:93:ILE:HD13	2.46	0.51
1:CA:1162:C:H2'	1:CA:1163:A:C8	2.46	0.51
6:CG:47:GLU:OE1	6:CG:57:GLU:HG2	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:635:A:H2'	1:AA:636:U:C6	2.46	0.51
29:DE:48:THR:C	29:DE:50:ALA:H	2.14	0.51
1:CA:833:G:H2'	1:CA:834:U:H6	1.75	0.51
23:DB:2461:A:N1	23:DB:2490:G:N2	2.59	0.51
20:CB:22:TRP:HA	20:CB:188:THR:HB	1.92	0.51
41:BJ:124:VAL:O	41:BJ:125:TYR:HB2	2.10	0.51
1:AA:399:G:H2'	1:AA:400:C:H6	1.76	0.51
23:DB:909:A:H2'	23:DB:912:C:C5	2.46	0.51
23:BB:740:C:O2'	23:BB:741:U:H5'	2.10	0.51
1:CA:1277:C:O2'	1:CA:1279:G:H1'	2.11	0.51
1:CA:97:G:H2'	1:CA:98:A:O4'	2.09	0.51
1:CA:89:U:H2'	1:CA:90:C:O4'	2.11	0.51
49:BR:14:VAL:HG22	49:BR:15:SER:N	2.25	0.51
1:CA:930:C:H2'	1:CA:931:C:C6	2.46	0.51
23:BB:1704:C:O2'	23:BB:1705:A:H5'	2.11	0.51
23:BB:702:U:H2'	23:BB:703:U:C6	2.46	0.51
23:BB:1083:U:H2'	23:BB:1085:A:OP2	2.11	0.51
11:CL:34:THR:HG21	11:CL:53:ARG:HH21	1.76	0.51
29:BE:11:ALA:O	29:BE:12:LEU:HD22	2.11	0.51
23:BB:2226:C:H2'	23:BB:2227:A:H8	1.75	0.51
28:BP:113:LEU:O	28:BP:113:LEU:HD23	2.11	0.51
19:AT:68:LYS:HE2	19:AT:68:LYS:HA	1.91	0.51
23:DB:840:C:H2'	23:DB:841:G:H8	1.75	0.51
23:BB:856:G:C1'	52:BW:23:LYS:HB3	2.40	0.51
40:BH:94:ILE:HG23	40:BH:99:ILE:HD11	1.92	0.51
44:DQ:83:LYS:HZ1	44:DQ:87:VAL:HA	1.75	0.51
51:DZ:45:ARG:HE	51:DZ:47:VAL:CG1	2.24	0.51
41:DJ:128:ASN:C	41:DJ:129:GLU:HG3	2.31	0.51
2:AC:63:ILE:HD12	2:AC:98:ALA:CB	2.31	0.51
1:AA:598:U:H2'	1:AA:599:C:C6	2.46	0.51
1:AA:599:C:H5''	7:AH:86:LYS:O	2.10	0.51
38:BM:17:ASN:ND2	38:BM:95:LEU:HG	2.16	0.51
44:BQ:59:LEU:O	44:BQ:62:ALA:HB3	2.10	0.51
44:BQ:63:ARG:HH22	44:BQ:96:ASP:CA	2.24	0.51
46:DU:90:LYS:HB3	46:DU:92:VAL:HG23	1.93	0.51
23:BB:76:C:O2'	23:BB:77:G:H5'	2.11	0.51
24:DI:76:ALA:HA	24:DI:135:MET:SD	2.51	0.51
24:DI:54:ILE:C	24:DI:54:ILE:HD13	2.31	0.51
12:CM:14:ALA:HB2	12:CM:42:VAL:HG23	1.93	0.51
42:DN:106:ASP:C	42:DN:108:ALA:H	2.13	0.51
42:DN:108:ALA:O	42:DN:110:MET:HE3	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CL:41:PRO:HB3	11:CL:49:ARG:NH1	2.26	0.51
38:DM:32:GLY:HA2	38:DM:117:PHE:CZ	2.46	0.51
23:DB:663:G:OP1	37:DL:17:LYS:HG2	2.11	0.51
49:BR:78:ARG:HG3	49:BR:78:ARG:HH21	1.76	0.51
26:DD:29:VAL:O	26:DD:185:ASN:HB3	2.10	0.51
1:AA:1472:U:H2'	1:AA:1473:G:H8	1.76	0.51
26:DD:138:LEU:N	26:DD:138:LEU:HD22	2.26	0.51
20:AB:57:ASN:HA	20:AB:60:ALA:HB3	1.92	0.51
23:BB:2147:A:H5'	23:BB:2148:G:O4'	2.11	0.51
1:CA:465:A:H5'	1:CA:465:A:N3	2.25	0.51
20:CB:107:ARG:HA	20:CB:110:ILE:HD12	1.92	0.51
28:BP:4:ILE:O	28:BP:6:GLN:N	2.41	0.51
1:AA:256:U:H3'	1:AA:257:G:H8	1.75	0.51
1:CA:236:A:H2'	1:CA:237:G:H8	1.76	0.51
42:BN:49:GLU:HA	42:BN:94:TYR:HD2	1.76	0.51
23:BB:2356:U:C5'	52:BW:16:GLU:HG3	2.39	0.51
3:CD:169:TRP:NE1	3:CD:170:LEU:HD23	2.25	0.51
1:CA:857:C:H2'	1:CA:858:G:O4'	2.11	0.51
6:CG:59:GLU:O	6:CG:63:VAL:HG23	2.10	0.51
1:CA:801:U:O2'	1:CA:802:A:H5'	2.11	0.51
1:CA:803:G:H2'	1:CA:804:U:C6	2.46	0.51
23:DB:1372:U:O2'	23:DB:1373:A:H5'	2.11	0.51
35:BV:53:LYS:HA	35:BV:53:LYS:HZ3	1.75	0.51
1:AA:405:U:O4	3:AD:1:ALA:HA	2.11	0.51
23:DB:1351:C:H2'	23:DB:1352:U:C1'	2.41	0.51
9:CJ:92:LEU:HD22	9:CJ:92:LEU:N	2.25	0.51
23:DB:1999:C:O2'	23:DB:2000:C:H5'	2.11	0.51
1:CA:1386:G:O2'	1:CA:1387:G:H5'	2.10	0.51
1:CA:1387:G:H2'	1:CA:1388:C:H6	1.76	0.51
40:DH:131:SER:HA	40:DH:141:LYS:HA	1.93	0.51
41:DJ:124:VAL:O	41:DJ:125:TYR:HB2	2.11	0.51
23:BB:1868:C:H2'	23:BB:1869:G:O4'	2.11	0.51
1:AA:692:U:C2	1:AA:694:A:H5''	2.45	0.51
48:BG:174:LYS:HZ2	48:BG:176:LYS:HG2	1.76	0.51
23:BB:951:C:O2'	23:BB:952:G:H5'	2.11	0.51
23:BB:615:U:O4	29:BE:39:ALA:HB2	2.11	0.51
3:AD:145:ARG:NH2	3:AD:147:LYS:HE2	2.26	0.51
23:BB:2756:U:H1'	23:BB:2757:A:H5''	1.93	0.51
1:CA:1069:C:O2'	1:CA:1192:C:H1'	2.10	0.51
7:CH:118:ALA:HB3	7:CH:120:LEU:HD22	1.92	0.51
23:DB:657:U:H2'	23:DB:658:U:C6	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1732:C:OP1	23:DB:1732:C:H2'	2.11	0.51
9:AJ:26:VAL:HG12	9:AJ:30:LYS:HE2	1.92	0.51
50:DT:5:GLU:CA	50:DT:8:LEU:HB2	2.22	0.50
25:BC:129:LEU:HB3	25:BC:134:ILE:HG22	1.92	0.50
25:BC:183:VAL:HG22	25:BC:184:GLU:H	1.76	0.50
6:AG:144:ALA:O	6:AG:145:GLU:HB3	2.11	0.50
48:DG:42:VAL:HG23	48:DG:50:THR:O	2.11	0.50
53:D6:84:ARG:CZ	53:D6:92:PRO:HG2	2.41	0.50
23:DB:2365:G:O2'	52:DW:59:PHE:HE1	1.94	0.50
53:B6:72:ASP:HB3	53:B6:75:ALA:CB	2.41	0.50
40:BH:90:LEU:HD13	40:BH:124:THR:O	2.12	0.50
41:BJ:128:ASN:C	41:BJ:129:GLU:HG3	2.32	0.50
41:DJ:4:PHE:HB3	41:DJ:44:TYR:CE1	2.46	0.50
44:DQ:59:LEU:O	44:DQ:62:ALA:HB3	2.10	0.50
35:BV:2:PHE:HD2	35:BV:59:GLU:OE1	1.94	0.50
48:DG:22:VAL:HG13	48:DG:36:LEU:HD13	1.93	0.50
23:DB:2393:U:C5'	37:DL:62:PRO:HG3	2.35	0.50
1:CA:1014:A:N3	1:CA:1219:A:H1'	2.26	0.50
48:BG:26:LYS:HA	48:BG:32:LEU:H	1.74	0.50
42:BN:83:LEU:HD12	42:BN:84:GLY:N	2.27	0.50
23:DB:1060:U:O2	23:DB:1088:A:C8	2.63	0.50
12:CM:44:ILE:HD12	12:CM:45:SER:H	1.76	0.50
12:CM:42:VAL:HB	12:CM:47:LEU:HD21	1.93	0.50
1:CA:946:A:H2'	1:CA:947:G:H8	1.72	0.50
12:CM:100:ARG:HH11	12:CM:103:THR:HB	1.76	0.50
10:AK:34:THR:HB	10:AK:40:ALA:CA	2.38	0.50
39:DX:7:ARG:HH11	39:DX:7:ARG:HB2	1.75	0.50
1:AA:719:C:H1'	17:AR:37:LYS:HB2	1.94	0.50
26:DD:168:GLU:O	26:DD:170:VAL:HG22	2.10	0.50
22:DA:33:G:O2'	22:DA:34:A:H5'	2.10	0.50
49:BR:40:MET:HG3	49:BR:48:LYS:HA	1.92	0.50
49:BR:39:LEU:CB	49:BR:49:ILE:HG12	2.41	0.50
1:AA:1392:G:H2'	1:AA:1393:U:C6	2.45	0.50
1:AA:87:C:H2'	1:AA:88:U:H4'	1.92	0.50
24:DI:126:ARG:HB3	24:DI:126:ARG:NH1	2.25	0.50
1:CA:617:G:H4'	15:CP:46:LYS:HE2	1.93	0.50
35:BV:9:ARG:HH21	35:BV:12:GLN:HA	1.73	0.50
23:DB:1683:U:H2'	23:DB:1684:G:C8	2.46	0.50
23:DB:1998:A:H2'	23:DB:1999:C:H6	1.76	0.50
23:BB:2415:G:H4'	37:BL:66:PHE:HB2	1.93	0.50
23:BB:569:U:H2'	23:BB:570:G:O4'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2605:U:H2'	23:DB:2606:C:C5	2.46	0.50
33:B1:40:PRO:O	33:B1:43:ARG:HG2	2.10	0.50
23:BB:1400:U:H2'	23:BB:1401:G:C8	2.46	0.50
23:BB:528:A:C2	23:BB:2042:A:H2'	2.45	0.50
1:CA:992:U:H1'	1:CA:993:G:C2	2.46	0.50
23:DB:1952:A:C2	27:DK:22:ILE:HD12	2.45	0.50
6:CG:30:MET:HG2	6:CG:31:VAL:N	2.25	0.50
23:BB:289:G:H2'	23:BB:290:U:O4'	2.11	0.50
6:CG:109:LYS:HE2	6:CG:109:LYS:HA	1.92	0.50
23:DB:1754:A:N1	23:DB:2716:C:O2'	2.43	0.50
25:DC:107:LYS:O	25:DC:109:LEU:HD22	2.11	0.50
23:BB:15:G:O2'	23:BB:16:C:H5'	2.11	0.50
23:BB:533:G:H5'	44:BQ:23:TYR:CD2	2.46	0.50
26:BD:104:VAL:HG13	26:BD:106:LYS:HE2	1.94	0.50
53:D6:39:LEU:CA	53:D6:52:LEU:HB3	2.40	0.50
53:B6:83:ILE:HG13	53:B6:92:PRO:HD2	1.92	0.50
40:BH:100:ALA:HA	40:BH:103:VAL:CG2	2.42	0.50
1:CA:1128:C:H4'	1:CA:1148:U:O2	2.11	0.50
44:DQ:86:SER:O	44:DQ:88:GLU:N	2.43	0.50
8:AI:56:MET:SD	8:AI:57:VAL:N	2.83	0.50
41:DJ:58:ASN:HA	41:DJ:127:GLY:HA2	1.94	0.50
23:DB:2645:G:H4'	23:DB:2732:G:H2'	1.94	0.50
43:BO:36:TYR:HD2	43:BO:36:TYR:N	2.09	0.50
30:BY:8:GLN:HB3	30:BY:31:ILE:C	2.31	0.50
1:AA:1277:C:O2'	1:AA:1279:G:H1'	2.12	0.50
1:AA:1078:U:H2'	1:AA:1079:G:O4'	2.11	0.50
1:AA:1081:A:O2'	1:AA:1082:A:H5'	2.11	0.50
29:DE:105:LEU:HA	29:DE:108:ILE:CG2	2.41	0.50
1:CA:1225:A:H3'	1:CA:1226:C:H6	1.73	0.50
18:CS:66:VAL:HG23	18:CS:67:GLY:H	1.76	0.50
29:BE:58:LYS:HE2	29:BE:60:TRP:CD1	2.46	0.50
23:DB:2502:G:H5'	23:DB:2503:A:C5'	2.35	0.50
42:BN:32:GLU:HB3	42:BN:115:LEU:HG	1.92	0.50
24:DI:18:ASN:HB2	24:DI:38:CYS:SG	2.52	0.50
20:CB:15:PHE:HD1	20:CB:16:GLY:N	2.09	0.50
38:BM:19:GLY:CA	38:BM:97:GLN:HB2	2.39	0.50
7:AH:40:LYS:HA	7:AH:45:ILE:HG13	1.94	0.50
7:AH:58:LEU:CD2	7:AH:60:LEU:HB2	2.41	0.50
20:CB:216:VAL:O	20:CB:220:VAL:HG23	2.11	0.50
1:CA:841:C:H2'	1:CA:843:U:OP2	2.11	0.50
23:BB:1438:U:H2'	23:BB:1439:A:O4'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1441:G:H2'	23:BB:1442:U:H6	1.76	0.50
20:AB:98:GLY:O	20:AB:102:ASN:N	2.44	0.50
45:DS:81:SER:HB3	45:DS:99:ARG:HB3	1.93	0.50
49:DR:31:GLU:O	49:DR:63:VAL:HG22	2.11	0.50
8:AI:123:ARG:HB3	8:AI:123:ARG:CZ	2.41	0.50
29:DE:158:PHE:HA	29:DE:169:VAL:CG2	2.41	0.50
1:AA:1058:G:OP1	2:AC:198:LYS:HE3	2.10	0.50
28:DP:52:ARG:NH1	28:DP:52:ARG:HG2	2.25	0.50
26:BD:168:GLU:O	26:BD:170:VAL:HG13	2.12	0.50
1:AA:254:G:O2'	1:AA:255:G:H5'	2.11	0.50
1:CA:256:U:H3'	1:CA:257:G:H8	1.74	0.50
23:BB:150:U:H2'	23:BB:151:C:C6	2.45	0.50
49:BR:2:TYR:HB2	49:BR:42:ALA:N	2.26	0.50
1:AA:6:G:H3'	1:AA:6:G:N3	2.26	0.50
23:BB:2460:U:H2'	23:BB:2461:A:H8	1.76	0.50
23:BB:2026:U:H2'	23:BB:2027:G:H8	1.75	0.50
23:DB:2247:A:H2'	23:DB:2248:C:H6	1.77	0.50
23:BB:1258:U:C4'	29:BE:79:ARG:HD2	2.41	0.50
17:CR:31:TYR:CD1	17:CR:54:LEU:HD11	2.46	0.50
1:AA:1063:C:H2'	1:AA:1064:G:C8	2.46	0.50
10:CK:52:ARG:NH1	10:CK:53:GLY:H	2.07	0.50
1:AA:284:C:H2'	1:AA:285:C:C6	2.46	0.50
22:DA:109:A:H2'	22:DA:110:C:H6	1.75	0.50
23:DB:660:C:H2'	23:DB:661:A:C8	2.45	0.50
23:DB:41:C:H2'	23:DB:42:A:O4'	2.11	0.50
23:BB:1107:G:H2'	23:BB:1108:U:H6	1.75	0.50
23:DB:1773:A:N7	23:DB:1829:A:H1'	2.26	0.50
1:AA:560:A:H4'	1:AA:561:U:H5''	1.92	0.50
1:CA:886:G:O2'	1:CA:887:G:H5'	2.11	0.50
23:DB:2333:A:H5'	23:DB:2335:A:H1'	1.92	0.50
23:BB:438:G:H2'	23:BB:439:A:H8	1.76	0.50
1:CA:434:U:H3'	1:CA:435:A:H8	1.74	0.50
23:DB:963:U:O2'	23:DB:964:C:H5'	2.10	0.50
23:BB:1268:A:H2'	23:BB:1269:A:O4'	2.10	0.50
51:DZ:18:ARG:HA	51:DZ:23:ASN:O	2.12	0.50
23:BB:1368:G:H2'	23:BB:1369:G:H8	1.77	0.50
1:AA:580:C:H2'	1:AA:581:G:O4'	2.12	0.50
23:DB:1704:C:O2'	23:DB:1705:A:H5'	2.11	0.50
23:BB:1742:U:H2'	23:BB:1743:G:C8	2.46	0.50
23:BB:1100:C:H2'	23:BB:1101:U:H6	1.75	0.50
1:CA:1105:A:H2'	1:CA:1106:G:H8	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:724:U:H2'	23:DB:725:G:O4'	2.12	0.50
46:BU:41:VAL:O	46:BU:42:LYS:HB2	2.11	0.50
41:DJ:9:GLU:H	41:DJ:9:GLU:CD	2.15	0.50
6:AG:49:LEU:HD12	6:AG:124:SER:OG	2.12	0.50
1:AA:251:G:N3	1:AA:266:G:O6	2.44	0.50
1:AA:532:A:C8	2:AC:192:TYR:HD2	2.29	0.50
40:DH:27:ARG:HH21	40:DH:27:ARG:HG2	1.76	0.50
23:BB:2269:G:H4'	52:BW:19:ARG:HH11	1.74	0.50
40:BH:111:ALA:HB3	40:BH:114:GLU:CG	2.41	0.50
53:D6:38:LEU:HD12	53:D6:66:LEU:HD23	1.92	0.50
53:D6:84:ARG:HD2	53:D6:92:PRO:CD	2.41	0.50
53:D6:86:SER:C	53:D6:88:LEU:H	2.15	0.50
53:B6:58:VAL:HG13	53:B6:68:VAL:HA	1.93	0.50
41:DJ:31:GLU:O	41:DJ:34:ARG:HB2	2.10	0.50
41:DJ:38:GLY:HA3	41:DJ:50:THR:O	2.11	0.50
8:AI:19:PHE:HB2	8:AI:63:TYR:HB3	1.93	0.50
23:DB:2734:A:N6	23:DB:2770:G:H1'	2.26	0.50
51:BZ:76:GLU:HG3	51:BZ:77:LYS:N	2.25	0.50
34:B3:36:ALA:O	34:B3:39:ARG:HB3	2.11	0.50
4:AE:132:PRO:O	4:AE:136:VAL:HG12	2.12	0.50
4:AE:89:THR:HG22	4:AE:90:GLY:N	2.26	0.50
1:CA:411:A:H62	1:CA:413:G:N2	1.99	0.50
20:CB:45:THR:HG22	20:CB:49:PHE:CZ	2.47	0.50
23:DB:2789:C:H3'	23:DB:2893:A:H62	1.75	0.50
1:CA:521:G:O2'	1:CA:522:C:H5'	2.12	0.50
31:B0:42:ILE:HD11	42:BN:98:LEU:HB3	1.92	0.50
48:DG:148:ARG:HA	48:DG:161:VAL:CG1	2.42	0.50
42:BN:72:ASP:OD2	42:BN:74:GLU:HB3	2.11	0.50
22:BA:106:G:H2'	22:BA:107:G:C8	2.46	0.50
42:DN:72:ASP:C	42:DN:74:GLU:H	2.14	0.50
38:DM:19:GLY:CA	38:DM:97:GLN:HB2	2.40	0.50
23:BB:126:A:O2'	23:BB:127:A:H5'	2.12	0.50
48:BG:30:GLY:HA3	48:BG:78:VAL:HG12	1.91	0.50
7:CH:11:THR:HA	7:CH:14:ARG:CZ	2.41	0.50
26:BD:9:VAL:HG13	26:BD:9:VAL:O	2.10	0.50
23:DB:1324:G:H1'	23:DB:1616:A:C6	2.47	0.50
31:B0:30:ASP:OD2	31:B0:31:LYS:HD2	2.11	0.50
5:AF:70:VAL:HG23	5:AF:71:ILE:H	1.76	0.50
23:BB:864:G:O2'	23:BB:865:C:H5'	2.12	0.50
43:BO:76:LYS:HG3	43:BO:113:ALA:CB	2.41	0.50
23:BB:132:G:O2'	23:BB:133:U:H5'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1585:C:H2'	23:BB:1586:A:O4'	2.11	0.50
23:BB:945:A:H4'	23:BB:945:A:OP2	2.11	0.50
28:BP:52:ARG:HB2	28:BP:55:HIS:O	2.10	0.50
20:CB:19:THR:OG1	20:CB:20:ARG:N	2.45	0.50
20:AB:70:GLY:HA3	20:AB:79:VAL:HG21	1.94	0.50
19:CT:50:PHE:HD2	19:CT:78:LEU:HD13	1.76	0.50
25:BC:245:THR:OG1	25:BC:249:VAL:HG23	2.11	0.50
1:CA:376:G:H2'	1:CA:377:G:H8	1.76	0.50
3:CD:10:LEU:HD12	3:CD:20:LEU:CD1	2.42	0.50
5:CF:15:SER:HA	5:CF:18:VAL:HG23	1.93	0.50
1:CA:45:G:H2'	1:CA:46:G:C8	2.45	0.50
23:DB:2254:C:H1'	53:D6:151:GLU:HB2	1.92	0.50
16:AQ:28:VAL:O	16:AQ:36:PHE:HA	2.11	0.50
23:BB:1332:G:H2'	23:BB:1332:G:N3	2.25	0.50
1:AA:986:U:H2'	1:AA:987:G:O4'	2.12	0.50
48:DG:59:ASP:O	48:DG:63:GLN:HB2	2.11	0.50
23:DB:2594:C:O2'	23:DB:2595:G:H5'	2.10	0.50
1:CA:1289:A:H2'	1:CA:1290:G:H5'	1.93	0.50
26:BD:39:ASP:HB3	26:BD:42:ASN:HB3	1.92	0.50
23:BB:660:C:H2'	23:BB:661:A:H8	1.76	0.50
1:AA:1234:C:O2'	1:AA:1235:U:H5'	2.12	0.50
1:CA:966:G:H2'	1:CA:967:C:C6	2.46	0.50
23:BB:855:G:N3	52:BW:23:LYS:HE3	2.26	0.50
23:BB:1819:A:OP1	25:BC:154:ALA:HA	2.11	0.50
25:BC:183:VAL:HG22	25:BC:184:GLU:N	2.26	0.50
48:DG:120:ILE:HD13	48:DG:121:THR:N	2.27	0.50
53:D6:38:LEU:CB	53:D6:58:VAL:HG21	2.42	0.50
40:BH:83:LYS:HB2	40:BH:92:GLY:H	1.76	0.50
1:AA:946:A:H2'	1:AA:947:G:H8	1.74	0.50
43:BO:51:ALA:O	43:BO:74:VAL:HG13	2.12	0.50
1:AA:764:C:O2'	1:AA:765:G:H5'	2.10	0.50
1:CA:1226:C:H4'	1:CA:1227:A:OP1	2.10	0.50
18:AS:30:LEU:HB2	18:AS:48:ILE:CG2	2.38	0.50
18:AS:42:ASN:HD21	18:AS:43:MET:HG2	1.75	0.50
28:BP:92:ARG:O	28:BP:92:ARG:HG2	2.11	0.50
25:DC:18:VAL:HG11	25:DC:202:ARG:HD2	1.93	0.50
23:DB:2807:U:H1'	23:DB:2892:G:N2	2.27	0.50
24:BI:125:THR:O	24:BI:129:GLU:HG3	2.11	0.50
1:AA:1471:U:O2'	1:AA:1472:U:H5'	2.11	0.50
38:BM:19:GLY:N	38:BM:38:ARG:NH2	2.58	0.50
44:DQ:109:VAL:O	44:DQ:113:LYS:HG3	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:314:C:O2'	1:CA:315:A:H5'	2.11	0.50
23:BB:279:A:N6	23:BB:361:G:H1'	2.26	0.50
20:AB:119:GLN:O	20:AB:125:PHE:HB3	2.11	0.50
45:DS:42:LYS:O	45:DS:45:VAL:HG22	2.11	0.50
23:DB:360:U:H2'	23:DB:361:G:C1'	2.42	0.50
23:BB:1777:U:O2'	23:BB:1778:U:H5'	2.11	0.50
1:AA:35:G:H2'	1:AA:36:C:H6	1.76	0.50
3:AD:84:ASN:ND2	3:AD:86:GLY:H	2.10	0.50
29:BE:47:LYS:HA	29:BE:51:GLU:OE2	2.11	0.50
23:BB:947:A:H2'	23:BB:948:C:C6	2.46	0.50
1:AA:192:A:O2'	1:AA:193:C:H5'	2.12	0.50
20:AB:19:THR:OG1	20:AB:20:ARG:N	2.45	0.50
23:DB:704:G:H1'	23:DB:727:A:N6	2.26	0.50
14:CO:5:THR:O	14:CO:8:THR:HB	2.11	0.50
7:CH:94:VAL:HG12	7:CH:99:GLY:HA3	1.93	0.50
1:AA:1225:A:N3	1:AA:1225:A:H2'	2.25	0.50
1:CA:215:C:H2'	1:CA:216:U:H6	1.76	0.50
23:DB:2218:G:O2'	23:DB:2219:U:H5'	2.12	0.50
23:DB:912:C:H2'	23:DB:913:U:C6	2.46	0.50
23:BB:139:U:H3'	23:BB:140:C:C5'	2.42	0.50
23:DB:416:U:H2'	23:DB:417:C:C6	2.47	0.50
42:DN:59:SER:O	42:DN:63:ARG:HB2	2.11	0.50
23:DB:4:U:H2'	23:DB:5:A:C8	2.46	0.50
1:CA:518:C:H2'	1:CA:530:G:H8	1.76	0.50
1:CA:1041:G:O2'	1:CA:1042:A:H5'	2.11	0.50
23:DB:1046:A:H4'	23:DB:1047:G:OP2	2.11	0.50
53:D6:25:LEU:HD22	53:D6:179:LYS:HG2	1.92	0.50
23:DB:2324:U:H3'	23:DB:2325:G:C5'	2.40	0.50
23:DB:1251:C:O2'	23:DB:1252:G:H3'	2.10	0.50
43:DO:97:PHE:HB3	43:DO:103:VAL:HG21	1.94	0.50
1:CA:1243:C:H2'	1:CA:1244:G:H8	1.76	0.50
23:BB:2226:C:H2'	23:BB:2227:A:C8	2.46	0.50
8:AI:11:ARG:HA	8:AI:105:ARG:NH1	2.26	0.50
23:BB:2008:C:H2'	23:BB:2009:A:H8	1.77	0.50
23:DB:697:G:H2'	23:DB:698:C:C6	2.46	0.50
33:B1:16:THR:OG1	33:B1:41:VAL:HG11	2.12	0.50
23:BB:1295:C:H2'	23:BB:1296:G:C8	2.45	0.50
1:CA:878:A:H5''	7:CH:80:PRO:HG2	1.92	0.50
23:BB:588:U:H1'	29:BE:85:PHE:CG	2.46	0.50
23:DB:910:A:H2'	23:DB:911:A:C8	2.47	0.50
23:DB:1368:G:H2'	23:DB:1369:G:H8	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:53:A:O2'	22:DA:54:G:H5'	2.11	0.50
32:D4:13:ASN:O	32:D4:27:CYS:HA	2.11	0.50
50:BT:5:GLU:CA	50:BT:8:LEU:HB2	2.21	0.50
52:BW:30:VAL:HA	52:BW:60:ALA:O	2.11	0.50
47:BF:90:LEU:C	47:BF:91:ARG:HD3	2.32	0.50
22:DA:42:C:C6	47:DF:65:LEU:HD13	2.47	0.50
8:CI:41:GLU:C	8:CI:43:ALA:H	2.14	0.50
43:DO:36:TYR:HD2	43:DO:36:TYR:N	2.10	0.50
39:BX:23:ARG:HA	39:BX:26:PHE:HB3	1.94	0.50
44:BQ:77:LYS:HA	44:BQ:80:ASN:HB3	1.93	0.50
48:BG:34:ARG:N	48:BG:34:ARG:HH11	1.99	0.50
30:BY:13:ILE:HG22	30:BY:14:GLY:N	2.25	0.50
24:DI:78:LEU:HD13	24:DI:108:ILE:HG23	1.94	0.50
45:BS:47:VAL:HG12	45:BS:103:ILE:HG21	1.93	0.50
23:BB:2471:A:O2'	23:BB:2472:G:O5'	2.27	0.50
35:DV:79:ARG:HH12	38:DM:134:THR:HG21	1.75	0.50
53:D6:2:THR:HB	53:D6:5:GLU:HG3	1.92	0.50
53:D6:4:LYS:HD3	53:D6:5:GLU:N	2.26	0.50
49:BR:49:ILE:HG21	49:BR:53:PHE:C	2.32	0.50
26:DD:36:GLN:HG2	26:DD:37:VAL:N	2.27	0.50
9:AJ:5:ARG:HG2	9:AJ:79:PRO:HD3	1.94	0.50
23:DB:1427:A:H5''	23:DB:1559:U:O2	2.11	0.50
4:AE:45:VAL:HG13	4:AE:117:ALA:HA	1.94	0.50
23:DB:2529:G:O3'	48:DG:174:LYS:HD2	2.12	0.50
23:BB:713:G:O2'	23:BB:714:U:H5'	2.12	0.50
23:DB:714:U:H1'	23:DB:717:C:H5	1.77	0.50
1:CA:859:G:O2'	1:CA:860:A:H5'	2.11	0.50
1:CA:1476:A:O2'	1:CA:1477:U:H5'	2.12	0.50
23:DB:727:A:OP1	23:DB:1431:A:O2'	2.28	0.50
23:DB:1592:C:H2'	23:DB:1593:A:C8	2.45	0.50
23:BB:1260:A:H2'	23:BB:1261:C:C6	2.47	0.50
1:AA:524:G:H2'	1:AA:525:C:H6	1.73	0.50
52:BW:77:LYS:HZ2	52:BW:77:LYS:N	2.09	0.50
1:CA:6:G:N3	1:CA:6:G:H3'	2.27	0.50
23:BB:7:G:H4'	41:BJ:15:TRP:CZ2	2.46	0.50
35:BV:14:LYS:HE3	35:BV:18:ARG:NH2	2.27	0.50
23:BB:1685:C:O2'	23:BB:1686:C:H5'	2.12	0.50
23:DB:949:G:O2'	23:DB:950:G:H5'	2.10	0.50
23:DB:290:U:O2'	23:DB:291:G:H5'	2.11	0.50
23:BB:1014:A:O2'	23:BB:1015:U:H5'	2.12	0.50
23:BB:807:U:H2'	23:BB:808:G:H8	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:63:VAL:CG1	12:CM:67:ASP:HB2	2.41	0.50
1:CA:73:C:O2'	1:CA:74:A:H5'	2.11	0.50
1:AA:640:A:O2'	1:AA:641:U:H5'	2.11	0.50
28:DP:29:VAL:HA	28:DP:79:VAL:O	2.12	0.50
1:AA:1381:U:O2'	1:AA:1382:C:H5'	2.12	0.50
23:DB:350:G:H2'	23:DB:351:C:O4'	2.12	0.50
1:AA:1437:A:H2'	1:AA:1438:G:H8	1.77	0.50
23:BB:1754:A:N1	23:BB:2716:C:O2'	2.45	0.50
26:DD:39:ASP:HB3	26:DD:42:ASN:HB3	1.92	0.50
23:DB:208:C:H2'	23:DB:209:C:H6	1.76	0.50
23:BB:917:A:C2	23:BB:918:A:H1'	2.47	0.50
20:AB:69:VAL:HB	20:AB:162:VAL:CB	2.42	0.50
23:DB:2547:A:H5''	27:DK:29:HIS:NE2	2.26	0.50
22:BA:28:C:O2'	22:BA:29:A:H5'	2.12	0.50
24:BI:79:LEU:HD11	24:BI:131:THR:OG1	2.11	0.50
47:BF:11:VAL:HG12	47:BF:12:VAL:N	2.14	0.50
1:AA:521:G:O2'	1:AA:522:C:H5'	2.12	0.50
11:AL:41:PRO:HB3	11:AL:49:ARG:NH1	2.26	0.50
29:BE:60:TRP:C	29:BE:62:GLN:H	2.14	0.50
35:DV:77:VAL:HG23	35:DV:89:ILE:HG22	1.94	0.50
39:DX:23:ARG:O	39:DX:27:ASN:N	2.43	0.50
17:CR:38:ILE:HG23	17:CR:62:ARG:NH2	2.26	0.50
22:BA:32:U:H4'	22:BA:52:A:N6	2.27	0.50
31:D0:38:LEU:HD13	31:D0:41:HIS:NE2	2.27	0.50
11:CL:28:GLN:HB2	11:CL:80:LEU:HG	1.92	0.50
44:BQ:109:VAL:CG1	44:BQ:113:LYS:HE3	2.40	0.50
24:BI:29:GLN:HA	24:BI:29:GLN:HE21	1.76	0.50
27:BK:98:ARG:N	27:BK:98:ARG:HE	2.09	0.50
1:AA:82:G:C6	1:AA:88:U:O2	2.65	0.50
8:AI:117:LEU:HB3	8:AI:122:ARG:O	2.12	0.50
8:AI:123:ARG:HB3	8:AI:123:ARG:NH1	2.26	0.50
26:BD:138:LEU:N	26:BD:138:LEU:HD22	2.26	0.50
1:CA:194:C:O2'	1:CA:195:A:H5'	2.11	0.50
23:DB:857:G:O2'	23:DB:858:G:H5'	2.10	0.50
23:BB:718:A:H5'	23:BB:719:C:C5	2.46	0.50
23:BB:2318:G:C6	23:BB:2319:G:N1	2.80	0.50
23:DB:2592:G:H2'	23:DB:2593:U:O4'	2.11	0.50
39:DX:10:SER:HA	39:DX:57:LEU:HD13	1.93	0.50
23:DB:1203:U:H3'	23:DB:1204:A:H5''	1.92	0.50
1:CA:1523:G:O2'	1:CA:1524:C:H5'	2.12	0.50
3:CD:2:ARG:HB3	3:CD:114:ARG:NH2	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:86:LEU:O	2:AC:90:VAL:HG23	2.11	0.50
23:BB:2461:A:H2'	23:BB:2462:C:H6	1.76	0.50
19:CT:79:THR:O	19:CT:82:ILE:HG12	2.11	0.50
11:CL:79:ILE:HD12	11:CL:96:THR:CG2	2.42	0.50
14:AO:7:ALA:O	14:AO:11:ILE:HG22	2.12	0.50
28:DP:25:VAL:HA	28:DP:85:VAL:HA	1.94	0.50
41:BJ:114:LEU:O	41:BJ:117:ALA:HB3	2.11	0.50
1:AA:1308:U:H3'	12:AM:97:ARG:NH1	2.27	0.50
23:DB:1561:C:H2'	23:DB:1562:U:C6	2.45	0.50
50:BT:48:GLN:NE2	50:BT:48:GLN:HA	2.27	0.50
23:DB:231:A:H3'	23:DB:232:G:H8	1.76	0.50
1:CA:1040:U:O2'	1:CA:1041:G:H5'	2.12	0.50
41:DJ:99:ARG:O	41:DJ:103:ILE:HG13	2.11	0.50
25:BC:42:ARG:HD2	25:BC:48:ILE:HG12	1.94	0.50
23:BB:2648:G:H2'	23:BB:2649:C:C6	2.47	0.50
23:BB:950:G:H2'	23:BB:951:C:H6	1.75	0.50
23:BB:1011:G:O2'	23:BB:1013:C:H5''	2.12	0.50
23:DB:598:U:H2'	23:DB:599:A:C8	2.47	0.50
26:DD:174:SER:O	26:DD:175:LEU:HB2	2.10	0.50
44:BQ:32:ARG:O	44:BQ:36:GLN:HG3	2.12	0.50
46:BU:13:LEU:HD12	46:BU:13:LEU:H	1.77	0.50
43:BO:97:PHE:HB3	43:BO:103:VAL:HG21	1.94	0.50
42:DN:54:LEU:HD11	42:DN:62:ASN:HB3	1.94	0.50
48:BG:59:ASP:O	48:BG:63:GLN:HB2	2.12	0.50
44:BQ:42:GLY:HA3	49:BR:75:VAL:HG21	1.93	0.50
44:BQ:2:ARG:HG3	44:BQ:3:VAL:H	1.76	0.50
23:DB:796:C:H2'	23:DB:797:G:C8	2.47	0.50
23:BB:2151:U:H2'	23:BB:2152:G:H8	1.77	0.50
1:CA:652:U:H1'	1:CA:653:U:C6	2.46	0.50
23:BB:841:G:O2'	23:BB:842:U:H5'	2.12	0.50
49:DR:84:ARG:HG3	49:DR:84:ARG:HH21	1.76	0.50
43:BO:81:ARG:HD3	43:BO:81:ARG:H	1.75	0.50
1:AA:179:A:H2'	1:AA:180:U:O4'	2.12	0.50
46:DU:51:LEU:O	46:DU:52:ASN:HB2	2.11	0.50
40:BH:25:TYR:O	40:BH:30:LEU:HG	2.11	0.50
40:DH:114:GLU:HG3	40:DH:133:GLN:O	2.12	0.50
48:BG:85:LYS:HA	48:BG:131:VAL:HG12	1.93	0.50
53:D6:38:LEU:HB3	53:D6:58:VAL:HG21	1.93	0.50
23:DB:637:A:P	37:DL:112:LEU:HD22	2.52	0.50
13:CN:63:CYS:HB3	13:CN:67:GLY:N	2.27	0.50
1:CA:981:U:C4'	13:CN:60:ARG:HD2	2.32	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:336:C:O2'	23:BB:337:C:H5'	2.11	0.50
23:BB:1240:U:O2'	23:BB:1241:A:H5'	2.11	0.50
42:BN:76:VAL:HA	42:BN:79:LEU:HD12	1.92	0.50
24:DI:57:VAL:HG23	24:DI:71:LYS:NZ	2.26	0.50
47:BF:79:ARG:HE	47:BF:79:ARG:N	2.08	0.50
1:AA:865:A:H5'	1:AA:1078:U:C4	2.45	0.50
1:CA:955:U:H1'	1:CA:1227:A:N6	2.27	0.50
11:AL:41:PRO:HB2	11:AL:88:ASP:HB3	1.94	0.50
40:BH:108:VAL:CG1	40:BH:109:GLU:H	2.18	0.50
1:AA:332:G:OP2	19:AT:4:LYS:HB2	2.12	0.50
13:CN:53:ASP:HA	13:CN:58:ARG:HD2	1.93	0.50
43:BO:49:VAL:HG11	43:BO:82:ALA:CA	2.41	0.50
29:DE:188:MET:HG2	29:DE:193:VAL:HG22	1.92	0.50
30:BY:2:LYS:CD	30:BY:2:LYS:H	2.21	0.50
23:DB:2073:C:C5'	25:DC:227:VAL:HG12	2.42	0.50
23:BB:1726:C:H2'	23:BB:1727:C:C6	2.47	0.50
23:DB:277:G:O2'	23:DB:278:A:N7	2.43	0.50
2:AC:183:TYR:HE1	2:AC:198:LYS:HB3	1.76	0.50
21:AU:10:PRO:CB	2:CC:71:ARG:HE	2.24	0.50
23:BB:1793:C:H2'	23:BB:1794:A:H8	1.77	0.50
41:BJ:96:ARG:CZ	41:BJ:99:ARG:HD2	2.42	0.50
23:DB:2590:A:H2'	23:DB:2591:C:H6	1.75	0.50
41:BJ:109:LEU:CD1	41:BJ:119:PHE:HB2	2.42	0.50
1:AA:857:C:H2'	1:AA:858:G:O4'	2.12	0.50
23:BB:378:C:O2'	23:BB:379:G:H5'	2.11	0.50
52:DW:46:ALA:HB2	52:DW:78:PHE:CD1	2.46	0.50
20:AB:128:LEU:CD1	20:AB:129:THR:H	2.25	0.50
1:CA:1063:C:H2'	1:CA:1064:G:C8	2.46	0.50
23:BB:1508:A:H5'	23:BB:1509:A:C6	2.47	0.50
43:BO:102:ARG:O	43:BO:106:LEU:HD23	2.11	0.50
53:B6:2:THR:HG23	53:B6:5:GLU:OE1	2.11	0.50
20:AB:71:THR:HG23	20:AB:94:ARG:H	1.77	0.50
23:BB:1536:C:H4'	23:BB:1537:G:C4	2.46	0.50
3:CD:149:LYS:HB2	3:CD:177:MET:HG3	1.92	0.50
1:CA:611:C:H2'	1:CA:612:C:C6	2.46	0.50
23:DB:902:C:H2'	23:DB:903:C:C6	2.47	0.50
23:BB:2526:G:O2'	32:B4:1:MET:HB2	2.12	0.50
5:CF:18:VAL:HG11	5:CF:58:HIS:NE2	2.27	0.50
31:B0:33:SER:OG	31:B0:35:GLU:HG2	2.11	0.50
23:DB:108:G:H2'	23:DB:109:C:H6	1.76	0.50
23:DB:77:G:H2'	23:DB:78:U:O4'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DI:5:GLN:HB2	24:DI:30:GLN:OE1	2.12	0.50
20:AB:93:HIS:HB2	20:AB:145:ASN:O	2.11	0.50
1:CA:1234:C:O2'	1:CA:1235:U:H5'	2.11	0.50
23:BB:1842:G:H2'	23:BB:1843:C:H6	1.76	0.50
23:BB:1295:C:H2'	23:BB:1296:G:H8	1.76	0.50
1:AA:652:U:H1'	1:AA:653:U:C6	2.46	0.50
23:DB:2436:G:O2'	23:DB:2437:G:H5'	2.12	0.50
31:B0:5:ASN:O	31:B0:7:PRO:HD3	2.11	0.50
1:AA:1407:C:O2'	23:BB:1912:A:N1	2.41	0.50
23:DB:458:G:N2	23:DB:469:G:H2'	2.26	0.50
23:BB:208:C:H2'	23:BB:209:C:H6	1.76	0.50
1:AA:233:C:O2'	1:AA:234:C:H5'	2.11	0.50
3:AD:87:GLU:OE1	3:AD:91:ALA:HB2	2.11	0.50
52:BW:36:ILE:HB	52:BW:39:GLN:NE2	2.26	0.50
8:AI:22:PRO:HA	8:AI:60:LEU:HB3	1.93	0.50
47:DF:74:ALA:HB1	47:DF:76:PHE:CD2	2.46	0.50
43:DO:36:TYR:N	43:DO:36:TYR:CD2	2.80	0.50
30:DY:51:SER:C	30:DY:53:MET:H	2.13	0.50
50:BT:39:THR:O	50:BT:40:LYS:HB2	2.12	0.50
30:BY:51:SER:C	30:BY:53:MET:H	2.13	0.50
9:CJ:53:ILE:HG23	9:CJ:54:SER:H	1.75	0.50
45:DS:47:VAL:HG12	45:DS:103:ILE:CG2	2.41	0.50
45:DS:15:GLN:HA	45:DS:18:ARG:CG	2.42	0.50
23:DB:1022:G:N2	23:DB:1142:A:N1	2.60	0.50
1:CA:1079:G:H5''	4:CE:49:TYR:HE2	1.74	0.50
23:BB:2869:G:H2'	23:BB:2870:C:C6	2.47	0.50
43:DO:49:VAL:HG11	43:DO:82:ALA:CA	2.42	0.50
29:DE:28:VAL:O	29:DE:32:VAL:HG13	2.11	0.50
23:BB:2465:C:O2'	23:BB:2466:C:H5'	2.12	0.50
13:AN:12:ARG:HG2	13:AN:53:ASP:HB3	1.94	0.50
23:BB:1199:U:H5'	44:BQ:4:LYS:HD3	1.93	0.50
20:CB:16:GLY:HA3	20:CB:39:ILE:HA	1.94	0.50
11:CL:81:ILE:HG23	11:CL:94:TYR:HB3	1.92	0.50
29:BE:173:THR:C	29:BE:175:ILE:H	2.15	0.50
26:DD:9:VAL:O	26:DD:9:VAL:HG13	2.11	0.50
23:BB:1439:A:N7	23:BB:1440:U:C6	2.80	0.50
43:BO:2:ASP:OD2	43:BO:4:LYS:HB3	2.12	0.50
23:BB:2821:A:OP2	42:BN:3:HIS:NE2	2.45	0.50
12:AM:89:ARG:HD3	12:AM:95:PRO:O	2.12	0.50
42:DN:24:MET:SD	42:DN:44:LEU:HD22	2.52	0.50
3:AD:192:ALA:C	3:AD:194:ILE:H	2.13	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:155:A:H2'	23:DB:156:A:H8	1.77	0.50
23:DB:118:A:OP2	23:DB:119:A:H5''	2.11	0.50
39:DX:51:ALA:O	39:DX:55:THR:N	2.41	0.50
23:DB:1874:C:H2'	23:DB:1875:G:O4'	2.11	0.50
23:DB:702:U:H2'	23:DB:703:U:C6	2.46	0.50
39:BX:41:HIS:O	39:BX:44:LYS:HB3	2.12	0.50
19:CT:71:ALA:O	19:CT:74:HIS:HB2	2.12	0.50
1:CA:214:C:H2'	1:CA:215:C:H6	1.77	0.50
23:BB:5:A:H2'	23:BB:6:A:H8	1.73	0.50
22:DA:46:A:H2'	22:DA:47:C:O4'	2.12	0.50
23:DB:1327:A:H2'	23:DB:1328:A:O4'	2.11	0.50
23:BB:1350:C:H5'	23:BB:1351:C:OP2	2.12	0.50
1:CA:585:G:H2'	1:CA:586:C:H6	1.77	0.50
24:BI:124:MET:O	24:BI:128:ILE:HG12	2.12	0.50
23:DB:289:G:H2'	23:DB:290:U:H6	1.76	0.50
23:DB:600:G:H1'	29:DE:100:MET:HG2	1.94	0.50
29:DE:97:ASN:ND2	29:DE:100:MET:HG3	2.27	0.50
23:DB:1465:G:H2'	23:DB:1466:U:C6	2.47	0.50
23:BB:1251:C:O2'	23:BB:1252:G:H3'	2.11	0.50
1:AA:1234:C:H1'	1:AA:1364:U:O2	2.12	0.50
23:DB:796:C:H2'	23:DB:797:G:H8	1.77	0.50
23:DB:217:A:H2'	23:DB:218:A:O4'	2.12	0.50
1:CA:986:U:H2'	1:CA:987:G:O4'	2.12	0.50
37:DL:119:PRO:HA	37:DL:138:ALA:O	2.11	0.50
1:AA:742:G:H2'	1:AA:743:A:H8	1.77	0.50
1:CA:113:G:O4'	1:CA:354:G:H4'	2.11	0.50
23:DB:2639:A:H2'	23:DB:2640:G:O4'	2.11	0.50
44:DQ:45:ALA:O	44:DQ:49:ARG:N	2.42	0.50
1:AA:124:C:O2'	1:AA:125:U:H5'	2.12	0.50
28:DP:61:ARG:HH21	28:DP:61:ARG:HB3	1.77	0.50
23:DB:1711:A:O2'	23:DB:1712:U:H5'	2.12	0.50
23:BB:1345:C:H5'	23:BB:1396:U:C5	2.47	0.50
9:CJ:67:ILE:HA	13:CN:94:GLY:O	2.12	0.50
29:DE:88:ARG:HG3	29:DE:88:ARG:HH21	1.76	0.50
3:AD:43:ARG:HB3	3:AD:43:ARG:HH11	1.77	0.50
31:D0:5:ASN:O	31:D0:7:PRO:HD3	2.12	0.50
23:DB:1663:G:H3'	57:DB:3246:HOH:O	2.11	0.50
46:DU:13:LEU:H	46:DU:13:LEU:HD12	1.76	0.50
46:DU:14:THR:O	46:DU:18:LYS:HG2	2.12	0.50
52:BW:49:ASN:HA	52:BW:61:LYS:HB2	1.94	0.50
25:DC:134:ILE:HG13	25:DC:134:ILE:O	2.08	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:40:PRO:C	21:CU:42:THR:H	2.15	0.50
53:D6:58:VAL:HG22	53:D6:68:VAL:HG13	1.93	0.50
44:DQ:57:ARG:HG2	44:DQ:57:ARG:NH1	2.25	0.50
8:AI:19:PHE:O	8:AI:62:LEU:HA	2.12	0.50
1:CA:1494:G:H5'	23:DB:1913:A:N6	2.27	0.50
23:BB:144:A:H2'	23:BB:145:C:C6	2.47	0.50
7:AH:100:ILE:HD11	7:AH:128:VAL:HB	1.92	0.50
13:CN:9:GLU:HB2	13:CN:62:ARG:NE	2.27	0.50
23:BB:986:C:O2'	23:BB:987:C:H5'	2.12	0.50
3:AD:157:ALA:O	3:AD:160:LEU:HD22	2.12	0.50
29:BE:134:LEU:O	29:BE:138:LEU:HG	2.12	0.50
45:DS:47:VAL:HG12	45:DS:103:ILE:HG21	1.94	0.50
47:DF:137:PHE:O	47:DF:139:GLU:N	2.44	0.50
35:BV:79:ARG:NH1	38:BM:134:THR:HG21	2.26	0.50
1:CA:1078:U:H2'	1:CA:1079:G:O4'	2.12	0.50
41:DJ:81:ILE:HG12	41:DJ:82:GLY:N	2.26	0.50
9:CJ:57:VAL:HG22	9:CJ:58:ASN:N	2.21	0.50
28:DP:92:ARG:HG2	28:DP:92:ARG:O	2.10	0.50
22:DA:106:G:H2'	22:DA:107:G:C8	2.47	0.50
23:BB:969:G:H2'	23:BB:970:U:C6	2.47	0.50
38:DM:2:LEU:CD2	38:DM:46:ILE:HD11	2.42	0.50
1:CA:437:U:H4'	3:CD:153:ARG:NH1	2.27	0.50
1:CA:312:C:H2'	1:CA:313:A:C8	2.47	0.50
34:D3:21:PHE:CE1	34:D3:58:ILE:HG12	2.47	0.50
23:BB:2652:C:H2'	23:BB:2653:U:O4'	2.11	0.50
20:AB:96:LEU:N	20:AB:99:MET:HE3	2.25	0.50
51:DZ:14:THR:HA	51:DZ:28:ARG:CA	2.42	0.50
1:CA:925:G:C2	1:CA:927:G:C8	3.00	0.50
23:DB:2074:U:O2'	23:DB:2075:U:H5'	2.12	0.50
23:BB:2241:A:H2'	23:BB:2242:G:H8	1.76	0.50
1:AA:264:C:H4'	16:AQ:64:ARG:HD2	1.92	0.50
23:BB:649:G:H2'	23:BB:650:C:H6	1.77	0.50
23:BB:155:A:H2'	23:BB:156:A:H8	1.77	0.50
37:DL:4:ASN:HD22	37:DL:4:ASN:N	2.10	0.50
1:AA:401:C:H2'	1:AA:402:G:C8	2.47	0.50
20:CB:87:ASP:HB2	20:CB:224:ARG:CZ	2.42	0.50
20:CB:94:ARG:HD2	20:CB:142:LYS:HE2	1.93	0.50
20:CB:172:ILE:HG23	20:CB:182:VAL:HG11	1.94	0.50
10:AK:16:SER:HA	10:AK:77:GLY:O	2.12	0.50
9:AJ:92:LEU:HD13	9:AJ:92:LEU:N	2.27	0.50
1:AA:502:A:H2'	1:AA:503:C:H6	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DT:32:LEU:N	50:DT:83:ALA:HB3	2.26	0.50
26:DD:133:THR:HG23	26:DD:134:HIS:N	2.27	0.50
23:DB:6:A:H2'	23:DB:7:G:C8	2.45	0.50
23:BB:2439:A:C8	23:BB:2586:U:H4'	2.46	0.50
29:BE:102:ARG:O	29:BE:106:LYS:HG3	2.12	0.50
4:AE:87:VAL:HG22	4:AE:88:HIS:N	2.27	0.50
3:CD:145:ARG:HB3	3:CD:147:LYS:HD2	1.93	0.50
23:DB:1053:C:H2'	23:DB:1054:A:H5'	1.94	0.50
17:AR:56:ARG:O	17:AR:60:ARG:HG2	2.12	0.50
1:CA:1426:G:O2'	1:CA:1427:C:H5'	2.12	0.50
10:CK:63:GLN:HG3	10:CK:98:ALA:HB2	1.93	0.50
1:AA:911:U:H2'	1:AA:912:C:C6	2.46	0.50
1:AA:49:U:O2'	1:AA:50:A:H2'	2.11	0.50
23:BB:2655:G:O2'	23:BB:2656:U:P	2.70	0.50
23:BB:2655:G:HO2'	23:BB:2656:U:P	2.35	0.50
25:DC:222:THR:HA	25:DC:231:HIS:O	2.11	0.50
23:BB:2573:C:H3'	57:BB:3613:HOH:O	2.10	0.50
23:DB:2007:U:O2'	23:DB:2008:C:H5'	2.12	0.50
6:AG:30:MET:HG2	6:AG:31:VAL:N	2.26	0.50
5:AF:32:ALA:O	5:AF:33:GLU:HB2	2.12	0.50
46:BU:51:LEU:O	46:BU:52:ASN:HB2	2.11	0.50
23:DB:2203:U:C2'	23:DB:2204:G:OP2	2.60	0.50
41:BJ:133:ALA:C	41:BJ:135:GLN:H	2.16	0.50
10:AK:126:ARG:HB2	21:AU:33:ARG:CD	2.42	0.49
23:DB:946:C:H2'	23:DB:947:A:C8	2.46	0.49
44:DQ:16:ILE:O	44:DQ:18:LYS:N	2.43	0.49
48:DG:10:VAL:HG21	48:DG:49:LEU:HD13	1.94	0.49
37:DL:90:VAL:CB	37:DL:122:VAL:HG12	2.42	0.49
48:DG:84:LYS:HG2	48:DG:85:LYS:N	2.25	0.49
40:BH:77:THR:CG2	40:BH:79:THR:HG23	2.41	0.49
26:DD:193:VAL:HB	26:DD:194:PRO:HD2	1.94	0.49
1:AA:1220:G:H21	18:AS:53:GLY:HA2	1.76	0.49
23:DB:143:C:H2'	23:DB:144:A:C8	2.47	0.49
1:CA:598:U:H4'	7:CH:85:TYR:CG	2.47	0.49
23:BB:77:G:H2'	23:BB:78:U:O4'	2.12	0.49
24:DI:11:GLN:HA	24:DI:55:PRO:HA	1.93	0.49
47:BF:43:ILE:HG23	47:BF:44:ALA:N	2.15	0.49
29:BE:146:VAL:O	29:BE:167:VAL:HA	2.12	0.49
40:DH:125:THR:HA	40:DH:146:VAL:CB	2.40	0.49
40:DH:83:LYS:O	40:DH:90:LEU:HA	2.12	0.49
1:AA:865:A:H2'	1:AA:866:C:C6	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2809:A:H2'	23:DB:2810:A:C8	2.47	0.49
24:DI:23:VAL:HG12	24:DI:27:LEU:HD21	1.94	0.49
1:AA:1237:C:H3'	1:AA:1238:A:H5'	1.93	0.49
15:CP:67:ILE:HG23	15:CP:67:ILE:O	2.12	0.49
23:BB:729:G:C5	25:BC:206:LYS:HB2	2.47	0.49
26:DD:141:ARG:O	26:DD:141:ARG:HG3	2.11	0.49
24:DI:19:PRO:HB2	24:DI:22:PRO:HD2	1.94	0.49
3:CD:154:VAL:HG23	3:CD:155:LYS:HD2	1.94	0.49
49:BR:39:LEU:HB2	49:BR:49:ILE:HG12	1.94	0.49
6:CG:144:ALA:O	6:CG:145:GLU:HB3	2.12	0.49
26:DD:68:PHE:C	26:DD:73:VAL:HB	2.33	0.49
47:DF:163:GLU:HA	47:DF:166:ARG:HD3	1.93	0.49
1:CA:325:A:H2'	1:CA:326:G:O4'	2.12	0.49
28:DP:94:ALA:C	28:DP:95:LYS:HD2	2.32	0.49
28:BP:88:ARG:HB2	28:BP:112:ARG:NH1	2.26	0.49
40:BH:18:GLN:HE21	40:BH:44:ILE:HG21	1.74	0.49
1:AA:190:A:O5'	1:AA:190:A:H8	1.95	0.49
40:BH:47:PHE:CA	40:BH:50:ARG:HH21	2.24	0.49
23:BB:2191:A:H2'	23:BB:2192:U:O4'	2.12	0.49
2:CC:46:LEU:HB3	2:CC:49:ALA:HB3	1.93	0.49
42:BN:12:ARG:HG2	42:BN:16:HIS:HB2	1.94	0.49
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.94	0.49
27:BK:2:ILE:HD12	27:BK:2:ILE:N	2.27	0.49
23:BB:956:G:OP2	38:BM:86:LYS:HE2	2.11	0.49
1:CA:1277:C:O2'	1:CA:1279:G:H8	1.95	0.49
23:BB:1535:A:H5''	23:BB:1536:C:H5	1.77	0.49
23:BB:1537:G:H5''	23:BB:1537:G:N3	2.27	0.49
12:CM:43:LYS:O	12:CM:46:GLU:HG3	2.11	0.49
41:DJ:89:PHE:CE1	41:DJ:93:ILE:HD13	2.47	0.49
23:DB:2677:G:H2'	23:DB:2678:C:H6	1.78	0.49
1:AA:693:G:H2'	1:AA:694:A:O4'	2.11	0.49
10:AK:52:ARG:NH1	10:AK:53:GLY:H	2.09	0.49
9:AJ:80:THR:HG21	9:AJ:82:LYS:NZ	2.27	0.49
23:BB:949:G:O2'	23:BB:950:G:H5'	2.12	0.49
23:DB:600:G:H2'	23:DB:601:C:C6	2.46	0.49
17:CR:61:ALA:HB3	17:CR:67:LEU:HD12	1.93	0.49
23:BB:1846:G:H2'	23:BB:1847:A:O4'	2.12	0.49
23:BB:1153:C:H2'	23:BB:1154:G:O4'	2.12	0.49
1:CA:90:C:H2'	1:CA:91:U:C6	2.47	0.49
23:DB:132:G:H2'	23:DB:133:U:H6	1.77	0.49
23:DB:2419:U:H2'	23:DB:2420:C:C6	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1423:G:H2'	1:CA:1424:U:H6	1.77	0.49
28:BP:62:LYS:HE3	28:BP:64:SER:OG	2.12	0.49
28:DP:8:GLU:HG2	28:DP:54:LEU:HD23	1.94	0.49
33:D1:29:LYS:N	33:D1:30:PRO:HD3	2.27	0.49
36:D2:13:ASN:O	36:D2:17:GLY:N	2.45	0.49
23:DB:730:A:O2'	23:DB:731:C:H5'	2.11	0.49
1:CA:208:U:H6	1:CA:208:U:O5'	1.95	0.49
6:AG:121:ASN:N	6:AG:121:ASN:HD22	2.07	0.49
4:AE:42:ASN:O	4:AE:75:LEU:HD12	2.12	0.49
23:BB:1230:A:H2'	23:BB:1231:U:C6	2.46	0.49
44:DQ:96:ASP:C	44:DQ:98:ALA:N	2.65	0.49
1:AA:1148:U:H5'	8:AI:6:TYR:OH	2.12	0.49
26:DD:3:GLY:C	26:DD:4:LEU:HD22	2.32	0.49
1:AA:597:G:H2'	1:AA:598:U:H5'	1.94	0.49
42:DN:38:LEU:HD11	42:DN:42:LYS:HD2	1.94	0.49
39:BX:28:LEU:HB3	39:BX:43:LEU:HD21	1.93	0.49
41:BJ:42:ALA:O	41:BJ:44:TYR:N	2.45	0.49
42:BN:52:ILE:HD13	42:BN:87:PHE:CD2	2.47	0.49
1:AA:1076:U:H2'	1:AA:1077:G:C8	2.48	0.49
1:CA:1225:A:H5'	1:CA:1226:C:OP2	2.12	0.49
18:CS:42:ASN:H	18:CS:42:ASN:HD22	1.60	0.49
18:AS:61:VAL:HG12	18:AS:62:THR:N	2.27	0.49
50:DT:39:THR:HG22	50:DT:42:GLU:CG	2.35	0.49
50:DT:85:VAL:C	50:DT:86:THR:HG23	2.33	0.49
23:BB:160:A:H2'	23:BB:161:A:C8	2.47	0.49
23:BB:2037:A:H2'	23:BB:2038:G:H8	1.77	0.49
28:DP:96:LEU:HB3	28:DP:99:LEU:HB2	1.94	0.49
13:CN:52:ARG:HG3	13:CN:53:ASP:N	2.27	0.49
1:AA:1287:A:H2'	1:AA:1288:A:C8	2.46	0.49
1:AA:1349:A:H2'	1:AA:1350:A:O4'	2.12	0.49
15:CP:6:LEU:HD23	15:CP:17:TYR:HB2	1.92	0.49
45:BS:66:ILE:N	45:BS:66:ILE:HD13	2.19	0.49
20:AB:33:ALA:HB2	20:AB:38:HIS:ND1	2.27	0.49
23:DB:1737:G:H5'	23:DB:1738:G:OP2	2.12	0.49
40:DH:4:ILE:HG21	40:DH:51:ARG:HH22	1.75	0.49
1:CA:1411:C:H2'	1:CA:1412:C:H6	1.77	0.49
1:CA:310:G:H5''	15:CP:31:ARG:HB2	1.94	0.49
23:DB:8:C:O2'	23:DB:9:G:H5'	2.11	0.49
23:DB:1439:A:N7	23:DB:1440:U:C2	2.80	0.49
11:AL:52:CYS:SG	11:AL:66:ILE:HD11	2.52	0.49
51:BZ:14:THR:HA	51:BZ:28:ARG:CA	2.40	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:113:LYS:HE3	2:CC:117:ASP:OD1	2.12	0.49
23:DB:278:A:C8	23:DB:361:G:N1	2.80	0.49
46:DU:35:VAL:HB	46:DU:38:ILE:CB	2.41	0.49
7:CH:40:LYS:HA	7:CH:45:ILE:HG13	1.94	0.49
14:AO:16:GLY:HA2	14:AO:27:VAL:HG22	1.92	0.49
23:DB:1139:G:O2'	23:DB:1143:A:N1	2.41	0.49
1:CA:858:G:O6	1:CA:869:G:H3'	2.12	0.49
12:CM:5:GLY:O	12:CM:7:ASN:N	2.45	0.49
23:DB:704:G:C2'	23:DB:726:G:H22	2.24	0.49
6:AG:63:VAL:HA	6:AG:66:GLU:CD	2.33	0.49
23:DB:1407:G:H2'	23:DB:1408:G:C8	2.45	0.49
23:DB:544:C:H2'	23:DB:545:U:C5	2.47	0.49
2:CC:139:ASN:O	2:CC:143:LEU:HD23	2.12	0.49
23:BB:1184:U:O2'	23:BB:1185:G:H5'	2.11	0.49
34:B3:41:ARG:HG3	34:B3:44:ARG:NH2	2.27	0.49
1:CA:182:A:O2'	1:CA:183:C:H3'	2.12	0.49
13:AN:14:ALA:C	13:AN:18:LYS:HE2	2.33	0.49
22:BA:109:A:H2'	22:BA:110:C:H6	1.74	0.49
13:CN:14:ALA:C	13:CN:18:LYS:HE2	2.33	0.49
37:DL:135:ILE:HG23	37:DL:136:GLU:N	2.28	0.49
17:AR:31:TYR:CD1	17:AR:54:LEU:HD11	2.48	0.49
23:BB:1774:C:O2	23:BB:1774:C:H2'	2.11	0.49
46:DU:13:LEU:HA	46:DU:18:LYS:HD3	1.92	0.49
1:CA:1247:U:O2'	1:CA:1248:A:H5'	2.11	0.49
8:CI:44:ARG:HG2	8:CI:44:ARG:HH11	1.75	0.49
23:DB:2655:G:O2'	23:DB:2656:U:P	2.69	0.49
3:CD:22:SER:H	3:CD:109:THR:HG22	1.77	0.49
23:BB:857:G:O2'	23:BB:858:G:H5'	2.11	0.49
10:CK:14:GLN:HA	10:CK:76:TYR:O	2.12	0.49
37:DL:120:VAL:HG12	37:DL:121:THR:N	2.27	0.49
37:BL:122:VAL:HG23	37:BL:143:GLU:OE1	2.12	0.49
20:AB:209:VAL:HG23	20:AB:210:THR:N	2.28	0.49
23:DB:2315:G:H5'	47:DF:156:THR:HG21	1.95	0.49
47:DF:31:GLU:O	47:DF:32:LYS:HD3	2.11	0.49
23:DB:2352:A:C6	52:DW:30:VAL:HG11	2.47	0.49
8:CI:83:THR:OG1	8:CI:97:LEU:HD13	2.13	0.49
1:CA:1349:A:H2'	1:CA:1350:A:O4'	2.12	0.49
44:DQ:73:ILE:HD11	44:DQ:77:LYS:HB3	1.93	0.49
8:AI:41:GLU:C	8:AI:43:ALA:H	2.15	0.49
35:DV:62:THR:CB	35:DV:71:LYS:HG2	2.42	0.49
44:BQ:83:LYS:HZ1	44:BQ:87:VAL:HA	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DH:77:THR:HG22	40:DH:143:ILE:CB	2.34	0.49
29:BE:115:GLN:O	29:BE:117:ARG:HG3	2.12	0.49
47:DF:133:GLU:HA	47:DF:150:GLY:CA	2.42	0.49
21:AU:24:LYS:HB3	21:AU:24:LYS:NZ	2.28	0.49
1:CA:1080:A:H4'	4:CE:20:VAL:HG13	1.94	0.49
1:CA:763:G:H2'	1:CA:764:C:H6	1.77	0.49
18:CS:47:THR:HA	18:CS:60:PHE:CD1	2.48	0.49
23:BB:2868:A:H2'	23:BB:2869:G:H8	1.77	0.49
28:BP:96:LEU:HB3	28:BP:99:LEU:HB2	1.94	0.49
23:BB:674:G:H2'	23:BB:804:A:H61	1.78	0.49
50:DT:27:SER:O	50:DT:28:ASN:HB3	2.12	0.49
29:BE:29:HIS:C	29:BE:32:VAL:HG22	2.33	0.49
2:AC:110:LEU:HD21	2:AC:140:ALA:O	2.13	0.49
23:BB:972:A:C3'	23:BB:973:A:H5''	2.39	0.49
23:DB:2379:G:H4'	43:DO:21:LEU:HD11	1.94	0.49
35:DV:26:PHE:HE2	35:DV:44:HIS:HA	1.77	0.49
1:AA:1337:G:H5''	1:AA:1338:G:OP1	2.12	0.49
1:AA:1340:A:H2'	1:AA:1341:U:O4'	2.12	0.49
39:DX:23:ARG:HA	39:DX:26:PHE:HB3	1.95	0.49
23:DB:2680:U:OP2	26:DD:114:LYS:HB3	2.12	0.49
3:AD:158:LEU:HA	3:AD:161:ALA:CB	2.43	0.49
26:DD:69:ALA:HA	26:DD:73:VAL:HB	1.92	0.49
23:DB:1446:C:H2'	23:DB:1447:C:C6	2.48	0.49
29:DE:126:VAL:CG2	29:DE:133:LEU:HB2	2.42	0.49
23:BB:188:G:OP1	51:BZ:14:THR:HG23	2.13	0.49
46:DU:35:VAL:O	46:DU:38:ILE:HG22	2.12	0.49
3:AD:169:TRP:NE1	3:AD:170:LEU:HD23	2.27	0.49
23:BB:2840:C:H2'	23:BB:2841:C:C6	2.48	0.49
23:BB:1583:A:OP2	23:BB:1583:A:H2	1.94	0.49
29:BE:46:GLN:HB3	29:BE:86:ALA:CA	2.42	0.49
33:B1:47:ILE:HD12	33:B1:47:ILE:N	2.27	0.49
5:AF:53:LYS:C	5:AF:54:LEU:HD22	2.32	0.49
5:AF:54:LEU:N	5:AF:54:LEU:HD13	2.26	0.49
23:DB:1484:U:H2'	23:DB:1485:U:H6	1.77	0.49
45:DS:96:ILE:O	45:DS:96:ILE:HG23	2.12	0.49
1:AA:67:C:H4'	1:AA:172:A:O4'	2.12	0.49
23:DB:2458:G:H1'	23:DB:2460:U:O4	2.12	0.49
23:DB:2461:A:H2'	23:DB:2462:C:H6	1.75	0.49
23:DB:1400:U:H2'	23:DB:1401:G:C8	2.47	0.49
10:CK:16:SER:HA	10:CK:77:GLY:O	2.12	0.49
42:BN:65:LEU:O	42:BN:68:ALA:HB3	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:D6:10:THR:O	53:D6:14:MET:HG3	2.13	0.49
40:BH:67:ALA:HB1	40:BH:70:GLU:HG2	1.93	0.49
23:BB:1351:C:H2'	23:BB:1352:U:O4'	2.12	0.49
23:BB:1917:U:O2'	23:BB:1918:A:H5'	2.11	0.49
23:DB:680:C:H2'	23:DB:681:G:C8	2.46	0.49
23:BB:2260:C:O2'	23:BB:2261:C:H5'	2.12	0.49
40:DH:41:LYS:HA	40:DH:44:ILE:HG12	1.94	0.49
43:DO:102:ARG:O	43:DO:106:LEU:HD23	2.12	0.49
23:DB:2439:A:C8	23:DB:2586:U:H4'	2.48	0.49
1:CA:169:C:O2'	1:CA:170:U:H5'	2.13	0.49
5:AF:18:VAL:O	5:AF:22:ILE:HG13	2.11	0.49
23:DB:303:G:H2'	23:DB:304:U:H6	1.78	0.49
23:DB:347:A:H2'	23:DB:348:A:H8	1.76	0.49
1:AA:821:G:H2'	1:AA:822:U:C6	2.48	0.49
17:AR:22:TYR:CE2	17:AR:23:LYS:HE3	2.47	0.49
1:AA:631:C:H5''	1:AA:632:U:O4'	2.12	0.49
23:BB:1037:G:O2'	23:BB:1038:G:H5'	2.12	0.49
23:BB:431:U:O2'	23:BB:432:A:H5'	2.13	0.49
23:BB:627:A:H4'	23:BB:628:G:OP1	2.12	0.49
23:DB:1414:C:H2'	23:DB:1415:U:H6	1.77	0.49
1:AA:1113:C:O2'	1:AA:1114:C:H5'	2.12	0.49
23:DB:1526:C:O2'	23:DB:1527:G:H5'	2.11	0.49
1:CA:124:C:O2'	1:CA:125:U:H5'	2.12	0.49
23:DB:2485:G:O2'	23:DB:2486:C:H5'	2.12	0.49
25:DC:80:LEU:HD11	25:DC:109:LEU:HG	1.94	0.49
21:CU:39:LYS:N	21:CU:40:PRO:CD	2.76	0.49
21:AU:39:LYS:N	21:AU:40:PRO:CD	2.76	0.49
20:AB:14:HIS:CD2	20:AB:202:ASN:H	2.30	0.49
53:D6:84:ARG:HH11	53:D6:92:PRO:HD2	1.78	0.49
40:BH:100:ALA:HA	40:BH:103:VAL:HG21	1.95	0.49
41:BJ:56:VAL:HG12	41:BJ:57:LEU:H	1.76	0.49
35:DV:56:PHE:O	35:DV:61:LEU:HD21	2.13	0.49
45:DS:1:MET:SD	45:DS:62:ASP:HB3	2.53	0.49
1:AA:598:U:H4'	7:AH:85:TYR:CG	2.47	0.49
30:DY:7:THR:HA	30:DY:34:THR:HA	1.94	0.49
46:BU:90:LYS:HB3	46:BU:92:VAL:HG23	1.95	0.49
1:AA:1080:A:H5''	4:AE:51:LYS:NZ	2.25	0.49
47:DF:140:ILE:O	47:DF:145:VAL:HG12	2.13	0.49
25:BC:196:ASN:C	25:BC:198:GLU:H	2.15	0.49
29:BE:59:PRO:HB2	29:BE:67:ARG:NH2	2.18	0.49
23:BB:672:C:H2'	23:BB:673:C:C6	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:138:U:O4'	50:DT:1:MET:HA	2.12	0.49
23:DB:662:G:O2'	23:DB:663:G:H5'	2.12	0.49
21:AU:48:LYS:HA	21:AU:51:ALA:CB	2.36	0.49
23:BB:1080:A:O2'	23:BB:1081:U:H5'	2.11	0.49
24:DI:17:ALA:C	24:DI:19:PRO:HD3	2.32	0.49
3:CD:154:VAL:HG23	3:CD:155:LYS:N	2.27	0.49
27:BK:105:ARG:HD2	27:BK:122:VAL:HG11	1.93	0.49
49:DR:59:ILE:HG23	49:DR:101:ILE:H	1.77	0.49
9:CJ:7:ARG:NH1	9:CJ:101:SER:HB2	2.28	0.49
23:BB:2897:U:H2'	23:BB:2898:U:H6	1.75	0.49
24:BI:33:ASN:HD21	24:BI:64:ARG:NH1	2.06	0.49
51:DZ:17:ASN:HD22	51:DZ:25:THR:HB	1.77	0.49
29:DE:126:VAL:HG21	29:DE:133:LEU:HB2	1.93	0.49
23:BB:1654:A:H2'	23:BB:1655:A:C8	2.48	0.49
1:AA:33:A:O2'	1:AA:34:C:H5'	2.12	0.49
12:CM:80:MET:HA	12:CM:87:GLY:HA3	1.93	0.49
46:BU:35:VAL:O	46:BU:38:ILE:HG22	2.13	0.49
10:CK:80:ASN:H	10:CK:80:ASN:HD22	1.60	0.49
11:AL:106:VAL:HA	11:AL:107:LYS:NZ	2.27	0.49
23:BB:99:U:O2	23:BB:99:U:H5'	2.11	0.49
34:B3:62:PRO:HG2	37:BL:48:ARG:NH2	2.27	0.49
23:DB:96:C:O2'	23:DB:97:C:H5'	2.11	0.49
23:DB:1585:C:H2'	23:DB:1586:A:O4'	2.12	0.49
3:AD:11:SER:HA	3:AD:18:LEU:CD2	2.42	0.49
23:BB:1372:U:O2'	23:BB:1373:A:H5'	2.11	0.49
28:BP:25:VAL:HA	28:BP:85:VAL:HA	1.94	0.49
1:AA:502:A:H2'	1:AA:503:C:C6	2.47	0.49
41:DJ:13:ARG:O	41:DJ:14:ASP:HB2	2.12	0.49
20:AB:94:ARG:HG2	20:AB:94:ARG:O	2.12	0.49
23:BB:1535:A:H5''	23:BB:1536:C:C5	2.47	0.49
22:BA:46:A:H2'	22:BA:47:C:O4'	2.11	0.49
1:CA:415:A:H3'	1:CA:416:G:H8	1.77	0.49
23:BB:1717:A:H2'	23:BB:1718:G:O4'	2.12	0.49
23:BB:1856:U:H2'	23:BB:1857:G:H5'	1.94	0.49
23:DB:1495:A:H2'	23:DB:1496:A:H8	1.77	0.49
1:AA:160:A:H1'	1:AA:344:A:N7	2.27	0.49
23:BB:2756:U:C1'	23:BB:2757:A:H5''	2.42	0.49
23:DB:2204:G:O2'	23:DB:2205:A:H5'	2.11	0.49
1:AA:1247:U:O2'	1:AA:1248:A:H5'	2.12	0.49
7:AH:23:ALA:HB1	7:AH:61:THR:HA	1.94	0.49
23:BB:458:G:N2	23:BB:469:G:H2'	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1669:A:O3'	23:DB:2549:G:H5'	2.13	0.49
23:DB:1838:C:H4'	23:DB:1839:G:H8	1.77	0.49
33:B1:29:LYS:N	33:B1:30:PRO:HD3	2.28	0.49
28:DP:64:SER:O	28:DP:66:GLY:N	2.46	0.49
23:BB:67:U:H2'	23:BB:68:G:H8	1.77	0.49
2:AC:128:MET:H	2:AC:128:MET:CE	2.26	0.49
42:BN:9:GLN:O	42:BN:17:ARG:HD3	2.12	0.49
25:DC:128:THR:OG1	25:DC:190:THR:HG22	2.12	0.49
44:BQ:23:TYR:N	44:BQ:23:TYR:CD2	2.79	0.49
16:CQ:74:LEU:HD22	16:CQ:75:VAL:N	2.27	0.49
53:B6:52:LEU:HD11	53:B6:58:VAL:HG23	1.94	0.49
40:BH:94:ILE:CG2	40:BH:99:ILE:HD11	2.42	0.49
29:DE:60:TRP:C	29:DE:62:GLN:H	2.15	0.49
7:AH:94:VAL:CG2	7:AH:101:ALA:HB2	2.42	0.49
23:DB:2732:G:H5'	23:DB:2733:A:O4'	2.12	0.49
43:BO:36:TYR:CD2	43:BO:36:TYR:N	2.80	0.49
47:BF:27:VAL:O	47:BF:29:ARG:HD2	2.13	0.49
23:BB:321:U:O4'	29:BE:159:LEU:HG	2.13	0.49
1:CA:1079:G:H5''	4:CE:49:TYR:CE2	2.47	0.49
18:CS:50:VAL:HG23	18:CS:59:VAL:HG21	1.95	0.49
1:AA:1318:A:H4'	18:AS:9:PHE:CE1	2.47	0.49
23:DB:1188:U:O2'	23:DB:1189:A:H5'	2.12	0.49
53:B6:107:THR:HG22	53:B6:108:GLU:H	1.78	0.49
33:D1:7:LYS:HA	33:D1:23:THR:HG22	1.95	0.49
33:D1:7:LYS:CD	34:D3:33:THR:HG21	2.37	0.49
23:BB:2646:C:H2'	23:BB:2647:U:O4'	2.12	0.49
24:BI:122:GLU:CD	24:BI:122:GLU:H	2.16	0.49
29:DE:146:VAL:O	29:DE:167:VAL:HA	2.12	0.49
20:AB:186:VAL:O	20:AB:200:PRO:HA	2.12	0.49
3:CD:121:ALA:O	3:CD:122:ILE:HD13	2.13	0.49
35:BV:30:ILE:HB	35:BV:38:LEU:HB3	1.94	0.49
23:DB:1553:A:H2'	23:DB:1555:G:N7	2.27	0.49
28:DP:9:GLN:HA	28:DP:12:MET:SD	2.53	0.49
23:BB:116:C:H1'	23:BB:127:A:N3	2.27	0.49
3:AD:104:MET:CE	3:AD:170:LEU:HD13	2.41	0.49
3:AD:170:LEU:HB2	3:AD:180:THR:O	2.12	0.49
28:DP:31:VAL:CG1	28:DP:38:ARG:HG3	2.42	0.49
10:CK:17:ASP:HA	10:CK:80:ASN:O	2.12	0.49
4:CE:152:VAL:O	4:CE:156:ARG:HG2	2.13	0.49
1:CA:1522:U:O2'	1:CA:1523:G:H5'	2.12	0.49
3:CD:129:VAL:HG12	3:CD:130:ASN:N	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:6:LYS:C	25:BC:8:THR:H	2.15	0.49
2:CC:70:ALA:HA	2:CC:105:VAL:CG2	2.43	0.49
23:BB:96:C:H2'	23:BB:97:C:H6	1.77	0.49
23:BB:2457:U:H2'	23:BB:2458:G:H5'	1.94	0.49
19:AT:57:VAL:HB	19:AT:71:ALA:HB1	1.95	0.49
23:BB:1040:A:H2'	23:BB:1041:G:H8	1.77	0.49
1:CA:1053:G:C4'	1:CA:1054:C:H5'	2.42	0.49
22:BA:6:G:H2'	22:BA:7:G:C8	2.47	0.49
23:DB:2756:U:C1'	23:DB:2757:A:H5''	2.43	0.49
23:BB:2539:C:O2'	23:BB:2540:C:H5'	2.13	0.49
23:BB:1351:C:H2'	23:BB:1352:U:C1'	2.42	0.49
22:DA:88:C:O2'	22:DA:89:U:H5''	2.12	0.49
25:DC:2:VAL:HG23	25:DC:3:VAL:N	2.28	0.49
23:DB:1816:C:H3'	25:DC:61:TYR:CE2	2.48	0.49
23:BB:833:A:C1'	37:BL:52:GLY:H	2.26	0.49
1:AA:204:G:H2'	1:AA:205:A:C8	2.48	0.49
1:AA:204:G:O2'	1:AA:205:A:H5'	2.12	0.49
37:DL:136:GLU:HA	37:DL:140:GLY:HA3	1.94	0.49
23:DB:108:G:H2'	23:DB:109:C:C6	2.48	0.49
5:CF:86:ARG:NH1	17:CR:64:LEU:HD12	2.27	0.49
23:DB:79:C:HO2'	23:DB:346:A:H1'	1.77	0.49
1:AA:992:U:H1'	1:AA:993:G:C2	2.47	0.49
40:BH:59:ALA:C	40:BH:62:LEU:HG	2.32	0.49
23:DB:2303:G:H1'	47:DF:122:ASP:OD1	2.13	0.49
48:BG:53:PRO:HG3	48:BG:61:TRP:CD2	2.48	0.49
23:DB:251:A:H2'	23:DB:252:G:O4'	2.12	0.49
23:DB:620:G:H5'	23:DB:620:G:N3	2.27	0.49
14:AO:50:HIS:O	14:AO:53:ARG:HB3	2.12	0.49
1:AA:227:G:H2'	1:AA:228:A:C8	2.47	0.49
47:BF:10:GLU:O	47:BF:13:LYS:HG3	2.12	0.49
1:CA:409:U:OP1	3:CD:23:GLY:HA3	2.12	0.49
20:AB:130:LYS:O	20:AB:134:LEU:HG	2.12	0.49
1:CA:114:U:H2'	1:CA:115:G:C8	2.48	0.49
5:AF:51:ILE:O	5:AF:51:ILE:HG23	2.11	0.49
25:BC:132:ARG:O	25:BC:132:ARG:HG3	2.12	0.49
5:CF:51:ILE:HG23	5:CF:51:ILE:O	2.11	0.49
48:BG:133:LYS:H	48:BG:133:LYS:HD3	1.76	0.49
23:BB:1145:C:O2'	23:BB:1146:C:H5'	2.12	0.49
1:CA:790:A:H2'	1:CA:791:G:C8	2.48	0.49
23:BB:923:G:N3	52:BW:23:LYS:HE3	2.27	0.49
25:DC:183:VAL:HG22	25:DC:184:GLU:N	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AK:14:GLN:HA	10:AK:76:TYR:O	2.12	0.49
5:CF:25:TYR:O	5:CF:29:ILE:HG13	2.12	0.49
26:BD:36:GLN:HG2	26:BD:37:VAL:N	2.26	0.49
40:BH:95:GLY:O	40:BH:99:ILE:HG12	2.11	0.49
8:CI:56:MET:SD	8:CI:57:VAL:N	2.84	0.49
26:DD:111:GLY:H	26:DD:194:PRO:HG3	1.78	0.49
53:B6:14:MET:HB3	53:B6:168:PHE:CG	2.47	0.49
42:BN:79:LEU:HA	42:BN:83:LEU:CD1	2.42	0.49
23:BB:2311:A:H1'	47:BF:84:ILE:HD13	1.94	0.49
10:AK:90:PRO:C	10:AK:92:ARG:H	2.15	0.49
1:CA:947:G:H2'	1:CA:948:C:H6	1.77	0.49
13:AN:27:LYS:HA	13:AN:31:SER:HB2	1.94	0.49
29:BE:58:LYS:CD	29:BE:58:LYS:N	2.75	0.49
23:BB:673:C:O4'	29:BE:77:ILE:HD11	2.13	0.49
50:DT:1:MET:CG	50:DT:2:ILE:H	2.24	0.49
37:DL:116:VAL:HG13	37:DL:117:THR:N	2.19	0.49
41:BJ:84:ILE:HG23	41:BJ:84:ILE:O	2.12	0.49
45:DS:29:VAL:CA	45:DS:32:ALA:HB3	2.43	0.49
49:DR:78:ARG:HH21	49:DR:78:ARG:HG3	1.78	0.49
46:BU:46:LYS:HZ1	46:BU:47:PRO:HG2	1.76	0.49
23:DB:2270:A:H2'	23:DB:2271:G:O4'	2.13	0.49
23:DB:1029:A:H2'	23:DB:1030:C:O4'	2.13	0.49
43:DO:58:ILE:O	43:DO:62:LEU:HB2	2.12	0.49
26:DD:113:SER:HB3	26:DD:167:ASN:HA	1.94	0.49
24:DI:17:ALA:O	24:DI:18:ASN:HB3	2.13	0.49
44:BQ:109:VAL:O	44:BQ:113:LYS:HG3	2.11	0.49
44:DQ:97:ILE:HD11	44:DQ:108:LEU:HD11	1.95	0.49
49:DR:38:VAL:HG13	49:DR:54:VAL:HG12	1.94	0.49
37:DL:95:LEU:HB2	37:DL:101:ILE:HG13	1.93	0.49
4:CE:111:ARG:HG3	4:CE:112:ALA:N	2.27	0.49
8:CI:117:LEU:HB3	8:CI:122:ARG:O	2.12	0.49
4:CE:143:LEU:O	4:CE:146:MET:HG2	2.12	0.49
33:D1:47:ILE:HD12	33:D1:47:ILE:N	2.27	0.49
34:B3:61:LEU:HB2	34:B3:64:ALA:HB2	1.95	0.49
40:BH:3:VAL:HG12	40:BH:38:PRO:HA	1.94	0.49
23:BB:1389:G:O2'	23:BB:1390:U:H5'	2.13	0.49
6:CG:129:ASN:HA	6:CG:134:VAL:HG11	1.94	0.49
23:DB:2457:U:O2'	23:DB:2458:G:H5'	2.13	0.49
19:CT:85:LEU:HD23	19:CT:86:ALA:H	1.77	0.49
23:DB:521:U:H2'	23:DB:522:A:H8	1.74	0.49
3:AD:10:LEU:HD12	3:AD:20:LEU:CD1	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1144:G:N2	1:AA:1146:A:H62	2.11	0.49
1:CA:1142:G:H3'	1:CA:1143:G:H8	1.76	0.49
23:BB:1184:U:OP1	30:BY:29:ARG:HD3	2.11	0.49
1:AA:677:U:H2'	1:AA:678:U:H6	1.76	0.49
26:BD:125:TRP:CD1	26:BD:160:LYS:HB3	2.47	0.49
23:BB:2069:G:O2'	23:BB:2070:A:H5'	2.13	0.49
1:CA:1179:A:H2'	1:CA:1180:A:O4'	2.12	0.49
31:D0:12:ARG:HD2	31:D0:16:ARG:NH1	2.27	0.49
1:AA:1040:U:O2'	1:AA:1041:G:H5'	2.12	0.49
23:DB:1201:U:H2'	23:DB:1202:G:H8	1.76	0.49
23:BB:1163:G:O2'	23:BB:1164:C:H5'	2.13	0.49
23:DB:1252:G:N2	44:DQ:32:ARG:HB3	2.27	0.49
46:DU:13:LEU:HD12	46:DU:68:ASN:O	2.13	0.49
1:AA:1366:C:H2'	1:AA:1367:C:H6	1.77	0.49
23:DB:1147:A:O2'	23:DB:1148:U:H5'	2.13	0.49
23:BB:902:C:H2'	23:BB:903:C:C6	2.48	0.49
19:CT:14:GLU:OE2	19:CT:18:LYS:HE2	2.13	0.49
27:BK:17:ARG:HB2	27:BK:45:GLU:HB3	1.95	0.49
1:CA:218:U:H2'	1:CA:219:U:C6	2.48	0.49
27:DK:17:ARG:HB2	27:DK:45:GLU:HB3	1.94	0.49
33:D1:16:THR:OG1	33:D1:41:VAL:HG11	2.12	0.49
50:DT:62:VAL:HG12	50:DT:63:VAL:N	2.27	0.49
26:DD:46:ARG:HH12	26:DD:88:GLU:HG3	1.77	0.49
10:CK:126:ARG:HB2	21:CU:33:ARG:CD	2.43	0.49
53:B6:40:HIS:O	53:B6:41:LEU:C	2.49	0.49
8:CI:62:LEU:N	8:CI:62:LEU:HD13	2.28	0.49
41:BJ:55:ILE:HG22	41:BJ:123:LYS:HB2	1.94	0.49
41:BJ:29:ALA:O	41:BJ:32:LEU:HB2	2.11	0.49
23:DB:630:G:H22	23:DB:632:A:H3'	1.74	0.49
29:DE:58:LYS:HB2	29:DE:60:TRP:HB2	1.94	0.49
23:DB:2646:C:H2'	23:DB:2647:U:O4'	2.12	0.49
13:CN:61:ASN:O	13:CN:62:ARG:HB2	2.12	0.49
50:BT:42:GLU:O	50:BT:46:ALA:HB2	2.12	0.49
50:BT:29:THR:CA	50:BT:86:THR:HA	2.41	0.49
40:DH:127:GLU:HB2	40:DH:143:ILE:HG21	1.95	0.49
23:BB:345:A:N3	23:BB:346:A:N1	2.60	0.49
3:AD:160:LEU:HD23	3:AD:164:ARG:NH2	2.28	0.49
47:BF:131:VAL:HG22	47:BF:151:LEU:O	2.12	0.49
23:BB:2394:C:OP1	37:BL:63:LYS:HG2	2.12	0.49
29:BE:145:ASP:OD1	29:BE:183:PHE:HA	2.12	0.49
1:AA:1078:U:O2'	4:AE:137:ARG:NH1	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DJ:82:GLY:O	41:DJ:84:ILE:HG22	2.13	0.49
43:DO:26:LEU:HD13	43:DO:39:VAL:CG2	2.43	0.49
29:BE:69:ARG:O	29:BE:70:SER:CB	2.56	0.49
23:BB:2789:C:H3'	23:BB:2893:A:H62	1.78	0.49
38:DM:26:VAL:HG23	38:DM:104:GLU:OE2	2.11	0.49
31:B0:41:HIS:HB2	42:BN:99:LYS:C	2.33	0.49
43:BO:49:VAL:HG11	43:BO:82:ALA:HA	1.94	0.49
48:BG:166:GLU:CG	48:BG:168:VAL:HG23	2.39	0.49
42:BN:72:ASP:C	42:BN:74:GLU:H	2.16	0.49
5:CF:4:TYR:O	5:CF:63:ASN:HA	2.12	0.49
2:CC:149:LYS:HB2	2:CC:168:ARG:HG3	1.94	0.49
40:BH:140:ALA:C	40:BH:141:LYS:HD3	2.33	0.49
49:DR:4:VAL:HB	49:DR:39:LEU:HG	1.95	0.49
3:AD:154:VAL:HG23	3:AD:155:LYS:N	2.28	0.49
44:DQ:7:VAL:O	44:DQ:11:ALA:HB2	2.12	0.49
23:BB:1103:A:H5''	23:BB:1104:C:C5	2.46	0.49
1:CA:998:C:H2'	1:CA:999:C:C6	2.47	0.49
20:CB:102:ASN:OD1	20:CB:105:THR:HB	2.13	0.49
4:AE:71:ILE:HD11	4:AE:144:GLU:HG3	1.93	0.49
43:DO:76:LYS:HG3	43:DO:113:ALA:CB	2.42	0.49
2:CC:26:LYS:HG3	2:CC:27:GLU:N	2.25	0.49
23:BB:2592:G:O2'	23:BB:2593:U:H5'	2.13	0.49
35:DV:76:ASP:H	35:DV:90:ASP:HB2	1.77	0.49
23:BB:150:U:H2'	23:BB:151:C:H6	1.78	0.49
23:BB:1805:A:N3	25:BC:49:THR:HG23	2.27	0.49
39:BX:14:LEU:O	39:BX:18:LEU:HB2	2.12	0.49
39:DX:41:HIS:O	39:DX:44:LYS:HB3	2.12	0.49
23:BB:2847:U:H5''	28:BP:94:ALA:HB2	1.93	0.49
1:AA:737:C:O2'	1:AA:738:C:H5'	2.13	0.49
23:BB:2218:G:O2'	23:BB:2219:U:H5'	2.12	0.49
23:DB:2854:G:H2'	23:DB:2855:C:C6	2.48	0.49
45:BS:96:ILE:HG23	45:BS:96:ILE:O	2.12	0.49
3:AD:18:LEU:HB2	3:AD:20:LEU:HG	1.94	0.49
20:CB:8:MET:CG	20:CB:9:LEU:N	2.76	0.49
23:DB:2197:U:O2'	23:DB:2198:A:H2'	2.13	0.49
1:CA:1308:U:H3'	12:CM:97:ARG:NH1	2.28	0.49
23:DB:4:U:H2'	23:DB:5:A:H8	1.78	0.49
22:DA:59:A:H2'	22:DA:60:C:O4'	2.13	0.49
1:AA:694:A:C2	1:AA:695:A:H1'	2.46	0.49
23:DB:1717:A:H2'	23:DB:1718:G:O4'	2.12	0.49
23:DB:2553:G:H2'	23:DB:2554:U:O4'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2300:C:H2'	23:BB:2301:C:C6	2.47	0.49
1:CA:201:G:O2'	1:CA:469:C:H4'	2.12	0.49
1:AA:766:A:H2'	1:AA:767:A:O4'	2.13	0.49
23:BB:1848:A:H2'	23:BB:1849:G:H8	1.78	0.49
23:BB:621:A:H2'	23:BB:622:G:O4'	2.12	0.49
22:BA:33:G:O2'	22:BA:34:A:H5'	2.12	0.49
1:CA:179:A:H2'	1:CA:180:U:O4'	2.13	0.49
23:DB:1664:A:H1'	23:DB:2726:A:N1	2.28	0.49
23:DB:927:A:H2'	23:DB:928:A:C8	2.48	0.49
37:BL:25:SER:O	37:BL:27:LEU:HD12	2.13	0.49
29:DE:3:LEU:CB	29:DE:12:LEU:HB2	2.43	0.49
2:AC:57:GLU:HB2	2:AC:64:ARG:HB2	1.94	0.49
1:CA:935:A:O2'	1:CA:936:C:H5'	2.13	0.49
10:CK:115:ILE:HD11	17:CR:72:ARG:HH12	1.78	0.49
2:CC:54:ILE:O	2:CC:54:ILE:HG23	2.12	0.49
25:DC:132:ARG:HG3	25:DC:132:ARG:O	2.12	0.49
37:BL:2:ARG:HG2	37:BL:2:ARG:O	2.12	0.49
23:BB:1693:U:H4'	23:BB:1694:C:OP2	2.13	0.49
25:DC:90:ILE:HD12	25:DC:102:TYR:HB3	1.95	0.49
23:DB:945:A:H4'	23:DB:945:A:OP2	2.12	0.49
37:BL:90:VAL:CB	37:BL:122:VAL:HG12	2.42	0.49
40:BH:111:ALA:O	40:BH:114:GLU:HG2	2.12	0.49
53:B6:42:LYS:HE2	53:B6:49:HIS:O	2.13	0.49
53:B6:68:VAL:HB	53:B6:99:LEU:CG	2.42	0.49
20:CB:209:VAL:HG23	20:CB:210:THR:N	2.28	0.49
51:DZ:76:GLU:HG3	51:DZ:77:LYS:N	2.23	0.49
1:AA:1216:A:H5''	13:AN:4:SER:CB	2.42	0.49
47:BF:177:ARG:CZ	47:BF:177:ARG:HA	2.43	0.49
23:DB:143:C:H2'	23:DB:144:A:H8	1.78	0.49
50:BT:27:SER:O	50:BT:28:ASN:HB3	2.12	0.49
23:DB:1063:G:H4'	24:DI:135:MET:HG2	1.95	0.49
47:BF:110:ILE:CG2	47:BF:113:PHE:HB3	2.43	0.49
12:CM:70:ARG:NH2	47:DF:142:TYR:HB3	2.27	0.49
4:CE:89:THR:HG22	4:CE:90:GLY:N	2.28	0.49
12:CM:79:LEU:CD2	12:CM:86:ARG:HH21	2.26	0.49
45:BS:8:ARG:HB3	45:BS:102:HIS:CE1	2.47	0.49
29:BE:60:TRP:CZ3	29:BE:62:GLN:HA	2.48	0.49
23:BB:2886:A:H62	31:B0:39:ARG:CZ	2.23	0.49
15:AP:67:ILE:HG23	15:AP:67:ILE:O	2.13	0.49
23:DB:1654:A:H2'	23:DB:1655:A:H8	1.77	0.49
24:DI:21:PRO:CB	24:DI:22:PRO:HD3	2.38	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:32:U:H4'	22:DA:52:A:H62	1.76	0.49
44:DQ:109:VAL:CG1	44:DQ:113:LYS:HE3	2.40	0.49
23:BB:2147:A:H5'	23:BB:2148:G:H4'	1.94	0.49
23:BB:851:C:O2'	30:BY:45:GLY:HA3	2.12	0.49
36:D2:21:ARG:CD	36:D2:43:THR:HG21	2.42	0.49
23:BB:1553:A:H2'	23:BB:1555:G:N7	2.27	0.49
34:D3:22:LYS:HB2	34:D3:48:MET:SD	2.53	0.49
11:AL:26:CYS:SG	11:AL:29:LYS:HE2	2.52	0.49
23:DB:171:U:H2'	23:DB:172:A:H8	1.75	0.49
23:DB:2527:C:O2'	23:DB:2528:U:H5'	2.13	0.49
4:AE:111:ARG:HG3	4:AE:112:ALA:N	2.27	0.49
42:BN:45:ARG:HG3	42:BN:95:THR:HG21	1.94	0.49
4:CE:152:VAL:HA	4:CE:155:LYS:HD3	1.93	0.49
6:AG:100:MET:O	6:AG:104:VAL:HG23	2.13	0.49
1:AA:401:C:H2'	1:AA:402:G:H8	1.77	0.49
20:AB:75:ALA:O	20:AB:79:VAL:HG23	2.13	0.49
20:CB:94:ARG:HG2	20:CB:94:ARG:O	2.13	0.49
2:AC:46:LEU:HB3	2:AC:49:ALA:HB3	1.93	0.49
3:AD:11:SER:HA	3:AD:18:LEU:HD22	1.95	0.49
3:AD:59:LYS:O	3:AD:63:ILE:HG13	2.12	0.49
50:BT:12:ARG:HB3	50:BT:12:ARG:HH11	1.74	0.49
1:AA:678:U:O2'	1:AA:679:C:H5'	2.13	0.49
3:CD:59:LYS:O	3:CD:63:ILE:HG13	2.12	0.49
1:CA:1472:U:H2'	1:CA:1473:G:C8	2.48	0.49
26:DD:125:TRP:CD1	26:DD:160:LYS:HB3	2.48	0.49
23:DB:231:A:H3'	23:DB:232:G:C8	2.48	0.49
1:CA:399:G:H2'	1:CA:400:C:H6	1.78	0.49
27:DK:109:SER:HB2	27:DK:111:LYS:HG2	1.93	0.49
23:DB:615:U:O4	29:DE:39:ALA:HB2	2.13	0.49
23:BB:2302:U:O2'	23:BB:2303:G:H5'	2.13	0.49
29:BE:37:ALA:C	29:BE:39:ALA:H	2.14	0.49
1:AA:852:G:H2'	1:AA:853:C:H6	1.77	0.49
23:BB:516:C:O2'	23:BB:517:C:H5'	2.13	0.49
17:AR:44:THR:C	17:AR:46:THR:H	2.15	0.49
46:DU:41:VAL:O	46:DU:42:LYS:HB2	2.13	0.49
23:BB:1613:G:H2'	23:BB:1617:C:H42	1.77	0.49
23:DB:688:U:O2'	23:DB:689:A:H5'	2.12	0.49
48:BG:173:ALA:HB3	48:BG:175:LYS:NZ	2.28	0.49
23:DB:2818:U:O2'	23:DB:2819:G:H5'	2.12	0.49
23:BB:736:C:H2'	23:BB:737:C:C6	2.48	0.49
25:BC:226:PRO:HA	25:BC:232:GLY:HA3	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:659:G:H4'	29:BE:95:LYS:HB3	1.95	0.49
41:BJ:75:TYR:CD1	41:BJ:86:GLN:HB3	2.48	0.49
49:BR:84:ARG:HH21	49:BR:84:ARG:HG3	1.77	0.49
23:BB:452:G:OP1	29:BE:53:THR:HG23	2.13	0.49
23:DB:1842:G:H2'	23:DB:1843:C:C6	2.48	0.49
25:DC:6:LYS:C	25:DC:8:THR:H	2.16	0.49
23:DB:1099:G:H5''	24:DI:2:LYS:HB2	1.95	0.49
23:BB:852:U:H2'	23:BB:853:C:C6	2.48	0.49
25:BC:131:MET:HE1	25:BC:143:VAL:HG13	1.94	0.49
48:BG:10:VAL:HG21	48:BG:49:LEU:HD13	1.94	0.49
25:DC:183:VAL:HG22	25:DC:184:GLU:H	1.78	0.49
10:AK:70:ALA:O	10:AK:74:LYS:HB2	2.13	0.49
23:BB:2314:A:H2'	23:BB:2315:G:C8	2.48	0.49
26:BD:4:LEU:HD12	26:BD:32:ASN:HB2	1.94	0.49
23:DB:853:C:H2'	23:DB:854:C:H6	1.77	0.49
53:B6:92:PRO:HG3	53:B6:101:ILE:HG23	1.95	0.49
25:DC:196:ASN:C	25:DC:198:GLU:H	2.15	0.49
41:DJ:42:ALA:O	41:DJ:44:TYR:N	2.46	0.49
35:DV:1:MET:HG3	35:DV:2:PHE:N	2.28	0.49
30:DY:8:GLN:HB3	30:DY:31:ILE:O	2.13	0.49
25:BC:141:HIS:HB3	25:BC:190:THR:OG1	2.12	0.49
26:DD:31:ALA:O	26:DD:52:THR:HG23	2.13	0.49
35:BV:56:PHE:O	35:BV:61:LEU:HD21	2.13	0.49
35:BV:71:LYS:O	35:BV:94:ALA:HB2	2.13	0.49
13:CN:60:ARG:NE	13:CN:69:PRO:HB3	2.27	0.49
44:BQ:73:ILE:HD11	44:BQ:77:LYS:HB3	1.95	0.49
48:BG:17:LYS:O	48:BG:23:ILE:HG23	2.13	0.49
51:BZ:56:MET:HA	51:BZ:59:ILE:HG12	1.94	0.49
42:BN:87:PHE:C	42:BN:89:SER:H	2.15	0.49
12:CM:37:GLY:O	12:CM:38:ILE:HD13	2.13	0.49
47:DF:21:TYR:HD2	47:DF:27:VAL:HG12	1.78	0.49
1:CA:1361:G:C2'	1:CA:1362:A:H5''	2.41	0.49
20:AB:41:ASN:HD22	20:AB:44:LYS:HB3	1.78	0.49
29:BE:58:LYS:HB2	29:BE:60:TRP:HB2	1.94	0.49
29:BE:60:TRP:CE3	29:BE:60:TRP:HA	2.48	0.49
46:BU:81:ARG:N	46:BU:81:ARG:HH21	2.09	0.49
17:AR:38:ILE:HG23	17:AR:62:ARG:NH2	2.28	0.49
9:CJ:52:LEU:HB2	13:CN:80:ARG:HD2	1.95	0.49
38:DM:134:THR:HG22	38:DM:136:MET:H	1.78	0.49
39:BX:7:ARG:HH11	39:BX:7:ARG:HB2	1.77	0.49
25:BC:12:ARG:HA	25:BC:15:VAL:CG2	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BV:77:VAL:HG23	35:BV:89:ILE:HG22	1.94	0.49
1:AA:85:U:O2	1:AA:85:U:H2'	2.11	0.49
4:AE:152:VAL:O	4:AE:156:ARG:HG2	2.12	0.49
29:DE:154:ASP:OD1	29:DE:156:ASN:HB3	2.11	0.49
23:BB:38:A:HO2'	29:BE:43:THR:HA	1.77	0.49
46:DU:11:ILE:O	46:DU:11:ILE:HD13	2.12	0.49
14:CO:70:LEU:HD12	14:CO:78:TYR:CB	2.43	0.49
23:DB:1681:G:H2'	23:DB:1757:A:N1	2.28	0.49
23:DB:2145:C:H3'	23:DB:2146:C:H5''	1.93	0.49
23:DB:91:A:H1'	23:DB:92:U:C6	2.48	0.49
28:DP:50:ARG:HB3	28:DP:57:ALA:N	2.28	0.49
23:BB:783:A:H8	23:BB:784:G:H4'	1.77	0.49
35:BV:76:ASP:H	35:BV:90:ASP:HB2	1.78	0.49
1:CA:1120:C:O2'	1:CA:1121:U:H5'	2.12	0.49
23:BB:154:U:H2'	23:BB:155:A:C8	2.48	0.49
39:DX:56:LEU:O	39:DX:57:LEU:HB3	2.12	0.49
5:AF:53:LYS:HB3	5:AF:54:LEU:HD22	1.95	0.49
23:BB:2458:G:H1'	23:BB:2460:U:O4	2.12	0.49
23:BB:2462:C:H2'	23:BB:2463:C:C6	2.48	0.49
23:BB:2189:U:H2'	23:BB:2190:G:H8	1.77	0.49
1:AA:393:A:O2'	1:AA:394:G:H5'	2.13	0.49
10:AK:77:GLY:O	10:AK:79:LYS:HE3	2.12	0.49
20:CB:8:MET:O	20:CB:9:LEU:HB3	2.13	0.49
23:DB:2539:C:O2'	23:DB:2540:C:H5'	2.13	0.49
42:BN:59:SER:O	42:BN:63:ARG:HB2	2.13	0.49
23:DB:2069:G:O2'	23:DB:2070:A:H5'	2.13	0.49
20:AB:22:TRP:HA	20:AB:188:THR:HB	1.95	0.49
1:CA:511:C:O2'	1:CA:512:U:H5''	2.13	0.49
1:AA:585:G:H2'	1:AA:586:C:H6	1.78	0.49
1:CA:204:G:O2'	1:CA:205:A:H5'	2.12	0.49
1:CA:1450:U:H2'	1:CA:1452:C:C4	2.48	0.49
23:DB:2648:G:H2'	23:DB:2649:C:H6	1.77	0.49
6:AG:70:PRO:HA	6:AG:141:HIS:CE1	2.48	0.49
1:CA:62:U:H2'	1:CA:63:C:H6	1.78	0.49
23:DB:1464:G:H2'	23:DB:1465:G:C8	2.47	0.49
23:BB:2676:C:O2'	23:BB:2677:G:H5'	2.12	0.49
22:BA:64:G:H2'	22:BA:65:U:H6	1.77	0.49
1:CA:386:C:C2'	1:CA:387:U:H5'	2.43	0.49
23:BB:1369:G:O2'	23:BB:1370:C:H5'	2.13	0.49
23:BB:840:C:H2'	23:BB:841:G:H8	1.78	0.49
6:AG:38:ALA:O	6:AG:42:VAL:HG23	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2828:G:O2'	23:BB:2829:A:H5'	2.13	0.49
23:BB:2559:C:H2'	23:BB:2560:A:H8	1.77	0.49
23:DB:1344:U:H4'	23:DB:1384:A:C5	2.48	0.49
7:CH:23:ALA:HB1	7:CH:61:THR:HA	1.95	0.49
10:CK:35:ASP:OD1	10:CK:37:GLN:HB2	2.13	0.49
23:BB:1661:G:O2'	23:BB:1662:U:H5'	2.13	0.49
39:BX:15:ASN:O	39:BX:19:LEU:HD13	2.13	0.49
23:DB:734:A:O2'	23:DB:735:A:H5'	2.12	0.49
23:BB:1878:G:H2'	23:BB:1879:C:C6	2.48	0.49
23:BB:1051:G:H5''	23:BB:1052:C:OP2	2.13	0.49
6:AG:106:ALA:HB1	6:AG:132:THR:HB	1.95	0.49
48:BG:8:VAL:HG22	48:BG:68:ARG:HD3	1.95	0.49
48:DG:16:VAL:HG11	48:DG:44:HIS:CE1	2.47	0.49
26:BD:55:LYS:C	26:BD:57:ALA:H	2.17	0.49
23:DB:2314:A:H2'	23:DB:2315:G:C8	2.47	0.49
41:BJ:25:LEU:O	41:BJ:27:ARG:N	2.44	0.49
47:DF:84:ILE:HG22	47:DF:84:ILE:O	2.12	0.49
23:DB:672:C:H2'	23:DB:673:C:C6	2.47	0.49
39:BX:28:LEU:HD13	39:BX:37:LEU:CD1	2.40	0.49
41:BJ:45:THR:OG1	41:BJ:48:VAL:HB	2.13	0.49
44:BQ:60:TRP:C	44:BQ:64:ILE:HG12	2.33	0.49
53:B6:14:MET:HG2	53:B6:129:ILE:HG23	1.95	0.49
30:BY:11:SER:HA	30:BY:31:ILE:HG22	1.95	0.49
33:B1:26:LYS:HB2	33:B1:52:LYS:HZ3	1.78	0.49
47:BF:74:ALA:HB1	47:BF:76:PHE:CD2	2.48	0.49
46:DU:81:ARG:HH21	46:DU:81:ARG:N	2.10	0.49
29:BE:126:VAL:CG2	29:BE:133:LEU:HB2	2.43	0.49
42:DN:83:LEU:HD12	42:DN:84:GLY:N	2.28	0.49
1:CA:1225:A:N3	1:CA:1225:A:H2'	2.27	0.49
12:AM:52:ILE:HG23	12:AM:56:ARG:NH1	2.17	0.49
23:DB:483:A:O2'	46:DU:56:GLY:HA2	2.13	0.49
23:DB:1025:G:H1'	23:DB:1135:C:O5'	2.13	0.49
13:AN:16:ALA:HA	13:AN:54:SER:O	2.13	0.49
23:BB:981:A:H4'	23:BB:2037:A:H5'	1.95	0.49
31:B0:42:ILE:HG22	31:B0:43:THR:O	2.13	0.49
15:AP:67:ILE:HG13	15:AP:71:VAL:HG13	1.94	0.49
23:BB:973:A:OP1	23:BB:973:A:H8	1.95	0.49
25:BC:14:HIS:O	25:BC:16:VAL:HG23	2.13	0.49
27:DK:42:THR:O	27:DK:44:LYS:HG2	2.12	0.49
20:AB:16:GLY:HA2	20:AB:40:ILE:CG1	2.42	0.49
20:AB:16:GLY:HA3	20:AB:39:ILE:HA	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BM:32:GLY:HA2	38:BM:117:PHE:CZ	2.48	0.49
31:D0:39:ARG:O	31:D0:40:HIS:HB2	2.12	0.49
35:BV:42:LEU:HD23	35:BV:42:LEU:N	2.25	0.49
27:DK:58:LEU:CD1	27:DK:86:LEU:HB3	2.39	0.49
1:CA:192:A:O2'	1:CA:193:C:H5'	2.12	0.49
46:BU:21:ARG:HD3	46:BU:72:PHE:CD2	2.48	0.49
23:DB:263:G:H2'	23:DB:264:C:O4'	2.12	0.49
11:AL:79:ILE:HD12	11:AL:96:THR:CG2	2.43	0.49
23:BB:629:G:H5''	23:BB:650:C:O2'	2.12	0.49
23:BB:1131:G:N2	23:BB:2024:G:N2	2.60	0.49
1:AA:490:C:H2'	1:AA:491:G:H8	1.77	0.49
6:AG:47:GLU:OE1	6:AG:57:GLU:HG2	2.12	0.49
23:DB:365:U:H2'	23:DB:366:C:H6	1.71	0.49
30:BY:6:ILE:HG21	30:BY:47:ILE:HD12	1.94	0.49
1:AA:1329:A:H5''	12:AM:24:VAL:HA	1.93	0.49
23:BB:2285:C:OP2	33:B1:5:ARG:HD3	2.12	0.49
19:AT:79:THR:O	19:AT:82:ILE:HG12	2.13	0.49
25:DC:116:GLN:O	25:DC:127:ASN:HA	2.13	0.49
23:BB:1407:G:H2'	23:BB:1408:G:C8	2.45	0.49
23:BB:1983:G:H4'	23:BB:2606:C:H4'	1.95	0.49
23:BB:2070:A:H2'	23:BB:2071:A:H8	1.78	0.49
26:BD:122:VAL:HA	26:BD:127:PHE:N	2.28	0.49
23:BB:2816:G:O2'	23:BB:2817:U:H5'	2.13	0.49
23:DB:1719:G:O2'	23:DB:1720:U:H5'	2.13	0.49
23:DB:2813:A:H2'	23:DB:2814:A:H8	1.75	0.49
29:DE:37:ALA:C	29:DE:39:ALA:H	2.16	0.49
23:DB:2834:G:H1'	23:DB:2883:A:N6	2.27	0.49
2:CC:179:ALA:HB3	2:CC:181:ILE:HD11	1.95	0.49
1:CA:811:C:H4'	1:CA:900:A:N6	2.27	0.49
17:CR:44:THR:OG1	17:CR:46:THR:HG22	2.13	0.49
1:CA:558:G:H8	1:CA:559:A:H2'	1.78	0.49
23:DB:2559:C:H2'	23:DB:2560:A:H8	1.78	0.49
40:BH:30:LEU:O	40:BH:35:LYS:HB2	2.13	0.49
33:D1:28:THR:O	33:D1:29:LYS:HD2	2.13	0.49
23:BB:516:C:H2'	23:BB:517:C:C6	2.48	0.49
1:CA:251:G:N3	1:CA:266:G:O6	2.46	0.49
28:BP:8:GLU:HG2	28:BP:54:LEU:HD23	1.94	0.49
6:CG:106:ALA:HB1	6:CG:132:THR:HB	1.94	0.49
10:AK:115:ILE:HD11	17:AR:72:ARG:HH12	1.78	0.49
9:AJ:35:GLN:HG2	9:AJ:78:GLU:OE1	2.13	0.49
1:AA:131:A:H2'	1:AA:132:C:C6	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1503:A:C8	1:AA:1531:A:N3	2.81	0.49
48:DG:133:LYS:H	48:DG:133:LYS:HD3	1.78	0.49
29:BE:88:ARG:HH21	29:BE:88:ARG:HG3	1.77	0.49
24:BI:2:LYS:NZ	24:BI:2:LYS:HB3	2.27	0.49
23:DB:1532:A:N3	23:DB:1532:A:H2'	2.25	0.49
23:BB:2327:A:H2'	23:BB:2328:A:C8	2.48	0.48
23:BB:2353:G:N3	52:BW:30:VAL:HG13	2.28	0.48
23:BB:2330:G:H1'	52:BW:38:ARG:HB3	1.95	0.48
25:DC:129:LEU:HB3	25:DC:134:ILE:HG22	1.93	0.48
44:BQ:29:ARG:NH1	44:BQ:29:ARG:HG2	2.28	0.48
16:CQ:62:GLU:HB2	16:CQ:72:TRP:CZ2	2.47	0.48
40:BH:97:ARG:HA	40:BH:112:LYS:CB	2.39	0.48
41:BJ:58:ASN:HA	41:BJ:127:GLY:HA2	1.94	0.48
35:DV:2:PHE:HD2	35:DV:59:GLU:OE1	1.97	0.48
23:BB:141:G:H5''	23:BB:142:A:O4'	2.13	0.48
26:DD:106:LYS:HD3	26:DD:106:LYS:N	2.28	0.48
12:AM:15:VAL:HG21	12:AM:40:GLU:HB3	1.95	0.48
3:CD:107:GLY:O	3:CD:157:ALA:HB1	2.12	0.48
13:AN:63:CYS:SG	13:AN:82:LYS:HG3	2.53	0.48
24:DI:131:THR:O	24:DI:135:MET:HG3	2.13	0.48
47:BF:16:MET:O	47:BF:20:ASN:HA	2.12	0.48
29:BE:153:LEU:HG	29:BE:154:ASP:N	2.28	0.48
12:AM:33:LEU:HD13	12:AM:39:ALA:O	2.13	0.48
12:AM:37:GLY:O	12:AM:38:ILE:HD13	2.13	0.48
50:DT:39:THR:O	50:DT:40:LYS:HB2	2.12	0.48
24:DI:27:LEU:HD23	24:DI:27:LEU:N	2.20	0.48
23:BB:1180:U:H2'	23:BB:1181:U:O4'	2.13	0.48
3:CD:173:ASP:CB	3:CD:178:GLU:HB2	2.36	0.48
11:CL:41:PRO:HB2	11:CL:88:ASP:HB3	1.96	0.48
23:DB:873:C:H2'	23:DB:874:G:C8	2.43	0.48
13:CN:52:ARG:C	13:CN:54:SER:H	2.15	0.48
18:CS:6:LYS:HD2	18:CS:6:LYS:N	2.28	0.48
27:DK:43:ILE:HG21	27:DK:46:ALA:HB2	1.95	0.48
22:BA:103:U:O2'	22:BA:104:A:H5'	2.12	0.48
23:BB:1198:U:H2'	23:BB:1199:U:H6	1.78	0.48
23:DB:847:U:O4'	23:DB:847:U:O2	2.31	0.48
22:DA:32:U:H4'	22:DA:52:A:N6	2.28	0.48
42:DN:65:LEU:O	42:DN:68:ALA:HB3	2.13	0.48
44:BQ:71:ASN:HD22	44:BQ:109:VAL:HG11	1.78	0.48
3:AD:123:MET:HA	3:AD:128:VAL:HA	1.95	0.48
28:DP:88:ARG:HB2	28:DP:112:ARG:NH1	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:321:U:O4'	29:DE:159:LEU:HG	2.13	0.48
23:DB:1131:G:N2	23:DB:2024:G:N2	2.58	0.48
10:AK:110:THR:CG2	21:AU:4:LYS:HA	2.43	0.48
29:DE:46:GLN:HB3	29:DE:86:ALA:CA	2.42	0.48
1:CA:1522:U:H2'	1:CA:1523:G:H8	1.77	0.48
23:DB:2840:C:H2'	23:DB:2841:C:C6	2.48	0.48
50:DT:54:GLU:HB3	50:DT:88:LYS:HB2	1.94	0.48
1:CA:1084:G:H2'	1:CA:1085:U:C6	2.48	0.48
1:AA:1521:C:O2'	1:AA:1522:U:H5'	2.12	0.48
33:B1:3:GLY:C	33:B1:5:ARG:H	2.14	0.48
23:DB:1260:A:H2'	23:DB:1261:C:C6	2.47	0.48
23:DB:1000:A:H2'	23:DB:1001:A:H8	1.76	0.48
9:AJ:92:LEU:N	9:AJ:92:LEU:HD22	2.26	0.48
16:CQ:32:ILE:HG23	16:CQ:33:TYR:CD2	2.48	0.48
23:DB:1889:A:H2'	23:DB:1890:A:H8	1.75	0.48
23:DB:2686:G:H2'	23:DB:2687:U:C6	2.48	0.48
29:DE:102:ARG:O	29:DE:106:LYS:HG3	2.13	0.48
1:CA:201:G:H2'	1:CA:202:G:O4'	2.13	0.48
23:DB:656:G:H2'	23:DB:657:U:C6	2.48	0.48
23:DB:2008:C:H2'	23:DB:2009:A:H8	1.78	0.48
1:AA:558:G:C8	1:AA:559:A:H2'	2.48	0.48
23:BB:2201:G:O2'	23:BB:2202:U:H5'	2.12	0.48
23:DB:245:G:H2'	23:DB:246:C:H6	1.78	0.48
5:AF:42:TRP:HB2	5:AF:59:TYR:HB2	1.94	0.48
41:BJ:76:HIS:CE1	41:BJ:85:LYS:HB2	2.48	0.48
23:DB:736:C:H2'	23:DB:737:C:C6	2.48	0.48
37:BL:70:LYS:O	37:BL:73:ILE:HG12	2.13	0.48
22:DA:64:G:H2'	22:DA:65:U:C6	2.48	0.48
23:DB:527:C:O2	23:DB:527:C:O4'	2.30	0.48
18:AS:11:ASP:HB2	18:AS:14:LEU:HD23	1.94	0.48
2:AC:125:ARG:O	2:AC:126:ARG:HB2	2.13	0.48
48:BG:94:ARG:HB2	48:BG:127:GLN:HG3	1.95	0.48
20:AB:162:VAL:HG13	20:AB:184:ALA:CB	2.36	0.48
50:BT:1:MET:HB2	50:BT:2:ILE:HD13	1.94	0.48
47:BF:71:LYS:O	47:BF:72:SER:HB3	2.13	0.48
25:BC:106:PRO:O	25:BC:109:LEU:HD13	2.14	0.48
37:BL:4:ASN:N	37:BL:4:ASN:HD22	2.10	0.48
23:BB:321:U:H1'	29:BE:162:ARG:NH1	2.25	0.48
47:DF:113:PHE:HZ	47:DF:175:PRO:HB2	1.78	0.48
18:CS:39:ILE:HG21	18:CS:61:VAL:HG13	1.95	0.48
18:CS:46:LEU:O	18:CS:60:PHE:HA	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AN:30:ILE:O	13:AN:40:ARG:HA	2.13	0.48
41:DJ:84:ILE:HG23	41:DJ:84:ILE:O	2.13	0.48
23:DB:138:U:O5'	23:DB:138:U:H6	1.95	0.48
9:AJ:52:LEU:HB2	13:AN:80:ARG:HD2	1.95	0.48
16:AQ:62:GLU:HB2	16:AQ:72:TRP:CZ2	2.48	0.48
29:DE:145:ASP:OD1	29:DE:183:PHE:HA	2.13	0.48
37:DL:2:ARG:O	37:DL:2:ARG:HG2	2.13	0.48
27:DK:43:ILE:CG2	27:DK:54:LYS:HA	2.42	0.48
49:DR:49:ILE:HG22	49:DR:54:VAL:HB	1.94	0.48
24:BI:21:PRO:CB	24:BI:22:PRO:HD3	2.40	0.48
23:DB:1438:U:H2'	23:DB:1439:A:O4'	2.12	0.48
29:BE:41:GLN:O	29:BE:42:GLY:O	2.31	0.48
46:BU:39:ASN:CG	46:BU:62:ALA:HB3	2.33	0.48
7:CH:58:LEU:CD2	7:CH:60:LEU:HB2	2.43	0.48
7:AH:11:THR:HA	7:AH:14:ARG:CZ	2.42	0.48
15:AP:43:ALA:HA	15:AP:46:LYS:HE3	1.95	0.48
13:AN:17:ASP:HA	13:AN:21:ALA:HB2	1.94	0.48
3:AD:129:VAL:HG12	3:AD:130:ASN:N	2.28	0.48
46:DU:48:VAL:O	46:DU:48:VAL:HG13	2.13	0.48
28:BP:50:ARG:HB3	28:BP:57:ALA:N	2.28	0.48
20:CB:20:ARG:HA	20:CB:20:ARG:NE	2.28	0.48
1:AA:1522:U:H2'	1:AA:1523:G:H8	1.78	0.48
46:BU:48:VAL:O	46:BU:48:VAL:HG13	2.13	0.48
1:CA:677:U:H2'	1:CA:678:U:H6	1.78	0.48
23:BB:2026:U:H2'	23:BB:2027:G:C8	2.48	0.48
11:CL:106:VAL:HA	11:CL:107:LYS:NZ	2.29	0.48
6:CG:68:VAL:CG1	6:CG:133:ALA:HB1	2.42	0.48
42:BN:12:ARG:HG3	42:BN:13:ASN:N	2.28	0.48
23:BB:540:C:O2'	23:BB:541:A:H5'	2.13	0.48
11:CL:7:VAL:HG22	16:CQ:33:TYR:CD1	2.48	0.48
23:DB:2699:C:H2'	23:DB:2700:A:H8	1.77	0.48
22:BA:49:C:O2'	22:BA:50:A:H5'	2.13	0.48
22:BA:49:C:OP1	43:BO:101:GLY:HA3	2.13	0.48
23:DB:379:G:O4'	23:DB:2232:C:H5''	2.14	0.48
1:CA:1036:A:H2'	1:CA:1037:C:C6	2.48	0.48
41:BJ:13:ARG:O	41:BJ:14:ASP:HB2	2.12	0.48
22:BA:93:C:H2'	22:BA:94:A:H8	1.78	0.48
23:BB:325:G:H2'	23:BB:326:G:H8	1.78	0.48
37:BL:136:GLU:HA	37:BL:140:GLY:HA3	1.94	0.48
23:BB:942:G:O2'	23:BB:943:A:H5'	2.12	0.48
22:DA:35:C:H2'	22:DA:36:C:H5'	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:779:U:H2'	23:BB:780:G:C8	2.48	0.48
4:CE:87:VAL:HG23	4:CE:92:ARG:HA	1.95	0.48
53:B6:4:LYS:HA	53:B6:7:TYR:HD2	1.77	0.48
24:BI:52:LEU:HD12	24:BI:52:LEU:N	2.28	0.48
23:BB:1234:U:H2'	23:BB:1235:G:O4'	2.12	0.48
29:BE:3:LEU:CB	29:BE:12:LEU:HB2	2.43	0.48
23:DB:2829:A:O2'	23:DB:2830:C:H5'	2.14	0.48
7:CH:23:ALA:CB	7:CH:61:THR:HA	2.44	0.48
24:DI:89:SER:HA	24:DI:97:VAL:HG11	1.96	0.48
23:DB:1038:G:O2'	23:DB:1039:A:H5'	2.13	0.48
23:DB:2611:C:O2'	23:DB:2612:C:H5'	2.12	0.48
23:DB:1693:U:H4'	23:DB:1694:C:OP2	2.13	0.48
1:AA:1379:G:O2'	1:AA:1380:U:H5'	2.13	0.48
4:CE:79:THR:OG1	4:CE:97:PRO:HA	2.13	0.48
40:DH:25:TYR:O	40:DH:30:LEU:HG	2.13	0.48
1:AA:409:U:OP1	3:AD:23:GLY:HA3	2.12	0.48
6:AG:94:ARG:NH1	6:AG:98:LEU:HD21	2.28	0.48
23:DB:1155:A:O2'	23:DB:1156:A:H2'	2.13	0.48
1:CA:1125:U:O2'	1:CA:1126:U:H2'	2.13	0.48
15:AP:12:LYS:C	15:AP:14:ARG:H	2.16	0.48
23:BB:2076:U:O4'	23:BB:2076:U:O2	2.28	0.48
1:CA:80:A:H2'	1:CA:81:A:C8	2.48	0.48
40:BH:27:ARG:O	40:BH:28:ASN:ND2	2.46	0.48
2:CC:125:ARG:O	2:CC:126:ARG:HB2	2.13	0.48
40:DH:27:ARG:O	40:DH:28:ASN:ND2	2.46	0.48
25:BC:119:VAL:HG13	25:BC:133:ASN:HD21	1.79	0.48
23:DB:2355:G:O3'	52:DW:20:LEU:HD13	2.13	0.48
25:DC:89:ASN:O	25:DC:105:ALA:HB3	2.13	0.48
25:DC:188:ARG:HG2	25:DC:188:ARG:HH21	1.78	0.48
48:BG:91:VAL:HG23	48:BG:92:GLY:H	1.78	0.48
23:DB:572:A:C2	23:DB:2033:A:C2	3.01	0.48
20:AB:164:ASP:OD1	20:AB:203:ASP:HB2	2.12	0.48
40:BH:81:ALA:HB2	40:BH:147:VAL:HG23	1.95	0.48
53:B6:77:LYS:HE2	53:B6:94:ASN:ND2	2.07	0.48
44:DQ:91:ARG:NH1	49:DR:10:LYS:HB3	2.28	0.48
26:DD:54:ALA:HA	26:DD:76:GLY:N	2.29	0.48
48:DG:17:LYS:O	48:DG:23:ILE:HG23	2.13	0.48
1:CA:1014:A:H5''	18:CS:13:HIS:HB3	1.95	0.48
41:BJ:4:PHE:HB3	41:BJ:44:TYR:CE1	2.47	0.48
1:AA:1277:C:H1'	1:AA:1282:C:O2	2.13	0.48
47:BF:104:THR:C	47:BF:108:PRO:HG2	2.33	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:142:TYR:CD1	47:DF:142:TYR:N	2.78	0.48
18:AS:44:ILE:HA	18:AS:61:VAL:CG1	2.43	0.48
29:BE:56:GLY:O	29:BE:58:LYS:HD3	2.13	0.48
41:BJ:81:ILE:HG12	41:BJ:82:GLY:N	2.27	0.48
8:AI:33:SER:HB3	8:AI:36:GLN:HE21	1.78	0.48
8:AI:33:SER:HB3	8:AI:36:GLN:NE2	2.28	0.48
28:DP:99:LEU:O	28:DP:99:LEU:HD13	2.13	0.48
23:BB:2732:G:H5'	23:BB:2733:A:O4'	2.13	0.48
45:BS:55:ILE:CD1	45:BS:107:VAL:HG21	2.43	0.48
25:BC:15:VAL:HA	25:BC:203:VAL:HG12	1.95	0.48
29:DE:115:GLN:O	29:DE:117:ARG:HG3	2.13	0.48
27:DK:54:LYS:HD2	27:DK:54:LYS:N	2.20	0.48
44:DQ:71:ASN:HD22	44:DQ:109:VAL:HG11	1.77	0.48
3:AD:154:VAL:HG23	3:AD:155:LYS:HD2	1.94	0.48
20:CB:67:LEU:HA	20:CB:89:PHE:O	2.12	0.48
11:AL:81:ILE:HG23	11:AL:94:TYR:HB3	1.94	0.48
20:AB:122:ASP:O	20:AB:125:PHE:HD2	1.96	0.48
46:BU:39:ASN:CB	46:BU:62:ALA:HB3	2.42	0.48
10:AK:17:ASP:HA	10:AK:80:ASN:O	2.13	0.48
1:AA:309:A:O2'	1:AA:310:G:H5'	2.13	0.48
19:CT:70:LYS:HA	19:CT:73:ARG:NH1	2.28	0.48
1:CA:338:A:H2'	1:CA:339:C:H6	1.78	0.48
1:CA:1124:G:H5''	9:CJ:37:ARG:O	2.13	0.48
3:CD:170:LEU:HB2	3:CD:180:THR:O	2.13	0.48
1:AA:17:U:O2'	1:AA:18:C:H5'	2.14	0.48
23:BB:1810:A:H2'	23:BB:1811:G:O4'	2.13	0.48
26:DD:14:ILE:O	26:DD:14:ILE:HG23	2.14	0.48
1:AA:169:C:O2'	1:AA:170:U:H5'	2.13	0.48
1:AA:66:A:H5''	1:AA:199:A:H4'	1.95	0.48
23:BB:2028:U:H2'	23:BB:2029:G:C8	2.48	0.48
23:BB:1327:A:H2'	23:BB:1328:A:O4'	2.13	0.48
23:BB:2074:U:O2'	23:BB:2075:U:H5'	2.13	0.48
23:DB:100:U:OP1	23:DB:101:A:O5'	2.31	0.48
23:DB:2799:A:O3'	23:DB:2800:A:O4'	2.31	0.48
23:BB:231:A:H3'	23:BB:232:G:H8	1.78	0.48
1:AA:586:C:O2'	1:AA:587:G:H5'	2.14	0.48
1:CA:694:A:C2	1:CA:695:A:H1'	2.49	0.48
50:BT:32:LEU:N	50:BT:83:ALA:HB3	2.27	0.48
12:AM:22:TYR:O	12:AM:68:LEU:HD12	2.13	0.48
1:CA:586:C:O2'	1:CA:587:G:H5'	2.13	0.48
23:DB:1047:G:H1'	23:DB:1111:A:N6	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:106:C:H2'	23:DB:107:G:C8	2.47	0.48
27:BK:25:LEU:HD11	27:BK:40:LYS:N	2.28	0.48
23:BB:1495:A:O2'	23:BB:1496:A:H5'	2.13	0.48
23:DB:2597:G:C6	23:DB:2598:A:N6	2.81	0.48
1:AA:363:A:P	11:AL:57:THR:HG21	2.54	0.48
42:DN:64:ARG:O	42:DN:67:PHE:HB3	2.12	0.48
23:DB:1266:G:N2	23:DB:2012:G:H2'	2.27	0.48
23:DB:2798:U:O5'	23:DB:2798:U:H6	1.95	0.48
23:DB:1064:C:H2'	23:DB:1065:U:O4'	2.14	0.48
5:CF:32:ALA:O	5:CF:33:GLU:HB2	2.13	0.48
23:DB:769:U:H2'	23:DB:770:G:C8	2.49	0.48
23:BB:858:G:H21	23:BB:2268:A:H3'	1.78	0.48
23:BB:2365:G:O2'	52:BW:59:PHE:HE1	1.96	0.48
25:BC:185:ALA:C	25:BC:187:CYS:H	2.17	0.48
23:DB:2752:C:H2'	23:DB:2753:A:O4'	2.13	0.48
23:DB:919:U:H2'	23:DB:920:A:H8	1.72	0.48
52:DW:66:VAL:HA	52:DW:81:ILE:HG22	1.95	0.48
50:BT:2:ILE:HG12	50:BT:3:ARG:H	1.79	0.48
48:BG:36:LEU:N	48:BG:36:LEU:HD22	2.29	0.48
42:BN:8:ARG:HB2	42:BN:43:GLU:OE1	2.13	0.48
1:AA:947:G:H4'	12:AM:107:THR:OG1	2.14	0.48
23:BB:988:A:C8	30:BY:13:ILE:HD12	2.48	0.48
4:CE:132:PRO:O	4:CE:136:VAL:HG12	2.13	0.48
18:CS:61:VAL:HG12	18:CS:62:THR:N	2.27	0.48
18:CS:62:THR:H	18:CS:65:MET:HB3	1.78	0.48
10:CK:92:ARG:NH2	21:CU:24:LYS:HG2	2.27	0.48
13:CN:30:ILE:O	13:CN:40:ARG:HA	2.13	0.48
23:BB:2547:A:H4'	27:BK:29:HIS:CE1	2.48	0.48
25:BC:16:VAL:N	25:BC:203:VAL:HG12	2.28	0.48
20:AB:16:GLY:HA2	20:AB:40:ILE:HD12	1.95	0.48
3:CD:123:MET:HA	3:CD:128:VAL:HA	1.95	0.48
31:D0:32:THR:OG1	31:D0:50:GLY:HA2	2.13	0.48
49:BR:38:VAL:HG13	49:BR:54:VAL:HG12	1.94	0.48
9:CJ:8:ILE:N	9:CJ:8:ILE:HD12	2.29	0.48
20:AB:101:THR:HG23	20:AB:102:ASN:N	2.28	0.48
37:BL:99:ASN:O	37:BL:100:ILE:HB	2.13	0.48
45:DS:50:VAL:HA	45:DS:53:SER:HB3	1.95	0.48
10:AK:80:ASN:CB	10:AK:105:ARG:HB3	2.44	0.48
23:BB:2821:A:OP2	26:BD:115:GLY:HA3	2.14	0.48
38:BM:31:PHE:HB3	38:BM:130:PHE:CZ	2.48	0.48
4:CE:45:VAL:HG13	4:CE:117:ALA:HA	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:490:C:H2'	1:CA:491:G:H8	1.78	0.48
41:BJ:100:VAL:O	41:BJ:104:ALA:HB2	2.14	0.48
1:AA:265:G:H4'	16:AQ:67:SER:HA	1.95	0.48
8:CI:9:GLY:HA2	8:CI:80:HIS:HD2	1.76	0.48
1:AA:236:A:H2'	1:AA:237:G:H8	1.78	0.48
36:D2:9:VAL:CG1	36:D2:10:LEU:N	2.77	0.48
39:DX:55:THR:O	39:DX:58:ASN:HB3	2.14	0.48
23:DB:540:C:O2'	23:DB:541:A:H5'	2.13	0.48
1:CA:401:C:H2'	1:CA:402:G:H8	1.79	0.48
23:BB:1999:C:O2'	23:BB:2000:C:H5'	2.14	0.48
23:BB:1874:C:H2'	23:BB:1875:G:O4'	2.13	0.48
20:CB:71:THR:HG23	20:CB:94:ARG:H	1.79	0.48
23:BB:2100:G:C6	23:BB:2190:G:C6	3.02	0.48
14:CO:8:THR:O	14:CO:11:ILE:HG22	2.12	0.48
38:BM:69:PRO:HA	38:BM:94:ALA:HB2	1.95	0.48
9:CJ:92:LEU:HD13	9:CJ:92:LEU:N	2.28	0.48
9:CJ:83:THR:O	9:CJ:86:ALA:HB3	2.13	0.48
1:AA:448:A:H2'	1:AA:449:G:C8	2.48	0.48
23:BB:2854:G:H2'	23:BB:2855:C:H6	1.77	0.48
23:BB:818:G:N1	23:BB:1187:G:H2'	2.28	0.48
1:AA:663:A:H5'	1:AA:836:G:OP1	2.13	0.48
23:BB:935:C:O2'	23:BB:936:A:H5'	2.14	0.48
23:BB:2784:U:H2'	23:BB:2785:C:H6	1.78	0.48
22:BA:88:C:O2'	22:BA:89:U:H5''	2.14	0.48
23:DB:1047:G:H3'	23:DB:1048:A:H5'	1.96	0.48
23:BB:2529:G:H4'	48:BG:174:LYS:HB2	1.94	0.48
1:CA:98:A:H2'	1:CA:99:C:H6	1.78	0.48
23:BB:2678:C:H2'	23:BB:2679:A:H8	1.77	0.48
43:DO:100:HIS:C	43:DO:104:GLN:HB2	2.34	0.48
10:AK:63:GLN:O	10:AK:67:GLU:HG2	2.13	0.48
23:BB:2597:G:C6	23:BB:2598:A:N6	2.81	0.48
23:BB:429:A:H2'	23:BB:430:A:C8	2.48	0.48
23:DB:789:A:H5''	57:DB:3670:HOH:O	2.12	0.48
23:DB:1798:U:OP1	25:DC:257:ARG:HB2	2.13	0.48
8:CI:42:THR:O	8:CI:45:MET:HG2	2.13	0.48
23:BB:1838:C:H4'	23:BB:1839:G:H8	1.78	0.48
23:DB:283:G:H2'	23:DB:284:U:O4'	2.13	0.48
23:DB:67:U:H2'	23:DB:68:G:H8	1.77	0.48
23:DB:112:U:H2'	23:DB:113:U:H5'	1.96	0.48
23:BB:2519:U:C6	23:BB:2542:A:N6	2.82	0.48
23:DB:1799:G:H4'	23:DB:1800:C:O5'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DW:30:VAL:HA	52:DW:60:ALA:O	2.13	0.48
53:B6:78:ALA:O	53:B6:82:ALA:HB2	2.13	0.48
53:B6:92:PRO:CG	53:B6:101:ILE:HG12	2.43	0.48
40:BH:99:ILE:HD12	40:BH:130:VAL:HG11	1.96	0.48
44:DQ:94:LEU:HD21	49:DR:11:GLN:HB2	1.94	0.48
8:AI:16:ALA:HA	8:AI:66:VAL:HA	1.96	0.48
5:AF:3:HIS:CE1	5:AF:95:ALA:H	2.31	0.48
13:AN:60:ARG:NE	13:AN:69:PRO:HB3	2.29	0.48
23:DB:496:G:H4'	45:DS:61:ASN:ND2	2.29	0.48
7:AH:77:VAL:HG11	7:AH:124:ILE:HG21	1.95	0.48
41:BJ:44:TYR:C	41:BJ:44:TYR:CD2	2.86	0.48
45:BS:17:VAL:HG11	45:BS:103:ILE:HG12	1.96	0.48
33:D1:33:LEU:HD12	33:D1:34:GLU:H	1.77	0.48
43:DO:49:VAL:HG11	43:DO:82:ALA:HA	1.95	0.48
31:B0:39:ARG:O	31:B0:40:HIS:HB2	2.13	0.48
13:CN:30:ILE:CG2	13:CN:41:TRP:HB2	2.40	0.48
35:DV:77:VAL:CG1	38:DM:136:MET:HB3	2.44	0.48
20:AB:15:PHE:CD1	20:AB:16:GLY:N	2.81	0.48
8:CI:87:MET:HE2	8:CI:87:MET:O	2.13	0.48
1:CA:332:G:OP2	19:CT:4:LYS:HB2	2.14	0.48
38:BM:26:VAL:HA	38:BM:66:ARG:HH21	1.78	0.48
49:BR:39:LEU:N	49:BR:39:LEU:HD23	2.29	0.48
37:DL:96:LYS:HD3	37:DL:103:ILE:HA	1.96	0.48
23:BB:2143:C:N3	23:BB:2148:G:O6	2.46	0.48
38:BM:55:ARG:CA	38:BM:55:ARG:HH21	2.22	0.48
1:AA:906:A:C2'	1:AA:907:A:H5''	2.43	0.48
46:DU:21:ARG:HD3	46:DU:72:PHE:CD2	2.48	0.48
26:BD:69:ALA:HA	26:BD:73:VAL:HB	1.95	0.48
22:BA:101:A:H4'	23:BB:864:G:H4'	1.94	0.48
23:BB:2015:A:H2'	23:BB:2016:U:O4'	2.13	0.48
38:DM:4:PRO:HG2	38:DM:70:ASP:HA	1.94	0.48
23:DB:150:U:H2'	23:DB:151:C:H6	1.78	0.48
1:AA:474:G:H2'	1:AA:475:C:H6	1.78	0.48
37:DL:3:LEU:O	37:DL:5:THR:N	2.45	0.48
1:CA:1460:C:H2'	1:CA:1461:G:C8	2.49	0.48
23:DB:15:G:O2'	23:DB:16:C:H5'	2.14	0.48
1:AA:1330:U:H2'	1:AA:1331:G:H5'	1.95	0.48
12:CM:19:THR:HA	12:CM:24:VAL:HG23	1.95	0.48
1:AA:807:A:H2'	1:AA:808:C:C6	2.48	0.48
23:BB:1000:A:H2'	23:BB:1001:A:H8	1.77	0.48
11:CL:54:VAL:HG12	11:CL:55:ARG:N	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AG:135:LYS:HE2	6:AG:139:ASP:OD2	2.14	0.48
23:DB:1924:C:O2'	23:DB:1925:C:H5'	2.14	0.48
23:BB:2699:C:H2'	23:BB:2700:A:H8	1.78	0.48
23:DB:876:C:H3'	23:DB:877:A:C8	2.48	0.48
3:CD:115:GLN:HE21	3:CD:119:HIS:CE1	2.31	0.48
40:BH:67:ALA:HB1	40:BH:70:GLU:CG	2.43	0.48
41:DJ:72:LYS:CB	41:DJ:89:PHE:H	2.26	0.48
6:CG:89:GLU:OE1	6:CG:152:HIS:NE2	2.47	0.48
23:DB:2545:G:O2'	23:DB:2546:U:H5'	2.13	0.48
5:CF:86:ARG:HH11	17:CR:64:LEU:HD12	1.78	0.48
1:AA:1477:U:H2'	1:AA:1478:U:H6	1.78	0.48
43:DO:100:HIS:CA	43:DO:104:GLN:HB2	2.44	0.48
7:AH:118:ALA:HB3	7:AH:120:LEU:CD2	2.43	0.48
1:CA:224:U:H2'	1:CA:225:C:H6	1.78	0.48
1:AA:1244:G:H2'	1:AA:1245:C:C6	2.48	0.48
1:AA:178:C:O2'	1:AA:179:A:H5'	2.14	0.48
50:DT:61:LEU:HD12	50:DT:62:VAL:O	2.13	0.48
23:DB:2011:U:H2'	23:DB:2012:G:O4'	2.14	0.48
1:AA:542:G:O2'	1:AA:543:U:H5'	2.12	0.48
41:DJ:133:ALA:C	41:DJ:135:GLN:H	2.17	0.48
23:DB:2588:G:H2'	23:DB:2589:A:O4'	2.13	0.48
1:CA:64:G:H3'	1:CA:64:G:OP1	2.13	0.48
44:BQ:20:ALA:HA	44:BQ:23:TYR:CE1	2.49	0.48
47:BF:91:ARG:O	47:BF:92:GLY:C	2.51	0.48
20:AB:209:VAL:HG23	20:AB:210:THR:H	1.79	0.48
26:BD:106:LYS:N	26:BD:106:LYS:HD3	2.28	0.48
53:D6:80:GLU:CA	53:D6:83:ILE:HG12	2.41	0.48
8:CI:120:ALA:O	8:CI:121:ARG:HG2	2.14	0.48
35:DV:71:LYS:O	35:DV:94:ALA:HB2	2.14	0.48
1:CA:1493:A:OP1	55:CA:1662:PAR:H51	2.12	0.48
13:AN:9:GLU:HB2	13:AN:62:ARG:NE	2.29	0.48
47:DF:148:VAL:O	47:DF:149:ARG:HG2	2.13	0.48
1:AA:1283:U:O2'	1:AA:1284:C:H5'	2.13	0.48
23:BB:1076:C:H4'	24:BI:94:LYS:NZ	2.28	0.48
45:DS:17:VAL:HG11	45:DS:103:ILE:HG12	1.95	0.48
47:DF:168:LEU:HD13	47:DF:172:PHE:HE2	1.79	0.48
18:CS:42:ASN:N	18:CS:42:ASN:HD22	2.10	0.48
13:AN:20:PHE:CB	13:AN:24:ALA:HB2	2.44	0.48
16:AQ:60:ILE:HD13	16:AQ:60:ILE:H	1.78	0.48
23:BB:1176:U:H2'	23:BB:1177:G:O4'	2.13	0.48
52:BW:9:THR:OG1	52:BW:10:ARG:N	2.45	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:587:C:O2'	37:DL:19:LEU:HD13	2.14	0.48
23:DB:2869:G:H2'	23:DB:2870:C:C6	2.48	0.48
48:DG:163:TYR:O	48:DG:165:ASP:N	2.47	0.48
23:DB:549:G:H2'	41:DJ:2:LYS:CE	2.43	0.48
1:CA:719:C:H2'	17:CR:38:ILE:HD11	1.96	0.48
23:BB:1278:C:O3'	42:BN:34:ILE:HG23	2.13	0.48
31:D0:42:ILE:HG12	42:DN:99:LYS:O	2.13	0.48
24:DI:100:ILE:O	24:DI:139:VAL:HG13	2.14	0.48
36:B2:21:ARG:CD	36:B2:43:THR:HG21	2.44	0.48
4:AE:143:LEU:O	4:AE:146:MET:HG2	2.13	0.48
4:AE:151:MET:O	4:AE:154:ALA:HB3	2.13	0.48
33:B1:7:LYS:HA	33:B1:23:THR:HG22	1.94	0.48
23:DB:1579:A:H2'	23:DB:1580:A:H8	1.78	0.48
3:AD:90:LEU:O	3:AD:93:LEU:HB2	2.14	0.48
1:AA:1048:G:H4'	13:AN:2:LYS:HZ2	1.76	0.48
1:AA:194:C:O2'	1:AA:195:A:H5'	2.14	0.48
37:DL:4:ASN:ND2	37:DL:4:ASN:N	2.60	0.48
27:BK:75:SER:HB2	28:BP:73:PHE:HA	1.94	0.48
28:BP:56:SER:O	28:BP:74:GLN:HA	2.14	0.48
28:BP:94:ALA:C	28:BP:95:LYS:HD2	2.34	0.48
13:CN:17:ASP:HA	13:CN:21:ALA:HB2	1.94	0.48
39:BX:10:SER:HA	39:BX:57:LEU:HD13	1.94	0.48
1:AA:1124:G:H5''	9:AJ:37:ARG:O	2.13	0.48
29:BE:21:ARG:HG3	29:BE:22:ASP:O	2.13	0.48
1:CA:377:G:H2'	1:CA:378:G:H8	1.77	0.48
7:CH:113:ARG:NH2	7:CH:114:ALA:HA	2.29	0.48
2:CC:131:ARG:HG2	2:CC:131:ARG:NH1	2.25	0.48
23:BB:6:A:H2'	23:BB:7:G:C8	2.47	0.48
23:DB:1968:G:H5''	57:DB:3572:HOH:O	2.13	0.48
23:DB:6:A:H4'	41:DJ:131:ASN:O	2.14	0.48
23:BB:1570:A:H2'	23:BB:1571:A:C8	2.49	0.48
23:DB:2368:C:H2'	23:DB:2369:A:H8	1.77	0.48
23:DB:629:G:H5''	23:DB:650:C:O2'	2.13	0.48
4:AE:32:PHE:CE2	4:AE:55:VAL:HG22	2.49	0.48
43:DO:40:ILE:HG22	43:DO:44:GLY:HA2	1.95	0.48
23:DB:257:C:H2'	23:DB:258:G:O4'	2.14	0.48
1:AA:810:C:O2'	1:AA:811:C:H5'	2.14	0.48
1:CA:26:A:H61	1:CA:558:G:H1'	1.79	0.48
1:AA:886:G:O2'	1:AA:887:G:H5'	2.13	0.48
37:BL:119:PRO:HA	37:BL:138:ALA:O	2.13	0.48
23:BB:359:G:O2'	23:BB:360:U:H5'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:516:C:O2'	23:DB:517:C:H5'	2.14	0.48
23:BB:56:A:H2'	23:BB:57:C:C6	2.48	0.48
20:CB:118:THR:O	20:CB:121:GLN:HB3	2.14	0.48
23:DB:1671:U:H2'	23:DB:1673:G:OP2	2.14	0.48
23:BB:2328:A:H2'	23:BB:2329:U:H6	1.76	0.48
48:BG:68:ARG:NH1	48:BG:72:ASN:HD22	2.09	0.48
44:DQ:29:ARG:HG2	44:DQ:29:ARG:HH11	1.77	0.48
26:BD:54:ALA:HA	26:BD:76:GLY:N	2.28	0.48
47:DF:91:ARG:O	47:DF:92:GLY:C	2.51	0.48
8:AI:5:TYR:HB3	8:AI:88:GLU:OE2	2.14	0.48
8:AI:75:ALA:HA	8:AI:78:ILE:HD12	1.96	0.48
26:DD:55:LYS:C	26:DD:57:ALA:H	2.17	0.48
22:DA:29:A:H2'	22:DA:30:C:O4'	2.14	0.48
48:DG:18:ILE:HA	48:DG:22:VAL:O	2.14	0.48
29:DE:60:TRP:CE3	29:DE:60:TRP:HA	2.48	0.48
38:DM:24:THR:HG23	38:DM:34:LYS:HE3	1.95	0.48
41:BJ:31:GLU:O	41:BJ:34:ARG:HB2	2.13	0.48
41:BJ:43:GLU:O	41:BJ:45:THR:HG22	2.14	0.48
23:BB:1652:A:OP1	42:BN:8:ARG:HD3	2.14	0.48
25:BC:89:ASN:O	25:BC:105:ALA:HB3	2.12	0.48
22:BA:28:C:N4	22:BA:56:G:C6	2.82	0.48
43:BO:35:ILE:HG21	43:BO:71:ALA:CB	2.43	0.48
37:BL:4:ASN:ND2	37:BL:4:ASN:N	2.61	0.48
24:DI:52:LEU:HD13	24:DI:81:LYS:HZ3	1.79	0.48
47:BF:108:PRO:O	47:BF:110:ILE:HG23	2.13	0.48
40:DH:86:ASP:C	40:DH:88:GLY:H	2.17	0.48
42:DN:106:ASP:OD1	42:DN:108:ALA:HB3	2.14	0.48
29:DE:29:HIS:C	29:DE:32:VAL:HG22	2.34	0.48
50:DT:50:LEU:C	50:DT:52:GLU:H	2.17	0.48
25:DC:202:ARG:NH1	25:DC:213:ARG:NE	2.60	0.48
23:BB:662:G:O2'	23:BB:663:G:H5'	2.13	0.48
23:BB:1029:A:H2'	23:BB:1030:C:O4'	2.13	0.48
9:CJ:55:PRO:HA	13:CN:80:ARG:HH22	1.72	0.48
35:DV:30:ILE:HB	35:DV:38:LEU:HB3	1.95	0.48
23:DB:2465:C:O2'	23:DB:2466:C:H5'	2.14	0.48
53:D6:1:MET:CG	53:D6:2:THR:H	2.26	0.48
20:CB:15:PHE:CD1	20:CB:16:GLY:N	2.82	0.48
31:D0:42:ILE:HG22	31:D0:43:THR:O	2.14	0.48
44:DQ:105:PHE:HA	44:DQ:108:LEU:HG	1.95	0.48
24:DI:129:GLU:HB3	24:DI:133:ARG:NH1	2.28	0.48
23:DB:1439:A:N7	23:DB:1440:U:C6	2.82	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AE:80:LEU:HD13	4:AE:95:MET:HB3	1.96	0.48
25:DC:43:ASN:ND2	25:DC:44:ASN:N	2.57	0.48
29:DE:126:VAL:HG22	29:DE:127:GLU:H	1.77	0.48
20:CB:101:THR:HG23	20:CB:102:ASN:H	1.78	0.48
20:CB:102:ASN:O	20:CB:106:VAL:HG23	2.14	0.48
1:CA:714:G:H2'	1:CA:715:A:C8	2.49	0.48
31:D0:31:LYS:N	31:D0:31:LYS:HD2	2.26	0.48
3:AD:169:TRP:CD1	3:AD:170:LEU:HD23	2.49	0.48
4:CE:151:MET:O	4:CE:154:ALA:HB3	2.13	0.48
23:DB:265:A:O2'	23:DB:266:G:H4'	2.14	0.48
29:DE:41:GLN:O	29:DE:42:GLY:O	2.32	0.48
1:CA:621:A:H2'	1:CA:622:A:H8	1.77	0.48
20:AB:20:ARG:HA	20:AB:20:ARG:NE	2.28	0.48
1:AA:1009:U:O2	1:AA:1009:U:H2'	2.13	0.48
7:AH:55:LYS:NZ	7:AH:55:LYS:HA	2.27	0.48
23:BB:2244:U:H2'	23:BB:2245:U:O4'	2.14	0.48
1:AA:1053:G:C4'	1:AA:1054:C:H5'	2.43	0.48
1:AA:212:G:H2'	1:AA:213:G:H8	1.78	0.48
23:BB:2700:A:H2'	23:BB:2701:U:C6	2.49	0.48
3:CD:11:SER:HA	3:CD:18:LEU:HD22	1.96	0.48
23:BB:1045:C:H5''	23:BB:1047:G:O4'	2.14	0.48
51:BZ:69:ALA:HA	51:BZ:72:ARG:NH1	2.28	0.48
16:AQ:32:ILE:HG23	16:AQ:33:TYR:CD2	2.48	0.48
23:DB:1416:G:O2'	23:DB:1417:C:H6	1.96	0.48
20:CB:129:THR:C	20:CB:131:LYS:N	2.67	0.48
29:DE:37:ALA:HB1	29:DE:92:HIS:O	2.13	0.48
2:CC:13:ILE:C	2:CC:15:LYS:H	2.17	0.48
23:DB:2834:G:O6	23:DB:2879:A:H2'	2.13	0.48
23:BB:2358:A:H61	37:BL:54:GLN:HE22	1.60	0.48
43:DO:94:ARG:HD2	43:DO:97:PHE:O	2.14	0.48
47:BF:120:SER:OG	47:BF:129:MET:HB3	2.13	0.48
23:BB:235:U:H2'	23:BB:236:C:C6	2.49	0.48
23:BB:1848:A:H2'	23:BB:1849:G:C8	2.49	0.48
29:BE:37:ALA:HB1	29:BE:92:HIS:O	2.13	0.48
23:DB:1576:U:O2'	23:DB:1577:C:H5'	2.14	0.48
23:DB:78:U:H2'	23:DB:79:C:C6	2.49	0.48
23:DB:1747:U:H2'	23:DB:1748:C:C6	2.48	0.48
48:BG:133:LYS:N	48:BG:133:LYS:HD3	2.27	0.48
23:BB:620:G:H5'	23:BB:620:G:N3	2.27	0.48
23:BB:771:G:O2'	23:BB:772:C:H5'	2.14	0.48
51:BZ:53:ALA:O	51:BZ:55:GLY:N	2.38	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:97:ASN:ND2	29:BE:100:MET:HG3	2.29	0.48
9:CJ:26:VAL:HG12	9:CJ:30:LYS:HE2	1.95	0.48
10:CK:27:ASN:O	10:CK:56:LYS:HD2	2.12	0.48
1:CA:1379:G:O2'	1:CA:1380:U:H5'	2.14	0.48
1:AA:1132:C:H2'	1:AA:1133:G:C8	2.47	0.48
42:DN:9:GLN:O	42:DN:17:ARG:HD3	2.13	0.48
6:CG:16:LYS:HD2	6:CG:43:TYR:CD1	2.49	0.48
2:CC:182:ASP:HB2	2:CC:203:LYS:HE2	1.95	0.48
10:CK:125:LYS:O	21:CU:33:ARG:NH2	2.46	0.48
23:BB:18:U:OP1	44:BQ:29:ARG:NH2	2.47	0.48
44:DQ:23:TYR:CD2	44:DQ:23:TYR:N	2.79	0.48
26:BD:176:ASP:HB2	26:BD:190:LYS:HG2	1.94	0.48
41:BJ:18:VAL:CG1	41:BJ:54:ILE:HD11	2.43	0.48
13:AN:9:GLU:O	13:AN:13:VAL:HG23	2.13	0.48
13:CN:63:CYS:SG	13:CN:82:LYS:HG3	2.53	0.48
43:DO:35:ILE:HG21	43:DO:71:ALA:HA	1.96	0.48
24:BI:74:PRO:O	24:BI:77:VAL:HG22	2.13	0.48
1:AA:1278:G:H4'	1:AA:1279:G:O4'	2.13	0.48
47:BF:7:TYR:HA	47:BF:11:VAL:HB	1.95	0.48
29:BE:138:LEU:O	29:BE:142:ALA:N	2.47	0.48
49:DR:20:VAL:HG12	49:DR:21:ARG:N	2.29	0.48
12:CM:109:LYS:HG3	12:CM:110:GLY:N	2.29	0.48
23:DB:1244:A:O2'	23:DB:1245:G:H5'	2.13	0.48
23:DB:138:U:H2'	23:DB:140:C:C1'	2.44	0.48
7:CH:31:LEU:O	7:CH:35:ILE:HG13	2.13	0.48
23:BB:1244:A:O2'	23:BB:1245:G:H5'	2.14	0.48
13:AN:52:ARG:HD2	13:AN:58:ARG:HH21	1.78	0.48
43:DO:55:GLU:HB2	43:DO:58:ILE:HD12	1.96	0.48
35:DV:9:ARG:HH21	35:DV:12:GLN:HA	1.74	0.48
23:BB:2645:G:H4'	23:BB:2732:G:H2'	1.96	0.48
27:BK:43:ILE:HG21	27:BK:46:ALA:HB2	1.96	0.48
20:CB:38:HIS:O	20:CB:39:ILE:HD13	2.13	0.48
20:CB:16:GLY:HA3	20:CB:40:ILE:H	1.78	0.48
43:BO:58:ILE:O	43:BO:62:LEU:HB2	2.13	0.48
27:BK:79:PHE:HZ	27:BK:104:THR:HG23	1.78	0.48
23:BB:1287:A:H3'	23:BB:1288:G:H21	1.76	0.48
25:DC:159:THR:H	25:DC:194:VAL:CG1	2.27	0.48
1:AA:1074:G:O4'	20:AB:102:ASN:HB2	2.14	0.48
2:CC:185:THR:HG22	2:CC:198:LYS:HA	1.95	0.48
31:D0:30:ASP:OD2	31:D0:31:LYS:HD2	2.13	0.48
26:BD:68:PHE:C	26:BD:73:VAL:HB	2.33	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:472:U:H2'	1:CA:473:U:C6	2.49	0.48
19:AT:70:LYS:HA	19:AT:73:ARG:NH1	2.29	0.48
22:BA:113:C:H2'	22:BA:114:C:C6	2.49	0.48
29:BE:48:THR:O	29:BE:52:VAL:HG23	2.14	0.48
33:B1:36:LYS:HA	33:B1:46:VAL:O	2.13	0.48
22:DA:13:G:H1'	22:DA:69:G:N2	2.29	0.48
23:BB:1854:A:H61	23:BB:1888:G:H1'	1.78	0.48
45:BS:44:ALA:C	45:BS:46:LEU:H	2.16	0.48
5:CF:53:LYS:C	5:CF:54:LEU:HD22	2.33	0.48
19:CT:57:VAL:HB	19:CT:71:ALA:HB1	1.95	0.48
1:CA:678:U:O2'	1:CA:679:C:H5'	2.14	0.48
7:CH:101:ALA:HB3	7:CH:112:ASP:HB3	1.96	0.48
23:DB:543:G:H21	23:DB:545:U:H5'	1.78	0.48
14:AO:8:THR:O	14:AO:11:ILE:HG22	2.13	0.48
52:BW:77:LYS:HZ2	52:BW:77:LYS:H	1.60	0.48
23:DB:2700:A:O2'	23:DB:2701:U:H5'	2.14	0.48
23:BB:2852:G:H2'	23:BB:2853:C:H6	1.77	0.48
43:BO:28:VAL:HG21	43:BO:106:LEU:HD21	1.96	0.48
42:BN:19:ALA:C	42:BN:21:PHE:N	2.67	0.48
23:DB:2784:U:H2'	23:DB:2785:C:H6	1.79	0.48
23:BB:175:G:O2'	23:BB:176:A:H5'	2.14	0.48
23:BB:1708:C:H2'	23:BB:1709:U:H6	1.78	0.48
25:BC:2:VAL:HG23	25:BC:3:VAL:N	2.27	0.48
7:CH:29:SER:OG	7:CH:32:LYS:HG3	2.13	0.48
48:DG:87:GLN:HE21	48:DG:164:ALA:HA	1.77	0.48
1:AA:591:U:H2'	1:AA:592:G:C8	2.49	0.48
23:BB:807:U:H2'	23:BB:808:G:C8	2.49	0.48
23:BB:656:G:H2'	23:BB:657:U:C6	2.49	0.48
46:BU:31:GLY:O	46:BU:66:VAL:HG12	2.14	0.48
7:CH:55:LYS:NZ	7:CH:55:LYS:HA	2.29	0.48
23:BB:598:U:H2'	23:BB:599:A:C8	2.49	0.48
23:DB:1369:G:O2'	23:DB:1370:C:H5'	2.14	0.48
46:DU:4:ILE:HG13	46:DU:66:VAL:HG23	1.95	0.48
29:DE:11:ALA:O	29:DE:12:LEU:HD22	2.13	0.48
48:DG:133:LYS:N	48:DG:133:LYS:HD3	2.28	0.48
1:AA:26:A:H61	1:AA:558:G:H1'	1.78	0.48
32:B4:13:ASN:O	32:B4:27:CYS:HA	2.13	0.48
12:AM:71:GLU:HA	12:AM:74:MET:SD	2.54	0.48
28:BP:77:SER:O	28:BP:80:VAL:HG12	2.14	0.48
32:B4:19:ARG:O	32:B4:20:ASP:HB2	2.13	0.48
13:AN:42:ASN:O	13:AN:45:LEU:HB3	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:553:G:O2'	23:DB:554:U:H5'	2.13	0.48
36:B2:3:ARG:NE	36:B2:3:ARG:HA	2.29	0.48
38:DM:33:LEU:HD22	38:DM:128:THR:OG1	2.14	0.48
23:DB:1099:G:O2'	23:DB:1100:C:H5'	2.14	0.48
25:DC:181:ARG:HD3	25:DC:182:LYS:H	1.77	0.48
44:BQ:30:VAL:CG1	44:BQ:31:TYR:H	1.97	0.48
48:DG:8:VAL:HG22	48:DG:68:ARG:HD3	1.96	0.48
37:DL:122:VAL:HG23	37:DL:143:GLU:OE1	2.13	0.48
20:AB:14:HIS:HB2	20:AB:208:ALA:CB	2.44	0.48
20:AB:187:ASP:HB3	20:AB:201:GLY:O	2.14	0.48
53:D6:41:LEU:HD13	53:D6:52:LEU:HD13	1.95	0.48
47:DF:87:LYS:CG	47:DF:88:VAL:H	2.20	0.48
1:CA:1350:A:H2'	1:CA:1351:U:C6	2.49	0.48
20:CB:162:VAL:HG13	20:CB:184:ALA:CB	2.36	0.48
20:CB:187:ASP:HB3	20:CB:201:GLY:O	2.14	0.48
8:AI:24:ASN:CG	8:AI:25:GLY:H	2.17	0.48
44:BQ:63:ARG:NH1	44:BQ:96:ASP:HB2	2.16	0.48
51:BZ:33:LEU:HA	51:BZ:51:VAL:O	2.14	0.48
3:AD:25:ARG:O	3:AD:26:ALA:HB3	2.14	0.48
47:BF:39:VAL:CG2	47:BF:48:LEU:HG	2.43	0.48
42:DN:79:LEU:C	42:DN:81:ASN:H	2.17	0.48
40:DH:125:THR:HA	40:DH:146:VAL:CG1	2.44	0.48
45:DS:13:SER:OG	45:DS:16:LYS:HB2	2.14	0.48
47:DF:104:THR:C	47:DF:108:PRO:HG2	2.34	0.48
1:CA:947:G:H2'	1:CA:948:C:C6	2.48	0.48
29:BE:61:ARG:HH12	29:BE:64:GLY:HA3	1.77	0.48
23:BB:811:U:OP2	37:BL:20:GLY:HA2	2.13	0.48
23:BB:973:A:H1'	23:BB:1188:U:C5	2.48	0.48
38:DM:135:VAL:O	38:DM:136:MET:HG3	2.13	0.48
39:BX:7:ARG:HG3	39:BX:7:ARG:O	2.14	0.48
27:BK:43:ILE:CG2	27:BK:46:ALA:HB2	2.44	0.48
23:BB:26:G:H1'	23:BB:514:A:N6	2.28	0.48
20:CB:33:ALA:HB2	20:CB:38:HIS:ND1	2.29	0.48
10:CK:28:ASN:HD22	10:CK:46:ALA:HB3	1.79	0.48
9:AJ:15:HIS:O	9:AJ:18:ILE:HG22	2.14	0.48
24:BI:62:ALA:C	24:BI:64:ARG:H	2.16	0.48
28:BP:6:GLN:NE2	28:BP:7:LEU:N	2.62	0.48
26:BD:114:LYS:HG2	26:BD:166:GLY:HA2	1.95	0.48
42:BN:24:MET:SD	42:BN:44:LEU:HD22	2.54	0.48
1:AA:310:G:H5''	15:AP:31:ARG:HB2	1.96	0.48
11:CL:23:LEU:O	11:CL:25:ALA:N	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BV:78:GLN:O	35:BV:87:GLN:N	2.44	0.48
6:AG:41:ILE:HG21	6:AG:115:MET:CG	2.43	0.48
33:D1:36:LYS:HA	33:D1:46:VAL:O	2.12	0.48
6:CG:100:MET:O	6:CG:104:VAL:HG23	2.14	0.48
23:BB:1825:U:H2'	23:BB:1826:G:C8	2.49	0.48
23:BB:1432:G:H2'	23:BB:1433:A:H8	1.77	0.48
23:BB:705:A:N6	23:BB:726:G:O2'	2.46	0.48
30:BY:7:THR:HA	30:BY:34:THR:HA	1.95	0.48
42:DN:49:GLU:HA	42:DN:94:TYR:HD2	1.77	0.48
23:DB:1868:C:H2'	23:DB:1869:G:O4'	2.13	0.48
43:DO:7:ARG:HA	43:DO:10:ARG:HD2	1.95	0.48
20:CB:23:ASN:HD22	20:CB:24:PRO:CD	2.26	0.48
23:BB:2455:G:O2'	23:BB:2456:C:H5'	2.14	0.48
23:BB:912:C:H2'	23:BB:913:U:C6	2.49	0.48
42:DN:19:ALA:C	42:DN:21:PHE:N	2.67	0.48
3:AD:77:GLU:OE1	3:AD:80:ARG:HD3	2.14	0.48
23:DB:1536:C:H4'	23:DB:1537:G:C4	2.49	0.48
22:DA:87:U:H2'	22:DA:88:C:H5''	1.95	0.48
1:CA:54:C:H2'	1:CA:352:C:N4	2.29	0.48
1:AA:590:U:H2'	1:AA:591:U:H6	1.79	0.48
1:CA:201:G:O2'	1:CA:202:G:H5'	2.14	0.48
43:BO:104:GLN:O	43:BO:107:ALA:HB3	2.14	0.48
23:DB:1339:G:H21	23:DB:1603:A:H1'	1.79	0.48
53:B6:7:TYR:OH	53:B6:157:ALA:HA	2.13	0.48
6:CG:119:LEU:O	6:CG:123:LEU:HG	2.13	0.48
1:CA:1366:C:H2'	1:CA:1367:C:C6	2.47	0.48
1:CA:106:C:O2'	1:CA:107:G:H5'	2.14	0.48
8:AI:11:ARG:CZ	8:AI:106:ASP:OD1	2.62	0.48
23:DB:696:G:O2'	23:DB:697:G:H5'	2.14	0.48
1:AA:631:C:H3'	1:AA:632:U:H5'	1.96	0.48
7:AH:23:ALA:CB	7:AH:61:THR:HA	2.44	0.48
23:DB:2300:C:H2'	23:DB:2301:C:C6	2.48	0.48
23:DB:2588:G:H3'	57:DB:3589:HOH:O	2.13	0.48
1:AA:37:U:H2'	1:AA:38:G:C8	2.49	0.48
51:DZ:39:TRP:HB2	51:DZ:46:PHE:CE2	2.49	0.48
1:AA:201:G:O2'	1:AA:469:C:H4'	2.13	0.48
23:BB:195:A:H61	23:BB:198:C:H3'	1.79	0.48
27:DK:11:ALA:O	27:DK:100:PHE:N	2.47	0.48
23:DB:2297:A:N6	23:DB:2319:G:H1'	2.29	0.48
6:AG:16:LYS:HD2	6:AG:43:TYR:CD1	2.49	0.48
2:CC:38:VAL:HG23	2:CC:39:ARG:N	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:128:MET:H	2:CC:128:MET:CE	2.26	0.48
1:AA:434:U:H3'	1:AA:435:A:H8	1.77	0.48
23:BB:2081:U:H2'	23:BB:2082:A:C8	2.49	0.48
23:BB:796:C:H2'	23:BB:797:G:C8	2.48	0.48
23:BB:2330:G:H1'	52:BW:38:ARG:CB	2.44	0.48
23:BB:2387:U:H1'	52:BW:38:ARG:CZ	2.44	0.48
25:DC:185:ALA:C	25:DC:187:CYS:H	2.16	0.48
44:BQ:18:LYS:C	44:BQ:20:ALA:N	2.67	0.48
21:AU:40:PRO:C	21:AU:42:THR:H	2.17	0.48
10:CK:12:ARG:HD3	10:CK:76:TYR:CE1	2.49	0.48
53:B6:41:LEU:HD21	53:B6:88:LEU:CD1	2.44	0.48
13:AN:13:VAL:HG22	13:AN:59:GLN:HG2	1.96	0.48
12:AM:13:HIS:HB2	12:AM:16:ILE:HG22	1.96	0.48
1:AA:947:G:H2'	1:AA:948:C:H6	1.78	0.48
25:BC:91:ALA:HB3	25:BC:105:ALA:HB2	1.94	0.48
25:BC:83:ASP:HB2	25:BC:90:ILE:HB	1.96	0.48
47:BF:141:ASP:O	47:BF:145:VAL:HG13	2.13	0.48
40:DH:121:VAL:O	40:DH:122:LEU:HB2	2.14	0.48
47:DF:138:PRO:HA	47:DF:142:TYR:CE2	2.49	0.48
35:BV:80:HIS:CD2	35:BV:82:TYR:H	2.13	0.48
24:BI:56:VAL:CG2	24:BI:68:PHE:HB2	2.43	0.48
1:AA:980:C:H4'	13:AN:58:ARG:HH12	1.78	0.48
20:CB:218:ALA:HA	20:CB:221:ARG:HG2	1.96	0.48
23:BB:2267:A:C8	23:BB:2267:A:O5'	2.65	0.48
32:D4:22:VAL:O	32:D4:24:ARG:HG3	2.14	0.48
45:BS:26:GLY:O	45:BS:28:LYS:N	2.46	0.48
23:DB:2466:C:OP1	32:D4:4:ARG:HB3	2.14	0.48
37:DL:99:ASN:O	37:DL:100:ILE:HB	2.14	0.48
1:AA:1389:C:H2'	1:AA:1390:U:H6	1.78	0.48
45:DS:44:ALA:C	45:DS:46:LEU:H	2.16	0.48
1:CA:672:U:H2'	1:CA:673:A:C8	2.49	0.48
20:CB:98:GLY:O	20:CB:102:ASN:N	2.46	0.48
40:DH:115:VAL:HG23	40:DH:132:PHE:HA	1.95	0.48
41:BJ:103:ILE:HD12	41:BJ:104:ALA:N	2.29	0.48
1:CA:320:A:H2'	1:CA:321:A:H8	1.74	0.48
12:AM:2:ARG:CG	12:AM:6:ILE:H	2.25	0.48
23:BB:2794:C:H2'	23:BB:2795:C:C6	2.49	0.48
4:CE:80:LEU:HD13	4:CE:95:MET:HB3	1.96	0.48
35:BV:78:GLN:HB2	35:BV:88:HIS:O	2.13	0.48
3:AD:22:SER:H	3:AD:109:THR:HG22	1.79	0.48
1:CA:394:G:O2'	1:CA:395:C:H5'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1570:A:H2'	23:DB:1571:A:C8	2.49	0.48
7:CH:94:VAL:CG2	7:CH:101:ALA:HB2	2.44	0.48
23:DB:2247:A:H2'	23:DB:2248:C:C6	2.49	0.48
1:AA:482:A:C2	1:AA:483:C:H1'	2.49	0.48
50:BT:45:ALA:O	50:BT:48:GLN:HB2	2.14	0.48
22:BA:97:C:H2'	22:BA:98:G:H5'	1.96	0.48
1:AA:611:C:H2'	1:AA:612:C:C6	2.49	0.48
1:AA:1035:A:H2'	1:AA:1036:A:C8	2.48	0.48
23:BB:2776:A:H4'	23:BB:2777:G:C5'	2.44	0.48
23:BB:1341:G:H5'	50:BT:61:LEU:HD22	1.96	0.48
25:DC:42:ARG:HG3	25:DC:46:GLY:O	2.14	0.48
24:BI:116:MET:SD	24:BI:124:MET:HB2	2.54	0.48
1:CA:1096:C:H2'	1:CA:1097:C:C6	2.48	0.48
23:BB:1464:G:H2'	23:BB:1465:G:C8	2.48	0.48
24:BI:52:LEU:HD21	24:BI:81:LYS:NZ	2.29	0.48
21:CU:31:VAL:HG12	21:CU:31:VAL:O	2.13	0.48
23:DB:1050:A:H2'	23:DB:1051:G:C8	2.49	0.48
23:DB:351:C:H2'	23:DB:352:A:C8	2.48	0.48
28:DP:62:LYS:HE3	28:DP:64:SER:OG	2.14	0.48
25:BC:226:PRO:HG3	25:BC:233:GLY:H	1.79	0.48
41:DJ:75:TYR:CD1	41:DJ:86:GLN:HB3	2.49	0.48
44:BQ:45:ALA:O	44:BQ:49:ARG:N	2.42	0.48
1:AA:462:G:H2'	1:AA:463:U:C6	2.49	0.48
31:D0:54:ILE:H	42:DN:118:ARG:HH12	1.62	0.48
48:BG:28:LYS:O	48:BG:29:ASN:HB3	2.14	0.48
1:AA:218:U:H2'	1:AA:219:U:C6	2.49	0.48
1:CA:742:G:H2'	1:CA:743:A:H8	1.79	0.48
23:DB:2478:A:H5'	32:D4:32:LYS:HE3	1.96	0.48
1:AA:323:U:H2'	1:AA:324:G:O4'	2.14	0.48
23:DB:1916:A:H2'	23:DB:1917:U:O4'	2.13	0.48
1:AA:610:U:O2	1:AA:610:U:O4'	2.32	0.48
35:DV:46:LYS:HD2	35:DV:46:LYS:N	2.29	0.48
23:DB:2076:U:O2	23:DB:2076:U:O4'	2.28	0.48
37:DL:142:ILE:N	37:DL:142:ILE:HD12	2.28	0.48
23:BB:257:C:H2'	23:BB:258:G:O4'	2.14	0.48
20:CB:130:LYS:HA	20:CB:133:ALA:HB3	1.96	0.48
25:DC:83:ASP:HB2	25:DC:90:ILE:HB	1.95	0.47
21:AU:35:GLU:HB3	21:AU:36:PHE:H	1.53	0.47
37:DL:89:VAL:HG13	37:DL:89:VAL:O	2.15	0.47
37:BL:120:VAL:HG12	37:BL:121:THR:N	2.29	0.47
53:D6:38:LEU:CD1	53:D6:66:LEU:HD23	2.43	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:79:THR:HG22	40:BH:145:ASN:HB2	1.96	0.47
40:BH:83:LYS:CB	40:BH:91:PHE:HB2	2.39	0.47
53:B6:76:LEU:HD23	53:B6:77:LYS:CE	2.44	0.47
20:CB:205:ALA:O	20:CB:209:VAL:HG22	2.14	0.47
8:AI:62:LEU:N	8:AI:62:LEU:HD13	2.29	0.47
51:DZ:77:LYS:CD	51:DZ:78:TYR:H	2.27	0.47
47:DF:71:LYS:O	47:DF:72:SER:HB3	2.14	0.47
13:AN:60:ARG:HE	13:AN:62:ARG:HG2	1.79	0.47
38:DM:12:MET:HB2	38:DM:72:PRO:HG2	1.96	0.47
23:DB:2444:G:OP2	29:DE:63:LYS:HD2	2.14	0.47
29:DE:56:GLY:O	29:DE:58:LYS:HD3	2.13	0.47
1:CA:1014:A:H4'	18:CS:13:HIS:CD2	2.48	0.47
50:BT:50:LEU:O	50:BT:51:PHE:HB2	2.14	0.47
25:DC:75:ALA:HB1	25:DC:93:VAL:HG22	1.96	0.47
2:CC:63:ILE:HD12	2:CC:98:ALA:CB	2.35	0.47
47:DF:3:LEU:HB2	47:DF:100:GLU:OE1	2.14	0.47
53:D6:45:TYR:CZ	53:D6:75:ALA:HB2	2.48	0.47
12:AM:3:ILE:HA	12:AM:56:ARG:CG	2.40	0.47
12:AM:52:ILE:HD12	12:AM:55:LEU:CD1	2.43	0.47
53:B6:109:GLU:O	53:B6:112:LYS:HG3	2.14	0.47
23:BB:2271:G:H2'	23:BB:2272:U:C6	2.48	0.47
53:D6:31:GLY:CA	53:D6:106:LEU:HD13	2.39	0.47
45:BS:27:LYS:CD	45:BS:27:LYS:H	2.27	0.47
49:DR:49:ILE:HG21	49:DR:53:PHE:C	2.34	0.47
3:AD:122:ILE:HG22	3:AD:123:MET:N	2.29	0.47
53:B6:114:LEU:HG	53:B6:183:ILE:HD11	1.95	0.47
23:DB:278:A:N7	23:DB:361:G:N1	2.62	0.47
20:CB:101:THR:HG23	20:CB:102:ASN:N	2.29	0.47
23:DB:2146:C:H4'	23:DB:2148:G:O4'	2.13	0.47
1:AA:672:U:H2'	1:AA:673:A:C8	2.49	0.47
1:CA:265:G:H4'	16:CQ:67:SER:HA	1.96	0.47
23:DB:718:A:H5'	23:DB:719:C:C5	2.49	0.47
23:DB:1508:A:H5'	23:DB:1509:A:N6	2.29	0.47
29:DE:21:ARG:HG3	29:DE:22:ASP:O	2.14	0.47
39:BX:51:ALA:O	39:BX:55:THR:N	2.41	0.47
3:CD:2:ARG:HB3	3:CD:114:ARG:HH22	1.78	0.47
23:BB:2461:A:N1	23:BB:2490:G:N2	2.61	0.47
1:AA:394:G:O2'	1:AA:395:C:H5'	2.12	0.47
23:DB:544:C:O2'	23:DB:545:U:O5'	2.32	0.47
23:DB:2064:C:H1'	23:DB:2450:A:C6	2.49	0.47
23:DB:1958:C:H2'	23:DB:1959:G:H8	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:16:THR:HG22	3:AD:17:ASP:H	1.79	0.47
1:AA:1036:A:H2'	1:AA:1037:C:C6	2.48	0.47
3:AD:115:GLN:HE21	3:AD:119:HIS:CE1	2.32	0.47
1:CA:505:G:H2'	1:CA:506:G:C8	2.49	0.47
1:AA:1450:U:H2'	1:AA:1452:C:C4	2.49	0.47
24:DI:37:PHE:HB2	24:DI:66:PHE:CE2	2.49	0.47
1:CA:1488:G:H2'	1:CA:1489:G:C8	2.49	0.47
22:DA:93:C:O2'	22:DA:94:A:H5'	2.14	0.47
49:DR:14:VAL:HG21	49:DR:98:ILE:HG12	1.94	0.47
1:CA:317:U:H2'	1:CA:318:G:C8	2.49	0.47
12:CM:22:TYR:O	12:CM:68:LEU:HD12	2.14	0.47
20:CB:93:HIS:HB2	20:CB:145:ASN:O	2.14	0.47
7:CH:54:THR:HG23	7:CH:55:LYS:N	2.29	0.47
23:BB:1576:U:O2'	23:BB:1577:C:H5'	2.13	0.47
23:DB:283:G:H2'	23:DB:284:U:C4'	2.44	0.47
9:AJ:41:PRO:O	9:AJ:42:LEU:HB2	2.14	0.47
1:AA:106:C:H2'	1:AA:107:G:H8	1.79	0.47
3:CD:106:PHE:CD1	3:CD:144:ILE:HD11	2.49	0.47
23:DB:2452:C:H2'	23:DB:2453:A:C8	2.49	0.47
1:AA:1109:C:H2'	1:AA:1110:A:O4'	2.14	0.47
23:BB:734:A:O2'	23:BB:735:A:H5'	2.14	0.47
23:BB:553:G:O2'	23:BB:554:U:H5'	2.13	0.47
48:DG:53:PRO:HG3	48:DG:61:TRP:CD2	2.48	0.47
23:BB:2221:G:O2'	23:BB:2222:C:H5'	2.14	0.47
23:BB:2234:G:O2'	23:BB:2235:G:H5'	2.13	0.47
23:DB:1184:U:O2'	23:DB:1185:G:H5'	2.14	0.47
1:CA:1113:C:O2'	1:CA:1114:C:H5'	2.13	0.47
53:B6:141:LYS:NZ	53:B6:141:LYS:HB3	2.29	0.47
50:DT:67:VAL:HG23	50:DT:75:GLY:O	2.14	0.47
23:DB:2386:A:C2	52:DW:38:ARG:HD2	2.48	0.47
25:DC:20:ASN:OD1	25:DC:22:GLU:HG2	2.14	0.47
47:BF:57:ALA:HB2	47:BF:64:PRO:HG2	1.96	0.47
23:BB:2313:C:O3'	47:BF:87:LYS:HE2	2.14	0.47
53:B6:80:GLU:O	53:B6:83:ILE:HG12	2.14	0.47
41:DJ:43:GLU:O	41:DJ:45:THR:HG22	2.14	0.47
44:DQ:60:TRP:C	44:DQ:64:ILE:HG12	2.33	0.47
25:BC:75:ALA:HB1	25:BC:93:VAL:HG22	1.95	0.47
41:DJ:25:LEU:O	41:DJ:27:ARG:N	2.44	0.47
48:DG:36:LEU:N	48:DG:36:LEU:HD22	2.29	0.47
1:CA:599:C:H2'	1:CA:600:A:H8	1.79	0.47
50:BT:29:THR:HB	50:BT:86:THR:HG22	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:22:VAL:HG13	48:BG:36:LEU:HD13	1.95	0.47
51:BZ:5:CYS:SG	51:BZ:8:THR:HG23	2.54	0.47
13:AN:63:CYS:HB2	13:AN:79:SER:HB3	1.95	0.47
46:BU:86:PHE:HB3	46:BU:90:LYS:O	2.14	0.47
23:BB:1241:A:H2'	23:BB:1242:U:C5'	2.40	0.47
23:BB:2882:A:OP1	42:BN:96:ARG:HD2	2.14	0.47
40:DH:94:ILE:CG2	40:DH:95:GLY:N	2.77	0.47
1:AA:1080:A:OP1	4:AE:51:LYS:HD2	2.13	0.47
47:DF:12:VAL:O	47:DF:16:MET:HG2	2.14	0.47
21:AU:3:ILE:HG23	21:AU:18:PHE:CD1	2.48	0.47
21:AU:3:ILE:HG21	21:AU:19:LYS:CG	2.44	0.47
1:CA:947:G:H4'	12:CM:107:THR:OG1	2.14	0.47
10:CK:95:THR:HG23	10:CK:96:ILE:N	2.29	0.47
23:DB:2271:G:H2'	23:DB:2272:U:C6	2.49	0.47
20:AB:218:ALA:HA	20:AB:221:ARG:HG2	1.96	0.47
21:CU:24:LYS:HZ3	21:CU:25:ALA:N	2.11	0.47
48:BG:148:ARG:HA	48:BG:161:VAL:CG1	2.45	0.47
15:CP:67:ILE:HG13	15:CP:71:VAL:HG13	1.95	0.47
27:DK:54:LYS:H	27:DK:54:LYS:CD	2.21	0.47
38:BM:63:ILE:HA	38:BM:104:GLU:O	2.14	0.47
3:CD:158:LEU:HA	3:CD:161:ALA:CB	2.44	0.47
27:BK:105:ARG:HD2	27:BK:122:VAL:CG1	2.45	0.47
35:BV:38:LEU:HG	35:BV:40:ILE:HG23	1.96	0.47
23:DB:1779:U:C5	23:DB:1784:A:N7	2.81	0.47
23:DB:1551:A:H2'	23:DB:1552:A:O4'	2.14	0.47
23:BB:2186:G:H2'	23:BB:2187:U:O4'	2.14	0.47
20:CB:147:LEU:O	20:CB:151:LYS:HB3	2.14	0.47
40:DH:50:ARG:HA	40:DH:53:GLU:HB3	1.96	0.47
1:CA:1001:C:H2'	1:CA:1002:G:H8	1.79	0.47
1:CA:35:G:H2'	1:CA:36:C:H6	1.78	0.47
23:DB:61:C:O2'	23:DB:62:U:H5'	2.14	0.47
3:CD:90:LEU:O	3:CD:93:LEU:HB2	2.15	0.47
1:AA:555:U:H2'	1:AA:556:C:C6	2.49	0.47
1:CA:1072:G:H2'	1:CA:1073:U:C6	2.48	0.47
10:CK:80:ASN:CB	10:CK:105:ARG:HB3	2.43	0.47
23:BB:559:G:H2'	23:BB:560:C:O4'	2.15	0.47
3:CD:171:GLU:O	3:CD:180:THR:N	2.47	0.47
23:DB:1854:A:H61	23:DB:1888:G:H1'	1.77	0.47
1:CA:401:C:H1'	1:CA:622:A:H1'	1.96	0.47
49:DR:2:TYR:HB2	49:DR:42:ALA:N	2.29	0.47
1:AA:859:G:O2'	1:AA:860:A:H5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DN:45:ARG:HG3	42:DN:95:THR:HG21	1.95	0.47
26:BD:133:THR:HG23	26:BD:134:HIS:CD2	2.49	0.47
1:CA:392:C:H2'	1:CA:393:A:H8	1.78	0.47
22:DA:114:C:H2'	22:DA:115:A:H8	1.78	0.47
12:AM:100:ARG:HH11	12:AM:103:THR:HB	1.79	0.47
38:BM:69:PRO:HG2	38:BM:70:ASP:H	1.79	0.47
50:BT:73:ARG:NH2	50:BT:73:ARG:HB3	2.29	0.47
23:DB:2199:A:H3'	23:DB:2200:C:C6	2.49	0.47
43:BO:40:ILE:HG22	43:BO:44:GLY:HA2	1.96	0.47
24:BI:85:ILE:CD1	24:BI:137:LEU:HD21	2.44	0.47
18:CS:11:ASP:HB2	18:CS:14:LEU:HD23	1.96	0.47
23:DB:7:G:H4'	41:DJ:15:TRP:CZ2	2.49	0.47
28:DP:100:ARG:HB3	28:DP:101:GLU:H	1.49	0.47
22:DA:60:C:H2'	22:DA:61:G:C8	2.48	0.47
22:BA:59:A:H2'	22:BA:60:C:O4'	2.13	0.47
1:CA:513:C:H2'	1:CA:514:C:H6	1.79	0.47
23:DB:2369:A:H2'	23:DB:2370:G:C8	2.49	0.47
23:DB:2491:U:H5''	23:DB:2570:G:C5'	2.44	0.47
1:AA:1499:A:H2'	1:AA:1500:A:H8	1.78	0.47
1:AA:996:A:H2'	1:AA:997:U:C6	2.49	0.47
25:DC:226:PRO:HG3	25:DC:233:GLY:N	2.29	0.47
28:BP:29:VAL:HA	28:BP:79:VAL:O	2.13	0.47
51:BZ:39:TRP:HB2	51:BZ:46:PHE:CE2	2.48	0.47
1:AA:1363:A:O2'	1:AA:1365:G:N7	2.40	0.47
48:DG:29:ASN:HD21	48:DG:81:GLY:HA2	1.80	0.47
23:DB:1689:A:H2'	23:DB:1690:A:C8	2.49	0.47
23:BB:1111:A:N3	23:BB:1112:G:H1'	2.29	0.47
1:AA:882:C:O2'	1:AA:883:C:H5'	2.14	0.47
3:CD:12:ARG:O	3:CD:37:PRO:HG3	2.14	0.47
47:BF:68:LYS:N	47:BF:68:LYS:HD2	2.29	0.47
23:BB:2798:U:O5'	23:BB:2798:U:H6	1.97	0.47
23:BB:853:C:H2'	23:BB:854:C:C6	2.48	0.47
52:BW:18:LYS:O	52:BW:34:SER:HA	2.14	0.47
23:DB:2330:G:N3	52:DW:38:ARG:HB3	2.30	0.47
23:BB:2315:G:H5'	47:BF:156:THR:HG21	1.95	0.47
26:BD:91:THR:HG23	26:BD:92:VAL:N	2.25	0.47
53:D6:40:HIS:O	53:D6:41:LEU:C	2.52	0.47
8:CI:16:ALA:HA	8:CI:66:VAL:HA	1.96	0.47
8:CI:66:VAL:HG11	8:CI:78:ILE:HD11	1.96	0.47
41:BJ:24:THR:O	41:BJ:25:LEU:HB3	2.14	0.47
41:DJ:3:THR:HB	41:DJ:44:TYR:OH	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DZ:32:ASN:O	51:DZ:33:LEU:O	2.31	0.47
41:DJ:18:VAL:HG22	41:DJ:19:ASP:N	2.29	0.47
29:DE:58:LYS:CD	29:DE:58:LYS:N	2.77	0.47
23:DB:2733:A:H3'	23:DB:2733:A:C8	2.49	0.47
46:DU:3:LYS:NZ	46:DU:82:VAL:HB	2.30	0.47
46:BU:85:ARG:HA	46:BU:85:ARG:CZ	2.44	0.47
47:BF:78:ILE:HA	47:BF:79:ARG:HH11	1.79	0.47
47:BF:11:VAL:O	47:BF:12:VAL:HB	2.14	0.47
25:BC:180:MET:CB	25:BC:268:ARG:H	2.27	0.47
47:DF:27:VAL:O	47:DF:29:ARG:HD2	2.14	0.47
4:CE:33:THR:HB	4:CE:49:TYR:CE1	2.49	0.47
25:DC:180:MET:CB	25:DC:268:ARG:H	2.27	0.47
28:BP:92:ARG:HH11	28:BP:92:ARG:HG3	1.77	0.47
9:AJ:56:HIS:O	9:AJ:57:VAL:HG12	2.13	0.47
23:DB:139:U:H3	50:DT:49:LYS:NZ	2.12	0.47
28:DP:92:ARG:HH11	28:DP:92:ARG:HG3	1.78	0.47
53:D6:146:GLU:HG3	53:D6:147:LEU:HG	1.95	0.47
23:DB:1656:C:P	26:DD:141:ARG:HH11	2.37	0.47
24:DI:18:ASN:N	24:DI:19:PRO:CD	2.77	0.47
3:CD:126:GLY:O	3:CD:127:ARG:HD2	2.15	0.47
49:DR:16:GLU:HG2	49:DR:101:ILE:HB	1.96	0.47
23:DB:2895:G:H2'	23:DB:2896:C:H6	1.76	0.47
1:CA:313:A:H2'	1:CA:314:C:H6	1.79	0.47
44:DQ:14:LYS:O	44:DQ:15:LYS:C	2.51	0.47
6:CG:144:ALA:O	6:CG:146:ALA:N	2.45	0.47
23:BB:851:C:O4'	30:BY:46:MET:HG2	2.14	0.47
25:BC:159:THR:N	25:BC:194:VAL:CG1	2.77	0.47
28:BP:9:GLN:HA	28:BP:12:MET:SD	2.54	0.47
51:BZ:14:THR:HA	51:BZ:28:ARG:HB2	1.95	0.47
5:AF:5:GLU:HA	5:AF:63:ASN:HA	1.97	0.47
23:BB:1324:G:H1'	23:BB:1616:A:C6	2.50	0.47
48:BG:115:GLN:CD	48:BG:115:GLN:N	2.63	0.47
11:AL:54:VAL:HG12	11:AL:55:ARG:N	2.29	0.47
22:BA:115:A:O2'	22:BA:116:G:H5'	2.13	0.47
38:DM:69:PRO:HG2	38:DM:70:ASP:H	1.78	0.47
1:CA:401:C:H2'	1:CA:402:G:C8	2.48	0.47
1:CA:737:C:O2'	1:CA:738:C:H5'	2.14	0.47
1:CA:1329:A:H5''	12:CM:24:VAL:HA	1.95	0.47
2:CC:42:LEU:O	2:CC:46:LEU:HD23	2.15	0.47
23:DB:935:C:O2'	23:DB:936:A:H5'	2.14	0.47
25:BC:166:ARG:CB	25:BC:171:VAL:HG22	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BY:29:ARG:H	30:BY:33:HIS:HD2	1.58	0.47
50:BT:69:ARG:HB3	50:BT:74:ILE:HA	1.96	0.47
3:CD:18:LEU:HB2	3:CD:20:LEU:HG	1.94	0.47
24:BI:135:MET:HG3	24:BI:137:LEU:HG	1.96	0.47
23:BB:2286:G:C8	23:BB:2286:G:H5'	2.49	0.47
1:CA:478:A:H2'	1:CA:479:U:O4'	2.14	0.47
1:AA:511:C:O2'	1:AA:512:U:H5''	2.15	0.47
1:CA:585:G:H2'	1:CA:586:C:C6	2.49	0.47
1:AA:825:A:H2'	1:AA:826:C:C6	2.48	0.47
29:BE:18:THR:HG22	29:BE:106:LYS:NZ	2.29	0.47
1:CA:766:A:H2'	1:CA:767:A:O4'	2.14	0.47
23:BB:807:U:OP2	37:BL:36:LYS:HD3	2.14	0.47
23:DB:1499:C:O2'	23:DB:1500:G:H5'	2.14	0.47
46:BU:14:THR:O	46:BU:18:LYS:HG2	2.13	0.47
23:DB:787:C:H5''	23:DB:788:A:H5'	1.96	0.47
16:CQ:28:VAL:O	16:CQ:36:PHE:HA	2.14	0.47
23:DB:840:C:H2'	23:DB:841:G:C8	2.50	0.47
1:AA:1246:A:H2'	1:AA:1247:U:C6	2.49	0.47
6:CG:15:PRO:HG2	6:CG:43:TYR:OH	2.14	0.47
7:CH:34:ALA:O	7:CH:38:VAL:HG23	2.13	0.47
1:CA:342:C:O2'	1:CA:343:U:H5'	2.14	0.47
1:AA:929:G:O2'	1:AA:930:C:H5'	2.14	0.47
23:DB:1516:G:O2'	23:DB:1517:G:H5'	2.14	0.47
44:DQ:35:PHE:O	44:DQ:39:ILE:HG12	2.14	0.47
23:BB:2856:A:H2'	23:BB:2857:G:C8	2.49	0.47
1:AA:208:U:O5'	1:AA:208:U:H6	1.96	0.47
23:DB:838:C:O2'	23:DB:839:U:H5'	2.15	0.47
6:CG:94:ARG:NH1	6:CG:98:LEU:HD21	2.29	0.47
23:DB:2201:G:O2'	23:DB:2202:U:H5'	2.14	0.47
25:DC:34:GLU:HG3	25:DC:34:GLU:O	2.14	0.47
53:D6:71:TRP:CD1	53:D6:71:TRP:N	2.82	0.47
23:BB:963:U:O2'	23:BB:964:C:H5'	2.14	0.47
41:DJ:76:HIS:CE1	41:DJ:85:LYS:HB2	2.48	0.47
39:DX:15:ASN:O	39:DX:19:LEU:HD13	2.14	0.47
23:BB:1147:A:O2'	23:BB:1148:U:H5'	2.13	0.47
23:DB:1100:C:H41	24:DI:1:ALA:N	2.12	0.47
23:BB:2332:C:H4'	23:BB:2336:A:C6	2.49	0.47
25:DC:140:VAL:HG12	25:DC:141:HIS:N	2.29	0.47
37:BL:124:GLY:O	37:BL:125:LEU:HG	2.14	0.47
26:BD:109:VAL:HG11	26:BD:193:VAL:CG1	2.44	0.47
26:BD:193:VAL:HB	26:BD:194:PRO:HD2	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:66:VAL:HG22	8:CI:67:LYS:N	2.30	0.47
37:DL:78:ARG:HB3	37:DL:113:ALA:HB2	1.97	0.47
7:AH:101:ALA:HB3	7:AH:112:ASP:HB3	1.96	0.47
44:BQ:79:ILE:HD13	44:BQ:79:ILE:C	2.35	0.47
1:AA:947:G:H2'	1:AA:948:C:C6	2.49	0.47
47:BF:169:LEU:HD22	47:BF:174:PHE:CE1	2.49	0.47
29:BE:152:GLU:O	29:BE:153:LEU:HB3	2.14	0.47
12:AM:56:ARG:O	12:AM:59:VAL:HG12	2.14	0.47
23:BB:672:C:O2'	23:BB:673:C:H5'	2.14	0.47
23:DB:1189:A:H2'	23:DB:1190:G:O4'	2.13	0.47
46:BU:47:PRO:CD	46:BU:55:GLY:HA3	2.39	0.47
23:DB:1654:A:H2'	23:DB:1655:A:C8	2.49	0.47
23:DB:844:A:C2	23:DB:845:A:N1	2.82	0.47
23:BB:847:U:O4'	23:BB:847:U:O2	2.30	0.47
1:CA:1337:G:H5''	1:CA:1338:G:OP1	2.14	0.47
40:DH:47:PHE:HB3	40:DH:51:ARG:HH21	1.77	0.47
49:BR:59:ILE:HG23	49:BR:101:ILE:H	1.78	0.47
48:DG:75:VAL:O	48:DG:78:VAL:HG22	2.14	0.47
6:CG:145:GLU:C	6:CG:147:ASN:N	2.68	0.47
23:DB:1441:G:H2'	23:DB:1442:U:H6	1.79	0.47
23:DB:30:G:H2'	23:DB:31:C:H6	1.74	0.47
23:BB:62:U:H2'	23:BB:63:A:O4'	2.14	0.47
20:CB:96:LEU:N	20:CB:99:MET:HE3	2.26	0.47
2:AC:185:THR:HG22	2:AC:198:LYS:HA	1.97	0.47
23:DB:1427:A:H4'	23:DB:1428:C:O5'	2.14	0.47
3:AD:100:VAL:HG21	3:AD:136:VAL:HG21	1.97	0.47
1:AA:617:G:H4'	15:AP:46:LYS:HE2	1.94	0.47
23:BB:2420:C:O2'	23:BB:2421:G:H5'	2.14	0.47
23:BB:2078:C:O2'	23:BB:2079:U:H5'	2.14	0.47
39:DX:17:GLU:HB3	39:DX:53:VAL:CG1	2.45	0.47
6:AG:58:LEU:HA	6:AG:61:PHE:HB3	1.95	0.47
23:BB:727:A:OP1	23:BB:1431:A:O2'	2.30	0.47
20:CB:63:LYS:HB3	20:CB:87:ASP:OD2	2.14	0.47
1:CA:1330:U:H2'	1:CA:1331:G:H5'	1.96	0.47
25:BC:86:ARG:HB3	25:BC:86:ARG:CZ	2.43	0.47
40:BH:57:LYS:HA	40:BH:60:GLU:OE2	2.14	0.47
37:DL:65:GLY:O	37:DL:66:PHE:HB3	2.15	0.47
1:AA:1225:A:H5'	1:AA:1226:C:OP2	2.15	0.47
19:AT:50:PHE:HD2	19:AT:78:LEU:HD13	1.79	0.47
23:BB:1064:C:H5'	24:BI:88:GLY:HA3	1.95	0.47
30:DY:29:ARG:H	30:DY:33:HIS:HD2	1.61	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:60:C:O2'	22:BA:61:G:H5'	2.14	0.47
23:DB:1535:A:H5''	23:DB:1536:C:C5	2.49	0.47
23:DB:528:A:H8	23:DB:528:A:H3'	1.79	0.47
1:CA:1039:G:H2'	1:CA:1040:U:H6	1.80	0.47
25:BC:42:ARG:HG3	25:BC:46:GLY:O	2.14	0.47
2:CC:13:ILE:O	2:CC:15:LYS:N	2.48	0.47
17:CR:22:TYR:CE2	17:CR:23:LYS:HE3	2.50	0.47
1:CA:821:G:H2'	1:CA:822:U:C6	2.49	0.47
1:AA:821:G:H2'	1:AA:822:U:H6	1.79	0.47
1:AA:1366:C:H2'	1:AA:1367:C:C6	2.49	0.47
23:BB:226:A:H5''	23:BB:257:C:O2'	2.14	0.47
48:DG:29:ASN:ND2	48:DG:77:GLY:O	2.47	0.47
37:DL:70:LYS:O	37:DL:73:ILE:HG12	2.14	0.47
1:CA:624:C:H2'	1:CA:625:U:C6	2.50	0.47
23:DB:2555:U:H2'	23:DB:2556:C:O4'	2.14	0.47
1:AA:961:U:OP1	1:AA:1223:C:H4'	2.14	0.47
23:BB:2153:C:H2'	23:BB:2153:C:O2	2.14	0.47
8:CI:71:ILE:HD12	8:CI:71:ILE:N	2.29	0.47
23:BB:1689:A:H2'	23:BB:1690:A:C8	2.49	0.47
23:BB:2494:G:H4'	38:BM:79:ALA:HB2	1.97	0.47
1:AA:1207:G:O2'	1:AA:1208:C:H5'	2.14	0.47
23:DB:2332:C:H4'	23:DB:2336:A:C6	2.49	0.47
48:BG:103:ASN:HA	48:BG:113:ASP:OD1	2.14	0.47
44:DQ:30:VAL:CG1	44:DQ:31:TYR:N	2.65	0.47
47:BF:32:LYS:HA	47:BF:95:MET:CG	2.44	0.47
53:D6:56:ALA:HB2	53:D6:79:ILE:CD1	2.39	0.47
53:B6:93:SER:O	53:B6:99:LEU:HD22	2.14	0.47
1:CA:1352:C:H2'	1:CA:1353:G:C8	2.50	0.47
8:AI:24:ASN:O	8:AI:60:LEU:N	2.48	0.47
51:DZ:56:MET:HA	51:DZ:59:ILE:HG12	1.96	0.47
1:AA:982:U:OP2	13:AN:60:ARG:NH1	2.47	0.47
1:AA:1014:A:H5''	18:AS:13:HIS:HB3	1.95	0.47
30:DY:12:ALA:HB2	30:DY:53:MET:HE1	1.95	0.47
50:BT:85:VAL:C	50:BT:86:THR:HG23	2.34	0.47
23:BB:397:U:H2'	23:BB:398:C:C6	2.49	0.47
22:BA:29:A:H2'	22:BA:30:C:O4'	2.14	0.47
10:AK:113:THR:HG21	21:AU:28:LEU:HD12	1.96	0.47
50:DT:50:LEU:O	50:DT:51:PHE:HB2	2.14	0.47
50:DT:29:THR:CA	50:DT:86:THR:HA	2.40	0.47
23:BB:2809:A:H2'	23:BB:2810:A:C8	2.49	0.47
23:BB:1175:A:H2'	23:BB:1175:A:N3	2.27	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AN:50:LEU:HB3	13:AN:51:PRO:HD3	1.95	0.47
15:AP:71:VAL:HG13	15:AP:72:ALA:N	2.30	0.47
23:DB:1028:A:N6	23:DB:1125:G:H2'	2.29	0.47
13:CN:16:ALA:HA	13:CN:54:SER:O	2.14	0.47
43:BO:26:LEU:HD13	43:BO:39:VAL:HG23	1.96	0.47
35:DV:38:LEU:HG	35:DV:40:ILE:HG23	1.96	0.47
15:CP:71:VAL:HG13	15:CP:72:ALA:N	2.29	0.47
27:DK:43:ILE:CG2	27:DK:46:ALA:HB2	2.43	0.47
20:AB:16:GLY:HA3	20:AB:40:ILE:H	1.79	0.47
20:AB:57:ASN:HD22	20:AB:223:GLY:CA	2.28	0.47
1:CA:1340:A:H2'	1:CA:1341:U:O4'	2.13	0.47
49:DR:39:LEU:HD23	49:DR:39:LEU:N	2.29	0.47
49:DR:59:ILE:HA	49:DR:101:ILE:H	1.78	0.47
21:CU:48:LYS:HA	21:CU:51:ALA:CB	2.41	0.47
38:DM:19:GLY:H	38:DM:38:ARG:NH1	2.09	0.47
9:CJ:7:ARG:O	9:CJ:100:ILE:HA	2.14	0.47
28:DP:6:GLN:NE2	28:DP:7:LEU:N	2.62	0.47
23:DB:2103:C:H2'	23:DB:2104:C:O4'	2.14	0.47
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.49	0.47
2:CC:129:PHE:CE2	2:CC:165:GLU:HG2	2.42	0.47
23:DB:560:C:H3'	23:DB:561:G:C8	2.49	0.47
11:CL:51:VAL:HG12	11:CL:52:CYS:N	2.25	0.47
23:BB:582:A:H2'	23:BB:583:G:C8	2.50	0.47
1:AA:552:U:H2'	1:AA:553:A:C8	2.49	0.47
2:CC:26:LYS:HE2	2:CC:27:GLU:CG	2.44	0.47
1:CA:9:G:H5'	4:CE:107:GLY:CA	2.44	0.47
4:CE:158:LYS:HZ3	7:CH:65:PHE:HA	1.80	0.47
3:CD:167:PRO:HG3	3:CD:170:LEU:HD11	1.96	0.47
23:DB:642:U:O2'	23:DB:644:A:N7	2.44	0.47
23:BB:947:A:H2'	23:BB:948:C:H6	1.77	0.47
23:BB:1825:U:H2'	23:BB:1826:G:H8	1.79	0.47
23:DB:2026:U:H2'	23:DB:2027:G:C8	2.49	0.47
49:BR:2:TYR:CB	49:BR:42:ALA:HB2	2.42	0.47
1:AA:68:G:H5'	1:AA:171:A:O2'	2.13	0.47
23:DB:1809:A:H2'	23:DB:1810:A:C8	2.49	0.47
23:DB:1454:C:H5'	42:DN:63:ARG:CZ	2.45	0.47
1:AA:833:G:H2'	1:AA:834:U:C6	2.49	0.47
37:BL:135:ILE:HG23	37:BL:136:GLU:N	2.29	0.47
23:DB:1535:A:H5''	23:DB:1536:C:H5	1.80	0.47
23:BB:314:C:O2'	23:BB:315:G:H5'	2.13	0.47
26:DD:122:VAL:HA	26:DD:127:PHE:N	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:204:G:H2'	1:CA:205:A:C8	2.48	0.47
23:DB:1163:G:O2'	23:DB:1164:C:H5'	2.14	0.47
44:DQ:40:LYS:HD2	44:DQ:44:TYR:CE1	2.49	0.47
12:CM:23:GLY:HA3	12:CM:68:LEU:CD1	2.44	0.47
1:CA:996:A:H2'	1:CA:997:U:C6	2.50	0.47
26:BD:141:ARG:HG3	26:BD:141:ARG:O	2.15	0.47
43:DO:104:GLN:O	43:DO:107:ALA:HB3	2.14	0.47
23:DB:1842:G:H2'	23:DB:1843:C:H6	1.79	0.47
23:DB:2296:U:H4'	23:DB:2297:A:OP1	2.13	0.47
23:BB:1155:A:O2'	23:BB:1156:A:H2'	2.15	0.47
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.50	0.47
23:DB:2187:U:H2'	23:DB:2188:U:H6	1.80	0.47
1:AA:77:A:H8	1:AA:77:A:O5'	1.97	0.47
1:CA:580:C:H2'	1:CA:581:G:O4'	2.14	0.47
23:DB:2047:C:H2'	23:DB:2048:G:H8	1.80	0.47
32:D4:19:ARG:O	32:D4:20:ASP:HB2	2.14	0.47
25:BC:170:TYR:CE2	25:BC:184:GLU:HA	2.50	0.47
10:AK:41:LEU:HD22	10:AK:76:TYR:CE2	2.50	0.47
5:CF:3:HIS:CE1	5:CF:95:ALA:H	2.33	0.47
48:DG:94:ARG:HB2	48:DG:127:GLN:HG3	1.96	0.47
26:BD:55:LYS:H	26:BD:76:GLY:H	1.62	0.47
40:BH:100:ALA:HB1	40:BH:132:PHE:CE1	2.44	0.47
41:BJ:16:TYR:O	41:BJ:55:ILE:HG12	2.15	0.47
20:CB:14:HIS:HB2	20:CB:208:ALA:CB	2.43	0.47
23:DB:986:C:O2'	23:DB:987:C:H5'	2.13	0.47
25:BC:93:VAL:HG12	25:BC:101:ARG:O	2.14	0.47
26:DD:55:LYS:H	26:DD:76:GLY:H	1.61	0.47
1:CA:599:C:H5''	7:CH:86:LYS:O	2.14	0.47
13:AN:70:HIS:O	13:AN:72:PHE:N	2.48	0.47
42:BN:38:LEU:CB	42:BN:39:PRO:HD3	2.41	0.47
42:BN:106:ASP:OD1	42:BN:108:ALA:HB3	2.14	0.47
1:CA:948:C:O2'	1:CA:949:A:H5'	2.14	0.47
23:BB:1023:U:H2'	23:BB:1024:G:C5'	2.44	0.47
25:DC:12:ARG:HA	25:DC:15:VAL:CG2	2.45	0.47
53:D6:178:LYS:HA	53:D6:181:GLN:OE1	2.14	0.47
23:BB:2270:A:H2'	23:BB:2271:G:O4'	2.13	0.47
8:CI:33:SER:HB3	8:CI:36:GLN:NE2	2.30	0.47
1:AA:723:U:O4'	21:AU:48:LYS:HD3	2.13	0.47
48:DG:148:ARG:HD2	48:DG:149:ALA:N	2.30	0.47
23:DB:981:A:H4'	23:DB:2037:A:H5'	1.97	0.47
13:CN:20:PHE:CB	13:CN:24:ALA:HB2	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BO:26:LEU:HA	43:BO:39:VAL:HA	1.97	0.47
25:BC:204:LEU:HD23	25:BC:209:ALA:CB	2.45	0.47
1:AA:465:A:H5'	1:AA:465:A:N3	2.30	0.47
23:DB:2723:C:O3'	42:DN:1:MET:HE1	2.14	0.47
26:DD:114:LYS:HG2	26:DD:166:GLY:HA2	1.96	0.47
22:BA:105:G:O2'	22:BA:106:G:H5'	2.15	0.47
38:BM:26:VAL:HG23	38:BM:104:GLU:OE2	2.14	0.47
49:BR:49:ILE:HG22	49:BR:54:VAL:HB	1.95	0.47
23:DB:1197:G:H2'	23:DB:1198:U:H6	1.80	0.47
20:CB:212:TYR:O	20:CB:216:VAL:HG13	2.15	0.47
20:CB:110:ILE:O	20:CB:113:LEU:HB3	2.15	0.47
23:DB:192:C:C2'	23:DB:193:U:H5'	2.44	0.47
23:DB:2078:C:O2'	23:DB:2079:U:H5'	2.14	0.47
14:CO:16:GLY:HA2	14:CO:27:VAL:CG2	2.44	0.47
4:AE:45:VAL:CG1	4:AE:116:VAL:HG23	2.45	0.47
46:BU:9:GLU:CD	46:BU:21:ARG:HD2	2.35	0.47
1:CA:238:A:C3'	1:CA:239:U:H5''	2.45	0.47
23:DB:116:C:O2'	23:DB:126:A:C8	2.68	0.47
23:BB:1854:A:H2	23:BB:2087:G:N3	2.12	0.47
30:BY:7:THR:O	30:BY:54:VAL:HG12	2.14	0.47
3:CD:84:ASN:HD22	3:CD:85:THR:N	2.12	0.47
40:DH:3:VAL:HG12	40:DH:38:PRO:HA	1.96	0.47
5:CF:53:LYS:HB3	5:CF:54:LEU:HD22	1.96	0.47
7:CH:44:PHE:HE2	7:CH:100:ILE:HG12	1.79	0.47
19:AT:35:TYR:CG	19:AT:36:ALA:N	2.83	0.47
6:AG:129:ASN:HA	6:AG:134:VAL:HG11	1.95	0.47
6:CG:91:ARG:HD2	6:CG:91:ARG:H	1.80	0.47
22:BA:8:C:O2'	43:BO:40:ILE:HD13	2.14	0.47
1:AA:585:G:H2'	1:AA:586:C:C6	2.50	0.47
34:B3:38:LYS:HG3	34:B3:41:ARG:NH1	2.30	0.47
23:DB:902:C:H2'	23:DB:903:C:H6	1.80	0.47
23:DB:1846:G:H2'	23:DB:1847:A:O4'	2.14	0.47
23:BB:1275:A:N3	23:BB:1275:A:H2'	2.29	0.47
23:BB:585:G:H2'	23:BB:1251:C:H42	1.80	0.47
23:DB:76:C:O2'	23:DB:77:G:H5'	2.14	0.47
34:B3:14:LYS:O	34:B3:21:PHE:O	2.32	0.47
23:BB:1747:U:H2'	23:BB:1748:C:C6	2.49	0.47
24:DI:102:ARG:HG3	24:DI:141:ASP:CB	2.44	0.47
1:AA:777:A:H2'	1:AA:778:G:C8	2.49	0.47
29:DE:88:ARG:HG3	29:DE:88:ARG:NH2	2.29	0.47
17:AR:44:THR:OG1	17:AR:46:THR:HG22	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AG:15:PRO:HG2	6:AG:43:TYR:OH	2.14	0.47
1:CA:1437:A:H2'	1:CA:1438:G:H8	1.78	0.47
23:BB:640:C:H2'	23:BB:641:U:C6	2.49	0.47
45:BS:4:ILE:CG2	45:BS:106:VAL:HG22	2.45	0.47
23:DB:167:A:H2'	23:DB:168:G:O4'	2.15	0.47
1:AA:224:U:H2'	1:AA:225:C:H6	1.78	0.47
23:BB:757:G:H2'	23:BB:758:C:H5'	1.97	0.47
23:BB:1479:G:O2'	23:BB:1480:C:H5'	2.15	0.47
48:DG:125:PRO:HB2	48:DG:129:GLU:OE2	2.14	0.47
1:CA:960:U:O2	1:CA:960:U:H5''	2.15	0.47
23:DB:1661:G:O2'	23:DB:1662:U:H5'	2.15	0.47
23:DB:1098:A:O3'	24:DI:4:VAL:O	2.32	0.47
2:CC:190:THR:CG2	2:CC:191:THR:N	2.77	0.47
23:BB:921:C:H2'	23:BB:922:C:H6	1.80	0.47
25:BC:169:ALA:O	25:BC:185:ALA:HB3	2.15	0.47
23:DB:2336:A:N6	52:DW:40:ARG:HD2	2.29	0.47
48:BG:42:VAL:HG23	48:BG:50:THR:O	2.14	0.47
44:DQ:18:LYS:C	44:DQ:20:ALA:N	2.68	0.47
48:DG:68:ARG:NH1	48:DG:72:ASN:HD22	2.11	0.47
37:BL:124:GLY:N	37:BL:143:GLU:CG	2.71	0.47
53:D6:68:VAL:C	53:D6:70:SER:H	2.17	0.47
53:D6:73:GLN:O	53:D6:77:LYS:HE2	2.14	0.47
53:B6:28:LEU:HD11	53:B6:121:TYR:HE2	1.80	0.47
53:B6:68:VAL:CG1	53:B6:79:ILE:HD13	2.45	0.47
40:BH:82:SER:HB2	40:BH:146:VAL:HG13	1.97	0.47
8:CI:64:ILE:HD12	8:CI:64:ILE:N	2.28	0.47
20:CB:164:ASP:OD1	20:CB:203:ASP:HB2	2.14	0.47
20:CB:209:VAL:HG23	20:CB:210:THR:H	1.79	0.47
1:AA:1147:C:H2'	1:AA:1148:U:C6	2.50	0.47
51:DZ:49:LEU:HB2	51:DZ:51:VAL:HG23	1.97	0.47
25:BC:141:HIS:CG	25:BC:142:ASN:H	2.32	0.47
37:DL:127:VAL:HG22	37:DL:128:THR:N	2.29	0.47
2:AC:80:GLY:O	2:AC:84:GLU:HB2	2.14	0.47
48:DG:15:ASP:OD2	48:DG:17:LYS:HB2	2.14	0.47
48:DG:33:THR:HA	48:DG:34:ARG:NH1	2.30	0.47
1:CA:1216:A:H5''	13:CN:4:SER:CB	2.42	0.47
50:BT:23:ALA:C	50:BT:25:GLU:H	2.16	0.47
50:BT:54:GLU:HB3	50:BT:88:LYS:HB2	1.96	0.47
46:DU:86:PHE:HB3	46:DU:90:LYS:O	2.15	0.47
40:DH:127:GLU:HB2	40:DH:143:ILE:HG22	1.96	0.47
25:BC:188:ARG:HG2	25:BC:188:ARG:HH21	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BO:34:HIS:HB3	43:BO:36:TYR:CE2	2.46	0.47
43:BO:51:ALA:HB3	43:BO:78:VAL:CG2	2.44	0.47
1:AA:410:G:P	3:AD:25:ARG:HE	2.38	0.47
24:DI:72:THR:CG2	24:DI:112:LYS:HD2	2.44	0.47
24:DI:75:ALA:O	24:DI:79:LEU:HG	2.15	0.47
47:BF:66:ILE:HA	47:BF:85:GLY:O	2.15	0.47
29:BE:126:VAL:HG21	29:BE:133:LEU:HB2	1.97	0.47
40:DH:126:GLY:H	40:DH:146:VAL:HB	1.80	0.47
47:DF:113:PHE:CZ	47:DF:175:PRO:HB2	2.50	0.47
10:AK:83:VAL:CB	10:AK:109:ILE:HG23	2.40	0.47
18:CS:48:ILE:HG22	18:CS:49:ALA:N	2.27	0.47
12:AM:10:ASP:HA	12:AM:44:ILE:CD1	2.43	0.47
18:AS:46:LEU:O	18:AS:60:PHE:HA	2.14	0.47
13:AN:25:GLU:O	13:AN:29:ILE:HG13	2.15	0.47
18:AS:62:THR:H	18:AS:65:MET:HB3	1.79	0.47
33:D1:49:LYS:HG3	33:D1:50:GLU:N	2.19	0.47
23:BB:1025:G:H1'	23:BB:1135:C:O5'	2.15	0.47
23:BB:2848:G:H1'	23:BB:2868:A:N6	2.29	0.47
29:BE:58:LYS:N	29:BE:58:LYS:HD3	2.29	0.47
53:D6:174:GLN:NE2	53:D6:178:LYS:HE2	2.30	0.47
45:DS:55:ILE:CD1	45:DS:107:VAL:HG21	2.45	0.47
23:DB:27:G:HO2'	23:DB:28:A:H8	1.55	0.47
32:D4:16:ILE:HG12	32:D4:25:VAL:HG22	1.95	0.47
23:DB:2037:A:H2'	23:DB:2038:G:C8	2.50	0.47
1:AA:1470:U:O2'	1:AA:1471:U:H5'	2.15	0.47
25:BC:15:VAL:HG22	25:BC:204:LEU:O	2.15	0.47
27:BK:15:GLY:HA2	27:BK:46:ALA:HA	1.96	0.47
23:DB:2773:C:H5''	26:DD:169:ARG:HB2	1.94	0.47
23:DB:2773:C:O2'	23:DB:2774:C:H5'	2.15	0.47
31:D0:50:GLY:C	31:D0:51:ARG:HG2	2.35	0.47
23:DB:591:U:O2'	23:DB:592:A:H5'	2.14	0.47
2:CC:110:LEU:HD21	2:CC:140:ALA:O	2.14	0.47
44:BQ:105:PHE:HA	44:BQ:108:LEU:HG	1.97	0.47
27:DK:113:MET:HA	27:DK:116:ILE:HD11	1.95	0.47
44:BQ:14:LYS:O	44:BQ:15:LYS:C	2.52	0.47
1:AA:842:U:H2'	1:AA:843:U:O3'	2.15	0.47
28:DP:6:GLN:O	28:DP:10:GLU:HB2	2.15	0.47
1:AA:86:G:H1'	1:AA:87:C:H5	1.78	0.47
20:CB:65:LYS:HA	20:CB:89:PHE:HE1	1.79	0.47
1:CA:842:U:H2'	1:CA:843:U:O3'	2.15	0.47
9:AJ:7:ARG:O	9:AJ:100:ILE:HA	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AB:147:LEU:O	20:AB:151:LYS:HB3	2.14	0.47
28:BP:6:GLN:HA	28:BP:9:GLN:HG2	1.95	0.47
4:AE:158:LYS:HZ1	7:AH:65:PHE:HA	1.80	0.47
10:AK:28:ASN:HD22	10:AK:29:THR:H	1.63	0.47
10:AK:28:ASN:HD22	10:AK:46:ALA:HB3	1.78	0.47
34:B3:31:ILE:O	34:B3:31:ILE:HG12	2.15	0.47
2:CC:113:LYS:HB2	2:CC:184:ASN:OD1	2.14	0.47
1:CA:1381:U:O2'	1:CA:1382:C:H5'	2.15	0.47
46:DU:39:ASN:CB	46:DU:62:ALA:HB3	2.43	0.47
7:CH:58:LEU:O	7:CH:60:LEU:N	2.48	0.47
2:CC:155:ARG:H	2:CC:162:ALA:HA	1.79	0.47
14:AO:25:THR:CB	14:AO:70:LEU:HD23	2.44	0.47
39:DX:20:ASN:H	39:DX:20:ASN:HD22	1.60	0.47
23:BB:1776:G:O2'	23:BB:1777:U:H5'	2.15	0.47
12:CM:89:ARG:HD3	12:CM:95:PRO:O	2.14	0.47
31:B0:2:VAL:HG12	31:B0:3:GLN:H	1.80	0.47
39:BX:20:ASN:H	39:BX:20:ASN:ND2	2.13	0.47
23:BB:2746:U:H5''	48:BG:137:LYS:HD2	1.97	0.47
1:AA:1096:C:H2'	1:AA:1097:C:C6	2.49	0.47
46:BU:10:VAL:HG21	46:BU:35:VAL:HG21	1.96	0.47
40:BH:41:LYS:CA	40:BH:44:ILE:HG13	2.44	0.47
23:BB:1007:C:H4'	41:BJ:110:PRO:HB3	1.96	0.47
23:BB:1811:G:O2'	23:BB:1812:U:H5'	2.15	0.47
3:CD:192:ALA:C	3:CD:194:ILE:H	2.18	0.47
23:BB:704:G:C2'	23:BB:726:G:H22	2.26	0.47
45:BS:50:VAL:HA	45:BS:53:SER:HB3	1.96	0.47
23:DB:21:A:H2'	23:DB:22:C:H6	1.76	0.47
23:DB:1175:A:H2'	23:DB:1175:A:N3	2.29	0.47
23:DB:705:A:N6	23:DB:726:G:H1'	2.29	0.47
23:DB:2028:U:O2'	23:DB:2029:G:H5'	2.14	0.47
23:BB:1592:C:H2'	23:BB:1593:A:C8	2.48	0.47
23:DB:1805:A:N3	25:DC:49:THR:HG23	2.29	0.47
23:DB:1810:A:H2'	23:DB:1811:G:O4'	2.15	0.47
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.96	0.47
23:DB:2462:C:H2'	23:DB:2463:C:C6	2.50	0.47
23:DB:1356:G:O2'	23:DB:1357:C:H5'	2.15	0.47
23:DB:1573:G:H2'	23:DB:1574:C:H5'	1.97	0.47
26:DD:16:THR:HG22	26:DD:17:GLU:H	1.80	0.47
42:DN:12:ARG:HG2	42:DN:16:HIS:HB2	1.97	0.47
20:AB:172:ILE:HG23	20:AB:182:VAL:HG11	1.96	0.47
23:DB:1637:A:H2'	23:DB:1638:C:H6	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1460:C:H2'	1:AA:1461:G:C8	2.49	0.47
23:BB:1063:G:H4'	24:BI:135:MET:HB3	1.96	0.47
50:DT:14:PRO:HA	50:DT:32:LEU:CB	2.45	0.47
23:DB:962:G:H21	23:DB:2250:G:H1	1.60	0.47
16:AQ:30:HIS:ND1	16:AQ:32:ILE:HG22	2.30	0.47
23:BB:231:A:H3'	23:BB:232:G:C8	2.50	0.47
23:DB:832:U:OP1	37:DL:38:GLN:N	2.48	0.47
48:BG:39:ALA:HB1	48:BG:57:TYR:CG	2.50	0.47
37:BL:129:LYS:HA	37:BL:132:ARG:HG2	1.95	0.47
50:DT:45:ALA:HA	50:DT:48:GLN:CG	2.45	0.47
23:BB:832:U:OP1	37:BL:38:GLN:N	2.48	0.47
1:AA:91:U:H6	1:AA:91:U:O5'	1.96	0.47
28:DP:103:THR:HG22	28:DP:104:GLY:N	2.28	0.47
23:BB:269:C:H2'	23:BB:270:A:C8	2.47	0.47
37:DL:131:ALA:C	37:DL:133:ALA:N	2.68	0.47
1:AA:546:A:P	3:AD:68:GLU:HB3	2.54	0.47
22:BA:11:C:H5''	52:BW:71:LYS:HE3	1.96	0.47
23:DB:1252:G:H1'	44:DQ:32:ARG:NH2	2.29	0.47
23:BB:2543:G:H2'	23:BB:2544:G:H8	1.80	0.47
2:CC:176:THR:HB	2:CC:179:ALA:HB2	1.96	0.47
23:BB:2636:C:H2'	23:BB:2637:U:H6	1.80	0.47
23:BB:2324:U:H3'	23:BB:2325:G:C5'	2.45	0.47
1:CA:1367:C:O2'	1:CA:1368:A:H5'	2.15	0.47
40:BH:59:ALA:CA	40:BH:62:LEU:HG	2.45	0.47
6:CG:38:ALA:O	6:CG:42:VAL:HG23	2.14	0.47
23:DB:1712:U:H2'	23:DB:1713:A:C8	2.49	0.47
23:BB:659:G:H4'	29:BE:95:LYS:HD2	1.96	0.47
29:BE:88:ARG:NH2	29:BE:88:ARG:HG3	2.30	0.47
23:DB:736:C:H2'	23:DB:737:C:H6	1.80	0.47
23:BB:607:U:O4	23:BB:620:G:H5''	2.15	0.47
1:AA:201:G:H2'	1:AA:202:G:O4'	2.14	0.47
23:BB:796:C:H2'	23:BB:797:G:H8	1.78	0.47
27:BK:11:ALA:O	27:BK:100:PHE:N	2.48	0.47
23:DB:1878:G:H2'	23:DB:1879:C:C6	2.49	0.47
39:DX:45:GLN:O	39:DX:46:VAL:HB	2.14	0.47
25:BC:20:ASN:OD1	25:BC:22:GLU:HG2	2.14	0.47
1:CA:555:U:H2'	1:CA:556:C:H6	1.80	0.47
25:BC:4:LYS:HD2	25:BC:5:CYS:H	1.79	0.47
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.50	0.47
23:BB:200:U:H5''	51:BZ:22:LEU:O	2.15	0.47
5:CF:11:HIS:CG	5:CF:12:PRO:HD2	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DY:26:LEU:HB2	30:DY:28:LEU:HG	1.96	0.47
12:AM:72:ILE:O	12:AM:76:ILE:HG13	2.14	0.47
1:AA:1294:G:H2'	1:AA:1295:U:C6	2.49	0.47
1:CA:631:C:H5''	1:CA:632:U:O4'	2.15	0.47
49:BR:29:THR:HG23	49:BR:65:ALA:HA	1.97	0.47
23:DB:438:G:H2'	23:DB:439:A:H8	1.79	0.47
34:B3:9:ALA:HA	37:BL:58:TYR:HB2	1.97	0.47
11:CL:2:THR:OG1	11:CL:5:GLN:HG3	2.15	0.47
53:B6:134:ARG:NH1	53:B6:135:GLU:HG3	2.29	0.47
49:DR:64:VAL:O	49:DR:65:ALA:HB3	2.14	0.47
7:AH:72:GLU:H	7:AH:72:GLU:CD	2.18	0.47
47:DF:68:LYS:HD2	47:DF:68:LYS:N	2.30	0.47
2:AC:54:ILE:HG23	2:AC:54:ILE:O	2.15	0.47
26:BD:61:THR:O	26:BD:64:GLU:HB2	2.14	0.47
1:AA:991:U:H2'	1:AA:1212:U:O2	2.15	0.47
1:CA:93:U:O5'	1:CA:93:U:H6	1.97	0.47
23:DB:1587:G:H2'	23:DB:1588:G:H8	1.80	0.47
23:DB:1098:A:O5'	24:DI:3:LYS:HG2	2.15	0.47
48:DG:103:ASN:HA	48:DG:113:ASP:OD1	2.15	0.47
53:B6:83:ILE:HG22	53:B6:90:LEU:N	2.30	0.47
44:DQ:91:ARG:NH2	49:DR:11:GLN:O	2.48	0.47
29:BE:105:LEU:HA	29:BE:108:ILE:CG2	2.44	0.47
39:BX:23:ARG:O	39:BX:27:ASN:N	2.44	0.47
44:BQ:91:ARG:HH21	44:BQ:94:LEU:HD21	1.79	0.47
3:AD:164:ARG:HG2	3:AD:164:ARG:HH11	1.80	0.47
47:BF:78:ILE:N	47:BF:79:ARG:NH1	2.62	0.47
9:AJ:53:ILE:HG23	9:AJ:54:SER:N	2.30	0.47
47:DF:1:ALA:O	47:DF:4:HIS:HB3	2.15	0.47
11:AL:42:LYS:HB3	11:AL:43:LYS:H	1.48	0.47
23:DB:483:A:H5'	46:DU:44:HIS:O	2.15	0.47
41:BJ:82:GLY:O	41:BJ:84:ILE:HG22	2.15	0.47
38:DM:63:ILE:HA	38:DM:104:GLU:O	2.15	0.47
23:BB:2886:A:N6	31:B0:39:ARG:CZ	2.78	0.47
48:DG:144:ALA:HB1	48:DG:163:TYR:HE1	1.80	0.47
13:CN:50:LEU:HB3	13:CN:51:PRO:HD3	1.96	0.47
8:CI:94:ARG:HH11	8:CI:94:ARG:CB	2.21	0.47
1:CA:332:G:P	19:CT:2:ASN:HB3	2.55	0.47
40:BH:14:SER:CB	40:BH:17:ASP:HB2	2.41	0.47
31:D0:43:THR:HG23	31:D0:47:TYR:C	2.35	0.47
44:DQ:111:LYS:HE3	49:DR:48:LYS:NZ	2.30	0.47
1:AA:1299:A:H2'	1:AA:1301:U:CI'	2.42	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:69:ALA:N	26:DD:73:VAL:HB	2.30	0.47
36:D2:21:ARG:HG2	36:D2:31:LEU:CG	2.40	0.47
16:AQ:58:VAL:HG12	16:AQ:77:VAL:HG13	1.97	0.47
1:AA:1342:C:O2'	1:AA:1343:G:H5'	2.14	0.47
5:CF:98:GLU:HG2	5:CF:99:ALA:H	1.80	0.47
3:CD:197:HIS:O	3:CD:201:GLU:HG3	2.15	0.47
23:BB:1210:G:H1'	23:BB:1212:G:C2	2.50	0.47
23:BB:582:A:H2'	23:BB:583:G:H8	1.80	0.47
1:CA:191:G:H2'	1:CA:192:A:H8	1.80	0.47
35:DV:42:LEU:N	35:DV:42:LEU:HD23	2.26	0.47
39:DX:56:LEU:O	39:DX:58:ASN:N	2.47	0.47
1:AA:401:C:H1'	1:AA:622:A:H1'	1.96	0.47
23:BB:705:A:N6	23:BB:726:G:H1'	2.29	0.47
39:BX:55:THR:O	39:BX:58:ASN:HB3	2.14	0.47
1:AA:170:U:O2'	1:AA:171:A:H5'	2.15	0.47
23:BB:754:U:H2'	23:BB:755:U:C6	2.50	0.47
43:DO:9:ARG:HG3	43:DO:10:ARG:H	1.80	0.47
23:BB:1939:U:O2	23:BB:1967:C:H4'	2.14	0.47
23:DB:834:G:O2'	23:DB:835:C:H5'	2.15	0.47
20:AB:94:ARG:HD2	20:AB:142:LYS:HE2	1.96	0.47
23:DB:754:U:H2'	23:DB:755:U:C6	2.49	0.47
1:AA:182:A:O2'	1:AA:183:C:H3'	2.14	0.47
1:AA:470:C:H2'	1:AA:471:U:H6	1.80	0.47
41:DJ:100:VAL:O	41:DJ:104:ALA:HB2	2.15	0.47
23:DB:1093:G:O2'	23:DB:1094:U:H5'	2.15	0.47
23:BB:2803:G:O2'	23:BB:2804:U:H5'	2.14	0.47
23:DB:459:U:C2'	23:DB:460:A:H5'	2.45	0.47
4:AE:103:GLY:O	4:AE:121:ASN:HA	2.15	0.47
23:BB:2686:G:H2'	23:BB:2687:U:C6	2.50	0.47
23:BB:2360:G:H4'	37:BL:61:LEU:HD11	1.96	0.47
1:CA:1486:G:H2'	1:CA:1487:G:C8	2.50	0.47
23:BB:1633:G:O2'	23:BB:1634:A:H5''	2.15	0.47
23:DB:2098:U:H2'	23:DB:2099:U:C6	2.49	0.47
1:CA:825:A:H2'	1:CA:826:C:C6	2.50	0.47
53:B6:156:ARG:NH2	53:B6:160:GLU:HB2	2.30	0.47
3:CD:145:ARG:HH21	3:CD:147:LYS:HE2	1.79	0.47
23:DB:2880:C:O4'	42:DN:91:ALA:HB3	2.15	0.47
46:DU:18:LYS:HD2	46:DU:19:GLY:N	2.30	0.47
1:AA:201:G:O2'	1:AA:202:G:H5'	2.15	0.47
23:BB:243:U:P	34:B3:5:THR:HG1	2.38	0.47
52:BW:47:GLY:HA3	52:BW:80:SER:CB	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1833:C:O2'	23:DB:1834:U:H5'	2.15	0.47
2:AC:40:GLN:HG3	2:AC:41:TYR:H	1.78	0.47
20:CB:35:ASN:HD22	20:CB:35:ASN:HA	1.54	0.47
1:CA:770:C:O2'	1:CA:771:G:H5'	2.15	0.47
28:BP:114:ASN:HD22	28:BP:114:ASN:HA	1.50	0.47
23:BB:1799:G:H4'	23:BB:1800:C:O5'	2.15	0.47
48:BG:9:VAL:HA	48:BG:48:THR:CG2	2.43	0.47
48:BG:90:GLY:HA3	48:BG:93:TYR:CZ	2.50	0.47
26:BD:31:ALA:O	26:BD:52:THR:HG23	2.13	0.47
53:D6:80:GLU:CG	53:D6:92:PRO:HB3	2.45	0.47
52:DW:23:LYS:H	52:DW:68:PHE:HE2	1.62	0.47
51:DZ:33:LEU:HA	51:DZ:51:VAL:O	2.14	0.47
23:DB:496:G:H4'	45:DS:61:ASN:HD21	1.80	0.47
25:DC:93:VAL:HG12	25:DC:101:ARG:O	2.15	0.47
41:BJ:38:GLY:HA3	41:BJ:50:THR:O	2.15	0.47
51:BZ:6:GLN:HE22	51:BZ:77:LYS:CE	2.28	0.47
24:DI:57:VAL:HG23	24:DI:71:LYS:HZ1	1.80	0.47
46:DU:81:ARG:HB2	46:DU:96:LYS:HG2	1.97	0.47
47:BF:29:ARG:HD3	47:BF:29:ARG:H	1.79	0.47
37:BL:79:LEU:HB2	37:BL:113:ALA:N	2.25	0.47
38:BM:21:ALA:CB	38:BM:100:LYS:HG2	2.45	0.47
12:CM:103:THR:HG22	12:CM:104:ASN:OD1	2.14	0.47
8:AI:87:MET:HB2	8:AI:94:ARG:HD3	1.97	0.47
46:BU:81:ARG:CD	46:BU:96:LYS:HG3	2.44	0.47
23:DB:2267:A:C8	23:DB:2267:A:O5'	2.65	0.47
10:CK:90:PRO:C	10:CK:92:ARG:H	2.18	0.47
53:D6:106:LEU:HG	53:D6:111:ARG:HE	1.79	0.47
23:BB:545:U:C5	23:BB:547:A:H5'	2.50	0.47
23:BB:2733:A:H3'	23:BB:2733:A:C8	2.50	0.47
27:DK:79:PHE:HZ	27:DK:104:THR:HG23	1.80	0.47
49:BR:59:ILE:HA	49:BR:101:ILE:H	1.79	0.47
40:BH:141:LYS:N	40:BH:141:LYS:HD3	2.30	0.47
7:AH:48:PHE:HA	7:AH:59:GLU:O	2.14	0.47
26:DD:90:PHE:O	26:DD:91:THR:C	2.53	0.47
28:DP:6:GLN:HA	28:DP:9:GLN:HG2	1.96	0.47
23:BB:1439:A:H1'	23:BB:1553:A:N6	2.30	0.47
23:BB:1441:G:H4'	23:BB:1628:G:OP1	2.15	0.47
25:BC:159:THR:H	25:BC:194:VAL:CG1	2.27	0.47
9:AJ:8:ILE:HD12	9:AJ:8:ILE:N	2.29	0.47
20:AB:101:THR:HG23	20:AB:102:ASN:H	1.80	0.47
2:AC:155:ARG:H	2:AC:162:ALA:CB	2.28	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:34:C:H2'	1:CA:35:G:H8	1.80	0.47
11:CL:66:ILE:N	11:CL:66:ILE:HD12	2.30	0.47
49:BR:23:GLU:O	49:BR:25:LEU:HD22	2.15	0.47
41:BJ:96:ARG:NE	41:BJ:99:ARG:HD2	2.29	0.47
41:BJ:96:ARG:O	41:BJ:99:ARG:HG3	2.15	0.47
23:BB:2590:A:O2'	23:BB:2591:C:H5'	2.15	0.47
3:CD:100:VAL:HG21	3:CD:136:VAL:HG21	1.97	0.47
23:DB:1854:A:H2	23:DB:2087:G:N3	2.13	0.47
23:DB:1175:A:C3'	23:DB:1176:U:H5'	2.45	0.47
53:B6:140:LEU:O	53:B6:143:LEU:HB2	2.15	0.47
23:BB:2217:G:O2'	23:BB:2218:G:H5'	2.14	0.47
1:AA:954:G:H2'	1:AA:955:U:C6	2.49	0.47
2:AC:70:ALA:HA	2:AC:105:VAL:CG2	2.45	0.47
23:BB:2799:A:O3'	23:BB:2800:A:O4'	2.32	0.47
23:BB:1902:C:H4'	25:BC:241:LYS:O	2.15	0.47
14:AO:5:THR:O	14:AO:8:THR:HB	2.15	0.47
1:CA:1386:G:H2'	1:CA:1387:G:H8	1.80	0.47
23:BB:1946:U:H2'	23:BB:1947:C:H6	1.80	0.47
1:CA:1278:G:H4'	1:CA:1279:G:O4'	2.15	0.47
43:BO:7:ARG:HA	43:BO:10:ARG:HD2	1.96	0.47
1:CA:1180:A:OP1	8:CI:104:THR:HG22	2.13	0.47
11:AL:7:VAL:HG22	16:AQ:33:TYR:CD1	2.49	0.47
1:AA:415:A:H3'	1:AA:416:G:H8	1.80	0.47
23:DB:2636:C:H2'	23:DB:2637:U:H6	1.80	0.47
1:CA:153:C:O2'	1:CA:154:U:H5'	2.15	0.47
1:CA:1132:C:H2'	1:CA:1133:G:H8	1.79	0.47
23:DB:1275:A:N3	23:DB:1275:A:H2'	2.29	0.47
25:DC:177:SER:O	25:DC:270:ARG:HG3	2.14	0.47
23:DB:1159:U:O2'	23:DB:1160:G:H5'	2.15	0.47
33:D1:29:LYS:HE2	33:D1:31:GLU:OE1	2.15	0.47
23:BB:516:C:H2'	23:BB:517:C:H6	1.80	0.47
25:DC:73:ILE:HG21	25:DC:97:ASP:HB2	1.97	0.47
1:CA:160:A:H2'	1:CA:161:A:O4'	2.14	0.47
23:BB:2011:U:H2'	23:BB:2012:G:O4'	2.14	0.47
6:CG:125:ASP:HA	6:CG:128:GLU:OE1	2.15	0.47
23:DB:621:A:H2'	23:DB:622:G:O4'	2.14	0.47
1:CA:1109:C:H2'	1:CA:1110:A:O4'	2.14	0.47
45:DS:57:ASN:HD22	45:DS:57:ASN:HA	1.53	0.47
50:BT:7:LEU:O	50:BT:7:LEU:HD13	2.15	0.47
16:AQ:25:GLU:HA	16:AQ:39:ARG:O	2.14	0.47
25:DC:4:LYS:HD2	25:DC:5:CYS:H	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:27:ARG:H	40:BH:31:VAL:HG23	1.79	0.47
48:BG:9:VAL:HG12	48:BG:11:PRO:CD	2.41	0.47
25:DC:171:VAL:HG23	25:DC:185:ALA:HB2	1.97	0.47
47:BF:57:ALA:HB2	47:BF:64:PRO:CG	2.45	0.47
8:CI:24:ASN:HD22	8:CI:25:GLY:H	1.59	0.47
47:DF:79:ARG:NE	47:DF:82:TYR:HD2	2.13	0.47
22:DA:28:C:N4	22:DA:56:G:C6	2.82	0.47
22:DA:28:C:O2'	22:DA:29:A:H5'	2.15	0.47
44:BQ:94:LEU:CD1	49:BR:13:ARG:HB2	2.44	0.47
47:BF:101:ARG:NH1	47:BF:138:PRO:HB2	2.29	0.47
29:BE:142:ALA:O	29:BE:143:LEU:HD23	2.15	0.47
42:DN:102:PHE:N	42:DN:109:PRO:HA	2.26	0.47
18:AS:2:ARG:O	18:AS:3:SER:C	2.54	0.47
50:DT:58:VAL:O	50:DT:58:VAL:HG13	2.15	0.47
39:DX:7:ARG:O	39:DX:7:ARG:HG3	2.15	0.47
32:B4:7:VAL:HG11	32:B4:23:ILE:O	2.14	0.47
13:AN:52:ARG:C	13:AN:54:SER:H	2.19	0.47
21:CU:24:LYS:HB3	21:CU:24:LYS:NZ	2.30	0.47
45:BS:29:VAL:CA	45:BS:32:ALA:HB3	2.44	0.47
23:DB:2345:G:H4'	23:DB:2346:A:O5'	2.15	0.47
23:DB:559:G:H2'	23:DB:560:C:O4'	2.15	0.47
51:DZ:14:THR:HA	51:DZ:28:ARG:HB2	1.96	0.47
4:AE:38:VAL:O	4:AE:45:VAL:HA	2.15	0.47
39:DX:20:ASN:H	39:DX:20:ASN:ND2	2.11	0.47
19:AT:66:ILE:CG2	19:AT:70:LYS:HB3	2.44	0.47
23:DB:718:A:H2'	23:DB:719:C:H5'	1.96	0.47
9:CJ:35:GLN:HG2	9:CJ:78:GLU:OE1	2.15	0.47
3:CD:96:ARG:HB3	3:CD:98:ASP:OD2	2.15	0.47
28:DP:20:ARG:CG	28:DP:21:PRO:HD2	2.45	0.47
23:BB:705:A:O2'	25:BC:6:LYS:HG3	2.15	0.47
40:BH:57:LYS:HZ3	40:BH:58:LEU:HD13	1.78	0.47
23:BB:755:U:H2'	23:BB:756:A:C8	2.50	0.47
43:DO:7:ARG:HA	43:DO:10:ARG:CD	2.45	0.47
7:CH:74:ILE:O	7:CH:74:ILE:HG23	2.15	0.47
23:BB:1041:G:H2'	23:BB:1042:G:H8	1.79	0.47
28:DP:25:VAL:HA	28:DP:85:VAL:CA	2.45	0.47
6:CG:135:LYS:HE2	6:CG:139:ASP:OD2	2.15	0.47
30:BY:29:ARG:HB2	30:BY:33:HIS:HD2	1.80	0.47
23:BB:1509:A:H5''	23:BB:1509:A:C8	2.50	0.47
23:DB:122:G:O2'	23:DB:123:G:H5'	2.15	0.47
1:AA:548:G:H2'	1:AA:549:C:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:68:LEU:O	51:BZ:72:ARG:HG2	2.15	0.47
23:DB:316:C:O2'	23:DB:317:G:H5'	2.15	0.47
15:AP:34:GLU:CD	15:AP:60:TRP:HE1	2.19	0.47
2:AC:16:PRO:CG	2:AC:53:ARG:HH22	2.28	0.47
12:AM:23:GLY:HA3	12:AM:68:LEU:CD1	2.44	0.47
23:DB:1707:G:O2'	23:DB:1708:C:H5'	2.14	0.47
23:DB:2649:C:H2'	23:DB:2650:U:H6	1.79	0.47
25:BC:270:ARG:HB3	25:BC:270:ARG:CZ	2.45	0.47
23:BB:2649:C:H2'	23:BB:2650:U:H6	1.80	0.47
29:DE:122:GLU:O	29:DE:123:LYS:CB	2.63	0.47
1:AA:1477:U:O2'	1:AA:1478:U:H5'	2.15	0.47
1:AA:160:A:H2'	1:AA:161:A:O4'	2.15	0.47
40:BH:25:TYR:CD2	40:BH:30:LEU:HD11	2.49	0.47
10:CK:67:GLU:HG3	10:CK:68:ARG:N	2.30	0.47
47:BF:13:LYS:HZ2	47:BF:13:LYS:C	2.18	0.47
28:BP:13:LYS:HD2	28:BP:76:HIS:HA	1.97	0.47
11:AL:30:ARG:O	11:AL:57:THR:HG23	2.15	0.47
45:BS:4:ILE:HG22	45:BS:106:VAL:HG22	1.96	0.47
1:CA:555:U:H2'	1:CA:556:C:C6	2.50	0.47
1:AA:656:G:O2'	1:AA:657:U:H5'	2.14	0.47
23:DB:2519:U:C6	23:DB:2542:A:N6	2.83	0.47
23:DB:431:U:O2'	23:DB:432:A:H5'	2.15	0.47
23:BB:838:C:O2'	23:BB:839:U:H5'	2.15	0.47
40:DH:54:LEU:HD22	40:DH:58:LEU:HD12	1.96	0.47
1:AA:509:A:H3'	57:AA:1771:HOH:O	2.15	0.47
5:AF:45:ARG:HH22	17:AR:25:ILE:HD13	1.80	0.47
50:BT:76:ARG:NH1	50:BT:76:ARG:HB3	2.30	0.47
49:DR:70:GLU:N	49:DR:70:GLU:CD	2.68	0.47
23:DB:2903:U:O2	23:DB:2903:U:C2'	2.62	0.47
1:AA:624:C:H2'	1:AA:625:U:C6	2.50	0.47
1:CA:144:G:H2'	1:CA:145:G:O4'	2.15	0.47
3:AD:106:PHE:CD1	3:AD:144:ILE:HD11	2.49	0.47
52:BW:19:ARG:HD3	52:BW:36:ILE:HD11	1.97	0.46
52:BW:61:LYS:HB3	52:BW:62:ALA:H	1.42	0.46
37:BL:89:VAL:O	37:BL:89:VAL:HG13	2.14	0.46
48:DG:112:VAL:O	48:DG:113:ASP:HB2	2.14	0.46
8:CI:24:ASN:O	8:CI:60:LEU:N	2.48	0.46
8:AI:66:VAL:HG22	8:AI:67:LYS:N	2.29	0.46
13:AN:61:ASN:O	13:AN:62:ARG:HB2	2.15	0.46
35:BV:1:MET:HG3	35:BV:2:PHE:N	2.29	0.46
13:CN:9:GLU:O	13:CN:13:VAL:HG23	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:17:LYS:HZ2	48:BG:18:ILE:N	2.13	0.46
48:BG:18:ILE:HA	48:BG:22:VAL:O	2.14	0.46
25:BC:90:ILE:HD12	25:BC:102:TYR:HB3	1.96	0.46
47:BF:79:ARG:NE	47:BF:82:TYR:HD2	2.13	0.46
47:BF:142:TYR:H	47:BF:142:TYR:HD1	1.58	0.46
47:BF:21:TYR:HD2	47:BF:27:VAL:HG12	1.80	0.46
47:DF:111:ARG:HE	47:DF:135:ILE:HG22	1.79	0.46
53:D6:74:ASN:ND2	53:D6:74:ASN:N	2.59	0.46
38:BM:135:VAL:O	38:BM:136:MET:HG3	2.15	0.46
1:CA:1316:G:OP2	1:CA:1316:G:H8	1.98	0.46
18:CS:35:ARG:HB3	18:CS:50:VAL:HG13	1.96	0.46
18:CS:52:ASN:O	18:CS:76:THR:HG23	2.14	0.46
53:B6:111:ARG:HD2	53:B6:111:ARG:HA	1.84	0.46
53:B6:115:VAL:HG22	53:B6:184:LEU:HD12	1.96	0.46
13:AN:53:ASP:HA	13:AN:58:ARG:HD2	1.97	0.46
2:AC:106:ARG:HG2	2:AC:106:ARG:O	2.15	0.46
23:DB:2281:A:O2'	23:DB:2282:G:H5'	2.15	0.46
23:DB:850:U:H2'	23:DB:851:C:H6	1.81	0.46
1:AA:1326:U:H2'	1:AA:1327:C:H6	1.77	0.46
25:BC:11:GLY:O	25:BC:206:LYS:HB3	2.15	0.46
29:DE:138:LEU:O	29:DE:142:ALA:N	2.48	0.46
27:DK:5:GLN:HA	27:DK:20:MET:SD	2.55	0.46
40:DH:47:PHE:O	40:DH:51:ARG:HB2	2.15	0.46
1:AA:1239:A:H4'	1:AA:1240:U:C5'	2.46	0.46
23:BB:1737:G:H5'	23:BB:1738:G:OP2	2.14	0.46
23:DB:2015:A:C2	31:D0:2:VAL:HG22	2.50	0.46
4:AE:84:VAL:HG11	4:AE:146:MET:HB3	1.96	0.46
37:BL:93:ASN:HD22	37:BL:94:THR:H	1.63	0.46
23:BB:1681:G:H2'	23:BB:1757:A:N1	2.29	0.46
23:DB:2720:U:H2'	23:DB:2721:A:C8	2.50	0.46
28:DP:56:SER:O	28:DP:74:GLN:HA	2.14	0.46
3:CD:197:HIS:HA	3:CD:200:VAL:HG22	1.97	0.46
4:CE:71:ILE:HD11	4:CE:144:GLU:HG3	1.96	0.46
1:CA:617:G:H4'	15:CP:46:LYS:CE	2.46	0.46
1:CA:338:A:H2'	1:CA:339:C:C6	2.50	0.46
39:DX:14:LEU:O	39:DX:18:LEU:HB2	2.15	0.46
23:DB:96:C:H2'	23:DB:97:C:H6	1.80	0.46
23:DB:1180:U:H2'	23:DB:1181:U:C6	2.50	0.46
39:BX:56:LEU:C	39:BX:58:ASN:N	2.68	0.46
23:DB:2461:A:H1'	23:DB:2492:U:C2	2.50	0.46
1:AA:955:U:H1'	1:AA:1227:A:N6	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2626:C:H2'	23:DB:2627:G:C8	2.50	0.46
1:CA:1144:G:N2	1:CA:1146:A:H62	2.12	0.46
1:CA:373:A:OP2	1:CA:373:A:H3'	2.14	0.46
1:AA:502:A:H4'	1:AA:550:G:H4'	1.97	0.46
20:AB:23:ASN:OD1	20:AB:25:LYS:HB2	2.14	0.46
40:DH:65:ALA:HB1	40:DH:138:VAL:HG11	1.97	0.46
23:DB:2623:G:H4'	23:DB:2825:G:C8	2.50	0.46
1:CA:1042:A:H2'	1:CA:1043:G:O4'	2.15	0.46
1:CA:590:U:H2'	1:CA:591:U:H6	1.80	0.46
19:AT:27:MET:CE	19:AT:28:ARG:HG2	2.45	0.46
23:DB:443:A:H1'	23:DB:1201:U:O4'	2.15	0.46
23:BB:1719:G:O2'	23:BB:1720:U:H5'	2.14	0.46
23:BB:2105:U:H2'	23:BB:2106:U:C6	2.49	0.46
6:AG:45:ALA:HB3	6:AG:119:LEU:HD23	1.96	0.46
25:BC:226:PRO:HG3	25:BC:233:GLY:N	2.30	0.46
5:CF:10:VAL:HG12	5:CF:11:HIS:N	2.31	0.46
5:CF:45:ARG:HG2	5:CF:46:GLN:N	2.30	0.46
10:AK:27:ASN:O	10:AK:56:LYS:HD2	2.14	0.46
5:CF:42:TRP:HB2	5:CF:59:TYR:HB2	1.96	0.46
53:D6:28:LEU:HD21	53:D6:121:TYR:HE2	1.80	0.46
1:AA:114:U:H2'	1:AA:115:G:C8	2.50	0.46
23:DB:997:G:O2'	23:DB:998:C:H5'	2.16	0.46
11:AL:2:THR:OG1	11:AL:5:GLN:HG3	2.15	0.46
30:BY:26:LEU:HB2	30:BY:28:LEU:HG	1.97	0.46
15:CP:12:LYS:C	15:CP:14:ARG:H	2.17	0.46
23:BB:1501:G:O2'	23:BB:1502:A:H5'	2.15	0.46
10:AK:126:ARG:HA	10:AK:126:ARG:NE	2.30	0.46
21:AU:36:PHE:CZ	21:AU:44:ARG:NH2	2.83	0.46
48:DG:106:LEU:O	48:DG:108:PHE:HD1	1.97	0.46
48:DG:108:PHE:C	48:DG:110:HIS:H	2.18	0.46
26:BD:3:GLY:C	26:BD:4:LEU:HD22	2.36	0.46
53:B6:67:VAL:HA	53:B6:99:LEU:O	2.15	0.46
41:DJ:3:THR:HG21	44:DQ:60:TRP:NE1	2.29	0.46
22:DA:27:C:C2'	22:DA:28:C:H5'	2.45	0.46
23:BB:997:G:O2'	23:BB:998:C:H5'	2.15	0.46
44:BQ:59:LEU:C	44:BQ:59:LEU:HD13	2.36	0.46
46:DU:86:PHE:HD1	46:DU:88:ASP:N	2.14	0.46
40:DH:127:GLU:CA	40:DH:145:ASN:HA	2.40	0.46
43:BO:31:THR:HG23	43:BO:34:HIS:O	2.15	0.46
23:BB:1059:G:H2'	23:BB:1060:U:C5	2.50	0.46
47:BF:103:ILE:HD11	47:BF:174:PHE:CD1	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:108:PRO:O	47:DF:110:ILE:HG23	2.14	0.46
47:DF:106:ALA:HA	47:DF:135:ILE:CD1	2.45	0.46
1:AA:1361:G:N2	1:AA:1362:A:N7	2.63	0.46
13:AN:26:LEU:C	13:AN:26:LEU:HD23	2.36	0.46
24:DI:27:LEU:HB2	24:DI:32:VAL:HG21	1.96	0.46
23:BB:1028:A:N6	23:BB:1125:G:H2'	2.30	0.46
13:AN:52:ARG:HG3	13:AN:53:ASP:N	2.30	0.46
48:DG:86:LEU:HD23	48:DG:162:ARG:O	2.16	0.46
23:BB:1082:U:C2	23:BB:1086:A:N1	2.84	0.46
13:CN:26:LEU:C	13:CN:26:LEU:HD23	2.35	0.46
23:BB:1189:A:H2'	23:BB:1190:G:O4'	2.15	0.46
15:CP:67:ILE:HD11	15:CP:71:VAL:HG22	1.97	0.46
27:DK:19:VAL:C	27:DK:41:ILE:HD11	2.36	0.46
20:CB:16:GLY:HA2	20:CB:40:ILE:HD12	1.98	0.46
49:BR:16:GLU:HG2	49:BR:101:ILE:HB	1.96	0.46
45:DS:74:ILE:HD12	45:DS:104:THR:O	2.16	0.46
29:DE:152:GLU:O	29:DE:153:LEU:HB3	2.16	0.46
46:DU:9:GLU:CD	46:DU:21:ARG:HD2	2.36	0.46
22:BA:74:U:H2'	22:BA:75:G:O4'	2.15	0.46
1:CA:925:G:O2'	1:CA:926:G:H5''	2.14	0.46
22:BA:113:C:H2'	22:BA:114:C:H6	1.79	0.46
35:DV:78:GLN:HB2	35:DV:88:HIS:O	2.14	0.46
3:CD:185:PRO:HB2	3:CD:190:LEU:HG	1.96	0.46
23:DB:48:G:HO2'	23:DB:49:A:H2	1.62	0.46
39:DX:9:LYS:NZ	39:DX:60:LYS:HE3	2.30	0.46
2:AC:129:PHE:CE2	2:AC:165:GLU:HG2	2.44	0.46
23:DB:2340:A:H2'	23:DB:2341:G:C8	2.50	0.46
49:DR:2:TYR:CB	49:DR:42:ALA:HB2	2.44	0.46
23:DB:1350:C:O2	23:DB:1350:C:H2'	2.15	0.46
1:AA:366:A:O2'	1:AA:394:G:N2	2.48	0.46
7:CH:101:ALA:O	7:CH:103:VAL:HG23	2.16	0.46
1:CA:1511:G:O2'	1:CA:1512:U:H5'	2.14	0.46
23:BB:630:G:H22	23:BB:632:A:H3'	1.79	0.46
23:BB:2699:C:H2'	23:BB:2700:A:C8	2.50	0.46
28:BP:25:VAL:HA	28:BP:85:VAL:CA	2.46	0.46
1:CA:376:G:O3'	15:CP:5:ARG:HD3	2.15	0.46
1:CA:1464:U:H2'	1:CA:1465:A:H8	1.79	0.46
43:BO:28:VAL:HG11	43:BO:92:PHE:CZ	2.51	0.46
41:DJ:28:LEU:HG	41:DJ:32:LEU:CD1	2.46	0.46
23:BB:1350:C:H2'	23:BB:1350:C:O2	2.16	0.46
22:DA:60:C:O2'	22:DA:61:G:H5'	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:128:G:H2'	1:AA:129:A:H8	1.80	0.46
23:BB:2527:C:O2'	23:BB:2528:U:H5'	2.14	0.46
23:BB:354:A:H2'	23:BB:355:U:O4'	2.14	0.46
23:DB:1118:C:H2'	23:DB:1119:U:C6	2.50	0.46
23:BB:1849:G:H2'	23:BB:1850:G:C8	2.50	0.46
23:BB:1201:U:H2'	23:BB:1202:G:C8	2.51	0.46
46:BU:14:THR:HG21	46:BU:64:ILE:HD13	1.97	0.46
28:DP:61:ARG:HD3	28:DP:70:GLU:HG3	1.97	0.46
23:DB:1843:C:H2'	23:DB:1844:C:H6	1.80	0.46
1:CA:631:C:H3'	1:CA:632:U:H5'	1.97	0.46
5:AF:45:ARG:HG2	5:AF:46:GLN:N	2.29	0.46
28:DP:13:LYS:HD2	28:DP:76:HIS:HA	1.97	0.46
4:AE:79:THR:OG1	4:AE:97:PRO:HA	2.16	0.46
23:BB:2508:G:O2'	23:BB:2509:G:H5'	2.15	0.46
1:AA:1387:G:H2'	1:AA:1388:C:H6	1.79	0.46
5:AF:49:TYR:CE1	17:AR:65:SER:HA	2.50	0.46
23:BB:1936:A:H2	23:BB:1943:U:O4	1.99	0.46
1:AA:787:A:O2'	1:AA:788:U:H5'	2.16	0.46
23:DB:1130:U:C2	23:DB:2025:C:H5''	2.49	0.46
24:DI:69:VAL:HG23	24:DI:69:VAL:O	2.14	0.46
1:CA:230:G:O2'	1:CA:231:U:H5'	2.15	0.46
23:BB:919:U:H2'	23:BB:920:A:H8	1.73	0.46
52:BW:35:ILE:CG1	52:BW:35:ILE:O	2.64	0.46
52:BW:65:LYS:HG3	52:BW:84:GLU:CB	2.40	0.46
48:BG:72:ASN:O	48:BG:76:ILE:HG12	2.16	0.46
20:AB:163:ILE:CG2	20:AB:164:ASP:H	2.09	0.46
48:DG:89:VAL:CB	48:DG:159:LYS:HA	2.28	0.46
23:DB:2365:G:O2'	52:DW:59:PHE:CE1	2.68	0.46
40:BH:124:THR:HG22	40:BH:126:GLY:H	1.80	0.46
53:B6:84:ARG:O	53:B6:85:ASP:HB2	2.14	0.46
5:AF:3:HIS:ND1	5:AF:95:ALA:HB2	2.31	0.46
51:DZ:5:CYS:SG	51:DZ:8:THR:HG23	2.55	0.46
41:DJ:36:LEU:HD21	41:DJ:122:LEU:CD1	2.45	0.46
50:BT:29:THR:CG2	50:BT:86:THR:HG22	2.45	0.46
3:AD:25:ARG:HB2	3:AD:25:ARG:NH1	2.30	0.46
30:BY:15:ARG:HD2	30:BY:15:ARG:N	2.30	0.46
12:CM:33:LEU:HD13	12:CM:39:ALA:O	2.16	0.46
47:BF:113:PHE:HZ	47:BF:175:PRO:HB2	1.80	0.46
47:DF:107:VAL:HB	47:DF:108:PRO:HD3	1.97	0.46
7:AH:31:LEU:O	7:AH:35:ILE:HG13	2.16	0.46
13:AN:30:ILE:CG2	13:AN:44:VAL:HG11	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1174:U:H2'	23:BB:1175:A:H5''	1.97	0.46
38:DM:53:MET:SD	38:DM:63:ILE:HG21	2.55	0.46
25:BC:18:VAL:CG1	25:BC:202:ARG:HD2	2.45	0.46
27:DK:15:GLY:HA2	27:DK:46:ALA:HA	1.97	0.46
23:BB:30:G:H2'	23:BB:31:C:H6	1.73	0.46
26:DD:26:VAL:HG13	26:DD:188:LEU:CD2	2.45	0.46
26:DD:148:GLN:HG3	26:DD:152:PRO:CG	2.44	0.46
23:DB:1438:U:O2'	23:DB:1439:A:H5'	2.15	0.46
28:DP:9:GLN:HA	28:DP:12:MET:CG	2.45	0.46
4:AE:82:HIS:CE1	4:AE:146:MET:HA	2.51	0.46
23:DB:1804:C:P	25:DC:256:THR:HB	2.55	0.46
29:DE:153:LEU:HG	29:DE:154:ASP:N	2.29	0.46
23:DB:1680:U:H2'	23:DB:1681:G:O4'	2.15	0.46
1:AA:338:A:H2'	1:AA:339:C:H6	1.80	0.46
14:AO:16:GLY:HA2	14:AO:27:VAL:CG2	2.45	0.46
38:BM:110:GLU:HG2	38:BM:111:GLU:N	2.30	0.46
1:CA:490:C:H2'	1:CA:491:G:C8	2.51	0.46
23:DB:2528:U:O2'	23:DB:2529:G:H3'	2.16	0.46
1:CA:474:G:H2'	1:CA:475:C:H6	1.75	0.46
23:BB:718:A:H2'	23:BB:719:C:H5'	1.97	0.46
2:AC:156:LEU:HD12	2:AC:163:ARG:HG3	1.98	0.46
1:AA:925:G:O2'	1:AA:926:G:H5''	2.15	0.46
7:AH:54:THR:HG23	7:AH:55:LYS:N	2.30	0.46
1:AA:67:C:H4'	1:AA:172:A:H4'	1.97	0.46
23:BB:379:G:O4'	23:BB:2232:C:H5''	2.15	0.46
23:BB:1902:C:H2'	23:BB:1903:G:O4'	2.15	0.46
23:BB:2511:U:H2'	23:BB:2512:C:C6	2.50	0.46
23:BB:1258:U:O4'	29:BE:79:ARG:HD2	2.14	0.46
23:DB:1946:U:H2'	23:DB:1947:C:H6	1.80	0.46
23:BB:350:G:H2'	23:BB:351:C:O4'	2.15	0.46
1:AA:373:A:OP2	1:AA:373:A:H3'	2.15	0.46
23:BB:1913:A:H4'	23:BB:1914:C:C5'	2.45	0.46
1:CA:1432:G:H5'	28:DP:105:LYS:HG2	1.97	0.46
23:DB:378:C:O2'	23:DB:379:G:H5'	2.14	0.46
23:BB:2498:C:H3'	57:BB:3587:HOH:O	2.15	0.46
14:CO:43:PHE:CD1	14:CO:56:LEU:HD22	2.50	0.46
1:AA:1385:G:O2'	1:AA:1386:G:H5'	2.15	0.46
29:DE:18:THR:HG22	29:DE:106:LYS:NZ	2.31	0.46
48:DG:87:GLN:H	48:DG:164:ALA:HB2	1.81	0.46
23:DB:1047:G:C3'	23:DB:1048:A:H5'	2.44	0.46
23:DB:1837:C:O2	23:DB:1927:A:H2	1.99	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:235:U:H2'	23:DB:236:C:C6	2.49	0.46
28:BP:103:THR:HG22	28:BP:104:GLY:N	2.29	0.46
1:CA:766:A:H2'	1:CA:767:A:C8	2.50	0.46
1:AA:478:A:H2'	1:AA:479:U:O4'	2.15	0.46
23:DB:1118:C:H2'	23:DB:1119:U:H6	1.79	0.46
26:DD:45:TYR:CD2	26:DD:83:ARG:HD3	2.49	0.46
1:CA:560:A:H5'	1:CA:566:G:N2	2.29	0.46
7:CH:118:ALA:HB3	7:CH:120:LEU:CD2	2.44	0.46
23:DB:1704:C:H2'	23:DB:1705:A:C8	2.51	0.46
7:CH:79:ARG:HB2	7:CH:80:PRO:HD2	1.96	0.46
23:BB:736:C:H2'	23:BB:737:C:H6	1.81	0.46
23:BB:2856:A:H2'	23:BB:2857:G:H8	1.79	0.46
23:BB:2181:U:H2'	23:BB:2182:U:H6	1.80	0.46
1:AA:935:A:O2'	1:AA:936:C:H5'	2.14	0.46
38:BM:12:MET:HB2	38:BM:72:PRO:HG2	1.95	0.46
1:CA:1019:A:H2'	1:CA:1020:G:C8	2.51	0.46
23:DB:822:G:H2'	23:DB:823:C:C6	2.50	0.46
23:DB:477:A:H2'	23:DB:478:A:C8	2.50	0.46
13:CN:42:ASN:O	13:CN:45:LEU:HB3	2.16	0.46
23:DB:677:A:O2'	23:DB:678:C:H5'	2.15	0.46
21:CU:36:PHE:CZ	21:CU:44:ARG:NH2	2.83	0.46
21:CU:35:GLU:HB3	21:CU:36:PHE:H	1.53	0.46
10:CK:70:ALA:O	10:CK:74:LYS:HB2	2.15	0.46
20:AB:205:ALA:O	20:AB:209:VAL:HG22	2.16	0.46
40:BH:133:GLN:HG2	40:BH:139:PHE:HB3	1.97	0.46
53:D6:41:LEU:O	53:D6:43:VAL:N	2.44	0.46
47:DF:90:LEU:C	47:DF:91:ARG:HD3	2.35	0.46
40:BH:89:LYS:NZ	40:BH:123:ARG:HB3	2.31	0.46
41:DJ:45:THR:OG1	41:DJ:48:VAL:HB	2.16	0.46
27:DK:47:ILE:HG23	27:DK:48:PRO:CD	2.46	0.46
51:DZ:77:LYS:CG	51:DZ:78:TYR:H	2.27	0.46
27:BK:47:ILE:HG23	27:BK:48:PRO:CD	2.45	0.46
47:DF:39:VAL:CG2	47:DF:48:LEU:HG	2.45	0.46
7:AH:87:ARG:H	7:AH:90:GLU:CB	2.29	0.46
30:DY:16:LEU:O	30:DY:20:LYS:HG3	2.15	0.46
50:BT:50:LEU:C	50:BT:52:GLU:H	2.16	0.46
50:BT:58:VAL:O	50:BT:58:VAL:HG13	2.16	0.46
39:BX:23:ARG:HD3	50:BT:50:LEU:HD12	1.97	0.46
46:BU:86:PHE:HD1	46:BU:88:ASP:N	2.14	0.46
24:BI:79:LEU:HD23	24:BI:108:ILE:CD1	2.46	0.46
47:BF:106:ALA:HA	47:BF:135:ILE:CD1	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BM:24:THR:HG23	38:BM:34:LYS:HE3	1.97	0.46
23:DB:518:G:H4'	45:DS:18:ARG:CZ	2.46	0.46
1:AA:865:A:C2	1:AA:918:A:H4'	2.51	0.46
23:DB:1018:U:O2'	23:DB:1019:U:H5'	2.15	0.46
18:CS:61:VAL:HA	18:CS:65:MET:SD	2.56	0.46
37:DL:42:SER:C	37:DL:44:GLY:N	2.68	0.46
28:BP:99:LEU:HD13	28:BP:99:LEU:O	2.15	0.46
50:DT:40:LYS:HD3	50:DT:58:VAL:O	2.15	0.46
53:D6:18:LEU:HD22	53:D6:168:PHE:CE2	2.51	0.46
53:D6:22:GLU:HG2	53:D6:175:LEU:HD21	1.96	0.46
24:DI:23:VAL:HG12	24:DI:24:GLY:N	2.30	0.46
32:B4:7:VAL:HG13	32:B4:8:LYS:N	2.29	0.46
21:CU:16:ARG:HG3	21:CU:19:LYS:HD2	1.97	0.46
23:BB:1942:C:C1'	53:B6:133:ARG:HH22	2.27	0.46
23:DB:1124:G:H1'	32:D4:38:GLY:OXT	2.15	0.46
1:CA:980:C:H4'	13:CN:58:ARG:HH12	1.81	0.46
5:CF:70:VAL:HG23	5:CF:71:ILE:H	1.81	0.46
1:AA:116:A:H2'	1:AA:117:G:O4'	2.14	0.46
38:BM:96:ILE:HD11	38:BM:126:ILE:HG12	1.97	0.46
44:BQ:97:ILE:HD11	44:BQ:108:LEU:HD11	1.97	0.46
49:BR:4:VAL:HB	49:BR:39:LEU:HG	1.96	0.46
49:DR:39:LEU:HA	49:DR:49:ILE:HG21	1.98	0.46
49:DR:40:MET:O	49:DR:41:ILE:HD13	2.16	0.46
46:BU:40:LEU:HB3	46:BU:59:GLU:HG2	1.96	0.46
23:BB:2896:C:H2'	23:BB:2897:U:C6	2.50	0.46
23:BB:1723:G:N7	23:BB:1737:G:N2	2.60	0.46
25:DC:159:THR:N	25:DC:194:VAL:CG1	2.79	0.46
23:BB:2186:G:H2'	23:BB:2187:U:H6	1.79	0.46
38:BM:2:LEU:HD23	38:BM:46:ILE:HD11	1.97	0.46
4:AE:81:GLN:CD	4:AE:148:SER:HA	2.35	0.46
14:CO:25:THR:CB	14:CO:70:LEU:HD23	2.44	0.46
23:BB:2135:A:H61	23:BB:2156:G:C2'	2.28	0.46
3:CD:89:LEU:CD2	3:CD:199:ILE:HD11	2.46	0.46
2:CC:155:ARG:H	2:CC:162:ALA:CB	2.28	0.46
3:AD:96:ARG:HB3	3:AD:98:ASP:OD2	2.15	0.46
1:AA:555:U:H2'	1:AA:556:C:H6	1.79	0.46
4:CE:38:VAL:O	4:CE:45:VAL:HA	2.15	0.46
46:BU:35:VAL:HB	46:BU:38:ILE:HB	1.98	0.46
40:BH:44:ILE:CG1	40:BH:45:GLU:H	2.28	0.46
40:BH:44:ILE:O	40:BH:48:GLU:HB3	2.16	0.46
3:AD:84:ASN:HD22	3:AD:85:THR:N	2.13	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DM:69:PRO:HA	38:DM:94:ALA:HB2	1.97	0.46
23:DB:1248:G:OP1	29:DE:44:ARG:NH1	2.48	0.46
8:AI:9:GLY:HA2	8:AI:80:HIS:HD2	1.77	0.46
23:DB:1584:U:H3'	23:DB:1585:C:H5'	1.96	0.46
1:AA:1330:U:C2'	1:AA:1331:G:H5'	2.45	0.46
3:AD:2:ARG:HB3	3:AD:114:ARG:NH2	2.30	0.46
1:AA:801:U:O2'	1:AA:802:A:H5'	2.14	0.46
23:DB:2492:U:O2'	23:DB:2493:U:H5'	2.16	0.46
12:AM:112:ARG:HB3	12:AM:114:PRO:HD3	1.98	0.46
38:BM:4:PRO:HG2	38:BM:70:ASP:HA	1.97	0.46
23:BB:2064:C:H1'	23:BB:2450:A:C6	2.50	0.46
23:BB:2853:C:O2'	23:BB:2854:G:H5'	2.15	0.46
1:AA:1308:U:H2'	1:AA:1309:G:H8	1.81	0.46
23:DB:2070:A:H2'	23:DB:2071:A:H8	1.77	0.46
40:DH:65:ALA:C	40:DH:138:VAL:HG11	2.35	0.46
23:BB:1708:C:H2'	23:BB:1709:U:C6	2.51	0.46
41:DJ:99:ARG:HA	41:DJ:102:GLU:HB2	1.98	0.46
23:DB:325:G:H2'	23:DB:326:G:H8	1.80	0.46
23:BB:251:A:H2'	23:BB:252:G:O4'	2.15	0.46
26:BD:45:TYR:CD2	26:BD:83:ARG:HD3	2.50	0.46
23:BB:1313:U:O2	23:BB:1313:U:H2'	2.15	0.46
23:DB:685:A:H1'	23:DB:688:U:O4	2.15	0.46
1:CA:1436:U:H2'	1:CA:1437:A:H8	1.81	0.46
25:BC:73:ILE:HG21	25:BC:97:ASP:HB2	1.97	0.46
2:CC:91:ALA:O	2:CC:95:GLY:N	2.49	0.46
23:BB:2838:G:H2'	23:BB:2839:G:H8	1.81	0.46
23:DB:2771:C:H1'	26:DD:208:LYS:HZ1	1.80	0.46
14:CO:62:GLN:O	14:CO:66:LEU:HD23	2.15	0.46
23:DB:332:A:O2'	23:DB:334:C:OP2	2.33	0.46
52:BW:25:PHE:HD1	52:BW:26:GLY:H	1.64	0.46
48:DG:66:THR:O	48:DG:70:LEU:HB2	2.15	0.46
23:BB:69:C:O2'	23:BB:70:G:H5'	2.14	0.46
15:AP:22:ALA:HA	15:AP:33:ILE:HG13	1.97	0.46
1:AA:144:G:H2'	1:AA:145:G:O4'	2.16	0.46
28:BP:101:GLU:OE2	28:BP:101:GLU:N	2.49	0.46
23:DB:2408:U:H2'	23:DB:2409:G:C8	2.51	0.46
23:DB:2696:U:O2'	23:DB:2697:G:H5'	2.16	0.46
37:DL:124:GLY:O	37:DL:125:LEU:HG	2.16	0.46
41:BJ:36:LEU:HD21	41:BJ:122:LEU:CD1	2.45	0.46
23:DB:996:A:H4'	44:DQ:91:ARG:CG	2.46	0.46
13:CN:60:ARG:HE	13:CN:62:ARG:HG2	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:49:LEU:HB2	51:BZ:51:VAL:HG23	1.96	0.46
46:BU:86:PHE:HD1	46:BU:88:ASP:H	1.59	0.46
23:BB:320:A:H2'	29:BE:131:THR:OG1	2.16	0.46
23:BB:1462:C:O2'	23:BB:1463:C:H5'	2.16	0.46
18:AS:50:VAL:HG23	18:AS:59:VAL:HG21	1.96	0.46
28:BP:92:ARG:NH1	28:BP:92:ARG:HG3	2.31	0.46
50:DT:11:LEU:CD2	50:DT:46:ALA:HB1	2.46	0.46
50:DT:29:THR:CG2	50:DT:86:THR:HG22	2.46	0.46
23:BB:165:A:H2'	23:BB:166:U:H6	1.79	0.46
1:AA:332:G:P	19:AT:2:ASN:HB3	2.55	0.46
31:B0:43:THR:HG23	31:B0:47:TYR:C	2.35	0.46
38:DM:2:LEU:HD23	38:DM:46:ILE:HD11	1.97	0.46
27:BK:104:THR:HB	27:BK:106:GLU:OE1	2.16	0.46
1:CA:312:C:H2'	1:CA:313:A:H8	1.80	0.46
27:BK:58:LEU:H	27:BK:58:LEU:HD23	1.80	0.46
1:AA:1299:A:C2'	1:AA:1301:U:H1'	2.41	0.46
23:BB:1427:A:H4'	23:BB:1428:C:O5'	2.15	0.46
23:BB:1724:G:H2'	23:BB:1725:U:H6	1.80	0.46
20:CB:75:ALA:O	20:CB:79:VAL:HG23	2.15	0.46
11:AL:28:GLN:HG3	11:AL:80:LEU:HD21	1.98	0.46
4:AE:158:LYS:HZ3	7:AH:65:PHE:HA	1.80	0.46
1:AA:109:A:H2'	1:AA:326:G:N2	2.30	0.46
23:DB:321:U:OP2	29:DE:130:LYS:HA	2.16	0.46
2:AC:112:ALA:HB1	2:AC:184:ASN:HB2	1.97	0.46
15:CP:43:ALA:HA	15:CP:46:LYS:HE3	1.95	0.46
2:CC:26:LYS:HG3	2:CC:27:GLU:HG3	1.98	0.46
23:DB:2602:A:H3'	23:DB:2602:A:OP1	2.15	0.46
23:BB:560:C:H2'	23:BB:561:G:O4'	2.16	0.46
11:AL:33:CYS:H	11:AL:54:VAL:HG13	1.80	0.46
1:AA:238:A:C3'	1:AA:239:U:H5''	2.46	0.46
1:AA:490:C:H2'	1:AA:491:G:C8	2.50	0.46
1:CA:807:A:H2'	1:CA:808:C:C6	2.50	0.46
45:BS:42:LYS:O	45:BS:46:LEU:HG	2.16	0.46
1:AA:1226:C:H4'	1:AA:1227:A:OP1	2.15	0.46
1:CA:212:G:H2'	1:CA:213:G:H8	1.80	0.46
20:CB:23:ASN:OD1	20:CB:25:LYS:HB2	2.16	0.46
20:CB:22:TRP:CZ3	20:CB:24:PRO:HA	2.51	0.46
16:CQ:80:LYS:O	16:CQ:83:LEU:HD13	2.15	0.46
23:DB:876:C:H2'	23:DB:877:A:O4'	2.15	0.46
23:BB:1867:G:O2'	23:BB:1868:C:H5'	2.15	0.46
22:BA:8:C:H4'	43:BO:27:VAL:HG21	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:139:U:H3'	23:BB:140:C:C4'	2.43	0.46
23:BB:2093:G:O2'	23:BB:2094:A:H5'	2.15	0.46
1:CA:1258:G:O2'	1:CA:1259:C:H5'	2.16	0.46
43:DO:110:ALA:O	43:DO:115:LEU:HB2	2.15	0.46
3:CD:77:GLU:OE1	3:CD:80:ARG:HD3	2.15	0.46
1:CA:539:A:H2'	1:CA:540:G:H8	1.77	0.46
23:BB:708:G:H2'	23:BB:709:U:C6	2.50	0.46
1:AA:586:C:C5'	7:AH:81:GLY:HA2	2.46	0.46
1:CA:591:U:H2'	1:CA:592:G:C8	2.50	0.46
43:DO:28:VAL:HG11	43:DO:92:PHE:CZ	2.49	0.46
23:DB:2730:C:H4'	26:DD:174:SER:HB3	1.96	0.46
46:BU:66:VAL:C	46:BU:68:ASN:H	2.19	0.46
26:BD:38:LYS:HD3	26:BD:45:TYR:OH	2.15	0.46
8:AI:71:ILE:N	8:AI:71:ILE:HD12	2.31	0.46
1:AA:821:G:O2'	1:AA:822:U:H5'	2.16	0.46
25:DC:226:PRO:HG3	25:DC:233:GLY:H	1.81	0.46
1:CA:1246:A:H2'	1:CA:1247:U:C6	2.50	0.46
48:BG:29:ASN:ND2	48:BG:77:GLY:O	2.49	0.46
23:BB:1435:G:H2'	23:BB:1436:G:H8	1.80	0.46
23:DB:1136:G:H2'	23:DB:1137:G:H8	1.80	0.46
23:BB:1711:A:O2'	23:BB:1712:U:H5'	2.16	0.46
51:BZ:2:SER:HB3	51:BZ:4:VAL:HG23	1.98	0.46
23:BB:730:A:H3'	57:BB:3597:HOH:O	2.15	0.46
45:DS:4:ILE:HG22	45:DS:106:VAL:HG22	1.98	0.46
23:BB:915:C:H3'	23:BB:916:G:H8	1.81	0.46
49:BR:62:GLU:O	49:BR:96:VAL:HA	2.16	0.46
23:BB:285:G:H2'	23:BB:286:U:C6	2.50	0.46
25:BC:35:LYS:HD2	25:BC:36:ASN:H	1.80	0.46
23:BB:483:A:O2'	46:BU:56:GLY:HA2	2.15	0.46
23:BB:2047:C:H2'	23:BB:2048:G:H8	1.80	0.46
23:DB:2109:U:N3	23:DB:2180:U:O4	2.47	0.46
10:AK:36:ARG:HG3	10:AK:36:ARG:HH11	1.81	0.46
7:CH:72:GLU:CD	7:CH:72:GLU:H	2.19	0.46
23:DB:56:A:H2'	23:DB:57:C:C6	2.49	0.46
22:DA:57:A:OP2	22:DA:58:A:OP2	2.33	0.46
25:BC:146:LYS:HB2	25:BC:149:LYS:HB2	1.97	0.46
23:DB:2269:G:H4'	52:DW:19:ARG:HH11	1.80	0.46
40:DH:133:GLN:CB	40:DH:139:PHE:HB3	2.26	0.46
48:DG:83:THR:C	48:DG:84:LYS:HD3	2.36	0.46
48:DG:90:GLY:HA3	48:DG:93:TYR:CZ	2.50	0.46
53:D6:60:ALA:HA	53:D6:66:LEU:HD12	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:77:THR:HG22	40:BH:79:THR:HG23	1.97	0.46
1:CA:1148:U:H5'	8:CI:6:TYR:OH	2.16	0.46
23:DB:996:A:H4'	44:DQ:91:ARG:HD2	1.98	0.46
47:DF:66:ILE:HA	47:DF:85:GLY:O	2.15	0.46
48:DG:26:LYS:HB2	48:DG:32:LEU:HG	1.98	0.46
48:DG:34:ARG:HH11	48:DG:34:ARG:N	1.99	0.46
23:DB:674:G:H2'	23:DB:804:A:H61	1.81	0.46
41:BJ:3:THR:HG21	44:BQ:60:TRP:NE1	2.27	0.46
41:BJ:45:THR:HG23	41:BJ:45:THR:O	2.15	0.46
48:BG:32:LEU:HB3	48:BG:34:ARG:CZ	2.45	0.46
30:BY:16:LEU:O	30:BY:20:LYS:HG3	2.16	0.46
34:B3:28:LEU:HD22	34:B3:43:LEU:HB2	1.97	0.46
47:DF:100:GLU:O	47:DF:104:THR:HB	2.15	0.46
47:DF:7:TYR:HA	47:DF:11:VAL:HB	1.97	0.46
47:DF:169:LEU:HA	47:DF:172:PHE:HD2	1.80	0.46
18:AS:35:ARG:HB3	18:AS:50:VAL:HG13	1.97	0.46
18:AS:39:ILE:HG21	18:AS:61:VAL:HG13	1.97	0.46
23:DB:483:A:C8	46:DU:44:HIS:HB3	2.50	0.46
53:D6:22:GLU:HG2	53:D6:175:LEU:CD2	2.45	0.46
40:BH:5:LEU:C	40:BH:6:LEU:HD12	2.36	0.46
32:B4:15:LYS:O	32:B4:15:LYS:HE2	2.16	0.46
32:B4:22:VAL:O	32:B4:24:ARG:HG3	2.16	0.46
15:AP:66:THR:HG22	15:AP:67:ILE:H	1.81	0.46
32:D4:7:VAL:HG11	32:D4:23:ILE:O	2.15	0.46
23:DB:2038:G:H2'	23:DB:2039:U:C6	2.51	0.46
23:DB:1654:A:O2'	26:DD:118:PHE:CB	2.57	0.46
2:CC:140:ALA:HB3	2:CC:148:ILE:HD12	1.96	0.46
48:DG:30:GLY:O	48:DG:78:VAL:HG12	2.16	0.46
1:CA:279:A:C5'	1:CA:280:C:H3'	2.43	0.46
23:DB:1776:G:O2'	23:DB:1777:U:H5'	2.16	0.46
1:AA:906:A:O2'	1:AA:907:A:H5''	2.16	0.46
24:DI:96:LYS:HD3	24:DI:138:VAL:HG21	1.97	0.46
36:D2:21:ARG:C	36:D2:23:ALA:H	2.18	0.46
20:AB:95:TRP:HZ2	20:AB:100:LEU:HD13	1.79	0.46
33:B1:7:LYS:CD	34:B3:33:THR:HG21	2.43	0.46
2:CC:117:ASP:OD2	2:CC:186:SER:HB3	2.16	0.46
23:BB:1210:G:H5'	23:BB:1212:G:H5'	1.98	0.46
1:AA:957:U:H2'	1:AA:959:A:OP2	2.16	0.46
43:BO:47:VAL:O	43:BO:48:LEU:HD23	2.16	0.46
1:CA:856:C:O2'	1:CA:857:C:H5'	2.16	0.46
39:DX:56:LEU:C	39:DX:58:ASN:N	2.67	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AE:106:ALA:HB1	4:AE:110:MET:CB	2.45	0.46
23:BB:72:U:H1'	39:BX:51:ALA:HA	1.97	0.46
50:DT:69:ARG:HB3	50:DT:74:ILE:HA	1.97	0.46
1:AA:212:G:H2'	1:AA:213:G:C8	2.51	0.46
23:DB:1924:C:H2'	23:DB:1925:C:H6	1.81	0.46
23:DB:899:A:C5	23:DB:900:A:H1'	2.51	0.46
1:CA:1035:A:H2'	1:CA:1036:A:C8	2.48	0.46
23:DB:828:U:H2'	23:DB:829:A:C8	2.51	0.46
23:DB:826:U:O2'	37:DL:53:GLY:HA3	2.15	0.46
3:CD:16:THR:HG22	3:CD:17:ASP:H	1.78	0.46
50:DT:45:ALA:HA	50:DT:48:GLN:HB2	1.96	0.46
50:DT:48:GLN:HA	50:DT:48:GLN:NE2	2.29	0.46
23:DB:1535:A:O2'	23:DB:1536:C:H5'	2.15	0.46
23:DB:2804:U:H2'	23:DB:2805:C:H6	1.78	0.46
1:AA:1039:G:H2'	1:AA:1040:U:H6	1.79	0.46
19:CT:49:ALA:HA	19:CT:52:GLU:CD	2.36	0.46
23:DB:1708:C:H2'	23:DB:1709:U:H6	1.79	0.46
23:BB:2322:A:C6	23:BB:2333:A:N6	2.84	0.46
23:BB:2825:G:H5''	23:BB:2825:G:N3	2.31	0.46
23:BB:443:A:H1'	23:BB:1201:U:O4'	2.16	0.46
23:DB:1676:A:C2	23:DB:1677:A:H1'	2.50	0.46
23:BB:660:C:H2'	23:BB:661:A:C8	2.49	0.46
1:CA:207:C:O2'	1:CA:208:U:H5'	2.15	0.46
48:BG:4:ALA:HB3	48:BG:61:TRP:HZ3	1.81	0.46
23:DB:927:A:O2'	23:DB:928:A:H5'	2.16	0.46
23:DB:2836:U:H2'	23:DB:2837:A:C8	2.51	0.46
1:AA:558:G:H8	1:AA:559:A:H2'	1.80	0.46
1:CA:80:A:H2'	1:CA:81:A:H8	1.79	0.46
48:DG:28:LYS:O	48:DG:29:ASN:HB3	2.15	0.46
1:CA:160:A:H1'	1:CA:344:A:N7	2.29	0.46
1:CA:1354:U:H2'	1:CA:1355:G:H8	1.81	0.46
22:BA:54:G:H21	47:BF:25:MET:CE	2.29	0.46
30:DY:3:THR:HB	30:DY:36:GLU:HG2	1.98	0.46
25:DC:11:GLY:O	25:DC:206:LYS:HB3	2.16	0.46
2:CC:40:GLN:HG3	2:CC:41:TYR:H	1.81	0.46
1:CA:1409:C:H2'	1:CA:1410:A:H8	1.81	0.46
23:DB:1949:G:H2'	23:DB:1950:G:C8	2.51	0.46
20:CB:134:LEU:HD11	20:CB:138:ARG:HH12	1.79	0.46
49:BR:34:GLU:OE1	49:BR:60:LYS:HE2	2.14	0.46
23:BB:2331:G:H4'	52:BW:39:GLN:HA	1.98	0.46
10:AK:12:ARG:HD3	10:AK:76:TYR:CE1	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:94:ARG:NH2	48:BG:104:LEU:HA	2.30	0.46
41:DJ:16:TYR:O	41:DJ:55:ILE:HG12	2.16	0.46
30:DY:15:ARG:N	30:DY:15:ARG:HD2	2.31	0.46
42:DN:38:LEU:CB	42:DN:39:PRO:HD3	2.41	0.46
43:BO:35:ILE:HG21	43:BO:71:ALA:HA	1.96	0.46
42:BN:79:LEU:C	42:BN:81:ASN:H	2.19	0.46
1:AA:1258:G:O2'	1:AA:1259:C:H5'	2.15	0.46
29:DE:108:ILE:HD11	29:DE:181:ILE:CB	2.37	0.46
18:CS:42:ASN:HD21	18:CS:43:MET:HG2	1.78	0.46
12:AM:79:LEU:HD22	12:AM:86:ARG:HE	1.80	0.46
18:AS:6:LYS:N	18:AS:6:LYS:HD2	2.30	0.46
11:AL:42:LYS:HB2	11:AL:88:ASP:HA	1.98	0.46
29:BE:77:ILE:HG13	29:BE:77:ILE:H	1.57	0.46
35:DV:14:LYS:HE3	35:DV:18:ARG:NH2	2.31	0.46
11:CL:49:ARG:HH12	11:CL:88:ASP:HB2	1.81	0.46
1:CA:1325:C:O2'	1:CA:1326:U:H5'	2.16	0.46
43:BO:26:LEU:HD13	43:BO:39:VAL:CG2	2.45	0.46
35:DV:44:HIS:O	35:DV:45:ASP:C	2.54	0.46
45:BS:28:LYS:O	45:BS:71:VAL:HG12	2.16	0.46
25:BC:16:VAL:CB	25:BC:203:VAL:HB	2.40	0.46
29:DE:142:ALA:O	29:DE:143:LEU:HD23	2.16	0.46
29:DE:115:GLN:NE2	37:DL:2:ARG:HD3	2.31	0.46
46:DU:12:VAL:HG22	46:DU:69:VAL:CG1	2.41	0.46
5:CF:62:MET:O	5:CF:63:ASN:HB2	2.16	0.46
20:CB:16:GLY:HA2	20:CB:40:ILE:HG13	1.97	0.46
20:CB:186:VAL:O	20:CB:200:PRO:HA	2.16	0.46
38:BM:65:ILE:HG23	38:BM:103:TYR:CE2	2.51	0.46
3:CD:122:ILE:HG22	3:CD:123:MET:N	2.31	0.46
1:CA:1411:C:H2'	1:CA:1412:C:C6	2.51	0.46
44:BQ:108:LEU:O	44:BQ:111:LYS:HB3	2.16	0.46
37:DL:95:LEU:HB3	37:DL:100:ILE:CG2	2.45	0.46
23:DB:2896:C:H2'	23:DB:2897:U:C6	2.50	0.46
23:DB:1441:G:O2'	23:DB:1442:U:H5'	2.16	0.46
23:BB:1446:C:H2'	23:BB:1447:C:C6	2.50	0.46
31:D0:2:VAL:HG12	31:D0:3:GLN:H	1.81	0.46
49:DR:25:LEU:H	49:DR:94:THR:HG21	1.81	0.46
12:AM:89:ARG:CB	12:AM:96:VAL:HG22	2.46	0.46
23:BB:1139:G:O2'	23:BB:1143:A:N1	2.42	0.46
23:BB:1138:G:H21	41:BJ:108:MET:CE	2.29	0.46
1:AA:1049:U:O4'	1:AA:1201:A:N7	2.49	0.46
23:DB:1213:A:C6	23:DB:1237:A:H1'	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:13:G:H1	22:BA:69:G:HO2'	1.64	0.46
23:DB:52:A:C5	23:DB:118:A:C2	3.04	0.46
23:DB:1248:G:C4	44:DQ:2:ARG:HD2	2.50	0.46
23:DB:1180:U:H2'	23:DB:1181:U:O4'	2.15	0.46
34:D3:60:CYS:C	34:D3:62:PRO:HD3	2.36	0.46
37:DL:47:ARG:HH21	37:DL:47:ARG:HB3	1.80	0.46
20:AB:83:ALA:CB	20:AB:90:PHE:HB3	2.45	0.46
1:AA:858:G:O6	1:AA:869:G:H3'	2.16	0.46
23:DB:1590:A:H2'	23:DB:1591:A:H8	1.81	0.46
1:AA:1123:U:C2'	1:AA:1124:G:H5'	2.46	0.46
23:DB:2853:C:O2'	23:DB:2854:G:H5'	2.16	0.46
19:CT:35:TYR:CG	19:CT:36:ALA:N	2.82	0.46
1:AA:1054:C:O2'	1:AA:1055:A:H5''	2.16	0.46
1:AA:1143:G:O2'	1:AA:1144:G:H5'	2.16	0.46
8:AI:99:LYS:HE3	9:CJ:80:THR:HA	1.97	0.46
16:CQ:30:HIS:ND1	16:CQ:32:ILE:HG22	2.30	0.46
23:DB:2699:C:H2'	23:DB:2700:A:C8	2.50	0.46
51:DZ:63:GLY:HA3	51:DZ:66:THR:OG1	2.16	0.46
22:DA:49:C:O2'	22:DA:50:A:H5'	2.16	0.46
21:AU:31:VAL:O	21:AU:31:VAL:HG12	2.15	0.46
23:BB:2730:C:H2'	23:BB:2731:G:H8	1.79	0.46
5:AF:7:VAL:O	5:AF:7:VAL:HG13	2.16	0.46
23:DB:1640:A:H2'	23:DB:1641:A:H8	1.80	0.46
1:CA:170:U:O2'	1:CA:171:A:H5'	2.16	0.46
1:CA:975:A:H5''	1:CA:976:G:O5'	2.15	0.46
1:AA:317:U:H2'	1:AA:318:G:C8	2.50	0.46
49:BR:20:VAL:HG12	49:BR:21:ARG:N	2.30	0.46
23:DB:686:U:H2'	23:DB:788:A:N1	2.31	0.46
7:AH:79:ARG:HB2	7:AH:80:PRO:HD2	1.96	0.46
1:CA:178:C:O2'	1:CA:179:A:H5'	2.16	0.46
1:AA:26:A:N6	1:AA:558:G:H1'	2.31	0.46
18:AS:11:ASP:H	18:AS:14:LEU:HD21	1.81	0.46
23:DB:2297:A:H61	23:DB:2319:G:H1'	1.79	0.46
1:CA:961:U:OP1	1:CA:1223:C:H4'	2.15	0.46
53:D6:156:ARG:O	53:D6:159:ALA:HB3	2.16	0.46
25:DC:35:LYS:HD2	25:DC:36:ASN:H	1.80	0.46
23:BB:1366:A:H2'	23:BB:1367:A:O4'	2.15	0.46
1:AA:1125:U:O2'	1:AA:1126:U:H2'	2.16	0.46
50:DT:15:HIS:O	50:DT:16:VAL:C	2.53	0.46
23:BB:1568:G:H4'	25:BC:58:LYS:HB3	1.98	0.46
23:BB:2745:C:H4'	48:BG:141:GLY:O	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AE:17:VAL:HG23	4:AE:33:THR:O	2.16	0.46
37:BL:142:ILE:HD12	37:BL:142:ILE:N	2.31	0.46
23:BB:303:G:H2'	23:BB:304:U:C6	2.51	0.46
1:AA:998:C:H2'	1:AA:999:C:C6	2.51	0.46
38:BM:33:LEU:HD22	38:BM:128:THR:OG1	2.16	0.46
23:BB:1664:A:H1'	23:BB:2726:A:N1	2.31	0.46
10:AK:125:LYS:O	21:AU:33:ARG:NH2	2.49	0.46
23:BB:2331:G:O2'	23:BB:2332:C:H5'	2.16	0.46
52:BW:49:ASN:CB	52:BW:60:ALA:HA	2.45	0.46
23:DB:2330:G:N2	52:DW:38:ARG:O	2.49	0.46
25:DC:146:LYS:HB2	25:DC:149:LYS:HB2	1.97	0.46
53:B6:70:SER:N	53:B6:97:ASP:O	2.47	0.46
53:B6:68:VAL:HG11	53:B6:79:ILE:CB	2.46	0.46
40:BH:79:THR:HA	40:BH:145:ASN:CB	2.44	0.46
1:CA:1147:C:H2'	1:CA:1148:U:C6	2.51	0.46
8:CI:25:GLY:HA3	8:CI:57:VAL:HA	1.98	0.46
47:DF:115:GLY:CA	47:DF:177:ARG:HD2	2.30	0.46
41:BJ:18:VAL:HG22	41:BJ:19:ASP:N	2.31	0.46
23:DB:994:C:O2	49:DR:10:LYS:HE3	2.16	0.46
13:AN:5:MET:O	13:AN:8:ARG:HB3	2.16	0.46
37:DL:115:GLU:N	37:DL:115:GLU:OE1	2.48	0.46
13:CN:78:LEU:HD23	13:CN:82:LYS:CB	2.45	0.46
38:DM:35:ALA:C	38:DM:37:GLY:H	2.19	0.46
1:CA:982:U:OP2	13:CN:60:ARG:NH1	2.48	0.46
13:CN:5:MET:HE2	13:CN:60:ARG:NH1	2.31	0.46
1:CA:430:A:P	3:CD:6:PRO:HA	2.56	0.46
51:BZ:71:LEU:CD1	51:BZ:76:GLU:HB3	2.44	0.46
46:DU:86:PHE:HD1	46:DU:88:ASP:H	1.60	0.46
22:BA:28:C:C5	22:BA:56:G:C2	3.04	0.46
37:BL:42:SER:O	37:BL:44:GLY:N	2.49	0.46
37:BL:80:SER:HB3	37:BL:115:GLU:OE2	2.16	0.46
35:BV:44:HIS:O	35:BV:45:ASP:C	2.54	0.46
4:CE:131:ASN:ND2	4:CE:134:ASN:H	2.14	0.46
8:AI:87:MET:HB2	8:AI:94:ARG:CD	2.46	0.46
9:AJ:57:VAL:HG22	9:AJ:58:ASN:N	2.20	0.46
50:DT:38:ALA:HB1	50:DT:43:ILE:CD1	2.45	0.46
23:DB:2893:A:H4'	23:DB:2894:G:O5'	2.15	0.46
16:AQ:74:LEU:HD22	16:AQ:75:VAL:H	1.81	0.46
23:BB:2751:G:H4'	23:BB:2752:C:OP1	2.15	0.46
53:B6:108:GLU:O	53:B6:112:LYS:HG3	2.16	0.46
32:B4:15:LYS:O	32:B4:16:ILE:HB	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:244:U:O4	1:CA:906:A:H1'	2.16	0.46
28:DP:92:ARG:NH1	28:DP:92:ARG:HG3	2.31	0.46
22:DA:76:G:P	35:DV:13:GLY:H	2.38	0.46
15:CP:72:ALA:HA	15:CP:75:ILE:CD1	2.45	0.46
26:DD:116:LYS:HB3	26:DD:118:PHE:CE2	2.50	0.46
23:BB:2443:C:O2'	23:BB:2444:G:H5'	2.16	0.46
23:DB:970:U:H1'	23:DB:985:C:P	2.56	0.46
23:DB:1439:A:H1'	23:DB:1553:A:N6	2.30	0.46
1:CA:842:U:H4'	1:CA:846:G:C2	2.51	0.46
36:B2:9:VAL:CG1	36:B2:10:LEU:N	2.79	0.46
23:DB:2244:U:H2'	23:DB:2245:U:O4'	2.15	0.46
28:BP:6:GLN:O	28:BP:10:GLU:HB2	2.15	0.46
28:BP:4:ILE:HG22	28:BP:5:LYS:N	2.27	0.46
4:AE:80:LEU:CD1	4:AE:95:MET:HB3	2.45	0.46
10:AK:80:ASN:HD22	10:AK:80:ASN:H	1.63	0.46
49:DR:23:GLU:O	49:DR:25:LEU:HD22	2.16	0.46
1:CA:440:C:O2'	1:CA:441:A:H5'	2.16	0.46
3:AD:197:HIS:HA	3:AD:200:VAL:HG22	1.98	0.46
1:CA:552:U:H2'	1:CA:553:A:H8	1.79	0.46
35:DV:29:ILE:HD13	35:DV:31:TYR:HE2	1.81	0.46
23:DB:646:U:H3'	23:DB:647:G:H8	1.81	0.46
23:DB:154:U:H2'	23:DB:155:A:C8	2.51	0.46
23:DB:17:G:H2'	23:DB:18:U:H6	1.81	0.46
23:BB:2626:C:O2'	23:BB:2627:G:H5'	2.15	0.46
23:BB:1590:A:H2'	23:BB:1591:A:H8	1.79	0.46
23:BB:1591:A:H2'	23:BB:1592:C:C6	2.51	0.46
20:AB:63:LYS:HB3	20:AB:87:ASP:OD2	2.16	0.46
23:DB:2626:C:O2'	23:DB:2627:G:H5'	2.15	0.46
53:D6:64:ARG:N	53:D6:64:ARG:HD2	2.31	0.46
1:AA:1461:G:O2'	1:AA:1462:C:H5'	2.15	0.46
6:CG:91:ARG:HD2	6:CG:91:ARG:N	2.31	0.46
23:DB:1316:U:H2'	23:DB:1317:G:H8	1.81	0.46
23:DB:779:U:H2'	23:DB:780:G:C8	2.51	0.46
23:BB:741:U:H2'	23:BB:742:A:H8	1.80	0.46
1:CA:1278:G:H4'	1:CA:1279:G:H5'	1.97	0.46
42:DN:58:ASP:OD2	42:DN:63:ARG:NH2	2.49	0.46
30:DY:29:ARG:HB2	30:DY:33:HIS:HD2	1.81	0.46
27:DK:76:VAL:HG12	27:DK:77:ILE:N	2.31	0.46
1:AA:513:C:H2'	1:AA:514:C:C6	2.50	0.46
23:BB:528:A:C2	23:BB:2043:C:H4'	2.51	0.46
28:DP:77:SER:O	28:DP:80:VAL:HG12	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:13:ILE:C	2:AC:15:LYS:H	2.18	0.46
23:DB:236:C:O2'	23:DB:237:C:H5'	2.16	0.46
23:BB:2648:G:H2'	23:BB:2649:C:H6	1.79	0.46
23:DB:2730:C:H2'	23:DB:2731:G:H8	1.81	0.46
37:BL:131:ALA:C	37:BL:133:ALA:N	2.69	0.46
5:AF:18:VAL:HG21	5:AF:58:HIS:CE1	2.50	0.46
23:DB:370:G:O2'	23:DB:423:A:H3'	2.15	0.46
27:DK:25:LEU:HD11	27:DK:40:LYS:N	2.30	0.46
46:DU:18:LYS:O	46:DU:20:LYS:N	2.48	0.46
1:CA:624:C:H2'	1:CA:625:U:H6	1.81	0.46
1:AA:224:U:H2'	1:AA:225:C:C6	2.51	0.46
25:BC:20:ASN:O	25:BC:23:LEU:HD13	2.16	0.46
5:AF:46:GLN:NE2	5:AF:46:GLN:HA	2.31	0.46
23:DB:729:G:C5	25:DC:206:LYS:HB2	2.51	0.46
1:CA:1409:C:H2'	1:CA:1410:A:C8	2.51	0.46
46:BU:98:ASN:OD1	46:BU:100:GLU:HB2	2.15	0.46
23:DB:2515:C:O2'	23:DB:2516:A:H5'	2.15	0.46
23:DB:1956:U:O2	23:DB:1985:C:H4'	2.16	0.46
23:BB:1035:U:H2'	23:BB:1036:G:H8	1.81	0.46
23:DB:1228:G:H2'	23:DB:1229:C:H6	1.81	0.46
26:BD:16:THR:O	28:BP:78:PRO:HG2	2.16	0.46
23:DB:1892:C:O2'	23:DB:1893:C:H5'	2.16	0.46
40:DH:40:THR:O	40:DH:42:LYS:N	2.48	0.46
23:DB:1435:G:H2'	23:DB:1436:G:H8	1.81	0.46
23:BB:1924:C:O2'	23:BB:1925:C:H5'	2.15	0.46
24:BI:72:THR:HG21	24:BI:111:THR:O	2.16	0.46
25:DC:24:HIS:CE1	25:DC:26:GLY:H	2.34	0.46
1:CA:610:U:O4'	1:CA:610:U:O2	2.33	0.46
23:DB:1385:A:O2'	23:DB:1396:U:H6	1.99	0.46
25:DC:9:SER:HB2	25:DC:10:PRO:HD2	1.98	0.46
29:BE:200:LEU:O	29:BE:201:ALA:HB3	2.15	0.46
52:BW:23:LYS:HD2	52:BW:24:ARG:H	1.81	0.46
48:BG:112:VAL:O	48:BG:113:ASP:HB2	2.15	0.46
37:DL:141:LYS:HZ3	37:DL:143:GLU:HA	1.81	0.46
48:DG:88:LEU:O	48:DG:88:LEU:HD12	2.16	0.46
53:B6:52:LEU:HA	53:B6:55:ILE:CG2	2.46	0.46
40:BH:132:PHE:HB2	40:BH:142:VAL:CG2	2.45	0.46
8:CI:75:ALA:HA	8:CI:78:ILE:HD12	1.98	0.46
47:DF:43:ILE:HB	47:DF:82:TYR:CZ	2.51	0.46
23:DB:673:C:H4'	29:DE:77:ILE:HD11	1.96	0.46
27:DK:29:HIS:O	27:DK:30:ARG:C	2.54	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:3:LYS:NZ	46:BU:82:VAL:HB	2.30	0.46
22:BA:27:C:C2'	22:BA:28:C:H5'	2.46	0.46
24:DI:78:LEU:HD23	24:DI:81:LYS:HE2	1.97	0.46
9:CJ:53:ILE:HG23	9:CJ:54:SER:N	2.31	0.46
47:BF:111:ARG:HE	47:BF:135:ILE:HG22	1.81	0.46
47:BF:138:PRO:HA	47:BF:142:TYR:CE2	2.51	0.46
47:BF:113:PHE:CZ	47:BF:175:PRO:HB2	2.51	0.46
2:CC:80:GLY:O	2:CC:84:GLU:HB2	2.16	0.46
24:BI:32:VAL:HG13	24:BI:66:PHE:CD2	2.50	0.46
18:CS:44:ILE:HA	18:CS:61:VAL:CG1	2.46	0.46
23:DB:138:U:H2'	23:DB:140:C:O4'	2.16	0.46
23:BB:2466:C:OP1	32:B4:4:ARG:HB3	2.15	0.46
32:B4:16:ILE:HG12	32:B4:25:VAL:HG22	1.97	0.46
23:DB:26:G:H1'	23:DB:514:A:H61	1.81	0.46
38:DM:65:ILE:HG23	38:DM:103:TYR:CE2	2.51	0.46
2:AC:11:LEU:HD11	13:AN:87:ALA:O	2.16	0.46
23:DB:2848:G:H1'	23:DB:2868:A:N6	2.31	0.46
35:DV:83:LYS:O	35:DV:85:LYS:N	2.49	0.46
48:BG:163:TYR:O	48:BG:165:ASP:N	2.49	0.46
24:BI:126:ARG:HA	24:BI:129:GLU:OE2	2.16	0.46
9:CJ:76:ILE:HD12	9:CJ:76:ILE:O	2.16	0.46
5:CF:5:GLU:HA	5:CF:63:ASN:HA	1.98	0.46
1:AA:311:C:O2'	1:AA:312:C:H5'	2.16	0.46
40:BH:69:ALA:HA	40:BH:141:LYS:HZ2	1.81	0.46
49:DR:39:LEU:CA	49:DR:53:PHE:HA	2.43	0.46
1:CA:116:A:H2'	1:CA:117:G:O4'	2.16	0.46
23:BB:1309:G:OP1	36:B2:9:VAL:N	2.48	0.46
9:CJ:12:ALA:HB3	9:CJ:18:ILE:HB	1.97	0.46
1:AA:1074:G:C1'	20:AB:102:ASN:HB2	2.46	0.46
2:AC:155:ARG:H	2:AC:162:ALA:HA	1.81	0.46
12:CM:89:ARG:CB	12:CM:96:VAL:HG22	2.46	0.46
23:DB:858:G:H21	23:DB:2268:A:H3'	1.81	0.46
1:CA:236:A:H2'	1:CA:237:G:C8	2.50	0.46
7:CH:65:PHE:CE2	7:CH:66:GLN:HG3	2.51	0.46
7:AH:7:ALA:O	7:AH:11:THR:HG23	2.16	0.46
23:BB:558:U:O3'	41:BJ:111:LYS:HD3	2.15	0.46
23:BB:646:U:H3'	23:BB:647:G:H8	1.81	0.46
23:DB:1597:A:C5'	23:DB:1598:A:H5'	2.42	0.46
1:CA:803:G:H2'	1:CA:804:U:H6	1.80	0.46
23:BB:1386:C:H1'	23:BB:1470:A:H1'	1.97	0.46
23:DB:2840:C:O2'	23:DB:2841:C:H5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:803:G:H2'	1:AA:804:U:C6	2.51	0.46
23:DB:1685:C:O2'	23:DB:1686:C:H5'	2.15	0.46
23:DB:1404:C:O2'	23:DB:1405:U:H5'	2.16	0.46
1:CA:828:U:O2'	20:CB:24:PRO:HB3	2.16	0.46
23:BB:2415:G:C4'	37:BL:66:PHE:HB2	2.45	0.46
22:DA:6:G:H2'	22:DA:7:G:C8	2.51	0.46
1:AA:505:G:H2'	1:AA:506:G:C8	2.50	0.46
39:DX:33:ALA:CB	50:DT:14:PRO:HD2	2.46	0.46
20:AB:22:TRP:CG	20:AB:23:ASN:N	2.82	0.46
43:BO:6:ALA:HB1	43:BO:10:ARG:HH11	1.81	0.46
23:DB:2606:C:O2'	23:DB:2607:G:H5'	2.16	0.46
28:DP:101:GLU:OE2	28:DP:101:GLU:N	2.48	0.46
23:BB:1918:A:O2'	23:BB:1920:C:C4	2.68	0.46
23:DB:480:A:H3'	23:DB:481:G:H5''	1.98	0.46
23:DB:2785:C:H2'	23:DB:2786:U:C6	2.51	0.46
25:DC:221:GLY:O	25:DC:223:ALA:N	2.49	0.46
1:CA:205:A:H2'	1:CA:206:C:O4'	2.16	0.46
27:DK:107:LEU:C	27:DK:109:SER:H	2.18	0.46
29:BE:102:ARG:HG3	29:BE:102:ARG:HH21	1.81	0.46
1:CA:728:A:H2'	1:CA:729:A:C8	2.51	0.46
23:BB:1640:A:H2'	23:BB:1641:A:H8	1.79	0.46
1:CA:448:A:H2'	1:CA:449:G:H8	1.80	0.46
23:BB:2677:G:H2'	23:BB:2678:C:H6	1.79	0.46
6:AG:72:VAL:HA	6:AG:89:GLU:HA	1.98	0.46
23:DB:1031:G:C4'	32:D4:6:SER:HB3	2.45	0.46
41:DJ:88:THR:HG22	41:DJ:91:GLU:OE1	2.16	0.46
2:AC:176:THR:HB	2:AC:179:ALA:HB2	1.96	0.46
23:BB:2213:U:O2	23:BB:2213:U:H2'	2.15	0.46
46:DU:66:VAL:C	46:DU:68:ASN:H	2.19	0.46
28:BP:64:SER:O	28:BP:66:GLY:N	2.48	0.46
23:DB:1693:U:O2'	25:DC:13:ARG:NH2	2.49	0.46
1:AA:960:U:O2'	1:AA:1223:C:H4'	2.16	0.46
1:AA:223:A:H2'	1:AA:224:U:C6	2.51	0.46
1:AA:624:C:H2'	1:AA:625:U:H6	1.79	0.46
52:DW:47:GLY:HA3	52:DW:80:SER:CB	2.46	0.46
50:BT:15:HIS:O	50:BT:16:VAL:C	2.53	0.46
26:DD:61:THR:O	26:DD:64:GLU:HB2	2.15	0.46
23:BB:685:A:H1'	23:BB:688:U:O4	2.16	0.46
23:DB:802:A:H4'	57:DB:3287:HOH:O	2.15	0.46
40:BH:11:ASN:O	40:BH:12:LEU:HB3	2.15	0.46
20:AB:131:LYS:O	20:AB:135:MET:HB2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AH:74:ILE:O	7:AH:74:ILE:HG23	2.16	0.46
1:AA:95:C:H2'	1:AA:95:C:O2	2.16	0.46
23:DB:2693:G:H2'	23:DB:2694:G:H8	1.80	0.46
2:CC:57:GLU:HB2	2:CC:64:ARG:HB2	1.97	0.46
23:BB:2545:G:O2'	23:BB:2546:U:H5'	2.15	0.46
38:BM:54:THR:C	38:BM:56:ALA:H	2.20	0.46
24:DI:2:LYS:O	24:DI:3:LYS:HG3	2.16	0.46
2:AC:190:THR:CG2	2:AC:191:THR:N	2.78	0.46
10:CK:126:ARG:NE	10:CK:126:ARG:HA	2.30	0.46
52:DW:19:ARG:HD3	52:DW:36:ILE:HD11	1.98	0.46
25:DC:131:MET:CE	25:DC:189:ALA:HB2	2.46	0.46
37:DL:124:GLY:H	37:DL:143:GLU:HG3	1.75	0.46
40:BH:133:GLN:NE2	40:BH:135:HIS:O	2.49	0.46
23:DB:2313:C:H4'	47:DF:87:LYS:HB3	1.98	0.46
8:CI:22:PRO:HA	8:CI:60:LEU:HB2	1.97	0.46
41:DJ:44:TYR:CD2	41:DJ:44:TYR:C	2.88	0.46
41:DJ:24:THR:O	41:DJ:25:LEU:HB3	2.16	0.46
13:CN:13:VAL:HG22	13:CN:59:GLN:HG2	1.97	0.46
46:DU:5:ARG:NH2	46:DU:93:ARG:HD3	2.31	0.46
40:DH:127:GLU:HA	40:DH:144:VAL:O	2.16	0.46
23:BB:78:U:H2'	23:BB:79:C:C6	2.50	0.46
47:BF:100:GLU:O	47:BF:104:THR:HB	2.15	0.46
29:BE:126:VAL:HG22	29:BE:127:GLU:H	1.80	0.46
1:AA:764:C:H2'	1:AA:765:G:C5'	2.46	0.46
47:DF:137:PHE:CD2	47:DF:137:PHE:N	2.84	0.46
1:CA:1361:G:N2	1:CA:1362:A:N7	2.64	0.46
23:DB:670:A:H4'	23:DB:671:C:C5'	2.37	0.46
18:AS:44:ILE:O	18:AS:44:ILE:HG23	2.16	0.46
50:DT:57:VAL:HG22	50:DT:58:VAL:N	2.21	0.46
22:DA:97:C:H2'	22:DA:98:G:H5'	1.98	0.46
46:BU:47:PRO:HB3	46:BU:55:GLY:CA	2.46	0.46
38:DM:103:TYR:HB2	38:DM:117:PHE:CE1	2.51	0.46
23:BB:2886:A:H3'	23:BB:2887:A:C8	2.46	0.46
1:AA:1269:A:H2	1:AA:1312:G:N3	2.13	0.46
43:BO:58:ILE:HG22	43:BO:62:LEU:CD2	2.40	0.46
20:CB:57:ASN:HD22	20:CB:223:GLY:CA	2.29	0.46
1:AA:1001:C:H2'	1:AA:1002:G:H8	1.79	0.46
27:DK:58:LEU:H	27:DK:58:LEU:HD23	1.81	0.46
26:BD:113:SER:HB3	26:BD:167:ASN:H	1.78	0.46
26:BD:113:SER:HB3	26:BD:167:ASN:HA	1.97	0.46
23:DB:322:A:C2	23:DB:340:A:C6	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:11:ILE:O	46:BU:11:ILE:HD13	2.16	0.46
3:AD:196:GLU:O	3:AD:200:VAL:HG13	2.16	0.46
4:CE:80:LEU:CD1	4:CE:95:MET:HB3	2.46	0.46
11:AL:33:CYS:N	11:AL:54:VAL:HG13	2.30	0.46
35:DV:42:LEU:H	35:DV:42:LEU:CD2	2.21	0.46
9:CJ:37:ARG:CZ	9:CJ:37:ARG:HA	2.46	0.46
23:BB:2345:G:H4'	23:BB:2346:A:O5'	2.16	0.46
34:B3:60:CYS:C	34:B3:62:PRO:HD3	2.36	0.46
1:AA:926:G:H3'	1:AA:1505:G:H21	1.80	0.46
23:BB:2000:C:O2'	23:BB:2001:C:H5'	2.16	0.46
23:DB:2460:U:O2'	23:DB:2461:A:H5'	2.15	0.46
23:BB:2028:U:O2'	23:BB:2029:G:H5'	2.15	0.46
25:BC:244:VAL:HA	25:BC:249:VAL:O	2.16	0.46
23:DB:876:C:N3	23:DB:901:C:N4	2.63	0.46
1:CA:378:G:H2'	1:CA:379:C:C6	2.51	0.46
16:CQ:31:PRO:O	16:CQ:32:ILE:HB	2.16	0.46
1:CA:1037:C:H2'	1:CA:1038:C:H6	1.81	0.46
48:BG:38:ASP:CG	48:BG:39:ALA:N	2.68	0.46
23:DB:314:C:O2'	23:DB:315:G:H5'	2.16	0.46
23:BB:1535:A:O2'	23:BB:1536:C:H5'	2.16	0.46
29:BE:122:GLU:O	29:BE:123:LYS:CB	2.62	0.46
23:DB:2543:G:H2'	23:DB:2544:G:H8	1.79	0.46
1:AA:386:C:C2'	1:AA:387:U:H5'	2.46	0.46
47:DF:120:SER:OG	47:DF:129:MET:HB3	2.16	0.46
2:AC:179:ALA:HB3	2:AC:181:ILE:HD11	1.97	0.46
1:CA:912:C:O2'	1:CA:913:A:H5'	2.16	0.46
23:DB:335:C:O2'	23:DB:336:C:H5'	2.16	0.46
8:CI:11:ARG:CZ	8:CI:106:ASP:OD1	2.64	0.46
23:BB:437:U:H2'	23:BB:438:G:C8	2.50	0.46
23:DB:2420:C:O2'	23:DB:2421:G:H5'	2.16	0.46
23:BB:902:C:H2'	23:BB:903:C:H6	1.81	0.46
1:AA:559:A:H5'	57:AA:1807:HOH:O	2.16	0.46
48:BG:77:GLY:HA3	48:BG:135:ALA:O	2.16	0.46
53:D6:24:ASN:HB3	53:D6:121:TYR:CE1	2.51	0.46
45:DS:4:ILE:CG2	45:DS:106:VAL:HG22	2.46	0.46
23:BB:1344:U:H4'	23:BB:1384:A:C5	2.51	0.46
23:BB:2563:U:H2'	23:BB:2565:A:OP2	2.16	0.46
5:AF:10:VAL:HG12	5:AF:11:HIS:N	2.31	0.46
23:BB:2611:C:O2'	23:BB:2612:C:H5'	2.15	0.46
1:CA:656:G:O2'	1:CA:657:U:H5'	2.16	0.46
23:DB:1908:C:O2'	23:DB:1909:C:H5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:43:ARG:HH11	3:CD:43:ARG:HB3	1.80	0.46
5:CF:17:GLN:O	5:CF:21:MET:HG3	2.16	0.46
23:DB:1098:A:H2'	24:DI:3:LYS:C	2.37	0.45
25:DC:141:HIS:CG	25:DC:142:ASN:H	2.32	0.45
25:DC:52:HIS:O	25:DC:53:ILE:HB	2.16	0.45
48:BG:94:ARG:HH21	48:BG:104:LEU:HA	1.81	0.45
5:CF:3:HIS:ND1	5:CF:95:ALA:HB2	2.31	0.45
23:DB:921:C:H2'	23:DB:922:C:H6	1.80	0.45
35:DV:1:MET:CE	35:DV:2:PHE:H	2.29	0.45
25:BC:115:ILE:HA	25:BC:127:ASN:OD1	2.15	0.45
25:BC:75:ALA:CB	25:BC:93:VAL:HG22	2.46	0.45
35:BV:1:MET:HE2	35:BV:2:PHE:H	1.80	0.45
35:BV:62:THR:CB	35:BV:71:LYS:HG2	2.44	0.45
41:DJ:25:LEU:HB2	41:DJ:62:VAL:CG2	2.46	0.45
47:DF:74:ALA:HB3	47:DF:77:LYS:O	2.16	0.45
13:CN:70:HIS:O	13:CN:71:GLY:C	2.54	0.45
38:BM:24:THR:HG23	38:BM:34:LYS:CE	2.46	0.45
47:DF:3:LEU:HD11	47:DF:172:PHE:CD1	2.51	0.45
53:D6:46:TYR:OH	53:D6:74:ASN:HB3	2.15	0.45
1:CA:17:U:H4'	1:CA:1079:G:O2'	2.16	0.45
23:BB:1018:U:O2'	23:BB:1019:U:H5'	2.16	0.45
33:D1:33:LEU:HD12	33:D1:34:GLU:N	2.32	0.45
29:DE:33:VAL:O	29:DE:36:ALA:HB3	2.16	0.45
23:BB:2886:A:H62	31:B0:39:ARG:CD	2.29	0.45
9:CJ:51:VAL:HG22	13:CN:80:ARG:HB2	1.98	0.45
53:D6:111:ARG:O	53:D6:115:VAL:HG22	2.15	0.45
53:B6:17:SER:O	53:B6:20:VAL:HB	2.16	0.45
27:DK:79:PHE:CD2	28:DP:69:VAL:HG12	2.51	0.45
23:BB:970:U:H1'	23:BB:985:C:P	2.56	0.45
23:BB:589:U:H2'	23:BB:590:A:H8	1.80	0.45
23:BB:591:U:O2'	23:BB:592:A:H5'	2.16	0.45
20:AB:216:VAL:O	20:AB:220:VAL:HG23	2.16	0.45
5:CF:4:TYR:CE2	5:CF:71:ILE:HG21	2.51	0.45
23:DB:2886:A:H62	31:D0:39:ARG:CZ	2.28	0.45
49:DR:1:MET:HG3	49:DR:101:ILE:HG21	1.98	0.45
7:AH:58:LEU:O	7:AH:60:LEU:N	2.48	0.45
23:DB:30:G:OP1	44:DQ:4:LYS:HG2	2.15	0.45
11:AL:51:VAL:HG12	11:AL:52:CYS:N	2.25	0.45
20:AB:148:GLY:C	20:AB:150:ILE:H	2.19	0.45
1:CA:1239:A:H4'	1:CA:1240:U:C5'	2.47	0.45
23:DB:173:A:H2'	23:DB:174:U:H6	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:26:ASN:ND2	46:DU:34:ILE:HD12	2.30	0.45
5:AF:98:GLU:CG	5:AF:99:ALA:N	2.74	0.45
39:BX:20:ASN:H	39:BX:20:ASN:HD22	1.63	0.45
27:BK:87:LEU:HB2	27:BK:93:GLN:C	2.36	0.45
23:BB:720:U:O2'	23:BB:721:A:H5'	2.16	0.45
3:CD:169:TRP:CD1	3:CD:170:LEU:HD23	2.50	0.45
38:BM:40:ARG:HB2	38:BM:93:VAL:HG21	1.99	0.45
23:BB:1597:A:C5'	23:BB:1598:A:H5'	2.45	0.45
1:CA:1270:G:H2'	1:CA:1271:A:C8	2.51	0.45
49:BR:2:TYR:HB2	49:BR:42:ALA:CB	2.46	0.45
23:DB:2843:G:O2'	23:DB:2844:G:H5'	2.15	0.45
1:CA:1330:U:C2'	1:CA:1331:G:H5'	2.46	0.45
23:DB:2449:U:H4'	23:DB:2450:A:OP1	2.16	0.45
3:AD:77:GLU:O	3:AD:81:LEU:HG	2.16	0.45
41:DJ:96:ARG:CZ	41:DJ:99:ARG:HD2	2.45	0.45
26:BD:15:PHE:N	26:BD:15:PHE:CD1	2.81	0.45
37:DL:129:LYS:HA	37:DL:132:ARG:CD	2.46	0.45
1:CA:821:G:O2'	1:CA:822:U:H5'	2.15	0.45
1:AA:159:G:H5'	1:AA:160:A:OP2	2.16	0.45
29:BE:3:LEU:O	29:BE:12:LEU:HD23	2.16	0.45
23:DB:728:G:O2'	23:DB:730:A:H8	1.98	0.45
33:B1:28:THR:O	33:B1:29:LYS:HD2	2.16	0.45
26:BD:16:THR:HG22	26:BD:17:GLU:H	1.80	0.45
23:DB:2256:G:H2'	23:DB:2257:U:H6	1.81	0.45
29:DE:4:VAL:HG12	29:DE:6:LYS:H	1.81	0.45
23:DB:2081:U:H2'	23:DB:2082:A:C8	2.51	0.45
48:DG:60:GLY:O	48:DG:62:ALA:N	2.49	0.45
23:DB:1568:G:H4'	25:DC:58:LYS:HB3	1.97	0.45
23:DB:1360:G:H2'	23:DB:1361:G:O4'	2.17	0.45
23:DB:1733:G:H2'	23:DB:1734:G:C8	2.51	0.45
41:DJ:98:GLU:CD	41:DJ:98:GLU:H	2.19	0.45
29:DE:73:ILE:HG12	29:DE:73:ILE:O	2.16	0.45
26:BD:27:ILE:HG23	26:BD:201:LEU:HD12	1.98	0.45
23:BB:1956:U:O2	23:BB:1985:C:H4'	2.16	0.45
15:CP:22:ALA:HA	15:CP:33:ILE:HG13	1.97	0.45
23:BB:1123:C:O2'	23:BB:1124:G:H5'	2.16	0.45
23:DB:1099:G:C8	24:DI:3:LYS:CB	2.99	0.45
52:BW:49:ASN:HB2	52:BW:61:LYS:N	2.26	0.45
25:DC:151:GLY:C	25:DC:152:GLN:HG3	2.37	0.45
44:DQ:23:TYR:HB2	44:DQ:27:ARG:HB3	1.99	0.45
37:BL:141:LYS:HD3	37:BL:141:LYS:C	2.36	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CQ:60:ILE:HG12	16:CQ:72:TRP:HE3	1.80	0.45
8:AI:20:ILE:HD13	8:AI:85:ALA:CB	2.44	0.45
8:AI:83:THR:OG1	8:AI:97:LEU:HD13	2.14	0.45
35:DV:32:GLY:C	35:DV:93:ARG:HG3	2.36	0.45
37:DL:77:ILE:HB	37:DL:109:LYS:O	2.17	0.45
22:DA:28:C:C5	22:DA:56:G:C2	3.04	0.45
30:DY:6:ILE:HG21	30:DY:47:ILE:HD12	1.97	0.45
50:BT:40:LYS:HD3	50:BT:58:VAL:O	2.16	0.45
1:CA:429:U:H3'	3:CD:8:LEU:CD2	2.41	0.45
12:AM:109:LYS:HG3	12:AM:110:GLY:N	2.30	0.45
23:DB:1059:G:H2'	23:DB:1060:U:C5	2.51	0.45
23:BB:2308:G:O6	23:BB:2311:A:N7	2.49	0.45
38:BM:35:ALA:C	38:BM:37:GLY:H	2.20	0.45
1:CA:978:A:H5'	1:CA:1362:A:H61	1.77	0.45
18:CS:39:ILE:HG13	18:CS:68:HIS:O	2.16	0.45
23:DB:137:U:H1'	50:DT:1:MET:H2	1.80	0.45
50:DT:10:VAL:O	50:DT:11:LEU:C	2.54	0.45
53:D6:181:GLN:O	53:D6:184:LEU:N	2.49	0.45
45:DS:27:LYS:CD	45:DS:27:LYS:H	2.28	0.45
53:B6:184:LEU:O	53:B6:184:LEU:HD23	2.16	0.45
11:CL:42:LYS:HB2	11:CL:88:ASP:HA	1.98	0.45
11:CL:86:VAL:CG1	11:CL:89:LEU:HD23	2.46	0.45
13:CN:52:ARG:HD2	13:CN:58:ARG:HH21	1.80	0.45
23:DB:1082:U:C2	23:DB:1086:A:N1	2.84	0.45
27:BK:29:HIS:O	27:BK:30:ARG:C	2.53	0.45
23:DB:2105:U:H2'	23:DB:2106:U:C6	2.50	0.45
45:DS:66:ILE:HG12	45:DS:67:ASP:N	2.31	0.45
44:BQ:9:ALA:C	44:BQ:11:ALA:N	2.69	0.45
27:BK:99:ILE:HG12	27:BK:115:ILE:HG13	1.97	0.45
37:DL:96:LYS:HE2	37:DL:102:GLY:O	2.16	0.45
34:B3:16:THR:HG21	34:B3:48:MET:CE	2.46	0.45
24:DI:100:ILE:HG23	24:DI:104:GLN:OE1	2.16	0.45
24:DI:138:VAL:HG12	24:DI:139:VAL:N	2.31	0.45
26:DD:9:VAL:O	26:DD:9:VAL:HG22	2.16	0.45
26:BD:9:VAL:HG22	26:BD:9:VAL:O	2.16	0.45
1:CA:1299:A:C2'	1:CA:1301:U:H1'	2.43	0.45
20:AB:27:LYS:C	20:AB:27:LYS:HD2	2.37	0.45
2:AC:184:ASN:HD22	2:AC:185:THR:H	1.64	0.45
1:AA:264:C:H2'	1:AA:265:G:O4'	2.16	0.45
4:CE:82:HIS:CE1	4:CE:146:MET:HA	2.51	0.45
50:DT:31:VAL:HA	50:DT:84:TYR:H	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CF:16:GLU:CD	5:CF:16:GLU:N	2.68	0.45
23:DB:1248:G:C5	29:DE:46:GLN:NE2	2.78	0.45
53:B6:140:LEU:HD23	53:B6:158:GLU:HG2	1.98	0.45
23:BB:2626:C:H2'	23:BB:2627:G:C8	2.51	0.45
39:BX:8:GLU:O	39:BX:12:GLU:HB2	2.16	0.45
1:CA:366:A:O2'	1:CA:394:G:N2	2.48	0.45
23:DB:1902:C:H2'	23:DB:1903:G:O4'	2.16	0.45
9:CJ:21:ALA:O	9:CJ:25:ILE:HG13	2.15	0.45
11:CL:33:CYS:N	11:CL:54:VAL:HG13	2.32	0.45
19:AT:85:LEU:HD23	19:AT:86:ALA:H	1.81	0.45
1:CA:1499:A:H2'	1:CA:1500:A:H8	1.81	0.45
37:BL:111:ILE:HD13	37:BL:128:THR:HG23	1.97	0.45
23:BB:1041:G:H2'	23:BB:1042:G:C8	2.51	0.45
53:D6:33:ALA:HB2	53:D6:63:PRO:HA	1.97	0.45
1:AA:389:A:H3'	1:AA:390:U:H6	1.81	0.45
23:DB:506:G:H1'	23:DB:507:A:C8	2.50	0.45
20:CB:129:THR:O	20:CB:131:LYS:N	2.48	0.45
1:AA:784:A:N6	1:AA:799:G:C6	2.84	0.45
23:BB:2813:A:H2'	23:BB:2814:A:H8	1.81	0.45
23:DB:707:G:O2'	23:DB:708:G:H5'	2.16	0.45
29:DE:18:THR:HG22	29:DE:106:LYS:HE2	1.97	0.45
23:BB:528:A:H3'	23:BB:528:A:H8	1.81	0.45
27:BK:109:SER:C	27:BK:111:LYS:H	2.19	0.45
23:DB:131:A:H2'	23:DB:132:G:C8	2.52	0.45
23:BB:1704:C:H2'	23:BB:1705:A:C8	2.52	0.45
10:CK:60:PHE:O	10:CK:63:GLN:HB3	2.16	0.45
23:DB:2300:C:H2'	23:DB:2301:C:H6	1.81	0.45
40:DH:30:LEU:O	40:DH:35:LYS:HB2	2.16	0.45
48:DG:4:ALA:HB3	48:DG:61:TRP:HZ3	1.80	0.45
23:DB:437:U:H2'	23:DB:438:G:C8	2.52	0.45
23:DB:2408:U:O2'	23:DB:2409:G:H5'	2.16	0.45
23:DB:2523:G:O2'	23:DB:2524:G:H5'	2.15	0.45
3:AD:12:ARG:O	3:AD:37:PRO:HG3	2.16	0.45
48:BG:66:THR:O	48:BG:70:LEU:HB2	2.16	0.45
9:AJ:67:ILE:HA	13:AN:94:GLY:O	2.16	0.45
23:DB:1987:A:O2'	23:DB:1988:G:H5'	2.16	0.45
23:BB:1733:G:H2'	23:BB:1734:G:C8	2.51	0.45
7:CH:62:LEU:HB3	7:CH:64:TYR:CE1	2.52	0.45
1:AA:1120:C:O2'	1:AA:1121:U:H5'	2.16	0.45
40:DH:9:VAL:HB	40:DH:12:LEU:O	2.16	0.45
23:DB:1544:A:H2'	23:DB:1545:A:C8	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:57:LYS:C	3:AD:57:LYS:HD3	2.37	0.45
19:CT:77:ASN:O	19:CT:81:GLN:HG3	2.16	0.45
1:AA:1426:G:O2'	1:AA:1427:C:H5'	2.16	0.45
42:BN:64:ARG:O	42:BN:67:PHE:HB3	2.16	0.45
23:DB:2049:G:O2'	23:DB:2050:C:H5'	2.15	0.45
23:DB:1799:G:N2	23:DB:1818:U:O2'	2.49	0.45
1:CA:1091:U:H5''	6:CG:3:ARG:NH2	2.32	0.45
20:AB:166:ASP:OD2	20:AB:190:SER:HA	2.17	0.45
52:DW:65:LYS:HG3	52:DW:84:GLU:CB	2.42	0.45
8:CI:38:PHE:HB3	8:CI:43:ALA:HB3	1.98	0.45
1:CA:1250:A:H2	1:CA:1370:G:H1'	1.81	0.45
8:AI:22:PRO:HA	8:AI:60:LEU:HB2	1.97	0.45
43:DO:34:HIS:HB3	43:DO:36:TYR:CE2	2.48	0.45
29:DE:61:ARG:HH12	29:DE:64:GLY:HA3	1.82	0.45
38:DM:24:THR:HG23	38:DM:34:LYS:CE	2.45	0.45
1:CA:1216:A:O2'	1:CA:1217:C:H5'	2.17	0.45
50:BT:11:LEU:CD2	50:BT:46:ALA:HB1	2.47	0.45
42:BN:38:LEU:HD11	42:BN:42:LYS:HD2	1.98	0.45
23:DB:1169:A:H2'	23:DB:1170:C:C6	2.50	0.45
47:DF:113:PHE:CE1	47:DF:116:LEU:HB2	2.51	0.45
10:AK:89:GLY:O	10:AK:92:ARG:HB2	2.17	0.45
4:CE:17:VAL:HA	4:CE:33:THR:O	2.16	0.45
45:BS:13:SER:CB	45:BS:16:LYS:HE3	2.46	0.45
1:AA:1316:G:OP2	1:AA:1316:G:H8	2.00	0.45
29:BE:32:VAL:HG23	29:BE:33:VAL:N	2.32	0.45
23:DB:2867:G:HO2'	23:DB:2868:A:H8	1.63	0.45
5:CF:61:LEU:HD12	5:CF:63:ASN:OD1	2.17	0.45
11:CL:20:VAL:HB	11:CL:94:TYR:CE1	2.51	0.45
1:CA:723:U:O4'	21:CU:48:LYS:HD3	2.16	0.45
20:CB:148:GLY:C	20:CB:150:ILE:H	2.19	0.45
1:CA:33:A:O2'	1:CA:34:C:H5'	2.16	0.45
2:CC:112:ALA:HB1	2:CC:184:ASN:HB2	1.99	0.45
16:AQ:18:LYS:HG2	16:AQ:48:GLU:HA	1.98	0.45
23:BB:2794:C:O2'	23:BB:2795:C:H5'	2.16	0.45
1:CA:264:C:H4'	16:CQ:64:ARG:HD2	1.98	0.45
23:DB:355:U:H2'	23:DB:356:G:H8	1.80	0.45
1:AA:440:C:O2'	1:AA:441:A:H5'	2.15	0.45
23:DB:1509:A:C8	23:DB:1509:A:H5''	2.51	0.45
28:BP:50:ARG:O	28:BP:51:ASN:HB2	2.16	0.45
11:CL:13:ARG:HB2	11:CL:14:LYS:H	1.44	0.45
42:DN:97:ILE:HD12	42:DN:98:LEU:H	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2247:A:H2'	23:BB:2248:C:H6	1.81	0.45
23:BB:2492:U:O2'	23:BB:2493:U:H5'	2.15	0.45
40:BH:54:LEU:HA	40:BH:58:LEU:HB2	1.99	0.45
23:DB:1349:C:H2'	23:DB:1350:C:C6	2.50	0.45
1:CA:1009:U:O2	1:CA:1009:U:H2'	2.15	0.45
43:DO:52:SER:C	43:DO:54:VAL:H	2.19	0.45
23:DB:2247:A:H3'	57:DB:3578:HOH:O	2.16	0.45
3:AD:7:LYS:O	3:AD:20:LEU:HD12	2.17	0.45
42:DN:12:ARG:HG3	42:DN:13:ASN:N	2.30	0.45
23:BB:2700:A:O2'	23:BB:2701:U:H5'	2.16	0.45
23:BB:2538:C:O2'	23:BB:2539:C:H5'	2.16	0.45
21:AU:11:PHE:O	21:AU:11:PHE:CD1	2.69	0.45
37:DL:23:ILE:HG13	49:DR:82:HIS:CE1	2.51	0.45
50:BT:45:ALA:HA	50:BT:48:GLN:HB2	1.98	0.45
29:DE:18:THR:HG22	29:DE:106:LYS:CE	2.46	0.45
23:DB:1708:C:H2'	23:DB:1709:U:C6	2.51	0.45
9:AJ:83:THR:O	9:AJ:86:ALA:HB3	2.17	0.45
29:BE:18:THR:HG22	29:BE:106:LYS:CE	2.47	0.45
1:CA:102:G:H2'	1:CA:103:U:H6	1.81	0.45
1:CA:167:A:O2'	1:CA:168:G:H5'	2.16	0.45
1:AA:54:C:H2'	1:AA:352:C:N4	2.32	0.45
4:AE:29:ILE:HG22	4:AE:29:ILE:O	2.17	0.45
24:BI:44:LYS:O	24:BI:48:ILE:HG13	2.16	0.45
17:AR:63:TYR:HD2	17:AR:63:TYR:N	2.14	0.45
9:AJ:10:LEU:HD11	9:AJ:25:ILE:CD1	2.46	0.45
23:BB:2104:C:H2'	23:BB:2105:U:C6	2.52	0.45
1:AA:1491:G:N3	1:AA:1491:G:H2'	2.32	0.45
23:DB:2559:C:O2'	23:DB:2560:A:H5'	2.17	0.45
1:CA:1426:G:H2'	1:CA:1427:C:H6	1.80	0.45
23:DB:250:G:H2'	23:DB:251:A:C8	2.50	0.45
2:CC:180:ASP:OD1	2:CC:203:LYS:HB2	2.16	0.45
5:AF:11:HIS:CG	5:AF:12:PRO:HD2	2.52	0.45
23:BB:1892:C:O2'	23:BB:1893:C:H5'	2.16	0.45
15:CP:45:GLU:C	15:CP:47:GLU:H	2.20	0.45
20:AB:35:ASN:O	20:AB:37:VAL:HG12	2.17	0.45
23:BB:823:C:H2'	23:BB:824:U:C6	2.52	0.45
24:BI:63:ASP:C	24:BI:65:SER:H	2.19	0.45
1:CA:1294:G:H2'	1:CA:1295:U:C6	2.51	0.45
1:AA:966:G:H2'	1:AA:967:C:C6	2.52	0.45
23:DB:2667:C:H2'	23:DB:2668:G:O4'	2.16	0.45
25:BC:79:ARG:HD2	25:BC:81:GLU:HG3	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:696:G:O2'	23:BB:697:G:H5'	2.16	0.45
52:BW:54:ARG:C	52:BW:56:HIS:H	2.20	0.45
52:DW:27:GLY:O	52:DW:63:ASP:HA	2.16	0.45
23:DB:584:C:H2'	23:DB:585:G:C8	2.52	0.45
46:DU:98:ASN:OD1	46:DU:100:GLU:HB2	2.16	0.45
23:BB:921:C:H2'	23:BB:922:C:C6	2.51	0.45
52:BW:49:ASN:C	52:BW:50:VAL:HG22	2.37	0.45
23:DB:853:C:H2'	23:DB:854:C:C6	2.51	0.45
53:B6:30:THR:H	53:B6:37:LEU:HD21	1.81	0.45
8:CI:20:ILE:CD1	8:CI:85:ALA:HB3	2.44	0.45
8:CI:119:LYS:C	8:CI:121:ARG:H	2.20	0.45
41:DJ:45:THR:HG23	41:DJ:45:THR:O	2.15	0.45
47:DF:43:ILE:O	47:DF:46:LYS:HE2	2.16	0.45
7:CH:87:ARG:H	7:CH:90:GLU:CB	2.29	0.45
39:BX:28:LEU:HB3	39:BX:43:LEU:CD2	2.47	0.45
48:BG:33:THR:HA	48:BG:34:ARG:NH1	2.31	0.45
46:BU:5:ARG:NH2	46:BU:93:ARG:HD3	2.30	0.45
33:B1:33:LEU:HD12	33:B1:34:GLU:H	1.80	0.45
47:BF:78:ILE:HA	47:BF:79:ARG:HE	1.80	0.45
47:BF:113:PHE:CE1	47:BF:116:LEU:HB2	2.51	0.45
1:AA:865:A:H2	1:AA:918:A:H4'	1.80	0.45
47:DF:11:VAL:O	47:DF:12:VAL:HB	2.16	0.45
47:DF:29:ARG:HD3	47:DF:29:ARG:H	1.81	0.45
35:BV:83:LYS:O	35:BV:85:LYS:N	2.49	0.45
45:BS:12:SER:O	45:BS:13:SER:HB3	2.17	0.45
31:B0:38:LEU:HD13	31:B0:41:HIS:NE2	2.31	0.45
23:BB:2502:G:H5'	23:BB:2503:A:C5'	2.38	0.45
48:BG:144:ALA:O	48:BG:147:LEU:HB2	2.17	0.45
23:DB:2108:A:H5'	23:DB:2150:C:O2'	2.17	0.45
23:DB:2150:C:H2'	23:DB:2151:U:C6	2.51	0.45
23:BB:729:G:H2'	23:BB:1775:U:H1'	1.98	0.45
27:DK:7:MET:SD	27:DK:20:MET:HB2	2.56	0.45
40:DH:14:SER:CB	40:DH:17:ASP:HB2	2.41	0.45
2:CC:148:ILE:HA	2:CC:200:TRP:O	2.16	0.45
1:AA:714:G:H2'	1:AA:715:A:C8	2.52	0.45
20:CB:212:TYR:HA	20:CB:215:ALA:HB3	1.98	0.45
20:AB:110:ILE:O	20:AB:113:LEU:HB3	2.17	0.45
40:DH:46:PHE:HA	40:DH:50:ARG:NH2	2.26	0.45
16:CQ:58:VAL:HG12	16:CQ:77:VAL:HG13	1.99	0.45
23:BB:61:C:O2'	23:BB:62:U:H5'	2.17	0.45
41:DJ:110:PRO:HB2	41:DJ:111:LYS:CE	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CH:49:LYS:HG3	7:CH:50:VAL:N	2.31	0.45
23:BB:192:C:C2'	23:BB:193:U:H5'	2.45	0.45
23:DB:153:U:O2'	23:DB:154:U:H5'	2.16	0.45
23:DB:742:A:O2'	23:DB:743:A:H5'	2.17	0.45
2:AC:122:GLN:O	2:AC:127:VAL:HG22	2.17	0.45
23:DB:1175:A:C2'	23:DB:1175:A:N3	2.80	0.45
34:D3:61:LEU:HB2	34:D3:64:ALA:HB2	1.98	0.45
23:BB:526:A:N6	23:BB:2626:C:C4'	2.77	0.45
19:CT:43:LYS:HB3	19:CT:85:LEU:HD21	1.98	0.45
1:CA:1007:U:H2'	1:CA:1008:U:H6	1.78	0.45
23:BB:2064:C:H2'	23:BB:2065:C:H6	1.81	0.45
23:DB:900:A:C2'	23:DB:901:C:H5'	2.46	0.45
18:CS:11:ASP:H	18:CS:14:LEU:HD21	1.81	0.45
23:DB:2249:U:N3	23:DB:2253:G:OP2	2.49	0.45
51:DZ:66:THR:O	51:DZ:70:GLU:HG3	2.17	0.45
20:CB:128:LEU:HD12	20:CB:132:GLU:HB2	1.98	0.45
12:AM:63:VAL:HB	12:AM:68:LEU:HD21	1.97	0.45
24:BI:5:GLN:HG2	24:BI:6:ALA:H	1.79	0.45
2:AC:13:ILE:O	2:AC:15:LYS:N	2.49	0.45
31:B0:8:THR:HG23	31:B0:10:SER:HB3	1.99	0.45
42:DN:2:ARG:HH11	42:DN:2:ARG:HG2	1.81	0.45
23:BB:1301:A:O2'	23:BB:1302:A:H2'	2.15	0.45
23:BB:1499:C:O2'	23:BB:1500:G:H5'	2.16	0.45
23:BB:1843:C:H5'	25:BC:250:GLN:HE21	1.80	0.45
23:BB:1100:C:H2'	23:BB:1101:U:C6	2.51	0.45
23:DB:1370:C:H2'	23:DB:1371:G:C8	2.52	0.45
23:BB:2152:G:H2'	23:BB:2152:G:N3	2.32	0.45
1:CA:1426:G:H2'	1:CA:1427:C:C6	2.50	0.45
48:BG:29:ASN:HD21	48:BG:81:GLY:HA2	1.79	0.45
23:DB:1689:A:H2'	23:DB:1690:A:H8	1.81	0.45
23:BB:2555:U:H2'	23:BB:2556:C:O4'	2.17	0.45
45:DS:4:ILE:HG22	45:DS:106:VAL:HG13	1.98	0.45
22:BA:53:A:O2'	22:BA:54:G:H5'	2.15	0.45
1:CA:538:G:OP2	11:CL:111:GLN:HB2	2.17	0.45
23:DB:1145:C:O2'	23:DB:1146:C:H5'	2.16	0.45
1:CA:37:U:H2'	1:CA:38:G:C8	2.51	0.45
36:B2:22:MET:SD	36:B2:28:ARG:HG2	2.56	0.45
23:BB:927:A:H2'	23:BB:928:A:C8	2.51	0.45
1:AA:775:G:O2'	1:AA:776:G:H5'	2.16	0.45
23:BB:1751:U:H2'	23:BB:1752:C:C5	2.52	0.45
23:DB:1541:C:H2'	23:DB:1542:U:C6	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:769:U:H2'	23:BB:770:G:C8	2.51	0.45
24:DI:70:THR:O	24:DI:70:THR:HG23	2.16	0.45
35:BV:46:LYS:HD2	35:BV:46:LYS:N	2.31	0.45
1:AA:342:C:O2'	1:AA:343:U:H5'	2.16	0.45
53:B6:167:GLU:O	53:B6:170:ALA:HB3	2.16	0.45
49:DR:79:ARG:C	49:DR:81:LYS:H	2.20	0.45
47:BF:56:LEU:HD22	47:BF:59:ILE:HD12	1.98	0.45
23:DB:2057:G:H2'	23:DB:2058:A:O4'	2.16	0.45
52:BW:39:GLN:CG	52:BW:40:ARG:N	2.71	0.45
48:BG:47:ASN:CG	48:BG:48:THR:N	2.70	0.45
25:DC:170:TYR:CE2	25:DC:184:GLU:HA	2.52	0.45
44:BQ:29:ARG:O	44:BQ:30:VAL:HB	2.17	0.45
26:BD:92:VAL:O	26:BD:94:GLN:N	2.49	0.45
47:DF:32:LYS:HA	47:DF:95:MET:CG	2.44	0.45
23:DB:921:C:H2'	23:DB:922:C:C6	2.52	0.45
53:B6:32:ARG:NE	53:B6:37:LEU:HD23	2.09	0.45
44:DQ:59:LEU:C	44:DQ:59:LEU:HD13	2.37	0.45
8:AI:45:MET:SD	8:AI:45:MET:N	2.89	0.45
35:DV:93:ARG:HG3	35:DV:93:ARG:HH11	1.82	0.45
23:BB:142:A:O2'	23:BB:143:C:H5'	2.16	0.45
35:BV:72:VAL:CG1	35:BV:93:ARG:HA	2.47	0.45
2:AC:87:ARG:HH21	2:AC:88:LYS:HA	1.81	0.45
7:AH:86:LYS:HB3	7:AH:90:GLU:HG2	1.99	0.45
1:CA:600:A:O2'	1:CA:601:G:H5'	2.17	0.45
38:DM:21:ALA:HB3	38:DM:99:GLY:O	2.16	0.45
46:BU:85:ARG:NH1	46:BU:86:PHE:H	2.13	0.45
12:CM:3:ILE:HA	12:CM:56:ARG:CG	2.41	0.45
40:DH:93:SER:C	40:DH:94:ILE:HD12	2.37	0.45
1:AA:763:G:H2'	1:AA:764:C:H6	1.81	0.45
45:DS:13:SER:CB	45:DS:16:LYS:HE3	2.46	0.45
38:BM:134:THR:HG22	38:BM:136:MET:H	1.80	0.45
10:AK:95:THR:HG23	10:AK:96:ILE:N	2.30	0.45
25:DC:207:ALA:O	25:DC:208:GLY:C	2.55	0.45
15:AP:67:ILE:HD11	15:AP:71:VAL:HG22	1.99	0.45
1:CA:906:A:C2'	1:CA:907:A:H5''	2.46	0.45
23:BB:729:G:C8	25:BC:206:LYS:HE3	2.52	0.45
1:CA:719:C:H2'	17:CR:38:ILE:HD13	1.98	0.45
23:BB:592:A:H2'	23:BB:593:U:H6	1.80	0.45
24:DI:21:PRO:HB2	24:DI:22:PRO:CD	2.42	0.45
20:AB:67:LEU:HA	20:AB:89:PHE:O	2.15	0.45
43:BO:55:GLU:HB2	43:BO:58:ILE:HD12	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2344:U:H4'	23:DB:2345:G:OP1	2.16	0.45
26:DD:10:GLY:O	26:DD:11:MET:HB2	2.16	0.45
23:BB:459:U:O2'	23:BB:460:A:H5'	2.17	0.45
36:B2:21:ARG:C	36:B2:23:ALA:H	2.19	0.45
23:BB:1444:G:H2'	23:BB:1445:G:H8	1.82	0.45
37:BL:85:VAL:HG22	37:BL:94:THR:CG2	2.47	0.45
2:AC:26:LYS:HG3	2:AC:27:GLU:HG3	1.98	0.45
1:AA:338:A:H2'	1:AA:339:C:C6	2.51	0.45
23:DB:1161:C:H4'	49:DR:8:GLY:O	2.17	0.45
12:AM:95:PRO:HB2	12:AM:99:GLN:CD	2.37	0.45
6:CG:57:GLU:O	6:CG:61:PHE:N	2.47	0.45
3:CD:84:ASN:C	3:CD:84:ASN:ND2	2.69	0.45
1:CA:1270:G:H2'	1:CA:1271:A:H8	1.80	0.45
23:DB:610:C:O2'	23:DB:611:C:H5'	2.17	0.45
12:AM:19:THR:HA	12:AM:24:VAL:HG23	1.99	0.45
23:BB:2247:A:H2'	23:BB:2248:C:C6	2.51	0.45
48:DG:39:ALA:HB1	48:DG:57:TYR:CG	2.50	0.45
28:BP:24:THR:C	28:BP:25:VAL:HG13	2.36	0.45
23:BB:955:U:H5''	38:BM:86:LYS:CD	2.45	0.45
43:BO:27:VAL:HG12	43:BO:28:VAL:N	2.32	0.45
1:AA:829:G:H4'	20:AB:24:PRO:HG3	1.97	0.45
20:AB:62:ARG:HG3	20:AB:62:ARG:HH11	1.81	0.45
23:BB:828:U:H2'	23:BB:829:A:C8	2.51	0.45
23:DB:1092:C:C2'	23:DB:1093:G:H5'	2.46	0.45
27:DK:109:SER:C	27:DK:111:LYS:H	2.20	0.45
22:DA:8:C:O2'	43:DO:40:ILE:HD13	2.17	0.45
49:DR:58:VAL:O	49:DR:58:VAL:HG13	2.17	0.45
23:DB:1847:A:H4'	23:DB:1848:A:C8	2.52	0.45
23:BB:370:G:O2'	23:BB:423:A:H3'	2.15	0.45
1:CA:900:A:H2'	1:CA:901:A:C8	2.50	0.45
23:DB:841:G:O2'	23:DB:842:U:H5'	2.17	0.45
23:DB:1952:A:N3	27:DK:22:ILE:HD12	2.32	0.45
23:BB:2597:G:OP1	25:BC:240:GLY:HA3	2.16	0.45
23:DB:1064:C:H5'	24:DI:88:GLY:HA3	1.99	0.45
23:DB:553:G:H2'	23:DB:554:U:O4'	2.17	0.45
23:BB:797:G:H2'	23:BB:798:G:H8	1.82	0.45
23:DB:2508:G:O2'	23:DB:2509:G:H5'	2.16	0.45
23:DB:2509:G:O2'	23:DB:2510:C:H5'	2.17	0.45
1:CA:421:U:H5'	1:CA:422:C:C5	2.51	0.45
16:CQ:25:GLU:HA	16:CQ:39:ARG:O	2.17	0.45
23:BB:2643:G:H2'	23:BB:2644:G:O4'	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:125:PRO:HB2	48:BG:129:GLU:OE2	2.16	0.45
8:AI:126:PHE:O	8:AI:128:LYS:N	2.49	0.45
23:BB:2588:G:H2'	23:BB:2589:A:O4'	2.17	0.45
23:BB:2523:G:O2'	23:BB:2524:G:H5'	2.17	0.45
19:AT:77:ASN:O	19:AT:81:GLN:HG3	2.16	0.45
10:AK:82:GLU:HG2	10:AK:108:ASN:HB2	1.99	0.45
23:DB:2208:C:H2'	23:DB:2209:G:C8	2.51	0.45
44:DQ:42:GLY:HA3	49:DR:75:VAL:HG21	1.99	0.45
41:BJ:9:GLU:H	41:BJ:9:GLU:CD	2.19	0.45
6:AG:10:LYS:HA	6:AG:10:LYS:HZ1	1.81	0.45
2:AC:91:ALA:O	2:AC:95:GLY:N	2.49	0.45
1:AA:421:U:H5'	1:AA:422:C:C5	2.51	0.45
23:BB:2534:A:C2	23:BB:2535:G:H1'	2.51	0.45
52:BW:28:GLU:HG3	52:BW:29:SER:H	1.82	0.45
23:DB:533:G:H5'	44:DQ:23:TYR:CD2	2.52	0.45
26:BD:48:ILE:HG23	26:BD:82:PHE:HB2	1.98	0.45
8:CI:56:MET:CG	8:CI:57:VAL:N	2.79	0.45
26:DD:109:VAL:HG11	26:DD:193:VAL:CG1	2.46	0.45
23:DB:2311:A:O4'	47:DF:76:PHE:HE2	1.99	0.45
41:BJ:3:THR:HB	41:BJ:44:TYR:OH	2.17	0.45
3:CD:25:ARG:O	3:CD:26:ALA:HB3	2.16	0.45
13:AN:70:HIS:O	13:AN:71:GLY:C	2.53	0.45
1:AA:430:A:P	3:AD:6:PRO:HA	2.56	0.45
47:BF:106:ALA:N	47:BF:108:PRO:HD2	2.32	0.45
42:DN:81:ASN:O	42:DN:85:PRO:HD2	2.17	0.45
1:AA:922:G:N3	1:AA:1398:A:H2	2.13	0.45
47:DF:169:LEU:HB3	47:DF:174:PHE:CD1	2.52	0.45
4:CE:37:VAL:HG11	4:CE:113:VAL:CG1	2.38	0.45
18:AS:39:ILE:HG13	18:AS:68:HIS:O	2.16	0.45
25:DC:18:VAL:CG1	25:DC:202:ARG:HD2	2.47	0.45
3:AD:173:ASP:OD1	3:AD:176:LYS:HD3	2.16	0.45
16:AQ:45:VAL:HA	16:AQ:72:TRP:O	2.17	0.45
23:DB:1025:G:OP1	23:DB:1025:G:H8	2.00	0.45
23:DB:26:G:H2'	23:DB:27:G:C1'	2.47	0.45
23:DB:978:G:O2'	23:DB:979:A:H5'	2.16	0.45
35:DV:77:VAL:HG12	38:DM:136:MET:CE	2.47	0.45
45:BS:74:ILE:O	45:BS:75:PHE:HB3	2.16	0.45
53:D6:1:MET:HB3	53:D6:143:LEU:CD2	2.42	0.45
38:BM:66:ARG:HE	38:BM:101:VAL:HG21	1.82	0.45
44:BQ:107:ALA:HB1	49:BR:48:LYS:CE	2.46	0.45
49:BR:1:MET:HG3	49:BR:101:ILE:HG21	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DR:39:LEU:CA	49:DR:49:ILE:HG12	2.46	0.45
1:AA:244:U:O4	1:AA:906:A:H1'	2.16	0.45
30:BY:25:GLY:HA3	30:BY:46:MET:HE3	1.99	0.45
23:DB:1445:G:O2'	23:DB:1446:C:H5'	2.16	0.45
40:DH:68:ARG:NH2	40:DH:71:LYS:HD3	2.32	0.45
20:CB:86:CYS:HB3	20:CB:88:GLN:CD	2.37	0.45
25:DC:159:THR:O	25:DC:160:TYR:HB3	2.17	0.45
25:BC:43:ASN:CG	25:BC:44:ASN:H	2.20	0.45
21:AU:10:PRO:HB2	2:CC:71:ARG:NE	2.31	0.45
5:AF:96:VAL:HG12	5:AF:97:THR:H	1.81	0.45
23:BB:2755:C:O5'	23:BB:2755:C:H6	1.99	0.45
16:AQ:16:MET:HB3	16:AQ:19:SER:HB2	1.95	0.45
50:BT:31:VAL:HA	50:BT:84:TYR:H	1.81	0.45
23:BB:1484:U:H2'	23:BB:1485:U:H6	1.80	0.45
41:BJ:110:PRO:HB2	41:BJ:111:LYS:CE	2.47	0.45
1:AA:9:G:H5'	4:AE:107:GLY:CA	2.43	0.45
23:DB:1222:U:P	49:DR:90:ARG:HH12	2.40	0.45
23:DB:2590:A:O2'	23:DB:2591:C:H5'	2.17	0.45
23:DB:719:C:O2'	23:DB:720:U:H5'	2.16	0.45
1:AA:236:A:H2'	1:AA:237:G:C8	2.52	0.45
1:AA:191:G:H2'	1:AA:192:A:H8	1.80	0.45
24:BI:138:VAL:HG12	24:BI:139:VAL:N	2.31	0.45
1:CA:708:C:O2'	1:CA:709:U:H5'	2.16	0.45
23:DB:523:C:O2'	23:DB:524:G:H5'	2.17	0.45
23:DB:526:A:N6	23:DB:2626:C:C4'	2.80	0.45
48:DG:38:ASP:CG	48:DG:39:ALA:N	2.70	0.45
1:AA:373:A:H1'	1:AA:481:G:H1'	1.98	0.45
23:BB:2737:G:H2'	23:BB:2738:A:H8	1.82	0.45
23:BB:2368:C:H2'	23:BB:2369:A:H8	1.81	0.45
23:DB:1561:C:H2'	23:DB:1562:U:H6	1.82	0.45
23:DB:1562:U:H2'	23:DB:1563:U:H6	1.81	0.45
42:DN:61:ALA:C	42:DN:63:ARG:N	2.70	0.45
14:AO:43:PHE:CD1	14:AO:56:LEU:HD22	2.51	0.45
1:AA:1042:A:H2'	1:AA:1043:G:O4'	2.16	0.45
19:AT:49:ALA:HA	19:AT:52:GLU:OE2	2.17	0.45
23:BB:1930:G:H22	23:BB:1969:A:P	2.39	0.45
43:BO:100:HIS:CA	43:BO:104:GLN:HB2	2.47	0.45
23:DB:1465:G:H2'	23:DB:1466:U:O4'	2.16	0.45
1:CA:224:U:H2'	1:CA:225:C:C6	2.51	0.45
11:CL:30:ARG:O	11:CL:57:THR:HG23	2.16	0.45
23:DB:639:U:H2'	23:DB:640:C:C6	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2150:C:H2'	23:BB:2151:U:C6	2.52	0.45
46:DU:41:VAL:HG22	46:DU:60:LYS:O	2.17	0.45
48:DG:77:GLY:HA3	48:DG:135:ALA:O	2.16	0.45
25:BC:20:ASN:HB3	25:BC:23:LEU:HD22	1.98	0.45
8:AI:10:ARG:HA	8:AI:77:ALA:HB1	1.99	0.45
14:CO:68:ASP:O	14:CO:72:ARG:HG3	2.17	0.45
1:CA:355:C:O2'	1:CA:356:A:H5'	2.16	0.45
23:BB:1544:A:H2'	23:BB:1545:A:C8	2.51	0.45
23:BB:2397:G:H2'	23:BB:2398:U:H6	1.82	0.45
1:CA:276:G:O2'	1:CA:277:C:H5'	2.17	0.45
23:DB:2643:G:H2'	23:DB:2644:G:O4'	2.15	0.45
49:BR:79:ARG:C	49:BR:81:LYS:H	2.19	0.45
23:BB:490:C:H3'	23:BB:491:G:H5''	1.99	0.45
10:CK:36:ARG:HG3	10:CK:36:ARG:HH11	1.82	0.45
23:DB:397:U:H2'	23:DB:398:C:C6	2.52	0.45
15:AP:8:ARG:CZ	15:AP:15:PRO:HB3	2.47	0.45
23:BB:1973:G:O2'	23:BB:1974:C:H5'	2.17	0.45
10:CK:126:ARG:HE	10:CK:126:ARG:HA	1.82	0.45
23:BB:2331:G:N2	23:BB:2336:A:H8	2.07	0.45
25:DC:90:ILE:HD11	25:DC:102:TYR:HB3	1.99	0.45
25:DC:188:ARG:HG2	25:DC:188:ARG:NH2	2.31	0.45
22:BA:42:C:C6	47:BF:65:LEU:HD13	2.51	0.45
26:BD:90:PHE:O	26:BD:91:THR:C	2.54	0.45
23:DB:2352:A:N1	52:DW:30:VAL:HG11	2.32	0.45
41:BJ:54:ILE:HD12	41:BJ:55:ILE:H	1.81	0.45
26:DD:25:THR:O	26:DD:189:VAL:HG22	2.17	0.45
37:DL:79:LEU:HB2	37:DL:113:ALA:N	2.23	0.45
47:DF:78:ILE:HA	47:DF:79:ARG:HH11	1.82	0.45
29:DE:58:LYS:HD3	29:DE:58:LYS:N	2.32	0.45
7:CH:124:ILE:HG22	7:CH:125:ILE:N	2.31	0.45
48:BG:26:LYS:HB2	48:BG:32:LEU:HG	1.98	0.45
13:AN:78:LEU:HD23	13:AN:82:LYS:CB	2.46	0.45
53:B6:10:THR:HG22	53:B6:14:MET:HE2	1.98	0.45
24:DI:128:ILE:HA	24:DI:131:THR:CG2	2.45	0.45
47:BF:106:ALA:HA	47:BF:135:ILE:HD11	1.99	0.45
47:BF:107:VAL:HB	47:BF:108:PRO:HD3	1.99	0.45
37:BL:77:ILE:HB	37:BL:109:LYS:O	2.16	0.45
40:DH:126:GLY:O	40:DH:146:VAL:HG23	2.17	0.45
40:DH:5:LEU:C	40:DH:6:LEU:HD12	2.36	0.45
29:DE:59:PRO:CB	29:DE:67:ARG:HH22	2.19	0.45
47:DF:131:VAL:O	47:DF:133:GLU:N	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:103:ILE:HD11	47:DF:174:PHE:CD1	2.52	0.45
42:DN:101:GLY:CA	42:DN:109:PRO:HA	2.47	0.45
43:DO:26:LEU:HA	43:DO:39:VAL:HA	1.98	0.45
29:DE:29:HIS:CE1	37:DL:8:PRO:HG3	2.52	0.45
16:AQ:60:ILE:HG12	16:AQ:72:TRP:HE3	1.81	0.45
38:DM:66:ARG:HE	38:DM:101:VAL:HG21	1.81	0.45
1:AA:719:C:H2'	17:AR:38:ILE:HD11	1.99	0.45
31:B0:48:TYR:O	31:B0:50:GLY:N	2.50	0.45
2:AC:148:ILE:HA	2:AC:200:TRP:O	2.17	0.45
13:CN:50:LEU:N	13:CN:51:PRO:HD2	2.31	0.45
23:BB:1080:A:H2'	23:BB:1081:U:C6	2.50	0.45
24:BI:129:GLU:CB	24:BI:133:ARG:HH12	2.21	0.45
44:DQ:111:LYS:HZ2	49:DR:48:LYS:HD2	1.82	0.45
3:AD:122:ILE:HG22	3:AD:123:MET:H	1.82	0.45
23:BB:1445:G:H2'	23:BB:1446:C:H6	1.80	0.45
9:CJ:15:HIS:O	9:CJ:18:ILE:HG22	2.17	0.45
7:AH:65:PHE:CE2	7:AH:66:GLN:HG3	2.51	0.45
29:DE:126:VAL:HG22	29:DE:133:LEU:HD12	1.99	0.45
23:BB:62:U:H2'	23:BB:63:A:H5'	1.96	0.45
3:AD:169:TRP:CD2	3:AD:185:PRO:HB3	2.50	0.45
14:AO:25:THR:CG2	14:AO:70:LEU:HD23	2.47	0.45
23:BB:1794:A:O2'	23:BB:1795:C:H5'	2.17	0.45
41:BJ:99:ARG:HA	41:BJ:102:GLU:HB2	1.99	0.45
12:AM:2:ARG:O	12:AM:4:ALA:N	2.50	0.45
12:AM:5:GLY:O	12:AM:7:ASN:N	2.48	0.45
23:BB:2842:G:O2'	23:BB:2843:G:H5'	2.17	0.45
16:CQ:18:LYS:HG2	16:CQ:48:GLU:HA	1.99	0.45
23:DB:1212:G:H1'	23:DB:1236:G:N2	2.31	0.45
23:BB:154:U:H2'	23:BB:155:A:H8	1.81	0.45
39:DX:8:GLU:O	39:DX:12:GLU:HB2	2.17	0.45
1:CA:805:C:O2'	1:CA:806:C:H5'	2.16	0.45
27:DK:24:VAL:CG1	27:DK:33:ALA:HB2	2.46	0.45
1:CA:677:U:H3	1:CA:713:G:H22	1.64	0.45
12:AM:103:THR:HG22	12:AM:104:ASN:OD1	2.17	0.45
11:CL:98:ARG:HB2	11:CL:116:TYR:HA	1.98	0.45
1:CA:1054:C:O2'	1:CA:1055:A:H5''	2.16	0.45
1:CA:1432:G:H8	1:CA:1432:G:H5''	1.82	0.45
23:DB:2578:G:O2'	23:DB:2579:C:H5'	2.17	0.45
20:AB:71:THR:HG23	20:AB:94:ARG:N	2.32	0.45
1:AA:833:G:H2'	1:AA:834:U:H6	1.80	0.45
23:BB:1958:C:H2'	23:BB:1959:G:H8	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2276:G:O2'	23:DB:2277:G:H5'	2.17	0.45
22:DA:94:A:H2'	22:DA:95:U:O4'	2.17	0.45
1:AA:591:U:OP2	7:AH:30:LYS:HD2	2.16	0.45
23:BB:2197:U:H1'	23:BB:2198:A:C8	2.52	0.45
1:AA:729:A:H2'	1:AA:730:G:H8	1.81	0.45
1:AA:900:A:H2'	1:AA:901:A:C8	2.51	0.45
6:CG:70:PRO:HA	6:CG:141:HIS:CE1	2.52	0.45
7:AH:34:ALA:HB1	7:AH:109:VAL:HB	1.99	0.45
22:DA:54:G:H21	47:DF:25:MET:CE	2.30	0.45
23:BB:2150:C:H2'	23:BB:2151:U:O4'	2.17	0.45
1:CA:652:U:H1'	1:CA:653:U:C5	2.52	0.45
23:DB:2047:C:H2'	23:DB:2048:G:C8	2.52	0.45
23:BB:728:G:O2'	23:BB:730:A:H8	2.00	0.45
1:CA:1241:G:O2'	1:CA:1242:G:H5'	2.17	0.45
1:AA:984:C:O2'	1:AA:985:C:H5'	2.17	0.45
23:DB:88:G:C2'	23:DB:89:A:H5'	2.46	0.45
23:DB:2714:G:O2'	23:DB:2715:C:H5'	2.16	0.45
26:DD:27:ILE:HG23	26:DD:201:LEU:HD12	1.98	0.45
1:CA:1253:G:N1	1:CA:1285:A:N6	2.65	0.45
23:BB:1830:C:H2'	23:BB:1831:G:H8	1.81	0.45
23:BB:380:G:O2'	23:BB:381:G:H5'	2.16	0.45
1:CA:755:G:H2'	1:CA:756:C:H6	1.82	0.45
1:CA:755:G:H2'	1:CA:756:C:C6	2.52	0.45
1:CA:594:U:H2'	1:CA:595:A:C8	2.52	0.45
29:BE:73:ILE:HG12	29:BE:73:ILE:O	2.17	0.45
55:BB:3111:PAR:H322	55:BB:3111:PAR:H51	1.81	0.45
37:DL:10:GLU:HA	37:DL:10:GLU:OE2	2.15	0.45
25:BC:151:GLY:C	25:BC:152:GLN:HG3	2.37	0.45
52:DW:23:LYS:HD2	52:DW:24:ARG:H	1.82	0.45
53:B6:48:ALA:C	53:B6:50:VAL:H	2.20	0.45
53:B6:50:VAL:O	53:B6:55:ILE:HG21	2.16	0.45
8:CI:74:GLN:O	8:CI:78:ILE:HG13	2.16	0.45
47:DF:177:ARG:HA	47:DF:177:ARG:CZ	2.47	0.45
41:BJ:58:ASN:O	41:BJ:59:ALA:HB3	2.17	0.45
23:DB:996:A:H4'	44:DQ:91:ARG:HG2	1.98	0.45
25:BC:70:LYS:HD3	25:BC:101:ARG:NH2	2.31	0.45
26:DD:105:LYS:N	26:DD:106:LYS:HZ3	2.11	0.45
35:BV:4:ILE:N	35:BV:62:THR:O	2.50	0.45
12:AM:30:LYS:HG3	12:AM:40:GLU:OE1	2.17	0.45
7:AH:103:VAL:HG22	7:AH:124:ILE:HA	1.99	0.45
25:BC:188:ARG:HG2	25:BC:188:ARG:NH2	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:3:LEU:HB2	47:BF:100:GLU:OE1	2.16	0.45
47:BF:110:ILE:HB	47:BF:113:PHE:HB3	1.98	0.45
47:BF:137:PHE:CD2	47:BF:137:PHE:N	2.84	0.45
47:BF:1:ALA:O	47:BF:2:LYS:C	2.55	0.45
4:AE:28:ARG:NH2	4:AE:30:PHE:HB3	2.32	0.45
21:AU:16:ARG:HG3	21:AU:19:LYS:HD2	1.99	0.45
18:CS:20:LYS:HD2	18:CS:20:LYS:O	2.16	0.45
1:AA:1270:G:H2'	1:AA:1271:A:H8	1.82	0.45
25:DC:210:ALA:O	25:DC:213:ARG:HB3	2.17	0.45
23:DB:973:A:OP1	23:DB:973:A:H8	1.99	0.45
23:BB:1179:G:O2'	23:BB:1180:U:H5'	2.17	0.45
13:AN:50:LEU:N	13:AN:51:PRO:HD2	2.32	0.45
23:BB:2038:G:H2'	23:BB:2039:U:H6	1.81	0.45
23:BB:2884:U:O4	31:B0:39:ARG:HD3	2.17	0.45
23:DB:849:A:H2'	23:DB:850:U:C6	2.51	0.45
32:D4:5:ALA:HA	32:D4:37:GLN:NE2	2.32	0.45
35:DV:30:ILE:HA	35:DV:91:PHE:O	2.17	0.45
35:DV:80:HIS:CD2	35:DV:82:TYR:H	2.15	0.45
22:DA:102:G:O2'	22:DA:103:U:H5'	2.17	0.45
48:BG:148:ARG:HD2	48:BG:149:ALA:N	2.32	0.45
23:DB:2772:C:H2'	23:DB:2773:C:H6	1.82	0.45
26:DD:113:SER:OG	26:DD:114:LYS:N	2.48	0.45
27:DK:121:GLU:O	27:DK:122:VAL:C	2.55	0.45
20:AB:212:TYR:O	20:AB:216:VAL:HG22	2.17	0.45
49:DR:4:VAL:H	49:DR:38:VAL:HG23	1.82	0.45
24:BI:19:PRO:HB2	24:BI:22:PRO:HD2	1.99	0.45
27:BK:99:ILE:H	27:BK:118:LEU:HD23	1.82	0.45
37:DL:93:ASN:HD22	37:DL:94:THR:H	1.64	0.45
23:BB:459:U:C2'	23:BB:460:A:H5'	2.47	0.45
23:BB:849:A:H2'	23:BB:850:U:C6	2.51	0.45
1:AA:82:G:OP2	1:AA:83:C:H6	1.99	0.45
20:CB:64:GLY:HA2	20:CB:158:ASP:OD1	2.16	0.45
34:D3:14:LYS:O	34:D3:21:PHE:O	2.35	0.45
37:BL:93:ASN:ND2	37:BL:94:THR:H	2.14	0.45
23:BB:1680:U:H2'	23:BB:1681:G:O4'	2.17	0.45
23:DB:2846:G:OP1	28:DP:51:ASN:HB2	2.17	0.45
3:AD:104:MET:SD	3:AD:179:GLY:HA3	2.57	0.45
1:CA:441:A:N6	1:CA:493:A:N6	2.65	0.45
23:DB:2602:A:C2'	23:DB:2602:A:N3	2.78	0.45
48:BG:137:LYS:O	48:BG:140:ILE:HG13	2.17	0.45
1:CA:553:A:H2'	1:CA:554:A:C8	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1210:G:H1'	23:DB:1212:G:C2	2.52	0.45
36:D2:10:LEU:HD11	36:D2:14:ARG:NH1	2.32	0.45
23:BB:1998:A:O2'	23:BB:1999:C:H5'	2.17	0.45
7:CH:74:ILE:HG13	7:CH:128:VAL:HG22	1.98	0.45
45:BS:31:GLN:C	45:BS:33:LEU:N	2.69	0.45
1:AA:676:A:H1'	10:AK:116:PRO:HB3	1.99	0.45
23:BB:523:C:O2'	23:BB:524:G:H5'	2.17	0.45
23:BB:1064:C:H2'	23:BB:1065:U:O4'	2.17	0.45
23:DB:123:G:H2'	23:DB:124:G:C8	2.52	0.45
50:DT:13:ALA:O	50:DT:32:LEU:HB2	2.17	0.45
51:DZ:65:ASP:O	51:DZ:69:ALA:N	2.48	0.45
41:BJ:13:ARG:HB3	41:BJ:53:TYR:HD2	1.82	0.45
1:AA:1384:C:O2'	1:AA:1385:G:H5'	2.16	0.45
1:AA:584:G:O2'	1:AA:585:G:H5'	2.17	0.45
23:BB:1429:G:H2'	23:BB:1430:G:C8	2.51	0.45
43:DO:28:VAL:HG21	43:DO:106:LEU:HD21	1.99	0.45
1:AA:204:G:H1'	1:AA:466:A:H62	1.82	0.45
23:BB:2804:U:H2'	23:BB:2805:C:H6	1.81	0.45
23:DB:459:U:O2'	23:DB:460:A:H5'	2.17	0.45
23:BB:2729:G:H2'	23:BB:2730:C:H6	1.82	0.45
1:CA:761:G:H2'	1:CA:762:U:H6	1.81	0.45
1:AA:975:A:H5''	1:AA:976:G:O5'	2.17	0.45
2:CC:172:VAL:O	2:CC:174:LEU:HD12	2.17	0.45
23:DB:2560:A:H2'	23:DB:2561:U:C6	2.52	0.45
23:DB:2561:U:O3'	27:DK:40:LYS:HE2	2.17	0.45
1:AA:358:U:H2'	1:AA:359:G:H8	1.80	0.45
46:DU:31:GLY:O	46:DU:66:VAL:HG12	2.16	0.45
48:BG:172:GLU:O	48:BG:173:ALA:HB2	2.17	0.45
49:BR:84:ARG:NH2	49:BR:84:ARG:HG3	2.32	0.45
49:BR:64:VAL:O	49:BR:65:ALA:HB3	2.17	0.45
1:CA:93:U:C2'	1:CA:94:G:H5'	2.47	0.45
23:DB:622:G:H2'	23:DB:623:C:H6	1.81	0.45
4:AE:17:VAL:HA	4:AE:33:THR:O	2.17	0.45
23:BB:688:U:O2'	23:BB:689:A:H5'	2.17	0.45
1:AA:970:C:N4	8:AI:128:LYS:HG2	2.32	0.45
16:AQ:3:LYS:HG2	16:AQ:4:ILE:H	1.81	0.45
23:BB:1159:U:H2'	23:BB:1160:G:H8	1.81	0.45
23:BB:911:A:H2'	38:BM:9:PHE:CZ	2.52	0.45
12:CM:72:ILE:O	12:CM:76:ILE:HG13	2.16	0.45
2:AC:182:ASP:HB2	2:AC:203:LYS:HE2	1.98	0.45
1:CA:454:G:H2'	1:CA:455:G:H8	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BK:64:ARG:O	27:BK:82:ASN:HA	2.17	0.45
5:CF:49:TYR:CE1	17:CR:65:SER:HA	2.52	0.45
1:CA:200:G:O2'	1:CA:381:C:N4	2.50	0.45
50:DT:76:ARG:HB3	50:DT:76:ARG:NH1	2.32	0.45
23:DB:1099:G:H4'	24:DI:4:VAL:HG12	1.99	0.45
44:BQ:23:TYR:HB2	44:BQ:27:ARG:HB3	1.99	0.45
48:BG:108:PHE:H	48:BG:108:PHE:HD1	1.65	0.45
48:DG:6:ALA:HB3	48:DG:68:ARG:CD	2.47	0.45
16:CQ:45:VAL:HA	16:CQ:72:TRP:O	2.17	0.45
53:B6:64:ARG:HA	53:B6:103:ILE:O	2.17	0.45
8:CI:6:TYR:C	8:CI:85:ALA:HB2	2.37	0.45
51:DZ:40:VAL:O	51:DZ:42:SER:N	2.49	0.45
23:DB:2305:U:H1'	47:DF:132:ARG:HA	1.99	0.45
48:DG:15:ASP:HA	48:DG:26:LYS:NZ	2.32	0.45
46:DU:84:PHE:HB3	46:DU:91:LYS:HG3	1.97	0.45
23:BB:2305:U:H2'	23:BB:2306:C:O4'	2.17	0.45
23:BB:2393:U:H2'	23:BB:2394:C:O4'	2.17	0.45
1:CA:1207:G:O2'	1:CA:1208:C:H5'	2.17	0.45
47:BF:168:LEU:HD13	47:BF:172:PHE:HE2	1.82	0.45
1:AA:1077:G:N2	1:AA:1080:A:OP2	2.44	0.45
1:CA:1078:U:H4'	4:CE:137:ARG:NH1	2.32	0.45
1:CA:922:G:N3	1:CA:1398:A:H2	2.15	0.45
1:CA:921:U:O2	4:CE:23:THR:HG23	2.17	0.45
1:CA:764:C:H2'	1:CA:765:G:C5'	2.45	0.45
18:CS:44:ILE:O	18:CS:44:ILE:HG23	2.16	0.45
18:AS:20:LYS:O	18:AS:23:GLU:HG3	2.17	0.45
32:B4:3:VAL:HG23	32:B4:4:ARG:N	2.31	0.45
23:DB:2788:C:H1'	23:DB:2809:A:C2	2.52	0.45
23:DB:818:G:N1	23:DB:1187:G:H2'	2.32	0.45
1:CA:1269:A:H2	1:CA:1312:G:N3	2.15	0.45
48:DG:147:LEU:O	48:DG:150:TYR:HB2	2.17	0.45
35:DV:9:ARG:HA	35:DV:41:GLU:OE2	2.17	0.45
15:CP:66:THR:HG22	15:CP:67:ILE:H	1.82	0.45
27:DK:104:THR:HB	27:DK:106:GLU:OE1	2.16	0.45
23:DB:845:A:C2'	23:DB:846:U:H5''	2.42	0.45
11:CL:29:LYS:HB3	11:CL:56:LEU:HD22	1.98	0.45
24:BI:19:PRO:HG2	24:BI:22:PRO:HB2	1.99	0.45
35:BV:89:ILE:HD12	35:BV:89:ILE:O	2.17	0.45
23:DB:1198:U:H2'	23:DB:1199:U:H6	1.82	0.45
48:BG:30:GLY:O	48:BG:78:VAL:HG12	2.16	0.45
2:CC:11:LEU:HD11	13:CN:87:ALA:O	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DS:81:SER:CA	45:DS:99:ARG:HA	2.43	0.45
20:CB:116:LEU:HA	20:CB:119:GLN:HG2	1.99	0.45
23:DB:362:A:C2'	23:DB:362:A:N3	2.80	0.45
5:AF:62:MET:O	5:AF:63:ASN:HB2	2.17	0.45
31:D0:33:SER:OG	31:D0:35:GLU:HG2	2.17	0.45
23:BB:191:A:H2'	23:BB:192:C:H6	1.76	0.45
23:BB:2015:A:C2	31:B0:2:VAL:HG22	2.52	0.45
2:CC:23:ALA:HB1	2:CC:27:GLU:OE2	2.17	0.45
23:BB:2746:U:O4	23:BB:2755:C:H5'	2.17	0.45
23:BB:2602:A:H3'	23:BB:2602:A:OP1	2.17	0.45
40:BH:44:ILE:C	40:BH:46:PHE:N	2.70	0.45
23:BB:647:G:H2'	23:BB:648:G:C8	2.52	0.45
22:BA:114:C:H1'	43:BO:47:VAL:HG21	1.98	0.45
43:BO:52:SER:OG	43:BO:54:VAL:HG12	2.17	0.45
35:BV:29:ILE:HD13	35:BV:31:TYR:HE2	1.81	0.45
37:BL:47:ARG:HB3	37:BL:47:ARG:HH21	1.82	0.45
43:DO:24:THR:HG1	43:DO:90:VAL:HG12	1.81	0.45
12:CM:2:ARG:O	12:CM:4:ALA:N	2.50	0.45
23:BB:2720:U:H2'	23:BB:2721:A:C8	2.52	0.45
22:DA:115:A:O2'	22:DA:116:G:H5'	2.17	0.45
23:DB:2415:G:O2'	23:DB:2416:C:H5'	2.17	0.45
19:AT:53:MET:HA	19:AT:56:ILE:HD12	1.98	0.45
1:AA:376:G:H5''	15:AP:5:ARG:HB2	1.98	0.45
25:BC:245:THR:C	25:BC:247:TRP:N	2.70	0.45
28:DP:107:ALA:O	28:DP:108:ARG:C	2.56	0.45
37:BL:65:GLY:O	37:BL:66:PHE:HB3	2.17	0.45
41:DJ:12:LYS:O	41:DJ:13:ARG:HB2	2.17	0.45
23:DB:1454:C:H5'	42:DN:63:ARG:NE	2.32	0.45
50:BT:45:ALA:HA	50:BT:48:GLN:CG	2.46	0.45
5:CF:47:LEU:HD21	5:CF:57:ALA:CB	2.46	0.45
41:DJ:96:ARG:O	41:DJ:99:ARG:HG3	2.16	0.45
23:BB:39:G:H2'	23:BB:40:U:H6	1.81	0.45
23:DB:1885:A:H2'	23:DB:1886:U:O4'	2.16	0.45
23:DB:1252:G:H5''	57:DB:3463:HOH:O	2.15	0.45
17:CR:57:ALA:HA	17:CR:60:ARG:HD2	1.99	0.45
23:DB:1848:A:H2'	23:DB:1849:G:C8	2.52	0.45
47:DF:120:SER:O	47:DF:127:TYR:HA	2.16	0.45
23:DB:2213:U:O2	23:DB:2213:U:H2'	2.15	0.45
4:AE:87:VAL:HG23	4:AE:92:ARG:HA	1.98	0.45
1:CA:435:A:H2'	1:CA:435:A:N3	2.32	0.45
7:CH:79:ARG:NH1	7:CH:82:LEU:HB3	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DR:84:ARG:HG3	49:DR:84:ARG:NH2	2.32	0.45
23:BB:2081:U:H2'	23:BB:2082:A:H8	1.82	0.45
1:AA:106:C:O2'	1:AA:107:G:H5'	2.17	0.45
23:DB:2508:G:O3'	23:DB:2555:U:H5'	2.17	0.45
45:BS:4:ILE:HG22	45:BS:106:VAL:HG13	1.98	0.45
1:CA:241:G:O2'	1:CA:242:G:H5'	2.17	0.45
1:CA:175:C:O2'	1:CA:176:C:H5'	2.17	0.45
47:BF:94:ARG:O	47:BF:98:PHE:N	2.49	0.45
22:DA:19:C:O2'	22:DA:20:G:H5'	2.17	0.45
16:CQ:3:LYS:HG2	16:CQ:4:ILE:H	1.81	0.45
23:BB:1376:C:H5''	57:BB:3502:HOH:O	2.16	0.45
1:AA:1310:G:O2'	1:AA:1311:A:H5'	2.16	0.45
36:D2:12:ARG:HG3	36:D2:12:ARG:NH2	2.32	0.45
39:BX:45:GLN:O	39:BX:46:VAL:HB	2.16	0.45
23:DB:1753:G:N2	23:DB:1755:A:H3'	2.32	0.45
52:BW:35:ILE:O	52:BW:37:VAL:N	2.50	0.45
52:DW:35:ILE:O	52:DW:35:ILE:CG1	2.65	0.45
23:DB:1819:A:H1'	23:DB:1821:A:C6	2.52	0.45
23:DB:2033:A:H3'	57:DB:3319:HOH:O	2.15	0.45
23:DB:2352:A:H8	23:DB:2352:A:O5'	2.00	0.45
8:CI:21:LYS:HB3	8:CI:61:ASP:O	2.17	0.45
20:CB:162:VAL:CG1	20:CB:184:ALA:HB2	2.39	0.45
51:DZ:5:CYS:O	51:DZ:6:GLN:HB3	2.16	0.45
25:BC:137:GLY:H	25:BC:163:ILE:HB	1.82	0.45
1:AA:1015:G:H2'	1:AA:1016:A:C8	2.52	0.45
1:AA:981:U:H2'	1:AA:982:U:C5	2.52	0.45
23:DB:2305:U:H2'	23:DB:2306:C:O4'	2.17	0.45
25:DC:75:ALA:CB	25:DC:93:VAL:HG22	2.46	0.45
42:DN:79:LEU:HA	42:DN:83:LEU:HD12	1.98	0.45
38:BM:21:ALA:HB3	38:BM:99:GLY:O	2.16	0.45
24:BI:27:LEU:HB2	24:BI:32:VAL:HG21	1.98	0.45
1:CA:951:G:OP2	12:CM:100:ARG:NH2	2.50	0.45
12:AM:53:ASP:HA	12:AM:56:ARG:NH2	2.32	0.45
33:D1:8:ILE:HG21	33:D1:51:ALA:CB	2.47	0.45
50:DT:29:THR:HB	50:DT:86:THR:HG22	1.98	0.45
23:DB:1789:A:OP1	25:DC:220:ARG:HD3	2.17	0.45
31:B0:50:GLY:C	31:B0:51:ARG:HG2	2.37	0.45
23:BB:2883:A:OP1	31:B0:48:TYR:OH	2.31	0.45
1:CA:1326:U:H2'	1:CA:1327:C:H6	1.79	0.45
32:D4:7:VAL:HG13	32:D4:8:LYS:N	2.29	0.45
52:DW:9:THR:OG1	52:DW:10:ARG:N	2.44	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1458:U:O3'	23:DB:1459:G:O4'	2.34	0.45
23:BB:845:A:C2'	23:BB:846:U:H5''	2.42	0.45
1:CA:1333:A:H2'	1:CA:1334:G:O4'	2.17	0.45
23:DB:592:A:H2'	23:DB:593:U:H6	1.78	0.45
42:DN:48:VAL:O	42:DN:51:LEU:N	2.50	0.45
1:CA:279:A:H5''	1:CA:280:C:C3'	2.44	0.45
24:DI:129:GLU:CB	24:DI:133:ARG:HH12	2.29	0.45
26:DD:48:ILE:HG23	26:DD:82:PHE:HB2	1.98	0.45
20:CB:83:ALA:CB	20:CB:90:PHE:HB3	2.47	0.45
49:DR:27:ILE:HG22	49:DR:28:ALA:N	2.32	0.45
37:BL:95:LEU:HB3	37:BL:100:ILE:CG2	2.46	0.45
2:CC:184:ASN:HD22	2:CC:185:THR:H	1.64	0.45
2:AC:26:LYS:HE2	2:AC:27:GLU:CG	2.46	0.45
7:CH:48:PHE:HA	7:CH:59:GLU:O	2.17	0.45
40:DH:111:ALA:O	40:DH:132:PHE:CZ	2.70	0.45
5:AF:97:THR:O	5:AF:98:GLU:CD	2.55	0.45
1:CA:974:A:H8	1:CA:974:A:OP1	1.98	0.45
14:AO:70:LEU:HD12	14:AO:78:TYR:CB	2.42	0.45
23:DB:299:A:H2'	23:DB:300:A:C8	2.52	0.45
10:CK:80:ASN:HA	10:CK:105:ARG:HB3	1.99	0.45
50:DT:81:LYS:HG3	50:DT:82:LYS:N	2.32	0.45
23:DB:1210:G:H5'	23:DB:1212:G:H5'	1.98	0.45
3:CD:117:VAL:O	3:CD:130:ASN:HA	2.17	0.45
23:DB:1429:G:H2'	23:DB:1430:G:C8	2.52	0.45
53:B6:147:LEU:N	53:B6:147:LEU:HD23	2.32	0.45
27:DK:2:ILE:HG23	27:DK:33:ALA:O	2.17	0.45
1:AA:805:C:O2'	1:AA:806:C:H5'	2.17	0.45
23:DB:1353:A:O2'	23:DB:1354:A:H5'	2.17	0.45
46:BU:48:VAL:O	46:BU:48:VAL:HG22	2.17	0.45
23:DB:1350:C:H5'	23:DB:1351:C:OP2	2.17	0.45
23:DB:307:G:N2	23:DB:309:A:H3'	2.32	0.45
22:DA:113:C:H2'	22:DA:114:C:C6	2.52	0.45
19:AT:38:ILE:HG13	19:AT:82:ILE:HG22	1.98	0.45
1:CA:212:G:H2'	1:CA:213:G:C8	2.52	0.45
20:CB:23:ASN:HB3	20:CB:188:THR:O	2.16	0.45
1:AA:1180:A:OP1	8:AI:104:THR:HG22	2.16	0.45
1:AA:1495:U:O2'	1:AA:1496:C:H5'	2.17	0.45
3:CD:7:LYS:O	3:CD:20:LEU:HD12	2.17	0.45
23:BB:2277:G:H5''	38:BM:86:LYS:CB	2.47	0.45
23:BB:480:A:H3'	23:BB:481:G:H5''	1.98	0.45
23:BB:681:G:H2'	23:BB:682:G:H8	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1480:A:H2'	1:CA:1481:U:H6	1.80	0.45
19:AT:49:ALA:HA	19:AT:52:GLU:CD	2.36	0.45
1:AA:90:C:H2'	1:AA:91:U:H5	1.82	0.45
23:BB:39:G:H2'	23:BB:40:U:C6	2.52	0.45
43:DO:27:VAL:HG12	43:DO:28:VAL:N	2.30	0.45
23:DB:131:A:H2'	23:DB:132:G:H8	1.82	0.45
6:CG:45:ALA:HB2	6:CG:116:ALA:O	2.17	0.45
1:CA:223:A:H2'	1:CA:224:U:H6	1.80	0.45
10:AK:60:PHE:O	10:AK:63:GLN:HB3	2.17	0.45
23:BB:1495:A:H2'	23:BB:1496:A:H8	1.80	0.45
46:DU:14:THR:HG21	46:DU:64:ILE:HD13	1.99	0.45
1:AA:912:C:H2'	1:AA:913:A:C8	2.52	0.45
23:DB:1664:A:H1'	23:DB:2726:A:C2	2.52	0.45
4:AE:33:THR:HB	4:AE:49:TYR:CE1	2.52	0.45
49:DR:62:GLU:O	49:DR:96:VAL:HA	2.16	0.45
43:DO:56:LYS:HA	43:DO:59:ALA:HB3	1.99	0.45
23:DB:158:U:H2'	23:DB:159:G:O4'	2.17	0.45
1:AA:200:G:O2'	1:AA:381:C:N4	2.49	0.45
1:AA:220:G:O2'	1:AA:221:C:H5'	2.16	0.45
1:AA:138:G:C6	1:AA:226:G:C6	3.05	0.45
8:CI:126:PHE:O	8:CI:128:LYS:N	2.50	0.45
23:DB:2582:G:O2'	23:DB:2583:G:H5'	2.16	0.45
15:CP:36:VAL:O	15:CP:36:VAL:HG13	2.17	0.45
24:DI:59:THR:O	24:DI:59:THR:HG23	2.17	0.45
23:BB:686:U:H2'	23:BB:788:A:N1	2.32	0.45
1:CA:1047:G:H21	1:CA:1215:G:C4'	2.30	0.45
23:DB:1100:C:H41	24:DI:1:ALA:H2	1.65	0.44
23:BB:855:G:C2	52:BW:23:LYS:HG2	2.50	0.44
23:BB:2354:C:H4'	52:BW:31:LEU:HD22	1.99	0.44
25:DC:131:MET:HE1	25:DC:189:ALA:HB2	1.98	0.44
23:BB:2667:C:O2	48:BG:110:HIS:CE1	2.69	0.44
48:BG:93:TYR:O	48:BG:94:ARG:HG3	2.17	0.44
26:BD:107:VAL:H	26:BD:205:PRO:HA	1.82	0.44
26:BD:25:THR:O	26:BD:189:VAL:HG22	2.17	0.44
8:AI:24:ASN:HD22	8:AI:25:GLY:H	1.60	0.44
8:AI:39:GLY:HA2	8:AI:44:ARG:HD3	1.99	0.44
1:AA:1014:A:H4'	18:AS:13:HIS:CD2	2.52	0.44
48:DG:22:VAL:C	48:DG:23:ILE:HG13	2.38	0.44
7:CH:86:LYS:HB3	7:CH:90:GLU:HG2	1.99	0.44
13:CN:60:ARG:HH21	13:CN:69:PRO:HD3	1.82	0.44
39:BX:27:ASN:O	39:BX:28:LEU:C	2.55	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:D3:36:ALA:HB3	34:D3:39:ARG:HB2	1.98	0.44
25:BC:107:LYS:N	25:BC:193:GLU:O	2.49	0.44
47:BF:45:ASP:C	47:BF:47:LYS:H	2.20	0.44
47:BF:108:PRO:C	47:BF:110:ILE:H	2.21	0.44
23:BB:625:G:O2'	23:BB:626:A:H5'	2.16	0.44
37:BL:115:GLU:OE1	37:BL:115:GLU:N	2.50	0.44
29:BE:184:ASP:O	29:BE:185:LYS:HG3	2.17	0.44
40:DH:89:LYS:HD2	40:DH:89:LYS:N	2.33	0.44
1:CA:1320:C:OP2	18:CS:2:ARG:HG3	2.17	0.44
23:BB:518:G:H4'	45:BS:18:ARG:CZ	2.47	0.44
33:D1:49:LYS:CG	33:D1:50:GLU:H	2.17	0.44
33:D1:8:ILE:CG2	33:D1:51:ALA:HA	2.47	0.44
6:CG:110:ARG:HE	6:CG:122:GLU:HB2	1.81	0.44
46:BU:81:ARG:HB2	46:BU:96:LYS:HG2	1.98	0.44
15:AP:72:ALA:HA	15:AP:75:ILE:CD1	2.47	0.44
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.52	0.44
45:BS:69:LEU:HG	45:BS:107:VAL:HG22	1.98	0.44
32:D4:2:LYS:HG2	32:D4:4:ARG:HG3	1.98	0.44
29:DE:151:GLY:HA2	29:DE:195:GLN:HE22	1.82	0.44
44:BQ:7:VAL:O	44:BQ:11:ALA:HB2	2.16	0.44
1:CA:333:U:H2'	1:CA:334:C:H6	1.82	0.44
20:CB:30:ILE:HD13	20:CB:38:HIS:CD2	2.52	0.44
3:CD:152:SER:O	3:CD:155:LYS:HG2	2.17	0.44
49:BR:39:LEU:CA	49:BR:53:PHE:HA	2.46	0.44
49:DR:38:VAL:HG22	49:DR:40:MET:H	1.83	0.44
23:DB:1794:A:O2'	23:DB:1795:C:H5'	2.17	0.44
23:BB:1416:G:O2'	23:BB:1417:C:H6	1.97	0.44
36:B2:34:ARG:O	36:B2:38:GLY:N	2.50	0.44
44:DQ:9:ALA:C	44:DQ:11:ALA:N	2.69	0.44
23:DB:1700:A:C2'	23:DB:1701:A:H5'	2.43	0.44
1:CA:845:A:C5	1:CA:846:G:H1'	2.52	0.44
25:BC:157:ALA:HA	25:BC:194:VAL:CG2	2.47	0.44
11:AL:20:VAL:HB	11:AL:94:TYR:CE1	2.53	0.44
16:AQ:77:VAL:HG12	16:AQ:79:GLU:H	1.82	0.44
37:BL:96:LYS:HD3	37:BL:103:ILE:HA	1.98	0.44
37:BL:96:LYS:HE2	37:BL:102:GLY:O	2.17	0.44
1:AA:325:A:H2'	1:AA:326:G:O4'	2.17	0.44
23:BB:182:A:H2'	23:BB:183:C:C6	2.52	0.44
23:BB:1789:A:O2'	23:BB:1790:C:H5'	2.16	0.44
49:BR:25:LEU:H	49:BR:94:THR:HG21	1.82	0.44
26:BD:169:ARG:O	26:BD:170:VAL:O	2.36	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:238:A:H3'	1:CA:239:U:H5''	1.99	0.44
16:CQ:18:LYS:HD3	16:CQ:48:GLU:HG2	1.98	0.44
10:CK:80:ASN:H	10:CK:80:ASN:ND2	2.14	0.44
3:CD:169:TRP:CD2	3:CD:185:PRO:HB3	2.51	0.44
38:DM:69:PRO:HA	38:DM:94:ALA:HA	1.99	0.44
6:CG:41:ILE:CG2	6:CG:115:MET:HG3	2.47	0.44
23:DB:1204:A:N1	23:DB:1241:A:N1	2.65	0.44
1:AA:618:C:N3	1:AA:622:A:N6	2.65	0.44
25:DC:245:THR:OG1	25:DC:249:VAL:HG23	2.17	0.44
8:AI:9:GLY:CA	8:AI:80:HIS:HB3	2.47	0.44
24:BI:12:VAL:HG23	24:BI:41:PHE:CE2	2.53	0.44
23:BB:704:G:H1'	23:BB:727:A:H61	1.82	0.44
23:DB:1432:G:H2'	23:DB:1433:A:H8	1.82	0.44
23:DB:1684:G:O2'	23:DB:1685:C:H5'	2.18	0.44
23:DB:936:A:H2'	23:DB:937:C:H6	1.80	0.44
19:AT:71:ALA:O	19:AT:74:HIS:HB2	2.17	0.44
23:BB:1042:G:H2'	23:BB:1043:C:H6	1.81	0.44
1:AA:376:G:H2'	1:AA:377:G:H8	1.80	0.44
1:AA:376:G:O3'	15:AP:5:ARG:HD3	2.17	0.44
23:BB:1183:U:H2'	23:BB:1184:U:C6	2.52	0.44
17:CR:51:GLN:HE22	17:CR:54:LEU:HD22	1.82	0.44
16:CQ:30:HIS:HB3	16:CQ:33:TYR:HB2	1.97	0.44
6:AG:91:ARG:HD2	6:AG:91:ARG:H	1.82	0.44
23:BB:6:A:O2'	23:BB:7:G:H5'	2.18	0.44
20:AB:23:ASN:HD22	20:AB:24:PRO:CD	2.28	0.44
1:CA:1277:C:H1'	1:CA:1282:C:O2	2.18	0.44
43:BO:7:ARG:HA	43:BO:10:ARG:CD	2.47	0.44
1:CA:796:C:H2'	1:CA:797:C:H6	1.81	0.44
23:DB:6:A:O2'	23:DB:7:G:H5'	2.17	0.44
1:CA:818:G:H3'	1:CA:819:A:C5'	2.47	0.44
3:AD:81:LEU:C	3:AD:83:GLY:H	2.20	0.44
2:AC:16:PRO:HG2	2:AC:53:ARG:HH22	1.82	0.44
1:AA:153:C:O2'	1:AA:154:U:H5'	2.17	0.44
7:AH:29:SER:OG	7:AH:32:LYS:HG3	2.17	0.44
23:BB:2358:A:H2'	23:BB:2359:C:C6	2.52	0.44
48:DG:91:VAL:HG23	48:DG:92:GLY:N	2.31	0.44
29:BE:40:ARG:NH2	29:BE:92:HIS:NE2	2.65	0.44
17:CR:63:TYR:HD2	17:CR:63:TYR:N	2.15	0.44
7:AH:79:ARG:NH1	7:AH:82:LEU:HB3	2.32	0.44
23:BB:2757:A:H2	48:BG:63:GLN:NE2	2.14	0.44
23:DB:2595:G:N1	23:DB:2599:G:C6	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2818:U:H4'	23:DB:2837:A:O4'	2.18	0.44
23:BB:553:G:H2'	23:BB:554:U:O4'	2.16	0.44
1:AA:1363:A:H2'	1:AA:1363:A:N3	2.32	0.44
23:DB:622:G:H2'	23:DB:623:C:C6	2.52	0.44
25:DC:57:HIS:ND1	25:DC:58:LYS:N	2.59	0.44
40:DH:11:ASN:O	40:DH:12:LEU:HB3	2.17	0.44
23:BB:332:A:O2'	23:BB:334:C:OP2	2.34	0.44
1:CA:1345:U:H2'	57:CA:1747:HOH:O	2.16	0.44
23:DB:1973:G:O2'	23:DB:1974:C:H5'	2.17	0.44
1:CA:1496:C:H2'	1:CA:1497:G:O4'	2.17	0.44
1:AA:594:U:H2'	1:AA:595:A:C8	2.52	0.44
23:DB:1449:G:O2'	23:DB:1450:G:H5'	2.17	0.44
23:BB:2516:A:O2'	23:BB:2517:C:H5'	2.17	0.44
36:D2:3:ARG:NE	36:D2:3:ARG:HA	2.31	0.44
49:BR:70:GLU:CD	49:BR:70:GLU:N	2.69	0.44
14:CO:28:GLN:O	14:CO:32:LEU:HD23	2.16	0.44
1:AA:814:A:O2'	1:AA:815:A:H3'	2.18	0.44
23:BB:918:A:C2'	23:BB:919:U:H5'	2.43	0.44
10:CK:41:LEU:HD22	10:CK:76:TYR:CE2	2.52	0.44
37:DL:141:LYS:HD3	37:DL:141:LYS:C	2.38	0.44
16:CQ:45:VAL:HG11	16:CQ:60:ILE:CG2	2.46	0.44
22:DA:44:G:N2	22:DA:48:U:C2	2.86	0.44
23:DB:852:U:H2'	23:DB:853:C:H6	1.82	0.44
52:DW:49:ASN:HB2	52:DW:60:ALA:CA	2.46	0.44
8:AI:119:LYS:C	8:AI:121:ARG:H	2.21	0.44
25:BC:140:VAL:HG12	25:BC:141:HIS:N	2.32	0.44
37:DL:112:LEU:O	37:DL:112:LEU:HD23	2.17	0.44
47:DF:79:ARG:HE	47:DF:79:ARG:H	1.64	0.44
45:BS:1:MET:SD	45:BS:62:ASP:HB3	2.57	0.44
43:DO:31:THR:HG23	43:DO:34:HIS:O	2.17	0.44
7:AH:101:ALA:O	7:AH:103:VAL:HG23	2.17	0.44
33:B1:33:LEU:HB3	33:B1:51:ALA:HB3	1.98	0.44
37:BL:51:GLU:OE1	37:BL:57:LEU:HB2	2.17	0.44
42:DN:52:ILE:HD13	42:DN:87:PHE:CE2	2.52	0.44
42:DN:83:LEU:HA	42:DN:86:ARG:HG3	1.99	0.44
40:DH:89:LYS:O	40:DH:90:LEU:C	2.55	0.44
42:BN:101:GLY:CA	42:BN:109:PRO:HA	2.46	0.44
12:CM:106:ARG:NH1	12:CM:109:LYS:HD2	2.20	0.44
1:CA:922:G:H2'	1:CA:923:A:H8	1.81	0.44
50:DT:42:GLU:O	50:DT:46:ALA:HB2	2.17	0.44
25:DC:14:HIS:O	25:DC:16:VAL:HG23	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:D6:18:LEU:HD21	53:D6:171:LYS:HG3	1.99	0.44
45:DS:32:ALA:O	45:DS:36:LEU:HD23	2.17	0.44
23:BB:2789:C:H2'	23:BB:2893:A:N7	2.32	0.44
2:CC:106:ARG:HG2	2:CC:106:ARG:O	2.16	0.44
53:B6:113:ASP:O	53:B6:116:ARG:HG2	2.17	0.44
26:DD:113:SER:HB3	26:DD:167:ASN:H	1.79	0.44
23:BB:1197:G:H2'	23:BB:1198:U:H6	1.82	0.44
23:BB:1727:C:H2'	23:BB:1728:C:O4'	2.17	0.44
26:BD:149:ASN:C	26:BD:152:PRO:HD2	2.38	0.44
31:D0:2:VAL:HG12	31:D0:3:GLN:N	2.33	0.44
46:DU:10:VAL:HG21	46:DU:35:VAL:HG21	1.98	0.44
10:AK:80:ASN:HA	10:AK:105:ARG:HB3	1.98	0.44
23:BB:2821:A:OP2	23:BB:2822:G:OP2	2.34	0.44
26:BD:112:THR:O	26:BD:113:SER:HB2	2.16	0.44
26:BD:116:LYS:HB3	26:BD:118:PHE:CE2	2.53	0.44
23:DB:2794:C:H2'	23:DB:2795:C:C6	2.52	0.44
12:CM:90:HIS:CE1	12:CM:96:VAL:HG21	2.53	0.44
12:AM:1:ALA:CA	12:AM:8:ILE:HG22	2.48	0.44
1:AA:617:G:H4'	15:AP:46:LYS:CE	2.46	0.44
23:DB:1724:G:H2'	23:DB:1725:U:H6	1.80	0.44
40:DH:96:THR:HG23	40:DH:97:ARG:N	2.29	0.44
35:DV:55:GLU:H	35:DV:55:GLU:CD	2.20	0.44
2:AC:129:PHE:CE2	2:AC:156:LEU:HD13	2.52	0.44
25:DC:245:THR:C	25:DC:247:TRP:N	2.70	0.44
1:CA:618:C:N3	1:CA:622:A:N6	2.65	0.44
2:AC:119:ILE:HD11	2:AC:133:MET:HA	1.98	0.44
23:BB:1470:A:H2'	23:BB:1471:G:O4'	2.17	0.44
1:CA:676:A:H1'	10:CK:116:PRO:HB3	1.99	0.44
1:CA:482:A:C2	1:CA:483:C:H1'	2.51	0.44
1:CA:1385:G:O2'	1:CA:1386:G:H5'	2.17	0.44
23:DB:2700:A:H2'	23:DB:2701:U:C6	2.50	0.44
23:BB:1317:G:H2'	23:BB:1318:U:H6	1.82	0.44
23:DB:871:U:H2'	23:DB:872:U:C6	2.52	0.44
14:CO:36:ILE:HD11	14:CO:59:MET:HB2	2.00	0.44
23:DB:1092:C:H2'	23:DB:1093:G:C5'	2.47	0.44
19:CT:49:ALA:HA	19:CT:52:GLU:OE2	2.17	0.44
29:DE:40:ARG:NH2	29:DE:92:HIS:NE2	2.65	0.44
20:CB:62:ARG:HG3	20:CB:62:ARG:HH11	1.81	0.44
23:DB:2649:C:H2'	23:DB:2650:U:C6	2.52	0.44
1:CA:939:G:H2'	1:CA:940:C:C6	2.52	0.44
1:CA:729:A:H2'	1:CA:730:G:H8	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:69:G:N2	1:CA:71:A:H62	2.15	0.44
46:BU:18:LYS:O	46:BU:20:LYS:N	2.50	0.44
24:BI:48:ILE:HG22	24:BI:49:GLU:HG2	1.98	0.44
23:BB:599:A:O2'	23:BB:600:G:H5'	2.17	0.44
23:BB:1370:C:H2'	23:BB:1371:G:C8	2.52	0.44
23:DB:1368:G:O2'	23:DB:1369:G:H5'	2.17	0.44
23:DB:2828:G:O2'	23:DB:2829:A:H5'	2.16	0.44
23:BB:2598:A:H5''	25:BC:233:GLY:CA	2.48	0.44
23:BB:2836:U:H2'	23:BB:2837:A:C8	2.53	0.44
7:CH:34:ALA:HB1	7:CH:109:VAL:HB	1.98	0.44
23:DB:2187:U:H2'	23:DB:2188:U:C6	2.52	0.44
1:AA:224:U:O2'	1:AA:225:C:H5'	2.17	0.44
23:BB:245:G:H2'	23:BB:246:C:H6	1.82	0.44
38:DM:54:THR:C	38:DM:56:ALA:H	2.21	0.44
12:CM:71:GLU:HA	12:CM:74:MET:SD	2.57	0.44
48:BG:60:GLY:O	48:BG:62:ALA:N	2.49	0.44
2:AC:38:VAL:HG23	2:AC:39:ARG:N	2.31	0.44
1:AA:1019:A:H2'	1:AA:1020:G:C8	2.53	0.44
1:AA:1023:U:O2'	1:AA:1024:G:H5'	2.18	0.44
23:BB:2693:G:H2'	23:BB:2694:G:H8	1.82	0.44
37:DL:14:LYS:O	37:DL:16:GLY:N	2.50	0.44
23:BB:1765:U:H2'	23:BB:1766:G:H8	1.82	0.44
23:DB:915:C:H3'	23:DB:916:G:H8	1.82	0.44
23:DB:288:U:O2	23:DB:288:U:H2'	2.16	0.44
3:CD:57:LYS:HD3	3:CD:57:LYS:C	2.38	0.44
23:BB:1130:U:C2	23:BB:2025:C:H5''	2.52	0.44
1:CA:140:U:H2'	1:CA:141:G:H8	1.81	0.44
23:DB:1098:A:H2'	24:DI:4:VAL:C	2.38	0.44
23:DB:2355:G:H4'	52:DW:20:LEU:HD12	1.99	0.44
48:BG:3:VAL:O	48:BG:68:ARG:HG3	2.18	0.44
25:DC:131:MET:C	25:DC:133:ASN:N	2.70	0.44
25:DC:52:HIS:NE2	25:DC:218:THR:HG23	2.33	0.44
48:BG:89:VAL:HG12	48:BG:90:GLY:H	1.83	0.44
40:BH:116:ARG:CB	40:BH:131:SER:HB2	2.37	0.44
40:BH:65:ALA:HB1	40:BH:68:ARG:NH1	2.32	0.44
53:B6:61:PRO:HB2	53:B6:62:ASP:OD1	2.18	0.44
53:B6:83:ILE:HG22	53:B6:90:LEU:H	1.81	0.44
1:CA:1251:A:H1'	1:CA:1370:G:O4'	2.17	0.44
41:BJ:25:LEU:HB2	41:BJ:62:VAL:CG2	2.47	0.44
41:DJ:44:TYR:CZ	44:DQ:59:LEU:HD11	2.52	0.44
41:DJ:59:ALA:O	41:DJ:62:VAL:HG12	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DY:16:LEU:N	30:DY:16:LEU:HD22	2.16	0.44
50:BT:38:ALA:HB1	50:BT:43:ILE:CD1	2.47	0.44
3:CD:160:LEU:HD23	3:CD:164:ARG:NH2	2.32	0.44
3:CD:164:ARG:HG2	3:CD:164:ARG:NH1	2.32	0.44
46:DU:85:ARG:HA	46:DU:85:ARG:CZ	2.48	0.44
25:BC:90:ILE:HD13	25:BC:103:ILE:C	2.38	0.44
33:B1:8:ILE:HG21	33:B1:51:ALA:CB	2.47	0.44
42:BN:83:LEU:HA	42:BN:86:ARG:HG3	1.98	0.44
47:BF:134:GLN:HE21	47:BF:134:GLN:HB3	1.53	0.44
12:CM:10:ASP:HA	12:CM:44:ILE:CD1	2.46	0.44
12:CM:47:LEU:HD22	12:CM:51:GLN:HB3	1.98	0.44
23:BB:340:A:H2'	23:BB:341:C:O4'	2.18	0.44
4:AE:89:THR:HG21	4:AE:134:ASN:HD21	1.78	0.44
35:BV:44:HIS:NE2	35:BV:85:LYS:HB2	2.33	0.44
1:CA:923:A:OP1	4:CE:25:LYS:HB3	2.17	0.44
45:BS:15:GLN:HA	45:BS:18:ARG:HG2	1.99	0.44
23:BB:2109:U:C2'	23:BB:2110:G:H5'	2.47	0.44
23:DB:971:G:H2'	23:DB:972:A:O4'	2.17	0.44
3:CD:173:ASP:OD1	3:CD:176:LYS:HD3	2.17	0.44
13:AN:88:MET:C	13:AN:90:GLY:H	2.20	0.44
39:DX:28:LEU:HD13	39:DX:37:LEU:CD1	2.38	0.44
22:DA:105:G:O2'	22:DA:106:G:H5'	2.17	0.44
48:BG:144:ALA:HB1	48:BG:163:TYR:HE1	1.81	0.44
27:DK:20:MET:O	27:DK:41:ILE:HD12	2.18	0.44
44:BQ:8:ILE:O	44:BQ:11:ALA:HB3	2.17	0.44
10:CK:25:SER:HG	10:CK:28:ASN:H	1.65	0.44
23:DB:1199:U:H5''	57:DB:3621:HOH:O	2.16	0.44
1:AA:81:A:N3	1:AA:82:G:N7	2.65	0.44
5:CF:97:THR:O	5:CF:98:GLU:CD	2.56	0.44
16:CQ:18:LYS:H	16:CQ:50:ASN:HD21	1.65	0.44
39:DX:44:LYS:NZ	39:DX:48:ARG:CZ	2.81	0.44
1:AA:620:C:O2	3:AD:131:ILE:HG21	2.17	0.44
23:DB:2135:A:C2'	23:DB:2136:G:H5'	2.47	0.44
1:AA:1227:A:H4'	12:AM:113:LYS:HD3	1.99	0.44
1:AA:58:C:O2'	1:AA:59:A:H5'	2.17	0.44
20:CB:22:TRP:CG	20:CB:23:ASN:N	2.82	0.44
1:CA:376:G:H5''	15:CP:5:ARG:HB2	1.99	0.44
23:DB:1316:U:H2'	23:DB:1317:G:C8	2.53	0.44
23:DB:1317:G:H2'	23:DB:1318:U:H6	1.81	0.44
1:AA:499:A:H1'	1:AA:500:G:C8	2.53	0.44
41:DJ:13:ARG:HB3	41:DJ:53:TYR:HD2	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2369:A:H2'	23:BB:2370:G:C8	2.51	0.44
16:AQ:30:HIS:HB3	16:AQ:33:TYR:HB2	1.98	0.44
22:BA:94:A:O2'	22:BA:95:U:H5'	2.18	0.44
31:B0:12:ARG:HD2	31:B0:16:ARG:NH1	2.32	0.44
23:BB:936:A:H2'	23:BB:937:C:H6	1.78	0.44
1:CA:167:A:H2'	1:CA:168:G:H8	1.82	0.44
46:BU:18:LYS:HD2	46:BU:19:GLY:N	2.32	0.44
23:BB:1749:A:H2'	23:BB:1750:G:C8	2.53	0.44
1:CA:26:A:N6	1:CA:558:G:H1'	2.32	0.44
23:BB:1843:C:H2'	23:BB:1844:C:H6	1.82	0.44
23:BB:840:C:H2'	23:BB:841:G:C8	2.52	0.44
3:AD:43:ARG:HB3	3:AD:43:ARG:NH1	2.32	0.44
29:DE:3:LEU:O	29:DE:12:LEU:HD23	2.17	0.44
5:AF:46:GLN:HE21	5:AF:46:GLN:HA	1.81	0.44
23:BB:285:G:O2'	23:BB:286:U:H5'	2.16	0.44
2:AC:180:ASP:OD1	2:AC:203:LYS:HB2	2.18	0.44
2:AC:32:LEU:O	2:AC:35:ASP:HB2	2.17	0.44
1:CA:814:A:O2'	1:CA:815:A:H3'	2.17	0.44
23:DB:1845:G:C6	23:DB:1896:G:C6	3.06	0.44
38:BM:29:GLY:HA2	38:BM:106:ASP:HB2	1.99	0.44
42:BN:11:ASN:HD22	42:BN:11:ASN:HA	1.53	0.44
23:DB:1098:A:O2'	24:DI:4:VAL:C	2.56	0.44
2:CC:122:GLN:O	2:CC:127:VAL:HG22	2.17	0.44
44:BQ:24:TYR:CG	44:BQ:25:GLY:N	2.86	0.44
44:BQ:33:VAL:O	44:BQ:37:ALA:N	2.51	0.44
48:DG:104:LEU:O	48:DG:111:PRO:HA	2.17	0.44
16:CQ:74:LEU:HD22	16:CQ:75:VAL:H	1.83	0.44
1:CA:1148:U:H2'	1:CA:1149:C:O4'	2.17	0.44
44:DQ:79:ILE:C	44:DQ:79:ILE:HD13	2.38	0.44
8:AI:90:ASP:O	8:AI:93:LEU:HG	2.16	0.44
25:BC:114:GLN:HB3	25:BC:114:GLN:HE21	1.62	0.44
13:AN:5:MET:HE2	13:AN:60:ARG:NH1	2.33	0.44
13:CN:70:HIS:O	13:CN:72:PHE:N	2.49	0.44
48:DG:17:LYS:HZ2	48:DG:18:ILE:H	1.65	0.44
23:DB:675:A:N3	23:DB:2443:C:O2'	2.50	0.44
1:CA:600:A:H2'	1:CA:601:G:H8	1.82	0.44
50:BT:10:VAL:O	50:BT:11:LEU:C	2.55	0.44
12:CM:13:HIS:HB2	12:CM:16:ILE:HG22	1.98	0.44
34:B3:36:ALA:HB3	34:B3:39:ARG:HB2	1.99	0.44
12:CM:53:ASP:HA	12:CM:56:ARG:NH2	2.32	0.44
12:CM:3:ILE:CA	12:CM:56:ARG:HG2	2.44	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:3:LEU:HD11	47:BF:172:PHE:CD1	2.52	0.44
47:DF:138:PRO:HA	47:DF:142:TYR:CZ	2.53	0.44
12:CM:109:LYS:HG3	12:CM:110:GLY:H	1.83	0.44
1:CA:1227:A:O3'	12:CM:113:LYS:HB2	2.18	0.44
1:CA:1076:U:H2'	1:CA:1077:G:C8	2.52	0.44
1:AA:1270:G:H2'	1:AA:1271:A:C8	2.51	0.44
1:AA:1361:G:C2'	1:AA:1362:A:H5''	2.44	0.44
33:D1:33:LEU:HB3	33:D1:51:ALA:HB3	1.99	0.44
11:AL:89:LEU:HD22	11:AL:89:LEU:N	2.33	0.44
23:BB:673:C:H4'	29:BE:77:ILE:HD11	1.99	0.44
23:BB:2472:G:O6	23:BB:2476:A:H4'	2.18	0.44
25:DC:202:ARG:HH21	25:DC:202:ARG:HB2	1.83	0.44
39:DX:27:ASN:O	39:DX:28:LEU:C	2.56	0.44
38:BM:53:MET:SD	38:BM:63:ILE:HG21	2.57	0.44
27:DK:110:GLU:HA	27:DK:113:MET:HG2	2.00	0.44
44:DQ:108:LEU:O	44:DQ:111:LYS:HB3	2.18	0.44
37:DL:85:VAL:HG22	37:DL:94:THR:HG21	1.99	0.44
3:AD:152:SER:O	3:AD:155:LYS:HG2	2.18	0.44
1:AA:845:A:C5	1:AA:846:G:H1'	2.53	0.44
48:BG:75:VAL:O	48:BG:78:VAL:HG22	2.17	0.44
29:DE:154:ASP:C	29:DE:156:ASN:H	2.21	0.44
23:DB:1418:G:C2'	23:DB:1580:A:H61	2.30	0.44
5:AF:61:LEU:HD12	5:AF:63:ASN:OD1	2.18	0.44
26:BD:69:ALA:N	26:BD:73:VAL:HB	2.32	0.44
14:AO:81:LEU:O	14:AO:85:LEU:HD13	2.18	0.44
12:AM:90:HIS:CE1	12:AM:96:VAL:HG21	2.51	0.44
31:B0:2:VAL:HG12	31:B0:3:GLN:N	2.32	0.44
28:DP:31:VAL:HG13	28:DP:32:VAL:N	2.33	0.44
4:CE:81:GLN:CD	4:CE:148:SER:HA	2.37	0.44
4:CE:158:LYS:HZ1	7:CH:65:PHE:HA	1.80	0.44
11:AL:33:CYS:HB2	11:AL:77:SER:O	2.18	0.44
29:BE:48:THR:C	29:BE:50:ALA:N	2.71	0.44
1:AA:15:G:H2'	1:AA:16:A:H8	1.82	0.44
29:BE:148:ILE:HD13	29:BE:187:VAL:CG2	2.43	0.44
6:AG:57:GLU:O	6:AG:61:PHE:N	2.48	0.44
1:AA:191:G:H8	1:AA:191:G:OP2	1.99	0.44
23:DB:51:G:O2'	23:DB:119:A:N1	2.44	0.44
46:DU:48:VAL:O	46:DU:48:VAL:HG22	2.18	0.44
23:DB:2339:C:H2'	23:DB:2340:A:H8	1.81	0.44
25:BC:30:ALA:C	25:BC:32:LEU:H	2.21	0.44
23:BB:2217:G:H2'	23:BB:2218:G:H8	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CE:106:ALA:HB1	4:CE:110:MET:CB	2.45	0.44
11:CL:33:CYS:H	11:CL:54:VAL:HG13	1.82	0.44
44:DQ:65:ASN:CB	44:DQ:75:TYR:HB2	2.47	0.44
23:DB:866:A:H61	23:DB:913:U:C1'	2.30	0.44
14:CO:56:LEU:O	14:CO:59:MET:HG3	2.18	0.44
31:D0:16:ARG:O	31:D0:19:ASP:HB2	2.18	0.44
1:AA:1517:G:H1'	23:BB:1919:A:O3'	2.18	0.44
23:DB:755:U:H2'	23:DB:756:A:H8	1.82	0.44
41:DJ:106:LYS:HD2	41:DJ:106:LYS:HA	1.84	0.44
23:DB:1201:U:H2'	23:DB:1202:G:C8	2.51	0.44
1:CA:1097:C:H2'	1:CA:1098:C:C6	2.53	0.44
49:BR:91:GLN:HG3	49:BR:92:TRP:N	2.32	0.44
17:AR:22:TYR:CZ	17:AR:23:LYS:HE3	2.53	0.44
40:BH:25:TYR:CZ	40:BH:30:LEU:HD21	2.52	0.44
3:CD:22:SER:N	3:CD:109:THR:HG22	2.32	0.44
23:DB:248:G:N7	23:DB:250:G:N3	2.66	0.44
23:DB:1517:G:O2'	23:DB:1518:C:H5'	2.17	0.44
23:BB:2181:U:H2'	23:BB:2182:U:C6	2.51	0.44
23:BB:1712:U:H2'	23:BB:1713:A:C8	2.53	0.44
23:BB:1893:C:H2'	23:BB:1894:C:O4'	2.18	0.44
23:DB:1144:A:O2'	23:DB:1145:C:H5'	2.18	0.44
46:BU:94:PHE:HB3	46:BU:101:THR:HA	1.99	0.44
1:AA:1198:G:H2'	1:AA:1199:U:C6	2.52	0.44
11:AL:23:LEU:O	11:AL:25:ALA:N	2.51	0.44
34:D3:9:ALA:C	34:D3:11:LYS:H	2.21	0.44
23:DB:1996:C:OP1	27:DK:31:ARG:CZ	2.66	0.44
5:AF:55:HIS:O	5:AF:56:LYS:HG3	2.17	0.44
23:DB:1462:C:O2'	23:DB:1463:C:H5'	2.17	0.44
23:BB:1228:G:H2'	23:BB:1229:C:H6	1.83	0.44
23:BB:2714:G:O2'	23:BB:2715:C:H5'	2.17	0.44
1:AA:711:G:O2'	1:AA:712:A:H5'	2.17	0.44
1:AA:1439:G:H2'	1:AA:1440:U:O4'	2.17	0.44
37:BL:81:ASP:O	37:BL:83:ALA:N	2.44	0.44
1:AA:1265:C:O2'	1:AA:1266:G:H5'	2.17	0.44
26:BD:56:LYS:C	26:BD:58:ASN:N	2.71	0.44
52:BW:23:LYS:H	52:BW:68:PHE:HE2	1.66	0.44
52:DW:35:ILE:O	52:DW:37:VAL:N	2.51	0.44
23:DB:1824:G:O2'	23:DB:1825:U:H5'	2.17	0.44
23:BB:17:G:H2'	23:BB:18:U:H6	1.81	0.44
23:BB:2667:C:H2'	23:BB:2668:G:O4'	2.17	0.44
44:DQ:20:ALA:HA	44:DQ:23:TYR:CE1	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:133:GLN:HG2	40:BH:139:PHE:CD2	2.51	0.44
53:D6:81:LYS:HA	53:D6:84:ARG:HH22	1.80	0.44
53:D6:90:LEU:HB3	53:D6:101:ILE:CG2	2.47	0.44
23:DB:2365:G:H4'	52:DW:59:PHE:CD1	2.53	0.44
53:B6:83:ILE:CG2	53:B6:90:LEU:HD12	2.46	0.44
53:B6:80:GLU:OE1	53:B6:91:ASN:ND2	2.50	0.44
40:BH:84:ALA:HA	40:BH:91:PHE:N	2.31	0.44
8:CI:114:LYS:H	8:CI:120:ALA:HA	1.83	0.44
41:BJ:28:LEU:HG	41:BJ:32:LEU:HD12	1.99	0.44
8:AI:15:ALA:O	8:AI:66:VAL:HG23	2.17	0.44
8:AI:120:ALA:O	8:AI:121:ARG:HG2	2.18	0.44
23:DB:2312:U:H5'	47:DF:84:ILE:HD12	1.99	0.44
2:AC:87:ARG:HG2	2:AC:98:ALA:O	2.17	0.44
7:AH:124:ILE:HG22	7:AH:125:ILE:N	2.32	0.44
23:BB:397:U:OP1	51:BZ:31:PRO:HA	2.18	0.44
37:BL:78:ARG:HB3	37:BL:113:ALA:HB2	1.98	0.44
40:DH:87:GLU:HB2	40:DH:89:LYS:HZ2	1.81	0.44
47:DF:102:LEU:C	47:DF:102:LEU:HD13	2.38	0.44
47:DF:106:ALA:HA	47:DF:135:ILE:HD11	2.00	0.44
13:AN:40:ARG:O	13:AN:41:TRP:HE3	2.01	0.44
18:AS:47:THR:HA	18:AS:60:PHE:CD1	2.53	0.44
23:BB:1091:G:O2'	23:BB:1092:C:H5'	2.17	0.44
23:DB:2893:A:H4'	23:DB:2894:G:C5'	2.48	0.44
23:DB:2787:C:H5'	26:DD:66:GLY:HA3	1.99	0.44
23:DB:1023:U:H2'	23:DB:1024:G:C5'	2.47	0.44
34:D3:31:ILE:HG12	34:D3:31:ILE:O	2.17	0.44
9:CJ:56:HIS:O	9:CJ:57:VAL:HG12	2.16	0.44
27:BK:5:GLN:HA	27:BK:20:MET:SD	2.58	0.44
8:CI:87:MET:HB2	8:CI:94:ARG:CD	2.47	0.44
49:DR:16:GLU:HG2	49:DR:101:ILE:CG1	2.48	0.44
10:CK:28:ASN:HD22	10:CK:29:THR:H	1.64	0.44
23:DB:783:A:H4'	23:DB:1779:U:O2	2.17	0.44
44:DQ:8:ILE:O	44:DQ:11:ALA:HB3	2.18	0.44
1:AA:1057:G:H2'	1:AA:1058:G:O4'	2.16	0.44
3:AD:171:GLU:O	3:AD:180:THR:N	2.51	0.44
3:AD:89:LEU:CD2	3:AD:199:ILE:HD11	2.48	0.44
1:CA:1048:G:OP1	13:CN:3:GLN:HB2	2.17	0.44
23:BB:557:C:H2'	23:BB:558:U:H6	1.80	0.44
3:CD:104:MET:CE	3:CD:170:LEU:HD13	2.48	0.44
1:AA:441:A:N6	1:AA:493:A:N6	2.65	0.44
1:AA:472:U:H2'	1:AA:473:U:C6	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:419:U:H2'	23:BB:420:C:H6	1.80	0.44
1:CA:1085:U:H3'	1:CA:1086:U:C5	2.52	0.44
23:BB:2462:C:H2'	23:BB:2463:C:H6	1.83	0.44
23:DB:1572:A:O2'	23:DB:1573:G:H5'	2.18	0.44
23:DB:1260:A:H2'	23:DB:1261:C:H6	1.83	0.44
37:BL:127:VAL:HG22	37:BL:128:THR:N	2.32	0.44
11:AL:14:LYS:CG	11:AL:15:VAL:N	2.80	0.44
28:DP:24:THR:C	28:DP:25:VAL:HG13	2.37	0.44
23:DB:692:C:H2'	23:DB:693:A:H8	1.83	0.44
1:CA:375:U:O2'	1:CA:376:G:H5'	2.17	0.44
1:CA:389:A:H3'	1:CA:390:U:H6	1.82	0.44
23:BB:1316:U:H2'	23:BB:1317:G:H8	1.81	0.44
23:BB:1573:G:C2'	23:BB:1574:C:H5'	2.47	0.44
23:DB:2368:C:H2'	23:DB:2369:A:C8	2.53	0.44
1:AA:1333:A:H2'	1:AA:1334:G:O4'	2.17	0.44
23:BB:958:U:H3	38:BM:16:ARG:HB3	1.82	0.44
1:AA:1458:G:O3'	19:AT:22:SER:HA	2.17	0.44
23:DB:1883:U:H2'	23:DB:1884:G:O4'	2.18	0.44
22:DA:8:C:H4'	43:DO:27:VAL:HG21	2.00	0.44
1:CA:584:G:O2'	1:CA:585:G:H5'	2.18	0.44
23:DB:234:U:O2'	23:DB:235:U:H5'	2.17	0.44
19:CT:27:MET:CE	19:CT:28:ARG:HG2	2.48	0.44
23:DB:955:U:OP1	38:DM:86:LYS:HE3	2.18	0.44
15:CP:34:GLU:CD	15:CP:60:TRP:HE1	2.21	0.44
49:BR:58:VAL:O	49:BR:58:VAL:HG13	2.16	0.44
6:CG:72:VAL:HA	6:CG:89:GLU:HA	2.00	0.44
23:DB:1849:G:H2'	23:DB:1850:G:C8	2.51	0.44
1:CA:96:U:H2'	1:CA:97:G:H8	1.82	0.44
1:AA:766:A:H2'	1:AA:767:A:C8	2.53	0.44
23:BB:1107:G:O2'	23:BB:1108:U:H5'	2.18	0.44
34:B3:9:ALA:C	34:B3:11:LYS:H	2.20	0.44
22:DA:80:U:H2'	22:DA:81:G:C8	2.52	0.44
1:CA:248:C:O2'	1:CA:249:U:H5'	2.18	0.44
3:CD:81:LEU:C	3:CD:83:GLY:H	2.19	0.44
15:CP:10:GLY:HA3	15:CP:15:PRO:HA	1.99	0.44
23:BB:2485:G:O2'	23:BB:2486:C:H5'	2.17	0.44
1:AA:1202:U:H2'	1:AA:1203:C:O4'	2.17	0.44
23:DB:531:C:O2'	23:DB:563:A:H5''	2.17	0.44
1:CA:1292:G:H2'	1:CA:1293:C:C6	2.51	0.44
23:DB:1366:A:H2'	23:DB:1367:A:O4'	2.17	0.44
49:DR:74:ILE:HB	49:DR:87:GLN:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AG:11:ILE:HD12	6:AG:11:ILE:H	1.82	0.44
1:AA:1429:A:O2'	1:AA:1430:A:H5'	2.17	0.44
1:AA:1241:G:O2'	1:AA:1242:G:H5'	2.17	0.44
25:BC:131:MET:CE	25:BC:189:ALA:HB2	2.47	0.44
25:DC:107:LYS:N	25:DC:193:GLU:O	2.50	0.44
47:BF:91:ARG:HD3	47:BF:91:ARG:N	2.32	0.44
48:DG:3:VAL:O	48:DG:68:ARG:HG3	2.17	0.44
16:CQ:66:LEU:HD12	16:CQ:70:LYS:HG2	1.98	0.44
53:D6:84:ARG:NH1	53:D6:92:PRO:HG2	2.32	0.44
52:DW:61:LYS:HB3	52:DW:62:ALA:H	1.43	0.44
8:CI:5:TYR:HB3	8:CI:88:GLU:OE2	2.18	0.44
1:CA:1287:A:H1'	1:CA:1353:G:O2'	2.17	0.44
1:AA:1128:C:H4'	1:AA:1148:U:O2	2.17	0.44
8:AI:56:MET:CG	8:AI:57:VAL:N	2.81	0.44
8:AI:21:LYS:HB3	8:AI:61:ASP:O	2.17	0.44
1:AA:1348:U:H4'	8:AI:121:ARG:HE	1.82	0.44
37:DL:111:ILE:HD13	37:DL:128:THR:HG23	1.98	0.44
45:DS:61:ASN:HB3	45:DS:62:ASP:H	1.45	0.44
7:CH:77:VAL:HG12	7:CH:78:SER:N	2.32	0.44
23:DB:2734:A:H2'	23:DB:2735:G:C5'	2.45	0.44
30:BY:12:ALA:HB2	30:BY:53:MET:HE1	1.99	0.44
47:BF:78:ILE:CA	47:BF:79:ARG:HH11	2.31	0.44
23:BB:1076:C:H2'	23:BB:1077:A:C8	2.52	0.44
23:DB:2882:A:OP1	42:DN:96:ARG:HD2	2.17	0.44
45:DS:12:SER:O	45:DS:13:SER:HB3	2.17	0.44
25:DC:180:MET:HB2	25:DC:268:ARG:H	1.82	0.44
23:BB:1025:G:H8	23:BB:1025:G:OP1	2.00	0.44
23:BB:673:C:H5''	29:BE:76:PRO:HD2	2.00	0.44
23:BB:1072:C:N3	23:BB:1092:C:N4	2.64	0.44
45:DS:69:LEU:HG	45:DS:107:VAL:HG22	1.98	0.44
6:CG:2:ARG:HH11	6:CG:2:ARG:CB	2.20	0.44
53:B6:107:THR:HG22	53:B6:108:GLU:N	2.32	0.44
10:CK:89:GLY:O	10:CK:92:ARG:HB2	2.18	0.44
32:D4:15:LYS:O	32:D4:16:ILE:HB	2.17	0.44
13:CN:26:LEU:CD1	13:CN:44:VAL:HG22	2.47	0.44
48:BG:147:LEU:HA	48:BG:150:TYR:HD1	1.82	0.44
48:BG:86:LEU:HD23	48:BG:162:ARG:O	2.18	0.44
1:AA:1269:A:N3	1:AA:1326:U:H1'	2.32	0.44
8:CI:87:MET:HB2	8:CI:94:ARG:HD3	1.99	0.44
3:CD:123:MET:HG3	3:CD:127:ARG:C	2.37	0.44
27:BK:121:GLU:O	27:BK:122:VAL:C	2.55	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:126:GLY:O	3:AD:127:ARG:HD2	2.18	0.44
4:CE:52:ALA:N	4:CE:58:ALA:HB2	2.32	0.44
9:AJ:12:ALA:HB3	9:AJ:18:ILE:HB	2.00	0.44
48:BG:30:GLY:HA3	48:BG:78:VAL:CA	2.41	0.44
23:BB:2772:C:H2'	23:BB:2773:C:H6	1.82	0.44
23:DB:357:C:H2'	23:DB:358:U:H6	1.80	0.44
23:DB:684:G:C6	23:DB:774:G:C4	3.05	0.44
15:CP:46:LYS:C	15:CP:48:GLU:H	2.21	0.44
23:BB:265:A:O2'	23:BB:266:G:H4'	2.17	0.44
23:DB:1138:G:H21	41:DJ:108:MET:CE	2.30	0.44
39:BX:44:LYS:NZ	39:BX:48:ARG:CZ	2.80	0.44
52:DW:44:PHE:HB3	52:DW:78:PHE:CE1	2.53	0.44
1:CA:1514:G:H2'	1:CA:1515:G:C8	2.52	0.44
23:BB:1372:U:H1'	23:BB:2214:C:C4	2.53	0.44
53:D6:62:ASP:HB2	53:D6:64:ARG:NH1	2.32	0.44
25:BC:245:THR:HG23	25:BC:249:VAL:HB	2.00	0.44
23:BB:506:G:H1'	23:BB:507:A:C8	2.52	0.44
41:DJ:35:ARG:HG3	41:DJ:52:ASP:OD1	2.18	0.44
23:DB:1292:G:H2'	23:DB:1293:C:H6	1.81	0.44
14:AO:59:MET:HG2	14:AO:59:MET:H	1.49	0.44
27:BK:76:VAL:HG12	27:BK:77:ILE:N	2.32	0.44
23:DB:2511:U:H2'	23:DB:2512:C:C6	2.53	0.44
23:BB:690:G:N3	25:BC:42:ARG:NH2	2.66	0.44
1:AA:518:C:H2'	1:AA:530:G:H8	1.80	0.44
17:AR:27:THR:HG22	17:AR:31:TYR:HE1	1.83	0.44
1:AA:900:A:O2'	1:AA:901:A:H5'	2.17	0.44
23:DB:2758:A:C2'	23:DB:2759:G:H5'	2.47	0.44
1:CA:900:A:O2'	1:CA:901:A:H5'	2.17	0.44
23:DB:1052:C:H2'	23:DB:1053:C:H6	1.82	0.44
23:BB:2818:U:O2'	23:BB:2819:G:H5'	2.18	0.44
32:B4:27:CYS:CB	32:B4:33:HIS:HB2	2.48	0.44
1:CA:159:G:H5'	1:CA:160:A:OP2	2.17	0.44
1:AA:1387:G:H2'	1:AA:1388:C:C6	2.52	0.44
23:DB:1870:C:H5''	23:DB:1871:A:C6	2.52	0.44
38:DM:110:GLU:HG2	38:DM:111:GLU:N	2.33	0.44
23:BB:820:A:H2'	23:BB:821:A:O4'	2.18	0.44
1:AA:1415:G:O2'	1:AA:1416:G:H5'	2.18	0.44
23:BB:1136:G:H2'	23:BB:1137:G:H8	1.81	0.44
1:CA:1229:A:H2'	1:CA:1230:C:C6	2.52	0.44
23:BB:2327:A:N7	23:BB:2388:A:N6	2.65	0.44
23:BB:2353:G:H1'	52:BW:30:VAL:CG1	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BQ:24:TYR:CD1	44:BQ:25:GLY:N	2.86	0.44
44:DQ:24:TYR:CG	44:DQ:25:GLY:N	2.86	0.44
44:DQ:29:ARG:HG2	44:DQ:29:ARG:NH1	2.33	0.44
37:DL:125:LEU:HB2	37:DL:143:GLU:OE2	2.17	0.44
53:B6:44:GLU:CA	53:B6:49:HIS:HA	2.36	0.44
40:BH:117:LEU:HD13	40:BH:121:VAL:HG23	1.99	0.44
1:CA:1346:A:H5'	8:CI:121:ARG:HH21	1.83	0.44
20:CB:204:ASP:O	20:CB:205:ALA:HB3	2.17	0.44
23:DB:625:G:O2'	23:DB:626:A:H5'	2.18	0.44
41:DJ:25:LEU:HB2	41:DJ:62:VAL:HG22	2.00	0.44
7:AH:86:LYS:CG	7:AH:124:ILE:HD11	2.47	0.44
50:BT:11:LEU:N	50:BT:11:LEU:HD22	2.27	0.44
40:DH:143:ILE:HG22	40:DH:144:VAL:N	2.33	0.44
46:BU:87:GLU:OE2	46:BU:88:ASP:HB3	2.17	0.44
37:BL:3:LEU:O	37:BL:5:THR:N	2.50	0.44
47:BF:138:PRO:HA	47:BF:142:TYR:CZ	2.52	0.44
23:BB:1076:C:H2'	23:BB:1077:A:H8	1.82	0.44
40:DH:85:GLY:N	40:DH:89:LYS:H	2.15	0.44
38:BM:21:ALA:HB1	38:BM:100:LYS:HE2	1.99	0.44
20:AB:41:ASN:HD22	20:AB:44:LYS:CB	2.31	0.44
20:CB:41:ASN:HD22	20:CB:44:LYS:HB3	1.83	0.44
12:AM:47:LEU:HD22	12:AM:51:GLN:HB3	1.99	0.44
10:AK:86:LYS:HB2	10:AK:113:THR:HA	2.00	0.44
46:DU:47:PRO:HB3	46:DU:55:GLY:CA	2.47	0.44
45:DS:26:GLY:HA2	45:DS:71:VAL:O	2.18	0.44
45:DS:29:VAL:HG11	45:DS:55:ILE:CD1	2.47	0.44
23:BB:2787:C:H2'	23:BB:2788:C:C6	2.52	0.44
23:BB:1169:A:H2'	23:BB:1170:C:C6	2.52	0.44
23:DB:2266:A:H1'	23:DB:2267:A:N6	2.32	0.44
21:CU:19:LYS:CD	21:CU:20:ARG:HH21	2.29	0.44
23:DB:1057:A:H62	23:DB:1086:A:H2'	1.82	0.44
45:BS:28:LYS:HB3	45:BS:29:VAL:H	1.42	0.44
37:DL:85:VAL:HG22	37:DL:94:THR:CG2	2.47	0.44
23:DB:968:C:O2'	23:DB:969:G:H5'	2.18	0.44
24:DI:45:THR:O	24:DI:48:ILE:HG22	2.17	0.44
46:BU:58:VAL:HG12	46:BU:59:GLU:N	2.24	0.44
11:AL:66:ILE:HG21	11:AL:71:HIS:CB	2.48	0.44
26:BD:8:LYS:O	26:BD:9:VAL:HB	2.17	0.44
20:CB:119:GLN:HA	20:CB:124:THR:HG23	2.00	0.44
46:DU:58:VAL:HG12	46:DU:59:GLU:N	2.27	0.44
25:DC:30:ALA:C	25:DC:32:LEU:H	2.21	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2840:C:O2'	23:BB:2841:C:H5'	2.17	0.44
23:BB:559:G:P	41:BJ:111:LYS:HD3	2.57	0.44
35:BV:29:ILE:HD12	35:BV:90:ASP:HA	1.99	0.44
23:BB:2689:U:H4'	23:BB:2690:U:OP2	2.18	0.44
23:DB:1583:A:H2	23:DB:1583:A:OP2	2.01	0.44
1:AA:856:C:O2'	1:AA:857:C:H5'	2.18	0.44
23:DB:1591:A:H2'	23:DB:1592:C:C6	2.52	0.44
39:BX:56:LEU:O	39:BX:58:ASN:N	2.50	0.44
12:AM:113:LYS:N	12:AM:114:PRO:CD	2.81	0.44
38:BM:68:PHE:CD1	38:BM:69:PRO:HD2	2.53	0.44
1:CA:213:G:H2'	1:CA:213:G:N3	2.33	0.44
23:DB:2219:U:O2'	23:DB:2220:U:H5'	2.18	0.44
6:AG:91:ARG:N	6:AG:91:ARG:HD2	2.33	0.44
1:CA:1472:U:H2'	1:CA:1473:G:H8	1.83	0.44
44:BQ:65:ASN:CB	44:BQ:75:TYR:HB2	2.48	0.44
23:DB:1930:G:H2'	23:DB:1968:G:N1	2.33	0.44
6:AG:68:VAL:CG1	6:AG:133:ALA:HB1	2.46	0.44
41:DJ:28:LEU:HG	41:DJ:32:LEU:HD12	1.99	0.44
53:B6:16:LYS:HA	53:B6:19:GLU:OE2	2.18	0.44
12:AM:22:TYR:HB2	12:AM:65:GLU:HA	1.99	0.44
23:BB:1637:A:H2'	23:BB:1638:C:H6	1.83	0.44
24:BI:109:ALA:HB1	24:BI:124:MET:CG	2.47	0.44
1:CA:128:G:H2'	1:CA:129:A:H8	1.81	0.44
23:BB:1013:C:H2'	23:BB:1014:A:H8	1.83	0.44
47:BF:119:LYS:N	47:BF:119:LYS:HD2	2.33	0.44
23:DB:2730:C:O2'	23:DB:2731:G:H5'	2.17	0.44
23:BB:1273:U:H4'	23:BB:1275:A:OP2	2.18	0.44
23:DB:189:G:H2'	23:DB:205:G:N2	2.33	0.44
23:BB:1465:G:H2'	23:BB:1466:U:O4'	2.17	0.44
23:DB:77:G:O2'	23:DB:78:U:H5'	2.17	0.44
1:CA:912:C:H2'	1:CA:913:A:C8	2.52	0.44
4:AE:92:ARG:HB3	4:AE:92:ARG:HH11	1.83	0.44
23:DB:1749:A:H2'	23:DB:1750:G:C8	2.52	0.44
23:DB:1749:A:H2'	23:DB:1750:G:H8	1.83	0.44
6:AG:30:MET:HA	6:AG:38:ALA:HB2	2.00	0.44
23:DB:2655:G:H1'	23:DB:2656:U:H5	1.83	0.44
23:DB:607:U:O4	23:DB:620:G:H5''	2.17	0.44
23:BB:622:G:H2'	23:BB:623:C:H6	1.83	0.44
23:BB:2829:A:O2'	23:BB:2830:C:H5'	2.18	0.44
23:BB:1266:G:N2	23:BB:2012:G:H2'	2.32	0.44
40:BH:9:VAL:HB	40:BH:12:LEU:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AF:10:VAL:HA	5:AF:84:VAL:HA	2.00	0.44
23:BB:910:A:H2'	23:BB:911:A:C8	2.53	0.44
1:CA:454:G:O2'	1:CA:455:G:H5'	2.17	0.44
52:DW:54:ARG:C	52:DW:56:HIS:H	2.21	0.44
23:DB:2361:G:O2'	23:DB:2362:C:H5'	2.18	0.44
16:CQ:47:ASP:OD2	16:CQ:51:GLU:HG2	2.17	0.44
20:AB:118:THR:HA	20:AB:121:GLN:HB3	1.99	0.44
23:BB:2408:U:H2'	23:BB:2409:G:C8	2.53	0.44
40:DH:110:VAL:O	40:DH:110:VAL:HG22	2.18	0.44
23:DB:2749:A:H3'	23:DB:2750:A:H2'	2.00	0.44
14:AO:28:GLN:O	14:AO:32:LEU:HD23	2.18	0.44
23:BB:2057:G:H2'	23:BB:2058:A:O4'	2.17	0.44
9:CJ:31:ARG:HB2	9:CJ:31:ARG:HE	1.64	0.44
25:BC:34:GLU:O	25:BC:34:GLU:HG3	2.17	0.44
23:DB:1936:A:H2	23:DB:1943:U:O4	2.01	0.44
23:BB:146:A:H2'	23:BB:147:C:C6	2.53	0.44
21:CU:33:ARG:NH1	21:CU:34:ARG:HH11	2.15	0.44
52:BW:59:PHE:CD2	52:BW:61:LYS:HD2	2.53	0.44
23:BB:1799:G:N2	23:BB:1818:U:O2'	2.51	0.44
25:BC:121:ALA:HB3	25:BC:129:LEU:CD1	2.48	0.44
25:BC:184:GLU:O	25:BC:186:ASP:N	2.43	0.44
25:DC:64:VAL:O	25:DC:102:TYR:O	2.36	0.44
21:CU:40:PRO:C	21:CU:42:THR:N	2.71	0.44
48:BG:108:PHE:C	48:BG:110:HIS:H	2.21	0.44
6:AG:144:ALA:O	6:AG:146:ALA:N	2.46	0.44
6:AG:145:GLU:C	6:AG:147:ASN:N	2.69	0.44
48:DG:10:VAL:CG2	48:DG:49:LEU:HD13	2.48	0.44
53:B6:48:ALA:O	53:B6:50:VAL:HG22	2.17	0.44
40:BH:128:HIS:CG	40:BH:130:VAL:HG22	2.53	0.44
40:BH:99:ILE:O	40:BH:103:VAL:HG13	2.18	0.44
8:AI:78:ILE:O	8:AI:82:ILE:HG13	2.18	0.44
26:DD:51:THR:HG22	26:DD:52:THR:H	1.83	0.44
23:DB:634:C:H6	23:DB:634:C:O5'	2.01	0.44
23:DB:2393:U:H2'	23:DB:2394:C:O4'	2.18	0.44
23:DB:675:A:C6	23:DB:676:A:C6	3.06	0.44
1:AA:600:A:H2'	1:AA:601:G:H8	1.83	0.44
7:CH:124:ILE:HG22	7:CH:125:ILE:H	1.83	0.44
51:BZ:77:LYS:CG	51:BZ:78:TYR:H	2.29	0.44
42:BN:52:ILE:O	42:BN:55:ALA:HB3	2.18	0.44
29:BE:157:LEU:HG	29:BE:169:VAL:HG11	2.00	0.44
29:BE:166:LYS:O	29:BE:167:VAL:HB	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:110:ILE:HB	47:DF:113:PHE:HB3	1.98	0.44
47:DF:174:PHE:HB3	47:DF:176:PHE:CE1	2.53	0.44
47:DF:4:HIS:O	47:DF:7:TYR:HB3	2.17	0.44
21:AU:16:ARG:NH2	21:AU:19:LYS:NZ	2.66	0.44
18:CS:62:THR:HG22	18:CS:63:ASP:N	2.30	0.44
13:AN:30:ILE:O	13:AN:32:ASP:N	2.45	0.44
23:BB:675:A:O2'	29:BE:62:GLN:NE2	2.50	0.44
23:DB:139:U:H3	50:DT:49:LYS:HZ1	1.65	0.44
23:BB:2893:A:H4'	23:BB:2894:G:O5'	2.17	0.44
23:BB:1170:C:H2'	23:BB:1171:G:O4'	2.17	0.44
38:DM:26:VAL:HG13	38:DM:133:LYS:HA	1.99	0.44
38:DM:26:VAL:HA	38:DM:66:ARG:HH21	1.82	0.44
23:BB:2037:A:H2'	23:BB:2038:G:C8	2.51	0.44
23:BB:2734:A:H2'	23:BB:2735:G:C5'	2.44	0.44
28:BP:107:ALA:O	28:BP:108:ARG:C	2.56	0.44
23:BB:593:U:H2'	23:BB:594:U:H6	1.82	0.44
49:BR:59:ILE:HG13	49:BR:59:ILE:H	1.60	0.44
24:BI:29:GLN:HA	24:BI:29:GLN:NE2	2.32	0.44
38:DM:18:ARG:HA	38:DM:18:ARG:HD2	1.59	0.44
38:DM:55:ARG:HH21	38:DM:55:ARG:CA	2.24	0.44
23:BB:173:A:H2'	23:BB:174:U:H6	1.81	0.44
20:AB:95:TRP:HZ3	20:AB:174:GLU:OE2	2.00	0.44
37:BL:82:LEU:O	37:BL:85:VAL:HG12	2.18	0.44
45:DS:42:LYS:O	45:DS:46:LEU:HG	2.18	0.44
45:DS:25:ARG:CZ	45:DS:74:ILE:HG23	2.48	0.44
1:CA:34:C:H2'	1:CA:35:G:C8	2.53	0.44
1:CA:716:A:N3	10:CK:118:ASN:O	2.50	0.44
46:DU:40:LEU:HB3	46:DU:59:GLU:HG2	1.99	0.44
23:DB:299:A:N6	23:DB:322:A:O2'	2.50	0.44
23:DB:719:C:H2'	23:DB:720:U:C6	2.53	0.44
23:BB:1824:G:H1'	25:BC:251:THR:CG2	2.48	0.44
39:BX:9:LYS:HZ2	39:BX:60:LYS:HE3	1.81	0.44
9:AJ:37:ARG:HA	9:AJ:37:ARG:CZ	2.48	0.44
23:BB:2460:U:O2'	23:BB:2461:A:H5'	2.17	0.44
1:AA:1514:G:H2'	1:AA:1515:G:C8	2.52	0.44
40:BH:54:LEU:O	40:BH:58:LEU:N	2.51	0.44
9:CJ:92:LEU:HB2	9:CJ:93:ALA:H	1.61	0.44
1:CA:829:G:H4'	20:CB:24:PRO:HG3	1.99	0.44
23:DB:1946:U:H2'	23:DB:1947:C:C6	2.52	0.44
9:AJ:92:LEU:HB2	9:AJ:93:ALA:H	1.61	0.44
1:CA:1036:A:H2'	1:CA:1037:C:H6	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2252:G:H2'	23:DB:2253:G:C8	2.52	0.44
23:BB:316:C:O2'	23:BB:317:G:H5'	2.18	0.44
23:DB:2785:C:H2'	23:DB:2786:U:H6	1.82	0.44
14:AO:43:PHE:CE1	14:AO:56:LEU:HD22	2.53	0.44
1:AA:1306:A:H1'	1:AA:1332:A:C2	2.53	0.44
29:DE:106:LYS:O	29:DE:110:SER:HB2	2.17	0.44
4:CE:98:ALA:HB3	4:CE:121:ASN:C	2.38	0.44
2:CC:19:SER:HB3	2:CC:21:TRP:HE1	1.83	0.44
26:DD:15:PHE:CD1	26:DD:15:PHE:N	2.82	0.44
1:AA:204:G:C2'	1:AA:466:A:H62	2.30	0.44
23:DB:235:U:H2'	23:DB:236:C:H6	1.83	0.44
1:CA:1096:C:O2'	1:CA:1097:C:H5'	2.17	0.44
23:BB:1847:A:H4'	23:BB:1848:A:C8	2.53	0.44
19:CT:19:HIS:CE1	19:CT:23:ARG:HG3	2.53	0.44
48:DG:172:GLU:O	48:DG:173:ALA:HB2	2.18	0.44
51:BZ:19:SER:OG	51:BZ:23:ASN:HB2	2.17	0.44
6:CG:30:MET:HA	6:CG:38:ALA:HB2	2.00	0.44
23:BB:438:G:H2'	23:BB:439:A:C8	2.53	0.44
23:DB:2298:A:N1	23:DB:2321:U:C5	2.85	0.44
23:BB:1689:A:H2'	23:BB:1690:A:H8	1.82	0.44
23:DB:1984:G:O2'	23:DB:1985:C:H5'	2.17	0.44
23:DB:1345:C:H5'	23:DB:1396:U:C5	2.53	0.44
23:BB:425:G:O2'	23:BB:426:C:H5'	2.17	0.44
23:BB:800:A:H4'	23:BB:801:G:O5'	2.18	0.44
23:BB:1541:C:H2'	23:BB:1542:U:C6	2.52	0.44
43:BO:14:ALA:C	43:BO:16:ARG:H	2.21	0.44
24:DI:53:PRO:CG	24:DI:77:VAL:HG11	2.47	0.44
23:DB:380:G:O2'	23:DB:381:G:H5'	2.18	0.44
3:CD:32:LYS:O	3:CD:35:GLN:HB2	2.17	0.44
1:CA:220:G:O2'	1:CA:221:C:H5'	2.17	0.44
25:DC:67:LYS:O	25:DC:188:ARG:HD3	2.18	0.44
25:DC:20:ASN:O	25:DC:23:LEU:HD13	2.18	0.44
48:BG:104:LEU:O	48:BG:111:PRO:HA	2.17	0.44
23:DB:573:U:N3	23:DB:2031:A:OP1	2.38	0.44
20:AB:162:VAL:HG21	20:AB:168:GLU:HB2	1.99	0.44
26:BD:111:GLY:N	26:BD:194:PRO:HG2	2.31	0.44
16:CQ:61:ARG:HD2	16:CQ:61:ARG:C	2.38	0.44
52:DW:30:VAL:O	52:DW:30:VAL:HG13	2.18	0.44
52:DW:49:ASN:HB3	52:DW:81:ILE:CD1	2.48	0.44
52:DW:59:PHE:O	52:DW:60:ALA:HB3	2.17	0.44
53:B6:36:ALA:O	53:B6:39:LEU:HG	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B6:79:ILE:O	53:B6:83:ILE:HG12	2.18	0.44
40:BH:99:ILE:HD12	40:BH:144:VAL:HG21	1.98	0.44
44:DQ:80:ASN:O	44:DQ:84:LYS:HG3	2.17	0.44
20:CB:166:ASP:OD2	20:CB:190:SER:HA	2.17	0.44
26:DD:107:VAL:H	26:DD:205:PRO:HA	1.83	0.44
29:BE:108:ILE:HD11	29:BE:181:ILE:CB	2.33	0.44
42:DN:8:ARG:HB2	42:DN:43:GLU:OE1	2.17	0.44
50:BT:57:VAL:O	50:BT:85:VAL:O	2.36	0.44
12:CM:15:VAL:HG21	12:CM:40:GLU:HB3	2.00	0.44
25:BC:67:LYS:O	25:BC:188:ARG:HD3	2.18	0.44
3:AD:24:VAL:HG12	3:AD:160:LEU:HD12	2.00	0.44
24:DI:72:THR:OG1	24:DI:73:PRO:HD2	2.18	0.44
47:BF:140:ILE:H	47:BF:140:ILE:HG13	1.58	0.44
24:BI:91:LYS:O	24:BI:94:LYS:HB2	2.18	0.44
40:DH:88:GLY:C	40:DH:89:LYS:HD2	2.38	0.44
47:DF:113:PHE:HE1	47:DF:116:LEU:HB2	1.83	0.44
47:DF:142:TYR:HD1	47:DF:142:TYR:H	1.61	0.44
23:BB:2471:A:O2'	23:BB:2472:G:C8	2.58	0.44
29:DE:29:HIS:O	29:DE:33:VAL:HG23	2.16	0.44
16:AQ:74:LEU:HD13	16:AQ:74:LEU:C	2.38	0.44
1:AA:333:U:H2'	1:AA:334:C:H6	1.83	0.44
10:CK:92:ARG:HE	21:CU:20:ARG:NH2	2.15	0.44
35:DV:44:HIS:NE2	35:DV:85:LYS:HB2	2.33	0.44
27:BK:8:LEU:O	27:BK:19:VAL:HG22	2.17	0.44
27:BK:113:MET:HA	27:BK:116:ILE:HD11	1.99	0.44
3:AD:153:ARG:HG3	3:AD:154:VAL:N	2.33	0.44
23:BB:1737:G:H8	23:BB:1737:G:OP2	2.00	0.44
1:AA:1074:G:C4'	20:AB:102:ASN:HB2	2.48	0.44
46:DU:35:VAL:HB	46:DU:38:ILE:HB	2.00	0.44
41:DJ:112:GLY:N	41:DJ:113:PRO:HD2	2.32	0.44
3:AD:96:ARG:NH1	3:AD:133:SER:HA	2.33	0.44
1:AA:34:C:H2'	1:AA:35:G:H8	1.82	0.44
12:CM:89:ARG:HH22	12:CM:94:LEU:HD12	1.81	0.44
19:CT:68:LYS:CA	19:CT:68:LYS:HE2	2.48	0.44
40:BH:41:LYS:HA	40:BH:44:ILE:CG1	2.46	0.44
35:DV:78:GLN:O	35:DV:87:GLN:N	2.43	0.44
23:BB:276:U:O2'	23:BB:278:A:N7	2.51	0.44
23:BB:153:U:O2'	23:BB:154:U:H5'	2.18	0.44
23:DB:150:U:H2'	23:DB:151:C:O4'	2.18	0.44
1:AA:190:A:H2'	1:AA:191:G:O4'	2.18	0.44
22:DA:69:G:H3'	22:DA:70:C:H6	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1314:C:H2'	1:CA:1315:U:H6	1.82	0.44
20:CB:71:THR:HG23	20:CB:94:ARG:N	2.33	0.44
1:CA:58:C:O2'	1:CA:59:A:H5'	2.18	0.44
23:DB:666:A:H2'	23:DB:667:U:C6	2.53	0.44
42:BN:58:ASP:OD2	42:BN:63:ARG:NH2	2.51	0.44
23:DB:2020:A:O2'	23:DB:2021:C:H5'	2.18	0.44
23:BB:866:A:H61	23:BB:913:U:C1'	2.31	0.44
1:CA:513:C:H2'	1:CA:514:C:C6	2.53	0.44
43:BO:83:LEU:HA	43:BO:83:LEU:HD12	1.84	0.44
4:CE:103:GLY:O	4:CE:121:ASN:HA	2.17	0.44
23:BB:2491:U:H5''	23:BB:2570:G:C5'	2.47	0.44
23:BB:834:G:O2'	23:BB:835:C:H5'	2.17	0.44
23:DB:459:U:H5''	36:D2:40:ALA:HB2	1.99	0.44
20:AB:13:VAL:CG1	20:AB:207:ARG:HG2	2.48	0.44
17:CR:22:TYR:HB2	17:CR:61:ALA:HB2	2.00	0.44
23:DB:1273:U:H4'	23:DB:1275:A:OP2	2.17	0.44
1:CA:821:G:H2'	1:CA:822:U:H6	1.82	0.44
1:AA:160:A:H1'	1:AA:344:A:C5	2.53	0.44
23:DB:1773:A:H2'	23:DB:1774:C:O4'	2.18	0.44
23:BB:1313:U:C2'	23:BB:1313:U:O2	2.66	0.44
1:AA:1234:C:H2'	1:AA:1235:U:C6	2.52	0.44
23:DB:218:A:H2'	23:DB:219:A:O4'	2.18	0.44
23:BB:737:C:O2'	23:BB:738:G:H5'	2.17	0.44
23:BB:2818:U:H4'	23:BB:2837:A:C4'	2.47	0.44
1:AA:1119:C:OP2	8:AI:10:ARG:NH2	2.51	0.44
25:DC:79:ARG:HD2	25:DC:81:GLU:HG3	2.00	0.44
1:CA:1439:G:H2'	1:CA:1440:U:O4'	2.17	0.44
23:BB:1607:C:N4	23:BB:1622:G:OP2	2.51	0.44
1:AA:1292:G:H2'	1:AA:1293:C:C6	2.53	0.44
1:AA:1486:G:H2'	1:AA:1487:G:O4'	2.17	0.44
3:AD:32:LYS:O	3:AD:35:GLN:HB2	2.18	0.44
23:BB:282:A:H2'	23:BB:283:G:C8	2.53	0.44
1:CA:575:G:H4'	1:CA:576:C:OP1	2.18	0.44
1:CA:1202:U:H2'	1:CA:1203:C:O4'	2.18	0.44
49:DR:86:GLN:HB2	49:DR:86:GLN:HE21	1.53	0.44
23:DB:114:U:O2	23:DB:114:U:H2'	2.16	0.44
49:BR:86:GLN:HE21	49:BR:86:GLN:HB2	1.53	0.44
8:CI:90:ASP:O	8:CI:93:LEU:HG	2.17	0.44
38:BM:74:THR:O	38:BM:75:GLU:HB2	2.18	0.44
1:AA:175:C:O2'	1:AA:176:C:H5'	2.18	0.44
23:DB:1098:A:C3'	24:DI:3:LYS:C	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BW:49:ASN:HB3	52:BW:81:ILE:CD1	2.47	0.43
48:DG:9:VAL:HG12	48:DG:11:PRO:CD	2.42	0.43
41:BJ:25:LEU:HB2	41:BJ:62:VAL:HG22	2.00	0.43
35:DV:1:MET:HE2	35:DV:2:PHE:H	1.82	0.43
35:BV:62:THR:CG2	35:BV:71:LYS:HG2	2.48	0.43
41:DJ:54:ILE:O	41:DJ:122:LEU:HA	2.17	0.43
48:BG:22:VAL:C	48:BG:23:ILE:HG13	2.39	0.43
33:B1:49:LYS:CG	33:B1:50:GLU:H	2.17	0.43
23:BB:2110:G:N2	23:BB:2180:U:H3	2.15	0.43
23:DB:2787:C:H2'	23:DB:2788:C:C6	2.53	0.43
37:BL:14:LYS:O	37:BL:16:GLY:N	2.51	0.43
23:BB:2893:A:H4'	23:BB:2894:G:C5'	2.48	0.43
23:BB:2893:A:H4'	23:BB:2894:G:H5'	2.00	0.43
34:D3:33:THR:HG23	34:D3:34:LYS:N	2.33	0.43
23:BB:2834:G:H1'	23:BB:2883:A:H61	1.81	0.43
48:DG:144:ALA:O	48:DG:147:LEU:HB2	2.17	0.43
29:BE:151:GLY:HA2	29:BE:195:GLN:HE22	1.83	0.43
27:DK:19:VAL:HG12	27:DK:43:ILE:HA	1.99	0.43
5:CF:60:VAL:HG12	5:CF:61:LEU:N	2.33	0.43
42:DN:32:GLU:HB3	42:DN:115:LEU:HG	2.00	0.43
15:CP:23:ASP:CG	15:CP:25:ARG:HE	2.22	0.43
37:DL:93:ASN:ND2	37:DL:94:THR:H	2.16	0.43
34:B3:16:THR:HG21	34:B3:48:MET:SD	2.57	0.43
11:AL:66:ILE:N	11:AL:66:ILE:HD12	2.33	0.43
9:AJ:7:ARG:CZ	9:AJ:101:SER:HB2	2.48	0.43
45:BS:81:SER:CA	45:BS:99:ARG:HA	2.44	0.43
45:DS:74:ILE:O	45:DS:75:PHE:HB3	2.18	0.43
2:AC:155:ARG:HD2	2:AC:155:ARG:HA	1.88	0.43
1:AA:92:U:H2'	1:AA:92:U:O2	2.18	0.43
1:CA:191:G:H8	1:CA:191:G:OP2	2.01	0.43
23:BB:2746:U:C4'	48:BG:138:GLN:HA	2.48	0.43
28:DP:33:GLU:OE1	28:DP:33:GLU:HA	2.18	0.43
1:AA:1048:G:H5''	13:AN:2:LYS:HD2	1.99	0.43
23:BB:642:U:O2'	23:BB:644:A:N7	2.44	0.43
38:DM:69:PRO:HA	38:DM:94:ALA:CA	2.47	0.43
3:AD:117:VAL:HG12	3:AD:130:ASN:HA	2.00	0.43
23:BB:1418:G:C2'	23:BB:1580:A:H61	2.31	0.43
3:CD:117:VAL:HG12	3:CD:130:ASN:HA	2.00	0.43
1:CA:620:C:C1'	3:CD:131:ILE:HD13	2.48	0.43
20:AB:19:THR:HG23	20:AB:20:ARG:N	2.33	0.43
23:DB:1171:G:H2'	23:DB:1172:C:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AB:86:CYS:C	20:AB:88:GLN:H	2.21	0.43
1:AA:404:G:OP1	3:AD:114:ARG:HD3	2.18	0.43
41:BJ:74:TYR:CD1	41:BJ:92:MET:HG3	2.54	0.43
23:DB:2854:G:H2'	23:DB:2855:C:H6	1.82	0.43
23:BB:2461:A:H1'	23:BB:2492:U:C2	2.53	0.43
1:AA:214:C:H2'	1:AA:215:C:H6	1.82	0.43
1:AA:450:G:N7	1:AA:481:G:O6	2.50	0.43
26:BD:125:TRP:HE1	26:BD:161:MET:N	2.16	0.43
23:DB:2756:U:H4'	23:DB:2757:A:OP1	2.18	0.43
1:AA:499:A:O4'	1:AA:547:A:N6	2.51	0.43
26:DD:125:TRP:HE1	26:DD:161:MET:N	2.16	0.43
26:DD:125:TRP:NE1	26:DD:161:MET:N	2.65	0.43
23:DB:6:A:O3'	41:DJ:132:HIS:CE1	2.71	0.43
14:CO:43:PHE:CE1	14:CO:56:LEU:HD22	2.53	0.43
50:DT:48:GLN:CA	50:DT:48:GLN:HE21	2.28	0.43
1:AA:658:C:H2'	1:AA:659:U:H6	1.83	0.43
10:CK:52:ARG:HD2	10:CK:52:ARG:HA	1.62	0.43
23:BB:2552:U:C2	23:BB:2554:U:H5'	2.53	0.43
23:DB:484:C:H2'	23:DB:485:C:H6	1.83	0.43
24:BI:14:ALA:HA	24:BI:45:THR:HG21	1.98	0.43
23:DB:1341:G:N2	23:DB:1398:C:H4'	2.33	0.43
23:BB:1885:A:H2'	23:BB:1886:U:O4'	2.18	0.43
23:BB:2873:A:O4'	42:BN:6:SER:HB3	2.18	0.43
1:AA:327:A:O2'	1:AA:328:C:O4'	2.35	0.43
26:BD:40:LEU:HD12	26:BD:41:ALA:H	1.83	0.43
24:DI:90:GLY:C	24:DI:92:PRO:HD3	2.39	0.43
23:DB:1313:U:O2	23:DB:1313:U:H2'	2.17	0.43
23:BB:1339:G:H21	23:BB:1603:A:H1'	1.82	0.43
46:BU:41:VAL:HG22	46:BU:60:LYS:O	2.18	0.43
23:BB:2007:U:O2'	23:BB:2008:C:H5'	2.18	0.43
23:DB:2597:G:OP1	25:DC:240:GLY:HA3	2.18	0.43
28:BP:8:GLU:HG2	28:BP:54:LEU:CD2	2.48	0.43
23:BB:797:G:OP2	29:BE:57:LYS:HB2	2.18	0.43
1:AA:960:U:H5''	1:AA:960:U:O2	2.17	0.43
23:BB:2047:C:H2'	23:BB:2048:G:C8	2.53	0.43
23:BB:822:G:H2'	23:BB:823:C:C6	2.53	0.43
24:BI:63:ASP:O	24:BI:65:SER:N	2.50	0.43
1:CA:176:C:H2'	1:CA:177:G:N3	2.34	0.43
2:AC:34:SER:O	2:AC:38:VAL:HG22	2.18	0.43
23:BB:282:A:H2'	23:BB:283:G:H8	1.83	0.43
3:AD:73:ASN:O	3:AD:76:LYS:HB2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:711:G:O2'	1:CA:712:A:H5'	2.18	0.43
23:DB:1310:G:H1'	23:DB:1611:C:H5'	1.99	0.43
1:AA:771:G:H2'	1:AA:772:U:C6	2.53	0.43
52:BW:12:GLY:O	52:BW:13:ARG:HB2	2.18	0.43
3:AD:102:TYR:HE1	3:AD:108:ALA:O	2.01	0.43
1:CA:664:G:H22	1:CA:741:G:H1	1.66	0.43
52:DW:25:PHE:HD1	52:DW:26:GLY:H	1.64	0.43
23:DB:1098:A:C2'	24:DI:4:VAL:C	2.87	0.43
50:BT:4:GLU:OE2	50:BT:5:GLU:HG2	2.18	0.43
40:DH:27:ARG:H	40:DH:31:VAL:HG23	1.80	0.43
52:BW:30:VAL:O	52:BW:30:VAL:HG13	2.18	0.43
23:BB:1818:U:C4	25:BC:152:GLN:HB3	2.53	0.43
23:DB:2329:U:H2'	23:DB:2330:G:H8	1.82	0.43
25:DC:170:TYR:HD2	25:DC:184:GLU:HA	1.82	0.43
44:BQ:33:VAL:CG2	44:BQ:34:ALA:N	2.81	0.43
23:DB:2315:G:H2'	23:DB:2316:G:H8	1.83	0.43
47:DF:57:ALA:HB2	47:DF:64:PRO:HG2	1.99	0.43
23:DB:918:A:C2'	23:DB:919:U:H5'	2.43	0.43
44:DQ:90:ASP:C	49:DR:11:GLN:HE22	2.22	0.43
20:CB:162:VAL:HG21	20:CB:168:GLU:HB2	2.00	0.43
35:BV:4:ILE:HD11	35:BV:61:LEU:HB3	2.00	0.43
41:DJ:54:ILE:HD12	41:DJ:55:ILE:H	1.82	0.43
41:DJ:55:ILE:HG22	41:DJ:123:LYS:HB2	1.99	0.43
47:DF:38:GLY:HA2	47:DF:85:GLY:HA3	2.00	0.43
23:DB:673:C:C4'	29:DE:77:ILE:HD11	2.48	0.43
44:BQ:80:ASN:O	44:BQ:84:LYS:HG3	2.18	0.43
44:BQ:87:VAL:HG12	44:BQ:89:ILE:HD13	1.99	0.43
23:BB:337:C:OP1	46:BU:3:LYS:HG3	2.18	0.43
34:D3:28:LEU:HD22	34:D3:43:LEU:HB2	2.00	0.43
47:BF:116:LEU:HB3	47:BF:176:PHE:HA	1.99	0.43
42:BN:101:GLY:HA2	42:BN:109:PRO:HA	2.00	0.43
12:AM:79:LEU:HD22	12:AM:86:ARG:HH21	1.84	0.43
23:DB:141:G:N3	23:DB:141:G:C3'	2.78	0.43
37:DL:51:GLU:OE1	37:DL:57:LEU:HB2	2.18	0.43
23:DB:512:G:P	23:DB:1215:G:N2	2.91	0.43
38:DM:66:ARG:NE	38:DM:101:VAL:HG11	2.33	0.43
13:CN:30:ILE:CG2	13:CN:44:VAL:HG11	2.49	0.43
35:DV:89:ILE:HD12	35:DV:89:ILE:O	2.18	0.43
20:AB:212:TYR:HA	20:AB:215:ALA:HB3	2.00	0.43
1:CA:908:A:O2'	1:CA:909:A:H5'	2.18	0.43
27:BK:110:GLU:HA	27:BK:113:MET:HG2	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:362:A:C8	23:BB:363:G:N7	2.86	0.43
28:DP:6:GLN:HE21	28:DP:7:LEU:N	2.16	0.43
1:AA:87:C:H2'	1:AA:88:U:C4'	2.48	0.43
23:BB:1445:G:O2'	23:BB:1446:C:H5'	2.16	0.43
20:AB:148:GLY:O	20:AB:151:LYS:HG2	2.18	0.43
45:BS:99:ARG:HB3	45:BS:99:ARG:HE	1.63	0.43
20:CB:98:GLY:HA2	20:CB:101:THR:CG2	2.48	0.43
5:AF:99:ALA:O	5:AF:100:SER:CB	2.67	0.43
42:DN:24:MET:CE	42:DN:44:LEU:HD13	2.47	0.43
23:BB:2794:C:H2'	23:BB:2795:C:H6	1.83	0.43
35:BV:9:ARG:HA	35:BV:41:GLU:OE2	2.18	0.43
23:DB:720:U:O2'	23:DB:721:A:H5'	2.18	0.43
1:AA:238:A:H3'	1:AA:239:U:H5''	2.00	0.43
25:DC:245:THR:HG23	25:DC:249:VAL:HB	2.00	0.43
45:BS:43:ALA:O	45:BS:46:LEU:HB2	2.19	0.43
20:CB:19:THR:HG23	20:CB:20:ARG:H	1.82	0.43
23:BB:526:A:H62	23:BB:2626:C:H4'	1.83	0.43
2:AC:42:LEU:O	2:AC:46:LEU:HD23	2.18	0.43
20:CB:160:LEU:HD21	20:CB:182:VAL:HG22	2.00	0.43
5:CF:53:LYS:CE	5:CF:53:LYS:HA	2.48	0.43
19:CT:53:MET:HA	19:CT:56:ILE:HD12	1.99	0.43
20:CB:8:MET:HG3	20:CB:9:LEU:H	1.81	0.43
11:AL:13:ARG:HB2	11:AL:14:LYS:H	1.44	0.43
38:DM:82:MET:HE3	38:DM:83:GLY:N	2.31	0.43
23:DB:2496:C:H5'	38:DM:82:MET:HG3	2.00	0.43
23:BB:2340:A:H2'	23:BB:2341:G:C8	2.49	0.43
1:AA:659:U:H2'	1:AA:660:C:C6	2.53	0.43
23:DB:1856:U:C2'	23:DB:1857:G:H5'	2.47	0.43
43:DO:66:GLY:O	43:DO:102:ARG:HD3	2.18	0.43
28:BP:61:ARG:HH21	28:BP:61:ARG:HB3	1.83	0.43
23:BB:1883:U:H2'	23:BB:1884:G:O4'	2.17	0.43
23:BB:2300:C:H2'	23:BB:2301:C:H6	1.82	0.43
23:DB:1422:G:H1'	23:DB:1495:A:H61	1.83	0.43
23:DB:226:A:H5''	23:DB:257:C:O2'	2.18	0.43
2:AC:172:VAL:O	2:AC:174:LEU:HD12	2.18	0.43
4:AE:92:ARG:NH1	4:AE:92:ARG:HB3	2.32	0.43
48:DG:173:ALA:HB3	48:DG:175:LYS:HZ3	1.82	0.43
23:BB:2818:U:H4'	23:BB:2837:A:O4'	2.17	0.43
23:BB:2559:C:O2'	23:BB:2560:A:H5'	2.18	0.43
39:BX:15:ASN:H	39:BX:15:ASN:ND2	2.16	0.43
22:DA:64:G:H2'	22:DA:65:U:H6	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:428:A:O2'	23:BB:429:A:H5'	2.18	0.43
8:CI:45:MET:SD	8:CI:45:MET:N	2.91	0.43
6:CG:16:LYS:HD3	6:CG:17:PHE:CE1	2.54	0.43
2:CC:34:SER:O	2:CC:38:VAL:HG22	2.18	0.43
23:DB:2047:C:O2'	23:DB:2048:G:H5'	2.17	0.43
23:DB:822:G:H2'	23:DB:823:C:H6	1.83	0.43
1:AA:771:G:O2'	1:AA:772:U:H5'	2.18	0.43
1:AA:454:G:H2'	1:AA:455:G:H8	1.82	0.43
1:CA:984:C:O2'	1:CA:985:C:H5'	2.18	0.43
6:AG:125:ASP:HA	6:AG:128:GLU:OE1	2.19	0.43
24:BI:38:CYS:O	24:BI:42:ASN:ND2	2.51	0.43
23:DB:1501:G:O2'	23:DB:1502:A:H5'	2.18	0.43
38:DM:74:THR:O	38:DM:75:GLU:HB2	2.18	0.43
24:BI:103:ALA:O	24:BI:107:GLU:HG3	2.18	0.43
23:DB:1336:A:H3'	23:DB:1337:G:H8	1.83	0.43
23:DB:1623:G:O2'	23:DB:1624:U:H5'	2.18	0.43
23:DB:1633:G:O2'	23:DB:1634:A:H5''	2.17	0.43
47:DF:94:ARG:O	47:DF:98:PHE:N	2.49	0.43
24:BI:4:VAL:HG13	24:BI:4:VAL:O	2.17	0.43
23:DB:2754:U:H6	23:DB:2754:U:O5'	2.01	0.43
1:CA:397:A:H3'	1:CA:397:A:N3	2.34	0.43
23:BB:1304:A:H2'	23:BB:1305:C:C6	2.54	0.43
1:AA:1165:U:H2'	1:AA:1166:G:O4'	2.18	0.43
23:BB:2657:A:H4'	48:BG:91:VAL:HG21	2.00	0.43
48:DG:102:ILE:CD1	48:DG:116:LEU:HD11	2.48	0.43
53:D6:80:GLU:HB2	53:D6:99:LEU:CD1	2.48	0.43
47:DF:57:ALA:HB2	47:DF:64:PRO:CG	2.48	0.43
52:DW:59:PHE:CD2	52:DW:60:ALA:N	2.86	0.43
53:B6:68:VAL:O	53:B6:70:SER:N	2.51	0.43
53:B6:56:ALA:CB	53:B6:79:ILE:HD11	2.48	0.43
8:CI:48:ARG:HA	8:CI:51:LEU:CD1	2.46	0.43
41:BJ:17:VAL:CG2	41:BJ:137:PRO:HB2	2.31	0.43
8:AI:74:GLN:O	8:AI:78:ILE:HG13	2.19	0.43
8:AI:114:LYS:H	8:AI:120:ALA:HA	1.84	0.43
35:DV:62:THR:CG2	35:DV:71:LYS:HG2	2.48	0.43
25:BC:140:VAL:O	25:BC:141:HIS:HB2	2.18	0.43
35:BV:32:GLY:C	35:BV:93:ARG:HG3	2.39	0.43
23:DB:2308:G:O6	23:DB:2311:A:N7	2.51	0.43
7:AH:124:ILE:HG22	7:AH:125:ILE:H	1.83	0.43
38:DM:21:ALA:CB	38:DM:100:LYS:HG2	2.46	0.43
50:BT:50:LEU:O	50:BT:52:GLU:N	2.45	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BJ:33:ALA:O	41:BJ:34:ARG:C	2.56	0.43
47:BF:141:ASP:O	47:BF:144:LYS:N	2.52	0.43
2:CC:87:ARG:HG2	2:CC:98:ALA:O	2.18	0.43
47:DF:141:ASP:O	47:DF:144:LYS:N	2.51	0.43
12:CM:84:CYS:SG	12:CM:86:ARG:HB2	2.59	0.43
29:DE:33:VAL:HA	29:DE:36:ALA:HB3	2.01	0.43
50:DT:40:LYS:O	50:DT:43:ILE:HB	2.17	0.43
45:DS:28:LYS:O	45:DS:71:VAL:HG12	2.17	0.43
23:BB:2788:C:H1'	23:BB:2809:A:C2	2.52	0.43
38:DM:63:ILE:N	38:DM:63:ILE:HD12	2.34	0.43
8:CI:33:SER:HB3	8:CI:36:GLN:HE21	1.82	0.43
2:AC:149:LYS:HE3	2:AC:166:TRP:CH2	2.54	0.43
1:AA:1325:C:O2'	1:AA:1326:U:H5'	2.19	0.43
45:BS:66:ILE:HG12	45:BS:67:ASP:N	2.33	0.43
17:CR:38:ILE:HG22	17:CR:58:ILE:HD13	2.01	0.43
3:CD:153:ARG:HG3	3:CD:154:VAL:N	2.33	0.43
23:DB:2884:U:O4	31:D0:39:ARG:HD3	2.18	0.43
1:CA:21:G:H2'	1:CA:22:G:H8	1.74	0.43
1:CA:909:A:H1'	1:CA:1414:U:H5'	1.99	0.43
1:AA:81:A:C2	1:AA:82:G:N7	2.87	0.43
24:DI:126:ARG:NH1	24:DI:126:ARG:CB	2.81	0.43
23:BB:1309:G:H4'	36:B2:7:PRO:HB2	1.99	0.43
25:BC:159:THR:O	25:BC:160:TYR:HB3	2.17	0.43
28:BP:9:GLN:HA	28:BP:12:MET:CG	2.49	0.43
34:D3:23:HIS:ND1	34:D3:24:LYS:N	2.66	0.43
20:CB:112:ARG:O	20:CB:116:LEU:HG	2.18	0.43
29:DE:130:LYS:C	29:DE:132:LYS:N	2.70	0.43
34:B3:33:THR:HG23	34:B3:34:LYS:N	2.33	0.43
51:DZ:20:HIS:O	51:DZ:21:ALA:HB3	2.18	0.43
1:CA:1343:G:H4'	8:CI:123:ARG:HB2	2.01	0.43
12:CM:95:PRO:HB2	12:CM:99:GLN:CD	2.38	0.43
1:CA:264:C:H2'	1:CA:265:G:O4'	2.18	0.43
20:CB:95:TRP:HZ2	20:CB:100:LEU:HD13	1.84	0.43
23:BB:1582:C:H3'	23:BB:1583:A:N3	2.34	0.43
1:AA:15:G:H2'	1:AA:16:A:C8	2.53	0.43
5:AF:53:LYS:HD3	5:AF:54:LEU:H	1.83	0.43
23:DB:741:U:H2'	23:DB:742:A:H8	1.83	0.43
25:DC:244:VAL:HA	25:DC:249:VAL:O	2.19	0.43
45:BS:51:LEU:HD12	45:BS:105:VAL:HG11	1.98	0.43
20:AB:86:CYS:HB3	20:AB:88:GLN:CD	2.39	0.43
23:BB:1470:A:H3'	23:BB:1471:G:H8	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:22:SER:N	3:AD:109:THR:HG22	2.33	0.43
40:BH:47:PHE:C	40:BH:50:ARG:HH21	2.21	0.43
23:DB:1686:C:H2'	23:DB:1687:G:O4'	2.17	0.43
23:BB:1356:G:O2'	23:BB:1357:C:H5'	2.18	0.43
11:CL:115:LYS:O	11:CL:116:TYR:HB2	2.18	0.43
23:BB:1383:A:H2	23:BB:1405:U:O2	2.00	0.43
23:BB:7:G:H4'	41:BJ:15:TRP:CH2	2.53	0.43
22:DA:39:A:H2	22:DA:46:A:N6	2.15	0.43
37:DL:23:ILE:H	37:DL:23:ILE:CD1	2.30	0.43
23:BB:2784:U:H2'	23:BB:2785:C:C6	2.53	0.43
23:BB:2259:U:H2'	23:BB:2260:C:H6	1.83	0.43
23:BB:1341:G:N2	23:BB:1398:C:H4'	2.33	0.43
10:AK:52:ARG:HA	10:AK:52:ARG:HD2	1.64	0.43
5:CF:81:ASN:O	5:CF:82:ASP:C	2.56	0.43
23:BB:1292:G:O2'	23:BB:1293:C:H5'	2.19	0.43
23:DB:443:A:C8	29:DE:40:ARG:HD3	2.53	0.43
1:AA:592:G:O2'	1:AA:593:U:H5'	2.18	0.43
43:BO:94:ARG:HD2	43:BO:97:PHE:O	2.19	0.43
42:BN:2:ARG:HG2	42:BN:2:ARG:HH11	1.84	0.43
41:BJ:88:THR:HG22	41:BJ:91:GLU:OE1	2.17	0.43
23:BB:2008:C:H2'	23:BB:2009:A:C8	2.52	0.43
10:CK:63:GLN:O	10:CK:67:GLU:HG2	2.18	0.43
23:DB:2008:C:H2'	23:DB:2009:A:C8	2.53	0.43
42:DN:9:GLN:C	42:DN:17:ARG:HD3	2.39	0.43
8:CI:71:ILE:H	8:CI:71:ILE:HD12	1.83	0.43
23:BB:639:U:H2'	23:BB:640:C:C6	2.54	0.43
34:B3:12:ARG:NE	37:BL:58:TYR:O	2.52	0.43
23:DB:2514:U:H2'	23:DB:2515:C:C6	2.54	0.43
36:D2:12:ARG:HH21	36:D2:12:ARG:HG3	1.83	0.43
1:AA:1020:G:N3	1:AA:1020:G:H2'	2.33	0.43
23:BB:1227:G:O2'	23:BB:1228:G:H5'	2.18	0.43
1:CA:991:U:H2'	1:CA:1212:U:O2	2.18	0.43
1:AA:668:G:O2'	1:AA:669:G:H5'	2.18	0.43
5:AF:17:GLN:O	5:AF:21:MET:HG3	2.17	0.43
1:CA:291:U:H2'	1:CA:292:G:H8	1.84	0.43
41:BJ:98:GLU:CD	41:BJ:98:GLU:H	2.22	0.43
53:B6:177:GLU:O	53:B6:177:GLU:HG2	2.16	0.43
23:BB:527:C:O4'	23:BB:527:C:O2	2.31	0.43
53:B6:73:GLN:HG3	53:B6:73:GLN:H	1.64	0.43
14:AO:68:ASP:O	14:AO:72:ARG:HG3	2.17	0.43
52:DW:19:ARG:O	52:DW:20:LEU:HD23	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AB:205:ALA:HB3	20:AB:208:ALA:HB3	2.00	0.43
52:DW:49:ASN:C	52:DW:50:VAL:HG22	2.38	0.43
40:BH:89:LYS:HB3	40:BH:89:LYS:HZ3	1.83	0.43
8:CI:24:ASN:CG	8:CI:25:GLY:H	2.21	0.43
44:DQ:86:SER:OG	49:DR:51:VAL:HG12	2.19	0.43
20:CB:17:HIS:CG	20:CB:202:ASN:ND2	2.87	0.43
5:AF:25:TYR:O	5:AF:29:ILE:HG13	2.18	0.43
26:DD:104:VAL:HG13	26:DD:106:LYS:HE2	2.00	0.43
35:BV:50:MET:O	35:BV:56:PHE:HB2	2.18	0.43
1:AA:599:C:H2'	1:AA:600:A:H8	1.83	0.43
12:CM:30:LYS:HG3	12:CM:40:GLU:OE1	2.18	0.43
47:BF:131:VAL:O	47:BF:133:GLU:N	2.50	0.43
45:DS:17:VAL:C	45:DS:19:LEU:N	2.70	0.43
47:DF:108:PRO:C	47:DF:110:ILE:H	2.22	0.43
1:CA:1227:A:H4'	12:CM:113:LYS:HD2	2.00	0.43
1:CA:1081:A:O2'	1:CA:1082:A:H5'	2.18	0.43
18:AS:10:ILE:HD13	18:AS:40:PHE:CE1	2.53	0.43
37:BL:19:LEU:HD23	37:BL:31:GLY:O	2.18	0.43
23:BB:1181:U:H2'	23:BB:1182:G:H8	1.83	0.43
46:BU:47:PRO:HB3	46:BU:55:GLY:HA3	2.01	0.43
2:AC:149:LYS:HE2	2:AC:200:TRP:CZ3	2.53	0.43
27:DK:8:LEU:O	27:DK:19:VAL:HG22	2.19	0.43
53:B6:24:ASN:HA	53:B6:24:ASN:HD22	1.54	0.43
49:BR:39:LEU:CA	49:BR:49:ILE:HG12	2.48	0.43
44:DQ:105:PHE:HA	44:DQ:108:LEU:CD1	2.49	0.43
49:DR:59:ILE:H	49:DR:59:ILE:HG13	1.59	0.43
18:AS:52:ASN:O	18:AS:76:THR:HG23	2.19	0.43
23:DB:2847:U:H5''	28:DP:94:ALA:CB	2.49	0.43
3:AD:167:PRO:HG3	3:AD:170:LEU:HD11	1.99	0.43
1:AA:1096:C:O2'	1:AA:1097:C:H5'	2.19	0.43
23:BB:2753:A:O2'	23:BB:2754:U:H5'	2.18	0.43
1:AA:491:G:O2'	1:AA:492:C:H5'	2.19	0.43
23:DB:1470:A:H2'	23:DB:1471:G:O4'	2.18	0.43
35:DV:53:LYS:HZ2	35:DV:53:LYS:HA	1.82	0.43
3:AD:117:VAL:O	3:AD:130:ASN:HA	2.18	0.43
20:AB:19:THR:HG23	20:AB:20:ARG:H	1.82	0.43
45:BS:44:ALA:C	45:BS:46:LEU:N	2.72	0.43
23:DB:19:A:OP1	44:DQ:22:GLY:N	2.52	0.43
23:DB:1431:A:O2'	23:DB:1432:G:H5'	2.18	0.43
23:DB:704:G:H1'	23:DB:727:A:H61	1.83	0.43
1:AA:1532:U:N1	1:AA:1534:A:H5'	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:70:ALA:HA	2:CC:105:VAL:HG22	2.01	0.43
1:AA:56:U:H2'	1:AA:57:G:H8	1.83	0.43
23:BB:1326:U:H2'	23:BB:1327:A:C8	2.50	0.43
42:BN:61:ALA:C	42:BN:63:ARG:N	2.71	0.43
22:BA:60:C:H2'	22:BA:61:G:C8	2.48	0.43
21:CU:11:PHE:CD1	21:CU:11:PHE:O	2.70	0.43
14:AO:43:PHE:C	14:AO:45:GLU:N	2.71	0.43
2:CC:16:PRO:CG	2:CC:53:ARG:HH22	2.30	0.43
23:DB:1117:C:O2'	23:DB:1118:C:H5'	2.17	0.43
23:DB:1424:G:H2'	23:DB:1425:G:C8	2.53	0.43
1:AA:652:U:H1'	1:AA:653:U:C5	2.52	0.43
23:BB:2560:A:H2'	23:BB:2561:U:C6	2.54	0.43
5:CF:46:GLN:HE21	5:CF:46:GLN:HA	1.83	0.43
28:DP:13:LYS:HG2	28:DP:76:HIS:ND1	2.32	0.43
23:DB:2408:U:H2'	23:DB:2409:G:H8	1.83	0.43
23:BB:730:A:O2'	23:BB:731:C:H5'	2.17	0.43
23:BB:302:C:O2'	23:BB:303:G:H5'	2.18	0.43
1:AA:1426:G:H2'	1:AA:1427:C:C6	2.53	0.43
23:BB:1751:U:H2'	23:BB:1752:C:C6	2.53	0.43
23:DB:1863:G:H2'	23:DB:1864:U:O4'	2.18	0.43
28:BP:44:GLY:HA3	28:BP:60:VAL:HG12	2.01	0.43
23:DB:2563:U:H2'	23:DB:2565:A:OP2	2.19	0.43
25:BC:9:SER:HB2	25:BC:10:PRO:HD2	2.00	0.43
8:CI:112:ARG:HH22	9:CJ:64:GLN:HE22	1.65	0.43
22:BA:80:U:H2'	22:BA:81:G:C8	2.53	0.43
8:AI:118:ARG:HG2	8:AI:118:ARG:O	2.18	0.43
1:CA:282:A:H2'	1:CA:282:A:N3	2.33	0.43
15:AP:45:GLU:C	15:AP:47:GLU:H	2.21	0.43
1:AA:12:U:H4'	1:AA:526:C:H4'	2.01	0.43
26:DD:35:THR:N	26:DD:49:GLN:O	2.50	0.43
23:BB:95:A:H4'	39:BX:38:GLN:O	2.19	0.43
43:DO:15:ARG:HH21	43:DO:95:SER:CB	2.32	0.43
20:CB:80:LYS:HG3	20:CB:81:ASP:N	2.33	0.43
25:BC:121:ALA:HB3	25:BC:129:LEU:HD11	2.01	0.43
48:BG:47:ASN:CG	48:BG:48:THR:H	2.21	0.43
25:DC:53:ILE:HG23	25:DC:53:ILE:O	2.18	0.43
48:BG:120:ILE:HD13	48:BG:121:THR:N	2.34	0.43
47:BF:87:LYS:HG3	47:BF:88:VAL:N	2.23	0.43
53:D6:90:LEU:HB3	53:D6:101:ILE:HG21	2.00	0.43
22:DA:40:U:H1'	22:DA:43:C:C5	2.53	0.43
53:B6:61:PRO:HD2	53:B6:65:THR:O	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:17:ARG:O	8:CI:64:ILE:HA	2.18	0.43
8:CI:50:PRO:HD3	8:CI:79:ARG:CG	2.48	0.43
41:BJ:54:ILE:O	41:BJ:122:LEU:HA	2.18	0.43
44:DQ:89:ILE:HB	44:DQ:90:ASP:H	1.73	0.43
8:AI:17:ARG:O	8:AI:64:ILE:HA	2.19	0.43
25:BC:75:ALA:HB1	25:BC:94:LEU:O	2.19	0.43
23:BB:144:A:H2'	23:BB:145:C:H6	1.83	0.43
48:DG:32:LEU:HB3	48:DG:34:ARG:CZ	2.49	0.43
25:DC:75:ALA:HB1	25:DC:94:LEU:O	2.19	0.43
25:BC:90:ILE:HD13	25:BC:103:ILE:O	2.19	0.43
23:BB:107:G:H21	23:BB:346:A:H62	1.65	0.43
24:DI:49:GLU:HB3	24:DI:52:LEU:HD12	2.00	0.43
47:BF:140:ILE:O	47:BF:145:VAL:HG12	2.19	0.43
47:BF:169:LEU:HA	47:BF:172:PHE:HD2	1.83	0.43
45:DS:76:VAL:HA	45:DS:102:HIS:O	2.18	0.43
4:AE:131:ASN:ND2	4:AE:134:ASN:H	2.16	0.43
21:AU:24:LYS:HZ3	21:AU:25:ALA:N	2.15	0.43
24:BI:32:VAL:HG22	24:BI:60:VAL:CG2	2.49	0.43
1:CA:1082:A:O2'	1:CA:1083:U:H5'	2.19	0.43
12:CM:79:LEU:HD22	12:CM:86:ARG:HE	1.82	0.43
1:AA:1320:C:N4	18:AS:36:ARG:HE	2.15	0.43
18:AS:42:ASN:ND2	18:AS:43:MET:N	2.66	0.43
11:AL:88:ASP:C	11:AL:89:LEU:HD22	2.39	0.43
23:BB:1255:U:H5''	23:BB:1256:G:H5''	2.01	0.43
23:BB:2060:A:H62	29:BE:69:ARG:HH12	1.64	0.43
23:BB:672:C:H2'	23:BB:673:C:H6	1.83	0.43
23:DB:1790:C:H2'	23:DB:1791:A:N7	2.33	0.43
29:BE:29:HIS:CE1	37:BL:8:PRO:HG3	2.52	0.43
23:DB:28:A:N6	23:DB:512:G:O2'	2.52	0.43
1:AA:1324:A:H2'	1:AA:1325:C:C6	2.54	0.43
15:CP:6:LEU:HD11	15:CP:71:VAL:HB	2.01	0.43
1:AA:1432:G:H5''	1:AA:1432:G:H8	1.83	0.43
38:BM:64:TRP:HE3	38:BM:104:GLU:O	2.02	0.43
27:BK:79:PHE:CD2	28:BP:69:VAL:HG12	2.53	0.43
24:DI:41:PHE:CE2	24:DI:45:THR:HG21	2.53	0.43
38:DM:40:ARG:HB2	38:DM:93:VAL:HG21	1.99	0.43
40:DH:69:ALA:HB1	40:DH:140:ALA:HB2	2.00	0.43
10:AK:25:SER:HG	10:AK:28:ASN:H	1.65	0.43
21:AU:10:PRO:HB2	2:CC:71:ARG:HE	1.83	0.43
7:CH:47:ASP:CG	7:CH:48:PHE:N	2.71	0.43
23:BB:2773:C:O2'	23:BB:2774:C:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BM:111:GLU:O	38:BM:114:ARG:HB3	2.19	0.43
4:CE:45:VAL:CG1	4:CE:116:VAL:HG23	2.48	0.43
23:DB:340:A:H2'	23:DB:341:C:O4'	2.18	0.43
22:BA:114:C:H2'	22:BA:115:A:H8	1.83	0.43
3:AD:84:ASN:C	3:AD:84:ASN:ND2	2.71	0.43
23:DB:1150:C:H2'	23:DB:1151:A:C8	2.47	0.43
6:CG:104:VAL:HG12	6:CG:108:ARG:HD2	2.01	0.43
39:DX:13:GLU:HA	39:DX:13:GLU:OE2	2.19	0.43
22:DA:14:U:H4'	22:DA:70:C:O2	2.19	0.43
1:AA:620:C:C1'	3:AD:131:ILE:HD13	2.48	0.43
45:BS:46:LEU:O	45:BS:50:VAL:HG23	2.18	0.43
23:BB:2231:U:H2'	23:BB:2232:C:C6	2.53	0.43
25:BC:52:HIS:NE2	25:BC:218:THR:HG23	2.32	0.43
25:BC:52:HIS:O	25:BC:53:ILE:HB	2.18	0.43
23:DB:1983:G:H4'	23:DB:2606:C:H4'	1.99	0.43
1:AA:1064:G:OP1	1:AA:1386:G:H4'	2.18	0.43
4:CE:55:VAL:N	4:CE:56:PRO:CD	2.81	0.43
23:DB:285:G:C2'	23:DB:286:U:H5'	2.49	0.43
14:AO:45:GLU:O	14:AO:47:LYS:N	2.50	0.43
1:CA:591:U:O2'	1:CA:592:G:H5'	2.19	0.43
23:BB:2623:G:H4'	23:BB:2825:G:C8	2.52	0.43
37:DL:136:GLU:HA	37:DL:140:GLY:CA	2.49	0.43
1:CA:642:A:H2'	1:CA:643:C:C6	2.51	0.43
23:DB:2054:A:H2'	31:D0:4:GLN:OE1	2.19	0.43
23:BB:2303:G:C1'	47:BF:122:ASP:OD1	2.67	0.43
6:AG:72:VAL:HG12	6:AG:89:GLU:HA	2.01	0.43
23:DB:39:G:H2'	23:DB:40:U:H6	1.83	0.43
36:B2:13:ASN:C	36:B2:15:SER:H	2.21	0.43
23:DB:1050:A:H2'	23:DB:1051:G:H8	1.83	0.43
17:AR:57:ALA:HA	17:AR:60:ARG:HD2	2.00	0.43
22:DA:54:G:O2'	22:DA:55:U:H5'	2.18	0.43
23:DB:2203:U:H2'	23:DB:2204:G:OP2	2.18	0.43
8:CI:39:GLY:HA2	8:CI:44:ARG:HD3	1.99	0.43
23:BB:67:U:H2'	23:BB:68:G:C8	2.54	0.43
23:BB:1050:A:H2'	23:BB:1051:G:H8	1.83	0.43
5:CF:10:VAL:HA	5:CF:84:VAL:HA	2.01	0.43
20:AB:35:ASN:O	20:AB:37:VAL:N	2.52	0.43
24:BI:63:ASP:C	24:BI:65:SER:N	2.72	0.43
23:BB:697:G:H2'	23:BB:698:C:C6	2.53	0.43
23:BB:686:U:H1'	36:B2:6:GLN:O	2.17	0.43
1:CA:1495:U:O2'	1:CA:1496:C:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2515:C:O2'	23:BB:2516:A:H5'	2.18	0.43
14:AO:69:TYR:HA	14:AO:72:ARG:NH1	2.34	0.43
23:DB:308:G:H1'	23:DB:501:A:OP1	2.19	0.43
23:DB:1410:G:H2'	23:DB:1411:U:C6	2.54	0.43
23:BB:1360:G:H2'	23:BB:1361:G:O4'	2.18	0.43
1:AA:755:G:H2'	1:AA:756:C:C6	2.53	0.43
23:DB:425:G:O2'	23:DB:426:C:H5'	2.18	0.43
1:CA:360:G:O2'	1:CA:361:G:H5'	2.19	0.43
2:AC:52:SER:HB3	2:AC:114:LEU:HG	2.00	0.43
23:BB:1587:G:H2'	23:BB:1588:G:H8	1.82	0.43
23:BB:677:A:O2'	23:BB:678:C:H5'	2.18	0.43
23:BB:2256:G:H2'	23:BB:2257:U:H6	1.83	0.43
1:CA:1363:A:H2'	1:CA:1363:A:N3	2.33	0.43
23:BB:2771:C:H1'	26:BD:208:LYS:HZ1	1.83	0.43
23:DB:765:C:H2'	23:DB:766:U:H6	1.83	0.43
23:BB:2454:G:H1'	57:BB:3366:HOH:O	2.18	0.43
21:CU:33:ARG:NE	21:CU:34:ARG:HG2	2.33	0.43
23:DB:1824:G:H1'	25:DC:251:THR:CG2	2.49	0.43
48:BG:96:ALA:O	48:BG:97:VAL:HB	2.19	0.43
44:DQ:29:ARG:O	44:DQ:30:VAL:HB	2.18	0.43
22:BA:42:C:O2'	47:BF:91:ARG:NH1	2.51	0.43
10:CK:70:ALA:HA	10:CK:73:VAL:CG2	2.49	0.43
53:D6:53:ASN:HD22	53:D6:53:ASN:N	2.10	0.43
53:D6:79:ILE:HG22	53:D6:80:GLU:N	2.33	0.43
23:DB:2314:A:H2'	23:DB:2315:G:H8	1.82	0.43
53:B6:28:LEU:O	53:B6:37:LEU:HD21	2.18	0.43
53:B6:55:ILE:CG2	53:B6:56:ALA:H	2.13	0.43
53:B6:66:LEU:O	53:B6:100:TYR:HA	2.18	0.43
8:CI:15:ALA:O	8:CI:66:VAL:HG23	2.19	0.43
1:CA:1349:A:P	8:CI:119:LYS:HD2	2.58	0.43
41:BJ:36:LEU:HD21	41:BJ:122:LEU:HD12	2.00	0.43
41:BJ:28:LEU:HG	41:BJ:32:LEU:CD1	2.48	0.43
8:AI:26:LYS:HB2	8:AI:61:ASP:CB	2.49	0.43
1:AA:1346:A:H5''	8:AI:121:ARG:HH21	1.83	0.43
23:DB:636:G:H4'	23:DB:638:G:O3'	2.17	0.43
41:DJ:36:LEU:HD21	41:DJ:122:LEU:HD12	2.00	0.43
22:DA:29:A:C4	22:DA:56:G:N2	2.86	0.43
25:DC:76:VAL:O	25:DC:93:VAL:O	2.36	0.43
43:BO:53:THR:HG23	43:BO:74:VAL:HG21	2.00	0.43
24:DI:54:ILE:HD11	24:DI:71:LYS:N	2.33	0.43
23:BB:2394:C:H2'	23:BB:2395:C:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1258:G:C2	1:AA:1278:G:N2	2.87	0.43
23:BB:340:A:O2'	29:BE:162:ARG:NH1	2.52	0.43
1:AA:921:U:O2	4:AE:23:THR:HG23	2.19	0.43
1:CA:411:A:O2'	1:CA:412:A:N3	2.42	0.43
18:CS:30:LEU:HB2	18:CS:48:ILE:CG2	2.41	0.43
37:DL:42:SER:O	37:DL:44:GLY:N	2.51	0.43
12:AM:84:CYS:SG	12:AM:86:ARG:HB2	2.58	0.43
18:AS:43:MET:O	18:AS:61:VAL:HB	2.18	0.43
18:AS:62:THR:HG22	18:AS:63:ASP:N	2.33	0.43
11:AL:86:VAL:CG1	11:AL:89:LEU:HD23	2.48	0.43
46:DU:47:PRO:HB3	46:DU:55:GLY:HA3	2.01	0.43
23:DB:2789:C:H2'	23:DB:2893:A:N7	2.32	0.43
1:CA:1269:A:N3	1:CA:1326:U:H1'	2.34	0.43
48:DG:147:LEU:HA	48:DG:150:TYR:HD1	1.82	0.43
48:DG:152:ARG:HA	48:DG:152:ARG:HD2	1.80	0.43
23:BB:1057:A:H62	23:BB:1086:A:H2'	1.83	0.43
1:AA:1287:A:H1'	1:AA:1353:G:O2'	2.18	0.43
23:BB:2733:A:C3'	23:BB:2733:A:C8	3.01	0.43
23:BB:1080:A:O2'	24:BI:126:ARG:CB	2.66	0.43
53:D6:2:THR:O	53:D6:3:LEU:C	2.55	0.43
27:DK:71:ARG:HD2	27:DK:106:GLU:OE2	2.18	0.43
42:BN:34:ILE:HG22	42:BN:35:LYS:N	2.32	0.43
23:BB:28:A:O2'	23:BB:29:U:H5'	2.17	0.43
44:BQ:9:ALA:O	44:BQ:11:ALA:N	2.52	0.43
20:AB:212:TYR:O	20:AB:216:VAL:HG13	2.19	0.43
38:BM:66:ARG:NE	38:BM:101:VAL:HG11	2.34	0.43
49:BR:49:ILE:HB	49:BR:53:PHE:O	2.19	0.43
7:AH:49:LYS:HG3	7:AH:50:VAL:N	2.33	0.43
26:DD:92:VAL:O	26:DD:94:GLN:N	2.51	0.43
9:AJ:15:HIS:HA	9:AJ:18:ILE:CG2	2.49	0.43
28:BP:3:ILE:HG23	28:BP:4:ILE:H	1.81	0.43
23:BB:2651:C:O2'	23:BB:2652:C:H5'	2.19	0.43
7:AH:68:LYS:HA	7:AH:68:LYS:HD2	1.90	0.43
45:DS:6:LYS:HA	45:DS:50:VAL:HG11	2.01	0.43
23:DB:170:U:O2'	23:DB:171:U:H5'	2.18	0.43
2:CC:129:PHE:CG	2:CC:130:ARG:N	2.86	0.43
23:DB:1428:C:H2'	23:DB:1569:A:OP2	2.18	0.43
46:BU:24:VAL:HA	46:BU:35:VAL:HA	2.01	0.43
9:AJ:24:GLU:CD	9:AJ:90:LEU:HD11	2.39	0.43
39:DX:52:ARG:O	39:DX:55:THR:HB	2.18	0.43
1:CA:663:A:H5'	1:CA:836:G:OP1	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:6:LYS:HA	25:BC:7:PRO:HD3	1.91	0.43
39:BX:1:MET:CG	39:BX:4:LYS:HD3	2.48	0.43
1:AA:102:G:H2'	1:AA:103:U:H6	1.82	0.43
1:CA:549:C:H2'	1:CA:550:G:C8	2.53	0.43
23:BB:2219:U:O2'	23:BB:2220:U:H5'	2.18	0.43
1:CA:676:A:O2'	1:CA:677:U:H5'	2.19	0.43
1:AA:1053:G:H4'	1:AA:1054:C:H5'	1.99	0.43
23:BB:2758:A:C2'	23:BB:2759:G:H5'	2.48	0.43
1:AA:677:U:H3	1:AA:713:G:H22	1.66	0.43
3:CD:10:LEU:HD12	3:CD:20:LEU:HD11	2.01	0.43
20:AB:23:ASN:HB3	20:AB:188:THR:O	2.18	0.43
41:BJ:13:ARG:HB3	41:BJ:53:TYR:CD2	2.53	0.43
1:AA:1464:U:H2'	1:AA:1465:A:H8	1.83	0.43
22:BA:97:C:C2'	22:BA:98:G:H5'	2.49	0.43
14:AO:56:LEU:O	14:AO:59:MET:HG3	2.19	0.43
23:BB:958:U:N3	38:BM:16:ARG:HB3	2.33	0.43
1:CA:659:U:H2'	1:CA:660:C:C6	2.54	0.43
1:CA:327:A:H1'	1:CA:329:A:O4'	2.19	0.43
28:DP:80:VAL:CG1	28:DP:81:ASP:N	2.82	0.43
23:DB:600:G:H1'	29:DE:100:MET:CG	2.48	0.43
26:DD:40:LEU:HD12	26:DD:41:ALA:H	1.83	0.43
25:DC:270:ARG:CZ	25:DC:270:ARG:HB3	2.49	0.43
23:BB:2756:U:OP2	32:B4:17:VAL:HG11	2.19	0.43
23:DB:769:U:H2'	23:DB:770:G:H8	1.81	0.43
53:B6:134:ARG:CZ	53:B6:135:GLU:HG3	2.48	0.43
23:BB:483:A:H5'	46:BU:44:HIS:O	2.18	0.43
25:BC:57:HIS:ND1	25:BC:58:LYS:N	2.58	0.43
29:DE:6:LYS:HB3	29:DE:7:ASP:H	1.59	0.43
1:AA:770:C:O2'	1:AA:771:G:H5'	2.19	0.43
26:DD:56:LYS:C	26:DD:58:ASN:N	2.72	0.43
1:AA:291:U:H2'	1:AA:292:G:H8	1.84	0.43
1:AA:933:G:N7	6:AG:2:ARG:NH1	2.67	0.43
23:DB:1607:C:N4	23:DB:1622:G:OP2	2.51	0.43
51:DZ:2:SER:HB3	51:DZ:4:VAL:HG23	1.99	0.43
1:AA:1045:C:H2'	1:AA:1046:A:O4'	2.18	0.43
1:AA:537:G:H2'	1:AA:538:G:C8	2.53	0.43
2:AC:171:ARG:HB2	2:AC:171:ARG:HH11	1.82	0.43
37:BL:10:GLU:OE2	37:BL:10:GLU:HA	2.16	0.43
26:DD:182:ALA:O	26:DD:184:ARG:HG2	2.18	0.43
1:CA:323:U:H2'	1:CA:324:G:O4'	2.18	0.43
23:DB:1765:U:H2'	23:DB:1766:G:H8	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AK:126:ARG:HA	10:AK:126:ARG:HE	1.83	0.43
23:DB:2331:G:H4'	52:DW:39:GLN:HA	2.01	0.43
48:BG:6:ALA:HB3	48:BG:68:ARG:CD	2.49	0.43
23:BB:21:A:H2'	23:BB:22:C:H6	1.81	0.43
20:AB:204:ASP:O	20:AB:205:ALA:HB3	2.17	0.43
26:BD:54:ALA:N	26:BD:76:GLY:HA2	2.34	0.43
52:DW:59:PHE:CD2	52:DW:61:LYS:HD2	2.54	0.43
53:B6:61:PRO:HD2	53:B6:65:THR:C	2.39	0.43
40:BH:90:LEU:O	40:BH:123:ARG:HD3	2.18	0.43
40:BH:84:ALA:CA	40:BH:90:LEU:HA	2.37	0.43
8:CI:49:GLN:N	8:CI:50:PRO:HD2	2.32	0.43
35:DV:72:VAL:CG1	35:DV:93:ARG:HA	2.49	0.43
1:AA:1217:C:H2'	1:AA:1218:C:C6	2.54	0.43
1:AA:1216:A:O2'	1:AA:1217:C:H5'	2.19	0.43
23:DB:2394:C:H2'	23:DB:2395:C:O4'	2.19	0.43
1:CA:598:U:H4'	7:CH:85:TYR:CD2	2.52	0.43
1:CA:1217:C:H2'	1:CA:1218:C:C6	2.54	0.43
23:BB:2199:A:H3'	23:BB:2200:C:C6	2.52	0.43
30:BY:8:GLN:HB3	30:BY:31:ILE:O	2.18	0.43
3:AD:24:VAL:HG23	3:AD:25:ARG:N	2.27	0.43
24:DI:54:ILE:O	24:DI:54:ILE:HG23	2.19	0.43
23:BB:1060:U:C1'	23:BB:1062:G:H5'	2.49	0.43
24:BI:11:GLN:NE2	24:BI:74:PRO:HG2	2.33	0.43
47:BF:168:LEU:O	47:BF:169:LEU:CB	2.65	0.43
29:BE:126:VAL:HG22	29:BE:133:LEU:HD12	1.99	0.43
29:BE:147:LEU:O	29:BE:168:ASP:O	2.37	0.43
47:DF:3:LEU:HD11	47:DF:172:PHE:CE1	2.54	0.43
33:D1:8:ILE:HG23	33:D1:51:ALA:HA	1.99	0.43
11:AL:41:PRO:CB	11:AL:88:ASP:HB3	2.49	0.43
50:DT:11:LEU:N	50:DT:11:LEU:HD22	2.29	0.43
23:BB:1244:A:H5''	37:BL:8:PRO:CD	2.38	0.43
22:DA:75:G:N1	22:DA:102:G:N2	2.67	0.43
23:BB:2734:A:H61	23:BB:2770:G:H1'	1.83	0.43
1:CA:120:A:C5	1:CA:122:G:C6	3.07	0.43
20:AB:16:GLY:HA2	20:AB:40:ILE:HG13	1.98	0.43
23:BB:26:G:H1'	23:BB:514:A:H61	1.82	0.43
20:AB:64:GLY:HA2	20:AB:158:ASP:OD1	2.18	0.43
1:CA:1306:A:H1'	1:CA:1332:A:C2	2.52	0.43
27:BK:119:ALA:O	27:BK:120:PRO:O	2.37	0.43
24:DI:12:VAL:HG13	24:DI:41:PHE:CE2	2.54	0.43
23:DB:1445:G:H2'	23:DB:1446:C:H6	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:B2:42:LEU:O	36:B2:43:THR:HG23	2.19	0.43
20:CB:212:TYR:O	20:CB:216:VAL:HG22	2.19	0.43
20:CB:86:CYS:C	20:CB:88:GLN:H	2.22	0.43
36:D2:31:LEU:HD22	36:D2:42:LEU:HD12	2.00	0.43
9:AJ:7:ARG:NH1	9:AJ:7:ARG:HB2	2.33	0.43
16:CQ:77:VAL:HG12	16:CQ:79:GLU:H	1.84	0.43
37:BL:85:VAL:HG22	37:BL:94:THR:HG21	2.00	0.43
23:DB:1434:A:H62	23:DB:1558:C:H42	1.66	0.43
1:CA:1503:A:C8	1:CA:1531:A:HI'	2.53	0.43
41:BJ:112:GLY:N	41:BJ:113:PRO:HD2	2.31	0.43
1:AA:1479:C:H2'	1:AA:1480:A:C8	2.46	0.43
49:BR:27:ILE:HG22	49:BR:28:ALA:N	2.33	0.43
49:BR:63:VAL:O	49:BR:63:VAL:HG23	2.19	0.43
1:CA:1123:U:C2'	1:CA:1124:G:H5'	2.49	0.43
9:CJ:35:GLN:HG2	9:CJ:77:VAL:HB	2.01	0.43
3:CD:96:ARG:O	3:CD:99:ASN:HB3	2.19	0.43
22:BA:14:U:H4'	22:BA:70:C:O2	2.19	0.43
23:DB:1582:C:H3'	23:DB:1583:A:N3	2.33	0.43
15:CP:76:LYS:HZ3	15:CP:80:LYS:HD3	1.81	0.43
23:DB:1405:U:H2'	23:DB:1406:U:H6	1.83	0.43
23:DB:1383:A:H2	23:DB:1405:U:O2	2.01	0.43
23:BB:1353:A:O2'	23:BB:1354:A:H5'	2.19	0.43
2:CC:111:ASP:OD2	2:CC:114:LEU:HG	2.19	0.43
1:AA:1229:A:H2'	1:AA:1230:C:C6	2.53	0.43
1:AA:1229:A:OP2	12:AM:112:ARG:HD2	2.18	0.43
11:CL:107:LYS:C	11:CL:109:ARG:H	2.20	0.43
1:AA:213:G:H2'	1:AA:213:G:N3	2.33	0.43
27:BK:2:ILE:HA	27:BK:33:ALA:H	1.83	0.43
23:BB:2449:U:H4'	23:BB:2450:A:OP1	2.19	0.43
23:DB:2217:G:H2'	23:DB:2218:G:H8	1.83	0.43
17:CR:27:THR:HG22	17:CR:31:TYR:HE1	1.83	0.43
23:BB:1561:C:H2'	23:BB:1562:U:H6	1.82	0.43
23:BB:1562:U:O2'	23:BB:1563:U:H5'	2.19	0.43
23:BB:1946:U:H2'	23:BB:1947:C:C6	2.53	0.43
1:AA:747:A:H2'	1:AA:748:G:O4'	2.19	0.43
20:AB:22:TRP:CZ3	20:AB:24:PRO:HA	2.53	0.43
1:CA:425:G:H2'	1:CA:426:U:H6	1.83	0.43
41:BJ:12:LYS:O	41:BJ:13:ARG:HB2	2.18	0.43
23:BB:1426:G:H8	23:BB:1426:G:OP2	2.02	0.43
23:BB:1707:G:O2'	23:BB:1708:C:H5'	2.18	0.43
1:AA:1127:G:H5'	1:AA:1280:A:O2'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:519:U:H2'	23:BB:520:G:H8	1.83	0.43
38:DM:11:LYS:HD2	38:DM:86:LYS:HG2	1.99	0.43
23:BB:2649:C:H2'	23:BB:2650:U:C6	2.53	0.43
47:BF:121:PHE:O	47:BF:122:ASP:OD1	2.37	0.43
23:DB:1476:U:O2'	23:DB:1477:A:H8	2.02	0.43
23:DB:2821:A:OP2	23:DB:2822:G:OP2	2.37	0.43
23:DB:2821:A:OP2	42:DN:3:HIS:NE2	2.51	0.43
1:AA:642:A:H2'	1:AA:643:C:C6	2.54	0.43
23:BB:41:C:O2'	23:BB:42:A:H5'	2.18	0.43
23:BB:840:C:O2'	23:BB:841:G:H5'	2.19	0.43
23:BB:1385:A:O2'	23:BB:1396:U:H6	2.02	0.43
23:DB:1838:C:H4'	23:DB:1839:G:C8	2.54	0.43
23:BB:622:G:H2'	23:BB:623:C:C6	2.54	0.43
23:DB:2830:C:H1'	23:DB:2836:U:O4'	2.19	0.43
39:DX:15:ASN:ND2	39:DX:15:ASN:H	2.16	0.43
1:CA:1020:G:N3	1:CA:1020:G:H2'	2.33	0.43
23:DB:729:G:H2'	23:DB:1775:U:H1'	1.99	0.43
23:DB:1893:C:H2'	23:DB:1894:C:O4'	2.19	0.43
23:BB:1310:G:H1'	23:BB:1611:C:H5'	2.01	0.43
23:BB:2281:A:O2'	23:BB:2282:G:H5'	2.18	0.43
22:BA:57:A:OP2	22:BA:58:A:OP2	2.36	0.43
1:CA:914:A:O2'	1:CA:915:A:H5'	2.18	0.43
1:CA:916:U:H2'	1:CA:917:G:H8	1.84	0.43
23:BB:104:A:H2'	23:BB:105:C:O4'	2.17	0.43
52:BW:27:GLY:O	52:BW:63:ASP:HA	2.18	0.43
2:AC:178:ARG:HG2	2:AC:206:ILE:HA	2.00	0.43
28:DP:36:LYS:HA	28:DP:36:LYS:HD3	1.87	0.43
1:CA:1045:C:H2'	1:CA:1046:A:O4'	2.19	0.43
52:BW:59:PHE:O	52:BW:60:ALA:HB3	2.17	0.43
23:DB:2330:G:H1'	52:DW:38:ARG:CB	2.49	0.43
25:DC:106:PRO:O	25:DC:109:LEU:HD13	2.18	0.43
23:BB:19:A:OP1	44:BQ:22:GLY:N	2.52	0.43
40:BH:111:ALA:HB3	40:BH:114:GLU:HG2	2.00	0.43
40:BH:116:ARG:HH11	40:BH:116:ARG:HB2	1.83	0.43
16:CQ:6:THR:O	16:CQ:7:LEU:HD23	2.19	0.43
47:DF:65:LEU:CD2	47:DF:87:LYS:HD2	2.47	0.43
23:DB:855:G:C2	52:DW:23:LYS:HE3	2.53	0.43
44:DQ:63:ARG:NH2	44:DQ:96:ASP:CA	2.79	0.43
13:AN:60:ARG:HH21	13:AN:69:PRO:HD3	1.82	0.43
23:DB:2443:C:O2'	23:DB:2444:G:H5'	2.18	0.43
50:BT:47:VAL:HG12	50:BT:47:VAL:O	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:85:ARG:NH1	46:DU:86:PHE:H	2.16	0.43
1:AA:947:G:OP1	12:AM:106:ARG:HB3	2.18	0.43
23:BB:346:A:H5'	23:BB:346:A:N3	2.33	0.43
1:AA:411:A:O2'	1:AA:412:A:N3	2.43	0.43
2:AC:76:ILE:HD13	2:AC:83:VAL:HG21	2.00	0.43
47:DF:106:ALA:N	47:DF:108:PRO:HD2	2.33	0.43
18:CS:42:ASN:ND2	18:CS:43:MET:N	2.67	0.43
29:DE:32:VAL:HG23	29:DE:33:VAL:N	2.33	0.43
23:DB:483:A:H5''	46:DU:46:LYS:HG3	2.01	0.43
45:DS:28:LYS:HB3	45:DS:29:VAL:H	1.42	0.43
45:DS:36:LEU:HB3	45:DS:48:LYS:HB2	2.01	0.43
25:BC:202:ARG:HH11	25:BC:213:ARG:NH2	2.17	0.43
29:DE:184:ASP:O	29:DE:185:LYS:HG3	2.19	0.43
29:DE:117:ARG:HA	29:DE:185:LYS:HE3	2.00	0.43
2:CC:120:THR:HA	2:CC:123:LEU:HD12	2.01	0.43
38:DM:47:GLU:O	38:DM:51:ARG:HG3	2.19	0.43
49:BR:3:ALA:HB1	49:BR:59:ILE:HD13	2.01	0.43
27:DK:99:ILE:H	27:DK:118:LEU:HD23	1.83	0.43
3:AD:121:ALA:O	3:AD:122:ILE:HD13	2.19	0.43
1:CA:279:A:H5'	1:CA:281:G:H5'	1.99	0.43
28:DP:3:ILE:HG23	28:DP:4:ILE:H	1.83	0.43
23:BB:1441:G:O2'	23:BB:1442:U:H5'	2.19	0.43
38:BM:47:GLU:O	38:BM:51:ARG:HG3	2.19	0.43
1:AA:271:C:O2'	1:AA:272:C:H5'	2.19	0.43
5:AF:4:TYR:CE2	5:AF:71:ILE:HG21	2.53	0.43
1:CA:715:A:O2'	1:CA:716:A:H5'	2.18	0.43
23:DB:1131:G:H22	23:DB:2024:G:H21	1.65	0.43
1:AA:1097:C:H2'	1:AA:1098:C:C6	2.53	0.43
16:AQ:18:LYS:HD3	16:AQ:48:GLU:HG2	2.01	0.43
23:DB:2591:C:O2'	23:DB:2592:G:H5'	2.19	0.43
28:BP:20:ARG:CG	28:BP:21:PRO:HD2	2.45	0.43
45:BS:6:LYS:HA	45:BS:50:VAL:HG11	2.01	0.43
1:CA:1460:C:H2'	1:CA:1461:G:H8	1.84	0.43
23:DB:1172:C:H2'	23:DB:1173:U:O4'	2.18	0.43
6:CG:22:LEU:O	6:CG:25:PHE:HB3	2.19	0.43
23:BB:2578:G:O2'	23:BB:2579:C:H5'	2.18	0.43
1:AA:796:C:H2'	1:AA:797:C:H6	1.84	0.43
1:CA:678:U:H4'	1:CA:778:G:OP1	2.19	0.43
2:CC:65:VAL:HG21	2:CC:90:VAL:HG11	2.01	0.43
43:DO:6:ALA:O	43:DO:10:ARG:HG3	2.19	0.43
20:AB:132:GLU:CD	20:AB:136:ARG:HH21	2.21	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1260:A:H2'	23:BB:1261:C:H6	1.83	0.43
43:BO:40:ILE:CG2	43:BO:44:GLY:HA2	2.49	0.43
43:BO:75:GLY:HA3	43:BO:106:LEU:HA	1.99	0.43
1:AA:1307:U:H2'	1:AA:1308:U:O4'	2.19	0.43
51:BZ:66:THR:O	51:BZ:70:GLU:HG3	2.19	0.43
9:AJ:65:TYR:C	13:AN:98:ALA:HB2	2.39	0.43
5:AF:81:ASN:O	5:AF:82:ASP:C	2.57	0.43
23:DB:708:G:H2'	23:DB:709:U:C6	2.53	0.43
46:BU:25:LYS:CE	46:BU:36:GLU:HG3	2.49	0.43
23:BB:962:G:H21	23:BB:2250:G:H1	1.63	0.43
40:DH:44:ILE:O	40:DH:48:GLU:HG2	2.19	0.43
43:DO:75:GLY:HA3	43:DO:106:LEU:HA	2.00	0.43
23:DB:1720:U:C2'	23:DB:1721:G:H5'	2.49	0.43
1:AA:205:A:H2'	1:AA:206:C:O4'	2.19	0.43
1:AA:903:G:H2'	1:AA:904:U:C6	2.53	0.43
23:BB:1300:G:H5'	23:BB:1301:A:N3	2.34	0.43
48:BG:154:GLU:O	48:BG:156:TYR:N	2.51	0.43
23:DB:79:C:HO2'	23:DB:346:A:H8	1.55	0.43
23:BB:208:C:H2'	23:BB:209:C:C6	2.53	0.43
23:DB:2771:C:H1'	26:DD:208:LYS:NZ	2.33	0.43
1:CA:177:G:N3	1:CA:177:G:O4'	2.52	0.43
1:AA:454:G:O2'	1:AA:455:G:H5'	2.19	0.43
2:AC:178:ARG:CG	2:AC:206:ILE:HA	2.49	0.43
1:AA:241:G:O2'	1:AA:242:G:H5'	2.18	0.43
14:CO:45:GLU:HB3	14:CO:46:HIS:HD1	1.84	0.43
23:DB:2533:U:H2'	23:DB:2534:A:O4'	2.18	0.43
9:CJ:41:PRO:O	9:CJ:42:LEU:HB2	2.18	0.43
26:BD:35:THR:N	26:BD:49:GLN:O	2.51	0.43
23:BB:1678:A:H2'	23:BB:1679:A:O4'	2.19	0.43
8:CI:118:ARG:HG2	8:CI:118:ARG:O	2.19	0.43
50:DT:7:LEU:O	50:DT:7:LEU:HD13	2.19	0.43
1:CA:138:G:C6	1:CA:226:G:C6	3.07	0.43
1:AA:932:C:H4'	6:AG:3:ARG:NH2	2.34	0.43
23:BB:1238:G:O2'	23:BB:1239:G:H5'	2.18	0.43
23:BB:1863:G:H2'	23:BB:1864:U:O4'	2.19	0.43
23:DB:1099:G:H4'	24:DI:4:VAL:HB	2.01	0.43
23:DB:947:A:O2'	23:DB:984:A:H2	2.02	0.43
44:DQ:33:VAL:O	44:DQ:37:ALA:N	2.51	0.43
47:DF:33:ILE:HG22	47:DF:34:THR:N	2.34	0.43
8:CI:51:LEU:HB3	8:CI:56:MET:HB2	2.01	0.43
41:DJ:17:VAL:CG2	41:DJ:137:PRO:HB2	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:42:ALA:HB1	47:DF:46:LYS:NZ	2.34	0.43
43:DO:35:ILE:HG21	43:DO:71:ALA:HB1	2.01	0.43
43:DO:34:HIS:CE1	43:DO:65:THR:HG21	2.53	0.43
3:CD:29:THR:H	3:CD:33:ILE:HG22	1.83	0.43
46:DU:84:PHE:CD2	46:DU:93:ARG:HG2	2.54	0.43
23:BB:1203:U:C4'	37:BL:3:LEU:HD12	2.46	0.43
37:BL:42:SER:C	37:BL:44:GLY:N	2.67	0.43
47:BF:141:ASP:O	47:BF:142:TYR:C	2.58	0.43
42:DN:52:ILE:O	42:DN:55:ALA:HB3	2.19	0.43
42:DN:87:PHE:CE1	42:DN:116:VAL:HG12	2.54	0.43
40:DH:80:ILE:CD1	40:DH:146:VAL:HG13	2.46	0.43
49:DR:21:ARG:C	49:DR:22:LEU:HD23	2.39	0.43
1:AA:922:G:H2'	1:AA:923:A:H8	1.84	0.43
47:DF:134:GLN:C	47:DF:136:ILE:N	2.72	0.43
1:CA:15:G:H2'	1:CA:16:A:H8	1.84	0.43
18:CS:47:THR:HG23	18:CS:60:PHE:CE1	2.47	0.43
45:BS:17:VAL:C	45:BS:19:LEU:N	2.70	0.43
12:AM:79:LEU:HG	12:AM:79:LEU:H	1.59	0.43
16:AQ:62:GLU:HB2	16:AQ:72:TRP:CE2	2.54	0.43
23:BB:662:G:O4'	37:BL:14:LYS:HB2	2.19	0.43
23:BB:2807:U:H1'	23:BB:2892:G:N2	2.34	0.43
3:CD:172:VAL:HG23	3:CD:178:GLU:O	2.18	0.43
21:CU:3:ILE:HG23	21:CU:18:PHE:CD1	2.54	0.43
23:DB:550:C:OP1	41:DJ:2:LYS:HE3	2.19	0.43
23:BB:819:A:N6	23:BB:1189:A:H1'	2.33	0.43
45:BS:29:VAL:HG11	45:BS:55:ILE:CD1	2.49	0.43
23:DB:2886:A:H62	31:D0:39:ARG:CD	2.31	0.43
1:CA:1411:C:O2'	1:CA:1412:C:H5'	2.19	0.43
49:DR:4:VAL:HG23	49:DR:39:LEU:N	2.29	0.43
1:CA:311:C:O2'	1:CA:312:C:H5'	2.19	0.43
23:DB:776:G:H4'	23:DB:777:G:C5'	2.49	0.43
2:CC:119:ILE:HD11	2:CC:133:MET:HA	2.00	0.43
25:BC:207:ALA:O	25:BC:208:GLY:C	2.57	0.43
14:CO:24:SER:O	14:CO:25:THR:C	2.57	0.43
28:DP:50:ARG:O	28:DP:51:ASN:HB2	2.19	0.43
1:CA:491:G:O2'	1:CA:492:C:H5'	2.19	0.43
23:BB:719:C:O2'	23:BB:720:U:H5'	2.19	0.43
16:CQ:17:GLU:C	16:CQ:19:SER:H	2.22	0.43
29:BE:48:THR:HG23	29:BE:51:GLU:OE2	2.18	0.43
24:BI:83:ALA:N	24:BI:100:ILE:HD11	2.33	0.43
53:B6:137:LEU:O	53:B6:140:LEU:HB3	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1873:G:O2'	23:BB:1874:C:H5'	2.19	0.43
6:CG:14:ASP:O	6:CG:18:GLY:HA2	2.19	0.43
1:AA:1009:U:H1'	1:AA:1021:A:N1	2.34	0.43
20:CB:172:ILE:H	20:CB:172:ILE:HG13	1.69	0.43
40:BH:53:GLU:O	40:BH:54:LEU:HD23	2.19	0.43
23:DB:1683:U:H2'	23:DB:1684:G:H8	1.83	0.43
45:BS:83:LYS:O	45:BS:84:ARG:NE	2.51	0.43
9:CJ:10:LEU:HD11	9:CJ:25:ILE:CD1	2.48	0.43
2:CC:42:LEU:HD21	2:CC:90:VAL:HG22	2.01	0.43
26:DD:159:LYS:HZ2	26:DD:160:LYS:N	2.17	0.43
18:CS:14:LEU:HD22	18:CS:34:SER:OG	2.19	0.43
50:BT:48:GLN:CA	50:BT:48:GLN:HE21	2.27	0.43
22:BA:94:A:H2'	22:BA:95:U:O4'	2.18	0.43
37:BL:129:LYS:HA	37:BL:132:ARG:CD	2.49	0.43
37:BL:136:GLU:HA	37:BL:140:GLY:CA	2.48	0.43
2:CC:16:PRO:HG2	2:CC:53:ARG:HH22	1.84	0.43
9:AJ:87:LEU:N	9:AJ:87:LEU:HD13	2.33	0.43
1:AA:908:A:H2'	1:AA:909:A:H8	1.84	0.43
44:DQ:32:ARG:O	44:DQ:36:GLN:HG3	2.18	0.43
53:D6:150:SER:O	53:D6:151:GLU:C	2.57	0.43
23:BB:2249:U:H4'	23:BB:2275:C:C5	2.53	0.43
23:BB:2249:U:N3	23:BB:2253:G:OP2	2.52	0.43
23:BB:1749:A:H2'	23:BB:1750:G:H8	1.84	0.43
23:DB:132:G:O2'	23:DB:133:U:H5'	2.18	0.43
23:BB:1835:G:H2'	23:BB:1836:C:H6	1.82	0.43
1:CA:224:U:O2'	1:CA:225:C:H5'	2.18	0.43
26:BD:46:ARG:HH12	26:BD:88:GLU:CG	2.32	0.43
23:BB:218:A:H2'	23:BB:219:A:O4'	2.19	0.43
23:DB:351:C:H2'	23:DB:352:A:H8	1.84	0.43
23:DB:2436:G:N3	23:DB:2598:A:H2	2.16	0.43
1:AA:1406:U:H2'	1:AA:1407:C:H5'	2.00	0.43
1:CA:251:G:N2	1:CA:266:G:O6	2.51	0.43
20:CB:35:ASN:O	20:CB:37:VAL:HG12	2.19	0.43
5:CF:45:ARG:HH22	17:CR:25:ILE:HD13	1.83	0.43
23:BB:823:C:O2'	23:BB:824:U:H5'	2.19	0.43
23:BB:381:G:OP1	51:BZ:16:ASN:ND2	2.52	0.43
43:DO:56:LYS:HG2	43:DO:60:GLU:CG	2.49	0.43
23:DB:1862:G:O2'	23:DB:1863:G:H5'	2.18	0.43
23:BB:1239:G:H5''	57:BB:3606:HOH:O	2.18	0.43
23:DB:1304:A:H2'	23:DB:1305:C:C6	2.54	0.43
23:DB:242:G:H5''	34:D3:63:TYR:CE2	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:94:PHE:HB3	46:DU:101:THR:HA	2.01	0.43
26:BD:182:ALA:O	26:BD:184:ARG:HG2	2.19	0.43
10:CK:108:ASN:HD21	21:CU:6:ARG:HG3	1.84	0.43
3:CD:150:LYS:HD3	3:CD:150:LYS:HA	1.89	0.43
23:BB:211:C:O2'	23:BB:212:G:H5'	2.19	0.43
23:DB:1678:A:H2'	23:DB:1679:A:O4'	2.19	0.43
23:BB:2329:U:H2'	23:BB:2330:G:H8	1.82	0.43
52:BW:19:ARG:O	52:BW:20:LEU:HD23	2.19	0.43
23:BB:1819:A:H1'	23:BB:1821:A:C6	2.53	0.43
23:DB:2327:A:N7	23:DB:2388:A:N6	2.66	0.43
25:DC:90:ILE:HD13	25:DC:103:ILE:C	2.39	0.43
48:BG:84:LYS:HG2	48:BG:85:LYS:N	2.25	0.43
47:BF:87:LYS:CG	47:BF:88:VAL:H	2.22	0.43
37:DL:143:GLU:CG	37:DL:144:GLU:N	2.79	0.43
48:DG:94:ARG:NH2	48:DG:104:LEU:HA	2.34	0.43
53:D6:73:GLN:O	53:D6:76:LEU:HB2	2.18	0.43
8:AI:21:LYS:HG3	8:AI:22:PRO:HD2	2.01	0.43
8:AI:35:GLU:HG3	8:AI:44:ARG:HD2	2.01	0.43
35:DV:62:THR:HG21	35:DV:71:LYS:NZ	2.34	0.43
13:CN:68:ARG:HH12	13:CN:71:GLY:N	2.16	0.43
13:CN:5:MET:O	13:CN:8:ARG:HB3	2.19	0.43
23:BB:996:A:H4'	44:BQ:91:ARG:HD2	2.01	0.43
49:BR:5:PHE:N	49:BR:5:PHE:CD1	2.87	0.43
47:DF:52:ALA:HA	47:DF:55:ASP:HB2	2.01	0.43
51:BZ:32:ASN:O	51:BZ:33:LEU:O	2.37	0.43
42:BN:8:ARG:NH2	42:BN:39:PRO:HA	2.34	0.43
1:AA:948:C:H2'	1:AA:949:A:H8	1.84	0.43
3:AD:29:THR:H	3:AD:33:ILE:HG22	1.84	0.43
46:DU:81:ARG:CD	46:DU:96:LYS:HG3	2.49	0.43
47:BF:102:LEU:HD13	47:BF:102:LEU:C	2.39	0.43
47:BF:113:PHE:HE1	47:BF:116:LEU:HB2	1.84	0.43
37:BL:78:ARG:NH2	37:BL:78:ARG:HB3	2.34	0.43
29:BE:154:ASP:C	29:BE:156:ASN:H	2.21	0.43
42:DN:79:LEU:HA	42:DN:83:LEU:HD11	2.00	0.43
1:CA:16:A:C2'	1:CA:17:U:H5'	2.49	0.43
4:CE:28:ARG:NH2	4:CE:30:PHE:HB3	2.34	0.43
3:AD:172:VAL:O	3:AD:172:VAL:HG13	2.19	0.43
23:BB:1245:G:OP1	37:BL:13:LYS:HE3	2.18	0.43
32:B4:8:LYS:O	32:B4:35:GLN:NE2	2.52	0.43
34:D3:32:LEU:HA	34:D3:35:LYS:HD2	2.01	0.43
23:DB:979:A:H2'	23:DB:982:C:N4	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CN:19:TYR:HB3	13:CN:20:PHE:H	1.66	0.43
13:CN:50:LEU:H	13:CN:51:PRO:HD2	1.84	0.43
29:DE:146:VAL:HG12	29:DE:147:LEU:N	2.34	0.43
23:BB:28:A:N6	23:BB:512:G:O2'	2.51	0.43
1:CA:333:U:H2'	1:CA:334:C:C6	2.54	0.43
42:DN:34:ILE:HG22	42:DN:35:LYS:N	2.33	0.43
44:DQ:106:THR:O	44:DQ:109:VAL:HB	2.18	0.43
23:BB:10:A:N6	23:BB:2895:G:H1'	2.34	0.43
23:DB:1439:A:C5	23:DB:1552:A:N6	2.86	0.43
14:CO:33:THR:OG1	14:CO:85:LEU:HD23	2.19	0.43
46:BU:62:ALA:O	46:BU:63:ALA:HB3	2.19	0.43
1:AA:553:A:H2'	1:AA:554:A:C8	2.53	0.43
14:AO:24:SER:O	14:AO:25:THR:C	2.57	0.43
40:BH:44:ILE:HG13	40:BH:45:GLU:H	1.84	0.43
27:DK:87:LEU:HB2	27:DK:93:GLN:C	2.38	0.43
27:DK:87:LEU:HD12	27:DK:92:GLU:CA	2.48	0.43
23:BB:610:C:O2'	23:BB:611:C:H5'	2.18	0.43
6:AG:14:ASP:O	6:AG:18:GLY:HA2	2.18	0.43
6:AG:14:ASP:CB	6:AG:19:SER:H	2.31	0.43
23:DB:1174:U:H1'	23:DB:1176:U:O2	2.18	0.43
23:DB:1174:U:OP2	23:DB:1174:U:H6	2.02	0.43
34:D3:61:LEU:N	34:D3:62:PRO:HD3	2.34	0.43
34:D3:6:VAL:HG23	34:D3:60:CYS:O	2.19	0.43
23:DB:608:A:H2'	23:DB:609:A:H8	1.81	0.43
23:BB:327:G:O2'	23:BB:328:U:H5'	2.19	0.43
2:CC:111:ASP:HB3	2:CC:114:LEU:HD12	2.01	0.43
23:DB:544:C:O2'	23:DB:545:U:O4'	2.37	0.43
1:AA:708:C:O2'	1:AA:709:U:H5'	2.18	0.43
25:BC:245:THR:HG23	25:BC:249:VAL:O	2.19	0.43
9:AJ:91:ASP:C	9:AJ:92:LEU:HD13	2.39	0.43
53:D6:44:GLU:OE2	53:D6:47:GLY:N	2.52	0.43
23:BB:1047:G:O2'	23:BB:1048:A:OP2	2.36	0.43
23:BB:401:A:H2'	23:BB:402:A:H8	1.84	0.43
23:BB:1349:C:H2'	23:BB:1350:C:C6	2.53	0.43
14:CO:59:MET:HG2	14:CO:59:MET:H	1.50	0.43
1:AA:832:G:O2'	1:AA:833:G:H5'	2.19	0.43
23:BB:1506:U:H2'	23:BB:1507:C:C6	2.54	0.43
23:DB:2784:U:H2'	23:DB:2785:C:C6	2.54	0.43
34:B3:44:ARG:N	34:B3:45:PRO:CD	2.82	0.43
23:BB:521:U:H2'	23:BB:522:A:H8	1.81	0.43
23:DB:1745:A:H2'	23:DB:1746:A:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DR:91:GLN:HG3	49:DR:92:TRP:N	2.33	0.43
29:BE:18:THR:HG22	29:BE:106:LYS:HE2	1.99	0.43
23:DB:1880:U:H2'	23:DB:1881:C:C6	2.54	0.43
23:DB:2553:G:H2'	23:DB:2554:U:H4'	1.99	0.43
23:BB:2301:C:O2'	23:BB:2302:U:H5'	2.19	0.43
23:DB:1300:G:H5'	23:DB:1301:A:N3	2.34	0.43
43:BO:100:HIS:C	43:BO:104:GLN:HB2	2.39	0.43
23:DB:1675:C:H2'	23:DB:1676:A:O4'	2.19	0.43
29:BE:1:MET:HB2	29:BE:16:GLU:HB2	2.01	0.43
33:B1:28:THR:C	33:B1:30:PRO:HD3	2.39	0.43
28:BP:13:LYS:HG2	28:BP:76:HIS:ND1	2.34	0.43
23:DB:2081:U:OP1	51:DZ:19:SER:HB3	2.18	0.43
23:DB:2208:C:H2'	23:DB:2209:G:H8	1.84	0.43
1:CA:970:C:N4	8:CI:128:LYS:HG2	2.33	0.43
23:BB:1845:G:C6	23:BB:1896:G:C6	3.07	0.43
38:BM:131:VAL:HG12	38:BM:132:THR:N	2.34	0.43
3:CD:73:ASN:O	3:CD:76:LYS:HB2	2.19	0.43
23:DB:699:A:H2'	23:DB:700:G:O4'	2.19	0.43
37:DL:81:ASP:O	37:DL:83:ALA:N	2.45	0.43
23:DB:1830:C:O2'	23:DB:1831:G:H5'	2.19	0.43
23:DB:1830:C:H2'	23:DB:1831:G:H8	1.83	0.43
5:CF:69:GLU:O	5:CF:73:GLU:HG3	2.19	0.43
23:BB:2208:C:H2'	23:BB:2209:G:C8	2.54	0.43
1:AA:874:G:O2'	1:AA:875:U:H5'	2.19	0.43
28:DP:86:LYS:HB3	28:DP:87:ARG:H	1.57	0.43
4:CE:59:ILE:H	4:CE:59:ILE:HG13	1.65	0.43
29:BE:4:VAL:HG12	29:BE:6:LYS:H	1.84	0.43
23:DB:2392:A:O3'	34:D3:26:ALA:HB1	2.18	0.43
23:BB:2361:G:O2'	23:BB:2362:C:H5'	2.19	0.43
40:BH:27:ARG:HE	51:BZ:64:ILE:HD11	1.83	0.42
1:AA:1526:G:O2'	1:AA:1527:U:H5'	2.19	0.42
21:AU:40:PRO:C	21:AU:42:THR:N	2.72	0.42
48:DG:94:ARG:HH21	48:DG:104:LEU:HA	1.83	0.42
48:DG:93:TYR:O	48:DG:94:ARG:HG3	2.19	0.42
52:DW:49:ASN:ND2	52:DW:50:VAL:N	2.67	0.42
47:DF:115:GLY:HA2	47:DF:177:ARG:NH1	2.34	0.42
1:CA:1250:A:C2	1:CA:1370:G:H1'	2.54	0.42
1:CA:1348:U:C4'	8:CI:121:ARG:HG3	2.31	0.42
44:DQ:87:VAL:HG12	44:DQ:89:ILE:HD13	2.01	0.42
41:DJ:58:ASN:O	41:DJ:59:ALA:HB3	2.19	0.42
23:DB:804:A:H5''	23:DB:805:G:OP1	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:36:HIS:HB3	51:BZ:38:PHE:CE2	2.54	0.42
51:BZ:5:CYS:O	51:BZ:6:GLN:HB3	2.19	0.42
24:DI:52:LEU:HD13	24:DI:81:LYS:NZ	2.34	0.42
23:BB:2305:U:C4	47:BF:151:LEU:HA	2.54	0.42
47:BF:116:LEU:HB3	47:BF:176:PHE:CA	2.49	0.42
29:BE:130:LYS:C	29:BE:132:LYS:N	2.71	0.42
40:DH:119:ASN:O	40:DH:121:VAL:HG22	2.19	0.42
1:CA:1079:G:C6	1:CA:1080:A:N6	2.86	0.42
1:CA:921:U:H2'	1:CA:922:G:O4'	2.19	0.42
29:DE:28:VAL:HG23	29:DE:29:HIS:N	2.34	0.42
32:B4:2:LYS:HG2	32:B4:4:ARG:HG3	2.01	0.42
32:B4:3:VAL:O	32:B4:4:ARG:O	2.37	0.42
6:AG:110:ARG:HE	6:AG:122:GLU:HB2	1.84	0.42
32:B4:5:ALA:HA	32:B4:37:GLN:NE2	2.34	0.42
38:DM:29:GLY:HA2	38:DM:106:ASP:HB2	2.01	0.42
46:BU:73:ASN:HB3	46:BU:95:PHE:CD2	2.54	0.42
8:AI:33:SER:CB	8:AI:36:GLN:HB2	2.42	0.42
13:CN:20:PHE:HD2	13:CN:54:SER:O	2.02	0.42
48:BG:147:LEU:O	48:BG:150:TYR:HB2	2.19	0.42
45:BS:22:ASP:HA	45:BS:25:ARG:HH12	1.80	0.42
23:BB:571:U:H3'	49:BR:80:ARG:CZ	2.47	0.42
38:BM:103:TYR:HB2	38:BM:117:PHE:CE1	2.54	0.42
49:DR:16:GLU:HG2	49:DR:101:ILE:CB	2.49	0.42
37:DL:82:LEU:O	37:DL:85:VAL:HG12	2.19	0.42
38:BM:55:ARG:HG3	38:BM:55:ARG:O	2.19	0.42
23:DB:2015:A:H2'	23:DB:2016:U:O4'	2.18	0.42
11:AL:20:VAL:HG12	11:AL:93:ARG:CB	2.47	0.42
4:AE:148:SER:OG	4:AE:151:MET:HB2	2.18	0.42
5:CF:99:ALA:O	5:CF:100:SER:CB	2.66	0.42
14:CO:71:LYS:HB2	14:CO:78:TYR:CD2	2.54	0.42
10:AK:80:ASN:ND2	10:AK:80:ASN:H	2.16	0.42
22:BA:116:G:H4'	43:BO:54:VAL:HG22	2.01	0.42
35:DV:29:ILE:HD12	35:DV:90:ASP:HA	2.01	0.42
23:DB:154:U:H2'	23:DB:155:A:H8	1.84	0.42
23:DB:1470:A:H3'	23:DB:1471:G:H8	1.84	0.42
23:BB:1824:G:H1'	25:BC:251:THR:HG21	2.00	0.42
45:DS:31:GLN:C	45:DS:33:LEU:N	2.71	0.42
20:CB:19:THR:HG23	20:CB:20:ARG:N	2.33	0.42
3:AD:2:ARG:HB3	3:AD:114:ARG:HH22	1.83	0.42
23:DB:2285:C:OP2	33:D1:5:ARG:HD3	2.19	0.42
23:DB:2457:U:H2'	23:DB:2458:G:H5'	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:57:LYS:CG	40:BH:58:LEU:N	2.82	0.42
53:D6:33:ALA:HB1	53:D6:63:PRO:HA	2.00	0.42
23:BB:2450:A:O2'	23:BB:2451:A:H5'	2.18	0.42
23:BB:1404:C:O2'	23:BB:1405:U:H5'	2.19	0.42
1:AA:1460:C:H2'	1:AA:1461:G:H8	1.84	0.42
23:DB:2291:U:H2'	23:DB:2292:U:C6	2.54	0.42
23:DB:871:U:C2	23:DB:907:G:C6	3.07	0.42
5:AF:81:ASN:O	5:AF:83:ALA:N	2.52	0.42
23:BB:1535:A:H3'	23:BB:1536:C:C6	2.52	0.42
23:BB:2815:C:C2	23:BB:2816:G:C8	3.07	0.42
1:AA:283:U:H2'	1:AA:284:C:H6	1.84	0.42
23:DB:2376:A:N1	43:DO:92:PHE:HD2	2.17	0.42
26:DD:15:PHE:CD2	28:DP:77:SER:HA	2.54	0.42
22:DA:83:G:C6	22:DA:94:A:C6	3.07	0.42
1:AA:591:U:O2'	1:AA:592:G:H5'	2.19	0.42
5:AF:85:ILE:CG2	5:AF:86:ARG:H	2.32	0.42
1:CA:648:A:H2'	1:CA:649:A:C8	2.54	0.42
7:AH:17:GLN:NE2	7:AH:69:ALA:HB1	2.34	0.42
46:BU:13:LEU:HA	46:BU:18:LYS:HD3	2.01	0.42
1:CA:1234:C:H2'	1:CA:1235:U:C6	2.54	0.42
2:AC:117:ASP:OD2	2:AC:186:SER:HB3	2.19	0.42
23:BB:2757:A:H2	48:BG:63:GLN:HE22	1.67	0.42
48:BG:5:LYS:HE2	48:BG:61:TRP:CH2	2.54	0.42
29:DE:2:GLU:OE1	29:DE:11:ALA:HB1	2.19	0.42
1:CA:960:U:O2'	1:CA:1223:C:H4'	2.18	0.42
17:AR:25:ILE:HG13	17:AR:26:ALA:N	2.34	0.42
5:CF:46:GLN:HA	5:CF:46:GLN:NE2	2.33	0.42
23:BB:2181:U:H2'	23:BB:2182:U:O4'	2.19	0.42
23:BB:1923:U:H2'	23:BB:1924:C:C6	2.54	0.42
1:AA:1121:U:H2'	1:AA:1122:U:C6	2.54	0.42
40:DH:109:GLU:O	40:DH:110:VAL:HG12	2.18	0.42
1:AA:755:G:H2'	1:AA:756:C:H6	1.84	0.42
23:BB:1248:G:OP1	44:BQ:1:ALA:HB3	2.19	0.42
30:BY:3:THR:HB	30:BY:36:GLU:HG2	2.01	0.42
23:DB:253:C:P	34:D3:4:LYS:HZ2	2.42	0.42
53:D6:183:ILE:C	53:D6:185:GLY:H	2.21	0.42
43:BO:15:ARG:HH21	43:BO:95:SER:HB3	1.84	0.42
1:AA:792:A:C4	1:AA:794:A:C6	3.08	0.42
15:AP:36:VAL:HG13	15:AP:36:VAL:O	2.19	0.42
43:DO:61:GLN:HE21	43:DO:61:GLN:HB3	1.70	0.42
23:BB:308:G:H1'	23:BB:501:A:OP1	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CN:47:LEU:O	13:CN:49:THR:N	2.52	0.42
43:BO:56:LYS:HG2	43:BO:60:GLU:CG	2.49	0.42
23:DB:2328:A:H2'	23:DB:2329:U:H6	1.77	0.42
52:DW:42:THR:O	52:DW:43:LYS:HE3	2.19	0.42
23:DB:1824:G:H1'	25:DC:251:THR:HG21	2.02	0.42
48:BG:93:TYR:HE1	48:BG:160:GLY:HA2	1.84	0.42
44:DQ:30:VAL:HG22	44:DQ:31:TYR:N	2.34	0.42
23:BB:2315:G:H2'	23:BB:2316:G:H8	1.84	0.42
16:CQ:74:LEU:HD13	16:CQ:74:LEU:C	2.40	0.42
47:DF:87:LYS:HG3	47:DF:88:VAL:N	2.21	0.42
53:B6:57:THR:HB	53:B6:69:GLN:O	2.18	0.42
41:DJ:33:ALA:O	41:DJ:34:ARG:C	2.57	0.42
20:CB:205:ALA:HB3	20:CB:208:ALA:HB3	2.01	0.42
8:AI:49:GLN:N	8:AI:50:PRO:HD2	2.34	0.42
48:DG:24:THR:OG1	48:DG:32:LEU:HD21	2.19	0.42
29:DE:60:TRP:CZ3	29:DE:62:GLN:HA	2.55	0.42
50:BT:54:GLU:H	50:BT:54:GLU:HG2	1.67	0.42
41:BJ:3:THR:O	41:BJ:4:PHE:O	2.36	0.42
46:BU:84:PHE:CD2	46:BU:93:ARG:HG2	2.53	0.42
47:BF:40:GLY:O	47:BF:41:GLU:C	2.57	0.42
47:BF:42:ALA:HB1	47:BF:46:LYS:NZ	2.34	0.42
47:BF:66:ILE:HD11	47:BF:83:PRO:CB	2.44	0.42
47:DF:2:LYS:CD	47:DF:100:GLU:HG2	2.49	0.42
10:AK:92:ARG:HE	21:AU:20:ARG:NH2	2.14	0.42
18:AS:50:VAL:O	18:AS:56:HIS:HA	2.20	0.42
37:DL:30:THR:O	37:DL:31:GLY:C	2.57	0.42
21:CU:3:ILE:HG21	21:CU:19:LYS:CG	2.45	0.42
1:AA:1251:A:O2'	1:AA:1252:A:H5'	2.19	0.42
1:AA:313:A:O2'	1:AA:314:C:H5'	2.18	0.42
23:DB:1723:G:N7	23:DB:1737:G:N2	2.61	0.42
1:CA:908:A:H2'	1:CA:909:A:H8	1.84	0.42
27:DK:119:ALA:O	27:DK:120:PRO:O	2.37	0.42
23:BB:2146:C:H1'	23:BB:2147:A:C4'	2.48	0.42
23:DB:784:G:H5''	25:DC:225:ASN:OD1	2.19	0.42
28:BP:6:GLN:HE21	28:BP:7:LEU:N	2.17	0.42
23:DB:557:C:H2'	23:DB:558:U:H6	1.83	0.42
23:BB:193:U:O3'	23:BB:803:U:H4'	2.20	0.42
4:AE:39:GLY:CA	4:AE:116:VAL:HB	2.46	0.42
4:AE:45:VAL:O	4:AE:70:MET:HB3	2.19	0.42
39:BX:20:ASN:HA	39:BX:24:GLU:OE1	2.20	0.42
4:CE:82:HIS:CD2	7:CH:95:MET:HG3	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AE:52:ALA:N	4:AE:58:ALA:HB2	2.34	0.42
23:BB:2419:U:OP2	34:B3:32:LEU:HD13	2.19	0.42
49:BR:19:THR:CB	49:BR:97:LYS:HA	2.45	0.42
23:DB:125:A:H2	36:D2:9:VAL:HG22	1.84	0.42
22:BA:13:G:C5	22:BA:70:C:H4'	2.55	0.42
23:DB:118:A:N3	23:DB:178:G:H1'	2.34	0.42
1:CA:1477:U:H2'	1:CA:1478:U:H6	1.81	0.42
23:DB:1374:G:H2'	23:DB:1375:U:H6	1.82	0.42
9:CJ:24:GLU:CD	9:CJ:90:LEU:HD11	2.39	0.42
1:AA:1009:U:O2	1:AA:1009:U:C2'	2.67	0.42
43:DO:7:ARG:HA	43:DO:10:ARG:NE	2.34	0.42
23:DB:2538:C:O2'	23:DB:2539:C:H5'	2.18	0.42
23:BB:1114:C:H2'	23:BB:1115:G:O4'	2.19	0.42
1:AA:378:G:H2'	1:AA:379:C:C6	2.53	0.42
23:BB:1258:U:H4'	29:BE:79:ARG:HD2	2.02	0.42
23:BB:2876:G:H2'	23:BB:2877:G:O4'	2.19	0.42
42:BN:59:SER:C	42:BN:61:ALA:N	2.71	0.42
23:BB:2291:U:H2'	23:BB:2292:U:C6	2.53	0.42
43:BO:6:ALA:CB	43:BO:10:ARG:HH11	2.32	0.42
37:BL:135:ILE:CG2	37:BL:136:GLU:N	2.82	0.42
23:BB:707:G:O2'	23:BB:708:G:H5'	2.19	0.42
23:DB:493:G:H2'	23:DB:494:G:O4'	2.19	0.42
26:DD:70:LYS:C	26:DD:70:LYS:HD3	2.39	0.42
1:CA:327:A:O2'	1:CA:328:C:O4'	2.32	0.42
23:BB:520:G:O2'	23:BB:521:U:H5'	2.18	0.42
1:CA:592:G:O2'	1:CA:593:U:H5'	2.19	0.42
34:B3:7:ARG:O	34:B3:8:GLY:C	2.57	0.42
38:BM:102:LEU:HD22	38:BM:102:LEU:N	2.34	0.42
23:DB:408:G:H2'	23:DB:409:G:H8	1.84	0.42
23:BB:1900:A:N1	23:BB:1970:A:C5	2.87	0.42
34:D3:7:ARG:O	34:D3:8:GLY:C	2.57	0.42
47:DF:119:LYS:C	47:DF:121:PHE:H	2.22	0.42
4:AE:87:VAL:HG21	4:AE:92:ARG:HD2	2.01	0.42
23:DB:1077:A:H4'	24:DI:93:ASN:OD1	2.19	0.42
23:DB:1271:G:C2	23:DB:1617:C:H4'	2.54	0.42
20:CB:13:VAL:CG1	20:CB:207:ARG:HG2	2.48	0.42
23:DB:2302:U:O2'	23:DB:2303:G:H5'	2.19	0.42
1:AA:37:U:H2'	1:AA:38:G:H8	1.84	0.42
23:BB:838:C:H2'	23:BB:839:U:H6	1.84	0.42
1:CA:537:G:H2'	1:CA:538:G:C8	2.54	0.42
23:BB:927:A:O2'	23:BB:928:A:H5'	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AP:10:GLY:HA3	15:AP:15:PRO:HA	1.99	0.42
1:CA:65:A:C5	1:CA:381:C:N3	2.87	0.42
23:BB:787:C:H3'	23:BB:791:C:H41	1.84	0.42
36:D2:1:MET:HG2	36:D2:2:LYS:H	1.84	0.42
5:CF:55:HIS:O	5:CF:56:LYS:HG3	2.19	0.42
1:CA:1165:U:H2'	1:CA:1166:G:O4'	2.19	0.42
23:DB:603:A:H4'	23:DB:604:G:O5'	2.19	0.42
14:CO:64:ARG:NH2	14:CO:88:ARG:NH1	2.67	0.42
23:DB:809:G:O2'	23:DB:810:U:H5'	2.19	0.42
43:BO:30:ARG:HG3	43:BO:30:ARG:HH11	1.84	0.42
1:AA:397:A:N3	1:AA:397:A:H3'	2.34	0.42
46:BU:45:GLN:HE21	46:BU:45:GLN:HB3	1.57	0.42
23:BB:699:A:H2'	23:BB:700:G:O4'	2.18	0.42
43:DO:14:ALA:C	43:DO:16:ARG:H	2.22	0.42
23:DB:760:G:C2'	23:DB:761:A:H5'	2.49	0.42
5:AF:74:LEU:HA	5:AF:77:THR:OG1	2.19	0.42
1:AA:1206:G:C4'	2:AC:192:TYR:HA	2.38	0.42
25:BC:131:MET:HE1	25:BC:189:ALA:HB2	2.01	0.42
23:DB:1818:U:HO2'	23:DB:1819:A:P	2.41	0.42
25:DC:121:ALA:HB3	25:DC:129:LEU:CD1	2.49	0.42
25:DC:140:VAL:O	25:DC:141:HIS:HB2	2.20	0.42
53:B6:52:LEU:CD1	53:B6:58:VAL:HG23	2.48	0.42
40:BH:89:LYS:HB3	40:BH:89:LYS:NZ	2.34	0.42
40:BH:90:LEU:HD23	40:BH:123:ARG:HG2	2.01	0.42
8:CI:46:VAL:HG23	8:CI:47:VAL:N	2.34	0.42
41:DJ:6:ALA:HB3	41:DJ:45:THR:CB	2.49	0.42
8:AI:38:PHE:HB3	8:AI:43:ALA:HB3	2.01	0.42
8:AI:50:PRO:HD3	8:AI:79:ARG:CG	2.49	0.42
47:DF:42:ALA:O	47:DF:45:ASP:N	2.52	0.42
48:DG:26:LYS:HA	48:DG:32:LEU:N	2.35	0.42
23:DB:2358:A:H2'	23:DB:2359:C:H6	1.84	0.42
23:DB:672:C:H2'	23:DB:673:C:H6	1.83	0.42
23:DB:674:G:O3'	29:DE:60:TRP:CZ2	2.71	0.42
44:BQ:81:GLY:C	44:BQ:83:LYS:N	2.73	0.42
23:BB:994:C:O2'	49:BR:10:LYS:HE2	2.19	0.42
44:BQ:90:ASP:C	49:BR:11:GLN:HE22	2.22	0.42
46:BU:84:PHE:HB3	46:BU:91:LYS:HG3	2.01	0.42
53:B6:129:ILE:HA	53:B6:132:ILE:CD1	2.37	0.42
25:BC:90:ILE:HD11	25:BC:102:TYR:HB3	2.00	0.42
1:AA:429:U:H3'	3:AD:8:LEU:CD2	2.45	0.42
3:AD:30:LYS:N	3:AD:30:LYS:HD3	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1204:A:N1	23:BB:1241:A:N1	2.66	0.42
42:BN:52:ILE:HD13	42:BN:87:PHE:CE2	2.54	0.42
23:BB:2311:A:O2'	47:BF:84:ILE:HG21	2.19	0.42
12:CM:52:ILE:HD12	12:CM:55:LEU:CD1	2.49	0.42
1:AA:1278:G:H4'	1:AA:1279:G:H5'	2.01	0.42
23:BB:322:A:C2	23:BB:340:A:C6	3.06	0.42
23:BB:1458:U:O3'	23:BB:1459:G:O4'	2.37	0.42
40:DH:95:GLY:H	40:DH:98:ASP:HB2	1.83	0.42
1:CA:15:G:H2'	1:CA:16:A:C8	2.54	0.42
1:CA:1081:A:OP1	4:CE:22:LYS:HA	2.19	0.42
1:CA:1320:C:N4	18:CS:36:ARG:HE	2.16	0.42
1:AA:1314:C:H2'	1:AA:1315:U:H6	1.80	0.42
18:AS:36:ARG:H	18:AS:36:ARG:HG2	1.59	0.42
10:CK:86:LYS:HB2	10:CK:113:THR:HA	2.01	0.42
23:DB:137:U:O2	50:DT:1:MET:N	2.43	0.42
23:DB:2472:G:O6	23:DB:2476:A:H4'	2.19	0.42
11:CL:89:LEU:HD22	11:CL:89:LEU:N	2.34	0.42
39:DX:28:LEU:HB3	39:DX:43:LEU:HD21	2.01	0.42
45:BS:36:LEU:HB3	45:BS:48:LYS:HB2	2.00	0.42
53:D6:143:LEU:HA	53:D6:146:GLU:HG2	2.01	0.42
23:BB:26:G:H2'	23:BB:27:G:C1'	2.48	0.42
1:CA:1336:C:H4'	1:CA:1337:G:O5'	2.20	0.42
31:D0:41:HIS:O	31:D0:42:ILE:O	2.36	0.42
49:BR:38:VAL:HG22	49:BR:40:MET:H	1.84	0.42
1:AA:1390:U:O2'	1:AA:1391:U:H5'	2.19	0.42
28:DP:1:SER:H1	28:DP:4:ILE:HD12	1.84	0.42
44:DQ:9:ALA:O	44:DQ:11:ALA:N	2.52	0.42
23:BB:116:C:C2'	23:BB:117:G:H5'	2.50	0.42
23:BB:1439:A:C8	23:BB:1440:U:C6	3.08	0.42
23:BB:1444:G:H2'	23:BB:1445:G:C8	2.53	0.42
20:AB:147:LEU:O	20:AB:151:LYS:N	2.52	0.42
38:BM:46:ILE:CG1	38:BM:47:GLU:N	2.81	0.42
29:BE:42:GLY:O	29:BE:43:THR:O	2.38	0.42
40:DH:113:SER:C	40:DH:115:VAL:H	2.22	0.42
9:AJ:5:ARG:HD3	9:AJ:79:PRO:HG3	2.00	0.42
3:CD:196:GLU:O	3:CD:200:VAL:HG13	2.19	0.42
1:CA:958:A:C6	1:CA:959:A:N1	2.87	0.42
1:CA:554:A:H5'	11:CL:25:ALA:HB1	2.00	0.42
23:BB:560:C:H3'	23:BB:561:G:C8	2.54	0.42
15:AP:40:ASN:HD21	15:AP:43:ALA:CA	2.31	0.42
23:BB:1222:U:P	49:BR:90:ARG:HH12	2.42	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AG:104:VAL:HG12	6:AG:108:ARG:HD2	2.01	0.42
23:BB:2087:G:H2'	23:BB:2088:A:H8	1.84	0.42
35:BV:55:GLU:CD	35:BV:55:GLU:H	2.22	0.42
1:CA:1028:C:H2'	1:CA:1028:C:O2	2.18	0.42
1:CA:56:U:H2'	1:CA:57:G:H8	1.85	0.42
23:DB:1902:C:H4'	25:DC:241:LYS:O	2.19	0.42
1:AA:392:C:H2'	1:AA:393:A:C8	2.54	0.42
23:DB:520:G:O2'	23:DB:521:U:H5'	2.19	0.42
38:BM:69:PRO:HA	38:BM:94:ALA:CA	2.49	0.42
23:BB:1372:U:H2'	23:BB:1373:A:H8	1.84	0.42
1:CA:1143:G:O2'	1:CA:1144:G:H5'	2.19	0.42
9:CJ:80:THR:HG21	9:CJ:82:LYS:HZ1	1.84	0.42
23:DB:1948:G:C6	23:DB:1959:G:C6	3.08	0.42
23:DB:2689:U:H4'	23:DB:2690:U:OP2	2.19	0.42
1:CA:1308:U:H2'	1:CA:1309:G:H8	1.83	0.42
35:DV:49:ASN:ND2	35:DV:49:ASN:N	2.65	0.42
23:BB:1316:U:H2'	23:BB:1317:G:C8	2.54	0.42
23:BB:1745:A:O2'	23:BB:1746:A:H5'	2.19	0.42
23:DB:681:G:H2'	23:DB:682:G:H8	1.84	0.42
23:BB:2812:G:H2'	23:BB:2813:A:O4'	2.19	0.42
50:BT:14:PRO:HA	50:BT:32:LEU:CB	2.49	0.42
4:AE:55:VAL:N	4:AE:56:PRO:CD	2.82	0.42
23:DB:1848:A:H2'	23:DB:1849:G:H8	1.84	0.42
23:BB:234:U:O2'	23:BB:235:U:H5'	2.19	0.42
1:AA:665:A:H2'	1:AA:725:G:N2	2.34	0.42
1:CA:106:C:H2'	1:CA:107:G:C8	2.54	0.42
23:DB:1952:A:C6	23:DB:1953:A:N1	2.88	0.42
42:BN:9:GLN:C	42:BN:17:ARG:HD3	2.38	0.42
23:DB:110:G:O2'	23:DB:111:A:H5'	2.19	0.42
1:CA:1354:U:H2'	1:CA:1355:G:C8	2.53	0.42
23:BB:1664:A:H1'	23:BB:2726:A:C2	2.55	0.42
1:AA:1426:G:H2'	1:AA:1427:C:H6	1.84	0.42
23:BB:1891:G:H2'	23:BB:1892:C:H6	1.85	0.42
23:BB:2408:U:O2'	23:BB:2409:G:H5'	2.20	0.42
43:DO:15:ARG:HH21	43:DO:95:SER:HB3	1.84	0.42
1:AA:538:G:OP2	11:AL:111:GLN:HB2	2.19	0.42
23:BB:158:U:H2'	23:BB:159:G:O4'	2.18	0.42
44:BQ:54:ARG:HB3	44:BQ:58:GLN:HE22	1.85	0.42
26:BD:18:ASP:OD1	26:BD:19:GLY:N	2.52	0.42
9:CJ:6:ILE:O	9:CJ:75:ASP:HA	2.19	0.42
49:DR:57:GLY:HA2	49:DR:102:SER:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:820:A:H2'	23:DB:821:A:O4'	2.19	0.42
53:B6:179:LYS:HA	53:B6:179:LYS:HD3	1.90	0.42
36:B2:12:ARG:NH2	36:B2:12:ARG:HG3	2.34	0.42
23:DB:2110:G:H8	23:DB:2110:G:OP2	2.02	0.42
23:DB:2873:A:O4'	42:DN:6:SER:HB3	2.20	0.42
52:DW:28:GLU:HG3	52:DW:29:SER:H	1.84	0.42
25:DC:102:TYR:O	25:DC:103:ILE:HG13	2.19	0.42
25:DC:23:LEU:HD21	25:DC:89:ASN:OD1	2.19	0.42
48:BG:88:LEU:O	48:BG:88:LEU:HD12	2.19	0.42
23:DB:2751:G:OP2	48:DG:2:ARG:HD2	2.19	0.42
48:DG:89:VAL:HG12	48:DG:90:GLY:H	1.84	0.42
40:BH:143:ILE:O	40:BH:144:VAL:HG23	2.19	0.42
8:CI:37:TYR:HE2	8:CI:74:GLN:HG2	1.85	0.42
1:CA:1287:A:H2'	1:CA:1288:A:H8	1.83	0.42
41:BJ:16:TYR:CD2	41:BJ:140:LEU:HD12	2.54	0.42
8:AI:43:ALA:O	8:AI:46:VAL:HG22	2.19	0.42
50:BT:1:MET:HG3	50:BT:2:ILE:N	2.32	0.42
47:DF:42:ALA:O	47:DF:44:ALA:N	2.52	0.42
47:DF:45:ASP:C	47:DF:47:LYS:H	2.21	0.42
47:DF:78:ILE:HA	47:DF:79:ARG:HE	1.84	0.42
1:AA:598:U:H4'	7:AH:85:TYR:CD2	2.55	0.42
23:DB:2733:A:C3'	23:DB:2733:A:C8	3.01	0.42
1:CA:981:U:H2'	1:CA:982:U:C5	2.54	0.42
41:BJ:44:TYR:CZ	44:BQ:59:LEU:HD11	2.54	0.42
23:BB:2307:G:O6	47:BF:40:GLY:HA3	2.19	0.42
1:AA:864:A:H2'	1:AA:865:A:C8	2.54	0.42
47:DF:116:LEU:HB3	47:DF:176:PHE:HA	2.02	0.42
10:AK:109:ILE:HB	21:AU:16:ARG:HH12	1.84	0.42
45:BS:76:VAL:HA	45:BS:102:HIS:O	2.19	0.42
12:AM:39:ALA:HB3	12:AM:42:VAL:HG13	2.00	0.42
12:AM:44:ILE:HD12	12:AM:45:SER:N	2.34	0.42
53:D6:171:LYS:O	53:D6:174:GLN:HB3	2.19	0.42
23:BB:662:G:O3'	37:BL:16:GLY:HA2	2.19	0.42
23:DB:819:A:N6	23:DB:1189:A:H1'	2.35	0.42
23:BB:2267:A:C8	23:BB:2267:A:C4'	3.02	0.42
13:CN:30:ILE:O	13:CN:32:ASP:N	2.47	0.42
22:DA:75:G:H2'	22:DA:76:G:C8	2.55	0.42
27:BK:19:VAL:HG12	27:BK:43:ILE:HA	2.00	0.42
26:DD:169:ARG:O	26:DD:170:VAL:O	2.37	0.42
45:DS:59:GLU:OE2	45:DS:66:ILE:HG23	2.19	0.42
11:CL:28:GLN:HA	11:CL:81:ILE:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BR:16:GLU:HG2	49:BR:101:ILE:CG1	2.48	0.42
27:DK:115:ILE:HG23	27:DK:116:ILE:H	1.84	0.42
49:DR:49:ILE:HB	49:DR:53:PHE:O	2.20	0.42
53:B6:114:LEU:CG	53:B6:183:ILE:HD11	2.50	0.42
1:AA:83:C:O3'	1:AA:84:U:C6	2.73	0.42
36:B2:10:LEU:O	36:B2:14:ARG:HG2	2.19	0.42
34:D3:23:HIS:O	34:D3:46:LYS:HB3	2.18	0.42
1:AA:1343:G:H1'	8:AI:122:ARG:NH1	2.34	0.42
45:DS:43:ALA:O	45:DS:46:LEU:HB2	2.19	0.42
45:DS:73:LYS:HD2	45:DS:73:LYS:HA	1.80	0.42
1:CA:1057:G:H2'	1:CA:1058:G:O4'	2.19	0.42
1:CA:1103:C:H5''	20:CB:96:LEU:HD12	2.00	0.42
1:AA:1057:G:H5''	2:AC:153:SER:CB	2.49	0.42
23:DB:558:U:OP1	41:DJ:114:LEU:N	2.52	0.42
23:BB:2723:C:H5''	42:BN:1:MET:CE	2.49	0.42
27:BK:87:LEU:HD12	27:BK:92:GLU:CA	2.49	0.42
50:BT:81:LYS:HG3	50:BT:82:LYS:N	2.34	0.42
41:BJ:110:PRO:O	41:BJ:115:GLY:HA3	2.19	0.42
23:BB:1584:U:H3'	23:BB:1585:C:H5'	2.00	0.42
23:BB:2347:C:O2'	33:B1:20:TYR:OH	2.34	0.42
6:AG:46:LEU:HG	6:AG:57:GLU:HB3	2.02	0.42
29:DE:48:THR:C	29:DE:50:ALA:N	2.72	0.42
1:CA:620:C:O2	3:CD:131:ILE:HG21	2.18	0.42
28:BP:31:VAL:HG13	28:BP:32:VAL:N	2.34	0.42
23:BB:1432:G:O2'	23:BB:1433:A:H5'	2.19	0.42
30:BY:47:ILE:O	30:BY:48:ASN:C	2.58	0.42
23:DB:1432:G:O2'	23:DB:1433:A:H5'	2.20	0.42
12:CM:28:ARG:CZ	12:CM:62:PHE:HB2	2.49	0.42
39:BX:52:ARG:O	39:BX:55:THR:HB	2.19	0.42
23:DB:1811:G:O2'	23:DB:1812:U:H5'	2.18	0.42
1:AA:366:A:O2'	1:AA:367:U:P	2.78	0.42
22:DA:116:G:H4'	43:DO:54:VAL:HG22	2.01	0.42
43:DO:6:ALA:CB	43:DO:10:ARG:HH11	2.33	0.42
2:AC:70:ALA:HA	2:AC:105:VAL:HG22	2.01	0.42
22:BA:7:G:O2'	22:BA:8:C:H5'	2.19	0.42
23:DB:1930:G:H22	23:DB:1969:A:P	2.41	0.42
43:DO:83:LEU:HA	43:DO:83:LEU:HD12	1.83	0.42
22:BA:94:A:C2'	22:BA:95:U:H5'	2.50	0.42
23:BB:325:G:H2'	23:BB:326:G:C8	2.54	0.42
1:AA:584:G:H2'	1:AA:585:G:H8	1.84	0.42
23:BB:2815:C:H2'	23:BB:2816:G:C8	2.51	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DO:40:ILE:CG2	43:DO:44:GLY:HA2	2.49	0.42
21:AU:9:GLU:OE2	2:CC:108:PRO:HG3	2.20	0.42
23:DB:577:G:O2'	23:DB:1254:A:OP1	2.36	0.42
41:DJ:101:ILE:O	41:DJ:105:VAL:HG22	2.20	0.42
53:D6:149:LEU:HB2	53:D6:154:THR:HG22	2.02	0.42
1:AA:327:A:H1'	1:AA:329:A:O4'	2.18	0.42
23:DB:39:G:H2'	23:DB:40:U:C6	2.54	0.42
3:CD:147:LYS:H	3:CD:147:LYS:HG3	1.66	0.42
36:D2:13:ASN:C	36:D2:15:SER:H	2.21	0.42
3:CD:19:PHE:HB3	3:CD:22:SER:OG	2.19	0.42
33:B1:29:LYS:HE2	33:B1:31:GLU:OE1	2.20	0.42
47:DF:122:ASP:HB3	47:DF:123:GLY:H	1.65	0.42
23:BB:738:G:H2'	23:BB:739:A:C8	2.53	0.42
23:DB:67:U:H2'	23:DB:68:G:C8	2.54	0.42
37:BL:118:THR:HA	37:BL:119:PRO:HD3	1.91	0.42
6:AG:16:LYS:HD3	6:AG:17:PHE:CE1	2.54	0.42
48:DG:5:LYS:HE2	48:DG:61:TRP:CH2	2.54	0.42
1:CA:93:U:H2'	1:CA:94:G:H5'	2.00	0.42
1:CA:160:A:H1'	1:CA:344:A:C5	2.54	0.42
23:DB:2256:G:H2'	23:DB:2257:U:C6	2.54	0.42
6:AG:10:LYS:HA	6:AG:10:LYS:NZ	2.33	0.42
1:CA:1229:A:H2'	1:CA:1230:C:H6	1.84	0.42
23:BB:1360:G:H2'	23:BB:1361:G:C5'	2.49	0.42
2:AC:50:SER:O	2:AC:114:LEU:HD21	2.20	0.42
23:BB:2256:G:H2'	23:BB:2257:U:C6	2.54	0.42
23:BB:1336:A:H3'	23:BB:1337:G:H8	1.84	0.42
40:BH:40:THR:N	40:BH:43:ASN:ND2	2.68	0.42
23:DB:1322:A:H2'	23:DB:1323:C:H5'	2.00	0.42
23:DB:1238:G:O2'	23:DB:1239:G:H5'	2.19	0.42
23:DB:800:A:H4'	23:DB:801:G:O5'	2.19	0.42
20:AB:80:LYS:HE3	20:AB:80:LYS:HB2	1.83	0.42
22:DA:67:G:O2'	22:DA:68:C:H5'	2.19	0.42
2:CC:178:ARG:CG	2:CC:206:ILE:HA	2.49	0.42
5:AF:69:GLU:O	5:AF:73:GLU:HG3	2.18	0.42
25:DC:140:VAL:CG2	25:DC:163:ILE:HG12	2.49	0.42
25:DC:169:ALA:O	25:DC:185:ALA:HB3	2.18	0.42
21:CU:42:THR:CB	21:CU:46:ARG:HH21	2.32	0.42
22:BA:42:C:C6	47:BF:65:LEU:HD22	2.55	0.42
48:DG:47:ASN:CG	48:DG:48:THR:N	2.73	0.42
41:BJ:55:ILE:CG2	41:BJ:123:LYS:HB2	2.49	0.42
8:AI:55:ASP:CB	8:AI:59:LYS:HG3	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DV:4:ILE:N	35:DV:62:THR:O	2.52	0.42
26:DD:54:ALA:N	26:DD:76:GLY:HA2	2.34	0.42
7:AH:86:LYS:HG3	7:AH:124:ILE:HD11	2.01	0.42
25:DC:114:GLN:HE21	25:DC:114:GLN:HB3	1.61	0.42
51:BZ:77:LYS:CD	51:BZ:78:TYR:H	2.30	0.42
23:BB:335:C:O2'	23:BB:336:C:H5'	2.19	0.42
46:BU:84:PHE:O	46:BU:85:ARG:CB	2.53	0.42
46:BU:5:ARG:HH22	46:BU:93:ARG:HD3	1.85	0.42
47:BF:4:HIS:O	47:BF:7:TYR:HB3	2.19	0.42
29:BE:146:VAL:HG12	29:BE:147:LEU:N	2.34	0.42
1:AA:924:C:H5'	1:AA:1399:C:OP2	2.20	0.42
24:BI:37:PHE:HB2	24:BI:66:PHE:CZ	2.55	0.42
1:CA:19:A:OP1	4:CE:134:ASN:ND2	2.51	0.42
1:CA:865:A:C2	1:CA:918:A:H4'	2.54	0.42
18:AS:66:VAL:C	18:AS:68:HIS:H	2.22	0.42
1:AA:972:C:O2'	9:AJ:57:VAL:HA	2.19	0.42
50:DT:57:VAL:O	50:DT:85:VAL:O	2.37	0.42
50:DT:29:THR:H	50:DT:91:GLN:NE2	2.17	0.42
25:DC:203:VAL:O	25:DC:204:LEU:HB2	2.20	0.42
53:D6:173:ASP:O	53:D6:174:GLN:C	2.58	0.42
37:BL:30:THR:O	37:BL:31:GLY:C	2.58	0.42
38:DM:30:SER:OG	38:DM:106:ASP:HA	2.20	0.42
13:AN:50:LEU:H	13:AN:51:PRO:HD2	1.84	0.42
23:DB:2848:G:N3	23:DB:2849:U:H5	2.18	0.42
28:DP:99:LEU:HD22	28:DP:99:LEU:HA	1.89	0.42
13:CN:27:LYS:O	13:CN:32:ASP:HB2	2.19	0.42
1:AA:1251:A:H1'	1:AA:1370:G:O4'	2.20	0.42
29:DE:166:LYS:O	29:DE:167:VAL:HB	2.18	0.42
1:CA:1413:A:O2'	1:CA:1414:U:H5'	2.19	0.42
40:BH:141:LYS:N	40:BH:141:LYS:CD	2.83	0.42
35:BV:77:VAL:HG23	35:BV:89:ILE:CG2	2.50	0.42
1:CA:313:A:O2'	1:CA:314:C:H5'	2.19	0.42
1:AA:842:U:H4'	1:AA:846:G:C2	2.54	0.42
26:DD:152:PRO:C	26:DD:154:LYS:H	2.22	0.42
23:BB:1729:U:H2'	23:BB:1730:C:H5'	2.01	0.42
44:DQ:7:VAL:HG23	44:DQ:8:ILE:N	2.35	0.42
44:DQ:8:ILE:HG23	44:DQ:9:ALA:N	2.34	0.42
26:BD:152:PRO:C	26:BD:154:LYS:H	2.23	0.42
2:CC:156:LEU:HD12	2:CC:163:ARG:HG3	2.00	0.42
23:DB:193:U:O3'	23:DB:803:U:H4'	2.19	0.42
1:AA:974:A:H8	1:AA:974:A:OP1	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BV:42:LEU:CD2	35:BV:42:LEU:H	2.20	0.42
3:AD:100:VAL:HG21	3:AD:136:VAL:CG2	2.49	0.42
11:AL:115:LYS:O	11:AL:116:TYR:HB2	2.19	0.42
8:CI:9:GLY:CA	8:CI:80:HIS:HB3	2.49	0.42
23:BB:118:A:H5'	23:BB:119:A:H8	1.84	0.42
23:DB:2842:G:O2'	23:DB:2843:G:H5'	2.19	0.42
23:BB:2228:G:H2'	23:BB:2229:U:C6	2.55	0.42
23:DB:1353:A:C8	23:DB:1378:A:N6	2.88	0.42
19:CT:38:ILE:HG13	19:CT:82:ILE:HG22	2.02	0.42
23:DB:931:U:O4	23:DB:1166:G:N2	2.53	0.42
23:DB:2199:A:H5''	23:DB:2200:C:H5	1.85	0.42
1:AA:676:A:O2'	1:AA:677:U:H5'	2.19	0.42
1:AA:373:A:C1'	1:AA:481:G:H1'	2.49	0.42
28:DP:105:LYS:HA	28:DP:108:ARG:NE	2.35	0.42
23:BB:2276:G:O2'	23:BB:2277:G:H5'	2.20	0.42
26:BD:125:TRP:NE1	26:BD:161:MET:N	2.67	0.42
23:DB:2757:A:N3	23:DB:2757:A:H2'	2.34	0.42
26:DD:125:TRP:HE1	26:DD:161:MET:H	1.68	0.42
2:AC:19:SER:HB3	2:AC:21:TRP:HE1	1.84	0.42
22:BA:39:A:H2	22:BA:46:A:N6	2.15	0.42
1:CA:591:U:OP2	7:CH:30:LYS:HD2	2.20	0.42
23:DB:2636:C:O5'	26:DD:81:GLU:HB2	2.19	0.42
23:BB:1856:U:C2'	23:BB:1857:G:H5'	2.50	0.42
23:BB:2730:C:H4'	26:BD:174:SER:HB3	2.01	0.42
24:BI:14:ALA:CB	24:BI:50:LYS:HA	2.49	0.42
23:BB:2301:C:H2'	23:BB:2302:U:H6	1.85	0.42
23:DB:2729:G:H2'	23:DB:2730:C:H6	1.83	0.42
1:CA:469:C:O2'	1:CA:470:C:H5'	2.20	0.42
23:BB:1275:A:H2'	23:BB:1276:A:O4'	2.20	0.42
26:BD:40:LEU:HA	26:BD:45:TYR:N	2.35	0.42
23:DB:79:C:HO2'	23:DB:346:A:C1'	2.32	0.42
23:DB:1835:G:H2'	23:DB:1836:C:H6	1.83	0.42
23:DB:2322:A:N6	23:DB:2333:A:H62	2.17	0.42
23:BB:2655:G:H1'	23:BB:2656:U:H5	1.84	0.42
23:DB:245:G:O2'	23:DB:246:C:H5'	2.19	0.42
23:DB:516:C:H2'	23:DB:517:C:C6	2.54	0.42
23:DB:438:G:H2'	23:DB:439:A:C8	2.55	0.42
14:CO:58:ARG:HH21	14:CO:62:GLN:HE22	1.67	0.42
23:BB:1435:G:H2'	23:BB:1436:G:C8	2.54	0.42
23:DB:2081:U:H2'	23:DB:2082:A:H8	1.85	0.42
1:CA:1241:G:H2'	1:CA:1242:G:H8	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1830:C:O2'	23:BB:1831:G:H5'	2.19	0.42
1:CA:1420:U:H2'	1:CA:1421:G:C8	2.55	0.42
23:BB:1449:G:O2'	23:BB:1450:G:H5'	2.19	0.42
53:B6:11:ARG:O	53:B6:15:GLN:HB2	2.19	0.42
23:DB:2838:G:H2'	23:DB:2839:G:H8	1.84	0.42
11:AL:65:TYR:HB3	11:AL:95:HIS:CD2	2.54	0.42
23:BB:1207:C:H2'	23:BB:1208:C:H6	1.83	0.42
3:CD:202:LEU:O	3:CD:202:LEU:HD12	2.20	0.42
15:AP:48:GLU:HG3	15:AP:49:GLY:H	1.83	0.42
24:BI:15:GLY:O	24:BI:16:MET:HB2	2.19	0.42
16:AQ:47:ASP:OD2	16:AQ:51:GLU:HG2	2.19	0.42
2:CC:125:ARG:HB3	2:CC:127:VAL:HG13	2.01	0.42
52:BW:59:PHE:CD2	52:BW:60:ALA:N	2.88	0.42
25:DC:121:ALA:HB3	25:DC:129:LEU:HD11	2.02	0.42
48:BG:106:LEU:O	48:BG:108:PHE:N	2.47	0.42
37:DL:121:THR:HG22	37:DL:141:LYS:CB	2.50	0.42
20:AB:187:ASP:O	20:AB:189:ASN:N	2.53	0.42
53:D6:84:ARG:HD2	53:D6:92:PRO:CG	2.50	0.42
53:B6:65:THR:CG2	53:B6:66:LEU:N	2.82	0.42
40:BH:80:ILE:CD1	40:BH:144:VAL:HG22	2.40	0.42
40:BH:82:SER:O	40:BH:92:GLY:N	2.50	0.42
8:CI:29:ILE:HG12	8:CI:64:ILE:HB	2.01	0.42
8:CI:78:ILE:O	8:CI:82:ILE:HG13	2.20	0.42
20:CB:202:ASN:HD22	20:CB:204:ASP:H	1.62	0.42
26:DD:4:LEU:HD12	26:DD:32:ASN:CB	2.50	0.42
47:DF:79:ARG:NE	47:DF:79:ARG:N	2.68	0.42
23:DB:2359:C:O3'	34:D3:50:SER:HB3	2.19	0.42
30:DY:47:ILE:O	30:DY:48:ASN:C	2.57	0.42
3:CD:160:LEU:HA	3:CD:163:GLN:CG	2.50	0.42
3:CD:25:ARG:HB2	3:CD:25:ARG:NH1	2.33	0.42
23:DB:1062:G:H2'	23:DB:1063:G:H8	1.84	0.42
1:AA:921:U:H2'	1:AA:922:G:O4'	2.20	0.42
12:CM:109:LYS:HB2	12:CM:113:LYS:NZ	2.34	0.42
1:CA:1221:G:OP1	18:CS:35:ARG:HD2	2.20	0.42
1:AA:1270:G:H4'	1:AA:1313:U:O2'	2.20	0.42
11:AL:49:ARG:HH12	11:AL:88:ASP:HB2	1.83	0.42
40:BH:106:ALA:O	40:BH:108:VAL:N	2.53	0.42
23:DB:850:U:O3'	30:DY:22:THR:HG22	2.20	0.42
1:AA:1250:A:H2	1:AA:1370:G:H1'	1.83	0.42
15:CP:52:LEU:CD2	15:CP:75:ILE:HA	2.50	0.42
45:BS:32:ALA:O	45:BS:36:LEU:HD23	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BS:59:GLU:OE2	45:BS:66:ILE:HG23	2.20	0.42
23:BB:729:G:OP1	25:BC:12:ARG:HB2	2.19	0.42
49:BR:101:ILE:HG22	49:BR:101:ILE:O	2.20	0.42
49:DR:39:LEU:O	49:DR:49:ILE:HG12	2.20	0.42
24:DI:105:LEU:HD11	24:DI:139:VAL:CG2	2.44	0.42
26:BD:148:GLN:O	26:BD:149:ASN:CB	2.67	0.42
20:AB:103:TRP:CZ3	20:AB:107:ARG:HD2	2.55	0.42
48:DG:115:GLN:CD	48:DG:115:GLN:N	2.62	0.42
23:DB:2102:G:O2'	23:DB:2103:C:H5'	2.19	0.42
11:AL:28:GLN:HA	11:AL:81:ILE:O	2.19	0.42
1:CA:1299:A:H2'	1:CA:1301:U:C1'	2.44	0.42
1:AA:108:G:H5'	1:AA:109:A:C5'	2.45	0.42
5:CF:40:GLU:OE1	5:CF:100:SER:HB2	2.20	0.42
23:BB:182:A:H2'	23:BB:183:C:H6	1.84	0.42
41:DJ:120:ARG:HB3	41:DJ:120:ARG:HE	1.69	0.42
5:AF:40:GLU:OE1	5:AF:100:SER:HB2	2.20	0.42
23:DB:2846:G:OP1	28:DP:52:ARG:NH1	2.52	0.42
26:BD:113:SER:OG	26:BD:114:LYS:N	2.51	0.42
3:AD:96:ARG:O	3:AD:99:ASN:HB3	2.19	0.42
23:DB:322:A:H5'	23:DB:340:A:C1'	2.48	0.42
7:AH:4:ASP:OD1	7:AH:7:ALA:HB2	2.19	0.42
1:CA:1121:U:H2'	1:CA:1122:U:C6	2.54	0.42
29:BE:48:THR:N	29:BE:51:GLU:HG3	2.34	0.42
23:DB:647:G:H2'	23:DB:648:G:C8	2.54	0.42
34:B3:61:LEU:N	34:B3:62:PRO:HD3	2.34	0.42
28:BP:50:ARG:HB3	28:BP:57:ALA:H	1.84	0.42
23:DB:1591:A:H2'	23:DB:1592:C:O4'	2.19	0.42
23:BB:2231:U:H2'	23:BB:2232:C:H6	1.83	0.42
1:AA:1161:C:O2'	1:AA:1162:C:H5'	2.20	0.42
23:DB:1041:G:C2	23:DB:1042:G:N7	2.88	0.42
1:AA:1225:A:OP1	12:AM:100:ARG:HA	2.20	0.42
23:DB:12:U:H1'	23:DB:2627:G:OP1	2.20	0.42
42:DN:13:ASN:C	42:DN:15:SER:H	2.22	0.42
1:CA:373:A:H5'	1:CA:373:A:H8	1.84	0.42
23:DB:2578:G:H2'	23:DB:2579:C:H6	1.84	0.42
23:BB:1949:G:H2'	23:BB:1950:G:C8	2.54	0.42
1:CA:389:A:C6	1:CA:390:U:H1'	2.54	0.42
41:DJ:13:ARG:HB3	41:DJ:53:TYR:CD2	2.54	0.42
37:BL:23:ILE:H	37:BL:23:ILE:CD1	2.30	0.42
41:BJ:41:LYS:O	44:BQ:66:ALA:HB1	2.19	0.42
48:DG:137:LYS:O	48:DG:140:ILE:HG13	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2250:G:O5'	23:BB:2250:G:H8	2.03	0.42
1:AA:1152:A:H2'	1:AA:1153:G:C8	2.54	0.42
23:DB:576:U:H2'	23:DB:577:G:H8	1.84	0.42
19:CT:31:ILE:O	19:CT:34:VAL:HG23	2.20	0.42
22:DA:93:C:H2'	22:DA:94:A:H8	1.84	0.42
37:DL:135:ILE:CG2	37:DL:136:GLU:N	2.81	0.42
23:BB:2299:U:H2'	23:BB:2300:C:C6	2.55	0.42
1:CA:1015:G:H2'	1:CA:1016:A:C8	2.53	0.42
23:DB:428:A:O2'	23:DB:429:A:H5'	2.18	0.42
23:BB:1252:G:H1'	44:BQ:32:ARG:NH2	2.34	0.42
48:DG:154:GLU:O	48:DG:156:TYR:N	2.52	0.42
23:DB:349:U:O2	23:DB:349:U:H2'	2.19	0.42
23:BB:1675:C:H2'	23:BB:1676:A:O4'	2.19	0.42
49:BR:15:SER:OG	49:BR:18:GLN:HG2	2.20	0.42
23:DB:840:C:O2'	23:DB:841:G:H5'	2.20	0.42
23:DB:1370:C:H2'	23:DB:1371:G:O4'	2.20	0.42
23:DB:797:G:OP2	29:DE:57:LYS:HB2	2.20	0.42
23:DB:619:G:H3'	23:DB:620:G:H21	1.85	0.42
1:AA:106:C:HO2'	1:AA:107:G:H5'	1.85	0.42
1:CA:655:A:H2'	1:CA:656:G:O4'	2.20	0.42
3:CD:43:ARG:NH1	3:CD:43:ARG:HB3	2.34	0.42
23:BB:769:U:H2'	23:BB:770:G:H8	1.85	0.42
1:CA:1229:A:OP2	12:CM:112:ARG:HD2	2.19	0.42
23:BB:103:A:H2'	23:BB:104:A:C8	2.55	0.42
26:BD:2:ILE:H	26:BD:2:ILE:HG13	1.73	0.42
1:CA:515:G:O2'	1:CA:516:U:H5'	2.19	0.42
1:CA:1429:A:O2'	1:CA:1430:A:H5'	2.20	0.42
1:AA:1159:U:O4'	1:AA:1182:G:N2	2.53	0.42
23:BB:1908:C:O2'	23:BB:1909:C:H5'	2.19	0.42
1:AA:63:C:H2'	1:AA:64:G:H5'	2.02	0.42
10:AK:101:ALA:C	10:AK:103:GLY:H	2.23	0.42
23:BB:586:A:H5'	29:BE:84:THR:OG1	2.19	0.42
31:D0:56:LYS:O	31:D0:56:LYS:HD3	2.20	0.42
23:DB:1107:G:O2'	23:DB:1108:U:H5'	2.18	0.42
23:DB:2234:G:O2'	23:DB:2235:G:H5'	2.19	0.42
28:BP:48:ALA:HB3	28:BP:59:THR:CB	2.50	0.42
21:AU:33:ARG:NE	21:AU:34:ARG:HG2	2.34	0.42
23:DB:2355:G:H4'	52:DW:20:LEU:HD13	2.00	0.42
23:DB:2354:C:H2'	23:DB:2355:G:H8	1.83	0.42
25:DC:120:ASP:O	25:DC:121:ALA:C	2.58	0.42
48:BG:91:VAL:O	48:BG:93:TYR:N	2.51	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:31:GLU:O	47:BF:32:LYS:O	2.38	0.42
48:DG:9:VAL:N	48:DG:48:THR:HB	2.34	0.42
52:DW:50:VAL:HG23	52:DW:61:LYS:CE	2.50	0.42
8:CI:56:MET:C	8:CI:58:GLU:N	2.73	0.42
8:AI:93:LEU:HD13	8:AI:97:LEU:HD11	2.02	0.42
35:BV:93:ARG:HH11	35:BV:93:ARG:HG3	1.84	0.42
29:DE:60:TRP:HB3	29:DE:61:ARG:H	1.42	0.42
50:BT:55:VAL:HG22	50:BT:87:LEU:CD2	2.50	0.42
23:BB:77:G:O2'	23:BB:78:U:H5'	2.20	0.42
3:AD:160:LEU:HD23	3:AD:164:ARG:HH21	1.85	0.42
42:BN:81:ASN:O	42:BN:85:PRO:HD2	2.19	0.42
24:DI:112:LYS:HB2	24:DI:116:MET:SD	2.60	0.42
47:BF:79:ARG:NE	47:BF:79:ARG:N	2.67	0.42
1:AA:1277:C:H1'	1:AA:1282:C:C2	2.55	0.42
46:DU:73:ASN:HD22	46:DU:73:ASN:N	2.17	0.42
47:BF:52:ALA:HA	47:BF:55:ASP:HB2	2.01	0.42
23:DB:1169:A:H2'	23:DB:1170:C:H6	1.85	0.42
1:CA:955:U:H1'	1:CA:1227:A:H62	1.84	0.42
4:CE:131:ASN:HD22	4:CE:134:ASN:H	1.68	0.42
4:CE:136:VAL:HG13	4:CE:137:ARG:H	1.81	0.42
18:CS:43:MET:O	18:CS:61:VAL:HB	2.20	0.42
42:DN:101:GLY:HA2	42:DN:109:PRO:HA	2.01	0.42
23:DB:668:A:H2'	23:DB:670:A:H62	1.85	0.42
12:AM:79:LEU:HA	12:AM:82:LEU:HB2	2.02	0.42
29:BE:33:VAL:HA	29:BE:36:ALA:HB3	2.00	0.42
46:BU:71:ILE:HD11	46:BU:81:ARG:O	2.19	0.42
37:DL:19:LEU:HD23	37:DL:31:GLY:O	2.20	0.42
23:DB:850:U:O2'	30:DY:22:THR:HA	2.19	0.42
48:BG:152:ARG:HG3	48:BG:153:PRO:HD2	2.01	0.42
31:D0:37:HIS:CD2	31:D0:43:THR:HG22	2.55	0.42
44:BQ:105:PHE:HA	44:BQ:108:LEU:CD1	2.49	0.42
49:BR:16:GLU:HG2	49:BR:101:ILE:CB	2.50	0.42
26:BD:10:GLY:O	26:BD:11:MET:HB2	2.19	0.42
1:CA:1390:U:O2'	1:CA:1391:U:H5'	2.20	0.42
20:CB:161:PHE:HA	20:CB:183:PHE:O	2.19	0.42
20:CB:67:LEU:HD22	20:CB:91:VAL:HG23	2.02	0.42
23:BB:116:C:N4	23:BB:117:G:C6	2.88	0.42
20:CB:148:GLY:O	20:CB:151:LYS:HG2	2.19	0.42
1:CA:999:C:H2'	1:CA:1000:A:H8	1.84	0.42
49:DR:63:VAL:O	49:DR:63:VAL:HG23	2.20	0.42
37:BL:100:ILE:O	37:BL:100:ILE:HG12	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DE:157:LEU:HG	29:DE:169:VAL:HG11	2.02	0.42
23:DB:62:U:H2'	23:DB:63:A:H5'	1.98	0.42
46:DU:24:VAL:HA	46:DU:35:VAL:HA	2.01	0.42
31:D0:30:ASP:HB3	31:D0:33:SER:O	2.19	0.42
23:DB:188:G:OP1	51:DZ:14:THR:HG23	2.20	0.42
23:BB:2747:G:H8	23:BB:2747:G:O5'	2.03	0.42
42:BN:92:GLY:HA2	42:BN:94:TYR:CZ	2.54	0.42
7:CH:66:GLN:HB3	7:CH:67:GLY:H	1.74	0.42
29:DE:41:GLN:O	29:DE:42:GLY:C	2.58	0.42
39:DX:5:GLU:OE2	39:DX:5:GLU:HA	2.19	0.42
23:BB:1998:A:H2'	23:BB:1999:C:C6	2.52	0.42
23:DB:703:U:H2'	23:DB:704:G:O4'	2.19	0.42
49:DR:2:TYR:HB2	49:DR:42:ALA:CB	2.48	0.42
41:BJ:101:ILE:O	41:BJ:105:VAL:HG22	2.19	0.42
1:CA:366:A:O2'	1:CA:367:U:P	2.77	0.42
1:AA:1511:G:O2'	1:AA:1512:U:H5'	2.18	0.42
2:AC:105:VAL:HG23	2:AC:105:VAL:O	2.20	0.42
1:AA:1028:C:H2'	1:AA:1028:C:O2	2.19	0.42
1:CA:1307:U:H2'	1:CA:1308:U:O4'	2.20	0.42
1:CA:1127:G:H5'	1:CA:1280:A:O2'	2.20	0.42
1:AA:835:U:O2'	1:AA:836:G:H5'	2.20	0.42
23:DB:754:U:H2'	23:DB:755:U:H6	1.84	0.42
3:AD:16:THR:CG2	3:AD:17:ASP:N	2.83	0.42
23:DB:2803:G:O2'	23:DB:2804:U:H5'	2.20	0.42
14:AO:36:ILE:HD11	14:AO:59:MET:HB2	2.01	0.42
23:BB:2553:G:H2'	23:BB:2554:U:H4'	2.00	0.42
26:BD:70:LYS:HD3	26:BD:70:LYS:C	2.39	0.42
1:CA:766:A:H2'	1:CA:767:A:H8	1.84	0.42
1:CA:1508:A:H2'	1:CA:1509:C:H6	1.84	0.42
23:DB:40:U:H2'	23:DB:41:C:C6	2.55	0.42
46:DU:14:THR:O	46:DU:18:LYS:HA	2.19	0.42
23:DB:928:A:O2'	30:DY:37:ARG:HD3	2.20	0.42
1:AA:543:U:H2'	1:AA:544:G:H8	1.85	0.42
9:CJ:26:VAL:O	9:CJ:30:LYS:HG3	2.18	0.42
23:BB:552:U:H2'	23:BB:553:G:H8	1.84	0.42
10:CK:82:GLU:HG2	10:CK:108:ASN:HB2	2.02	0.42
23:DB:95:A:H1'	39:DX:40:SER:OG	2.19	0.42
1:AA:1481:U:H2'	1:AA:1482:G:C8	2.55	0.42
23:DB:1522:A:H4'	23:DB:1524:G:C8	2.55	0.42
1:AA:1404:C:H2'	1:AA:1405:G:C8	2.54	0.42
23:DB:1099:G:OP2	24:DI:2:LYS:O	2.37	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DT:4:GLU:OE2	50:DT:5:GLU:HG2	2.19	0.42
23:BB:20:C:O2'	23:BB:21:A:H5'	2.20	0.42
44:BQ:30:VAL:HG22	44:BQ:31:TYR:N	2.35	0.42
48:DG:10:VAL:HG13	48:DG:14:VAL:HB	2.01	0.42
37:BL:125:LEU:HB2	37:BL:143:GLU:OE2	2.19	0.42
26:BD:32:ASN:HD22	26:BD:50:VAL:HG21	1.85	0.42
53:D6:57:THR:O	53:D6:68:VAL:HA	2.20	0.42
44:DQ:73:ILE:HG13	44:DQ:74:SER:N	2.35	0.42
44:DQ:94:LEU:C	44:DQ:96:ASP:H	2.22	0.42
51:DZ:6:GLN:HE22	51:DZ:77:LYS:CE	2.32	0.42
51:DZ:77:LYS:CG	51:DZ:78:TYR:N	2.82	0.42
25:BC:128:THR:CG2	25:BC:190:THR:HG22	2.49	0.42
37:DL:78:ARG:NH2	37:DL:78:ARG:HB3	2.35	0.42
42:DN:39:PRO:C	42:DN:41:ALA:H	2.23	0.42
30:BY:11:SER:OG	30:BY:13:ILE:HG13	2.19	0.42
47:DF:137:PHE:O	47:DF:138:PRO:C	2.58	0.42
4:CE:33:THR:HG22	4:CE:51:LYS:HB3	2.02	0.42
13:AN:26:LEU:HD23	13:AN:27:LYS:N	2.35	0.42
23:DB:135:U:O2'	23:DB:136:G:H5'	2.20	0.42
23:DB:1789:A:O2'	23:DB:1790:C:H5'	2.20	0.42
53:D6:15:GLN:HB3	53:D6:16:LYS:NZ	2.35	0.42
29:BE:29:HIS:O	29:BE:32:VAL:HG22	2.19	0.42
11:CL:42:LYS:HD2	11:CL:43:LYS:HG2	2.02	0.42
15:AP:52:LEU:CD2	15:AP:75:ILE:HA	2.50	0.42
23:DB:851:C:H4'	30:DY:46:MET:HA	2.02	0.42
23:DB:2742:G:OP1	32:D4:36:ARG:HD3	2.20	0.42
23:BB:974:G:P	49:BR:78:ARG:HD3	2.60	0.42
23:BB:2547:A:H2'	23:BB:2548:U:H6	1.80	0.42
32:D4:3:VAL:HG23	32:D4:4:ARG:N	2.29	0.42
23:BB:1199:U:C5'	44:BQ:4:LYS:HD3	2.49	0.42
44:BQ:7:VAL:HG23	44:BQ:8:ILE:N	2.33	0.42
49:DR:101:ILE:HG22	49:DR:101:ILE:O	2.18	0.42
49:DR:38:VAL:O	49:DR:53:PHE:HB3	2.19	0.42
27:BK:98:ARG:C	27:BK:99:ILE:HD12	2.40	0.42
35:BV:30:ILE:HA	35:BV:91:PHE:O	2.19	0.42
1:AA:279:A:H5'	1:AA:281:G:H5'	2.01	0.42
36:D2:34:ARG:O	36:D2:38:GLY:N	2.53	0.42
23:BB:2743:U:H3'	23:BB:2744:G:H5''	2.01	0.42
23:BB:2653:U:H3'	23:BB:2654:A:H2'	2.01	0.42
45:DS:51:LEU:HD12	45:DS:105:VAL:HG11	2.01	0.42
45:DS:44:ALA:C	45:DS:46:LEU:N	2.72	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AJ:76:ILE:H	9:AJ:76:ILE:HG13	1.71	0.42
4:CE:104:ILE:HD11	4:CE:111:ARG:HA	2.02	0.42
1:AA:552:U:H2'	1:AA:553:A:H8	1.84	0.42
2:AC:129:PHE:CG	2:AC:130:ARG:N	2.88	0.42
23:DB:1372:U:H1'	23:DB:2214:C:C4	2.55	0.42
25:BC:30:ALA:O	25:BC:32:LEU:N	2.50	0.42
20:AB:161:PHE:HA	20:AB:183:PHE:O	2.19	0.42
39:BX:1:MET:HB3	39:BX:5:GLU:OE1	2.20	0.42
1:AA:167:A:H2'	1:AA:168:G:H8	1.85	0.42
1:CA:499:A:H1'	1:CA:500:G:C8	2.54	0.42
1:CA:503:C:O2'	1:CA:504:C:H5'	2.20	0.42
49:DR:19:THR:CB	49:DR:97:LYS:HA	2.48	0.42
23:DB:519:U:H2'	23:DB:520:G:H8	1.84	0.42
19:AT:43:LYS:HB3	19:AT:85:LEU:HD21	2.02	0.42
23:DB:543:G:N2	23:DB:545:U:H5'	2.35	0.42
20:AB:160:LEU:HD21	20:AB:182:VAL:HG22	2.01	0.42
23:BB:635:C:O2'	23:BB:636:G:H5'	2.19	0.42
6:AG:6:ILE:HB	6:AG:7:GLY:H	1.54	0.42
1:CA:880:C:O2'	1:CA:881:G:H5'	2.20	0.42
1:CA:1200:C:O5'	1:CA:1201:A:H3'	2.20	0.42
9:CJ:87:LEU:N	9:CJ:87:LEU:HD13	2.34	0.42
23:DB:2000:C:O2'	23:DB:2001:C:H5'	2.19	0.42
23:BB:1063:G:O2'	23:BB:1064:C:H5'	2.20	0.42
23:BB:816:C:O2'	23:BB:817:C:H5'	2.20	0.42
37:BL:136:GLU:HA	37:BL:140:GLY:N	2.35	0.42
23:BB:1683:U:H2'	23:BB:1684:G:H8	1.83	0.42
1:AA:130:A:H1'	1:AA:263:A:O2'	2.20	0.42
23:DB:325:G:H2'	23:DB:326:G:C8	2.55	0.42
1:CA:586:C:C5'	7:CH:81:GLY:HA2	2.48	0.42
5:CF:18:VAL:N	5:CF:19:PRO:HD2	2.35	0.42
29:BE:106:LYS:O	29:BE:110:SER:HB2	2.20	0.42
25:BC:221:GLY:O	25:BC:223:ALA:N	2.51	0.42
7:AH:29:SER:O	7:AH:30:LYS:C	2.58	0.42
37:BL:61:LEU:N	37:BL:61:LEU:HD12	2.35	0.42
23:BB:1720:U:C2'	23:BB:1721:G:H5'	2.49	0.42
38:DM:102:LEU:N	38:DM:102:LEU:HD22	2.35	0.42
4:CE:92:ARG:HB3	4:CE:92:ARG:NH1	2.35	0.42
23:DB:1397:U:H5''	23:DB:1398:C:H5	1.85	0.42
1:CA:103:U:H1'	1:CA:171:A:N1	2.35	0.42
23:BB:1846:G:N2	23:BB:1848:A:N6	2.68	0.42
23:DB:77:G:H2'	23:DB:78:U:H6	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1748:C:H2'	23:DB:1749:A:C8	2.55	0.42
23:DB:337:C:H2'	23:DB:338:G:O4'	2.20	0.42
6:CG:120:ALA:HA	6:CG:123:LEU:HD12	2.02	0.42
9:AJ:21:ALA:O	9:AJ:25:ILE:HG13	2.19	0.42
23:BB:841:G:H2'	23:BB:842:U:C6	2.55	0.42
19:CT:14:GLU:O	19:CT:17:ARG:HB3	2.19	0.42
5:CF:45:ARG:NH2	17:CR:25:ILE:HD13	2.35	0.42
23:BB:285:G:H2'	23:BB:286:U:H6	1.84	0.42
23:BB:787:C:H5''	23:BB:788:A:H5'	2.02	0.42
1:AA:185:U:H2'	1:AA:186:C:C6	2.55	0.42
23:DB:957:C:N4	23:DB:2459:A:C8	2.88	0.42
32:D4:30:GLU:HA	32:D4:31:PRO:HD3	1.91	0.42
23:BB:1932:A:H2'	23:BB:1933:G:O4'	2.20	0.42
23:BB:88:G:C2'	23:BB:89:A:H5'	2.50	0.42
51:DZ:27:ARG:H	51:DZ:27:ARG:HG3	1.68	0.42
23:DB:1751:U:H2'	23:DB:1752:C:C5	2.54	0.42
23:BB:1410:G:H2'	23:BB:1411:U:C6	2.54	0.42
52:BW:50:VAL:HG23	52:BW:61:LYS:CE	2.49	0.42
25:DC:152:GLN:HA	25:DC:155:ARG:CD	2.49	0.42
25:DC:144:GLU:OE2	25:DC:188:ARG:HG3	2.20	0.42
1:CA:1093:A:P	6:CG:3:ARG:HH12	2.42	0.42
53:D6:80:GLU:CD	53:D6:99:LEU:HD13	2.40	0.42
53:D6:80:GLU:HA	53:D6:83:ILE:CG1	2.43	0.42
53:D6:89:GLY:O	53:D6:90:LEU:HG	2.20	0.42
53:B6:38:LEU:HD21	53:B6:88:LEU:HD22	2.02	0.42
23:DB:1420:A:C2'	23:DB:2211:A:H62	2.15	0.42
8:CI:21:LYS:HG3	8:CI:22:PRO:HD2	2.01	0.42
53:B6:76:LEU:HG	53:B6:94:ASN:OD1	2.19	0.42
41:BJ:26:GLY:C	41:BJ:28:LEU:N	2.74	0.42
41:DJ:34:ARG:O	41:DJ:38:GLY:N	2.53	0.42
1:AA:1148:U:H2'	1:AA:1149:C:O4'	2.20	0.42
8:AI:25:GLY:HA3	8:AI:57:VAL:HA	2.02	0.42
8:AI:56:MET:C	8:AI:58:GLU:N	2.73	0.42
8:AI:51:LEU:HB3	8:AI:56:MET:HB2	2.02	0.42
8:AI:6:TYR:C	8:AI:85:ALA:HB2	2.40	0.42
47:DF:40:GLY:O	47:DF:41:GLU:C	2.57	0.42
1:AA:599:C:O2'	1:AA:600:A:H5'	2.20	0.42
44:BQ:91:ARG:NH2	49:BR:11:GLN:O	2.53	0.42
51:BZ:51:VAL:HG12	51:BZ:52:SER:N	2.35	0.42
13:AN:68:ARG:HH12	13:AN:71:GLY:N	2.18	0.42
46:BU:85:ARG:HH11	46:BU:86:PHE:N	2.15	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:64:VAL:O	25:BC:102:TYR:O	2.38	0.42
43:BO:35:ILE:C	43:BO:36:TYR:HD2	2.23	0.42
47:BF:29:ARG:HH11	47:BF:29:ARG:HB2	1.85	0.42
40:DH:90:LEU:HD11	40:DH:146:VAL:HG11	2.01	0.42
40:DH:90:LEU:HD12	40:DH:90:LEU:N	2.21	0.42
25:BC:199:HIS:C	25:BC:201:LEU:H	2.23	0.42
45:BS:13:SER:HG	45:BS:16:LYS:HB2	1.85	0.42
29:BE:60:TRP:HB3	29:BE:61:ARG:H	1.42	0.42
23:DB:1187:G:OP1	49:DR:85:LYS:NZ	2.51	0.42
11:CL:49:ARG:HH12	11:CL:88:ASP:CB	2.33	0.42
23:DB:2267:A:C8	23:DB:2267:A:C4'	3.03	0.42
13:CN:80:ARG:HG2	13:CN:80:ARG:HH11	1.85	0.42
23:BB:546:U:H4'	23:BB:547:A:OP2	2.19	0.42
1:AA:1324:A:H2'	1:AA:1325:C:H6	1.84	0.42
23:BB:512:G:P	23:BB:1215:G:N2	2.92	0.42
11:CL:21:PRO:HG2	11:CL:94:TYR:OH	2.20	0.42
27:DK:99:ILE:HG12	27:DK:115:ILE:HG13	2.00	0.42
23:DB:2346:A:O4'	23:DB:2383:G:O4'	2.38	0.42
34:B3:23:HIS:ND1	34:B3:24:LYS:N	2.68	0.42
20:CB:103:TRP:CZ3	20:CB:107:ARG:HD2	2.53	0.42
4:AE:82:HIS:CD2	7:AH:95:MET:HG3	2.54	0.42
1:CA:109:A:H2'	1:CA:326:G:N2	2.35	0.42
2:CC:129:PHE:CE2	2:CC:156:LEU:HD13	2.55	0.42
2:CC:184:ASN:ND2	2:CC:185:THR:H	2.18	0.42
14:CO:81:LEU:O	14:CO:85:LEU:HD13	2.20	0.42
27:DK:73:ASP:OD2	27:DK:75:SER:HB3	2.19	0.42
19:CT:70:LYS:HA	19:CT:73:ARG:CZ	2.50	0.42
16:AQ:17:GLU:O	16:AQ:18:LYS:HB2	2.20	0.42
12:AM:2:ARG:HG3	12:AM:5:GLY:HA2	2.02	0.42
4:AE:61:LYS:NZ	4:AE:61:LYS:HB3	2.35	0.42
23:DB:1727:C:H2'	23:DB:1728:C:O4'	2.20	0.42
37:DL:47:ARG:NH2	37:DL:47:ARG:HB3	2.35	0.42
1:CA:1026:G:O2'	1:CA:1027:C:H5'	2.20	0.42
1:AA:408:A:OP1	3:AD:109:THR:OG1	2.36	0.42
39:BX:13:GLU:OE2	39:BX:13:GLU:HA	2.20	0.42
23:BB:96:C:H4'	39:BX:41:HIS:ND1	2.35	0.42
2:AC:65:VAL:HG21	2:AC:90:VAL:HG11	2.02	0.42
2:CC:49:ALA:O	2:CC:50:SER:HB2	2.20	0.42
19:AT:56:ILE:O	19:AT:60:GLN:HG2	2.20	0.42
52:BW:44:PHE:HB3	52:BW:78:PHE:CE1	2.54	0.42
23:BB:1927:A:H2'	23:BB:1928:A:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:481:G:O2'	1:AA:482:A:H8	2.03	0.42
23:DB:877:A:N6	23:DB:898:C:C2	2.88	0.42
31:D0:8:THR:HG23	31:D0:10:SER:HB3	2.02	0.42
1:AA:828:U:O2'	20:AB:24:PRO:HB3	2.18	0.42
23:BB:1318:U:H2'	23:BB:1319:C:C6	2.55	0.42
23:BB:1213:A:C6	23:BB:1237:A:H1'	2.53	0.42
23:BB:1237:A:H2'	23:BB:1237:A:N3	2.35	0.42
34:D3:44:ARG:N	34:D3:45:PRO:CD	2.83	0.42
27:BK:70:ARG:CB	27:BK:70:ARG:HH11	2.33	0.42
23:DB:690:G:N3	25:DC:42:ARG:NH2	2.68	0.42
5:CF:81:ASN:O	5:CF:83:ALA:N	2.53	0.42
23:DB:2737:G:H2'	23:DB:2738:A:H8	1.83	0.42
23:DB:1047:G:O2'	23:DB:1109:C:N4	2.53	0.42
24:DI:140:GLU:CD	24:DI:140:GLU:H	2.23	0.42
28:BP:104:GLY:O	28:BP:106:ALA:N	2.45	0.42
5:CF:18:VAL:HG21	5:CF:58:HIS:CE1	2.54	0.42
29:BE:102:ARG:NH2	29:BE:102:ARG:HG3	2.35	0.42
38:DM:77:PRO:O	38:DM:78:LEU:O	2.38	0.42
1:AA:728:A:H2'	1:AA:729:A:C8	2.55	0.42
5:AF:18:VAL:N	5:AF:19:PRO:HD2	2.35	0.42
23:DB:1674:G:N2	23:DB:1677:A:N1	2.67	0.42
19:AT:14:GLU:O	19:AT:17:ARG:HB3	2.20	0.42
23:BB:2530:A:H3'	48:BG:156:TYR:OH	2.20	0.42
1:AA:993:G:H2'	1:AA:995:C:H41	1.84	0.42
23:DB:70:G:O4'	23:DB:73:A:H1'	2.19	0.42
9:AJ:26:VAL:O	9:AJ:30:LYS:HG3	2.19	0.42
41:BJ:75:TYR:HD1	41:BJ:86:GLN:HB3	1.84	0.42
20:CB:130:LYS:H	20:CB:130:LYS:HG2	1.51	0.42
48:DG:28:LYS:HB2	48:DG:28:LYS:HE2	1.91	0.42
23:DB:1891:G:H2'	23:DB:1892:C:H6	1.85	0.42
23:DB:1359:A:H2'	23:DB:1360:G:O4'	2.20	0.42
2:AC:111:ASP:O	2:AC:115:VAL:HG23	2.20	0.42
2:AC:114:LEU:O	2:AC:115:VAL:C	2.58	0.42
1:AA:894:G:H2'	1:AA:895:G:H8	1.85	0.42
1:CA:1262:C:H2'	1:CA:1263:C:O4'	2.20	0.42
8:AI:112:ARG:HH22	9:AJ:64:GLN:HE22	1.67	0.42
1:AA:582:C:O2'	1:AA:583:A:H5'	2.19	0.42
52:DW:12:GLY:O	52:DW:13:ARG:HB2	2.19	0.42
1:CA:775:G:O2'	1:CA:776:G:H5'	2.19	0.42
23:DB:566:U:H2'	23:DB:567:U:C6	2.55	0.42
1:CA:1119:C:OP2	8:CI:10:ARG:NH2	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DQ:78:PHE:CZ	44:DQ:82:LEU:HD11	2.55	0.42
23:BB:2434:A:H2'	23:BB:2434:A:H8	1.72	0.42
46:DU:23:LYS:H	46:DU:23:LYS:HD2	1.85	0.42
8:AI:30:ASN:HD22	8:AI:65:THR:HA	1.84	0.42
3:CD:102:TYR:HE1	3:CD:108:ALA:O	2.02	0.42
52:DW:28:GLU:HB2	52:DW:31:LEU:HD21	2.02	0.42
48:DG:93:TYR:HE1	48:DG:160:GLY:HA2	1.84	0.42
16:CQ:7:LEU:O	16:CQ:60:ILE:HD13	2.20	0.42
53:D6:61:PRO:CD	53:D6:66:LEU:HA	2.48	0.42
22:DA:42:C:O2'	47:DF:91:ARG:NH1	2.53	0.42
41:DJ:41:LYS:O	44:DQ:66:ALA:HB1	2.20	0.42
49:DR:5:PHE:CD1	49:DR:5:PHE:N	2.88	0.42
8:AI:56:MET:O	8:AI:58:GLU:N	2.45	0.42
8:AI:37:TYR:HE2	8:AI:74:GLN:HG2	1.85	0.42
41:DJ:59:ALA:C	41:DJ:61:LYS:N	2.73	0.42
47:DF:42:ALA:HB1	47:DF:46:LYS:HZ3	1.85	0.42
47:DF:78:ILE:N	47:DF:78:ILE:CD1	2.83	0.42
41:BJ:43:GLU:O	41:BJ:44:TYR:C	2.57	0.42
23:BB:2200:C:OP1	51:BZ:37:ARG:N	2.53	0.42
51:BZ:32:ASN:C	51:BZ:33:LEU:HD12	2.41	0.42
25:BC:109:LEU:N	25:BC:109:LEU:CD2	2.82	0.42
33:B1:8:ILE:CG2	33:B1:51:ALA:HA	2.50	0.42
23:DB:1060:U:H5	24:DI:131:THR:HG22	1.82	0.42
23:BB:1059:G:H2'	23:BB:1060:U:C6	2.54	0.42
47:BF:134:GLN:C	47:BF:136:ILE:N	2.73	0.42
42:DN:55:ALA:HA	42:DN:80:PHE:CD1	2.55	0.42
1:CA:947:G:OP1	12:CM:106:ARG:HB3	2.20	0.42
4:CE:35:LEU:HD22	4:CE:133:ILE:HA	2.02	0.42
18:AS:50:VAL:HG22	18:AS:70:LEU:HD23	2.01	0.42
32:B4:2:LYS:CG	32:B4:4:ARG:HE	2.23	0.42
9:AJ:51:VAL:HG22	13:AN:80:ARG:HB2	1.99	0.42
53:D6:177:GLU:O	53:D6:180:GLU:HB3	2.19	0.42
53:D6:18:LEU:HD21	53:D6:171:LYS:CG	2.50	0.42
23:DB:972:A:C3'	23:DB:973:A:H5''	2.38	0.42
23:DB:974:G:P	49:DR:78:ARG:HD3	2.59	0.42
32:B4:36:ARG:O	32:B4:37:GLN:C	2.58	0.42
1:AA:1288:A:H2	1:AA:1371:G:N3	2.17	0.42
35:DV:40:ILE:N	35:DV:40:ILE:CD1	2.83	0.42
9:CJ:5:ARG:HD3	9:CJ:79:PRO:HG3	2.02	0.42
43:BO:67:ASN:H	43:BO:70:ALA:HB3	1.85	0.42
42:DN:69:ARG:H	42:DN:69:ARG:HD3	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BR:4:VAL:HG23	49:BR:39:LEU:N	2.31	0.42
7:AH:45:ILE:HD13	7:AH:60:LEU:HD11	2.02	0.42
23:BB:1428:C:H2'	23:BB:1569:A:OP2	2.20	0.42
1:AA:88:U:O2'	1:AA:89:U:C6	2.72	0.42
23:BB:116:C:C4	23:BB:117:G:C5	3.08	0.42
34:B3:31:ILE:HD11	34:B3:34:LYS:CD	2.47	0.42
1:AA:34:C:H2'	1:AA:35:G:C8	2.54	0.42
1:CA:191:G:H2'	1:CA:192:A:C8	2.54	0.42
10:AK:30:ILE:HG13	10:AK:30:ILE:O	2.18	0.42
43:BO:52:SER:C	43:BO:54:VAL:H	2.23	0.42
23:DB:1139:G:H2'	23:DB:1140:C:H6	1.85	0.42
3:CD:104:MET:HE3	3:CD:170:LEU:HD13	2.02	0.42
23:BB:2343:U:H2'	23:BB:2344:U:C6	2.55	0.42
39:BX:18:LEU:O	39:BX:22:LEU:HB3	2.20	0.42
37:BL:47:ARG:HB3	37:BL:47:ARG:NH2	2.35	0.42
1:CA:782:A:N6	1:CA:801:U:C5	2.87	0.42
1:CA:832:G:O2'	1:CA:833:G:H5'	2.19	0.42
23:DB:1176:U:O5'	23:DB:1176:U:H6	2.03	0.42
23:DB:2135:A:H61	23:DB:2156:G:C2'	2.33	0.42
50:DT:54:GLU:HG2	50:DT:90:GLY:HA3	2.02	0.42
45:DS:83:LYS:O	45:DS:84:ARG:NE	2.52	0.42
47:DF:19:PHE:CZ	47:DF:164:GLU:HG2	2.54	0.42
23:BB:377:G:O2'	23:BB:378:C:H5'	2.20	0.42
10:CK:110:THR:CG2	21:CU:4:LYS:HA	2.48	0.42
50:DT:73:ARG:HB3	50:DT:73:ARG:NH2	2.34	0.42
1:AA:370:C:H2'	1:AA:371:A:H8	1.85	0.42
23:BB:1064:C:C4'	24:BI:90:GLY:HA2	2.49	0.42
25:BC:61:TYR:CA	25:BC:85:ASN:HD21	2.31	0.42
23:DB:2231:U:H2'	23:DB:2232:C:C6	2.55	0.42
23:DB:508:A:O2'	23:DB:509:C:OP1	2.34	0.42
51:BZ:65:ASP:O	51:BZ:69:ALA:N	2.52	0.42
43:BO:9:ARG:HG3	43:BO:10:ARG:H	1.85	0.42
25:BC:53:ILE:O	25:BC:53:ILE:HG23	2.20	0.42
23:BB:818:G:C6	23:BB:1187:G:H2'	2.55	0.42
1:CA:747:A:H2'	1:CA:748:G:O4'	2.19	0.42
23:BB:2411:A:H2'	23:BB:2412:A:C8	2.55	0.42
1:CA:692:U:O4	10:CK:53:GLY:HA2	2.19	0.42
23:DB:2512:C:OP2	26:DD:128:ARG:HD2	2.20	0.42
1:AA:1508:A:H2'	1:AA:1509:C:C6	2.55	0.42
22:DA:49:C:OP1	43:DO:101:GLY:HA3	2.19	0.42
23:DB:2815:C:H2'	23:DB:2816:G:C8	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1745:A:H2'	23:DB:1746:A:C8	2.55	0.42
24:DI:99:LYS:HB2	24:DI:140:GLU:OE1	2.19	0.42
23:BB:1476:U:O2'	23:BB:1477:A:H8	2.02	0.42
23:BB:1883:U:H2'	23:BB:1884:G:C1'	2.50	0.42
23:BB:1013:C:H2'	23:BB:1014:A:C8	2.55	0.42
6:CG:152:HIS:O	6:CG:153:TYR:C	2.58	0.42
22:BA:35:C:H2'	22:BA:36:C:H5'	2.00	0.42
23:BB:564:C:H1'	44:BQ:36:GLN:OE1	2.20	0.42
23:DB:423:A:H5''	23:DB:424:G:C5'	2.50	0.42
6:AG:71:THR:O	6:AG:89:GLU:HA	2.20	0.42
46:BU:14:THR:O	46:BU:18:LYS:HA	2.20	0.42
23:DB:2653:U:H3'	23:DB:2654:A:H2'	2.02	0.42
17:AR:22:TYR:CE1	17:AR:23:LYS:HG3	2.55	0.42
23:BB:1313:U:H4'	23:BB:1332:G:H4'	2.02	0.42
23:BB:1249:U:H4'	44:BQ:3:VAL:HG11	2.02	0.42
28:DP:44:GLY:HA3	28:DP:60:VAL:HG12	2.02	0.42
23:DB:246:C:C2'	23:DB:247:G:H5'	2.50	0.42
23:BB:553:G:C2'	23:BB:554:U:H5'	2.50	0.42
1:CA:771:G:H2'	1:CA:772:U:C6	2.55	0.42
23:BB:2508:G:O3'	23:BB:2555:U:H5'	2.20	0.42
23:BB:2514:U:H2'	23:BB:2515:C:C6	2.55	0.42
26:BD:35:THR:OG1	26:BD:49:GLN:HG2	2.20	0.42
43:BO:56:LYS:O	43:BO:60:GLU:HG2	2.20	0.42
23:BB:1516:G:O2'	23:BB:1517:G:H5'	2.19	0.42
1:CA:197:A:H1'	1:CA:198:G:C1'	2.50	0.42
23:BB:389:G:O2'	23:BB:390:U:H5'	2.20	0.42
28:BP:36:LYS:HD3	28:BP:36:LYS:HA	1.85	0.42
23:DB:2614:A:O4'	31:D0:1:ALA:HB3	2.20	0.42
46:BU:23:LYS:HD2	46:BU:23:LYS:H	1.85	0.42
14:AO:17:ARG:HA	14:AO:17:ARG:NH1	2.35	0.42
16:CQ:82:VAL:HG13	16:CQ:82:VAL:O	2.19	0.42
23:BB:502:A:N6	23:BB:505:A:N1	2.67	0.42
5:AF:72:ASP:HA	5:AF:75:GLU:OE1	2.19	0.42
48:DG:50:THR:HG22	48:DG:51:PHE:N	2.35	0.41
41:DJ:43:GLU:O	41:DJ:44:TYR:C	2.57	0.41
44:DQ:84:LYS:O	44:DQ:86:SER:N	2.53	0.41
23:DB:825:A:O2'	37:DL:54:GLN:NE2	2.52	0.41
24:DI:108:ILE:CG2	24:DI:128:ILE:HD13	2.49	0.41
47:BF:2:LYS:CD	47:BF:100:GLU:HG2	2.48	0.41
25:BC:180:MET:HB2	25:BC:268:ARG:H	1.85	0.41
1:CA:813:U:O2	1:CA:813:U:H2'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BS:13:SER:HB3	45:BS:16:LYS:HE3	2.01	0.41
20:CB:46:VAL:N	20:CB:47:PRO:CD	2.83	0.41
1:AA:1320:C:C2	18:AS:71:GLY:HA3	2.55	0.41
23:BB:674:G:H5''	29:BE:71:GLY:N	2.34	0.41
23:DB:2893:A:H4'	23:DB:2894:G:H5'	2.01	0.41
38:DM:64:TRP:HE3	38:DM:104:GLU:O	2.03	0.41
31:B0:41:HIS:O	31:B0:42:ILE:O	2.38	0.41
23:DB:2848:G:N3	23:DB:2849:U:C5	2.88	0.41
22:DA:75:G:H2'	22:DA:76:G:H8	1.85	0.41
23:BB:2768:U:H2'	23:BB:2769:U:O4'	2.20	0.41
45:BS:73:LYS:HA	45:BS:73:LYS:HD2	1.83	0.41
25:BC:210:ALA:O	25:BC:213:ARG:HB3	2.20	0.41
23:BB:844:A:C2	23:BB:845:A:N1	2.88	0.41
31:D0:48:TYR:CZ	31:D0:49:ARG:HG3	2.55	0.41
37:DL:101:ILE:HG22	37:DL:102:GLY:N	2.35	0.41
26:DD:69:ALA:CA	26:DD:73:VAL:HB	2.50	0.41
29:DE:132:LYS:O	29:DE:135:ALA:HB3	2.19	0.41
29:DE:157:LEU:HD12	29:DE:157:LEU:O	2.20	0.41
2:CC:133:MET:HE1	2:CC:165:GLU:HG3	2.02	0.41
23:DB:362:A:H3'	23:DB:363:G:H8	1.85	0.41
23:DB:182:A:H2'	23:DB:183:C:C6	2.54	0.41
5:AF:98:GLU:HG2	5:AF:99:ALA:H	1.81	0.41
25:DC:30:ALA:O	25:DC:32:LEU:N	2.51	0.41
23:BB:1795:C:O2'	23:BB:1796:U:H5'	2.20	0.41
11:AL:107:LYS:HD2	11:AL:107:LYS:O	2.20	0.41
11:AL:98:ARG:HB2	11:AL:116:TYR:HA	2.01	0.41
35:DV:31:TYR:CB	35:DV:37:PRO:HG3	2.48	0.41
36:D2:10:LEU:O	36:D2:14:ARG:HG2	2.20	0.41
39:DX:44:LYS:HA	39:DX:44:LYS:HD2	1.87	0.41
1:CA:549:C:H2'	1:CA:550:G:H8	1.84	0.41
40:DH:62:LEU:HG	40:DH:66:ASN:HD22	1.83	0.41
2:AC:78:LYS:HG3	2:AC:81:GLU:HB3	2.01	0.41
23:DB:1685:C:H2'	23:DB:1686:C:H6	1.85	0.41
1:CA:1009:U:C2'	1:CA:1009:U:O2	2.68	0.41
23:BB:2028:U:H2'	23:BB:2029:G:O4'	2.20	0.41
2:CC:52:SER:HB3	2:CC:114:LEU:HG	2.02	0.41
23:BB:509:C:H5''	23:BB:510:C:OP2	2.20	0.41
23:BB:1562:U:H2'	23:BB:1563:U:H6	1.84	0.41
23:BB:1563:U:O2'	23:BB:1564:C:H5'	2.20	0.41
43:BO:28:VAL:HG12	43:BO:93:ASP:O	2.20	0.41
23:BB:1686:C:H2'	23:BB:1687:G:O4'	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AE:56:PRO:HG2	4:AE:57:ALA:H	1.85	0.41
23:DB:2376:A:H1'	43:DO:111:ARG:HH12	1.84	0.41
23:BB:2527:C:O4'	32:B4:1:MET:N	2.52	0.41
23:BB:577:G:O2'	23:BB:1254:A:OP1	2.36	0.41
23:DB:2569:G:C2	23:DB:2570:G:C8	3.07	0.41
23:BB:2730:C:H2'	23:BB:2731:G:C8	2.55	0.41
1:CA:1115:U:H1'	13:CN:100:TRP:O	2.20	0.41
23:BB:779:U:H2'	23:BB:780:G:H8	1.84	0.41
23:DB:107:G:C2	23:DB:108:G:C8	3.09	0.41
23:DB:1639:C:O2'	23:DB:1640:A:H5'	2.20	0.41
1:AA:628:G:H2'	1:AA:629:A:H8	1.83	0.41
1:AA:818:G:H3'	1:AA:819:A:C5'	2.50	0.41
23:BB:814:C:H2'	23:BB:815:C:H6	1.85	0.41
2:CC:10:ARG:HG3	2:CC:10:ARG:HH11	1.85	0.41
1:CA:543:U:H2'	1:CA:544:G:H8	1.84	0.41
1:AA:811:C:H4'	1:AA:900:A:H62	1.83	0.41
17:AR:22:TYR:HA	17:AR:57:ALA:HB1	2.02	0.41
9:AJ:10:LEU:HD23	9:AJ:98:VAL:HG12	2.00	0.41
23:DB:2322:A:N6	23:DB:2333:A:N6	2.68	0.41
23:DB:208:C:H2'	23:DB:209:C:C6	2.54	0.41
23:DB:1693:U:H1'	25:DC:13:ARG:NH2	2.35	0.41
23:DB:553:G:C2'	23:DB:554:U:H5'	2.50	0.41
23:DB:823:C:H2'	23:DB:824:U:C6	2.55	0.41
22:BA:54:G:O2'	22:BA:55:U:H5'	2.20	0.41
23:BB:2745:C:H1'	48:BG:142:GLN:OE1	2.19	0.41
10:AK:108:ASN:ND2	21:AU:6:ARG:HB2	2.35	0.41
23:DB:1764:C:H2'	23:DB:1765:U:H6	1.86	0.41
23:BB:2046:G:H1'	31:B0:18:HIS:CD2	2.55	0.41
23:DB:2863:C:O2'	23:DB:2864:G:H5'	2.19	0.41
1:AA:1047:G:H21	1:AA:1215:G:C4'	2.33	0.41
4:AE:36:THR:O	4:AE:48:GLY:N	2.52	0.41
23:DB:1098:A:H3'	24:DI:3:LYS:HB3	2.01	0.41
52:BW:67:LYS:O	52:BW:68:PHE:CB	2.61	0.41
25:BC:121:ALA:HB3	25:BC:129:LEU:HG	2.02	0.41
52:DW:17:ALA:O	52:DW:18:LYS:HD2	2.19	0.41
23:DB:1823:G:O2'	23:DB:1824:G:H5'	2.19	0.41
25:DC:109:LEU:H	25:DC:109:LEU:HD23	1.85	0.41
48:DG:42:VAL:HA	48:DG:50:THR:O	2.20	0.41
47:DF:92:GLY:O	47:DF:95:MET:HB3	2.20	0.41
8:CI:26:LYS:HB2	8:CI:61:ASP:CB	2.49	0.41
41:DJ:6:ALA:CB	41:DJ:45:THR:HG21	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:187:ASP:O	20:CB:189:ASN:N	2.53	0.41
35:DV:61:LEU:HD11	35:DV:74:ALA:HB2	2.02	0.41
29:DE:62:GLN:HG2	29:DE:63:LYS:HG3	2.02	0.41
23:DB:2674:G:H2'	23:DB:2675:A:C8	2.55	0.41
50:BT:53:VAL:HG12	50:BT:54:GLU:N	2.35	0.41
41:BJ:4:PHE:O	41:BJ:44:TYR:CZ	2.73	0.41
44:BQ:94:LEU:C	44:BQ:96:ASP:H	2.22	0.41
3:CD:160:LEU:HA	3:CD:163:GLN:HG3	2.03	0.41
51:BZ:77:LYS:CG	51:BZ:78:TYR:N	2.83	0.41
3:AD:29:THR:HG22	3:AD:30:LYS:HD3	2.01	0.41
30:BY:16:LEU:HD23	30:BY:19:HIS:CD2	2.55	0.41
46:DU:73:ASN:O	46:DU:75:ALA:N	2.53	0.41
1:CA:948:C:H2'	1:CA:949:A:H8	1.85	0.41
18:CS:36:ARG:H	18:CS:36:ARG:HG2	1.60	0.41
18:CS:48:ILE:HD11	18:CS:61:VAL:HG23	2.02	0.41
1:AA:1318:A:H5''	1:AA:1319:A:OP2	2.20	0.41
18:AS:48:ILE:HD11	18:AS:61:VAL:HG23	2.01	0.41
10:CK:34:THR:HB	10:CK:40:ALA:CA	2.37	0.41
8:AI:87:MET:O	8:AI:87:MET:HE2	2.19	0.41
29:BE:58:LYS:CE	29:BE:58:LYS:H	2.33	0.41
10:CK:113:THR:HG21	21:CU:28:LEU:HD12	2.02	0.41
23:BB:1179:G:H2'	23:BB:1180:U:H6	1.84	0.41
3:CD:172:VAL:HG13	3:CD:172:VAL:O	2.20	0.41
15:AP:66:THR:HG22	15:AP:67:ILE:N	2.36	0.41
3:CD:138:PRO:C	3:CD:140:ASP:H	2.24	0.41
13:CN:26:LEU:HD23	13:CN:27:LYS:N	2.35	0.41
23:BB:45:G:H2'	23:BB:215:G:C5	2.55	0.41
22:DA:106:G:H2'	22:DA:107:G:O4'	2.20	0.41
22:DA:77:U:O2'	22:DA:78:A:H5'	2.20	0.41
27:BK:19:VAL:C	27:BK:41:ILE:HD11	2.40	0.41
42:BN:33:ILE:HA	42:BN:113:ILE:O	2.20	0.41
42:DN:65:LEU:HD11	42:DN:69:ARG:NH1	2.33	0.41
42:DN:33:ILE:HA	42:DN:113:ILE:O	2.19	0.41
40:BH:73:ASN:HD22	40:BH:74:ALA:N	2.13	0.41
49:DR:3:ALA:HB1	49:DR:59:ILE:HD13	2.01	0.41
1:CA:465:A:N3	1:CA:465:A:O4'	2.53	0.41
7:AH:49:LYS:HB3	7:AH:59:GLU:CB	2.42	0.41
26:DD:8:LYS:O	26:DD:9:VAL:HB	2.20	0.41
40:DH:70:GLU:OE1	40:DH:71:LYS:HG3	2.20	0.41
36:D2:39:ARG:HG3	36:D2:39:ARG:HH11	1.85	0.41
23:BB:1438:U:O2'	23:BB:1439:A:H5'	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:157:ALA:HA	25:DC:194:VAL:CG2	2.50	0.41
20:AB:98:GLY:HA2	20:AB:101:THR:CG2	2.50	0.41
46:DU:10:VAL:HA	46:DU:70:ALA:O	2.21	0.41
40:DH:115:VAL:HB	40:DH:132:PHE:HD1	1.81	0.41
26:BD:114:LYS:HG2	26:BD:114:LYS:H	1.53	0.41
3:AD:96:ARG:HH12	3:AD:133:SER:CB	2.32	0.41
23:BB:718:A:H3'	23:BB:719:C:H6	1.85	0.41
23:BB:265:A:N6	23:BB:427:U:O2'	2.53	0.41
34:B3:32:LEU:HA	34:B3:35:LYS:HD2	2.01	0.41
35:DV:21:ARG:HE	35:DV:87:GLN:HB3	1.85	0.41
23:BB:275:C:H2'	23:BB:276:U:H5'	2.02	0.41
1:AA:489:C:O2'	1:AA:490:C:H5'	2.20	0.41
23:DB:1386:C:H1'	23:DB:1470:A:H1'	2.01	0.41
20:CB:185:ILE:HG23	20:CB:199:ILE:O	2.21	0.41
1:AA:8:A:O4'	4:AE:106:ALA:C	2.59	0.41
23:DB:2876:G:H2'	23:DB:2877:G:O4'	2.20	0.41
1:CA:499:A:O4'	1:CA:547:A:N6	2.53	0.41
23:BB:754:U:H2'	23:BB:755:U:H6	1.85	0.41
25:DC:115:ILE:HA	25:DC:127:ASN:OD1	2.20	0.41
23:BB:2376:A:H2'	23:BB:2377:A:O4'	2.20	0.41
52:BW:77:LYS:HB2	52:BW:77:LYS:HZ3	1.83	0.41
1:AA:448:A:H2'	1:AA:449:G:H8	1.83	0.41
1:CA:283:U:H2'	1:CA:284:C:H6	1.83	0.41
29:DE:1:MET:HB2	29:DE:16:GLU:HB2	2.02	0.41
1:AA:720:C:H5''	17:AR:40:PRO:HA	2.01	0.41
42:DN:59:SER:C	42:DN:61:ALA:N	2.72	0.41
1:CA:817:C:C2	1:CA:819:A:O4'	2.73	0.41
22:DA:17:C:H2'	22:DA:18:G:H8	1.85	0.41
23:BB:1505:A:H2'	23:BB:1506:U:H6	1.85	0.41
23:DB:528:A:H3'	23:DB:528:A:C8	2.54	0.41
23:DB:2812:G:H2'	23:DB:2813:A:O4'	2.20	0.41
23:DB:903:C:H2'	23:DB:904:G:C8	2.55	0.41
1:CA:665:A:H2'	1:CA:732:C:O2	2.21	0.41
23:BB:2889:C:H2'	23:BB:2890:G:C8	2.55	0.41
1:AA:691:G:H1'	1:AA:696:A:N6	2.35	0.41
4:CE:87:VAL:HG21	4:CE:92:ARG:HD2	2.01	0.41
23:BB:235:U:H2'	23:BB:236:C:H6	1.83	0.41
23:BB:2543:G:H8	23:BB:2543:G:H5'	1.84	0.41
46:BU:13:LEU:HD12	46:BU:68:ASN:C	2.40	0.41
48:BG:154:GLU:HB3	48:BG:158:GLY:H	1.85	0.41
23:DB:77:G:H2'	23:DB:78:U:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1332:G:HO2'	23:DB:1609:A:H2	1.64	0.41
23:BB:1773:A:H2'	23:BB:1774:C:O4'	2.19	0.41
1:AA:251:G:N2	1:AA:266:G:O6	2.52	0.41
33:D1:28:THR:C	33:D1:30:PRO:HD3	2.40	0.41
23:DB:2010:G:O2'	23:DB:2011:U:H5'	2.20	0.41
6:AG:15:PRO:HG2	6:AG:16:LYS:H	1.85	0.41
1:AA:435:A:N3	1:AA:435:A:H2'	2.33	0.41
48:BG:28:LYS:HE2	48:BG:28:LYS:HB2	1.88	0.41
23:DB:1183:U:H2'	23:DB:1184:U:C6	2.56	0.41
49:DR:29:THR:HG23	49:DR:65:ALA:HA	2.02	0.41
23:DB:2903:U:O2	23:DB:2903:U:H2'	2.21	0.41
17:CR:25:ILE:HG13	17:CR:26:ALA:N	2.34	0.41
23:BB:1159:U:O2'	23:BB:1160:G:H5'	2.19	0.41
50:DT:7:LEU:C	50:DT:9:LYS:HD3	2.41	0.41
43:BO:15:ARG:HH21	43:BO:95:SER:CB	2.33	0.41
23:DB:1322:A:C2'	23:DB:1323:C:H5'	2.50	0.41
2:CC:178:ARG:HG2	2:CC:206:ILE:HA	2.02	0.41
15:AP:48:GLU:HG3	15:AP:49:GLY:N	2.35	0.41
2:CC:85:LYS:O	2:CC:89:VAL:HG23	2.19	0.41
1:AA:61:G:H2'	1:AA:62:U:C6	2.55	0.41
23:DB:1330:C:H2'	23:DB:1331:G:H8	1.85	0.41
1:AA:1401:G:H2'	1:AA:1402:C:O4'	2.19	0.41
23:DB:1084:A:H1'	23:DB:1106:G:H5'	2.01	0.41
14:AO:31:LEU:O	14:AO:34:ALA:HB3	2.19	0.41
33:D1:25:ASN:OD1	33:D1:27:ARG:HB2	2.20	0.41
1:CA:687:A:C2	1:CA:704:A:C5	3.08	0.41
1:CA:528:C:H41	11:CL:45:ASN:CG	2.23	0.41
23:DB:2779:U:OP1	23:DB:2780:G:H2'	2.20	0.41
1:AA:1262:C:H2'	1:AA:1263:C:O4'	2.20	0.41
1:AA:1173:U:H2'	1:AA:1174:G:C8	2.54	0.41
23:BB:2452:C:H2'	23:BB:2453:A:C8	2.54	0.41
25:BC:131:MET:C	25:BC:133:ASN:N	2.73	0.41
48:BG:10:VAL:CG2	48:BG:49:LEU:HD13	2.51	0.41
48:DG:96:ALA:O	48:DG:97:VAL:HB	2.21	0.41
26:BD:51:THR:HG22	26:BD:52:THR:H	1.83	0.41
53:D6:43:VAL:HG11	53:D6:79:ILE:HA	2.03	0.41
53:B6:68:VAL:CG2	53:B6:99:LEU:HD12	2.50	0.41
40:BH:90:LEU:HD22	40:BH:123:ARG:HA	2.03	0.41
1:CA:1287:A:N6	1:CA:1288:A:N6	2.67	0.41
41:BJ:32:LEU:HD22	41:BJ:122:LEU:HD11	2.02	0.41
23:DB:996:A:O3'	44:DQ:91:ARG:HG3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DJ:16:TYR:CD2	41:DJ:140:LEU:HD12	2.55	0.41
43:DO:35:ILE:O	43:DO:35:ILE:HG22	2.19	0.41
30:DY:7:THR:O	30:DY:54:VAL:HG12	2.20	0.41
50:BT:41:ALA:C	50:BT:43:ILE:N	2.73	0.41
41:BJ:34:ARG:O	41:BJ:38:GLY:N	2.53	0.41
12:CM:17:ALA:CB	12:CM:44:ILE:HG12	2.50	0.41
46:DU:73:ASN:HB3	46:DU:95:PHE:CD2	2.56	0.41
47:BF:141:ASP:O	47:BF:143:ASP:N	2.53	0.41
47:BF:3:LEU:HD11	47:BF:172:PHE:CE1	2.55	0.41
37:BL:79:LEU:CG	37:BL:112:LEU:HA	2.35	0.41
21:AU:3:ILE:CD1	21:AU:19:LYS:HA	2.47	0.41
31:B0:21:LEU:HB3	45:BS:23:LEU:HD21	2.03	0.41
23:DB:136:G:H2'	23:DB:137:U:C6	2.56	0.41
23:BB:811:U:C4	37:BL:21:ARG:NH2	2.88	0.41
38:DM:23:GLY:HA3	38:DM:66:ARG:NH1	2.35	0.41
1:AA:719:C:H2'	17:AR:38:ILE:HD13	2.02	0.41
17:AR:38:ILE:HG22	17:AR:58:ILE:HD13	2.00	0.41
23:DB:1032:A:OP1	32:D4:8:LYS:HG3	2.20	0.41
29:BE:188:MET:CE	29:BE:193:VAL:HG22	2.50	0.41
23:DB:981:A:H2'	23:DB:982:C:C5'	2.50	0.41
23:BB:2061:G:H5''	23:BB:2503:A:C2	2.55	0.41
17:CR:38:ILE:CG2	17:CR:58:ILE:HD13	2.51	0.41
26:DD:114:LYS:HE3	26:DD:116:LYS:CE	2.51	0.41
27:DK:72:PRO:O	27:DK:74:GLY:N	2.53	0.41
38:BM:64:TRP:O	38:BM:103:TYR:HA	2.21	0.41
31:D0:48:TYR:O	31:D0:50:GLY:N	2.52	0.41
27:BK:71:ARG:HD2	27:BK:106:GLU:OE2	2.19	0.41
11:CL:29:LYS:CB	11:CL:56:LEU:HD22	2.51	0.41
44:BQ:111:LYS:HE3	49:BR:48:LYS:NZ	2.36	0.41
44:DQ:105:PHE:HA	44:DQ:108:LEU:HD12	2.01	0.41
47:BF:163:GLU:O	47:BF:166:ARG:HB2	2.20	0.41
7:AH:47:ASP:CG	7:AH:48:PHE:N	2.70	0.41
36:B2:39:ARG:HH11	36:B2:39:ARG:HG3	1.86	0.41
36:D2:31:LEU:O	36:D2:34:ARG:N	2.53	0.41
46:BU:26:ASN:ND2	46:BU:34:ILE:HD12	2.33	0.41
9:AJ:5:ARG:N	9:AJ:76:ILE:O	2.53	0.41
23:BB:2621:G:OP1	26:BD:124:ARG:NH2	2.53	0.41
14:AO:71:LYS:HB2	14:AO:78:TYR:CD2	2.55	0.41
13:CN:3:GLN:OE1	13:CN:3:GLN:HA	2.21	0.41
16:CQ:17:GLU:O	16:CQ:18:LYS:HB2	2.21	0.41
6:AG:96:ASN:O	6:AG:100:MET:HG3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:297:G:H2'	23:BB:298:G:C8	2.55	0.41
1:CA:1314:C:N4	18:CS:3:SER:CB	2.83	0.41
23:DB:1867:G:O2'	23:DB:1868:C:H5'	2.21	0.41
23:DB:1402:U:H2'	23:DB:1403:A:O5'	2.20	0.41
43:DO:6:ALA:HB1	43:DO:10:ARG:HH11	1.86	0.41
43:DO:9:ARG:HA	43:DO:12:THR:OG1	2.20	0.41
23:DB:269:C:C2	23:DB:270:A:C8	3.08	0.41
50:BT:68:LYS:O	50:BT:74:ILE:HD12	2.20	0.41
23:DB:2064:C:H2'	23:DB:2065:C:H6	1.84	0.41
23:DB:1998:A:H2'	23:DB:1999:C:C6	2.54	0.41
40:DH:141:LYS:H	40:DH:141:LYS:CD	2.34	0.41
23:BB:1064:C:C1'	24:BI:90:GLY:HA2	2.50	0.41
53:B6:5:GLU:O	53:B6:8:ALA:HB3	2.20	0.41
23:DB:1152:C:H4'	44:DQ:76:SER:HA	2.02	0.41
43:BO:79:ALA:HB2	43:BO:110:ALA:HB1	2.02	0.41
34:B3:7:ARG:HH11	34:B3:7:ARG:CG	2.33	0.41
23:DB:237:C:O2'	23:DB:238:C:H5'	2.20	0.41
49:BR:58:VAL:O	49:BR:58:VAL:HG22	2.19	0.41
9:AJ:86:ALA:C	9:AJ:87:LEU:HD13	2.39	0.41
1:AA:152:A:H2'	1:AA:153:C:O4'	2.20	0.41
4:AE:98:ALA:HB3	4:AE:121:ASN:C	2.41	0.41
1:AA:908:A:O2'	1:AA:909:A:H5'	2.21	0.41
1:AA:1115:U:H1'	13:AN:100:TRP:O	2.20	0.41
23:BB:2195:U:O2'	23:BB:2196:C:H5'	2.21	0.41
23:DB:2096:C:H2'	23:DB:2096:C:O2	2.21	0.41
23:DB:256:A:H2'	23:DB:257:C:H6	1.84	0.41
23:BB:1748:C:H2'	23:BB:1749:A:C8	2.55	0.41
25:DC:226:PRO:HD3	25:DC:233:GLY:H	1.85	0.41
23:DB:1313:U:H4'	23:DB:1332:G:H4'	2.01	0.41
37:DL:118:THR:HA	37:DL:119:PRO:HD3	1.91	0.41
23:DB:2818:U:H4'	23:DB:2837:A:C4'	2.50	0.41
1:CA:266:G:O2'	1:CA:267:C:H3'	2.21	0.41
23:DB:111:A:O2'	23:DB:112:U:H5'	2.21	0.41
1:AA:207:C:O2'	1:AA:208:U:H5'	2.21	0.41
5:AF:45:ARG:NH2	17:AR:25:ILE:HD13	2.35	0.41
23:DB:729:G:C8	25:DC:206:LYS:HE3	2.55	0.41
14:CO:69:TYR:HA	14:CO:72:ARG:NH1	2.36	0.41
15:CP:8:ARG:CZ	15:CP:15:PRO:HB3	2.50	0.41
23:DB:765:C:H2'	23:DB:766:U:C6	2.55	0.41
1:AA:291:U:H2'	1:AA:292:G:C8	2.55	0.41
23:DB:1764:C:O2'	23:DB:1765:U:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:95:A:H4'	39:DX:38:GLN:O	2.21	0.41
1:CA:1159:U:O4'	1:CA:1182:G:N2	2.53	0.41
2:AC:85:LYS:O	2:AC:89:VAL:HG23	2.19	0.41
1:AA:382:A:H2'	1:AA:383:A:C8	2.55	0.41
11:AL:35:ARG:HH21	11:AL:36:VAL:HG22	1.85	0.41
5:CF:72:ASP:HA	5:CF:75:GLU:OE1	2.21	0.41
49:BR:57:GLY:HA2	49:BR:102:SER:O	2.21	0.41
23:BB:2049:G:O2'	23:BB:2050:C:H5'	2.19	0.41
27:DK:21:CYS:HB2	27:DK:39:ILE:HG21	2.01	0.41
23:DB:2856:A:H2'	23:DB:2857:G:C8	2.55	0.41
23:BB:2901:C:H2'	23:BB:2901:C:O2	2.20	0.41
38:BM:90:GLU:HA	38:BM:90:GLU:OE1	2.19	0.41
1:AA:282:A:N3	1:AA:282:A:H2'	2.36	0.41
38:BM:20:LEU:N	38:BM:20:LEU:HD22	2.35	0.41
17:CR:52:ARG:HG3	17:CR:52:ARG:HH11	1.86	0.41
23:DB:1932:A:H2'	23:DB:1933:G:O4'	2.20	0.41
23:DB:1758:U:O4	23:DB:2695:U:H4'	2.21	0.41
23:BB:2350:C:H2'	23:BB:2351:G:O4'	2.20	0.41
48:BG:42:VAL:HA	48:BG:50:THR:O	2.21	0.41
10:AK:70:ALA:C	10:AK:72:ALA:N	2.74	0.41
48:BG:102:ILE:CD1	48:BG:116:LEU:HD11	2.51	0.41
48:BG:83:THR:C	48:BG:84:LYS:HD3	2.41	0.41
23:DB:948:C:H1'	23:DB:984:A:N3	2.35	0.41
48:DG:84:LYS:HG3	48:DG:131:VAL:HB	2.03	0.41
47:DF:91:ARG:HD3	47:DF:91:ARG:N	2.35	0.41
40:BH:82:SER:HB2	40:BH:146:VAL:CG1	2.51	0.41
41:DJ:6:ALA:HB3	41:DJ:45:THR:CG2	2.49	0.41
27:BK:47:ILE:HG23	27:BK:48:PRO:N	2.34	0.41
13:CN:68:ARG:HH12	13:CN:71:GLY:H	1.68	0.41
30:DY:51:SER:HA	30:DY:54:VAL:CG2	2.51	0.41
13:CN:9:GLU:HB2	13:CN:62:ARG:CZ	2.51	0.41
48:BG:17:LYS:CA	48:BG:17:LYS:HZ2	2.33	0.41
46:DU:85:ARG:N	46:DU:91:LYS:O	2.50	0.41
42:BN:96:ARG:HH11	42:BN:116:VAL:HA	1.85	0.41
37:BL:57:LEU:HD13	37:BL:60:ARG:NH2	2.36	0.41
1:AA:920:U:C2	1:AA:921:U:C5	3.08	0.41
4:AE:132:PRO:HG2	4:AE:133:ILE:H	1.85	0.41
47:DF:131:VAL:C	47:DF:133:GLU:N	2.74	0.41
24:BI:32:VAL:HG22	24:BI:60:VAL:HG21	2.02	0.41
12:AM:3:ILE:CA	12:AM:56:ARG:HG2	2.43	0.41
13:AN:32:ASP:CG	13:AN:33:VAL:H	2.23	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:69:ARG:HH11	29:BE:69:ARG:HG2	1.85	0.41
23:DB:137:U:C5	23:DB:138:U:N3	2.88	0.41
50:DT:49:LYS:HB2	50:DT:50:LEU:HD22	2.02	0.41
38:DM:66:ARG:HB2	38:DM:101:VAL:HG13	2.02	0.41
23:BB:981:A:H2'	23:BB:982:C:C5'	2.50	0.41
1:CA:1324:A:H2'	1:CA:1325:C:C6	2.55	0.41
29:BE:171:ASP:CG	29:BE:172:ALA:N	2.74	0.41
29:BE:192:ALA:HA	29:BE:195:GLN:NE2	2.36	0.41
35:DV:83:LYS:HA	35:DV:84:PRO:HD3	1.92	0.41
9:CJ:5:ARG:N	9:CJ:76:ILE:O	2.54	0.41
45:BS:24:ILE:O	45:BS:25:ARG:C	2.59	0.41
25:BC:203:VAL:O	25:BC:204:LEU:HB2	2.20	0.41
29:DE:161:ALA:HB1	29:DE:167:VAL:HG13	2.02	0.41
29:DE:160:ALA:O	29:DE:161:ALA:HB3	2.20	0.41
32:D4:3:VAL:O	32:D4:4:ARG:O	2.38	0.41
26:DD:112:THR:O	26:DD:113:SER:HB2	2.20	0.41
27:DK:104:THR:C	27:DK:106:GLU:H	2.24	0.41
44:BQ:105:PHE:HA	44:BQ:108:LEU:HD12	2.01	0.41
37:DL:100:ILE:O	37:DL:100:ILE:HG12	2.20	0.41
23:DB:1439:A:N3	23:DB:1553:A:C6	2.88	0.41
36:B2:31:LEU:HD22	36:B2:42:LEU:HD12	2.01	0.41
23:DB:455:C:N3	23:DB:473:G:H5'	2.35	0.41
23:BB:1439:A:C5	23:BB:1552:A:N6	2.88	0.41
20:AB:120:SER:CA	20:AB:125:PHE:HB3	2.45	0.41
1:CA:271:C:O2'	1:CA:272:C:H5'	2.20	0.41
51:BZ:14:THR:HA	51:BZ:28:ARG:CB	2.50	0.41
3:AD:110:ARG:HH11	3:AD:110:ARG:HG3	1.84	0.41
46:DU:78:LYS:HE3	46:DU:79:ALA:N	2.35	0.41
46:DU:62:ALA:O	46:DU:63:ALA:HB3	2.20	0.41
1:CA:958:A:N6	1:CA:959:A:N1	2.69	0.41
23:BB:2747:G:O6	23:BB:2754:U:H2'	2.20	0.41
11:AL:107:LYS:H	11:AL:107:LYS:HZ2	1.66	0.41
23:DB:616:A:H4'	29:DE:101:TYR:CE2	2.55	0.41
23:BB:220:G:N1	23:BB:427:U:H2'	2.34	0.41
3:CD:100:VAL:HG21	3:CD:136:VAL:CG2	2.49	0.41
23:DB:2087:G:H2'	23:DB:2088:A:H8	1.84	0.41
1:CA:861:G:O2'	1:CA:862:C:H5'	2.19	0.41
23:BB:2846:G:OP1	28:BP:51:ASN:HB2	2.20	0.41
1:CA:734:G:H2'	1:CA:735:C:C6	2.56	0.41
23:DB:2137:U:O2'	23:DB:2138:G:H5'	2.20	0.41
40:DH:37:VAL:HG23	40:DH:38:PRO:HD2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1099:G:H2'	1:CA:1100:C:O4'	2.21	0.41
1:CA:548:G:H2'	1:CA:549:C:C6	2.55	0.41
2:CC:114:LEU:O	2:CC:115:VAL:C	2.58	0.41
2:AC:104:GLU:HG2	2:AC:105:VAL:N	2.33	0.41
1:CA:1404:C:O4'	1:CA:1499:A:C2	2.73	0.41
1:CA:1053:G:H4'	1:CA:1054:C:H5'	2.01	0.41
38:BM:11:LYS:HD2	38:BM:86:LYS:HG2	2.02	0.41
23:DB:866:A:H61	23:DB:913:U:C4'	2.33	0.41
23:BB:1045:C:C2	23:BB:1047:G:C2	3.08	0.41
1:AA:547:A:H4'	1:AA:548:G:O5'	2.20	0.41
23:DB:377:G:O2'	23:DB:378:C:H5'	2.21	0.41
1:CA:1277:C:O2'	1:CA:1279:G:C8	2.73	0.41
8:CI:98:ARG:NE	8:CI:103:VAL:HG21	2.35	0.41
23:BB:1745:A:H2'	23:BB:1746:A:O4'	2.21	0.41
23:BB:2785:C:H2'	23:BB:2786:U:C6	2.54	0.41
19:AT:31:ILE:O	19:AT:34:VAL:HG23	2.21	0.41
26:BD:67:HIS:ND1	26:BD:67:HIS:C	2.74	0.41
43:DO:106:LEU:CA	43:DO:109:ALA:HB3	2.50	0.41
38:BM:82:MET:HE3	38:BM:83:GLY:N	2.34	0.41
48:BG:87:GLN:H	48:BG:164:ALA:HB2	1.84	0.41
23:BB:2528:U:O2'	23:BB:2529:G:H3'	2.20	0.41
23:DB:2323:G:O2'	23:DB:2324:U:H5'	2.20	0.41
22:DA:83:G:H4'	30:DY:52:PHE:CD2	2.55	0.41
49:DR:58:VAL:HG22	49:DR:58:VAL:O	2.19	0.41
1:AA:28:A:C2	1:AA:296:U:H4'	2.55	0.41
1:AA:648:A:H2'	1:AA:649:A:C8	2.55	0.41
22:DA:91:C:O2'	22:DA:92:C:H5'	2.20	0.41
1:AA:614:C:C2'	1:AA:615:G:H5'	2.51	0.41
23:DB:1313:U:O2	23:DB:1313:U:C2'	2.68	0.41
23:BB:189:G:H2'	23:BB:205:G:N2	2.35	0.41
3:AD:145:ARG:HH21	3:AD:147:LYS:HE2	1.84	0.41
6:AG:45:ALA:HB2	6:AG:116:ALA:O	2.20	0.41
19:AT:68:LYS:HE2	19:AT:68:LYS:CA	2.50	0.41
1:CA:1422:G:O2'	1:CA:1423:G:H5'	2.21	0.41
1:AA:655:A:H2'	1:AA:656:G:O4'	2.20	0.41
23:DB:1385:A:HO2'	23:DB:1396:U:H6	1.65	0.41
39:BX:45:GLN:O	39:BX:47:ARG:N	2.46	0.41
28:BP:44:GLY:HA3	28:BP:60:VAL:CG1	2.50	0.41
36:B2:12:ARG:HH21	36:B2:12:ARG:HG3	1.86	0.41
23:DB:1751:U:H2'	23:DB:1752:C:C6	2.56	0.41
6:AG:67:ASN:ND2	6:AG:127:ALA:HA	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:19:C:O2'	22:BA:20:G:H5'	2.19	0.41
7:AH:62:LEU:HB3	7:AH:64:TYR:CE1	2.55	0.41
1:CA:1265:C:O2'	1:CA:1266:G:H5'	2.19	0.41
1:AA:757:U:O2'	1:AA:758:C:H5'	2.20	0.41
7:CH:91:LEU:HD12	7:CH:116:ARG:HB2	2.03	0.41
19:AT:72:ALA:HA	19:AT:75:LYS:HD3	2.02	0.41
23:DB:2013:A:C2'	23:DB:2014:A:H5'	2.50	0.41
2:AC:202:PHE:HZ	2:AC:205:GLU:HG2	1.84	0.41
23:BB:2083:G:H2'	23:BB:2084:C:H6	1.84	0.41
10:AK:70:ALA:HA	10:AK:73:VAL:CG2	2.50	0.41
48:BG:104:LEU:HB3	48:BG:106:LEU:HD21	2.02	0.41
44:DQ:24:TYR:CD1	44:DQ:25:GLY:N	2.86	0.41
22:BA:44:G:N2	22:BA:48:U:C2	2.89	0.41
48:DG:110:HIS:HA	48:DG:111:PRO:HD3	1.95	0.41
48:DG:93:TYR:CG	48:DG:106:LEU:HB3	2.55	0.41
27:BK:34:GLY:O	27:BK:36:GLY:N	2.53	0.41
53:D6:39:LEU:O	53:D6:53:ASN:N	2.54	0.41
47:DF:65:LEU:HD23	47:DF:87:LYS:CD	2.49	0.41
53:B6:52:LEU:HA	53:B6:55:ILE:HG23	2.01	0.41
53:B6:67:VAL:O	53:B6:67:VAL:HG23	2.20	0.41
41:DJ:45:THR:H	41:DJ:46:PRO:CD	2.33	0.41
44:DQ:63:ARG:HG3	44:DQ:63:ARG:H	1.63	0.41
5:AF:3:HIS:ND1	5:AF:95:ALA:N	2.66	0.41
35:DV:32:GLY:O	35:DV:93:ARG:NH1	2.53	0.41
26:DD:76:GLY:O	26:DD:77:ARG:C	2.58	0.41
7:AH:77:VAL:HG12	7:AH:78:SER:N	2.36	0.41
7:CH:86:LYS:CG	7:CH:124:ILE:HD11	2.50	0.41
3:CD:24:VAL:HG12	3:CD:160:LEU:HD12	2.02	0.41
46:BU:1:ALA:HB1	46:BU:84:PHE:CZ	2.56	0.41
25:BC:109:LEU:H	25:BC:109:LEU:HD23	1.84	0.41
43:BO:51:ALA:HB1	43:BO:77:ALA:CB	2.51	0.41
24:DI:72:THR:HG23	24:DI:112:LYS:HD2	2.02	0.41
37:BL:57:LEU:C	37:BL:59:ARG:N	2.74	0.41
47:DF:21:TYR:CD2	47:DF:27:VAL:HG12	2.56	0.41
18:CS:40:PHE:O	18:CS:43:MET:HG3	2.20	0.41
1:CA:1320:C:H1'	18:CS:72:GLU:HB3	2.02	0.41
1:AA:1271:A:H5'	1:AA:1314:C:C5'	2.47	0.41
23:BB:2848:G:N3	23:BB:2849:U:C5	2.88	0.41
23:DB:138:U:H2'	23:DB:140:C:C6	2.55	0.41
25:DC:14:HIS:O	25:DC:15:VAL:C	2.59	0.41
22:DA:97:C:C2'	22:DA:98:G:H5'	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AQ:66:LEU:HD12	16:AQ:70:LYS:HG2	2.01	0.41
37:BL:13:LYS:O	37:BL:14:LYS:HG2	2.20	0.41
34:D3:30:HIS:HD2	34:D3:31:ILE:H	1.68	0.41
38:DM:64:TRP:C	38:DM:65:ILE:HG13	2.39	0.41
1:CA:972:C:O2'	9:CJ:57:VAL:HA	2.21	0.41
23:BB:2886:A:N7	31:B0:39:ARG:NH2	2.65	0.41
48:DG:148:ARG:HD3	48:DG:152:ARG:CD	2.51	0.41
26:DD:98:VAL:C	26:DD:100:LEU:N	2.74	0.41
48:BG:152:ARG:HA	48:BG:152:ARG:HD2	1.82	0.41
23:DB:2105:U:H2'	23:DB:2106:U:H6	1.85	0.41
23:DB:2106:U:H2'	23:DB:2107:G:OP1	2.20	0.41
23:DB:2151:U:O2'	23:DB:2152:G:H5'	2.20	0.41
44:BQ:8:ILE:HG23	44:BQ:9:ALA:N	2.35	0.41
42:DN:70:THR:OG1	42:DN:70:THR:O	2.39	0.41
49:DR:39:LEU:HB3	49:DR:53:PHE:HA	2.02	0.41
34:B3:23:HIS:O	34:B3:46:LYS:HB3	2.20	0.41
20:CB:68:PHE:CG	20:CB:83:ALA:HB2	2.55	0.41
25:BC:156:SER:HB3	25:BC:159:THR:CG2	2.51	0.41
34:D3:24:LYS:HB2	37:DL:64:PHE:CD2	2.56	0.41
38:DM:114:ARG:HB2	38:DM:114:ARG:NH2	2.28	0.41
45:DS:22:ASP:HA	45:DS:25:ARG:HH12	1.83	0.41
23:BB:62:U:HO2'	23:BB:63:A:H5'	1.84	0.41
2:CC:116:ALA:HB1	2:CC:186:SER:OG	2.21	0.41
14:CO:82:ILE:O	14:CO:86:GLY:N	2.53	0.41
26:BD:113:SER:CB	26:BD:168:GLU:H	2.32	0.41
23:BB:2746:U:O4'	48:BG:138:GLN:HA	2.20	0.41
23:BB:2795:C:H2'	23:BB:2796:U:C1'	2.50	0.41
10:CK:17:ASP:HB3	10:CK:80:ASN:HD21	1.85	0.41
4:CE:157:GLY:O	4:CE:158:LYS:HB2	2.20	0.41
23:DB:265:A:N6	23:DB:427:U:O2'	2.54	0.41
1:CA:1120:C:H2'	1:CA:1121:U:H6	1.85	0.41
1:AA:142:G:N3	1:AA:196:A:H2	2.18	0.41
12:CM:2:ARG:HG3	12:CM:5:GLY:HA2	2.01	0.41
12:CM:2:ARG:CG	12:CM:6:ILE:H	2.29	0.41
1:CA:835:U:O2'	1:CA:836:G:H5'	2.20	0.41
23:DB:1179:G:H2'	23:DB:1180:U:H5'	2.01	0.41
23:BB:1591:A:H2'	23:BB:1592:C:O4'	2.20	0.41
33:D1:3:GLY:O	33:D1:5:ARG:N	2.54	0.41
23:BB:2578:G:C6	26:BD:145:SER:HB2	2.55	0.41
23:BB:2099:U:H2'	23:BB:2100:G:C8	2.53	0.41
22:DA:114:C:H1'	43:DO:47:VAL:HG21	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CL:107:LYS:HD2	11:CL:107:LYS:O	2.20	0.41
1:CA:374:A:H5''	1:CA:452:A:N1	2.36	0.41
1:AA:1178:G:H2'	1:AA:1180:A:OP2	2.20	0.41
1:CA:720:C:H5''	17:CR:40:PRO:HA	2.02	0.41
1:CA:284:C:O2'	1:CA:285:C:H5'	2.20	0.41
23:BB:2415:G:O2'	23:BB:2416:C:H5'	2.19	0.41
23:DB:2231:U:H2'	23:DB:2232:C:H6	1.85	0.41
33:B1:18:HIS:ND1	33:B1:19:PHE:N	2.69	0.41
1:AA:880:C:H2'	1:AA:881:G:C8	2.51	0.41
37:BL:132:ARG:C	37:BL:135:ILE:HG22	2.41	0.41
23:DB:2259:U:H2'	23:DB:2260:C:H6	1.86	0.41
23:DB:2708:G:H2'	23:DB:2709:G:C8	2.54	0.41
49:DR:15:SER:OG	49:DR:18:GLN:HG2	2.20	0.41
17:CR:22:TYR:HA	17:CR:57:ALA:HB1	2.01	0.41
1:AA:818:G:C2'	1:AA:819:A:H5''	2.51	0.41
23:DB:2543:G:H8	23:DB:2543:G:H5'	1.86	0.41
12:CM:22:TYR:HB2	12:CM:65:GLU:HA	2.03	0.41
46:BU:4:ILE:HG13	46:BU:66:VAL:HG23	2.02	0.41
5:CF:7:VAL:O	5:CF:7:VAL:HG13	2.20	0.41
23:DB:1230:A:H2'	23:DB:1231:U:H6	1.85	0.41
1:CA:614:C:C2'	1:CA:615:G:H5'	2.51	0.41
40:BH:59:ALA:HA	40:BH:62:LEU:CD2	2.51	0.41
23:BB:1368:G:O2'	23:BB:1369:G:H5'	2.20	0.41
33:B1:39:ASP:OD1	33:B1:41:VAL:HB	2.21	0.41
32:D4:27:CYS:CB	32:D4:33:HIS:HB2	2.50	0.41
44:BQ:42:GLY:HA3	49:BR:75:VAL:CG2	2.50	0.41
1:AA:177:G:N3	1:AA:177:G:O4'	2.52	0.41
1:AA:632:U:H5''	1:AA:633:G:C8	2.56	0.41
23:BB:1838:C:H4'	23:BB:1839:G:C8	2.54	0.41
28:BP:29:VAL:O	28:BP:40:GLN:N	2.54	0.41
20:CB:35:ASN:O	20:CB:37:VAL:N	2.53	0.41
23:BB:838:C:H2'	23:BB:839:U:C6	2.55	0.41
23:DB:1541:C:H2'	23:DB:1542:U:H6	1.85	0.41
1:CA:664:G:H22	1:CA:741:G:H22	1.69	0.41
1:CA:291:U:H2'	1:CA:292:G:C8	2.55	0.41
23:BB:1248:G:OP1	29:BE:44:ARG:NH1	2.54	0.41
8:CI:10:ARG:HA	8:CI:77:ALA:HB1	2.03	0.41
1:AA:916:U:H2'	1:AA:917:G:H8	1.85	0.41
23:DB:2089:C:H2'	23:DB:2090:A:C8	2.55	0.41
5:CF:74:LEU:HA	5:CF:77:THR:OG1	2.21	0.41
1:CA:753:A:OP1	14:CO:73:LYS:HE3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DO:69:ASP:O	43:DO:72:ALA:HB3	2.21	0.41
2:CC:32:LEU:O	2:CC:35:ASP:HB2	2.20	0.41
23:DB:388:G:N7	23:DB:390:U:H2'	2.35	0.41
25:DC:89:ASN:HA	25:DC:89:ASN:HD22	1.58	0.41
6:AG:146:ALA:CA	10:AK:55:ARG:HH12	2.33	0.41
1:AA:1526:G:OP2	21:AU:38:GLU:HB3	2.21	0.41
48:DG:7:PRO:O	48:DG:8:VAL:HB	2.20	0.41
37:BL:121:THR:HG22	37:BL:141:LYS:CB	2.50	0.41
48:DG:118:ALA:O	48:DG:120:ILE:N	2.52	0.41
48:DG:83:THR:O	48:DG:84:LYS:HD3	2.21	0.41
23:DB:2365:G:O6	34:D3:42:HIS:HE1	2.03	0.41
52:DW:24:ARG:HA	52:DW:66:VAL:N	2.16	0.41
41:BJ:59:ALA:O	41:BJ:62:VAL:HG12	2.19	0.41
44:DQ:94:LEU:HD12	49:DR:13:ARG:HB2	2.02	0.41
1:CA:1491:G:C5	55:CA:1662:PAR:H21	2.56	0.41
35:BV:62:THR:HG21	35:BV:71:LYS:NZ	2.35	0.41
37:DL:77:ILE:CG2	37:DL:78:ARG:N	2.83	0.41
23:BB:496:G:H4'	45:BS:61:ASN:ND2	2.35	0.41
30:DY:51:SER:C	30:DY:53:MET:N	2.74	0.41
44:BQ:63:ARG:H	44:BQ:63:ARG:HG3	1.64	0.41
43:BO:37:ALA:CB	43:BO:78:VAL:HG21	2.51	0.41
30:BY:12:ALA:HB2	30:BY:53:MET:CE	2.51	0.41
42:BN:83:LEU:HA	42:BN:86:ARG:CG	2.51	0.41
23:DB:1060:U:C1'	23:DB:1062:G:H5'	2.51	0.41
47:BF:76:PHE:HD2	47:BF:78:ILE:CD1	2.31	0.41
47:BF:169:LEU:HB3	47:BF:174:PHE:CD1	2.55	0.41
23:BB:322:A:H5'	23:BB:340:A:C1'	2.50	0.41
23:BB:1461:C:H2'	23:BB:1462:C:C5	2.56	0.41
4:AE:131:ASN:HD22	4:AE:134:ASN:H	1.69	0.41
47:DF:29:ARG:HB2	47:DF:29:ARG:HH11	1.85	0.41
1:CA:924:C:H5'	1:CA:1399:C:OP2	2.20	0.41
1:CA:923:A:H2'	1:CA:924:C:H6	1.85	0.41
1:AA:1315:U:H5	18:AS:5:LYS:CE	2.33	0.41
23:BB:2867:G:HO2'	23:BB:2868:A:H8	1.66	0.41
11:CL:88:ASP:C	11:CL:89:LEU:HD22	2.40	0.41
13:CN:40:ARG:O	13:CN:41:TRP:HE3	2.02	0.41
1:AA:1249:C:H2'	1:AA:1250:A:H5'	2.03	0.41
35:DV:77:VAL:HG23	35:DV:89:ILE:CG2	2.51	0.41
27:BK:54:LYS:C	27:BK:56:ASP:H	2.23	0.41
5:CF:67:PRO:O	5:CF:71:ILE:HG22	2.20	0.41
38:BM:66:ARG:CZ	38:BM:101:VAL:HG11	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:313:A:H2'	1:AA:314:C:H6	1.85	0.41
23:DB:2886:A:N7	31:D0:39:ARG:NH2	2.63	0.41
11:CL:20:VAL:HG12	11:CL:93:ARG:CB	2.45	0.41
27:DK:119:ALA:HB3	27:DK:120:PRO:HD3	2.03	0.41
26:BD:26:VAL:HG13	26:BD:188:LEU:CD2	2.50	0.41
23:BB:116:C:O2	23:BB:127:A:H2	2.03	0.41
23:BB:1439:A:N3	23:BB:1553:A:C6	2.89	0.41
13:CN:88:MET:C	13:CN:90:GLY:H	2.22	0.41
23:DB:2016:U:C4	23:DB:2017:U:C4	3.08	0.41
23:BB:2742:G:O2'	23:BB:2743:U:H5'	2.21	0.41
20:AB:122:ASP:C	20:AB:124:THR:H	2.23	0.41
1:AA:1343:G:H4'	8:AI:123:ARG:HB2	2.03	0.41
1:CA:1382:C:H4'	6:CG:78:ARG:HH21	1.86	0.41
2:AC:23:ALA:HB1	2:AC:27:GLU:OE2	2.20	0.41
5:AF:70:VAL:HG23	5:AF:71:ILE:N	2.35	0.41
14:CO:25:THR:CG2	14:CO:70:LEU:HD23	2.50	0.41
28:DP:50:ARG:HB2	28:DP:56:SER:CB	2.50	0.41
14:AO:82:ILE:O	14:AO:86:GLY:N	2.53	0.41
15:CP:40:ASN:HD21	15:CP:43:ALA:CA	2.33	0.41
1:CA:142:G:H2'	1:CA:143:A:O4'	2.19	0.41
41:BJ:106:LYS:HD2	41:BJ:106:LYS:HA	1.85	0.41
26:BD:14:ILE:HA	28:BP:11:GLN:HE22	1.86	0.41
27:BK:88:ASN:C	27:BK:88:ASN:HD22	2.22	0.41
3:AD:197:HIS:O	3:AD:201:GLU:HG3	2.20	0.41
23:BB:648:G:O2'	23:BB:649:G:H5'	2.20	0.41
35:DV:78:GLN:N	35:DV:88:HIS:O	2.53	0.41
23:BB:150:U:O2'	23:BB:151:C:H5'	2.20	0.41
6:CG:37:THR:O	6:CG:41:ILE:HG13	2.21	0.41
1:AA:141:G:O2'	1:AA:142:G:H5'	2.21	0.41
20:AB:68:PHE:CG	20:AB:83:ALA:HB2	2.55	0.41
9:CJ:10:LEU:HD12	9:CJ:72:ARG:HB2	2.03	0.41
23:BB:633:A:H2'	23:BB:634:C:O4'	2.20	0.41
23:DB:2578:G:C6	26:DD:145:SER:HB2	2.55	0.41
10:CK:50:GLY:O	10:CK:51:PHE:C	2.59	0.41
23:BB:4:U:O2'	23:BB:5:A:H5'	2.21	0.41
23:BB:866:A:H61	23:BB:913:U:C4'	2.33	0.41
6:CG:77:ARG:HG3	6:CG:79:VAL:CG2	2.49	0.41
26:DD:159:LYS:HZ3	26:DD:159:LYS:HA	1.86	0.41
16:AQ:31:PRO:O	16:AQ:32:ILE:HB	2.20	0.41
23:BB:1572:A:O2'	23:BB:1573:G:H5'	2.19	0.41
3:CD:16:THR:CG2	3:CD:17:ASP:N	2.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1684:G:O2'	23:BB:1685:C:H5'	2.20	0.41
23:DB:528:A:C2	23:DB:2043:C:H4'	2.55	0.41
15:AP:20:VAL:HG21	15:AP:32:PHE:CG	2.56	0.41
1:CA:658:C:H2'	1:CA:659:U:H6	1.85	0.41
25:BC:255:LYS:C	25:BC:257:ARG:H	2.24	0.41
23:DB:1419:A:N6	23:DB:1494:A:N1	2.59	0.41
50:DT:72:GLN:HG2	50:DT:72:GLN:H	1.64	0.41
1:CA:1488:G:O2'	1:CA:1489:G:H5'	2.20	0.41
23:DB:1885:A:H3'	23:DB:1886:U:H6	1.83	0.41
23:BB:597:G:H21	37:BL:12:SER:HA	1.86	0.41
23:DB:1205:A:N1	29:DE:165:HIS:HB2	2.35	0.41
17:CR:21:ASP:OD2	17:CR:23:LYS:HD2	2.20	0.41
1:CA:1508:A:H2'	1:CA:1509:C:C6	2.55	0.41
23:DB:2651:C:O2'	23:DB:2652:C:H5'	2.21	0.41
29:BE:1:MET:HB2	29:BE:16:GLU:CA	2.50	0.41
10:AK:67:GLU:HG3	10:AK:68:ARG:N	2.34	0.41
24:DI:10:LEU:C	24:DI:10:LEU:HD12	2.40	0.41
23:BB:1370:C:H2'	23:BB:1371:G:O4'	2.20	0.41
23:BB:1396:U:O4'	23:BB:1396:U:O2	2.38	0.41
6:AG:121:ASN:N	6:AG:121:ASN:ND2	2.69	0.41
8:CI:35:GLU:HG3	8:CI:44:ARG:HD2	2.02	0.41
29:DE:3:LEU:O	29:DE:12:LEU:N	2.53	0.41
28:BP:54:LEU:HA	28:BP:76:HIS:CD2	2.56	0.41
1:CA:536:C:H2'	1:CA:537:G:C8	2.55	0.41
23:DB:1541:C:O2'	23:DB:1542:U:H5'	2.20	0.41
47:BF:56:LEU:O	47:BF:56:LEU:HD13	2.21	0.41
23:BB:1831:G:O2'	23:BB:1832:C:H5'	2.20	0.41
39:BX:38:GLN:H	39:BX:38:GLN:HG2	1.79	0.41
1:AA:537:G:H2'	1:AA:538:G:H8	1.86	0.41
20:AB:80:LYS:HG3	20:AB:81:ASP:N	2.35	0.41
22:BA:22:U:H2'	22:BA:23:G:C8	2.56	0.41
40:BH:119:ASN:HB2	40:BH:120:GLY:H	1.62	0.41
2:AC:10:ARG:HH11	2:AC:10:ARG:HG3	1.85	0.41
24:BI:35:MET:C	24:BI:35:MET:SD	2.98	0.41
23:BB:857:G:H5'	52:BW:68:PHE:CD1	2.56	0.41
25:BC:120:ASP:O	25:BC:121:ALA:C	2.59	0.41
48:BG:50:THR:HG22	48:BG:51:PHE:N	2.36	0.41
23:DB:569:U:H1'	23:DB:947:A:O4'	2.21	0.41
47:BF:33:ILE:HG22	47:BF:34:THR:N	2.35	0.41
10:CK:70:ALA:C	10:CK:72:ALA:N	2.73	0.41
48:DG:8:VAL:CG1	48:DG:49:LEU:HB2	2.40	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BL:90:VAL:HG23	37:BL:120:VAL:CG1	2.50	0.41
53:D6:84:ARG:HD2	53:D6:92:PRO:HD3	2.01	0.41
47:DF:34:THR:CG2	47:DF:89:THR:HG22	2.48	0.41
53:B6:61:PRO:HD2	53:B6:65:THR:HG22	2.02	0.41
23:DB:2211:A:C2'	23:DB:2212:A:OP1	2.68	0.41
8:AI:46:VAL:HG23	8:AI:47:VAL:N	2.36	0.41
35:DV:4:ILE:HD11	35:DV:61:LEU:HB3	2.03	0.41
23:BB:141:G:C6	50:BT:2:ILE:HG21	2.55	0.41
38:DM:72:PRO:O	38:DM:73:ILE:HB	2.21	0.41
50:BT:54:GLU:HG2	50:BT:90:GLY:HA3	2.02	0.41
13:AN:68:ARG:HB2	13:AN:79:SER:HB3	2.02	0.41
3:AD:164:ARG:NH1	3:AD:164:ARG:HG2	2.35	0.41
42:BN:55:ALA:HA	42:BN:80:PHE:CD1	2.55	0.41
47:BF:43:ILE:O	47:BF:46:LYS:HE2	2.20	0.41
47:BF:8:LYS:HD3	47:BF:9:ASP:OD2	2.21	0.41
42:DN:96:ARG:HH11	42:DN:116:VAL:HA	1.85	0.41
4:AE:136:VAL:HG13	4:AE:137:ARG:H	1.86	0.41
47:DF:102:LEU:O	47:DF:103:ILE:CB	2.69	0.41
4:CE:132:PRO:HG2	4:CE:133:ILE:H	1.86	0.41
1:CA:765:G:C6	1:CA:812:G:C5	3.09	0.41
18:CS:66:VAL:C	18:CS:68:HIS:H	2.24	0.41
33:D1:26:LYS:HB2	33:D1:52:LYS:HZ3	1.84	0.41
40:BH:106:ALA:C	40:BH:108:VAL:N	2.73	0.41
34:D3:30:HIS:O	34:D3:31:ILE:C	2.59	0.41
46:BU:73:ASN:HD22	46:BU:73:ASN:N	2.18	0.41
29:BE:149:ILE:O	29:BE:188:MET:HA	2.20	0.41
35:DV:9:ARG:HG2	35:DV:40:ILE:C	2.41	0.41
22:DA:76:G:O2'	22:DA:77:U:H5'	2.21	0.41
48:BG:86:LEU:HD23	48:BG:163:TYR:HA	2.03	0.41
29:DE:171:ASP:CG	29:DE:172:ALA:N	2.74	0.41
1:CA:1236:A:C4'	1:CA:1304:G:H4'	2.44	0.41
38:BM:63:ILE:N	38:BM:63:ILE:HD12	2.35	0.41
2:CC:149:LYS:HE2	2:CC:200:TRP:CZ3	2.55	0.41
49:BR:39:LEU:HA	49:BR:49:ILE:HG21	2.03	0.41
27:BK:116:ILE:H	27:BK:116:ILE:HG13	1.74	0.41
10:CK:23:HIS:HB3	10:CK:30:ILE:HG12	2.02	0.41
35:BV:89:ILE:HD13	35:BV:91:PHE:CZ	2.56	0.41
4:CE:52:ALA:HB3	4:CE:58:ALA:N	2.36	0.41
23:DB:1441:G:H4'	23:DB:1628:G:OP1	2.20	0.41
53:B6:110:ARG:O	53:B6:114:LEU:HB2	2.21	0.41
23:BB:1723:G:C2'	23:BB:1724:G:H5'	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1729:U:C2'	23:BB:1730:C:H5'	2.51	0.41
9:AJ:6:ILE:HG23	9:AJ:101:SER:O	2.20	0.41
34:D3:21:PHE:O	34:D3:22:LYS:O	2.39	0.41
23:BB:2391:G:P	34:B3:34:LYS:HZ3	2.44	0.41
23:DB:362:A:H3'	23:DB:363:G:C8	2.55	0.41
51:DZ:14:THR:HA	51:DZ:28:ARG:CB	2.50	0.41
4:CE:104:ILE:HG23	4:CE:104:ILE:O	2.21	0.41
1:AA:1087:G:O2'	1:AA:1088:G:H5'	2.21	0.41
19:CT:67:HIS:CD2	19:CT:68:LYS:H	2.39	0.41
4:AE:111:ARG:O	4:AE:112:ALA:C	2.59	0.41
4:CE:156:ARG:HB3	7:CH:42:GLU:O	2.21	0.41
1:AA:1048:G:OP1	13:AN:3:GLN:HB2	2.20	0.41
23:BB:2419:U:O5'	34:B3:32:LEU:HD12	2.20	0.41
35:BV:21:ARG:HE	35:BV:87:GLN:HB3	1.86	0.41
1:CA:1122:U:H2'	1:CA:1123:U:C6	2.55	0.41
23:DB:1854:A:H62	23:DB:1888:G:H8	1.67	0.41
23:BB:947:A:O2'	23:BB:984:A:H2	2.00	0.41
1:AA:140:U:H2'	1:AA:141:G:H8	1.83	0.41
35:DV:53:LYS:HZ3	35:DV:53:LYS:HA	1.82	0.41
23:BB:1854:A:H62	23:BB:1888:G:H8	1.67	0.41
23:BB:1431:A:O2'	23:BB:1432:G:H5'	2.21	0.41
2:CC:9:ILE:O	2:CC:9:ILE:HG13	2.20	0.41
1:CA:1085:U:H3'	1:CA:1086:U:C6	2.55	0.41
20:CB:94:ARG:NE	20:CB:94:ARG:N	2.69	0.41
26:BD:136:ASN:OD1	26:BD:139:SER:HB3	2.20	0.41
1:CA:502:A:C4'	1:CA:550:G:H4'	2.51	0.41
19:CT:78:LEU:HA	19:CT:78:LEU:HD23	1.93	0.41
23:BB:753:A:O2'	23:BB:754:U:H5'	2.20	0.41
2:CC:50:SER:O	2:CC:114:LEU:HD21	2.20	0.41
23:BB:634:C:O5'	23:BB:634:C:H6	2.04	0.41
1:AA:1142:G:H2'	1:AA:1143:G:O4'	2.21	0.41
50:BT:73:ARG:HH21	50:BT:73:ARG:HB3	1.86	0.41
1:CA:481:G:OP1	1:CA:481:G:H4'	2.21	0.41
1:CA:377:G:O2'	1:CA:378:G:H5'	2.20	0.41
29:BE:34:ALA:CB	29:BE:96:VAL:HG21	2.51	0.41
1:CA:1307:U:H2'	1:CA:1308:U:H6	1.84	0.41
23:DB:2349:G:OP2	34:D3:41:ARG:HD3	2.20	0.41
23:DB:710:U:O2'	23:DB:711:G:H5'	2.20	0.41
1:AA:1036:A:H2'	1:AA:1037:C:H6	1.83	0.41
23:BB:1341:G:O4'	50:BT:61:LEU:HD23	2.21	0.41
27:BK:107:LEU:C	27:BK:109:SER:N	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2020:A:O2'	23:BB:2021:C:H5'	2.21	0.41
4:CE:92:ARG:HB3	4:CE:92:ARG:HH11	1.85	0.41
9:CJ:65:TYR:OH	13:CN:84:ARG:HG3	2.21	0.41
23:DB:1275:A:H2'	23:DB:1276:A:O4'	2.21	0.41
23:DB:255:A:H2'	23:DB:256:A:O4'	2.21	0.41
48:DG:154:GLU:HB3	48:DG:158:GLY:H	1.84	0.41
1:AA:565:U:H3'	1:AA:566:G:H2'	2.03	0.41
6:CG:42:VAL:O	6:CG:46:LEU:HB2	2.21	0.41
22:DA:53:A:C2'	22:DA:54:G:H5'	2.51	0.41
6:CG:15:PRO:HG2	6:CG:16:LYS:H	1.85	0.41
2:CC:128:MET:N	2:CC:128:MET:SD	2.88	0.41
23:DB:1517:G:H2'	23:DB:1518:C:H6	1.86	0.41
1:CA:290:C:O2'	1:CA:291:U:H5'	2.20	0.41
1:AA:1172:C:O2'	1:AA:1173:U:H5'	2.21	0.41
22:BA:18:G:H2'	22:BA:19:C:C6	2.55	0.41
7:AH:91:LEU:HD12	7:AH:116:ARG:HB2	2.02	0.41
1:CA:260:G:O2'	1:CA:261:U:H5'	2.21	0.41
49:BR:32:THR:HA	49:BR:61:ALA:O	2.20	0.41
22:BA:67:G:O2'	22:BA:68:C:H5'	2.19	0.41
24:DI:68:PHE:N	24:DI:68:PHE:CD1	2.89	0.41
4:AE:78:GLY:O	4:AE:119:VAL:HA	2.20	0.41
23:BB:2352:A:H8	23:BB:2352:A:O5'	2.03	0.41
23:BB:1818:U:HO2'	23:BB:1819:A:P	2.42	0.41
25:DC:121:ALA:HB3	25:DC:129:LEU:HG	2.02	0.41
25:DC:153:LEU:HD13	25:DC:175:LEU:CD2	2.50	0.41
9:CJ:9:ARG:HB2	9:CJ:99:GLN:CB	2.30	0.41
6:AG:148:LYS:HG3	6:AG:151:ALA:HB3	2.03	0.41
48:DG:47:ASN:CG	48:DG:48:THR:H	2.24	0.41
37:BL:90:VAL:HG23	37:BL:120:VAL:HG11	2.03	0.41
8:AI:43:ALA:C	8:AI:45:MET:H	2.24	0.41
25:BC:140:VAL:CG2	25:BC:163:ILE:HG12	2.51	0.41
1:AA:1217:C:H2'	1:AA:1218:C:H6	1.86	0.41
47:DF:47:LYS:HA	47:DF:50:ASP:OD2	2.20	0.41
43:DO:53:THR:HG23	43:DO:74:VAL:HG21	2.02	0.41
37:DL:61:LEU:HA	37:DL:62:PRO:HD3	1.95	0.41
1:CA:598:U:H2'	1:CA:599:C:H6	1.86	0.41
44:BQ:89:ILE:HB	44:BQ:90:ASP:H	1.73	0.41
22:BA:28:C:C2'	22:BA:29:A:H5'	2.51	0.41
12:CM:38:ILE:HG13	12:CM:55:LEU:CD2	2.45	0.41
45:DS:8:ARG:HB3	45:DS:102:HIS:ND1	2.36	0.41
1:CA:1225:A:OP1	12:CM:100:ARG:HA	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1317:C:H2'	1:AA:1318:A:O4'	2.21	0.41
18:AS:23:GLU:HG3	18:AS:23:GLU:H	1.71	0.41
18:AS:40:PHE:HB2	18:AS:42:ASN:ND2	2.35	0.41
23:BB:2849:U:OP2	28:BP:92:ARG:HG3	2.21	0.41
25:DC:212:TRP:CD1	25:DC:212:TRP:C	2.94	0.41
16:AQ:45:VAL:HG11	16:AQ:60:ILE:CG2	2.48	0.41
37:BL:116:VAL:CG1	37:BL:117:THR:H	2.23	0.41
23:DB:816:C:O2'	23:DB:817:C:H5'	2.21	0.41
23:DB:162:U:OP1	23:DB:162:U:H6	2.04	0.41
23:BB:162:U:H6	23:BB:162:U:OP1	2.03	0.41
23:DB:2038:G:H2'	23:DB:2039:U:H6	1.86	0.41
1:AA:1250:A:H4'	8:AI:69:GLY:O	2.21	0.41
39:DX:27:ASN:HA	39:DX:30:MET:HG2	2.01	0.41
25:BC:212:TRP:CD1	25:BC:212:TRP:C	2.93	0.41
32:D4:2:LYS:CG	32:D4:4:ARG:HE	2.25	0.41
1:CA:1237:C:H4'	1:CA:1334:G:N2	2.35	0.41
38:BM:66:ARG:NE	38:BM:101:VAL:HG21	2.36	0.41
38:BM:23:GLY:HA3	38:BM:66:ARG:NH1	2.36	0.41
2:CC:149:LYS:HE3	2:CC:166:TRP:CH2	2.56	0.41
48:DG:30:GLY:HA3	48:DG:78:VAL:CA	2.41	0.41
6:CG:145:GLU:CA	6:CG:148:LYS:HB2	2.45	0.41
26:DD:91:THR:HG23	26:DD:92:VAL:N	2.27	0.41
23:DB:1444:G:H2'	23:DB:1445:G:H8	1.85	0.41
23:BB:1549:A:H2'	23:BB:1550:C:H6	1.86	0.41
11:AL:29:LYS:HB3	11:AL:56:LEU:HD22	2.01	0.41
1:AA:134:G:H1'	1:AA:325:A:C5	2.56	0.41
23:DB:280:U:H6	23:DB:280:U:O5'	2.04	0.41
20:CB:98:GLY:HA2	20:CB:101:THR:HG22	2.03	0.41
23:DB:2079:U:H2'	23:DB:2080:A:O4'	2.21	0.41
46:DU:26:ASN:H	46:DU:26:ASN:HD22	1.65	0.41
26:DD:146:ILE:HG13	26:DD:147:GLY:H	1.86	0.41
1:AA:302:G:N3	1:AA:556:C:H4'	2.35	0.41
25:DC:63:ILE:HD13	25:DC:63:ILE:HA	1.90	0.41
1:CA:142:G:N3	1:CA:196:A:H2	2.19	0.41
1:CA:957:U:H2'	1:CA:959:A:OP2	2.20	0.41
1:CA:9:G:OP1	4:CE:125:LYS:HD2	2.20	0.41
23:DB:1237:A:N3	23:DB:1237:A:H2'	2.35	0.41
29:DE:42:GLY:O	29:DE:43:THR:O	2.39	0.41
29:BE:83:VAL:HG12	29:BE:86:ALA:HA	2.03	0.41
6:AG:41:ILE:CG2	6:AG:115:MET:HG3	2.49	0.41
6:AG:37:THR:O	6:AG:41:ILE:HG13	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:150:U:O2'	23:DB:151:C:H5'	2.21	0.41
1:AA:142:G:H2'	1:AA:143:A:O4'	2.20	0.41
29:DE:83:VAL:HG12	29:DE:86:ALA:HA	2.03	0.41
6:AG:19:SER:HB2	6:AG:21:LEU:CD2	2.51	0.41
23:DB:1873:G:O2'	23:DB:1874:C:H5'	2.20	0.41
1:CA:1028:C:H3'	1:CA:1029:U:C5	2.56	0.41
23:BB:1595:C:O2'	23:BB:1596:A:H5'	2.21	0.41
23:DB:2462:C:H2'	23:DB:2463:C:H6	1.85	0.41
23:DB:1400:U:H2'	23:DB:1401:G:H8	1.85	0.41
22:DA:113:C:H2'	22:DA:114:C:H6	1.84	0.41
23:DB:1635:A:C2'	23:DB:1636:U:H5'	2.50	0.41
1:CA:86:G:H1'	1:CA:87:C:C6	2.56	0.41
50:BT:68:LYS:O	50:BT:69:ARG:CB	2.68	0.41
23:BB:1904:G:N3	23:BB:1928:A:H2	2.19	0.41
42:BN:69:ARG:H	42:BN:69:ARG:HD3	1.86	0.41
23:BB:1064:C:O2'	23:BB:1065:U:H5'	2.21	0.41
27:DK:97:THR:C	27:DK:98:ARG:HE	2.24	0.41
23:BB:2368:C:H2'	23:BB:2369:A:C8	2.56	0.41
27:DK:76:VAL:HG12	27:DK:77:ILE:H	1.85	0.41
28:DP:59:THR:H	28:DP:72:VAL:HA	1.86	0.41
3:AD:80:ARG:NH1	3:AD:81:LEU:HD23	2.36	0.41
23:BB:2708:G:H2'	23:BB:2709:G:C8	2.52	0.41
50:BT:13:ALA:O	50:BT:32:LEU:HB2	2.20	0.41
23:BB:962:G:H21	23:BB:2250:G:N2	2.17	0.41
23:BB:528:A:C8	23:BB:528:A:H3'	2.56	0.41
35:BV:49:ASN:ND2	35:BV:49:ASN:N	2.68	0.41
28:BP:61:ARG:HD3	28:BP:70:GLU:HG3	2.02	0.41
1:CA:903:G:H2'	1:CA:904:U:C6	2.56	0.41
6:AG:70:PRO:HA	6:AG:141:HIS:NE2	2.36	0.41
31:B0:33:SER:C	31:B0:35:GLU:N	2.74	0.41
37:DL:132:ARG:C	37:DL:135:ILE:HG22	2.41	0.41
1:CA:1458:G:O3'	19:CT:22:SER:HA	2.20	0.41
6:CG:72:VAL:HG12	6:CG:89:GLU:HA	2.03	0.41
1:AA:903:G:H2'	1:AA:904:U:H6	1.86	0.41
23:BB:247:G:H4'	23:BB:386:G:C4	2.55	0.41
53:B6:4:LYS:HE2	53:B6:4:LYS:HB3	1.89	0.41
24:BI:48:ILE:O	24:BI:49:GLU:HB3	2.21	0.41
23:DB:346:A:H5'	23:DB:346:A:N3	2.36	0.41
23:DB:348:A:H2'	23:DB:349:U:C1'	2.51	0.41
1:AA:993:G:H21	1:AA:996:A:H62	1.69	0.41
23:BB:2104:C:C3'	23:BB:2104:C:C6	3.04	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2320:U:O2'	23:DB:2322:A:N7	2.48	0.41
23:DB:1704:C:H2'	23:DB:1705:A:H8	1.85	0.41
1:CA:986:U:H2'	1:CA:987:G:C8	2.55	0.41
27:BK:18:ARG:HB2	27:BK:45:GLU:CG	2.51	0.41
23:DB:1843:C:O2'	23:DB:1844:C:H5'	2.20	0.41
25:DC:6:LYS:HA	25:DC:7:PRO:HD3	1.91	0.41
23:DB:1670:C:H3'	23:DB:1671:U:H6	1.86	0.41
1:AA:1132:C:H2'	1:AA:1133:G:H8	1.85	0.41
28:BP:80:VAL:CG1	28:BP:81:ASP:N	2.83	0.41
23:DB:1517:G:H2'	23:DB:1518:C:C6	2.56	0.41
1:AA:1222:G:O2'	1:AA:1223:C:H5'	2.21	0.41
23:DB:584:C:O2'	23:DB:585:G:H5'	2.21	0.41
23:DB:2207:C:H2'	23:DB:2208:C:C6	2.56	0.41
23:BB:1653:G:O6	42:BN:11:ASN:ND2	2.54	0.41
40:DH:110:VAL:HG13	40:DH:110:VAL:O	2.21	0.41
24:DI:46:ASP:HA	24:DI:50:LYS:HE2	2.03	0.41
1:AA:230:G:O2'	1:AA:231:U:H5'	2.20	0.41
24:DI:91:LYS:HD2	24:DI:91:LYS:N	2.35	0.41
20:AB:127:LYS:HB3	20:AB:127:LYS:NZ	2.36	0.41
23:BB:1951:U:H2'	23:BB:1952:A:H3'	2.03	0.41
50:DT:5:GLU:HA	50:DT:8:LEU:HD12	2.02	0.41
52:BW:28:GLU:O	52:BW:30:VAL:N	2.54	0.41
52:BW:43:LYS:HD2	52:BW:79:ILE:CD1	2.42	0.41
52:DW:18:LYS:O	52:DW:34:SER:HA	2.20	0.41
6:AG:148:LYS:N	10:AK:55:ARG:NH2	2.69	0.41
48:DG:10:VAL:CG1	48:DG:14:VAL:HG21	2.51	0.41
23:DB:2751:G:H4'	48:DG:3:VAL:CG1	2.51	0.41
37:DL:90:VAL:HG23	37:DL:120:VAL:HG11	2.03	0.41
16:AQ:61:ARG:C	16:AQ:61:ARG:HD2	2.40	0.41
40:BH:68:ARG:H	40:BH:68:ARG:HG2	1.60	0.41
16:CQ:62:GLU:HB2	16:CQ:72:TRP:CE2	2.56	0.41
53:D6:43:VAL:HG22	53:D6:82:ALA:HB3	2.02	0.41
53:B6:64:ARG:HD3	53:B6:104:PRO:HA	2.03	0.41
53:B6:30:THR:C	53:B6:32:ARG:N	2.73	0.41
53:B6:57:THR:HG22	53:B6:58:VAL:N	2.35	0.41
40:BH:81:ALA:HB1	40:BH:147:VAL:HG23	2.03	0.41
40:BH:80:ILE:O	40:BH:146:VAL:HG22	2.21	0.41
23:BB:1141:U:H5''	41:BJ:27:ARG:HH21	1.85	0.41
44:DQ:94:LEU:HG	49:DR:11:GLN:HE21	1.86	0.41
27:DK:47:ILE:HG23	27:DK:48:PRO:N	2.34	0.41
8:AI:35:GLU:C	8:AI:37:TYR:H	2.24	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DV:50:MET:O	35:DV:56:PHE:HB2	2.21	0.41
25:BC:76:VAL:O	25:BC:93:VAL:O	2.38	0.41
26:DD:4:LEU:N	26:DD:4:LEU:HD22	2.35	0.41
37:DL:77:ILE:HG22	37:DL:78:ARG:N	2.34	0.41
38:DM:71:LYS:HA	38:DM:72:PRO:HD3	1.90	0.41
47:DF:48:LEU:N	47:DF:48:LEU:HD23	2.36	0.41
13:CN:79:SER:HG	13:CN:82:LYS:HG2	1.85	0.41
45:BS:61:ASN:HB3	45:BS:62:ASP:H	1.45	0.41
23:DB:825:A:O2'	37:DL:54:GLN:HB3	2.21	0.41
23:DB:2444:G:P	29:DE:63:LYS:HD2	2.60	0.41
1:CA:599:C:O2'	1:CA:600:A:H5'	2.20	0.41
23:DB:2673:G:H2'	23:DB:2674:G:H8	1.85	0.41
44:BQ:56:PHE:O	44:BQ:59:LEU:HB3	2.21	0.41
44:BQ:63:ARG:NH2	44:BQ:96:ASP:CA	2.82	0.41
48:BG:26:LYS:HA	48:BG:32:LEU:N	2.34	0.41
46:DU:5:ARG:HH22	46:DU:93:ARG:HD3	1.86	0.41
23:BB:337:C:H2'	23:BB:338:G:O4'	2.20	0.41
25:BC:109:LEU:O	25:BC:110:LYS:C	2.59	0.41
33:B1:8:ILE:HA	33:B1:8:ILE:HD13	1.87	0.41
47:BF:38:GLY:HA2	47:BF:85:GLY:HA3	2.03	0.41
46:DU:71:ILE:HD11	46:DU:81:ARG:O	2.21	0.41
37:BL:77:ILE:HG22	37:BL:78:ARG:N	2.36	0.41
1:AA:1082:A:O2'	1:AA:1083:U:H5'	2.21	0.41
47:DF:135:ILE:CD1	47:DF:137:PHE:HB3	2.51	0.41
47:DF:134:GLN:HE21	47:DF:134:GLN:HB3	1.53	0.41
47:DF:168:LEU:O	47:DF:169:LEU:CB	2.66	0.41
10:AK:90:PRO:C	10:AK:92:ARG:N	2.73	0.41
21:AU:19:LYS:CD	21:AU:20:ARG:HH21	2.34	0.41
24:BI:37:PHE:HZ	24:BI:56:VAL:HG11	1.86	0.41
4:CE:33:THR:HB	4:CE:49:TYR:CZ	2.56	0.41
1:CA:1077:G:N1	1:CA:1081:A:C6	2.89	0.41
12:CM:79:LEU:HA	12:CM:82:LEU:HB2	2.02	0.41
18:AS:18:VAL:O	18:AS:22:VAL:HG23	2.20	0.41
18:AS:48:ILE:HG22	18:AS:49:ALA:N	2.29	0.41
18:AS:40:PHE:O	18:AS:43:MET:HG3	2.21	0.41
33:D1:37:LYS:HB2	33:D1:48:TYR:CD2	2.55	0.41
23:BB:2848:G:N3	23:BB:2849:U:H5	2.19	0.41
23:BB:674:G:H4'	29:BE:69:ARG:HB3	2.03	0.41
23:BB:372:G:O2'	23:BB:373:U:P	2.78	0.41
50:DT:50:LEU:O	50:DT:52:GLU:N	2.45	0.41
16:AQ:60:ILE:CG2	16:AQ:74:LEU:HA	2.42	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2468:A:H2'	23:DB:2476:A:C5	2.56	0.41
38:DM:124:LEU:HA	38:DM:125:PRO:HD3	1.89	0.41
37:DL:57:LEU:C	37:DL:59:ARG:N	2.74	0.41
23:BB:1027:A:N3	23:BB:2488:G:H5''	2.36	0.41
21:CU:3:ILE:CD1	21:CU:19:LYS:HA	2.46	0.41
23:DB:850:U:O2	30:DY:46:MET:HE3	2.21	0.41
32:D4:8:LYS:O	32:D4:35:GLN:NE2	2.51	0.41
23:BB:1056:G:H4'	23:BB:1086:A:H8	1.85	0.41
18:CS:5:LYS:HB2	18:CS:6:LYS:H	1.61	0.41
23:BB:971:G:H2'	23:BB:972:A:O4'	2.20	0.41
35:DV:24:ASN:O	35:DV:44:HIS:HB2	2.21	0.41
23:DB:1459:G:P	23:DB:1459:G:H8	2.44	0.41
23:BB:2674:G:H2'	23:BB:2675:A:C8	2.56	0.41
3:AD:138:PRO:C	3:AD:140:ASP:H	2.24	0.41
45:BS:25:ARG:CZ	45:BS:74:ILE:HG23	2.51	0.41
27:DK:54:LYS:C	27:DK:56:ASP:H	2.24	0.41
20:AB:16:GLY:HA2	20:AB:40:ILE:CD1	2.51	0.41
23:BB:30:G:H4'	23:BB:1215:G:H5'	2.02	0.41
20:AB:65:LYS:O	20:AB:157:PRO:HB2	2.20	0.41
20:AB:53:LEU:CD1	20:AB:216:VAL:HG12	2.41	0.41
23:DB:591:U:H1'	34:D3:1:PRO:H3	1.84	0.41
44:DQ:107:ALA:HB1	49:DR:48:LYS:CE	2.48	0.41
49:DR:4:VAL:CG2	49:DR:39:LEU:HG	2.51	0.41
23:DB:10:A:N6	23:DB:2895:G:H1'	2.35	0.41
3:AD:123:MET:HG3	3:AD:127:ARG:C	2.42	0.41
23:DB:1795:C:O2'	23:DB:1796:U:H5'	2.21	0.41
35:BV:30:ILE:HG13	35:BV:40:ILE:HD11	2.03	0.41
1:AA:846:G:H2'	1:AA:847:G:C8	2.56	0.41
1:AA:716:A:N3	10:AK:118:ASN:O	2.54	0.41
26:DD:149:ASN:C	26:DD:152:PRO:HD2	2.41	0.41
28:DP:5:LYS:O	28:DP:9:GLN:HG2	2.21	0.41
36:B2:31:LEU:O	36:B2:34:ARG:N	2.54	0.41
48:BG:71:LEU:HD13	48:BG:74:MET:SD	2.61	0.41
13:CN:88:MET:HE2	13:CN:88:MET:HA	2.03	0.41
34:D3:16:THR:HG21	34:D3:48:MET:CE	2.51	0.41
1:AA:1073:U:H2'	1:AA:1074:G:O4'	2.20	0.41
33:B1:22:THR:OG1	33:B1:23:THR:N	2.53	0.41
1:AA:93:U:H3'	1:AA:94:G:C5'	2.48	0.41
23:DB:279:A:N6	23:DB:361:G:O2'	2.44	0.41
23:DB:2146:C:H4'	23:DB:2148:G:H1'	2.01	0.41
23:DB:98:G:C3'	23:DB:99:U:H5''	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AP:23:ASP:CG	15:AP:25:ARG:HE	2.23	0.41
39:DX:20:ASN:HA	39:DX:24:GLU:OE1	2.21	0.41
23:BB:783:A:H4'	23:BB:1779:U:O2	2.21	0.41
23:DB:1365:A:O3'	51:DZ:11:ARG:NH1	2.54	0.41
1:CA:927:G:OP2	1:CA:1503:A:C4	2.74	0.41
41:BJ:72:LYS:CG	41:BJ:89:PHE:HB2	2.51	0.41
1:AA:1099:G:H2'	1:AA:1100:C:O4'	2.21	0.41
4:AE:104:ILE:O	4:AE:104:ILE:HG23	2.20	0.41
27:BK:88:ASN:ND2	27:BK:89:ASN:N	2.69	0.41
23:BB:720:U:HO2'	23:BB:721:A:H5'	1.85	0.41
23:BB:2317:A:H2'	23:BB:2318:G:O4'	2.20	0.41
19:AT:66:ILE:HG23	19:AT:70:LYS:CB	2.45	0.41
19:AT:70:LYS:HA	19:AT:73:ARG:CZ	2.51	0.41
16:CQ:67:SER:O	16:CQ:68:LYS:C	2.58	0.41
10:CK:17:ASP:HB3	10:CK:80:ASN:CG	2.41	0.41
13:AN:1:ALA:HB1	13:AN:6:LYS:CE	2.51	0.41
23:BB:2346:A:O4'	23:BB:2383:G:O4'	2.38	0.41
47:BF:19:PHE:CZ	47:BF:164:GLU:HG2	2.55	0.41
23:BB:122:G:O2'	23:BB:123:G:H5'	2.21	0.41
34:B3:6:VAL:HG23	34:B3:60:CYS:O	2.20	0.41
25:DC:86:ARG:HH11	25:DC:86:ARG:HB3	1.85	0.41
39:DX:59:GLU:CD	39:DX:60:LYS:H	2.24	0.41
25:BC:123:ILE:HD13	25:BC:135:PRO:HD2	2.03	0.41
6:AG:22:LEU:O	6:AG:25:PHE:HB3	2.21	0.41
28:BP:33:GLU:OE1	28:BP:33:GLU:HA	2.20	0.41
28:BP:23:ASP:O	28:BP:46:VAL:HG22	2.21	0.41
1:CA:1459:G:O2'	1:CA:1460:C:H5'	2.21	0.41
23:DB:20:C:O2'	23:DB:21:A:H5'	2.21	0.41
23:DB:2028:U:H2'	23:DB:2029:G:O4'	2.20	0.41
15:CP:1:MET:HA	15:CP:1:MET:HE3	2.03	0.41
45:DS:95:ARG:O	45:DS:96:ILE:HG22	2.20	0.41
1:CA:1099:G:OP1	20:CB:94:ARG:HD3	2.21	0.41
15:CP:61:VAL:HA	15:CP:65:ALA:HB3	2.03	0.41
23:BB:1739:A:H2'	23:BB:1740:G:C8	2.55	0.41
3:AD:19:PHE:HB3	3:AD:22:SER:OG	2.20	0.41
39:BX:5:GLU:HA	39:BX:5:GLU:OE2	2.21	0.41
1:AA:734:G:H2'	1:AA:735:C:C6	2.56	0.41
1:AA:66:A:H5'	1:AA:173:U:O4	2.21	0.41
1:CA:1009:U:H1'	1:CA:1021:A:N1	2.35	0.41
52:DW:77:LYS:N	52:DW:77:LYS:NZ	2.62	0.41
14:AO:11:ILE:HG13	14:AO:15:PHE:CE1	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BN:13:ASN:C	42:BN:15:SER:H	2.24	0.41
23:DB:1924:C:H2'	23:DB:1925:C:C6	2.55	0.41
1:AA:377:G:H2'	1:AA:378:G:C8	2.53	0.41
23:BB:510:C:H2'	23:BB:511:U:O4'	2.20	0.41
50:BT:69:ARG:HH11	50:BT:69:ARG:CB	2.34	0.41
23:BB:1904:G:O2'	23:BB:1905:C:H5'	2.21	0.41
23:DB:1317:G:H2'	23:DB:1318:U:C6	2.56	0.41
23:DB:2020:A:C2	23:DB:2022:U:O4'	2.74	0.41
23:BB:2603:G:O2'	23:BB:2604:U:H5'	2.21	0.41
1:AA:499:A:H1'	1:AA:500:G:O4'	2.20	0.41
23:DB:2228:G:H2'	23:DB:2229:U:C6	2.56	0.41
23:BB:2292:U:O2'	23:BB:2293:G:H5'	2.21	0.41
23:DB:2568:U:H6	23:DB:2568:U:O5'	2.04	0.41
51:BZ:63:GLY:HA3	51:BZ:66:THR:OG1	2.21	0.41
51:DZ:68:LEU:O	51:DZ:72:ARG:HG2	2.20	0.41
23:DB:4:U:O2'	23:DB:5:A:H5'	2.21	0.41
23:BB:1400:U:H2'	23:BB:1401:G:H8	1.85	0.41
28:DP:48:ALA:HB3	28:DP:59:THR:CB	2.50	0.41
14:AO:45:GLU:HB3	14:AO:46:HIS:HD1	1.85	0.41
22:BA:46:A:H2'	22:BA:47:C:C6	2.56	0.41
23:DB:958:U:H3	38:DM:16:ARG:HB3	1.86	0.41
23:DB:814:C:H2'	23:DB:815:C:H6	1.85	0.41
23:DB:1883:U:H2'	23:DB:1884:G:C1'	2.51	0.41
23:BB:832:U:P	37:BL:38:GLN:H	2.43	0.41
19:AT:27:MET:HE2	19:AT:28:ARG:HG2	2.03	0.41
1:AA:692:U:O4	10:AK:53:GLY:HA2	2.20	0.41
23:BB:1930:G:H2'	23:BB:1968:G:N1	2.35	0.41
23:DB:1013:C:H2'	23:DB:1014:A:H8	1.86	0.41
51:BZ:20:HIS:O	51:BZ:21:ALA:HB3	2.21	0.41
23:DB:2552:U:C2	23:DB:2554:U:H5'	2.56	0.41
23:BB:2730:C:O2'	23:BB:2731:G:H5'	2.21	0.41
37:DL:136:GLU:HA	37:DL:140:GLY:N	2.35	0.41
23:BB:779:U:O2'	23:BB:780:G:H5'	2.20	0.41
1:CA:384:G:H2'	1:CA:385:C:H6	1.85	0.41
26:DD:172:VAL:HG11	26:DD:175:LEU:HD11	2.03	0.41
23:BB:1885:A:H3'	23:BB:1886:U:H6	1.84	0.41
2:CC:10:ARG:NH2	2:CC:181:ILE:HD13	2.35	0.41
47:DF:119:LYS:HD2	47:DF:119:LYS:N	2.36	0.41
34:B3:57:VAL:C	34:B3:59:ALA:H	2.23	0.41
23:BB:1670:C:H3'	23:BB:1671:U:H6	1.86	0.41
23:BB:1676:A:C2	23:BB:1677:A:H1'	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1426:G:H8	23:DB:1426:G:OP2	2.04	0.41
14:AO:58:ARG:HH21	14:AO:62:GLN:HE22	1.67	0.41
23:BB:1843:C:O2'	23:BB:1844:C:H5'	2.20	0.41
23:DB:963:U:H2'	23:DB:964:C:C6	2.56	0.41
23:DB:2301:C:H2'	23:DB:2302:U:H6	1.86	0.41
10:AK:115:ILE:O	10:AK:115:ILE:HD12	2.21	0.41
23:BB:428:A:H2'	23:BB:429:A:O4'	2.21	0.41
2:AC:40:GLN:HG3	2:AC:41:TYR:N	2.36	0.41
23:DB:1435:G:H2'	23:DB:1436:G:C8	2.56	0.41
49:DR:81:LYS:HA	49:DR:81:LYS:HD3	1.84	0.41
37:BL:81:ASP:HA	37:BL:84:LYS:CE	2.51	0.41
26:DD:35:THR:OG1	26:DD:49:GLN:HG2	2.20	0.41
14:CO:45:GLU:O	14:CO:47:LYS:N	2.52	0.41
1:CA:1065:U:H1'	1:CA:1066:C:OP2	2.20	0.41
23:BB:1009:A:P	41:BJ:39:LYS:HZ2	2.44	0.41
1:AA:51:A:C2	1:AA:353:A:N7	2.89	0.41
24:DI:14:ALA:HB3	24:DI:51:GLY:H	1.86	0.41
23:DB:146:A:H2'	23:DB:147:C:C6	2.56	0.41
51:DZ:36:HIS:CG	51:DZ:37:ARG:N	2.89	0.41
23:BB:2582:G:O2'	23:BB:2583:G:H5'	2.20	0.41
43:DO:30:ARG:HG3	43:DO:30:ARG:HH11	1.85	0.41
23:BB:268:C:H2'	23:BB:268:C:O2	2.21	0.41
47:DF:51:ASN:HD22	47:DF:51:ASN:HA	1.66	0.41
23:BB:1806:C:C2'	23:BB:1807:G:H5'	2.51	0.41
23:DB:1068:G:C6	23:DB:1069:A:N6	2.89	0.41
25:BC:29:PHE:CE2	25:BC:31:PRO:HG2	2.55	0.41
23:DB:1904:G:O2'	23:DB:1905:C:H5'	2.20	0.41
40:DH:117:LEU:HA	40:DH:118:PRO:HD3	1.96	0.41
31:B0:56:LYS:O	31:B0:56:LYS:HD3	2.20	0.41
1:AA:355:C:O2'	1:AA:356:A:H5'	2.21	0.41
23:DB:490:C:H3'	23:DB:491:G:H5''	2.03	0.41
23:DB:1099:G:C4'	24:DI:4:VAL:HB	2.51	0.41
10:AK:124:LYS:CA	21:AU:34:ARG:HB3	2.26	0.41
23:BB:852:U:H2'	23:BB:853:C:H6	1.86	0.41
52:BW:42:THR:O	52:BW:43:LYS:HE3	2.21	0.41
52:BW:49:ASN:HB2	52:BW:60:ALA:CA	2.45	0.41
52:BW:64:GLY:HA2	52:BW:84:GLU:HG2	2.02	0.41
48:BG:8:VAL:CG1	48:BG:49:LEU:HB2	2.45	0.41
48:BG:7:PRO:O	48:BG:8:VAL:HB	2.20	0.41
23:DB:1819:A:OP1	25:DC:154:ALA:HA	2.20	0.41
25:DC:109:LEU:O	25:DC:110:LYS:C	2.59	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:251:THR:O	25:DC:252:LYS:HD2	2.20	0.41
23:DB:1824:G:OP2	25:DC:52:HIS:CE1	2.74	0.41
48:BG:91:VAL:HG23	48:BG:92:GLY:N	2.35	0.41
21:AU:36:PHE:O	21:AU:39:LYS:HE3	2.21	0.41
27:DK:34:GLY:O	27:DK:36:GLY:N	2.53	0.41
40:BH:116:ARG:HD3	40:BH:133:GLN:HB2	2.03	0.41
40:BH:84:ALA:HB3	40:BH:148:ALA:HB2	2.02	0.41
51:DZ:31:PRO:HB2	51:DZ:33:LEU:CD1	2.44	0.41
23:DB:988:A:P	30:DY:11:SER:HB3	2.60	0.41
1:AA:1422:G:H5'	27:BK:48:PRO:HB3	2.03	0.41
25:BC:117:SER:HA	25:BC:128:THR:O	2.20	0.41
25:BC:93:VAL:CG2	25:BC:115:ILE:HD11	2.50	0.41
23:DB:1005:C:H1'	23:DB:1012:U:C4	2.55	0.41
25:DC:94:LEU:CD1	25:DC:100:ARG:HD3	2.46	0.41
48:BG:15:ASP:HA	48:BG:26:LYS:NZ	2.36	0.41
51:BZ:36:HIS:CG	51:BZ:37:ARG:N	2.89	0.41
53:B6:130:ARG:HG3	53:B6:130:ARG:HH11	1.86	0.41
22:BA:24:G:C2	22:BA:28:C:C5	3.09	0.41
30:BY:16:LEU:N	30:BY:16:LEU:HD22	2.17	0.41
42:BN:79:LEU:HA	42:BN:83:LEU:HD12	2.02	0.41
24:DI:73:PRO:CG	24:DI:78:LEU:HD21	2.47	0.41
47:BF:42:ALA:O	47:BF:45:ASP:N	2.53	0.41
47:BF:48:LEU:N	47:BF:48:LEU:HD23	2.36	0.41
47:BF:27:VAL:O	47:BF:27:VAL:HG23	2.21	0.41
42:BN:100:CYS:SG	42:BN:101:GLY:N	2.94	0.41
7:AH:35:ILE:HG13	7:AH:35:ILE:H	1.70	0.41
1:CA:954:G:H2'	1:CA:955:U:C6	2.55	0.41
1:CA:865:A:H2	1:CA:918:A:H4'	1.85	0.41
1:AA:1271:A:O2'	1:AA:1272:G:H5'	2.21	0.41
18:AS:20:LYS:HD2	18:AS:20:LYS:O	2.21	0.41
11:AL:49:ARG:HH12	11:AL:88:ASP:CB	2.33	0.41
23:BB:804:A:H5''	23:BB:805:G:OP1	2.21	0.41
37:DL:29:LYS:CG	37:DL:30:THR:HG23	2.42	0.41
9:CJ:52:LEU:CA	9:CJ:62:ARG:HA	2.44	0.41
48:BG:148:ARG:HD3	48:BG:152:ARG:CD	2.51	0.41
20:CB:27:LYS:C	20:CB:27:LYS:HD2	2.40	0.41
1:AA:123:U:H5''	1:AA:311:C:O2'	2.21	0.41
23:DB:2886:A:N6	31:D0:39:ARG:CZ	2.84	0.41
29:DE:69:ARG:HG2	29:DE:69:ARG:HH11	1.86	0.41
26:DD:186:LEU:HD11	28:DP:3:ILE:CG1	2.45	0.41
20:CB:161:PHE:CZ	20:CB:216:VAL:HG11	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:125:A:C6	36:B2:10:LEU:HD23	2.56	0.41
23:BB:1104:C:O2'	23:BB:1105:U:H5'	2.20	0.41
11:AL:21:PRO:HG2	11:AL:94:TYR:OH	2.20	0.41
37:BL:101:ILE:HG22	37:BL:102:GLY:N	2.35	0.41
20:CB:119:GLN:CD	20:CB:136:ARG:HH11	2.25	0.41
23:DB:360:U:H2'	23:DB:361:G:N9	2.35	0.41
7:CH:45:ILE:HD13	7:CH:60:LEU:HD11	2.03	0.41
1:AA:1003:G:H21	1:AA:1005:A:H5'	1.86	0.41
3:CD:90:LEU:H	3:CD:90:LEU:HD22	1.86	0.41
2:CC:155:ARG:HD2	2:CC:155:ARG:HA	1.88	0.41
23:BB:580:U:O2'	23:BB:581:C:H5'	2.21	0.41
23:BB:1785:A:H2'	23:BB:1787:A:N7	2.36	0.41
1:CA:1342:C:O2'	1:CA:1343:G:H5'	2.22	0.41
4:CE:148:SER:OG	4:CE:151:MET:HB2	2.21	0.41
11:AL:107:LYS:C	11:AL:109:ARG:H	2.23	0.41
29:BE:191:ASP:O	29:BE:194:LYS:HB3	2.21	0.41
49:BR:63:VAL:HA	49:BR:95:ASP:O	2.21	0.41
35:BV:31:TYR:CB	35:BV:37:PRO:HG3	2.50	0.41
23:DB:1729:U:H2'	23:DB:1730:C:H5'	2.03	0.41
23:DB:1430:G:O2'	23:DB:1431:A:H5'	2.21	0.41
53:B6:137:LEU:HD11	53:B6:158:GLU:CD	2.42	0.41
1:AA:167:A:O2'	1:AA:168:G:H5'	2.21	0.41
1:AA:103:U:H1'	1:AA:171:A:N1	2.36	0.41
1:AA:173:U:H5	1:AA:198:G:N3	2.19	0.41
27:DK:2:ILE:HA	27:DK:33:ALA:H	1.86	0.41
45:BS:95:ARG:O	45:BS:96:ILE:HG22	2.21	0.41
23:DB:543:G:H2'	23:DB:545:U:OP1	2.21	0.41
23:BB:636:G:H4'	23:BB:638:G:O3'	2.21	0.41
1:CA:373:A:H1'	1:CA:481:G:H1'	2.03	0.41
23:BB:228:C:O2	23:BB:418:C:H4'	2.21	0.41
23:DB:121:G:H2'	23:DB:122:G:H8	1.86	0.41
23:DB:510:C:H2'	23:DB:511:U:O4'	2.21	0.41
1:CA:1118:U:H1'	1:CA:1179:A:C4	2.56	0.41
23:DB:747:U:OP2	45:DS:90:LYS:NZ	2.54	0.41
23:DB:862:G:H2'	23:DB:863:A:C8	2.56	0.41
23:DB:440:C:H2'	23:DB:441:U:H6	1.86	0.41
27:BK:70:ARG:HB3	27:BK:70:ARG:HH11	1.85	0.41
26:DD:127:PHE:HB3	26:DD:128:ARG:H	1.70	0.41
1:AA:1030:U:O2	1:AA:1030:U:C2'	2.69	0.41
23:BB:1880:U:H2'	23:BB:1881:C:C6	2.56	0.41
46:DU:25:LYS:CE	46:DU:36:GLU:HG3	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:628:G:H2'	1:CA:629:A:H8	1.86	0.41
23:DB:599:A:O2'	23:DB:600:G:H5'	2.20	0.41
9:CJ:65:TYR:C	13:CN:98:ALA:HB2	2.41	0.41
23:DB:2544:G:O2'	23:DB:2545:G:H5'	2.21	0.41
42:BN:6:SER:OG	42:BN:7:GLY:N	2.54	0.41
26:DD:40:LEU:HA	26:DD:45:TYR:N	2.36	0.41
53:D6:150:SER:HB3	53:D6:153:GLU:OE1	2.20	0.41
23:DB:346:A:H3'	23:DB:347:A:H8	1.86	0.41
37:BL:40:SER:OG	37:BL:41:ARG:HG3	2.21	0.41
23:DB:1053:C:C2'	23:DB:1054:A:H5'	2.50	0.41
23:BB:2595:G:N1	23:BB:2599:G:C6	2.89	0.41
1:AA:884:U:H4'	1:AA:885:G:H5''	2.03	0.41
23:BB:437:U:H2'	23:BB:438:G:H8	1.85	0.41
28:DP:44:GLY:HA3	28:DP:60:VAL:CG1	2.51	0.41
1:AA:1367:C:O2'	1:AA:1368:A:H5'	2.20	0.41
1:CA:1222:G:O2'	1:CA:1223:C:H5'	2.20	0.41
5:CF:10:VAL:HG12	5:CF:11:HIS:H	1.86	0.41
23:BB:2010:G:O2'	23:BB:2011:U:H5'	2.20	0.41
23:DB:1228:G:H2'	23:DB:1229:C:C6	2.56	0.41
23:DB:1360:G:H2'	23:DB:1361:G:C5'	2.51	0.41
43:BO:14:ALA:C	43:BO:16:ARG:N	2.74	0.41
24:DI:53:PRO:HG2	24:DI:77:VAL:HG11	2.01	0.41
47:DF:61:GLY:HA3	47:DF:94:ARG:HD2	2.03	0.41
23:BB:388:G:N7	23:BB:390:U:H2'	2.36	0.41
2:AC:89:VAL:HG12	2:AC:93:ILE:HD11	2.03	0.41
1:AA:51:A:H4'	1:AA:52:C:H5'	2.03	0.41
1:AA:1204:A:H2'	1:AA:1205:U:O4'	2.21	0.41
23:BB:2696:U:O2'	23:BB:2697:G:H5'	2.21	0.41
1:CA:1023:U:O2'	1:CA:1024:G:H5'	2.21	0.41
41:BJ:121:LYS:HB2	41:BJ:121:LYS:HE3	1.97	0.41
11:CL:65:TYR:HB3	11:CL:95:HIS:CD2	2.56	0.41
23:BB:93:G:O2'	23:BB:94:A:H5'	2.21	0.41
23:BB:2366:A:H4'	52:BW:61:LYS:HE2	2.02	0.40
52:DW:17:ALA:HA	52:DW:35:ILE:CG2	2.26	0.40
52:DW:32:ALA:C	52:DW:34:SER:N	2.74	0.40
25:DC:145:MET:CE	25:DC:153:LEU:HD11	2.51	0.40
23:DB:1818:U:C4	25:DC:152:GLN:HB3	2.56	0.40
37:DL:108:ALA:HB3	37:DL:125:LEU:HD21	2.03	0.40
37:DL:121:THR:HB	37:DL:141:LYS:HD2	2.03	0.40
53:D6:43:VAL:CG2	53:D6:52:LEU:HD12	2.47	0.40
53:B6:66:LEU:O	53:B6:101:ILE:N	2.45	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2210:U:C4	23:DB:2212:A:N7	2.89	0.40
1:AA:1346:A:N1	1:AA:1374:A:H5'	2.36	0.40
1:AA:1014:A:H2'	1:AA:1015:G:O4'	2.21	0.40
35:BV:1:MET:CE	35:BV:2:PHE:H	2.35	0.40
23:DB:637:A:OP2	37:DL:128:THR:HG21	2.21	0.40
23:BB:996:A:O2'	23:BB:997:G:H5'	2.20	0.40
44:BQ:79:ILE:HG23	44:BQ:80:ASN:N	2.36	0.40
23:BB:338:G:N2	23:BB:339:U:H1'	2.36	0.40
30:BY:51:SER:C	30:BY:53:MET:N	2.74	0.40
33:B1:51:ALA:O	33:B1:52:LYS:C	2.60	0.40
23:BB:2306:C:H6	23:BB:2306:C:O5'	2.04	0.40
47:BF:137:PHE:O	47:BF:138:PRO:C	2.58	0.40
40:DH:126:GLY:C	40:DH:146:VAL:H	2.20	0.40
45:DS:13:SER:HB3	45:DS:16:LYS:HE3	2.03	0.40
47:DF:141:ASP:O	47:DF:142:TYR:C	2.58	0.40
47:DF:116:LEU:HB3	47:DF:176:PHE:CA	2.51	0.40
47:DF:27:VAL:O	47:DF:27:VAL:HG23	2.21	0.40
18:CS:50:VAL:HG22	18:CS:70:LEU:HD23	2.03	0.40
12:AM:38:ILE:HG13	12:AM:55:LEU:CD2	2.47	0.40
50:DT:1:MET:HG3	50:DT:2:ILE:N	2.33	0.40
1:AA:333:U:H2'	1:AA:334:C:C6	2.56	0.40
48:DG:152:ARG:HG3	48:DG:153:PRO:HD2	2.03	0.40
35:DV:24:ASN:HB3	35:DV:44:HIS:HB3	2.02	0.40
35:DV:89:ILE:HD13	35:DV:91:PHE:CZ	2.57	0.40
28:BP:105:LYS:HA	28:BP:108:ARG:NE	2.35	0.40
23:DB:2621:G:OP1	26:DD:124:ARG:NH2	2.54	0.40
42:BN:33:ILE:CG2	42:BN:114:GLU:HB2	2.45	0.40
42:BN:28:LEU:C	42:BN:28:LEU:HD13	2.42	0.40
23:DB:2884:U:H4'	31:D0:49:ARG:NH2	2.36	0.40
23:DB:9:G:H21	23:DB:10:A:N6	2.07	0.40
9:CJ:7:ARG:CZ	9:CJ:101:SER:HB2	2.51	0.40
20:CB:65:LYS:O	20:CB:157:PRO:HB2	2.20	0.40
9:CJ:12:ALA:HB2	9:CJ:96:VAL:HG12	2.03	0.40
5:CF:39:LEU:HD13	5:CF:40:GLU:N	2.35	0.40
2:CC:153:SER:OG	2:CC:196:GLY:N	2.54	0.40
14:CO:26:GLU:OE2	14:CO:77:ARG:HD2	2.22	0.40
14:AO:89:ARG:HH22	23:BB:716:A:P	2.44	0.40
42:BN:3:HIS:O	42:BN:4:ARG:HB2	2.22	0.40
1:AA:309:A:H2'	1:AA:310:G:H8	1.87	0.40
1:CA:926:G:H3'	1:CA:1505:G:N2	2.36	0.40
23:DB:1309:G:H4'	36:D2:7:PRO:HB2	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1120:C:H2'	1:CA:1121:U:C6	2.56	0.40
34:B3:60:CYS:C	34:B3:61:LEU:HD23	2.41	0.40
48:DG:155:PRO:C	48:DG:170:THR:HB	2.41	0.40
23:DB:1243:C:O2'	37:DL:4:ASN:O	2.37	0.40
1:CA:781:A:H2'	1:CA:782:A:C5'	2.48	0.40
8:AI:9:GLY:HA3	8:AI:81:GLY:H	1.84	0.40
27:BK:73:ASP:OD2	27:BK:75:SER:HB3	2.21	0.40
23:BB:2001:C:H4'	23:BB:2689:U:C2'	2.51	0.40
11:CL:14:LYS:HG2	11:CL:16:ALA:H	1.86	0.40
23:BB:1993:U:H4'	26:BD:133:THR:HG21	2.01	0.40
10:CK:16:SER:HB3	10:CK:79:LYS:CG	2.52	0.40
25:BC:166:ARG:HA	25:BC:171:VAL:HA	2.03	0.40
38:BM:69:PRO:HA	38:BM:94:ALA:HA	2.02	0.40
23:BB:1040:A:C2	23:BB:1116:G:N1	2.90	0.40
1:CA:1418:A:H2	23:DB:1948:G:N3	2.19	0.40
52:BW:77:LYS:N	52:BW:77:LYS:NZ	2.67	0.40
23:DB:1506:U:H2'	23:DB:1507:C:C6	2.55	0.40
23:BB:1454:C:O2	23:BB:1454:C:O4'	2.39	0.40
23:BB:1914:C:H2'	23:BB:1915:U:O4'	2.21	0.40
23:BB:1508:A:H5'	23:BB:1509:A:N6	2.36	0.40
23:BB:2277:G:O3'	38:BM:11:LYS:HE3	2.21	0.40
22:BA:49:C:OP1	43:BO:102:ARG:N	2.45	0.40
29:DE:1:MET:HB2	29:DE:16:GLU:CA	2.50	0.40
53:B6:2:THR:H	53:B6:5:GLU:CD	2.23	0.40
23:DB:509:C:H5''	23:DB:510:C:OP2	2.20	0.40
1:CA:1258:G:C2	1:CA:1278:G:N2	2.90	0.40
23:BB:871:U:H2'	23:BB:872:U:C6	2.54	0.40
23:DB:1292:G:O2'	23:DB:1293:C:H5'	2.21	0.40
23:DB:1027:A:N3	23:DB:2488:G:H5''	2.36	0.40
23:DB:1112:G:H2'	23:DB:1113:U:O4'	2.21	0.40
27:DK:111:LYS:HD3	27:DK:111:LYS:N	2.36	0.40
23:BB:1292:G:H2'	23:BB:1293:C:H6	1.83	0.40
23:BB:2320:U:O2'	23:BB:2322:A:N7	2.48	0.40
28:BP:61:ARG:NH1	28:BP:100:ARG:HA	2.35	0.40
15:CP:20:VAL:HG21	15:CP:32:PHE:CG	2.56	0.40
47:BF:120:SER:O	47:BF:127:TYR:HA	2.21	0.40
23:DB:2727:A:O2'	23:DB:2728:U:H5'	2.21	0.40
23:BB:237:C:O2'	23:BB:238:C:H5'	2.21	0.40
23:DB:2494:G:O2'	38:DM:79:ALA:HA	2.20	0.40
25:DC:259:ASN:OD1	25:DC:262:THR:HG23	2.21	0.40
47:DF:13:LYS:C	47:DF:13:LYS:HZ2	2.25	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AG:120:ALA:HA	6:AG:123:LEU:HD12	2.02	0.40
1:AA:1491:G:C5	55:AA:1661:PAR:H21	2.56	0.40
46:BU:60:LYS:HA	46:BU:60:LYS:HE2	2.02	0.40
23:DB:2298:A:H2'	23:DB:2299:U:O4'	2.20	0.40
23:DB:2301:C:O2'	23:DB:2302:U:H5'	2.21	0.40
23:BB:2818:U:H4'	23:BB:2837:A:H4'	2.02	0.40
18:AS:11:ASP:N	18:AS:14:LEU:HD21	2.35	0.40
3:CD:106:PHE:CG	3:CD:144:ILE:HD11	2.56	0.40
1:CA:1434:A:H2'	1:CA:1435:G:C8	2.56	0.40
23:BB:839:U:H1'	23:BB:1191:G:H1'	2.04	0.40
23:DB:2515:C:H2'	23:DB:2516:A:H8	1.86	0.40
23:DB:1396:U:O2	23:DB:1396:U:O4'	2.39	0.40
20:AB:35:ASN:HD22	20:AB:35:ASN:HA	1.53	0.40
53:B6:164:ILE:O	53:B6:167:GLU:HB2	2.21	0.40
1:CA:815:A:OP2	1:CA:816:A:H5''	2.21	0.40
23:BB:282:A:O2'	23:BB:283:G:H5'	2.21	0.40
23:BB:1360:G:H2'	23:BB:1361:G:H5'	2.03	0.40
1:CA:704:A:C2	1:CA:705:G:H1'	2.56	0.40
23:DB:2856:A:H2'	23:DB:2857:G:H8	1.87	0.40
24:DI:56:VAL:CG2	24:DI:68:PHE:HB2	2.51	0.40
23:BB:329:G:H1	46:BU:16:LYS:HZ3	1.69	0.40
6:CG:67:ASN:ND2	6:CG:127:ALA:HA	2.36	0.40
38:DM:131:VAL:HG12	38:DM:132:THR:N	2.36	0.40
1:AA:1394:A:C5	1:AA:1501:C:H4'	2.55	0.40
38:DM:20:LEU:N	38:DM:20:LEU:HD22	2.36	0.40
15:AP:51:ARG:NH1	15:AP:51:ARG:HG2	2.36	0.40
9:AJ:31:ARG:HE	9:AJ:31:ARG:HB2	1.63	0.40
24:DI:2:LYS:N	24:DI:2:LYS:HD2	2.36	0.40
10:CK:125:LYS:O	21:CU:33:ARG:CZ	2.69	0.40
10:AK:125:LYS:O	10:AK:126:ARG:C	2.59	0.40
52:BW:37:VAL:C	52:BW:39:GLN:H	2.24	0.40
25:DC:51:ARG:O	25:DC:52:HIS:C	2.60	0.40
6:AG:87:PRO:HG2	6:AG:151:ALA:HB2	2.03	0.40
16:CQ:75:VAL:HG23	16:CQ:76:ARG:N	2.36	0.40
53:B6:69:GLN:CD	53:B6:98:ALA:HB2	2.41	0.40
23:DB:633:A:H2'	23:DB:634:C:O4'	2.21	0.40
29:BE:105:LEU:HD21	29:BE:177:PRO:CA	2.51	0.40
23:BB:2199:A:H5''	23:BB:2200:C:H5	1.86	0.40
40:DH:128:HIS:N	40:DH:144:VAL:O	2.49	0.40
43:BO:35:ILE:O	43:BO:35:ILE:HG22	2.20	0.40
51:BZ:40:VAL:O	51:BZ:42:SER:N	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1059:G:H2'	23:DB:1060:U:C6	2.56	0.40
23:DB:1060:U:O4	24:DI:131:THR:HG22	2.21	0.40
47:BF:107:VAL:HA	47:BF:111:ARG:HH12	1.87	0.40
24:BI:91:LYS:O	24:BI:91:LYS:HG3	2.21	0.40
23:BB:299:A:N6	23:BB:322:A:O2'	2.50	0.40
23:BB:322:A:P	29:BE:163:ASN:ND2	2.94	0.40
23:BB:1461:C:H2'	23:BB:1462:C:C6	2.56	0.40
45:DS:15:GLN:HA	45:DS:18:ARG:HG2	2.02	0.40
18:CS:20:LYS:O	18:CS:23:GLU:HG3	2.21	0.40
23:DB:483:A:H8	46:DU:44:HIS:HB3	1.86	0.40
29:BE:33:VAL:O	29:BE:36:ALA:HB3	2.21	0.40
41:BJ:83:GLY:O	41:BJ:84:ILE:C	2.60	0.40
39:DX:7:ARG:HB2	39:DX:7:ARG:CZ	2.51	0.40
10:CK:59:PRO:N	10:CK:90:PRO:HB2	2.36	0.40
2:AC:120:THR:HA	2:AC:123:LEU:HD12	2.03	0.40
1:AA:1350:A:H2'	1:AA:1351:U:H6	1.86	0.40
15:CP:66:THR:HG22	15:CP:67:ILE:N	2.36	0.40
29:DE:147:LEU:O	29:DE:168:ASP:O	2.39	0.40
23:BB:27:G:O2'	23:BB:28:A:H8	2.02	0.40
44:BQ:71:ASN:HB3	44:BQ:72:GLY:H	1.70	0.40
49:BR:4:VAL:H	49:BR:38:VAL:HG23	1.85	0.40
49:BR:49:ILE:CG2	49:BR:54:VAL:HB	2.51	0.40
27:DK:112:PHE:O	27:DK:113:MET:C	2.58	0.40
27:BK:112:PHE:O	27:BK:113:MET:C	2.60	0.40
27:BK:119:ALA:HB3	27:BK:120:PRO:HD3	2.03	0.40
29:BE:176:ASP:O	29:BE:180:LEU:HG	2.22	0.40
23:DB:1444:G:H2'	23:DB:1445:G:C8	2.56	0.40
9:AJ:12:ALA:HB2	9:AJ:96:VAL:HG12	2.03	0.40
5:CF:96:VAL:HG12	5:CF:97:THR:H	1.86	0.40
1:CA:1057:G:H5''	2:CC:153:SER:CB	2.51	0.40
1:AA:92:U:OP2	1:AA:92:U:H6	2.04	0.40
23:DB:182:A:H2'	23:DB:183:C:H6	1.87	0.40
28:DP:50:ARG:HB2	28:DP:56:SER:OG	2.20	0.40
28:DP:57:ALA:HA	28:DP:73:PHE:O	2.21	0.40
23:BB:2774:C:H2'	23:BB:2775:G:O4'	2.22	0.40
29:DE:191:ASP:O	29:DE:194:LYS:HB3	2.21	0.40
12:AM:89:ARG:HH22	12:AM:94:LEU:HD12	1.83	0.40
23:DB:320:A:C2	29:DE:163:ASN:HB3	2.57	0.40
23:BB:1139:G:OP1	41:BJ:103:ILE:HD12	2.21	0.40
16:AQ:67:SER:O	16:AQ:68:LYS:C	2.58	0.40
11:CL:23:LEU:C	11:CL:25:ALA:N	2.75	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:419:U:H2'	23:DB:420:C:H6	1.84	0.40
23:DB:2592:G:O2'	23:DB:2593:U:H5'	2.22	0.40
1:AA:237:G:H5''	16:AQ:26:ARG:NH2	2.36	0.40
1:AA:16:A:C2'	1:AA:17:U:H5'	2.51	0.40
39:DX:44:LYS:HZ1	39:DX:48:ARG:CZ	2.34	0.40
39:DX:9:LYS:HZ2	39:DX:60:LYS:HE3	1.86	0.40
28:BP:51:ASN:O	28:BP:52:ARG:HD3	2.22	0.40
28:BP:57:ALA:HA	28:BP:73:PHE:O	2.20	0.40
23:BB:2847:U:OP1	28:BP:95:LYS:HD3	2.21	0.40
42:DN:92:GLY:HA2	42:DN:94:TYR:CZ	2.56	0.40
1:AA:66:A:C2'	1:AA:67:C:H5'	2.51	0.40
19:AT:78:LEU:HA	19:AT:78:LEU:HD23	1.93	0.40
23:DB:1635:A:H2'	23:DB:1636:U:C5'	2.51	0.40
9:CJ:83:THR:O	9:CJ:87:LEU:HD22	2.22	0.40
16:CQ:30:HIS:CB	16:CQ:33:TYR:HB2	2.51	0.40
23:BB:1948:G:O2'	23:BB:1949:G:H5'	2.21	0.40
50:DT:13:ALA:O	50:DT:33:LYS:N	2.54	0.40
6:CG:20:GLU:O	6:CG:23:ALA:HB3	2.21	0.40
23:DB:1967:C:C2'	23:DB:1968:G:H5'	2.52	0.40
1:CA:1179:A:H2'	1:CA:1180:A:C8	2.56	0.40
41:BJ:64:VAL:HG11	41:BJ:69:ARG:HD2	2.03	0.40
1:AA:1037:C:H2'	1:AA:1038:C:H6	1.86	0.40
50:BT:13:ALA:O	50:BT:33:LYS:N	2.54	0.40
22:DA:87:U:C2'	22:DA:88:C:O5'	2.69	0.40
23:BB:2259:U:H2'	23:BB:2260:C:C6	2.56	0.40
41:DJ:96:ARG:NE	41:DJ:99:ARG:HD2	2.35	0.40
23:DB:1900:A:N1	23:DB:1970:A:C5	2.88	0.40
11:AL:122:LYS:HG3	11:AL:123:ALA:N	2.35	0.40
23:DB:2691:C:C4	23:DB:2719:G:N2	2.89	0.40
35:DV:16:ALA:O	35:DV:19:ARG:HB2	2.22	0.40
23:BB:409:G:H2'	23:BB:410:G:C8	2.57	0.40
19:AT:19:HIS:CE1	19:AT:23:ARG:HG3	2.56	0.40
23:BB:247:G:H5''	23:BB:386:G:H2'	2.03	0.40
1:AA:1289:A:H61	8:AI:71:ILE:CD1	2.34	0.40
1:AA:1489:G:OP2	55:AA:1661:PAR:H54	2.19	0.40
23:BB:499:U:H5''	46:BU:42:LYS:HG2	2.03	0.40
28:DP:60:VAL:O	28:DP:70:GLU:HA	2.21	0.40
27:DK:18:ARG:HB2	27:DK:45:GLU:CG	2.51	0.40
23:BB:1693:U:O2'	25:BC:13:ARG:NH2	2.54	0.40
28:BP:29:VAL:HG12	28:BP:80:VAL:HA	2.02	0.40
6:CG:94:ARG:HH12	6:CG:98:LEU:HD21	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:437:U:H2'	23:DB:438:G:H8	1.86	0.40
1:AA:1121:U:O2'	1:AA:1122:U:H5'	2.22	0.40
23:BB:2643:G:O2'	23:BB:2644:G:H5'	2.21	0.40
23:BB:2771:C:H1'	26:BD:208:LYS:NZ	2.37	0.40
23:BB:103:A:H2'	23:BB:104:A:H8	1.86	0.40
1:CA:1157:A:H5'	1:CA:1158:C:C5	2.56	0.40
23:BB:35:G:H1'	23:BB:454:A:O4'	2.21	0.40
25:BC:24:HIS:CE1	25:BC:26:GLY:H	2.39	0.40
26:BD:12:THR:HG22	26:BD:13:ARG:N	2.36	0.40
13:AN:64:ARG:HB2	13:AN:77:GLY:O	2.21	0.40
1:AA:682:G:O2'	1:AA:683:G:H5'	2.21	0.40
13:AN:47:LEU:O	13:AN:49:THR:N	2.54	0.40
14:CO:17:ARG:NH1	14:CO:17:ARG:HA	2.37	0.40
18:CS:33:TRP:CE3	18:CS:33:TRP:N	2.90	0.40
23:DB:757:G:H2'	23:DB:758:C:H5'	2.03	0.40
14:CO:31:LEU:O	14:CO:34:ALA:HB3	2.20	0.40
23:DB:2417:C:H2'	23:DB:2418:A:H8	1.87	0.40
23:DB:1099:G:H3'	24:DI:2:LYS:HA	2.03	0.40
50:BT:4:GLU:O	50:BT:8:LEU:HG	2.21	0.40
23:DB:2331:G:C4'	52:DW:39:GLN:HA	2.50	0.40
48:BG:10:VAL:HG13	48:BG:14:VAL:HB	2.03	0.40
23:DB:2751:G:O4'	48:DG:2:ARG:HD3	2.21	0.40
53:D6:30:THR:C	53:D6:32:ARG:N	2.75	0.40
53:D6:68:VAL:CG2	53:D6:99:LEU:HD12	2.50	0.40
41:BJ:59:ALA:C	41:BJ:61:LYS:N	2.75	0.40
44:DQ:79:ILE:HG23	44:DQ:80:ASN:N	2.36	0.40
44:DQ:93:ILE:HG23	44:DQ:94:LEU:N	2.36	0.40
44:DQ:63:ARG:CZ	44:DQ:96:ASP:HA	2.51	0.40
1:AA:958:A:N1	18:AS:53:GLY:C	2.75	0.40
13:CN:68:ARG:CB	13:CN:68:ARG:HH11	2.17	0.40
1:AA:600:A:O2'	1:AA:601:G:H5'	2.21	0.40
42:DN:38:LEU:CD1	42:DN:42:LYS:HD2	2.51	0.40
50:BT:28:ASN:ND2	50:BT:29:THR:HG23	2.36	0.40
25:DC:76:VAL:O	25:DC:78:GLU:N	2.54	0.40
1:CA:1328:C:H5''	12:CM:27:THR:CG2	2.37	0.40
51:BZ:30:LEU:HA	51:BZ:31:PRO:HD3	1.95	0.40
22:BA:29:A:C4	22:BA:56:G:N2	2.89	0.40
47:BF:134:GLN:H	47:BF:150:GLY:N	2.16	0.40
1:AA:1396:A:O4'	1:AA:1398:A:H1'	2.21	0.40
47:DF:140:ILE:H	47:DF:140:ILE:HG13	1.58	0.40
47:DF:8:LYS:HD3	47:DF:9:ASP:OD2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1077:G:N2	1:CA:1080:A:OP2	2.53	0.40
18:CS:18:VAL:O	18:CS:22:VAL:HG23	2.22	0.40
18:CS:49:ALA:HB1	18:CS:56:HIS:HB3	2.03	0.40
20:AB:46:VAL:N	20:AB:47:PRO:CD	2.83	0.40
23:BB:2468:A:H2'	23:BB:2476:A:C5	2.56	0.40
50:DT:41:ALA:C	50:DT:43:ILE:N	2.75	0.40
3:AD:172:VAL:HG23	3:AD:178:GLU:O	2.22	0.40
13:AN:80:ARG:HG2	13:AN:80:ARG:HH11	1.86	0.40
16:AQ:45:VAL:HG12	16:AQ:46:HIS:H	1.85	0.40
29:BE:28:VAL:HG23	29:BE:29:HIS:N	2.36	0.40
23:BB:2893:A:H5''	23:BB:2894:G:H5'	2.04	0.40
23:DB:819:A:OP2	23:DB:1187:G:N2	2.54	0.40
23:BB:979:A:H2'	23:BB:982:C:N4	2.36	0.40
13:AN:88:MET:HE2	13:AN:88:MET:HA	2.02	0.40
23:DB:2869:G:H2'	23:DB:2870:C:O4'	2.21	0.40
1:CA:1324:A:H2'	1:CA:1325:C:H6	1.86	0.40
32:D4:36:ARG:O	32:D4:37:GLN:C	2.59	0.40
1:AA:1237:C:H3'	1:AA:1336:C:N4	2.30	0.40
9:CJ:76:ILE:HG13	9:CJ:76:ILE:H	1.70	0.40
45:BS:55:ILE:CG2	45:BS:56:ALA:N	2.85	0.40
29:DE:161:ALA:HA	29:DE:164:LEU:HD12	2.02	0.40
27:DK:19:VAL:HB	27:DK:41:ILE:CG1	2.51	0.40
19:CT:2:ASN:ND2	19:CT:3:ILE:N	2.62	0.40
42:DN:51:LEU:HD21	42:DN:70:THR:HG21	2.03	0.40
23:BB:2144:G:N2	23:BB:2146:C:C2	2.89	0.40
1:CA:279:A:H5'	1:CA:281:G:O4'	2.21	0.40
1:AA:715:A:O2'	1:AA:716:A:H5'	2.21	0.40
36:B2:43:THR:O	36:B2:44:VAL:C	2.59	0.40
20:CB:67:LEU:HD23	20:CB:67:LEU:HA	1.91	0.40
25:DC:43:ASN:CG	25:DC:44:ASN:H	2.22	0.40
45:DS:46:LEU:O	45:DS:50:VAL:HG23	2.21	0.40
23:BB:37:C:H4'	23:BB:451:U:OP1	2.21	0.40
23:DB:360:U:H2'	23:DB:361:G:O4'	2.21	0.40
1:CA:1103:C:C4	1:CA:1104:G:N7	2.90	0.40
28:DP:50:ARG:HB3	28:DP:57:ALA:H	1.86	0.40
26:BD:114:LYS:HE3	26:BD:116:LYS:CE	2.52	0.40
4:CE:39:GLY:CA	4:CE:116:VAL:HB	2.48	0.40
28:BP:112:ARG:HB2	28:BP:112:ARG:NH1	2.36	0.40
46:BU:10:VAL:HA	46:BU:70:ALA:O	2.21	0.40
4:AE:104:ILE:HD11	4:AE:111:ARG:HA	2.03	0.40
40:BH:18:GLN:HE22	40:BH:44:ILE:HD13	1.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:44:ILE:O	40:BH:46:PHE:N	2.54	0.40
38:DM:41:LEU:O	38:DM:94:ALA:N	2.53	0.40
1:AA:191:G:H2'	1:AA:192:A:C8	2.55	0.40
28:BP:32:VAL:HG12	28:BP:33:GLU:O	2.21	0.40
23:BB:705:A:H61	23:BB:726:G:H1'	1.86	0.40
1:CA:547:A:H4'	1:CA:548:G:O5'	2.21	0.40
1:AA:1229:A:H2'	1:AA:1230:C:H6	1.86	0.40
19:AT:65:LEU:HA	19:AT:65:LEU:HD12	1.92	0.40
20:CB:26:MET:HE2	20:CB:26:MET:HB3	1.89	0.40
23:DB:2219:U:H2'	23:DB:2220:U:C6	2.56	0.40
42:BN:60:VAL:O	42:BN:63:ARG:HB3	2.21	0.40
1:AA:448:A:O2'	1:AA:449:G:H5'	2.22	0.40
1:CA:375:U:C2	1:CA:376:G:C8	3.10	0.40
1:CA:376:G:OP1	15:CP:5:ARG:HB2	2.21	0.40
43:BO:106:LEU:HA	43:BO:109:ALA:HB3	2.03	0.40
23:DB:962:G:H21	23:DB:2250:G:N2	2.18	0.40
6:AG:77:ARG:HG3	6:AG:79:VAL:CG2	2.50	0.40
23:DB:228:C:O2	23:DB:418:C:H4'	2.21	0.40
16:AQ:30:HIS:CB	16:AQ:33:TYR:HB2	2.51	0.40
23:DB:1562:U:O2'	23:DB:1563:U:H5'	2.22	0.40
23:DB:679:C:H2'	23:DB:680:C:C6	2.56	0.40
37:BL:132:ARG:HA	37:BL:135:ILE:CG2	2.52	0.40
25:BC:254:LYS:HB3	25:BC:255:LYS:H	1.68	0.40
23:BB:2262:U:H2'	23:BB:2263:C:H6	1.86	0.40
7:CH:29:SER:O	7:CH:30:LYS:C	2.59	0.40
3:CD:146:GLU:CD	3:CD:146:GLU:N	2.74	0.40
29:DE:31:VAL:HG21	29:DE:104:ALA:CB	2.51	0.40
43:DO:106:LEU:HA	43:DO:109:ALA:HB3	2.03	0.40
1:CA:152:A:H2'	1:CA:153:C:O4'	2.22	0.40
23:DB:2889:C:H2'	23:DB:2890:G:C8	2.56	0.40
1:CA:648:A:H2'	1:CA:649:A:H8	1.86	0.40
1:CA:691:G:H1'	1:CA:696:A:N6	2.35	0.40
22:BA:77:U:O2'	22:BA:78:A:H5'	2.21	0.40
24:DI:63:ASP:O	24:DI:63:ASP:OD1	2.39	0.40
1:AA:158:G:H2'	1:AA:159:G:O4'	2.21	0.40
47:DF:56:LEU:HD13	47:DF:56:LEU:O	2.20	0.40
23:DB:1054:A:H2'	23:DB:1055:G:O4'	2.22	0.40
23:BB:2757:A:H2'	23:BB:2757:A:N3	2.36	0.40
1:AA:177:G:C5	1:AA:178:C:C5	3.09	0.40
23:DB:2300:C:O2'	23:DB:2301:C:H5'	2.22	0.40
23:BB:2830:C:H1'	23:BB:2836:U:O4'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1798:U:OP1	25:DC:255:LYS:HG2	2.21	0.40
29:DE:6:LYS:HB2	29:DE:120:VAL:O	2.21	0.40
23:BB:2408:U:H2'	23:BB:2409:G:H8	1.87	0.40
23:BB:1304:A:H2'	23:BB:1305:C:H6	1.86	0.40
43:DO:14:ALA:C	43:DO:16:ARG:N	2.75	0.40
1:CA:1112:C:O2	2:CC:178:ARG:HB3	2.21	0.40
23:BB:34:U:H4'	23:BB:35:G:OP2	2.22	0.40
23:BB:1068:G:C6	23:BB:1069:A:N6	2.89	0.40
23:BB:2295:C:O2'	23:BB:2296:U:H5'	2.21	0.40
23:DB:1058:U:H1'	24:DI:117:THR:HG22	2.03	0.40
1:CA:952:U:H2'	1:CA:953:G:C8	2.56	0.40
33:B1:38:PHE:HB2	33:B1:45:HIS:CE1	2.55	0.40
1:CA:750:C:H4'	14:CO:21:ASP:HA	2.03	0.40
27:DK:64:ARG:O	27:DK:82:ASN:HA	2.21	0.40
1:CA:792:A:C4	1:CA:794:A:C6	3.09	0.40
40:DH:26:ALA:O	40:DH:27:ARG:C	2.60	0.40
52:BW:49:ASN:ND2	52:BW:50:VAL:N	2.70	0.40
48:BG:84:LYS:HG3	48:BG:131:VAL:HB	2.03	0.40
22:BA:40:U:H1'	22:BA:43:C:C5	2.55	0.40
6:AG:148:LYS:O	6:AG:151:ALA:HB3	2.22	0.40
37:DL:90:VAL:HG23	37:DL:120:VAL:CG1	2.51	0.40
48:DG:108:PHE:HD1	48:DG:108:PHE:H	1.70	0.40
22:DA:42:C:C6	47:DF:65:LEU:HD22	2.57	0.40
41:DJ:40:HIS:ND1	41:DJ:41:LYS:HG3	2.36	0.40
41:DJ:41:LYS:HB3	41:DJ:42:ALA:H	1.65	0.40
41:DJ:4:PHE:O	41:DJ:44:TYR:CZ	2.74	0.40
23:BB:138:U:O2'	50:BT:1:MET:HA	2.22	0.40
23:DB:635:C:O2'	23:DB:636:G:H5'	2.20	0.40
37:DL:127:VAL:CG2	37:DL:128:THR:N	2.83	0.40
22:DA:24:G:C2	22:DA:28:C:C5	3.10	0.40
23:DB:2768:U:H2'	23:DB:2769:U:O4'	2.21	0.40
13:CN:60:ARG:HD3	13:CN:62:ARG:CZ	2.52	0.40
39:BX:27:ASN:HA	39:BX:30:MET:HG2	2.02	0.40
25:DC:92:LEU:HD12	25:DC:101:ARG:O	2.21	0.40
44:BQ:91:ARG:CB	44:BQ:94:LEU:HD23	2.50	0.40
12:CM:39:ALA:HB3	12:CM:42:VAL:HG13	2.02	0.40
1:AA:1259:C:O2	1:AA:1283:U:H1'	2.21	0.40
37:BL:79:LEU:HD23	37:BL:79:LEU:HA	1.95	0.40
43:DO:88:LYS:CE	43:DO:116:GLN:HB2	2.39	0.40
9:AJ:53:ILE:CG2	9:AJ:61:ALA:HB1	2.51	0.40
35:BV:24:ASN:O	35:BV:26:PHE:N	2.53	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:58:LYS:HZ3	29:BE:58:LYS:N	2.13	0.40
23:BB:2806:C:H2'	23:BB:2807:U:O4'	2.21	0.40
23:DB:1190:G:P	37:DL:32:GLY:HA2	2.60	0.40
23:BB:1028:A:H1'	23:BB:2487:G:O5'	2.22	0.40
32:D4:36:ARG:HE	32:D4:37:GLN:H	1.70	0.40
48:DG:86:LEU:HD23	48:DG:163:TYR:HA	2.04	0.40
23:BB:971:G:OP2	23:BB:974:G:N2	2.55	0.40
35:DV:24:ASN:O	35:DV:26:PHE:N	2.55	0.40
29:DE:192:ALA:HA	29:DE:195:GLN:NE2	2.36	0.40
38:DM:46:ILE:CG1	38:DM:47:GLU:N	2.84	0.40
23:DB:591:U:H1'	34:D3:1:PRO:H2	1.84	0.40
2:CC:166:TRP:O	2:CC:167:TYR:CB	2.69	0.40
1:AA:20:U:O2'	1:AA:21:G:H5'	2.22	0.40
1:CA:723:U:H5'	21:CU:48:LYS:HG2	2.03	0.40
23:DB:2896:C:H2'	23:DB:2897:U:H6	1.86	0.40
23:BB:2896:C:H2'	23:BB:2897:U:H6	1.86	0.40
28:DP:4:ILE:HG22	28:DP:5:LYS:N	2.29	0.40
1:AA:279:A:H5'	1:AA:281:G:C5'	2.51	0.40
48:BG:71:LEU:HD13	48:BG:74:MET:HE1	2.04	0.40
1:CA:998:C:H2'	1:CA:999:C:H6	1.85	0.40
29:DE:126:VAL:HG22	29:DE:127:GLU:N	2.35	0.40
1:CA:1101:A:N6	20:CB:101:THR:HG21	2.37	0.40
44:DQ:51:GLN:O	44:DQ:54:ARG:HB2	2.21	0.40
1:CA:263:A:OP1	19:CT:73:ARG:NH1	2.55	0.40
35:BV:29:ILE:O	35:BV:29:ILE:HD12	2.21	0.40
23:BB:150:U:H2'	23:BB:151:C:O4'	2.20	0.40
25:BC:251:THR:O	25:BC:252:LYS:HD2	2.22	0.40
6:AG:19:SER:HB2	6:AG:21:LEU:HD21	2.03	0.40
11:CL:35:ARG:HH21	11:CL:36:VAL:HG22	1.86	0.40
6:AG:134:VAL:HG23	6:AG:135:LYS:N	2.36	0.40
25:BC:239:PHE:HD1	25:BC:241:LYS:H	1.68	0.40
23:BB:1374:G:H2'	23:BB:1375:U:H6	1.84	0.40
20:CB:191:ASP:OD2	20:CB:193:ASP:HB2	2.21	0.40
23:BB:1184:U:H2'	23:BB:1185:G:H8	1.87	0.40
1:CA:481:G:O2'	1:CA:482:A:H8	2.03	0.40
8:AI:98:ARG:NE	8:AI:103:VAL:HG21	2.37	0.40
1:AA:1483:A:H1'	23:BB:1948:G:H1'	2.04	0.40
1:AA:503:C:O2'	1:AA:504:C:H5'	2.22	0.40
23:DB:2250:G:H8	23:DB:2250:G:O5'	2.05	0.40
23:DB:2603:G:O2'	23:DB:2604:U:H5'	2.21	0.40
23:BB:1401:G:H2'	23:BB:1402:U:H6	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1745:A:H2'	23:BB:1746:A:C8	2.57	0.40
23:BB:493:G:H2'	23:BB:494:G:O4'	2.22	0.40
23:DB:1537:G:H3'	23:DB:1538:G:O4'	2.22	0.40
1:CA:692:U:O2	1:CA:694:A:C8	2.74	0.40
14:AO:36:ILE:HD13	14:AO:59:MET:HE2	2.03	0.40
41:DJ:72:LYS:CG	41:DJ:89:PHE:HB2	2.52	0.40
1:AA:426:U:H2'	1:AA:427:U:C6	2.56	0.40
25:DC:221:GLY:C	25:DC:223:ALA:N	2.73	0.40
23:DB:1926:U:H3'	23:DB:1928:A:OP2	2.21	0.40
31:B0:10:SER:O	31:B0:11:LYS:C	2.60	0.40
25:BC:221:GLY:C	25:BC:223:ALA:N	2.75	0.40
23:BB:408:G:H2'	23:BB:409:G:H8	1.85	0.40
1:AA:761:G:H2'	1:AA:762:U:H6	1.82	0.40
23:DB:2730:C:H2'	23:DB:2731:G:C8	2.57	0.40
23:BB:1300:G:N2	23:BB:1634:A:C2	2.89	0.40
23:DB:1499:C:H2'	23:DB:1500:G:C8	2.54	0.40
23:BB:247:G:C2	23:BB:252:G:C6	3.09	0.40
24:BI:52:LEU:O	24:BI:54:ILE:HG13	2.22	0.40
24:DI:102:ARG:O	24:DI:106:GLN:HG3	2.22	0.40
1:CA:884:U:H4'	1:CA:885:G:H5''	2.03	0.40
7:CH:79:ARG:HH11	7:CH:79:ARG:HG2	1.87	0.40
6:AG:31:VAL:HG22	6:AG:32:ASP:N	2.36	0.40
1:CA:1423:G:H2'	1:CA:1424:U:C6	2.56	0.40
23:DB:1344:U:H5'	23:DB:1384:A:N1	2.36	0.40
23:DB:247:G:H4'	23:DB:386:G:C4	2.57	0.40
23:DB:1692:U:O2'	23:DB:1693:U:H2'	2.22	0.40
23:BB:963:U:H2'	23:BB:964:C:C6	2.55	0.40
48:DG:125:PRO:HB2	48:DG:129:GLU:CD	2.42	0.40
29:BE:196:VAL:O	29:BE:200:LEU:HD23	2.21	0.40
1:AA:1119:C:O2'	1:AA:1120:C:H5'	2.21	0.40
23:BB:2515:C:H2'	23:BB:2516:A:H8	1.87	0.40
9:CJ:31:ARG:HG3	9:CJ:31:ARG:H	1.64	0.40
1:AA:1485:U:O2'	1:AA:1486:G:H5'	2.22	0.40
9:CJ:49:PHE:O	9:CJ:64:GLN:HA	2.21	0.40
20:CB:80:LYS:HG3	20:CB:81:ASP:H	1.86	0.40
10:CK:108:ASN:ND2	21:CU:6:ARG:HG3	2.36	0.40
26:BD:2:ILE:CG2	26:BD:84:LEU:HB3	2.51	0.40
23:BB:531:C:O2'	23:BB:563:A:H5''	2.21	0.40
33:B1:25:ASN:OD1	33:B1:27:ARG:HB2	2.22	0.40
2:AC:55:VAL:HG12	2:AC:56:ILE:N	2.37	0.40
26:BD:191:GLY:O	26:BD:192:ALA:HB3	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CH:83:ARG:C	7:CH:84:ILE:HG13	2.41	0.40
26:DD:12:THR:HG22	26:DD:13:ARG:N	2.37	0.40
26:DD:18:ASP:OD1	26:DD:19:GLY:N	2.54	0.40
23:DB:1614:A:H8	23:DB:1614:A:O5'	2.04	0.40
41:DJ:65:THR:HG23	41:DJ:66:GLY:N	2.36	0.40
1:AA:260:G:O2'	1:AA:261:U:H5'	2.21	0.40
1:AA:24:U:O2'	1:AA:25:C:H5'	2.21	0.40
23:DB:199:A:C6	23:DB:2434:A:C6	3.09	0.40
23:BB:2354:C:H2'	23:BB:2355:G:H8	1.87	0.40
52:BW:28:GLU:HB2	52:BW:31:LEU:HD21	2.03	0.40
25:DC:134:ILE:HD11	25:DC:163:ILE:HG13	2.04	0.40
25:DC:90:ILE:HA	25:DC:90:ILE:HD13	1.92	0.40
10:AK:42:GLY:HA3	10:AK:73:VAL:HG13	2.03	0.40
48:BG:106:LEU:N	48:BG:106:LEU:HD23	2.37	0.40
44:DQ:33:VAL:CG2	44:DQ:34:ALA:N	2.84	0.40
40:BH:116:ARG:HH11	40:BH:133:GLN:HB2	1.85	0.40
26:BD:105:LYS:HE3	26:BD:176:ASP:HB3	2.04	0.40
26:BD:51:THR:HG21	26:BD:75:ALA:O	2.21	0.40
26:BD:76:GLY:O	26:BD:77:ARG:C	2.60	0.40
53:D6:84:ARG:C	53:D6:86:SER:N	2.74	0.40
23:DB:2313:C:O3'	47:DF:87:LYS:HE2	2.22	0.40
47:DF:31:GLU:O	47:DF:32:LYS:O	2.38	0.40
47:DF:32:LYS:O	47:DF:32:LYS:HE2	2.21	0.40
52:DW:49:ASN:CB	52:DW:60:ALA:HA	2.46	0.40
53:B6:65:THR:HG22	53:B6:66:LEU:N	2.36	0.40
40:BH:144:VAL:HG12	40:BH:146:VAL:HG23	2.03	0.40
40:BH:90:LEU:HD11	40:BH:146:VAL:HG11	2.00	0.40
8:CI:56:MET:O	8:CI:58:GLU:N	2.45	0.40
41:DJ:3:THR:CB	41:DJ:44:TYR:OH	2.70	0.40
51:DZ:51:VAL:HG12	51:DZ:52:SER:N	2.36	0.40
13:AN:60:ARG:HD3	13:AN:62:ARG:CZ	2.52	0.40
35:BV:61:LEU:HD11	35:BV:74:ALA:HB2	2.03	0.40
23:DB:2307:G:O6	47:DF:40:GLY:HA3	2.21	0.40
47:DF:66:ILE:HD11	47:DF:83:PRO:CB	2.46	0.40
12:AM:15:VAL:CG2	12:AM:40:GLU:HB3	2.51	0.40
23:DB:1255:U:H5''	23:DB:1256:G:H5''	2.04	0.40
1:AA:598:U:H2'	1:AA:599:C:H6	1.87	0.40
50:BT:40:LYS:O	50:BT:43:ILE:HB	2.21	0.40
46:DU:85:ARG:NH1	46:DU:86:PHE:O	2.53	0.40
12:AM:106:ARG:HH12	12:AM:109:LYS:CD	2.20	0.40
25:BC:83:ASP:HA	25:BC:84:PRO:HD3	1.84	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BN:87:PHE:CE1	42:BN:116:VAL:HG12	2.56	0.40
24:BI:73:PRO:HA	24:BI:74:PRO:HD3	1.99	0.40
47:BF:42:ALA:O	47:BF:44:ALA:N	2.54	0.40
29:BE:160:ALA:C	29:BE:162:ARG:H	2.24	0.40
40:DH:83:LYS:HG3	40:DH:149:GLU:CG	2.51	0.40
1:CA:411:A:O2'	1:CA:412:A:O4'	2.39	0.40
1:CA:411:A:O3'	1:CA:412:A:H4'	2.20	0.40
10:AK:59:PRO:N	10:AK:90:PRO:HB2	2.36	0.40
4:CE:89:THR:HG21	4:CE:134:ASN:HD21	1.85	0.40
1:CA:1318:A:H5''	1:CA:1319:A:OP2	2.21	0.40
18:CS:10:ILE:HD13	18:CS:40:PHE:CE1	2.56	0.40
42:DN:100:CYS:SG	42:DN:101:GLY:N	2.95	0.40
13:AN:29:ILE:HB	13:AN:30:ILE:H	1.73	0.40
38:DM:126:ILE:H	38:DM:126:ILE:CD1	2.18	0.40
50:DT:55:VAL:HG13	50:DT:85:VAL:CG1	2.52	0.40
25:DC:208:GLY:O	25:DC:209:ALA:C	2.59	0.40
45:DS:26:GLY:CA	45:DS:71:VAL:HG13	2.51	0.40
45:DS:24:ILE:CG1	45:DS:36:LEU:HD21	2.49	0.40
23:BB:2883:A:OP1	31:B0:48:TYR:CE1	2.74	0.40
23:DB:2282:G:H5''	23:DB:2283:C:O4'	2.21	0.40
2:AC:166:TRP:O	2:AC:167:TYR:CB	2.69	0.40
49:BR:78:ARG:NH2	49:BR:78:ARG:HG3	2.36	0.40
1:AA:1336:C:H4'	1:AA:1337:G:O5'	2.20	0.40
48:BG:162:ARG:O	48:BG:162:ARG:HG2	2.22	0.40
23:DB:2772:C:H2'	23:DB:2773:C:C6	2.57	0.40
3:CD:105:GLY:HA3	3:CD:158:LEU:HG	2.03	0.40
22:DA:32:U:H2'	22:DA:33:G:C8	2.57	0.40
49:BR:39:LEU:HB3	49:BR:53:PHE:HA	2.03	0.40
40:BH:69:ALA:O	40:BH:141:LYS:NZ	2.51	0.40
23:BB:170:U:O2'	23:BB:171:U:H5'	2.21	0.40
23:DB:1778:U:N3	23:DB:1784:A:C8	2.89	0.40
26:DD:9:VAL:HA	26:DD:197:THR:CG2	2.52	0.40
23:BB:115:C:H2'	23:BB:116:C:H6	1.87	0.40
26:BD:186:LEU:HD11	28:BP:3:ILE:CG1	2.47	0.40
28:BP:1:SER:H1	28:BP:4:ILE:HD12	1.86	0.40
11:AL:85:ARG:HE	11:AL:85:ARG:HB2	1.72	0.40
4:AE:156:ARG:HB3	7:AH:42:GLU:O	2.21	0.40
4:AE:83:PRO:HA	4:AE:95:MET:O	2.22	0.40
20:CB:125:PHE:HE1	20:CB:136:ARG:HD2	1.87	0.40
1:AA:92:U:H2'	1:AA:93:U:C6	2.56	0.40
29:BE:41:GLN:O	29:BE:42:GLY:C	2.58	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AF:60:VAL:HG12	5:AF:61:LEU:N	2.35	0.40
5:AF:98:GLU:O	5:AF:99:ALA:HB3	2.22	0.40
49:BR:23:GLU:O	49:BR:24:LYS:C	2.60	0.40
4:CE:111:ARG:O	4:CE:112:ALA:C	2.59	0.40
1:AA:1098:C:O2'	1:AA:1099:G:H5'	2.22	0.40
16:AQ:17:GLU:C	16:AQ:19:SER:H	2.25	0.40
28:DP:32:VAL:HG12	28:DP:33:GLU:O	2.21	0.40
23:DB:1724:G:O2'	23:DB:1725:U:H5'	2.21	0.40
1:AA:14:U:O2	1:AA:17:U:H5	2.05	0.40
23:BB:1131:G:H22	23:BB:2024:G:H21	1.68	0.40
23:BB:2344:U:H2'	33:B1:35:LEU:O	2.21	0.40
2:AC:6:PRO:HA	2:AC:9:ILE:CG2	2.49	0.40
34:D3:60:CYS:C	34:D3:61:LEU:HD23	2.41	0.40
23:DB:2139:U:H2'	23:DB:2140:G:H8	1.87	0.40
23:BB:1589:U:H2'	23:BB:1590:A:C8	2.56	0.40
2:AC:42:LEU:HD21	2:AC:90:VAL:HG22	2.02	0.40
1:CA:370:C:H2'	1:CA:371:A:C8	2.56	0.40
23:BB:692:C:H2'	23:BB:693:A:H8	1.87	0.40
24:BI:7:TYR:CD1	24:BI:7:TYR:C	2.95	0.40
3:AD:10:LEU:HD12	3:AD:20:LEU:HD13	2.03	0.40
1:CA:1142:G:H2'	1:CA:1143:G:O4'	2.21	0.40
23:BB:1405:U:H2'	23:BB:1406:U:H6	1.86	0.40
9:CJ:86:ALA:C	9:CJ:87:LEU:HD13	2.42	0.40
23:BB:1454:C:H5'	42:BN:63:ARG:NE	2.36	0.40
1:CA:283:U:O2'	1:CA:284:C:H5'	2.22	0.40
43:BO:106:LEU:CA	43:BO:109:ALA:HB3	2.51	0.40
1:AA:613:C:P	3:AD:80:ARG:HH21	2.44	0.40
23:BB:2785:C:H2'	23:BB:2786:U:H6	1.87	0.40
22:BA:87:U:C2'	22:BA:88:C:O5'	2.69	0.40
53:B6:16:LYS:N	53:B6:16:LYS:HE3	2.36	0.40
23:DB:1013:C:H2'	23:DB:1014:A:C8	2.57	0.40
23:BB:484:C:H2'	23:BB:485:C:H6	1.86	0.40
23:BB:1476:U:O2'	23:BB:1477:A:P	2.80	0.40
22:DA:109:A:H2'	22:DA:110:C:O4'	2.21	0.40
23:DB:1885:A:H3'	23:DB:1886:U:C5	2.56	0.40
49:DR:14:VAL:HG22	49:DR:15:SER:H	1.86	0.40
29:DE:97:ASN:OD1	29:DE:97:ASN:N	2.54	0.40
23:BB:2298:A:H2'	23:BB:2299:U:O4'	2.22	0.40
9:CJ:65:TYR:HA	13:CN:96:LYS:O	2.22	0.40
5:CF:86:ARG:CZ	17:CR:63:TYR:HB3	2.51	0.40
1:AA:1103:C:C4	1:AA:1104:G:N7	2.90	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AH:79:ARG:HG2	7:AH:79:ARG:HH11	1.87	0.40
23:DB:1051:G:H2'	23:DB:1052:C:C6	2.56	0.40
1:AA:266:G:O2'	1:AA:267:C:H3'	2.21	0.40
44:BQ:2:ARG:HG3	44:BQ:3:VAL:N	2.36	0.40
46:DU:13:LEU:HD12	46:DU:68:ASN:C	2.42	0.40
10:CK:68:ARG:HH11	10:CK:68:ARG:HG3	1.86	0.40
41:BJ:133:ALA:O	41:BJ:135:GLN:N	2.55	0.40
23:DB:2299:U:H2'	23:DB:2300:C:C6	2.57	0.40
23:BB:619:G:H3'	23:BB:620:G:H21	1.86	0.40
23:BB:2047:C:O2'	23:BB:2048:G:H5'	2.22	0.40
23:DB:1733:G:H2'	23:DB:1734:G:H8	1.86	0.40
10:AK:108:ASN:HD21	21:AU:6:ARG:HG3	1.86	0.40
20:AB:117:GLU:O	20:AB:121:GLN:HB2	2.21	0.40
3:CD:35:GLN:HB2	3:CD:35:GLN:HE21	1.73	0.40
2:AC:111:ASP:OD2	2:AC:114:LEU:HG	2.22	0.40
23:BB:1423:G:H2'	23:BB:1424:G:H8	1.86	0.40
23:DB:311:A:H3'	23:DB:312:G:C8	2.57	0.40
25:BC:161:VAL:HG13	25:BC:174:ARG:O	2.22	0.40
23:DB:2083:G:H2'	23:DB:2084:C:H6	1.87	0.40
1:AA:528:C:H41	11:AL:45:ASN:CG	2.24	0.40
40:BH:75:LEU:HD21	40:BH:104:THR:O	2.22	0.40
1:AA:1210:C:H4'	1:AA:1214:C:C5	2.57	0.40
3:AD:47:LEU:HD11	3:AD:51:GLY:HA3	2.04	0.40
1:AA:687:A:C2	1:AA:704:A:C5	3.09	0.40
23:DB:2657:A:H2'	23:DB:2658:C:O4'	2.22	0.40
23:BB:765:C:H2'	23:BB:766:U:C6	2.57	0.40
1:AA:258:G:H2'	1:AA:258:G:N3	2.35	0.40
51:BZ:27:ARG:HG3	51:BZ:27:ARG:H	1.66	0.40
18:AS:33:TRP:CE3	18:AS:33:TRP:N	2.89	0.40
23:DB:2317:A:H2'	23:DB:2318:G:O4'	2.22	0.40
1:CA:1401:G:H2'	1:CA:1402:C:O4'	2.22	0.40
1:CA:787:A:O2'	1:CA:788:U:H5'	2.20	0.40
26:DD:191:GLY:O	26:DD:192:ALA:HB3	2.22	0.40

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:53:A:OP1	23:DB:1592:C:O2'[1_655]	2.08	0.12

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	AC	204/232 (88%)	150 (74%)	41 (20%)	13 (6%)	2	26
2	CC	204/232 (88%)	154 (76%)	36 (18%)	14 (7%)	1	23
3	AD	203/205 (99%)	151 (74%)	41 (20%)	11 (5%)	2	30
3	CD	203/205 (99%)	150 (74%)	41 (20%)	12 (6%)	2	27
4	AE	148/166 (89%)	113 (76%)	32 (22%)	3 (2%)	9	53
4	CE	148/166 (89%)	116 (78%)	28 (19%)	4 (3%)	6	47
5	AF	98/135 (73%)	66 (67%)	25 (26%)	7 (7%)	1	23
5	CF	98/135 (73%)	67 (68%)	24 (24%)	7 (7%)	1	23
6	AG	148/178 (83%)	121 (82%)	23 (16%)	4 (3%)	6	47
6	CG	150/178 (84%)	123 (82%)	23 (15%)	4 (3%)	6	47
7	AH	127/129 (98%)	96 (76%)	27 (21%)	4 (3%)	5	44
7	CH	127/129 (98%)	96 (76%)	28 (22%)	3 (2%)	7	49
8	AI	125/129 (97%)	96 (77%)	23 (18%)	6 (5%)	3	32
8	CI	125/129 (97%)	96 (77%)	22 (18%)	7 (6%)	2	29
9	AJ	96/103 (93%)	72 (75%)	16 (17%)	8 (8%)	1	18
9	CJ	96/103 (93%)	71 (74%)	17 (18%)	8 (8%)	1	18
10	AK	115/128 (90%)	86 (75%)	22 (19%)	7 (6%)	2	27
10	CK	115/128 (90%)	85 (74%)	23 (20%)	7 (6%)	2	27
11	AL	121/123 (98%)	76 (63%)	34 (28%)	11 (9%)	1	16
11	CL	121/123 (98%)	74 (61%)	36 (30%)	11 (9%)	1	16
12	AM	112/117 (96%)	77 (69%)	28 (25%)	7 (6%)	2	26
12	CM	111/117 (95%)	79 (71%)	25 (22%)	7 (6%)	2	26
13	AN	92/100 (92%)	58 (63%)	21 (23%)	13 (14%)	0	6
13	CN	92/100 (92%)	59 (64%)	21 (23%)	12 (13%)	0	7
14	AO	86/89 (97%)	66 (77%)	17 (20%)	3 (4%)	4	41

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
14	CO	86/89 (97%)	67 (78%)	16 (19%)	3 (4%)	4	41
15	AP	80/82 (98%)	58 (72%)	18 (22%)	4 (5%)	3	31
15	CP	78/82 (95%)	56 (72%)	17 (22%)	5 (6%)	2	26
16	AQ	78/83 (94%)	58 (74%)	16 (20%)	4 (5%)	2	31
16	CQ	79/83 (95%)	59 (75%)	15 (19%)	5 (6%)	2	26
17	AR	53/74 (72%)	45 (85%)	8 (15%)	0	100	100
17	CR	53/74 (72%)	44 (83%)	9 (17%)	0	100	100
18	AS	77/91 (85%)	52 (68%)	24 (31%)	1 (1%)	15	60
18	CS	78/91 (86%)	53 (68%)	23 (30%)	2 (3%)	7	47
19	AT	83/86 (96%)	67 (81%)	13 (16%)	3 (4%)	4	40
19	CT	83/86 (96%)	67 (81%)	13 (16%)	3 (4%)	4	40
20	AB	216/240 (90%)	159 (74%)	36 (17%)	21 (10%)	1	14
20	CB	216/240 (90%)	156 (72%)	37 (17%)	23 (11%)	0	11
21	AU	49/70 (70%)	27 (55%)	14 (29%)	8 (16%)	0	5
21	CU	49/70 (70%)	26 (53%)	14 (29%)	9 (18%)	0	3
24	BI	139/141 (99%)	119 (86%)	15 (11%)	5 (4%)	4	40
24	DI	139/141 (99%)	114 (82%)	21 (15%)	4 (3%)	6	45
25	BC	269/272 (99%)	164 (61%)	63 (23%)	42 (16%)	0	5
25	DC	269/272 (99%)	161 (60%)	68 (25%)	40 (15%)	0	5
26	BD	207/209 (99%)	118 (57%)	55 (27%)	34 (16%)	0	5
26	DD	207/209 (99%)	115 (56%)	59 (28%)	33 (16%)	0	5
27	BK	119/123 (97%)	72 (60%)	30 (25%)	17 (14%)	0	6
27	DK	119/123 (97%)	71 (60%)	30 (25%)	18 (15%)	0	5
28	BP	112/114 (98%)	62 (55%)	37 (33%)	13 (12%)	0	9
28	DP	112/114 (98%)	63 (56%)	35 (31%)	14 (12%)	0	8
29	BE	199/201 (99%)	124 (62%)	56 (28%)	19 (10%)	1	15
29	DE	199/201 (99%)	121 (61%)	58 (29%)	20 (10%)	1	13
30	BY	56/58 (97%)	36 (64%)	15 (27%)	5 (9%)	1	17
30	DY	56/58 (97%)	37 (66%)	14 (25%)	5 (9%)	1	17
31	B0	54/56 (96%)	35 (65%)	13 (24%)	6 (11%)	0	11
31	D0	54/56 (96%)	36 (67%)	11 (20%)	7 (13%)	0	7

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
32	B4	36/38 (95%)	18 (50%)	11 (31%)	7 (19%)	0	3
32	D4	36/38 (95%)	18 (50%)	11 (31%)	7 (19%)	0	3
33	B1	48/54 (89%)	36 (75%)	7 (15%)	5 (10%)	1	12
33	D1	48/54 (89%)	36 (75%)	7 (15%)	5 (10%)	1	12
34	B3	62/64 (97%)	40 (64%)	16 (26%)	6 (10%)	1	14
34	D3	62/64 (97%)	41 (66%)	14 (23%)	7 (11%)	0	10
35	BV	92/94 (98%)	70 (76%)	16 (17%)	6 (6%)	1	26
35	DV	92/94 (98%)	69 (75%)	18 (20%)	5 (5%)	2	30
36	B2	44/46 (96%)	26 (59%)	15 (34%)	3 (7%)	1	24
36	D2	44/46 (96%)	26 (59%)	15 (34%)	3 (7%)	1	24
37	BL	141/144 (98%)	76 (54%)	42 (30%)	23 (16%)	0	5
37	DL	141/144 (98%)	76 (54%)	40 (28%)	25 (18%)	0	3
38	BM	134/136 (98%)	88 (66%)	31 (23%)	15 (11%)	0	11
38	DM	134/136 (98%)	89 (66%)	29 (22%)	16 (12%)	0	9
39	BX	61/63 (97%)	36 (59%)	18 (30%)	7 (12%)	0	9
39	DX	61/63 (97%)	37 (61%)	17 (28%)	7 (12%)	0	9
40	BH	147/149 (99%)	71 (48%)	49 (33%)	27 (18%)	0	3
40	DH	147/149 (99%)	96 (65%)	28 (19%)	23 (16%)	0	5
41	BJ	140/142 (99%)	89 (64%)	34 (24%)	17 (12%)	0	9
41	DJ	140/142 (99%)	88 (63%)	36 (26%)	16 (11%)	0	10
42	BN	118/127 (93%)	73 (62%)	34 (29%)	11 (9%)	1	16
42	DN	118/127 (93%)	71 (60%)	35 (30%)	12 (10%)	1	13
43	BO	114/117 (97%)	80 (70%)	25 (22%)	9 (8%)	1	19
43	DO	114/117 (97%)	79 (69%)	26 (23%)	9 (8%)	1	19
44	BQ	115/117 (98%)	70 (61%)	34 (30%)	11 (10%)	1	14
44	DQ	115/117 (98%)	69 (60%)	35 (30%)	11 (10%)	1	14
45	BS	108/110 (98%)	72 (67%)	22 (20%)	14 (13%)	0	7
45	DS	108/110 (98%)	70 (65%)	24 (22%)	14 (13%)	0	7
46	BU	100/103 (97%)	52 (52%)	28 (28%)	20 (20%)	0	2
46	DU	100/103 (97%)	50 (50%)	29 (29%)	21 (21%)	0	2
47	BF	176/178 (99%)	106 (60%)	43 (24%)	27 (15%)	0	5

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
47	DF	176/178 (99%)	107 (61%)	42 (24%)	27 (15%)	0	5
48	BG	174/176 (99%)	100 (58%)	49 (28%)	25 (14%)	0	6
48	DG	174/176 (99%)	99 (57%)	49 (28%)	26 (15%)	0	5
49	BR	101/103 (98%)	67 (66%)	21 (21%)	13 (13%)	0	8
49	DR	101/103 (98%)	68 (67%)	20 (20%)	13 (13%)	0	8
50	BT	91/100 (91%)	51 (56%)	26 (29%)	14 (15%)	0	5
50	DT	91/100 (91%)	50 (55%)	27 (30%)	14 (15%)	0	5
51	BZ	75/78 (96%)	51 (68%)	18 (24%)	6 (8%)	1	19
51	DZ	75/78 (96%)	51 (68%)	18 (24%)	6 (8%)	1	19
52	BW	77/84 (92%)	31 (40%)	21 (27%)	25 (32%)	0	0
52	DW	77/84 (92%)	31 (40%)	21 (27%)	25 (32%)	0	0
53	B6	183/185 (99%)	151 (82%)	25 (14%)	7 (4%)	4	38
53	D6	183/185 (99%)	132 (72%)	40 (22%)	11 (6%)	2	27
All	All	11607/12284 (94%)	7747 (67%)	2693 (23%)	1167 (10%)	1	13

All (1167) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AC	54	ILE
2	AC	205	GLU
6	AG	6	ILE
8	AI	8	THR
9	AJ	36	VAL
9	AJ	57	VAL
12	AM	22	TYR
12	AM	105	ALA
13	AN	50	LEU
13	AN	61	ASN
14	AO	18	ASP
14	AO	34	ALA
15	AP	28	ARG
15	AP	44	SER
15	AP	67	ILE
16	AQ	32	ILE
20	AB	9	LEU
20	AB	15	PHE
20	AB	19	THR

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Mol	Chain	Res	Type
20	AB	22	TRP
21	AU	12	ASP
21	AU	34	ARG
24	BI	18	ASN
25	BC	65	ASP
25	BC	77	VAL
25	BC	141	HIS
26	BD	9	VAL
26	BD	14	ILE
26	BD	74	GLU
26	BD	91	THR
26	BD	122	VAL
26	BD	169	ARG
26	BD	170	VAL
27	BK	17	ARG
27	BK	18	ARG
27	BK	31	ARG
27	BK	35	VAL
27	BK	72	PRO
27	BK	120	PRO
28	BP	25	VAL
28	BP	38	ARG
28	BP	50	ARG
28	BP	64	SER
28	BP	65	ASN
28	BP	75	THR
28	BP	100	ARG
29	BE	43	THR
29	BE	60	TRP
29	BE	165	HIS
29	BE	167	VAL
30	BY	2	LYS
31	B0	42	ILE
31	B0	48	TYR
31	B0	51	ARG
34	B3	29	ARG
37	BL	89	VAL
37	BL	100	ILE
37	BL	111	ILE
37	BL	116	VAL
38	BM	13	HIS
38	BM	36	VAL

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Mol	Chain	Res	Type
38	BM	78	LEU
39	BX	2	LYS
40	BH	3	VAL
40	BH	10	ALA
40	BH	12	LEU
40	BH	31	VAL
40	BH	32	PRO
40	BH	33	GLN
40	BH	147	VAL
41	BJ	4	PHE
41	BJ	41	LYS
41	BJ	44	TYR
41	BJ	45	THR
41	BJ	81	ILE
44	BQ	30	VAL
44	BQ	31	TYR
45	BS	13	SER
45	BS	27	LYS
45	BS	61	ASN
46	BU	6	ARG
46	BU	18	LYS
46	BU	42	LYS
46	BU	85	ARG
47	BF	32	LYS
47	BF	41	GLU
47	BF	43	ILE
47	BF	77	LYS
47	BF	92	GLY
47	BF	112	ASP
47	BF	135	ILE
47	BF	138	PRO
47	BF	148	VAL
47	BF	149	ARG
48	BG	9	VAL
48	BG	11	PRO
48	BG	84	LYS
48	BG	85	LYS
48	BG	91	VAL
48	BG	94	ARG
48	BG	117	PRO
48	BG	172	GLU
50	BT	38	ALA

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Mol	Chain	Res	Type
50	BT	39	THR
50	BT	58	VAL
50	BT	88	LYS
51	BZ	33	LEU
51	BZ	77	LYS
52	BW	9	THR
52	BW	14	ASP
52	BW	30	VAL
52	BW	36	ILE
52	BW	50	VAL
52	BW	59	PHE
52	BW	60	ALA
2	CC	54	ILE
2	CC	205	GLU
8	CI	8	THR
9	CJ	36	VAL
9	CJ	57	VAL
12	CM	22	TYR
12	CM	105	ALA
13	CN	50	LEU
13	CN	61	ASN
14	CO	18	ASP
14	CO	34	ALA
15	CP	28	ARG
15	CP	44	SER
15	CP	67	ILE
16	CQ	32	ILE
20	CB	15	PHE
20	CB	19	THR
20	CB	22	TRP
20	CB	94	ARG
20	CB	119	GLN
21	CU	12	ASP
21	CU	34	ARG
24	DI	5	GLN
24	DI	18	ASN
25	DC	51	ARG
25	DC	65	ASP
25	DC	77	VAL
25	DC	141	HIS
26	DD	9	VAL
26	DD	14	ILE

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Mol	Chain	Res	Type
26	DD	74	GLU
26	DD	91	THR
26	DD	122	VAL
26	DD	169	ARG
26	DD	170	VAL
27	DK	17	ARG
27	DK	18	ARG
27	DK	31	ARG
27	DK	35	VAL
27	DK	72	PRO
27	DK	119	ALA
27	DK	120	PRO
28	DP	25	VAL
28	DP	50	ARG
28	DP	64	SER
28	DP	65	ASN
28	DP	75	THR
28	DP	100	ARG
29	DE	60	TRP
29	DE	165	HIS
29	DE	167	VAL
30	DY	2	LYS
31	D0	42	ILE
31	D0	48	TYR
31	D0	51	ARG
33	D1	4	ILE
37	DL	89	VAL
37	DL	100	ILE
37	DL	111	ILE
37	DL	116	VAL
38	DM	13	HIS
38	DM	36	VAL
38	DM	78	LEU
39	DX	2	LYS
40	DH	3	VAL
40	DH	10	ALA
40	DH	31	VAL
40	DH	32	PRO
40	DH	33	GLN
40	DH	86	ASP
40	DH	121	VAL
40	DH	136	SER

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Mol	Chain	Res	Type
41	DJ	4	PHE
41	DJ	44	TYR
41	DJ	45	THR
41	DJ	81	ILE
41	DJ	124	VAL
44	DQ	30	VAL
44	DQ	31	TYR
45	DS	3	THR
45	DS	13	SER
45	DS	27	LYS
45	DS	61	ASN
46	DU	6	ARG
46	DU	18	LYS
46	DU	42	LYS
46	DU	59	GLU
46	DU	85	ARG
47	DF	32	LYS
47	DF	41	GLU
47	DF	43	ILE
47	DF	77	LYS
47	DF	92	GLY
47	DF	112	ASP
47	DF	135	ILE
47	DF	138	PRO
47	DF	148	VAL
47	DF	149	ARG
48	DG	9	VAL
48	DG	11	PRO
48	DG	84	LYS
48	DG	85	LYS
48	DG	91	VAL
48	DG	94	ARG
48	DG	117	PRO
48	DG	172	GLU
50	DT	38	ALA
50	DT	39	THR
50	DT	58	VAL
50	DT	88	LYS
51	DZ	33	LEU
51	DZ	77	LYS
52	DW	9	THR
52	DW	14	ASP

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Mol	Chain	Res	Type
52	DW	30	VAL
52	DW	36	ILE
52	DW	50	VAL
52	DW	59	PHE
52	DW	60	ALA
53	D6	84	ARG
53	D6	88	LEU
2	AC	14	VAL
2	AC	60	ALA
2	AC	180	ASP
3	AD	24	VAL
3	AD	82	LYS
4	AE	20	VAL
5	AF	69	GLU
5	AF	85	ILE
5	AF	92	THR
5	AF	98	GLU
6	AG	112	ASP
7	AH	59	GLU
7	AH	65	PHE
7	AH	82	LEU
8	AI	127	SER
9	AJ	74	VAL
10	AK	88	PRO
10	AK	126	ARG
11	AL	13	ARG
11	AL	16	ALA
11	AL	23	LEU
11	AL	24	GLU
11	AL	42	LYS
11	AL	117	GLY
13	AN	2	LYS
13	AN	29	ILE
13	AN	71	GLY
15	AP	52	LEU
18	AS	27	LYS
19	AT	76	ALA
20	AB	86	CYS
20	AB	94	ARG
20	AB	163	ILE
20	AB	188	THR
21	AU	7	GLU

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Mol	Chain	Res	Type
24	BI	14	ALA
24	BI	64	ARG
25	BC	3	VAL
25	BC	36	ASN
25	BC	51	ARG
25	BC	52	HIS
25	BC	53	ILE
25	BC	64	VAL
25	BC	88	ALA
25	BC	93	VAL
25	BC	107	LYS
25	BC	145	MET
25	BC	222	THR
25	BC	239	PHE
25	BC	250	GLN
25	BC	255	LYS
26	BD	53	GLY
26	BD	93	GLY
26	BD	106	LYS
26	BD	107	VAL
26	BD	121	THR
26	BD	131	ASP
26	BD	136	ASN
26	BD	145	SER
26	BD	149	ASN
26	BD	159	LYS
26	BD	197	THR
27	BK	6	THR
27	BK	92	GLU
27	BK	119	ALA
29	BE	42	GLY
29	BE	79	ARG
29	BE	86	ALA
30	BY	4	ILE
32	B4	4	ARG
33	B1	4	ILE
34	B3	22	LYS
35	BV	25	LYS
36	B2	45	SER
37	BL	9	ALA
37	BL	28	GLY
37	BL	36	LYS

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Mol	Chain	Res	Type
37	BL	54	GLN
37	BL	99	ASN
37	BL	143	GLU
38	BM	20	LEU
38	BM	43	ALA
38	BM	69	PRO
38	BM	79	ALA
38	BM	134	THR
39	BX	9	LYS
39	BX	61	ALA
40	BH	73	ASN
40	BH	77	THR
40	BH	125	THR
41	BJ	2	LYS
41	BJ	43	GLU
41	BJ	73	VAL
41	BJ	124	VAL
41	BJ	134	ALA
42	BN	98	LEU
42	BN	100	CYS
42	BN	101	GLY
43	BO	51	ALA
43	BO	100	HIS
44	BQ	17	LEU
44	BQ	18	LYS
44	BQ	89	ILE
44	BQ	91	ARG
45	BS	3	THR
45	BS	14	ALA
45	BS	25	ARG
45	BS	96	ILE
46	BU	19	GLY
46	BU	41	VAL
46	BU	50	ALA
46	BU	59	GLU
46	BU	82	VAL
46	BU	89	GLY
46	BU	92	VAL
47	BF	11	VAL
47	BF	36	ASN
47	BF	78	ILE
47	BF	87	LYS

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Mol	Chain	Res	Type
47	BF	103	ILE
47	BF	110	ILE
47	BF	142	TYR
48	BG	31	GLU
48	BG	38	ASP
48	BG	46	ASP
48	BG	83	THR
48	BG	97	VAL
48	BG	164	ALA
48	BG	170	THR
49	BR	24	LYS
49	BR	43	ASN
49	BR	55	ASP
49	BR	57	GLY
49	BR	70	GLU
50	BT	2	ILE
50	BT	19	LYS
51	BZ	71	LEU
52	BW	12	GLY
52	BW	13	ARG
52	BW	17	ALA
52	BW	32	ALA
52	BW	34	SER
52	BW	53	GLY
52	BW	61	LYS
52	BW	62	ALA
53	B6	41	LEU
2	CC	14	VAL
2	CC	60	ALA
2	CC	180	ASP
3	CD	24	VAL
3	CD	82	LYS
4	CE	20	VAL
5	CF	69	GLU
5	CF	85	ILE
5	CF	92	THR
5	CF	98	GLU
6	CG	112	ASP
7	CH	59	GLU
7	CH	65	PHE
7	CH	82	LEU
8	CI	127	SER

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Mol	Chain	Res	Type
9	CJ	74	VAL
10	CK	88	PRO
10	CK	126	ARG
11	CL	13	ARG
11	CL	16	ALA
11	CL	23	LEU
11	CL	24	GLU
11	CL	42	LYS
11	CL	117	GLY
12	CM	49	GLU
13	CN	29	ILE
13	CN	71	GLY
15	CP	52	LEU
18	CS	27	LYS
19	CT	76	ALA
20	CB	18	GLN
20	CB	86	CYS
20	CB	163	ILE
20	CB	188	THR
25	DC	3	VAL
25	DC	36	ASN
25	DC	52	HIS
25	DC	53	ILE
25	DC	64	VAL
25	DC	88	ALA
25	DC	93	VAL
25	DC	94	LEU
25	DC	107	LYS
25	DC	145	MET
25	DC	222	THR
25	DC	239	PHE
25	DC	250	GLN
25	DC	255	LYS
26	DD	93	GLY
26	DD	106	LYS
26	DD	107	VAL
26	DD	121	THR
26	DD	145	SER
26	DD	149	ASN
26	DD	159	LYS
26	DD	196	ALA
26	DD	197	THR

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Mol	Chain	Res	Type
27	DK	6	THR
27	DK	92	GLU
28	DP	38	ARG
29	DE	42	GLY
29	DE	43	THR
29	DE	78	TRP
29	DE	79	ARG
29	DE	86	ALA
30	DY	4	ILE
30	DY	34	THR
32	D4	4	ARG
32	D4	8	LYS
34	D3	20	GLY
34	D3	22	LYS
34	D3	29	ARG
35	DV	25	LYS
36	D2	45	SER
37	DL	9	ALA
37	DL	28	GLY
37	DL	54	GLN
37	DL	99	ASN
37	DL	143	GLU
38	DM	20	LEU
38	DM	43	ALA
38	DM	69	PRO
38	DM	79	ALA
38	DM	134	THR
39	DX	9	LYS
39	DX	61	ALA
40	DH	12	LEU
40	DH	96	THR
40	DH	113	SER
40	DH	114	GLU
41	DJ	2	LYS
41	DJ	41	LYS
41	DJ	43	GLU
41	DJ	73	VAL
41	DJ	112	GLY
42	DN	11	ASN
42	DN	98	LEU
42	DN	100	CYS
42	DN	101	GLY

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Mol	Chain	Res	Type
43	DO	51	ALA
43	DO	100	HIS
44	DQ	18	LYS
44	DQ	89	ILE
44	DQ	91	ARG
45	DS	14	ALA
45	DS	25	ARG
45	DS	96	ILE
46	DU	19	GLY
46	DU	41	VAL
46	DU	50	ALA
46	DU	82	VAL
46	DU	89	GLY
46	DU	92	VAL
47	DF	11	VAL
47	DF	36	ASN
47	DF	78	ILE
47	DF	87	LYS
47	DF	103	ILE
47	DF	142	TYR
48	DG	31	GLU
48	DG	38	ASP
48	DG	46	ASP
48	DG	83	THR
48	DG	97	VAL
48	DG	164	ALA
48	DG	170	THR
49	DR	24	LYS
49	DR	43	ASN
49	DR	57	GLY
49	DR	70	GLU
50	DT	2	ILE
50	DT	19	LYS
51	DZ	71	LEU
52	DW	12	GLY
52	DW	13	ARG
52	DW	17	ALA
52	DW	32	ALA
52	DW	34	SER
52	DW	53	GLY
52	DW	61	LYS
52	DW	62	ALA

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Mol	Chain	Res	Type
53	D6	39	LEU
53	D6	41	LEU
2	AC	3	LYS
2	AC	59	PRO
2	AC	112	ALA
3	AD	22	SER
3	AD	25	ARG
3	AD	31	CYS
3	AD	191	SER
5	AF	54	LEU
5	AF	82	ASP
8	AI	24	ASN
9	AJ	34	ALA
9	AJ	56	HIS
9	AJ	75	ASP
10	AK	46	ALA
10	AK	124	LYS
11	AL	15	VAL
11	AL	47	ALA
11	AL	121	PRO
12	AM	49	GLU
12	AM	104	ASN
13	AN	27	LYS
13	AN	34	ASN
20	AB	14	HIS
20	AB	18	GLN
20	AB	36	LYS
20	AB	58	LYS
21	AU	25	ALA
24	BI	23	VAL
25	BC	37	SER
25	BC	59	GLN
25	BC	70	LYS
25	BC	94	LEU
25	BC	121	ALA
25	BC	140	VAL
25	BC	237	ARG
25	BC	246	PRO
26	BD	54	ALA
26	BD	113	SER
26	BD	144	GLY
26	BD	162	ALA

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Mol	Chain	Res	Type
26	BD	167	ASN
26	BD	181	ASP
26	BD	194	PRO
26	BD	196	ALA
27	BK	14	SER
27	BK	43	ILE
27	BK	73	ASP
27	BK	89	ASN
27	BK	110	GLU
28	BP	37	LYS
28	BP	101	GLU
29	BE	27	LEU
29	BE	46	GLN
29	BE	69	ARG
29	BE	70	SER
29	BE	188	MET
30	BY	34	THR
30	BY	50	VAL
31	B0	54	ILE
32	B4	8	LYS
32	B4	21	GLY
32	B4	36	ARG
33	B1	36	LYS
33	B1	50	GLU
34	B3	31	ILE
34	B3	58	ILE
37	BL	15	ALA
37	BL	19	LEU
37	BL	29	LYS
37	BL	51	GLU
37	BL	62	PRO
37	BL	65	GLY
37	BL	81	ASP
38	BM	21	ALA
38	BM	72	PRO
38	BM	77	PRO
39	BX	62	GLY
40	BH	7	ASP
40	BH	9	VAL
40	BH	11	ASN
40	BH	28	ASN
40	BH	45	GLU

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Mol	Chain	Res	Type
40	BH	54	LEU
40	BH	64	ALA
40	BH	83	LYS
41	BJ	84	ILE
41	BJ	112	GLY
42	BN	10	LEU
42	BN	11	ASN
42	BN	68	ALA
42	BN	82	GLU
42	BN	119	SER
44	BQ	10	ARG
46	BU	12	VAL
46	BU	47	PRO
46	BU	49	PRO
47	BF	9	ASP
47	BF	121	PHE
47	BF	136	ILE
47	BF	176	PHE
48	BG	2	ARG
48	BG	61	TRP
48	BG	89	VAL
49	BR	7	SER
49	BR	40	MET
49	BR	46	GLU
49	BR	56	GLY
49	BR	79	ARG
49	BR	98	ILE
50	BT	11	LEU
51	BZ	70	GLU
52	BW	29	SER
53	B6	30	THR
53	B6	69	GLN
2	CC	3	LYS
2	CC	59	PRO
2	CC	112	ALA
3	CD	22	SER
3	CD	25	ARG
3	CD	31	CYS
3	CD	68	GLU
3	CD	191	SER
5	CF	54	LEU
5	CF	82	ASP

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Mol	Chain	Res	Type
8	CI	24	ASN
9	CJ	34	ALA
9	CJ	56	HIS
9	CJ	75	ASP
10	CK	51	PHE
10	CK	124	LYS
11	CL	47	ALA
11	CL	121	PRO
12	CM	104	ASN
13	CN	2	LYS
18	CS	2	ARG
20	CB	14	HIS
20	CB	36	LYS
20	CB	58	LYS
20	CB	141	GLU
21	CU	7	GLU
21	CU	25	ALA
24	DI	23	VAL
25	DC	37	SER
25	DC	59	GLN
25	DC	70	LYS
25	DC	121	ALA
25	DC	123	ILE
25	DC	140	VAL
25	DC	195	GLY
25	DC	237	ARG
25	DC	246	PRO
25	DC	254	LYS
26	DD	53	GLY
26	DD	54	ALA
26	DD	127	PHE
26	DD	131	ASP
26	DD	136	ASN
26	DD	144	GLY
26	DD	162	ALA
26	DD	167	ASN
26	DD	181	ASP
26	DD	194	PRO
27	DK	14	SER
27	DK	43	ILE
27	DK	46	ALA
27	DK	73	ASP

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Mol	Chain	Res	Type
27	DK	89	ASN
27	DK	110	GLU
28	DP	101	GLU
29	DE	46	GLN
29	DE	69	ARG
29	DE	70	SER
30	DY	50	VAL
31	D0	54	ILE
32	D4	21	GLY
32	D4	36	ARG
33	D1	36	LYS
33	D1	50	GLU
33	D1	51	ALA
34	D3	31	ILE
34	D3	58	ILE
37	DL	3	LEU
37	DL	15	ALA
37	DL	19	LEU
37	DL	31	GLY
37	DL	36	LYS
37	DL	51	GLU
37	DL	81	ASP
37	DL	117	THR
38	DM	2	LEU
38	DM	21	ALA
38	DM	72	PRO
38	DM	77	PRO
39	DX	62	GLY
40	DH	7	ASP
40	DH	9	VAL
40	DH	11	ASN
40	DH	28	ASN
40	DH	40	THR
41	DJ	84	ILE
41	DJ	134	ALA
42	DN	10	LEU
42	DN	68	ALA
42	DN	82	GLU
42	DN	119	SER
43	DO	98	GLN
44	DQ	10	ARG
44	DQ	17	LEU

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Mol	Chain	Res	Type
46	DU	12	VAL
46	DU	47	PRO
46	DU	49	PRO
47	DF	136	ILE
47	DF	176	PHE
48	DG	2	ARG
48	DG	18	ILE
48	DG	61	TRP
48	DG	89	VAL
48	DG	109	SER
49	DR	7	SER
49	DR	46	GLU
49	DR	55	ASP
49	DR	56	GLY
49	DR	79	ARG
49	DR	98	ILE
50	DT	11	LEU
51	DZ	70	GLU
52	DW	10	ARG
52	DW	23	LYS
52	DW	29	SER
53	D6	70	SER
2	AC	100	ILE
2	AC	107	LYS
3	AD	68	GLU
4	AE	77	ASN
4	AE	156	ARG
5	AF	95	ALA
8	AI	44	ARG
8	AI	55	ASP
10	AK	51	PHE
13	AN	48	GLN
13	AN	51	PRO
13	AN	52	ARG
13	AN	67	GLY
16	AQ	70	LYS
16	AQ	81	ALA
20	AB	119	GLN
20	AB	121	GLN
20	AB	141	GLU
20	AB	149	GLY
20	AB	153	MET

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Mol	Chain	Res	Type
20	AB	200	PRO
20	AB	205	ALA
21	AU	9	GLU
21	AU	11	PHE
21	AU	17	ARG
21	AU	22	CYS
25	BC	35	LYS
25	BC	105	ALA
25	BC	123	ILE
25	BC	196	ASN
25	BC	257	ARG
26	BD	56	LYS
26	BD	127	PHE
27	BK	4	GLU
27	BK	46	ALA
28	BP	113	LEU
29	BE	78	TRP
29	BE	96	VAL
29	BE	131	THR
30	BY	9	THR
32	B4	9	LYS
32	B4	10	LEU
33	B1	51	ALA
34	B3	20	GLY
35	BV	71	LYS
36	B2	14	ARG
37	BL	31	GLY
37	BL	117	THR
38	BM	2	LEU
39	BX	37	LEU
40	BH	44	ILE
40	BH	62	LEU
40	BH	86	ASP
40	BH	97	ARG
40	BH	126	GLY
42	BN	70	THR
43	BO	65	THR
43	BO	68	LYS
43	BO	98	GLN
44	BQ	26	ALA
44	BQ	86	SER
44	BQ	88	GLU

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Mol	Chain	Res	Type
45	BS	71	VAL
45	BS	80	PRO
46	BU	51	LEU
46	BU	63	ALA
46	BU	67	SER
46	BU	78	LYS
46	BU	101	THR
48	BG	18	ILE
48	BG	109	SER
50	BT	28	ASN
50	BT	29	THR
50	BT	69	ARG
50	BT	86	THR
51	BZ	35	SER
52	BW	10	ARG
52	BW	23	LYS
52	BW	28	GLU
52	BW	56	HIS
52	BW	68	PHE
52	BW	77	LYS
53	B6	44	GLU
2	CC	100	ILE
2	CC	107	LYS
3	CD	192	ALA
4	CE	77	ASN
4	CE	156	ARG
5	CF	95	ALA
6	CG	152	HIS
8	CI	42	THR
8	CI	55	ASP
10	CK	46	ALA
11	CL	15	VAL
13	CN	27	LYS
13	CN	34	ASN
13	CN	48	GLN
13	CN	51	PRO
13	CN	52	ARG
13	CN	67	GLY
20	CB	129	THR
20	CB	130	LYS
20	CB	153	MET
20	CB	200	PRO

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Mol	Chain	Res	Type
20	CB	205	ALA
21	CU	9	GLU
21	CU	11	PHE
21	CU	17	ARG
25	DC	196	ASN
25	DC	257	ARG
26	DD	56	LYS
26	DD	109	VAL
26	DD	113	SER
27	DK	4	GLU
28	DP	37	LYS
28	DP	113	LEU
29	DE	27	LEU
29	DE	188	MET
30	DY	9	THR
31	D0	17	SER
32	D4	9	LYS
32	D4	10	LEU
33	D1	35	LEU
34	D3	50	SER
35	DV	45	ASP
35	DV	71	LYS
36	D2	14	ARG
37	DL	62	PRO
39	DX	37	LEU
40	DH	41	LYS
40	DH	148	ALA
42	DN	70	THR
43	DO	65	THR
43	DO	68	LYS
44	DQ	26	ALA
45	DS	80	PRO
46	DU	51	LEU
46	DU	63	ALA
46	DU	67	SER
46	DU	78	LYS
47	DF	9	ASP
47	DF	110	ILE
47	DF	121	PHE
48	DG	29	ASN
49	DR	40	MET
50	DT	28	ASN

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Mol	Chain	Res	Type
50	DT	29	THR
50	DT	69	ARG
50	DT	86	THR
51	DZ	35	SER
52	DW	28	GLU
52	DW	51	GLY
52	DW	77	LYS
53	D6	69	GLN
53	D6	106	LEU
2	AC	167	TYR
3	AD	29	THR
3	AD	192	ALA
8	AI	42	THR
10	AK	14	GLN
11	AL	70	GLY
12	AM	67	ASP
13	AN	31	SER
14	AO	74	ASP
19	AT	4	LYS
20	AB	50	ASN
20	AB	64	GLY
24	BI	49	GLU
25	BC	190	THR
25	BC	195	GLY
25	BC	200	MET
25	BC	254	LYS
26	BD	31	ALA
26	BD	109	VAL
26	BD	114	LYS
27	BK	93	GLN
29	BE	83	VAL
31	B0	26	SER
33	B1	35	LEU
34	B3	6	VAL
35	BV	45	ASP
35	BV	61	LEU
36	B2	44	VAL
37	BL	66	PHE
38	BM	56	ALA
39	BX	36	GLN
40	BH	29	PHE
40	BH	40	THR

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Mol	Chain	Res	Type
41	BJ	13	ARG
41	BJ	58	ASN
43	BO	62	LEU
43	BO	99	TYR
45	BS	30	SER
45	BS	40	ASN
45	BS	65	ASP
46	BU	83	GLY
47	BF	156	THR
48	BG	29	ASN
48	BG	155	PRO
49	BR	101	ILE
50	BT	8	LEU
51	BZ	28	ARG
52	BW	51	GLY
2	CC	153	SER
2	CC	167	TYR
8	CI	44	ARG
9	CJ	62	ARG
11	CL	70	GLY
12	CM	67	ASP
15	CP	46	LYS
16	CQ	70	LYS
16	CQ	81	ALA
16	CQ	82	VAL
19	CT	4	LYS
20	CB	9	LEU
20	CB	50	ASN
20	CB	64	GLY
20	CB	128	LEU
20	CB	149	GLY
21	CU	22	CYS
21	CU	41	THR
24	DI	14	ALA
25	DC	69	ASN
25	DC	105	ALA
25	DC	200	MET
26	DD	95	SER
26	DD	168	GLU
26	DD	184	ARG
27	DK	16	ALA
27	DK	93	GLN

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Mol	Chain	Res	Type
28	DP	23	ASP
29	DE	72	SER
29	DE	83	VAL
29	DE	96	VAL
29	DE	131	THR
31	D0	26	SER
35	DV	15	GLY
37	DL	5	THR
37	DL	29	LYS
37	DL	65	GLY
37	DL	66	PHE
38	DM	56	ALA
39	DX	36	GLN
39	DX	45	GLN
40	DH	29	PHE
41	DJ	13	ARG
41	DJ	14	ASP
42	DN	88	ALA
43	DO	62	LEU
43	DO	99	TYR
44	DQ	86	SER
44	DQ	88	GLU
45	DS	30	SER
45	DS	40	ASN
45	DS	65	ASP
45	DS	71	VAL
46	DU	101	THR
47	DF	40	GLY
47	DF	156	THR
48	DG	155	PRO
48	DG	157	LYS
49	DR	101	ILE
50	DT	8	LEU
51	DZ	28	ARG
52	DW	68	PHE
53	D6	42	LYS
53	D6	51	PRO
2	AC	47	ALA
2	AC	153	SER
3	AD	27	ILE
7	AH	47	ASP
9	AJ	62	ARG

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Mol	Chain	Res	Type
25	BC	18	VAL
25	BC	31	PRO
25	BC	69	ASN
26	BD	33	ARG
26	BD	95	SER
26	BD	184	ARG
28	BP	83	ILE
28	BP	108	ARG
32	B4	16	ILE
35	BV	15	GLY
35	BV	84	PRO
37	BL	52	GLY
37	BL	58	TYR
38	BM	73	ILE
39	BX	45	GLN
41	BJ	5	THR
41	BJ	14	ASP
42	BN	61	ALA
45	BS	18	ARG
47	BF	2	LYS
47	BF	40	GLY
48	BG	168	VAL
53	B6	49	HIS
53	B6	52	LEU
2	CC	104	GLU
3	CD	27	ILE
3	CD	29	THR
3	CD	165	GLU
8	CI	71	ILE
10	CK	14	GLN
14	CO	6	GLU
25	DC	18	VAL
25	DC	31	PRO
25	DC	135	PRO
25	DC	151	GLY
26	DD	114	LYS
28	DP	108	ARG
32	D4	16	ILE
34	D3	6	VAL
35	DV	84	PRO
36	D2	44	VAL
38	DM	73	ILE

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Mol	Chain	Res	Type
40	DH	85	GLY
40	DH	107	GLY
42	DN	61	ALA
45	DS	18	ARG
46	DU	5	ARG
47	DF	2	LYS
52	DW	56	HIS
53	D6	95	LYS
10	AK	89	GLY
11	AL	10	PRO
13	AN	94	GLY
19	AT	3	ILE
28	BP	4	ILE
29	BE	129	PRO
29	BE	148	ILE
38	BM	83	GLY
41	BJ	64	VAL
45	BS	29	VAL
47	BF	88	VAL
50	BT	55	VAL
10	CK	89	GLY
11	CL	10	PRO
12	CM	3	ILE
13	CN	94	GLY
25	DC	15	VAL
28	DP	83	ILE
29	DE	73	ILE
29	DE	129	PRO
29	DE	148	ILE
37	DL	22	GLY
38	DM	83	GLY
41	DJ	64	VAL
43	DO	8	ILE
45	DS	29	VAL
47	DF	88	VAL
48	DG	168	VAL
50	DT	55	VAL
12	AM	3	ILE
16	AQ	31	PRO
25	BC	15	VAL
25	BC	63	ILE
25	BC	135	PRO

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Mol	Chain	Res	Type
25	BC	151	GLY
25	BC	232	GLY
29	BE	73	ILE
37	BL	43	GLY
40	BH	34	GLY
43	BO	8	ILE
44	BQ	87	VAL
48	BG	16	VAL
48	BG	152	ARG
49	BR	52	PRO
53	B6	55	ILE
3	CD	107	GLY
16	CQ	31	PRO
19	CT	3	ILE
25	DC	63	ILE
28	DP	4	ILE
40	DH	34	GLY
43	DO	28	VAL
44	DQ	87	VAL
46	DU	83	GLY
48	DG	16	VAL
48	DG	152	ARG
49	DR	52	PRO
52	DW	33	GLY
3	AD	107	GLY
9	AJ	41	PRO
31	B0	24	VAL
42	BN	47	VAL
43	BO	28	VAL
47	BF	81	GLY
52	BW	70	VAL
12	CM	6	ILE
25	DC	232	GLY
37	DL	43	GLY
37	DL	52	GLY
52	DW	70	VAL
6	AG	15	PRO
6	AG	68	VAL
12	AM	6	ILE
50	BT	16	VAL
52	BW	33	GLY
2	CC	65	VAL

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Mol	Chain	Res	Type
4	CE	107	GLY
6	CG	68	VAL
9	CJ	41	PRO
31	D0	24	VAL
41	DJ	139	VAL
42	DN	47	VAL
47	DF	12	VAL
47	DF	81	GLY
50	DT	16	VAL
53	D6	105	PRO
40	BH	103	VAL
47	BF	12	VAL
6	CG	15	PRO
38	DM	19	GLY

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	AC	170/189 (90%)	142 (84%)	28 (16%)	3	20
2	CC	170/189 (90%)	142 (84%)	28 (16%)	3	20
3	AD	172/172 (100%)	147 (86%)	25 (14%)	4	26
3	CD	172/172 (100%)	148 (86%)	24 (14%)	4	28
4	AE	113/125 (90%)	96 (85%)	17 (15%)	3	25
4	CE	113/125 (90%)	96 (85%)	17 (15%)	3	25
5	AF	87/116 (75%)	71 (82%)	16 (18%)	2	15
5	CF	87/116 (75%)	70 (80%)	17 (20%)	2	14
6	AG	123/146 (84%)	106 (86%)	17 (14%)	4	29
6	CG	125/146 (86%)	109 (87%)	16 (13%)	5	31
7	AH	104/104 (100%)	96 (92%)	8 (8%)	16	55
7	CH	104/104 (100%)	96 (92%)	8 (8%)	16	55
8	AI	105/106 (99%)	88 (84%)	17 (16%)	3	21

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
8	CI	105/106 (99%)	88 (84%)	17 (16%)	3	21
9	AJ	86/90 (96%)	73 (85%)	13 (15%)	3	25
9	CJ	86/90 (96%)	73 (85%)	13 (15%)	3	25
10	AK	90/98 (92%)	76 (84%)	14 (16%)	3	23
10	CK	90/98 (92%)	76 (84%)	14 (16%)	3	23
11	AL	103/103 (100%)	92 (89%)	11 (11%)	8	39
11	CL	103/103 (100%)	91 (88%)	12 (12%)	7	35
12	AM	92/95 (97%)	78 (85%)	14 (15%)	3	24
12	CM	91/95 (96%)	77 (85%)	14 (15%)	3	24
13	AN	79/83 (95%)	66 (84%)	13 (16%)	3	20
13	CN	79/83 (95%)	66 (84%)	13 (16%)	3	20
14	AO	76/77 (99%)	64 (84%)	12 (16%)	3	23
14	CO	76/77 (99%)	64 (84%)	12 (16%)	3	23
15	AP	65/65 (100%)	60 (92%)	5 (8%)	16	55
15	CP	65/65 (100%)	60 (92%)	5 (8%)	16	55
16	AQ	74/77 (96%)	66 (89%)	8 (11%)	8	38
16	CQ	75/77 (97%)	67 (89%)	8 (11%)	8	39
17	AR	48/64 (75%)	45 (94%)	3 (6%)	22	61
17	CR	48/64 (75%)	45 (94%)	3 (6%)	22	61
18	AS	70/78 (90%)	54 (77%)	16 (23%)	1	9
18	CS	71/78 (91%)	55 (78%)	16 (22%)	1	9
19	AT	65/65 (100%)	56 (86%)	9 (14%)	4	29
19	CT	65/65 (100%)	56 (86%)	9 (14%)	4	29
20	AB	180/198 (91%)	150 (83%)	30 (17%)	3	20
20	CB	180/198 (91%)	149 (83%)	31 (17%)	2	18
21	AU	44/60 (73%)	31 (70%)	13 (30%)	0	4
21	CU	44/60 (73%)	31 (70%)	13 (30%)	0	4
24	BI	109/109 (100%)	107 (98%)	2 (2%)	66	87
24	DI	109/109 (100%)	103 (94%)	6 (6%)	27	66
25	BC	216/217 (100%)	178 (82%)	38 (18%)	2	18
25	DC	216/217 (100%)	179 (83%)	37 (17%)	2	19

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
26	BD	164/164 (100%)	142 (87%)	22 (13%)	5	29
26	DD	164/164 (100%)	140 (85%)	24 (15%)	4	26
27	BK	102/104 (98%)	75 (74%)	27 (26%)	0	5
27	DK	102/104 (98%)	75 (74%)	27 (26%)	0	5
28	BP	99/99 (100%)	82 (83%)	17 (17%)	2	18
28	DP	99/99 (100%)	82 (83%)	17 (17%)	2	18
29	BE	165/165 (100%)	141 (86%)	24 (14%)	4	26
29	DE	165/165 (100%)	140 (85%)	25 (15%)	3	24
30	BY	48/48 (100%)	38 (79%)	10 (21%)	1	11
30	DY	48/48 (100%)	38 (79%)	10 (21%)	1	11
31	B0	47/47 (100%)	39 (83%)	8 (17%)	2	19
31	D0	47/47 (100%)	39 (83%)	8 (17%)	2	19
32	B4	34/34 (100%)	28 (82%)	6 (18%)	2	18
32	D4	34/34 (100%)	28 (82%)	6 (18%)	2	18
33	B1	45/48 (94%)	42 (93%)	3 (7%)	20	59
33	D1	45/48 (94%)	42 (93%)	3 (7%)	20	59
34	B3	51/51 (100%)	47 (92%)	4 (8%)	16	54
34	D3	51/51 (100%)	47 (92%)	4 (8%)	16	54
35	BV	78/78 (100%)	66 (85%)	12 (15%)	3	24
35	DV	78/78 (100%)	67 (86%)	11 (14%)	4	28
36	B2	38/38 (100%)	34 (90%)	4 (10%)	8	39
36	D2	38/38 (100%)	34 (90%)	4 (10%)	8	39
37	BL	102/103 (99%)	87 (85%)	15 (15%)	4	26
37	DL	102/103 (99%)	88 (86%)	14 (14%)	4	29
38	BM	109/109 (100%)	88 (81%)	21 (19%)	2	14
38	DM	109/109 (100%)	89 (82%)	20 (18%)	2	15
39	BX	55/55 (100%)	40 (73%)	15 (27%)	0	5
39	DX	55/55 (100%)	42 (76%)	13 (24%)	1	8
40	BH	114/114 (100%)	68 (60%)	46 (40%)	0	0
40	DH	114/114 (100%)	91 (80%)	23 (20%)	1	12
41	BJ	116/116 (100%)	99 (85%)	17 (15%)	4	26

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
41	DJ	116/116 (100%)	99 (85%)	17 (15%)	4	26
42	BN	100/103 (97%)	86 (86%)	14 (14%)	4	28
42	DN	100/103 (97%)	86 (86%)	14 (14%)	4	28
43	BO	86/87 (99%)	73 (85%)	13 (15%)	3	25
43	DO	86/87 (99%)	74 (86%)	12 (14%)	4	28
44	BQ	89/89 (100%)	76 (85%)	13 (15%)	4	26
44	DQ	89/89 (100%)	75 (84%)	14 (16%)	3	23
45	BS	93/93 (100%)	79 (85%)	14 (15%)	3	25
45	DS	93/93 (100%)	80 (86%)	13 (14%)	4	28
46	BU	83/84 (99%)	69 (83%)	14 (17%)	2	20
46	DU	83/84 (99%)	69 (83%)	14 (17%)	2	20
47	BF	149/149 (100%)	114 (76%)	35 (24%)	1	8
47	DF	149/149 (100%)	116 (78%)	33 (22%)	1	10
48	BG	137/137 (100%)	114 (83%)	23 (17%)	2	20
48	DG	137/137 (100%)	115 (84%)	22 (16%)	3	22
49	BR	84/84 (100%)	72 (86%)	12 (14%)	4	27
49	DR	84/84 (100%)	72 (86%)	12 (14%)	4	27
50	BT	80/84 (95%)	65 (81%)	15 (19%)	2	15
50	DT	80/84 (95%)	68 (85%)	12 (15%)	3	25
51	BZ	67/68 (98%)	53 (79%)	14 (21%)	1	11
51	DZ	67/68 (98%)	54 (81%)	13 (19%)	2	14
52	BW	59/62 (95%)	47 (80%)	12 (20%)	1	12
52	DW	59/62 (95%)	46 (78%)	13 (22%)	1	10
53	B6	157/157 (100%)	119 (76%)	38 (24%)	1	7
53	D6	157/157 (100%)	123 (78%)	34 (22%)	1	10
All	All	9647/10014 (96%)	8085 (84%)	1562 (16%)	3	21

All (1562) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AC	2	GLN
2	AC	13	ILE
2	AC	17	TRP

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Mol	Chain	Res	Type
2	AC	19	SER
2	AC	27	GLU
2	AC	35	ASP
2	AC	41	TYR
2	AC	44	LYS
2	AC	48	LYS
2	AC	61	LYS
2	AC	62	SER
2	AC	69	THR
2	AC	71	ARG
2	AC	78	LYS
2	AC	84	GLU
2	AC	87	ARG
2	AC	88	LYS
2	AC	106	ARG
2	AC	125	ARG
2	AC	128	MET
2	AC	131	ARG
2	AC	138	GLN
2	AC	168	ARG
2	AC	171	ARG
2	AC	180	ASP
2	AC	184	ASN
2	AC	192	TYR
2	AC	206	ILE
3	AD	4	LEU
3	AD	18	LEU
3	AD	25	ARG
3	AD	28	ASP
3	AD	32	LYS
3	AD	35	GLN
3	AD	39	GLN
3	AD	55	ARG
3	AD	61	ARG
3	AD	84	ASN
3	AD	87	GLU
3	AD	114	ARG
3	AD	146	GLU
3	AD	147	LYS
3	AD	155	LYS
3	AD	160	LEU
3	AD	164	ARG

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Mol	Chain	Res	Type
3	AD	176	LYS
3	AD	183	ARG
3	AD	189	ASP
3	AD	190	LEU
3	AD	196	GLU
3	AD	197	HIS
3	AD	198	LEU
3	AD	203	TYR
4	AE	9	GLU
4	AE	23	THR
4	AE	28	ARG
4	AE	30	PHE
4	AE	45	VAL
4	AE	51	LYS
4	AE	55	VAL
4	AE	61	LYS
4	AE	64	GLU
4	AE	81	GLN
4	AE	95	MET
4	AE	115	GLU
4	AE	123	LEU
4	AE	127	TYR
4	AE	147	ASN
4	AE	151	MET
4	AE	156	ARG
5	AF	1	MET
5	AF	6	ILE
5	AF	13	ASP
5	AF	16	GLU
5	AF	39	LEU
5	AF	53	LYS
5	AF	54	LEU
5	AF	55	HIS
5	AF	61	LEU
5	AF	64	VAL
5	AF	71	ILE
5	AF	77	THR
5	AF	86	ARG
5	AF	87	SER
5	AF	90	MET
5	AF	98	GLU
6	AG	6	ILE

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Mol	Chain	Res	Type
6	AG	8	GLN
6	AG	10	LYS
6	AG	12	LEU
6	AG	21	LEU
6	AG	22	LEU
6	AG	26	VAL
6	AG	49	LEU
6	AG	55	LYS
6	AG	58	LEU
6	AG	62	GLU
6	AG	75	LYS
6	AG	78	ARG
6	AG	109	LYS
6	AG	110	ARG
6	AG	117	LEU
6	AG	129	ASN
7	AH	17	GLN
7	AH	55	LYS
7	AH	72	GLU
7	AH	76	ARG
7	AH	88	LYS
7	AH	107	LYS
7	AH	111	THR
7	AH	113	ARG
8	AI	36	GLN
8	AI	45	MET
8	AI	58	GLU
8	AI	59	LYS
8	AI	60	LEU
8	AI	61	ASP
8	AI	62	LEU
8	AI	67	LYS
8	AI	74	GLN
8	AI	84	ARG
8	AI	87	MET
8	AI	91	GLU
8	AI	94	ARG
8	AI	105	ARG
8	AI	106	ASP
8	AI	108	ARG
8	AI	109	GLN
9	AJ	14	ASP

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Mol	Chain	Res	Type
9	AJ	17	LEU
9	AJ	31	ARG
9	AJ	35	GLN
9	AJ	45	ARG
9	AJ	47	GLU
9	AJ	59	LYS
9	AJ	85	ASP
9	AJ	87	LEU
9	AJ	88	MET
9	AJ	89	ARG
9	AJ	90	LEU
9	AJ	92	LEU
10	AK	28	ASN
10	AK	29	THR
10	AK	34	THR
10	AK	51	PHE
10	AK	52	ARG
10	AK	55	ARG
10	AK	56	LYS
10	AK	80	ASN
10	AK	84	MET
10	AK	92	ARG
10	AK	100	ASN
10	AK	105	ARG
10	AK	117	HIS
10	AK	128	VAL
11	AL	13	ARG
11	AL	14	LYS
11	AL	15	VAL
11	AL	17	LYS
11	AL	19	ASN
11	AL	28	GLN
11	AL	43	LYS
11	AL	49	ARG
11	AL	93	ARG
11	AL	107	LYS
11	AL	114	SER
12	AM	2	ARG
12	AM	15	VAL
12	AM	28	ARG
12	AM	43	LYS
12	AM	44	ILE

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Mol	Chain	Res	Type
12	AM	46	GLU
12	AM	57	ASP
12	AM	64	VAL
12	AM	67	ASP
12	AM	71	GLU
12	AM	79	LEU
12	AM	82	LEU
12	AM	92	ARG
12	AM	102	LYS
13	AN	17	ASP
13	AN	19	TYR
13	AN	26	LEU
13	AN	30	ILE
13	AN	34	ASN
13	AN	40	ARG
13	AN	41	TRP
13	AN	45	LEU
13	AN	57	SER
13	AN	59	GLN
13	AN	65	GLN
13	AN	68	ARG
13	AN	97	LYS
14	AO	18	ASP
14	AO	25	THR
14	AO	37	ASN
14	AO	42	HIS
14	AO	54	ARG
14	AO	59	MET
14	AO	64	ARG
14	AO	68	ASP
14	AO	70	LEU
14	AO	71	LYS
14	AO	88	ARG
14	AO	89	ARG
15	AP	28	ARG
15	AP	31	ARG
15	AP	45	GLU
15	AP	51	ARG
15	AP	79	ASN
16	AQ	24	ILE
16	AQ	39	ARG
16	AQ	56	ASP

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Mol	Chain	Res	Type
16	AQ	60	ILE
16	AQ	61	ARG
16	AQ	67	SER
16	AQ	71	SER
16	AQ	80	LYS
17	AR	33	THR
17	AR	38	ILE
17	AR	73	HIS
18	AS	2	ARG
18	AS	4	LEU
18	AS	5	LYS
18	AS	12	LEU
18	AS	13	HIS
18	AS	14	LEU
18	AS	15	LEU
18	AS	17	LYS
18	AS	20	LYS
18	AS	23	GLU
18	AS	27	LYS
18	AS	28	LYS
18	AS	42	ASN
18	AS	43	MET
18	AS	46	LEU
18	AS	64	GLU
19	AT	4	LYS
19	AT	35	TYR
19	AT	38	ILE
19	AT	43	LYS
19	AT	51	ASN
19	AT	53	MET
19	AT	69	ASN
19	AT	74	HIS
19	AT	85	LEU
20	AB	20	ARG
20	AB	27	LYS
20	AB	35	ASN
20	AB	36	LYS
20	AB	38	HIS
20	AB	43	GLU
20	AB	46	VAL
20	AB	53	LEU
20	AB	57	ASN

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Mol	Chain	Res	Type
20	AB	62	ARG
20	AB	67	LEU
20	AB	84	LEU
20	AB	87	ASP
20	AB	88	GLN
20	AB	94	ARG
20	AB	95	TRP
20	AB	100	LEU
20	AB	104	LYS
20	AB	124	THR
20	AB	127	LYS
20	AB	128	LEU
20	AB	138	ARG
20	AB	166	ASP
20	AB	176	ASN
20	AB	196	ASP
20	AB	202	ASN
20	AB	203	ASP
20	AB	211	LEU
20	AB	213	LEU
20	AB	221	ARG
21	AU	7	GLU
21	AU	11	PHE
21	AU	15	LEU
21	AU	16	ARG
21	AU	20	ARG
21	AU	22	CYS
21	AU	24	LYS
21	AU	33	ARG
21	AU	34	ARG
21	AU	35	GLU
21	AU	38	GLU
21	AU	44	ARG
21	AU	48	LYS
24	BI	63	ASP
24	BI	96	LYS
25	BC	4	LYS
25	BC	12	ARG
25	BC	37	SER
25	BC	43	ASN
25	BC	44	ASN
25	BC	45	ASN

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Mol	Chain	Res	Type
25	BC	47	ARG
25	BC	52	HIS
25	BC	62	ARG
25	BC	65	ASP
25	BC	86	ARG
25	BC	89	ASN
25	BC	90	ILE
25	BC	100	ARG
25	BC	109	LEU
25	BC	123	ILE
25	BC	129	LEU
25	BC	134	ILE
25	BC	142	ASN
25	BC	155	ARG
25	BC	167	ASP
25	BC	172	THR
25	BC	173	LEU
25	BC	176	ARG
25	BC	180	MET
25	BC	181	ARG
25	BC	191	LEU
25	BC	196	ASN
25	BC	203	VAL
25	BC	211	ARG
25	BC	212	TRP
25	BC	224	MET
25	BC	239	PHE
25	BC	245	THR
25	BC	249	VAL
25	BC	250	GLN
25	BC	251	THR
25	BC	257	ARG
26	BD	16	THR
26	BD	30	GLU
26	BD	40	LEU
26	BD	56	LYS
26	BD	79	LEU
26	BD	81	GLU
26	BD	82	PHE
26	BD	84	LEU
26	BD	88	GLU
26	BD	95	SER

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Mol	Chain	Res	Type
26	BD	99	GLU
26	BD	114	LYS
26	BD	124	ARG
26	BD	137	SER
26	BD	138	LEU
26	BD	142	VAL
26	BD	148	GLN
26	BD	159	LYS
26	BD	179	ARG
26	BD	186	LEU
26	BD	197	THR
26	BD	204	LYS
27	BK	2	ILE
27	BK	8	LEU
27	BK	18	ARG
27	BK	21	CYS
27	BK	25	LEU
27	BK	32	TYR
27	BK	47	ILE
27	BK	53	LYS
27	BK	54	LYS
27	BK	58	LEU
27	BK	64	ARG
27	BK	67	LYS
27	BK	70	ARG
27	BK	72	PRO
27	BK	73	ASP
27	BK	79	PHE
27	BK	80	ASP
27	BK	86	LEU
27	BK	87	LEU
27	BK	88	ASN
27	BK	89	ASN
27	BK	98	ARG
27	BK	104	THR
27	BK	105	ARG
27	BK	107	LEU
27	BK	111	LYS
27	BK	120	PRO
28	BP	3	ILE
28	BP	6	GLN
28	BP	19	PHE

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Mol	Chain	Res	Type
28	BP	25	VAL
28	BP	33	GLU
28	BP	38	ARG
28	BP	43	GLU
28	BP	61	ARG
28	BP	65	ASN
28	BP	80	VAL
28	BP	83	ILE
28	BP	99	LEU
28	BP	100	ARG
28	BP	101	GLU
28	BP	111	GLU
28	BP	112	ARG
28	BP	114	ASN
29	BE	2	GLU
29	BE	3	LEU
29	BE	5	LEU
29	BE	7	ASP
29	BE	22	ASP
29	BE	24	ASN
29	BE	58	LYS
29	BE	60	TRP
29	BE	62	GLN
29	BE	67	ARG
29	BE	70	SER
29	BE	75	SER
29	BE	80	SER
29	BE	97	ASN
29	BE	107	SER
29	BE	108	ILE
29	BE	111	GLU
29	BE	116	ASP
29	BE	118	LEU
29	BE	122	GLU
29	BE	133	LEU
29	BE	150	THR
29	BE	159	LEU
29	BE	163	ASN
30	BY	2	LYS
30	BY	6	ILE
30	BY	8	GLN
30	BY	15	ARG

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Mol	Chain	Res	Type
30	BY	16	LEU
30	BY	19	HIS
30	BY	23	LEU
30	BY	30	ARG
30	BY	37	ARG
30	BY	43	ILE
31	B0	5	ASN
31	B0	27	LEU
31	B0	31	LYS
31	B0	38	LEU
31	B0	41	HIS
31	B0	51	ARG
31	B0	53	VAL
31	B0	56	LYS
32	B4	2	LYS
32	B4	9	LYS
32	B4	15	LYS
32	B4	22	VAL
32	B4	24	ARG
32	B4	35	GLN
33	B1	6	GLU
33	B1	9	LYS
33	B1	35	LEU
34	B3	7	ARG
34	B3	18	LYS
34	B3	49	VAL
34	B3	61	LEU
35	BV	35	GLU
35	BV	40	ILE
35	BV	41	GLU
35	BV	42	LEU
35	BV	45	ASP
35	BV	46	LYS
35	BV	51	GLN
35	BV	53	LYS
35	BV	66	ASP
35	BV	69	GLU
35	BV	70	ILE
35	BV	75	GLN
36	B2	19	ARG
36	B2	33	ARG
36	B2	35	ARG

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Mol	Chain	Res	Type
36	B2	39	ARG
37	BL	10	GLU
37	BL	39	LYS
37	BL	47	ARG
37	BL	55	MET
37	BL	60	ARG
37	BL	67	THR
37	BL	69	ARG
37	BL	82	LEU
37	BL	91	ASP
37	BL	92	LEU
37	BL	95	LEU
37	BL	99	ASN
37	BL	112	LEU
37	BL	118	THR
37	BL	123	ARG
38	BM	1	MET
38	BM	2	LEU
38	BM	7	THR
38	BM	10	ARG
38	BM	18	ARG
38	BM	20	LEU
38	BM	26	VAL
38	BM	47	GLU
38	BM	55	ARG
38	BM	65	ILE
38	BM	70	ASP
38	BM	78	LEU
38	BM	81	ARG
38	BM	88	ASN
38	BM	90	GLU
38	BM	108	VAL
38	BM	110	GLU
38	BM	111	GLU
38	BM	114	ARG
38	BM	115	GLU
38	BM	123	LYS
39	BX	1	MET
39	BX	7	ARG
39	BX	10	SER
39	BX	15	ASN
39	BX	18	LEU

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Mol	Chain	Res	Type
39	BX	20	ASN
39	BX	21	LEU
39	BX	28	LEU
39	BX	29	ARG
39	BX	30	MET
39	BX	38	GLN
39	BX	41	HIS
39	BX	48	ARG
39	BX	49	ASP
39	BX	59	GLU
40	BH	3	VAL
40	BH	4	ILE
40	BH	12	LEU
40	BH	15	LEU
40	BH	19	VAL
40	BH	28	ASN
40	BH	31	VAL
40	BH	32	PRO
40	BH	33	GLN
40	BH	41	LYS
40	BH	43	ASN
40	BH	44	ILE
40	BH	45	GLU
40	BH	46	PHE
40	BH	48	GLU
40	BH	50	ARG
40	BH	51	ARG
40	BH	54	LEU
40	BH	57	LYS
40	BH	58	LEU
40	BH	60	GLU
40	BH	62	LEU
40	BH	68	ARG
40	BH	70	GLU
40	BH	71	LYS
40	BH	73	ASN
40	BH	75	LEU
40	BH	79	THR
40	BH	82	SER
40	BH	87	GLU
40	BH	89	LYS
40	BH	110	VAL

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Mol	Chain	Res	Type
40	BH	112	LYS
40	BH	114	GLU
40	BH	116	ARG
40	BH	119	ASN
40	BH	125	THR
40	BH	128	HIS
40	BH	130	VAL
40	BH	134	VAL
40	BH	135	HIS
40	BH	138	VAL
40	BH	139	PHE
40	BH	141	LYS
40	BH	142	VAL
40	BH	147	VAL
41	BJ	3	THR
41	BJ	5	THR
41	BJ	9	GLU
41	BJ	12	LYS
41	BJ	28	LEU
41	BJ	30	THR
41	BJ	44	TYR
41	BJ	65	THR
41	BJ	71	ASP
41	BJ	73	VAL
41	BJ	95	ARG
41	BJ	106	LYS
41	BJ	120	ARG
41	BJ	124	VAL
41	BJ	129	GLU
41	BJ	131	ASN
41	BJ	138	GLN
42	BN	1	MET
42	BN	9	GLN
42	BN	11	ASN
42	BN	20	MET
42	BN	31	HIS
42	BN	35	LYS
42	BN	46	ARG
42	BN	51	LEU
42	BN	69	ARG
42	BN	71	ARG
42	BN	82	GLU

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Mol	Chain	Res	Type
42	BN	96	ARG
42	BN	114	GLU
42	BN	120	GLU
43	BO	31	THR
43	BO	35	ILE
43	BO	36	TYR
43	BO	43	ASN
43	BO	58	ILE
43	BO	62	LEU
43	BO	69	ASP
43	BO	74	VAL
43	BO	81	ARG
43	BO	89	ASP
43	BO	106	LEU
43	BO	115	LEU
43	BO	116	GLN
44	BQ	4	LYS
44	BQ	5	ARG
44	BQ	10	ARG
44	BQ	13	HIS
44	BQ	63	ARG
44	BQ	69	ARG
44	BQ	79	ILE
44	BQ	83	LYS
44	BQ	84	LYS
44	BQ	89	ILE
44	BQ	90	ASP
44	BQ	91	ARG
44	BQ	96	ASP
45	BS	7	HIS
45	BS	15	GLN
45	BS	22	ASP
45	BS	27	LYS
45	BS	57	ASN
45	BS	61	ASN
45	BS	66	ILE
45	BS	72	THR
45	BS	84	ARG
45	BS	86	MET
45	BS	88	ARG
45	BS	92	ARG
45	BS	99	ARG

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Mol	Chain	Res	Type
45	BS	101	SER
46	BU	11	ILE
46	BU	13	LEU
46	BU	20	LYS
46	BU	26	ASN
46	BU	45	GLN
46	BU	49	PRO
46	BU	51	LEU
46	BU	53	GLN
46	BU	60	LYS
46	BU	73	ASN
46	BU	78	LYS
46	BU	81	ARG
46	BU	85	ARG
46	BU	88	ASP
47	BF	2	LYS
47	BF	13	LYS
47	BF	19	PHE
47	BF	22	ASN
47	BF	29	ARG
47	BF	32	LYS
47	BF	46	LYS
47	BF	50	ASP
47	BF	55	ASP
47	BF	56	LEU
47	BF	68	LYS
47	BF	70	ARG
47	BF	76	PHE
47	BF	79	ARG
47	BF	91	ARG
47	BF	96	TRP
47	BF	97	GLU
47	BF	100	GLU
47	BF	102	LEU
47	BF	103	ILE
47	BF	109	ARG
47	BF	111	ARG
47	BF	120	SER
47	BF	121	PHE
47	BF	124	ARG
47	BF	129	MET
47	BF	134	GLN

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Mol	Chain	Res	Type
47	BF	137	PHE
47	BF	138	PRO
47	BF	142	TYR
47	BF	149	ARG
47	BF	168	LEU
47	BF	173	ASP
47	BF	174	PHE
47	BF	178	LYS
48	BG	2	ARG
48	BG	14	VAL
48	BG	24	THR
48	BG	26	LYS
48	BG	31	GLU
48	BG	34	ARG
48	BG	46	ASP
48	BG	54	ARG
48	BG	61	TRP
48	BG	66	THR
48	BG	68	ARG
48	BG	70	LEU
48	BG	84	LYS
48	BG	94	ARG
48	BG	106	LEU
48	BG	120	ILE
48	BG	132	LEU
48	BG	133	LYS
48	BG	138	GLN
48	BG	152	ARG
48	BG	162	ARG
48	BG	166	GLU
48	BG	176	LYS
49	BR	4	VAL
49	BR	19	THR
49	BR	22	LEU
49	BR	39	LEU
49	BR	53	PHE
49	BR	55	ASP
49	BR	70	GLU
49	BR	71	LYS
49	BR	72	VAL
49	BR	79	ARG
49	BR	82	HIS

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Mol	Chain	Res	Type
49	BR	86	GLN
50	BT	2	ILE
50	BT	3	ARG
50	BT	4	GLU
50	BT	9	LYS
50	BT	11	LEU
50	BT	12	ARG
50	BT	25	GLU
50	BT	29	THR
50	BT	32	LEU
50	BT	50	LEU
50	BT	64	LYS
50	BT	68	LYS
50	BT	69	ARG
50	BT	70	HIS
50	BT	81	LYS
51	BZ	2	SER
51	BZ	14	THR
51	BZ	25	THR
51	BZ	27	ARG
51	BZ	28	ARG
51	BZ	30	LEU
51	BZ	33	LEU
51	BZ	37	ARG
51	BZ	46	PHE
51	BZ	50	ARG
51	BZ	60	ASP
51	BZ	66	THR
51	BZ	77	LYS
51	BZ	78	TYR
52	BW	10	ARG
52	BW	16	GLU
52	BW	19	ARG
52	BW	24	ARG
52	BW	25	PHE
52	BW	39	GLN
52	BW	44	PHE
52	BW	49	ASN
52	BW	50	VAL
52	BW	75	ASN
52	BW	77	LYS
52	BW	82	GLU

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Mol	Chain	Res	Type
53	B6	1	MET
53	B6	10	THR
53	B6	12	SER
53	B6	16	LYS
53	B6	22	GLU
53	B6	24	ASN
53	B6	39	LEU
53	B6	46	TYR
53	B6	50	VAL
53	B6	59	THR
53	B6	62	ASP
53	B6	64	ARG
53	B6	66	LEU
53	B6	71	TRP
53	B6	73	GLN
53	B6	77	LYS
53	B6	84	ARG
53	B6	86	SER
53	B6	88	LEU
53	B6	90	LEU
53	B6	97	ASP
53	B6	102	ASN
53	B6	106	LEU
53	B6	111	ARG
53	B6	112	LYS
53	B6	113	ASP
53	B6	134	ARG
53	B6	137	LEU
53	B6	141	LYS
53	B6	142	LYS
53	B6	147	LEU
53	B6	156	ARG
53	B6	162	GLN
53	B6	169	ILE
53	B6	174	GLN
53	B6	177	GLU
53	B6	180	GLU
53	B6	181	GLN
2	CC	2	GLN
2	CC	13	ILE
2	CC	17	TRP
2	CC	19	SER

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Mol	Chain	Res	Type
2	CC	27	GLU
2	CC	35	ASP
2	CC	41	TYR
2	CC	44	LYS
2	CC	48	LYS
2	CC	61	LYS
2	CC	62	SER
2	CC	69	THR
2	CC	71	ARG
2	CC	78	LYS
2	CC	84	GLU
2	CC	87	ARG
2	CC	88	LYS
2	CC	106	ARG
2	CC	125	ARG
2	CC	128	MET
2	CC	131	ARG
2	CC	138	GLN
2	CC	168	ARG
2	CC	171	ARG
2	CC	180	ASP
2	CC	184	ASN
2	CC	192	TYR
2	CC	206	ILE
3	CD	4	LEU
3	CD	18	LEU
3	CD	25	ARG
3	CD	28	ASP
3	CD	32	LYS
3	CD	35	GLN
3	CD	39	GLN
3	CD	55	ARG
3	CD	61	ARG
3	CD	84	ASN
3	CD	87	GLU
3	CD	114	ARG
3	CD	146	GLU
3	CD	147	LYS
3	CD	155	LYS
3	CD	160	LEU
3	CD	164	ARG
3	CD	176	LYS

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Mol	Chain	Res	Type
3	CD	183	ARG
3	CD	189	ASP
3	CD	190	LEU
3	CD	196	GLU
3	CD	198	LEU
3	CD	203	TYR
4	CE	9	GLU
4	CE	23	THR
4	CE	28	ARG
4	CE	30	PHE
4	CE	45	VAL
4	CE	51	LYS
4	CE	55	VAL
4	CE	61	LYS
4	CE	64	GLU
4	CE	81	GLN
4	CE	95	MET
4	CE	115	GLU
4	CE	123	LEU
4	CE	127	TYR
4	CE	147	ASN
4	CE	151	MET
4	CE	156	ARG
5	CF	1	MET
5	CF	6	ILE
5	CF	13	ASP
5	CF	16	GLU
5	CF	39	LEU
5	CF	53	LYS
5	CF	54	LEU
5	CF	55	HIS
5	CF	61	LEU
5	CF	62	MET
5	CF	64	VAL
5	CF	71	ILE
5	CF	77	THR
5	CF	86	ARG
5	CF	87	SER
5	CF	90	MET
5	CF	98	GLU
6	CG	2	ARG
6	CG	8	GLN

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Mol	Chain	Res	Type
6	CG	10	LYS
6	CG	12	LEU
6	CG	21	LEU
6	CG	22	LEU
6	CG	26	VAL
6	CG	49	LEU
6	CG	55	LYS
6	CG	58	LEU
6	CG	62	GLU
6	CG	75	LYS
6	CG	78	ARG
6	CG	109	LYS
6	CG	117	LEU
6	CG	129	ASN
7	CH	17	GLN
7	CH	55	LYS
7	CH	72	GLU
7	CH	76	ARG
7	CH	88	LYS
7	CH	107	LYS
7	CH	111	THR
7	CH	113	ARG
8	CI	36	GLN
8	CI	45	MET
8	CI	58	GLU
8	CI	59	LYS
8	CI	60	LEU
8	CI	61	ASP
8	CI	62	LEU
8	CI	67	LYS
8	CI	74	GLN
8	CI	84	ARG
8	CI	87	MET
8	CI	91	GLU
8	CI	94	ARG
8	CI	105	ARG
8	CI	106	ASP
8	CI	108	ARG
8	CI	109	GLN
9	CJ	14	ASP
9	CJ	17	LEU
9	CJ	31	ARG

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Mol	Chain	Res	Type
9	CJ	35	GLN
9	CJ	45	ARG
9	CJ	47	GLU
9	CJ	59	LYS
9	CJ	85	ASP
9	CJ	87	LEU
9	CJ	88	MET
9	CJ	89	ARG
9	CJ	90	LEU
9	CJ	92	LEU
10	CK	28	ASN
10	CK	29	THR
10	CK	34	THR
10	CK	51	PHE
10	CK	52	ARG
10	CK	55	ARG
10	CK	56	LYS
10	CK	80	ASN
10	CK	84	MET
10	CK	92	ARG
10	CK	100	ASN
10	CK	105	ARG
10	CK	117	HIS
10	CK	128	VAL
11	CL	13	ARG
11	CL	14	LYS
11	CL	15	VAL
11	CL	17	LYS
11	CL	19	ASN
11	CL	28	GLN
11	CL	33	CYS
11	CL	43	LYS
11	CL	49	ARG
11	CL	93	ARG
11	CL	107	LYS
11	CL	114	SER
12	CM	2	ARG
12	CM	15	VAL
12	CM	28	ARG
12	CM	43	LYS
12	CM	44	ILE
12	CM	46	GLU

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Mol	Chain	Res	Type
12	CM	57	ASP
12	CM	64	VAL
12	CM	67	ASP
12	CM	71	GLU
12	CM	79	LEU
12	CM	82	LEU
12	CM	92	ARG
12	CM	102	LYS
13	CN	17	ASP
13	CN	19	TYR
13	CN	26	LEU
13	CN	30	ILE
13	CN	34	ASN
13	CN	40	ARG
13	CN	41	TRP
13	CN	45	LEU
13	CN	57	SER
13	CN	59	GLN
13	CN	65	GLN
13	CN	68	ARG
13	CN	97	LYS
14	CO	18	ASP
14	CO	25	THR
14	CO	37	ASN
14	CO	42	HIS
14	CO	54	ARG
14	CO	59	MET
14	CO	64	ARG
14	CO	68	ASP
14	CO	70	LEU
14	CO	71	LYS
14	CO	88	ARG
14	CO	89	ARG
15	CP	28	ARG
15	CP	31	ARG
15	CP	45	GLU
15	CP	51	ARG
15	CP	79	ASN
16	CQ	24	ILE
16	CQ	39	ARG
16	CQ	56	ASP
16	CQ	60	ILE

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Mol	Chain	Res	Type
16	CQ	61	ARG
16	CQ	67	SER
16	CQ	71	SER
16	CQ	80	LYS
17	CR	33	THR
17	CR	38	ILE
17	CR	73	HIS
18	CS	2	ARG
18	CS	4	LEU
18	CS	5	LYS
18	CS	12	LEU
18	CS	13	HIS
18	CS	14	LEU
18	CS	15	LEU
18	CS	17	LYS
18	CS	20	LYS
18	CS	23	GLU
18	CS	27	LYS
18	CS	28	LYS
18	CS	42	ASN
18	CS	43	MET
18	CS	46	LEU
18	CS	64	GLU
19	CT	4	LYS
19	CT	35	TYR
19	CT	38	ILE
19	CT	43	LYS
19	CT	51	ASN
19	CT	53	MET
19	CT	69	ASN
19	CT	74	HIS
19	CT	85	LEU
20	CB	20	ARG
20	CB	27	LYS
20	CB	35	ASN
20	CB	36	LYS
20	CB	38	HIS
20	CB	43	GLU
20	CB	46	VAL
20	CB	53	LEU
20	CB	57	ASN
20	CB	62	ARG

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Mol	Chain	Res	Type
20	CB	67	LEU
20	CB	76	SER
20	CB	84	LEU
20	CB	87	ASP
20	CB	88	GLN
20	CB	94	ARG
20	CB	95	TRP
20	CB	100	LEU
20	CB	104	LYS
20	CB	125	PHE
20	CB	127	LYS
20	CB	130	LYS
20	CB	138	ARG
20	CB	166	ASP
20	CB	176	ASN
20	CB	196	ASP
20	CB	202	ASN
20	CB	203	ASP
20	CB	211	LEU
20	CB	213	LEU
20	CB	221	ARG
21	CU	11	PHE
21	CU	15	LEU
21	CU	16	ARG
21	CU	18	PHE
21	CU	20	ARG
21	CU	22	CYS
21	CU	24	LYS
21	CU	33	ARG
21	CU	34	ARG
21	CU	35	GLU
21	CU	38	GLU
21	CU	44	ARG
21	CU	48	LYS
24	DI	2	LYS
24	DI	54	ILE
24	DI	91	LYS
24	DI	99	LYS
24	DI	121	ILE
24	DI	140	GLU
25	DC	4	LYS
25	DC	12	ARG

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Mol	Chain	Res	Type
25	DC	37	SER
25	DC	43	ASN
25	DC	44	ASN
25	DC	45	ASN
25	DC	47	ARG
25	DC	52	HIS
25	DC	62	ARG
25	DC	65	ASP
25	DC	86	ARG
25	DC	89	ASN
25	DC	90	ILE
25	DC	100	ARG
25	DC	109	LEU
25	DC	123	ILE
25	DC	129	LEU
25	DC	134	ILE
25	DC	142	ASN
25	DC	155	ARG
25	DC	167	ASP
25	DC	172	THR
25	DC	173	LEU
25	DC	176	ARG
25	DC	180	MET
25	DC	181	ARG
25	DC	191	LEU
25	DC	203	VAL
25	DC	211	ARG
25	DC	212	TRP
25	DC	224	MET
25	DC	239	PHE
25	DC	245	THR
25	DC	249	VAL
25	DC	250	GLN
25	DC	251	THR
25	DC	257	ARG
26	DD	16	THR
26	DD	30	GLU
26	DD	40	LEU
26	DD	56	LYS
26	DD	79	LEU
26	DD	81	GLU
26	DD	82	PHE

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Mol	Chain	Res	Type
26	DD	84	LEU
26	DD	88	GLU
26	DD	91	THR
26	DD	95	SER
26	DD	99	GLU
26	DD	114	LYS
26	DD	124	ARG
26	DD	137	SER
26	DD	138	LEU
26	DD	141	ARG
26	DD	142	VAL
26	DD	148	GLN
26	DD	159	LYS
26	DD	179	ARG
26	DD	186	LEU
26	DD	197	THR
26	DD	204	LYS
27	DK	2	ILE
27	DK	8	LEU
27	DK	18	ARG
27	DK	21	CYS
27	DK	25	LEU
27	DK	32	TYR
27	DK	47	ILE
27	DK	53	LYS
27	DK	54	LYS
27	DK	58	LEU
27	DK	64	ARG
27	DK	67	LYS
27	DK	70	ARG
27	DK	72	PRO
27	DK	73	ASP
27	DK	79	PHE
27	DK	80	ASP
27	DK	86	LEU
27	DK	87	LEU
27	DK	88	ASN
27	DK	89	ASN
27	DK	98	ARG
27	DK	104	THR
27	DK	105	ARG
27	DK	107	LEU

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Mol	Chain	Res	Type
27	DK	111	LYS
27	DK	120	PRO
28	DP	3	ILE
28	DP	6	GLN
28	DP	19	PHE
28	DP	25	VAL
28	DP	33	GLU
28	DP	38	ARG
28	DP	43	GLU
28	DP	61	ARG
28	DP	65	ASN
28	DP	80	VAL
28	DP	83	ILE
28	DP	99	LEU
28	DP	100	ARG
28	DP	101	GLU
28	DP	111	GLU
28	DP	112	ARG
28	DP	114	ASN
29	DE	2	GLU
29	DE	3	LEU
29	DE	5	LEU
29	DE	7	ASP
29	DE	22	ASP
29	DE	24	ASN
29	DE	58	LYS
29	DE	60	TRP
29	DE	62	GLN
29	DE	67	ARG
29	DE	70	SER
29	DE	75	SER
29	DE	80	SER
29	DE	97	ASN
29	DE	98	LYS
29	DE	107	SER
29	DE	108	ILE
29	DE	111	GLU
29	DE	116	ASP
29	DE	118	LEU
29	DE	122	GLU
29	DE	133	LEU
29	DE	150	THR

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Mol	Chain	Res	Type
29	DE	159	LEU
29	DE	163	ASN
30	DY	2	LYS
30	DY	6	ILE
30	DY	8	GLN
30	DY	15	ARG
30	DY	16	LEU
30	DY	19	HIS
30	DY	23	LEU
30	DY	30	ARG
30	DY	37	ARG
30	DY	43	ILE
31	D0	5	ASN
31	D0	27	LEU
31	D0	31	LYS
31	D0	38	LEU
31	D0	41	HIS
31	D0	51	ARG
31	D0	53	VAL
31	D0	56	LYS
32	D4	2	LYS
32	D4	9	LYS
32	D4	15	LYS
32	D4	22	VAL
32	D4	24	ARG
32	D4	35	GLN
33	D1	6	GLU
33	D1	9	LYS
33	D1	35	LEU
34	D3	7	ARG
34	D3	18	LYS
34	D3	49	VAL
34	D3	61	LEU
35	DV	35	GLU
35	DV	40	ILE
35	DV	42	LEU
35	DV	45	ASP
35	DV	46	LYS
35	DV	51	GLN
35	DV	53	LYS
35	DV	66	ASP
35	DV	69	GLU

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Mol	Chain	Res	Type
35	DV	70	ILE
35	DV	75	GLN
36	D2	19	ARG
36	D2	33	ARG
36	D2	35	ARG
36	D2	39	ARG
37	DL	10	GLU
37	DL	39	LYS
37	DL	47	ARG
37	DL	55	MET
37	DL	67	THR
37	DL	69	ARG
37	DL	82	LEU
37	DL	91	ASP
37	DL	92	LEU
37	DL	95	LEU
37	DL	99	ASN
37	DL	112	LEU
37	DL	118	THR
37	DL	123	ARG
38	DM	1	MET
38	DM	7	THR
38	DM	10	ARG
38	DM	18	ARG
38	DM	20	LEU
38	DM	26	VAL
38	DM	47	GLU
38	DM	55	ARG
38	DM	65	ILE
38	DM	70	ASP
38	DM	78	LEU
38	DM	81	ARG
38	DM	88	ASN
38	DM	90	GLU
38	DM	108	VAL
38	DM	111	GLU
38	DM	114	ARG
38	DM	115	GLU
38	DM	123	LYS
38	DM	126	ILE
39	DX	1	MET
39	DX	7	ARG

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Mol	Chain	Res	Type
39	DX	10	SER
39	DX	15	ASN
39	DX	18	LEU
39	DX	20	ASN
39	DX	21	LEU
39	DX	28	LEU
39	DX	29	ARG
39	DX	30	MET
39	DX	41	HIS
39	DX	49	ASP
39	DX	59	GLU
40	DH	3	VAL
40	DH	4	ILE
40	DH	12	LEU
40	DH	15	LEU
40	DH	19	VAL
40	DH	28	ASN
40	DH	31	VAL
40	DH	32	PRO
40	DH	33	GLN
40	DH	47	PHE
40	DH	50	ARG
40	DH	55	GLU
40	DH	70	GLU
40	DH	83	LYS
40	DH	97	ARG
40	DH	112	LYS
40	DH	113	SER
40	DH	121	VAL
40	DH	124	THR
40	DH	129	GLU
40	DH	133	GLN
40	DH	137	GLU
40	DH	141	LYS
41	DJ	3	THR
41	DJ	5	THR
41	DJ	9	GLU
41	DJ	12	LYS
41	DJ	28	LEU
41	DJ	30	THR
41	DJ	44	TYR
41	DJ	65	THR

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Mol	Chain	Res	Type
41	DJ	71	ASP
41	DJ	92	MET
41	DJ	95	ARG
41	DJ	106	LYS
41	DJ	120	ARG
41	DJ	124	VAL
41	DJ	129	GLU
41	DJ	131	ASN
41	DJ	138	GLN
42	DN	1	MET
42	DN	9	GLN
42	DN	11	ASN
42	DN	20	MET
42	DN	31	HIS
42	DN	35	LYS
42	DN	46	ARG
42	DN	51	LEU
42	DN	69	ARG
42	DN	71	ARG
42	DN	82	GLU
42	DN	96	ARG
42	DN	114	GLU
42	DN	120	GLU
43	DO	31	THR
43	DO	35	ILE
43	DO	36	TYR
43	DO	58	ILE
43	DO	62	LEU
43	DO	69	ASP
43	DO	74	VAL
43	DO	81	ARG
43	DO	89	ASP
43	DO	106	LEU
43	DO	115	LEU
43	DO	116	GLN
44	DQ	4	LYS
44	DQ	5	ARG
44	DQ	10	ARG
44	DQ	13	HIS
44	DQ	63	ARG
44	DQ	69	ARG
44	DQ	79	ILE

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Mol	Chain	Res	Type
44	DQ	83	LYS
44	DQ	84	LYS
44	DQ	88	GLU
44	DQ	89	ILE
44	DQ	90	ASP
44	DQ	91	ARG
44	DQ	96	ASP
45	DS	7	HIS
45	DS	15	GLN
45	DS	22	ASP
45	DS	27	LYS
45	DS	57	ASN
45	DS	61	ASN
45	DS	66	ILE
45	DS	72	THR
45	DS	84	ARG
45	DS	86	MET
45	DS	88	ARG
45	DS	99	ARG
45	DS	101	SER
46	DU	11	ILE
46	DU	13	LEU
46	DU	20	LYS
46	DU	26	ASN
46	DU	45	GLN
46	DU	49	PRO
46	DU	51	LEU
46	DU	53	GLN
46	DU	60	LYS
46	DU	73	ASN
46	DU	78	LYS
46	DU	81	ARG
46	DU	85	ARG
46	DU	88	ASP
47	DF	2	LYS
47	DF	13	LYS
47	DF	19	PHE
47	DF	22	ASN
47	DF	29	ARG
47	DF	32	LYS
47	DF	46	LYS
47	DF	50	ASP

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Mol	Chain	Res	Type
47	DF	55	ASP
47	DF	68	LYS
47	DF	70	ARG
47	DF	76	PHE
47	DF	79	ARG
47	DF	91	ARG
47	DF	96	TRP
47	DF	97	GLU
47	DF	100	GLU
47	DF	102	LEU
47	DF	103	ILE
47	DF	109	ARG
47	DF	111	ARG
47	DF	120	SER
47	DF	121	PHE
47	DF	124	ARG
47	DF	129	MET
47	DF	134	GLN
47	DF	137	PHE
47	DF	138	PRO
47	DF	149	ARG
47	DF	168	LEU
47	DF	173	ASP
47	DF	174	PHE
47	DF	178	LYS
48	DG	14	VAL
48	DG	24	THR
48	DG	26	LYS
48	DG	31	GLU
48	DG	34	ARG
48	DG	46	ASP
48	DG	54	ARG
48	DG	61	TRP
48	DG	66	THR
48	DG	68	ARG
48	DG	70	LEU
48	DG	84	LYS
48	DG	94	ARG
48	DG	106	LEU
48	DG	120	ILE
48	DG	132	LEU
48	DG	133	LYS

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Mol	Chain	Res	Type
48	DG	138	GLN
48	DG	152	ARG
48	DG	162	ARG
48	DG	166	GLU
48	DG	176	LYS
49	DR	4	VAL
49	DR	19	THR
49	DR	22	LEU
49	DR	39	LEU
49	DR	53	PHE
49	DR	55	ASP
49	DR	70	GLU
49	DR	71	LYS
49	DR	72	VAL
49	DR	79	ARG
49	DR	82	HIS
49	DR	86	GLN
50	DT	2	ILE
50	DT	3	ARG
50	DT	4	GLU
50	DT	9	LYS
50	DT	11	LEU
50	DT	12	ARG
50	DT	32	LEU
50	DT	64	LYS
50	DT	68	LYS
50	DT	69	ARG
50	DT	70	HIS
50	DT	81	LYS
51	DZ	2	SER
51	DZ	25	THR
51	DZ	27	ARG
51	DZ	28	ARG
51	DZ	30	LEU
51	DZ	33	LEU
51	DZ	37	ARG
51	DZ	46	PHE
51	DZ	50	ARG
51	DZ	60	ASP
51	DZ	66	THR
51	DZ	77	LYS
51	DZ	78	TYR

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Mol	Chain	Res	Type
52	DW	10	ARG
52	DW	14	ASP
52	DW	16	GLU
52	DW	19	ARG
52	DW	24	ARG
52	DW	25	PHE
52	DW	39	GLN
52	DW	44	PHE
52	DW	49	ASN
52	DW	50	VAL
52	DW	75	ASN
52	DW	77	LYS
52	DW	82	GLU
53	D6	1	MET
53	D6	6	LEU
53	D6	9	GLU
53	D6	12	SER
53	D6	13	HIS
53	D6	16	LYS
53	D6	17	SER
53	D6	29	ARG
53	D6	41	LEU
53	D6	44	GLU
53	D6	52	LEU
53	D6	53	ASN
53	D6	54	GLN
53	D6	64	ARG
53	D6	71	TRP
53	D6	73	GLN
53	D6	74	ASN
53	D6	84	ARG
53	D6	85	ASP
53	D6	93	SER
53	D6	94	ASN
53	D6	107	THR
53	D6	108	GLU
53	D6	110	ARG
53	D6	114	LEU
53	D6	115	VAL
53	D6	121	TYR
53	D6	130	ARG
53	D6	137	LEU

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Mol	Chain	Res	Type
53	D6	138	ASP
53	D6	150	SER
53	D6	154	THR
53	D6	156	ARG
53	D6	174	GLN

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (336) such sidechains are listed below:

Mol	Chain	Res	Type
2	AC	2	GLN
2	AC	5	HIS
2	AC	68	HIS
2	AC	99	GLN
2	AC	139	ASN
2	AC	184	ASN
2	AC	189	HIS
3	AD	35	GLN
3	AD	84	ASN
3	AD	135	GLN
3	AD	163	GLN
4	AE	18	ASN
4	AE	131	ASN
5	AF	17	GLN
5	AF	37	HIS
5	AF	46	GLN
6	AG	67	ASN
6	AG	121	ASN
7	AH	3	GLN
7	AH	17	GLN
7	AH	117	GLN
8	AI	24	ASN
8	AI	30	ASN
8	AI	31	GLN
8	AI	36	GLN
8	AI	74	GLN
8	AI	80	HIS
9	AJ	15	HIS
9	AJ	20	GLN
9	AJ	58	ASN
9	AJ	64	GLN
9	AJ	99	GLN
10	AK	21	HIS

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Mol	Chain	Res	Type
10	AK	28	ASN
10	AK	80	ASN
10	AK	118	ASN
11	AL	5	GLN
11	AL	19	ASN
11	AL	28	GLN
11	AL	45	ASN
12	AM	7	ASN
12	AM	13	HIS
12	AM	90	HIS
14	AO	28	GLN
14	AO	37	ASN
14	AO	40	GLN
14	AO	62	GLN
15	AP	26	ASN
15	AP	40	ASN
16	AQ	50	ASN
17	AR	53	GLN
18	AS	42	ASN
19	AT	2	ASN
19	AT	20	ASN
19	AT	67	HIS
20	AB	14	HIS
20	AB	17	HIS
20	AB	18	GLN
20	AB	23	ASN
20	AB	35	ASN
20	AB	41	ASN
20	AB	57	ASN
20	AB	93	HIS
20	AB	119	GLN
20	AB	121	GLN
20	AB	145	ASN
20	AB	169	HIS
20	AB	202	ASN
24	BI	11	GLN
24	BI	29	GLN
24	BI	33	ASN
25	BC	43	ASN
25	BC	45	ASN
25	BC	59	GLN
25	BC	85	ASN

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Mol	Chain	Res	Type
25	BC	114	GLN
25	BC	116	GLN
25	BC	133	ASN
25	BC	152	GLN
25	BC	196	ASN
25	BC	225	ASN
26	BD	32	ASN
26	BD	49	GLN
26	BD	126	ASN
26	BD	136	ASN
26	BD	173	GLN
27	BK	5	GLN
27	BK	13	ASN
27	BK	88	ASN
28	BP	6	GLN
28	BP	11	GLN
28	BP	114	ASN
29	BE	24	ASN
29	BE	30	GLN
29	BE	62	GLN
29	BE	136	GLN
29	BE	163	ASN
29	BE	195	GLN
30	BY	19	HIS
30	BY	33	HIS
30	BY	48	ASN
32	B4	35	GLN
32	B4	37	GLN
34	B3	30	HIS
34	B3	42	HIS
35	BV	44	HIS
35	BV	49	ASN
35	BV	80	HIS
35	BV	88	HIS
36	B2	6	GLN
36	B2	13	ASN
37	BL	4	ASN
37	BL	54	GLN
37	BL	93	ASN
37	BL	104	GLN
38	BM	17	ASN
38	BM	22	GLN

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Mol	Chain	Res	Type
39	BX	20	ASN
39	BX	25	GLN
39	BX	41	HIS
40	BH	18	GLN
40	BH	28	ASN
40	BH	43	ASN
40	BH	73	ASN
40	BH	133	GLN
41	BJ	130	HIS
41	BJ	135	GLN
41	BJ	136	GLN
41	BJ	138	GLN
42	BN	11	ASN
42	BN	107	ASN
43	BO	19	GLN
43	BO	29	HIS
43	BO	38	GLN
43	BO	61	GLN
44	BQ	19	GLN
44	BQ	51	GLN
44	BQ	58	GLN
44	BQ	71	ASN
44	BQ	80	ASN
46	BU	26	ASN
46	BU	45	GLN
46	BU	52	ASN
46	BU	65	GLN
46	BU	73	ASN
47	BF	51	ASN
47	BF	134	GLN
48	BG	29	ASN
48	BG	72	ASN
48	BG	87	GLN
49	BR	6	GLN
49	BR	11	GLN
49	BR	43	ASN
49	BR	86	GLN
49	BR	87	GLN
50	BT	48	GLN
50	BT	91	GLN
50	BT	92	ASN
51	BZ	6	GLN

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Mol	Chain	Res	Type
51	BZ	17	ASN
51	BZ	36	HIS
52	BW	39	GLN
52	BW	49	ASN
52	BW	75	ASN
53	B6	13	HIS
53	B6	24	ASN
53	B6	91	ASN
53	B6	102	ASN
53	B6	162	GLN
53	B6	174	GLN
2	CC	2	GLN
2	CC	5	HIS
2	CC	68	HIS
2	CC	99	GLN
2	CC	139	ASN
2	CC	184	ASN
2	CC	189	HIS
3	CD	35	GLN
3	CD	84	ASN
3	CD	135	GLN
3	CD	163	GLN
4	CE	18	ASN
4	CE	81	GLN
4	CE	131	ASN
5	CF	17	GLN
5	CF	37	HIS
5	CF	46	GLN
5	CF	55	HIS
6	CG	67	ASN
6	CG	121	ASN
7	CH	3	GLN
7	CH	17	GLN
7	CH	117	GLN
8	CI	24	ASN
8	CI	30	ASN
8	CI	31	GLN
8	CI	36	GLN
8	CI	74	GLN
8	CI	80	HIS
9	CJ	20	GLN
9	CJ	58	ASN

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Mol	Chain	Res	Type
9	CJ	64	GLN
9	CJ	99	GLN
10	CK	21	HIS
10	CK	28	ASN
10	CK	80	ASN
10	CK	118	ASN
11	CL	5	GLN
11	CL	19	ASN
11	CL	28	GLN
11	CL	45	ASN
12	CM	7	ASN
12	CM	13	HIS
12	CM	90	HIS
14	CO	28	GLN
14	CO	37	ASN
14	CO	40	GLN
14	CO	62	GLN
15	CP	26	ASN
15	CP	40	ASN
16	CQ	50	ASN
18	CS	42	ASN
18	CS	52	ASN
19	CT	2	ASN
19	CT	20	ASN
19	CT	67	HIS
20	CB	14	HIS
20	CB	17	HIS
20	CB	18	GLN
20	CB	23	ASN
20	CB	35	ASN
20	CB	41	ASN
20	CB	57	ASN
20	CB	93	HIS
20	CB	119	GLN
20	CB	145	ASN
20	CB	169	HIS
20	CB	202	ASN
24	DI	5	GLN
24	DI	11	GLN
24	DI	33	ASN
25	DC	43	ASN
25	DC	45	ASN

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Mol	Chain	Res	Type
25	DC	59	GLN
25	DC	85	ASN
25	DC	114	GLN
25	DC	116	GLN
25	DC	133	ASN
25	DC	152	GLN
25	DC	196	ASN
26	DD	32	ASN
26	DD	49	GLN
26	DD	126	ASN
26	DD	136	ASN
26	DD	173	GLN
27	DK	5	GLN
27	DK	13	ASN
27	DK	88	ASN
28	DP	6	GLN
28	DP	11	GLN
28	DP	114	ASN
29	DE	24	ASN
29	DE	29	HIS
29	DE	30	GLN
29	DE	62	GLN
29	DE	136	GLN
29	DE	163	ASN
29	DE	195	GLN
30	DY	33	HIS
30	DY	48	ASN
32	D4	35	GLN
32	D4	37	GLN
34	D3	30	HIS
34	D3	42	HIS
35	DV	44	HIS
35	DV	49	ASN
35	DV	80	HIS
36	D2	6	GLN
36	D2	13	ASN
37	DL	4	ASN
37	DL	54	GLN
37	DL	93	ASN
37	DL	104	GLN
38	DM	17	ASN
39	DX	20	ASN

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Mol	Chain	Res	Type
39	DX	25	GLN
39	DX	41	HIS
40	DH	28	ASN
40	DH	66	ASN
40	DH	133	GLN
40	DH	135	HIS
41	DJ	130	HIS
41	DJ	136	GLN
41	DJ	138	GLN
42	DN	11	ASN
42	DN	16	HIS
42	DN	107	ASN
43	DO	19	GLN
43	DO	29	HIS
43	DO	38	GLN
43	DO	61	GLN
44	DQ	19	GLN
44	DQ	51	GLN
44	DQ	58	GLN
44	DQ	71	ASN
44	DQ	80	ASN
46	DU	26	ASN
46	DU	45	GLN
46	DU	52	ASN
46	DU	65	GLN
46	DU	73	ASN
47	DF	51	ASN
47	DF	134	GLN
48	DG	29	ASN
48	DG	63	GLN
48	DG	72	ASN
48	DG	87	GLN
49	DR	6	GLN
49	DR	11	GLN
49	DR	43	ASN
49	DR	86	GLN
49	DR	87	GLN
50	DT	48	GLN
50	DT	72	GLN
50	DT	91	GLN
50	DT	92	ASN
51	DZ	6	GLN

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Mol	Chain	Res	Type
51	DZ	17	ASN
51	DZ	36	HIS
52	DW	39	GLN
52	DW	49	ASN
52	DW	75	ASN
53	D6	53	ASN
53	D6	54	GLN
53	D6	74	ASN
53	D6	174	GLN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1529/1542 (99%)	246 (16%)	16 (1%)
1	CA	1529/1542 (99%)	244 (15%)	16 (1%)
22	BA	116/120 (96%)	18 (15%)	0
22	DA	116/120 (96%)	18 (15%)	0
23	BB	2837/2904 (97%)	446 (15%)	14 (0%)
23	DB	2837/2904 (97%)	447 (15%)	16 (0%)
All	All	8964/9132 (98%)	1419 (15%)	62 (0%)

All (1419) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	7	A
1	AA	9	G
1	AA	14	U
1	AA	31	G
1	AA	32	A
1	AA	39	G
1	AA	47	C
1	AA	48	C
1	AA	51	A
1	AA	52	C
1	AA	55	A
1	AA	65	A
1	AA	71	A
1	AA	72	A
1	AA	79	G
1	AA	83	C
1	AA	84	U

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Mol	Chain	Res	Type
1	AA	85	U
1	AA	86	G
1	AA	88	U
1	AA	89	U
1	AA	91	U
1	AA	93	U
1	AA	94	G
1	AA	95	C
1	AA	96	U
1	AA	119	A
1	AA	121	U
1	AA	131	A
1	AA	151	A
1	AA	182	A
1	AA	183	C
1	AA	191	G
1	AA	197	A
1	AA	202	G
1	AA	209	U
1	AA	210	C
1	AA	211	G
1	AA	213	G
1	AA	239	U
1	AA	240	G
1	AA	243	A
1	AA	244	U
1	AA	245	U
1	AA	247	G
1	AA	250	A
1	AA	251	G
1	AA	253	A
1	AA	257	G
1	AA	258	G
1	AA	266	G
1	AA	267	C
1	AA	280	C
1	AA	289	G
1	AA	301	G
1	AA	316	C
1	AA	321	A
1	AA	328	C
1	AA	329	A

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Mol	Chain	Res	Type
1	AA	330	C
1	AA	332	G
1	AA	345	C
1	AA	346	G
1	AA	352	C
1	AA	353	A
1	AA	354	G
1	AA	367	U
1	AA	372	C
1	AA	373	A
1	AA	381	C
1	AA	382	A
1	AA	384	G
1	AA	397	A
1	AA	398	U
1	AA	406	G
1	AA	408	A
1	AA	409	U
1	AA	411	A
1	AA	412	A
1	AA	413	G
1	AA	421	U
1	AA	422	C
1	AA	423	G
1	AA	429	U
1	AA	430	A
1	AA	435	A
1	AA	438	U
1	AA	461	A
1	AA	462	G
1	AA	463	U
1	AA	464	U
1	AA	465	A
1	AA	466	A
1	AA	467	U
1	AA	468	A
1	AA	484	G
1	AA	485	U
1	AA	486	U
1	AA	493	A
1	AA	500	G
1	AA	511	C

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Mol	Chain	Res	Type
1	AA	518	C
1	AA	527	G
1	AA	532	A
1	AA	547	A
1	AA	559	A
1	AA	562	U
1	AA	572	A
1	AA	573	A
1	AA	576	C
1	AA	577	G
1	AA	607	A
1	AA	633	G
1	AA	653	U
1	AA	665	A
1	AA	687	A
1	AA	695	A
1	AA	700	G
1	AA	721	G
1	AA	724	G
1	AA	731	G
1	AA	747	A
1	AA	748	G
1	AA	755	G
1	AA	777	A
1	AA	781	A
1	AA	782	A
1	AA	793	U
1	AA	794	A
1	AA	812	G
1	AA	813	U
1	AA	814	A
1	AA	815	A
1	AA	817	C
1	AA	819	A
1	AA	821	G
1	AA	828	U
1	AA	829	G
1	AA	841	C
1	AA	843	U
1	AA	844	G
1	AA	845	A
1	AA	907	A

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Mol	Chain	Res	Type
1	AA	926	G
1	AA	927	G
1	AA	934	C
1	AA	935	A
1	AA	960	U
1	AA	961	U
1	AA	969	A
1	AA	971	G
1	AA	974	A
1	AA	976	G
1	AA	977	A
1	AA	991	U
1	AA	992	U
1	AA	993	G
1	AA	994	A
1	AA	1004	A
1	AA	1009	U
1	AA	1010	U
1	AA	1020	G
1	AA	1022	A
1	AA	1028	C
1	AA	1029	U
1	AA	1030	U
1	AA	1031	C
1	AA	1034	G
1	AA	1035	A
1	AA	1037	C
1	AA	1038	C
1	AA	1049	U
1	AA	1050	G
1	AA	1054	C
1	AA	1065	U
1	AA	1066	C
1	AA	1081	A
1	AA	1094	G
1	AA	1095	U
1	AA	1101	A
1	AA	1136	C
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1140	C

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Mol	Chain	Res	Type
1	AA	1158	C
1	AA	1168	U
1	AA	1171	A
1	AA	1181	G
1	AA	1183	U
1	AA	1184	G
1	AA	1196	A
1	AA	1197	A
1	AA	1201	A
1	AA	1202	U
1	AA	1209	C
1	AA	1211	U
1	AA	1212	U
1	AA	1213	A
1	AA	1214	C
1	AA	1215	G
1	AA	1225	A
1	AA	1226	C
1	AA	1240	U
1	AA	1250	A
1	AA	1256	A
1	AA	1279	G
1	AA	1280	A
1	AA	1281	C
1	AA	1285	A
1	AA	1300	G
1	AA	1301	U
1	AA	1302	C
1	AA	1303	C
1	AA	1305	G
1	AA	1316	G
1	AA	1317	C
1	AA	1319	A
1	AA	1320	C
1	AA	1323	G
1	AA	1336	C
1	AA	1363	A
1	AA	1364	U
1	AA	1381	U
1	AA	1398	A
1	AA	1409	C
1	AA	1410	A

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Mol	Chain	Res	Type
1	AA	1432	G
1	AA	1446	A
1	AA	1448	C
1	AA	1451	U
1	AA	1452	C
1	AA	1453	G
1	AA	1491	G
1	AA	1492	A
1	AA	1497	G
1	AA	1503	A
1	AA	1506	U
1	AA	1517	G
1	AA	1519	A
1	AA	1520	C
1	AA	1529	G
1	AA	1530	G
1	AA	1532	U
1	AA	1533	C
1	AA	1534	A
22	BA	16	G
22	BA	24	G
22	BA	25	U
22	BA	26	C
22	BA	30	C
22	BA	35	C
22	BA	42	C
22	BA	43	C
22	BA	44	G
22	BA	53	A
22	BA	88	C
22	BA	89	U
22	BA	90	C
22	BA	96	G
22	BA	99	A
22	BA	109	A
22	BA	112	G
22	BA	116	G
23	BB	2	G
23	BB	4	U
23	BB	34	U
23	BB	46	G
23	BB	51	G

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Mol	Chain	Res	Type
23	BB	63	A
23	BB	71	A
23	BB	72	U
23	BB	74	A
23	BB	75	G
23	BB	79	C
23	BB	91	A
23	BB	99	U
23	BB	101	A
23	BB	102	U
23	BB	103	A
23	BB	118	A
23	BB	119	A
23	BB	120	U
23	BB	125	A
23	BB	126	A
23	BB	128	C
23	BB	140	C
23	BB	141	G
23	BB	142	A
23	BB	144	A
23	BB	149	A
23	BB	160	A
23	BB	162	U
23	BB	163	C
23	BB	180	G
23	BB	181	A
23	BB	196	A
23	BB	199	A
23	BB	203	A
23	BB	215	G
23	BB	216	A
23	BB	221	A
23	BB	222	A
23	BB	230	G
23	BB	233	A
23	BB	248	G
23	BB	250	G
23	BB	255	A
23	BB	265	A
23	BB	266	G
23	BB	267	C

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Mol	Chain	Res	Type
23	BB	271	G
23	BB	278	A
23	BB	279	A
23	BB	281	C
23	BB	299	A
23	BB	302	C
23	BB	311	A
23	BB	323	C
23	BB	329	G
23	BB	330	A
23	BB	333	G
23	BB	346	A
23	BB	349	U
23	BB	353	C
23	BB	369	U
23	BB	371	A
23	BB	372	G
23	BB	386	G
23	BB	387	U
23	BB	395	U
23	BB	396	G
23	BB	405	U
23	BB	411	G
23	BB	412	A
23	BB	424	G
23	BB	435	C
23	BB	455	C
23	BB	456	C
23	BB	457	A
23	BB	479	A
23	BB	480	A
23	BB	481	G
23	BB	491	G
23	BB	504	A
23	BB	505	A
23	BB	508	A
23	BB	509	C
23	BB	510	C
23	BB	512	G
23	BB	527	C
23	BB	531	C
23	BB	532	A

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Mol	Chain	Res	Type
23	BB	546	U
23	BB	547	A
23	BB	548	G
23	BB	549	G
23	BB	550	C
23	BB	563	A
23	BB	572	A
23	BB	573	U
23	BB	574	A
23	BB	575	A
23	BB	603	A
23	BB	613	A
23	BB	614	A
23	BB	615	U
23	BB	616	A
23	BB	627	A
23	BB	632	A
23	BB	637	A
23	BB	645	C
23	BB	646	U
23	BB	647	G
23	BB	654	A
23	BB	655	A
23	BB	671	C
23	BB	686	U
23	BB	718	A
23	BB	719	C
23	BB	730	A
23	BB	746	U
23	BB	747	U
23	BB	764	A
23	BB	775	G
23	BB	782	A
23	BB	784	G
23	BB	785	G
23	BB	789	A
23	BB	805	G
23	BB	812	C
23	BB	819	A
23	BB	827	U
23	BB	828	U
23	BB	847	U

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Mol	Chain	Res	Type
23	BB	859	G
23	BB	876	C
23	BB	877	A
23	BB	899	A
23	BB	910	A
23	BB	912	C
23	BB	932	U
23	BB	933	A
23	BB	941	A
23	BB	946	C
23	BB	961	C
23	BB	962	G
23	BB	973	A
23	BB	974	G
23	BB	983	A
23	BB	990	A
23	BB	991	C
23	BB	995	C
23	BB	996	A
23	BB	1012	U
23	BB	1013	C
23	BB	1022	G
23	BB	1023	U
23	BB	1024	G
23	BB	1025	G
23	BB	1033	U
23	BB	1043	C
23	BB	1047	G
23	BB	1051	G
23	BB	1062	G
23	BB	1070	A
23	BB	1088	A
23	BB	1090	A
23	BB	1106	G
23	BB	1110	G
23	BB	1111	A
23	BB	1112	G
23	BB	1126	A
23	BB	1129	A
23	BB	1132	U
23	BB	1133	A
23	BB	1135	C

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Mol	Chain	Res	Type
23	BB	1136	G
23	BB	1141	U
23	BB	1142	A
23	BB	1157	G
23	BB	1171	G
23	BB	1172	C
23	BB	1173	U
23	BB	1174	U
23	BB	1186	G
23	BB	1195	G
23	BB	1204	A
23	BB	1205	A
23	BB	1211	C
23	BB	1212	G
23	BB	1237	A
23	BB	1238	G
23	BB	1247	A
23	BB	1248	G
23	BB	1250	G
23	BB	1251	C
23	BB	1253	A
23	BB	1256	G
23	BB	1266	G
23	BB	1271	G
23	BB	1272	A
23	BB	1273	U
23	BB	1275	A
23	BB	1276	A
23	BB	1301	A
23	BB	1302	A
23	BB	1321	A
23	BB	1324	G
23	BB	1325	U
23	BB	1330	C
23	BB	1337	G
23	BB	1341	G
23	BB	1345	C
23	BB	1365	A
23	BB	1368	G
23	BB	1378	A
23	BB	1379	U
23	BB	1383	A

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Mol	Chain	Res	Type
23	BB	1384	A
23	BB	1386	C
23	BB	1396	U
23	BB	1397	U
23	BB	1416	G
23	BB	1419	A
23	BB	1427	A
23	BB	1428	C
23	BB	1451	C
23	BB	1453	A
23	BB	1454	C
23	BB	1455	G
23	BB	1459	G
23	BB	1460	U
23	BB	1461	C
23	BB	1476	U
23	BB	1477	A
23	BB	1482	G
23	BB	1486	U
23	BB	1490	A
23	BB	1493	C
23	BB	1494	A
23	BB	1504	A
23	BB	1505	A
23	BB	1507	C
23	BB	1508	A
23	BB	1509	A
23	BB	1510	G
23	BB	1524	G
23	BB	1532	A
23	BB	1535	A
23	BB	1537	G
23	BB	1538	G
23	BB	1540	G
23	BB	1552	A
23	BB	1559	U
23	BB	1569	A
23	BB	1578	U
23	BB	1584	U
23	BB	1585	C
23	BB	1588	G
23	BB	1607	C

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Mol	Chain	Res	Type
23	BB	1608	A
23	BB	1610	A
23	BB	1616	A
23	BB	1634	A
23	BB	1635	A
23	BB	1647	U
23	BB	1648	U
23	BB	1674	G
23	BB	1700	A
23	BB	1701	A
23	BB	1706	C
23	BB	1713	A
23	BB	1715	G
23	BB	1724	G
23	BB	1725	U
23	BB	1727	C
23	BB	1729	U
23	BB	1730	C
23	BB	1732	C
23	BB	1733	G
23	BB	1738	G
23	BB	1758	U
23	BB	1764	C
23	BB	1773	A
23	BB	1800	C
23	BB	1816	C
23	BB	1829	A
23	BB	1833	C
23	BB	1870	C
23	BB	1872	A
23	BB	1884	G
23	BB	1906	G
23	BB	1927	A
23	BB	1929	G
23	BB	1930	G
23	BB	1936	A
23	BB	1937	A
23	BB	1938	A
23	BB	1939	U
23	BB	1940	U
23	BB	1955	U
23	BB	1967	C

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Mol	Chain	Res	Type
23	BB	1970	A
23	BB	1971	U
23	BB	1972	G
23	BB	1991	U
23	BB	1993	U
23	BB	1997	C
23	BB	2022	U
23	BB	2023	C
23	BB	2030	A
23	BB	2031	A
23	BB	2032	G
23	BB	2033	A
23	BB	2043	C
23	BB	2055	C
23	BB	2056	G
23	BB	2060	A
23	BB	2061	G
23	BB	2062	A
23	BB	2069	G
23	BB	2072	C
23	BB	2096	C
23	BB	2102	G
23	BB	2103	C
23	BB	2109	U
23	BB	2137	U
23	BB	2138	G
23	BB	2143	C
23	BB	2144	G
23	BB	2145	C
23	BB	2147	A
23	BB	2148	G
23	BB	2149	U
23	BB	2151	U
23	BB	2153	C
23	BB	2154	A
23	BB	2155	U
23	BB	2157	G
23	BB	2181	U
23	BB	2183	A
23	BB	2184	A
23	BB	2192	U
23	BB	2198	A

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Mol	Chain	Res	Type
23	BB	2199	A
23	BB	2203	U
23	BB	2204	G
23	BB	2211	A
23	BB	2212	A
23	BB	2213	U
23	BB	2225	A
23	BB	2238	G
23	BB	2239	G
23	BB	2250	G
23	BB	2266	A
23	BB	2283	C
23	BB	2287	A
23	BB	2288	A
23	BB	2305	U
23	BB	2307	G
23	BB	2308	G
23	BB	2309	A
23	BB	2311	A
23	BB	2320	U
23	BB	2321	U
23	BB	2322	A
23	BB	2325	G
23	BB	2333	A
23	BB	2337	G
23	BB	2345	G
23	BB	2347	C
23	BB	2361	G
23	BB	2372	U
23	BB	2379	G
23	BB	2383	G
23	BB	2385	C
23	BB	2396	G
23	BB	2402	U
23	BB	2403	C
23	BB	2406	A
23	BB	2423	U
23	BB	2425	A
23	BB	2426	A
23	BB	2427	C
23	BB	2429	G
23	BB	2430	A

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Mol	Chain	Res	Type
23	BB	2431	U
23	BB	2441	U
23	BB	2448	A
23	BB	2449	U
23	BB	2472	G
23	BB	2476	A
23	BB	2491	U
23	BB	2502	G
23	BB	2505	G
23	BB	2506	U
23	BB	2518	A
23	BB	2535	G
23	BB	2554	U
23	BB	2555	U
23	BB	2556	C
23	BB	2566	A
23	BB	2567	G
23	BB	2572	A
23	BB	2582	G
23	BB	2586	U
23	BB	2602	A
23	BB	2609	U
23	BB	2611	C
23	BB	2613	U
23	BB	2629	U
23	BB	2630	G
23	BB	2634	A
23	BB	2646	C
23	BB	2654	A
23	BB	2682	A
23	BB	2689	U
23	BB	2690	U
23	BB	2714	G
23	BB	2739	U
23	BB	2744	G
23	BB	2748	A
23	BB	2750	A
23	BB	2751	G
23	BB	2752	C
23	BB	2753	A
23	BB	2757	A
23	BB	2765	A

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Mol	Chain	Res	Type
23	BB	2778	A
23	BB	2791	G
23	BB	2798	U
23	BB	2799	A
23	BB	2800	A
23	BB	2802	G
23	BB	2808	G
23	BB	2820	A
23	BB	2821	A
23	BB	2823	A
23	BB	2831	G
23	BB	2836	U
23	BB	2850	A
23	BB	2866	U
23	BB	2867	G
23	BB	2872	A
23	BB	2873	A
23	BB	2883	A
23	BB	2894	G
23	BB	2901	C
23	BB	2903	U
1	CA	7	A
1	CA	9	G
1	CA	14	U
1	CA	31	G
1	CA	32	A
1	CA	39	G
1	CA	47	C
1	CA	48	C
1	CA	49	U
1	CA	51	A
1	CA	52	C
1	CA	55	A
1	CA	71	A
1	CA	72	A
1	CA	84	U
1	CA	85	U
1	CA	86	G
1	CA	87	C
1	CA	88	U
1	CA	93	U
1	CA	94	G

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Mol	Chain	Res	Type
1	CA	119	A
1	CA	121	U
1	CA	131	A
1	CA	151	A
1	CA	182	A
1	CA	183	C
1	CA	191	G
1	CA	197	A
1	CA	202	G
1	CA	209	U
1	CA	210	C
1	CA	211	G
1	CA	213	G
1	CA	239	U
1	CA	240	G
1	CA	243	A
1	CA	244	U
1	CA	245	U
1	CA	247	G
1	CA	250	A
1	CA	251	G
1	CA	253	A
1	CA	257	G
1	CA	258	G
1	CA	266	G
1	CA	267	C
1	CA	280	C
1	CA	289	G
1	CA	301	G
1	CA	316	C
1	CA	321	A
1	CA	328	C
1	CA	329	A
1	CA	330	C
1	CA	332	G
1	CA	345	C
1	CA	346	G
1	CA	352	C
1	CA	353	A
1	CA	354	G
1	CA	367	U
1	CA	372	C

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Mol	Chain	Res	Type
1	CA	373	A
1	CA	381	C
1	CA	382	A
1	CA	384	G
1	CA	397	A
1	CA	398	U
1	CA	406	G
1	CA	408	A
1	CA	409	U
1	CA	411	A
1	CA	412	A
1	CA	413	G
1	CA	421	U
1	CA	422	C
1	CA	423	G
1	CA	429	U
1	CA	430	A
1	CA	435	A
1	CA	438	U
1	CA	461	A
1	CA	462	G
1	CA	463	U
1	CA	464	U
1	CA	465	A
1	CA	466	A
1	CA	467	U
1	CA	468	A
1	CA	482	A
1	CA	484	G
1	CA	485	U
1	CA	486	U
1	CA	493	A
1	CA	500	G
1	CA	509	A
1	CA	511	C
1	CA	518	C
1	CA	527	G
1	CA	532	A
1	CA	547	A
1	CA	559	A
1	CA	562	U
1	CA	572	A

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Mol	Chain	Res	Type
1	CA	573	A
1	CA	576	C
1	CA	577	G
1	CA	607	A
1	CA	633	G
1	CA	653	U
1	CA	665	A
1	CA	687	A
1	CA	695	A
1	CA	700	G
1	CA	721	G
1	CA	724	G
1	CA	731	G
1	CA	747	A
1	CA	748	G
1	CA	755	G
1	CA	777	A
1	CA	781	A
1	CA	782	A
1	CA	793	U
1	CA	794	A
1	CA	812	G
1	CA	813	U
1	CA	814	A
1	CA	815	A
1	CA	817	C
1	CA	819	A
1	CA	821	G
1	CA	828	U
1	CA	829	G
1	CA	841	C
1	CA	843	U
1	CA	844	G
1	CA	845	A
1	CA	907	A
1	CA	926	G
1	CA	927	G
1	CA	934	C
1	CA	935	A
1	CA	960	U
1	CA	961	U
1	CA	969	A

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Mol	Chain	Res	Type
1	CA	971	G
1	CA	974	A
1	CA	976	G
1	CA	977	A
1	CA	991	U
1	CA	992	U
1	CA	993	G
1	CA	994	A
1	CA	1004	A
1	CA	1009	U
1	CA	1010	U
1	CA	1020	G
1	CA	1022	A
1	CA	1028	C
1	CA	1029	U
1	CA	1030	U
1	CA	1031	C
1	CA	1034	G
1	CA	1035	A
1	CA	1037	C
1	CA	1038	C
1	CA	1049	U
1	CA	1050	G
1	CA	1054	C
1	CA	1065	U
1	CA	1066	C
1	CA	1081	A
1	CA	1091	U
1	CA	1094	G
1	CA	1095	U
1	CA	1101	A
1	CA	1136	C
1	CA	1137	C
1	CA	1138	G
1	CA	1139	G
1	CA	1140	C
1	CA	1158	C
1	CA	1160	G
1	CA	1168	U
1	CA	1171	A
1	CA	1181	G
1	CA	1183	U

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Mol	Chain	Res	Type
1	CA	1184	G
1	CA	1196	A
1	CA	1197	A
1	CA	1201	A
1	CA	1202	U
1	CA	1209	C
1	CA	1211	U
1	CA	1212	U
1	CA	1213	A
1	CA	1214	C
1	CA	1215	G
1	CA	1225	A
1	CA	1226	C
1	CA	1240	U
1	CA	1241	G
1	CA	1250	A
1	CA	1256	A
1	CA	1279	G
1	CA	1280	A
1	CA	1281	C
1	CA	1285	A
1	CA	1300	G
1	CA	1301	U
1	CA	1302	C
1	CA	1303	C
1	CA	1305	G
1	CA	1316	G
1	CA	1317	C
1	CA	1319	A
1	CA	1320	C
1	CA	1323	G
1	CA	1336	C
1	CA	1363	A
1	CA	1364	U
1	CA	1381	U
1	CA	1398	A
1	CA	1419	G
1	CA	1432	G
1	CA	1446	A
1	CA	1448	C
1	CA	1451	U
1	CA	1452	C

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Mol	Chain	Res	Type
1	CA	1453	G
1	CA	1490	U
1	CA	1492	A
1	CA	1494	G
1	CA	1497	G
1	CA	1503	A
1	CA	1506	U
1	CA	1517	G
1	CA	1519	A
1	CA	1520	C
1	CA	1529	G
1	CA	1530	G
1	CA	1534	A
22	DA	4	C
22	DA	16	G
22	DA	24	G
22	DA	25	U
22	DA	26	C
22	DA	30	C
22	DA	35	C
22	DA	42	C
22	DA	43	C
22	DA	44	G
22	DA	53	A
22	DA	88	C
22	DA	89	U
22	DA	90	C
22	DA	96	G
22	DA	99	A
22	DA	109	A
22	DA	112	G
23	DB	2	G
23	DB	34	U
23	DB	46	G
23	DB	51	G
23	DB	63	A
23	DB	71	A
23	DB	72	U
23	DB	74	A
23	DB	75	G
23	DB	79	C
23	DB	91	A

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Mol	Chain	Res	Type
23	DB	99	U
23	DB	100	U
23	DB	101	A
23	DB	102	U
23	DB	103	A
23	DB	118	A
23	DB	119	A
23	DB	120	U
23	DB	125	A
23	DB	126	A
23	DB	128	C
23	DB	139	U
23	DB	140	C
23	DB	142	A
23	DB	149	A
23	DB	160	A
23	DB	162	U
23	DB	163	C
23	DB	180	G
23	DB	181	A
23	DB	196	A
23	DB	199	A
23	DB	215	G
23	DB	216	A
23	DB	221	A
23	DB	222	A
23	DB	230	G
23	DB	233	A
23	DB	248	G
23	DB	250	G
23	DB	255	A
23	DB	265	A
23	DB	266	G
23	DB	267	C
23	DB	271	G
23	DB	273	G
23	DB	276	U
23	DB	277	G
23	DB	278	A
23	DB	281	C
23	DB	282	A
23	DB	284	U

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Mol	Chain	Res	Type
23	DB	287	G
23	DB	288	U
23	DB	289	G
23	DB	299	A
23	DB	302	C
23	DB	311	A
23	DB	323	C
23	DB	329	G
23	DB	330	A
23	DB	333	G
23	DB	346	A
23	DB	349	U
23	DB	352	A
23	DB	353	C
23	DB	363	G
23	DB	369	U
23	DB	371	A
23	DB	372	G
23	DB	386	G
23	DB	387	U
23	DB	395	U
23	DB	396	G
23	DB	405	U
23	DB	411	G
23	DB	412	A
23	DB	424	G
23	DB	435	C
23	DB	455	C
23	DB	456	C
23	DB	457	A
23	DB	479	A
23	DB	480	A
23	DB	481	G
23	DB	491	G
23	DB	492	A
23	DB	504	A
23	DB	505	A
23	DB	508	A
23	DB	509	C
23	DB	510	C
23	DB	512	G
23	DB	527	C

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Mol	Chain	Res	Type
23	DB	531	C
23	DB	532	A
23	DB	544	C
23	DB	545	U
23	DB	546	U
23	DB	547	A
23	DB	548	G
23	DB	549	G
23	DB	563	A
23	DB	572	A
23	DB	573	U
23	DB	575	A
23	DB	586	A
23	DB	588	U
23	DB	603	A
23	DB	613	A
23	DB	614	A
23	DB	615	U
23	DB	616	A
23	DB	627	A
23	DB	632	A
23	DB	637	A
23	DB	645	C
23	DB	646	U
23	DB	647	G
23	DB	654	A
23	DB	655	A
23	DB	671	C
23	DB	686	U
23	DB	718	A
23	DB	719	C
23	DB	730	A
23	DB	747	U
23	DB	764	A
23	DB	775	G
23	DB	782	A
23	DB	784	G
23	DB	785	G
23	DB	805	G
23	DB	812	C
23	DB	819	A
23	DB	827	U

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Mol	Chain	Res	Type
23	DB	828	U
23	DB	847	U
23	DB	859	G
23	DB	899	A
23	DB	910	A
23	DB	912	C
23	DB	932	U
23	DB	933	A
23	DB	941	A
23	DB	946	C
23	DB	961	C
23	DB	962	G
23	DB	973	A
23	DB	974	G
23	DB	983	A
23	DB	990	A
23	DB	991	C
23	DB	995	C
23	DB	996	A
23	DB	1012	U
23	DB	1013	C
23	DB	1022	G
23	DB	1023	U
23	DB	1024	G
23	DB	1025	G
23	DB	1033	U
23	DB	1045	C
23	DB	1048	A
23	DB	1070	A
23	DB	1088	A
23	DB	1090	A
23	DB	1098	A
23	DB	1110	G
23	DB	1112	G
23	DB	1116	G
23	DB	1126	A
23	DB	1129	A
23	DB	1132	U
23	DB	1133	A
23	DB	1135	C
23	DB	1136	G
23	DB	1141	U

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Mol	Chain	Res	Type
23	DB	1142	A
23	DB	1157	G
23	DB	1174	U
23	DB	1176	U
23	DB	1179	G
23	DB	1186	G
23	DB	1195	G
23	DB	1204	A
23	DB	1205	A
23	DB	1211	C
23	DB	1212	G
23	DB	1237	A
23	DB	1238	G
23	DB	1247	A
23	DB	1248	G
23	DB	1250	G
23	DB	1251	C
23	DB	1253	A
23	DB	1256	G
23	DB	1266	G
23	DB	1271	G
23	DB	1272	A
23	DB	1273	U
23	DB	1275	A
23	DB	1276	A
23	DB	1301	A
23	DB	1302	A
23	DB	1321	A
23	DB	1324	G
23	DB	1325	U
23	DB	1330	C
23	DB	1337	G
23	DB	1341	G
23	DB	1345	C
23	DB	1365	A
23	DB	1368	G
23	DB	1378	A
23	DB	1379	U
23	DB	1383	A
23	DB	1384	A
23	DB	1386	C
23	DB	1396	U

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Mol	Chain	Res	Type
23	DB	1397	U
23	DB	1416	G
23	DB	1419	A
23	DB	1427	A
23	DB	1428	C
23	DB	1434	A
23	DB	1451	C
23	DB	1453	A
23	DB	1454	C
23	DB	1455	G
23	DB	1459	G
23	DB	1460	U
23	DB	1461	C
23	DB	1476	U
23	DB	1477	A
23	DB	1482	G
23	DB	1486	U
23	DB	1490	A
23	DB	1493	C
23	DB	1494	A
23	DB	1504	A
23	DB	1505	A
23	DB	1507	C
23	DB	1508	A
23	DB	1509	A
23	DB	1510	G
23	DB	1524	G
23	DB	1532	A
23	DB	1535	A
23	DB	1537	G
23	DB	1538	G
23	DB	1540	G
23	DB	1552	A
23	DB	1559	U
23	DB	1569	A
23	DB	1578	U
23	DB	1584	U
23	DB	1585	C
23	DB	1588	G
23	DB	1607	C
23	DB	1608	A
23	DB	1610	A

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Mol	Chain	Res	Type
23	DB	1616	A
23	DB	1634	A
23	DB	1635	A
23	DB	1647	U
23	DB	1648	U
23	DB	1674	G
23	DB	1700	A
23	DB	1701	A
23	DB	1706	C
23	DB	1713	A
23	DB	1715	G
23	DB	1724	G
23	DB	1725	U
23	DB	1727	C
23	DB	1729	U
23	DB	1730	C
23	DB	1732	C
23	DB	1733	G
23	DB	1738	G
23	DB	1758	U
23	DB	1764	C
23	DB	1773	A
23	DB	1800	C
23	DB	1816	C
23	DB	1829	A
23	DB	1833	C
23	DB	1870	C
23	DB	1872	A
23	DB	1884	G
23	DB	1906	G
23	DB	1913	A
23	DB	1914	C
23	DB	1915	U
23	DB	1927	A
23	DB	1929	G
23	DB	1930	G
23	DB	1936	A
23	DB	1937	A
23	DB	1938	A
23	DB	1939	U
23	DB	1940	U
23	DB	1955	U

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Mol	Chain	Res	Type
23	DB	1967	C
23	DB	1970	A
23	DB	1971	U
23	DB	1972	G
23	DB	1991	U
23	DB	1993	U
23	DB	1997	C
23	DB	2022	U
23	DB	2023	C
23	DB	2030	A
23	DB	2031	A
23	DB	2032	G
23	DB	2033	A
23	DB	2043	C
23	DB	2055	C
23	DB	2056	G
23	DB	2060	A
23	DB	2061	G
23	DB	2062	A
23	DB	2069	G
23	DB	2096	C
23	DB	2097	A
23	DB	2107	G
23	DB	2108	A
23	DB	2110	G
23	DB	2134	A
23	DB	2135	A
23	DB	2138	G
23	DB	2143	C
23	DB	2144	G
23	DB	2145	C
23	DB	2147	A
23	DB	2148	G
23	DB	2155	U
23	DB	2156	G
23	DB	2157	G
23	DB	2180	U
23	DB	2183	A
23	DB	2189	U
23	DB	2190	G
23	DB	2193	G
23	DB	2198	A

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Mol	Chain	Res	Type
23	DB	2199	A
23	DB	2203	U
23	DB	2204	G
23	DB	2211	A
23	DB	2212	A
23	DB	2213	U
23	DB	2225	A
23	DB	2238	G
23	DB	2239	G
23	DB	2250	G
23	DB	2266	A
23	DB	2283	C
23	DB	2287	A
23	DB	2288	A
23	DB	2305	U
23	DB	2307	G
23	DB	2308	G
23	DB	2309	A
23	DB	2311	A
23	DB	2320	U
23	DB	2321	U
23	DB	2322	A
23	DB	2325	G
23	DB	2333	A
23	DB	2337	G
23	DB	2345	G
23	DB	2347	C
23	DB	2361	G
23	DB	2372	U
23	DB	2379	G
23	DB	2383	G
23	DB	2385	C
23	DB	2396	G
23	DB	2402	U
23	DB	2403	C
23	DB	2406	A
23	DB	2423	U
23	DB	2425	A
23	DB	2426	A
23	DB	2427	C
23	DB	2429	G
23	DB	2430	A

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Mol	Chain	Res	Type
23	DB	2441	U
23	DB	2448	A
23	DB	2449	U
23	DB	2472	G
23	DB	2476	A
23	DB	2491	U
23	DB	2501	C
23	DB	2502	G
23	DB	2505	G
23	DB	2506	U
23	DB	2518	A
23	DB	2535	G
23	DB	2554	U
23	DB	2555	U
23	DB	2556	C
23	DB	2566	A
23	DB	2567	G
23	DB	2572	A
23	DB	2582	G
23	DB	2586	U
23	DB	2602	A
23	DB	2609	U
23	DB	2611	C
23	DB	2613	U
23	DB	2619	C
23	DB	2629	U
23	DB	2630	G
23	DB	2634	A
23	DB	2646	C
23	DB	2654	A
23	DB	2682	A
23	DB	2689	U
23	DB	2690	U
23	DB	2714	G
23	DB	2739	U
23	DB	2744	G
23	DB	2748	A
23	DB	2757	A
23	DB	2765	A
23	DB	2778	A
23	DB	2798	U
23	DB	2799	A

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Mol	Chain	Res	Type
23	DB	2800	A
23	DB	2802	G
23	DB	2808	G
23	DB	2820	A
23	DB	2821	A
23	DB	2823	A
23	DB	2831	G
23	DB	2836	U
23	DB	2850	A
23	DB	2866	U
23	DB	2867	G
23	DB	2872	A
23	DB	2873	A
23	DB	2883	A
23	DB	2894	G
23	DB	2903	U

All (62) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	51	A
1	AA	239	U
1	AA	243	A
1	AA	279	A
1	AA	328	C
1	AA	366	A
1	AA	372	C
1	AA	428	G
1	AA	429	U
1	AA	960	U
1	AA	975	A
1	AA	1049	U
1	AA	1065	U
1	AA	1201	A
1	AA	1302	C
1	AA	1397	C
23	BB	3	U
23	BB	162	U
23	BB	508	A
23	BB	546	U
23	BB	670	A
23	BB	1210	G

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Mol	Chain	Res	Type
23	BB	1419	A
23	BB	1509	A
23	BB	2282	G
23	BB	2336	A
23	BB	2425	A
23	BB	2756	U
23	BB	2832	U
23	BB	2894	G
1	CA	51	A
1	CA	239	U
1	CA	243	A
1	CA	279	A
1	CA	328	C
1	CA	366	A
1	CA	372	C
1	CA	428	G
1	CA	429	U
1	CA	960	U
1	CA	975	A
1	CA	1049	U
1	CA	1065	U
1	CA	1201	A
1	CA	1302	C
1	CA	1397	C
23	DB	139	U
23	DB	162	U
23	DB	508	A
23	DB	544	C
23	DB	546	U
23	DB	670	A
23	DB	1126	A
23	DB	1210	G
23	DB	1419	A
23	DB	1509	A
23	DB	2282	G
23	DB	2336	A
23	DB	2425	A
23	DB	2756	U
23	DB	2832	U
23	DB	2894	G

5.4 Non-standard residues in protein, DNA, RNA chains ⓘ

There are no non-standard protein/DNA/RNA residues in this entry.

5.5 Carbohydrates ⓘ

There are no carbohydrates in this entry.

5.6 Ligand geometry ⓘ

Of 349 ligands modelled in this entry, 345 are monoatomic - leaving 4 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the chemical component dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
55	PAR	AA	1661	-	45,45,45	1.72	10 (22%)	59,67,67	1.14	5 (8%)
55	PAR	BB	3111	-	45,45,45	1.81	11 (24%)	59,67,67	1.13	5 (8%)
55	PAR	CA	1662	-	45,45,45	1.81	11 (24%)	59,67,67	1.17	6 (10%)
55	PAR	DB	3112	-	45,45,45	1.85	12 (26%)	59,67,67	1.12	5 (8%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the chemical component dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
55	PAR	AA	1661	-	-	0/18/94/94	0/4/4/4
55	PAR	BB	3111	-	-	0/18/94/94	0/4/4/4
55	PAR	CA	1662	-	-	0/18/94/94	0/4/4/4
55	PAR	DB	3112	-	-	0/18/94/94	0/4/4/4

All (44) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	DB	3112	PAR	O33-C33	2.01	1.48	1.43
55	DB	3112	PAR	C62-C12	2.04	1.58	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	CA	1662	PAR	C44-C34	2.05	1.57	1.52
55	BB	3111	PAR	C23-C33	2.10	1.57	1.53
55	BB	3111	PAR	C44-C34	2.16	1.58	1.52
55	AA	1661	PAR	C41-C51	2.17	1.57	1.53
55	DB	3112	PAR	C44-C34	2.20	1.58	1.52
55	BB	3111	PAR	C62-C12	2.24	1.58	1.53
55	DB	3112	PAR	O51-C51	2.25	1.50	1.44
55	AA	1661	PAR	C62-C12	2.25	1.58	1.53
55	CA	1662	PAR	C41-C51	2.25	1.57	1.53
55	AA	1661	PAR	O51-C51	2.28	1.50	1.44
55	CA	1662	PAR	C62-C12	2.29	1.58	1.53
55	BB	3111	PAR	O51-C51	2.29	1.50	1.44
55	CA	1662	PAR	O51-C51	2.29	1.50	1.44
55	DB	3112	PAR	C41-C51	2.30	1.58	1.53
55	BB	3111	PAR	C41-C51	2.30	1.58	1.53
55	DB	3112	PAR	O43-C13	2.31	1.45	1.41
55	AA	1661	PAR	C23-C33	2.31	1.58	1.53
55	AA	1661	PAR	O54-C54	2.36	1.50	1.44
55	CA	1662	PAR	C23-C33	2.38	1.58	1.53
55	AA	1661	PAR	C24-N24	2.55	1.51	1.47
55	BB	3111	PAR	C24-N24	2.55	1.51	1.47
55	BB	3111	PAR	O54-C54	2.57	1.50	1.44
55	CA	1662	PAR	O54-C54	2.57	1.50	1.44
55	DB	3112	PAR	O54-C54	2.69	1.51	1.44
55	CA	1662	PAR	C64-C54	2.70	1.58	1.52
55	CA	1662	PAR	C24-N24	2.72	1.51	1.47
55	DB	3112	PAR	C24-N24	2.72	1.51	1.47
55	AA	1661	PAR	C64-C54	2.74	1.58	1.52
55	BB	3111	PAR	C64-C54	2.84	1.59	1.52
55	DB	3112	PAR	C64-C54	2.84	1.59	1.52
55	BB	3111	PAR	O51-C11	3.42	1.50	1.41
55	DB	3112	PAR	O51-C11	3.47	1.50	1.41
55	AA	1661	PAR	O51-C11	3.57	1.51	1.41
55	CA	1662	PAR	O51-C11	3.63	1.51	1.41
55	AA	1661	PAR	C31-C21	4.31	1.59	1.53
55	AA	1661	PAR	O54-C14	4.41	1.53	1.41
55	DB	3112	PAR	O54-C14	4.48	1.53	1.41
55	BB	3111	PAR	O54-C14	4.50	1.53	1.41
55	CA	1662	PAR	O54-C14	4.63	1.53	1.41
55	DB	3112	PAR	C31-C21	4.65	1.59	1.53
55	BB	3111	PAR	C31-C21	4.69	1.59	1.53
55	CA	1662	PAR	C31-C21	4.71	1.59	1.53

All (21) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	CA	1662	PAR	O23-C23-C33	2.03	117.02	111.16
55	CA	1662	PAR	O52-C13-C23	2.06	112.03	107.75
55	AA	1661	PAR	O23-C23-C33	2.20	117.51	111.16
55	BB	3111	PAR	O52-C13-C23	2.27	112.48	107.75
55	DB	3112	PAR	O52-C13-C23	2.42	112.79	107.75
55	BB	3111	PAR	O23-C23-C33	2.43	118.19	111.16
55	CA	1662	PAR	O43-C13-C23	2.48	108.26	104.78
55	DB	3112	PAR	C14-O54-C54	2.67	118.92	113.75
55	DB	3112	PAR	O23-C23-C33	2.68	118.89	111.16
55	AA	1661	PAR	O43-C13-C23	2.69	108.56	104.78
55	AA	1661	PAR	C14-O54-C54	2.72	119.02	113.75
55	BB	3111	PAR	C14-O54-C54	2.77	119.12	113.75
55	CA	1662	PAR	C14-O54-C54	2.82	119.22	113.75
55	AA	1661	PAR	O33-C14-C24	2.91	113.35	107.96
55	BB	3111	PAR	O54-C54-C64	2.92	111.81	106.10
55	CA	1662	PAR	O54-C54-C64	2.92	111.81	106.10
55	AA	1661	PAR	O54-C54-C64	3.02	112.00	106.10
55	DB	3112	PAR	O54-C54-C64	3.03	112.02	106.10
55	CA	1662	PAR	O33-C14-C24	3.18	113.85	107.96
55	BB	3111	PAR	O33-C14-C24	3.39	114.23	107.96
55	DB	3112	PAR	O33-C14-C24	3.53	114.50	107.96

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

4 monomers are involved in 7 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
55	AA	1661	PAR	3	0
55	BB	3111	PAR	1	0
55	CA	1662	PAR	2	0
55	DB	3112	PAR	1	0

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

In the following table, the column labelled ‘#RSRZ> 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q< 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	AA	1530/1542 (99%)	0.11	24 (1%) 74 65	8, 88, 162, 180	0
1	CA	1530/1542 (99%)	-0.06	12 (0%) 87 82	5, 54, 146, 180	0
2	AC	206/232 (88%)	0.01	5 (2%) 62 52	9, 89, 158, 180	0
2	CC	206/232 (88%)	-0.29	2 (0%) 84 78	9, 83, 141, 180	0
3	AD	205/205 (100%)	-0.06	4 (1%) 68 58	5, 97, 172, 180	0
3	CD	205/205 (100%)	-0.36	0 100 100	5, 59, 151, 180	0
4	AE	150/166 (90%)	-0.13	1 (0%) 89 84	5, 85, 159, 180	0
4	CE	150/166 (90%)	-0.10	1 (0%) 89 84	5, 52, 137, 180	0
5	AF	100/135 (74%)	-0.11	2 (2%) 68 58	8, 73, 146, 172	0
5	CF	100/135 (74%)	-0.31	0 100 100	5, 84, 153, 180	0
6	AG	150/178 (84%)	-0.17	5 (3%) 50 39	10, 110, 170, 180	0
6	CG	152/178 (85%)	0.13	6 (3%) 43 34	28, 93, 162, 180	0
7	AH	129/129 (100%)	0.00	3 (2%) 64 54	15, 85, 159, 180	0
7	CH	129/129 (100%)	-0.19	2 (1%) 74 65	5, 50, 128, 175	0
8	AI	127/129 (98%)	0.12	4 (3%) 52 42	5, 98, 163, 180	0
8	CI	127/129 (98%)	-0.18	1 (0%) 87 82	5, 102, 180, 180	0
9	AJ	98/103 (95%)	0.27	5 (5%) 32 24	5, 105, 174, 180	0
9	CJ	98/103 (95%)	0.36	7 (7%) 19 14	10, 93, 158, 180	0
10	AK	117/128 (91%)	-0.24	0 100 100	9, 67, 129, 146	0
10	CK	117/128 (91%)	-0.39	2 (1%) 73 64	5, 63, 134, 180	0
11	AL	123/123 (100%)	0.03	1 (0%) 87 82	19, 84, 158, 180	0
11	CL	123/123 (100%)	-0.41	0 100 100	5, 54, 113, 180	0
12	AM	114/117 (97%)	0.13	3 (2%) 59 49	55, 122, 180, 180	0
12	CM	113/117 (96%)	0.21	4 (3%) 48 38	31, 114, 180, 180	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
13	AN	96/100 (96%)	0.38	11 (11%) 6 7	5, 108, 170, 180	0
13	CN	96/100 (96%)	0.21	6 (6%) 23 17	6, 99, 162, 180	0
14	AO	88/89 (98%)	-0.23	0 100 100	7, 86, 156, 180	0
14	CO	88/89 (98%)	-0.50	0 100 100	5, 60, 132, 175	0
15	AP	82/82 (100%)	0.32	4 (4%) 33 26	35, 106, 173, 180	0
15	CP	80/82 (97%)	0.33	6 (7%) 17 13	5, 47, 142, 180	0
16	AQ	80/83 (96%)	-0.09	0 100 100	48, 104, 180, 180	0
16	CQ	81/83 (97%)	-0.18	0 100 100	5, 53, 140, 173	0
17	AR	55/74 (74%)	-0.10	1 (1%) 71 62	5, 65, 143, 180	0
17	CR	55/74 (74%)	0.34	3 (5%) 29 22	13, 68, 130, 180	0
18	AS	79/91 (86%)	0.41	6 (7%) 17 13	55, 129, 180, 180	0
18	CS	80/91 (87%)	0.16	2 (2%) 61 50	46, 108, 180, 180	0
19	AT	85/86 (98%)	-0.16	1 (1%) 81 73	44, 105, 154, 180	0
19	CT	85/86 (98%)	-0.16	1 (1%) 81 73	5, 56, 117, 161	0
20	AB	218/240 (90%)	-0.11	5 (2%) 64 54	7, 105, 171, 180	0
20	CB	218/240 (90%)	0.40	15 (6%) 20 15	23, 111, 172, 180	0
21	AU	51/70 (72%)	0.01	1 (1%) 68 58	23, 104, 180, 180	0
21	CU	51/70 (72%)	-0.04	3 (5%) 26 19	24, 96, 173, 180	0
22	BA	117/120 (97%)	-0.21	0 100 100	37, 82, 145, 178	0
22	DA	117/120 (97%)	0.05	2 (1%) 73 64	18, 84, 143, 180	0
23	BB	2841/2904 (97%)	0.02	38 (1%) 79 71	6, 58, 150, 180	0
23	DB	2841/2904 (97%)	-0.09	13 (0%) 91 88	5, 38, 149, 180	0
24	BI	141/141 (100%)	0.69	9 (6%) 23 16	63, 161, 180, 180	0
24	DI	141/141 (100%)	0.55	15 (10%) 8 7	65, 157, 180, 180	0
25	BC	271/272 (99%)	-0.25	1 (0%) 93 90	5, 48, 108, 166	0
25	DC	271/272 (99%)	-0.22	0 100 100	5, 30, 102, 180	0
26	BD	209/209 (100%)	0.12	6 (2%) 55 44	5, 79, 148, 180	0
26	DD	209/209 (100%)	-0.35	0 100 100	5, 51, 123, 180	0
27	BK	121/123 (98%)	0.12	1 (0%) 87 82	5, 74, 149, 180	0
27	DK	121/123 (98%)	-0.28	0 100 100	5, 33, 106, 180	0
28	BP	114/114 (100%)	-0.03	0 100 100	18, 89, 153, 180	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
28	DP	114/114 (100%)	-0.29	0 100 100	5, 48, 124, 180	0
29	BE	201/201 (100%)	-0.32	3 (1%) 76 67	5, 67, 146, 180	0
29	DE	201/201 (100%)	-0.24	1 (0%) 91 88	5, 67, 142, 177	0
30	BY	58/58 (100%)	-0.00	0 100 100	18, 82, 151, 171	0
30	DY	58/58 (100%)	-0.23	1 (1%) 73 64	5, 68, 126, 162	0
31	B0	56/56 (100%)	-0.17	0 100 100	5, 73, 153, 164	0
31	D0	56/56 (100%)	-0.18	0 100 100	5, 56, 147, 180	0
32	B4	38/38 (100%)	1.82	13 (34%) 0 1	45, 115, 169, 180	0
32	D4	38/38 (100%)	1.94	14 (36%) 0 1	36, 110, 169, 180	0
33	B1	50/54 (92%)	0.47	5 (10%) 9 8	22, 95, 157, 180	0
33	D1	50/54 (92%)	0.38	1 (2%) 68 58	19, 73, 122, 161	0
34	B3	64/64 (100%)	-0.16	0 100 100	20, 63, 125, 145	0
34	D3	64/64 (100%)	-0.05	1 (1%) 74 65	5, 35, 88, 129	0
35	BV	94/94 (100%)	-0.15	0 100 100	24, 96, 156, 180	0
35	DV	94/94 (100%)	-0.14	0 100 100	11, 93, 151, 180	0
36	B2	46/46 (100%)	-0.06	0 100 100	5, 75, 137, 180	0
36	D2	46/46 (100%)	-0.16	0 100 100	5, 44, 101, 180	0
37	BL	143/144 (99%)	-0.11	1 (0%) 89 84	5, 71, 133, 180	0
37	DL	143/144 (99%)	-0.22	0 100 100	5, 51, 116, 180	0
38	BM	136/136 (100%)	-0.07	2 (1%) 76 67	9, 70, 149, 180	0
38	DM	136/136 (100%)	-0.17	2 (1%) 76 67	5, 50, 131, 176	0
39	BX	63/63 (100%)	0.11	5 (7%) 15 12	7, 84, 165, 180	0
39	DX	63/63 (100%)	0.02	2 (3%) 51 40	47, 108, 173, 180	0
40	BH	149/149 (100%)	0.56	14 (9%) 11 9	5, 130, 180, 180	0
40	DH	149/149 (100%)	0.13	5 (3%) 49 39	12, 97, 172, 180	0
41	BJ	142/142 (100%)	-0.10	2 (1%) 78 69	6, 81, 147, 180	0
41	DJ	142/142 (100%)	-0.22	1 (0%) 89 84	5, 58, 135, 180	0
42	BN	120/127 (94%)	-0.11	0 100 100	5, 68, 139, 178	0
42	DN	120/127 (94%)	-0.43	0 100 100	5, 38, 101, 180	0
43	BO	116/117 (99%)	0.30	10 (8%) 13 11	21, 91, 147, 180	0
43	DO	116/117 (99%)	0.41	13 (11%) 7 7	8, 86, 164, 180	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
44	BQ	117/117 (100%)	-0.37	0 100 100	5, 66, 135, 176	0
44	DQ	117/117 (100%)	-0.15	2 (1%) 73 64	5, 48, 134, 180	0
45	BS	110/110 (100%)	-0.07	0 100 100	6, 58, 139, 180	0
45	DS	110/110 (100%)	-0.30	0 100 100	5, 50, 121, 180	0
46	BU	102/103 (99%)	0.33	6 (5%) 26 19	5, 89, 144, 180	0
46	DU	102/103 (99%)	0.10	0 100 100	24, 99, 159, 180	0
47	BF	178/178 (100%)	-0.24	0 100 100	36, 111, 174, 180	0
47	DF	178/178 (100%)	-0.03	1 (0%) 90 86	8, 103, 177, 180	0
48	BG	176/176 (100%)	0.25	3 (1%) 73 64	9, 114, 179, 180	0
48	DG	176/176 (100%)	0.05	6 (3%) 49 39	15, 91, 167, 180	0
49	BR	103/103 (100%)	0.17	0 100 100	16, 93, 157, 180	0
49	DR	103/103 (100%)	0.12	0 100 100	5, 88, 145, 180	0
50	BT	93/100 (93%)	-0.06	2 (2%) 65 56	5, 88, 180, 180	0
50	DT	93/100 (93%)	0.12	1 (1%) 82 76	7, 90, 180, 180	0
51	BZ	77/78 (98%)	0.01	3 (3%) 43 34	5, 52, 127, 154	0
51	DZ	77/78 (98%)	-0.18	1 (1%) 79 71	5, 43, 95, 135	0
52	BW	79/84 (94%)	0.31	4 (5%) 32 24	10, 85, 145, 179	0
52	DW	79/84 (94%)	0.32	2 (2%) 61 50	5, 66, 152, 180	0
53	B6	185/185 (100%)	0.63	31 (16%) 2 4	5, 125, 180, 180	0
53	D6	185/185 (100%)	0.08	12 (6%) 22 16	5, 90, 180, 180	0
All	All	20787/21416 (97%)	-0.01	414 (1%) 68 58	5, 70, 162, 180	0

All (414) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
39	DX	63	ALA	11.6
23	BB	2147	A	11.0
24	BI	1	ALA	8.2
24	BI	2	LYS	7.0
23	BB	140	C	6.8
23	DB	1175	A	6.6
32	B4	7	VAL	6.1
23	DB	2133	G	5.8
23	BB	2145	C	5.7
32	D4	35	GLN	5.6

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Mol	Chain	Res	Type	RSRZ
52	BW	84	GLU	5.2
53	B6	93	SER	5.1
40	BH	124	THR	5.0
52	DW	84	GLU	5.0
20	CB	216	VAL	5.0
23	BB	2146	C	5.0
17	CR	19	GLU	4.9
53	B6	95	LYS	4.9
24	BI	3	LYS	4.9
32	B4	24	ARG	4.8
39	DX	62	GLY	4.8
23	BB	139	U	4.8
24	BI	4	VAL	4.8
15	AP	81	ALA	4.7
43	BO	37	ALA	4.7
33	B1	52	LYS	4.7
24	DI	52	LEU	4.6
53	B6	69	GLN	4.5
23	BB	2148	G	4.5
32	B4	35	GLN	4.5
15	AP	82	ALA	4.4
40	DH	149	GLU	4.4
1	CA	1297	G	4.4
32	B4	31	PRO	4.4
32	D4	21	GLY	4.3
29	BE	155	GLU	4.3
39	BX	62	GLY	4.3
46	BU	52	ASN	4.2
53	B6	89	GLY	4.2
15	AP	80	LYS	4.2
32	B4	30	GLU	4.1
32	D4	25	VAL	4.1
24	DI	44	LYS	4.1
17	CR	31	TYR	4.0
18	AS	29	PRO	4.0
24	DI	49	GLU	4.0
53	D6	46	TYR	3.9
1	CA	1032	G	3.9
24	DI	81	LYS	3.9
43	DO	37	ALA	3.9
1	AA	86	G	3.8
13	AN	54	SER	3.8

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Mol	Chain	Res	Type	RSRZ
23	BB	1095	A	3.8
39	BX	63	ALA	3.8
44	DQ	117	ALA	3.8
12	CM	44	ILE	3.8
1	CA	1001	C	3.8
1	AA	78	A	3.8
53	B6	34	ASN	3.8
11	AL	123	ALA	3.7
52	BW	64	GLY	3.7
15	CP	47	GLU	3.6
32	D4	23	ILE	3.6
24	DI	7	TYR	3.6
53	B6	35	PRO	3.6
10	CK	12	ARG	3.6
1	CA	1362	A	3.6
1	AA	461	A	3.6
24	BI	115	ASP	3.6
13	AN	30	ILE	3.6
53	B6	87	ASP	3.6
23	DB	2148	G	3.6
1	AA	466	A	3.6
17	AR	19	GLU	3.6
53	B6	47	GLY	3.6
1	AA	79	G	3.5
23	BB	901	C	3.5
23	BB	405	U	3.5
1	AA	94	G	3.5
26	BD	186	LEU	3.5
43	BO	28	VAL	3.5
53	B6	96	GLY	3.5
43	DO	28	VAL	3.5
20	CB	163	ILE	3.4
23	DB	846	U	3.4
33	B1	51	ALA	3.4
13	CN	42	ASN	3.4
32	B4	36	ARG	3.4
53	B6	36	ALA	3.4
23	BB	1175	A	3.4
2	CC	167	TYR	3.4
32	B4	17	VAL	3.4
23	BB	2141	G	3.4
23	BB	1731	G	3.3

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Mol	Chain	Res	Type	RSRZ
23	BB	2140	G	3.3
9	AJ	72	ARG	3.3
53	D6	98	ALA	3.3
20	CB	36	LYS	3.3
1	AA	121	U	3.2
32	B4	25	VAL	3.2
48	BG	42	VAL	3.2
40	DH	82	SER	3.2
23	BB	1870	C	3.2
24	DI	84	GLY	3.2
53	D6	37	LEU	3.2
53	D6	38	LEU	3.2
32	D4	7	VAL	3.2
6	AG	79	VAL	3.2
53	B6	98	ALA	3.2
27	BK	46	ALA	3.2
48	DG	88	LEU	3.1
32	D4	22	VAL	3.1
53	B6	62	ASP	3.1
53	B6	48	ALA	3.1
40	BH	126	GLY	3.1
32	D4	24	ARG	3.1
38	BM	103	TYR	3.1
7	CH	120	LEU	3.1
41	BJ	83	GLY	3.1
1	AA	972	C	3.1
32	B4	29	ALA	3.1
53	B6	84	ARG	3.1
20	CB	38	HIS	3.1
23	DB	613	A	3.1
40	BH	85	GLY	3.1
40	BH	45	GLU	3.0
18	AS	30	LEU	3.0
24	BI	5	GLN	3.0
9	CJ	35	GLN	3.0
3	AD	22	SER	3.0
32	D4	17	VAL	3.0
53	B6	41	LEU	3.0
53	B6	75	ALA	3.0
12	AM	4	ALA	3.0
40	BH	27	ARG	3.0
39	BX	57	LEU	3.0

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Mol	Chain	Res	Type	RSRZ
6	AG	78	ARG	3.0
24	BI	70	THR	3.0
1	CA	1033	G	3.0
32	B4	23	ILE	3.0
53	B6	67	VAL	2.9
43	BO	99	TYR	2.9
43	DO	53	THR	2.9
24	DI	29	GLN	2.9
7	AH	129	ALA	2.9
23	BB	715	A	2.9
43	DO	59	ALA	2.9
46	BU	61	GLU	2.9
3	AD	83	GLY	2.9
23	BB	1537	G	2.9
51	BZ	78	TYR	2.9
53	D6	45	TYR	2.9
48	DG	40	VAL	2.9
18	AS	40	PHE	2.9
43	BO	38	GLN	2.9
22	DA	88	C	2.9
23	BB	645	C	2.9
46	BU	93	ARG	2.9
20	CB	212	TYR	2.9
6	CG	74	VAL	2.8
13	AN	23	ARG	2.8
4	CE	50	GLY	2.8
18	AS	42	ASN	2.8
43	BO	92	PHE	2.8
20	CB	35	ASN	2.8
23	BB	1087	G	2.8
23	BB	2157	G	2.8
24	DI	53	PRO	2.8
47	DF	173	ASP	2.8
32	D4	36	ARG	2.8
23	BB	2149	U	2.8
53	B6	40	HIS	2.8
53	B6	74	ASN	2.8
53	B6	94	ASN	2.7
43	BO	107	ALA	2.7
53	B6	38	LEU	2.7
23	DB	645	C	2.7
1	AA	93	U	2.7

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Mol	Chain	Res	Type	RSRZ
23	BB	141	G	2.7
32	D4	18	LYS	2.7
2	AC	159	ALA	2.7
20	CB	184	ALA	2.7
22	DA	52	A	2.7
39	BX	60	LYS	2.7
39	BX	5	GLU	2.7
50	BT	65	GLY	2.7
32	D4	37	GLN	2.7
43	DO	38	GLN	2.7
6	CG	5	VAL	2.7
43	BO	93	ASP	2.7
53	B6	86	SER	2.7
9	CJ	79	PRO	2.7
10	CK	13	LYS	2.7
1	CA	999	C	2.7
1	AA	77	A	2.7
2	CC	165	GLU	2.6
40	BH	125	THR	2.6
53	B6	59	THR	2.6
53	D6	95	LYS	2.6
12	AM	91	ARG	2.6
48	DG	172	GLU	2.6
24	BI	117	THR	2.6
43	DO	27	VAL	2.6
26	BD	25	THR	2.6
1	AA	1150	A	2.6
23	BB	1057	A	2.6
53	B6	88	LEU	2.6
9	CJ	34	ALA	2.6
20	CB	79	VAL	2.6
41	BJ	82	GLY	2.6
32	D4	33	HIS	2.6
23	BB	2139	U	2.6
9	CJ	80	THR	2.6
1	AA	1355	G	2.6
24	BI	6	ALA	2.6
7	AH	102	VAL	2.6
13	CN	60	ARG	2.6
40	DH	81	ALA	2.5
7	AH	128	VAL	2.5
44	DQ	90	ASP	2.5

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Mol	Chain	Res	Type	RSRZ
12	CM	42	VAL	2.5
43	DO	26	LEU	2.5
23	DB	2110	G	2.5
50	BT	3	ARG	2.5
12	CM	12	LYS	2.5
20	AB	100	LEU	2.5
12	AM	92	ARG	2.5
8	AI	99	LYS	2.5
23	DB	2799	A	2.5
40	BH	18	GLN	2.5
7	CH	122	GLY	2.5
26	BD	187	LEU	2.5
32	D4	19	ARG	2.5
1	AA	1004	A	2.5
6	CG	70	PRO	2.5
43	DO	92	PHE	2.5
43	BO	95	SER	2.5
26	BD	27	ILE	2.5
53	B6	97	ASP	2.5
15	CP	9	HIS	2.5
1	CA	998	C	2.4
1	CA	1296	C	2.4
24	DI	82	ALA	2.4
24	DI	48	ILE	2.4
53	B6	63	PRO	2.4
2	AC	155	ARG	2.4
15	CP	17	TYR	2.4
40	DH	83	LYS	2.4
23	DB	2903	U	2.4
13	CN	46	LYS	2.4
33	B1	16	THR	2.4
53	D6	75	ALA	2.4
13	CN	62	ARG	2.4
32	B4	38	GLY	2.4
40	BH	88	GLY	2.4
5	AF	8	PHE	2.4
1	AA	995	C	2.4
6	AG	81	GLY	2.4
40	BH	127	GLU	2.4
51	DZ	78	TYR	2.4
52	DW	65	LYS	2.4
53	D6	72	ASP	2.4

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Mol	Chain	Res	Type	RSRZ
38	DM	1	MET	2.4
52	BW	65	LYS	2.4
1	CA	1031	C	2.4
23	BB	2142	A	2.4
24	DI	6	ALA	2.4
18	CS	23	GLU	2.4
6	CG	4	ARG	2.3
8	AI	16	ALA	2.3
1	AA	971	G	2.3
23	BB	2144	G	2.3
1	CA	121	U	2.3
8	AI	102	PHE	2.3
23	BB	436	C	2.3
6	CG	113	LYS	2.3
15	CP	10	GLY	2.3
50	DT	14	PRO	2.3
8	CI	31	GLN	2.3
13	AN	28	ALA	2.3
2	AC	158	GLY	2.3
6	AG	150	PHE	2.3
43	BO	106	LEU	2.3
43	DO	97	PHE	2.3
1	AA	65	A	2.3
8	AI	100	ALA	2.3
43	DO	52	SER	2.3
23	BB	1730	C	2.3
51	BZ	76	GLU	2.3
24	DI	83	ALA	2.3
30	DY	1	ALA	2.3
20	CB	186	VAL	2.3
3	AD	203	TYR	2.3
37	BL	45	GLY	2.3
53	B6	44	GLU	2.3
33	B1	14	ALA	2.2
40	BH	12	LEU	2.2
48	BG	160	GLY	2.2
53	B6	49	HIS	2.2
9	AJ	42	LEU	2.2
13	AN	31	SER	2.2
20	AB	158	ASP	2.2
53	D6	94	ASN	2.2
13	CN	59	GLN	2.2

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Mol	Chain	Res	Type	RSRZ
23	BB	2133	G	2.2
13	AN	19	TYR	2.2
29	DE	96	VAL	2.2
33	B1	15	GLY	2.2
9	CJ	81	GLU	2.2
20	AB	8	MET	2.2
24	DI	80	LYS	2.2
40	DH	80	ILE	2.2
9	AJ	10	LEU	2.2
26	BD	188	LEU	2.2
13	AN	20	PHE	2.2
15	AP	17	TYR	2.2
21	CU	34	ARG	2.2
21	CU	35	GLU	2.2
29	BE	124	PHE	2.2
20	CB	130	LYS	2.2
9	AJ	89	ARG	2.2
19	CT	66	ILE	2.2
23	DB	546	U	2.2
25	BC	34	GLU	2.2
26	BD	183	GLU	2.2
48	DG	160	GLY	2.2
1	AA	999	C	2.2
2	AC	178	ARG	2.2
43	DO	60	GLU	2.2
13	AN	34	ASN	2.2
23	BB	1215	G	2.2
53	B6	58	VAL	2.2
1	AA	1136	C	2.2
52	BW	26	GLY	2.2
53	D6	79	ILE	2.2
1	AA	1033	G	2.2
2	AC	48	LYS	2.2
33	D1	20	TYR	2.2
40	BH	19	VAL	2.2
21	AU	35	GLU	2.1
23	DB	1112	G	2.1
43	DO	61	GLN	2.1
53	B6	91	ASN	2.1
20	CB	52	ALA	2.1
20	CB	56	LEU	2.1
32	B4	33	HIS	2.1

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Mol	Chain	Res	Type	RSRZ
23	BB	2828	G	2.1
19	AT	65	LEU	2.1
20	AB	63	LYS	2.1
53	B6	104	PRO	2.1
23	BB	1046	A	2.1
40	BH	94	ILE	2.1
6	CG	69	ARG	2.1
34	D3	19	GLY	2.1
23	BB	47	C	2.1
48	DG	176	LYS	2.1
20	AB	216	VAL	2.1
13	AN	51	PRO	2.1
23	BB	1728	C	2.1
46	BU	83	GLY	2.1
40	BH	89	LYS	2.1
40	BH	105	ALA	2.1
15	CP	52	LEU	2.1
18	CS	74	ALA	2.1
1	CA	1000	A	2.1
23	BB	1176	U	2.1
13	AN	55	SER	2.1
18	AS	49	ALA	2.1
20	CB	69	VAL	2.1
23	BB	1093	G	2.1
38	BM	39	GLY	2.1
9	CJ	33	GLY	2.1
12	CM	43	LYS	2.1
20	CB	215	ALA	2.1
6	AG	80	GLY	2.1
29	BE	143	LEU	2.1
43	DO	62	LEU	2.1
15	CP	15	PRO	2.1
1	AA	837	U	2.1
1	AA	1302	C	2.1
38	DM	60	GLN	2.1
46	BU	59	GLU	2.1
24	DI	21	PRO	2.0
1	AA	1363	A	2.0
23	DB	2147	A	2.0
51	BZ	77	LYS	2.0
53	D6	43	VAL	2.0
3	AD	82	LYS	2.0

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Mol	Chain	Res	Type	RSRZ
4	AE	147	ASN	2.0
24	DI	79	LEU	2.0
32	D4	20	ASP	2.0
9	CJ	26	VAL	2.0
43	BO	103	VAL	2.0
13	AN	53	ASP	2.0
46	BU	51	LEU	2.0
32	B4	6	SER	2.0
48	DG	161	VAL	2.0
13	CN	9	GLU	2.0
17	CR	66	LEU	2.0
1	CA	1034	G	2.0
23	BB	1056	G	2.0
23	BB	900	A	2.0
41	DJ	64	VAL	2.0
5	AF	62	MET	2.0
20	CB	68	PHE	2.0
1	AA	1362	A	2.0
9	AJ	41	PRO	2.0
53	D6	41	LEU	2.0
23	DB	2146	C	2.0
21	CU	36	PHE	2.0
1	AA	746	A	2.0
48	BG	8	VAL	2.0
18	AS	75	PRO	2.0
23	BB	179	C	2.0

6.2 Non-standard residues in protein, DNA, RNA chains [i](#)

There are no non-standard protein/DNA/RNA residues in this entry.

6.3 Carbohydrates [i](#)

There are no carbohydrates in this entry.

6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors

of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	AA	1619	1/1	0.88	1.60	48.28	180,180,180,180	0
55	PAR	DB	3112	42/42	0.78	0.40	6.58	55,55,55,55	42
54	MG	BB	3108	1/1	0.81	0.30	5.48	88,88,88,88	0
55	PAR	BB	3111	42/42	0.71	0.42	4.97	100,100,100,100	42
54	MG	AA	1633	1/1	0.87	0.41	4.11	56,56,56,56	0
54	MG	BB	3013	1/1	0.90	0.28	3.54	86,86,86,86	0
54	MG	CA	1604	1/1	0.95	0.28	3.08	11,11,11,11	0
54	MG	AA	1644	1/1	0.94	0.22	2.91	69,69,69,69	0
54	MG	AA	1643	1/1	0.99	0.17	2.44	118,118,118,118	0
54	MG	DB	3035	1/1	0.88	0.23	2.39	52,52,52,52	0
54	MG	DB	3030	1/1	0.95	0.23	1.99	30,30,30,30	0
54	MG	AA	1615	1/1	0.86	0.45	1.97	171,171,171,171	0
54	MG	AA	1610	1/1	0.90	0.32	1.88	82,82,82,82	0
54	MG	BB	3082	1/1	0.99	0.33	1.53	22,22,22,22	0
54	MG	DB	3014	1/1	0.96	0.33	1.29	39,39,39,39	0
54	MG	BB	3049	1/1	0.88	0.27	1.23	25,25,25,25	0
54	MG	DB	3087	1/1	0.99	0.22	1.10	67,67,67,67	0
54	MG	DB	3111	1/1	0.96	0.23	1.09	68,68,68,68	0
54	MG	DB	3089	1/1	0.98	0.21	1.00	75,75,75,75	0
54	MG	AA	1651	1/1	0.87	0.19	0.87	55,55,55,55	0
54	MG	DB	3108	1/1	0.95	0.24	0.69	13,13,13,13	0
55	PAR	CA	1662	42/42	0.90	0.22	0.62	45,45,45,45	0
54	MG	AA	1601	1/1	0.85	0.22	0.52	10,10,10,10	0
55	PAR	AA	1661	42/42	0.89	0.22	0.46	62,62,62,62	0
54	MG	AA	1635	1/1	0.86	0.19	0.36	120,120,120,120	0
54	MG	AA	1613	1/1	0.75	0.30	0.12	82,82,82,82	0
54	MG	BB	3087	1/1	0.98	0.18	0.09	102,102,102,102	0
54	MG	BB	3011	1/1	0.95	0.17	0.02	68,68,68,68	0
54	MG	DB	3090	1/1	0.94	0.22	-0.04	35,35,35,35	0
54	MG	BB	3019	1/1	0.89	0.17	-0.06	56,56,56,56	0
54	MG	DB	3074	1/1	0.99	0.15	-0.06	17,17,17,17	0
54	MG	DB	3026	1/1	0.88	0.20	-0.07	54,54,54,54	0
54	MG	BB	3048	1/1	0.97	0.18	-0.12	8,8,8,8	0
54	MG	CA	1633	1/1	0.97	0.17	-0.28	106,106,106,106	0
54	MG	DB	3096	1/1	0.98	0.15	-0.29	37,37,37,37	0
54	MG	BB	3012	1/1	0.89	0.16	-0.34	71,71,71,71	0
54	MG	CA	1614	1/1	0.84	0.19	-0.40	85,85,85,85	0
54	MG	BB	3090	1/1	0.95	0.17	-0.42	115,115,115,115	0
54	MG	BB	3077	1/1	0.85	0.17	-0.43	64,64,64,64	0
54	MG	DB	3003	1/1	0.89	0.19	-0.44	5,5,5,5	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	BB	3098	1/1	0.97	0.14	-0.44	10,10,10,10	0
54	MG	DB	3085	1/1	0.97	0.20	-0.48	49,49,49,49	0
54	MG	CA	1616	1/1	0.70	0.24	-0.49	94,94,94,94	0
54	MG	DB	3110	1/1	0.96	0.14	-0.66	44,44,44,44	0
54	MG	DB	3099	1/1	0.98	0.15	-0.72	21,21,21,21	0
54	MG	DB	3068	1/1	0.97	0.19	-0.72	16,16,16,16	0
54	MG	BB	3021	1/1	0.99	0.12	-0.73	62,62,62,62	0
54	MG	BB	3037	1/1	0.94	0.15	-0.80	63,63,63,63	0
54	MG	DB	3094	1/1	0.92	0.09	-0.85	81,81,81,81	0
54	MG	CA	1617	1/1	0.97	0.11	-0.92	12,12,12,12	0
54	MG	BB	3079	1/1	0.72	0.19	-0.92	43,43,43,43	0
54	MG	CA	1612	1/1	0.99	0.11	-0.94	97,97,97,97	0
54	MG	DB	3051	1/1	0.94	0.15	-0.95	20,20,20,20	0
54	MG	DB	3078	1/1	0.97	0.11	-0.95	31,31,31,31	0
54	MG	BB	3029	1/1	0.95	0.10	-1.08	12,12,12,12	0
54	MG	AA	1640	1/1	0.96	0.09	-1.11	77,77,77,77	0
54	MG	DB	3007	1/1	0.96	0.16	-1.13	27,27,27,27	0
54	MG	DB	3055	1/1	0.97	0.16	-1.14	26,26,26,26	0
54	MG	DB	3092	1/1	0.96	0.14	-1.16	60,60,60,60	0
54	MG	DB	3047	1/1	0.98	0.17	-1.19	31,31,31,31	0
54	MG	BB	3040	1/1	0.96	0.12	-1.24	47,47,47,47	0
54	MG	BB	3099	1/1	0.87	0.11	-1.27	40,40,40,40	0
54	MG	BB	3086	1/1	0.97	0.13	-1.28	5,5,5,5	0
54	MG	BB	3083	1/1	0.94	0.14	-1.31	51,51,51,51	0
54	MG	CA	1601	1/1	0.97	0.15	-1.39	9,9,9,9	0
54	MG	DB	3100	1/1	0.92	0.13	-1.40	22,22,22,22	0
54	MG	BB	3005	1/1	0.98	0.11	-1.44	9,9,9,9	0
54	MG	BB	3023	1/1	0.98	0.11	-1.47	6,6,6,6	0
54	MG	CA	1653	1/1	0.97	0.05	-1.50	43,43,43,43	0
56	ZN	B4	101	1/1	0.94	0.20	-1.50	68,68,68,68	0
54	MG	DB	3069	1/1	0.97	0.19	-1.59	5,5,5,5	0
54	MG	BB	3081	1/1	0.85	0.16	-1.63	31,31,31,31	0
54	MG	DB	3010	1/1	0.95	0.14	-1.67	5,5,5,5	0
54	MG	AA	1653	1/1	0.97	0.10	-1.69	51,51,51,51	0
54	MG	CA	1644	1/1	0.97	0.11	-1.76	69,69,69,69	0
54	MG	DB	3084	1/1	1.00	0.16	-1.77	14,14,14,14	0
54	MG	BB	3094	1/1	0.99	0.12	-1.80	55,55,55,55	0
56	ZN	D4	101	1/1	0.91	0.30	-1.82	96,96,96,96	0
54	MG	CA	1643	1/1	0.92	0.13	-1.83	11,11,11,11	0
54	MG	DB	3012	1/1	0.98	0.12	-1.85	8,8,8,8	0
54	MG	CA	1618	1/1	0.97	0.12	-1.89	23,23,23,23	0
54	MG	BB	3062	1/1	0.99	0.15	-1.91	5,5,5,5	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	AA	1607	1/1	0.96	0.10	-2.13	35,35,35,35	0
54	MG	BB	3110	1/1	0.97	0.17	-2.17	41,41,41,41	0
54	MG	BB	3002	1/1	0.95	0.09	-2.21	18,18,18,18	0
54	MG	CA	1638	1/1	0.96	0.06	-2.30	56,56,56,56	0
54	MG	BB	3032	1/1	0.97	0.12	-2.39	31,31,31,31	0
54	MG	DB	3103	1/1	0.97	0.10	-2.41	37,37,37,37	0
54	MG	AA	1638	1/1	0.94	0.10	-2.49	45,45,45,45	0
54	MG	AA	1630	1/1	0.96	0.11	-2.51	118,118,118,118	0
54	MG	DB	3070	1/1	0.97	0.09	-2.53	28,28,28,28	0
54	MG	BB	3069	1/1	0.96	0.11	-2.61	5,5,5,5	0
54	MG	BB	3001	1/1	0.96	0.08	-2.63	14,14,14,14	0
54	MG	DB	3025	1/1	0.98	0.09	-2.72	18,18,18,18	0
54	MG	CA	1605	1/1	0.97	0.12	-2.78	5,5,5,5	0
54	MG	CA	1656	1/1	0.99	0.06	-2.96	7,7,7,7	0
54	MG	BB	3088	1/1	0.95	0.08	-3.02	11,11,11,11	0
54	MG	DB	3056	1/1	0.99	0.16	-3.05	16,16,16,16	0
54	MG	BB	3074	1/1	0.98	0.08	-3.05	7,7,7,7	0
54	MG	AA	1620	1/1	0.90	0.06	-3.13	95,95,95,95	0
54	MG	BB	3035	1/1	0.96	0.14	-3.14	60,60,60,60	0
54	MG	BB	3066	1/1	0.95	0.05	-3.30	34,34,34,34	0
54	MG	DB	3019	1/1	0.98	0.07	-3.31	8,8,8,8	0
54	MG	DB	3001	1/1	0.99	0.10	-3.34	5,5,5,5	0
54	MG	CA	1640	1/1	0.94	0.11	-3.44	35,35,35,35	0
54	MG	AA	1609	1/1	0.97	0.06	-3.45	11,11,11,11	0
54	MG	DB	3080	1/1	0.89	0.11	-3.60	13,13,13,13	0
54	MG	DB	3044	1/1	0.98	0.10	-3.66	16,16,16,16	0
54	MG	BB	3065	1/1	0.95	0.10	-3.67	30,30,30,30	0
54	MG	DB	3002	1/1	0.97	0.09	-3.71	14,14,14,14	0
54	MG	BB	3085	1/1	0.99	0.10	-3.83	76,76,76,76	0
54	MG	BB	3103	1/1	0.97	0.08	-4.02	20,20,20,20	0
54	MG	DB	3072	1/1	0.86	0.09	-4.29	48,48,48,48	0
54	MG	DB	3041	1/1	0.96	0.12	-4.32	9,9,9,9	0
54	MG	AA	1629	1/1	0.97	0.09	-4.33	44,44,44,44	0
54	MG	DB	3006	1/1	0.96	0.06	-4.51	15,15,15,15	0
54	MG	DB	3088	1/1	0.96	0.07	-4.56	31,31,31,31	0
54	MG	BB	3056	1/1	0.99	0.05	-4.57	61,61,61,61	0
54	MG	BB	3052	1/1	0.98	0.09	-4.62	59,59,59,59	0
54	MG	CA	1645	1/1	0.96	0.08	-5.91	82,82,82,82	0
54	MG	DB	3009	1/1	0.96	0.09	-6.52	22,22,22,22	0
54	MG	AA	1654	1/1	0.97	0.08	-6.74	52,52,52,52	0
54	MG	CA	1655	1/1	0.99	0.06	-11.23	22,22,22,22	0
54	MG	DB	3071	1/1	0.97	0.09	-	41,41,41,41	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	BB	3060	1/1	0.98	0.15	-	43,43,43,43	0
54	MG	BB	3059	1/1	0.95	0.16	-	39,39,39,39	0
54	MG	BB	3030	1/1	0.98	0.05	-	83,83,83,83	0
54	MG	DB	3109	1/1	0.99	0.19	-	27,27,27,27	0
54	MG	BB	3036	1/1	0.99	0.22	-	68,68,68,68	0
54	MG	AA	1659	1/1	0.40	0.55	-	127,127,127,127	0
54	MG	CA	1609	1/1	0.90	0.16	-	81,81,81,81	0
54	MG	AA	1634	1/1	0.94	0.11	-	79,79,79,79	0
54	MG	CA	1649	1/1	0.81	0.34	-	134,134,134,134	0
54	MG	BB	3033	1/1	0.84	0.57	-	125,125,125,125	0
54	MG	CA	1639	1/1	0.98	0.15	-	5,5,5,5	0
54	MG	BB	3034	1/1	0.97	0.18	-	41,41,41,41	0
54	MG	AA	1660	1/1	0.83	0.21	-	75,75,75,75	0
54	MG	DB	3064	1/1	0.88	0.12	-	23,23,23,23	0
54	MG	CA	1625	1/1	0.90	0.31	-	46,46,46,46	0
54	MG	DB	3011	1/1	0.96	0.12	-	22,22,22,22	0
54	MG	DB	3102	1/1	0.96	0.17	-	20,20,20,20	0
54	MG	BB	3044	1/1	0.97	0.09	-	29,29,29,29	0
54	MG	CA	1615	1/1	0.91	0.26	-	180,180,180,180	0
54	MG	DB	3013	1/1	0.85	0.21	-	35,35,35,35	0
54	MG	BB	3004	1/1	0.92	0.31	-	44,44,44,44	0
54	MG	BB	3009	1/1	0.95	0.12	-	76,76,76,76	0
54	MG	DB	3008	1/1	0.94	0.19	-	11,11,11,11	0
54	MG	AA	1627	1/1	0.83	0.30	-	46,46,46,46	0
54	MG	BB	3073	1/1	0.97	0.14	-	70,70,70,70	0
54	MG	CA	1632	1/1	0.93	0.14	-	34,34,34,34	0
54	MG	BB	3057	1/1	0.96	0.72	-	65,65,65,65	0
54	MG	BB	3043	1/1	0.91	0.23	-	97,97,97,97	0
54	MG	CA	1634	1/1	0.88	0.17	-	30,30,30,30	0
54	MG	DB	3106	1/1	0.98	0.12	-	17,17,17,17	0
54	MG	BB	3084	1/1	0.99	0.14	-	60,60,60,60	0
54	MG	DB	3004	1/1	0.98	0.26	-	40,40,40,40	0
54	MG	BB	3063	1/1	0.91	0.09	-	5,5,5,5	0
54	MG	DB	3086	1/1	0.98	0.19	-	25,25,25,25	0
54	MG	CA	1660	1/1	0.77	0.22	-	58,58,58,58	0
54	MG	DB	3005	1/1	0.98	0.06	-	52,52,52,52	0
54	MG	AA	1608	1/1	0.55	0.53	-	136,136,136,136	0
54	MG	AA	1656	1/1	0.79	0.25	-	50,50,50,50	0
54	MG	BB	3054	1/1	0.94	0.10	-	55,55,55,55	0
54	MG	BB	3038	1/1	0.97	0.12	-	157,157,157,157	0
54	MG	DB	3101	1/1	0.98	0.25	-	7,7,7,7	0
54	MG	BB	3024	1/1	0.97	0.08	-	76,76,76,76	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	AA	1602	1/1	0.88	0.17	-	105,105,105,105	0
54	MG	DB	3033	1/1	0.98	0.16	-	20,20,20,20	0
54	MG	AA	1641	1/1	0.98	0.05	-	32,32,32,32	0
54	MG	BB	3020	1/1	0.94	0.48	-	23,23,23,23	0
54	MG	BB	3104	1/1	0.99	0.13	-	43,43,43,43	0
54	MG	BB	3047	1/1	0.86	0.18	-	92,92,92,92	0
54	MG	DB	3077	1/1	0.99	0.11	-	17,17,17,17	0
54	MG	CA	1613	1/1	0.99	0.12	-	24,24,24,24	0
54	MG	DB	3024	1/1	0.98	0.14	-	47,47,47,47	0
54	MG	BB	3028	1/1	0.98	0.23	-	95,95,95,95	0
54	MG	BB	3003	1/1	0.96	0.21	-	60,60,60,60	0
54	MG	CA	1657	1/1	0.68	0.58	-	97,97,97,97	0
54	MG	BB	3041	1/1	0.95	0.12	-	15,15,15,15	0
54	MG	AA	1603	1/1	0.80	0.17	-	38,38,38,38	0
54	MG	BB	3091	1/1	0.94	0.11	-	81,81,81,81	0
54	MG	AA	1622	1/1	0.89	0.33	-	111,111,111,111	0
54	MG	CA	1635	1/1	0.93	0.16	-	105,105,105,105	0
54	MG	DB	3060	1/1	0.23	0.12	-	160,160,160,160	0
54	MG	CA	1621	1/1	0.93	0.55	-	67,67,67,67	0
54	MG	DB	3018	1/1	0.98	0.15	-	17,17,17,17	0
54	MG	BB	3107	1/1	0.97	0.06	-	13,13,13,13	0
54	MG	AA	1645	1/1	0.95	0.17	-	138,138,138,138	0
54	MG	CA	1607	1/1	0.94	0.11	-	20,20,20,20	0
54	MG	BB	3017	1/1	0.94	0.16	-	46,46,46,46	0
54	MG	DB	3036	1/1	0.95	0.32	-	51,51,51,51	0
54	MG	DB	3049	1/1	0.94	0.12	-	11,11,11,11	0
54	MG	AA	1605	1/1	0.95	0.09	-	54,54,54,54	0
54	MG	BB	3050	1/1	0.98	0.09	-	16,16,16,16	0
54	MG	CA	1636	1/1	0.94	0.21	-	90,90,90,90	0
54	MG	DB	3083	1/1	0.83	0.32	-	72,72,72,72	0
54	MG	BB	3053	1/1	0.76	0.12	-	38,38,38,38	0
54	MG	BB	3105	1/1	0.98	0.10	-	21,21,21,21	0
54	MG	BB	3109	1/1	0.97	0.12	-	49,49,49,49	0
54	MG	CA	1623	1/1	0.78	0.36	-	180,180,180,180	0
54	MG	AA	1637	1/1	0.83	1.22	-	146,146,146,146	0
54	MG	BB	3010	1/1	0.88	0.12	-	38,38,38,38	0
54	MG	BB	3097	1/1	0.86	0.32	-	95,95,95,95	0
54	MG	BB	3072	1/1	0.96	0.18	-	64,64,64,64	0
54	MG	BB	3080	1/1	0.88	0.60	-	131,131,131,131	0
54	MG	AA	1648	1/1	0.95	0.10	-	5,5,5,5	0
54	MG	DB	3042	1/1	0.98	0.10	-	36,36,36,36	0
54	MG	CE	201	1/1	0.60	0.91	-	145,145,145,145	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	CA	1652	1/1	0.93	0.22	-	58,58,58,58	0
54	MG	DB	3061	1/1	0.93	0.17	-	95,95,95,95	0
54	MG	BB	3025	1/1	0.99	0.07	-	22,22,22,22	0
54	MG	CA	1602	1/1	0.98	0.21	-	16,16,16,16	0
54	MG	CA	1637	1/1	0.93	0.13	-	116,116,116,116	0
54	MG	BB	3027	1/1	0.92	0.18	-	83,83,83,83	0
54	MG	DB	3037	1/1	0.81	0.14	-	45,45,45,45	0
54	MG	DB	3093	1/1	0.96	0.12	-	9,9,9,9	0
54	MG	DB	3107	1/1	0.98	0.08	-	51,51,51,51	0
54	MG	AA	1646	1/1	0.94	0.12	-	98,98,98,98	0
54	MG	BB	3046	1/1	0.94	0.19	-	64,64,64,64	0
54	MG	DB	3075	1/1	0.95	0.16	-	10,10,10,10	0
54	MG	DB	3081	1/1	0.97	0.09	-	20,20,20,20	0
54	MG	DB	3017	1/1	0.95	0.13	-	23,23,23,23	0
54	MG	BB	3071	1/1	0.93	0.20	-	63,63,63,63	0
54	MG	DB	3040	1/1	0.99	0.10	-	5,5,5,5	0
54	MG	DB	3062	1/1	0.98	0.04	-	44,44,44,44	0
54	MG	AA	1626	1/1	0.57	0.62	-	28,28,28,28	1
54	MG	BB	3064	1/1	0.78	0.19	-	78,78,78,78	0
54	MG	BB	3018	1/1	0.95	0.25	-	32,32,32,32	0
54	MG	CA	1608	1/1	0.66	0.58	-	178,178,178,178	0
54	MG	AA	1631	1/1	0.96	0.09	-	61,61,61,61	0
54	MG	CA	1650	1/1	0.99	0.05	-	5,5,5,5	0
54	MG	DB	3098	1/1	0.98	0.07	-	69,69,69,69	0
54	MG	DB	3050	1/1	0.91	0.11	-	118,118,118,118	0
54	MG	DB	3105	1/1	0.98	0.06	-	24,24,24,24	0
54	MG	DB	3082	1/1	0.96	0.07	-	37,37,37,37	0
54	MG	AA	1650	1/1	0.74	0.17	-	116,116,116,116	0
54	MG	CA	1659	1/1	0.95	0.13	-	70,70,70,70	0
54	MG	DB	3015	1/1	0.93	0.10	-	39,39,39,39	0
54	MG	CA	1628	1/1	0.96	0.20	-	82,82,82,82	0
54	MG	BB	3092	1/1	0.96	0.07	-	60,60,60,60	0
54	MG	AA	1604	1/1	0.95	0.12	-	37,37,37,37	0
54	MG	DB	3059	1/1	0.40	0.13	-	152,152,152,152	0
54	MG	AA	1639	1/1	0.66	1.92	-	126,126,126,126	0
54	MG	AA	1621	1/1	0.90	0.26	-	27,27,27,27	0
54	MG	BB	3014	1/1	0.98	0.19	-	46,46,46,46	0
54	MG	BB	3078	1/1	0.93	0.33	-	92,92,92,92	0
54	MG	CA	1624	1/1	0.92	0.20	-	48,48,48,48	0
54	MG	BB	3015	1/1	0.99	0.05	-	9,9,9,9	0
54	MG	AA	1657	1/1	0.56	1.79	-	155,155,155,155	0
54	MG	AA	1618	1/1	0.97	0.04	-	105,105,105,105	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	DB	3039	1/1	0.98	0.09	-	34,34,34,34	0
54	MG	BB	3096	1/1	0.98	0.13	-	69,69,69,69	0
54	MG	AA	1628	1/1	0.98	0.22	-	49,49,49,49	0
54	MG	CA	1611	1/1	0.97	0.09	-	114,114,114,114	0
54	MG	DB	3073	1/1	0.93	0.12	-	25,25,25,25	0
54	MG	AA	1652	1/1	0.89	0.23	-	126,126,126,126	0
54	MG	CA	1654	1/1	0.91	0.13	-	72,72,72,72	0
54	MG	CA	1626	1/1	0.88	0.31	-	23,23,23,23	1
54	MG	BB	3055	1/1	0.98	0.26	-	78,78,78,78	0
54	MG	CA	1631	1/1	0.98	0.14	-	55,55,55,55	0
54	MG	AA	1636	1/1	0.96	0.16	-	38,38,38,38	0
54	MG	BB	3031	1/1	0.84	0.19	-	44,44,44,44	0
54	MG	AA	1647	1/1	0.81	1.44	-	180,180,180,180	0
54	MG	DB	3057	1/1	0.98	0.06	-	17,17,17,17	0
54	MG	DB	3020	1/1	0.98	0.14	-	5,5,5,5	0
54	MG	CA	1661	1/1	0.94	0.12	-	40,40,40,40	0
54	MG	BB	3045	1/1	0.98	0.12	-	32,32,32,32	0
54	MG	BB	3068	1/1	0.96	0.14	-	102,102,102,102	0
54	MG	DB	3021	1/1	0.99	0.11	-	18,18,18,18	0
54	MG	AA	1606	1/1	0.93	0.04	-	73,73,73,73	0
54	MG	BB	3008	1/1	0.96	0.13	-	81,81,81,81	0
54	MG	AA	1612	1/1	0.94	0.15	-	96,96,96,96	0
54	MG	CA	1648	1/1	0.85	0.20	-	17,17,17,17	0
54	MG	CA	1658	1/1	0.88	0.37	-	70,70,70,70	0
54	MG	BB	3095	1/1	0.90	0.11	-	65,65,65,65	0
54	MG	AA	1632	1/1	0.68	0.43	-	80,80,80,80	0
54	MG	CA	1630	1/1	0.90	0.23	-	65,65,65,65	0
54	MG	CA	1619	1/1	0.83	0.24	-	78,78,78,78	0
54	MG	DB	3097	1/1	0.94	0.14	-	32,32,32,32	0
54	MG	AA	1624	1/1	0.94	0.20	-	76,76,76,76	0
54	MG	BB	3058	1/1	0.99	0.09	-	17,17,17,17	0
54	MG	AA	1655	1/1	0.95	0.22	-	83,83,83,83	0
54	MG	CA	1646	1/1	0.94	0.34	-	78,78,78,78	0
54	MG	CA	1603	1/1	0.99	0.12	-	37,37,37,37	0
54	MG	BB	3089	1/1	0.99	0.06	-	30,30,30,30	0
54	MG	DB	3058	1/1	0.89	0.56	-	157,157,157,157	0
54	MG	DB	3095	1/1	0.96	0.23	-	62,62,62,62	0
54	MG	DB	3046	1/1	0.96	0.15	-	38,38,38,38	0
54	MG	CA	1610	1/1	0.97	0.11	-	65,65,65,65	0
54	MG	DB	3079	1/1	0.98	0.16	-	30,30,30,30	0
54	MG	DB	3048	1/1	0.96	0.24	-	8,8,8,8	0
54	MG	DB	3052	1/1	0.78	0.53	-	166,166,166,166	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	BB	3070	1/1	0.95	0.18	-	40,40,40,40	0
54	MG	DB	3063	1/1	0.97	0.06	-	23,23,23,23	0
54	MG	CA	1647	1/1	0.98	0.13	-	58,58,58,58	0
54	MG	DB	3034	1/1	0.97	0.11	-	52,52,52,52	0
54	MG	DB	3022	1/1	0.92	0.17	-	85,85,85,85	0
54	MG	DB	3076	1/1	0.97	0.15	-	27,27,27,27	0
54	MG	DB	3104	1/1	0.98	0.11	-	21,21,21,21	0
54	MG	DB	3028	1/1	0.98	0.31	-	33,33,33,33	0
54	MG	CA	1629	1/1	0.84	0.49	-	96,96,96,96	1
54	MG	DB	3032	1/1	0.97	0.17	-	21,21,21,21	0
54	MG	BB	3061	1/1	0.95	0.14	-	46,46,46,46	0
54	MG	AA	1649	1/1	0.95	0.09	-	93,93,93,93	0
54	MG	CA	1642	1/1	0.97	0.09	-	85,85,85,85	0
54	MG	BB	3026	1/1	0.93	0.22	-	44,44,44,44	0
54	MG	DB	3053	1/1	0.91	0.26	-	65,65,65,65	0
54	MG	DB	3091	1/1	0.99	0.09	-	11,11,11,11	0
54	MG	DB	3038	1/1	0.98	0.09	-	23,23,23,23	0
54	MG	BB	3051	1/1	0.89	0.37	-	75,75,75,75	0
54	MG	DB	3066	1/1	0.91	0.18	-	123,123,123,123	0
54	MG	BB	3067	1/1	0.98	0.07	-	25,25,25,25	0
54	MG	CA	1627	1/1	0.96	0.21	-	35,35,35,35	1
54	MG	DB	3065	1/1	0.94	0.32	-	68,68,68,68	0
54	MG	AA	1642	1/1	0.95	0.20	-	63,63,63,63	0
54	MG	DB	3023	1/1	0.96	0.07	-	35,35,35,35	0
54	MG	AA	1616	1/1	0.98	0.12	-	15,15,15,15	0
54	MG	DB	3054	1/1	0.91	0.12	-	69,69,69,69	0
54	MG	BB	3016	1/1	0.98	0.17	-	94,94,94,94	0
54	MG	AA	1625	1/1	0.00	0.18	-	144,144,144,144	1
54	MG	BB	3093	1/1	0.85	0.44	-	98,98,98,98	0
54	MG	BB	3006	1/1	0.92	0.09	-	37,37,37,37	0
54	MG	CA	1651	1/1	0.98	0.08	-	37,37,37,37	0
54	MG	AA	1623	1/1	0.90	0.62	-	33,33,33,33	1
54	MG	DB	3031	1/1	0.97	0.10	-	29,29,29,29	0
54	MG	BB	3042	1/1	0.74	0.06	-	100,100,100,100	0
54	MG	AA	1617	1/1	0.80	0.22	-	138,138,138,138	0
54	MG	DB	3043	1/1	0.97	0.12	-	7,7,7,7	0
54	MG	AA	1658	1/1	0.77	0.12	-	97,97,97,97	0
54	MG	BB	3100	1/1	0.94	0.20	-	109,109,109,109	0
54	MG	CA	1622	1/1	0.85	0.18	-	38,38,38,38	0
54	MG	DB	3067	1/1	0.94	0.16	-	13,13,13,13	0
54	MG	BB	3075	1/1	0.98	0.12	-	55,55,55,55	0
54	MG	BB	3039	1/1	0.97	0.12	-	12,12,12,12	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	DB	3029	1/1	0.95	0.16	-	70,70,70,70	0
54	MG	BB	3076	1/1	0.98	0.09	-	48,48,48,48	0
54	MG	CA	1620	1/1	0.90	0.26	-	104,104,104,104	0
54	MG	CA	1641	1/1	0.97	0.12	-	76,76,76,76	0
54	MG	BB	3022	1/1	0.99	0.03	-	34,34,34,34	0
54	MG	BB	3106	1/1	0.97	0.10	-	45,45,45,45	0
54	MG	BB	3101	1/1	1.00	0.23	-	64,64,64,64	0
54	MG	BB	3007	1/1	0.98	0.21	-	103,103,103,103	0
54	MG	AA	1614	1/1	0.96	0.55	-	131,131,131,131	0
54	MG	DB	3016	1/1	0.92	0.12	-	5,5,5,5	0
54	MG	DB	3045	1/1	0.64	0.12	-	108,108,108,108	0
54	MG	CA	1606	1/1	0.85	0.22	-	103,103,103,103	0
54	MG	BB	3102	1/1	0.98	0.13	-	76,76,76,76	0
54	MG	DB	3027	1/1	0.93	0.17	-	11,11,11,11	0
54	MG	AA	1611	1/1	0.96	0.09	-	75,75,75,75	0

6.5 Other polymers [i](#)

There are no such residues in this entry.