



# Full wwPDB X-ray Structure Validation Report ⓘ

Feb 1, 2016 – 09:38 PM GMT

PDB ID : 4V52  
Title : Crystal structure of the bacterial ribosome from Escherichia coli in complex with neomycin.  
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 : 2007-06-15  
Resolution : 3.21 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](mailto: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.

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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

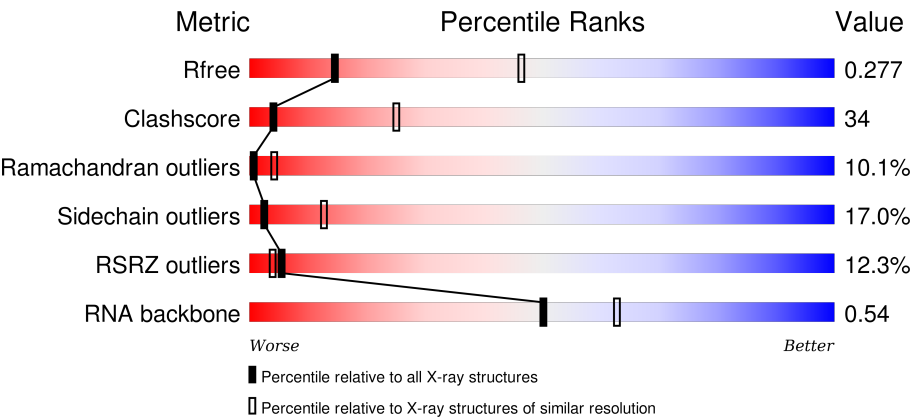
# 1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 3.21 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 <sub>free</sub>	91344	1095 (3.26-3.18)
Clashscore	102246	1046 (3.24-3.20)
Ramachandran outliers	100387	1026 (3.24-3.20)
Sidechain outliers	100360	1025 (3.24-3.20)
RSRZ outliers	91569	1100 (3.26-3.18)
RNA backbone	2183	1004 (3.72-2.72)

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 <=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>28%60%12%</div><div></div></div>
1	CA	1542	<div><div>28%60%11%</div><div></div></div>
2	AC	232	<div><div>16%32%44%13%11%</div><div></div></div>
2	CC	232	<div><div>12%31%46%12%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	

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
53	NMY	BB	3001	-	-	-	X
53	NMY	CA	1601	-	-	-	X
53	NMY	DB	3001	-	-	-	X
54	MG	AA	1620	-	-	-	X
54	MG	AA	1658	-	-	-	X
54	MG	BB	3082	-	-	-	X
54	MG	BB	3088	-	-	-	X
54	MG	CA	1638	-	-	-	X
54	MG	DB	3031	-	-	-	X
54	MG	DB	3060	-	-	-	X
54	MG	DB	3097	-	-	-	X

## 2 Entry composition

There are 56 unique types of molecules in this entry. The entry contains 284172 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			

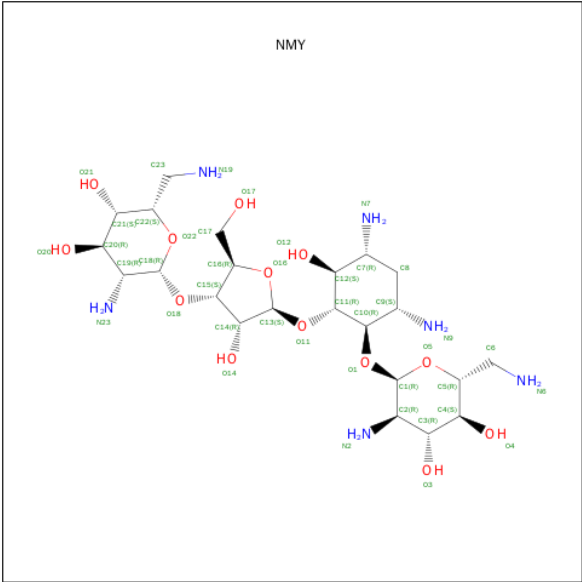
- Molecule 51 is a protein called 50S ribosomal protein L28.

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 NEOMYCIN (three-letter code: NMY) (formula: C<sub>23</sub>H<sub>46</sub>N<sub>6</sub>O<sub>13</sub>).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
53	AA	1	Total	C	N	O	0	0
			42	23	6	13		
53	BB	1	Total	C	N	O	0	0
			42	23	6	13		
53	CA	1	Total	C	N	O	0	0
			42	23	6	13		
53	DB	1	Total	C	N	O	0	0
			42	23	6	13		

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

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

- Molecule 55 is ZINC ION (three-letter code: ZN) (formula: Zn).

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

- Molecule 56 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
56	AA	291	Total O 291 291	0	0
56	AL	4	Total O 4 4	0	0
56	AN	4	Total O 4 4	0	0
56	AT	1	Total O 1 1	0	0
56	BB	497	Total O 497 497	0	0
56	BC	5	Total O 5 5	0	0
56	BE	1	Total O 1 1	0	0
56	BL	1	Total O 1 1	0	0
56	BN	1	Total O 1 1	0	0
56	BR	1	Total O 1 1	0	0
56	CA	298	Total O 298 298	0	0
56	CE	3	Total O 3 3	0	0
56	CL	2	Total O 2 2	0	0
56	CN	4	Total O 4 4	0	0
56	CP	1	Total O 1 1	0	0
56	CT	1	Total O 1 1	0	0
56	DB	502	Total O 502 502	0	0
56	DC	6	Total O 6 6	0	0

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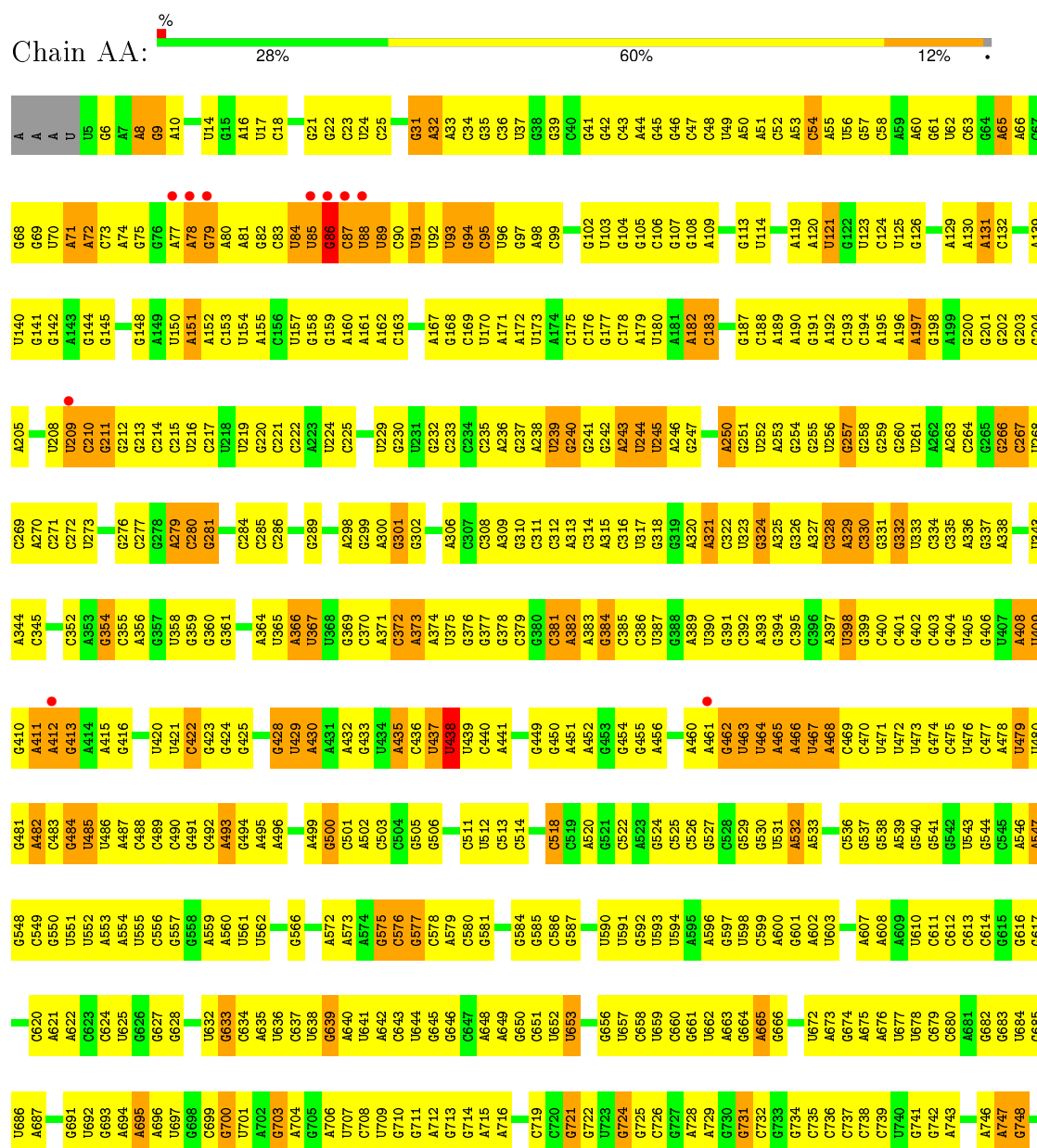
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	DE	1	Total	O	0	0
			1	1		
56	DL	2	Total	O	0	0
			2	2		
56	DR	1	Total	O	0	0
			1	1		



### 3 Residue-property plots

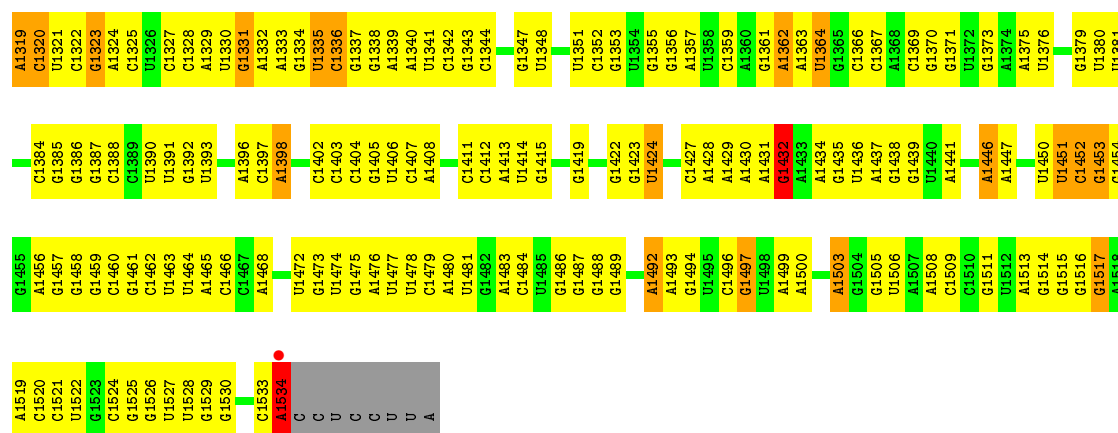
These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according 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

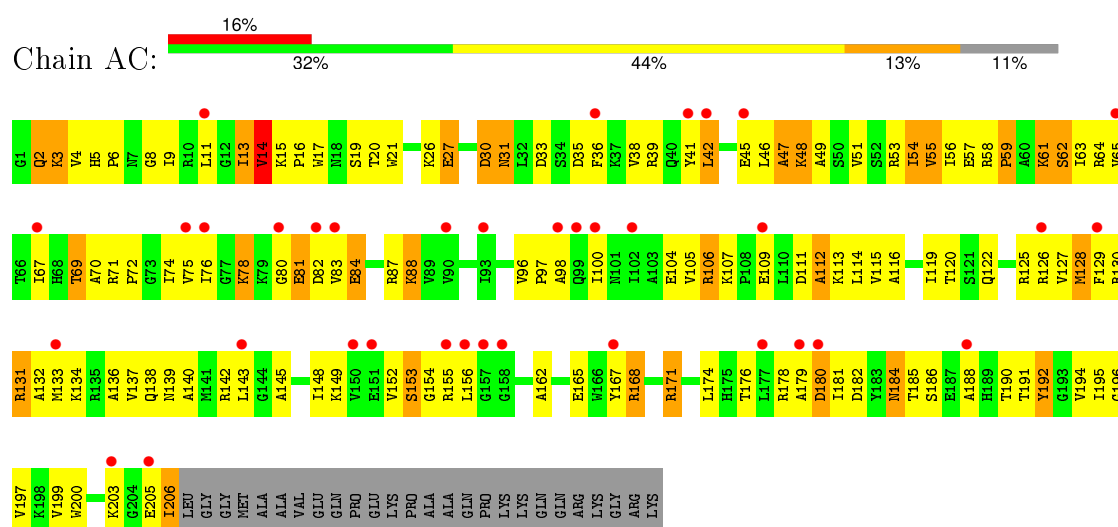




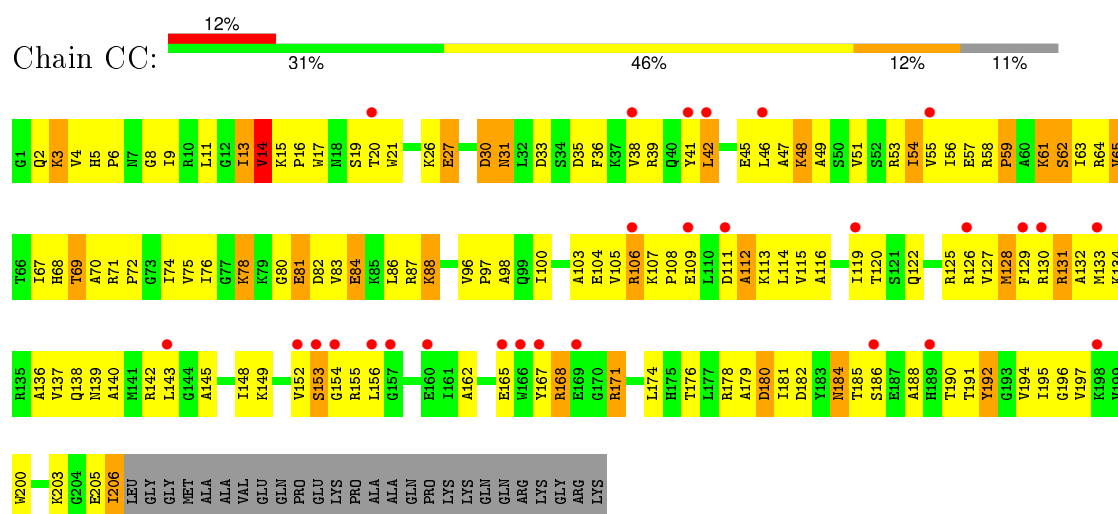
A1251	A1252	G1190	U1118	U1049	C985	A915	G832	G755	A687	C618	G548	G484	G413	C352	U273	G211
A1252	G1253	A1191	C1119	G1050	U986	U916	G833	U762	G691	U619	C549	U485	G414	C352	A274	G212
A1253	G1254	G1120	U1120	G1053	G987	U917	U834	U763	U692	C620	G550	U486	G415	A353	G275	G213
G1255	G1193	G1121	U1121	C1054	G988	G917	U835	G764	G693	C621	U552	A487	G416	G354	G276	G214
A1256	U1194	U1122	U1123	A1055	U991	A918	C840	G765	G694	C622	A553	C488	U420	C355	G277	G215
G1260	G1195	U1056	U1057	U992	U992	U920	C841	G766	G695	C623	A554	C489	U421	G357	A279	G216
A1261	A1196	G993	U1124	U993	G993	U921	U842	A767	G696	C624	U555	G490	U422	U358	C280	U216
C1262	G1198	G994	U1125	A994	A994	G922	U843	A768	U697	C625	U556	G491	G423	U359	G281	U219
C1263	G1199	A995	U1126	A996	A996	G923	G844	G769	G698	C626	U557	G492	G424	G360	C284	G220
G1270	C1200	U997	G1131	U1062	C997	G925	G845	C770	G699	C627	G558	G494	G425	G361	C285	G221
A1271	G1132	C998	G1133	C1063	C998	G926	G846	G775	G700	U632	A559	A495	G428	A364	C286	G222
G1272	U1063	C999	G1064	G1065	C999	G927	G847	G776	G701	U633	U560	A496	U429	U365	U224	G223
C1273	C1203	A1000	C1136	U1066	A1000	G928	C848	A777	A702	G634	U562	A499	U430	U366	U225	G226
A1274	G1206	C1001	C1137	C1067	C1001	G929	G849	A778	G703	C634	U563	A500	A431	U367	G289	G227
G1277	G1207	G1002	G1138	G1068	G1002	C932	U855	C779	G705	U636	A572	C501	G432	C370	A298	U229
C1208	C1209	C1003	C1140	C1069	G1003	G933	G858	A780	U707	U637	A573	C502	G433	A371	G299	G230
G1278	G1210	A1004	C1141	U1070	A1005	G934	G859	A782	U708	G639	A574	C504	G434	C372	A300	G231
G1279	U1211	G1006	G1142	C1071	A1006	A946	A860	C783	U709	C640	A575	C505	G435	C373	G301	U232
A1280	U1212	A935	U1143	G1072	C1007	G947	G861	A784	U710	U641	G576	C506	G436	A374	G302	G233
C1281	U1213	U1008	G1144	U1073	C936	G948	C862	G785	G711	U642	C577	C507	U437	U375	C303	G234
U1282	A1213	G939	G1065	U1076	G939	C940	U863	U798	A712	C643	G577	A509	U439	A306	A306	G235
C1283	C940	U950	U1077	G1078	U950	C941	A864	A792	G713	U648	C578	A510	U440	C307	C307	G236
C1284	G1214	U951	G1077	U1079	U951	G941	A865	U793	G714	A648	A579	C511	U441	C308	A309	G237
G1285	A1216	U952	U1078	G1080	U952	G942	G866	A794	A715	U649	C580	C512	G449	C309	G310	G238
U1286	C1217	G1085	U1079	G1081	G1085	A946	G867	C795	A716	C650	G581	C513	G450	C311	G311	U239
A1287	G1218	U953	C1086	U1082	G1086	G947	G874	C796	G717	C651	U590	C514	G451	C312	G312	G240
A1288	C1219	G1088	U1083	U1083	G1088	G948	G875	C797	G718	U652	U591	C515	A452	A382	A313	G241
A1289	G1220	A1081	U1084	U1084	A1021	C949	G876	U798	G719	U653	U592	C516	A453	A383	C314	G242
G1290	G1221	U1017	G1085	U1085	U1022	U956	A872	U802	G721	C656	C586	G517	G454	C384	A315	G243
U1291	C1222	U1018	U1086	U1086	U1023	U957	A873	A802	G722	U657	G587	C518	G455	C385	C316	U244
C1292	U1223	G1087	U1087	U1087	G953	U957	G874	G803	U723	C658	U593	C519	G456	C386	U317	U245
G1293	C1224	G1088	U1088	U1088	U1024	U958	A875	U804	G724	U659	U594	C520	A457	U387	G318	A246
A1294	A1225	A1021	U1089	U1089	U1025	U959	C879	C805	G725	C660	G591	C521	U458	G388	G319	G247
U1295	C1226	A1022	U1090	U1090	U1026	U960	C880	C806	G726	U661	U592	C522	A459	A389	A320	A250
C1296	A1227	U1022	U1091	U1091	U1027	U961	G881	A807	G727	C662	U593	C523	A460	U390	A321	G251
G1297	G1230	U1025	G1094	U1094	G1028	U962	G882	C810	A728	U663	U594	C524	G461	C322	C322	U252
A1298	G1231	G1026	U1095	U1095	U1029	U963	C883	C811	A729	U664	A595	C525	U462	C323	U323	A253
G1300	U1232	C1027	C1096	C1096	C1028	U964	U884	G812	G730	C665	A596	C526	U463	G324	G324	G254
U1301	G1233	U1028	C1097	C1097	U1029	U965	G885	G813	G731	A665	G597	C527	U464	A325	A325	G255
C1302	C1234	U1030	U1098	U1098	U1030	U966	G886	U814	G732	C666	U598	C528	U465	C326	G326	G256
C1303	U1235	C1031	C1099	C1099	U1031	U967	C887	A815	G733	C667	U599	C529	U466	A327	A327	U256
G1304	A1236	G1032	C1100	C1100	U1032	U968	G888	A816	G734	U672	A600	C530	U467	C328	C328	G257
A1306	C1237	A1101	U1099	U1099	G1033	U969	C889	A817	C735	A673	G601	C531	U468	U399	A329	G258
U1307	A1238	G1034	C1101	C1101	U1034	U970	G890	C817	G736	U674	A602	C532	U469	C399	C399	G259
G1308	U1239	G1035	U1102	U1102	C1035	U971	C891	G818	C737	G674	U603	C533	U470	C400	G330	G260
U1309	U1240	A1036	G1104	G1104	A1036	U972	C892	A819	C738	A675	A607	C534	U471	C401	G331	U261
G1310	G1241	U1037	U1105	U1105	U1037	U973	A901	U820	C739	U676	U608	C535	U472	G402	G332	A262
A1311	C1242	C1107	G1106	G1106	U1040	U974	G902	G821	U740	U677	A608	C536	U473	C403	U333	A263
G1312	U1243	U1040	G1107	G1107	U1041	U975	G903	U822	G741	U678	A609	C537	U474	C404	C334	A264
C1313	G1244	A1180	C1108	C1108	A1180	U976	G904	G742	G742	C679	U610	C538	U475	G405	C335	G265
U1314	A1245	G1181	U1112	U1112	G1043	U977	U905	G824	A743	C680	U611	C539	U476	U406	A336	G266
C1315	C1246	G1182	C1113	C1113	C980	U978	A906	A825	C744	A681	C612	C540	U477	U407	G337	G267
G1316	U1247	U1183	U1114	U1114	U981	U979	A907	C826	G745	G682	C613	C541	U478	U408	A338	U268
A1317	C1248	A1046	U1115	U1115	U982	U982	A908	U827	A746	G683	C614	C542	U479	U409	C345	G269
G1318	U1249	G1047	U1116	U1116	U983	U983	A909	U828	A747	U684	G615	C543	U480	U410	G346	A270
A1318	A1250	G1048	U1187	U1187	C984	C984	C910	G929	G748	U686	G616	C544	A482	G411	G347	G271
																G272



- Molecule 2: 30S ribosomal protein S3

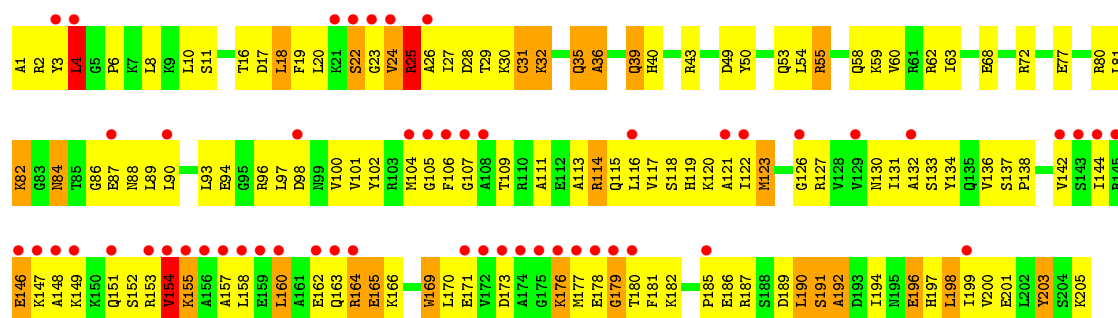


- Molecule 2: 30S ribosomal protein S3

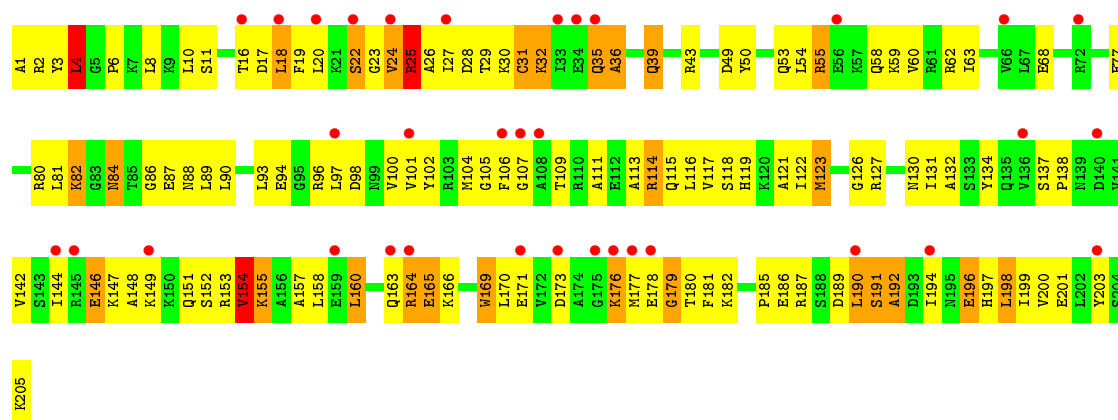


- Molecule 3: 30S ribosomal protein S4

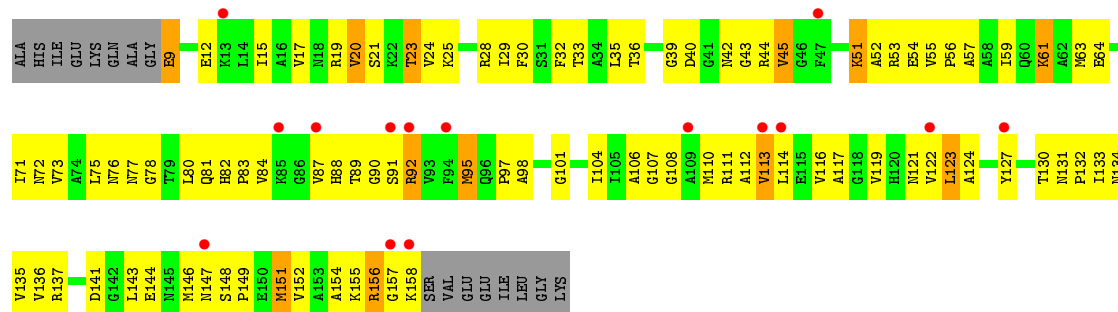




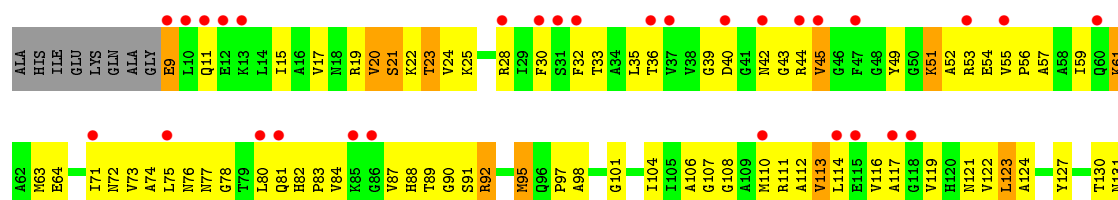
• Molecule 3: 30S ribosomal protein S4

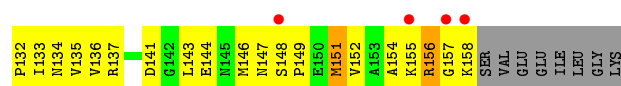


• Molecule 4: 30S ribosomal protein S5

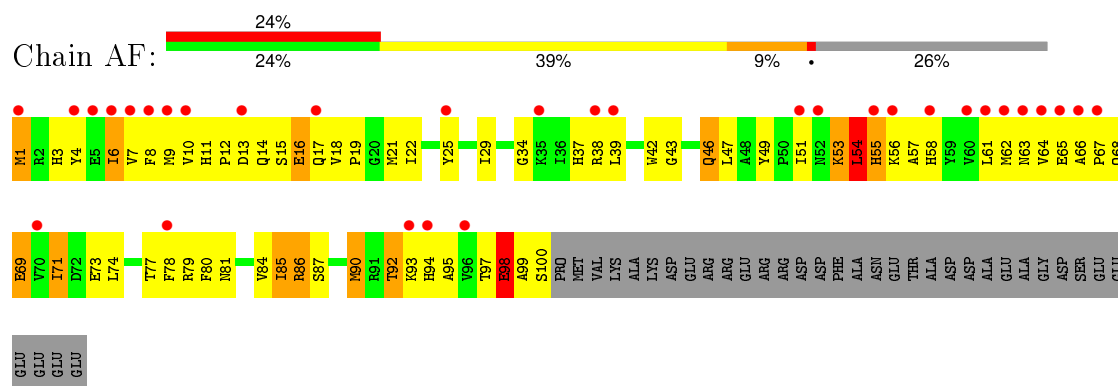


• Molecule 4: 30S ribosomal protein S5

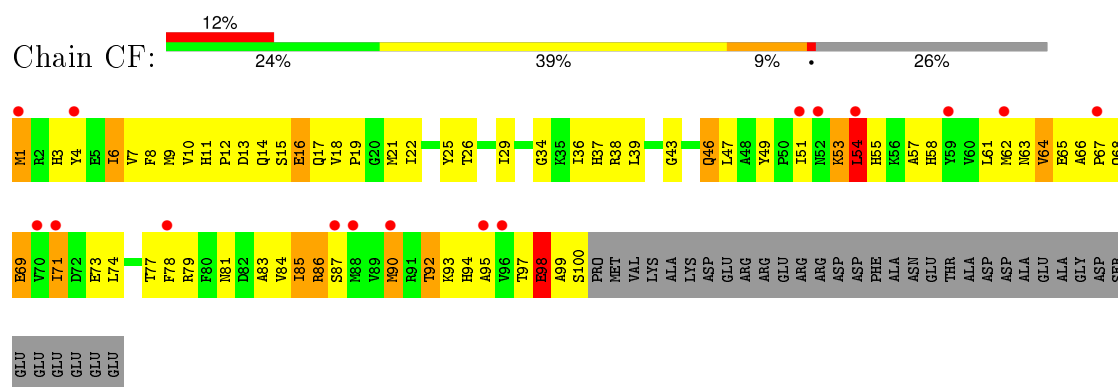




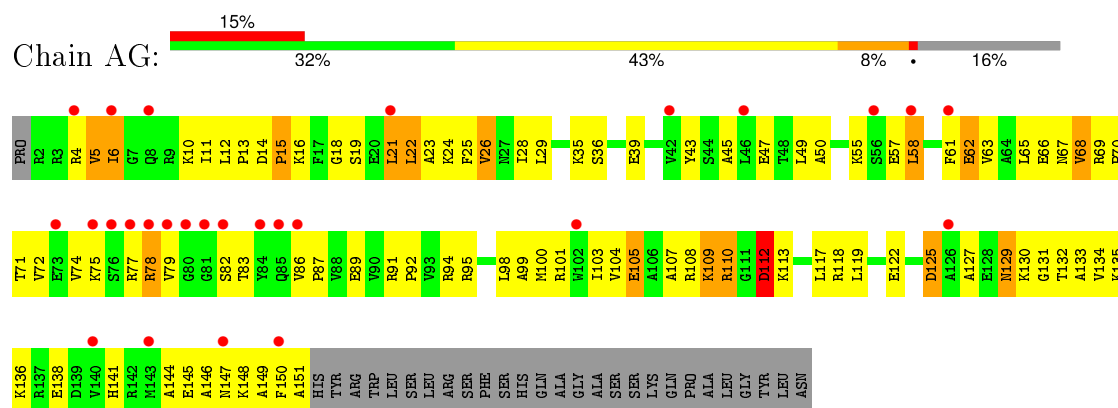
• Molecule 5: 30S ribosomal protein S6



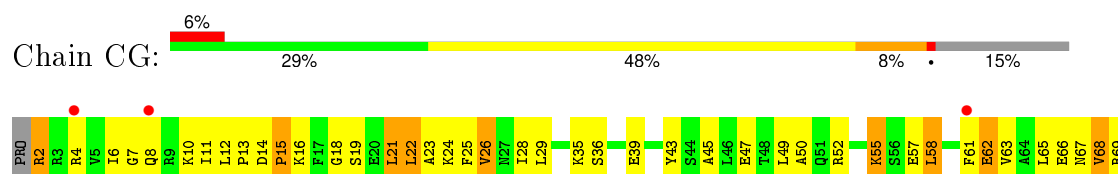
• Molecule 5: 30S ribosomal protein S6

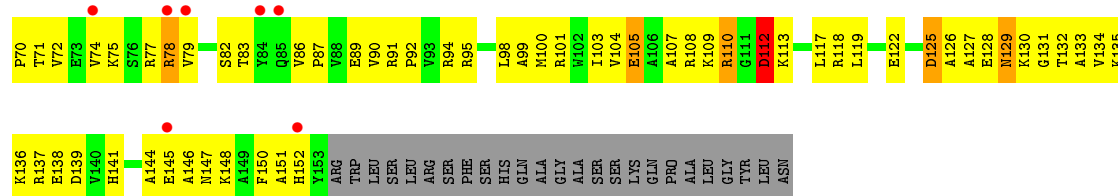


• Molecule 6: 30S ribosomal protein S7

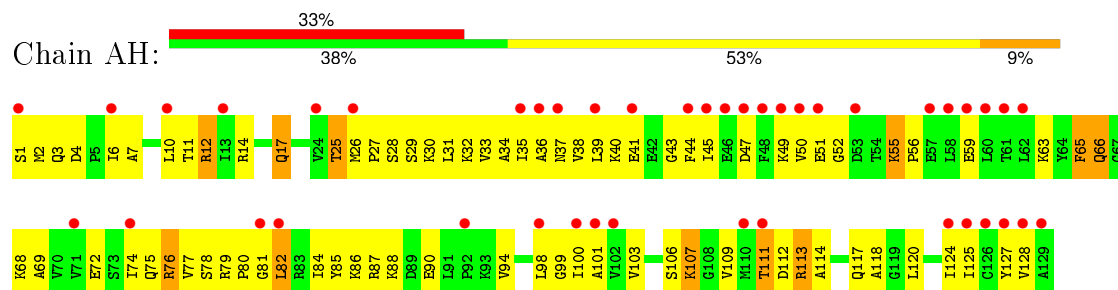


• Molecule 6: 30S ribosomal protein S7

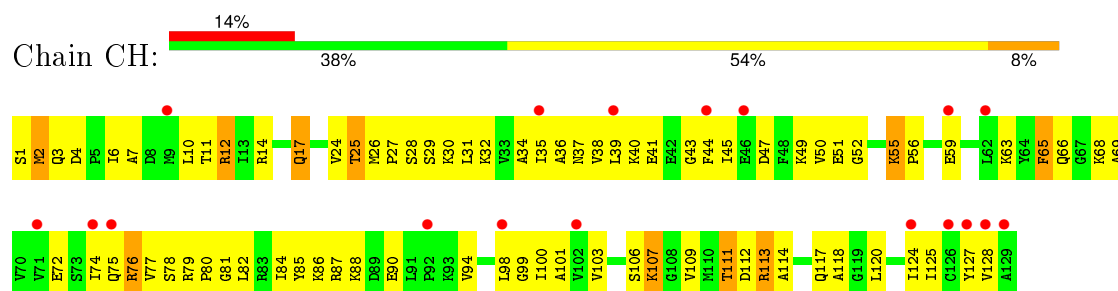




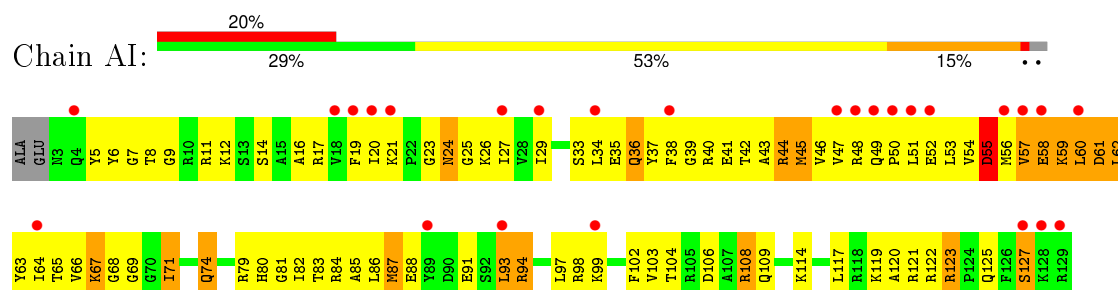
### • Molecule 7: 30S ribosomal protein S8



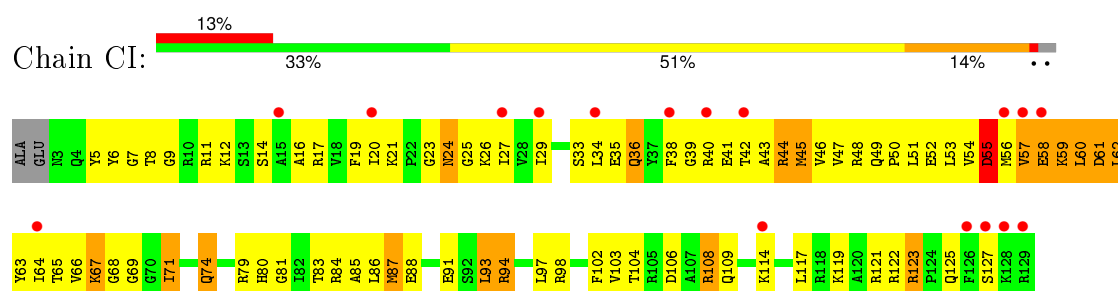
### • Molecule 7: 30S ribosomal protein S8



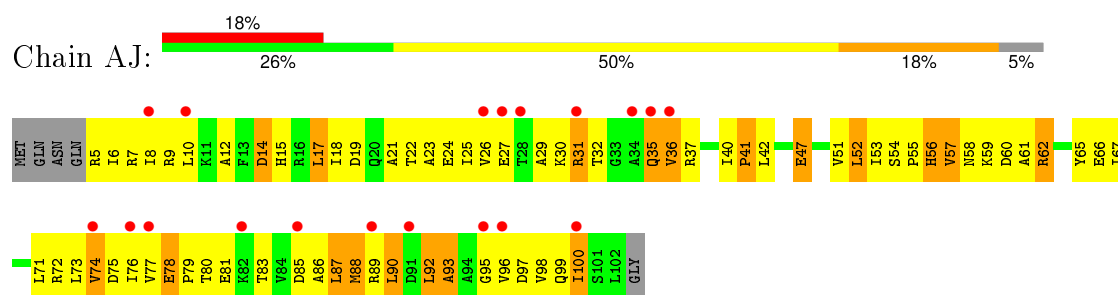
### • Molecule 8: 30S ribosomal protein S9



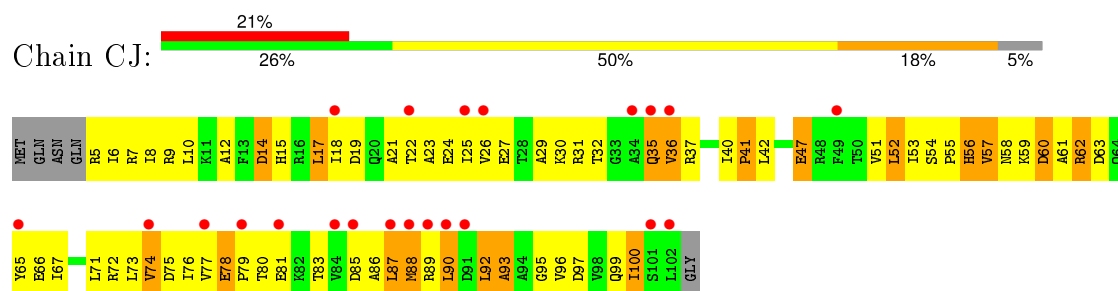
### • Molecule 8: 30S ribosomal protein S9



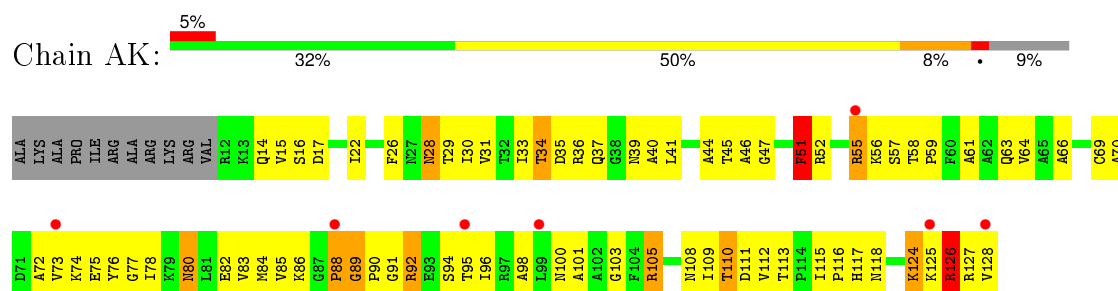
### • Molecule 9: 30S ribosomal protein S10



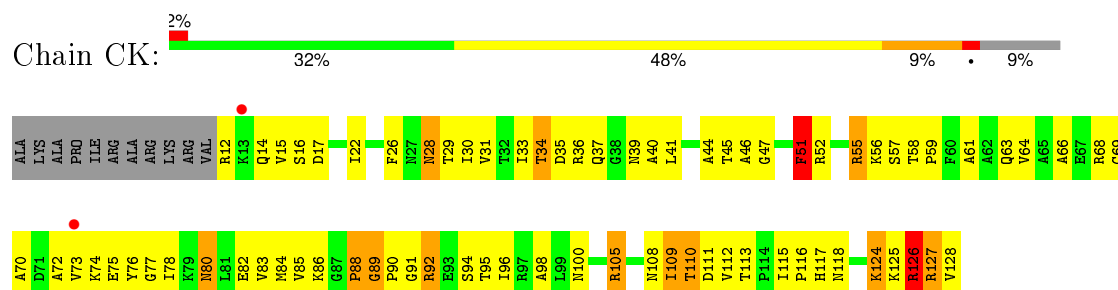
- Molecule 9: 30S ribosomal protein S10



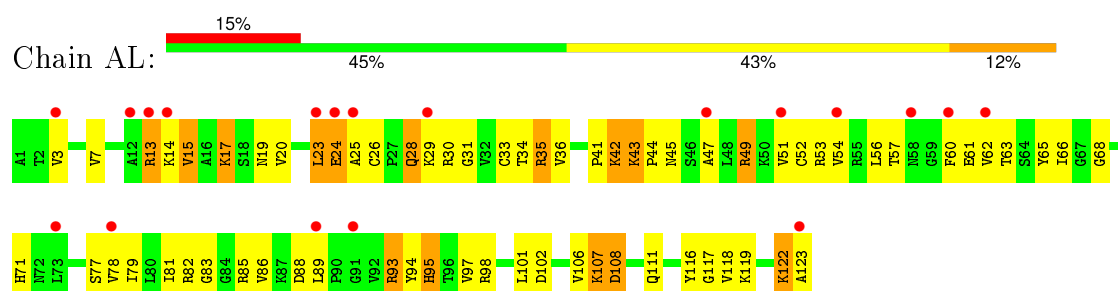
- Molecule 10: 30S ribosomal protein S11




- Molecule 10: 30S ribosomal protein S11

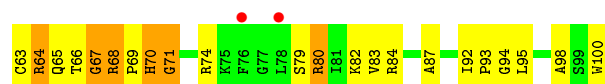


- Molecule 11: 30S ribosomal protein S12

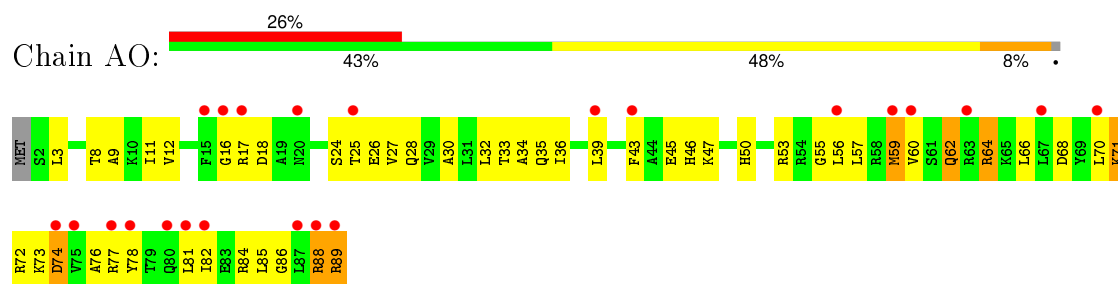




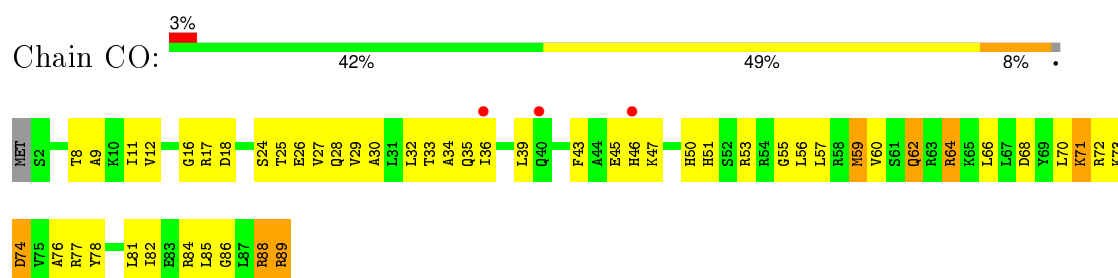
- Chain CN: 



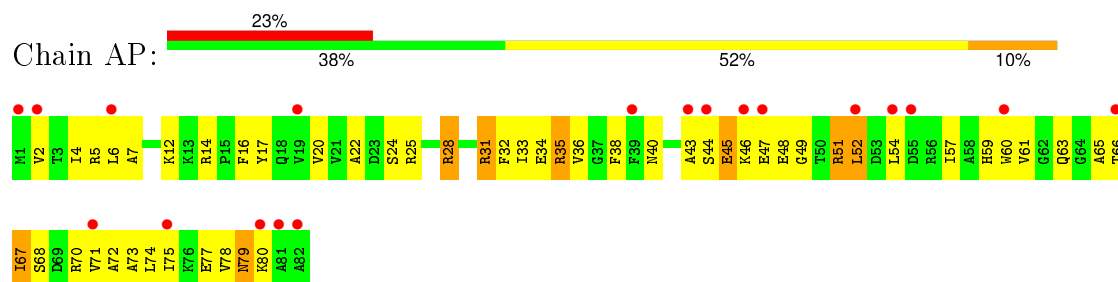
- Molecule 14: 30S ribosomal protein S15



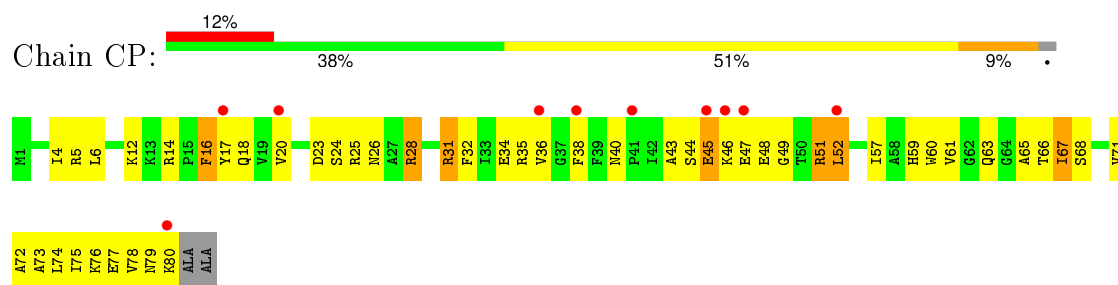
- Molecule 14: 30S ribosomal protein S15



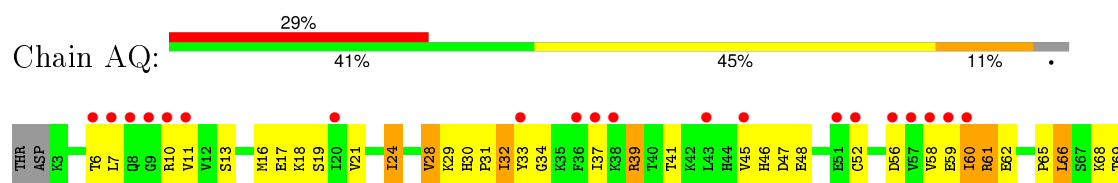
- Molecule 15: 30S ribosomal protein S16

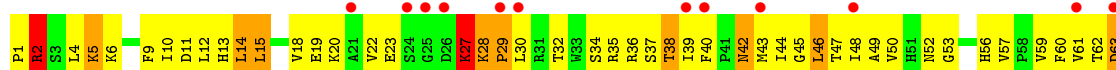


- Molecule 15: 30S ribosomal protein S16

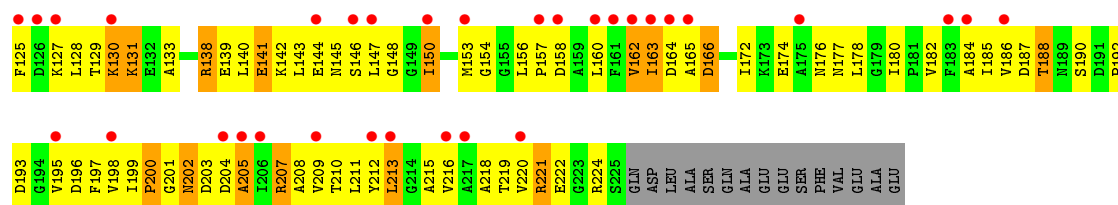


- Molecule 16: 30S ribosomal protein S17

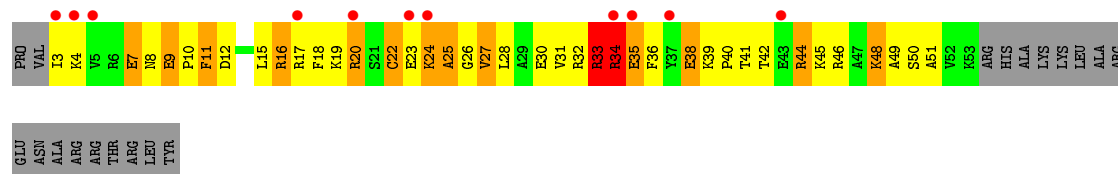




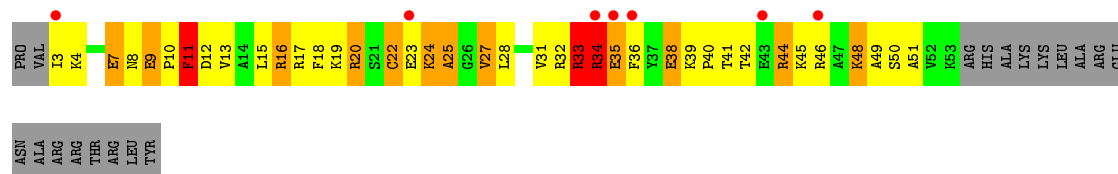
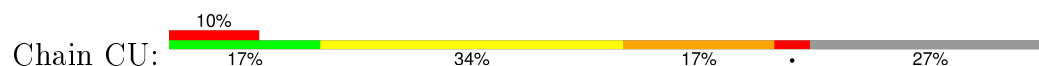




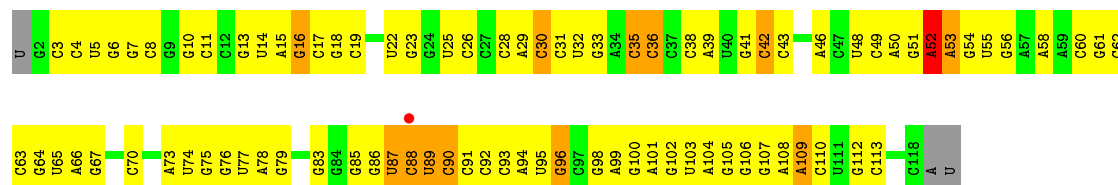
• Molecule 21: 30S ribosomal protein S21



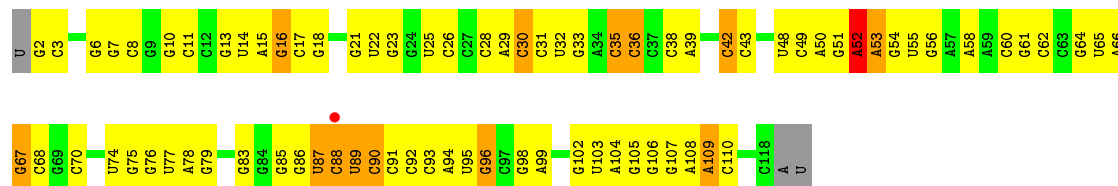
• Molecule 21: 30S ribosomal protein S21



• Molecule 22: 5S rRNA



• Molecule 22: 5S rRNA



• Molecule 23: 23S rRNA



G1051	A984	A918	A849	G774	A699	G636	U567	G498	G426	G350	U280	C208	A142	G68	G1
G1052	C987	U919	U850	G775	G700	A637	U570	U499	U427	C351	C281	C209	C143	C69	G2
G1053	A988	C921	C851	G776	U571	G638	G570	G500	A428	A352	A282	G214	C144	C70	U3
A1054	A988	A920	U852	G777	G704	C640	A572	A503	U431	A354	U284	G215	C145	A71	U4
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G1057	C991	G924	G855	A782	U709	A644	A575	A508	U434	G359	G287	G218	U150	A74	C7
G1058	C992	A925	G856	A783	U710	C645	A576	A508	C435	G359	U288	G219	C151	G75	C8
G1059	G993	G926	G857	G784	U576	U646	G577	C510	U436	U360	G289	A220	A152	C76	G9
G1060	C994	A927	G858	G785	U576	U647	G577	C510	G438	G361	U290	G221	U153	C77	A10
G1061	C995	G927	G859	G786	G713	C647	G577	C510	U439	G362	U291	A222	U154	C78	A11
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C1064	C998	U931	C864	A716	A716	G652	A582	G513	U442	C364	G297	U225	C157	U82	C16
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G1115	C1049	A982	U913	U844	U769	G695	A632	C562	G495	G424	A346	G277	U206	C140	U65
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U2143	G2012	G2012	G1933	A1866	C1726	A1574	A1509	A1439	A1373	U1219	U1219	A1147
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C	G2102	G2035	U1957	A1821	A1678	U1596	C1536	G1465	G1399	G1251	G1251	G1171
U	C2103	C2036	C1957	G1822	U1679	A1597	G1537	U1466	G1323	C1252	C1252	C1172
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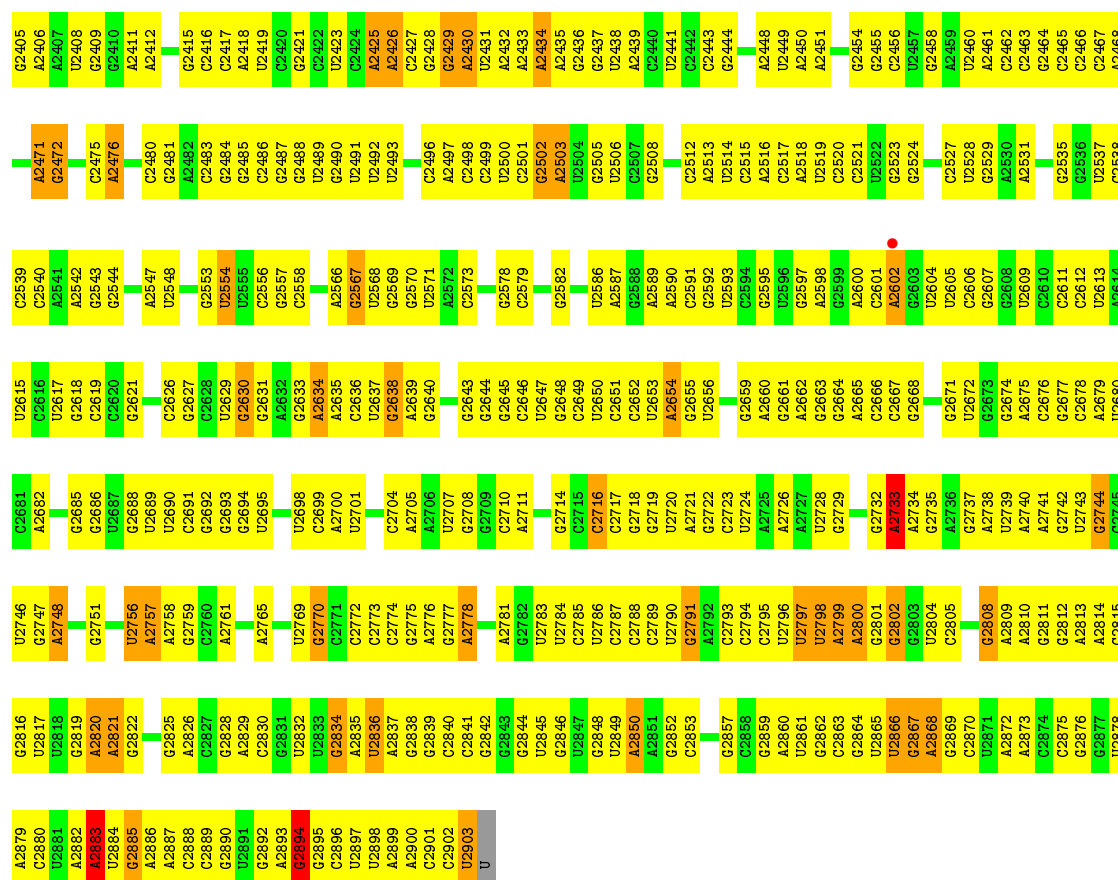
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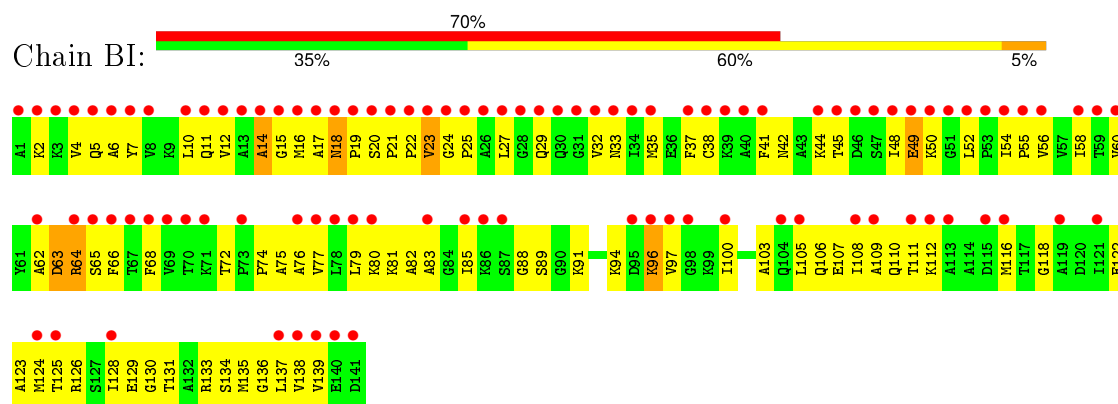




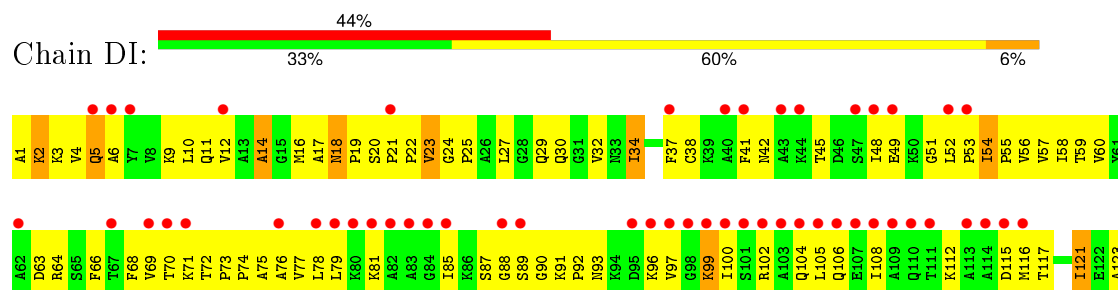


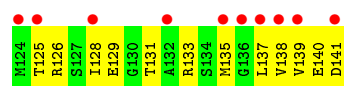


• Molecule 24: 50S ribosomal protein L11

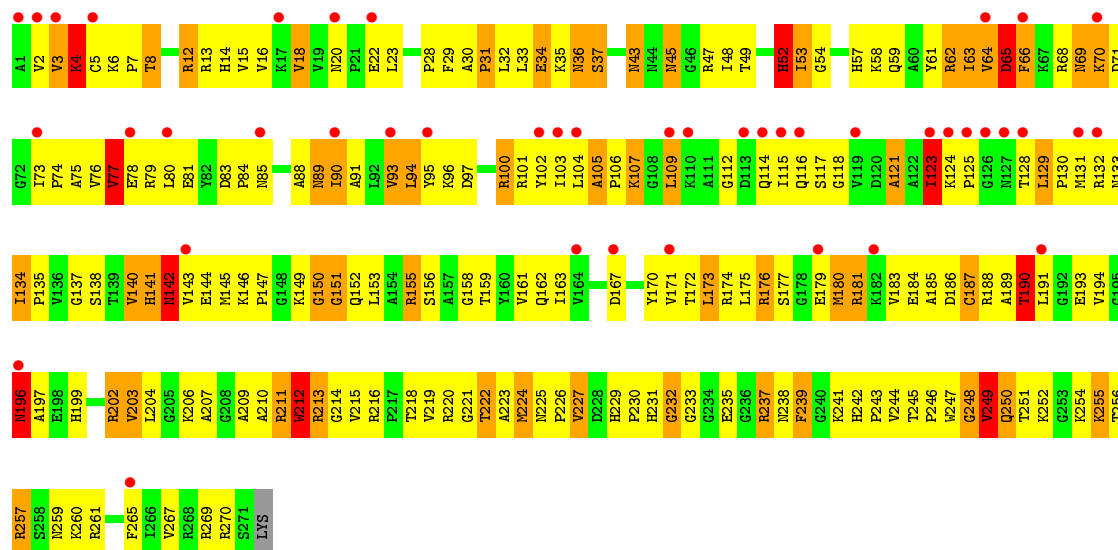


• Molecule 24: 50S ribosomal protein L11

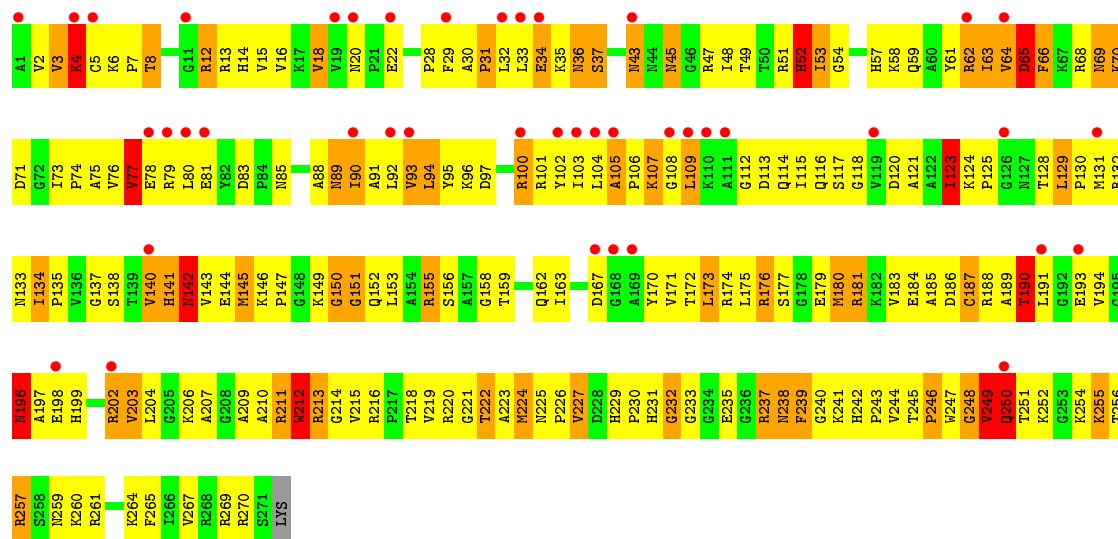




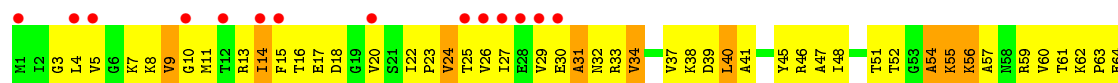
• Molecule 25: 50S ribosomal protein L2

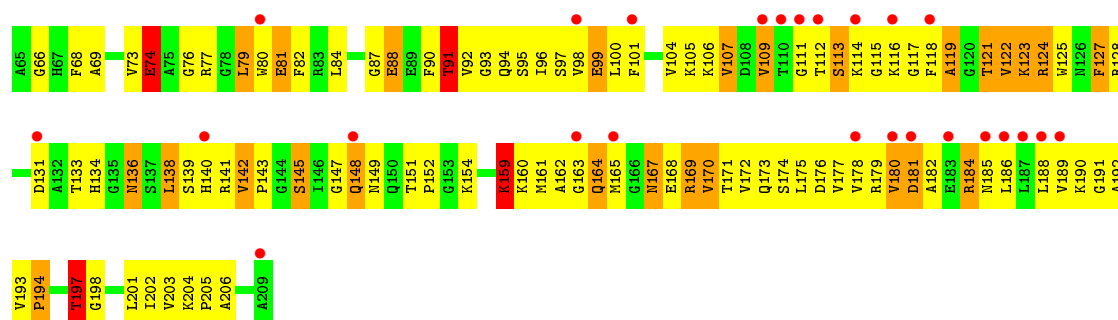


• Molecule 25: 50S ribosomal protein L2

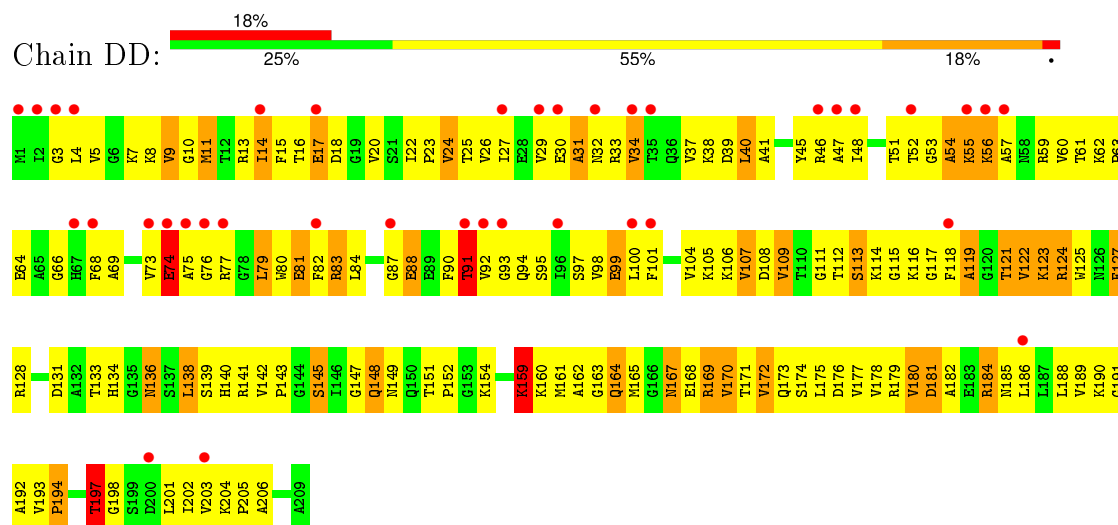


• Molecule 26: 50S ribosomal protein L3

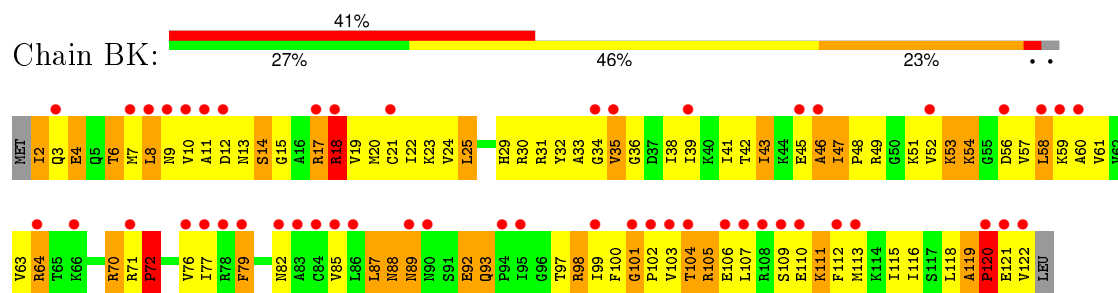




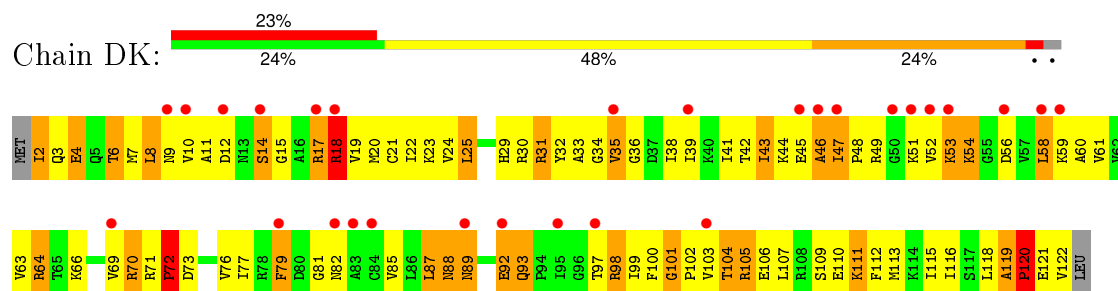
- Molecule 26: 50S ribosomal protein L3



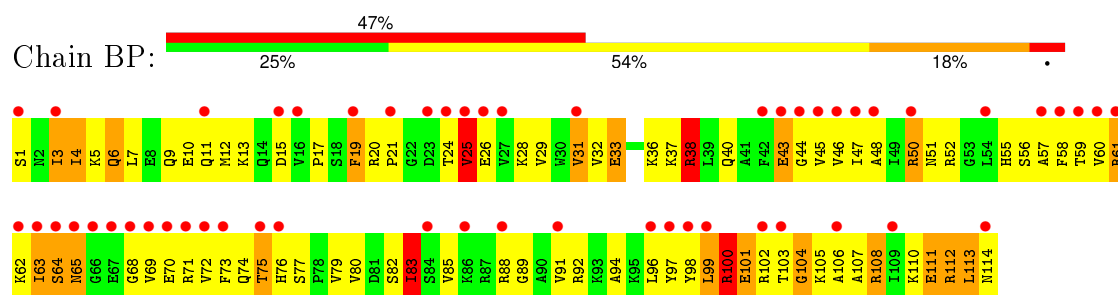
- Molecule 27: 50S ribosomal protein L14



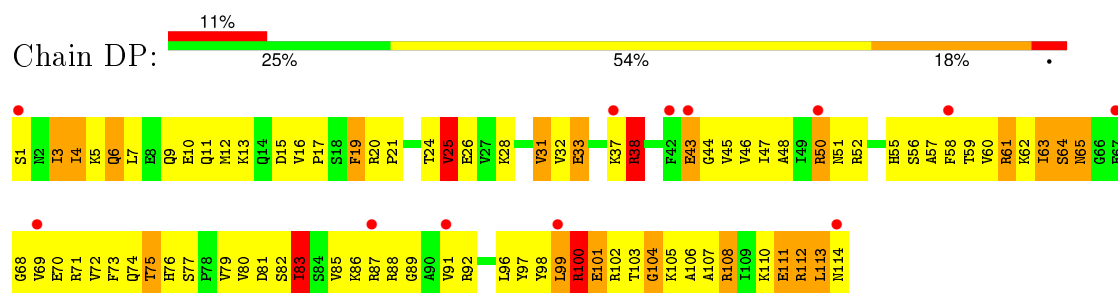
- Molecule 27: 50S ribosomal protein L14



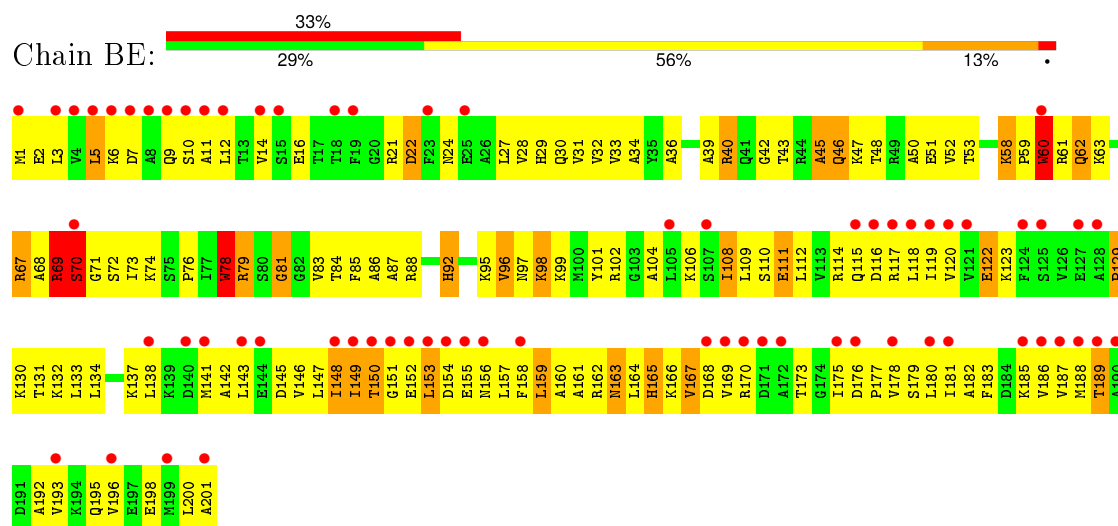
- Molecule 28: 50S ribosomal protein L19



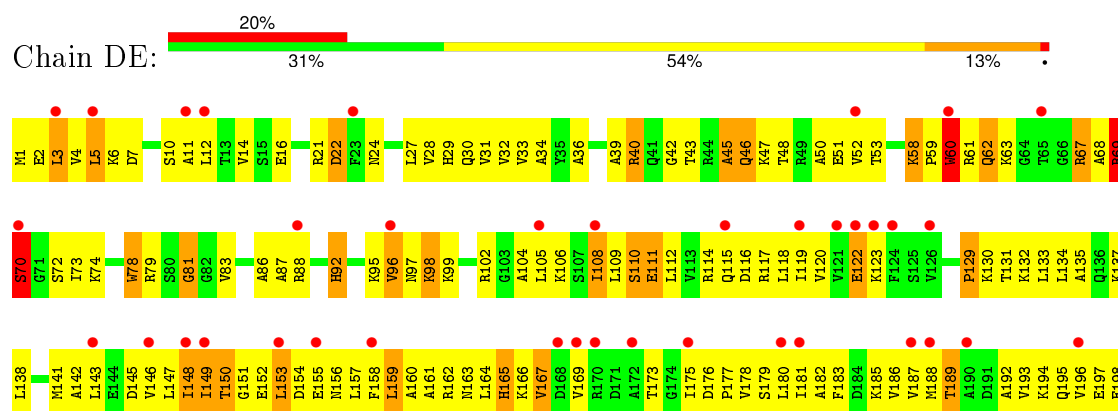
- Molecule 28: 50S ribosomal protein L19



- Molecule 29: 50S ribosomal protein L4

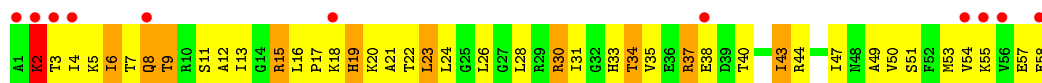


- Molecule 29: 50S ribosomal protein L4

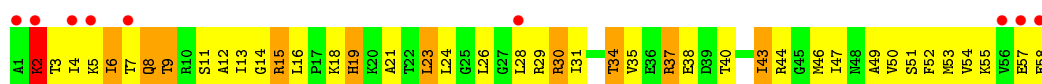




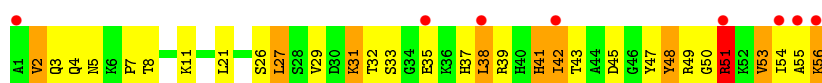
- Molecule 30: 50S ribosomal protein L30



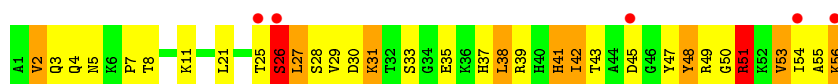
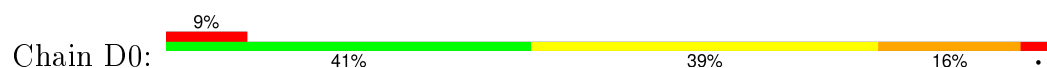
- Molecule 30: 50S ribosomal protein L30



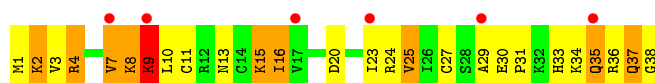
- Molecule 31: 50S ribosomal protein L32



- Molecule 31: 50S ribosomal protein L32



- Molecule 32: 50S ribosomal protein L36



- Molecule 32: 50S ribosomal protein L36



- Molecule 33: 50S ribosomal protein L33





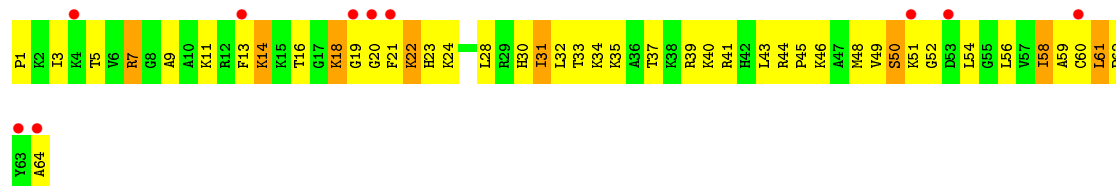
• Molecule 33: 50S ribosomal protein L33



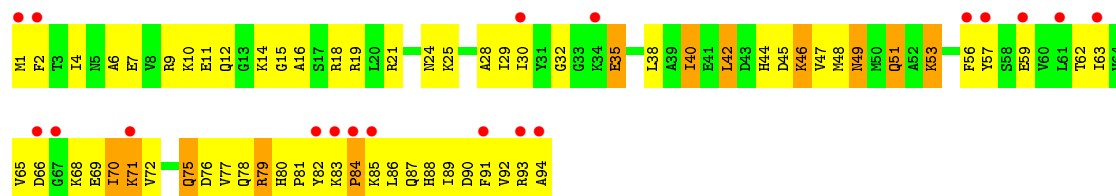
• Molecule 34: 50S ribosomal protein L35



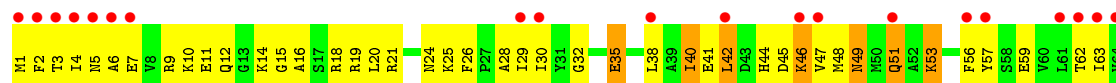
• Molecule 34: 50S ribosomal protein L35



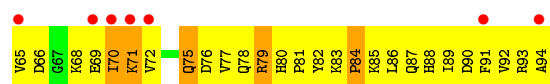
• Molecule 35: 50S ribosomal protein L25



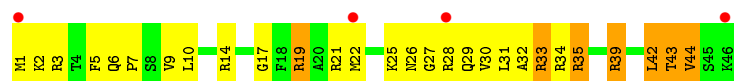
• Molecule 35: 50S ribosomal protein L25



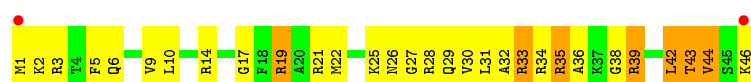




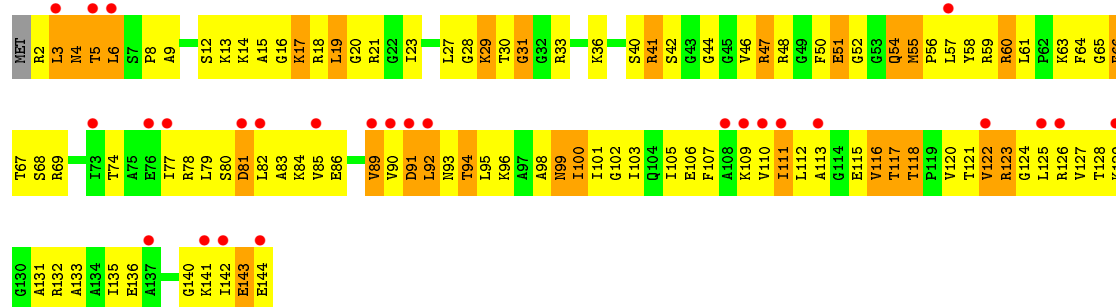
- Molecule 36: 50S ribosomal protein L34



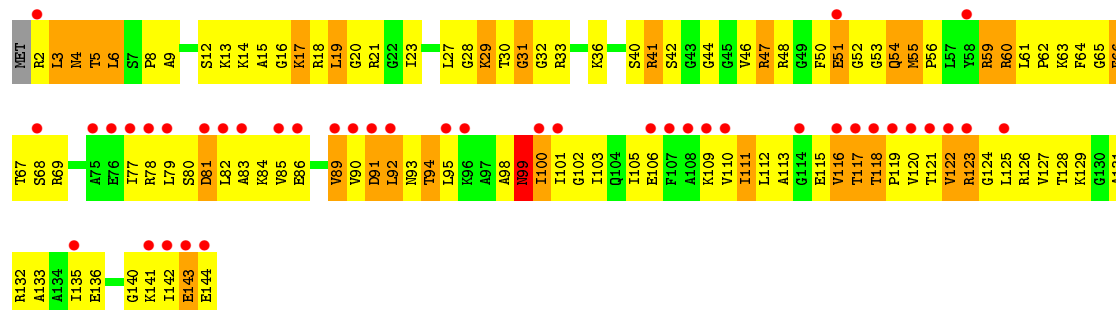
- Molecule 36: 50S ribosomal protein L34



- Molecule 37: 50S ribosomal protein L15

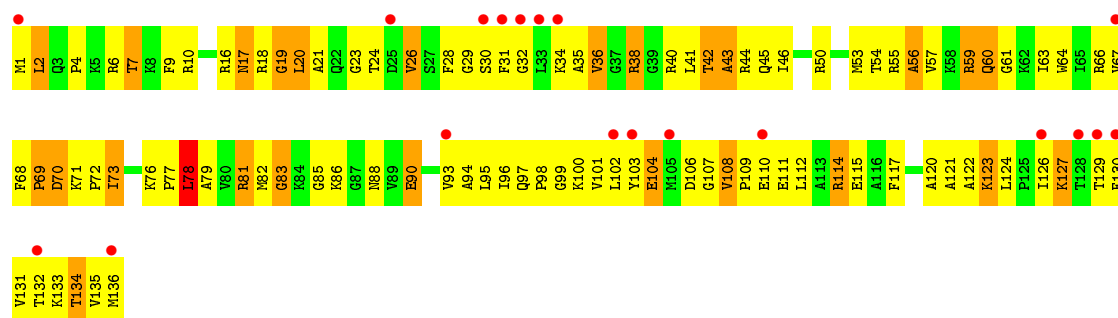


- Molecule 37: 50S ribosomal protein L15

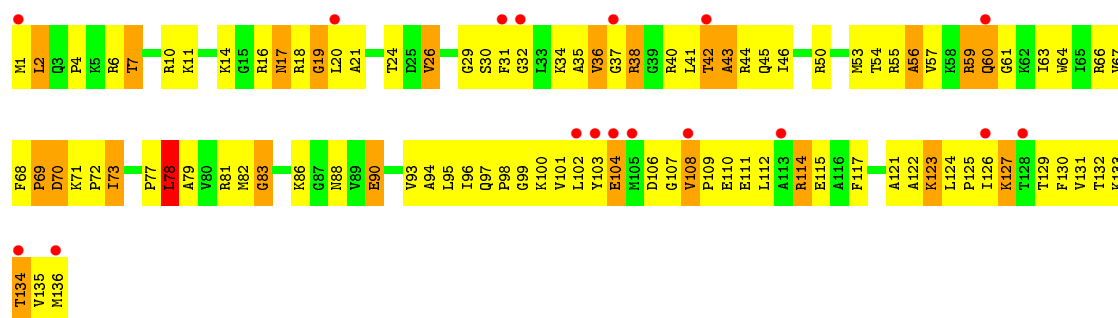


- Molecule 38: 50S ribosomal protein L16

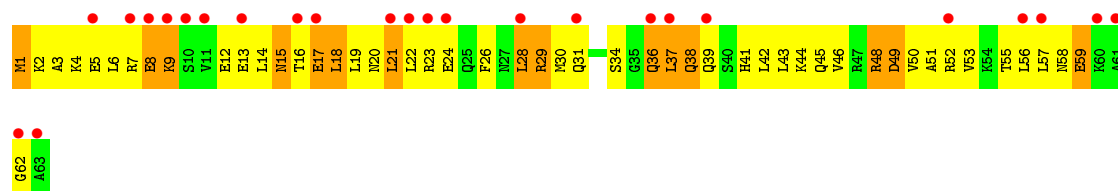




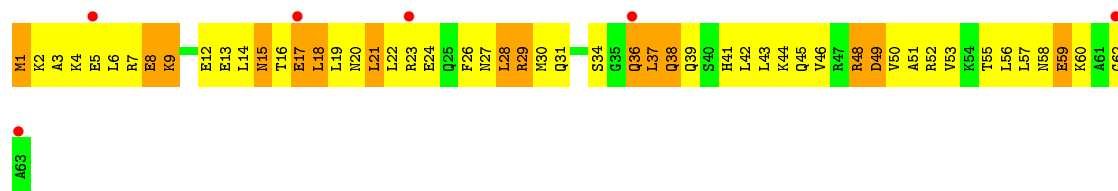
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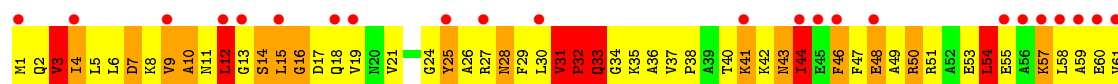
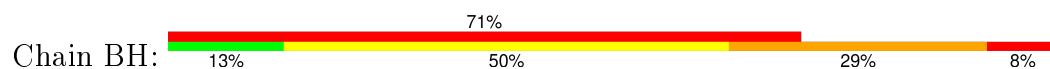
• Molecule 39: 50S ribosomal protein L29

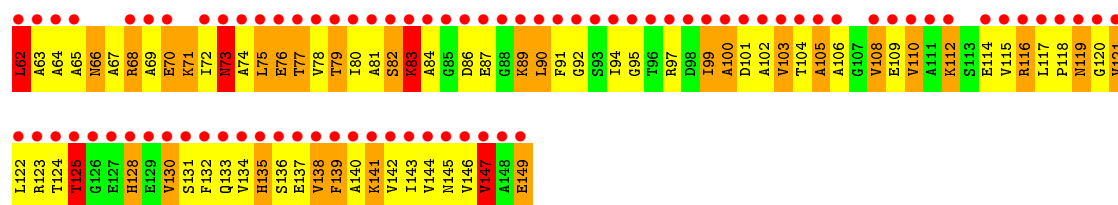


• Molecule 39: 50S ribosomal protein L29

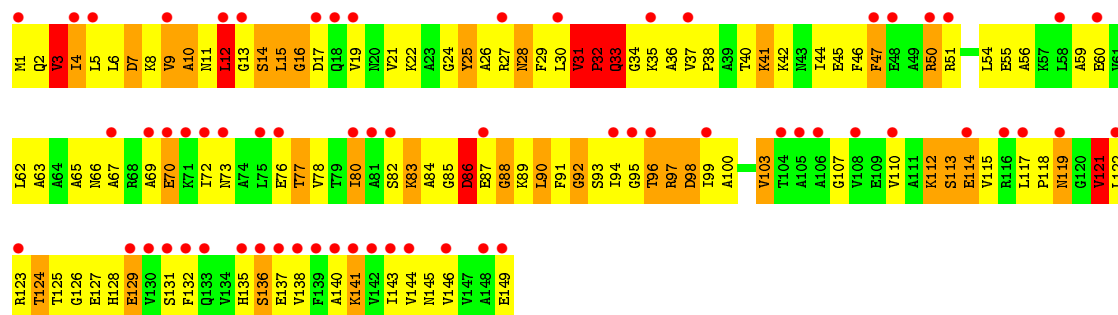


• Molecule 40: 50S ribosomal protein L9

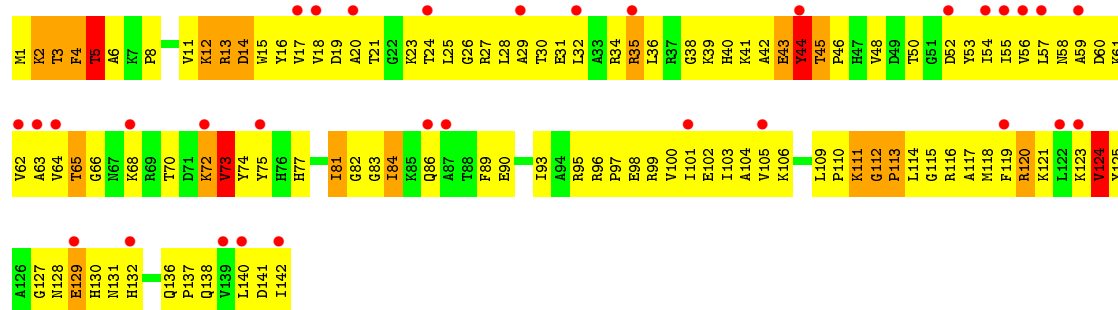




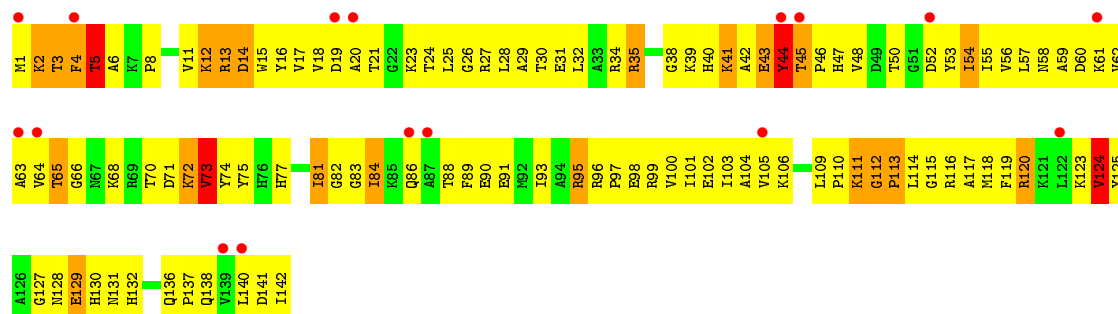
• Molecule 40: 50S ribosomal protein L9



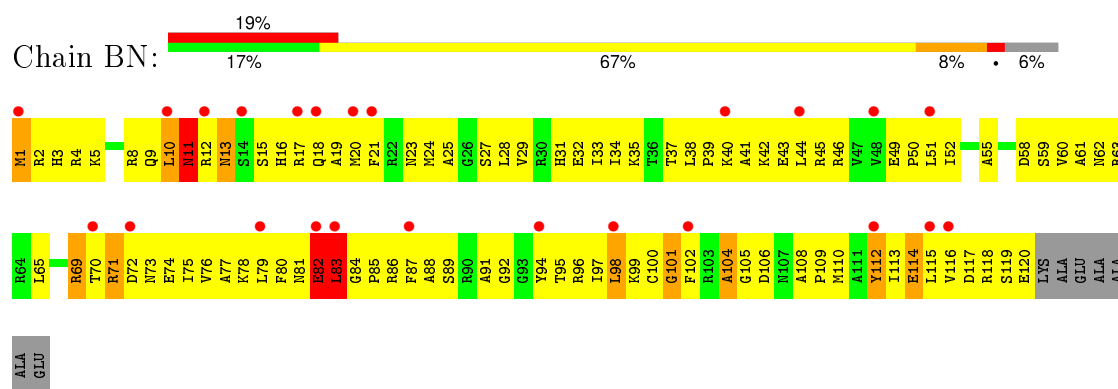
• Molecule 41: 50S ribosomal protein L13



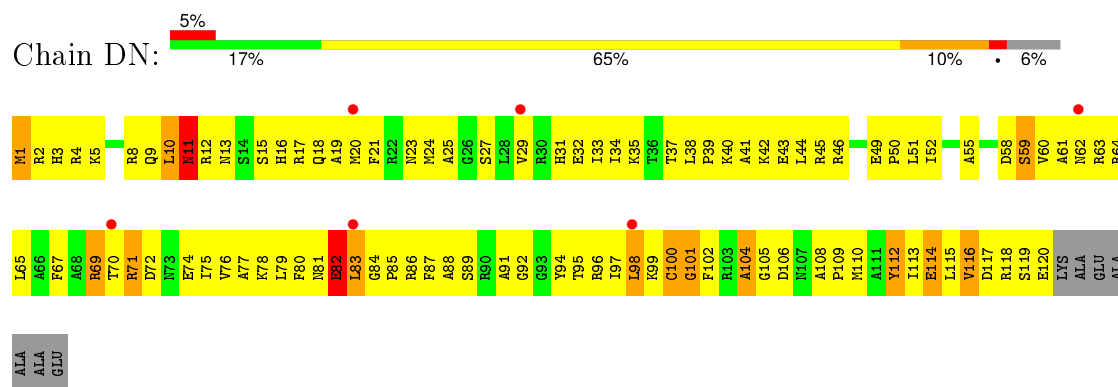
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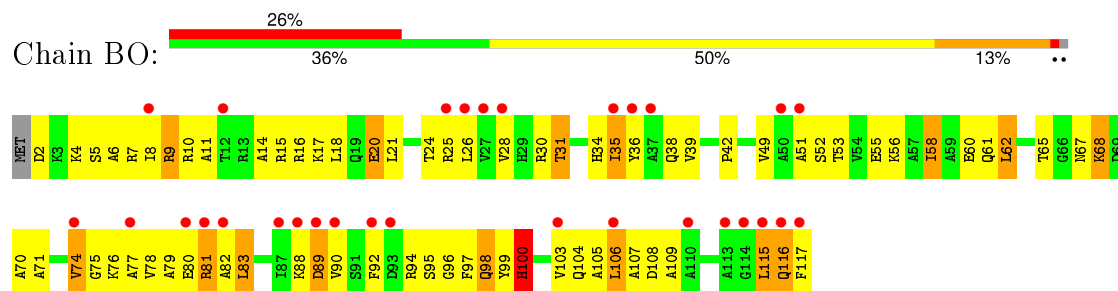
• Molecule 42: 50S ribosomal protein L17



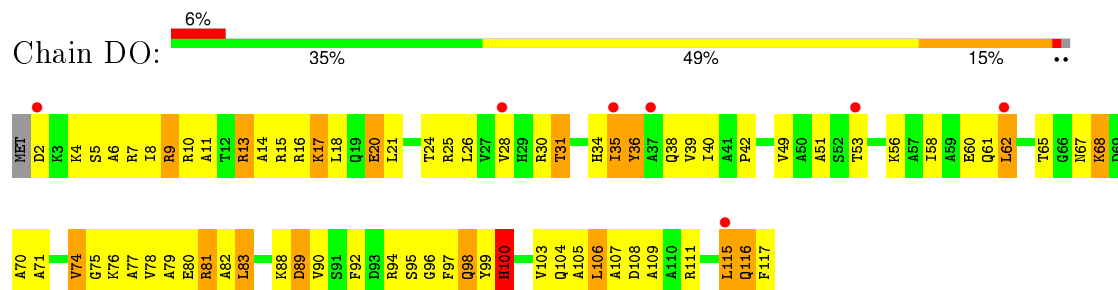
- Molecule 42: 50S ribosomal protein L17



- Molecule 43: 50S ribosomal protein L18

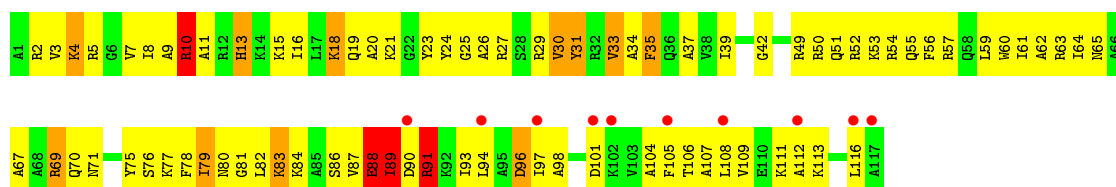


- Molecule 43: 50S ribosomal protein L18

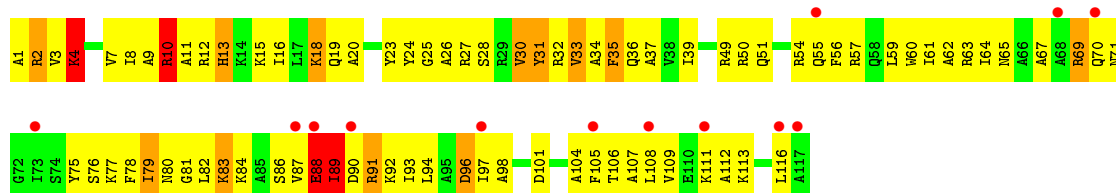


- Molecule 44: 50S ribosomal protein L20

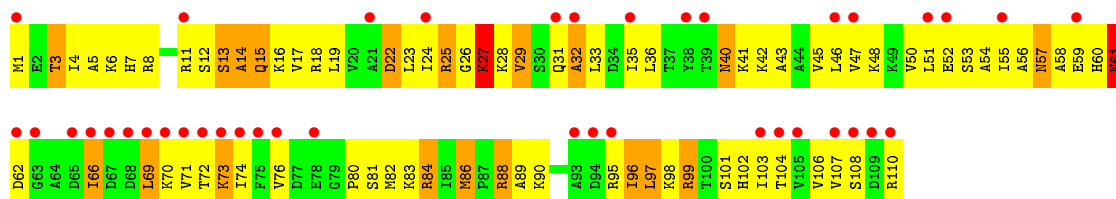




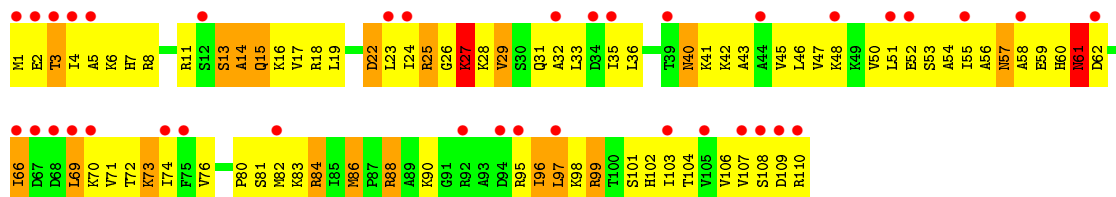
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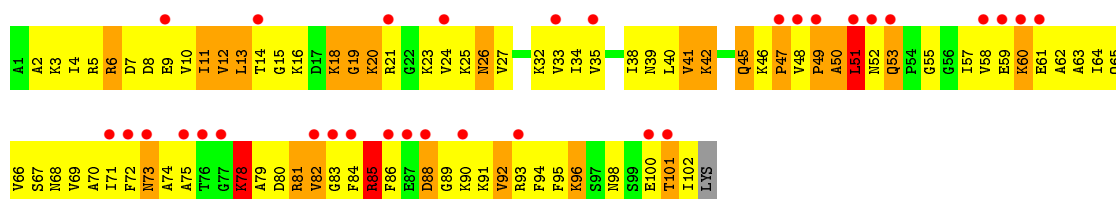
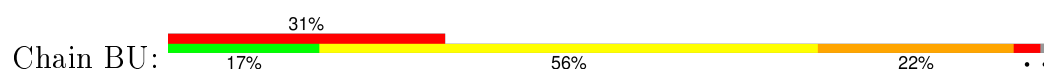
• Molecule 45: 50S ribosomal protein L22



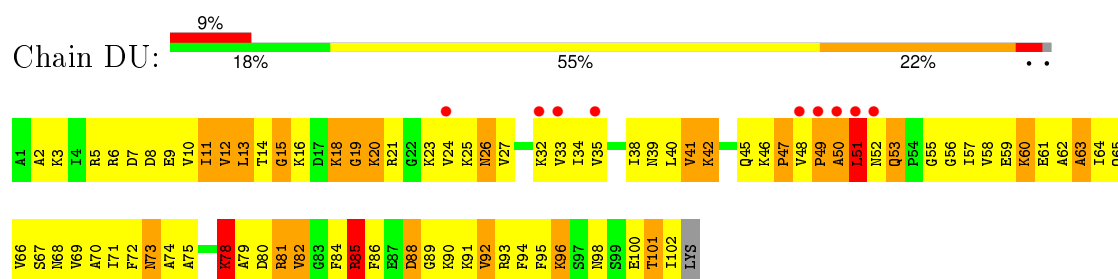
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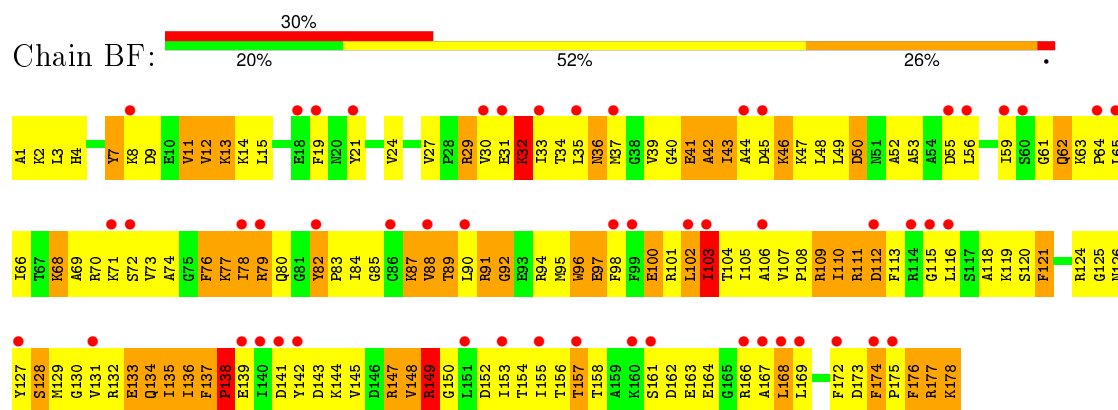
• Molecule 46: 50S ribosomal protein L24



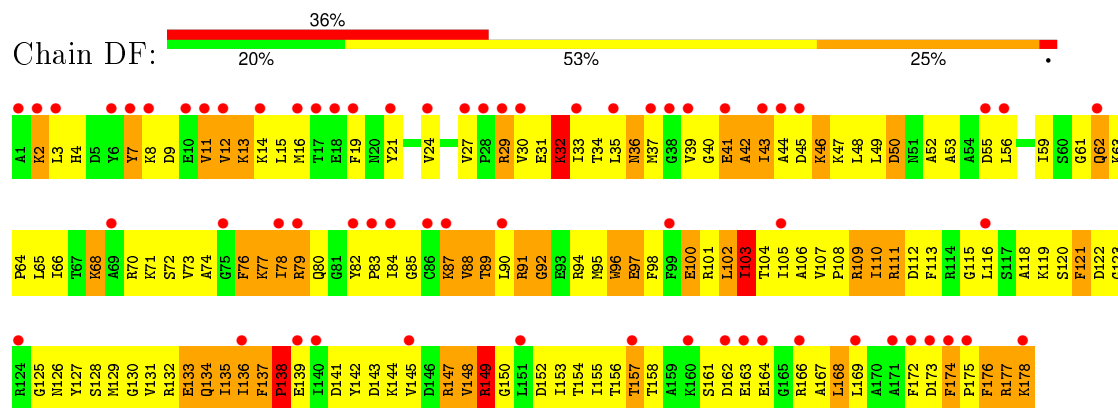
• Molecule 46: 50S ribosomal protein L24



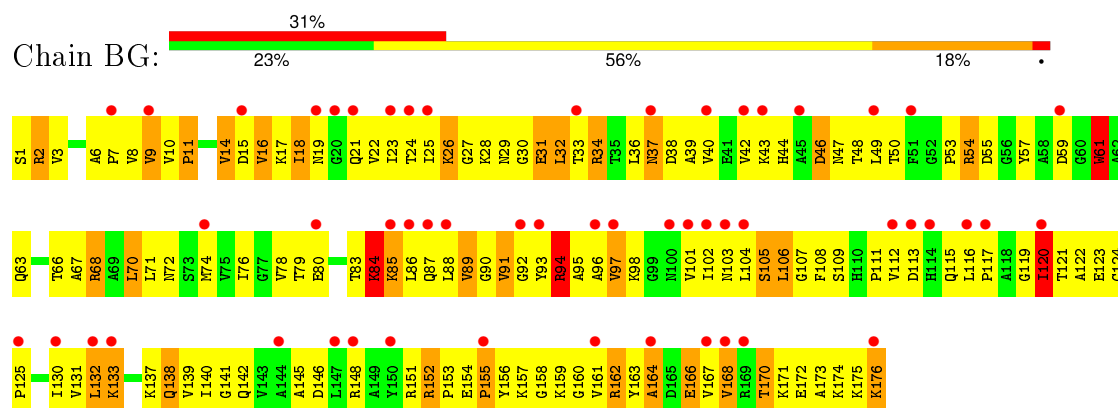
• Molecule 47: 50S ribosomal protein L5



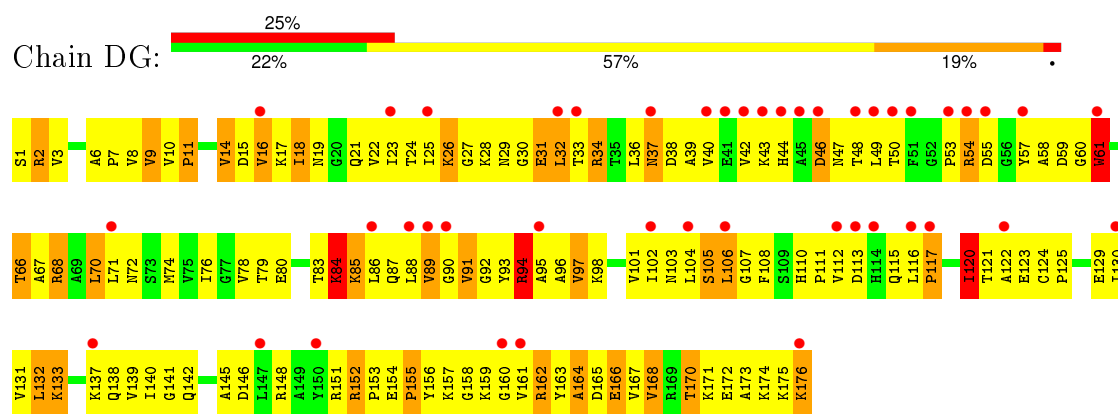
• Molecule 47: 50S ribosomal protein L5



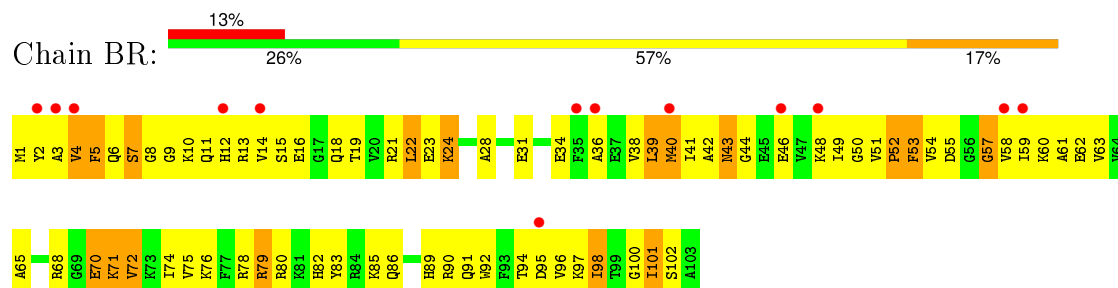
• Molecule 48: 50S ribosomal protein L6



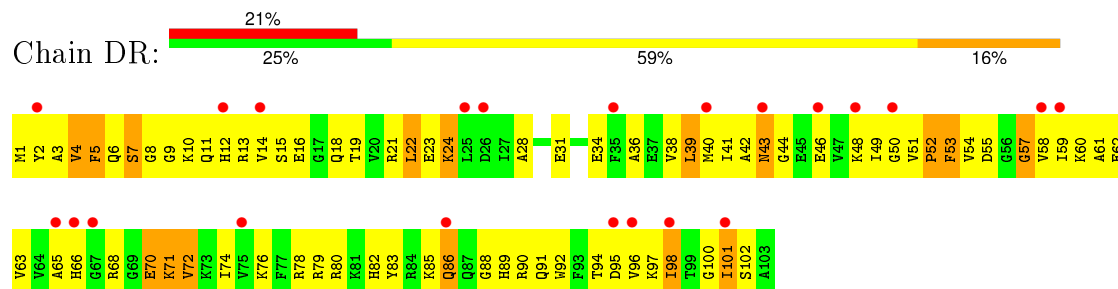
• Molecule 48: 50S ribosomal protein L6



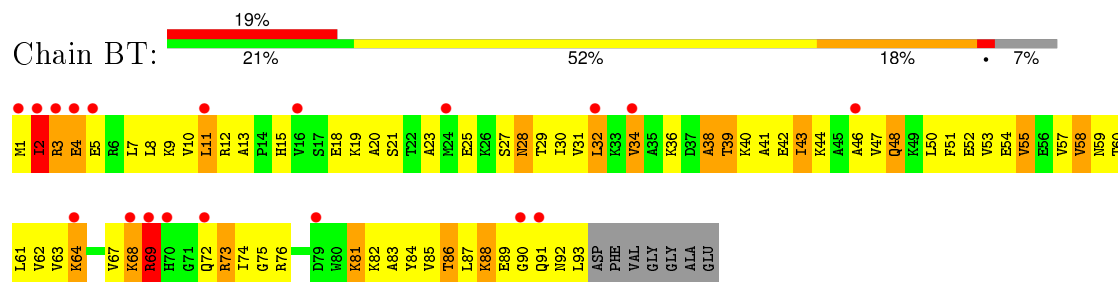
• Molecule 49: 50S ribosomal protein L21



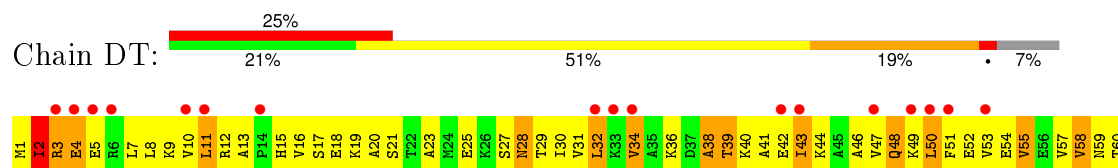
• Molecule 49: 50S ribosomal protein L21



• Molecule 50: 50S ribosomal protein L23

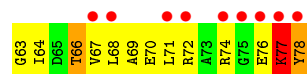
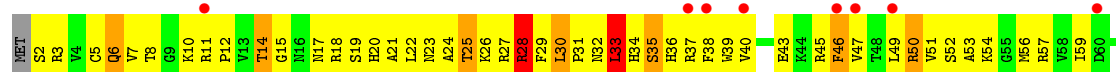


• Molecule 50: 50S ribosomal protein L23

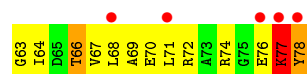
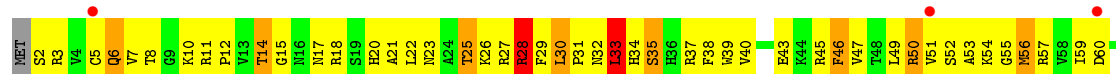




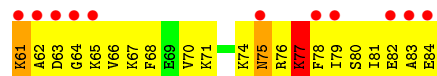
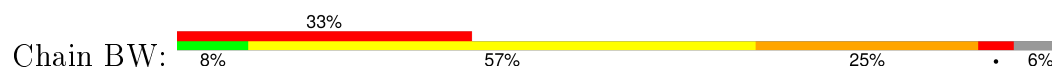
- Molecule 51: 50S ribosomal protein L28



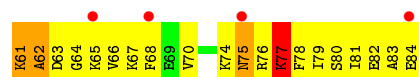
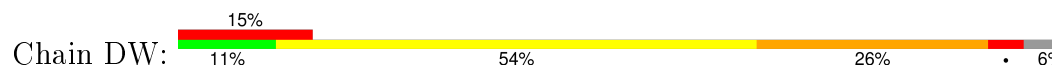
- Molecule 51: 50S ribosomal protein L28



- Molecule 52: 50S ribosomal protein L27



- Molecule 52: 50S ribosomal protein L27





## 4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	208.85Å 379.20Å 739.28Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	70.00 – 3.21 138.41 – 3.22	Depositor EDS
% Data completeness (in resolution range)	(Not available) (70.00-3.21) 66.7 (138.41-3.22)	Depositor EDS
$R_{merge}$	0.11	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.54 (at 3.19Å)	Xtriage
Refinement program	CNS	Depositor
R, $R_{free}$	0.274 , 0.309 0.243 , 0.277	Depositor DCC
$R_{free}$ test set	30050 reflections (5.04%)	DCC
Wilson B-factor (Å <sup>2</sup> )	93.7	Xtriage
Anisotropy	0.398	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.24 , 62.8	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.49$ , $\langle L^2 \rangle = 0.32$	Xtriage
Outliers	0 of 626512 reflections	Xtriage
$F_o, F_c$ correlation	0.91	EDS
Total number of atoms	284172	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	72.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.47% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities estimated from amplitudes.

<sup>2</sup>Theoretical 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, NMY

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	0.25	1/36762 (0.0%)	0.75	12/57350 (0.0%)
1	CA	0.26	1/36762 (0.0%)	0.75	16/57350 (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	0.24	0/1118	0.46	0/1504
4	CE	0.23	0/1118	0.46	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	0.45	0/1326
7	CH	0.23	0/989	0.45	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	0.49	0/1077
10	AK	0.24	0/893	0.47	0/1205
10	CK	0.24	0/893	0.47	0/1205
11	AL	0.22	0/969	0.49	0/1300
11	CL	0.22	0/969	0.49	0/1300
12	AM	0.21	0/892	0.46	0/1193
12	CM	0.21	0/884	0.45	0/1181
13	AN	0.24	0/785	0.48	0/1043
13	CN	0.24	0/785	0.48	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	0.23	0/666	0.48	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	0.48	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	0.48	0/570
22	BA	0.24	0/2803	0.75	1/4371 (0.0%)
22	DA	0.24	0/2803	0.75	1/4371 (0.0%)
23	BB	0.28	8/68314 (0.0%)	0.77	42/106569 (0.0%)
23	DB	0.28	9/68314 (0.0%)	0.77	48/106569 (0.0%)
24	BI	0.24	0/1046	0.47	0/1410
24	DI	0.25	0/1046	0.49	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	0.49	0/2134
26	DD	0.24	0/1586	0.49	0/2134
27	BK	0.24	0/939	0.56	0/1258
27	DK	0.24	0/939	0.56	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	0.51	0/2113
29	DE	0.24	0/1571	0.51	0/2113
30	BY	0.23	0/453	0.50	0/605
30	DY	0.23	0/453	0.50	0/605
31	B0	0.22	0/450	0.56	0/599
31	D0	0.22	0/450	0.56	0/599
32	B4	0.23	0/303	0.48	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	0.42	0/1025
35	DV	0.25	0/766	0.42	0/1025
36	B2	0.26	0/380	0.47	0/498
36	D2	0.26	0/380	0.47	0/498
37	BL	0.23	0/1054	0.48	0/1403
37	DL	0.24	0/1054	0.49	0/1403
38	BM	0.25	0/1093	0.49	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	0.53	0/677
39	DX	0.24	0/510	0.53	0/677
40	BH	0.25	0/1122	0.48	0/1515
40	DH	0.25	0/1122	0.49	0/1515
41	BJ	0.23	0/1152	0.48	0/1551
41	DJ	0.23	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	0.49	0/1209
43	DO	0.23	0/902	0.49	0/1209
44	BQ	0.26	0/960	0.50	0/1278
44	DQ	0.26	0/960	0.50	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	0.48	0/1051
47	BF	0.26	0/1444	0.52	0/1937
47	DF	0.26	0/1444	0.52	0/1937
48	BG	0.23	0/1343	0.47	0/1816
48	DG	0.23	0/1343	0.47	0/1816
49	BR	0.25	0/829	0.49	0/1107
49	DR	0.25	0/829	0.49	0/1107
50	BT	0.23	0/744	0.57	0/994
50	DT	0.23	0/744	0.57	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	0.53	0/797
52	DW	0.28	0/603	0.53	0/797
All	All	0.26	19/306360 (0.0%)	0.70	120/457969 (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	13
1	CA	0	11
23	BB	0	43
23	DB	0	42
All	All	0	109

All (19) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	DB	1086	A	C5-C6	-16.27	1.26	1.41
23	BB	1086	A	C5-C6	-16.18	1.26	1.41
23	BB	1088	A	C6-N1	-10.58	1.28	1.35
23	DB	1088	A	C6-N1	-10.47	1.28	1.35
23	DB	2323	G	O3'-P	9.74	1.72	1.61
23	DB	1060	U	C2-N3	7.84	1.43	1.37
23	BB	1060	U	C2-N3	7.75	1.43	1.37
23	DB	2318	G	O3'-P	-7.29	1.52	1.61
23	BB	1086	A	N3-C4	-6.97	1.30	1.34
23	DB	1086	A	N3-C4	-6.86	1.30	1.34
23	BB	1086	A	N7-C5	-6.47	1.35	1.39
23	BB	2267	A	C5-C6	-6.45	1.35	1.41
23	DB	1086	A	N7-C5	-6.44	1.35	1.39
23	DB	2267	A	C5-C6	-6.39	1.35	1.41
23	DB	2280	G	O3'-P	5.81	1.68	1.61
23	BB	2325	G	P-OP2	5.78	1.58	1.49
1	CA	495	A	N3-C4	-5.21	1.31	1.34
1	AA	495	A	N3-C4	-5.11	1.31	1.34
23	BB	2267	A	C4'-C3'	-5.05	1.47	1.52

All (120) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DB	2204	G	O5'-P-OP1	-29.64	75.14	110.70
23	BB	2204	G	O5'-P-OP2	-28.20	76.86	110.70
23	BB	2791	G	O5'-P-OP1	-27.64	77.53	110.70
23	DB	2791	G	O5'-P-OP2	-26.90	78.42	110.70
23	BB	2791	G	O5'-P-OP2	18.64	133.06	110.70
23	DB	2791	G	O5'-P-OP1	18.57	132.98	110.70
23	BB	2204	G	O5'-P-OP1	17.75	132.00	110.70
23	DB	2204	G	O5'-P-OP2	17.72	131.96	110.70
23	BB	2790	U	OP1-P-O3'	14.84	137.84	105.20
23	DB	2790	U	OP2-P-O3'	14.73	137.61	105.20
23	DB	2203	U	OP1-P-O3'	14.35	136.76	105.20
23	BB	2203	U	OP2-P-O3'	14.09	136.19	105.20
23	BB	1552	A	N9-C1'-C2'	-9.40	101.66	112.00
23	DB	1552	A	N9-C1'-C2'	-9.38	101.69	112.00
23	DB	1397	U	C5'-C4'-C3'	-8.56	102.31	116.00
23	BB	1397	U	C5'-C4'-C3'	-8.46	102.46	116.00
23	DB	1088	A	N1-C6-N6	-8.28	113.63	118.60
23	BB	1088	A	N1-C6-N6	-8.22	113.67	118.60
1	CA	765	G	N9-C1'-C2'	-8.12	103.07	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	765	G	N9-C1'-C2'	-8.09	103.10	112.00
23	BB	1439	A	N9-C1'-C2'	-7.58	103.66	112.00
23	DB	1439	A	N9-C1'-C2'	-7.56	103.68	112.00
23	DB	773	U	C5'-C4'-C3'	-7.35	104.23	116.00
23	DB	1060	U	C5-C4-O4	-7.32	121.51	125.90
23	BB	690	G	C5'-C4'-C3'	-7.31	104.30	116.00
23	BB	1060	U	C5-C4-O4	-7.30	121.52	125.90
1	CA	232	G	C5'-C4'-C3'	-7.13	104.60	116.00
23	DB	1086	A	C4-C5-C6	7.07	120.54	117.00
23	DB	690	G	C5'-C4'-C3'	-7.04	104.73	116.00
23	BB	1086	A	C4-C5-C6	7.03	120.51	117.00
23	BB	2733	A	N9-C1'-C2'	-6.95	104.36	112.00
23	BB	2283	C	O5'-P-OP2	-6.94	99.46	105.70
1	CA	1049	U	O5'-P-OP1	-6.93	99.47	105.70
23	DB	745	G	C5'-C4'-C3'	-6.90	104.96	116.00
23	DB	944	C	C5'-C4'-C3'	-6.88	104.99	116.00
23	DB	2733	A	N9-C1'-C2'	-6.81	104.51	112.00
23	DB	560	C	C5'-C4'-C3'	-6.81	105.11	116.00
23	BB	773	U	C5'-C4'-C3'	-6.70	105.28	116.00
1	AA	855	U	C5'-C4'-C3'	-6.63	105.39	116.00
1	AA	232	G	C5'-C4'-C3'	-6.58	105.47	116.00
23	BB	745	G	C5'-C4'-C3'	-6.53	105.55	116.00
23	DB	2199	A	C5'-C4'-C3'	-6.44	105.69	116.00
23	DB	1088	A	C5-C6-N6	6.43	128.85	123.70
1	CA	1432	G	N9-C1'-C2'	-6.41	104.95	112.00
1	AA	1432	G	N9-C1'-C2'	-6.40	104.96	112.00
23	BB	2894	G	N9-C1'-C2'	-6.36	105.00	112.00
23	BB	1088	A	C5-C6-N6	6.36	128.78	123.70
23	DB	2894	G	N9-C1'-C2'	-6.34	105.02	112.00
1	AA	1301	U	N1-C1'-C2'	6.31	122.20	114.00
23	DB	1251	C	C5'-C4'-C3'	-6.26	105.98	116.00
1	CA	1424	U	C5'-C4'-C3'	-6.26	105.98	116.00
23	BB	2790	U	O3'-P-O5'	-6.26	92.11	104.00
1	CA	1301	U	N1-C1'-C2'	6.25	122.13	114.00
23	BB	560	C	C5'-C4'-C3'	-6.18	106.11	116.00
23	DB	2894	G	C5'-C4'-C3'	-6.18	106.11	116.00
23	DB	671	C	C5'-C4'-C3'	-6.16	106.15	116.00
23	DB	2790	U	O3'-P-O5'	-6.14	92.33	104.00
23	BB	508	A	C4'-C3'-O3'	-6.13	96.53	109.40
23	BB	1086	A	C6-C5-N7	-6.13	128.01	132.30
23	DB	2267	A	C5-C6-N6	-6.12	118.80	123.70
23	DB	1086	A	C6-C5-N7	-6.09	128.04	132.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DB	508	A	C4'-C3'-O3'	-6.06	96.67	109.40
23	BB	2267	A	C5-C6-N6	-6.06	118.85	123.70
1	CA	31	G	C5'-C4'-C3'	-5.99	106.42	116.00
23	DB	2203	U	O3'-P-O5'	-5.90	92.79	104.00
23	BB	2894	G	C5'-C4'-C3'	-5.83	106.67	116.00
23	BB	2199	A	C5'-C4'-C3'	-5.81	106.70	116.00
1	CA	855	U	C5'-C4'-C3'	-5.80	106.72	116.00
1	AA	1250	A	C5'-C4'-C3'	5.79	125.27	116.00
22	BA	52	A	C5'-C4'-C3'	5.77	125.23	116.00
1	CA	814	A	C5'-C4'-C3'	5.74	125.19	116.00
1	CA	1432	G	C5'-C4'-C3'	-5.71	106.87	116.00
23	BB	1086	A	C2-N3-C4	-5.65	107.77	110.60
23	DB	2323	G	OP2-P-O3'	5.64	117.62	105.20
23	BB	1251	C	C5'-C4'-C3'	-5.60	107.04	116.00
23	BB	1060	U	N1-C2-O2	-5.58	118.89	122.80
23	BB	1126	A	C5'-C4'-C3'	-5.57	107.08	116.00
23	BB	2267	A	C4-N9-C1'	5.57	136.32	126.30
1	CA	1250	A	C5'-C4'-C3'	5.54	124.87	116.00
23	DB	2267	A	C4-N9-C1'	5.54	136.27	126.30
23	DB	2096	C	C5'-C4'-C3'	-5.50	107.20	116.00
23	DB	1086	A	C2-N3-C4	-5.50	107.85	110.60
1	CA	1534	A	C2'-C3'-O3'	-5.50	97.41	109.50
23	DB	2716	C	C5'-C4'-C3'	5.46	124.74	116.00
23	BB	2716	C	C5'-C4'-C3'	5.45	124.72	116.00
23	BB	479	A	C4'-C3'-O3'	-5.43	98.00	109.40
23	BB	1382	G	C5'-C4'-C3'	5.42	124.66	116.00
23	DB	1634	A	C5'-C4'-C3'	-5.41	107.34	116.00
23	DB	2272	U	C5-C4-O4	-5.41	122.66	125.90
23	DB	2619	C	C5'-C4'-C3'	-5.38	107.39	116.00
23	BB	268	C	C5'-C4'-C3'	-5.38	107.40	116.00
23	DB	1060	U	N1-C2-O2	-5.35	119.06	122.80
23	BB	1060	U	N3-C2-O2	5.34	125.94	122.20
23	DB	1060	U	N3-C2-O2	5.33	125.93	122.20
23	BB	2272	U	C5-C4-O4	-5.33	122.70	125.90
22	DA	52	A	C5'-C4'-C3'	5.30	124.47	116.00
1	AA	814	A	C5'-C4'-C3'	5.29	124.46	116.00
1	AA	31	G	C5'-C4'-C3'	-5.28	107.55	116.00
23	DB	134	G	C5'-C4'-C3'	-5.27	107.56	116.00
23	DB	1382	G	C5'-C4'-C3'	5.26	124.42	116.00
23	BB	2203	U	O3'-P-O5'	-5.24	94.05	104.00
1	AA	1432	G	C5'-C4'-C3'	-5.23	107.63	116.00
23	DB	1126	A	C5'-C4'-O4'	5.22	115.37	109.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	72	A	C5'-C4'-C3'	-5.21	107.66	116.00
1	CA	1049	U	C5'-C4'-O4'	5.21	115.35	109.10
23	BB	944	C	C5'-C4'-C3'	-5.20	107.68	116.00
23	DB	2718	G	C5'-C4'-C3'	5.19	124.30	116.00
23	BB	2191	A	C5'-C4'-C3'	-5.17	107.73	116.00
23	DB	1350	C	C5'-C4'-C3'	-5.17	107.73	116.00
1	AA	765	G	C4'-C3'-O3'	5.15	123.30	113.00
23	DB	268	C	C5'-C4'-C3'	-5.14	107.77	116.00
23	BB	1126	A	O5'-P-OP2	-5.11	101.11	105.70
23	BB	2267	A	C8-N9-C1'	-5.10	118.52	127.70
23	DB	2267	A	C8-N9-C1'	-5.10	118.52	127.70
1	CA	765	G	C4'-C3'-O3'	5.08	123.17	113.00
1	AA	1398	A	C5'-C4'-C3'	-5.08	107.87	116.00
1	CA	1279	G	N9-C1'-C2'	5.03	120.54	114.00
23	DB	1880	U	C5'-C4'-C3'	-5.03	107.95	116.00
1	AA	1279	G	N9-C1'-C2'	5.02	120.52	114.00
23	DB	1294	U	C5'-C4'-C3'	-5.01	107.99	116.00

There are no chirality outliers.

All (109) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
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
1	AA	86	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	1426	G	Sidechain
23	BB	1439	A	Sidechain

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Mol	Chain	Res	Type	Group
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	2454	G	Sidechain
23	BB	2471	A	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
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	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

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Mol	Chain	Res	Type	Group
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
23	DB	1047	G	Sidechain
23	DB	1060	U	Sidechain
23	DB	1086	A	Sidechain
23	DB	1088	A	Sidechain
23	DB	1426	G	Sidechain
23	DB	1439	A	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
23	DB	2135	A	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	2454	G	Sidechain
23	DB	2471	A	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	299	A	Sidechain
23	DB	356	G	Sidechain
23	DB	370	G	Sidechain
23	DB	500	G	Sidechain
23	DB	51	G	Sidechain

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Mol	Chain	Res	Type	Group
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	1156	0
1	CA	32831	0	16521	1152	0
2	AC	1624	0	1699	127	0
2	CC	1624	0	1699	127	0
3	AD	1643	0	1710	158	0
3	CD	1643	0	1710	151	0
4	AE	1105	0	1148	92	0
4	CE	1105	0	1148	95	0
5	AF	817	0	808	83	0
5	CF	817	0	808	79	0
6	AG	1174	0	1230	89	0
6	CG	1196	0	1246	88	0
7	AH	979	0	1034	83	0
7	CH	979	0	1034	82	0
8	AI	1022	0	1070	128	0
8	CI	1022	0	1070	118	0
9	AJ	786	0	828	85	0
9	CJ	786	0	828	89	0
10	AK	877	0	887	94	0
10	CK	877	0	887	93	0
11	AL	955	0	1019	75	0
11	CL	955	0	1019	73	0
12	AM	883	0	944	116	0
12	CM	876	0	937	115	0
13	AN	774	0	827	101	0
13	CN	774	0	827	105	0
14	AO	714	0	734	57	0
14	CO	714	0	734	52	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
15	AP	649	0	666	54	0
15	CP	638	0	656	51	0
16	AQ	648	0	691	42	0
16	CQ	657	0	702	45	0
17	AR	455	0	478	28	0
17	CR	455	0	478	26	0
18	AS	637	0	665	86	0
18	CS	644	0	675	89	0
19	AT	665	0	714	55	0
19	CT	665	0	714	52	0
20	AB	1704	0	1732	199	0
20	CB	1704	0	1732	199	0
21	AU	425	0	449	61	0
21	CU	425	0	449	59	0
22	BA	2507	0	1270	96	0
22	DA	2507	0	1270	89	0
23	BB	60995	0	30678	2146	0
23	DB	60995	0	30677	2248	0
24	BI	1032	0	1088	111	0
24	DI	1032	0	1088	196	0
25	BC	2082	0	2157	259	0
25	DC	2082	0	2157	244	0
26	BD	1565	0	1616	204	0
26	DD	1565	0	1616	214	0
27	BK	930	0	1000	117	0
27	DK	930	0	1000	121	0
28	BP	917	0	965	119	0
28	DP	917	0	965	117	0
29	BE	1552	0	1619	185	0
29	DE	1552	0	1619	165	0
30	BY	449	0	491	52	0
30	DY	449	0	491	47	0
31	B0	444	0	461	45	0
31	D0	444	0	461	46	0
32	B4	302	0	340	30	0
32	D4	302	0	341	28	0
33	B1	409	0	440	51	0
33	D1	409	0	440	42	0
34	B3	504	0	574	56	0
34	D3	504	0	574	51	0
35	BV	753	0	780	80	0
35	DV	753	0	780	83	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
36	B2	377	0	418	44	0
36	D2	377	0	418	47	0
37	BL	1045	0	1117	142	0
37	DL	1045	0	1117	152	0
38	BM	1074	0	1157	115	0
38	DM	1074	0	1157	114	0
39	BX	509	0	543	62	0
39	DX	509	0	543	58	0
40	BH	1111	0	1148	196	0
40	DH	1111	0	1148	153	0
41	BJ	1129	0	1162	146	0
41	DJ	1129	0	1162	148	0
42	BN	960	0	1000	116	0
42	DN	960	0	1000	116	0
43	BO	892	0	923	79	0
43	DO	892	0	923	91	0
44	BQ	947	0	1022	142	0
44	DQ	947	0	1022	147	0
45	BS	857	0	922	103	0
45	DS	857	0	922	100	0
46	BU	779	0	834	125	0
46	DU	779	0	834	118	0
47	BF	1420	0	1460	231	0
47	DF	1420	0	1460	237	0
48	BG	1323	0	1374	187	0
48	DG	1323	0	1374	189	0
49	BR	816	0	839	97	0
49	DR	816	0	839	102	0
50	BT	738	0	807	129	0
50	DT	738	0	807	122	0
51	BZ	625	0	652	82	0
51	DZ	625	0	652	83	0
52	BW	596	0	610	136	0
52	DW	596	0	610	143	0
53	AA	42	0	46	2	0
53	BB	42	0	46	0	0
53	CA	42	0	46	0	0
53	DB	42	0	46	1	0
54	AA	60	0	0	0	0
54	BB	110	0	0	0	0
54	CA	60	0	0	0	0
54	CE	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
54	CN	1	0	0	0	0
54	DB	111	0	0	0	0
55	B4	1	0	0	0	0
55	D4	1	0	0	0	0
56	AA	291	0	0	2	0
56	AL	4	0	0	0	0
56	AN	4	0	0	0	0
56	AT	1	0	0	0	0
56	BB	497	0	0	8	0
56	BC	5	0	0	0	0
56	BE	1	0	0	0	0
56	BL	1	0	0	0	0
56	BN	1	0	0	0	0
56	BR	1	0	0	0	0
56	CA	298	0	0	1	0
56	CE	3	0	0	0	0
56	CL	2	0	0	0	0
56	CN	4	0	0	0	0
56	CP	1	0	0	0	0
56	CT	1	0	0	0	0
56	DB	502	0	0	10	0
56	DC	6	0	0	0	0
56	DE	1	0	0	0	0
56	DL	2	0	0	0	0
56	DR	1	0	0	0	0
All	All	284172	0	190846	16001	0

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 34.

All (16001) 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	1.38	1.21
40:DH:31:VAL:HB	40:DH:32:PRO:HD2	1.30	1.11
21:CU:36:PHE:HB3	21:CU:40:PRO:HD3	1.32	1.11
6:CG:2:ARG:HH11	6:CG:2:ARG:HB3	1.10	1.11
40:BH:31:VAL:HB	40:BH:32:PRO:HD2	1.29	1.10
46:BU:85:ARG:HD3	46:BU:86:PHE:H	1.17	1.09
9:CJ:9:ARG:HB2	9:CJ:99:GLN:HB3	1.35	1.08
20:AB:163:ILE:HG23	20:AB:164:ASP:H	1.18	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:855:G:H21	52:BW:23:LYS:HG2	0.99	1.07
23:DB:1099:G:O5'	24:DI:4:VAL:N	1.86	1.06
6:AG:149:ALA:HB2	10:AK:55:ARG:HE	1.19	1.06
21:AU:36:PHE:HB3	21:AU:40:PRO:HD3	1.31	1.05
46:DU:85:ARG:HD3	46:DU:86:PHE:H	1.19	1.05
23:DB:1098:A:H3'	24:DI:3:LYS:CA	1.87	1.04
23:DB:1099:G:C8	24:DI:3:LYS:N	2.22	1.04
49:DR:60:LYS:H	49:DR:100:GLY:HA3	1.22	1.04
23:BB:126:A:H5'	36:B2:19:ARG:HG3	1.40	1.03
9:AJ:9:ARG:HB2	9:AJ:99:GLN:HB3	1.39	1.03
52:DW:51:GLY:HA3	52:DW:59:PHE:HB2	1.40	1.03
26:BD:10:GLY:HA3	26:BD:26:VAL:H	1.20	1.03
26:DD:10:GLY:HA3	26:DD:26:VAL:H	1.19	1.03
52:BW:17:ALA:HA	52:BW:35:ILE:HG23	1.39	1.02
23:DB:855:G:H21	52:DW:23:LYS:HG2	1.22	1.02
26:DD:106:LYS:HB3	26:DD:206:ALA:H	1.21	1.02
5:CF:29:ILE:HG21	5:CF:64:VAL:HG11	1.42	1.02
26:BD:24:VAL:HG21	26:BD:188:LEU:HB3	1.42	1.02
52:DW:17:ALA:HA	52:DW:35:ILE:HG23	1.37	1.02
44:DQ:30:VAL:HG13	44:DQ:31:TYR:H	1.20	1.01
26:BD:106:LYS:HB3	26:BD:206:ALA:H	1.20	1.01
20:CB:163:ILE:HG23	20:CB:164:ASP:H	1.20	1.01
23:DB:1098:A:H3'	24:DI:3:LYS:HA	1.40	1.01
1:CA:1533:C:H2'	1:CA:1534:A:H3'	1.40	1.01
8:AI:20:ILE:HA	8:AI:62:LEU:HD12	1.43	1.01
5:CF:92:THR:HG22	5:CF:94:HIS:H	1.23	1.00
44:BQ:30:VAL:HG13	44:BQ:31:TYR:H	1.18	1.00
8:CI:20:ILE:HA	8:CI:62:LEU:HD12	1.42	1.00
28:DP:63:ILE:HA	28:DP:68:GLY:HA2	1.40	1.00
26:DD:24:VAL:HG21	26:DD:188:LEU:HB3	1.43	1.00
5:AF:92:THR:HG22	5:AF:94:HIS:H	1.23	1.00
48:BG:89:VAL:HB	48:BG:159:LYS:HA	1.41	0.99
27:BK:70:ARG:HB3	27:BK:76:VAL:HG22	1.45	0.99
5:AF:29:ILE:HG21	5:AF:64:VAL:HG11	1.40	0.99
49:BR:60:LYS:H	49:BR:100:GLY:HA3	1.23	0.99
52:BW:51:GLY:HA3	52:BW:59:PHE:HB2	1.42	0.99
50:BT:5:GLU:HA	50:BT:8:LEU:HB2	1.45	0.98
23:BB:855:G:N2	52:BW:23:LYS:HG2	1.78	0.98
23:BB:1458:U:H5''	23:BB:1459:G:H5'	1.45	0.98
42:DN:2:ARG:HA	42:DN:5:LYS:HD3	1.46	0.98
3:AD:22:SER:HB3	3:AD:164:ARG:HH22	1.28	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BN:2:ARG:HA	42:BN:5:LYS:HD3	1.41	0.98
33:D1:33:LEU:H	33:D1:51:ALA:HB3	1.29	0.98
1:CA:243:A:H4'	1:CA:244:U:H5'	1.45	0.98
28:BP:63:ILE:HA	28:BP:68:GLY:HA2	1.42	0.97
13:AN:40:ARG:NH2	18:AS:6:LYS:HB2	1.79	0.97
48:DG:43:LYS:HB2	48:DG:50:THR:HB	1.47	0.97
42:DN:37:THR:HG22	42:DN:39:PRO:HD2	1.46	0.97
48:BG:43:LYS:HB2	48:BG:50:THR:HB	1.43	0.97
48:DG:89:VAL:HB	48:DG:159:LYS:HA	1.42	0.97
23:DB:2502:G:H5'	23:DB:2503:A:H5''	1.43	0.97
33:B1:33:LEU:H	33:B1:51:ALA:HB3	1.30	0.97
13:CN:51:PRO:HB2	13:CN:54:SER:HB3	1.47	0.96
25:BC:77:VAL:HG23	25:BC:112:GLY:H	1.25	0.96
51:DZ:5:CYS:HB3	51:DZ:10:LYS:H	1.29	0.96
13:CN:40:ARG:NH2	18:CS:6:LYS:HB2	1.79	0.96
40:BH:84:ALA:HA	40:BH:90:LEU:HA	1.46	0.96
37:DL:79:LEU:HB2	37:DL:113:ALA:H	1.31	0.96
38:BM:59:ARG:HH11	38:BM:60:GLN:HB3	1.29	0.96
25:DC:105:ALA:HB1	25:DC:109:LEU:HD12	1.47	0.96
23:BB:2502:G:H5'	23:BB:2503:A:H5''	1.45	0.95
52:DW:9:THR:HG23	52:DW:10:ARG:HD3	1.45	0.95
49:DR:7:SER:HB2	49:DR:22:LEU:HB3	1.48	0.95
39:DX:28:LEU:HD13	39:DX:37:LEU:HD11	1.47	0.95
19:CT:43:LYS:HE2	19:CT:44:ALA:H	1.32	0.95
2:CC:76:ILE:HA	2:CC:83:VAL:HG23	1.48	0.95
27:DK:70:ARG:HB3	27:DK:76:VAL:HG22	1.45	0.95
29:DE:145:ASP:HA	29:DE:166:LYS:HB3	1.46	0.95
2:AC:76:ILE:HA	2:AC:83:VAL:HG23	1.48	0.95
25:DC:77:VAL:HG23	25:DC:112:GLY:H	1.26	0.95
29:BE:145:ASP:HA	29:BE:166:LYS:HB3	1.46	0.95
3:CD:187:ARG:HH12	3:CD:191:SER:HA	1.32	0.95
1:AA:243:A:H4'	1:AA:244:U:H5'	1.48	0.95
50:DT:5:GLU:HA	50:DT:8:LEU:HB2	1.47	0.94
37:DL:123:ARG:HA	37:DL:143:GLU:HB3	1.48	0.94
3:CD:22:SER:HB3	3:CD:164:ARG:HH22	1.31	0.94
13:AN:51:PRO:HB2	13:AN:54:SER:HB3	1.49	0.94
1:AA:1086:U:H3	1:AA:1099:G:H22	1.11	0.94
10:CK:22:ILE:HG21	10:CK:95:THR:HG21	1.49	0.94
23:DB:1420:A:H2'	23:DB:2211:A:H62	1.31	0.94
2:AC:126:ARG:HH22	2:AC:190:THR:HG23	1.33	0.94
47:DF:43:ILE:HG23	47:DF:44:ALA:H	1.33	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:B1:34:GLU:HB3	33:B1:49:LYS:HD3	1.50	0.94
38:DM:59:ARG:HH11	38:DM:60:GLN:HB3	1.31	0.94
23:DB:1458:U:H5''	23:DB:1459:G:H5'	1.48	0.94
52:BW:9:THR:HG23	52:BW:10:ARG:HD3	1.46	0.94
18:CS:48:ILE:HB	18:CS:59:VAL:HG23	1.50	0.94
48:BG:34:ARG:H	48:BG:34:ARG:HH11	1.16	0.94
10:CK:34:THR:HB	10:CK:40:ALA:HA	1.47	0.94
26:BD:5:VAL:H	26:BD:32:ASN:HD21	1.12	0.94
39:BX:28:LEU:HD13	39:BX:37:LEU:HD11	1.49	0.94
26:DD:5:VAL:H	26:DD:32:ASN:HD21	1.11	0.94
10:AK:34:THR:HB	10:AK:40:ALA:HA	1.46	0.94
21:CU:16:ARG:HE	21:CU:16:ARG:HA	1.32	0.93
20:AB:198:VAL:HG12	20:AB:200:PRO:HD3	1.49	0.93
51:BZ:5:CYS:HB3	51:BZ:10:LYS:H	1.30	0.93
40:BH:100:ALA:HB3	40:BH:112:LYS:HA	1.49	0.93
18:AS:48:ILE:HB	18:AS:59:VAL:HG23	1.51	0.93
51:DZ:54:LYS:HA	51:DZ:57:ARG:HD3	1.50	0.93
20:AB:162:VAL:HG13	20:AB:184:ALA:HB2	1.51	0.93
49:BR:7:SER:HB2	49:BR:22:LEU:HB3	1.47	0.93
20:AB:96:LEU:HD21	20:AB:146:SER:HB2	1.50	0.93
1:AA:68:G:H5'	1:AA:171:A:H1'	1.49	0.93
23:BB:125:A:H5'	36:B2:19:ARG:HD2	1.50	0.93
13:AN:40:ARG:HH22	18:AS:6:LYS:HB2	1.34	0.93
23:BB:1420:A:H2'	23:BB:2211:A:H62	1.32	0.93
23:BB:460:A:H4'	50:BT:72:GLN:HB2	1.51	0.93
37:BL:123:ARG:HA	37:BL:143:GLU:HB3	1.51	0.93
10:AK:22:ILE:HG21	10:AK:95:THR:HG21	1.50	0.93
42:BN:102:PHE:H	42:BN:109:PRO:HA	1.34	0.93
23:BB:850:U:H5''	30:BY:18:LYS:HD3	1.50	0.93
10:AK:124:LYS:HA	21:AU:34:ARG:HB3	1.50	0.92
42:BN:101:GLY:HA2	42:BN:110:MET:N	1.84	0.92
51:DZ:40:VAL:HG21	51:DZ:43:GLU:HB3	1.51	0.92
37:BL:81:ASP:HA	37:BL:84:LYS:HE2	1.51	0.92
21:AU:16:ARG:HA	21:AU:16:ARG:HE	1.32	0.92
51:BZ:54:LYS:HA	51:BZ:57:ARG:HD3	1.51	0.92
33:D1:34:GLU:HB3	33:D1:49:LYS:HD3	1.51	0.92
25:BC:4:LYS:HD2	25:BC:5:CYS:H	1.34	0.92
28:DP:4:ILE:HG22	28:DP:5:LYS:H	1.35	0.92
25:BC:105:ALA:HB1	25:BC:109:LEU:HD12	1.48	0.92
41:BJ:17:VAL:HG23	41:BJ:137:PRO:HB2	1.51	0.92
50:BT:57:VAL:HG22	50:BT:58:VAL:H	1.34	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DQ:97:ILE:HD11	44:DQ:108:LEU:HD11	1.52	0.92
42:DN:101:GLY:HA2	42:DN:110:MET:N	1.83	0.92
10:CK:124:LYS:HA	21:CU:34:ARG:HB3	1.48	0.92
37:BL:79:LEU:HB2	37:BL:113:ALA:H	1.31	0.92
1:CA:1086:U:H3	1:CA:1099:G:H22	1.12	0.92
41:DJ:17:VAL:HG23	41:DJ:137:PRO:HB2	1.52	0.92
3:AD:187:ARG:HH12	3:AD:191:SER:HA	1.33	0.92
25:BC:130:PRO:HG2	25:BC:133:ASN:HD22	1.35	0.91
45:DS:76:VAL:HG12	45:DS:103:ILE:HA	1.50	0.91
25:DC:183:VAL:HG13	25:DC:185:ALA:H	1.34	0.91
27:DK:47:ILE:HG12	27:DK:48:PRO:HD2	1.51	0.91
20:CB:96:LEU:HD21	20:CB:146:SER:HB2	1.50	0.91
4:CE:33:THR:HG22	4:CE:51:LYS:HB3	1.52	0.91
39:DX:31:GLN:HG2	39:DX:37:LEU:HB2	1.50	0.91
48:DG:34:ARG:HH11	48:DG:34:ARG:H	1.15	0.91
25:DC:16:VAL:HB	25:DC:203:VAL:HB	1.53	0.91
23:BB:670:A:H4'	23:BB:671:C:H5'	1.53	0.91
25:DC:226:PRO:HG3	25:DC:233:GLY:H	1.36	0.91
44:BQ:97:ILE:HD11	44:BQ:108:LEU:HD11	1.53	0.91
42:DN:102:PHE:H	42:DN:109:PRO:HA	1.33	0.90
4:AE:33:THR:HG22	4:AE:51:LYS:HB3	1.53	0.90
47:DF:45:ASP:HB3	47:DF:48:LEU:HD22	1.51	0.90
25:DC:130:PRO:HG2	25:DC:133:ASN:HD22	1.34	0.90
43:DO:49:VAL:HG21	43:DO:82:ALA:HB2	1.53	0.90
25:DC:144:GLU:HA	25:DC:151:GLY:HA2	1.52	0.90
47:BF:45:ASP:HB3	47:BF:48:LEU:HD22	1.52	0.90
37:DL:79:LEU:HG	37:DL:112:LEU:HA	1.53	0.90
2:CC:48:LYS:HD3	2:CC:48:LYS:H	1.36	0.90
43:BO:49:VAL:HG21	43:BO:82:ALA:HB2	1.52	0.90
20:CB:162:VAL:HG13	20:CB:184:ALA:HB2	1.52	0.90
50:DT:57:VAL:HG22	50:DT:58:VAL:H	1.37	0.90
25:BC:183:VAL:HG13	25:BC:185:ALA:H	1.36	0.90
25:DC:129:LEU:HD23	25:DC:130:PRO:HD2	1.52	0.90
23:DB:1060:U:N3	23:DB:1088:A:N7	2.20	0.90
25:DC:4:LYS:HD2	25:DC:5:CYS:H	1.35	0.90
40:BH:116:ARG:HB2	40:BH:133:GLN:HB2	1.51	0.90
16:AQ:6:THR:HG22	16:AQ:61:ARG:HB3	1.54	0.90
40:DH:135:HIS:HB3	40:DH:138:VAL:HB	1.52	0.90
20:CB:198:VAL:HG12	20:CB:200:PRO:HD3	1.52	0.89
23:BB:1060:U:N3	23:BB:1088:A:N7	2.20	0.89
6:AG:145:GLU:HA	6:AG:148:LYS:HB2	1.53	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:202:ASN:ND2	20:CB:204:ASP:H	1.69	0.89
23:BB:2305:U:H5''	47:BF:130:GLY:HA3	1.53	0.89
27:BK:47:ILE:HG12	27:BK:48:PRO:HD2	1.53	0.89
39:BX:31:GLN:HG2	39:BX:37:LEU:HB2	1.54	0.89
47:BF:43:ILE:HG23	47:BF:44:ALA:H	1.34	0.89
37:DL:81:ASP:HA	37:DL:84:LYS:HE2	1.52	0.89
39:DX:3:ALA:HA	39:DX:6:LEU:HD23	1.51	0.89
23:BB:2356:U:H5''	52:BW:16:GLU:HG3	1.51	0.89
39:BX:3:ALA:HA	39:BX:6:LEU:HD23	1.54	0.89
37:DL:6:LEU:H	37:DL:6:LEU:HD23	1.36	0.89
18:CS:28:LYS:HZ2	18:CS:28:LYS:H	1.20	0.89
4:AE:89:THR:HG22	4:AE:90:GLY:H	1.37	0.89
23:DB:2108:A:H5''	23:DB:2150:C:H4'	1.54	0.89
1:AA:1206:G:H4'	2:AC:192:TYR:HA	1.54	0.89
25:DC:144:GLU:HG3	25:DC:151:GLY:H	1.38	0.89
52:BW:58:LEU:HD12	52:BW:79:ILE:HD12	1.55	0.89
1:AA:72:A:H61	1:AA:98:A:H2	1.15	0.89
28:BP:4:ILE:HG22	28:BP:5:LYS:H	1.36	0.89
10:CK:33:ILE:HB	10:CK:73:VAL:HG11	1.55	0.89
20:AB:27:LYS:HA	20:AB:30:ILE:HD12	1.55	0.88
20:AB:202:ASN:ND2	20:AB:204:ASP:H	1.71	0.88
2:CC:126:ARG:HH22	2:CC:190:THR:HG23	1.36	0.88
33:D1:26:LYS:HD3	33:D1:52:LYS:HB3	1.53	0.88
40:BH:80:ILE:HB	40:BH:144:VAL:HG13	1.53	0.88
27:BK:35:VAL:HG23	27:BK:36:GLY:H	1.37	0.88
23:BB:2108:A:H2'	23:BB:2109:U:H4'	1.55	0.88
1:AA:1236:A:H4'	1:AA:1304:G:H4'	1.55	0.88
23:DB:1080:A:H4'	24:DI:126:ARG:CD	2.03	0.88
6:CG:145:GLU:HA	6:CG:148:LYS:HB2	1.54	0.88
27:DK:35:VAL:HG23	27:DK:36:GLY:H	1.36	0.88
2:AC:48:LYS:H	2:AC:48:LYS:HD3	1.36	0.88
51:DZ:6:GLN:HE21	51:DZ:50:ARG:H	1.18	0.88
46:DU:95:PHE:HE1	46:DU:102:ILE:HB	1.38	0.88
19:AT:43:LYS:HE2	19:AT:44:ALA:H	1.36	0.88
1:CA:1296:C:H4'	1:CA:1302:C:H41	1.38	0.88
23:DB:1244:A:H5''	37:DL:8:PRO:HD3	1.55	0.88
21:AU:24:LYS:HD2	21:AU:25:ALA:H	1.37	0.88
13:CN:40:ARG:HH22	18:CS:6:LYS:HB2	1.35	0.88
45:BS:76:VAL:HG12	45:BS:103:ILE:HA	1.54	0.88
23:BB:1203:U:H1'	37:BL:4:ASN:HD21	1.39	0.88
10:AK:33:ILE:HB	10:AK:73:VAL:HG11	1.56	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:27:G:H22	23:BB:512:G:H2'	1.37	0.88
23:DB:2267:A:H3'	23:DB:2267:A:H8	1.38	0.88
20:AB:67:LEU:HD12	20:AB:157:PRO:HG3	1.56	0.88
15:CP:40:ASN:HD21	15:CP:43:ALA:H	1.19	0.87
51:DZ:14:THR:HA	51:DZ:28:ARG:HA	1.56	0.87
1:AA:1296:C:H4'	1:AA:1302:C:H41	1.39	0.87
52:DW:66:VAL:HA	52:DW:81:ILE:HG22	1.55	0.87
25:BC:16:VAL:HB	25:BC:203:VAL:HB	1.55	0.87
27:DK:71:ARG:HG3	27:DK:105:ARG:NH2	1.89	0.87
27:DK:19:VAL:HG12	27:DK:43:ILE:HA	1.56	0.87
4:CE:52:ALA:HB2	4:CE:61:LYS:HE2	1.57	0.87
51:BZ:7:VAL:HG13	51:BZ:8:THR:HG23	1.57	0.87
50:DT:11:LEU:H	50:DT:11:LEU:HD22	1.40	0.87
21:CU:24:LYS:HD2	21:CU:25:ALA:H	1.35	0.87
23:DB:27:G:H22	23:DB:512:G:H2'	1.36	0.87
26:BD:29:VAL:HB	26:BD:98:VAL:HG22	1.56	0.87
40:BH:80:ILE:HD12	40:BH:144:VAL:HG22	1.55	0.87
37:BL:143:GLU:HG2	37:BL:144:GLU:H	1.39	0.87
48:BG:68:ARG:HH12	48:BG:72:ASN:HD22	1.21	0.87
23:DB:670:A:H4'	23:DB:671:C:H5'	1.55	0.87
33:D1:49:LYS:HG3	33:D1:50:GLU:H	1.37	0.87
23:DB:558:U:OP1	41:DJ:113:PRO:HG2	1.74	0.87
52:BW:66:VAL:HA	52:BW:81:ILE:HG22	1.57	0.87
48:BG:24:THR:HG22	48:BG:34:ARG:HB3	1.57	0.87
37:BL:79:LEU:HG	37:BL:112:LEU:HA	1.56	0.87
42:DN:72:ASP:HB3	42:DN:75:ILE:HG12	1.56	0.87
26:DD:29:VAL:HB	26:DD:98:VAL:HG22	1.56	0.87
27:BK:25:LEU:HD13	27:BK:38:ILE:HG22	1.57	0.87
5:AF:3:HIS:HB2	5:AF:92:THR:HA	1.56	0.87
51:BZ:40:VAL:HG21	51:BZ:43:GLU:HB3	1.54	0.87
20:CB:156:LEU:HD12	20:CB:156:LEU:H	1.40	0.87
1:AA:79:G:H2'	1:AA:80:A:C8	2.10	0.87
40:DH:90:LEU:HD23	40:DH:94:ILE:HD13	1.55	0.87
46:DU:58:VAL:HG12	46:DU:59:GLU:H	1.39	0.87
20:CB:67:LEU:HD12	20:CB:157:PRO:HG3	1.56	0.87
24:BI:27:LEU:HD23	24:BI:27:LEU:H	1.39	0.87
20:CB:27:LYS:HA	20:CB:30:ILE:HD12	1.56	0.87
23:DB:1287:A:OP1	42:DN:104:ALA:HB3	1.75	0.87
33:B1:49:LYS:HG3	33:B1:50:GLU:H	1.37	0.86
33:B1:26:LYS:HD3	33:B1:52:LYS:HB3	1.56	0.86
25:BC:128:THR:HA	25:BC:190:THR:HA	1.55	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:120:A:H2'	1:CA:121:U:H5''	1.54	0.86
42:BN:37:THR:HG22	42:BN:39:PRO:HD2	1.54	0.86
23:BB:2267:A:H8	23:BB:2267:A:H3'	1.37	0.86
51:BZ:71:LEU:HD13	51:BZ:76:GLU:HB3	1.56	0.86
23:DB:79:C:HO2'	23:DB:346:A:H8	1.20	0.86
1:AA:120:A:H2'	1:AA:121:U:H5''	1.57	0.86
25:BC:129:LEU:HD23	25:BC:130:PRO:HD2	1.55	0.86
25:BC:64:VAL:O	25:BC:65:ASP:HB3	1.75	0.86
1:CA:1236:A:H4'	1:CA:1304:G:H4'	1.56	0.86
46:BU:95:PHE:HE1	46:BU:102:ILE:HB	1.39	0.86
25:DC:128:THR:HA	25:DC:190:THR:HA	1.58	0.86
37:DL:143:GLU:HG2	37:DL:144:GLU:H	1.38	0.86
46:BU:58:VAL:HG12	46:BU:59:GLU:H	1.41	0.86
40:DH:127:GLU:HA	40:DH:145:ASN:HA	1.57	0.86
23:DB:2379:G:H4'	43:DO:21:LEU:HD11	1.58	0.86
6:CG:2:ARG:HB3	6:CG:2:ARG:NH1	1.90	0.86
5:CF:3:HIS:HB2	5:CF:92:THR:HA	1.55	0.86
41:DJ:81:ILE:HG23	41:DJ:82:GLY:H	1.41	0.86
40:DH:7:ASP:HA	40:DH:15:LEU:HD22	1.57	0.86
23:DB:276:U:H2'	23:DB:278:A:C2	2.11	0.86
51:BZ:6:GLN:HE21	51:BZ:50:ARG:H	1.20	0.86
21:AU:16:ARG:HA	21:AU:16:ARG:NE	1.91	0.86
23:DB:328:U:H4'	46:DU:65:GLN:HE22	1.40	0.86
16:CQ:6:THR:HG22	16:CQ:61:ARG:HB3	1.55	0.86
38:BM:34:LYS:HB3	38:BM:129:THR:HG22	1.58	0.86
50:BT:11:LEU:HD22	50:BT:11:LEU:H	1.40	0.86
18:CS:50:VAL:HG23	18:CS:59:VAL:HG21	1.58	0.86
48:DG:24:THR:HG22	48:DG:34:ARG:HB3	1.58	0.86
27:DK:25:LEU:HD13	27:DK:38:ILE:HG22	1.57	0.85
1:CA:1206:G:H4'	2:CC:192:TYR:HA	1.56	0.85
15:AP:40:ASN:HD21	15:AP:43:ALA:H	1.18	0.85
24:DI:11:GLN:HG2	24:DI:55:PRO:HB3	1.59	0.85
15:AP:40:ASN:HD21	15:AP:43:ALA:N	1.73	0.85
40:BH:7:ASP:HA	40:BH:15:LEU:HD22	1.57	0.85
1:AA:411:A:H62	1:AA:413:G:H21	1.23	0.85
35:DV:62:THR:HA	35:DV:71:LYS:HA	1.56	0.85
23:DB:850:U:H5''	30:DY:18:LYS:HD3	1.56	0.85
20:CB:99:MET:HA	20:CB:106:VAL:HG21	1.58	0.85
47:DF:87:LYS:HG3	47:DF:88:VAL:H	1.39	0.85
3:CD:25:ARG:HH11	3:CD:26:ALA:H	1.24	0.85
51:DZ:7:VAL:HG13	51:DZ:8:THR:HG23	1.56	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DX:39:GLN:HB3	39:DX:42:LEU:HD13	1.58	0.85
10:CK:34:THR:HA	10:CK:41:LEU:HG	1.56	0.85
20:AB:156:LEU:HD12	20:AB:156:LEU:H	1.41	0.85
35:BV:62:THR:HA	35:BV:71:LYS:HA	1.58	0.85
32:D4:7:VAL:HG13	32:D4:8:LYS:H	1.41	0.85
51:DZ:64:ILE:HD12	51:DZ:64:ILE:H	1.40	0.85
25:BC:144:GLU:HA	25:BC:151:GLY:HA2	1.55	0.85
23:DB:142:A:H2'	23:DB:143:C:C6	2.11	0.85
25:BC:226:PRO:HG3	25:BC:233:GLY:H	1.40	0.85
23:BB:1287:A:OP1	42:BN:104:ALA:HB3	1.75	0.85
41:DJ:1:MET:HG2	41:DJ:2:LYS:HG2	1.57	0.85
34:B3:31:ILE:HD11	34:B3:34:LYS:HD3	1.57	0.85
1:AA:85:U:O3'	1:AA:86:G:H4'	1.77	0.85
23:DB:1080:A:H4'	24:DI:126:ARG:HD3	1.59	0.85
15:CP:40:ASN:HD21	15:CP:43:ALA:N	1.73	0.85
23:DB:328:U:H4'	46:DU:65:GLN:NE2	1.92	0.85
23:BB:79:C:O2'	23:BB:346:A:H1'	1.76	0.85
23:BB:558:U:OP1	41:BJ:113:PRO:HG2	1.76	0.85
1:CA:203:G:H1'	1:CA:465:A:N6	1.92	0.85
12:AM:106:ARG:HH12	12:AM:109:LYS:HD2	1.42	0.85
23:DB:1099:G:P	24:DI:3:LYS:HA	2.16	0.85
51:DZ:71:LEU:HD13	51:DZ:76:GLU:HB3	1.58	0.85
51:BZ:64:ILE:H	51:BZ:64:ILE:HD12	1.41	0.85
25:DC:64:VAL:O	25:DC:65:ASP:HB3	1.75	0.85
52:DW:58:LEU:HD12	52:DW:79:ILE:HD12	1.58	0.85
24:DI:27:LEU:HD23	24:DI:27:LEU:H	1.41	0.85
52:BW:39:GLN:HE21	52:BW:42:THR:HB	1.42	0.84
48:BG:15:ASP:HB2	48:BG:26:LYS:H	1.41	0.84
29:BE:108:ILE:HD11	29:BE:181:ILE:HB	1.59	0.84
37:BL:6:LEU:HD23	37:BL:6:LEU:H	1.38	0.84
42:BN:72:ASP:HB3	42:BN:75:ILE:HG12	1.56	0.84
18:AS:18:VAL:HG21	18:AS:43:MET:HB3	1.59	0.84
23:DB:1024:G:H3'	23:DB:1025:G:H5''	1.57	0.84
40:DH:46:PHE:HA	40:DH:50:ARG:HH21	1.42	0.84
52:DW:37:VAL:HG12	52:DW:38:ARG:H	1.41	0.84
21:CU:16:ARG:NE	21:CU:16:ARG:HA	1.91	0.84
34:D3:31:ILE:HD11	34:D3:34:LYS:HD3	1.59	0.84
27:BK:19:VAL:HG12	27:BK:43:ILE:HA	1.59	0.84
20:AB:99:MET:HA	20:AB:106:VAL:HG21	1.59	0.84
15:AP:54:LEU:HD22	15:AP:80:LYS:HE3	1.59	0.84
10:AK:28:ASN:HD21	10:AK:47:GLY:H	1.26	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:203:G:H1'	1:AA:465:A:N6	1.91	0.84
45:DS:4:ILE:HG22	45:DS:106:VAL:HG13	1.58	0.84
25:DC:144:GLU:HG3	25:DC:151:GLY:N	1.93	0.84
48:DG:15:ASP:HB2	48:DG:26:LYS:H	1.43	0.84
2:CC:63:ILE:HD12	2:CC:98:ALA:HB2	1.57	0.84
23:DB:2769:U:H2'	23:DB:2770:G:H8	1.43	0.84
48:BG:17:LYS:HB3	48:BG:24:THR:H	1.41	0.84
23:DB:9:G:H21	23:DB:10:A:H62	1.25	0.84
23:BB:2769:U:H2'	23:BB:2770:G:H8	1.41	0.84
25:BC:144:GLU:HG3	25:BC:151:GLY:H	1.43	0.84
48:DG:17:LYS:HB3	48:DG:24:THR:H	1.43	0.84
35:BV:4:ILE:HB	35:BV:63:ILE:HA	1.59	0.84
26:BD:113:SER:HB2	26:BD:168:GLU:H	1.41	0.84
32:B4:7:VAL:HG13	32:B4:8:LYS:H	1.42	0.84
1:CA:1323:G:H2'	1:CA:1324:A:C8	2.13	0.84
47:DF:137:PHE:HB2	47:DF:138:PRO:HD2	1.60	0.84
6:CG:14:ASP:HB3	6:CG:18:GLY:H	1.40	0.84
23:DB:1099:G:P	24:DI:4:VAL:H	2.00	0.84
51:DZ:31:PRO:HB2	51:DZ:33:LEU:HD11	1.60	0.84
3:AD:165:GLU:HG3	3:AD:166:LYS:H	1.42	0.84
23:DB:2306:C:H3'	23:DB:2307:G:C5'	2.08	0.84
3:AD:24:VAL:HG23	3:AD:25:ARG:H	1.40	0.84
46:BU:84:PHE:O	46:BU:85:ARG:HB2	1.78	0.84
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.13	0.84
51:BZ:14:THR:HA	51:BZ:28:ARG:HA	1.57	0.84
41:BJ:81:ILE:HG23	41:BJ:82:GLY:H	1.42	0.83
39:BX:39:GLN:HB3	39:BX:42:LEU:HD13	1.58	0.83
47:BF:87:LYS:HG3	47:BF:88:VAL:H	1.43	0.83
3:CD:116:LEU:HB3	3:CD:122:ILE:HD11	1.60	0.83
23:BB:1244:A:H5''	37:BL:8:PRO:HD3	1.60	0.83
21:AU:36:PHE:HA	21:AU:39:LYS:HE3	1.59	0.83
23:BB:2306:C:H3'	23:BB:2307:G:C5'	2.08	0.83
26:DD:107:VAL:HG13	26:DD:203:VAL:HG23	1.61	0.83
10:AK:34:THR:HA	10:AK:41:LEU:HG	1.59	0.83
5:CF:53:LYS:HD3	5:CF:54:LEU:HD13	1.61	0.83
10:CK:28:ASN:HD21	10:CK:47:GLY:H	1.27	0.83
3:AD:116:LEU:HB3	3:AD:122:ILE:HD11	1.58	0.83
20:CB:46:VAL:HG13	20:CB:47:PRO:HD3	1.61	0.83
23:BB:100:U:O2	23:BB:100:U:H2'	1.76	0.83
23:DB:1099:G:H8	24:DI:3:LYS:CA	1.90	0.83
23:DB:137:U:H2'	23:DB:138:U:O4'	1.78	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1024:G:H3'	23:BB:1025:G:H5''	1.60	0.83
21:CU:36:PHE:HA	21:CU:39:LYS:HE3	1.61	0.83
25:DC:80:LEU:HD11	25:DC:109:LEU:HG	1.59	0.83
27:BK:71:ARG:HG3	27:BK:105:ARG:NH2	1.93	0.83
52:DW:39:GLN:HE21	52:DW:42:THR:HB	1.41	0.83
23:DB:2267:A:C8	23:DB:2267:A:H3'	2.13	0.83
23:BB:2267:A:C8	23:BB:2267:A:H3'	2.13	0.83
2:AC:63:ILE:HD12	2:AC:98:ALA:HB2	1.59	0.83
52:BW:37:VAL:HG12	52:BW:38:ARG:H	1.41	0.83
6:AG:14:ASP:HB3	6:AG:18:GLY:H	1.43	0.83
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.13	0.83
47:BF:137:PHE:HB2	47:BF:138:PRO:HD2	1.60	0.83
37:BL:30:THR:O	37:BL:33:ARG:HG2	1.79	0.83
23:BB:1060:U:C2	23:BB:1088:A:N7	2.47	0.83
23:DB:742:A:H2'	23:DB:743:A:C8	2.14	0.83
5:AF:53:LYS:HD3	5:AF:54:LEU:HD13	1.61	0.83
47:DF:163:GLU:HA	47:DF:166:ARG:HH11	1.43	0.83
20:AB:46:VAL:HG13	20:AB:47:PRO:HD3	1.61	0.82
1:AA:1361:G:H2'	1:AA:1362:A:H5''	1.61	0.82
4:CE:89:THR:HG22	4:CE:90:GLY:H	1.43	0.82
47:BF:163:GLU:HA	47:BF:166:ARG:HH11	1.44	0.82
44:BQ:91:ARG:CZ	49:BR:11:GLN:H	1.91	0.82
23:BB:2322:A:N6	23:BB:2333:A:H62	1.75	0.82
37:DL:30:THR:O	37:DL:33:ARG:HG2	1.78	0.82
40:BH:81:ALA:HA	40:BH:146:VAL:HA	1.61	0.82
18:AS:50:VAL:HG23	18:AS:59:VAL:HG21	1.61	0.82
40:BH:103:VAL:HG23	40:BH:110:VAL:HG21	1.61	0.82
1:CA:1361:G:H2'	1:CA:1362:A:H5''	1.60	0.82
14:AO:70:LEU:HD11	14:AO:77:ARG:HB2	1.61	0.82
41:BJ:25:LEU:HD22	41:BJ:26:GLY:H	1.43	0.82
10:CK:111:ASP:HB2	21:CU:19:LYS:HE3	1.61	0.82
3:CD:146:GLU:HA	3:CD:149:LYS:HG2	1.62	0.82
38:DM:34:LYS:HB3	38:DM:129:THR:HG22	1.59	0.82
1:CA:411:A:H62	1:CA:413:G:H21	1.24	0.82
8:AI:56:MET:HA	8:AI:59:LYS:HB2	1.62	0.82
23:BB:161:A:H3'	23:BB:162:U:H5''	1.61	0.82
23:BB:2749:A:H3'	23:BB:2750:A:H5''	1.61	0.82
36:B2:31:LEU:HD23	36:B2:42:LEU:HD12	1.62	0.82
24:DI:121:ILE:HD13	24:DI:121:ILE:H	1.44	0.82
23:BB:858:G:N3	23:BB:2268:A:H2'	1.94	0.82
25:BC:80:LEU:HD11	25:BC:109:LEU:HG	1.59	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1060:U:C2	23:DB:1088:A:N7	2.48	0.82
23:BB:1141:U:H4'	23:BB:1142:A:O4'	1.79	0.82
29:DE:108:ILE:HD11	29:DE:181:ILE:HB	1.60	0.82
40:DH:115:VAL:HB	40:DH:132:PHE:HD1	1.44	0.82
38:BM:38:ARG:HH11	38:BM:38:ARG:HB3	1.43	0.82
23:DB:161:A:H3'	23:DB:162:U:H5''	1.61	0.82
23:DB:2305:U:H4'	47:DF:132:ARG:HD3	1.62	0.82
23:DB:1099:G:OP2	24:DI:3:LYS:HA	1.79	0.82
6:AG:149:ALA:HB2	10:AK:55:ARG:NE	1.95	0.82
23:BB:141:G:H1	50:BT:2:ILE:HD12	1.42	0.82
8:CI:56:MET:HA	8:CI:59:LYS:HB2	1.61	0.82
29:BE:143:LEU:HB3	29:BE:146:VAL:HG21	1.60	0.82
21:AU:3:ILE:HD13	21:AU:19:LYS:HA	1.60	0.82
50:BT:29:THR:HA	50:BT:86:THR:HA	1.62	0.82
40:BH:131:SER:HA	40:BH:141:LYS:HA	1.60	0.82
23:BB:1082:U:C4	23:BB:1086:A:C2	2.68	0.82
47:DF:11:VAL:HG12	47:DF:12:VAL:H	1.43	0.82
14:CO:70:LEU:HD11	14:CO:77:ARG:HB2	1.62	0.82
38:DM:38:ARG:HH11	38:DM:38:ARG:HB3	1.43	0.82
21:CU:33:ARG:CZ	21:CU:34:ARG:HG2	2.10	0.81
40:DH:125:THR:HA	40:DH:146:VAL:HB	1.60	0.81
47:BF:11:VAL:HG12	47:BF:12:VAL:H	1.45	0.81
23:DB:972:A:H3'	23:DB:973:A:H5''	1.60	0.81
8:AI:29:ILE:HA	8:AI:64:ILE:HB	1.61	0.81
6:AG:149:ALA:H	10:AK:55:ARG:HH21	1.25	0.81
8:AI:59:LYS:HB3	8:AI:60:LEU:HD23	1.62	0.81
8:CI:59:LYS:HB3	8:CI:60:LEU:HD23	1.61	0.81
42:BN:101:GLY:HA2	42:BN:110:MET:H	1.44	0.81
3:CD:24:VAL:HG23	3:CD:25:ARG:H	1.44	0.81
8:CI:29:ILE:HA	8:CI:64:ILE:HB	1.60	0.81
23:BB:287:G:H2'	23:BB:288:U:C6	2.15	0.81
41:DJ:25:LEU:HD22	41:DJ:26:GLY:H	1.43	0.81
23:DB:2886:A:H62	31:D0:39:ARG:NE	1.78	0.81
1:CA:18:C:H4'	1:CA:1078:U:O2	1.79	0.81
2:AC:69:THR:HG21	2:AC:75:VAL:HG21	1.62	0.81
23:DB:1082:U:C4	23:DB:1086:A:C2	2.68	0.81
48:BG:17:LYS:HZ2	48:BG:18:ILE:H	1.29	0.81
27:DK:71:ARG:HG3	27:DK:105:ARG:HH21	1.41	0.81
30:DY:8:GLN:HG2	30:DY:31:ILE:HA	1.62	0.81
23:DB:636:G:H3'	37:DL:128:THR:HG21	1.62	0.81
44:BQ:30:VAL:HG13	44:BQ:31:TYR:N	1.95	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BT:11:LEU:HD21	50:BT:46:ALA:HB1	1.60	0.81
42:DN:101:GLY:HA2	42:DN:110:MET:H	1.43	0.81
13:CN:63:CYS:HB2	13:CN:79:SER:HB3	1.62	0.81
23:DB:704:G:H2'	23:DB:726:G:H22	1.46	0.81
4:AE:131:ASN:HD21	4:AE:133:ILE:HB	1.45	0.81
40:BH:90:LEU:HD21	40:BH:146:VAL:HG11	1.63	0.81
25:DC:4:LYS:HD2	25:DC:5:CYS:N	1.95	0.81
40:DH:78:VAL:HB	40:DH:144:VAL:HG13	1.63	0.81
23:DB:1141:U:H4'	23:DB:1142:A:O4'	1.79	0.81
23:DB:1324:G:H1'	23:DB:1616:A:N6	1.95	0.81
46:DU:46:LYS:HG2	46:DU:47:PRO:HD2	1.63	0.81
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.16	0.81
50:DT:11:LEU:HD21	50:DT:46:ALA:HB1	1.60	0.81
25:BC:144:GLU:HG3	25:BC:151:GLY:N	1.96	0.81
28:DP:20:ARG:HG3	28:DP:21:PRO:HD2	1.63	0.81
12:CM:106:ARG:HH12	12:CM:109:LYS:HD2	1.45	0.81
35:DV:9:ARG:NH2	35:DV:12:GLN:HA	1.95	0.81
25:BC:4:LYS:HD2	25:BC:5:CYS:N	1.94	0.81
24:BI:55:PRO:HD3	24:BI:74:PRO:HD3	1.62	0.81
3:AD:25:ARG:HH11	3:AD:26:ALA:H	1.26	0.81
23:BB:141:G:N1	50:BT:2:ILE:HD12	1.95	0.81
23:DB:117:G:H5'	23:DB:126:A:H8	1.46	0.81
25:BC:76:VAL:HG12	25:BC:114:GLN:HG2	1.61	0.81
51:BZ:31:PRO:HB2	51:BZ:33:LEU:HD11	1.62	0.81
23:BB:9:G:H21	23:BB:10:A:H62	1.27	0.81
23:DB:1592:C:H2'	23:DB:1593:A:H8	1.46	0.81
9:CJ:36:VAL:HG22	9:CJ:76:ILE:HG22	1.63	0.81
48:DG:106:LEU:HD12	48:DG:151:ARG:HD3	1.61	0.81
50:DT:29:THR:HA	50:DT:86:THR:HA	1.63	0.80
47:DF:42:ALA:HA	47:DF:48:LEU:HD21	1.61	0.80
18:CS:18:VAL:HG21	18:CS:43:MET:HB3	1.63	0.80
23:BB:135:U:H2'	23:BB:136:G:C8	2.17	0.80
45:BS:4:ILE:HG22	45:BS:106:VAL:HG13	1.62	0.80
23:BB:1076:C:H4'	24:BI:94:LYS:HE3	1.61	0.80
26:DD:91:THR:HG23	26:DD:92:VAL:H	1.46	0.80
26:BD:105:LYS:HD2	26:BD:177:VAL:HG22	1.62	0.80
29:BE:188:MET:HE2	29:BE:193:VAL:HG22	1.60	0.80
21:AU:33:ARG:CZ	21:AU:34:ARG:HG2	2.10	0.80
23:DB:139:U:H3	50:DT:49:LYS:HZ1	1.25	0.80
38:BM:19:GLY:HA2	38:BM:97:GLN:HB2	1.61	0.80
23:BB:1381:G:H2'	23:BB:1382:G:H5'	1.63	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:114:LYS:HE3	26:DD:116:LYS:NZ	1.96	0.80
38:DM:121:ALA:HA	38:DM:124:LEU:HD12	1.60	0.80
23:BB:62:U:H3'	23:BB:63:A:C8	2.17	0.80
21:CU:3:ILE:HD13	21:CU:19:LYS:HA	1.62	0.80
1:AA:411:A:N6	1:AA:413:G:H21	1.78	0.80
1:AA:1060:U:H4'	9:AJ:54:SER:HB2	1.63	0.80
9:AJ:36:VAL:HG22	9:AJ:76:ILE:HG22	1.61	0.80
52:BW:18:LYS:HA	52:BW:36:ILE:HG12	1.64	0.80
23:DB:138:U:O3'	23:DB:139:U:H3'	1.82	0.80
23:DB:858:G:N3	23:DB:2268:A:H2'	1.96	0.80
23:DB:62:U:H3'	23:DB:63:A:C8	2.17	0.80
14:CO:24:SER:HB3	14:CO:27:VAL:HG23	1.64	0.80
23:BB:775:G:H4'	23:BB:776:G:H5'	1.64	0.80
35:BV:9:ARG:NH2	35:BV:12:GLN:HA	1.97	0.80
4:AE:52:ALA:HB2	4:AE:61:LYS:HE2	1.64	0.80
28:DP:110:LYS:HD2	28:DP:110:LYS:H	1.45	0.80
46:DU:84:PHE:O	46:DU:85:ARG:HB2	1.79	0.80
10:AK:111:ASP:HB2	21:AU:19:LYS:HE3	1.64	0.80
47:DF:36:ASN:HA	47:DF:87:LYS:HA	1.64	0.80
26:BD:148:GLN:HG3	26:BD:152:PRO:HG2	1.64	0.80
24:DI:21:PRO:HB2	24:DI:22:PRO:HD3	1.64	0.80
23:DB:1381:G:H2'	23:DB:1382:G:H5'	1.64	0.80
47:BF:42:ALA:HA	47:BF:48:LEU:HD21	1.61	0.80
23:BB:2311:A:H1'	47:BF:84:ILE:HD13	1.63	0.80
1:CA:411:A:N6	1:CA:413:G:H21	1.79	0.80
30:BY:8:GLN:HG2	30:BY:31:ILE:HA	1.62	0.80
22:BA:43:C:O2'	47:BF:91:ARG:HD2	1.81	0.80
49:DR:8:GLY:HA3	49:DR:23:GLU:HB2	1.64	0.80
2:CC:69:THR:HG21	2:CC:75:VAL:HG21	1.64	0.80
26:DD:113:SER:HB2	26:DD:168:GLU:H	1.45	0.80
13:AN:63:CYS:HB2	13:AN:79:SER:HB3	1.64	0.80
46:BU:46:LYS:HG2	46:BU:47:PRO:HD2	1.62	0.80
29:BE:46:GLN:HG3	29:BE:87:ALA:HB3	1.64	0.80
29:DE:46:GLN:HG3	29:DE:87:ALA:HB3	1.64	0.79
52:DW:77:LYS:HZ2	52:DW:77:LYS:H	1.30	0.79
14:AO:24:SER:HB3	14:AO:27:VAL:HG23	1.63	0.79
28:BP:110:LYS:HD2	28:BP:110:LYS:H	1.48	0.79
2:AC:106:ARG:HD2	2:AC:106:ARG:H	1.47	0.79
6:CG:12:LEU:HD22	6:CG:13:PRO:HD2	1.62	0.79
25:DC:196:ASN:HD22	25:DC:199:HIS:HB2	1.47	0.79
35:DV:4:ILE:HB	35:DV:63:ILE:HA	1.64	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1324:G:H1'	23:BB:1616:A:N6	1.96	0.79
29:DE:58:LYS:HE2	29:DE:60:TRP:HD1	1.46	0.79
23:BB:2148:G:H3'	23:BB:2149:U:O4'	1.83	0.79
6:CG:58:LEU:H	6:CG:58:LEU:HD23	1.47	0.79
23:DB:855:G:N2	52:DW:23:LYS:HG2	1.97	0.79
43:BO:53:THR:HB	43:BO:65:THR:HG22	1.65	0.79
20:CB:202:ASN:HD22	20:CB:204:ASP:H	1.29	0.79
49:BR:8:GLY:HA3	49:BR:23:GLU:HB2	1.65	0.79
23:DB:2264:C:H41	52:DW:11:ASN:HD21	1.30	0.79
3:CD:165:GLU:HG3	3:CD:166:LYS:H	1.46	0.79
22:DA:43:C:O2'	47:DF:91:ARG:HD2	1.81	0.79
48:DG:17:LYS:HA	48:DG:17:LYS:HZ2	1.48	0.79
4:CE:131:ASN:HD21	4:CE:133:ILE:HB	1.48	0.79
24:BI:106:GLN:O	24:BI:110:GLN:HG3	1.83	0.79
43:DO:62:LEU:HD11	43:DO:70:ALA:HA	1.64	0.79
23:DB:354:A:H2'	23:DB:355:U:C6	2.17	0.79
2:AC:122:GLN:HB3	2:AC:127:VAL:HG21	1.64	0.79
26:BD:91:THR:HG23	26:BD:92:VAL:H	1.48	0.79
6:AG:58:LEU:HD23	6:AG:58:LEU:H	1.48	0.79
40:DH:72:ILE:HD11	40:DH:140:ALA:HB3	1.64	0.79
38:BM:121:ALA:HA	38:BM:124:LEU:HD12	1.63	0.79
48:DG:166:GLU:HG2	48:DG:168:VAL:HG23	1.65	0.79
25:DC:14:HIS:O	25:DC:203:VAL:HG11	1.83	0.79
13:CN:68:ARG:HB3	13:CN:68:ARG:HH11	1.48	0.79
25:DC:76:VAL:HG12	25:DC:114:GLN:HG2	1.63	0.79
41:BJ:1:MET:HG2	41:BJ:2:LYS:HG2	1.62	0.79
14:CO:89:ARG:HA	14:CO:89:ARG:HH11	1.48	0.79
24:BI:129:GLU:HB3	24:BI:133:ARG:HH12	1.46	0.79
25:BC:196:ASN:HD22	25:BC:199:HIS:HB2	1.48	0.79
50:BT:39:THR:HG22	50:BT:42:GLU:HG2	1.63	0.79
38:DM:19:GLY:HA2	38:DM:97:GLN:HB2	1.62	0.79
52:BW:77:LYS:H	52:BW:77:LYS:NZ	1.81	0.79
20:CB:128:LEU:HD13	20:CB:129:THR:N	1.98	0.79
35:BV:42:LEU:HD12	35:BV:47:VAL:HG21	1.64	0.79
2:CC:106:ARG:HD2	2:CC:106:ARG:H	1.48	0.79
40:BH:27:ARG:HE	51:BZ:64:ILE:HD11	1.48	0.79
46:BU:85:ARG:HD3	46:BU:86:PHE:N	1.97	0.79
20:CB:62:ARG:H	20:CB:62:ARG:HD2	1.48	0.79
6:AG:149:ALA:H	10:AK:55:ARG:NH2	1.80	0.78
2:CC:122:GLN:HB3	2:CC:127:VAL:HG21	1.65	0.78
17:CR:19:GLU:HG3	17:CR:54:LEU:HD12	1.65	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:280:U:H2'	23:BB:281:C:C6	2.18	0.78
46:BU:39:ASN:HB3	46:BU:62:ALA:HB3	1.65	0.78
23:BB:1019:U:H2'	23:BB:1020:A:C8	2.18	0.78
18:AS:28:LYS:HZ2	18:AS:28:LYS:H	1.30	0.78
3:AD:146:GLU:HA	3:AD:149:LYS:HG2	1.64	0.78
23:DB:742:A:H2'	23:DB:743:A:H8	1.46	0.78
6:AG:12:LEU:HD22	6:AG:13:PRO:HD2	1.65	0.78
23:BB:2073:C:H5''	25:BC:227:VAL:HG12	1.64	0.78
26:BD:107:VAL:HG13	26:BD:203:VAL:HG23	1.64	0.78
51:DZ:45:ARG:HE	51:DZ:47:VAL:HG12	1.49	0.78
35:DV:42:LEU:HD12	35:DV:47:VAL:HG21	1.64	0.78
23:BB:1176:U:H3'	23:BB:1177:G:H8	1.46	0.78
33:B1:46:VAL:HG22	33:B1:47:ILE:H	1.48	0.78
47:BF:36:ASN:HA	47:BF:87:LYS:HA	1.63	0.78
40:BH:40:THR:H	40:BH:43:ASN:HD21	1.26	0.78
2:AC:26:LYS:HG3	2:AC:27:GLU:H	1.47	0.78
23:BB:742:A:H2'	23:BB:743:A:C8	2.18	0.78
23:DB:1173:U:H2'	23:DB:1174:U:C6	2.18	0.78
40:DH:97:ARG:HB3	40:DH:112:LYS:HE2	1.65	0.78
48:BG:166:GLU:HG2	48:BG:168:VAL:HG23	1.64	0.78
24:BI:21:PRO:HB2	24:BI:22:PRO:HD3	1.63	0.78
51:DZ:5:CYS:HB2	51:DZ:10:LYS:HB3	1.66	0.78
44:DQ:91:ARG:CZ	49:DR:11:GLN:H	1.96	0.78
18:AS:43:MET:HG3	18:AS:61:VAL:HG21	1.66	0.78
22:DA:98:G:H1	35:DV:14:LYS:HB2	1.48	0.78
37:DL:103:ILE:H	37:DL:103:ILE:HD12	1.47	0.78
40:BH:94:ILE:HB	40:BH:121:VAL:HB	1.65	0.78
44:DQ:94:LEU:HD12	49:DR:13:ARG:HB2	1.66	0.78
10:CK:126:ARG:HB2	21:CU:33:ARG:HD2	1.65	0.78
20:AB:202:ASN:HD22	20:AB:204:ASP:H	1.30	0.78
1:CA:203:G:H1'	1:CA:465:A:H61	1.49	0.78
1:AA:1220:G:H21	18:AS:53:GLY:HA2	1.49	0.78
23:BB:2743:U:H2'	23:BB:2744:G:O4'	1.83	0.78
20:CB:63:LYS:HA	20:CB:224:ARG:HH11	1.48	0.78
40:BH:82:SER:H	40:BH:146:VAL:HG13	1.47	0.78
50:DT:39:THR:HG22	50:DT:42:GLU:HG2	1.65	0.78
23:BB:142:A:H2'	23:BB:143:C:C6	2.18	0.78
1:CA:1412:C:H2'	1:CA:1413:A:H8	1.48	0.78
13:AN:63:CYS:HB3	13:AN:67:GLY:H	1.48	0.78
2:CC:26:LYS:HG3	2:CC:27:GLU:H	1.49	0.78
35:DV:16:ALA:HA	35:DV:19:ARG:HE	1.49	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AR:19:GLU:HG3	17:AR:54:LEU:HD12	1.65	0.78
40:BH:31:VAL:HB	40:BH:32:PRO:CD	2.11	0.78
52:DW:18:LYS:HA	52:DW:36:ILE:HG12	1.65	0.78
25:DC:149:LYS:HD3	25:DC:152:GLN:HE22	1.49	0.78
29:DE:143:LEU:HB3	29:DE:146:VAL:HG21	1.62	0.78
10:AK:126:ARG:HB2	21:AU:33:ARG:HD2	1.63	0.78
48:BG:106:LEU:HD12	48:BG:151:ARG:HD3	1.65	0.78
40:BH:130:VAL:HG21	40:BH:144:VAL:HG23	1.66	0.78
47:DF:107:VAL:HG11	47:DF:175:PRO:HG3	1.65	0.78
23:DB:2073:C:H5''	25:DC:227:VAL:HG12	1.66	0.78
24:DI:45:THR:HA	24:DI:48:ILE:HG22	1.66	0.78
23:BB:972:A:H3'	23:BB:973:A:H5''	1.63	0.78
50:DT:48:GLN:HA	50:DT:48:GLN:HE21	1.48	0.78
40:BH:68:ARG:HH11	40:BH:134:VAL:HG21	1.48	0.78
40:DH:86:ASP:HB2	40:DH:89:LYS:HZ3	1.49	0.78
52:DW:77:LYS:H	52:DW:77:LYS:NZ	1.82	0.78
34:B3:49:VAL:HG21	34:B3:54:LEU:HD13	1.64	0.78
48:DG:68:ARG:HH12	48:DG:72:ASN:HD22	1.29	0.78
38:BM:82:MET:HE3	38:BM:83:GLY:H	1.49	0.77
51:BZ:33:LEU:HG	51:BZ:52:SER:HB3	1.66	0.77
44:DQ:30:VAL:HG13	44:DQ:31:TYR:N	1.97	0.77
48:BG:26:LYS:HB2	48:BG:32:LEU:HG	1.65	0.77
1:AA:337:G:H2'	1:AA:338:A:C8	2.19	0.77
1:CA:1060:U:H4'	9:CJ:54:SER:HB2	1.65	0.77
35:DV:30:ILE:HD12	35:DV:38:LEU:HD23	1.64	0.77
24:DI:72:THR:HG21	24:DI:112:LYS:HA	1.66	0.77
23:DB:62:U:H3'	23:DB:63:A:H8	1.47	0.77
23:BB:645:C:H4'	23:BB:646:U:OP2	1.84	0.77
23:BB:2264:C:H41	52:BW:11:ASN:HD21	1.32	0.77
1:CA:844:G:H2'	1:CA:845:A:C8	2.19	0.77
50:DT:67:VAL:HB	50:DT:76:ARG:HG2	1.66	0.77
23:DB:1019:U:H2'	23:DB:1020:A:C8	2.19	0.77
47:DF:64:PRO:HA	47:DF:88:VAL:HG22	1.66	0.77
27:BK:71:ARG:HG3	27:BK:105:ARG:HH21	1.48	0.77
47:DF:8:LYS:HA	47:DF:12:VAL:HG21	1.65	0.77
23:BB:1171:G:C4	23:BB:1172:C:H1'	2.20	0.77
23:BB:704:G:H2'	23:BB:726:G:H22	1.48	0.77
15:CP:52:LEU:HD21	15:CP:75:ILE:HG12	1.66	0.77
28:BP:20:ARG:HG3	28:BP:21:PRO:HD2	1.64	0.77
1:CA:1343:G:H4'	8:CI:123:ARG:O	1.85	0.77
23:DB:2331:G:O2'	52:DW:40:ARG:HB2	1.85	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:668:A:H2'	23:DB:670:A:H62	1.49	0.77
23:BB:1046:A:H3'	23:BB:1047:G:H5''	1.65	0.77
20:AB:163:ILE:HG23	20:AB:164:ASP:N	1.98	0.77
26:BD:106:LYS:HB3	26:BD:206:ALA:N	1.99	0.77
16:CQ:16:MET:HB2	16:CQ:19:SER:HB2	1.66	0.77
20:AB:63:LYS:HA	20:AB:224:ARG:HH11	1.48	0.77
47:DF:72:SER:HB2	47:DF:80:GLN:HA	1.66	0.77
35:BV:72:VAL:HG12	35:BV:94:ALA:H	1.49	0.77
27:DK:54:LYS:H	27:DK:54:LYS:HD2	1.49	0.77
40:BH:40:THR:H	40:BH:43:ASN:ND2	1.82	0.77
3:CD:90:LEU:HD21	3:CD:196:GLU:HB3	1.67	0.77
42:BN:34:ILE:HB	42:BN:113:ILE:HG22	1.67	0.77
1:CA:108:G:H5'	1:CA:109:A:H5''	1.66	0.77
51:DZ:33:LEU:HG	51:DZ:52:SER:HB3	1.66	0.77
26:DD:105:LYS:HD2	26:DD:177:VAL:HG22	1.65	0.77
23:BB:62:U:H3'	23:BB:63:A:H8	1.48	0.77
5:AF:98:GLU:HG2	5:AF:99:ALA:N	1.99	0.77
1:AA:1348:U:H4'	8:AI:121:ARG:HG3	1.67	0.77
42:DN:38:LEU:HB3	42:DN:39:PRO:HD3	1.66	0.77
24:BI:27:LEU:HD12	24:BI:32:VAL:HG11	1.65	0.77
40:DH:131:SER:HB2	40:DH:141:LYS:HG3	1.67	0.77
23:DB:2615:U:H1'	31:D0:3:GLN:HB3	1.67	0.77
36:D2:31:LEU:HD23	36:D2:42:LEU:HD12	1.67	0.77
11:CL:49:ARG:HG2	11:CL:89:LEU:HD21	1.66	0.77
25:BC:14:HIS:O	25:BC:203:VAL:HG11	1.84	0.77
23:DB:1080:A:H2'	23:DB:1081:U:H6	1.49	0.77
23:BB:27:G:N2	23:BB:512:G:H2'	2.00	0.77
38:BM:19:GLY:N	38:BM:38:ARG:HH22	1.83	0.77
12:AM:3:ILE:HA	12:AM:56:ARG:HG2	1.65	0.77
26:DD:148:GLN:HG3	26:DD:152:PRO:HG2	1.67	0.77
48:BG:16:VAL:HG13	48:BG:49:LEU:HD11	1.67	0.77
36:B2:19:ARG:HH21	36:B2:19:ARG:HG2	1.49	0.76
51:BZ:45:ARG:HE	51:BZ:47:VAL:HG12	1.50	0.76
1:AA:203:G:H1'	1:AA:465:A:H61	1.48	0.76
1:AA:239:U:H4'	1:AA:239:U:OP1	1.85	0.76
24:DI:105:LEU:HD13	24:DI:129:GLU:HG2	1.65	0.76
37:DL:124:GLY:N	37:DL:143:GLU:HG3	2.01	0.76
48:DG:26:LYS:HB2	48:DG:32:LEU:HG	1.67	0.76
23:BB:668:A:H2'	23:BB:670:A:H62	1.48	0.76
27:BK:105:ARG:HD3	27:BK:105:ARG:H	1.50	0.76
43:DO:53:THR:HB	43:DO:65:THR:HG22	1.67	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1250:A:H4'	8:CI:69:GLY:H	1.50	0.76
23:BB:275:C:H2'	23:BB:276:U:O4'	1.86	0.76
45:DS:66:ILE:H	45:DS:66:ILE:HD13	1.50	0.76
23:BB:2769:U:H2'	23:BB:2770:G:C8	2.20	0.76
1:AA:1323:G:H2'	1:AA:1324:A:H8	1.51	0.76
40:DH:115:VAL:HB	40:DH:132:PHE:CD1	2.20	0.76
1:CA:337:G:H2'	1:CA:338:A:C8	2.19	0.76
46:DU:39:ASN:HB3	46:DU:62:ALA:HB3	1.67	0.76
34:D3:49:VAL:HG21	34:D3:54:LEU:HD13	1.66	0.76
23:BB:922:C:H1'	52:BW:22:VAL:HG21	1.67	0.76
9:AJ:12:ALA:HB3	9:AJ:18:ILE:HB	1.68	0.76
26:DD:106:LYS:HB3	26:DD:206:ALA:N	1.99	0.76
29:DE:188:MET:HE2	29:DE:193:VAL:HG22	1.65	0.76
40:BH:134:VAL:HG13	40:BH:135:HIS:H	1.49	0.76
23:DB:28:A:H61	23:DB:512:G:H1'	1.50	0.76
32:B4:7:VAL:HG23	32:B4:35:GLN:HB2	1.68	0.76
47:BF:102:LEU:HD22	47:BF:103:ILE:H	1.50	0.76
14:AO:89:ARG:HA	14:AO:89:ARG:HH11	1.50	0.76
3:AD:94:GLU:HG2	3:AD:185:PRO:HG3	1.66	0.76
23:BB:2886:A:H62	31:B0:39:ARG:NE	1.84	0.76
37:DL:23:ILE:HD12	37:DL:23:ILE:H	1.50	0.76
23:DB:27:G:N2	23:DB:512:G:H2'	2.00	0.76
25:DC:196:ASN:ND2	25:DC:199:HIS:HB2	2.01	0.76
47:BF:72:SER:HB2	47:BF:80:GLN:HA	1.67	0.76
43:BO:62:LEU:HD11	43:BO:70:ALA:HA	1.65	0.76
1:AA:108:G:H5'	1:AA:109:A:H5''	1.66	0.76
1:AA:1029:U:H2'	1:AA:1031:C:N3	2.01	0.76
12:CM:3:ILE:HA	12:CM:56:ARG:HG2	1.66	0.76
41:DJ:72:LYS:HB2	41:DJ:89:PHE:HB2	1.67	0.76
40:DH:31:VAL:CB	40:DH:32:PRO:HD2	2.14	0.76
25:BC:143:VAL:HB	25:BC:153:LEU:HB2	1.67	0.76
27:BK:54:LYS:H	27:BK:54:LYS:HD2	1.50	0.76
35:DV:72:VAL:HG12	35:DV:94:ALA:H	1.49	0.76
27:DK:76:VAL:H	28:DP:72:VAL:HG23	1.51	0.76
50:BT:53:VAL:HG11	50:BT:87:LEU:HD13	1.68	0.76
45:DS:52:GLU:HA	45:DS:55:ILE:HG22	1.68	0.76
40:DH:90:LEU:HD11	40:DH:146:VAL:HG11	1.66	0.76
33:D1:46:VAL:HG22	33:D1:47:ILE:H	1.49	0.76
37:BL:103:ILE:H	37:BL:103:ILE:HD12	1.49	0.76
23:DB:845:A:H2'	23:DB:846:U:H5''	1.67	0.76
23:BB:2269:G:H4'	52:BW:19:ARG:NH1	2.01	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:64:PRO:HA	47:BF:88:VAL:HG22	1.67	0.76
47:BF:107:VAL:HG11	47:BF:175:PRO:HG3	1.68	0.76
47:BF:8:LYS:HA	47:BF:12:VAL:HG21	1.67	0.76
46:DU:26:ASN:HD21	46:DU:34:ILE:HD12	1.51	0.76
1:CA:423:G:H2'	1:CA:424:G:O4'	1.85	0.76
23:DB:90:U:H3'	23:DB:91:A:H5''	1.67	0.76
42:DN:33:ILE:HG22	42:DN:114:GLU:HB2	1.68	0.76
50:BT:67:VAL:HB	50:BT:76:ARG:HG2	1.66	0.76
40:DH:31:VAL:HB	40:DH:32:PRO:CD	2.11	0.76
23:BB:28:A:H61	23:BB:512:G:H1'	1.51	0.76
36:D2:19:ARG:HG2	36:D2:19:ARG:HH21	1.51	0.76
26:DD:114:LYS:HE3	26:DD:116:LYS:HZ2	1.50	0.76
48:DG:16:VAL:HG13	48:DG:49:LEU:HD11	1.68	0.76
48:DG:9:VAL:HA	48:DG:48:THR:HG22	1.67	0.76
35:BV:16:ALA:HA	35:BV:19:ARG:HE	1.51	0.76
3:AD:90:LEU:HD21	3:AD:196:GLU:HB3	1.67	0.76
30:BY:12:ALA:HA	30:BY:15:ARG:HD3	1.65	0.76
8:CI:51:LEU:HB3	8:CI:56:MET:HB2	1.68	0.75
47:DF:64:PRO:HA	47:DF:88:VAL:CG2	2.16	0.75
47:DF:62:GLN:HG3	47:DF:91:ARG:HH11	1.49	0.75
23:DB:1437:C:H2'	23:DB:1438:U:C6	2.20	0.75
9:CJ:57:VAL:HG22	9:CJ:58:ASN:H	1.51	0.75
23:DB:1098:A:H2'	24:DI:4:VAL:N	2.02	0.75
23:BB:923:G:H1'	52:BW:23:LYS:HZ2	1.49	0.75
46:DU:85:ARG:HD3	46:DU:86:PHE:N	2.00	0.75
28:BP:61:ARG:HH21	28:BP:61:ARG:HB3	1.51	0.75
37:BL:89:VAL:HG23	37:BL:123:ARG:HG3	1.68	0.75
41:BJ:72:LYS:HB2	41:BJ:89:PHE:HB2	1.68	0.75
27:DK:105:ARG:H	27:DK:105:ARG:HD3	1.50	0.75
31:B0:42:ILE:HD11	42:BN:98:LEU:HD12	1.66	0.75
35:BV:30:ILE:HD12	35:BV:38:LEU:HD23	1.67	0.75
23:DB:775:G:H4'	23:DB:776:G:H5'	1.66	0.75
29:DE:176:ASP:HB3	29:DE:179:SER:HB2	1.67	0.75
40:BH:142:VAL:HG12	40:BH:143:ILE:H	1.48	0.75
23:BB:1060:U:C5	24:BI:131:THR:HG22	2.21	0.75
48:DG:167:VAL:HG23	48:DG:168:VAL:H	1.51	0.75
23:BB:90:U:H3'	23:BB:91:A:H5''	1.67	0.75
37:DL:89:VAL:HG23	37:DL:123:ARG:HG3	1.68	0.75
3:CD:25:ARG:HD3	3:CD:26:ALA:N	2.02	0.75
13:CN:63:CYS:HB3	13:CN:67:GLY:H	1.49	0.75
26:DD:114:LYS:HB2	26:DD:116:LYS:HE3	1.68	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:45:G:H5'	23:BB:46:G:H5'	1.69	0.75
8:CI:71:ILE:H	8:CI:71:ILE:HD12	1.51	0.75
37:BL:47:ARG:HB3	37:BL:47:ARG:HH21	1.50	0.75
23:BB:856:G:H1'	52:BW:23:LYS:HB3	1.68	0.75
48:DG:26:LYS:HG2	48:DG:27:GLY:N	2.01	0.75
1:CA:1323:G:H2'	1:CA:1324:A:H8	1.50	0.75
48:BG:167:VAL:HG23	48:BG:168:VAL:H	1.50	0.75
23:DB:2531:A:H5'	48:DG:173:ALA:HB1	1.69	0.75
43:BO:51:ALA:HB3	43:BO:78:VAL:HG22	1.68	0.75
1:AA:844:G:H2'	1:AA:845:A:C8	2.21	0.75
23:DB:1099:G:O4'	24:DI:3:LYS:C	2.24	0.75
42:BN:38:LEU:HB3	42:BN:39:PRO:HD3	1.66	0.75
26:BD:151:THR:HB	26:BD:152:PRO:HD3	1.69	0.75
23:BB:955:U:OP1	38:BM:86:LYS:HE3	1.87	0.75
23:DB:1168:G:H2'	23:DB:1169:A:C8	2.21	0.75
23:DB:645:C:H4'	23:DB:646:U:OP2	1.84	0.75
1:CA:239:U:OP1	1:CA:239:U:H4'	1.85	0.75
20:AB:60:ALA:HA	20:AB:64:GLY:HA3	1.69	0.75
1:CA:1220:G:H21	18:CS:53:GLY:HA2	1.51	0.75
29:DE:155:GLU:HA	29:DE:158:PHE:HB3	1.69	0.75
42:DN:34:ILE:HB	42:DN:113:ILE:HG22	1.67	0.75
44:DQ:77:LYS:HE2	44:DQ:116:LEU:HD23	1.69	0.75
3:AD:192:ALA:HB3	3:AD:194:ILE:HG22	1.67	0.75
47:BF:128:SER:HB3	47:BF:154:THR:HG23	1.69	0.75
23:BB:547:A:H3'	23:BB:548:G:C8	2.21	0.75
35:BV:80:HIS:HD2	35:BV:82:TYR:H	1.34	0.75
37:BL:116:VAL:HG13	37:BL:117:THR:H	1.52	0.75
29:BE:176:ASP:HB3	29:BE:179:SER:HB2	1.67	0.75
16:AQ:16:MET:HB2	16:AQ:19:SER:HB2	1.68	0.75
26:BD:104:VAL:HA	26:BD:106:LYS:HZ1	1.51	0.75
20:CB:60:ALA:HA	20:CB:64:GLY:HA3	1.67	0.75
8:AI:20:ILE:HD13	8:AI:85:ALA:HB3	1.69	0.75
44:BQ:93:ILE:HG23	44:BQ:94:LEU:HD22	1.67	0.75
23:BB:1021:A:H61	23:BB:1142:A:N6	1.84	0.75
23:DB:2723:C:H5''	42:DN:1:MET:HE2	1.69	0.75
3:CD:94:GLU:HG2	3:CD:185:PRO:HG3	1.68	0.75
23:BB:2787:C:H1'	26:BD:63:PRO:HG3	1.69	0.75
23:BB:845:A:H2'	23:BB:846:U:H5''	1.67	0.75
23:DB:281:C:H2'	23:DB:282:A:C8	2.22	0.75
45:BS:66:ILE:H	45:BS:66:ILE:HD13	1.51	0.75
33:B1:8:ILE:HD11	33:B1:52:LYS:HB2	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:15:ASP:HB3	48:BG:25:ILE:HA	1.69	0.74
30:DY:12:ALA:HA	30:DY:15:ARG:HD3	1.67	0.74
23:DB:45:G:H5'	23:DB:46:G:H5'	1.67	0.74
26:BD:114:LYS:HE3	26:BD:116:LYS:NZ	2.01	0.74
1:CA:1029:U:H2'	1:CA:1031:C:N3	2.02	0.74
10:AK:22:ILE:HD12	10:AK:85:VAL:HG22	1.67	0.74
23:DB:1081:U:H5'	24:DI:126:ARG:NH1	2.02	0.74
23:BB:1019:U:H2'	23:BB:1020:A:H8	1.51	0.74
23:BB:2472:G:H2'	23:BB:2475:C:H42	1.51	0.74
49:BR:14:VAL:HG21	49:BR:98:ILE:HG12	1.66	0.74
26:DD:105:LYS:HE3	26:DD:176:ASP:HB3	1.68	0.74
3:CD:22:SER:HB2	3:CD:109:THR:HG22	1.69	0.74
18:CS:43:MET:O	18:CS:46:LEU:HB2	1.87	0.74
47:DF:31:GLU:O	47:DF:32:LYS:HD3	1.88	0.74
43:DO:5:SER:HA	43:DO:8:ILE:HD12	1.69	0.74
35:BV:14:LYS:HE3	35:BV:18:ARG:HH22	1.52	0.74
23:DB:1099:G:H5''	24:DI:3:LYS:N	2.03	0.74
3:CD:192:ALA:HB3	3:CD:194:ILE:HG22	1.69	0.74
24:DI:55:PRO:HD3	24:DI:74:PRO:HD3	1.68	0.74
23:BB:345:A:H1'	23:BB:346:A:H2	1.50	0.74
38:DM:19:GLY:N	38:DM:38:ARG:HH22	1.85	0.74
40:BH:44:ILE:HA	40:BH:51:ARG:HH22	1.51	0.74
26:BD:62:LYS:HD2	26:BD:62:LYS:H	1.53	0.74
20:AB:62:ARG:H	20:AB:62:ARG:HD2	1.51	0.74
41:BJ:23:LYS:HE3	41:BJ:142:ILE:HG23	1.70	0.74
1:AA:1343:G:H4'	8:AI:123:ARG:O	1.86	0.74
10:CK:83:VAL:HB	10:CK:109:ILE:HG23	1.67	0.74
32:D4:7:VAL:HG23	32:D4:35:GLN:HB2	1.69	0.74
47:DF:102:LEU:HD22	47:DF:103:ILE:H	1.52	0.74
23:BB:2185:U:H2'	23:BB:2186:G:C8	2.23	0.74
23:DB:1387:A:H2'	23:DB:1388:G:H8	1.52	0.74
5:CF:79:ARG:NH2	5:CF:87:SER:HB3	2.02	0.74
23:BB:855:G:H21	52:BW:23:LYS:CG	1.91	0.74
26:BD:105:LYS:HE3	26:BD:176:ASP:HB3	1.68	0.74
17:CR:34:GLU:HB2	21:CU:18:PHE:HZ	1.51	0.74
40:BH:108:VAL:HG12	40:BH:109:GLU:H	1.53	0.74
20:AB:27:LYS:HB3	20:AB:28:PRO:HD3	1.70	0.74
27:BK:97:THR:C	27:BK:98:ARG:HE	1.91	0.74
35:BV:44:HIS:HE1	35:BV:86:LEU:H	1.33	0.74
1:CA:1348:U:H4'	8:CI:121:ARG:HG3	1.68	0.74
33:B1:7:LYS:HA	33:B1:23:THR:HG22	1.70	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:973:G:H3'	1:AA:974:A:H5''	1.70	0.74
5:CF:98:GLU:HG2	5:CF:99:ALA:N	2.02	0.74
40:DH:27:ARG:NH1	51:DZ:60:ASP:HA	2.03	0.74
20:AB:95:TRP:HH2	20:AB:100:LEU:HB2	1.52	0.74
27:BK:112:PHE:O	27:BK:115:ILE:HG22	1.87	0.74
20:AB:87:ASP:HB2	20:AB:224:ARG:CZ	2.17	0.74
23:BB:125:A:H3'	23:BB:126:A:H5''	1.69	0.74
44:DQ:63:ARG:HH22	44:DQ:96:ASP:HA	1.53	0.74
48:BG:26:LYS:HG2	48:BG:27:GLY:N	2.02	0.74
23:DB:1021:A:H61	23:DB:1142:A:N6	1.86	0.74
46:BU:26:ASN:HD21	46:BU:34:ILE:HD12	1.52	0.74
9:CJ:12:ALA:HB3	9:CJ:18:ILE:HB	1.69	0.74
45:BS:84:ARG:HB3	45:BS:96:ILE:HG23	1.70	0.74
37:DL:47:ARG:HH21	37:DL:47:ARG:HB3	1.53	0.74
23:BB:254:G:H22	34:B3:7:ARG:HH21	1.35	0.74
25:BC:149:LYS:HD3	25:BC:152:GLN:HE22	1.50	0.74
23:DB:28:A:N6	23:DB:512:G:H1'	2.03	0.74
23:BB:2267:A:C8	23:BB:2267:A:C3'	2.71	0.74
39:BX:29:ARG:NH1	50:BT:12:ARG:HE	1.85	0.74
46:DU:35:VAL:HB	46:DU:38:ILE:HG21	1.70	0.74
13:AN:27:LYS:HG3	13:AN:28:ALA:H	1.53	0.74
13:CN:27:LYS:HG3	13:CN:28:ALA:H	1.51	0.74
29:BE:58:LYS:HE2	29:BE:60:TRP:HD1	1.52	0.74
23:DB:2743:U:H2'	23:DB:2744:G:H5''	1.68	0.74
8:AI:51:LEU:HB3	8:AI:56:MET:HB2	1.69	0.74
44:BQ:24:TYR:O	44:BQ:27:ARG:HB2	1.88	0.74
18:CS:43:MET:HG3	18:CS:61:VAL:HG21	1.67	0.74
50:BT:48:GLN:HE21	50:BT:48:GLN:HA	1.52	0.74
27:DK:97:THR:C	27:DK:98:ARG:HE	1.91	0.74
23:BB:1082:U:N3	23:BB:1086:A:C2	2.56	0.74
52:BW:77:LYS:HZ2	52:BW:77:LYS:H	1.35	0.74
46:BU:35:VAL:HB	46:BU:38:ILE:HG21	1.69	0.74
23:BB:1107:G:H2'	23:BB:1108:U:C6	2.23	0.74
52:DW:51:GLY:HA3	52:DW:59:PHE:CB	2.17	0.73
29:BE:155:GLU:HA	29:BE:158:PHE:HB3	1.68	0.73
3:AD:25:ARG:HD3	3:AD:26:ALA:N	2.03	0.73
23:DB:743:A:O2'	23:DB:744:U:H5'	1.88	0.73
42:DN:97:ILE:HD12	42:DN:98:LEU:N	2.03	0.73
37:DL:116:VAL:HG13	37:DL:117:THR:H	1.53	0.73
23:BB:1592:C:H2'	23:BB:1593:A:H8	1.53	0.73
23:BB:1437:C:H2'	23:BB:1438:U:C6	2.23	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2148:G:H2'	23:DB:2148:G:N3	2.03	0.73
21:AU:36:PHE:CB	21:AU:40:PRO:HD3	2.17	0.73
42:DN:85:PRO:HA	42:DN:88:ALA:HB2	1.70	0.73
47:DF:109:ARG:HB3	47:DF:135:ILE:HD12	1.68	0.73
1:CA:373:A:H1'	1:CA:481:G:N3	2.03	0.73
7:AH:11:THR:HG22	7:AH:14:ARG:HH12	1.52	0.73
49:DR:72:VAL:HG23	49:DR:89:HIS:HB3	1.70	0.73
23:DB:2039:U:H2'	23:DB:2040:G:H8	1.51	0.73
44:DQ:24:TYR:O	44:DQ:27:ARG:HB2	1.88	0.73
21:CU:24:LYS:HD2	21:CU:25:ALA:N	2.03	0.73
20:CB:202:ASN:HD22	20:CB:203:ASP:N	1.87	0.73
27:BK:99:ILE:HG12	27:BK:115:ILE:HG13	1.68	0.73
27:DK:99:ILE:HG12	27:DK:115:ILE:HG13	1.70	0.73
24:DI:20:SER:HB3	24:DI:21:PRO:HD3	1.68	0.73
47:DF:128:SER:HB3	47:DF:154:THR:HG23	1.71	0.73
24:BI:122:GLU:O	24:BI:126:ARG:HG3	1.88	0.73
23:BB:743:A:O2'	23:BB:744:U:H5'	1.88	0.73
41:DJ:23:LYS:HE3	41:DJ:142:ILE:HG23	1.70	0.73
23:DB:2472:G:H2'	23:DB:2475:C:H42	1.53	0.73
23:DB:717:C:H3'	23:DB:718:A:H5''	1.70	0.73
13:CN:25:GLU:HB2	13:CN:29:ILE:HD11	1.69	0.73
6:AG:149:ALA:N	10:AK:55:ARG:HH21	1.85	0.73
5:AF:64:VAL:HG12	5:AF:65:GLU:H	1.52	0.73
45:DS:5:ALA:HB3	45:DS:54:ALA:HB2	1.71	0.73
23:DB:2267:A:C8	23:DB:2267:A:C3'	2.70	0.73
23:BB:2867:G:H2'	23:BB:2867:G:N3	2.04	0.73
23:DB:713:G:H21	23:DB:718:A:H2	1.36	0.73
5:AF:79:ARG:NH2	5:AF:87:SER:HB3	2.03	0.73
1:AA:373:A:H1'	1:AA:481:G:N3	2.03	0.73
23:DB:616:A:H3'	23:DB:617:G:H8	1.54	0.73
1:CA:1004:A:H2'	1:CA:1005:A:O4'	1.89	0.73
1:CA:859:G:H2'	1:CA:860:A:C8	2.24	0.73
11:CL:78:VAL:HG12	11:CL:101:LEU:HD13	1.69	0.73
23:BB:2108:A:H2'	23:BB:2109:U:C4'	2.17	0.73
23:DB:2769:U:H2'	23:DB:2770:G:C8	2.22	0.73
47:BF:109:ARG:HB3	47:BF:135:ILE:HD12	1.69	0.73
43:DO:67:ASN:H	43:DO:70:ALA:HB3	1.52	0.73
24:BI:20:SER:HB3	24:BI:21:PRO:HD3	1.69	0.73
26:DD:62:LYS:H	26:DD:62:LYS:HD2	1.54	0.73
47:BF:61:GLY:HA3	47:BF:94:ARG:HD2	1.71	0.73
51:BZ:5:CYS:HB2	51:BZ:10:LYS:HB3	1.69	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DQ:26:ALA:O	44:DQ:30:VAL:HG12	1.89	0.73
28:DP:61:ARG:HH21	28:DP:61:ARG:HB3	1.53	0.73
23:DB:1176:U:H2'	23:DB:1177:G:C8	2.22	0.73
48:DG:84:LYS:HG2	48:DG:85:LYS:H	1.54	0.73
9:AJ:57:VAL:HG22	9:AJ:58:ASN:H	1.53	0.73
23:BB:717:C:H3'	23:BB:718:A:H5''	1.69	0.73
23:DB:2496:C:OP1	38:DM:82:MET:HB2	1.89	0.73
23:BB:2039:U:H2'	23:BB:2040:G:H8	1.53	0.73
23:DB:350:G:H2'	23:DB:351:C:O4'	1.89	0.73
23:BB:1485:U:H2'	23:BB:1486:U:C6	2.23	0.73
32:B4:24:ARG:HG2	32:B4:36:ARG:HG3	1.71	0.73
52:DW:23:LYS:NZ	52:DW:24:ARG:HG3	2.04	0.73
40:DH:46:PHE:HA	40:DH:50:ARG:NH2	2.03	0.73
23:BB:1486:U:H2'	23:BB:1487:U:C6	2.23	0.73
40:DH:62:LEU:HG	40:DH:66:ASN:HD22	1.54	0.73
10:AK:82:GLU:HG2	10:AK:108:ASN:HB2	1.69	0.73
23:DB:1084:A:H1'	23:DB:1106:G:H5'	1.70	0.73
52:BW:23:LYS:HZ3	52:BW:24:ARG:HG3	1.53	0.73
33:D1:8:ILE:HD11	33:D1:52:LYS:HB2	1.70	0.73
23:BB:320:A:H2'	29:BE:131:THR:OG1	1.89	0.73
37:BL:124:GLY:N	37:BL:143:GLU:HG3	2.03	0.73
23:DB:1019:U:H2'	23:DB:1020:A:H8	1.52	0.73
1:AA:1004:A:H2'	1:AA:1005:A:O4'	1.88	0.73
49:DR:14:VAL:HG21	49:DR:98:ILE:HG12	1.70	0.73
1:AA:922:G:H4'	4:AE:24:VAL:HA	1.70	0.73
1:AA:1250:A:H4'	8:AI:69:GLY:H	1.52	0.73
23:DB:856:G:H1'	52:DW:23:LYS:HB3	1.71	0.73
52:BW:39:GLN:HG2	52:BW:40:ARG:N	2.04	0.73
26:BD:5:VAL:H	26:BD:32:ASN:ND2	1.87	0.73
8:CI:51:LEU:HD13	8:CI:56:MET:HG2	1.71	0.73
42:BN:33:ILE:HG22	42:BN:114:GLU:HB2	1.69	0.73
18:AS:43:MET:O	18:AS:46:LEU:HB2	1.89	0.73
1:CA:437:U:H2'	1:CA:438:U:O4'	1.89	0.73
23:DB:1082:U:N3	23:DB:1086:A:C2	2.57	0.73
1:CA:843:U:H5'	1:CA:844:G:N7	2.04	0.73
43:BO:67:ASN:H	43:BO:70:ALA:HB3	1.54	0.73
31:D0:42:ILE:HD11	42:DN:98:LEU:HD12	1.69	0.73
23:DB:2144:G:O2'	23:DB:2145:C:H5'	1.89	0.73
20:CB:95:TRP:HH2	20:CB:100:LEU:HB2	1.54	0.73
23:BB:1812:U:H2'	23:BB:1813:G:H8	1.53	0.73
1:AA:93:U:H3'	1:AA:94:G:H5''	1.69	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AN:40:ARG:HH22	18:AS:6:LYS:CB	2.01	0.73
18:AS:48:ILE:HG22	18:AS:49:ALA:H	1.54	0.73
48:DG:15:ASP:HB3	48:DG:25:ILE:HA	1.71	0.73
10:CK:28:ASN:ND2	10:CK:29:THR:H	1.86	0.73
23:BB:2322:A:N6	23:BB:2333:A:N6	2.37	0.73
23:DB:2867:G:N3	23:DB:2867:G:H2'	2.04	0.73
24:DI:105:LEU:HD11	24:DI:139:VAL:HG21	1.68	0.73
23:DB:90:U:H3'	23:DB:91:A:C5'	2.19	0.73
1:AA:662:U:H2'	1:AA:663:A:C8	2.24	0.73
10:CK:80:ASN:H	10:CK:80:ASN:HD22	1.35	0.73
23:DB:1283:G:H22	23:DB:1286:A:H5'	1.54	0.73
4:AE:44:ARG:HA	4:AE:71:ILE:O	1.89	0.73
23:DB:1099:G:H5''	24:DI:2:LYS:C	2.09	0.72
18:CS:5:LYS:C	18:CS:6:LYS:HD2	2.10	0.72
47:BF:62:GLN:HG3	47:BF:91:ARG:HH11	1.53	0.72
13:AN:68:ARG:HB3	13:AN:68:ARG:HH11	1.54	0.72
1:AA:522:C:H41	11:AL:49:ARG:NH2	1.86	0.72
20:AB:128:LEU:HD13	20:AB:129:THR:H	1.52	0.72
41:DJ:117:ALA:HA	41:DJ:120:ARG:HD2	1.70	0.72
7:CH:11:THR:HG22	7:CH:14:ARG:HH12	1.53	0.72
45:BS:52:GLU:HA	45:BS:55:ILE:HG22	1.71	0.72
47:BF:64:PRO:HA	47:BF:88:VAL:CG2	2.18	0.72
20:CB:87:ASP:HB2	20:CB:224:ARG:CZ	2.19	0.72
20:AB:65:LYS:HB2	20:AB:158:ASP:H	1.54	0.72
31:D0:38:LEU:HB3	31:D0:41:HIS:NE2	2.05	0.72
23:DB:919:U:H2'	23:DB:920:A:C8	2.24	0.72
24:BI:33:ASN:HD21	24:BI:64:ARG:HH11	1.38	0.72
1:CA:764:C:H2'	1:CA:765:G:H5'	1.70	0.72
23:DB:1486:U:H2'	23:DB:1487:U:C6	2.25	0.72
1:CA:973:G:H3'	1:CA:974:A:H5''	1.71	0.72
8:AI:25:GLY:HA2	8:AI:60:LEU:O	1.88	0.72
50:BT:54:GLU:HG3	50:BT:90:GLY:H	1.52	0.72
44:DQ:109:VAL:HG12	44:DQ:113:LYS:HE3	1.71	0.72
43:BO:39:VAL:HB	43:BO:49:VAL:HG22	1.71	0.72
45:BS:5:ALA:HB3	45:BS:54:ALA:HB2	1.71	0.72
23:BB:704:G:H1'	23:BB:727:A:H61	1.54	0.72
23:BB:704:G:H1'	23:BB:727:A:N6	2.04	0.72
32:D4:24:ARG:HG2	32:D4:36:ARG:HG3	1.69	0.72
23:DB:71:A:H4'	23:DB:72:U:H5'	1.72	0.72
23:BB:1785:A:H2'	23:BB:1787:A:N7	2.04	0.72
7:CH:51:GLU:HG2	7:CH:52:GLY:H	1.55	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2461:A:H2'	23:DB:2462:C:C6	2.24	0.72
23:BB:1469:A:H2'	23:BB:1470:A:C8	2.24	0.72
23:BB:2615:U:H1'	31:B0:3:GLN:HB3	1.71	0.72
13:AN:25:GLU:HB2	13:AN:29:ILE:HD11	1.69	0.72
10:CK:82:GLU:HG2	10:CK:108:ASN:HB2	1.71	0.72
42:DN:29:VAL:HG13	42:DN:83:LEU:HD21	1.71	0.72
23:DB:2787:C:H1'	26:DD:63:PRO:HG3	1.71	0.72
23:BB:1387:A:H5'	23:BB:1469:A:H1'	1.70	0.72
13:AN:30:ILE:HG22	13:AN:41:TRP:HB2	1.72	0.72
23:DB:452:G:OP1	29:DE:53:THR:HG23	1.90	0.72
23:DB:2859:G:H2'	23:DB:2860:A:C8	2.25	0.72
47:BF:149:ARG:HA	47:BF:149:ARG:HH11	1.52	0.72
44:BQ:77:LYS:HE2	44:BQ:116:LEU:HD23	1.71	0.72
31:B0:27:LEU:HD12	31:B0:27:LEU:H	1.54	0.72
1:AA:423:G:H2'	1:AA:424:G:O4'	1.88	0.72
39:DX:37:LEU:HD23	39:DX:39:GLN:H	1.54	0.72
44:BQ:63:ARG:HH22	44:BQ:96:ASP:HA	1.54	0.72
23:BB:287:G:H2'	23:BB:288:U:H6	1.55	0.72
23:DB:2269:G:H4'	52:DW:19:ARG:NH1	2.04	0.72
22:BA:32:U:H4'	22:BA:52:A:H62	1.55	0.72
23:BB:742:A:H2'	23:BB:743:A:H8	1.54	0.72
31:B0:38:LEU:HB3	31:B0:41:HIS:NE2	2.05	0.72
23:DB:1301:A:O2'	23:DB:1302:A:H2'	1.89	0.72
23:BB:458:G:N2	23:BB:469:G:H2'	2.04	0.72
23:DB:172:A:H2'	23:DB:173:A:C8	2.25	0.72
37:BL:51:GLU:HG3	37:BL:56:PRO:HA	1.69	0.72
45:BS:24:ILE:HD11	45:BS:36:LEU:HD11	1.72	0.72
23:DB:141:G:N3	23:DB:141:G:H3'	2.05	0.72
37:DL:29:LYS:HG3	37:DL:30:THR:HG23	1.69	0.72
1:CA:522:C:H41	11:CL:49:ARG:NH2	1.88	0.72
37:DL:51:GLU:HG3	37:DL:56:PRO:HA	1.70	0.72
1:CA:1137:C:H1'	1:CA:1138:G:C2	2.25	0.72
51:DZ:6:GLN:NE2	51:DZ:50:ARG:H	1.87	0.72
23:BB:90:U:H3'	23:BB:91:A:C5'	2.19	0.72
45:DS:84:ARG:HB3	45:DS:96:ILE:HG23	1.72	0.72
23:DB:2498:C:O2'	23:DB:2499:C:H5'	1.89	0.72
40:BH:31:VAL:CB	40:BH:32:PRO:HD2	2.14	0.72
52:BW:51:GLY:HA3	52:BW:59:PHE:CB	2.19	0.72
8:AI:55:ASP:HB2	8:AI:59:LYS:HG3	1.72	0.72
44:BQ:26:ALA:O	44:BQ:30:VAL:HG12	1.89	0.72
8:CI:48:ARG:HA	8:CI:51:LEU:HD12	1.71	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:143:VAL:HB	25:DC:153:LEU:HB2	1.72	0.72
50:DT:53:VAL:HG11	50:DT:87:LEU:HD13	1.70	0.72
20:AB:202:ASN:HD22	20:AB:203:ASP:N	1.87	0.72
23:BB:137:U:H2'	23:BB:138:U:C6	2.23	0.72
23:DB:704:G:H1'	23:DB:727:A:N6	2.04	0.72
45:DS:83:LYS:HD3	45:DS:97:LEU:HD11	1.71	0.72
38:BM:67:VAL:HG11	38:BM:102:LEU:HD13	1.71	0.72
41:BJ:117:ALA:HA	41:BJ:120:ARG:HD2	1.71	0.72
30:BY:16:LEU:H	30:BY:16:LEU:HD22	1.55	0.72
8:AI:51:LEU:HD13	8:AI:56:MET:HG2	1.71	0.72
26:DD:14:ILE:HA	28:DP:11:GLN:HE22	1.55	0.72
20:CB:185:ILE:HA	20:CB:199:ILE:HB	1.72	0.72
24:BI:77:VAL:HA	24:BI:80:LYS:HE2	1.72	0.72
23:BB:28:A:N6	23:BB:512:G:H1'	2.05	0.72
23:DB:704:G:H1'	23:DB:727:A:H61	1.55	0.72
23:DB:126:A:H5'	36:D2:19:ARG:HG3	1.72	0.72
13:AN:60:ARG:HE	13:AN:62:ARG:HG2	1.54	0.72
1:AA:843:U:H5'	1:AA:844:G:N7	2.04	0.72
7:AH:118:ALA:HB3	7:AH:120:LEU:HD22	1.72	0.72
35:DV:80:HIS:HD2	35:DV:82:TYR:H	1.35	0.72
23:DB:899:A:H3'	23:DB:900:A:H8	1.54	0.72
32:B4:3:VAL:HG23	32:B4:4:ARG:H	1.55	0.72
19:CT:2:ASN:ND2	19:CT:3:ILE:H	1.86	0.72
52:BW:49:ASN:HB2	52:BW:61:LYS:H	1.55	0.72
8:AI:24:ASN:ND2	8:AI:25:GLY:H	1.88	0.72
10:AK:92:ARG:HH21	21:AU:24:LYS:HG2	1.55	0.72
44:BQ:109:VAL:HG12	44:BQ:113:LYS:HE3	1.72	0.72
40:BH:68:ARG:HD3	40:BH:134:VAL:HG11	1.71	0.72
40:DH:87:GLU:H	40:DH:89:LYS:HZ2	1.37	0.72
47:BF:102:LEU:HD22	47:BF:103:ILE:N	2.03	0.72
23:BB:2788:C:H2'	23:BB:2789:C:C6	2.25	0.72
23:BB:1655:A:H5'	26:BD:118:PHE:HB2	1.72	0.72
23:DB:1469:A:H2'	23:DB:1470:A:H8	1.55	0.72
23:BB:713:G:H21	23:BB:718:A:H2	1.36	0.72
38:DM:82:MET:HE3	38:DM:83:GLY:H	1.54	0.72
35:DV:44:HIS:HE1	35:DV:86:LEU:H	1.33	0.72
6:AG:78:ARG:HG2	6:AG:83:THR:HG22	1.72	0.72
9:AJ:55:PRO:HA	13:AN:80:ARG:NH2	2.04	0.72
41:DJ:29:ALA:HA	41:DJ:32:LEU:HD12	1.72	0.72
20:CB:31:PHE:HB2	20:CB:41:ASN:HA	1.71	0.72
40:BH:116:ARG:HB2	40:BH:116:ARG:HH11	1.55	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:186:LEU:HD21	28:BP:3:ILE:HD11	1.70	0.71
12:CM:70:ARG:NH2	47:DF:142:TYR:HB3	2.05	0.71
23:BB:674:G:H5'	29:BE:71:GLY:N	2.05	0.71
10:CK:17:ASP:HB3	10:CK:80:ASN:ND2	2.05	0.71
1:AA:946:A:H2'	1:AA:947:G:C8	2.25	0.71
23:DB:2720:U:H5'	28:DP:52:ARG:HH21	1.54	0.71
4:AE:106:ALA:HB1	4:AE:110:MET:HB3	1.72	0.71
27:BK:76:VAL:H	28:BP:72:VAL:HG23	1.54	0.71
13:CN:40:ARG:HH22	18:CS:6:LYS:CB	2.03	0.71
41:DJ:45:THR:H	41:DJ:46:PRO:HD3	1.55	0.71
20:AB:184:ALA:HB3	20:AB:195:VAL:HG21	1.73	0.71
45:BS:24:ILE:HG22	45:BS:71:VAL:HG11	1.71	0.71
41:DJ:82:GLY:O	41:DJ:84:ILE:HG22	1.90	0.71
47:DF:149:ARG:HA	47:DF:149:ARG:HH11	1.55	0.71
23:BB:1387:A:H2'	23:BB:1388:G:H8	1.55	0.71
23:DB:2078:C:H2'	23:DB:2079:U:C6	2.25	0.71
20:CB:19:THR:HG23	20:CB:20:ARG:H	1.54	0.71
23:BB:2859:G:H2'	23:BB:2860:A:C8	2.25	0.71
2:AC:149:LYS:HB3	2:AC:200:TRP:HB2	1.71	0.71
23:DB:2356:U:H5'	52:DW:16:GLU:HG3	1.70	0.71
26:DD:11:MET:HE1	26:DD:192:ALA:H	1.54	0.71
20:CB:65:LYS:HB2	20:CB:158:ASP:H	1.55	0.71
8:CI:20:ILE:HD13	8:CI:85:ALA:HB3	1.72	0.71
23:DB:2267:A:H61	23:DB:2272:U:H3	1.39	0.71
29:BE:29:HIS:NE2	37:BL:8:PRO:HG3	2.05	0.71
12:CM:49:GLU:O	12:CM:52:ILE:HG22	1.90	0.71
23:DB:1469:A:H2'	23:DB:1470:A:C8	2.24	0.71
11:AL:49:ARG:HG2	11:AL:89:LEU:HD21	1.72	0.71
23:DB:1046:A:H3'	23:DB:1047:G:H5'	1.72	0.71
4:CE:44:ARG:HA	4:CE:71:ILE:O	1.90	0.71
20:AB:31:PHE:HB2	20:AB:41:ASN:HA	1.72	0.71
23:BB:181:A:H2'	23:BB:182:A:C8	2.25	0.71
19:AT:2:ASN:ND2	19:AT:3:ILE:H	1.88	0.71
1:AA:764:C:H2'	1:AA:765:G:H5'	1.71	0.71
19:AT:79:THR:HG22	19:AT:83:ASN:HD21	1.55	0.71
26:DD:5:VAL:H	26:DD:32:ASN:ND2	1.86	0.71
8:AI:26:LYS:H	8:AI:61:ASP:HB3	1.55	0.71
23:DB:626:A:H2'	37:DL:78:ARG:NH1	2.05	0.71
41:DJ:99:ARG:O	41:DJ:103:ILE:HG13	1.90	0.71
23:DB:1060:U:C4	23:DB:1088:A:N6	2.59	0.71
47:DF:102:LEU:HD22	47:DF:103:ILE:N	2.05	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:151:THR:HB	26:DD:152:PRO:HD3	1.71	0.71
23:DB:307:G:N2	23:DB:309:A:H3'	2.06	0.71
23:BB:307:G:N2	23:BB:309:A:H3'	2.05	0.71
23:BB:1412:U:H2'	23:BB:1413:A:C8	2.25	0.71
23:BB:321:U:OP2	29:BE:130:LYS:HA	1.90	0.71
17:AR:34:GLU:HB2	21:AU:18:PHE:HZ	1.53	0.71
15:AP:52:LEU:HD21	15:AP:75:ILE:HG12	1.69	0.71
23:DB:2884:U:O4	31:D0:39:ARG:HD3	1.89	0.71
1:CA:922:G:H4'	4:CE:24:VAL:HA	1.73	0.71
23:BB:1176:U:H3'	23:BB:1177:G:C8	2.25	0.71
12:AM:42:VAL:HB	12:AM:47:LEU:HD21	1.72	0.71
26:BD:114:LYS:HB2	26:BD:116:LYS:HE3	1.73	0.71
33:B1:7:LYS:HD3	34:B3:33:THR:HG21	1.73	0.71
23:DB:2591:C:H2'	23:DB:2592:G:C8	2.25	0.71
39:BX:17:GLU:HB3	39:BX:53:VAL:HG11	1.70	0.71
8:AI:48:ARG:HA	8:AI:51:LEU:HD12	1.71	0.71
8:CI:26:LYS:H	8:CI:61:ASP:HB3	1.56	0.71
21:AU:24:LYS:HD2	21:AU:25:ALA:N	2.05	0.71
20:CB:27:LYS:HB3	20:CB:28:PRO:HD3	1.71	0.71
42:BN:83:LEU:HA	42:BN:86:ARG:HB2	1.71	0.71
1:AA:920:U:H2'	1:AA:921:U:C6	2.25	0.71
1:AA:591:U:OP1	7:AH:30:LYS:HE2	1.91	0.71
38:DM:67:VAL:HG11	38:DM:102:LEU:HD13	1.71	0.71
40:BH:57:LYS:HG3	40:BH:58:LEU:N	2.05	0.71
43:BO:15:ARG:HH21	43:BO:95:SER:HB3	1.56	0.71
23:DB:2602:A:H2'	23:DB:2602:A:N3	2.06	0.71
23:DB:666:A:H4'	37:DL:48:ARG:HD2	1.70	0.71
19:CT:79:THR:HG22	19:CT:83:ASN:HD21	1.55	0.71
1:CA:1526:G:OP2	21:CU:38:GLU:HB3	1.91	0.71
26:DD:104:VAL:HA	26:DD:106:LYS:HZ1	1.55	0.71
52:DW:39:GLN:HG2	52:DW:40:ARG:N	2.03	0.71
50:DT:82:LYS:HD2	50:DT:84:TYR:HE1	1.55	0.71
41:BJ:45:THR:H	41:BJ:46:PRO:HD3	1.55	0.71
27:DK:112:PHE:O	27:DK:115:ILE:HG22	1.89	0.71
43:DO:67:ASN:HB3	43:DO:70:ALA:HB2	1.72	0.71
48:BG:9:VAL:HA	48:BG:48:THR:HG22	1.70	0.71
12:CM:42:VAL:HB	12:CM:47:LEU:HD21	1.71	0.71
5:CF:38:ARG:HH21	5:CF:63:ASN:HD21	1.35	0.71
23:DB:1412:U:H2'	23:DB:1413:A:C8	2.25	0.71
48:BG:79:THR:HG22	48:BG:80:GLU:HG2	1.73	0.71
1:AA:1406:U:H2'	1:AA:1407:C:H5'	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:B1:33:LEU:N	33:B1:51:ALA:HB3	2.06	0.71
18:CS:48:ILE:HG22	18:CS:49:ALA:H	1.55	0.71
1:AA:1412:C:H2'	1:AA:1413:A:H8	1.54	0.71
1:CA:920:U:H2'	1:CA:921:U:C6	2.26	0.71
23:DB:845:A:C2	23:DB:847:U:H1'	2.25	0.71
23:BB:1866:A:H2'	23:BB:1867:G:O4'	1.91	0.71
43:DO:51:ALA:HB3	43:DO:78:VAL:HG22	1.71	0.71
42:BN:87:PHE:HE1	42:BN:116:VAL:HG12	1.55	0.71
51:BZ:6:GLN:NE2	51:BZ:50:ARG:H	1.89	0.71
44:BQ:57:ARG:NH1	44:BQ:61:ILE:HD11	2.05	0.71
42:BN:85:PRO:HA	42:BN:88:ALA:HB2	1.72	0.71
23:DB:718:A:H2'	23:DB:719:C:H5'	1.73	0.71
48:BG:84:LYS:HG2	48:BG:85:LYS:H	1.54	0.71
1:CA:591:U:OP1	7:CH:30:LYS:HE2	1.90	0.71
1:AA:1526:G:OP2	21:AU:38:GLU:HB3	1.91	0.71
10:CK:28:ASN:HD22	10:CK:29:THR:H	1.39	0.71
38:DM:19:GLY:HA2	38:DM:98:PRO:HD2	1.71	0.71
12:AM:49:GLU:O	12:AM:52:ILE:HG22	1.91	0.71
23:DB:1485:U:H2'	23:DB:1486:U:C6	2.26	0.71
23:DB:773:U:H5'	23:DB:774:G:OP2	1.91	0.71
8:AI:71:ILE:HD12	8:AI:71:ILE:H	1.54	0.71
23:BB:355:U:H2'	23:BB:356:G:H8	1.55	0.71
23:BB:2498:C:O2'	23:BB:2499:C:H5'	1.90	0.71
45:BS:82:MET:HB2	45:BS:98:LYS:HB2	1.73	0.71
37:BL:23:ILE:HD12	37:BL:23:ILE:H	1.55	0.71
20:CB:221:ARG:HH11	20:CB:221:ARG:HB3	1.56	0.71
44:DQ:57:ARG:NH1	44:DQ:61:ILE:HD11	2.06	0.70
40:BH:116:ARG:HB3	40:BH:131:SER:HB2	1.73	0.70
23:BB:1060:U:C4	23:BB:1088:A:N6	2.59	0.70
10:AK:28:ASN:ND2	10:AK:29:THR:H	1.88	0.70
23:BB:1381:G:C2'	23:BB:1382:G:H5'	2.21	0.70
23:BB:544:C:H2'	23:BB:545:U:C2	2.24	0.70
31:B0:41:HIS:HB3	42:BN:99:LYS:HB2	1.71	0.70
23:DB:1387:A:H5'	23:DB:1469:A:H1'	1.73	0.70
23:BB:1486:U:H2'	23:BB:1487:U:H6	1.56	0.70
23:BB:1798:U:H5''	25:BC:257:ARG:HB2	1.73	0.70
28:BP:91:VAL:HG11	28:BP:96:LEU:HD11	1.72	0.70
40:BH:83:LYS:HB3	40:BH:91:PHE:HB2	1.72	0.70
45:BS:83:LYS:HD3	45:BS:97:LEU:HD11	1.73	0.70
23:DB:365:U:H2'	23:DB:366:C:C6	2.26	0.70
22:DA:109:A:H2'	22:DA:110:C:C6	2.25	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BJ:99:ARG:O	41:BJ:103:ILE:HG13	1.91	0.70
45:DS:24:ILE:HG22	45:DS:71:VAL:HG11	1.71	0.70
27:DK:15:GLY:HA3	27:DK:52:VAL:HG23	1.73	0.70
49:DR:61:ALA:HB2	49:DR:98:ILE:HA	1.73	0.70
23:BB:616:A:H3'	23:BB:617:G:H8	1.54	0.70
32:D4:3:VAL:HG23	32:D4:4:ARG:H	1.54	0.70
12:CM:90:HIS:HA	12:CM:108:ARG:HH22	1.56	0.70
28:DP:91:VAL:HG11	28:DP:96:LEU:HD11	1.72	0.70
1:AA:859:G:H2'	1:AA:860:A:C8	2.25	0.70
23:DB:543:G:H2'	23:DB:544:C:H4'	1.73	0.70
43:DO:39:VAL:HB	43:DO:49:VAL:HG22	1.73	0.70
47:DF:30:VAL:HG21	47:DF:96:TRP:HE1	1.56	0.70
1:AA:437:U:H2'	1:AA:438:U:O4'	1.91	0.70
23:DB:138:U:H2'	23:DB:140:C:N1	2.06	0.70
38:BM:19:GLY:HA2	38:BM:98:PRO:HD2	1.72	0.70
23:BB:845:A:C2	23:BB:847:U:H1'	2.27	0.70
23:DB:2720:U:H5''	28:DP:52:ARG:NH2	2.06	0.70
23:BB:172:A:H2'	23:BB:173:A:C8	2.26	0.70
23:BB:1283:G:H22	23:BB:1286:A:H5'	1.56	0.70
23:DB:458:G:N2	23:DB:469:G:H2'	2.05	0.70
3:AD:84:ASN:ND2	4:AE:101:GLY:HA3	2.06	0.70
1:AA:806:C:H2'	1:AA:807:A:C8	2.26	0.70
34:B3:61:LEU:HB2	34:B3:64:ALA:HB2	1.74	0.70
24:DI:85:ILE:HD13	24:DI:137:LEU:HD21	1.73	0.70
8:AI:21:LYS:O	8:AI:60:LEU:HB2	1.92	0.70
8:CI:25:GLY:HA2	8:CI:60:LEU:O	1.91	0.70
8:CI:21:LYS:O	8:CI:60:LEU:HB2	1.90	0.70
10:CK:22:ILE:HD12	10:CK:85:VAL:HG22	1.74	0.70
39:BX:37:LEU:HD23	39:BX:39:GLN:H	1.56	0.70
10:CK:124:LYS:HA	21:CU:34:ARG:CB	2.22	0.70
45:DS:3:THR:HB	45:DS:62:ASP:HB2	1.74	0.70
52:DW:43:LYS:HB3	52:DW:58:LEU:HD11	1.73	0.70
35:DV:14:LYS:HE3	35:DV:18:ARG:HH22	1.56	0.70
42:BN:97:ILE:HD12	42:BN:98:LEU:N	2.06	0.70
23:BB:2444:G:OP2	29:BE:63:LYS:HD2	1.92	0.70
13:CN:30:ILE:H	13:CN:30:ILE:HD12	1.56	0.70
23:BB:71:A:H4'	23:BB:72:U:H5'	1.72	0.70
31:B0:8:THR:HG23	31:B0:11:LYS:H	1.56	0.70
28:BP:58:PHE:HB2	28:BP:73:PHE:HB2	1.74	0.70
15:CP:57:ILE:O	15:CP:61:VAL:HG23	1.90	0.70
19:CT:68:LYS:HA	19:CT:68:LYS:HE2	1.74	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:149:LYS:HB3	2:CC:200:TRP:HB2	1.73	0.70
22:BA:109:A:H2'	22:BA:110:C:C6	2.27	0.70
13:AN:51:PRO:HB2	13:AN:54:SER:CB	2.21	0.70
45:DS:29:VAL:HG11	45:DS:55:ILE:HD13	1.74	0.70
23:DB:2271:G:H2'	23:DB:2272:U:C6	2.26	0.70
23:BB:919:U:H2'	23:BB:920:A:C8	2.25	0.70
12:AM:90:HIS:HA	12:AM:108:ARG:HH22	1.55	0.70
1:CA:1238:A:H5'	1:CA:1336:C:H41	1.57	0.70
4:AE:152:VAL:HG21	7:AH:98:LEU:HB3	1.73	0.70
7:CH:118:ALA:HB3	7:CH:120:LEU:HD22	1.73	0.70
11:AL:107:LYS:H	11:AL:107:LYS:NZ	1.88	0.70
50:DT:54:GLU:HG3	50:DT:90:GLY:H	1.54	0.70
43:DO:11:ALA:HB2	43:DO:96:GLY:N	2.06	0.70
52:DW:37:VAL:HG12	52:DW:38:ARG:N	2.07	0.70
26:BD:106:LYS:CB	26:BD:206:ALA:H	2.00	0.70
25:DC:90:ILE:HD12	25:DC:102:TYR:HB3	1.73	0.70
25:BC:90:ILE:HD12	25:BC:102:TYR:HB3	1.72	0.70
25:BC:103:ILE:HG22	25:BC:105:ALA:H	1.56	0.70
3:CD:25:ARG:HH11	3:CD:26:ALA:N	1.90	0.70
47:BF:30:VAL:HG21	47:BF:96:TRP:HE1	1.57	0.70
4:AE:71:ILE:HD11	4:AE:144:GLU:HG3	1.72	0.70
1:CA:764:C:C2'	1:CA:765:G:H5'	2.22	0.70
24:BI:105:LEU:HD11	24:BI:139:VAL:HG11	1.73	0.70
10:AK:80:ASN:HD22	10:AK:80:ASN:H	1.38	0.70
6:CG:78:ARG:HG2	6:CG:83:THR:HG22	1.72	0.70
51:DZ:33:LEU:HA	51:DZ:52:SER:HA	1.72	0.70
20:CB:163:ILE:HG23	20:CB:164:ASP:N	2.00	0.70
48:BG:30:GLY:HA3	48:BG:78:VAL:HA	1.73	0.70
51:BZ:40:VAL:HG22	51:BZ:45:ARG:O	1.91	0.70
42:BN:29:VAL:HG13	42:BN:83:LEU:HD21	1.72	0.70
23:BB:2271:G:H2'	23:BB:2272:U:C6	2.26	0.70
3:AD:29:THR:HB	3:AD:30:LYS:NZ	2.07	0.70
47:BF:2:LYS:HD2	47:BF:100:GLU:HG2	1.72	0.70
23:DB:1381:G:C2'	23:DB:1382:G:H5'	2.22	0.70
47:BF:31:GLU:O	47:BF:32:LYS:HD3	1.90	0.70
23:DB:2788:C:H2'	23:DB:2789:C:C6	2.26	0.70
10:AK:83:VAL:HB	10:AK:109:ILE:HG23	1.74	0.70
43:BO:5:SER:HA	43:BO:8:ILE:HD12	1.74	0.70
23:DB:1124:G:H1'	32:D4:38:GLY:OXT	1.91	0.70
51:BZ:33:LEU:HA	51:BZ:52:SER:HA	1.74	0.70
18:AS:5:LYS:C	18:AS:6:LYS:HD2	2.11	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BS:47:VAL:HG12	45:BS:103:ILE:HG21	1.73	0.70
23:DB:277:G:H4'	23:DB:278:A:C5	2.26	0.70
49:BR:24:LYS:HA	49:BR:94:THR:HG23	1.72	0.70
23:BB:773:U:H5'	23:BB:774:G:OP2	1.92	0.70
42:DN:87:PHE:HE1	42:DN:116:VAL:HG12	1.56	0.70
47:DF:61:GLY:HA3	47:DF:94:ARG:HD2	1.73	0.70
1:CA:946:A:H2'	1:CA:947:G:C8	2.27	0.70
52:DW:50:VAL:HG23	52:DW:61:LYS:HE3	1.73	0.70
23:BB:547:A:H2	23:BB:549:G:H1	1.40	0.70
13:AN:30:ILE:HD12	13:AN:30:ILE:H	1.57	0.70
23:BB:2461:A:H2'	23:BB:2462:C:C6	2.27	0.70
23:BB:2591:C:H2'	23:BB:2592:G:C8	2.27	0.70
11:CL:107:LYS:NZ	11:CL:107:LYS:H	1.89	0.70
3:AD:22:SER:HB2	3:AD:109:THR:HG22	1.74	0.70
9:CJ:6:ILE:HB	9:CJ:76:ILE:HD11	1.73	0.70
23:BB:1812:U:H1'	25:BC:43:ASN:HD21	1.56	0.70
4:CE:71:ILE:HD11	4:CE:144:GLU:HG3	1.74	0.70
20:AB:19:THR:HG23	20:AB:20:ARG:H	1.56	0.70
4:AE:80:LEU:HA	4:AE:146:MET:HE1	1.74	0.70
9:AJ:24:GLU:HG2	9:AJ:90:LEU:HD21	1.74	0.70
40:BH:68:ARG:NH1	40:BH:134:VAL:HG21	2.06	0.69
41:BJ:58:ASN:HA	41:BJ:127:GLY:HA2	1.74	0.69
14:CO:89:ARG:HH22	23:DB:715:A:H5''	1.57	0.69
25:BC:196:ASN:ND2	25:BC:199:HIS:HB2	2.06	0.69
47:BF:147:ARG:HD2	47:BF:148:VAL:HG22	1.74	0.69
28:DP:58:PHE:HB2	28:DP:73:PHE:HB2	1.73	0.69
1:CA:1513:A:H2'	1:CA:1514:G:C8	2.27	0.69
41:DJ:18:VAL:HG12	41:DJ:54:ILE:HD11	1.73	0.69
37:BL:29:LYS:HG3	37:BL:30:THR:HG23	1.73	0.69
42:DN:83:LEU:HA	42:DN:86:ARG:HB2	1.73	0.69
23:BB:1081:U:H5'	24:BI:126:ARG:HD2	1.74	0.69
23:DB:364:C:H2'	23:DB:365:U:C6	2.27	0.69
8:AI:46:VAL:O	8:AI:79:ARG:HG3	1.91	0.69
10:AK:86:LYS:HB3	10:AK:112:VAL:HG23	1.74	0.69
23:DB:455:C:N3	23:DB:472:A:H2'	2.07	0.69
1:AA:269:C:H2'	1:AA:270:A:C8	2.26	0.69
10:CK:86:LYS:HB3	10:CK:112:VAL:HG23	1.74	0.69
23:DB:1097:U:H2'	23:DB:1098:A:O4'	1.91	0.69
26:DD:10:GLY:HA3	26:DD:26:VAL:N	2.02	0.69
8:CI:55:ASP:HB2	8:CI:59:LYS:HG3	1.73	0.69
29:BE:147:LEU:HB3	29:BE:186:VAL:HG23	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:24:LYS:CD	21:CU:25:ALA:H	2.05	0.69
45:BS:69:LEU:HG	45:BS:107:VAL:HG22	1.74	0.69
49:DR:24:LYS:HA	49:DR:94:THR:HG23	1.74	0.69
1:CA:981:U:H4'	13:CN:60:ARG:HD2	1.75	0.69
13:CN:30:ILE:HG22	13:CN:41:TRP:HB2	1.75	0.69
40:DH:59:ALA:O	40:DH:62:LEU:HD22	1.92	0.69
23:DB:1785:A:H2'	23:DB:1787:A:N7	2.07	0.69
48:BG:98:LYS:HB2	48:BG:101:VAL:HG23	1.74	0.69
23:BB:2181:U:H2'	23:BB:2182:U:H6	1.57	0.69
50:BT:11:LEU:HA	50:BT:34:VAL:HG12	1.74	0.69
1:CA:1296:C:H4'	1:CA:1302:C:N4	2.07	0.69
48:BG:9:VAL:HG12	48:BG:11:PRO:HD3	1.74	0.69
1:AA:93:U:H5''	1:AA:94:G:OP2	1.92	0.69
23:BB:222:A:N6	23:BB:232:G:H1'	2.07	0.69
37:DL:95:LEU:HA	37:DL:98:ALA:HB3	1.75	0.69
29:DE:59:PRO:HB2	29:DE:67:ARG:HH22	1.57	0.69
1:AA:1137:C:H1'	1:AA:1138:G:C2	2.27	0.69
31:D0:8:THR:HG23	31:D0:11:LYS:H	1.58	0.69
50:DT:32:LEU:H	50:DT:83:ALA:HB3	1.57	0.69
52:BW:46:ALA:HB2	52:BW:78:PHE:HD1	1.57	0.69
23:BB:2849:U:H4'	23:BB:2850:A:H5'	1.72	0.69
11:CL:41:PRO:HB3	11:CL:49:ARG:NH1	2.08	0.69
43:BO:67:ASN:HB3	43:BO:70:ALA:HB2	1.74	0.69
16:AQ:59:GLU:O	16:AQ:75:VAL:HG22	1.93	0.69
23:BB:570:G:H2'	23:BB:2030:A:N7	2.07	0.69
23:DB:1812:U:H1'	25:DC:43:ASN:HD21	1.57	0.69
23:DB:1812:U:H2'	23:DB:1813:G:H8	1.54	0.69
20:AB:221:ARG:HH11	20:AB:221:ARG:HB3	1.58	0.69
20:AB:163:ILE:CG2	20:AB:164:ASP:H	2.02	0.69
52:BW:49:ASN:HB3	52:BW:81:ILE:HG12	1.74	0.69
52:DW:49:ASN:HB2	52:DW:61:LYS:H	1.55	0.69
28:DP:47:ILE:HD13	28:DP:61:ARG:HG2	1.75	0.69
42:BN:24:MET:HG2	42:BN:44:LEU:HD22	1.73	0.69
20:AB:156:LEU:HD23	20:AB:178:LEU:HD13	1.74	0.69
23:DB:1412:U:H2'	23:DB:1413:A:H8	1.58	0.69
23:BB:773:U:H4'	25:BC:45:ASN:O	1.93	0.69
46:BU:81:ARG:HH21	46:BU:81:ARG:N	1.90	0.69
1:AA:1477:U:H2'	1:AA:1478:U:C6	2.28	0.69
1:AA:673:A:H2'	1:AA:674:G:C8	2.28	0.69
1:CA:662:U:H2'	1:CA:663:A:C8	2.26	0.69
29:DE:117:ARG:HA	29:DE:185:LYS:HE3	1.73	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2365:G:H4'	52:DW:59:PHE:CE1	2.27	0.69
25:DC:66:PHE:HB2	25:DC:150:GLY:O	1.92	0.69
10:CK:31:VAL:HG21	10:CK:66:ALA:HA	1.74	0.69
25:BC:66:PHE:HB2	25:BC:150:GLY:O	1.92	0.69
48:DG:71:LEU:HA	48:DG:74:MET:SD	2.33	0.69
52:DW:67:LYS:O	52:DW:68:PHE:HB2	1.93	0.69
29:DE:58:LYS:H	29:DE:58:LYS:NZ	1.90	0.69
1:CA:763:G:H2'	1:CA:764:C:H6	1.58	0.69
4:CE:106:ALA:HB1	4:CE:110:MET:HB3	1.75	0.69
14:CO:68:ASP:O	14:CO:72:ARG:HG3	1.93	0.69
26:DD:8:LYS:HD3	26:DD:197:THR:H	1.55	0.69
4:CE:152:VAL:HG21	7:CH:98:LEU:HB3	1.73	0.69
1:AA:1513:A:H2'	1:AA:1514:G:C8	2.27	0.69
23:BB:666:A:H4'	37:BL:48:ARG:HD2	1.72	0.69
23:BB:2635:A:H5'	26:BD:79:LEU:HD23	1.75	0.69
1:CA:1328:C:H5''	12:CM:27:THR:HG21	1.73	0.69
21:CU:36:PHE:CB	21:CU:40:PRO:HD3	2.17	0.69
29:DE:192:ALA:HA	29:DE:195:GLN:HE21	1.58	0.69
10:AK:31:VAL:HG21	10:AK:66:ALA:HA	1.75	0.69
10:AK:124:LYS:HA	21:AU:34:ARG:CB	2.23	0.69
20:CB:186:VAL:O	20:CB:200:PRO:HA	1.92	0.69
23:BB:2305:U:H4'	47:BF:132:ARG:HD3	1.73	0.69
1:AA:85:U:H1'	1:AA:86:G:O4'	1.93	0.69
40:DH:86:ASP:HB2	40:DH:89:LYS:NZ	2.07	0.69
47:DF:2:LYS:HD2	47:DF:100:GLU:HG2	1.75	0.69
23:DB:139:U:H3	50:DT:49:LYS:NZ	1.91	0.69
23:DB:163:C:H2'	23:DB:164:C:O4'	1.92	0.69
1:CA:920:U:O2'	1:CA:1081:A:H4'	1.92	0.69
29:DE:60:TRP:O	29:DE:61:ARG:HB2	1.92	0.69
8:CI:117:LEU:HD22	8:CI:123:ARG:HG2	1.75	0.69
23:BB:721:A:H2'	23:BB:722:A:C8	2.28	0.69
4:AE:28:ARG:HH12	4:AE:30:PHE:HB3	1.57	0.69
23:BB:1469:A:H2'	23:BB:1470:A:H8	1.56	0.69
2:AC:137:VAL:HA	2:AC:148:ILE:HD13	1.75	0.69
23:BB:1412:U:H2'	23:BB:1413:A:H8	1.56	0.69
1:CA:1238:A:H5'	1:CA:1336:C:N4	2.07	0.69
6:AG:129:ASN:HA	6:AG:134:VAL:HG11	1.74	0.69
23:DB:570:G:H2'	23:DB:2030:A:N7	2.07	0.69
22:BA:104:A:H2'	22:BA:105:G:O4'	1.93	0.69
49:BR:72:VAL:HG23	49:BR:89:HIS:HB3	1.72	0.69
23:BB:1802:A:H2'	23:BB:1803:A:C8	2.28	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BJ:29:ALA:HA	41:BJ:32:LEU:HD12	1.73	0.69
22:DA:104:A:H2'	22:DA:105:G:O4'	1.93	0.69
14:AO:68:ASP:O	14:AO:72:ARG:HG3	1.93	0.69
30:DY:16:LEU:H	30:DY:16:LEU:HD22	1.55	0.69
5:CF:64:VAL:HG12	5:CF:65:GLU:H	1.58	0.69
26:BD:98:VAL:HG12	26:BD:180:VAL:HG12	1.72	0.69
25:DC:103:ILE:HG22	25:DC:105:ALA:H	1.58	0.69
44:DQ:93:ILE:HG23	44:DQ:94:LEU:HD22	1.73	0.69
49:DR:49:ILE:HD13	49:DR:53:PHE:N	2.08	0.69
25:DC:129:LEU:HB3	25:DC:134:ILE:HG22	1.75	0.69
18:CS:27:LYS:HG3	18:CS:28:LYS:HD2	1.74	0.69
23:DB:2849:U:H4'	23:DB:2850:A:H5'	1.75	0.69
23:DB:2866:U:H4'	23:DB:2867:G:H4'	1.75	0.69
1:CA:1158:C:H4'	20:CB:131:LYS:HD3	1.73	0.69
15:CP:67:ILE:HG13	15:CP:71:VAL:HG13	1.74	0.69
12:AM:52:ILE:HG23	12:AM:56:ARG:HH12	1.58	0.69
43:DO:35:ILE:HG22	43:DO:53:THR:HG23	1.74	0.69
13:CN:60:ARG:HE	13:CN:62:ARG:HG2	1.55	0.69
29:BE:58:LYS:NZ	29:BE:58:LYS:H	1.89	0.69
28:BP:57:ALA:HA	28:BP:73:PHE:O	1.93	0.69
10:AK:105:ARG:NH2	21:AU:10:PRO:HB3	2.08	0.69
6:CG:72:VAL:HG12	6:CG:89:GLU:HA	1.74	0.69
1:CA:9:G:H5'	4:CE:107:GLY:HA3	1.75	0.69
23:DB:181:A:H2'	23:DB:182:A:C8	2.28	0.69
52:DW:49:ASN:HB3	52:DW:81:ILE:HG12	1.73	0.69
13:CN:51:PRO:HB2	13:CN:54:SER:CB	2.22	0.69
40:BH:84:ALA:HA	40:BH:90:LEU:CA	2.22	0.69
23:DB:2108:A:H2'	23:DB:2109:U:O4'	1.93	0.69
47:BF:126:ASN:HD22	47:BF:156:THR:HA	1.58	0.69
40:DH:67:ALA:O	40:DH:70:GLU:HG3	1.93	0.69
23:BB:1558:C:H4'	23:BB:1559:U:H5'	1.75	0.69
12:AM:39:ALA:HB3	12:AM:42:VAL:HG13	1.74	0.69
12:AM:53:ASP:HA	12:AM:56:ARG:NH2	2.07	0.69
17:CR:52:ARG:HB3	17:CR:56:ARG:HH21	1.56	0.69
23:BB:2773:C:H5''	26:BD:169:ARG:HB2	1.73	0.69
48:DG:79:THR:HG22	48:DG:80:GLU:HG2	1.74	0.69
22:DA:32:U:H4'	22:DA:52:A:H62	1.55	0.69
23:DB:192:C:H2'	23:DB:193:U:H5'	1.74	0.69
8:CI:9:GLY:HA2	8:CI:80:HIS:CD2	2.28	0.69
51:DZ:10:LYS:O	51:DZ:31:PRO:HG2	1.93	0.68
52:BW:39:GLN:HG3	52:BW:42:THR:HB	1.74	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:71:LEU:HA	48:BG:74:MET:SD	2.33	0.68
1:AA:1073:U:H4'	20:AB:104:LYS:HE3	1.73	0.68
44:DQ:71:ASN:HD22	44:DQ:109:VAL:HG11	1.58	0.68
20:CB:184:ALA:HB3	20:CB:195:VAL:HG21	1.74	0.68
23:DB:27:G:H1'	23:DB:513:A:N6	2.08	0.68
5:CF:6:ILE:HG23	5:CF:62:MET:HB3	1.75	0.68
23:DB:1406:U:H2'	23:DB:1407:G:H8	1.57	0.68
28:BP:50:ARG:HB3	28:BP:57:ALA:N	2.07	0.68
22:DA:28:C:H5	22:DA:56:G:H1	1.41	0.68
1:AA:734:G:H21	17:AR:63:TYR:HE1	1.41	0.68
23:BB:455:C:N3	23:BB:472:A:H2'	2.08	0.68
23:BB:479:A:N3	23:BB:481:G:H5''	2.09	0.68
10:CK:92:ARG:HH21	21:CU:24:LYS:HG2	1.58	0.68
50:DT:2:ILE:HB	50:DT:3:ARG:HD3	1.75	0.68
23:BB:163:C:H2'	23:BB:164:C:O4'	1.92	0.68
24:BI:25:PRO:O	24:BI:29:GLN:HG2	1.93	0.68
23:BB:2039:U:H2'	23:BB:2040:G:C8	2.28	0.68
10:AK:17:ASP:HA	10:AK:80:ASN:O	1.93	0.68
23:BB:1993:U:H4'	26:BD:133:THR:CG2	2.23	0.68
23:DB:873:C:H4'	38:DM:64:TRP:HE1	1.57	0.68
23:DB:2804:U:H2'	23:DB:2805:C:C6	2.28	0.68
33:D1:7:LYS:HA	33:D1:23:THR:HG22	1.73	0.68
1:AA:1238:A:H5'	1:AA:1336:C:H41	1.58	0.68
27:DK:8:LEU:H	27:DK:8:LEU:HD12	1.58	0.68
45:DS:24:ILE:HD11	45:DS:36:LEU:HD11	1.75	0.68
45:BS:24:ILE:HG12	45:BS:36:LEU:HD21	1.75	0.68
45:BS:3:THR:HB	45:BS:62:ASP:HB2	1.74	0.68
1:AA:1296:C:H4'	1:AA:1302:C:N4	2.07	0.68
26:DD:98:VAL:HG12	26:DD:180:VAL:HG12	1.75	0.68
13:AN:26:LEU:HD11	13:AN:44:VAL:HG22	1.74	0.68
23:DB:1866:A:H2'	23:DB:1867:G:O4'	1.93	0.68
23:DB:222:A:N6	23:DB:232:G:H1'	2.08	0.68
1:CA:1071:C:H2'	1:CA:1072:G:H8	1.58	0.68
23:DB:1798:U:H5''	25:DC:257:ARG:HB2	1.76	0.68
1:CA:909:A:H2'	1:CA:910:C:O4'	1.93	0.68
6:CG:66:GLU:HA	6:CG:69:ARG:HD2	1.73	0.68
23:BB:192:C:H2'	23:BB:193:U:H5'	1.75	0.68
23:BB:2150:C:H2'	23:BB:2151:U:C6	2.29	0.68
19:AT:66:ILE:HG13	19:AT:70:LYS:HE3	1.73	0.68
9:AJ:17:LEU:HD22	9:AJ:96:VAL:HG13	1.75	0.68
28:BP:31:VAL:HG12	28:BP:38:ARG:O	1.94	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DN:24:MET:HG2	42:DN:44:LEU:HD22	1.73	0.68
20:AB:185:ILE:HA	20:AB:199:ILE:HB	1.75	0.68
44:BQ:94:LEU:HD12	49:BR:13:ARG:HB2	1.76	0.68
40:BH:75:LEU:HD23	40:BH:76:GLU:H	1.57	0.68
27:BK:15:GLY:HA3	27:BK:52:VAL:HG23	1.75	0.68
47:DF:101:ARG:NH1	47:DF:138:PRO:HB2	2.09	0.68
47:DF:147:ARG:HD2	47:DF:148:VAL:HG22	1.73	0.68
40:DH:70:GLU:HA	40:DH:73:ASN:HB2	1.75	0.68
2:AC:26:LYS:HG3	2:AC:27:GLU:HG3	1.74	0.68
2:CC:26:LYS:HG3	2:CC:27:GLU:HG3	1.75	0.68
48:BG:8:VAL:HG11	48:BG:49:LEU:HB2	1.76	0.68
29:BE:109:LEU:HD13	29:BE:180:LEU:HD13	1.76	0.68
26:BD:114:LYS:HE3	26:BD:116:LYS:HZ2	1.56	0.68
28:DP:50:ARG:HB3	28:DP:57:ALA:N	2.08	0.68
1:AA:763:G:H2'	1:AA:764:C:H6	1.58	0.68
7:AH:51:GLU:HG2	7:AH:52:GLY:H	1.57	0.68
40:BH:47:PHE:HA	40:BH:50:ARG:HH21	1.58	0.68
23:DB:2346:A:H3'	23:DB:2347:C:H5''	1.75	0.68
48:DG:30:GLY:HA3	48:DG:78:VAL:HA	1.74	0.68
23:BB:2602:A:N3	23:BB:2602:A:H2'	2.06	0.68
23:DB:2502:G:H5'	23:DB:2503:A:C5'	2.22	0.68
23:BB:1060:U:O2	23:BB:1088:A:N7	2.27	0.68
18:CS:47:THR:HG23	18:CS:60:PHE:HE1	1.58	0.68
45:BS:29:VAL:HA	45:BS:32:ALA:HB3	1.74	0.68
1:CA:1081:A:OP1	4:CE:22:LYS:HB2	1.92	0.68
9:AJ:10:LEU:HD11	9:AJ:25:ILE:HD12	1.74	0.68
23:DB:982:C:O2	23:DB:982:C:H5'	1.94	0.68
28:DP:57:ALA:HA	28:DP:73:PHE:O	1.94	0.68
1:AA:764:C:C2'	1:AA:765:G:H5'	2.24	0.68
28:BP:50:ARG:HB3	28:BP:57:ALA:H	1.59	0.68
1:CA:806:C:H2'	1:CA:807:A:C8	2.28	0.68
39:DX:14:LEU:HD13	39:DX:57:LEU:HD21	1.75	0.68
2:CC:13:ILE:H	2:CC:13:ILE:HD13	1.57	0.68
4:CE:76:ASN:HB2	4:CE:81:GLN:NE2	2.08	0.68
23:BB:664:G:H2'	23:BB:665:U:H6	1.58	0.68
52:DW:30:VAL:HA	52:DW:60:ALA:O	1.94	0.68
8:CI:24:ASN:ND2	8:CI:25:GLY:H	1.91	0.68
44:DQ:63:ARG:HH22	44:DQ:96:ASP:CA	2.07	0.68
40:DH:90:LEU:HD12	40:DH:90:LEU:H	1.58	0.68
23:DB:78:U:H2'	23:DB:79:C:C6	2.29	0.68
16:CQ:59:GLU:O	16:CQ:75:VAL:HG22	1.94	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BR:61:ALA:HB2	49:BR:98:ILE:HA	1.75	0.68
9:CJ:10:LEU:HD11	9:CJ:25:ILE:HD12	1.75	0.68
23:BB:3:U:O2'	23:BB:4:U:H6	1.77	0.68
9:CJ:77:VAL:HG12	9:CJ:78:GLU:HG3	1.75	0.68
8:AI:94:ARG:HH11	8:AI:94:ARG:HB3	1.56	0.68
37:DL:123:ARG:HH11	37:DL:123:ARG:HB3	1.59	0.68
38:BM:35:ALA:CB	38:BM:100:LYS:H	2.06	0.68
47:BF:32:LYS:HA	47:BF:95:MET:HG3	1.76	0.68
48:DG:9:VAL:HG12	48:DG:11:PRO:HD3	1.74	0.68
23:DB:2039:U:H2'	23:DB:2040:G:C8	2.27	0.68
23:BB:718:A:H2'	23:BB:719:C:H5'	1.75	0.68
23:BB:1301:A:O2'	23:BB:1302:A:H2'	1.93	0.68
31:D0:27:LEU:H	31:D0:27:LEU:HD12	1.59	0.68
1:AA:408:A:OP1	3:AD:111:ALA:HB3	1.93	0.68
6:CG:129:ASN:HA	6:CG:134:VAL:HG11	1.74	0.68
11:AL:17:LYS:H	11:AL:17:LYS:HE3	1.57	0.68
23:BB:877:A:H3'	23:BB:899:A:H61	1.58	0.68
23:BB:1508:A:H5'	23:BB:1509:A:C6	2.28	0.68
52:BW:65:LYS:HG3	52:BW:84:GLU:HB3	1.76	0.68
52:BW:37:VAL:HG12	52:BW:38:ARG:N	2.08	0.68
40:BH:84:ALA:HB2	40:BH:147:VAL:O	1.94	0.68
45:DS:47:VAL:HG12	45:DS:103:ILE:HG21	1.76	0.68
23:BB:1060:U:H5	24:BI:131:THR:HG22	1.57	0.68
15:AP:75:ILE:HG22	15:AP:80:LYS:HD2	1.76	0.68
30:DY:6:ILE:O	30:DY:34:THR:HA	1.94	0.68
23:BB:1178:C:H2'	23:BB:1179:G:C8	2.28	0.68
12:AM:38:ILE:HG22	12:AM:42:VAL:HG21	1.76	0.68
23:DB:1437:C:H2'	23:DB:1438:U:H6	1.57	0.68
1:CA:269:C:H2'	1:CA:270:A:C8	2.29	0.68
38:DM:114:ARG:HB2	38:DM:114:ARG:HH21	1.58	0.68
1:CA:1287:A:H2'	1:CA:1288:A:C8	2.28	0.68
11:AL:51:VAL:HG12	11:AL:52:CYS:H	1.59	0.68
45:DS:73:LYS:HE3	45:DS:74:ILE:H	1.59	0.68
23:DB:2071:A:H2'	23:DB:2072:C:C6	2.29	0.68
40:DH:27:ARG:H	40:DH:31:VAL:CG2	2.07	0.68
52:DW:65:LYS:HG3	52:DW:84:GLU:HB3	1.76	0.68
38:BM:59:ARG:HE	38:BM:60:GLN:H	1.41	0.68
50:DT:32:LEU:N	50:DT:83:ALA:HB3	2.09	0.68
1:AA:1071:C:H2'	1:AA:1072:G:H8	1.59	0.68
37:BL:123:ARG:HH11	37:BL:123:ARG:HB3	1.59	0.68
45:BS:24:ILE:HG23	45:BS:32:ALA:HB1	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DW:46:ALA:HB2	52:DW:78:PHE:HD1	1.59	0.68
8:AI:117:LEU:HD22	8:AI:123:ARG:HG2	1.75	0.68
23:DB:2810:A:H2'	23:DB:2811:G:O4'	1.94	0.68
10:CK:17:ASP:HA	10:CK:80:ASN:O	1.94	0.68
23:BB:2099:U:H2'	23:BB:2100:G:H8	1.58	0.68
1:CA:493:A:H5'	1:CA:494:G:OP2	1.94	0.68
43:BO:11:ALA:HB2	43:BO:96:GLY:N	2.08	0.68
8:CI:46:VAL:O	8:CI:79:ARG:HG3	1.94	0.68
26:BD:46:ARG:NH2	26:BD:87:GLY:H	1.92	0.68
39:BX:20:ASN:O	39:BX:24:GLU:HB3	1.92	0.68
1:AA:909:A:H2'	1:AA:910:C:O4'	1.94	0.68
44:BQ:57:ARG:HH12	44:BQ:61:ILE:HD11	1.60	0.68
25:BC:129:LEU:HB3	25:BC:134:ILE:HG22	1.75	0.68
45:DS:24:ILE:HG12	45:DS:36:LEU:HD21	1.75	0.68
40:BH:114:GLU:HB3	40:BH:134:VAL:HA	1.75	0.68
20:CB:156:LEU:HD23	20:CB:178:LEU:HD13	1.75	0.68
3:CD:29:THR:HB	3:CD:30:LYS:NZ	2.08	0.68
23:BB:675:A:H5'	29:BE:60:TRP:HE1	1.58	0.68
23:DB:543:G:C6	23:DB:544:C:H1'	2.29	0.68
23:BB:1283:G:N2	23:BB:1285:A:H3'	2.09	0.68
43:BO:89:ASP:HA	43:BO:116:GLN:O	1.94	0.68
25:BC:202:ARG:NH1	25:BC:213:ARG:HE	1.91	0.68
23:DB:96:C:H4'	39:DX:41:HIS:CE1	2.29	0.68
40:BH:67:ALA:O	40:BH:71:LYS:HB2	1.94	0.68
52:DW:23:LYS:HZ3	52:DW:24:ARG:HG3	1.57	0.67
33:D1:33:LEU:N	33:D1:51:ALA:HB3	2.05	0.67
52:BW:43:LYS:HB3	52:BW:58:LEU:HD11	1.76	0.67
1:CA:1002:G:H2'	1:CA:1003:G:O4'	1.94	0.67
23:BB:1338:G:H4'	50:BT:18:GLU:HG3	1.76	0.67
23:DB:1149:G:H2'	23:DB:1150:C:C6	2.29	0.67
23:DB:1911:U:H2'	23:DB:1918:A:N1	2.08	0.67
1:CA:673:A:H2'	1:CA:674:G:C8	2.29	0.67
37:BL:95:LEU:HA	37:BL:98:ALA:HB3	1.76	0.67
26:DD:106:LYS:CB	26:DD:206:ALA:H	2.02	0.67
23:DB:1060:U:O2	23:DB:1088:A:N7	2.27	0.67
40:BH:69:ALA:HB2	40:BH:139:PHE:O	1.93	0.67
4:CE:28:ARG:HH12	4:CE:30:PHE:HB3	1.59	0.67
23:DB:125:A:H5'	36:D2:19:ARG:HD2	1.76	0.67
29:BE:58:LYS:C	29:BE:60:TRP:H	1.97	0.67
2:CC:137:VAL:HA	2:CC:148:ILE:HD13	1.76	0.67
11:CL:20:VAL:HB	11:CL:94:TYR:HE1	1.58	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:84:ASN:ND2	4:CE:101:GLY:HA3	2.09	0.67
46:DU:81:ARG:N	46:DU:81:ARG:HH21	1.91	0.67
48:DG:98:LYS:HB2	48:DG:101:VAL:HG23	1.74	0.67
23:DB:1464:G:H2'	23:DB:1465:G:H8	1.58	0.67
23:BB:2804:U:H2'	23:BB:2805:C:C6	2.30	0.67
13:AN:52:ARG:HD2	13:AN:58:ARG:HH21	1.59	0.67
15:AP:67:ILE:HG13	15:AP:71:VAL:HG13	1.75	0.67
23:BB:2734:A:H2'	23:BB:2735:G:H5'	1.76	0.67
23:BB:1012:U:O4	41:BJ:30:THR:HG21	1.94	0.67
23:DB:974:G:OP2	49:DR:78:ARG:HD3	1.94	0.67
30:BY:6:ILE:O	30:BY:34:THR:HA	1.94	0.67
1:AA:981:U:H4'	13:AN:60:ARG:HD2	1.76	0.67
23:BB:594:U:H2'	23:BB:595:C:C6	2.30	0.67
3:AD:137:SER:HB2	3:AD:138:PRO:HD2	1.76	0.67
1:AA:1432:G:H1'	1:AA:1468:A:N6	2.09	0.67
23:BB:328:U:H4'	46:BU:65:GLN:NE2	2.08	0.67
1:AA:1170:A:H2'	1:AA:1171:A:O4'	1.94	0.67
1:CA:87:C:H2'	1:CA:88:U:H5''	1.77	0.67
51:BZ:10:LYS:O	51:BZ:31:PRO:HG2	1.94	0.67
52:BW:30:VAL:HA	52:BW:60:ALA:O	1.94	0.67
47:DF:32:LYS:HA	47:DF:95:MET:HG3	1.76	0.67
23:BB:1172:C:H3'	23:BB:1173:U:C6	2.29	0.67
13:AN:5:MET:HB3	13:AN:62:ARG:HH12	1.59	0.67
23:BB:1045:C:H5''	23:BB:1047:G:O4'	1.93	0.67
13:AN:25:GLU:O	13:AN:29:ILE:HG13	1.93	0.67
45:DS:82:MET:HB2	45:DS:98:LYS:HB2	1.76	0.67
25:DC:250:GLN:CD	25:DC:250:GLN:H	1.96	0.67
26:BD:109:VAL:HG11	26:BD:193:VAL:HB	1.76	0.67
39:DX:17:GLU:HB3	39:DX:53:VAL:HG11	1.76	0.67
24:DI:25:PRO:O	24:DI:29:GLN:HG3	1.94	0.67
23:BB:784:G:C6	25:BC:227:VAL:HG11	2.29	0.67
1:AA:1000:A:H2'	1:AA:1001:C:C6	2.28	0.67
12:CM:39:ALA:HB3	12:CM:42:VAL:HG13	1.76	0.67
23:BB:1594:U:H2'	23:BB:1595:C:C6	2.29	0.67
1:AA:1273:C:H2'	1:AA:1274:A:O4'	1.95	0.67
6:AG:72:VAL:HG12	6:AG:89:GLU:HA	1.76	0.67
1:CA:390:U:H2'	1:CA:391:G:C8	2.30	0.67
11:AL:78:VAL:HG12	11:AL:101:LEU:HD13	1.76	0.67
23:BB:2086:U:H2'	23:BB:2087:G:C8	2.30	0.67
1:AA:518:C:H2'	1:AA:530:G:H8	1.60	0.67
29:BE:117:ARG:HA	29:BE:185:LYS:HE3	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DS:29:VAL:HA	45:DS:32:ALA:HB3	1.77	0.67
41:BJ:82:GLY:O	41:BJ:84:ILE:HG22	1.94	0.67
1:AA:1202:U:H1'	13:AN:68:ARG:HD2	1.76	0.67
31:D0:41:HIS:HB3	42:DN:99:LYS:HB2	1.77	0.67
25:BC:250:GLN:H	25:BC:250:GLN:CD	1.97	0.67
1:CA:41:G:H2'	1:CA:42:G:H8	1.59	0.67
1:CA:1006:G:H2'	1:CA:1007:U:H6	1.60	0.67
23:DB:1180:U:H2'	23:DB:1181:U:C6	2.30	0.67
23:DB:1558:C:H4'	23:DB:1559:U:H5'	1.75	0.67
52:BW:49:ASN:HB2	52:BW:60:ALA:HA	1.76	0.67
52:DW:49:ASN:HB2	52:DW:60:ALA:HA	1.77	0.67
5:CF:3:HIS:CD2	5:CF:65:GLU:HG3	2.30	0.67
5:CF:3:HIS:CG	5:CF:92:THR:HG23	2.30	0.67
26:BD:30:GLU:HG3	26:BD:52:THR:HG22	1.77	0.67
49:DR:49:ILE:HD13	49:DR:53:PHE:H	1.60	0.67
41:DJ:99:ARG:HA	41:DJ:102:GLU:HB2	1.77	0.67
24:DI:73:PRO:HG2	24:DI:78:LEU:HD21	1.75	0.67
23:BB:2267:A:H61	23:BB:2272:U:H3	1.43	0.67
15:AP:68:SER:OG	15:AP:71:VAL:HG12	1.95	0.67
1:CA:1316:G:H22	1:CA:1318:A:H3'	1.58	0.67
1:CA:1316:G:N2	1:CA:1318:A:H3'	2.09	0.67
18:AS:27:LYS:HG3	18:AS:28:LYS:HD2	1.76	0.67
29:BE:60:TRP:O	29:BE:61:ARG:HB2	1.94	0.67
10:AK:17:ASP:HB3	10:AK:80:ASN:ND2	2.08	0.67
1:AA:1477:U:H2'	1:AA:1478:U:H6	1.58	0.67
1:AA:1238:A:H5'	1:AA:1336:C:N4	2.09	0.67
25:DC:202:ARG:NH1	25:DC:213:ARG:HE	1.92	0.67
17:AR:52:ARG:HB3	17:AR:56:ARG:HH21	1.58	0.67
1:AA:45:G:H2'	1:AA:46:G:H8	1.58	0.67
23:DB:2645:G:H3'	23:DB:2646:C:H5'	1.77	0.67
8:AI:9:GLY:HA2	8:AI:80:HIS:CD2	2.30	0.67
22:BA:107:G:O2'	22:BA:108:A:H5'	1.95	0.67
23:DB:1802:A:H2'	23:DB:1803:A:C8	2.30	0.67
11:CL:24:GLU:HB2	11:CL:26:CYS:SG	2.35	0.67
12:CM:9:PRO:HB2	12:CM:17:ALA:HB1	1.77	0.67
23:BB:2328:A:H2'	23:BB:2329:U:C6	2.30	0.67
1:CA:1488:G:H2'	1:CA:1489:G:H8	1.59	0.67
1:AA:1328:C:H5''	12:AM:27:THR:HG21	1.77	0.67
8:CI:94:ARG:HH11	8:CI:94:ARG:HB3	1.59	0.67
26:DD:46:ARG:NH2	26:DD:87:GLY:H	1.93	0.67
51:BZ:6:GLN:HE22	51:BZ:77:LYS:NZ	1.92	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:30:GLU:HG3	26:DD:52:THR:HG22	1.76	0.67
5:AF:3:HIS:CG	5:AF:92:THR:HG23	2.29	0.67
23:BB:2267:A:H8	23:BB:2267:A:O5'	1.77	0.67
1:CA:17:U:H2'	1:CA:18:C:C6	2.30	0.67
23:DB:1178:C:H2'	23:DB:1179:G:H8	1.60	0.67
26:DD:9:VAL:HA	26:DD:197:THR:HG23	1.76	0.67
2:AC:154:GLY:HA3	2:AC:162:ALA:HB1	1.76	0.67
1:AA:212:G:H2'	1:AA:213:G:H8	1.60	0.67
23:DB:2294:G:P	43:DO:94:ARG:HH11	2.17	0.67
1:CA:1054:C:O2'	1:CA:1055:A:H5''	1.95	0.67
20:AB:209:VAL:O	20:AB:213:LEU:HB2	1.95	0.67
26:BD:14:ILE:HA	28:BP:11:GLN:HE22	1.59	0.67
29:BE:130:LYS:HB2	29:BE:133:LEU:HG	1.76	0.67
37:DL:125:LEU:H	37:DL:143:GLU:HG3	1.60	0.67
23:BB:996:A:C4'	44:BQ:91:ARG:HH11	2.08	0.67
45:DS:69:LEU:HG	45:DS:107:VAL:HG22	1.76	0.67
23:BB:27:G:H1'	23:BB:513:A:N6	2.09	0.67
6:AG:19:SER:OG	6:AG:22:LEU:HB2	1.95	0.67
38:DM:35:ALA:CB	38:DM:100:LYS:H	2.07	0.67
23:DB:1429:G:H2'	23:DB:1430:G:H8	1.60	0.67
23:DB:1655:A:H5'	26:DD:118:PHE:HB2	1.76	0.67
22:BA:28:C:H5	22:BA:56:G:H1	1.42	0.67
1:AA:1002:G:H2'	1:AA:1003:G:O4'	1.95	0.67
29:DE:109:LEU:HD13	29:DE:180:LEU:HD13	1.77	0.67
23:DB:2141:G:H2'	23:DB:2142:A:H8	1.60	0.67
23:DB:2143:C:H3'	23:DB:2144:G:H8	1.60	0.67
39:BX:14:LEU:HD13	39:BX:57:LEU:HD21	1.75	0.67
23:BB:2151:U:H2'	23:BB:2152:G:H8	1.58	0.67
1:CA:1244:G:H2'	1:CA:1245:C:C6	2.30	0.67
23:BB:2751:G:N3	23:BB:2751:G:H2'	2.10	0.67
25:BC:158:GLY:N	25:BC:194:VAL:HG13	2.10	0.67
42:BN:45:ARG:HG3	42:BN:95:THR:HG21	1.76	0.67
1:CA:1170:A:H2'	1:CA:1171:A:O4'	1.95	0.67
2:CC:154:GLY:HA3	2:CC:162:ALA:HB1	1.77	0.67
23:DB:2291:U:H2'	23:DB:2292:U:C6	2.30	0.67
1:CA:1432:G:H1'	1:CA:1468:A:N6	2.10	0.67
9:AJ:80:THR:HB	9:AJ:83:THR:OG1	1.94	0.67
25:BC:216:ARG:HH11	25:BC:216:ARG:HG3	1.60	0.67
24:BI:10:LEU:HD13	24:BI:12:VAL:HG13	1.76	0.67
49:DR:68:ARG:NH1	49:DR:90:ARG:HD3	2.09	0.67
46:BU:85:ARG:HH11	46:BU:86:PHE:N	1.93	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1277:C:HO2'	1:AA:1279:G:H8	1.39	0.67
10:AK:28:ASN:HD22	10:AK:29:THR:H	1.43	0.67
23:BB:1429:G:H2'	23:BB:1430:G:H8	1.60	0.67
9:CJ:17:LEU:HD22	9:CJ:96:VAL:HG13	1.76	0.67
13:CN:27:LYS:HA	13:CN:31:SER:HB2	1.76	0.67
29:BE:58:LYS:HZ2	29:BE:58:LYS:H	1.42	0.67
23:DB:2394:C:H5''	37:DL:63:LYS:HD3	1.76	0.67
8:CI:9:GLY:HA2	8:CI:80:HIS:HD2	1.59	0.67
23:DB:594:U:H2'	23:DB:595:C:C6	2.30	0.67
1:AA:473:U:H2'	1:AA:474:G:H8	1.60	0.67
1:CA:518:C:H2'	1:CA:530:G:H8	1.60	0.67
43:DO:89:ASP:HA	43:DO:116:GLN:O	1.94	0.67
23:BB:2078:C:H2'	23:BB:2079:U:C6	2.30	0.67
39:BX:12:GLU:HA	39:BX:15:ASN:HD21	1.58	0.67
6:AG:66:GLU:HA	6:AG:69:ARG:HD2	1.77	0.67
13:CN:52:ARG:HD2	13:CN:58:ARG:HH21	1.57	0.66
20:AB:186:VAL:O	20:AB:200:PRO:HA	1.95	0.66
44:BQ:91:ARG:NH1	49:BR:10:LYS:HB3	2.10	0.66
21:AU:24:LYS:CD	21:AU:25:ALA:H	2.06	0.66
50:BT:32:LEU:H	50:BT:83:ALA:HB3	1.59	0.66
24:DI:27:LEU:HD12	24:DI:32:VAL:HG11	1.75	0.66
29:DE:58:LYS:C	29:DE:60:TRP:H	1.97	0.66
47:DF:126:ASN:HD22	47:DF:156:THR:HA	1.60	0.66
47:DF:62:GLN:HG3	47:DF:91:ARG:NH1	2.09	0.66
35:DV:80:HIS:CD2	35:DV:83:LYS:HB2	2.29	0.66
23:BB:191:A:H2'	23:BB:192:C:C6	2.30	0.66
19:AT:68:LYS:HE2	19:AT:68:LYS:HA	1.76	0.66
45:BS:73:LYS:HE3	45:BS:74:ILE:H	1.59	0.66
3:CD:137:SER:HB2	3:CD:138:PRO:HD2	1.76	0.66
46:BU:12:VAL:HG22	46:BU:69:VAL:HG12	1.77	0.66
46:BU:14:THR:HG21	46:BU:64:ILE:HD13	1.76	0.66
1:AA:1009:U:H5'	1:AA:1010:U:OP2	1.95	0.66
49:DR:31:GLU:H	49:DR:63:VAL:HG22	1.58	0.66
23:BB:1568:G:H4'	25:BC:58:LYS:HB3	1.77	0.66
11:CL:33:CYS:HA	11:CL:54:VAL:HA	1.77	0.66
23:DB:923:G:H1'	52:DW:23:LYS:HZ2	1.60	0.66
23:BB:587:C:O2'	37:BL:19:LEU:HD13	1.93	0.66
52:BW:67:LYS:O	52:BW:68:PHE:HB2	1.93	0.66
28:BP:4:ILE:HG22	28:BP:5:LYS:N	2.10	0.66
23:DB:1778:U:H2'	23:DB:1784:A:H62	1.59	0.66
11:AL:33:CYS:HA	11:AL:54:VAL:HA	1.76	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1722:A:H2'	23:DB:1723:G:H8	1.60	0.66
51:DZ:66:THR:O	51:DZ:69:ALA:HB3	1.95	0.66
51:DZ:5:CYS:CB	51:DZ:10:LYS:H	2.06	0.66
52:BW:50:VAL:HG23	52:BW:61:LYS:HE3	1.76	0.66
29:BE:192:ALA:HA	29:BE:195:GLN:HE21	1.61	0.66
4:AE:89:THR:HG22	4:AE:90:GLY:N	2.09	0.66
23:DB:1080:A:H2'	23:DB:1081:U:C6	2.29	0.66
45:BS:48:LYS:O	45:BS:52:GLU:HG2	1.94	0.66
45:BS:55:ILE:HD12	45:BS:69:LEU:HD23	1.76	0.66
23:DB:549:G:H2'	41:DJ:2:LYS:HE3	1.76	0.66
23:DB:2734:A:H2'	23:DB:2735:G:H5'	1.78	0.66
23:DB:140:C:H4'	23:DB:141:G:C6	2.31	0.66
9:CJ:52:LEU:HA	9:CJ:62:ARG:HA	1.77	0.66
13:CN:25:GLU:O	13:CN:29:ILE:HG13	1.95	0.66
23:DB:1486:U:H2'	23:DB:1487:U:H6	1.59	0.66
5:CF:38:ARG:HH21	5:CF:63:ASN:ND2	1.92	0.66
23:DB:1406:U:H2'	23:DB:1407:G:C8	2.30	0.66
23:DB:191:A:H2'	23:DB:192:C:C6	2.30	0.66
1:AA:1432:G:H5'	28:BP:105:LYS:HG2	1.76	0.66
6:AG:4:ARG:HD2	6:AG:5:VAL:H	1.59	0.66
12:AM:9:PRO:HB2	12:AM:17:ALA:HB1	1.77	0.66
1:AA:56:U:H2'	1:AA:57:G:H8	1.60	0.66
19:AT:49:ALA:HA	19:AT:52:GLU:OE2	1.95	0.66
30:DY:43:ILE:O	30:DY:47:ILE:HG12	1.95	0.66
9:CJ:80:THR:HB	9:CJ:83:THR:OG1	1.94	0.66
23:DB:2103:C:H3'	23:DB:2104:C:C2	2.30	0.66
2:CC:70:ALA:HA	2:CC:105:VAL:HG21	1.77	0.66
9:AJ:23:ALA:O	9:AJ:27:GLU:HB2	1.95	0.66
23:BB:2728:U:H2'	23:BB:2729:G:C8	2.31	0.66
1:AA:532:A:N6	2:AC:191:THR:HB	2.10	0.66
3:AD:25:ARG:HH11	3:AD:26:ALA:N	1.93	0.66
40:DH:113:SER:H	40:DH:132:PHE:HE1	1.44	0.66
23:DB:1592:C:H2'	23:DB:1593:A:C8	2.31	0.66
43:BO:35:ILE:HG22	43:BO:53:THR:HG23	1.77	0.66
23:DB:2264:C:N4	52:DW:11:ASN:HD21	1.93	0.66
36:D2:21:ARG:HG2	36:D2:31:LEU:HG	1.77	0.66
12:CM:52:ILE:HG23	12:CM:56:ARG:HH12	1.59	0.66
48:DG:8:VAL:HG11	48:DG:49:LEU:HB2	1.75	0.66
13:CN:5:MET:HB3	13:CN:62:ARG:HH12	1.61	0.66
23:DB:2141:G:H2'	23:DB:2142:A:C8	2.31	0.66
1:CA:1000:A:H2'	1:CA:1001:C:C6	2.31	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:41:G:H2'	1:AA:42:G:H8	1.61	0.66
34:D3:61:LEU:HB2	34:D3:64:ALA:HB2	1.77	0.66
46:DU:12:VAL:HG22	46:DU:69:VAL:HG12	1.76	0.66
1:AA:539:A:H2'	1:AA:540:G:C8	2.31	0.66
52:BW:23:LYS:HD2	52:BW:24:ARG:H	1.61	0.66
39:DX:20:ASN:O	39:DX:24:GLU:HB3	1.95	0.66
24:DI:72:THR:HG22	24:DI:115:ASP:OD2	1.95	0.66
23:BB:79:C:HO2'	23:BB:346:A:H1'	1.59	0.66
27:BK:8:LEU:H	27:BK:8:LEU:HD12	1.61	0.66
23:BB:549:G:H2'	41:BJ:2:LYS:HE3	1.77	0.66
23:BB:1081:U:H4'	24:BI:123:ALA:HB1	1.77	0.66
48:DG:122:ALA:HA	48:DG:132:LEU:HA	1.78	0.66
23:BB:1484:U:H2'	23:BB:1485:U:C6	2.31	0.66
23:BB:2882:A:OP1	42:BN:96:ARG:HD2	1.94	0.66
23:DB:545:U:H3'	23:DB:545:U:OP2	1.96	0.66
23:DB:2425:A:H5'	23:DB:2427:C:O4'	1.95	0.66
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.30	0.66
1:AA:390:U:H2'	1:AA:391:G:C8	2.30	0.66
7:AH:87:ARG:H	7:AH:90:GLU:HB3	1.61	0.66
47:DF:119:LYS:HA	47:DF:121:PHE:CE1	2.30	0.66
9:AJ:77:VAL:HG12	9:AJ:78:GLU:HG3	1.78	0.66
23:BB:873:C:H4'	38:BM:64:TRP:HE1	1.60	0.66
40:DH:2:GLN:O	40:DH:3:VAL:HG22	1.95	0.66
1:CA:658:C:H2'	1:CA:659:U:H6	1.61	0.66
46:DU:85:ARG:HH11	46:DU:86:PHE:N	1.93	0.66
1:CA:1320:C:N3	18:CS:35:ARG:HD3	2.11	0.66
41:BJ:99:ARG:HA	41:BJ:102:GLU:HB2	1.78	0.66
50:BT:32:LEU:N	50:BT:83:ALA:HB3	2.09	0.66
24:DI:9:LYS:HG2	24:DI:57:VAL:HG13	1.77	0.66
41:DJ:58:ASN:HA	41:DJ:127:GLY:HA2	1.76	0.66
29:DE:58:LYS:HE2	29:DE:60:TRP:CD1	2.28	0.66
24:DI:42:ASN:HA	24:DI:45:THR:OG1	1.95	0.66
37:DL:56:PRO:HD2	37:DL:59:ARG:HG3	1.78	0.66
23:DB:2591:C:H2'	23:DB:2592:G:H8	1.60	0.66
38:DM:42:THR:O	38:DM:44:ARG:N	2.27	0.66
23:BB:171:U:H2'	23:BB:172:A:C8	2.30	0.66
23:DB:2102:G:H2'	23:DB:2103:C:O4'	1.96	0.66
2:AC:13:ILE:H	2:AC:13:ILE:HD13	1.61	0.66
1:CA:524:G:H2'	1:CA:525:C:C6	2.31	0.66
23:BB:1464:G:H2'	23:BB:1465:G:H8	1.60	0.66
3:AD:2:ARG:NH1	3:AD:114:ARG:HG3	2.11	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1009:U:H5'	1:CA:1010:U:OP2	1.95	0.66
23:DB:479:A:N3	23:DB:481:G:H5''	2.09	0.66
52:BW:81:ILE:O	52:BW:81:ILE:HG13	1.95	0.66
51:DZ:40:VAL:HG22	51:DZ:45:ARG:O	1.94	0.66
45:DS:24:ILE:HG23	45:DS:32:ALA:HB1	1.76	0.66
23:DB:1080:A:H4'	24:DI:126:ARG:HD2	1.75	0.66
1:CA:1302:C:OP2	12:CM:16:ILE:HD11	1.95	0.66
45:BS:27:LYS:O	45:BS:32:ALA:HB2	1.96	0.66
1:AA:1316:G:H22	1:AA:1318:A:H3'	1.61	0.66
48:DG:104:LEU:HB2	48:DG:112:VAL:HB	1.78	0.66
12:CM:53:ASP:HA	12:CM:56:ARG:NH2	2.10	0.66
13:AN:27:LYS:HA	13:AN:31:SER:HB2	1.76	0.66
23:DB:721:A:H2'	23:DB:722:A:C8	2.30	0.66
1:AA:806:C:H2'	1:AA:807:A:H8	1.60	0.66
25:BC:156:SER:O	25:BC:194:VAL:HG11	1.96	0.66
1:CA:501:C:H2'	1:CA:502:A:H8	1.59	0.66
30:BY:43:ILE:O	30:BY:47:ILE:HG12	1.94	0.66
15:AP:57:ILE:O	15:AP:61:VAL:HG23	1.95	0.66
50:DT:11:LEU:HA	50:DT:34:VAL:HG12	1.77	0.66
50:BT:82:LYS:HD2	50:BT:84:TYR:HE1	1.59	0.66
48:DG:26:LYS:HA	48:DG:32:LEU:HA	1.78	0.66
20:AB:14:HIS:HD2	20:AB:202:ASN:H	1.44	0.66
23:BB:78:U:H2'	23:BB:79:C:C6	2.30	0.66
29:BE:48:THR:N	29:BE:51:GLU:HG3	2.11	0.66
9:CJ:55:PRO:HA	13:CN:80:ARG:NH2	2.10	0.66
23:BB:1551:A:H3'	23:BB:1552:A:H5''	1.78	0.66
23:BB:982:C:H5'	23:BB:982:C:O2	1.96	0.66
23:DB:171:U:H2'	23:DB:172:A:C8	2.30	0.66
23:DB:224:U:O4	23:DB:420:C:H5'	1.95	0.66
23:DB:1098:A:H2'	24:DI:4:VAL:CA	2.26	0.66
20:CB:209:VAL:O	20:CB:213:LEU:HB2	1.96	0.66
38:DM:59:ARG:HE	38:DM:60:GLN:H	1.42	0.66
27:BK:104:THR:HB	27:BK:106:GLU:OE1	1.96	0.66
26:DD:116:LYS:HB3	26:DD:118:PHE:CE2	2.30	0.66
16:CQ:16:MET:CB	16:CQ:19:SER:HB2	2.25	0.66
35:BV:80:HIS:CD2	35:BV:83:LYS:HB2	2.30	0.66
1:AA:865:A:H5'	1:AA:1078:U:O4	1.96	0.66
23:BB:1406:U:H2'	23:BB:1407:G:C8	2.31	0.66
23:BB:2591:C:H2'	23:BB:2592:G:H8	1.61	0.66
11:AL:17:LYS:HE3	11:AL:17:LYS:N	2.11	0.66
23:BB:709:U:H2'	23:BB:710:U:C6	2.31	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BQ:65:ASN:HB2	44:BQ:75:TYR:HB2	1.78	0.66
23:DB:18:U:H2'	23:DB:19:A:C8	2.31	0.66
1:CA:60:A:H4'	1:CA:61:G:O5'	1.96	0.66
23:BB:1149:G:H2'	23:BB:1150:C:C6	2.31	0.66
28:BP:47:ILE:HD13	28:BP:61:ARG:HG2	1.78	0.66
17:CR:34:GLU:HB2	21:CU:18:PHE:CZ	2.31	0.66
48:BG:17:LYS:HZ2	48:BG:18:ILE:N	1.94	0.66
23:BB:1138:G:H2'	23:BB:1139:G:O4'	1.96	0.66
47:BF:116:LEU:HB3	47:BF:176:PHE:HA	1.78	0.66
23:DB:770:G:H5'	36:D2:10:LEU:HD12	1.77	0.66
47:BF:62:GLN:HG3	47:BF:91:ARG:NH1	2.11	0.66
23:DB:784:G:C6	25:DC:227:VAL:HG11	2.31	0.66
23:DB:773:U:H4'	25:DC:45:ASN:O	1.96	0.66
23:DB:962:G:H21	23:DB:2250:G:H22	1.43	0.66
20:AB:138:ARG:HD3	20:AB:141:GLU:OE1	1.96	0.66
22:DA:107:G:O2'	22:DA:108:A:H5'	1.96	0.66
4:CE:92:ARG:HB3	4:CE:92:ARG:HH11	1.61	0.66
25:DC:158:GLY:N	25:DC:194:VAL:HG13	2.11	0.66
21:AU:38:GLU:C	21:AU:40:PRO:HD2	2.16	0.65
52:BW:35:ILE:HG12	52:BW:35:ILE:O	1.96	0.65
5:AF:38:ARG:HH21	5:AF:63:ASN:HD21	1.43	0.65
37:BL:90:VAL:HB	37:BL:122:VAL:HG12	1.78	0.65
26:BD:148:GLN:CG	26:BD:152:PRO:HG2	2.26	0.65
42:BN:34:ILE:O	42:BN:112:TYR:HA	1.96	0.65
39:BX:49:ASP:O	39:BX:53:VAL:HG23	1.97	0.65
23:DB:2484:G:OP1	38:DM:44:ARG:HD3	1.96	0.65
4:AE:76:ASN:HB2	4:AE:81:GLN:NE2	2.10	0.65
25:DC:244:VAL:HB	25:DC:249:VAL:H	1.61	0.65
44:BQ:65:ASN:O	44:BQ:69:ARG:HB2	1.95	0.65
42:DN:45:ARG:HG3	42:DN:95:THR:HG21	1.76	0.65
24:BI:7:TYR:HB2	24:BI:58:ILE:O	1.95	0.65
1:AA:493:A:H5'	1:AA:494:G:OP2	1.96	0.65
23:BB:751:A:H5'	45:BS:90:LYS:HA	1.78	0.65
29:DE:130:LYS:HB2	29:DE:133:LEU:HG	1.77	0.65
23:DB:664:G:H2'	23:DB:665:U:H6	1.61	0.65
52:DW:39:GLN:HG3	52:DW:42:THR:HB	1.77	0.65
44:BQ:30:VAL:O	44:BQ:31:TYR:HB2	1.96	0.65
19:CT:43:LYS:HE2	19:CT:44:ALA:N	2.09	0.65
48:BG:26:LYS:HA	48:BG:32:LEU:HA	1.78	0.65
39:BX:39:GLN:O	39:BX:42:LEU:HB2	1.96	0.65
41:BJ:3:THR:HB	41:BJ:44:TYR:CE1	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BQ:71:ASN:HD22	44:BQ:109:VAL:HG11	1.61	0.65
20:CB:14:HIS:HD2	20:CB:202:ASN:H	1.42	0.65
29:DE:29:HIS:NE2	37:DL:8:PRO:HG3	2.11	0.65
23:DB:2267:A:O5'	23:DB:2267:A:H8	1.79	0.65
15:CP:46:LYS:HG3	15:CP:48:GLU:O	1.95	0.65
23:BB:1021:A:H62	23:BB:1141:U:H3	1.43	0.65
15:CP:68:SER:OG	15:CP:71:VAL:HG12	1.96	0.65
26:BD:116:LYS:HB3	26:BD:118:PHE:CE2	2.31	0.65
9:CJ:15:HIS:HA	9:CJ:18:ILE:HG22	1.78	0.65
23:DB:1125:G:H4'	32:D4:37:GLN:NE2	2.11	0.65
23:DB:1484:U:H2'	23:DB:1485:U:C6	2.32	0.65
23:BB:1386:C:H2'	23:BB:1387:A:C8	2.31	0.65
38:BM:42:THR:O	38:BM:44:ARG:N	2.28	0.65
48:BG:122:ALA:HA	48:BG:132:LEU:HA	1.77	0.65
4:CE:80:LEU:HA	4:CE:146:MET:HE1	1.77	0.65
46:DU:80:ASP:HB3	46:DU:96:LYS:N	2.12	0.65
23:BB:654:A:H2'	23:BB:655:A:H5''	1.76	0.65
52:BW:23:LYS:NZ	52:BW:24:ARG:HG3	2.09	0.65
52:DW:23:LYS:HD2	52:DW:24:ARG:H	1.62	0.65
23:DB:996:A:C4'	44:DQ:91:ARG:HH11	2.09	0.65
6:AG:74:VAL:HA	6:AG:87:PRO:HA	1.78	0.65
23:DB:1138:G:H2'	23:DB:1139:G:O4'	1.96	0.65
36:B2:21:ARG:HG2	36:B2:31:LEU:HG	1.78	0.65
23:DB:162:U:H4'	23:DB:163:C:OP1	1.95	0.65
23:DB:1309:G:OP1	36:D2:9:VAL:HG12	1.97	0.65
46:DU:24:VAL:HG22	46:DU:35:VAL:HG22	1.76	0.65
4:CE:45:VAL:HG12	4:CE:116:VAL:HG23	1.79	0.65
23:DB:545:U:H2'	23:DB:546:U:H4'	1.78	0.65
23:BB:664:G:H2'	23:BB:665:U:C6	2.30	0.65
23:BB:1166:G:H2'	23:BB:1167:C:C6	2.31	0.65
23:DB:1508:A:H5'	23:DB:1509:A:C6	2.31	0.65
1:CA:812:G:H2'	1:CA:812:G:N3	2.11	0.65
21:CU:11:PHE:O	21:CU:11:PHE:HD1	1.79	0.65
14:AO:8:THR:O	14:AO:12:VAL:HG23	1.96	0.65
23:BB:2795:C:H2'	23:BB:2796:U:O4'	1.96	0.65
23:DB:1131:G:N2	23:DB:2024:G:H21	1.94	0.65
50:DT:73:ARG:HB3	50:DT:73:ARG:HH21	1.61	0.65
2:AC:129:PHE:HE2	2:AC:165:GLU:HG2	1.61	0.65
23:DB:947:A:H2'	23:DB:948:C:C6	2.30	0.65
40:BH:27:ARG:HG2	40:BH:27:ARG:HH21	1.62	0.65
29:DE:147:LEU:HB3	29:DE:186:VAL:HG23	1.77	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2322:A:C6	23:BB:2333:A:N6	2.65	0.65
23:BB:1820:U:OP1	25:BC:176:ARG:HD2	1.97	0.65
18:AS:47:THR:HG23	18:AS:60:PHE:HE1	1.61	0.65
23:BB:675:A:H4'	29:BE:60:TRP:CZ2	2.31	0.65
46:BU:24:VAL:HG22	46:BU:35:VAL:HG22	1.78	0.65
28:DP:50:ARG:HB3	28:DP:57:ALA:H	1.60	0.65
1:AA:590:U:H2'	1:AA:591:U:C6	2.31	0.65
43:BO:15:ARG:HH21	43:BO:95:SER:CB	2.09	0.65
39:DX:49:ASP:O	39:DX:53:VAL:HG23	1.96	0.65
25:BC:156:SER:HB3	25:BC:159:THR:HG21	1.78	0.65
23:DB:947:A:H2'	23:DB:948:C:H6	1.62	0.65
47:BF:119:LYS:HA	47:BF:121:PHE:CE1	2.30	0.65
1:AA:1463:U:H2'	1:AA:1464:U:C6	2.31	0.65
1:AA:1287:A:H2'	1:AA:1288:A:C8	2.32	0.65
11:AL:24:GLU:HB2	11:AL:26:CYS:SG	2.37	0.65
23:DB:2458:G:H1'	23:DB:2460:U:O4	1.96	0.65
49:BR:68:ARG:NH1	49:BR:90:ARG:HD3	2.11	0.65
23:DB:709:U:H2'	23:DB:710:U:C6	2.31	0.65
23:DB:460:A:H4'	50:DT:72:GLN:HB2	1.78	0.65
1:AA:1244:G:H2'	1:AA:1245:C:C6	2.31	0.65
36:B2:10:LEU:HD21	36:B2:14:ARG:NH1	2.10	0.65
52:DW:81:ILE:O	52:DW:81:ILE:HG13	1.96	0.65
36:D2:19:ARG:HG2	36:D2:19:ARG:NH2	2.09	0.65
23:DB:857:G:C2'	23:DB:858:G:H5'	2.27	0.65
13:CN:26:LEU:HD11	13:CN:44:VAL:HG22	1.78	0.65
37:BL:56:PRO:HD2	37:BL:59:ARG:HG3	1.78	0.65
26:BD:8:LYS:HD3	26:BD:197:THR:H	1.61	0.65
23:BB:18:U:H2'	23:BB:19:A:C8	2.31	0.65
26:DD:69:ALA:HA	26:DD:73:VAL:HB	1.78	0.65
1:AA:9:G:H5'	4:AE:107:GLY:HA3	1.78	0.65
9:CJ:23:ALA:O	9:CJ:27:GLU:HB2	1.97	0.65
23:DB:1993:U:H4'	26:DD:133:THR:CG2	2.26	0.65
6:CG:74:VAL:HA	6:CG:87:PRO:HA	1.78	0.65
11:AL:20:VAL:HB	11:AL:94:TYR:HE1	1.62	0.65
51:DZ:38:PHE:HE2	51:DZ:51:VAL:HG21	1.61	0.65
1:CA:473:U:H2'	1:CA:474:G:H8	1.62	0.65
20:AB:53:LEU:HD11	20:AB:216:VAL:HG12	1.78	0.65
52:BW:24:ARG:HA	52:BW:66:VAL:H	1.62	0.65
23:BB:1309:G:OP1	36:B2:9:VAL:HG12	1.97	0.65
19:CT:38:ILE:HG12	19:CT:85:LEU:HD13	1.77	0.65
1:AA:1320:C:N3	18:AS:35:ARG:HD3	2.11	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BL:125:LEU:H	37:BL:143:GLU:HG3	1.60	0.65
48:DG:24:THR:HA	48:DG:34:ARG:HA	1.79	0.65
47:BF:40:GLY:O	47:BF:41:GLU:C	2.35	0.65
15:AP:46:LYS:HG3	15:AP:48:GLU:O	1.97	0.65
23:BB:162:U:H4'	23:BB:163:C:OP1	1.96	0.65
23:BB:2866:U:H4'	23:BB:2867:G:H4'	1.77	0.65
34:D3:22:LYS:HB2	34:D3:48:MET:SD	2.36	0.65
23:DB:981:A:H2'	23:DB:982:C:H5''	1.78	0.65
37:DL:90:VAL:HB	37:DL:122:VAL:HG12	1.78	0.65
23:DB:479:A:O2'	23:DB:481:G:H5'	1.96	0.65
23:BB:2291:U:H2'	23:BB:2292:U:C6	2.31	0.65
50:BT:69:ARG:HB3	50:BT:74:ILE:HA	1.79	0.65
1:AA:658:C:H2'	1:AA:659:U:H6	1.61	0.65
23:DB:2366:A:H2'	23:DB:2367:G:O4'	1.97	0.65
23:DB:1726:C:H2'	23:DB:1727:C:C6	2.31	0.65
44:DQ:65:ASN:HB2	44:DQ:75:TYR:HB2	1.79	0.65
23:BB:962:G:H21	23:BB:2250:G:H22	1.44	0.65
23:BB:224:U:O4	23:BB:420:C:H5'	1.97	0.65
1:CA:320:A:H2'	1:CA:321:A:C8	2.31	0.65
1:AA:812:G:H2'	1:AA:812:G:N3	2.11	0.65
23:DB:492:A:H2'	23:DB:493:G:O4'	1.97	0.65
36:B2:19:ARG:NH2	36:B2:19:ARG:HG2	2.08	0.65
23:DB:849:A:H2'	23:DB:850:U:C6	2.31	0.65
52:DW:24:ARG:HA	52:DW:66:VAL:H	1.62	0.65
39:DX:39:GLN:O	39:DX:42:LEU:HB2	1.96	0.65
44:BQ:63:ARG:HH22	44:BQ:96:ASP:CA	2.09	0.65
25:BC:137:GLY:H	25:BC:163:ILE:HB	1.62	0.65
23:DB:362:A:N3	23:DB:362:A:H2'	2.10	0.65
40:BH:8:LYS:O	40:BH:13:GLY:HA3	1.96	0.65
15:AP:6:LEU:HB3	15:AP:17:TYR:HB3	1.78	0.65
47:DF:135:ILE:HD11	47:DF:137:PHE:HB3	1.79	0.65
48:DG:88:LEU:O	48:DG:88:LEU:HD12	1.97	0.65
2:AC:26:LYS:HG3	2:AC:27:GLU:N	2.11	0.65
12:AM:28:ARG:NH2	12:AM:62:PHE:HB2	2.11	0.65
23:BB:1406:U:H2'	23:BB:1407:G:H8	1.61	0.65
8:AI:9:GLY:HA2	8:AI:80:HIS:HD2	1.61	0.65
49:DR:28:ALA:O	49:DR:63:VAL:HG21	1.96	0.65
44:DQ:65:ASN:O	44:DQ:69:ARG:HB2	1.96	0.65
1:CA:814:A:H5'	1:CA:1511:G:H4'	1.79	0.65
23:BB:590:A:H2'	23:BB:591:U:C6	2.32	0.65
23:BB:53:A:H1'	23:BB:179:C:O2'	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1722:A:H2'	23:BB:1723:G:H8	1.60	0.65
10:AK:58:THR:HB	10:AK:59:PRO:HD2	1.79	0.65
1:AA:524:G:H2'	1:AA:525:C:C6	2.32	0.65
26:BD:69:ALA:HA	26:BD:73:VAL:HB	1.77	0.65
38:BM:96:ILE:HD11	38:BM:126:ILE:HG12	1.79	0.65
44:DQ:91:ARG:NH1	49:DR:10:LYS:HB3	2.11	0.65
27:BK:41:ILE:HG13	27:BK:42:THR:H	1.61	0.65
47:DF:107:VAL:O	47:DF:110:ILE:HG22	1.97	0.65
1:AA:1316:G:N2	1:AA:1318:A:H3'	2.11	0.65
9:AJ:6:ILE:HB	9:AJ:76:ILE:HD11	1.79	0.65
29:DE:48:THR:N	29:DE:51:GLU:HG3	2.12	0.65
23:DB:281:C:H2'	23:DB:282:A:H8	1.61	0.65
11:AL:107:LYS:H	11:AL:107:LYS:HZ2	1.44	0.65
23:DB:233:A:H61	23:DB:428:A:H61	1.44	0.65
2:CC:155:ARG:H	2:CC:162:ALA:HA	1.62	0.65
11:AL:20:VAL:HB	11:AL:94:TYR:CE1	2.32	0.65
50:BT:73:ARG:HH21	50:BT:73:ARG:HB3	1.62	0.65
23:BB:431:U:O2'	23:BB:432:A:H5'	1.96	0.65
42:DN:58:ASP:O	42:DN:59:SER:HB3	1.95	0.65
1:AA:1479:C:H2'	1:AA:1480:A:H8	1.62	0.65
23:DB:155:A:H2'	23:DB:156:A:C8	2.31	0.65
24:BI:89:SER:HA	24:BI:97:VAL:HG21	1.79	0.65
7:AH:40:LYS:HD2	7:AH:47:ASP:HA	1.79	0.65
51:DZ:6:GLN:HE22	51:DZ:77:LYS:NZ	1.94	0.65
1:CA:1103:C:H5''	20:CB:96:LEU:HD12	1.78	0.65
40:DH:77:THR:HA	40:DH:143:ILE:O	1.97	0.65
1:CA:408:A:OP1	3:CD:111:ALA:HB3	1.95	0.65
18:AS:18:VAL:CG2	18:AS:43:MET:HB3	2.26	0.65
47:DF:168:LEU:HD13	47:DF:169:LEU:H	1.62	0.65
35:BV:42:LEU:HD23	35:BV:42:LEU:H	1.62	0.65
12:CM:28:ARG:NH2	12:CM:62:PHE:HB2	2.11	0.65
12:CM:2:ARG:HG3	12:CM:6:ILE:H	1.62	0.65
16:AQ:16:MET:CB	16:AQ:19:SER:HB2	2.26	0.65
49:DR:71:LYS:HG3	49:DR:72:VAL:N	2.12	0.65
23:DB:544:C:H2'	23:DB:545:U:C4	2.32	0.65
37:DL:93:ASN:O	37:DL:95:LEU:HD12	1.97	0.65
23:BB:1993:U:H4'	26:BD:133:THR:HG22	1.79	0.65
23:BB:2728:U:H2'	23:BB:2729:G:H8	1.61	0.65
4:CE:92:ARG:HB3	4:CE:92:ARG:NH1	2.12	0.65
7:AH:76:ARG:HG3	7:AH:77:VAL:N	2.12	0.65
23:DB:2635:A:H5'	26:DD:79:LEU:HD23	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2360:G:H4'	37:DL:61:LEU:HD11	1.77	0.65
23:DB:1338:G:H4'	50:DT:18:GLU:HG3	1.79	0.65
7:CH:76:ARG:HG3	7:CH:77:VAL:N	2.12	0.65
11:AL:60:PHE:O	11:AL:62:VAL:HG13	1.97	0.65
1:AA:1054:C:O2'	1:AA:1055:A:H5''	1.97	0.65
25:DC:173:LEU:H	25:DC:173:LEU:HD22	1.61	0.65
42:BN:58:ASP:O	42:BN:59:SER:HB3	1.96	0.65
40:DH:31:VAL:O	40:DH:32:PRO:C	2.34	0.65
21:CU:38:GLU:C	21:CU:40:PRO:HD2	2.17	0.65
41:DJ:3:THR:HB	41:DJ:44:TYR:CE1	2.32	0.65
23:DB:138:U:H4'	23:DB:139:U:H2'	1.78	0.65
23:BB:547:A:H3'	23:BB:548:G:H8	1.62	0.65
24:DI:41:PHE:O	24:DI:45:THR:HG23	1.97	0.65
12:AM:44:ILE:HD12	12:AM:45:SER:H	1.62	0.65
46:DU:34:ILE:HG12	46:DU:63:ALA:HB2	1.79	0.65
1:CA:235:C:H2'	1:CA:236:A:C8	2.32	0.65
16:AQ:18:LYS:HE3	16:AQ:48:GLU:HG2	1.79	0.65
23:DB:2471:A:O2'	23:DB:2472:G:H8	1.79	0.65
4:AE:45:VAL:HG12	4:AE:116:VAL:HG23	1.79	0.65
1:CA:1006:G:H2'	1:CA:1007:U:C6	2.32	0.65
23:BB:1038:G:H2'	23:BB:1039:A:H8	1.61	0.65
40:BH:2:GLN:O	40:BH:3:VAL:HG22	1.97	0.65
23:DB:2728:U:H2'	23:DB:2729:G:H8	1.62	0.65
13:AN:40:ARG:NH2	18:AS:6:LYS:CB	2.58	0.64
50:DT:38:ALA:O	50:DT:39:THR:HB	1.96	0.64
18:CS:30:LEU:HD12	18:CS:48:ILE:HG12	1.79	0.64
47:BF:107:VAL:O	47:BF:110:ILE:HG22	1.97	0.64
23:BB:134:G:H2'	23:BB:135:U:C6	2.33	0.64
23:BB:545:U:C6	23:BB:547:A:H5'	2.31	0.64
23:BB:2884:U:O2	31:B0:49:ARG:HG2	1.97	0.64
12:CM:38:ILE:HG22	12:CM:42:VAL:HG21	1.78	0.64
16:AQ:18:LYS:HG2	16:AQ:48:GLU:HA	1.79	0.64
46:DU:35:VAL:HB	46:DU:38:ILE:CG2	2.26	0.64
11:AL:41:PRO:HB3	11:AL:49:ARG:NH1	2.12	0.64
43:DO:74:VAL:O	43:DO:78:VAL:HG23	1.97	0.64
23:DB:18:U:H2'	23:DB:19:A:H8	1.61	0.64
25:DC:156:SER:O	25:DC:194:VAL:HG11	1.97	0.64
23:DB:664:G:H2'	23:DB:665:U:C6	2.32	0.64
23:BB:2229:U:H2'	23:BB:2230:G:C8	2.32	0.64
46:BU:48:VAL:C	46:BU:53:GLN:HG3	2.18	0.64
40:DH:119:ASN:ND2	40:DH:121:VAL:HG13	2.11	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2400:G:O2'	23:DB:2401:U:H5'	1.97	0.64
33:D1:3:GLY:O	33:D1:4:ILE:HG12	1.96	0.64
4:AE:92:ARG:HB3	4:AE:92:ARG:NH1	2.13	0.64
40:BH:27:ARG:H	40:BH:31:VAL:CG2	2.11	0.64
25:DC:140:VAL:HG12	25:DC:141:HIS:H	1.61	0.64
23:DB:1203:U:H1'	37:DL:4:ASN:HD21	1.62	0.64
27:DK:38:ILE:HD13	27:DK:61:VAL:HG12	1.78	0.64
23:BB:1076:C:H4'	24:BI:94:LYS:CE	2.27	0.64
35:DV:42:LEU:H	35:DV:42:LEU:HD23	1.61	0.64
2:CC:26:LYS:HG3	2:CC:27:GLU:N	2.12	0.64
23:BB:1441:G:H2'	23:BB:1442:U:C6	2.31	0.64
11:CL:20:VAL:HB	11:CL:94:TYR:CE1	2.32	0.64
23:DB:594:U:H2'	23:DB:595:C:H6	1.62	0.64
25:DC:216:ARG:HH11	25:DC:216:ARG:HG3	1.60	0.64
9:CJ:24:GLU:HG2	9:CJ:90:LEU:HD21	1.78	0.64
23:BB:1726:C:H2'	23:BB:1727:C:C6	2.33	0.64
40:BH:79:THR:HG22	40:BH:145:ASN:HB2	1.79	0.64
11:CL:51:VAL:HG12	11:CL:52:CYS:H	1.62	0.64
23:BB:581:C:H2'	23:BB:582:A:C8	2.33	0.64
47:DF:141:ASP:HB2	47:DF:144:LYS:HB2	1.78	0.64
23:DB:1205:A:H4'	23:DB:1206:G:OP2	1.96	0.64
52:DW:37:VAL:HG13	52:DW:55:ASP:O	1.96	0.64
49:BR:60:LYS:N	49:BR:100:GLY:HA3	2.06	0.64
26:DD:186:LEU:HD21	28:DP:3:ILE:HD11	1.79	0.64
41:BJ:18:VAL:HG12	41:BJ:54:ILE:HD11	1.78	0.64
40:BH:132:PHE:HB3	40:BH:140:ALA:HB3	1.79	0.64
23:BB:2267:A:C8	23:BB:2267:A:O5'	2.51	0.64
23:BB:345:A:H1'	23:BB:346:A:C2	2.32	0.64
23:BB:139:U:H5	50:BT:1:MET:HB3	1.63	0.64
23:DB:1440:U:H2'	23:DB:1441:G:C8	2.32	0.64
13:CN:20:PHE:HB3	13:CN:24:ALA:HB2	1.79	0.64
46:BU:80:ASP:HB3	46:BU:96:LYS:N	2.13	0.64
37:BL:93:ASN:O	37:BL:95:LEU:HD12	1.96	0.64
23:BB:18:U:H2'	23:BB:19:A:H8	1.61	0.64
23:DB:2728:U:H2'	23:DB:2729:G:C8	2.31	0.64
49:BR:28:ALA:O	49:BR:63:VAL:HG21	1.97	0.64
23:DB:315:G:H2'	23:DB:316:C:C6	2.32	0.64
1:AA:1006:G:H2'	1:AA:1007:U:H6	1.62	0.64
3:AD:60:VAL:HA	3:AD:63:ILE:HD12	1.80	0.64
2:AC:116:ALA:O	2:AC:119:ILE:HG22	1.98	0.64
23:DB:2182:U:H2'	23:DB:2183:A:C8	2.33	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1463:U:H2'	1:CA:1464:U:C6	2.32	0.64
17:CR:38:ILE:H	17:CR:38:ILE:HD13	1.63	0.64
23:DB:2137:U:O2'	23:DB:2138:G:H5'	1.97	0.64
42:BN:106:ASP:C	42:BN:108:ALA:H	2.01	0.64
40:BH:31:VAL:O	40:BH:32:PRO:C	2.34	0.64
26:BD:51:THR:HG21	26:BD:76:GLY:HA3	1.80	0.64
20:CB:53:LEU:HD11	20:CB:216:VAL:HG12	1.80	0.64
25:BC:173:LEU:H	25:BC:173:LEU:HD22	1.61	0.64
20:AB:16:GLY:HA3	20:AB:39:ILE:HA	1.79	0.64
27:DK:41:ILE:HG13	27:DK:42:THR:H	1.63	0.64
5:CF:53:LYS:HB3	5:CF:54:LEU:HD22	1.80	0.64
47:BF:110:ILE:HA	47:BF:111:ARG:CZ	2.27	0.64
9:AJ:15:HIS:HA	9:AJ:18:ILE:HG22	1.79	0.64
42:DN:34:ILE:O	42:DN:112:TYR:HA	1.97	0.64
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.33	0.64
46:BU:35:VAL:HB	46:BU:38:ILE:CG2	2.26	0.64
1:CA:1009:U:H1'	1:CA:1021:A:C2	2.33	0.64
49:BR:31:GLU:H	49:BR:63:VAL:HG22	1.61	0.64
23:DB:1373:A:H2'	23:DB:1374:G:O4'	1.96	0.64
23:DB:254:G:H22	34:D3:7:ARG:HH21	1.45	0.64
23:DB:2086:U:H2'	23:DB:2087:G:C8	2.32	0.64
23:DB:1857:G:N2	23:DB:1884:G:H2'	2.13	0.64
2:AC:70:ALA:HA	2:AC:105:VAL:HG21	1.79	0.64
2:CC:116:ALA:O	2:CC:119:ILE:HG22	1.97	0.64
48:DG:87:GLN:HG2	48:DG:164:ALA:HA	1.80	0.64
46:DU:86:PHE:CD2	46:DU:92:VAL:HG21	2.32	0.64
44:DQ:91:ARG:HH21	44:DQ:94:LEU:HD21	1.63	0.64
29:DE:134:LEU:HD21	29:DE:161:ALA:HB2	1.79	0.64
23:BB:321:U:H5''	29:BE:131:THR:HG23	1.79	0.64
45:DS:48:LYS:O	45:DS:52:GLU:HG2	1.96	0.64
27:DK:87:LEU:HB2	27:DK:93:GLN:O	1.98	0.64
23:BB:2147:A:H5'	23:BB:2148:G:H4'	1.79	0.64
23:DB:1439:A:C6	23:DB:1552:A:N7	2.65	0.64
23:DB:1386:C:H2'	23:DB:1387:A:C8	2.33	0.64
23:DB:1283:G:N2	23:DB:1285:A:H3'	2.12	0.64
38:BM:26:VAL:HA	38:BM:66:ARG:HH21	1.62	0.64
1:CA:501:C:H2'	1:CA:502:A:C8	2.32	0.64
17:AR:38:ILE:H	17:AR:38:ILE:HD13	1.62	0.64
43:BO:76:LYS:O	43:BO:80:GLU:HG2	1.97	0.64
49:BR:49:ILE:HD13	49:BR:53:PHE:N	2.13	0.64
23:BB:2102:G:N3	23:BB:2102:G:H2'	2.12	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1273:C:H2'	1:CA:1274:A:O4'	1.97	0.64
6:CG:125:ASP:HB3	6:CG:131:GLY:N	2.13	0.64
20:AB:118:THR:O	20:AB:121:GLN:HB3	1.97	0.64
23:DB:1175:A:N3	23:DB:1175:A:H3'	2.13	0.64
23:BB:125:A:H3'	23:BB:126:A:C5'	2.28	0.64
25:DC:116:GLN:HG2	25:DC:117:SER:H	1.63	0.64
47:DF:40:GLY:O	47:DF:41:GLU:C	2.35	0.64
1:AA:1302:C:OP2	12:AM:16:ILE:HD11	1.97	0.64
3:AD:165:GLU:CG	3:AD:166:LYS:H	2.09	0.64
23:BB:1024:G:C3'	23:BB:1025:G:H5''	2.26	0.64
47:BF:107:VAL:HA	47:BF:111:ARG:HH12	1.63	0.64
23:BB:2749:A:C3'	23:BB:2750:A:H5''	2.28	0.64
1:CA:451:A:H4'	1:CA:452:A:O4'	1.98	0.64
23:DB:2471:A:HO2'	23:DB:2472:G:H8	1.45	0.64
4:AE:43:GLY:O	4:AE:72:ASN:HA	1.97	0.64
1:CA:590:U:H2'	1:CA:591:U:C6	2.32	0.64
8:AI:39:GLY:HA2	8:AI:44:ARG:HD3	1.78	0.64
28:DP:31:VAL:HG12	28:DP:38:ARG:O	1.97	0.64
2:CC:129:PHE:HE2	2:CC:165:GLU:HG2	1.61	0.64
23:DB:1166:G:H2'	23:DB:1167:C:C6	2.33	0.64
1:CA:279:A:H5''	1:CA:280:C:H3'	1.79	0.64
1:AA:501:C:H2'	1:AA:502:A:H8	1.62	0.64
14:AO:53:ARG:HD2	23:BB:715:A:H61	1.61	0.64
43:DO:15:ARG:HH21	43:DO:95:SER:HB3	1.61	0.64
23:DB:2334:U:N3	43:DO:16:ARG:HG2	2.11	0.64
15:CP:20:VAL:HG23	15:CP:35:ARG:HA	1.79	0.64
23:DB:1098:A:H3'	24:DI:3:LYS:CB	2.27	0.64
44:DQ:27:ARG:HA	44:DQ:33:VAL:HG23	1.80	0.64
48:BG:24:THR:HA	48:BG:34:ARG:HA	1.80	0.64
27:BK:38:ILE:HD13	27:BK:61:VAL:HG12	1.79	0.64
40:DH:8:LYS:O	40:DH:13:GLY:HA3	1.97	0.64
32:B4:7:VAL:HG13	32:B4:8:LYS:N	2.13	0.64
50:BT:2:ILE:HB	50:BT:3:ARG:HD3	1.79	0.64
23:DB:2070:A:H2'	23:DB:2071:A:C8	2.32	0.64
8:CI:39:GLY:HA2	8:CI:44:ARG:HD3	1.79	0.64
14:CO:8:THR:O	14:CO:12:VAL:HG23	1.97	0.64
28:BP:88:ARG:HB2	28:BP:112:ARG:NH1	2.13	0.64
23:DB:431:U:O2'	23:DB:432:A:H5'	1.98	0.64
23:DB:654:A:H2'	23:DB:655:A:H5''	1.79	0.64
7:CH:87:ARG:H	7:CH:90:GLU:HB3	1.61	0.64
23:BB:315:G:H2'	23:BB:316:C:C6	2.33	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:48:VAL:C	46:DU:53:GLN:HG3	2.18	0.64
23:BB:2810:A:H2'	23:BB:2811:G:O4'	1.96	0.64
51:DZ:30:LEU:HD23	51:DZ:30:LEU:N	2.11	0.64
25:DC:77:VAL:HG23	25:DC:112:GLY:N	2.08	0.64
47:DF:40:GLY:HA2	47:DF:84:ILE:HG23	1.79	0.64
25:BC:140:VAL:HG12	25:BC:141:HIS:H	1.61	0.64
45:DS:27:LYS:O	45:DS:32:ALA:HB2	1.97	0.64
1:CA:1202:U:H1'	13:CN:68:ARG:HD2	1.79	0.64
40:DH:96:THR:HG23	40:DH:97:ARG:HD3	1.79	0.64
38:DM:2:LEU:O	38:DM:69:PRO:HG3	1.98	0.64
2:CC:14:VAL:O	2:CC:15:LYS:HD2	1.97	0.64
26:BD:9:VAL:HA	26:BD:197:THR:HG23	1.80	0.64
4:AE:92:ARG:HH11	4:AE:92:ARG:HB3	1.63	0.64
23:BB:1727:C:H2'	23:BB:1728:C:H6	1.63	0.64
23:BB:155:A:H2'	23:BB:156:A:C8	2.32	0.64
37:BL:132:ARG:O	37:BL:136:GLU:HG3	1.98	0.64
7:CH:40:LYS:HD2	7:CH:47:ASP:HA	1.80	0.64
43:DO:76:LYS:O	43:DO:80:GLU:HG2	1.98	0.64
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.33	0.64
23:BB:2331:G:H21	23:BB:2336:A:H8	1.44	0.64
52:DW:35:ILE:O	52:DW:35:ILE:HG12	1.97	0.64
47:DF:39:VAL:HG11	47:DF:49:LEU:HD23	1.79	0.64
47:DF:39:VAL:HG21	47:DF:49:LEU:HA	1.80	0.64
41:BJ:43:GLU:O	41:BJ:45:THR:N	2.31	0.64
25:BC:13:ARG:HG3	25:BC:14:HIS:ND1	2.13	0.64
25:DC:13:ARG:HG3	25:DC:14:HIS:ND1	2.13	0.64
47:BF:135:ILE:HD11	47:BF:137:PHE:HB3	1.78	0.64
16:CQ:18:LYS:HG2	16:CQ:48:GLU:HA	1.80	0.64
12:AM:2:ARG:HG3	12:AM:6:ILE:H	1.62	0.64
1:CA:1250:A:H2'	1:CA:1251:A:C8	2.33	0.64
1:CA:337:G:H2'	1:CA:338:A:H8	1.60	0.64
23:DB:1440:U:H2'	23:DB:1441:G:H8	1.62	0.64
4:AE:28:ARG:NH2	4:AE:30:PHE:HA	2.13	0.64
10:CK:105:ARG:NH2	21:CU:10:PRO:HB3	2.13	0.64
1:CA:806:C:H2'	1:CA:807:A:H8	1.62	0.64
8:CI:79:ARG:NH2	8:CI:102:PHE:HA	2.13	0.64
1:CA:812:G:HO2'	1:CA:813:U:H6	1.45	0.64
23:DB:1727:C:H2'	23:DB:1728:C:H6	1.62	0.64
1:AA:1006:G:H2'	1:AA:1007:U:C6	2.33	0.64
16:CQ:13:SER:HB3	16:CQ:21:VAL:HB	1.80	0.64
23:BB:2645:G:H3'	23:BB:2646:C:H5'	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:279:A:H5''	1:AA:280:C:H3'	1.77	0.64
47:BF:141:ASP:HB2	47:BF:144:LYS:HB2	1.79	0.64
1:CA:1478:U:H2'	1:CA:1479:C:C6	2.32	0.64
44:DQ:4:LYS:HZ3	44:DQ:7:VAL:HG22	1.63	0.64
17:AR:34:GLU:HB2	21:AU:18:PHE:CZ	2.33	0.64
23:BB:1203:U:H3'	23:BB:1204:A:H5''	1.80	0.64
46:DU:26:ASN:N	46:DU:26:ASN:HD22	1.94	0.64
46:DU:24:VAL:HA	46:DU:35:VAL:HA	1.79	0.64
23:DB:172:A:H2'	23:DB:173:A:H8	1.62	0.64
23:BB:355:U:H2'	23:BB:356:G:C8	2.31	0.64
23:DB:1812:U:H2'	23:DB:1813:G:C8	2.33	0.64
23:BB:479:A:O2'	23:BB:481:G:H5'	1.98	0.64
46:BU:72:PHE:HA	46:BU:78:LYS:O	1.98	0.64
37:DL:132:ARG:O	37:DL:136:GLU:HG3	1.98	0.64
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.33	0.64
51:BZ:66:THR:O	51:BZ:69:ALA:HB3	1.98	0.64
1:CA:734:G:H21	17:CR:63:TYR:HE1	1.44	0.64
23:BB:492:A:H2'	23:BB:493:G:O4'	1.97	0.64
23:DB:751:A:H5'	45:DS:90:LYS:HA	1.78	0.64
49:DR:60:LYS:N	49:DR:100:GLY:HA3	2.05	0.63
49:BR:36:ALA:HA	49:BR:58:VAL:HA	1.80	0.63
44:DQ:57:ARG:HH12	44:DQ:61:ILE:HD11	1.61	0.63
29:BE:134:LEU:HD21	29:BE:161:ALA:HB2	1.80	0.63
37:DL:143:GLU:CG	37:DL:144:GLU:H	2.10	0.63
1:CA:1101:A:H61	20:CB:101:THR:HG21	1.63	0.63
23:DB:1060:U:O4	23:DB:1088:A:N6	2.31	0.63
27:DK:71:ARG:HD2	27:DK:106:GLU:OE2	1.97	0.63
47:BF:101:ARG:NH1	47:BF:138:PRO:HB2	2.12	0.63
38:BM:19:GLY:N	38:BM:38:ARG:NH2	2.46	0.63
1:CA:923:A:H2'	1:CA:924:C:C6	2.33	0.63
23:BB:365:U:H2'	23:BB:366:C:C6	2.33	0.63
23:BB:741:U:H2'	23:BB:742:A:C8	2.33	0.63
1:AA:1218:C:H2'	1:AA:1219:A:C8	2.33	0.63
15:CP:6:LEU:HB3	15:CP:17:TYR:HB3	1.80	0.63
48:BG:8:VAL:HG11	48:BG:49:LEU:CB	2.28	0.63
23:BB:2884:U:O4	31:B0:39:ARG:HD3	1.98	0.63
43:BO:58:ILE:HG22	43:BO:62:LEU:HD23	1.81	0.63
23:BB:2471:A:HO2'	23:BB:2472:G:H8	1.45	0.63
23:BB:675:A:H4'	29:BE:60:TRP:HZ2	1.61	0.63
48:DG:84:LYS:HB2	48:DG:132:LEU:H	1.63	0.63
2:AC:14:VAL:O	2:AC:15:LYS:HD2	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:502:A:H2'	1:CA:503:C:H6	1.62	0.63
23:BB:1354:A:H2'	23:BB:1355:G:O4'	1.98	0.63
23:DB:794:A:H2'	23:DB:795:C:C6	2.32	0.63
23:DB:2296:U:H4'	23:DB:2297:A:OP1	1.98	0.63
23:DB:2674:G:H4'	27:DK:30:ARG:HG3	1.78	0.63
21:AU:11:PHE:O	21:AU:11:PHE:HD1	1.80	0.63
38:DM:40:ARG:HD3	38:DM:93:VAL:HG21	1.80	0.63
23:DB:1947:C:H2'	23:DB:1948:G:H8	1.63	0.63
23:DB:2795:C:H2'	23:DB:2796:U:O4'	1.97	0.63
52:DW:64:GLY:HA2	52:DW:84:GLU:H	1.63	0.63
23:DB:580:U:H2'	23:DB:581:C:C6	2.34	0.63
44:BQ:91:ARG:HH21	44:BQ:94:LEU:HD21	1.63	0.63
1:AA:411:A:H62	1:AA:413:G:N2	1.96	0.63
40:BH:41:LYS:N	40:BH:41:LYS:HE3	2.14	0.63
1:AA:337:G:H2'	1:AA:338:A:H8	1.60	0.63
1:CA:1221:G:O3'	18:CS:76:THR:HG21	1.98	0.63
1:CA:859:G:H2'	1:CA:860:A:H8	1.63	0.63
40:BH:83:LYS:CB	40:BH:91:PHE:HB2	2.29	0.63
23:DB:543:G:H21	23:DB:545:U:H5'	1.63	0.63
4:CE:152:VAL:HA	4:CE:155:LYS:HD3	1.81	0.63
2:AC:155:ARG:H	2:AC:162:ALA:HA	1.62	0.63
25:DC:156:SER:HB3	25:DC:159:THR:HG21	1.80	0.63
23:DB:948:C:H2'	23:DB:949:G:H8	1.63	0.63
38:BM:2:LEU:O	38:BM:69:PRO:HG3	1.97	0.63
23:DB:864:G:O2'	23:DB:865:C:H5'	1.98	0.63
1:CA:818:G:H3'	1:CA:819:A:H5''	1.80	0.63
10:CK:51:PHE:HB2	10:CK:55:ARG:HB3	1.80	0.63
50:BT:36:LYS:O	50:BT:36:LYS:HD3	1.97	0.63
1:AA:17:U:H2'	1:AA:18:C:C6	2.33	0.63
26:DD:51:THR:HG21	26:DD:76:GLY:HA3	1.79	0.63
47:BF:42:ALA:HB1	47:BF:46:LYS:HZ3	1.63	0.63
47:BF:105:ILE:O	47:BF:109:ARG:HB2	1.98	0.63
23:BB:1439:A:C6	23:BB:1552:A:N7	2.66	0.63
1:AA:1513:A:H2'	1:AA:1514:G:H8	1.61	0.63
23:DB:1790:C:O2'	25:DC:207:ALA:HB2	1.98	0.63
1:AA:74:A:O2'	1:AA:75:G:H5'	1.98	0.63
1:CA:45:G:H2'	1:CA:46:G:H8	1.61	0.63
1:CA:56:U:H2'	1:CA:57:G:H8	1.62	0.63
35:DV:70:ILE:HD13	35:DV:70:ILE:N	2.13	0.63
23:DB:2353:G:N3	52:DW:30:VAL:HG13	2.14	0.63
8:AI:62:LEU:HD22	8:AI:62:LEU:H	1.62	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:62:LEU:HD22	8:CI:62:LEU:H	1.63	0.63
41:DJ:3:THR:HB	41:DJ:44:TYR:HE1	1.63	0.63
18:AS:30:LEU:HD12	18:AS:48:ILE:HG12	1.80	0.63
44:BQ:56:PHE:O	44:BQ:59:LEU:HB3	1.98	0.63
25:BC:128:THR:HA	25:BC:190:THR:CA	2.27	0.63
50:BT:38:ALA:O	50:BT:39:THR:HB	1.99	0.63
27:BK:102:PRO:HA	27:BK:120:PRO:HB3	1.81	0.63
27:DK:64:ARG:HD2	27:DK:102:PRO:O	1.98	0.63
47:BF:168:LEU:HD13	47:BF:169:LEU:H	1.63	0.63
24:BI:129:GLU:HB3	24:BI:133:ARG:NH1	2.12	0.63
3:AD:169:TRP:NE1	3:AD:170:LEU:HD23	2.13	0.63
23:BB:2471:A:O2'	23:BB:2472:G:H8	1.81	0.63
9:AJ:52:LEU:HA	9:AJ:62:ARG:HA	1.79	0.63
23:DB:2078:C:H2'	23:DB:2079:U:H6	1.62	0.63
39:BX:56:LEU:C	39:BX:58:ASN:H	2.02	0.63
1:CA:1237:C:H3'	1:CA:1336:C:H41	1.63	0.63
10:CK:88:PRO:HD3	21:CU:28:LEU:CD1	2.28	0.63
23:BB:222:A:N1	23:BB:233:A:H5''	2.13	0.63
23:DB:2137:U:H2'	23:DB:2138:G:H8	1.62	0.63
1:CA:818:G:C3'	1:CA:819:A:H5''	2.28	0.63
23:DB:26:G:H1'	23:DB:514:A:N6	2.14	0.63
26:BD:16:THR:HB	26:BD:18:ASP:OD1	1.98	0.63
47:DF:125:GLY:O	47:DF:157:THR:HG23	1.99	0.63
23:DB:1447:C:H2'	23:DB:1448:G:H8	1.63	0.63
28:DP:88:ARG:HB2	28:DP:112:ARG:NH1	2.13	0.63
46:DU:78:LYS:HD3	46:DU:79:ALA:H	1.62	0.63
11:CL:17:LYS:HE3	11:CL:17:LYS:H	1.63	0.63
23:BB:794:A:H2'	23:BB:795:C:C6	2.33	0.63
23:BB:620:G:H5'	23:BB:620:G:N3	2.13	0.63
1:AA:728:A:H2'	1:AA:729:A:C8	2.33	0.63
52:BW:37:VAL:HG13	52:BW:55:ASP:O	1.99	0.63
37:DL:78:ARG:HB3	37:DL:113:ALA:HB2	1.79	0.63
47:DF:41:GLU:O	47:DF:43:ILE:HG22	1.97	0.63
41:BJ:3:THR:HB	41:BJ:44:TYR:HE1	1.63	0.63
49:BR:38:VAL:HG22	49:BR:40:MET:H	1.64	0.63
24:BI:11:GLN:HA	24:BI:55:PRO:HA	1.79	0.63
23:DB:2267:A:C3'	23:DB:2267:A:H8	2.07	0.63
40:DH:94:ILE:O	40:DH:122:LEU:HB2	1.98	0.63
5:CF:53:LYS:NZ	5:CF:54:LEU:H	1.95	0.63
38:DM:21:ALA:HB2	38:DM:100:LYS:HG2	1.80	0.63
24:DI:20:SER:O	24:DI:25:PRO:HD2	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CN:5:MET:SD	13:CN:8:ARG:HD3	2.38	0.63
23:BB:2444:G:P	29:BE:63:LYS:HD2	2.38	0.63
46:BU:24:VAL:HA	46:BU:35:VAL:HA	1.81	0.63
23:DB:2137:U:H2'	23:DB:2138:G:C8	2.34	0.63
38:BM:114:ARG:HH21	38:BM:114:ARG:HB2	1.63	0.63
23:DB:1935:G:H1'	23:DB:1964:G:N2	2.14	0.63
1:AA:382:A:H2'	1:AA:383:A:C8	2.34	0.63
23:BB:176:A:O2'	23:BB:177:G:H5'	1.98	0.63
23:DB:1579:A:H2'	23:DB:1580:A:C8	2.34	0.63
1:AA:586:C:H5''	7:AH:81:GLY:HA2	1.80	0.63
30:DY:2:LYS:HD3	30:DY:2:LYS:H	1.63	0.63
10:AK:110:THR:HG22	21:AU:4:LYS:HA	1.81	0.63
1:AA:781:A:H2'	1:AA:782:A:H5'	1.79	0.63
10:CK:58:THR:HB	10:CK:59:PRO:HD2	1.79	0.63
23:DB:620:G:H5'	23:DB:620:G:N3	2.13	0.63
23:DB:1015:U:H2'	23:DB:1016:G:C8	2.34	0.63
23:BB:1579:A:H2'	23:BB:1580:A:C8	2.33	0.63
51:BZ:5:CYS:CB	51:BZ:10:LYS:H	2.08	0.63
23:DB:2387:U:H1'	52:DW:38:ARG:CZ	2.28	0.63
5:AF:29:ILE:HD13	5:AF:64:VAL:HG21	1.81	0.63
5:AF:6:ILE:HG23	5:AF:62:MET:HB3	1.78	0.63
33:B1:26:LYS:HD2	33:B1:30:PRO:HA	1.80	0.63
29:BE:149:ILE:HG23	29:BE:188:MET:HA	1.81	0.63
45:DS:55:ILE:HD12	45:DS:69:LEU:HD23	1.80	0.63
23:BB:1060:U:O4	23:BB:1088:A:N6	2.31	0.63
27:DK:41:ILE:HG13	27:DK:42:THR:N	2.14	0.63
47:DF:107:VAL:HA	47:DF:111:ARG:HH12	1.63	0.63
6:CG:23:ALA:O	6:CG:26:VAL:HG22	1.99	0.63
36:D2:10:LEU:HD21	36:D2:14:ARG:NH1	2.13	0.63
24:BI:20:SER:O	24:BI:25:PRO:HD2	1.99	0.63
1:AA:235:C:H2'	1:AA:236:A:C8	2.33	0.63
1:AA:522:C:H41	11:AL:49:ARG:HH22	1.46	0.63
19:CT:79:THR:HG22	19:CT:83:ASN:ND2	2.13	0.63
23:BB:2181:U:H2'	23:BB:2182:U:C6	2.33	0.63
1:CA:41:G:H2'	1:CA:42:G:C8	2.34	0.63
3:CD:138:PRO:HA	3:CD:181:PHE:HD2	1.62	0.63
50:DT:69:ARG:HB3	50:DT:74:ILE:HA	1.81	0.63
14:CO:11:ILE:HD11	14:CO:30:ALA:HB1	1.81	0.63
1:CA:1163:A:H2'	1:CA:1164:G:H8	1.64	0.63
1:CA:950:U:H2'	1:CA:951:G:C8	2.34	0.63
48:BG:145:ALA:HA	48:BG:148:ARG:HG3	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:948:C:H2'	23:BB:949:G:H8	1.64	0.63
23:BB:2346:A:H3'	23:BB:2347:C:H5''	1.80	0.63
23:BB:2155:U:H2'	23:BB:2156:G:O4'	1.99	0.63
11:CL:60:PHE:O	11:CL:62:VAL:HG13	1.98	0.63
23:DB:581:C:H2'	23:DB:582:A:C8	2.34	0.63
50:DT:61:LEU:HG	50:DT:82:LYS:HB2	1.78	0.63
28:DP:4:ILE:HG22	28:DP:5:LYS:N	2.09	0.63
20:CB:44:LYS:C	20:CB:47:PRO:HD2	2.19	0.63
23:DB:278:A:H3'	23:DB:278:A:OP 2	1.98	0.63
23:BB:557:C:H2'	23:BB:558:U:C6	2.33	0.63
24:DI:27:LEU:CD2	24:DI:27:LEU:H	2.11	0.63
41:BJ:84:ILE:HG23	41:BJ:84:ILE:O	1.98	0.63
29:BE:47:LYS:HB3	29:BE:51:GLU:HB2	1.79	0.63
23:DB:1018:U:O2'	23:DB:1019:U:H5'	1.98	0.63
23:BB:1812:U:H2'	23:BB:1813:G:C8	2.34	0.63
23:BB:2720:U:H5''	28:BP:52:ARG:NH2	2.13	0.63
1:AA:1237:C:H3'	1:AA:1336:C:H41	1.63	0.63
23:BB:2135:A:H3'	23:BB:2136:G:H8	1.63	0.63
48:DG:148:ARG:HB2	48:DG:152:ARG:NH2	2.14	0.63
6:AG:57:GLU:CD	6:AG:57:GLU:H	2.02	0.63
51:BZ:30:LEU:HD23	51:BZ:30:LEU:N	2.13	0.63
23:DB:580:U:H2'	23:DB:581:C:H6	1.64	0.63
41:BJ:72:LYS:HB2	41:BJ:89:PHE:H	1.64	0.63
47:BF:40:GLY:HA2	47:BF:84:ILE:HG23	1.80	0.63
40:DH:5:LEU:HD13	40:DH:13:GLY:HA2	1.80	0.63
24:DI:121:ILE:N	24:DI:121:ILE:HD13	2.13	0.63
23:BB:142:A:O2'	23:BB:143:C:H5'	1.99	0.63
1:CA:1414:U:H2'	1:CA:1415:G:H8	1.62	0.63
13:AN:63:CYS:HB3	13:AN:67:GLY:N	2.13	0.63
23:DB:2074:U:H2'	23:DB:2075:U:C6	2.33	0.63
16:CQ:18:LYS:HE3	16:CQ:48:GLU:HG2	1.79	0.63
20:AB:63:LYS:HA	20:AB:224:ARG:NH1	2.14	0.63
23:BB:1442:U:H2'	23:BB:1443:U:C6	2.34	0.63
42:DN:96:ARG:HE	42:DN:116:VAL:HG23	1.64	0.63
26:BD:25:THR:HG21	26:BD:193:VAL:HG22	1.81	0.63
23:BB:580:U:H2'	23:BB:581:C:C6	2.33	0.63
14:AO:53:ARG:HG3	14:AO:57:LEU:HD13	1.81	0.63
23:DB:1506:U:H2'	23:DB:1507:C:C6	2.34	0.63
38:DM:71:LYS:HD3	38:DM:95:LEU:HD13	1.81	0.63
48:BG:173:ALA:HB3	48:BG:175:LYS:NZ	2.14	0.63
1:CA:728:A:H2'	1:CA:729:A:C8	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:53:A:H1'	23:DB:179:C:O2'	1.99	0.63
23:BB:974:G:OP2	49:BR:78:ARG:HD3	1.99	0.63
20:AB:85:SER:O	20:AB:86:CYS:HB2	1.98	0.63
23:BB:2425:A:H5'	23:BB:2427:C:O4'	1.99	0.63
3:CD:2:ARG:NH1	3:CD:114:ARG:HG3	2.13	0.63
46:BU:86:PHE:CD2	46:BU:92:VAL:HG21	2.33	0.63
23:DB:2331:G:H21	23:DB:2336:A:H8	1.45	0.63
44:BQ:27:ARG:HA	44:BQ:33:VAL:HG23	1.81	0.63
5:AF:3:HIS:CD2	5:AF:65:GLU:HG3	2.34	0.63
44:DQ:63:ARG:NH2	44:DQ:96:ASP:HA	2.13	0.63
10:CK:91:GLY:HA2	10:CK:94:SER:HB3	1.81	0.63
25:BC:116:GLN:HG2	25:BC:117:SER:H	1.64	0.63
50:BT:28:ASN:HA	50:BT:91:GLN:HE22	1.64	0.63
44:BQ:97:ILE:HG13	44:BQ:105:PHE:HB2	1.81	0.63
19:AT:43:LYS:HE2	19:AT:44:ALA:N	2.11	0.63
10:AK:14:GLN:HA	10:AK:76:TYR:O	1.98	0.63
46:DU:32:LYS:HA	46:DU:65:GLN:HA	1.81	0.63
5:AF:53:LYS:HB3	5:AF:54:LEU:HD22	1.79	0.63
35:DV:9:ARG:HH22	35:DV:12:GLN:HA	1.64	0.63
23:BB:279:A:N6	23:BB:361:G:H1'	2.13	0.63
23:DB:1178:C:H2'	23:DB:1179:G:C8	2.34	0.63
26:DD:148:GLN:CG	26:DD:152:PRO:HG2	2.28	0.63
1:AA:844:G:H3'	1:AA:844:G:OP2	1.99	0.63
48:BG:84:LYS:HB2	48:BG:132:LEU:H	1.64	0.63
2:CC:148:ILE:HA	2:CC:200:TRP:O	1.99	0.63
23:BB:2229:U:H2'	23:BB:2230:G:H8	1.64	0.63
5:AF:18:VAL:HG21	5:AF:58:HIS:CE1	2.34	0.63
23:BB:1015:U:H2'	23:BB:1016:G:C8	2.34	0.63
23:BB:1205:A:H4'	23:BB:1206:G:OP2	1.99	0.63
23:BB:2064:C:H2'	23:BB:2065:C:C6	2.34	0.63
40:DH:27:ARG:H	40:DH:31:VAL:HG21	1.64	0.62
51:DZ:7:VAL:HG21	51:DZ:59:ILE:HD11	1.79	0.62
23:DB:2328:A:H2'	23:DB:2329:U:C6	2.34	0.62
44:DQ:30:VAL:O	44:DQ:31:TYR:HB2	1.97	0.62
26:BD:51:THR:CG2	26:BD:76:GLY:HA3	2.29	0.62
41:DJ:6:ALA:HB3	41:DJ:45:THR:HG21	1.81	0.62
47:DF:43:ILE:HG23	47:DF:44:ALA:N	2.12	0.62
37:BL:78:ARG:HB3	37:BL:113:ALA:HB2	1.80	0.62
45:BS:29:VAL:HG11	45:BS:55:ILE:HD13	1.81	0.62
23:BB:1203:U:H3'	23:BB:1204:A:C5'	2.28	0.62
23:DB:557:C:H2'	23:DB:558:U:C6	2.33	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BM:35:ALA:HB3	38:BM:99:GLY:H	1.63	0.62
4:CE:28:ARG:NH2	4:CE:30:PHE:HA	2.14	0.62
4:CE:113:VAL:HG11	4:CE:136:VAL:HG23	1.81	0.62
43:DO:58:ILE:HG22	43:DO:62:LEU:HD23	1.81	0.62
1:AA:1329:A:H5''	12:AM:24:VAL:HA	1.80	0.62
22:BA:98:G:H1	35:BV:14:LYS:HB2	1.63	0.62
23:BB:1107:G:H2'	23:BB:1108:U:H6	1.61	0.62
28:DP:52:ARG:HH11	28:DP:52:ARG:HG2	1.62	0.62
20:CB:20:ARG:CZ	20:CB:20:ARG:HA	2.29	0.62
40:BH:57:LYS:O	40:BH:61:VAL:HG12	1.99	0.62
42:BN:96:ARG:HE	42:BN:116:VAL:HG23	1.63	0.62
4:CE:87:VAL:HG23	4:CE:92:ARG:HA	1.80	0.62
23:BB:947:A:H2'	23:BB:948:C:C6	2.34	0.62
30:BY:2:LYS:HD3	30:BY:2:LYS:H	1.63	0.62
6:AG:125:ASP:HB3	6:AG:131:GLY:N	2.12	0.62
26:DD:136:ASN:HD21	26:DD:139:SER:C	2.03	0.62
36:B2:30:VAL:HA	36:B2:33:ARG:NH2	2.13	0.62
41:DJ:40:HIS:HE1	41:DJ:41:LYS:HE3	1.63	0.62
23:BB:2071:A:H2'	23:BB:2072:C:C6	2.33	0.62
23:BB:2801:G:H2'	23:BB:2802:G:C8	2.34	0.62
13:AN:48:GLN:O	13:AN:51:PRO:HD2	2.00	0.62
41:DJ:103:ILE:HD12	41:DJ:104:ALA:N	2.14	0.62
45:BS:15:GLN:HA	45:BS:18:ARG:HG2	1.81	0.62
23:BB:26:G:H1'	23:BB:514:A:N6	2.14	0.62
23:BB:1018:U:O2'	23:BB:1019:U:H5'	1.98	0.62
23:BB:918:A:H2'	23:BB:919:U:H5'	1.81	0.62
13:AN:20:PHE:HB3	13:AN:24:ALA:HB2	1.79	0.62
23:BB:1440:U:H2'	23:BB:1441:G:H8	1.64	0.62
4:AE:45:VAL:O	4:AE:71:ILE:HG22	1.98	0.62
4:CE:43:GLY:O	4:CE:72:ASN:HA	1.99	0.62
28:DP:91:VAL:HG21	28:DP:96:LEU:HD21	1.82	0.62
23:DB:2834:G:H1'	23:DB:2883:A:N6	2.15	0.62
40:BH:49:ALA:HB3	40:BH:50:ARG:NH1	2.14	0.62
23:DB:2138:G:H2'	23:DB:2139:U:C6	2.34	0.62
3:CD:96:ARG:HB3	3:CD:98:ASP:OD2	1.99	0.62
42:DN:106:ASP:C	42:DN:108:ALA:H	2.03	0.62
50:DT:92:ASN:HB2	50:DT:93:LEU:HD22	1.81	0.62
1:CA:539:A:H2'	1:CA:540:G:C8	2.34	0.62
1:AA:1486:G:H2'	1:AA:1487:G:O4'	1.99	0.62
23:BB:753:A:H2'	23:BB:754:U:C6	2.33	0.62
46:DU:14:THR:HG21	46:DU:64:ILE:HD13	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:B2:3:ARG:NE	36:B2:3:ARG:HA	2.14	0.62
40:DH:27:ARG:HH21	40:DH:27:ARG:HG2	1.63	0.62
47:DF:42:ALA:HB1	47:DF:46:LYS:NZ	2.13	0.62
37:BL:18:ARG:C	37:BL:19:LEU:HD12	2.20	0.62
40:BH:135:HIS:HB3	40:BH:138:VAL:HG23	1.82	0.62
27:DK:104:THR:HB	27:DK:106:GLU:OE1	1.98	0.62
38:DM:35:ALA:HB3	38:DM:99:GLY:H	1.64	0.62
23:DB:126:A:OP2	36:D2:19:ARG:HB2	1.98	0.62
52:DW:77:LYS:O	52:DW:78:PHE:HB2	1.99	0.62
46:BU:26:ASN:HD22	46:BU:26:ASN:N	1.96	0.62
48:BG:88:LEU:O	48:BG:88:LEU:HD12	1.98	0.62
1:CA:843:U:OP2	1:CA:843:U:H4'	2.00	0.62
8:CI:123:ARG:HB3	8:CI:123:ARG:NH1	2.14	0.62
3:AD:96:ARG:HB3	3:AD:98:ASP:OD2	1.99	0.62
28:DP:13:LYS:HD3	28:DP:76:HIS:HA	1.80	0.62
23:DB:155:A:H2'	23:DB:156:A:H8	1.63	0.62
1:AA:501:C:H2'	1:AA:502:A:C8	2.34	0.62
20:CB:138:ARG:HD3	20:CB:141:GLU:OE1	2.00	0.62
23:DB:2814:A:H2'	23:DB:2815:C:C6	2.34	0.62
23:BB:118:A:H5'	23:BB:119:A:H8	1.64	0.62
27:BK:89:ASN:C	27:BK:89:ASN:HD22	2.03	0.62
1:AA:719:C:O2'	17:AR:37:LYS:HB2	1.97	0.62
1:CA:1277:C:HO2'	1:CA:1279:G:H8	1.46	0.62
23:DB:996:A:H4'	44:DQ:91:ARG:HG2	1.80	0.62
47:DF:43:ILE:HB	47:DF:82:TYR:OH	1.99	0.62
50:BT:44:LYS:O	50:BT:48:GLN:HG2	1.99	0.62
24:DI:126:ARG:HB3	24:DI:126:ARG:HH11	1.64	0.62
40:DH:94:ILE:HG22	40:DH:122:LEU:HG	1.81	0.62
47:DF:105:ILE:O	47:DF:109:ARG:HB2	1.99	0.62
6:CG:19:SER:OG	6:CG:22:LEU:HB2	1.99	0.62
1:CA:411:A:H62	1:CA:413:G:N2	1.97	0.62
38:DM:19:GLY:N	38:DM:38:ARG:NH2	2.48	0.62
23:BB:1046:A:C3'	23:BB:1047:G:H5''	2.30	0.62
1:CA:522:C:H41	11:CL:49:ARG:HH22	1.47	0.62
25:BC:244:VAL:HB	25:BC:249:VAL:H	1.65	0.62
50:DT:54:GLU:CB	50:DT:88:LYS:HB2	2.30	0.62
26:DD:133:THR:HG23	26:DD:134:HIS:N	2.14	0.62
43:DO:15:ARG:HH21	43:DO:95:SER:CB	2.12	0.62
28:BP:89:GLY:HA2	28:BP:112:ARG:N	2.14	0.62
44:DQ:4:LYS:NZ	44:DQ:7:VAL:HG22	2.14	0.62
49:DR:36:ALA:HA	49:DR:58:VAL:HA	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1857:G:N2	23:BB:1884:G:H2'	2.14	0.62
1:AA:699:C:H2'	1:AA:700:G:H5''	1.81	0.62
11:CL:42:LYS:HD2	11:CL:43:LYS:HG2	1.82	0.62
1:AA:818:G:C3'	1:AA:819:A:H5''	2.29	0.62
2:AC:190:THR:HG22	2:AC:191:THR:H	1.65	0.62
27:BK:87:LEU:HB2	27:BK:93:GLN:O	1.99	0.62
27:DK:102:PRO:HA	27:DK:120:PRO:HB3	1.81	0.62
23:DB:1024:G:C3'	23:DB:1025:G:H5''	2.26	0.62
46:DU:46:LYS:NZ	46:DU:47:PRO:HG2	2.15	0.62
1:AA:451:A:H4'	1:AA:452:A:O4'	2.00	0.62
4:CE:45:VAL:O	4:CE:71:ILE:HG22	2.00	0.62
23:BB:2834:G:H1'	23:BB:2883:A:N6	2.15	0.62
23:DB:1813:G:N3	25:DC:49:THR:HG21	2.14	0.62
49:BR:71:LYS:HG3	49:BR:72:VAL:N	2.14	0.62
22:DA:28:C:OP1	43:DO:31:THR:HG21	1.99	0.62
42:BN:59:SER:O	42:BN:63:ARG:HB2	1.99	0.62
23:BB:2737:G:H2'	23:BB:2738:A:C8	2.35	0.62
23:DB:1786:A:H1'	23:DB:1938:A:N6	2.14	0.62
11:CL:82:ARG:HG2	11:CL:82:ARG:HH11	1.64	0.62
1:AA:950:U:H2'	1:AA:951:G:C8	2.34	0.62
2:AC:6:PRO:HA	2:AC:9:ILE:HG22	1.80	0.62
1:AA:320:A:H2'	1:AA:321:A:C8	2.34	0.62
23:BB:2366:A:H2'	23:BB:2367:G:O4'	1.99	0.62
23:DB:1100:C:H2'	23:DB:1101:U:H6	1.63	0.62
23:BB:770:G:H5''	36:B2:10:LEU:HD12	1.82	0.62
40:BH:112:LYS:HE3	40:BH:112:LYS:C	2.20	0.62
40:BH:90:LEU:HD11	40:BH:146:VAL:HG12	1.82	0.62
18:CS:48:ILE:HG21	18:CS:70:LEU:HD21	1.81	0.62
44:DQ:97:ILE:HG13	44:DQ:105:PHE:HB2	1.81	0.62
27:BK:64:ARG:HD2	27:BK:102:PRO:O	1.99	0.62
27:DK:119:ALA:HB3	27:DK:120:PRO:HD3	1.81	0.62
47:DF:116:LEU:HB3	47:DF:176:PHE:HA	1.80	0.62
5:AF:53:LYS:NZ	5:AF:54:LEU:H	1.97	0.62
13:CN:68:ARG:HH12	13:CN:70:HIS:HB2	1.64	0.62
23:DB:704:G:C2'	23:DB:726:G:H22	2.12	0.62
23:DB:1593:A:H2'	23:DB:1594:U:C6	2.35	0.62
46:BU:34:ILE:HG12	46:BU:63:ALA:HB2	1.81	0.62
23:BB:2074:U:H2'	23:BB:2075:U:C6	2.34	0.62
20:CB:63:LYS:HA	20:CB:224:ARG:NH1	2.15	0.62
3:CD:169:TRP:NE1	3:CD:170:LEU:HD23	2.15	0.62
8:AI:123:ARG:HB3	8:AI:123:ARG:NH1	2.15	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AE:23:THR:HA	4:AE:28:ARG:HA	1.81	0.62
1:CA:1513:A:H2'	1:CA:1514:G:H8	1.62	0.62
10:AK:88:PRO:HD3	21:AU:28:LEU:CD1	2.30	0.62
23:BB:594:U:H2'	23:BB:595:C:H6	1.63	0.62
1:CA:1163:A:H2'	1:CA:1164:G:C8	2.34	0.62
23:BB:2183:A:H2'	23:BB:2184:A:C8	2.34	0.62
23:DB:2065:C:H2'	23:DB:2066:C:H6	1.64	0.62
11:CL:85:ARG:HA	11:CL:93:ARG:HA	1.81	0.62
20:AB:26:MET:SD	20:AB:192:PRO:HD3	2.39	0.62
1:AA:678:U:H2'	1:AA:679:C:C6	2.34	0.62
47:BF:125:GLY:O	47:BF:157:THR:HG23	1.99	0.62
23:BB:1935:G:H1'	23:BB:1964:G:N2	2.15	0.62
23:DB:1826:G:H2'	23:DB:1827:U:H6	1.64	0.62
11:AL:122:LYS:HG3	11:AL:123:ALA:H	1.65	0.62
23:DB:753:A:H2'	23:DB:754:U:C6	2.34	0.62
25:DC:73:ILE:HG21	25:DC:97:ASP:HB2	1.82	0.62
40:BH:90:LEU:HB3	40:BH:123:ARG:HD3	1.80	0.62
27:DK:79:PHE:CD2	28:DP:69:VAL:HG12	2.35	0.62
37:DL:17:LYS:HD2	37:DL:19:LEU:HD11	1.82	0.62
14:AO:81:LEU:HD23	14:AO:85:LEU:HD13	1.81	0.62
22:DA:98:G:N1	35:DV:14:LYS:HB2	2.14	0.62
34:B3:22:LYS:HA	34:B3:48:MET:HA	1.81	0.62
1:CA:1343:G:H2'	1:CA:1344:C:C6	2.34	0.62
12:CM:44:ILE:HD12	12:CM:45:SER:H	1.64	0.62
35:DV:93:ARG:HG3	35:DV:93:ARG:HH11	1.64	0.62
48:DG:8:VAL:HG11	48:DG:49:LEU:CB	2.29	0.62
1:CA:1218:C:H2'	1:CA:1219:A:C8	2.35	0.62
23:DB:282:A:H2'	23:DB:283:G:C8	2.34	0.62
23:BB:2189:U:H2'	23:BB:2190:G:H8	1.62	0.62
23:BB:419:U:H2'	23:BB:420:C:C6	2.35	0.62
23:BB:2814:A:H2'	23:BB:2815:C:C6	2.35	0.62
48:BG:148:ARG:HB2	48:BG:152:ARG:NH2	2.13	0.62
23:DB:2243:U:H2'	23:DB:2244:U:C6	2.34	0.62
23:DB:2097:A:H2'	23:DB:2098:U:C6	2.34	0.62
23:BB:1131:G:N2	23:BB:2024:G:H21	1.97	0.62
35:DV:79:ARG:NH1	38:DM:134:THR:HG21	2.14	0.62
47:DF:71:LYS:O	47:DF:73:VAL:HG23	2.00	0.62
23:BB:2400:G:O2'	23:BB:2401:U:H5'	2.00	0.62
5:AF:66:ALA:HB1	5:AF:67:PRO:HD2	1.82	0.62
49:DR:76:LYS:HB2	49:DR:85:LYS:HB2	1.81	0.62
52:BW:64:GLY:HA2	52:BW:84:GLU:H	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:163:ILE:CG2	20:CB:164:ASP:H	2.05	0.62
20:CB:213:LEU:O	20:CB:216:VAL:HG22	2.00	0.62
25:BC:77:VAL:HG23	25:BC:112:GLY:N	2.07	0.62
1:CA:1313:U:OP2	18:CS:5:LYS:HA	2.00	0.62
51:DZ:40:VAL:CG2	51:DZ:43:GLU:HB3	2.27	0.62
44:BQ:104:ALA:HA	49:BR:46:GLU:CD	2.19	0.62
42:DN:102:PHE:N	42:DN:109:PRO:HA	2.11	0.62
47:BF:42:ALA:HB1	47:BF:46:LYS:NZ	2.15	0.62
23:DB:1060:U:C5	24:DI:131:THR:HG22	2.35	0.62
41:BJ:25:LEU:HD13	41:BJ:26:GLY:N	2.14	0.62
23:BB:136:G:H2'	23:BB:137:U:C6	2.34	0.62
23:BB:1590:A:H2'	23:BB:1591:A:C8	2.35	0.62
23:BB:1590:A:H2'	23:BB:1591:A:H8	1.65	0.62
10:CK:80:ASN:H	10:CK:80:ASN:ND2	1.97	0.62
1:AA:590:U:H2'	1:AA:591:U:H6	1.65	0.62
22:DA:32:U:H4'	22:DA:52:A:N6	2.15	0.62
39:BX:20:ASN:HA	39:BX:24:GLU:OE1	2.00	0.62
23:BB:580:U:H2'	23:BB:581:C:H6	1.65	0.62
10:CK:61:ALA:O	10:CK:64:VAL:HG12	2.00	0.62
23:BB:1447:C:H2'	23:BB:1448:G:H8	1.63	0.62
23:DB:2773:C:H5''	26:DD:169:ARG:HB2	1.82	0.62
26:BD:174:SER:O	26:BD:175:LEU:HB2	1.98	0.62
44:BQ:10:ARG:HA	44:BQ:13:HIS:HB2	1.82	0.62
23:BB:968:C:H2'	23:BB:969:G:H8	1.65	0.62
23:DB:1104:C:H2'	23:DB:1105:U:C6	2.35	0.62
39:DX:12:GLU:HA	39:DX:15:ASN:HD21	1.64	0.62
8:AI:33:SER:HB3	8:AI:36:GLN:HB2	1.82	0.62
51:DZ:59:ILE:HG22	51:DZ:64:ILE:HG13	1.82	0.62
23:BB:2352:A:H2'	23:BB:2353:G:O4'	2.00	0.62
8:CI:5:TYR:HB2	8:CI:20:ILE:HB	1.81	0.62
33:D1:26:LYS:HD2	33:D1:30:PRO:HA	1.81	0.62
49:DR:6:GLN:HE22	49:DR:10:LYS:N	1.97	0.62
49:DR:4:VAL:HG23	49:DR:39:LEU:H	1.64	0.62
44:BQ:107:ALA:HB1	49:BR:48:LYS:HE3	1.81	0.62
20:CB:16:GLY:HA2	20:CB:40:ILE:HG13	1.81	0.62
20:CB:16:GLY:HA3	20:CB:39:ILE:HA	1.80	0.62
10:CK:14:GLN:HA	10:CK:76:TYR:O	1.99	0.62
19:AT:38:ILE:HG12	19:AT:85:LEU:HD13	1.80	0.62
27:DK:118:LEU:O	27:DK:120:PRO:HD2	2.00	0.62
27:BK:41:ILE:HG13	27:BK:42:THR:N	2.14	0.62
46:DU:46:LYS:HZ1	46:DU:47:PRO:HG2	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:D2:10:LEU:HD11	36:D2:14:ARG:CZ	2.30	0.62
23:DB:1594:U:H2'	23:DB:1595:C:C6	2.35	0.62
20:CB:85:SER:O	20:CB:86:CYS:HB2	1.98	0.62
23:BB:254:G:N2	34:B3:7:ARG:HH21	1.96	0.62
39:BX:29:ARG:NH1	50:BT:12:ARG:NE	2.48	0.62
23:BB:1593:A:H2'	23:BB:1594:U:C6	2.35	0.62
23:BB:981:A:H2'	23:BB:982:C:H5''	1.80	0.62
1:AA:90:C:H2'	1:AA:91:U:C5	2.34	0.62
2:AC:148:ILE:HA	2:AC:200:TRP:O	2.00	0.62
19:AT:79:THR:HG22	19:AT:83:ASN:ND2	2.14	0.62
46:BU:78:LYS:HD3	46:BU:79:ALA:H	1.64	0.62
2:AC:59:PRO:HG2	2:AC:62:SER:OG	1.99	0.62
23:BB:289:G:H2'	23:BB:290:U:O4'	1.99	0.62
40:DH:83:LYS:HE2	40:DH:149:GLU:HG3	1.81	0.62
2:CC:6:PRO:HA	2:CC:9:ILE:HG22	1.81	0.62
24:BI:85:ILE:HD13	24:BI:137:LEU:HD21	1.80	0.62
23:DB:2229:U:H2'	23:DB:2230:G:C8	2.35	0.62
23:BB:2636:C:H2'	23:BB:2637:U:C6	2.35	0.62
23:BB:2636:C:H4'	26:BD:81:GLU:OE2	2.00	0.62
21:AU:42:THR:O	21:AU:46:ARG:HG3	2.00	0.62
26:DD:51:THR:CG2	26:DD:76:GLY:HA3	2.30	0.62
8:AI:26:LYS:N	8:AI:61:ASP:HB3	2.15	0.62
8:CI:51:LEU:HB3	8:CI:56:MET:HG2	1.82	0.62
49:BR:6:GLN:HE22	49:BR:10:LYS:N	1.96	0.62
38:DM:35:ALA:HB2	38:DM:100:LYS:HB2	1.80	0.62
29:DE:58:LYS:C	29:DE:60:TRP:N	2.52	0.62
48:BG:104:LEU:HB2	48:BG:112:VAL:HB	1.82	0.62
39:BX:48:ARG:O	39:BX:51:ALA:HB3	2.00	0.62
39:DX:56:LEU:C	39:DX:58:ASN:H	2.03	0.62
25:BC:202:ARG:HH12	25:BC:213:ARG:HE	1.45	0.62
3:CD:84:ASN:ND2	3:CD:86:GLY:H	1.98	0.62
41:DJ:40:HIS:CE1	41:DJ:41:LYS:HG3	2.35	0.62
1:AA:323:U:H2'	1:AA:324:G:O4'	2.00	0.62
25:DC:74:PRO:HG2	25:DC:96:LYS:CG	2.30	0.62
26:DD:174:SER:O	26:DD:175:LEU:HB2	1.98	0.62
1:CA:188:C:H2'	1:CA:189:A:O4'	2.00	0.62
23:BB:1373:A:H2'	23:BB:1374:G:O4'	1.99	0.62
23:DB:176:A:O2'	23:DB:177:G:H5'	1.99	0.62
23:DB:1568:G:H4'	25:DC:58:LYS:HB3	1.80	0.62
5:AF:80:PHE:CZ	25:BC:123:ILE:HG12	2.35	0.62
1:CA:312:C:H2'	1:CA:313:A:H8	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:99:ILE:HD12	40:BH:130:VAL:HG11	1.82	0.61
23:DB:2898:U:H2'	23:DB:2899:A:C8	2.35	0.61
23:BB:2147:A:H5'	23:BB:2148:G:C4'	2.30	0.61
23:BB:1045:C:H4'	23:BB:1046:A:H5''	1.81	0.61
1:AA:843:U:OP2	1:AA:843:U:H4'	1.97	0.61
35:BV:44:HIS:NE2	35:BV:85:LYS:HB2	2.15	0.61
29:BE:58:LYS:HE2	29:BE:60:TRP:CD1	2.32	0.61
42:BN:87:PHE:CE1	42:BN:116:VAL:HG12	2.34	0.61
23:BB:172:A:H2'	23:BB:173:A:H8	1.64	0.61
1:CA:390:U:H2'	1:CA:391:G:H8	1.65	0.61
1:AA:1011:C:H2'	1:AA:1012:A:C8	2.35	0.61
1:AA:746:A:H2'	1:AA:747:A:C8	2.35	0.61
23:BB:589:U:H2'	23:BB:590:A:C8	2.35	0.61
1:AA:1007:U:H2'	1:AA:1008:U:C6	2.34	0.61
49:BR:49:ILE:HD13	49:BR:53:PHE:H	1.63	0.61
23:DB:1869:G:H2'	23:DB:1870:C:H5'	1.82	0.61
11:AL:35:ARG:HA	11:AL:35:ARG:CZ	2.30	0.61
23:DB:1849:G:H2'	23:DB:1850:G:H8	1.65	0.61
23:BB:2674:G:H4'	27:BK:30:ARG:HG3	1.82	0.61
9:AJ:22:THR:OG1	9:AJ:72:ARG:HG3	2.00	0.61
1:CA:212:G:H2'	1:CA:213:G:H8	1.63	0.61
10:CK:110:THR:HG22	21:CU:4:LYS:HA	1.81	0.61
23:BB:1869:G:H2'	23:BB:1870:C:H5'	1.82	0.61
1:AA:1359:C:H3'	13:AN:74:ARG:NH2	2.14	0.61
23:DB:1100:C:OP2	24:DI:2:LYS:HB3	1.99	0.61
23:DB:2352:A:C2	52:DW:29:SER:HB3	2.35	0.61
23:DB:855:G:N3	52:DW:23:LYS:HE3	2.15	0.61
52:DW:24:ARG:HD2	52:DW:65:LYS:HG2	1.82	0.61
26:DD:10:GLY:O	26:DD:11:MET:HB2	2.01	0.61
8:AI:51:LEU:HB3	8:AI:56:MET:HG2	1.83	0.61
29:DE:161:ALA:HA	29:DE:164:LEU:HB2	1.83	0.61
10:AK:91:GLY:HA2	10:AK:94:SER:HB3	1.82	0.61
38:BM:35:ALA:HB2	38:BM:100:LYS:HB2	1.81	0.61
38:BM:21:ALA:HB2	38:BM:100:LYS:HG2	1.81	0.61
24:DI:32:VAL:HG22	24:DI:60:VAL:HG21	1.82	0.61
47:DF:24:VAL:O	47:DF:27:VAL:HG22	2.01	0.61
14:CO:70:LEU:HD12	14:CO:78:TYR:HB2	1.81	0.61
23:DB:1590:A:H2'	23:DB:1591:A:C8	2.35	0.61
23:BB:1553:A:O2'	23:BB:1554:U:H2'	2.00	0.61
23:DB:351:C:H2'	23:DB:352:A:C8	2.34	0.61
9:AJ:52:LEU:HD21	9:AJ:59:LYS:HA	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CT:61:ALA:HA	19:CT:67:HIS:H	1.65	0.61
23:DB:2882:A:OP1	42:DN:96:ARG:HD2	2.00	0.61
6:AG:72:VAL:HG12	6:AG:89:GLU:HG3	1.81	0.61
42:DN:59:SER:O	42:DN:63:ARG:HB2	1.99	0.61
1:CA:1147:C:H1'	8:CI:17:ARG:NH1	2.16	0.61
5:CF:18:VAL:HG21	5:CF:58:HIS:CE1	2.35	0.61
1:CA:621:A:H2'	1:CA:622:A:C8	2.35	0.61
1:CA:182:A:O2'	1:CA:183:C:H3'	2.00	0.61
40:DH:42:LYS:HA	40:DH:45:GLU:OE2	1.98	0.61
26:DD:97:SER:HB3	26:DD:99:GLU:HG3	1.82	0.61
19:CT:49:ALA:HA	19:CT:52:GLU:OE2	2.00	0.61
23:BB:1947:C:H2'	23:BB:1948:G:H8	1.65	0.61
26:DD:16:THR:HB	26:DD:18:ASP:OD1	2.00	0.61
7:CH:94:VAL:HG23	7:CH:101:ALA:HB2	1.81	0.61
48:DG:154:GLU:HB3	48:DG:158:GLY:H	1.65	0.61
15:AP:20:VAL:HG23	15:AP:35:ARG:HA	1.81	0.61
40:BH:32:PRO:HG3	51:BZ:39:TRP:HB3	1.82	0.61
21:AU:39:LYS:N	21:AU:40:PRO:HD2	2.14	0.61
8:AI:5:TYR:HB2	8:AI:20:ILE:HB	1.81	0.61
1:AA:1313:U:OP2	18:AS:5:LYS:HA	2.00	0.61
23:DB:2311:A:H1'	47:DF:84:ILE:HD13	1.81	0.61
23:DB:559:G:P	41:DJ:111:LYS:HD3	2.41	0.61
47:DF:110:ILE:HA	47:DF:111:ARG:CZ	2.30	0.61
29:BE:33:VAL:O	29:BE:36:ALA:HB3	2.00	0.61
23:BB:145:C:H2'	23:BB:146:A:H8	1.65	0.61
23:BB:1082:U:N3	23:BB:1086:A:C6	2.69	0.61
29:BE:48:THR:H	29:BE:51:GLU:HG3	1.66	0.61
3:AD:197:HIS:HA	3:AD:200:VAL:HG22	1.82	0.61
23:DB:1441:G:H2'	23:DB:1442:U:C6	2.34	0.61
35:DV:24:ASN:O	35:DV:44:HIS:HB2	2.00	0.61
35:DV:44:HIS:NE2	35:DV:85:LYS:HB2	2.16	0.61
23:DB:899:A:H2'	23:DB:900:A:O4'	2.00	0.61
23:BB:75:G:H4'	39:BX:48:ARG:HH22	1.63	0.61
38:DM:43:ALA:O	38:DM:46:ILE:HG12	2.01	0.61
42:DN:87:PHE:CE1	42:DN:116:VAL:HG12	2.35	0.61
23:BB:222:A:H61	23:BB:232:G:H1'	1.66	0.61
23:BB:5:A:H2'	23:BB:6:A:C8	2.35	0.61
2:CC:70:ALA:HA	2:CC:105:VAL:CG2	2.31	0.61
26:DD:68:PHE:HB3	26:DD:73:VAL:HG23	1.83	0.61
23:BB:1038:G:H2'	23:BB:1039:A:C8	2.35	0.61
20:AB:83:ALA:HB3	20:AB:90:PHE:HB3	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:B2:3:ARG:HA	36:B2:3:ARG:CZ	2.29	0.61
48:DG:154:GLU:H	48:DG:158:GLY:HA2	1.65	0.61
23:BB:30:G:OP1	44:BQ:4:LYS:HG2	2.00	0.61
1:AA:1239:A:H4'	1:AA:1240:U:H5'	1.81	0.61
9:CJ:22:THR:OG1	9:CJ:72:ARG:HG3	1.99	0.61
7:AH:94:VAL:HG23	7:AH:101:ALA:HB2	1.83	0.61
23:DB:992:C:H4'	49:DR:74:ILE:HD13	1.82	0.61
20:AB:80:LYS:HG3	20:AB:81:ASP:H	1.65	0.61
23:BB:452:G:OP1	29:BE:53:THR:HG23	1.99	0.61
23:DB:1098:A:OP2	24:DI:3:LYS:HG2	1.99	0.61
23:BB:857:G:C2'	23:BB:858:G:H5'	2.31	0.61
18:AS:48:ILE:HG21	18:AS:70:LEU:HD21	1.81	0.61
23:DB:2151:U:O2'	23:DB:2152:G:H5'	2.01	0.61
20:AB:16:GLY:HA2	20:AB:40:ILE:HG13	1.82	0.61
23:BB:2267:A:H8	23:BB:2267:A:C3'	2.07	0.61
27:BK:71:ARG:HD2	27:BK:106:GLU:OE2	2.01	0.61
23:DB:1082:U:N3	23:DB:1086:A:C6	2.68	0.61
23:BB:62:U:H2'	23:BB:62:U:O2	1.99	0.61
46:BU:46:LYS:HZ1	46:BU:47:PRO:HG2	1.65	0.61
47:DF:91:ARG:HD3	47:DF:91:ARG:N	2.15	0.61
43:BO:74:VAL:O	43:BO:78:VAL:HG23	2.00	0.61
23:BB:1440:U:H2'	23:BB:1441:G:C8	2.34	0.61
1:AA:922:G:H2'	1:AA:923:A:C8	2.36	0.61
23:BB:458:G:H22	23:BB:469:G:H2'	1.65	0.61
28:BP:91:VAL:HG21	28:BP:96:LEU:HD21	1.83	0.61
1:AA:270:A:H2'	1:AA:271:C:C6	2.35	0.61
38:DM:26:VAL:HA	38:DM:66:ARG:HH21	1.64	0.61
11:CL:54:VAL:CG2	11:CL:79:ILE:HD11	2.29	0.61
23:DB:955:U:OP1	38:DM:86:LYS:HE3	1.99	0.61
5:CF:66:ALA:HB1	5:CF:67:PRO:HD2	1.82	0.61
23:DB:1316:U:O2'	23:DB:1317:G:H5'	2.01	0.61
23:DB:877:A:O2'	23:DB:878:A:H5'	2.01	0.61
33:B1:3:GLY:O	33:B1:4:ILE:HG12	2.00	0.61
49:BR:34:GLU:HG2	49:BR:60:LYS:HG2	1.81	0.61
50:BT:5:GLU:HA	50:BT:8:LEU:CB	2.28	0.61
49:BR:4:VAL:HG23	49:BR:39:LEU:H	1.65	0.61
47:BF:66:ILE:HD11	47:BF:83:PRO:HB3	1.83	0.61
40:DH:82:SER:OG	40:DH:94:ILE:HD11	2.00	0.61
14:AO:25:THR:HB	14:AO:70:LEU:HD23	1.82	0.61
23:BB:63:A:H2'	23:BB:63:A:OP2	2.01	0.61
13:AN:68:ARG:HH12	13:AN:70:HIS:HB2	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AN:60:ARG:NE	13:AN:62:ARG:HG2	2.15	0.61
23:DB:784:G:O2'	23:DB:785:G:H5''	2.00	0.61
3:CD:197:HIS:HA	3:CD:200:VAL:HG22	1.82	0.61
31:B0:53:VAL:HG21	42:BN:98:LEU:HD11	1.82	0.61
1:AA:451:A:C6	1:AA:480:U:H2'	2.35	0.61
23:BB:1405:U:H2'	23:BB:1406:U:C6	2.36	0.61
23:DB:1405:U:H2'	23:DB:1406:U:C6	2.35	0.61
1:AA:1432:G:H1'	1:AA:1468:A:H61	1.66	0.61
1:CA:1007:U:H2'	1:CA:1008:U:C6	2.35	0.61
39:BX:8:GLU:O	39:BX:12:GLU:HB2	2.00	0.61
23:BB:2155:U:H2'	23:BB:2156:G:C8	2.35	0.61
23:BB:2284:A:OP2	33:B1:5:ARG:HG3	2.00	0.61
1:AA:154:U:H2'	1:AA:155:A:C8	2.35	0.61
4:CE:95:MET:HG3	4:CE:124:ALA:HB2	1.82	0.61
23:DB:2636:C:H2'	23:DB:2637:U:C6	2.36	0.61
48:BG:87:GLN:HE21	48:BG:164:ALA:HA	1.65	0.61
48:BG:37:ASN:HD22	48:BG:40:VAL:HB	1.66	0.61
1:AA:1147:C:H1'	8:AI:17:ARG:NH1	2.15	0.61
5:CF:16:GLU:CD	5:CF:16:GLU:H	2.01	0.61
23:DB:1099:G:C5'	24:DI:3:LYS:N	2.64	0.61
8:CI:26:LYS:N	8:CI:61:ASP:HB3	2.14	0.61
33:B1:29:LYS:N	33:B1:30:PRO:HD3	2.15	0.61
13:CN:40:ARG:NH2	18:CS:6:LYS:CB	2.59	0.61
29:DE:189:THR:O	29:DE:193:VAL:HG23	2.01	0.61
23:DB:1203:U:H3'	23:DB:1204:A:C5'	2.30	0.61
23:DB:1080:A:O2'	24:DI:126:ARG:HD2	2.01	0.61
41:DJ:84:ILE:HG23	41:DJ:84:ILE:O	2.00	0.61
1:CA:429:U:H3'	3:CD:8:LEU:HD23	1.83	0.61
3:AD:153:ARG:HG3	3:AD:154:VAL:N	2.15	0.61
13:CN:63:CYS:HB3	13:CN:67:GLY:N	2.13	0.61
23:BB:2885:G:N2	31:B0:31:LYS:HG3	2.15	0.61
1:CA:1329:A:H5''	12:CM:24:VAL:HA	1.82	0.61
29:BE:58:LYS:C	29:BE:60:TRP:N	2.52	0.61
23:BB:1552:A:H2'	23:BB:1553:A:H5'	1.81	0.61
1:AA:1250:A:H2'	1:AA:1251:A:C8	2.35	0.61
4:AE:82:HIS:HB2	4:AE:83:PRO:HD2	1.81	0.61
1:CA:270:A:H2'	1:CA:271:C:C6	2.36	0.61
38:BM:64:TRP:HB2	38:BM:104:GLU:HB2	1.82	0.61
39:DX:8:GLU:O	39:DX:12:GLU:HB2	2.00	0.61
1:AA:1338:G:H2'	1:AA:1339:A:C8	2.35	0.61
1:CA:1062:U:H2'	1:CA:1063:C:C6	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1104:C:H2'	23:BB:1105:U:C6	2.35	0.61
23:BB:1849:G:H2'	23:BB:1850:G:H8	1.64	0.61
34:B3:37:THR:HA	34:B3:40:LYS:HE2	1.82	0.61
25:BC:73:ILE:HG21	25:BC:97:ASP:HB2	1.82	0.61
1:CA:678:U:H2'	1:CA:679:C:C6	2.36	0.61
52:BW:24:ARG:HD2	52:BW:65:LYS:HG2	1.83	0.61
23:DB:2352:A:H2'	23:DB:2353:G:O4'	2.00	0.61
8:CI:51:LEU:HB3	8:CI:56:MET:CB	2.30	0.61
26:DD:14:ILE:HD13	26:DD:178:VAL:HG11	1.83	0.61
41:DJ:43:GLU:O	41:DJ:45:THR:N	2.34	0.61
50:DT:28:ASN:HA	50:DT:91:GLN:HE22	1.66	0.61
47:BF:41:GLU:O	47:BF:43:ILE:HG22	2.00	0.61
24:DI:128:ILE:HA	24:DI:131:THR:HG23	1.83	0.61
40:BH:116:ARG:NH1	40:BH:139:PHE:HB2	2.16	0.61
27:DK:64:ARG:HH12	27:DK:101:GLY:HA3	1.66	0.61
23:DB:9:G:N2	23:DB:10:A:H62	1.96	0.61
23:DB:2895:G:H2'	23:DB:2896:C:C6	2.36	0.61
3:AD:116:LEU:HD21	3:AD:153:ARG:HD2	1.83	0.61
23:DB:117:G:H5'	23:DB:126:A:C8	2.31	0.61
23:BB:2143:C:H2'	23:BB:2144:G:C8	2.36	0.61
24:BI:18:ASN:N	24:BI:19:PRO:HD2	2.15	0.61
34:B3:22:LYS:HD2	34:B3:46:LYS:HB2	1.83	0.61
23:BB:921:C:H2'	23:BB:922:C:H6	1.66	0.61
3:AD:90:LEU:HA	3:AD:93:LEU:HD12	1.82	0.61
23:DB:2146:C:H4'	23:DB:2148:G:H1'	1.83	0.61
28:BP:13:LYS:HD3	28:BP:76:HIS:HA	1.81	0.61
23:BB:1796:U:H2'	23:BB:1797:G:H8	1.65	0.61
19:AT:61:ALA:HA	19:AT:67:HIS:H	1.65	0.61
43:BO:24:THR:HG22	43:BO:42:PRO:HD3	1.82	0.61
26:BD:27:ILE:HG23	26:BD:201:LEU:HD12	1.82	0.61
39:DX:15:ASN:ND2	39:DX:15:ASN:H	1.99	0.61
7:CH:10:LEU:HD22	7:CH:74:ILE:HD11	1.82	0.61
23:DB:2801:G:H2'	23:DB:2802:G:C8	2.34	0.61
1:AA:204:G:H2'	1:AA:205:A:C8	2.36	0.61
29:DE:11:ALA:O	29:DE:12:LEU:HD22	2.00	0.61
1:AA:621:A:H2'	1:AA:622:A:C8	2.35	0.61
23:BB:2355:G:H4'	52:BW:20:LEU:CD1	2.31	0.61
7:CH:78:SER:HA	7:CH:84:ILE:HD12	1.83	0.61
7:AH:107:LYS:HE3	7:AH:107:LYS:HA	1.82	0.61
23:DB:5:A:H2'	23:DB:6:A:C8	2.36	0.61
1:CA:781:A:H2'	1:CA:782:A:H5'	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1239:A:H4'	1:CA:1240:U:H5'	1.81	0.61
21:CU:39:LYS:N	21:CU:40:PRO:HD2	2.15	0.61
10:AK:61:ALA:O	10:AK:64:VAL:HG12	2.00	0.61
52:DW:23:LYS:HD2	52:DW:24:ARG:N	2.16	0.61
33:D1:29:LYS:N	33:D1:30:PRO:HD3	2.15	0.61
23:BB:2898:U:H2'	23:BB:2899:A:C8	2.36	0.61
38:DM:35:ALA:HB2	38:DM:100:LYS:H	1.65	0.61
23:BB:139:U:H3'	23:BB:140:C:C5'	2.31	0.61
22:BA:32:U:H4'	22:BA:52:A:N6	2.15	0.61
23:BB:2187:U:H2'	23:BB:2188:U:C6	2.36	0.61
1:AA:923:A:H2'	1:AA:924:C:C6	2.35	0.61
1:AA:216:U:H2'	1:AA:217:C:C6	2.35	0.61
1:CA:474:G:H2'	1:CA:475:C:C6	2.35	0.61
26:BD:68:PHE:HB3	26:BD:73:VAL:HG23	1.83	0.61
2:AC:70:ALA:HA	2:AC:105:VAL:CG2	2.31	0.61
50:DT:12:ARG:NH1	50:DT:12:ARG:HB3	2.15	0.61
34:D3:37:THR:HA	34:D3:40:LYS:HE2	1.82	0.61
23:BB:38:A:O2'	29:BE:43:THR:HA	2.01	0.61
23:DB:522:A:H2'	23:DB:523:C:C6	2.35	0.61
1:CA:63:C:H5'	1:CA:64:G:OP2	2.01	0.61
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.36	0.61
25:BC:74:PRO:HG2	25:BC:96:LYS:CG	2.31	0.61
46:BU:3:LYS:HD3	46:BU:82:VAL:HB	1.83	0.61
40:BH:97:ARG:O	40:BH:101:ASP:HB2	2.01	0.61
37:BL:17:LYS:HD2	37:BL:19:LEU:HD11	1.83	0.61
29:DE:47:LYS:HB3	29:DE:51:GLU:HB2	1.81	0.61
23:BB:1080:A:O2'	24:BI:126:ARG:HB2	2.01	0.61
23:DB:2144:G:N3	23:DB:2146:C:H5'	2.16	0.61
10:AK:80:ASN:ND2	10:AK:80:ASN:H	1.98	0.61
26:BD:133:THR:HG23	26:BD:134:HIS:N	2.16	0.61
23:BB:1506:U:H2'	23:BB:1507:C:C6	2.36	0.61
1:AA:41:G:H2'	1:AA:42:G:C8	2.35	0.61
1:AA:390:U:H2'	1:AA:391:G:H8	1.66	0.61
1:AA:190:A:H2'	1:AA:191:G:O4'	2.01	0.61
26:DD:25:THR:HG21	26:DD:193:VAL:HG22	1.83	0.61
1:CA:699:C:H2'	1:CA:700:G:H5''	1.83	0.61
1:CA:160:A:H2'	1:CA:161:A:O4'	2.01	0.61
23:BB:729:G:C5	25:BC:206:LYS:HB2	2.35	0.61
1:CA:1359:C:H3'	13:CN:74:ARG:NH2	2.16	0.61
10:AK:72:ALA:O	10:AK:75:GLU:HG2	2.01	0.61
23:DB:2671:G:H2'	23:DB:2672:U:C6	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:D2:3:ARG:CZ	36:D2:3:ARG:HA	2.31	0.61
7:CH:107:LYS:HA	7:CH:107:LYS:HE3	1.83	0.61
50:BT:92:ASN:HB2	50:BT:93:LEU:HD22	1.82	0.61
51:BZ:7:VAL:HG21	51:BZ:59:ILE:HD11	1.82	0.61
50:DT:31:VAL:HA	50:DT:84:TYR:H	1.66	0.61
50:DT:60:THR:HB	50:DT:81:LYS:HD2	1.83	0.61
37:DL:123:ARG:HA	37:DL:143:GLU:CB	2.26	0.61
42:BN:102:PHE:N	42:BN:109:PRO:HA	2.11	0.61
20:CB:187:ASP:H	20:CB:190:SER:HB2	1.66	0.61
37:DL:6:LEU:H	37:DL:6:LEU:CD2	2.10	0.61
41:BJ:77:HIS:CD2	41:BJ:84:ILE:H	2.19	0.61
47:BF:24:VAL:O	47:BF:27:VAL:HG22	2.01	0.61
20:CB:128:LEU:HD22	20:CB:129:THR:H	1.66	0.61
23:DB:1174:U:H1'	23:DB:1176:U:C2	2.35	0.61
9:CJ:52:LEU:HD21	9:CJ:59:LYS:HA	1.82	0.61
23:DB:1552:A:H2'	23:DB:1553:A:H5'	1.82	0.61
35:BV:24:ASN:O	35:BV:44:HIS:HB2	2.00	0.61
35:BV:80:HIS:CD2	35:BV:82:TYR:H	2.16	0.61
48:BG:120:ILE:HD11	48:BG:132:LEU:HB2	1.83	0.61
23:BB:2720:U:H5''	28:BP:52:ARG:HH21	1.66	0.61
10:CK:113:THR:HG21	21:CU:28:LEU:HD12	1.83	0.61
26:BD:79:LEU:N	26:BD:79:LEU:HD22	2.16	0.61
4:CE:82:HIS:HB2	4:CE:83:PRO:HD2	1.81	0.61
1:AA:1009:U:H1'	1:AA:1021:A:C2	2.35	0.61
48:DG:148:ARG:HD3	48:DG:152:ARG:CZ	2.31	0.61
23:BB:1105:U:H2'	23:BB:1106:G:C8	2.36	0.61
1:AA:620:C:N1	3:AD:131:ILE:HD13	2.16	0.61
23:DB:2241:A:H2'	23:DB:2242:G:C8	2.36	0.61
1:CA:1338:G:H2'	1:CA:1339:A:C8	2.36	0.61
23:DB:968:C:H2'	23:DB:969:G:H8	1.66	0.61
6:CG:57:GLU:H	6:CG:57:GLU:CD	2.04	0.61
23:BB:1914:C:H2'	23:BB:1915:U:O4'	2.01	0.61
11:AL:65:TYR:HB3	11:AL:95:HIS:CD2	2.36	0.61
23:DB:699:A:H4'	23:DB:1634:A:N7	2.16	0.61
12:CM:29:SER:O	12:CM:32:ILE:HG22	2.01	0.61
50:DT:36:LYS:O	50:DT:36:LYS:HD3	2.00	0.61
23:BB:1032:A:H1'	32:B4:23:ILE:HD13	1.82	0.61
24:DI:1:ALA:HB1	24:DI:2:LYS:HD2	1.81	0.60
44:BQ:63:ARG:NH2	44:BQ:96:ASP:HA	2.15	0.60
3:CD:153:ARG:HG3	3:CD:154:VAL:N	2.16	0.60
4:CE:23:THR:HA	4:CE:28:ARG:HA	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:357:C:H2'	23:DB:358:U:C6	2.36	0.60
23:BB:2885:G:H2'	23:BB:2886:A:O4'	2.00	0.60
13:CN:60:ARG:NE	13:CN:62:ARG:HG2	2.16	0.60
47:BF:37:MET:SD	47:BF:52:ALA:HB1	2.40	0.60
8:AI:79:ARG:NH2	8:AI:102:PHE:HA	2.16	0.60
23:BB:2635:A:H4'	26:BD:79:LEU:HB2	1.83	0.60
4:CE:73:VAL:HG11	4:CE:143:LEU:HB3	1.83	0.60
9:AJ:37:ARG:NE	9:AJ:37:ARG:HA	2.15	0.60
46:DU:13:LEU:H	46:DU:13:LEU:HD12	1.65	0.60
34:D3:44:ARG:N	34:D3:45:PRO:HD2	2.16	0.60
26:BD:97:SER:HB3	26:BD:99:GLU:HG3	1.83	0.60
6:CG:77:ARG:HG3	6:CG:79:VAL:HG23	1.82	0.60
23:DB:443:A:C8	29:DE:40:ARG:HD3	2.36	0.60
48:BG:154:GLU:HB3	48:BG:158:GLY:H	1.66	0.60
35:BV:70:ILE:HD13	35:BV:70:ILE:N	2.16	0.60
36:D2:30:VAL:HA	36:D2:33:ARG:NH2	2.16	0.60
1:CA:1225:A:H3'	1:CA:1226:C:C6	2.35	0.60
23:DB:571:U:H3'	49:DR:80:ARG:NH1	2.16	0.60
23:BB:782:A:N7	25:BC:219:VAL:HG21	2.15	0.60
29:DE:149:ILE:HG23	29:DE:188:MET:HA	1.83	0.60
23:BB:626:A:H2'	37:BL:78:ARG:NH1	2.16	0.60
41:DJ:93:ILE:O	41:DJ:97:PRO:HG3	2.01	0.60
23:BB:1178:C:H2'	23:BB:1179:G:H8	1.65	0.60
1:AA:1221:G:O3'	18:AS:76:THR:HG21	2.01	0.60
41:DJ:72:LYS:HB2	41:DJ:89:PHE:H	1.66	0.60
23:DB:1551:A:H3'	23:DB:1552:A:H5''	1.82	0.60
4:AE:152:VAL:HA	4:AE:155:LYS:HD3	1.81	0.60
37:DL:95:LEU:HB3	37:DL:100:ILE:HG23	1.81	0.60
1:CA:746:A:H2'	1:CA:747:A:C8	2.35	0.60
23:DB:962:G:N2	23:DB:2250:G:H1	1.99	0.60
38:DM:71:LYS:HE3	38:DM:73:ILE:HD11	1.82	0.60
48:BG:154:GLU:H	48:BG:158:GLY:HA2	1.66	0.60
1:AA:182:A:O2'	1:AA:183:C:H3'	2.01	0.60
23:BB:1709:U:H2'	23:BB:1710:G:C8	2.36	0.60
23:DB:693:A:H2'	23:DB:694:U:C6	2.36	0.60
23:DB:414:C:H2'	23:DB:415:A:C8	2.37	0.60
23:DB:441:U:H2'	23:DB:442:G:C8	2.36	0.60
1:AA:328:C:H4'	1:AA:329:A:H5''	1.83	0.60
37:DL:92:LEU:HD23	37:DL:92:LEU:H	1.65	0.60
23:BB:2358:A:H61	37:BL:54:GLN:HE22	1.49	0.60
29:BE:59:PRO:HB2	29:BE:67:ARG:HH22	1.65	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AQ:13:SER:HB3	16:AQ:21:VAL:HB	1.81	0.60
51:DZ:77:LYS:HD2	51:DZ:78:TYR:H	1.66	0.60
26:BD:10:GLY:HA3	26:BD:26:VAL:N	2.03	0.60
8:AI:51:LEU:HB3	8:AI:56:MET:CB	2.31	0.60
18:CS:18:VAL:CG2	18:CS:43:MET:HB3	2.29	0.60
50:BT:60:THR:HB	50:BT:81:LYS:HD2	1.81	0.60
23:DB:1203:U:H3'	23:DB:1204:A:H5''	1.83	0.60
1:AA:97:G:H2'	1:AA:98:A:O4'	2.01	0.60
42:BN:29:VAL:HG12	42:BN:78:LYS:HG2	1.84	0.60
38:BM:35:ALA:HB2	38:BM:100:LYS:H	1.65	0.60
23:DB:2722:G:H4'	42:DN:4:ARG:HB2	1.82	0.60
20:CB:83:ALA:HB3	20:CB:90:PHE:HB3	1.83	0.60
48:BG:104:LEU:HB3	48:BG:106:LEU:HD21	1.83	0.60
29:BE:176:ASP:O	29:BE:180:LEU:HG	2.01	0.60
23:BB:1485:U:H2'	23:BB:1486:U:H6	1.66	0.60
23:BB:233:A:H61	23:BB:428:A:H61	1.48	0.60
6:CG:72:VAL:HG12	6:CG:89:GLU:HG3	1.81	0.60
1:AA:1019:A:H2'	1:AA:1020:G:C8	2.36	0.60
1:AA:818:G:H3'	1:AA:819:A:H5''	1.83	0.60
44:BQ:4:LYS:NZ	44:BQ:7:VAL:HG22	2.16	0.60
23:BB:2091:C:H1'	51:BZ:34:HIS:CD2	2.36	0.60
1:AA:398:U:H2'	1:AA:399:G:H8	1.66	0.60
23:DB:1061:U:O4'	23:DB:1070:A:H1'	2.00	0.60
23:BB:1826:G:H2'	23:BB:1827:U:H6	1.66	0.60
1:CA:1035:A:H2'	1:CA:1036:A:H8	1.66	0.60
11:CL:35:ARG:HA	11:CL:35:ARG:CZ	2.31	0.60
23:DB:1098:A:C8	24:DI:3:LYS:HB3	2.36	0.60
33:B1:33:LEU:HB3	33:B1:51:ALA:CB	2.31	0.60
29:BE:189:THR:O	29:BE:193:VAL:HG23	2.01	0.60
18:CS:10:ILE:HG22	18:CS:37:SER:HB3	1.82	0.60
25:BC:117:SER:HB3	25:BC:128:THR:HB	1.82	0.60
45:DS:18:ARG:HB3	45:DS:76:VAL:CG2	2.31	0.60
40:DH:129:GLU:HA	40:DH:143:ILE:HA	1.83	0.60
1:CA:429:U:H1'	1:CA:430:A:H5''	1.83	0.60
23:DB:1021:A:H62	23:DB:1141:U:H3	1.49	0.60
4:CE:89:THR:HG22	4:CE:90:GLY:N	2.14	0.60
23:DB:2885:G:H2'	23:DB:2886:A:O4'	2.01	0.60
24:BI:91:LYS:HB2	24:BI:94:LYS:HD2	1.82	0.60
46:BU:46:LYS:NZ	46:BU:47:PRO:HG2	2.15	0.60
29:DE:48:THR:HG23	29:DE:88:ARG:HH11	1.67	0.60
25:DC:76:VAL:CG1	25:DC:114:GLN:HG2	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AB:57:ASN:HB2	20:AB:219:THR:O	2.02	0.60
23:DB:458:G:H22	23:DB:469:G:H2'	1.66	0.60
20:AB:20:ARG:CZ	20:AB:20:ARG:HA	2.31	0.60
1:AA:812:G:O2'	1:AA:813:U:H6	1.83	0.60
38:BM:40:ARG:HB2	38:BM:93:VAL:CG2	2.31	0.60
20:AB:119:GLN:O	20:AB:125:PHE:HB3	2.01	0.60
23:BB:155:A:H2'	23:BB:156:A:H8	1.65	0.60
47:BF:141:ASP:O	47:BF:145:VAL:HG13	2.01	0.60
5:CF:4:TYR:CE2	5:CF:71:ILE:HG21	2.37	0.60
23:BB:1169:A:H2'	23:BB:1170:C:C6	2.36	0.60
1:AA:1216:A:H5''	13:AN:4:SER:HB3	1.83	0.60
1:CA:398:U:H2'	1:CA:399:G:H8	1.66	0.60
7:AH:28:SER:OG	7:AH:56:PRO:HB2	2.01	0.60
23:DB:1099:G:C8	24:DI:3:LYS:CA	2.80	0.60
49:DR:34:GLU:HG2	49:DR:60:LYS:HG2	1.84	0.60
36:B2:10:LEU:O	36:B2:14:ARG:HG2	2.02	0.60
5:CF:92:THR:HG22	5:CF:93:LYS:N	2.17	0.60
8:AI:24:ASN:HD21	8:AI:26:LYS:HG3	1.67	0.60
29:BE:196:VAL:O	29:BE:200:LEU:HD23	2.01	0.60
10:CK:111:ASP:HB2	21:CU:19:LYS:CE	2.32	0.60
1:CA:1361:G:C2'	1:CA:1362:A:H5''	2.32	0.60
47:DF:37:MET:SD	47:DF:52:ALA:HB1	2.42	0.60
23:BB:2516:A:O2'	23:BB:2517:C:H5'	2.02	0.60
23:DB:138:U:H2'	23:DB:140:C:C6	2.36	0.60
1:CA:16:A:O2'	1:CA:17:U:H5'	2.01	0.60
1:CA:844:G:OP2	1:CA:844:G:H3'	2.01	0.60
1:AA:237:G:H2'	1:AA:238:A:H8	1.67	0.60
23:DB:1553:A:O2'	23:DB:1554:U:H2'	2.02	0.60
23:BB:2723:C:H5''	42:BN:1:MET:HE2	1.82	0.60
1:CA:763:G:H2'	1:CA:764:C:C6	2.36	0.60
35:DV:80:HIS:CD2	35:DV:82:TYR:H	2.17	0.60
10:AK:113:THR:HG21	21:AU:28:LEU:HD12	1.84	0.60
23:DB:1464:G:H2'	23:DB:1465:G:C8	2.37	0.60
3:AD:138:PRO:HA	3:AD:181:PHE:HD2	1.64	0.60
23:DB:1727:C:H2'	23:DB:1728:C:C6	2.36	0.60
23:DB:1338:G:H4'	50:DT:18:GLU:CG	2.32	0.60
2:CC:120:THR:HG22	2:CC:197:VAL:HG21	1.82	0.60
2:CC:188:ALA:HB3	2:CC:195:ILE:HB	1.83	0.60
1:AA:16:A:O2'	1:AA:17:U:H5'	2.01	0.60
48:BG:152:ARG:HH22	48:BG:162:ARG:HA	1.65	0.60
36:D2:3:ARG:NE	36:D2:3:ARG:HA	2.15	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DK:89:ASN:C	27:DK:89:ASN:HD22	2.04	0.60
39:DX:46:VAL:O	39:DX:50:VAL:HG23	2.02	0.60
1:AA:814:A:H5'	1:AA:1511:G:H4'	1.82	0.60
1:CA:204:G:H1'	1:CA:466:A:N7	2.17	0.60
1:AA:129:A:H1'	1:AA:130:A:C8	2.37	0.60
10:CK:72:ALA:O	10:CK:75:GLU:HG2	2.02	0.60
23:DB:833:A:H2'	23:DB:834:G:C8	2.37	0.60
46:BU:85:ARG:HH11	46:BU:86:PHE:H	1.50	0.60
52:DW:39:GLN:NE2	52:DW:42:THR:HB	2.16	0.60
5:AF:38:ARG:HH21	5:AF:63:ASN:ND2	1.98	0.60
39:DX:20:ASN:HA	39:DX:24:GLU:OE1	2.01	0.60
23:BB:849:A:H2'	23:BB:850:U:C6	2.35	0.60
47:BF:39:VAL:HG21	47:BF:49:LEU:HA	1.84	0.60
40:BH:133:GLN:HA	40:BH:139:PHE:CB	2.31	0.60
40:BH:68:ARG:HD3	40:BH:134:VAL:CG1	2.32	0.60
40:BH:134:VAL:HG22	40:BH:135:HIS:N	2.16	0.60
27:BK:119:ALA:HB3	27:BK:120:PRO:HD3	1.82	0.60
26:BD:113:SER:HB3	26:BD:167:ASN:N	2.17	0.60
37:DL:18:ARG:C	37:DL:19:LEU:HD12	2.21	0.60
14:AO:70:LEU:HD12	14:AO:78:TYR:HB2	1.83	0.60
1:CA:922:G:H2'	1:CA:923:A:C8	2.35	0.60
23:DB:1654:A:O2'	26:DD:118:PHE:HB2	2.01	0.60
13:AN:71:GLY:O	13:AN:79:SER:HA	2.02	0.60
52:DW:77:LYS:N	52:DW:77:LYS:HZ2	1.99	0.60
47:DF:31:GLU:HB3	47:DF:156:THR:O	2.01	0.60
38:BM:82:MET:HE3	38:BM:83:GLY:N	2.17	0.60
35:BV:93:ARG:HH11	35:BV:93:ARG:HG3	1.67	0.60
1:AA:841:C:H2'	1:AA:843:U:OP2	2.01	0.60
23:DB:1168:G:H2'	23:DB:1169:A:H8	1.66	0.60
38:DM:96:ILE:HD11	38:DM:126:ILE:HG12	1.81	0.60
11:CL:107:LYS:H	11:CL:107:LYS:HZ2	1.50	0.60
38:DM:26:VAL:HG23	38:DM:104:GLU:OE2	2.02	0.60
1:CA:1053:G:C3'	1:CA:1054:C:H5'	2.31	0.60
40:DH:3:VAL:HG12	40:DH:38:PRO:HA	1.83	0.60
23:BB:1722:A:H2'	23:BB:1723:G:C8	2.37	0.60
26:DD:79:LEU:HD22	26:DD:79:LEU:N	2.15	0.60
48:DG:145:ALA:HA	48:DG:148:ARG:HG3	1.83	0.60
1:AA:188:C:H2'	1:AA:189:A:O4'	2.00	0.60
44:BQ:101:ASP:HB2	49:BR:2:TYR:OH	2.02	0.60
23:DB:1001:A:H2'	23:DB:1002:G:O4'	2.02	0.60
20:CB:26:MET:SD	20:CB:192:PRO:HD3	2.41	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1709:U:H2'	23:DB:1710:G:C8	2.36	0.60
23:BB:2880:C:C1'	42:BN:91:ALA:HB3	2.31	0.60
1:AA:22:G:H2'	1:AA:23:C:C6	2.36	0.60
1:CA:98:A:H2'	1:CA:99:C:C6	2.37	0.60
20:CB:130:LYS:HA	20:CB:133:ALA:HB3	1.82	0.60
25:DC:137:GLY:H	25:DC:163:ILE:HB	1.67	0.60
50:BT:39:THR:CG2	50:BT:42:GLU:H	2.15	0.60
20:CB:202:ASN:C	20:CB:202:ASN:HD22	2.04	0.60
2:CC:190:THR:HG22	2:CC:191:THR:H	1.67	0.60
29:DE:33:VAL:O	29:DE:36:ALA:HB3	2.02	0.60
47:DF:102:LEU:HA	47:DF:106:ALA:CB	2.32	0.60
1:AA:410:G:P	3:AD:25:ARG:HE	2.24	0.60
1:AA:429:U:H1'	1:AA:430:A:H5''	1.83	0.60
4:AE:113:VAL:HG11	4:AE:136:VAL:HG23	1.82	0.60
26:BD:34:VAL:CG1	26:BD:94:GLN:H	2.15	0.60
44:DQ:81:GLY:HA3	44:DQ:112:ALA:HB1	1.83	0.60
23:BB:1437:C:H2'	23:BB:1438:U:H6	1.63	0.60
23:DB:921:C:H2'	23:DB:922:C:H6	1.66	0.60
39:BX:17:GLU:HB3	39:BX:53:VAL:CG1	2.31	0.60
30:DY:16:LEU:O	30:DY:19:HIS:HB2	2.02	0.60
25:DC:202:ARG:HH12	25:DC:213:ARG:HE	1.48	0.60
23:DB:948:C:H2'	23:DB:949:G:C8	2.37	0.60
46:DU:72:PHE:HA	46:DU:78:LYS:O	2.02	0.60
23:BB:2063:C:O2	23:BB:2450:A:N1	2.34	0.60
1:AA:1494:G:H5'	23:BB:1913:A:C6	2.36	0.60
23:DB:2516:A:O2'	23:DB:2517:C:H5'	2.02	0.60
1:CA:154:U:H2'	1:CA:155:A:C8	2.35	0.60
23:BB:129:C:H2'	23:BB:130:C:H6	1.67	0.60
47:BF:71:LYS:O	47:BF:73:VAL:HG23	2.02	0.60
23:BB:1268:A:H2'	23:BB:1269:A:O4'	2.02	0.60
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.37	0.60
1:AA:1225:A:H3'	1:AA:1226:C:C6	2.37	0.60
1:AA:1039:G:H2'	1:AA:1040:U:C6	2.36	0.60
29:BE:5:LEU:CD1	29:BE:10:SER:HB2	2.32	0.60
29:DE:31:VAL:HG21	29:DE:104:ALA:HB2	1.84	0.60
10:AK:51:PHE:HB2	10:AK:55:ARG:HB3	1.82	0.60
8:CI:24:ASN:HD21	8:CI:26:LYS:HG3	1.67	0.60
25:DC:128:THR:HA	25:DC:190:THR:CA	2.29	0.60
23:BB:2502:G:H5'	23:BB:2503:A:C5'	2.25	0.60
49:DR:38:VAL:HG22	49:DR:40:MET:H	1.65	0.60
50:DT:48:GLN:HA	50:DT:48:GLN:NE2	2.16	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BQ:104:ALA:HA	49:BR:46:GLU:OE1	2.01	0.60
47:BF:39:VAL:HG11	47:BF:49:LEU:HD23	1.83	0.60
39:DX:7:ARG:HH11	39:DX:7:ARG:HB2	1.67	0.60
20:AB:187:ASP:H	20:AB:190:SER:HB2	1.66	0.60
20:AB:44:LYS:C	20:AB:47:PRO:HD2	2.22	0.60
40:BH:5:LEU:HD13	40:BH:13:GLY:HA2	1.83	0.60
23:DB:143:C:H2'	23:DB:144:A:C8	2.37	0.60
23:BB:2675:A:N1	23:BB:2732:G:O6	2.35	0.60
1:AA:429:U:H3'	3:AD:8:LEU:HD23	1.84	0.60
26:BD:20:VAL:HG22	27:BK:72:PRO:HB3	1.82	0.60
23:BB:2868:A:H2'	23:BB:2869:G:C8	2.37	0.60
48:DG:173:ALA:HB3	48:DG:175:LYS:NZ	2.17	0.60
23:DB:233:A:N6	23:DB:428:A:H61	1.99	0.60
2:AC:13:ILE:O	2:AC:14:VAL:HG22	2.02	0.60
14:AO:11:ILE:HD11	14:AO:30:ALA:HB1	1.84	0.60
4:AE:87:VAL:HG23	4:AE:92:ARG:HA	1.84	0.60
9:AJ:41:PRO:O	9:AJ:42:LEU:HB2	2.02	0.60
23:BB:2671:G:H2'	23:BB:2672:U:C6	2.36	0.60
11:AL:42:LYS:HD2	11:AL:43:LYS:HG2	1.82	0.60
23:DB:2547:A:H2'	23:DB:2548:U:C6	2.37	0.60
29:DE:137:LYS:HE2	29:DE:141:MET:SD	2.42	0.60
23:BB:693:A:H2'	23:BB:694:U:C6	2.37	0.60
52:BW:23:LYS:HD2	52:BW:24:ARG:N	2.15	0.60
45:DS:17:VAL:C	45:DS:19:LEU:H	2.05	0.60
23:DB:275:C:H2'	23:DB:276:U:N1	2.17	0.60
32:D4:7:VAL:HG13	32:D4:8:LYS:N	2.13	0.60
29:DE:176:ASP:O	29:DE:180:LEU:HG	2.01	0.60
23:DB:870:U:O2'	23:DB:871:U:H5'	2.02	0.60
1:CA:590:U:H2'	1:CA:591:U:H6	1.67	0.60
37:DL:110:VAL:HG23	37:DL:126:ARG:O	2.02	0.60
1:CA:1432:G:H1'	1:CA:1468:A:H61	1.67	0.60
23:BB:1727:C:H2'	23:BB:1728:C:C6	2.37	0.60
48:DG:87:GLN:HE21	48:DG:164:ALA:HA	1.67	0.60
20:AB:119:GLN:HA	20:AB:124:THR:OG1	2.01	0.60
38:DM:40:ARG:HB2	38:DM:93:VAL:CG2	2.32	0.60
23:BB:2092:U:H4'	23:BB:2093:G:O5'	2.02	0.60
14:CO:53:ARG:HG3	14:CO:57:LEU:HD13	1.84	0.60
26:BD:136:ASN:HD21	26:BD:139:SER:C	2.05	0.60
20:CB:127:LYS:HD2	20:CB:127:LYS:O	2.02	0.60
5:AF:16:GLU:H	5:AF:16:GLU:CD	2.05	0.60
1:CA:83:C:O2'	1:CA:84:U:H2'	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DE:69:ARG:O	29:DE:70:SER:HB3	2.02	0.60
33:D1:33:LEU:HB3	33:D1:51:ALA:CB	2.32	0.60
41:DJ:11:VAL:HG11	41:DJ:13:ARG:HE	1.67	0.60
37:BL:123:ARG:HA	37:BL:143:GLU:CB	2.29	0.60
41:BJ:93:ILE:O	41:BJ:97:PRO:HG3	2.02	0.60
2:CC:63:ILE:HD11	2:CC:96:VAL:HG23	1.84	0.60
47:BF:31:GLU:HB3	47:BF:156:THR:O	2.02	0.60
47:BF:91:ARG:HD3	47:BF:91:ARG:N	2.17	0.60
52:BW:77:LYS:O	52:BW:78:PHE:HB2	2.01	0.60
23:DB:1442:U:H2'	23:DB:1443:U:C6	2.35	0.60
1:AA:481:G:HO2'	1:AA:482:A:H8	1.50	0.60
28:BP:52:ARG:HH11	28:BP:52:ARG:HG2	1.65	0.60
1:CA:1019:A:H2'	1:CA:1020:G:C8	2.37	0.60
38:BM:43:ALA:O	38:BM:46:ILE:HG12	2.01	0.60
1:CA:190:A:H2'	1:CA:191:G:O4'	2.02	0.60
23:BB:1847:A:H4'	23:BB:1848:A:C8	2.37	0.60
4:AE:95:MET:HG3	4:AE:124:ALA:HB2	1.84	0.60
2:AC:19:SER:HB3	2:AC:21:TRP:HE1	1.65	0.60
23:DB:98:G:H2'	23:DB:99:U:H5''	1.83	0.60
28:DP:97:TYR:O	28:DP:100:ARG:HB2	2.02	0.60
1:CA:484:G:H4'	1:CA:485:U:H5''	1.84	0.60
23:BB:1419:A:H2'	23:BB:1421:G:N7	2.17	0.60
46:BU:60:LYS:HA	46:BU:60:LYS:HE2	1.83	0.60
23:DB:1930:G:N2	23:DB:1968:G:H2'	2.17	0.60
1:CA:1405:G:O2'	1:CA:1406:U:H5'	2.01	0.60
24:DI:1:ALA:C	24:DI:2:LYS:HD2	2.22	0.59
13:CN:48:GLN:O	13:CN:51:PRO:HD2	2.02	0.59
45:DS:15:GLN:HA	45:DS:18:ARG:HG2	1.84	0.59
39:BX:7:ARG:HH11	39:BX:7:ARG:HB2	1.66	0.59
37:BL:6:LEU:H	37:BL:6:LEU:CD2	2.13	0.59
23:DB:2675:A:N1	23:DB:2732:G:O6	2.35	0.59
41:BJ:58:ASN:HA	41:BJ:127:GLY:CA	2.31	0.59
13:CN:71:GLY:O	13:CN:79:SER:HA	2.02	0.59
35:BV:9:ARG:HH22	35:BV:12:GLN:HA	1.67	0.59
47:DF:90:LEU:C	47:DF:91:ARG:HD3	2.21	0.59
1:CA:108:G:C6	19:CT:9:ARG:HG2	2.38	0.59
1:AA:108:G:C6	19:AT:9:ARG:HG2	2.37	0.59
7:CH:11:THR:HA	7:CH:14:ARG:NH1	2.17	0.59
9:CJ:37:ARG:NE	9:CJ:37:ARG:HA	2.17	0.59
23:DB:2814:A:H2'	23:DB:2815:C:H6	1.67	0.59
38:DM:61:GLY:HA2	38:DM:107:GLY:HA3	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:97:LEU:HB2	3:CD:134:TYR:HB3	1.84	0.59
23:DB:2033:A:O2'	23:DB:2035:G:OP2	2.18	0.59
6:CG:71:THR:HG22	6:CG:141:HIS:NE2	2.17	0.59
23:DB:1346:G:O2'	23:DB:1347:A:H5'	2.02	0.59
23:DB:165:A:H2'	23:DB:166:U:H6	1.67	0.59
23:BB:83:A:N1	23:BB:101:A:H5'	2.17	0.59
1:AA:131:A:H2'	1:AA:132:C:C6	2.36	0.59
20:CB:122:ASP:OD2	20:CB:124:THR:HG22	2.02	0.59
1:CA:882:C:O2'	1:CA:883:C:H5'	2.02	0.59
44:DQ:63:ARG:HH12	44:DQ:96:ASP:HB2	1.67	0.59
49:DR:4:VAL:O	49:DR:38:VAL:HA	2.03	0.59
50:BT:31:VAL:HA	50:BT:84:TYR:H	1.66	0.59
14:CO:25:THR:HB	14:CO:70:LEU:HD23	1.82	0.59
23:DB:62:U:O2	23:DB:62:U:H2'	2.01	0.59
1:CA:1001:C:H2'	1:CA:1002:G:H8	1.67	0.59
23:DB:918:A:H2'	23:DB:919:U:H5'	1.84	0.59
4:AE:155:LYS:O	4:AE:158:LYS:HE3	2.02	0.59
1:AA:57:G:H2'	1:AA:58:C:C6	2.37	0.59
1:CA:812:G:O2'	1:CA:813:U:H6	1.85	0.59
2:AC:129:PHE:CE2	2:AC:156:LEU:HD13	2.37	0.59
23:BB:2809:A:H2'	23:BB:2810:A:C8	2.37	0.59
23:BB:2070:A:H2'	23:BB:2071:A:C8	2.37	0.59
23:DB:1826:G:H2'	23:DB:1827:U:C6	2.37	0.59
23:BB:2531:A:H5''	48:BG:156:TYR:CZ	2.37	0.59
37:DL:131:ALA:C	37:DL:133:ALA:H	2.05	0.59
23:DB:1599:U:H2'	23:DB:1600:C:C6	2.37	0.59
23:DB:2737:G:H2'	23:DB:2738:A:C8	2.38	0.59
23:DB:1268:A:H2'	23:DB:1269:A:O4'	2.02	0.59
23:BB:1229:C:H2'	23:BB:1230:A:H8	1.67	0.59
40:BH:31:VAL:CB	40:BH:32:PRO:CD	2.78	0.59
51:BZ:77:LYS:HD2	51:BZ:78:TYR:H	1.66	0.59
46:BU:86:PHE:HE1	46:BU:88:ASP:HB3	1.67	0.59
50:BT:57:VAL:HG22	50:BT:58:VAL:N	2.14	0.59
50:BT:54:GLU:CB	50:BT:88:LYS:HB2	2.32	0.59
24:DI:112:LYS:O	24:DI:116:MET:HG3	2.02	0.59
18:CS:28:LYS:HB2	18:CS:29:PRO:HD2	1.84	0.59
23:DB:2267:A:C8	23:DB:2267:A:O5'	2.54	0.59
23:DB:27:G:HO2'	23:DB:28:A:H8	1.50	0.59
23:DB:2898:U:H2'	23:DB:2899:A:H8	1.67	0.59
3:CD:116:LEU:HD21	3:CD:153:ARG:HD2	1.83	0.59
23:DB:1012:U:O4	41:DJ:30:THR:HG21	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DJ:25:LEU:HD13	41:DJ:26:GLY:N	2.16	0.59
23:DB:1590:A:H2'	23:DB:1591:A:H8	1.67	0.59
29:DE:58:LYS:HB2	29:DE:58:LYS:HZ3	1.67	0.59
23:DB:2052:A:OP1	26:DD:145:SER:HA	2.01	0.59
23:DB:1549:A:H2'	23:DB:1550:C:C6	2.38	0.59
23:DB:1550:C:H2'	23:DB:1551:A:H8	1.68	0.59
35:BV:44:HIS:CE1	35:BV:85:LYS:HB2	2.38	0.59
48:DG:120:ILE:HD11	48:DG:132:LEU:HB2	1.83	0.59
48:DG:84:LYS:HG3	48:DG:131:VAL:HB	1.84	0.59
6:CG:78:ARG:NH1	6:CG:82:SER:H	2.00	0.59
22:DA:32:U:C4'	22:DA:52:A:H62	2.16	0.59
25:BC:211:ARG:C	25:BC:213:ARG:H	2.05	0.59
23:BB:2329:U:H2'	23:BB:2330:G:C8	2.37	0.59
23:DB:1722:A:H2'	23:DB:1723:G:C8	2.37	0.59
7:AH:6:ILE:HB	7:AH:76:ARG:NH1	2.16	0.59
20:AB:121:GLN:HE21	20:AB:122:ASP:HB2	1.67	0.59
39:DX:5:GLU:O	39:DX:8:GLU:HG2	2.01	0.59
23:DB:2636:C:H4'	26:DD:81:GLU:OE2	2.02	0.59
23:DB:825:A:O2'	37:DL:54:GLN:HB3	2.03	0.59
8:CI:14:SER:HA	8:CI:68:GLY:O	2.01	0.59
23:BB:864:G:O2'	23:BB:865:C:H5'	2.02	0.59
8:AI:14:SER:HA	8:AI:68:GLY:O	2.02	0.59
1:CA:21:G:H2'	1:CA:22:G:C8	2.37	0.59
24:BI:5:GLN:HG2	24:BI:6:ALA:N	2.17	0.59
1:AA:1035:A:H2'	1:AA:1036:A:H8	1.67	0.59
23:DB:2652:C:H2'	23:DB:2653:U:O4'	2.02	0.59
1:CA:382:A:H2'	1:CA:383:A:C8	2.37	0.59
2:CC:19:SER:HB3	2:CC:21:TRP:HE1	1.66	0.59
23:BB:131:A:H2'	23:BB:132:G:H8	1.67	0.59
23:DB:589:U:H2'	23:DB:590:A:C8	2.36	0.59
13:CN:40:ARG:CZ	18:CS:6:LYS:HB2	2.32	0.59
25:DC:117:SER:HB3	25:DC:128:THR:HB	1.85	0.59
29:BE:158:PHE:HA	29:BE:169:VAL:HG21	1.83	0.59
23:BB:2895:G:H2'	23:BB:2896:C:C6	2.38	0.59
27:DK:60:ALA:HA	27:DK:87:LEU:HD23	1.85	0.59
4:AE:132:PRO:O	4:AE:136:VAL:HG12	2.02	0.59
9:AJ:65:TYR:OH	13:AN:84:ARG:HG3	2.03	0.59
23:BB:2264:C:N4	52:BW:11:ASN:HD21	1.99	0.59
3:CD:90:LEU:HA	3:CD:93:LEU:HD12	1.83	0.59
34:D3:22:LYS:HA	34:D3:48:MET:HA	1.83	0.59
23:BB:3:U:HO2'	23:BB:4:U:H6	1.48	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1053:G:C3'	1:AA:1054:C:H5'	2.32	0.59
23:DB:794:A:H2'	23:DB:795:C:H6	1.68	0.59
11:AL:106:VAL:HG23	11:AL:116:TYR:HB3	1.84	0.59
23:BB:1930:G:N2	23:BB:1968:G:H2'	2.17	0.59
23:DB:2411:A:H2'	23:DB:2412:A:C8	2.37	0.59
20:AB:213:LEU:O	20:AB:216:VAL:HG22	2.02	0.59
1:AA:80:A:N3	1:AA:81:A:H1'	2.18	0.59
24:BI:27:LEU:CD2	24:BI:27:LEU:H	2.14	0.59
22:BA:52:A:OP1	22:BA:52:A:H4'	2.03	0.59
23:BB:2443:C:O2'	23:BB:2444:G:H5'	2.02	0.59
1:AA:763:G:H2'	1:AA:764:C:C6	2.37	0.59
23:DB:871:U:H2'	23:DB:872:U:C6	2.36	0.59
8:CI:46:VAL:HA	8:CI:49:GLN:HG3	1.85	0.59
25:DC:242:HIS:O	25:DC:244:VAL:HG13	2.02	0.59
1:AA:45:G:H2'	1:AA:46:G:C8	2.35	0.59
47:DF:141:ASP:CB	47:DF:144:LYS:HB2	2.32	0.59
1:CA:312:C:H2'	1:CA:313:A:C8	2.36	0.59
1:CA:204:G:H2'	1:CA:205:A:C8	2.38	0.59
23:BB:129:C:H2'	23:BB:130:C:C6	2.38	0.59
23:DB:1794:A:H2'	23:DB:1795:C:C6	2.37	0.59
23:DB:1794:A:H2'	23:DB:1795:C:H6	1.67	0.59
41:BJ:11:VAL:HG11	41:BJ:13:ARG:HE	1.68	0.59
23:DB:1275:A:H2'	23:DB:1276:A:O4'	2.02	0.59
29:BE:21:ARG:HG3	29:BE:22:ASP:N	2.17	0.59
23:DB:560:C:H2'	23:DB:561:G:O4'	2.03	0.59
23:DB:1564:C:O2'	23:DB:1565:C:H5'	2.03	0.59
1:AA:1163:A:H2'	1:AA:1164:G:H8	1.67	0.59
1:AA:160:A:H2'	1:AA:161:A:O4'	2.03	0.59
11:AL:85:ARG:HA	11:AL:93:ARG:HA	1.83	0.59
51:DZ:30:LEU:HD23	51:DZ:30:LEU:H	1.68	0.59
40:BH:27:ARG:H	40:BH:31:VAL:HG21	1.67	0.59
28:DP:4:ILE:O	28:DP:6:GLN:N	2.34	0.59
10:CK:127:ARG:HH11	10:CK:127:ARG:HG3	1.67	0.59
24:DI:108:ILE:HG22	24:DI:128:ILE:HD13	1.84	0.59
20:AB:202:ASN:C	20:AB:202:ASN:HD22	2.05	0.59
48:BG:166:GLU:CG	48:BG:168:VAL:HG23	2.33	0.59
23:DB:784:G:N1	25:DC:227:VAL:HG11	2.17	0.59
1:CA:268:U:H2'	1:CA:269:C:C6	2.38	0.59
1:AA:539:A:H2'	1:AA:540:G:H8	1.67	0.59
38:BM:66:ARG:CZ	38:BM:101:VAL:HG11	2.32	0.59
23:DB:254:G:N2	34:D3:7:ARG:HH21	2.00	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DP:89:GLY:HA2	28:DP:112:ARG:N	2.16	0.59
29:BE:5:LEU:HD12	29:BE:10:SER:HB2	1.84	0.59
23:DB:590:A:H2'	23:DB:591:U:C6	2.37	0.59
1:AA:1163:A:H2'	1:AA:1164:G:C8	2.37	0.59
23:BB:2557:G:H2'	23:BB:2558:C:C6	2.38	0.59
1:CA:719:C:O2'	17:CR:37:LYS:HB2	2.02	0.59
41:BJ:40:HIS:CE1	41:BJ:41:LYS:HG3	2.38	0.59
23:BB:1097:U:H2'	23:BB:1098:A:H5'	1.84	0.59
23:DB:264:C:O2'	23:DB:265:A:H5''	2.02	0.59
20:CB:80:LYS:HG3	20:CB:81:ASP:H	1.66	0.59
1:CA:328:C:H4'	1:CA:329:A:H5''	1.83	0.59
5:AF:4:TYR:CE2	5:AF:71:ILE:HG21	2.37	0.59
23:DB:850:U:H2'	23:DB:851:C:C6	2.38	0.59
20:CB:60:ALA:HB1	20:CB:220:VAL:HG13	1.85	0.59
25:DC:170:TYR:HE2	25:DC:184:GLU:HG2	1.68	0.59
44:DQ:56:PHE:O	44:DQ:59:LEU:HB3	2.02	0.59
39:DX:34:SER:HB2	39:DX:36:GLN:OE1	2.03	0.59
50:DT:43:ILE:O	50:DT:47:VAL:HG23	2.03	0.59
21:CU:19:LYS:HB2	21:CU:20:ARG:HE	1.67	0.59
49:BR:4:VAL:O	49:BR:38:VAL:HA	2.02	0.59
50:BT:61:LEU:HG	50:BT:82:LYS:HB2	1.83	0.59
26:DD:20:VAL:HG22	27:DK:72:PRO:HB3	1.84	0.59
23:DB:360:U:H2'	23:DB:361:G:C1'	2.33	0.59
47:BF:103:ILE:HD11	47:BF:174:PHE:HA	1.84	0.59
23:DB:1082:U:C2	23:DB:1086:A:C6	2.90	0.59
26:BD:148:GLN:HG3	26:BD:152:PRO:CG	2.32	0.59
34:B3:22:LYS:HB2	34:B3:48:MET:SD	2.43	0.59
23:BB:871:U:H2'	23:BB:872:U:C6	2.38	0.59
23:DB:2064:C:H2'	23:DB:2065:C:C6	2.38	0.59
23:BB:1104:C:H2'	23:BB:1105:U:H6	1.66	0.59
23:BB:782:A:N3	25:BC:224:MET:HB3	2.18	0.59
6:AG:77:ARG:HG3	6:AG:79:VAL:HG23	1.83	0.59
1:CA:625:U:H4'	15:CP:16:PHE:CE2	2.38	0.59
1:CA:376:G:H2'	1:CA:377:G:H8	1.67	0.59
28:BP:97:TYR:O	28:BP:100:ARG:HB2	2.03	0.59
9:CJ:40:ILE:HD12	9:CJ:73:LEU:HD12	1.83	0.59
23:BB:1001:A:H2'	23:BB:1002:G:O4'	2.02	0.59
23:DB:69:C:O2'	23:DB:70:G:H5'	2.01	0.59
40:DH:31:VAL:CB	40:DH:32:PRO:CD	2.78	0.59
52:DW:49:ASN:O	52:DW:50:VAL:HG13	2.03	0.59
26:DD:10:GLY:CA	26:DD:26:VAL:H	2.06	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1245:G:OP1	37:BL:13:LYS:HE3	2.03	0.59
23:BB:145:C:H2'	23:BB:146:A:C8	2.38	0.59
23:BB:1082:U:C2	23:BB:1086:A:C6	2.91	0.59
23:BB:63:A:H8	23:BB:63:A:OP2	1.84	0.59
23:BB:784:G:H21	25:BC:225:ASN:HD22	1.51	0.59
50:BT:12:ARG:NH1	50:BT:12:ARG:HB3	2.17	0.59
1:AA:664:G:H22	1:AA:741:G:H1	1.51	0.59
23:DB:171:U:H2'	23:DB:172:A:H8	1.68	0.59
46:BU:81:ARG:HH21	46:BU:81:ARG:H	1.51	0.59
46:BU:32:LYS:HA	46:BU:65:GLN:HA	1.83	0.59
43:DO:24:THR:HG22	43:DO:42:PRO:HD3	1.83	0.59
46:BU:13:LEU:HD12	46:BU:13:LEU:H	1.68	0.59
24:BI:89:SER:HB2	24:BI:136:GLY:HA3	1.84	0.59
7:CH:6:ILE:HD12	7:CH:35:ILE:HD11	1.84	0.59
37:DL:136:GLU:HA	37:DL:140:GLY:H	1.66	0.59
23:BB:947:A:H2'	23:BB:948:C:H6	1.68	0.59
23:BB:1709:U:H2'	23:BB:1710:G:H8	1.67	0.59
1:AA:1151:A:HO2'	1:AA:1152:A:H8	1.50	0.59
1:AA:926:G:N2	1:AA:1505:G:H2'	2.18	0.59
23:DB:145:C:H2'	23:DB:146:A:H8	1.68	0.59
23:BB:2760:C:O2'	23:BB:2761:A:H5'	2.03	0.59
1:CA:35:G:H2'	1:CA:36:C:C6	2.38	0.59
45:BS:31:GLN:O	45:BS:35:ILE:HG12	2.02	0.59
49:BR:76:LYS:HB2	49:BR:85:LYS:HB2	1.83	0.59
20:CB:72:LYS:O	20:CB:76:SER:HB2	2.02	0.59
34:B3:44:ARG:N	34:B3:45:PRO:HD2	2.16	0.59
2:AC:81:GLU:HG3	2:AC:82:ASP:N	2.18	0.59
1:AA:1279:G:H5''	9:AJ:9:ARG:NH2	2.17	0.59
23:DB:855:G:H21	52:DW:23:LYS:CG	2.07	0.59
17:AR:64:LEU:HB3	17:AR:66:LEU:HG	1.85	0.59
29:DE:196:VAL:O	29:DE:200:LEU:HD23	2.03	0.59
50:DT:39:THR:CG2	50:DT:42:GLU:H	2.15	0.59
48:BG:15:ASP:CB	48:BG:26:LYS:H	2.14	0.59
35:DV:62:THR:HB	35:DV:71:LYS:HG2	1.84	0.59
41:BJ:112:GLY:H	41:BJ:113:PRO:HD2	1.68	0.59
13:AN:42:ASN:O	13:AN:46:LYS:HG3	2.03	0.59
23:DB:115:C:O2'	23:DB:116:C:H5'	2.03	0.59
25:BC:76:VAL:CG1	25:BC:114:GLN:HG2	2.31	0.59
23:DB:2679:A:O2'	23:DB:2680:U:H5'	2.03	0.59
1:AA:1001:C:H2'	1:AA:1002:G:H8	1.67	0.59
23:BB:675:A:H4'	29:BE:62:GLN:HE22	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2809:A:H2'	23:DB:2810:A:C8	2.38	0.59
17:CR:64:LEU:HB3	17:CR:66:LEU:HG	1.84	0.59
1:AA:1289:A:H61	8:AI:71:ILE:HD11	1.68	0.59
22:DA:52:A:H4'	22:DA:52:A:OP1	2.01	0.59
19:AT:66:ILE:HG23	19:AT:70:LYS:HB3	1.85	0.59
37:BL:110:VAL:HG23	37:BL:126:ARG:O	2.02	0.59
46:BU:53:GLN:O	46:BU:53:GLN:HG2	2.03	0.59
23:BB:2066:C:O2'	23:BB:2067:G:H5'	2.03	0.59
48:BG:87:GLN:HG2	48:BG:164:ALA:HA	1.83	0.59
25:DC:69:ASN:O	25:DC:70:LYS:C	2.41	0.59
23:BB:527:C:H5'	56:BB:3417:HOH:O	2.02	0.59
11:AL:82:ARG:HH11	11:AL:82:ARG:HG2	1.66	0.59
23:BB:2758:A:H2'	23:BB:2759:G:H5'	1.84	0.59
17:CR:41:SER:HB2	17:CR:51:GLN:HG2	1.85	0.59
1:CA:560:A:H4'	1:CA:561:U:H5''	1.83	0.59
23:DB:2756:U:H1'	23:DB:2757:A:H5''	1.85	0.59
23:BB:1210:G:H5'	23:BB:1212:G:O4'	2.02	0.59
23:BB:414:C:H2'	23:BB:415:A:C8	2.37	0.59
20:AB:103:TRP:O	20:AB:107:ARG:HG2	2.02	0.59
21:AU:19:LYS:HB2	21:AU:20:ARG:HE	1.68	0.59
25:BC:4:LYS:HD3	25:BC:16:VAL:HG22	1.85	0.59
23:BB:1060:U:OP2	24:BI:74:PRO:HA	2.03	0.59
27:BK:118:LEU:O	27:BK:120:PRO:HD2	2.02	0.59
42:BN:33:ILE:O	42:BN:33:ILE:HD12	2.03	0.59
27:DK:113:MET:HE2	27:DK:116:ILE:HD11	1.85	0.59
6:CG:21:LEU:HG	6:CG:22:LEU:H	1.67	0.59
5:CF:53:LYS:CE	5:CF:54:LEU:H	2.16	0.59
22:BA:28:C:OP1	43:BO:31:THR:HG21	2.03	0.59
1:CA:841:C:H2'	1:CA:843:U:OP2	2.03	0.59
3:CD:197:HIS:O	3:CD:200:VAL:HG22	2.03	0.59
26:DD:13:ARG:HH12	28:DP:74:GLN:NE2	2.01	0.59
28:BP:83:ILE:HD13	28:BP:83:ILE:O	2.03	0.59
4:AE:73:VAL:HG11	4:AE:143:LEU:HB3	1.84	0.59
1:CA:664:G:H22	1:CA:741:G:H1	1.50	0.59
1:CA:518:C:H2'	1:CA:530:G:C8	2.38	0.59
23:DB:1993:U:H4'	26:DD:133:THR:HG22	1.83	0.59
34:D3:7:ARG:O	34:D3:11:LYS:HG3	2.03	0.59
37:BL:136:GLU:HA	37:BL:140:GLY:H	1.68	0.59
23:DB:1199:U:H2'	23:DB:1200:C:C6	2.38	0.59
23:BB:2241:A:H2'	23:BB:2242:G:C8	2.37	0.59
48:DG:37:ASN:HD22	48:DG:40:VAL:HB	1.68	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DK:7:MET:HE2	27:DK:18:ARG:NH1	2.17	0.59
23:DB:2199:A:H5'	23:DB:2200:C:OP2	2.03	0.59
1:CA:193:C:H2'	1:CA:194:C:C6	2.37	0.59
1:CA:1045:C:H2'	1:CA:1046:A:O4'	2.03	0.59
23:BB:2458:G:H1'	23:BB:2460:U:O4	2.02	0.59
52:BW:49:ASN:O	52:BW:50:VAL:HG13	2.03	0.58
8:CI:48:ARG:O	8:CI:52:GLU:HG2	2.03	0.58
13:AN:40:ARG:CZ	18:AS:6:LYS:HB2	2.32	0.58
49:DR:10:LYS:N	49:DR:10:LYS:HD2	2.18	0.58
41:BJ:45:THR:N	41:BJ:46:PRO:HD3	2.18	0.58
44:DQ:104:ALA:HA	49:DR:46:GLU:OE1	2.03	0.58
41:DJ:110:PRO:HB2	41:DJ:111:LYS:HE2	1.85	0.58
27:DK:10:VAL:HG12	27:DK:12:ASP:H	1.68	0.58
6:AG:23:ALA:O	6:AG:26:VAL:HG22	2.03	0.58
47:BF:102:LEU:HA	47:BF:106:ALA:CB	2.33	0.58
5:AF:53:LYS:CE	5:AF:54:LEU:H	2.16	0.58
23:BB:2143:C:H2'	23:BB:2144:G:H8	1.68	0.58
18:AS:28:LYS:HB2	18:AS:29:PRO:HD2	1.84	0.58
13:AN:5:MET:SD	13:AN:8:ARG:HD3	2.42	0.58
9:CJ:52:LEU:HB2	13:CN:80:ARG:HD2	1.85	0.58
36:D2:21:ARG:CD	36:D2:43:THR:HG21	2.33	0.58
23:BB:1119:U:OP1	35:BV:83:LYS:HE3	2.03	0.58
23:BB:2443:C:H2'	23:BB:2444:G:H8	1.68	0.58
39:BX:14:LEU:O	39:BX:18:LEU:HB2	2.03	0.58
1:AA:859:G:H2'	1:AA:860:A:H8	1.66	0.58
23:BB:753:A:H2'	23:BB:754:U:H6	1.68	0.58
23:DB:1827:U:C2'	23:DB:1828:G:H5'	2.33	0.58
29:BE:98:LYS:HZ1	29:BE:99:LYS:HE3	1.68	0.58
23:DB:2557:G:H2'	23:DB:2558:C:C6	2.38	0.58
29:DE:5:LEU:CD1	29:DE:10:SER:HB2	2.33	0.58
23:BB:322:A:H3'	29:BE:163:ASN:HD21	1.68	0.58
10:CK:30:ILE:HG22	10:CK:45:THR:OG1	2.03	0.58
1:CA:834:U:H2'	1:CA:835:U:C6	2.36	0.58
3:CD:60:VAL:HA	3:CD:63:ILE:HD12	1.85	0.58
47:DF:15:LEU:HD22	47:DF:167:ALA:HB1	1.84	0.58
50:BT:8:LEU:HD22	50:BT:46:ALA:HA	1.86	0.58
29:BE:195:GLN:O	29:BE:198:GLU:HG2	2.03	0.58
37:BL:143:GLU:HG2	37:BL:144:GLU:N	2.16	0.58
23:DB:345:A:H1'	23:DB:346:A:C2	2.38	0.58
36:B2:21:ARG:CD	36:B2:43:THR:HG21	2.33	0.58
40:DH:113:SER:HB2	40:DH:132:PHE:HZ	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:44:ILE:HA	40:BH:51:ARG:NH2	2.18	0.58
35:DV:72:VAL:HB	35:DV:92:VAL:O	2.04	0.58
1:AA:1342:C:H2'	1:AA:1343:G:C8	2.38	0.58
23:BB:1549:A:H2'	23:BB:1550:C:C6	2.38	0.58
23:DB:2143:C:H2'	23:DB:2144:G:O4'	2.03	0.58
1:AA:1078:U:H2'	1:AA:1079:G:O4'	2.03	0.58
23:BB:181:A:H2'	23:BB:182:A:H8	1.66	0.58
23:BB:1283:G:N2	23:BB:1286:A:H5'	2.17	0.58
26:DD:8:LYS:CD	26:DD:197:THR:H	2.17	0.58
26:DD:27:ILE:HG23	26:DD:201:LEU:HD12	1.85	0.58
23:DB:222:A:H61	23:DB:232:G:H1'	1.68	0.58
1:AA:1464:U:P	28:BP:108:ARG:HH22	2.25	0.58
47:DF:141:ASP:O	47:DF:145:VAL:HG13	2.02	0.58
1:AA:502:A:H2'	1:AA:503:C:H6	1.66	0.58
44:BQ:9:ALA:C	44:BQ:11:ALA:H	2.06	0.58
4:CE:95:MET:HA	4:CE:124:ALA:HB2	1.86	0.58
1:CA:1437:A:H2'	1:CA:1438:G:H8	1.69	0.58
23:BB:441:U:H2'	23:BB:442:G:C8	2.38	0.58
1:CA:301:G:H2'	1:CA:302:G:H8	1.67	0.58
23:BB:1733:G:H2'	23:BB:1734:G:C8	2.38	0.58
1:CA:642:A:H2'	1:CA:643:C:H6	1.68	0.58
23:BB:1657:U:O2'	23:BB:1658:C:H5'	2.04	0.58
23:DB:2008:C:H2'	23:DB:2009:A:H8	1.68	0.58
23:DB:1656:C:H2'	23:DB:1657:U:H6	1.67	0.58
23:DB:547:A:N1	23:DB:548:G:H1'	2.19	0.58
26:BD:15:PHE:H	26:BD:15:PHE:HD1	1.51	0.58
28:BP:26:GLU:HA	28:BP:43:GLU:HA	1.84	0.58
26:BD:14:ILE:HD13	26:BD:178:VAL:HG11	1.84	0.58
42:DN:38:LEU:O	42:DN:42:LYS:HG3	2.04	0.58
41:BJ:124:VAL:O	41:BJ:125:TYR:HB2	2.02	0.58
37:BL:79:LEU:CG	37:BL:112:LEU:HA	2.32	0.58
23:BB:559:G:OP1	41:BJ:111:LYS:HD3	2.03	0.58
3:AD:154:VAL:O	3:AD:158:LEU:HD12	2.03	0.58
2:AC:63:ILE:HD11	2:AC:96:VAL:HG23	1.85	0.58
41:DJ:58:ASN:HA	41:DJ:127:GLY:CA	2.33	0.58
29:BE:48:THR:HG23	29:BE:88:ARG:HH11	1.68	0.58
29:DE:48:THR:HG22	29:DE:86:ALA:HB3	1.85	0.58
23:DB:1820:U:OP1	25:DC:176:ARG:HD2	2.03	0.58
23:BB:2143:C:H2'	23:BB:2144:G:O4'	2.03	0.58
23:BB:2146:C:H1'	23:BB:2147:A:H4'	1.84	0.58
23:BB:2496:C:OP1	38:BM:82:MET:HB2	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AB:60:ALA:HB1	20:AB:220:VAL:HG13	1.85	0.58
16:AQ:45:VAL:HG21	16:AQ:60:ILE:HG21	1.86	0.58
8:AI:46:VAL:HA	8:AI:49:GLN:HG3	1.85	0.58
23:DB:222:A:N1	23:DB:233:A:H5'	2.17	0.58
2:CC:13:ILE:O	2:CC:14:VAL:HG22	2.03	0.58
46:BU:10:VAL:O	46:BU:21:ARG:HA	2.03	0.58
48:BG:148:ARG:HD3	48:BG:152:ARG:CZ	2.32	0.58
23:DB:753:A:H2'	23:DB:754:U:H6	1.68	0.58
5:CF:47:LEU:HD21	5:CF:57:ALA:HB3	1.85	0.58
9:AJ:67:ILE:HG12	13:AN:94:GLY:O	2.04	0.58
28:DP:24:THR:O	28:DP:25:VAL:HG22	2.03	0.58
11:CL:106:VAL:HG23	11:CL:116:TYR:HB3	1.84	0.58
23:DB:1230:A:H2'	23:DB:1231:U:C6	2.38	0.58
8:CI:33:SER:HB3	8:CI:36:GLN:HB2	1.84	0.58
23:BB:2033:A:H3'	56:BB:3539:HOH:O	2.03	0.58
23:DB:1354:A:H2'	23:DB:1355:G:O4'	2.02	0.58
1:AA:1045:C:H2'	1:AA:1046:A:O4'	2.03	0.58
1:AA:1488:G:O2'	1:AA:1489:G:H5'	2.03	0.58
27:DK:14:SER:HB2	27:DK:51:LYS:H	1.68	0.58
19:CT:66:ILE:HG13	19:CT:70:LYS:HE3	1.84	0.58
48:DG:95:ALA:HB2	48:DG:130:ILE:HD11	1.86	0.58
23:BB:2547:A:H2'	23:BB:2548:U:C6	2.38	0.58
26:BD:10:GLY:CA	26:BD:26:VAL:H	2.06	0.58
26:BD:105:LYS:H	26:BD:106:LYS:NZ	2.01	0.58
29:BE:161:ALA:HA	29:BE:164:LEU:HB2	1.85	0.58
50:DT:32:LEU:O	50:DT:83:ALA:HB2	2.03	0.58
47:DF:66:ILE:HD11	47:DF:83:PRO:HB3	1.85	0.58
37:BL:143:GLU:CG	37:BL:144:GLU:H	2.11	0.58
50:BT:59:ASN:O	50:BT:84:TYR:HB2	2.03	0.58
12:AM:13:HIS:HB2	12:AM:16:ILE:HG22	1.85	0.58
27:DK:43:ILE:HG22	27:DK:54:LYS:HA	1.86	0.58
41:DJ:112:GLY:H	41:DJ:113:PRO:HD2	1.68	0.58
27:BK:60:ALA:HA	27:BK:87:LEU:HD23	1.84	0.58
40:DH:93:SER:O	40:DH:94:ILE:HD12	2.02	0.58
47:DF:103:ILE:HD11	47:DF:174:PHE:HA	1.84	0.58
14:CO:81:LEU:HD23	14:CO:85:LEU:HD13	1.85	0.58
23:DB:63:A:H2'	23:DB:63:A:OP2	2.03	0.58
47:DF:33:ILE:HD13	47:DF:95:MET:HG2	1.85	0.58
1:CA:1342:C:H2'	1:CA:1343:G:C8	2.38	0.58
24:DI:125:THR:O	24:DI:129:GLU:HG3	2.03	0.58
9:AJ:18:ILE:HG23	9:AJ:19:ASP:N	2.18	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2820:A:OP1	42:BN:4:ARG:HA	2.02	0.58
35:DV:44:HIS:CE1	35:DV:86:LEU:H	2.20	0.58
22:DA:54:G:O2'	22:DA:55:U:H5'	2.02	0.58
22:BA:106:G:H2'	22:BA:107:G:C8	2.39	0.58
19:AT:49:ALA:O	19:AT:52:GLU:HG2	2.04	0.58
25:DC:158:GLY:H	25:DC:194:VAL:HG13	1.69	0.58
25:DC:173:LEU:H	25:DC:173:LEU:CD2	2.17	0.58
23:BB:581:C:H2'	23:BB:582:A:H8	1.68	0.58
2:CC:129:PHE:CE2	2:CC:156:LEU:HD13	2.38	0.58
14:AO:53:ARG:HD2	23:BB:715:A:N6	2.19	0.58
23:BB:948:C:H2'	23:BB:949:G:C8	2.38	0.58
48:DG:152:ARG:HH22	48:DG:162:ARG:HA	1.68	0.58
1:AA:21:G:H2'	1:AA:22:G:C8	2.38	0.58
9:CJ:41:PRO:O	9:CJ:42:LEU:HB2	2.02	0.58
25:DC:78:GLU:OE1	25:DC:94:LEU:HD22	2.04	0.58
23:BB:264:C:O2'	23:BB:265:A:H5''	2.02	0.58
7:AH:79:ARG:HB2	7:AH:80:PRO:HD2	1.85	0.58
23:DB:1419:A:H2'	23:DB:1421:G:N7	2.19	0.58
23:DB:609:A:H2'	23:DB:610:C:O4'	2.02	0.58
51:BZ:7:VAL:HG13	51:BZ:8:THR:CG2	2.33	0.58
52:BW:39:GLN:NE2	52:BW:42:THR:HB	2.15	0.58
37:DL:79:LEU:CG	37:DL:112:LEU:HA	2.30	0.58
25:DC:141:HIS:CG	25:DC:142:ASN:H	2.22	0.58
39:BX:34:SER:HB2	39:BX:36:GLN:OE1	2.04	0.58
40:BH:132:PHE:HB2	40:BH:142:VAL:HG23	1.85	0.58
20:AB:204:ASP:CG	20:AB:205:ALA:H	2.06	0.58
41:DJ:114:LEU:O	41:DJ:118:MET:HE3	2.03	0.58
31:D0:38:LEU:HD13	31:D0:41:HIS:NE2	2.19	0.58
1:AA:1342:C:H2'	1:AA:1343:G:H8	1.68	0.58
1:CA:1004:A:H5'	1:CA:1025:U:O2	2.04	0.58
1:AA:474:G:H2'	1:AA:475:C:C6	2.38	0.58
23:BB:1464:G:H2'	23:BB:1465:G:C8	2.38	0.58
23:DB:21:A:H2'	23:DB:22:C:C6	2.39	0.58
1:CA:1162:C:H2'	1:CA:1163:A:C8	2.39	0.58
23:BB:1826:G:H2'	23:BB:1827:U:C6	2.38	0.58
1:AA:22:G:H2'	1:AA:23:C:H6	1.69	0.58
9:AJ:40:ILE:HD12	9:AJ:73:LEU:HD12	1.84	0.58
8:CI:11:ARG:HE	8:CI:12:LYS:HG3	1.67	0.58
23:BB:165:A:H2'	23:BB:166:U:H6	1.69	0.58
44:DQ:10:ARG:HB2	44:DQ:10:ARG:NH1	2.18	0.58
14:CO:55:GLY:O	14:CO:59:MET:HG2	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2653:U:O2'	48:BG:109:SER:HB2	2.03	0.58
23:BB:445:C:O2'	23:BB:446:G:H5'	2.03	0.58
23:DB:1796:U:H2'	23:DB:1797:G:H8	1.68	0.58
1:CA:1450:U:H2'	1:CA:1452:C:C4	2.37	0.58
1:AA:1532:U:C2	1:AA:1534:A:H5'	2.39	0.58
21:CU:42:THR:O	21:CU:46:ARG:HG3	2.02	0.58
1:CA:1279:G:H5''	9:CJ:9:ARG:NH2	2.18	0.58
26:BD:11:MET:HE1	26:BD:192:ALA:H	1.69	0.58
8:CI:47:VAL:HG23	8:CI:48:ARG:HG3	1.86	0.58
5:AF:6:ILE:HD11	5:AF:8:PHE:HD2	1.67	0.58
50:DT:5:GLU:HA	50:DT:8:LEU:CB	2.28	0.58
21:AU:24:LYS:HB3	21:AU:24:LYS:NZ	2.18	0.58
20:CB:195:VAL:HG12	20:CB:197:PHE:H	1.69	0.58
20:CB:204:ASP:CG	20:CB:205:ALA:H	2.06	0.58
45:BS:17:VAL:C	45:BS:19:LEU:H	2.07	0.58
27:DK:115:ILE:HG23	27:DK:116:ILE:N	2.18	0.58
1:AA:1361:G:C2'	1:AA:1362:A:H5''	2.33	0.58
1:CA:1342:C:H2'	1:CA:1343:G:H8	1.69	0.58
23:BB:1047:G:HO2'	23:BB:1048:A:P	2.26	0.58
1:CA:237:G:H2'	1:CA:238:A:H8	1.69	0.58
23:BB:1444:G:H2'	23:BB:1445:G:H8	1.69	0.58
23:BB:979:A:H2'	23:BB:982:C:N4	2.18	0.58
11:AL:54:VAL:CG2	11:AL:79:ILE:HD11	2.34	0.58
23:DB:419:U:H2'	23:DB:420:C:C6	2.38	0.58
23:BB:946:C:H2'	23:BB:947:A:H8	1.69	0.58
48:DG:152:ARG:HG3	48:DG:153:PRO:HD2	1.86	0.58
7:AH:10:LEU:HD22	7:AH:74:ILE:HD11	1.85	0.58
23:DB:523:C:H4'	23:DB:540:C:O2	2.04	0.58
29:BE:98:LYS:NZ	29:BE:99:LYS:HE3	2.18	0.58
20:AB:23:ASN:HD22	20:AB:24:PRO:HD2	1.68	0.58
1:CA:777:A:H2'	1:CA:778:G:H8	1.68	0.58
24:BI:109:ALA:HB1	24:BI:124:MET:HG3	1.85	0.58
23:BB:98:G:H2'	23:BB:99:U:H5''	1.85	0.58
46:BU:86:PHE:HD1	46:BU:88:ASP:H	1.48	0.58
8:AI:24:ASN:CG	8:AI:25:GLY:H	2.07	0.58
52:DW:7:GLY:C	52:DW:10:ARG:HH12	2.07	0.58
50:DT:44:LYS:O	50:DT:48:GLN:HG2	2.02	0.58
41:DJ:124:VAL:O	41:DJ:125:TYR:HB2	2.02	0.58
41:DJ:55:ILE:HG13	41:DJ:55:ILE:O	2.03	0.58
24:DI:71:LYS:HB3	24:DI:115:ASP:OD2	2.03	0.58
12:CM:70:ARG:CZ	47:DF:142:TYR:HB3	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:32:U:C4'	22:BA:52:A:H62	2.15	0.58
47:DF:34:THR:OG1	47:DF:154:THR:HB	2.04	0.58
26:BD:34:VAL:HB	26:BD:48:ILE:HD11	1.86	0.58
48:DG:166:GLU:CG	48:DG:168:VAL:HG23	2.34	0.58
23:DB:1283:G:N2	23:DB:1286:A:H5'	2.17	0.58
35:DV:44:HIS:CE1	35:DV:85:LYS:HB2	2.38	0.58
1:CA:769:G:O2'	1:CA:770:C:H5'	2.04	0.58
37:DL:85:VAL:HG22	37:DL:94:THR:CG2	2.34	0.58
1:AA:518:C:H2'	1:AA:530:G:C8	2.37	0.58
1:AA:56:U:H2'	1:AA:57:G:C8	2.37	0.58
1:CA:470:C:H2'	1:CA:471:U:C6	2.39	0.58
38:BM:40:ARG:HD3	38:BM:93:VAL:HG21	1.86	0.58
23:BB:2814:A:H2'	23:BB:2815:C:H6	1.67	0.58
48:BG:148:ARG:HA	48:BG:161:VAL:HB	1.85	0.58
23:DB:2063:C:O2	23:DB:2450:A:N1	2.37	0.58
39:DX:1:MET:O	39:DX:5:GLU:HG2	2.03	0.58
23:DB:2240:U:O2'	23:DB:2241:A:H5'	2.03	0.58
25:DC:75:ALA:HB1	25:DC:93:VAL:HG22	1.84	0.58
1:CA:1151:A:HO2'	1:CA:1152:A:H8	1.49	0.58
15:AP:73:ALA:O	15:AP:77:GLU:HG3	2.04	0.58
1:AA:1307:U:H2'	1:AA:1308:U:C6	2.39	0.58
10:AK:30:ILE:HG22	10:AK:45:THR:OG1	2.02	0.58
4:AE:12:GLU:HB3	4:AE:63:MET:HE1	1.86	0.58
23:DB:445:C:O2'	23:DB:446:G:H5'	2.03	0.58
2:CC:59:PRO:HG2	2:CC:62:SER:OG	2.02	0.58
44:DQ:79:ILE:O	44:DQ:79:ILE:HD13	2.04	0.58
40:DH:99:ILE:O	40:DH:103:VAL:HG12	2.03	0.58
37:BL:131:ALA:C	37:BL:133:ALA:H	2.06	0.58
19:AT:4:LYS:HE3	19:AT:6:ALA:H	1.68	0.58
8:AI:62:LEU:N	8:AI:62:LEU:HD22	2.19	0.58
50:DT:29:THR:CA	50:DT:86:THR:HA	2.33	0.58
48:BG:34:ARG:HD3	48:BG:34:ARG:N	2.19	0.58
25:BC:141:HIS:CG	25:BC:142:ASN:H	2.22	0.58
23:BB:2896:C:H2'	23:BB:2897:U:C6	2.39	0.58
41:BJ:25:LEU:HD22	41:BJ:26:GLY:N	2.18	0.58
23:BB:1082:U:O4	23:BB:1086:A:C2	2.57	0.58
23:DB:2849:U:N3	23:DB:2867:G:C8	2.71	0.58
24:DI:45:THR:CA	24:DI:48:ILE:HG22	2.32	0.58
29:DE:158:PHE:HA	29:DE:169:VAL:HG21	1.84	0.58
25:BC:242:HIS:O	25:BC:244:VAL:HG13	2.03	0.58
44:BQ:81:GLY:HA3	44:BQ:112:ALA:HB1	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AJ:55:PRO:HA	13:AN:80:ARG:HH22	1.68	0.58
24:BI:105:LEU:HD11	24:BI:139:VAL:CG1	2.33	0.58
1:CA:1071:C:H2'	1:CA:1072:G:C8	2.39	0.58
37:BL:95:LEU:HB3	37:BL:100:ILE:HG23	1.85	0.58
38:BM:26:VAL:HG23	38:BM:104:GLU:OE2	2.04	0.58
1:CA:1011:C:H2'	1:CA:1012:A:C8	2.39	0.58
23:BB:417:C:H2'	23:BB:418:C:C6	2.37	0.58
23:BB:2646:C:H2'	23:BB:2647:U:O4'	2.03	0.58
10:CK:51:PHE:CZ	10:CK:61:ALA:HA	2.39	0.58
46:DU:10:VAL:O	46:DU:21:ARG:HA	2.04	0.58
47:DF:19:PHE:CE2	47:DF:164:GLU:HG2	2.39	0.58
23:DB:1657:U:O2'	23:DB:1658:C:H5'	2.04	0.58
23:BB:2033:A:O2'	23:BB:2035:G:OP2	2.19	0.58
23:BB:1771:C:H2'	23:BB:1772:A:H8	1.69	0.58
47:DF:35:LEU:HD23	47:DF:153:ILE:HG12	1.86	0.58
22:DA:94:A:H2'	22:DA:95:U:O4'	2.04	0.58
23:BB:1061:U:H4'	23:BB:1070:A:O3'	2.04	0.58
23:DB:322:A:H5'	23:DB:340:A:H1'	1.85	0.58
6:CG:112:ASP:HB2	6:CG:118:ARG:HG2	1.85	0.58
1:AA:868:C:H2'	1:AA:869:G:O4'	2.04	0.58
1:AA:312:C:H2'	1:AA:313:A:H8	1.68	0.58
22:DA:2:G:H2'	22:DA:3:C:C6	2.38	0.58
1:CA:1039:G:H2'	1:CA:1040:U:C6	2.39	0.58
23:BB:1794:A:H2'	23:BB:1795:C:C6	2.38	0.58
23:DB:1582:C:H2'	23:DB:1583:A:O4'	2.04	0.58
46:BU:3:LYS:HB3	46:BU:82:VAL:HG21	1.85	0.58
46:DU:86:PHE:HE1	46:DU:88:ASP:HB3	1.69	0.58
52:DW:48:ALA:HB3	52:DW:81:ILE:O	2.03	0.58
52:DW:23:LYS:O	52:DW:66:VAL:HB	2.04	0.58
29:BE:154:ASP:OD1	29:BE:156:ASN:HB3	2.03	0.58
18:CS:39:ILE:HB	18:CS:66:VAL:HA	1.85	0.58
23:BB:9:G:N2	23:BB:10:A:H62	2.00	0.58
25:DC:226:PRO:HA	25:DC:232:GLY:HA3	1.84	0.58
26:BD:182:ALA:O	26:BD:184:ARG:HG2	2.04	0.58
27:DK:35:VAL:HG23	27:DK:36:GLY:N	2.15	0.58
15:CP:46:LYS:C	15:CP:48:GLU:H	2.06	0.58
1:AA:617:G:H4'	15:AP:46:LYS:HE2	1.86	0.58
3:CD:154:VAL:O	3:CD:158:LEU:HD12	2.04	0.58
26:DD:113:SER:HB3	26:DD:167:ASN:N	2.19	0.58
35:DV:30:ILE:HB	35:DV:38:LEU:HB3	1.86	0.58
23:BB:646:U:H3'	23:BB:647:G:H8	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1026:G:H2'	1:AA:1027:C:H6	1.68	0.58
4:AE:45:VAL:HG13	4:AE:117:ALA:HA	1.86	0.58
30:BY:16:LEU:O	30:BY:19:HIS:HB2	2.02	0.58
22:DA:109:A:H2'	22:DA:110:C:H6	1.68	0.58
23:BB:2845:U:O2'	23:BB:2846:G:H5'	2.03	0.58
1:AA:470:C:H2'	1:AA:471:U:C6	2.39	0.58
39:BX:1:MET:O	39:BX:5:GLU:HG2	2.04	0.58
11:CL:54:VAL:HG21	11:CL:79:ILE:HD11	1.84	0.58
11:CL:17:LYS:HE3	11:CL:17:LYS:N	2.19	0.58
27:DK:59:LYS:HD2	27:DK:89:ASN:ND2	2.19	0.58
41:BJ:38:GLY:HA3	41:BJ:50:THR:O	2.03	0.58
1:CA:625:U:H4'	15:CP:16:PHE:CZ	2.38	0.58
29:DE:5:LEU:HD12	29:DE:10:SER:HB2	1.85	0.58
44:DQ:10:ARG:HA	44:DQ:13:HIS:HB2	1.84	0.58
27:BK:14:SER:HB2	27:BK:51:LYS:H	1.68	0.58
23:DB:796:C:H2'	23:DB:797:G:H8	1.68	0.58
7:CH:79:ARG:HB2	7:CH:80:PRO:HD2	1.85	0.58
25:BC:177:SER:O	25:BC:270:ARG:HG3	2.04	0.58
23:BB:833:A:H2'	23:BB:834:G:C8	2.38	0.58
1:AA:1123:U:O2'	1:AA:1124:G:H5'	2.04	0.58
2:AC:88:LYS:O	2:AC:88:LYS:HE3	2.04	0.58
23:BB:2893:A:H5''	23:BB:2894:G:H5'	1.86	0.58
11:CL:65:TYR:HB3	11:CL:95:HIS:CD2	2.39	0.58
1:AA:1450:U:H2'	1:AA:1452:C:C4	2.38	0.58
52:DW:49:ASN:HB3	52:DW:81:ILE:CG1	2.34	0.58
29:DE:189:THR:HG23	29:DE:192:ALA:H	1.69	0.58
44:BQ:94:LEU:HD21	49:BR:11:GLN:HB2	1.86	0.58
37:BL:92:LEU:HD23	37:BL:92:LEU:H	1.68	0.58
1:CA:410:G:P	3:CD:25:ARG:HE	2.27	0.58
26:BD:170:VAL:O	26:BD:170:VAL:HG23	2.04	0.58
41:DJ:25:LEU:HD22	41:DJ:26:GLY:N	2.17	0.58
36:D2:10:LEU:O	36:D2:14:ARG:HG2	2.03	0.58
1:AA:1004:A:H5'	1:AA:1025:U:O2	2.04	0.58
23:DB:1548:A:H2'	23:DB:1549:A:C8	2.38	0.58
23:DB:644:A:O2'	23:DB:645:C:H5'	2.04	0.58
20:CB:218:ALA:HA	20:CB:221:ARG:HG2	1.84	0.58
23:DB:1778:U:H2'	23:DB:1784:A:N6	2.19	0.58
37:DL:95:LEU:HB3	37:DL:100:ILE:CG2	2.34	0.58
4:CE:155:LYS:O	4:CE:158:LYS:HE3	2.04	0.58
46:DU:81:ARG:H	46:DU:81:ARG:HH21	1.51	0.58
23:BB:1735:A:H2'	23:BB:1736:U:C6	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BM:71:LYS:HD3	38:BM:95:LEU:HD13	1.86	0.58
1:CA:56:U:H2'	1:CA:57:G:C8	2.39	0.58
23:DB:2229:U:H2'	23:DB:2230:G:H8	1.67	0.58
1:CA:620:C:N1	3:CD:131:ILE:HD13	2.18	0.58
23:BB:322:A:H5'	23:BB:340:A:H1'	1.84	0.58
3:CD:77:GLU:HA	3:CD:80:ARG:HG2	1.85	0.58
18:AS:65:MET:HG3	18:AS:73:PHE:CZ	2.39	0.58
31:D0:33:SER:C	31:D0:35:GLU:H	2.07	0.58
47:BF:177:ARG:CZ	47:BF:177:ARG:HA	2.34	0.58
5:CF:29:ILE:HD13	5:CF:64:VAL:HG21	1.85	0.57
23:DB:2329:U:H2'	23:DB:2330:G:C8	2.39	0.57
8:CI:56:MET:C	8:CI:58:GLU:H	2.06	0.57
48:BG:89:VAL:HG12	48:BG:90:GLY:H	1.69	0.57
41:DJ:45:THR:N	41:DJ:46:PRO:HD3	2.18	0.57
29:DE:138:LEU:HB3	29:DE:143:LEU:O	2.04	0.57
29:BE:106:LYS:HE3	29:BE:200:LEU:HD12	1.85	0.57
3:CD:102:TYR:HE1	3:CD:109:THR:HA	1.69	0.57
2:AC:126:ARG:HH22	2:AC:190:THR:CG2	2.14	0.57
25:DC:226:PRO:HG3	25:DC:233:GLY:N	2.14	0.57
23:BB:1021:A:H61	23:BB:1142:A:H61	1.50	0.57
24:DI:121:ILE:CD1	24:DI:121:ILE:H	2.14	0.57
46:DU:47:PRO:HD3	46:DU:55:GLY:HA3	1.86	0.57
23:DB:2868:A:H2'	23:DB:2869:G:C8	2.39	0.57
23:DB:63:A:OP2	23:DB:63:A:H8	1.86	0.57
47:BF:90:LEU:C	47:BF:91:ARG:HD3	2.25	0.57
23:BB:704:G:C2'	23:BB:726:G:H22	2.15	0.57
26:DD:148:GLN:HB2	26:DD:152:PRO:HG2	1.86	0.57
23:BB:921:C:H2'	23:BB:922:C:C6	2.39	0.57
23:BB:720:U:H2'	23:BB:721:A:C8	2.39	0.57
23:DB:871:U:H2'	23:DB:872:U:H6	1.67	0.57
48:BG:84:LYS:HG3	48:BG:131:VAL:HB	1.85	0.57
10:AK:88:PRO:HD3	21:AU:28:LEU:HD11	1.86	0.57
23:DB:1805:A:H5''	25:DC:247:TRP:CE2	2.39	0.57
19:AT:27:MET:O	19:AT:31:ILE:HG13	2.03	0.57
23:BB:2190:G:O2'	23:BB:2191:A:H5'	2.04	0.57
42:DN:49:GLU:OE2	42:DN:95:THR:HG22	2.02	0.57
23:BB:870:U:O2'	23:BB:871:U:H5'	2.03	0.57
5:AF:43:GLY:HA2	5:AF:58:HIS:NE2	2.19	0.57
35:DV:1:MET:HG2	35:DV:59:GLU:HG3	1.86	0.57
20:CB:93:HIS:CD2	20:CB:145:ASN:HB3	2.39	0.57
6:AG:112:ASP:HB2	6:AG:118:ARG:HG2	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1810:A:H2'	23:BB:1811:G:O4'	2.03	0.57
23:BB:564:C:O2'	23:BB:565:C:H5'	2.04	0.57
1:CA:6:G:H2'	4:CE:123:LEU:HD22	1.86	0.57
4:CE:55:VAL:N	4:CE:56:PRO:HD2	2.18	0.57
23:BB:1316:U:O2'	23:BB:1317:G:H5'	2.03	0.57
2:CC:182:ASP:HB2	2:CC:203:LYS:HE2	1.86	0.57
45:DS:31:GLN:O	45:DS:35:ILE:HG12	2.04	0.57
23:DB:581:C:H2'	23:DB:582:A:H8	1.68	0.57
26:BD:204:LYS:HB2	26:BD:205:PRO:HD2	1.85	0.57
47:DF:78:ILE:N	47:DF:78:ILE:HD12	2.18	0.57
24:DI:123:ALA:HA	24:DI:126:ARG:HH12	1.68	0.57
45:BS:18:ARG:HB3	45:BS:76:VAL:CG2	2.34	0.57
3:CD:149:LYS:HB2	3:CD:177:MET:HG3	1.86	0.57
23:DB:139:U:O2'	50:DT:1:MET:HB2	2.03	0.57
47:BF:137:PHE:O	47:BF:139:GLU:N	2.37	0.57
38:DM:36:VAL:HB	38:DM:127:LYS:O	2.03	0.57
29:DE:62:GLN:HG2	29:DE:63:LYS:HG3	1.86	0.57
22:BA:94:A:H2'	22:BA:95:U:O4'	2.03	0.57
23:BB:1550:C:H2'	23:BB:1551:A:H8	1.69	0.57
39:BX:17:GLU:OE1	39:BX:21:LEU:HD11	2.04	0.57
38:DM:64:TRP:HB2	38:DM:104:GLU:HB2	1.85	0.57
23:DB:233:A:H61	23:DB:428:A:N6	2.01	0.57
40:BH:47:PHE:HA	40:BH:50:ARG:NH2	2.19	0.57
39:DX:48:ARG:O	39:DX:51:ALA:HB3	2.03	0.57
23:DB:417:C:H2'	23:DB:418:C:C6	2.39	0.57
23:DB:946:C:H2'	23:DB:947:A:H8	1.69	0.57
23:DB:2182:U:H2'	23:DB:2183:A:H8	1.68	0.57
23:DB:441:U:H2'	23:DB:442:G:H8	1.69	0.57
3:CD:18:LEU:HB2	3:CD:20:LEU:HG	1.86	0.57
23:BB:2652:C:H2'	23:BB:2653:U:O4'	2.03	0.57
8:CI:87:MET:HG2	8:CI:91:GLU:HG2	1.85	0.57
38:DM:108:VAL:HG22	38:DM:109:PRO:HD2	1.87	0.57
23:BB:992:C:H4'	49:BR:74:ILE:HD13	1.86	0.57
43:DO:56:LYS:HG2	43:DO:60:GLU:CD	2.24	0.57
23:DB:1513:U:O2'	23:DB:1514:G:H5'	2.03	0.57
23:BB:1477:A:H2'	23:BB:1478:G:O4'	2.04	0.57
1:AA:1414:U:H2'	1:AA:1415:G:H8	1.70	0.57
23:DB:564:C:O2'	23:DB:565:C:H5'	2.04	0.57
1:AA:1521:C:H2'	1:AA:1522:U:C6	2.39	0.57
35:BV:49:ASN:HD22	35:BV:49:ASN:N	2.01	0.57
1:AA:1437:A:H2'	1:AA:1438:G:H8	1.67	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:2:ARG:HH11	6:CG:2:ARG:CB	2.00	0.57
23:DB:2386:A:H2'	23:DB:2387:U:C6	2.39	0.57
8:AI:56:MET:C	8:AI:58:GLU:H	2.07	0.57
29:DE:154:ASP:OD1	29:DE:156:ASN:HB3	2.04	0.57
18:AS:10:ILE:HG22	18:AS:37:SER:HB3	1.85	0.57
1:AA:796:C:H4'	10:AK:126:ARG:NH2	2.19	0.57
25:BC:173:LEU:H	25:BC:173:LEU:CD2	2.16	0.57
47:DF:137:PHE:O	47:DF:139:GLU:N	2.37	0.57
23:BB:1022:G:N2	23:BB:1142:A:N1	2.51	0.57
27:BK:79:PHE:CD2	28:BP:69:VAL:HG12	2.39	0.57
26:DD:34:VAL:HB	26:DD:48:ILE:HD11	1.86	0.57
1:AA:1060:U:C4'	9:AJ:54:SER:HB2	2.33	0.57
47:BF:33:ILE:HD13	47:BF:95:MET:HG2	1.86	0.57
37:BL:116:VAL:HG13	37:BL:117:THR:N	2.17	0.57
9:CJ:18:ILE:HG23	9:CJ:19:ASP:N	2.19	0.57
23:DB:921:C:H2'	23:DB:922:C:C6	2.39	0.57
4:CE:45:VAL:HG13	4:CE:117:ALA:HA	1.85	0.57
4:AE:84:VAL:CG1	4:AE:146:MET:HB3	2.35	0.57
6:CG:134:VAL:O	6:CG:138:GLU:HG3	2.03	0.57
23:BB:591:U:H1'	34:B3:1:PRO:N	2.19	0.57
44:DQ:9:ALA:C	44:DQ:11:ALA:H	2.07	0.57
1:AA:1390:U:H2'	1:AA:1391:U:C6	2.39	0.57
1:CA:45:G:H2'	1:CA:46:G:C8	2.38	0.57
23:DB:1827:U:O2'	23:DB:1828:G:H5'	2.05	0.57
23:BB:2285:C:OP2	33:B1:5:ARG:HD3	2.03	0.57
23:DB:1061:U:H4'	23:DB:1070:A:O3'	2.03	0.57
1:CA:22:G:H2'	1:CA:23:C:C6	2.38	0.57
1:CA:1216:A:H5''	13:CN:4:SER:HB3	1.85	0.57
1:AA:35:G:H2'	1:AA:36:C:C6	2.39	0.57
7:AH:78:SER:HA	7:AH:84:ILE:HD12	1.86	0.57
16:AQ:77:VAL:HG12	16:AQ:79:GLU:H	1.69	0.57
1:AA:484:G:H4'	1:AA:485:U:H5''	1.85	0.57
1:CA:640:A:O2'	1:CA:641:U:H5'	2.03	0.57
1:CA:586:C:H5''	7:CH:81:GLY:HA2	1.86	0.57
20:CB:56:LEU:O	20:CB:59:ILE:HD12	2.05	0.57
35:DV:49:ASN:N	35:DV:49:ASN:HD22	2.01	0.57
45:BS:88:ARG:HH21	45:BS:88:ARG:HG3	1.70	0.57
25:BC:69:ASN:O	25:BC:70:LYS:C	2.42	0.57
51:BZ:59:ILE:HG22	51:BZ:64:ILE:HG13	1.85	0.57
8:CI:62:LEU:HD22	8:CI:62:LEU:N	2.19	0.57
5:AF:92:THR:HG22	5:AF:93:LYS:N	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DT:50:LEU:HD22	50:DT:50:LEU:N	2.19	0.57
23:BB:2898:U:H2'	23:BB:2899:A:H8	1.69	0.57
25:BC:130:PRO:HA	25:BC:188:ARG:HA	1.86	0.57
48:DG:17:LYS:NZ	48:DG:18:ILE:H	2.03	0.57
47:BF:43:ILE:HB	47:BF:82:TYR:OH	2.04	0.57
51:BZ:40:VAL:CG2	51:BZ:43:GLU:HB3	2.31	0.57
38:BM:35:ALA:HB3	38:BM:99:GLY:N	2.20	0.57
23:BB:2146:C:H1'	23:BB:2147:A:C4'	2.33	0.57
23:BB:705:A:N6	23:BB:726:G:H1'	2.19	0.57
16:CQ:45:VAL:HG21	16:CQ:60:ILE:HG21	1.85	0.57
3:AD:104:MET:SD	3:AD:179:GLY:HA3	2.44	0.57
23:DB:1550:C:H2'	23:DB:1551:A:C8	2.40	0.57
13:CN:60:ARG:CZ	13:CN:69:PRO:HB3	2.33	0.57
37:DL:55:MET:HE2	37:DL:56:PRO:HD2	1.86	0.57
8:CI:67:LYS:HZ3	8:CI:67:LYS:HB2	1.69	0.57
25:DC:211:ARG:C	25:DC:213:ARG:H	2.07	0.57
23:DB:2646:C:H2'	23:DB:2647:U:O4'	2.04	0.57
23:DB:2292:U:H2'	23:DB:2293:G:H8	1.70	0.57
39:BX:15:ASN:H	39:BX:15:ASN:ND2	2.02	0.57
19:AT:49:ALA:HA	19:AT:52:GLU:CD	2.23	0.57
7:AH:86:LYS:HD2	7:AH:90:GLU:CG	2.35	0.57
47:BF:120:SER:O	47:BF:127:TYR:HA	2.04	0.57
46:DU:53:GLN:HG2	46:DU:53:GLN:O	2.03	0.57
17:AR:41:SER:HB2	17:AR:51:GLN:HG2	1.84	0.57
23:DB:2893:A:H5''	23:DB:2894:G:H5'	1.86	0.57
51:DZ:21:ALA:HB3	51:DZ:23:ASN:HD21	1.68	0.57
23:DB:1923:U:H2'	23:DB:1924:C:H6	1.68	0.57
24:DI:37:PHE:CZ	24:DI:58:ILE:HD11	2.39	0.57
23:BB:1582:C:H3'	23:BB:1583:A:N3	2.20	0.57
23:DB:1733:G:H2'	23:DB:1734:G:C8	2.40	0.57
2:CC:57:GLU:HB2	2:CC:64:ARG:HB2	1.86	0.57
23:DB:757:G:H2'	23:DB:758:C:H5'	1.87	0.57
23:BB:1513:U:O2'	23:BB:1514:G:H5'	2.04	0.57
23:DB:1098:A:C2'	24:DI:4:VAL:N	2.68	0.57
21:AU:40:PRO:O	21:AU:44:ARG:HB2	2.04	0.57
46:DU:86:PHE:HD1	46:DU:88:ASP:H	1.50	0.57
8:AI:47:VAL:HG23	8:AI:48:ARG:HG3	1.86	0.57
52:DW:9:THR:HG22	52:DW:10:ARG:HH11	1.69	0.57
19:CT:82:ILE:HA	19:CT:85:LEU:HD22	1.87	0.57
2:CC:72:PRO:O	2:CC:76:ILE:HG12	2.04	0.57
18:AS:39:ILE:HB	18:AS:66:VAL:HA	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BL:90:VAL:HB	37:BL:122:VAL:HA	1.86	0.57
1:CA:617:G:H4'	15:CP:46:LYS:HE2	1.87	0.57
27:DK:105:ARG:H	27:DK:105:ARG:CD	2.18	0.57
27:BK:64:ARG:HH12	27:BK:101:GLY:HA3	1.69	0.57
27:BK:115:ILE:HG23	27:BK:116:ILE:N	2.20	0.57
23:DB:1021:A:H61	23:DB:1142:A:H61	1.51	0.57
27:BK:43:ILE:HG22	27:BK:54:LYS:HA	1.86	0.57
23:DB:139:U:H3	50:DT:49:LYS:CE	2.18	0.57
41:DJ:21:THR:O	41:DJ:62:VAL:HA	2.04	0.57
23:DB:1429:G:O2'	23:DB:1430:G:H5'	2.03	0.57
23:BB:1080:A:H2'	23:BB:1081:U:H6	1.70	0.57
23:BB:1432:G:O2'	23:BB:1433:A:H5'	2.04	0.57
36:D2:21:ARG:HH21	36:D2:43:THR:HG21	1.69	0.57
47:BF:149:ARG:HA	47:BF:149:ARG:NH1	2.20	0.57
1:AA:268:U:H2'	1:AA:269:C:C6	2.40	0.57
1:CA:323:U:H2'	1:CA:324:G:O4'	2.04	0.57
40:BH:3:VAL:HG12	40:BH:38:PRO:HA	1.86	0.57
40:DH:119:ASN:HD21	40:DH:121:VAL:HG13	1.69	0.57
23:DB:1856:U:H2'	23:DB:1857:G:H5'	1.86	0.57
23:DB:1847:A:H4'	23:DB:1848:A:C8	2.39	0.57
41:BJ:40:HIS:HE1	41:BJ:41:LYS:HE3	1.69	0.57
23:BB:1771:C:H2'	23:BB:1772:A:C8	2.39	0.57
1:AA:335:C:H2'	1:AA:336:A:H8	1.70	0.57
23:BB:609:A:H2'	23:BB:610:C:O4'	2.04	0.57
51:BZ:38:PHE:HE2	51:BZ:51:VAL:HG21	1.69	0.57
23:DB:2301:C:H2'	23:DB:2302:U:H6	1.69	0.57
3:AD:16:THR:HG22	3:AD:17:ASP:H	1.68	0.57
44:DQ:35:PHE:HE1	44:DQ:39:ILE:HD11	1.68	0.57
23:BB:1192:G:O2'	23:BB:1193:G:H5'	2.05	0.57
23:DB:528:A:C2	23:DB:2042:A:H2'	2.40	0.57
38:BM:61:GLY:HA2	38:BM:107:GLY:HA3	1.85	0.57
1:CA:1472:U:H2'	1:CA:1473:G:C8	2.39	0.57
47:BF:15:LEU:HD22	47:BF:167:ALA:HB1	1.86	0.57
23:BB:2411:A:H2'	23:BB:2412:A:C8	2.38	0.57
29:BE:31:VAL:HG21	29:BE:104:ALA:HB2	1.87	0.57
23:DB:1939:U:H5'	23:DB:1939:U:H6	1.69	0.57
26:DD:15:PHE:HD1	26:DD:15:PHE:H	1.52	0.57
1:CA:131:A:H2'	1:CA:132:C:C6	2.38	0.57
30:BY:35:VAL:HG21	30:BY:37:ARG:HH22	1.70	0.57
23:DB:2500:U:H5'	23:DB:2501:C:OP2	2.04	0.57
25:BC:75:ALA:HB1	25:BC:93:VAL:HG22	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:856:G:C1'	52:DW:23:LYS:HB3	2.33	0.57
52:DW:35:ILE:O	52:DW:37:VAL:N	2.38	0.57
29:DE:195:GLN:O	29:DE:198:GLU:HG2	2.04	0.57
44:BQ:91:ARG:HH12	49:BR:10:LYS:HB3	1.68	0.57
47:BF:78:ILE:H	47:BF:79:ARG:HH11	1.51	0.57
38:DM:35:ALA:HB3	38:DM:99:GLY:N	2.20	0.57
1:CA:1078:U:H2'	1:CA:1079:G:O4'	2.05	0.57
2:CC:51:VAL:HA	2:CC:69:THR:HA	1.87	0.57
22:BA:54:G:O2'	22:BA:55:U:H5'	2.05	0.57
43:BO:30:ARG:HD2	43:BO:31:THR:N	2.19	0.57
1:CA:844:G:H2'	1:CA:845:A:N9	2.19	0.57
11:CL:86:VAL:HG11	11:CL:89:LEU:HD23	1.87	0.57
1:AA:1027:C:H2'	1:AA:1028:C:C6	2.39	0.57
37:BL:47:ARG:HH21	37:BL:47:ARG:CB	2.16	0.57
23:BB:2679:A:O2'	23:BB:2680:U:H5'	2.04	0.57
29:BE:60:TRP:CE3	29:BE:60:TRP:HA	2.40	0.57
23:DB:2143:C:H3'	23:DB:2144:G:C8	2.39	0.57
23:BB:171:U:H2'	23:BB:172:A:H8	1.68	0.57
20:AB:218:ALA:HA	20:AB:221:ARG:HG2	1.85	0.57
23:BB:2078:C:H2'	23:BB:2079:U:H6	1.68	0.57
22:DA:106:G:H2'	22:DA:107:G:C8	2.40	0.57
51:BZ:70:GLU:O	51:BZ:72:ARG:N	2.35	0.57
23:BB:131:A:H2'	23:BB:132:G:C8	2.39	0.57
23:DB:145:C:H2'	23:DB:146:A:C8	2.39	0.57
2:CC:81:GLU:HG3	2:CC:82:ASP:N	2.19	0.57
23:DB:526:A:N6	23:DB:2626:C:H4'	2.19	0.57
28:DP:102:ARG:HD2	28:DP:106:ALA:O	2.04	0.57
23:BB:2776:A:H4'	23:BB:2777:G:C5'	2.35	0.57
23:DB:37:C:O2'	29:DE:45:ALA:HA	2.05	0.57
23:BB:988:A:P	30:BY:11:SER:HB3	2.44	0.57
5:AF:47:LEU:HD21	5:AF:57:ALA:HB3	1.85	0.57
3:AD:201:GLU:OE1	4:AE:104:ILE:HG22	2.04	0.57
51:BZ:30:LEU:HD23	51:BZ:30:LEU:H	1.70	0.57
52:BW:35:ILE:O	52:BW:37:VAL:N	2.38	0.57
23:BB:850:U:H2'	23:BB:851:C:C6	2.40	0.57
23:DB:2598:A:H5''	25:DC:233:GLY:CA	2.34	0.57
1:AA:86:G:C2	1:AA:87:C:N4	2.73	0.57
41:BJ:110:PRO:HB2	41:BJ:111:LYS:HE2	1.86	0.57
47:DF:102:LEU:HD13	47:DF:103:ILE:HB	1.86	0.57
6:CG:21:LEU:HG	6:CG:22:LEU:N	2.19	0.57
50:BT:1:MET:C	50:BT:2:ILE:HD13	2.25	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1081:U:C5'	24:BI:126:ARG:HD2	2.34	0.57
1:CA:1060:U:C4'	9:CJ:54:SER:HB2	2.35	0.57
3:CD:201:GLU:OE1	4:CE:104:ILE:HG22	2.04	0.57
41:DJ:72:LYS:CB	41:DJ:89:PHE:HB2	2.35	0.57
23:BB:2783:U:H2'	23:BB:2784:U:C6	2.40	0.57
23:DB:1387:A:H2'	23:DB:1388:G:C8	2.37	0.57
29:BE:62:GLN:HG2	29:BE:63:LYS:HG3	1.85	0.57
1:CA:370:C:H2'	1:CA:371:A:H8	1.69	0.57
6:AG:78:ARG:NH1	6:AG:82:SER:H	2.03	0.57
23:BB:2181:U:OP2	23:BB:2181:U:H3'	2.04	0.57
38:DM:66:ARG:CZ	38:DM:101:VAL:HG11	2.34	0.57
8:CI:38:PHE:HZ	8:CI:74:GLN:HB3	1.67	0.57
23:DB:1911:U:O2'	23:DB:1912:A:H5'	2.04	0.57
23:BB:871:U:H2'	23:BB:872:U:H6	1.67	0.57
36:B2:29:GLN:O	36:B2:33:ARG:HB2	2.05	0.57
23:DB:2093:G:O5'	40:DH:24:GLY:HA3	2.04	0.57
1:CA:1160:G:H4'	20:CB:130:LYS:HB2	1.86	0.57
1:AA:335:C:H2'	1:AA:336:A:C8	2.39	0.57
23:DB:2246:G:H2'	23:DB:2247:A:C8	2.40	0.57
2:AC:176:THR:HB	2:AC:179:ALA:HB2	1.85	0.57
23:BB:1716:U:H2'	23:BB:1717:A:C8	2.40	0.57
19:AT:54:GLN:N	19:AT:55:PRO:HD2	2.20	0.57
23:DB:2776:A:H4'	23:DB:2777:G:C5'	2.35	0.57
23:BB:1932:A:H2'	23:BB:1933:G:O4'	2.05	0.57
4:AE:55:VAL:N	4:AE:56:PRO:HD2	2.19	0.57
23:BB:1400:U:H2'	23:BB:1401:G:C8	2.39	0.57
1:CA:1132:C:H2'	1:CA:1133:G:C8	2.39	0.57
1:CA:784:A:H2'	1:CA:785:G:H8	1.70	0.57
1:AA:449:G:H2'	1:AA:450:G:C8	2.40	0.57
40:DH:31:VAL:O	40:DH:33:GLN:N	2.37	0.57
52:BW:59:PHE:O	52:BW:60:ALA:CB	2.53	0.57
26:BD:178:VAL:HB	26:BD:188:LEU:HB2	1.86	0.57
20:CB:57:ASN:HB2	20:CB:219:THR:O	2.03	0.57
5:AF:29:ILE:HG22	5:AF:34:GLY:HA3	1.85	0.57
50:BT:11:LEU:N	50:BT:11:LEU:HD22	2.16	0.57
47:DF:42:ALA:HB1	47:DF:46:LYS:HZ3	1.68	0.57
1:AA:1071:C:H2'	1:AA:1072:G:C8	2.40	0.57
21:AU:19:LYS:HD3	21:AU:20:ARG:HH21	1.70	0.57
50:BT:48:GLN:NE2	50:BT:48:GLN:HA	2.18	0.57
50:BT:29:THR:CA	50:BT:86:THR:HA	2.32	0.57
25:DC:4:LYS:HD3	25:DC:16:VAL:HG22	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DI:78:LEU:HA	24:DI:81:LYS:HE2	1.87	0.57
20:CB:14:HIS:CD2	20:CB:202:ASN:H	2.22	0.57
23:DB:27:G:H1'	23:DB:513:A:H61	1.69	0.57
23:DB:1287:A:N7	42:DN:105:GLY:HA3	2.19	0.57
15:AP:46:LYS:C	15:AP:48:GLU:H	2.07	0.57
23:DB:741:U:H2'	23:DB:742:A:C8	2.40	0.57
23:DB:636:G:H3'	37:DL:128:THR:CG2	2.31	0.57
23:BB:972:A:C3'	23:BB:973:A:H5''	2.33	0.57
31:B0:38:LEU:HD13	31:B0:41:HIS:NE2	2.20	0.57
23:BB:1592:C:H2'	23:BB:1593:A:C8	2.36	0.57
23:BB:1441:G:H2'	23:BB:1442:U:H6	1.70	0.57
23:BB:1439:A:H1'	23:BB:1553:A:N6	2.20	0.57
23:DB:720:U:H2'	23:DB:721:A:C8	2.39	0.57
23:BB:1779:U:H5	23:BB:1784:A:N7	2.03	0.57
22:BA:83:G:OP1	30:BY:16:LEU:HD21	2.05	0.57
28:DP:52:ARG:HB2	28:DP:55:HIS:O	2.05	0.57
51:DZ:35:SER:HA	51:DZ:49:LEU:O	2.03	0.57
23:BB:1205:A:N1	29:BE:165:HIS:HB2	2.20	0.57
23:BB:2636:C:H2'	23:BB:2637:U:H6	1.69	0.57
1:AA:204:G:H2'	1:AA:205:A:H8	1.70	0.57
23:DB:215:G:H4'	23:DB:216:A:H4'	1.87	0.57
52:DW:41:GLY:HA2	52:DW:44:PHE:CD2	2.40	0.57
29:DE:1:MET:HB3	29:DE:14:VAL:O	2.05	0.57
1:AA:157:U:O2'	1:AA:158:G:H5'	2.05	0.57
8:AI:38:PHE:HZ	8:AI:74:GLN:HB3	1.69	0.57
23:BB:49:A:H5''	23:BB:51:G:O4'	2.05	0.57
29:DE:98:LYS:NZ	29:DE:99:LYS:HE3	2.20	0.57
1:CA:868:C:H2'	1:CA:869:G:O4'	2.05	0.57
1:AA:513:C:H2'	1:AA:514:C:H6	1.70	0.57
23:DB:1192:G:O2'	23:DB:1193:G:H5'	2.05	0.57
1:AA:625:U:H4'	15:AP:16:PHE:CE2	2.40	0.57
51:DZ:7:VAL:HG13	51:DZ:8:THR:CG2	2.31	0.57
21:CU:40:PRO:O	21:CU:44:ARG:HB2	2.05	0.57
40:BH:31:VAL:O	40:BH:33:GLN:N	2.38	0.57
46:DU:85:ARG:HH11	46:DU:86:PHE:H	1.51	0.57
3:AD:102:TYR:HE1	3:AD:109:THR:HA	1.69	0.57
2:AC:72:PRO:O	2:AC:76:ILE:HG12	2.04	0.57
20:AB:195:VAL:HG12	20:AB:197:PHE:H	1.70	0.57
27:DK:47:ILE:CG1	27:DK:48:PRO:HD2	2.32	0.57
40:DH:90:LEU:HD22	40:DH:122:LEU:O	2.04	0.57
50:DT:1:MET:C	50:DT:2:ILE:HD13	2.25	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:6:LYS:O	25:DC:8:THR:HG22	2.05	0.57
48:DG:104:LEU:HB3	48:DG:106:LEU:HD21	1.86	0.57
23:BB:784:G:O2'	23:BB:785:G:H5''	2.05	0.57
1:CA:1060:U:H2'	1:CA:1061:G:H8	1.70	0.57
11:CL:41:PRO:HB3	11:CL:49:ARG:HH11	1.70	0.57
23:DB:1444:G:H2'	23:DB:1445:G:H8	1.70	0.57
26:BD:124:ARG:HA	26:BD:165:MET:HE3	1.87	0.57
37:DL:116:VAL:HG13	37:DL:117:THR:N	2.19	0.57
1:AA:918:A:H2'	1:AA:919:A:C8	2.39	0.57
23:BB:1778:U:H2'	23:BB:1784:A:H62	1.69	0.57
23:DB:899:A:C5	23:DB:900:A:H1'	2.39	0.57
28:BP:52:ARG:HB2	28:BP:55:HIS:O	2.05	0.57
23:BB:233:A:N6	23:BB:428:A:H61	2.02	0.57
37:DL:90:VAL:HB	37:DL:122:VAL:HA	1.87	0.57
19:AT:70:LYS:HA	19:AT:73:ARG:NH1	2.20	0.57
4:CE:84:VAL:CG1	4:CE:146:MET:HB3	2.34	0.57
42:BN:92:GLY:HA2	42:BN:94:TYR:CZ	2.40	0.57
49:DR:31:GLU:H	49:DR:63:VAL:CG2	2.16	0.57
30:BY:40:THR:O	30:BY:43:ILE:HG23	2.05	0.57
42:DN:92:GLY:HA2	42:DN:94:TYR:CZ	2.40	0.57
1:CA:57:G:H2'	1:CA:58:C:C6	2.40	0.57
1:CA:950:U:H2'	1:CA:951:G:H8	1.68	0.57
23:BB:1868:C:H2'	23:BB:1869:G:O4'	2.05	0.57
5:CF:43:GLY:HA2	5:CF:58:HIS:NE2	2.20	0.57
23:BB:1000:A:H2'	23:BB:1001:A:C8	2.40	0.57
45:BS:31:GLN:C	45:BS:33:LEU:H	2.07	0.57
19:CT:70:LYS:HA	19:CT:73:ARG:NH1	2.20	0.57
44:DQ:34:ALA:O	44:DQ:37:ALA:HB3	2.05	0.57
14:CO:43:PHE:CD1	14:CO:56:LEU:HD22	2.40	0.57
23:BB:2008:C:H2'	23:BB:2009:A:H8	1.70	0.57
6:CG:107:ALA:HA	6:CG:110:ARG:HD2	1.87	0.57
23:DB:2633:G:H2'	23:DB:2634:A:O4'	2.05	0.57
5:CF:69:GLU:O	5:CF:73:GLU:HG3	2.04	0.57
23:DB:836:G:H2'	23:DB:837:C:C6	2.40	0.57
23:BB:2318:G:C6	23:BB:2319:G:N1	2.73	0.57
2:AC:182:ASP:HB2	2:AC:203:LYS:HE2	1.86	0.57
20:CB:8:MET:O	20:CB:9:LEU:HB3	2.04	0.57
23:BB:1786:A:H1'	23:BB:1938:A:N6	2.20	0.57
1:CA:229:U:H2'	1:CA:230:G:H8	1.70	0.57
1:AA:1176:A:H2'	1:AA:1177:G:O4'	2.05	0.57
20:CB:163:ILE:HD11	20:CB:209:VAL:HG12	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:57:VAL:HB	8:CI:58:GLU:OE2	2.04	0.57
29:DE:134:LEU:O	29:DE:138:LEU:HG	2.05	0.57
41:BJ:3:THR:HG21	44:BQ:60:TRP:HE1	1.70	0.57
44:BQ:60:TRP:O	44:BQ:64:ILE:HG12	2.05	0.57
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.40	0.57
10:AK:111:ASP:HB2	21:AU:19:LYS:CE	2.34	0.57
41:BJ:72:LYS:CB	41:BJ:89:PHE:HB2	2.35	0.57
50:BT:32:LEU:O	50:BT:83:ALA:HB2	2.04	0.57
42:DN:29:VAL:HG12	42:DN:78:LYS:HG2	1.86	0.57
27:BK:113:MET:HE2	27:BK:116:ILE:HD11	1.87	0.57
36:B2:21:ARG:HH21	36:B2:43:THR:HG21	1.70	0.57
23:DB:1055:G:H3'	23:DB:1056:G:H8	1.70	0.57
46:BU:47:PRO:HD3	46:BU:55:GLY:HA3	1.87	0.57
23:DB:646:U:H3'	23:DB:647:G:H8	1.69	0.57
1:AA:482:A:H2'	1:AA:483:C:O4'	2.05	0.57
23:DB:899:A:H3'	23:DB:900:A:C8	2.37	0.57
37:DL:77:ILE:HG12	37:DL:95:LEU:HD22	1.86	0.57
43:DO:97:PHE:HB3	43:DO:103:VAL:HG21	1.87	0.57
23:DB:2100:G:H3'	23:DB:2101:A:H8	1.69	0.57
51:DZ:38:PHE:CE2	51:DZ:51:VAL:HG21	2.38	0.57
23:BB:962:G:N2	23:BB:2250:G:H1	2.03	0.57
7:CH:6:ILE:HB	7:CH:76:ARG:NH1	2.19	0.57
49:BR:31:GLU:H	49:BR:63:VAL:CG2	2.18	0.57
3:CD:2:ARG:HG3	3:CD:114:ARG:NH1	2.20	0.57
27:BK:59:LYS:HD2	27:BK:89:ASN:ND2	2.20	0.57
1:AA:1301:U:O2	1:AA:1301:U:H2'	2.05	0.57
23:BB:523:C:H4'	23:BB:540:C:O2	2.05	0.57
1:AA:370:C:H2'	1:AA:371:A:H8	1.69	0.57
23:BB:2753:A:O2'	23:BB:2754:U:H5'	2.05	0.57
12:AM:29:SER:O	12:AM:32:ILE:HG22	2.05	0.57
23:DB:2543:G:H8	23:DB:2543:G:H5'	1.70	0.57
22:DA:10:G:H2'	22:DA:11:C:O4'	2.05	0.57
20:CB:23:ASN:HD22	20:CB:24:PRO:HD2	1.70	0.57
23:BB:1564:C:O2'	23:BB:1565:C:H5'	2.04	0.57
23:BB:528:A:C2	23:BB:2042:A:H2'	2.40	0.57
7:CH:124:ILE:HG22	7:CH:125:ILE:N	2.20	0.57
3:AD:77:GLU:HA	3:AD:80:ARG:HG2	1.86	0.57
23:DB:100:U:OP1	23:DB:100:U:H3'	2.05	0.57
1:CA:129:A:H1'	1:CA:130:A:C8	2.40	0.57
43:BO:56:LYS:HG2	43:BO:60:GLU:CD	2.26	0.57
23:BB:2539:C:O2'	23:BB:2540:C:H5'	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:10:GLY:O	26:BD:11:MET:HB2	2.03	0.56
26:DD:204:LYS:HB2	26:DD:205:PRO:HD2	1.87	0.56
26:DD:178:VAL:HB	26:DD:188:LEU:HB2	1.87	0.56
5:AF:7:VAL:HG11	17:AR:64:LEU:HD21	1.87	0.56
47:BF:43:ILE:HG23	47:BF:44:ALA:N	2.13	0.56
27:BK:63:VAL:HG12	27:BK:64:ARG:HD3	1.87	0.56
27:BK:60:ALA:HA	27:BK:87:LEU:CD2	2.35	0.56
42:BN:38:LEU:O	42:BN:42:LYS:HG3	2.05	0.56
41:DJ:77:HIS:CD2	41:DJ:84:ILE:H	2.23	0.56
23:DB:1139:G:O2'	23:DB:1140:C:H5'	2.05	0.56
23:DB:1082:U:O4	23:DB:1086:A:C2	2.57	0.56
23:DB:2821:A:OP2	26:DD:115:GLY:HA3	2.05	0.56
26:DD:170:VAL:O	26:DD:170:VAL:HG23	2.05	0.56
20:CB:62:ARG:H	20:CB:62:ARG:CD	2.14	0.56
23:BB:1558:C:H4'	23:BB:1559:U:C5'	2.34	0.56
34:D3:22:LYS:HD2	34:D3:46:LYS:HB2	1.87	0.56
23:BB:1442:U:H2'	23:BB:1443:U:H6	1.69	0.56
23:BB:1548:A:H2'	23:BB:1549:A:C8	2.40	0.56
23:BB:2860:A:O5'	23:BB:2860:A:H8	1.88	0.56
46:BU:81:ARG:NH2	46:BU:81:ARG:H	2.02	0.56
23:DB:96:C:H4'	39:DX:41:HIS:ND1	2.20	0.56
23:BB:328:U:H4'	46:BU:65:GLN:HE22	1.69	0.56
23:DB:459:U:O2'	23:DB:460:A:H5'	2.05	0.56
23:BB:17:G:H2'	23:BB:18:U:C6	2.39	0.56
44:BQ:10:ARG:NH1	44:BQ:10:ARG:HB2	2.20	0.56
19:CT:66:ILE:HG23	19:CT:70:LYS:HB3	1.86	0.56
12:AM:79:LEU:HD22	12:AM:86:ARG:HE	1.69	0.56
43:DO:56:LYS:O	43:DO:60:GLU:HG2	2.05	0.56
1:CA:1472:U:H2'	1:CA:1473:G:H8	1.70	0.56
25:BC:78:GLU:OE1	25:BC:94:LEU:HD22	2.05	0.56
23:BB:2776:A:H4'	23:BB:2777:G:H5''	1.86	0.56
1:AA:636:U:H2'	1:AA:637:C:C6	2.40	0.56
1:AA:636:U:H2'	1:AA:637:C:H6	1.70	0.56
25:BC:229:HIS:ND1	25:BC:230:PRO:HD2	2.20	0.56
24:DI:99:LYS:HD3	24:DI:99:LYS:H	1.70	0.56
1:CA:602:A:O2'	1:CA:603:U:H5'	2.05	0.56
6:AG:71:THR:HG22	6:AG:141:HIS:NE2	2.20	0.56
2:AC:57:GLU:HB2	2:AC:64:ARG:HB2	1.87	0.56
1:AA:193:C:H2'	1:AA:194:C:C6	2.40	0.56
1:AA:195:A:H1'	1:AA:222:C:O2'	2.05	0.56
1:AA:1132:C:H2'	1:AA:1133:G:C8	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1810:A:H2'	23:DB:1811:G:O4'	2.05	0.56
23:BB:69:C:O2'	23:BB:70:G:H5'	2.04	0.56
14:AO:55:GLY:O	14:AO:59:MET:HG2	2.05	0.56
30:DY:30:ARG:HD3	30:DY:30:ARG:H	1.70	0.56
23:DB:1098:A:H3'	24:DI:3:LYS:C	2.26	0.56
23:DB:1098:A:P	24:DI:3:LYS:HG2	2.45	0.56
44:DQ:107:ALA:HB1	49:DR:48:LYS:HE3	1.87	0.56
13:CN:42:ASN:O	13:CN:46:LYS:HG3	2.05	0.56
41:BJ:45:THR:OG1	41:BJ:48:VAL:HB	2.04	0.56
40:BH:116:ARG:HH11	40:BH:133:GLN:HB2	1.69	0.56
42:DN:72:ASP:O	42:DN:76:VAL:HG13	2.05	0.56
1:AA:80:A:H2'	1:AA:81:A:O4'	2.05	0.56
23:BB:557:C:H2'	23:BB:558:U:H6	1.70	0.56
3:AD:149:LYS:HB2	3:AD:177:MET:HG3	1.87	0.56
47:BF:102:LEU:HD13	47:BF:103:ILE:HB	1.86	0.56
47:BF:4:HIS:O	47:BF:7:TYR:HB3	2.05	0.56
2:CC:67:ILE:HG22	2:CC:69:THR:HG22	1.87	0.56
29:DE:48:THR:H	29:DE:51:GLU:HG3	1.68	0.56
20:CB:86:CYS:HB3	20:CB:88:GLN:CD	2.24	0.56
35:BV:72:VAL:HB	35:BV:92:VAL:O	2.05	0.56
48:BG:10:VAL:HG23	48:BG:48:THR:HA	1.87	0.56
1:AA:237:G:H2'	1:AA:238:A:C8	2.41	0.56
3:CD:169:TRP:O	3:CD:182:LYS:HB2	2.06	0.56
23:DB:45:G:C5'	23:DB:46:G:H5'	2.34	0.56
23:DB:2741:A:H2'	23:DB:2742:G:O4'	2.05	0.56
23:DB:979:A:H2'	23:DB:982:C:N4	2.19	0.56
50:BT:18:GLU:C	50:BT:20:ALA:H	2.09	0.56
39:DX:17:GLU:OE1	39:DX:21:LEU:HD11	2.06	0.56
23:BB:967:U:H2'	23:BB:968:C:C6	2.40	0.56
1:AA:285:C:H2'	1:AA:286:C:H6	1.70	0.56
1:AA:384:G:H2'	1:AA:385:C:C6	2.40	0.56
31:B0:33:SER:C	31:B0:35:GLU:H	2.07	0.56
49:BR:16:GLU:HG2	49:BR:101:ILE:HG13	1.86	0.56
22:BA:60:C:H2'	22:BA:61:G:H8	1.69	0.56
10:AK:16:SER:HA	10:AK:77:GLY:O	2.04	0.56
52:BW:28:GLU:HB2	52:BW:31:LEU:HD21	1.87	0.56
23:DB:2783:U:H2'	23:DB:2784:U:C6	2.40	0.56
23:BB:1322:A:OP1	45:BS:11:ARG:HD2	2.05	0.56
6:AG:107:ALA:HA	6:AG:110:ARG:HD2	1.86	0.56
7:CH:17:GLN:HE21	7:CH:17:GLN:HA	1.70	0.56
1:CA:975:A:H4'	1:CA:976:G:OP2	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AK:51:PHE:CZ	10:AK:61:ALA:HA	2.40	0.56
52:DW:59:PHE:O	52:DW:60:ALA:CB	2.52	0.56
23:DB:2365:G:H4'	52:DW:59:PHE:CD1	2.41	0.56
52:BW:39:GLN:CG	52:BW:42:THR:HB	2.35	0.56
5:CF:29:ILE:HG22	5:CF:34:GLY:HA3	1.86	0.56
8:AI:48:ARG:O	8:AI:52:GLU:HG2	2.05	0.56
42:DN:37:THR:HB	42:DN:40:LYS:HB2	1.86	0.56
40:BH:117:LEU:HD11	40:BH:130:VAL:CG1	2.35	0.56
25:DC:80:LEU:HD23	25:DC:91:ALA:HB2	1.87	0.56
41:DJ:12:LYS:HB3	41:DJ:12:LYS:HZ2	1.70	0.56
50:DT:59:ASN:O	50:DT:84:TYR:HB2	2.05	0.56
47:DF:47:LYS:HA	47:DF:50:ASP:OD1	2.05	0.56
26:DD:182:ALA:O	26:DD:184:ARG:HG2	2.04	0.56
25:BC:107:LYS:O	25:BC:109:LEU:HD22	2.05	0.56
47:BF:47:LYS:HA	47:BF:50:ASP:OD1	2.05	0.56
19:AT:82:ILE:HA	19:AT:85:LEU:HD22	1.87	0.56
42:DN:55:ALA:HA	42:DN:80:PHE:CE1	2.41	0.56
27:BK:10:VAL:HG12	27:BK:12:ASP:H	1.70	0.56
41:BJ:114:LEU:O	41:BJ:118:MET:HE2	2.06	0.56
23:DB:2897:U:H2'	23:DB:2898:U:C6	2.40	0.56
6:AG:21:LEU:HG	6:AG:22:LEU:N	2.20	0.56
47:BF:137:PHE:HB2	47:BF:138:PRO:CD	2.35	0.56
38:DM:34:LYS:HE2	38:DM:99:GLY:HA2	1.88	0.56
41:DJ:128:ASN:C	41:DJ:129:GLU:HG3	2.25	0.56
23:DB:2884:U:O2	31:D0:49:ARG:HG2	2.05	0.56
23:DB:705:A:N6	23:DB:726:G:H1'	2.20	0.56
23:DB:1654:A:H2'	23:DB:1655:A:H8	1.71	0.56
9:AJ:53:ILE:CG2	9:AJ:61:ALA:HB1	2.35	0.56
23:DB:355:U:H2'	23:DB:356:G:C8	2.39	0.56
23:DB:1174:U:H1'	23:DB:1176:U:H1'	1.88	0.56
9:CJ:53:ILE:HG13	13:CN:84:ARG:NE	2.20	0.56
23:DB:2052:A:O4'	26:DD:147:GLY:HA3	2.05	0.56
42:DN:33:ILE:HD12	42:DN:33:ILE:O	2.04	0.56
35:BV:30:ILE:HB	35:BV:38:LEU:HB3	1.86	0.56
23:BB:45:G:H5'	23:BB:46:G:OP1	2.05	0.56
23:BB:1125:G:H4'	32:B4:37:GLN:NE2	2.20	0.56
48:DG:84:LYS:CG	48:DG:85:LYS:H	2.19	0.56
23:BB:1387:A:H2'	23:BB:1388:G:C8	2.39	0.56
13:AN:30:ILE:HB	13:AN:44:VAL:HG11	1.87	0.56
26:DD:13:ARG:HH12	28:DP:74:GLN:CD	2.09	0.56
12:AM:80:MET:HA	12:AM:87:GLY:HA3	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AG:129:ASN:HA	6:AG:134:VAL:HG21	1.85	0.56
43:DO:30:ARG:HD2	43:DO:31:THR:N	2.20	0.56
23:DB:1560:G:H2'	23:DB:1561:C:H6	1.69	0.56
1:AA:599:C:H5''	7:AH:86:LYS:O	2.05	0.56
23:BB:580:U:O2'	23:BB:581:C:H5'	2.06	0.56
2:CC:129:PHE:CE2	2:CC:165:GLU:HG2	2.41	0.56
23:DB:1198:U:H2'	23:DB:1199:U:C6	2.40	0.56
23:DB:30:G:H2'	23:DB:31:C:C6	2.41	0.56
23:BB:2065:C:H2'	23:BB:2066:C:H6	1.69	0.56
23:DB:967:U:H2'	23:DB:968:C:C6	2.40	0.56
26:BD:136:ASN:HD21	26:BD:140:HIS:N	2.03	0.56
1:CA:1451:U:H5''	1:CA:1452:C:OP2	2.06	0.56
1:AA:312:C:H2'	1:AA:313:A:C8	2.39	0.56
23:BB:1794:A:H2'	23:BB:1795:C:H6	1.71	0.56
43:BO:56:LYS:O	43:BO:60:GLU:HG2	2.04	0.56
1:AA:272:C:H2'	1:AA:273:U:H6	1.70	0.56
23:DB:1771:C:H2'	23:DB:1772:A:H8	1.70	0.56
23:BB:2199:A:H5'	23:BB:2200:C:OP2	2.05	0.56
23:DB:2539:C:O2'	23:DB:2540:C:H5'	2.05	0.56
43:DO:100:HIS:C	43:DO:104:GLN:HB2	2.26	0.56
20:AB:56:LEU:O	20:AB:59:ILE:HD12	2.05	0.56
23:DB:1838:C:N4	23:DB:1898:U:H2'	2.19	0.56
2:AC:188:ALA:HB3	2:AC:195:ILE:HB	1.85	0.56
22:BA:13:G:H2'	22:BA:14:U:H5''	1.87	0.56
22:DA:48:U:H2'	22:DA:49:C:C6	2.40	0.56
43:BO:100:HIS:C	43:BO:104:GLN:HB2	2.26	0.56
23:DB:1771:C:H2'	23:DB:1772:A:C8	2.40	0.56
1:CA:1175:G:O2'	1:CA:1176:A:H5'	2.06	0.56
10:CK:16:SER:HA	10:CK:77:GLY:O	2.05	0.56
22:BA:48:U:H2'	22:BA:49:C:C6	2.41	0.56
1:CA:636:U:H2'	1:CA:637:C:C6	2.40	0.56
28:BP:24:THR:O	28:BP:25:VAL:HG22	2.05	0.56
48:DG:54:ARG:HB3	48:DG:57:TYR:CD1	2.40	0.56
23:BB:2301:C:H2'	23:BB:2302:U:H6	1.70	0.56
23:BB:560:C:H2'	23:BB:561:G:O4'	2.05	0.56
22:BA:41:G:H21	23:BB:2340:A:H5'	1.71	0.56
23:BB:2500:U:H5'	23:BB:2501:C:OP2	2.05	0.56
1:AA:520:A:N1	1:AA:536:C:H1'	2.21	0.56
14:CO:28:GLN:O	14:CO:32:LEU:HD23	2.05	0.56
44:DQ:86:SER:HB2	49:DR:50:GLY:O	2.04	0.56
23:DB:2896:C:H2'	23:DB:2897:U:C6	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:96:VAL:HB	2:AC:97:PRO:HD2	1.87	0.56
23:BB:141:G:C6	50:BT:2:ILE:HD12	2.40	0.56
29:BE:48:THR:HG22	29:BE:86:ALA:HB3	1.86	0.56
23:BB:546:U:H5'	23:BB:548:G:O6	2.06	0.56
23:BB:784:G:N1	25:BC:227:VAL:HG11	2.20	0.56
23:BB:1429:G:O2'	23:BB:1430:G:H5'	2.04	0.56
23:BB:2869:G:H2'	23:BB:2870:C:C6	2.40	0.56
1:CA:1343:G:O3'	8:CI:123:ARG:HB2	2.05	0.56
1:CA:332:G:OP2	19:CT:4:LYS:HB2	2.06	0.56
19:CT:4:LYS:HE3	19:CT:6:ALA:H	1.70	0.56
23:DB:19:A:H2'	23:DB:20:C:C6	2.40	0.56
11:AL:20:VAL:HG23	11:AL:20:VAL:O	2.05	0.56
23:BB:794:A:H2'	23:BB:795:C:H6	1.71	0.56
48:DG:148:ARG:HA	48:DG:161:VAL:HB	1.86	0.56
23:BB:1856:U:H2'	23:BB:1857:G:H5'	1.86	0.56
1:AA:1239:A:H4'	1:AA:1240:U:C5'	2.35	0.56
1:AA:1299:A:H2'	1:AA:1301:U:H1'	1.88	0.56
11:AL:98:ARG:HB2	11:AL:116:TYR:HA	1.88	0.56
23:BB:2240:U:O2'	23:BB:2241:A:H5'	2.05	0.56
23:DB:2008:C:H2'	23:DB:2009:A:C8	2.40	0.56
23:BB:2297:A:N6	23:BB:2319:G:H1'	2.21	0.56
23:BB:1346:G:O2'	23:BB:1347:A:H5'	2.05	0.56
12:AM:70:ARG:HH22	47:BF:112:ASP:HB3	1.71	0.56
1:CA:810:C:O2'	1:CA:811:C:H5'	2.06	0.56
23:BB:197:A:N6	23:BB:2430:A:H2'	2.21	0.56
23:DB:1164:C:H2'	23:DB:1165:A:H8	1.70	0.56
23:DB:1744:A:H2'	23:DB:1745:A:C8	2.40	0.56
23:DB:1735:A:H2'	23:DB:1736:U:C6	2.41	0.56
23:DB:1477:A:H2'	23:DB:1478:G:O4'	2.06	0.56
23:BB:1311:G:H21	23:BB:1603:A:H62	1.53	0.56
23:DB:1099:G:C8	24:DI:3:LYS:HB2	2.41	0.56
52:BW:23:LYS:O	52:BW:66:VAL:HB	2.05	0.56
29:BE:134:LEU:O	29:BE:138:LEU:HG	2.06	0.56
44:BQ:91:ARG:HG2	44:BQ:93:ILE:HG22	1.87	0.56
1:CA:1097:C:H2'	1:CA:1098:C:C6	2.41	0.56
40:BH:140:ALA:C	40:BH:141:LYS:HD3	2.26	0.56
23:DB:2272:U:H5''	23:DB:2273:A:OP1	2.06	0.56
20:CB:156:LEU:H	20:CB:156:LEU:CD1	2.16	0.56
42:BN:72:ASP:O	42:BN:76:VAL:HG13	2.05	0.56
27:DK:60:ALA:HA	27:DK:87:LEU:CD2	2.35	0.56
47:BF:135:ILE:CD1	47:BF:137:PHE:HB3	2.36	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:918:A:H2'	1:CA:919:A:C8	2.41	0.56
1:AA:1060:U:H2'	1:AA:1061:G:H8	1.70	0.56
1:CA:1027:C:H2'	1:CA:1028:C:C6	2.41	0.56
23:DB:718:A:H3'	23:DB:719:C:H6	1.70	0.56
23:BB:1410:G:H2'	23:BB:1411:U:C6	2.41	0.56
48:BG:123:GLU:O	48:BG:125:PRO:HD3	2.05	0.56
4:AE:81:GLN:HG2	4:AE:148:SER:HA	1.87	0.56
6:AG:134:VAL:O	6:AG:138:GLU:HG3	2.05	0.56
25:BC:158:GLY:H	25:BC:194:VAL:HG13	1.70	0.56
47:BF:141:ASP:CB	47:BF:144:LYS:HB2	2.34	0.56
30:DY:2:LYS:CD	30:DY:2:LYS:H	2.18	0.56
1:AA:950:U:H2'	1:AA:951:G:H8	1.68	0.56
1:CA:777:A:H2'	1:CA:778:G:C8	2.40	0.56
4:AE:59:ILE:O	4:AE:63:MET:HG2	2.04	0.56
23:DB:197:A:N6	23:DB:2430:A:H2'	2.21	0.56
23:DB:402:A:H2'	23:DB:403:U:O4'	2.05	0.56
23:BB:2836:U:H2'	23:BB:2837:A:C8	2.40	0.56
10:AK:37:GLN:HB2	10:AK:39:ASN:HD22	1.70	0.56
1:AA:848:C:H2'	1:AA:849:G:O4'	2.05	0.56
1:AA:1049:U:H6	1:AA:1049:U:H5'	1.71	0.56
23:DB:2841:C:H2'	23:DB:2842:G:C8	2.40	0.56
12:AM:58:GLU:O	12:AM:61:LYS:HG2	2.06	0.56
1:CA:482:A:H2'	1:CA:483:C:O4'	2.06	0.56
1:AA:882:C:O2'	1:AA:883:C:H5'	2.04	0.56
2:CC:88:LYS:O	2:CC:88:LYS:HE3	2.05	0.56
24:BI:96:LYS:N	24:BI:96:LYS:HD2	2.21	0.56
28:DP:83:ILE:HD13	28:DP:83:ILE:O	2.06	0.56
23:DB:2314:A:H2'	23:DB:2315:G:C8	2.40	0.56
25:DC:54:GLY:O	25:DC:214:GLY:HA2	2.06	0.56
44:BQ:34:ALA:O	44:BQ:37:ALA:HB3	2.05	0.56
23:BB:856:G:C1'	52:BW:23:LYS:HB3	2.36	0.56
52:BW:24:ARG:HD3	52:BW:65:LYS:HE3	1.88	0.56
46:DU:3:LYS:HD3	46:DU:82:VAL:HB	1.86	0.56
44:DQ:91:ARG:HH12	49:DR:10:LYS:HB3	1.70	0.56
29:DE:106:LYS:HE3	29:DE:200:LEU:HD12	1.87	0.56
1:AA:1099:G:H2'	1:AA:1100:C:O4'	2.06	0.56
41:BJ:17:VAL:HG23	41:BJ:137:PRO:CB	2.31	0.56
37:BL:19:LEU:O	37:BL:21:ARG:HG2	2.04	0.56
47:BF:78:ILE:HD12	47:BF:78:ILE:N	2.21	0.56
24:DI:54:ILE:HD13	24:DI:55:PRO:N	2.21	0.56
24:BI:76:ALA:O	24:BI:80:LYS:HG3	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:15:PHE:HA	20:CB:42:LEU:HD21	1.88	0.56
47:DF:137:PHE:HB2	47:DF:138:PRO:CD	2.35	0.56
23:BB:139:U:C5	50:BT:1:MET:HB3	2.41	0.56
9:AJ:53:ILE:HG13	13:AN:84:ARG:NE	2.20	0.56
26:DD:113:SER:HB2	26:DD:168:GLU:N	2.19	0.56
23:BB:2741:A:H2'	23:BB:2742:G:O4'	2.05	0.56
9:CJ:59:LYS:HG3	9:CJ:60:ASP:N	2.20	0.56
48:DG:10:VAL:HG23	48:DG:48:THR:HA	1.88	0.56
1:CA:451:A:C6	1:CA:480:U:H2'	2.41	0.56
23:DB:720:U:H2'	23:DB:721:A:H8	1.69	0.56
1:AA:451:A:N6	1:AA:480:U:H2'	2.21	0.56
23:BB:2395:C:H2'	23:BB:2396:G:O4'	2.06	0.56
23:DB:2720:U:H2'	23:DB:2721:A:C8	2.41	0.56
45:BS:95:ARG:HG3	45:BS:97:LEU:HD13	1.87	0.56
8:AI:87:MET:HG2	8:AI:91:GLU:HG2	1.88	0.56
37:BL:110:VAL:HB	37:BL:127:VAL:HG23	1.87	0.56
1:CA:502:A:H2'	1:CA:503:C:C6	2.39	0.56
2:AC:120:THR:HG22	2:AC:197:VAL:HG21	1.87	0.56
23:DB:2185:U:H2'	23:DB:2186:G:O4'	2.05	0.56
11:CL:43:LYS:HE2	11:CL:44:PRO:HD3	1.88	0.56
36:D2:29:GLN:O	36:D2:33:ARG:HB2	2.05	0.56
23:DB:796:C:H2'	23:DB:797:G:C8	2.40	0.56
45:DS:31:GLN:C	45:DS:33:LEU:H	2.07	0.56
16:CQ:77:VAL:HG12	16:CQ:79:GLU:H	1.69	0.56
23:DB:1902:C:H4'	25:DC:241:LYS:O	2.05	0.56
23:DB:1092:C:H2'	23:DB:1093:G:H5'	1.88	0.56
29:DE:21:ARG:HG3	29:DE:22:ASP:N	2.21	0.56
3:AD:97:LEU:HB2	3:AD:134:TYR:HB3	1.87	0.56
47:DF:177:ARG:HA	47:DF:177:ARG:CZ	2.35	0.56
23:DB:1099:G:H8	24:DI:3:LYS:H	1.04	0.56
23:DB:1099:G:O5'	24:DI:4:VAL:HG12	2.06	0.56
33:D1:26:LYS:HB2	33:D1:52:LYS:NZ	2.21	0.56
18:AS:30:LEU:HB2	18:AS:48:ILE:HG23	1.88	0.56
23:BB:1599:U:H2'	23:BB:1600:C:C6	2.41	0.56
25:DC:130:PRO:HA	25:DC:188:ARG:HA	1.88	0.56
12:CM:13:HIS:HB2	12:CM:16:ILE:HG22	1.87	0.56
45:BS:70:LYS:HD3	45:BS:110:ARG:O	2.05	0.56
23:BB:1651:G:OP1	42:BN:40:LYS:HG3	2.05	0.56
6:AG:21:LEU:HG	6:AG:22:LEU:H	1.70	0.56
41:DJ:24:THR:HA	41:DJ:63:ALA:HB3	1.86	0.56
47:BF:35:LEU:HD23	47:BF:153:ILE:HG12	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:126:ASN:HB3	47:DF:156:THR:HA	1.87	0.56
9:CJ:65:TYR:OH	13:CN:84:ARG:HG3	2.05	0.56
34:D3:14:LYS:O	34:D3:21:PHE:O	2.24	0.56
23:DB:1439:A:H1'	23:DB:1553:A:N6	2.20	0.56
1:CA:1026:G:H2'	1:CA:1027:C:H6	1.70	0.56
12:CM:90:HIS:HA	12:CM:108:ARG:NH2	2.21	0.56
39:DX:56:LEU:O	39:DX:57:LEU:HB3	2.06	0.56
11:CL:20:VAL:O	11:CL:20:VAL:HG23	2.05	0.56
24:BI:10:LEU:HD12	24:BI:10:LEU:O	2.05	0.56
47:DF:120:SER:O	47:DF:127:TYR:HA	2.06	0.56
23:DB:416:U:H2'	23:DB:417:C:C6	2.41	0.56
48:BG:152:ARG:HG3	48:BG:153:PRO:HD2	1.86	0.56
23:BB:30:G:H2'	23:BB:31:C:C6	2.41	0.56
1:AA:204:G:H1'	1:AA:466:A:N7	2.21	0.56
6:CG:29:LEU:O	6:CG:29:LEU:HD23	2.06	0.56
25:BC:74:PRO:HG2	25:BC:96:LYS:HG3	1.86	0.56
26:DD:109:VAL:HG11	26:DD:193:VAL:HB	1.86	0.56
42:DN:9:GLN:O	42:DN:11:ASN:N	2.39	0.56
24:BI:14:ALA:HB1	24:BI:50:LYS:HA	1.87	0.56
23:DB:2443:C:O2'	23:DB:2444:G:H5'	2.06	0.56
1:CA:824:G:O2'	1:CA:825:A:H5'	2.05	0.56
23:DB:2105:U:H2'	23:DB:2106:U:O4'	2.06	0.56
19:CT:54:GLN:N	19:CT:55:PRO:HD2	2.20	0.56
23:DB:1460:U:H4'	23:DB:1461:C:O5'	2.05	0.56
23:BB:278:A:H2'	23:BB:278:A:N3	2.19	0.56
23:BB:2257:U:O2'	23:BB:2258:C:H5'	2.06	0.56
23:BB:2246:G:H2'	23:BB:2247:A:C8	2.41	0.56
51:BZ:64:ILE:N	51:BZ:64:ILE:HD12	2.18	0.56
52:BW:49:ASN:HB3	52:BW:81:ILE:CG1	2.36	0.56
5:CF:93:LYS:O	5:CF:94:HIS:HB2	2.06	0.56
23:BB:1458:U:H4'	23:BB:1459:G:O4'	2.06	0.56
25:DC:68:ARG:HB2	25:DC:128:THR:HG21	1.88	0.56
41:BJ:6:ALA:HB3	41:BJ:45:THR:HG21	1.86	0.56
23:BB:1351:C:O2'	23:BB:1571:A:H1'	2.06	0.56
47:BF:34:THR:OG1	47:BF:154:THR:HB	2.06	0.56
48:DG:123:GLU:O	48:DG:125:PRO:HD3	2.06	0.56
1:AA:93:U:H3'	1:AA:94:G:C5'	2.36	0.56
9:AJ:52:LEU:HB2	13:AN:80:ARG:HD2	1.86	0.56
23:BB:5:A:H2'	23:BB:6:A:H8	1.70	0.56
3:AD:18:LEU:HB2	3:AD:20:LEU:HG	1.87	0.56
23:DB:2183:A:H2'	23:DB:2184:A:C8	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1853:A:N1	23:DB:2087:G:H1'	2.21	0.56
25:DC:74:PRO:HG2	25:DC:96:LYS:HG3	1.87	0.56
1:CA:1254:A:H2'	1:CA:1255:G:C8	2.41	0.56
41:BJ:13:ARG:O	41:BJ:52:ASP:HA	2.05	0.56
1:AA:1162:C:H2'	1:AA:1163:A:C8	2.41	0.56
23:BB:1061:U:O4'	23:BB:1070:A:H1'	2.06	0.56
1:AA:1451:U:H5''	1:AA:1452:C:OP2	2.06	0.56
23:BB:522:A:H2'	23:BB:523:C:C6	2.39	0.56
1:CA:1176:A:H2'	1:CA:1177:G:O4'	2.06	0.56
23:DB:1682:G:H2'	23:DB:1683:U:C6	2.41	0.56
35:BV:1:MET:HG2	35:BV:59:GLU:HG3	1.88	0.56
25:DC:124:LYS:HG3	25:DC:125:PRO:HD2	1.88	0.56
20:CB:103:TRP:O	20:CB:107:ARG:HG2	2.06	0.56
23:BB:184:C:H2'	23:BB:185:G:H8	1.70	0.56
1:CA:449:G:H2'	1:CA:450:G:C8	2.41	0.56
15:AP:36:VAL:HG13	15:AP:36:VAL:O	2.06	0.56
23:BB:200:U:H5''	51:BZ:22:LEU:O	2.05	0.56
23:BB:796:C:H2'	23:BB:797:G:H8	1.70	0.56
44:DQ:91:ARG:HG2	44:DQ:93:ILE:HG22	1.88	0.56
29:BE:115:GLN:O	29:BE:117:ARG:HG3	2.05	0.56
18:CS:11:ASP:HB2	18:CS:14:LEU:HD23	1.87	0.56
44:BQ:63:ARG:HH12	44:BQ:96:ASP:HB2	1.70	0.56
41:BJ:103:ILE:HD12	41:BJ:104:ALA:N	2.20	0.56
23:BB:2110:G:N2	23:BB:2180:U:H3	2.03	0.56
23:BB:27:G:H1'	23:BB:513:A:H61	1.69	0.56
3:CD:29:THR:HG22	3:CD:30:LYS:H	1.71	0.56
47:BF:62:GLN:NE2	47:BF:90:LEU:HD13	2.21	0.56
23:BB:1173:U:H2'	23:BB:1174:U:H4'	1.88	0.56
33:B1:35:LEU:O	33:B1:36:LYS:HB2	2.06	0.56
40:BH:41:LYS:HA	40:BH:44:ILE:HG13	1.88	0.56
1:CA:253:A:H2'	1:CA:254:G:H8	1.71	0.56
16:AQ:45:VAL:HG12	16:AQ:46:HIS:N	2.21	0.56
13:CN:30:ILE:HB	13:CN:44:VAL:HG11	1.88	0.56
23:DB:1485:U:H2'	23:DB:1486:U:H6	1.70	0.56
23:BB:233:A:H61	23:BB:428:A:N6	2.03	0.56
23:DB:1558:C:H4'	23:DB:1559:U:C5'	2.35	0.56
1:CA:1018:G:H2'	1:CA:1019:A:C8	2.41	0.56
50:DT:18:GLU:C	50:DT:20:ALA:H	2.09	0.56
46:DU:78:LYS:HE3	46:DU:79:ALA:N	2.21	0.56
1:CA:376:G:H5''	15:CP:5:ARG:HB2	1.87	0.56
51:BZ:35:SER:HA	51:BZ:49:LEU:O	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:625:U:H4'	15:AP:16:PHE:CZ	2.41	0.56
1:AA:272:C:H2'	1:AA:273:U:C6	2.40	0.56
45:BS:13:SER:OG	45:BS:16:LYS:HB2	2.06	0.56
1:AA:834:U:H2'	1:AA:835:U:C6	2.41	0.56
23:BB:1275:A:H2'	23:BB:1276:A:O4'	2.06	0.56
3:CD:16:THR:HG22	3:CD:17:ASP:H	1.70	0.56
38:DM:90:GLU:HA	38:DM:90:GLU:OE1	2.06	0.56
23:DB:40:U:H2'	23:DB:41:C:C6	2.41	0.56
29:DE:34:ALA:HB2	29:DE:96:VAL:HG21	1.87	0.56
23:DB:2365:G:H4'	52:DW:59:PHE:HE1	1.70	0.56
23:BB:2386:A:H2'	23:BB:2387:U:C6	2.41	0.56
48:DG:89:VAL:HG12	48:DG:90:GLY:H	1.71	0.56
33:B1:33:LEU:HB3	33:B1:51:ALA:HB3	1.87	0.56
44:DQ:111:LYS:HZ2	49:DR:48:LYS:HD2	1.70	0.56
29:BE:149:ILE:HG23	29:BE:188:MET:CA	2.36	0.56
47:DF:50:ASP:O	47:DF:53:ALA:HB3	2.06	0.56
23:BB:459:U:O2'	23:BB:460:A:H5'	2.06	0.56
23:BB:670:A:H5''	37:BL:42:SER:HB2	1.87	0.56
20:CB:165:ALA:HA	20:CB:172:ILE:HD11	1.87	0.56
24:DI:49:GLU:CB	24:DI:52:LEU:HD12	2.36	0.56
40:BH:103:VAL:HG12	40:BH:142:VAL:HG11	1.87	0.56
27:DK:63:VAL:HG12	27:DK:64:ARG:HD3	1.87	0.56
10:AK:28:ASN:ND2	10:AK:46:ALA:HB3	2.20	0.56
47:DF:37:MET:HE3	47:DF:56:LEU:HD23	1.88	0.56
23:DB:140:C:H4'	23:DB:141:G:C5	2.41	0.56
52:BW:77:LYS:HZ2	52:BW:77:LYS:N	2.03	0.56
40:BH:40:THR:N	40:BH:43:ASN:HD21	2.02	0.56
12:AM:10:ASP:HA	12:AM:44:ILE:HD13	1.87	0.56
12:AM:47:LEU:HD13	12:AM:51:GLN:O	2.06	0.56
23:BB:91:A:H1'	23:BB:92:U:C6	2.41	0.56
23:BB:720:U:H2'	23:BB:721:A:H8	1.70	0.56
43:BO:4:LYS:O	43:BO:8:ILE:HG13	2.06	0.56
1:CA:908:A:O2'	1:CA:909:A:H5'	2.06	0.56
1:CA:1488:G:H2'	1:CA:1489:G:C8	2.40	0.56
1:AA:1018:G:H2'	1:AA:1019:A:H8	1.71	0.56
23:DB:2136:G:O2'	23:DB:2137:U:H5'	2.06	0.56
7:CH:86:LYS:HD2	7:CH:90:GLU:CG	2.36	0.56
23:DB:2092:U:H4'	23:DB:2093:G:O5'	2.06	0.56
23:BB:1447:C:H2'	23:BB:1448:G:C8	2.41	0.56
23:DB:1709:U:H2'	23:DB:1710:G:H8	1.69	0.56
23:BB:2893:A:H4'	23:BB:2894:G:O5'	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2892:G:H5''	23:DB:2894:G:N2	2.21	0.56
23:DB:1924:C:O2'	23:DB:1925:C:H5'	2.06	0.56
29:DE:98:LYS:HZ1	29:DE:99:LYS:HE3	1.71	0.56
16:AQ:11:VAL:HG23	16:AQ:56:ASP:O	2.05	0.56
7:CH:28:SER:OG	7:CH:56:PRO:HB2	2.06	0.56
28:DP:26:GLU:HA	28:DP:43:GLU:HA	1.86	0.56
23:DB:1311:G:H21	23:DB:1603:A:H62	1.54	0.56
1:CA:403:C:H2'	1:CA:404:G:H8	1.71	0.56
23:BB:1535:A:H5''	23:BB:1536:C:C5	2.40	0.56
2:CC:142:ARG:HH21	2:CC:143:LEU:HD21	1.71	0.56
22:DA:102:G:O2'	22:DA:103:U:H5'	2.06	0.56
1:AA:602:A:O2'	1:AA:603:U:H5'	2.05	0.56
1:AA:301:G:H2'	1:AA:302:G:H8	1.70	0.56
23:BB:2605:U:H2'	23:BB:2606:C:C6	2.41	0.56
23:DB:841:G:O2'	23:DB:842:U:H5'	2.05	0.56
12:CM:58:GLU:O	12:CM:61:LYS:HG2	2.06	0.56
52:BW:24:ARG:CD	52:BW:65:LYS:HG2	2.36	0.55
46:DU:82:VAL:HG13	46:DU:93:ARG:HB3	1.88	0.55
52:DW:37:VAL:CG1	52:DW:38:ARG:HH11	2.18	0.55
50:BT:50:LEU:N	50:BT:50:LEU:HD22	2.21	0.55
45:DS:26:GLY:H	45:DS:71:VAL:HG13	1.71	0.55
40:BH:133:GLN:HA	40:BH:139:PHE:HB3	1.88	0.55
26:BD:186:LEU:HD11	28:BP:3:ILE:HG13	1.86	0.55
18:AS:11:ASP:HB2	18:AS:14:LEU:HD23	1.88	0.55
10:CK:28:ASN:HD22	10:CK:29:THR:N	2.04	0.55
47:BF:110:ILE:HA	47:BF:111:ARG:NH1	2.21	0.55
48:DG:108:PHE:HD1	48:DG:108:PHE:H	1.54	0.55
26:DD:34:VAL:CG1	26:DD:94:GLN:H	2.19	0.55
26:BD:148:GLN:HB2	26:BD:152:PRO:HG2	1.88	0.55
47:BF:62:GLN:NE2	47:BF:90:LEU:HA	2.21	0.55
9:CJ:53:ILE:CG2	9:CJ:61:ALA:HB1	2.36	0.55
29:BE:69:ARG:O	29:BE:70:SER:HB3	2.04	0.55
23:BB:721:A:H2'	23:BB:722:A:H8	1.70	0.55
23:BB:182:A:H2'	23:BB:183:C:C6	2.41	0.55
12:CM:63:VAL:HG12	12:CM:68:LEU:HG	1.88	0.55
26:BD:25:THR:HG21	26:BD:193:VAL:CG2	2.37	0.55
39:DX:17:GLU:HB3	39:DX:53:VAL:CG1	2.36	0.55
1:AA:476:U:H2'	1:AA:477:C:C6	2.42	0.55
1:AA:403:C:H2'	1:AA:404:G:H8	1.71	0.55
28:DP:112:ARG:O	28:DP:113:LEU:HB3	2.06	0.55
26:BD:175:LEU:HD21	26:BD:191:GLY:O	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AF:80:PHE:HE1	25:BC:135:PRO:HG2	1.72	0.55
1:AA:552:U:H4'	11:AL:82:ARG:HG2	1.87	0.55
23:BB:1210:G:OP1	23:BB:1212:G:H5'	2.06	0.55
23:DB:2523:G:O2'	23:DB:2524:G:H5'	2.06	0.55
25:DC:229:HIS:ND1	25:DC:230:PRO:HD2	2.20	0.55
23:DB:15:G:O2'	23:DB:16:C:H5'	2.06	0.55
20:AB:72:LYS:O	20:AB:76:SER:HB2	2.06	0.55
23:DB:1013:C:H2'	23:DB:1014:A:H8	1.71	0.55
1:CA:1048:G:O3'	1:CA:1049:U:H3'	2.05	0.55
20:AB:33:ALA:HA	20:AB:37:VAL:O	2.06	0.55
29:DE:148:ILE:HD13	29:DE:187:VAL:CG2	2.36	0.55
23:DB:582:A:H2'	23:DB:583:G:C8	2.42	0.55
41:DJ:17:VAL:HG23	41:DJ:137:PRO:CB	2.31	0.55
12:AM:106:ARG:HD3	12:AM:110:GLY:O	2.07	0.55
47:DF:110:ILE:CG2	47:DF:113:PHE:HB3	2.36	0.55
23:BB:1139:G:O2'	23:BB:1140:C:H5'	2.06	0.55
23:BB:2207:C:H2'	23:BB:2208:C:C6	2.41	0.55
1:CA:17:U:H2'	1:CA:18:C:H6	1.69	0.55
1:CA:1414:U:H2'	1:CA:1415:G:C8	2.40	0.55
26:BD:37:VAL:HG23	26:BD:91:THR:HA	1.88	0.55
16:CQ:46:HIS:HB2	16:CQ:66:LEU:HD13	1.89	0.55
45:DS:66:ILE:N	45:DS:66:ILE:HD13	2.20	0.55
16:AQ:46:HIS:HB2	16:AQ:66:LEU:HD13	1.89	0.55
43:DO:4:LYS:O	43:DO:8:ILE:HG13	2.06	0.55
23:DB:2144:G:O2'	23:DB:2146:C:H5''	2.07	0.55
12:AM:95:PRO:N	12:AM:108:ARG:HG2	2.22	0.55
39:DX:14:LEU:O	39:DX:18:LEU:HB2	2.04	0.55
1:AA:908:A:O2'	1:AA:909:A:H5'	2.06	0.55
1:AA:477:C:H2'	1:AA:478:A:C8	2.42	0.55
1:AA:57:G:H2'	1:AA:58:C:H6	1.69	0.55
23:DB:17:G:H2'	23:DB:18:U:C6	2.41	0.55
1:CA:476:U:H2'	1:CA:477:C:C6	2.41	0.55
23:DB:1868:C:H2'	23:DB:1869:G:O4'	2.05	0.55
1:CA:560:A:N1	1:CA:566:G:H5'	2.21	0.55
23:BB:1716:U:H2'	23:BB:1717:A:H8	1.71	0.55
10:AK:16:SER:HA	10:AK:78:ILE:HA	1.87	0.55
23:BB:1535:A:H5''	23:BB:1536:C:H5	1.70	0.55
23:BB:150:U:H2'	23:BB:151:C:C6	2.41	0.55
23:DB:2322:A:N6	23:DB:2333:A:H62	2.04	0.55
48:BG:54:ARG:HB3	48:BG:57:TYR:CD1	2.40	0.55
1:AA:6:G:H2'	4:AE:123:LEU:HD22	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1400:U:H2'	23:DB:1401:G:C8	2.40	0.55
29:DE:6:LYS:HB2	29:DE:120:VAL:O	2.06	0.55
52:BW:41:GLY:HA2	52:BW:44:PHE:CD2	2.41	0.55
1:AA:1200:C:C3'	1:AA:1201:A:H5'	2.37	0.55
1:CA:285:C:H2'	1:CA:286:C:H6	1.71	0.55
23:BB:1744:A:H2'	23:BB:1745:A:C8	2.41	0.55
7:AH:17:GLN:HA	7:AH:17:GLN:HE21	1.71	0.55
23:DB:2207:C:H2'	23:DB:2208:C:C6	2.41	0.55
22:DA:60:C:H2'	22:DA:61:G:H8	1.71	0.55
35:BV:46:LYS:HD2	35:BV:46:LYS:N	2.22	0.55
25:BC:79:ARG:HD2	25:BC:81:GLU:HG3	1.88	0.55
23:BB:1872:A:H2'	23:BB:1873:G:O4'	2.07	0.55
5:CF:10:VAL:HG12	5:CF:11:HIS:N	2.21	0.55
46:BU:86:PHE:HD1	46:BU:88:ASP:N	2.05	0.55
8:AI:34:LEU:HD11	8:AI:47:VAL:HG21	1.88	0.55
8:CI:19:PHE:HB2	8:CI:63:TYR:HB3	1.87	0.55
33:D1:33:LEU:HB3	33:D1:51:ALA:HB3	1.88	0.55
25:DC:89:ASN:O	25:DC:105:ALA:HB3	2.06	0.55
41:DJ:38:GLY:HA3	41:DJ:50:THR:O	2.05	0.55
20:AB:165:ALA:HA	20:AB:172:ILE:HD11	1.88	0.55
25:BC:64:VAL:HG22	25:BC:90:ILE:HD11	1.87	0.55
41:DJ:16:TYR:O	41:DJ:55:ILE:HG12	2.06	0.55
48:DG:34:ARG:HD3	48:DG:34:ARG:N	2.22	0.55
44:BQ:104:ALA:O	44:BQ:105:PHE:HB3	2.07	0.55
24:BI:77:VAL:HA	24:BI:80:LYS:CE	2.36	0.55
1:AA:72:A:H2'	1:AA:73:C:C6	2.42	0.55
10:CK:33:ILE:HG13	10:CK:73:VAL:HG21	1.89	0.55
19:AT:85:LEU:HD23	19:AT:86:ALA:H	1.71	0.55
23:DB:559:G:OP1	41:DJ:111:LYS:HD3	2.05	0.55
47:DF:147:ARG:HB3	47:DF:147:ARG:CZ	2.35	0.55
6:AG:14:ASP:HB3	6:AG:18:GLY:N	2.18	0.55
23:DB:1351:C:O2'	23:DB:1571:A:H1'	2.06	0.55
40:BH:44:ILE:O	40:BH:48:GLU:HB3	2.07	0.55
23:BB:705:A:O2'	25:BC:6:LYS:HG3	2.06	0.55
1:CA:108:G:O6	19:CT:9:ARG:HG2	2.06	0.55
12:AM:56:ARG:O	12:AM:59:VAL:HG12	2.07	0.55
26:DD:148:GLN:HG3	26:DD:152:PRO:CG	2.34	0.55
1:CA:987:G:O2'	1:CA:988:G:H5'	2.06	0.55
23:DB:1029:A:H2'	23:DB:1030:C:O4'	2.06	0.55
11:AL:86:VAL:HG11	11:AL:89:LEU:HD23	1.88	0.55
45:DS:96:ILE:HG23	45:DS:96:ILE:O	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DP:91:VAL:O	28:DP:92:ARG:HB3	2.07	0.55
23:BB:877:A:H2	23:BB:900:A:N7	2.04	0.55
23:BB:1338:G:H4'	50:BT:18:GLU:CG	2.35	0.55
11:AL:54:VAL:HG21	11:AL:79:ILE:HD11	1.88	0.55
23:BB:1723:G:H2'	23:BB:1724:G:O4'	2.06	0.55
1:AA:1254:A:H2'	1:AA:1255:G:C8	2.41	0.55
49:BR:2:TYR:HB2	49:BR:42:ALA:HB2	1.88	0.55
1:AA:484:G:H4'	1:AA:485:U:C5'	2.37	0.55
23:DB:1923:U:H2'	23:DB:1924:C:C6	2.41	0.55
23:BB:1400:U:H2'	23:BB:1401:G:H8	1.71	0.55
43:BO:105:ALA:C	43:BO:107:ALA:H	2.10	0.55
23:BB:2339:C:H2'	23:BB:2340:A:C8	2.41	0.55
23:DB:2257:U:O2'	23:DB:2258:C:H5'	2.06	0.55
1:AA:1472:U:H2'	1:AA:1473:G:C8	2.40	0.55
3:CD:113:ALA:O	3:CD:117:VAL:HG23	2.06	0.55
23:DB:2091:C:H1'	51:DZ:34:HIS:CD2	2.41	0.55
23:DB:2595:G:H1	25:DC:238:ASN:ND2	2.04	0.55
49:DR:2:TYR:HB2	49:DR:42:ALA:HB2	1.87	0.55
36:B2:39:ARG:HH11	36:B2:39:ARG:HG3	1.71	0.55
23:DB:2014:A:H2'	23:DB:2015:A:C8	2.42	0.55
23:BB:402:A:H2'	23:BB:403:U:O4'	2.06	0.55
4:CE:15:ILE:HB	4:CE:35:LEU:O	2.06	0.55
23:BB:1874:C:H2'	23:BB:1875:G:O4'	2.05	0.55
5:AF:93:LYS:O	5:AF:94:HIS:HB2	2.05	0.55
40:BH:130:VAL:HG21	40:BH:144:VAL:CG2	2.33	0.55
50:DT:50:LEU:HD22	50:DT:50:LEU:H	1.72	0.55
37:DL:143:GLU:HG2	37:DL:144:GLU:N	2.15	0.55
52:BW:9:THR:HG22	52:BW:10:ARG:HH11	1.71	0.55
44:BQ:94:LEU:CD2	49:BR:11:GLN:HB2	2.36	0.55
4:CE:17:VAL:HG23	4:CE:33:THR:O	2.07	0.55
23:BB:2109:U:H3'	23:BB:2110:G:C8	2.42	0.55
42:BN:55:ALA:HA	42:BN:80:PHE:CE1	2.41	0.55
20:AB:156:LEU:CD1	20:AB:156:LEU:H	2.16	0.55
23:DB:1022:G:N2	23:DB:1142:A:N1	2.53	0.55
23:BB:162:U:O2'	23:BB:163:C:H5'	2.06	0.55
23:DB:2869:G:H2'	23:DB:2870:C:C6	2.41	0.55
47:BF:32:LYS:H	47:BF:95:MET:HE1	1.72	0.55
29:DE:60:TRP:CE3	29:DE:60:TRP:HA	2.42	0.55
25:BC:6:LYS:O	25:BC:8:THR:HG22	2.07	0.55
1:AA:109:A:H2'	1:AA:326:G:N2	2.22	0.55
1:AA:376:G:H2'	1:AA:377:G:H8	1.69	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:47:LEU:HB3	12:CM:51:GLN:HB2	1.88	0.55
34:B3:7:ARG:O	34:B3:11:LYS:HG3	2.05	0.55
23:DB:2038:G:H2'	23:DB:2039:U:C6	2.42	0.55
44:BQ:80:ASN:O	44:BQ:83:LYS:HB3	2.07	0.55
23:BB:2484:G:OP1	38:BM:44:ARG:HD3	2.07	0.55
12:CM:80:MET:HA	12:CM:87:GLY:HA3	1.88	0.55
17:AR:63:TYR:N	17:AR:63:TYR:CD2	2.74	0.55
1:AA:1238:A:C8	1:AA:1303:C:H1'	2.41	0.55
46:DU:81:ARG:H	46:DU:81:ARG:NH2	2.03	0.55
8:AI:99:LYS:HE3	9:CJ:80:THR:HA	1.87	0.55
26:DD:136:ASN:HD21	26:DD:140:HIS:N	2.05	0.55
1:CA:539:A:H2'	1:CA:540:G:H8	1.70	0.55
1:AA:676:A:H1'	10:AK:116:PRO:HB3	1.88	0.55
1:CA:216:U:H2'	1:CA:217:C:C6	2.41	0.55
1:CA:712:A:O2'	1:CA:713:G:H5'	2.06	0.55
23:BB:1229:C:H2'	23:BB:1230:A:C8	2.42	0.55
23:DB:1656:C:H2'	23:DB:1657:U:C6	2.42	0.55
22:DA:95:U:H2'	22:DA:96:G:C8	2.42	0.55
4:CE:32:PHE:CE2	4:CE:55:VAL:HG22	2.42	0.55
51:BZ:49:LEU:HB2	51:BZ:51:VAL:HG23	1.88	0.55
29:BE:34:ALA:HB2	29:BE:96:VAL:HG21	1.89	0.55
23:DB:2626:C:O2'	23:DB:2627:G:H5'	2.07	0.55
23:DB:37:C:O2'	23:DB:38:A:H5'	2.06	0.55
1:AA:624:C:H2'	1:AA:625:U:C6	2.42	0.55
1:AA:560:A:H4'	1:AA:561:U:H5''	1.87	0.55
6:AG:132:THR:O	6:AG:135:LYS:HB3	2.06	0.55
23:BB:2243:U:H2'	23:BB:2244:U:C6	2.42	0.55
1:AA:880:C:H2'	1:AA:881:G:H8	1.70	0.55
1:CA:208:U:H2'	1:CA:210:C:C5	2.40	0.55
45:DS:88:ARG:HG3	45:DS:88:ARG:HH21	1.72	0.55
38:BM:108:VAL:HG22	38:BM:109:PRO:HD2	1.88	0.55
8:CI:93:LEU:O	8:CI:97:LEU:HG	2.06	0.55
26:BD:14:ILE:HG22	26:BD:22:ILE:O	2.06	0.55
44:DQ:60:TRP:O	44:DQ:64:ILE:HG12	2.07	0.55
23:DB:1458:U:H4'	23:DB:1459:G:O4'	2.07	0.55
33:D1:34:GLU:HA	33:D1:48:TYR:O	2.06	0.55
44:DQ:105:PHE:O	44:DQ:109:VAL:HG23	2.05	0.55
48:DG:17:LYS:HZ2	48:DG:18:ILE:H	1.52	0.55
47:BF:76:PHE:HD2	47:BF:78:ILE:HD13	1.72	0.55
47:DF:65:LEU:HD23	47:DF:87:LYS:HD2	1.89	0.55
27:BK:105:ARG:H	27:BK:105:ARG:CD	2.16	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:587:C:O2'	37:DL:19:LEU:HD13	2.06	0.55
2:AC:51:VAL:HA	2:AC:69:THR:HA	1.88	0.55
4:AE:131:ASN:HD22	4:AE:134:ASN:H	1.53	0.55
47:DF:128:SER:HB3	47:DF:154:THR:HA	1.88	0.55
23:BB:740:C:O2'	23:BB:741:U:H5'	2.06	0.55
23:DB:784:G:H21	25:DC:225:ASN:HD22	1.52	0.55
23:DB:2748:A:H4'	48:DG:3:VAL:HG21	1.87	0.55
1:AA:376:G:H5''	15:AP:5:ARG:HB2	1.88	0.55
44:DQ:80:ASN:O	44:DQ:83:LYS:HB3	2.07	0.55
1:CA:373:A:C1'	1:CA:481:G:H1'	2.36	0.55
1:AA:373:A:C1'	1:AA:481:G:H1'	2.37	0.55
23:BB:1813:G:N3	25:BC:49:THR:HG21	2.22	0.55
23:DB:922:C:H1'	52:DW:22:VAL:HG21	1.89	0.55
44:BQ:83:LYS:NZ	44:BQ:87:VAL:HA	2.21	0.55
23:DB:1410:G:H2'	23:DB:1411:U:C6	2.42	0.55
37:DL:110:VAL:HB	37:DL:127:VAL:HG23	1.88	0.55
17:AR:63:TYR:N	17:AR:63:TYR:HD2	2.05	0.55
37:BL:95:LEU:HB3	37:BL:100:ILE:CG2	2.37	0.55
1:AA:1018:G:H2'	1:AA:1019:A:C8	2.41	0.55
23:DB:1723:G:H2'	23:DB:1724:G:O4'	2.07	0.55
38:BM:30:SER:HA	38:BM:133:LYS:HB2	1.88	0.55
38:BM:66:ARG:NE	38:BM:101:VAL:HG11	2.22	0.55
24:BI:89:SER:HA	24:BI:97:VAL:CG2	2.36	0.55
1:AA:502:A:H2'	1:AA:503:C:C6	2.42	0.55
1:AA:712:A:O2'	1:AA:713:G:H5'	2.06	0.55
23:DB:5:A:H2'	23:DB:6:A:H8	1.72	0.55
23:BB:1827:U:O2'	23:BB:1828:G:H5'	2.06	0.55
23:BB:441:U:H2'	23:BB:442:G:H8	1.72	0.55
11:CL:98:ARG:HB2	11:CL:116:TYR:HA	1.87	0.55
23:DB:1582:C:H3'	23:DB:1583:A:N3	2.21	0.55
23:BB:1583:A:H5''	23:BB:1584:U:OP1	2.06	0.55
23:DB:2605:U:H2'	23:DB:2606:C:C6	2.41	0.55
23:DB:1210:G:H5'	23:DB:1212:G:O4'	2.07	0.55
23:BB:15:G:O2'	23:BB:16:C:H5'	2.06	0.55
6:CG:99:ALA:O	6:CG:103:ILE:HG13	2.06	0.55
25:BC:20:ASN:OD1	25:BC:22:GLU:HG2	2.07	0.55
19:CT:20:ASN:O	19:CT:24:ARG:HB2	2.06	0.55
23:DB:2836:U:H2'	23:DB:2837:A:C8	2.42	0.55
9:CJ:67:ILE:HG12	13:CN:94:GLY:O	2.06	0.55
27:BK:7:MET:HE2	27:BK:18:ARG:NH1	2.21	0.55
52:BW:21:GLY:CA	52:BW:33:GLY:HA2	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AE:53:ARG:HE	4:AE:54:GLU:HG2	1.70	0.55
38:BM:90:GLU:HA	38:BM:90:GLU:OE1	2.06	0.55
24:DI:63:ASP:O	24:DI:64:ARG:HB2	2.06	0.55
37:DL:9:ALA:HB3	37:DL:12:SER:OG	2.07	0.55
1:AA:810:C:O2'	1:AA:811:C:H5'	2.06	0.55
1:AA:731:G:H5'	1:AA:766:A:H4'	1.89	0.55
46:DU:86:PHE:HB3	46:DU:90:LYS:O	2.06	0.55
23:DB:2352:A:C6	52:DW:30:VAL:HG11	2.42	0.55
40:BH:95:GLY:O	40:BH:99:ILE:HG12	2.07	0.55
50:DT:11:LEU:N	50:DT:11:LEU:HD22	2.16	0.55
44:DQ:109:VAL:O	44:DQ:113:LYS:HG3	2.06	0.55
24:DI:79:LEU:HD11	24:DI:131:THR:OG1	2.07	0.55
2:CC:190:THR:HG22	2:CC:191:THR:N	2.22	0.55
45:BS:18:ARG:HB3	45:BS:76:VAL:HG22	1.89	0.55
37:DL:19:LEU:O	37:DL:21:ARG:HG2	2.07	0.55
41:BJ:128:ASN:C	41:BJ:129:GLU:HG3	2.27	0.55
47:DF:168:LEU:HD13	47:DF:169:LEU:N	2.21	0.55
26:DD:37:VAL:HG23	26:DD:91:THR:HA	1.87	0.55
26:DD:118:PHE:HZ	26:DD:123:LYS:HZ3	1.54	0.55
1:CA:333:U:H2'	1:CA:334:C:C6	2.41	0.55
23:DB:1442:U:H2'	23:DB:1443:U:H6	1.70	0.55
23:BB:1470:A:H3'	23:BB:1471:G:H8	1.72	0.55
34:B3:5:THR:HG22	34:B3:62:PRO:HD2	1.89	0.55
24:BI:100:ILE:O	24:BI:139:VAL:HA	2.06	0.55
37:DL:100:ILE:O	37:DL:100:ILE:HG12	2.05	0.55
37:BL:100:ILE:O	37:BL:100:ILE:HG12	2.07	0.55
19:AT:48:LYS:O	19:AT:52:GLU:HB3	2.07	0.55
1:AA:1288:A:N1	1:AA:1371:G:H1'	2.22	0.55
23:BB:582:A:H2'	23:BB:583:G:C8	2.42	0.55
1:CA:1301:U:H2'	1:CA:1301:U:O2	2.06	0.55
1:CA:204:G:H2'	1:CA:205:A:H8	1.72	0.55
23:BB:1230:A:H2'	23:BB:1231:U:C6	2.41	0.55
23:DB:1164:C:H2'	23:DB:1165:A:C8	2.41	0.55
44:DQ:101:ASP:HB2	49:DR:2:TYR:OH	2.06	0.55
23:BB:1838:C:N4	23:BB:1898:U:H2'	2.22	0.55
23:BB:2196:C:O2'	23:BB:2197:U:H5'	2.06	0.55
23:DB:1872:A:H2'	23:DB:1873:G:O4'	2.06	0.55
23:DB:2210:U:N3	23:DB:2212:A:N7	2.55	0.55
23:DB:324:A:H2'	23:DB:325:G:O4'	2.06	0.55
39:BX:46:VAL:O	39:BX:50:VAL:HG23	2.07	0.55
23:BB:1788:C:O2'	23:BB:1789:A:H5'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:215:G:H4'	23:BB:216:A:H4'	1.88	0.55
4:CE:53:ARG:HE	4:CE:54:GLU:HG2	1.71	0.55
20:AB:163:ILE:HD11	20:AB:209:VAL:HG12	1.89	0.55
33:B1:29:LYS:HA	33:B1:31:GLU:OE1	2.07	0.55
33:B1:34:GLU:HA	33:B1:48:TYR:O	2.06	0.55
29:DE:192:ALA:HA	29:DE:195:GLN:NE2	2.20	0.55
25:BC:80:LEU:HD23	25:BC:91:ALA:HB2	1.88	0.55
41:BJ:55:ILE:O	41:BJ:55:ILE:HG13	2.04	0.55
41:DJ:96:ARG:O	41:DJ:99:ARG:HG3	2.07	0.55
48:DG:15:ASP:CB	48:DG:26:LYS:H	2.15	0.55
10:CK:33:ILE:HG12	10:CK:69:CYS:SG	2.47	0.55
20:AB:14:HIS:CD2	20:AB:202:ASN:H	2.24	0.55
42:BN:37:THR:HB	42:BN:40:LYS:HB2	1.89	0.55
35:BV:62:THR:HB	35:BV:71:LYS:HG2	1.89	0.55
25:BC:226:PRO:HA	25:BC:232:GLY:HA3	1.87	0.55
15:AP:74:LEU:O	15:AP:78:VAL:HG12	2.05	0.55
47:DF:135:ILE:CD1	47:DF:137:PHE:HB3	2.37	0.55
41:BJ:30:THR:HG23	41:BJ:31:GLU:N	2.22	0.55
23:DB:1571:A:H2'	23:DB:1572:A:C8	2.42	0.55
47:BF:128:SER:HB3	47:BF:154:THR:HA	1.88	0.55
40:DH:141:LYS:HE3	40:DH:141:LYS:N	2.21	0.55
3:AD:169:TRP:CE2	3:AD:185:PRO:HB3	2.42	0.55
48:DG:9:VAL:H	48:DG:48:THR:HB	1.71	0.55
35:BV:78:GLN:HB2	35:BV:88:HIS:O	2.07	0.55
37:DL:47:ARG:CB	37:DL:47:ARG:HH21	2.18	0.55
23:BB:1550:C:H2'	23:BB:1551:A:C8	2.41	0.55
7:AH:11:THR:HA	7:AH:14:ARG:NH1	2.22	0.55
23:DB:2860:A:H8	23:DB:2860:A:O5'	1.89	0.55
46:BU:81:ARG:HB2	46:BU:96:LYS:CG	2.37	0.55
29:DE:115:GLN:O	29:DE:117:ARG:HG3	2.06	0.55
23:BB:1508:A:H5'	23:BB:1509:A:N6	2.22	0.55
23:DB:1432:G:O2'	23:DB:1433:A:H5'	2.06	0.55
46:BU:11:ILE:O	46:BU:12:VAL:HB	2.07	0.55
11:AL:31:GLY:HA3	11:AL:54:VAL:CG1	2.37	0.55
44:BQ:78:PHE:CZ	44:BQ:82:LEU:HD11	2.41	0.55
17:CR:63:TYR:HD2	17:CR:63:TYR:N	2.05	0.55
1:CA:314:C:O2'	1:CA:315:A:H5'	2.07	0.55
1:CA:1239:A:H4'	1:CA:1240:U:C5'	2.36	0.55
1:CA:1299:A:H2'	1:CA:1301:U:H1'	1.89	0.55
1:CA:1035:A:H2'	1:CA:1036:A:C8	2.42	0.55
23:BB:2758:A:H1'	48:BG:63:GLN:HE22	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:195:A:H1'	1:CA:222:C:O2'	2.06	0.55
23:DB:2776:A:H4'	23:DB:2777:G:H5''	1.88	0.55
11:CL:122:LYS:HG3	11:CL:123:ALA:H	1.70	0.55
19:AT:20:ASN:O	19:AT:24:ARG:HB2	2.06	0.55
23:BB:679:C:O2'	23:BB:680:C:H5'	2.07	0.55
23:DB:1874:C:H2'	23:DB:1875:G:O4'	2.06	0.55
23:BB:2841:C:H2'	23:BB:2842:G:C8	2.40	0.55
30:DY:35:VAL:HG21	30:DY:37:ARG:HH22	1.72	0.55
43:BO:79:ALA:O	43:BO:83:LEU:HB2	2.07	0.55
18:CS:65:MET:HG3	18:CS:73:PHE:CZ	2.41	0.55
43:BO:97:PHE:HB3	43:BO:103:VAL:HG21	1.88	0.55
1:CA:1308:U:H2'	1:CA:1309:G:H8	1.72	0.55
23:DB:1716:U:H2'	23:DB:1717:A:C8	2.42	0.55
49:DR:16:GLU:HG2	49:DR:101:ILE:HG13	1.87	0.55
23:BB:1425:G:H2'	23:BB:1426:G:C8	2.42	0.55
1:CA:1380:U:H5	6:CG:2:ARG:HH12	1.55	0.55
46:BU:82:VAL:HG13	46:BU:93:ARG:HB3	1.88	0.55
26:DD:105:LYS:H	26:DD:106:LYS:NZ	2.04	0.55
13:CN:51:PRO:HG2	13:CN:52:ARG:H	1.71	0.55
29:BE:138:LEU:HB3	29:BE:143:LEU:O	2.07	0.55
25:BC:89:ASN:O	25:BC:105:ALA:HB3	2.07	0.55
50:BT:38:ALA:HB3	50:BT:81:LYS:HE2	1.89	0.55
41:DJ:125:TYR:HH	41:DJ:132:HIS:CE1	2.25	0.55
45:DS:70:LYS:HD3	45:DS:110:ARG:O	2.06	0.55
48:DG:25:ILE:O	48:DG:32:LEU:HA	2.07	0.55
28:BP:3:ILE:HG23	28:BP:4:ILE:N	2.21	0.55
20:AB:166:ASP:OD2	20:AB:190:SER:HA	2.07	0.55
40:DH:87:GLU:H	40:DH:89:LYS:NZ	2.04	0.55
42:BN:52:ILE:O	42:BN:55:ALA:HB3	2.07	0.55
22:DA:42:C:C5	47:DF:65:LEU:HD22	2.42	0.55
35:BV:4:ILE:HD12	35:BV:63:ILE:HG13	1.87	0.55
2:CC:96:VAL:HB	2:CC:97:PRO:HD2	1.88	0.55
23:BB:743:A:C2'	23:BB:744:U:H5'	2.37	0.55
1:AA:844:G:H2'	1:AA:845:A:N9	2.21	0.55
3:CD:169:TRP:CE2	3:CD:185:PRO:HB3	2.42	0.55
23:BB:2286:G:H4'	23:BB:2287:A:O4'	2.07	0.55
1:AA:860:A:H2'	1:AA:861:G:O4'	2.07	0.55
24:DI:85:ILE:CD1	24:DI:137:LEU:HD21	2.36	0.55
1:AA:270:A:H2'	1:AA:271:C:H6	1.71	0.55
23:DB:1509:A:H4'	23:DB:1510:G:H8	1.71	0.55
17:AR:58:ILE:O	17:AR:62:ARG:HG3	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1057:G:H4'	2:CC:196:GLY:H	1.72	0.55
17:CR:63:TYR:CD2	17:CR:63:TYR:N	2.74	0.55
23:DB:2297:A:N6	23:DB:2319:G:H1'	2.22	0.55
23:DB:1000:A:H2'	23:DB:1001:A:C8	2.42	0.55
23:BB:2008:C:H2'	23:BB:2009:A:C8	2.41	0.55
1:AA:1048:G:O3'	1:AA:1049:U:H3'	2.07	0.55
23:BB:1816:C:H3'	25:BC:61:TYR:HE2	1.72	0.55
22:DA:13:G:H2'	22:DA:14:U:H5''	1.89	0.55
46:BU:27:VAL:HG23	46:BU:33:VAL:HG12	1.88	0.55
45:DS:13:SER:OG	45:DS:16:LYS:HB2	2.06	0.55
23:DB:1831:G:H2'	23:DB:1832:C:C6	2.42	0.55
23:BB:634:C:H2'	23:BB:635:C:C6	2.42	0.55
23:DB:2286:G:H4'	23:DB:2287:A:O4'	2.06	0.55
23:BB:836:G:H2'	23:BB:837:C:C6	2.42	0.55
23:BB:660:C:H2'	23:BB:661:A:H8	1.71	0.55
1:CA:848:C:H2'	1:CA:849:G:O4'	2.07	0.55
27:DK:3:GLN:HG2	27:DK:4:GLU:N	2.22	0.55
23:DB:1661:G:O2'	23:DB:1662:U:H5'	2.05	0.55
23:BB:324:A:H2'	23:BB:325:G:O4'	2.07	0.55
51:DZ:31:PRO:HB2	51:DZ:33:LEU:CD1	2.34	0.55
52:BW:35:ILE:HG13	52:BW:57:THR:OG1	2.05	0.55
52:BW:37:VAL:CG1	52:BW:38:ARG:HH11	2.19	0.55
26:DD:51:THR:HG22	26:DD:52:THR:H	1.72	0.55
44:DQ:30:VAL:CG1	44:DQ:33:VAL:HG22	2.36	0.55
49:DR:6:GLN:HE21	49:DR:7:SER:N	2.04	0.55
29:BE:189:THR:HG23	29:BE:192:ALA:H	1.71	0.55
1:AA:241:G:O2'	1:AA:242:G:H5'	2.06	0.55
13:AN:51:PRO:HG2	13:AN:52:ARG:H	1.72	0.55
2:AC:190:THR:HG22	2:AC:191:THR:N	2.22	0.55
18:AS:39:ILE:HG12	18:AS:70:LEU:HD12	1.88	0.55
41:BJ:96:ARG:O	41:BJ:99:ARG:HG3	2.07	0.55
24:BI:11:GLN:O	24:BI:11:GLN:HG3	2.07	0.55
12:AM:106:ARG:HH12	12:AM:109:LYS:CD	2.17	0.55
32:B4:27:CYS:SG	32:B4:29:ALA:HB3	2.47	0.55
47:DF:101:ARG:CZ	47:DF:138:PRO:HB2	2.37	0.55
1:AA:437:U:H5''	3:AD:151:GLN:CD	2.27	0.55
47:BF:110:ILE:CG2	47:BF:113:PHE:HB3	2.37	0.55
47:DF:62:GLN:NE2	47:DF:90:LEU:HA	2.22	0.55
23:BB:644:A:O2'	23:BB:645:C:H5'	2.07	0.55
23:BB:2867:G:N7	28:BP:20:ARG:NH1	2.54	0.55
16:CQ:45:VAL:HG12	16:CQ:46:HIS:N	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:D2:21:ARG:HH21	36:D2:43:THR:CG2	2.20	0.55
12:AM:47:LEU:HB3	12:AM:51:GLN:HB2	1.87	0.55
26:DD:149:ASN:O	26:DD:152:PRO:HD2	2.06	0.55
23:DB:91:A:H1'	23:DB:92:U:C6	2.42	0.55
3:AD:197:HIS:O	3:AD:200:VAL:HG22	2.06	0.55
23:BB:2038:G:H2'	23:BB:2039:U:C6	2.42	0.55
45:DS:95:ARG:HG3	45:DS:97:LEU:HD13	1.89	0.55
23:DB:1044:C:H1'	23:DB:1048:A:H1'	1.89	0.55
23:DB:1047:G:H1'	23:DB:1111:A:N6	2.21	0.55
22:DA:83:G:H4'	30:DY:52:PHE:CD2	2.40	0.55
38:DM:66:ARG:NE	38:DM:101:VAL:HG11	2.22	0.55
26:BD:9:VAL:HG22	26:BD:9:VAL:O	2.07	0.55
23:DB:2635:A:H4'	26:DD:79:LEU:HB2	1.89	0.55
1:CA:598:U:H2'	1:CA:599:C:C6	2.42	0.55
23:BB:154:U:H2'	23:BB:155:A:C8	2.42	0.55
46:BU:78:LYS:HE3	46:BU:79:ALA:N	2.22	0.55
1:CA:1404:C:H2'	1:CA:1405:G:C8	2.42	0.55
24:BI:112:LYS:O	24:BI:116:MET:HG3	2.06	0.55
1:CA:1131:G:O2'	1:CA:1132:C:H5'	2.07	0.55
1:CA:1132:C:H2'	1:CA:1133:G:H8	1.71	0.55
8:AI:67:LYS:HB2	8:AI:67:LYS:HZ3	1.72	0.55
14:CO:56:LEU:O	14:CO:60:VAL:HG23	2.07	0.55
48:DG:174:LYS:HZ3	48:DG:176:LYS:HG2	1.72	0.55
23:DB:2369:A:H2'	23:DB:2370:G:H8	1.72	0.55
23:BB:1919:A:H2'	23:BB:1920:C:H5'	1.89	0.55
1:CA:555:U:H2'	1:CA:556:C:C6	2.42	0.55
25:BC:124:LYS:HG3	25:BC:125:PRO:HD2	1.88	0.55
23:DB:1535:A:H5''	23:DB:1536:C:C5	2.41	0.55
23:BB:571:U:H3'	49:BR:80:ARG:NH1	2.22	0.55
6:AG:100:MET:O	6:AG:104:VAL:HG23	2.06	0.55
23:DB:1495:A:H2'	23:DB:1496:A:C8	2.42	0.55
47:DF:113:PHE:CZ	47:DF:175:PRO:HB2	2.42	0.55
47:DF:4:HIS:O	47:DF:7:TYR:HB3	2.07	0.55
23:DB:2885:G:N2	31:D0:31:LYS:HG3	2.22	0.55
23:DB:1381:G:H1'	23:DB:1571:A:N1	2.22	0.55
1:AA:1031:C:H4'	1:AA:1032:G:H5''	1.87	0.55
9:CJ:17:LEU:HD22	9:CJ:96:VAL:CG1	2.36	0.55
37:BL:55:MET:HE3	37:BL:55:MET:HA	1.89	0.55
9:AJ:59:LYS:HG3	9:AJ:60:ASP:N	2.22	0.55
1:AA:948:C:O2'	1:AA:949:A:H5'	2.07	0.55
10:CK:88:PRO:HD3	21:CU:28:LEU:HD11	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:129:ASN:HA	6:CG:134:VAL:HG21	1.87	0.55
11:AL:51:VAL:HG12	11:AL:52:CYS:N	2.22	0.55
30:DY:40:THR:O	30:DY:43:ILE:HG23	2.07	0.55
34:D3:5:THR:HG22	34:D3:62:PRO:HD2	1.89	0.55
23:BB:589:U:H2'	23:BB:590:A:H8	1.72	0.55
7:AH:6:ILE:HD12	7:AH:35:ILE:HD11	1.88	0.55
15:CP:20:VAL:HG21	15:CP:32:PHE:CG	2.42	0.55
43:DO:9:ARG:HG3	43:DO:10:ARG:N	2.22	0.55
40:DH:83:LYS:HD2	40:DH:83:LYS:H	1.71	0.55
7:AH:44:PHE:HE2	7:AH:100:ILE:HG12	1.72	0.55
23:BB:37:C:O2'	23:BB:38:A:H5'	2.07	0.55
1:CA:1225:A:H3'	1:CA:1226:C:H6	1.72	0.55
1:CA:484:G:H4'	1:CA:485:U:C5'	2.37	0.55
1:CA:22:G:H2'	1:CA:23:C:H6	1.72	0.55
1:CA:624:C:H2'	1:CA:625:U:C6	2.42	0.55
23:BB:2758:A:C2'	23:BB:2759:G:H5'	2.37	0.55
1:AA:332:G:O2'	1:AA:333:U:H5'	2.07	0.55
51:BZ:38:PHE:CE2	51:BZ:51:VAL:HG21	2.42	0.55
3:AD:16:THR:HG22	3:AD:17:ASP:N	2.20	0.55
1:AA:1132:C:H2'	1:AA:1133:G:H8	1.71	0.55
22:BA:13:G:C2'	22:BA:14:U:H5''	2.37	0.55
1:AA:560:A:N1	1:AA:566:G:H5'	2.22	0.55
23:DB:2153:C:H2'	23:DB:2154:A:H8	1.72	0.55
23:BB:2369:A:H2'	23:BB:2370:G:H8	1.72	0.55
13:AN:14:ALA:O	13:AN:18:LYS:HG3	2.07	0.55
40:BH:73:ASN:HD22	40:BH:74:ALA:N	2.05	0.55
34:D3:18:LYS:HD2	34:D3:19:GLY:N	2.21	0.55
23:BB:2314:A:H2'	23:BB:2315:G:C8	2.41	0.55
25:DC:20:ASN:OD1	25:DC:22:GLU:HG2	2.07	0.55
40:BH:1:MET:HB3	40:BH:21:VAL:O	2.07	0.55
1:AA:66:A:H5'	1:AA:173:U:O4	2.07	0.55
5:AF:69:GLU:O	5:AF:73:GLU:HG3	2.07	0.55
23:DB:1100:C:H2'	23:DB:1101:U:C6	2.42	0.54
41:DJ:13:ARG:O	41:DJ:14:ASP:HB2	2.07	0.54
21:CU:24:LYS:HB3	21:CU:24:LYS:NZ	2.21	0.54
1:AA:796:C:H4'	10:AK:126:ARG:HH21	1.71	0.54
41:DJ:18:VAL:CG1	41:DJ:54:ILE:HD11	2.36	0.54
23:DB:143:C:H2'	23:DB:144:A:H8	1.72	0.54
10:CK:28:ASN:ND2	10:CK:46:ALA:HB3	2.22	0.54
20:CB:128:LEU:HD13	20:CB:129:THR:H	1.72	0.54
15:CP:4:ILE:HB	15:CP:67:ILE:HD12	1.87	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:718:A:H3'	23:BB:719:C:H6	1.71	0.54
11:AL:49:ARG:HH12	11:AL:88:ASP:CB	2.20	0.54
12:AM:90:HIS:HA	12:AM:108:ARG:NH2	2.21	0.54
23:BB:1796:U:H2'	23:BB:1797:G:C8	2.42	0.54
19:AT:67:HIS:CD2	19:AT:68:LYS:H	2.25	0.54
1:CA:1288:A:N1	1:CA:1371:G:H1'	2.21	0.54
11:CL:31:GLY:HA3	11:CL:54:VAL:CG1	2.37	0.54
1:CA:1018:G:H2'	1:CA:1019:A:H8	1.72	0.54
5:AF:80:PHE:CE1	25:BC:135:PRO:HG2	2.42	0.54
19:CT:49:ALA:HA	19:CT:52:GLU:CD	2.28	0.54
1:CA:676:A:H1'	10:CK:116:PRO:HB3	1.88	0.54
23:BB:264:C:C2'	23:BB:265:A:H5''	2.36	0.54
11:CL:66:ILE:N	11:CL:66:ILE:HD12	2.22	0.54
1:AA:36:C:H4'	11:AL:118:VAL:O	2.08	0.54
43:DO:105:ALA:C	43:DO:107:ALA:H	2.09	0.54
10:CK:16:SER:HA	10:CK:78:ILE:HA	1.88	0.54
1:CA:607:A:H2'	1:CA:608:A:C8	2.43	0.54
12:CM:71:GLU:HA	12:CM:74:MET:SD	2.48	0.54
1:AA:555:U:H2'	1:AA:556:C:C6	2.41	0.54
23:DB:2341:G:H2'	23:DB:2342:C:C6	2.43	0.54
23:BB:2662:A:H2'	23:BB:2663:G:O4'	2.07	0.54
23:BB:699:A:H4'	23:BB:1634:A:N7	2.21	0.54
23:BB:1198:U:H2'	23:BB:1199:U:C6	2.42	0.54
10:CK:37:GLN:HB2	10:CK:39:ASN:HD22	1.72	0.54
27:BK:3:GLN:HG2	27:BK:4:GLU:N	2.22	0.54
26:BD:7:LYS:HE2	26:BD:198:GLY:HA2	1.89	0.54
1:AA:975:A:H4'	1:AA:976:G:OP2	2.06	0.54
15:AP:25:ARG:HD3	15:AP:25:ARG:H	1.71	0.54
7:AH:26:MET:HB2	7:AH:27:PRO:HD2	1.90	0.54
15:CP:25:ARG:H	15:CP:25:ARG:HD3	1.72	0.54
46:BU:86:PHE:HB3	46:BU:90:LYS:O	2.07	0.54
52:BW:48:ALA:HB3	52:BW:81:ILE:O	2.06	0.54
8:AI:19:PHE:HB2	8:AI:63:TYR:HB3	1.87	0.54
23:BB:1460:U:H4'	23:BB:1461:C:O5'	2.08	0.54
40:BH:82:SER:N	40:BH:146:VAL:HG13	2.18	0.54
29:BE:145:ASP:OD1	29:BE:183:PHE:HA	2.07	0.54
29:BE:192:ALA:HA	29:BE:195:GLN:NE2	2.22	0.54
10:AK:127:ARG:HG3	10:AK:127:ARG:HH11	1.71	0.54
50:BT:39:THR:HG22	50:BT:42:GLU:CG	2.33	0.54
44:DQ:105:PHE:HA	44:DQ:108:LEU:HG	1.88	0.54
3:AD:187:ARG:NH1	3:AD:191:SER:HA	2.14	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DG:17:LYS:CA	48:DG:17:LYS:HZ2	2.17	0.54
47:DF:110:ILE:HA	47:DF:111:ARG:NH1	2.23	0.54
14:AO:78:TYR:CZ	14:AO:82:ILE:HD11	2.42	0.54
23:DB:639:U:H2'	23:DB:640:C:C6	2.43	0.54
30:BY:23:LEU:HD13	30:BY:28:LEU:HB2	1.89	0.54
47:BF:126:ASN:HB3	47:BF:156:THR:HA	1.89	0.54
47:DF:32:LYS:H	47:DF:95:MET:HE1	1.73	0.54
3:AD:98:ASP:HB3	3:AD:132:ALA:HB1	1.90	0.54
12:CM:3:ILE:HG21	12:CM:21:ILE:HD11	1.90	0.54
1:CA:237:G:H2'	1:CA:238:A:C8	2.41	0.54
23:DB:721:A:H2'	23:DB:722:A:H8	1.69	0.54
23:BB:2720:U:H2'	23:BB:2721:A:C8	2.42	0.54
1:CA:1238:A:C8	1:CA:1303:C:H1'	2.42	0.54
1:AA:672:U:H2'	1:AA:673:A:C8	2.43	0.54
37:BL:77:ILE:HG12	37:BL:95:LEU:HD22	1.89	0.54
1:CA:1200:C:C3'	1:CA:1201:A:H5'	2.37	0.54
39:BX:5:GLU:O	39:BX:8:GLU:HG2	2.07	0.54
25:DC:71:ASP:OD2	25:DC:118:GLY:HA2	2.07	0.54
23:DB:992:C:O2'	23:DB:993:G:H5'	2.07	0.54
23:DB:2636:C:H2'	23:DB:2637:U:H6	1.72	0.54
36:D2:33:ARG:HH21	36:D2:33:ARG:CB	2.20	0.54
23:BB:1656:C:H2'	23:BB:1657:U:H6	1.72	0.54
11:CL:66:ILE:HG21	11:CL:71:HIS:HB3	1.90	0.54
1:CA:229:U:H2'	1:CA:230:G:C8	2.42	0.54
1:CA:636:U:H2'	1:CA:637:C:H6	1.72	0.54
23:BB:2840:C:H2'	23:BB:2841:C:C6	2.43	0.54
43:BO:94:ARG:HD2	43:BO:97:PHE:O	2.06	0.54
1:AA:176:C:H2'	1:AA:177:G:N3	2.22	0.54
23:BB:615:U:O4	29:BE:39:ALA:HB2	2.07	0.54
1:AA:642:A:H2'	1:AA:643:C:H6	1.72	0.54
25:DC:79:ARG:HD2	25:DC:81:GLU:HG3	1.88	0.54
16:CQ:30:HIS:CE1	16:CQ:32:ILE:HG22	2.42	0.54
25:BC:162:GLN:NE2	25:BC:174:ARG:HH21	2.05	0.54
1:AA:487:A:H2'	1:AA:488:C:O4'	2.07	0.54
1:CA:272:C:H2'	1:CA:273:U:C6	2.43	0.54
23:DB:987:C:H2'	23:DB:988:A:O4'	2.07	0.54
23:BB:1732:C:H2'	23:BB:1732:C:OP1	2.06	0.54
15:CP:74:LEU:O	15:CP:78:VAL:HG12	2.07	0.54
1:AA:310:G:H5''	15:AP:31:ARG:HB2	1.89	0.54
23:DB:903:C:H2'	23:DB:904:G:C8	2.42	0.54
37:BL:65:GLY:O	37:BL:66:PHE:HB3	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BV:89:ILE:HD12	35:BV:89:ILE:O	2.07	0.54
8:CI:24:ASN:CG	8:CI:25:GLY:H	2.10	0.54
26:DD:14:ILE:HG22	26:DD:22:ILE:O	2.06	0.54
48:BG:25:ILE:O	48:BG:32:LEU:HA	2.07	0.54
25:BC:68:ARG:HB2	25:BC:128:THR:HG21	1.90	0.54
37:DL:3:LEU:O	37:DL:5:THR:N	2.40	0.54
23:BB:1007:C:O3'	41:BJ:110:PRO:HB3	2.07	0.54
41:BJ:21:THR:O	41:BJ:62:VAL:HA	2.08	0.54
14:CO:78:TYR:CZ	14:CO:82:ILE:HD11	2.42	0.54
23:DB:2886:A:H62	31:D0:39:ARG:CD	2.19	0.54
30:DY:8:GLN:CG	30:DY:31:ILE:HA	2.36	0.54
23:DB:125:A:H3'	23:DB:126:A:H5''	1.89	0.54
4:CE:131:ASN:O	4:CE:135:VAL:HG23	2.08	0.54
43:DO:58:ILE:O	43:DO:62:LEU:HB2	2.07	0.54
13:AN:60:ARG:CZ	13:AN:69:PRO:HB3	2.37	0.54
1:CA:1060:U:H5''	9:CJ:53:ILE:CD1	2.38	0.54
3:AD:169:TRP:O	3:AD:182:LYS:HB2	2.06	0.54
1:AA:922:G:N3	1:AA:1398:A:H2	2.04	0.54
13:AN:21:ALA:O	13:AN:22:LYS:HE2	2.07	0.54
44:BQ:87:VAL:HG12	44:BQ:89:ILE:HD13	1.89	0.54
23:DB:2845:U:O2'	23:DB:2846:G:H5'	2.06	0.54
12:CM:95:PRO:N	12:CM:108:ARG:HG2	2.22	0.54
28:DP:91:VAL:CG2	28:DP:96:LEU:HD21	2.37	0.54
50:DT:54:GLU:HB3	50:DT:88:LYS:HB2	1.89	0.54
23:DB:181:A:H2'	23:DB:182:A:H8	1.72	0.54
28:BP:31:VAL:O	28:BP:32:VAL:HB	2.06	0.54
4:CE:81:GLN:HG2	4:CE:148:SER:HA	1.88	0.54
1:CA:270:A:H2'	1:CA:271:C:H6	1.71	0.54
42:BN:49:GLU:OE2	42:BN:95:THR:HG22	2.07	0.54
1:AA:598:U:H2'	1:AA:599:C:C6	2.42	0.54
23:BB:1166:G:H2'	23:BB:1167:C:H6	1.70	0.54
23:BB:2815:C:H2'	23:BB:2816:G:H8	1.72	0.54
23:BB:2355:G:H4'	52:BW:20:LEU:HD13	1.89	0.54
20:CB:112:ARG:NH2	20:CB:116:LEU:HD21	2.22	0.54
23:DB:165:A:H2'	23:DB:166:U:C6	2.42	0.54
41:BJ:12:LYS:HZ2	41:BJ:12:LYS:HB3	1.72	0.54
23:BB:2019:A:H2	23:BB:2035:G:H22	1.54	0.54
44:DQ:10:ARG:HB2	44:DQ:10:ARG:CZ	2.36	0.54
1:AA:33:A:H2'	1:AA:34:C:C6	2.42	0.54
1:CA:586:C:O2'	1:CA:587:G:H5'	2.07	0.54
23:BB:796:C:H2'	23:BB:797:G:C8	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1472:U:H2'	1:AA:1473:G:H8	1.73	0.54
23:BB:634:C:H2'	23:BB:635:C:H6	1.72	0.54
46:DU:60:LYS:HA	46:DU:60:LYS:HE2	1.87	0.54
1:AA:640:A:O2'	1:AA:641:U:H5'	2.08	0.54
1:CA:1351:U:O2'	1:CA:1352:C:H5'	2.08	0.54
23:DB:1159:U:O2'	23:DB:1160:G:H5'	2.07	0.54
23:BB:2216:G:H2'	23:BB:2217:G:C8	2.43	0.54
3:CD:104:MET:SD	3:CD:179:GLY:HA3	2.47	0.54
34:D3:24:LYS:HB2	37:DL:64:PHE:CD2	2.42	0.54
23:DB:660:C:H2'	23:DB:661:A:H8	1.72	0.54
7:AH:37:ASN:O	7:AH:41:GLU:HG2	2.06	0.54
37:DL:65:GLY:O	37:DL:66:PHE:HB3	2.06	0.54
23:BB:2512:C:H2'	23:BB:2513:A:O4'	2.07	0.54
51:BZ:5:CYS:SG	51:BZ:8:THR:HG23	2.48	0.54
8:CI:56:MET:CG	8:CI:57:VAL:H	2.20	0.54
18:CS:30:LEU:HB2	18:CS:48:ILE:HG23	1.87	0.54
48:BG:24:THR:C	48:BG:25:ILE:HD12	2.28	0.54
37:DL:4:ASN:HD22	37:DL:4:ASN:N	2.04	0.54
18:CS:27:LYS:HB2	18:CS:28:LYS:NZ	2.22	0.54
38:BM:36:VAL:HB	38:BM:127:LYS:O	2.08	0.54
1:AA:437:U:H4'	3:AD:153:ARG:NH1	2.23	0.54
23:DB:972:A:C3'	23:DB:973:A:H5''	2.33	0.54
41:DJ:30:THR:HG23	41:DJ:31:GLU:H	1.71	0.54
1:CA:922:G:N3	1:CA:1398:A:H2	2.04	0.54
24:BI:17:ALA:O	24:BI:18:ASN:HB3	2.07	0.54
34:B3:14:LYS:O	34:B3:21:PHE:O	2.25	0.54
23:BB:2867:G:N3	23:BB:2867:G:C2'	2.70	0.54
31:B0:38:LEU:HB3	31:B0:41:HIS:CD2	2.43	0.54
1:AA:108:G:O6	19:AT:9:ARG:HG2	2.08	0.54
28:BP:91:VAL:O	28:BP:92:ARG:HB3	2.08	0.54
40:BH:47:PHE:CA	40:BH:50:ARG:HH21	2.20	0.54
1:CA:492:C:H2'	1:CA:493:A:N3	2.22	0.54
23:DB:1181:U:H2'	23:DB:1182:G:H8	1.71	0.54
23:DB:1197:G:H2'	23:DB:1198:U:H6	1.72	0.54
23:BB:37:C:H4'	23:BB:451:U:OP1	2.08	0.54
34:D3:41:ARG:HG3	34:D3:44:ARG:HH22	1.71	0.54
1:CA:1225:A:H5'	1:CA:1226:C:OP2	2.07	0.54
1:CA:98:A:H2'	1:CA:99:C:H6	1.72	0.54
1:AA:1308:U:H2'	1:AA:1309:G:H8	1.72	0.54
23:DB:2893:A:H4'	23:DB:2894:G:O5'	2.07	0.54
47:BF:19:PHE:CE2	47:BF:164:GLU:HG2	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1422:G:H1'	23:DB:1495:A:H61	1.73	0.54
28:BP:102:ARG:HD2	28:BP:106:ALA:O	2.08	0.54
3:CD:106:PHE:CG	3:CD:144:ILE:HD11	2.42	0.54
16:CQ:11:VAL:HG23	16:CQ:56:ASP:O	2.08	0.54
23:DB:2196:C:O2'	23:DB:2197:U:H5'	2.07	0.54
2:CC:176:THR:HB	2:CC:179:ALA:HB2	1.88	0.54
23:BB:1666:G:O2'	23:BB:1667:G:H5'	2.06	0.54
25:DC:12:ARG:HD3	25:DC:12:ARG:O	2.07	0.54
23:DB:1292:G:H2'	23:DB:1293:C:C6	2.42	0.54
16:AQ:30:HIS:CE1	16:AQ:32:ILE:HG22	2.42	0.54
23:DB:575:A:O2'	23:DB:576:U:H5'	2.08	0.54
3:AD:106:PHE:CG	3:AD:144:ILE:HD11	2.42	0.54
52:DW:37:VAL:HG11	52:DW:38:ARG:HH11	1.72	0.54
41:DJ:44:TYR:O	41:DJ:45:THR:HB	2.07	0.54
48:BG:30:GLY:HA3	48:BG:78:VAL:HG12	1.89	0.54
41:DJ:17:VAL:HG22	41:DJ:55:ILE:HD11	1.90	0.54
19:AT:38:ILE:HD13	19:AT:38:ILE:O	2.08	0.54
29:DE:28:VAL:O	29:DE:32:VAL:HG13	2.07	0.54
27:DK:53:LYS:HD3	27:DK:56:ASP:OD2	2.08	0.54
40:DH:87:GLU:N	40:DH:89:LYS:HZ2	2.04	0.54
1:CA:430:A:OP1	3:CD:8:LEU:HB2	2.07	0.54
3:CD:151:GLN:HE21	3:CD:153:ARG:HG2	1.73	0.54
41:DJ:30:THR:HG23	41:DJ:31:GLU:N	2.22	0.54
23:DB:2867:G:N3	23:DB:2867:G:C2'	2.70	0.54
1:AA:1060:U:H5''	9:AJ:53:ILE:CD1	2.37	0.54
48:BG:108:PHE:H	48:BG:108:PHE:HD1	1.53	0.54
1:CA:254:G:OP1	16:CQ:68:LYS:O	2.26	0.54
1:CA:333:U:H2'	1:CA:334:C:H6	1.71	0.54
33:D1:35:LEU:O	33:D1:36:LYS:HB2	2.06	0.54
23:BB:45:G:C5'	23:BB:46:G:H5'	2.36	0.54
23:BB:1654:A:H2'	23:BB:1655:A:H8	1.73	0.54
5:CF:6:ILE:HD11	5:CF:8:PHE:HD2	1.72	0.54
3:AD:84:ASN:ND2	3:AD:86:GLY:H	2.05	0.54
24:BI:58:ILE:N	24:BI:58:ILE:HD12	2.22	0.54
23:BB:417:C:H2'	23:BB:418:C:H6	1.73	0.54
1:AA:501:C:H1'	1:AA:549:C:H1'	1.89	0.54
23:DB:1447:C:H2'	23:DB:1448:G:C8	2.42	0.54
20:AB:86:CYS:HB3	20:AB:88:GLN:CD	2.28	0.54
23:DB:2450:A:O2'	23:DB:2451:A:H5'	2.07	0.54
44:BQ:10:ARG:CZ	44:BQ:10:ARG:HB2	2.37	0.54
23:BB:1870:C:H5''	23:BB:1871:A:C6	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1599:U:H2'	23:DB:1600:C:H6	1.72	0.54
20:CB:80:LYS:HG3	20:CB:81:ASP:N	2.23	0.54
1:AA:314:C:O2'	1:AA:315:A:H5'	2.07	0.54
23:BB:2216:G:H2'	23:BB:2217:G:H8	1.72	0.54
1:CA:512:U:O2'	1:CA:513:C:H5'	2.06	0.54
4:CE:59:ILE:O	4:CE:63:MET:HG2	2.08	0.54
23:DB:2700:A:H2'	23:DB:2701:U:C6	2.43	0.54
1:CA:1521:C:H2'	1:CA:1522:U:C6	2.42	0.54
7:AH:124:ILE:HG22	7:AH:125:ILE:N	2.22	0.54
6:AG:94:ARG:NH1	6:AG:98:LEU:HD21	2.23	0.54
23:DB:150:U:H2'	23:DB:151:C:C6	2.43	0.54
6:CG:45:ALA:HB3	6:CG:119:LEU:HD23	1.89	0.54
40:DH:47:PHE:O	40:DH:51:ARG:HB2	2.08	0.54
23:DB:2666:C:O4'	23:DB:2666:C:O2	2.25	0.54
23:DB:1541:C:H2'	23:DB:1542:U:C6	2.42	0.54
23:BB:2436:G:O2'	23:BB:2437:G:H5'	2.07	0.54
29:BE:6:LYS:HB2	29:BE:120:VAL:O	2.07	0.54
49:DR:62:GLU:O	49:DR:96:VAL:HA	2.07	0.54
51:DZ:64:ILE:N	51:DZ:64:ILE:HD12	2.19	0.54
1:CA:1099:G:H2'	1:CA:1100:C:O4'	2.08	0.54
20:AB:15:PHE:HA	20:AB:42:LEU:HD21	1.88	0.54
42:DN:52:ILE:O	42:DN:55:ALA:HB3	2.08	0.54
22:BA:42:C:C5	47:BF:65:LEU:HD22	2.43	0.54
47:BF:65:LEU:HD23	47:BF:87:LYS:HD2	1.89	0.54
23:DB:162:U:O2'	23:DB:163:C:H5'	2.07	0.54
30:DY:26:LEU:HB2	30:DY:28:LEU:HG	1.89	0.54
4:CE:132:PRO:O	4:CE:136:VAL:HG12	2.08	0.54
34:D3:54:LEU:O	34:D3:58:ILE:HG13	2.08	0.54
31:D0:38:LEU:HB3	31:D0:41:HIS:CD2	2.43	0.54
45:BS:96:ILE:HG23	45:BS:96:ILE:O	2.07	0.54
13:CN:20:PHE:CB	13:CN:24:ALA:HB2	2.38	0.54
1:AA:93:U:H2'	1:AA:94:G:H4'	1.89	0.54
23:BB:1784:A:H4'	23:BB:1785:A:O5'	2.07	0.54
1:CA:1137:C:O2'	1:CA:1138:G:H5''	2.07	0.54
23:DB:1779:U:H5	23:DB:1784:A:N7	2.06	0.54
23:BB:2150:C:H2'	23:BB:2151:U:H6	1.71	0.54
1:AA:1173:U:H2'	1:AA:1174:G:C8	2.42	0.54
1:AA:212:G:H2'	1:AA:213:G:C8	2.42	0.54
51:DZ:49:LEU:HB2	51:DZ:51:VAL:HG23	1.88	0.54
40:DH:119:ASN:O	40:DH:121:VAL:HG22	2.08	0.54
30:BY:2:LYS:HE3	30:BY:58:GLU:HB3	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2815:C:H2'	23:DB:2816:G:H8	1.73	0.54
29:BE:102:ARG:HG3	29:BE:102:ARG:HH21	1.72	0.54
29:BE:98:LYS:HG2	29:BE:99:LYS:N	2.21	0.54
1:AA:333:U:H2'	1:AA:334:C:C6	2.43	0.54
1:AA:313:A:H2'	1:AA:314:C:C6	2.43	0.54
25:BC:93:VAL:HG21	25:BC:115:ILE:HD11	1.88	0.54
1:AA:1131:G:O2'	1:AA:1132:C:H5'	2.07	0.54
1:AA:177:G:H5''	19:AT:59:ARG:NH2	2.22	0.54
23:DB:2700:A:H2'	23:DB:2701:U:H6	1.72	0.54
44:DQ:18:LYS:C	44:DQ:20:ALA:H	2.11	0.54
23:BB:2756:U:H1'	23:BB:2757:A:H5''	1.87	0.54
1:CA:1270:G:H2'	1:CA:1271:A:H8	1.73	0.54
22:BA:89:U:O2	23:BB:958:U:H2'	2.08	0.54
23:BB:538:A:N6	23:BB:555:G:O2'	2.41	0.54
6:CG:86:VAL:HG22	6:CG:150:PHE:HB3	1.88	0.54
23:BB:2875:C:H2'	23:BB:2876:G:H8	1.73	0.54
23:BB:1859:U:H2'	23:BB:1860:G:C8	2.42	0.54
1:CA:113:G:H2'	1:CA:114:U:C6	2.42	0.54
1:CA:731:G:H5'	1:CA:766:A:H4'	1.90	0.54
9:CJ:92:LEU:H	9:CJ:92:LEU:HD22	1.73	0.54
23:DB:1932:A:H2'	23:DB:1933:G:O4'	2.07	0.54
1:AA:1076:U:H2'	1:AA:1077:G:C8	2.43	0.54
23:BB:1889:A:H2'	23:BB:1890:A:C8	2.42	0.54
23:DB:2880:C:C1'	42:DN:91:ALA:HB3	2.38	0.54
23:BB:2543:G:H8	23:BB:2543:G:H5'	1.71	0.54
23:BB:2639:A:H2'	23:BB:2640:G:O4'	2.07	0.54
51:DZ:5:CYS:O	51:DZ:6:GLN:HB3	2.08	0.54
52:DW:24:ARG:HD3	52:DW:65:LYS:HE3	1.90	0.54
1:AA:1314:C:H2'	1:AA:1315:U:C6	2.42	0.54
33:B1:49:LYS:HG3	33:B1:50:GLU:N	2.17	0.54
23:DB:996:A:H4'	44:DQ:91:ARG:CG	2.38	0.54
48:BG:17:LYS:HA	48:BG:17:LYS:HZ2	1.73	0.54
23:BB:848:C:H2'	23:BB:849:A:C8	2.43	0.54
37:DL:3:LEU:O	37:DL:5:THR:HG23	2.08	0.54
28:BP:4:ILE:O	28:BP:6:GLN:N	2.36	0.54
23:BB:2272:U:H5''	23:BB:2273:A:OP1	2.07	0.54
23:BB:559:G:P	41:BJ:111:LYS:HD3	2.48	0.54
41:BJ:30:THR:HG23	41:BJ:31:GLU:H	1.71	0.54
23:DB:2269:G:H4'	52:DW:19:ARG:HH11	1.72	0.54
3:CD:165:GLU:CG	3:CD:166:LYS:H	2.12	0.54
23:BB:705:A:N6	23:BB:726:G:O2'	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CP:67:ILE:HD11	15:CP:71:VAL:HG22	1.90	0.54
1:CA:1329:A:O2'	1:CA:1330:U:H5'	2.07	0.54
23:BB:2467:C:H1'	38:BM:122:ALA:HB1	1.90	0.54
39:BX:56:LEU:O	39:BX:57:LEU:HB3	2.08	0.54
46:BU:80:ASP:O	46:BU:96:LYS:HG2	2.08	0.54
9:AJ:17:LEU:HD22	9:AJ:96:VAL:CG1	2.38	0.54
23:BB:3:U:H6	23:BB:3:U:O5'	1.90	0.54
43:DO:94:ARG:HD2	43:DO:97:PHE:O	2.08	0.54
23:DB:1728:C:O2'	23:DB:1729:U:H5'	2.08	0.54
23:BB:416:U:H2'	23:BB:417:C:C6	2.43	0.54
1:CA:1476:A:H2'	1:CA:1477:U:O4'	2.07	0.54
1:AA:1239:A:H62	1:AA:1299:A:H62	1.56	0.54
20:AB:80:LYS:HG3	20:AB:81:ASP:N	2.22	0.54
45:BS:43:ALA:HA	45:BS:46:LEU:HD12	1.89	0.54
23:DB:1229:C:H2'	23:DB:1230:A:H8	1.72	0.54
38:DM:108:VAL:HG13	38:DM:112:LEU:HB3	1.90	0.54
23:BB:2080:A:OP1	51:BZ:20:HIS:HB3	2.08	0.54
42:BN:9:GLN:O	42:BN:11:ASN:N	2.41	0.54
22:DA:13:G:C2'	22:DA:14:U:H5''	2.38	0.54
22:BA:10:G:H2'	22:BA:11:C:O4'	2.08	0.54
48:BG:174:LYS:HZ3	48:BG:176:LYS:HG2	1.72	0.54
23:DB:438:G:H2'	23:DB:439:A:H8	1.73	0.54
34:B3:18:LYS:HD2	34:B3:19:GLY:N	2.23	0.54
14:AO:28:GLN:O	14:AO:32:LEU:HD23	2.08	0.54
23:BB:786:C:O2'	23:BB:787:C:H5'	2.08	0.54
23:BB:1501:G:O2'	23:BB:1502:A:H5'	2.08	0.54
23:DB:1567:G:H5'	25:DC:57:HIS:CD2	2.43	0.54
20:CB:75:ALA:O	20:CB:79:VAL:HG23	2.08	0.54
27:BK:70:ARG:HB3	27:BK:70:ARG:HH11	1.73	0.54
49:BR:58:VAL:O	49:BR:58:VAL:HG13	2.08	0.54
45:DS:71:VAL:HA	45:DS:107:VAL:HA	1.90	0.54
37:DL:19:LEU:HD23	37:DL:31:GLY:O	2.07	0.54
23:BB:160:A:H2'	23:BB:161:A:C8	2.43	0.54
24:DI:45:THR:HA	24:DI:48:ILE:CG2	2.37	0.54
12:CM:7:ASN:H	12:CM:7:ASN:ND2	2.06	0.54
13:AN:20:PHE:CB	13:AN:24:ALA:HB2	2.37	0.54
29:BE:58:LYS:HZ3	29:BE:58:LYS:HB2	1.72	0.54
10:CK:80:ASN:HD22	10:CK:80:ASN:N	2.04	0.54
26:DD:9:VAL:O	26:DD:9:VAL:HG22	2.08	0.54
38:DM:30:SER:HA	38:DM:133:LYS:HB2	1.90	0.54
33:D1:7:LYS:HD3	34:D3:33:THR:HG21	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2100:G:C6	23:BB:2190:G:C6	2.96	0.54
46:DU:81:ARG:HB2	46:DU:96:LYS:CG	2.37	0.54
23:DB:1181:U:O2'	23:DB:1182:G:H5'	2.07	0.54
7:AH:86:LYS:HD2	7:AH:90:GLU:HG3	1.89	0.54
23:BB:156:A:H2'	23:BB:157:C:H6	1.73	0.54
23:BB:1015:U:H2'	23:BB:1016:G:H8	1.73	0.54
30:BY:2:LYS:H	30:BY:2:LYS:CD	2.18	0.54
42:DN:106:ASP:OD1	42:DN:108:ALA:HB3	2.08	0.54
47:DF:71:LYS:HE2	47:DF:73:VAL:HB	1.90	0.54
15:AP:34:GLU:CD	15:AP:60:TRP:HE1	2.11	0.54
1:CA:62:U:H2'	1:CA:63:C:C6	2.43	0.54
11:AL:82:ARG:HB2	11:AL:97:VAL:HG22	1.90	0.54
23:DB:1013:C:H2'	23:DB:1014:A:C8	2.42	0.54
23:DB:2339:C:H2'	23:DB:2340:A:C8	2.42	0.54
1:CA:168:G:O2'	1:CA:169:C:H5'	2.08	0.54
23:BB:1164:C:H2'	23:BB:1165:A:H8	1.73	0.54
23:DB:335:C:O2'	23:DB:336:C:H5'	2.08	0.54
23:DB:1152:C:H4'	44:DQ:76:SER:HA	1.88	0.54
35:DV:89:ILE:HD12	35:DV:89:ILE:O	2.07	0.54
23:BB:925:A:O2'	23:BB:926:G:H5'	2.08	0.54
21:AU:8:ASN:O	21:AU:9:GLU:HB3	2.08	0.54
23:BB:1013:C:H2'	23:BB:1014:A:H8	1.73	0.54
1:AA:783:C:O2'	1:AA:784:A:H5'	2.07	0.54
29:BE:148:ILE:HD13	29:BE:187:VAL:CG2	2.37	0.54
15:CP:36:VAL:O	15:CP:36:VAL:HG13	2.07	0.54
3:AD:55:ARG:HG3	3:AD:55:ARG:HH11	1.73	0.54
52:DW:28:GLU:HB2	52:DW:31:LEU:HD21	1.90	0.54
26:BD:33:ARG:CZ	26:BD:74:GLU:HB3	2.38	0.54
24:DI:92:PRO:O	24:DI:93:ASN:HB2	2.08	0.54
21:CU:44:ARG:HG2	21:CU:44:ARG:HH11	1.73	0.54
40:BH:27:ARG:NE	51:BZ:64:ILE:HD11	2.21	0.54
23:BB:923:G:H1'	52:BW:23:LYS:NZ	2.22	0.54
8:AI:56:MET:CG	8:AI:57:VAL:H	2.20	0.54
33:D1:26:LYS:HB2	33:D1:52:LYS:HZ2	1.72	0.54
33:D1:29:LYS:HA	33:D1:31:GLU:OE1	2.07	0.54
1:CA:241:G:O2'	1:CA:242:G:H5'	2.07	0.54
1:CA:1314:C:H2'	1:CA:1315:U:C6	2.42	0.54
40:BH:94:ILE:HG23	40:BH:99:ILE:HD11	1.90	0.54
25:DC:149:LYS:HD3	25:DC:152:GLN:NE2	2.21	0.54
52:DW:9:THR:CG2	52:DW:10:ARG:HH11	2.21	0.54
41:DJ:45:THR:OG1	41:DJ:48:VAL:HB	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BR:6:GLN:HE21	49:BR:7:SER:N	2.06	0.54
23:BB:460:A:H2'	23:BB:461:C:O4'	2.07	0.54
10:AK:92:ARG:HH21	21:AU:24:LYS:CG	2.21	0.54
41:BJ:16:TYR:O	41:BJ:55:ILE:HG12	2.08	0.54
1:CA:1101:A:H4'	1:CA:1102:A:O5'	2.07	0.54
25:DC:226:PRO:CG	25:DC:233:GLY:H	2.15	0.54
23:DB:557:C:H2'	23:DB:558:U:H6	1.72	0.54
46:DU:58:VAL:HG12	46:DU:59:GLU:N	2.18	0.54
40:BH:5:LEU:O	40:BH:6:LEU:HD12	2.08	0.54
24:DI:24:GLY:HA2	24:DI:34:ILE:HD12	1.89	0.54
47:BF:168:LEU:HD13	47:BF:169:LEU:N	2.22	0.54
49:DR:78:ARG:HH21	49:DR:78:ARG:HG3	1.72	0.54
36:D2:10:LEU:HD21	36:D2:14:ARG:HH11	1.73	0.54
24:DI:17:ALA:O	24:DI:18:ASN:CB	2.56	0.54
35:DV:78:GLN:HB2	35:DV:88:HIS:O	2.08	0.54
1:CA:106:C:O2'	1:CA:107:G:H5'	2.07	0.54
1:AA:845:A:N7	1:AA:846:G:H1'	2.23	0.54
1:AA:253:A:H2'	1:AA:254:G:H8	1.72	0.54
23:BB:2680:U:OP2	26:BD:114:LYS:HB3	2.08	0.54
23:DB:919:U:H2'	23:DB:920:A:H8	1.67	0.54
47:BF:147:ARG:HB3	47:BF:147:ARG:CZ	2.37	0.54
1:CA:1369:C:H2'	1:CA:1370:G:C8	2.42	0.54
23:DB:460:A:H2'	23:DB:461:C:O4'	2.08	0.54
23:BB:19:A:H2'	23:BB:20:C:C6	2.43	0.54
23:DB:154:U:H2'	23:DB:155:A:C8	2.43	0.54
23:BB:2230:G:H2'	23:BB:2231:U:C6	2.42	0.54
48:BG:148:ARG:HD3	48:BG:152:ARG:NE	2.23	0.54
19:CT:48:LYS:O	19:CT:52:GLU:HB3	2.08	0.54
23:DB:2405:G:H1'	23:DB:2412:A:H61	1.73	0.54
1:AA:333:U:H2'	1:AA:334:C:H6	1.73	0.54
23:DB:2841:C:H2'	23:DB:2842:G:H8	1.73	0.54
5:CF:10:VAL:HG12	5:CF:11:HIS:H	1.73	0.54
23:BB:639:U:H2'	23:BB:640:C:C6	2.43	0.54
23:DB:2286:G:H5'	23:DB:2286:G:C8	2.43	0.54
2:AC:171:ARG:HB2	2:AC:171:ARG:HH11	1.72	0.54
47:BF:134:GLN:NE2	47:BF:136:ILE:HD13	2.23	0.54
9:CJ:29:ALA:O	9:CJ:32:THR:HG22	2.07	0.54
20:AB:93:HIS:CD2	20:AB:145:ASN:HB3	2.43	0.54
23:BB:1274:A:N3	23:BB:1297:C:H1'	2.23	0.54
23:DB:2662:A:H2'	23:DB:2663:G:O4'	2.08	0.54
23:DB:1816:C:H3'	25:DC:61:TYR:HE2	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:942:G:O2'	23:BB:943:A:H5'	2.07	0.54
35:DV:46:LYS:HD2	35:DV:46:LYS:N	2.22	0.54
23:BB:1877:A:H2'	23:BB:1878:G:C8	2.42	0.54
26:DD:33:ARG:CZ	26:DD:74:GLU:HB3	2.38	0.54
51:BZ:6:GLN:HE22	51:BZ:77:LYS:CE	2.20	0.54
52:BW:37:VAL:HG11	52:BW:38:ARG:HH11	1.71	0.54
29:BE:130:LYS:C	29:BE:132:LYS:H	2.12	0.54
1:CA:1321:U:H2'	1:CA:1322:C:C5	2.42	0.54
1:AA:68:G:C5'	1:AA:171:A:H1'	2.32	0.54
28:DP:3:ILE:HG23	28:DP:4:ILE:N	2.23	0.54
50:BT:41:ALA:C	50:BT:43:ILE:H	2.10	0.54
50:BT:43:ILE:O	50:BT:47:VAL:HG23	2.06	0.54
1:CA:1096:C:H2'	1:CA:1097:C:C6	2.43	0.54
45:DS:24:ILE:CG1	45:DS:36:LEU:HD21	2.38	0.54
24:DI:76:ALA:HA	24:DI:135:MET:SD	2.48	0.54
2:AC:48:LYS:H	2:AC:48:LYS:CD	2.17	0.54
46:DU:73:ASN:C	46:DU:75:ALA:H	2.11	0.54
26:DD:168:GLU:O	26:DD:170:VAL:HG22	2.08	0.54
2:AC:26:LYS:HE2	2:AC:27:GLU:HG3	1.90	0.54
1:CA:845:A:N7	1:CA:846:G:H1'	2.23	0.54
23:BB:2861:U:H2'	23:BB:2862:G:H8	1.73	0.54
12:AM:19:THR:HA	12:AM:24:VAL:HG23	1.90	0.54
23:BB:2277:G:H5''	38:BM:86:LYS:HB3	1.90	0.54
26:BD:62:LYS:HB2	26:BD:63:PRO:HD3	1.90	0.54
35:BV:14:LYS:HE3	35:BV:18:ARG:NH2	2.21	0.54
23:BB:2443:C:H2'	23:BB:2444:G:C8	2.43	0.54
1:CA:373:A:OP2	1:CA:373:A:H3'	2.08	0.54
1:AA:373:A:OP2	1:AA:373:A:H3'	2.08	0.54
23:BB:1029:A:H2'	23:BB:1030:C:O4'	2.08	0.54
45:DS:86:MET:HG3	45:DS:96:ILE:HD12	1.88	0.54
8:AI:44:ARG:HH11	8:AI:44:ARG:HG2	1.71	0.54
23:DB:182:A:H2'	23:DB:183:C:C6	2.43	0.54
23:BB:1482:G:N2	23:BB:1508:A:H1'	2.23	0.54
23:BB:1508:A:H2'	23:BB:1509:A:C2	2.43	0.54
1:AA:1057:G:H4'	2:AC:196:GLY:H	1.73	0.54
23:DB:1454:C:H5'	42:DN:63:ARG:NE	2.23	0.54
23:DB:2359:C:H2'	23:DB:2360:G:C8	2.43	0.54
1:CA:1392:G:O2'	1:CA:1393:U:H5'	2.07	0.54
1:AA:17:U:H2'	1:AA:18:C:H6	1.72	0.54
1:AA:818:G:H3'	1:AA:819:A:C5'	2.38	0.54
48:BG:154:GLU:OE2	48:BG:156:TYR:HB2	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1438:G:O2'	1:CA:1439:G:H5'	2.08	0.54
25:DC:93:VAL:HG21	25:DC:115:ILE:HD11	1.89	0.54
1:CA:1307:U:H2'	1:CA:1308:U:C6	2.42	0.54
23:DB:1535:A:H5''	23:DB:1536:C:H5	1.71	0.54
3:CD:104:MET:SD	3:CD:142:VAL:HB	2.48	0.54
1:AA:784:A:H2'	1:AA:785:G:H8	1.73	0.54
1:CA:157:U:O2'	1:CA:158:G:H5'	2.07	0.54
2:CC:134:LYS:HA	2:CC:167:TYR:HE2	1.72	0.54
23:DB:2643:G:H2'	23:DB:2644:G:O4'	2.08	0.54
1:CA:384:G:H2'	1:CA:385:C:C6	2.43	0.54
23:BB:841:G:O2'	23:BB:842:U:H5'	2.07	0.54
35:DV:10:LYS:HG2	35:DV:11:GLU:HG3	1.89	0.54
1:AA:996:A:H2'	1:AA:997:U:C6	2.43	0.54
23:BB:636:G:H3'	37:BL:128:THR:HG21	1.89	0.54
1:AA:178:C:O2'	1:AA:179:A:H5'	2.08	0.54
1:CA:1230:C:H2'	1:CA:1231:G:H8	1.72	0.54
52:DW:24:ARG:CD	52:DW:65:LYS:HG2	2.38	0.53
23:DB:851:C:O4'	30:DY:46:MET:HG2	2.08	0.53
23:DB:580:U:O2'	23:DB:581:C:H5'	2.07	0.53
23:DB:1060:U:OP2	24:DI:74:PRO:HA	2.08	0.53
1:AA:72:A:H2'	1:AA:73:C:H6	1.73	0.53
27:BK:99:ILE:N	27:BK:118:LEU:HD22	2.23	0.53
23:DB:79:C:O2'	23:DB:346:A:H1'	2.07	0.53
24:DI:32:VAL:HG22	24:DI:60:VAL:CG2	2.38	0.53
23:DB:1140:C:H2'	23:DB:1141:U:H5'	1.90	0.53
23:DB:740:C:O2'	23:DB:741:U:H5'	2.08	0.53
23:BB:1571:A:H2'	23:BB:1572:A:C8	2.43	0.53
34:B3:54:LEU:O	34:B3:58:ILE:HG13	2.07	0.53
1:CA:1343:G:H2'	1:CA:1344:C:H6	1.73	0.53
1:CA:1250:A:H4'	8:CI:69:GLY:N	2.19	0.53
1:CA:335:C:H2'	1:CA:336:A:C8	2.44	0.53
35:DV:75:GLN:HG2	35:DV:92:VAL:HB	1.90	0.53
23:DB:1444:G:H2'	23:DB:1445:G:C8	2.43	0.53
23:DB:45:G:H5'	23:DB:46:G:OP1	2.08	0.53
1:AA:1343:G:H2'	1:AA:1344:C:H6	1.73	0.53
40:BH:62:LEU:HD13	40:BH:66:ASN:HD21	1.73	0.53
20:CB:218:ALA:O	20:CB:222:GLU:HG2	2.08	0.53
40:BH:49:ALA:HB3	40:BH:50:ARG:CZ	2.38	0.53
48:DG:30:GLY:HA3	48:DG:78:VAL:HG12	1.88	0.53
23:BB:2292:U:H2'	23:BB:2293:G:H8	1.74	0.53
38:BM:71:LYS:HE3	38:BM:73:ILE:HD11	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BM:71:LYS:HG2	38:BM:73:ILE:HD11	1.90	0.53
40:DH:118:PRO:O	40:DH:119:ASN:HB3	2.08	0.53
14:AO:56:LEU:HD21	23:BB:715:A:C2	2.44	0.53
28:DP:88:ARG:HB2	28:DP:112:ARG:CZ	2.38	0.53
23:DB:2065:C:H2'	23:DB:2066:C:C6	2.43	0.53
23:BB:968:C:H2'	23:BB:969:G:C8	2.43	0.53
1:CA:679:C:H2'	1:CA:680:C:H6	1.72	0.53
42:DN:13:ASN:C	42:DN:15:SER:H	2.12	0.53
25:DC:94:LEU:HB2	25:DC:100:ARG:HD3	1.89	0.53
23:DB:1583:A:H5''	23:DB:1584:U:OP1	2.08	0.53
1:CA:586:C:C2'	1:CA:587:G:H5'	2.38	0.53
1:AA:370:C:O2'	1:AA:371:A:H5'	2.08	0.53
23:BB:1535:A:H3'	23:BB:1536:C:H6	1.74	0.53
20:CB:144:GLU:O	20:CB:148:GLY:HA3	2.08	0.53
1:CA:176:C:H2'	1:CA:177:G:N3	2.22	0.53
1:CA:177:G:H5''	19:CT:59:ARG:NH2	2.22	0.53
27:BK:53:LYS:HD3	27:BK:56:ASP:OD2	2.09	0.53
1:AA:1142:G:H2'	1:AA:1143:G:O4'	2.08	0.53
23:BB:2633:G:H2'	23:BB:2634:A:O4'	2.07	0.53
23:BB:1607:C:H4'	23:BB:1608:A:O5'	2.08	0.53
6:AG:61:PHE:O	6:AG:65:LEU:HD13	2.08	0.53
52:BW:39:GLN:HG3	52:BW:42:THR:CB	2.38	0.53
5:CF:3:HIS:HB2	5:CF:92:THR:CA	2.33	0.53
52:DW:37:VAL:C	52:DW:39:GLN:H	2.12	0.53
8:AI:57:VAL:HB	8:AI:58:GLU:OE2	2.08	0.53
5:AF:3:HIS:CE1	5:AF:95:ALA:H	2.26	0.53
33:D1:28:THR:C	33:D1:30:PRO:HD3	2.28	0.53
29:BE:188:MET:HG2	29:BE:193:VAL:HG22	1.90	0.53
13:AN:16:ALA:HA	13:AN:54:SER:O	2.07	0.53
18:CS:30:LEU:HB2	18:CS:48:ILE:HA	1.90	0.53
50:BT:50:LEU:C	50:BT:52:GLU:H	2.11	0.53
45:BS:71:VAL:HA	45:BS:107:VAL:HA	1.91	0.53
40:DH:90:LEU:CD1	40:DH:90:LEU:H	2.21	0.53
23:DB:2895:G:H2'	23:DB:2896:C:H6	1.71	0.53
3:AD:160:LEU:N	3:AD:160:LEU:HD13	2.24	0.53
5:AF:53:LYS:C	5:AF:54:LEU:HD22	2.28	0.53
36:B2:21:ARG:HD2	36:B2:43:THR:HG21	1.90	0.53
23:DB:2861:U:H2'	23:DB:2862:G:H8	1.73	0.53
12:CM:106:ARG:HD3	12:CM:110:GLY:O	2.07	0.53
22:DA:43:C:H1'	47:DF:91:ARG:NH2	2.22	0.53
23:BB:2886:A:H62	31:B0:39:ARG:CD	2.21	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:47:LEU:HD13	12:CM:51:GLN:O	2.08	0.53
23:BB:1654:A:O2'	26:BD:118:PHE:HB2	2.07	0.53
45:BS:86:MET:HG3	45:BS:96:ILE:HD12	1.90	0.53
1:CA:1003:G:N2	1:CA:1005:A:H5'	2.23	0.53
47:BF:37:MET:HE3	47:BF:56:LEU:HD23	1.89	0.53
23:DB:2393:U:O2'	23:DB:2394:C:H5'	2.08	0.53
11:AL:107:LYS:N	11:AL:107:LYS:NZ	2.56	0.53
23:BB:592:A:N3	34:B3:3:ILE:HD11	2.23	0.53
1:AA:492:C:H2'	1:AA:493:A:N3	2.24	0.53
23:DB:2138:G:H2'	23:DB:2139:U:H6	1.73	0.53
1:CA:818:G:H3'	1:CA:819:A:C5'	2.38	0.53
23:DB:540:C:H2'	23:DB:541:A:H8	1.72	0.53
23:DB:699:A:H2'	23:DB:700:G:O4'	2.08	0.53
1:CA:560:A:H5'	1:CA:566:G:N2	2.22	0.53
1:AA:1521:C:H2'	1:AA:1522:U:H6	1.73	0.53
23:DB:2301:C:H2'	23:DB:2302:U:C6	2.43	0.53
23:BB:528:A:C2	23:BB:2043:C:H4'	2.42	0.53
23:DB:1771:C:O2'	23:DB:1772:A:H5'	2.09	0.53
23:BB:1197:G:H2'	23:BB:1198:U:H6	1.73	0.53
23:DB:1816:C:H3'	25:DC:61:TYR:CE2	2.43	0.53
22:DA:89:U:O2	23:DB:958:U:H2'	2.09	0.53
1:AA:1270:G:H2'	1:AA:1271:A:H8	1.73	0.53
6:AG:45:ALA:HB3	6:AG:119:LEU:HD23	1.89	0.53
23:DB:132:G:O2'	23:DB:133:U:H5'	2.08	0.53
6:AG:86:VAL:HG22	6:AG:150:PHE:HB3	1.90	0.53
21:AU:48:LYS:HG3	21:AU:49:ALA:N	2.24	0.53
1:AA:777:A:H2'	1:AA:778:G:C8	2.43	0.53
23:BB:937:C:H2'	23:BB:938:G:H8	1.73	0.53
23:BB:2700:A:H2'	23:BB:2701:U:C6	2.43	0.53
24:BI:81:LYS:HG3	24:BI:82:ALA:N	2.23	0.53
24:BI:52:LEU:HD21	24:BI:81:LYS:HZ2	1.73	0.53
25:DC:179:GLU:HG3	25:DC:269:ARG:HA	1.89	0.53
12:AM:85:TYR:HA	12:AM:88:LEU:HD12	1.89	0.53
1:CA:499:A:H4'	1:CA:500:G:OP1	2.07	0.53
43:BO:9:ARG:HG3	43:BO:10:ARG:N	2.23	0.53
23:DB:1098:A:C3'	24:DI:4:VAL:N	2.71	0.53
46:DU:86:PHE:HD1	46:DU:88:ASP:N	2.07	0.53
8:CI:34:LEU:HD11	8:CI:47:VAL:HG21	1.89	0.53
47:DF:46:LYS:HZ3	47:DF:46:LYS:HA	1.73	0.53
47:DF:78:ILE:H	47:DF:79:ARG:HH11	1.55	0.53
41:BJ:44:TYR:O	41:BJ:45:THR:HB	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BR:7:SER:HB2	49:BR:22:LEU:CB	2.30	0.53
1:CA:796:C:H4'	10:CK:126:ARG:HH21	1.74	0.53
23:DB:2598:A:OP1	25:DC:233:GLY:HA3	2.08	0.53
45:BS:26:GLY:H	45:BS:71:VAL:HG13	1.73	0.53
27:DK:19:VAL:HB	27:DK:41:ILE:CG1	2.38	0.53
1:AA:80:A:C2	1:AA:81:A:H1'	2.43	0.53
46:BU:73:ASN:C	46:BU:75:ALA:H	2.11	0.53
47:BF:113:PHE:CZ	47:BF:175:PRO:HB2	2.43	0.53
14:AO:78:TYR:CE1	14:AO:82:ILE:HD11	2.43	0.53
41:BJ:24:THR:HA	41:BJ:63:ALA:HB3	1.89	0.53
26:BD:151:THR:CB	26:BD:152:PRO:HD3	2.38	0.53
30:BY:26:LEU:HB2	30:BY:28:LEU:HG	1.90	0.53
1:AA:987:G:O2'	1:AA:988:G:H5'	2.08	0.53
34:D3:49:VAL:O	34:D3:51:LYS:N	2.42	0.53
1:CA:1306:A:N6	1:CA:1331:G:H1'	2.23	0.53
40:DH:60:GLU:OE2	40:DH:63:ALA:HB2	2.08	0.53
28:BP:91:VAL:CG2	28:BP:96:LEU:HD21	2.38	0.53
19:CT:67:HIS:CD2	19:CT:68:LYS:H	2.26	0.53
12:AM:63:VAL:HG12	12:AM:68:LEU:HG	1.90	0.53
37:DL:93:ASN:O	37:DL:95:LEU:N	2.41	0.53
1:AA:596:A:H2'	1:AA:597:G:H8	1.73	0.53
1:AA:499:A:H4'	1:AA:500:G:OP1	2.08	0.53
1:CA:538:G:OP2	11:CL:111:GLN:HB2	2.08	0.53
1:AA:1035:A:H2'	1:AA:1036:A:C8	2.42	0.53
25:BC:94:LEU:HB2	25:BC:100:ARG:CD	2.37	0.53
23:BB:987:C:H2'	23:BB:988:A:O4'	2.08	0.53
3:CD:16:THR:HG22	3:CD:17:ASP:N	2.23	0.53
7:AH:17:GLN:NE2	7:AH:69:ALA:HB1	2.23	0.53
23:DB:151:C:H2'	23:DB:152:A:H8	1.72	0.53
23:BB:2756:U:C1'	23:BB:2757:A:H5''	2.39	0.53
52:DW:28:GLU:H	52:DW:31:LEU:HG	1.73	0.53
22:BA:16:G:O2'	22:BA:17:C:H5'	2.08	0.53
8:AI:11:ARG:HE	8:AI:12:LYS:HG3	1.71	0.53
24:BI:49:GLU:CG	24:BI:54:ILE:HD11	2.39	0.53
23:DB:1050:A:H2'	23:DB:1051:G:O4'	2.08	0.53
23:BB:909:A:H2'	23:BB:912:C:H5	1.73	0.53
23:DB:2639:A:H2'	23:DB:2640:G:O4'	2.08	0.53
40:BH:120:GLY:O	40:BH:122:LEU:HD12	2.08	0.53
1:CA:1121:U:H2'	1:CA:1122:U:C6	2.44	0.53
29:BE:11:ALA:O	29:BE:12:LEU:HD22	2.09	0.53
23:DB:811:U:OP2	37:DL:20:GLY:HA2	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CT:50:PHE:O	19:CT:53:MET:HG3	2.08	0.53
6:CG:15:PRO:HG2	6:CG:43:TYR:OH	2.09	0.53
1:AA:168:G:O2'	1:AA:169:C:H5'	2.08	0.53
52:BW:49:ASN:CB	52:BW:60:ALA:HA	2.38	0.53
44:BQ:30:VAL:CG1	44:BQ:33:VAL:HG22	2.39	0.53
33:B1:28:THR:O	33:B1:29:LYS:HD2	2.08	0.53
41:DJ:13:ARG:O	41:DJ:52:ASP:HA	2.09	0.53
21:CU:19:LYS:HD3	21:CU:20:ARG:HH21	1.72	0.53
52:BW:9:THR:CG2	52:BW:10:ARG:HH11	2.22	0.53
41:BJ:123:LYS:HG2	41:BJ:132:HIS:NE2	2.23	0.53
44:BQ:105:PHE:O	44:BQ:109:VAL:HG23	2.08	0.53
40:BH:142:VAL:HG12	40:BH:143:ILE:N	2.20	0.53
38:BM:24:THR:HG23	38:BM:34:LYS:HE3	1.90	0.53
38:BM:34:LYS:HE2	38:BM:99:GLY:HA2	1.89	0.53
35:DV:4:ILE:HD12	35:DV:63:ILE:HG13	1.90	0.53
26:BD:168:GLU:O	26:BD:170:VAL:HG22	2.09	0.53
23:DB:2306:C:H3'	23:DB:2307:G:H5'	1.90	0.53
5:CF:53:LYS:C	5:CF:54:LEU:HD22	2.29	0.53
1:CA:415:A:H3'	1:CA:416:G:H8	1.72	0.53
1:CA:250:A:H1'	1:CA:252:U:C5	2.44	0.53
1:AA:1028:C:H3'	1:AA:1029:U:C5	2.44	0.53
12:CM:10:ASP:HA	12:CM:44:ILE:HD13	1.89	0.53
9:CJ:56:HIS:O	9:CJ:57:VAL:HG12	2.08	0.53
1:CA:1031:C:H4'	1:CA:1032:G:H5''	1.90	0.53
23:DB:1407:G:H2'	23:DB:1408:G:H8	1.72	0.53
1:AA:769:G:O2'	1:AA:770:C:H5'	2.07	0.53
8:CI:44:ARG:HG2	8:CI:44:ARG:HH11	1.73	0.53
23:BB:592:A:H2'	23:BB:593:U:C6	2.43	0.53
45:BS:22:ASP:HA	45:BS:25:ARG:NH1	2.23	0.53
42:BN:106:ASP:OD1	42:BN:108:ALA:HB3	2.08	0.53
14:AO:43:PHE:CD1	14:AO:56:LEU:HD22	2.43	0.53
32:B4:23:ILE:HB	32:B4:38:GLY:HA3	1.89	0.53
1:AA:398:U:H2'	1:AA:399:G:C8	2.44	0.53
11:AL:43:LYS:HE2	11:AL:44:PRO:HD3	1.90	0.53
20:CB:142:LYS:HA	20:CB:145:ASN:OD1	2.07	0.53
23:BB:2405:G:H1'	23:BB:2412:A:H61	1.73	0.53
25:BC:94:LEU:HB2	25:BC:100:ARG:HD3	1.89	0.53
52:BW:21:GLY:HA3	52:BW:33:GLY:HA2	1.91	0.53
23:BB:2197:U:O2'	23:BB:2198:A:H2'	2.08	0.53
14:AO:32:LEU:O	14:AO:36:ILE:HG12	2.08	0.53
23:BB:1013:C:H2'	23:BB:1014:A:C8	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:520:A:N1	1:CA:536:C:H1'	2.23	0.53
7:CH:49:LYS:HG3	7:CH:50:VAL:N	2.23	0.53
1:AA:229:U:H2'	1:AA:230:G:H8	1.73	0.53
23:BB:757:G:H2'	23:BB:758:C:H5'	1.91	0.53
23:BB:95:A:H4'	39:BX:38:GLN:O	2.09	0.53
52:DW:49:ASN:HB2	52:DW:61:LYS:N	2.23	0.53
52:BW:37:VAL:C	52:BW:39:GLN:H	2.11	0.53
52:DW:35:ILE:HG13	52:DW:57:THR:OG1	2.08	0.53
44:DQ:23:TYR:HB3	44:DQ:27:ARG:HB3	1.90	0.53
33:B1:28:THR:C	33:B1:30:PRO:HD3	2.29	0.53
25:DC:143:VAL:HG12	25:DC:144:GLU:N	2.24	0.53
1:AA:1096:C:H2'	1:AA:1097:C:C6	2.43	0.53
2:AC:126:ARG:NH2	2:AC:190:THR:HG23	2.13	0.53
23:BB:2897:U:H2'	23:BB:2898:U:C6	2.44	0.53
37:BL:4:ASN:N	37:BL:4:ASN:HD22	2.04	0.53
1:AA:82:G:C6	1:AA:88:U:O2	2.61	0.53
36:B2:21:ARG:HH21	36:B2:43:THR:CG2	2.21	0.53
1:CA:1081:A:OP1	4:CE:21:SER:O	2.26	0.53
23:DB:634:C:H2'	23:DB:635:C:C6	2.42	0.53
23:DB:705:A:N6	23:DB:726:G:O2'	2.42	0.53
14:CO:16:GLY:HA2	14:CO:27:VAL:CG2	2.39	0.53
46:BU:62:ALA:O	46:BU:63:ALA:HB3	2.09	0.53
24:BI:18:ASN:N	24:BI:19:PRO:CD	2.71	0.53
23:BB:2868:A:H2'	23:BB:2869:G:H8	1.73	0.53
29:DE:109:LEU:HD12	29:DE:112:LEU:HD12	1.89	0.53
23:BB:2722:G:H4'	42:BN:4:ARG:HB2	1.89	0.53
9:AJ:56:HIS:O	9:AJ:57:VAL:HG12	2.09	0.53
43:DO:51:ALA:O	43:DO:74:VAL:HG13	2.08	0.53
23:BB:2834:G:H1'	23:BB:2883:A:H61	1.74	0.53
40:BH:83:LYS:HB3	40:BH:83:LYS:NZ	2.24	0.53
23:DB:1508:A:H2'	23:DB:1509:A:C2	2.43	0.53
23:DB:947:A:HO2'	23:DB:984:A:H2	1.57	0.53
1:CA:552:U:H4'	11:CL:82:ARG:HG2	1.90	0.53
15:AP:20:VAL:HG21	15:AP:32:PHE:CG	2.44	0.53
1:CA:1239:A:H62	1:CA:1299:A:H62	1.55	0.53
1:AA:182:A:O2'	1:AA:183:C:H5''	2.09	0.53
23:DB:693:A:H2'	23:DB:694:U:H6	1.73	0.53
4:AE:95:MET:HA	4:AE:124:ALA:HB2	1.90	0.53
1:CA:783:C:O2'	1:CA:784:A:H5'	2.08	0.53
23:DB:2840:C:H2'	23:DB:2841:C:C6	2.43	0.53
23:DB:2153:C:H2'	23:DB:2154:A:C8	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2339:C:H2'	23:DB:2340:A:H8	1.73	0.53
23:DB:2654:A:N1	23:DB:2665:A:H5''	2.23	0.53
23:BB:633:A:O5'	23:BB:633:A:H8	1.91	0.53
20:AB:144:GLU:O	20:AB:148:GLY:HA3	2.09	0.53
35:BV:10:LYS:HG2	35:BV:11:GLU:HG3	1.91	0.53
23:DB:2649:C:H2'	23:DB:2650:U:H6	1.73	0.53
23:BB:1395:A:H4'	23:BB:1397:U:C5	2.44	0.53
23:BB:1341:G:H2'	23:BB:1397:U:O2'	2.07	0.53
23:DB:1913:A:H4'	23:DB:1915:U:OP2	2.08	0.53
30:BY:30:ARG:H	30:BY:30:ARG:HD3	1.74	0.53
38:DM:55:ARG:HH21	38:DM:55:ARG:HA	1.74	0.53
39:BX:41:HIS:O	39:BX:44:LYS:HB3	2.09	0.53
16:AQ:24:ILE:HG13	16:AQ:41:THR:HB	1.90	0.53
23:BB:950:G:H2'	23:BB:951:C:C6	2.44	0.53
6:AG:99:ALA:O	6:AG:103:ILE:HG13	2.09	0.53
23:DB:1098:A:C3'	24:DI:3:LYS:HA	2.28	0.53
52:DW:37:VAL:CG1	52:DW:38:ARG:H	2.18	0.53
25:DC:146:LYS:HB2	25:DC:149:LYS:HB2	1.91	0.53
39:DX:39:GLN:HB2	39:DX:42:LEU:HD22	1.91	0.53
29:BE:200:LEU:O	29:BE:201:ALA:HB3	2.07	0.53
52:BW:7:GLY:C	52:BW:10:ARG:HH12	2.12	0.53
27:BK:35:VAL:HG23	27:BK:36:GLY:N	2.16	0.53
47:DF:3:LEU:HB2	47:DF:100:GLU:OE1	2.08	0.53
6:CG:14:ASP:HB3	6:CG:18:GLY:N	2.15	0.53
3:AD:29:THR:HG22	3:AD:30:LYS:H	1.73	0.53
47:BF:101:ARG:CZ	47:BF:138:PRO:HB2	2.38	0.53
47:BF:7:TYR:OH	47:BF:29:ARG:HG3	2.08	0.53
41:DJ:127:GLY:O	41:DJ:128:ASN:HB2	2.08	0.53
9:AJ:76:ILE:O	9:AJ:76:ILE:HD12	2.08	0.53
34:B3:21:PHE:CE1	34:B3:58:ILE:HG12	2.43	0.53
34:D3:21:PHE:HE1	34:D3:58:ILE:HG12	1.73	0.53
22:BA:95:U:H2'	22:BA:96:G:C8	2.44	0.53
31:D0:53:VAL:HG21	42:DN:98:LEU:HD11	1.91	0.53
1:AA:250:A:H1'	1:AA:252:U:C5	2.44	0.53
51:DZ:70:GLU:O	51:DZ:72:ARG:N	2.36	0.53
1:AA:1053:G:N7	1:AA:1199:U:H3'	2.24	0.53
23:BB:582:A:H2'	23:BB:583:G:H8	1.74	0.53
28:DP:31:VAL:O	28:DP:32:VAL:HB	2.08	0.53
1:CA:1390:U:H2'	1:CA:1391:U:C6	2.44	0.53
11:AL:106:VAL:CG2	11:AL:116:TYR:HB3	2.38	0.53
23:BB:1097:U:C2'	23:BB:1098:A:H5'	2.37	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CJ:42:LEU:HD11	9:CJ:73:LEU:HB2	1.90	0.53
24:BI:75:ALA:HB2	24:BI:112:LYS:HE2	1.89	0.53
1:AA:32:A:H2'	1:AA:33:A:C8	2.44	0.53
29:DE:98:LYS:HG2	29:DE:99:LYS:N	2.23	0.53
23:DB:1716:U:H2'	23:DB:1717:A:H8	1.74	0.53
23:DB:1877:A:H2'	23:DB:1878:G:C8	2.43	0.53
23:BB:1009:A:P	41:BJ:39:LYS:HZ2	2.32	0.53
40:DH:1:MET:HB3	40:DH:21:VAL:O	2.09	0.53
7:CH:37:ASN:O	7:CH:41:GLU:HG2	2.08	0.53
23:DB:1607:C:H4'	23:DB:1608:A:O5'	2.08	0.53
5:AF:10:VAL:HG12	5:AF:11:HIS:N	2.23	0.53
1:CA:1386:G:O2'	1:CA:1387:G:H5'	2.09	0.53
1:CA:487:A:H2'	1:CA:488:C:O4'	2.07	0.53
23:BB:2054:A:H2'	31:B0:4:GLN:OE1	2.09	0.53
2:AC:142:ARG:HH21	2:AC:143:LEU:HD21	1.73	0.53
23:BB:2360:G:H4'	37:BL:61:LEU:HD11	1.91	0.53
32:D4:27:CYS:SG	32:D4:29:ALA:HB3	2.48	0.53
51:BZ:31:PRO:HB2	51:BZ:33:LEU:CD1	2.33	0.53
23:BB:337:C:OP1	46:BU:3:LYS:HG3	2.08	0.53
20:CB:67:LEU:H	20:CB:160:LEU:HA	1.74	0.53
37:DL:115:GLU:N	37:DL:115:GLU:OE1	2.42	0.53
25:DC:104:LEU:O	25:DC:105:ALA:HB3	2.08	0.53
50:DT:21:SER:O	50:DT:25:GLU:HB2	2.09	0.53
1:AA:1097:C:H2'	1:AA:1098:C:C6	2.43	0.53
18:CS:39:ILE:HG12	18:CS:70:LEU:HD12	1.89	0.53
1:AA:1321:U:H2'	1:AA:1322:C:C5	2.43	0.53
41:BJ:136:GLN:N	41:BJ:137:PRO:HD3	2.24	0.53
42:DN:82:GLU:C	42:DN:84:GLY:H	2.12	0.53
23:DB:2675:A:H4'	27:DK:29:HIS:HB2	1.91	0.53
5:CF:54:LEU:N	5:CF:54:LEU:HD13	2.24	0.53
14:AO:26:GLU:HA	14:AO:81:LEU:HD11	1.90	0.53
30:DY:23:LEU:HD13	30:DY:28:LEU:HB2	1.91	0.53
40:BH:44:ILE:HG22	40:BH:51:ARG:HH22	1.72	0.53
24:DI:100:ILE:O	24:DI:139:VAL:HA	2.09	0.53
34:D3:21:PHE:CE1	34:D3:58:ILE:HG12	2.44	0.53
1:AA:376:G:H5''	15:AP:5:ARG:HD3	1.91	0.53
12:CM:15:VAL:HG22	12:CM:33:LEU:HD11	1.89	0.53
12:CM:48:SER:HB2	12:CM:51:GLN:HG3	1.91	0.53
1:CA:238:A:H2'	1:CA:239:U:H5''	1.90	0.53
1:AA:1343:G:O3'	8:AI:123:ARG:HB2	2.09	0.53
23:DB:2037:A:H2'	23:DB:2038:G:C8	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:62:LYS:HB2	26:DD:63:PRO:HD3	1.91	0.53
23:BB:1405:U:H2'	23:BB:1406:U:H6	1.74	0.53
26:BD:13:ARG:HH12	28:BP:74:GLN:NE2	2.06	0.53
8:AI:93:LEU:O	8:AI:97:LEU:HG	2.07	0.53
23:BB:2772:C:H2'	23:BB:2773:C:H6	1.74	0.53
29:DE:130:LYS:C	29:DE:132:LYS:H	2.11	0.53
2:AC:129:PHE:CE2	2:AC:165:GLU:HG2	2.41	0.53
23:DB:2135:A:H61	23:DB:2156:G:C2'	2.21	0.53
23:DB:1199:U:H2'	23:DB:1200:C:H6	1.73	0.53
1:CA:212:G:H2'	1:CA:213:G:C8	2.44	0.53
34:D3:41:ARG:HG3	34:D3:44:ARG:NH2	2.24	0.53
23:DB:264:C:C2'	23:DB:265:A:H5''	2.38	0.53
5:AF:68:GLN:O	5:AF:71:ILE:HG23	2.08	0.53
1:CA:376:G:H5''	15:CP:5:ARG:HD3	1.91	0.53
23:BB:2339:C:H2'	23:BB:2340:A:H8	1.72	0.53
23:DB:2195:U:O2'	23:DB:2196:C:H5'	2.09	0.53
1:CA:513:C:H2'	1:CA:514:C:H6	1.73	0.53
23:BB:1877:A:H2'	23:BB:1878:G:H8	1.74	0.53
23:BB:2700:A:H2'	23:BB:2701:U:H6	1.72	0.53
1:CA:1386:G:H2'	1:CA:1387:G:H8	1.72	0.53
23:BB:1156:A:H5''	56:BB:3488:HOH:O	2.09	0.53
38:DM:6:ARG:O	38:DM:7:THR:HG23	2.09	0.53
29:BE:137:LYS:HE2	29:BE:141:MET:SD	2.49	0.53
8:CI:98:ARG:NE	8:CI:103:VAL:HG21	2.23	0.53
23:BB:1495:A:H2'	23:BB:1496:A:C8	2.43	0.53
28:DP:77:SER:OG	28:DP:79:VAL:HG22	2.09	0.53
1:CA:996:A:H2'	1:CA:997:U:C6	2.43	0.53
23:DB:1341:G:H2'	23:DB:1397:U:O2'	2.09	0.53
1:CA:1234:C:O2'	1:CA:1235:U:H5'	2.09	0.53
23:DB:854:C:O2'	23:DB:855:G:H5'	2.08	0.53
23:DB:925:A:O2'	23:DB:926:G:H5'	2.08	0.53
29:DE:145:ASP:OD1	29:DE:183:PHE:HA	2.08	0.53
48:BG:34:ARG:N	48:BG:34:ARG:HH11	1.97	0.53
49:BR:10:LYS:HD2	49:BR:10:LYS:N	2.23	0.53
49:BR:5:PHE:O	49:BR:11:GLN:HA	2.07	0.53
44:DQ:104:ALA:HA	49:DR:46:GLU:CD	2.29	0.53
1:CA:796:C:H4'	10:CK:126:ARG:NH2	2.24	0.53
41:DJ:136:GLN:N	41:DJ:137:PRO:HD3	2.24	0.53
48:DG:34:ARG:HH11	48:DG:34:ARG:N	1.96	0.53
24:DI:52:LEU:HD22	24:DI:81:LYS:HD3	1.91	0.53
20:AB:67:LEU:H	20:AB:160:LEU:HA	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DH:86:ASP:OD2	40:DH:89:LYS:HD3	2.09	0.53
40:BH:9:VAL:HB	40:BH:12:LEU:O	2.09	0.53
3:CD:25:ARG:HD3	3:CD:25:ARG:C	2.29	0.53
4:CE:89:THR:CG2	4:CE:90:GLY:H	2.16	0.53
41:BJ:26:GLY:O	41:BJ:30:THR:HG22	2.09	0.53
31:D0:48:TYR:CG	31:D0:49:ARG:N	2.76	0.53
23:BB:646:U:H3'	23:BB:647:G:C8	2.44	0.53
3:CD:196:GLU:H	3:CD:196:GLU:CD	2.12	0.53
1:AA:1306:A:N6	1:AA:1331:G:H1'	2.24	0.53
12:AM:15:VAL:HG22	12:AM:33:LEU:HD11	1.88	0.53
12:AM:7:ASN:ND2	12:AM:7:ASN:H	2.06	0.53
42:DN:114:GLU:HG2	42:DN:115:LEU:N	2.24	0.53
23:DB:280:U:H2'	23:DB:281:C:C6	2.44	0.53
23:BB:1444:G:H2'	23:BB:1445:G:C8	2.43	0.53
23:BB:1551:A:C3'	23:BB:1552:A:H5''	2.39	0.53
23:DB:2142:A:H2'	23:DB:2143:C:O4'	2.09	0.53
23:DB:305:C:H2'	23:DB:306:U:C6	2.44	0.53
48:BG:116:LEU:HD23	48:BG:121:THR:HA	1.91	0.53
23:DB:544:C:O5'	23:DB:545:U:OP1	2.27	0.53
12:AM:63:VAL:CG1	12:AM:67:ASP:HB2	2.39	0.53
38:DM:26:VAL:HG13	38:DM:133:LYS:HA	1.90	0.53
23:DB:1434:A:H62	23:DB:1558:C:H42	1.55	0.53
23:BB:21:A:H2'	23:BB:22:C:C6	2.44	0.53
1:CA:477:C:H2'	1:CA:478:A:C8	2.44	0.53
23:DB:30:G:OP1	44:DQ:4:LYS:HG2	2.08	0.53
46:BU:21:ARG:HD3	46:BU:72:PHE:CD2	2.43	0.53
23:DB:26:G:H1'	23:DB:514:A:H61	1.72	0.53
11:CL:82:ARG:HB2	11:CL:97:VAL:HG22	1.89	0.53
1:CA:313:A:H2'	1:CA:314:C:C6	2.44	0.53
4:CE:95:MET:HA	4:CE:124:ALA:CB	2.39	0.53
1:AA:1225:A:H3'	1:AA:1226:C:H6	1.73	0.53
1:AA:1308:U:H2'	1:AA:1309:G:C8	2.43	0.53
42:BN:15:SER:O	42:BN:18:GLN:HB2	2.09	0.53
1:CA:1308:U:H2'	1:CA:1309:G:C8	2.43	0.53
9:AJ:29:ALA:O	9:AJ:32:THR:HG22	2.08	0.53
23:DB:1220:G:H2'	23:DB:1221:C:H6	1.73	0.53
23:DB:1889:A:H2'	23:DB:1890:A:C8	2.44	0.53
1:CA:266:G:O2'	1:CA:267:C:H3'	2.09	0.53
6:CG:100:MET:O	6:CG:104:VAL:HG23	2.08	0.53
23:BB:1541:C:H2'	23:BB:1542:U:C6	2.43	0.53
23:BB:40:U:H2'	23:BB:41:C:C6	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:B1:40:PRO:O	33:B1:43:ARG:HG2	2.09	0.53
23:BB:1661:G:O2'	23:BB:1662:U:H5'	2.09	0.53
1:CA:1480:A:H2'	1:CA:1481:U:C6	2.44	0.53
1:AA:1230:C:H2'	1:AA:1231:G:H8	1.73	0.53
46:DU:27:VAL:HG23	46:DU:33:VAL:HG12	1.90	0.53
50:DT:64:LYS:H	50:DT:64:LYS:HD2	1.74	0.53
7:CH:55:LYS:NZ	7:CH:55:LYS:HA	2.24	0.53
46:BU:23:LYS:HD2	46:BU:23:LYS:N	2.23	0.53
1:AA:607:A:H2'	1:AA:608:A:C8	2.44	0.53
23:BB:1306:C:H2'	23:BB:1307:A:H8	1.74	0.53
23:BB:410:G:H5''	23:BB:411:G:H5'	1.91	0.53
52:DW:39:GLN:CG	52:DW:42:THR:HB	2.39	0.53
23:DB:582:A:H2'	23:DB:583:G:H8	1.74	0.53
33:B1:10:LEU:O	33:B1:19:PHE:HB2	2.08	0.53
29:DE:149:ILE:HG23	29:DE:188:MET:CA	2.39	0.53
47:BF:78:ILE:HA	47:BF:82:TYR:CD2	2.44	0.53
37:BL:3:LEU:O	37:BL:5:THR:HG23	2.09	0.53
42:BN:31:HIS:O	42:BN:33:ILE:HG13	2.09	0.53
40:BH:7:ASP:CG	40:BH:8:LYS:H	2.09	0.53
47:DF:138:PRO:HA	47:DF:142:TYR:CE2	2.44	0.53
47:DF:149:ARG:HA	47:DF:149:ARG:NH1	2.21	0.53
41:BJ:127:GLY:O	41:BJ:128:ASN:HB2	2.08	0.53
50:BT:2:ILE:HG12	50:BT:3:ARG:H	1.73	0.53
14:AO:24:SER:HB3	14:AO:27:VAL:CG2	2.36	0.53
47:DF:34:THR:HA	47:DF:89:THR:HA	1.91	0.53
35:DV:29:ILE:HG13	35:DV:88:HIS:HE1	1.74	0.53
1:AA:238:A:H2'	1:AA:239:U:H5''	1.91	0.53
13:CN:60:ARG:NE	13:CN:69:PRO:HB3	2.24	0.53
44:DQ:77:LYS:HA	44:DQ:80:ASN:HB3	1.90	0.53
16:AQ:74:LEU:HD22	16:AQ:75:VAL:N	2.24	0.53
1:CA:1028:C:H3'	1:CA:1029:U:C5	2.44	0.53
34:B3:7:ARG:HH11	34:B3:7:ARG:HG3	1.74	0.53
23:BB:673:C:H5''	29:BE:76:PRO:HD2	1.90	0.53
23:DB:1028:A:N6	23:DB:1125:G:H2'	2.24	0.53
13:CN:41:TRP:HB3	13:CN:44:VAL:HG12	1.90	0.53
48:BG:123:GLU:HG2	48:BG:124:CYS:N	2.23	0.53
23:DB:2834:G:H1'	23:DB:2883:A:H61	1.74	0.53
23:BB:2772:C:H2'	23:BB:2773:C:C6	2.43	0.53
1:AA:1272:G:H2'	1:AA:1273:C:C6	2.44	0.53
42:BN:45:ARG:O	42:BN:49:GLU:HG3	2.09	0.53
46:DU:11:ILE:O	46:DU:12:VAL:HB	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:321:U:OP2	29:DE:130:LYS:HD3	2.08	0.53
23:BB:156:A:H2'	23:BB:157:C:C6	2.43	0.53
30:DY:2:LYS:HE3	30:DY:58:GLU:HB3	1.90	0.53
23:DB:1015:U:H2'	23:DB:1016:G:H8	1.73	0.53
36:B2:33:ARG:HH21	36:B2:33:ARG:HB2	1.74	0.53
8:CI:17:ARG:HB2	8:CI:65:THR:HB	1.91	0.53
1:AA:1225:A:H5'	1:AA:1226:C:OP2	2.09	0.53
1:AA:1533:C:O2'	1:AA:1534:A:H5''	2.08	0.53
22:DA:2:G:H2'	22:DA:3:C:H6	1.72	0.53
23:BB:2405:G:H1'	23:BB:2412:A:N6	2.24	0.53
22:BA:48:U:H2'	22:BA:49:C:H6	1.74	0.53
1:CA:825:A:H2'	1:CA:826:C:H6	1.74	0.53
56:DB:3575:HOH:O	25:DC:230:PRO:HA	2.09	0.53
23:BB:2841:C:H2'	23:BB:2842:G:H8	1.73	0.53
23:BB:1633:G:O2'	23:BB:1634:A:H5''	2.09	0.53
21:AU:48:LYS:HA	21:AU:51:ALA:HB3	1.91	0.53
23:DB:2512:C:H2'	23:DB:2513:A:O4'	2.08	0.53
23:BB:2643:G:H2'	23:BB:2644:G:O4'	2.08	0.53
20:CB:33:ALA:HA	20:CB:37:VAL:O	2.08	0.53
1:AA:394:G:H2'	1:AA:395:C:H6	1.74	0.53
23:BB:2852:G:H2'	23:BB:2853:C:C6	2.44	0.53
23:DB:1742:U:H2'	23:DB:1743:G:C8	2.44	0.53
1:CA:956:U:O2'	1:CA:957:U:H5'	2.09	0.53
6:CG:132:THR:O	6:CG:135:LYS:HB3	2.08	0.53
21:CU:8:ASN:O	21:CU:9:GLU:HB3	2.09	0.53
1:CA:95:C:O2	1:CA:95:C:H2'	2.08	0.53
48:BG:133:LYS:N	48:BG:133:LYS:HD3	2.23	0.53
1:CA:880:C:H2'	1:CA:881:G:H8	1.74	0.53
8:AI:19:PHE:O	8:AI:62:LEU:HA	2.08	0.53
8:CI:56:MET:SD	8:CI:57:VAL:N	2.81	0.53
33:B1:26:LYS:HB2	33:B1:52:LYS:NZ	2.24	0.53
25:DC:107:LYS:O	25:DC:109:LEU:HD22	2.09	0.53
50:DT:50:LEU:C	50:DT:52:GLU:H	2.12	0.53
23:BB:2261:C:N4	52:BW:10:ARG:HB3	2.24	0.53
4:AE:17:VAL:HG23	4:AE:33:THR:O	2.09	0.53
43:DO:49:VAL:CG2	43:DO:82:ALA:HB2	2.35	0.53
40:BH:115:VAL:O	40:BH:133:GLN:HB3	2.09	0.53
23:BB:1060:U:O2	23:BB:1088:A:C8	2.62	0.53
52:BW:43:LYS:HD2	52:BW:79:ILE:HD11	1.90	0.53
1:AA:415:A:H3'	1:AA:416:G:H8	1.73	0.53
47:DF:108:PRO:O	47:DF:110:ILE:HG23	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:144:A:H2'	23:BB:145:C:C6	2.43	0.53
9:CJ:76:ILE:HD12	9:CJ:76:ILE:O	2.08	0.53
4:CE:136:VAL:HG13	4:CE:137:ARG:H	1.73	0.53
1:AA:1219:A:H2'	1:AA:1220:G:C8	2.44	0.53
34:B3:21:PHE:HE1	34:B3:58:ILE:HG12	1.73	0.53
15:CP:66:THR:O	15:CP:67:ILE:HB	2.09	0.53
1:CA:325:A:H2'	1:CA:326:G:O4'	2.09	0.53
31:B0:48:TYR:CG	31:B0:49:ARG:N	2.77	0.53
29:DE:109:LEU:O	29:DE:112:LEU:HB2	2.09	0.53
23:DB:283:G:C2	23:DB:284:U:H1'	2.44	0.53
23:BB:2185:U:H2'	23:BB:2186:G:H8	1.70	0.53
23:BB:1443:U:H2'	23:BB:1444:G:C8	2.43	0.53
1:CA:1004:A:C8	1:CA:1025:U:H1'	2.44	0.53
23:BB:2037:A:H2'	23:BB:2038:G:C8	2.44	0.53
49:DR:61:ALA:CB	49:DR:98:ILE:HA	2.39	0.53
37:DL:55:MET:HA	37:DL:55:MET:HE3	1.90	0.53
23:DB:2720:U:H2'	23:DB:2721:A:H8	1.72	0.53
15:CP:61:VAL:HA	15:CP:65:ALA:HB3	1.91	0.53
1:CA:672:U:H2'	1:CA:673:A:C8	2.44	0.53
23:DB:2292:U:H2'	23:DB:2293:G:C8	2.44	0.53
1:AA:1011:C:H2'	1:AA:1012:A:H8	1.73	0.53
1:AA:1020:G:H2'	1:AA:1020:G:N3	2.23	0.53
23:DB:709:U:H2'	23:DB:710:U:H6	1.74	0.53
23:BB:2183:A:H2'	23:BB:2184:A:N7	2.23	0.53
36:D2:33:ARG:HH21	36:D2:33:ARG:HB2	1.74	0.53
23:BB:825:A:O2'	37:BL:54:GLN:HB3	2.09	0.53
12:AM:86:ARG:HD2	18:AS:2:ARG:HH12	1.74	0.53
1:AA:123:U:H2'	1:AA:124:C:C6	2.44	0.53
23:DB:1922:G:H2'	23:DB:1923:U:O4'	2.09	0.53
22:DA:48:U:H2'	22:DA:49:C:H6	1.74	0.53
23:DB:1400:U:H2'	23:DB:1401:G:H8	1.73	0.53
23:DB:2415:G:H4'	37:DL:66:PHE:HB2	1.90	0.53
6:AG:94:ARG:HH11	6:AG:98:LEU:HD11	1.72	0.53
1:AA:179:A:H2'	1:AA:180:U:O4'	2.08	0.53
23:BB:937:C:H2'	23:BB:938:G:C8	2.44	0.53
7:AH:38:VAL:HG13	7:AH:111:THR:HG22	1.89	0.53
1:AA:1101:A:H4'	1:AA:1102:A:O5'	2.09	0.53
25:BC:180:MET:HB3	25:BC:267:VAL:HB	1.90	0.53
1:AA:113:G:H2'	1:AA:114:U:C6	2.44	0.53
1:AA:952:U:H2'	1:AA:953:G:C8	2.44	0.53
35:DV:53:LYS:NZ	35:DV:53:LYS:HA	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AQ:37:ILE:HG22	16:AQ:39:ARG:HE	1.74	0.53
46:DU:3:LYS:HB3	46:DU:82:VAL:HG21	1.90	0.52
8:CI:19:PHE:O	8:CI:62:LEU:HA	2.09	0.52
39:DX:20:ASN:HD22	39:DX:20:ASN:N	2.06	0.52
48:DG:17:LYS:HB3	48:DG:24:THR:N	2.19	0.52
23:DB:1693:U:O2'	25:DC:13:ARG:NH2	2.40	0.52
47:BF:50:ASP:O	47:BF:53:ALA:HB3	2.09	0.52
47:BF:79:ARG:HE	47:BF:79:ARG:N	2.07	0.52
42:DN:65:LEU:HD11	42:DN:69:ARG:CZ	2.40	0.52
40:DH:80:ILE:HD11	40:DH:146:VAL:HA	1.90	0.52
18:AS:18:VAL:HG21	18:AS:43:MET:HE2	1.91	0.52
15:AP:4:ILE:HB	15:AP:67:ILE:HD12	1.90	0.52
23:BB:1244:A:H5''	37:BL:8:PRO:CD	2.36	0.52
29:BE:28:VAL:O	29:BE:32:VAL:HG13	2.09	0.52
23:DB:634:C:H2'	23:DB:635:C:H6	1.74	0.52
1:CA:1289:A:H61	8:CI:71:ILE:HD11	1.73	0.52
23:BB:2472:G:O6	23:BB:2476:A:H4'	2.09	0.52
23:BB:2286:G:C8	23:BB:2286:G:H5'	2.44	0.52
1:CA:371:A:O2'	1:CA:372:C:H5'	2.10	0.52
23:DB:2395:C:H2'	23:DB:2396:G:O4'	2.08	0.52
23:DB:1784:A:H4'	23:DB:1785:A:O5'	2.09	0.52
23:BB:2152:G:H2'	23:BB:2152:G:N3	2.24	0.52
11:CL:51:VAL:HG12	11:CL:52:CYS:N	2.23	0.52
23:DB:1166:G:H2'	23:DB:1167:C:H6	1.72	0.52
46:BU:21:ARG:HD3	46:BU:72:PHE:CG	2.44	0.52
23:DB:2297:A:H61	23:DB:2319:G:H1'	1.74	0.52
26:DD:25:THR:HG21	26:DD:193:VAL:CG2	2.39	0.52
41:BJ:35:ARG:HA	41:BJ:40:HIS:CD2	2.44	0.52
47:DF:19:PHE:CZ	47:DF:164:GLU:HA	2.43	0.52
19:CT:27:MET:O	19:CT:31:ILE:HG13	2.08	0.52
1:AA:285:C:H2'	1:AA:286:C:C6	2.43	0.52
1:CA:285:C:H2'	1:CA:286:C:C6	2.44	0.52
38:BM:108:VAL:HG13	38:BM:112:LEU:HB3	1.89	0.52
23:DB:2341:G:H2'	23:DB:2342:C:H6	1.73	0.52
23:DB:958:U:H3	38:DM:16:ARG:HB3	1.73	0.52
5:AF:11:HIS:CE1	5:AF:13:ASP:HB2	2.44	0.52
23:DB:2512:C:OP2	26:DD:128:ARG:HD2	2.10	0.52
23:BB:247:G:H4'	23:BB:386:G:C5	2.44	0.52
1:CA:1203:C:H4'	13:CN:66:THR:HG22	1.90	0.52
27:BK:17:ARG:HB2	27:BK:45:GLU:HB3	1.90	0.52
7:CH:38:VAL:HG13	7:CH:111:THR:HG22	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CQ:24:ILE:HG13	16:CQ:41:THR:HB	1.91	0.52
24:DI:5:GLN:O	24:DI:6:ALA:HB3	2.08	0.52
1:AA:1508:A:H2'	1:AA:1509:C:C6	2.44	0.52
21:CU:48:LYS:HG3	21:CU:49:ALA:N	2.23	0.52
27:BK:58:LEU:N	27:BK:58:LEU:HD23	2.24	0.52
23:DB:64:A:H2'	23:DB:65:U:C6	2.44	0.52
24:BI:23:VAL:HG23	24:BI:24:GLY:N	2.24	0.52
23:DB:848:C:H2'	23:DB:849:A:C8	2.44	0.52
28:DP:62:LYS:O	28:DP:63:ILE:HB	2.10	0.52
26:DD:14:ILE:O	26:DD:14:ILE:HG23	2.09	0.52
50:DT:11:LEU:CD2	50:DT:46:ALA:HB1	2.37	0.52
25:BC:170:TYR:HE2	25:BC:184:GLU:HG2	1.73	0.52
41:BJ:96:ARG:NE	41:BJ:99:ARG:HD2	2.25	0.52
20:CB:182:VAL:HG12	20:CB:195:VAL:HG13	1.91	0.52
47:DF:107:VAL:N	47:DF:108:PRO:CD	2.71	0.52
38:DM:21:ALA:CB	38:DM:100:LYS:HG2	2.39	0.52
23:DB:160:A:H2'	23:DB:161:A:C8	2.44	0.52
26:DD:121:THR:C	26:DD:123:LYS:H	2.12	0.52
35:BV:40:ILE:N	35:BV:40:ILE:HD13	2.23	0.52
44:DQ:87:VAL:HG12	44:DQ:89:ILE:HD13	1.89	0.52
13:AN:26:LEU:HA	13:AN:29:ILE:HD12	1.92	0.52
23:DB:1805:A:N3	25:DC:49:THR:CG2	2.72	0.52
37:BL:93:ASN:O	37:BL:95:LEU:N	2.40	0.52
1:CA:1021:A:H2'	1:CA:1022:A:O4'	2.09	0.52
1:AA:1369:C:H2'	1:AA:1370:G:C8	2.43	0.52
26:BD:8:LYS:CD	26:BD:197:THR:H	2.23	0.52
23:DB:1993:U:H4'	26:DD:133:THR:HG21	1.91	0.52
23:BB:1723:G:H3'	23:BB:1724:G:H8	1.74	0.52
38:BM:68:PHE:CG	38:BM:69:PRO:HD2	2.44	0.52
1:CA:599:C:H5''	7:CH:86:LYS:O	2.09	0.52
23:BB:2800:A:H2'	23:BB:2801:G:O4'	2.10	0.52
39:DX:15:ASN:O	39:DX:19:LEU:HD13	2.09	0.52
5:CF:68:GLN:O	5:CF:71:ILE:HG23	2.09	0.52
1:CA:398:U:H2'	1:CA:399:G:C8	2.45	0.52
23:DB:591:U:H1'	34:D3:1:PRO:N	2.24	0.52
23:DB:2405:G:H1'	23:DB:2412:A:N6	2.24	0.52
28:DP:19:PHE:CE2	28:DP:25:VAL:HG11	2.44	0.52
23:BB:1582:C:H2'	23:BB:1583:A:O4'	2.08	0.52
12:CM:79:LEU:HD22	12:CM:86:ARG:HE	1.74	0.52
1:CA:272:C:H2'	1:CA:273:U:H6	1.74	0.52
23:DB:988:A:P	30:DY:11:SER:HB3	2.49	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AH:103:VAL:HG22	7:AH:124:ILE:HA	1.90	0.52
23:BB:96:C:H4'	39:BX:41:HIS:CE1	2.43	0.52
23:DB:729:G:C5	25:DC:206:LYS:HB2	2.44	0.52
2:CC:128:MET:HB2	2:CC:131:ARG:HB2	1.92	0.52
23:BB:903:C:H2'	23:BB:904:G:C8	2.43	0.52
6:CG:68:VAL:HG11	6:CG:133:ALA:HB1	1.91	0.52
23:DB:1528:A:H2'	23:DB:1529:G:O4'	2.09	0.52
27:DK:17:ARG:HB2	27:DK:45:GLU:HB3	1.91	0.52
23:BB:64:A:H2'	23:BB:65:U:C6	2.44	0.52
9:AJ:92:LEU:H	9:AJ:92:LEU:HD22	1.73	0.52
23:BB:1332:G:H2'	23:BB:1332:G:N3	2.25	0.52
3:CD:82:LYS:NZ	3:CD:82:LYS:HB3	2.24	0.52
23:BB:2626:C:O2'	23:BB:2627:G:H5'	2.09	0.52
24:DI:2:LYS:C	24:DI:3:LYS:HD2	2.30	0.52
52:BW:49:ASN:HB2	52:BW:61:LYS:N	2.22	0.52
5:AF:92:THR:O	5:AF:93:LYS:HB2	2.10	0.52
13:CN:16:ALA:HA	13:CN:54:SER:O	2.09	0.52
19:CT:85:LEU:HD23	19:CT:86:ALA:H	1.74	0.52
44:DQ:104:ALA:O	44:DQ:105:PHE:HB3	2.08	0.52
24:DI:131:THR:O	24:DI:135:MET:HG3	2.10	0.52
40:DH:5:LEU:O	40:DH:6:LEU:HD12	2.09	0.52
23:BB:2598:A:H5''	25:BC:233:GLY:CA	2.38	0.52
3:AD:26:ALA:HA	3:AD:30:LYS:HE3	1.92	0.52
23:DB:2305:U:H5''	47:DF:130:GLY:HA3	1.91	0.52
23:BB:141:G:C6	50:BT:2:ILE:HG21	2.44	0.52
47:DF:11:VAL:HG12	47:DF:12:VAL:N	2.21	0.52
47:BF:34:THR:HA	47:BF:89:THR:HA	1.90	0.52
22:BA:43:C:H1'	47:BF:91:ARG:NH2	2.23	0.52
22:BA:32:U:H1'	22:BA:52:A:N7	2.25	0.52
1:CA:109:A:H2'	1:CA:326:G:N2	2.24	0.52
1:AA:254:G:OP1	16:AQ:68:LYS:O	2.26	0.52
23:BB:2186:G:H2'	23:BB:2187:U:O4'	2.08	0.52
48:DG:123:GLU:HG2	48:DG:124:CYS:N	2.23	0.52
23:BB:1805:A:H5''	25:BC:247:TRP:CE2	2.45	0.52
28:BP:56:SER:O	28:BP:74:GLN:HA	2.10	0.52
23:DB:1560:G:H2'	23:DB:1561:C:C6	2.44	0.52
48:DG:154:GLU:OE2	48:DG:156:TYR:HB2	2.10	0.52
23:DB:467:G:OP1	36:D2:33:ARG:HG2	2.08	0.52
23:DB:825:A:H1'	37:DL:54:GLN:HE21	1.73	0.52
25:BC:221:GLY:C	25:BC:223:ALA:H	2.13	0.52
23:BB:1816:C:H3'	25:BC:61:TYR:CE2	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DV:77:VAL:HA	35:DV:89:ILE:HG22	1.91	0.52
23:DB:2648:G:H2'	23:DB:2649:C:C6	2.44	0.52
6:CG:135:LYS:HD3	6:CG:136:LYS:N	2.25	0.52
24:BI:23:VAL:HG23	24:BI:24:GLY:H	1.73	0.52
24:DI:102:ARG:HG3	24:DI:141:ASP:HB2	1.92	0.52
23:DB:303:G:H2'	23:DB:304:U:C6	2.45	0.52
23:DB:2704:C:H2'	23:DB:2705:A:O4'	2.10	0.52
25:DC:32:LEU:O	25:DC:33:LEU:HD23	2.10	0.52
8:AI:98:ARG:NE	8:AI:103:VAL:HG21	2.25	0.52
23:DB:2216:G:H2'	23:DB:2217:G:H8	1.75	0.52
26:DD:77:ARG:HB2	26:DD:80:TRP:HH2	1.75	0.52
23:DB:1335:C:H2'	23:DB:1336:A:H8	1.74	0.52
23:DB:1322:A:C2'	23:DB:1323:C:H5'	2.40	0.52
28:BP:77:SER:OG	28:BP:79:VAL:HG22	2.09	0.52
1:CA:1123:U:O2'	1:CA:1124:G:H5'	2.09	0.52
2:AC:134:LYS:HA	2:AC:167:TYR:HE2	1.75	0.52
48:BG:95:ALA:HB2	48:BG:130:ILE:HD11	1.90	0.52
1:AA:956:U:O2'	1:AA:957:U:H5'	2.09	0.52
40:DH:4:ILE:HD12	40:DH:37:VAL:HG13	1.90	0.52
43:DO:79:ALA:O	43:DO:83:LEU:HB2	2.08	0.52
37:BL:9:ALA:HB3	37:BL:12:SER:OG	2.09	0.52
2:AC:128:MET:HB2	2:AC:131:ARG:HB2	1.90	0.52
23:DB:2492:U:O2'	23:DB:2493:U:H5'	2.09	0.52
48:DG:133:LYS:N	48:DG:133:LYS:HD3	2.24	0.52
38:BM:63:ILE:N	38:BM:63:ILE:HD12	2.24	0.52
24:DI:10:LEU:O	24:DI:10:LEU:HD12	2.09	0.52
29:BE:1:MET:HB3	29:BE:14:VAL:O	2.10	0.52
1:CA:792:A:H4'	1:CA:793:U:O5'	2.07	0.52
21:AU:39:LYS:N	21:AU:40:PRO:CD	2.73	0.52
23:DB:2386:A:N3	52:DW:38:ARG:HD2	2.25	0.52
8:AI:56:MET:HE1	8:AI:59:LYS:HB3	1.92	0.52
33:D1:8:ILE:HG23	33:D1:51:ALA:HA	1.92	0.52
50:DT:57:VAL:HG13	50:DT:58:VAL:N	2.25	0.52
47:DF:74:ALA:HB3	47:DF:77:LYS:O	2.09	0.52
23:BB:996:A:H4'	44:BQ:91:ARG:HH11	1.74	0.52
45:DS:18:ARG:HB3	45:DS:76:VAL:HG22	1.91	0.52
23:DB:2598:A:H5''	25:DC:233:GLY:HA2	1.91	0.52
24:DI:79:LEU:HD12	24:DI:135:MET:SD	2.49	0.52
31:B0:21:LEU:HD12	45:BS:19:LEU:O	2.09	0.52
23:BB:26:G:H1'	23:BB:514:A:H61	1.73	0.52
27:DK:99:ILE:N	27:DK:118:LEU:HD22	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:437:U:H5''	3:CD:151:GLN:CD	2.29	0.52
3:AD:160:LEU:H	3:AD:160:LEU:HD13	1.74	0.52
23:BB:1140:C:H2'	23:BB:1141:U:H5'	1.92	0.52
5:AF:54:LEU:N	5:AF:54:LEU:HD13	2.24	0.52
38:DM:24:THR:HG23	38:DM:34:LYS:HE3	1.91	0.52
23:BB:1381:G:H1'	23:BB:1571:A:N1	2.25	0.52
23:BB:363:G:H2'	23:BB:364:C:C6	2.43	0.52
23:BB:2849:U:H4'	23:BB:2850:A:C5'	2.39	0.52
36:D2:21:ARG:HD2	36:D2:43:THR:HG21	1.90	0.52
44:DQ:83:LYS:NZ	44:DQ:87:VAL:HA	2.23	0.52
16:AQ:60:ILE:HG22	16:AQ:74:LEU:HA	1.90	0.52
1:CA:373:A:H1'	1:CA:481:G:H1'	1.92	0.52
23:DB:2589:A:H2'	23:DB:2590:A:H8	1.75	0.52
38:DM:68:PHE:CG	38:DM:69:PRO:HD2	2.45	0.52
37:BL:85:VAL:HG22	37:BL:94:THR:CG2	2.38	0.52
48:DG:148:ARG:HD3	48:DG:152:ARG:NE	2.25	0.52
36:B2:33:ARG:HH21	36:B2:33:ARG:CB	2.22	0.52
25:DC:74:PRO:HG2	25:DC:96:LYS:HG2	1.90	0.52
7:CH:44:PHE:HE2	7:CH:100:ILE:HG12	1.73	0.52
6:AG:29:LEU:HD23	6:AG:29:LEU:O	2.09	0.52
23:BB:1827:U:C2'	23:BB:1828:G:H5'	2.39	0.52
22:BA:60:C:H2'	22:BA:61:G:C8	2.45	0.52
22:BA:49:C:H2'	22:BA:50:A:C8	2.44	0.52
12:CM:85:TYR:HA	12:CM:88:LEU:HD12	1.91	0.52
23:BB:1164:C:H2'	23:BB:1165:A:C8	2.45	0.52
23:DB:1077:A:H4'	24:DI:93:ASN:OD1	2.09	0.52
1:AA:777:A:H2'	1:AA:778:G:H8	1.74	0.52
7:AH:49:LYS:HG3	7:AH:50:VAL:N	2.23	0.52
23:BB:2666:C:O4'	23:BB:2666:C:O2	2.25	0.52
22:BA:30:C:H2'	22:BA:31:C:H5'	1.91	0.52
23:BB:1742:U:H2'	23:BB:1743:G:C8	2.45	0.52
23:BB:1292:G:H2'	23:BB:1293:C:C6	2.44	0.52
25:DC:162:GLN:NE2	25:DC:174:ARG:HH21	2.07	0.52
1:AA:224:U:H2'	1:AA:225:C:H6	1.73	0.52
25:DC:177:SER:O	25:DC:270:ARG:HG3	2.09	0.52
34:B3:39:ARG:O	34:B3:43:LEU:HG	2.10	0.52
8:CI:20:ILE:HG23	8:CI:60:LEU:CD1	2.39	0.52
41:DJ:44:TYR:CD2	44:DQ:59:LEU:HD11	2.45	0.52
37:BL:115:GLU:OE1	37:BL:115:GLU:N	2.42	0.52
37:BL:79:LEU:HB2	37:BL:113:ALA:N	2.13	0.52
41:DJ:96:ARG:NE	41:DJ:99:ARG:HD2	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DI:116:MET:HE1	24:DI:128:ILE:HG13	1.91	0.52
23:DB:2899:A:H2'	23:DB:2900:A:C8	2.45	0.52
47:DF:2:LYS:HE3	47:DF:97:GLU:HA	1.92	0.52
47:BF:3:LEU:HB2	47:BF:100:GLU:OE1	2.10	0.52
50:BT:1:MET:HB2	50:BT:2:ILE:HD13	1.91	0.52
48:DG:88:LEU:HD13	48:DG:93:TYR:HB3	1.91	0.52
26:BD:149:ASN:O	26:BD:152:PRO:HD2	2.08	0.52
23:BB:1560:G:H2'	23:BB:1561:C:H6	1.72	0.52
3:AD:196:GLU:CD	3:AD:196:GLU:H	2.12	0.52
1:CA:239:U:C5'	1:CA:239:U:H6	2.23	0.52
23:DB:1470:A:H3'	23:DB:1471:G:H8	1.74	0.52
1:CA:370:C:O2'	1:CA:371:A:H5'	2.08	0.52
32:B4:2:LYS:HG2	32:B4:4:ARG:HG3	1.92	0.52
32:D4:23:ILE:HB	32:D4:38:GLY:HA3	1.91	0.52
23:DB:2358:A:H61	37:DL:54:GLN:HE22	1.57	0.52
23:DB:2019:A:H2	23:DB:2035:G:H22	1.57	0.52
23:BB:1656:C:H2'	23:BB:1657:U:C6	2.44	0.52
25:DC:94:LEU:HB2	25:DC:100:ARG:CD	2.40	0.52
45:DS:43:ALA:HA	45:DS:46:LEU:HD12	1.90	0.52
23:BB:608:A:H2'	23:BB:609:A:C8	2.44	0.52
7:CH:17:GLN:NE2	7:CH:69:ALA:HB1	2.25	0.52
28:DP:26:GLU:O	28:DP:28:LYS:HE2	2.09	0.52
23:BB:2838:G:H2'	23:BB:2839:G:H8	1.74	0.52
12:CM:89:ARG:NH2	12:CM:94:LEU:HD12	2.25	0.52
46:DU:41:VAL:HG22	46:DU:60:LYS:O	2.09	0.52
23:DB:152:A:H2'	23:DB:153:U:C6	2.44	0.52
25:DC:180:MET:HB3	25:DC:267:VAL:HB	1.91	0.52
23:BB:1159:U:O2'	23:BB:1160:G:H5'	2.08	0.52
1:AA:1292:G:H2'	1:AA:1293:C:C6	2.45	0.52
23:DB:2537:U:H2'	23:DB:2538:C:H6	1.74	0.52
23:DB:1190:G:OP1	37:DL:32:GLY:HA2	2.09	0.52
23:BB:2210:U:N3	23:BB:2212:A:N7	2.57	0.52
22:BA:86:G:H2'	22:BA:87:U:O4'	2.10	0.52
23:DB:2213:U:O2	23:DB:2213:U:C2'	2.57	0.52
7:AH:34:ALA:HB1	7:AH:109:VAL:HB	1.92	0.52
23:BB:503:A:H5''	23:BB:505:A:OP1	2.10	0.52
23:DB:1099:G:C5'	24:DI:4:VAL:HG12	2.40	0.52
51:BZ:76:GLU:HG3	51:BZ:77:LYS:H	1.75	0.52
49:DR:54:VAL:HG22	49:DR:55:ASP:OD2	2.10	0.52
25:BC:179:GLU:HG3	25:BC:269:ARG:HA	1.92	0.52
41:BJ:17:VAL:HG22	41:BJ:55:ILE:HD11	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BT:87:LEU:HB2	50:BT:91:GLN:HG2	1.91	0.52
41:DJ:55:ILE:HB	41:DJ:123:LYS:HB2	1.91	0.52
31:D0:21:LEU:HD12	45:DS:19:LEU:O	2.09	0.52
45:DS:27:LYS:HD2	45:DS:27:LYS:H	1.73	0.52
44:BQ:105:PHE:HA	44:BQ:108:LEU:HG	1.91	0.52
45:BS:48:LYS:HE2	45:BS:52:GLU:OE1	2.10	0.52
27:BK:99:ILE:HD13	27:BK:118:LEU:HD13	1.92	0.52
40:DH:7:ASP:CG	40:DH:8:LYS:H	2.11	0.52
27:DK:61:VAL:HG11	27:DK:112:PHE:CE2	2.45	0.52
47:DF:102:LEU:HA	47:DF:106:ALA:HB3	1.90	0.52
47:DF:134:GLN:C	47:DF:136:ILE:H	2.13	0.52
47:BF:107:VAL:N	47:BF:108:PRO:CD	2.71	0.52
47:DF:169:LEU:HA	47:DF:172:PHE:HD2	1.74	0.52
1:CA:1080:A:H2'	1:CA:1081:A:H5'	1.91	0.52
23:BB:1349:C:H2'	23:BB:1350:C:H6	1.74	0.52
14:CO:24:SER:HB3	14:CO:27:VAL:CG2	2.37	0.52
35:BV:42:LEU:HD23	35:BV:42:LEU:N	2.24	0.52
12:AM:3:ILE:HG21	12:AM:21:ILE:HD11	1.90	0.52
12:CM:6:ILE:O	12:CM:8:ILE:HG23	2.10	0.52
41:DJ:73:VAL:HG23	41:DJ:74:TYR:H	1.75	0.52
29:BE:173:THR:C	29:BE:175:ILE:H	2.13	0.52
9:AJ:52:LEU:HG	9:AJ:62:ARG:HE	1.75	0.52
23:DB:1405:U:H2'	23:DB:1406:U:H6	1.74	0.52
11:CL:107:LYS:NZ	11:CL:107:LYS:N	2.57	0.52
50:BT:68:LYS:O	50:BT:69:ARG:CB	2.58	0.52
50:BT:68:LYS:O	50:BT:69:ARG:HB3	2.10	0.52
15:CP:34:GLU:CD	15:CP:60:TRP:HE1	2.13	0.52
28:BP:88:ARG:HB2	28:BP:112:ARG:CZ	2.40	0.52
46:DU:21:ARG:HG3	46:DU:21:ARG:HH11	1.74	0.52
23:BB:1849:G:H2'	23:BB:1850:G:C8	2.44	0.52
9:AJ:42:LEU:HD11	9:AJ:73:LEU:HB2	1.92	0.52
23:DB:2651:C:O2'	23:DB:2652:C:H5'	2.09	0.52
41:BJ:13:ARG:O	41:BJ:14:ASP:HB2	2.09	0.52
1:CA:32:A:H2'	1:CA:33:A:C8	2.45	0.52
23:DB:299:A:N6	23:DB:322:A:H1'	2.25	0.52
47:BF:19:PHE:CZ	47:BF:164:GLU:HA	2.44	0.52
47:DF:115:GLY:HA3	47:DF:177:ARG:HD2	1.91	0.52
23:BB:151:C:H2'	23:BB:152:A:H8	1.74	0.52
23:DB:2322:A:N6	23:DB:2333:A:N6	2.58	0.52
1:AA:229:U:H2'	1:AA:230:G:C8	2.44	0.52
23:DB:950:G:H2'	23:DB:951:C:C6	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:696:G:O2'	23:DB:697:G:H5'	2.10	0.52
6:AG:68:VAL:HG11	6:AG:133:ALA:HB1	1.91	0.52
23:DB:2355:G:H4'	52:DW:20:LEU:CD1	2.40	0.52
23:DB:1425:G:H2'	23:DB:1426:G:C8	2.45	0.52
2:CC:171:ARG:HB2	2:CC:171:ARG:HH11	1.73	0.52
22:BA:76:G:O2'	22:BA:77:U:H5'	2.10	0.52
11:AL:66:ILE:N	11:AL:66:ILE:HD12	2.25	0.52
1:AA:792:A:H4'	1:AA:793:U:O5'	2.10	0.52
43:BO:28:VAL:HG11	43:BO:92:PHE:CZ	2.45	0.52
38:BM:55:ARG:HH21	38:BM:55:ARG:HA	1.74	0.52
23:DB:1666:G:O2'	23:DB:1667:G:H5'	2.09	0.52
32:D4:15:LYS:O	32:D4:16:ILE:HB	2.09	0.52
23:DB:1676:A:H2'	23:DB:1677:A:O4'	2.09	0.52
37:DL:79:LEU:HB2	37:DL:113:ALA:N	2.13	0.52
44:BQ:111:LYS:HZ2	49:BR:48:LYS:HD2	1.73	0.52
20:CB:101:THR:HG22	20:CB:174:GLU:OE1	2.10	0.52
40:DH:76:GLU:O	40:DH:77:THR:HG23	2.09	0.52
41:BJ:81:ILE:HG23	41:BJ:82:GLY:N	2.19	0.52
36:B2:42:LEU:O	36:B2:43:THR:HG23	2.10	0.52
47:DF:7:TYR:OH	47:DF:29:ARG:HG3	2.10	0.52
41:DJ:26:GLY:O	41:DJ:30:THR:HG22	2.09	0.52
1:CA:17:U:O2'	1:CA:18:C:H5'	2.09	0.52
23:DB:675:A:H4'	29:DE:62:GLN:HE22	1.74	0.52
16:CQ:74:LEU:HD22	16:CQ:75:VAL:N	2.25	0.52
12:AM:48:SER:HB2	12:AM:51:GLN:HG3	1.90	0.52
48:BG:16:VAL:HG11	48:BG:44:HIS:CE1	2.45	0.52
48:BG:9:VAL:H	48:BG:48:THR:HB	1.74	0.52
23:DB:1443:U:H2'	23:DB:1444:G:C8	2.45	0.52
1:CA:1219:A:H2'	1:CA:1220:G:C8	2.45	0.52
23:BB:1654:A:H2'	23:BB:1655:A:C8	2.44	0.52
26:BD:118:PHE:HE2	42:BN:1:MET:SD	2.32	0.52
48:DG:116:LEU:HD23	48:DG:121:THR:HA	1.91	0.52
1:CA:948:C:O2'	1:CA:949:A:H5'	2.10	0.52
23:BB:1993:U:H4'	26:BD:133:THR:HG21	1.90	0.52
1:CA:1072:G:H2'	1:CA:1073:U:C6	2.44	0.52
4:CE:80:LEU:HG	4:CE:122:VAL:HG11	1.90	0.52
23:DB:1149:G:H2'	23:DB:1150:C:H6	1.72	0.52
23:BB:1728:C:O2'	23:BB:1729:U:H5'	2.09	0.52
1:AA:279:A:H5'	1:AA:281:G:O4'	2.09	0.52
1:CA:1161:C:H2'	1:CA:1162:C:H6	1.74	0.52
1:CA:62:U:H2'	1:CA:63:C:H6	1.73	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:968:C:H2'	23:DB:969:G:C8	2.44	0.52
23:DB:827:U:H5'	23:DB:828:U:O5'	2.10	0.52
1:AA:1491:G:H3'	53:AA:1601:NMY:O3	2.09	0.52
1:AA:1438:G:O2'	1:AA:1439:G:H5'	2.09	0.52
29:DE:98:LYS:O	29:DE:102:ARG:HG2	2.09	0.52
14:CO:43:PHE:CE1	14:CO:56:LEU:HD22	2.45	0.52
48:BG:39:ALA:C	48:BG:54:ARG:HB2	2.30	0.52
23:BB:1923:U:H2'	23:BB:1924:C:C6	2.45	0.52
23:BB:1682:G:H2'	23:BB:1683:U:C6	2.44	0.52
23:DB:2710:C:H2'	23:DB:2711:A:H8	1.75	0.52
23:DB:234:U:H2'	23:DB:235:U:H6	1.74	0.52
23:BB:2025:C:H5'	26:BD:154:LYS:NZ	2.25	0.52
19:CT:28:ARG:O	19:CT:32:LYS:HG3	2.09	0.52
23:BB:1831:G:H2'	23:BB:1832:C:C6	2.43	0.52
23:DB:1332:G:H2'	23:DB:1332:G:N3	2.25	0.52
40:DH:110:VAL:O	40:DH:110:VAL:HG22	2.09	0.52
23:DB:49:A:H5''	23:DB:51:G:O4'	2.09	0.52
1:AA:264:C:O2'	16:AQ:65:PRO:HG2	2.09	0.52
23:DB:1859:U:H2'	23:DB:1860:G:C8	2.45	0.52
23:BB:1957:C:H2'	23:BB:1958:C:C6	2.44	0.52
23:BB:2455:G:H2'	23:BB:2456:C:C6	2.44	0.52
23:DB:1098:A:H3'	24:DI:3:LYS:HB3	1.91	0.52
5:CF:3:HIS:CE1	5:CF:95:ALA:H	2.27	0.52
40:BH:121:VAL:HG21	40:BH:128:HIS:NE2	2.25	0.52
25:DC:185:ALA:C	25:DC:187:CYS:H	2.13	0.52
41:DJ:4:PHE:CG	41:DJ:5:THR:N	2.78	0.52
19:CT:38:ILE:O	19:CT:38:ILE:HD13	2.10	0.52
13:AN:50:LEU:N	13:AN:51:PRO:HD2	2.25	0.52
18:CS:32:THR:HG22	18:CS:34:SER:H	1.75	0.52
25:BC:143:VAL:HG12	25:BC:144:GLU:N	2.25	0.52
23:BB:2895:G:H2'	23:BB:2896:C:H6	1.74	0.52
50:BT:54:GLU:HB3	50:BT:88:LYS:HB2	1.92	0.52
45:BS:58:ALA:CB	45:BS:69:LEU:HD21	2.40	0.52
46:BU:40:LEU:HB3	46:BU:59:GLU:HG2	1.91	0.52
23:DB:361:G:O2'	23:DB:362:A:H5'	2.09	0.52
15:AP:78:VAL:O	15:AP:80:LYS:N	2.43	0.52
47:DF:134:GLN:NE2	47:DF:136:ILE:HD13	2.25	0.52
1:AA:430:A:OP1	3:AD:8:LEU:HB2	2.10	0.52
3:CD:152:SER:O	3:CD:155:LYS:HG2	2.10	0.52
23:DB:857:G:H2'	23:DB:858:G:H5'	1.92	0.52
13:AN:60:ARG:NE	13:AN:69:PRO:HB3	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CJ:52:LEU:HG	9:CJ:62:ARG:HE	1.74	0.52
31:B0:53:VAL:HG12	42:BN:118:ARG:NH1	2.25	0.52
23:DB:2472:G:O6	23:DB:2476:A:H4'	2.09	0.52
23:BB:1386:C:H2'	23:BB:1387:A:H8	1.72	0.52
1:AA:1137:C:O2'	1:AA:1138:G:H5''	2.10	0.52
23:BB:1149:G:H2'	23:BB:1150:C:H6	1.75	0.52
20:AB:138:ARG:HB2	20:AB:138:ARG:NH1	2.24	0.52
42:DN:49:GLU:HB2	42:DN:50:PRO:HD3	1.92	0.52
23:DB:1849:G:H2'	23:DB:1850:G:C8	2.45	0.52
7:AH:100:ILE:HG13	7:AH:128:VAL:O	2.10	0.52
1:AA:1147:C:O2'	8:AI:17:ARG:HD2	2.10	0.52
23:BB:729:G:H2'	23:BB:1775:U:H1'	1.91	0.52
11:CL:106:VAL:CG2	11:CL:116:TYR:HB3	2.39	0.52
23:BB:165:A:H2'	23:BB:166:U:C6	2.44	0.52
23:BB:2341:G:H2'	23:BB:2342:C:C6	2.45	0.52
23:BB:2341:G:H2'	23:BB:2342:C:H6	1.75	0.52
23:BB:1747:U:H2'	23:BB:1748:C:C6	2.45	0.52
23:BB:2512:C:OP2	26:BD:128:ARG:HD2	2.09	0.52
1:AA:1508:A:H2'	1:AA:1509:C:H6	1.74	0.52
22:BA:38:C:H2'	22:BA:39:A:O4'	2.10	0.52
23:BB:1749:A:H2'	23:BB:1750:G:H8	1.75	0.52
23:DB:2520:C:O2'	23:DB:2521:C:H5'	2.10	0.52
33:D1:25:ASN:OD1	33:D1:27:ARG:HB2	2.10	0.52
1:CA:685:G:O2'	1:CA:686:U:H5'	2.10	0.52
23:DB:394:C:H2'	23:DB:395:U:O4'	2.10	0.52
21:CU:39:LYS:N	21:CU:40:PRO:CD	2.73	0.52
21:CU:40:PRO:HA	21:CU:44:ARG:HD3	1.92	0.52
26:BD:32:ASN:HA	26:BD:51:THR:O	2.09	0.52
8:AI:56:MET:SD	8:AI:57:VAL:N	2.82	0.52
44:DQ:94:LEU:C	44:DQ:96:ASP:H	2.14	0.52
1:AA:244:U:O4	1:AA:906:A:H1'	2.10	0.52
50:DT:10:VAL:HG21	50:DT:42:GLU:HG3	1.91	0.52
44:BQ:86:SER:HB3	49:BR:52:PRO:HD3	1.92	0.52
41:BJ:55:ILE:HB	41:BJ:123:LYS:HB2	1.92	0.52
3:AD:186:GLU:CD	3:AD:187:ARG:H	2.13	0.52
27:BK:47:ILE:CG1	27:BK:48:PRO:HD2	2.34	0.52
27:DK:87:LEU:HD12	27:DK:92:GLU:HA	1.92	0.52
3:CD:29:THR:HB	3:CD:30:LYS:HZ2	1.72	0.52
35:BV:4:ILE:N	35:BV:62:THR:O	2.43	0.52
15:AP:66:THR:O	15:AP:67:ILE:HB	2.10	0.52
26:BD:113:SER:HB2	26:BD:168:GLU:N	2.17	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1318:A:H4'	18:CS:9:PHE:CE1	2.44	0.52
1:AA:436:C:O2'	1:AA:437:U:H5'	2.09	0.52
47:BF:169:LEU:HA	47:BF:172:PHE:HD2	1.75	0.52
41:DJ:25:LEU:HB2	41:DJ:62:VAL:CG2	2.40	0.52
23:DB:633:A:O5'	23:DB:633:A:H8	1.92	0.52
14:CO:17:ARG:HD3	14:CO:24:SER:OG	2.10	0.52
23:BB:364:C:H2'	23:BB:365:U:C6	2.44	0.52
3:AD:104:MET:SD	3:AD:142:VAL:HB	2.50	0.52
12:CM:19:THR:HA	12:CM:24:VAL:HG23	1.91	0.52
3:AD:196:GLU:O	3:AD:199:ILE:HG12	2.09	0.52
38:BM:134:THR:HG22	38:BM:136:MET:H	1.75	0.52
1:CA:860:A:H2'	1:CA:861:G:O4'	2.09	0.52
23:BB:2037:A:H2'	23:BB:2038:G:H8	1.73	0.52
23:BB:329:G:H1	46:BU:16:LYS:HG3	1.74	0.52
40:BH:62:LEU:N	40:BH:62:LEU:HD12	2.24	0.52
23:BB:616:A:H4'	29:BE:101:TYR:CE2	2.44	0.52
23:BB:2720:U:H2'	23:BB:2721:A:H8	1.74	0.52
1:CA:1200:C:H3'	1:CA:1201:A:H5'	1.92	0.52
23:DB:1508:A:H5'	23:DB:1509:A:N6	2.23	0.52
28:DP:88:ARG:HB3	28:DP:88:ARG:NH2	2.25	0.52
46:DU:78:LYS:CD	46:DU:79:ALA:H	2.22	0.52
19:CT:49:ALA:O	19:CT:52:GLU:HG2	2.10	0.52
7:CH:94:VAL:CG2	7:CH:101:ALA:HB2	2.39	0.52
1:CA:677:U:H3	1:CA:713:G:H22	1.57	0.52
1:AA:327:A:H1'	1:AA:329:A:O4'	2.09	0.52
23:BB:1169:A:H2'	23:BB:1170:C:H6	1.72	0.52
23:BB:2651:C:O2'	23:BB:2652:C:H5'	2.10	0.52
23:BB:2892:G:H5''	23:BB:2894:G:N2	2.25	0.52
52:BW:28:GLU:H	52:BW:31:LEU:HG	1.75	0.52
23:DB:2443:C:H2'	23:DB:2444:G:H8	1.75	0.52
23:BB:1747:U:H2'	23:BB:1748:C:H6	1.75	0.52
3:CD:117:VAL:O	3:CD:130:ASN:HA	2.10	0.52
23:DB:1422:G:C1'	23:DB:1495:A:H61	2.23	0.52
1:CA:1521:C:H2'	1:CA:1522:U:H6	1.75	0.52
23:BB:1422:G:H1'	23:BB:1495:A:H61	1.75	0.52
1:CA:1234:C:H1'	1:CA:1364:U:O2	2.10	0.52
24:DI:5:GLN:HB2	24:DI:30:GLN:OE1	2.10	0.52
1:AA:824:G:O2'	1:AA:825:A:H5'	2.09	0.52
23:DB:1501:G:O2'	23:DB:1502:A:H5'	2.09	0.52
1:CA:178:C:O2'	1:CA:179:A:H5'	2.09	0.52
1:CA:24:U:O2'	1:CA:25:C:H5'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:61:PHE:O	6:CG:65:LEU:HD13	2.10	0.52
23:DB:929:U:O2'	23:DB:930:G:H5'	2.10	0.52
6:AG:15:PRO:HG2	6:AG:43:TYR:OH	2.10	0.52
33:D1:10:LEU:O	33:D1:19:PHE:HB2	2.10	0.52
2:CC:54:ILE:O	2:CC:54:ILE:HG23	2.09	0.52
23:DB:1732:C:OP1	23:DB:1732:C:H2'	2.10	0.52
23:DB:2698:U:H2'	23:DB:2699:C:C6	2.45	0.52
52:DW:21:GLY:CA	52:DW:33:GLY:HA2	2.40	0.52
1:AA:266:G:O2'	1:AA:267:C:H3'	2.10	0.52
36:B2:10:LEU:HD11	36:B2:14:ARG:CZ	2.40	0.52
26:DD:51:THR:HG22	26:DD:52:THR:N	2.25	0.52
33:B1:8:ILE:HG23	33:B1:51:ALA:HA	1.92	0.52
25:DC:90:ILE:CD1	25:DC:102:TYR:HB3	2.39	0.52
52:DW:9:THR:OG1	52:DW:10:ARG:N	2.42	0.52
29:BE:166:LYS:O	29:BE:167:VAL:HB	2.10	0.52
50:DT:39:THR:O	50:DT:40:LYS:HB2	2.09	0.52
50:DT:82:LYS:HD2	50:DT:84:TYR:CE1	2.42	0.52
50:DT:87:LEU:HB2	50:DT:91:GLN:HG2	1.92	0.52
47:DF:39:VAL:HG12	47:DF:84:ILE:C	2.30	0.52
47:DF:43:ILE:HB	47:DF:82:TYR:CZ	2.45	0.52
41:BJ:4:PHE:CG	41:BJ:5:THR:N	2.78	0.52
44:BQ:94:LEU:C	44:BQ:96:ASP:H	2.13	0.52
20:AB:95:TRP:CH2	20:AB:100:LEU:HB2	2.40	0.52
47:BF:78:ILE:HG23	47:BF:82:TYR:HB3	1.92	0.52
47:BF:79:ARG:NE	47:BF:82:TYR:HD2	2.07	0.52
40:BH:75:LEU:HD21	40:BH:105:ALA:HA	1.93	0.52
23:DB:2734:A:C2'	23:DB:2735:G:H5'	2.40	0.52
47:BF:138:PRO:HA	47:BF:142:TYR:CE2	2.45	0.52
41:BJ:56:VAL:HG12	41:BJ:57:LEU:N	2.25	0.52
14:CO:78:TYR:CE1	14:CO:82:ILE:HD11	2.45	0.52
26:DD:123:LYS:O	26:DD:165:MET:HE1	2.10	0.52
23:BB:1172:C:H2'	23:BB:1172:C:O2	2.10	0.52
1:CA:253:A:H2'	1:CA:254:G:C8	2.44	0.52
31:B0:42:ILE:HG12	42:BN:99:LYS:O	2.09	0.52
1:AA:1003:G:N2	1:AA:1005:A:H5'	2.25	0.52
23:DB:1386:C:H2'	23:DB:1387:A:H8	1.75	0.52
23:DB:173:A:H2'	23:DB:174:U:C6	2.45	0.52
23:BB:182:A:H2'	23:BB:183:C:H6	1.74	0.52
48:BG:96:ALA:HB3	48:BG:103:ASN:HB3	1.92	0.52
1:AA:1289:A:H2'	1:AA:1290:G:H5'	1.91	0.52
23:BB:2021:C:OP1	31:B0:8:THR:HG21	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:472:U:H2'	1:AA:473:U:C6	2.44	0.52
3:AD:11:SER:HA	3:AD:18:LEU:CD2	2.39	0.52
23:DB:2085:U:O2'	23:DB:2086:U:H5'	2.10	0.52
49:BR:54:VAL:HG22	49:BR:55:ASP:OD2	2.10	0.52
1:CA:405:U:O4	3:CD:1:ALA:HA	2.10	0.52
1:CA:194:C:O2'	1:CA:195:A:H5'	2.10	0.52
23:BB:322:A:C3'	29:BE:163:ASN:HD21	2.23	0.52
22:DA:50:A:OP1	43:DO:68:LYS:HB2	2.10	0.52
23:BB:2301:C:H2'	23:BB:2302:U:C6	2.44	0.52
1:AA:560:A:H5'	1:AA:566:G:N2	2.25	0.52
23:BB:699:A:H2'	23:BB:700:G:O4'	2.09	0.52
4:AE:19:ARG:O	4:AE:20:VAL:HB	2.10	0.52
35:DV:76:ASP:CG	35:DV:77:VAL:H	2.14	0.52
23:DB:2537:U:H2'	23:DB:2538:C:C6	2.46	0.52
11:AL:66:ILE:HG21	11:AL:71:HIS:HB3	1.91	0.52
23:BB:2825:G:N3	23:BB:2825:G:H5''	2.25	0.52
23:DB:2707:U:H2'	23:DB:2708:G:C8	2.45	0.52
22:DA:16:G:O2'	22:DA:17:C:H5'	2.10	0.52
1:CA:575:G:H4'	1:CA:576:C:OP1	2.10	0.52
1:CA:394:G:H2'	1:CA:395:C:H6	1.75	0.52
23:BB:1676:A:H2'	23:BB:1677:A:O4'	2.10	0.52
46:DU:23:LYS:HD2	46:DU:23:LYS:N	2.25	0.52
1:CA:144:G:H2'	1:CA:145:G:O4'	2.10	0.52
23:BB:2353:G:N3	52:BW:30:VAL:HG13	2.26	0.51
21:AU:40:PRO:HA	21:AU:44:ARG:HD3	1.92	0.51
26:DD:101:PHE:HE2	26:DD:205:PRO:HD3	1.75	0.51
50:DT:41:ALA:C	50:DT:43:ILE:H	2.12	0.51
50:DT:57:VAL:HG22	50:DT:58:VAL:N	2.16	0.51
47:DF:78:ILE:HG23	47:DF:82:TYR:HB3	1.92	0.51
52:BW:9:THR:OG1	52:BW:10:ARG:N	2.42	0.51
20:AB:107:ARG:HA	20:AB:110:ILE:HD12	1.91	0.51
20:AB:113:LEU:HD12	20:AB:143:LEU:HB3	1.92	0.51
25:BC:142:ASN:O	25:BC:142:ASN:CG	2.48	0.51
28:BP:3:ILE:HG23	28:BP:4:ILE:HG13	1.92	0.51
40:DH:88:GLY:C	40:DH:89:LYS:HD2	2.30	0.51
3:CD:26:ALA:HA	3:CD:30:LYS:HE3	1.91	0.51
15:AP:67:ILE:HD11	15:AP:71:VAL:HG22	1.92	0.51
40:BH:40:THR:N	40:BH:43:ASN:ND2	2.55	0.51
1:AA:1219:A:H2'	1:AA:1220:G:H8	1.75	0.51
23:BB:2849:U:N3	23:BB:2867:G:C8	2.76	0.51
12:CM:56:ARG:O	12:CM:59:VAL:HG12	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BO:51:ALA:O	43:BO:74:VAL:HG13	2.10	0.51
20:AB:62:ARG:H	20:AB:62:ARG:CD	2.16	0.51
23:BB:1805:A:N3	25:BC:49:THR:CG2	2.74	0.51
23:BB:616:A:H3'	23:BB:617:G:C8	2.42	0.51
24:DI:85:ILE:HD12	24:DI:87:SER:O	2.09	0.51
9:AJ:14:ASP:OD1	9:AJ:17:LEU:HB2	2.10	0.51
23:DB:592:A:H2'	23:DB:593:U:C6	2.45	0.51
11:CL:31:GLY:HA3	11:CL:54:VAL:HG12	1.92	0.51
23:DB:1723:G:H3'	23:DB:1724:G:H8	1.74	0.51
23:DB:2425:A:H5''	23:DB:2426:A:H3'	1.91	0.51
38:BM:26:VAL:HG13	38:BM:133:LYS:HA	1.92	0.51
42:DN:49:GLU:HA	42:DN:94:TYR:HD2	1.76	0.51
26:BD:69:ALA:CA	26:BD:73:VAL:HB	2.40	0.51
23:BB:2136:G:H3'	23:BB:2137:U:H5	1.76	0.51
23:DB:2772:C:H2'	23:DB:2773:C:C6	2.45	0.51
23:BB:1847:A:H4'	23:BB:1848:A:H8	1.75	0.51
1:CA:926:G:N2	1:CA:1505:G:H2'	2.25	0.51
23:BB:132:G:O2'	23:BB:133:U:H5'	2.10	0.51
23:BB:322:A:C2'	29:BE:163:ASN:HD21	2.23	0.51
24:DI:99:LYS:HD3	24:DI:99:LYS:N	2.25	0.51
3:CD:106:PHE:CD1	3:CD:144:ILE:HD11	2.45	0.51
23:BB:1295:C:H2'	23:BB:1296:G:C8	2.45	0.51
23:BB:817:C:O2'	23:BB:839:U:H5''	2.10	0.51
6:CG:104:VAL:HG12	6:CG:108:ARG:HH11	1.75	0.51
23:DB:1376:C:H3'	56:DB:3278:HOH:O	2.10	0.51
2:AC:113:LYS:HB2	2:AC:184:ASN:OD1	2.09	0.51
49:BR:62:GLU:O	49:BR:96:VAL:HA	2.10	0.51
23:DB:2282:G:H4'	23:DB:2389:G:O2'	2.09	0.51
22:DA:22:U:H2'	22:DA:23:G:C8	2.45	0.51
1:CA:952:U:H2'	1:CA:953:G:C8	2.44	0.51
2:CC:113:LYS:HB2	2:CC:184:ASN:OD1	2.10	0.51
11:CL:7:VAL:HG22	16:CQ:33:TYR:HD1	1.74	0.51
23:BB:2052:A:OP1	26:BD:145:SER:HA	2.09	0.51
23:DB:2852:G:H2'	23:DB:2853:C:C6	2.45	0.51
23:BB:1220:G:H2'	23:BB:1221:C:H6	1.74	0.51
23:BB:1319:C:O2'	23:BB:1320:C:H5'	2.09	0.51
23:DB:483:A:C4	46:DU:57:ILE:HD11	2.45	0.51
23:BB:1050:A:H2'	23:BB:1051:G:H8	1.75	0.51
26:BD:77:ARG:HB2	26:BD:80:TRP:HH2	1.75	0.51
6:CG:11:ILE:H	6:CG:11:ILE:HD12	1.75	0.51
1:CA:1142:G:H2'	1:CA:1143:G:O4'	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:85:ARG:HA	46:BU:85:ARG:NE	2.26	0.51
36:B2:10:LEU:HD21	36:B2:14:ARG:HH11	1.72	0.51
52:DW:49:ASN:CB	52:DW:60:ALA:HA	2.40	0.51
5:CF:92:THR:O	5:CF:93:LYS:HB2	2.11	0.51
40:BH:82:SER:HB3	40:BH:92:GLY:O	2.09	0.51
25:DC:116:GLN:HG2	25:DC:117:SER:N	2.23	0.51
25:DC:151:GLY:C	25:DC:152:GLN:HG3	2.30	0.51
44:DQ:86:SER:HB3	49:DR:52:PRO:HD3	1.92	0.51
47:DF:79:ARG:NE	47:DF:82:TYR:HD2	2.08	0.51
18:CS:11:ASP:H	18:CS:14:LEU:HD21	1.75	0.51
23:DB:1060:U:O2	23:DB:1088:A:C8	2.63	0.51
23:BB:1241:A:H2'	23:BB:1242:U:H5'	1.92	0.51
37:BL:3:LEU:O	37:BL:5:THR:N	2.43	0.51
1:AA:465:A:H5'	1:AA:465:A:N3	2.26	0.51
23:BB:139:U:H5''	23:BB:140:C:O4'	2.10	0.51
23:DB:1654:A:H2'	23:DB:1655:A:C8	2.44	0.51
40:DH:73:ASN:ND2	40:DH:140:ALA:HB1	2.26	0.51
1:CA:972:C:P	9:CJ:59:LYS:HD3	2.50	0.51
12:AM:49:GLU:HG3	12:AM:53:ASP:OD1	2.11	0.51
12:AM:6:ILE:O	12:AM:8:ILE:HG23	2.11	0.51
1:AA:325:A:H2'	1:AA:326:G:O4'	2.09	0.51
1:AA:1004:A:C8	1:AA:1025:U:H1'	2.45	0.51
13:AN:24:ALA:O	13:AN:27:LYS:HG2	2.10	0.51
13:AN:41:TRP:HB3	13:AN:44:VAL:HG12	1.90	0.51
48:BG:84:LYS:HB3	48:BG:132:LEU:O	2.11	0.51
37:DL:85:VAL:HG22	37:DL:94:THR:HG22	1.93	0.51
25:DC:246:PRO:HB2	25:DC:247:TRP:CZ3	2.45	0.51
23:BB:478:A:H5''	23:BB:479:A:OP2	2.10	0.51
39:BX:20:ASN:HD22	39:BX:20:ASN:N	2.08	0.51
1:CA:1488:G:O2'	1:CA:1489:G:H5'	2.10	0.51
25:BC:159:THR:O	25:BC:194:VAL:HG12	2.11	0.51
23:DB:156:A:H2'	23:DB:157:C:C6	2.45	0.51
20:AB:112:ARG:NH2	20:AB:116:LEU:HD21	2.24	0.51
20:AB:124:THR:OG1	20:AB:124:THR:O	2.25	0.51
1:AA:586:C:C2'	1:AA:587:G:H5'	2.40	0.51
5:AF:43:GLY:HA2	5:AF:58:HIS:CD2	2.45	0.51
30:BY:2:LYS:HG2	30:BY:3:THR:H	1.75	0.51
49:DR:58:VAL:O	49:DR:58:VAL:HG13	2.10	0.51
23:DB:753:A:O2'	23:DB:754:U:H5'	2.10	0.51
23:DB:2230:G:H2'	23:DB:2231:U:C6	2.45	0.51
1:CA:1147:C:O2'	8:CI:17:ARG:HD2	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:825:A:H1'	37:DL:54:GLN:NE2	2.26	0.51
23:DB:1229:C:H2'	23:DB:1230:A:C8	2.45	0.51
12:AM:89:ARG:NH2	12:AM:94:LEU:HD12	2.25	0.51
1:AA:858:G:O6	1:AA:869:G:H3'	2.10	0.51
1:AA:1298:U:H2'	6:AG:113:LYS:NZ	2.25	0.51
1:CA:634:C:H2'	1:CA:635:A:H8	1.76	0.51
44:BQ:35:PHE:HE1	44:BQ:39:ILE:HD11	1.75	0.51
23:DB:1213:A:C6	23:DB:1237:A:H1'	2.45	0.51
1:AA:825:A:H2'	1:AA:826:C:H6	1.73	0.51
23:BB:1220:G:H2'	23:BB:1221:C:C6	2.45	0.51
23:BB:438:G:H2'	23:BB:439:A:C8	2.45	0.51
25:DC:221:GLY:C	25:DC:223:ALA:H	2.14	0.51
20:CB:13:VAL:HG11	20:CB:207:ARG:HG2	1.91	0.51
19:AT:50:PHE:O	19:AT:53:MET:HG3	2.09	0.51
23:BB:934:U:H2'	23:BB:935:C:C6	2.45	0.51
26:BD:111:GLY:H	26:BD:194:PRO:HG2	1.75	0.51
1:CA:201:G:O2'	1:CA:469:C:H4'	2.09	0.51
23:BB:2213:U:O2	23:BB:2213:U:C2'	2.57	0.51
9:AJ:88:MET:SD	9:AJ:88:MET:N	2.83	0.51
26:BD:14:ILE:O	26:BD:14:ILE:HG23	2.10	0.51
25:DC:64:VAL:HG22	25:DC:90:ILE:HD11	1.91	0.51
49:DR:5:PHE:O	49:DR:11:GLN:HA	2.09	0.51
29:BE:182:ALA:O	29:BE:183:PHE:HB2	2.10	0.51
50:DT:43:ILE:HG21	50:DT:58:VAL:HG21	1.92	0.51
41:BJ:44:TYR:C	41:BJ:44:TYR:CD2	2.84	0.51
1:AA:171:A:H2'	1:AA:172:A:C8	2.44	0.51
41:BJ:18:VAL:CG1	41:BJ:54:ILE:HD11	2.39	0.51
50:BT:50:LEU:H	50:BT:50:LEU:HD22	1.74	0.51
40:DH:135:HIS:CG	40:DH:136:SER:N	2.79	0.51
18:CS:27:LYS:HB3	18:CS:27:LYS:HZ2	1.76	0.51
23:DB:1007:C:O3'	41:DJ:110:PRO:HB3	2.09	0.51
27:BK:64:ARG:O	27:BK:82:ASN:HA	2.10	0.51
18:AS:44:ILE:HA	18:AS:61:VAL:CG1	2.40	0.51
41:DJ:56:VAL:HG12	41:DJ:57:LEU:N	2.25	0.51
24:DI:18:ASN:HB2	24:DI:38:CYS:SG	2.51	0.51
12:AM:15:VAL:HG22	12:AM:33:LEU:CD1	2.40	0.51
1:AA:239:U:C5'	1:AA:239:U:H6	2.23	0.51
24:DI:129:GLU:HB3	24:DI:133:ARG:HH12	1.75	0.51
1:CA:1251:A:H2'	1:CA:1252:A:C8	2.46	0.51
23:BB:274:C:H2'	23:BB:275:C:O4'	2.11	0.51
23:BB:919:U:H2'	23:BB:920:A:H8	1.70	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DN:31:HIS:O	42:DN:33:ILE:HG13	2.10	0.51
1:AA:253:A:H2'	1:AA:254:G:C8	2.45	0.51
49:BR:61:ALA:CB	49:BR:98:ILE:HA	2.41	0.51
19:CT:2:ASN:ND2	19:CT:3:ILE:N	2.57	0.51
12:CM:96:VAL:C	12:CM:98:GLY:H	2.14	0.51
26:BD:13:ARG:HH12	28:BP:74:GLN:CD	2.14	0.51
37:DL:82:LEU:HD23	37:DL:90:VAL:HG21	1.92	0.51
23:BB:1509:A:H4'	23:BB:1510:G:H8	1.74	0.51
1:CA:674:G:H2'	1:CA:675:A:H8	1.75	0.51
46:DU:81:ARG:HB2	46:DU:96:LYS:HG2	1.91	0.51
1:AA:1172:C:O2'	1:AA:1173:U:H5'	2.10	0.51
1:CA:1243:C:H2'	1:CA:1244:G:H8	1.75	0.51
8:AI:99:LYS:HE3	9:CJ:80:THR:CA	2.40	0.51
50:DT:68:LYS:O	50:DT:69:ARG:HB3	2.10	0.51
40:BH:77:THR:HG22	40:BH:79:THR:HG23	1.93	0.51
1:AA:677:U:H2'	1:AA:678:U:C6	2.45	0.51
23:DB:1083:U:H2'	23:DB:1085:A:OP2	2.10	0.51
1:CA:310:G:H5''	15:CP:31:ARG:HB2	1.91	0.51
23:DB:692:C:H2'	23:DB:693:A:H8	1.75	0.51
1:CA:34:C:H2'	1:CA:35:G:H8	1.76	0.51
1:AA:1490:U:H5'	1:AA:1491:G:OP2	2.11	0.51
23:DB:1796:U:H2'	23:DB:1797:G:C8	2.45	0.51
20:AB:23:ASN:HD22	20:AB:24:PRO:CD	2.23	0.51
4:AE:104:ILE:O	4:AE:104:ILE:HG23	2.10	0.51
28:BP:77:SER:O	28:BP:80:VAL:HG12	2.10	0.51
1:CA:179:A:H2'	1:CA:180:U:O4'	2.09	0.51
56:CA:1764:HOH:O	13:CN:1:ALA:HB3	2.10	0.51
23:DB:2611:C:O2'	23:DB:2612:C:H5'	2.10	0.51
7:CH:34:ALA:HB1	7:CH:109:VAL:HB	1.91	0.51
23:BB:1083:U:H2'	23:BB:1085:A:OP2	2.10	0.51
23:DB:1310:G:H21	23:DB:1610:A:H8	1.59	0.51
23:DB:1349:C:H2'	23:DB:1350:C:H6	1.76	0.51
1:CA:1292:G:H2'	1:CA:1293:C:C6	2.44	0.51
1:CA:386:C:C2'	1:CA:387:U:H5'	2.41	0.51
1:CA:1298:U:H2'	6:CG:113:LYS:NZ	2.25	0.51
23:BB:84:A:P	46:BU:5:ARG:HE	2.33	0.51
23:DB:2489:U:O2'	23:DB:2490:G:H5'	2.10	0.51
23:DB:184:C:H2'	23:DB:185:G:H8	1.75	0.51
23:BB:767:U:O2'	23:BB:768:G:H5'	2.10	0.51
16:CQ:80:LYS:H	16:CQ:80:LYS:HD2	1.75	0.51
23:DB:937:C:H2'	23:DB:938:G:C8	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:851:C:H2'	23:DB:852:U:H6	1.75	0.51
52:DW:36:ILE:HB	52:DW:39:GLN:NE2	2.24	0.51
25:DC:102:TYR:O	25:DC:103:ILE:HG13	2.10	0.51
44:DQ:59:LEU:O	44:DQ:62:ALA:HB3	2.10	0.51
44:BQ:59:LEU:O	44:BQ:62:ALA:HB3	2.11	0.51
25:BC:104:LEU:O	25:BC:105:ALA:HB3	2.10	0.51
25:BC:116:GLN:HG2	25:BC:117:SER:N	2.25	0.51
45:DS:58:ALA:CB	45:DS:69:LEU:HD21	2.40	0.51
44:BQ:105:PHE:HA	44:BQ:108:LEU:CD1	2.40	0.51
45:BS:24:ILE:CG1	45:BS:36:LEU:HD21	2.39	0.51
24:DI:23:VAL:HG12	24:DI:27:LEU:HD21	1.92	0.51
13:AN:46:LYS:HZ2	18:AS:15:LEU:HD11	1.75	0.51
47:DF:106:ALA:HA	47:DF:135:ILE:CD1	2.41	0.51
1:AA:1318:A:H4'	18:AS:9:PHE:CE1	2.45	0.51
23:BB:143:C:H6	23:BB:143:C:O5'	1.94	0.51
22:BA:55:U:H2'	22:BA:56:G:H8	1.76	0.51
40:BH:40:THR:O	40:BH:42:LYS:N	2.39	0.51
35:DV:40:ILE:N	35:DV:40:ILE:HD13	2.26	0.51
16:CQ:75:VAL:HG23	16:CQ:76:ARG:N	2.25	0.51
11:CL:49:ARG:HH12	11:CL:88:ASP:CB	2.23	0.51
1:AA:1329:A:O2'	1:AA:1330:U:H5'	2.10	0.51
16:AQ:45:VAL:HG11	16:AQ:60:ILE:HG21	1.92	0.51
23:BB:305:C:H2'	23:BB:306:U:C6	2.46	0.51
23:BB:173:A:H2'	23:BB:174:U:C6	2.45	0.51
4:AE:80:LEU:HG	4:AE:122:VAL:HG11	1.92	0.51
46:DU:80:ASP:O	46:DU:96:LYS:HG2	2.10	0.51
1:CA:1053:G:N7	1:CA:1199:U:H3'	2.25	0.51
1:AA:1243:C:H2'	1:AA:1244:G:H8	1.75	0.51
28:DP:107:ALA:O	28:DP:108:ARG:C	2.49	0.51
2:CC:116:ALA:O	2:CC:120:THR:HG23	2.10	0.51
20:AB:118:THR:HA	20:AB:121:GLN:HB3	1.92	0.51
30:DY:2:LYS:HG2	30:DY:3:THR:H	1.76	0.51
47:DF:71:LYS:HG2	47:DF:73:VAL:H	1.76	0.51
1:AA:1359:C:H3'	13:AN:74:ARG:HH21	1.74	0.51
1:CA:182:A:O2'	1:CA:183:C:H5''	2.11	0.51
1:CA:679:C:H2'	1:CA:680:C:C6	2.45	0.51
23:DB:1633:G:O2'	23:DB:1634:A:H5''	2.09	0.51
1:CA:1225:A:H2'	1:CA:1225:A:N3	2.25	0.51
23:DB:589:U:H2'	23:DB:590:A:H8	1.75	0.51
1:CA:33:A:H2'	1:CA:34:C:C6	2.45	0.51
23:DB:2106:U:H2'	23:DB:2107:G:OP1	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:817:C:O2'	23:DB:839:U:H5''	2.10	0.51
23:BB:2747:G:H2'	23:BB:2748:A:C8	2.45	0.51
23:BB:438:G:H2'	23:BB:439:A:H8	1.74	0.51
23:BB:1704:C:O2'	23:BB:1705:A:H5'	2.09	0.51
23:BB:2649:C:H2'	23:BB:2650:U:H6	1.73	0.51
23:BB:443:A:C8	29:BE:40:ARG:HD3	2.45	0.51
22:DA:38:C:H2'	22:DA:39:A:O4'	2.09	0.51
1:AA:1234:C:O2'	1:AA:1235:U:H5'	2.10	0.51
23:BB:1117:C:H2'	23:BB:1118:C:H6	1.76	0.51
25:BC:222:THR:HA	25:BC:231:HIS:O	2.10	0.51
51:BZ:64:ILE:CD1	51:BZ:64:ILE:H	2.17	0.51
25:DC:107:LYS:HD3	25:DC:193:GLU:HB2	1.93	0.51
37:DL:141:LYS:NZ	37:DL:143:GLU:HA	2.25	0.51
37:BL:125:LEU:H	37:BL:143:GLU:CG	2.24	0.51
37:BL:141:LYS:NZ	37:BL:143:GLU:HA	2.25	0.51
25:BC:146:LYS:HB2	25:BC:149:LYS:HB2	1.92	0.51
41:BJ:96:ARG:N	41:BJ:97:PRO:HD3	2.25	0.51
40:BH:68:ARG:O	40:BH:72:ILE:HG22	2.11	0.51
45:BS:27:LYS:H	45:BS:27:LYS:HD2	1.75	0.51
42:BN:82:GLU:C	42:BN:84:GLY:H	2.14	0.51
23:BB:1287:A:N7	42:BN:105:GLY:HA3	2.25	0.51
32:B4:11:CYS:SG	32:B4:13:ASN:HB2	2.50	0.51
47:DF:21:TYR:HD2	47:DF:27:VAL:HG12	1.76	0.51
14:CO:26:GLU:HA	14:CO:81:LEU:HD11	1.91	0.51
2:AC:67:ILE:HG22	2:AC:69:THR:HG22	1.93	0.51
25:DC:6:LYS:C	25:DC:8:THR:H	2.14	0.51
42:DN:3:HIS:O	42:DN:4:ARG:HB2	2.11	0.51
20:CB:83:ALA:HA	20:CB:88:GLN:HB2	1.92	0.51
48:BG:88:LEU:HD13	48:BG:93:TYR:HB3	1.92	0.51
25:BC:6:LYS:C	25:BC:8:THR:H	2.13	0.51
35:BV:75:GLN:HG2	35:BV:92:VAL:HB	1.92	0.51
23:DB:2615:U:C2	31:D0:3:GLN:HA	2.45	0.51
29:BE:109:LEU:O	29:BE:112:LEU:HB2	2.10	0.51
45:BS:66:ILE:N	45:BS:66:ILE:HD13	2.20	0.51
23:BB:674:G:O2'	29:BE:60:TRP:HH2	1.94	0.51
38:DM:82:MET:HE3	38:DM:83:GLY:N	2.24	0.51
1:AA:93:U:OP2	1:AA:94:G:H5''	2.10	0.51
47:BF:37:MET:HE1	47:BF:149:ARG:HD2	1.92	0.51
20:CB:221:ARG:CB	20:CB:221:ARG:HH11	2.24	0.51
23:BB:2589:A:H2'	23:BB:2590:A:H8	1.75	0.51
37:BL:93:ASN:ND2	37:BL:94:THR:H	2.08	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:46:ARG:HH12	26:DD:88:GLU:HG3	1.75	0.51
23:BB:709:U:H2'	23:BB:710:U:H6	1.72	0.51
23:BB:418:C:H2'	23:BB:419:U:C6	2.46	0.51
23:DB:1870:C:H5''	23:DB:1871:A:C6	2.46	0.51
20:CB:116:LEU:HB3	20:CB:140:LEU:HD11	1.92	0.51
1:AA:162:A:H2'	1:AA:163:C:O4'	2.10	0.51
23:BB:2241:A:H2'	23:BB:2242:G:H8	1.76	0.51
23:BB:827:U:H5'	23:BB:828:U:O5'	2.11	0.51
37:BL:46:VAL:HB	37:BL:50:PHE:HD1	1.76	0.51
42:BN:13:ASN:C	42:BN:15:SER:H	2.14	0.51
23:DB:2207:C:H2'	23:DB:2208:C:H6	1.75	0.51
49:DR:1:MET:HA	49:DR:42:ALA:HB3	1.93	0.51
35:BV:76:ASP:CG	35:BV:77:VAL:H	2.13	0.51
23:DB:438:G:H2'	23:DB:439:A:C8	2.45	0.51
23:DB:1220:G:H2'	23:DB:1221:C:C6	2.45	0.51
1:AA:224:U:H2'	1:AA:225:C:C6	2.46	0.51
25:DC:209:ALA:HA	25:DC:212:TRP:NE1	2.25	0.51
12:AM:71:GLU:HA	12:AM:74:MET:HG3	1.92	0.51
48:BG:140:ILE:HD12	48:BG:141:GLY:N	2.26	0.51
25:DC:34:GLU:O	25:DC:34:GLU:HG3	2.10	0.51
44:BQ:18:LYS:C	44:BQ:20:ALA:H	2.12	0.51
3:AD:117:VAL:O	3:AD:130:ASN:HA	2.11	0.51
23:DB:1099:G:H5''	24:DI:2:LYS:HB2	1.93	0.51
26:BD:14:ILE:HG23	26:BD:22:ILE:HB	1.91	0.51
26:BD:104:VAL:HG13	26:BD:106:LYS:HE2	1.92	0.51
44:BQ:91:ARG:NE	49:BR:11:GLN:H	2.09	0.51
1:CA:1085:U:H3'	1:CA:1086:U:C5	2.45	0.51
1:CA:1102:A:H2'	1:CA:1103:C:C6	2.45	0.51
40:DH:88:GLY:HA3	40:DH:125:THR:OG1	2.10	0.51
42:BN:77:ALA:O	42:BN:81:ASN:HB2	2.11	0.51
52:DW:68:PHE:CE1	52:DW:79:ILE:HD11	2.45	0.51
18:AS:11:ASP:H	18:AS:14:LEU:HD21	1.75	0.51
36:B2:43:THR:O	36:B2:44:VAL:C	2.49	0.51
4:CE:19:ARG:O	4:CE:20:VAL:HB	2.11	0.51
4:AE:131:ASN:O	4:AE:135:VAL:HG23	2.09	0.51
18:AS:27:LYS:NZ	18:AS:27:LYS:HB3	2.26	0.51
2:CC:26:LYS:HE2	2:CC:27:GLU:HG3	1.92	0.51
1:CA:1219:A:H2'	1:CA:1220:G:H8	1.76	0.51
13:CN:26:LEU:HA	13:CN:29:ILE:HD12	1.92	0.51
1:AA:946:A:H2'	1:AA:947:G:H8	1.72	0.51
23:DB:1812:U:H1'	25:DC:43:ASN:ND2	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:32:U:H2'	22:DA:33:G:H8	1.75	0.51
1:CA:1287:A:H2'	1:CA:1288:A:H8	1.72	0.51
44:DQ:78:PHE:CZ	44:DQ:82:LEU:HD11	2.46	0.51
23:BB:871:U:H4'	38:BM:68:PHE:CE2	2.46	0.51
28:DP:89:GLY:HA2	28:DP:111:GLU:HA	1.92	0.51
23:BB:1418:G:H1'	23:BB:1580:A:H61	1.75	0.51
1:AA:677:U:H2'	1:AA:678:U:H6	1.75	0.51
7:CH:74:ILE:HG13	7:CH:128:VAL:HG22	1.92	0.51
8:AI:17:ARG:HB2	8:AI:65:THR:HB	1.92	0.51
25:BC:71:ASP:OD2	25:BC:118:GLY:HA2	2.11	0.51
47:BF:71:LYS:HE2	47:BF:73:VAL:HB	1.92	0.51
1:AA:123:U:H2'	1:AA:124:C:H6	1.76	0.51
23:BB:1582:C:H3'	23:BB:1583:A:C2	2.45	0.51
25:BC:93:VAL:HG13	25:BC:94:LEU:N	2.26	0.51
23:BB:1347:A:H2'	23:BB:1348:C:O4'	2.11	0.51
23:BB:1789:A:OP1	25:BC:220:ARG:HD3	2.11	0.51
35:BV:77:VAL:HA	35:BV:89:ILE:HG22	1.91	0.51
22:DA:90:C:OP1	38:DM:16:ARG:HB2	2.11	0.51
23:BB:2698:U:H2'	23:BB:2699:C:C6	2.45	0.51
3:AD:113:ALA:O	3:AD:117:VAL:HG23	2.11	0.51
7:CH:26:MET:HB2	7:CH:27:PRO:HD2	1.93	0.51
16:CQ:28:VAL:HG12	16:CQ:37:ILE:O	2.11	0.51
1:CA:715:A:H2'	1:CA:716:A:C8	2.46	0.51
23:DB:2376:A:N1	43:DO:92:PHE:HD2	2.07	0.51
23:BB:2704:C:H2'	23:BB:2705:A:O4'	2.11	0.51
1:CA:123:U:H2'	1:CA:124:C:C6	2.45	0.51
23:BB:2707:U:H2'	23:BB:2708:G:C8	2.46	0.51
19:AT:72:ALA:HA	19:AT:75:LYS:HD3	1.92	0.51
23:BB:575:A:O2'	23:BB:576:U:H5'	2.11	0.51
23:BB:394:C:H2'	23:BB:395:U:O4'	2.10	0.51
1:AA:538:G:OP2	11:AL:111:GLN:HB2	2.10	0.51
23:BB:2344:U:H4'	23:BB:2345:G:OP1	2.10	0.51
23:DB:1774:C:H2'	23:DB:1774:C:O2	2.10	0.51
26:BD:61:THR:O	26:BD:64:GLU:HB2	2.11	0.51
23:DB:2875:C:H2'	23:DB:2876:G:H8	1.76	0.51
24:DI:1:ALA:CB	24:DI:2:LYS:HD2	2.40	0.51
51:BZ:5:CYS:O	51:BZ:6:GLN:HB3	2.10	0.51
52:BW:17:ALA:O	52:BW:18:LYS:HD2	2.11	0.51
26:DD:107:VAL:HA	26:DD:204:LYS:O	2.11	0.51
26:BD:51:THR:HG22	26:BD:52:THR:N	2.26	0.51
13:CN:55:SER:HB2	13:CN:58:ARG:HD2	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DR:3:ALA:O	49:DR:4:VAL:HG13	2.10	0.51
29:BE:195:GLN:HA	29:BE:198:GLU:CD	2.31	0.51
1:AA:242:G:H2'	1:AA:243:A:H5''	1.91	0.51
50:DT:39:THR:HG22	50:DT:42:GLU:CG	2.36	0.51
38:DM:59:ARG:HE	38:DM:60:GLN:N	2.09	0.51
39:BX:31:GLN:HB3	39:BX:37:LEU:HD12	1.93	0.51
44:BQ:111:LYS:NZ	49:BR:50:GLY:HA2	2.26	0.51
25:BC:185:ALA:C	25:BC:187:CYS:H	2.14	0.51
44:DQ:105:PHE:HA	44:DQ:108:LEU:CD1	2.41	0.51
41:DJ:96:ARG:N	41:DJ:97:PRO:HD3	2.26	0.51
38:BM:21:ALA:CB	38:BM:100:LYS:HG2	2.40	0.51
1:CA:436:C:O2'	1:CA:437:U:H5'	2.11	0.51
3:AD:152:SER:O	3:AD:155:LYS:HG2	2.11	0.51
23:BB:62:U:C2'	23:BB:63:A:H5'	2.40	0.51
23:DB:62:U:C2'	23:DB:63:A:H5'	2.41	0.51
47:BF:126:ASN:HD22	47:BF:156:THR:CA	2.22	0.51
47:DF:126:ASN:HD22	47:DF:156:THR:CA	2.24	0.51
23:BB:279:A:H2'	23:BB:280:U:H5'	1.92	0.51
1:CA:842:U:H4'	1:CA:846:G:C2	2.45	0.51
35:BV:44:HIS:CE1	35:BV:86:LEU:H	2.20	0.51
12:CM:63:VAL:CG1	12:CM:67:ASP:HB2	2.41	0.51
37:DL:93:ASN:ND2	37:DL:94:THR:H	2.08	0.51
23:DB:1804:C:OP1	25:DC:256:THR:HB	2.11	0.51
42:BN:49:GLU:HA	42:BN:94:TYR:HD2	1.75	0.51
3:AD:2:ARG:HG3	3:AD:114:ARG:NH1	2.25	0.51
33:D1:3:GLY:C	33:D1:5:ARG:H	2.14	0.51
1:CA:279:A:H5'	1:CA:281:G:O4'	2.10	0.51
23:DB:1198:U:H2'	23:DB:1199:U:H6	1.75	0.51
46:BU:78:LYS:CD	46:BU:79:ALA:H	2.24	0.51
23:BB:1353:A:H2'	23:BB:1354:A:C8	2.45	0.51
1:CA:57:G:H2'	1:CA:58:C:H6	1.75	0.51
23:BB:1947:C:H2'	23:BB:1948:G:C8	2.46	0.51
7:AH:94:VAL:CG2	7:AH:101:ALA:HB2	2.40	0.51
33:B1:3:GLY:C	33:B1:5:ARG:H	2.14	0.51
23:BB:693:A:H2'	23:BB:694:U:H6	1.75	0.51
42:DN:13:ASN:OD1	42:DN:15:SER:HB3	2.09	0.51
23:DB:2893:A:H4'	23:DB:2894:G:C5'	2.41	0.51
6:AG:135:LYS:HD3	6:AG:136:LYS:N	2.26	0.51
1:AA:555:U:H2'	1:AA:556:C:H6	1.75	0.51
23:BB:912:C:H2'	23:BB:913:U:C6	2.45	0.51
46:BU:23:LYS:HD2	46:BU:23:LYS:H	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AQ:28:VAL:HG12	16:AQ:37:ILE:O	2.10	0.51
23:BB:526:A:N6	23:BB:2626:C:H4'	2.25	0.51
23:BB:2648:G:H2'	23:BB:2649:C:C6	2.45	0.51
34:D3:39:ARG:O	34:D3:43:LEU:HG	2.10	0.51
27:BK:109:SER:HB2	27:BK:111:LYS:HE2	1.92	0.51
1:AA:144:G:H2'	1:AA:145:G:O4'	2.11	0.51
52:BW:32:ALA:C	52:BW:34:SER:H	2.14	0.51
23:DB:1274:A:N3	23:DB:1297:C:H1'	2.25	0.51
1:AA:1351:U:O2'	1:AA:1352:C:H5'	2.10	0.51
23:BB:1054:A:H2'	23:BB:1055:G:C8	2.46	0.51
23:DB:1098:A:H2'	24:DI:3:LYS:C	2.32	0.51
23:DB:2352:A:N3	52:DW:29:SER:HB3	2.26	0.51
5:AF:3:HIS:HB2	5:AF:92:THR:CA	2.35	0.51
5:AF:6:ILE:HD11	5:AF:8:PHE:CD2	2.46	0.51
40:BH:90:LEU:HD13	40:BH:124:THR:O	2.11	0.51
23:DB:1818:U:HO2'	23:DB:1819:A:P	2.33	0.51
37:DL:125:LEU:HB2	37:DL:143:GLU:OE2	2.11	0.51
37:BL:82:LEU:HD23	37:BL:90:VAL:HG21	1.92	0.51
25:BC:106:PRO:O	25:BC:109:LEU:HD13	2.10	0.51
41:BJ:102:GLU:HG3	41:BJ:124:VAL:HG11	1.93	0.51
50:BT:10:VAL:HG21	50:BT:42:GLU:HG3	1.93	0.51
24:BI:79:LEU:HD11	24:BI:131:THR:OG1	2.10	0.51
1:AA:77:A:H8	1:AA:77:A:O5'	1.93	0.51
46:DU:40:LEU:HB3	46:DU:59:GLU:HG2	1.92	0.51
42:BN:83:LEU:HA	42:BN:86:ARG:HG3	1.91	0.51
23:DB:136:G:H2'	23:DB:137:U:C6	2.46	0.51
41:BJ:25:LEU:HB2	41:BJ:62:VAL:CG2	2.40	0.51
1:CA:923:A:H2'	1:CA:924:C:H6	1.74	0.51
48:DG:93:TYR:C	48:DG:94:ARG:HG3	2.31	0.51
24:DI:17:ALA:C	24:DI:19:PRO:HD3	2.31	0.51
14:AO:16:GLY:HA2	14:AO:27:VAL:CG2	2.40	0.51
26:BD:92:VAL:O	26:BD:94:GLN:N	2.44	0.51
40:DH:141:LYS:HE3	40:DH:141:LYS:H	1.75	0.51
40:BH:4:ILE:HD12	40:BH:37:VAL:HG13	1.92	0.51
24:BI:17:ALA:O	24:BI:18:ASN:CB	2.59	0.51
3:CD:196:GLU:O	3:CD:199:ILE:HG12	2.10	0.51
26:DD:151:THR:CB	26:DD:152:PRO:HD3	2.38	0.51
1:AA:1026:G:H2'	1:AA:1027:C:C6	2.46	0.51
1:AA:840:C:H2'	1:AA:842:U:OP2	2.11	0.51
13:CN:24:ALA:O	13:CN:27:LYS:HG2	2.11	0.51
1:AA:1250:A:H4'	8:AI:69:GLY:N	2.20	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CF:6:ILE:HD12	5:CF:7:VAL:N	2.26	0.51
1:AA:1289:A:H61	8:AI:71:ILE:CD1	2.24	0.51
8:AI:41:GLU:C	8:AI:43:ALA:H	2.14	0.51
23:DB:182:A:H2'	23:DB:183:C:H6	1.75	0.51
26:BD:109:VAL:HG11	26:BD:193:VAL:CB	2.39	0.51
42:BN:49:GLU:HB2	42:BN:50:PRO:HD3	1.93	0.51
9:AJ:35:GLN:HG2	9:AJ:78:GLU:OE1	2.10	0.51
38:BM:40:ARG:HB2	38:BM:93:VAL:HG21	1.92	0.51
46:DU:21:ARG:HD3	46:DU:72:PHE:CG	2.46	0.51
23:DB:1418:G:H1'	23:DB:1580:A:H61	1.76	0.51
1:AA:586:C:O2'	1:AA:587:G:H5'	2.09	0.51
1:AA:678:U:H2'	1:AA:679:C:H6	1.74	0.51
23:DB:2094:A:H2'	23:DB:2095:A:C8	2.46	0.51
1:AA:204:G:H1'	1:AA:466:A:H62	1.76	0.51
1:AA:399:G:H2'	1:AA:400:C:C6	2.45	0.51
1:AA:1225:A:N3	1:AA:1225:A:H2'	2.25	0.51
1:AA:332:G:OP2	19:AT:4:LYS:HB2	2.10	0.51
20:CB:23:ASN:HD22	20:CB:24:PRO:CD	2.24	0.51
22:DA:49:C:H2'	22:DA:50:A:C8	2.46	0.51
23:DB:1736:U:H2'	23:DB:1737:G:O4'	2.11	0.51
23:DB:2840:C:H2'	23:DB:2841:C:H6	1.75	0.51
6:AG:104:VAL:HG12	6:AG:108:ARG:HH11	1.76	0.51
1:AA:556:C:O2'	1:AA:557:G:H5'	2.11	0.51
23:BB:2875:C:H2'	23:BB:2876:G:C8	2.46	0.51
9:CJ:92:LEU:HD13	9:CJ:92:LEU:N	2.26	0.51
23:DB:1341:G:N2	23:DB:1398:C:H4'	2.26	0.51
9:AJ:92:LEU:HD13	9:AJ:92:LEU:N	2.25	0.51
23:DB:2216:G:H2'	23:DB:2217:G:C8	2.45	0.51
1:CA:893:C:H2'	1:CA:894:G:H8	1.76	0.51
19:AT:28:ARG:O	19:AT:32:LYS:HG3	2.09	0.51
1:CA:148:G:N3	1:CA:1446:A:H2	2.09	0.51
26:BD:159:LYS:O	26:BD:161:MET:HG2	2.11	0.51
1:CA:1384:C:H2'	1:CA:1385:G:C8	2.46	0.51
6:AG:11:ILE:HG12	6:AG:24:LYS:HE2	1.91	0.51
35:BV:53:LYS:HA	35:BV:53:LYS:NZ	2.25	0.51
7:AH:55:LYS:NZ	7:AH:55:LYS:HA	2.25	0.51
38:DM:63:ILE:N	38:DM:63:ILE:HD12	2.26	0.51
1:CA:80:A:H2'	1:CA:81:A:C8	2.46	0.51
51:DZ:6:GLN:HE22	51:DZ:77:LYS:CE	2.24	0.51
1:AA:1524:C:H2'	1:AA:1525:G:C8	2.46	0.51
52:DW:17:ALA:O	52:DW:18:LYS:HD2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:107:VAL:HA	26:BD:204:LYS:O	2.11	0.51
50:BT:11:LEU:HD11	50:BT:46:ALA:HB3	1.93	0.51
44:DQ:111:LYS:HB2	49:DR:48:LYS:HE2	1.92	0.51
29:DE:182:ALA:O	29:DE:183:PHE:HB2	2.11	0.51
47:DF:78:ILE:HA	47:DF:82:TYR:CD2	2.46	0.51
25:BC:102:TYR:O	25:BC:103:ILE:HG13	2.11	0.51
25:BC:109:LEU:H	25:BC:109:LEU:CD2	2.24	0.51
25:BC:90:ILE:HD13	25:BC:103:ILE:O	2.11	0.51
45:DS:26:GLY:HA2	45:DS:71:VAL:O	2.11	0.51
2:AC:48:LYS:N	2:AC:48:LYS:HD3	2.17	0.51
23:DB:1245:G:OP1	37:DL:13:LYS:HE3	2.11	0.51
40:DH:93:SER:C	40:DH:94:ILE:HD12	2.30	0.51
23:DB:345:A:N3	23:DB:346:A:N1	2.58	0.51
38:BM:35:ALA:HB3	38:BM:100:LYS:H	1.74	0.51
27:DK:99:ILE:HD13	27:DK:118:LEU:HD13	1.93	0.51
3:AD:151:GLN:HE21	3:AD:153:ARG:HG2	1.76	0.51
27:BK:79:PHE:HZ	27:BK:104:THR:HG23	1.76	0.51
47:BF:21:TYR:HD2	47:BF:27:VAL:HG12	1.76	0.51
13:AN:68:ARG:HH12	13:AN:71:GLY:H	1.59	0.51
23:BB:279:A:H2'	23:BB:280:U:C5'	2.41	0.51
40:DH:96:THR:HG23	40:DH:97:ARG:H	1.75	0.51
48:BG:104:LEU:O	48:BG:111:PRO:HA	2.11	0.51
1:CA:842:U:H2'	1:CA:843:U:O3'	2.11	0.51
1:CA:335:C:H2'	1:CA:336:A:H8	1.74	0.51
1:AA:373:A:H1'	1:AA:481:G:H1'	1.93	0.51
35:DV:80:HIS:CG	35:DV:83:LYS:HB2	2.46	0.51
23:BB:1407:G:H2'	23:BB:1408:G:H8	1.74	0.51
23:BB:1804:C:OP1	25:BC:256:THR:HB	2.11	0.51
1:AA:1377:A:C5	6:AG:6:ILE:HG12	2.45	0.51
1:CA:1020:G:N3	1:CA:1020:G:H2'	2.25	0.51
23:BB:1736:U:H2'	23:BB:1737:G:O4'	2.10	0.51
14:AO:39:LEU:HD23	14:AO:43:PHE:HE1	1.76	0.51
28:BP:89:GLY:HA2	28:BP:111:GLU:HA	1.93	0.51
23:BB:2450:A:O2'	23:BB:2451:A:H5'	2.11	0.51
23:DB:2066:C:O2'	23:DB:2067:G:H5'	2.11	0.51
23:DB:2801:G:H2'	23:DB:2802:G:H8	1.74	0.51
1:CA:162:A:H2'	1:CA:163:C:O4'	2.11	0.51
36:D2:26:ASN:O	36:D2:30:VAL:HG23	2.10	0.51
23:DB:265:A:O2'	23:DB:266:G:H4'	2.11	0.51
23:DB:610:C:O2'	23:DB:611:C:H5'	2.11	0.51
23:DB:612:G:H2'	23:DB:614:A:H5''	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BI:124:MET:O	24:BI:128:ILE:HG12	2.11	0.51
23:DB:1582:C:H3'	23:DB:1583:A:C2	2.46	0.51
23:DB:528:A:C2	23:DB:2043:C:H4'	2.45	0.51
25:BC:75:ALA:HB2	25:BC:95:TYR:HA	1.93	0.51
7:CH:103:VAL:HG22	7:CH:124:ILE:HA	1.93	0.51
23:BB:152:A:H2'	23:BB:153:U:C6	2.45	0.51
1:AA:1473:G:H2'	1:AA:1474:U:O4'	2.11	0.51
23:DB:1535:A:H3'	23:DB:1536:C:H6	1.76	0.51
23:BB:1957:C:H2'	23:BB:1958:C:H6	1.76	0.51
46:DU:23:LYS:H	46:DU:23:LYS:HD2	1.76	0.51
1:AA:742:G:O2'	1:AA:743:A:H5'	2.11	0.51
23:BB:2611:C:O2'	23:BB:2612:C:H5'	2.10	0.51
32:B4:15:LYS:O	32:B4:16:ILE:HB	2.10	0.51
1:AA:979:C:H1'	1:AA:1317:C:H41	1.76	0.51
8:CI:53:LEU:HD13	8:CI:53:LEU:O	2.11	0.51
23:BB:1939:U:H6	23:BB:1939:U:H5'	1.75	0.51
23:DB:2692:G:O2'	23:DB:2693:G:H5'	2.11	0.51
19:CT:77:ASN:O	19:CT:81:GLN:HG3	2.11	0.51
23:BB:338:G:N2	23:BB:339:U:H1'	2.25	0.51
1:CA:1278:G:H4'	1:CA:1279:G:C5'	2.41	0.51
33:B1:26:LYS:HB2	33:B1:52:LYS:HZ2	1.76	0.51
40:BH:80:ILE:HD11	40:BH:102:ALA:HB3	1.91	0.51
29:DE:153:LEU:HG	29:DE:154:ASP:H	1.76	0.51
50:DT:81:LYS:HG3	50:DT:82:LYS:N	2.26	0.51
13:AN:55:SER:HB2	13:AN:58:ARG:HD2	1.92	0.51
1:AA:1320:C:H41	18:AS:36:ARG:HE	1.58	0.51
20:AB:102:ASN:O	20:AB:106:VAL:HG23	2.11	0.51
23:BB:78:U:H2'	23:BB:79:C:H6	1.76	0.51
12:AM:109:LYS:HG3	12:AM:110:GLY:H	1.76	0.51
26:BD:113:SER:HB3	26:BD:167:ASN:H	1.76	0.51
23:BB:1244:A:O2'	23:BB:1245:G:H5'	2.10	0.51
47:BF:102:LEU:HA	47:BF:106:ALA:HB3	1.92	0.51
23:BB:161:A:C3'	23:BB:162:U:H5''	2.38	0.51
29:DE:58:LYS:HZ2	29:DE:58:LYS:H	1.59	0.51
26:BD:34:VAL:HG12	26:BD:94:GLN:H	1.75	0.51
35:DV:42:LEU:N	35:DV:42:LEU:HD23	2.25	0.51
40:BH:44:ILE:C	40:BH:46:PHE:H	2.13	0.51
40:DH:96:THR:OG1	40:DH:112:LYS:HD3	2.10	0.51
4:CE:104:ILE:O	4:CE:104:ILE:HG23	2.11	0.51
23:DB:646:U:H3'	23:DB:647:G:C8	2.44	0.51
23:BB:674:G:O2'	29:BE:60:TRP:CH2	2.63	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2037:A:H2'	23:DB:2038:G:H8	1.76	0.51
48:DG:84:LYS:CB	48:DG:132:LEU:H	2.24	0.51
23:BB:1484:U:H2'	23:BB:1485:U:H6	1.76	0.51
41:DJ:116:ARG:O	41:DJ:120:ARG:HG2	2.10	0.51
37:BL:55:MET:HE2	37:BL:56:PRO:HD2	1.93	0.51
23:BB:329:G:H1	46:BU:16:LYS:NZ	2.09	0.51
38:DM:126:ILE:N	38:DM:126:ILE:HD12	2.26	0.51
23:DB:543:G:N2	23:DB:545:U:H5'	2.26	0.51
1:AA:674:G:H2'	1:AA:675:A:H8	1.75	0.51
23:DB:873:C:H4'	38:DM:64:TRP:NE1	2.26	0.51
23:BB:2329:U:H2'	23:BB:2330:G:H8	1.75	0.51
50:DT:68:LYS:O	50:DT:69:ARG:CB	2.58	0.51
23:BB:2292:U:H2'	23:BB:2293:G:C8	2.46	0.51
23:BB:962:G:H21	23:BB:2250:G:N2	2.08	0.51
43:DO:15:ARG:NH2	43:DO:95:SER:HB3	2.26	0.51
1:CA:1477:U:H2'	1:CA:1478:U:C6	2.46	0.51
23:DB:2579:C:O2'	26:DD:136:ASN:HA	2.11	0.51
5:AF:1:MET:SD	5:AF:67:PRO:HD3	2.51	0.51
10:CK:70:ALA:C	10:CK:72:ALA:H	2.14	0.51
42:DN:12:ARG:HG2	42:DN:16:HIS:HB2	1.93	0.51
3:CD:11:SER:HA	3:CD:18:LEU:CD2	2.40	0.51
25:DC:75:ALA:CB	25:DC:93:VAL:HG22	2.41	0.51
23:DB:299:A:N6	23:DB:322:A:O2'	2.43	0.51
23:DB:1897:G:O2'	23:DB:1898:U:H5'	2.11	0.51
22:BA:50:A:OP1	43:BO:68:LYS:HB2	2.11	0.51
3:AD:106:PHE:CD1	3:AD:144:ILE:HD11	2.46	0.51
6:AG:94:ARG:NH1	6:AG:98:LEU:HD11	2.26	0.51
22:BA:11:C:H5''	52:BW:71:LYS:HE3	1.93	0.51
48:BG:176:LYS:O	48:BG:176:LYS:HE2	2.10	0.51
23:DB:934:U:H2'	23:DB:935:C:C6	2.47	0.51
1:CA:123:U:H2'	1:CA:124:C:H6	1.76	0.51
38:BM:6:ARG:O	38:BM:7:THR:HG23	2.10	0.51
35:BV:51:GLN:HA	35:BV:56:PHE:CG	2.46	0.51
23:BB:1902:C:H4'	25:BC:241:LYS:O	2.11	0.51
56:DB:3474:HOH:O	37:DL:99:ASN:HB3	2.10	0.51
22:BA:91:C:H2'	22:BA:92:C:H6	1.76	0.51
25:BC:32:LEU:O	25:BC:33:LEU:HD23	2.11	0.51
1:AA:1203:C:H4'	13:AN:66:THR:HG22	1.93	0.51
23:DB:912:C:H2'	23:DB:913:U:C6	2.45	0.51
23:DB:1640:A:H2'	23:DB:1641:A:C8	2.46	0.51
3:AD:82:LYS:NZ	3:AD:82:LYS:HB3	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2710:C:H2'	23:BB:2711:A:H8	1.75	0.51
51:DZ:64:ILE:CD1	51:DZ:64:ILE:H	2.16	0.50
51:DZ:74:ARG:HD2	51:DZ:76:GLU:OE2	2.10	0.50
51:DZ:5:CYS:SG	51:DZ:8:THR:HG23	2.51	0.50
2:CC:76:ILE:HA	2:CC:83:VAL:CG2	2.33	0.50
50:DT:27:SER:O	50:DT:28:ASN:HB3	2.10	0.50
44:BQ:111:LYS:HZ3	49:BR:50:GLY:HA2	1.76	0.50
49:BR:39:LEU:O	49:BR:40:MET:HB2	2.12	0.50
23:BB:588:U:H1'	29:BE:85:PHE:CG	2.46	0.50
40:DH:135:HIS:HB3	40:DH:138:VAL:CB	2.33	0.50
20:CB:14:HIS:CE1	20:CB:42:LEU:HD22	2.45	0.50
10:AK:44:ALA:HB3	10:AK:69:CYS:HB2	1.92	0.50
27:BK:11:ALA:HB3	27:BK:85:VAL:CG2	2.41	0.50
40:DH:9:VAL:HB	40:DH:12:LEU:O	2.11	0.50
23:BB:558:U:O2'	23:BB:559:G:H5'	2.11	0.50
3:AD:25:ARG:C	3:AD:25:ARG:HD3	2.31	0.50
47:BF:101:ARG:HA	47:BF:105:ILE:HD12	1.93	0.50
23:DB:1820:U:H3	25:DC:197:ALA:HA	1.77	0.50
34:B3:49:VAL:CG2	34:B3:54:LEU:HD13	2.38	0.50
35:BV:29:ILE:HG13	35:BV:88:HIS:HE1	1.75	0.50
1:CA:235:C:H2'	1:CA:236:A:H8	1.74	0.50
23:BB:2393:U:O2'	23:BB:2394:C:H5'	2.11	0.50
12:CM:95:PRO:HD3	12:CM:108:ARG:HG2	1.93	0.50
4:AE:82:HIS:CE1	4:AE:146:MET:HA	2.46	0.50
23:DB:1150:C:H2'	23:DB:1151:A:H8	1.76	0.50
2:AC:13:ILE:HG12	2:AC:14:VAL:HG13	1.94	0.50
1:AA:658:C:H2'	1:AA:659:U:C6	2.45	0.50
1:CA:624:C:H2'	1:CA:625:U:H6	1.75	0.50
28:BP:26:GLU:O	28:BP:28:LYS:HE2	2.10	0.50
23:BB:988:A:C8	30:BY:13:ILE:HD12	2.46	0.50
22:DA:60:C:H2'	22:DA:61:G:C8	2.46	0.50
26:BD:7:LYS:CE	26:BD:198:GLY:HA2	2.41	0.50
5:AF:10:VAL:HG12	5:AF:11:HIS:H	1.77	0.50
23:BB:1422:G:C1'	23:BB:1495:A:H61	2.24	0.50
23:DB:1395:A:H4'	23:DB:1397:U:C5	2.46	0.50
23:DB:2281:A:O2'	23:DB:2282:G:H5'	2.11	0.50
1:CA:979:C:H1'	1:CA:1317:C:H41	1.75	0.50
23:BB:234:U:H2'	23:BB:235:U:H6	1.76	0.50
1:AA:1458:G:H2'	1:AA:1459:G:H8	1.76	0.50
23:DB:425:G:O2'	23:DB:426:C:H5'	2.11	0.50
23:BB:1640:A:O2'	23:BB:1641:A:H5'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:35:C:H3'	22:DA:35:C:O2	2.11	0.50
27:DK:2:ILE:HD12	27:DK:2:ILE:N	2.26	0.50
23:BB:1774:C:H2'	23:BB:1774:C:O2	2.11	0.50
3:AD:54:LEU:O	3:AD:54:LEU:HD22	2.11	0.50
23:DB:1647:U:H3'	23:DB:1647:U:P	2.52	0.50
1:AA:148:G:N3	1:AA:1446:A:H2	2.08	0.50
1:CA:140:U:H2'	1:CA:141:G:H8	1.75	0.50
13:CN:50:LEU:N	13:CN:51:PRO:HD2	2.25	0.50
38:BM:59:ARG:NH1	38:BM:60:GLN:HB3	2.13	0.50
45:DS:52:GLU:HA	45:DS:55:ILE:CG2	2.39	0.50
48:DG:24:THR:C	48:DG:25:ILE:HD12	2.30	0.50
18:CS:27:LYS:HB2	18:CS:28:LYS:HZ2	1.75	0.50
40:DH:86:ASP:H	40:DH:89:LYS:HD3	1.76	0.50
40:DH:127:GLU:CA	40:DH:145:ASN:HA	2.37	0.50
47:DF:87:LYS:CG	47:DF:88:VAL:H	2.19	0.50
27:BK:19:VAL:HB	27:BK:41:ILE:CG1	2.41	0.50
47:BF:108:PRO:O	47:BF:110:ILE:HG23	2.11	0.50
38:DM:35:ALA:HB3	38:DM:100:LYS:H	1.76	0.50
41:DJ:25:LEU:HB2	41:DJ:62:VAL:HG21	1.92	0.50
48:DG:104:LEU:O	48:DG:111:PRO:HA	2.10	0.50
30:BY:8:GLN:CG	30:BY:31:ILE:HA	2.37	0.50
47:BF:32:LYS:HE2	47:BF:34:THR:HG22	1.93	0.50
23:BB:2886:A:H3'	23:BB:2887:A:H8	1.75	0.50
3:AD:89:LEU:CD2	3:AD:199:ILE:HD11	2.42	0.50
16:AQ:75:VAL:HG23	16:AQ:76:ARG:N	2.25	0.50
23:BB:2722:G:H2'	23:BB:2723:C:C6	2.46	0.50
19:AT:2:ASN:ND2	19:AT:3:ILE:N	2.58	0.50
40:BH:83:LYS:HB3	40:BH:83:LYS:HZ2	1.75	0.50
10:AK:80:ASN:HD22	10:AK:80:ASN:N	2.07	0.50
1:AA:269:C:H2'	1:AA:270:A:H8	1.72	0.50
26:DD:8:LYS:HB2	26:DD:201:LEU:HD11	1.93	0.50
45:DS:73:LYS:CE	45:DS:74:ILE:H	2.24	0.50
25:DC:18:VAL:HG11	25:DC:202:ARG:HD2	1.93	0.50
39:BX:12:GLU:CA	39:BX:15:ASN:HD21	2.23	0.50
46:DU:11:ILE:O	46:DU:11:ILE:HD13	2.11	0.50
23:DB:962:G:H21	23:DB:2250:G:N2	2.07	0.50
23:DB:1725:U:O2'	23:DB:1726:C:H5'	2.11	0.50
20:AB:112:ARG:HA	20:AB:115:ASP:OD2	2.11	0.50
1:CA:598:U:H2'	1:CA:599:C:H6	1.76	0.50
23:BB:2801:G:H2'	23:BB:2802:G:H8	1.73	0.50
23:DB:1847:A:H4'	23:DB:1848:A:H8	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:414:C:H2'	23:DB:415:A:H8	1.76	0.50
27:DK:58:LEU:N	27:DK:58:LEU:HD23	2.26	0.50
49:BR:1:MET:HA	49:BR:42:ALA:HB3	1.92	0.50
1:CA:1473:G:H2'	1:CA:1474:U:O4'	2.11	0.50
4:AE:32:PHE:CE2	4:AE:55:VAL:HG22	2.47	0.50
1:AA:512:U:H2'	1:AA:513:C:C6	2.47	0.50
5:CF:11:HIS:CE1	5:CF:13:ASP:HB2	2.46	0.50
23:BB:1790:C:O2'	25:BC:207:ALA:HB2	2.09	0.50
1:AA:1080:A:H2'	1:AA:1081:A:H5'	1.93	0.50
23:BB:1117:C:H2'	23:BB:1118:C:C6	2.46	0.50
23:DB:1295:C:H2'	23:DB:1296:G:C8	2.45	0.50
6:AG:11:ILE:HD12	6:AG:11:ILE:H	1.75	0.50
22:DA:86:G:H2'	22:DA:87:U:O4'	2.10	0.50
23:BB:997:G:O2'	23:BB:998:C:H5'	2.11	0.50
1:CA:1076:U:H2'	1:CA:1077:G:C8	2.47	0.50
23:BB:2281:A:O2'	23:BB:2282:G:H5'	2.11	0.50
22:BA:35:C:H3'	22:BA:35:C:O2	2.11	0.50
29:DE:111:GLU:HG2	29:DE:114:ARG:HH21	1.76	0.50
23:DB:1064:C:H5'	24:DI:88:GLY:HA3	1.93	0.50
1:CA:505:G:H2'	1:CA:506:G:H8	1.75	0.50
23:DB:1100:C:H41	24:DI:1:ALA:N	2.10	0.50
44:DQ:24:TYR:CG	44:DQ:25:GLY:N	2.79	0.50
41:DJ:44:TYR:CD2	41:DJ:44:TYR:C	2.84	0.50
50:DT:5:GLU:CA	50:DT:8:LEU:HB2	2.32	0.50
49:BR:3:ALA:O	49:BR:4:VAL:HG13	2.12	0.50
50:BT:57:VAL:HG13	50:BT:58:VAL:N	2.27	0.50
41:DJ:123:LYS:HG2	41:DJ:132:HIS:NE2	2.26	0.50
24:DI:11:GLN:HA	24:DI:55:PRO:HA	1.92	0.50
18:CS:27:LYS:NZ	18:CS:27:LYS:HB3	2.26	0.50
20:AB:15:PHE:CD1	20:AB:16:GLY:N	2.80	0.50
20:AB:187:ASP:HB3	20:AB:201:GLY:O	2.11	0.50
40:DH:125:THR:HA	40:DH:146:VAL:CB	2.37	0.50
42:BN:70:THR:HB	42:BN:75:ILE:HD11	1.94	0.50
23:DB:277:G:H4'	23:DB:278:A:N7	2.26	0.50
35:BV:4:ILE:HG22	35:BV:63:ILE:HG23	1.94	0.50
47:BF:64:PRO:HA	47:BF:88:VAL:HG21	1.94	0.50
6:AG:21:LEU:H	6:AG:21:LEU:HD23	1.76	0.50
48:DG:93:TYR:O	48:DG:94:ARG:HG3	2.11	0.50
23:DB:2722:G:H2'	23:DB:2723:C:C6	2.47	0.50
28:DP:110:LYS:HD2	28:DP:110:LYS:N	2.20	0.50
48:BG:93:TYR:C	48:BG:94:ARG:HG3	2.32	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:D3:14:LYS:O	34:D3:14:LYS:HD2	2.10	0.50
9:CJ:10:LEU:HB3	9:CJ:18:ILE:HD11	1.93	0.50
7:AH:14:ARG:HE	7:AH:75:GLN:NE2	2.10	0.50
48:DG:84:LYS:HB3	48:DG:132:LEU:O	2.10	0.50
48:DG:85:LYS:HA	48:DG:131:VAL:HG12	1.93	0.50
44:BQ:77:LYS:HA	44:BQ:80:ASN:HB3	1.93	0.50
28:DP:56:SER:O	28:DP:74:GLN:HA	2.11	0.50
12:AM:95:PRO:HD3	12:AM:108:ARG:HG2	1.93	0.50
23:BB:1729:U:H2'	23:BB:1730:C:C4'	2.41	0.50
38:DM:40:ARG:HB2	38:DM:93:VAL:HG22	1.92	0.50
35:DV:70:ILE:HD13	35:DV:70:ILE:H	1.76	0.50
38:DM:71:LYS:HG2	38:DM:73:ILE:HD11	1.92	0.50
23:BB:2449:U:H4'	23:BB:2450:A:OP1	2.11	0.50
1:AA:719:C:O2	17:AR:37:LYS:HA	2.11	0.50
23:DB:2449:U:H4'	23:DB:2450:A:OP1	2.11	0.50
23:DB:2097:A:H2'	23:DB:2098:U:H6	1.76	0.50
23:DB:3:U:H2'	23:DB:4:U:C6	2.46	0.50
1:CA:1359:C:H3'	13:CN:74:ARG:HH21	1.74	0.50
23:BB:815:C:OP2	49:BR:85:LYS:HE2	2.12	0.50
23:BB:612:G:H2'	23:BB:614:A:H5''	1.93	0.50
29:BE:34:ALA:CB	29:BE:96:VAL:HG21	2.41	0.50
1:AA:624:C:H2'	1:AA:625:U:H6	1.75	0.50
48:DG:39:ALA:C	48:DG:54:ARG:HB2	2.31	0.50
23:DB:1534:U:H2'	23:DB:1536:C:C5	2.46	0.50
23:BB:1199:U:H2'	23:BB:1200:C:C6	2.46	0.50
23:DB:2197:U:O2'	23:DB:2198:A:H2'	2.12	0.50
23:BB:958:U:H3	38:BM:16:ARG:HB3	1.77	0.50
23:DB:1877:A:H2'	23:DB:1878:G:H8	1.77	0.50
28:DP:77:SER:O	28:DP:80:VAL:HG12	2.11	0.50
1:AA:1446:A:N6	1:AA:1447:A:N6	2.59	0.50
9:AJ:7:ARG:O	9:AJ:100:ILE:HA	2.11	0.50
1:CA:1456:A:H2'	1:CA:1457:G:O4'	2.11	0.50
23:BB:1824:G:O2'	23:BB:1825:U:H5'	2.11	0.50
23:DB:259:G:O2'	23:DB:260:G:H5'	2.12	0.50
23:DB:2076:U:O2	23:DB:2076:U:O4'	2.29	0.50
23:BB:598:U:H2'	23:BB:599:A:H8	1.76	0.50
20:AB:75:ALA:O	20:AB:79:VAL:HG23	2.12	0.50
33:D1:28:THR:O	33:D1:29:LYS:HD2	2.11	0.50
50:DT:38:ALA:HB3	50:DT:81:LYS:HE2	1.93	0.50
20:AB:101:THR:HG23	20:AB:102:ASN:H	1.76	0.50
41:BJ:72:LYS:CG	41:BJ:89:PHE:HB2	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DJ:98:GLU:HG3	41:DJ:124:VAL:HB	1.94	0.50
39:DX:7:ARG:NH1	39:DX:7:ARG:HB2	2.26	0.50
26:BD:186:LEU:HD21	28:BP:7:LEU:HD22	1.93	0.50
46:DU:73:ASN:HD22	46:DU:74:ALA:N	2.10	0.50
20:AB:156:LEU:N	20:AB:156:LEU:HD12	2.20	0.50
27:BK:71:ARG:HE	27:BK:71:ARG:HA	1.76	0.50
24:DI:19:PRO:HB2	24:DI:22:PRO:HD2	1.94	0.50
24:BI:125:THR:O	24:BI:129:GLU:HG3	2.11	0.50
12:CM:49:GLU:HG3	12:CM:53:ASP:OD1	2.12	0.50
23:DB:1439:A:N7	23:DB:1440:U:N1	2.59	0.50
1:CA:370:C:H2'	1:CA:371:A:C8	2.46	0.50
5:CF:7:VAL:HG11	17:CR:64:LEU:HD21	1.93	0.50
1:AA:1406:U:C2'	1:AA:1407:C:H5'	2.41	0.50
22:DA:32:U:H2'	22:DA:33:G:C8	2.46	0.50
1:CA:87:C:C2'	1:CA:88:U:H5''	2.41	0.50
1:AA:1479:C:O2'	1:AA:1480:A:H5'	2.12	0.50
28:BP:112:ARG:O	28:BP:113:LEU:HB3	2.11	0.50
20:AB:83:ALA:HA	20:AB:88:GLN:HB2	1.94	0.50
5:AF:18:VAL:N	5:AF:19:PRO:HD2	2.26	0.50
1:CA:678:U:H2'	1:CA:679:C:H6	1.76	0.50
10:AK:70:ALA:C	10:AK:72:ALA:H	2.15	0.50
41:BJ:11:VAL:HG13	41:BJ:50:THR:HG22	1.92	0.50
7:CH:66:GLN:C	7:CH:68:LYS:H	2.14	0.50
23:DB:197:A:H62	23:DB:2430:A:H2'	1.76	0.50
1:AA:684:U:H1'	10:AK:39:ASN:HA	1.93	0.50
1:CA:555:U:H2'	1:CA:556:C:H6	1.76	0.50
6:CG:104:VAL:CG1	6:CG:108:ARG:HH11	2.25	0.50
21:CU:48:LYS:HA	21:CU:51:ALA:HB3	1.93	0.50
1:CA:1422:G:O2'	1:CA:1423:G:H5'	2.10	0.50
35:DV:51:GLN:HA	35:DV:56:PHE:CG	2.46	0.50
1:AA:1105:A:H2'	1:AA:1106:G:H8	1.76	0.50
1:CA:815:A:H4'	1:CA:817:C:C4	2.46	0.50
1:CA:454:G:H2'	1:CA:455:G:H8	1.75	0.50
1:AA:1121:U:H2'	1:AA:1122:U:C6	2.46	0.50
48:DG:140:ILE:HD12	48:DG:141:GLY:N	2.26	0.50
23:BB:2537:U:H2'	23:BB:2538:C:H6	1.76	0.50
23:DB:1098:A:C4	24:DI:3:LYS:O	2.65	0.50
20:AB:70:GLY:HA3	20:AB:79:VAL:HG21	1.94	0.50
23:BB:854:C:O2'	23:BB:855:G:H5'	2.12	0.50
21:AU:44:ARG:HH11	21:AU:44:ARG:HG2	1.77	0.50
52:DW:39:GLN:HG3	52:DW:42:THR:CB	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1799:G:N2	23:DB:1818:U:O2'	2.45	0.50
41:DJ:3:THR:HG21	44:DQ:60:TRP:HE1	1.75	0.50
39:DX:31:GLN:HB3	39:DX:37:LEU:HD12	1.93	0.50
18:CS:42:ASN:HD21	18:CS:43:MET:HE2	1.77	0.50
25:BC:90:ILE:CD1	25:BC:102:TYR:HB3	2.41	0.50
23:BB:1799:G:OP2	25:BC:269:ARG:NH2	2.45	0.50
41:BJ:124:VAL:HG23	41:BJ:125:TYR:H	1.77	0.50
41:BJ:98:GLU:HG3	41:BJ:124:VAL:HB	1.93	0.50
10:AK:33:ILE:HG13	10:AK:73:VAL:HG21	1.92	0.50
27:DK:54:LYS:N	27:DK:54:LYS:HD2	2.22	0.50
42:DN:77:ALA:O	42:DN:81:ASN:HB2	2.12	0.50
27:BK:87:LEU:HD12	27:BK:92:GLU:HA	1.93	0.50
1:AA:79:G:H2'	1:AA:80:A:H8	1.71	0.50
42:BN:24:MET:HE1	42:BN:40:LYS:O	2.10	0.50
42:BN:72:ASP:C	42:BN:74:GLU:H	2.15	0.50
23:DB:278:A:P	23:DB:278:A:H3'	2.52	0.50
24:DI:27:LEU:HD23	24:DI:27:LEU:N	2.19	0.50
47:DF:37:MET:HE1	47:DF:149:ARG:HD2	1.94	0.50
6:CG:14:ASP:HB3	6:CG:19:SER:H	1.75	0.50
3:AD:115:GLN:HG3	3:AD:119:HIS:CE1	2.46	0.50
26:DD:118:PHE:CE1	26:DD:123:LYS:HD2	2.47	0.50
16:CQ:45:VAL:HG11	16:CQ:60:ILE:HG21	1.92	0.50
16:CQ:7:LEU:O	16:CQ:60:ILE:HD13	2.11	0.50
43:BO:58:ILE:O	43:BO:62:LEU:HB2	2.11	0.50
31:D0:53:VAL:HG12	42:DN:118:ARG:NH1	2.26	0.50
26:BD:121:THR:C	26:BD:123:LYS:H	2.15	0.50
49:BR:15:SER:H	49:BR:18:GLN:CD	2.14	0.50
23:BB:719:C:O2'	23:BB:720:U:H5'	2.11	0.50
1:AA:91:U:H2'	1:AA:92:U:O4'	2.12	0.50
11:AL:41:PRO:HB3	11:AL:49:ARG:HH11	1.75	0.50
23:BB:2393:U:H4'	37:BL:59:ARG:O	2.11	0.50
23:DB:2078:C:O2'	23:DB:2079:U:H5'	2.12	0.50
38:DM:1:MET:O	38:DM:2:LEU:HB2	2.12	0.50
38:DM:4:PRO:HG2	38:DM:70:ASP:HA	1.91	0.50
6:AG:62:GLU:O	6:AG:66:GLU:HG3	2.12	0.50
14:AO:9:ALA:O	14:AO:12:VAL:HB	2.12	0.50
23:BB:2795:C:H2'	23:BB:2796:U:C1'	2.41	0.50
28:BP:107:ALA:O	28:BP:108:ARG:C	2.50	0.50
50:BT:69:ARG:HG2	50:BT:73:ARG:O	2.12	0.50
15:CP:18:GLN:HE21	15:CP:35:ARG:HD3	1.76	0.50
1:AA:245:U:H2'	1:AA:246:A:H5'	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CL:43:LYS:CE	11:CL:44:PRO:HD3	2.42	0.50
23:DB:2241:A:H2'	23:DB:2242:G:H8	1.73	0.50
47:BF:71:LYS:HG2	47:BF:73:VAL:H	1.76	0.50
46:BU:41:VAL:HG22	46:BU:60:LYS:O	2.11	0.50
23:DB:608:A:H2'	23:DB:609:A:C8	2.47	0.50
23:DB:2247:A:O2'	23:DB:2248:C:H5'	2.11	0.50
30:DY:30:ARG:N	30:DY:30:ARG:HD3	2.26	0.50
12:CM:71:GLU:HA	12:CM:74:MET:HG3	1.94	0.50
1:CA:201:G:H2'	1:CA:202:G:O4'	2.12	0.50
43:DO:28:VAL:HG11	43:DO:92:PHE:CZ	2.46	0.50
43:DO:75:GLY:HA3	43:DO:106:LEU:HA	1.93	0.50
6:AG:24:LYS:O	6:AG:28:ILE:HG12	2.11	0.50
1:AA:1317:C:OP1	13:AN:56:PRO:HD2	2.12	0.50
9:AJ:8:ILE:HG13	9:AJ:100:ILE:HG22	1.93	0.50
1:AA:1456:A:H2'	1:AA:1457:G:O4'	2.11	0.50
2:AC:54:ILE:HG23	2:AC:54:ILE:O	2.12	0.50
23:BB:1528:A:H2'	23:BB:1529:G:O4'	2.11	0.50
22:BA:22:U:H2'	22:BA:23:G:C8	2.46	0.50
1:AA:893:C:H2'	1:AA:894:G:C8	2.47	0.50
1:AA:651:C:H2'	1:AA:652:U:C6	2.47	0.50
23:DB:1882:U:O2'	23:DB:1883:U:H5'	2.11	0.50
1:AA:1499:A:O2'	1:AA:1500:A:H5'	2.11	0.50
48:BG:142:GLN:HG3	48:BG:146:ASP:OD2	2.12	0.50
15:CP:76:LYS:NZ	15:CP:80:LYS:HD3	2.27	0.50
23:BB:2523:G:O2'	23:BB:2524:G:H5'	2.10	0.50
23:DB:1390:U:O2'	23:DB:1391:U:H5'	2.11	0.50
23:DB:767:U:O2'	23:DB:768:G:H5'	2.11	0.50
23:BB:2365:G:O2'	52:BW:59:PHE:HE1	1.95	0.50
52:BW:59:PHE:O	52:BW:60:ALA:HB3	2.11	0.50
26:DD:104:VAL:HG13	26:DD:106:LYS:HE2	1.94	0.50
23:DB:627:A:N6	37:DL:112:LEU:HD21	2.26	0.50
44:DQ:94:LEU:CD2	49:DR:11:GLN:HB2	2.42	0.50
49:DR:3:ALA:O	49:DR:13:ARG:HA	2.12	0.50
3:CD:186:GLU:CD	3:CD:187:ARG:H	2.15	0.50
50:DT:11:LEU:HD11	50:DT:46:ALA:HB3	1.93	0.50
48:BG:17:LYS:HA	48:BG:17:LYS:NZ	2.25	0.50
48:BG:17:LYS:NZ	48:BG:18:ILE:H	2.04	0.50
41:BJ:125:TYR:HH	41:BJ:132:HIS:CE1	2.30	0.50
23:BB:1599:U:H2'	23:BB:1600:C:H6	1.77	0.50
50:BT:39:THR:O	50:BT:40:LYS:HB2	2.10	0.50
23:BB:513:A:O5'	23:BB:513:A:H8	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DK:71:ARG:HB3	27:DK:72:PRO:HD2	1.93	0.50
47:DF:135:ILE:HG13	47:DF:137:PHE:H	1.77	0.50
1:CA:437:U:H4'	3:CD:153:ARG:NH1	2.26	0.50
12:CM:106:ARG:HA	12:CM:106:ARG:HH11	1.77	0.50
16:CQ:60:ILE:HG12	16:CQ:72:TRP:HE3	1.77	0.50
16:AQ:68:LYS:HG2	16:AQ:69:THR:HG23	1.93	0.50
23:DB:279:A:H2'	23:DB:280:U:H5'	1.93	0.50
23:DB:2467:C:H1'	38:DM:122:ALA:HB1	1.94	0.50
13:CN:21:ALA:O	13:CN:22:LYS:HE2	2.11	0.50
49:DR:14:VAL:HG22	49:DR:15:SER:N	2.26	0.50
23:BB:2615:U:C2	31:B0:3:GLN:HA	2.46	0.50
23:DB:1046:A:H3'	23:DB:1047:G:C5'	2.42	0.50
12:AM:63:VAL:HG13	12:AM:67:ASP:HB2	1.94	0.50
1:AA:736:C:H2'	1:AA:737:C:C6	2.47	0.50
23:BB:1853:A:N1	23:BB:2087:G:H1'	2.26	0.50
45:BS:22:ASP:HA	45:BS:25:ARG:HH11	1.76	0.50
1:CA:501:C:H1'	1:CA:549:C:H1'	1.92	0.50
23:DB:417:C:H2'	23:DB:418:C:H6	1.75	0.50
21:CU:11:PHE:O	21:CU:11:PHE:CD1	2.63	0.50
2:AC:129:PHE:CG	2:AC:130:ARG:N	2.80	0.50
7:CH:6:ILE:HD12	7:CH:35:ILE:CD1	2.42	0.50
17:CR:58:ILE:O	17:CR:62:ARG:HG3	2.12	0.50
14:AO:43:PHE:CE1	14:AO:56:LEU:HD22	2.47	0.50
46:DU:14:THR:O	46:DU:18:LYS:HA	2.11	0.50
7:CH:100:ILE:HG13	7:CH:128:VAL:O	2.10	0.50
23:DB:99:U:O2	23:DB:99:U:H5'	2.11	0.50
2:CC:21:TRP:CH2	2:CC:31:ASN:HB3	2.47	0.50
1:CA:719:C:O2	17:CR:37:LYS:HA	2.11	0.50
25:DC:75:ALA:HB2	25:DC:95:TYR:HA	1.94	0.50
23:BB:1401:G:H2'	23:BB:1402:U:C6	2.46	0.50
23:BB:2840:C:H2'	23:BB:2841:C:H6	1.75	0.50
20:AB:142:LYS:HA	20:AB:145:ASN:OD1	2.11	0.50
23:DB:2389:G:H5''	23:DB:2390:U:H5'	1.93	0.50
1:CA:80:A:H2'	1:CA:81:A:H8	1.77	0.50
23:DB:1306:C:H2'	23:DB:1307:A:H8	1.76	0.50
37:DL:109:LYS:HB3	37:DL:111:ILE:HD11	1.93	0.50
1:CA:707:U:H2'	1:CA:708:C:C6	2.46	0.50
3:AD:173:ASP:HB3	3:AD:178:GLU:HB2	1.94	0.50
23:BB:1545:A:H2'	23:BB:1546:G:O4'	2.11	0.50
46:BU:19:GLY:O	46:BU:20:LYS:HD3	2.11	0.50
23:BB:1100:C:H2'	23:BB:1101:U:H6	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:140:U:H2'	1:AA:141:G:H8	1.75	0.50
1:CA:1105:A:H2'	1:CA:1106:G:H8	1.75	0.50
3:AD:58:GLN:O	3:AD:62:ARG:HG2	2.12	0.50
50:DT:7:LEU:O	50:DT:7:LEU:HD13	2.12	0.50
1:AA:467:U:H2'	1:AA:467:U:O2	2.12	0.50
23:DB:289:G:H2'	23:DB:290:U:C6	2.46	0.50
50:BT:7:LEU:O	50:BT:7:LEU:HD13	2.12	0.50
20:AB:13:VAL:HG11	20:AB:207:ARG:HG2	1.94	0.50
23:DB:337:C:H2'	23:DB:338:G:O4'	2.12	0.50
52:BW:37:VAL:CG1	52:BW:38:ARG:H	2.18	0.50
23:BB:1458:U:C5'	23:BB:1459:G:H5'	2.30	0.50
25:DC:142:ASN:CG	25:DC:142:ASN:O	2.49	0.50
25:DC:83:ASP:HB2	25:DC:90:ILE:HB	1.94	0.50
41:DJ:11:VAL:HG21	41:DJ:13:ARG:HH11	1.76	0.50
41:DJ:11:VAL:HG13	41:DJ:50:THR:HG22	1.93	0.50
10:AK:92:ARG:NH2	21:AU:24:LYS:HG2	2.24	0.50
3:AD:192:ALA:C	3:AD:194:ILE:H	2.13	0.50
1:CA:1101:A:N6	20:CB:101:THR:HG21	2.27	0.50
40:DH:65:ALA:HB1	40:DH:138:VAL:HG11	1.92	0.50
40:DH:127:GLU:HB2	40:DH:143:ILE:HG22	1.92	0.50
23:DB:2678:C:H2'	23:DB:2679:A:C8	2.47	0.50
34:B3:14:LYS:O	34:B3:14:LYS:HD2	2.11	0.50
9:CJ:55:PRO:HA	13:CN:80:ARG:HH22	1.76	0.50
12:CM:7:ASN:HD22	12:CM:7:ASN:N	2.08	0.50
29:BE:109:LEU:HD12	29:BE:112:LEU:HD12	1.92	0.50
1:AA:255:G:H5'	16:AQ:17:GLU:O	2.12	0.50
41:BJ:116:ARG:O	41:BJ:120:ARG:HG2	2.11	0.50
2:CC:149:LYS:HG3	2:CC:168:ARG:HB2	1.93	0.50
22:BA:109:A:H2'	22:BA:110:C:H6	1.71	0.50
29:DE:119:ILE:HD11	29:DE:185:LYS:HE2	1.93	0.50
45:DS:22:ASP:HA	45:DS:25:ARG:NH1	2.27	0.50
23:DB:1723:G:C2'	23:DB:1724:G:H5'	2.42	0.50
1:CA:524:G:H2'	1:CA:525:C:H6	1.76	0.50
1:AA:405:U:O4	3:AD:1:ALA:HA	2.11	0.50
23:DB:1482:G:N2	23:DB:1508:A:H1'	2.25	0.50
14:CO:8:THR:O	14:CO:11:ILE:HG22	2.11	0.50
5:CF:85:ILE:HG22	5:CF:86:ARG:N	2.27	0.50
23:DB:2094:A:H2'	23:DB:2095:A:H8	1.77	0.50
5:CF:18:VAL:N	5:CF:19:PRO:HD2	2.26	0.50
48:DG:154:GLU:C	48:DG:156:TYR:H	2.15	0.50
6:CG:50:ALA:HB2	6:CG:57:GLU:HG3	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:69:G:N2	1:CA:71:A:H62	2.09	0.50
42:DN:15:SER:O	42:DN:18:GLN:HB2	2.11	0.50
23:BB:813:U:H2'	23:BB:814:C:C6	2.47	0.50
29:BE:98:LYS:O	29:BE:102:ARG:HG2	2.10	0.50
47:DF:35:LEU:CD2	47:DF:153:ILE:HG12	2.42	0.50
1:AA:370:C:H2'	1:AA:371:A:C8	2.47	0.50
20:CB:22:TRP:HA	20:CB:188:THR:HB	1.94	0.50
51:BZ:21:ALA:HB3	51:BZ:23:ASN:HD21	1.77	0.50
23:BB:1534:U:H2'	23:BB:1536:C:C5	2.47	0.50
1:CA:512:U:H2'	1:CA:513:C:C6	2.47	0.50
22:BA:90:C:OP1	38:BM:16:ARG:HB2	2.12	0.50
23:BB:41:C:O2'	23:BB:42:A:H5'	2.11	0.50
23:BB:2654:A:N1	23:BB:2665:A:H5''	2.26	0.50
23:BB:1640:A:H2'	23:BB:1641:A:C8	2.47	0.50
1:AA:455:G:H2'	1:AA:456:A:C8	2.47	0.50
26:DD:61:THR:O	26:DD:64:GLU:HB2	2.12	0.50
1:CA:542:G:O2'	1:CA:543:U:H5'	2.12	0.50
41:BJ:101:ILE:O	41:BJ:105:VAL:HG22	2.11	0.50
11:AL:45:ASN:N	11:AL:45:ASN:HD22	2.10	0.50
25:BC:210:ALA:O	25:BC:215:VAL:HB	2.12	0.50
45:DS:72:THR:CG2	45:DS:108:SER:HB3	2.42	0.50
25:DC:2:VAL:HG23	25:DC:3:VAL:N	2.27	0.50
26:DD:7:LYS:HE2	26:DD:198:GLY:HA2	1.94	0.50
1:AA:634:C:H2'	1:AA:635:A:H8	1.76	0.50
23:DB:1098:A:O5'	24:DI:3:LYS:HG2	2.12	0.50
52:DW:65:LYS:HG3	52:DW:84:GLU:CB	2.41	0.50
44:BQ:26:ALA:HB1	44:BQ:30:VAL:CG1	2.42	0.50
26:DD:14:ILE:HG23	26:DD:22:ILE:HB	1.94	0.50
40:BH:99:ILE:C	40:BH:101:ASP:H	2.16	0.50
25:DC:109:LEU:H	25:DC:109:LEU:CD2	2.25	0.50
50:DT:8:LEU:HD22	50:DT:46:ALA:HA	1.93	0.50
1:AA:532:A:C8	2:AC:192:TYR:HD2	2.29	0.50
49:BR:3:ALA:O	49:BR:13:ARG:HA	2.12	0.50
10:AK:22:ILE:CG2	10:AK:95:THR:HG21	2.34	0.50
21:AU:16:ARG:CZ	21:AU:19:LYS:NZ	2.75	0.50
50:BT:10:VAL:HG11	50:BT:43:ILE:HG13	1.93	0.50
50:BT:13:ALA:O	50:BT:32:LEU:HB2	2.12	0.50
50:BT:54:GLU:HG3	50:BT:90:GLY:N	2.25	0.50
50:BT:81:LYS:HG3	50:BT:82:LYS:N	2.26	0.50
3:AD:191:SER:O	3:AD:192:ALA:HB2	2.12	0.50
37:BL:42:SER:C	37:BL:44:GLY:H	2.14	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:202:ASN:ND2	20:CB:204:ASP:N	2.51	0.50
20:AB:14:HIS:CE1	20:AB:42:LEU:HD22	2.47	0.50
2:CC:61:LYS:O	2:CC:96:VAL:HB	2.12	0.50
3:CD:160:LEU:N	3:CD:160:LEU:HD13	2.26	0.50
23:DB:2886:A:H3'	23:DB:2887:A:H8	1.76	0.50
1:CA:920:U:H2'	1:CA:921:U:H6	1.76	0.50
29:DE:58:LYS:HD3	29:DE:58:LYS:N	2.27	0.50
24:BI:122:GLU:CD	24:BI:122:GLU:H	2.15	0.50
24:BI:29:GLN:HA	24:BI:29:GLN:HE21	1.76	0.50
11:CL:49:ARG:CG	11:CL:89:LEU:HD21	2.39	0.50
33:D1:36:LYS:HG3	33:D1:47:ILE:HG13	1.94	0.50
35:BV:80:HIS:HA	35:BV:87:GLN:OE1	2.11	0.50
23:DB:719:C:O2'	23:DB:720:U:H5'	2.12	0.50
23:BB:2466:C:OP1	32:B4:4:ARG:HB3	2.12	0.50
50:DT:54:GLU:HG3	50:DT:89:GLU:H	1.77	0.50
23:DB:873:C:H2'	23:DB:874:G:C8	2.46	0.50
11:CL:81:ILE:HG23	11:CL:94:TYR:HB3	1.94	0.50
1:AA:1377:A:H2'	6:AG:6:ILE:HD11	1.93	0.50
23:DB:478:A:H5''	23:DB:479:A:OP2	2.12	0.50
26:BD:8:LYS:HB2	26:BD:201:LEU:HD11	1.94	0.50
26:DD:69:ALA:CA	26:DD:73:VAL:HB	2.40	0.50
25:DC:52:HIS:NE2	25:DC:218:THR:HG23	2.26	0.50
1:CA:735:C:O2'	1:CA:736:C:H5'	2.12	0.50
23:DB:540:C:O2'	23:DB:541:A:H5'	2.11	0.50
23:DB:98:G:C2'	23:DB:99:U:H5''	2.42	0.50
25:DC:93:VAL:HG13	25:DC:94:LEU:N	2.27	0.50
1:AA:1175:G:O2'	1:AA:1176:A:H5'	2.11	0.50
23:BB:197:A:H62	23:BB:2430:A:H2'	1.75	0.50
47:BF:134:GLN:C	47:BF:136:ILE:H	2.15	0.50
1:AA:454:G:H2'	1:AA:455:G:H8	1.75	0.50
38:BM:131:VAL:HG12	38:BM:132:THR:H	1.76	0.50
7:AH:113:ARG:HH21	7:AH:114:ALA:HA	1.77	0.50
1:CA:802:A:H2'	1:CA:803:G:O4'	2.12	0.50
23:DB:2455:G:H2'	23:DB:2456:C:C6	2.47	0.50
9:CJ:7:ARG:O	9:CJ:100:ILE:HA	2.12	0.50
23:DB:538:A:N6	23:DB:555:G:O2'	2.43	0.50
25:DC:53:ILE:HG23	25:DC:53:ILE:O	2.12	0.50
19:CT:72:ALA:HA	19:CT:75:LYS:HD3	1.92	0.50
23:BB:303:G:H2'	23:BB:304:U:C6	2.47	0.50
1:CA:1508:A:H2'	1:CA:1509:C:C6	2.47	0.50
1:CA:244:U:O4	1:CA:906:A:H1'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:186:LEU:HD21	28:DP:7:LEU:HD22	1.94	0.50
41:BJ:73:VAL:HG23	41:BJ:74:TYR:H	1.76	0.50
50:BT:21:SER:O	50:BT:25:GLU:HB2	2.11	0.50
20:CB:101:THR:HG23	20:CB:102:ASN:H	1.77	0.50
23:DB:1063:G:H4'	24:DI:135:MET:HG2	1.94	0.50
10:CK:44:ALA:HB3	10:CK:69:CYS:HB2	1.92	0.50
20:AB:46:VAL:HA	20:AB:49:PHE:CD2	2.47	0.50
23:DB:558:U:O2'	23:DB:559:G:H5'	2.12	0.50
42:DN:75:ILE:O	42:DN:79:LEU:HD12	2.11	0.50
23:BB:1056:G:H4'	23:BB:1086:A:H8	1.77	0.50
26:DD:118:PHE:HE2	42:DN:1:MET:SD	2.34	0.50
1:AA:1217:C:OP1	13:AN:8:ARG:HD2	2.12	0.50
48:BG:106:LEU:O	48:BG:108:PHE:N	2.44	0.50
34:B3:49:VAL:O	34:B3:51:LYS:N	2.44	0.50
3:CD:89:LEU:CD2	3:CD:199:ILE:HD11	2.42	0.50
36:D2:43:THR:O	36:D2:44:VAL:C	2.49	0.50
1:AA:843:U:H2'	1:AA:843:U:O2	2.12	0.50
26:BD:116:LYS:HB3	26:BD:118:PHE:CZ	2.47	0.50
48:DG:96:ALA:HB3	48:DG:103:ASN:HB3	1.94	0.50
23:BB:1778:U:H2'	23:BB:1784:A:N6	2.27	0.50
43:BO:15:ARG:NH2	43:BO:95:SER:HB3	2.23	0.50
4:AE:143:LEU:O	4:AE:146:MET:HG2	2.11	0.50
23:DB:2021:C:OP1	31:D0:8:THR:HG21	2.12	0.50
11:AL:31:GLY:HA3	11:AL:54:VAL:HG12	1.92	0.50
44:BQ:65:ASN:CB	44:BQ:75:TYR:HB2	2.41	0.50
42:DN:45:ARG:O	42:DN:49:GLU:HG3	2.11	0.50
23:DB:459:U:C2'	23:DB:460:A:H5'	2.42	0.50
3:AD:18:LEU:HD12	3:AD:63:ILE:HG12	1.94	0.50
40:DH:41:LYS:O	40:DH:45:GLU:HG3	2.12	0.50
23:DB:2514:U:H2'	23:DB:2515:C:C6	2.47	0.50
23:DB:673:C:C2'	23:DB:674:G:H5'	2.42	0.50
25:BC:75:ALA:CB	25:BC:93:VAL:HG22	2.42	0.50
23:DB:2246:G:H2'	23:DB:2247:A:H8	1.77	0.50
48:DG:176:LYS:HE2	48:DG:176:LYS:O	2.12	0.50
1:CA:152:A:H2'	1:CA:153:C:O4'	2.11	0.50
43:BO:28:VAL:HG21	43:BO:106:LEU:HD21	1.93	0.50
23:BB:1674:G:N2	23:BB:1677:A:N1	2.60	0.50
1:CA:952:U:H2'	1:CA:953:G:H8	1.77	0.50
23:BB:2052:A:O4'	26:BD:147:GLY:HA3	2.12	0.50
23:DB:1640:A:O2'	23:DB:1641:A:H5'	2.12	0.50
1:CA:1317:C:OP1	13:CN:56:PRO:HD2	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1508:A:H2'	1:CA:1509:C:H6	1.76	0.50
18:AS:32:THR:HG22	18:AS:34:SER:H	1.76	0.50
25:BC:12:ARG:HA	25:BC:15:VAL:HG23	1.94	0.50
1:AA:1014:A:H4'	18:AS:13:HIS:CG	2.47	0.50
1:CA:1014:A:H4'	18:CS:13:HIS:CG	2.47	0.50
1:AA:1410:A:H2'	1:AA:1411:C:C6	2.47	0.50
1:AA:802:A:H2'	1:AA:803:G:O4'	2.11	0.50
1:CA:1524:C:H2'	1:CA:1525:G:C8	2.47	0.49
23:DB:2329:U:H2'	23:DB:2330:G:H8	1.77	0.49
18:AS:5:LYS:O	18:AS:6:LYS:HD2	2.12	0.49
13:CN:40:ARG:NH1	18:CS:6:LYS:O	2.36	0.49
40:BH:124:THR:O	40:BH:125:THR:CB	2.59	0.49
47:DF:79:ARG:HE	47:DF:79:ARG:N	2.09	0.49
1:CA:1321:U:H2'	1:CA:1322:C:H5	1.76	0.49
18:CS:44:ILE:HA	18:CS:61:VAL:CG1	2.42	0.49
41:BJ:42:ALA:O	41:BJ:44:TYR:N	2.45	0.49
28:DP:3:ILE:HD13	28:DP:3:ILE:O	2.12	0.49
50:BT:82:LYS:HD2	50:BT:84:TYR:CE1	2.43	0.49
24:DI:78:LEU:HD13	24:DI:108:ILE:HG23	1.94	0.49
1:CA:617:G:H4'	15:CP:46:LYS:CE	2.42	0.49
23:DB:558:U:H5'	41:DJ:114:LEU:HD22	1.94	0.49
12:AM:106:ARG:HH11	12:AM:106:ARG:HA	1.77	0.49
18:AS:44:ILE:O	18:AS:44:ILE:HG23	2.12	0.49
23:DB:1141:U:H4'	23:DB:1142:A:C1'	2.42	0.49
23:BB:2734:A:C2'	23:BB:2735:G:H5'	2.39	0.49
3:AD:29:THR:HG22	3:AD:30:LYS:HD3	1.94	0.49
2:AC:61:LYS:O	2:AC:96:VAL:HB	2.12	0.49
47:BF:135:ILE:HG13	47:BF:137:PHE:H	1.77	0.49
38:DM:24:THR:HG23	38:DM:34:LYS:CE	2.42	0.49
40:DH:113:SER:HB2	40:DH:132:PHE:CZ	2.47	0.49
38:BM:18:ARG:C	38:BM:38:ARG:HH22	2.15	0.49
23:DB:636:G:O5'	37:DL:128:THR:HG22	2.11	0.49
23:DB:2863:C:O2'	23:DB:2864:G:H5'	2.12	0.49
9:CJ:6:ILE:HB	9:CJ:76:ILE:CD1	2.40	0.49
23:DB:2820:A:OP1	42:DN:4:ARG:HA	2.12	0.49
18:AS:27:LYS:HB2	18:AS:28:LYS:NZ	2.26	0.49
23:BB:784:G:H5''	25:BC:225:ASN:OD1	2.13	0.49
1:CA:255:G:H2'	1:CA:256:U:C6	2.47	0.49
12:AM:7:ASN:HD22	12:AM:7:ASN:N	2.10	0.49
12:CM:2:ARG:HG3	12:CM:6:ILE:N	2.27	0.49
1:CA:374:A:H5''	1:CA:452:A:N1	2.26	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1106:G:H2'	23:DB:1107:G:H8	1.77	0.49
23:DB:1484:U:H2'	23:DB:1485:U:H6	1.76	0.49
12:AM:96:VAL:C	12:AM:98:GLY:H	2.15	0.49
22:DA:55:U:H2'	22:DA:56:G:H8	1.76	0.49
23:BB:477:A:H2'	23:BB:478:A:C8	2.47	0.49
4:CE:82:HIS:CE1	4:CE:146:MET:HA	2.47	0.49
23:DB:2645:G:H3'	23:DB:2646:C:C5'	2.42	0.49
1:AA:1021:A:H2'	1:AA:1022:A:O4'	2.11	0.49
47:DF:119:LYS:C	47:DF:121:PHE:H	2.15	0.49
1:CA:472:U:H2'	1:CA:473:U:C6	2.47	0.49
23:DB:315:G:H2'	23:DB:316:C:H6	1.76	0.49
20:AB:116:LEU:HB3	20:AB:140:LEU:HD11	1.93	0.49
23:BB:1355:G:O2'	23:BB:1356:G:H5'	2.12	0.49
40:DH:40:THR:O	40:DH:42:LYS:N	2.44	0.49
44:BQ:4:LYS:HZ3	44:BQ:7:VAL:HG22	1.76	0.49
25:BC:74:PRO:HG2	25:BC:96:LYS:HG2	1.93	0.49
23:BB:2893:A:H4'	23:BB:2894:G:C5'	2.42	0.49
16:CQ:30:HIS:ND1	16:CQ:32:ILE:HG22	2.27	0.49
25:DC:12:ARG:HA	25:DC:15:VAL:HG23	1.93	0.49
23:DB:729:G:H2'	23:DB:1775:U:H1'	1.93	0.49
40:DH:4:ILE:HD12	40:DH:37:VAL:O	2.12	0.49
43:DO:28:VAL:HG21	43:DO:106:LEU:HD21	1.94	0.49
9:CJ:8:ILE:HG13	9:CJ:100:ILE:HG22	1.94	0.49
1:AA:1366:C:H2'	1:AA:1367:C:H6	1.77	0.49
17:CR:33:THR:C	17:CR:35:SER:H	2.15	0.49
1:AA:201:G:O2'	1:AA:469:C:H4'	2.12	0.49
23:BB:2076:U:O4'	23:BB:2076:U:O2	2.30	0.49
16:AQ:80:LYS:HD2	16:AQ:80:LYS:H	1.77	0.49
23:DB:57:C:H2'	23:DB:58:G:O4'	2.12	0.49
42:DN:23:ASN:O	42:DN:27:SER:HB2	2.12	0.49
23:BB:1213:A:C6	23:BB:1237:A:H1'	2.47	0.49
51:BZ:71:LEU:O	51:BZ:74:ARG:HG2	2.12	0.49
23:BB:2352:A:C6	52:BW:30:VAL:HG11	2.47	0.49
1:AA:1278:G:H4'	1:AA:1279:G:C5'	2.42	0.49
26:DD:4:LEU:HD23	26:DD:101:PHE:CE1	2.47	0.49
26:BD:101:PHE:HE2	26:BD:205:PRO:HD3	1.78	0.49
44:BQ:23:TYR:HB3	44:BQ:27:ARG:HB3	1.94	0.49
8:CI:51:LEU:HB3	8:CI:56:MET:CG	2.42	0.49
40:BH:144:VAL:HG12	40:BH:146:VAL:HG23	1.94	0.49
25:DC:170:TYR:CD2	25:DC:184:GLU:HA	2.47	0.49
25:DC:90:ILE:HD13	25:DC:103:ILE:O	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DQ:94:LEU:HD21	49:DR:11:GLN:HB2	1.94	0.49
27:DK:70:ARG:HH11	27:DK:70:ARG:HB3	1.76	0.49
29:DE:147:LEU:HD12	29:DE:149:ILE:HG22	1.94	0.49
1:AA:1207:G:O2'	1:AA:1208:C:H5'	2.13	0.49
18:AS:49:ALA:HA	18:AS:57:VAL:O	2.12	0.49
28:DP:3:ILE:HG23	28:DP:4:ILE:HG13	1.94	0.49
25:BC:107:LYS:HD3	25:BC:193:GLU:HB2	1.92	0.49
1:CA:692:U:H2'	1:CA:694:A:OP2	2.12	0.49
20:CB:16:GLY:CA	20:CB:40:ILE:H	2.25	0.49
10:AK:33:ILE:HG12	10:AK:69:CYS:SG	2.52	0.49
52:DW:43:LYS:HB3	52:DW:58:LEU:CD1	2.42	0.49
47:BF:87:LYS:HG3	47:BF:88:VAL:N	2.20	0.49
24:DI:17:ALA:O	24:DI:18:ASN:HB3	2.12	0.49
2:AC:106:ARG:HG2	2:AC:106:ARG:O	2.12	0.49
4:CE:131:ASN:HD22	4:CE:134:ASN:H	1.60	0.49
23:BB:1175:A:C5	23:BB:1176:U:H1'	2.47	0.49
48:BG:93:TYR:O	48:BG:94:ARG:HG3	2.11	0.49
23:BB:1560:G:H2'	23:BB:1561:C:C6	2.46	0.49
1:CA:332:G:O2'	1:CA:333:U:H5'	2.11	0.49
48:DG:10:VAL:HG12	48:DG:14:VAL:HG21	1.94	0.49
23:DB:1439:A:N7	23:DB:1440:U:C2	2.81	0.49
1:CA:373:A:O4'	1:CA:481:G:H1'	2.12	0.49
23:BB:1487:U:H2'	23:BB:1488:C:C6	2.47	0.49
23:DB:309:A:N3	23:DB:329:G:O2'	2.45	0.49
48:BG:84:LYS:HG3	48:BG:131:VAL:CA	2.42	0.49
19:CT:68:LYS:CA	19:CT:68:LYS:HE2	2.42	0.49
4:AE:158:LYS:NZ	7:AH:65:PHE:HA	2.27	0.49
4:AE:82:HIS:HE1	4:AE:146:MET:HA	1.77	0.49
46:BU:81:ARG:HB2	46:BU:96:LYS:HG2	1.93	0.49
2:CC:13:ILE:HD13	2:CC:13:ILE:N	2.27	0.49
1:CA:441:A:H61	1:CA:493:A:H62	1.60	0.49
1:AA:389:A:H2'	1:AA:389:A:N3	2.27	0.49
23:DB:1729:U:H2'	23:DB:1730:C:C4'	2.42	0.49
23:DB:156:A:H2'	23:DB:157:C:H6	1.76	0.49
46:DU:21:ARG:HD3	46:DU:72:PHE:CD2	2.47	0.49
23:BB:946:C:H2'	23:BB:947:A:C8	2.48	0.49
41:DJ:35:ARG:HA	41:DJ:40:HIS:CD2	2.47	0.49
23:DB:2095:A:H3'	23:DB:2096:C:H6	1.76	0.49
1:CA:1240:U:H3	6:CG:29:LEU:HD23	1.77	0.49
1:CA:36:C:H4'	11:CL:118:VAL:O	2.12	0.49
5:AF:47:LEU:HD21	5:AF:57:ALA:CB	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:8:MET:CG	20:CB:9:LEU:H	2.25	0.49
23:DB:2443:C:H2'	23:DB:2444:G:C8	2.48	0.49
23:DB:1210:G:OP1	23:DB:1212:G:H5'	2.11	0.49
1:CA:1308:U:H3'	12:CM:97:ARG:NH1	2.26	0.49
40:BH:73:ASN:N	40:BH:73:ASN:HD22	2.10	0.49
1:CA:1446:A:N6	1:CA:1447:A:N6	2.60	0.49
39:DX:23:ARG:HA	39:DX:26:PHE:HB3	1.94	0.49
23:BB:1714:U:H3'	23:BB:1715:G:C5'	2.42	0.49
27:BK:2:ILE:HA	27:BK:33:ALA:H	1.77	0.49
1:AA:505:G:H2'	1:AA:506:G:H8	1.76	0.49
3:CD:54:LEU:HD22	3:CD:54:LEU:O	2.12	0.49
23:DB:2746:U:H4'	48:DG:137:LYS:HG3	1.94	0.49
1:AA:1527:U:O2'	1:AA:1528:U:H5'	2.11	0.49
23:DB:997:G:O2'	23:DB:998:C:H5'	2.13	0.49
23:DB:1099:G:O2'	23:DB:1100:C:H5'	2.13	0.49
23:BB:855:G:N3	52:BW:23:LYS:HE3	2.27	0.49
52:DW:30:VAL:O	52:DW:30:VAL:HG22	2.13	0.49
52:DW:50:VAL:HG23	52:DW:61:LYS:CE	2.42	0.49
52:DW:59:PHE:O	52:DW:60:ALA:HB3	2.12	0.49
26:DD:32:ASN:HA	26:DD:51:THR:O	2.12	0.49
5:AF:3:HIS:N	5:AF:3:HIS:CD2	2.81	0.49
37:DL:125:LEU:H	37:DL:143:GLU:CG	2.22	0.49
23:BB:2260:C:H2'	23:BB:2261:C:H6	1.77	0.49
1:CA:1320:C:H41	18:CS:36:ARG:HE	1.59	0.49
18:CS:66:VAL:C	18:CS:68:HIS:H	2.16	0.49
39:BX:39:GLN:HB2	39:BX:42:LEU:HD22	1.93	0.49
25:BC:151:GLY:C	25:BC:152:GLN:HG3	2.31	0.49
50:BT:15:HIS:HB3	50:BT:31:VAL:HG23	1.94	0.49
24:DI:54:ILE:C	24:DI:54:ILE:HD13	2.32	0.49
45:BS:36:LEU:N	45:BS:36:LEU:HD22	2.27	0.49
1:AA:87:C:H2'	1:AA:88:U:C4'	2.42	0.49
40:DH:90:LEU:HD12	40:DH:90:LEU:N	2.25	0.49
42:BN:114:GLU:HG2	42:BN:115:LEU:N	2.27	0.49
42:BN:25:ALA:O	42:BN:29:VAL:HG23	2.11	0.49
42:BN:83:LEU:HA	42:BN:86:ARG:CB	2.42	0.49
47:DF:64:PRO:HA	47:DF:88:VAL:HG21	1.92	0.49
47:BF:106:ALA:HA	47:BF:135:ILE:CD1	2.41	0.49
5:AF:53:LYS:HA	5:AF:53:LYS:HE2	1.94	0.49
47:BF:168:LEU:O	47:BF:169:LEU:HB2	2.13	0.49
47:BF:1:ALA:O	47:BF:4:HIS:HB3	2.13	0.49
49:DR:78:ARG:HB3	49:DR:83:TYR:HB3	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CN:79:SER:O	13:CN:83:VAL:HG23	2.12	0.49
26:DD:92:VAL:O	26:DD:94:GLN:N	2.45	0.49
28:BP:110:LYS:HD2	28:BP:110:LYS:N	2.23	0.49
23:BB:545:U:C5	23:BB:547:A:H5'	2.47	0.49
40:BH:4:ILE:HD12	40:BH:37:VAL:O	2.11	0.49
40:BH:4:ILE:HG12	40:BH:44:ILE:HG23	1.93	0.49
23:BB:1434:A:H62	23:BB:1558:C:H42	1.58	0.49
1:AA:1330:U:H2'	1:AA:1331:G:H5'	1.94	0.49
1:AA:842:U:H2'	1:AA:843:U:O3'	2.13	0.49
26:BD:124:ARG:HG3	26:BD:124:ARG:O	2.11	0.49
49:BR:14:VAL:HG22	49:BR:15:SER:N	2.27	0.49
29:BE:70:SER:HB2	29:BE:78:TRP:CZ2	2.48	0.49
23:DB:920:A:H2'	23:DB:921:C:C6	2.47	0.49
48:BG:85:LYS:HA	48:BG:131:VAL:HG12	1.94	0.49
8:AI:39:GLY:HA2	8:AI:44:ARG:CD	2.41	0.49
37:DL:77:ILE:HD11	37:DL:95:LEU:HD13	1.93	0.49
1:CA:658:C:H2'	1:CA:659:U:C6	2.44	0.49
46:BU:21:ARG:HG3	46:BU:21:ARG:HH11	1.76	0.49
23:DB:863:A:H2'	23:DB:864:G:C8	2.47	0.49
38:BM:31:PHE:HB3	38:BM:130:PHE:CZ	2.48	0.49
38:DM:135:VAL:O	38:DM:136:MET:HG3	2.12	0.49
38:DM:134:THR:HG22	38:DM:136:MET:H	1.76	0.49
10:CK:110:THR:CG2	21:CU:4:LYS:HA	2.42	0.49
7:AH:94:VAL:HG21	7:AH:100:ILE:O	2.12	0.49
1:AA:401:C:H2'	1:AA:402:G:H8	1.76	0.49
1:CA:399:G:H2'	1:CA:400:C:C6	2.47	0.49
1:CA:378:G:H2'	1:CA:379:C:C6	2.47	0.49
8:AI:66:VAL:CG2	8:AI:74:GLN:HG3	2.42	0.49
23:BB:528:A:N1	23:BB:2042:A:H2'	2.28	0.49
29:DE:34:ALA:CB	29:DE:96:VAL:HG21	2.41	0.49
1:AA:1200:C:H3'	1:AA:1201:A:H5'	1.93	0.49
7:AH:66:GLN:C	7:AH:68:LYS:H	2.15	0.49
6:AG:94:ARG:HH12	6:AG:98:LEU:HD21	1.77	0.49
23:DB:1153:C:H2'	23:DB:1154:G:O4'	2.12	0.49
43:BO:75:GLY:HA3	43:BO:106:LEU:HA	1.94	0.49
23:BB:1219:U:H2'	23:BB:1220:G:H8	1.77	0.49
19:AT:53:MET:O	19:AT:57:VAL:HG22	2.12	0.49
23:DB:937:C:H2'	23:DB:938:G:H8	1.76	0.49
1:AA:1247:U:O2'	1:AA:1248:A:H5'	2.12	0.49
5:AF:81:ASN:HB3	5:AF:84:VAL:HG12	1.94	0.49
11:CL:45:ASN:HD22	11:CL:45:ASN:N	2.09	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1326:U:H2'	23:DB:1327:A:H8	1.77	0.49
38:DM:78:LEU:HD12	38:DM:79:ALA:H	1.77	0.49
1:AA:208:U:H2'	1:AA:210:C:C5	2.47	0.49
26:BD:40:LEU:HD12	26:BD:41:ALA:N	2.28	0.49
23:BB:2691:C:H2'	23:BB:2692:G:H8	1.78	0.49
6:CG:94:ARG:NH1	6:CG:98:LEU:HD21	2.27	0.49
23:DB:2025:C:H5'	26:DD:154:LYS:NZ	2.27	0.49
2:CC:174:LEU:H	2:CC:174:LEU:HD12	1.77	0.49
2:CC:181:ILE:HD12	2:CC:181:ILE:N	2.26	0.49
25:BC:53:ILE:O	25:BC:53:ILE:HG23	2.11	0.49
33:D1:40:PRO:O	33:D1:43:ARG:HG2	2.11	0.49
23:BB:696:G:O2'	23:BB:697:G:H5'	2.12	0.49
26:DD:111:GLY:H	26:DD:194:PRO:HG2	1.77	0.49
1:CA:794:A:H2'	1:CA:795:C:C6	2.48	0.49
23:BB:2269:G:H4'	52:BW:19:ARG:HH12	1.78	0.49
52:BW:39:GLN:HG3	52:BW:42:THR:H	1.77	0.49
44:DQ:26:ALA:HB1	44:DQ:30:VAL:HG11	1.93	0.49
28:DP:62:LYS:HE3	28:DP:64:SER:OG	2.11	0.49
28:BP:47:ILE:HG13	28:BP:48:ALA:H	1.77	0.49
41:DJ:42:ALA:O	41:DJ:44:TYR:N	2.46	0.49
3:CD:191:SER:O	3:CD:192:ALA:HB2	2.13	0.49
48:BG:17:LYS:HB3	48:BG:24:THR:N	2.17	0.49
20:AB:172:ILE:HG23	20:AB:182:VAL:HG11	1.95	0.49
41:BJ:44:TYR:CD2	44:BQ:59:LEU:HD11	2.47	0.49
51:BZ:53:ALA:O	51:BZ:54:LYS:HB3	2.12	0.49
25:BC:117:SER:CB	25:BC:128:THR:HB	2.43	0.49
1:CA:1096:C:H2'	1:CA:1097:C:H6	1.78	0.49
47:BF:42:ALA:O	47:BF:43:ILE:C	2.51	0.49
46:BU:73:ASN:HD22	46:BU:74:ALA:N	2.10	0.49
23:DB:2897:U:H2'	23:DB:2898:U:H6	1.77	0.49
47:BF:2:LYS:HE3	47:BF:97:GLU:HA	1.94	0.49
23:BB:1570:A:H2'	23:BB:1571:A:C8	2.47	0.49
47:BF:35:LEU:CD2	47:BF:153:ILE:HG12	2.42	0.49
23:BB:362:A:H3'	23:BB:363:G:H8	1.76	0.49
23:BB:705:A:H61	23:BB:726:G:H1'	1.78	0.49
1:AA:1031:C:H4'	1:AA:1032:G:C5'	2.43	0.49
29:DE:173:THR:C	29:DE:175:ILE:H	2.15	0.49
23:DB:2147:A:O5'	23:DB:2148:G:H5''	2.12	0.49
25:BC:243:PRO:O	25:BC:250:GLN:HA	2.12	0.49
23:BB:2498:C:H3'	56:BB:3589:HOH:O	2.12	0.49
8:AI:39:GLY:O	8:AI:41:GLU:HG3	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1482:G:H2'	23:BB:1483:G:H8	1.77	0.49
1:CA:389:A:H2'	1:CA:389:A:N3	2.27	0.49
38:BM:126:ILE:HD12	38:BM:126:ILE:N	2.27	0.49
22:DA:7:G:H1'	43:DO:38:GLN:HE22	1.76	0.49
1:CA:596:A:H2'	1:CA:597:G:H8	1.77	0.49
37:BL:129:LYS:HA	37:BL:132:ARG:HG2	1.93	0.49
1:CA:204:G:H1'	1:CA:466:A:H62	1.78	0.49
29:DE:70:SER:HB2	29:DE:78:TRP:CZ2	2.48	0.49
2:AC:21:TRP:CH2	2:AC:31:ASN:HB3	2.47	0.49
23:BB:814:C:H2'	23:BB:815:C:H6	1.77	0.49
34:B3:41:ARG:HG3	34:B3:44:ARG:HH22	1.76	0.49
34:B3:41:ARG:HG3	34:B3:44:ARG:NH2	2.26	0.49
23:BB:414:C:H2'	23:BB:415:A:H8	1.78	0.49
45:DS:43:ALA:O	45:DS:46:LEU:HB2	2.12	0.49
23:BB:540:C:H2'	23:BB:541:A:H8	1.76	0.49
16:AQ:30:HIS:ND1	16:AQ:32:ILE:HG22	2.27	0.49
1:AA:714:G:H21	1:AA:777:A:H1'	1.77	0.49
23:DB:2355:G:H4'	52:DW:20:LEU:HD13	1.94	0.49
43:BO:28:VAL:O	43:BO:28:VAL:HG13	2.13	0.49
23:BB:1683:U:H2'	23:BB:1684:G:C8	2.47	0.49
52:DW:21:GLY:HA3	52:DW:33:GLY:HA2	1.94	0.49
19:AT:53:MET:HA	19:AT:56:ILE:HD12	1.93	0.49
23:BB:1161:C:H2'	23:BB:1162:G:H8	1.77	0.49
23:DB:81:G:H2'	23:DB:82:U:O4'	2.12	0.49
23:DB:2825:G:H5''	23:DB:2825:G:N3	2.27	0.49
1:CA:1069:C:H4'	1:CA:1192:C:O2	2.12	0.49
23:DB:1364:G:H5''	51:DZ:3:ARG:CZ	2.42	0.49
41:BJ:34:ARG:HG3	41:BJ:34:ARG:HH11	1.76	0.49
23:BB:2081:U:OP1	51:BZ:19:SER:HB3	2.13	0.49
23:BB:337:C:H2'	23:BB:338:G:O4'	2.12	0.49
23:BB:857:G:O2'	23:BB:858:G:H5'	2.12	0.49
20:CB:57:ASN:HA	20:CB:60:ALA:HB3	1.94	0.49
8:AI:20:ILE:HD13	8:AI:85:ALA:CB	2.40	0.49
44:BQ:26:ALA:HB1	44:BQ:30:VAL:HG11	1.94	0.49
25:DC:117:SER:CB	25:DC:128:THR:HB	2.42	0.49
50:DT:29:THR:CG2	50:DT:86:THR:HG22	2.43	0.49
1:AA:1085:U:H3'	1:AA:1086:U:C5	2.47	0.49
47:DF:49:LEU:HD11	47:DF:66:ILE:HD12	1.92	0.49
45:DS:36:LEU:HD22	45:DS:36:LEU:N	2.27	0.49
47:BF:84:ILE:HG22	47:BF:84:ILE:O	2.12	0.49
43:BO:26:LEU:HD13	43:BO:39:VAL:HG23	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:16:GLY:HA2	20:CB:40:ILE:CG1	2.42	0.49
28:BP:6:GLN:HA	28:BP:9:GLN:CD	2.33	0.49
37:DL:42:SER:C	37:DL:44:GLY:H	2.16	0.49
32:D4:11:CYS:SG	32:D4:13:ASN:HB2	2.52	0.49
32:D4:9:LYS:HD3	32:D4:9:LYS:N	2.28	0.49
23:BB:2732:G:H5'	23:BB:2733:A:O4'	2.13	0.49
23:BB:1023:U:H2'	23:BB:1024:G:H5'	1.93	0.49
8:CI:64:ILE:H	8:CI:64:ILE:HD12	1.78	0.49
9:CJ:53:ILE:HG13	13:CN:84:ARG:CZ	2.43	0.49
48:BG:10:VAL:HG12	48:BG:10:VAL:O	2.12	0.49
12:CM:52:ILE:HD12	12:CM:55:LEU:HD12	1.95	0.49
41:DJ:72:LYS:CG	41:DJ:89:PHE:HB2	2.43	0.49
1:AA:374:A:H5''	1:AA:452:A:N1	2.27	0.49
28:BP:74:GLN:O	28:BP:76:HIS:N	2.45	0.49
23:BB:3:U:O2'	23:BB:4:U:C6	2.63	0.49
8:CI:66:VAL:CG2	8:CI:74:GLN:HG3	2.41	0.49
23:BB:873:C:H2'	23:BB:874:G:C8	2.47	0.49
15:AP:61:VAL:HA	15:AP:65:ALA:HB3	1.94	0.49
1:AA:1480:A:H2'	1:AA:1481:U:O4'	2.13	0.49
1:CA:598:U:H4'	7:CH:85:TYR:CD2	2.47	0.49
23:BB:2155:U:H2'	23:BB:2156:G:H8	1.76	0.49
23:BB:118:A:N3	23:BB:178:G:H1'	2.27	0.49
1:AA:679:C:H2'	1:AA:680:C:C6	2.47	0.49
23:DB:2243:U:O2'	23:DB:2244:U:H5'	2.13	0.49
5:CF:43:GLY:HA2	5:CF:58:HIS:CD2	2.48	0.49
7:AH:94:VAL:HG12	7:AH:99:GLY:HA3	1.93	0.49
48:BG:154:GLU:C	48:BG:156:TYR:H	2.15	0.49
1:CA:6:G:H4'	1:CA:298:A:H4'	1.95	0.49
1:AA:34:C:H2'	1:AA:35:G:H8	1.76	0.49
25:BC:93:VAL:HG12	25:BC:101:ARG:O	2.13	0.49
23:BB:2247:A:O2'	23:BB:2248:C:H5'	2.11	0.49
23:BB:2757:A:H2'	23:BB:2757:A:N3	2.28	0.49
40:BH:122:LEU:HD12	40:BH:122:LEU:H	1.77	0.49
23:BB:1683:U:H2'	23:BB:1684:G:H8	1.78	0.49
25:BC:12:ARG:HD3	25:BC:12:ARG:O	2.13	0.49
23:BB:1258:U:H2'	23:BB:1259:G:H8	1.78	0.49
1:AA:1386:G:H2'	1:AA:1387:G:H8	1.76	0.49
23:BB:820:A:H2'	23:BB:821:A:O4'	2.12	0.49
1:AA:685:G:O2'	1:AA:686:U:H5'	2.12	0.49
11:CL:23:LEU:O	11:CL:25:ALA:N	2.45	0.49
23:DB:813:U:H2'	23:DB:814:C:C6	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CN:14:ALA:O	13:CN:18:LYS:HG3	2.12	0.49
44:BQ:79:ILE:HD13	44:BQ:79:ILE:O	2.11	0.49
40:BH:149:GLU:O	40:BH:149:GLU:HG3	2.11	0.49
40:DH:95:GLY:H	40:DH:98:ASP:HB2	1.78	0.49
46:DU:85:ARG:NH1	46:DU:86:PHE:N	2.60	0.49
42:DN:24:MET:HE1	42:DN:40:LYS:O	2.12	0.49
42:DN:39:PRO:C	42:DN:41:ALA:H	2.14	0.49
29:DE:150:THR:HG21	29:DE:153:LEU:HA	1.93	0.49
29:DE:166:LYS:O	29:DE:167:VAL:HB	2.12	0.49
50:DT:25:GLU:HG2	50:DT:29:THR:O	2.13	0.49
18:AS:48:ILE:HG22	18:AS:49:ALA:N	2.24	0.49
23:BB:996:A:H4'	44:BQ:91:ARG:HG2	1.94	0.49
1:AA:1073:U:H4'	20:AB:104:LYS:CE	2.42	0.49
28:DP:3:ILE:C	28:DP:3:ILE:HD13	2.33	0.49
29:BE:181:ILE:HG12	37:BL:2:ARG:N	2.27	0.49
47:DF:87:LYS:HG3	47:DF:88:VAL:N	2.17	0.49
27:BK:71:ARG:HB3	27:BK:72:PRO:HD2	1.95	0.49
47:BF:174:PHE:HB3	47:BF:176:PHE:CD1	2.48	0.49
23:DB:743:A:C2'	23:DB:744:U:H5'	2.42	0.49
26:DD:90:PHE:CD2	26:DD:94:GLN:HG3	2.47	0.49
26:DD:90:PHE:HD2	26:DD:94:GLN:HG3	1.77	0.49
23:DB:1570:A:H2'	23:DB:1571:A:C8	2.47	0.49
1:CA:840:C:N3	1:CA:842:U:H5'	2.26	0.49
36:D2:42:LEU:O	36:D2:43:THR:HG23	2.13	0.49
23:DB:1551:A:C3'	23:DB:1552:A:H5''	2.42	0.49
43:BO:51:ALA:HB3	43:BO:78:VAL:CG2	2.38	0.49
24:BI:62:ALA:C	24:BI:64:ARG:H	2.15	0.49
7:CH:51:GLU:HG2	7:CH:52:GLY:N	2.24	0.49
12:CM:63:VAL:HG13	12:CM:67:ASP:HB2	1.94	0.49
12:AM:95:PRO:CD	12:AM:108:ARG:HG2	2.43	0.49
23:BB:454:A:H4'	23:BB:455:C:OP2	2.12	0.49
38:DM:101:VAL:HG13	38:DM:101:VAL:O	2.13	0.49
2:CC:13:ILE:HG12	2:CC:14:VAL:HG13	1.93	0.49
11:CL:83:GLY:HA2	11:CL:94:TYR:HA	1.95	0.49
3:AD:138:PRO:HA	3:AD:181:PHE:CD2	2.47	0.49
23:DB:2101:A:O2'	23:DB:2102:G:H5'	2.12	0.49
1:AA:441:A:H61	1:AA:493:A:H62	1.61	0.49
1:CA:1272:G:H2'	1:CA:1273:C:C6	2.48	0.49
20:AB:125:PHE:C	20:AB:127:LYS:HD2	2.33	0.49
1:CA:1057:G:H5''	2:CC:153:SER:HB2	1.95	0.49
2:CC:129:PHE:CG	2:CC:130:ARG:N	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BP:88:ARG:HB3	28:BP:88:ARG:NH2	2.27	0.49
23:BB:2065:C:H2'	23:BB:2066:C:C6	2.46	0.49
5:CF:18:VAL:O	5:CF:22:ILE:HG13	2.11	0.49
47:DF:19:PHE:HE1	47:DF:167:ALA:HB2	1.78	0.49
28:BP:26:GLU:HG3	28:BP:43:GLU:HB2	1.95	0.49
47:BF:115:GLY:HA3	47:BF:177:ARG:HD2	1.94	0.49
23:BB:540:C:O2'	23:BB:541:A:H5'	2.12	0.49
14:CO:32:LEU:O	14:CO:36:ILE:HG12	2.12	0.49
23:BB:1665:A:O2'	23:BB:1666:G:H5'	2.13	0.49
23:BB:975:A:H1'	23:BB:990:A:C2	2.47	0.49
23:BB:2213:U:O2	23:BB:2213:U:H2'	2.13	0.49
1:CA:893:C:H2'	1:CA:894:G:C8	2.47	0.49
23:DB:909:A:H2'	23:DB:912:C:H5	1.76	0.49
23:BB:2282:G:H4'	23:BB:2389:G:O2'	2.12	0.49
26:DD:7:LYS:CE	26:DD:198:GLY:HA2	2.42	0.49
23:BB:1258:U:H2'	23:BB:1259:G:C8	2.47	0.49
1:CA:984:C:O2'	1:CA:985:C:H5'	2.12	0.49
23:DB:782:A:N3	25:DC:224:MET:HB3	2.28	0.49
23:DB:1319:C:O2'	23:DB:1320:C:H5'	2.13	0.49
23:DB:975:A:H1'	23:DB:990:A:C2	2.48	0.49
23:DB:598:U:H2'	23:DB:599:A:H8	1.77	0.49
15:CP:73:ALA:O	15:CP:77:GLU:HG3	2.13	0.49
21:CU:27:VAL:O	21:CU:31:VAL:HG23	2.12	0.49
23:DB:1539:U:H2'	23:DB:1540:G:C8	2.46	0.49
23:BB:81:G:H2'	23:BB:82:U:O4'	2.13	0.49
25:DC:175:LEU:HD11	25:DC:181:ARG:HG3	1.94	0.49
10:AK:115:ILE:O	10:AK:115:ILE:HD12	2.11	0.49
34:B3:50:SER:C	34:B3:52:GLY:H	2.16	0.49
23:DB:2385:C:H2'	23:DB:2386:A:C8	2.47	0.49
49:BR:34:GLU:CD	49:BR:60:LYS:HE2	2.33	0.49
23:DB:2260:C:H2'	23:DB:2261:C:H6	1.77	0.49
29:BE:150:THR:HG21	29:BE:153:LEU:HA	1.94	0.49
50:DT:13:ALA:O	50:DT:32:LEU:HB2	2.13	0.49
20:AB:165:ALA:HB3	20:AB:186:VAL:HG12	1.95	0.49
44:BQ:86:SER:HB2	49:BR:50:GLY:O	2.12	0.49
44:DQ:109:VAL:CG1	44:DQ:113:LYS:HE3	2.41	0.49
23:BB:588:U:H1'	29:BE:85:PHE:CD1	2.47	0.49
40:BH:114:GLU:HB3	40:BH:134:VAL:CA	2.43	0.49
40:BH:141:LYS:HD3	40:BH:141:LYS:N	2.26	0.49
24:BI:74:PRO:O	24:BI:77:VAL:HG22	2.12	0.49
10:AK:73:VAL:O	10:AK:76:TYR:HB2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BN:39:PRO:C	42:BN:41:ALA:H	2.16	0.49
47:DF:65:LEU:H	47:DF:88:VAL:HG22	1.75	0.49
23:DB:2732:G:H5'	23:DB:2733:A:O4'	2.12	0.49
23:BB:2732:G:H3'	23:BB:2733:A:H5'	1.95	0.49
47:DF:104:THR:C	47:DF:108:PRO:HG2	2.33	0.49
47:DF:174:PHE:HB3	47:DF:176:PHE:CD1	2.47	0.49
30:DY:7:THR:HA	30:DY:34:THR:HA	1.95	0.49
30:DY:8:GLN:HB3	30:DY:31:ILE:O	2.13	0.49
24:DI:21:PRO:CB	24:DI:22:PRO:HD3	2.38	0.49
14:AO:17:ARG:HD3	14:AO:24:SER:OG	2.13	0.49
47:DF:32:LYS:HE2	47:DF:34:THR:HG22	1.93	0.49
23:BB:1080:A:O2'	23:BB:1081:U:H5'	2.12	0.49
23:DB:1439:A:N7	23:DB:1440:U:C6	2.81	0.49
35:BV:40:ILE:HD13	35:BV:40:ILE:H	1.78	0.49
9:CJ:14:ASP:OD1	9:CJ:17:LEU:HB2	2.13	0.49
29:BE:58:LYS:N	29:BE:58:LYS:HD3	2.27	0.49
23:BB:1439:A:N7	23:BB:1440:U:N1	2.61	0.49
23:DB:2471:A:O2'	23:DB:2472:G:O5'	2.31	0.49
1:AA:1251:A:H2'	1:AA:1252:A:C8	2.47	0.49
25:BC:245:THR:O	25:BC:247:TRP:N	2.45	0.49
23:DB:1487:U:H2'	23:DB:1488:C:C6	2.48	0.49
23:BB:1779:U:C5	23:BB:1784:A:N7	2.79	0.49
37:DL:95:LEU:O	37:DL:100:ILE:HG22	2.13	0.49
23:DB:192:C:C2'	23:DB:193:U:H5'	2.42	0.49
6:CG:62:GLU:O	6:CG:66:GLU:HG3	2.12	0.49
46:BU:14:THR:O	46:BU:18:LYS:HA	2.12	0.49
1:AA:1057:G:H5''	2:AC:153:SER:HB2	1.94	0.49
38:BM:4:PRO:HG2	38:BM:70:ASP:HA	1.93	0.49
23:BB:1729:U:H2'	23:BB:1730:C:O4'	2.13	0.49
1:AA:17:U:O2'	1:AA:18:C:H5'	2.12	0.49
10:AK:110:THR:CG2	21:AU:4:LYS:HA	2.43	0.49
1:CA:552:U:O2'	1:CA:553:A:H5'	2.13	0.49
1:AA:679:C:H2'	1:AA:680:C:H6	1.77	0.49
25:DC:71:ASP:O	25:DC:73:ILE:HG12	2.13	0.49
23:DB:68:G:H2'	23:DB:69:C:H6	1.77	0.49
5:CF:47:LEU:HD21	5:CF:57:ALA:CB	2.42	0.49
23:DB:2776:A:H4'	23:DB:2777:G:O5'	2.13	0.49
23:DB:100:U:OP1	23:DB:101:A:O5'	2.30	0.49
22:BA:49:C:H2'	22:BA:50:A:H8	1.77	0.49
23:BB:1198:U:H2'	23:BB:1199:U:H6	1.78	0.49
22:BA:88:C:HO2'	22:BA:89:U:H6	1.61	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2359:C:H2'	23:BB:2360:G:C8	2.48	0.49
23:BB:39:G:H2'	23:BB:40:U:C6	2.48	0.49
6:AG:15:PRO:HG3	6:AG:39:GLU:OE1	2.13	0.49
23:BB:2537:U:H2'	23:BB:2538:C:C6	2.47	0.49
27:BK:2:ILE:HD12	27:BK:2:ILE:N	2.27	0.49
23:DB:782:A:N7	25:DC:219:VAL:HG21	2.28	0.49
23:BB:2828:G:O2'	23:BB:2829:A:H5'	2.11	0.49
23:BB:1310:G:H21	23:BB:1610:A:H8	1.61	0.49
1:CA:432:A:H2'	1:CA:433:G:H5'	1.94	0.49
1:CA:627:G:H2'	1:CA:628:G:C8	2.47	0.49
1:CA:264:C:O2'	16:CQ:65:PRO:HG2	2.12	0.49
4:AE:15:ILE:HB	4:AE:35:LEU:O	2.12	0.49
23:BB:57:C:H2'	23:BB:58:G:O4'	2.12	0.49
23:DB:1916:A:H2'	23:DB:1917:U:O4'	2.13	0.49
2:AC:174:LEU:HD12	2:AC:174:LEU:H	1.78	0.49
1:CA:219:U:H2'	1:CA:220:G:H8	1.77	0.49
3:CD:49:ASP:O	3:CD:53:GLN:HG3	2.13	0.49
1:AA:715:A:H2'	1:AA:716:A:C8	2.47	0.49
22:DA:76:G:O2'	22:DA:77:U:H5'	2.12	0.49
20:CB:70:GLY:HA3	20:CB:79:VAL:HG21	1.94	0.49
1:CA:242:G:H2'	1:CA:243:A:H5''	1.94	0.49
29:BE:160:ALA:O	29:BE:161:ALA:HB3	2.13	0.49
1:AA:1321:U:H2'	1:AA:1322:C:H5	1.78	0.49
18:AS:30:LEU:HB2	18:AS:48:ILE:HA	1.94	0.49
44:BQ:91:ARG:NH2	49:BR:11:GLN:H	2.11	0.49
25:BC:183:VAL:HG22	25:BC:187:CYS:SG	2.53	0.49
37:BL:19:LEU:HD23	37:BL:31:GLY:O	2.12	0.49
20:CB:184:ALA:C	20:CB:199:ILE:HD12	2.33	0.49
23:BB:2108:A:C2'	23:BB:2109:U:H4'	2.35	0.49
24:DI:126:ARG:HB3	24:DI:126:ARG:NH1	2.27	0.49
45:BS:54:ALA:HA	45:BS:57:ASN:HB2	1.95	0.49
23:BB:2598:A:OP1	25:BC:233:GLY:HA3	2.13	0.49
47:BF:65:LEU:H	47:BF:88:VAL:HG22	1.76	0.49
47:DF:168:LEU:O	47:DF:169:LEU:HB2	2.12	0.49
47:BF:27:VAL:O	47:BF:27:VAL:HG23	2.13	0.49
9:CJ:5:ARG:HG2	9:CJ:79:PRO:HG3	1.95	0.49
30:BY:7:THR:HG22	30:BY:9:THR:H	1.78	0.49
23:BB:643:A:H2'	23:BB:644:A:O4'	2.12	0.49
16:CQ:68:LYS:HG2	16:CQ:69:THR:HG23	1.95	0.49
9:AJ:10:LEU:HB3	9:AJ:18:ILE:HD11	1.93	0.49
9:AJ:10:LEU:O	9:AJ:71:LEU:HA	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:15:VAL:HG22	12:CM:33:LEU:CD1	2.42	0.49
35:BV:80:HIS:CG	35:BV:83:LYS:HB2	2.47	0.49
23:BB:2187:U:H2'	23:BB:2188:U:H6	1.77	0.49
1:AA:373:A:H2'	1:AA:374:A:H8	1.77	0.49
49:DR:15:SER:H	49:DR:18:GLN:CD	2.15	0.49
4:AE:28:ARG:NH1	4:AE:30:PHE:HB3	2.25	0.49
20:CB:95:TRP:CH2	20:CB:100:LEU:HB2	2.42	0.49
23:DB:1487:U:H2'	23:DB:1488:C:H6	1.78	0.49
22:DA:32:U:H1'	22:DA:52:A:N7	2.28	0.49
8:CI:49:GLN:N	8:CI:50:PRO:HD2	2.27	0.49
39:DX:41:HIS:O	39:DX:44:LYS:HB3	2.12	0.49
1:CA:1169:A:H2'	1:CA:1170:A:C8	2.47	0.49
46:BU:11:ILE:O	46:BU:11:ILE:HD13	2.12	0.49
23:DB:418:C:H2'	23:DB:419:U:C6	2.47	0.49
1:AA:1287:A:H2'	1:AA:1288:A:H8	1.77	0.49
26:BD:8:LYS:HB2	26:BD:201:LEU:HD21	1.95	0.49
23:BB:1454:C:H5'	42:BN:63:ARG:NE	2.27	0.49
42:BN:106:ASP:C	42:BN:108:ALA:N	2.66	0.49
1:CA:734:G:H2'	1:CA:735:C:C6	2.48	0.49
23:BB:2136:G:N3	23:BB:2136:G:H2'	2.28	0.49
23:BB:2065:C:O2'	23:BB:2066:C:H5'	2.12	0.49
26:DD:175:LEU:HD21	26:DD:191:GLY:O	2.13	0.49
23:DB:572:A:H5''	23:DB:573:U:OP2	2.13	0.49
1:AA:1151:A:O2'	1:AA:1152:A:H8	1.95	0.49
23:DB:1923:U:O2'	23:DB:1924:C:H5'	2.12	0.49
47:BF:161:SER:OG	47:BF:164:GLU:HG3	2.12	0.49
20:CB:107:ARG:HA	20:CB:110:ILE:HD12	1.94	0.49
23:BB:660:C:H2'	23:BB:661:A:C8	2.46	0.49
19:CT:53:MET:O	19:CT:57:VAL:HG22	2.12	0.49
23:BB:1341:G:N2	23:BB:1398:C:H4'	2.28	0.49
22:BA:30:C:H2'	22:BA:30:C:O2	2.13	0.49
23:BB:1830:C:H2'	23:BB:1831:G:H8	1.76	0.49
43:DO:28:VAL:O	43:DO:28:VAL:HG13	2.13	0.49
1:AA:1366:C:H2'	1:AA:1367:C:C6	2.47	0.49
1:AA:201:G:H2'	1:AA:202:G:O4'	2.12	0.49
23:BB:2693:G:O2'	23:BB:2694:G:H5'	2.13	0.49
23:BB:1539:U:H2'	23:BB:1540:G:C8	2.48	0.49
1:AA:1113:C:O2'	1:AA:1114:C:H5'	2.13	0.49
23:BB:1773:A:N7	23:BB:1829:A:H1'	2.28	0.49
22:DA:30:C:H2'	22:DA:31:C:H5'	1.94	0.49
23:DB:1263:U:O2'	31:D0:7:PRO:HD2	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CK:115:ILE:HD12	10:CK:115:ILE:O	2.12	0.49
25:BC:54:GLY:O	25:BC:214:GLY:HA2	2.12	0.49
23:DB:755:U:H2'	23:DB:756:A:C8	2.47	0.49
24:DI:89:SER:HA	24:DI:97:VAL:HG11	1.95	0.49
51:BZ:74:ARG:HD2	51:BZ:76:GLU:OE2	2.12	0.49
5:CF:3:HIS:N	5:CF:92:THR:OG1	2.45	0.49
8:AI:20:ILE:HG23	8:AI:60:LEU:CD1	2.43	0.49
25:DC:155:ARG:CB	25:DC:155:ARG:HH11	2.26	0.49
29:DE:150:THR:OG1	29:DE:151:GLY:N	2.45	0.49
47:DF:76:PHE:HD2	47:DF:78:ILE:HD13	1.75	0.49
23:BB:851:C:H2'	23:BB:852:U:H6	1.78	0.49
1:AA:797:C:O2'	1:AA:798:U:H5'	2.13	0.49
25:BC:83:ASP:HB2	25:BC:90:ILE:HB	1.95	0.49
45:DS:54:ALA:HA	45:DS:57:ASN:HB2	1.95	0.49
27:DK:47:ILE:HG23	27:DK:48:PRO:CD	2.43	0.49
48:DG:17:LYS:HA	48:DG:17:LYS:NZ	2.24	0.49
40:BH:133:GLN:HA	40:BH:139:PHE:HB2	1.95	0.49
20:CB:15:PHE:CD1	20:CB:16:GLY:N	2.80	0.49
2:CC:126:ARG:HH22	2:CC:190:THR:CG2	2.16	0.49
23:BB:1242:U:H2'	23:BB:1243:C:C6	2.48	0.49
23:BB:1203:U:C4'	37:BL:3:LEU:HD12	2.43	0.49
27:DK:43:ILE:CD1	27:DK:52:VAL:HB	2.43	0.49
1:CA:465:A:H5'	1:CA:465:A:N3	2.27	0.49
27:BK:54:LYS:HD2	27:BK:54:LYS:N	2.23	0.49
1:AA:438:U:H4'	3:AD:119:HIS:HD2	1.78	0.49
14:AO:25:THR:CB	14:AO:70:LEU:HD23	2.42	0.49
40:DH:113:SER:N	40:DH:132:PHE:HE1	2.08	0.49
47:BF:11:VAL:HG21	47:BF:172:PHE:CE1	2.48	0.49
2:CC:106:ARG:O	2:CC:106:ARG:HG2	2.13	0.49
23:BB:741:U:H2'	23:BB:742:A:H8	1.78	0.49
1:AA:378:G:H2'	1:AA:379:C:C6	2.48	0.49
23:BB:2821:A:OP2	26:BD:115:GLY:HA3	2.12	0.49
26:BD:124:ARG:HA	26:BD:165:MET:CE	2.43	0.49
1:CA:451:A:N6	1:CA:480:U:H2'	2.27	0.49
48:DG:84:LYS:HG3	48:DG:131:VAL:CA	2.42	0.49
23:BB:1028:A:N6	23:BB:1125:G:H2'	2.28	0.49
23:DB:2077:A:C6	23:DB:2078:C:N4	2.81	0.49
4:AE:101:GLY:H	4:AE:121:ASN:ND2	2.10	0.49
1:AA:736:C:H5''	5:AF:90:MET:CE	2.42	0.49
23:BB:1465:G:H2'	23:BB:1466:U:C6	2.47	0.49
28:BP:112:ARG:HB2	28:BP:112:ARG:HH11	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BI:135:MET:HG3	24:BI:137:LEU:HG	1.95	0.49
24:BI:85:ILE:CD1	24:BI:137:LEU:HD21	2.43	0.49
7:CH:94:VAL:HG21	7:CH:100:ILE:O	2.12	0.49
1:CA:677:U:H2'	1:CA:678:U:C6	2.48	0.49
23:BB:150:U:H2'	23:BB:151:C:H6	1.77	0.49
45:DS:13:SER:OG	45:DS:14:ALA:N	2.46	0.49
1:CA:366:A:O2'	1:CA:394:G:N2	2.46	0.49
6:CG:24:LYS:O	6:CG:28:ILE:HG12	2.12	0.49
23:DB:1064:C:H2'	23:DB:1065:U:O4'	2.13	0.49
1:AA:803:G:H2'	1:AA:804:U:C6	2.48	0.49
1:CA:420:U:H2'	1:CA:422:C:C4	2.48	0.49
28:BP:103:THR:HG22	28:BP:104:GLY:H	1.78	0.49
4:AE:156:ARG:HA	7:AH:63:LYS:NZ	2.28	0.49
25:DC:222:THR:HA	25:DC:231:HIS:O	2.12	0.49
4:CE:156:ARG:HB3	7:CH:43:GLY:HA3	1.95	0.49
23:DB:1824:G:O2'	23:DB:1825:U:H5'	2.12	0.49
2:AC:181:ILE:N	2:AC:181:ILE:HD12	2.28	0.49
23:DB:2761:A:H1'	48:DG:142:GLN:NE2	2.27	0.49
23:DB:2054:A:H2'	31:D0:4:GLN:OE1	2.12	0.49
52:BW:65:LYS:HG3	52:BW:84:GLU:CB	2.41	0.49
26:BD:106:LYS:N	26:BD:106:LYS:HD3	2.28	0.49
26:BD:51:THR:HG22	26:BD:52:THR:H	1.77	0.49
8:AI:51:LEU:HB3	8:AI:56:MET:CG	2.43	0.49
8:AI:23:GLY:H	8:AI:60:LEU:HA	1.77	0.49
10:CK:92:ARG:HH21	21:CU:24:LYS:CG	2.25	0.49
18:AS:66:VAL:C	18:AS:68:HIS:H	2.16	0.49
20:AB:101:THR:HG23	20:AB:102:ASN:N	2.27	0.49
28:DP:1:SER:H1	28:DP:4:ILE:HB	1.77	0.49
25:BC:140:VAL:HG12	25:BC:141:HIS:N	2.27	0.49
39:BX:7:ARG:NH1	39:BX:7:ARG:HB2	2.27	0.49
23:DB:2150:C:H2'	23:DB:2151:U:C6	2.48	0.49
27:DK:71:ARG:HA	27:DK:71:ARG:HE	1.78	0.49
1:AA:87:C:H2'	1:AA:88:U:H4'	1.95	0.49
23:DB:328:U:H4'	46:DU:65:GLN:CD	2.32	0.49
15:AP:40:ASN:ND2	15:AP:43:ALA:N	2.53	0.49
1:AA:413:G:H2'	1:AA:428:G:H21	1.78	0.49
35:DV:4:ILE:N	35:DV:62:THR:O	2.46	0.49
23:BB:1287:A:H3'	23:BB:1288:G:N2	2.28	0.49
1:AA:409:U:OP1	3:AD:23:GLY:HA3	2.13	0.49
6:AG:14:ASP:O	6:AG:18:GLY:HA2	2.13	0.49
23:BB:141:G:H3'	23:BB:142:A:O4'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DJ:59:ALA:O	41:DJ:62:VAL:HG12	2.13	0.49
23:DB:1429:G:H2'	23:DB:1430:G:C8	2.43	0.49
23:DB:2864:G:H2'	23:DB:2865:U:C6	2.48	0.49
23:DB:1591:A:H2'	23:DB:1592:C:C6	2.48	0.49
16:CQ:18:LYS:HA	16:CQ:47:ASP:O	2.13	0.49
16:CQ:60:ILE:HG22	16:CQ:74:LEU:HA	1.94	0.49
20:AB:57:ASN:HA	20:AB:60:ALA:HB3	1.94	0.49
23:BB:2678:C:H2'	23:BB:2679:A:C8	2.48	0.49
23:DB:616:A:H3'	23:DB:617:G:C8	2.41	0.49
23:BB:1386:C:H1'	23:BB:1470:A:H1'	1.94	0.49
12:CM:95:PRO:CD	12:CM:108:ARG:HG2	2.43	0.49
12:AM:22:TYR:N	12:AM:65:GLU:OE2	2.46	0.49
1:CA:1238:A:H2	1:CA:1241:G:N3	2.11	0.49
29:DE:59:PRO:HB2	29:DE:67:ARG:NH2	2.25	0.49
23:DB:873:C:H2'	23:DB:874:G:H8	1.78	0.49
1:CA:1172:C:O2'	1:CA:1173:U:H5'	2.12	0.49
6:AG:4:ARG:NE	6:AG:6:ILE:HG23	2.28	0.49
38:BM:40:ARG:HB2	38:BM:93:VAL:HG22	1.93	0.49
14:AO:35:GLN:O	14:AO:39:LEU:HB2	2.13	0.49
23:BB:315:G:H2'	23:BB:316:C:H6	1.76	0.49
23:DB:2795:C:H2'	23:DB:2796:U:C1'	2.43	0.49
48:BG:145:ALA:HA	48:BG:148:ARG:CG	2.42	0.49
23:DB:2772:C:H2'	23:DB:2773:C:H6	1.77	0.49
1:AA:1216:A:H5''	13:AN:4:SER:CB	2.42	0.49
10:CK:70:ALA:O	10:CK:74:LYS:HB2	2.13	0.49
23:BB:2557:G:H2'	23:BB:2558:C:H6	1.78	0.49
23:DB:2557:G:H2'	23:DB:2558:C:H6	1.78	0.49
23:BB:322:A:H5'	23:BB:340:A:C1'	2.43	0.49
1:CA:834:U:H2'	1:CA:835:U:H6	1.78	0.49
23:DB:1230:A:H2'	23:DB:1231:U:H6	1.75	0.49
1:AA:34:C:H2'	1:AA:35:G:C8	2.47	0.49
23:DB:758:C:O2	23:DB:1981:A:H2	1.95	0.49
23:DB:38:A:N3	29:DE:43:THR:HB	2.28	0.49
20:CB:113:LEU:HD12	20:CB:143:LEU:HB3	1.95	0.49
23:BB:1275:A:N3	23:BB:1275:A:H2'	2.28	0.49
23:DB:41:C:O2'	23:DB:42:A:H5'	2.12	0.49
3:CD:171:GLU:HB2	3:CD:180:THR:HB	1.94	0.49
23:DB:660:C:H2'	23:DB:661:A:C8	2.47	0.49
23:BB:951:C:O2'	23:BB:952:G:H5'	2.13	0.49
27:BK:107:LEU:C	27:BK:109:SER:H	2.16	0.49
27:DK:2:ILE:HA	27:DK:33:ALA:H	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2692:G:O2'	23:BB:2693:G:H5'	2.13	0.49
19:CT:14:GLU:O	19:CT:17:ARG:HB3	2.13	0.49
1:CA:903:G:H2'	1:CA:904:U:C6	2.48	0.49
22:BA:102:G:O2'	22:BA:103:U:H5'	2.13	0.49
44:DQ:51:GLN:O	44:DQ:54:ARG:HB2	2.13	0.49
23:BB:2233:U:H2'	23:BB:2234:G:C8	2.48	0.49
8:AI:53:LEU:O	8:AI:53:LEU:HD13	2.13	0.49
10:CK:117:HIS:O	10:CK:118:ASN:HB2	2.13	0.49
51:DZ:76:GLU:HG3	51:DZ:77:LYS:H	1.77	0.48
46:DU:85:ARG:NE	46:DU:85:ARG:HA	2.26	0.48
46:DU:85:ARG:O	46:DU:92:VAL:HB	2.12	0.48
44:DQ:26:ALA:HB1	44:DQ:30:VAL:CG1	2.42	0.48
8:AI:61:ASP:C	8:AI:62:LEU:HD13	2.34	0.48
44:BQ:24:TYR:CG	44:BQ:25:GLY:N	2.80	0.48
28:BP:62:LYS:O	28:BP:63:ILE:HB	2.13	0.48
25:DC:140:VAL:HG12	25:DC:141:HIS:N	2.28	0.48
41:DJ:45:THR:HG23	41:DJ:45:THR:O	2.13	0.48
39:BX:28:LEU:HB3	39:BX:43:LEU:HD21	1.95	0.48
49:BR:4:VAL:HA	49:BR:12:HIS:O	2.13	0.48
1:AA:1072:G:H2'	1:AA:1073:U:H6	1.77	0.48
25:BC:91:ALA:CB	25:BC:105:ALA:HB2	2.43	0.48
45:DS:48:LYS:HE2	45:DS:52:GLU:OE1	2.13	0.48
37:DL:4:ASN:ND2	37:DL:4:ASN:N	2.61	0.48
18:CS:28:LYS:HZ2	18:CS:28:LYS:N	2.01	0.48
42:DN:51:LEU:HD21	42:DN:70:THR:HG21	1.95	0.48
18:AS:62:THR:HG22	18:AS:63:ASP:N	2.29	0.48
23:DB:2421:G:N7	34:D3:30:HIS:NE2	2.61	0.48
6:CG:14:ASP:O	6:CG:18:GLY:HA2	2.13	0.48
6:CG:21:LEU:H	6:CG:21:LEU:HD23	1.78	0.48
1:AA:1324:A:H2'	1:AA:1325:C:O4'	2.13	0.48
14:CO:84:ARG:C	14:CO:85:LEU:HD12	2.34	0.48
49:DR:78:ARG:NH2	49:DR:78:ARG:HG3	2.28	0.48
22:BA:32:U:H2'	22:BA:33:G:C8	2.48	0.48
43:BO:30:ARG:HG3	43:BO:30:ARG:HH11	1.77	0.48
46:BU:39:ASN:CB	46:BU:62:ALA:HB3	2.41	0.48
23:BB:2862:G:H2'	23:BB:2863:C:C6	2.48	0.48
23:BB:2864:G:H2'	23:BB:2865:U:C6	2.48	0.48
1:CA:1330:U:H2'	1:CA:1331:G:H5'	1.95	0.48
23:DB:845:A:C2'	23:DB:846:U:H5''	2.39	0.48
16:AQ:7:LEU:O	16:AQ:60:ILE:HD13	2.13	0.48
1:CA:1026:G:H2'	1:CA:1027:C:C6	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2144:G:C2	23:DB:2146:C:H5'	2.47	0.48
17:CR:56:ARG:O	17:CR:60:ARG:HG2	2.13	0.48
4:CE:158:LYS:NZ	7:CH:65:PHE:HA	2.28	0.48
4:CE:82:HIS:HE1	4:CE:146:MET:HA	1.77	0.48
8:CI:41:GLU:C	8:CI:43:ALA:H	2.16	0.48
23:BB:419:U:H2'	23:BB:420:C:H6	1.76	0.48
23:DB:2800:A:H2'	23:DB:2801:G:O4'	2.12	0.48
23:DB:522:A:H2'	23:DB:523:C:H6	1.75	0.48
10:AK:70:ALA:O	10:AK:74:LYS:HB2	2.12	0.48
23:BB:2579:C:O2'	26:BD:136:ASN:HA	2.13	0.48
23:DB:2756:U:C1'	23:DB:2757:A:H5''	2.42	0.48
12:AM:86:ARG:O	12:AM:89:ARG:HB2	2.13	0.48
23:DB:1585:C:H2'	23:DB:1586:A:O4'	2.13	0.48
23:BB:833:A:H1'	37:BL:52:GLY:N	2.28	0.48
51:DZ:20:HIS:O	51:DZ:21:ALA:HB3	2.13	0.48
23:DB:200:U:H5''	51:DZ:22:LEU:O	2.13	0.48
23:DB:38:A:O2'	29:DE:43:THR:HA	2.13	0.48
1:CA:858:G:O6	1:CA:869:G:H3'	2.13	0.48
14:CO:39:LEU:HD23	14:CO:43:PHE:HE1	1.78	0.48
1:CA:1310:G:O2'	1:CA:1311:A:H5'	2.13	0.48
23:DB:1536:C:H1'	23:DB:1537:G:N2	2.29	0.48
21:AU:9:GLU:OE2	2:CC:108:PRO:HG3	2.13	0.48
23:BB:1295:C:H2'	23:BB:1296:G:H8	1.78	0.48
1:AA:893:C:H2'	1:AA:894:G:H8	1.76	0.48
6:CG:94:ARG:HH11	6:CG:98:LEU:HD11	1.78	0.48
22:DA:30:C:H1'	22:DA:58:A:N1	2.28	0.48
4:AE:156:ARG:HB3	7:AH:43:GLY:HA3	1.95	0.48
4:CE:156:ARG:HA	7:CH:63:LYS:NZ	2.28	0.48
1:CA:1332:A:H2'	1:CA:1333:A:O4'	2.13	0.48
1:AA:152:A:H2'	1:AA:153:C:O4'	2.12	0.48
23:BB:378:C:O2'	23:BB:379:G:H5'	2.13	0.48
7:CH:113:ARG:HH21	7:CH:114:ALA:HA	1.78	0.48
23:DB:1714:U:H3'	23:DB:1715:G:C5'	2.43	0.48
23:DB:1749:A:H2'	23:DB:1750:G:H8	1.77	0.48
33:D1:14:ALA:HB3	33:D1:16:THR:HG22	1.93	0.48
23:BB:1390:U:O2'	23:BB:1391:U:H5'	2.12	0.48
23:DB:657:U:H2'	23:DB:658:U:C6	2.48	0.48
29:DE:27:LEU:O	29:DE:30:GLN:HB3	2.13	0.48
9:CJ:88:MET:SD	9:CJ:88:MET:N	2.86	0.48
27:DK:109:SER:C	27:DK:111:LYS:H	2.17	0.48
23:BB:510:C:H2'	23:BB:511:U:O4'	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:6:GLN:HE22	51:BZ:77:LYS:HZ1	1.57	0.48
50:BT:4:GLU:CD	50:BT:5:GLU:H	2.16	0.48
3:AD:102:TYR:CE1	3:AD:109:THR:HA	2.48	0.48
33:B1:8:ILE:HD12	33:B1:51:ALA:HA	1.96	0.48
13:CN:49:THR:O	13:CN:50:LEU:HB2	2.12	0.48
1:AA:1319:A:H4'	1:AA:1320:C:OP1	2.13	0.48
41:BJ:4:PHE:HB3	41:BJ:44:TYR:CD1	2.49	0.48
41:BJ:100:VAL:O	41:BJ:104:ALA:HB2	2.14	0.48
20:CB:172:ILE:HG23	20:CB:182:VAL:HG11	1.95	0.48
40:BH:116:ARG:CZ	40:BH:131:SER:HB3	2.43	0.48
20:CB:187:ASP:OD1	20:CB:203:ASP:HB3	2.13	0.48
20:CB:46:VAL:HA	20:CB:49:PHE:CD2	2.48	0.48
23:DB:1241:A:H2'	23:DB:1242:U:H5'	1.95	0.48
45:BS:26:GLY:HA2	45:BS:71:VAL:O	2.13	0.48
47:DF:134:GLN:H	47:DF:150:GLY:H	1.61	0.48
23:BB:2306:C:H3'	23:BB:2307:G:H5''	1.93	0.48
3:AD:115:GLN:HE21	3:AD:119:HIS:CE1	2.31	0.48
6:AG:14:ASP:HB3	6:AG:19:SER:H	1.78	0.48
41:BJ:19:ASP:OD2	41:BJ:58:ASN:HB2	2.13	0.48
23:BB:547:A:H5''	23:BB:548:G:N7	2.27	0.48
23:BB:2869:G:H2'	23:BB:2870:C:H6	1.77	0.48
12:CM:14:ALA:HB1	12:CM:33:LEU:HD21	1.95	0.48
23:DB:847:U:O4'	23:DB:847:U:O2	2.30	0.48
16:AQ:60:ILE:HG12	16:AQ:72:TRP:HE3	1.77	0.48
49:BR:15:SER:OG	49:BR:18:GLN:HG2	2.13	0.48
23:DB:170:U:H2'	23:DB:171:U:C6	2.48	0.48
23:BB:2394:C:H5''	37:BL:63:LYS:HD3	1.95	0.48
1:AA:948:C:H2'	1:AA:949:A:H8	1.78	0.48
2:AC:140:ALA:HB3	2:AC:148:ILE:HD12	1.94	0.48
8:AI:49:GLN:N	8:AI:50:PRO:HD2	2.29	0.48
29:DE:115:GLN:HE22	37:DL:2:ARG:HD3	1.78	0.48
4:CE:143:LEU:O	4:CE:146:MET:HG2	2.14	0.48
9:AJ:80:THR:HG22	9:AJ:81:GLU:N	2.28	0.48
30:DY:43:ILE:HG13	30:DY:44:ARG:N	2.29	0.48
2:AC:116:ALA:O	2:AC:120:THR:HG23	2.13	0.48
1:CA:246:A:N6	1:CA:281:G:H1'	2.28	0.48
7:CH:86:LYS:HD2	7:CH:90:GLU:HG3	1.93	0.48
1:CA:1391:U:H2'	1:CA:1392:G:H8	1.76	0.48
23:BB:947:A:HO2'	23:BB:984:A:H2	1.62	0.48
23:BB:2800:A:H2'	23:BB:2801:G:C8	2.48	0.48
1:CA:677:U:H2'	1:CA:678:U:H6	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1161:C:H2'	1:AA:1162:C:H6	1.78	0.48
1:CA:34:C:H2'	1:CA:35:G:C8	2.48	0.48
51:DZ:21:ALA:HB3	51:DZ:23:ASN:ND2	2.27	0.48
23:BB:610:C:O2'	23:BB:611:C:H5'	2.13	0.48
23:BB:2297:A:H61	23:BB:2319:G:H1'	1.78	0.48
48:DG:54:ARG:HB3	48:DG:57:TYR:HD1	1.78	0.48
23:BB:2836:U:H2'	23:BB:2837:A:H8	1.77	0.48
47:BF:134:GLN:H	47:BF:150:GLY:H	1.61	0.48
1:AA:823:C:O2'	1:AA:824:G:H5'	2.13	0.48
6:CG:11:ILE:HG12	6:CG:24:LYS:HE2	1.95	0.48
7:CH:12:ARG:HH11	7:CH:12:ARG:HG3	1.79	0.48
23:DB:1295:C:H2'	23:DB:1296:G:H8	1.77	0.48
23:DB:2693:G:O2'	23:DB:2694:G:H5'	2.13	0.48
48:DG:142:GLN:HG3	48:DG:146:ASP:OD2	2.13	0.48
27:DK:109:SER:HB2	27:DK:111:LYS:HE2	1.96	0.48
23:BB:2553:G:H2'	23:BB:2554:U:O4'	2.13	0.48
6:CG:6:ILE:HG22	6:CG:7:GLY:N	2.28	0.48
41:DJ:101:ILE:O	41:DJ:105:VAL:HG22	2.14	0.48
23:DB:1252:G:H5''	56:DB:3464:HOH:O	2.13	0.48
23:BB:657:U:H2'	23:BB:658:U:C6	2.48	0.48
23:DB:1248:G:OP1	44:DQ:1:ALA:HB3	2.13	0.48
23:DB:1545:A:H2'	23:DB:1546:G:O4'	2.12	0.48
1:CA:224:U:H2'	1:CA:225:C:C6	2.48	0.48
23:DB:2418:A:H2'	23:DB:2419:U:O4'	2.14	0.48
51:DZ:71:LEU:O	51:DZ:74:ARG:HG2	2.14	0.48
23:BB:858:G:H21	23:BB:2268:A:H3'	1.78	0.48
52:BW:49:ASN:HB2	52:BW:60:ALA:CA	2.43	0.48
46:DU:84:PHE:O	46:DU:85:ARG:CB	2.58	0.48
20:CB:64:GLY:O	20:CB:66:ILE:HG12	2.13	0.48
23:DB:1651:G:OP1	42:DN:37:THR:HG21	2.13	0.48
40:BH:97:ARG:HA	40:BH:112:LYS:CB	2.43	0.48
25:DC:106:PRO:O	25:DC:109:LEU:HD13	2.12	0.48
3:CD:102:TYR:CE1	3:CD:109:THR:HA	2.47	0.48
1:AA:1320:C:H2'	1:AA:1321:U:O4'	2.13	0.48
44:BQ:109:VAL:O	44:BQ:113:LYS:HG3	2.13	0.48
43:BO:49:VAL:CG2	43:BO:82:ALA:HB2	2.34	0.48
40:BH:114:GLU:HB2	40:BH:132:PHE:CE1	2.48	0.48
20:CB:187:ASP:HB3	20:CB:201:GLY:O	2.13	0.48
37:DL:6:LEU:N	37:DL:6:LEU:HD23	2.18	0.48
42:DN:72:ASP:C	42:DN:74:GLU:H	2.15	0.48
1:AA:86:G:H1'	1:AA:87:C:H5	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:58:VAL:HG12	46:BU:59:GLU:N	2.20	0.48
25:BC:226:PRO:CG	25:BC:233:GLY:H	2.19	0.48
12:AM:106:ARG:HE	12:AM:112:ARG:HD3	1.78	0.48
23:DB:1023:U:H2'	23:DB:1024:G:H5'	1.94	0.48
12:CM:109:LYS:HG3	12:CM:110:GLY:H	1.77	0.48
23:DB:2821:A:H2'	23:DB:2822:G:O4'	2.14	0.48
23:DB:1161:C:H2'	23:DB:1162:G:H8	1.79	0.48
29:DE:58:LYS:CB	29:DE:58:LYS:HZ3	2.25	0.48
23:DB:786:C:O2'	23:DB:787:C:H5'	2.14	0.48
48:DG:1:SER:HA	48:DG:61:TRP:CZ3	2.48	0.48
3:AD:96:ARG:HH12	3:AD:133:SER:HB3	1.78	0.48
2:AC:149:LYS:HB2	2:AC:168:ARG:HG3	1.96	0.48
28:BP:96:LEU:HB3	28:BP:99:LEU:HB2	1.95	0.48
27:DK:8:LEU:HD12	27:DK:8:LEU:N	2.25	0.48
38:DM:114:ARG:HA	38:DM:130:PHE:CE1	2.47	0.48
38:DM:31:PHE:HB3	38:DM:130:PHE:CZ	2.48	0.48
45:DS:22:ASP:HA	45:DS:25:ARG:HH11	1.79	0.48
23:BB:418:C:H2'	23:BB:419:U:H6	1.78	0.48
4:AE:87:VAL:HG23	4:AE:91:SER:O	2.12	0.48
1:CA:736:C:H2'	1:CA:737:C:C6	2.48	0.48
5:AF:18:VAL:O	5:AF:22:ILE:HG13	2.13	0.48
23:DB:2096:C:H2'	23:DB:2097:A:C8	2.49	0.48
1:CA:401:C:H2'	1:CA:402:G:H8	1.77	0.48
7:CH:74:ILE:O	7:CH:74:ILE:HG23	2.13	0.48
7:AH:74:ILE:HG13	7:AH:128:VAL:HG22	1.94	0.48
23:DB:956:G:OP2	38:DM:86:LYS:HE2	2.12	0.48
23:DB:969:G:H2'	23:DB:970:U:C6	2.49	0.48
23:DB:37:C:H4'	23:DB:451:U:OP1	2.12	0.48
12:CM:86:ARG:O	12:CM:89:ARG:HB2	2.13	0.48
24:BI:52:LEU:HD12	24:BI:52:LEU:N	2.28	0.48
23:BB:2025:C:H5'	26:BD:154:LYS:HZ1	1.77	0.48
23:BB:1902:C:H2'	23:BB:1903:G:O4'	2.13	0.48
23:BB:598:U:H2'	23:BB:599:A:C8	2.49	0.48
27:DK:107:LEU:C	27:DK:109:SER:H	2.16	0.48
1:CA:224:U:H2'	1:CA:225:C:H6	1.77	0.48
23:BB:2489:U:O2'	23:BB:2490:G:H5'	2.13	0.48
23:DB:246:C:C2'	23:DB:247:G:H5'	2.43	0.48
1:AA:65:A:C2	1:AA:381:C:H2'	2.48	0.48
23:DB:1704:C:O2'	23:DB:1705:A:H5'	2.13	0.48
23:BB:195:A:H61	23:BB:198:C:H3'	1.78	0.48
45:BS:6:LYS:HB3	45:BS:104:THR:HA	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:648:A:H2'	1:CA:649:A:C8	2.48	0.48
2:CC:11:LEU:HD11	13:CN:87:ALA:O	2.13	0.48
16:CQ:82:VAL:HG13	16:CQ:82:VAL:O	2.14	0.48
23:DB:464:U:H2'	23:DB:465:G:O4'	2.14	0.48
23:BB:532:A:H4'	23:BB:533:G:C8	2.49	0.48
8:CI:61:ASP:C	8:CI:62:LEU:HD13	2.33	0.48
42:DN:2:ARG:HG2	42:DN:2:ARG:O	2.13	0.48
44:DQ:91:ARG:HE	44:DQ:94:LEU:HD23	1.78	0.48
29:DE:195:GLN:HA	29:DE:198:GLU:CD	2.33	0.48
3:CD:187:ARG:O	3:CD:191:SER:HB3	2.13	0.48
50:DT:15:HIS:HB3	50:DT:31:VAL:HG23	1.94	0.48
40:BH:65:ALA:O	40:BH:68:ARG:HD2	2.13	0.48
48:BG:53:PRO:HG3	48:BG:61:TRP:CD2	2.49	0.48
27:BK:61:VAL:HG11	27:BK:112:PHE:CE2	2.49	0.48
23:DB:1287:A:H3'	23:DB:1288:G:N2	2.28	0.48
41:DJ:81:ILE:HG23	41:DJ:82:GLY:N	2.18	0.48
18:AS:42:ASN:ND2	18:AS:43:MET:H	2.12	0.48
23:DB:2896:C:H2'	23:DB:2897:U:H6	1.78	0.48
5:CF:53:LYS:HE2	5:CF:53:LYS:HA	1.94	0.48
41:BJ:59:ALA:C	41:BJ:61:LYS:H	2.17	0.48
47:DF:27:VAL:O	47:DF:27:VAL:HG23	2.14	0.48
26:DD:124:ARG:HA	26:DD:165:MET:CE	2.43	0.48
23:DB:858:G:H21	23:DB:2268:A:H3'	1.78	0.48
13:AN:79:SER:O	13:AN:83:VAL:HG23	2.13	0.48
22:BA:53:A:O2'	22:BA:54:G:H5'	2.14	0.48
1:AA:984:C:O2'	1:AA:985:C:H5'	2.13	0.48
23:BB:2667:C:H1'	48:BG:108:PHE:CD2	2.48	0.48
8:CI:123:ARG:HB3	8:CI:123:ARG:CZ	2.43	0.48
31:B0:43:THR:OG1	31:B0:47:TYR:HB2	2.13	0.48
1:AA:107:G:O6	19:AT:9:ARG:HD3	2.14	0.48
48:DG:10:VAL:HG12	48:DG:10:VAL:O	2.12	0.48
3:CD:169:TRP:CD2	3:CD:185:PRO:HB3	2.48	0.48
8:AI:123:ARG:HB3	8:AI:123:ARG:CZ	2.44	0.48
23:BB:1549:A:H2'	23:BB:1550:C:H6	1.79	0.48
1:CA:373:A:H2'	1:CA:374:A:H8	1.79	0.48
23:BB:1487:U:H2'	23:BB:1488:C:H6	1.78	0.48
23:BB:1028:A:H2'	23:BB:1029:A:C8	2.48	0.48
23:DB:919:U:H6	23:DB:919:U:O5'	1.96	0.48
23:DB:1488:C:O2'	23:DB:1489:C:H5'	2.13	0.48
23:BB:2466:C:O2'	23:BB:2467:C:H5'	2.13	0.48
1:CA:946:A:H2'	1:CA:947:G:H8	1.74	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CE:87:VAL:HG23	4:CE:91:SER:O	2.13	0.48
23:DB:1856:U:C2'	23:DB:1857:G:H5'	2.44	0.48
23:BB:2425:A:H5''	23:BB:2426:A:H3'	1.95	0.48
26:BD:175:LEU:HD23	26:BD:190:LYS:HB3	1.94	0.48
23:BB:2636:C:O2'	23:BB:2637:U:H5'	2.13	0.48
25:BC:71:ASP:O	25:BC:73:ILE:HG12	2.13	0.48
29:BE:102:ARG:NH2	29:BE:102:ARG:HG3	2.28	0.48
23:DB:1353:A:H2'	23:DB:1354:A:C8	2.47	0.48
20:CB:104:LYS:NZ	20:CB:104:LYS:HB2	2.28	0.48
23:BB:1920:C:H2'	23:BB:1921:G:H8	1.78	0.48
23:BB:840:C:H2'	23:BB:841:G:H8	1.79	0.48
24:BI:52:LEU:HD21	24:BI:81:LYS:NZ	2.29	0.48
2:CC:128:MET:H	2:CC:128:MET:CE	2.27	0.48
1:AA:794:A:H2'	1:AA:795:C:C6	2.48	0.48
23:BB:1749:A:H2'	23:BB:1750:G:C8	2.48	0.48
23:BB:932:U:O4'	23:BB:932:U:O2	2.32	0.48
35:BV:51:GLN:HB2	35:BV:57:TYR:OH	2.13	0.48
2:AC:53:ARG:HG2	2:AC:54:ILE:H	1.79	0.48
23:DB:659:G:H21	29:DE:30:GLN:NE2	2.11	0.48
1:CA:1347:G:C8	8:CI:108:ARG:HB2	2.48	0.48
1:CA:584:G:O2'	1:CA:585:G:H5'	2.14	0.48
49:BR:57:GLY:HA2	49:BR:102:SER:O	2.13	0.48
1:CA:1186:G:H21	13:CN:100:TRP:C	2.17	0.48
23:BB:929:U:O2'	23:BB:930:G:H5'	2.14	0.48
29:BE:27:LEU:O	29:BE:30:GLN:HB3	2.14	0.48
3:AD:126:GLY:O	3:AD:127:ARG:HD2	2.12	0.48
23:DB:945:A:H4'	23:DB:945:A:OP2	2.14	0.48
1:AA:939:G:H5'	6:AG:101:ARG:NH1	2.29	0.48
23:DB:208:C:H2'	23:DB:209:C:C6	2.48	0.48
1:AA:665:A:H2'	1:AA:725:G:N2	2.28	0.48
24:DI:2:LYS:NZ	24:DI:2:LYS:HB3	2.28	0.48
52:DW:39:GLN:HG3	52:DW:42:THR:H	1.77	0.48
26:BD:106:LYS:O	26:BD:107:VAL:HB	2.13	0.48
5:AF:6:ILE:HD12	5:AF:7:VAL:N	2.29	0.48
28:BP:47:ILE:HD11	28:BP:59:THR:HG22	1.95	0.48
28:BP:47:ILE:HG13	28:BP:48:ALA:N	2.29	0.48
29:BE:150:THR:OG1	29:BE:151:GLY:N	2.46	0.48
13:CN:42:ASN:HD22	13:CN:45:LEU:HD22	1.78	0.48
33:D1:49:LYS:HG3	33:D1:50:GLU:N	2.17	0.48
50:BT:27:SER:O	50:BT:28:ASN:HB3	2.12	0.48
39:BX:23:ARG:HA	39:BX:26:PHE:HB3	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DS:1:MET:SD	45:DS:62:ASP:HB3	2.53	0.48
23:DB:1059:G:H4'	24:DI:116:MET:HE2	1.95	0.48
20:CB:166:ASP:OD2	20:CB:190:SER:HA	2.13	0.48
23:DB:1244:A:O2'	23:DB:1245:G:H5'	2.12	0.48
45:BS:1:MET:SD	45:BS:62:ASP:HB3	2.54	0.48
27:DK:19:VAL:C	27:DK:41:ILE:HD11	2.33	0.48
27:DK:43:ILE:HD12	27:DK:56:ASP:HB2	1.96	0.48
40:DH:85:GLY:H	40:DH:89:LYS:H	1.60	0.48
1:AA:413:G:H2'	1:AA:428:G:N2	2.29	0.48
23:BB:79:C:HO2'	23:BB:346:A:C1'	2.26	0.48
24:DI:27:LEU:HB2	24:DI:32:VAL:HG21	1.94	0.48
1:CA:1324:A:H2'	1:CA:1325:C:O4'	2.13	0.48
3:CD:160:LEU:HA	3:CD:163:GLN:HG3	1.96	0.48
41:BJ:25:LEU:HB2	41:BJ:62:VAL:HG21	1.94	0.48
48:DG:53:PRO:HG3	48:DG:61:TRP:CD2	2.48	0.48
12:AM:2:ARG:HG3	12:AM:6:ILE:N	2.27	0.48
12:AM:14:ALA:HB1	12:AM:33:LEU:HD21	1.96	0.48
3:AD:169:TRP:CD2	3:AD:185:PRO:HB3	2.48	0.48
23:BB:2821:A:H2'	23:BB:2822:G:O4'	2.14	0.48
23:DB:1028:A:H2'	23:DB:1029:A:C8	2.48	0.48
1:CA:374:A:OP1	1:CA:452:A:N1	2.46	0.48
35:DV:21:ARG:HE	35:DV:87:GLN:HB3	1.78	0.48
35:DV:80:HIS:HA	35:DV:87:GLN:OE1	2.14	0.48
26:DD:13:ARG:HD2	28:DP:55:HIS:ND1	2.28	0.48
28:DP:50:ARG:HD3	28:DP:56:SER:HB3	1.96	0.48
4:CE:11:GLN:HB3	4:CE:116:VAL:HG12	1.96	0.48
32:D4:2:LYS:HG2	32:D4:4:ARG:HG3	1.95	0.48
12:AM:87:GLY:HA2	12:AM:90:HIS:HD2	1.78	0.48
23:DB:2882:A:H2'	23:DB:2883:A:H5''	1.96	0.48
11:CL:107:LYS:HZ3	11:CL:107:LYS:N	2.12	0.48
23:BB:2151:U:H2'	23:BB:2152:G:C8	2.43	0.48
9:CJ:35:GLN:HG2	9:CJ:78:GLU:OE1	2.13	0.48
23:BB:2191:A:H2'	23:BB:2192:U:C6	2.48	0.48
1:CA:1432:G:H5'	28:DP:105:LYS:HG2	1.96	0.48
43:DO:88:LYS:HE2	43:DO:116:GLN:CD	2.34	0.48
23:DB:19:A:H2'	23:DB:20:C:H6	1.77	0.48
23:DB:1482:G:H2'	23:DB:1483:G:H8	1.77	0.48
23:BB:1725:U:O2'	23:BB:1726:C:H5'	2.14	0.48
6:CG:122:GLU:OE1	6:CG:131:GLY:HA3	2.13	0.48
22:DA:6:G:H2'	22:DA:7:G:H8	1.78	0.48
46:DU:48:VAL:O	46:DU:48:VAL:HG13	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AB:83:ALA:O	20:AB:88:GLN:HB2	2.14	0.48
23:BB:753:A:O2'	23:BB:754:U:H5'	2.13	0.48
27:BK:88:ASN:C	27:BK:88:ASN:ND2	2.67	0.48
1:AA:677:U:H3	1:AA:713:G:H22	1.60	0.48
7:AH:74:ILE:O	7:AH:74:ILE:HG23	2.14	0.48
23:DB:413:C:H2'	23:DB:414:C:C6	2.49	0.48
1:CA:327:A:H1'	1:CA:329:A:O4'	2.12	0.48
23:DB:68:G:H2'	23:DB:69:C:C6	2.48	0.48
23:DB:146:A:H2'	23:DB:147:C:C6	2.48	0.48
19:CT:27:MET:HG2	19:CT:31:ILE:HD11	1.96	0.48
23:BB:2199:A:H3'	23:BB:2200:C:H6	1.79	0.48
22:DA:49:C:H2'	22:DA:50:A:H8	1.78	0.48
1:AA:1077:G:N2	1:AA:1080:A:OP2	2.42	0.48
19:CT:53:MET:HA	19:CT:56:ILE:HD12	1.95	0.48
24:DI:102:ARG:HG3	24:DI:141:ASP:CB	2.43	0.48
34:D3:28:LEU:HD22	34:D3:43:LEU:CB	2.44	0.48
23:BB:1364:G:H5''	51:BZ:3:ARG:CZ	2.43	0.48
23:BB:2492:U:O2'	23:BB:2493:U:H5'	2.13	0.48
1:CA:142:G:N3	1:CA:196:A:H2	2.12	0.48
1:AA:687:A:C2	1:AA:704:A:C5	3.02	0.48
10:AK:117:HIS:O	10:AK:118:ASN:HB2	2.12	0.48
11:CL:30:ARG:O	11:CL:57:THR:HG23	2.13	0.48
23:BB:1114:C:H2'	23:BB:1115:G:C8	2.49	0.48
3:CD:35:GLN:O	3:CD:36:ALA:HB2	2.13	0.48
1:CA:240:G:H5'	1:CA:240:G:H8	1.77	0.48
24:BI:2:LYS:NZ	24:BI:2:LYS:HB3	2.28	0.48
1:AA:1030:U:H2'	1:AA:1030:U:O2	2.14	0.48
52:DW:32:ALA:C	52:DW:34:SER:H	2.16	0.48
44:DQ:23:TYR:CB	44:DQ:27:ARG:HB3	2.44	0.48
26:BD:98:VAL:C	26:BD:100:LEU:H	2.17	0.48
44:DQ:57:ARG:HH11	44:DQ:57:ARG:HG2	1.79	0.48
49:DR:49:ILE:HG21	49:DR:53:PHE:C	2.33	0.48
49:DR:7:SER:HB2	49:DR:22:LEU:CB	2.31	0.48
44:BQ:91:ARG:HE	44:BQ:94:LEU:HD23	1.79	0.48
37:BL:125:LEU:HB2	37:BL:143:GLU:OE2	2.13	0.48
23:BB:1818:U:HO2'	23:BB:1819:A:P	2.35	0.48
23:BB:2899:A:H2'	23:BB:2900:A:C8	2.49	0.48
43:DO:26:LEU:HD13	43:DO:39:VAL:HG23	1.95	0.48
24:DI:57:VAL:HG23	24:DI:71:LYS:NZ	2.28	0.48
6:AG:144:ALA:O	6:AG:145:GLU:HB3	2.12	0.48
27:DK:64:ARG:O	27:DK:82:ASN:HA	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:226:PRO:HG3	25:BC:233:GLY:N	2.19	0.48
47:DF:101:ARG:HA	47:DF:105:ILE:HD12	1.96	0.48
47:BF:2:LYS:CD	47:BF:100:GLU:HG2	2.41	0.48
47:BF:104:THR:C	47:BF:108:PRO:HG2	2.34	0.48
41:DJ:19:ASP:OD2	41:DJ:58:ASN:HB2	2.13	0.48
4:AE:136:VAL:HG13	4:AE:137:ARG:H	1.79	0.48
23:DB:857:G:O2'	23:DB:858:G:H5'	2.12	0.48
24:BI:21:PRO:CB	24:BI:22:PRO:HD3	2.40	0.48
35:DV:14:LYS:HE3	35:DV:18:ARG:NH2	2.24	0.48
46:DU:62:ALA:O	46:DU:63:ALA:HB3	2.13	0.48
1:CA:1289:A:H2'	1:CA:1290:G:H5'	1.95	0.48
1:AA:842:U:H4'	1:AA:846:G:C2	2.49	0.48
23:DB:643:A:H2'	23:DB:644:A:O4'	2.13	0.48
5:CF:37:HIS:O	5:CF:97:THR:HG23	2.14	0.48
56:BB:3554:HOH:O	29:BE:63:LYS:HE2	2.13	0.48
23:BB:979:A:H2'	23:BB:982:C:H42	1.78	0.48
48:BG:84:LYS:CB	48:BG:132:LEU:H	2.25	0.48
23:BB:1285:A:H2'	23:BB:1286:A:H5''	1.94	0.48
2:CC:140:ALA:HB3	2:CC:148:ILE:HD12	1.94	0.48
23:BB:335:C:H5''	46:BU:81:ARG:NH1	2.29	0.48
23:BB:4:U:H2'	23:BB:5:A:C8	2.48	0.48
23:BB:1505:A:H2'	23:BB:1506:U:C6	2.49	0.48
1:AA:470:C:H2'	1:AA:471:U:H6	1.77	0.48
2:CC:104:GLU:HG2	2:CC:105:VAL:H	1.79	0.48
11:AL:81:ILE:HG23	11:AL:94:TYR:HB3	1.96	0.48
2:AC:119:ILE:HG13	2:AC:132:ALA:HB1	1.96	0.48
14:AO:56:LEU:O	14:AO:60:VAL:HG23	2.12	0.48
15:CP:20:VAL:HG21	15:CP:32:PHE:CD2	2.49	0.48
28:DP:112:ARG:HB2	28:DP:112:ARG:HH11	1.79	0.48
38:BM:114:ARG:HA	38:BM:130:PHE:CE1	2.49	0.48
41:DJ:40:HIS:ND1	41:DJ:41:LYS:HG3	2.29	0.48
46:DU:66:VAL:C	46:DU:68:ASN:H	2.17	0.48
1:AA:1240:U:H3	6:AG:29:LEU:HD23	1.78	0.48
11:CL:35:ARG:HG3	11:CL:36:VAL:N	2.28	0.48
23:BB:1230:A:H2'	23:BB:1231:U:H6	1.76	0.48
1:AA:552:U:O2'	1:AA:553:A:H5'	2.13	0.48
23:DB:1745:A:H2'	23:DB:1746:A:O4'	2.13	0.48
23:BB:1196:C:H2'	23:BB:1197:G:C8	2.49	0.48
29:BE:148:ILE:HD13	29:BE:187:VAL:HG21	1.95	0.48
23:DB:2663:G:H2'	23:DB:2664:G:O4'	2.12	0.48
1:CA:1180:A:OP1	8:CI:104:THR:HG22	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1179:A:H2'	1:AA:1180:A:O4'	2.14	0.48
23:BB:576:U:H2'	23:BB:577:G:C8	2.48	0.48
23:DB:95:A:H4'	39:DX:38:GLN:O	2.14	0.48
1:AA:1294:G:H2'	1:AA:1295:U:C6	2.49	0.48
33:B1:14:ALA:HB3	33:B1:16:THR:HG22	1.95	0.48
25:BC:2:VAL:HG23	25:BC:3:VAL:N	2.28	0.48
23:BB:1647:U:H3'	23:BB:1647:U:P	2.53	0.48
2:CC:109:GLU:HG2	2:CC:139:ASN:HB3	1.96	0.48
23:DB:378:C:O2'	23:DB:379:G:H5'	2.14	0.48
23:BB:1326:U:H2'	23:BB:1327:A:H8	1.78	0.48
26:DD:40:LEU:HD12	26:DD:41:ALA:N	2.28	0.48
23:DB:942:G:O2'	23:DB:943:A:H5'	2.13	0.48
1:CA:1526:G:P	21:CU:38:GLU:HB3	2.54	0.48
1:AA:1278:G:H4'	1:AA:1279:G:O5'	2.14	0.48
26:BD:14:ILE:CG2	26:BD:22:ILE:HB	2.44	0.48
1:CA:1533:C:H2'	1:CA:1534:A:C3'	2.29	0.48
8:AI:56:MET:O	8:AI:58:GLU:N	2.42	0.48
1:CA:906:A:C2'	1:CA:907:A:H5''	2.44	0.48
1:AA:906:A:C2'	1:AA:907:A:H5''	2.43	0.48
48:BG:28:LYS:O	48:BG:29:ASN:HB3	2.14	0.48
47:BF:39:VAL:HG12	47:BF:84:ILE:C	2.33	0.48
23:BB:1060:U:C4	24:BI:131:THR:HG22	2.47	0.48
31:B0:21:LEU:HB3	45:BS:23:LEU:HD21	1.96	0.48
27:DK:79:PHE:HD2	28:DP:69:VAL:HG12	1.74	0.48
42:DN:70:THR:HB	42:DN:75:ILE:HD11	1.94	0.48
27:BK:98:ARG:N	27:BK:98:ARG:HE	2.12	0.48
15:AP:66:THR:HG22	15:AP:67:ILE:H	1.79	0.48
10:AK:28:ASN:HD22	10:AK:29:THR:N	2.08	0.48
12:CM:70:ARG:NE	47:DF:136:ILE:HG21	2.28	0.48
1:CA:438:U:H4'	3:CD:119:HIS:HD2	1.78	0.48
1:CA:413:G:H2'	1:CA:428:G:H21	1.79	0.48
28:DP:20:ARG:O	28:DP:46:VAL:HG21	2.13	0.48
48:DG:106:LEU:O	48:DG:108:PHE:N	2.47	0.48
30:BY:7:THR:HA	30:BY:34:THR:HA	1.96	0.48
47:DF:62:GLN:NE2	47:DF:90:LEU:HD13	2.27	0.48
23:BB:1429:G:H2'	23:BB:1430:G:C8	2.44	0.48
1:AA:373:A:O4'	1:AA:481:G:H1'	2.13	0.48
4:CE:39:GLY:HA3	4:CE:116:VAL:HB	1.95	0.48
37:DL:95:LEU:HB2	37:DL:101:ILE:CG1	2.44	0.48
20:AB:218:ALA:O	20:AB:222:GLU:HG2	2.13	0.48
20:AB:221:ARG:CB	20:AB:221:ARG:HH11	2.25	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AT:68:LYS:HE2	19:AT:68:LYS:CA	2.44	0.48
1:CA:1370:G:O2'	1:CA:1371:G:H5'	2.13	0.48
1:CA:490:C:H2'	1:CA:491:G:C8	2.49	0.48
9:CJ:83:THR:O	9:CJ:87:LEU:HD22	2.14	0.48
23:BB:1150:C:H2'	23:BB:1151:A:H8	1.79	0.48
23:DB:2186:G:H2'	23:DB:2187:U:O4'	2.12	0.48
23:DB:2797:U:H3'	23:DB:2798:U:C5	2.48	0.48
1:CA:1161:C:H2'	1:CA:1162:C:C6	2.48	0.48
1:CA:190:A:O5'	1:CA:190:A:H8	1.97	0.48
23:BB:2880:C:O4'	42:BN:91:ALA:HB3	2.14	0.48
1:AA:1039:G:H2'	1:AA:1040:U:H6	1.77	0.48
23:BB:132:G:H2'	23:BB:133:U:C6	2.49	0.48
24:BI:116:MET:SD	24:BI:124:MET:HB2	2.53	0.48
12:AM:70:ARG:HH22	47:BF:112:ASP:CB	2.26	0.48
38:BM:108:VAL:HG11	38:BM:112:LEU:HD12	1.94	0.48
23:DB:1212:G:H1'	23:DB:1236:G:N2	2.29	0.48
23:DB:1212:G:HO2'	23:DB:1213:A:P	2.37	0.48
23:BB:1197:G:H2'	23:BB:1198:U:C6	2.48	0.48
23:BB:1163:G:O2'	23:BB:1164:C:H5'	2.14	0.48
1:AA:1102:A:H2'	1:AA:1103:C:C6	2.49	0.48
40:DH:4:ILE:H	40:DH:4:ILE:HD12	1.79	0.48
1:CA:505:G:H2'	1:CA:506:G:C8	2.49	0.48
23:DB:598:U:H2'	23:DB:599:A:C8	2.49	0.48
1:AA:50:A:N6	1:AA:361:G:H4'	2.29	0.48
23:DB:1957:C:H2'	23:DB:1958:C:C6	2.49	0.48
23:DB:2022:U:O2'	23:DB:2617:U:H5'	2.13	0.48
23:DB:1184:U:O2'	23:DB:1185:G:H5'	2.14	0.48
25:BC:34:GLU:O	25:BC:34:GLU:HG3	2.14	0.48
17:AR:33:THR:C	17:AR:35:SER:H	2.16	0.48
15:AP:59:HIS:O	15:AP:63:GLN:HG3	2.13	0.48
23:DB:1099:G:C8	24:DI:3:LYS:CB	2.96	0.48
40:BH:125:THR:HG23	40:BH:146:VAL:O	2.13	0.48
41:DJ:44:TYR:CE2	44:DQ:59:LEU:HD11	2.49	0.48
47:DF:42:ALA:O	47:DF:43:ILE:C	2.51	0.48
25:BC:152:GLN:HA	25:BC:155:ARG:HD3	1.94	0.48
37:BL:80:SER:H	37:BL:113:ALA:HB3	1.79	0.48
48:DG:17:LYS:HZ2	48:DG:18:ILE:N	2.09	0.48
40:BH:105:ALA:HB3	40:BH:108:VAL:HG21	1.96	0.48
40:BH:68:ARG:HB3	40:BH:134:VAL:HG11	1.96	0.48
10:CK:73:VAL:O	10:CK:76:TYR:HB2	2.13	0.48
32:B4:9:LYS:N	32:B4:9:LYS:HD3	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:160:LEU:H	3:CD:160:LEU:HD13	1.78	0.48
47:DF:162:ASP:O	47:DF:166:ARG:HD2	2.13	0.48
23:DB:161:A:C3'	23:DB:162:U:H5''	2.38	0.48
23:DB:2862:G:H2'	23:DB:2863:C:C6	2.48	0.48
29:DE:87:ALA:O	29:DE:88:ARG:HD3	2.14	0.48
52:BW:75:ASN:O	52:BW:76:ARG:HB2	2.13	0.48
20:CB:128:LEU:CD1	20:CB:131:LYS:HB3	2.43	0.48
23:DB:2751:G:H4'	48:DG:3:VAL:HG13	1.96	0.48
1:CA:106:C:HO2'	1:CA:107:G:H5'	1.79	0.48
48:BG:44:HIS:ND1	48:BG:49:LEU:HD12	2.29	0.48
24:DI:100:ILE:O	24:DI:139:VAL:HG13	2.14	0.48
24:DI:129:GLU:HB3	24:DI:133:ARG:NH1	2.29	0.48
1:AA:1001:C:H2'	1:AA:1002:G:C8	2.48	0.48
1:AA:840:C:N3	1:AA:842:U:H5'	2.29	0.48
26:BD:118:PHE:O	26:BD:119:ALA:HB3	2.14	0.48
23:BB:1591:A:H2'	23:BB:1592:C:C6	2.49	0.48
23:BB:1443:U:H2'	23:BB:1444:G:H8	1.79	0.48
13:CN:30:ILE:HB	13:CN:44:VAL:HG21	1.96	0.48
23:DB:1285:A:H2'	23:DB:1286:A:H5''	1.94	0.48
28:DP:74:GLN:O	28:DP:76:HIS:N	2.47	0.48
38:DM:69:PRO:HA	38:DM:94:ALA:HB2	1.96	0.48
40:BH:59:ALA:HA	40:BH:62:LEU:CD2	2.44	0.48
23:BB:192:C:C2'	23:BB:193:U:H5'	2.44	0.48
25:BC:18:VAL:HG11	25:BC:202:ARG:HD2	1.95	0.48
6:AG:63:VAL:HA	6:AG:66:GLU:CD	2.34	0.48
1:AA:490:C:H2'	1:AA:491:G:C8	2.49	0.48
14:AO:8:THR:O	14:AO:11:ILE:HG22	2.14	0.48
38:BM:2:LEU:CD2	38:BM:46:ILE:HD11	2.44	0.48
23:DB:1338:G:H5''	50:DT:17:SER:HB3	1.96	0.48
46:BU:50:ALA:H	46:BU:53:GLN:CD	2.17	0.48
23:DB:2295:C:O2'	23:DB:2296:U:H5'	2.13	0.48
23:DB:1789:A:OP1	25:DC:220:ARG:HD3	2.14	0.48
23:BB:467:G:OP1	36:B2:33:ARG:HG2	2.14	0.48
3:CD:98:ASP:HB3	3:CD:132:ALA:HB1	1.96	0.48
23:BB:1913:A:H4'	23:BB:1914:C:H5''	1.95	0.48
1:CA:714:G:H21	1:CA:777:A:H1'	1.79	0.48
23:DB:526:A:N6	23:DB:2626:C:C4'	2.76	0.48
23:DB:401:A:H2'	23:DB:402:A:C8	2.49	0.48
23:BB:184:C:H2'	23:BB:185:G:C8	2.47	0.48
23:DB:2215:C:O2'	23:DB:2216:G:H5'	2.14	0.48
22:BA:30:C:H1'	22:BA:58:A:N1	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2213:U:O2	23:DB:2213:U:H2'	2.13	0.48
3:AD:118:SER:HA	3:AD:130:ASN:HB2	1.96	0.48
3:AD:173:ASP:OD1	3:AD:176:LYS:HD3	2.14	0.48
44:DQ:51:GLN:O	44:DQ:55:GLN:HG3	2.14	0.48
45:DS:6:LYS:HB3	45:DS:104:THR:HA	1.95	0.48
3:CD:126:GLY:O	3:CD:127:ARG:HD2	2.14	0.48
34:D3:50:SER:C	34:D3:52:GLY:H	2.17	0.48
21:AU:27:VAL:O	21:AU:31:VAL:HG23	2.14	0.48
1:CA:1283:U:O2'	1:CA:1284:C:H5'	2.13	0.48
23:DB:510:C:H2'	23:DB:511:U:O4'	2.13	0.48
3:AD:35:GLN:O	3:AD:36:ALA:HB2	2.13	0.48
3:CD:173:ASP:HB3	3:CD:178:GLU:HB2	1.96	0.48
23:DB:1773:A:N7	23:DB:1829:A:H1'	2.29	0.48
48:BG:19:ASN:HB2	48:BG:22:VAL:HB	1.95	0.48
46:DU:51:LEU:O	46:DU:52:ASN:HB2	2.14	0.48
23:DB:615:U:O4	29:DE:39:ALA:HB2	2.13	0.48
49:DR:21:ARG:HB3	49:DR:95:ASP:OD1	2.14	0.48
52:BW:30:VAL:O	52:BW:30:VAL:HG22	2.14	0.48
5:CF:3:HIS:CD2	5:CF:3:HIS:N	2.81	0.48
5:CF:36:ILE:HG12	5:CF:64:VAL:HG13	1.96	0.48
8:CI:23:GLY:H	8:CI:60:LEU:HA	1.79	0.48
42:BN:2:ARG:HG2	42:BN:2:ARG:O	2.14	0.48
40:BH:117:LEU:HD11	40:BH:130:VAL:HG13	1.95	0.48
25:DC:91:ALA:CB	25:DC:105:ALA:HB2	2.44	0.48
3:CD:192:ALA:C	3:CD:194:ILE:H	2.18	0.48
41:BJ:44:TYR:CD2	44:BQ:59:LEU:HD21	2.49	0.48
41:BJ:45:THR:HG23	41:BJ:45:THR:O	2.14	0.48
20:AB:101:THR:HG22	20:AB:174:GLU:OE1	2.13	0.48
33:D1:11:VAL:O	33:D1:48:TYR:HA	2.13	0.48
1:CA:695:A:H61	1:CA:797:C:H1'	1.79	0.48
25:BC:131:MET:HA	25:BC:134:ILE:HG12	1.96	0.48
23:BB:663:G:OP1	37:BL:17:LYS:HG2	2.14	0.48
18:CS:29:PRO:HA	18:CS:47:THR:O	2.13	0.48
46:BU:73:ASN:HD22	46:BU:73:ASN:N	2.11	0.48
27:DK:98:ARG:HE	27:DK:98:ARG:N	2.12	0.48
1:CA:410:G:H2'	1:CA:429:U:C5	2.49	0.48
23:BB:2207:C:H2'	23:BB:2208:C:H6	1.77	0.48
14:CO:85:LEU:HD12	14:CO:85:LEU:N	2.29	0.48
23:DB:2849:U:H4'	23:DB:2850:A:C5'	2.41	0.48
23:DB:121:G:H2'	23:DB:122:G:H8	1.79	0.48
52:DW:46:ALA:HB2	52:DW:78:PHE:CD1	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DG:44:HIS:ND1	48:DG:49:LEU:HD12	2.28	0.48
23:DB:1438:U:H2'	23:DB:1439:A:O4'	2.13	0.48
43:DO:2:ASP:OD2	43:DO:4:LYS:HB3	2.14	0.48
46:DU:35:VAL:O	46:DU:38:ILE:HG22	2.14	0.48
13:CN:27:LYS:HG3	13:CN:28:ALA:N	2.26	0.48
23:BB:674:G:HO2'	29:BE:60:TRP:HH2	1.55	0.48
1:AA:919:A:O2'	1:AA:920:U:H5'	2.13	0.48
13:AN:30:ILE:HG22	13:AN:41:TRP:CB	2.41	0.48
23:BB:306:U:H2'	23:BB:307:G:O4'	2.14	0.48
25:DC:159:THR:O	25:DC:194:VAL:HG12	2.14	0.48
1:AA:658:C:O2'	1:AA:659:U:H5'	2.13	0.48
48:BG:173:ALA:HB3	48:BG:175:LYS:HZ1	1.79	0.48
6:AG:122:GLU:OE1	6:AG:131:GLY:HA3	2.14	0.48
40:DH:83:LYS:HG3	40:DH:149:GLU:HG3	1.94	0.48
23:BB:1491:G:H5'	25:BC:97:ASP:OD1	2.13	0.48
23:DB:7:G:H4'	41:DJ:15:TRP:CZ2	2.49	0.48
23:DB:831:G:H2'	23:DB:832:U:O4'	2.14	0.48
5:CF:46:GLN:HG3	5:CF:47:LEU:N	2.29	0.48
20:AB:22:TRP:HA	20:AB:188:THR:HB	1.96	0.48
23:DB:2838:G:H2'	23:DB:2839:G:H8	1.77	0.48
29:DE:21:ARG:HG3	29:DE:22:ASP:O	2.13	0.48
23:BB:2246:G:H2'	23:BB:2247:A:H8	1.77	0.48
45:BS:13:SER:OG	45:BS:14:ALA:N	2.47	0.48
29:DE:148:ILE:HD13	29:DE:187:VAL:HG21	1.96	0.48
23:DB:2415:G:C4'	37:DL:66:PHE:HB2	2.44	0.48
1:CA:113:G:H2'	1:CA:114:U:H6	1.76	0.48
1:AA:1178:G:H2'	1:AA:1180:A:OP2	2.14	0.48
43:BO:106:LEU:CA	43:BO:109:ALA:HB3	2.44	0.48
22:BA:91:C:H2'	22:BA:92:C:C6	2.48	0.48
1:CA:455:G:H2'	1:CA:456:A:C8	2.48	0.48
23:DB:2053:G:O2'	23:DB:2054:A:H5'	2.13	0.48
3:CD:32:LYS:O	3:CD:35:GLN:HB2	2.14	0.48
38:DM:54:THR:O	38:DM:56:ALA:N	2.43	0.48
1:CA:1247:U:O2'	1:CA:1248:A:H5'	2.13	0.48
11:AL:30:ARG:O	11:AL:57:THR:HG23	2.14	0.48
23:BB:1180:U:O2'	23:BB:1181:U:H5'	2.13	0.48
1:CA:50:A:N6	1:CA:361:G:H4'	2.29	0.48
23:DB:1260:A:H2'	23:DB:1261:C:C6	2.48	0.48
3:AD:49:ASP:O	3:AD:53:GLN:HG3	2.13	0.48
37:DL:14:LYS:O	37:DL:16:GLY:N	2.47	0.48
48:BG:155:PRO:C	48:BG:170:THR:HB	2.34	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:142:G:N3	1:AA:196:A:H2	2.12	0.48
48:BG:115:GLN:CD	48:BG:115:GLN:H	2.17	0.48
1:CA:1278:G:H4'	1:CA:1279:G:O5'	2.14	0.48
44:DQ:30:VAL:O	44:DQ:31:TYR:CB	2.62	0.48
33:D1:8:ILE:HD12	33:D1:51:ALA:HA	1.95	0.48
25:DC:66:PHE:CD1	25:DC:66:PHE:N	2.81	0.48
25:DC:80:LEU:HD21	25:DC:109:LEU:HG	1.95	0.48
41:DJ:4:PHE:HB3	41:DJ:44:TYR:CD1	2.49	0.48
51:DZ:53:ALA:O	51:DZ:54:LYS:HB3	2.13	0.48
1:CA:1097:C:H2'	1:CA:1098:C:H6	1.78	0.48
20:CB:44:LYS:O	20:CB:48:MET:HG2	2.14	0.48
28:BP:3:ILE:HD13	28:BP:3:ILE:C	2.34	0.48
28:BP:4:ILE:CG2	28:BP:5:LYS:H	2.18	0.48
40:DH:127:GLU:HA	40:DH:144:VAL:O	2.13	0.48
3:AD:25:ARG:O	3:AD:26:ALA:HB3	2.14	0.48
3:AD:30:LYS:N	3:AD:30:LYS:HD3	2.29	0.48
3:AD:151:GLN:HB3	3:AD:154:VAL:HG22	1.95	0.48
47:BF:100:GLU:C	47:BF:102:LEU:N	2.68	0.48
8:AI:64:ILE:HD12	8:AI:64:ILE:H	1.79	0.48
4:CE:28:ARG:NH1	4:CE:30:PHE:HB3	2.27	0.48
23:DB:635:C:O2'	23:DB:639:U:H5''	2.13	0.48
26:DD:116:LYS:HB3	26:DD:118:PHE:CZ	2.48	0.48
29:DE:58:LYS:H	29:DE:58:LYS:HZ3	1.59	0.48
47:DF:34:THR:HG22	47:DF:89:THR:HG22	1.95	0.48
26:BD:90:PHE:CD2	26:BD:94:GLN:HG3	2.48	0.48
1:AA:235:C:H2'	1:AA:236:A:H8	1.75	0.48
48:DG:173:ALA:HB3	48:DG:175:LYS:HZ3	1.79	0.48
1:AA:974:A:H8	1:AA:974:A:OP1	1.97	0.48
11:CL:78:VAL:O	11:CL:102:ASP:HB2	2.14	0.48
11:AL:88:ASP:C	11:AL:89:LEU:HD22	2.34	0.48
22:BA:6:G:H2'	22:BA:7:G:H8	1.77	0.48
23:BB:2592:G:H2'	23:BB:2593:U:O4'	2.13	0.48
6:CG:63:VAL:HA	6:CG:66:GLU:CD	2.33	0.48
7:AH:51:GLU:HG2	7:AH:52:GLY:N	2.26	0.48
4:CE:101:GLY:H	4:CE:121:ASN:ND2	2.12	0.48
23:DB:1464:G:O2'	23:DB:1465:G:H5'	2.13	0.48
39:BX:15:ASN:O	39:BX:19:LEU:HD13	2.13	0.48
9:CJ:80:THR:HG22	9:CJ:81:GLU:N	2.29	0.48
38:BM:101:VAL:HG13	38:BM:101:VAL:O	2.13	0.48
23:BB:873:C:H4'	38:BM:64:TRP:NE1	2.28	0.48
23:DB:947:A:O2'	23:DB:984:A:H2	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BM:1:MET:O	38:BM:2:LEU:HB2	2.14	0.48
7:AH:6:ILE:HD11	7:AH:31:LEU:HD23	1.96	0.48
23:BB:2228:G:H2'	23:BB:2229:U:C6	2.48	0.48
17:AR:38:ILE:HG22	17:AR:58:ILE:HG21	1.96	0.48
1:CA:245:U:H2'	1:CA:246:A:H5'	1.96	0.48
14:CO:9:ALA:O	14:CO:12:VAL:HB	2.13	0.48
1:CA:736:C:H5''	5:CF:90:MET:HE3	1.96	0.48
23:DB:1788:C:O2'	23:DB:1789:A:H5'	2.13	0.48
23:BB:1856:U:C2'	23:BB:1857:G:H5'	2.44	0.48
1:CA:551:U:O2'	1:CA:552:U:H5'	2.14	0.48
1:AA:1355:G:H2'	1:AA:1356:G:H8	1.79	0.48
1:CA:1337:G:H5''	1:CA:1338:G:OP1	2.14	0.48
23:DB:1275:A:N3	23:DB:1275:A:H2'	2.28	0.48
29:BE:21:ARG:HG3	29:BE:22:ASP:O	2.14	0.48
25:DC:93:VAL:HG12	25:DC:101:ARG:O	2.13	0.48
28:BP:25:VAL:HA	28:BP:85:VAL:HA	1.96	0.48
23:DB:1747:U:H2'	23:DB:1748:C:H6	1.78	0.48
23:DB:1747:U:H2'	23:DB:1748:C:C6	2.48	0.48
8:CI:93:LEU:HD13	8:CI:97:LEU:HD11	1.96	0.48
23:BB:554:U:H2'	23:BB:555:G:O4'	2.14	0.48
1:CA:150:U:H2'	1:CA:151:A:H8	1.79	0.48
1:AA:952:U:H2'	1:AA:953:G:H8	1.77	0.48
25:DC:209:ALA:HA	25:DC:212:TRP:CE2	2.49	0.48
1:CA:1192:C:H2'	1:CA:1193:G:O4'	2.14	0.48
36:D2:1:MET:HG2	36:D2:2:LYS:H	1.78	0.48
1:CA:701:U:H5''	1:CA:703:G:O4'	2.13	0.48
23:BB:1532:A:H2'	23:BB:1532:A:N3	2.29	0.48
23:DB:503:A:H5''	23:DB:505:A:OP1	2.14	0.48
23:BB:2567:G:H2'	23:BB:2568:U:C6	2.49	0.48
46:BU:85:ARG:NH1	46:BU:86:PHE:N	2.60	0.47
52:BW:23:LYS:C	52:BW:66:VAL:HB	2.34	0.47
49:DR:34:GLU:CD	49:DR:60:LYS:HE2	2.34	0.47
52:DW:23:LYS:C	52:DW:66:VAL:HB	2.34	0.47
26:DD:106:LYS:HD3	26:DD:106:LYS:N	2.29	0.47
44:BQ:30:VAL:CG1	44:BQ:31:TYR:H	2.00	0.47
23:DB:2061:G:H5''	23:DB:2503:A:C2	2.49	0.47
25:DC:144:GLU:HB3	25:DC:187:CYS:HB3	1.96	0.47
44:DQ:59:LEU:C	44:DQ:59:LEU:HD13	2.35	0.47
44:DQ:96:ASP:C	44:DQ:98:ALA:H	2.17	0.47
1:AA:1096:C:H2'	1:AA:1097:C:H6	1.79	0.47
47:DF:43:ILE:CG2	47:DF:44:ALA:H	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BX:28:LEU:HB3	39:BX:43:LEU:CD2	2.44	0.47
1:AA:68:G:H2'	1:AA:69:G:O4'	2.14	0.47
23:DB:1693:U:H1'	25:DC:13:ARG:NH2	2.28	0.47
47:BF:46:LYS:HA	47:BF:46:LYS:HZ3	1.79	0.47
47:BF:78:ILE:HG23	47:BF:82:TYR:CG	2.49	0.47
23:DB:1060:U:H5	24:DI:131:THR:HG22	1.76	0.47
6:AG:145:GLU:C	6:AG:147:ASN:H	2.16	0.47
15:CP:40:ASN:ND2	15:CP:43:ALA:N	2.52	0.47
23:DB:188:G:OP1	51:DZ:14:THR:HG23	2.14	0.47
42:BN:37:THR:OG1	42:BN:40:LYS:HE2	2.14	0.47
23:DB:360:U:H2'	23:DB:361:G:C8	2.48	0.47
1:AA:617:G:H4'	15:AP:46:LYS:CE	2.43	0.47
3:CD:25:ARG:HH12	3:CD:30:LYS:HE3	1.79	0.47
23:BB:1025:G:H8	23:BB:1025:G:OP1	1.97	0.47
23:DB:587:C:H4'	23:DB:588:U:C6	2.49	0.47
23:DB:639:U:H2'	23:DB:640:C:H6	1.78	0.47
20:CB:83:ALA:O	20:CB:88:GLN:HB2	2.14	0.47
23:BB:727:A:OP1	23:BB:1431:A:O2'	2.31	0.47
23:BB:2865:U:H5''	23:BB:2866:U:OP2	2.14	0.47
23:DB:1441:G:H2'	23:DB:1442:U:H6	1.75	0.47
23:DB:283:G:H2'	23:DB:284:U:C4'	2.44	0.47
23:DB:2038:G:H2'	23:DB:2039:U:H6	1.79	0.47
1:AA:93:U:H6	1:AA:93:U:O5'	1.97	0.47
1:AA:972:C:P	9:AJ:59:LYS:HD3	2.53	0.47
23:BB:2882:A:H2'	23:BB:2883:A:H5''	1.96	0.47
23:BB:170:U:H2'	23:BB:171:U:C6	2.49	0.47
2:CC:149:LYS:HB2	2:CC:168:ARG:HG3	1.94	0.47
12:AM:76:ILE:O	12:AM:80:MET:HG3	2.13	0.47
23:DB:1779:U:C5	23:DB:1784:A:N7	2.82	0.47
23:DB:2804:U:H2'	23:DB:2805:C:H6	1.75	0.47
37:BL:95:LEU:O	37:BL:100:ILE:HG22	2.14	0.47
23:BB:873:C:H2'	23:BB:874:G:H8	1.79	0.47
23:BB:591:U:H1'	34:B3:1:PRO:H3	1.78	0.47
6:AG:50:ALA:HB2	6:AG:57:GLU:HG3	1.95	0.47
20:CB:138:ARG:HB2	20:CB:138:ARG:NH1	2.29	0.47
23:DB:2092:U:H5	23:DB:2226:C:OP2	1.97	0.47
39:DX:12:GLU:CA	39:DX:15:ASN:HD21	2.27	0.47
23:BB:1374:G:H2'	23:BB:1375:U:C6	2.49	0.47
23:BB:1847:A:H1'	23:BB:1848:A:N7	2.29	0.47
37:DL:46:VAL:HB	37:DL:50:PHE:HD1	1.79	0.47
23:BB:2093:G:O2'	23:BB:2094:A:H5'	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AE:95:MET:HA	4:AE:124:ALA:CB	2.43	0.47
23:DB:547:A:H2'	23:DB:547:A:N3	2.28	0.47
19:CT:27:MET:SD	19:CT:66:ILE:HG12	2.54	0.47
23:BB:528:A:H2	23:BB:2043:C:H4'	1.78	0.47
1:CA:125:U:H2'	1:CA:126:G:C8	2.49	0.47
1:AA:880:C:H2'	1:AA:881:G:C8	2.47	0.47
23:BB:2755:C:O2'	23:BB:2756:U:H2'	2.14	0.47
23:BB:1296:G:O2'	23:BB:1297:C:H5'	2.14	0.47
23:BB:758:C:O2	23:BB:1981:A:H2	1.97	0.47
1:AA:394:G:H2'	1:AA:395:C:C6	2.49	0.47
27:BK:109:SER:C	27:BK:111:LYS:H	2.17	0.47
22:DA:85:G:H2'	22:DA:86:G:H8	1.79	0.47
9:CJ:8:ILE:N	9:CJ:8:ILE:HD12	2.28	0.47
22:DA:30:C:O2	22:DA:30:C:H2'	2.13	0.47
48:DG:28:LYS:O	48:DG:29:ASN:HB3	2.14	0.47
29:DE:52:VAL:HG11	29:DE:81:GLY:HA3	1.95	0.47
23:DB:1880:U:H2'	23:DB:1881:C:C6	2.49	0.47
23:BB:2104:C:H2'	23:BB:2105:U:H6	1.79	0.47
45:BS:56:ALA:O	45:BS:59:GLU:HB2	2.13	0.47
1:CA:1190:G:OP1	2:CC:3:LYS:HA	2.14	0.47
31:B0:55:ALA:C	31:B0:56:LYS:HG3	2.33	0.47
20:AB:94:ARG:N	20:AB:94:ARG:HE	2.11	0.47
23:BB:1841:U:H2'	23:BB:1842:G:H8	1.78	0.47
23:BB:1573:G:H2'	23:BB:1574:C:H5'	1.95	0.47
5:AF:55:HIS:O	5:AF:56:LYS:HG3	2.14	0.47
1:CA:939:G:H2'	1:CA:940:C:C6	2.49	0.47
45:DS:42:LYS:O	45:DS:45:VAL:HG22	2.14	0.47
48:DG:115:GLN:H	48:DG:115:GLN:CD	2.17	0.47
40:BH:32:PRO:O	40:BH:33:GLN:HB2	2.14	0.47
51:BZ:6:GLN:NE2	51:BZ:77:LYS:NZ	2.62	0.47
52:BW:24:ARG:HD3	52:BW:65:LYS:CE	2.44	0.47
52:BW:50:VAL:HG23	52:BW:61:LYS:CE	2.44	0.47
26:DD:31:ALA:O	26:DD:52:THR:HG23	2.14	0.47
29:DE:188:MET:HG2	29:DE:193:VAL:HG22	1.96	0.47
29:BE:147:LEU:HD12	29:BE:149:ILE:HG22	1.96	0.47
1:AA:1098:C:O2'	1:AA:1099:G:H5'	2.14	0.47
18:CS:66:VAL:HG23	18:CS:67:GLY:H	1.78	0.47
44:BQ:60:TRP:CH2	44:BQ:93:ILE:HB	2.50	0.47
25:BC:153:LEU:HD13	25:BC:175:LEU:HD21	1.96	0.47
25:BC:181:ARG:HD3	25:BC:265:PHE:O	2.14	0.47
45:DS:26:GLY:N	45:DS:71:VAL:HG13	2.28	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2151:U:HO2'	23:DB:2152:G:H5'	1.79	0.47
24:BI:56:VAL:CG2	24:BI:68:PHE:HB2	2.44	0.47
23:DB:276:U:O5'	23:DB:276:U:H6	1.97	0.47
3:CD:29:THR:HG22	3:CD:30:LYS:HD3	1.95	0.47
14:CO:81:LEU:O	14:CO:85:LEU:HD13	2.14	0.47
24:DI:18:ASN:N	24:DI:19:PRO:CD	2.77	0.47
47:BF:34:THR:HG22	47:BF:89:THR:HG22	1.95	0.47
22:BA:32:U:H2'	22:BA:33:G:H8	1.78	0.47
35:DV:6:ALA:O	35:DV:65:VAL:HG12	2.14	0.47
22:DA:74:U:H2'	22:DA:75:G:C8	2.48	0.47
1:CA:255:G:H5'	16:CQ:17:GLU:O	2.15	0.47
35:BV:35:GLU:HG3	35:BV:93:ARG:NH1	2.29	0.47
23:DB:1386:C:H1'	23:DB:1470:A:H1'	1.95	0.47
13:AN:17:ASP:HA	13:AN:21:ALA:HB2	1.95	0.47
39:BX:55:THR:O	39:BX:58:ASN:HB3	2.14	0.47
5:CF:6:ILE:HD11	5:CF:8:PHE:CD2	2.49	0.47
2:CC:149:LYS:HA	2:CC:168:ARG:HB2	1.96	0.47
25:DC:245:THR:O	25:DC:247:TRP:N	2.48	0.47
1:AA:736:C:H5''	5:AF:90:MET:HE3	1.96	0.47
43:BO:24:THR:OG1	43:BO:90:VAL:HG12	2.14	0.47
3:CD:138:PRO:HA	3:CD:181:PHE:CD2	2.46	0.47
30:BY:43:ILE:HG13	30:BY:44:ARG:N	2.28	0.47
23:DB:20:C:H2'	23:DB:21:A:H8	1.79	0.47
23:BB:2794:C:H2'	23:BB:2795:C:C6	2.49	0.47
38:BM:69:PRO:HA	38:BM:94:ALA:HB2	1.95	0.47
20:AB:120:SER:HA	20:AB:125:PHE:HB3	1.96	0.47
1:CA:738:C:H2'	1:CA:739:C:H6	1.79	0.47
23:DB:2243:U:O2	23:DB:2434:A:C2	2.68	0.47
23:BB:969:G:OP1	30:BY:17:PRO:HG3	2.14	0.47
11:AL:35:ARG:HG3	11:AL:36:VAL:N	2.29	0.47
1:CA:97:G:H2'	1:CA:98:A:O4'	2.14	0.47
23:BB:692:C:H2'	23:BB:693:A:H8	1.79	0.47
29:DE:68:ALA:O	29:DE:69:ARG:C	2.53	0.47
23:DB:1347:A:H2'	23:DB:1348:C:O4'	2.14	0.47
1:AA:161:A:H2'	1:AA:162:A:C8	2.49	0.47
3:CD:18:LEU:HD12	3:CD:63:ILE:HG12	1.95	0.47
23:DB:1355:G:O2'	23:DB:1356:G:H5'	2.13	0.47
19:CT:65:LEU:HD23	19:CT:66:ILE:HD13	1.96	0.47
23:BB:2747:G:O6	23:BB:2755:C:H5''	2.13	0.47
6:CG:104:VAL:HG12	6:CG:108:ARG:HD2	1.95	0.47
23:DB:2691:C:H2'	23:DB:2692:G:H8	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1263:U:O2'	31:B0:7:PRO:HD2	2.15	0.47
27:BK:22:ILE:O	27:BK:23:LYS:HB2	2.14	0.47
23:BB:1910:G:O2'	23:BB:1911:U:H5'	2.13	0.47
1:CA:821:G:H2'	1:CA:822:U:C6	2.48	0.47
23:DB:1997:C:O2'	23:DB:1998:A:H5'	2.14	0.47
6:CG:91:ARG:HB3	6:CG:92:PRO:HD2	1.96	0.47
23:BB:2022:U:O2'	23:BB:2617:U:H5'	2.14	0.47
46:BU:51:LEU:O	46:BU:52:ASN:HB2	2.14	0.47
23:BB:208:C:H2'	23:BB:209:C:C6	2.50	0.47
18:AS:64:GLU:N	18:AS:64:GLU:CD	2.68	0.47
1:AA:815:A:H4'	1:AA:817:C:C4	2.49	0.47
12:CM:22:TYR:N	12:CM:65:GLU:OE2	2.47	0.47
1:AA:541:G:O2'	3:AD:39:GLN:HB3	2.14	0.47
36:B2:9:VAL:HG13	36:B2:10:LEU:N	2.29	0.47
52:DW:64:GLY:HA3	52:DW:83:ALA:HA	1.96	0.47
26:BD:4:LEU:HD23	26:BD:101:PHE:CE1	2.48	0.47
28:BP:61:ARG:CB	28:BP:61:ARG:HH21	2.25	0.47
42:DN:38:LEU:CB	42:DN:39:PRO:HD3	2.41	0.47
49:DR:39:LEU:O	49:DR:40:MET:HB2	2.13	0.47
1:CA:1319:A:H4'	1:CA:1320:C:OP1	2.14	0.47
20:AB:104:LYS:NZ	20:AB:104:LYS:HB2	2.29	0.47
23:BB:459:U:C2'	23:BB:460:A:H5'	2.44	0.47
25:BC:4:LYS:HE3	25:BC:13:ARG:O	2.13	0.47
25:BC:175:LEU:HD11	25:BC:181:ARG:HG3	1.96	0.47
25:BC:66:PHE:N	25:BC:66:PHE:CD1	2.82	0.47
1:CA:1098:C:O2'	1:CA:1099:G:H5'	2.15	0.47
41:DJ:102:GLU:HG3	41:DJ:124:VAL:HG11	1.95	0.47
2:CC:48:LYS:HD3	2:CC:48:LYS:N	2.17	0.47
40:BH:68:ARG:CD	40:BH:134:VAL:HG11	2.40	0.47
1:AA:78:A:H2'	1:AA:79:G:C8	2.49	0.47
23:DB:345:A:H1'	23:DB:346:A:H2	1.77	0.47
34:B3:30:HIS:O	34:B3:31:ILE:C	2.52	0.47
23:BB:558:U:H5'	41:BJ:114:LEU:HD22	1.96	0.47
23:DB:2895:G:O2'	23:DB:2896:C:H5'	2.15	0.47
23:DB:2867:G:N7	28:DP:20:ARG:NH1	2.62	0.47
35:DV:16:ALA:HA	35:DV:19:ARG:NE	2.26	0.47
16:CQ:46:HIS:NE2	16:CQ:48:GLU:HB2	2.28	0.47
20:AB:87:ASP:HB2	20:AB:224:ARG:NH2	2.28	0.47
23:BB:2884:U:H2'	23:BB:2885:G:C8	2.49	0.47
50:BT:76:ARG:CZ	50:BT:76:ARG:HB3	2.44	0.47
35:BV:21:ARG:HE	35:BV:87:GLN:HB3	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:35:VAL:HB	46:DU:38:ILE:CB	2.43	0.47
47:BF:148:VAL:O	47:BF:149:ARG:HG2	2.14	0.47
12:AM:64:VAL:HA	12:AM:68:LEU:HD12	1.96	0.47
25:BC:255:LYS:C	25:BC:256:THR:HG23	2.34	0.47
23:BB:2751:G:H5'	48:BG:2:ARG:CD	2.44	0.47
46:BU:14:THR:HG21	46:BU:64:ILE:CD1	2.43	0.47
23:BB:2815:C:H2'	23:BB:2816:G:C8	2.49	0.47
23:BB:154:U:H2'	23:BB:155:A:H8	1.78	0.47
38:DM:40:ARG:HB2	38:DM:93:VAL:HG21	1.95	0.47
23:DB:2065:C:O2'	23:DB:2066:C:H5'	2.14	0.47
1:AA:1307:U:H2'	1:AA:1308:U:H6	1.79	0.47
23:DB:322:A:C2	23:DB:340:A:C6	3.02	0.47
1:AA:513:C:H2'	1:AA:514:C:C6	2.48	0.47
1:AA:192:A:O2'	1:AA:193:C:H5'	2.15	0.47
28:BP:19:PHE:CE2	28:BP:25:VAL:HG11	2.50	0.47
49:DR:91:GLN:HG3	49:DR:92:TRP:N	2.30	0.47
1:AA:682:G:O2'	1:AA:683:G:H5'	2.15	0.47
23:DB:1683:U:H2'	23:DB:1684:G:C8	2.49	0.47
42:BN:13:ASN:OD1	42:BN:15:SER:HB3	2.14	0.47
1:CA:1179:A:H2'	1:CA:1180:A:O4'	2.14	0.47
1:AA:1410:A:H2'	1:AA:1411:C:H6	1.80	0.47
23:BB:1714:U:H3'	23:BB:1715:G:H5'	1.96	0.47
4:CE:156:ARG:HB3	7:CH:43:GLY:O	2.14	0.47
23:DB:246:C:H2'	23:DB:247:G:H5'	1.96	0.47
23:BB:207:A:H2'	23:BB:208:C:O4'	2.15	0.47
23:BB:2595:G:H1	25:BC:238:ASN:ND2	2.11	0.47
23:BB:536:G:P	44:BQ:52:ARG:HH21	2.37	0.47
1:AA:575:G:H4'	1:AA:576:C:OP1	2.14	0.47
38:DM:131:VAL:HG12	38:DM:132:THR:H	1.79	0.47
41:BJ:64:VAL:O	41:BJ:68:LYS:HD2	2.15	0.47
5:CF:17:GLN:O	5:CF:21:MET:HG3	2.14	0.47
34:B3:56:LEU:O	34:B3:59:ALA:HB3	2.14	0.47
4:CE:9:GLU:O	4:CE:40:ASP:HA	2.14	0.47
51:DZ:7:VAL:HG21	51:DZ:59:ILE:CD1	2.45	0.47
23:DB:338:G:N2	23:DB:339:U:H1'	2.28	0.47
25:DC:152:GLN:HA	25:DC:155:ARG:HD3	1.96	0.47
41:DJ:44:TYR:CD2	44:DQ:59:LEU:HD21	2.50	0.47
44:DQ:60:TRP:CH2	44:DQ:93:ILE:HB	2.49	0.47
47:DF:78:ILE:HG23	47:DF:82:TYR:CG	2.50	0.47
10:AK:22:ILE:HD13	10:AK:95:THR:CG2	2.44	0.47
25:BC:170:TYR:CD2	25:BC:184:GLU:HA	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:89:ASN:HD22	25:BC:89:ASN:HA	1.52	0.47
24:DI:72:THR:CG2	24:DI:112:LYS:HD2	2.44	0.47
39:DX:3:ALA:O	39:DX:6:LEU:HB2	2.14	0.47
52:BW:43:LYS:HB3	52:BW:58:LEU:CD1	2.44	0.47
23:BB:2675:A:H4'	27:BK:29:HIS:HB2	1.96	0.47
23:BB:2514:U:H2'	23:BB:2515:C:C6	2.50	0.47
47:BF:107:VAL:HA	47:BF:111:ARG:NH1	2.30	0.47
23:DB:705:A:H61	23:DB:726:G:H1'	1.79	0.47
1:CA:1413:A:O2'	1:CA:1414:U:H5'	2.15	0.47
9:AJ:5:ARG:HG2	9:AJ:79:PRO:HG3	1.94	0.47
22:BA:55:U:H2'	22:BA:56:G:C8	2.49	0.47
33:B1:36:LYS:HG3	33:B1:47:ILE:HG13	1.95	0.47
1:CA:840:C:H2'	1:CA:842:U:OP2	2.14	0.47
1:CA:107:G:O6	19:CT:9:ARG:HD3	2.15	0.47
1:AA:106:C:HO2'	1:AA:107:G:H5'	1.80	0.47
12:CM:2:ARG:O	12:CM:4:ALA:N	2.48	0.47
1:CA:238:A:H3'	1:CA:239:U:H5''	1.96	0.47
9:CJ:10:LEU:O	9:CJ:71:LEU:HA	2.15	0.47
39:BX:29:ARG:HH12	50:BT:12:ARG:HG2	1.79	0.47
46:BU:35:VAL:O	46:BU:38:ILE:HG22	2.15	0.47
13:CN:29:ILE:HB	13:CN:30:ILE:HD12	1.97	0.47
13:CN:30:ILE:HG22	13:CN:41:TRP:CB	2.44	0.47
1:AA:920:U:H2'	1:AA:921:U:H6	1.74	0.47
7:CH:14:ARG:HE	7:CH:75:GLN:NE2	2.12	0.47
1:CA:974:A:H8	1:CA:974:A:OP1	1.97	0.47
23:DB:2393:U:H5''	37:DL:62:PRO:HG3	1.96	0.47
20:CB:19:THR:HG23	20:CB:20:ARG:N	2.27	0.47
23:BB:335:C:O2'	23:BB:336:C:H5'	2.14	0.47
1:AA:1238:A:H2	1:AA:1241:G:N3	2.12	0.47
45:DS:25:ARG:CZ	45:DS:74:ILE:HG23	2.44	0.47
23:DB:1465:G:H2'	23:DB:1466:U:C6	2.50	0.47
2:AC:154:GLY:O	2:AC:155:ARG:HB2	2.15	0.47
2:AC:155:ARG:HD2	2:AC:155:ARG:HA	1.66	0.47
46:BU:66:VAL:C	46:BU:68:ASN:H	2.17	0.47
1:CA:659:U:N3	1:CA:747:A:N6	2.62	0.47
23:DB:1729:U:H2'	23:DB:1730:C:O4'	2.14	0.47
23:BB:1723:G:C2'	23:BB:1724:G:H5'	2.44	0.47
46:BU:48:VAL:O	46:BU:48:VAL:HG13	2.15	0.47
23:DB:1197:G:H2'	23:DB:1198:U:C6	2.48	0.47
1:CA:735:C:H2'	1:CA:736:C:H6	1.79	0.47
1:AA:1486:G:H2'	1:AA:1487:G:Cl'	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:19:GLY:O	46:DU:20:LYS:HD3	2.15	0.47
2:AC:6:PRO:O	2:AC:9:ILE:HG22	2.14	0.47
2:CC:6:PRO:O	2:CC:9:ILE:HG22	2.15	0.47
26:DD:175:LEU:HD23	26:DD:190:LYS:HB3	1.96	0.47
27:DK:88:ASN:ND2	27:DK:88:ASN:C	2.66	0.47
27:DK:22:ILE:O	27:DK:23:LYS:HB2	2.14	0.47
20:CB:112:ARG:HA	20:CB:115:ASP:OD2	2.14	0.47
23:DB:2199:A:H3'	23:DB:2200:C:H6	1.79	0.47
23:DB:2247:A:H2'	23:DB:2248:C:C6	2.50	0.47
29:DE:102:ARG:HG3	29:DE:102:ARG:HH21	1.79	0.47
1:AA:512:U:O2'	1:AA:513:C:H5'	2.14	0.47
23:DB:2784:U:H2'	23:DB:2785:C:H6	1.79	0.47
43:DO:104:GLN:O	43:DO:107:ALA:HB3	2.14	0.47
1:CA:607:A:H2'	1:CA:608:A:H8	1.78	0.47
23:BB:553:G:H2'	23:BB:554:U:O4'	2.13	0.47
1:CA:993:G:H2'	1:CA:995:C:H41	1.80	0.47
23:DB:485:C:HO2'	45:DS:60:HIS:CE1	2.32	0.47
43:DO:106:LEU:CA	43:DO:109:ALA:HB3	2.45	0.47
1:AA:1246:A:H2'	1:AA:1247:U:O4'	2.13	0.47
1:AA:1114:C:H2'	1:AA:1115:U:C6	2.50	0.47
22:BA:101:A:H2'	22:BA:102:G:O4'	2.14	0.47
23:BB:2193:G:H2'	23:BB:2194:U:H6	1.79	0.47
23:BB:1260:A:H2'	23:BB:1261:C:C6	2.48	0.47
14:CO:74:ASP:OD1	14:CO:76:ALA:HB3	2.14	0.47
23:DB:1258:U:H2'	23:DB:1259:G:C8	2.49	0.47
1:CA:299:G:H2'	1:CA:300:A:C8	2.49	0.47
14:AO:64:ARG:HA	14:AO:64:ARG:NE	2.29	0.47
1:CA:531:U:H5'	1:CA:531:U:H6	1.79	0.47
50:BT:64:LYS:H	50:BT:64:LYS:HD2	1.79	0.47
23:DB:1936:A:H2	23:DB:1943:U:C5	2.31	0.47
1:AA:24:U:O2'	1:AA:25:C:H5'	2.14	0.47
19:AT:14:GLU:O	19:AT:17:ARG:HB3	2.14	0.47
40:BH:29:PHE:C	40:BH:31:VAL:H	2.18	0.47
1:AA:1526:G:P	21:AU:38:GLU:HB3	2.54	0.47
52:BW:36:ILE:HB	52:BW:39:GLN:NE2	2.29	0.47
26:DD:106:LYS:O	26:DD:107:VAL:HB	2.15	0.47
8:AI:5:TYR:O	8:AI:19:PHE:HA	2.15	0.47
27:DK:77:ILE:HG12	28:DP:71:ARG:HD2	1.95	0.47
44:BQ:59:LEU:C	44:BQ:59:LEU:HD13	2.35	0.47
44:BQ:60:TRP:CZ2	44:BQ:93:ILE:HB	2.50	0.47
41:BJ:123:LYS:HG2	41:BJ:132:HIS:CD2	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:204:ASP:O	20:CB:208:ALA:HB3	2.15	0.47
20:AB:15:PHE:HD1	20:AB:16:GLY:N	2.12	0.47
20:AB:16:GLY:HA2	20:AB:40:ILE:CG1	2.44	0.47
29:BE:108:ILE:O	29:BE:108:ILE:HD13	2.15	0.47
42:DN:80:PHE:O	42:DN:85:PRO:HD3	2.15	0.47
32:D4:7:VAL:CG1	32:D4:8:LYS:H	2.22	0.47
3:AD:153:ARG:HG3	3:AD:154:VAL:H	1.79	0.47
23:DB:587:C:H4'	23:DB:588:U:H6	1.80	0.47
14:AO:26:GLU:CD	14:AO:77:ARG:HD2	2.35	0.47
1:CA:413:G:H2'	1:CA:428:G:N2	2.29	0.47
23:BB:167:A:H2'	23:BB:168:G:O4'	2.15	0.47
29:BE:46:GLN:HG3	29:BE:87:ALA:CB	2.40	0.47
23:BB:2743:U:H3'	23:BB:2744:G:H5''	1.97	0.47
1:CA:254:G:H4'	16:CQ:19:SER:OG	2.15	0.47
5:AF:98:GLU:CG	5:AF:99:ALA:N	2.73	0.47
1:AA:62:U:O2'	1:AA:379:C:H1'	2.15	0.47
23:BB:2787:C:O2'	23:BB:2788:C:H5'	2.14	0.47
29:BE:68:ALA:O	29:BE:69:ARG:C	2.52	0.47
23:BB:1488:C:O2'	23:BB:1489:C:H5'	2.14	0.47
31:B0:2:VAL:HG12	31:B0:3:GLN:H	1.79	0.47
20:CB:20:ARG:NE	20:CB:20:ARG:HA	2.30	0.47
1:CA:89:U:H2'	1:CA:90:C:C6	2.50	0.47
1:CA:1173:U:H2'	1:CA:1174:G:C8	2.48	0.47
26:BD:68:PHE:HB3	26:BD:73:VAL:HA	1.96	0.47
23:DB:154:U:H2'	23:DB:155:A:H8	1.79	0.47
23:DB:1196:C:H2'	23:DB:1197:G:C8	2.50	0.47
1:AA:1391:U:H2'	1:AA:1392:G:H8	1.76	0.47
23:BB:118:A:OP2	23:BB:119:A:H2'	2.14	0.47
23:DB:175:G:O2'	23:DB:176:A:H5'	2.14	0.47
27:DK:88:ASN:ND2	27:DK:89:ASN:N	2.63	0.47
23:DB:833:A:H1'	37:DL:52:GLY:N	2.30	0.47
1:AA:1164:G:H2'	1:AA:1165:U:C6	2.49	0.47
45:DS:46:LEU:O	45:DS:50:VAL:HG23	2.15	0.47
24:DI:37:PHE:HB2	24:DI:66:PHE:CE2	2.49	0.47
23:BB:680:C:H2'	23:BB:681:G:C8	2.48	0.47
22:DA:14:U:H4'	22:DA:70:C:O2	2.15	0.47
1:CA:556:C:O2'	1:CA:557:G:H5'	2.14	0.47
23:DB:1292:G:O2'	23:DB:1293:C:H5'	2.15	0.47
23:BB:2295:C:O2'	23:BB:2296:U:H5'	2.14	0.47
23:DB:1050:A:C2	23:DB:1051:G:H1'	2.49	0.47
23:BB:950:G:H2'	23:BB:951:C:H6	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1674:G:N2	23:DB:1677:A:N1	2.61	0.47
35:DV:51:GLN:HB2	35:DV:57:TYR:OH	2.14	0.47
1:CA:1014:A:H2'	1:CA:1015:G:O4'	2.15	0.47
23:BB:2847:U:H5''	28:BP:94:ALA:CB	2.44	0.47
23:DB:1749:A:H2'	23:DB:1750:G:C8	2.49	0.47
23:DB:659:G:H4'	29:DE:95:LYS:HB3	1.95	0.47
23:BB:1841:U:H2'	23:BB:1842:G:C8	2.49	0.47
23:BB:1842:G:H2'	23:BB:1843:C:C6	2.49	0.47
1:CA:939:G:H5'	6:CG:101:ARG:NH1	2.29	0.47
23:DB:679:C:O2'	23:DB:680:C:H5'	2.15	0.47
1:CA:721:G:H4'	1:CA:722:G:O4'	2.13	0.47
1:CA:665:A:H2'	1:CA:725:G:N2	2.29	0.47
23:BB:1936:A:H2	23:BB:1943:U:C5	2.32	0.47
23:BB:196:A:H2'	23:BB:196:A:N3	2.29	0.47
1:AA:708:C:H2'	1:AA:709:U:H6	1.80	0.47
1:AA:1186:G:H21	13:AN:100:TRP:C	2.18	0.47
41:DJ:64:VAL:HG22	41:DJ:68:LYS:HD2	1.96	0.47
11:AL:7:VAL:HG22	16:AQ:33:TYR:HD1	1.80	0.47
23:DB:2049:G:O2'	23:DB:2050:C:H5'	2.14	0.47
23:DB:1851:U:O2'	23:DB:1852:U:H5'	2.14	0.47
14:AO:74:ASP:OD1	14:AO:76:ALA:HB3	2.15	0.47
26:BD:101:PHE:HA	26:BD:104:VAL:HG21	1.96	0.47
28:BP:61:ARG:HD3	28:BP:70:GLU:OE1	2.15	0.47
29:DE:160:ALA:O	29:DE:161:ALA:HB3	2.15	0.47
29:BE:119:ILE:HD11	29:BE:185:LYS:HE2	1.95	0.47
23:BB:2311:A:O2'	47:BF:84:ILE:HG21	2.15	0.47
47:BF:49:LEU:HD11	47:BF:66:ILE:HD12	1.95	0.47
46:DU:73:ASN:HD22	46:DU:73:ASN:N	2.11	0.47
27:DK:105:ARG:N	27:DK:105:ARG:HD3	2.25	0.47
42:BN:81:ASN:O	42:BN:85:PRO:HD2	2.14	0.47
27:DK:11:ALA:HB3	27:DK:85:VAL:CG2	2.45	0.47
13:AN:42:ASN:ND2	13:AN:45:LEU:HD22	2.30	0.47
32:B4:9:LYS:HE2	32:B4:10:LEU:N	2.29	0.47
3:CD:116:LEU:O	3:CD:121:ALA:HB3	2.15	0.47
3:CD:153:ARG:HG3	3:CD:154:VAL:H	1.79	0.47
23:BB:138:U:O2'	50:BT:1:MET:HA	2.15	0.47
1:CA:919:A:O2'	1:CA:920:U:H5'	2.15	0.47
43:DO:67:ASN:H	43:DO:70:ALA:CB	2.26	0.47
38:BM:123:LYS:O	38:BM:124:LEU:HG	2.14	0.47
1:CA:843:U:H2'	1:CA:843:U:O2	2.14	0.47
12:AM:2:ARG:O	12:AM:4:ALA:N	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:44:ILE:HA	12:CM:47:LEU:CD1	2.44	0.47
35:BV:83:LYS:O	35:BV:85:LYS:N	2.47	0.47
29:BE:60:TRP:HE3	29:BE:60:TRP:HA	1.80	0.47
23:BB:1030:C:O2'	23:BB:1031:G:H5'	2.15	0.47
38:DM:94:ALA:O	38:DM:96:ILE:HG23	2.15	0.47
23:BB:773:U:O2'	25:BC:47:ARG:HD3	2.14	0.47
19:AT:60:GLN:HB3	19:AT:65:LEU:HD23	1.97	0.47
23:DB:1434:A:H62	23:DB:1558:C:N4	2.12	0.47
17:AR:56:ARG:O	17:AR:60:ARG:HG2	2.15	0.47
1:CA:1171:A:H2'	1:CA:1172:C:C6	2.49	0.47
23:DB:946:C:H2'	23:DB:947:A:C8	2.49	0.47
26:DD:68:PHE:HB3	26:DD:73:VAL:HA	1.97	0.47
1:AA:1007:U:H2'	1:AA:1008:U:H6	1.77	0.47
23:DB:1847:A:H1'	23:DB:1848:A:N7	2.30	0.47
23:DB:521:U:H2'	23:DB:522:A:C8	2.50	0.47
1:AA:1254:A:H2'	1:AA:1255:G:H8	1.80	0.47
37:DL:131:ALA:C	37:DL:133:ALA:N	2.67	0.47
23:DB:1275:A:C4	42:DN:16:HIS:CD2	3.02	0.47
23:DB:263:G:H2'	23:DB:264:C:O4'	2.14	0.47
23:BB:299:A:N6	23:BB:322:A:H1'	2.30	0.47
52:BW:21:GLY:N	52:BW:33:GLY:HA2	2.29	0.47
23:BB:2663:G:H2'	23:BB:2664:G:O4'	2.14	0.47
23:DB:151:C:H2'	23:DB:152:A:C8	2.49	0.47
23:BB:41:C:H2'	23:BB:42:A:O4'	2.14	0.47
22:BA:85:G:H2'	22:BA:86:G:H8	1.80	0.47
23:DB:1424:G:O2'	23:DB:1425:G:H5'	2.14	0.47
2:AC:112:ALA:HB1	2:AC:184:ASN:HB2	1.95	0.47
23:DB:2875:C:H2'	23:DB:2876:G:C8	2.49	0.47
23:DB:554:U:H2'	23:DB:555:G:O4'	2.13	0.47
23:DB:2025:C:H5'	26:DD:154:LYS:HZ3	1.80	0.47
23:DB:659:G:H21	29:DE:30:GLN:HE22	1.63	0.47
23:BB:1335:C:H2'	23:BB:1336:A:H8	1.80	0.47
41:DJ:75:TYR:CD1	41:DJ:86:GLN:HB3	2.50	0.47
48:DG:19:ASN:HB2	48:DG:22:VAL:HB	1.96	0.47
1:AA:649:A:H2'	1:AA:650:G:O4'	2.14	0.47
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.49	0.47
15:CP:59:HIS:O	15:CP:63:GLN:HG3	2.15	0.47
42:BN:19:ALA:C	42:BN:21:PHE:H	2.18	0.47
1:CA:317:U:H2'	1:CA:318:G:H8	1.78	0.47
23:DB:198:C:H2'	23:DB:199:A:H5''	1.95	0.47
23:DB:1099:G:H3'	24:DI:2:LYS:HA	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BW:64:GLY:HA3	52:BW:83:ALA:HA	1.96	0.47
23:BB:923:G:N3	52:BW:23:LYS:HE3	2.30	0.47
23:BB:2385:C:H3'	56:BB:3567:HOH:O	2.15	0.47
26:BD:31:ALA:O	26:BD:52:THR:HG23	2.15	0.47
20:CB:209:VAL:HG23	20:CB:210:THR:N	2.29	0.47
44:BQ:30:VAL:CG1	44:BQ:31:TYR:N	2.67	0.47
8:CI:56:MET:HE1	8:CI:59:LYS:HB3	1.95	0.47
50:BT:5:GLU:HA	50:BT:8:LEU:HD12	1.96	0.47
18:CS:5:LYS:O	18:CS:6:LYS:HD2	2.13	0.47
40:BH:90:LEU:HD11	40:BH:146:VAL:CG1	2.43	0.47
37:DL:80:SER:H	37:DL:113:ALA:HB3	1.80	0.47
44:DQ:91:ARG:HE	49:DR:11:GLN:HB2	1.79	0.47
3:CD:187:ARG:NH1	3:CD:191:SER:HA	2.14	0.47
50:DT:4:GLU:CD	50:DT:5:GLU:H	2.17	0.47
13:AN:49:THR:O	13:AN:50:LEU:HB2	2.14	0.47
52:BW:8:SER:O	52:BW:9:THR:HB	2.14	0.47
18:CS:44:ILE:O	18:CS:44:ILE:HG23	2.13	0.47
44:BQ:96:ASP:C	44:BQ:98:ALA:H	2.17	0.47
23:BB:460:A:C4'	50:BT:72:GLN:HB2	2.35	0.47
1:AA:695:A:H61	1:AA:797:C:H1'	1.78	0.47
50:BT:29:THR:CG2	50:BT:86:THR:HG22	2.44	0.47
50:BT:25:GLU:HG2	50:BT:29:THR:O	2.15	0.47
43:DO:26:LEU:HD13	43:DO:39:VAL:CG2	2.44	0.47
47:BF:43:ILE:HB	47:BF:82:TYR:CZ	2.50	0.47
40:BH:116:ARG:HD3	40:BH:133:GLN:HB2	1.97	0.47
20:CB:16:GLY:HA2	20:CB:40:ILE:H	1.79	0.47
26:BD:181:ASP:CG	26:BD:184:ARG:HD2	2.35	0.47
20:AB:16:GLY:CA	20:AB:40:ILE:H	2.27	0.47
20:AB:204:ASP:O	20:AB:208:ALA:HB3	2.15	0.47
20:AB:44:LYS:O	20:AB:48:MET:HG2	2.13	0.47
23:BB:2179:C:H2'	23:BB:2180:U:C6	2.50	0.47
31:B0:21:LEU:HD13	45:BS:23:LEU:HD11	1.96	0.47
51:DZ:14:THR:HA	51:DZ:28:ARG:CA	2.38	0.47
42:DN:83:LEU:HA	42:DN:86:ARG:HG3	1.95	0.47
27:BK:63:VAL:HG21	27:BK:85:VAL:HG23	1.97	0.47
42:BN:80:PHE:O	42:BN:85:PRO:HD3	2.14	0.47
23:DB:275:C:H2'	23:DB:276:U:C1'	2.45	0.47
1:CA:1207:G:O2'	1:CA:1208:C:H5'	2.13	0.47
52:DW:43:LYS:HD2	52:DW:79:ILE:HD11	1.97	0.47
13:AN:42:ASN:HD22	13:AN:45:LEU:HD22	1.79	0.47
23:DB:10:A:H2'	23:DB:11:C:C2	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:160:LEU:HA	3:CD:163:GLN:CG	2.45	0.47
47:DF:11:VAL:HG21	47:DF:172:PHE:CE1	2.50	0.47
1:CA:921:U:H5'	1:CA:1081:A:O3'	2.15	0.47
30:DY:51:SER:HA	30:DY:54:VAL:CG2	2.45	0.47
23:DB:630:G:N2	23:DB:632:A:H3'	2.30	0.47
23:DB:1654:A:O2'	26:DD:118:PHE:CB	2.63	0.47
1:AA:1060:U:H2'	1:AA:1061:G:C8	2.50	0.47
52:DW:75:ASN:O	52:DW:76:ARG:HB2	2.14	0.47
4:CE:136:VAL:HG13	4:CE:137:ARG:N	2.29	0.47
40:DH:131:SER:HA	40:DH:141:LYS:HA	1.97	0.47
40:DH:131:SER:HB2	40:DH:141:LYS:HA	1.96	0.47
40:BH:4:ILE:HD12	40:BH:4:ILE:H	1.79	0.47
48:DG:72:ASN:O	48:DG:76:ILE:HG12	2.15	0.47
50:DT:76:ARG:HB3	50:DT:76:ARG:CZ	2.44	0.47
3:CD:199:ILE:HG13	3:CD:200:VAL:N	2.30	0.47
12:AM:44:ILE:HA	12:AM:47:LEU:CD1	2.44	0.47
24:DI:96:LYS:HD3	24:DI:138:VAL:HG21	1.97	0.47
35:DV:93:ARG:HG3	35:DV:93:ARG:NH1	2.29	0.47
48:DG:10:VAL:HG13	48:DG:14:VAL:HB	1.96	0.47
38:BM:135:VAL:O	38:BM:136:MET:HG3	2.15	0.47
23:DB:281:C:O2'	23:DB:282:A:H5'	2.14	0.47
23:BB:2784:U:H2'	23:BB:2785:C:H6	1.80	0.47
23:BB:847:U:O4'	23:BB:847:U:O2	2.30	0.47
32:D4:36:ARG:HG2	32:D4:37:GLN:H	1.79	0.47
46:BU:35:VAL:HB	46:BU:38:ILE:CB	2.45	0.47
23:BB:1439:A:N7	23:BB:1440:U:C2	2.82	0.47
23:BB:1595:C:O2'	23:BB:1596:A:H5'	2.14	0.47
48:DG:97:VAL:HA	48:DG:102:ILE:HA	1.96	0.47
38:DM:82:MET:HE2	38:DM:82:MET:HB3	1.77	0.47
40:DH:62:LEU:HG	40:DH:66:ASN:ND2	2.26	0.47
23:BB:1812:U:H1'	25:BC:43:ASN:ND2	2.26	0.47
28:DP:52:ARG:NH1	28:DP:52:ARG:HG2	2.29	0.47
38:DM:69:PRO:HG2	38:DM:70:ASP:H	1.78	0.47
40:BH:53:GLU:HA	40:BH:57:LYS:HG2	1.97	0.47
48:BG:97:VAL:HA	48:BG:102:ILE:HA	1.97	0.47
28:DP:96:LEU:HB3	28:DP:99:LEU:HB2	1.97	0.47
28:BP:50:ARG:CB	28:BP:57:ALA:H	2.27	0.47
37:DL:85:VAL:HG22	37:DL:94:THR:HG21	1.97	0.47
22:DA:28:C:H2'	22:DA:29:A:H8	1.80	0.47
1:AA:735:C:H2'	1:AA:736:C:H6	1.77	0.47
8:AI:94:ARG:CB	8:AI:94:ARG:HH11	2.25	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2099:U:H2'	23:BB:2100:G:C8	2.45	0.47
37:BL:77:ILE:HD11	37:BL:95:LEU:HD13	1.96	0.47
1:AA:1432:G:H5'	28:BP:105:LYS:CG	2.44	0.47
2:CC:154:GLY:O	2:CC:155:ARG:HB2	2.14	0.47
11:CL:79:ILE:HD12	11:CL:96:THR:HG22	1.96	0.47
34:D3:61:LEU:CB	34:D3:64:ALA:HB2	2.44	0.47
1:CA:1011:C:H2'	1:CA:1012:A:H8	1.78	0.47
1:CA:1010:U:O2'	1:CA:1011:C:H5'	2.14	0.47
23:DB:418:C:H2'	23:DB:419:U:H6	1.80	0.47
23:DB:21:A:O2'	23:DB:22:C:H5'	2.15	0.47
50:DT:69:ARG:HA	50:DT:69:ARG:NH1	2.29	0.47
50:BT:69:ARG:HG2	50:BT:73:ARG:C	2.35	0.47
44:DQ:65:ASN:CB	44:DQ:75:TYR:HB2	2.42	0.47
38:BM:69:PRO:HG2	38:BM:70:ASP:H	1.79	0.47
26:DD:79:LEU:HD22	26:DD:79:LEU:H	1.80	0.47
1:CA:279:A:H4'	1:CA:280:C:OP2	2.14	0.47
23:BB:1418:G:H1'	23:BB:1580:A:N6	2.30	0.47
27:BK:88:ASN:ND2	27:BK:89:ASN:N	2.63	0.47
1:CA:552:U:H2'	1:CA:553:A:C8	2.50	0.47
39:DX:15:ASN:HD22	39:DX:15:ASN:H	1.61	0.47
23:DB:2228:G:H2'	23:DB:2229:U:C6	2.50	0.47
1:AA:1337:G:H5''	1:AA:1338:G:OP1	2.13	0.47
23:DB:2515:C:O2'	23:DB:2516:A:H5'	2.15	0.47
1:AA:552:U:H5'	11:AL:82:ARG:HH11	1.80	0.47
47:DF:161:SER:OG	47:DF:164:GLU:HG3	2.14	0.47
1:AA:1308:U:H3'	12:AM:97:ARG:NH1	2.29	0.47
12:AM:79:LEU:HA	12:AM:82:LEU:HB2	1.96	0.47
23:BB:1771:C:O2'	23:BB:1772:A:H5'	2.14	0.47
1:CA:1039:G:H2'	1:CA:1040:U:H6	1.80	0.47
3:CD:77:GLU:OE1	3:CD:80:ARG:HD3	2.15	0.47
38:DM:108:VAL:HG11	38:DM:112:LEU:HD12	1.96	0.47
1:CA:1216:A:H5''	13:CN:4:SER:CB	2.44	0.47
3:AD:81:LEU:HB2	3:AD:88:ASN:ND2	2.30	0.47
10:AK:35:ASP:C	10:AK:37:GLN:H	2.18	0.47
23:DB:2430:A:H5'	23:DB:2431:U:OP2	2.15	0.47
23:DB:1093:G:O2'	23:DB:1094:U:H5'	2.15	0.47
23:BB:2247:A:H2'	23:BB:2248:C:C6	2.50	0.47
23:BB:401:A:H2'	23:BB:402:A:C8	2.50	0.47
23:BB:2838:G:H2'	23:BB:2839:G:C8	2.49	0.47
45:DS:13:SER:HB3	45:DS:16:LYS:HE3	1.96	0.47
23:DB:1830:C:H2'	23:DB:1831:G:H8	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1577:C:H2'	23:DB:1578:U:O4'	2.15	0.47
1:AA:177:G:P	19:AT:23:ARG:HH22	2.37	0.47
1:CA:731:G:O2'	1:CA:732:C:H5'	2.15	0.47
1:AA:997:U:O2'	1:AA:998:C:H5'	2.14	0.47
1:AA:714:G:N2	1:AA:777:A:H1'	2.29	0.47
6:CG:15:PRO:HG3	6:CG:39:GLU:OE1	2.13	0.47
7:CH:49:LYS:HB3	7:CH:59:GLU:HB2	1.96	0.47
30:BY:30:ARG:N	30:BY:30:ARG:HD3	2.28	0.47
23:BB:2053:G:O2'	23:BB:2054:A:H5'	2.15	0.47
1:CA:1178:G:H2'	1:CA:1180:A:OP2	2.14	0.47
23:DB:951:C:O2'	23:DB:952:G:H5'	2.15	0.47
2:CC:53:ARG:HG2	2:CC:54:ILE:H	1.79	0.47
2:CC:184:ASN:HD22	2:CC:185:THR:H	1.63	0.47
23:DB:553:G:H2'	23:DB:554:U:O4'	2.14	0.47
1:AA:505:G:H2'	1:AA:506:G:C8	2.50	0.47
23:DB:814:C:H2'	23:DB:815:C:H6	1.79	0.47
23:BB:198:C:H2'	23:BB:199:A:H5''	1.97	0.47
1:AA:648:A:H2'	1:AA:649:A:C8	2.50	0.47
37:BL:14:LYS:O	37:BL:16:GLY:N	2.48	0.47
2:AC:109:GLU:HG2	2:AC:139:ASN:HB3	1.95	0.47
45:BS:72:THR:CG2	45:BS:108:SER:HB3	2.44	0.47
23:DB:196:A:N3	23:DB:196:A:H2'	2.30	0.47
26:DD:138:LEU:N	26:DD:138:LEU:HD22	2.29	0.47
48:DG:155:PRO:C	48:DG:170:THR:HB	2.35	0.47
26:BD:55:LYS:HB2	26:BD:60:VAL:HG13	1.95	0.47
9:AJ:26:VAL:O	9:AJ:30:LYS:HG3	2.15	0.47
9:AJ:66:GLU:HB3	13:AN:98:ALA:HB2	1.97	0.47
1:AA:463:U:H5'	1:AA:464:U:OP2	2.15	0.47
1:CA:742:G:O2'	1:CA:743:A:H5'	2.14	0.47
23:DB:189:G:H2'	23:DB:205:G:H22	1.80	0.47
1:CA:200:G:O2'	1:CA:381:C:N4	2.48	0.47
23:DB:2676:C:H2'	23:DB:2677:G:H8	1.79	0.47
37:DL:142:ILE:N	37:DL:142:ILE:HD12	2.30	0.47
1:CA:467:U:O2	1:CA:467:U:H2'	2.13	0.47
23:BB:242:G:C8	34:B3:4:LYS:HG2	2.50	0.47
15:AP:38:PHE:CE2	15:AP:51:ARG:HD3	2.50	0.47
2:CC:178:ARG:O	2:CC:178:ARG:HG2	2.15	0.47
5:CF:25:TYR:O	5:CF:29:ILE:HG13	2.14	0.47
8:CI:56:MET:O	8:CI:58:GLU:N	2.41	0.47
41:DJ:13:ARG:HB3	41:DJ:53:TYR:CD2	2.50	0.47
44:DQ:86:SER:CB	49:DR:51:VAL:HA	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:321:U:OP2	29:BE:130:LYS:HD3	2.15	0.47
50:DT:5:GLU:HA	50:DT:8:LEU:HD12	1.96	0.47
18:CS:50:VAL:O	18:CS:56:HIS:HA	2.14	0.47
25:BC:153:LEU:HD13	25:BC:175:LEU:CD2	2.45	0.47
41:BJ:55:ILE:CG2	41:BJ:123:LYS:HB2	2.45	0.47
31:D0:21:LEU:HB3	45:DS:23:LEU:HD21	1.97	0.47
27:BK:34:GLY:O	27:BK:36:GLY:N	2.48	0.47
23:BB:27:G:HO2'	23:BB:28:A:H8	1.57	0.47
20:CB:178:LEU:HB2	20:CB:180:ILE:HG12	1.97	0.47
40:DH:128:HIS:O	40:DH:144:VAL:N	2.48	0.47
38:BM:24:THR:HG23	38:BM:34:LYS:CE	2.44	0.47
27:DK:11:ALA:O	27:DK:100:PHE:N	2.42	0.47
13:AN:46:LYS:HZ2	18:AS:15:LEU:CD1	2.27	0.47
12:CM:70:ARG:HH22	47:DF:142:TYR:HB3	1.76	0.47
47:DF:147:ARG:HB3	47:DF:147:ARG:NH1	2.30	0.47
36:B2:21:ARG:HD3	36:B2:43:THR:HG21	1.96	0.47
14:CO:25:THR:CB	14:CO:70:LEU:HD23	2.45	0.47
26:DD:148:GLN:CB	26:DD:152:PRO:HG2	2.44	0.47
23:DB:1548:A:H2'	23:DB:1549:A:H8	1.79	0.47
23:DB:1439:A:C5	23:DB:1552:A:N6	2.83	0.47
35:BV:38:LEU:HG	35:BV:40:ILE:HG23	1.96	0.47
20:AB:65:LYS:H	20:AB:158:ASP:CG	2.18	0.47
1:AA:256:U:H3'	1:AA:257:G:H8	1.79	0.47
23:DB:2468:A:H2'	23:DB:2476:A:C6	2.49	0.47
1:AA:923:A:H2'	1:AA:924:C:H6	1.76	0.47
23:DB:170:U:H2'	23:DB:171:U:H6	1.80	0.47
12:CM:64:VAL:HA	12:CM:68:LEU:HD12	1.97	0.47
28:BP:50:ARG:HD3	28:BP:75:THR:OG1	2.14	0.47
12:AM:64:VAL:HA	12:AM:68:LEU:CD1	2.44	0.47
12:AM:95:PRO:HB2	12:AM:99:GLN:OE1	2.15	0.47
11:AL:107:LYS:HD2	11:AL:107:LYS:O	2.15	0.47
47:BF:119:LYS:C	47:BF:121:PHE:H	2.17	0.47
3:AD:18:LEU:O	3:AD:19:PHE:HB2	2.15	0.47
2:CC:119:ILE:HG13	2:CC:132:ALA:HB1	1.96	0.47
1:AA:1392:G:O2'	1:AA:1393:U:H5'	2.15	0.47
1:CA:161:A:H2'	1:CA:162:A:C8	2.50	0.47
6:CG:50:ALA:CB	6:CG:57:GLU:HG3	2.45	0.47
23:DB:2548:U:H1'	27:DK:23:LYS:NZ	2.30	0.47
11:AL:68:GLY:HA3	11:AL:106:VAL:HG21	1.97	0.47
1:CA:642:A:H2'	1:CA:643:C:C6	2.50	0.47
11:CL:68:GLY:HA3	11:CL:106:VAL:HG21	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:263:G:H2'	23:BB:264:C:O4'	2.15	0.47
23:DB:2892:G:H5''	23:DB:2894:G:H22	1.78	0.47
23:DB:528:A:N1	23:DB:2042:A:H2'	2.29	0.47
23:BB:151:C:H2'	23:BB:152:A:C8	2.50	0.47
23:BB:680:C:H2'	23:BB:681:G:H8	1.78	0.47
22:DA:14:U:H5'	22:DA:70:C:O2'	2.15	0.47
23:BB:553:G:O2'	23:BB:554:U:H5'	2.15	0.47
19:CT:57:VAL:HB	19:CT:71:ALA:HB1	1.96	0.47
16:CQ:37:ILE:HG22	16:CQ:39:ARG:HE	1.80	0.47
1:CA:979:C:H1'	1:CA:1317:C:N4	2.30	0.47
27:DK:2:ILE:HG13	27:DK:33:ALA:O	2.15	0.47
23:BB:1824:G:H1'	25:BC:251:THR:CG2	2.44	0.47
1:CA:822:U:O2'	1:CA:823:C:H5'	2.15	0.47
23:DB:1258:U:H2'	23:DB:1259:G:H8	1.79	0.47
23:DB:409:G:H2'	23:DB:410:G:C8	2.50	0.47
1:AA:832:G:O2'	1:AA:833:G:H5'	2.15	0.47
26:DD:171:THR:OG1	26:DD:172:VAL:N	2.48	0.47
1:CA:1262:C:H2'	1:CA:1263:C:C6	2.50	0.47
22:BA:64:G:H2'	22:BA:65:U:C6	2.50	0.47
1:CA:651:C:H2'	1:CA:652:U:C6	2.50	0.47
1:CA:1113:C:O2'	1:CA:1114:C:H5'	2.15	0.47
1:AA:240:G:H8	1:AA:240:G:H5'	1.80	0.47
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.50	0.47
51:BZ:59:ILE:HD13	51:BZ:67:VAL:HG21	1.97	0.47
23:DB:924:G:H2'	23:DB:925:A:H8	1.80	0.47
47:DF:46:LYS:HA	47:DF:46:LYS:NZ	2.30	0.47
13:CN:46:LYS:HZ2	18:CS:15:LEU:HD11	1.80	0.47
44:BQ:109:VAL:CG1	44:BQ:113:LYS:HE3	2.43	0.47
25:DC:131:MET:HA	25:DC:134:ILE:HG12	1.97	0.47
24:DI:78:LEU:HD23	24:DI:81:LYS:HE2	1.95	0.47
24:BI:79:LEU:HD23	24:BI:108:ILE:CD1	2.45	0.47
20:CB:15:PHE:O	20:CB:40:ILE:HD12	2.15	0.47
27:BK:47:ILE:HG23	27:BK:48:PRO:CD	2.45	0.47
1:AA:82:G:H2'	1:AA:84:U:C5	2.49	0.47
1:CA:1206:G:H2'	1:CA:1207:G:O4'	2.15	0.47
3:CD:25:ARG:O	3:CD:26:ALA:HB3	2.14	0.47
20:AB:178:LEU:HB2	20:AB:180:ILE:HG12	1.97	0.47
24:DI:23:VAL:HG12	24:DI:24:GLY:N	2.30	0.47
1:AA:430:A:P	3:AD:6:PRO:HA	2.55	0.47
23:BB:1141:U:H4'	23:BB:1142:A:C1'	2.44	0.47
14:AO:81:LEU:O	14:AO:85:LEU:HD13	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DM:36:VAL:HG21	38:DM:129:THR:HB	1.96	0.47
30:DY:7:THR:HG22	30:DY:9:THR:H	1.80	0.47
12:CM:106:ARG:HH21	12:CM:112:ARG:HD3	1.80	0.47
22:BA:43:C:H4'	47:BF:91:ARG:NE	2.29	0.47
29:BE:87:ALA:O	29:BE:88:ARG:HD3	2.14	0.47
29:DE:60:TRP:HB3	29:DE:61:ARG:H	1.34	0.47
48:BG:91:VAL:O	48:BG:93:TYR:N	2.42	0.47
46:DU:26:ASN:ND2	46:DU:26:ASN:N	2.62	0.47
1:AA:377:G:H2'	1:AA:378:G:H8	1.80	0.47
12:CM:44:ILE:HA	12:CM:47:LEU:HD12	1.96	0.47
23:DB:1438:U:O2'	23:DB:1439:A:H5'	2.15	0.47
29:BE:60:TRP:C	29:BE:62:GLN:H	2.18	0.47
23:DB:351:C:H2'	23:DB:352:A:H8	1.75	0.47
13:AN:30:ILE:HB	13:AN:44:VAL:HG21	1.97	0.47
41:DJ:29:ALA:O	41:DJ:32:LEU:HB2	2.15	0.47
28:DP:50:ARG:HD3	28:DP:75:THR:OG1	2.14	0.47
23:DB:454:A:H4'	23:DB:455:C:OP2	2.15	0.47
23:DB:1805:A:N3	25:DC:49:THR:HG23	2.29	0.47
8:CI:43:ALA:O	8:CI:46:VAL:HG22	2.15	0.47
8:CI:46:VAL:O	8:CI:49:GLN:HB2	2.14	0.47
8:CI:16:ALA:HA	8:CI:66:VAL:HA	1.97	0.47
23:BB:593:U:H2'	23:BB:594:U:C6	2.50	0.47
26:BD:109:VAL:CG1	26:BD:193:VAL:HB	2.45	0.47
50:DT:69:ARG:HG2	50:DT:73:ARG:O	2.14	0.47
2:AC:119:ILE:HD11	2:AC:133:MET:HA	1.97	0.47
1:CA:1057:G:O3'	2:CC:196:GLY:HA3	2.15	0.47
14:AO:57:LEU:HD11	23:BB:715:A:N6	2.30	0.47
37:DL:129:LYS:HA	37:DL:132:ARG:HG2	1.95	0.47
23:BB:969:G:H2'	23:BB:970:U:C6	2.50	0.47
29:DE:40:ARG:NH2	29:DE:92:HIS:NE2	2.63	0.47
27:DK:88:ASN:HD22	27:DK:89:ASN:N	2.13	0.47
39:DX:45:GLN:O	39:DX:46:VAL:HB	2.15	0.47
23:BB:863:A:H2'	23:BB:864:G:C8	2.50	0.47
1:CA:301:G:H2'	1:CA:302:G:C8	2.49	0.47
1:CA:1450:U:H2'	1:CA:1452:C:C5	2.49	0.47
5:AF:46:GLN:HG3	5:AF:47:LEU:N	2.29	0.47
31:B0:29:VAL:HA	31:B0:35:GLU:O	2.15	0.47
23:DB:2785:C:H2'	23:DB:2786:U:H6	1.80	0.47
23:BB:1536:C:H1'	23:BB:1537:G:N2	2.30	0.47
23:DB:1401:G:H2'	23:DB:1402:U:C6	2.50	0.47
1:CA:684:U:H1'	10:CK:39:ASN:HA	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AQ:37:ILE:HG22	16:AQ:39:ARG:NE	2.30	0.47
23:DB:1335:C:H2'	23:DB:1336:A:C8	2.50	0.47
23:BB:1292:G:O2'	23:BB:1293:C:H5'	2.15	0.47
20:CB:13:VAL:HG12	20:CB:13:VAL:O	2.15	0.47
23:BB:426:C:O2'	23:BB:427:U:H5'	2.15	0.47
23:DB:426:C:O2'	23:DB:427:U:H5'	2.15	0.47
1:AA:125:U:H2'	1:AA:126:G:C8	2.50	0.47
38:BM:131:VAL:HG12	38:BM:132:THR:N	2.30	0.47
23:BB:1183:U:H2'	23:BB:1184:U:C6	2.49	0.47
47:BF:68:LYS:N	47:BF:68:LYS:HD2	2.29	0.47
1:AA:1190:G:OP1	2:AC:3:LYS:HA	2.14	0.47
1:AA:375:U:OP1	15:AP:70:ARG:HD3	2.15	0.47
26:DD:55:LYS:HB2	26:DD:60:VAL:HG13	1.96	0.47
1:AA:386:C:C2'	1:AA:387:U:H5'	2.45	0.47
6:AG:91:ARG:HB3	6:AG:92:PRO:HD2	1.97	0.47
23:BB:1821:A:H2'	23:BB:1822:C:C6	2.50	0.47
23:BB:755:U:H2'	23:BB:756:A:C8	2.49	0.47
23:BB:1063:G:H1'	24:BI:134:SER:O	2.15	0.47
49:BR:91:GLN:HG3	49:BR:92:TRP:N	2.30	0.47
41:DJ:34:ARG:HG3	41:DJ:34:ARG:HH11	1.80	0.47
1:AA:613:C:H2'	1:AA:614:C:C6	2.49	0.47
31:D0:55:ALA:C	31:D0:56:LYS:HG3	2.33	0.47
36:D2:39:ARG:HG3	36:D2:39:ARG:HH11	1.80	0.47
1:AA:627:G:H2'	1:AA:628:G:C8	2.50	0.47
23:BB:2428:G:H5''	23:BB:2429:G:OP1	2.15	0.47
23:DB:1672:A:C2	23:DB:2582:G:H5'	2.50	0.47
52:DW:49:ASN:HB2	52:DW:60:ALA:CA	2.43	0.47
8:CI:5:TYR:O	8:CI:19:PHE:HA	2.15	0.47
13:CN:53:ASP:HA	13:CN:58:ARG:HD3	1.97	0.47
25:DC:143:VAL:HG12	25:DC:144:GLU:H	1.80	0.47
44:DQ:111:LYS:HE3	49:DR:48:LYS:NZ	2.30	0.47
25:BC:80:LEU:HD21	25:BC:109:LEU:HG	1.97	0.47
43:BO:26:LEU:HD13	43:BO:39:VAL:CG2	2.45	0.47
37:DL:3:LEU:HA	37:DL:6:LEU:HD21	1.96	0.47
20:AB:187:ASP:OD1	20:AB:203:ASP:HB3	2.14	0.47
47:DF:113:PHE:HZ	47:DF:175:PRO:HB2	1.79	0.47
3:CD:146:GLU:C	3:CD:148:ALA:H	2.18	0.47
50:DT:2:ILE:HG12	50:DT:3:ARG:H	1.79	0.47
23:BB:146:A:H2'	23:BB:147:C:C6	2.50	0.47
23:DB:727:A:OP1	23:DB:1431:A:O2'	2.31	0.47
23:DB:116:C:HO2'	23:DB:126:A:H8	1.54	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CJ:5:ARG:N	9:CJ:76:ILE:O	2.48	0.47
26:DD:118:PHE:CD1	26:DD:119:ALA:N	2.83	0.47
26:DD:118:PHE:O	26:DD:119:ALA:HB3	2.14	0.47
1:CA:1060:U:H2'	1:CA:1061:G:C8	2.49	0.47
35:BV:72:VAL:HG11	35:BV:93:ARG:HA	1.97	0.47
11:CL:88:ASP:C	11:CL:89:LEU:HD22	2.35	0.47
12:AM:52:ILE:HA	12:AM:55:LEU:HG	1.97	0.47
1:CA:1250:A:H2'	1:CA:1251:A:H8	1.80	0.47
35:DV:72:VAL:HG11	35:DV:93:ARG:HA	1.97	0.47
30:BY:15:ARG:HG2	30:BY:53:MET:SD	2.55	0.47
22:BA:74:U:H2'	22:BA:75:G:O4'	2.15	0.47
1:CA:1289:A:H61	8:CI:71:ILE:CD1	2.28	0.47
26:BD:114:LYS:HG3	26:BD:115:GLY:H	1.80	0.47
13:CN:17:ASP:HA	13:CN:21:ALA:HB2	1.97	0.47
23:DB:2812:G:H2'	23:DB:2813:A:C8	2.50	0.47
23:DB:2497:A:H5''	56:DB:3699:HOH:O	2.15	0.47
13:AN:29:ILE:HB	13:AN:30:ILE:HD12	1.96	0.47
43:DO:51:ALA:HB3	43:DO:78:VAL:CG2	2.41	0.47
48:BG:84:LYS:HB2	48:BG:132:LEU:HG	1.97	0.47
29:DE:59:PRO:CB	29:DE:67:ARG:HH22	2.25	0.47
8:CI:50:PRO:O	8:CI:54:VAL:HG22	2.14	0.47
11:CL:29:LYS:HB3	11:CL:56:LEU:HD22	1.97	0.47
1:AA:1171:A:H2'	1:AA:1172:C:C6	2.49	0.47
25:DC:243:PRO:O	25:DC:250:GLN:HA	2.15	0.47
1:CA:1053:G:C4'	1:CA:1054:C:H5'	2.45	0.47
23:BB:781:A:OP1	25:BC:216:ARG:NH2	2.47	0.47
46:BU:13:LEU:HD12	46:BU:68:ASN:O	2.14	0.47
3:AD:2:ARG:O	3:AD:3:TYR:HB3	2.14	0.47
23:BB:2797:U:H3'	23:BB:2798:U:C5	2.50	0.47
1:AA:1244:G:H2'	1:AA:1245:C:H6	1.78	0.47
23:BB:2291:U:O2'	23:BB:2374:C:H1'	2.15	0.47
23:DB:2135:A:O2'	23:DB:2136:G:H5'	2.14	0.47
23:BB:2812:G:H2'	23:BB:2813:A:C8	2.50	0.47
1:CA:736:C:H5''	5:CF:90:MET:CE	2.45	0.47
23:DB:1085:A:H1'	23:DB:1105:U:H1'	1.96	0.47
1:CA:620:C:C2	3:CD:131:ILE:HD13	2.50	0.47
1:CA:1335:U:H5''	1:CA:1337:G:N2	2.30	0.47
37:DL:50:PHE:O	37:DL:52:GLY:N	2.48	0.47
1:CA:96:U:H2'	1:CA:97:G:H8	1.80	0.47
29:DE:31:VAL:HG21	29:DE:104:ALA:CB	2.44	0.47
23:BB:2093:G:O5'	40:BH:24:GLY:HA3	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BJ:11:VAL:HG21	41:BJ:13:ARG:HH11	1.79	0.47
9:CJ:41:PRO:HG2	9:CJ:42:LEU:H	1.80	0.47
23:BB:527:C:O4'	23:BB:527:C:O2	2.33	0.47
23:BB:265:A:O2'	23:BB:266:G:H4'	2.15	0.47
1:AA:33:A:H2'	1:AA:34:C:H6	1.79	0.47
30:BY:37:ARG:CG	30:BY:38:GLU:H	2.27	0.47
23:DB:1683:U:O2'	23:DB:1684:G:H5'	2.15	0.47
23:DB:817:C:H2'	23:DB:818:G:O4'	2.15	0.47
23:DB:2368:C:H2'	23:DB:2369:A:H8	1.79	0.47
1:CA:177:G:P	19:CT:23:ARG:HH22	2.38	0.47
1:CA:394:G:H2'	1:CA:395:C:C6	2.50	0.47
23:BB:2578:G:C5	26:BD:145:SER:HB2	2.50	0.47
12:AM:71:GLU:HA	12:AM:74:MET:SD	2.54	0.47
1:AA:208:U:O5'	1:AA:208:U:H6	1.98	0.47
23:BB:1184:U:O2'	23:BB:1185:G:H5'	2.15	0.47
1:CA:666:G:H5'	1:CA:726:C:H1'	1.97	0.47
1:AA:708:C:H2'	1:AA:709:U:C6	2.50	0.47
10:CK:63:GLN:HG3	10:CK:98:ALA:HB2	1.96	0.47
11:AL:23:LEU:O	11:AL:25:ALA:N	2.48	0.47
1:CA:1366:C:H2'	1:CA:1367:C:C6	2.49	0.47
35:BV:81:PRO:HG2	38:BM:20:LEU:HD12	1.97	0.47
23:BB:2835:A:N6	23:BB:2878:U:H2'	2.30	0.47
42:BN:23:ASN:O	42:BN:27:SER:HB2	2.15	0.47
23:DB:1908:C:O2'	23:DB:1909:C:H5'	2.15	0.47
2:CC:46:LEU:HB3	2:CC:49:ALA:CB	2.45	0.47
1:CA:687:A:C2	1:CA:704:A:C5	3.03	0.47
18:CS:79:TYR:CE1	18:CS:80:ARG:HG3	2.50	0.47
23:DB:1099:G:H4'	24:DI:4:VAL:CG1	2.45	0.46
46:BU:71:ILE:HD11	46:BU:82:VAL:HG22	1.97	0.46
46:DU:71:ILE:HD11	46:DU:82:VAL:HG22	1.96	0.46
50:BT:11:LEU:CD2	50:BT:46:ALA:HB1	2.38	0.46
40:BH:82:SER:HB2	40:BH:146:VAL:HG13	1.97	0.46
49:DR:4:VAL:HA	49:DR:12:HIS:O	2.15	0.46
39:DX:24:GLU:O	39:DX:28:LEU:HD23	2.15	0.46
27:DK:76:VAL:HG12	27:DK:77:ILE:N	2.31	0.46
18:CS:18:VAL:HG21	18:CS:43:MET:HE2	1.97	0.46
20:AB:182:VAL:HG12	20:AB:195:VAL:HG13	1.97	0.46
49:BR:40:MET:O	49:BR:41:ILE:HD13	2.14	0.46
26:DD:186:LEU:HD11	28:DP:3:ILE:HG13	1.97	0.46
3:AD:186:GLU:CD	3:AD:187:ARG:N	2.68	0.46
48:DG:33:THR:HA	48:DG:34:ARG:NH1	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:66:ILE:HA	47:BF:85:GLY:O	2.14	0.46
39:BX:3:ALA:O	39:BX:6:LEU:HB2	2.15	0.46
52:BW:68:PHE:CE1	52:BW:79:ILE:HD11	2.51	0.46
45:BS:15:GLN:HA	45:BS:18:ARG:CG	2.45	0.46
23:BB:1203:U:H4'	37:BL:3:LEU:HD12	1.96	0.46
27:DK:71:ARG:CG	27:DK:105:ARG:HH21	2.20	0.46
42:DN:79:LEU:C	42:DN:81:ASN:H	2.19	0.46
27:BK:11:ALA:O	27:BK:100:PHE:N	2.44	0.46
1:CA:409:U:OP1	3:CD:23:GLY:HA3	2.15	0.46
3:CD:115:GLN:HG3	3:CD:119:HIS:CE1	2.49	0.46
3:CD:148:ALA:O	3:CD:151:GLN:HB2	2.15	0.46
1:AA:437:U:H4'	3:AD:153:ARG:HH12	1.81	0.46
37:DL:29:LYS:C	37:DL:31:GLY:H	2.18	0.46
14:CO:26:GLU:CD	14:CO:77:ARG:HD2	2.35	0.46
1:CA:921:U:O2	4:CE:23:THR:HG23	2.14	0.46
23:DB:116:C:O2'	23:DB:126:A:C8	2.64	0.46
48:DG:93:TYR:HA	48:DG:105:SER:O	2.14	0.46
52:DW:19:ARG:N	52:DW:19:ARG:HD3	2.30	0.46
33:B1:46:VAL:HG22	33:B1:47:ILE:N	2.23	0.46
23:BB:2471:A:O2'	23:BB:2472:G:O5'	2.33	0.46
23:DB:2740:A:H2'	23:DB:2741:A:C8	2.50	0.46
23:DB:2589:A:H2'	23:DB:2590:A:C8	2.50	0.46
39:BX:56:LEU:C	39:BX:58:ASN:N	2.68	0.46
34:B3:60:CYS:C	34:B3:62:PRO:HD3	2.35	0.46
19:AT:27:MET:HG2	19:AT:31:ILE:HD11	1.97	0.46
26:BD:46:ARG:HH22	26:BD:87:GLY:H	1.62	0.46
37:BL:95:LEU:HB2	37:BL:101:ILE:CG1	2.45	0.46
8:CI:94:ARG:HH11	8:CI:94:ARG:CB	2.28	0.46
1:AA:598:U:H2'	1:AA:599:C:H6	1.79	0.46
1:CA:812:G:H4'	1:CA:812:G:OP1	2.15	0.46
23:BB:2250:G:O5'	23:BB:2250:G:H8	1.97	0.46
1:AA:525:C:O2'	1:AA:526:C:H5'	2.15	0.46
2:CC:119:ILE:HD11	2:CC:133:MET:HA	1.98	0.46
7:CH:86:LYS:HD2	7:CH:90:GLU:HG2	1.97	0.46
23:BB:2070:A:C2	23:BB:2442:C:C2	3.04	0.46
5:CF:18:VAL:HG21	5:CF:58:HIS:CD2	2.50	0.46
1:AA:621:A:H2'	1:AA:622:A:H8	1.79	0.46
25:BC:209:ALA:HA	25:BC:212:TRP:NE1	2.30	0.46
41:BJ:13:ARG:HB3	41:BJ:53:TYR:CD2	2.50	0.46
42:DN:17:ARG:O	42:DN:18:GLN:HG2	2.14	0.46
23:BB:2758:A:C1'	48:BG:63:GLN:HE22	2.28	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:322:A:H5'	23:DB:340:A:C1'	2.45	0.46
1:CA:634:C:H2'	1:CA:635:A:C8	2.50	0.46
6:AG:104:VAL:CG1	6:AG:108:ARG:HH11	2.28	0.46
23:DB:1577:C:H2'	23:DB:1578:U:C6	2.49	0.46
1:CA:167:A:H2'	1:CA:168:G:H8	1.80	0.46
23:DB:2649:C:H2'	23:DB:2650:U:C6	2.50	0.46
7:AH:49:LYS:HB3	7:AH:59:GLU:HB2	1.97	0.46
2:CC:39:ARG:HE	2:CC:54:ILE:HG23	1.80	0.46
1:CA:709:U:H2'	1:CA:710:G:H8	1.80	0.46
20:AB:10:LYS:O	20:AB:13:VAL:HG23	2.15	0.46
1:CA:1014:A:H4'	18:CS:13:HIS:CD2	2.50	0.46
23:DB:208:C:H2'	23:DB:209:C:H6	1.79	0.46
26:DD:39:ASP:OD2	26:DD:41:ALA:HB3	2.14	0.46
1:CA:1246:A:H2'	1:CA:1247:U:O4'	2.16	0.46
1:AA:546:A:P	3:AD:68:GLU:HB3	2.55	0.46
25:DC:210:ALA:O	25:DC:215:VAL:HB	2.15	0.46
44:BQ:51:GLN:O	44:BQ:55:GLN:HG3	2.16	0.46
23:BB:1266:G:N2	23:BB:2012:G:H2'	2.30	0.46
23:BB:2480:C:O2'	23:BB:2481:G:H5'	2.14	0.46
33:B1:24:LYS:HG2	33:B1:25:ASN:N	2.30	0.46
26:BD:171:THR:OG1	26:BD:172:VAL:N	2.47	0.46
18:AS:79:TYR:CE1	18:AS:80:ARG:HG3	2.50	0.46
23:BB:686:U:O2'	36:B2:5:PHE:HA	2.15	0.46
1:CA:1030:U:O2	1:CA:1030:U:H2'	2.13	0.46
11:CL:28:GLN:HE21	11:CL:28:GLN:HB3	1.53	0.46
23:DB:1842:G:H2'	23:DB:1843:C:C6	2.49	0.46
1:AA:1332:A:H2'	1:AA:1333:A:O4'	2.15	0.46
23:DB:1099:G:H3'	24:DI:2:LYS:CB	2.45	0.46
51:BZ:32:ASN:O	51:BZ:33:LEU:O	2.33	0.46
8:AI:5:TYR:HB3	8:AI:88:GLU:OE2	2.14	0.46
28:BP:62:LYS:HE3	28:BP:64:SER:OG	2.14	0.46
23:DB:1651:G:OP1	42:DN:40:LYS:HG3	2.14	0.46
40:BH:99:ILE:HG22	40:BH:100:ALA:N	2.30	0.46
28:DP:47:ILE:HG13	28:DP:48:ALA:N	2.30	0.46
1:CA:1320:C:H2'	1:CA:1321:U:O4'	2.15	0.46
48:BG:26:LYS:HA	48:BG:32:LEU:H	1.80	0.46
44:BQ:91:ARG:NH2	49:BR:11:GLN:O	2.48	0.46
49:BR:6:GLN:HE21	49:BR:6:GLN:C	2.18	0.46
50:BT:43:ILE:HG21	50:BT:58:VAL:HG21	1.96	0.46
37:BL:113:ALA:HB3	37:BL:115:GLU:OE1	2.15	0.46
23:DB:1080:A:C4'	24:DI:126:ARG:HD2	2.43	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:144:ALA:O	6:CG:145:GLU:HB3	2.14	0.46
27:DK:20:MET:O	27:DK:41:ILE:HD12	2.16	0.46
42:DN:81:ASN:O	42:DN:85:PRO:HD2	2.15	0.46
1:AA:86:G:HO2'	1:AA:88:U:H5	1.61	0.46
42:BN:38:LEU:CB	42:BN:39:PRO:HD3	2.40	0.46
26:BD:168:GLU:O	26:BD:170:VAL:HG13	2.15	0.46
47:BF:162:ASP:O	47:BF:166:ARG:HD2	2.15	0.46
41:BJ:59:ALA:O	41:BJ:62:VAL:HG12	2.15	0.46
23:DB:160:A:N6	23:DB:167:A:H1'	2.30	0.46
50:BT:1:MET:CG	50:BT:2:ILE:H	2.28	0.46
23:DB:2868:A:H2'	23:DB:2869:G:H8	1.77	0.46
48:DG:91:VAL:O	48:DG:93:TYR:N	2.45	0.46
29:BE:47:LYS:HA	29:BE:51:GLU:OE2	2.15	0.46
31:B0:53:VAL:HG21	42:BN:98:LEU:CD1	2.45	0.46
36:D2:21:ARG:HD3	36:D2:43:THR:HG21	1.96	0.46
12:AM:44:ILE:HA	12:AM:47:LEU:HD12	1.97	0.46
43:BO:67:ASN:N	43:BO:70:ALA:HB3	2.27	0.46
16:AQ:46:HIS:NE2	16:AQ:48:GLU:HB2	2.30	0.46
23:BB:2722:G:H2'	23:BB:2723:C:H6	1.81	0.46
34:B3:7:ARG:HG3	34:B3:7:ARG:NH1	2.30	0.46
23:BB:673:C:C2'	23:BB:674:G:H5'	2.45	0.46
23:DB:2146:C:H4'	23:DB:2148:G:C1'	2.44	0.46
23:DB:718:A:H5'	23:DB:719:C:C5	2.50	0.46
23:BB:2465:C:O2'	23:BB:2466:C:H5'	2.16	0.46
23:DB:309:A:H4'	46:DU:15:GLY:HA3	1.98	0.46
23:BB:1383:A:H2	23:BB:1405:U:O2	1.98	0.46
17:CR:52:ARG:CB	17:CR:56:ARG:HH21	2.26	0.46
5:AF:85:ILE:HG22	5:AF:86:ARG:N	2.30	0.46
23:BB:454:A:H3'	23:BB:455:C:H5'	1.96	0.46
40:BH:47:PHE:C	40:BH:50:ARG:HH21	2.18	0.46
1:AA:46:G:O2'	1:AA:365:U:H1'	2.16	0.46
23:BB:2078:C:O2'	23:BB:2079:U:H5'	2.15	0.46
34:D3:60:CYS:C	34:D3:62:PRO:HD3	2.36	0.46
1:CA:470:C:H2'	1:CA:471:U:H6	1.78	0.46
1:AA:812:G:H4'	1:AA:812:G:OP1	2.14	0.46
23:DB:2087:G:O2'	23:DB:2088:A:H5'	2.15	0.46
23:BB:2101:A:H2'	23:BB:2102:G:C8	2.50	0.46
23:BB:947:A:O2'	23:BB:984:A:H2	1.98	0.46
23:DB:2815:C:H2'	23:DB:2816:G:C8	2.51	0.46
5:CF:18:VAL:HG11	5:CF:58:HIS:NE2	2.31	0.46
9:AJ:41:PRO:HG2	9:AJ:42:LEU:H	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:115:ASP:O	20:CB:119:GLN:HG2	2.15	0.46
23:BB:99:U:O2	23:BB:99:U:H5'	2.15	0.46
1:CA:1151:A:O2'	1:CA:1152:A:H8	1.97	0.46
37:BL:50:PHE:O	37:BL:52:GLY:N	2.49	0.46
47:BF:177:ARG:NH2	47:BF:178:LYS:H	2.13	0.46
47:BF:19:PHE:HE1	47:BF:167:ALA:HB2	1.81	0.46
1:CA:131:A:H2'	1:CA:132:C:H6	1.80	0.46
23:BB:2753:A:H2'	23:BB:2754:U:C6	2.50	0.46
23:DB:2785:C:H2'	23:DB:2786:U:C6	2.50	0.46
23:BB:2817:U:O2'	23:BB:2837:A:H1'	2.15	0.46
23:DB:840:C:H2'	23:DB:841:G:H8	1.80	0.46
23:BB:635:C:O2'	23:BB:639:U:H5''	2.15	0.46
3:AD:101:VAL:HG13	3:AD:106:PHE:HB2	1.97	0.46
1:AA:1084:G:H5'	1:AA:1102:A:OP2	2.16	0.46
1:AA:261:U:H2'	1:AA:263:A:OP2	2.14	0.46
30:DY:21:ALA:O	30:DY:24:LEU:HB3	2.14	0.46
23:BB:2389:G:H5''	23:BB:2390:U:H5'	1.97	0.46
1:CA:708:C:H2'	1:CA:709:U:C6	2.51	0.46
1:CA:803:G:H2'	1:CA:804:U:C6	2.49	0.46
23:DB:553:G:O2'	23:DB:554:U:H5'	2.15	0.46
1:AA:1014:A:H4'	18:AS:13:HIS:CD2	2.50	0.46
1:AA:150:U:H2'	1:AA:151:A:H8	1.80	0.46
34:D3:56:LEU:O	34:D3:59:ALA:HB3	2.15	0.46
9:CJ:26:VAL:O	9:CJ:30:LYS:HG3	2.16	0.46
19:AT:77:ASN:O	19:AT:81:GLN:HG3	2.14	0.46
49:DR:57:GLY:HA2	49:DR:102:SER:O	2.15	0.46
23:DB:2027:G:O2'	23:DB:2028:U:H5'	2.14	0.46
24:DI:69:VAL:HG23	24:DI:69:VAL:O	2.14	0.46
11:AL:28:GLN:HB3	11:AL:28:GLN:HE21	1.53	0.46
23:BB:945:A:H4'	23:BB:945:A:OP2	2.15	0.46
16:AQ:29:LYS:HG3	16:AQ:34:GLY:O	2.15	0.46
23:DB:2889:C:H2'	23:DB:2890:G:C8	2.50	0.46
26:DD:101:PHE:HA	26:DD:104:VAL:HG21	1.96	0.46
1:CA:1533:C:C2'	1:CA:1534:A:H3'	2.29	0.46
23:DB:2260:C:O2'	23:DB:2261:C:H5'	2.15	0.46
13:CN:42:ASN:ND2	13:CN:45:LEU:HD22	2.30	0.46
18:AS:66:VAL:HG23	18:AS:67:GLY:H	1.80	0.46
41:BJ:8:PRO:HG3	41:BJ:48:VAL:HG13	1.97	0.46
1:AA:69:G:H2'	1:AA:70:U:C6	2.50	0.46
1:AA:693:G:H2'	1:AA:694:A:O4'	2.15	0.46
23:BB:2896:C:H2'	23:BB:2897:U:H6	1.77	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DS:61:ASN:HB3	45:DS:62:ASP:H	1.51	0.46
25:DC:4:LYS:HE3	25:DC:13:ARG:O	2.15	0.46
27:BK:47:ILE:HG23	27:BK:49:ARG:H	1.80	0.46
46:DU:95:PHE:CE1	46:DU:102:ILE:HB	2.30	0.46
27:DK:53:LYS:H	27:DK:53:LYS:HD3	1.80	0.46
23:DB:77:G:H2'	23:DB:78:U:O4'	2.15	0.46
40:DH:127:GLU:HA	40:DH:145:ASN:CA	2.39	0.46
23:BB:2598:A:H5''	25:BC:233:GLY:HA2	1.97	0.46
27:BK:105:ARG:HD3	27:BK:105:ARG:N	2.24	0.46
38:BM:38:ARG:HH11	38:BM:38:ARG:CB	2.20	0.46
26:DD:91:THR:HG23	26:DD:92:VAL:N	2.25	0.46
26:DD:124:ARG:HA	26:DD:165:MET:HE3	1.97	0.46
9:AJ:5:ARG:N	9:AJ:76:ILE:O	2.49	0.46
30:BY:8:GLN:HB3	30:BY:31:ILE:O	2.15	0.46
26:BD:90:PHE:HD2	26:BD:94:GLN:HG3	1.80	0.46
23:BB:548:G:O5'	23:BB:548:G:H8	1.98	0.46
35:BV:32:GLY:O	35:BV:93:ARG:HG3	2.15	0.46
5:AF:37:HIS:O	5:AF:97:THR:HG23	2.15	0.46
12:AM:1:ALA:O	12:AM:3:ILE:HG13	2.15	0.46
3:AD:94:GLU:OE2	3:AD:190:LEU:HD21	2.16	0.46
33:D1:36:LYS:HA	33:D1:46:VAL:O	2.15	0.46
48:DG:7:PRO:O	48:DG:8:VAL:HB	2.15	0.46
42:BN:3:HIS:O	42:BN:4:ARG:HB2	2.14	0.46
20:AB:128:LEU:HG	20:AB:132:GLU:HG2	1.97	0.46
23:BB:309:A:N3	23:BB:329:G:O2'	2.47	0.46
1:CA:592:G:H2'	1:CA:593:U:C6	2.50	0.46
1:CA:664:G:P	17:CR:52:ARG:HH21	2.39	0.46
43:DO:30:ARG:HG3	43:DO:30:ARG:HH11	1.80	0.46
2:AC:13:ILE:HD13	2:AC:13:ILE:N	2.30	0.46
46:BU:48:VAL:O	46:BU:48:VAL:HG22	2.15	0.46
1:CA:737:C:H2'	1:CA:738:C:H6	1.80	0.46
42:DN:106:ASP:C	42:DN:108:ALA:N	2.67	0.46
40:DH:41:LYS:O	40:DH:44:ILE:HG12	2.16	0.46
15:AP:20:VAL:HG21	15:AP:32:PHE:CD2	2.49	0.46
1:AA:620:C:C2	3:AD:131:ILE:HD13	2.51	0.46
23:DB:4:U:H2'	23:DB:5:A:C8	2.50	0.46
45:BS:46:LEU:O	45:BS:50:VAL:HG23	2.15	0.46
1:AA:551:U:O2'	1:AA:552:U:H5'	2.15	0.46
23:DB:1583:A:H4'	23:DB:1585:C:C4	2.50	0.46
8:AI:67:LYS:NZ	8:AI:67:LYS:HB2	2.30	0.46
23:BB:68:G:H2'	23:BB:69:C:H6	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CK:35:ASP:C	10:CK:37:GLN:H	2.18	0.46
23:BB:1577:C:H2'	23:BB:1578:U:O4'	2.15	0.46
1:AA:366:A:O2'	1:AA:394:G:N2	2.48	0.46
23:DB:950:G:H2'	23:DB:951:C:H6	1.80	0.46
23:BB:1683:U:O2'	23:BB:1684:G:H5'	2.16	0.46
23:BB:1219:U:H2'	23:BB:1220:G:C8	2.49	0.46
1:AA:1234:C:H1'	1:AA:1364:U:O2	2.15	0.46
23:BB:599:A:O2'	23:BB:600:G:H5'	2.14	0.46
1:AA:140:U:H2'	1:AA:141:G:C8	2.50	0.46
26:BD:39:ASP:OD2	26:BD:41:ALA:HB3	2.15	0.46
4:AE:156:ARG:HB3	7:AH:43:GLY:O	2.15	0.46
20:AB:71:THR:HG23	20:AB:94:ARG:H	1.80	0.46
41:BJ:65:THR:HG23	41:BJ:66:GLY:N	2.31	0.46
1:AA:707:U:H2'	1:AA:708:C:C6	2.50	0.46
23:DB:189:G:H2'	23:DB:205:G:N2	2.31	0.46
10:AK:63:GLN:HG3	10:AK:98:ALA:HB2	1.96	0.46
27:BK:121:GLU:O	27:BK:122:VAL:C	2.54	0.46
29:BE:52:VAL:HG11	29:BE:81:GLY:HA3	1.97	0.46
23:DB:508:A:HO2'	23:DB:509:C:P	2.38	0.46
36:B2:25:LYS:C	36:B2:27:GLY:H	2.19	0.46
1:CA:308:C:H2'	1:CA:309:A:H8	1.80	0.46
23:BB:2685:G:O2'	23:BB:2686:G:H5'	2.16	0.46
23:DB:1532:A:N3	23:DB:1532:A:H2'	2.29	0.46
1:CA:928:G:O2'	1:CA:929:G:H5'	2.16	0.46
15:AP:12:LYS:C	15:AP:14:ARG:H	2.19	0.46
1:AA:1430:A:H2'	1:AA:1431:A:O4'	2.16	0.46
40:DH:29:PHE:C	40:DH:31:VAL:H	2.19	0.46
46:DU:8:ASP:HB3	46:DU:71:ILE:HG22	1.97	0.46
23:DB:533:G:H5'	44:DQ:23:TYR:CD2	2.50	0.46
1:AA:1206:G:H2'	1:AA:1207:G:O4'	2.16	0.46
48:BG:26:LYS:HA	48:BG:32:LEU:CA	2.45	0.46
25:BC:91:ALA:HB2	25:BC:105:ALA:HB2	1.96	0.46
25:BC:130:PRO:CG	25:BC:133:ASN:HD22	2.18	0.46
40:BH:108:VAL:HG12	40:BH:109:GLU:N	2.28	0.46
27:DK:34:GLY:O	27:DK:36:GLY:N	2.48	0.46
45:BS:52:GLU:HA	45:BS:55:ILE:CG2	2.42	0.46
1:AA:1302:C:C2	12:AM:16:ILE:HD12	2.50	0.46
23:DB:276:U:H2'	23:DB:278:A:H2	1.77	0.46
23:DB:1025:G:H8	23:DB:1025:G:OP1	1.99	0.46
47:DF:100:GLU:C	47:DF:102:LEU:N	2.68	0.46
38:DM:18:ARG:C	38:DM:38:ARG:HH22	2.18	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:123:G:H2'	23:DB:124:G:H8	1.80	0.46
23:BB:2147:A:H5'	23:BB:2148:G:O4'	2.15	0.46
48:BG:167:VAL:HG23	48:BG:168:VAL:N	2.26	0.46
37:DL:103:ILE:H	37:DL:103:ILE:CD1	2.23	0.46
1:AA:987:G:H2'	1:AA:988:G:H8	1.80	0.46
13:AN:60:ARG:O	13:AN:62:ARG:N	2.49	0.46
23:DB:2751:G:OP2	48:DG:2:ARG:HD2	2.15	0.46
23:BB:1433:A:H2'	23:BB:1434:A:O4'	2.15	0.46
48:BG:10:VAL:HG12	48:BG:14:VAL:HG21	1.97	0.46
23:BB:919:U:H6	23:BB:919:U:O5'	1.98	0.46
12:CM:50:GLY:HA2	12:CM:53:ASP:OD1	2.16	0.46
8:CI:71:ILE:CD1	8:CI:71:ILE:H	2.26	0.46
1:CA:1217:C:OP1	13:CN:8:ARG:HD2	2.16	0.46
29:BE:58:LYS:HB2	29:BE:60:TRP:HB2	1.98	0.46
23:BB:1439:A:C5	23:BB:1552:A:N6	2.83	0.46
23:DB:2143:C:H2'	23:DB:2144:G:C4'	2.45	0.46
2:AC:137:VAL:HG13	2:AC:148:ILE:HG21	1.98	0.46
48:BG:96:ALA:O	48:BG:97:VAL:HB	2.16	0.46
12:CM:76:ILE:O	12:CM:80:MET:HG3	2.15	0.46
34:B3:61:LEU:CB	34:B3:64:ALA:HB2	2.44	0.46
20:AB:20:ARG:HA	20:AB:20:ARG:NE	2.30	0.46
23:DB:677:A:O2'	23:DB:2071:A:H5'	2.15	0.46
26:BD:46:ARG:HH12	26:BD:88:GLU:HG3	1.81	0.46
37:BL:95:LEU:HB2	37:BL:101:ILE:HG13	1.98	0.46
37:BL:85:VAL:HG22	37:BL:94:THR:HG22	1.97	0.46
1:CA:87:C:C3'	1:CA:88:U:H5''	2.46	0.46
23:DB:593:U:H2'	23:DB:594:U:C6	2.50	0.46
23:DB:419:U:H2'	23:DB:420:C:H6	1.79	0.46
46:DU:21:ARG:HG3	46:DU:21:ARG:NH1	2.31	0.46
3:CD:58:GLN:O	3:CD:62:ARG:HG2	2.15	0.46
23:DB:1827:U:H2'	23:DB:1828:G:H5'	1.96	0.46
7:CH:94:VAL:HG12	7:CH:99:GLY:HA3	1.97	0.46
7:AH:36:ALA:O	7:AH:45:ILE:HD11	2.15	0.46
1:AA:190:A:O5'	1:AA:190:A:H8	1.98	0.46
24:BI:5:GLN:HG2	24:BI:6:ALA:H	1.78	0.46
1:AA:159:G:N1	1:AA:163:C:N4	2.63	0.46
1:CA:586:C:C5'	7:CH:81:GLY:HA2	2.45	0.46
28:DP:103:THR:HG22	28:DP:104:GLY:H	1.79	0.46
42:BN:12:ARG:HG2	42:BN:16:HIS:HB2	1.97	0.46
1:AA:1460:C:H2'	1:AA:1461:G:C8	2.51	0.46
23:BB:1221:C:O2'	23:BB:1222:U:H5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2746:U:H4'	48:BG:137:LYS:HG3	1.97	0.46
22:DA:35:C:H2'	22:DA:36:C:O4'	2.16	0.46
19:CT:72:ALA:O	19:CT:75:LYS:HD3	2.14	0.46
1:CA:725:G:H2'	1:CA:726:C:C6	2.50	0.46
23:BB:1985:C:O2'	23:BB:1986:C:H5'	2.14	0.46
1:AA:1187:G:P	8:AI:114:LYS:HE3	2.55	0.46
23:DB:2335:A:OP1	43:DO:13:ARG:NH1	2.48	0.46
27:DK:121:GLU:O	27:DK:122:VAL:C	2.54	0.46
1:AA:1260:G:OP1	1:AA:1284:C:H4'	2.15	0.46
1:CA:1430:A:H2'	1:CA:1431:A:O4'	2.16	0.46
1:CA:1527:U:O2'	1:CA:1528:U:H5'	2.15	0.46
2:AC:30:ASP:HA	13:AN:64:ARG:NH2	2.31	0.46
1:AA:775:G:O2'	1:AA:776:G:H5'	2.15	0.46
22:BA:112:G:O2'	22:BA:113:C:H5'	2.15	0.46
26:BD:38:LYS:HD3	26:BD:45:TYR:OH	2.14	0.46
23:BB:1678:A:H2'	23:BB:1679:A:O4'	2.16	0.46
1:CA:580:C:H2'	1:CA:581:G:O4'	2.16	0.46
38:BM:78:LEU:HD12	38:BM:79:ALA:H	1.80	0.46
26:DD:38:LYS:HD3	26:DD:45:TYR:OH	2.16	0.46
23:BB:2332:C:H4'	23:BB:2336:A:C6	2.51	0.46
26:DD:107:VAL:H	26:DD:205:PRO:HA	1.81	0.46
23:DB:2336:A:H62	52:DW:40:ARG:CB	2.28	0.46
26:BD:3:GLY:C	26:BD:4:LEU:HD22	2.36	0.46
23:BB:533:G:H5'	44:BQ:23:TYR:CD2	2.50	0.46
52:DW:8:SER:O	52:DW:9:THR:HB	2.16	0.46
29:BE:188:MET:HG2	29:BE:193:VAL:CG2	2.45	0.46
25:BC:155:ARG:HH11	25:BC:155:ARG:CB	2.29	0.46
28:BP:1:SER:N	28:BP:4:ILE:HB	2.31	0.46
6:CG:144:ALA:O	6:CG:146:ALA:N	2.41	0.46
37:BL:4:ASN:ND2	37:BL:4:ASN:N	2.61	0.46
18:AS:14:LEU:HG	18:AS:15:LEU:N	2.30	0.46
18:AS:62:THR:HG22	18:AS:63:ASP:H	1.81	0.46
23:DB:2732:G:H3'	23:DB:2733:A:H5'	1.98	0.46
3:AD:157:ALA:O	3:AD:160:LEU:HD22	2.16	0.46
23:BB:100:U:C2'	23:BB:100:U:O2	2.52	0.46
47:DF:7:TYR:HA	47:DF:11:VAL:CG2	2.45	0.46
41:DJ:59:ALA:C	41:DJ:61:LYS:H	2.17	0.46
47:DF:62:GLN:HE22	47:DF:90:LEU:HA	1.80	0.46
26:BD:48:ILE:HG23	26:BD:82:PHE:HB2	1.97	0.46
40:DH:96:THR:HG23	40:DH:97:ARG:CD	2.45	0.46
20:CB:86:CYS:SG	20:CB:87:ASP:N	2.86	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:973:A:OP1	23:BB:973:A:H8	1.98	0.46
35:DV:38:LEU:HG	35:DV:40:ILE:HG23	1.96	0.46
35:DV:29:ILE:HG13	35:DV:88:HIS:CE1	2.51	0.46
28:BP:20:ARG:O	28:BP:46:VAL:HG21	2.15	0.46
48:BG:7:PRO:O	48:BG:8:VAL:HB	2.16	0.46
31:D0:43:THR:HG23	31:D0:47:TYR:O	2.15	0.46
1:AA:255:G:O3'	16:AQ:18:LYS:HD2	2.14	0.46
26:BD:118:PHE:CD1	26:BD:119:ALA:N	2.84	0.46
1:CA:1031:C:H4'	1:CA:1032:G:C5'	2.45	0.46
23:BB:2286:G:O6	33:B1:22:THR:HG21	2.16	0.46
23:BB:674:G:H2'	23:BB:804:A:H61	1.80	0.46
23:BB:1439:A:N7	23:BB:1440:U:C6	2.83	0.46
23:DB:2688:G:H1'	23:DB:2721:A:N6	2.30	0.46
2:AC:149:LYS:HA	2:AC:168:ARG:HB2	1.97	0.46
38:DM:2:LEU:CD2	38:DM:46:ILE:HD11	2.45	0.46
40:BH:62:LEU:HD13	40:BH:66:ASN:ND2	2.29	0.46
12:CM:64:VAL:HA	12:CM:68:LEU:CD1	2.46	0.46
23:DB:544:C:H2'	23:DB:545:U:C5	2.51	0.46
37:DL:91:ASP:HB2	37:DL:94:THR:OG1	2.15	0.46
1:AA:1237:C:H3'	1:AA:1238:A:H5'	1.98	0.46
4:CE:84:VAL:HG11	4:CE:146:MET:HB3	1.97	0.46
9:CJ:37:ARG:NH1	9:CJ:77:VAL:HG21	2.30	0.46
8:AI:87:MET:HE2	8:AI:91:GLU:HG2	1.98	0.46
23:BB:877:A:C2	23:BB:900:A:N7	2.84	0.46
8:CI:39:GLY:O	8:CI:41:GLU:HG3	2.16	0.46
50:BT:18:GLU:O	50:BT:20:ALA:N	2.42	0.46
23:BB:2803:G:O2'	23:BB:2804:U:H5'	2.16	0.46
17:AR:52:ARG:CB	17:AR:56:ARG:HH21	2.28	0.46
1:CA:525:C:O2'	1:CA:526:C:H5'	2.15	0.46
23:BB:19:A:H2'	23:BB:20:C:H6	1.79	0.46
50:BT:69:ARG:NH1	50:BT:69:ARG:HA	2.30	0.46
40:BH:79:THR:HG22	40:BH:145:ASN:CB	2.44	0.46
49:BR:49:ILE:HG21	49:BR:53:PHE:C	2.36	0.46
20:AB:125:PHE:HD2	20:AB:125:PHE:H	1.64	0.46
21:AU:11:PHE:O	21:AU:11:PHE:CD1	2.65	0.46
23:DB:1945:G:C4	23:DB:1946:U:C5	3.04	0.46
49:BR:78:ARG:HG3	49:BR:78:ARG:HH21	1.79	0.46
23:BB:1105:U:H2'	23:BB:1106:G:H8	1.76	0.46
1:CA:711:G:O2'	1:CA:712:A:H5'	2.16	0.46
1:CA:780:A:O2'	1:CA:781:A:H5"	2.16	0.46
23:DB:2428:G:H5"	23:DB:2429:G:OP1	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:36:C:O3'	11:CL:119:LYS:HA	2.15	0.46
28:DP:25:VAL:HA	28:DP:85:VAL:HA	1.97	0.46
1:AA:1437:A:H2'	1:AA:1438:G:C8	2.49	0.46
7:CH:124:ILE:HG22	7:CH:125:ILE:H	1.80	0.46
23:BB:2430:A:H5'	23:BB:2431:U:OP2	2.15	0.46
51:BZ:20:HIS:O	51:BZ:21:ALA:HB3	2.15	0.46
3:CD:118:SER:HA	3:CD:130:ASN:HB2	1.95	0.46
30:DY:37:ARG:CG	30:DY:38:GLU:H	2.27	0.46
1:CA:766:A:H2'	1:CA:767:A:O4'	2.15	0.46
26:BD:33:ARG:NE	26:BD:74:GLU:HB3	2.30	0.46
1:AA:1141:C:H2'	1:AA:1142:G:H8	1.80	0.46
23:BB:246:C:H2'	23:BB:247:G:H5'	1.97	0.46
23:BB:2649:C:H2'	23:BB:2650:U:C6	2.51	0.46
23:BB:1053:C:H2'	23:BB:1054:A:H8	1.80	0.46
1:CA:896:C:O2'	1:CA:897:C:H5'	2.16	0.46
25:BC:239:PHE:HD1	25:BC:241:LYS:H	1.64	0.46
23:BB:1181:U:O2'	23:BB:1182:G:H5'	2.16	0.46
20:AB:71:THR:HG23	20:AB:94:ARG:N	2.31	0.46
23:DB:680:C:H2'	23:DB:681:G:C8	2.50	0.46
23:BB:1010:A:N3	23:BB:1153:C:H1'	2.30	0.46
1:AA:915:A:H2'	1:AA:916:U:H5'	1.96	0.46
23:BB:1343:G:O4'	23:BB:1597:A:H2'	2.16	0.46
3:CD:81:LEU:HB2	3:CD:88:ASN:ND2	2.31	0.46
25:DC:123:ILE:HD13	25:DC:135:PRO:HG2	1.98	0.46
17:CR:45:GLY:O	17:CR:46:THR:C	2.54	0.46
2:AC:178:ARG:HG2	2:AC:178:ARG:O	2.15	0.46
2:AC:111:ASP:OD2	2:AC:114:LEU:HG	2.16	0.46
1:AA:531:U:H6	1:AA:531:U:H5'	1.80	0.46
1:CA:994:A:N1	1:CA:1047:G:H4'	2.31	0.46
20:AB:209:VAL:HG23	20:AB:210:THR:N	2.30	0.46
23:BB:126:A:C5'	36:B2:19:ARG:HG3	2.27	0.46
23:DB:2353:G:N3	52:DW:30:VAL:CG1	2.78	0.46
23:DB:532:A:H4'	23:DB:533:G:C8	2.49	0.46
27:BK:76:VAL:HG12	27:BK:77:ILE:N	2.31	0.46
29:BE:153:LEU:HG	29:BE:154:ASP:H	1.79	0.46
21:CU:3:ILE:HG23	21:CU:18:PHE:CD1	2.51	0.46
44:BQ:91:ARG:HE	44:BQ:94:LEU:CD2	2.28	0.46
37:BL:89:VAL:HA	37:BL:121:THR:O	2.16	0.46
25:BC:141:HIS:HB3	25:BC:190:THR:OG1	2.16	0.46
50:BT:47:VAL:HG12	50:BT:47:VAL:O	2.16	0.46
45:DS:29:VAL:HG11	45:DS:55:ILE:CD1	2.44	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:174:GLU:O	20:CB:177:ASN:HB3	2.16	0.46
28:BP:4:ILE:HA	28:BP:7:LEU:HB3	1.98	0.46
45:BS:26:GLY:N	45:BS:71:VAL:HG13	2.30	0.46
23:DB:670:A:H5''	37:DL:42:SER:HB2	1.97	0.46
1:CA:430:A:P	3:CD:6:PRO:HA	2.56	0.46
47:DF:102:LEU:HA	47:DF:106:ALA:HB2	1.98	0.46
47:DF:3:LEU:HD12	47:DF:96:TRP:CD1	2.50	0.46
3:AD:165:GLU:CG	3:AD:166:LYS:N	2.79	0.46
27:BK:79:PHE:HD2	28:BP:69:VAL:HG12	1.80	0.46
23:BB:920:A:H2'	23:BB:921:C:C6	2.50	0.46
48:DG:16:VAL:HG11	48:DG:44:HIS:CE1	2.50	0.46
31:D0:43:THR:OG1	31:D0:47:TYR:HB2	2.15	0.46
23:BB:1438:U:H2'	23:BB:1439:A:O4'	2.15	0.46
1:AA:374:A:OP1	1:AA:452:A:N1	2.49	0.46
48:DG:84:LYS:HB2	48:DG:132:LEU:HG	1.96	0.46
48:DG:96:ALA:O	48:DG:97:VAL:HB	2.16	0.46
44:BQ:83:LYS:HZ1	44:BQ:87:VAL:HA	1.81	0.46
1:AA:1405:G:H2'	1:AA:1406:U:O4'	2.16	0.46
12:CM:95:PRO:HB2	12:CM:99:GLN:OE1	2.15	0.46
28:BP:50:ARG:HD3	28:BP:56:SER:HB3	1.97	0.46
1:CA:948:C:H2'	1:CA:949:A:H8	1.79	0.46
23:BB:2030:A:H4'	23:BB:2031:A:H5'	1.98	0.46
5:AF:51:ILE:HD11	5:AF:86:ARG:HG3	1.97	0.46
40:BH:49:ALA:HB3	40:BH:50:ARG:NH2	2.31	0.46
11:AL:78:VAL:O	11:AL:102:ASP:HB2	2.15	0.46
1:CA:1244:G:H2'	1:CA:1245:C:H6	1.78	0.46
1:AA:404:G:H2'	1:AA:405:U:C6	2.51	0.46
23:BB:2231:U:O2'	23:BB:2232:C:H5'	2.16	0.46
46:DU:50:ALA:H	46:DU:53:GLN:CD	2.19	0.46
23:DB:1947:C:H2'	23:DB:1948:G:C8	2.46	0.46
20:AB:68:PHE:CE1	20:AB:88:GLN:HB3	2.50	0.46
23:BB:677:A:O2'	23:BB:2071:A:H5'	2.15	0.46
23:DB:2800:A:H2'	23:DB:2801:G:C8	2.51	0.46
35:BV:70:ILE:H	35:BV:70:ILE:HD13	1.81	0.46
29:BE:59:PRO:HB2	29:BE:67:ARG:NH2	2.29	0.46
23:BB:322:A:C2	23:BB:340:A:C6	3.04	0.46
10:AK:30:ILE:HG13	10:AK:30:ILE:O	2.15	0.46
23:BB:68:G:H2'	23:BB:69:C:C6	2.50	0.46
23:DB:1683:U:H2'	23:DB:1684:G:H8	1.80	0.46
1:CA:284:C:H2'	1:CA:285:C:H6	1.81	0.46
46:DU:41:VAL:O	46:DU:42:LYS:HB2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:104:VAL:O	6:CG:108:ARG:HG3	2.16	0.46
33:D1:24:LYS:HG2	33:D1:25:ASN:N	2.30	0.46
2:CC:16:PRO:HG2	2:CC:53:ARG:NH2	2.30	0.46
22:DA:17:C:H2'	22:DA:18:G:O4'	2.16	0.46
23:DB:483:A:O2'	46:DU:56:GLY:HA2	2.16	0.46
1:AA:634:C:H2'	1:AA:635:A:C8	2.51	0.46
6:CG:94:ARG:NH1	6:CG:98:LEU:HD11	2.31	0.46
1:CA:261:U:H2'	1:CA:263:A:OP2	2.16	0.46
3:AD:32:LYS:O	3:AD:35:GLN:HB2	2.15	0.46
23:DB:1260:A:H2'	23:DB:1261:C:H6	1.80	0.46
11:AL:3:VAL:O	11:AL:7:VAL:HG23	2.15	0.46
1:CA:1114:C:H2'	1:CA:1115:U:C6	2.51	0.46
23:BB:826:U:H5''	23:BB:2428:G:O3'	2.14	0.46
23:DB:2299:U:H2'	23:DB:2300:C:C6	2.51	0.46
52:BW:47:GLY:HA3	52:BW:80:SER:CB	2.45	0.46
23:BB:359:G:O2'	23:BB:360:U:H5'	2.14	0.46
1:CA:1458:G:H2'	1:CA:1459:G:H8	1.81	0.46
24:BI:63:ASP:C	24:BI:65:SER:H	2.18	0.46
23:BB:2774:C:H2'	23:BB:2775:G:O4'	2.15	0.46
23:BB:2153:C:H2'	23:BB:2153:C:O2	2.16	0.46
29:BE:73:ILE:O	29:BE:73:ILE:HG12	2.16	0.46
1:AA:432:A:H2'	1:AA:433:G:H5'	1.97	0.46
1:AA:993:G:H2'	1:AA:995:C:H41	1.80	0.46
23:DB:2309:A:H2'	23:DB:2310:C:C6	2.51	0.46
29:BE:111:GLU:HG2	29:BE:114:ARG:HH21	1.81	0.46
48:DG:86:LEU:HD23	48:DG:163:TYR:HA	1.98	0.46
40:DH:32:PRO:O	40:DH:33:GLN:HB2	2.16	0.46
26:DD:4:LEU:HD12	26:DD:32:ASN:HB2	1.97	0.46
20:CB:212:TYR:O	20:CB:216:VAL:HG13	2.16	0.46
37:DL:79:LEU:HB3	37:DL:115:GLU:O	2.16	0.46
47:DF:66:ILE:HA	47:DF:85:GLY:O	2.16	0.46
18:CS:15:LEU:O	18:CS:18:VAL:HG12	2.16	0.46
18:CS:48:ILE:HG22	18:CS:49:ALA:N	2.25	0.46
18:CS:49:ALA:HA	18:CS:57:VAL:O	2.16	0.46
20:AB:102:ASN:OD1	20:AB:105:THR:HB	2.16	0.46
41:BJ:89:PHE:CE1	41:BJ:93:ILE:HD13	2.49	0.46
41:DJ:124:VAL:HG23	41:DJ:125:TYR:H	1.80	0.46
3:AD:187:ARG:O	3:AD:191:SER:HB3	2.14	0.46
24:DI:75:ALA:O	24:DI:79:LEU:HG	2.16	0.46
20:CB:15:PHE:HD1	20:CB:16:GLY:N	2.13	0.46
23:BB:496:G:H4'	45:BS:61:ASN:ND2	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:1:SER:HA	48:BG:61:TRP:CZ3	2.50	0.46
23:DB:667:U:H2'	23:DB:668:A:O4'	2.16	0.46
40:DH:92:GLY:O	40:DH:93:SER:HB3	2.16	0.46
42:BN:75:ILE:O	42:BN:79:LEU:HD12	2.16	0.46
23:DB:275:C:H2'	23:DB:276:U:C2	2.50	0.46
12:AM:106:ARG:HH21	12:AM:112:ARG:HD3	1.80	0.46
41:BJ:24:THR:O	41:BJ:25:LEU:HB3	2.16	0.46
36:B2:31:LEU:CD2	36:B2:42:LEU:HD12	2.40	0.46
47:BF:7:TYR:HA	47:BF:11:VAL:CG2	2.46	0.46
30:DY:8:GLN:HB3	30:DY:31:ILE:C	2.35	0.46
26:BD:148:GLN:CB	26:BD:152:PRO:HG2	2.44	0.46
47:BF:62:GLN:HE22	47:BF:90:LEU:HA	1.81	0.46
23:BB:549:G:H2'	41:BJ:2:LYS:CE	2.45	0.46
3:CD:197:HIS:HA	3:CD:200:VAL:CG2	2.45	0.46
34:D3:49:VAL:CG2	34:D3:54:LEU:HD13	2.40	0.46
3:AD:169:TRP:CD1	3:AD:170:LEU:HD23	2.51	0.46
23:DB:845:A:N1	23:DB:847:U:H1'	2.29	0.46
16:AQ:18:LYS:HA	16:AQ:47:ASP:O	2.15	0.46
1:CA:1001:C:H2'	1:CA:1002:G:C8	2.47	0.46
23:DB:2787:C:O2'	23:DB:2788:C:H5'	2.15	0.46
35:DV:83:LYS:O	35:DV:85:LYS:N	2.48	0.46
39:BX:51:ALA:O	39:BX:55:THR:N	2.48	0.46
34:B3:60:CYS:C	34:B3:61:LEU:HD23	2.35	0.46
24:BI:138:VAL:HG12	24:BI:139:VAL:N	2.30	0.46
22:DA:28:C:H5	22:DA:56:G:N1	2.13	0.46
22:DA:53:A:O2'	22:DA:54:G:H5'	2.16	0.46
28:BP:32:VAL:HG12	28:BP:33:GLU:O	2.16	0.46
23:BB:1508:A:H5'	23:BB:1509:A:N1	2.30	0.46
37:BL:91:ASP:HB2	37:BL:94:THR:OG1	2.16	0.46
23:BB:328:U:H4'	46:BU:65:GLN:CD	2.35	0.46
23:BB:2085:U:O2'	23:BB:2086:U:H5'	2.15	0.46
45:BS:73:LYS:HE3	45:BS:74:ILE:N	2.29	0.46
45:BS:73:LYS:CE	45:BS:74:ILE:H	2.28	0.46
1:AA:1053:G:C4'	1:AA:1054:C:H5'	2.46	0.46
1:AA:499:A:H4'	1:AA:500:G:H5'	1.97	0.46
23:DB:1505:A:H2'	23:DB:1506:U:C6	2.51	0.46
5:AF:18:VAL:HG21	5:AF:58:HIS:CD2	2.50	0.46
1:CA:182:A:N3	1:CA:182:A:H5''	2.31	0.46
1:CA:1254:A:H2'	1:CA:1255:G:H8	1.80	0.46
23:BB:2579:C:O5'	23:BB:2579:C:H6	1.98	0.46
2:AC:19:SER:HB3	2:AC:21:TRP:NE1	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:41:VAL:O	46:BU:42:LYS:HB2	2.15	0.46
45:BS:43:ALA:O	45:BS:46:LEU:HB2	2.16	0.46
10:CK:30:ILE:HG13	10:CK:30:ILE:O	2.16	0.46
19:CT:60:GLN:HB3	19:CT:65:LEU:HD23	1.97	0.46
14:CO:35:GLN:O	14:CO:39:LEU:HB2	2.16	0.46
43:BO:104:GLN:O	43:BO:107:ALA:HB3	2.15	0.46
23:DB:1684:G:H2'	23:DB:1685:C:C6	2.51	0.46
23:BB:15:G:H2'	23:BB:16:C:H6	1.80	0.46
23:BB:1577:C:H2'	23:BB:1578:U:C6	2.51	0.46
23:DB:1221:C:O2'	23:DB:1222:U:H5'	2.16	0.46
33:B1:18:HIS:NE2	33:B1:40:PRO:HD2	2.30	0.46
23:BB:901:C:H2'	23:BB:902:C:C6	2.51	0.46
2:AC:128:MET:H	2:AC:128:MET:CE	2.29	0.46
1:AA:821:G:H2'	1:AA:822:U:C6	2.51	0.46
19:AT:57:VAL:HB	19:AT:71:ALA:HB1	1.97	0.46
23:DB:932:U:O2	23:DB:932:U:O4'	2.32	0.46
23:DB:1641:A:H2'	23:DB:1642:G:O4'	2.16	0.46
1:CA:454:G:O2'	1:CA:455:G:H5'	2.16	0.46
9:CJ:8:ILE:HD13	9:CJ:74:VAL:HG12	1.97	0.46
1:AA:1014:A:H2'	1:AA:1015:G:O4'	2.15	0.46
23:DB:991:C:H5'	23:DB:991:C:H6	1.80	0.46
23:BB:1911:U:O4	23:BB:1918:A:H2'	2.16	0.46
23:BB:1260:A:H2'	23:BB:1261:C:H6	1.81	0.46
36:D2:34:ARG:HB3	36:D2:39:ARG:HB2	1.97	0.46
4:CE:42:ASN:O	4:CE:75:LEU:HD12	2.16	0.46
23:DB:1821:A:H2'	23:DB:1822:C:C6	2.51	0.46
41:BJ:75:TYR:CD1	41:BJ:86:GLN:HB3	2.51	0.46
34:B3:9:ALA:HA	37:BL:58:TYR:HB2	1.97	0.46
20:AB:8:MET:O	20:AB:11:ALA:HB3	2.16	0.46
51:DZ:6:GLN:HE21	51:DZ:50:ARG:N	1.99	0.46
52:DW:24:ARG:HD3	52:DW:65:LYS:CE	2.45	0.46
23:DB:2332:C:H4'	23:DB:2336:A:C6	2.51	0.46
26:BD:4:LEU:HD12	26:BD:32:ASN:HB2	1.96	0.46
40:BH:82:SER:O	40:BH:90:LEU:HG	2.14	0.46
48:BG:33:THR:HA	48:BG:34:ARG:NH1	2.30	0.46
28:DP:6:GLN:HA	28:DP:9:GLN:CD	2.36	0.46
37:BL:40:SER:O	37:BL:44:GLY:HA3	2.15	0.46
24:DI:116:MET:HE1	24:DI:128:ILE:CG1	2.46	0.46
24:DI:57:VAL:HG23	24:DI:71:LYS:HZ1	1.81	0.46
40:DH:135:HIS:CG	40:DH:136:SER:H	2.34	0.46
6:CG:145:GLU:C	6:CG:147:ASN:H	2.18	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:513:A:O5'	23:DB:513:A:H8	1.98	0.46
1:AA:81:A:N3	1:AA:82:G:N7	2.64	0.46
24:BI:27:LEU:HB2	24:BI:32:VAL:HG21	1.97	0.46
46:BU:95:PHE:CE1	46:BU:102:ILE:HB	2.31	0.46
32:D4:9:LYS:HE2	32:D4:10:LEU:N	2.31	0.46
34:D3:30:HIS:O	34:D3:31:ILE:C	2.53	0.46
27:BK:43:ILE:CD1	27:BK:52:VAL:HB	2.45	0.46
32:B4:11:CYS:SG	32:B4:33:HIS:CE1	3.08	0.46
1:AA:978:A:H5'	1:AA:1362:A:N6	2.31	0.46
29:DE:108:ILE:HD13	29:DE:108:ILE:O	2.15	0.46
23:BB:1082:U:C2	23:BB:1086:A:N1	2.84	0.46
14:CO:71:LYS:HB2	14:CO:78:TYR:CG	2.51	0.46
23:DB:1055:G:H2'	23:DB:1056:G:O4'	2.15	0.46
23:DB:1055:G:H3'	23:DB:1056:G:C8	2.50	0.46
23:DB:2862:G:H2'	23:DB:2863:C:H6	1.81	0.46
17:CR:31:TYR:CD1	17:CR:54:LEU:HD11	2.50	0.46
48:DG:3:VAL:O	48:DG:68:ARG:HG3	2.16	0.46
29:BE:175:ILE:HD11	29:BE:180:LEU:HD11	1.97	0.46
1:AA:255:G:H2'	1:AA:256:U:C6	2.51	0.46
23:DB:2148:G:N3	23:DB:2148:G:C2'	2.78	0.46
23:DB:979:A:H2'	23:DB:982:C:H42	1.79	0.46
49:DR:15:SER:OG	49:DR:18:GLN:HG2	2.16	0.46
23:BB:329:G:H22	46:BU:16:LYS:NZ	2.13	0.46
23:BB:1411:U:H2'	23:BB:1412:U:C6	2.51	0.46
23:DB:1411:U:H2'	23:DB:1412:U:C6	2.51	0.46
48:BG:84:LYS:HG2	48:BG:85:LYS:N	2.28	0.46
1:CA:1237:C:H3'	1:CA:1238:A:H5'	1.97	0.46
4:AE:84:VAL:HG11	4:AE:146:MET:HB3	1.97	0.46
8:AI:50:PRO:O	8:AI:54:VAL:HG22	2.15	0.46
43:DO:116:GLN:O	43:DO:117:PHE:HB3	2.15	0.46
43:DO:24:THR:OG1	43:DO:90:VAL:HG12	2.15	0.46
23:BB:1464:G:O2'	23:BB:1465:G:H5'	2.16	0.46
1:AA:659:U:N3	1:AA:747:A:N6	2.63	0.46
26:BD:69:ALA:N	26:BD:73:VAL:HB	2.31	0.46
38:BM:126:ILE:H	38:BM:126:ILE:HD12	1.81	0.46
23:DB:1454:C:C5	42:DN:64:ARG:HG2	2.50	0.46
2:CC:194:VAL:HG12	2:CC:195:ILE:N	2.30	0.46
1:AA:246:A:N6	1:AA:281:G:H1'	2.31	0.46
27:BK:88:ASN:HD22	27:BK:89:ASN:N	2.13	0.46
1:CA:552:U:H2'	1:CA:553:A:H8	1.79	0.46
23:DB:2093:G:O2'	23:DB:2094:A:H5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:209:ALA:HA	25:BC:212:TRP:CE2	2.51	0.46
1:AA:1226:C:C4	12:AM:102:LYS:HB3	2.51	0.46
9:CJ:40:ILE:HB	9:CJ:73:LEU:HB3	1.98	0.46
37:BL:131:ALA:C	37:BL:133:ALA:N	2.68	0.46
1:AA:1450:U:H2'	1:AA:1452:C:C5	2.51	0.46
30:BY:35:VAL:HG11	30:BY:37:ARG:HH12	1.81	0.46
8:AI:16:ALA:HA	8:AI:66:VAL:HA	1.97	0.46
1:AA:6:G:H4'	1:AA:298:A:H4'	1.98	0.46
23:BB:1745:A:H2'	23:BB:1746:A:O4'	2.15	0.46
12:CM:71:GLU:HA	12:CM:74:MET:CG	2.45	0.46
23:DB:958:U:OP2	38:DM:14:LYS:NZ	2.44	0.46
24:BI:44:LYS:O	24:BI:48:ILE:HG13	2.15	0.46
1:CA:992:U:H1'	1:CA:993:G:C2	2.49	0.46
2:AC:184:ASN:HD22	2:AC:185:THR:H	1.64	0.46
29:BE:40:ARG:NH2	29:BE:92:HIS:NE2	2.64	0.46
1:AA:979:C:H1'	1:AA:1317:C:N4	2.31	0.46
23:BB:1641:A:H2'	23:BB:1642:G:O4'	2.16	0.46
9:CJ:8:ILE:HD13	9:CJ:74:VAL:CG1	2.46	0.46
23:DB:813:U:H2'	23:DB:814:C:H6	1.80	0.46
23:BB:2520:C:O2'	23:BB:2521:C:H5'	2.16	0.46
26:BD:38:LYS:HD3	26:BD:45:TYR:CZ	2.51	0.46
2:AC:178:ARG:HG2	2:AC:206:ILE:HA	1.96	0.46
23:DB:84:A:H4'	23:DB:85:G:O5'	2.16	0.46
23:DB:129:C:H2'	23:DB:130:C:H6	1.81	0.46
23:BB:1249:U:O4'	44:BQ:3:VAL:HG21	2.15	0.46
23:BB:259:G:O2'	23:BB:260:G:H5'	2.16	0.46
1:AA:102:G:H2'	1:AA:103:U:H6	1.80	0.46
1:CA:546:A:P	3:CD:68:GLU:HB3	2.56	0.46
1:CA:1375:A:H2'	1:CA:1376:U:H6	1.81	0.46
23:BB:572:A:H5''	23:BB:573:U:OP2	2.15	0.46
13:CN:11:LYS:O	13:CN:15:LEU:HG	2.16	0.46
25:DC:259:ASN:OD1	25:DC:261:ARG:HB3	2.16	0.46
4:AE:9:GLU:O	4:AE:40:ASP:HA	2.16	0.46
14:CO:64:ARG:NE	14:CO:64:ARG:HA	2.31	0.46
23:BB:1040:A:H2'	23:BB:1041:G:H8	1.80	0.46
23:BB:2716:C:O2'	23:BB:2717:C:H5'	2.16	0.46
23:BB:2438:U:O3'	23:BB:2439:A:H3'	2.16	0.46
23:DB:533:G:H5'	44:DQ:23:TYR:CE2	2.50	0.46
44:DQ:91:ARG:NE	49:DR:11:GLN:H	2.12	0.46
38:DM:59:ARG:NH1	38:DM:60:GLN:HB3	2.15	0.46
18:CS:62:THR:HG22	18:CS:63:ASP:N	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DP:6:GLN:O	28:DP:10:GLU:HB2	2.16	0.46
23:BB:1799:G:H4'	23:BB:1800:C:O5'	2.16	0.46
45:DS:57:ASN:HD22	45:DS:57:ASN:HA	1.55	0.46
48:DG:26:LYS:HA	48:DG:32:LEU:H	1.80	0.46
27:BK:98:ARG:C	27:BK:99:ILE:HD12	2.36	0.46
40:DH:128:HIS:N	40:DH:144:VAL:O	2.49	0.46
34:D3:31:ILE:HD11	34:D3:34:LYS:CD	2.39	0.46
27:BK:19:VAL:C	27:BK:41:ILE:HD11	2.36	0.46
15:AP:6:LEU:CD1	15:AP:71:VAL:HB	2.46	0.46
41:BJ:58:ASN:C	41:BJ:60:ASP:H	2.20	0.46
23:DB:2305:U:H1'	47:DF:132:ARG:HA	1.98	0.46
47:BF:7:TYR:O	47:BF:11:VAL:HB	2.16	0.46
23:DB:62:U:O2	23:DB:62:U:C2'	2.64	0.46
47:BF:91:ARG:O	47:BF:92:GLY:C	2.55	0.46
29:DE:47:LYS:HA	29:DE:51:GLU:OE2	2.16	0.46
20:CB:63:LYS:HB3	20:CB:87:ASP:OD2	2.16	0.46
31:D0:2:VAL:HG12	31:D0:3:GLN:H	1.81	0.46
24:DI:100:ILE:HG23	24:DI:104:GLN:OE1	2.16	0.46
46:DU:34:ILE:HG12	46:DU:63:ALA:CB	2.44	0.46
35:DV:32:GLY:O	35:DV:93:ARG:HG3	2.16	0.46
48:DG:10:VAL:HG21	48:DG:49:LEU:HD13	1.98	0.46
23:DB:646:U:H5''	23:DB:647:G:C8	2.50	0.46
20:AB:64:GLY:HA2	20:AB:158:ASP:OD1	2.15	0.46
20:AB:64:GLY:O	20:AB:66:ILE:HG12	2.15	0.46
1:AA:93:U:C3'	1:AA:94:G:H4'	2.46	0.46
48:BG:84:LYS:CG	48:BG:85:LYS:H	2.19	0.46
12:AM:22:TYR:HB3	12:AM:69:ARG:NH2	2.31	0.46
22:DA:55:U:H2'	22:DA:56:G:C8	2.50	0.46
37:BL:101:ILE:HG22	37:BL:102:GLY:N	2.31	0.46
23:DB:1433:A:H2'	23:DB:1434:A:O4'	2.15	0.46
1:AA:524:G:H2'	1:AA:525:C:H6	1.80	0.46
17:CR:38:ILE:HG22	17:CR:58:ILE:HG21	1.98	0.46
5:AF:18:VAL:HG11	5:AF:58:HIS:NE2	2.30	0.46
1:CA:620:C:O2	3:CD:131:ILE:HG21	2.15	0.46
1:CA:1355:G:H2'	1:CA:1356:G:H8	1.81	0.46
23:BB:444:C:O2'	23:BB:445:C:H5'	2.16	0.46
47:BF:177:ARG:CZ	47:BF:178:LYS:H	2.29	0.46
23:DB:564:C:H1'	44:DQ:36:GLN:OE1	2.16	0.46
2:AC:194:VAL:HG12	2:AC:195:ILE:N	2.31	0.46
22:BA:14:U:H4'	22:BA:70:C:O2	2.16	0.46
23:DB:2314:A:H2'	23:DB:2315:G:H8	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:840:C:H2'	23:DB:841:G:C8	2.51	0.46
1:CA:682:G:O2'	1:CA:683:G:H5'	2.16	0.46
9:AJ:8:ILE:HD12	9:AJ:8:ILE:N	2.31	0.46
2:AC:16:PRO:HG2	2:AC:53:ARG:NH2	2.31	0.46
23:BB:508:A:HO2'	23:BB:509:C:P	2.38	0.46
23:DB:2028:U:H2'	23:DB:2029:G:C8	2.50	0.46
1:AA:992:U:H2'	1:AA:1043:G:N7	2.30	0.46
2:AC:11:LEU:HD11	13:AN:87:ALA:O	2.15	0.46
23:DB:2438:U:O3'	23:DB:2439:A:H3'	2.16	0.46
48:BG:86:LEU:HD23	48:BG:163:TYR:HA	1.98	0.46
23:BB:2676:C:H2'	23:BB:2677:G:H8	1.81	0.46
23:BB:1152:C:H4'	44:BQ:76:SER:HA	1.97	0.46
23:DB:1266:G:N2	23:DB:2012:G:H2'	2.31	0.46
18:CS:1:PRO:O	18:CS:2:ARG:HB2	2.16	0.46
1:CA:1486:G:H2'	1:CA:1487:G:O4'	2.16	0.46
24:DI:70:THR:O	24:DI:70:THR:HG23	2.15	0.46
23:DB:1099:G:OP2	24:DI:2:LYS:O	2.33	0.46
46:BU:85:ARG:O	46:BU:92:VAL:HB	2.16	0.46
50:BT:5:GLU:CA	50:BT:8:LEU:HB2	2.31	0.46
41:DJ:11:VAL:HG21	41:DJ:13:ARG:NH1	2.31	0.46
28:DP:61:ARG:HD3	28:DP:70:GLU:HG3	1.97	0.46
50:DT:57:VAL:O	50:DT:85:VAL:O	2.34	0.46
44:BQ:91:ARG:NH2	49:BR:11:GLN:N	2.64	0.46
10:AK:85:VAL:O	10:AK:111:ASP:HA	2.16	0.46
26:DD:181:ASP:CG	26:DD:184:ARG:HD2	2.36	0.46
47:BF:41:GLU:O	47:BF:43:ILE:N	2.49	0.46
47:BF:78:ILE:HG13	47:BF:82:TYR:CZ	2.50	0.46
6:CG:144:ALA:C	6:CG:146:ALA:H	2.18	0.46
23:DB:558:U:O3'	41:DJ:111:LYS:HD3	2.16	0.46
27:DK:85:VAL:O	27:DK:87:LEU:HD23	2.15	0.46
34:B3:31:ILE:HD11	34:B3:34:LYS:CD	2.37	0.46
12:AM:109:LYS:HG3	12:AM:110:GLY:N	2.30	0.46
47:DF:37:MET:CE	47:DF:149:ARG:HD2	2.46	0.46
38:DM:97:GLN:HB2	38:DM:98:PRO:HD2	1.98	0.46
9:AJ:6:ILE:HB	9:AJ:76:ILE:CD1	2.46	0.46
26:DD:113:SER:HB3	26:DD:167:ASN:H	1.79	0.46
23:BB:1081:U:O2'	24:BI:118:GLY:HA2	2.16	0.46
23:DB:1173:U:H6	23:DB:1173:U:O5'	1.98	0.46
23:DB:784:G:H5''	25:DC:225:ASN:OD1	2.15	0.46
3:AD:199:ILE:HG13	3:AD:200:VAL:N	2.30	0.46
44:DQ:83:LYS:HZ2	44:DQ:83:LYS:HA	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:662:U:H2'	1:AA:663:A:H8	1.80	0.46
24:BI:33:ASN:HD21	24:BI:64:ARG:NH1	2.09	0.46
23:DB:365:U:H2'	23:DB:366:C:H6	1.80	0.46
38:DM:30:SER:OG	38:DM:106:ASP:HA	2.16	0.46
23:BB:4:U:H2'	23:BB:5:A:H8	1.81	0.46
23:BB:2098:U:O2'	23:BB:2099:U:H5'	2.15	0.46
8:CI:67:LYS:NZ	8:CI:67:LYS:HB2	2.31	0.46
43:BO:88:LYS:HE2	43:BO:116:GLN:CD	2.36	0.46
40:BH:67:ALA:CA	40:BH:70:GLU:HG2	2.46	0.46
45:BS:73:LYS:HD2	45:BS:73:LYS:HA	1.68	0.46
1:AA:1010:U:O2'	1:AA:1011:C:H5'	2.15	0.46
1:AA:403:C:H2'	1:AA:404:G:C8	2.50	0.46
11:AL:83:GLY:HA2	11:AL:94:TYR:HA	1.97	0.46
23:BB:1728:C:H2'	23:BB:1730:C:O2	2.16	0.46
22:DA:6:G:H2'	22:DA:7:G:C8	2.51	0.46
23:DB:30:G:H2'	23:DB:31:C:H6	1.79	0.46
49:BR:78:ARG:HB3	49:BR:83:TYR:HB3	1.97	0.46
15:AP:20:VAL:HG23	15:AP:34:GLU:C	2.36	0.46
1:AA:401:C:H1'	1:AA:622:A:H1'	1.98	0.46
1:AA:1161:C:H2'	1:AA:1162:C:C6	2.51	0.46
3:CD:11:SER:HA	3:CD:18:LEU:HD22	1.98	0.46
1:CA:642:A:C5	7:CH:106:SER:HA	2.51	0.46
1:AA:36:C:O3'	11:AL:119:LYS:HA	2.15	0.46
1:AA:642:A:C5	7:AH:106:SER:HA	2.51	0.46
23:DB:2194:U:H2'	23:DB:2195:U:H6	1.81	0.46
43:BO:7:ARG:HA	43:BO:10:ARG:CZ	2.46	0.46
12:AM:71:GLU:HA	12:AM:74:MET:CG	2.47	0.46
44:BQ:18:LYS:C	44:BQ:20:ALA:N	2.69	0.46
6:AG:11:ILE:N	6:AG:11:ILE:HD12	2.31	0.46
15:AP:38:PHE:CD2	15:AP:51:ARG:HB2	2.51	0.46
23:BB:1153:C:H2'	23:BB:1154:G:O4'	2.16	0.46
23:BB:1987:A:H2'	23:BB:1988:G:H8	1.81	0.46
22:DA:91:C:H2'	22:DA:92:C:H6	1.81	0.46
40:DH:14:SER:HB2	40:DH:17:ASP:HB2	1.98	0.46
23:DB:1965:C:H5''	23:DB:1966:A:H2'	1.98	0.46
1:CA:991:U:H2'	1:CA:1212:U:C2	2.50	0.46
23:DB:256:A:O2'	23:DB:257:C:H5'	2.16	0.46
22:BA:78:A:H2'	22:BA:79:G:O4'	2.16	0.46
23:BB:2415:G:H2'	23:BB:2416:C:H6	1.81	0.46
23:DB:820:A:H2'	23:DB:821:A:O4'	2.16	0.46
24:DI:59:THR:O	24:DI:59:THR:HG23	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2835:A:N6	23:DB:2878:U:H2'	2.31	0.46
51:BZ:15:GLY:O	51:BZ:26:LYS:HA	2.16	0.46
23:DB:1099:G:N7	24:DI:3:LYS:CD	2.79	0.45
23:BB:858:G:H4'	52:BW:19:ARG:HH22	1.81	0.45
20:CB:65:LYS:HA	20:CB:89:PHE:HE1	1.80	0.45
50:BT:4:GLU:OE2	50:BT:5:GLU:HG2	2.15	0.45
29:DE:161:ALA:HA	29:DE:164:LEU:HD12	1.97	0.45
50:DT:10:VAL:HG11	50:DT:43:ILE:HG13	1.98	0.45
23:BB:2897:U:H2'	23:BB:2898:U:H6	1.80	0.45
42:DN:70:THR:OG1	42:DN:70:THR:O	2.33	0.45
51:BZ:40:VAL:CG2	51:BZ:45:ARG:H	2.30	0.45
23:DB:346:A:H3'	23:DB:347:A:H8	1.81	0.45
23:DB:78:U:H2'	23:DB:79:C:H6	1.75	0.45
38:BM:36:VAL:HG21	38:BM:129:THR:HB	1.98	0.45
1:CA:409:U:H2'	1:CA:410:G:C8	2.51	0.45
3:CD:115:GLN:HE21	3:CD:119:HIS:CE1	2.35	0.45
23:DB:141:G:N3	23:DB:141:G:C3'	2.75	0.45
47:BF:104:THR:CA	47:BF:108:PRO:HG2	2.46	0.45
47:DF:163:GLU:CA	47:DF:166:ARG:HH11	2.20	0.45
23:BB:141:G:H5''	23:BB:142:A:O4'	2.15	0.45
23:BB:143:C:H3'	23:BB:144:A:C8	2.51	0.45
47:DF:7:TYR:O	47:DF:11:VAL:HB	2.16	0.45
1:CA:1411:C:H2'	1:CA:1412:C:C6	2.51	0.45
12:CM:106:ARG:HH12	12:CM:109:LYS:CD	2.20	0.45
23:DB:122:G:O2'	23:DB:123:G:H5'	2.16	0.45
23:DB:125:A:C6	36:D2:10:LEU:HD23	2.52	0.45
1:AA:1060:U:H5''	9:AJ:53:ILE:HD11	1.98	0.45
17:AR:31:TYR:CD1	17:AR:54:LEU:HD11	2.51	0.45
48:BG:94:ARG:C	48:BG:94:ARG:HE	2.20	0.45
23:DB:2751:G:N3	23:DB:2751:G:H2'	2.30	0.45
1:CA:1342:C:O2'	8:CI:125:GLN:HB3	2.16	0.45
24:DI:138:VAL:HG12	24:DI:139:VAL:N	2.31	0.45
29:DE:176:ASP:OD1	29:DE:178:VAL:HG12	2.16	0.45
23:BB:2186:G:H2'	23:BB:2187:U:C6	2.50	0.45
23:DB:2461:A:H2'	23:DB:2462:C:H6	1.76	0.45
22:BA:7:G:H1'	43:BO:38:GLN:HE22	1.80	0.45
23:BB:2834:G:O6	23:BB:2879:A:H2'	2.15	0.45
23:BB:170:U:H2'	23:BB:171:U:H6	1.81	0.45
50:DT:54:GLU:HG3	50:DT:90:GLY:N	2.26	0.45
4:AE:148:SER:OG	4:AE:151:MET:HB2	2.16	0.45
22:DA:51:G:H2'	22:DA:52:A:O5'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DX:55:THR:O	39:DX:58:ASN:HB3	2.16	0.45
23:BB:2804:U:H2'	23:BB:2805:C:H6	1.77	0.45
23:DB:2088:A:H2'	23:DB:2089:C:C6	2.51	0.45
1:AA:1335:U:H5'	1:AA:1337:G:N2	2.31	0.45
2:CC:31:ASN:ND2	2:CC:58:ARG:HE	2.13	0.45
23:BB:299:A:N6	23:BB:322:A:O2'	2.48	0.45
48:DG:54:ARG:HD3	48:DG:55:ASP:N	2.31	0.45
4:AE:98:ALA:HB2	4:AE:123:LEU:HG	1.98	0.45
25:BC:61:TYR:HA	25:BC:85:ASN:HD21	1.80	0.45
27:BK:53:LYS:H	27:BK:53:LYS:HD3	1.81	0.45
23:DB:1665:A:O2'	23:DB:1666:G:H5'	2.15	0.45
1:CA:144:G:O2'	1:CA:145:G:H5'	2.16	0.45
23:BB:1824:G:O2'	25:BC:251:THR:HG21	2.16	0.45
1:CA:725:G:H2'	1:CA:726:C:H6	1.82	0.45
26:BD:55:LYS:C	26:BD:57:ALA:H	2.19	0.45
1:AA:462:G:H2'	1:AA:463:U:C6	2.51	0.45
23:BB:217:A:H2'	23:BB:218:A:O4'	2.15	0.45
1:CA:1427:C:H2'	1:CA:1428:A:C8	2.51	0.45
45:DS:81:SER:CB	45:DS:99:ARG:HA	2.46	0.45
23:DB:374:A:N6	23:DB:400:G:H1'	2.31	0.45
44:DQ:15:LYS:HD2	44:DQ:19:GLN:HE21	1.80	0.45
1:AA:1347:G:C8	8:AI:108:ARG:HB2	2.51	0.45
23:DB:1517:G:O2'	23:DB:1518:C:H5'	2.16	0.45
23:BB:823:C:O2'	23:BB:824:U:H5'	2.16	0.45
1:AA:1408:A:H5'	1:AA:1409:C:OP2	2.16	0.45
1:CA:610:U:O4'	1:CA:610:U:O2	2.32	0.45
2:CC:111:ASP:OD2	2:CC:114:LEU:HG	2.15	0.45
23:BB:1979:U:O2'	23:BB:1980:G:H5'	2.16	0.45
1:CA:93:U:O5'	1:CA:93:U:H6	1.99	0.45
23:BB:2276:G:OP2	38:BM:85:GLY:N	2.43	0.45
23:BB:857:G:H2'	23:BB:858:G:H5'	1.98	0.45
21:AU:35:GLU:HB3	21:AU:36:PHE:H	1.47	0.45
8:AI:62:LEU:N	8:AI:62:LEU:HD13	2.32	0.45
23:BB:533:G:H5'	44:BQ:23:TYR:CE2	2.51	0.45
44:BQ:30:VAL:O	44:BQ:31:TYR:CB	2.62	0.45
25:DC:91:ALA:HB2	25:DC:105:ALA:HB2	1.97	0.45
49:DR:6:GLN:C	49:DR:6:GLN:HE21	2.19	0.45
10:AK:57:SER:O	10:AK:90:PRO:HG3	2.16	0.45
31:D0:21:LEU:HD13	45:DS:23:LEU:HD11	1.98	0.45
43:BO:49:VAL:HG11	43:BO:82:ALA:HB2	1.98	0.45
42:DN:86:ARG:HE	42:DN:117:ASP:CG	2.19	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DN:83:LEU:HA	42:DN:86:ARG:CB	2.45	0.45
15:AP:43:ALA:HA	15:AP:46:LYS:HE3	1.98	0.45
3:CD:30:LYS:HD3	3:CD:30:LYS:N	2.31	0.45
23:DB:2900:A:H2'	23:DB:2901:C:O4'	2.15	0.45
47:BF:87:LYS:CG	47:BF:88:VAL:H	2.21	0.45
3:AD:160:LEU:HA	3:AD:163:GLN:HG3	1.98	0.45
23:DB:137:U:C2'	23:DB:138:U:O4'	2.60	0.45
38:BM:97:GLN:HB2	38:BM:98:PRO:HD2	1.98	0.45
12:CM:106:ARG:HE	12:CM:112:ARG:HD3	1.81	0.45
36:D2:9:VAL:HG13	36:D2:10:LEU:N	2.30	0.45
23:DB:2722:G:H2'	23:DB:2723:C:H6	1.80	0.45
9:AJ:53:ILE:HG13	13:AN:84:ARG:CZ	2.46	0.45
29:DE:60:TRP:C	29:DE:62:GLN:H	2.20	0.45
29:DE:58:LYS:HB2	29:DE:60:TRP:HB2	1.98	0.45
23:DB:784:G:N2	25:DC:225:ASN:HD22	2.14	0.45
23:DB:2751:G:H4'	48:DG:3:VAL:CG1	2.46	0.45
34:D3:54:LEU:HD11	34:D3:58:ILE:HD11	1.98	0.45
31:B0:50:GLY:C	31:B0:51:ARG:HG2	2.37	0.45
1:AA:92:U:H2'	1:AA:93:U:C6	2.51	0.45
31:B0:27:LEU:CD1	31:B0:27:LEU:H	2.23	0.45
23:BB:182:A:H1'	23:BB:434:U:H5'	1.98	0.45
23:DB:306:U:H2'	23:DB:307:G:O4'	2.16	0.45
23:BB:2688:G:H1'	23:BB:2721:A:N6	2.32	0.45
12:AM:72:ILE:O	12:AM:76:ILE:HG13	2.15	0.45
19:AT:27:MET:SD	19:AT:66:ILE:HG12	2.56	0.45
39:DX:51:ALA:O	39:DX:55:THR:N	2.49	0.45
23:DB:1561:C:H2'	23:DB:1562:U:C6	2.50	0.45
26:DD:46:ARG:HH22	26:DD:87:GLY:H	1.61	0.45
47:BF:121:PHE:HB3	47:BF:127:TYR:CE2	2.52	0.45
23:BB:2230:G:H2'	23:BB:2231:U:H6	1.80	0.45
49:BR:21:ARG:HB3	49:BR:95:ASP:OD1	2.16	0.45
20:AB:115:ASP:O	20:AB:119:GLN:HG2	2.16	0.45
28:DP:32:VAL:HG12	28:DP:33:GLU:O	2.15	0.45
46:DU:48:VAL:O	46:DU:48:VAL:HG22	2.16	0.45
23:BB:2645:G:H3'	23:BB:2646:C:C5'	2.44	0.45
1:CA:364:A:H2'	1:CA:365:U:O2	2.17	0.45
36:B2:26:ASN:O	36:B2:30:VAL:HG23	2.16	0.45
23:BB:37:C:O2'	29:BE:45:ALA:HA	2.16	0.45
23:DB:825:A:O2'	37:DL:54:GLN:NE2	2.50	0.45
45:DS:33:LEU:HG	45:DS:51:LEU:HD23	1.98	0.45
23:DB:1922:G:O2'	23:DB:1923:U:H5'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:41:C:H2'	23:DB:42:A:O4'	2.16	0.45
23:BB:2839:G:H2'	23:BB:2840:C:H6	1.81	0.45
12:CM:79:LEU:HA	12:CM:82:LEU:HB2	1.98	0.45
6:AG:104:VAL:HG12	6:AG:108:ARG:HD2	1.99	0.45
23:DB:2341:G:O2'	23:DB:2342:C:H5'	2.16	0.45
37:BL:65:GLY:O	37:BL:66:PHE:CB	2.64	0.45
1:AA:113:G:H2'	1:AA:114:U:H6	1.77	0.45
9:AJ:92:LEU:HB2	9:AJ:93:ALA:H	1.63	0.45
23:DB:1190:G:P	37:DL:32:GLY:HA2	2.55	0.45
25:BC:29:PHE:CE2	25:BC:31:PRO:HG2	2.51	0.45
1:CA:541:G:O2'	3:CD:39:GLN:HB3	2.16	0.45
6:CG:94:ARG:HH12	6:CG:98:LEU:HD21	1.80	0.45
33:D1:18:HIS:NE2	33:D1:40:PRO:HD2	2.31	0.45
1:CA:649:A:H2'	1:CA:650:G:O4'	2.16	0.45
23:BB:208:C:H2'	23:BB:209:C:H6	1.81	0.45
23:DB:2600:A:O2'	23:DB:2601:C:H5'	2.16	0.45
36:D2:25:LYS:C	36:D2:27:GLY:H	2.18	0.45
23:DB:2774:C:H2'	23:DB:2775:G:O4'	2.15	0.45
23:BB:485:C:HO2'	45:BS:60:HIS:CE1	2.34	0.45
23:DB:1249:U:O4'	44:DQ:3:VAL:HG21	2.16	0.45
1:AA:1402:C:H2'	1:AA:1403:C:O4'	2.16	0.45
23:DB:1637:A:H2'	23:DB:1638:C:C6	2.51	0.45
43:BO:18:LEU:HD23	43:BO:25:ARG:CD	2.47	0.45
23:BB:1882:U:O2'	23:BB:1883:U:H5'	2.15	0.45
23:DB:1118:C:H2'	23:DB:1119:U:C6	2.52	0.45
26:BD:29:VAL:O	26:BD:185:ASN:HB3	2.16	0.45
20:CB:65:LYS:H	20:CB:158:ASP:CG	2.19	0.45
40:BH:94:ILE:CG2	40:BH:99:ILE:HD11	2.46	0.45
23:DB:1799:G:H4'	23:DB:1800:C:O5'	2.17	0.45
44:DQ:91:ARG:HE	44:DQ:94:LEU:CD2	2.30	0.45
29:BE:154:ASP:C	29:BE:156:ASN:H	2.20	0.45
29:BE:134:LEU:CD2	29:BE:161:ALA:HB2	2.44	0.45
50:DT:4:GLU:OE2	50:DT:5:GLU:HG2	2.15	0.45
23:DB:2312:U:H5'	47:DF:84:ILE:HD12	1.99	0.45
18:CS:19:GLU:HA	18:CS:22:VAL:HG23	1.98	0.45
44:BQ:111:LYS:HB2	49:BR:48:LYS:HE2	1.98	0.45
49:BR:5:PHE:N	49:BR:5:PHE:CD1	2.84	0.45
28:DP:4:ILE:HA	28:DP:7:LEU:HB3	1.98	0.45
23:BB:2895:G:O2'	23:BB:2896:C:H5'	2.15	0.45
50:BT:83:ALA:O	50:BT:84:TYR:HB2	2.17	0.45
50:BT:54:GLU:HG3	50:BT:89:GLU:H	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BL:80:SER:HB3	37:BL:115:GLU:OE2	2.16	0.45
20:CB:71:THR:HG23	20:CB:94:ARG:N	2.32	0.45
41:DJ:16:TYR:CD2	41:DJ:140:LEU:HD12	2.51	0.45
20:CB:101:THR:HG23	20:CB:102:ASN:N	2.30	0.45
23:DB:1694:C:OP1	25:DC:7:PRO:HG2	2.16	0.45
23:DB:1242:U:H2'	23:DB:1243:C:C6	2.52	0.45
28:BP:3:ILE:HD13	28:BP:3:ILE:O	2.16	0.45
20:AB:16:GLY:HA2	20:AB:40:ILE:H	1.80	0.45
20:CB:156:LEU:HD12	20:CB:156:LEU:N	2.20	0.45
40:DH:85:GLY:HA2	40:DH:91:PHE:CE1	2.51	0.45
42:BN:79:LEU:O	42:BN:80:PHE:HB2	2.16	0.45
32:D4:10:LEU:HD13	32:D4:33:HIS:CD2	2.51	0.45
27:BK:8:LEU:N	27:BK:8:LEU:HD12	2.28	0.45
47:DF:107:VAL:HG11	47:DF:175:PRO:CG	2.41	0.45
3:CD:151:GLN:HB3	3:CD:154:VAL:HG22	1.97	0.45
50:DT:1:MET:CG	50:DT:2:ILE:H	2.29	0.45
47:BF:110:ILE:HB	47:BF:113:PHE:HB3	1.98	0.45
14:AO:84:ARG:C	14:AO:85:LEU:HD12	2.36	0.45
1:CA:865:A:H2'	1:CA:866:C:C6	2.51	0.45
23:DB:2869:G:H2'	23:DB:2870:C:H6	1.80	0.45
12:CM:109:LYS:HG3	12:CM:110:GLY:N	2.31	0.45
23:BB:63:A:C8	23:BB:63:A:OP2	2.68	0.45
26:DD:168:GLU:O	26:DD:170:VAL:HG13	2.16	0.45
40:DH:100:ALA:HB2	40:DH:112:LYS:HB3	1.99	0.45
1:CA:256:U:H3'	1:CA:257:G:H8	1.80	0.45
1:CA:105:G:H2'	1:CA:106:C:H6	1.81	0.45
1:CA:1253:G:N1	1:CA:1285:A:N6	2.64	0.45
12:CM:28:ARG:HH12	12:CM:59:VAL:HA	1.82	0.45
33:D1:47:ILE:HD12	33:D1:47:ILE:N	2.31	0.45
23:BB:845:A:N1	23:BB:847:U:H1'	2.32	0.45
30:DY:15:ARG:HG2	30:DY:53:MET:SD	2.56	0.45
23:BB:674:G:H1'	29:BE:69:ARG:HE	1.82	0.45
9:AJ:52:LEU:HB2	13:AN:80:ARG:CD	2.46	0.45
23:DB:2592:G:H2'	23:DB:2593:U:O4'	2.16	0.45
22:BA:7:G:O2'	22:BA:8:C:H5'	2.16	0.45
12:AM:68:LEU:O	12:AM:72:ILE:HB	2.17	0.45
20:AB:19:THR:HG23	20:AB:20:ARG:N	2.28	0.45
8:AI:93:LEU:HD13	8:AI:97:LEU:HD11	1.98	0.45
37:DL:2:ARG:O	37:DL:2:ARG:HG2	2.16	0.45
22:DA:28:C:H2'	22:DA:29:A:O4'	2.17	0.45
25:BC:18:VAL:O	25:BC:18:VAL:HG13	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CL:81:ILE:CG2	11:CL:94:TYR:HB3	2.47	0.45
23:BB:2088:A:H2'	23:BB:2089:C:C6	2.52	0.45
9:AJ:83:THR:O	9:AJ:87:LEU:HD22	2.16	0.45
39:BX:15:ASN:H	39:BX:15:ASN:HD22	1.63	0.45
23:DB:477:A:H2'	23:DB:478:A:C8	2.51	0.45
7:CH:6:ILE:HD11	7:CH:31:LEU:HD23	1.97	0.45
23:DB:2184:A:H2'	23:DB:2185:U:C5	2.50	0.45
23:DB:1199:U:H5'	44:DQ:4:LYS:HD3	1.98	0.45
51:BZ:66:THR:O	51:BZ:70:GLU:HG3	2.16	0.45
23:DB:1418:G:H1'	23:DB:1580:A:N6	2.31	0.45
40:DH:83:LYS:CE	40:DH:149:GLU:HG3	2.47	0.45
23:BB:1945:G:C4	23:BB:1946:U:C5	3.04	0.45
23:BB:30:G:H2'	23:BB:31:C:H6	1.80	0.45
23:DB:1315:C:H2'	23:DB:1316:U:H6	1.81	0.45
23:DB:2:G:O2'	23:DB:3:U:H5'	2.16	0.45
26:DD:109:VAL:HG11	26:DD:193:VAL:CB	2.46	0.45
1:AA:706:A:H4'	10:AK:30:ILE:HD11	1.99	0.45
31:D0:29:VAL:HA	31:D0:35:GLU:O	2.16	0.45
23:BB:992:C:O2'	23:BB:993:G:H5'	2.16	0.45
43:DO:56:LYS:HG2	43:DO:60:GLU:CG	2.45	0.45
23:DB:1921:G:O2'	23:DB:1922:G:H5'	2.16	0.45
23:BB:1585:C:H2'	23:BB:1586:A:O4'	2.16	0.45
23:DB:1733:G:H2'	23:DB:1734:G:H8	1.82	0.45
20:CB:25:LYS:HD3	20:CB:193:ASP:OD1	2.16	0.45
23:BB:2340:A:H2'	23:BB:2341:G:H8	1.81	0.45
23:DB:39:G:H2'	23:DB:40:U:C6	2.51	0.45
25:DC:62:ARG:O	25:DC:63:ILE:HG12	2.17	0.45
1:CA:1141:C:H2'	1:CA:1142:G:H8	1.82	0.45
23:DB:936:A:H2'	23:DB:937:C:C6	2.52	0.45
1:CA:895:G:H2'	1:CA:896:C:C6	2.52	0.45
23:BB:425:G:O2'	23:BB:426:C:H5'	2.15	0.45
23:DB:2417:C:O2'	23:DB:2418:A:H5'	2.15	0.45
23:DB:1957:C:H2'	23:DB:1958:C:H6	1.81	0.45
26:DD:55:LYS:C	26:DD:57:ALA:H	2.20	0.45
22:DA:91:C:H2'	22:DA:92:C:C6	2.52	0.45
23:BB:2415:G:H2'	23:BB:2416:C:C6	2.51	0.45
52:DW:47:GLY:HA3	52:DW:80:SER:CB	2.45	0.45
23:BB:819:A:OP2	23:BB:1187:G:N2	2.49	0.45
26:DD:125:TRP:CD1	26:DD:160:LYS:HB3	2.51	0.45
23:DB:1987:A:H2'	23:DB:1988:G:H8	1.82	0.45
30:DY:5:LYS:HE2	30:DY:57:GLU:O	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BM:29:GLY:HA2	38:BM:106:ASP:HB2	1.98	0.45
26:DD:159:LYS:O	26:DD:161:MET:HG2	2.16	0.45
51:BZ:29:PHE:N	51:BZ:29:PHE:CD1	2.84	0.45
22:DA:15:A:H3'	22:DA:15:A:OP2	2.16	0.45
18:CS:64:GLU:CD	18:CS:64:GLU:N	2.70	0.45
47:DF:13:LYS:HE3	47:DF:14:LYS:N	2.31	0.45
23:DB:2352:A:H8	23:DB:2352:A:O5'	2.00	0.45
52:DW:36:ILE:HD12	52:DW:39:GLN:HE22	1.82	0.45
26:DD:14:ILE:CG2	26:DD:22:ILE:HB	2.46	0.45
29:DE:154:ASP:C	29:DE:156:ASN:H	2.20	0.45
3:CD:186:GLU:CD	3:CD:187:ARG:N	2.70	0.45
13:AN:53:ASP:HA	13:AN:58:ARG:HD3	1.97	0.45
47:DF:41:GLU:O	47:DF:43:ILE:N	2.50	0.45
28:DP:1:SER:N	28:DP:4:ILE:HB	2.31	0.45
10:CK:125:LYS:O	21:CU:33:ARG:CZ	2.63	0.45
48:DG:23:ILE:HG21	48:DG:71:LEU:HD11	1.98	0.45
47:BF:74:ALA:HB3	47:BF:77:LYS:O	2.15	0.45
24:DI:128:ILE:HA	24:DI:131:THR:CG2	2.45	0.45
23:BB:1059:G:H2'	23:BB:1060:U:C5	2.51	0.45
23:DB:1204:A:N1	23:DB:1241:A:N1	2.65	0.45
26:BD:184:ARG:HD3	26:BD:186:LEU:HD22	1.98	0.45
32:D4:8:LYS:HG2	32:D4:9:LYS:HD3	1.98	0.45
32:B4:10:LEU:HD13	32:B4:33:HIS:CD2	2.52	0.45
23:DB:973:A:OP1	23:DB:973:A:H8	2.00	0.45
23:DB:705:A:O2'	25:DC:6:LYS:HG3	2.16	0.45
38:DM:123:LYS:O	38:DM:124:LEU:HG	2.16	0.45
43:BO:34:HIS:HB3	43:BO:36:TYR:HE2	1.81	0.45
47:DF:90:LEU:HB3	47:DF:95:MET:HA	1.98	0.45
23:BB:1080:A:H2'	23:BB:1081:U:C6	2.50	0.45
31:B0:43:THR:HG23	31:B0:47:TYR:O	2.17	0.45
1:AA:237:G:O2'	1:AA:238:A:H5'	2.17	0.45
34:D3:21:PHE:O	34:D3:22:LYS:O	2.35	0.45
12:CM:21:ILE:O	12:CM:24:VAL:HG22	2.16	0.45
48:DG:9:VAL:HA	48:DG:48:THR:CG2	2.41	0.45
30:BY:15:ARG:HD2	30:BY:15:ARG:N	2.31	0.45
8:CI:71:ILE:HD12	8:CI:71:ILE:N	2.27	0.45
23:DB:1168:G:O2'	23:DB:1169:A:H5'	2.17	0.45
44:DQ:77:LYS:O	44:DQ:80:ASN:HB3	2.16	0.45
35:BV:79:ARG:NH1	38:BM:134:THR:HG21	2.32	0.45
30:DY:15:ARG:N	30:DY:15:ARG:HD2	2.31	0.45
23:BB:675:A:OP1	29:BE:60:TRP:NE1	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DG:84:LYS:HG2	48:DG:85:LYS:N	2.27	0.45
40:DH:62:LEU:HD23	40:DH:63:ALA:N	2.32	0.45
23:DB:2591:C:OP1	25:DC:237:ARG:HG3	2.16	0.45
23:DB:1383:A:H2	23:DB:1405:U:O2	1.99	0.45
1:CA:1241:G:H2'	1:CA:1242:G:H8	1.80	0.45
1:CA:1238:A:N7	1:CA:1303:C:H1'	2.32	0.45
23:DB:182:A:H1'	23:DB:434:U:H5'	1.98	0.45
22:DA:28:C:H5	22:DA:56:G:H22	1.64	0.45
22:DA:52:A:H2'	22:DA:53:A:H8	1.81	0.45
2:CC:13:ILE:C	2:CC:15:LYS:H	2.20	0.45
1:AA:1370:G:O2'	1:AA:1371:G:H5'	2.17	0.45
38:BM:41:LEU:O	38:BM:94:ALA:N	2.49	0.45
23:DB:2515:C:H2'	23:DB:2516:A:H8	1.82	0.45
1:CA:714:G:N2	1:CA:777:A:H1'	2.32	0.45
8:CI:87:MET:HE2	8:CI:87:MET:O	2.16	0.45
23:BB:1476:U:HO2'	23:BB:1477:A:H8	1.65	0.45
16:AQ:52:CYS:HB3	16:AQ:77:VAL:HG22	1.97	0.45
23:DB:2893:A:H4'	23:DB:2894:G:H5'	1.97	0.45
1:AA:371:A:O2'	1:AA:372:C:H5'	2.16	0.45
24:BI:14:ALA:HA	24:BI:45:THR:HG21	1.96	0.45
23:DB:2106:U:O2	23:DB:2106:U:H2'	2.17	0.45
23:BB:2840:C:O2'	23:BB:2841:C:H5'	2.17	0.45
23:DB:1718:G:O2'	23:DB:1719:G:H5'	2.17	0.45
44:DQ:18:LYS:C	44:DQ:20:ALA:N	2.68	0.45
23:DB:1010:A:N3	23:DB:1153:C:H1'	2.31	0.45
23:BB:936:A:H2'	23:BB:937:C:C6	2.51	0.45
23:BB:1341:G:H2'	23:BB:1397:U:HO2'	1.82	0.45
1:CA:880:C:H2'	1:CA:881:G:C8	2.51	0.45
23:DB:64:A:O2'	23:DB:65:U:H5'	2.16	0.45
23:BB:219:A:O2'	23:BB:220:G:H5'	2.16	0.45
1:CA:708:C:O2'	1:CA:709:U:H5'	2.16	0.45
28:BP:103:THR:HG22	28:BP:104:GLY:N	2.32	0.45
23:DB:1714:U:H3'	23:DB:1715:G:H5'	1.98	0.45
23:DB:247:G:H4'	23:DB:386:G:C5	2.51	0.45
41:BJ:64:VAL:HG22	41:BJ:68:LYS:HD2	1.98	0.45
2:CC:178:ARG:HG2	2:CC:206:ILE:HA	1.98	0.45
33:B1:25:ASN:OD1	33:B1:27:ARG:HB2	2.16	0.45
23:DB:1843:C:O2'	23:DB:1844:C:H5'	2.16	0.45
23:BB:1880:U:H2'	23:BB:1881:C:C6	2.52	0.45
1:CA:8:A:C6	3:CD:205:LYS:HG3	2.52	0.45
23:DB:2348:U:O2'	23:DB:2349:G:H5'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:259:ASN:OD1	25:BC:261:ARG:HB3	2.17	0.45
23:BB:2569:G:O2'	23:BB:2570:G:H5'	2.16	0.45
1:AA:60:A:H4'	1:AA:61:G:O5'	2.17	0.45
23:BB:463:G:N2	23:BB:466:A:OP2	2.45	0.45
23:DB:2685:G:O2'	23:DB:2686:G:H5'	2.17	0.45
1:CA:197:A:H4'	1:CA:198:G:O5'	2.16	0.45
1:AA:592:G:H2'	1:AA:593:U:C6	2.50	0.45
23:BB:2309:A:H2'	23:BB:2310:C:C6	2.52	0.45
1:CA:1294:G:H2'	1:CA:1295:U:C6	2.52	0.45
23:BB:2418:A:H2'	23:BB:2419:U:O4'	2.16	0.45
26:BD:202:ILE:HD12	26:BD:202:ILE:N	2.31	0.45
23:DB:2233:U:H2'	23:DB:2234:G:C8	2.50	0.45
23:BB:2630:G:O2'	23:BB:2631:G:H5'	2.17	0.45
46:DU:98:ASN:OD1	46:DU:100:GLU:HB2	2.16	0.45
8:CI:51:LEU:HD22	8:CI:56:MET:CE	2.45	0.45
28:DP:47:ILE:HD11	28:DP:59:THR:HG22	1.97	0.45
29:BE:138:LEU:O	29:BE:142:ALA:N	2.50	0.45
48:BG:32:LEU:HB3	48:BG:34:ARG:CZ	2.47	0.45
48:BG:23:ILE:HG21	48:BG:71:LEU:HD11	1.98	0.45
37:BL:121:THR:HG22	37:BL:141:LYS:HB3	1.98	0.45
41:BJ:123:LYS:O	41:BJ:124:VAL:HG13	2.16	0.45
1:CA:693:G:H2'	1:CA:694:A:O4'	2.16	0.45
23:BB:667:U:H2'	23:BB:668:A:O4'	2.17	0.45
42:DN:25:ALA:O	42:DN:29:VAL:HG23	2.17	0.45
42:BN:32:GLU:O	42:BN:114:GLU:HA	2.17	0.45
18:AS:15:LEU:O	18:AS:18:VAL:HG12	2.17	0.45
23:BB:2515:C:O2'	23:BB:2516:A:H5'	2.16	0.45
23:BB:2306:C:H3'	23:BB:2307:G:H5'	1.92	0.45
36:B2:22:MET:HE2	36:B2:31:LEU:HD13	1.97	0.45
47:BF:29:ARG:HH11	47:BF:29:ARG:HB2	1.82	0.45
23:DB:2884:U:H2'	23:DB:2885:G:C8	2.51	0.45
24:BI:126:ARG:HA	24:BI:129:GLU:OE2	2.16	0.45
23:BB:363:G:H2'	23:BB:364:C:H6	1.81	0.45
46:BU:26:ASN:N	46:BU:26:ASN:ND2	2.64	0.45
48:BG:93:TYR:HA	48:BG:105:SER:O	2.16	0.45
1:CA:105:G:H2'	1:CA:106:C:C6	2.51	0.45
12:AM:15:VAL:HG13	12:AM:30:LYS:HA	1.98	0.45
1:AA:238:A:H3'	1:AA:239:U:H5''	1.99	0.45
44:DQ:83:LYS:HA	44:DQ:83:LYS:NZ	2.31	0.45
48:DG:84:LYS:HG3	48:DG:131:VAL:CB	2.45	0.45
4:AE:71:ILE:HG12	4:AE:72:ASN:N	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DM:41:LEU:O	38:DM:94:ALA:N	2.50	0.45
28:BP:52:ARG:HG2	28:BP:52:ARG:NH1	2.31	0.45
8:AI:43:ALA:O	8:AI:46:VAL:HG22	2.16	0.45
22:DA:28:C:H2'	22:DA:29:A:C8	2.52	0.45
40:BH:49:ALA:HB3	40:BH:50:ARG:HH12	1.81	0.45
1:CA:269:C:H2'	1:CA:270:A:H8	1.76	0.45
39:BX:1:MET:CG	39:BX:4:LYS:HD3	2.47	0.45
7:AH:6:ILE:HD12	7:AH:35:ILE:CD1	2.46	0.45
50:DT:18:GLU:O	50:DT:20:ALA:N	2.43	0.45
23:BB:2811:G:O2'	23:BB:2812:G:H5'	2.16	0.45
23:DB:2295:C:OP2	43:DO:10:ARG:HG2	2.16	0.45
1:AA:586:C:C5'	7:AH:81:GLY:HA2	2.44	0.45
6:AG:50:ALA:CB	6:AG:57:GLU:HG3	2.46	0.45
1:AA:818:G:C2'	1:AA:819:A:H5''	2.47	0.45
23:BB:1490:A:H2'	25:BC:97:ASP:OD1	2.16	0.45
23:DB:3:U:H2'	23:DB:4:U:H6	1.82	0.45
9:AJ:40:ILE:HB	9:AJ:73:LEU:HB3	1.98	0.45
1:CA:192:A:O2'	1:CA:193:C:H5'	2.17	0.45
23:BB:322:A:P	29:BE:163:ASN:HD22	2.39	0.45
1:AA:1533:C:C2'	1:AA:1534:A:H5''	2.46	0.45
45:DS:50:VAL:O	45:DS:53:SER:HB3	2.16	0.45
23:BB:1789:A:H2'	23:BB:1790:C:O4'	2.17	0.45
45:DS:13:SER:O	45:DS:101:SER:HB3	2.17	0.45
23:DB:1291:C:O2'	23:DB:1292:G:H5'	2.17	0.45
23:BB:840:C:H2'	23:BB:841:G:C8	2.52	0.45
23:BB:246:C:C2'	23:BB:247:G:H5'	2.46	0.45
25:DC:28:PRO:HG2	25:DC:33:LEU:HD11	1.98	0.45
23:BB:2025:C:H2'	23:BB:2026:U:C6	2.52	0.45
43:DO:28:VAL:CG2	43:DO:106:LEU:HD21	2.47	0.45
23:BB:219:A:H2	23:BB:234:U:O2	2.00	0.45
1:CA:140:U:H2'	1:CA:141:G:C8	2.51	0.45
23:DB:599:A:O2'	23:DB:600:G:H5'	2.16	0.45
7:CH:113:ARG:O	7:CH:117:GLN:HG3	2.16	0.45
34:D3:32:LEU:HA	34:D3:35:LYS:HD2	1.97	0.45
23:BB:2023:C:H4'	23:BB:2617:U:O3'	2.17	0.45
41:DJ:65:THR:HG23	41:DJ:66:GLY:N	2.32	0.45
23:DB:195:A:H61	23:DB:198:C:H3'	1.81	0.45
19:CT:11:ILE:O	19:CT:15:LYS:HB2	2.16	0.45
2:AC:45:GLU:C	2:AC:46:LEU:HD22	2.37	0.45
5:CF:81:ASN:HB3	5:CF:84:VAL:HG12	1.98	0.45
23:DB:1740:G:H2'	23:DB:1741:C:H6	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DG:67:ALA:HA	48:DG:70:LEU:HB2	1.98	0.45
23:BB:107:G:H2'	23:BB:108:G:H8	1.80	0.45
29:BE:152:GLU:OE1	29:BE:152:GLU:HA	2.16	0.45
23:DB:1678:A:H2'	23:DB:1679:A:O4'	2.16	0.45
20:CB:70:GLY:HA2	20:CB:163:ILE:CG2	2.47	0.45
33:B1:11:VAL:O	33:B1:48:TYR:HA	2.15	0.45
44:DQ:60:TRP:CZ2	44:DQ:93:ILE:HB	2.51	0.45
49:DR:49:ILE:HG22	49:DR:54:VAL:HB	1.99	0.45
37:DL:89:VAL:HA	37:DL:121:THR:O	2.17	0.45
44:BQ:57:ARG:HG2	44:BQ:57:ARG:HH11	1.82	0.45
23:BB:848:C:H2'	23:BB:849:A:H8	1.81	0.45
25:BC:106:PRO:HB3	25:BC:141:HIS:CE1	2.52	0.45
25:BC:128:THR:HG23	25:BC:190:THR:HG22	1.98	0.45
25:BC:143:VAL:HG12	25:BC:144:GLU:H	1.81	0.45
23:BB:9:G:H21	23:BB:10:A:N6	2.04	0.45
41:BJ:16:TYR:CD2	41:BJ:140:LEU:HD12	2.51	0.45
1:CA:692:U:O2	1:CA:694:A:H5''	2.17	0.45
23:DB:1693:U:H4'	23:DB:1694:C:OP2	2.16	0.45
2:CC:48:LYS:H	2:CC:48:LYS:CD	2.16	0.45
47:BF:131:VAL:O	47:BF:132:ARG:HB2	2.17	0.45
41:DJ:114:LEU:HG	41:DJ:118:MET:HE3	1.98	0.45
42:DN:51:LEU:HD11	42:DN:69:ARG:HG3	1.98	0.45
24:BI:32:VAL:HG13	24:BI:66:PHE:CD2	2.51	0.45
42:BN:65:LEU:HD11	42:BN:69:ARG:CZ	2.46	0.45
23:DB:326:G:O2'	23:DB:327:G:H5'	2.17	0.45
27:DK:64:ARG:HH12	27:DK:101:GLY:CA	2.28	0.45
1:AA:412:A:O2'	1:AA:413:G:H5''	2.16	0.45
26:BD:112:THR:O	26:BD:113:SER:HB2	2.17	0.45
47:DF:106:ALA:N	47:DF:108:PRO:HD2	2.32	0.45
3:AD:24:VAL:HG23	3:AD:25:ARG:N	2.19	0.45
23:BB:2515:C:H2'	23:BB:2516:A:H8	1.82	0.45
23:DB:1082:U:C2	23:DB:1086:A:N1	2.84	0.45
23:DB:2678:C:H2'	23:DB:2679:A:H8	1.81	0.45
30:BY:8:GLN:HB3	30:BY:31:ILE:C	2.37	0.45
24:BI:19:PRO:HG2	24:BI:22:PRO:HB2	1.99	0.45
24:DI:45:THR:O	24:DI:48:ILE:HG22	2.15	0.45
9:CJ:51:VAL:CG2	13:CN:80:ARG:HB2	2.47	0.45
48:BG:10:VAL:HB	48:BG:47:ASN:O	2.16	0.45
1:CA:1252:A:H2'	1:CA:1253:G:O4'	2.17	0.45
9:CJ:18:ILE:CG2	9:CJ:19:ASP:N	2.80	0.45
29:BE:69:ARG:O	29:BE:70:SER:CB	2.64	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2466:C:O2'	23:DB:2467:C:H5'	2.16	0.45
23:DB:2472:G:C2'	23:DB:2475:C:H42	2.26	0.45
23:DB:2463:C:O2'	23:DB:2464:G:H5'	2.17	0.45
38:DM:126:ILE:H	38:DM:126:ILE:HD12	1.81	0.45
5:CF:38:ARG:HB3	5:CF:63:ASN:HB2	1.97	0.45
23:BB:2589:A:H2'	23:BB:2590:A:C8	2.51	0.45
1:CA:664:G:N2	1:CA:741:G:H1	2.15	0.45
4:CE:149:PRO:HB3	7:CH:98:LEU:HD21	1.98	0.45
23:DB:2344:U:H4'	23:DB:2345:G:OP1	2.16	0.45
23:BB:2189:U:H2'	23:BB:2190:G:C8	2.48	0.45
1:AA:1169:A:H2'	1:AA:1170:A:C8	2.51	0.45
1:AA:1020:G:H2'	1:AA:1021:A:H5'	1.99	0.45
23:DB:2250:G:H8	23:DB:2250:G:O5'	2.00	0.45
26:DD:69:ALA:N	26:DD:73:VAL:HB	2.31	0.45
1:CA:475:C:O2'	1:CA:476:U:H5'	2.16	0.45
1:CA:1463:U:OP1	28:DP:108:ARG:HD2	2.17	0.45
43:DO:14:ALA:C	43:DO:16:ARG:H	2.20	0.45
23:BB:2065:C:H1'	23:BB:2449:U:H3	1.81	0.45
40:DH:83:LYS:HE2	40:DH:149:GLU:CG	2.45	0.45
1:CA:311:C:HO2'	1:CA:312:C:H5'	1.82	0.45
23:DB:1315:C:H2'	23:DB:1316:U:C6	2.52	0.45
1:AA:1355:G:H2'	1:AA:1356:G:C8	2.52	0.45
23:BB:2092:U:H5	23:BB:2226:C:OP2	2.00	0.45
23:DB:1653:G:O6	42:DN:10:LEU:O	2.34	0.45
23:BB:813:U:H2'	23:BB:814:C:H6	1.80	0.45
23:BB:98:G:C2'	23:BB:99:U:H5''	2.45	0.45
23:BB:831:G:H2'	23:BB:832:U:O4'	2.16	0.45
23:BB:2892:G:H5''	23:BB:2894:G:H22	1.81	0.45
16:CQ:52:CYS:HB3	16:CQ:77:VAL:HG22	1.97	0.45
8:CI:83:THR:OG1	8:CI:97:LEU:HD13	2.17	0.45
45:DS:13:SER:CB	45:DS:16:LYS:HE3	2.46	0.45
23:DB:901:C:H2'	23:DB:902:C:C6	2.52	0.45
34:D3:24:LYS:HB2	37:DL:64:PHE:HD2	1.82	0.45
23:DB:2415:G:H2'	23:DB:2416:C:C6	2.52	0.45
1:CA:152:A:H3'	1:CA:153:C:H6	1.82	0.45
34:B3:28:LEU:HD22	34:B3:43:LEU:CB	2.46	0.45
6:CG:11:ILE:HD12	6:CG:11:ILE:N	2.31	0.45
35:BV:48:MET:O	35:BV:51:GLN:HG3	2.17	0.45
1:AA:708:C:O2'	1:AA:709:U:H5'	2.17	0.45
23:DB:410:G:H5''	23:DB:411:G:H5'	1.98	0.45
23:DB:2028:U:O2'	23:DB:2029:G:H5'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1117:C:O2'	23:DB:1118:C:H5'	2.15	0.45
1:AA:1193:G:O2'	1:AA:1194:U:H5'	2.15	0.45
1:CA:613:C:H2'	1:CA:614:C:C6	2.51	0.45
23:DB:1985:C:O2'	23:DB:1986:C:H5'	2.16	0.45
1:CA:463:U:H5'	1:CA:464:U:OP2	2.16	0.45
28:DP:44:GLY:HA3	28:DP:60:VAL:CG1	2.47	0.45
1:AA:219:U:H2'	1:AA:220:G:H8	1.80	0.45
1:AA:317:U:H2'	1:AA:318:G:H8	1.81	0.45
43:BO:20:GLU:OE2	43:BO:21:LEU:HG	2.17	0.45
1:AA:991:U:H2'	1:AA:1212:U:C2	2.51	0.45
23:DB:103:A:H3'	23:DB:104:A:H8	1.80	0.45
1:AA:420:U:H2'	1:AA:422:C:C4	2.51	0.45
47:BF:59:ILE:HG22	47:BF:98:PHE:HE1	1.82	0.45
52:BW:38:ARG:HD3	52:BW:38:ARG:N	2.31	0.45
44:BQ:23:TYR:CB	44:BQ:27:ARG:HB3	2.47	0.45
28:BP:61:ARG:HD3	28:BP:70:GLU:HG3	1.98	0.45
28:BP:59:THR:H	28:BP:72:VAL:HA	1.82	0.45
37:DL:113:ALA:HB3	37:DL:115:GLU:OE1	2.16	0.45
38:BM:59:ARG:HE	38:BM:60:GLN:N	2.09	0.45
10:CK:22:ILE:CG2	10:CK:95:THR:HG21	2.34	0.45
47:DF:84:ILE:O	47:DF:84:ILE:HG22	2.16	0.45
41:BJ:44:TYR:CE2	44:BQ:59:LEU:HD11	2.51	0.45
44:BQ:91:ARG:HE	49:BR:11:GLN:HB2	1.82	0.45
23:DB:1060:U:H5	24:DI:131:THR:CG2	2.30	0.45
46:DU:73:ASN:HB3	46:DU:95:PHE:CD2	2.52	0.45
1:AA:85:U:H1'	1:AA:86:G:C4'	2.46	0.45
27:DK:63:VAL:HG21	27:DK:85:VAL:HG23	1.99	0.45
23:BB:2420:C:O2'	23:BB:2421:G:H5'	2.16	0.45
41:BJ:114:LEU:O	41:BJ:118:MET:HG3	2.17	0.45
47:DF:104:THR:CA	47:DF:108:PRO:HG2	2.47	0.45
47:DF:107:VAL:HB	47:DF:108:PRO:HD3	1.99	0.45
47:BF:3:LEU:HD12	47:BF:96:TRP:CD1	2.52	0.45
14:AO:85:LEU:N	14:AO:85:LEU:HD12	2.31	0.45
47:DF:29:ARG:HB2	47:DF:29:ARG:HH11	1.82	0.45
1:CA:1202:U:O2'	13:CN:68:ARG:HG3	2.17	0.45
26:DD:124:ARG:HG3	26:DD:124:ARG:O	2.14	0.45
49:DR:66:HIS:ND1	49:DR:94:THR:HG22	2.32	0.45
47:DF:32:LYS:HE2	47:DF:34:THR:CG2	2.46	0.45
22:DA:43:C:H4'	47:DF:91:ARG:NE	2.31	0.45
23:BB:1173:U:H1'	23:BB:1177:G:H22	1.82	0.45
23:BB:1173:U:H2'	23:BB:1174:U:C4'	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BN:34:ILE:HB	42:BN:113:ILE:CG2	2.44	0.45
12:CM:52:ILE:HA	12:CM:55:LEU:HG	1.98	0.45
1:CA:1220:G:O2'	1:CA:1221:G:H5'	2.17	0.45
23:BB:2468:A:H2'	23:BB:2476:A:C6	2.52	0.45
23:BB:1551:A:H2'	23:BB:1552:A:O4'	2.17	0.45
12:CM:87:GLY:HA2	12:CM:90:HIS:HD2	1.82	0.45
23:BB:7:G:H4'	41:BJ:15:TRP:CZ2	2.52	0.45
11:CL:56:LEU:HD21	11:CL:81:ILE:HG13	1.99	0.45
1:CA:1007:U:H2'	1:CA:1008:U:H6	1.79	0.45
1:CA:658:C:O2'	1:CA:659:U:H5'	2.17	0.45
2:AC:13:ILE:C	2:AC:15:LYS:H	2.20	0.45
1:AA:8:A:C6	3:AD:205:LYS:HG3	2.52	0.45
1:CA:322:C:H2'	1:CA:323:U:C6	2.52	0.45
1:CA:597:G:H2'	1:CA:598:U:H5'	1.98	0.45
1:CA:598:U:H4'	7:CH:85:TYR:CG	2.51	0.45
3:CD:2:ARG:O	3:CD:3:TYR:HB3	2.17	0.45
50:DT:93:LEU:HD22	50:DT:93:LEU:N	2.32	0.45
1:CA:621:A:H2'	1:CA:622:A:H8	1.81	0.45
11:AL:43:LYS:CE	11:AL:44:PRO:HD3	2.46	0.45
45:BS:50:VAL:O	45:BS:53:SER:HB3	2.17	0.45
23:DB:299:A:H2'	23:DB:300:A:C8	2.51	0.45
23:BB:2790:U:H5'	23:BB:2893:A:N7	2.32	0.45
7:CH:1:SER:O	7:CH:3:GLN:HG3	2.16	0.45
1:AA:194:C:O2'	1:AA:195:A:H5'	2.17	0.45
7:CH:68:LYS:HG3	7:CH:69:ALA:H	1.82	0.45
23:DB:1092:C:C2'	23:DB:1093:G:H5'	2.46	0.45
48:BG:54:ARG:HB3	48:BG:57:TYR:HD1	1.79	0.45
1:CA:513:C:H2'	1:CA:514:C:C6	2.49	0.45
23:DB:1541:C:H2'	23:DB:1542:U:H6	1.82	0.45
7:CH:49:LYS:O	7:CH:59:GLU:N	2.49	0.45
1:CA:1387:G:H2'	1:CA:1388:C:C6	2.52	0.45
23:DB:1219:U:H2'	23:DB:1220:G:H8	1.81	0.45
16:CQ:80:LYS:H	16:CQ:80:LYS:CD	2.29	0.45
23:BB:1100:C:H2'	23:BB:1101:U:C6	2.51	0.45
1:CA:543:U:H2'	1:CA:544:G:H8	1.82	0.45
27:BK:2:ILE:HG13	27:BK:33:ALA:O	2.17	0.45
23:DB:680:C:H2'	23:DB:681:G:H8	1.82	0.45
23:DB:1841:U:H2'	23:DB:1842:G:H8	1.81	0.45
1:AA:1280:A:H3'	1:AA:1281:C:H5''	1.98	0.45
16:CQ:29:LYS:HG3	16:CQ:34:GLY:O	2.17	0.45
9:CJ:66:GLU:HB3	13:CN:98:ALA:HB2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2553:G:H2'	23:DB:2554:U:O4'	2.17	0.45
1:CA:832:G:O2'	1:CA:833:G:H5'	2.16	0.45
23:BB:2889:C:H2'	23:BB:2890:G:C8	2.51	0.45
1:CA:1118:U:H2'	1:CA:1119:C:H6	1.81	0.45
1:AA:610:U:O2	1:AA:610:U:O4'	2.31	0.45
29:DE:73:ILE:HG12	29:DE:73:ILE:O	2.17	0.45
21:CU:40:PRO:HG2	21:CU:41:THR:H	1.82	0.45
52:BW:23:LYS:HD2	52:BW:24:ARG:HB3	1.99	0.45
1:AA:731:G:O2'	1:AA:732:C:H5'	2.16	0.45
52:DW:37:VAL:HG12	52:DW:38:ARG:HD3	1.99	0.45
26:BD:106:LYS:HB3	26:BD:206:ALA:CB	2.47	0.45
8:CI:62:LEU:N	8:CI:62:LEU:HD13	2.31	0.45
25:DC:183:VAL:HG22	25:DC:187:CYS:SG	2.57	0.45
50:DT:43:ILE:CG2	50:DT:58:VAL:HG21	2.46	0.45
23:DB:1458:U:C5'	23:DB:1459:G:H5'	2.32	0.45
23:DB:1459:G:P	23:DB:1459:G:H8	2.40	0.45
18:CS:14:LEU:HG	18:CS:15:LEU:N	2.31	0.45
37:BL:84:LYS:C	37:BL:86:GLU:H	2.20	0.45
23:BB:1799:G:C5	25:BC:175:LEU:HD13	2.52	0.45
23:BB:1599:U:OP1	50:BT:39:THR:HA	2.16	0.45
45:DS:24:ILE:CG2	45:DS:71:VAL:HG11	2.42	0.45
27:DK:47:ILE:HG23	27:DK:49:ARG:H	1.82	0.45
48:DG:23:ILE:O	48:DG:34:ARG:HA	2.17	0.45
47:BF:78:ILE:HA	47:BF:79:ARG:HE	1.82	0.45
47:BF:78:ILE:H	47:BF:79:ARG:NH1	2.13	0.45
40:BH:132:PHE:HB2	40:BH:142:VAL:CG2	2.47	0.45
45:BS:24:ILE:CG2	45:BS:71:VAL:HG11	2.44	0.45
29:BE:181:ILE:HG13	37:BL:2:ARG:HB3	1.99	0.45
48:BG:3:VAL:O	48:BG:68:ARG:HG3	2.17	0.45
48:BG:72:ASN:O	48:BG:76:ILE:HG12	2.16	0.45
42:BN:51:LEU:HD11	42:BN:69:ARG:HG3	1.99	0.45
47:DF:148:VAL:O	47:DF:149:ARG:HG2	2.16	0.45
47:BF:107:VAL:HB	47:BF:108:PRO:HD3	1.99	0.45
38:DM:38:ARG:HH11	38:DM:38:ARG:CB	2.21	0.45
23:DB:2865:U:H5''	23:DB:2866:U:OP2	2.17	0.45
26:DD:118:PHE:HZ	26:DD:123:LYS:NZ	2.14	0.45
24:DI:21:PRO:HB2	24:DI:22:PRO:CD	2.43	0.45
1:AA:1202:U:O2'	13:AN:68:ARG:HG3	2.17	0.45
25:DC:196:ASN:O	25:DC:197:ALA:HB3	2.17	0.45
35:BV:6:ALA:O	35:BV:65:VAL:HG12	2.17	0.45
35:DV:42:LEU:CD1	35:DV:47:VAL:HG21	2.42	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2740:A:H2'	23:BB:2741:A:C8	2.51	0.45
35:DV:40:ILE:HD13	35:DV:40:ILE:H	1.81	0.45
1:CA:254:G:O2'	1:CA:255:G:H5'	2.17	0.45
3:CD:89:LEU:HD23	3:CD:199:ILE:HD11	1.98	0.45
31:B0:42:ILE:HG22	31:B0:43:THR:O	2.16	0.45
45:DS:56:ALA:O	45:DS:59:GLU:HB2	2.17	0.45
34:D3:16:THR:HG21	34:D3:48:MET:SD	2.56	0.45
1:AA:105:G:H2'	1:AA:106:C:C6	2.52	0.45
12:CM:37:GLY:O	12:CM:38:ILE:HD13	2.17	0.45
23:DB:1549:A:H2'	23:DB:1550:C:H6	1.80	0.45
20:AB:65:LYS:HA	20:AB:89:PHE:HE1	1.82	0.45
44:DQ:81:GLY:C	44:DQ:83:LYS:N	2.67	0.45
33:B1:22:THR:OG1	33:B1:23:THR:N	2.49	0.45
29:BE:60:TRP:CZ3	29:BE:62:GLN:HA	2.52	0.45
23:DB:2811:G:OP1	26:DD:62:LYS:HD2	2.16	0.45
9:AJ:51:VAL:CG2	13:AN:80:ARG:HB2	2.46	0.45
23:BB:1408:G:O2'	23:BB:1409:U:H5'	2.17	0.45
22:BA:6:G:H2'	22:BA:7:G:C8	2.51	0.45
8:AI:46:VAL:O	8:AI:49:GLN:HB2	2.17	0.45
41:BJ:29:ALA:O	41:BJ:32:LEU:HB2	2.17	0.45
23:BB:2751:G:H5'	48:BG:2:ARG:HD2	1.99	0.45
23:DB:2373:G:O2'	23:DB:2374:C:H5'	2.17	0.45
23:BB:21:A:O2'	23:BB:22:C:H5'	2.16	0.45
1:CA:478:A:H2'	1:CA:479:U:O4'	2.17	0.45
23:BB:2373:G:O2'	23:BB:2374:C:H5'	2.17	0.45
38:BM:40:ARG:HB3	38:BM:95:LEU:HD12	1.99	0.45
1:AA:1053:G:H4'	1:AA:1054:C:H5'	1.99	0.45
23:DB:2065:C:H1'	23:DB:2449:U:H3	1.81	0.45
23:DB:1:G:H2'	23:DB:2:G:H8	1.81	0.45
1:AA:1494:G:O2'	1:AA:1495:U:H5'	2.17	0.45
53:AA:1601:NMY:H5	53:AA:1601:NMY:H91	1.81	0.45
20:AB:22:TRP:CG	20:AB:23:ASN:N	2.83	0.45
12:AM:79:LEU:HD21	12:AM:86:ARG:HH21	1.82	0.45
1:CA:1460:C:H2'	1:CA:1461:G:C8	2.52	0.45
23:BB:1746:A:H2'	23:BB:1747:U:C6	2.51	0.45
23:DB:2829:A:O2'	23:DB:2830:C:H5'	2.17	0.45
23:BB:639:U:H2'	23:BB:640:C:H6	1.79	0.45
23:BB:817:C:H2'	23:BB:818:G:O4'	2.16	0.45
25:DC:29:PHE:CE2	25:DC:31:PRO:HG2	2.52	0.45
23:DB:52:A:C5	23:DB:118:A:C2	3.04	0.45
52:DW:21:GLY:N	52:DW:33:GLY:HA2	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:483:A:H1'	46:DU:57:ILE:HG13	1.98	0.45
25:BC:32:LEU:O	25:BC:63:ILE:HG12	2.17	0.45
13:CN:87:ALA:HB2	13:CN:92:ILE:HD12	1.98	0.45
1:AA:709:U:H2'	1:AA:710:G:H8	1.82	0.45
1:AA:613:C:H2'	1:AA:614:C:H6	1.82	0.45
1:CA:1366:C:H2'	1:CA:1367:C:H6	1.81	0.45
1:CA:579:A:H2'	1:CA:580:C:C6	2.52	0.45
1:CA:93:U:H2'	1:CA:94:G:H5'	1.99	0.45
23:BB:244:A:H2'	23:BB:245:G:O4'	2.17	0.45
23:DB:2436:G:O2'	23:DB:2437:G:H5'	2.17	0.45
23:DB:1058:U:H1'	24:DI:117:THR:HG22	1.99	0.45
25:DC:36:ASN:HD21	25:DC:85:ASN:ND2	2.15	0.45
23:DB:2716:C:O2'	23:DB:2717:C:H5'	2.17	0.45
1:CA:1280:A:H3'	1:CA:1281:C:H5''	1.99	0.45
1:CA:600:A:H2'	1:CA:601:G:H8	1.81	0.45
23:DB:823:C:O2'	23:DB:824:U:H5'	2.17	0.45
23:DB:102:U:O2	23:DB:102:U:H5''	2.16	0.45
51:DZ:18:ARG:HE	51:DZ:18:ARG:HA	1.82	0.45
23:DB:1752:C:O2'	23:DB:1753:G:H5'	2.16	0.45
41:DJ:70:THR:HG22	41:DJ:90:GLU:OE2	2.16	0.45
23:DB:1098:A:C3'	24:DI:3:LYS:C	2.85	0.45
51:DZ:5:CYS:HB3	51:DZ:10:LYS:N	2.14	0.45
1:AA:766:A:H2'	1:AA:767:A:O4'	2.17	0.45
23:BB:125:A:C6	36:B2:10:LEU:HD23	2.52	0.45
52:DW:30:VAL:O	52:DW:30:VAL:HG13	2.17	0.45
23:DB:2336:A:N6	52:DW:40:ARG:HD2	2.32	0.45
26:BD:30:GLU:HB3	26:BD:185:ASN:ND2	2.31	0.45
8:CI:20:ILE:HD13	8:CI:85:ALA:CB	2.44	0.45
8:CI:34:LEU:HD21	8:CI:48:ARG:HE	1.82	0.45
48:BG:157:LYS:HB3	48:BG:159:LYS:HG2	1.98	0.45
39:DX:31:GLN:CG	39:DX:37:LEU:HB2	2.36	0.45
28:DP:47:ILE:HG13	28:DP:48:ALA:H	1.81	0.45
29:DE:160:ALA:C	29:DE:162:ARG:H	2.19	0.45
50:DT:83:ALA:O	50:DT:84:TYR:HB2	2.17	0.45
50:DT:87:LEU:HB2	50:DT:91:GLN:CG	2.47	0.45
39:BX:36:GLN:HB2	39:BX:37:LEU:H	1.50	0.45
10:AK:95:THR:HG23	10:AK:96:ILE:N	2.31	0.45
21:AU:24:LYS:HZ3	21:AU:24:LYS:HB3	1.82	0.45
1:AA:693:G:OP1	10:AK:126:ARG:NH1	2.49	0.45
10:AK:125:LYS:O	21:AU:33:ARG:CZ	2.65	0.45
28:DP:6:GLN:HA	28:DP:9:GLN:HG2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:138:SER:O	25:BC:140:VAL:HG23	2.17	0.45
41:DJ:123:LYS:O	41:DJ:124:VAL:HG13	2.17	0.45
20:CB:102:ASN:O	20:CB:106:VAL:HG23	2.17	0.45
23:BB:587:C:H4'	23:BB:588:U:C6	2.52	0.45
37:BL:29:LYS:C	37:BL:31:GLY:H	2.21	0.45
42:BN:79:LEU:C	42:BN:81:ASN:H	2.20	0.45
50:DT:1:MET:O	50:DT:2:ILE:HG23	2.17	0.45
41:DJ:58:ASN:C	41:DJ:60:ASP:H	2.20	0.45
4:AE:52:ALA:HB2	4:AE:61:LYS:CE	2.42	0.45
23:BB:784:G:N2	25:BC:225:ASN:HD22	2.13	0.45
1:AA:1220:G:O2'	1:AA:1221:G:H5'	2.17	0.45
1:AA:986:U:H2'	1:AA:987:G:O4'	2.17	0.45
1:CA:1060:U:H5''	9:CJ:53:ILE:HD11	1.98	0.45
23:BB:1561:C:H2'	23:BB:1562:U:C6	2.52	0.45
12:AM:1:ALA:C	12:AM:8:ILE:HG22	2.38	0.45
1:CA:987:G:H2'	1:CA:988:G:H8	1.82	0.45
31:D0:42:ILE:HG22	31:D0:43:THR:O	2.16	0.45
23:BB:2678:C:H2'	23:BB:2679:A:H8	1.82	0.45
23:BB:1593:A:H2'	23:BB:1594:U:H6	1.80	0.45
23:BB:982:C:H2'	23:BB:982:C:O2	2.16	0.45
12:CM:68:LEU:O	12:CM:72:ILE:HB	2.17	0.45
43:BO:2:ASP:OD2	43:BO:4:LYS:HB3	2.16	0.45
1:AA:1241:G:H2'	1:AA:1242:G:H8	1.82	0.45
45:DS:73:LYS:HE3	45:DS:74:ILE:N	2.27	0.45
25:DC:250:GLN:HG2	25:DC:254:LYS:HG2	1.99	0.45
23:BB:2751:G:H4'	23:BB:2752:C:OP1	2.16	0.45
24:BI:12:VAL:HG23	24:BI:41:PHE:CE2	2.52	0.45
1:AA:478:A:H2'	1:AA:479:U:O4'	2.17	0.45
46:BU:12:VAL:HG22	46:BU:69:VAL:CG1	2.45	0.45
1:CA:1020:G:H2'	1:CA:1021:A:H5'	1.99	0.45
25:DC:156:SER:HB3	25:DC:159:THR:CG2	2.47	0.45
1:AA:441:A:H61	1:AA:493:A:N6	2.15	0.45
1:AA:1057:G:O3'	2:AC:196:GLY:HA3	2.16	0.45
22:DA:7:G:O2'	22:DA:8:C:H5'	2.16	0.45
23:DB:1945:G:H2'	23:DB:1946:U:C6	2.52	0.45
23:DB:2793:C:H2'	23:DB:2794:C:C6	2.51	0.45
26:DD:47:ALA:HB1	26:DD:81:GLU:HG3	1.99	0.45
1:AA:182:A:H5''	1:AA:182:A:N3	2.32	0.45
23:DB:826:U:O2'	37:DL:53:GLY:HA3	2.17	0.45
23:DB:2411:A:H2'	23:DB:2412:A:H8	1.81	0.45
30:BY:37:ARG:HG3	30:BY:38:GLU:OE1	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2828:G:O2'	23:DB:2829:A:H5'	2.17	0.45
3:CD:100:VAL:HG11	3:CD:142:VAL:HG21	1.98	0.45
23:DB:2415:G:H2'	23:DB:2416:C:H6	1.81	0.45
1:AA:1140:C:O2'	1:AA:1141:C:H5'	2.17	0.45
1:CA:1386:G:H2'	1:CA:1387:G:C8	2.51	0.45
1:CA:992:U:H2'	1:CA:1043:G:N7	2.32	0.45
1:CA:997:U:O2'	1:CA:998:C:H5'	2.17	0.45
33:B1:18:HIS:CD2	33:B1:40:PRO:HD2	2.52	0.45
1:CA:1143:G:H2'	1:CA:1144:G:H8	1.82	0.45
1:CA:201:G:O2'	1:CA:202:G:H5'	2.17	0.45
23:DB:184:C:H2'	23:DB:185:G:C8	2.51	0.45
23:BB:508:A:O2'	23:BB:509:C:OP1	2.35	0.45
23:BB:242:G:N7	34:B3:4:LYS:HG2	2.31	0.45
2:AC:115:VAL:HG13	2:AC:136:ALA:HB1	1.98	0.45
24:BI:72:THR:HG21	24:BI:111:THR:O	2.17	0.45
30:BY:21:ALA:O	30:BY:24:LEU:HB3	2.17	0.45
26:BD:138:LEU:N	26:BD:138:LEU:HD22	2.31	0.45
1:CA:616:G:H2'	1:CA:616:G:N3	2.32	0.45
38:DM:17:ASN:HA	38:DM:17:ASN:HD22	1.60	0.45
4:AE:42:ASN:O	4:AE:75:LEU:HD12	2.16	0.45
21:CU:41:THR:HG22	21:CU:45:LYS:HZ3	1.82	0.45
23:DB:2365:G:O2'	52:DW:59:PHE:CE1	2.70	0.45
52:DW:61:LYS:HB3	52:DW:62:ALA:H	1.44	0.45
52:DW:38:ARG:HD3	52:DW:38:ARG:N	2.32	0.45
47:DF:74:ALA:HB1	47:DF:76:PHE:CD2	2.51	0.45
18:CS:42:ASN:ND2	18:CS:43:MET:H	2.15	0.45
41:DJ:123:LYS:HG2	41:DJ:132:HIS:CD2	2.51	0.45
47:BF:78:ILE:N	47:BF:79:ARG:HH11	2.15	0.45
40:BH:69:ALA:HA	40:BH:140:ALA:CB	2.47	0.45
45:BS:42:LYS:O	45:BS:45:VAL:HG22	2.17	0.45
15:CP:43:ALA:HA	15:CP:46:LYS:HE3	1.99	0.45
40:DH:8:LYS:O	40:DH:9:VAL:C	2.55	0.45
18:AS:19:GLU:HA	18:AS:22:VAL:HG23	1.99	0.45
3:AD:160:LEU:HA	3:AD:163:GLN:CG	2.47	0.45
47:BF:106:ALA:N	47:BF:108:PRO:HD2	2.31	0.45
41:DJ:24:THR:O	41:DJ:25:LEU:HB3	2.17	0.45
13:CN:68:ARG:HH12	13:CN:71:GLY:H	1.63	0.45
26:DD:114:LYS:HG3	26:DD:115:GLY:H	1.81	0.45
13:AN:79:SER:OG	13:AN:82:LYS:HG2	2.17	0.45
23:BB:2146:C:C4'	23:BB:2148:G:H1'	2.47	0.45
22:BA:28:C:H2'	22:BA:29:A:O4'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AS:29:PRO:HA	18:AS:47:THR:O	2.16	0.45
33:B1:36:LYS:HA	33:B1:46:VAL:O	2.16	0.45
20:CB:87:ASP:HB2	20:CB:224:ARG:NH2	2.31	0.45
15:CP:4:ILE:O	15:CP:71:VAL:HG11	2.17	0.45
12:AM:7:ASN:ND2	12:AM:7:ASN:N	2.64	0.45
46:DU:39:ASN:CB	46:DU:62:ALA:HB3	2.42	0.45
3:AD:171:GLU:HB2	3:AD:180:THR:HB	1.99	0.45
48:DG:10:VAL:HB	48:DG:47:ASN:O	2.17	0.45
23:BB:2783:U:H2'	23:BB:2784:U:H6	1.82	0.45
26:BD:123:LYS:O	26:BD:165:MET:HE1	2.17	0.45
8:CI:119:LYS:C	8:CI:121:ARG:H	2.20	0.45
5:CF:97:THR:O	5:CF:98:GLU:CD	2.56	0.45
1:AA:92:U:H2'	1:AA:93:U:C5	2.52	0.45
20:AB:128:LEU:HB3	20:AB:132:GLU:HB3	1.99	0.45
44:BQ:81:GLY:C	44:BQ:83:LYS:N	2.68	0.45
2:AC:149:LYS:HG3	2:AC:168:ARG:HB2	1.98	0.45
48:BG:83:THR:C	48:BG:84:LYS:HD3	2.38	0.45
2:CC:137:VAL:HG13	2:CC:148:ILE:HG21	1.98	0.45
23:BB:2463:C:O2'	23:BB:2464:G:H5'	2.16	0.45
11:CL:107:LYS:HD2	11:CL:107:LYS:O	2.17	0.45
37:DL:101:ILE:HG22	37:DL:102:GLY:N	2.32	0.45
25:DC:248:GLY:C	25:DC:249:VAL:HG22	2.37	0.45
23:DB:2291:U:O2'	23:DB:2374:C:H1'	2.17	0.45
45:BS:25:ARG:CZ	45:BS:74:ILE:HG23	2.47	0.45
23:DB:321:U:OP2	29:DE:130:LYS:HA	2.17	0.45
23:DB:321:U:O4'	29:DE:159:LEU:HG	2.17	0.45
38:BM:94:ALA:O	38:BM:96:ILE:HG23	2.16	0.45
23:DB:1374:G:H2'	23:DB:1375:U:C6	2.52	0.45
7:AH:1:SER:O	7:AH:3:GLN:HG3	2.17	0.45
48:DG:145:ALA:HA	48:DG:148:ARG:CG	2.45	0.45
44:BQ:7:VAL:O	44:BQ:11:ALA:HB2	2.17	0.45
23:BB:1845:G:O2'	23:BB:1846:G:H5'	2.17	0.45
29:BE:59:PRO:CB	29:BE:67:ARG:HH22	2.30	0.45
23:BB:2671:G:H2'	23:BB:2672:U:H6	1.81	0.45
45:BS:33:LEU:HG	45:BS:51:LEU:HD23	1.99	0.45
24:BI:109:ALA:HB1	24:BI:124:MET:CG	2.47	0.45
23:BB:1584:U:H3'	23:BB:1585:C:H5'	1.99	0.45
44:BQ:35:PHE:C	44:BQ:37:ALA:N	2.71	0.45
1:AA:879:C:O2'	1:AA:880:C:H5'	2.17	0.45
23:DB:2369:A:H2'	23:DB:2370:G:C8	2.52	0.45
23:DB:2340:A:H2'	23:DB:2341:G:H8	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:33:ARG:NE	26:DD:74:GLU:HB3	2.32	0.45
23:DB:1051:G:H2'	23:DB:1052:C:C6	2.52	0.45
1:CA:1107:C:OP1	2:CC:171:ARG:HB2	2.16	0.45
2:CC:38:VAL:HG23	2:CC:39:ARG:N	2.32	0.45
23:BB:220:G:H1	23:BB:427:U:H2'	1.82	0.45
23:BB:2835:A:H61	23:BB:2878:U:H2'	1.82	0.45
43:BO:14:ALA:C	43:BO:16:ARG:H	2.21	0.45
23:BB:464:U:H2'	23:BB:465:G:O4'	2.17	0.45
2:AC:42:LEU:O	2:AC:46:LEU:HB2	2.16	0.45
1:CA:612:C:H2'	1:CA:613:C:C6	2.53	0.45
1:AA:1159:U:O4'	1:AA:1182:G:N2	2.50	0.45
23:BB:1637:A:H2'	23:BB:1638:C:C6	2.52	0.45
1:AA:580:C:H2'	1:AA:581:G:O4'	2.17	0.45
23:BB:1740:G:H2'	23:BB:1741:C:H6	1.80	0.45
37:BL:142:ILE:HD12	37:BL:142:ILE:N	2.31	0.45
7:AH:12:ARG:HH11	7:AH:12:ARG:HG3	1.82	0.45
23:BB:2714:G:O2'	23:BB:2715:C:H5'	2.17	0.45
22:DA:78:A:H2'	22:DA:79:G:O4'	2.17	0.45
23:BB:1239:G:H5''	56:BB:3608:HOH:O	2.17	0.45
23:BB:297:G:H2'	23:BB:298:G:O4'	2.17	0.44
1:CA:1313:U:O2'	1:CA:1314:C:H5'	2.18	0.44
40:BH:89:LYS:HB3	40:BH:90:LEU:H	1.59	0.44
19:CT:41:GLY:O	19:CT:42:ASP:HB2	2.17	0.44
28:DP:59:THR:H	28:DP:72:VAL:HA	1.82	0.44
29:DE:138:LEU:O	29:DE:142:ALA:N	2.50	0.44
10:CK:95:THR:HG23	10:CK:96:ILE:N	2.31	0.44
21:AU:16:ARG:NH2	21:AU:19:LYS:HZ3	2.14	0.44
50:BT:87:LEU:HB2	50:BT:91:GLN:CG	2.46	0.44
47:BF:45:ASP:C	47:BF:47:LYS:H	2.20	0.44
20:AB:15:PHE:O	20:AB:40:ILE:HD12	2.17	0.44
45:BS:61:ASN:HB3	45:BS:62:ASP:H	1.51	0.44
42:DN:79:LEU:O	42:DN:80:PHE:HB2	2.18	0.44
27:BK:85:VAL:O	27:BK:87:LEU:HD23	2.17	0.44
40:DH:84:ALA:O	40:DH:91:PHE:HE1	1.99	0.44
23:DB:360:U:H2'	23:DB:361:G:O4'	2.17	0.44
12:CM:70:ARG:HH21	47:DF:136:ILE:HB	1.81	0.44
47:DF:110:ILE:HB	47:DF:113:PHE:HB3	1.99	0.44
27:BK:71:ARG:O	27:BK:72:PRO:C	2.56	0.44
30:DY:51:SER:HA	30:DY:54:VAL:HG22	1.99	0.44
48:DG:94:ARG:HH21	48:DG:104:LEU:HA	1.83	0.44
22:BA:28:C:H2'	22:BA:29:A:H8	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:41:LYS:CA	40:BH:44:ILE:HG13	2.48	0.44
20:CB:68:PHE:CE1	20:CB:88:GLN:HB3	2.52	0.44
24:DI:41:PHE:CE2	24:DI:45:THR:HG21	2.52	0.44
23:BB:1047:G:O2'	23:BB:1110:G:N1	2.42	0.44
12:AM:3:ILE:HA	12:AM:56:ARG:CG	2.43	0.44
12:AM:42:VAL:HB	12:AM:47:LEU:CD2	2.44	0.44
43:BO:67:ASN:H	43:BO:70:ALA:CB	2.26	0.44
1:AA:106:C:O2'	1:AA:107:G:H5'	2.16	0.44
12:CM:50:GLY:HA2	12:CM:53:ASP:CG	2.37	0.44
12:CM:7:ASN:ND2	12:CM:7:ASN:N	2.64	0.44
1:AA:254:G:H4'	16:AQ:19:SER:OG	2.16	0.44
32:B4:36:ARG:HG2	32:B4:37:GLN:H	1.81	0.44
1:AA:90:C:H2'	1:AA:91:U:C6	2.52	0.44
1:AA:93:U:C2'	1:AA:94:G:H4'	2.47	0.44
23:DB:2846:G:OP1	28:DP:51:ASN:HB2	2.17	0.44
23:BB:329:G:H1	46:BU:16:LYS:HZ3	1.63	0.44
23:BB:72:U:H1'	39:BX:51:ALA:CB	2.47	0.44
38:DM:102:LEU:HB3	38:DM:103:TYR:CD1	2.51	0.44
48:BG:102:ILE:CD1	48:BG:116:LEU:HD11	2.46	0.44
23:DB:454:A:H3'	23:DB:455:C:H5'	1.99	0.44
23:BB:2181:U:H2'	23:BB:2182:U:O4'	2.16	0.44
23:BB:1797:G:O3'	25:BC:255:LYS:HA	2.18	0.44
1:CA:1006:G:O2'	1:CA:1007:U:H5'	2.17	0.44
51:DZ:66:THR:O	51:DZ:70:GLU:HG3	2.17	0.44
1:AA:659:U:O2'	1:AA:660:C:H5'	2.17	0.44
23:BB:2228:G:H2'	23:BB:2229:U:H6	1.82	0.44
5:CF:49:TYR:CE2	5:CF:51:ILE:HB	2.52	0.44
23:BB:175:G:O2'	23:BB:176:A:H5'	2.17	0.44
23:BB:971:G:OP2	23:BB:974:G:N2	2.50	0.44
15:AP:20:VAL:HG23	15:AP:34:GLU:O	2.18	0.44
1:AA:1239:A:N6	1:AA:1299:A:H62	2.15	0.44
1:AA:620:C:H2'	1:AA:621:A:C8	2.52	0.44
50:DT:12:ARG:HH11	50:DT:12:ARG:HB3	1.82	0.44
23:DB:828:U:H4'	23:DB:831:G:N1	2.32	0.44
2:CC:19:SER:HB3	2:CC:21:TRP:NE1	2.32	0.44
1:CA:125:U:H2'	1:CA:126:G:H8	1.82	0.44
44:BQ:35:PHE:C	44:BQ:37:ALA:H	2.20	0.44
45:BS:13:SER:O	45:BS:101:SER:HB3	2.16	0.44
1:CA:439:U:H2'	1:CA:440:C:H6	1.82	0.44
39:BX:45:GLN:O	39:BX:46:VAL:HB	2.17	0.44
23:DB:1576:U:O2'	23:DB:1577:C:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2215:C:O2'	23:BB:2216:G:H5'	2.17	0.44
37:DL:65:GLY:O	37:DL:66:PHE:CB	2.65	0.44
23:DB:131:A:H2'	23:DB:132:G:C8	2.51	0.44
22:BA:17:C:H2'	22:BA:18:G:O4'	2.17	0.44
23:BB:990:A:H1'	23:BB:1156:A:C2	2.53	0.44
35:DV:53:LYS:HZ3	35:DV:53:LYS:HA	1.82	0.44
23:DB:1296:G:O2'	23:DB:1297:C:H5'	2.17	0.44
1:AA:725:G:H2'	1:AA:726:C:C6	2.52	0.44
23:DB:1998:A:OP2	26:DD:141:ARG:NH2	2.50	0.44
41:DJ:64:VAL:O	41:DJ:68:LYS:HD2	2.17	0.44
23:BB:1064:C:H2'	23:BB:1065:U:O4'	2.17	0.44
26:DD:38:LYS:HD3	26:DD:45:TYR:CZ	2.52	0.44
1:CA:1375:A:H2'	1:CA:1376:U:C6	2.51	0.44
1:AA:299:G:H2'	1:AA:300:A:C8	2.52	0.44
1:CA:171:A:H2'	1:CA:172:A:C8	2.52	0.44
23:BB:1091:G:O2'	23:BB:1092:C:H5'	2.17	0.44
1:CA:1453:G:H2'	1:CA:1454:G:O4'	2.17	0.44
24:DI:53:PRO:CG	24:DI:77:VAL:HG11	2.46	0.44
1:CA:1483:A:H2'	1:CA:1484:C:O4'	2.17	0.44
1:CA:577:G:O2'	1:CA:578:C:H5'	2.17	0.44
48:BG:36:LEU:N	48:BG:36:LEU:HD22	2.32	0.44
49:DR:86:GLN:HB2	49:DR:86:GLN:HE21	1.53	0.44
10:AK:36:ARG:HG3	10:AK:36:ARG:HH11	1.82	0.44
41:BJ:106:LYS:HD2	41:BJ:106:LYS:HA	1.86	0.44
23:DB:2110:G:H8	23:DB:2110:G:OP2	2.00	0.44
23:DB:292:U:H2'	23:DB:293:U:C6	2.52	0.44
1:CA:1499:A:O2'	1:CA:1500:A:H5'	2.17	0.44
1:CA:1379:G:N7	6:CG:2:ARG:CZ	2.80	0.44
51:BZ:7:VAL:HG21	51:BZ:59:ILE:CD1	2.48	0.44
23:DB:848:C:H2'	23:DB:849:A:H8	1.83	0.44
41:BJ:44:TYR:HB2	44:BQ:63:ARG:CD	2.47	0.44
20:CB:71:THR:HG23	20:CB:94:ARG:H	1.82	0.44
45:DS:24:ILE:CD1	45:DS:36:LEU:HD21	2.48	0.44
45:DS:28:LYS:HB3	45:DS:29:VAL:H	1.43	0.44
23:DB:1060:U:OP1	24:DI:75:ALA:HB3	2.17	0.44
40:BH:141:LYS:HE2	40:BH:141:LYS:HB2	1.73	0.44
39:BX:6:LEU:O	39:BX:7:ARG:HB3	2.18	0.44
45:BS:70:LYS:HD3	45:BS:110:ARG:C	2.38	0.44
27:DK:79:PHE:HZ	27:DK:104:THR:HG23	1.82	0.44
40:DH:88:GLY:O	40:DH:124:THR:HA	2.17	0.44
1:CA:409:U:O2'	1:CA:410:G:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:146:GLU:C	3:AD:148:ALA:H	2.18	0.44
36:B2:22:MET:HA	36:B2:28:ARG:HG3	1.99	0.44
4:AE:131:ASN:ND2	4:AE:134:ASN:H	2.15	0.44
23:DB:124:G:C6	36:D2:19:ARG:NH1	2.85	0.44
48:DG:94:ARG:HE	48:DG:94:ARG:C	2.20	0.44
26:DD:123:LYS:HD3	26:DD:165:MET:SD	2.57	0.44
30:BY:51:SER:HA	30:BY:54:VAL:CG2	2.48	0.44
47:DF:33:ILE:HG22	47:DF:90:LEU:HD23	1.97	0.44
52:BW:77:LYS:HB2	52:BW:77:LYS:HZ3	1.81	0.44
23:BB:1172:C:C2'	23:BB:1172:C:O2	2.65	0.44
35:BV:16:ALA:HA	35:BV:19:ARG:NE	2.27	0.44
30:BY:12:ALA:HB2	30:BY:53:MET:CE	2.47	0.44
35:BV:29:ILE:HG13	35:BV:88:HIS:CE1	2.51	0.44
23:DB:1030:C:O2'	23:DB:1031:G:H5'	2.17	0.44
48:DG:103:ASN:HA	48:DG:113:ASP:OD1	2.17	0.44
1:AA:921:U:O2	4:AE:23:THR:HG23	2.17	0.44
23:DB:2844:G:O2'	23:DB:2845:U:H5'	2.16	0.44
23:BB:182:A:O2'	23:BB:183:C:H5'	2.17	0.44
4:AE:149:PRO:HB3	7:AH:98:LEU:HD21	1.99	0.44
1:AA:734:G:H2'	1:AA:735:C:C6	2.53	0.44
38:DM:29:GLY:HA2	38:DM:106:ASP:HB2	1.98	0.44
1:AA:1238:A:N7	1:AA:1303:C:H1'	2.32	0.44
43:BO:116:GLN:O	43:BO:117:PHE:HB3	2.17	0.44
23:BB:327:G:O2'	23:BB:328:U:H5'	2.16	0.44
1:CA:189:A:H2'	1:CA:190:A:C8	2.51	0.44
50:BT:93:LEU:HD22	50:BT:93:LEU:N	2.32	0.44
1:AA:1225:A:O2'	18:AS:77:ARG:HD3	2.17	0.44
1:CA:84:U:O2'	1:CA:85:U:H5'	2.17	0.44
1:AA:1533:C:C3'	1:AA:1534:A:H5''	2.47	0.44
29:DE:1:MET:HB2	29:DE:16:GLU:CA	2.48	0.44
23:BB:528:A:H3'	23:BB:528:A:H8	1.81	0.44
23:DB:2838:G:H2'	23:DB:2839:G:C8	2.52	0.44
20:CB:110:ILE:O	20:CB:113:LEU:HB3	2.17	0.44
23:DB:1011:G:O2'	23:DB:1013:C:H5''	2.17	0.44
1:CA:208:U:H6	1:CA:208:U:O5'	2.01	0.44
23:BB:1921:G:O2'	23:BB:1922:G:H5'	2.17	0.44
1:AA:308:C:H2'	1:AA:309:A:H8	1.83	0.44
24:DI:90:GLY:C	24:DI:92:PRO:HD3	2.38	0.44
40:BH:119:ASN:HB2	40:BH:120:GLY:H	1.71	0.44
43:BO:106:LEU:HA	43:BO:109:ALA:HB3	1.99	0.44
1:AA:468:A:H8	1:AA:469:C:C6	2.36	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DJ:64:VAL:O	41:DJ:65:THR:HG22	2.16	0.44
1:AA:1332:A:H2'	1:AA:1333:A:C8	2.52	0.44
25:DC:259:ASN:C	25:DC:261:ARG:H	2.20	0.44
2:CC:115:VAL:HG13	2:CC:136:ALA:HB1	1.99	0.44
1:AA:1192:C:H2'	1:AA:1193:G:O4'	2.17	0.44
17:AR:45:GLY:O	17:AR:46:THR:C	2.55	0.44
23:DB:1951:U:O2'	23:DB:1953:A:N7	2.47	0.44
29:BE:129:PRO:HB3	29:BE:159:LEU:HD23	1.99	0.44
23:DB:686:U:O2'	36:D2:5:PHE:HA	2.17	0.44
51:DZ:15:GLY:O	51:DZ:26:LYS:HA	2.18	0.44
28:BP:44:GLY:HA3	28:BP:60:VAL:CG1	2.48	0.44
23:DB:1652:A:OP1	42:DN:8:ARG:HD3	2.18	0.44
14:CO:62:GLN:O	14:CO:66:LEU:HD23	2.17	0.44
1:AA:1418:A:N6	1:AA:1482:G:H1'	2.31	0.44
5:AF:17:GLN:O	5:AF:21:MET:HG3	2.17	0.44
1:AA:994:A:N1	1:AA:1047:G:H4'	2.32	0.44
51:BZ:11:ARG:HB3	51:BZ:12:PRO:HD2	1.99	0.44
23:DB:527:C:O2	23:DB:527:C:O4'	2.32	0.44
23:BB:1652:A:OP1	42:BN:8:ARG:HD3	2.17	0.44
23:BB:1146:C:H2'	23:BB:1147:A:C8	2.52	0.44
49:DR:5:PHE:CD1	49:DR:5:PHE:N	2.85	0.44
28:DP:61:ARG:CB	28:DP:61:ARG:HH21	2.27	0.44
50:DT:34:VAL:HG21	50:DT:43:ILE:HD11	1.99	0.44
50:DT:40:LYS:O	50:DT:43:ILE:HG22	2.18	0.44
10:CK:22:ILE:HD13	10:CK:95:THR:CG2	2.46	0.44
50:BT:57:VAL:O	50:BT:85:VAL:O	2.35	0.44
37:BL:79:LEU:HD13	37:BL:115:GLU:O	2.17	0.44
47:BF:46:LYS:NZ	47:BF:46:LYS:HA	2.32	0.44
20:CB:165:ALA:HB3	20:CB:186:VAL:HG12	1.98	0.44
23:DB:1059:G:H2'	23:DB:1060:U:C5	2.52	0.44
6:AG:87:PRO:HG2	6:AG:151:ALA:HB2	1.99	0.44
28:BP:3:ILE:CG2	28:BP:4:ILE:N	2.80	0.44
28:BP:6:GLN:HA	28:BP:9:GLN:HG2	2.00	0.44
37:BL:3:LEU:HA	37:BL:6:LEU:HD21	1.99	0.44
1:AA:88:U:O2'	1:AA:89:U:C6	2.70	0.44
3:CD:29:THR:HG22	3:CD:30:LYS:N	2.31	0.44
32:D4:11:CYS:SG	32:D4:33:HIS:CE1	3.10	0.44
15:AP:66:THR:HG22	15:AP:67:ILE:N	2.33	0.44
47:BF:65:LEU:CD2	47:BF:87:LYS:HD2	2.47	0.44
3:AD:116:LEU:O	3:AD:121:ALA:HB3	2.17	0.44
14:AO:71:LYS:HB2	14:AO:78:TYR:CG	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:138:U:O5'	23:BB:138:U:H6	2.00	0.44
8:CI:29:ILE:HG12	8:CI:64:ILE:CB	2.47	0.44
4:AE:136:VAL:HG13	4:AE:137:ARG:N	2.32	0.44
23:BB:1076:C:H4'	24:BI:94:LYS:NZ	2.31	0.44
23:BB:1349:C:H2'	23:BB:1350:C:C6	2.51	0.44
26:BD:91:THR:HG23	26:BD:92:VAL:N	2.26	0.44
35:BV:42:LEU:CD2	35:BV:42:LEU:H	2.25	0.44
23:DB:783:A:H8	23:DB:784:G:H4'	1.82	0.44
15:CP:6:LEU:CD1	15:CP:71:VAL:HB	2.48	0.44
23:BB:2863:C:O2'	23:BB:2864:G:H5'	2.16	0.44
12:CM:1:ALA:O	12:CM:3:ILE:HG13	2.17	0.44
33:D1:46:VAL:HG22	33:D1:47:ILE:N	2.25	0.44
23:DB:1443:U:H2'	23:DB:1444:G:H8	1.82	0.44
23:BB:845:A:C2'	23:BB:846:U:H5''	2.40	0.44
23:BB:2472:G:C2'	23:BB:2475:C:H42	2.26	0.44
1:CA:861:G:O2'	1:CA:862:C:H5'	2.16	0.44
23:BB:718:A:H5'	23:BB:719:C:C5	2.52	0.44
1:AA:1252:A:H2'	1:AA:1253:G:O4'	2.18	0.44
25:BC:248:GLY:C	25:BC:249:VAL:HG22	2.37	0.44
5:CF:62:MET:O	5:CF:63:ASN:HB2	2.17	0.44
12:AM:69:ARG:O	12:AM:72:ILE:HG22	2.18	0.44
1:AA:738:C:H2'	1:AA:739:C:H6	1.82	0.44
9:AJ:21:ALA:HB2	9:AJ:96:VAL:HG11	2.00	0.44
4:CE:81:GLN:H	4:CE:146:MET:CE	2.30	0.44
23:BB:2098:U:H2'	23:BB:2099:U:C6	2.52	0.44
1:CA:490:C:H2'	1:CA:491:G:H8	1.83	0.44
1:AA:475:C:O2'	1:AA:476:U:H5'	2.17	0.44
23:DB:962:G:H21	23:DB:2250:G:H1	1.61	0.44
9:CJ:24:GLU:CG	9:CJ:90:LEU:HD11	2.47	0.44
23:DB:1205:A:N1	29:DE:165:HIS:HB2	2.33	0.44
20:AB:122:ASP:C	20:AB:124:THR:H	2.21	0.44
43:DO:6:ALA:O	43:DO:10:ARG:HG3	2.17	0.44
23:DB:1653:G:H1	42:DN:11:ASN:HD21	1.65	0.44
23:DB:2080:A:OP1	51:DZ:20:HIS:HB3	2.18	0.44
23:DB:1746:A:H2'	23:DB:1747:U:C6	2.52	0.44
1:AA:883:C:O2'	1:AA:884:U:H5'	2.17	0.44
47:DF:177:ARG:NH2	47:DF:178:LYS:H	2.16	0.44
51:BZ:21:ALA:HB3	51:BZ:23:ASN:ND2	2.32	0.44
23:DB:15:G:H2'	23:DB:16:C:H6	1.83	0.44
23:DB:2830:C:H1'	23:DB:2836:U:O4'	2.18	0.44
23:BB:1897:G:O2'	23:BB:1898:U:H5'	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1920:C:H2'	23:BB:1921:G:C8	2.53	0.44
23:DB:1219:U:H2'	23:DB:1220:G:C8	2.52	0.44
23:BB:932:U:H1'	23:BB:934:U:C4	2.52	0.44
46:BU:2:ALA:O	46:BU:5:ARG:NH2	2.50	0.44
23:BB:765:C:H2'	23:BB:766:U:C6	2.52	0.44
1:CA:455:G:H2'	1:CA:456:A:H8	1.83	0.44
1:CA:708:C:H2'	1:CA:709:U:H6	1.81	0.44
16:AQ:80:LYS:CD	16:AQ:80:LYS:H	2.30	0.44
24:BI:63:ASP:O	24:BI:65:SER:N	2.50	0.44
45:BS:60:HIS:ND1	45:BS:60:HIS:O	2.51	0.44
1:AA:1069:C:H4'	1:AA:1192:C:O2	2.18	0.44
13:AN:32:ASP:CG	13:AN:33:VAL:N	2.70	0.44
47:BF:13:LYS:HE3	47:BF:14:LYS:N	2.32	0.44
23:DB:2758:A:O2'	23:DB:2759:G:H5'	2.17	0.44
45:DS:40:ASN:O	45:DS:41:LYS:HG3	2.17	0.44
17:CR:68:PRO:HB2	17:CR:70:THR:O	2.17	0.44
48:DG:36:LEU:N	48:DG:36:LEU:HD22	2.33	0.44
23:DB:1854:A:N6	23:DB:1888:G:H1'	2.33	0.44
23:DB:1099:G:H4'	24:DI:4:VAL:HB	1.98	0.44
51:DZ:77:LYS:CG	51:DZ:78:TYR:H	2.30	0.44
52:BW:23:LYS:CG	52:BW:24:ARG:N	2.80	0.44
46:DU:84:PHE:CE2	46:DU:93:ARG:HG2	2.53	0.44
36:B2:10:LEU:HD13	36:B2:10:LEU:C	2.38	0.44
26:BD:24:VAL:HG23	26:BD:189:VAL:N	2.33	0.44
20:CB:64:GLY:HA2	20:CB:158:ASP:OD1	2.17	0.44
8:AI:21:LYS:HB3	8:AI:61:ASP:O	2.18	0.44
40:BH:80:ILE:CD1	40:BH:102:ALA:HB3	2.47	0.44
44:DQ:63:ARG:HH12	44:DQ:96:ASP:CB	2.31	0.44
50:DT:50:LEU:O	50:DT:51:PHE:HB2	2.16	0.44
13:CN:46:LYS:HZ2	18:CS:15:LEU:CD1	2.31	0.44
49:BR:6:GLN:HE22	49:BR:9:GLY:N	2.16	0.44
23:BB:470:A:H61	50:BT:72:GLN:NE2	2.15	0.44
10:AK:91:GLY:O	10:AK:95:THR:HG22	2.18	0.44
50:BT:40:LYS:O	50:BT:44:LYS:N	2.49	0.44
50:BT:55:VAL:HG22	50:BT:87:LEU:CD2	2.48	0.44
1:CA:1085:U:H3'	1:CA:1086:U:C6	2.53	0.44
24:DI:72:THR:OG1	24:DI:73:PRO:HD2	2.17	0.44
45:BS:17:VAL:HG11	45:BS:103:ILE:HG12	2.00	0.44
37:BL:2:ARG:HG2	37:BL:2:ARG:O	2.17	0.44
27:BK:98:ARG:HA	27:BK:118:LEU:CD2	2.47	0.44
46:BU:73:ASN:HB3	46:BU:95:PHE:CD2	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:8:LYS:O	40:BH:9:VAL:C	2.56	0.44
18:AS:42:ASN:HD21	18:AS:43:MET:HE2	1.82	0.44
23:DB:135:U:O2'	23:DB:136:G:H5'	2.17	0.44
47:DF:91:ARG:O	47:DF:92:GLY:C	2.55	0.44
23:DB:354:A:H2'	23:DB:355:U:H6	1.77	0.44
13:AN:5:MET:HE3	13:AN:62:ARG:HH22	1.82	0.44
23:BB:1434:A:H62	23:BB:1558:C:N4	2.15	0.44
23:BB:2862:G:H2'	23:BB:2863:C:H6	1.83	0.44
12:AM:33:LEU:HD22	12:AM:38:ILE:HB	1.99	0.44
3:AD:100:VAL:HG11	3:AD:142:VAL:HG21	1.98	0.44
35:DV:35:GLU:HG3	35:DV:93:ARG:NH1	2.32	0.44
3:AD:89:LEU:HD23	3:AD:199:ILE:HD11	1.99	0.44
23:DB:1551:A:H2'	23:DB:1552:A:O4'	2.17	0.44
1:CA:986:U:H2'	1:CA:987:G:O4'	2.17	0.44
29:BE:176:ASP:OD1	29:BE:178:VAL:HG12	2.17	0.44
50:BT:12:ARG:HB3	50:BT:12:ARG:HH11	1.83	0.44
10:CK:17:ASP:HB3	10:CK:80:ASN:HD21	1.77	0.44
23:DB:2393:U:H4'	37:DL:59:ARG:O	2.17	0.44
23:DB:329:G:H22	46:DU:16:LYS:NZ	2.16	0.44
23:BB:1409:U:O2'	23:BB:1410:G:H5'	2.17	0.44
7:AH:29:SER:OG	7:AH:32:LYS:HG3	2.16	0.44
1:CA:1237:C:H4'	1:CA:1334:G:N2	2.33	0.44
8:AI:40:ARG:H	8:AI:44:ARG:CZ	2.30	0.44
8:AI:83:THR:OG1	8:AI:97:LEU:HD13	2.17	0.44
8:CI:9:GLY:HA3	8:CI:81:GLY:N	2.33	0.44
39:DX:56:LEU:C	39:DX:58:ASN:N	2.69	0.44
40:BH:70:GLU:H	40:BH:70:GLU:CD	2.19	0.44
25:BC:52:HIS:NE2	25:BC:218:THR:HG23	2.33	0.44
46:BU:11:ILE:HG23	46:BU:12:VAL:N	2.33	0.44
8:AI:99:LYS:HE3	9:CJ:80:THR:C	2.37	0.44
23:DB:2103:C:H3'	23:DB:2104:C:O2	2.18	0.44
34:D3:60:CYS:C	34:D3:61:LEU:HD23	2.37	0.44
7:AH:86:LYS:HD2	7:AH:90:GLU:HG2	1.98	0.44
1:CA:322:C:O2'	1:CA:323:U:H5'	2.17	0.44
37:DL:132:ARG:HA	37:DL:135:ILE:CG2	2.47	0.44
1:CA:736:C:H2'	1:CA:737:C:H6	1.82	0.44
25:DC:71:ASP:C	25:DC:73:ILE:H	2.21	0.44
23:BB:1103:A:H5''	23:BB:1104:C:C5	2.53	0.44
23:BB:1846:G:H2'	23:BB:1847:A:O4'	2.18	0.44
23:DB:692:C:H2'	23:DB:693:A:C8	2.53	0.44
29:DE:69:ARG:O	29:DE:70:SER:CB	2.64	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1165:U:H2'	1:AA:1166:G:O4'	2.18	0.44
48:DG:21:GLN:O	48:DG:37:ASN:HB2	2.17	0.44
1:AA:35:G:H2'	1:AA:36:C:H6	1.81	0.44
25:BC:78:GLU:HG3	25:BC:94:LEU:HB3	2.00	0.44
22:BA:14:U:H5'	22:BA:70:C:O2'	2.16	0.44
1:CA:1352:C:H2'	1:CA:1353:G:C8	2.52	0.44
1:AA:167:A:H2'	1:AA:168:G:H8	1.81	0.44
6:AG:15:PRO:HG2	6:AG:16:LYS:H	1.82	0.44
25:BC:30:ALA:C	25:BC:32:LEU:H	2.20	0.44
23:DB:1251:C:O2'	23:DB:1252:G:H3'	2.17	0.44
23:BB:1842:G:H2'	23:BB:1843:C:H6	1.83	0.44
13:AN:87:ALA:HB2	13:AN:92:ILE:HD12	1.99	0.44
23:BB:1072:C:N3	23:BB:1092:C:N4	2.64	0.44
1:AA:1453:G:H2'	1:AA:1454:G:O4'	2.17	0.44
30:BY:5:LYS:HE2	30:BY:57:GLU:O	2.17	0.44
15:CP:38:PHE:CE2	15:CP:51:ARG:HD3	2.52	0.44
23:DB:1792:G:O2'	23:DB:1793:C:H5'	2.17	0.44
23:BB:907:G:O2'	23:BB:908:C:H5'	2.18	0.44
26:BD:122:VAL:HG12	26:BD:122:VAL:O	2.18	0.44
39:DX:59:GLU:N	39:DX:59:GLU:OE2	2.50	0.44
10:CK:36:ARG:HG3	10:CK:36:ARG:HH11	1.82	0.44
23:DB:1573:G:H2'	23:DB:1574:C:H5'	1.98	0.44
52:BW:30:VAL:O	52:BW:30:VAL:HG13	2.18	0.44
52:BW:54:ARG:C	52:BW:56:HIS:H	2.20	0.44
26:BD:107:VAL:H	26:BD:205:PRO:HA	1.82	0.44
25:DC:140:VAL:CG2	25:DC:163:ILE:HG12	2.48	0.44
1:AA:906:A:H2'	1:AA:907:A:H5''	2.00	0.44
10:CK:109:ILE:HB	21:CU:16:ARG:HH12	1.83	0.44
48:BG:15:ASP:HA	48:BG:26:LYS:NZ	2.32	0.44
20:AB:96:LEU:HD23	20:AB:99:MET:HE3	2.00	0.44
10:AK:89:GLY:O	10:AK:92:ARG:HB2	2.16	0.44
21:AU:3:ILE:HG23	21:AU:18:PHE:CD1	2.52	0.44
50:BT:48:GLN:O	50:BT:52:GLU:HA	2.18	0.44
50:BT:32:LEU:HG	50:BT:83:ALA:HB2	2.00	0.44
1:CA:692:U:C2	1:CA:694:A:H5''	2.53	0.44
24:BI:11:GLN:NE2	24:BI:74:PRO:HG2	2.32	0.44
20:AB:27:LYS:C	20:AB:27:LYS:HD2	2.38	0.44
20:AB:14:HIS:HB2	20:AB:208:ALA:HB2	2.00	0.44
45:BS:29:VAL:HG23	45:BS:70:LYS:HA	2.00	0.44
26:DD:29:VAL:O	26:DD:185:ASN:HB3	2.18	0.44
24:BI:32:VAL:HG22	24:BI:60:VAL:CG2	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DO:17:LYS:O	43:DO:17:LYS:HD3	2.17	0.44
27:BK:20:MET:O	27:BK:41:ILE:HD12	2.17	0.44
23:DB:9:G:H21	23:DB:10:A:N6	2.03	0.44
47:DF:134:GLN:NE2	47:DF:136:ILE:HA	2.32	0.44
3:CD:157:ALA:O	3:CD:160:LEU:HD22	2.18	0.44
37:DL:29:LYS:C	37:DL:31:GLY:N	2.71	0.44
23:BB:2750:A:H8	23:BB:2750:A:OP1	1.99	0.44
29:DE:60:TRP:CZ3	29:DE:62:GLN:HA	2.53	0.44
29:DE:60:TRP:HE3	29:DE:60:TRP:HA	1.83	0.44
22:BA:52:A:H2'	22:BA:53:A:H8	1.82	0.44
47:DF:92:GLY:HA2	47:DF:95:MET:HE3	2.00	0.44
9:CJ:52:LEU:HB2	13:CN:80:ARG:CD	2.46	0.44
1:CA:844:G:C6	1:CA:845:A:N6	2.86	0.44
1:AA:1025:U:HO2'	1:AA:1026:G:H8	1.64	0.44
12:CM:1:ALA:C	12:CM:8:ILE:HG22	2.38	0.44
23:DB:2811:G:O2'	23:DB:2812:G:H5'	2.17	0.44
23:BB:1470:A:H2'	23:BB:1471:G:O4'	2.18	0.44
26:BD:79:LEU:H	26:BD:79:LEU:HD22	1.83	0.44
9:AJ:17:LEU:CD1	9:AJ:95:GLY:HA3	2.47	0.44
25:DC:255:LYS:C	25:DC:256:THR:HG23	2.36	0.44
1:CA:1053:G:H4'	1:CA:1054:C:H5'	2.00	0.44
11:CL:54:VAL:HG22	11:CL:79:ILE:HD11	1.98	0.44
46:DU:12:VAL:HG22	46:DU:69:VAL:CG1	2.44	0.44
21:CU:11:PHE:O	21:CU:13:VAL:N	2.49	0.44
1:AA:8:A:H1'	4:AE:107:GLY:HA2	1.99	0.44
2:AC:104:GLU:HG2	2:AC:105:VAL:H	1.81	0.44
44:DQ:7:VAL:O	44:DQ:11:ALA:HB2	2.18	0.44
46:BU:21:ARG:NH1	46:BU:21:ARG:HG3	2.32	0.44
1:AA:584:G:O2'	1:AA:585:G:H5'	2.18	0.44
13:AN:72:PHE:HE1	13:AN:74:ARG:HG2	1.82	0.44
7:CH:39:LEU:HD21	7:CH:128:VAL:HG21	2.00	0.44
7:CH:36:ALA:O	7:CH:45:ILE:HD11	2.17	0.44
23:BB:2531:A:H5''	48:BG:156:TYR:CE1	2.52	0.44
41:BJ:40:HIS:ND1	41:BJ:41:LYS:HG3	2.32	0.44
1:CA:35:G:H2'	1:CA:36:C:H6	1.79	0.44
22:DA:95:U:H2'	22:DA:96:G:H8	1.80	0.44
22:DA:2:G:O2'	22:DA:3:C:H5'	2.18	0.44
23:BB:1794:A:O2'	23:BB:1795:C:H5'	2.18	0.44
2:CC:81:GLU:CG	2:CC:82:ASP:N	2.81	0.44
23:DB:1902:C:H2'	23:DB:1903:G:O4'	2.17	0.44
25:DC:124:LYS:H	25:DC:191:LEU:HD13	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BS:13:SER:HB3	45:BS:16:LYS:HE3	1.98	0.44
48:BG:54:ARG:HD3	48:BG:55:ASP:N	2.33	0.44
40:BH:73:ASN:N	40:BH:73:ASN:ND2	2.66	0.44
23:DB:2194:U:H2'	23:DB:2195:U:C6	2.53	0.44
23:DB:149:A:H2'	23:DB:150:U:C6	2.53	0.44
6:CG:15:PRO:HG2	6:CG:16:LYS:H	1.82	0.44
1:AA:607:A:H2'	1:AA:608:A:H8	1.81	0.44
34:B3:28:LEU:O	34:B3:28:LEU:HG	2.18	0.44
23:BB:1684:G:H2'	23:BB:1685:C:C6	2.52	0.44
23:DB:2710:C:H2'	23:DB:2711:A:C8	2.53	0.44
45:DS:60:HIS:O	45:DS:60:HIS:ND1	2.50	0.44
23:BB:84:A:H4'	23:BB:85:G:O5'	2.17	0.44
1:AA:895:G:H2'	1:AA:896:C:C6	2.51	0.44
1:AA:529:G:O6	11:AL:45:ASN:HA	2.17	0.44
1:CA:1332:A:H2'	1:CA:1333:A:C8	2.53	0.44
2:CC:45:GLU:C	2:CC:46:LEU:HD22	2.37	0.44
23:DB:1841:U:H2'	23:DB:1842:G:C8	2.52	0.44
27:BK:103:VAL:HG23	27:BK:122:VAL:O	2.18	0.44
1:CA:308:C:H2'	1:CA:309:A:C8	2.53	0.44
24:BI:63:ASP:C	24:BI:65:SER:N	2.71	0.44
23:DB:1518:C:H2'	23:DB:1519:G:H8	1.83	0.44
2:AC:42:LEU:O	2:AC:46:LEU:HD23	2.17	0.44
1:AA:1181:G:H1'	1:AA:1182:G:C5	2.52	0.44
37:DL:118:THR:HA	37:DL:119:PRO:HD3	1.90	0.44
1:CA:935:A:O2'	1:CA:936:C:H5'	2.17	0.44
23:BB:2527:C:O3'	32:B4:31:PRO:HB2	2.16	0.44
23:BB:494:G:O2'	23:BB:495:G:H5'	2.17	0.44
1:AA:701:U:H5''	1:AA:703:G:O4'	2.16	0.44
39:DX:13:GLU:HA	39:DX:13:GLU:OE2	2.17	0.44
47:DF:68:LYS:HD2	47:DF:68:LYS:N	2.32	0.44
51:BZ:18:ARG:HA	51:BZ:18:ARG:HE	1.83	0.44
1:AA:439:U:H2'	1:AA:440:C:H6	1.82	0.44
1:AA:1262:C:H2'	1:AA:1263:C:C6	2.52	0.44
23:BB:1792:G:O2'	23:BB:1793:C:H5'	2.17	0.44
51:DZ:32:ASN:O	51:DZ:33:LEU:O	2.34	0.44
51:DZ:6:GLN:NE2	51:DZ:77:LYS:NZ	2.64	0.44
46:BU:85:ARG:HA	46:BU:85:ARG:CZ	2.48	0.44
20:AB:212:TYR:O	20:AB:216:VAL:HG13	2.17	0.44
52:BW:39:GLN:CG	52:BW:40:ARG:N	2.79	0.44
44:DQ:30:VAL:HG22	44:DQ:31:TYR:N	2.32	0.44
5:AF:38:ARG:HB3	5:AF:63:ASN:HB2	1.97	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2221:G:O2'	23:DB:2222:C:H5'	2.18	0.44
25:DC:141:HIS:HB3	25:DC:190:THR:OG1	2.17	0.44
2:AC:76:ILE:HA	2:AC:83:VAL:CG2	2.33	0.44
29:BE:192:ALA:O	29:BE:196:VAL:HG23	2.18	0.44
50:DT:29:THR:H	50:DT:91:GLN:NE2	2.16	0.44
21:CU:16:ARG:CZ	21:CU:19:LYS:NZ	2.80	0.44
47:DF:45:ASP:C	47:DF:47:LYS:H	2.20	0.44
47:DF:46:LYS:O	47:DF:49:LEU:HB3	2.18	0.44
20:AB:110:ILE:O	20:AB:113:LEU:HB3	2.18	0.44
20:AB:174:GLU:O	20:AB:177:ASN:HB3	2.17	0.44
25:BC:140:VAL:CG2	25:BC:163:ILE:HG12	2.48	0.44
41:DJ:100:VAL:O	41:DJ:104:ALA:HB2	2.18	0.44
41:DJ:54:ILE:HD12	41:DJ:55:ILE:H	1.82	0.44
47:BF:78:ILE:HG23	47:BF:82:TYR:CB	2.47	0.44
45:BS:57:ASN:O	45:BS:61:ASN:HB2	2.18	0.44
27:DK:71:ARG:O	27:DK:72:PRO:C	2.56	0.44
27:BK:99:ILE:H	27:BK:118:LEU:HD22	1.82	0.44
23:BB:346:A:H5'	23:BB:346:A:N3	2.33	0.44
32:B4:8:LYS:HG2	32:B4:9:LYS:HD3	1.99	0.44
3:CD:154:VAL:HG23	3:CD:155:LYS:H	1.83	0.44
1:CA:865:A:H2	1:CA:918:A:H4'	1.83	0.44
26:DD:121:THR:HB	26:DD:127:PHE:CD1	2.53	0.44
52:BW:46:ALA:HB2	52:BW:78:PHE:CD1	2.44	0.44
23:BB:646:U:H5''	23:BB:647:G:C8	2.52	0.44
15:CP:66:THR:HG22	15:CP:67:ILE:H	1.83	0.44
46:DU:26:ASN:H	46:DU:26:ASN:HD22	1.63	0.44
3:AD:100:VAL:HG21	3:AD:136:VAL:HG21	2.00	0.44
37:DL:23:ILE:H	37:DL:23:ILE:CD1	2.26	0.44
1:CA:1217:C:H2'	1:CA:1218:C:C6	2.53	0.44
1:CA:986:U:H1'	18:CS:53:GLY:O	2.18	0.44
13:CN:60:ARG:O	13:CN:62:ARG:N	2.50	0.44
49:BR:19:THR:HB	49:BR:97:LYS:HA	1.99	0.44
13:AN:26:LEU:HD21	13:AN:44:VAL:HG13	2.00	0.44
44:BQ:77:LYS:O	44:BQ:80:ASN:HB3	2.18	0.44
22:BA:83:G:P	30:BY:16:LEU:HD21	2.58	0.44
38:BM:42:THR:HB	38:BM:45:GLN:HG3	2.00	0.44
8:AI:35:GLU:O	8:AI:39:GLY:HA3	2.17	0.44
1:CA:663:A:O2'	1:CA:664:G:H5'	2.18	0.44
26:DD:8:LYS:HB2	26:DD:201:LEU:HD21	1.98	0.44
23:DB:433:C:H2'	23:DB:434:U:C6	2.53	0.44
33:D1:22:THR:OG1	33:D1:23:THR:N	2.49	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:35:GLU:O	8:CI:39:GLY:HA3	2.17	0.44
8:CI:66:VAL:HG21	8:CI:74:GLN:HG3	1.99	0.44
43:DO:88:LYS:HG2	43:DO:116:GLN:HB2	2.00	0.44
1:AA:389:A:H3'	1:AA:390:U:H6	1.83	0.44
38:BM:64:TRP:HB2	38:BM:104:GLU:CB	2.46	0.44
23:BB:20:C:H2'	23:BB:21:A:H8	1.82	0.44
20:AB:116:LEU:HD22	20:AB:140:LEU:HD11	1.99	0.44
28:DP:33:GLU:OE1	28:DP:33:GLU:HA	2.18	0.44
37:BL:132:ARG:HA	37:BL:135:ILE:CG2	2.48	0.44
23:DB:1198:U:H5'	44:DQ:8:ILE:HD13	2.00	0.44
23:DB:2797:U:H3'	23:DB:2798:U:H5	1.83	0.44
1:AA:322:C:O2'	1:AA:323:U:H5'	2.18	0.44
23:DB:1846:G:H2'	23:DB:1847:A:O4'	2.17	0.44
23:DB:2637:U:H5''	26:DD:83:ARG:HH22	1.83	0.44
23:DB:6:A:O2'	23:DB:7:G:H5'	2.18	0.44
1:CA:33:A:H2'	1:CA:34:C:H6	1.82	0.44
2:AC:81:GLU:CG	2:AC:82:ASP:N	2.80	0.44
28:BP:25:VAL:HA	28:BP:85:VAL:CA	2.48	0.44
48:DG:54:ARG:HD3	48:DG:54:ARG:C	2.38	0.44
23:BB:2830:C:H1'	23:BB:2836:U:O4'	2.18	0.44
23:DB:1092:C:H2'	23:DB:1093:G:C5'	2.47	0.44
23:BB:2604:U:O2'	23:BB:2605:U:H5'	2.16	0.44
30:DY:35:VAL:HG11	30:DY:37:ARG:HH12	1.82	0.44
23:DB:1537:G:H5'	23:DB:1538:G:OP2	2.18	0.44
23:BB:2543:G:H2'	23:BB:2544:G:C8	2.52	0.44
23:BB:651:G:OP1	34:B3:18:LYS:HE3	2.18	0.44
23:DB:1878:G:H2'	23:DB:1879:C:C6	2.53	0.44
40:DH:25:TYR:CD1	40:DH:30:LEU:HG	2.53	0.44
1:CA:1384:C:H2'	1:CA:1385:G:H8	1.80	0.44
23:DB:866:A:H61	23:DB:913:U:C1'	2.31	0.44
23:BB:1161:C:H2'	23:BB:1162:G:C8	2.52	0.44
23:DB:659:G:H4'	29:DE:95:LYS:HD2	1.99	0.44
8:CI:108:ARG:HH11	8:CI:108:ARG:HB3	1.83	0.44
23:DB:1183:U:H2'	23:DB:1184:U:C6	2.52	0.44
3:CD:123:MET:HG3	3:CD:127:ARG:O	2.17	0.44
2:AC:111:ASP:O	2:AC:115:VAL:HG23	2.18	0.44
34:B3:32:LEU:HA	34:B3:35:LYS:HD2	2.00	0.44
1:AA:543:U:H2'	1:AA:544:G:H8	1.82	0.44
1:CA:1125:U:O2	1:CA:1126:U:H6	2.01	0.44
23:DB:536:G:H21	41:DJ:47:HIS:CG	2.36	0.44
23:DB:2660:A:H2'	23:DB:2661:G:C8	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1681:G:N3	23:BB:1762:A:H2'	2.32	0.44
1:CA:1407:C:O2'	1:CA:1408:A:H5'	2.18	0.44
1:AA:1427:C:H2'	1:AA:1428:A:C8	2.53	0.44
23:DB:924:G:H2'	23:DB:925:A:C8	2.53	0.44
8:AI:51:LEU:HD22	8:AI:56:MET:CE	2.47	0.44
23:BB:1459:G:H8	23:BB:1459:G:P	2.40	0.44
50:DT:47:VAL:HG12	50:DT:47:VAL:O	2.18	0.44
1:AA:1097:C:H2'	1:AA:1098:C:H6	1.83	0.44
10:CK:92:ARG:HH22	10:CK:111:ASP:CG	2.21	0.44
41:BJ:4:PHE:O	41:BJ:44:TYR:CZ	2.71	0.44
1:AA:1070:U:H2'	1:AA:1071:C:C6	2.53	0.44
25:BC:144:GLU:HB3	25:BC:187:CYS:HB3	1.99	0.44
50:BT:30:ILE:O	50:BT:85:VAL:HG23	2.18	0.44
50:BT:50:LEU:O	50:BT:51:PHE:HB2	2.17	0.44
50:BT:50:LEU:O	50:BT:52:GLU:N	2.49	0.44
1:CA:797:C:O2'	1:CA:798:U:H5'	2.18	0.44
47:BF:43:ILE:HG13	47:BF:44:ALA:N	2.31	0.44
42:BN:82:GLU:HB3	42:BN:83:LEU:H	1.59	0.44
1:AA:415:A:N1	1:AA:428:G:O6	2.51	0.44
18:AS:42:ASN:ND2	18:AS:43:MET:N	2.66	0.44
23:DB:10:A:H61	23:DB:2895:G:H1'	1.82	0.44
23:DB:141:G:C6	50:DT:2:ILE:HG23	2.53	0.44
47:BF:113:PHE:HZ	47:BF:175:PRO:HB2	1.80	0.44
23:DB:2819:G:O2'	23:DB:2820:A:H5''	2.17	0.44
9:AJ:53:ILE:HG23	9:AJ:61:ALA:HB1	2.00	0.44
52:DW:76:ARG:HB3	52:DW:78:PHE:CE2	2.52	0.44
46:BU:34:ILE:HG12	46:BU:63:ALA:CB	2.46	0.44
23:BB:1173:U:O2	23:BB:1174:U:H1'	2.18	0.44
1:AA:986:U:H1'	18:AS:53:GLY:O	2.18	0.44
20:CB:86:CYS:HB3	20:CB:88:GLN:OE1	2.18	0.44
16:CQ:46:HIS:HB2	16:CQ:70:LYS:HE2	2.00	0.44
29:DE:175:ILE:HD11	29:DE:180:LEU:HD11	2.00	0.44
23:DB:1169:A:H2'	23:DB:1170:C:C6	2.53	0.44
23:BB:2186:G:O2'	23:BB:2187:U:H5'	2.18	0.44
23:BB:1438:U:C4	23:BB:1552:A:N6	2.86	0.44
48:DG:116:LEU:HG	48:DG:120:ILE:HD12	1.99	0.44
23:BB:2038:G:H2'	23:BB:2039:U:H6	1.80	0.44
38:BM:102:LEU:HB3	38:BM:103:TYR:CD1	2.53	0.44
48:BG:103:ASN:HA	48:BG:113:ASP:OD1	2.16	0.44
25:DC:246:PRO:HB2	25:DC:247:TRP:CE3	2.52	0.44
23:BB:335:C:OP2	46:BU:81:ARG:NH1	2.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:737:C:H2'	1:AA:738:C:H6	1.83	0.44
3:CD:84:ASN:C	3:CD:84:ASN:ND2	2.70	0.44
23:BB:2087:G:O2'	23:BB:2088:A:H5'	2.18	0.44
23:DB:1508:A:H5'	23:DB:1509:A:N1	2.33	0.44
23:BB:2794:C:O2'	23:BB:2795:C:H5'	2.18	0.44
3:AD:11:SER:HA	3:AD:18:LEU:HD22	1.98	0.44
23:DB:2794:C:H2'	23:DB:2795:C:C6	2.53	0.44
1:CA:1164:G:H2'	1:CA:1165:U:C6	2.53	0.44
23:DB:2579:C:O5'	23:DB:2579:C:H6	2.01	0.44
23:BB:2800:A:H2'	23:BB:2801:G:H8	1.82	0.44
1:AA:401:C:H2'	1:AA:402:G:C8	2.51	0.44
1:AA:328:C:H4'	1:AA:329:A:C5'	2.48	0.44
20:AB:25:LYS:HD3	20:AB:193:ASP:OD1	2.18	0.44
23:BB:993:G:O2'	23:BB:994:C:H5'	2.18	0.44
44:DQ:35:PHE:C	44:DQ:37:ALA:H	2.20	0.44
23:DB:40:U:H2'	23:DB:41:C:H6	1.82	0.44
23:BB:1534:U:O2'	23:BB:1535:A:H8	2.00	0.44
23:DB:2817:U:O2'	23:DB:2837:A:H1'	2.18	0.44
23:BB:2368:C:H2'	23:BB:2369:A:H8	1.82	0.44
3:AD:55:ARG:HG3	3:AD:55:ARG:NH1	2.33	0.44
1:AA:822:U:O2'	1:AA:823:C:H5'	2.18	0.44
1:CA:393:A:O2'	1:CA:394:G:H5'	2.16	0.44
23:DB:2389:G:H5''	23:DB:2390:U:O4'	2.17	0.44
44:BQ:16:ILE:O	44:BQ:18:LYS:N	2.50	0.44
43:DO:106:LEU:HA	43:DO:109:ALA:HB3	1.99	0.44
25:BC:62:ARG:O	25:BC:63:ILE:HG12	2.17	0.44
23:BB:1640:A:H2'	23:BB:1641:A:H8	1.83	0.44
22:BA:35:C:H2'	22:BA:36:C:O4'	2.18	0.44
1:CA:432:A:C2'	1:CA:433:G:H5'	2.48	0.44
13:CN:92:ILE:HG21	13:CN:95:LEU:HD22	2.00	0.44
1:AA:939:G:H2'	1:AA:940:C:C6	2.53	0.44
1:AA:612:C:H2'	1:AA:613:C:C6	2.52	0.44
23:DB:1531:C:H2'	23:DB:1532:A:C8	2.53	0.44
17:CR:44:THR:C	17:CR:46:THR:H	2.21	0.44
23:BB:2096:C:O2'	23:BB:2097:A:H5'	2.18	0.44
2:AC:80:GLY:O	2:AC:84:GLU:HB2	2.18	0.44
32:D4:30:GLU:HA	32:D4:31:PRO:HD3	1.89	0.44
1:CA:1181:G:H1'	1:CA:1182:G:C5	2.53	0.44
33:D1:38:PHE:HB2	33:D1:45:HIS:CE1	2.52	0.44
40:DH:34:GLY:O	40:DH:35:LYS:HG2	2.17	0.44
1:CA:10:A:OP2	4:CE:130:THR:HB	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DN:19:ALA:C	42:DN:21:PHE:H	2.21	0.44
1:AA:616:G:H2'	1:AA:616:G:N3	2.33	0.44
4:AE:29:ILE:HG22	4:AE:29:ILE:O	2.18	0.44
15:CP:12:LYS:C	15:CP:14:ARG:H	2.20	0.44
4:AE:77:ASN:OD1	4:AE:78:GLY:N	2.51	0.44
1:CA:960:U:O2'	1:CA:1223:C:H4'	2.17	0.44
1:AA:721:G:H4'	1:AA:722:G:O4'	2.18	0.44
51:BZ:77:LYS:CG	51:BZ:78:TYR:H	2.30	0.44
23:BB:770:G:H1'	23:BB:1379:U:C4	2.52	0.44
23:DB:2365:G:O2'	52:DW:59:PHE:HE1	2.00	0.44
23:BB:2385:C:H2'	23:BB:2386:A:C8	2.52	0.44
52:BW:37:VAL:HG12	52:BW:38:ARG:HD3	1.99	0.44
52:DW:17:ALA:CA	52:DW:35:ILE:HG23	2.27	0.44
44:DQ:30:VAL:HG11	44:DQ:33:VAL:HG22	2.00	0.44
8:CI:5:TYR:HB3	8:CI:88:GLU:OE2	2.18	0.44
26:DD:23:PRO:O	26:DD:24:VAL:HB	2.18	0.44
50:DT:40:LYS:O	50:DT:44:LYS:N	2.48	0.44
50:DT:55:VAL:HG13	50:DT:85:VAL:HG12	2.00	0.44
10:CK:91:GLY:O	10:CK:95:THR:HG22	2.17	0.44
47:DF:78:ILE:H	47:DF:79:ARG:NH1	2.16	0.44
44:BQ:96:ASP:C	44:BQ:98:ALA:N	2.70	0.44
1:AA:692:U:H2'	1:AA:694:A:OP2	2.17	0.44
40:BH:106:ALA:N	40:BH:108:VAL:HG23	2.33	0.44
28:BP:6:GLN:O	28:BP:10:GLU:HB2	2.17	0.44
28:BP:6:GLN:HA	28:BP:9:GLN:NE2	2.33	0.44
20:AB:202:ASN:ND2	20:AB:204:ASP:N	2.52	0.44
47:DF:106:ALA:HA	47:DF:135:ILE:HD13	2.00	0.44
47:DF:137:PHE:CD2	47:DF:137:PHE:N	2.82	0.44
3:AD:8:LEU:HD12	3:AD:31:CYS:SG	2.58	0.44
3:CD:151:GLN:HE22	3:CD:153:ARG:HH11	1.66	0.44
5:AF:53:LYS:CD	5:AF:54:LEU:H	2.31	0.44
31:D0:50:GLY:C	31:D0:51:ARG:HG2	2.38	0.44
23:DB:1595:C:O2'	23:DB:1596:A:H5'	2.18	0.44
47:BF:90:LEU:HB3	47:BF:95:MET:HA	1.99	0.44
23:DB:1177:G:H2'	23:DB:1178:C:C6	2.53	0.44
24:BI:19:PRO:HB2	24:BI:22:PRO:HD2	2.00	0.44
31:B0:41:HIS:HB2	42:BN:99:LYS:O	2.17	0.44
9:AJ:18:ILE:CG2	9:AJ:19:ASP:N	2.79	0.44
42:DN:32:GLU:O	42:DN:114:GLU:HA	2.18	0.44
31:D0:42:ILE:HG12	42:DN:99:LYS:O	2.18	0.44
16:AQ:46:HIS:HB2	16:AQ:70:LYS:HE2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AQ:58:VAL:HB	16:AQ:74:LEU:HD23	2.00	0.44
23:DB:1470:A:H2'	23:DB:1471:G:O4'	2.18	0.44
13:AN:27:LYS:HG3	13:AN:28:ALA:N	2.28	0.44
23:DB:1047:G:O3'	23:DB:1048:A:H8	2.00	0.44
1:AA:1237:C:H4'	1:AA:1334:G:N2	2.33	0.44
1:CA:1072:G:H2'	1:CA:1073:U:H6	1.82	0.44
23:BB:2793:C:H2'	23:BB:2794:C:C6	2.53	0.44
26:BD:8:LYS:O	26:BD:9:VAL:HB	2.17	0.44
11:AL:56:LEU:HD21	11:AL:81:ILE:HG13	1.99	0.44
46:DU:13:LEU:HD12	46:DU:68:ASN:O	2.18	0.44
26:BD:47:ALA:HB1	26:BD:81:GLU:HG3	1.99	0.44
1:CA:401:C:H2'	1:CA:402:G:C8	2.52	0.44
23:BB:1124:G:H1'	32:B4:38:GLY:OXT	2.17	0.44
1:AA:552:U:H2'	1:AA:553:A:C8	2.52	0.44
3:CD:18:LEU:O	3:CD:19:PHE:HB2	2.17	0.44
1:CA:1451:U:O2	1:CA:1451:U:O4'	2.36	0.44
1:CA:587:G:H4'	7:CH:3:GLN:HA	2.00	0.44
23:BB:1322:A:C2'	23:BB:1323:C:H5'	2.47	0.44
45:BS:13:SER:CB	45:BS:16:LYS:HE3	2.48	0.44
12:CM:84:CYS:C	12:CM:88:LEU:HD12	2.38	0.44
23:DB:576:U:H2'	23:DB:577:G:C8	2.53	0.44
23:DB:150:U:H2'	23:DB:151:C:H6	1.83	0.44
1:AA:1080:A:O3'	4:AE:20:VAL:HG11	2.16	0.44
23:BB:1629:U:O2	23:BB:2698:U:H5''	2.18	0.44
25:DC:30:ALA:N	25:DC:31:PRO:HD2	2.32	0.44
23:DB:1336:A:H3'	23:DB:1337:G:H8	1.82	0.44
40:DH:4:ILE:CD1	40:DH:37:VAL:HG13	2.48	0.44
2:CC:112:ALA:HB1	2:CC:184:ASN:HB2	2.00	0.44
1:CA:201:G:H2'	1:CA:202:G:C8	2.53	0.44
23:DB:1349:C:H2'	23:DB:1350:C:C6	2.52	0.44
23:BB:2648:G:H2'	23:BB:2649:C:H6	1.81	0.44
7:AH:113:ARG:O	7:AH:117:GLN:HG3	2.18	0.44
1:CA:1193:G:O2'	1:CA:1194:U:H5'	2.18	0.44
23:BB:2233:U:H2'	23:BB:2234:G:H8	1.83	0.44
23:DB:2023:C:H4'	23:DB:2617:U:O3'	2.18	0.44
1:CA:1260:G:H4'	1:CA:1283:U:O2'	2.18	0.44
23:BB:1183:U:H2'	23:BB:1184:U:H6	1.83	0.44
23:BB:2617:U:C2'	23:BB:2618:G:H5'	2.48	0.44
1:CA:65:A:C8	1:CA:381:C:N4	2.86	0.44
9:CJ:26:VAL:HG12	9:CJ:30:LYS:HE2	2.00	0.44
2:AC:8:GLY:HA2	2:AC:11:LEU:HG	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BO:14:ALA:O	43:BO:18:LEU:HB2	2.17	0.44
23:BB:465:G:H2'	23:BB:466:A:C8	2.52	0.44
23:BB:2419:U:OP2	34:B3:32:LEU:HD13	2.18	0.44
46:BU:98:ASN:OD1	46:BU:100:GLU:HB2	2.17	0.44
29:BE:72:SER:C	29:BE:74:LYS:H	2.20	0.44
29:BE:122:GLU:O	29:BE:123:LYS:HB2	2.17	0.44
23:BB:256:A:H2'	23:BB:257:C:H6	1.82	0.44
1:AA:197:A:H4'	1:AA:198:G:O5'	2.18	0.44
24:BI:38:CYS:O	24:BI:42:ASN:ND2	2.50	0.44
23:BB:1904:G:H1'	23:BB:1927:A:N1	2.32	0.44
23:BB:2221:G:O2'	23:BB:2222:C:H5'	2.18	0.44
2:CC:30:ASP:HA	13:CN:64:ARG:NH2	2.32	0.44
41:BJ:70:THR:HG22	41:BJ:90:GLU:OE2	2.18	0.44
40:BH:14:SER:HB2	40:BH:17:ASP:HB2	1.99	0.44
23:DB:819:A:OP2	23:DB:1187:G:N2	2.48	0.44
19:CT:5:SER:C	19:CT:7:LYS:H	2.21	0.44
26:BD:117:GLY:HA2	26:BD:164:GLN:NE2	2.33	0.44
23:DB:285:G:O2'	23:DB:286:U:H5'	2.18	0.44
23:BB:121:G:H2'	23:BB:122:G:C8	2.53	0.44
1:CA:1277:C:O2'	1:CA:1279:G:H8	1.99	0.44
8:CI:56:MET:C	8:CI:58:GLU:N	2.70	0.44
44:DQ:91:ARG:NH2	49:DR:11:GLN:O	2.50	0.44
29:DE:146:VAL:O	29:DE:167:VAL:HA	2.18	0.44
12:CM:78:ARG:HH22	18:CS:68:HIS:CE1	2.36	0.44
18:CS:39:ILE:HG12	18:CS:70:LEU:CD1	2.48	0.44
51:DZ:53:ALA:O	51:DZ:55:GLY:N	2.46	0.44
25:BC:203:VAL:O	25:BC:204:LEU:HB2	2.18	0.44
39:BX:23:ARG:HD3	50:BT:50:LEU:HD12	2.00	0.44
25:BC:134:ILE:HG13	25:BC:134:ILE:O	2.16	0.44
45:DS:47:VAL:HG23	45:DS:48:LYS:N	2.32	0.44
23:BB:587:C:H4'	23:BB:588:U:H6	1.83	0.44
46:DU:73:ASN:ND2	46:DU:74:ALA:N	2.66	0.44
40:DH:90:LEU:HD13	40:DH:123:ARG:C	2.38	0.44
24:BI:32:VAL:HG22	24:BI:60:VAL:HG21	2.00	0.44
3:CD:24:VAL:HG23	3:CD:25:ARG:N	2.22	0.44
32:B4:35:GLN:HE21	32:B4:35:GLN:HB2	1.67	0.44
1:AA:410:G:H2'	1:AA:429:U:C5	2.53	0.44
14:AO:25:THR:CG2	14:AO:70:LEU:HD23	2.48	0.44
41:BJ:57:LEU:HB3	41:BJ:58:ASN:H	1.68	0.44
26:DD:48:ILE:HG23	26:DD:82:PHE:HB2	1.98	0.44
47:BF:32:LYS:HE2	47:BF:34:THR:CG2	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AN:60:ARG:NH1	13:AN:62:ARG:CZ	2.81	0.44
9:CJ:57:VAL:HG13	9:CJ:58:ASN:N	2.33	0.44
1:CA:236:A:O2'	1:CA:237:G:H5'	2.18	0.44
26:BD:118:PHE:CE1	26:BD:123:LYS:HD2	2.53	0.44
49:BR:15:SER:H	49:BR:18:GLN:CG	2.30	0.44
23:BB:1547:C:H2'	23:BB:1548:A:C8	2.53	0.44
48:DG:120:ILE:C	48:DG:120:ILE:HD13	2.38	0.44
39:BX:52:ARG:O	39:BX:55:THR:HB	2.18	0.44
23:BB:617:G:O2'	23:BB:618:G:H5'	2.18	0.44
28:BP:13:LYS:HG2	28:BP:76:HIS:ND1	2.33	0.44
10:AK:86:LYS:HB2	10:AK:113:THR:HA	1.99	0.44
20:AB:221:ARG:NH1	20:AB:221:ARG:HB3	2.30	0.44
23:DB:182:A:O2'	23:DB:183:C:H5'	2.17	0.44
1:AA:736:C:H2'	1:AA:737:C:H6	1.82	0.44
39:DX:18:LEU:O	39:DX:22:LEU:HB3	2.18	0.44
8:CI:40:ARG:H	8:CI:44:ARG:CZ	2.31	0.44
23:DB:962:G:N2	23:DB:2250:G:H22	2.12	0.44
44:DQ:75:TYR:O	44:DQ:78:PHE:HB3	2.17	0.44
23:BB:1723:G:N7	23:BB:1737:G:N2	2.61	0.44
48:DG:87:GLN:HE21	48:DG:164:ALA:CA	2.31	0.44
20:AB:125:PHE:O	20:AB:127:LYS:HD2	2.17	0.44
1:CA:46:G:O2'	1:CA:365:U:H1'	2.18	0.44
28:DP:89:GLY:N	28:DP:112:ARG:NH1	2.66	0.44
48:BG:173:ALA:HB3	48:BG:175:LYS:HZ3	1.81	0.44
1:CA:401:C:H1'	1:CA:622:A:H1'	2.00	0.44
23:BB:1945:G:H2'	23:BB:1946:U:C6	2.53	0.44
23:BB:1946:U:H2'	23:BB:1947:C:H6	1.83	0.44
23:DB:591:U:H1'	34:D3:1:PRO:H3	1.83	0.44
42:DN:11:ASN:O	42:DN:12:ARG:HB2	2.17	0.44
1:AA:1491:G:H2'	1:AA:1491:G:N3	2.33	0.44
17:AR:41:SER:HB2	17:AR:51:GLN:CG	2.48	0.44
23:BB:1583:A:H4'	23:BB:1585:C:C4	2.53	0.44
23:BB:1717:A:H2'	23:BB:1718:G:O4'	2.18	0.44
29:DE:102:ARG:HG3	29:DE:102:ARG:NH2	2.33	0.44
20:CB:22:TRP:CG	20:CB:23:ASN:N	2.83	0.44
43:BO:56:LYS:HG2	43:BO:60:GLU:CG	2.47	0.44
23:DB:2840:C:O2'	23:DB:2841:C:H5'	2.17	0.44
22:DA:61:G:H2'	22:DA:62:C:H6	1.83	0.44
1:CA:208:U:H2'	1:CA:210:C:C4	2.53	0.44
23:DB:2370:G:H2'	23:DB:2371:G:O4'	2.18	0.44
23:DB:1534:U:H1'	23:DB:1538:G:N2	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:219:A:H2	23:DB:234:U:O2	2.01	0.44
23:DB:2282:G:H5'	23:DB:2389:G:H1'	2.00	0.44
23:BB:934:U:H2'	23:BB:935:C:H6	1.83	0.44
26:BD:159:LYS:HD3	26:BD:159:LYS:C	2.37	0.44
1:AA:455:G:H2'	1:AA:456:A:H8	1.81	0.44
1:AA:200:G:O2'	1:AA:381:C:N4	2.51	0.44
1:AA:725:G:H2'	1:AA:726:C:H6	1.83	0.44
21:AU:27:VAL:O	21:AU:30:GLU:HB3	2.17	0.44
23:BB:1145:C:O2'	23:BB:1146:C:H5'	2.18	0.44
23:BB:1146:C:H2'	23:BB:1147:A:H8	1.83	0.44
1:AA:276:G:O2'	1:AA:277:C:H5'	2.18	0.44
1:AA:656:G:O2'	1:AA:657:U:H5'	2.17	0.44
23:DB:1147:A:O2'	23:DB:1148:U:H5'	2.18	0.44
1:AA:935:A:O2'	1:AA:936:C:H5'	2.18	0.44
19:AT:5:SER:C	19:AT:7:LYS:H	2.20	0.44
23:DB:1526:C:H2'	23:DB:1527:G:O4'	2.18	0.44
33:B1:38:PHE:HB2	33:B1:45:HIS:CE1	2.53	0.44
23:DB:1904:G:H1'	23:DB:1927:A:N1	2.33	0.44
45:BS:81:SER:CB	45:BS:99:ARG:HA	2.48	0.44
9:AJ:31:ARG:HE	9:AJ:31:ARG:HB2	1.66	0.44
51:DZ:29:PHE:CD1	51:DZ:29:PHE:N	2.85	0.44
1:AA:358:U:H2'	1:AA:359:G:C8	2.53	0.44
23:DB:760:G:C2'	23:DB:761:A:H5'	2.48	0.44
23:BB:1516:G:H2'	23:BB:1517:G:H8	1.83	0.44
1:CA:1525:G:O2'	1:CA:1526:G:H5'	2.18	0.43
51:BZ:71:LEU:HA	51:BZ:74:ARG:HE	1.83	0.43
46:BU:8:ASP:HB3	46:BU:71:ILE:HG22	2.00	0.43
46:DU:85:ARG:O	46:DU:86:PHE:HB2	2.18	0.43
42:DN:37:THR:OG1	42:DN:40:LYS:HE2	2.18	0.43
23:DB:637:A:P	37:DL:112:LEU:HD22	2.58	0.43
23:DB:1818:U:H2'	25:DC:152:GLN:O	2.18	0.43
49:DR:4:VAL:CG2	49:DR:39:LEU:HG	2.48	0.43
29:DE:151:GLY:HA2	29:DE:195:GLN:HE22	1.83	0.43
18:CS:42:ASN:ND2	18:CS:43:MET:N	2.66	0.43
50:BT:40:LYS:O	50:BT:43:ILE:HG22	2.18	0.43
48:DG:71:LEU:O	48:DG:74:MET:HB2	2.18	0.43
23:BB:2356:U:C5'	52:BW:16:GLU:HG3	2.36	0.43
23:DB:2267:A:N6	23:DB:2272:U:H3	2.11	0.43
23:DB:188:G:H5''	51:DZ:14:THR:HG21	1.99	0.43
24:BI:37:PHE:HB2	24:BI:66:PHE:CZ	2.53	0.43
18:AS:45:GLY:N	18:AS:61:VAL:HB	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AP:7:ALA:O	15:AP:17:TYR:HA	2.17	0.43
1:CA:978:A:H5'	1:CA:1362:A:N6	2.32	0.43
43:BO:35:ILE:HG13	43:BO:71:ALA:CB	2.48	0.43
43:DO:67:ASN:N	43:DO:70:ALA:HB3	2.25	0.43
40:BH:18:GLN:NE2	40:BH:44:ILE:HG21	2.32	0.43
5:AF:97:THR:O	5:AF:98:GLU:CD	2.56	0.43
1:AA:105:G:H2'	1:AA:106:C:H6	1.83	0.43
23:DB:1553:A:H2'	23:DB:1555:G:N7	2.33	0.43
10:CK:80:ASN:HB3	10:CK:105:ARG:HB3	2.00	0.43
4:CE:71:ILE:HG12	4:CE:72:ASN:N	2.33	0.43
23:BB:72:U:H1'	39:BX:51:ALA:HA	1.99	0.43
1:CA:1070:U:H2'	1:CA:1071:C:C6	2.52	0.43
25:BC:156:SER:HB3	25:BC:159:THR:CG2	2.45	0.43
25:BC:52:HIS:HA	25:BC:216:ARG:HB2	2.00	0.43
1:AA:598:U:H4'	7:AH:85:TYR:CD2	2.53	0.43
47:DF:121:PHE:HB3	47:DF:127:TYR:CE2	2.52	0.43
23:DB:21:A:H2'	23:DB:22:C:H6	1.83	0.43
1:AA:1243:C:H2'	1:AA:1244:G:C8	2.52	0.43
23:BB:2373:G:H2'	23:BB:2374:C:C6	2.53	0.43
38:BM:96:ILE:HD11	38:BM:126:ILE:CG1	2.47	0.43
7:CH:31:LEU:O	7:CH:35:ILE:HG13	2.18	0.43
1:CA:213:G:H3'	1:CA:214:C:H6	1.82	0.43
7:AH:44:PHE:CE2	7:AH:100:ILE:HG12	2.53	0.43
2:AC:78:LYS:HG3	2:AC:81:GLU:HB3	2.00	0.43
1:CA:1437:A:H2'	1:CA:1438:G:C8	2.49	0.43
25:DC:78:GLU:HG3	25:DC:94:LEU:HB3	2.00	0.43
23:DB:340:A:H2'	23:DB:341:C:O4'	2.18	0.43
23:DB:12:U:O2	23:DB:2626:C:H4'	2.18	0.43
51:BZ:20:HIS:C	51:BZ:22:LEU:H	2.22	0.43
48:BG:54:ARG:HD2	48:BG:57:TYR:HE1	1.83	0.43
7:AH:68:LYS:HG3	7:AH:69:ALA:H	1.81	0.43
36:B2:34:ARG:HB3	36:B2:39:ARG:HB2	1.99	0.43
23:DB:1237:A:O2'	23:DB:1238:G:O4'	2.36	0.43
23:BB:214:G:N2	23:BB:216:A:N3	2.65	0.43
1:CA:1307:U:H2'	1:CA:1308:U:H6	1.83	0.43
1:CA:1309:G:P	12:CM:86:ARG:HH12	2.41	0.43
23:BB:2314:A:H2'	23:BB:2315:G:H8	1.83	0.43
23:DB:1292:G:H2'	23:DB:1293:C:H6	1.82	0.43
23:BB:630:G:N2	23:BB:632:A:H3'	2.32	0.43
23:BB:1541:C:H2'	23:BB:1542:U:H6	1.83	0.43
20:CB:17:HIS:HB3	20:CB:18:GLN:OE1	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:217:A:H2'	23:DB:218:A:O4'	2.18	0.43
23:DB:483:A:H3'	23:DB:484:C:H6	1.83	0.43
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.53	0.43
25:BC:30:ALA:N	25:BC:31:PRO:HD2	2.32	0.43
27:BK:2:ILE:HD13	27:BK:6:THR:HG21	2.00	0.43
23:BB:1258:U:O4'	29:BE:79:ARG:HD2	2.18	0.43
3:AD:123:MET:HG3	3:AD:127:ARG:O	2.18	0.43
1:CA:1260:G:OP1	1:CA:1284:C:H4'	2.17	0.43
23:DB:1936:A:H2	23:DB:1943:U:O4	2.01	0.43
44:BQ:51:GLN:O	44:BQ:54:ARG:HB2	2.17	0.43
17:AR:43:ILE:O	17:AR:44:THR:HG23	2.18	0.43
23:BB:2527:C:O2'	23:BB:2528:U:H5'	2.18	0.43
23:DB:1146:C:H2'	23:DB:1147:A:C8	2.53	0.43
23:DB:1681:G:N3	23:DB:1762:A:H2'	2.33	0.43
23:DB:596:U:H2'	23:DB:597:G:C8	2.53	0.43
1:AA:1118:U:H2'	1:AA:1119:C:H6	1.83	0.43
29:DE:122:GLU:O	29:DE:123:LYS:HB2	2.18	0.43
1:CA:102:G:H2'	1:CA:103:U:H6	1.82	0.43
42:BN:71:ARG:CG	42:BN:71:ARG:HH21	2.31	0.43
43:DO:61:GLN:HE21	43:DO:61:GLN:HB3	1.64	0.43
29:DE:152:GLU:OE1	29:DE:152:GLU:HA	2.18	0.43
1:CA:1402:C:H2'	1:CA:1403:C:O4'	2.17	0.43
23:BB:2352:A:H8	23:BB:2352:A:O5'	2.01	0.43
46:DU:85:ARG:HA	46:DU:85:ARG:CZ	2.48	0.43
5:AF:7:VAL:O	5:AF:7:VAL:HG13	2.18	0.43
37:DL:79:LEU:HD13	37:DL:115:GLU:O	2.18	0.43
44:DQ:96:ASP:C	44:DQ:98:ALA:N	2.71	0.43
27:DK:70:ARG:H	27:DK:70:ARG:HG2	1.69	0.43
10:CK:89:GLY:O	10:CK:92:ARG:HB2	2.17	0.43
1:AA:1072:G:N2	20:AB:105:THR:HG21	2.32	0.43
10:AK:90:PRO:C	10:AK:92:ARG:H	2.21	0.43
41:BJ:72:LYS:O	41:BJ:73:VAL:HG13	2.18	0.43
21:CU:33:ARG:NH1	21:CU:34:ARG:HH11	2.16	0.43
37:BL:79:LEU:HA	37:BL:79:LEU:HD23	1.90	0.43
45:DS:29:VAL:HG23	45:DS:70:LYS:HA	2.00	0.43
40:BH:103:VAL:CG1	40:BH:142:VAL:HG11	2.47	0.43
2:CC:126:ARG:NH2	2:CC:190:THR:HG23	2.16	0.43
42:BN:86:ARG:HE	42:BN:117:ASP:CG	2.21	0.43
23:DB:346:A:H2'	23:DB:347:A:O4'	2.18	0.43
47:DF:103:ILE:HD11	47:DF:174:PHE:CA	2.47	0.43
47:BF:2:LYS:CE	47:BF:100:GLU:HG2	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:163:GLU:CA	47:BF:166:ARG:HH11	2.22	0.43
23:BB:160:A:N6	23:BB:167:A:H1'	2.33	0.43
1:CA:865:A:C2	1:CA:918:A:H4'	2.53	0.43
23:BB:1076:C:H2'	23:BB:1077:A:H8	1.82	0.43
47:DF:128:SER:HB3	47:DF:154:THR:CG2	2.45	0.43
47:DF:155:ILE:HG22	47:DF:156:THR:N	2.34	0.43
47:DF:62:GLN:HB2	47:DF:63:LYS:H	1.64	0.43
47:DF:62:GLN:NE2	47:DF:91:ARG:NE	2.66	0.43
23:DB:356:G:O2'	23:DB:357:C:H5'	2.18	0.43
24:DI:12:VAL:HG13	24:DI:41:PHE:CE2	2.53	0.43
23:DB:2751:G:O4'	48:DG:2:ARG:HD3	2.18	0.43
1:CA:252:U:H2'	1:CA:253:A:C8	2.53	0.43
3:CD:90:LEU:HD21	3:CD:196:GLU:CB	2.45	0.43
24:DI:105:LEU:CD1	24:DI:129:GLU:HG2	2.44	0.43
23:DB:2531:A:H5'	48:DG:173:ALA:CB	2.45	0.43
23:BB:956:G:N2	23:BB:959:A:H3'	2.33	0.43
1:CA:235:C:H1'	16:CQ:62:GLU:OE1	2.18	0.43
3:CD:169:TRP:CD1	3:CD:170:LEU:HD23	2.53	0.43
13:AN:20:PHE:CG	13:AN:24:ALA:HB2	2.53	0.43
23:BB:672:C:H2'	23:BB:673:C:H6	1.84	0.43
23:BB:1553:A:H2'	23:BB:1555:G:N7	2.33	0.43
23:BB:981:A:H4'	23:BB:2037:A:H5'	2.00	0.43
23:DB:1106:G:O2'	23:DB:1107:G:H5'	2.18	0.43
49:DR:15:SER:H	49:DR:18:GLN:CG	2.31	0.43
39:BX:18:LEU:O	39:BX:22:LEU:HB3	2.18	0.43
26:BD:13:ARG:HD2	28:BP:55:HIS:ND1	2.33	0.43
23:DB:1434:A:N6	23:DB:1558:C:H42	2.16	0.43
38:BM:23:GLY:O	38:BM:101:VAL:HG12	2.18	0.43
3:AD:3:TYR:CZ	3:AD:10:LEU:HD21	2.54	0.43
42:DN:49:GLU:N	42:DN:50:PRO:CD	2.81	0.43
2:CC:116:ALA:HB1	2:CC:186:SER:OG	2.17	0.43
1:CA:737:C:H2'	1:CA:738:C:C6	2.53	0.43
33:B1:3:GLY:O	33:B1:5:ARG:N	2.51	0.43
23:BB:1103:A:H5''	23:BB:1104:C:C6	2.53	0.43
1:AA:1254:A:H5'	1:AA:1356:G:H4'	1.99	0.43
1:AA:189:A:H2'	1:AA:190:A:C8	2.53	0.43
23:DB:2671:G:H2'	23:DB:2672:U:H6	1.79	0.43
1:CA:1160:G:H4'	20:CB:130:LYS:HG3	2.00	0.43
14:CO:50:HIS:O	14:CO:53:ARG:HB3	2.18	0.43
23:BB:2556:C:H2'	23:BB:2557:G:O4'	2.18	0.43
23:DB:611:C:H2'	23:DB:612:G:O4'	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AM:89:ARG:CZ	12:AM:94:LEU:HD12	2.48	0.43
44:BQ:49:ARG:O	44:BQ:53:LYS:HE2	2.18	0.43
23:BB:2776:A:H4'	23:BB:2777:G:O5'	2.18	0.43
52:DW:41:GLY:HA2	52:DW:44:PHE:CE2	2.53	0.43
23:DB:2836:U:H2'	23:DB:2837:A:H8	1.80	0.43
1:CA:1309:G:H2'	1:CA:1310:G:H8	1.84	0.43
1:AA:1270:G:H2'	1:AA:1271:A:C8	2.52	0.43
23:BB:39:G:H2'	23:BB:40:U:H6	1.81	0.43
23:BB:65:U:H2'	23:BB:66:C:H6	1.82	0.43
25:DC:30:ALA:C	25:DC:32:LEU:H	2.21	0.43
29:BE:1:MET:HB2	29:BE:16:GLU:CA	2.49	0.43
7:AH:49:LYS:O	7:AH:59:GLU:N	2.51	0.43
23:BB:2028:U:H2'	23:BB:2029:G:C8	2.53	0.43
1:AA:263:A:H2'	1:AA:264:C:C6	2.53	0.43
1:CA:1140:C:O2'	1:CA:1141:C:H5'	2.18	0.43
27:DK:24:VAL:HG13	27:DK:33:ALA:HB2	1.99	0.43
1:AA:152:A:H3'	1:AA:153:C:H6	1.81	0.43
38:DM:131:VAL:HG12	38:DM:132:THR:N	2.32	0.43
41:BJ:64:VAL:O	41:BJ:65:THR:HG22	2.17	0.43
2:CC:42:LEU:O	2:CC:46:LEU:HD23	2.16	0.43
1:AA:593:U:H2'	1:AA:594:U:C6	2.53	0.43
1:AA:1465:A:O2'	1:AA:1466:C:H5'	2.18	0.43
23:DB:2432:A:H2'	23:DB:2433:A:C8	2.53	0.43
23:DB:463:G:N2	23:DB:466:A:OP2	2.50	0.43
23:BB:1998:A:OP2	26:BD:141:ARG:NH2	2.51	0.43
23:BB:1687:G:O2'	23:BB:1688:U:H5'	2.18	0.43
48:BG:67:ALA:HA	48:BG:70:LEU:HB2	2.00	0.43
23:BB:374:A:N6	23:BB:400:G:H1'	2.33	0.43
23:DB:367:G:N2	23:DB:368:A:H1'	2.33	0.43
23:BB:676:A:N1	23:BB:2069:G:O2'	2.46	0.43
23:DB:736:C:H2'	23:DB:737:C:C6	2.54	0.43
28:BP:15:ASP:O	28:BP:17:PRO:HD3	2.18	0.43
23:DB:297:G:H2'	23:DB:298:G:O4'	2.18	0.43
33:D1:39:ASP:OD1	33:D1:42:VAL:HG23	2.18	0.43
14:AO:62:GLN:O	14:AO:66:LEU:HD23	2.18	0.43
51:BZ:39:TRP:HB2	51:BZ:46:PHE:CE2	2.53	0.43
23:BB:2331:G:O2'	52:BW:40:ARG:HB2	2.18	0.43
26:DD:3:GLY:C	26:DD:4:LEU:HD22	2.38	0.43
13:CN:52:ARG:HA	13:CN:52:ARG:HD3	1.90	0.43
18:CS:36:ARG:O	18:CS:69:LYS:HD2	2.18	0.43
41:BJ:45:THR:HG1	41:BJ:48:VAL:HB	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1693:U:H4'	23:BB:1694:C:OP2	2.19	0.43
37:BL:79:LEU:HB3	37:BL:115:GLU:O	2.17	0.43
20:CB:94:ARG:N	20:CB:94:ARG:HE	2.15	0.43
41:DJ:54:ILE:HD12	41:DJ:55:ILE:N	2.33	0.43
45:DS:27:LYS:CD	45:DS:27:LYS:H	2.30	0.43
45:DS:57:ASN:O	45:DS:61:ASN:HB2	2.18	0.43
29:BE:181:ILE:HD13	37:BL:3:LEU:HD23	1.99	0.43
23:BB:28:A:N6	23:BB:512:G:O2'	2.51	0.43
27:BK:12:ASP:OD2	27:BK:85:VAL:HG13	2.18	0.43
23:BB:77:G:H2'	23:BB:78:U:O4'	2.17	0.43
15:AP:52:LEU:CD2	15:AP:75:ILE:HA	2.48	0.43
23:DB:2306:C:H3'	23:DB:2307:G:H5''	1.95	0.43
3:AD:29:THR:HG22	3:AD:30:LYS:N	2.33	0.43
29:BE:29:HIS:O	29:BE:33:VAL:HG23	2.18	0.43
5:CF:53:LYS:CD	5:CF:54:LEU:H	2.32	0.43
47:BF:103:ILE:HD11	47:BF:174:PHE:CA	2.47	0.43
23:BB:143:C:H2'	23:BB:144:A:C8	2.53	0.43
23:DB:2680:U:OP2	26:DD:114:LYS:HB3	2.18	0.43
23:DB:1161:C:H2'	23:DB:1162:G:C8	2.54	0.43
25:BC:196:ASN:O	25:BC:197:ALA:HB3	2.16	0.43
23:BB:277:G:N3	23:BB:361:G:O6	2.50	0.43
34:B3:21:PHE:O	34:B3:22:LYS:O	2.37	0.43
34:B3:54:LEU:HD11	34:B3:58:ILE:HD11	2.01	0.43
48:DG:68:ARG:NH1	48:DG:72:ASN:HB2	2.33	0.43
12:AM:21:ILE:O	12:AM:24:VAL:HG22	2.19	0.43
43:DO:34:HIS:CE1	43:DO:65:THR:HG21	2.52	0.43
44:DQ:83:LYS:HZ3	44:DQ:87:VAL:HA	1.82	0.43
3:CD:182:LYS:HE2	3:CD:182:LYS:HB3	1.81	0.43
26:BD:118:PHE:HZ	26:BD:123:LYS:HZ3	1.66	0.43
26:BD:121:THR:HB	26:BD:127:PHE:CD1	2.53	0.43
49:BR:97:LYS:O	49:BR:98:ILE:HB	2.18	0.43
48:DG:97:VAL:HG23	48:DG:124:CYS:SG	2.59	0.43
23:DB:1409:U:O2'	23:DB:1410:G:H5'	2.19	0.43
28:BP:50:ARG:O	28:BP:51:ASN:HB2	2.18	0.43
24:BI:83:ALA:N	24:BI:100:ILE:HD11	2.33	0.43
37:DL:95:LEU:HB2	37:DL:101:ILE:HG13	1.99	0.43
20:AB:221:ARG:HG3	20:AB:222:GLU:N	2.32	0.43
4:CE:154:ALA:HB1	7:CH:65:PHE:CZ	2.53	0.43
1:AA:215:C:H2'	1:AA:216:U:O4'	2.17	0.43
1:AA:598:U:H4'	7:AH:85:TYR:CG	2.53	0.43
44:BQ:75:TYR:O	44:BQ:78:PHE:HB3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DT:69:ARG:HG2	50:DT:73:ARG:C	2.38	0.43
23:BB:1723:G:C4	23:BB:1724:G:C8	3.07	0.43
46:DU:14:THR:HG21	46:DU:64:ILE:CD1	2.46	0.43
23:DB:2230:G:H2'	23:DB:2231:U:H6	1.83	0.43
1:CA:214:C:H2'	1:CA:215:C:C6	2.53	0.43
1:CA:215:C:H2'	1:CA:216:U:O4'	2.18	0.43
1:CA:620:C:H2'	1:CA:621:A:C8	2.53	0.43
1:CA:83:C:O3'	1:CA:84:U:C6	2.71	0.43
1:AA:552:U:H2'	1:AA:553:A:H8	1.83	0.43
1:AA:1309:G:H2'	1:AA:1310:G:H8	1.83	0.43
20:CB:52:ALA:O	20:CB:56:LEU:HB2	2.17	0.43
29:BE:31:VAL:HG21	29:BE:104:ALA:CB	2.47	0.43
23:BB:988:A:O5'	30:BY:11:SER:HB3	2.18	0.43
1:CA:828:U:O2'	20:CB:24:PRO:HB3	2.18	0.43
1:AA:683:G:O2'	1:AA:684:U:H5'	2.18	0.43
23:DB:1210:G:N3	23:DB:1212:G:N2	2.65	0.43
12:CM:89:ARG:CZ	12:CM:94:LEU:HD12	2.48	0.43
23:DB:1537:G:H5''	23:DB:1537:G:N3	2.33	0.43
23:DB:651:G:OP1	34:D3:18:LYS:HG3	2.18	0.43
23:DB:2665:A:H2'	23:DB:2666:C:O2	2.17	0.43
23:BB:2699:C:O2'	23:BB:2700:A:H5'	2.18	0.43
23:DB:65:U:H2'	23:DB:66:C:H6	1.82	0.43
1:AA:1180:A:OP1	8:AI:104:THR:HG22	2.18	0.43
34:D3:28:LEU:HG	34:D3:28:LEU:O	2.17	0.43
35:DV:51:GLN:HA	35:DV:56:PHE:CB	2.48	0.43
1:CA:529:G:O6	11:CL:45:ASN:HA	2.18	0.43
1:AA:1386:G:O2'	1:AA:1387:G:H5'	2.18	0.43
40:DH:95:GLY:N	40:DH:98:ASP:OD2	2.51	0.43
1:CA:420:U:H2'	1:CA:422:C:C5	2.53	0.43
1:AA:360:G:O2'	1:AA:361:G:H5'	2.18	0.43
23:DB:1791:A:C2	23:DB:1829:A:H4'	2.53	0.43
1:AA:611:C:H2'	1:AA:612:C:H6	1.82	0.43
45:DS:81:SER:HA	45:DS:99:ARG:HA	2.00	0.43
1:AA:579:A:H2'	1:AA:580:C:C6	2.54	0.43
23:BB:1251:C:O2'	23:BB:1252:G:H3'	2.18	0.43
51:DZ:11:ARG:HB3	51:DZ:12:PRO:HD2	1.99	0.43
51:DZ:17:ASN:HD22	51:DZ:25:THR:HB	1.84	0.43
23:BB:2014:A:H2'	23:BB:2015:A:C8	2.53	0.43
23:BB:596:U:H2'	23:BB:597:G:C8	2.53	0.43
17:AR:68:PRO:HB2	17:AR:70:THR:O	2.18	0.43
24:BI:103:ALA:O	24:BI:107:GLU:HG3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:736:C:H2'	23:BB:737:C:H6	1.83	0.43
1:CA:1475:G:H4'	23:DB:1689:A:H4'	1.99	0.43
1:AA:1148:U:H5'	8:AI:6:TYR:OH	2.19	0.43
37:BL:105:ILE:HG22	37:BL:106:GLU:N	2.33	0.43
3:CD:55:ARG:HG3	3:CD:55:ARG:HH11	1.83	0.43
1:CA:435:A:H2'	1:CA:435:A:N3	2.34	0.43
24:DI:2:LYS:O	24:DI:3:LYS:HG3	2.18	0.43
51:BZ:77:LYS:CD	51:BZ:78:TYR:H	2.30	0.43
23:BB:2365:G:H4'	52:BW:59:PHE:CE1	2.54	0.43
26:DD:106:LYS:HB3	26:DD:206:ALA:CB	2.48	0.43
26:DD:107:VAL:HG21	26:DD:177:VAL:HG12	2.01	0.43
26:DD:108:ASP:OD2	26:DD:206:ALA:HA	2.18	0.43
8:AI:34:LEU:HD21	8:AI:48:ARG:HE	1.83	0.43
8:AI:56:MET:C	8:AI:58:GLU:N	2.71	0.43
28:DP:63:ILE:O	28:DP:63:ILE:HG22	2.18	0.43
26:DD:22:ILE:HG22	26:DD:23:PRO:O	2.18	0.43
18:CS:66:VAL:O	18:CS:68:HIS:N	2.52	0.43
28:DP:3:ILE:CG2	28:DP:4:ILE:N	2.81	0.43
1:CA:796:C:O2'	1:CA:797:C:H5'	2.18	0.43
41:DJ:55:ILE:CG2	41:DJ:123:LYS:HB2	2.48	0.43
41:DJ:99:ARG:HG2	41:DJ:99:ARG:HH11	1.82	0.43
45:DS:70:LYS:HD3	45:DS:110:ARG:C	2.39	0.43
23:DB:2267:A:C8	23:DB:2267:A:C4'	3.01	0.43
27:DK:19:VAL:HB	27:DK:41:ILE:HD11	2.00	0.43
27:BK:64:ARG:HH12	27:BK:101:GLY:CA	2.30	0.43
23:DB:360:U:H2'	23:DB:361:G:N9	2.32	0.43
23:BB:2733:A:H2'	23:BB:2734:A:O4'	2.18	0.43
3:AD:151:GLN:HE22	3:AD:153:ARG:HH11	1.66	0.43
23:BB:1137:G:O2'	23:BB:1138:G:H5'	2.18	0.43
48:DG:93:TYR:O	48:DG:94:ARG:O	2.37	0.43
23:BB:1076:C:H2'	23:BB:1077:A:C8	2.53	0.43
38:DM:124:LEU:HA	38:DM:125:PRO:HD3	1.89	0.43
47:BF:128:SER:HB3	47:BF:154:THR:CG2	2.44	0.43
47:BF:62:GLN:HB2	47:BF:63:LYS:H	1.64	0.43
47:BF:92:GLY:O	47:BF:95:MET:HB3	2.18	0.43
23:BB:783:A:H8	23:BB:784:G:H4'	1.83	0.43
35:DV:30:ILE:HA	35:DV:91:PHE:O	2.18	0.43
35:DV:30:ILE:HG12	35:DV:91:PHE:HB2	2.01	0.43
1:CA:255:G:O3'	16:CQ:18:LYS:HD2	2.19	0.43
42:BN:28:LEU:HD23	42:BN:113:ILE:HG23	2.00	0.43
36:D2:17:GLY:O	36:D2:21:ARG:HB2	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:844:G:C6	1:AA:845:A:N6	2.87	0.43
23:BB:956:G:OP2	38:BM:86:LYS:HE2	2.18	0.43
48:BG:84:LYS:HG3	48:BG:131:VAL:CB	2.46	0.43
23:BB:2846:G:OP1	28:BP:51:ASN:HB2	2.18	0.43
2:CC:148:ILE:HG12	2:CC:149:LYS:N	2.33	0.43
46:BU:81:ARG:HB2	46:BU:96:LYS:HG3	1.99	0.43
1:CA:1327:C:H2'	1:CA:1328:C:C6	2.52	0.43
45:DS:25:ARG:HH11	45:DS:25:ARG:HB2	1.83	0.43
8:CI:39:GLY:HA2	8:CI:44:ARG:CD	2.45	0.43
43:DO:94:ARG:O	43:DO:97:PHE:HB2	2.17	0.43
42:BN:49:GLU:N	42:BN:50:PRO:CD	2.81	0.43
1:CA:1462:C:H2'	1:CA:1463:U:C6	2.54	0.43
14:AO:50:HIS:O	14:AO:53:ARG:HB3	2.18	0.43
2:AC:31:ASN:ND2	2:AC:58:ARG:HE	2.17	0.43
1:CA:328:C:H4'	1:CA:329:A:C5'	2.49	0.43
34:B3:44:ARG:N	34:B3:45:PRO:CD	2.82	0.43
23:BB:2457:U:C2'	23:BB:2458:G:H5'	2.48	0.43
23:BB:322:A:H2'	29:BE:163:ASN:HD21	1.81	0.43
23:BB:1733:G:H2'	23:BB:1734:G:H8	1.80	0.43
1:AA:1489:G:H2'	1:AA:1490:U:H6	1.84	0.43
25:DC:93:VAL:CG2	25:DC:115:ILE:HD11	2.49	0.43
4:CE:98:ALA:HB2	4:CE:123:LEU:HG	2.00	0.43
4:CE:55:VAL:N	4:CE:56:PRO:CD	2.82	0.43
2:CC:57:GLU:HB2	2:CC:64:ARG:CB	2.49	0.43
23:DB:528:A:H8	23:DB:528:A:H3'	1.82	0.43
28:DP:103:THR:HG22	28:DP:104:GLY:N	2.33	0.43
10:AK:16:SER:CA	10:AK:78:ILE:HA	2.48	0.43
28:DP:26:GLU:HG3	28:DP:43:GLU:HB2	2.00	0.43
48:BG:54:ARG:C	48:BG:54:ARG:HD3	2.38	0.43
48:BG:54:ARG:HD2	48:BG:57:TYR:CE1	2.54	0.43
4:CE:15:ILE:HD12	4:CE:35:LEU:HG	2.01	0.43
25:BC:61:TYR:HA	25:BC:85:ASN:ND2	2.33	0.43
23:BB:2370:G:H2'	23:BB:2371:G:O4'	2.18	0.43
7:AH:124:ILE:HG22	7:AH:125:ILE:H	1.84	0.43
23:BB:2852:G:H2'	23:BB:2853:C:H6	1.81	0.43
23:BB:526:A:N6	23:BB:2626:C:C4'	2.81	0.43
7:CH:25:THR:O	7:CH:26:MET:HB3	2.18	0.43
16:CQ:37:ILE:HG22	16:CQ:39:ARG:NE	2.34	0.43
29:DE:110:SER:HB3	29:DE:114:ARG:HH12	1.84	0.43
1:CA:541:G:O2'	1:CA:542:G:H5'	2.19	0.43
23:BB:2489:U:H2'	23:BB:2490:G:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:45:TYR:CD1	26:DD:45:TYR:N	2.86	0.43
28:DP:44:GLY:HA3	28:DP:60:VAL:HG12	2.00	0.43
23:BB:122:G:O2'	23:BB:123:G:H5'	2.19	0.43
1:AA:638:U:H2'	1:AA:639:G:O4'	2.19	0.43
23:DB:1427:A:H4'	23:DB:1428:C:O4'	2.18	0.43
36:B2:1:MET:HG2	36:B2:2:LYS:H	1.83	0.43
1:AA:960:U:O2'	1:AA:1223:C:H4'	2.18	0.43
24:BI:4:VAL:HG13	24:BI:4:VAL:O	2.18	0.43
23:DB:268:C:O2	23:DB:268:C:H2'	2.18	0.43
20:AB:131:LYS:HE2	20:AB:131:LYS:HB3	1.84	0.43
10:CK:52:ARG:HB3	10:CK:52:ARG:NH1	2.33	0.43
22:DA:64:G:H2'	22:DA:65:U:C6	2.53	0.43
13:CN:32:ASP:CG	13:CN:33:VAL:N	2.71	0.43
1:AA:1515:G:O2'	1:AA:1516:G:H5'	2.19	0.43
38:BM:32:GLY:HA2	38:BM:117:PHE:CZ	2.53	0.43
37:DL:105:ILE:HG22	37:DL:106:GLU:N	2.34	0.43
23:BB:923:G:H5'	52:BW:25:PHE:CZ	2.54	0.43
21:AU:40:PRO:HG2	21:AU:41:THR:H	1.82	0.43
52:DW:23:LYS:HD2	52:DW:24:ARG:HB3	2.00	0.43
52:BW:39:GLN:HG3	52:BW:42:THR:N	2.33	0.43
23:DB:2330:G:H1'	52:DW:38:ARG:HB2	2.00	0.43
5:AF:62:MET:HG3	5:AF:64:VAL:CG2	2.49	0.43
29:DE:153:LEU:HG	29:DE:154:ASP:N	2.32	0.43
10:CK:31:VAL:HG11	10:CK:95:THR:OG1	2.18	0.43
47:DF:78:ILE:HA	47:DF:79:ARG:HE	1.84	0.43
47:DF:78:ILE:HG13	47:DF:82:TYR:CZ	2.53	0.43
23:BB:2260:C:O2'	23:BB:2261:C:H5'	2.19	0.43
18:AS:39:ILE:HG12	18:AS:70:LEU:CD1	2.48	0.43
28:DP:6:GLN:HA	28:DP:9:GLN:NE2	2.33	0.43
41:BJ:55:ILE:HG22	41:BJ:123:LYS:HB2	2.00	0.43
50:BT:55:VAL:HG13	50:BT:85:VAL:HG12	1.99	0.43
24:DI:54:ILE:O	24:DI:54:ILE:HG23	2.18	0.43
40:BH:78:VAL:HB	40:BH:143:ILE:O	2.19	0.43
20:CB:14:HIS:HB2	20:CB:208:ALA:HB2	2.01	0.43
45:BS:27:LYS:CD	45:BS:27:LYS:H	2.32	0.43
45:BS:28:LYS:O	45:BS:29:VAL:HG23	2.19	0.43
1:AA:82:G:H2'	1:AA:84:U:H5	1.84	0.43
47:DF:65:LEU:CD2	47:DF:87:LYS:HD2	2.48	0.43
23:BB:2421:G:N7	34:B3:30:HIS:NE2	2.67	0.43
23:BB:345:A:N3	23:BB:346:A:N1	2.66	0.43
51:BZ:14:THR:HA	51:BZ:28:ARG:CA	2.39	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BJ:25:LEU:O	41:BJ:27:ARG:N	2.50	0.43
38:DM:19:GLY:H	38:DM:38:ARG:HH22	1.65	0.43
23:DB:121:G:H2'	23:DB:122:G:C8	2.53	0.43
24:BI:91:LYS:O	24:BI:94:LYS:HB2	2.18	0.43
23:BB:2144:G:O2'	23:BB:2146:C:H5'	2.18	0.43
22:BA:28:C:H5	22:BA:56:G:H22	1.66	0.43
33:B1:47:ILE:HD12	33:B1:47:ILE:N	2.33	0.43
24:BI:29:GLN:HA	24:BI:29:GLN:NE2	2.32	0.43
48:BG:105:SER:C	48:BG:106:LEU:HD23	2.39	0.43
23:BB:2886:A:N6	31:B0:39:ARG:NE	2.62	0.43
3:AD:197:HIS:HA	3:AD:200:VAL:CG2	2.47	0.43
1:AA:1342:C:O2'	8:AI:125:GLN:HB3	2.17	0.43
41:DJ:23:LYS:HE3	41:DJ:142:ILE:HG12	2.01	0.43
48:DG:83:THR:C	48:DG:84:LYS:HD3	2.38	0.43
23:DB:871:U:H4'	38:DM:68:PHE:CE2	2.54	0.43
40:BH:54:LEU:HA	40:BH:58:LEU:CB	2.48	0.43
48:BG:116:LEU:HG	48:BG:120:ILE:HD12	2.01	0.43
7:CH:29:SER:OG	7:CH:32:LYS:HG3	2.18	0.43
11:AL:107:LYS:N	11:AL:107:LYS:HZ3	2.17	0.43
23:BB:1796:U:H4'	25:BC:252:LYS:O	2.18	0.43
37:BL:77:ILE:HG13	37:BL:101:ILE:HD11	2.00	0.43
37:BL:85:VAL:HG22	37:BL:94:THR:HG21	2.01	0.43
1:CA:1201:A:H8	1:CA:1201:A:H5''	1.84	0.43
46:DU:11:ILE:HG23	46:DU:12:VAL:N	2.33	0.43
23:BB:18:U:OP1	44:BQ:29:ARG:NH2	2.50	0.43
23:DB:1728:C:H2'	23:DB:1730:C:O2	2.18	0.43
28:BP:89:GLY:N	28:BP:112:ARG:NH1	2.66	0.43
23:DB:1789:A:H2'	23:DB:1790:C:O4'	2.18	0.43
28:DP:89:GLY:HA2	28:DP:112:ARG:H	1.82	0.43
3:CD:3:TYR:O	3:CD:4:LEU:HD12	2.17	0.43
1:CA:537:G:H2'	1:CA:538:G:C8	2.54	0.43
25:BC:123:ILE:HD13	25:BC:135:PRO:HG2	1.99	0.43
1:CA:618:C:N3	1:CA:622:A:N6	2.65	0.43
23:BB:340:A:H2'	23:BB:341:C:O4'	2.19	0.43
28:DP:25:VAL:HA	28:DP:85:VAL:CA	2.48	0.43
1:AA:311:C:HO2'	1:AA:312:C:H5'	1.83	0.43
23:DB:1923:U:O4	53:DB:3001:NMY:N9	2.51	0.43
23:BB:2199:A:H5''	23:BB:2200:C:H5	1.84	0.43
23:BB:2369:A:H2'	23:BB:2370:G:C8	2.53	0.43
23:BB:409:G:H2'	23:BB:410:G:C8	2.53	0.43
23:DB:235:U:H2'	23:DB:236:C:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2520:C:C6	23:DB:2567:G:H1'	2.53	0.43
1:AA:537:G:H2'	1:AA:538:G:H8	1.84	0.43
23:DB:1640:A:H2'	23:DB:1641:A:H8	1.82	0.43
35:DV:48:MET:O	35:DV:51:GLN:HG3	2.19	0.43
23:DB:997:G:OP1	44:DQ:92:LYS:HB2	2.19	0.43
23:DB:2025:C:H2'	23:DB:2026:U:C6	2.53	0.43
34:B3:9:ALA:O	34:B3:13:PHE:HD2	2.01	0.43
45:DS:99:ARG:HG2	45:DS:99:ARG:H	1.54	0.43
23:DB:374:A:H61	23:DB:400:G:H1'	1.83	0.43
32:B4:30:GLU:HA	32:B4:31:PRO:HD3	1.89	0.43
23:BB:1526:C:H2'	23:BB:1527:G:O4'	2.19	0.43
38:DM:32:GLY:HA2	38:DM:117:PHE:CZ	2.53	0.43
51:DZ:39:TRP:HB2	51:DZ:46:PHE:CE2	2.54	0.43
36:D2:36:ALA:C	36:D2:38:GLY:N	2.72	0.43
17:AR:32:ILE:HG23	17:AR:36:GLY:O	2.19	0.43
51:DZ:59:ILE:HD13	51:DZ:67:VAL:HG21	2.00	0.43
44:DQ:24:TYR:CD1	44:DQ:25:GLY:N	2.86	0.43
26:BD:98:VAL:C	26:BD:100:LEU:N	2.71	0.43
20:CB:69:VAL:O	20:CB:163:ILE:HG22	2.19	0.43
41:DJ:45:THR:H	41:DJ:46:PRO:CD	2.27	0.43
44:DQ:111:LYS:HE3	49:DR:48:LYS:HZ3	1.81	0.43
28:DP:61:ARG:HD3	28:DP:70:GLU:CG	2.49	0.43
29:BE:146:VAL:HG12	29:BE:147:LEU:N	2.34	0.43
29:BE:146:VAL:O	29:BE:167:VAL:HA	2.18	0.43
10:CK:92:ARG:NH2	21:CU:24:LYS:HG2	2.28	0.43
47:DF:78:ILE:HG23	47:DF:82:TYR:CB	2.49	0.43
18:AS:50:VAL:O	18:AS:56:HIS:HA	2.19	0.43
44:BQ:86:SER:O	44:BQ:88:GLU:N	2.48	0.43
25:BC:66:PHE:CE2	25:BC:104:LEU:HD11	2.54	0.43
25:DC:203:VAL:O	25:DC:204:LEU:HB2	2.19	0.43
40:BH:68:ARG:HD3	40:BH:134:VAL:HG21	2.00	0.43
37:DL:81:ASP:O	37:DL:83:ALA:N	2.45	0.43
27:DK:42:THR:O	27:DK:43:ILE:C	2.57	0.43
42:DN:82:GLU:C	42:DN:84:GLY:N	2.71	0.43
46:BU:73:ASN:ND2	46:BU:74:ALA:N	2.66	0.43
15:AP:4:ILE:O	15:AP:71:VAL:HG11	2.18	0.43
32:B4:7:VAL:CG1	32:B4:8:LYS:H	2.22	0.43
47:BF:106:ALA:HA	47:BF:135:ILE:HD13	1.99	0.43
47:DF:131:VAL:O	47:DF:132:ARG:HB2	2.19	0.43
23:BB:62:U:O2	23:BB:62:U:C2'	2.63	0.43
29:DE:46:GLN:HB3	29:DE:86:ALA:HA	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CP:52:LEU:CD2	15:CP:75:ILE:HA	2.49	0.43
35:BV:93:ARG:HG3	35:BV:93:ARG:NH1	2.30	0.43
31:B0:41:HIS:HB2	42:BN:99:LYS:C	2.37	0.43
48:BG:10:VAL:HG13	48:BG:14:VAL:HB	2.00	0.43
43:DO:35:ILE:HG13	43:DO:71:ALA:CB	2.49	0.43
1:AA:104:G:O2'	1:AA:105:G:H5'	2.19	0.43
1:AA:865:A:H2	1:AA:918:A:H4'	1.83	0.43
13:AN:17:ASP:O	13:AN:21:ALA:HB3	2.18	0.43
28:DP:50:ARG:CB	28:DP:57:ALA:H	2.27	0.43
12:CM:76:ILE:HG22	12:CM:80:MET:HE2	2.01	0.43
29:DE:117:ARG:HA	29:DE:185:LYS:HG2	1.99	0.43
26:DD:8:LYS:O	26:DD:9:VAL:HB	2.19	0.43
51:DZ:51:VAL:HG11	51:DZ:56:MET:HG3	2.00	0.43
23:DB:155:A:O2'	23:DB:156:A:H5'	2.18	0.43
40:DH:119:ASN:C	40:DH:121:VAL:H	2.22	0.43
2:AC:116:ALA:HB1	2:AC:186:SER:OG	2.19	0.43
1:AA:279:A:H4'	1:AA:280:C:OP2	2.17	0.43
1:AA:587:G:H4'	7:AH:3:GLN:HA	2.01	0.43
5:CF:1:MET:SD	5:CF:67:PRO:HD3	2.57	0.43
23:DB:2637:U:H5''	26:DD:83:ARG:NH2	2.33	0.43
1:CA:676:A:H2'	1:CA:677:U:C6	2.54	0.43
1:CA:1239:A:N6	1:CA:1299:A:H62	2.14	0.43
34:D3:44:ARG:N	34:D3:45:PRO:CD	2.81	0.43
12:AM:102:LYS:NZ	12:AM:102:LYS:HB2	2.34	0.43
11:AL:42:LYS:HB3	11:AL:43:LYS:H	1.63	0.43
20:CB:125:PHE:HA	20:CB:127:LYS:HZ1	1.83	0.43
45:BS:51:LEU:C	45:BS:53:SER:H	2.21	0.43
1:AA:1309:G:P	12:AM:86:ARG:HH12	2.42	0.43
23:DB:320:A:H4'	23:DB:322:A:N7	2.34	0.43
23:BB:2893:A:H4'	23:BB:2894:G:H5'	1.99	0.43
6:AG:112:ASP:HB3	6:AG:113:LYS:H	1.63	0.43
45:DS:51:LEU:C	45:DS:53:SER:H	2.21	0.43
23:BB:2411:A:H2'	23:BB:2412:A:H8	1.82	0.43
23:BB:1424:G:O2'	23:BB:1425:G:H5'	2.18	0.43
23:DB:1831:G:H2'	23:DB:1832:C:H6	1.83	0.43
23:BB:1666:G:C2'	23:BB:1667:G:H5'	2.48	0.43
23:BB:2874:C:H2'	23:BB:2875:C:C6	2.54	0.43
23:BB:924:G:H2'	23:BB:925:A:H8	1.83	0.43
47:BF:134:GLN:NE2	47:BF:136:ILE:HA	2.33	0.43
23:BB:1878:G:H2'	23:BB:1879:C:C6	2.53	0.43
23:BB:12:U:O2	23:BB:2626:C:H4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1322:A:H2'	23:DB:1323:C:H5'	2.00	0.43
23:DB:2489:U:H2'	23:DB:2490:G:O4'	2.19	0.43
22:BA:92:C:O2'	22:BA:93:C:H5'	2.18	0.43
23:DB:765:C:H2'	23:DB:766:U:C6	2.53	0.43
18:AS:64:GLU:H	18:AS:64:GLU:CD	2.21	0.43
2:CC:42:LEU:O	2:CC:46:LEU:HB2	2.19	0.43
23:DB:1145:C:O2'	23:DB:1146:C:H5'	2.18	0.43
23:BB:736:C:H2'	23:BB:737:C:C6	2.54	0.43
23:BB:1893:C:H2'	23:BB:1894:C:O4'	2.18	0.43
2:AC:38:VAL:HG23	2:AC:39:ARG:N	2.33	0.43
23:DB:1893:C:H2'	23:DB:1894:C:O4'	2.19	0.43
23:BB:2408:U:O2'	23:BB:2409:G:H5'	2.18	0.43
23:DB:695:G:OP1	23:DB:1380:G:H4'	2.19	0.43
26:DD:202:ILE:HG22	26:DD:202:ILE:O	2.17	0.43
6:CG:55:LYS:H	6:CG:55:LYS:HG2	1.63	0.43
20:CB:43:GLU:H	20:CB:43:GLU:HG2	1.50	0.43
39:BX:13:GLU:OE2	39:BX:13:GLU:HA	2.18	0.43
23:BB:298:G:OP1	46:BU:83:GLY:HA2	2.18	0.43
1:AA:1277:C:O2'	1:AA:1279:G:H8	1.97	0.43
8:CI:34:LEU:CD1	8:CI:47:VAL:HG21	2.49	0.43
28:BP:61:ARG:HD3	28:BP:70:GLU:CG	2.49	0.43
25:DC:107:LYS:HB3	25:DC:108:GLY:H	1.68	0.43
23:DB:2261:C:N4	52:DW:10:ARG:HB3	2.33	0.43
18:AS:66:VAL:O	18:AS:68:HIS:N	2.52	0.43
50:BT:72:GLN:H	50:BT:72:GLN:HG2	1.63	0.43
44:DQ:105:PHE:HA	44:DQ:108:LEU:CG	2.49	0.43
45:DS:26:GLY:O	45:DS:28:LYS:N	2.52	0.43
27:DK:47:ILE:HG23	27:DK:48:PRO:N	2.33	0.43
1:CA:1103:C:O2	20:CB:105:THR:HG21	2.18	0.43
48:DG:26:LYS:HA	48:DG:32:LEU:CA	2.45	0.43
43:DO:49:VAL:HG11	43:DO:82:ALA:CA	2.49	0.43
43:BO:49:VAL:HG11	43:BO:82:ALA:CA	2.48	0.43
20:CB:45:THR:HA	20:CB:48:MET:HG3	2.00	0.43
45:BS:26:GLY:O	45:BS:28:LYS:N	2.52	0.43
1:AA:77:A:O2'	1:AA:78:A:H5'	2.19	0.43
27:DK:115:ILE:CG2	27:DK:116:ILE:N	2.82	0.43
3:CD:8:LEU:HD12	3:CD:31:CYS:SG	2.58	0.43
29:BE:32:VAL:HG23	29:BE:33:VAL:N	2.34	0.43
26:DD:90:PHE:O	26:DD:91:THR:C	2.57	0.43
26:DD:119:ALA:HB2	26:DD:163:GLY:C	2.39	0.43
29:DE:46:GLN:HG3	29:DE:87:ALA:CB	2.40	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2146:C:H4'	23:BB:2148:G:H1'	2.00	0.43
22:BA:53:A:C2'	22:BA:54:G:H5'	2.49	0.43
23:BB:2742:G:O2'	23:BB:2743:U:H5'	2.17	0.43
48:BG:94:ARG:HH21	48:BG:104:LEU:HA	1.82	0.43
48:BG:106:LEU:N	48:BG:106:LEU:HD23	2.33	0.43
35:DV:28:ALA:HA	35:DV:88:HIS:ND1	2.34	0.43
5:AF:98:GLU:HG2	5:AF:99:ALA:H	1.80	0.43
12:CM:28:ARG:CZ	12:CM:62:PHE:HB2	2.48	0.43
23:BB:2819:G:O2'	23:BB:2820:A:H5''	2.18	0.43
9:CJ:17:LEU:CD1	9:CJ:95:GLY:HA3	2.49	0.43
23:DB:2743:U:C2'	23:DB:2744:G:H5''	2.42	0.43
11:AL:49:ARG:CG	11:AL:89:LEU:HD21	2.44	0.43
28:DP:50:ARG:CD	28:DP:56:SER:HB3	2.49	0.43
2:AC:148:ILE:HG12	2:AC:149:LYS:N	2.34	0.43
23:DB:1559:U:H3'	23:DB:1560:G:H5'	2.00	0.43
43:DO:88:LYS:HG2	43:DO:89:ASP:N	2.33	0.43
1:AA:1017:U:H2'	1:AA:1018:G:C8	2.54	0.43
9:AJ:37:ARG:NH1	9:AJ:77:VAL:HG21	2.33	0.43
1:AA:1462:C:H2'	1:AA:1463:U:C6	2.53	0.43
23:BB:416:U:H2'	23:BB:417:C:H6	1.84	0.43
23:DB:2139:U:O2'	23:DB:2140:G:H5'	2.18	0.43
43:DO:14:ALA:O	43:DO:18:LEU:HB2	2.19	0.43
3:CD:3:TYR:CZ	3:CD:10:LEU:HD21	2.54	0.43
23:DB:956:G:N2	23:DB:959:A:H3'	2.34	0.43
1:CA:1355:G:H2'	1:CA:1356:G:C8	2.53	0.43
1:CA:1254:A:OP1	9:CJ:47:GLU:HG3	2.19	0.43
20:CB:119:GLN:HB3	20:CB:125:PHE:HD1	1.84	0.43
23:BB:101:A:H2'	23:BB:102:U:OP2	2.19	0.43
1:CA:706:A:H4'	10:CK:30:ILE:HD11	2.00	0.43
23:BB:1478:G:O2'	23:BB:1479:G:H5'	2.18	0.43
1:CA:586:C:H2'	1:CA:587:G:H5'	2.01	0.43
2:CC:78:LYS:HE3	2:CC:81:GLU:HG2	2.01	0.43
23:BB:1401:G:H2'	23:BB:1402:U:H6	1.83	0.43
3:AD:77:GLU:O	3:AD:81:LEU:HG	2.18	0.43
23:DB:39:G:H2'	23:DB:40:U:H6	1.84	0.43
1:CA:403:C:H2'	1:CA:404:G:C8	2.51	0.43
23:DB:839:U:H2'	23:DB:840:C:C6	2.52	0.43
20:AB:18:GLN:O	20:AB:37:VAL:HG23	2.18	0.43
49:DR:2:TYR:CB	49:DR:42:ALA:HB2	2.49	0.43
1:AA:642:A:H2'	1:AA:643:C:C6	2.51	0.43
23:DB:958:U:O4	38:DM:16:ARG:HA	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1576:U:O2'	23:BB:1577:C:H5'	2.19	0.43
23:DB:64:A:H2'	23:DB:65:U:H6	1.84	0.43
23:DB:51:G:H1'	23:DB:118:A:N6	2.34	0.43
23:DB:930:G:H1'	30:DY:24:LEU:HD11	2.01	0.43
23:DB:2852:G:H2'	23:DB:2853:C:H6	1.82	0.43
23:DB:934:U:H2'	23:DB:935:C:H6	1.84	0.43
23:DB:912:C:O2'	23:DB:913:U:H5'	2.19	0.43
9:AJ:8:ILE:HD13	9:AJ:74:VAL:CG1	2.49	0.43
1:AA:894:G:O2'	1:AA:895:G:H5'	2.19	0.43
23:BB:2847:U:H5''	28:BP:94:ALA:HB2	2.00	0.43
3:CD:173:ASP:OD1	3:CD:176:LYS:HD3	2.19	0.43
1:CA:65:A:C4	1:CA:381:C:C4	3.07	0.43
23:BB:1739:A:H2'	23:BB:1740:G:C8	2.53	0.43
23:BB:1740:G:H2'	23:BB:1741:C:C6	2.54	0.43
23:BB:2220:U:O2'	23:BB:2221:G:H5'	2.18	0.43
38:BM:54:THR:O	38:BM:56:ALA:N	2.45	0.43
1:CA:355:C:O2'	1:CA:356:A:H5'	2.18	0.43
23:DB:1333:G:H2'	23:DB:1334:G:H8	1.82	0.43
23:DB:244:A:H2'	23:DB:245:G:O4'	2.19	0.43
43:DO:77:ALA:O	43:DO:81:ARG:HD3	2.18	0.43
23:BB:1567:G:H5'	25:BC:57:HIS:CD2	2.53	0.43
24:BI:15:GLY:O	24:BI:16:MET:HB2	2.19	0.43
40:DH:27:ARG:HE	51:DZ:64:ILE:HD11	1.84	0.43
21:CU:35:GLU:HB3	21:CU:36:PHE:H	1.47	0.43
20:AB:70:GLY:HA2	20:AB:163:ILE:CG2	2.48	0.43
23:DB:2336:A:N6	52:DW:40:ARG:HB3	2.33	0.43
52:DW:18:LYS:H	52:DW:35:ILE:CG2	2.32	0.43
52:DW:39:GLN:HG3	52:DW:42:THR:N	2.34	0.43
26:BD:54:ALA:HA	26:BD:76:GLY:N	2.33	0.43
52:DW:9:THR:HG23	52:DW:10:ARG:CD	2.32	0.43
19:CT:42:ASP:HA	19:CT:43:LYS:NZ	2.34	0.43
29:BE:131:THR:HB	29:BE:164:LEU:HG	2.00	0.43
29:BE:153:LEU:HG	29:BE:154:ASP:N	2.34	0.43
50:DT:57:VAL:HG12	50:DT:86:THR:OG1	2.19	0.43
10:CK:57:SER:O	10:CK:90:PRO:HG3	2.18	0.43
20:AB:184:ALA:C	20:AB:199:ILE:HD12	2.39	0.43
37:BL:92:LEU:CD2	37:BL:124:GLY:HA3	2.48	0.43
1:AA:692:U:C2	1:AA:694:A:H5''	2.54	0.43
1:AA:697:U:O2	1:AA:798:U:H1'	2.19	0.43
10:AK:124:LYS:O	21:AU:33:ARG:HG2	2.18	0.43
37:BL:81:ASP:HA	37:BL:84:LYS:CE	2.36	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:64:VAL:O	25:BC:65:ASP:CB	2.54	0.43
50:BT:57:VAL:HG12	50:BT:86:THR:OG1	2.18	0.43
44:DQ:104:ALA:C	44:DQ:106:THR:H	2.21	0.43
20:CB:96:LEU:HD23	20:CB:99:MET:HE3	2.00	0.43
47:BF:74:ALA:HB1	47:BF:76:PHE:CD2	2.53	0.43
23:BB:1060:U:C1'	23:BB:1062:G:H5'	2.49	0.43
39:DX:6:LEU:O	39:DX:7:ARG:HB3	2.19	0.43
23:DB:1203:U:C4'	37:DL:3:LEU:HD12	2.48	0.43
20:AB:27:LYS:CA	20:AB:30:ILE:HD12	2.39	0.43
19:AT:43:LYS:HB3	19:AT:85:LEU:HD21	2.01	0.43
51:DZ:28:ARG:O	51:DZ:28:ARG:HG2	2.18	0.43
4:CE:57:ALA:O	4:CE:61:LYS:HG2	2.18	0.43
48:BG:1:SER:O	48:BG:3:VAL:N	2.52	0.43
41:DJ:110:PRO:O	41:DJ:115:GLY:HA3	2.19	0.43
26:DD:98:VAL:C	26:DD:100:LEU:H	2.21	0.43
20:CB:27:LYS:C	20:CB:27:LYS:HD2	2.38	0.43
15:AP:46:LYS:O	15:AP:47:GLU:HB2	2.18	0.43
27:BK:43:ILE:HG21	27:BK:46:ALA:HB2	2.01	0.43
3:CD:105:GLY:O	3:CD:157:ALA:HB1	2.18	0.43
1:AA:1323:G:H4'	1:AA:1362:A:C4	2.54	0.43
1:CA:412:A:O2'	1:CA:413:G:H5''	2.19	0.43
23:BB:163:C:O2	23:BB:163:C:O4'	2.37	0.43
1:CA:16:A:H2	1:CA:1080:A:N3	2.17	0.43
14:CO:88:ARG:O	14:CO:89:ARG:HB2	2.19	0.43
18:AS:28:LYS:N	18:AS:28:LYS:HD2	2.34	0.43
18:AS:28:LYS:HZ2	18:AS:28:LYS:N	2.08	0.43
23:BB:1175:A:H3'	23:BB:1176:U:O4'	2.19	0.43
48:DG:1:SER:O	48:DG:3:VAL:N	2.51	0.43
1:CA:276:G:O2'	1:CA:277:C:H5'	2.19	0.43
48:BG:9:VAL:HG12	48:BG:11:PRO:CD	2.47	0.43
24:DI:105:LEU:HD11	24:DI:139:VAL:CG2	2.43	0.43
3:AD:96:ARG:O	3:AD:100:VAL:HG23	2.19	0.43
12:CM:15:VAL:HG13	12:CM:30:LYS:HA	1.99	0.43
12:CM:42:VAL:HB	12:CM:47:LEU:CD2	2.44	0.43
26:BD:62:LYS:O	26:BD:66:GLY:N	2.51	0.43
23:BB:2590:A:H5''	25:BC:237:ARG:NH2	2.33	0.43
23:BB:1803:A:H4'	25:BC:256:THR:OG1	2.18	0.43
23:DB:2345:G:N3	23:DB:2381:A:H2'	2.33	0.43
37:BL:96:LYS:HE2	37:BL:102:GLY:O	2.19	0.43
23:BB:2751:G:N3	23:BB:2751:G:C2'	2.78	0.43
3:AD:3:TYR:O	3:AD:4:LEU:HD12	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1509:A:H4'	23:DB:1510:G:C8	2.53	0.43
50:BT:74:ILE:HG13	50:BT:75:GLY:N	2.34	0.43
1:CA:321:A:O2'	1:CA:322:C:H5'	2.18	0.43
3:AD:18:LEU:HD11	3:AD:59:LYS:HG3	1.99	0.43
15:CP:20:VAL:HG23	15:CP:34:GLU:C	2.39	0.43
5:CF:51:ILE:O	5:CF:51:ILE:HG23	2.19	0.43
46:DU:70:ALA:HB1	46:DU:79:ALA:CB	2.49	0.43
23:BB:2737:G:H2'	23:BB:2738:A:H8	1.83	0.43
1:AA:676:A:H2'	1:AA:677:U:C6	2.53	0.43
1:CA:159:G:N1	1:CA:163:C:N4	2.67	0.43
10:CK:75:GLU:N	10:CK:75:GLU:CD	2.71	0.43
23:DB:832:U:H2'	23:DB:833:A:C8	2.54	0.43
23:DB:1257:C:H5'	29:DE:78:TRP:CZ3	2.54	0.43
41:BJ:12:LYS:O	41:BJ:13:ARG:HB2	2.18	0.43
1:CA:36:C:O2'	1:CA:37:U:H5'	2.18	0.43
1:AA:1310:G:O2'	1:AA:1311:A:H5'	2.18	0.43
18:AS:71:GLY:C	18:AS:73:PHE:H	2.22	0.43
44:DQ:35:PHE:C	44:DQ:37:ALA:N	2.71	0.43
8:AI:66:VAL:HG21	8:AI:74:GLN:HG3	2.01	0.43
23:DB:2543:G:H2'	23:DB:2544:G:C8	2.53	0.43
10:AK:15:VAL:HB	10:AK:78:ILE:CD1	2.49	0.43
1:CA:825:A:H2'	1:CA:826:C:C6	2.53	0.43
23:BB:2243:U:O2	23:BB:2434:A:C2	2.72	0.43
12:CM:79:LEU:HD13	12:CM:86:ARG:HB3	2.01	0.43
23:DB:1535:A:O2'	23:DB:1536:C:H5'	2.17	0.43
6:AG:104:VAL:O	6:AG:108:ARG:HG3	2.18	0.43
7:AH:25:THR:O	7:AH:26:MET:HB3	2.19	0.43
1:CA:1270:G:H2'	1:CA:1271:A:C8	2.52	0.43
43:BO:28:VAL:CG2	43:BO:106:LEU:HD21	2.47	0.43
22:BA:39:A:H2	22:BA:46:A:H61	1.67	0.43
23:BB:2825:G:H2'	23:BB:2826:A:H5'	2.00	0.43
23:DB:2282:G:H5''	23:DB:2283:C:O4'	2.19	0.43
23:DB:552:U:O2'	23:DB:553:G:H5'	2.18	0.43
1:AA:1014:A:H2'	1:AA:1015:G:C8	2.54	0.43
4:AE:15:ILE:HD12	4:AE:35:LEU:HG	2.00	0.43
23:DB:2617:U:C4	23:DB:2618:G:N7	2.87	0.43
23:BB:1843:C:O2'	23:BB:1844:C:H5'	2.19	0.43
23:DB:2888:C:H2'	23:DB:2889:C:C6	2.54	0.43
26:BD:45:TYR:CD1	26:BD:45:TYR:N	2.87	0.43
22:DA:92:C:O2'	22:DA:93:C:H5'	2.18	0.43
23:DB:1118:C:H2'	23:DB:1119:U:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:59:ILE:HG13	47:BF:59:ILE:H	1.66	0.43
15:CP:38:PHE:CD2	15:CP:51:ARG:HB2	2.53	0.43
23:BB:1904:G:O2'	23:BB:1905:C:H5'	2.19	0.43
40:BH:14:SER:C	40:BH:16:GLY:N	2.72	0.43
1:CA:1067:A:H4'	1:CA:1068:G:O5'	2.18	0.43
23:BB:2659:G:N2	23:BB:2661:G:H3'	2.34	0.43
45:BS:40:ASN:O	45:BS:41:LYS:HG3	2.18	0.43
2:AC:55:VAL:HG12	2:AC:56:ILE:N	2.34	0.43
10:CK:68:ARG:HH11	10:CK:68:ARG:HG3	1.83	0.43
39:BX:59:GLU:OE2	39:BX:59:GLU:N	2.52	0.43
1:AA:903:G:H2'	1:AA:904:U:C6	2.54	0.43
23:BB:1333:G:H2'	23:BB:1334:G:H8	1.84	0.43
25:DC:106:PRO:HB3	25:DC:141:HIS:CE1	2.54	0.43
44:DQ:111:LYS:HZ3	49:DR:50:GLY:HA2	1.83	0.43
29:DE:134:LEU:HD12	29:DE:134:LEU:O	2.19	0.43
50:DT:4:GLU:CD	50:DT:5:GLU:N	2.72	0.43
50:DT:55:VAL:HG22	50:DT:87:LEU:CD2	2.49	0.43
10:CK:22:ILE:HG12	10:CK:31:VAL:HG12	2.00	0.43
48:BG:71:LEU:O	48:BG:74:MET:HB2	2.18	0.43
37:BL:89:VAL:HG23	37:BL:123:ARG:CG	2.45	0.43
43:DO:49:VAL:HG11	43:DO:82:ALA:HB2	2.00	0.43
47:BF:41:GLU:HB2	47:BF:48:LEU:HD11	2.00	0.43
40:BH:131:SER:CA	40:BH:141:LYS:HA	2.41	0.43
23:BB:2305:U:H1'	47:BF:132:ARG:HA	2.00	0.43
1:AA:98:A:O2'	1:AA:99:C:H5'	2.19	0.43
45:BS:47:VAL:HG23	45:BS:48:LYS:N	2.33	0.43
42:DN:82:GLU:O	42:DN:84:GLY:N	2.52	0.43
6:CG:22:LEU:O	6:CG:26:VAL:HG13	2.18	0.43
51:BZ:28:ARG:HG2	51:BZ:28:ARG:O	2.19	0.43
23:DB:138:U:O3'	23:DB:140:C:OP2	2.37	0.43
14:AO:70:LEU:HD12	14:AO:78:TYR:CB	2.49	0.43
41:DJ:24:THR:OG1	41:DJ:27:ARG:HD2	2.19	0.43
1:CA:1411:C:H2'	1:CA:1412:C:H6	1.83	0.43
22:BA:51:G:H2'	22:BA:52:A:O5'	2.19	0.43
18:AS:29:PRO:HA	18:AS:47:THR:HG22	2.00	0.43
23:BB:1174:U:H2'	23:BB:1175:A:H5''	1.99	0.43
23:BB:1177:G:H2'	23:BB:1178:C:C6	2.53	0.43
1:CA:252:U:H2'	1:CA:253:A:H8	1.83	0.43
1:CA:424:G:O2'	1:CA:425:G:H5'	2.19	0.43
1:CA:238:A:C3'	1:CA:239:U:H5''	2.49	0.43
23:BB:613:A:C2	29:BE:173:THR:HG21	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2784:U:O2'	23:BB:2785:C:H5'	2.19	0.43
1:AA:1253:G:N1	1:AA:1285:A:N6	2.67	0.43
1:AA:663:A:O2'	1:AA:664:G:H5'	2.19	0.43
23:DB:920:A:H2'	23:DB:921:C:H6	1.82	0.43
9:AJ:52:LEU:CB	13:AN:80:ARG:HE	2.32	0.43
38:DM:42:THR:HB	38:DM:45:GLN:HG3	2.01	0.43
8:AI:35:GLU:HG3	8:AI:44:ARG:HD2	2.00	0.43
37:DL:82:LEU:O	37:DL:85:VAL:HG12	2.19	0.43
1:AA:737:C:H2'	1:AA:738:C:C6	2.54	0.43
23:BB:6:A:O2'	23:BB:7:G:H5'	2.19	0.43
1:AA:1173:U:H2'	1:AA:1174:G:H8	1.82	0.43
23:DB:781:A:OP1	25:DC:216:ARG:NH2	2.51	0.43
25:DC:216:ARG:NH1	25:DC:216:ARG:HG3	2.31	0.43
23:DB:2135:A:N6	23:DB:2156:G:O2'	2.48	0.43
49:BR:49:ILE:HG22	49:BR:54:VAL:HB	2.00	0.43
23:DB:993:G:OP1	44:DQ:49:ARG:NH1	2.52	0.43
23:DB:540:C:H2'	23:DB:541:A:C8	2.53	0.43
23:BB:978:G:O4'	23:BB:1001:A:H2	2.02	0.43
14:CO:59:MET:HG2	14:CO:59:MET:H	1.60	0.43
1:AA:195:A:H1'	1:AA:222:C:HO2'	1.83	0.43
20:CB:139:GLU:HG2	20:CB:143:LEU:HD12	2.01	0.43
42:BN:11:ASN:O	42:BN:12:ARG:HB2	2.17	0.43
23:DB:2154:A:H2'	23:DB:2155:U:O4'	2.19	0.43
34:D3:23:HIS:ND1	34:D3:24:LYS:N	2.67	0.43
1:AA:1082:A:O2'	1:AA:1083:U:H5'	2.19	0.43
1:CA:169:C:O2'	1:CA:170:U:H5'	2.19	0.43
22:DA:88:C:HO2'	22:DA:89:U:H6	1.66	0.43
20:AB:148:GLY:C	20:AB:150:ILE:H	2.23	0.43
1:AA:1232:U:P	8:AI:127:SER:HG	2.42	0.43
23:BB:2028:U:O2'	23:BB:2029:G:H5'	2.18	0.43
26:BD:111:GLY:H	26:BD:194:PRO:CG	2.32	0.43
9:AJ:8:ILE:HD13	9:AJ:74:VAL:HG12	2.01	0.43
17:CR:43:ILE:O	17:CR:44:THR:HG23	2.18	0.43
1:CA:613:C:H2'	1:CA:614:C:H6	1.83	0.43
26:DD:202:ILE:HD12	26:DD:202:ILE:N	2.33	0.43
2:CC:80:GLY:O	2:CC:84:GLU:HB2	2.19	0.43
34:B3:23:HIS:ND1	34:B3:24:LYS:N	2.67	0.43
14:AO:45:GLU:O	14:AO:47:LYS:N	2.51	0.43
25:DC:132:ARG:HG3	25:DC:132:ARG:O	2.18	0.43
1:AA:10:A:OP2	4:AE:130:THR:HB	2.19	0.43
23:BB:518:G:H2'	23:BB:519:U:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DZ:30:LEU:HA	51:DZ:31:PRO:HD3	1.93	0.43
51:BZ:6:GLN:HE21	51:BZ:50:ARG:N	2.01	0.43
23:DB:580:U:O3'	44:DQ:30:VAL:HG23	2.19	0.43
8:AI:34:LEU:CD1	8:AI:47:VAL:HG21	2.49	0.43
50:BT:4:GLU:CD	50:BT:5:GLU:N	2.72	0.43
48:BG:23:ILE:O	48:BG:34:ARG:HA	2.18	0.43
20:AB:95:TRP:HZ3	20:AB:174:GLU:OE2	2.02	0.43
25:BC:141:HIS:CG	25:BC:142:ASN:N	2.87	0.43
10:CK:124:LYS:O	10:CK:125:LYS:HB2	2.19	0.43
20:CB:94:ARG:HG2	20:CB:94:ARG:O	2.18	0.43
23:DB:2598:A:H5''	25:DC:233:GLY:HA3	2.00	0.43
47:BF:78:ILE:HA	47:BF:79:ARG:HH11	1.84	0.43
37:DL:81:ASP:HA	37:DL:84:LYS:CE	2.37	0.43
37:DL:84:LYS:C	37:DL:86:GLU:H	2.20	0.43
28:BP:9:GLN:HA	28:BP:12:MET:SD	2.59	0.43
37:DL:40:SER:C	37:DL:41:ARG:HG3	2.39	0.43
40:DH:125:THR:CA	40:DH:146:VAL:HB	2.41	0.43
38:BM:18:ARG:HD2	38:BM:18:ARG:HA	1.74	0.43
47:DF:130:GLY:HA2	47:DF:152:ASP:HA	2.01	0.43
23:DB:1056:G:H5''	23:DB:1057:A:H5'	2.00	0.43
46:DU:47:PRO:HB3	46:DU:55:GLY:HA3	2.01	0.43
48:DG:93:TYR:HE1	48:DG:160:GLY:HA2	1.84	0.43
30:BY:8:GLN:OE1	30:BY:23:LEU:HD11	2.18	0.43
23:BB:2144:G:N2	23:BB:2146:C:O4'	2.49	0.43
43:BO:35:ILE:HG13	43:BO:71:ALA:HB2	2.01	0.43
46:BU:25:LYS:N	46:BU:34:ILE:O	2.51	0.43
1:CA:255:G:H2'	1:CA:256:U:H6	1.84	0.43
24:DI:129:GLU:CB	24:DI:133:ARG:HH12	2.31	0.43
3:AD:104:MET:CE	3:AD:170:LEU:HD13	2.48	0.43
12:CM:3:ILE:HA	12:CM:56:ARG:CG	2.43	0.43
29:DE:157:LEU:HG	29:DE:169:VAL:HG11	2.00	0.43
31:D0:41:HIS:O	31:D0:42:ILE:O	2.37	0.43
23:BB:2785:C:H2'	23:BB:2786:U:C6	2.53	0.43
23:BB:2819:G:H2'	23:BB:2821:A:N7	2.33	0.43
23:BB:1548:A:H2'	23:BB:1549:A:H8	1.82	0.43
25:BC:245:THR:OG1	25:BC:249:VAL:HG23	2.19	0.43
28:DP:50:ARG:HB3	28:DP:57:ALA:O	2.19	0.43
2:AC:137:VAL:HA	2:AC:148:ILE:CD1	2.46	0.43
48:BG:120:ILE:C	48:BG:120:ILE:HD13	2.39	0.43
48:BG:132:LEU:HG	48:BG:132:LEU:H	1.71	0.43
28:BP:91:VAL:HG11	28:BP:96:LEU:CD1	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:72:ILE:O	12:CM:76:ILE:HG13	2.19	0.43
4:CE:148:SER:OG	4:CE:151:MET:HB2	2.19	0.43
8:CI:35:GLU:HG3	8:CI:44:ARG:HD2	2.01	0.43
46:BU:11:ILE:CG2	46:BU:12:VAL:N	2.82	0.43
1:AA:490:C:H2'	1:AA:491:G:H8	1.83	0.43
23:BB:751:A:C5'	45:BS:90:LYS:HA	2.48	0.43
2:AC:133:MET:SD	2:AC:152:VAL:HG23	2.59	0.43
1:CA:818:G:C2'	1:CA:819:A:H5''	2.49	0.43
46:DU:20:LYS:HB2	46:DU:20:LYS:HE2	1.91	0.43
7:AH:39:LEU:HD21	7:AH:128:VAL:HG21	2.00	0.43
23:DB:528:A:H2	23:DB:2043:C:H4'	1.83	0.43
23:DB:1939:U:H5'	23:DB:1939:U:C6	2.52	0.43
6:AG:70:PRO:HA	6:AG:141:HIS:CE1	2.54	0.43
23:DB:2839:G:H2'	23:DB:2840:C:H6	1.83	0.43
24:BI:14:ALA:CB	24:BI:50:LYS:HA	2.49	0.43
1:CA:175:C:H2'	1:CA:176:C:H6	1.84	0.43
23:DB:1052:C:H2'	23:DB:1053:C:O4'	2.18	0.43
23:BB:902:C:H2'	23:BB:903:C:C6	2.53	0.43
23:DB:302:C:H2'	23:DB:303:G:H8	1.83	0.43
23:BB:1291:C:O2'	23:BB:1292:G:H5'	2.19	0.43
23:DB:219:A:O2'	23:DB:220:G:H5'	2.19	0.43
1:AA:825:A:H2'	1:AA:826:C:C6	2.53	0.43
23:BB:766:U:H2'	23:BB:767:U:C6	2.54	0.43
19:AT:72:ALA:O	19:AT:75:LYS:HD3	2.19	0.43
1:AA:537:G:H2'	1:AA:538:G:C8	2.53	0.43
23:BB:2389:G:H5''	23:BB:2390:U:O4'	2.18	0.43
1:AA:210:C:H1'	1:AA:211:G:C2	2.54	0.43
3:CD:50:TYR:HA	3:CD:53:GLN:HE21	1.83	0.43
23:BB:2104:C:C3'	23:BB:2104:C:C6	3.00	0.43
26:DD:125:TRP:CG	26:DD:160:LYS:HB3	2.54	0.43
26:DD:159:LYS:HD3	26:DD:159:LYS:C	2.39	0.43
23:BB:2888:C:H2'	23:BB:2889:C:C6	2.54	0.43
17:AR:44:THR:C	17:AR:46:THR:H	2.22	0.43
23:DB:2659:G:N2	23:DB:2661:G:H3'	2.34	0.43
23:DB:2363:G:O2'	23:DB:2364:C:H5'	2.19	0.43
23:BB:282:A:O2'	23:BB:283:G:H5'	2.19	0.43
2:CC:4:VAL:HG22	2:CC:5:HIS:N	2.34	0.43
23:DB:1720:U:C2'	23:DB:1721:G:H5'	2.49	0.43
23:DB:566:U:H2'	23:DB:567:U:O4'	2.19	0.43
1:CA:1111:A:O2'	1:CA:1112:C:H5'	2.19	0.43
1:CA:1149:C:H2'	1:CA:1150:A:C8	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DW:39:GLN:CG	52:DW:40:ARG:N	2.78	0.42
26:BD:54:ALA:N	26:BD:76:GLY:HA2	2.34	0.42
8:AI:27:ILE:CG2	8:AI:34:LEU:HB2	2.49	0.42
5:AF:62:MET:O	5:AF:63:ASN:HB2	2.18	0.42
25:DC:145:MET:HB2	25:DC:152:GLN:HE22	1.84	0.42
44:DQ:63:ARG:HH12	44:DQ:96:ASP:HA	1.83	0.42
49:DR:38:VAL:HG11	49:DR:41:ILE:HD11	2.01	0.42
28:DP:61:ARG:HD3	28:DP:70:GLU:OE1	2.19	0.42
50:DT:32:LEU:HG	50:DT:83:ALA:HB2	2.01	0.42
18:CS:43:MET:CG	18:CS:61:VAL:HG21	2.44	0.42
12:AM:78:ARG:HH22	18:AS:68:HIS:CE1	2.37	0.42
49:BR:6:GLN:HE22	49:BR:9:GLY:C	2.23	0.42
20:AB:104:LYS:HA	20:AB:107:ARG:HD3	2.01	0.42
37:BL:122:VAL:HG23	37:BL:143:GLU:OE1	2.19	0.42
23:BB:2204:G:OP2	25:BC:146:LYS:HD2	2.19	0.42
25:BC:173:LEU:N	25:BC:173:LEU:CD2	2.80	0.42
50:BT:29:THR:HA	50:BT:86:THR:CA	2.42	0.42
45:DS:17:VAL:HG11	45:DS:103:ILE:HG12	2.01	0.42
40:BH:106:ALA:C	40:BH:108:VAL:N	2.73	0.42
23:BB:1204:A:N1	23:BB:1241:A:N1	2.67	0.42
26:DD:98:VAL:C	26:DD:100:LEU:N	2.72	0.42
15:AP:45:GLU:C	15:AP:47:GLU:H	2.22	0.42
23:BB:2598:A:H5''	25:BC:233:GLY:HA3	2.01	0.42
47:BF:102:LEU:HA	47:BF:106:ALA:HB2	1.99	0.42
47:BF:102:LEU:CD2	47:BF:106:ALA:HB3	2.49	0.42
47:BF:116:LEU:HB3	47:BF:176:PHE:CA	2.47	0.42
23:DB:1057:A:H62	23:DB:1086:A:H2'	1.83	0.42
30:DY:6:ILE:HG22	30:DY:7:THR:H	1.84	0.42
26:DD:114:LYS:H	26:DD:114:LYS:HG2	1.61	0.42
30:BY:51:SER:HA	30:BY:54:VAL:HG22	2.01	0.42
22:BA:43:C:C2'	47:BF:91:ARG:HD2	2.49	0.42
40:DH:96:THR:OG1	40:DH:97:ARG:N	2.52	0.42
23:BB:2861:U:H2'	23:BB:2862:G:C8	2.52	0.42
12:AM:53:ASP:HA	12:AM:56:ARG:CZ	2.49	0.42
12:AM:7:ASN:HD22	12:AM:7:ASN:H	1.67	0.42
1:AA:235:C:H1'	16:AQ:62:GLU:OE1	2.19	0.42
1:AA:252:U:H2'	1:AA:253:A:H8	1.84	0.42
23:BB:674:G:O3'	29:BE:60:TRP:CZ2	2.71	0.42
23:DB:982:C:O2	23:DB:982:C:H2'	2.17	0.42
48:DG:83:THR:HA	48:DG:84:LYS:NZ	2.34	0.42
49:DR:18:GLN:O	49:DR:18:GLN:HG3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:865:A:C2	1:AA:918:A:H4'	2.54	0.42
1:AA:664:G:N2	1:AA:741:G:H1	2.15	0.42
4:AE:43:GLY:O	4:AE:44:ARG:HG3	2.19	0.42
23:DB:1408:G:O2'	23:DB:1409:U:H5'	2.19	0.42
20:CB:221:ARG:HG3	20:CB:222:GLU:N	2.33	0.42
26:BD:13:ARG:HH12	28:BP:74:GLN:CG	2.31	0.42
23:DB:433:C:O2'	23:DB:434:U:H5'	2.19	0.42
1:AA:364:A:H2'	1:AA:365:U:O2	2.19	0.42
1:AA:214:C:H2'	1:AA:215:C:C6	2.53	0.42
1:AA:213:G:H3'	1:AA:214:C:H6	1.84	0.42
1:CA:1201:A:H5''	1:CA:1201:A:C8	2.54	0.42
1:AA:597:G:H2'	1:AA:598:U:H5'	2.00	0.42
11:AL:81:ILE:CG2	11:AL:94:TYR:HB3	2.49	0.42
46:BU:70:ALA:HB1	46:BU:79:ALA:CB	2.49	0.42
1:CA:44:A:O2'	1:CA:45:G:H5'	2.19	0.42
23:BB:974:G:P	49:BR:78:ARG:HD3	2.58	0.42
1:CA:551:U:H2'	1:CA:552:U:H6	1.83	0.42
1:CA:551:U:H2'	1:CA:552:U:C6	2.53	0.42
1:AA:711:G:O2'	1:AA:712:A:H5'	2.19	0.42
48:BG:21:GLN:O	48:BG:37:ASN:HB2	2.18	0.42
10:AK:75:GLU:N	10:AK:75:GLU:CD	2.72	0.42
23:BB:782:A:C2	25:BC:224:MET:SD	3.12	0.42
1:CA:1355:G:O2'	1:CA:1356:G:H5'	2.19	0.42
23:DB:674:G:H2'	23:DB:804:A:H61	1.84	0.42
1:AA:131:A:H2'	1:AA:132:C:H6	1.80	0.42
41:BJ:13:ARG:HB3	41:BJ:53:TYR:HD2	1.84	0.42
5:CF:46:GLN:HE21	5:CF:46:GLN:HB2	1.61	0.42
12:AM:79:LEU:HD13	12:AM:86:ARG:HB3	2.00	0.42
1:AA:1451:U:O2	1:AA:1451:U:O4'	2.36	0.42
23:DB:1400:U:O2'	23:DB:1401:G:H5'	2.19	0.42
49:DR:59:ILE:HA	49:DR:101:ILE:H	1.83	0.42
48:DG:174:LYS:NZ	48:DG:176:LYS:HG2	2.33	0.42
1:CA:167:A:O2'	1:CA:168:G:H5'	2.19	0.42
23:DB:133:U:H2'	23:DB:134:G:C8	2.54	0.42
23:DB:133:U:H2'	23:DB:134:G:H8	1.84	0.42
5:AF:12:PRO:C	5:AF:14:GLN:H	2.22	0.42
23:DB:1397:U:H5''	23:DB:1398:C:H5	1.82	0.42
6:CG:135:LYS:HE2	6:CG:139:ASP:OD2	2.19	0.42
23:DB:235:U:H2'	23:DB:236:C:H6	1.84	0.42
23:DB:2488:G:O2'	23:DB:2489:U:H5'	2.19	0.42
23:DB:932:U:H1'	23:DB:934:U:C4	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:599:A:H2'	23:BB:600:G:H8	1.84	0.42
1:AA:126:G:H4'	1:AA:634:C:H1'	2.00	0.42
23:DB:659:G:H4'	29:DE:95:LYS:CD	2.49	0.42
3:AD:53:GLN:HA	3:AD:198:LEU:HD22	2.00	0.42
26:BD:60:VAL:O	26:BD:60:VAL:HG23	2.19	0.42
23:DB:1739:A:H2'	23:DB:1740:G:O4'	2.19	0.42
45:BS:81:SER:HA	45:BS:99:ARG:HA	1.99	0.42
23:DB:596:U:H2'	23:DB:597:G:H8	1.84	0.42
1:CA:330:C:O2'	1:CA:331:G:H5'	2.18	0.42
23:BB:2379:G:H2'	23:BB:2380:C:C6	2.54	0.42
23:DB:1224:U:H4'	49:DR:88:GLY:O	2.19	0.42
23:BB:838:C:C2	23:BB:941:A:C6	3.07	0.42
23:DB:807:U:H2'	23:DB:808:G:H8	1.84	0.42
1:CA:775:G:O2'	1:CA:776:G:H5'	2.19	0.42
23:BB:586:A:H5'	29:BE:84:THR:OG1	2.18	0.42
28:BP:36:LYS:HA	28:BP:36:LYS:HD3	1.90	0.42
23:BB:991:C:H6	23:BB:991:C:H5'	1.84	0.42
23:DB:1764:C:O2'	23:DB:1765:U:H5'	2.18	0.42
23:BB:1864:U:O2'	23:BB:1865:U:H5'	2.19	0.42
23:DB:923:G:H1'	52:DW:23:LYS:NZ	2.32	0.42
48:BG:89:VAL:HG12	48:BG:90:GLY:N	2.33	0.42
23:BB:1459:G:H5''	23:BB:1460:U:OP1	2.19	0.42
41:DJ:38:GLY:O	41:DJ:43:GLU:HB2	2.19	0.42
29:BE:117:ARG:HA	29:BE:185:LYS:HG2	2.00	0.42
47:DF:43:ILE:HG13	47:DF:44:ALA:N	2.33	0.42
48:BG:26:LYS:CB	48:BG:32:LEU:HG	2.43	0.42
18:AS:38:THR:HA	18:AS:68:HIS:O	2.18	0.42
49:BR:4:VAL:HB	49:BR:39:LEU:HG	2.01	0.42
37:BL:81:ASP:O	37:BL:83:ALA:N	2.45	0.42
50:BT:48:GLN:HE21	50:BT:48:GLN:CA	2.19	0.42
25:DC:129:LEU:HB3	25:DC:134:ILE:CG2	2.47	0.42
20:CB:46:VAL:N	20:CB:47:PRO:CD	2.83	0.42
1:AA:71:A:H2'	1:AA:72:A:H8	1.84	0.42
1:CA:1302:C:C2	12:CM:16:ILE:HD12	2.54	0.42
45:BS:28:LYS:HB3	45:BS:29:VAL:H	1.43	0.42
45:BS:24:ILE:CD1	45:BS:36:LEU:HD21	2.48	0.42
37:DL:40:SER:O	37:DL:44:GLY:HA3	2.18	0.42
23:DB:327:G:O2'	23:DB:328:U:H5'	2.18	0.42
47:DF:2:LYS:CD	47:DF:100:GLU:HG2	2.46	0.42
23:BB:1140:C:C2'	23:BB:1141:U:H5'	2.49	0.42
47:BF:118:ALA:HA	47:BF:176:PHE:HE2	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:47:PRO:HB3	46:BU:55:GLY:HA3	2.02	0.42
4:CE:132:PRO:HG2	4:CE:133:ILE:H	1.84	0.42
23:BB:1559:U:H3'	23:BB:1560:G:H5'	2.01	0.42
8:AI:119:LYS:C	8:AI:121:ARG:H	2.21	0.42
12:AM:28:ARG:CZ	12:AM:62:PHE:HB2	2.50	0.42
12:CM:39:ALA:HB3	12:CM:42:VAL:CG1	2.48	0.42
41:BJ:23:LYS:HE3	41:BJ:142:ILE:HG12	2.02	0.42
9:CJ:15:HIS:HA	9:CJ:18:ILE:CG2	2.46	0.42
48:DG:117:PRO:HD2	48:DG:120:ILE:HG21	2.02	0.42
1:AA:864:A:H2'	1:AA:865:A:C8	2.53	0.42
23:BB:1805:A:N3	25:BC:49:THR:HG23	2.33	0.42
4:CE:39:GLY:HA2	4:CE:44:ARG:O	2.19	0.42
23:DB:773:U:O2'	25:DC:47:ARG:HD3	2.19	0.42
1:CA:947:G:H2'	1:CA:948:C:C6	2.54	0.42
10:CK:86:LYS:HB2	10:CK:113:THR:HA	2.01	0.42
31:D0:27:LEU:HB2	31:D0:28:SER:H	1.57	0.42
23:BB:2098:U:H2'	23:BB:2099:U:O4'	2.19	0.42
25:DC:18:VAL:O	25:DC:18:VAL:HG13	2.19	0.42
45:BS:25:ARG:HB2	45:BS:25:ARG:HH11	1.84	0.42
1:AA:1056:U:O2'	1:AA:1057:G:H5'	2.18	0.42
22:DA:8:C:OP1	43:DO:15:ARG:NH2	2.47	0.42
28:BP:89:GLY:HA2	28:BP:112:ARG:H	1.83	0.42
23:BB:314:C:O2'	23:BB:315:G:H5'	2.18	0.42
1:AA:1390:U:H2'	1:AA:1391:U:H6	1.80	0.42
51:BZ:63:GLY:HA3	51:BZ:66:THR:OG1	2.19	0.42
23:BB:607:U:O4	23:BB:620:G:H5''	2.19	0.42
25:BC:71:ASP:C	25:BC:73:ILE:H	2.22	0.42
1:CA:83:C:O3'	1:CA:84:U:H6	2.01	0.42
11:AL:68:GLY:HA3	11:AL:106:VAL:CG2	2.49	0.42
11:CL:68:GLY:HA3	11:CL:106:VAL:CG2	2.49	0.42
23:BB:832:U:H2'	23:BB:833:A:C8	2.53	0.42
1:AA:36:C:O2'	1:AA:37:U:H5'	2.18	0.42
51:DZ:20:HIS:C	51:DZ:22:LEU:H	2.23	0.42
23:DB:1163:G:O2'	23:DB:1164:C:H5'	2.20	0.42
25:DC:239:PHE:HD1	25:DC:241:LYS:H	1.66	0.42
23:BB:1537:G:H5'	23:BB:1538:G:OP2	2.19	0.42
23:BB:2243:U:O2'	23:BB:2244:U:H5'	2.19	0.42
25:BC:124:LYS:H	25:BC:191:LEU:HD13	1.84	0.42
1:AA:1143:G:H2'	1:AA:1144:G:H8	1.84	0.42
23:DB:2283:C:H5''	23:DB:2389:G:O2'	2.19	0.42
11:CL:3:VAL:O	11:CL:7:VAL:HG23	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1292:G:H2'	1:CA:1293:C:H6	1.84	0.42
23:BB:85:G:OP1	46:BU:6:ARG:N	2.52	0.42
23:BB:2345:G:N3	23:BB:2381:A:H2'	2.33	0.42
23:DB:289:G:H2'	23:DB:290:U:H6	1.83	0.42
33:D1:18:HIS:CD2	33:D1:40:PRO:HD2	2.53	0.42
48:DG:139:VAL:O	48:DG:142:GLN:HB3	2.19	0.42
1:AA:724:G:O2'	1:AA:725:G:H5'	2.20	0.42
1:AA:666:G:H5'	1:AA:726:C:H1'	2.01	0.42
8:AI:108:ARG:HH11	8:AI:108:ARG:HB3	1.84	0.42
23:BB:1881:C:H2'	23:BB:1882:U:O4'	2.20	0.42
1:CA:171:A:O2'	1:CA:172:A:H5'	2.19	0.42
23:DB:291:G:O2'	23:DB:292:U:H5'	2.19	0.42
28:BP:45:VAL:N	28:BP:60:VAL:HG13	2.34	0.42
23:DB:2527:C:O2'	23:DB:2528:U:H5'	2.19	0.42
4:CE:111:ARG:HG3	4:CE:112:ALA:N	2.34	0.42
23:BB:2299:U:H2'	23:BB:2300:C:C6	2.54	0.42
23:BB:1908:C:O2'	23:BB:1909:C:H5'	2.20	0.42
23:BB:1556:C:O2'	23:BB:1557:C:H5'	2.19	0.42
23:DB:1343:G:O4'	23:DB:1597:A:H2'	2.19	0.42
49:DR:43:ASN:ND2	49:DR:44:GLY:N	2.66	0.42
1:AA:1149:C:H2'	1:AA:1150:A:C8	2.54	0.42
23:BB:748:G:C8	45:BS:89:ALA:HB1	2.54	0.42
6:AG:109:LYS:HA	6:AG:109:LYS:HE2	2.01	0.42
46:BU:45:GLN:HE21	46:BU:45:GLN:HB3	1.72	0.42
26:DD:17:GLU:H	26:DD:17:GLU:HG3	1.64	0.42
23:BB:1690:A:H2'	23:BB:1691:C:O4'	2.19	0.42
44:DQ:30:VAL:CG1	44:DQ:31:TYR:N	2.69	0.42
33:B1:10:LEU:HA	33:B1:49:LYS:O	2.19	0.42
40:BH:81:ALA:CB	40:BH:147:VAL:HG23	2.49	0.42
41:DJ:12:LYS:O	41:DJ:13:ARG:HB2	2.19	0.42
41:DJ:13:ARG:HB3	41:DJ:53:TYR:HD2	1.84	0.42
44:DQ:111:LYS:NZ	49:DR:50:GLY:HA2	2.35	0.42
49:DR:40:MET:HG3	49:DR:48:LYS:HA	2.01	0.42
29:BE:157:LEU:HG	29:BE:169:VAL:HG11	2.00	0.42
37:DL:89:VAL:HG13	37:DL:89:VAL:O	2.19	0.42
50:BT:62:VAL:HG12	50:BT:63:VAL:H	1.85	0.42
10:CK:124:LYS:O	21:CU:33:ARG:HG2	2.20	0.42
23:DB:1062:G:H2'	23:DB:1063:G:H8	1.84	0.42
23:DB:1060:U:O4	24:DI:131:THR:HG22	2.19	0.42
20:AB:46:VAL:N	20:AB:47:PRO:CD	2.83	0.42
23:DB:2271:G:H2'	23:DB:2272:U:H6	1.79	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DK:20:MET:C	27:DK:41:ILE:HD12	2.40	0.42
23:DB:28:A:N6	23:DB:512:G:O2'	2.52	0.42
42:BN:83:LEU:HD23	42:BN:115:LEU:HD11	2.01	0.42
42:BN:51:LEU:HD21	42:BN:70:THR:HG21	2.02	0.42
27:DK:99:ILE:H	27:DK:118:LEU:HD22	1.83	0.42
32:D4:8:LYS:CG	32:D4:9:LYS:HD3	2.50	0.42
23:DB:1140:C:C2'	23:DB:1141:U:H5'	2.49	0.42
47:DF:108:PRO:C	47:DF:110:ILE:H	2.23	0.42
3:AD:24:VAL:CG2	3:AD:25:ARG:H	2.21	0.42
23:BB:2515:C:OP1	41:BJ:81:ILE:HG12	2.19	0.42
3:AD:105:GLY:O	3:AD:157:ALA:HB1	2.19	0.42
36:B2:17:GLY:O	36:B2:21:ARG:HB2	2.19	0.42
40:DH:114:GLU:O	40:DH:115:VAL:C	2.58	0.42
23:DB:167:A:H2'	23:DB:168:G:O4'	2.19	0.42
23:BB:141:G:H1	50:BT:2:ILE:CD1	2.20	0.42
14:CO:70:LEU:HD12	14:CO:78:TYR:CB	2.47	0.42
48:DG:106:LEU:N	48:DG:106:LEU:HD23	2.34	0.42
56:DB:3321:HOH:O	29:DE:63:LYS:HE2	2.18	0.42
40:DH:131:SER:HA	40:DH:140:ALA:O	2.19	0.42
40:DH:97:ARG:HA	40:DH:112:LYS:HG2	2.01	0.42
48:DG:68:ARG:HH12	48:DG:72:ASN:ND2	2.07	0.42
23:BB:705:A:O2'	23:BB:706:A:H5'	2.19	0.42
20:AB:63:LYS:HG2	20:AB:224:ARG:NH1	2.34	0.42
12:AM:52:ILE:HD12	12:AM:55:LEU:HD12	1.99	0.42
1:AA:106:C:O2	1:AA:379:C:H4'	2.19	0.42
23:DB:1444:G:O2'	23:DB:1445:G:H5'	2.20	0.42
1:CA:982:U:OP2	13:CN:60:ARG:NH1	2.53	0.42
1:AA:661:G:O2'	1:AA:662:U:H5'	2.19	0.42
35:DV:83:LYS:HA	35:DV:84:PRO:HD3	1.92	0.42
4:CE:45:VAL:HG23	4:CE:71:ILE:CG2	2.49	0.42
22:BA:5:U:H2'	22:BA:6:G:H8	1.83	0.42
7:CH:120:LEU:HD23	7:CH:120:LEU:O	2.19	0.42
28:BP:33:GLU:OE1	28:BP:33:GLU:HA	2.18	0.42
11:AL:29:LYS:HB3	11:AL:56:LEU:HD22	2.01	0.42
10:CK:55:ARG:O	10:CK:55:ARG:HD3	2.19	0.42
23:BB:2064:C:H2'	23:BB:2065:C:H6	1.81	0.42
36:B2:30:VAL:HA	36:B2:33:ARG:HH22	1.83	0.42
1:AA:818:G:C3'	1:AA:819:A:C5'	2.95	0.42
1:CA:182:A:H1'	1:CA:183:C:C5	2.55	0.42
1:AA:1226:C:H2'	12:AM:101:THR:OG1	2.19	0.42
1:AA:159:G:H5'	1:AA:160:A:OP2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2604:U:O2'	23:DB:2605:U:H5'	2.19	0.42
23:DB:2368:C:H2'	23:DB:2369:A:C8	2.54	0.42
40:BH:25:TYR:CD1	40:BH:30:LEU:HG	2.54	0.42
52:DW:28:GLU:OE1	52:DW:28:GLU:HA	2.17	0.42
1:CA:1180:A:P	8:CI:98:ARG:HH22	2.42	0.42
1:AA:608:A:H3'	56:AA:1896:HOH:O	2.19	0.42
7:AH:38:VAL:CG1	7:AH:111:THR:HG22	2.49	0.42
23:DB:1322:A:OP1	45:DS:11:ARG:HD2	2.19	0.42
1:AA:266:G:OP2	1:AA:266:G:H4'	2.19	0.42
23:BB:2746:U:C4'	48:BG:138:GLN:HA	2.49	0.42
25:BC:28:PRO:HG2	25:BC:33:LEU:HD11	2.00	0.42
23:DB:990:A:H1'	23:DB:1156:A:C2	2.54	0.42
1:CA:219:U:H2'	1:CA:220:G:C8	2.54	0.42
23:BB:1539:U:H3'	23:BB:1540:G:H8	1.84	0.42
23:BB:1336:A:H3'	23:BB:1337:G:H8	1.83	0.42
26:DD:60:VAL:O	26:DD:60:VAL:HG23	2.19	0.42
43:BO:18:LEU:HD23	43:BO:25:ARG:HD3	2.00	0.42
48:DG:66:THR:HG23	48:DG:67:ALA:H	1.84	0.42
28:DP:45:VAL:N	28:DP:60:VAL:HG13	2.34	0.42
23:DB:1904:G:O2'	23:DB:1905:C:H5'	2.19	0.42
23:BB:2660:A:H2'	23:BB:2661:G:C8	2.53	0.42
23:DB:1120:G:O2'	23:DB:1121:C:H5'	2.19	0.42
23:DB:1864:U:O2'	23:DB:1865:U:H5'	2.19	0.42
43:BO:77:ALA:O	43:BO:81:ARG:HD3	2.19	0.42
23:DB:2630:G:O2'	23:DB:2631:G:H5'	2.19	0.42
1:CA:638:U:H2'	1:CA:639:G:O4'	2.19	0.42
26:BD:125:TRP:CE3	26:BD:160:LYS:HD3	2.53	0.42
23:BB:1672:A:C2	23:BB:2582:G:H5'	2.54	0.42
23:DB:1700:A:H2'	23:DB:1701:A:H5'	2.00	0.42
23:DB:2903:U:O2	23:DB:2903:U:H3'	2.19	0.42
1:CA:91:U:H2'	1:CA:92:U:H6	1.83	0.42
23:DB:497:A:H2'	23:DB:498:G:O4'	2.18	0.42
23:DB:1100:C:C5	24:DI:1:ALA:O	2.72	0.42
40:DH:27:ARG:CG	40:DH:27:ARG:HH21	2.31	0.42
51:DZ:30:LEU:CD2	51:DZ:30:LEU:N	2.81	0.42
52:DW:49:ASN:HB3	52:DW:81:ILE:CD1	2.49	0.42
1:CA:906:A:H2'	1:CA:907:A:H5''	2.00	0.42
25:DC:171:VAL:HB	25:DC:183:VAL:HG12	2.02	0.42
25:DC:66:PHE:CE2	25:DC:104:LEU:HD11	2.55	0.42
44:DQ:84:LYS:O	44:DQ:86:SER:N	2.52	0.42
29:DE:134:LEU:CD2	29:DE:161:ALA:HB2	2.46	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AN:50:LEU:H	13:AN:51:PRO:HD2	1.84	0.42
13:AN:50:LEU:HB3	13:AN:51:PRO:HD3	2.02	0.42
18:CS:57:VAL:HG23	18:CS:59:VAL:HG13	2.02	0.42
18:AS:36:ARG:O	18:AS:69:LYS:HD2	2.19	0.42
41:BJ:99:ARG:HH11	41:BJ:99:ARG:HG2	1.83	0.42
1:CA:693:G:OP1	10:CK:126:ARG:NH1	2.50	0.42
37:BL:19:LEU:HD12	37:BL:19:LEU:N	2.33	0.42
24:DI:54:ILE:HD11	24:DI:71:LYS:N	2.34	0.42
18:CS:28:LYS:N	18:CS:28:LYS:HD2	2.34	0.42
45:BS:71:VAL:HG22	45:BS:71:VAL:O	2.19	0.42
27:DK:98:ARG:HA	27:DK:118:LEU:CD2	2.48	0.42
27:DK:98:ARG:C	27:DK:99:ILE:HD12	2.39	0.42
40:BH:7:ASP:CG	40:BH:8:LYS:N	2.73	0.42
23:DB:2734:A:H2'	23:DB:2735:G:C5'	2.47	0.42
23:DB:2901:C:O2'	23:DB:2902:C:H5'	2.19	0.42
32:B4:8:LYS:CG	32:B4:9:LYS:HD3	2.48	0.42
47:DF:110:ILE:HA	47:DF:111:ARG:NE	2.34	0.42
3:AD:29:THR:HB	3:AD:30:LYS:HZ2	1.81	0.42
6:AG:22:LEU:O	6:AG:26:VAL:HG13	2.20	0.42
14:CO:82:ILE:O	14:CO:86:GLY:N	2.52	0.42
23:DB:632:A:H2'	23:DB:633:A:C8	2.53	0.42
23:DB:1616:A:H4'	23:DB:1617:C:OP2	2.20	0.42
29:BE:48:THR:C	29:BE:50:ALA:H	2.23	0.42
22:BA:28:C:H2'	22:BA:29:A:C8	2.54	0.42
2:CC:122:GLN:O	2:CC:127:VAL:HG13	2.19	0.42
31:B0:41:HIS:O	31:B0:42:ILE:O	2.38	0.42
31:B0:31:LYS:H	31:B0:31:LYS:HD2	1.85	0.42
41:DJ:72:LYS:O	41:DJ:73:VAL:HG13	2.19	0.42
23:DB:1547:C:H2'	23:DB:1548:A:C8	2.54	0.42
42:DN:98:LEU:O	42:DN:112:TYR:HB2	2.19	0.42
35:BV:79:ARG:HA	35:BV:86:LEU:HA	2.01	0.42
46:DU:35:VAL:HB	46:DU:38:ILE:HB	2.01	0.42
23:DB:2742:G:OP2	32:D4:24:ARG:NH1	2.52	0.42
20:AB:128:LEU:CD1	20:AB:129:THR:H	2.26	0.42
7:AH:118:ALA:HB3	7:AH:120:LEU:CD2	2.44	0.42
23:BB:433:C:H2'	23:BB:434:U:C6	2.53	0.42
22:DA:28:C:O2	22:DA:28:C:O4'	2.38	0.42
23:DB:2345:G:H4'	23:DB:2346:A:O5'	2.19	0.42
1:AA:1009:U:H2'	1:AA:1009:U:O2	2.19	0.42
23:DB:1723:G:C4	23:DB:1724:G:C8	3.07	0.42
1:CA:502:A:H4'	1:CA:550:G:H4'	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AB:68:PHE:CD1	20:AB:83:ALA:HB2	2.55	0.42
20:AB:68:PHE:CD1	20:AB:68:PHE:N	2.87	0.42
20:AB:83:ALA:CB	20:AB:90:PHE:HB3	2.49	0.42
23:BB:1946:U:H2'	23:BB:1947:C:C6	2.54	0.42
39:DX:29:ARG:NH1	50:DT:12:ARG:HE	2.16	0.42
11:CL:36:VAL:O	11:CL:36:VAL:HG23	2.19	0.42
10:CK:70:ALA:C	10:CK:72:ALA:N	2.72	0.42
23:DB:978:G:O4'	23:DB:1001:A:H2	2.03	0.42
17:CR:41:SER:HB2	17:CR:51:GLN:CG	2.48	0.42
10:AK:30:ILE:HG22	10:AK:45:THR:CB	2.50	0.42
25:BC:93:VAL:CG2	25:BC:115:ILE:HD11	2.49	0.42
8:AI:66:VAL:HG22	8:AI:67:LYS:N	2.35	0.42
23:BB:2317:A:H2'	23:BB:2318:G:O4'	2.19	0.42
49:BR:59:ILE:HA	49:BR:101:ILE:H	1.85	0.42
25:DC:124:LYS:N	25:DC:191:LEU:HD13	2.34	0.42
1:CA:273:U:O4	1:CA:274:A:N6	2.52	0.42
1:CA:151:A:H5'	1:CA:152:A:OP2	2.20	0.42
46:BU:2:ALA:HB3	46:BU:5:ARG:CZ	2.50	0.42
23:BB:1299:G:N2	23:BB:1640:A:C8	2.88	0.42
1:CA:1423:G:H2'	1:CA:1424:U:H6	1.82	0.42
1:AA:125:U:H2'	1:AA:126:G:H8	1.83	0.42
23:BB:1237:A:O2'	23:BB:1238:G:O4'	2.37	0.42
2:CC:8:GLY:HA2	2:CC:11:LEU:HG	2.00	0.42
3:AD:50:TYR:HA	3:AD:53:GLN:HE21	1.85	0.42
9:AJ:26:VAL:HG12	9:AJ:30:LYS:HE2	2.01	0.42
40:DH:14:SER:C	40:DH:16:GLY:N	2.72	0.42
23:DB:2835:A:H61	23:DB:2878:U:H2'	1.83	0.42
2:AC:46:LEU:HB3	2:AC:49:ALA:CB	2.49	0.42
1:AA:577:G:O2'	1:AA:578:C:H5'	2.18	0.42
7:AH:4:ASP:OD1	7:AH:7:ALA:HB2	2.19	0.42
23:BB:911:A:H2'	38:BM:9:PHE:CZ	2.54	0.42
52:DW:54:ARG:C	52:DW:56:HIS:H	2.22	0.42
23:BB:350:G:O2'	23:BB:351:C:H5'	2.19	0.42
48:DG:58:ALA:C	48:DG:60:GLY:H	2.22	0.42
1:AA:1125:U:O2	1:AA:1126:U:H6	2.02	0.42
23:BB:566:U:H2'	23:BB:567:U:O4'	2.20	0.42
23:BB:388:G:N7	23:BB:390:U:H2'	2.34	0.42
23:BB:2236:U:O2'	23:BB:2237:G:H5'	2.19	0.42
23:BB:483:A:C4	46:BU:57:ILE:HD11	2.54	0.42
23:DB:1360:G:O6	23:DB:1372:U:C2	2.72	0.42
25:BC:132:ARG:O	25:BC:132:ARG:HG3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:122:VAL:HG12	26:DD:122:VAL:O	2.19	0.42
23:DB:108:G:H2'	23:DB:109:C:H6	1.85	0.42
1:CA:1256:A:O4'	1:CA:1278:G:N2	2.52	0.42
23:BB:2365:G:O2'	52:BW:59:PHE:CE1	2.72	0.42
23:DB:337:C:OP1	46:DU:3:LYS:HG3	2.20	0.42
8:AI:56:MET:HE1	8:AI:60:LEU:HD23	2.01	0.42
40:BH:99:ILE:CD1	40:BH:130:VAL:HG11	2.48	0.42
37:DL:112:LEU:O	37:DL:112:LEU:HD23	2.19	0.42
41:DJ:8:PRO:HG3	41:DJ:48:VAL:HG13	2.01	0.42
44:DQ:63:ARG:HH22	44:DQ:96:ASP:N	2.16	0.42
49:DR:6:GLN:HE22	49:DR:9:GLY:C	2.23	0.42
29:DE:192:ALA:O	29:DE:196:VAL:HG23	2.19	0.42
50:DT:32:LEU:H	50:DT:83:ALA:CB	2.31	0.42
50:DT:48:GLN:O	50:DT:52:GLU:HA	2.19	0.42
10:CK:90:PRO:C	10:CK:92:ARG:H	2.23	0.42
23:BB:10:A:H2'	23:BB:11:C:C2	2.55	0.42
25:DC:4:LYS:CD	25:DC:5:CYS:H	2.19	0.42
24:DI:108:ILE:CG2	24:DI:128:ILE:HD13	2.49	0.42
20:AB:45:THR:HA	20:AB:48:MET:HG3	2.02	0.42
48:BG:6:ALA:HB3	48:BG:68:ARG:NE	2.34	0.42
43:DO:20:GLU:OE2	43:DO:21:LEU:HG	2.19	0.42
35:DV:3:THR:HA	35:DV:62:THR:HG1	1.85	0.42
41:BJ:110:PRO:O	41:BJ:115:GLY:HA3	2.19	0.42
32:B4:27:CYS:HB3	32:B4:33:HIS:HB2	2.01	0.42
47:DF:102:LEU:O	47:DF:103:ILE:CB	2.68	0.42
47:DF:134:GLN:O	47:DF:136:ILE:N	2.52	0.42
47:BF:137:PHE:CD2	47:BF:137:PHE:N	2.83	0.42
14:CO:25:THR:O	14:CO:29:VAL:HG23	2.20	0.42
23:DB:63:A:C8	23:DB:63:A:OP2	2.70	0.42
29:DE:60:TRP:CZ2	29:DE:62:GLN:NE2	2.88	0.42
35:DV:6:ALA:HB2	35:DV:42:LEU:HB3	2.02	0.42
34:B3:16:THR:HG21	34:B3:48:MET:SD	2.60	0.42
31:B0:38:LEU:HD13	31:B0:41:HIS:CE1	2.54	0.42
3:AD:90:LEU:HD21	3:AD:196:GLU:CB	2.44	0.42
29:DE:158:PHE:HD2	29:DE:169:VAL:HG23	1.85	0.42
26:DD:62:LYS:O	26:DD:66:GLY:N	2.52	0.42
28:DP:13:LYS:HG2	28:DP:76:HIS:ND1	2.35	0.42
40:BH:59:ALA:CA	40:BH:62:LEU:HG	2.50	0.42
45:BS:83:LYS:HD3	45:BS:97:LEU:CD1	2.47	0.42
12:AM:90:HIS:CE1	12:AM:96:VAL:HG21	2.55	0.42
19:AT:65:LEU:HD23	19:AT:66:ILE:HD13	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:441:A:H61	1:CA:493:A:N6	2.17	0.42
1:CA:491:G:O2'	1:CA:492:C:H5'	2.20	0.42
25:DC:244:VAL:HB	25:DC:249:VAL:N	2.30	0.42
1:CA:1243:C:H2'	1:CA:1244:G:C8	2.53	0.42
1:CA:747:A:H2'	1:CA:748:G:O4'	2.20	0.42
23:BB:962:G:N2	23:BB:2250:G:H22	2.12	0.42
7:AH:31:LEU:O	7:AH:35:ILE:HG13	2.19	0.42
23:DB:2185:U:O2'	23:DB:2186:G:H5'	2.20	0.42
23:DB:2137:U:C2'	23:DB:2138:G:H5'	2.49	0.42
1:CA:1056:U:O2'	1:CA:1057:G:H5'	2.20	0.42
37:BL:135:ILE:HG23	37:BL:136:GLU:N	2.35	0.42
5:AF:18:VAL:HG21	5:AF:58:HIS:CG	2.54	0.42
1:AA:321:A:O2'	1:AA:322:C:H5'	2.20	0.42
23:DB:4:U:H2'	23:DB:5:A:H8	1.84	0.42
23:BB:38:A:N3	29:BE:43:THR:HB	2.33	0.42
1:CA:1339:A:H2'	1:CA:1340:A:O4'	2.20	0.42
1:CA:204:G:N3	1:CA:466:A:N6	2.67	0.42
23:DB:2002:G:OP1	42:DN:13:ASN:HA	2.19	0.42
1:AA:828:U:O2'	20:AB:24:PRO:HB3	2.19	0.42
23:BB:1315:C:H2'	23:BB:1316:U:C6	2.55	0.42
44:DQ:32:ARG:O	44:DQ:36:GLN:HG3	2.19	0.42
5:AF:46:GLN:HG3	5:AF:47:LEU:H	1.85	0.42
24:DI:99:LYS:HB2	24:DI:140:GLU:OE1	2.19	0.42
6:AG:70:PRO:O	6:AG:95:ARG:HG3	2.20	0.42
31:B0:33:SER:C	31:B0:35:GLU:N	2.72	0.42
45:BS:12:SER:O	45:BS:13:SER:HB3	2.20	0.42
29:DE:4:VAL:HG12	29:DE:6:LYS:H	1.85	0.42
23:DB:1495:A:C2	23:DB:1578:U:H1'	2.54	0.42
15:CP:23:ASP:OD1	15:CP:25:ARG:HB2	2.19	0.42
23:BB:1731:G:O2'	23:BB:1732:C:H5''	2.20	0.42
23:DB:902:C:H2'	23:DB:903:C:C6	2.54	0.42
23:DB:2648:G:H2'	23:DB:2649:C:H6	1.81	0.42
23:DB:1190:G:OP1	37:DL:32:GLY:CA	2.67	0.42
23:DB:697:G:H2'	23:DB:698:C:C6	2.55	0.42
23:DB:118:A:OP2	23:DB:119:A:H5''	2.19	0.42
23:DB:1731:G:O2'	23:DB:1732:C:H5''	2.19	0.42
23:BB:235:U:H2'	23:BB:236:C:C6	2.55	0.42
26:BD:39:ASP:CG	26:BD:41:ALA:H	2.23	0.42
1:AA:151:A:H5'	1:AA:152:A:OP2	2.20	0.42
23:DB:515:A:H2	23:DB:1260:A:N3	2.17	0.42
23:BB:1147:A:O2'	23:BB:1148:U:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1515:A:H3'	23:BB:1516:G:H8	1.84	0.42
34:B3:24:LYS:HB2	37:BL:64:PHE:CD2	2.54	0.42
23:BB:189:G:H2'	23:BB:205:G:H22	1.84	0.42
1:AA:889:A:H4'	1:AA:890:G:OP1	2.19	0.42
23:DB:730:A:H3'	56:DB:3611:HOH:O	2.19	0.42
38:BM:17:ASN:HD22	38:BM:17:ASN:HA	1.60	0.42
4:AE:111:ARG:HG3	4:AE:112:ALA:N	2.34	0.42
23:BB:2145:C:H2'	23:BB:2145:C:H6	1.64	0.42
40:BH:34:GLY:O	40:BH:35:LYS:HG2	2.20	0.42
46:BU:84:PHE:CE2	46:BU:93:ARG:HG2	2.54	0.42
1:AA:1525:G:O2'	1:AA:1526:G:H5'	2.19	0.42
1:AA:766:A:H2	1:AA:1525:G:N3	2.17	0.42
52:DW:59:PHE:CD2	52:DW:60:ALA:N	2.88	0.42
8:CI:27:ILE:CG2	8:CI:34:LEU:HB2	2.49	0.42
42:DN:41:ALA:C	42:DN:43:GLU:N	2.71	0.42
33:B1:33:LEU:HD12	33:B1:34:GLU:N	2.35	0.42
49:DR:39:LEU:HA	49:DR:53:PHE:HA	2.01	0.42
29:DE:146:VAL:HG12	29:DE:147:LEU:N	2.34	0.42
50:DT:23:ALA:C	50:DT:25:GLU:H	2.23	0.42
13:AN:52:ARG:HD3	13:AN:52:ARG:HA	1.90	0.42
44:BQ:57:ARG:HA	44:BQ:60:TRP:CE3	2.55	0.42
23:BB:1818:U:H2'	25:BC:152:GLN:O	2.19	0.42
50:BT:41:ALA:C	50:BT:43:ILE:N	2.72	0.42
4:CE:33:THR:HB	4:CE:49:TYR:CE1	2.55	0.42
44:BQ:104:ALA:C	44:BQ:106:THR:H	2.23	0.42
29:DE:29:HIS:O	29:DE:33:VAL:HG23	2.19	0.42
15:CP:45:GLU:C	15:CP:47:GLU:H	2.22	0.42
27:BK:43:ILE:CG2	27:BK:54:LYS:HA	2.49	0.42
27:BK:42:THR:HG23	27:BK:57:VAL:HG22	2.01	0.42
3:CD:154:VAL:O	3:CD:157:ALA:HB3	2.20	0.42
47:BF:97:GLU:O	47:BF:100:GLU:HB2	2.20	0.42
41:DJ:58:ASN:O	41:DJ:59:ALA:HB3	2.20	0.42
29:BE:46:GLN:HB3	29:BE:86:ALA:HA	2.01	0.42
47:DF:92:GLY:O	47:DF:95:MET:HB3	2.18	0.42
35:DV:16:ALA:N	35:DV:19:ARG:HH21	2.17	0.42
48:BG:93:TYR:O	48:BG:94:ARG:O	2.37	0.42
23:BB:1562:U:H2'	23:BB:1563:U:C6	2.54	0.42
3:CD:197:HIS:O	3:CD:201:GLU:HG3	2.18	0.42
36:D2:22:MET:HA	36:D2:28:ARG:HG3	2.00	0.42
12:AM:28:ARG:HH12	12:AM:59:VAL:HA	1.85	0.42
12:AM:50:GLY:HA2	12:AM:53:ASP:OD1	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:6:ILE:O	12:CM:7:ASN:C	2.58	0.42
29:BE:58:LYS:CD	29:BE:58:LYS:N	2.83	0.42
32:D4:36:ARG:CG	32:D4:37:GLN:H	2.30	0.42
23:BB:1438:U:O2'	23:BB:1439:A:H5'	2.19	0.42
48:DG:125:PRO:HD2	48:DG:129:GLU:HG2	2.02	0.42
9:AJ:57:VAL:HG13	9:AJ:58:ASN:N	2.35	0.42
23:DB:1046:A:H4'	23:DB:1047:G:OP2	2.19	0.42
1:AA:762:U:H2'	1:AA:763:G:H8	1.84	0.42
23:DB:2602:A:C2'	23:DB:2602:A:N3	2.80	0.42
23:BB:2834:G:H2'	23:BB:2879:A:H61	1.85	0.42
48:BG:125:PRO:HD3	48:BG:131:VAL:HG22	2.01	0.42
48:BG:97:VAL:HG23	48:BG:124:CYS:SG	2.60	0.42
4:CE:97:PRO:HA	4:CE:122:VAL:HG12	2.02	0.42
43:BO:90:VAL:HG22	43:BO:115:LEU:HD11	2.01	0.42
39:BX:1:MET:HA	39:BX:4:LYS:HB3	2.02	0.42
38:BM:28:PHE:HB3	38:BM:64:TRP:CE2	2.55	0.42
3:AD:1:ALA:O	3:AD:2:ARG:HG2	2.20	0.42
23:DB:416:U:H2'	23:DB:417:C:H6	1.82	0.42
25:DC:52:HIS:HA	25:DC:216:ARG:HB2	2.01	0.42
46:DU:48:VAL:H	46:DU:53:GLN:HG3	1.85	0.42
37:DL:135:ILE:HG23	37:DL:136:GLU:N	2.35	0.42
1:CA:1165:U:H2'	1:CA:1166:G:O4'	2.19	0.42
1:CA:1225:A:O2'	18:CS:77:ARG:HD3	2.19	0.42
1:CA:71:A:O2'	1:CA:72:A:H5''	2.18	0.42
23:BB:611:C:H2'	23:BB:612:G:O4'	2.20	0.42
2:CC:82:ASP:O	2:CC:86:LEU:HG	2.19	0.42
1:CA:828:U:H2'	1:CA:829:G:O5'	2.19	0.42
23:BB:2341:G:O2'	23:BB:2342:C:H5'	2.19	0.42
49:DR:91:GLN:HG3	49:DR:92:TRP:H	1.84	0.42
20:CB:104:LYS:HA	20:CB:107:ARG:HD3	2.01	0.42
1:AA:878:A:H2'	1:AA:879:C:C6	2.55	0.42
38:BM:57:VAL:HA	38:BM:112:LEU:HD11	2.00	0.42
25:BC:162:GLN:HE22	25:BC:174:ARG:HH21	1.67	0.42
1:CA:174:A:O2'	1:CA:175:C:H5'	2.19	0.42
1:CA:177:G:N3	1:CA:177:G:O4'	2.53	0.42
1:AA:169:C:O2'	1:AA:170:U:H5'	2.19	0.42
1:CA:1480:A:H2'	1:CA:1481:U:H6	1.83	0.42
2:AC:184:ASN:O	2:AC:199:VAL:HG22	2.19	0.42
23:BB:1050:A:H2'	23:BB:1051:G:C8	2.54	0.42
20:CB:10:LYS:O	20:CB:13:VAL:HG23	2.19	0.42
1:CA:79:G:H2'	1:CA:80:A:H8	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BV:51:GLN:HA	35:BV:56:PHE:CB	2.49	0.42
20:AB:13:VAL:HG12	20:AB:13:VAL:O	2.19	0.42
45:DS:72:THR:HG23	45:DS:108:SER:HB3	2.01	0.42
25:DC:181:ARG:HD3	25:DC:265:PHE:O	2.19	0.42
48:DG:170:THR:O	48:DG:171:LYS:HD3	2.19	0.42
26:BD:202:ILE:HG22	26:BD:202:ILE:O	2.18	0.42
1:AA:547:A:H4'	1:AA:548:G:O5'	2.20	0.42
1:AA:600:A:H2'	1:AA:601:G:H8	1.84	0.42
23:BB:688:U:O2'	23:BB:689:A:H5'	2.20	0.42
23:BB:2778:A:O2'	23:BB:2781:A:H5'	2.20	0.42
23:DB:812:C:H4'	44:DQ:12:ARG:HH22	1.85	0.42
23:BB:497:A:H2'	23:BB:498:G:O4'	2.20	0.42
3:CD:43:ARG:HH11	3:CD:43:ARG:HB3	1.85	0.42
1:AA:435:A:N3	1:AA:435:A:H2'	2.33	0.42
29:DE:105:LEU:HD23	29:DE:105:LEU:HA	1.87	0.42
19:AT:11:ILE:O	19:AT:15:LYS:HB2	2.19	0.42
23:DB:494:G:O2'	23:DB:495:G:H5'	2.20	0.42
23:DB:43:G:H2'	23:DB:44:A:O4'	2.20	0.42
51:BZ:68:LEU:HD22	51:BZ:78:TYR:CD1	2.54	0.42
20:CB:216:VAL:O	20:CB:220:VAL:HG23	2.19	0.42
37:DL:79:LEU:HA	37:DL:79:LEU:HD23	1.91	0.42
10:AK:22:ILE:HD13	10:AK:95:THR:HG23	2.00	0.42
25:BC:149:LYS:HD3	25:BC:152:GLN:NE2	2.26	0.42
50:BT:43:ILE:CG2	50:BT:58:VAL:HG21	2.49	0.42
10:CK:127:ARG:NH1	10:CK:127:ARG:HG3	2.33	0.42
47:BF:46:LYS:O	47:BF:49:LEU:HB3	2.19	0.42
6:AG:144:ALA:C	6:AG:146:ALA:H	2.21	0.42
23:BB:2305:U:C1'	47:BF:132:ARG:HA	2.49	0.42
45:BS:3:THR:HG21	45:BS:58:ALA:HB2	2.01	0.42
27:BK:118:LEU:C	27:BK:120:PRO:HD2	2.40	0.42
23:DB:345:A:C1'	23:DB:346:A:H2	2.33	0.42
23:DB:278:A:N7	23:DB:361:G:N1	2.67	0.42
23:DB:327:G:H2'	23:DB:328:U:O4'	2.20	0.42
15:AP:46:LYS:C	15:AP:48:GLU:N	2.72	0.42
32:D4:11:CYS:HG	32:D4:33:HIS:CE1	2.36	0.42
47:BF:110:ILE:HA	47:BF:111:ARG:NE	2.35	0.42
23:BB:144:A:H2'	23:BB:145:C:H6	1.83	0.42
23:DB:123:G:H2'	23:DB:124:G:C8	2.54	0.42
29:DE:58:LYS:CD	29:DE:58:LYS:N	2.83	0.42
26:BD:90:PHE:O	26:BD:91:THR:C	2.57	0.42
26:BD:37:VAL:CG2	26:BD:91:THR:HA	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:44:ILE:C	40:BH:46:PHE:N	2.72	0.42
15:CP:75:ILE:H	15:CP:75:ILE:HG13	1.61	0.42
15:CP:71:VAL:O	15:CP:75:ILE:HG13	2.20	0.42
1:CA:104:G:O2'	1:CA:105:G:H5'	2.20	0.42
43:DO:34:HIS:HB3	43:DO:36:TYR:HE2	1.83	0.42
23:BB:2884:U:H4'	31:B0:49:ARG:NH2	2.35	0.42
12:CM:33:LEU:HD22	12:CM:38:ILE:HB	2.02	0.42
23:BB:2786:U:O2'	26:BD:66:GLY:HA3	2.20	0.42
23:DB:2144:G:N2	23:DB:2146:C:O4'	2.53	0.42
41:DJ:23:LYS:CE	41:DJ:142:ILE:HG23	2.46	0.42
1:AA:91:U:H6	1:AA:91:U:O5'	2.01	0.42
23:DB:2834:G:O6	23:DB:2879:A:H2'	2.19	0.42
37:DL:77:ILE:HG13	37:DL:101:ILE:HD11	2.01	0.42
23:DB:1813:G:N3	25:DC:49:THR:CG2	2.80	0.42
39:DX:52:ARG:O	39:DX:55:THR:HB	2.19	0.42
23:BB:326:G:O2'	23:BB:327:G:H5'	2.19	0.42
51:DZ:63:GLY:HA3	51:DZ:66:THR:OG1	2.20	0.42
4:CE:87:VAL:HG22	4:CE:88:HIS:N	2.35	0.42
42:DN:60:VAL:O	42:DN:63:ARG:HB3	2.19	0.42
42:DN:64:ARG:O	42:DN:67:PHE:HB3	2.19	0.42
1:AA:1006:G:O2'	1:AA:1007:U:H5'	2.19	0.42
20:AB:116:LEU:HB3	20:AB:140:LEU:CG	2.49	0.42
43:DO:18:LEU:HD23	43:DO:25:ARG:CD	2.49	0.42
23:DB:2793:C:H2'	23:DB:2794:C:H6	1.84	0.42
1:CA:1161:C:O2'	1:CA:1162:C:H5'	2.20	0.42
23:DB:2231:U:O2'	23:DB:2232:C:H5'	2.19	0.42
7:CH:36:ALA:HA	7:CH:39:LEU:HD12	2.00	0.42
23:DB:969:G:H2'	23:DB:970:U:H6	1.85	0.42
23:BB:2531:A:H4'	48:BG:156:TYR:CD1	2.54	0.42
23:DB:1275:A:C2'	23:DB:1276:A:O4'	2.68	0.42
42:DN:12:ARG:HG3	42:DN:13:ASN:N	2.34	0.42
28:DP:24:THR:C	28:DP:25:VAL:HG13	2.39	0.42
20:CB:145:ASN:N	20:CB:145:ASN:ND2	2.66	0.42
4:AE:55:VAL:N	4:AE:56:PRO:CD	2.83	0.42
23:DB:2784:U:H2'	23:DB:2785:C:C6	2.55	0.42
47:DF:177:ARG:CZ	47:DF:178:LYS:H	2.32	0.42
23:DB:1534:U:O2'	23:DB:1535:A:H8	2.02	0.42
23:BB:1199:U:H2'	23:BB:1200:C:H6	1.83	0.42
1:AA:177:G:N3	1:AA:177:G:O4'	2.53	0.42
23:BB:538:A:H2'	23:BB:539:G:O4'	2.20	0.42
48:BG:174:LYS:NZ	48:BG:176:LYS:HG2	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DV:77:VAL:HG23	35:DV:89:ILE:CG2	2.50	0.42
47:BF:134:GLN:HE21	47:BF:134:GLN:HB3	1.56	0.42
1:CA:1231:G:O2'	1:CA:1232:U:H5'	2.19	0.42
12:AM:84:CYS:C	12:AM:88:LEU:HD12	2.39	0.42
23:BB:1541:C:H2'	23:BB:1542:U:O4'	2.20	0.42
1:CA:366:A:O2'	1:CA:367:U:P	2.78	0.42
2:AC:112:ALA:CB	2:AC:184:ASN:HB2	2.49	0.42
23:BB:2710:C:H2'	23:BB:2711:A:C8	2.52	0.42
23:BB:1642:G:O2'	23:BB:1643:G:H5'	2.19	0.42
1:CA:263:A:H2'	1:CA:264:C:C6	2.55	0.42
23:DB:1823:G:O2'	23:DB:1824:G:H5'	2.20	0.42
1:AA:1260:G:P	1:AA:1284:C:H4'	2.60	0.42
47:DF:13:LYS:HA	47:DF:16:MET:HB2	2.01	0.42
26:BD:141:ARG:O	26:BD:142:VAL:HG13	2.20	0.42
23:BB:1035:U:H2'	23:BB:1036:G:H8	1.85	0.42
23:BB:531:C:O2'	23:BB:563:A:H5''	2.20	0.42
23:BB:659:G:H4'	29:BE:95:LYS:HB3	2.00	0.42
40:DH:54:LEU:C	40:DH:56:ALA:H	2.23	0.42
23:DB:2667:C:H2'	23:DB:2668:G:O4'	2.20	0.42
1:CA:667:G:H4'	14:CO:51:HIS:ND1	2.35	0.42
22:BA:15:A:OP2	22:BA:15:A:H3'	2.19	0.42
2:AC:2:GLN:H	2:AC:2:GLN:NE2	2.18	0.42
36:D2:32:ALA:HA	36:D2:35:ARG:HB2	2.01	0.42
23:DB:1098:A:O3'	24:DI:4:VAL:O	2.37	0.42
46:BU:3:LYS:CB	46:BU:82:VAL:HG21	2.50	0.42
23:BB:853:C:H2'	23:BB:854:C:H6	1.85	0.42
20:CB:212:TYR:HA	20:CB:215:ALA:HB3	2.02	0.42
37:DL:80:SER:HB3	37:DL:115:GLU:OE2	2.20	0.42
23:DB:2261:C:O2'	23:DB:2262:U:H5'	2.20	0.42
1:AA:532:A:N7	2:AC:192:TYR:HD2	2.18	0.42
18:CS:18:VAL:HG13	18:CS:19:GLU:N	2.35	0.42
1:CA:1320:C:H1'	18:CS:72:GLU:HB3	2.01	0.42
44:BQ:63:ARG:HH12	44:BQ:96:ASP:HA	1.85	0.42
42:DN:100:CYS:O	42:DN:101:GLY:O	2.37	0.42
37:BL:40:SER:OG	37:BL:41:ARG:HG3	2.18	0.42
40:BH:72:ILE:HG23	40:BH:140:ALA:CB	2.49	0.42
40:BH:75:LEU:HD11	40:BH:103:VAL:O	2.19	0.42
6:AG:145:GLU:CA	6:AG:148:LYS:HB2	2.39	0.42
47:BF:130:GLY:HA2	47:BF:152:ASP:HA	2.01	0.42
40:DH:126:GLY:O	40:DH:146:VAL:N	2.50	0.42
40:DH:86:ASP:HB2	40:DH:87:GLU:H	1.59	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DK:119:ALA:HB3	27:DK:120:PRO:CD	2.50	0.42
35:BV:4:ILE:HB	35:BV:63:ILE:HG13	2.00	0.42
27:BK:20:MET:C	27:BK:41:ILE:HD12	2.40	0.42
23:DB:137:U:H2'	23:DB:138:U:C1'	2.48	0.42
8:AI:29:ILE:HG12	8:AI:64:ILE:CB	2.49	0.42
1:CA:923:A:OP1	4:CE:25:LYS:HB3	2.20	0.42
23:DB:633:A:H2'	23:DB:634:C:C5'	2.50	0.42
23:DB:858:G:H4'	52:DW:19:ARG:HH22	1.84	0.42
30:BY:7:THR:O	30:BY:54:VAL:HA	2.20	0.42
25:DC:76:VAL:HA	25:DC:113:ASP:O	2.20	0.42
52:BW:77:LYS:H	52:BW:77:LYS:HZ3	1.63	0.42
23:BB:279:A:C2	23:BB:362:A:H4'	2.54	0.42
40:DH:97:ARG:HA	40:DH:100:ALA:HB3	2.01	0.42
1:CA:1343:G:H1'	8:CI:122:ARG:NH1	2.34	0.42
23:DB:776:G:H4'	23:DB:777:G:O5'	2.20	0.42
16:AQ:18:LYS:HE3	16:AQ:48:GLU:CG	2.49	0.42
23:BB:1438:U:N3	23:BB:1552:A:N6	2.68	0.42
40:DH:60:GLU:HA	40:DH:62:LEU:CD2	2.49	0.42
1:AA:90:C:H2'	1:AA:91:U:H5	1.83	0.42
47:BF:147:ARG:NH1	47:BF:147:ARG:HB3	2.34	0.42
23:DB:170:U:O2'	23:DB:171:U:H5'	2.19	0.42
1:AA:947:G:H2'	1:AA:948:C:C6	2.55	0.42
5:CF:38:ARG:NH2	5:CF:63:ASN:ND2	2.64	0.42
48:BG:83:THR:HA	48:BG:84:LYS:NZ	2.35	0.42
48:BG:84:LYS:O	48:BG:85:LYS:O	2.38	0.42
7:CH:29:SER:O	7:CH:30:LYS:C	2.58	0.42
11:AL:107:LYS:HD2	11:AL:107:LYS:C	2.40	0.42
23:DB:2030:A:H4'	23:DB:2031:A:H5'	2.01	0.42
23:BB:877:A:H2'	23:BB:899:A:N1	2.35	0.42
11:CL:84:GLY:H	11:CL:94:TYR:HA	1.85	0.42
1:CA:88:U:H2'	1:CA:89:U:C6	2.55	0.42
1:CA:389:A:H3'	1:CA:390:U:H6	1.83	0.42
8:AI:9:GLY:HA3	8:AI:81:GLY:N	2.34	0.42
23:DB:20:C:H2'	23:DB:21:A:C8	2.54	0.42
1:CA:476:U:H2'	1:CA:477:C:H6	1.84	0.42
4:AE:87:VAL:HG22	4:AE:88:HIS:N	2.35	0.42
23:BB:154:U:O2'	23:BB:155:A:H5'	2.19	0.42
1:CA:734:G:H2'	1:CA:735:C:H6	1.85	0.42
1:CA:818:G:C3'	1:CA:819:A:C5'	2.96	0.42
44:BQ:9:ALA:C	44:BQ:11:ALA:N	2.72	0.42
33:B1:3:GLY:C	33:B1:5:ARG:N	2.73	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1:G:H2'	23:DB:2:G:C8	2.55	0.42
36:D2:33:ARG:CG	36:D2:33:ARG:HH21	2.33	0.42
1:AA:182:A:H1'	1:AA:183:C:C5	2.55	0.42
20:CB:116:LEU:HB3	20:CB:140:LEU:CD1	2.50	0.42
23:DB:674:G:H1'	29:DE:69:ARG:HE	1.84	0.42
1:CA:883:C:O2'	1:CA:884:U:H5'	2.20	0.42
23:DB:2556:C:H2'	23:DB:2557:G:O4'	2.19	0.42
23:DB:547:A:C6	23:DB:548:G:H1'	2.55	0.42
23:BB:1315:C:H2'	23:BB:1316:U:H6	1.84	0.42
23:BB:1537:G:H5''	23:BB:1537:G:N3	2.35	0.42
1:CA:1048:G:H5''	13:CN:2:LYS:HD2	2.02	0.42
23:BB:764:A:N1	23:BB:1789:A:O2'	2.51	0.42
23:DB:2529:G:H4'	48:DG:174:LYS:HG3	2.02	0.42
24:BI:48:ILE:O	24:BI:49:GLU:HB3	2.20	0.42
23:BB:1495:A:C2	23:BB:1578:U:H1'	2.54	0.42
1:CA:1143:G:H2'	1:CA:1144:G:C8	2.55	0.42
48:BG:137:LYS:O	48:BG:140:ILE:HG13	2.19	0.42
1:CA:79:G:H2'	1:CA:80:A:C8	2.55	0.42
22:DA:35:C:H2'	22:DA:36:C:C5'	2.50	0.42
23:BB:2282:G:H5'	23:BB:2389:G:H1'	2.01	0.42
6:AG:101:ARG:HG2	6:AG:105:GLU:OE2	2.19	0.42
14:AO:73:LYS:O	14:AO:74:ASP:HB2	2.20	0.42
27:DK:103:VAL:HG23	27:DK:122:VAL:O	2.20	0.42
23:BB:1739:A:H2'	23:BB:1740:G:H8	1.84	0.42
23:DB:1690:A:H2'	23:DB:1691:C:O4'	2.20	0.42
29:DE:72:SER:C	29:DE:74:LYS:H	2.23	0.42
23:DB:519:U:H2'	23:DB:520:G:H8	1.84	0.42
23:DB:838:C:C2	23:DB:941:A:C6	3.08	0.42
44:DQ:67:ALA:O	44:DQ:70:GLN:HB3	2.19	0.42
44:BQ:15:LYS:HD2	44:BQ:19:GLN:HE21	1.84	0.42
46:DU:5:ARG:HG2	46:DU:5:ARG:HH21	1.84	0.42
43:BO:52:SER:O	43:BO:55:GLU:HG3	2.20	0.42
5:AF:74:LEU:HD11	5:AF:78:PHE:CZ	2.54	0.42
20:AB:209:VAL:HG23	20:AB:210:THR:H	1.84	0.42
21:AU:41:THR:HG22	21:AU:45:LYS:HZ3	1.85	0.42
23:DB:923:G:O2'	23:DB:924:G:H5'	2.20	0.42
52:BW:36:ILE:H	52:BW:36:ILE:HG13	1.70	0.42
5:CF:26:THR:HA	5:CF:36:ILE:HD11	2.02	0.42
20:CB:53:LEU:CD1	20:CB:216:VAL:HG12	2.49	0.42
8:CI:21:LYS:HB3	8:CI:61:ASP:O	2.20	0.42
25:DC:64:VAL:HG11	25:DC:66:PHE:CE2	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:160:ALA:C	29:BE:162:ARG:H	2.22	0.42
10:CK:85:VAL:O	10:CK:111:ASP:HA	2.20	0.42
47:DF:41:GLU:HB2	47:DF:48:LEU:HD11	2.01	0.42
18:AS:10:ILE:HG22	18:AS:38:THR:N	2.35	0.42
44:BQ:86:SER:CB	49:BR:51:VAL:HA	2.49	0.42
20:AB:136:ARG:O	20:AB:139:GLU:HB3	2.20	0.42
37:BL:121:THR:HB	37:BL:141:LYS:HD2	2.02	0.42
37:BL:92:LEU:CD2	37:BL:92:LEU:H	2.31	0.42
51:DZ:40:VAL:CG2	51:DZ:45:ARG:H	2.32	0.42
50:BT:25:GLU:C	50:BT:27:SER:H	2.22	0.42
45:DS:2:GLU:O	45:DS:3:THR:O	2.38	0.42
48:DG:32:LEU:HB3	48:DG:34:ARG:CZ	2.50	0.42
23:BB:1059:G:N2	24:BI:130:GLY:HA3	2.35	0.42
15:CP:46:LYS:O	15:CP:47:GLU:HB2	2.20	0.42
40:DH:80:ILE:CD1	40:DH:146:VAL:HA	2.49	0.42
42:BN:82:GLU:C	42:BN:84:GLY:N	2.72	0.42
27:BK:15:GLY:HA2	27:BK:46:ALA:HA	2.01	0.42
23:BB:2733:A:H3'	23:BB:2733:A:C8	2.55	0.42
47:DF:118:ALA:HA	47:DF:176:PHE:HE2	1.84	0.42
47:DF:3:LEU:O	47:DF:3:LEU:HD13	2.18	0.42
47:DF:56:LEU:HD22	47:DF:59:ILE:HD12	2.01	0.42
2:AC:63:ILE:HD11	2:AC:96:VAL:CG2	2.50	0.42
23:BB:286:U:H2'	23:BB:287:G:C8	2.54	0.42
1:CA:864:A:H2'	1:CA:865:A:C8	2.55	0.42
29:BE:48:THR:C	29:BE:50:ALA:N	2.73	0.42
29:DE:48:THR:C	29:DE:50:ALA:H	2.23	0.42
43:BO:30:ARG:HG3	43:BO:30:ARG:NH1	2.35	0.42
23:DB:358:U:H2'	23:DB:359:G:C8	2.55	0.42
20:CB:129:THR:C	20:CB:131:LYS:N	2.73	0.42
31:B0:42:ILE:CD1	42:BN:98:LEU:HD12	2.43	0.42
12:AM:5:GLY:O	12:AM:7:ASN:N	2.53	0.42
1:AA:62:U:H2'	1:AA:63:C:C6	2.55	0.42
12:CM:38:ILE:HG13	12:CM:55:LEU:HD21	2.02	0.42
12:CM:30:LYS:HG3	12:CM:40:GLU:OE1	2.20	0.42
12:CM:5:GLY:O	12:CM:7:ASN:N	2.53	0.42
48:DG:9:VAL:HG12	48:DG:11:PRO:CD	2.47	0.42
35:BV:16:ALA:N	35:BV:19:ARG:HH21	2.17	0.42
23:BB:2785:C:H2'	23:BB:2786:U:H6	1.84	0.42
13:CN:19:TYR:HB3	13:CN:20:PHE:H	1.56	0.42
48:DG:120:ILE:HD13	48:DG:121:THR:N	2.35	0.42
32:B4:36:ARG:CG	32:B4:37:GLN:H	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AN:22:LYS:HA	13:AN:25:GLU:OE2	2.20	0.42
44:BQ:77:LYS:HE2	44:BQ:116:LEU:CD2	2.46	0.42
20:CB:31:PHE:HB2	20:CB:41:ASN:CA	2.45	0.42
23:DB:2688:G:H1'	23:DB:2721:A:H61	1.84	0.42
20:CB:20:ARG:CZ	20:CB:20:ARG:CA	2.97	0.42
39:BX:56:LEU:O	39:BX:58:ASN:N	2.53	0.42
10:AK:80:ASN:HB3	10:AK:105:ARG:HB3	2.02	0.42
4:AE:97:PRO:HA	4:AE:122:VAL:HG12	2.02	0.42
8:AI:79:ARG:O	8:AI:83:THR:HG22	2.20	0.42
1:CA:89:U:H2'	1:CA:90:C:H6	1.84	0.42
25:DC:249:VAL:O	25:DC:250:GLN:C	2.58	0.42
1:AA:471:U:H2'	1:AA:472:U:H6	1.85	0.42
47:DF:121:PHE:HB3	47:DF:127:TYR:CZ	2.55	0.42
38:BM:41:LEU:C	38:BM:43:ALA:H	2.23	0.42
38:BM:71:LYS:HG2	38:BM:73:ILE:CD1	2.49	0.42
23:DB:2135:A:N6	23:DB:2156:G:C2'	2.82	0.42
1:CA:279:A:C5'	1:CA:280:C:H3'	2.48	0.42
5:CF:51:ILE:HD11	5:CF:86:ARG:HG3	2.02	0.42
23:DB:2318:G:C6	23:DB:2319:G:N1	2.88	0.42
23:DB:1490:A:H2'	25:DC:97:ASP:OD1	2.20	0.42
27:DK:58:LEU:HB2	27:DK:59:LYS:H	1.69	0.42
23:DB:98:G:C3'	23:DB:99:U:H5''	2.50	0.42
23:DB:2757:A:N3	23:DB:2757:A:H2'	2.34	0.42
3:CD:18:LEU:HD11	3:CD:59:LYS:HG3	2.00	0.42
23:BB:928:A:O2'	30:BY:37:ARG:HD3	2.20	0.42
20:AB:52:ALA:O	20:AB:56:LEU:HB2	2.18	0.42
5:CF:12:PRO:C	5:CF:14:GLN:H	2.23	0.42
40:BH:21:VAL:HG21	40:BH:25:TYR:HD2	1.84	0.42
6:CG:86:VAL:HG13	6:CG:151:ALA:O	2.20	0.42
23:BB:924:G:H2'	23:BB:925:A:C8	2.55	0.42
1:CA:175:C:H2'	1:CA:176:C:C6	2.54	0.42
22:DA:89:U:C2	23:DB:958:U:H2'	2.55	0.42
1:CA:499:A:H4'	1:CA:500:G:H5'	2.02	0.42
23:DB:484:C:H2'	23:DB:485:C:C6	2.55	0.42
23:DB:2487:G:H2'	23:DB:2488:G:H8	1.84	0.42
1:AA:144:G:O2'	1:AA:145:G:H5'	2.18	0.42
23:DB:1642:G:O2'	23:DB:1643:G:H5'	2.20	0.42
1:AA:652:U:H1'	1:AA:653:U:C5	2.55	0.42
1:CA:709:U:O2'	1:CA:710:G:H5'	2.20	0.42
39:DX:23:ARG:O	39:DX:27:ASN:N	2.46	0.42
23:BB:2617:U:C4	23:BB:2618:G:N7	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:65:A:C5	1:CA:381:C:N3	2.88	0.42
23:BB:1063:G:O2'	23:BB:1064:C:H5'	2.20	0.42
23:DB:1842:G:H2'	23:DB:1843:C:H6	1.85	0.42
1:AA:592:G:H2'	1:AA:593:U:H6	1.85	0.42
1:CA:1118:U:O2'	1:CA:1119:C:H5'	2.20	0.42
1:CA:600:A:O3'	7:CH:88:LYS:HE3	2.20	0.42
23:DB:736:C:H2'	23:DB:737:C:H6	1.83	0.42
1:CA:1148:U:H2'	1:CA:1149:C:O4'	2.20	0.42
23:BB:350:G:H2'	23:BB:351:C:O4'	2.20	0.42
23:BB:483:A:H3'	23:BB:484:C:H6	1.84	0.42
1:AA:600:A:O3'	7:AH:88:LYS:HE3	2.18	0.42
23:DB:1215:G:O2'	23:DB:1216:G:H5'	2.19	0.42
1:AA:1067:A:H4'	1:AA:1068:G:O5'	2.18	0.42
1:CA:358:U:H2'	1:CA:359:G:C8	2.55	0.42
23:BB:1369:G:O2'	23:BB:1370:C:H5'	2.20	0.42
23:BB:43:G:H2'	23:BB:44:A:O4'	2.19	0.42
23:BB:1668:A:N3	23:BB:1670:C:C4	2.88	0.42
44:BQ:21:LYS:HD3	44:BQ:21:LYS:HA	1.83	0.42
42:DN:71:ARG:HH21	42:DN:71:ARG:CG	2.32	0.42
23:BB:1854:A:N6	23:BB:1888:G:H1'	2.34	0.42
52:DW:23:LYS:CG	52:DW:24:ARG:N	2.82	0.42
26:DD:54:ALA:HA	26:DD:76:GLY:N	2.35	0.42
20:CB:209:VAL:HG23	20:CB:210:THR:H	1.84	0.42
48:DG:42:VAL:HA	48:DG:50:THR:O	2.20	0.42
23:DB:2061:G:H3'	56:DB:3296:HOH:O	2.20	0.42
13:CN:50:LEU:H	13:CN:51:PRO:HD2	1.85	0.42
23:DB:2222:C:H4'	25:DC:184:GLU:OE2	2.20	0.42
44:DQ:86:SER:O	44:DQ:88:GLU:N	2.51	0.42
23:DB:996:A:H4'	44:DQ:91:ARG:HH11	1.84	0.42
49:DR:4:VAL:HB	49:DR:39:LEU:HG	2.01	0.42
29:BE:158:PHE:HD2	29:BE:169:VAL:HG23	1.85	0.42
47:DF:78:ILE:N	47:DF:78:ILE:CD1	2.83	0.42
48:BG:15:ASP:OD2	48:BG:17:LYS:HB2	2.19	0.42
1:AA:1320:C:O2'	1:AA:1321:U:H5'	2.20	0.42
44:BQ:111:LYS:HE3	49:BR:48:LYS:NZ	2.34	0.42
48:DG:15:ASP:OD2	48:DG:17:LYS:HB2	2.20	0.42
37:BL:41:ARG:HH21	37:BL:41:ARG:HG2	1.85	0.42
6:AG:145:GLU:OE2	6:AG:148:LYS:HD2	2.19	0.42
18:CS:29:PRO:HA	18:CS:47:THR:HG22	2.02	0.42
1:AA:97:G:C2	1:AA:98:A:H1'	2.54	0.42
10:CK:12:ARG:HD3	10:CK:76:TYR:CE1	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1296:C:C4'	1:CA:1302:C:H41	2.21	0.42
15:CP:46:LYS:C	15:CP:48:GLU:N	2.71	0.42
27:BK:119:ALA:HB3	27:BK:120:PRO:CD	2.50	0.42
1:AA:81:A:C2	1:AA:82:G:N7	2.88	0.42
40:DH:127:GLU:HB2	40:DH:143:ILE:CG2	2.50	0.42
27:DK:97:THR:HB	27:DK:98:ARG:NH2	2.35	0.42
47:DF:59:ILE:HG22	47:DF:98:PHE:HE1	1.84	0.42
3:AD:148:ALA:O	3:AD:151:GLN:HB2	2.20	0.42
23:BB:141:G:OP2	23:BB:142:A:C4	2.73	0.42
30:DY:7:THR:O	30:DY:54:VAL:HA	2.20	0.42
14:AO:16:GLY:HA2	14:AO:27:VAL:HG22	2.02	0.42
3:CD:165:GLU:CG	3:CD:166:LYS:N	2.81	0.42
23:BB:545:U:C2	23:BB:548:G:OP2	2.73	0.42
24:BI:129:GLU:CB	24:BI:133:ARG:HH12	2.23	0.42
23:BB:1820:U:H3	25:BC:197:ALA:HA	1.85	0.42
23:BB:2075:U:H2'	23:BB:2238:G:N2	2.34	0.42
16:CQ:58:VAL:HB	16:CQ:74:LEU:HD23	2.02	0.42
1:AA:1329:A:OP1	12:AM:28:ARG:HB2	2.20	0.42
12:AM:37:GLY:O	12:AM:38:ILE:HD13	2.20	0.42
13:CN:5:MET:HE3	13:CN:62:ARG:HH22	1.84	0.42
49:BR:18:GLN:O	49:BR:18:GLN:HG3	2.20	0.42
33:B1:7:LYS:CD	34:B3:33:THR:HG21	2.46	0.42
23:BB:1108:U:C5	23:BB:1109:C:C5	3.08	0.42
13:CN:22:LYS:HA	13:CN:25:GLU:OE2	2.20	0.42
25:BC:249:VAL:O	25:BC:250:GLN:C	2.58	0.42
4:AE:45:VAL:HG23	4:AE:71:ILE:CG2	2.50	0.42
23:DB:2394:C:OP1	37:DL:63:LYS:HG2	2.19	0.42
7:AH:29:SER:O	7:AH:30:LYS:C	2.58	0.42
38:DM:41:LEU:C	38:DM:43:ALA:H	2.22	0.42
23:DB:35:G:H1'	23:DB:454:A:C4	2.55	0.42
1:AA:769:G:H4'	1:AA:1513:A:H4'	2.01	0.42
1:AA:735:C:O2'	1:AA:736:C:H5'	2.19	0.42
5:AF:86:ARG:HD2	17:AR:63:TYR:O	2.19	0.42
1:CA:1053:G:O6	1:CA:1199:U:H2'	2.19	0.42
23:BB:2796:U:H3'	23:BB:2798:U:O4	2.19	0.42
23:DB:2359:C:O2'	23:DB:2360:G:H5'	2.20	0.42
23:BB:2813:A:H2'	23:BB:2814:A:C8	2.55	0.42
28:DP:112:ARG:HB2	28:DP:112:ARG:NH1	2.34	0.42
8:AI:33:SER:HB3	8:AI:36:GLN:HE21	1.85	0.42
11:AL:36:VAL:O	11:AL:36:VAL:HG23	2.19	0.42
23:DB:1848:A:H2'	23:DB:1849:G:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:413:C:H2'	23:BB:414:C:C6	2.54	0.42
23:BB:828:U:H4'	23:BB:831:G:N1	2.35	0.42
23:DB:2627:G:O2'	23:DB:2781:A:N1	2.48	0.42
23:BB:560:C:H3'	23:BB:561:G:C8	2.55	0.42
23:BB:2002:G:OP1	42:BN:13:ASN:HA	2.20	0.42
1:AA:301:G:H2'	1:AA:302:G:C8	2.51	0.42
12:CM:79:LEU:HG	12:CM:79:LEU:H	1.69	0.42
23:DB:1717:A:H2'	23:DB:1718:G:O4'	2.19	0.42
23:BB:1922:G:O2'	23:BB:1923:U:H5'	2.20	0.42
14:AO:33:THR:HA	14:AO:36:ILE:HB	2.02	0.42
23:DB:1322:A:C5	23:DB:1323:C:C5	3.08	0.42
1:AA:792:A:H1'	1:AA:794:A:N7	2.34	0.42
23:DB:1667:G:N2	23:DB:1992:G:OP2	2.45	0.42
23:DB:1310:G:H1'	23:DB:1611:C:H5'	2.01	0.42
46:BU:5:ARG:HG2	46:BU:5:ARG:HH21	1.84	0.42
27:DK:2:ILE:HD13	27:DK:6:THR:HG21	2.02	0.42
48:BG:139:VAL:O	48:BG:142:GLN:HB3	2.20	0.42
1:CA:707:U:H2'	1:CA:708:C:H6	1.85	0.42
23:BB:697:G:H2'	23:BB:698:C:C6	2.55	0.42
23:DB:2825:G:H2'	23:DB:2826:A:H5'	2.00	0.42
23:DB:1365:A:OP2	51:DZ:3:ARG:HB2	2.20	0.42
23:BB:1310:G:H1'	23:BB:1611:C:H5'	2.01	0.42
6:CG:101:ARG:HG2	6:CG:105:GLU:OE2	2.20	0.42
14:CO:73:LYS:O	14:CO:74:ASP:HB2	2.20	0.42
47:BF:68:LYS:HB3	47:BF:69:ALA:H	1.71	0.42
23:DB:1908:C:H2'	23:DB:1909:C:H6	1.85	0.42
23:DB:285:G:H2'	23:DB:286:U:O4'	2.19	0.42
14:CO:45:GLU:O	14:CO:47:LYS:N	2.52	0.42
1:CA:77:A:O2'	1:CA:78:A:H5'	2.20	0.42
26:DD:117:GLY:HA2	26:DD:164:GLN:NE2	2.35	0.42
37:BL:109:LYS:HB3	37:BL:111:ILE:HD11	2.02	0.42
1:CA:259:G:O2'	1:CA:260:G:H5'	2.19	0.42
23:DB:1270:C:H5''	23:DB:1271:G:O5'	2.20	0.42
12:CM:43:LYS:N	12:CM:43:LYS:HD2	2.35	0.42
41:DJ:109:LEU:CD1	41:DJ:119:PHE:HB2	2.50	0.42
51:BZ:5:CYS:HB3	51:BZ:10:LYS:N	2.14	0.41
52:BW:19:ARG:HD3	52:BW:19:ARG:N	2.35	0.41
23:DB:851:C:H2'	23:DB:852:U:C6	2.54	0.41
23:DB:2330:G:N3	52:DW:38:ARG:HB3	2.35	0.41
8:AI:24:ASN:CG	8:AI:25:GLY:N	2.73	0.41
8:AI:24:ASN:O	8:AI:59:LYS:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AF:64:VAL:HG12	5:AF:65:GLU:N	2.29	0.41
40:BH:80:ILE:HB	40:BH:144:VAL:CG1	2.35	0.41
38:BM:59:ARG:O	38:BM:60:GLN:C	2.58	0.41
27:DK:70:ARG:HH11	27:DK:76:VAL:HG22	1.85	0.41
29:DE:131:THR:HB	29:DE:164:LEU:HG	2.01	0.41
29:BE:149:ILE:O	29:BE:188:MET:HA	2.20	0.41
18:CS:10:ILE:HG22	18:CS:38:THR:N	2.35	0.41
18:CS:45:GLY:N	18:CS:61:VAL:HB	2.35	0.41
18:CS:61:VAL:HG12	18:CS:62:THR:N	2.34	0.41
48:BG:74:MET:O	48:BG:78:VAL:HG13	2.20	0.41
48:DG:17:LYS:O	48:DG:23:ILE:HG23	2.20	0.41
23:BB:513:A:O2'	23:BB:514:A:H5'	2.20	0.41
27:BK:13:ASN:ND2	27:BK:98:ARG:H	2.17	0.41
20:CB:27:LYS:CA	20:CB:30:ILE:HD12	2.39	0.41
42:BN:41:ALA:C	42:BN:43:GLU:N	2.72	0.41
27:DK:118:LEU:C	27:DK:120:PRO:HD2	2.39	0.41
1:AA:411:A:N7	1:AA:413:G:N3	2.68	0.41
23:DB:1137:G:O2'	23:DB:1138:G:H5'	2.20	0.41
14:AO:82:ILE:O	14:AO:86:GLY:N	2.53	0.41
47:DF:131:VAL:C	47:DF:133:GLU:H	2.23	0.41
23:BB:141:G:H5''	23:BB:142:A:C1'	2.50	0.41
38:DM:18:ARG:CA	38:DM:38:ARG:HH22	2.32	0.41
23:DB:2886:A:N6	31:D0:39:ARG:NE	2.56	0.41
1:CA:922:G:H2'	1:CA:923:A:H8	1.84	0.41
23:DB:635:C:O2'	23:DB:636:G:H5'	2.19	0.41
13:CN:70:HIS:O	13:CN:71:GLY:C	2.59	0.41
4:AE:132:PRO:HG2	4:AE:133:ILE:H	1.85	0.41
26:DD:37:VAL:CG2	26:DD:91:THR:HA	2.49	0.41
26:DD:34:VAL:HG12	26:DD:94:GLN:H	1.83	0.41
1:AA:1060:U:H5''	9:AJ:53:ILE:HG12	2.00	0.41
30:BY:7:THR:O	30:BY:54:VAL:HG12	2.20	0.41
47:BF:155:ILE:HG22	47:BF:156:THR:N	2.35	0.41
13:AN:70:HIS:O	13:AN:71:GLY:C	2.58	0.41
6:CG:58:LEU:H	6:CG:58:LEU:CD2	2.25	0.41
48:DG:167:VAL:HG23	48:DG:168:VAL:N	2.27	0.41
23:BB:1171:G:H2'	23:BB:1172:C:H4'	2.02	0.41
40:BH:44:ILE:CG2	40:BH:51:ARG:HH22	2.32	0.41
40:BH:4:ILE:CD1	40:BH:37:VAL:HG13	2.50	0.41
9:CJ:52:LEU:CB	13:CN:80:ARG:HE	2.33	0.41
35:DV:29:ILE:HA	35:DV:38:LEU:O	2.20	0.41
3:CD:199:ILE:CG1	3:CD:200:VAL:N	2.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DS:59:GLU:OE2	45:DS:66:ILE:HG23	2.18	0.41
1:AA:1028:C:H3'	1:AA:1029:U:H5	1.85	0.41
48:DG:10:VAL:CG1	48:DG:14:VAL:HG21	2.50	0.41
13:CN:9:GLU:HB2	13:CN:62:ARG:NE	2.35	0.41
23:BB:1654:A:O2'	26:BD:118:PHE:CB	2.68	0.41
23:DB:2143:C:N3	23:DB:2144:G:H1'	2.35	0.41
23:DB:2471:A:O2'	23:DB:2472:G:C8	2.64	0.41
23:DB:723:C:H2'	23:DB:724:U:C6	2.55	0.41
20:AB:31:PHE:HB2	20:AB:41:ASN:CA	2.47	0.41
23:BB:170:U:O2'	23:BB:171:U:H5'	2.20	0.41
1:CA:769:G:H4'	1:CA:1513:A:H4'	2.02	0.41
37:BL:77:ILE:O	37:BL:110:VAL:O	2.38	0.41
46:DU:81:ARG:HB2	46:DU:96:LYS:HG3	2.02	0.41
11:AL:54:VAL:HG22	11:AL:79:ILE:HD11	2.02	0.41
1:CA:1009:U:H2'	1:CA:1010:U:C5	2.55	0.41
1:AA:489:C:O2'	1:AA:490:C:H5'	2.20	0.41
1:AA:1053:G:O6	1:AA:1199:U:H2'	2.19	0.41
25:DC:173:LEU:N	25:DC:173:LEU:CD2	2.81	0.41
2:CC:133:MET:SD	2:CC:152:VAL:HG23	2.60	0.41
44:DQ:7:VAL:HG23	44:DQ:8:ILE:N	2.35	0.41
23:DB:2796:U:H3'	23:DB:2798:U:O4	2.19	0.41
49:BR:78:ARG:NH2	49:BR:78:ARG:HG3	2.34	0.41
1:CA:537:G:H2'	1:CA:538:G:H8	1.85	0.41
25:BC:206:LYS:HZ3	25:BC:212:TRP:HH2	1.67	0.41
1:CA:1226:C:C4	12:CM:102:LYS:HB3	2.55	0.41
12:CM:102:LYS:NZ	12:CM:102:LYS:HB2	2.34	0.41
23:DB:1794:A:O2'	23:DB:1795:C:H5'	2.20	0.41
1:CA:221:C:O2'	1:CA:222:C:H5'	2.19	0.41
23:DB:2557:G:C6	23:DB:2558:C:N4	2.88	0.41
1:CA:6:G:C8	4:CE:123:LEU:HD21	2.55	0.41
23:DB:2041:U:H2'	23:DB:2042:A:C8	2.56	0.41
29:BE:31:VAL:O	29:BE:34:ALA:HB3	2.20	0.41
23:BB:522:A:H2'	23:BB:523:C:H6	1.81	0.41
43:BO:105:ALA:C	43:BO:107:ALA:N	2.74	0.41
1:CA:824:G:H2'	1:CA:825:A:H8	1.85	0.41
23:DB:1684:G:H2'	23:DB:1685:C:H6	1.85	0.41
23:BB:215:G:C4'	23:BB:216:A:H4'	2.50	0.41
25:BC:124:LYS:N	25:BC:191:LEU:HD13	2.35	0.41
1:CA:113:G:O4'	1:CA:354:G:H4'	2.20	0.41
1:AA:113:G:O4'	1:AA:354:G:H4'	2.20	0.41
23:DB:2568:U:H2'	23:DB:2569:G:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:895:G:H2'	1:AA:896:C:H6	1.86	0.41
1:AA:896:C:O2'	1:AA:897:C:H5'	2.19	0.41
27:BK:24:VAL:HG13	27:BK:33:ALA:HB2	2.02	0.41
23:DB:780:G:H2'	23:DB:782:A:N7	2.35	0.41
23:DB:2419:U:H3'	34:D3:32:LEU:HD12	2.01	0.41
23:DB:2617:U:C2'	23:DB:2618:G:H5'	2.50	0.41
21:AU:26:GLY:O	21:AU:30:GLU:HB2	2.19	0.41
23:BB:1182:G:H2'	23:BB:1183:U:O4'	2.20	0.41
1:CA:652:U:H1'	1:CA:653:U:C5	2.55	0.41
23:BB:1987:A:H2'	23:BB:1988:G:C8	2.55	0.41
25:BC:259:ASN:C	25:BC:261:ARG:H	2.23	0.41
5:CF:81:ASN:OD1	5:CF:83:ALA:HB3	2.20	0.41
23:BB:107:G:O2'	23:BB:108:G:H5'	2.19	0.41
28:BP:44:GLY:HA3	28:BP:60:VAL:HG12	2.01	0.41
1:CA:1148:U:H5'	8:CI:6:TYR:OH	2.20	0.41
46:DU:2:ALA:O	46:DU:5:ARG:NH2	2.52	0.41
23:DB:2252:G:O2'	23:DB:2253:G:H5'	2.19	0.41
1:AA:392:C:H2'	1:AA:393:A:H8	1.85	0.41
23:DB:2519:U:C6	23:DB:2542:A:N6	2.87	0.41
1:CA:53:A:H2'	1:CA:54:C:O4'	2.20	0.41
43:BO:61:GLN:HE21	43:BO:61:GLN:HB3	1.63	0.41
23:BB:2249:U:H4'	23:BB:2275:C:C5	2.55	0.41
1:AA:533:A:H5''	56:AA:1893:HOH:O	2.19	0.41
23:DB:112:U:H2'	23:DB:113:U:H5'	2.01	0.41
21:CU:40:PRO:C	21:CU:42:THR:H	2.23	0.41
23:BB:2352:A:N1	52:BW:30:VAL:HG11	2.35	0.41
8:AI:56:MET:CG	8:AI:57:VAL:N	2.83	0.41
44:BQ:30:VAL:HG22	44:BQ:31:TYR:N	2.35	0.41
44:DQ:57:ARG:HA	44:DQ:60:TRP:CE3	2.55	0.41
49:DR:11:GLN:O	49:DR:12:HIS:CG	2.73	0.41
50:DT:85:VAL:C	50:DT:86:THR:HG23	2.41	0.41
37:DL:121:THR:HB	37:DL:141:LYS:HD2	2.01	0.41
20:AB:139:GLU:HG2	20:AB:143:LEU:HD12	2.02	0.41
10:AK:22:ILE:HG12	10:AK:31:VAL:HG12	2.02	0.41
50:BT:89:GLU:C	50:BT:91:GLN:H	2.24	0.41
45:DS:28:LYS:O	45:DS:29:VAL:HG23	2.20	0.41
47:BF:78:ILE:HG13	47:BF:82:TYR:CE1	2.55	0.41
24:DI:72:THR:HG23	24:DI:112:LYS:HD2	2.02	0.41
6:AG:145:GLU:C	6:AG:147:ASN:N	2.72	0.41
27:BK:47:ILE:HG23	27:BK:48:PRO:N	2.34	0.41
1:AA:77:A:H2'	1:AA:78:A:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BN:76:VAL:HA	42:BN:79:LEU:HD12	2.02	0.41
23:DB:10:A:H61	23:DB:2895:G:C1'	2.33	0.41
47:DF:102:LEU:C	47:DF:102:LEU:HD13	2.41	0.41
38:DM:18:ARG:HA	38:DM:18:ARG:HD2	1.75	0.41
47:BF:11:VAL:HG12	47:BF:12:VAL:N	2.22	0.41
47:BF:11:VAL:O	47:BF:12:VAL:HB	2.20	0.41
47:BF:1:ALA:HB1	47:BF:4:HIS:HB3	2.01	0.41
23:DB:770:G:O2'	23:DB:771:G:H5'	2.19	0.41
45:BS:4:ILE:HG22	45:BS:106:VAL:HG22	2.02	0.41
26:DD:114:LYS:HE2	26:DD:165:MET:HG2	2.02	0.41
47:BF:31:GLU:O	47:BF:32:LYS:O	2.38	0.41
49:BR:23:GLU:O	49:BR:24:LYS:C	2.59	0.41
2:AC:26:LYS:HB2	2:AC:26:LYS:HE3	1.89	0.41
20:CB:83:ALA:CB	20:CB:90:PHE:HB3	2.49	0.41
42:BN:98:LEU:O	42:BN:112:TYR:HB2	2.20	0.41
36:D2:22:MET:HE2	36:D2:31:LEU:HD13	2.01	0.41
31:B0:49:ARG:O	31:B0:51:ARG:NE	2.53	0.41
12:CM:53:ASP:HA	12:CM:56:ARG:CZ	2.50	0.41
1:CA:237:G:O2'	1:CA:238:A:H5'	2.19	0.41
26:BD:118:PHE:HZ	26:BD:123:LYS:NZ	2.17	0.41
23:BB:1547:C:H2'	23:BB:1548:A:H8	1.84	0.41
23:BB:1552:A:H2'	23:BB:1553:A:C5'	2.50	0.41
49:DR:72:VAL:CG2	49:DR:89:HIS:HB3	2.46	0.41
23:DB:2462:C:H2'	23:DB:2463:C:C6	2.54	0.41
44:BQ:83:LYS:NZ	44:BQ:83:LYS:HA	2.35	0.41
28:BP:50:ARG:HB3	28:BP:57:ALA:O	2.20	0.41
43:DO:90:VAL:HG22	43:DO:115:LEU:HD11	2.02	0.41
2:AC:14:VAL:HG23	2:AC:15:LYS:HD3	2.01	0.41
46:BU:50:ALA:H	46:BU:53:GLN:NE2	2.18	0.41
28:BP:112:ARG:HB2	28:BP:112:ARG:NH1	2.34	0.41
48:BG:152:ARG:HA	48:BG:152:ARG:HD2	1.86	0.41
10:AK:70:ALA:C	10:AK:72:ALA:N	2.73	0.41
23:DB:673:C:H2'	23:DB:674:G:H5'	2.02	0.41
23:DB:1930:G:H22	23:DB:1969:A:P	2.43	0.41
45:BS:33:LEU:HG	45:BS:51:LEU:CD2	2.50	0.41
35:DV:1:MET:HG2	35:DV:59:GLU:CG	2.48	0.41
4:CE:32:PHE:CZ	4:CE:55:VAL:HG22	2.55	0.41
1:AA:284:C:H2'	1:AA:285:C:H6	1.84	0.41
1:CA:126:G:H4'	1:CA:634:C:H1'	2.02	0.41
48:DG:54:ARG:HD2	48:DG:57:TYR:CE1	2.55	0.41
23:BB:1535:A:O2'	23:BB:1536:C:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:839:U:H2'	23:DB:840:C:H6	1.85	0.41
23:DB:1983:G:H4'	23:DB:2606:C:H4'	2.02	0.41
3:CD:101:VAL:HG13	3:CD:106:PHE:HB2	2.01	0.41
20:CB:148:GLY:C	20:CB:150:ILE:H	2.23	0.41
23:DB:2376:A:N1	43:DO:92:PHE:HB3	2.36	0.41
23:DB:1539:U:H3'	23:DB:1540:G:H8	1.85	0.41
23:BB:1335:C:H2'	23:BB:1336:A:C8	2.55	0.41
1:AA:1283:U:O2'	1:AA:1284:C:H5'	2.19	0.41
13:AN:92:ILE:HG21	13:AN:95:LEU:HD22	2.01	0.41
23:DB:1987:A:H2'	23:DB:1988:G:C8	2.55	0.41
23:DB:1740:G:H2'	23:DB:1741:C:C6	2.54	0.41
1:AA:420:U:H2'	1:AA:422:C:C5	2.55	0.41
23:BB:2889:C:O2'	23:BB:2890:G:H5'	2.20	0.41
23:DB:2758:A:H2'	23:DB:2759:G:O4'	2.20	0.41
28:DP:15:ASP:O	28:DP:17:PRO:HD3	2.20	0.41
23:BB:1999:C:O2'	23:BB:2000:C:H5'	2.20	0.41
23:DB:2219:U:O2'	23:DB:2220:U:H5'	2.20	0.41
46:DU:94:PHE:HA	46:DU:101:THR:HA	2.01	0.41
1:CA:1465:A:O2'	1:CA:1466:C:H5'	2.20	0.41
1:AA:691:G:H1'	1:AA:696:A:N6	2.34	0.41
23:DB:2480:C:O2'	23:DB:2481:G:H5'	2.19	0.41
41:BJ:36:LEU:HD12	41:BJ:121:LYS:HE3	2.02	0.41
37:BL:74:THR:HA	37:BL:107:PHE:O	2.20	0.41
1:CA:1517:G:H1'	23:DB:1919:A:O3'	2.20	0.41
52:DW:49:ASN:C	52:DW:50:VAL:HG22	2.40	0.41
5:CF:29:ILE:HG21	5:CF:64:VAL:CG1	2.31	0.41
5:AF:3:HIS:N	5:AF:92:THR:OG1	2.48	0.41
13:CN:40:ARG:HG3	13:CN:40:ARG:HH11	1.85	0.41
29:BE:161:ALA:HA	29:BE:164:LEU:HD12	2.02	0.41
29:BE:146:VAL:HA	29:BE:185:LYS:O	2.21	0.41
18:CS:39:ILE:HG21	18:CS:61:VAL:HG13	2.02	0.41
18:CS:68:HIS:HB3	18:CS:72:GLU:CD	2.41	0.41
44:BQ:93:ILE:HG23	44:BQ:94:LEU:N	2.35	0.41
20:AB:107:ARG:HG3	20:AB:108:GLN:NE2	2.35	0.41
37:BL:124:GLY:H	37:BL:143:GLU:HG3	1.84	0.41
23:BB:1693:U:O2'	25:BC:13:ARG:NH2	2.53	0.41
25:BC:152:GLN:HA	25:BC:155:ARG:CD	2.49	0.41
50:BT:39:THR:O	50:BT:41:ALA:N	2.48	0.41
50:BT:54:GLU:CG	50:BT:90:GLY:H	2.27	0.41
50:BT:29:THR:H	50:BT:91:GLN:NE2	2.18	0.41
41:DJ:55:ILE:CB	41:DJ:123:LYS:HB2	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DJ:96:ARG:CZ	41:DJ:99:ARG:HD2	2.50	0.41
25:BC:129:LEU:HB3	25:BC:134:ILE:CG2	2.46	0.41
24:DI:73:PRO:CG	24:DI:78:LEU:HD21	2.46	0.41
42:DN:78:LYS:O	42:DN:82:GLU:HB2	2.21	0.41
42:BN:73:ASN:O	42:BN:76:VAL:HG22	2.21	0.41
23:DB:2379:G:O3'	43:DO:17:LYS:HE2	2.20	0.41
15:AP:71:VAL:O	15:AP:75:ILE:HG13	2.20	0.41
47:DF:102:LEU:CD2	47:DF:106:ALA:HB3	2.50	0.41
3:AD:154:VAL:HG23	3:AD:155:LYS:H	1.85	0.41
47:BF:108:PRO:C	47:BF:110:ILE:H	2.24	0.41
1:CA:415:A:N1	1:CA:428:G:O6	2.53	0.41
23:DB:971:G:O2'	23:DB:972:A:H5'	2.20	0.41
23:DB:1324:G:H1'	23:DB:1616:A:C6	2.54	0.41
24:BI:91:LYS:O	24:BI:91:LYS:HG3	2.20	0.41
14:CO:16:GLY:HA2	14:CO:27:VAL:HG22	2.02	0.41
47:BF:31:GLU:HB2	47:BF:158:THR:HG23	2.02	0.41
47:BF:34:THR:O	47:BF:35:LEU:HB2	2.20	0.41
23:BB:1172:C:H3'	23:BB:1173:U:H6	1.78	0.41
23:BB:1431:A:H2'	23:BB:1432:G:C8	2.55	0.41
12:CM:33:LEU:HD13	12:CM:39:ALA:O	2.20	0.41
1:CA:423:G:O2'	1:CA:424:G:H5'	2.19	0.41
35:BV:30:ILE:HA	35:BV:91:PHE:O	2.21	0.41
23:BB:956:G:H5''	38:BM:76:LYS:HE2	2.02	0.41
1:AA:252:U:H2'	1:AA:253:A:C8	2.55	0.41
5:CF:98:GLU:O	5:CF:99:ALA:HB3	2.19	0.41
23:DB:2743:U:H2'	23:DB:2744:G:C5'	2.44	0.41
9:AJ:57:VAL:O	9:AJ:58:ASN:HB2	2.19	0.41
1:AA:865:A:H2'	1:AA:866:C:C6	2.54	0.41
37:BL:57:LEU:C	37:BL:59:ARG:H	2.24	0.41
23:DB:2394:C:H2'	23:DB:2395:C:C6	2.55	0.41
32:B4:3:VAL:HG23	32:B4:4:ARG:N	2.30	0.41
48:BG:84:LYS:CB	48:BG:132:LEU:HG	2.50	0.41
48:BG:84:LYS:HG3	48:BG:131:VAL:C	2.41	0.41
1:CA:592:G:H2'	1:CA:593:U:H6	1.85	0.41
50:DT:54:GLU:CG	50:DT:90:GLY:H	2.27	0.41
25:DC:51:ARG:NH2	25:DC:246:PRO:HG2	2.35	0.41
5:AF:51:ILE:O	5:AF:51:ILE:HG23	2.20	0.41
23:DB:1434:A:OP1	23:DB:1434:A:H4'	2.19	0.41
1:AA:1327:C:H2'	1:AA:1328:C:C6	2.54	0.41
23:DB:592:A:N3	34:D3:3:ILE:HD11	2.35	0.41
6:AG:6:ILE:H	6:AG:6:ILE:HG13	1.58	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CJ:83:THR:O	9:CJ:86:ALA:HB3	2.20	0.41
44:BQ:78:PHE:CE2	44:BQ:82:LEU:HD11	2.55	0.41
7:CH:6:ILE:HD11	7:CH:31:LEU:CD2	2.50	0.41
20:AB:118:THR:O	20:AB:124:THR:HG23	2.21	0.41
5:CF:86:ARG:CZ	17:CR:63:TYR:HB3	2.50	0.41
43:DO:7:ARG:HA	43:DO:10:ARG:CZ	2.50	0.41
23:DB:1418:G:C2'	23:DB:1580:A:H61	2.34	0.41
6:AG:125:ASP:HB3	6:AG:130:LYS:HB3	2.02	0.41
8:AI:36:GLN:N	8:AI:36:GLN:HE21	2.18	0.41
29:DE:3:LEU:HB3	29:DE:12:LEU:HB2	2.02	0.41
49:BR:2:TYR:CB	49:BR:42:ALA:HB2	2.50	0.41
1:CA:379:C:O2'	1:CA:380:G:H5'	2.20	0.41
23:BB:2457:U:H2'	23:BB:2458:G:H5'	2.02	0.41
8:CI:11:ARG:NH2	8:CI:12:LYS:HD2	2.35	0.41
20:AB:23:ASN:O	20:AB:25:LYS:N	2.53	0.41
23:DB:1584:U:H3'	23:DB:1585:C:H5'	2.02	0.41
48:DG:54:ARG:HD2	48:DG:57:TYR:HE1	1.85	0.41
1:AA:884:U:H4'	1:AA:885:G:H5''	2.00	0.41
20:CB:103:TRP:CZ3	20:CB:107:ARG:HD2	2.56	0.41
1:AA:834:U:H2'	1:AA:835:U:H6	1.85	0.41
12:CM:79:LEU:HB2	12:CM:84:CYS:SG	2.61	0.41
23:BB:2369:A:O2'	23:BB:2370:G:H5'	2.20	0.41
1:AA:1076:U:H2'	1:AA:1077:G:H8	1.84	0.41
26:DD:33:ARG:NH1	26:DD:53:GLY:O	2.52	0.41
1:AA:1180:A:P	8:AI:98:ARG:HH22	2.44	0.41
43:DO:83:LEU:HA	43:DO:83:LEU:HD12	1.92	0.41
23:BB:2027:G:O2'	23:BB:2028:U:H5'	2.20	0.41
22:DA:21:G:O2'	22:DA:22:U:H5'	2.21	0.41
1:CA:468:A:H8	1:CA:469:C:C6	2.38	0.41
1:CA:386:C:O2'	1:CA:387:U:H5'	2.20	0.41
27:BK:107:LEU:C	27:BK:109:SER:N	2.73	0.41
1:CA:894:G:O2'	1:CA:895:G:H5'	2.19	0.41
1:CA:709:U:H2'	1:CA:710:G:C8	2.54	0.41
25:DC:264:LYS:HG3	25:DC:265:PHE:N	2.35	0.41
1:CA:627:G:H2'	1:CA:628:G:H8	1.86	0.41
27:DK:107:LEU:C	27:DK:109:SER:N	2.74	0.41
23:BB:1531:C:H2'	23:BB:1532:A:C8	2.55	0.41
20:AB:94:ARG:HG2	20:AB:94:ARG:O	2.20	0.41
23:DB:1515:A:H3'	23:DB:1516:G:H8	1.86	0.41
23:DB:2233:U:H2'	23:DB:2234:G:H8	1.85	0.41
1:CA:462:G:H2'	1:CA:463:U:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:596:U:H2'	23:BB:597:G:H8	1.84	0.41
23:DB:1333:G:H3'	56:DB:3550:HOH:O	2.21	0.41
23:DB:730:A:H5'	56:DB:3611:HOH:O	2.19	0.41
1:AA:43:C:H2'	1:AA:44:A:O4'	2.19	0.41
44:BQ:67:ALA:O	44:BQ:70:GLN:HB3	2.20	0.41
34:D3:9:ALA:O	34:D3:13:PHE:HD2	2.02	0.41
36:B2:32:ALA:HA	36:B2:35:ARG:HB2	2.02	0.41
41:DJ:130:HIS:O	41:DJ:130:HIS:CG	2.73	0.41
24:BI:35:MET:C	24:BI:35:MET:SD	2.98	0.41
1:AA:343:U:O2'	1:AA:344:A:H2'	2.20	0.41
23:DB:1102:C:H2'	23:DB:1103:A:H8	1.85	0.41
1:AA:330:C:O2'	1:AA:331:G:H5'	2.20	0.41
20:AB:53:LEU:CD1	20:AB:216:VAL:HG12	2.47	0.41
44:DQ:23:TYR:HB2	44:DQ:28:SER:OG	2.21	0.41
13:AN:40:ARG:NH2	18:AS:6:LYS:CG	2.84	0.41
33:B1:33:LEU:HD12	33:B1:34:GLU:H	1.84	0.41
25:DC:142:ASN:HA	25:DC:153:LEU:O	2.20	0.41
23:BB:319:G:H2'	23:BB:320:A:O4'	2.21	0.41
37:DL:143:GLU:CG	37:DL:144:GLU:N	2.80	0.41
38:DM:59:ARG:O	38:DM:60:GLN:C	2.58	0.41
48:BG:17:LYS:O	48:BG:23:ILE:HG23	2.20	0.41
48:BG:28:LYS:O	48:BG:30:GLY:N	2.53	0.41
48:BG:32:LEU:HB3	48:BG:34:ARG:NE	2.35	0.41
48:BG:30:GLY:CA	48:BG:78:VAL:HA	2.46	0.41
18:AS:68:HIS:HB3	18:AS:72:GLU:CD	2.41	0.41
10:AK:92:ARG:HH22	10:AK:111:ASP:CG	2.24	0.41
28:DP:4:ILE:C	28:DP:6:GLN:N	2.74	0.41
25:BC:173:LEU:HD23	25:BC:173:LEU:O	2.21	0.41
25:BC:184:GLU:O	25:BC:185:ALA:HB3	2.20	0.41
25:BC:90:ILE:HD13	25:BC:103:ILE:C	2.40	0.41
32:D4:25:VAL:HG11	32:D4:35:GLN:NE2	2.36	0.41
23:BB:2517:C:C2	23:BB:2542:A:N6	2.88	0.41
1:CA:437:U:H4'	3:CD:153:ARG:HH12	1.85	0.41
29:BE:28:VAL:HG23	29:BE:29:HIS:N	2.36	0.41
47:BF:137:PHE:O	47:BF:138:PRO:C	2.59	0.41
14:AO:78:TYR:O	14:AO:82:ILE:HG13	2.20	0.41
23:DB:163:C:O4'	23:DB:163:C:O2	2.38	0.41
23:BB:1057:A:H62	23:BB:1086:A:H2'	1.85	0.41
47:BF:1:ALA:CA	47:BF:4:HIS:HB3	2.51	0.41
30:DY:7:THR:HG22	30:DY:8:GLN:N	2.36	0.41
23:DB:1430:G:H2'	23:DB:1431:A:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:6:LYS:O	25:DC:8:THR:N	2.52	0.41
48:DG:110:HIS:HA	48:DG:111:PRO:HD3	1.95	0.41
47:BF:92:GLY:HA2	47:BF:95:MET:HE3	2.03	0.41
47:DF:31:GLU:HB2	47:DF:158:THR:HG23	2.03	0.41
23:DB:1174:U:H1'	23:DB:1176:U:C1'	2.49	0.41
9:CJ:51:VAL:O	9:CJ:63:ASP:N	2.53	0.41
9:AJ:15:HIS:O	9:AJ:18:ILE:HG22	2.21	0.41
35:BV:80:HIS:HB3	35:BV:83:LYS:O	2.20	0.41
13:CN:20:PHE:CG	13:CN:24:ALA:HB2	2.55	0.41
32:D4:36:ARG:O	32:D4:37:GLN:C	2.58	0.41
23:DB:2465:C:O2'	23:DB:2466:C:H5'	2.19	0.41
23:DB:2808:G:O2'	23:DB:2809:A:H8	2.04	0.41
37:DL:56:PRO:O	37:DL:60:ARG:HG3	2.20	0.41
4:AE:81:GLN:H	4:AE:146:MET:CE	2.33	0.41
8:AI:43:ALA:C	8:AI:45:MET:H	2.23	0.41
29:DE:119:ILE:HD11	29:DE:185:LYS:CE	2.50	0.41
23:BB:1803:A:H3'	23:BB:1804:C:H6	1.84	0.41
8:AI:81:GLY:O	8:AI:84:ARG:HB2	2.20	0.41
1:AA:471:U:H2'	1:AA:472:U:C6	2.55	0.41
46:BU:14:THR:HB	46:BU:68:ASN:HB3	2.03	0.41
46:DU:11:ILE:CG2	46:DU:12:VAL:N	2.83	0.41
1:CA:1020:G:H2'	1:CA:1021:A:C5'	2.50	0.41
1:AA:1057:G:H5''	2:AC:153:SER:CB	2.50	0.41
1:CA:814:A:C5'	1:CA:1511:G:H4'	2.49	0.41
23:DB:154:U:O2'	23:DB:155:A:H5'	2.19	0.41
42:BN:60:VAL:O	42:BN:63:ARG:HB3	2.20	0.41
34:D3:7:ARG:HG3	34:D3:7:ARG:HH11	1.85	0.41
15:CP:20:VAL:HG23	15:CP:35:ARG:CA	2.49	0.41
27:DK:30:ARG:HH11	27:DK:30:ARG:HG2	1.85	0.41
23:BB:1418:G:C2'	23:BB:1580:A:H61	2.34	0.41
1:CA:538:G:H2'	1:CA:539:A:C8	2.55	0.41
5:CF:18:VAL:HG21	5:CF:58:HIS:CG	2.55	0.41
7:AH:36:ALA:HA	7:AH:39:LEU:HD12	2.02	0.41
38:DM:11:LYS:HD2	38:DM:86:LYS:HG2	2.02	0.41
23:DB:876:C:H2'	23:DB:877:A:O4'	2.21	0.41
1:AA:1339:A:H2'	1:AA:1340:A:O4'	2.21	0.41
23:BB:1848:A:H2'	23:BB:1849:G:C8	2.56	0.41
48:BG:154:GLU:O	48:BG:158:GLY:N	2.54	0.41
6:CG:71:THR:C	6:CG:90:VAL:HG22	2.40	0.41
1:AA:551:U:O2'	11:AL:82:ARG:HD2	2.21	0.41
1:AA:828:U:H2'	1:AA:829:G:O5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CH:4:ASP:HB2	7:CH:80:PRO:HG3	2.03	0.41
2:CC:78:LYS:HG3	2:CC:81:GLU:HB3	2.01	0.41
23:DB:2783:U:H2'	23:DB:2784:U:H6	1.82	0.41
42:BN:12:ARG:HG3	42:BN:13:ASN:N	2.36	0.41
23:DB:2320:U:O2'	23:DB:2322:A:N7	2.48	0.41
52:BW:41:GLY:HA2	52:BW:44:PHE:CE2	2.55	0.41
23:DB:1495:A:O2'	23:DB:1496:A:H5'	2.21	0.41
23:BB:632:A:H2'	23:BB:633:A:C8	2.56	0.41
23:BB:633:A:OP1	37:BL:68:SER:HB2	2.20	0.41
20:CB:18:GLN:O	20:CB:37:VAL:HG23	2.20	0.41
16:AQ:39:ARG:HH11	16:AQ:39:ARG:HG3	1.85	0.41
25:DC:32:LEU:O	25:DC:63:ILE:HG12	2.21	0.41
23:DB:2569:G:O2'	23:DB:2570:G:H5'	2.20	0.41
25:BC:30:ALA:O	25:BC:32:LEU:N	2.53	0.41
23:DB:1299:G:N2	23:DB:1640:A:C8	2.88	0.41
9:AJ:8:ILE:HB	9:AJ:74:VAL:HB	2.02	0.41
23:BB:378:C:C2'	23:BB:379:G:H5'	2.50	0.41
23:DB:1248:G:C4	44:DQ:2:ARG:HD2	2.56	0.41
1:AA:575:G:O2'	1:AA:820:U:H5''	2.20	0.41
1:CA:724:G:O2'	1:CA:725:G:H5'	2.20	0.41
23:BB:1064:C:O2'	23:BB:1065:U:H5'	2.20	0.41
23:DB:129:C:H2'	23:DB:130:C:C6	2.55	0.41
1:CA:93:U:C2'	1:CA:94:G:H5'	2.50	0.41
48:BG:70:LEU:HD22	48:BG:70:LEU:HA	1.93	0.41
49:BR:43:ASN:ND2	49:BR:44:GLY:N	2.68	0.41
45:BS:8:ARG:HB3	45:BS:102:HIS:CE1	2.55	0.41
3:AD:72:ARG:HG2	3:AD:72:ARG:HH11	1.86	0.41
52:BW:45:HIS:N	52:BW:45:HIS:ND1	2.66	0.41
25:DC:120:ASP:N	25:DC:120:ASP:OD2	2.51	0.41
25:DC:92:LEU:HD12	25:DC:92:LEU:HA	1.90	0.41
5:AF:42:TRP:CD1	5:AF:42:TRP:N	2.89	0.41
22:DA:67:G:O2'	22:DA:68:C:H5'	2.20	0.41
23:DB:388:G:N7	23:DB:390:U:H2'	2.35	0.41
23:DB:2330:G:N2	52:DW:38:ARG:O	2.51	0.41
27:BK:77:ILE:HG12	28:BP:71:ARG:HD2	2.02	0.41
48:DG:157:LYS:HB3	48:DG:159:LYS:HG2	2.03	0.41
23:DB:627:A:H4'	23:DB:628:G:OP1	2.20	0.41
25:DC:141:HIS:CG	25:DC:142:ASN:N	2.87	0.41
39:DX:36:GLN:HB2	39:DX:37:LEU:H	1.49	0.41
19:CT:43:LYS:HB3	19:CT:85:LEU:HD21	2.02	0.41
3:CD:22:SER:CB	3:CD:109:THR:HG22	2.46	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:42:ALA:O	47:DF:44:ALA:N	2.53	0.41
18:CS:38:THR:HA	18:CS:68:HIS:O	2.21	0.41
18:CS:40:PHE:O	18:CS:43:MET:HG2	2.21	0.41
18:AS:38:THR:HG23	18:AS:69:LYS:CE	2.51	0.41
20:AB:96:LEU:HB2	20:AB:99:MET:HE2	2.02	0.41
25:BC:142:ASN:HA	25:BC:153:LEU:O	2.20	0.41
25:BC:64:VAL:HG12	25:BC:65:ASP:N	2.35	0.41
41:BJ:55:ILE:CB	41:BJ:123:LYS:HB2	2.50	0.41
24:DI:52:LEU:HD13	24:DI:81:LYS:NZ	2.35	0.41
40:BH:106:ALA:O	40:BH:108:VAL:N	2.52	0.41
23:DB:1203:U:H4'	37:DL:3:LEU:HD12	2.01	0.41
28:BP:1:SER:H1	28:BP:4:ILE:HB	1.84	0.41
4:CE:52:ALA:HB2	4:CE:61:LYS:CE	2.40	0.41
27:BK:119:ALA:O	27:BK:120:PRO:O	2.39	0.41
1:AA:85:U:O2'	1:AA:86:G:H5''	2.21	0.41
23:BB:2267:A:C8	23:BB:2267:A:C4'	3.03	0.41
38:BM:21:ALA:HB1	38:BM:100:LYS:HE2	2.02	0.41
18:AS:40:PHE:HB2	18:AS:42:ASN:ND2	2.35	0.41
18:AS:61:VAL:HG12	18:AS:62:THR:N	2.36	0.41
27:BK:42:THR:O	27:BK:43:ILE:C	2.59	0.41
1:AA:409:U:H2'	1:AA:410:G:C8	2.55	0.41
23:DB:138:U:O4'	50:DT:1:MET:HA	2.20	0.41
37:DL:19:LEU:HD12	37:DL:19:LEU:N	2.35	0.41
38:BM:18:ARG:CA	38:BM:38:ARG:HH22	2.33	0.41
23:DB:971:G:OP2	23:DB:974:G:N2	2.54	0.41
1:CA:1080:A:H5''	4:CE:20:VAL:HG11	2.02	0.41
13:CN:79:SER:OG	13:CN:82:LYS:HG2	2.20	0.41
30:BY:7:THR:HG22	30:BY:8:GLN:N	2.35	0.41
13:AN:9:GLU:HB2	13:AN:62:ARG:NE	2.36	0.41
9:CJ:59:LYS:C	9:CJ:61:ALA:H	2.24	0.41
36:D2:31:LEU:CD2	36:D2:42:LEU:HD12	2.44	0.41
43:DO:35:ILE:HG13	43:DO:71:ALA:HB2	2.02	0.41
1:CA:334:C:H2'	1:CA:335:C:H6	1.85	0.41
46:DU:25:LYS:N	46:DU:34:ILE:O	2.52	0.41
1:AA:1024:G:O2'	1:AA:1025:U:H5'	2.20	0.41
13:CN:60:ARG:NH1	13:CN:62:ARG:CZ	2.83	0.41
23:BB:2786:U:H4'	26:BD:66:GLY:O	2.21	0.41
22:BA:98:G:N1	35:BV:14:LYS:HB2	2.31	0.41
9:CJ:15:HIS:O	9:CJ:18:ILE:HG22	2.19	0.41
13:CN:17:ASP:O	13:CN:21:ALA:HB3	2.20	0.41
13:CN:26:LEU:HD21	13:CN:44:VAL:HG13	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:250:GLN:HG2	25:BC:254:LYS:HG2	2.02	0.41
23:BB:2394:C:H2'	23:BB:2395:C:C6	2.56	0.41
23:DB:2846:G:OP1	28:DP:52:ARG:NH1	2.52	0.41
23:BB:172:A:O2'	23:BB:173:A:H5'	2.20	0.41
28:BP:13:LYS:CD	28:BP:76:HIS:HA	2.49	0.41
4:AE:154:ALA:HB1	7:AH:65:PHE:CZ	2.55	0.41
46:BU:81:ARG:NH2	46:BU:81:ARG:HG3	2.35	0.41
19:AT:66:ILE:HG22	19:AT:67:HIS:N	2.34	0.41
23:BB:2602:A:H3'	23:BB:2602:A:OP1	2.21	0.41
8:CI:66:VAL:HG22	8:CI:67:LYS:N	2.35	0.41
43:BO:88:LYS:HG2	43:BO:116:GLN:HB2	2.02	0.41
23:DB:1803:A:H3'	23:DB:1804:C:H6	1.85	0.41
43:DO:115:LEU:HD13	43:DO:116:GLN:H	1.85	0.41
6:AG:67:ASN:C	6:AG:69:ARG:H	2.24	0.41
1:AA:1009:U:H2'	1:AA:1010:U:C5	2.56	0.41
1:AA:1020:G:H2'	1:AA:1021:A:C5'	2.50	0.41
1:AA:1375:A:H2'	1:AA:1376:U:H6	1.86	0.41
23:DB:710:U:O2'	23:DB:711:G:H5'	2.20	0.41
3:CD:1:ALA:O	3:CD:2:ARG:HG2	2.20	0.41
46:DU:18:LYS:HB3	46:DU:19:GLY:H	1.61	0.41
23:DB:826:U:H2'	23:DB:828:U:O4'	2.21	0.41
20:CB:116:LEU:HB3	20:CB:140:LEU:CG	2.50	0.41
1:CA:884:U:H4'	1:CA:885:G:H5''	2.03	0.41
42:DN:17:ARG:NH2	42:DN:17:ARG:HB2	2.34	0.41
11:AL:82:ARG:HG2	11:AL:82:ARG:NH1	2.33	0.41
23:BB:1210:G:N3	23:BB:1212:G:N2	2.68	0.41
23:DB:2199:A:H5''	23:DB:2200:C:H5	1.84	0.41
8:CI:36:GLN:N	8:CI:36:GLN:HE21	2.17	0.41
7:CH:4:ASP:OD1	7:CH:7:ALA:HB2	2.20	0.41
2:AC:57:GLU:H	2:AC:64:ARG:HB3	1.84	0.41
10:CK:16:SER:CA	10:CK:78:ILE:HA	2.50	0.41
23:DB:1163:G:H4'	49:DR:92:TRP:CD1	2.56	0.41
23:BB:2817:U:O2	23:BB:2836:U:H1'	2.20	0.41
1:CA:404:G:H4'	1:CA:439:U:O2	2.20	0.41
5:CF:11:HIS:CG	5:CF:12:PRO:HD2	2.55	0.41
1:CA:210:C:H1'	1:CA:211:G:C2	2.56	0.41
23:DB:2606:C:O2'	23:DB:2607:G:H5'	2.21	0.41
23:BB:1789:A:H2'	23:BB:1790:C:C6	2.55	0.41
18:CS:71:GLY:C	18:CS:73:PHE:H	2.23	0.41
23:BB:866:A:H61	23:BB:913:U:C1'	2.33	0.41
7:AH:49:LYS:HB3	7:AH:59:GLU:OE2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2552:U:C2	23:BB:2554:U:H5'	2.56	0.41
26:DD:39:ASP:CG	26:DD:41:ALA:H	2.23	0.41
23:DB:991:C:H5''	23:DB:1185:G:H2'	2.03	0.41
23:BB:2520:C:C6	23:BB:2567:G:H1'	2.55	0.41
1:AA:992:U:H1'	1:AA:993:G:C2	2.55	0.41
2:CC:111:ASP:O	2:CC:115:VAL:HG23	2.21	0.41
24:DI:53:PRO:HG2	24:DI:77:VAL:HG11	2.01	0.41
30:BY:5:LYS:N	30:BY:5:LYS:HE2	2.35	0.41
37:DL:118:THR:O	37:DL:120:VAL:HG23	2.20	0.41
23:BB:519:U:H2'	23:BB:520:G:H8	1.85	0.41
1:CA:359:G:H2'	1:CA:360:G:O4'	2.20	0.41
29:DE:194:LYS:O	29:DE:197:GLU:HB3	2.20	0.41
23:DB:311:A:H3'	23:DB:312:G:C8	2.55	0.41
23:BB:627:A:H4'	23:BB:628:G:OP1	2.20	0.41
47:DF:122:ASP:HB3	47:DF:123:GLY:H	1.70	0.41
23:DB:531:C:O2'	23:DB:563:A:H5''	2.20	0.41
46:BU:94:PHE:HA	46:BU:101:THR:HA	2.01	0.41
23:BB:268:C:H2'	23:BB:268:C:O2	2.20	0.41
52:DW:27:GLY:O	52:DW:63:ASP:HA	2.21	0.41
23:BB:1973:G:O2'	23:BB:1974:C:H5'	2.20	0.41
40:DH:26:ALA:HA	40:DH:31:VAL:HG23	2.03	0.41
51:DZ:77:LYS:CD	51:DZ:78:TYR:H	2.30	0.41
40:BH:29:PHE:C	40:BH:31:VAL:N	2.73	0.41
52:BW:49:ASN:HB3	52:BW:81:ILE:CD1	2.51	0.41
52:DW:49:ASN:HA	52:DW:61:LYS:HB2	2.03	0.41
20:CB:82:ALA:CB	20:CB:213:LEU:HD22	2.50	0.41
33:D1:29:LYS:C	33:D1:31:GLU:H	2.24	0.41
42:DN:39:PRO:C	42:DN:41:ALA:N	2.74	0.41
13:CN:50:LEU:HB3	13:CN:51:PRO:HD3	2.02	0.41
40:BH:99:ILE:CD1	40:BH:144:VAL:HG21	2.50	0.41
41:DJ:6:ALA:CB	41:DJ:45:THR:HG21	2.49	0.41
44:DQ:59:LEU:HD13	44:DQ:60:TRP:N	2.35	0.41
44:DQ:93:ILE:HG23	44:DQ:94:LEU:N	2.36	0.41
29:DE:192:ALA:CA	29:DE:195:GLN:HE21	2.30	0.41
50:DT:30:ILE:O	50:DT:85:VAL:HG23	2.20	0.41
1:AA:1095:U:H2'	1:AA:1096:C:C6	2.56	0.41
21:CU:24:LYS:HB3	21:CU:24:LYS:HZ2	1.83	0.41
18:CS:11:ASP:OD1	18:CS:34:SER:HB2	2.21	0.41
18:AS:35:ARG:HB3	18:AS:50:VAL:HG13	2.01	0.41
23:BB:996:A:H4'	44:BQ:91:ARG:CG	2.49	0.41
41:BJ:45:THR:N	41:BJ:46:PRO:CD	2.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1799:G:N2	23:BB:1818:U:O2'	2.53	0.41
1:CA:1099:G:P	20:CB:94:ARG:HD3	2.61	0.41
1:CA:1084:G:H5'	1:CA:1102:A:OP2	2.20	0.41
48:DG:26:LYS:CB	48:DG:32:LEU:HG	2.45	0.41
20:CB:172:ILE:H	20:CB:172:ILE:HG13	1.72	0.41
40:BH:114:GLU:HA	40:BH:133:GLN:O	2.21	0.41
20:CB:204:ASP:CG	20:CB:205:ALA:N	2.73	0.41
27:DK:35:VAL:HG12	27:DK:69:VAL:HG22	2.02	0.41
1:AA:86:G:N3	1:AA:87:C:N4	2.67	0.41
40:DH:88:GLY:H	40:DH:89:LYS:HD2	1.85	0.41
40:DH:7:ASP:CG	40:DH:8:LYS:N	2.74	0.41
40:BH:7:ASP:HA	40:BH:15:LEU:CD2	2.40	0.41
40:BH:9:VAL:O	40:BH:10:ALA:C	2.58	0.41
1:AA:409:U:O2'	1:AA:410:G:H5'	2.21	0.41
23:DB:163:C:O2	23:DB:163:C:H5'	2.20	0.41
47:BF:12:VAL:HG13	47:BF:27:VAL:HG21	2.01	0.41
31:D0:49:ARG:O	31:D0:51:ARG:NE	2.53	0.41
1:CA:1396:A:O4'	1:CA:1398:A:H1'	2.21	0.41
1:CA:921:U:H2'	1:CA:922:G:O4'	2.21	0.41
23:DB:633:A:H2'	23:DB:634:C:H5'	2.01	0.41
23:BB:1351:C:H2'	23:BB:1352:U:O4'	2.20	0.41
49:DR:23:GLU:O	49:DR:24:LYS:C	2.58	0.41
22:BA:28:C:H5	22:BA:56:G:N1	2.14	0.41
48:BG:93:TYR:HE1	48:BG:160:GLY:HA2	1.85	0.41
23:DB:2073:C:O2'	23:DB:2074:U:H5'	2.20	0.41
9:CJ:53:ILE:HG23	9:CJ:61:ALA:HB1	2.02	0.41
23:BB:1430:G:H2'	23:BB:1431:A:C8	2.56	0.41
1:CA:1341:U:O2'	1:CA:1342:C:H5'	2.21	0.41
12:AM:33:LEU:HD13	12:AM:39:ALA:O	2.21	0.41
31:B0:32:THR:OG1	31:B0:50:GLY:HA2	2.21	0.41
1:AA:376:G:O3'	15:AP:5:ARG:HD3	2.21	0.41
3:AD:199:ILE:CG1	3:AD:200:VAL:N	2.84	0.41
29:BE:60:TRP:CZ2	29:BE:62:GLN:NE2	2.89	0.41
1:CA:372:C:H4'	1:CA:373:A:H5'	2.02	0.41
48:DG:102:ILE:CD1	48:DG:116:LEU:HD11	2.51	0.41
49:DR:19:THR:HB	49:DR:97:LYS:HA	2.02	0.41
1:AA:1396:A:O4'	1:AA:1398:A:H1'	2.20	0.41
1:AA:921:U:H2'	1:AA:922:G:C8	2.56	0.41
4:AE:39:GLY:HA3	4:AE:116:VAL:HB	2.02	0.41
45:DS:83:LYS:HD3	45:DS:97:LEU:CD1	2.46	0.41
28:DP:50:ARG:O	28:DP:51:ASN:HB2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:308:G:H2'	23:BB:309:A:O4'	2.21	0.41
23:DB:2483:C:H2'	23:DB:2484:G:O4'	2.21	0.41
38:DM:41:LEU:HB3	38:DM:46:ILE:HG22	2.02	0.41
8:CI:38:PHE:HB3	8:CI:43:ALA:HB3	2.03	0.41
23:BB:327:G:H2'	23:BB:328:U:O4'	2.20	0.41
23:BB:2086:U:H2'	23:BB:2087:G:H8	1.84	0.41
40:DH:117:LEU:HG	40:DH:119:ASN:O	2.21	0.41
2:AC:116:ALA:HA	2:AC:119:ILE:HG22	2.01	0.41
1:AA:279:A:C5'	1:AA:280:C:H3'	2.48	0.41
23:DB:863:A:O2'	23:DB:864:G:H5'	2.20	0.41
11:AL:35:ARG:HG3	11:AL:36:VAL:H	1.85	0.41
23:BB:1490:A:H2'	25:BC:97:ASP:CG	2.41	0.41
1:CA:676:A:H2'	1:CA:677:U:H6	1.85	0.41
1:AA:130:A:N1	1:AA:233:C:H1'	2.36	0.41
1:CA:1254:A:H5'	1:CA:1356:G:H4'	2.02	0.41
42:DN:12:ARG:HG3	42:DN:13:ASN:H	1.84	0.41
23:BB:165:A:H2'	23:BB:166:U:O4'	2.20	0.41
23:DB:2247:A:H2'	23:DB:2248:C:H6	1.85	0.41
1:CA:130:A:N1	1:CA:233:C:H1'	2.35	0.41
23:BB:2199:A:O2'	51:BZ:36:HIS:HE1	2.03	0.41
23:BB:2338:C:O2'	23:BB:2339:C:H5'	2.20	0.41
23:BB:278:A:C2'	23:BB:278:A:N3	2.84	0.41
23:DB:2523:G:C2'	23:DB:2524:G:H5'	2.51	0.41
23:BB:1011:G:O2'	23:BB:1013:C:H5''	2.21	0.41
1:AA:1231:G:O2'	1:AA:1232:U:H5'	2.20	0.41
1:AA:957:U:H2'	1:AA:959:A:OP2	2.20	0.41
23:BB:2026:U:H2'	23:BB:2027:G:O4'	2.21	0.41
23:DB:936:A:H2'	23:DB:937:C:H6	1.86	0.41
23:BB:509:C:H5''	23:BB:510:C:OP2	2.20	0.41
23:DB:207:A:H2'	23:DB:208:C:O4'	2.20	0.41
48:BG:170:THR:O	48:BG:171:LYS:HD3	2.21	0.41
12:CM:22:TYR:HB3	12:CM:69:ARG:NH2	2.34	0.41
30:DY:5:LYS:H	30:DY:5:LYS:HE2	1.86	0.41
23:DB:1739:A:H2'	23:DB:1740:G:C8	2.56	0.41
23:BB:1739:A:H2'	23:BB:1740:G:O4'	2.20	0.41
23:DB:1146:C:H2'	23:DB:1147:A:H8	1.85	0.41
23:DB:1863:G:H2'	23:DB:1864:U:O4'	2.20	0.41
1:AA:696:A:H1'	1:AA:786:G:O2'	2.20	0.41
11:AL:34:THR:N	11:AL:53:ARG:O	2.53	0.41
1:CA:1187:G:P	8:CI:114:LYS:HE3	2.61	0.41
10:AK:101:ALA:C	10:AK:103:GLY:H	2.22	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1376:C:H5''	56:BB:3504:HOH:O	2.20	0.41
23:DB:272:A:H2'	23:DB:273:G:C8	2.56	0.41
23:BB:1760:C:H2'	23:BB:1761:C:O4'	2.19	0.41
20:CB:55:GLU:O	20:CB:58:LYS:HB3	2.20	0.41
23:BB:683:U:O5'	23:BB:683:U:H6	2.03	0.41
28:DP:16:VAL:HG23	28:DP:16:VAL:O	2.21	0.41
6:CG:52:ARG:HG3	6:CG:52:ARG:H	1.73	0.41
36:B2:6:GLN:NE2	36:B2:6:GLN:HA	2.35	0.41
20:AB:82:ALA:CB	20:AB:213:LEU:HD22	2.49	0.41
23:BB:855:G:C2	52:BW:23:LYS:HG2	2.53	0.41
26:BD:23:PRO:O	26:BD:24:VAL:HB	2.20	0.41
25:DC:64:VAL:HG12	25:DC:65:ASP:N	2.36	0.41
44:DQ:63:ARG:NH1	44:DQ:96:ASP:HA	2.36	0.41
18:CS:62:THR:HG22	18:CS:63:ASP:H	1.85	0.41
20:AB:98:GLY:HA2	20:AB:174:GLU:OE1	2.20	0.41
23:BB:850:U:O2'	30:BY:22:THR:HG22	2.20	0.41
1:AA:692:U:O2	1:AA:694:A:H5''	2.21	0.41
25:BC:80:LEU:CD1	25:BC:109:LEU:HG	2.41	0.41
25:BC:171:VAL:HB	25:BC:183:VAL:HG12	2.03	0.41
23:BB:10:A:H61	23:BB:2895:G:H1'	1.84	0.41
41:BJ:54:ILE:HD12	41:BJ:55:ILE:H	1.86	0.41
24:DI:73:PRO:HA	24:DI:74:PRO:HD3	1.93	0.41
23:DB:1204:A:N1	23:DB:1241:A:C2	2.88	0.41
20:AB:27:LYS:C	20:AB:29:PHE:H	2.24	0.41
20:AB:204:ASP:CG	20:AB:205:ALA:N	2.72	0.41
41:DJ:114:LEU:O	41:DJ:118:MET:HG3	2.19	0.41
42:DN:79:LEU:HA	42:DN:83:LEU:HD12	2.02	0.41
51:BZ:45:ARG:HE	51:BZ:47:VAL:CG1	2.27	0.41
40:DH:90:LEU:O	40:DH:91:PHE:C	2.58	0.41
46:BU:73:ASN:HD22	46:BU:74:ALA:H	1.68	0.41
1:CA:408:A:H3'	1:CA:409:U:H6	1.86	0.41
34:B3:31:ILE:HG12	34:B3:31:ILE:O	2.21	0.41
18:AS:18:VAL:HG13	18:AS:19:GLU:N	2.35	0.41
50:DT:1:MET:HB2	50:DT:2:ILE:HD13	2.02	0.41
23:BB:160:A:H1'	23:BB:2208:C:O2'	2.20	0.41
41:DJ:25:LEU:O	41:DJ:27:ARG:N	2.51	0.41
23:DB:2886:A:H62	31:D0:39:ARG:CZ	2.33	0.41
30:DY:7:THR:O	30:DY:54:VAL:HG12	2.21	0.41
26:DD:114:LYS:CG	26:DD:115:GLY:H	2.34	0.41
30:BY:33:HIS:O	30:BY:34:THR:HB	2.21	0.41
23:DB:1161:C:H4'	49:DR:8:GLY:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BM:123:LYS:H	38:BM:123:LYS:HG2	1.71	0.41
35:BV:6:ALA:HB2	35:BV:42:LEU:HB3	2.01	0.41
1:AA:1217:C:H2'	1:AA:1218:C:C6	2.55	0.41
20:CB:68:PHE:CD1	20:CB:68:PHE:N	2.88	0.41
23:BB:2867:G:H2'	23:BB:2868:A:OP2	2.21	0.41
12:AM:33:LEU:CD2	12:AM:38:ILE:HB	2.51	0.41
9:AJ:10:LEU:HD23	9:AJ:98:VAL:HG12	2.02	0.41
14:AO:88:ARG:O	14:AO:89:ARG:HB2	2.21	0.41
23:DB:844:A:C2	23:DB:845:A:N1	2.89	0.41
22:BA:94:A:OP1	35:BV:19:ARG:HD3	2.20	0.41
22:BA:95:U:H2'	22:BA:96:G:H8	1.84	0.41
31:D0:43:THR:HG23	31:D0:47:TYR:C	2.41	0.41
48:DG:125:PRO:HB2	48:DG:129:GLU:CD	2.41	0.41
49:DR:97:LYS:O	49:DR:98:ILE:HB	2.20	0.41
4:AE:39:GLY:HA2	4:AE:44:ARG:O	2.20	0.41
1:AA:424:G:O2'	1:AA:425:G:H5'	2.20	0.41
9:AJ:59:LYS:HB2	9:AJ:62:ARG:NH2	2.35	0.41
23:BB:2590:A:O2'	23:BB:2591:C:H5'	2.20	0.41
11:CL:107:LYS:HD2	11:CL:107:LYS:C	2.40	0.41
9:AJ:24:GLU:CG	9:AJ:90:LEU:HD11	2.51	0.41
5:AF:49:TYR:CE2	5:AF:51:ILE:HB	2.55	0.41
1:AA:734:G:N2	17:AR:63:TYR:HE1	2.13	0.41
43:BO:115:LEU:HD13	43:BO:116:GLN:H	1.86	0.41
23:BB:1568:G:H4'	25:BC:58:LYS:CB	2.49	0.41
1:CA:1009:U:O2	1:CA:1009:U:H2'	2.19	0.41
15:AP:2:VAL:O	15:AP:65:ALA:HA	2.21	0.41
26:DD:133:THR:CG2	26:DD:134:HIS:N	2.80	0.41
1:AA:747:A:H2'	1:AA:748:G:O4'	2.21	0.41
43:DO:18:LEU:HD23	43:DO:25:ARG:HD3	2.01	0.41
41:DJ:40:HIS:CE1	41:DJ:41:LYS:HE3	2.50	0.41
1:AA:322:C:H2'	1:AA:323:U:C6	2.55	0.41
23:DB:2094:A:P	40:DH:22:LYS:HD2	2.61	0.41
15:CP:26:ASN:HD21	15:CP:31:ARG:HD3	1.85	0.41
1:AA:204:G:N3	1:AA:466:A:N6	2.69	0.41
1:CA:1226:C:OP2	12:CM:101:THR:HG21	2.20	0.41
20:CB:121:GLN:CD	20:CB:122:ASP:N	2.74	0.41
41:BJ:11:VAL:HG21	41:BJ:13:ARG:NH1	2.36	0.41
23:DB:2778:A:O2'	23:DB:2781:A:H5'	2.21	0.41
20:CB:23:ASN:O	20:CB:25:LYS:N	2.54	0.41
23:DB:2106:U:C2'	23:DB:2107:G:OP1	2.69	0.41
1:CA:209:U:H5'	1:CA:210:C:C5	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DY:37:ARG:HG3	30:DY:38:GLU:OE1	2.20	0.41
40:BH:30:LEU:O	40:BH:36:ALA:HB3	2.21	0.41
1:AA:175:C:H2'	1:AA:176:C:C6	2.56	0.41
22:BA:89:U:C2	23:BB:958:U:H2'	2.55	0.41
1:AA:1107:C:OP1	2:AC:171:ARG:HB2	2.20	0.41
47:BF:133:GLU:HA	47:BF:150:GLY:HA2	2.03	0.41
21:AU:48:LYS:C	21:AU:50:SER:N	2.74	0.41
23:BB:912:C:O2'	23:BB:913:U:H5'	2.21	0.41
48:BG:133:LYS:H	48:BG:133:LYS:HD3	1.85	0.41
23:BB:247:G:H4'	23:BB:386:G:C4	2.55	0.41
24:DI:10:LEU:C	24:DI:10:LEU:HD12	2.40	0.41
23:BB:1830:C:H2'	23:BB:1831:G:C8	2.55	0.41
23:BB:1750:G:H2'	23:BB:1751:U:C6	2.56	0.41
45:DS:60:HIS:O	45:DS:60:HIS:CG	2.74	0.41
7:CH:24:VAL:HG22	7:CH:25:THR:N	2.36	0.41
23:BB:235:U:H2'	23:BB:236:C:H6	1.86	0.41
23:DB:1824:G:H2'	23:DB:1825:U:H6	1.85	0.41
1:CA:1260:G:P	1:CA:1284:C:H4'	2.61	0.41
23:DB:510:C:C2'	23:DB:511:U:H5'	2.50	0.41
1:CA:940:C:H2'	1:CA:941:G:C8	2.56	0.41
23:BB:1936:A:H2	23:BB:1943:U:O4	2.04	0.41
8:AI:108:ARG:HG2	8:AI:108:ARG:H	1.43	0.41
39:DX:59:GLU:CD	39:DX:59:GLU:N	2.73	0.41
23:BB:483:A:H2'	23:BB:484:C:O4'	2.20	0.41
30:DY:13:ILE:HG22	30:DY:14:GLY:N	2.36	0.41
23:DB:1304:A:O2'	23:DB:1305:C:H5'	2.21	0.41
24:DI:14:ALA:HB3	24:DI:51:GLY:H	1.86	0.41
23:BB:738:G:O2'	23:BB:739:A:H5'	2.20	0.41
2:AC:4:VAL:HG22	2:AC:5:HIS:N	2.35	0.41
23:BB:1965:C:H5''	23:BB:1966:A:H2'	2.01	0.41
17:AR:22:TYR:CZ	17:AR:23:LYS:HE3	2.56	0.41
38:BM:50:ARG:HA	38:BM:53:MET:HE3	2.02	0.41
1:AA:632:U:H5''	1:AA:633:G:C8	2.55	0.41
40:DH:29:PHE:C	40:DH:31:VAL:N	2.74	0.41
46:BU:4:ILE:CD1	46:BU:71:ILE:HG23	2.51	0.41
46:BU:83:GLY:O	46:BU:93:ARG:HA	2.20	0.41
26:DD:54:ALA:N	26:DD:76:GLY:HA2	2.35	0.41
26:BD:22:ILE:HG22	26:BD:23:PRO:O	2.20	0.41
8:CI:51:LEU:HD22	8:CI:56:MET:HE3	2.02	0.41
26:DD:14:ILE:HA	28:DP:11:GLN:NE2	2.30	0.41
25:DC:128:THR:HG23	25:DC:190:THR:HG22	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:65:ASP:CG	25:DC:65:ASP:O	2.59	0.41
29:BE:147:LEU:O	29:BE:168:ASP:O	2.38	0.41
29:BE:154:ASP:OD2	29:BE:157:LEU:HB3	2.21	0.41
50:DT:25:GLU:C	50:DT:27:SER:N	2.74	0.41
18:AS:57:VAL:HG23	18:AS:59:VAL:HG13	2.03	0.41
41:BJ:44:TYR:HB2	44:BQ:63:ARG:HG2	2.03	0.41
44:BQ:84:LYS:O	44:BQ:86:SER:N	2.53	0.41
49:BR:38:VAL:HG11	49:BR:41:ILE:HD11	2.03	0.41
49:BR:40:MET:HG3	49:BR:48:LYS:HA	2.02	0.41
10:AK:31:VAL:HG11	10:AK:95:THR:OG1	2.20	0.41
25:BC:64:VAL:HG11	25:BC:66:PHE:CE2	2.56	0.41
45:DS:1:MET:HB2	45:DS:109:ASP:OD1	2.20	0.41
23:BB:587:C:C6	23:BB:671:C:H1'	2.56	0.41
43:BO:49:VAL:HG11	43:BO:82:ALA:HA	2.03	0.41
23:DB:1060:U:C1'	23:DB:1062:G:H5'	2.51	0.41
29:DE:32:VAL:HG23	29:DE:33:VAL:N	2.36	0.41
23:DB:529:A:OP2	41:DJ:113:PRO:HD3	2.21	0.41
42:DN:72:ASP:C	42:DN:74:GLU:N	2.74	0.41
40:DH:89:LYS:HA	40:DH:123:ARG:O	2.20	0.41
40:DH:9:VAL:O	40:DH:10:ALA:C	2.58	0.41
23:DB:2733:A:H2'	23:DB:2734:A:O4'	2.20	0.41
47:DF:107:VAL:HA	47:DF:111:ARG:NH1	2.31	0.41
23:DB:137:U:H1'	50:DT:1:MET:N	2.34	0.41
6:AG:22:LEU:O	6:AG:25:PHE:HB3	2.21	0.41
23:BB:2320:U:O2'	23:BB:2322:A:N7	2.48	0.41
38:DM:35:ALA:C	38:DM:37:GLY:H	2.24	0.41
14:CO:70:LEU:HD13	14:CO:70:LEU:C	2.41	0.41
23:DB:705:A:O2'	23:DB:706:A:H5'	2.21	0.41
23:DB:2867:G:H2'	23:DB:2868:A:OP2	2.21	0.41
35:DV:9:ARG:HD2	35:DV:41:GLU:HB3	2.03	0.41
9:AJ:53:ILE:HG23	9:AJ:54:SER:H	1.86	0.41
30:BY:6:ILE:HG22	30:BY:7:THR:H	1.85	0.41
24:DI:16:MET:N	24:DI:42:ASN:OD1	2.54	0.41
23:BB:1434:A:N6	23:BB:1558:C:H42	2.19	0.41
12:AM:38:ILE:HG13	12:AM:55:LEU:HD21	2.02	0.41
12:AM:6:ILE:O	12:AM:7:ASN:C	2.58	0.41
1:CA:337:G:O2'	1:CA:338:A:H5'	2.20	0.41
3:AD:171:GLU:O	3:AD:179:GLY:HA2	2.21	0.41
1:CA:1306:A:N6	1:CA:1331:G:C1'	2.84	0.41
23:DB:1438:U:C4	23:DB:1552:A:N6	2.89	0.41
35:BV:28:ALA:HA	35:BV:88:HIS:ND1	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:D0:38:LEU:HD13	31:D0:41:HIS:CE1	2.55	0.41
31:D0:41:HIS:HB2	42:DN:99:LYS:O	2.21	0.41
3:CD:94:GLU:OE2	3:CD:190:LEU:HD21	2.20	0.41
41:BJ:23:LYS:CE	41:BJ:142:ILE:HG23	2.45	0.41
26:DD:62:LYS:N	26:DD:63:PRO:CD	2.83	0.41
9:AJ:57:VAL:HG22	9:AJ:58:ASN:N	2.30	0.41
1:AA:93:U:OP1	1:AA:94:G:OP2	2.39	0.41
23:BB:2483:C:H2'	23:BB:2484:G:O4'	2.21	0.41
5:CF:7:VAL:O	5:CF:7:VAL:HG13	2.21	0.41
23:DB:1812:U:O2	25:DC:43:ASN:ND2	2.54	0.41
4:CE:158:LYS:HZ3	7:CH:65:PHE:HA	1.85	0.41
38:DM:64:TRP:HB2	38:DM:104:GLU:CB	2.51	0.41
2:CC:14:VAL:HG23	2:CC:15:LYS:HD3	2.03	0.41
33:D1:3:GLY:O	33:D1:5:ARG:N	2.53	0.41
20:AB:118:THR:HA	20:AB:121:GLN:CB	2.50	0.41
20:AB:116:LEU:HB3	20:AB:140:LEU:HG	2.03	0.41
23:BB:715:A:H2'	23:BB:716:A:C8	2.55	0.41
23:DB:2334:U:C2	43:DO:16:ARG:HG2	2.56	0.41
43:DO:7:ARG:HA	43:DO:10:ARG:NE	2.36	0.41
3:CD:62:ARG:HG2	3:CD:62:ARG:H	1.72	0.41
5:AF:15:SER:HA	5:AF:18:VAL:HG23	2.03	0.41
48:DG:154:GLU:O	48:DG:158:GLY:N	2.54	0.41
23:BB:1846:G:N2	23:BB:1848:A:N6	2.69	0.41
1:CA:377:G:H2'	1:CA:378:G:H8	1.86	0.41
23:BB:2382:G:H21	34:B3:41:ARG:NH2	2.18	0.41
23:BB:1475:G:H4'	23:BB:1476:U:O5'	2.21	0.41
19:AT:54:GLN:N	19:AT:55:PRO:CD	2.84	0.41
23:BB:2041:U:H2'	23:BB:2042:A:C8	2.55	0.41
24:DI:140:GLU:CD	24:DI:140:GLU:H	2.24	0.41
1:CA:635:A:H2'	1:CA:636:U:C6	2.56	0.41
24:DI:63:ASP:O	24:DI:63:ASP:OD1	2.39	0.41
1:AA:308:C:H2'	1:AA:309:A:C8	2.55	0.41
40:DH:21:VAL:HG21	40:DH:25:TYR:HD2	1.86	0.41
1:AA:791:G:C6	1:AA:792:A:N7	2.89	0.41
23:DB:935:C:H2'	23:DB:936:A:C8	2.56	0.41
1:AA:1458:G:H5''	19:AT:25:SER:HB2	2.03	0.41
23:DB:766:U:H2'	23:DB:767:U:C6	2.56	0.41
9:CJ:8:ILE:HB	9:CJ:74:VAL:HB	2.01	0.41
23:DB:1327:A:H2'	23:DB:1328:A:O4'	2.21	0.41
13:CN:14:ALA:HB1	13:CN:18:LYS:HE2	2.03	0.41
23:DB:624:C:O2'	23:DB:657:U:H5''	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:942:G:H2'	23:DB:943:A:H8	1.86	0.41
3:AD:39:GLN:HG3	3:AD:40:HIS:N	2.36	0.41
1:CA:1434:A:H2'	1:CA:1435:G:O4'	2.20	0.41
8:AI:114:LYS:H	8:AI:120:ALA:HA	1.86	0.41
48:DG:163:TYR:O	48:DG:165:ASP:N	2.54	0.41
4:CE:75:LEU:HD23	4:CE:75:LEU:HA	1.92	0.41
18:CS:64:GLU:CD	18:CS:64:GLU:H	2.23	0.41
19:CT:15:LYS:HD3	19:CT:18:LYS:HE3	2.01	0.41
1:AA:439:U:O3'	3:AD:120:LYS:NZ	2.54	0.41
36:D2:36:ALA:C	36:D2:38:GLY:H	2.23	0.41
14:AO:45:GLU:HG2	14:AO:46:HIS:N	2.36	0.41
38:DM:50:ARG:HA	38:DM:53:MET:HE3	2.03	0.41
4:CE:77:ASN:OD1	4:CE:78:GLY:N	2.53	0.41
23:BB:2398:U:H2'	23:BB:2399:G:H8	1.86	0.41
1:CA:632:U:H5''	1:CA:633:G:C8	2.56	0.41
23:DB:1068:G:C6	23:DB:1069:A:N6	2.89	0.41
1:CA:915:A:H2'	1:CA:916:U:H5'	2.02	0.41
41:BJ:109:LEU:CD1	41:BJ:119:PHE:HB2	2.50	0.41
1:CA:656:G:O2'	1:CA:657:U:H5'	2.21	0.41
23:BB:2223:G:C2'	23:BB:2224:G:H5'	2.51	0.41
1:AA:827:U:H2'	1:AA:870:U:O4	2.21	0.41
1:AA:1394:A:C5	1:AA:1501:C:H4'	2.56	0.41
1:AA:1363:A:H2'	1:AA:1363:A:N3	2.35	0.41
23:BB:225:C:H2'	23:BB:226:A:O4'	2.21	0.41
51:BZ:17:ASN:HD22	51:BZ:25:THR:HB	1.85	0.41
23:DB:1099:G:O5'	24:DI:3:LYS:CA	2.69	0.41
51:DZ:71:LEU:HA	51:DZ:74:ARG:HE	1.86	0.41
51:BZ:59:ILE:CD1	51:BZ:67:VAL:HG21	2.51	0.41
46:BU:88:ASP:O	46:BU:90:LYS:N	2.54	0.41
21:AU:42:THR:C	21:AU:46:ARG:HE	2.24	0.41
1:AA:1258:G:C2	1:AA:1278:G:N2	2.88	0.41
52:BW:18:LYS:H	52:BW:35:ILE:CG2	2.34	0.41
23:DB:2385:C:H2'	23:DB:2386:A:H8	1.84	0.41
20:CB:65:LYS:HB3	20:CB:157:PRO:HA	2.03	0.41
8:AI:27:ILE:HG22	8:AI:34:LEU:HB2	2.03	0.41
44:BQ:24:TYR:CD1	44:BQ:25:GLY:N	2.86	0.41
33:B1:6:GLU:HG2	33:B1:52:LYS:HE2	2.03	0.41
40:BH:128:HIS:CE1	40:BH:130:VAL:HG13	2.56	0.41
23:DB:625:G:O2'	23:DB:626:A:H5'	2.20	0.41
25:DC:138:SER:O	25:DC:140:VAL:HG23	2.20	0.41
25:DC:91:ALA:N	25:DC:103:ILE:O	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2222:C:H2'	23:DB:2223:G:O4'	2.21	0.41
25:DC:184:GLU:O	25:DC:185:ALA:HB3	2.20	0.41
23:DB:996:A:C4'	44:DQ:91:ARG:NH1	2.82	0.41
50:DT:41:ALA:C	50:DT:43:ILE:N	2.74	0.41
47:DF:76:PHE:O	47:DF:77:LYS:HB2	2.21	0.41
48:BG:17:LYS:CA	48:BG:17:LYS:HZ2	2.33	0.41
41:BJ:45:THR:H	41:BJ:46:PRO:CD	2.27	0.41
21:AU:19:LYS:CD	21:AU:20:ARG:HH21	2.33	0.41
51:DZ:45:ARG:HE	51:DZ:47:VAL:CG1	2.26	0.41
26:DD:184:ARG:HD3	26:DD:186:LEU:HD22	2.02	0.41
25:BC:143:VAL:HG11	25:BC:173:LEU:HD11	2.03	0.41
23:BB:10:A:H61	23:BB:2895:G:C1'	2.34	0.41
50:BT:23:ALA:C	50:BT:25:GLU:H	2.24	0.41
1:CA:796:C:OP1	10:CK:127:ARG:HB3	2.20	0.41
25:BC:121:ALA:HB3	25:BC:129:LEU:HD11	2.03	0.41
45:DS:3:THR:HG21	45:DS:58:ALA:HB2	2.03	0.41
48:DG:24:THR:CG2	48:DG:34:ARG:HB3	2.40	0.41
48:DG:15:ASP:HA	48:DG:26:LYS:NZ	2.36	0.41
23:DB:1063:G:C5'	24:DI:135:MET:HG2	2.51	0.41
24:DI:112:LYS:HB2	24:DI:116:MET:SD	2.61	0.41
24:DI:49:GLU:HB3	24:DI:52:LEU:HD12	2.02	0.41
24:DI:52:LEU:HD13	24:DI:81:LYS:HZ3	1.86	0.41
40:BH:78:VAL:HG11	40:BH:103:VAL:HG12	2.03	0.41
23:BB:1059:G:H2'	23:BB:1060:U:C6	2.55	0.41
24:DI:126:ARG:NH1	24:DI:126:ARG:CB	2.84	0.41
45:BS:45:VAL:HA	45:BS:48:LYS:HB3	2.03	0.41
27:DK:43:ILE:HG21	27:DK:46:ALA:HB2	2.02	0.41
37:DL:40:SER:OG	37:DL:41:ARG:HG3	2.21	0.41
42:BN:79:LEU:HA	42:BN:83:LEU:HD12	2.02	0.41
40:DH:128:HIS:O	40:DH:143:ILE:HA	2.20	0.41
41:DJ:82:GLY:O	41:DJ:83:GLY:C	2.58	0.41
23:DB:362:A:N3	23:DB:362:A:C2'	2.81	0.41
35:DV:4:ILE:HB	35:DV:63:ILE:HG13	2.02	0.41
35:DV:4:ILE:HG22	35:DV:63:ILE:HG23	2.03	0.41
3:CD:25:ARG:NH1	3:CD:30:LYS:HE3	2.35	0.41
32:D4:35:GLN:HB2	32:D4:35:GLN:HE21	1.65	0.41
23:DB:1021:A:C2	23:DB:1023:U:C2	3.09	0.41
27:BK:8:LEU:HD12	27:BK:19:VAL:O	2.20	0.41
23:BB:2734:A:H2'	23:BB:2735:G:C5'	2.47	0.41
47:DF:3:LEU:HB2	47:DF:100:GLU:OE2	2.21	0.41
47:DF:174:PHE:HB3	47:DF:176:PHE:HD1	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:154:VAL:O	3:AD:157:ALA:HB3	2.21	0.41
27:BK:71:ARG:CG	27:BK:105:ARG:HH21	2.26	0.41
14:AO:70:LEU:HD12	14:AO:78:TYR:CA	2.51	0.41
47:DF:12:VAL:HG13	47:DF:27:VAL:HG21	2.02	0.41
23:BB:285:G:O2'	23:BB:286:U:H5'	2.20	0.41
31:D0:30:ASP:OD2	31:D0:31:LYS:N	2.50	0.41
41:DJ:57:LEU:HB3	41:DJ:58:ASN:H	1.68	0.41
23:DB:633:A:H2'	23:DB:634:C:O4'	2.21	0.41
48:DG:105:SER:C	48:DG:106:LEU:HD23	2.40	0.41
23:BB:1616:A:H4'	23:BB:1617:C:OP2	2.21	0.41
22:DA:43:C:C2'	47:DF:91:ARG:HD2	2.51	0.41
47:DF:32:LYS:HA	47:DF:95:MET:CG	2.46	0.41
14:CO:89:ARG:NH2	23:DB:715:A:H5''	2.31	0.41
40:BH:41:LYS:C	40:BH:43:ASN:N	2.74	0.41
15:CP:66:THR:HG22	15:CP:67:ILE:N	2.36	0.41
20:AB:63:LYS:HB3	20:AB:87:ASP:OD2	2.21	0.41
12:AM:10:ASP:HA	12:AM:44:ILE:CD1	2.51	0.41
48:BG:10:VAL:HG21	48:BG:49:LEU:HD13	2.03	0.41
48:BG:47:ASN:CG	48:BG:48:THR:N	2.74	0.41
12:CM:10:ASP:HA	12:CM:44:ILE:CD1	2.51	0.41
48:DG:47:ASN:CG	48:DG:48:THR:N	2.75	0.41
9:CJ:57:VAL:O	9:CJ:58:ASN:HB2	2.21	0.41
35:BV:30:ILE:HG12	35:BV:91:PHE:HB2	2.02	0.41
37:BL:47:ARG:HB3	37:BL:47:ARG:NH2	2.27	0.41
35:BV:83:LYS:HA	35:BV:84:PRO:HD3	1.92	0.41
29:BE:170:ARG:HH22	29:BE:176:ASP:HB2	1.86	0.41
26:BD:119:ALA:HB2	26:BD:163:GLY:C	2.41	0.41
30:DY:12:ALA:HB2	30:DY:53:MET:CE	2.51	0.41
49:BR:14:VAL:HG21	49:BR:98:ILE:CG1	2.44	0.41
23:BB:672:C:H2'	23:BB:673:C:C6	2.56	0.41
23:BB:713:G:O2'	23:BB:714:U:H5'	2.20	0.41
23:DB:2496:C:O2'	23:DB:2497:A:H5'	2.21	0.41
23:DB:352:A:H2'	23:DB:353:C:C6	2.56	0.41
48:DG:125:PRO:HD3	48:DG:131:VAL:HG22	2.02	0.41
1:AA:921:U:H2'	1:AA:922:G:O4'	2.21	0.41
47:BF:37:MET:CE	47:BF:149:ARG:HD2	2.50	0.41
37:BL:56:PRO:O	37:BL:60:ARG:HG3	2.19	0.41
7:AH:120:LEU:O	7:AH:120:LEU:HD23	2.21	0.41
23:BB:2467:C:H42	23:BB:2483:C:N4	2.18	0.41
23:DB:2590:A:O2'	23:DB:2591:C:H5'	2.20	0.41
28:BP:98:TYR:CE2	28:BP:99:LEU:HD23	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BP:58:PHE:HE1	28:BP:83:ILE:HG13	1.86	0.41
10:CK:88:PRO:HD3	21:CU:28:LEU:HD13	2.03	0.41
37:DL:93:ASN:CG	37:DL:94:THR:H	2.25	0.41
37:DL:77:ILE:O	37:DL:110:VAL:O	2.39	0.41
1:CA:661:G:O2'	1:CA:662:U:H5'	2.21	0.41
26:DD:9:VAL:O	26:DD:9:VAL:HG13	2.20	0.41
22:DA:83:G:OP1	30:DY:16:LEU:HD21	2.20	0.41
39:DX:58:ASN:C	39:DX:60:LYS:N	2.74	0.41
23:DB:1561:C:H2'	23:DB:1562:U:H6	1.86	0.41
1:CA:1053:G:N7	1:CA:1200:C:H5''	2.36	0.41
9:AJ:83:THR:O	9:AJ:86:ALA:HB3	2.21	0.41
1:AA:596:A:H2'	1:AA:597:G:C8	2.54	0.41
1:CA:659:U:O2'	1:CA:660:C:H5'	2.21	0.41
23:DB:2635:A:C5'	26:DD:79:LEU:HB2	2.49	0.41
7:AH:6:ILE:HD11	7:AH:31:LEU:CD2	2.51	0.41
40:DH:117:LEU:HD12	40:DH:118:PRO:HD2	2.03	0.41
2:CC:120:THR:HG22	2:CC:197:VAL:CG2	2.50	0.41
44:DQ:4:LYS:CE	44:DQ:7:VAL:HG22	2.51	0.41
23:DB:1946:U:H2'	23:DB:1947:C:C6	2.56	0.41
46:DU:14:THR:HB	46:DU:68:ASN:HB3	2.02	0.41
23:BB:1857:G:H21	23:BB:1884:G:H2'	1.86	0.41
23:DB:2228:G:H2'	23:DB:2229:U:H6	1.86	0.41
23:DB:1845:G:C6	23:DB:1896:G:C6	3.09	0.41
5:CF:15:SER:HA	5:CF:18:VAL:HG23	2.03	0.41
23:DB:2637:U:C2'	23:DB:2638:G:H5'	2.51	0.41
1:AA:620:C:C1'	3:AD:131:ILE:HD13	2.51	0.41
1:AA:189:A:O2'	1:AA:190:A:H5'	2.21	0.41
1:CA:159:G:H5'	1:CA:160:A:OP2	2.20	0.41
48:BG:154:GLU:H	48:BG:158:GLY:CA	2.32	0.41
1:AA:1226:C:OP2	12:AM:101:THR:HG21	2.21	0.41
23:DB:672:C:H2'	23:DB:673:C:H6	1.86	0.41
23:DB:572:A:C2	23:DB:2033:A:C2	3.08	0.41
20:CB:121:GLN:HE22	20:CB:122:ASP:HB3	1.86	0.41
6:CG:70:PRO:O	6:CG:95:ARG:HG3	2.21	0.41
23:DB:2007:U:O2'	23:DB:2008:C:H5'	2.20	0.41
5:CF:46:GLN:HG3	5:CF:47:LEU:H	1.86	0.41
23:DB:444:C:O2'	23:DB:445:C:H5'	2.21	0.41
11:CL:65:TYR:C	11:CL:66:ILE:HD12	2.42	0.41
28:DP:104:GLY:O	28:DP:106:ALA:N	2.49	0.41
23:BB:988:A:OP1	30:BY:11:SER:HB3	2.21	0.41
23:DB:215:G:H4'	23:DB:216:A:OP1	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:77:GLU:OE1	3:AD:80:ARG:HD3	2.21	0.41
14:AO:59:MET:HG2	14:AO:59:MET:H	1.58	0.41
23:DB:2784:U:O2'	23:DB:2785:C:H5'	2.20	0.41
23:BB:1322:A:C5	23:BB:1323:C:C5	3.09	0.41
28:BP:24:THR:C	28:BP:25:VAL:HG13	2.40	0.41
35:BV:1:MET:HE2	35:BV:2:PHE:H	1.86	0.41
23:BB:185:G:H2'	23:BB:186:G:O4'	2.21	0.41
42:BN:9:GLN:C	42:BN:17:ARG:HD3	2.41	0.41
1:AA:1201:A:C8	1:AA:1201:A:H5''	2.56	0.41
13:AN:14:ALA:HB1	13:AN:18:LYS:HE2	2.03	0.41
1:AA:309:A:O2'	1:AA:310:G:H5'	2.20	0.41
25:BC:161:VAL:HG13	25:BC:174:ARG:O	2.21	0.41
23:DB:1290:C:O2'	23:DB:1291:C:H5'	2.21	0.41
23:BB:786:C:H5''	23:BB:1780:A:C8	2.56	0.41
1:CA:152:A:N6	1:CA:170:U:C2	2.89	0.41
23:DB:1152:C:O2'	23:DB:1153:C:H5'	2.20	0.41
23:BB:839:U:H2'	23:BB:840:C:C6	2.56	0.41
20:CB:147:LEU:O	20:CB:150:ILE:HG22	2.21	0.41
1:AA:1143:G:H2'	1:AA:1144:G:C8	2.56	0.41
1:AA:778:G:H2'	1:AA:779:C:C6	2.56	0.41
23:BB:909:A:H2'	23:BB:912:C:C5	2.54	0.41
40:DH:30:LEU:O	40:DH:36:ALA:HB3	2.21	0.41
5:AF:11:HIS:CG	5:AF:12:PRO:HD2	2.56	0.41
1:CA:998:C:H2'	1:CA:999:C:C6	2.56	0.41
1:AA:366:A:O2'	1:AA:367:U:P	2.79	0.41
21:CU:48:LYS:C	21:CU:50:SER:N	2.74	0.41
23:DB:2698:U:H2'	23:DB:2699:C:H6	1.86	0.41
32:B4:16:ILE:HG12	32:B4:25:VAL:HG22	2.03	0.41
22:DA:35:C:C3'	22:DA:35:C:O2	2.69	0.41
1:CA:139:A:H2'	1:CA:140:U:C6	2.55	0.41
25:BC:251:THR:O	25:BC:251:THR:HG22	2.20	0.41
23:BB:1917:U:O2'	23:BB:1918:A:H5'	2.20	0.41
23:BB:1064:C:H5'	24:BI:88:GLY:HA3	2.03	0.41
1:CA:173:U:H6	1:CA:198:G:HO2'	1.66	0.41
23:DB:2758:A:C2'	23:DB:2759:G:H5'	2.51	0.41
51:BZ:18:ARG:HH11	51:BZ:24:ALA:N	2.18	0.41
1:CA:1159:U:O4'	1:CA:1182:G:N2	2.54	0.41
19:AT:5:SER:C	19:AT:7:LYS:N	2.74	0.41
1:CA:1515:G:O2'	1:CA:1516:G:H5'	2.21	0.41
1:AA:1373:G:H5''	6:AG:35:LYS:HB2	2.03	0.41
1:CA:348:G:O2'	1:CA:349:A:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1270:C:H5'	23:BB:1271:G:O5'	2.21	0.41
23:DB:1520:U:H2'	23:DB:1521:G:O4'	2.21	0.41
23:BB:1653:G:O6	42:BN:10:LEU:O	2.39	0.41
22:BA:62:C:H2'	22:BA:63:C:C6	2.56	0.41
1:CA:927:G:H4'	1:CA:1503:A:N7	2.36	0.41
23:DB:269:C:H2'	23:DB:270:A:H8	1.86	0.41
23:DB:1009:A:P	41:DJ:39:LYS:HZ2	2.43	0.41
2:CC:33:ASP:O	2:CC:36:PHE:HB3	2.21	0.41
23:DB:1396:U:O2	23:DB:1396:U:O4'	2.37	0.41
10:AK:52:ARG:NH1	10:AK:52:ARG:HB3	2.35	0.41
1:AA:95:C:H2'	1:AA:95:C:O2	2.20	0.41
27:DK:39:ILE:HA	27:DK:39:ILE:HD13	1.95	0.41
23:BB:2363:G:O2'	23:BB:2364:C:H5'	2.20	0.41
23:BB:1518:C:H2'	23:BB:1519:G:H8	1.84	0.41
23:DB:1962:C:H4'	23:DB:1963:U:H5	1.86	0.41
23:BB:367:G:N2	23:BB:368:A:H1'	2.36	0.41
31:D0:25:THR:O	31:D0:26:SER:HB3	2.21	0.41
23:DB:907:G:O2'	23:DB:908:C:H5'	2.20	0.41
41:BJ:130:HIS:O	41:BJ:130:HIS:CG	2.74	0.41
23:DB:1098:A:C8	24:DI:3:LYS:CB	3.04	0.41
51:DZ:68:LEU:HD22	51:DZ:78:TYR:CD1	2.55	0.41
23:DB:2385:C:O2'	23:DB:2386:A:H5'	2.20	0.41
23:DB:2387:U:O2'	52:DW:38:ARG:NH2	2.54	0.41
48:BG:42:VAL:HA	48:BG:50:THR:O	2.21	0.41
33:B1:37:LYS:HB2	33:B1:48:TYR:CD2	2.55	0.41
25:DC:170:TYR:HD2	25:DC:184:GLU:HA	1.85	0.41
25:DC:89:ASN:HA	25:DC:89:ASN:HD22	1.52	0.41
44:DQ:86:SER:HB3	49:DR:51:VAL:HA	2.03	0.41
50:DT:15:HIS:O	50:DT:16:VAL:C	2.59	0.41
50:DT:29:THR:H	50:DT:91:GLN:HE22	1.69	0.41
50:DT:43:ILE:HG22	50:DT:44:LYS:N	2.36	0.41
18:AS:35:ARG:HB3	18:AS:50:VAL:CG1	2.51	0.41
37:BL:89:VAL:O	37:BL:89:VAL:HG13	2.21	0.41
1:AA:796:C:O2'	1:AA:797:C:H5'	2.21	0.41
44:BQ:105:PHE:HA	44:BQ:108:LEU:CG	2.50	0.41
20:CB:165:ALA:CB	20:CB:186:VAL:HG12	2.51	0.41
23:DB:1060:U:C4	24:DI:131:THR:HG22	2.56	0.41
45:BS:47:VAL:HG12	45:BS:103:ILE:CG2	2.46	0.41
29:BE:181:ILE:O	37:BL:2:ARG:N	2.53	0.41
27:DK:15:GLY:HA2	27:DK:46:ALA:HA	2.02	0.41
27:DK:43:ILE:CG2	27:DK:54:LYS:HA	2.48	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BK:116:ILE:H	27:BK:116:ILE:HG13	1.71	0.41
2:CC:63:ILE:HG22	2:CC:65:VAL:HG23	2.02	0.41
23:BB:2733:A:O2'	23:BB:2734:A:H5'	2.21	0.41
47:DF:134:GLN:HB2	47:DF:149:ARG:HB3	2.03	0.41
3:AD:29:THR:HB	3:AD:30:LYS:HZ3	1.83	0.41
23:BB:2519:U:C6	23:BB:2542:A:N6	2.89	0.41
41:BJ:82:GLY:O	41:BJ:83:GLY:C	2.59	0.41
22:BA:42:C:C6	47:BF:65:LEU:HD13	2.56	0.41
23:BB:142:A:H2'	23:BB:143:C:C5	2.54	0.41
13:AN:68:ARG:NH1	13:AN:71:GLY:H	2.19	0.41
29:DE:48:THR:C	29:DE:50:ALA:N	2.74	0.41
23:DB:355:U:H2'	23:DB:356:G:H8	1.85	0.41
40:DH:69:ALA:HB1	40:DH:140:ALA:HB2	2.02	0.41
23:BB:1430:G:O2'	23:BB:1431:A:H5'	2.21	0.41
25:BC:6:LYS:HA	25:BC:7:PRO:HD3	1.91	0.41
23:BB:2848:G:H1'	23:BB:2868:A:N6	2.36	0.41
19:CT:4:LYS:HD2	19:CT:4:LYS:HA	1.89	0.41
23:BB:920:A:H2'	23:BB:921:C:H6	1.86	0.41
1:CA:1305:G:H2'	1:CA:1331:G:N2	2.36	0.41
29:BE:170:ARG:NH2	29:BE:176:ASP:HB2	2.36	0.41
23:BB:2723:C:H2'	23:BB:2724:U:O4'	2.21	0.41
9:CJ:93:ALA:O	9:CJ:96:VAL:HG22	2.21	0.41
9:CJ:21:ALA:HB2	9:CJ:96:VAL:HG11	2.03	0.41
23:DB:2742:G:O2'	23:DB:2743:U:H5'	2.21	0.41
23:DB:981:A:H4'	23:DB:2037:A:H5'	2.03	0.41
48:DG:132:LEU:H	48:DG:132:LEU:HG	1.70	0.41
49:DR:61:ALA:HB1	49:DR:98:ILE:H	1.86	0.41
23:BB:75:G:H4'	39:BX:48:ARG:NH2	2.32	0.41
38:DM:41:LEU:HD11	38:DM:102:LEU:CD1	2.51	0.41
38:DM:41:LEU:HD11	38:DM:102:LEU:HD11	2.03	0.41
48:BG:122:ALA:HA	48:BG:131:VAL:O	2.20	0.41
1:CA:591:U:O2'	1:CA:592:G:H5'	2.21	0.41
12:CM:90:HIS:C	12:CM:92:ARG:H	2.24	0.41
2:CC:137:VAL:HG13	2:CC:148:ILE:CG2	2.51	0.41
12:AM:90:HIS:C	12:AM:92:ARG:H	2.23	0.41
23:BB:2635:A:C5'	26:BD:79:LEU:HB2	2.51	0.41
23:BB:35:G:H1'	23:BB:454:A:C4	2.55	0.41
39:DX:14:LEU:H	39:DX:14:LEU:HD22	1.86	0.41
8:AI:87:MET:HG3	8:AI:94:ARG:HG3	2.02	0.41
40:BH:67:ALA:HB1	40:BH:70:GLU:CG	2.51	0.41
25:BC:216:ARG:NH1	25:BC:216:ARG:CG	2.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:491:G:O2'	1:AA:492:C:H5'	2.21	0.41
29:DE:132:LYS:O	29:DE:135:ALA:HB3	2.21	0.41
42:DN:58:ASP:O	42:DN:59:SER:CB	2.66	0.41
23:DB:1175:A:C3'	23:DB:1175:A:N3	2.83	0.41
2:CC:153:SER:O	2:CC:156:LEU:HD21	2.21	0.41
1:AA:502:A:H4'	1:AA:550:G:H4'	2.03	0.41
43:DO:18:LEU:HA	43:DO:18:LEU:HD12	1.91	0.41
1:CA:310:G:O2'	1:CA:311:C:H5'	2.21	0.41
23:DB:1845:G:O2'	23:DB:1846:G:H5'	2.20	0.41
7:CH:101:ALA:HB3	7:CH:112:ASP:HB3	2.03	0.41
48:BG:87:GLN:HE21	48:BG:164:ALA:CA	2.32	0.41
11:CL:35:ARG:HG3	11:CL:36:VAL:H	1.86	0.41
23:DB:560:C:H3'	23:DB:561:G:C8	2.56	0.41
23:BB:2241:A:O2'	23:BB:2242:G:H5'	2.21	0.41
23:DB:319:G:H2'	23:DB:320:A:O4'	2.21	0.41
23:DB:341:C:O2'	23:DB:342:A:H5'	2.21	0.41
23:DB:528:A:H3'	23:DB:528:A:C8	2.56	0.41
23:BB:1718:G:O2'	23:BB:1719:G:H5'	2.21	0.41
23:DB:197:A:H4'	23:DB:2069:G:OP2	2.21	0.41
42:BN:17:ARG:O	42:BN:18:GLN:HG2	2.21	0.41
25:DC:12:ARG:HA	25:DC:15:VAL:CG2	2.51	0.41
1:AA:1081:A:O2'	1:AA:1082:A:H5'	2.21	0.41
23:BB:1397:U:H5''	23:BB:1398:C:H5	1.85	0.41
40:DH:110:VAL:HG13	40:DH:110:VAL:O	2.21	0.41
23:DB:932:U:H4'	23:DB:933:A:C4	2.56	0.41
25:BC:63:ILE:HD13	25:BC:63:ILE:HA	1.87	0.41
22:BA:35:C:C3'	22:BA:35:C:O2	2.69	0.41
3:AD:176:LYS:HD3	3:AD:176:LYS:H	1.85	0.41
1:AA:139:A:H2'	1:AA:140:U:C6	2.56	0.41
1:AA:454:G:O2'	1:AA:455:G:H5'	2.20	0.41
23:BB:2692:G:H1'	23:BB:2847:U:O2'	2.21	0.41
22:BA:100:G:H2'	22:BA:101:A:O4'	2.20	0.41
23:BB:2488:G:O2'	23:BB:2489:U:H5'	2.20	0.41
23:BB:1183:U:O2'	23:BB:1184:U:H5'	2.21	0.41
1:AA:709:U:H2'	1:AA:710:G:C8	2.55	0.41
23:DB:2889:C:O2'	23:DB:2890:G:H5'	2.20	0.41
23:BB:2439:A:H4'	23:BB:2440:C:O5'	2.21	0.41
23:DB:1516:G:H2'	23:DB:1517:G:H8	1.85	0.41
26:DD:125:TRP:CE3	26:DD:160:LYS:HD3	2.56	0.41
2:AC:47:ALA:C	2:AC:49:ALA:H	2.25	0.41
1:CA:611:C:H2'	1:CA:612:C:H6	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:578:C:H2'	1:AA:579:A:H8	1.86	0.41
30:BY:5:LYS:HE2	30:BY:5:LYS:H	1.86	0.41
1:AA:656:G:HO2'	1:AA:657:U:H5'	1.86	0.41
23:BB:374:A:H61	23:BB:400:G:H1'	1.85	0.41
23:DB:108:G:H2'	23:DB:109:C:C6	2.56	0.41
23:DB:518:G:H2'	23:DB:519:U:C6	2.56	0.41
23:BB:1068:G:C6	23:BB:1069:A:N6	2.89	0.41
1:AA:645:G:O2'	1:AA:646:G:H5'	2.21	0.41
2:AC:33:ASP:O	2:AC:36:PHE:HB3	2.20	0.41
37:BL:118:THR:O	37:BL:120:VAL:HG23	2.20	0.41
22:BA:3:C:H2'	22:BA:4:C:C6	2.56	0.41
23:DB:2655:G:O2'	23:DB:2656:U:P	2.78	0.41
23:DB:1623:G:O2'	23:DB:1624:U:H5'	2.20	0.41
1:CA:744:C:H2'	1:CA:745:G:C8	2.56	0.41
52:BW:27:GLY:O	52:BW:63:ASP:HA	2.21	0.41
23:DB:2485:G:O2'	23:DB:2486:C:H5'	2.21	0.41
36:D2:6:GLN:NE2	36:D2:6:GLN:HA	2.35	0.41
35:DV:5:ASN:OD1	35:DV:5:ASN:N	2.53	0.41
23:DB:2747:G:O5'	23:DB:2747:G:H8	2.04	0.41
27:DK:31:ARG:HH11	27:DK:31:ARG:HG3	1.86	0.41
13:CN:34:ASN:HB2	13:CN:35:ALA:H	1.48	0.41
1:CA:1496:C:H2'	1:CA:1497:G:O4'	2.20	0.41
23:DB:106:C:H2'	23:DB:107:G:H8	1.85	0.41
2:CC:68:HIS:HA	2:CC:103:ALA:HB3	2.03	0.41
51:DZ:59:ILE:CD1	51:DZ:67:VAL:HG21	2.52	0.40
21:CU:40:PRO:C	21:CU:42:THR:N	2.74	0.40
51:BZ:77:LYS:O	51:BZ:78:TYR:HB3	2.21	0.40
23:BB:856:G:H2'	23:BB:857:G:C8	2.56	0.40
52:BW:24:ARG:HD2	52:BW:25:PHE:N	2.36	0.40
52:BW:50:VAL:O	52:BW:52:CYS:N	2.54	0.40
23:DB:2384:U:H5''	23:DB:2386:A:OP1	2.21	0.40
26:DD:24:VAL:HG23	26:DD:189:VAL:N	2.35	0.40
41:DJ:4:PHE:O	41:DJ:44:TYR:CZ	2.74	0.40
23:BB:1799:G:C4	25:BC:175:LEU:HD13	2.56	0.40
23:BB:2899:A:H5'	41:BJ:136:GLN:OE1	2.21	0.40
37:BL:29:LYS:C	37:BL:31:GLY:N	2.73	0.40
40:BH:114:GLU:OE2	40:BH:134:VAL:HA	2.21	0.40
20:AB:205:ALA:HB3	20:AB:208:ALA:HB3	2.01	0.40
42:DN:51:LEU:CD2	42:DN:70:THR:HG21	2.51	0.40
27:BK:97:THR:HB	27:BK:98:ARG:NH2	2.36	0.40
40:DH:87:GLU:OE1	40:DH:89:LYS:NZ	2.53	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BI:37:PHE:HZ	24:BI:56:VAL:HG11	1.86	0.40
42:BN:72:ASP:C	42:BN:74:GLU:N	2.73	0.40
35:BV:4:ILE:CD1	35:BV:63:ILE:HG13	2.51	0.40
34:D3:31:ILE:O	34:D3:31:ILE:HG12	2.21	0.40
15:AP:71:VAL:HG13	15:AP:72:ALA:N	2.37	0.40
1:AA:465:A:N3	1:AA:465:A:O4'	2.54	0.40
29:BE:29:HIS:C	29:BE:32:VAL:HG22	2.41	0.40
14:AO:81:LEU:HD23	14:AO:81:LEU:O	2.22	0.40
41:BJ:58:ASN:O	41:BJ:59:ALA:HB3	2.21	0.40
14:CO:70:LEU:HD12	14:CO:78:TYR:CA	2.51	0.40
14:CO:70:LEU:HD12	14:CO:78:TYR:N	2.36	0.40
23:DB:1430:G:O2'	23:DB:1431:A:H5'	2.21	0.40
4:AE:57:ALA:O	4:AE:61:LYS:HG2	2.20	0.40
22:BA:28:C:OP1	43:BO:34:HIS:HB2	2.21	0.40
23:BB:2073:C:O2'	23:BB:2074:U:H5'	2.20	0.40
1:AA:981:U:H2'	1:AA:982:U:C5	2.56	0.40
23:DB:784:G:H21	25:DC:225:ASN:ND2	2.19	0.40
23:BB:650:C:O3'	34:B3:48:MET:HE1	2.20	0.40
38:BM:82:MET:O	38:BM:83:GLY:C	2.58	0.40
15:CP:71:VAL:HG13	15:CP:72:ALA:N	2.36	0.40
1:CA:276:G:H5'	16:CQ:16:MET:SD	2.61	0.40
16:CQ:17:GLU:C	16:CQ:19:SER:H	2.23	0.40
12:AM:33:LEU:HB3	12:AM:38:ILE:O	2.21	0.40
12:AM:44:ILE:HD12	12:AM:45:SER:N	2.34	0.40
1:AA:236:A:O2'	1:AA:237:G:H5'	2.21	0.40
1:AA:239:U:H5''	1:AA:239:U:H6	1.85	0.40
1:CA:336:A:O2'	1:CA:337:G:H5'	2.20	0.40
31:D0:41:HIS:HB2	42:DN:99:LYS:C	2.42	0.40
49:DR:71:LYS:HG3	49:DR:72:VAL:H	1.86	0.40
23:DB:2467:C:C2'	23:DB:2468:A:H5'	2.51	0.40
23:DB:722:A:H2'	23:DB:723:C:C6	2.56	0.40
23:BB:722:A:H2'	23:BB:723:C:C6	2.56	0.40
38:BM:120:ALA:C	38:BM:122:ALA:N	2.73	0.40
38:DM:41:LEU:HA	38:DM:45:GLN:OE1	2.21	0.40
1:CA:593:U:H2'	1:CA:594:U:C6	2.56	0.40
1:CA:1238:A:C2	1:CA:1241:G:N3	2.88	0.40
8:AI:35:GLU:C	8:AI:37:TYR:H	2.24	0.40
23:BB:1505:A:H2'	23:BB:1506:U:O4'	2.21	0.40
6:AG:72:VAL:CG1	6:AG:89:GLU:HG3	2.50	0.40
1:CA:1200:C:O5'	1:CA:1201:A:H3'	2.22	0.40
24:BI:7:TYR:CD1	24:BI:7:TYR:C	2.95	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DE:129:PRO:HB3	29:DE:159:LEU:HD23	2.02	0.40
1:CA:812:G:C4'	1:CA:812:G:OP1	2.69	0.40
38:BM:93:VAL:HG22	38:BM:94:ALA:H	1.86	0.40
23:DB:314:C:O2'	23:DB:315:G:H5'	2.20	0.40
22:DA:8:C:O2'	43:DO:40:ILE:HD13	2.21	0.40
44:DQ:9:ALA:O	44:DQ:11:ALA:N	2.54	0.40
23:BB:1353:A:H2'	23:BB:1354:A:H8	1.85	0.40
1:AA:586:C:H2'	1:AA:587:G:H5'	2.03	0.40
11:CL:43:LYS:HG3	11:CL:44:PRO:HD2	2.03	0.40
23:DB:1491:G:H5'	25:DC:97:ASP:OD1	2.21	0.40
23:DB:2434:A:H8	23:DB:2434:A:H2'	1.73	0.40
44:BQ:7:VAL:HG23	44:BQ:8:ILE:N	2.35	0.40
1:AA:1254:A:OP1	9:AJ:47:GLU:HG3	2.20	0.40
6:CG:70:PRO:HA	6:CG:141:HIS:CE1	2.56	0.40
7:AH:79:ARG:NH1	7:AH:82:LEU:HB3	2.35	0.40
23:BB:993:G:OP1	44:BQ:49:ARG:NH1	2.55	0.40
25:BC:75:ALA:CB	25:BC:95:TYR:HA	2.51	0.40
1:AA:369:G:O2'	1:AA:370:C:H5'	2.22	0.40
1:CA:1460:C:H2'	1:CA:1461:G:H8	1.86	0.40
1:AA:1200:C:O5'	1:AA:1201:A:H3'	2.21	0.40
1:AA:175:C:H2'	1:AA:176:C:H6	1.86	0.40
1:AA:643:C:H2'	1:AA:644:U:H6	1.86	0.40
3:CD:171:GLU:O	3:CD:179:GLY:HA2	2.20	0.40
23:BB:40:U:H2'	23:BB:41:C:H6	1.86	0.40
23:DB:483:A:H2'	23:DB:484:C:O4'	2.21	0.40
1:AA:209:U:H5'	1:AA:210:C:C5	2.56	0.40
3:CD:53:GLN:HA	3:CD:198:LEU:HD22	2.03	0.40
42:BN:19:ALA:C	42:BN:21:PHE:N	2.74	0.40
1:CA:614:C:O2'	1:CA:615:G:H5'	2.21	0.40
1:AA:1426:G:O2'	1:AA:1427:C:H5'	2.20	0.40
23:DB:1720:U:O2'	23:DB:1721:G:H5'	2.22	0.40
26:BD:125:TRP:CD1	26:BD:160:LYS:HB3	2.56	0.40
45:DS:8:ARG:HB3	45:DS:102:HIS:CE1	2.56	0.40
23:DB:977:G:H4'	23:DB:1155:A:H5'	2.03	0.40
1:AA:862:C:O2'	1:AA:863:U:H5'	2.21	0.40
6:CG:126:ALA:C	6:CG:128:GLU:H	2.24	0.40
33:B1:39:ASP:OD1	33:B1:42:VAL:HG23	2.20	0.40
23:BB:2138:G:H2'	23:BB:2139:U:C5'	2.51	0.40
19:AT:74:HIS:O	19:AT:78:LEU:HB2	2.21	0.40
28:BP:29:VAL:O	28:BP:40:GLN:N	2.54	0.40
25:DC:251:THR:O	25:DC:251:THR:HG22	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:872:A:C4	1:CA:874:G:N7	2.89	0.40
23:DB:579:G:H4'	23:DB:2017:U:H2'	2.03	0.40
1:CA:691:G:H1'	1:CA:696:A:N6	2.36	0.40
23:BB:1951:U:H2'	23:BB:1953:A:OP2	2.21	0.40
51:DZ:77:LYS:CG	51:DZ:78:TYR:N	2.84	0.40
52:BW:49:ASN:C	52:BW:50:VAL:HG22	2.41	0.40
23:BB:2365:G:OP1	52:BW:54:ARG:HG3	2.21	0.40
23:BB:2384:U:H5''	23:BB:2386:A:OP1	2.20	0.40
52:BW:36:ILE:HD12	52:BW:39:GLN:HE22	1.85	0.40
20:CB:65:LYS:HB2	20:CB:158:ASP:OD2	2.21	0.40
27:BK:70:ARG:HH11	27:BK:76:VAL:HG22	1.86	0.40
49:DR:6:GLN:HE22	49:DR:9:GLY:N	2.18	0.40
39:DX:28:LEU:HB3	39:DX:43:LEU:HD21	2.04	0.40
29:BE:151:GLY:HA2	29:BE:195:GLN:HE22	1.86	0.40
50:DT:25:GLU:C	50:DT:27:SER:H	2.23	0.40
13:AN:50:LEU:N	13:AN:51:PRO:CD	2.84	0.40
10:CK:22:ILE:HD13	10:CK:95:THR:HG23	2.02	0.40
47:DF:74:ALA:HB3	47:DF:78:ILE:HB	2.03	0.40
10:AK:90:PRO:C	10:AK:92:ARG:N	2.74	0.40
1:AA:796:C:OP1	10:AK:127:ARG:HB3	2.20	0.40
28:DP:4:ILE:C	28:DP:6:GLN:H	2.21	0.40
25:BC:64:VAL:HG11	25:BC:66:PHE:CZ	2.56	0.40
6:CG:144:ALA:C	6:CG:146:ALA:N	2.75	0.40
19:AT:85:LEU:HD23	19:AT:86:ALA:N	2.34	0.40
27:DK:42:THR:O	27:DK:44:LYS:HG2	2.21	0.40
42:BN:25:ALA:HA	42:BN:44:LEU:HD11	2.04	0.40
42:BN:82:GLU:O	42:BN:84:GLY:N	2.54	0.40
23:DB:361:G:N3	23:DB:362:A:H8	2.19	0.40
1:CA:1323:G:H4'	1:CA:1362:A:C4	2.56	0.40
6:CG:14:ASP:OD2	6:CG:22:LEU:HB3	2.21	0.40
6:CG:22:LEU:O	6:CG:25:PHE:HB3	2.21	0.40
47:BF:102:LEU:O	47:BF:103:ILE:CB	2.69	0.40
47:DF:8:LYS:HA	47:DF:12:VAL:CG2	2.43	0.40
30:DY:8:GLN:OE1	30:DY:23:LEU:HD11	2.22	0.40
23:DB:2621:G:P	26:DD:124:ARG:HH22	2.44	0.40
47:BF:33:ILE:HG22	47:BF:90:LEU:HD23	2.01	0.40
29:DE:46:GLN:HB2	29:DE:87:ALA:O	2.21	0.40
23:DB:715:A:H2'	23:DB:716:A:C8	2.56	0.40
1:AA:985:C:H2'	1:AA:986:U:C6	2.55	0.40
20:CB:63:LYS:HG2	20:CB:224:ARG:NH1	2.35	0.40
2:CC:26:LYS:HB2	2:CC:26:LYS:HE3	1.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DG:6:ALA:HB3	48:DG:68:ARG:NE	2.36	0.40
23:BB:705:A:H2'	23:BB:706:A:H8	1.87	0.40
12:AM:39:ALA:HB3	12:AM:42:VAL:CG1	2.46	0.40
23:DB:2052:A:H4'	26:DD:148:GLN:N	2.36	0.40
23:DB:1547:C:H2'	23:DB:1548:A:H8	1.86	0.40
35:BV:29:ILE:HA	35:BV:38:LEU:O	2.22	0.40
22:BA:75:G:H1'	35:BV:29:ILE:HG12	2.03	0.40
13:CN:60:ARG:NH2	13:CN:69:PRO:HB3	2.36	0.40
1:AA:254:G:O2'	1:AA:255:G:H5'	2.21	0.40
23:BB:2784:U:H2'	23:BB:2785:C:C6	2.56	0.40
26:BD:62:LYS:N	26:BD:63:PRO:CD	2.84	0.40
9:CJ:21:ALA:O	9:CJ:25:ILE:HG13	2.21	0.40
39:BX:18:LEU:HA	39:BX:21:LEU:HD12	2.03	0.40
7:AH:29:SER:O	7:AH:33:VAL:HG23	2.21	0.40
38:DM:96:ILE:HD11	38:DM:126:ILE:CG1	2.50	0.40
40:BH:54:LEU:O	40:BH:58:LEU:N	2.55	0.40
12:CM:90:HIS:CE1	12:CM:96:VAL:HG21	2.56	0.40
28:BP:50:ARG:CD	28:BP:56:SER:HB3	2.51	0.40
23:DB:2834:G:H2'	23:DB:2879:A:H61	1.86	0.40
11:CL:107:LYS:O	11:CL:108:ASP:HB2	2.22	0.40
1:AA:1238:A:C2	1:AA:1241:G:N3	2.89	0.40
8:CI:43:ALA:C	8:CI:45:MET:H	2.25	0.40
1:CA:674:G:H2'	1:CA:675:A:C8	2.55	0.40
46:DU:81:ARG:HG3	46:DU:81:ARG:NH2	2.36	0.40
39:BX:1:MET:HG3	39:BX:4:LYS:HD3	2.02	0.40
1:AA:1009:U:C2'	1:AA:1009:U:O2	2.69	0.40
1:CA:1017:U:H2'	1:CA:1018:G:C8	2.56	0.40
23:BB:2797:U:H3'	23:BB:2798:U:H5	1.86	0.40
1:CA:471:U:H2'	1:CA:472:U:H6	1.85	0.40
23:DB:1454:C:H5'	42:DN:63:ARG:CZ	2.52	0.40
7:AH:77:VAL:HG21	7:AH:127:TYR:CE1	2.56	0.40
7:CH:77:VAL:HG21	7:CH:127:TYR:CE1	2.56	0.40
20:AB:121:GLN:HE21	20:AB:122:ASP:CB	2.32	0.40
1:CA:189:A:O2'	1:CA:190:A:H5'	2.21	0.40
23:DB:48:G:N2	23:DB:177:G:H21	2.20	0.40
1:CA:215:C:H2'	1:CA:216:U:C6	2.56	0.40
23:BB:1870:C:H2'	23:BB:1871:A:N3	2.36	0.40
23:BB:863:A:O2'	23:BB:864:G:H5'	2.21	0.40
2:CC:19:SER:O	13:CN:93:PRO:HB3	2.21	0.40
20:AB:21:TYR:O	20:AB:22:TRP:O	2.39	0.40
1:CA:778:G:H2'	1:CA:779:C:C6	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:878:A:H5''	7:CH:80:PRO:HG2	2.04	0.40
1:CA:587:G:C6	1:CA:755:G:C6	3.09	0.40
4:AE:104:ILE:HD11	4:AE:114:LEU:HB2	2.02	0.40
1:CA:284:C:O2'	1:CA:285:C:H5'	2.21	0.40
25:BC:20:ASN:HB3	25:BC:23:LEU:HD13	2.03	0.40
1:CA:683:G:O2'	1:CA:684:U:H5'	2.21	0.40
1:AA:1460:C:H2'	1:AA:1461:G:H8	1.85	0.40
44:DQ:16:ILE:O	44:DQ:18:LYS:N	2.51	0.40
1:AA:1142:G:C2	1:AA:1143:G:H1'	2.56	0.40
43:BO:6:ALA:O	43:BO:10:ARG:HG3	2.21	0.40
22:BA:18:G:H2'	22:BA:19:C:C6	2.57	0.40
23:DB:1053:C:C2'	23:DB:1054:A:H5'	2.51	0.40
23:DB:2640:G:OP1	41:DJ:95:ARG:NH2	2.55	0.40
1:CA:993:G:N2	1:CA:996:A:N6	2.69	0.40
32:D4:15:LYS:O	32:D4:16:ILE:CB	2.69	0.40
1:AA:263:A:H2'	1:AA:264:C:C5	2.56	0.40
23:DB:2567:G:H2'	23:DB:2568:U:C6	2.56	0.40
23:DB:2570:G:O2'	23:DB:2571:U:H5'	2.21	0.40
19:AT:57:VAL:HG23	19:AT:58:ASP:N	2.35	0.40
1:CA:895:G:H2'	1:CA:896:C:H6	1.86	0.40
23:DB:755:U:H2'	23:DB:756:A:H8	1.86	0.40
2:CC:139:ASN:N	2:CC:139:ASN:HD22	2.19	0.40
1:AA:1434:A:H2'	1:AA:1435:G:O4'	2.22	0.40
23:DB:2298:A:N1	23:DB:2321:U:C5	2.90	0.40
25:DC:259:ASN:C	25:DC:261:ARG:N	2.74	0.40
23:BB:1863:G:H2'	23:BB:1864:U:O4'	2.21	0.40
23:BB:189:G:H2'	23:BB:205:G:N2	2.36	0.40
14:CO:45:GLU:HG2	14:CO:46:HIS:N	2.36	0.40
36:B2:6:GLN:HA	36:B2:7:PRO:HD2	1.89	0.40
1:CA:515:G:O2'	1:CA:516:U:H5'	2.21	0.40
27:DK:66:LYS:NZ	27:DK:81:GLY:N	2.69	0.40
23:DB:931:U:P	30:DY:29:ARG:NH1	2.94	0.40
5:CF:74:LEU:HD11	5:CF:78:PHE:CZ	2.57	0.40
6:CG:67:ASN:O	6:CG:137:ARG:NE	2.53	0.40
23:DB:2597:G:OP1	25:DC:240:GLY:HA3	2.22	0.40
13:AN:34:ASN:HB2	13:AN:35:ALA:H	1.47	0.40
24:DI:56:VAL:CG2	24:DI:68:PHE:HB2	2.51	0.40
18:CS:20:LYS:HE3	18:CS:20:LYS:HB3	1.93	0.40
1:CA:397:A:H3'	1:CA:397:A:N3	2.36	0.40
3:AD:203:TYR:HD2	3:AD:203:TYR:HA	1.79	0.40
23:DB:1766:G:O2'	23:DB:1767:G:H5'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1098:A:O2'	24:DI:4:VAL:C	2.60	0.40
51:DZ:10:LYS:HG2	51:DZ:31:PRO:HG3	2.02	0.40
40:BH:26:ALA:HA	40:BH:31:VAL:HG23	2.03	0.40
51:BZ:30:LEU:HA	51:BZ:31:PRO:HD3	1.93	0.40
51:BZ:5:CYS:SG	51:BZ:7:VAL:HG12	2.61	0.40
46:BU:85:ARG:O	46:BU:86:PHE:HB2	2.20	0.40
52:BW:54:ARG:HH11	52:BW:54:ARG:CB	2.34	0.40
44:BQ:30:VAL:HG11	44:BQ:33:VAL:HG22	2.03	0.40
23:DB:2223:G:H2'	23:DB:2224:G:H5'	2.03	0.40
25:DC:90:ILE:HG23	25:DC:91:ALA:N	2.37	0.40
41:DJ:44:TYR:HB2	44:DQ:63:ARG:CD	2.51	0.40
44:BQ:59:LEU:HD13	44:BQ:60:TRP:N	2.37	0.40
10:AK:124:LYS:CA	21:AU:34:ARG:HB3	2.37	0.40
23:BB:2204:G:O2'	23:BB:2205:A:H5'	2.21	0.40
1:CA:697:U:O2	1:CA:798:U:H1'	2.21	0.40
23:DB:1059:G:H2'	23:DB:1060:U:C6	2.56	0.40
24:DI:128:ILE:CA	24:DI:131:THR:HG23	2.51	0.40
20:CB:42:LEU:HA	20:CB:45:THR:HB	2.04	0.40
23:DB:1081:U:H5'	24:DI:126:ARG:CZ	2.51	0.40
19:AT:42:ASP:HA	19:AT:43:LYS:NZ	2.37	0.40
23:DB:512:G:H4'	23:DB:512:G:OP1	2.21	0.40
48:BG:68:ARG:HH12	48:BG:72:ASN:ND2	2.02	0.40
27:BK:115:ILE:CG2	27:BK:116:ILE:N	2.84	0.40
27:BK:99:ILE:H	27:BK:118:LEU:CD2	2.35	0.40
23:DB:77:G:O2'	23:DB:78:U:H5'	2.20	0.40
23:DB:2733:A:H3'	23:DB:2733:A:C8	2.56	0.40
5:AF:53:LYS:HD3	5:AF:54:LEU:H	1.87	0.40
37:DL:21:ARG:HD3	37:DL:21:ARG:HA	1.93	0.40
23:BB:163:C:O2	23:BB:163:C:H5'	2.22	0.40
31:D0:49:ARG:O	31:D0:51:ARG:HG2	2.21	0.40
23:DB:2886:A:N6	31:D0:39:ARG:CZ	2.84	0.40
36:D2:10:LEU:C	36:D2:10:LEU:HD13	2.41	0.40
23:BB:1350:C:H5'	23:BB:1351:C:OP2	2.22	0.40
26:DD:114:LYS:HB2	26:DD:116:LYS:CE	2.47	0.40
29:BE:46:GLN:HB2	29:BE:87:ALA:O	2.21	0.40
25:DC:196:ASN:O	25:DC:198:GLU:HG2	2.22	0.40
52:BW:76:ARG:HB3	52:BW:78:PHE:CE2	2.56	0.40
40:BH:48:GLU:HA	40:BH:51:ARG:CZ	2.51	0.40
20:CB:68:PHE:CD1	20:CB:83:ALA:HB2	2.56	0.40
23:BB:2667:C:H2'	23:BB:2668:G:O4'	2.21	0.40
9:CJ:53:ILE:HG23	9:CJ:54:SER:H	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1431:A:H2'	23:BB:1432:G:H8	1.86	0.40
9:AJ:10:LEU:CD2	9:AJ:98:VAL:HG12	2.51	0.40
14:AO:88:ARG:NE	14:AO:88:ARG:HA	2.36	0.40
29:BE:173:THR:C	29:BE:175:ILE:N	2.75	0.40
1:CA:1028:C:H3'	1:CA:1029:U:H5	1.85	0.40
1:AA:1343:G:H1'	8:AI:122:ARG:NH1	2.36	0.40
46:BU:35:VAL:HB	46:BU:38:ILE:HB	2.03	0.40
41:DJ:20:ALA:HA	41:DJ:23:LYS:HG3	2.03	0.40
48:DG:122:ALA:HA	48:DG:131:VAL:O	2.22	0.40
48:DG:84:LYS:HG3	48:DG:131:VAL:C	2.41	0.40
1:AA:865:A:H5'	1:AA:1078:U:C4	2.56	0.40
35:DV:26:PHE:CE2	35:DV:44:HIS:HA	2.56	0.40
40:BH:61:VAL:C	40:BH:63:ALA:H	2.24	0.40
23:BB:2688:G:H1'	23:BB:2721:A:H61	1.86	0.40
48:DG:30:GLY:O	48:DG:78:VAL:HG12	2.22	0.40
1:CA:805:C:O2'	1:CA:806:C:H5'	2.20	0.40
9:CJ:37:ARG:HH11	9:CJ:77:VAL:HG21	1.87	0.40
23:BB:1507:C:H2'	23:BB:1508:A:H4'	2.03	0.40
43:DO:111:ARG:NH2	43:DO:117:PHE:O	2.55	0.40
1:CA:1009:U:C2'	1:CA:1009:U:O2	2.69	0.40
23:DB:1726:C:H2'	23:DB:1727:C:H6	1.84	0.40
23:BB:870:U:C2'	23:BB:871:U:H5'	2.50	0.40
6:CG:125:ASP:HB3	6:CG:130:LYS:HB3	2.03	0.40
20:AB:125:PHE:CD2	20:AB:126:ASP:N	2.90	0.40
1:AA:585:G:O2'	1:AA:586:C:H5'	2.22	0.40
1:CA:552:U:H5'	11:CL:82:ARG:HH11	1.85	0.40
39:DX:1:MET:HA	39:DX:4:LYS:HB3	2.03	0.40
23:BB:30:G:H2'	23:BB:31:C:O4'	2.22	0.40
23:BB:1105:U:O2'	23:BB:1106:G:H5'	2.21	0.40
9:CJ:42:LEU:CD1	9:CJ:73:LEU:HB2	2.51	0.40
2:AC:78:LYS:HE3	2:AC:81:GLU:HG2	2.04	0.40
3:CD:80:ARG:HG3	3:CD:80:ARG:HH11	1.87	0.40
31:D0:33:SER:C	31:D0:35:GLU:N	2.72	0.40
1:CA:230:G:O2'	1:CA:231:U:H5'	2.21	0.40
23:BB:540:C:H2'	23:BB:541:A:C8	2.55	0.40
10:CK:15:VAL:HB	10:CK:78:ILE:CD1	2.50	0.40
23:BB:2839:G:O2'	23:BB:2840:C:H5'	2.21	0.40
25:BC:36:ASN:HD21	25:BC:85:ASN:ND2	2.20	0.40
20:AB:145:ASN:N	20:AB:145:ASN:ND2	2.68	0.40
23:DB:131:A:H2'	23:DB:132:G:H8	1.86	0.40
23:DB:132:G:H2'	23:DB:133:U:C6	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DP:80:VAL:CG1	28:DP:81:ASP:N	2.84	0.40
24:DI:102:ARG:O	24:DI:106:GLN:HG3	2.21	0.40
1:AA:824:G:H2'	1:AA:825:A:H8	1.86	0.40
23:BB:768:G:O2'	23:BB:769:U:H5'	2.21	0.40
7:CH:12:ARG:HB3	7:CH:24:VAL:HG21	2.04	0.40
23:DB:2694:G:O2'	23:DB:2695:U:H5'	2.21	0.40
1:CA:1423:G:H2'	1:CA:1424:U:C6	2.55	0.40
1:CA:543:U:H2'	1:CA:544:G:C8	2.57	0.40
23:DB:538:A:H2'	23:DB:539:G:O4'	2.22	0.40
1:AA:152:A:H3'	1:AA:153:C:C6	2.56	0.40
27:DK:109:SER:O	27:DK:111:LYS:N	2.54	0.40
11:AL:23:LEU:C	11:AL:25:ALA:N	2.75	0.40
1:AA:432:A:C2'	1:AA:433:G:H5'	2.51	0.40
19:CT:15:LYS:HA	19:CT:18:LYS:HE3	2.03	0.40
1:AA:219:U:H2'	1:AA:220:G:C8	2.56	0.40
46:DU:2:ALA:HB3	46:DU:5:ARG:CZ	2.51	0.40
24:DI:68:PHE:N	24:DI:68:PHE:CD1	2.90	0.40
23:BB:811:U:OP2	37:BL:20:GLY:HA2	2.21	0.40
13:AN:11:LYS:O	13:AN:15:LEU:HG	2.20	0.40
23:BB:55:G:H2'	23:BB:56:A:H8	1.85	0.40
30:BY:20:LYS:H	30:BY:20:LYS:HG3	1.67	0.40
23:DB:2799:A:H8	23:DB:2799:A:OP2	2.04	0.40
26:BD:96:ILE:HD12	26:BD:96:ILE:N	2.35	0.40
3:AD:162:GLU:OE2	3:AD:162:GLU:N	2.55	0.40
3:AD:43:ARG:HB3	3:AD:43:ARG:HH11	1.86	0.40
12:AM:43:LYS:N	12:AM:43:LYS:HD2	2.36	0.40
23:DB:2408:U:O2'	23:DB:2409:G:H5'	2.20	0.40
23:DB:127:A:N7	36:D2:46:LYS:HE2	2.36	0.40
1:CA:275:G:H5'	16:CQ:15:LYS:HD3	2.03	0.40
23:DB:1114:C:H2'	23:DB:1115:G:C8	2.57	0.40
24:DI:2:LYS:N	24:DI:2:LYS:HD2	2.35	0.40
23:BB:296:U:H2'	23:BB:297:G:C8	2.57	0.40
20:AB:163:ILE:CG2	20:AB:164:ASP:N	2.70	0.40
20:AB:212:TYR:HA	20:AB:215:ALA:HB3	2.03	0.40
21:AU:40:PRO:C	21:AU:42:THR:N	2.75	0.40
46:DU:88:ASP:O	46:DU:90:LYS:N	2.54	0.40
23:DB:853:C:H2'	23:DB:854:C:H6	1.86	0.40
23:BB:2336:A:H1'	23:BB:2385:C:O4'	2.21	0.40
26:BD:30:GLU:HG3	26:BD:52:THR:CG2	2.50	0.40
44:BQ:27:ARG:HA	44:BQ:33:VAL:CG2	2.50	0.40
8:CI:7:GLY:CA	8:CI:85:ALA:HB2	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AF:25:TYR:O	5:AF:29:ILE:HG13	2.21	0.40
1:AA:1313:U:O2'	1:AA:1314:C:H5'	2.22	0.40
25:DC:80:LEU:HA	25:DC:80:LEU:HD23	1.96	0.40
39:DX:20:ASN:ND2	39:DX:20:ASN:N	2.68	0.40
29:DE:149:ILE:HG12	29:DE:149:ILE:O	2.20	0.40
23:BB:625:G:O2'	23:BB:626:A:H5'	2.20	0.40
48:DG:26:LYS:HA	48:DG:32:LEU:N	2.37	0.40
23:BB:670:A:H4'	23:BB:671:C:C5'	2.37	0.40
43:DO:49:VAL:HG11	43:DO:82:ALA:HA	2.03	0.40
40:BH:106:ALA:C	40:BH:108:VAL:H	2.25	0.40
42:BN:39:PRO:C	42:BN:41:ALA:N	2.75	0.40
18:AS:43:MET:CG	18:AS:61:VAL:HG21	2.44	0.40
41:BJ:77:HIS:CD2	41:BJ:84:ILE:N	2.89	0.40
23:DB:137:U:P	23:DB:137:U:H6	2.44	0.40
23:BB:1021:A:C2	23:BB:1023:U:C2	3.09	0.40
14:AO:70:LEU:HD12	14:AO:78:TYR:N	2.36	0.40
41:BJ:59:ALA:C	41:BJ:61:LYS:N	2.75	0.40
1:CA:411:A:N7	1:CA:413:G:N3	2.69	0.40
23:BB:284:U:H2'	23:BB:285:G:H8	1.87	0.40
23:DB:2723:C:H2'	23:DB:2724:U:O4'	2.21	0.40
26:DD:119:ALA:HB1	26:DD:163:GLY:N	2.37	0.40
23:DB:1351:C:H2'	23:DB:1352:U:O4'	2.22	0.40
26:DD:112:THR:O	26:DD:113:SER:HB2	2.20	0.40
23:BB:784:G:O6	25:BC:227:VAL:HG11	2.21	0.40
35:DV:16:ALA:O	35:DV:19:ARG:HB2	2.21	0.40
23:DB:785:G:H2'	23:DB:786:C:C6	2.57	0.40
22:DA:75:G:H1'	35:DV:29:ILE:HG12	2.03	0.40
1:CA:845:A:H8	1:CA:845:A:OP2	2.05	0.40
4:CE:104:ILE:HD11	4:CE:114:LEU:HB2	2.03	0.40
23:DB:2578:G:C5	26:DD:145:SER:HB2	2.56	0.40
34:D3:14:LYS:HB3	34:D3:14:LYS:HE3	1.94	0.40
12:CM:52:ILE:HD12	12:CM:55:LEU:CD1	2.51	0.40
23:BB:2186:G:H2'	23:BB:2187:U:H6	1.86	0.40
9:CJ:17:LEU:HD11	9:CJ:95:GLY:HA3	2.04	0.40
23:BB:1439:A:N3	23:BB:1553:A:C5	2.90	0.40
48:DG:84:LYS:CB	48:DG:132:LEU:HG	2.51	0.40
32:B4:36:ARG:O	32:B4:37:GLN:C	2.60	0.40
1:AA:923:A:OP1	4:AE:25:LYS:HB3	2.22	0.40
35:DV:80:HIS:HB3	35:DV:83:LYS:O	2.20	0.40
22:BA:8:C:OP1	43:BO:15:ARG:NH2	2.52	0.40
28:BP:96:LEU:HD12	28:BP:96:LEU:N	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DP:98:TYR:CE2	28:DP:99:LEU:HD23	2.56	0.40
12:AM:22:TYR:HB2	12:AM:65:GLU:HA	2.02	0.40
43:DO:30:ARG:HG3	43:DO:30:ARG:NH1	2.36	0.40
1:AA:472:U:N3	1:AA:473:U:C4	2.90	0.40
2:AC:153:SER:O	2:AC:156:LEU:HD21	2.21	0.40
1:CA:471:U:H2'	1:CA:472:U:C6	2.56	0.40
14:AO:3:LEU:HB2	14:AO:35:GLN:NE2	2.36	0.40
2:CC:9:ILE:O	2:CC:9:ILE:HG13	2.20	0.40
27:BK:30:ARG:HH11	27:BK:30:ARG:HG2	1.86	0.40
7:AH:101:ALA:HB3	7:AH:112:ASP:HB3	2.03	0.40
23:DB:1315:C:O2'	23:DB:1316:U:H5'	2.21	0.40
1:CA:1160:G:H4'	20:CB:130:LYS:CG	2.52	0.40
48:DG:37:ASN:ND2	48:DG:40:VAL:HB	2.36	0.40
23:DB:1796:U:H4'	25:DC:252:LYS:O	2.21	0.40
44:DQ:79:ILE:C	44:DQ:79:ILE:HD13	2.42	0.40
1:AA:123:U:OP1	1:AA:312:C:H5'	2.21	0.40
45:DS:31:GLN:C	45:DS:33:LEU:N	2.73	0.40
38:DM:57:VAL:HA	38:DM:112:LEU:HD11	2.02	0.40
23:DB:215:G:C4'	23:DB:216:A:H4'	2.49	0.40
23:BB:528:A:C8	23:BB:528:A:H3'	2.56	0.40
1:AA:221:C:O2'	1:AA:222:C:H5'	2.21	0.40
25:BC:220:ARG:O	25:BC:223:ALA:HB3	2.21	0.40
43:BO:94:ARG:O	43:BO:97:PHE:HB2	2.21	0.40
16:CQ:30:HIS:C	16:CQ:32:ILE:H	2.25	0.40
35:BV:77:VAL:HG23	35:BV:89:ILE:CG2	2.52	0.40
23:DB:1076:C:O2'	23:DB:1077:A:H5'	2.22	0.40
1:AA:1139:G:H4'	1:AA:1140:C:O5'	2.21	0.40
23:BB:2295:C:OP2	43:BO:9:ARG:NH2	2.55	0.40
24:BI:48:ILE:HG22	24:BI:49:GLU:HG2	2.02	0.40
23:DB:810:U:O2'	37:DL:20:GLY:HA3	2.21	0.40
1:CA:486:U:H2'	1:CA:487:A:C8	2.57	0.40
23:DB:218:A:O2'	23:DB:219:A:H5'	2.21	0.40
23:BB:1051:G:H2'	23:BB:1051:G:N3	2.36	0.40
23:BB:2282:G:O2'	23:BB:2283:C:OP2	2.33	0.40
22:BA:35:C:H2'	22:BA:36:C:C5'	2.51	0.40
4:AE:156:ARG:HA	7:AH:63:LYS:HZ1	1.86	0.40
3:AD:123:MET:HG3	3:AD:127:ARG:N	2.36	0.40
1:AA:554:A:H5'	11:AL:25:ALA:HB1	2.04	0.40
1:CA:173:U:H5'	1:CA:197:A:O4'	2.22	0.40
23:BB:1997:C:O2'	23:BB:1998:A:H5'	2.22	0.40
23:DB:579:G:C4'	23:DB:2017:U:H2'	2.52	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DJ:88:THR:HG23	41:DJ:91:GLU:H	1.87	0.40
23:DB:1035:U:O2'	23:DB:1036:G:H5'	2.20	0.40
1:AA:53:A:C2	1:AA:54:C:H1'	2.56	0.40
23:DB:2083:G:H2'	23:DB:2084:C:H6	1.85	0.40
1:CA:1492:A:H2'	1:CA:1493:A:C8	2.57	0.40
1:CA:1373:G:H5''	6:CG:35:LYS:HB2	2.03	0.40
44:BQ:42:GLY:HA3	49:BR:75:VAL:HG21	2.04	0.40
15:AP:22:ALA:HA	15:AP:33:ILE:HG13	2.03	0.40
23:BB:2049:G:O2'	23:BB:2050:C:H5'	2.21	0.40
28:DP:86:LYS:HB3	28:DP:87:ARG:H	1.66	0.40
23:DB:738:G:O2'	23:DB:739:A:H5'	2.22	0.40
23:DB:55:G:H2'	23:DB:56:A:H8	1.86	0.40
1:AA:355:C:O2'	1:AA:356:A:H5'	2.20	0.40
23:DB:1760:C:H2'	23:DB:1761:C:O4'	2.20	0.40
23:BB:1427:A:H4'	23:BB:1428:C:O4'	2.21	0.40
20:AB:69:VAL:O	20:AB:163:ILE:HG22	2.21	0.40
23:DB:852:U:H2'	23:DB:853:C:C6	2.56	0.40
8:AI:7:GLY:CA	8:AI:85:ALA:HB2	2.52	0.40
44:BQ:27:ARG:HH11	44:BQ:27:ARG:HG3	1.85	0.40
8:CI:27:ILE:HG22	8:CI:34:LEU:HB2	2.03	0.40
49:BR:34:GLU:HB3	49:BR:58:VAL:CG2	2.51	0.40
42:BN:2:ARG:HG2	42:BN:5:LYS:HB2	2.03	0.40
41:DJ:44:TYR:O	41:DJ:45:THR:CB	2.68	0.40
29:DE:151:GLY:CA	29:DE:195:GLN:HE22	2.35	0.40
47:DF:39:VAL:CG1	47:DF:49:LEU:HD23	2.48	0.40
18:CS:38:THR:HG23	18:CS:69:LYS:CE	2.52	0.40
20:AB:165:ALA:CB	20:AB:186:VAL:HG12	2.51	0.40
28:DP:9:GLN:HA	28:DP:12:MET:SD	2.62	0.40
25:BC:140:VAL:O	25:BC:141:HIS:HB2	2.21	0.40
25:BC:83:ASP:HA	25:BC:84:PRO:HD3	1.85	0.40
50:BT:61:LEU:HD12	50:BT:62:VAL:O	2.21	0.40
1:CA:796:C:H2'	1:CA:797:C:H6	1.86	0.40
41:DJ:103:ILE:HA	41:DJ:106:LYS:HB3	2.04	0.40
6:AG:148:LYS:O	6:AG:151:ALA:HB3	2.22	0.40
20:CB:205:ALA:HB3	20:CB:208:ALA:HB3	2.03	0.40
26:BD:186:LEU:CD2	28:BP:3:ILE:HD11	2.47	0.40
20:AB:30:ILE:HG21	20:AB:38:HIS:CD2	2.57	0.40
20:AB:42:LEU:HA	20:AB:45:THR:HB	2.03	0.40
23:BB:1204:A:N1	23:BB:1241:A:C2	2.90	0.40
27:DK:12:ASP:OD2	27:DK:85:VAL:HG13	2.21	0.40
18:AS:45:GLY:HA2	18:AS:61:VAL:O	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DV:81:PRO:O	38:DM:34:LYS:HE2	2.22	0.40
47:DF:168:LEU:HD13	47:DF:172:PHE:HE2	1.85	0.40
35:DV:9:ARG:NE	35:DV:20:LEU:HD11	2.36	0.40
26:DD:48:ILE:HG23	26:DD:48:ILE:O	2.22	0.40
23:BB:776:G:H4'	23:BB:777:G:O5'	2.22	0.40
46:BU:46:LYS:HE3	46:BU:47:PRO:O	2.21	0.40
43:BO:34:HIS:CE1	43:BO:65:THR:HG21	2.57	0.40
48:DG:168:VAL:O	48:DG:168:VAL:HG12	2.21	0.40
30:BY:12:ALA:HB2	30:BY:53:MET:HE1	2.04	0.40
23:DB:1438:U:N3	23:DB:1552:A:N6	2.69	0.40
22:BA:73:A:C5	22:BA:74:U:C5	3.10	0.40
1:AA:846:G:H2'	1:AA:846:G:N3	2.37	0.40
42:DN:97:ILE:HD12	42:DN:98:LEU:H	1.84	0.40
41:BJ:20:ALA:HA	41:BJ:23:LYS:HG3	2.04	0.40
5:AF:79:ARG:HD3	5:AF:79:ARG:HA	1.88	0.40
1:CA:762:U:H2'	1:CA:763:G:H8	1.86	0.40
26:DD:13:ARG:HH12	28:DP:74:GLN:CG	2.34	0.40
40:BH:62:LEU:O	40:BH:63:ALA:C	2.60	0.40
23:DB:543:G:H3'	23:DB:544:C:H5''	2.04	0.40
11:AL:107:LYS:O	11:AL:108:ASP:HB2	2.21	0.40
23:BB:2462:C:H2'	23:BB:2463:C:C6	2.57	0.40
23:BB:2591:C:OP1	25:BC:237:ARG:HG3	2.21	0.40
1:AA:674:G:O2'	1:AA:675:A:H5'	2.22	0.40
1:AA:735:C:H2'	1:AA:736:C:C6	2.55	0.40
23:BB:2077:A:C6	23:BB:2078:C:N4	2.90	0.40
1:AA:1376:U:H2'	1:AA:1377:A:C8	2.55	0.40
23:BB:962:G:H21	23:BB:2250:G:H1	1.67	0.40
49:BR:63:VAL:HA	49:BR:95:ASP:O	2.21	0.40
2:CC:120:THR:HB	2:CC:188:ALA:HB2	2.04	0.40
1:AA:500:G:H2'	1:AA:501:C:C6	2.57	0.40
3:CD:10:LEU:HB3	3:CD:62:ARG:HD3	2.04	0.40
47:DF:71:LYS:C	47:DF:73:VAL:H	2.24	0.40
7:CH:44:PHE:CE2	7:CH:100:ILE:HG12	2.54	0.40
44:BQ:9:ALA:O	44:BQ:11:ALA:N	2.53	0.40
48:BG:37:ASN:ND2	48:BG:40:VAL:HB	2.34	0.40
1:AA:620:C:O2	3:AD:131:ILE:HG21	2.21	0.40
23:DB:826:U:H5''	23:DB:2428:G:O3'	2.21	0.40
23:DB:825:A:H2'	23:DB:826:U:O4'	2.22	0.40
23:DB:672:C:H2'	23:DB:673:C:C6	2.57	0.40
45:BS:31:GLN:C	45:BS:33:LEU:N	2.73	0.40
8:CI:33:SER:HB3	8:CI:36:GLN:HE21	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1489:G:H2'	1:AA:1490:U:C6	2.56	0.40
35:DV:1:MET:CE	35:DV:2:PHE:H	2.35	0.40
1:AA:1522:U:O2'	1:AA:1523:G:H5'	2.22	0.40
20:CB:8:MET:HB2	20:CB:11:ALA:CB	2.52	0.40
20:CB:8:MET:SD	20:CB:9:LEU:N	2.80	0.40
1:AA:284:C:O2'	1:AA:285:C:H5'	2.22	0.40
23:BB:2199:A:H3'	23:BB:2200:C:C6	2.57	0.40
14:CO:33:THR:HA	14:CO:36:ILE:HB	2.03	0.40
1:CA:811:C:O2'	1:CA:901:A:N1	2.52	0.40
23:BB:1275:A:C4	42:BN:16:HIS:CD2	3.10	0.40
1:CA:284:C:H2'	1:CA:285:C:C6	2.57	0.40
1:AA:556:C:C2'	1:AA:557:G:H5'	2.51	0.40
8:AI:11:ARG:NH2	8:AI:12:LYS:HD2	2.37	0.40
35:BV:10:LYS:C	35:BV:11:GLU:HG3	2.41	0.40
23:BB:2359:C:O2'	23:BB:2360:G:H5'	2.21	0.40
23:BB:2665:A:H2'	23:BB:2666:C:O2	2.21	0.40
23:BB:2455:G:H2'	23:BB:2456:C:H6	1.85	0.40
1:CA:1298:U:H2'	6:CG:113:LYS:HZ1	1.85	0.40
23:DB:185:G:H2'	23:DB:186:G:O4'	2.21	0.40
25:BC:12:ARG:HA	25:BC:15:VAL:CG2	2.52	0.40
23:DB:1183:U:H2'	23:DB:1184:U:H6	1.86	0.40
14:AO:73:LYS:HD3	14:AO:73:LYS:HA	1.94	0.40
1:AA:1332:A:H2'	1:AA:1333:A:H8	1.87	0.40
23:DB:2298:A:H2'	23:DB:2299:U:O4'	2.22	0.40
30:DY:5:LYS:HE2	30:DY:5:LYS:N	2.36	0.40
1:AA:1069:C:O4'	1:AA:1191:A:H2	2.05	0.40
1:CA:1118:U:H2'	1:CA:1119:C:C6	2.56	0.40
1:AA:543:U:H2'	1:AA:544:G:C8	2.57	0.40
23:BB:2219:U:O2'	23:BB:2220:U:H5'	2.21	0.40
26:BD:141:ARG:HG3	26:BD:141:ARG:O	2.22	0.40
52:DW:54:ARG:NH1	52:DW:54:ARG:HB3	2.37	0.40
1:AA:1157:A:H4'	1:AA:1158:C:O5'	2.22	0.40
23:BB:2655:G:O2'	23:BB:2656:U:P	2.80	0.40
23:BB:807:U:H2'	23:BB:808:G:H8	1.86	0.40
1:CA:1087:G:O2'	1:CA:1088:G:H5'	2.22	0.40
2:CC:55:VAL:HG12	2:CC:56:ILE:N	2.36	0.40
1:CA:932:C:H2'	1:CA:933:G:H8	1.87	0.40
20:AB:133:ALA:O	20:AB:137:THR:HG23	2.22	0.40
23:DB:649:G:H2'	23:DB:650:C:C6	2.56	0.40
47:BF:124:ARG:HD2	47:BF:124:ARG:HA	1.93	0.40
27:BK:39:ILE:HD13	27:BK:39:ILE:HA	1.93	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2252:G:O2'	23:BB:2253:G:H5'	2.21	0.40
23:DB:295:G:O2'	23:DB:296:U:H5'	2.21	0.40
1:AA:259:G:O2'	1:AA:260:G:H5'	2.22	0.40

There are no symmetry-related clashes.

## 5.3 Torsion angles [i](#)

### 5.3.1 Protein backbone [i](#)

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%)	155 (76%)	35 (17%)	14 (7%)	1	11
2	CC	204/232 (88%)	155 (76%)	36 (18%)	13 (6%)	2	13
3	AD	203/205 (99%)	154 (76%)	34 (17%)	15 (7%)	1	9
3	CD	203/205 (99%)	151 (74%)	37 (18%)	15 (7%)	1	9
4	AE	148/166 (89%)	120 (81%)	25 (17%)	3 (2%)	9	48
4	CE	148/166 (89%)	120 (81%)	24 (16%)	4 (3%)	6	39
5	AF	98/135 (73%)	67 (68%)	26 (26%)	5 (5%)	2	20
5	CF	98/135 (73%)	65 (66%)	28 (29%)	5 (5%)	2	20
6	AG	148/178 (83%)	124 (84%)	18 (12%)	6 (4%)	3	27
6	CG	150/178 (84%)	127 (85%)	18 (12%)	5 (3%)	5	32
7	AH	127/129 (98%)	98 (77%)	25 (20%)	4 (3%)	5	34
7	CH	127/129 (98%)	97 (76%)	27 (21%)	3 (2%)	7	43
8	AI	125/129 (97%)	95 (76%)	20 (16%)	10 (8%)	1	7
8	CI	125/129 (97%)	97 (78%)	19 (15%)	9 (7%)	1	10
9	AJ	96/103 (93%)	73 (76%)	15 (16%)	8 (8%)	1	7
9	CJ	96/103 (93%)	74 (77%)	13 (14%)	9 (9%)	1	5
10	AK	115/128 (90%)	88 (76%)	22 (19%)	5 (4%)	3	25

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
10	CK	115/128 (90%)	85 (74%)	25 (22%)	5 (4%)	3	25
11	AL	121/123 (98%)	79 (65%)	33 (27%)	9 (7%)	1	9
11	CL	121/123 (98%)	80 (66%)	32 (26%)	9 (7%)	1	9
12	AM	112/117 (96%)	76 (68%)	27 (24%)	9 (8%)	1	7
12	CM	111/117 (95%)	77 (69%)	26 (23%)	8 (7%)	1	10
13	AN	92/100 (92%)	58 (63%)	24 (26%)	10 (11%)	0	3
13	CN	92/100 (92%)	58 (63%)	23 (25%)	11 (12%)	0	3
14	AO	86/89 (97%)	71 (83%)	12 (14%)	3 (4%)	4	31
14	CO	86/89 (97%)	71 (83%)	12 (14%)	3 (4%)	4	31
15	AP	80/82 (98%)	60 (75%)	14 (18%)	6 (8%)	1	9
15	CP	78/82 (95%)	58 (74%)	14 (18%)	6 (8%)	1	8
16	AQ	78/83 (94%)	58 (74%)	16 (20%)	4 (5%)	2	20
16	CQ	79/83 (95%)	59 (75%)	16 (20%)	4 (5%)	2	20
17	AR	53/74 (72%)	43 (81%)	8 (15%)	2 (4%)	4	28
17	CR	53/74 (72%)	43 (81%)	9 (17%)	1 (2%)	10	49
18	AS	77/91 (85%)	54 (70%)	17 (22%)	6 (8%)	1	8
18	CS	78/91 (86%)	54 (69%)	17 (22%)	7 (9%)	1	5
19	AT	83/86 (96%)	65 (78%)	12 (14%)	6 (7%)	1	10
19	CT	83/86 (96%)	66 (80%)	11 (13%)	6 (7%)	1	10
20	AB	216/240 (90%)	150 (69%)	44 (20%)	22 (10%)	1	4
20	CB	216/240 (90%)	147 (68%)	48 (22%)	21 (10%)	1	4
21	AU	49/70 (70%)	28 (57%)	11 (22%)	10 (20%)	0	0
21	CU	49/70 (70%)	28 (57%)	10 (20%)	11 (22%)	0	0
24	BI	139/141 (99%)	119 (86%)	15 (11%)	5 (4%)	4	30
24	DI	139/141 (99%)	114 (82%)	20 (14%)	5 (4%)	4	30
25	BC	269/272 (99%)	174 (65%)	49 (18%)	46 (17%)	0	1
25	DC	269/272 (99%)	174 (65%)	47 (18%)	48 (18%)	0	0
26	BD	207/209 (99%)	112 (54%)	63 (30%)	32 (16%)	0	1
26	DD	207/209 (99%)	114 (55%)	58 (28%)	35 (17%)	0	1
27	BK	119/123 (97%)	75 (63%)	28 (24%)	16 (13%)	0	1
27	DK	119/123 (97%)	75 (63%)	27 (23%)	17 (14%)	0	1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
28	BP	112/114 (98%)	62 (55%)	35 (31%)	15 (13%)	0	1
28	DP	112/114 (98%)	63 (56%)	34 (30%)	15 (13%)	0	1
29	BE	199/201 (99%)	131 (66%)	51 (26%)	17 (8%)	1	6
29	DE	199/201 (99%)	130 (65%)	53 (27%)	16 (8%)	1	7
30	BY	56/58 (97%)	36 (64%)	14 (25%)	6 (11%)	0	3
30	DY	56/58 (97%)	37 (66%)	13 (23%)	6 (11%)	0	3
31	B0	54/56 (96%)	39 (72%)	10 (18%)	5 (9%)	1	5
31	D0	54/56 (96%)	39 (72%)	10 (18%)	5 (9%)	1	5
32	B4	36/38 (95%)	21 (58%)	7 (19%)	8 (22%)	0	0
32	D4	36/38 (95%)	20 (56%)	7 (19%)	9 (25%)	0	0
33	B1	48/54 (89%)	37 (77%)	5 (10%)	6 (12%)	0	2
33	D1	48/54 (89%)	37 (77%)	5 (10%)	6 (12%)	0	2
34	B3	62/64 (97%)	44 (71%)	13 (21%)	5 (8%)	1	7
34	D3	62/64 (97%)	44 (71%)	13 (21%)	5 (8%)	1	7
35	BV	92/94 (98%)	65 (71%)	23 (25%)	4 (4%)	3	25
35	DV	92/94 (98%)	65 (71%)	23 (25%)	4 (4%)	3	25
36	B2	44/46 (96%)	29 (66%)	14 (32%)	1 (2%)	8	44
36	D2	44/46 (96%)	28 (64%)	15 (34%)	1 (2%)	8	44
37	BL	141/144 (98%)	88 (62%)	30 (21%)	23 (16%)	0	1
37	DL	141/144 (98%)	88 (62%)	29 (21%)	24 (17%)	0	1
38	BM	134/136 (98%)	86 (64%)	31 (23%)	17 (13%)	0	2
38	DM	134/136 (98%)	86 (64%)	32 (24%)	16 (12%)	0	3
39	BX	61/63 (97%)	38 (62%)	18 (30%)	5 (8%)	1	7
39	DX	61/63 (97%)	38 (62%)	18 (30%)	5 (8%)	1	7
40	BH	147/149 (99%)	77 (52%)	41 (28%)	29 (20%)	0	0
40	DH	147/149 (99%)	85 (58%)	39 (26%)	23 (16%)	0	1
41	BJ	140/142 (99%)	88 (63%)	36 (26%)	16 (11%)	0	3
41	DJ	140/142 (99%)	89 (64%)	33 (24%)	18 (13%)	0	2
42	BN	118/127 (93%)	72 (61%)	34 (29%)	12 (10%)	1	4
42	DN	118/127 (93%)	71 (60%)	35 (30%)	12 (10%)	1	4
43	BO	114/117 (97%)	84 (74%)	25 (22%)	5 (4%)	3	24

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
43	DO	114/117 (97%)	83 (73%)	25 (22%)	6 (5%)	2	19
44	BQ	115/117 (98%)	73 (64%)	34 (30%)	8 (7%)	1	10
44	DQ	115/117 (98%)	70 (61%)	38 (33%)	7 (6%)	2	15
45	BS	108/110 (98%)	69 (64%)	28 (26%)	11 (10%)	1	4
45	DS	108/110 (98%)	69 (64%)	29 (27%)	10 (9%)	1	5
46	BU	100/103 (97%)	53 (53%)	25 (25%)	22 (22%)	0	0
46	DU	100/103 (97%)	54 (54%)	23 (23%)	23 (23%)	0	0
47	BF	176/178 (99%)	107 (61%)	44 (25%)	25 (14%)	0	1
47	DF	176/178 (99%)	107 (61%)	44 (25%)	25 (14%)	0	1
48	BG	174/176 (99%)	100 (58%)	48 (28%)	26 (15%)	0	1
48	DG	174/176 (99%)	101 (58%)	48 (28%)	25 (14%)	0	1
49	BR	101/103 (98%)	65 (64%)	25 (25%)	11 (11%)	0	3
49	DR	101/103 (98%)	64 (63%)	28 (28%)	9 (9%)	1	5
50	BT	91/100 (91%)	50 (55%)	31 (34%)	10 (11%)	0	3
50	DT	91/100 (91%)	51 (56%)	30 (33%)	10 (11%)	0	3
51	BZ	75/78 (96%)	53 (71%)	18 (24%)	4 (5%)	2	19
51	DZ	75/78 (96%)	50 (67%)	21 (28%)	4 (5%)	2	19
52	BW	77/84 (92%)	29 (38%)	27 (35%)	21 (27%)	0	0
52	DW	77/84 (92%)	29 (38%)	26 (34%)	22 (29%)	0	0
All	All	11241/11914 (94%)	7579 (67%)	2528 (22%)	1134 (10%)	1	4

All (1134) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AC	14	VAL
2	AC	54	ILE
2	AC	153	SER
2	AC	205	GLU
5	AF	92	THR
6	AG	6	ILE
7	AH	65	PHE
8	AI	8	THR
9	AJ	57	VAL
10	AK	124	LYS
10	AK	126	ARG

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Mol	Chain	Res	Type
13	AN	50	LEU
15	AP	44	SER
16	AQ	32	ILE
18	AS	63	ASP
19	AT	3	ILE
20	AB	9	LEU
20	AB	19	THR
20	AB	22	TRP
20	AB	94	ARG
20	AB	163	ILE
21	AU	23	GLU
21	AU	25	ALA
21	AU	34	ARG
24	BI	18	ASN
25	BC	77	VAL
25	BC	107	LYS
26	BD	9	VAL
26	BD	14	ILE
26	BD	74	GLU
26	BD	107	VAL
26	BD	122	VAL
26	BD	169	ARG
26	BD	170	VAL
26	BD	184	ARG
27	BK	31	ARG
27	BK	35	VAL
27	BK	72	PRO
27	BK	119	ALA
27	BK	120	PRO
28	BP	25	VAL
28	BP	50	ARG
28	BP	65	ASN
28	BP	75	THR
28	BP	100	ARG
29	BE	45	ALA
29	BE	60	TRP
29	BE	69	ARG
29	BE	79	ARG
29	BE	165	HIS
29	BE	167	VAL
30	BY	2	LYS
31	B0	42	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
31	B0	51	ARG
34	B3	31	ILE
34	B3	50	SER
37	BL	51	GLU
37	BL	89	VAL
37	BL	100	ILE
37	BL	111	ILE
37	BL	116	VAL
38	BM	2	LEU
38	BM	36	VAL
38	BM	78	LEU
39	BX	2	LYS
40	BH	9	VAL
40	BH	10	ALA
40	BH	31	VAL
40	BH	32	PRO
40	BH	33	GLN
40	BH	73	ASN
40	BH	77	THR
40	BH	105	ALA
40	BH	136	SER
40	BH	147	VAL
41	BJ	4	PHE
41	BJ	44	TYR
41	BJ	45	THR
41	BJ	73	VAL
41	BJ	81	ILE
41	BJ	124	VAL
42	BN	11	ASN
42	BN	82	GLU
44	BQ	30	VAL
44	BQ	31	TYR
44	BQ	89	ILE
45	BS	3	THR
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	9	ASP

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Mol	Chain	Res	Type
47	BF	32	LYS
47	BF	41	GLU
47	BF	43	ILE
47	BF	77	LYS
47	BF	92	GLY
47	BF	103	ILE
47	BF	110	ILE
47	BF	112	ASP
47	BF	138	PRO
47	BF	149	ARG
48	BG	9	VAL
48	BG	11	PRO
48	BG	46	ASP
48	BG	85	LYS
48	BG	89	VAL
48	BG	91	VAL
48	BG	94	ARG
48	BG	117	PRO
48	BG	172	GLU
50	BT	2	ILE
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	30	VAL
52	BW	36	ILE
52	BW	50	VAL
52	BW	59	PHE
52	BW	60	ALA
52	BW	61	LYS
2	CC	14	VAL
2	CC	54	ILE
2	CC	153	SER
2	CC	205	GLU
3	CD	24	VAL
5	CF	92	THR
7	CH	65	PHE
8	CI	8	THR
9	CJ	57	VAL
10	CK	124	LYS

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Mol	Chain	Res	Type
10	CK	126	ARG
12	CM	105	ALA
13	CN	50	LEU
15	CP	44	SER
15	CP	67	ILE
16	CQ	32	ILE
18	CS	63	ASP
19	CT	3	ILE
20	CB	19	THR
20	CB	22	TRP
20	CB	94	ARG
21	CU	34	ARG
24	DI	5	GLN
24	DI	18	ASN
25	DC	77	VAL
25	DC	107	LYS
26	DD	9	VAL
26	DD	14	ILE
26	DD	74	GLU
26	DD	107	VAL
26	DD	122	VAL
26	DD	169	ARG
26	DD	170	VAL
26	DD	184	ARG
27	DK	31	ARG
27	DK	35	VAL
27	DK	72	PRO
27	DK	92	GLU
27	DK	119	ALA
27	DK	120	PRO
28	DP	25	VAL
28	DP	50	ARG
28	DP	65	ASN
28	DP	75	THR
28	DP	100	ARG
29	DE	45	ALA
29	DE	60	TRP
29	DE	69	ARG
29	DE	79	ARG
29	DE	165	HIS
29	DE	167	VAL
30	DY	2	LYS

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Mol	Chain	Res	Type
31	D0	42	ILE
31	D0	51	ARG
34	D3	31	ILE
34	D3	50	SER
37	DL	51	GLU
37	DL	89	VAL
37	DL	100	ILE
37	DL	111	ILE
37	DL	116	VAL
38	DM	2	LEU
38	DM	36	VAL
38	DM	78	LEU
39	DX	2	LYS
40	DH	9	VAL
40	DH	10	ALA
40	DH	31	VAL
40	DH	32	PRO
40	DH	33	GLN
40	DH	121	VAL
40	DH	136	SER
41	DJ	4	PHE
41	DJ	44	TYR
41	DJ	45	THR
41	DJ	73	VAL
41	DJ	81	ILE
41	DJ	124	VAL
42	DN	11	ASN
42	DN	82	GLU
42	DN	89	SER
44	DQ	30	VAL
44	DQ	31	TYR
44	DQ	89	ILE
45	DS	3	THR
45	DS	13	SER
45	DS	27	LYS
46	DU	6	ARG
46	DU	18	LYS
46	DU	42	LYS
46	DU	85	ARG
47	DF	9	ASP
47	DF	32	LYS
47	DF	41	GLU

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Mol	Chain	Res	Type
47	DF	43	ILE
47	DF	77	LYS
47	DF	92	GLY
47	DF	103	ILE
47	DF	110	ILE
47	DF	112	ASP
47	DF	138	PRO
47	DF	149	ARG
48	DG	9	VAL
48	DG	11	PRO
48	DG	46	ASP
48	DG	85	LYS
48	DG	89	VAL
48	DG	91	VAL
48	DG	94	ARG
48	DG	117	PRO
48	DG	172	GLU
50	DT	2	ILE
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
52	DW	30	VAL
52	DW	36	ILE
52	DW	50	VAL
52	DW	59	PHE
52	DW	60	ALA
52	DW	61	LYS
2	AC	47	ALA
2	AC	112	ALA
2	AC	180	ASP
3	AD	24	VAL
3	AD	25	ARG
3	AD	107	GLY
3	AD	165	GLU
3	AD	192	ALA
4	AE	20	VAL
4	AE	108	GLY
5	AF	85	ILE

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Mol	Chain	Res	Type
6	AG	68	VAL
7	AH	2	MET
7	AH	82	LEU
8	AI	127	SER
9	AJ	36	VAL
9	AJ	74	VAL
10	AK	88	PRO
11	AL	23	LEU
11	AL	24	GLU
11	AL	42	LYS
11	AL	117	GLY
12	AM	22	TYR
12	AM	49	GLU
12	AM	104	ASN
12	AM	105	ALA
13	AN	29	ILE
13	AN	71	GLY
14	AO	18	ASP
14	AO	74	ASP
15	AP	67	ILE
15	AP	79	ASN
18	AS	27	LYS
19	AT	42	ASP
20	AB	14	HIS
20	AB	15	PHE
20	AB	18	GLN
20	AB	86	CYS
20	AB	188	THR
21	AU	7	GLU
21	AU	12	ASP
21	AU	22	CYS
21	AU	32	ARG
24	BI	14	ALA
24	BI	64	ARG
25	BC	3	VAL
25	BC	18	VAL
25	BC	35	LYS
25	BC	36	ASN
25	BC	63	ILE
25	BC	69	ASN
25	BC	93	VAL
25	BC	94	LEU

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Mol	Chain	Res	Type
25	BC	123	ILE
25	BC	141	HIS
25	BC	142	ASN
25	BC	232	GLY
25	BC	239	PHE
25	BC	255	LYS
26	BD	91	THR
26	BD	93	GLY
26	BD	121	THR
26	BD	136	ASN
26	BD	145	SER
27	BK	18	ARG
27	BK	46	ALA
27	BK	92	GLU
27	BK	110	GLU
28	BP	37	LYS
28	BP	38	ARG
28	BP	64	SER
28	BP	83	ILE
28	BP	101	GLU
29	BE	42	GLY
29	BE	46	GLN
30	BY	4	ILE
31	B0	48	TYR
32	B4	4	ARG
32	B4	8	LYS
33	B1	4	ILE
34	B3	20	GLY
34	B3	22	LYS
35	BV	25	LYS
36	B2	44	VAL
37	BL	15	ALA
37	BL	28	GLY
38	BM	19	GLY
38	BM	56	ALA
38	BM	69	PRO
38	BM	83	GLY
38	BM	134	THR
39	BX	9	LYS
40	BH	3	VAL
40	BH	12	LEU
40	BH	28	ASN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
40	BH	64	ALA
40	BH	125	THR
41	BJ	43	GLU
41	BJ	84	ILE
41	BJ	111	LYS
42	BN	10	LEU
42	BN	89	SER
42	BN	98	LEU
42	BN	100	CYS
42	BN	101	GLY
42	BN	119	SER
43	BO	83	LEU
43	BO	98	GLN
44	BQ	18	LYS
45	BS	14	ALA
45	BS	25	ARG
45	BS	96	ILE
46	BU	19	GLY
46	BU	41	VAL
46	BU	47	PRO
46	BU	78	LYS
46	BU	89	GLY
47	BF	11	VAL
47	BF	36	ASN
47	BF	78	ILE
47	BF	135	ILE
47	BF	148	VAL
48	BG	2	ARG
48	BG	84	LYS
48	BG	97	VAL
48	BG	107	GLY
49	BR	24	LYS
49	BR	57	GLY
50	BT	19	LYS
50	BT	38	ALA
50	BT	69	ARG
51	BZ	35	SER
52	BW	12	GLY
52	BW	14	ASP
52	BW	17	ALA
52	BW	32	ALA
52	BW	51	GLY

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Mol	Chain	Res	Type
52	BW	53	GLY
52	BW	62	ALA
52	BW	77	LYS
2	CC	112	ALA
2	CC	180	ASP
3	CD	22	SER
3	CD	25	ARG
3	CD	107	GLY
3	CD	165	GLU
3	CD	192	ALA
4	CE	20	VAL
4	CE	108	GLY
5	CF	85	ILE
6	CG	112	ASP
6	CG	152	HIS
7	CH	2	MET
7	CH	82	LEU
8	CI	127	SER
9	CJ	36	VAL
9	CJ	74	VAL
10	CK	88	PRO
11	CL	23	LEU
11	CL	24	GLU
11	CL	42	LYS
11	CL	117	GLY
12	CM	22	TYR
12	CM	49	GLU
12	CM	104	ASN
13	CN	29	ILE
13	CN	71	GLY
14	CO	18	ASP
14	CO	74	ASP
18	CS	27	LYS
19	CT	42	ASP
20	CB	14	HIS
20	CB	18	GLN
20	CB	86	CYS
20	CB	131	LYS
20	CB	154	GLY
20	CB	163	ILE
20	CB	188	THR
21	CU	7	GLU

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Mol	Chain	Res	Type
21	CU	12	ASP
21	CU	22	CYS
21	CU	23	GLU
21	CU	25	ALA
21	CU	32	ARG
25	DC	18	VAL
25	DC	35	LYS
25	DC	36	ASN
25	DC	59	GLN
25	DC	63	ILE
25	DC	64	VAL
25	DC	69	ASN
25	DC	93	VAL
25	DC	94	LEU
25	DC	123	ILE
25	DC	141	HIS
25	DC	142	ASN
25	DC	190	THR
25	DC	232	GLY
25	DC	239	PHE
25	DC	255	LYS
26	DD	91	THR
26	DD	93	GLY
26	DD	121	THR
26	DD	127	PHE
26	DD	136	ASN
26	DD	145	SER
27	DK	17	ARG
27	DK	18	ARG
27	DK	110	GLU
28	DP	37	LYS
28	DP	64	SER
28	DP	83	ILE
28	DP	101	GLU
29	DE	42	GLY
30	DY	4	ILE
31	D0	48	TYR
32	D4	8	LYS
32	D4	37	GLN
33	D1	4	ILE
34	D3	20	GLY
34	D3	22	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
35	DV	25	LYS
36	D2	44	VAL
37	DL	3	LEU
37	DL	15	ALA
37	DL	28	GLY
38	DM	19	GLY
38	DM	56	ALA
38	DM	69	PRO
38	DM	83	GLY
38	DM	134	THR
39	DX	9	LYS
40	DH	3	VAL
40	DH	12	LEU
40	DH	28	ASN
40	DH	113	SER
41	DJ	43	GLU
41	DJ	84	ILE
41	DJ	111	LYS
42	DN	10	LEU
42	DN	98	LEU
42	DN	100	CYS
42	DN	101	GLY
42	DN	119	SER
43	DO	83	LEU
43	DO	98	GLN
44	DQ	18	LYS
45	DS	14	ALA
45	DS	25	ARG
45	DS	61	ASN
45	DS	96	ILE
46	DU	19	GLY
46	DU	41	VAL
46	DU	47	PRO
46	DU	89	GLY
47	DF	11	VAL
47	DF	36	ASN
47	DF	78	ILE
47	DF	135	ILE
47	DF	148	VAL
48	DG	2	ARG
48	DG	31	GLU
48	DG	84	LYS

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Mol	Chain	Res	Type
48	DG	97	VAL
48	DG	107	GLY
48	DG	164	ALA
49	DR	24	LYS
49	DR	57	GLY
50	DT	19	LYS
50	DT	38	ALA
51	DZ	35	SER
52	DW	12	GLY
52	DW	17	ALA
52	DW	32	ALA
52	DW	51	GLY
52	DW	53	GLY
52	DW	77	LYS
2	AC	3	LYS
2	AC	59	PRO
2	AC	107	LYS
3	AD	22	SER
3	AD	31	CYS
3	AD	169	TRP
3	AD	191	SER
5	AF	54	LEU
5	AF	69	GLU
5	AF	98	GLU
6	AG	112	ASP
8	AI	24	ASN
8	AI	44	ARG
9	AJ	56	HIS
9	AJ	75	ASP
10	AK	51	PHE
11	AL	13	ARG
11	AL	61	GLU
11	AL	122	LYS
12	AM	6	ILE
13	AN	2	LYS
13	AN	61	ASN
16	AQ	28	VAL
16	AQ	81	ALA
20	AB	121	GLN
20	AB	141	GLU
20	AB	153	MET
20	AB	154	GLY

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Mol	Chain	Res	Type
21	AU	17	ARG
24	BI	23	VAL
25	BC	4	LYS
25	BC	37	SER
25	BC	59	GLN
25	BC	64	VAL
25	BC	65	ASP
25	BC	88	ALA
25	BC	121	ALA
25	BC	140	VAL
25	BC	189	ALA
25	BC	190	THR
25	BC	222	THR
26	BD	113	SER
26	BD	127	PHE
26	BD	164	GLN
26	BD	167	ASN
26	BD	181	ASP
26	BD	194	PRO
27	BK	6	THR
27	BK	17	ARG
28	BP	104	GLY
30	BY	9	THR
32	B4	34	LYS
37	BL	3	LEU
37	BL	5	THR
37	BL	117	THR
38	BM	43	ALA
38	BM	59	ARG
38	BM	77	PRO
39	BX	37	LEU
40	BH	11	ASN
40	BH	44	ILE
40	BH	83	LYS
40	BH	103	VAL
41	BJ	72	LYS
41	BJ	113	PRO
42	BN	61	ALA
42	BN	83	LEU
43	BO	100	HIS
44	BQ	4	LYS
44	BQ	10	ARG

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Mol	Chain	Res	Type
44	BQ	88	GLU
45	BS	40	ASN
46	BU	9	GLU
46	BU	49	PRO
46	BU	61	GLU
46	BU	96	LYS
47	BF	42	ALA
47	BF	87	LYS
47	BF	176	PHE
48	BG	31	GLU
48	BG	38	ASP
48	BG	164	ALA
49	BR	43	ASN
52	BW	13	ARG
52	BW	23	LYS
2	CC	3	LYS
2	CC	47	ALA
2	CC	59	PRO
2	CC	107	LYS
3	CD	31	CYS
3	CD	169	TRP
3	CD	191	SER
5	CF	98	GLU
6	CG	68	VAL
8	CI	24	ASN
9	CJ	56	HIS
9	CJ	75	ASP
10	CK	51	PHE
11	CL	13	ARG
11	CL	61	GLU
11	CL	122	LYS
12	CM	6	ILE
13	CN	2	LYS
16	CQ	81	ALA
17	CR	46	THR
19	CT	41	GLY
20	CB	15	PHE
20	CB	58	LYS
20	CB	141	GLU
20	CB	153	MET
24	DI	23	VAL
25	DC	3	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	DC	4	LYS
25	DC	37	SER
25	DC	52	HIS
25	DC	65	ASP
25	DC	140	VAL
25	DC	222	THR
26	DD	24	VAL
26	DD	113	SER
26	DD	131	ASP
26	DD	167	ASN
26	DD	194	PRO
27	DK	6	THR
27	DK	46	ALA
28	DP	38	ARG
28	DP	104	GLY
29	DE	46	GLN
29	DE	153	LEU
30	DY	9	THR
30	DY	34	THR
31	D0	54	ILE
32	D4	4	ARG
32	D4	9	LYS
32	D4	16	ILE
32	D4	34	LYS
33	D1	51	ALA
37	DL	5	THR
37	DL	54	GLN
37	DL	117	THR
38	DM	43	ALA
38	DM	59	ARG
38	DM	72	PRO
38	DM	77	PRO
39	DX	37	LEU
40	DH	11	ASN
41	DJ	2	LYS
41	DJ	5	THR
41	DJ	72	LYS
41	DJ	113	PRO
42	DN	61	ALA
42	DN	83	LEU
43	DO	100	HIS
44	DQ	10	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
44	DQ	88	GLU
45	DS	40	ASN
46	DU	9	GLU
46	DU	49	PRO
46	DU	61	GLU
46	DU	78	LYS
47	DF	42	ALA
47	DF	87	LYS
47	DF	176	PHE
48	DG	38	ASP
48	DG	170	THR
49	DR	43	ASN
50	DT	69	ARG
52	DW	13	ARG
52	DW	23	LYS
52	DW	62	ALA
52	DW	70	VAL
2	AC	100	ILE
3	AD	82	LYS
6	AG	127	ALA
8	AI	42	THR
8	AI	55	ASP
8	AI	106	ASP
9	AJ	93	ALA
12	AM	7	ASN
13	AN	52	ARG
15	AP	28	ARG
15	AP	49	GLY
15	AP	52	LEU
17	AR	46	THR
18	AS	67	GLY
18	AS	72	GLU
19	AT	4	LYS
19	AT	41	GLY
19	AT	65	LEU
19	AT	67	HIS
20	AB	58	LYS
20	AB	205	ALA
21	AU	9	GLU
21	AU	33	ARG
24	BI	49	GLU
25	BC	52	HIS

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Mol	Chain	Res	Type
25	BC	53	ILE
25	BC	70	LYS
25	BC	196	ASN
25	BC	212	TRP
25	BC	237	ARG
25	BC	248	GLY
26	BD	24	VAL
26	BD	31	ALA
26	BD	95	SER
26	BD	131	ASP
26	BD	159	LYS
26	BD	162	ALA
26	BD	197	THR
27	BK	4	GLU
27	BK	14	SER
28	BP	31	VAL
28	BP	108	ARG
29	BE	153	LEU
30	BY	34	THR
30	BY	49	ALA
30	BY	50	VAL
31	B0	26	SER
31	B0	54	ILE
32	B4	9	LYS
32	B4	16	ILE
32	B4	37	GLN
33	B1	35	LEU
33	B1	36	LYS
33	B1	50	GLU
33	B1	51	ALA
35	BV	71	LYS
37	BL	4	ASN
37	BL	17	LYS
37	BL	29	LYS
37	BL	36	LYS
37	BL	66	PHE
37	BL	81	ASP
37	BL	94	THR
37	BL	99	ASN
37	BL	143	GLU
38	BM	42	THR
38	BM	60	GLN

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Mol	Chain	Res	Type
38	BM	72	PRO
39	BX	62	GLY
40	BH	7	ASP
40	BH	54	LEU
40	BH	100	ALA
40	BH	118	PRO
41	BJ	5	THR
41	BJ	13	ARG
42	BN	13	ASN
42	BN	104	ALA
43	BO	99	TYR
45	BS	29	VAL
45	BS	80	PRO
46	BU	12	VAL
46	BU	50	ALA
46	BU	82	VAL
46	BU	91	LYS
46	BU	92	VAL
46	BU	101	THR
48	BG	32	LEU
48	BG	61	TRP
48	BG	120	ILE
48	BG	170	THR
49	BR	7	SER
49	BR	65	ALA
50	BT	28	ASN
50	BT	86	THR
52	BW	70	VAL
3	CD	82	LYS
5	CF	54	LEU
5	CF	69	GLU
6	CG	127	ALA
8	CI	44	ARG
8	CI	55	ASP
8	CI	106	ASP
9	CJ	93	ALA
11	CL	47	ALA
12	CM	7	ASN
13	CN	51	PRO
13	CN	52	ARG
13	CN	61	ASN
14	CO	34	ALA

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Mol	Chain	Res	Type
15	CP	28	ARG
15	CP	49	GLY
15	CP	52	LEU
16	CQ	28	VAL
18	CS	2	ARG
18	CS	52	ASN
18	CS	67	GLY
18	CS	72	GLU
19	CT	4	LYS
19	CT	65	LEU
19	CT	67	HIS
20	CB	9	LEU
20	CB	205	ALA
21	CU	9	GLU
21	CU	33	ARG
24	DI	14	ALA
25	DC	53	ILE
25	DC	70	LYS
25	DC	88	ALA
25	DC	121	ALA
25	DC	189	ALA
25	DC	196	ASN
25	DC	212	TRP
25	DC	237	ARG
25	DC	248	GLY
25	DC	260	LYS
26	DD	31	ALA
26	DD	95	SER
26	DD	159	LYS
26	DD	162	ALA
26	DD	164	GLN
26	DD	181	ASP
26	DD	197	THR
27	DK	4	GLU
27	DK	14	SER
27	DK	43	ILE
27	DK	73	ASP
28	DP	108	ARG
30	DY	49	ALA
31	D0	26	SER
33	D1	36	LYS
33	D1	50	GLU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
35	DV	71	LYS
37	DL	4	ASN
37	DL	19	LEU
37	DL	36	LYS
37	DL	66	PHE
37	DL	81	ASP
37	DL	94	THR
37	DL	99	ASN
37	DL	143	GLU
38	DM	42	THR
38	DM	60	GLN
39	DX	16	THR
39	DX	62	GLY
40	DH	7	ASP
40	DH	41	LYS
40	DH	90	LEU
40	DH	92	GLY
40	DH	119	ASN
41	DJ	13	ARG
42	DN	104	ALA
43	DO	99	TYR
44	DQ	4	LYS
45	DS	29	VAL
45	DS	80	PRO
46	DU	12	VAL
46	DU	50	ALA
46	DU	82	VAL
46	DU	91	LYS
46	DU	92	VAL
46	DU	96	LYS
46	DU	101	THR
47	DF	2	LYS
48	DG	32	LEU
48	DG	61	TRP
48	DG	120	ILE
49	DR	7	SER
49	DR	65	ALA
50	DT	28	ASN
50	DT	86	THR
52	DW	27	GLY
3	AD	4	LEU
9	AJ	41	PRO

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
9	AJ	62	ARG
12	AM	65	GLU
13	AN	51	PRO
13	AN	70	HIS
14	AO	34	ALA
18	AS	52	ASN
20	AB	76	SER
20	AB	200	PRO
25	BC	105	ALA
25	BC	145	MET
25	BC	186	ASP
25	BC	246	PRO
26	BD	54	ALA
26	BD	56	LYS
26	BD	109	VAL
26	BD	119	ALA
26	BD	143	PRO
27	BK	43	ILE
27	BK	93	GLN
29	BE	70	SER
32	B4	20	ASP
34	B3	58	ILE
37	BL	19	LEU
37	BL	41	ARG
37	BL	54	GLN
38	BM	20	LEU
39	BX	16	THR
40	BH	62	LEU
40	BH	86	ASP
40	BH	99	ILE
41	BJ	2	LYS
41	BJ	14	ASP
43	BO	68	LYS
46	BU	51	LEU
46	BU	67	SER
47	BF	7	TYR
47	BF	12	VAL
47	BF	133	GLU
47	BF	136	ILE
49	BR	52	PRO
49	BR	70	GLU
49	BR	79	ARG

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Mol	Chain	Res	Type
49	BR	98	ILE
49	BR	101	ILE
51	BZ	28	ARG
52	BW	27	GLY
52	BW	74	LYS
2	CC	100	ILE
2	CC	145	ALA
3	CD	4	LEU
3	CD	27	ILE
8	CI	42	THR
9	CJ	41	PRO
9	CJ	62	ARG
12	CM	97	ARG
13	CN	48	GLN
20	CB	50	ASN
20	CB	200	PRO
21	CU	11	PHE
25	DC	34	GLU
25	DC	105	ALA
25	DC	145	MET
25	DC	186	ASP
25	DC	238	ASN
25	DC	246	PRO
26	DD	11	MET
26	DD	56	LYS
26	DD	75	ALA
26	DD	109	VAL
26	DD	119	ALA
26	DD	143	PRO
26	DD	173	GLN
27	DK	93	GLN
28	DP	31	VAL
29	DE	70	SER
30	DY	50	VAL
32	D4	20	ASP
32	D4	36	ARG
33	D1	35	LEU
34	D3	58	ILE
35	DV	15	GLY
37	DL	17	LYS
37	DL	29	LYS
37	DL	41	ARG

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Mol	Chain	Res	Type
38	DM	20	LEU
38	DM	73	ILE
40	DH	86	ASP
40	DH	96	THR
41	DJ	14	ASP
46	DU	51	LEU
46	DU	63	ALA
46	DU	67	SER
47	DF	7	TYR
47	DF	12	VAL
47	DF	133	GLU
47	DF	136	ILE
49	DR	52	PRO
49	DR	70	GLU
49	DR	98	ILE
49	DR	101	ILE
51	DZ	28	ARG
52	DW	10	ARG
52	DW	74	LYS
2	AC	145	ALA
3	AD	27	ILE
3	AD	36	ALA
7	AH	66	GLN
11	AL	47	ALA
12	AM	97	ARG
13	AN	62	ARG
16	AQ	31	PRO
17	AR	44	THR
20	AB	24	PRO
20	AB	50	ASN
25	BC	31	PRO
25	BC	34	GLU
25	BC	249	VAL
25	BC	260	LYS
26	BD	173	GLN
27	BK	101	GLY
29	BE	78	TRP
29	BE	96	VAL
29	BE	129	PRO
29	BE	177	PRO
35	BV	15	GLY
35	BV	84	PRO

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Mol	Chain	Res	Type
38	BM	73	ILE
38	BM	81	ARG
44	BQ	91	ARG
45	BS	32	ALA
48	BG	92	GLY
48	BG	155	PRO
49	BR	40	MET
50	BT	55	VAL
3	CD	36	ALA
4	CE	74	ALA
9	CJ	60	ASP
13	CN	62	ARG
13	CN	70	HIS
15	CP	16	PHE
16	CQ	31	PRO
20	CB	24	PRO
21	CU	17	ARG
25	DC	31	PRO
25	DC	250	GLN
26	DD	54	ALA
29	DE	96	VAL
29	DE	129	PRO
35	DV	84	PRO
37	DL	68	SER
40	DH	88	GLY
40	DH	98	ASP
40	DH	107	GLY
41	DJ	41	LYS
42	DN	59	SER
43	DO	13	ARG
43	DO	68	LYS
48	DG	155	PRO
50	DT	55	VAL
6	AG	15	PRO
25	BC	48	ILE
25	BC	150	GLY
29	BE	81	GLY
29	BE	83	VAL
40	BH	108	VAL
47	BF	88	VAL
52	BW	37	VAL
6	CG	15	PRO

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Mol	Chain	Res	Type
8	CI	71	ILE
20	CB	64	GLY
25	DC	151	GLY
25	DC	249	VAL
28	DP	63	ILE
29	DE	83	VAL
29	DE	177	PRO
47	DF	88	VAL
52	DW	37	VAL
2	AC	65	VAL
3	AD	179	GLY
8	AI	57	VAL
10	AK	89	GLY
12	AM	3	ILE
20	AB	150	ILE
28	BP	63	ILE
29	BE	148	ILE
46	BU	15	GLY
48	BG	16	VAL
2	CC	65	VAL
3	CD	154	VAL
3	CD	179	GLY
8	CI	57	VAL
12	CM	3	ILE
20	CB	150	ILE
25	DC	48	ILE
25	DC	150	GLY
29	DE	148	ILE
32	D4	7	VAL
33	D1	30	PRO
41	DJ	54	ILE
48	DG	16	VAL
3	AD	154	VAL
4	AE	157	GLY
8	AI	71	ILE
18	AS	29	PRO
20	AB	64	GLY
25	BC	151	GLY
28	BP	4	ILE
32	B4	7	VAL
33	B1	30	PRO
37	BL	31	GLY

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Mol	Chain	Res	Type
41	BJ	112	GLY
4	CE	157	GLY
10	CK	89	GLY
27	DK	101	GLY
28	DP	4	ILE
41	DJ	112	GLY
46	DU	15	GLY
48	DG	18	ILE
48	DG	92	GLY
11	AL	15	VAL
40	BH	121	VAL
48	BG	18	ILE
48	BG	119	GLY
48	BG	168	VAL
13	CN	67	GLY
18	CS	29	PRO
29	DE	81	GLY
37	DL	31	GLY
40	DH	16	GLY
48	DG	168	VAL
2	AC	55	VAL
6	AG	5	VAL
8	AI	82	ILE
13	AN	67	GLY
25	BC	147	PRO
40	BH	16	GLY
47	BF	82	TYR
11	CL	15	VAL
24	DI	34	ILE
25	DC	147	PRO
26	DD	172	VAL

### 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.

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	AC	170/189 (90%)	137 (81%)	33 (19%)	2	9
2	CC	170/189 (90%)	137 (81%)	33 (19%)	2	9
3	AD	172/172 (100%)	148 (86%)	24 (14%)	4	20
3	CD	172/172 (100%)	148 (86%)	24 (14%)	4	20
4	AE	113/125 (90%)	95 (84%)	18 (16%)	3	15
4	CE	113/125 (90%)	95 (84%)	18 (16%)	3	15
5	AF	87/116 (75%)	71 (82%)	16 (18%)	2	11
5	CF	87/116 (75%)	70 (80%)	17 (20%)	2	9
6	AG	123/146 (84%)	104 (85%)	19 (15%)	3	16
6	CG	125/146 (86%)	103 (82%)	22 (18%)	2	12
7	AH	104/104 (100%)	95 (91%)	9 (9%)	13	45
7	CH	104/104 (100%)	94 (90%)	10 (10%)	10	39
8	AI	105/106 (99%)	88 (84%)	17 (16%)	3	14
8	CI	105/106 (99%)	87 (83%)	18 (17%)	2	13
9	AJ	86/90 (96%)	71 (83%)	15 (17%)	2	12
9	CJ	86/90 (96%)	71 (83%)	15 (17%)	2	12
10	AK	90/98 (92%)	76 (84%)	14 (16%)	3	15
10	CK	90/98 (92%)	74 (82%)	16 (18%)	2	11
11	AL	103/103 (100%)	88 (85%)	15 (15%)	4	18
11	CL	103/103 (100%)	88 (85%)	15 (15%)	4	18
12	AM	92/95 (97%)	76 (83%)	16 (17%)	2	12
12	CM	91/95 (96%)	75 (82%)	16 (18%)	2	12
13	AN	79/83 (95%)	65 (82%)	14 (18%)	2	12
13	CN	79/83 (95%)	65 (82%)	14 (18%)	2	12
14	AO	76/77 (99%)	70 (92%)	6 (8%)	15	52
14	CO	76/77 (99%)	70 (92%)	6 (8%)	15	52
15	AP	65/65 (100%)	58 (89%)	7 (11%)	8	34
15	CP	65/65 (100%)	59 (91%)	6 (9%)	11	41
16	AQ	74/77 (96%)	65 (88%)	9 (12%)	6	27
16	CQ	75/77 (97%)	66 (88%)	9 (12%)	6	28

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
17	AR	48/64 (75%)	40 (83%)	8 (17%)	3	13
17	CR	48/64 (75%)	41 (85%)	7 (15%)	4	18
18	AS	70/78 (90%)	56 (80%)	14 (20%)	1	8
18	CS	71/78 (91%)	57 (80%)	14 (20%)	1	8
19	AT	65/65 (100%)	54 (83%)	11 (17%)	2	13
19	CT	65/65 (100%)	54 (83%)	11 (17%)	2	13
20	AB	180/198 (91%)	148 (82%)	32 (18%)	2	11
20	CB	180/198 (91%)	150 (83%)	30 (17%)	3	13
21	AU	44/60 (73%)	30 (68%)	14 (32%)	0	0
21	CU	44/60 (73%)	30 (68%)	14 (32%)	0	0
24	BI	109/109 (100%)	107 (98%)	2 (2%)	66	89
24	DI	109/109 (100%)	104 (95%)	5 (5%)	33	73
25	BC	216/217 (100%)	176 (82%)	40 (18%)	2	10
25	DC	216/217 (100%)	176 (82%)	40 (18%)	2	10
26	BD	164/164 (100%)	142 (87%)	22 (13%)	5	23
26	DD	164/164 (100%)	141 (86%)	23 (14%)	4	20
27	BK	102/104 (98%)	79 (78%)	23 (22%)	1	5
27	DK	102/104 (98%)	79 (78%)	23 (22%)	1	5
28	BP	99/99 (100%)	81 (82%)	18 (18%)	2	11
28	DP	99/99 (100%)	81 (82%)	18 (18%)	2	11
29	BE	165/165 (100%)	136 (82%)	29 (18%)	2	12
29	DE	165/165 (100%)	137 (83%)	28 (17%)	2	13
30	BY	48/48 (100%)	38 (79%)	10 (21%)	1	7
30	DY	48/48 (100%)	38 (79%)	10 (21%)	1	7
31	B0	47/47 (100%)	36 (77%)	11 (23%)	1	4
31	D0	47/47 (100%)	35 (74%)	12 (26%)	1	2
32	B4	34/34 (100%)	28 (82%)	6 (18%)	2	12
32	D4	34/34 (100%)	28 (82%)	6 (18%)	2	12
33	B1	45/48 (94%)	40 (89%)	5 (11%)	8	32
33	D1	45/48 (94%)	41 (91%)	4 (9%)	12	44
34	B3	51/51 (100%)	47 (92%)	4 (8%)	16	53

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
34	D3	51/51 (100%)	47 (92%)	4 (8%)	16	53
35	BV	78/78 (100%)	62 (80%)	16 (20%)	1	7
35	DV	78/78 (100%)	62 (80%)	16 (20%)	1	7
36	B2	38/38 (100%)	32 (84%)	6 (16%)	3	15
36	D2	38/38 (100%)	32 (84%)	6 (16%)	3	15
37	BL	102/103 (99%)	89 (87%)	13 (13%)	5	25
37	DL	102/103 (99%)	88 (86%)	14 (14%)	4	21
38	BM	109/109 (100%)	91 (84%)	18 (16%)	3	13
38	DM	109/109 (100%)	91 (84%)	18 (16%)	3	13
39	BX	55/55 (100%)	40 (73%)	15 (27%)	0	2
39	DX	55/55 (100%)	40 (73%)	15 (27%)	0	2
40	BH	114/114 (100%)	64 (56%)	50 (44%)	0	0
40	DH	114/114 (100%)	86 (75%)	28 (25%)	1	3
41	BJ	116/116 (100%)	101 (87%)	15 (13%)	5	24
41	DJ	116/116 (100%)	100 (86%)	16 (14%)	4	21
42	BN	100/103 (97%)	87 (87%)	13 (13%)	5	24
42	DN	100/103 (97%)	87 (87%)	13 (13%)	5	24
43	BO	86/87 (99%)	70 (81%)	16 (19%)	2	10
43	DO	86/87 (99%)	70 (81%)	16 (19%)	2	10
44	BQ	89/89 (100%)	74 (83%)	15 (17%)	2	13
44	DQ	89/89 (100%)	74 (83%)	15 (17%)	2	13
45	BS	93/93 (100%)	79 (85%)	14 (15%)	3	17
45	DS	93/93 (100%)	79 (85%)	14 (15%)	3	17
46	BU	83/84 (99%)	68 (82%)	15 (18%)	2	11
46	DU	83/84 (99%)	68 (82%)	15 (18%)	2	11
47	BF	149/149 (100%)	114 (76%)	35 (24%)	1	4
47	DF	149/149 (100%)	115 (77%)	34 (23%)	1	5
48	BG	137/137 (100%)	113 (82%)	24 (18%)	2	12
48	DG	137/137 (100%)	113 (82%)	24 (18%)	2	12
49	BR	84/84 (100%)	73 (87%)	11 (13%)	5	24
49	DR	84/84 (100%)	73 (87%)	11 (13%)	5	24

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
50	BT	80/84 (95%)	66 (82%)	14 (18%)	2	12
50	DT	80/84 (95%)	65 (81%)	15 (19%)	2	10
51	BZ	67/68 (98%)	52 (78%)	15 (22%)	1	5
51	DZ	67/68 (98%)	52 (78%)	15 (22%)	1	5
52	BW	59/62 (95%)	45 (76%)	14 (24%)	1	4
52	DW	59/62 (95%)	45 (76%)	14 (24%)	1	4
All	All	9333/9700 (96%)	7746 (83%)	1587 (17%)	2	13

All (1587) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AC	2	GLN
2	AC	13	ILE
2	AC	14	VAL
2	AC	17	TRP
2	AC	20	THR
2	AC	27	GLU
2	AC	30	ASP
2	AC	31	ASN
2	AC	35	ASP
2	AC	41	TYR
2	AC	42	LEU
2	AC	48	LYS
2	AC	61	LYS
2	AC	62	SER
2	AC	69	THR
2	AC	71	ARG
2	AC	74	ILE
2	AC	78	LYS
2	AC	81	GLU
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

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Mol	Chain	Res	Type
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	84	ASN
3	AD	87	GLU
3	AD	114	ARG
3	AD	123	MET
3	AD	146	GLU
3	AD	147	LYS
3	AD	154	VAL
3	AD	155	LYS
3	AD	160	LEU
3	AD	164	ARG
3	AD	176	LYS
3	AD	189	ASP
3	AD	190	LEU
3	AD	196	GLU
3	AD	198	LEU
3	AD	203	TYR
4	AE	9	GLU
4	AE	21	SER
4	AE	23	THR
4	AE	36	THR
4	AE	45	VAL
4	AE	51	LYS
4	AE	61	LYS
4	AE	64	GLU
4	AE	92	ARG
4	AE	95	MET
4	AE	113	VAL
4	AE	119	VAL
4	AE	123	LEU
4	AE	127	TYR

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Mol	Chain	Res	Type
4	AE	141	ASP
4	AE	147	ASN
4	AE	151	MET
4	AE	156	ARG
5	AF	1	MET
5	AF	6	ILE
5	AF	9	MET
5	AF	16	GLU
5	AF	39	LEU
5	AF	46	GLN
5	AF	53	LYS
5	AF	54	LEU
5	AF	55	HIS
5	AF	61	LEU
5	AF	71	ILE
5	AF	77	THR
5	AF	86	ARG
5	AF	90	MET
5	AF	98	GLU
5	AF	100	SER
6	AG	10	LYS
6	AG	21	LEU
6	AG	22	LEU
6	AG	26	VAL
6	AG	36	SER
6	AG	47	GLU
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	105	GLU
6	AG	109	LYS
6	AG	110	ARG
6	AG	112	ASP
6	AG	117	LEU
6	AG	125	ASP
6	AG	129	ASN
7	AH	12	ARG
7	AH	17	GLN
7	AH	25	THR

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
7	AH	55	LYS
7	AH	72	GLU
7	AH	76	ARG
7	AH	107	LYS
7	AH	111	THR
7	AH	113	ARG
8	AI	36	GLN
8	AI	45	MET
8	AI	55	ASP
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	86	LEU
8	AI	87	MET
8	AI	93	LEU
8	AI	94	ARG
8	AI	108	ARG
8	AI	109	GLN
8	AI	123	ARG
9	AJ	14	ASP
9	AJ	17	LEU
9	AJ	31	ARG
9	AJ	35	GLN
9	AJ	47	GLU
9	AJ	52	LEU
9	AJ	78	GLU
9	AJ	85	ASP
9	AJ	87	LEU
9	AJ	88	MET
9	AJ	89	ARG
9	AJ	90	LEU
9	AJ	92	LEU
9	AJ	97	ASP
9	AJ	100	ILE
10	AK	26	PHE
10	AK	28	ASN
10	AK	34	THR
10	AK	51	PHE

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Mol	Chain	Res	Type
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	110	THR
10	AK	126	ARG
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	35	ARG
11	AL	43	LYS
11	AL	49	ARG
11	AL	63	THR
11	AL	77	SER
11	AL	93	ARG
11	AL	95	HIS
11	AL	107	LYS
11	AL	108	ASP
12	AM	2	ARG
12	AM	8	ILE
12	AM	15	VAL
12	AM	28	ARG
12	AM	43	LYS
12	AM	44	ILE
12	AM	46	GLU
12	AM	57	ASP
12	AM	67	ASP
12	AM	71	GLU
12	AM	79	LEU
12	AM	82	LEU
12	AM	91	ARG
12	AM	92	ARG
12	AM	102	LYS
12	AM	106	ARG
13	AN	3	GLN

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Mol	Chain	Res	Type
13	AN	19	TYR
13	AN	25	GLU
13	AN	32	ASP
13	AN	40	ARG
13	AN	41	TRP
13	AN	42	ASN
13	AN	44	VAL
13	AN	45	LEU
13	AN	59	GLN
13	AN	64	ARG
13	AN	65	GLN
13	AN	68	ARG
13	AN	80	ARG
14	AO	59	MET
14	AO	62	GLN
14	AO	64	ARG
14	AO	71	LYS
14	AO	88	ARG
14	AO	89	ARG
15	AP	24	SER
15	AP	28	ARG
15	AP	31	ARG
15	AP	35	ARG
15	AP	45	GLU
15	AP	51	ARG
15	AP	79	ASN
16	AQ	10	ARG
16	AQ	24	ILE
16	AQ	39	ARG
16	AQ	60	ILE
16	AQ	61	ARG
16	AQ	66	LEU
16	AQ	71	SER
16	AQ	74	LEU
16	AQ	80	LYS
17	AR	33	THR
17	AR	37	LYS
17	AR	38	ILE
17	AR	44	THR
17	AR	46	THR
17	AR	63	TYR
17	AR	71	ASP

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Mol	Chain	Res	Type
17	AR	73	HIS
18	AS	2	ARG
18	AS	4	LEU
18	AS	5	LYS
18	AS	12	LEU
18	AS	14	LEU
18	AS	15	LEU
18	AS	23	GLU
18	AS	27	LYS
18	AS	28	LYS
18	AS	38	THR
18	AS	42	ASN
18	AS	46	LEU
18	AS	64	GLU
18	AS	66	VAL
19	AT	4	LYS
19	AT	34	VAL
19	AT	35	TYR
19	AT	38	ILE
19	AT	43	LYS
19	AT	53	MET
19	AT	58	ASP
19	AT	69	ASN
19	AT	74	HIS
19	AT	78	LEU
19	AT	85	LEU
20	AB	20	ARG
20	AB	23	ASN
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
20	AB	59	ILE
20	AB	62	ARG
20	AB	72	LYS
20	AB	81	ASP
20	AB	88	GLN
20	AB	94	ARG

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Mol	Chain	Res	Type
20	AB	95	TRP
20	AB	104	LYS
20	AB	113	LEU
20	AB	124	THR
20	AB	125	PHE
20	AB	127	LYS
20	AB	128	LEU
20	AB	138	ARG
20	AB	162	VAL
20	AB	166	ASP
20	AB	196	ASP
20	AB	202	ASN
20	AB	207	ARG
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	27	VAL
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	8	THR
25	BC	12	ARG
25	BC	37	SER
25	BC	43	ASN
25	BC	45	ASN
25	BC	52	HIS
25	BC	62	ARG
25	BC	65	ASP
25	BC	66	PHE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	BC	77	VAL
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	187	CYS
25	BC	190	THR
25	BC	196	ASN
25	BC	202	ARG
25	BC	203	VAL
25	BC	211	ARG
25	BC	212	TRP
25	BC	213	ARG
25	BC	224	MET
25	BC	227	VAL
25	BC	235	GLU
25	BC	249	VAL
25	BC	250	GLN
25	BC	257	ARG
26	BD	17	GLU
26	BD	34	VAL
26	BD	40	LEU
26	BD	55	LYS
26	BD	56	LYS
26	BD	59	ARG
26	BD	74	GLU
26	BD	79	LEU
26	BD	81	GLU
26	BD	84	LEU
26	BD	88	GLU
26	BD	91	THR

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Mol	Chain	Res	Type
26	BD	99	GLU
26	BD	123	LYS
26	BD	124	ARG
26	BD	138	LEU
26	BD	142	VAL
26	BD	148	GLN
26	BD	159	LYS
26	BD	179	ARG
26	BD	180	VAL
26	BD	197	THR
27	BK	2	ILE
27	BK	8	LEU
27	BK	9	ASN
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	70	ARG
27	BK	72	PRO
27	BK	79	PHE
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	111	LYS
27	BK	120	PRO
28	BP	3	ILE
28	BP	6	GLN
28	BP	19	PHE
28	BP	25	VAL
28	BP	33	GLU
28	BP	38	ARG
28	BP	43	GLU
28	BP	61	ARG
28	BP	65	ASN

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Mol	Chain	Res	Type
28	BP	82	SER
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	113	LEU
28	BP	114	ASN
29	BE	2	GLU
29	BE	3	LEU
29	BE	5	LEU
29	BE	7	ASP
29	BE	9	GLN
29	BE	22	ASP
29	BE	24	ASN
29	BE	40	ARG
29	BE	58	LYS
29	BE	60	TRP
29	BE	62	GLN
29	BE	67	ARG
29	BE	69	ARG
29	BE	70	SER
29	BE	78	TRP
29	BE	92	HIS
29	BE	97	ASN
29	BE	98	LYS
29	BE	108	ILE
29	BE	110	SER
29	BE	111	GLU
29	BE	116	ASP
29	BE	118	LEU
29	BE	122	GLU
29	BE	149	ILE
29	BE	150	THR
29	BE	159	LEU
29	BE	163	ASN
29	BE	189	THR
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	19	HIS
30	BY	23	LEU
30	BY	30	ARG
30	BY	37	ARG
30	BY	43	ILE
30	BY	55	LYS
31	B0	2	VAL
31	B0	5	ASN
31	B0	27	LEU
31	B0	31	LYS
31	B0	37	HIS
31	B0	38	LEU
31	B0	41	HIS
31	B0	45	ASP
31	B0	51	ARG
31	B0	53	VAL
31	B0	56	LYS
32	B4	1	MET
32	B4	2	LYS
32	B4	9	LYS
32	B4	15	LYS
32	B4	25	VAL
32	B4	35	GLN
33	B1	6	GLU
33	B1	9	LYS
33	B1	31	GLU
33	B1	35	LEU
33	B1	44	GLN
34	B3	7	ARG
34	B3	14	LYS
34	B3	18	LYS
34	B3	61	LEU
35	BV	7	GLU
35	BV	35	GLU
35	BV	40	ILE
35	BV	42	LEU
35	BV	45	ASP
35	BV	46	LYS
35	BV	49	ASN
35	BV	51	GLN
35	BV	53	LYS
35	BV	66	ASP

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Mol	Chain	Res	Type
35	BV	68	LYS
35	BV	69	GLU
35	BV	70	ILE
35	BV	75	GLN
35	BV	79	ARG
35	BV	90	ASP
36	B2	19	ARG
36	B2	33	ARG
36	B2	35	ARG
36	B2	39	ARG
36	B2	42	LEU
36	B2	43	THR
37	BL	6	LEU
37	BL	27	LEU
37	BL	47	ARG
37	BL	55	MET
37	BL	60	ARG
37	BL	67	THR
37	BL	69	ARG
37	BL	91	ASP
37	BL	92	LEU
37	BL	99	ASN
37	BL	118	THR
37	BL	122	VAL
37	BL	123	ARG
38	BM	7	THR
38	BM	10	ARG
38	BM	17	ASN
38	BM	26	VAL
38	BM	38	ARG
38	BM	70	ASP
38	BM	78	LEU
38	BM	81	ARG
38	BM	88	ASN
38	BM	90	GLU
38	BM	104	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

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Mol	Chain	Res	Type
38	BM	127	LYS
39	BX	1	MET
39	BX	8	GLU
39	BX	9	LYS
39	BX	15	ASN
39	BX	17	GLU
39	BX	18	LEU
39	BX	21	LEU
39	BX	28	LEU
39	BX	29	ARG
39	BX	30	MET
39	BX	36	GLN
39	BX	38	GLN
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	14	SER
40	BH	15	LEU
40	BH	19	VAL
40	BH	25	TYR
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	46	PHE
40	BH	48	GLU
40	BH	50	ARG
40	BH	54	LEU
40	BH	55	GLU
40	BH	57	LYS
40	BH	60	GLU
40	BH	62	LEU
40	BH	66	ASN
40	BH	68	ARG
40	BH	70	GLU
40	BH	71	LYS

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Mol	Chain	Res	Type
40	BH	73	ASN
40	BH	75	LEU
40	BH	76	GLU
40	BH	79	THR
40	BH	82	SER
40	BH	83	LYS
40	BH	87	GLU
40	BH	89	LYS
40	BH	90	LEU
40	BH	104	THR
40	BH	110	VAL
40	BH	112	LYS
40	BH	116	ARG
40	BH	119	ASN
40	BH	125	THR
40	BH	128	HIS
40	BH	130	VAL
40	BH	135	HIS
40	BH	137	GLU
40	BH	138	VAL
40	BH	139	PHE
40	BH	141	LYS
40	BH	147	VAL
40	BH	149	GLU
41	BJ	3	THR
41	BJ	5	THR
41	BJ	12	LYS
41	BJ	28	LEU
41	BJ	35	ARG
41	BJ	44	TYR
41	BJ	65	THR
41	BJ	73	VAL
41	BJ	95	ARG
41	BJ	120	ARG
41	BJ	124	VAL
41	BJ	129	GLU
41	BJ	131	ASN
41	BJ	138	GLN
41	BJ	141	ASP
42	BN	1	MET
42	BN	11	ASN
42	BN	20	MET

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Mol	Chain	Res	Type
42	BN	35	LYS
42	BN	46	ARG
42	BN	62	ASN
42	BN	69	ARG
42	BN	71	ARG
42	BN	82	GLU
42	BN	83	LEU
42	BN	112	TYR
42	BN	114	GLU
42	BN	120	GLU
43	BO	9	ARG
43	BO	17	LYS
43	BO	20	GLU
43	BO	31	THR
43	BO	35	ILE
43	BO	58	ILE
43	BO	62	LEU
43	BO	74	VAL
43	BO	81	ARG
43	BO	89	ASP
43	BO	98	GLN
43	BO	100	HIS
43	BO	106	LEU
43	BO	108	ASP
43	BO	115	LEU
43	BO	116	GLN
44	BQ	2	ARG
44	BQ	5	ARG
44	BQ	10	ARG
44	BQ	13	HIS
44	BQ	33	VAL
44	BQ	35	PHE
44	BQ	50	ARG
44	BQ	69	ARG
44	BQ	79	ILE
44	BQ	83	LYS
44	BQ	88	GLU
44	BQ	89	ILE
44	BQ	90	ASP
44	BQ	91	ARG
44	BQ	96	ASP
45	BS	7	HIS

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Mol	Chain	Res	Type
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	69	LEU
45	BS	73	LYS
45	BS	84	ARG
45	BS	86	MET
45	BS	88	ARG
45	BS	97	LEU
45	BS	99	ARG
46	BU	7	ASP
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	13	LYS
47	BF	29	ARG
47	BF	32	LYS
47	BF	46	LYS
47	BF	50	ASP
47	BF	55	ASP
47	BF	62	GLN
47	BF	68	LYS
47	BF	70	ARG
47	BF	76	PHE
47	BF	79	ARG
47	BF	89	THR
47	BF	91	ARG
47	BF	96	TRP

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Mol	Chain	Res	Type
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	121	PHE
47	BF	128	SER
47	BF	129	MET
47	BF	134	GLN
47	BF	137	PHE
47	BF	138	PRO
47	BF	143	ASP
47	BF	147	ARG
47	BF	149	ARG
47	BF	157	THR
47	BF	168	LEU
47	BF	173	ASP
47	BF	174	PHE
47	BF	177	ARG
47	BF	178	LYS
48	BG	14	VAL
48	BG	26	LYS
48	BG	31	GLU
48	BG	34	ARG
48	BG	37	ASN
48	BG	46	ASP
48	BG	54	ARG
48	BG	59	ASP
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	105	SER
48	BG	106	LEU
48	BG	120	ILE
48	BG	132	LEU
48	BG	133	LYS
48	BG	138	GLN
48	BG	152	ARG

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Mol	Chain	Res	Type
48	BG	162	ARG
48	BG	166	GLU
48	BG	176	LYS
49	BR	4	VAL
49	BR	5	PHE
49	BR	22	LEU
49	BR	39	LEU
49	BR	53	PHE
49	BR	70	GLU
49	BR	71	LYS
49	BR	72	VAL
49	BR	79	ARG
49	BR	82	HIS
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	32	LEU
50	BT	34	VAL
50	BT	43	ILE
50	BT	48	GLN
50	BT	64	LYS
50	BT	68	LYS
50	BT	69	ARG
50	BT	73	ARG
50	BT	81	LYS
51	BZ	2	SER
51	BZ	6	GLN
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	56	MET
51	BZ	66	THR
51	BZ	77	LYS

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Mol	Chain	Res	Type
51	BZ	78	TYR
52	BW	11	ASN
52	BW	14	ASP
52	BW	19	ARG
52	BW	23	LYS
52	BW	24	ARG
52	BW	25	PHE
52	BW	28	GLU
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
2	CC	2	GLN
2	CC	13	ILE
2	CC	14	VAL
2	CC	17	TRP
2	CC	20	THR
2	CC	27	GLU
2	CC	30	ASP
2	CC	31	ASN
2	CC	35	ASP
2	CC	41	TYR
2	CC	42	LEU
2	CC	48	LYS
2	CC	61	LYS
2	CC	62	SER
2	CC	69	THR
2	CC	71	ARG
2	CC	74	ILE
2	CC	78	LYS
2	CC	81	GLU
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

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Mol	Chain	Res	Type
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	84	ASN
3	CD	87	GLU
3	CD	114	ARG
3	CD	123	MET
3	CD	146	GLU
3	CD	147	LYS
3	CD	154	VAL
3	CD	155	LYS
3	CD	160	LEU
3	CD	164	ARG
3	CD	176	LYS
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	21	SER
4	CE	23	THR
4	CE	36	THR
4	CE	45	VAL
4	CE	51	LYS
4	CE	61	LYS
4	CE	64	GLU
4	CE	92	ARG
4	CE	95	MET
4	CE	113	VAL
4	CE	119	VAL

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Mol	Chain	Res	Type
4	CE	123	LEU
4	CE	127	TYR
4	CE	141	ASP
4	CE	147	ASN
4	CE	151	MET
4	CE	156	ARG
5	CF	1	MET
5	CF	6	ILE
5	CF	9	MET
5	CF	16	GLU
5	CF	39	LEU
5	CF	46	GLN
5	CF	53	LYS
5	CF	54	LEU
5	CF	55	HIS
5	CF	61	LEU
5	CF	64	VAL
5	CF	71	ILE
5	CF	77	THR
5	CF	86	ARG
5	CF	90	MET
5	CF	98	GLU
5	CF	100	SER
6	CG	2	ARG
6	CG	4	ARG
6	CG	8	GLN
6	CG	10	LYS
6	CG	21	LEU
6	CG	22	LEU
6	CG	26	VAL
6	CG	36	SER
6	CG	47	GLU
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	105	GLU
6	CG	109	LYS
6	CG	110	ARG
6	CG	112	ASP

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Mol	Chain	Res	Type
6	CG	117	LEU
6	CG	125	ASP
6	CG	129	ASN
7	CH	2	MET
7	CH	12	ARG
7	CH	17	GLN
7	CH	25	THR
7	CH	55	LYS
7	CH	72	GLU
7	CH	76	ARG
7	CH	107	LYS
7	CH	111	THR
7	CH	113	ARG
8	CI	36	GLN
8	CI	45	MET
8	CI	55	ASP
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	86	LEU
8	CI	87	MET
8	CI	93	LEU
8	CI	94	ARG
8	CI	108	ARG
8	CI	109	GLN
8	CI	123	ARG
9	CJ	14	ASP
9	CJ	17	LEU
9	CJ	31	ARG
9	CJ	35	GLN
9	CJ	47	GLU
9	CJ	52	LEU
9	CJ	78	GLU
9	CJ	85	ASP
9	CJ	87	LEU
9	CJ	88	MET
9	CJ	89	ARG

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Mol	Chain	Res	Type
9	CJ	90	LEU
9	CJ	92	LEU
9	CJ	97	ASP
9	CJ	100	ILE
10	CK	26	PHE
10	CK	28	ASN
10	CK	34	THR
10	CK	51	PHE
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	109	ILE
10	CK	110	THR
10	CK	126	ARG
10	CK	127	ARG
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	35	ARG
11	CL	43	LYS
11	CL	49	ARG
11	CL	63	THR
11	CL	77	SER
11	CL	93	ARG
11	CL	95	HIS
11	CL	107	LYS
11	CL	108	ASP
12	CM	2	ARG
12	CM	8	ILE
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	67	ASP
12	CM	71	GLU
12	CM	79	LEU
12	CM	82	LEU
12	CM	91	ARG
12	CM	92	ARG
12	CM	102	LYS
12	CM	106	ARG
13	CN	3	GLN
13	CN	19	TYR
13	CN	25	GLU
13	CN	32	ASP
13	CN	40	ARG
13	CN	41	TRP
13	CN	42	ASN
13	CN	44	VAL
13	CN	45	LEU
13	CN	59	GLN
13	CN	64	ARG
13	CN	65	GLN
13	CN	68	ARG
13	CN	80	ARG
14	CO	59	MET
14	CO	62	GLN
14	CO	64	ARG
14	CO	71	LYS
14	CO	88	ARG
14	CO	89	ARG
15	CP	24	SER
15	CP	28	ARG
15	CP	31	ARG
15	CP	45	GLU
15	CP	51	ARG
15	CP	79	ASN
16	CQ	10	ARG
16	CQ	24	ILE
16	CQ	39	ARG
16	CQ	60	ILE
16	CQ	61	ARG
16	CQ	66	LEU
16	CQ	71	SER

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Mol	Chain	Res	Type
16	CQ	74	LEU
16	CQ	80	LYS
17	CR	33	THR
17	CR	37	LYS
17	CR	38	ILE
17	CR	44	THR
17	CR	46	THR
17	CR	71	ASP
17	CR	73	HIS
18	CS	2	ARG
18	CS	4	LEU
18	CS	5	LYS
18	CS	12	LEU
18	CS	14	LEU
18	CS	15	LEU
18	CS	23	GLU
18	CS	27	LYS
18	CS	28	LYS
18	CS	38	THR
18	CS	42	ASN
18	CS	46	LEU
18	CS	64	GLU
18	CS	66	VAL
19	CT	4	LYS
19	CT	34	VAL
19	CT	35	TYR
19	CT	38	ILE
19	CT	43	LYS
19	CT	53	MET
19	CT	58	ASP
19	CT	69	ASN
19	CT	74	HIS
19	CT	78	LEU
19	CT	85	LEU
20	CB	20	ARG
20	CB	23	ASN
20	CB	27	LYS
20	CB	35	ASN
20	CB	36	LYS
20	CB	38	HIS
20	CB	43	GLU
20	CB	46	VAL

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Mol	Chain	Res	Type
20	CB	53	LEU
20	CB	57	ASN
20	CB	59	ILE
20	CB	62	ARG
20	CB	72	LYS
20	CB	81	ASP
20	CB	88	GLN
20	CB	94	ARG
20	CB	95	TRP
20	CB	104	LYS
20	CB	113	LEU
20	CB	130	LYS
20	CB	138	ARG
20	CB	162	VAL
20	CB	166	ASP
20	CB	176	ASN
20	CB	196	ASP
20	CB	202	ASN
20	CB	207	ARG
20	CB	211	LEU
20	CB	213	LEU
20	CB	221	ARG
21	CU	7	GLU
21	CU	11	PHE
21	CU	15	LEU
21	CU	16	ARG
21	CU	20	ARG
21	CU	22	CYS
21	CU	24	LYS
21	CU	27	VAL
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
25	DC	4	LYS

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Mol	Chain	Res	Type
25	DC	8	THR
25	DC	12	ARG
25	DC	37	SER
25	DC	43	ASN
25	DC	45	ASN
25	DC	52	HIS
25	DC	62	ARG
25	DC	65	ASP
25	DC	66	PHE
25	DC	77	VAL
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	187	CYS
25	DC	190	THR
25	DC	196	ASN
25	DC	202	ARG
25	DC	203	VAL
25	DC	211	ARG
25	DC	212	TRP
25	DC	213	ARG
25	DC	224	MET
25	DC	227	VAL
25	DC	235	GLU
25	DC	249	VAL
25	DC	250	GLN
25	DC	257	ARG
26	DD	17	GLU
26	DD	34	VAL
26	DD	40	LEU

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Mol	Chain	Res	Type
26	DD	55	LYS
26	DD	56	LYS
26	DD	59	ARG
26	DD	74	GLU
26	DD	79	LEU
26	DD	81	GLU
26	DD	83	ARG
26	DD	84	LEU
26	DD	88	GLU
26	DD	91	THR
26	DD	99	GLU
26	DD	123	LYS
26	DD	124	ARG
26	DD	138	LEU
26	DD	142	VAL
26	DD	148	GLN
26	DD	159	LYS
26	DD	179	ARG
26	DD	180	VAL
26	DD	197	THR
27	DK	2	ILE
27	DK	8	LEU
27	DK	9	ASN
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	70	ARG
27	DK	72	PRO
27	DK	79	PHE
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	111	LYS

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Mol	Chain	Res	Type
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	82	SER
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	113	LEU
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	40	ARG
29	DE	58	LYS
29	DE	60	TRP
29	DE	62	GLN
29	DE	67	ARG
29	DE	69	ARG
29	DE	70	SER
29	DE	78	TRP
29	DE	92	HIS
29	DE	97	ASN
29	DE	98	LYS
29	DE	108	ILE
29	DE	110	SER
29	DE	111	GLU
29	DE	116	ASP
29	DE	118	LEU
29	DE	122	GLU

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Mol	Chain	Res	Type
29	DE	149	ILE
29	DE	150	THR
29	DE	159	LEU
29	DE	163	ASN
29	DE	189	THR
30	DY	2	LYS
30	DY	6	ILE
30	DY	8	GLN
30	DY	15	ARG
30	DY	19	HIS
30	DY	23	LEU
30	DY	30	ARG
30	DY	37	ARG
30	DY	43	ILE
30	DY	55	LYS
31	D0	2	VAL
31	D0	5	ASN
31	D0	26	SER
31	D0	27	LEU
31	D0	31	LYS
31	D0	37	HIS
31	D0	38	LEU
31	D0	41	HIS
31	D0	45	ASP
31	D0	51	ARG
31	D0	53	VAL
31	D0	56	LYS
32	D4	1	MET
32	D4	2	LYS
32	D4	9	LYS
32	D4	15	LYS
32	D4	25	VAL
32	D4	35	GLN
33	D1	9	LYS
33	D1	31	GLU
33	D1	35	LEU
33	D1	44	GLN
34	D3	7	ARG
34	D3	14	LYS
34	D3	18	LYS
34	D3	61	LEU
35	DV	7	GLU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
35	DV	35	GLU
35	DV	40	ILE
35	DV	42	LEU
35	DV	45	ASP
35	DV	46	LYS
35	DV	49	ASN
35	DV	51	GLN
35	DV	53	LYS
35	DV	66	ASP
35	DV	68	LYS
35	DV	69	GLU
35	DV	70	ILE
35	DV	75	GLN
35	DV	79	ARG
35	DV	90	ASP
36	D2	19	ARG
36	D2	33	ARG
36	D2	35	ARG
36	D2	39	ARG
36	D2	42	LEU
36	D2	43	THR
37	DL	6	LEU
37	DL	27	LEU
37	DL	47	ARG
37	DL	55	MET
37	DL	59	ARG
37	DL	60	ARG
37	DL	67	THR
37	DL	69	ARG
37	DL	91	ASP
37	DL	92	LEU
37	DL	99	ASN
37	DL	118	THR
37	DL	122	VAL
37	DL	123	ARG
38	DM	7	THR
38	DM	10	ARG
38	DM	17	ASN
38	DM	26	VAL
38	DM	38	ARG
38	DM	70	ASP
38	DM	78	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
38	DM	81	ARG
38	DM	88	ASN
38	DM	90	GLU
38	DM	104	GLU
38	DM	108	VAL
38	DM	110	GLU
38	DM	111	GLU
38	DM	114	ARG
38	DM	115	GLU
38	DM	123	LYS
38	DM	127	LYS
39	DX	1	MET
39	DX	8	GLU
39	DX	9	LYS
39	DX	15	ASN
39	DX	17	GLU
39	DX	18	LEU
39	DX	21	LEU
39	DX	28	LEU
39	DX	29	ARG
39	DX	30	MET
39	DX	36	GLN
39	DX	38	GLN
39	DX	48	ARG
39	DX	49	ASP
39	DX	59	GLU
40	DH	3	VAL
40	DH	4	ILE
40	DH	12	LEU
40	DH	14	SER
40	DH	15	LEU
40	DH	19	VAL
40	DH	25	TYR
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	77	THR

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Mol	Chain	Res	Type
40	DH	80	ILE
40	DH	83	LYS
40	DH	86	ASP
40	DH	97	ARG
40	DH	103	VAL
40	DH	112	LYS
40	DH	114	GLU
40	DH	121	VAL
40	DH	124	THR
40	DH	129	GLU
40	DH	137	GLU
40	DH	141	LYS
41	DJ	3	THR
41	DJ	5	THR
41	DJ	12	LYS
41	DJ	28	LEU
41	DJ	35	ARG
41	DJ	44	TYR
41	DJ	65	THR
41	DJ	71	ASP
41	DJ	73	VAL
41	DJ	95	ARG
41	DJ	120	ARG
41	DJ	124	VAL
41	DJ	129	GLU
41	DJ	131	ASN
41	DJ	138	GLN
41	DJ	141	ASP
42	DN	1	MET
42	DN	11	ASN
42	DN	20	MET
42	DN	35	LYS
42	DN	46	ARG
42	DN	62	ASN
42	DN	69	ARG
42	DN	71	ARG
42	DN	82	GLU
42	DN	112	TYR
42	DN	114	GLU
42	DN	116	VAL
42	DN	120	GLU
43	DO	9	ARG

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Mol	Chain	Res	Type
43	DO	17	LYS
43	DO	20	GLU
43	DO	31	THR
43	DO	35	ILE
43	DO	36	TYR
43	DO	62	LEU
43	DO	74	VAL
43	DO	81	ARG
43	DO	89	ASP
43	DO	98	GLN
43	DO	100	HIS
43	DO	106	LEU
43	DO	108	ASP
43	DO	115	LEU
43	DO	116	GLN
44	DQ	2	ARG
44	DQ	4	LYS
44	DQ	10	ARG
44	DQ	13	HIS
44	DQ	33	VAL
44	DQ	35	PHE
44	DQ	50	ARG
44	DQ	69	ARG
44	DQ	79	ILE
44	DQ	83	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	69	LEU
45	DS	73	LYS
45	DS	84	ARG
45	DS	86	MET
45	DS	88	ARG

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Mol	Chain	Res	Type
45	DS	97	LEU
45	DS	99	ARG
46	DU	7	ASP
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	13	LYS
47	DF	29	ARG
47	DF	32	LYS
47	DF	46	LYS
47	DF	50	ASP
47	DF	55	ASP
47	DF	62	GLN
47	DF	68	LYS
47	DF	70	ARG
47	DF	76	PHE
47	DF	79	ARG
47	DF	89	THR
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	121	PHE
47	DF	129	MET
47	DF	134	GLN
47	DF	137	PHE
47	DF	138	PRO

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Mol	Chain	Res	Type
47	DF	143	ASP
47	DF	147	ARG
47	DF	149	ARG
47	DF	157	THR
47	DF	168	LEU
47	DF	173	ASP
47	DF	174	PHE
47	DF	177	ARG
47	DF	178	LYS
48	DG	14	VAL
48	DG	26	LYS
48	DG	31	GLU
48	DG	34	ARG
48	DG	37	ASN
48	DG	46	ASP
48	DG	54	ARG
48	DG	59	ASP
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	105	SER
48	DG	106	LEU
48	DG	120	ILE
48	DG	132	LEU
48	DG	133	LYS
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	5	PHE
49	DR	22	LEU
49	DR	39	LEU
49	DR	53	PHE
49	DR	70	GLU
49	DR	71	LYS
49	DR	72	VAL
49	DR	79	ARG

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Mol	Chain	Res	Type
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	32	LEU
50	DT	34	VAL
50	DT	43	ILE
50	DT	48	GLN
50	DT	50	LEU
50	DT	64	LYS
50	DT	68	LYS
50	DT	69	ARG
50	DT	73	ARG
50	DT	81	LYS
51	DZ	2	SER
51	DZ	6	GLN
51	DZ	14	THR
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	56	MET
51	DZ	66	THR
51	DZ	77	LYS
51	DZ	78	TYR
52	DW	11	ASN
52	DW	14	ASP
52	DW	19	ARG
52	DW	23	LYS
52	DW	24	ARG
52	DW	25	PHE
52	DW	28	GLU
52	DW	39	GLN
52	DW	44	PHE
52	DW	49	ASN

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Mol	Chain	Res	Type
52	DW	50	VAL
52	DW	75	ASN
52	DW	77	LYS
52	DW	82	GLU

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (343) such sidechains are listed below:

Mol	Chain	Res	Type
2	AC	2	GLN
2	AC	24	ASN
2	AC	31	ASN
2	AC	68	HIS
2	AC	139	ASN
2	AC	184	ASN
3	AD	35	GLN
3	AD	39	GLN
3	AD	53	GLN
3	AD	58	GLN
3	AD	84	ASN
3	AD	115	GLN
3	AD	119	HIS
3	AD	135	GLN
3	AD	151	GLN
3	AD	163	GLN
4	AE	18	ASN
4	AE	81	GLN
4	AE	82	HIS
4	AE	131	ASN
5	AF	14	GLN
5	AF	17	GLN
5	AF	46	GLN
5	AF	68	GLN
6	AG	67	ASN
6	AG	129	ASN
7	AH	3	GLN
7	AH	17	GLN
7	AH	75	GLN
7	AH	117	GLN
8	AI	24	ASN
8	AI	30	ASN
8	AI	31	GLN
8	AI	36	GLN

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Mol	Chain	Res	Type
8	AI	80	HIS
9	AJ	20	GLN
9	AJ	35	GLN
9	AJ	99	GLN
10	AK	28	ASN
10	AK	39	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	90	HIS
13	AN	65	GLN
14	AO	28	GLN
14	AO	37	ASN
14	AO	40	GLN
15	AP	18	GLN
15	AP	26	ASN
15	AP	40	ASN
17	AR	53	GLN
18	AS	42	ASN
19	AT	2	ASN
19	AT	20	ASN
19	AT	67	HIS
19	AT	83	ASN
20	AB	14	HIS
20	AB	23	ASN
20	AB	35	ASN
20	AB	88	GLN
20	AB	119	GLN
20	AB	121	GLN
20	AB	169	HIS
20	AB	202	ASN
24	BI	11	GLN
24	BI	29	GLN
24	BI	33	ASN
24	BI	93	ASN
25	BC	43	ASN
25	BC	59	GLN
25	BC	85	ASN

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Mol	Chain	Res	Type
25	BC	89	ASN
25	BC	114	GLN
25	BC	116	GLN
25	BC	133	ASN
25	BC	152	GLN
25	BC	162	GLN
25	BC	196	ASN
25	BC	225	ASN
25	BC	238	ASN
26	BD	32	ASN
26	BD	49	GLN
26	BD	126	ASN
26	BD	130	GLN
26	BD	136	ASN
26	BD	148	GLN
26	BD	164	GLN
26	BD	185	ASN
27	BK	88	ASN
27	BK	89	ASN
27	BK	90	ASN
28	BP	6	GLN
28	BP	11	GLN
28	BP	40	GLN
28	BP	114	ASN
29	BE	24	ASN
29	BE	29	HIS
29	BE	30	GLN
29	BE	62	GLN
29	BE	163	ASN
29	BE	195	GLN
30	BY	48	ASN
32	B4	13	ASN
32	B4	35	GLN
32	B4	37	GLN
35	BV	44	HIS
35	BV	49	ASN
35	BV	51	GLN
35	BV	80	HIS
35	BV	88	HIS
36	B2	6	GLN
36	B2	13	ASN
37	BL	4	ASN

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Mol	Chain	Res	Type
37	BL	38	GLN
37	BL	54	GLN
37	BL	104	GLN
38	BM	17	ASN
39	BX	15	ASN
39	BX	20	ASN
39	BX	25	GLN
40	BH	18	GLN
40	BH	28	ASN
40	BH	43	ASN
40	BH	73	ASN
41	BJ	40	HIS
41	BJ	130	HIS
41	BJ	138	GLN
42	BN	11	ASN
42	BN	62	ASN
42	BN	107	ASN
43	BO	19	GLN
43	BO	38	GLN
43	BO	61	GLN
43	BO	67	ASN
43	BO	100	HIS
44	BQ	19	GLN
44	BQ	51	GLN
44	BQ	71	ASN
44	BQ	80	ASN
45	BS	61	ASN
46	BU	26	ASN
46	BU	45	GLN
46	BU	52	ASN
46	BU	73	ASN
47	BF	51	ASN
47	BF	62	GLN
47	BF	126	ASN
47	BF	134	GLN
48	BG	37	ASN
48	BG	47	ASN
48	BG	63	GLN
48	BG	72	ASN
48	BG	87	GLN
48	BG	110	HIS
48	BG	114	HIS

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Mol	Chain	Res	Type
49	BR	6	GLN
49	BR	86	GLN
49	BR	87	GLN
50	BT	48	GLN
50	BT	72	GLN
50	BT	91	GLN
50	BT	92	ASN
51	BZ	6	GLN
51	BZ	17	ASN
51	BZ	20	HIS
51	BZ	23	ASN
51	BZ	36	HIS
52	BW	11	ASN
52	BW	39	GLN
52	BW	75	ASN
2	CC	2	GLN
2	CC	24	ASN
2	CC	31	ASN
2	CC	68	HIS
2	CC	139	ASN
2	CC	184	ASN
3	CD	35	GLN
3	CD	39	GLN
3	CD	53	GLN
3	CD	58	GLN
3	CD	84	ASN
3	CD	115	GLN
3	CD	119	HIS
3	CD	135	GLN
3	CD	151	GLN
3	CD	163	GLN
4	CE	18	ASN
4	CE	81	GLN
4	CE	82	HIS
4	CE	131	ASN
5	CF	14	GLN
5	CF	17	GLN
5	CF	46	GLN
5	CF	52	ASN
6	CG	67	ASN
6	CG	129	ASN
7	CH	3	GLN

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Mol	Chain	Res	Type
7	CH	17	GLN
7	CH	75	GLN
7	CH	117	GLN
8	CI	24	ASN
8	CI	30	ASN
8	CI	31	GLN
8	CI	36	GLN
8	CI	80	HIS
9	CJ	20	GLN
9	CJ	35	GLN
9	CJ	99	GLN
10	CK	28	ASN
10	CK	39	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
13	CN	65	GLN
14	CO	28	GLN
14	CO	37	ASN
14	CO	40	GLN
15	CP	18	GLN
15	CP	26	ASN
15	CP	40	ASN
17	CR	53	GLN
17	CR	73	HIS
18	CS	42	ASN
18	CS	68	HIS
19	CT	2	ASN
19	CT	20	ASN
19	CT	67	HIS
19	CT	83	ASN
20	CB	14	HIS
20	CB	23	ASN
20	CB	35	ASN
20	CB	88	GLN
20	CB	119	GLN
20	CB	169	HIS
20	CB	202	ASN

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Mol	Chain	Res	Type
24	DI	5	GLN
24	DI	11	GLN
24	DI	33	ASN
25	DC	43	ASN
25	DC	59	GLN
25	DC	85	ASN
25	DC	89	ASN
25	DC	114	GLN
25	DC	116	GLN
25	DC	133	ASN
25	DC	152	GLN
25	DC	162	GLN
25	DC	196	ASN
25	DC	238	ASN
26	DD	32	ASN
26	DD	49	GLN
26	DD	126	ASN
26	DD	130	GLN
26	DD	136	ASN
26	DD	185	ASN
27	DK	88	ASN
27	DK	89	ASN
27	DK	90	ASN
28	DP	6	GLN
28	DP	11	GLN
28	DP	40	GLN
28	DP	114	ASN
29	DE	24	ASN
29	DE	29	HIS
29	DE	30	GLN
29	DE	62	GLN
29	DE	195	GLN
30	DY	48	ASN
31	D0	3	GLN
32	D4	13	ASN
32	D4	35	GLN
32	D4	37	GLN
34	D3	42	HIS
35	DV	49	ASN
35	DV	51	GLN
35	DV	80	HIS
35	DV	88	HIS

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Mol	Chain	Res	Type
36	D2	6	GLN
36	D2	13	ASN
36	D2	16	HIS
37	DL	4	ASN
37	DL	54	GLN
37	DL	104	GLN
38	DM	17	ASN
39	DX	15	ASN
39	DX	20	ASN
39	DX	25	GLN
40	DH	28	ASN
40	DH	66	ASN
40	DH	73	ASN
40	DH	135	HIS
41	DJ	40	HIS
41	DJ	130	HIS
41	DJ	138	GLN
42	DN	11	ASN
42	DN	62	ASN
42	DN	107	ASN
43	DO	19	GLN
43	DO	38	GLN
43	DO	61	GLN
43	DO	67	ASN
43	DO	100	HIS
44	DQ	19	GLN
44	DQ	51	GLN
44	DQ	71	ASN
44	DQ	80	ASN
45	DS	61	ASN
46	DU	26	ASN
46	DU	45	GLN
46	DU	52	ASN
46	DU	73	ASN
47	DF	51	ASN
47	DF	62	GLN
47	DF	126	ASN
47	DF	134	GLN
48	DG	37	ASN
48	DG	72	ASN
48	DG	87	GLN
48	DG	114	HIS

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Mol	Chain	Res	Type
49	DR	6	GLN
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
51	DZ	17	ASN
51	DZ	20	HIS
51	DZ	23	ASN
51	DZ	36	HIS
52	DW	11	ASN
52	DW	39	GLN
52	DW	75	ASN

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1529/1542 (99%)	239 (15%)	16 (1%)
1	CA	1529/1542 (99%)	229 (14%)	17 (1%)
22	BA	116/120 (96%)	17 (14%)	1 (0%)
22	DA	116/120 (96%)	17 (14%)	1 (0%)
23	BB	2837/2904 (97%)	435 (15%)	18 (0%)
23	DB	2837/2904 (97%)	433 (15%)	20 (0%)
All	All	8964/9132 (98%)	1370 (15%)	73 (0%)

All (1370) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	8	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	49	U
1	AA	51	A
1	AA	52	C

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Mol	Chain	Res	Type
1	AA	54	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
1	AA	85	U
1	AA	86	G
1	AA	87	C
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	197	A
1	AA	209	U
1	AA	210	C
1	AA	211	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	257	G
1	AA	258	G
1	AA	266	G
1	AA	267	C
1	AA	280	C
1	AA	289	G

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Mol	Chain	Res	Type
1	AA	301	G
1	AA	306	A
1	AA	316	C
1	AA	321	A
1	AA	328	C
1	AA	329	A
1	AA	330	C
1	AA	332	G
1	AA	345	C
1	AA	352	C
1	AA	354	G
1	AA	367	U
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	429	U
1	AA	430	A
1	AA	435	A
1	AA	438	U
1	AA	460	A
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	479	U
1	AA	482	A
1	AA	484	G

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Mol	Chain	Res	Type
1	AA	485	U
1	AA	486	U
1	AA	493	A
1	AA	500	G
1	AA	511	C
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	633	G
1	AA	639	G
1	AA	653	U
1	AA	665	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	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

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Mol	Chain	Res	Type
1	AA	845	A
1	AA	907	A
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	966	G
1	AA	969	A
1	AA	974	A
1	AA	976	G
1	AA	977	A
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	1021	A
1	AA	1028	C
1	AA	1029	U
1	AA	1030	U
1	AA	1031	C
1	AA	1033	G
1	AA	1034	G
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	1091	U
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	1158	C

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Mol	Chain	Res	Type
1	AA	1168	U
1	AA	1169	A
1	AA	1171	A
1	AA	1181	G
1	AA	1183	U
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	1225	A
1	AA	1226	C
1	AA	1227	A
1	AA	1240	U
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	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	1335	U
1	AA	1336	C
1	AA	1362	A
1	AA	1363	A
1	AA	1364	U
1	AA	1381	U
1	AA	1398	A
1	AA	1409	C
1	AA	1410	A
1	AA	1419	G

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Mol	Chain	Res	Type
1	AA	1429	A
1	AA	1432	G
1	AA	1446	A
1	AA	1449	C
1	AA	1451	U
1	AA	1452	C
1	AA	1491	G
1	AA	1492	A
1	AA	1497	G
1	AA	1503	A
1	AA	1505	G
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	1534	A
22	BA	16	G
22	BA	25	U
22	BA	26	C
22	BA	30	C
22	BA	35	C
22	BA	36	C
22	BA	42	C
22	BA	52	A
22	BA	53	A
22	BA	67	G
22	BA	87	U
22	BA	88	C
22	BA	89	U
22	BA	90	C
22	BA	96	G
22	BA	99	A
22	BA	109	A
23	BB	2	G
23	BB	4	U
23	BB	27	G
23	BB	34	U
23	BB	46	G
23	BB	63	A
23	BB	71	A

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Mol	Chain	Res	Type
23	BB	72	U
23	BB	74	A
23	BB	75	G
23	BB	91	A
23	BB	96	C
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	135	U
23	BB	137	U
23	BB	140	C
23	BB	141	G
23	BB	142	A
23	BB	144	A
23	BB	160	A
23	BB	162	U
23	BB	163	C
23	BB	179	C
23	BB	180	G
23	BB	181	A
23	BB	196	A
23	BB	199	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	252	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	276	U
23	BB	277	G
23	BB	278	A
23	BB	279	A
23	BB	281	C
23	BB	291	G
23	BB	299	A
23	BB	302	C
23	BB	311	A
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	367	G
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

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Mol	Chain	Res	Type
23	BB	532	A
23	BB	533	G
23	BB	545	U
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	573	U
23	BB	574	A
23	BB	575	A
23	BB	588	U
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	722	A
23	BB	727	A
23	BB	730	A
23	BB	747	U
23	BB	765	C
23	BB	775	G
23	BB	782	A
23	BB	784	G
23	BB	785	G
23	BB	805	G
23	BB	806	C
23	BB	811	U

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Mol	Chain	Res	Type
23	BB	812	C
23	BB	819	A
23	BB	827	U
23	BB	828	U
23	BB	847	U
23	BB	859	G
23	BB	872	U
23	BB	874	G
23	BB	877	A
23	BB	878	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	973	A
23	BB	974	G
23	BB	983	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	1025	G
23	BB	1033	U
23	BB	1047	G
23	BB	1051	G
23	BB	1056	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

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Mol	Chain	Res	Type
23	BB	1132	U
23	BB	1133	A
23	BB	1135	C
23	BB	1136	G
23	BB	1139	G
23	BB	1141	U
23	BB	1142	A
23	BB	1171	G
23	BB	1172	C
23	BB	1173	U
23	BB	1174	U
23	BB	1186	G
23	BB	1204	A
23	BB	1205	A
23	BB	1211	C
23	BB	1212	G
23	BB	1238	G
23	BB	1242	U
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	1301	A
23	BB	1302	A
23	BB	1324	G
23	BB	1325	U
23	BB	1337	G
23	BB	1341	G
23	BB	1352	U
23	BB	1365	A
23	BB	1368	G
23	BB	1379	U
23	BB	1383	A
23	BB	1384	A
23	BB	1388	G

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Mol	Chain	Res	Type
23	BB	1396	U
23	BB	1397	U
23	BB	1416	G
23	BB	1419	A
23	BB	1428	C
23	BB	1434	A
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	1540	G
23	BB	1552	A
23	BB	1559	U
23	BB	1560	G
23	BB	1569	A
23	BB	1578	U
23	BB	1584	U
23	BB	1588	G
23	BB	1608	A
23	BB	1610	A
23	BB	1634	A
23	BB	1635	A

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Mol	Chain	Res	Type
23	BB	1647	U
23	BB	1648	U
23	BB	1674	G
23	BB	1700	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	1756	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	1871	A
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	1937	A
23	BB	1938	A
23	BB	1939	U
23	BB	1940	U
23	BB	1955	U
23	BB	1967	C
23	BB	1970	A
23	BB	1971	U
23	BB	1972	G
23	BB	1991	U
23	BB	1993	U

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Mol	Chain	Res	Type
23	BB	1997	C
23	BB	2022	U
23	BB	2023	C
23	BB	2031	A
23	BB	2032	G
23	BB	2033	A
23	BB	2043	C
23	BB	2048	G
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	2102	G
23	BB	2103	C
23	BB	2109	U
23	BB	2136	G
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	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
23	BB	2203	U
23	BB	2204	G
23	BB	2211	A
23	BB	2212	A
23	BB	2213	U
23	BB	2225	A

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Mol	Chain	Res	Type
23	BB	2238	G
23	BB	2239	G
23	BB	2266	A
23	BB	2273	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	2426	A
23	BB	2429	G
23	BB	2430	A
23	BB	2434	A
23	BB	2435	A
23	BB	2441	U
23	BB	2448	A
23	BB	2472	G
23	BB	2476	A
23	BB	2491	U
23	BB	2502	G
23	BB	2505	G

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Mol	Chain	Res	Type
23	BB	2506	U
23	BB	2518	A
23	BB	2535	G
23	BB	2554	U
23	BB	2566	A
23	BB	2567	G
23	BB	2573	C
23	BB	2586	U
23	BB	2602	A
23	BB	2609	U
23	BB	2613	U
23	BB	2629	U
23	BB	2630	G
23	BB	2634	A
23	BB	2654	A
23	BB	2682	A
23	BB	2689	U
23	BB	2690	U
23	BB	2714	G
23	BB	2726	A
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
23	BB	2778	A
23	BB	2791	G
23	BB	2797	U
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	2836	U
23	BB	2850	A
23	BB	2866	U

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Mol	Chain	Res	Type
23	BB	2867	G
23	BB	2872	A
23	BB	2873	A
23	BB	2883	A
23	BB	2885	G
23	BB	2894	G
23	BB	2901	C
23	BB	2903	U
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	54	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	119	A
1	CA	121	U
1	CA	131	A
1	CA	151	A
1	CA	182	A
1	CA	183	C
1	CA	197	A
1	CA	209	U
1	CA	210	C
1	CA	211	G
1	CA	226	G
1	CA	239	U
1	CA	240	G
1	CA	243	A

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Mol	Chain	Res	Type
1	CA	244	U
1	CA	245	U
1	CA	247	G
1	CA	250	A
1	CA	251	G
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	306	A
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	352	C
1	CA	354	G
1	CA	367	U
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	429	U
1	CA	430	A
1	CA	435	A
1	CA	438	U
1	CA	460	A

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Mol	Chain	Res	Type
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	479	U
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
1	CA	573	A
1	CA	576	C
1	CA	577	G
1	CA	633	G
1	CA	639	G
1	CA	653	U
1	CA	665	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

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Mol	Chain	Res	Type
1	CA	793	U
1	CA	794	A
1	CA	812	G
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	966	G
1	CA	969	A
1	CA	971	G
1	CA	974	A
1	CA	976	G
1	CA	977	A
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	1021	A
1	CA	1028	C
1	CA	1029	U
1	CA	1030	U
1	CA	1031	C
1	CA	1034	G
1	CA	1049	U
1	CA	1050	G
1	CA	1054	C

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Mol	Chain	Res	Type
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	1158	C
1	CA	1168	U
1	CA	1169	A
1	CA	1171	A
1	CA	1181	G
1	CA	1183	U
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	1225	A
1	CA	1226	C
1	CA	1227	A
1	CA	1240	U
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	1303	C
1	CA	1305	G
1	CA	1316	G
1	CA	1317	C
1	CA	1319	A

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Mol	Chain	Res	Type
1	CA	1320	C
1	CA	1323	G
1	CA	1335	U
1	CA	1336	C
1	CA	1362	A
1	CA	1363	A
1	CA	1364	U
1	CA	1381	U
1	CA	1398	A
1	CA	1419	G
1	CA	1429	A
1	CA	1432	G
1	CA	1446	A
1	CA	1451	U
1	CA	1452	C
1	CA	1453	G
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	16	G
22	DA	25	U
22	DA	26	C
22	DA	30	C
22	DA	35	C
22	DA	36	C
22	DA	42	C
22	DA	52	A
22	DA	53	A
22	DA	67	G
22	DA	87	U
22	DA	88	C
22	DA	89	U
22	DA	90	C
22	DA	96	G

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Mol	Chain	Res	Type
22	DA	99	A
22	DA	109	A
23	DB	2	G
23	DB	27	G
23	DB	34	U
23	DB	46	G
23	DB	63	A
23	DB	71	A
23	DB	72	U
23	DB	74	A
23	DB	75	G
23	DB	91	A
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	139	U
23	DB	140	C
23	DB	141	G
23	DB	143	C
23	DB	160	A
23	DB	162	U
23	DB	163	C
23	DB	179	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

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Mol	Chain	Res	Type
23	DB	252	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	280	U
23	DB	281	C
23	DB	282	A
23	DB	284	U
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	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	354	A
23	DB	359	G
23	DB	363	G
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

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Mol	Chain	Res	Type
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	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
23	DB	532	A
23	DB	533	G
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	573	U
23	DB	574	A
23	DB	575	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

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Mol	Chain	Res	Type
23	DB	719	C
23	DB	722	A
23	DB	727	A
23	DB	730	A
23	DB	747	U
23	DB	765	C
23	DB	775	G
23	DB	782	A
23	DB	784	G
23	DB	785	G
23	DB	805	G
23	DB	806	C
23	DB	811	U
23	DB	812	C
23	DB	819	A
23	DB	827	U
23	DB	828	U
23	DB	847	U
23	DB	859	G
23	DB	872	U
23	DB	874	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	973	A
23	DB	974	G
23	DB	983	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	1025	G
23	DB	1033	U
23	DB	1053	C

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Mol	Chain	Res	Type
23	DB	1055	G
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	1132	U
23	DB	1133	A
23	DB	1135	C
23	DB	1136	G
23	DB	1141	U
23	DB	1142	A
23	DB	1170	C
23	DB	1174	U
23	DB	1176	U
23	DB	1179	G
23	DB	1186	G
23	DB	1204	A
23	DB	1205	A
23	DB	1211	C
23	DB	1212	G
23	DB	1238	G
23	DB	1242	U
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	1301	A
23	DB	1302	A
23	DB	1324	G
23	DB	1325	U
23	DB	1337	G

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Mol	Chain	Res	Type
23	DB	1341	G
23	DB	1352	U
23	DB	1365	A
23	DB	1368	G
23	DB	1379	U
23	DB	1383	A
23	DB	1384	A
23	DB	1388	G
23	DB	1396	U
23	DB	1397	U
23	DB	1416	G
23	DB	1419	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	1540	G
23	DB	1552	A
23	DB	1559	U
23	DB	1560	G

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Mol	Chain	Res	Type
23	DB	1569	A
23	DB	1578	U
23	DB	1584	U
23	DB	1588	G
23	DB	1608	A
23	DB	1610	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	1706	C
23	DB	1713	A
23	DB	1715	G
23	DB	1724	G
23	DB	1725	U
23	DB	1729	U
23	DB	1730	C
23	DB	1732	C
23	DB	1733	G
23	DB	1738	G
23	DB	1756	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	1871	A
23	DB	1872	A
23	DB	1884	G
23	DB	1906	G
23	DB	1913	A
23	DB	1914	C
23	DB	1927	A
23	DB	1929	G
23	DB	1930	G
23	DB	1937	A
23	DB	1938	A

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Mol	Chain	Res	Type
23	DB	1939	U
23	DB	1940	U
23	DB	1955	U
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	2031	A
23	DB	2032	G
23	DB	2033	A
23	DB	2043	C
23	DB	2048	G
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	2072	C
23	DB	2096	C
23	DB	2097	A
23	DB	2099	U
23	DB	2101	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	2147	A
23	DB	2148	G
23	DB	2152	G
23	DB	2155	U
23	DB	2156	G
23	DB	2157	G
23	DB	2180	U
23	DB	2183	A

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Mol	Chain	Res	Type
23	DB	2184	A
23	DB	2189	U
23	DB	2193	G
23	DB	2198	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	2266	A
23	DB	2273	A
23	DB	2283	C
23	DB	2287	A
23	DB	2288	A
23	DB	2297	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	2426	A

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Mol	Chain	Res	Type
23	DB	2429	G
23	DB	2430	A
23	DB	2434	A
23	DB	2435	A
23	DB	2441	U
23	DB	2448	A
23	DB	2472	G
23	DB	2476	A
23	DB	2491	U
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	2566	A
23	DB	2567	G
23	DB	2573	C
23	DB	2586	U
23	DB	2602	A
23	DB	2609	U
23	DB	2613	U
23	DB	2629	U
23	DB	2630	G
23	DB	2634	A
23	DB	2654	A
23	DB	2682	A
23	DB	2689	U
23	DB	2690	U
23	DB	2714	G
23	DB	2719	G
23	DB	2726	A
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	2791	G
23	DB	2797	U
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	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	2885	G
23	DB	2894	G
23	DB	2903	U

All (73) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	51	A
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	1362	A
1	AA	1397	C
22	BA	66	A
23	BB	63	A
23	BB	162	U
23	BB	508	A
23	BB	670	A
23	BB	858	G
23	BB	1210	G

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Mol	Chain	Res	Type
23	BB	1301	A
23	BB	1419	A
23	BB	1509	A
23	BB	2213	U
23	BB	2282	G
23	BB	2336	A
23	BB	2425	A
23	BB	2434	A
23	BB	2756	U
23	BB	2832	U
23	BB	2894	G
23	BB	2902	C
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	1362	A
1	CA	1397	C
22	DA	66	A
23	DB	63	A
23	DB	162	U
23	DB	508	A
23	DB	544	C
23	DB	546	U
23	DB	670	A
23	DB	858	G
23	DB	1126	A
23	DB	1210	G
23	DB	1301	A
23	DB	1419	A
23	DB	1509	A

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Mol	Chain	Res	Type
23	DB	2213	U
23	DB	2282	G
23	DB	2336	A
23	DB	2425	A
23	DB	2434	A
23	DB	2756	U
23	DB	2832	U
23	DB	2894	G

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

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

## 5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

## 5.6 Ligand geometry [i](#)

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
53	NMY	AA	1601	-	45,45,45	1.86	12 (26%)	58,67,67	1.20	6 (10%)
53	NMY	BB	3001	-	45,45,45	1.86	13 (28%)	58,67,67	1.15	6 (10%)
53	NMY	CA	1601	-	45,45,45	1.85	11 (24%)	58,67,67	1.28	7 (12%)
53	NMY	DB	3001	-	45,45,45	1.92	14 (31%)	58,67,67	1.18	6 (10%)

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
53	NMY	AA	1601	-	-	0/18/94/94	0/4/4/4
53	NMY	BB	3001	-	-	0/18/94/94	0/4/4/4
53	NMY	CA	1601	-	-	0/18/94/94	0/4/4/4
53	NMY	DB	3001	-	-	0/18/94/94	0/4/4/4

All (50) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
53	DB	3001	NMY	C6-C5	2.00	1.57	1.52
53	BB	3001	NMY	C14-C15	2.02	1.57	1.53
53	DB	3001	NMY	C18-C19	2.02	1.56	1.52
53	DB	3001	NMY	O18-C15	2.02	1.49	1.43
53	BB	3001	NMY	C6-C5	2.06	1.57	1.52
53	AA	1601	NMY	C20-C21	2.13	1.58	1.52
53	CA	1601	NMY	C20-C21	2.13	1.58	1.52
53	AA	1601	NMY	C4-C5	2.13	1.57	1.53
53	DB	3001	NMY	C12-C7	2.15	1.58	1.53
53	DB	3001	NMY	C20-C21	2.18	1.58	1.52
53	BB	3001	NMY	C20-C21	2.21	1.58	1.52
53	DB	3001	NMY	O5-C5	2.22	1.49	1.44
53	AA	1601	NMY	C12-C7	2.22	1.58	1.53
53	CA	1601	NMY	O5-C5	2.26	1.50	1.44
53	BB	3001	NMY	C12-C7	2.26	1.58	1.53
53	BB	3001	NMY	O5-C5	2.29	1.50	1.44
53	CA	1601	NMY	C4-C5	2.30	1.58	1.53
53	DB	3001	NMY	C4-C5	2.31	1.58	1.53
53	BB	3001	NMY	C4-C5	2.34	1.58	1.53
53	AA	1601	NMY	O5-C5	2.38	1.50	1.44
53	CA	1601	NMY	C1-C2	2.43	1.57	1.52
53	AA	1601	NMY	C14-C15	2.49	1.58	1.53
53	CA	1601	NMY	C14-C15	2.53	1.58	1.53
53	BB	3001	NMY	O16-C13	2.55	1.46	1.41
53	CA	1601	NMY	O22-C22	2.57	1.50	1.44
53	AA	1601	NMY	O22-C22	2.58	1.50	1.44
53	BB	3001	NMY	O22-C22	2.62	1.50	1.44
53	AA	1601	NMY	O16-C13	2.65	1.46	1.41
53	CA	1601	NMY	C23-C22	2.66	1.58	1.52
53	DB	3001	NMY	O22-C22	2.70	1.51	1.44
53	BB	3001	NMY	C19-N23	2.70	1.51	1.47
53	AA	1601	NMY	C19-N23	2.72	1.51	1.47
53	AA	1601	NMY	C23-C22	2.74	1.58	1.52
53	CA	1601	NMY	C19-N23	2.77	1.51	1.47
53	BB	3001	NMY	C23-C22	2.80	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
53	DB	3001	NMY	C19-N23	2.80	1.51	1.47
53	DB	3001	NMY	C23-C22	2.85	1.59	1.52
53	BB	3001	NMY	O5-C1	3.43	1.50	1.41
53	DB	3001	NMY	O5-C1	3.43	1.50	1.41
53	AA	1601	NMY	O5-C1	3.62	1.51	1.41
53	DB	3001	NMY	O16-C13	3.64	1.48	1.41
53	CA	1601	NMY	O5-C1	3.94	1.51	1.41
53	CA	1601	NMY	C3-C2	4.33	1.59	1.53
53	DB	3001	NMY	O22-C18	4.51	1.53	1.41
53	BB	3001	NMY	O22-C18	4.55	1.53	1.41
53	AA	1601	NMY	C3-C2	4.66	1.59	1.53
53	AA	1601	NMY	O22-C18	4.68	1.53	1.41
53	DB	3001	NMY	C3-C2	4.69	1.59	1.53
53	BB	3001	NMY	C3-C2	4.70	1.59	1.53
53	CA	1601	NMY	O22-C18	4.75	1.54	1.41

All (25) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	AA	1601	NMY	O11-C13-C14	2.01	111.93	107.75
53	CA	1601	NMY	O14-C14-C15	2.18	117.46	111.16
53	AA	1601	NMY	O14-C14-C15	2.21	117.53	111.16
53	CA	1601	NMY	O11-C13-C14	2.24	112.41	107.75
53	BB	3001	NMY	O11-C13-C14	2.29	112.50	107.75
53	DB	3001	NMY	O5-C5-C6	2.30	110.59	106.10
53	BB	3001	NMY	O5-C5-C6	2.35	110.70	106.10
53	AA	1601	NMY	O5-C5-C6	2.35	110.70	106.10
53	BB	3001	NMY	O14-C14-C15	2.43	118.18	111.16
53	CA	1601	NMY	O16-C13-C14	2.44	108.21	104.78
53	DB	3001	NMY	O11-C13-C14	2.44	112.83	107.75
53	CA	1601	NMY	O5-C5-C6	2.55	111.07	106.10
53	DB	3001	NMY	O14-C14-C15	2.61	118.70	111.16
53	DB	3001	NMY	C18-O22-C22	2.71	119.00	113.75
53	BB	3001	NMY	C18-O22-C22	2.75	119.08	113.75
53	AA	1601	NMY	C18-O22-C22	2.91	119.39	113.75
53	AA	1601	NMY	O22-C22-C23	2.92	111.81	106.10
53	CA	1601	NMY	O22-C22-C23	2.96	111.89	106.10
53	BB	3001	NMY	O22-C22-C23	2.97	111.91	106.10
53	CA	1601	NMY	C18-O22-C22	3.00	119.58	113.75
53	DB	3001	NMY	O22-C22-C23	3.07	112.09	106.10
53	AA	1601	NMY	O18-C18-C19	3.39	114.24	107.96
53	BB	3001	NMY	O18-C18-C19	3.51	114.46	107.96

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Mol	Chain	Res	Type	Atoms	Z	Observed( $^{\circ}$ )	Ideal( $^{\circ}$ )
53	CA	1601	NMY	O18-C18-C19	3.63	114.67	107.96
53	DB	3001	NMY	O18-C18-C19	3.87	115.12	107.96

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

2 monomers are involved in 3 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
53	AA	1601	NMY	2	0
53	DB	3001	NMY	1	0

## 5.7 Other polymers [i](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues [i](#)

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, 95<sup>th</sup> 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 <sup>2</sup> )	Q<0.9
1	AA	1530/1542 (99%)	-0.61	12 (0%) 87 80	22, 76, 152, 180	0
1	CA	1530/1542 (99%)	-0.62	3 (0%) 95 94	12, 57, 136, 180	0
2	AC	206/232 (88%)	0.80	36 (17%) 2 1	16, 66, 135, 180	0
2	CC	206/232 (88%)	0.77	28 (13%) 4 3	14, 74, 124, 180	0
3	AD	205/205 (100%)	1.34	53 (25%) 1 1	8, 84, 155, 180	0
3	CD	205/205 (100%)	0.89	34 (16%) 2 2	15, 62, 135, 180	0
4	AE	150/166 (90%)	0.75	15 (10%) 9 6	7, 67, 122, 158	0
4	CE	150/166 (90%)	1.15	34 (22%) 1 1	10, 59, 122, 180	0
5	AF	100/135 (74%)	1.54	32 (32%) 1 1	32, 80, 148, 180	0
5	CF	100/135 (74%)	1.02	16 (16%) 3 2	23, 69, 138, 180	0
6	AG	150/178 (84%)	0.74	27 (18%) 2 1	39, 105, 151, 180	0
6	CG	152/178 (85%)	0.25	10 (6%) 22 13	32, 89, 152, 180	0
7	AH	129/129 (100%)	1.35	43 (33%) 0 1	29, 79, 133, 180	0
7	CH	129/129 (100%)	0.65	18 (13%) 4 3	7, 55, 120, 148	0
8	AI	127/129 (98%)	0.84	26 (20%) 1 1	37, 90, 164, 180	0
8	CI	127/129 (98%)	0.63	17 (13%) 4 3	32, 95, 162, 180	0
9	AJ	98/103 (95%)	1.01	19 (19%) 1 1	17, 85, 158, 180	0
9	CJ	98/103 (95%)	1.10	22 (22%) 1 1	22, 89, 150, 180	0
10	AK	117/128 (91%)	0.51	7 (5%) 25 15	17, 63, 128, 162	0
10	CK	117/128 (91%)	0.17	2 (1%) 73 62	10, 51, 116, 164	0
11	AL	123/123 (100%)	0.89	19 (15%) 3 2	19, 74, 135, 180	0
11	CL	123/123 (100%)	0.62	7 (5%) 27 17	6, 50, 127, 180	0
12	AM	114/117 (97%)	0.68	17 (14%) 3 2	52, 119, 180, 180	0
12	CM	113/117 (96%)	0.74	17 (15%) 3 2	53, 105, 167, 180	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
13	AN	96/100 (96%)	0.60	9 (9%) 11 7	24, 79, 118, 152	0
13	CN	96/100 (96%)	0.64	14 (14%) 3 3	26, 82, 119, 139	0
14	AO	88/89 (98%)	1.25	23 (26%) 1 1	39, 76, 123, 180	0
14	CO	88/89 (98%)	0.38	3 (3%) 49 35	15, 55, 123, 154	0
15	AP	82/82 (100%)	1.53	19 (23%) 1 1	30, 87, 150, 180	0
15	CP	80/82 (97%)	0.61	10 (12%) 5 3	8, 56, 135, 180	0
16	AQ	80/83 (96%)	1.25	24 (30%) 1 1	49, 96, 155, 180	0
16	CQ	81/83 (97%)	0.60	8 (9%) 9 6	25, 66, 128, 180	0
17	AR	55/74 (74%)	1.03	10 (18%) 2 1	15, 74, 125, 165	0
17	CR	55/74 (74%)	0.70	7 (12%) 5 3	19, 63, 119, 170	0
18	AS	79/91 (86%)	1.00	20 (25%) 1 1	73, 121, 176, 180	0
18	CS	80/91 (87%)	1.02	16 (20%) 1 1	58, 109, 168, 180	0
19	AT	85/86 (98%)	0.48	9 (10%) 8 5	52, 104, 164, 180	0
19	CT	85/86 (98%)	0.07	5 (5%) 26 15	22, 62, 125, 179	0
20	AB	218/240 (90%)	0.94	49 (22%) 1 1	29, 99, 155, 180	0
20	CB	218/240 (90%)	1.33	69 (31%) 1 1	31, 102, 160, 180	0
21	AU	51/70 (72%)	1.08	11 (21%) 1 1	43, 92, 146, 180	0
21	CU	51/70 (72%)	0.76	7 (13%) 4 3	40, 85, 133, 166	0
22	BA	117/120 (97%)	-0.68	1 (0%) 85 79	49, 83, 138, 174	0
22	DA	117/120 (97%)	-0.57	1 (0%) 85 79	36, 75, 124, 180	0
23	BB	2841/2904 (97%)	-0.37	28 (0%) 84 77	16, 60, 154, 180	0
23	DB	2841/2904 (97%)	-0.40	11 (0%) 93 90	6, 47, 151, 180	0
24	BI	141/141 (100%)	3.73	98 (69%) 0 0	93, 176, 180, 180	0
24	DI	141/141 (100%)	2.02	62 (43%) 0 0	101, 177, 180, 180	0
25	BC	271/272 (99%)	0.96	44 (16%) 3 2	9, 50, 104, 180	0
25	DC	271/272 (99%)	0.88	42 (15%) 3 2	5, 35, 87, 135	0
26	BD	209/209 (100%)	0.95	39 (18%) 2 1	20, 76, 135, 180	0
26	DD	209/209 (100%)	1.05	38 (18%) 2 1	5, 50, 126, 180	0
27	BK	121/123 (98%)	1.97	51 (42%) 0 0	14, 72, 133, 180	0
27	DK	121/123 (98%)	1.30	28 (23%) 1 1	6, 43, 104, 164	0
28	BP	114/114 (100%)	2.01	54 (47%) 0 0	35, 86, 151, 180	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
28	DP	114/114 (100%)	0.72	12 (10%) 8 5	6, 49, 113, 160	0
29	BE	201/201 (100%)	1.48	67 (33%) 0 1	10, 67, 144, 180	0
29	DE	201/201 (100%)	1.03	40 (19%) 1 1	5, 72, 137, 180	0
30	BY	58/58 (100%)	0.87	11 (18%) 2 1	34, 74, 139, 180	0
30	DY	58/58 (100%)	0.64	9 (15%) 3 2	21, 60, 141, 177	0
31	B0	56/56 (100%)	0.88	8 (14%) 4 3	15, 74, 151, 180	0
31	D0	56/56 (100%)	0.53	5 (8%) 12 7	9, 49, 124, 180	0
32	B4	38/38 (100%)	0.82	6 (15%) 3 2	35, 91, 145, 151	0
32	D4	38/38 (100%)	-0.11	0 100 100	18, 68, 129, 150	0
33	B1	50/54 (92%)	2.16	23 (46%) 0 0	52, 90, 134, 174	0
33	D1	50/54 (92%)	1.22	11 (22%) 1 1	14, 76, 127, 175	0
34	B3	64/64 (100%)	1.07	15 (23%) 1 1	26, 59, 87, 158	0
34	D3	64/64 (100%)	0.83	10 (15%) 3 2	9, 49, 112, 156	0
35	BV	94/94 (100%)	0.95	19 (20%) 1 1	29, 97, 155, 178	0
35	DV	94/94 (100%)	1.07	27 (28%) 1 1	21, 89, 153, 167	0
36	B2	46/46 (100%)	0.59	4 (8%) 13 8	14, 50, 83, 144	0
36	D2	46/46 (100%)	0.52	2 (4%) 39 26	5, 38, 76, 180	0
37	BL	143/144 (99%)	0.91	27 (18%) 2 1	25, 70, 133, 180	0
37	DL	143/144 (99%)	1.26	42 (29%) 1 1	9, 59, 117, 147	0
38	BM	136/136 (100%)	1.05	19 (13%) 4 3	21, 68, 136, 180	0
38	DM	136/136 (100%)	0.69	17 (12%) 5 3	13, 54, 118, 167	0
39	BX	63/63 (100%)	1.65	25 (39%) 0 0	21, 81, 149, 175	0
39	DX	63/63 (100%)	0.56	6 (9%) 10 7	38, 97, 156, 180	0
40	BH	149/149 (100%)	4.26	106 (71%) 0 0	31, 134, 180, 180	0
40	DH	149/149 (100%)	1.96	64 (42%) 0 0	32, 110, 160, 180	0
41	BJ	142/142 (100%)	1.10	32 (22%) 1 1	23, 82, 140, 169	0
41	DJ	142/142 (100%)	0.79	16 (11%) 7 5	17, 61, 126, 180	0
42	BN	120/127 (94%)	0.95	24 (20%) 1 1	24, 71, 139, 180	0
42	DN	120/127 (94%)	0.36	6 (5%) 32 21	7, 43, 91, 172	0
43	BO	116/117 (99%)	1.05	30 (25%) 1 1	35, 83, 145, 180	0
43	DO	116/117 (99%)	0.54	7 (6%) 25 15	19, 73, 135, 172	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
44	BQ	117/117 (100%)	0.31	10 (8%) 13 8	10, 66, 129, 167	0
44	DQ	117/117 (100%)	0.80	13 (11%) 7 5	8, 50, 104, 180	0
45	BS	110/110 (100%)	1.64	40 (36%) 0 1	6, 62, 123, 152	0
45	DS	110/110 (100%)	1.61	37 (33%) 0 1	12, 48, 129, 180	0
46	BU	102/103 (99%)	1.63	32 (31%) 1 1	21, 77, 140, 180	0
46	DU	102/103 (99%)	0.32	9 (8%) 12 8	22, 94, 154, 180	0
47	BF	178/178 (100%)	1.38	53 (29%) 1 1	56, 128, 177, 180	0
47	DF	178/178 (100%)	1.88	64 (35%) 0 1	30, 107, 168, 180	0
48	BG	176/176 (100%)	1.41	54 (30%) 1 1	49, 112, 163, 180	0
48	DG	176/176 (100%)	1.24	44 (25%) 1 1	35, 97, 161, 180	0
49	BR	103/103 (100%)	0.63	13 (12%) 5 3	25, 87, 151, 176	0
49	DR	103/103 (100%)	1.14	22 (21%) 1 1	23, 76, 139, 161	0
50	BT	93/100 (93%)	1.11	19 (20%) 1 1	22, 77, 159, 180	0
50	DT	93/100 (93%)	1.11	25 (26%) 1 1	24, 64, 156, 179	0
51	BZ	77/78 (98%)	0.98	17 (22%) 1 1	12, 51, 112, 143	0
51	DZ	77/78 (98%)	0.60	8 (10%) 8 5	9, 48, 94, 128	0
52	BW	79/84 (94%)	1.63	28 (35%) 0 1	18, 85, 141, 159	0
52	DW	79/84 (94%)	0.91	13 (16%) 2 2	20, 71, 134, 180	0
All	All	20417/21046 (97%)	0.40	2515 (12%) 5 4	5, 69, 156, 180	0

All (2515) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
40	BH	84	ALA	20.3
40	BH	85	GLY	18.6
40	BH	142	VAL	14.4
40	BH	130	VAL	14.4
15	AP	81	ALA	13.7
40	BH	86	ASP	13.6
40	BH	93	SER	13.2
8	CI	129	ARG	12.7
40	BH	45	GLU	12.6
40	BH	80	ILE	12.5
15	AP	82	ALA	12.5
11	CL	123	ALA	12.1
39	DX	63	ALA	11.4

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Mol	Chain	Res	Type	RSRZ
24	BI	59	THR	11.4
24	BI	58	ILE	10.8
40	BH	92	GLY	10.8
33	B1	52	LYS	10.4
24	BI	6	ALA	10.0
40	BH	124	THR	10.0
24	BI	97	VAL	10.0
33	D1	52	LYS	9.9
52	BW	84	GLU	9.9
40	BH	105	ALA	9.8
52	DW	84	GLU	9.7
29	BE	155	GLU	9.6
24	BI	47	SER	9.6
24	BI	18	ASN	9.5
4	CE	158	LYS	9.3
40	BH	132	PHE	9.3
40	BH	91	PHE	9.3
40	BH	102	ALA	9.2
17	AR	19	GLU	9.2
8	AI	129	ARG	9.1
29	DE	155	GLU	9.0
40	BH	82	SER	8.8
24	BI	19	PRO	8.6
40	BH	61	VAL	8.5
24	BI	32	VAL	8.4
40	DH	116	ARG	8.4
47	DF	82	TYR	8.4
40	BH	127	GLU	8.4
40	BH	131	SER	8.4
45	DS	109	ASP	8.3
24	BI	54	ILE	8.3
46	BU	51	LEU	8.1
40	BH	104	THR	8.1
23	BB	140	C	8.1
24	BI	15	GLY	8.1
15	AP	80	LYS	8.0
40	BH	94	ILE	8.0
40	BH	140	ALA	8.0
40	BH	46	PHE	7.9
41	BJ	20	ALA	7.9
3	AD	178	GLU	7.9
45	DS	110	ARG	7.9

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Mol	Chain	Res	Type	RSRZ
33	B1	51	ALA	7.9
40	BH	125	THR	7.9
24	BI	17	ALA	7.8
47	DF	55	ASP	7.8
40	BH	126	GLY	7.7
40	DH	149	GLU	7.7
24	DI	84	GLY	7.7
17	CR	19	GLU	7.6
40	BH	133	GLN	7.6
39	BX	63	ALA	7.6
40	DH	140	ALA	7.6
24	BI	52	LEU	7.5
24	BI	70	THR	7.5
3	AD	159	GLU	7.5
24	BI	48	ILE	7.4
40	BH	134	VAL	7.4
23	BB	613	A	7.4
33	B1	15	GLY	7.4
40	BH	88	GLY	7.4
40	BH	79	THR	7.3
3	AD	106	PHE	7.3
13	AN	30	ILE	7.3
46	BU	52	ASN	7.3
47	DF	10	GLU	7.3
24	BI	34	ILE	7.2
24	BI	68	PHE	7.2
23	BB	139	U	7.2
15	CP	47	GLU	7.2
40	BH	147	VAL	7.1
37	BL	144	GLU	7.1
23	DB	1175	A	7.1
38	BM	136	MET	7.0
29	BE	124	PHE	7.0
40	BH	139	PHE	6.9
24	BI	51	GLY	6.9
40	BH	128	HIS	6.9
29	BE	143	LEU	6.9
40	BH	87	GLU	6.9
24	BI	29	GLN	6.9
16	AQ	82	VAL	6.9
40	BH	141	LYS	6.9
24	BI	11	GLN	6.8

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Mol	Chain	Res	Type	RSRZ
7	AH	129	ALA	6.8
24	BI	95	ASP	6.8
38	BM	103	TYR	6.8
24	BI	35	MET	6.8
3	AD	177	MET	6.7
24	BI	3	LYS	6.7
12	CM	44	ILE	6.7
24	BI	1	ALA	6.7
24	DI	83	ALA	6.6
29	DE	188	MET	6.6
9	CJ	84	VAL	6.6
40	BH	117	LEU	6.5
8	AI	57	VAL	6.5
22	DA	88	C	6.5
20	AB	188	THR	6.5
47	DF	173	ASP	6.5
29	BE	10	SER	6.4
51	DZ	78	TYR	6.4
4	AE	158	LYS	6.4
26	BD	186	LEU	6.4
24	BI	4	VAL	6.4
24	DI	7	TYR	6.4
24	BI	60	VAL	6.4
29	BE	119	ILE	6.4
3	AD	173	ASP	6.4
24	BI	141	ASP	6.3
20	CB	126	ASP	6.3
24	BI	20	SER	6.2
24	BI	66	PHE	6.2
40	BH	148	ALA	6.2
48	DG	40	VAL	6.2
48	DG	55	ASP	6.2
27	BK	104	THR	6.2
26	DD	52	THR	6.2
40	BH	55	GLU	6.2
38	BM	32	GLY	6.1
21	AU	3	ILE	6.1
40	DH	110	VAL	6.1
13	CN	30	ILE	6.0
24	BI	31	GLY	6.0
50	DT	90	GLY	6.0
24	BI	21	PRO	6.0

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Mol	Chain	Res	Type	RSRZ
40	BH	144	VAL	6.0
24	BI	25	PRO	6.0
39	BX	5	GLU	6.0
37	DL	85	VAL	6.0
1	AA	86	G	6.0
24	DI	99	LYS	6.0
29	DE	201	ALA	5.9
47	BF	139	GLU	5.9
40	BH	60	GLU	5.9
40	BH	118	PRO	5.9
40	BH	109	GLU	5.9
24	DI	85	ILE	5.9
33	B1	16	THR	5.8
50	DT	70	HIS	5.8
2	CC	165	GLU	5.8
40	BH	114	GLU	5.8
20	CB	220	VAL	5.8
30	BY	58	GLU	5.8
48	BG	176	LYS	5.8
40	DH	12	LEU	5.8
47	DF	169	LEU	5.7
20	AB	193	ASP	5.7
24	DI	98	GLY	5.7
26	BD	111	GLY	5.7
24	BI	7	TYR	5.7
24	BI	49	GLU	5.7
40	BH	76	GLU	5.7
20	CB	60	ALA	5.7
24	BI	140	GLU	5.7
47	DF	178	LYS	5.7
48	DG	51	PHE	5.7
40	BH	75	LEU	5.7
15	AP	47	GLU	5.7
37	DL	122	VAL	5.7
40	BH	149	GLU	5.7
40	BH	146	VAL	5.6
33	D1	27	ARG	5.6
6	AG	78	ARG	5.6
29	BE	188	MET	5.6
48	BG	167	VAL	5.6
18	CS	40	PHE	5.6
6	AG	150	PHE	5.6

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Mol	Chain	Res	Type	RSRZ
47	DF	44	ALA	5.6
40	BH	122	LEU	5.5
27	BK	110	GLU	5.5
28	BP	70	GLU	5.5
24	BI	10	LEU	5.5
8	AI	20	ILE	5.4
40	BH	115	VAL	5.4
5	AF	5	GLU	5.4
40	BH	56	ALA	5.4
46	BU	14	THR	5.4
20	AB	192	PRO	5.4
24	BI	115	ASP	5.4
40	BH	90	LEU	5.4
29	DE	169	VAL	5.4
48	BG	102	ILE	5.4
9	CJ	102	LEU	5.3
24	BI	16	MET	5.3
24	BI	67	THR	5.3
24	BI	5	GLN	5.3
4	CE	12	GLU	5.3
40	DH	139	PHE	5.3
28	BP	99	LEU	5.3
40	BH	48	GLU	5.3
47	DF	30	VAL	5.3
34	D3	19	GLY	5.3
38	BM	1	MET	5.3
40	DH	18	GLN	5.3
40	DH	141	LYS	5.3
18	CS	39	ILE	5.3
30	DY	1	ALA	5.3
37	DL	91	ASP	5.3
37	DL	92	LEU	5.3
8	AI	56	MET	5.2
24	BI	28	GLY	5.2
49	DR	95	ASP	5.2
27	BK	121	GLU	5.2
48	DG	41	GLU	5.2
20	CB	212	TYR	5.2
29	BE	11	ALA	5.2
28	BP	47	ILE	5.2
52	BW	45	HIS	5.2
38	DM	136	MET	5.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
3	CD	176	LYS	5.2
40	BH	106	ALA	5.2
45	BS	63	GLY	5.2
50	DT	91	GLN	5.2
11	CL	24	GLU	5.1
24	BI	33	ASN	5.1
20	CB	165	ALA	5.1
52	BW	83	ALA	5.1
24	BI	86	LYS	5.1
28	BP	54	LEU	5.1
20	AB	212	TYR	5.1
48	DG	161	VAL	5.1
4	CE	13	LYS	5.1
13	CN	42	ASN	5.1
20	CB	123	GLY	5.1
48	DG	42	VAL	5.1
51	BZ	71	LEU	5.1
26	DD	77	ARG	5.1
27	BK	84	CYS	5.1
24	DI	125	THR	5.1
48	BG	19	ASN	5.1
40	DH	122	LEU	5.1
38	DM	1	MET	5.1
24	BI	14	ALA	5.1
40	BH	108	VAL	5.1
15	CP	52	LEU	5.0
24	DI	6	ALA	5.0
23	BB	715	A	5.0
37	DL	123	ARG	5.0
20	CB	68	PHE	5.0
24	DI	52	LEU	5.0
29	BE	150	THR	5.0
48	DG	176	LYS	5.0
40	DH	131	SER	5.0
24	BI	27	LEU	5.0
40	DH	51	ARG	5.0
8	CI	128	LYS	5.0
37	DL	144	GLU	5.0
37	DL	77	ILE	5.0
39	BX	62	GLY	5.0
28	BP	21	PRO	4.9
29	DE	124	PHE	4.9

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Mol	Chain	Res	Type	RSRZ
42	DN	83	LEU	4.9
40	DH	47	PHE	4.9
20	CB	17	HIS	4.9
16	CQ	82	VAL	4.9
33	D1	26	LYS	4.9
49	BR	46	GLU	4.9
9	CJ	25	ILE	4.9
24	DI	48	ILE	4.9
24	BI	108	ILE	4.9
48	BG	101	VAL	4.9
20	CB	56	LEU	4.8
38	BM	33	LEU	4.8
3	AD	157	ALA	4.8
24	BI	26	ALA	4.8
20	AB	87	ASP	4.8
41	BJ	54	ILE	4.8
29	BE	153	LEU	4.8
24	BI	8	VAL	4.8
20	CB	71	THR	4.8
39	DX	62	GLY	4.8
12	AM	59	VAL	4.8
30	DY	58	GLU	4.8
24	BI	45	THR	4.8
40	DH	82	SER	4.8
47	BF	140	ILE	4.8
28	BP	71	ARG	4.8
29	BE	196	VAL	4.8
48	BG	148	ARG	4.8
13	CN	16	ALA	4.8
18	CS	43	MET	4.7
39	BX	57	LEU	4.7
46	BU	87	GLU	4.7
28	BP	42	PHE	4.7
12	CM	52	ILE	4.7
44	DQ	90	ASP	4.7
20	CB	209	VAL	4.7
47	DF	174	PHE	4.7
29	DE	60	TRP	4.7
40	DH	72	ILE	4.7
44	BQ	108	LEU	4.7
40	DH	142	VAL	4.7
6	AG	61	PHE	4.7

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Mol	Chain	Res	Type	RSRZ
3	CD	190	LEU	4.7
35	BV	67	GLY	4.7
37	DL	143	GLU	4.7
5	AF	52	ASN	4.6
43	BO	92	PHE	4.6
23	BB	2145	C	4.6
29	BE	12	LEU	4.6
6	AG	84	TYR	4.6
18	CS	29	PRO	4.6
3	AD	24	VAL	4.6
3	AD	175	GLY	4.6
24	BI	37	PHE	4.6
28	BP	67	GLU	4.6
50	BT	3	ARG	4.6
51	BZ	76	GLU	4.6
45	DS	108	SER	4.6
48	BG	42	VAL	4.6
33	B1	49	LYS	4.6
47	BF	131	VAL	4.6
24	BI	13	ALA	4.6
24	BI	2	LYS	4.6
25	BC	114	GLN	4.6
40	BH	136	SER	4.6
27	BK	9	ASN	4.6
28	BP	58	PHE	4.6
6	AG	79	VAL	4.6
47	DF	124	ARG	4.6
40	DH	4	ILE	4.6
29	BE	152	GLU	4.6
45	DS	69	LEU	4.5
27	BK	103	VAL	4.5
47	DF	39	VAL	4.5
24	BI	111	THR	4.5
29	BE	5	LEU	4.5
27	BK	108	ARG	4.5
24	BI	69	VAL	4.5
38	BM	105	MET	4.5
26	DD	2	ILE	4.5
7	AH	128	VAL	4.5
20	CB	38	HIS	4.5
45	BS	74	ILE	4.5
5	AF	35	LYS	4.5

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Mol	Chain	Res	Type	RSRZ
52	BW	64	GLY	4.5
37	BL	77	ILE	4.5
8	AI	47	VAL	4.5
43	BO	113	ALA	4.5
28	BP	27	VAL	4.4
33	B1	13	SER	4.4
40	BH	119	ASN	4.4
43	BO	110	ALA	4.4
48	BG	100	ASN	4.4
35	DV	61	LEU	4.4
47	DF	27	VAL	4.4
5	AF	66	ALA	4.4
12	CM	3	ILE	4.4
52	BW	62	ALA	4.4
14	AO	89	ARG	4.4
44	DQ	117	ALA	4.4
47	BF	116	LEU	4.4
49	DR	58	VAL	4.4
29	BE	187	VAL	4.4
37	BL	113	ALA	4.4
8	AI	29	ILE	4.4
23	DB	645	C	4.4
24	BI	56	VAL	4.4
37	BL	85	VAL	4.4
45	DS	1	MET	4.4
18	AS	48	ILE	4.4
47	DF	171	ALA	4.4
45	BS	39	THR	4.4
26	BD	209	ALA	4.3
40	BH	83	LYS	4.3
3	AD	22	SER	4.3
24	DI	47	SER	4.3
20	AB	68	PHE	4.3
42	BN	21	PHE	4.3
48	DG	48	THR	4.3
4	CE	9	GLU	4.3
20	AB	183	PHE	4.3
4	AE	157	GLY	4.3
33	B1	14	ALA	4.3
26	BD	101	PHE	4.3
2	AC	156	LEU	4.3
12	AM	114	PRO	4.3

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Mol	Chain	Res	Type	RSRZ
47	DF	140	ILE	4.3
11	AL	123	ALA	4.3
37	DL	141	LYS	4.3
1	AA	78	A	4.3
47	BF	174	PHE	4.3
24	BI	79	LEU	4.3
43	BO	51	ALA	4.3
9	CJ	91	ASP	4.3
37	DL	90	VAL	4.3
28	BP	75	THR	4.3
8	AI	34	LEU	4.3
26	BD	27	ILE	4.3
12	AM	7	ASN	4.3
28	BP	61	ARG	4.3
24	DI	137	LEU	4.3
20	AB	66	ILE	4.3
37	BL	89	VAL	4.3
3	AD	107	GLY	4.3
3	AD	179	GLY	4.3
31	B0	56	LYS	4.3
38	BM	31	PHE	4.3
42	DN	62	ASN	4.3
38	BM	67	VAL	4.2
3	AD	156	ALA	4.2
27	BK	107	LEU	4.2
29	DE	143	LEU	4.2
35	DV	5	ASN	4.2
40	BH	13	GLY	4.2
5	AF	8	PHE	4.2
46	BU	84	PHE	4.2
7	CH	62	LEU	4.2
8	AI	51	LEU	4.2
24	BI	65	SER	4.2
40	BH	63	ALA	4.2
2	CC	133	MET	4.2
42	BN	102	PHE	4.2
23	DB	1730	C	4.2
27	BK	77	ILE	4.2
40	BH	111	ALA	4.2
25	BC	70	LYS	4.2
18	CS	26	ASP	4.2
20	AB	195	VAL	4.2

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Mol	Chain	Res	Type	RSRZ
3	AD	145	ARG	4.2
20	AB	197	PHE	4.2
10	AK	99	LEU	4.2
3	CD	24	VAL	4.2
15	AP	6	LEU	4.2
45	BS	69	LEU	4.2
20	CB	217	ALA	4.2
37	DL	89	VAL	4.2
45	BS	65	ASP	4.2
9	CJ	34	ALA	4.2
16	AQ	58	VAL	4.2
35	DV	63	ILE	4.2
7	CH	44	PHE	4.2
40	BH	96	THR	4.2
48	DG	33	THR	4.2
45	DS	32	ALA	4.1
52	BW	50	VAL	4.1
6	AG	80	GLY	4.1
29	BE	151	GLY	4.1
20	AB	17	HIS	4.1
37	DL	110	VAL	4.1
48	DG	16	VAL	4.1
29	BE	154	ASP	4.1
8	AI	128	LYS	4.1
30	BY	55	LYS	4.1
2	AC	90	VAL	4.1
14	AO	60	VAL	4.1
28	BP	91	VAL	4.1
24	DI	82	ALA	4.1
29	DE	119	ILE	4.1
37	BL	126	ARG	4.1
12	AM	113	LYS	4.1
20	CB	161	PHE	4.1
44	BQ	105	PHE	4.1
23	BB	1728	C	4.1
18	CS	70	LEU	4.1
40	BH	121	VAL	4.1
5	AF	65	GLU	4.1
26	DD	48	ILE	4.1
26	DD	32	ASN	4.1
41	DJ	44	TYR	4.1
29	BE	189	THR	4.1

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Mol	Chain	Res	Type	RSRZ
48	BG	120	ILE	4.1
8	CI	34	LEU	4.1
25	DC	109	LEU	4.1
48	DG	37	ASN	4.1
12	CM	42	VAL	4.1
45	DS	55	ILE	4.1
40	BH	116	ARG	4.1
43	BO	114	GLY	4.1
47	BF	35	LEU	4.1
24	BI	38	CYS	4.1
20	CB	69	VAL	4.0
24	DI	115	ASP	4.0
43	DO	53	THR	4.0
47	DF	45	ASP	4.0
46	BU	49	PRO	4.0
47	DF	78	ILE	4.0
51	BZ	78	TYR	4.0
7	AH	110	MET	4.0
45	BS	67	ASP	4.0
9	AJ	36	VAL	4.0
21	CU	23	GLU	4.0
24	BI	50	LYS	4.0
20	AB	31	PHE	4.0
16	AQ	7	LEU	4.0
40	BH	81	ALA	4.0
42	BN	83	LEU	4.0
37	BL	92	LEU	4.0
4	CE	117	ALA	4.0
29	DE	172	ALA	4.0
7	AH	98	LEU	4.0
45	DS	3	THR	4.0
23	BB	62	U	4.0
26	BD	118	PHE	4.0
40	BH	4	ILE	4.0
12	AM	47	LEU	4.0
38	BM	129	THR	4.0
48	BG	116	LEU	4.0
29	BE	121	VAL	4.0
8	AI	27	ILE	4.0
8	CI	42	THR	4.0
9	AJ	76	ILE	4.0
27	BK	8	LEU	4.0

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Mol	Chain	Res	Type	RSRZ
24	BI	22	PRO	4.0
52	DW	43	LYS	4.0
40	DH	76	GLU	4.0
28	BP	102	ARG	4.0
40	DH	94	ILE	4.0
44	DQ	73	ILE	4.0
2	CC	167	TYR	4.0
27	BK	78	ARG	3.9
49	DR	96	VAL	3.9
7	AH	60	LEU	3.9
37	BL	91	ASP	3.9
41	DJ	52	ASP	3.9
24	DI	138	VAL	3.9
9	AJ	31	ARG	3.9
3	AD	154	VAL	3.9
6	AG	140	VAL	3.9
29	BE	201	ALA	3.9
2	CC	156	LEU	3.9
40	DH	136	SER	3.9
6	AG	85	GLN	3.9
28	BP	69	VAL	3.9
12	AM	55	LEU	3.9
22	BA	88	C	3.9
9	AJ	27	GLU	3.9
28	BP	26	GLU	3.9
45	DS	52	GLU	3.9
24	BI	12	VAL	3.9
24	BI	139	VAL	3.9
40	BH	65	ALA	3.9
40	DH	133	GLN	3.9
52	BW	63	ASP	3.9
4	AE	94	PHE	3.9
16	AQ	80	LYS	3.9
7	CH	129	ALA	3.9
41	DJ	1	MET	3.9
3	AD	116	LEU	3.9
27	BK	71	ARG	3.9
47	DF	18	GLU	3.9
23	BB	136	G	3.9
47	DF	172	PHE	3.9
45	DS	62	ASP	3.9
18	CS	65	MET	3.9

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Mol	Chain	Res	Type	RSRZ
47	DF	145	VAL	3.9
39	BX	22	LEU	3.9
27	DK	51	LYS	3.9
8	AI	50	PRO	3.9
45	DS	34	ASP	3.9
3	CD	66	VAL	3.9
20	AB	161	PHE	3.9
32	B4	7	VAL	3.9
2	AC	93	ILE	3.9
3	AD	176	LYS	3.9
45	BS	55	ILE	3.9
47	BF	72	SER	3.9
50	BT	91	GLN	3.9
31	B0	51	ARG	3.9
20	CB	49	PHE	3.9
5	AF	61	LEU	3.9
7	AH	125	ILE	3.9
37	DL	142	ILE	3.9
47	BF	103	ILE	3.9
2	AC	167	TYR	3.8
52	DW	18	LYS	3.8
49	BR	12	HIS	3.8
23	BB	1727	C	3.8
20	CB	216	VAL	3.8
26	BD	15	PHE	3.8
31	D0	56	LYS	3.8
18	AS	30	LEU	3.8
24	BI	46	ASP	3.8
29	BE	172	ALA	3.8
41	BJ	63	ALA	3.8
40	BH	135	HIS	3.8
40	BH	145	ASN	3.8
12	CM	47	LEU	3.8
47	BF	56	LEU	3.8
3	AD	121	ALA	3.8
5	AF	1	MET	3.8
8	AI	58	GLU	3.8
31	B0	54	ILE	3.8
43	BO	117	PHE	3.8
15	CP	45	GLU	3.8
47	DF	41	GLU	3.8
9	CJ	49	PHE	3.8

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Mol	Chain	Res	Type	RSRZ
41	BJ	64	VAL	3.8
24	BI	125	THR	3.8
26	DD	93	GLY	3.8
43	BO	88	LYS	3.8
41	BJ	62	VAL	3.8
38	BM	110	GLU	3.8
20	CB	195	VAL	3.8
3	AD	104	MET	3.8
1	AA	85	U	3.8
34	B3	19	GLY	3.8
8	CI	40	ARG	3.8
7	AH	100	ILE	3.8
40	BH	27	ARG	3.8
51	BZ	72	ARG	3.8
23	BB	645	C	3.8
7	AH	102	VAL	3.8
48	BG	161	VAL	3.8
9	CJ	85	ASP	3.8
29	BE	7	ASP	3.8
29	DE	108	ILE	3.8
49	DR	50	GLY	3.8
41	BJ	56	VAL	3.8
7	AH	127	TYR	3.7
45	BS	75	PHE	3.7
49	BR	35	PHE	3.7
18	AS	29	PRO	3.7
10	AK	125	LYS	3.7
40	DH	75	LEU	3.7
33	B1	30	PRO	3.7
34	B3	14	LYS	3.7
44	DQ	97	ILE	3.7
45	BS	66	ILE	3.7
34	B3	13	PHE	3.7
47	DF	7	TYR	3.7
24	BI	53	PRO	3.7
3	CD	22	SER	3.7
35	BV	61	LEU	3.7
46	DU	51	LEU	3.7
47	DF	163	GLU	3.7
3	AD	108	ALA	3.7
48	DG	45	ALA	3.7
20	AB	187	ASP	3.7

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Mol	Chain	Res	Type	RSRZ
24	BI	116	MET	3.7
24	DI	81	LYS	3.7
29	BE	138	LEU	3.7
50	BT	5	GLU	3.7
23	DB	139	U	3.7
48	BG	20	GLY	3.7
28	BP	86	LYS	3.7
37	DL	108	ALA	3.7
4	CE	157	GLY	3.7
5	AF	38	ARG	3.7
11	CL	13	ARG	3.7
28	BP	73	PHE	3.7
11	AL	89	LEU	3.7
29	BE	190	ALA	3.7
2	AC	188	ALA	3.7
15	AP	71	VAL	3.7
18	AS	22	VAL	3.7
35	DV	94	ALA	3.7
50	DT	3	ARG	3.7
1	AA	79	G	3.7
40	BH	57	LYS	3.7
52	BW	42	THR	3.7
52	DW	42	THR	3.7
41	BJ	59	ALA	3.7
7	CH	127	TYR	3.7
9	CJ	89	ARG	3.7
3	CD	106	PHE	3.7
15	AP	54	LEU	3.7
25	BC	3	VAL	3.7
28	BP	45	VAL	3.7
35	DV	47	VAL	3.7
40	DH	137	GLU	3.7
7	AH	45	ILE	3.7
26	DD	87	GLY	3.7
24	BI	137	LEU	3.7
5	AF	62	MET	3.7
5	AF	94	HIS	3.7
17	CR	63	TYR	3.7
7	AH	13	ILE	3.7
27	BK	46	ALA	3.6
25	BC	17	LYS	3.6
29	BE	14	VAL	3.6

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Mol	Chain	Res	Type	RSRZ
47	DF	24	VAL	3.6
24	DI	113	ALA	3.6
2	AC	41	TYR	3.6
25	DC	102	TYR	3.6
47	BF	82	TYR	3.6
50	BT	70	HIS	3.6
24	BI	109	ALA	3.6
25	BC	167	ASP	3.6
45	BS	32	ALA	3.6
40	DH	35	LYS	3.6
44	DQ	105	PHE	3.6
39	BX	37	LEU	3.6
40	BH	89	LYS	3.6
26	DD	101	PHE	3.6
9	CJ	81	GLU	3.6
14	AO	67	LEU	3.6
33	B1	10	LEU	3.6
34	D3	20	GLY	3.6
25	DC	34	GLU	3.6
47	DF	157	THR	3.6
18	AS	65	MET	3.6
20	CB	163	ILE	3.6
47	DF	43	ILE	3.6
4	CE	10	LEU	3.6
26	DD	30	GLU	3.6
35	BV	84	PRO	3.6
50	DT	5	GLU	3.6
2	AC	150	VAL	3.6
5	AF	63	ASN	3.6
41	DJ	20	ALA	3.6
25	BC	115	ILE	3.6
40	BH	98	ASP	3.6
40	BH	78	VAL	3.6
17	AR	25	ILE	3.6
48	DG	23	ILE	3.6
12	CM	79	LEU	3.6
20	CB	67	LEU	3.6
20	AB	198	VAL	3.6
20	CB	127	LYS	3.6
28	BP	76	HIS	3.6
6	AG	143	MET	3.6
25	BC	131	MET	3.6

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Mol	Chain	Res	Type	RSRZ
35	BV	56	PHE	3.6
37	DL	82	LEU	3.6
20	CB	162	VAL	3.6
6	AG	81	GLY	3.6
47	BF	18	GLU	3.6
25	DC	93	VAL	3.6
44	BQ	90	ASP	3.6
45	BS	109	ASP	3.6
14	CO	46	HIS	3.6
20	CB	146	SER	3.6
7	AH	74	ILE	3.6
6	CG	152	HIS	3.6
27	BK	102	PRO	3.6
2	AC	205	GLU	3.5
30	BY	1	ALA	3.5
16	CQ	83	LEU	3.5
47	DF	33	ILE	3.5
48	BG	86	LEU	3.5
50	BT	72	GLN	3.5
52	BW	39	GLN	3.5
49	DR	48	LYS	3.5
29	BE	158	PHE	3.5
12	AM	38	ILE	3.5
26	BD	4	LEU	3.5
47	DF	136	ILE	3.5
48	BG	114	HIS	3.5
6	CG	74	VAL	3.5
24	BI	44	LYS	3.5
25	DC	79	ARG	3.5
26	DD	27	ILE	3.5
21	AU	4	LYS	3.5
19	AT	35	TYR	3.5
26	BD	25	THR	3.5
37	DL	106	GLU	3.5
40	BH	137	GLU	3.5
35	BV	57	TYR	3.5
13	CN	76	PHE	3.5
20	CB	51	GLU	3.5
23	BB	2147	A	3.5
25	BC	78	GLU	3.5
27	BK	79	PHE	3.5
3	AD	144	ILE	3.5

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Mol	Chain	Res	Type	RSRZ
16	AQ	6	THR	3.5
38	BM	128	THR	3.5
9	CJ	65	TYR	3.5
25	DC	22	GLU	3.5
26	DD	118	PHE	3.5
2	CC	143	LEU	3.5
29	BE	6	LYS	3.5
45	BS	73	LYS	3.5
49	DR	101	ILE	3.5
24	DI	124	MET	3.5
7	AH	36	ALA	3.5
20	CB	52	ALA	3.5
41	BJ	142	ILE	3.5
45	BS	70	LYS	3.5
51	BZ	49	LEU	3.5
39	BX	10	SER	3.5
41	DJ	87	ALA	3.5
40	BH	138	VAL	3.5
7	AH	51	GLU	3.5
9	CJ	26	VAL	3.5
26	BD	180	VAL	3.5
4	CE	11	GLN	3.5
50	DT	72	GLN	3.5
27	BK	45	GLU	3.5
47	DF	19	PHE	3.5
16	AQ	20	ILE	3.5
27	BK	39	ILE	3.5
25	DC	64	VAL	3.5
28	BP	48	ALA	3.5
28	DP	58	PHE	3.5
29	BE	141	MET	3.5
16	AQ	56	ASP	3.4
52	BW	14	ASP	3.4
16	AQ	9	GLY	3.4
29	BE	23	PHE	3.4
35	DV	70	ILE	3.4
47	DF	75	GLY	3.4
11	AL	47	ALA	3.4
47	DF	79	ARG	3.4
28	DP	1	SER	3.4
28	BP	62	LYS	3.4
37	BL	125	LEU	3.4

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Mol	Chain	Res	Type	RSRZ
50	DT	11	LEU	3.4
24	BI	121	ILE	3.4
8	AI	19	PHE	3.4
25	BC	124	LYS	3.4
24	DI	69	VAL	3.4
26	DD	56	LYS	3.4
29	DE	190	ALA	3.4
29	BE	1	MET	3.4
42	BN	1	MET	3.4
26	DD	76	GLY	3.4
4	AE	47	PHE	3.4
19	AT	30	PHE	3.4
6	AG	46	LEU	3.4
12	CM	82	LEU	3.4
29	DE	12	LEU	3.4
3	CD	27	ILE	3.4
18	CS	48	ILE	3.4
47	DF	105	ILE	3.4
3	AD	171	GLU	3.4
24	DI	114	ALA	3.4
31	B0	55	ALA	3.4
7	AH	44	PHE	3.4
14	AO	17	ARG	3.4
26	DD	4	LEU	3.4
37	BL	6	LEU	3.4
48	BG	88	LEU	3.4
20	CB	45	THR	3.4
24	DI	111	THR	3.4
29	BE	148	ILE	3.4
40	BH	1	MET	3.4
7	AH	71	VAL	3.4
37	BL	90	VAL	3.4
48	DG	89	VAL	3.4
26	BD	12	THR	3.4
28	BP	98	TYR	3.4
48	DG	57	TYR	3.4
52	BW	75	ASN	3.4
40	BH	97	ARG	3.4
18	AS	70	LEU	3.4
45	DS	24	ILE	3.4
45	DS	94	ASP	3.4
49	DR	26	ASP	3.4

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Mol	Chain	Res	Type	RSRZ
17	CR	31	TYR	3.4
27	BK	122	VAL	3.4
29	BE	60	TRP	3.4
48	DG	44	HIS	3.4
29	DE	149	ILE	3.4
43	BO	35	ILE	3.4
40	BH	18	GLN	3.4
3	AD	162	GLU	3.4
14	AO	70	LEU	3.4
20	AB	100	LEU	3.4
16	AQ	52	CYS	3.3
35	DV	65	VAL	3.3
40	BH	19	VAL	3.3
2	CC	198	LYS	3.3
48	DG	43	LYS	3.3
48	DG	88	LEU	3.3
8	CI	20	ILE	3.3
21	CU	3	ILE	3.3
23	DB	613	A	3.3
47	BF	33	ILE	3.3
48	BG	168	VAL	3.3
50	DT	71	GLY	3.3
20	CB	77	GLU	3.3
9	CJ	87	LEU	3.3
18	CS	25	GLY	3.3
39	BX	60	LYS	3.3
48	BG	9	VAL	3.3
7	AH	1	SER	3.3
35	DV	91	PHE	3.3
29	BE	3	LEU	3.3
7	AH	24	VAL	3.3
15	AP	19	VAL	3.3
41	DJ	64	VAL	3.3
49	DR	46	GLU	3.3
27	DK	14	SER	3.3
28	BP	15	ASP	3.3
37	DL	118	THR	3.3
49	DR	40	MET	3.3
2	AC	99	GLN	3.3
27	BK	109	SER	3.3
34	B3	50	SER	3.3
45	DS	70	LYS	3.3

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Mol	Chain	Res	Type	RSRZ
48	BG	133	LYS	3.3
24	DI	141	ASP	3.3
41	BJ	55	ILE	3.3
27	BK	18	ARG	3.3
40	DH	1	MET	3.3
47	BF	37	MET	3.3
25	DC	110	LYS	3.3
20	AB	165	ALA	3.3
40	DH	148	ALA	3.3
16	AQ	75	VAL	3.3
40	BH	44	ILE	3.3
48	DG	160	GLY	3.3
6	CG	78	ARG	3.3
25	BC	132	ARG	3.3
42	BN	17	ARG	3.3
24	DI	78	LEU	3.3
25	BC	128	THR	3.3
28	BP	96	LEU	3.3
50	DT	87	LEU	3.3
41	BJ	132	HIS	3.3
24	BI	55	PRO	3.3
49	BR	2	TYR	3.3
9	AJ	8	ILE	3.3
18	CS	61	VAL	3.3
24	DI	97	VAL	3.3
29	BE	175	ILE	3.3
8	AI	21	LYS	3.3
37	DL	107	PHE	3.3
17	AR	28	LEU	3.3
4	AE	147	ASN	3.3
28	DP	114	ASN	3.3
47	DF	175	PRO	3.3
3	AD	122	ILE	3.3
3	AD	142	VAL	3.3
4	AE	85	LYS	3.3
5	AF	64	VAL	3.3
28	BP	46	VAL	3.3
28	BP	63	ILE	3.3
46	BU	93	ARG	3.3
52	DW	19	ARG	3.3
9	CJ	90	LEU	3.3
37	DL	75	ALA	3.3

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Mol	Chain	Res	Type	RSRZ
5	AF	70	VAL	3.3
20	AB	199	ILE	3.3
52	DW	40	ARG	3.3
25	BC	5	CYS	3.3
28	BP	16	VAL	3.3
38	DM	37	GLY	3.3
38	BM	130	PHE	3.3
20	CB	213	LEU	3.3
24	DI	89	SER	3.3
28	BP	64	SER	3.3
45	BS	51	LEU	3.3
11	CL	55	ARG	3.3
35	BV	82	TYR	3.3
2	CC	55	VAL	3.3
29	BE	193	VAL	3.3
40	DH	144	VAL	3.3
7	CH	98	LEU	3.3
24	DI	79	LEU	3.3
29	DE	5	LEU	3.3
26	DD	1	MET	3.3
28	BP	57	ALA	3.2
18	AS	39	ILE	3.2
24	BI	73	PRO	3.2
38	DM	31	PHE	3.2
42	BN	72	ASP	3.2
24	DI	5	GLN	3.2
39	BX	31	GLN	3.2
48	DG	25	ILE	3.2
3	AD	153	ARG	3.2
26	BD	131	ASP	3.2
3	CD	159	GLU	3.2
6	CG	79	VAL	3.2
24	DI	136	GLY	3.2
28	BP	44	GLY	3.2
41	BJ	17	VAL	3.2
4	CE	75	LEU	3.2
37	DL	95	LEU	3.2
5	CF	90	MET	3.2
20	CB	153	MET	3.2
3	AD	174	ALA	3.2
7	AH	46	GLU	3.2
18	CS	63	ASP	3.2

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Mol	Chain	Res	Type	RSRZ
47	BF	30	VAL	3.2
38	BM	102	LEU	3.2
40	DH	58	LEU	3.2
47	BF	114	ARG	3.2
48	BG	132	LEU	3.2
9	AJ	28	THR	3.2
9	CJ	36	VAL	3.2
13	CN	24	ALA	3.2
24	BI	80	LYS	3.2
34	D3	13	PHE	3.2
43	DO	28	VAL	3.2
43	DO	37	ALA	3.2
48	BG	130	ILE	3.2
48	DG	104	LEU	3.2
27	BK	7	MET	3.2
11	AL	24	GLU	3.2
21	CU	36	PHE	3.2
25	DC	108	GLY	3.2
26	DD	47	ALA	3.2
49	DR	14	VAL	3.2
40	BH	58	LEU	3.2
48	DG	106	LEU	3.2
9	AJ	89	ARG	3.2
11	CL	122	LYS	3.2
27	DK	9	ASN	3.2
45	BS	110	ARG	3.2
51	BZ	77	LYS	3.2
2	AC	83	VAL	3.2
18	AS	47	THR	3.2
37	BL	142	ILE	3.2
43	BO	28	VAL	3.2
45	BS	107	VAL	3.2
47	BF	153	ILE	3.2
23	BB	1175	A	3.2
37	DL	2	ARG	3.2
7	AH	50	VAL	3.2
24	BI	62	ALA	3.2
37	BL	82	LEU	3.2
40	DH	13	GLY	3.2
40	DH	73	ASN	3.2
43	BO	26	LEU	3.2
47	BF	168	LEU	3.2

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Mol	Chain	Res	Type	RSRZ
7	AH	59	GLU	3.2
39	BX	23	ARG	3.2
37	DL	119	PRO	3.2
2	AC	80	GLY	3.2
12	AM	4	ALA	3.2
5	AF	55	HIS	3.2
25	BC	22	GLU	3.2
26	BD	28	GLU	3.2
26	DD	74	GLU	3.2
2	CC	129	PHE	3.2
18	AS	40	PHE	3.2
42	BN	10	LEU	3.2
45	DS	4	ILE	3.2
46	DU	48	VAL	3.2
40	DH	5	LEU	3.2
24	DI	106	GLN	3.2
25	BC	116	GLN	3.2
26	BD	30	GLU	3.2
43	DO	2	ASP	3.2
2	AC	102	ILE	3.2
20	CB	40	ILE	3.2
24	BI	24	GLY	3.2
24	DI	139	VAL	3.2
35	DV	4	ILE	3.2
37	BL	111	ILE	3.2
47	DF	99	PHE	3.2
49	DR	65	ALA	3.2
27	DK	45	GLU	3.1
48	BG	33	THR	3.1
43	BO	93	ASP	3.1
3	AD	26	ALA	3.1
3	CD	164	ARG	3.1
26	BD	187	LEU	3.1
50	BT	90	GLY	3.1
41	BJ	75	TYR	3.1
47	BF	106	ALA	3.1
25	DC	78	GLU	3.1
52	BW	65	LYS	3.1
7	AH	58	LEU	3.1
16	AQ	37	ILE	3.1
24	BI	78	LEU	3.1
27	DK	50	GLY	3.1

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Mol	Chain	Res	Type	RSRZ
36	B2	1	MET	3.1
42	BN	98	LEU	3.1
48	DG	102	ILE	3.1
3	CD	163	GLN	3.1
14	AO	82	ILE	3.1
24	BI	124	MET	3.1
25	DC	33	LEU	3.1
33	D1	35	LEU	3.1
35	BV	93	ARG	3.1
20	AB	75	ALA	3.1
41	BJ	87	ALA	3.1
23	BB	546	U	3.1
12	AM	51	GLN	3.1
46	BU	90	LYS	3.1
47	DF	139	GLU	3.1
48	BG	87	GLN	3.1
15	AP	60	TRP	3.1
29	BE	116	ASP	3.1
10	CK	13	LYS	3.1
47	DF	160	LYS	3.1
25	BC	143	VAL	3.1
14	AO	16	GLY	3.1
44	BQ	94	LEU	3.1
26	BD	116	LYS	3.1
40	BH	101	ASP	3.1
40	DH	70	GLU	3.1
5	CF	70	VAL	3.1
20	CB	29	PHE	3.1
26	BD	20	VAL	3.1
28	BP	50	ARG	3.1
34	B3	23	HIS	3.1
52	BW	40	ARG	3.1
45	BS	72	THR	3.1
45	BS	71	VAL	3.1
48	BG	40	VAL	3.1
35	DV	71	LYS	3.1
46	BU	59	GLU	3.1
12	CM	55	LEU	3.1
40	DH	146	VAL	3.1
46	BU	48	VAL	3.1
52	BW	78	PHE	3.1
20	AB	86	CYS	3.1

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Mol	Chain	Res	Type	RSRZ
30	DY	7	THR	3.1
34	B3	20	GLY	3.1
46	BU	76	THR	3.1
46	DU	49	PRO	3.1
24	DI	135	MET	3.1
46	BU	61	GLU	3.1
24	BI	41	PHE	3.1
26	BD	114	LYS	3.1
3	AD	105	GLY	3.1
16	AQ	10	ARG	3.1
43	BO	89	ASP	3.1
24	DI	101	SER	3.1
20	CB	14	HIS	3.1
49	BR	58	VAL	3.1
47	BF	112	ASP	3.1
21	CU	35	GLU	3.0
6	AG	58	LEU	3.0
46	BU	86	PHE	3.0
27	DK	52	VAL	3.0
45	DS	105	VAL	3.0
28	BP	114	ASN	3.0
4	AE	13	LYS	3.0
37	DL	86	GLU	3.0
45	BS	68	ASP	3.0
25	DC	111	ALA	3.0
28	BP	88	ARG	3.0
29	DE	170	ARG	3.0
37	DL	83	ALA	3.0
34	B3	21	PHE	3.0
47	BF	98	PHE	3.0
6	AG	82	SER	3.0
50	DT	50	LEU	3.0
3	AD	87	GLU	3.0
40	BH	112	LYS	3.0
25	BC	113	ASP	3.0
51	BZ	60	ASP	3.0
24	BI	23	VAL	3.0
29	DE	196	VAL	3.0
24	DI	80	LYS	3.0
8	AI	4	GLN	3.0
28	BP	43	GLU	3.0
4	CE	36	THR	3.0

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Mol	Chain	Res	Type	RSRZ
26	DD	186	LEU	3.0
47	DF	11	VAL	3.0
48	DG	137	LYS	3.0
52	BW	51	GLY	3.0
28	DP	43	GLU	3.0
20	CB	99	MET	3.0
26	BD	181	ASP	3.0
33	D1	30	PRO	3.0
44	DQ	87	VAL	3.0
25	BC	126	GLY	3.0
34	B3	58	ILE	3.0
47	DF	21	TYR	3.0
28	DP	50	ARG	3.0
24	DI	116	MET	3.0
47	DF	37	MET	3.0
6	AG	86	VAL	3.0
45	DS	107	VAL	3.0
48	DG	147	LEU	3.0
14	AO	74	ASP	3.0
4	AE	127	TYR	3.0
47	BF	157	THR	3.0
42	DN	98	LEU	3.0
39	BX	11	VAL	3.0
40	DH	130	VAL	3.0
5	AF	51	ILE	3.0
19	CT	35	TYR	3.0
27	BK	82	ASN	3.0
46	BU	71	ILE	3.0
40	BH	41	LYS	3.0
45	BS	104	THR	3.0
47	DF	14	LYS	3.0
19	AT	85	LEU	3.0
43	BO	115	LEU	3.0
47	BF	161	SER	3.0
43	BO	25	ARG	3.0
43	BO	37	ALA	3.0
49	DR	25	LEU	3.0
29	BE	4	VAL	3.0
21	AU	23	GLU	3.0
21	AU	24	LYS	3.0
38	DM	103	TYR	3.0
24	BI	30	GLN	3.0

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Mol	Chain	Res	Type	RSRZ
4	AE	114	LEU	3.0
40	BH	12	LEU	3.0
40	DH	30	LEU	3.0
43	BO	106	LEU	3.0
2	AC	75	VAL	3.0
2	AC	158	GLY	3.0
36	B2	46	LYS	3.0
36	D2	46	LYS	3.0
47	BF	175	PRO	3.0
41	BJ	52	ASP	3.0
12	CM	51	GLN	3.0
35	DV	72	VAL	3.0
37	DL	117	THR	3.0
47	DF	3	LEU	3.0
48	BG	104	LEU	3.0
16	AQ	45	VAL	3.0
27	BK	113	MET	3.0
4	CE	71	ILE	3.0
28	BP	68	GLY	3.0
31	D0	26	SER	3.0
45	BS	52	GLU	3.0
47	DF	8	LYS	3.0
46	BU	88	ASP	3.0
8	CI	126	PHE	3.0
14	AO	81	LEU	3.0
24	DI	41	PHE	3.0
35	DV	38	LEU	3.0
5	AF	56	LYS	3.0
20	AB	186	VAL	3.0
26	BD	29	VAL	3.0
48	BG	96	ALA	3.0
28	BP	3	ILE	3.0
40	DH	27	ARG	2.9
45	BS	11	ARG	2.9
48	DG	114	HIS	2.9
8	AI	48	ARG	2.9
50	BT	69	ARG	2.9
7	AH	92	PRO	2.9
7	AH	126	CYS	2.9
27	DK	84	CYS	2.9
29	BE	180	LEU	2.9
29	DE	3	LEU	2.9

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Mol	Chain	Res	Type	RSRZ
16	AQ	51	GLU	2.9
20	AB	43	GLU	2.9
24	DI	100	ILE	2.9
27	BK	11	ALA	2.9
35	DV	3	THR	2.9
37	DL	78	ARG	2.9
6	AG	21	LEU	2.9
8	AI	127	SER	2.9
23	BB	137	U	2.9
51	BZ	46	PHE	2.9
3	AD	146	GLU	2.9
4	CE	37	VAL	2.9
38	BM	25	ASP	2.9
41	BJ	18	VAL	2.9
43	BO	103	VAL	2.9
46	BU	33	VAL	2.9
8	CI	56	MET	2.9
20	AB	64	GLY	2.9
40	DH	143	ILE	2.9
45	DS	5	ALA	2.9
5	AF	78	PHE	2.9
7	AH	39	LEU	2.9
29	DE	158	PHE	2.9
13	AN	65	GLN	2.9
29	BE	9	GLN	2.9
40	DH	114	GLU	2.9
13	CN	21	ALA	2.9
47	DF	29	ARG	2.9
15	CP	80	LYS	2.9
35	DV	56	PHE	2.9
26	DD	73	VAL	2.9
3	AD	143	SER	2.9
42	BN	12	ARG	2.9
52	BW	61	LYS	2.9
48	DG	49	LEU	2.9
20	CB	79	VAL	2.9
21	CU	34	ARG	2.9
25	DC	81	GLU	2.9
40	BH	103	VAL	2.9
42	BN	70	THR	2.9
24	BI	85	ILE	2.9
24	BI	98	GLY	2.9

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Mol	Chain	Res	Type	RSRZ
47	BF	160	LYS	2.9
25	BC	103	ILE	2.9
29	DE	148	ILE	2.9
52	BW	36	ILE	2.9
14	AO	87	LEU	2.9
26	DD	68	PHE	2.9
29	BE	19	PHE	2.9
39	BX	7	ARG	2.9
50	DT	34	VAL	2.9
9	AJ	100	ILE	2.9
15	AP	39	PHE	2.9
17	CR	66	LEU	2.9
25	DC	191	LEU	2.9
48	BG	147	LEU	2.9
46	BU	35	VAL	2.9
20	CB	157	PRO	2.9
27	BK	120	PRO	2.9
46	BU	101	THR	2.9
48	BG	23	ILE	2.9
7	CH	39	LEU	2.9
15	AP	55	ASP	2.9
11	AL	3	VAL	2.9
11	AL	51	VAL	2.9
17	AR	22	TYR	2.9
29	BE	144	GLU	2.9
43	BO	90	VAL	2.9
2	AC	157	GLY	2.9
24	BI	100	ILE	2.9
29	BE	149	ILE	2.9
40	DH	95	GLY	2.9
12	CM	78	ARG	2.9
45	BS	1	MET	2.9
50	DT	51	PHE	2.9
7	AH	53	ASP	2.9
26	BD	26	VAL	2.9
27	BK	56	ASP	2.9
52	BW	29	SER	2.9
28	BP	25	VAL	2.9
43	BO	116	GLN	2.9
34	B3	54	LEU	2.9
38	DM	134	THR	2.9
40	BH	77	THR	2.9

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Mol	Chain	Res	Type	RSRZ
37	BL	110	VAL	2.9
39	BX	17	GLU	2.9
5	AF	25	TYR	2.9
47	DF	6	TYR	2.9
3	CD	194	ILE	2.8
5	CF	51	ILE	2.8
8	AI	64	ILE	2.8
13	AN	46	LYS	2.8
24	DI	40	ALA	2.8
40	DH	119	ASN	2.8
28	BP	19	PHE	2.8
37	DL	125	LEU	2.8
7	AH	47	ASP	2.8
7	CH	126	CYS	2.8
9	AJ	95	GLY	2.8
12	AM	3	ILE	2.8
13	CN	22	LYS	2.8
20	CB	204	ASP	2.8
21	AU	20	ARG	2.8
45	BS	94	ASP	2.8
47	BF	86	CYS	2.8
47	BF	127	TYR	2.8
15	AP	75	ILE	2.8
27	DK	95	ILE	2.8
2	AC	42	LEU	2.8
8	AI	49	GLN	2.8
3	AD	185	PRO	2.8
27	BK	106	GLU	2.8
40	BH	129	GLU	2.8
46	BU	9	GLU	2.8
9	AJ	77	VAL	2.8
20	AB	207	ARG	2.8
51	BZ	67	VAL	2.8
35	BV	34	LYS	2.8
2	CC	119	ILE	2.8
20	AB	38	HIS	2.8
20	AB	59	ILE	2.8
47	BF	151	LEU	2.8
52	DW	75	ASN	2.8
3	AD	155	LYS	2.8
6	CG	4	ARG	2.8
16	AQ	33	TYR	2.8

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Mol	Chain	Res	Type	RSRZ
38	BM	132	THR	2.8
45	DS	103	ILE	2.8
20	CB	90	PHE	2.8
48	BG	144	ALA	2.8
3	CD	72	ARG	2.8
4	CE	53	ARG	2.8
34	D3	60	CYS	2.8
46	DU	52	ASN	2.8
23	BB	1067	A	2.8
40	BH	70	GLU	2.8
40	DH	69	ALA	2.8
41	BJ	29	ALA	2.8
26	DD	203	VAL	2.8
40	DH	108	VAL	2.8
5	CF	67	PRO	2.8
35	DV	30	ILE	2.8
20	CB	160	LEU	2.8
40	BH	30	LEU	2.8
3	AD	132	ALA	2.8
15	AP	43	ALA	2.8
26	DD	67	HIS	2.8
45	BS	78	GLU	2.8
39	BX	39	GLN	2.8
25	BC	73	ILE	2.8
27	DK	89	ASN	2.8
28	BP	65	ASN	2.8
33	B1	47	ILE	2.8
45	BS	35	ILE	2.8
27	DK	18	ARG	2.8
9	AJ	35	GLN	2.8
33	B1	41	VAL	2.8
3	AD	149	LYS	2.8
3	CD	203	TYR	2.8
35	DV	6	ALA	2.8
3	AD	163	GLN	2.8
24	DI	95	ASP	2.8
27	BK	17	ARG	2.8
52	BW	79	ILE	2.8
52	BW	82	GLU	2.8
3	AD	148	ALA	2.8
27	BK	83	ALA	2.8
30	BY	56	VAL	2.8

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Mol	Chain	Res	Type	RSRZ
20	CB	130	LYS	2.8
21	AU	34	ARG	2.8
24	BI	112	LYS	2.8
43	BO	12	THR	2.8
19	AT	41	GLY	2.8
3	CD	18	LEU	2.8
47	BF	90	LEU	2.8
48	DG	86	LEU	2.8
1	AA	87	C	2.8
7	AH	57	GLU	2.8
3	AD	172	VAL	2.8
27	DK	103	VAL	2.8
9	CJ	22	THR	2.8
16	AQ	36	PHE	2.8
28	BP	59	THR	2.8
30	BY	3	THR	2.8
23	DB	846	U	2.8
25	DC	80	LEU	2.8
47	DF	84	ILE	2.8
28	BP	1	SER	2.8
20	AB	200	PRO	2.8
20	CB	205	ALA	2.8
23	BB	1730	C	2.8
38	DM	108	VAL	2.8
40	BH	64	ALA	2.8
48	DG	95	ALA	2.8
27	BK	86	LEU	2.7
8	AI	52	GLU	2.7
42	BN	94	TYR	2.7
4	CE	44	ARG	2.7
9	AJ	74	VAL	2.7
46	DU	50	ALA	2.7
35	DV	1	MET	2.7
28	BP	11	GLN	2.7
44	DQ	55	GLN	2.7
44	DQ	116	LEU	2.7
48	BG	25	ILE	2.7
39	BX	24	GLU	2.7
11	AL	13	ARG	2.7
25	DC	1	ALA	2.7
28	BP	72	VAL	2.7
45	DS	58	ALA	2.7

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Mol	Chain	Res	Type	RSRZ
14	AO	20	ASN	2.7
25	BC	191	LEU	2.7
42	BN	44	LEU	2.7
13	AN	55	SER	2.7
24	DI	132	ALA	2.7
38	BM	30	SER	2.7
2	CC	109	GLU	2.7
6	CG	85	GLN	2.7
25	BC	265	PHE	2.7
37	DL	101	ILE	2.7
42	BN	82	GLU	2.7
14	AO	78	TYR	2.7
20	CB	158	ASP	2.7
37	DL	116	VAL	2.7
40	DH	81	ALA	2.7
25	BC	110	LYS	2.7
37	DL	109	LYS	2.7
18	AS	60	PHE	2.7
26	DD	3	GLY	2.7
33	B1	34	GLU	2.7
40	DH	87	GLU	2.7
47	DF	62	GLN	2.7
20	CB	46	VAL	2.7
20	CB	186	VAL	2.7
47	BF	45	ASP	2.7
6	AG	4	ARG	2.7
40	DH	80	ILE	2.7
30	DY	56	VAL	2.7
8	CI	64	ILE	2.7
12	AM	79	LEU	2.7
25	BC	109	LEU	2.7
25	DC	131	MET	2.7
29	DE	181	ILE	2.7
18	AS	18	VAL	2.7
20	AB	216	VAL	2.7
29	BE	120	VAL	2.7
38	BM	93	VAL	2.7
42	BN	40	LYS	2.7
40	DH	135	HIS	2.7
18	CS	21	ALA	2.7
4	CE	30	PHE	2.7
13	AN	20	PHE	2.7

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Mol	Chain	Res	Type	RSRZ
25	DC	92	LEU	2.7
49	DR	35	PHE	2.7
7	AH	111	THR	2.7
25	DC	250	GLN	2.7
49	BR	48	LYS	2.7
51	DZ	77	LYS	2.7
10	CK	73	VAL	2.7
12	CM	59	VAL	2.7
37	BL	122	VAL	2.7
42	BN	116	VAL	2.7
45	DS	92	ARG	2.7
4	CE	42	ASN	2.7
18	AS	73	PHE	2.7
30	DY	28	LEU	2.7
33	B1	6	GLU	2.7
47	BF	115	GLY	2.7
48	DG	116	LEU	2.7
9	AJ	85	ASP	2.7
19	CT	3	ILE	2.7
25	BC	90	ILE	2.7
40	BH	73	ASN	2.7
48	BG	45	ALA	2.7
20	AB	99	MET	2.7
27	DK	56	ASP	2.7
10	AK	73	VAL	2.7
27	BK	52	VAL	2.7
29	BE	115	GLN	2.7
33	B1	11	VAL	2.7
45	BS	105	VAL	2.7
48	BG	150	TYR	2.7
16	CQ	81	ALA	2.7
45	DS	2	GLU	2.7
2	AC	76	ILE	2.7
40	DH	99	ILE	2.7
25	BC	125	PRO	2.7
27	BK	85	VAL	2.7
27	BK	94	PRO	2.7
48	BG	125	PRO	2.7
5	CF	59	TYR	2.6
1	AA	412	A	2.6
3	CD	175	GLY	2.6
4	AE	91	SER	2.6

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Mol	Chain	Res	Type	RSRZ
20	CB	183	PHE	2.6
38	DM	126	ILE	2.6
43	BO	87	ILE	2.6
5	AF	17	GLN	2.6
24	BI	104	GLN	2.6
26	BD	109	VAL	2.6
35	BV	83	LYS	2.6
23	BB	1172	C	2.6
7	AH	35	ILE	2.6
11	CL	68	GLY	2.6
20	CB	83	ALA	2.6
24	DI	103	ALA	2.6
29	BE	170	ARG	2.6
41	BJ	122	LEU	2.6
24	DI	128	ILE	2.6
29	BE	181	ILE	2.6
50	DT	43	ILE	2.6
51	BZ	75	GLY	2.6
29	BE	199	MET	2.6
19	AT	42	ASP	2.6
47	BF	141	ASP	2.6
23	DB	653	U	2.6
24	DI	105	LEU	2.6
20	AB	14	HIS	2.6
24	BI	96	LYS	2.6
7	AH	61	THR	2.6
16	AQ	38	LYS	2.6
20	CB	65	LYS	2.6
37	BL	109	LYS	2.6
27	BK	35	VAL	2.6
46	BU	24	VAL	2.6
16	CQ	52	CYS	2.6
20	CB	125	PHE	2.6
47	BF	102	LEU	2.6
6	AG	6	ILE	2.6
8	CI	29	ILE	2.6
12	CM	1	ALA	2.6
20	CB	164	ASP	2.6
24	BI	76	ALA	2.6
49	BR	36	ALA	2.6
5	AF	10	VAL	2.6
20	AB	26	MET	2.6

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Mol	Chain	Res	Type	RSRZ
25	DC	62	ARG	2.6
37	DL	68	SER	2.6
49	BR	4	VAL	2.6
2	AC	45	GLU	2.6
3	CD	35	GLN	2.6
4	CE	80	LEU	2.6
4	CE	155	LYS	2.6
27	BK	101	GLY	2.6
25	DC	5	CYS	2.6
27	DK	47	ILE	2.6
47	BF	78	ILE	2.6
16	AQ	11	VAL	2.6
35	BV	91	PHE	2.6
41	BJ	24	THR	2.6
3	AD	90	LEU	2.6
7	AH	81	GLY	2.6
13	CN	46	LYS	2.6
25	BC	182	LYS	2.6
34	D3	64	ALA	2.6
49	BR	3	ALA	2.6
49	DR	59	ILE	2.6
52	DW	36	ILE	2.6
48	BG	169	ARG	2.6
10	AK	128	VAL	2.6
6	CG	145	GLU	2.6
25	DC	4	LYS	2.6
26	BD	163	GLY	2.6
12	CM	14	ALA	2.6
40	BH	100	ALA	2.6
45	BS	24	ILE	2.6
48	DG	54	ARG	2.6
26	BD	185	ASN	2.6
27	DK	82	ASN	2.6
5	AF	9	MET	2.6
9	CJ	74	VAL	2.6
15	AP	1	MET	2.6
26	DD	29	VAL	2.6
35	BV	1	MET	2.6
40	DH	9	VAL	2.6
44	BQ	101	ASP	2.6
48	DG	61	TRP	2.6
48	BG	74	MET	2.6

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Mol	Chain	Res	Type	RSRZ
44	DQ	88	GLU	2.6
45	BS	103	ILE	2.6
18	AS	21	ALA	2.6
35	BV	94	ALA	2.6
3	AD	129	VAL	2.6
7	CH	128	VAL	2.6
50	DT	47	VAL	2.6
20	CB	48	MET	2.6
2	AC	143	LEU	2.6
3	CD	33	ILE	2.6
6	CG	8	GLN	2.6
11	AL	12	ALA	2.6
12	AM	36	ALA	2.6
47	BF	21	TYR	2.6
2	AC	65	VAL	2.6
4	CE	40	ASP	2.6
25	DC	193	GLU	2.6
43	DO	62	LEU	2.6
7	CH	75	GLN	2.6
12	AM	76	ILE	2.6
20	CB	59	ILE	2.6
30	DY	2	LYS	2.6
31	B0	1	ALA	2.6
34	B3	47	ALA	2.6
27	BK	76	VAL	2.6
27	DK	10	VAL	2.6
7	AH	82	LEU	2.5
18	CS	73	PHE	2.6
42	BN	20	MET	2.5
50	BT	4	GLU	2.6
33	B1	27	ARG	2.5
50	DT	6	ARG	2.5
2	AC	100	ILE	2.5
10	AK	95	THR	2.5
25	BC	119	VAL	2.5
30	BY	54	VAL	2.5
38	DM	104	GLU	2.5
46	BU	82	VAL	2.5
47	BF	65	LEU	2.5
2	CC	154	GLY	2.5
17	AR	23	LYS	2.5
37	DL	58	TYR	2.5

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Mol	Chain	Res	Type	RSRZ
47	BF	169	LEU	2.5
23	BB	1870	C	2.5
4	AE	113	VAL	2.5
26	DD	46	ARG	2.5
40	DH	138	VAL	2.5
42	DN	29	VAL	2.5
45	DS	95	ARG	2.5
13	AN	22	LYS	2.5
13	CN	78	LEU	2.5
40	DH	117	LEU	2.5
2	CC	153	SER	2.5
13	AN	54	SER	2.5
24	DI	70	THR	2.5
28	BP	66	GLY	2.5
29	BE	125	SER	2.5
31	D0	25	THR	2.5
42	BN	14	SER	2.5
50	BT	2	ILE	2.5
4	AE	92	ARG	2.5
10	AK	55	ARG	2.5
27	BK	21	CYS	2.5
26	DD	75	ALA	2.5
29	BE	127	GLU	2.5
48	BG	80	GLU	2.5
51	DZ	51	VAL	2.5
20	CB	147	LEU	2.5
29	DE	105	LEU	2.5
29	DE	123	LYS	2.5
34	D3	21	PHE	2.5
7	CH	124	ILE	2.5
28	BP	103	THR	2.5
23	BB	654	A	2.5
11	AL	58	ASN	2.5
14	AO	15	PHE	2.5
20	AB	15	PHE	2.5
27	BK	59	LYS	2.5
40	DH	17	ASP	2.5
43	BO	50	ALA	2.5
46	BU	53	GLN	2.5
23	BB	653	U	2.5
34	B3	63	TYR	2.5
50	DT	93	LEU	2.5

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Mol	Chain	Res	Type	RSRZ
47	DF	16	MET	2.5
2	AC	67	ILE	2.5
5	AF	6	ILE	2.5
24	BI	64	ARG	2.5
24	DI	108	ILE	2.5
24	DI	67	THR	2.5
30	BY	18	LYS	2.5
46	BU	58	VAL	2.5
35	DV	57	TYR	2.5
19	CT	38	ILE	2.5
33	B1	4	ILE	2.5
47	BF	71	LYS	2.5
9	AJ	26	VAL	2.5
11	AL	54	VAL	2.5
18	CS	24	SER	2.5
47	BF	31	GLU	2.5
24	BI	105	LEU	2.5
26	DD	100	LEU	2.5
29	BE	118	LEU	2.5
41	BJ	140	LEU	2.5
52	BW	34	SER	2.5
48	DG	46	ASP	2.5
3	AD	126	GLY	2.5
23	BB	2320	U	2.5
25	DC	90	ILE	2.5
26	DD	17	GLU	2.5
26	DD	34	VAL	2.5
29	BE	186	VAL	2.5
35	DV	69	GLU	2.5
46	BU	72	PHE	2.5
50	DT	10	VAL	2.5
26	DD	57	ALA	2.5
37	DL	121	THR	2.5
38	DM	42	THR	2.5
2	CC	111	ASP	2.5
18	AS	43	MET	2.5
20	CB	64	GLY	2.5
2	CC	152	VAL	2.5
6	AG	73	GLU	2.5
20	CB	198	VAL	2.5
23	BB	2402	U	2.5
26	BD	189	VAL	2.5

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Mol	Chain	Res	Type	RSRZ
29	DE	187	VAL	2.5
39	BX	13	GLU	2.5
27	BK	112	PHE	2.5
40	DH	37	VAL	2.5
12	CM	112	ARG	2.5
44	BQ	112	ALA	2.5
48	BG	24	THR	2.5
48	BG	93	TYR	2.5
7	CH	35	ILE	2.5
25	BC	20	ASN	2.5
27	BK	99	ILE	2.5
50	BT	1	MET	2.5
41	DJ	140	LEU	2.5
48	BG	97	VAL	2.5
46	BU	60	LYS	2.5
6	CG	84	TYR	2.5
49	DR	12	HIS	2.5
5	CF	1	MET	2.5
20	AB	163	ILE	2.5
7	CH	46	GLU	2.5
7	AH	10	LEU	2.5
14	AO	43	PHE	2.5
24	DI	12	VAL	2.5
40	BH	123	ARG	2.5
24	BI	40	ALA	2.4
32	B4	29	ALA	2.4
5	AF	58	HIS	2.4
20	CB	206	ILE	2.4
29	BE	168	ASP	2.4
47	DF	86	CYS	2.4
7	CH	102	VAL	2.4
8	AI	18	VAL	2.4
47	DF	116	LEU	2.4
2	AC	98	ALA	2.4
6	AG	8	GLN	2.4
7	CH	92	PRO	2.4
12	CM	4	ALA	2.4
25	BC	102	TYR	2.4
49	DR	86	GLN	2.4
7	AH	49	LYS	2.4
20	CB	150	ILE	2.4
25	BC	123	ILE	2.4

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Mol	Chain	Res	Type	RSRZ
29	BE	25	GLU	2.4
17	CR	64	LEU	2.4
18	AS	26	ASP	2.4
25	BC	164	VAL	2.4
27	BK	12	ASP	2.4
27	DK	35	VAL	2.4
40	BH	62	LEU	2.4
40	BH	110	VAL	2.4
3	CD	108	ALA	2.4
19	AT	86	ALA	2.4
25	DC	20	ASN	2.4
16	AQ	8	GLN	2.4
45	BS	38	TYR	2.4
3	AD	147	LYS	2.4
7	AH	124	ILE	2.4
36	D2	1	MET	2.4
48	BG	51	PHE	2.4
49	BR	40	MET	2.4
29	DE	168	ASP	2.4
33	D1	28	THR	2.4
48	DG	71	LEU	2.4
50	DT	53	VAL	2.4
20	AB	196	ASP	2.4
47	BF	44	ALA	2.4
18	AS	2	ARG	2.4
21	AU	37	TYR	2.4
23	DB	2602	A	2.4
24	DI	104	GLN	2.4
30	BY	8	GLN	2.4
51	BZ	74	ARG	2.4
4	CE	47	PHE	2.4
25	BC	66	PHE	2.4
39	BX	56	LEU	2.4
51	BZ	40	VAL	2.4
3	CD	140	ASP	2.4
3	CD	173	ASP	2.4
7	AH	101	ALA	2.4
48	DG	122	ALA	2.4
20	AB	92	ASN	2.4
33	B1	17	GLY	2.4
12	CM	32	ILE	2.4
27	DK	39	ILE	2.4

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Mol	Chain	Res	Type	RSRZ
47	BF	59	ILE	2.4
3	CD	97	LEU	2.4
39	BX	28	LEU	2.4
20	CB	93	HIS	2.4
20	CB	94	ARG	2.4
14	AO	25	THR	2.4
20	AB	164	ASP	2.4
29	BE	140	ASP	2.4
29	BE	156	ASN	2.4
47	BF	142	TYR	2.4
48	BG	37	ASN	2.4
18	AS	61	VAL	2.4
34	D3	51	LYS	2.4
1	CA	1534	A	2.4
39	BX	61	ALA	2.4
9	CJ	101	SER	2.4
20	CB	55	GLU	2.4
23	BB	1171	G	2.4
29	BE	18	THR	2.4
35	BV	59	GLU	2.4
45	BS	59	GLU	2.4
5	AF	67	PRO	2.4
7	AH	48	PHE	2.4
45	BS	31	GLN	2.4
26	BD	188	LEU	2.4
38	DM	102	LEU	2.4
39	DX	23	ARG	2.4
41	DJ	105	VAL	2.4
46	DU	24	VAL	2.4
48	DG	117	PRO	2.4
26	BD	80	TRP	2.4
24	DI	109	ALA	2.4
4	CE	31	SER	2.4
5	CF	87	SER	2.4
41	BJ	44	TYR	2.4
1	CA	1030	U	2.4
9	AJ	96	VAL	2.4
15	CP	36	VAL	2.4
16	CQ	26	ARG	2.4
20	AB	69	VAL	2.4
42	BN	115	LEU	2.4
47	DF	35	LEU	2.4

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Mol	Chain	Res	Type	RSRZ
51	BZ	68	LEU	2.4
52	BW	38	ARG	2.4
33	D1	6	GLU	2.4
12	AM	52	ILE	2.4
2	CC	42	LEU	2.4
14	AO	63	ARG	2.4
11	AL	78	VAL	2.4
13	CN	44	VAL	2.4
16	CQ	74	LEU	2.4
25	BC	95	TYR	2.4
25	DC	104	LEU	2.4
29	DE	65	THR	2.4
29	DE	70	SER	2.4
40	BH	25	TYR	2.4
47	BF	8	LYS	2.4
40	DH	104	THR	2.4
45	BS	76	VAL	2.4
51	BZ	38	PHE	2.4
9	CJ	88	MET	2.4
14	AO	59	MET	2.4
26	BD	140	HIS	2.4
28	BP	106	ALA	2.4
47	DF	69	ALA	2.4
28	DP	87	ARG	2.4
25	BC	64	VAL	2.4
26	DD	92	VAL	2.4
40	BH	15	LEU	2.4
42	BN	48	VAL	2.4
42	BN	112	TYR	2.4
48	DG	112	VAL	2.4
49	BR	95	ASP	2.4
52	DW	37	VAL	2.4
3	AD	180	THR	2.4
3	CD	145	ARG	2.4
27	DK	92	GLU	2.4
29	BE	117	ARG	2.4
37	BL	137	ALA	2.4
40	BH	59	ALA	2.4
41	DJ	63	ALA	2.4
5	AF	60	VAL	2.4
29	DE	180	LEU	2.4
48	DG	32	LEU	2.4

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Mol	Chain	Res	Type	RSRZ
48	DG	50	THR	2.3
40	DH	123	ARG	2.3
13	AN	42	ASN	2.3
25	BC	1	ALA	2.3
38	DM	113	ALA	2.3
47	DF	1	ALA	2.3
26	DD	82	PHE	2.3
41	BJ	101	ILE	2.3
42	BN	87	PHE	2.3
43	DO	35	ILE	2.3
41	BJ	139	VAL	2.3
44	BQ	116	LEU	2.3
49	DR	98	ILE	2.3
19	AT	57	VAL	2.3
4	CE	28	ARG	2.3
32	B4	9	LYS	2.3
29	BE	107	SER	2.3
46	BU	21	ARG	2.3
10	AK	88	PRO	2.3
24	DI	21	PRO	2.3
1	AA	844	G	2.3
1	CA	1032	G	2.3
34	B3	10	ALA	2.3
34	B3	60	CYS	2.3
45	BS	21	ALA	2.3
2	AC	11	LEU	2.3
5	AF	7	VAL	2.3
7	CH	71	VAL	2.3
18	CS	30	LEU	2.3
23	BB	138	U	2.3
37	DL	120	VAL	2.3
41	BJ	57	LEU	2.3
8	AI	89	TYR	2.3
13	CN	19	TYR	2.3
48	DG	150	TYR	2.3
50	DT	49	LYS	2.3
28	BP	23	ASP	2.3
48	BG	59	ASP	2.3
25	DC	29	PHE	2.3
33	D1	51	ALA	2.3
47	BF	167	ALA	2.3
3	CD	149	LYS	2.3

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Mol	Chain	Res	Type	RSRZ
20	AB	22	TRP	2.3
25	BC	127	ASN	2.3
29	BE	178	VAL	2.3
2	CC	126	ARG	2.3
38	DM	60	GLN	2.3
41	BJ	35	ARG	2.3
49	DR	2	TYR	2.3
20	AB	158	ASP	2.3
29	DE	122	GLU	2.3
25	DC	11	GLY	2.3
2	AC	177	LEU	2.3
2	CC	20	THR	2.3
8	CI	27	ILE	2.3
20	AB	184	ALA	2.3
47	BF	19	PHE	2.3
48	DG	53	PRO	2.3
2	CC	38	VAL	2.3
24	BI	39	LYS	2.3
6	AG	77	ARG	2.3
46	BU	73	ASN	2.3
3	AD	151	GLN	2.3
40	DH	48	GLU	2.3
40	DH	60	GLU	2.3
50	DT	42	GLU	2.3
3	AD	158	LEU	2.3
11	AL	25	ALA	2.3
20	AB	42	LEU	2.3
35	BV	66	ASP	2.3
41	BJ	32	LEU	2.3
43	BO	27	VAL	2.3
46	BU	47	PRO	2.3
46	DU	32	LYS	2.3
2	CC	130	ARG	2.3
38	DM	128	THR	2.3
17	CR	22	TYR	2.3
5	CF	88	MET	2.3
37	BL	76	GLU	2.3
52	BW	28	GLU	2.3
2	CC	46	LEU	2.3
3	AD	4	LEU	2.3
4	CE	32	PHE	2.3
24	DI	96	LYS	2.3

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Mol	Chain	Res	Type	RSRZ
51	DZ	5	CYS	2.3
28	BP	109	ILE	2.3
29	DE	23	PHE	2.3
29	DE	153	LEU	2.3
4	AE	122	VAL	2.3
9	CJ	79	PRO	2.3
14	AO	75	VAL	2.3
4	CE	148	SER	2.3
23	BB	1731	G	2.3
33	B1	12	SER	2.3
6	AG	75	LYS	2.3
20	CB	66	ILE	2.3
25	BC	104	LEU	2.3
8	CI	57	VAL	2.3
45	DS	67	ASP	2.3
21	AU	43	GLU	2.3
47	DF	2	LYS	2.3
3	CD	177	MET	2.3
27	DK	17	ARG	2.3
52	BW	33	GLY	2.3
46	DU	33	VAL	2.3
37	BL	129	LYS	2.3
48	BG	117	PRO	2.3
2	AC	151	GLU	2.3
2	AC	155	ARG	2.3
4	CE	81	GLN	2.3
26	BD	110	THR	2.3
35	DV	62	THR	2.3
45	DS	39	THR	2.3
14	AO	56	LEU	2.3
48	BG	92	GLY	2.3
18	AS	42	ASN	2.3
20	CB	92	ASN	2.3
19	AT	71	ALA	2.3
28	DP	69	VAL	2.3
8	CI	114	LYS	2.3
8	CI	58	GLU	2.3
18	AS	41	PRO	2.3
25	DC	167	ASP	2.3
47	BF	55	ASP	2.3
51	DZ	60	ASP	2.3
14	AO	80	GLN	2.3

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Mol	Chain	Res	Type	RSRZ
25	BC	80	LEU	2.3
33	D1	15	GLY	2.3
49	DR	66	HIS	2.3
5	AF	93	LYS	2.3
28	BP	31	VAL	2.3
37	BL	141	LYS	2.3
41	BJ	72	LYS	2.3
41	BJ	105	VAL	2.3
49	DR	75	VAL	2.3
50	BT	16	VAL	2.3
50	BT	64	LYS	2.3
4	CE	115	GLU	2.3
29	DE	88	ARG	2.3
33	D1	34	GLU	2.3
37	BL	81	ASP	2.3
48	BG	15	ASP	2.3
48	BG	113	ASP	2.3
32	B4	35	GLN	2.3
45	DS	82	MET	2.3
16	AQ	60	ILE	2.3
40	BH	68	ARG	2.2
40	DH	67	ALA	2.2
45	BS	95	ARG	2.2
46	BU	75	ALA	2.2
47	DF	17	THR	2.3
27	BK	64	ARG	2.2
31	B0	35	GLU	2.2
35	DV	7	GLU	2.2
15	CP	38	PHE	2.2
16	CQ	56	ASP	2.2
17	CR	71	ASP	2.2
28	DP	99	LEU	2.2
34	B3	51	LYS	2.2
19	CT	57	VAL	2.2
23	DB	62	U	2.2
30	DY	4	ILE	2.2
35	BV	63	ILE	2.2
24	DI	76	ALA	2.2
43	BO	82	ALA	2.2
27	BK	89	ASN	2.2
2	AC	82	ASP	2.2
9	AJ	10	LEU	2.2

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Mol	Chain	Res	Type	RSRZ
15	AP	52	LEU	2.2
47	DF	162	ASP	2.2
50	DT	33	LYS	2.2
24	BI	128	ILE	2.2
25	BC	2	VAL	2.2
29	BE	169	VAL	2.2
29	DE	146	VAL	2.2
3	CD	16	THR	2.2
20	AB	190	SER	2.2
24	DI	44	LYS	2.2
29	BE	185	LYS	2.2
41	DJ	61	LYS	2.2
47	DF	87	LYS	2.2
4	CE	114	LEU	2.2
8	CI	38	PHE	2.2
11	AL	23	LEU	2.2
24	DI	37	PHE	2.2
40	BH	95	GLY	2.2
45	DS	97	LEU	2.2
7	CH	9	MET	2.2
14	CO	36	ILE	2.2
26	BD	148	GLN	2.2
39	DX	36	GLN	2.2
47	BF	155	ILE	2.2
47	DF	166	ARG	2.2
49	BR	59	ILE	2.2
15	AP	44	SER	2.2
34	B3	15	LYS	2.2
41	BJ	123	LYS	2.2
40	DH	96	THR	2.2
45	DS	12	SER	2.2
4	CE	86	GLY	2.2
39	BX	21	LEU	2.2
47	DF	90	LEU	2.2
2	AC	180	ASP	2.2
9	CJ	77	VAL	2.2
15	CP	20	VAL	2.2
21	AU	5	VAL	2.2
26	BD	1	MET	2.2
26	BD	178	VAL	2.2
37	DL	81	ASP	2.2
40	BH	143	ILE	2.2

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Mol	Chain	Res	Type	RSRZ
41	DJ	86	GLN	2.2
42	BN	18	GLN	2.2
42	DN	20	MET	2.2
45	BS	47	VAL	2.2
24	DI	43	ALA	2.2
24	DI	62	ALA	2.2
27	BK	60	ALA	2.2
27	DK	46	ALA	2.2
44	DQ	68	ALA	2.2
5	CF	78	PHE	2.2
5	AF	4	TYR	2.2
26	DD	91	THR	2.2
19	AT	38	ILE	2.2
3	AD	21	LYS	2.2
4	CE	85	LYS	2.2
5	AF	13	ASP	2.2
17	AR	71	ASP	2.2
30	DY	57	GLU	2.2
50	DT	14	PRO	2.2
2	CC	189	HIS	2.2
37	BL	108	ALA	2.2
52	DW	45	HIS	2.2
20	CB	34	ARG	2.2
39	BX	52	ARG	2.2
29	BE	105	LEU	2.2
42	BN	79	LEU	2.2
45	BS	46	LEU	2.2
2	CC	186	SER	2.2
45	BS	108	SER	2.2
29	DE	52	VAL	2.2
37	DL	100	ILE	2.2
39	BX	16	THR	2.2
24	BI	71	LYS	2.2
25	DC	43	ASN	2.2
27	BK	66	LYS	2.2
38	BM	34	LYS	2.2
47	DF	83	PRO	2.2
48	BG	21	GLN	2.2
2	AC	179	ALA	2.2
27	DK	12	ASP	2.2
2	CC	166	TRP	2.2
27	DK	79	PHE	2.2

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Mol	Chain	Res	Type	RSRZ
43	DO	115	LEU	2.2
9	CJ	18	ILE	2.2
24	BI	87	SER	2.2
26	BD	98	VAL	2.2
30	BY	2	LYS	2.2
33	B1	42	VAL	2.2
35	BV	71	LYS	2.2
44	DQ	111	LYS	2.2
21	AU	35	GLU	2.2
46	BU	100	GLU	2.2
51	DZ	76	GLU	2.2
36	B2	28	ARG	2.2
40	DH	105	ALA	2.2
20	AB	25	LYS	2.2
25	DC	126	GLY	2.2
50	DT	32	LEU	2.2
37	DL	96	LYS	2.2
39	BX	9	LYS	2.2
52	BW	26	GLY	2.2
3	CD	144	ILE	2.2
5	CF	4	TYR	2.2
32	B4	17	VAL	2.2
24	DI	107	GLU	2.2
30	BY	38	GLU	2.2
1	AA	1080	A	2.2
23	BB	2799	A	2.2
24	BI	119	ALA	2.2
24	DI	110	GLN	2.2
37	BL	5	THR	2.2
41	DJ	45	THR	2.2
29	BE	8	ALA	2.2
40	BH	74	ALA	2.2
45	BS	93	ALA	2.2
48	BG	103	ASN	2.2
3	AD	160	LEU	2.2
11	AL	14	LYS	2.2
14	AO	39	LEU	2.2
35	BV	85	LYS	2.2
37	BL	3	LEU	2.2
44	DQ	108	LEU	2.2
11	AL	91	GLY	2.2
5	CF	71	ILE	2.2

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Mol	Chain	Res	Type	RSRZ
25	DC	119	VAL	2.2
28	DP	91	VAL	2.2
38	BM	126	ILE	2.2
43	BO	74	VAL	2.2
43	BO	80	GLU	2.2
14	CO	40	GLN	2.2
26	BD	112	THR	2.2
39	BX	36	GLN	2.2
40	DH	106	ALA	2.2
50	BT	46	ALA	2.2
5	CF	52	ASN	2.2
41	BJ	119	PHE	2.2
48	BG	7	PRO	2.2
1	AA	88	U	2.2
4	AE	87	VAL	2.2
4	CE	55	VAL	2.2
24	DI	49	GLU	2.2
48	DG	130	ILE	2.2
7	AH	26	MET	2.2
23	BB	1726	C	2.2
11	AL	60	PHE	2.2
28	BP	84	SER	2.2
15	AP	66	THR	2.2
47	DF	38	GLY	2.2
4	CE	45	VAL	2.2
27	BK	95	ILE	2.2
29	BE	176	ASP	2.2
29	DE	96	VAL	2.2
41	DJ	19	ASP	2.2
39	BX	8	GLU	2.1
3	AD	3	TYR	2.1
15	CP	46	LYS	2.1
34	D3	63	TYR	2.1
4	AE	109	ALA	2.1
9	CJ	35	GLN	2.1
27	DK	58	LEU	2.1
40	DH	132	PHE	2.1
47	DF	151	LEU	2.1
50	BT	11	LEU	2.1
24	DI	53	PRO	2.1
40	BH	120	GLY	2.1
40	DH	50	ARG	2.1

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Mol	Chain	Res	Type	RSRZ
47	BF	166	ARG	2.1
29	DE	121	VAL	2.1
31	D0	54	ILE	2.1
28	DP	37	LYS	2.1
34	D3	53	ASP	2.1
40	BH	99	ILE	2.1
2	CC	41	TYR	2.1
20	CB	72	LYS	2.1
40	DH	71	LYS	2.1
26	BD	165	MET	2.1
5	CF	95	ALA	2.1
8	AI	38	PHE	2.1
11	AL	73	LEU	2.1
25	DC	105	ALA	2.1
28	DP	42	PHE	2.1
37	BL	57	LEU	2.1
51	DZ	71	LEU	2.1
2	AC	109	GLU	2.1
3	AD	199	ILE	2.1
24	BI	138	VAL	2.1
29	BE	15	SER	2.1
29	BE	70	SER	2.1
47	DF	12	VAL	2.1
51	BZ	47	VAL	2.1
25	BC	196	ASN	2.1
52	DW	65	LYS	2.1
45	DS	68	ASP	2.1
3	AD	164	ARG	2.1
35	DV	42	LEU	2.1
45	DS	51	LEU	2.1
4	CE	60	GLN	2.1
50	DT	69	ARG	2.1
1	AA	77	A	2.1
25	DC	168	GLY	2.1
2	CC	160	GLU	2.1
7	CH	59	GLU	2.1
11	AL	29	LYS	2.1
16	AQ	59	GLU	2.1
40	DH	19	VAL	2.1
48	BG	85	LYS	2.1
48	BG	155	PRO	2.1
2	AC	126	ARG	2.1

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Mol	Chain	Res	Type	RSRZ
2	AC	133	MET	2.1
2	CC	106	ARG	2.1
45	BS	62	ASP	2.1
29	DE	199	MET	2.1
47	BF	79	ARG	2.1
47	BF	99	PHE	2.1
8	CI	15	ALA	2.1
20	AB	63	LYS	2.1
24	DI	71	LYS	2.1
35	DV	46	LYS	2.1
46	BU	77	GLY	2.1
50	BT	68	LYS	2.1
20	CB	91	VAL	2.1
21	CU	43	GLU	2.1
23	DB	548	G	2.1
25	BC	171	VAL	2.1
39	DX	5	GLU	2.1
49	BR	14	VAL	2.1
15	CP	17	TYR	2.1
21	AU	17	ARG	2.1
26	DD	35	THR	2.1
2	AC	203	LYS	2.1
5	CF	62	MET	2.1
25	DC	32	LEU	2.1
49	DR	43	ASN	2.1
50	BT	32	LEU	2.1
9	AJ	82	LYS	2.1
27	DK	53	LYS	2.1
4	CE	118	GLY	2.1
41	BJ	86	GLN	2.1
49	DR	67	GLY	2.1
2	CC	169	GLU	2.1
20	CB	144	GLU	2.1
1	AA	209	U	2.1
37	DL	135	ILE	2.1
12	AM	78	ARG	2.1
6	AG	76	SER	2.1
8	AI	60	LEU	2.1
3	AD	98	ASP	2.1
20	CB	35	ASN	2.1
24	BI	113	ALA	2.1
26	DD	200	ASP	2.1

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Mol	Chain	Res	Type	RSRZ
27	DK	97	THR	2.1
30	DY	5	LYS	2.1
9	AJ	34	ALA	2.1
15	AP	2	VAL	2.1
20	AB	95	TRP	2.1
24	BI	77	VAL	2.1
25	BC	93	VAL	2.1
25	DC	198	GLU	2.1
26	BD	5	VAL	2.1
27	BK	10	VAL	2.1
50	DT	4	GLU	2.1
8	AI	93	LEU	2.1
15	CP	41	PRO	2.1
17	AR	29	LYS	2.1
31	B0	38	LEU	2.1
35	BV	2	PHE	2.1
2	CC	157	GLY	2.1
6	AG	126	ALA	2.1
13	CN	17	ASP	2.1
16	CQ	53	GLY	2.1
18	CS	74	ALA	2.1
26	BD	10	GLY	2.1
27	BK	90	ASN	2.1
28	BP	24	THR	2.1
43	BO	77	ALA	2.1
45	DS	44	ALA	2.1
46	BU	83	GLY	2.1
48	DG	113	ASP	2.1
50	BT	79	ASP	2.1
5	AF	96	VAL	2.1
21	CU	46	ARG	2.1
26	BD	14	ILE	2.1
26	DD	96	ILE	2.1
15	AP	46	LYS	2.1
33	B1	26	LYS	2.1
41	BJ	68	LYS	2.1
48	BG	43	LYS	2.1
23	DB	546	U	2.1
27	BK	58	LEU	2.1
45	DS	75	PHE	2.1
47	BF	64	PRO	2.1
12	AM	93	GLY	2.1

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Mol	Chain	Res	Type	RSRZ
20	AB	153	MET	2.1
28	DP	67	GLU	2.1
38	DM	32	GLY	2.1
47	BF	60	SER	2.1
41	BJ	129	GLU	2.1
44	BQ	117	ALA	2.1
3	CD	101	VAL	2.1
43	BO	8	ILE	2.1
35	DV	2	PHE	2.1
45	DS	23	LEU	2.1
33	B1	48	TYR	2.1
47	DF	28	PRO	2.1
3	CD	56	GLU	2.1
24	DI	102	ARG	2.1
25	BC	179	GLU	2.1
5	CF	96	VAL	2.1
25	DC	169	ALA	2.1
27	DK	83	ALA	2.1
36	B2	22	MET	2.1
38	DM	105	MET	2.1
40	BH	9	VAL	2.1
48	BG	112	VAL	2.1
9	AJ	91	ASP	2.1
25	DC	103	ILE	2.1
27	BK	3	GLN	2.1
30	BY	4	ILE	2.1
31	B0	42	ILE	2.1
32	B4	23	ILE	2.1
42	DN	70	THR	2.1
51	DZ	68	LEU	2.1
25	DC	202	ARG	2.1
52	BW	19	ARG	2.1
8	AI	99	LYS	2.1
20	CB	80	LYS	2.1
37	DL	76	GLU	2.1
45	DS	48	LYS	2.1
52	DW	6	GLY	2.1
27	DK	69	VAL	2.1
8	CI	127	SER	2.1
17	AR	32	ILE	2.1
29	DE	175	ILE	2.1
2	AC	36	PHE	2.1

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Mol	Chain	Res	Type	RSRZ
7	AH	37	ASN	2.1
41	DJ	122	LEU	2.1
48	BG	49	LEU	2.1
52	DW	68	PHE	2.1
14	AO	77	ARG	2.1
17	AR	72	ARG	2.1
25	DC	100	ARG	2.1
3	AD	23	GLY	2.1
3	CD	171	GLU	2.1
20	AB	159	ALA	2.1
25	DC	19	VAL	2.1
47	BF	88	VAL	2.1
50	BT	24	MET	2.1
50	BT	34	VAL	2.1
20	AB	185	ILE	2.0
33	D1	8	ILE	2.0
6	AG	56	SER	2.0
35	DV	51	GLN	2.0
11	CL	56	LEU	2.0
13	CN	20	PHE	2.0
51	BZ	11	ARG	2.0
34	D3	4	LYS	2.0
3	CD	178	GLU	2.0
28	BP	97	TYR	2.0
39	DX	17	GLU	2.0
40	DH	129	GLU	2.0
13	AN	24	ALA	2.0
24	BI	83	ALA	2.0
41	DJ	139	VAL	2.0
52	BW	37	VAL	2.0
45	DS	66	ILE	2.0
29	DE	115	GLN	2.0
5	AF	39	LEU	2.0
12	AM	75	SER	2.0
44	BQ	102	LYS	2.0
1	AA	461	A	2.0
3	CD	107	GLY	2.0
26	BD	183	GLU	2.0
37	DL	114	GLY	2.0
4	CE	110	MET	2.0
11	AL	62	VAL	2.0
16	AQ	57	VAL	2.0

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Mol	Chain	Res	Type	RSRZ
29	DE	126	VAL	2.0
46	DU	35	VAL	2.0
7	AH	6	ILE	2.0
13	CN	29	ILE	2.0
18	AS	75	PRO	2.0
19	CT	66	ILE	2.0
35	DV	29	ILE	2.0
45	DS	35	ILE	2.0
45	DS	74	ILE	2.0
14	AO	88	ARG	2.0
51	BZ	37	ARG	2.0
2	AC	129	PHE	2.0
3	CD	20	LEU	2.0
47	BF	172	PHE	2.0
3	CD	34	GLU	2.0
6	AG	102	TRP	2.0
16	AQ	79	GLU	2.0
3	CD	136	VAL	2.0
12	CM	7	ASN	2.0
20	AB	41	ASN	2.0
24	DI	88	GLY	2.0
28	BP	60	VAL	2.0
29	BE	128	ALA	2.0
29	DE	11	ALA	2.0
35	DV	64	VAL	2.0
43	BO	36	TYR	2.0
37	BL	73	ILE	2.0
40	BH	69	ALA	2.0
5	CF	54	LEU	2.0
7	AH	62	LEU	2.0
17	AR	67	LEU	2.0
38	DM	20	LEU	2.0
42	BN	51	LEU	2.0
7	AH	41	GLU	2.0
47	DF	164	GLU	2.0
27	BK	34	GLY	2.0
29	BE	171	ASP	2.0
31	D0	45	ASP	2.0
6	AG	147	ASN	2.0
7	CH	74	ILE	2.0
20	CB	75	ALA	2.0
33	B1	22	THR	2.0

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Mol	Chain	Res	Type	RSRZ
43	BO	81	ARG	2.0
26	DD	14	ILE	2.0
26	DD	55	LYS	2.0
33	B1	32	LYS	2.0
44	BQ	97	ILE	2.0
48	BG	164	ALA	2.0
52	BW	17	ALA	2.0
6	CG	61	PHE	2.0
16	AQ	43	LEU	2.0
37	DL	79	LEU	2.0
47	DF	56	LEU	2.0
44	DQ	70	GLN	2.0
37	DL	51	GLU	2.0
6	AG	42	VAL	2.0
25	DC	140	VAL	2.0
48	DG	90	GLY	2.0
27	DK	59	LYS	2.0
20	CB	175	ALA	2.0
20	CB	184	ALA	2.0
23	BB	1459	G	2.0
25	BC	85	ASN	2.0
35	BV	30	ILE	2.0
40	BH	72	ILE	2.0
41	DJ	4	PHE	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, 95<sup>th</sup> 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( $\text{\AA}^2$ )	Q<0.9
53	NMY	DB	3001	42/42	0.68	0.53	15.96	88,88,88,88	42
54	MG	AA	1658	1/1	0.89	0.33	13.51	115,115,115,115	0
54	MG	BB	3082	1/1	0.85	0.33	10.04	59,59,59,59	0
53	NMY	BB	3001	42/42	0.59	0.49	7.85	100,100,100,100	42
54	MG	AA	1620	1/1	0.79	0.18	7.22	130,130,130,130	0
54	MG	CA	1638	1/1	0.88	0.17	4.33	142,142,142,142	0
53	NMY	CA	1601	42/42	0.89	0.25	3.82	71,71,71,71	0
54	MG	BB	3088	1/1	0.96	0.21	3.12	57,57,57,57	0
54	MG	DB	3060	1/1	0.80	0.24	3.07	124,124,124,124	0
54	MG	DB	3031	1/1	0.81	0.24	3.03	32,32,32,32	0
54	MG	DB	3097	1/1	0.81	0.21	2.61	33,33,33,33	0
53	NMY	AA	1601	42/42	0.88	0.29	1.82	71,71,71,71	0
54	MG	BB	3087	1/1	0.96	0.23	1.75	41,41,41,41	0
54	MG	AA	1636	1/1	0.70	0.12	1.37	88,88,88,88	0
54	MG	DB	3052	1/1	0.97	0.20	1.07	32,32,32,32	0
54	MG	CA	1633	1/1	0.96	0.16	0.67	73,73,73,73	0
54	MG	CA	1645	1/1	0.97	0.16	0.65	45,45,45,45	0
54	MG	CA	1632	1/1	0.95	0.15	0.56	47,47,47,47	0
54	MG	DB	3090	1/1	0.97	0.17	0.36	34,34,34,34	0
54	MG	BB	3041	1/1	0.95	0.15	-0.34	28,28,28,28	0
54	MG	CA	1653	1/1	0.94	0.10	-0.46	33,33,33,33	0
54	MG	DB	3111	1/1	0.95	0.14	-0.52	28,28,28,28	0
54	MG	BB	3099	1/1	0.95	0.16	-0.62	41,41,41,41	0
54	MG	AA	1637	1/1	0.87	0.10	-0.66	89,89,89,89	0
55	ZN	D4	101	1/1	0.95	0.13	-0.84	57,57,57,57	0
54	MG	DB	3070	1/1	0.96	0.18	-0.86	23,23,23,23	0
54	MG	BB	3012	1/1	0.97	0.17	-0.89	25,25,25,25	0
54	MG	DB	3091	1/1	0.92	0.07	-0.97	47,47,47,47	0
54	MG	DB	3085	1/1	0.96	0.17	-1.04	25,25,25,25	0
54	MG	DB	3100	1/1	0.94	0.15	-1.05	9,9,9,9	0
54	MG	AA	1654	1/1	0.91	0.13	-1.05	51,51,51,51	0
54	MG	DB	3048	1/1	0.96	0.17	-1.10	23,23,23,23	0
54	MG	CN	201	1/1	0.93	0.07	-1.24	48,48,48,48	0
54	MG	CA	1636	1/1	0.87	0.08	-1.28	56,56,56,56	0
54	MG	AA	1621	1/1	0.86	0.07	-1.32	85,85,85,85	0
54	MG	CA	1639	1/1	0.96	0.08	-1.42	14,14,14,14	0
54	MG	DB	3015	1/1	0.95	0.07	-1.45	22,22,22,22	0
54	MG	DB	3075	1/1	0.99	0.12	-1.45	7,7,7,7	0
54	MG	AA	1631	1/1	0.95	0.10	-1.46	107,107,107,107	0
54	MG	DB	3080	1/1	0.98	0.16	-1.53	39,39,39,39	0
54	MG	CA	1613	1/1	0.97	0.09	-1.53	77,77,77,77	0
54	MG	CA	1615	1/1	0.83	0.07	-1.60	41,41,41,41	0
54	MG	AA	1645	1/1	0.98	0.10	-1.63	60,60,60,60	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	BB	3109	1/1	0.96	0.13	-1.66	32,32,32,32	0
54	MG	CA	1640	1/1	0.98	0.12	-1.68	57,57,57,57	0
54	MG	BB	3086	1/1	0.97	0.14	-1.75	66,66,66,66	0
55	ZN	B4	101	1/1	0.95	0.06	-1.81	72,72,72,72	0
54	MG	BB	3095	1/1	0.81	0.15	-1.85	46,46,46,46	0
54	MG	BB	3005	1/1	0.94	0.04	-1.93	39,39,39,39	0
54	MG	AA	1608	1/1	0.98	0.06	-1.94	54,54,54,54	0
54	MG	BB	3022	1/1	0.97	0.10	-2.01	22,22,22,22	0
54	MG	AA	1639	1/1	0.96	0.09	-2.04	57,57,57,57	0
54	MG	AA	1604	1/1	0.98	0.15	-2.06	36,36,36,36	0
54	MG	BB	3006	1/1	0.99	0.14	-2.07	5,5,5,5	0
54	MG	BB	3013	1/1	0.95	0.12	-2.09	41,41,41,41	0
54	MG	BB	3038	1/1	0.93	0.08	-2.10	50,50,50,50	0
54	MG	BB	3063	1/1	0.94	0.14	-2.14	31,31,31,31	0
54	MG	AA	1614	1/1	0.96	0.03	-2.20	64,64,64,64	0
54	MG	DB	3004	1/1	0.98	0.09	-2.28	14,14,14,14	0
54	MG	BB	3030	1/1	0.94	0.09	-2.29	36,36,36,36	0
54	MG	DB	3089	1/1	0.98	0.14	-2.44	10,10,10,10	0
54	MG	AA	1611	1/1	0.98	0.04	-2.58	28,28,28,28	0
54	MG	DB	3008	1/1	0.96	0.11	-2.80	16,16,16,16	0
54	MG	AA	1652	1/1	0.93	0.06	-2.81	73,73,73,73	0
54	MG	BB	3089	1/1	0.92	0.07	-2.82	45,45,45,45	0
54	MG	CA	1606	1/1	0.99	0.09	-2.90	19,19,19,19	0
54	MG	CA	1643	1/1	0.88	0.10	-2.95	43,43,43,43	0
54	MG	BB	3074	1/1	0.95	0.10	-3.00	31,31,31,31	0
54	MG	BB	3024	1/1	0.99	0.13	-3.09	7,7,7,7	0
54	MG	AA	1630	1/1	0.92	0.07	-3.12	35,35,35,35	0
54	MG	CA	1624	1/1	0.96	0.03	-3.14	34,34,34,34	0
54	MG	BB	3084	1/1	0.96	0.10	-3.28	21,21,21,21	0
54	MG	DB	3028	1/1	0.98	0.10	-3.40	8,8,8,8	0
54	MG	DB	3086	1/1	0.92	0.11	-3.43	18,18,18,18	0
54	MG	AA	1643	1/1	0.94	0.06	-3.59	53,53,53,53	0
54	MG	AA	1634	1/1	0.94	0.04	-3.63	52,52,52,52	0
54	MG	DB	3093	1/1	0.93	0.09	-3.80	67,67,67,67	0
54	MG	BB	3078	1/1	0.91	0.06	-3.81	32,32,32,32	0
54	MG	AA	1610	1/1	0.97	0.10	-3.95	10,10,10,10	0
54	MG	DB	3079	1/1	0.97	0.09	-3.97	43,43,43,43	0
54	MG	CA	1656	1/1	0.97	0.07	-3.99	27,27,27,27	0
54	MG	BB	3091	1/1	0.91	0.09	-4.06	75,75,75,75	0
54	MG	BB	3066	1/1	0.94	0.06	-4.06	44,44,44,44	0
54	MG	DB	3056	1/1	0.95	0.07	-4.07	12,12,12,12	0
54	MG	DB	3104	1/1	0.88	0.09	-4.11	21,21,21,21	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	AA	1602	1/1	0.96	0.05	-4.15	29,29,29,29	0
54	MG	CA	1617	1/1	0.99	0.07	-4.15	9,9,9,9	0
54	MG	DB	3011	1/1	0.95	0.07	-4.24	7,7,7,7	0
54	MG	BB	3050	1/1	0.95	0.08	-4.33	18,18,18,18	0
54	MG	DB	3088	1/1	0.97	0.10	-4.39	48,48,48,48	0
54	MG	BB	3017	1/1	0.98	0.10	-4.69	28,28,28,28	0
54	MG	BB	3080	1/1	0.95	0.09	-4.74	37,37,37,37	0
54	MG	BB	3060	1/1	0.96	0.08	-4.76	30,30,30,30	0
54	MG	BB	3003	1/1	0.99	0.07	-4.90	24,24,24,24	0
54	MG	DB	3109	1/1	0.97	0.05	-5.04	10,10,10,10	0
54	MG	BB	3014	1/1	0.91	0.05	-5.12	42,42,42,42	0
54	MG	DB	3077	1/1	0.99	0.12	-5.14	47,47,47,47	0
54	MG	CA	1644	1/1	0.95	0.08	-5.18	58,58,58,58	0
54	MG	AA	1644	1/1	0.96	0.07	-5.20	24,24,24,24	0
54	MG	BB	3049	1/1	0.99	0.03	-5.23	14,14,14,14	0
54	MG	BB	3033	1/1	0.96	0.07	-5.63	55,55,55,55	0
54	MG	CA	1605	1/1	0.98	0.04	-5.64	16,16,16,16	0
54	MG	DB	3003	1/1	0.98	0.08	-5.65	9,9,9,9	0
54	MG	BB	3062	1/1	0.97	0.04	-5.72	29,29,29,29	0
54	MG	DB	3037	1/1	0.93	0.07	-5.85	15,15,15,15	0
54	MG	BB	3057	1/1	0.99	0.05	-5.97	20,20,20,20	0
54	MG	DB	3036	1/1	0.98	0.05	-6.03	40,40,40,40	0
54	MG	BB	3053	1/1	0.98	0.08	-6.31	25,25,25,25	0
54	MG	DB	3069	1/1	0.97	0.10	-6.35	6,6,6,6	0
54	MG	DB	3081	1/1	0.93	0.12	-6.37	18,18,18,18	0
54	MG	DB	3045	1/1	0.98	0.03	-6.41	22,22,22,22	0
54	MG	CA	1618	1/1	0.98	0.04	-6.41	8,8,8,8	0
54	MG	DB	3073	1/1	0.98	0.07	-6.42	33,33,33,33	0
54	MG	BB	3020	1/1	0.85	0.09	-6.45	45,45,45,45	0
54	MG	BB	3051	1/1	0.95	0.05	-6.52	41,41,41,41	0
54	MG	BB	3104	1/1	0.97	0.04	-6.61	8,8,8,8	0
54	MG	BB	3070	1/1	0.96	0.08	-6.87	15,15,15,15	0
54	MG	DB	3010	1/1	0.94	0.07	-7.01	5,5,5,5	0
54	MG	DB	3057	1/1	0.95	0.08	-7.11	5,5,5,5	0
54	MG	BB	3002	1/1	0.97	0.05	-7.24	24,24,24,24	0
54	MG	CA	1655	1/1	0.98	0.07	-7.27	69,69,69,69	0
54	MG	DB	3042	1/1	0.98	0.06	-7.29	7,7,7,7	0
54	MG	BB	3036	1/1	0.97	0.07	-7.33	36,36,36,36	0
54	MG	CA	1602	1/1	0.97	0.05	-7.60	6,6,6,6	0
54	MG	BB	3067	1/1	0.99	0.07	-7.68	34,34,34,34	0
54	MG	AA	1655	1/1	0.96	0.04	-7.88	38,38,38,38	0
54	MG	DB	3071	1/1	0.98	0.09	-8.83	61,61,61,61	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	DB	3002	1/1	0.98	0.10	-8.85	5,5,5,5	0
54	MG	DB	3007	1/1	0.97	0.07	-9.12	12,12,12,12	0
54	MG	DB	3020	1/1	0.99	0.04	-10.23	5,5,5,5	0
54	MG	AA	1653	1/1	0.79	0.09	-	79,79,79,79	0
54	MG	AA	1656	1/1	0.97	0.13	-	60,60,60,60	0
54	MG	DB	3023	1/1	0.91	0.10	-	29,29,29,29	0
54	MG	BB	3007	1/1	0.98	0.09	-	5,5,5,5	0
54	MG	AA	1606	1/1	0.88	0.05	-	47,47,47,47	0
54	MG	AA	1633	1/1	0.96	0.10	-	51,51,51,51	0
54	MG	AA	1651	1/1	0.92	0.06	-	109,109,109,109	0
54	MG	CA	1627	1/1	0.92	0.08	-	29,29,29,29	1
54	MG	BB	3018	1/1	0.90	0.07	-	43,43,43,43	0
54	MG	BB	3026	1/1	0.97	0.10	-	54,54,54,54	0
54	MG	DB	3068	1/1	0.97	0.07	-	19,19,19,19	0
54	MG	DB	3040	1/1	0.98	0.07	-	58,58,58,58	0
54	MG	DB	3030	1/1	0.91	0.13	-	74,74,74,74	0
54	MG	AA	1661	1/1	0.89	0.11	-	79,79,79,79	0
54	MG	DB	3072	1/1	0.91	0.08	-	30,30,30,30	0
54	MG	CA	1622	1/1	0.90	0.10	-	75,75,75,75	0
54	MG	BB	3108	1/1	0.98	0.11	-	25,25,25,25	0
54	MG	CA	1607	1/1	0.90	0.12	-	100,100,100,100	0
54	MG	DB	3083	1/1	0.98	0.08	-	24,24,24,24	0
54	MG	BB	3032	1/1	0.89	0.10	-	45,45,45,45	0
54	MG	CA	1658	1/1	0.93	0.09	-	52,52,52,52	0
54	MG	BB	3110	1/1	0.94	0.07	-	30,30,30,30	0
54	MG	DB	3053	1/1	0.70	0.09	-	102,102,102,102	0
54	MG	AA	1646	1/1	0.97	0.03	-	94,94,94,94	0
54	MG	BB	3023	1/1	0.93	0.22	-	41,41,41,41	0
54	MG	BB	3043	1/1	0.80	0.08	-	170,170,170,170	0
54	MG	AA	1650	1/1	0.74	0.06	-	114,114,114,114	0
54	MG	BB	3097	1/1	0.97	0.05	-	32,32,32,32	0
54	MG	BB	3081	1/1	0.90	0.21	-	52,52,52,52	0
54	MG	AA	1627	1/1	0.86	0.10	-	15,15,15,15	1
54	MG	DB	3027	1/1	0.94	0.07	-	36,36,36,36	0
54	MG	DB	3108	1/1	0.96	0.07	-	21,21,21,21	0
54	MG	BB	3090	1/1	0.95	0.07	-	49,49,49,49	0
54	MG	CA	1611	1/1	0.95	0.06	-	60,60,60,60	0
54	MG	BB	3015	1/1	0.94	0.04	-	27,27,27,27	0
54	MG	AA	1616	1/1	0.91	0.10	-	77,77,77,77	0
54	MG	DB	3016	1/1	0.89	0.11	-	49,49,49,49	0
54	MG	BB	3010	1/1	0.93	0.08	-	82,82,82,82	0
54	MG	DB	3009	1/1	0.98	0.08	-	19,19,19,19	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	BB	3059	1/1	0.95	0.07	-	30,30,30,30	0
54	MG	DB	3103	1/1	0.98	0.10	-	16,16,16,16	0
54	MG	CA	1642	1/1	0.78	0.09	-	94,94,94,94	0
54	MG	BB	3076	1/1	0.94	0.14	-	60,60,60,60	0
54	MG	AA	1649	1/1	0.95	0.11	-	19,19,19,19	0
54	MG	CA	1623	1/1	0.88	0.03	-	131,131,131,131	0
54	MG	DB	3105	1/1	0.95	0.10	-	40,40,40,40	0
54	MG	AA	1609	1/1	0.83	0.20	-	127,127,127,127	0
54	MG	BB	3107	1/1	0.97	0.07	-	54,54,54,54	0
54	MG	DB	3084	1/1	0.74	0.20	-	92,92,92,92	0
54	MG	BB	3092	1/1	0.94	0.10	-	32,32,32,32	0
54	MG	BB	3040	1/1	0.92	0.10	-	28,28,28,28	0
54	MG	BB	3058	1/1	0.81	0.17	-	76,76,76,76	0
54	MG	AA	1618	1/1	0.95	0.08	-	79,79,79,79	0
54	MG	DB	3005	1/1	0.87	0.20	-	30,30,30,30	0
54	MG	BB	3039	1/1	0.83	0.07	-	131,131,131,131	0
54	MG	CA	1654	1/1	0.93	0.05	-	78,78,78,78	0
54	MG	BB	3011	1/1	0.65	0.12	-	66,66,66,66	0
54	MG	DB	3065	1/1	0.94	0.07	-	16,16,16,16	0
54	MG	AA	1640	1/1	0.84	0.24	-	104,104,104,104	0
54	MG	AA	1626	1/1	0.55	0.19	-	64,64,64,64	1
54	MG	DB	3032	1/1	0.95	0.11	-	18,18,18,18	0
54	MG	DB	3078	1/1	0.92	0.13	-	46,46,46,46	0
54	MG	DB	3067	1/1	0.11	0.13	-	178,178,178,178	0
54	MG	BB	3004	1/1	0.93	0.07	-	38,38,38,38	0
54	MG	BB	3054	1/1	0.94	0.05	-	46,46,46,46	0
54	MG	DB	3098	1/1	0.93	0.15	-	36,36,36,36	0
54	MG	CA	1634	1/1	0.91	0.12	-	8,8,8,8	0
54	MG	BB	3009	1/1	0.96	0.12	-	64,64,64,64	0
54	MG	AA	1607	1/1	0.94	0.04	-	64,64,64,64	0
54	MG	CA	1610	1/1	0.93	0.04	-	79,79,79,79	0
54	MG	DB	3017	1/1	0.86	0.08	-	6,6,6,6	0
54	MG	BB	3073	1/1	0.93	0.10	-	67,67,67,67	0
54	MG	AA	1647	1/1	0.85	0.13	-	87,87,87,87	0
54	MG	CA	1659	1/1	0.97	0.07	-	62,62,62,62	0
54	MG	AA	1622	1/1	0.93	0.06	-	27,27,27,27	0
54	MG	CA	1641	1/1	0.93	0.09	-	63,63,63,63	0
54	MG	CA	1646	1/1	0.96	0.05	-	72,72,72,72	0
54	MG	AA	1624	1/1	0.89	0.32	-	32,32,32,32	1
54	MG	DB	3014	1/1	0.93	0.14	-	48,48,48,48	0
54	MG	AA	1617	1/1	0.90	0.07	-	45,45,45,45	0
54	MG	BB	3079	1/1	0.80	0.12	-	75,75,75,75	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	DB	3063	1/1	0.96	0.04	-	71,71,71,71	0
54	MG	DB	3101	1/1	0.96	0.09	-	5,5,5,5	0
54	MG	CA	1660	1/1	0.93	0.06	-	69,69,69,69	0
54	MG	DB	3034	1/1	0.86	0.08	-	43,43,43,43	0
54	MG	BB	3102	1/1	0.95	0.10	-	28,28,28,28	0
54	MG	CE	201	1/1	0.87	0.08	-	97,97,97,97	0
54	MG	AA	1629	1/1	0.95	0.05	-	70,70,70,70	0
54	MG	AA	1605	1/1	0.97	0.15	-	48,48,48,48	0
54	MG	AA	1615	1/1	0.46	0.08	-	110,110,110,110	0
54	MG	DB	3026	1/1	0.97	0.13	-	15,15,15,15	0
54	MG	CA	1649	1/1	0.96	0.07	-	73,73,73,73	0
54	MG	AA	1657	1/1	0.86	0.08	-	69,69,69,69	0
54	MG	BB	3045	1/1	0.95	0.09	-	67,67,67,67	0
54	MG	DB	3106	1/1	0.98	0.12	-	39,39,39,39	0
54	MG	CA	1625	1/1	0.98	0.06	-	34,34,34,34	0
54	MG	DB	3087	1/1	0.94	0.19	-	25,25,25,25	0
54	MG	DB	3021	1/1	0.99	0.15	-	9,9,9,9	0
54	MG	BB	3027	1/1	0.98	0.08	-	34,34,34,34	0
54	MG	AA	1628	1/1	0.90	0.14	-	57,57,57,57	0
54	MG	DB	3039	1/1	0.98	0.13	-	19,19,19,19	0
54	MG	BB	3083	1/1	0.95	0.12	-	5,5,5,5	0
54	MG	BB	3048	1/1	0.78	0.13	-	128,128,128,128	0
54	MG	DB	3049	1/1	0.98	0.10	-	46,46,46,46	0
54	MG	AA	1632	1/1	0.93	0.14	-	37,37,37,37	0
54	MG	CA	1635	1/1	0.68	0.09	-	96,96,96,96	0
54	MG	DB	3012	1/1	0.99	0.20	-	37,37,37,37	0
54	MG	DB	3013	1/1	0.94	0.18	-	21,21,21,21	0
54	MG	DB	3033	1/1	0.96	0.12	-	62,62,62,62	0
54	MG	CA	1648	1/1	0.93	0.11	-	55,55,55,55	0
54	MG	BB	3034	1/1	0.73	0.23	-	136,136,136,136	0
54	MG	AA	1642	1/1	0.92	0.07	-	59,59,59,59	0
54	MG	DB	3076	1/1	0.98	0.06	-	26,26,26,26	0
54	MG	BB	3064	1/1	0.96	0.06	-	26,26,26,26	0
54	MG	BB	3072	1/1	0.96	0.09	-	52,52,52,52	0
54	MG	DB	3102	1/1	0.98	0.14	-	14,14,14,14	0
54	MG	CA	1647	1/1	0.95	0.06	-	90,90,90,90	0
54	MG	DB	3025	1/1	0.95	0.09	-	44,44,44,44	0
54	MG	BB	3016	1/1	0.99	0.07	-	18,18,18,18	0
54	MG	CA	1621	1/1	0.86	0.32	-	118,118,118,118	0
54	MG	BB	3069	1/1	0.98	0.11	-	32,32,32,32	0
54	MG	CA	1652	1/1	0.92	0.17	-	77,77,77,77	0
54	MG	AA	1641	1/1	0.88	0.11	-	56,56,56,56	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	BB	3046	1/1	0.98	0.08	-	46,46,46,46	0
54	MG	CA	1650	1/1	0.99	0.09	-	12,12,12,12	0
54	MG	CA	1626	1/1	0.93	0.15	-	8,8,8,8	1
54	MG	DB	3006	1/1	0.98	0.07	-	20,20,20,20	0
54	MG	BB	3101	1/1	0.54	0.12	-	138,138,138,138	0
54	MG	DB	3038	1/1	0.90	0.15	-	17,17,17,17	0
54	MG	BB	3105	1/1	0.96	0.11	-	21,21,21,21	0
54	MG	DB	3051	1/1	0.84	0.08	-	87,87,87,87	0
54	MG	DB	3061	1/1	0.48	0.08	-	115,115,115,115	0
54	MG	BB	3035	1/1	0.94	0.08	-	32,32,32,32	0
54	MG	DB	3092	1/1	0.98	0.17	-	46,46,46,46	0
54	MG	CA	1637	1/1	0.94	0.06	-	79,79,79,79	0
54	MG	DB	3099	1/1	0.98	0.15	-	29,29,29,29	0
54	MG	AA	1623	1/1	0.68	0.28	-	129,129,129,129	0
54	MG	BB	3028	1/1	0.98	0.08	-	32,32,32,32	0
54	MG	DB	3107	1/1	0.91	0.10	-	27,27,27,27	0
54	MG	AA	1612	1/1	0.93	0.06	-	37,37,37,37	0
54	MG	CA	1629	1/1	0.93	0.08	-	46,46,46,46	1
54	MG	BB	3052	1/1	0.86	0.09	-	59,59,59,59	0
54	MG	DB	3035	1/1	0.85	0.20	-	81,81,81,81	0
54	MG	DB	3110	1/1	0.90	0.08	-	19,19,19,19	0
54	MG	CA	1612	1/1	0.76	0.10	-	84,84,84,84	0
54	MG	DB	3082	1/1	0.99	0.07	-	6,6,6,6	0
54	MG	CA	1657	1/1	0.70	0.15	-	91,91,91,91	0
54	MG	BB	3094	1/1	0.91	0.22	-	93,93,93,93	0
54	MG	BB	3096	1/1	0.91	0.12	-	42,42,42,42	0
54	MG	BB	3075	1/1	0.97	0.10	-	13,13,13,13	0
54	MG	BB	3019	1/1	0.89	0.10	-	45,45,45,45	0
54	MG	BB	3077	1/1	0.97	0.08	-	37,37,37,37	0
54	MG	CA	1608	1/1	0.98	0.06	-	40,40,40,40	0
54	MG	AA	1603	1/1	0.41	0.15	-	133,133,133,133	0
54	MG	BB	3025	1/1	0.93	0.08	-	14,14,14,14	0
54	MG	CA	1603	1/1	0.97	0.12	-	30,30,30,30	0
54	MG	BB	3098	1/1	0.67	0.12	-	80,80,80,80	0
54	MG	DB	3095	1/1	0.97	0.05	-	39,39,39,39	0
54	MG	CA	1630	1/1	0.95	0.08	-	40,40,40,40	0
54	MG	DB	3022	1/1	0.98	0.09	-	5,5,5,5	0
54	MG	BB	3044	1/1	0.77	0.12	-	108,108,108,108	0
54	MG	AA	1625	1/1	0.88	0.11	-	72,72,72,72	0
54	MG	CA	1614	1/1	0.98	0.06	-	58,58,58,58	0
54	MG	BB	3068	1/1	0.97	0.10	-	55,55,55,55	0
54	MG	BB	3093	1/1	0.95	0.04	-	36,36,36,36	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	CA	1651	1/1	0.96	0.06	-	40,40,40,40	0
54	MG	BB	3042	1/1	0.99	0.08	-	8,8,8,8	0
54	MG	CA	1609	1/1	0.76	0.13	-	121,121,121,121	0
54	MG	DB	3044	1/1	0.96	0.06	-	12,12,12,12	0
54	MG	AA	1619	1/1	0.78	0.13	-	85,85,85,85	0
54	MG	DB	3074	1/1	0.97	0.05	-	28,28,28,28	0
54	MG	DB	3064	1/1	0.98	0.10	-	33,33,33,33	0
54	MG	BB	3061	1/1	0.92	0.14	-	41,41,41,41	0
54	MG	DB	3055	1/1	0.95	0.09	-	42,42,42,42	0
54	MG	BB	3111	1/1	0.92	0.14	-	81,81,81,81	0
54	MG	DB	3024	1/1	0.92	0.05	-	55,55,55,55	0
54	MG	BB	3106	1/1	0.99	0.14	-	33,33,33,33	0
54	MG	BB	3065	1/1	0.94	0.08	-	24,24,24,24	0
54	MG	AA	1660	1/1	0.24	0.36	-	163,163,163,163	0
54	MG	CA	1620	1/1	0.90	0.17	-	70,70,70,70	0
54	MG	CA	1661	1/1	0.93	0.08	-	61,61,61,61	0
54	MG	BB	3031	1/1	0.97	0.03	-	47,47,47,47	0
54	MG	BB	3085	1/1	0.96	0.15	-	44,44,44,44	0
54	MG	DB	3054	1/1	0.93	0.10	-	65,65,65,65	0
54	MG	AA	1635	1/1	0.91	0.13	-	45,45,45,45	0
54	MG	BB	3103	1/1	0.94	0.09	-	37,37,37,37	0
54	MG	AA	1648	1/1	0.92	0.49	-	94,94,94,94	0
54	MG	DB	3029	1/1	0.90	0.07	-	33,33,33,33	0
54	MG	CA	1604	1/1	0.99	0.08	-	52,52,52,52	0
54	MG	BB	3047	1/1	0.95	0.09	-	46,46,46,46	0
54	MG	DB	3094	1/1	0.96	0.15	-	21,21,21,21	0
54	MG	AA	1659	1/1	0.97	0.05	-	112,112,112,112	0
54	MG	BB	3100	1/1	0.94	0.19	-	68,68,68,68	0
54	MG	BB	3071	1/1	0.99	0.12	-	29,29,29,29	0
54	MG	DB	3047	1/1	0.98	0.04	-	24,24,24,24	0
54	MG	CA	1619	1/1	0.72	0.09	-	59,59,59,59	0
54	MG	AA	1613	1/1	0.91	0.07	-	65,65,65,65	0
54	MG	DB	3112	1/1	0.98	0.15	-	37,37,37,37	0
54	MG	CA	1631	1/1	0.94	0.07	-	34,34,34,34	0
54	MG	DB	3059	1/1	0.77	1.45	-	180,180,180,180	0
54	MG	BB	3037	1/1	0.96	0.07	-	42,42,42,42	0
54	MG	BB	3055	1/1	0.87	0.06	-	58,58,58,58	0
54	MG	DB	3019	1/1	0.97	0.14	-	48,48,48,48	0
54	MG	AA	1638	1/1	0.56	0.36	-	147,147,147,147	0
54	MG	DB	3062	1/1	0.92	0.04	-	47,47,47,47	0
54	MG	DB	3018	1/1	0.94	0.09	-	8,8,8,8	0
54	MG	DB	3066	1/1	0.97	0.06	-	29,29,29,29	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	DB	3050	1/1	0.98	0.14	-	32,32,32,32	0
54	MG	DB	3043	1/1	0.97	0.09	-	15,15,15,15	0
54	MG	CA	1628	1/1	0.95	0.04	-	61,61,61,61	0
54	MG	BB	3021	1/1	0.95	0.06	-	22,22,22,22	0
54	MG	DB	3046	1/1	0.93	0.13	-	55,55,55,55	0
54	MG	DB	3096	1/1	0.72	0.11	-	127,127,127,127	0
54	MG	BB	3029	1/1	0.84	0.22	-	32,32,32,32	0
54	MG	BB	3008	1/1	1.00	0.09	-	64,64,64,64	0
54	MG	CA	1616	1/1	0.79	0.09	-	167,167,167,167	0
54	MG	DB	3058	1/1	0.89	0.05	-	43,43,43,43	0
54	MG	DB	3041	1/1	0.97	0.14	-	15,15,15,15	0
54	MG	BB	3056	1/1	0.96	0.13	-	34,34,34,34	0

## 6.5 Other polymers [i](#)

There are no such residues in this entry.