



# Full wwPDB X-ray Structure Validation Report ⓘ

Feb 1, 2016 – 09:36 PM GMT

PDB ID : 4V57  
Title : Crystal structure of the bacterial ribosome from Escherichia coli in complex with spectinomycin and neomycin.  
Authors : Borovinskaya, M.A.; Shoji, S.; Holton, J.M.; Fredrick, K.; Cate, J.H.D.  
Deposited on : 2007-07-21  
Resolution : 3.50 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



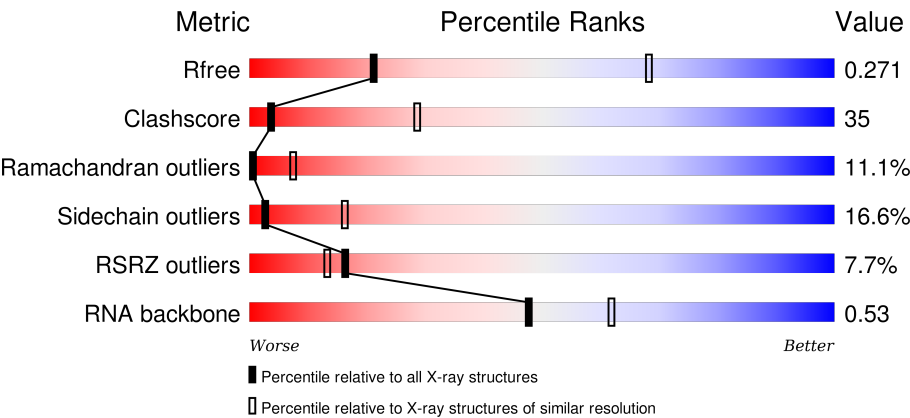
# 1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 3.50 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	1051 (3.60-3.40)
Clashscore	102246	1157 (3.60-3.40)
Ramachandran outliers	100387	1120 (3.60-3.40)
Sidechain outliers	100360	1121 (3.60-3.40)
RSRZ outliers	91569	1058 (3.60-3.40)
RNA backbone	2183	1050 (4.20-2.80)

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

Mol	Chain	Length	Quality of chain
1	AA	1542	<div><div>23%62%14%..</div></div>
1	CA	1542	<div><div>24%62%14%.</div></div>
2	AC	232	<div><div>9%20%48%18%.11%</div></div>
2	CC	232	<div><div>7%28%46%14%.11%</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	AP	82	
13	CP	82	
14	AQ	83	
14	CQ	83	
15	AR	74	

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Mol	Chain	Length	Quality of chain
15	CR	74	
16	AS	91	
16	CS	91	
17	AT	86	
17	CT	86	
18	AB	240	
18	CB	240	
19	AU	70	
19	CU	70	
20	AO	89	
20	CO	89	
21	AN	100	
21	CN	100	
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	AA	1601	-	-	-	X
53	NMY	BB	3001	-	-	-	X
53	NMY	CA	1601	-	-	-	X
53	NMY	DB	3001	-	-	-	X
54	MG	AA	1658	-	-	-	X
54	MG	BB	3088	-	-	-	X
54	MG	DB	3090	-	-	-	X



## 2 Entry composition

There are 57 unique types of molecules in this entry. The entry contains 284201 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 S16.

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

- Molecule 14 is a protein called 30S ribosomal protein S17.

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

- Molecule 15 is a protein called 30S ribosomal protein S18.

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



- Molecule 16 is a protein called 30S ribosomal protein S19.

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

- Molecule 17 is a protein called 30S ribosomal protein S20.

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

- Molecule 18 is a protein called 30S ribosomal protein S2.

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

- Molecule 19 is a protein called 30S ribosomal protein S21.

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

- Molecule 20 is a protein called 30S ribosomal protein S15.

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

- Molecule 21 is a protein called 30S ribosomal protein S14.



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

- 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			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BA	120	U	-	INSERTION	GB 85674274
DA	120	U	-	INSERTION	GB 85674274

- 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			

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BB	2903	U	-	INSERTION	GB 85674274
BB	2904	U	-	INSERTION	GB 85674274
DB	2903	U	-	INSERTION	GB 85674274
DB	2904	U	-	INSERTION	GB 85674274

- 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			
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			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
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			
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			

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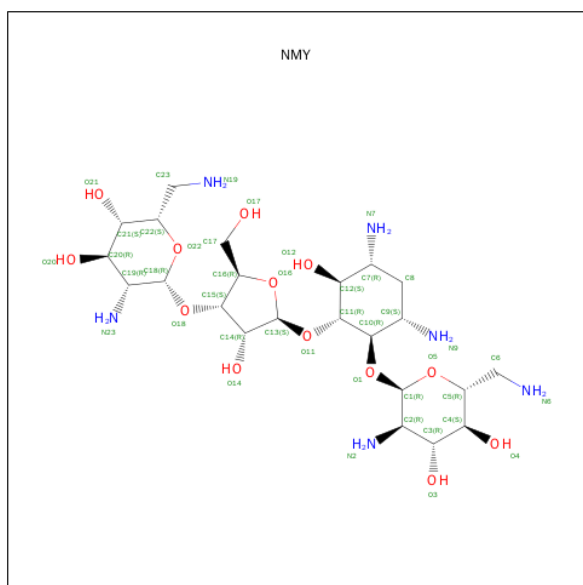
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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	DZ	77	Total	C	N	O	S	0	0	0
			625	388	129	106	2			

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

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

- Molecule 53 is NEOMYCIN (three-letter code: NMY) (formula:  $C_{23}H_{46}N_6O_{13}$ ).



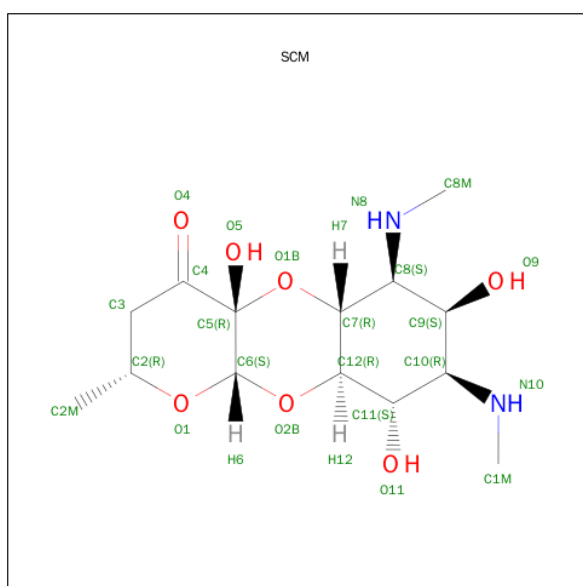
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
53	AA	1	Total 42	C 23	N 6	O 13	0	0
53	BB	1	Total 42	C 23	N 6	O 13	0	0
53	CA	1	Total 42	C 23	N 6	O 13	0	0
53	DB	1	Total 42	C 23	N 6	O 13	0	0

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



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
54	BB	110	Total Mg 110 110	0	0
54	AA	60	Total Mg 60 60	0	0
54	CA	59	Total Mg 59 59	0	0
54	DB	111	Total Mg 111 111	0	0

- Molecule 55 is SPECTINOMYCIN (three-letter code: SCM) (formula:  $C_{14}H_{24}N_2O_7$ ).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
55	AA	1	Total 23	C 14	N 2	O 7	0	0
55	CA	1	Total 23	C 14	N 2	O 7	0	0

- Molecule 56 is ZINC ION (three-letter code: ZN) (formula:  $\text{Zn}$ ).

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

- Molecule 57 is water.



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	AA	290	Total O 290 290	0	0
57	AE	1	Total O 1 1	0	0
57	AK	1	Total O 1 1	0	0
57	AL	4	Total O 4 4	0	0
57	AP	1	Total O 1 1	0	0
57	AT	2	Total O 2 2	0	0
57	AN	1	Total O 1 1	0	0
57	BB	492	Total O 492 492	0	0
57	BC	7	Total O 7 7	0	0
57	BD	1	Total O 1 1	0	0
57	BE	4	Total O 4 4	0	0
57	BL	2	Total O 2 2	0	0
57	BH	1	Total O 1 1	0	0
57	CA	282	Total O 282 282	0	0
57	CE	2	Total O 2 2	0	0
57	CL	4	Total O 4 4	0	0
57	CP	1	Total O 1 1	0	0
57	CT	1	Total O 1 1	0	0
57	CI	1	Total O 1 1	0	0
57	CN	3	Total O 3 3	0	0
57	DB	501	Total O 501 501	0	0
57	DC	4	Total O 4 4	0	0

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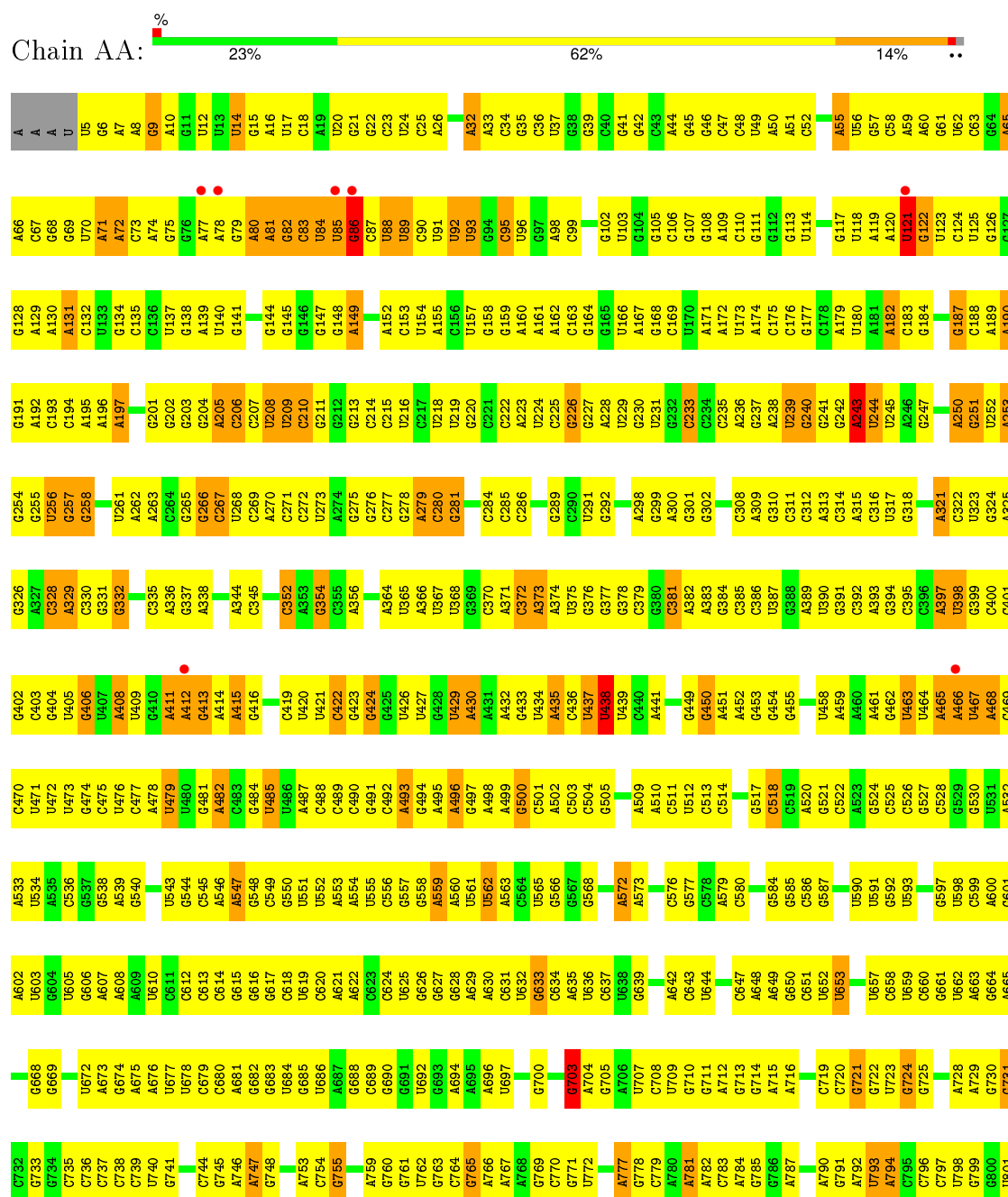
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	DD	1	Total 1	O 1	0	0
57	DE	2	Total 2	O 2	0	0
57	DL	1	Total 1	O 1	0	0
57	DN	2	Total 2	O 2	0	0
57	DR	1	Total 1	O 1	0	0



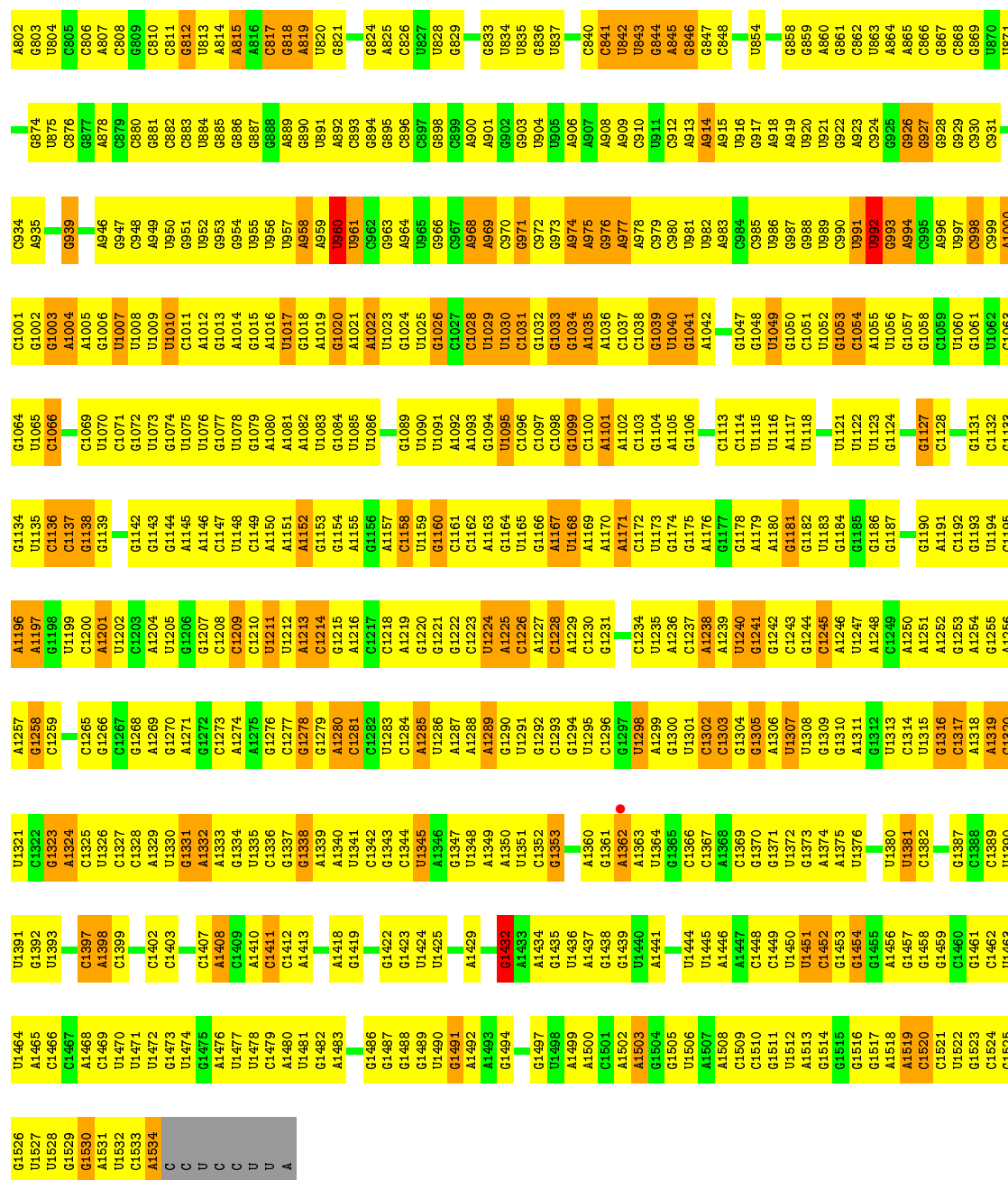
### 3 Residue-property plots

These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density ( $\text{RSRZ} > 2$ ). 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

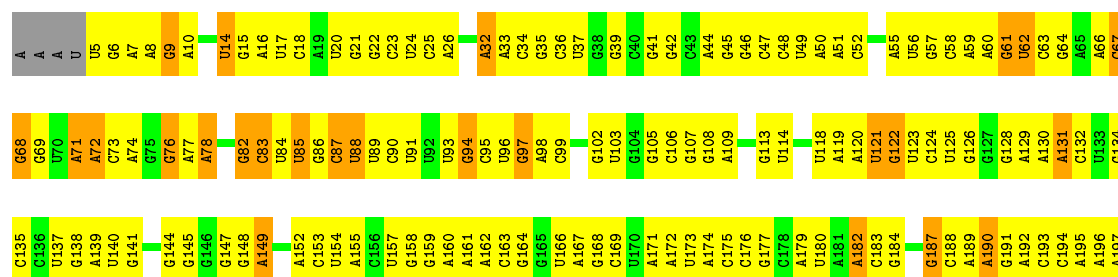






### • Molecule 1: 16S rRNA

Chain CA:



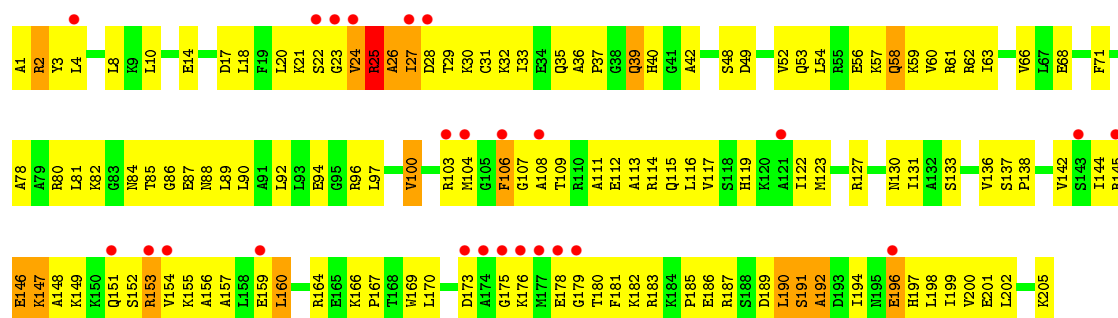


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A1280	C1217	A1150	U1090	A1022	U960	G890	C817	A747	C679	C611	C545	U480	A411	C336	A263	G201
C1281	C1218	A1151	U1091	U1023	U961	U891	G818	A748	C680	C613	A547	G481	A412	A337	C264	G202
U1283	A1219	A1152	U1092	A1024	A892	A892	A819	A749	A682	C613	A547	A482	A413	G338	C265	G203
U1284	G1221	G1153	A1093	U1025	U965	C893	U820	C750	G682	G615	C549	C483	A414	A339	C266	G204
A1285	G1222	C1154	A1094	G1026	G894	G894	G821	U751	G683	G616	G550	U485	A415	C340	C267	G205
U1287	C1223	A1157	U1095	C1027	G895	G895	G824	G755	U684	G617	U551	U486	A416	A344	U268	A205
U1287	U1224	C1158	U1096	C1028	G896	C896	A825	G756	G685	G618	U552	A487	U420	C345	C269	C206
U1287	U1225	U1159	C1097	U1029	A968	C897	A826	A759	U686	C619	U553	A488	U421	C346	A270	C207
A1288	C1226	G1160	C1098	U1030	A969	A900	C826	A760	G687	U619	A554	C488	U422	C352	C271	U208
A1289	C1226	C1161	C1098	C1031	C970	A901	U827	G760	G688	C620	A554	C489	U423	C353	C272	U209
G1290	A1227	G1162	G1099	G1032	G971	G901	U828	G761	G689	A621	U555	C490	G423	A354	U273	G210
U1291	C1228	A1163	G1100	G1033	C972	G902	G833	G763	G691	A622	C556	G491	G424	G355	G211	G212
G1292	A1229	G1164	A1101	G1036	G973	G903	U834	G764	U692	C624	G557	C492	G425	C356	G213	G213
C1293	C1230	U1165	A1102	C1037	A974	U904	U835	G765	G693	U625	A558	A494	U426	A356	C277	G214
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U1295	U1233	A1167	G1104	C1037	G976	A906	U837	A767	A694	U627	A561	A496	U428	A365	C280	U216
G1296	G1233	U1168	U1040	U1040	A977	U907	U837	G769	G700	G628	U562	G497	A430	A366	G281	C217
G1297	C1234	A1169	G1107	G1041	A978	A908	C840	G770	U701	A629	A563	A498	A431	U367	U218	U219
U1298	U1235	A1170	G1108	A1042	C979	A909	C841	G771	A702	A630	C564	A499	A432	U368	C284	
U1299	A1236	A1171	C1109	G1043	C980	C910	U842	U772	G703	C631	U565	C500	G433	C369	C285	C222
G1300	C1237	U1172	A1110	G1047	U981	U911	U843	U773	A704	U632	U566	C501	U434	C370	C286	
U1301	A1238	U1173	A1111	G1047	U982	C912	U844	A777	G707	C633	G567	A502	A435	A371	U287	A223
U1302	G1239	G1174	C1112	G1048	A983	A913	G845	G778	U708	C634	G568	C503	C436	C372	A288	U224
C1303	A1240	G1175	G1113	U1049	C984	A914	U846	C779	C708	A635	U572	C504	U437	A373	C289	C225
G1304	G1241	A1176	C1114	G1050	C985	A914	C846	C779	U709	U636	A573	C505	U438	A374	C290	G226
G1305	G1242	G1177	U1115	C1051	U986	G917	G847	A780	U709	U637	A573	C505	U439	U367	U291	G227
A1306	C1243	G1178	U1116	U1052	G987	A918	C848	A781	U710	U638	C576	A509	A440	U368	G292	A228
U1307	G1244	A1179	A1117	G1053	U988	A919	U854	A782	G712	U639	C577	A510	A441	C379	U229	U230
U1308	C1245	A1180	U1118	C1054	U989	A920	G858	G783	A713	C643	C578	C511	G449	C380	A298	G231
G1309	A1246	G1181	C1119	A1055	C990	U921	G859	A784	G713	U644	C579	C512	G450	C381	C299	U232
G1310	U1247	G1182	C1120	U1056	U991	G922	G860	G785	G714	C644	C580	C513	G451	C382	A300	G233
A1311	A1248	U1183	U1121	G1057	U992	A923	G861	G786	A715	U644	C580	C513	G452	C383	G301	C233
C1312	C1249	G1184	U1122	G1058	G993	C924	G862	A787	A716	U644	C580	C513	G453	C384	G302	G234
U1313	A1250	G1185	C1123	C1059	A994	G925	G863	A787	A716	U644	C580	C513	G454	C385	C308	A236
C1314	G1251	G1186	G1124	U1060	C995	G926	U864	A790	C719	C647	G584	C518	U488	C386	A309	G237
U1315	A1252	G1187	U1125	G1061	A996	G927	U865	A791	C720	A648	G585	C519	A489	C387	G310	U239
G1316	G1253	A1188	U1126	U1062	U997	G933	A866	A792	G721	A649	C586	C520	A490	C388	A299	G240
C1317	A1254	U1189	C1127	C1063	C998	G934	U867	A793	G722	C651	G587	C521	A491	C389	C311	U239
A1318	G1255	G1190	C1128	C934	C999	G934	U868	A794	G723	U652	G587	C522	A492	U390	C312	G241
U1256	A1256	U1191	C1129	U1065	A1000	A935	U869	C796	G724	U653	U590	A524	A461	C392	C313	G242
A1320	C1257	A1196	A1130	C1066	C1001	A938	U870	C797	G725	U656	U591	A525	A462	C393	A314	G243
U1321	G1258	A1197	G1131	A1067	G1002	G939	U871	C797	G726	U657	U592	A526	U463	C394	A315	U244
C1322	C1259	U1198	C1132	U1068	G1003	C940	U872	U798	A728	U658	U593	A527	U464	C395	C316	U245
G1323	U1260	U1199	G1133	C1069	A1004	G941	U873	U798	A729	U659	U594	C528	U465	C396	G318	G247
A1324	C1262	C1200	G1134	U1070	A1005	G941	U874	U801	G730	U660	A595	C529	A466	A397	A321	A250
C1325	G1263	A1201	U1135	C1071	G1006	A946	U875	A802	G731	U661	A596	A529	A467	U398	C322	G251
U1326	U1264	U1202	C1136	G1072	U1007	G947	C876	G803	G732	C660	G597	A530	A468	U399	U323	U252
C1327	G1265	C1203	C1137	U1073	U1008	G947	C877	G804	G733	U662	U598	A531	A469	C400	G324	A253
C1328	G1266	U1204	G1138	U1074	U1009	C948	U878	C805	G734	U663	C599	A532	A470	C401	A325	G254
			G1139	U1075	U1010	A949	U879	C806	G735	A663	A600	A533	C469	C402	G326	G255
			U1140	U1076	C1011	U950	U880	A807	C736	U664	G601	A534	C470	C403	A327	U256
			C1141	G1077	G951	U951	U881	C808	G737	A665	A602	A535	U471	C404	A328	G257
			U1078	U1078	G1013	U952	C882	G809	C738	U666	U603	A536	U472	C405	A329	G258
			G1143	U1079	G1014	G953	C883	C810	C739	U672	G604	A537	U473	C406	C330	
			A1144	U1080	U1015	G954	U884	C811	U740	U673	U605	A538	U474	U405	A331	
			A1145	A1082	A1016	U955	U885	G812	G741	G674	G606	A539	C475	U406	A332	
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			C1147	G1084	U1018	U957	U887	U814	G745	A676	A608	A541	C477	A408	G331	
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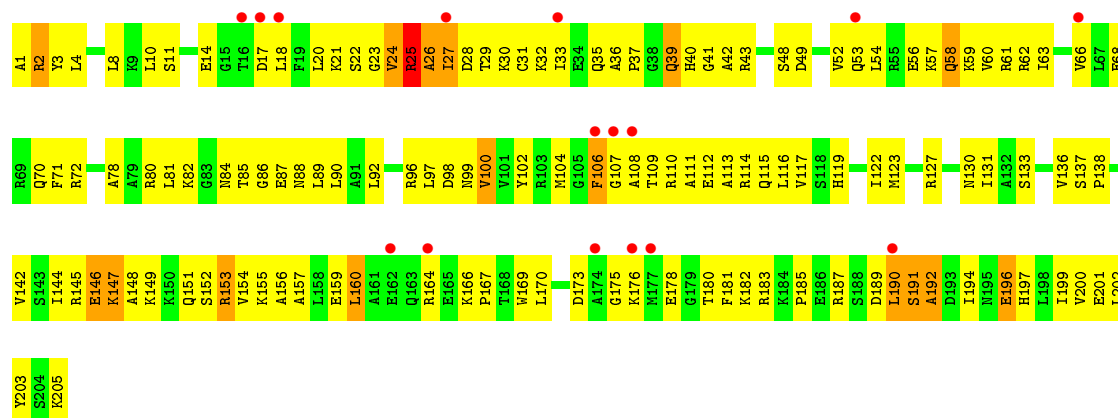




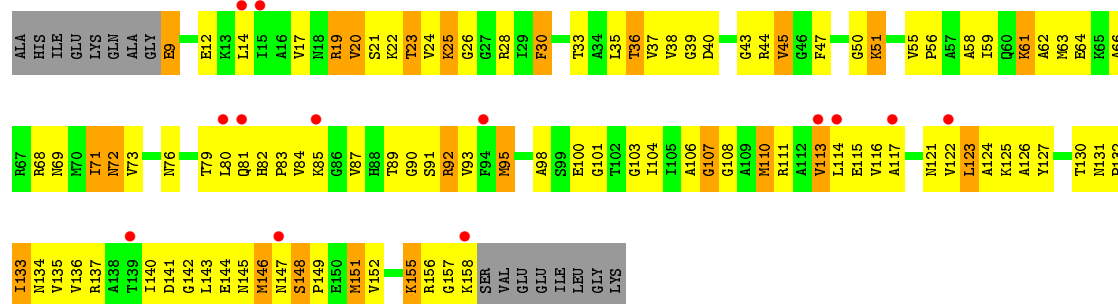




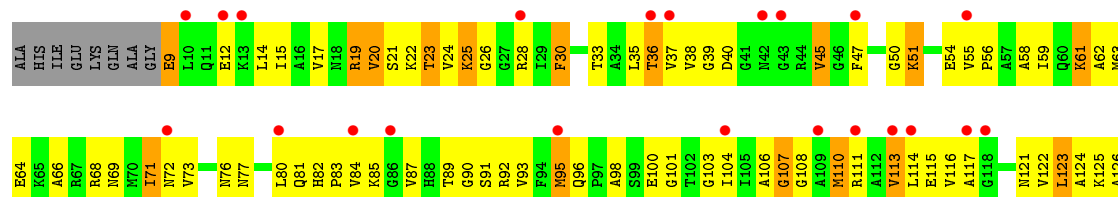
• Molecule 3: 30S ribosomal protein S4



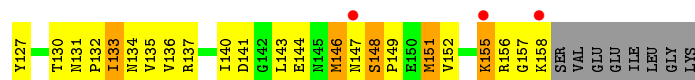
• Molecule 4: 30S ribosomal protein S5



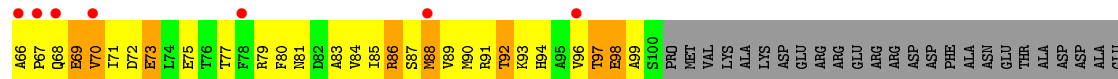
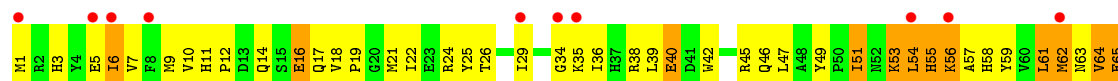
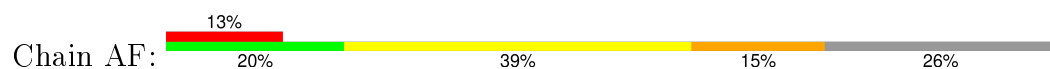
• Molecule 4: 30S ribosomal protein S5



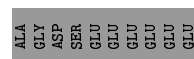
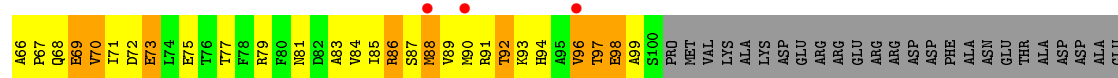
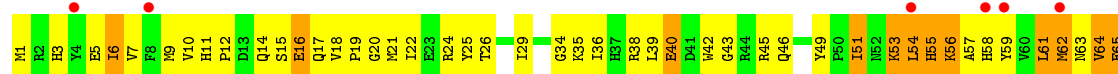
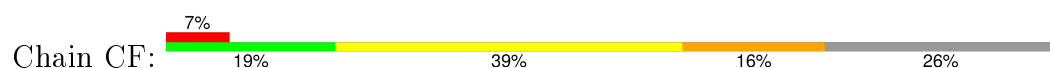




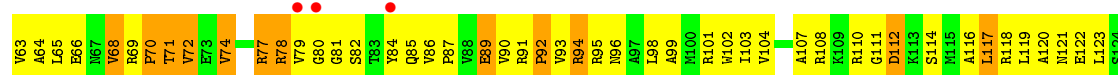
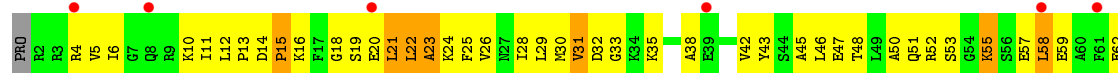
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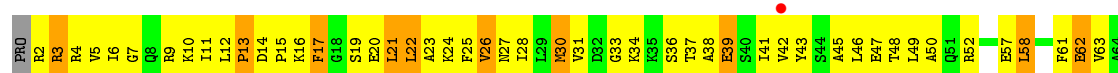
• Molecule 5: 30S ribosomal protein S6



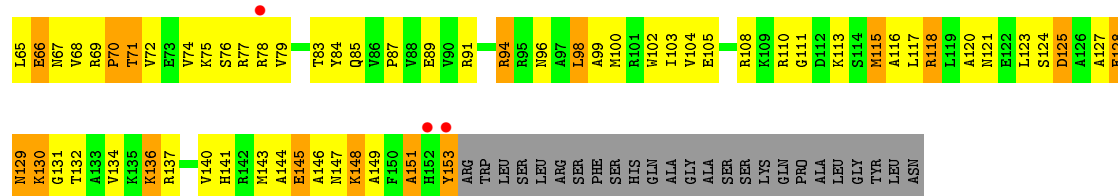
• Molecule 6: 30S ribosomal protein S7



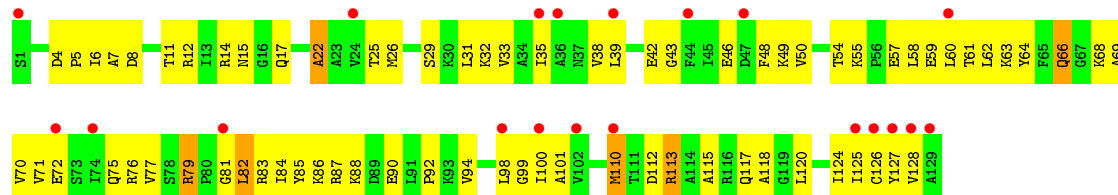
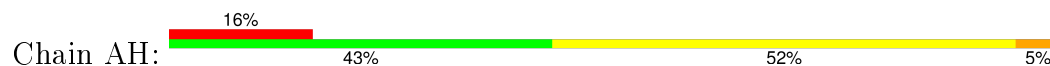
• Molecule 6: 30S ribosomal protein S7



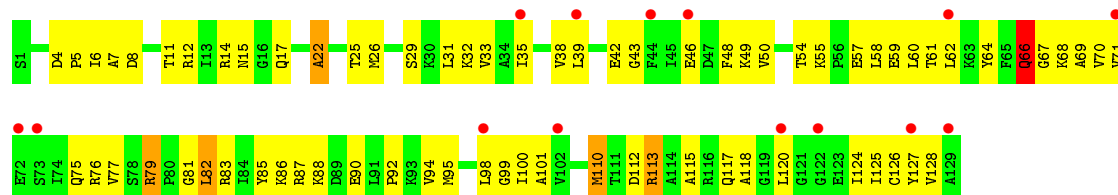




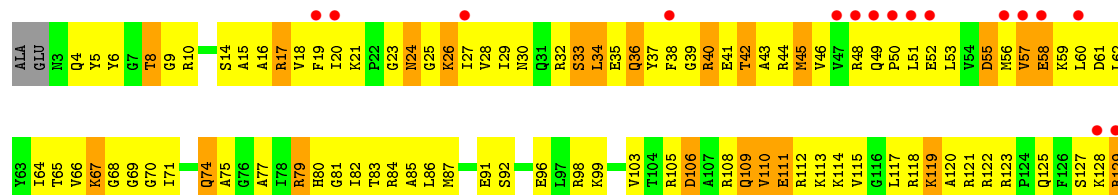
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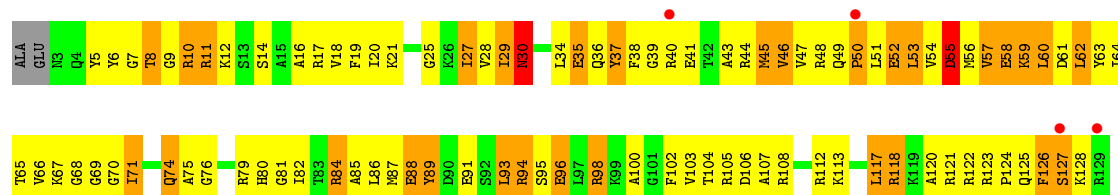
• Molecule 7: 30S ribosomal protein S8



• Molecule 8: 30S ribosomal protein S9

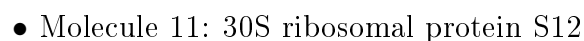
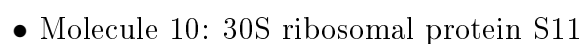
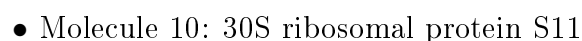


• Molecule 8: 30S ribosomal protein S9



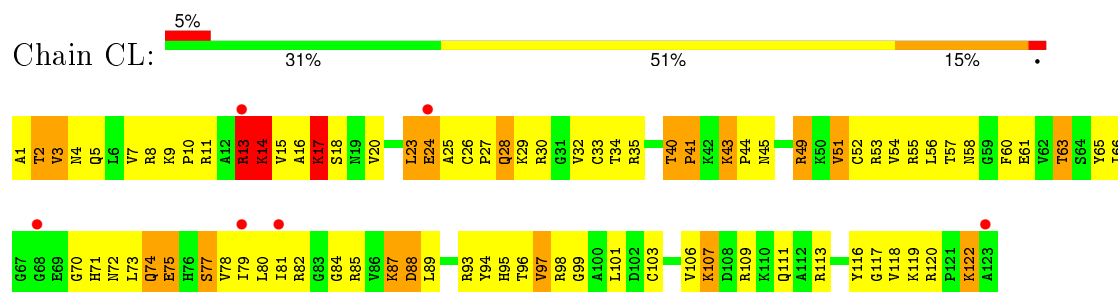
• Molecule 9: 30S ribosomal protein S10



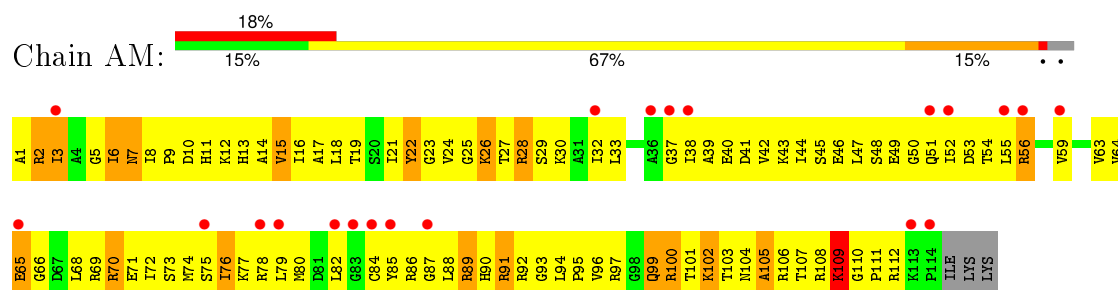




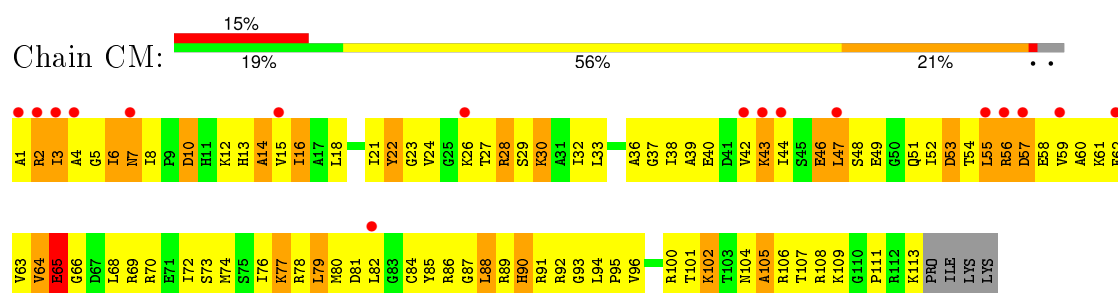
- Molecule 11: 30S ribosomal protein S12



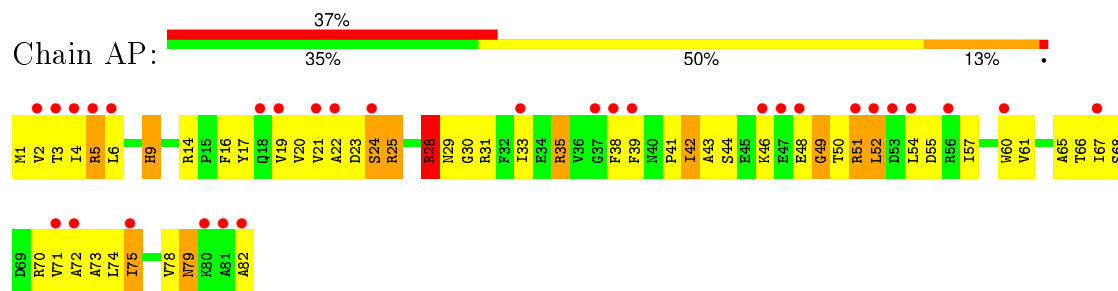
- Molecule 12: 30S ribosomal protein S13



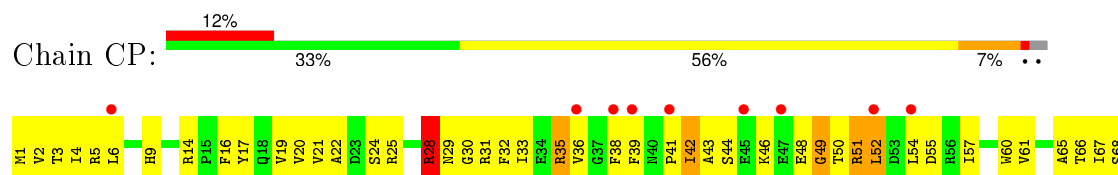
- Molecule 12: 30S ribosomal protein S13



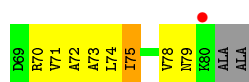
- Molecule 13: 30S ribosomal protein S16



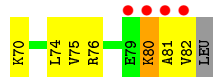
- Molecule 13: 30S ribosomal protein S16



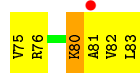
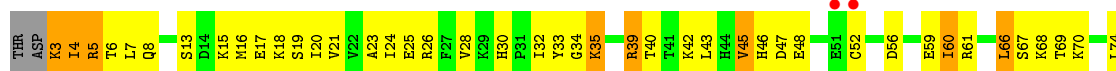
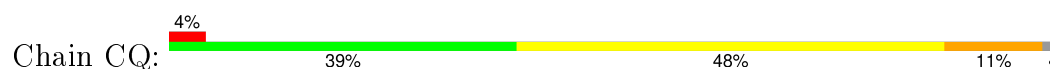




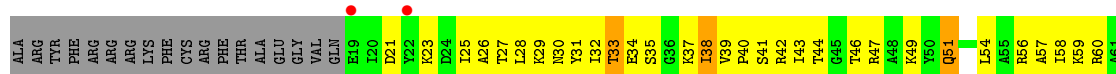
- Molecule 14: 30S ribosomal protein S17



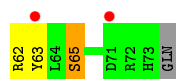
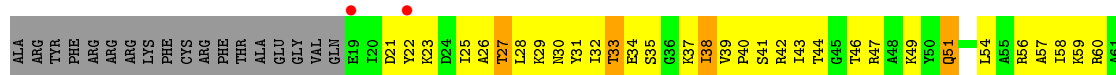
- Molecule 14: 30S ribosomal protein S17



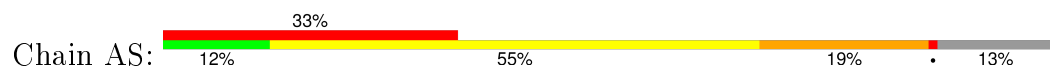
- Molecule 15: 30S ribosomal protein S18



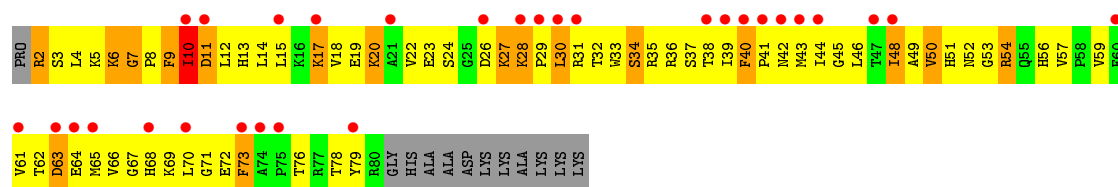
- Molecule 15: 30S ribosomal protein S18



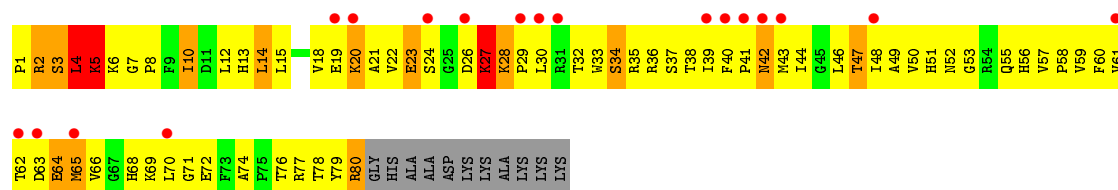
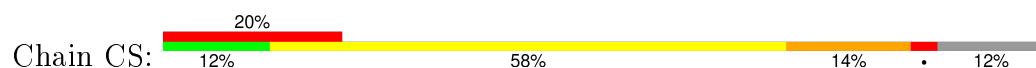
- Molecule 16: 30S ribosomal protein S19



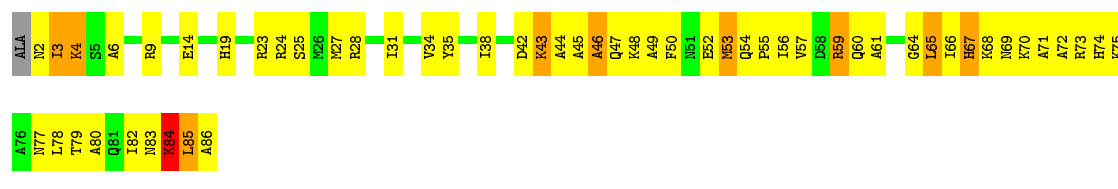




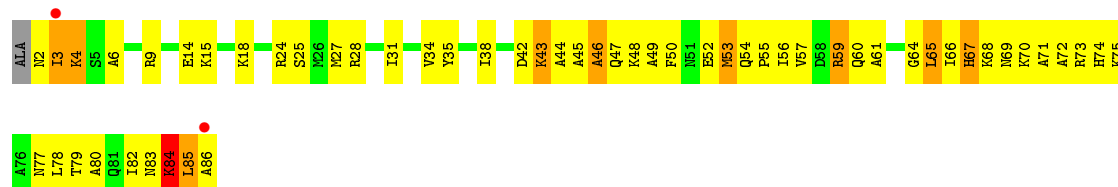
• Molecule 16: 30S ribosomal protein S19



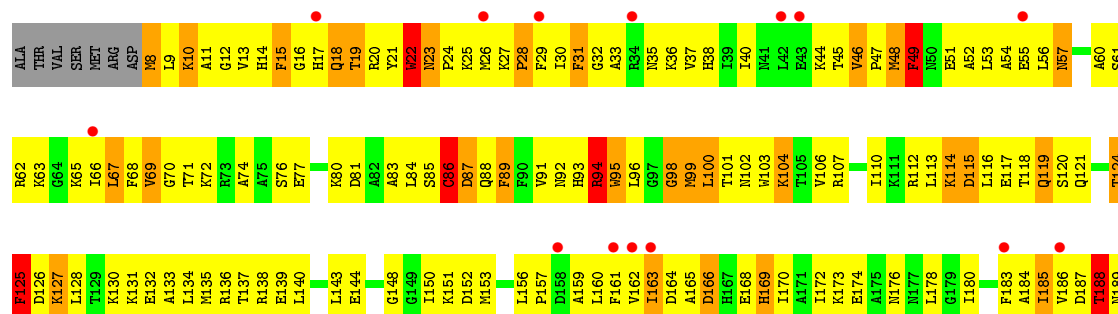
• Molecule 17: 30S ribosomal protein S20



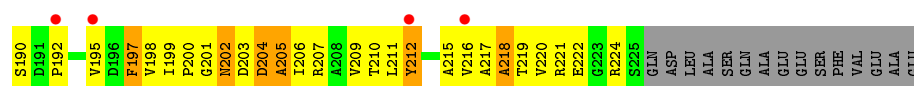
• Molecule 17: 30S ribosomal protein S20



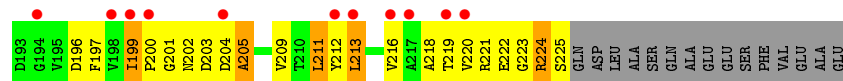
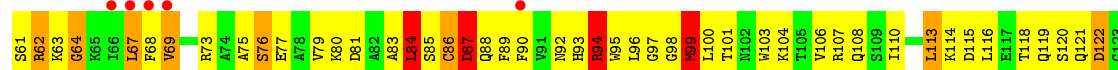
• Molecule 18: 30S ribosomal protein S2



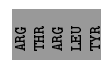
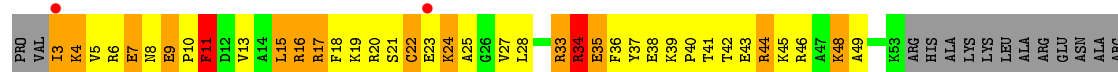




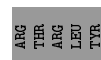
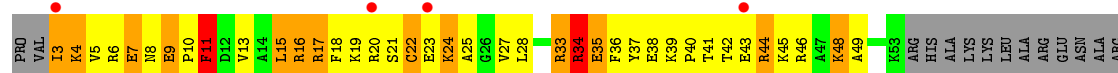
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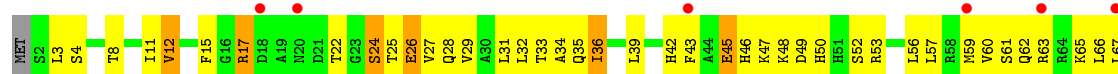
• Molecule 19: 30S ribosomal protein S21



• Molecule 19: 30S ribosomal protein S21

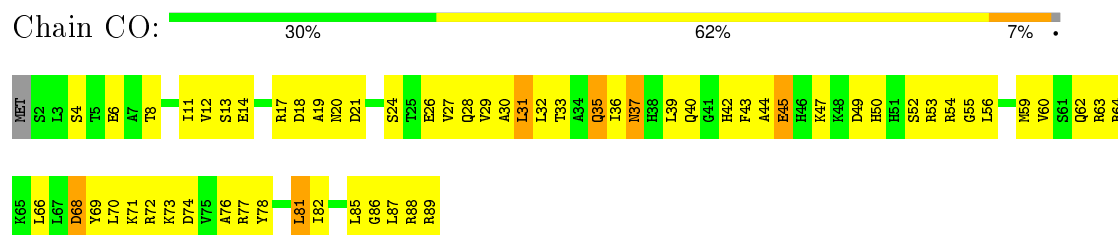


• Molecule 20: 30S ribosomal protein S15

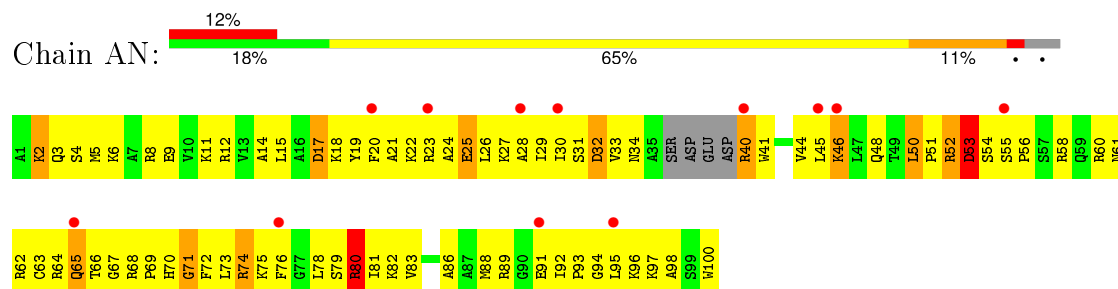




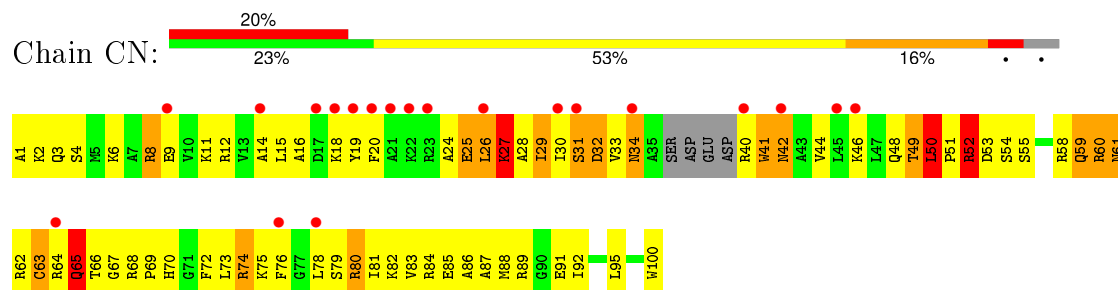
- Molecule 20: 30S ribosomal protein S15



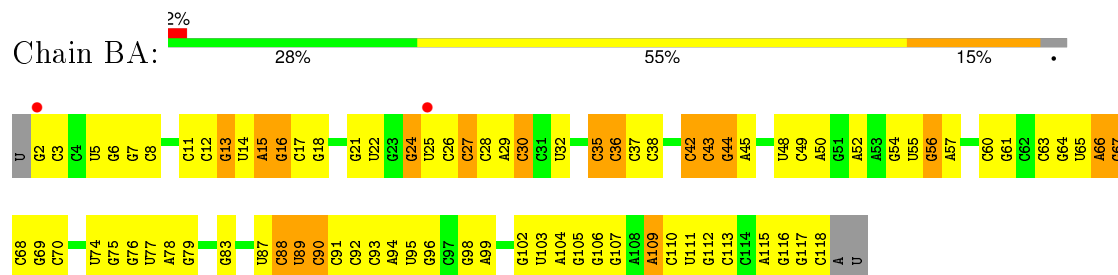
- Molecule 21: 30S ribosomal protein S14



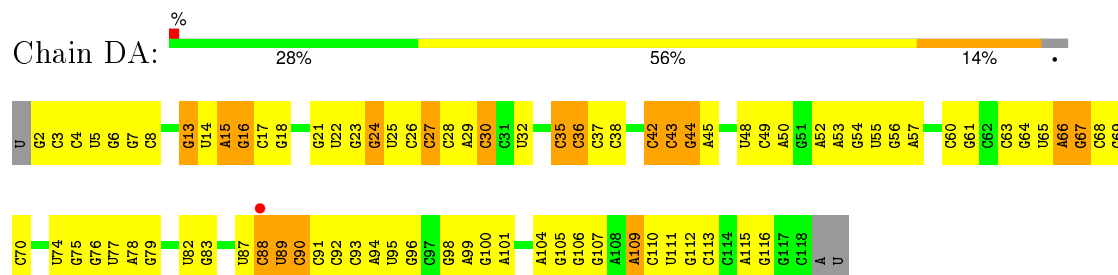
- Molecule 21: 30S ribosomal protein S14



- Molecule 22: 5S rRNA

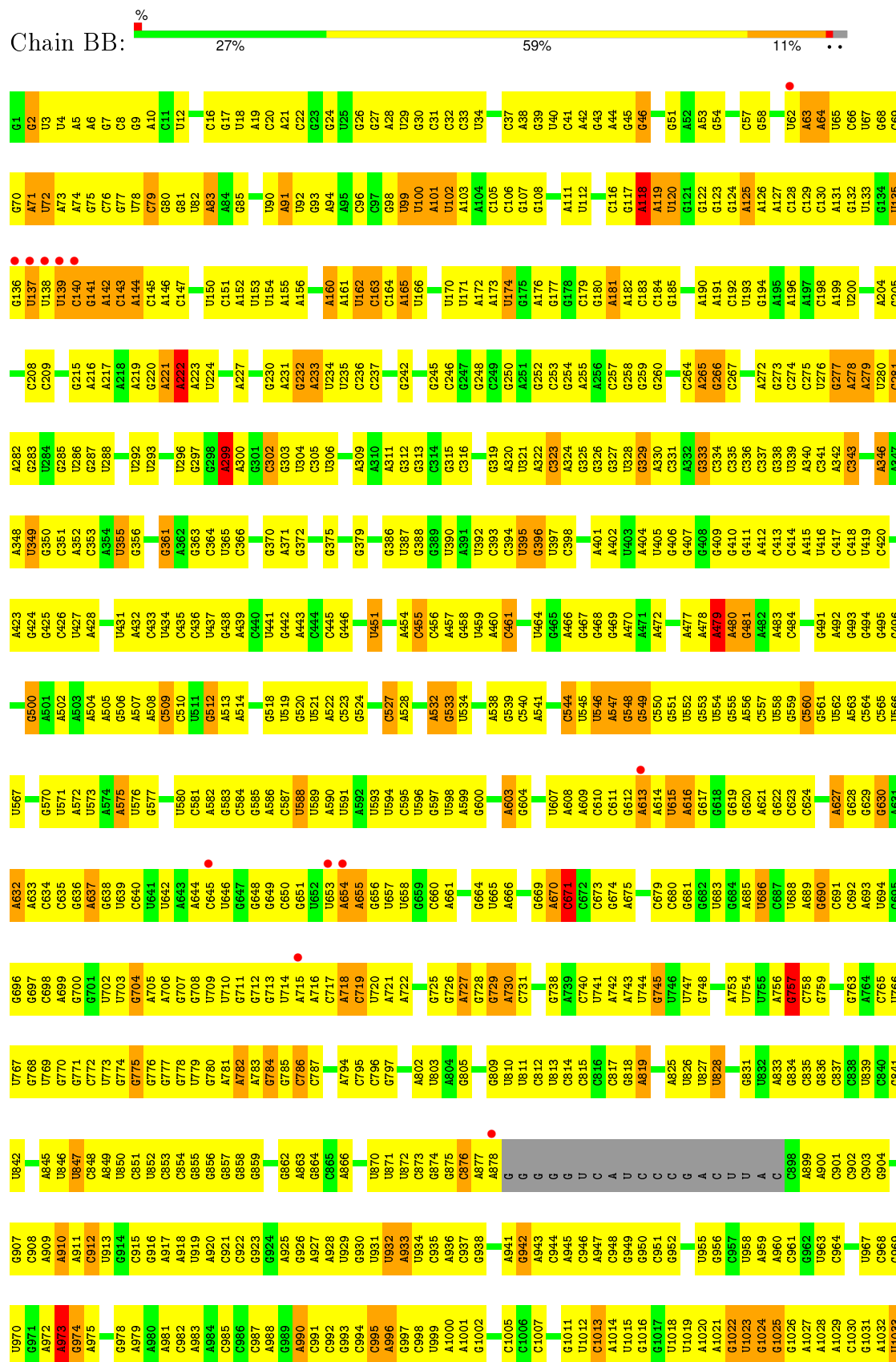


- Molecule 22: 5S rRNA





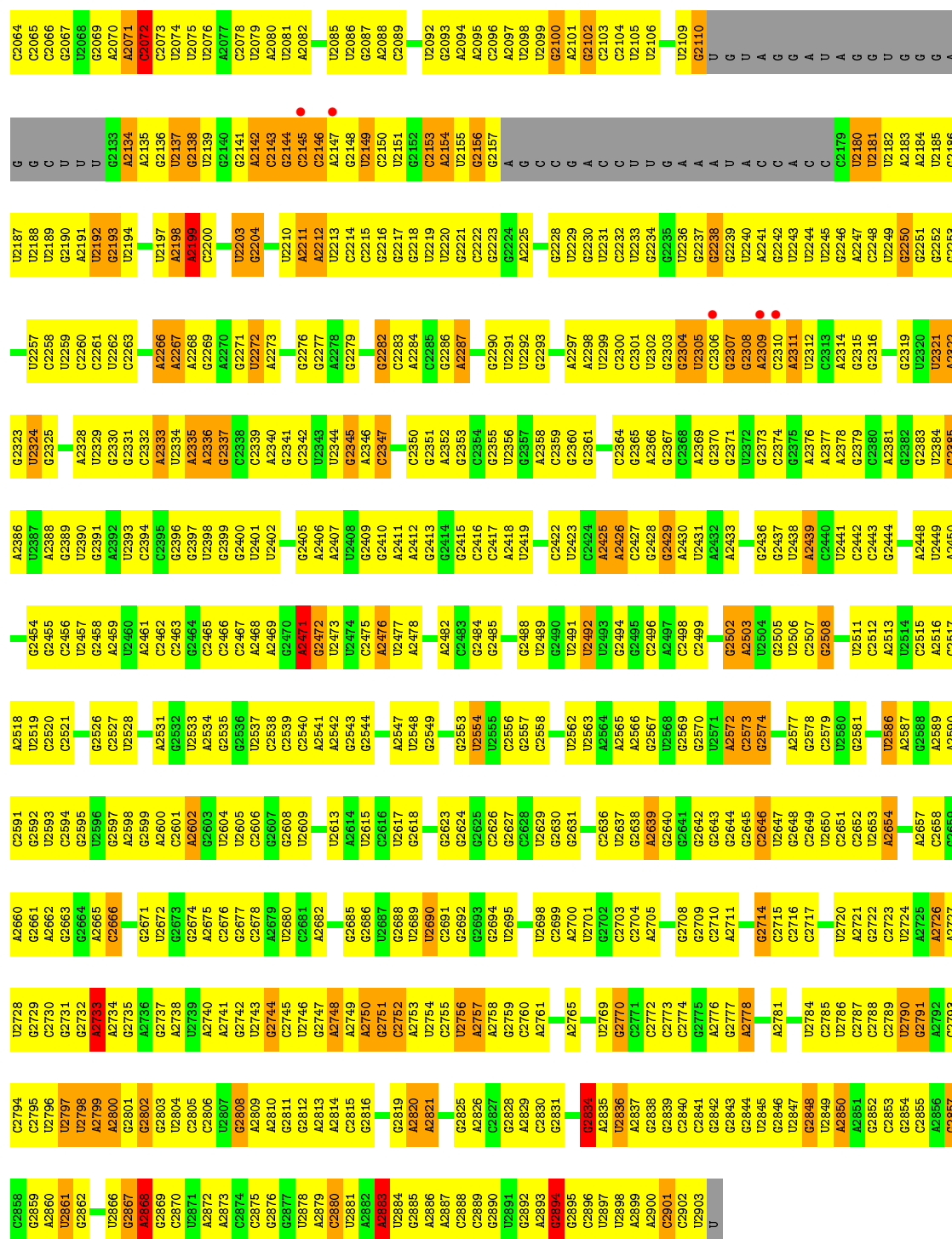
- Molecule 23: 23S rRNA













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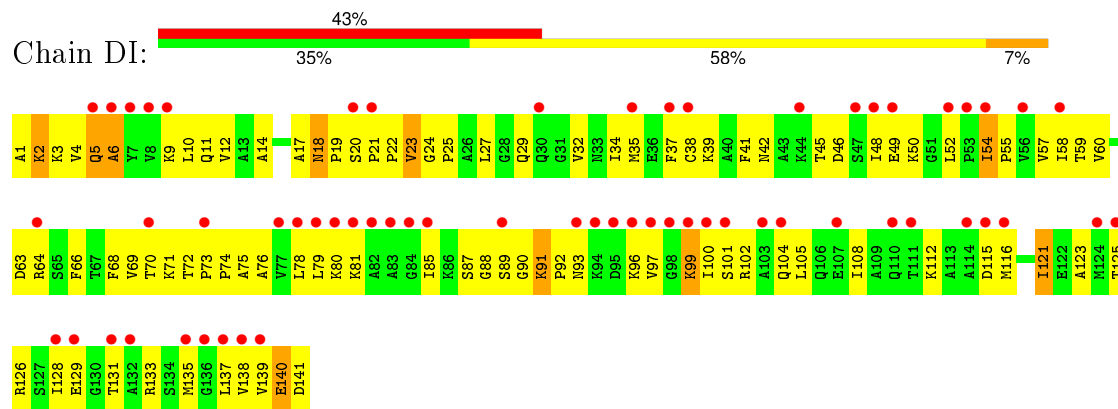
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U	U1222	G1297	A1359	G1425	G1555	U1625	C1691	G1760	G1823	A1893	A1900	U2039	C2103	U
U	G1223	C1298	G1360	G1426		C1626		G1761	U1824	U1901	U1901	G2040	C2104	U
U		G1299	G1361	A1427	C1558	A1826	A1698	A1762	U1825	C1902	U1971	U2041	U2105	U
U	G1228	G1300	C1362	C1428	U1559		G1699	A1763	U1826	C1903	U1972	A2042	U2106	U
U	G1229	A1301	A1365	G1429	G1560	U1629	A1701	G1764	G1827	G1904	G1973	G2043	G2107	U
U	A1302	A1302		G1430	C1561			U1765	G1828	C1905	C1974	G2044	A2108	U
U				A1494	U1562	A1634		G1766	A1829	G1906			U2109	A
U	G1306	C1306	G1368	A1431	U1563	A1635	C1704	G1767	A1830	G1907	A1978	G2047	G2110	U
U	A1307	A1307	G1371	A1432	U1564	A1636	A1705	C1768	G1831	C1908	U1979	G2048	U	U
U	G1308	G1308	A1372	A1433	C1565	U1637	A1706	G1769	C1832	C1909	G1980	G2049	U	U
U			A1373	A1434		C1638	G1707	C1771		U1911	A1981	G2050	A	U
U				G1500	G1568	G1639	C1708	A1772	C1836			A2051	G	A



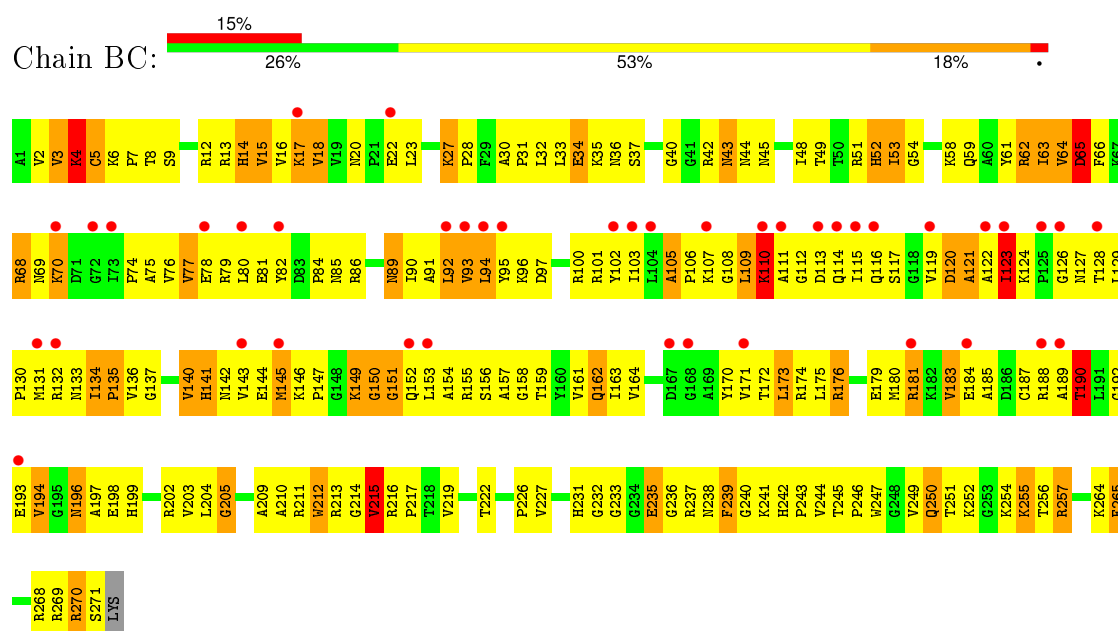




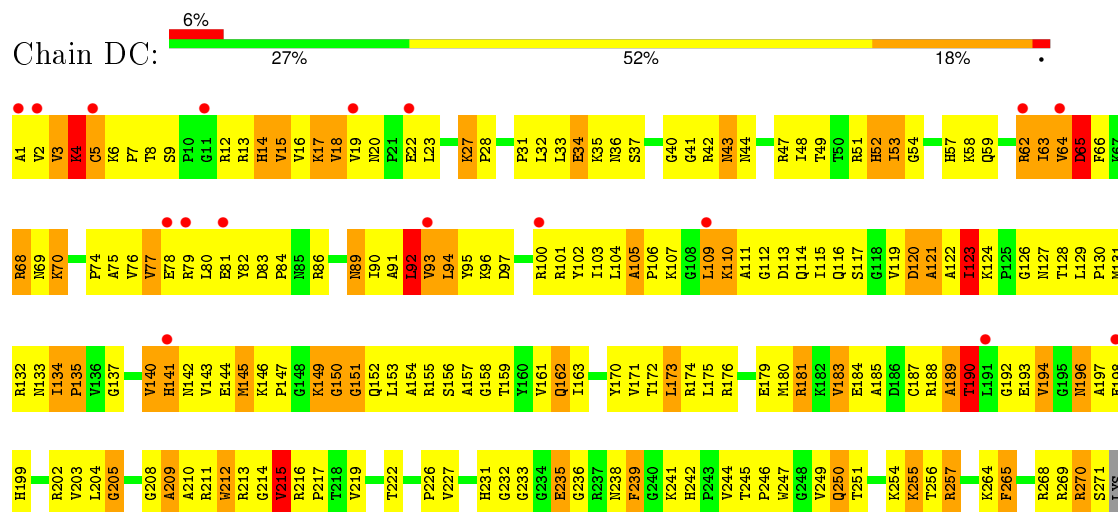
• Molecule 24: 50S ribosomal protein L11



• Molecule 25: 50S ribosomal protein L2



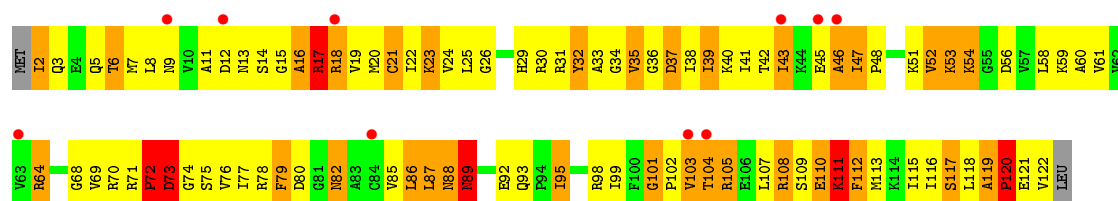
• Molecule 25: 50S ribosomal protein L2



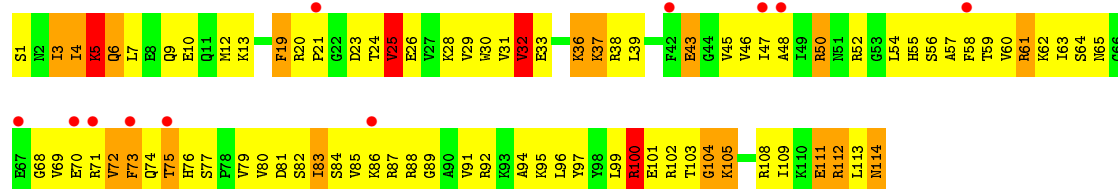




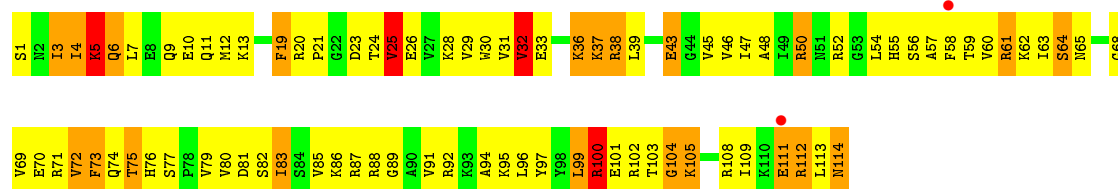




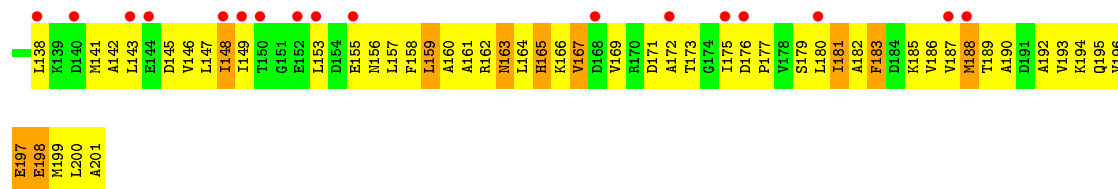
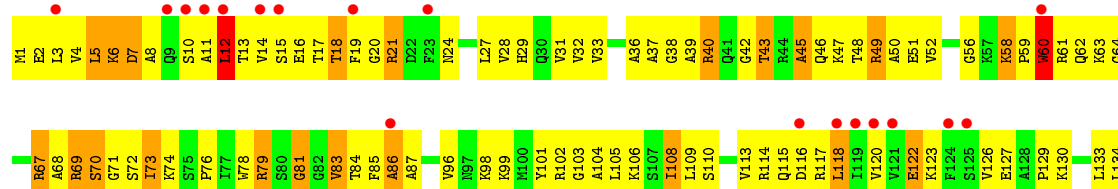
• Molecule 28: 50S ribosomal protein L19



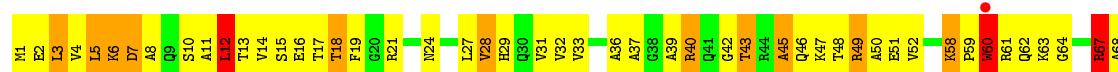
• Molecule 28: 50S ribosomal protein L19



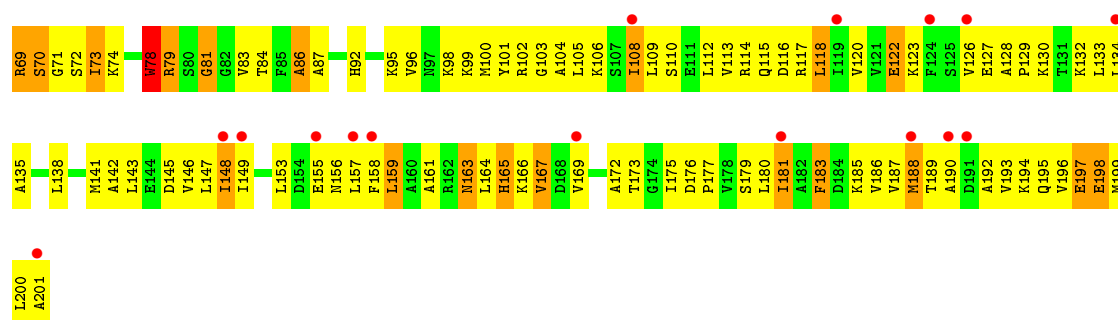
• Molecule 29: 50S ribosomal protein L4



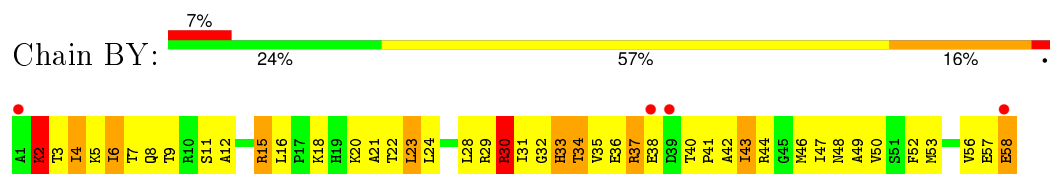
• Molecule 29: 50S ribosomal protein L4



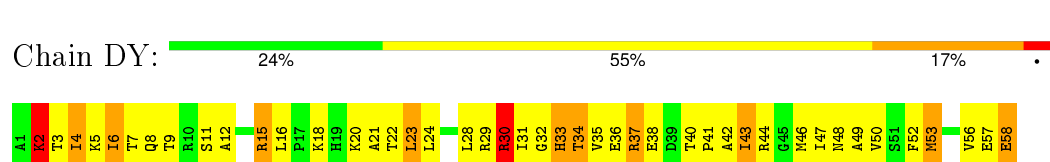




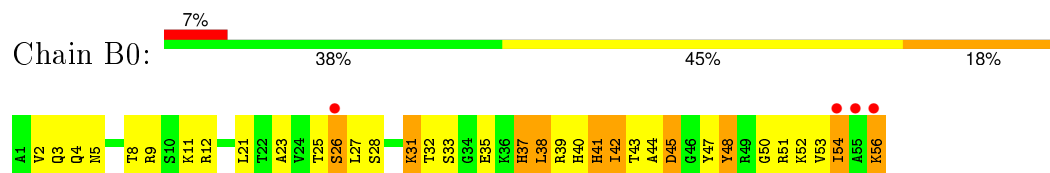
- Molecule 30: 50S ribosomal protein L30



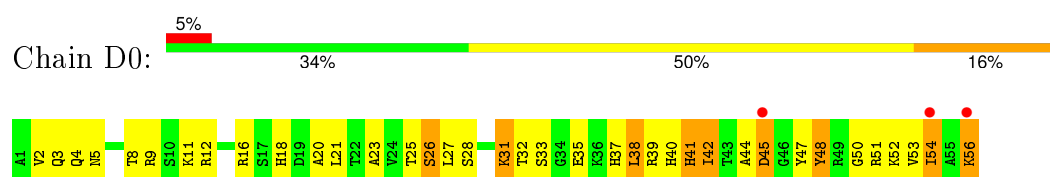
- Molecule 30: 50S ribosomal protein L30



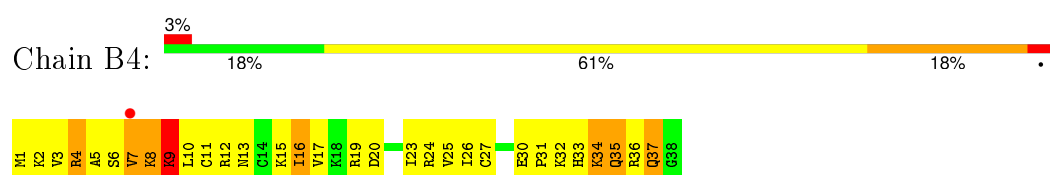
- Molecule 31: 50S ribosomal protein L32



- Molecule 31: 50S ribosomal protein L32



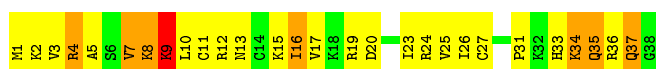
- Molecule 32: 50S ribosomal protein L36



- Molecule 32: 50S ribosomal protein L36



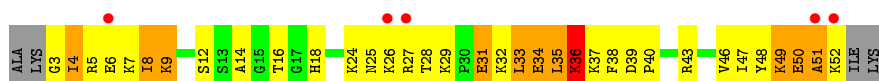




- Molecule 33: 50S ribosomal protein L33



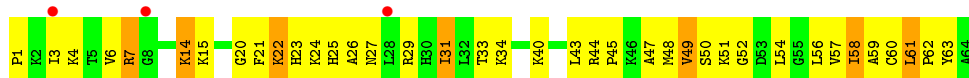
- Molecule 33: 50S ribosomal protein L33



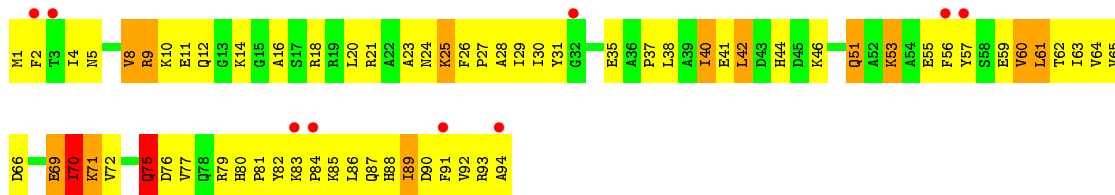
- Molecule 34: 50S ribosomal protein L35



- Molecule 34: 50S ribosomal protein L35



- Molecule 35: 50S ribosomal protein L25



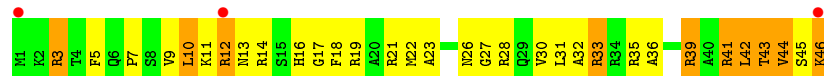
- Molecule 35: 50S ribosomal protein L25







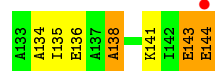
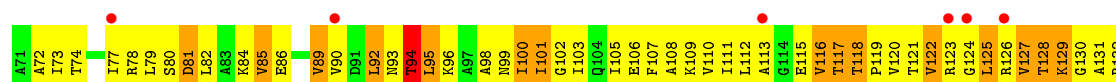
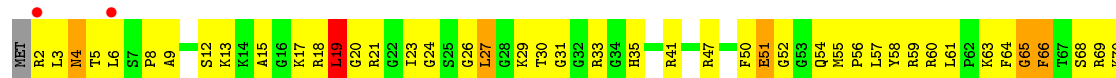
- Molecule 36: 50S ribosomal protein L34



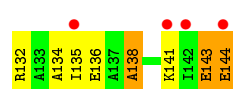
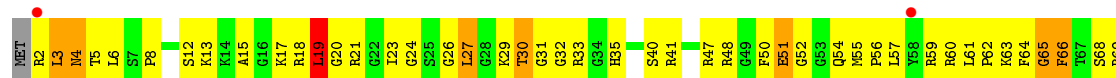
- Molecule 36: 50S ribosomal protein L34



- Molecule 37: 50S ribosomal protein L15



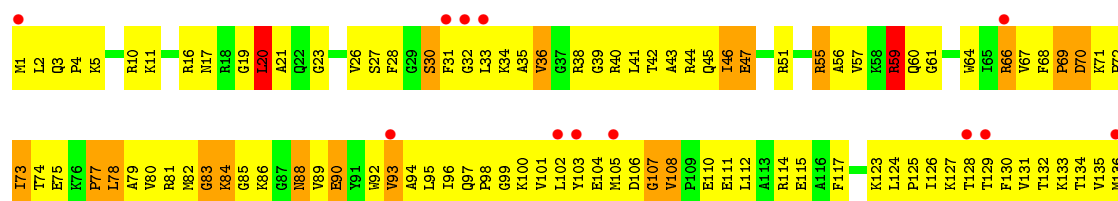
- Molecule 37: 50S ribosomal protein L15



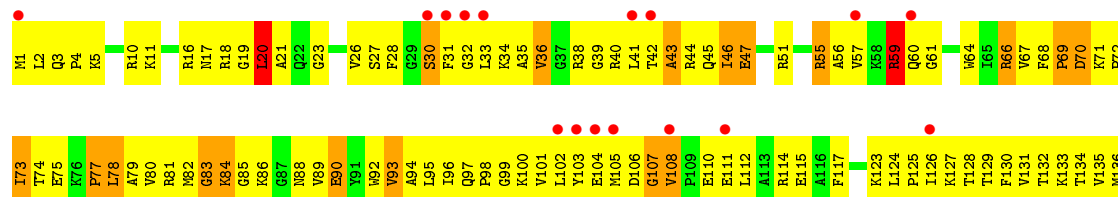
- Molecule 38: 50S ribosomal protein L16



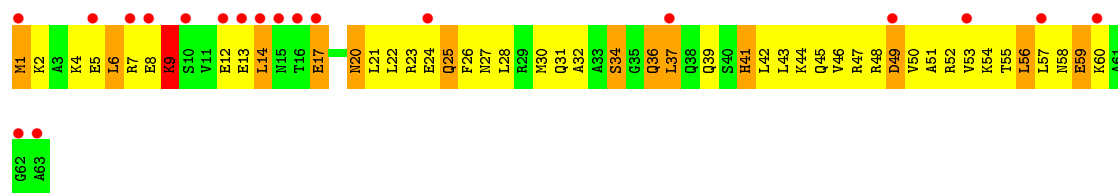




• Molecule 38: 50S ribosomal protein L16



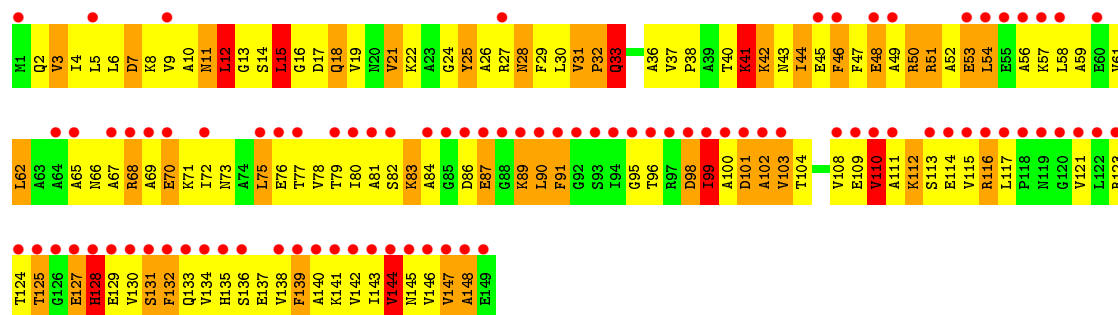
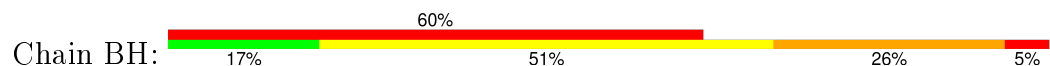
• Molecule 39: 50S ribosomal protein L29



• Molecule 39: 50S ribosomal protein L29

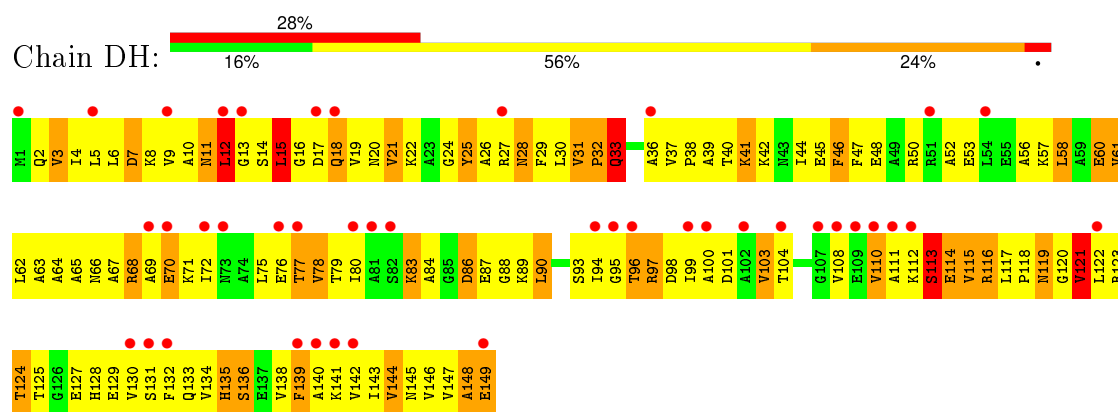


• Molecule 40: 50S ribosomal protein L9

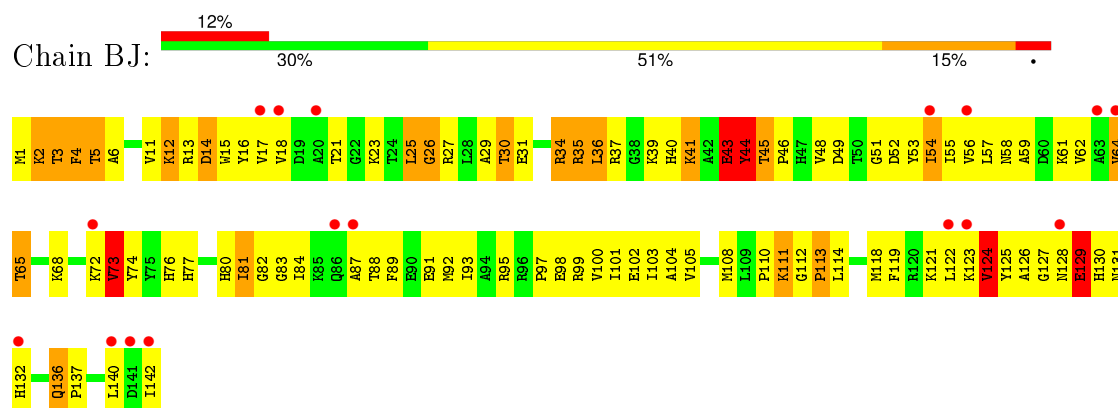


• Molecule 40: 50S ribosomal protein L9

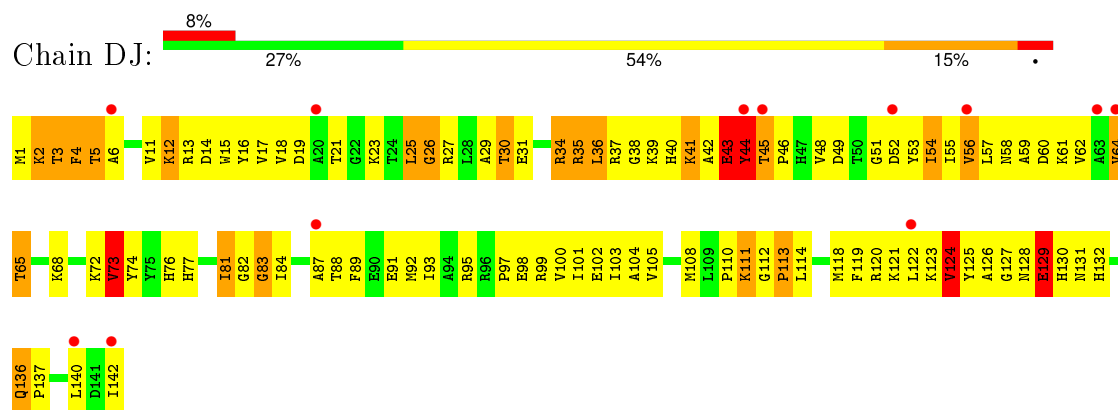




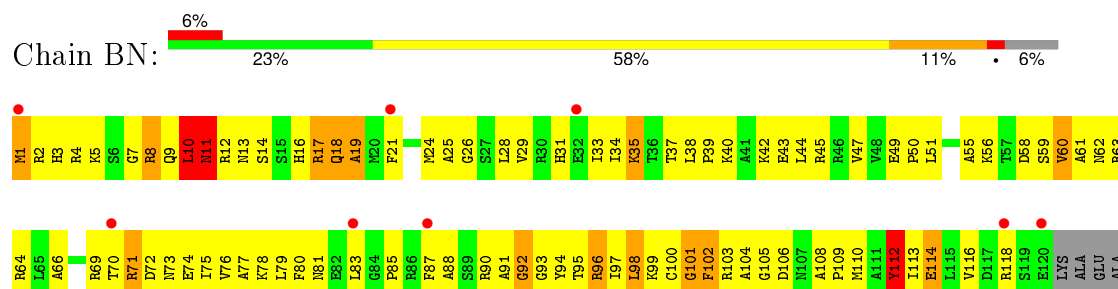
• Molecule 41: 50S ribosomal protein L13



• Molecule 41: 50S ribosomal protein L13



• Molecule 42: 50S ribosomal protein L17

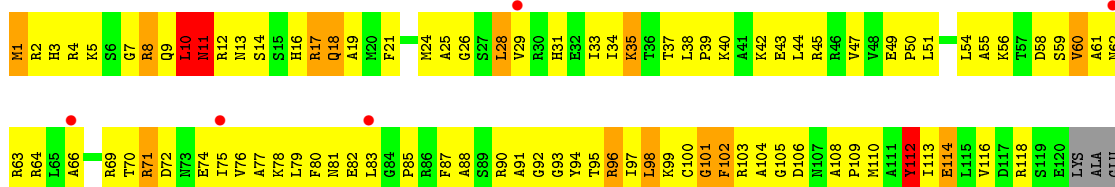




ALA  
ALA  
GLU

• Molecule 42: 50S ribosomal protein L17

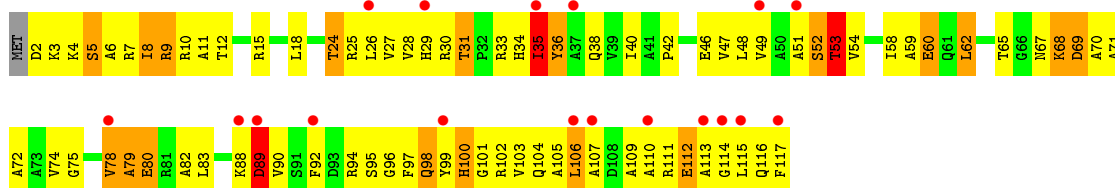
Chain DN: 4% 22% 60% 10% 6%



ALA  
ALA  
GLU

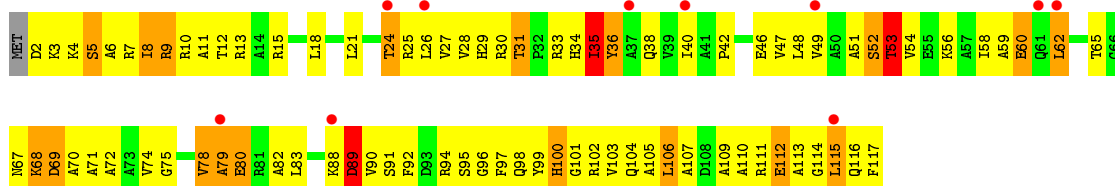
• Molecule 43: 50S ribosomal protein L18

Chain BO: 15% 30% 51% 15%



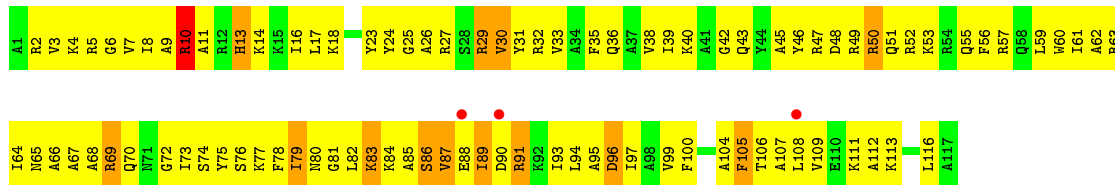
• Molecule 43: 50S ribosomal protein L18

Chain DO: 9% 26% 55% 15%



• Molecule 44: 50S ribosomal protein L20

Chain BQ: 3% 21% 68% 11%

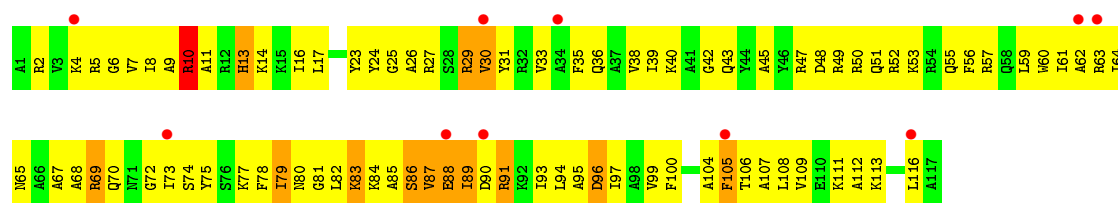


• Molecule 44: 50S ribosomal protein L20

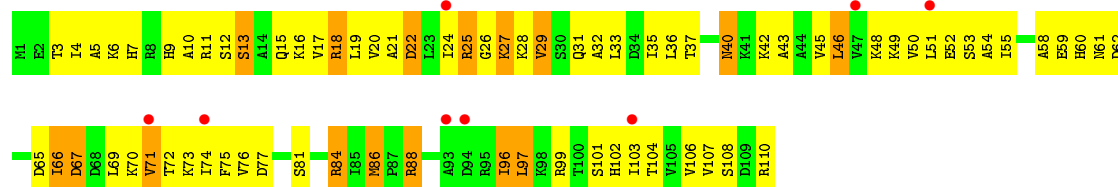
Chain DQ: 9% 26% 62% 11%



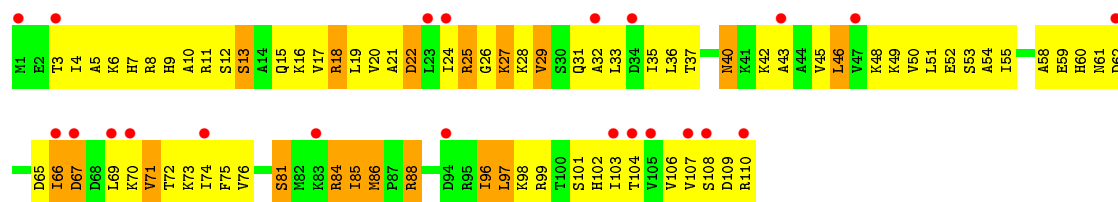




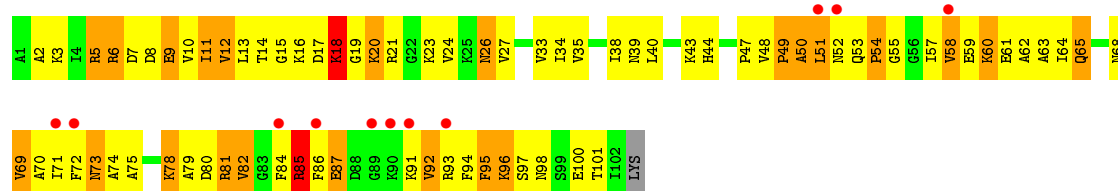
• Molecule 45: 50S ribosomal protein L22



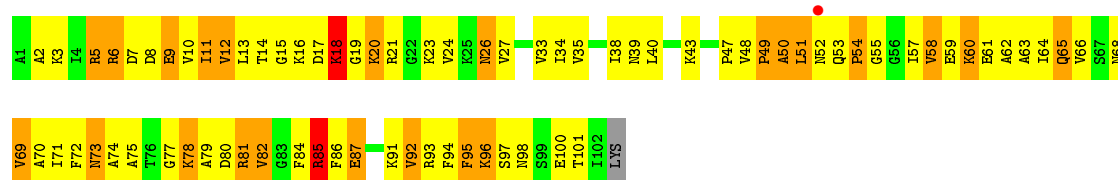
• Molecule 45: 50S ribosomal protein L22



• Molecule 46: 50S ribosomal protein L24

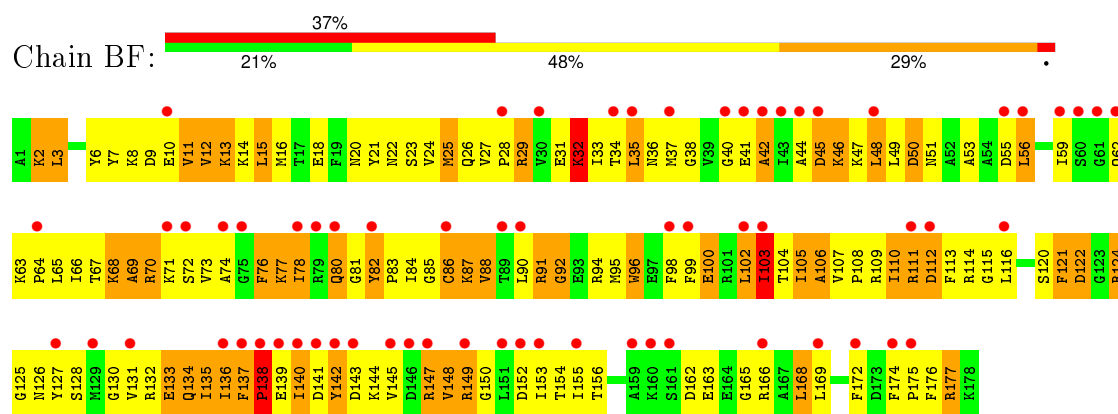


• Molecule 46: 50S ribosomal protein L24

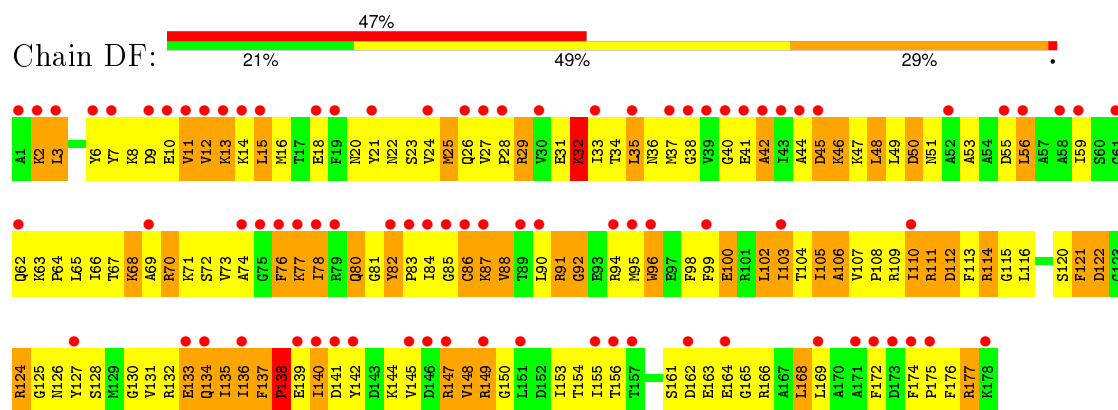


• Molecule 47: 50S ribosomal protein L5

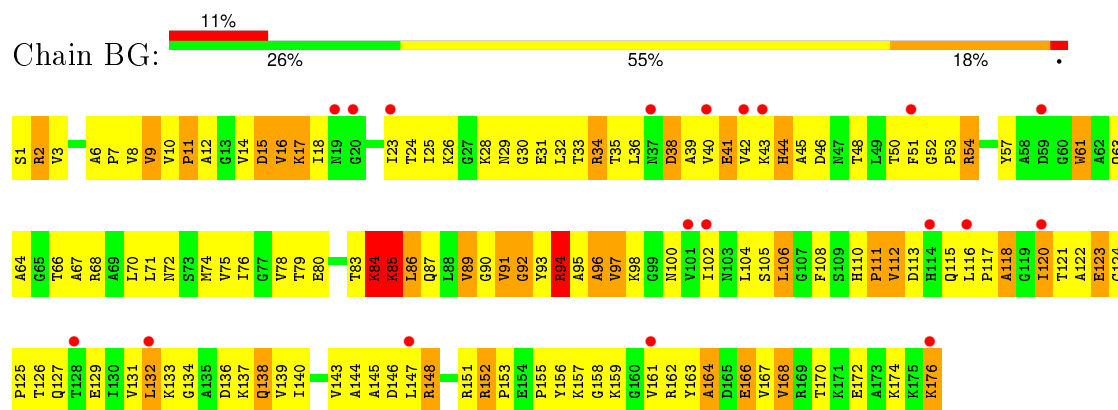




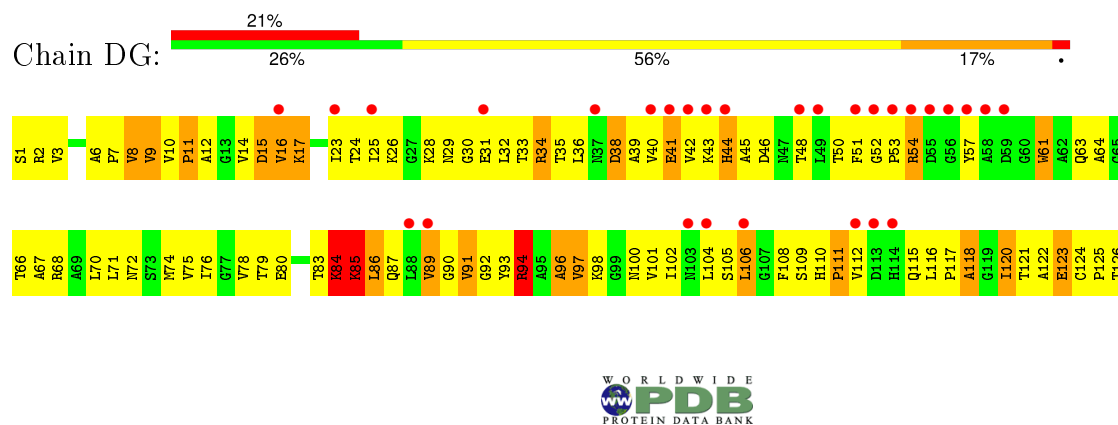
• Molecule 47: 50S ribosomal protein L5



• Molecule 48: 50S ribosomal protein L6



• Molecule 48: 50S ribosomal protein L6







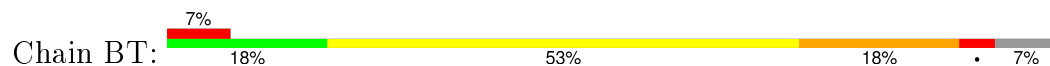
• Molecule 49: 50S ribosomal protein L21



• Molecule 49: 50S ribosomal protein L21



• Molecule 50: 50S ribosomal protein L23



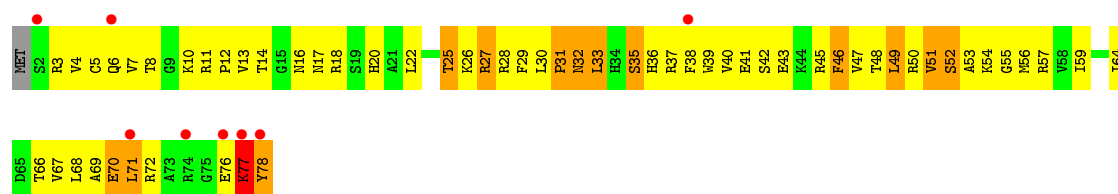
• Molecule 50: 50S ribosomal protein L23



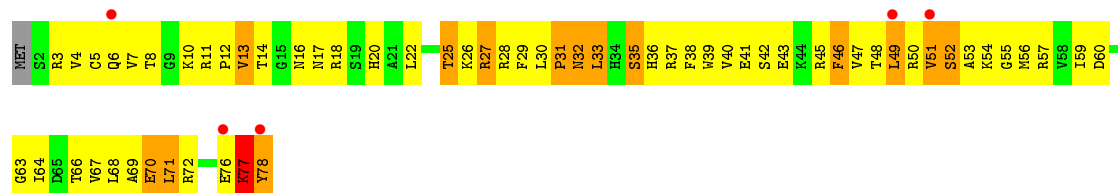
• Molecule 51: 50S ribosomal protein L28



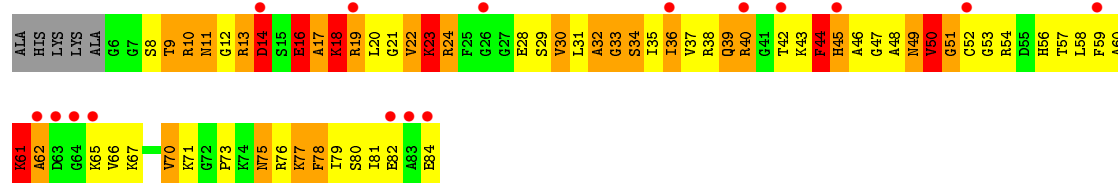
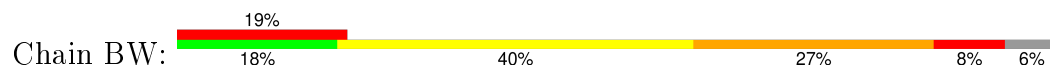




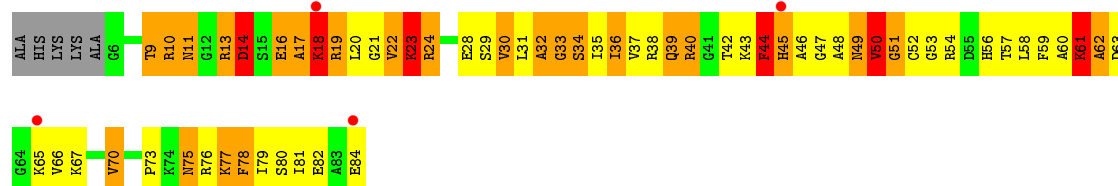
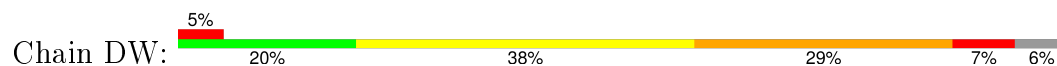
- Molecule 51: 50S ribosomal protein L28



- 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 – 3.50 182.94 – 3.53	Depositor EDS
% Data completeness (in resolution range)	(Not available) (70.00-3.50) 73.0 (182.94-3.53)	Depositor EDS
$R_{merge}$	0.10	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.69 (at 3.49Å)	Xtriage
Refinement program	CNS	Depositor
R, $R_{free}$	0.264 , 0.306 0.232 , 0.271	Depositor DCC
$R_{free}$ test set	25274 reflections (5.10%)	DCC
Wilson B-factor (Å <sup>2</sup> )	132.6	Xtriage
Anisotropy	0.194	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.25 , 79.7	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.48$ , $\langle L^2 \rangle = 0.31$	Xtriage
Outliers	0 of 521228 reflections	Xtriage
$F_o, F_c$ correlation	0.93	EDS
Total number of atoms	284201	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	71.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.41% 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: SCM, 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	0.26	1/36762 (0.0%)	0.75	9/57350 (0.0%)
1	CA	0.32	2/36762 (0.0%)	0.77	8/57350 (0.0%)
2	AC	0.23	0/1651	0.45	0/2225
2	CC	0.23	0/1651	0.46	0/2225
3	AD	0.23	0/1665	0.43	0/2227
3	CD	0.23	0/1665	0.43	0/2227
4	AE	0.23	0/1118	0.46	0/1504
4	CE	0.23	0/1118	0.46	0/1504
5	AF	0.24	0/835	0.44	0/1128
5	CF	0.24	0/835	0.44	0/1128
6	AG	0.23	0/1187	0.44	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	0.44	0/1326
8	AI	0.24	0/1034	0.44	0/1375
8	CI	0.24	0/1034	0.45	0/1375
9	AJ	0.22	0/796	0.48	0/1077
9	CJ	0.23	0/796	0.47	0/1077
10	AK	0.24	0/893	0.45	0/1205
10	CK	0.24	0/893	0.45	0/1205
11	AL	0.22	0/969	0.48	0/1300
11	CL	0.22	0/969	0.48	0/1300
12	AM	0.21	0/892	0.46	0/1193
12	CM	0.21	0/884	0.45	0/1181
13	AP	0.25	0/659	0.46	0/884
13	CP	0.25	0/648	0.46	0/870
14	AQ	0.24	0/657	0.46	0/881
14	CQ	0.24	0/666	0.46	0/892
15	AR	0.23	0/462	0.44	0/621
15	CR	0.23	0/462	0.45	0/621
16	AS	0.25	0/652	0.45	0/877
16	CS	0.25	0/660	0.49	0/888



Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
17	AT	0.24	0/671	0.40	0/888
17	CT	0.23	0/671	0.40	0/888
18	AB	0.25	0/1735	0.44	0/2338
18	CB	0.25	0/1735	0.45	0/2338
19	AU	0.26	0/430	0.46	0/570
19	CU	0.26	0/430	0.46	0/570
20	AO	0.23	0/722	0.44	0/964
20	CO	0.23	0/722	0.43	0/964
21	AN	0.24	0/785	0.43	0/1043
21	CN	0.24	0/785	0.45	0/1043
22	BA	0.25	0/2803	0.75	0/4371
22	DA	0.25	0/2803	0.74	0/4371
23	BB	0.28	6/68314 (0.0%)	0.77	42/106569 (0.0%)
23	DB	0.28	6/68314 (0.0%)	0.77	41/106569 (0.0%)
24	BI	0.24	0/1046	0.46	0/1410
24	DI	0.25	0/1046	0.47	0/1410
25	BC	0.22	0/2121	0.47	0/2852
25	DC	0.22	0/2121	0.47	0/2852
26	BD	0.24	0/1586	0.47	0/2134
26	DD	0.24	0/1586	0.47	0/2134
27	BK	0.23	0/939	0.52	0/1258
27	DK	0.23	0/939	0.52	0/1258
28	BP	0.24	0/929	0.49	0/1242
28	DP	0.24	0/929	0.49	0/1242
29	BE	0.24	0/1571	0.49	0/2113
29	DE	0.24	0/1571	0.49	0/2113
30	BY	0.24	0/453	0.48	0/605
30	DY	0.24	0/453	0.48	0/605
31	B0	0.22	0/450	0.51	0/599
31	D0	0.22	0/450	0.51	0/599
32	B4	0.23	0/303	0.44	0/397
32	D4	0.23	0/303	0.44	0/397
33	B1	0.27	0/416	0.47	0/554
33	D1	0.27	0/416	0.47	0/554
34	B3	0.24	0/513	0.47	0/676
34	D3	0.24	0/513	0.47	0/676
35	BV	0.25	0/766	0.43	0/1025
35	DV	0.25	0/766	0.43	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	0.47	0/1403
37	DL	0.23	0/1054	0.47	0/1403
38	BM	0.25	0/1093	0.47	0/1460



Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
38	DM	0.25	0/1093	0.47	0/1460
39	BX	0.24	0/510	0.52	0/677
39	DX	0.24	0/510	0.52	0/677
40	BH	0.25	0/1122	0.45	0/1515
40	DH	0.25	0/1122	0.46	0/1515
41	BJ	0.23	0/1152	0.47	0/1551
41	DJ	0.23	0/1152	0.47	0/1551
42	BN	0.24	0/973	0.49	0/1301
42	DN	0.24	0/973	0.49	0/1301
43	BO	0.23	0/902	0.47	0/1209
43	DO	0.23	0/902	0.47	0/1209
44	BQ	0.25	0/960	0.46	0/1278
44	DQ	0.25	0/960	0.46	0/1278
45	BS	0.21	0/864	0.50	0/1156
45	DS	0.21	0/864	0.50	0/1156
46	BU	0.25	0/787	0.45	0/1051
46	DU	0.25	0/787	0.45	0/1051
47	BF	0.25	0/1444	0.50	0/1937
47	DF	0.25	0/1444	0.50	0/1937
48	BG	0.23	0/1343	0.46	0/1816
48	DG	0.23	0/1343	0.46	0/1816
49	BR	0.25	0/829	0.46	0/1107
49	DR	0.25	0/829	0.46	0/1107
50	BT	0.22	0/744	0.51	0/994
50	DT	0.22	0/744	0.51	0/994
51	BZ	0.25	0/635	0.48	0/848
51	DZ	0.25	0/635	0.48	0/848
52	BW	0.28	0/603	0.48	0/797
52	DW	0.27	0/603	0.48	0/797
All	All	0.27	15/306360 (0.0%)	0.70	100/457969 (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	20
23	BB	0	44
23	DB	0	43
All	All	0	120



All (15) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	BB	1086	A	C5-C6	-15.92	1.26	1.41
23	DB	1086	A	C5-C6	-15.80	1.26	1.41
23	BB	1088	A	C6-N1	-10.61	1.28	1.35
23	DB	1088	A	C6-N1	-10.48	1.28	1.35
23	DB	1060	U	C2-N3	7.81	1.43	1.37
23	BB	1060	U	C2-N3	7.68	1.43	1.37
23	DB	1086	A	N3-C4	-7.68	1.30	1.34
23	BB	1086	A	N3-C4	-7.60	1.30	1.34
1	CA	1257	A	C4'-C3'	-6.26	1.46	1.53
23	DB	1086	A	N7-C5	-6.09	1.35	1.39
23	BB	1086	A	N7-C5	-6.01	1.35	1.39
1	AA	495	A	N3-C4	-5.45	1.31	1.34
1	CA	495	A	N3-C4	-5.32	1.31	1.34
23	BB	2267	A	C6-N6	-5.06	1.29	1.33
23	DB	2267	A	C6-N6	-5.04	1.29	1.33

All (100) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DB	2204	G	O5'-P-OP1	-29.68	75.09	110.70
23	BB	2204	G	O5'-P-OP2	-28.72	76.23	110.70
23	DB	2791	G	O5'-P-OP2	-27.53	77.67	110.70
23	BB	2791	G	O5'-P-OP1	-27.53	77.67	110.70
23	DB	2791	G	O5'-P-OP1	17.94	132.23	110.70
23	BB	2791	G	O5'-P-OP2	17.87	132.15	110.70
23	BB	2204	G	O5'-P-OP1	17.77	132.02	110.70
23	DB	2204	G	O5'-P-OP2	17.65	131.88	110.70
23	BB	2790	U	OP1-P-O3'	14.65	137.43	105.20
23	DB	2790	U	OP2-P-O3'	14.62	137.37	105.20
23	DB	2203	U	OP1-P-O3'	14.38	136.84	105.20
23	BB	2203	U	OP2-P-O3'	14.05	136.10	105.20
23	BB	1552	A	N9-C1'-C2'	-8.61	102.53	112.00
23	DB	1552	A	N9-C1'-C2'	-8.59	102.55	112.00
1	CA	466	A	C5'-C4'-C3'	8.52	129.64	116.00
23	DB	1088	A	N1-C6-N6	-8.34	113.59	118.60
23	BB	1088	A	N1-C6-N6	-8.26	113.65	118.60
1	CA	765	G	N9-C1'-C2'	-7.90	103.31	112.00
1	AA	765	G	N9-C1'-C2'	-7.86	103.36	112.00
23	BB	1060	U	C5-C4-O4	-7.37	121.48	125.90
23	BB	1086	A	C4-C5-C6	7.35	120.67	117.00
23	DB	1060	U	C5-C4-O4	-7.33	121.50	125.90
1	AA	86	G	N9-C1'-C2'	7.32	123.51	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DB	1086	A	C4-C5-C6	7.11	120.56	117.00
23	BB	2733	A	N9-C1'-C2'	-7.10	104.19	112.00
23	DB	2733	A	N9-C1'-C2'	-7.09	104.20	112.00
1	AA	466	A	C5'-C4'-O4'	-6.87	100.86	109.10
23	DB	1350	C	C5'-C4'-C3'	-6.76	105.18	116.00
23	BB	560	C	C5'-C4'-C3'	-6.68	105.30	116.00
23	BB	1126	A	C5'-C4'-C3'	-6.55	105.53	116.00
1	CA	166	U	C5'-C4'-C3'	-6.47	105.64	116.00
23	BB	2192	U	C5'-C4'-C3'	-6.47	105.64	116.00
23	BB	1439	A	N9-C1'-C2'	-6.46	104.89	112.00
23	DB	1088	A	C5-C6-N6	6.42	128.84	123.70
23	DB	1439	A	N9-C1'-C2'	-6.42	104.94	112.00
23	BB	1088	A	C5-C6-N6	6.34	128.77	123.70
1	AA	166	U	C5'-C4'-C3'	-6.31	105.90	116.00
23	BB	2137	U	N1-C1'-C2'	-6.22	105.16	112.00
23	DB	2471	A	C5'-C4'-C3'	-6.19	106.10	116.00
23	BB	2471	A	C5'-C4'-C3'	-6.16	106.14	116.00
23	BB	2199	A	C5'-C4'-C3'	-6.14	106.18	116.00
23	BB	1350	C	C5'-C4'-C3'	-6.12	106.21	116.00
23	BB	1086	A	C6-C5-N7	-6.11	128.03	132.30
23	DB	560	C	C5'-C4'-C3'	-6.10	106.24	116.00
1	AA	960	U	C2'-C3'-O3'	6.10	123.46	113.70
23	DB	2790	U	O3'-P-O5'	-6.08	92.45	104.00
23	DB	1086	A	C6-C5-N7	-6.06	128.06	132.30
23	BB	2790	U	O3'-P-O5'	-5.96	92.68	104.00
1	CA	243	A	C2'-C3'-O3'	5.93	123.19	113.70
23	DB	2199	A	C5'-C4'-C3'	-5.89	106.58	116.00
1	AA	243	A	C2'-C3'-O3'	5.88	123.11	113.70
23	BB	745	G	C5'-C4'-C3'	-5.83	106.67	116.00
23	DB	1086	A	C2-N3-C4	-5.82	107.69	110.60
1	AA	992	U	N1-C1'-C2'	-5.79	105.62	112.00
23	DB	944	C	C5'-C4'-C3'	-5.77	106.77	116.00
23	DB	773	U	C5'-C4'-C3'	-5.74	106.81	116.00
23	BB	1086	A	C2-N3-C4	-5.72	107.74	110.60
23	DB	1634	A	C5'-C4'-C3'	-5.70	106.88	116.00
23	DB	2072	C	C5'-C4'-C3'	-5.69	106.90	116.00
23	BB	1060	U	N1-C2-O2	-5.66	118.84	122.80
23	BB	2267	A	N9-C1'-C2'	-5.64	105.79	112.00
23	DB	1060	U	N1-C2-O2	-5.64	118.85	122.80
23	DB	2203	U	O3'-P-O5'	-5.63	93.30	104.00
23	DB	2267	A	N9-C1'-C2'	-5.63	105.81	112.00
23	BB	1340	U	C5'-C4'-C3'	-5.60	107.04	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BB	479	A	C4'-C3'-O3'	-5.54	97.77	109.40
23	BB	461	C	C5'-C4'-C3'	-5.49	107.21	116.00
23	DB	2894	G	N9-C1'-C2'	-5.47	105.98	112.00
23	BB	1126	A	O5'-P-OP2	-5.46	100.79	105.70
23	BB	1552	A	C4'-C3'-O3'	5.44	123.89	113.00
23	BB	2894	G	N9-C1'-C2'	-5.43	106.03	112.00
23	BB	2072	C	C5'-C4'-C3'	-5.40	107.36	116.00
23	DB	671	C	C5'-C4'-C3'	-5.38	107.39	116.00
23	DB	386	G	C5'-C4'-C3'	-5.38	107.40	116.00
23	DB	1060	U	N3-C2-O2	5.35	125.94	122.20
1	CA	1534	A	C2'-C3'-O3'	-5.35	97.74	109.50
1	CA	1213	A	O4'-C4'-C3'	5.33	110.36	106.10
23	BB	375	G	C5'-C4'-C3'	-5.32	107.48	116.00
23	BB	973	A	C5'-C4'-C3'	-5.31	107.50	116.00
23	BB	2203	U	O3'-P-O5'	-5.31	93.90	104.00
23	BB	690	G	C5'-C4'-C3'	-5.28	107.55	116.00
23	DB	1600	C	C5'-C4'-C3'	-5.28	107.55	116.00
23	DB	1664	A	C5'-C4'-C3'	-5.28	107.56	116.00
23	BB	1600	C	C5'-C4'-C3'	-5.26	107.58	116.00
23	BB	1060	U	N3-C2-O2	5.25	125.88	122.20
23	DB	1340	U	C5'-C4'-C3'	-5.23	107.63	116.00
23	BB	2137	U	C4'-C3'-O3'	5.22	123.45	113.00
23	DB	745	G	C5'-C4'-C3'	-5.21	107.66	116.00
23	DB	974	G	C4'-C3'-O3'	-5.16	98.56	109.40
1	CA	1432	G	C5'-C4'-C3'	-5.16	107.74	116.00
23	DB	461	C	C5'-C4'-C3'	-5.15	107.75	116.00
23	DB	375	G	C5'-C4'-C3'	-5.15	107.76	116.00
23	DB	1251	C	C5'-C4'-C3'	-5.14	107.78	116.00
23	DB	479	A	C4'-C3'-O3'	-5.11	98.67	109.40
1	CA	1432	G	N9-C1'-C2'	-5.11	106.38	112.00
1	AA	121	U	C5'-C4'-C3'	5.09	124.14	116.00
1	AA	1432	G	N9-C1'-C2'	-5.04	106.45	112.00
23	DB	1552	A	C4'-C3'-O3'	5.04	123.08	113.00
23	BB	671	C	C5'-C4'-C3'	-5.03	107.95	116.00
23	BB	1251	C	C5'-C4'-C3'	-5.03	107.95	116.00

There are no chirality outliers.

All (120) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	AA	1039	G	Sidechain
1	AA	1331	G	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	1432	G	Sidechain
1	AA	1441	A	Sidechain
1	AA	187	G	Sidechain
1	AA	281	G	Sidechain
1	AA	437	U	Sidechain
1	AA	438	U	Sidechain
1	AA	450	G	Sidechain
1	AA	496	A	Sidechain
1	AA	703	G	Sidechain
1	AA	86	G	Sidechain
1	AA	992	U	Sidechain
23	BB	1047	G	Sidechain
23	BB	1060	U	Sidechain
23	BB	1086	A	Sidechain
23	BB	1088	A	Sidechain
23	BB	118	A	Sidechain
23	BB	1306	C	Sidechain
23	BB	1377	G	Sidechain
23	BB	1419	A	Sidechain
23	BB	1439	A	Sidechain
23	BB	1476	U	Sidechain
23	BB	1546	G	Sidechain
23	BB	1572	A	Sidechain
23	BB	1721	G	Sidechain
23	BB	1792	G	Sidechain
23	BB	1814	G	Sidechain
23	BB	1828	G	Sidechain
23	BB	2062	A	Sidechain
23	BB	2156	G	Sidechain
23	BB	221	A	Sidechain
23	BB	222	A	Sidechain
23	BB	2272	U	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	2638	G	Sidechain
23	BB	2733	A	Sidechain
23	BB	2770	G	Sidechain
23	BB	2834	G	Sidechain
23	BB	2848	G	Sidechain

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Mol	Chain	Res	Type	Group
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	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
23	BB	942	G	Sidechain
1	CA	1012	A	Sidechain
1	CA	1027	C	Sidechain
1	CA	1033	G	Sidechain
1	CA	1133	G	Sidechain
1	CA	1144	G	Sidechain
1	CA	1313	U	Sidechain
1	CA	1331	G	Sidechain
1	CA	1356	G	Sidechain
1	CA	1405	G	Sidechain
1	CA	1432	G	Sidechain
1	CA	1441	A	Sidechain
1	CA	187	G	Sidechain
1	CA	281	G	Sidechain
1	CA	437	U	Sidechain
1	CA	438	U	Sidechain
1	CA	450	G	Sidechain
1	CA	496	A	Sidechain
1	CA	703	G	Sidechain
1	CA	82	G	Sidechain
1	CA	935	A	Sidechain
23	DB	1047	G	Sidechain
23	DB	1060	U	Sidechain
23	DB	1086	A	Sidechain
23	DB	1088	A	Sidechain
23	DB	1306	C	Sidechain
23	DB	1377	G	Sidechain
23	DB	1419	A	Sidechain
23	DB	1439	A	Sidechain
23	DB	1476	U	Sidechain

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Mol	Chain	Res	Type	Group
23	DB	1546	G	Sidechain
23	DB	1572	A	Sidechain
23	DB	1721	G	Sidechain
23	DB	1792	G	Sidechain
23	DB	1814	G	Sidechain
23	DB	1828	G	Sidechain
23	DB	2062	A	Sidechain
23	DB	2135	A	Sidechain
23	DB	2136	G	Sidechain
23	DB	221	A	Sidechain
23	DB	222	A	Sidechain
23	DB	2272	U	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	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	500	G	Sidechain
23	DB	51	G	Sidechain
23	DB	562	U	Sidechain
23	DB	630	G	Sidechain
23	DB	727	A	Sidechain
23	DB	729	G	Sidechain
23	DB	757	G	Sidechain
23	DB	942	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	1291	0
1	CA	32831	0	16521	1302	0
2	AC	1624	0	1699	189	0
2	CC	1624	0	1699	189	0
3	AD	1643	0	1710	127	0
3	CD	1643	0	1710	128	0
4	AE	1105	0	1148	94	0
4	CE	1105	0	1148	93	0
5	AF	817	0	808	95	0
5	CF	817	0	808	91	0
6	AG	1174	0	1230	150	0
6	CG	1196	0	1246	114	0
7	AH	979	0	1034	68	0
7	CH	979	0	1034	70	0
8	AI	1022	0	1070	146	0
8	CI	1022	0	1070	136	0
9	AJ	786	0	828	100	0
9	CJ	786	0	828	98	0
10	AK	877	0	887	108	0
10	CK	877	0	887	97	0
11	AL	955	0	1019	96	0
11	CL	955	0	1019	97	0
12	AM	883	0	944	160	0
12	CM	876	0	937	116	0
13	AP	649	0	666	58	0
13	CP	638	0	656	50	0
14	AQ	648	0	691	63	0
14	CQ	657	0	702	59	0
15	AR	455	0	478	40	0
15	CR	455	0	478	43	0
16	AS	637	0	665	107	0
16	CS	644	0	675	106	0
17	AT	665	0	714	60	0
17	CT	665	0	714	64	0
18	AB	1704	0	1732	193	0
18	CB	1704	0	1732	210	0
19	AU	425	0	449	74	0
19	CU	425	0	449	67	0
20	AO	714	0	734	65	0
20	CO	714	0	734	50	0
21	AN	774	0	827	109	0
21	CN	774	0	827	113	0
22	BA	2507	0	1270	104	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
22	DA	2507	0	1270	107	0
23	BB	60995	0	30679	2216	0
23	DB	60995	0	30678	2313	0
24	BI	1032	0	1088	112	0
24	DI	1032	0	1088	176	0
25	BC	2082	0	2157	217	0
25	DC	2082	0	2157	218	0
26	BD	1565	0	1616	206	0
26	DD	1565	0	1616	207	0
27	BK	930	0	1000	130	0
27	DK	930	0	1000	138	0
28	BP	917	0	965	115	0
28	DP	917	0	965	118	0
29	BE	1552	0	1619	199	0
29	DE	1552	0	1619	183	0
30	BY	449	0	491	58	0
30	DY	449	0	491	57	0
31	B0	444	0	461	35	0
31	D0	444	0	461	40	0
32	B4	302	0	340	42	0
32	D4	302	0	340	39	0
33	B1	409	0	440	34	0
33	D1	409	0	440	38	0
34	B3	504	0	574	50	0
34	D3	504	0	574	44	0
35	BV	753	0	780	102	0
35	DV	753	0	780	100	0
36	B2	377	0	418	48	0
36	D2	377	0	418	45	0
37	BL	1045	0	1117	139	0
37	DL	1045	0	1117	153	0
38	BM	1074	0	1157	116	0
38	DM	1074	0	1157	115	0
39	BX	509	0	543	63	0
39	DX	509	0	543	67	0
40	BH	1111	0	1148	193	0
40	DH	1111	0	1148	179	0
41	BJ	1129	0	1162	130	0
41	DJ	1129	0	1162	127	0
42	BN	960	0	1000	115	0
42	DN	960	0	1000	114	0
43	BO	892	0	923	93	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
43	DO	892	0	923	102	0
44	BQ	947	0	1022	143	0
44	DQ	947	0	1022	143	0
45	BS	857	0	922	86	0
45	DS	857	0	922	92	0
46	BU	779	0	834	110	0
46	DU	779	0	834	111	0
47	BF	1420	0	1460	223	0
47	DF	1420	0	1460	216	0
48	BG	1323	0	1374	188	0
48	DG	1323	0	1374	178	0
49	BR	816	0	839	110	0
49	DR	816	0	839	105	0
50	BT	738	0	807	107	0
50	DT	738	0	807	116	0
51	BZ	625	0	652	68	0
51	DZ	625	0	652	67	0
52	BW	596	0	610	134	0
52	DW	596	0	610	127	0
53	AA	42	0	46	0	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	59	0	0	0	0
54	DB	111	0	0	0	0
55	AA	23	0	24	5	0
55	CA	23	0	24	1	0
56	B4	1	0	0	0	0
56	D4	1	0	0	0	0
57	AA	290	0	0	2	0
57	AE	1	0	0	0	0
57	AK	1	0	0	0	0
57	AL	4	0	0	0	0
57	AN	1	0	0	0	0
57	AP	1	0	0	0	0
57	AT	2	0	0	0	0
57	BB	492	0	0	4	0
57	BC	7	0	0	0	0
57	BD	1	0	0	0	0
57	BE	4	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
57	BH	1	0	0	0	0
57	BL	2	0	0	0	0
57	CA	282	0	0	2	0
57	CE	2	0	0	0	0
57	CI	1	0	0	0	0
57	CL	4	0	0	0	0
57	CN	3	0	0	0	0
57	CP	1	0	0	0	0
57	CT	1	0	0	0	0
57	DB	501	0	0	14	0
57	DC	4	0	0	0	0
57	DD	1	0	0	0	0
57	DE	2	0	0	0	0
57	DL	1	0	0	0	0
57	DN	2	0	0	0	0
57	DR	1	0	0	0	0
All	All	284201	0	190895	16740	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 35.

All (16740) 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	1.32	1.27
23:BB:2305:U:H1'	47:BF:132:ARG:HA	1.33	1.10
40:BH:125:THR:HA	40:BH:146:VAL:HB	1.28	1.10
18:CB:69:VAL:HG23	18:CB:162:VAL:HB	1.34	1.09
23:DB:1098:A:H3'	24:DI:3:LYS:HA	1.32	1.08
9:CJ:52:LEU:HB2	21:CN:80:ARG:HD2	1.35	1.08
8:CI:35:GLU:HA	8:CI:39:GLY:HA3	1.36	1.07
9:AJ:8:ILE:HA	9:AJ:100:ILE:HG22	1.37	1.07
19:CU:36:PHE:HB3	19:CU:40:PRO:HD3	1.07	1.07
23:BB:855:G:H21	52:BW:23:LYS:HG2	1.16	1.07
18:CB:46:VAL:HG13	18:CB:47:PRO:HD3	1.37	1.06
30:BY:12:ALA:HA	30:BY:15:ARG:HD3	1.37	1.06
23:DB:704:G:H2'	23:DB:726:G:H22	1.21	1.05
1:AA:1296:C:H4'	1:AA:1302:C:H41	1.17	1.05
50:DT:29:THR:HA	50:DT:86:THR:HA	1.37	1.05
19:AU:36:PHE:HB3	19:AU:40:PRO:HD3	1.08	1.05
30:DY:12:ALA:HA	30:DY:15:ARG:HD3	1.37	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1099:G:C8	24:DI:3:LYS:N	2.24	1.04
23:BB:545:U:H2'	23:BB:546:U:H5'	1.38	1.04
52:BW:49:ASN:HB2	52:BW:61:LYS:H	1.20	1.04
50:BT:29:THR:HA	50:BT:86:THR:HA	1.35	1.03
23:DB:2305:U:H1'	47:DF:132:ARG:HA	1.37	1.03
52:DW:49:ASN:HB2	52:DW:61:LYS:H	1.19	1.03
23:DB:855:G:H21	52:DW:23:LYS:HG2	1.22	1.03
52:DW:51:GLY:HA3	52:DW:59:PHE:HB3	1.37	1.03
52:DW:48:ALA:HB3	52:DW:81:ILE:HG13	1.40	1.03
9:CJ:40:ILE:HD13	9:CJ:73:LEU:HB3	1.41	1.02
52:BW:51:GLY:HA3	52:BW:59:PHE:HB3	1.39	1.02
42:DN:37:THR:HG22	42:DN:39:PRO:HD2	1.42	1.02
8:CI:98:ARG:HG3	8:CI:103:VAL:HG21	1.37	1.02
6:CG:115:MET:HA	6:CG:118:ARG:HG3	1.39	1.01
9:CJ:55:PRO:HA	21:CN:80:ARG:HH21	1.25	1.01
25:DC:183:VAL:HG13	25:DC:185:ALA:H	1.24	1.01
32:B4:7:VAL:HG13	32:B4:8:LYS:H	1.26	1.00
25:BC:183:VAL:HG13	25:BC:185:ALA:H	1.24	1.00
9:CJ:9:ARG:HB2	9:CJ:99:GLN:HB2	1.38	1.00
32:D4:7:VAL:HG13	32:D4:8:LYS:H	1.27	1.00
23:DB:2502:G:H5'	23:DB:2503:A:H5''	1.43	1.00
23:BB:704:G:H2'	23:BB:726:G:H22	1.23	1.00
37:DL:29:LYS:HG3	37:DL:30:THR:HG23	1.43	0.99
10:AK:86:LYS:HB3	10:AK:112:VAL:HG23	1.42	0.99
25:DC:144:GLU:HG3	25:DC:151:GLY:H	1.25	0.99
48:BG:34:ARG:H	48:BG:34:ARG:HH11	1.03	0.99
26:BD:8:LYS:HB2	26:BD:201:LEU:HD21	1.44	0.99
2:CC:52:SER:HB3	2:CC:114:LEU:HG	1.45	0.99
1:AA:120:A:H2'	1:AA:121:U:H5''	1.44	0.99
26:DD:8:LYS:HB2	26:DD:201:LEU:HD21	1.44	0.99
4:AE:81:GLN:H	4:AE:146:MET:HE3	1.28	0.99
52:BW:48:ALA:HB3	52:BW:81:ILE:HG13	1.40	0.98
35:BV:9:ARG:HH12	35:BV:27:PRO:HB3	1.26	0.98
25:BC:123:ILE:HD12	25:BC:135:PRO:HG2	1.41	0.98
41:BJ:17:VAL:HG23	41:BJ:137:PRO:HB2	1.45	0.98
26:BD:106:LYS:HB3	26:BD:206:ALA:H	1.29	0.98
23:DB:1098:A:H3'	24:DI:3:LYS:CA	1.93	0.98
6:CG:10:LYS:HZ2	6:CG:11:ILE:H	1.09	0.98
35:DV:9:ARG:HH12	35:DV:27:PRO:HB3	1.25	0.98
23:DB:1099:G:O5'	24:DI:4:VAL:N	1.96	0.97
23:DB:1099:G:H8	24:DI:3:LYS:H	0.99	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:123:ILE:HD12	25:DC:135:PRO:HG2	1.46	0.97
18:AB:13:VAL:HB	18:AB:207:ARG:HE	1.28	0.97
2:CC:59:PRO:HG2	2:CC:62:SER:HB2	1.43	0.97
1:CA:120:A:H2'	1:CA:121:U:H5''	1.42	0.97
20:AO:25:THR:HG21	20:AO:70:LEU:HD23	1.47	0.97
52:BW:39:GLN:HG3	52:BW:42:THR:HB	1.46	0.97
19:CU:20:ARG:HG2	19:CU:24:LYS:HZ2	1.30	0.96
21:CN:51:PRO:HB2	21:CN:54:SER:HB3	1.43	0.96
48:DG:34:ARG:HH11	48:DG:34:ARG:H	1.04	0.96
29:BE:110:SER:HB3	29:BE:114:ARG:HH12	1.31	0.96
5:CF:3:HIS:H	5:CF:92:THR:HG23	1.28	0.96
5:AF:3:HIS:H	5:AF:92:THR:HG23	1.30	0.96
41:DJ:17:VAL:HG23	41:DJ:137:PRO:HB2	1.47	0.96
10:CK:86:LYS:HB3	10:CK:112:VAL:HG23	1.43	0.96
9:AJ:7:ARG:HB2	9:AJ:101:SER:H	1.30	0.95
40:BH:54:LEU:HA	40:BH:58:LEU:HB2	1.44	0.95
23:DB:27:G:H22	23:DB:512:G:H2'	1.31	0.95
23:BB:1032:A:H1'	32:B4:23:ILE:HD13	1.48	0.95
14:AQ:16:MET:HB2	14:AQ:19:SER:HB2	1.45	0.95
14:CQ:16:MET:HB2	14:CQ:19:SER:HB2	1.47	0.95
26:DD:106:LYS:HB3	26:DD:206:ALA:H	1.28	0.95
40:BH:79:THR:HG22	40:BH:145:ASN:HB2	1.45	0.95
6:CG:12:LEU:HD22	6:CG:13:PRO:HD2	1.47	0.95
52:DW:39:GLN:HG3	52:DW:42:THR:HB	1.47	0.95
2:CC:53:ARG:HH12	2:CC:55:VAL:HG23	1.30	0.95
23:BB:858:G:N3	23:BB:2268:A:H2'	1.81	0.95
4:CE:81:GLN:H	4:CE:146:MET:HE3	1.29	0.95
29:DE:110:SER:HB3	29:DE:114:ARG:HH12	1.30	0.95
23:BB:143:C:O4'	50:BT:2:ILE:HB	1.67	0.95
23:BB:2502:G:H5'	23:BB:2503:A:H5''	1.45	0.95
40:DH:127:GLU:HA	40:DH:145:ASN:HA	1.49	0.94
44:BQ:8:ILE:H	44:BQ:8:ILE:HD12	1.32	0.94
42:BN:72:ASP:HB3	42:BN:75:ILE:HG12	1.47	0.94
44:DQ:8:ILE:HD12	44:DQ:8:ILE:H	1.32	0.94
37:DL:123:ARG:HA	37:DL:143:GLU:HB3	1.49	0.94
43:BO:53:THR:HG22	43:BO:74:VAL:HG21	1.48	0.94
6:CG:2:ARG:HH11	6:CG:2:ARG:HB3	1.33	0.94
8:AI:18:VAL:HG11	8:AI:82:ILE:HA	1.46	0.94
23:BB:922:C:H1'	52:BW:22:VAL:HG21	1.50	0.94
23:DB:2720:U:H5''	28:DP:52:ARG:HH22	1.33	0.94
9:CJ:52:LEU:H	9:CJ:52:LEU:HD12	1.28	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:B2:30:VAL:HA	36:B2:33:ARG:HH22	1.33	0.93
12:AM:106:ARG:HE	12:AM:112:ARG:HG2	1.30	0.93
19:AU:16:ARG:HH12	19:AU:19:LYS:HE2	1.32	0.93
40:BH:82:SER:HB3	40:BH:146:VAL:HG13	1.49	0.93
42:DN:72:ASP:HB3	42:DN:75:ILE:HG12	1.47	0.93
24:BI:129:GLU:HB3	24:BI:133:ARG:HH12	1.31	0.93
23:DB:138:U:H4'	23:DB:139:U:H3'	1.49	0.93
18:CB:164:ASP:HB2	18:CB:203:ASP:HB2	1.48	0.93
50:BT:67:VAL:HB	50:BT:76:ARG:HG3	1.51	0.93
37:BL:123:ARG:HA	37:BL:143:GLU:HB3	1.51	0.93
43:DO:53:THR:HG22	43:DO:74:VAL:HG21	1.49	0.93
23:DB:858:G:N3	23:DB:2268:A:H2'	1.83	0.93
37:BL:29:LYS:HG3	37:BL:30:THR:HG23	1.50	0.93
10:CK:124:LYS:HA	19:CU:34:ARG:HB3	1.47	0.93
9:AJ:39:PRO:HA	9:AJ:74:VAL:HG22	1.51	0.93
23:DB:1729:U:H3'	23:DB:1730:C:H4'	1.50	0.93
10:AK:124:LYS:HA	19:AU:34:ARG:HB3	1.49	0.92
40:BH:40:THR:H	40:BH:43:ASN:HD22	1.17	0.92
46:BU:34:ILE:HG12	46:BU:63:ALA:HB2	1.52	0.92
3:AD:160:LEU:H	3:AD:160:LEU:HD13	1.34	0.92
48:BG:157:LYS:HB3	48:BG:159:LYS:HG3	1.51	0.92
14:CQ:45:VAL:HG12	14:CQ:46:HIS:H	1.35	0.92
2:AC:62:SER:HB3	2:AC:97:PRO:HG2	1.51	0.92
30:BY:30:ARG:HH11	30:BY:30:ARG:HB2	1.31	0.92
23:BB:1729:U:H3'	23:BB:1730:C:H4'	1.51	0.92
23:BB:2305:U:H4'	47:BF:132:ARG:HG2	1.52	0.92
46:DU:34:ILE:HG12	46:DU:63:ALA:HB2	1.50	0.92
1:CA:9:G:H5'	4:CE:107:GLY:HA3	1.51	0.92
42:BN:37:THR:HG22	42:BN:39:PRO:HD2	1.51	0.92
12:CM:21:ILE:HB	12:CM:24:VAL:HG22	1.52	0.92
19:CU:24:LYS:HZ3	19:CU:25:ALA:H	1.15	0.92
23:BB:27:G:H22	23:BB:512:G:H2'	1.33	0.92
6:CG:125:ASP:HB3	6:CG:130:LYS:HD2	1.52	0.92
30:DY:30:ARG:HB2	30:DY:30:ARG:HH11	1.32	0.92
37:BL:90:VAL:HB	37:BL:122:VAL:HG12	1.52	0.92
15:AR:40:PRO:HD2	15:AR:43:ILE:HD11	1.52	0.92
23:BB:1283:G:H22	23:BB:1286:A:H5'	1.34	0.91
2:AC:149:LYS:HB3	2:AC:200:TRP:HB2	1.52	0.91
8:CI:19:PHE:HB2	8:CI:63:TYR:HB3	1.52	0.91
25:BC:144:GLU:HG3	25:BC:151:GLY:H	1.31	0.91
1:CA:978:A:H5'	1:CA:1362:A:H62	1.36	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DL:79:LEU:HB2	37:DL:113:ALA:H	1.34	0.91
48:DG:84:LYS:HG2	48:DG:85:LYS:H	1.36	0.91
10:CK:22:ILE:HG21	10:CK:95:THR:HG21	1.51	0.91
23:DB:2306:C:H3'	23:DB:2307:G:H5'	1.52	0.91
52:DW:17:ALA:HA	52:DW:35:ILE:HG23	1.50	0.91
48:DG:157:LYS:HB3	48:DG:159:LYS:HG3	1.53	0.91
19:CU:16:ARG:HH12	19:CU:19:LYS:HE2	1.33	0.91
27:DK:35:VAL:HG23	27:DK:36:GLY:H	1.36	0.91
9:AJ:36:VAL:HG13	9:AJ:76:ILE:HG22	1.53	0.91
48:BG:84:LYS:HG2	48:BG:85:LYS:H	1.35	0.91
23:BB:1046:A:H3'	23:BB:1047:G:H5''	1.51	0.91
42:DN:37:THR:HB	42:DN:40:LYS:HG3	1.53	0.90
37:DL:90:VAL:HB	37:DL:122:VAL:HG12	1.51	0.90
42:DN:70:THR:HB	42:DN:75:ILE:HD11	1.53	0.90
23:DB:1283:G:H22	23:DB:1286:A:H5'	1.34	0.90
18:AB:46:VAL:HG13	18:AB:47:PRO:HD3	1.49	0.90
27:BK:35:VAL:HG23	27:BK:36:GLY:H	1.35	0.90
1:AA:9:G:H5'	4:AE:107:GLY:HA3	1.50	0.90
23:BB:2306:C:H3'	23:BB:2307:G:H5'	1.52	0.90
50:DT:67:VAL:HB	50:DT:76:ARG:HG3	1.51	0.90
52:BW:17:ALA:HA	52:BW:35:ILE:HG23	1.50	0.90
23:BB:2145:C:H3'	23:BB:2146:C:H3'	1.54	0.90
19:AU:20:ARG:HG2	19:AU:24:LYS:HZ2	1.36	0.90
51:DZ:40:VAL:HG21	51:DZ:43:GLU:HB3	1.54	0.90
46:BU:3:LYS:HB3	46:BU:82:VAL:HG21	1.53	0.90
28:DP:4:ILE:HG22	28:DP:5:LYS:H	1.37	0.90
23:DB:1812:U:H1'	25:DC:43:ASN:HD21	1.37	0.90
50:BT:69:ARG:HB3	50:BT:74:ILE:HA	1.54	0.90
27:BK:88:ASN:HD22	27:BK:89:ASN:N	1.70	0.90
40:BH:78:VAL:HB	40:BH:143:ILE:HG13	1.52	0.90
14:AQ:45:VAL:HG12	14:AQ:46:HIS:H	1.36	0.89
10:AK:22:ILE:HG21	10:AK:95:THR:HG21	1.52	0.89
15:CR:40:PRO:HD2	15:CR:43:ILE:HD11	1.53	0.89
23:BB:2720:U:H5''	28:BP:52:ARG:HH22	1.36	0.89
40:BH:80:ILE:HD12	40:BH:99:ILE:HD13	1.53	0.89
23:BB:1060:U:N3	23:BB:1088:A:N7	2.20	0.89
1:CA:406:G:H21	3:CD:115:GLN:HE22	1.19	0.89
35:DV:26:PHE:HE1	35:DV:89:ILE:HD11	1.37	0.89
45:DS:66:ILE:H	45:DS:66:ILE:HD13	1.37	0.89
19:AU:36:PHE:HA	19:AU:39:LYS:HE2	1.54	0.89
37:BL:79:LEU:HB2	37:BL:113:ALA:H	1.34	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:160:LEU:H	3:CD:160:LEU:HD13	1.37	0.89
21:AN:12:ARG:HE	21:AN:58:ARG:HG3	1.35	0.89
49:BR:3:ALA:HB2	49:BR:101:ILE:HD11	1.54	0.89
40:DH:31:VAL:HB	40:DH:32:PRO:HD3	1.52	0.89
46:DU:3:LYS:HB3	46:DU:82:VAL:HG21	1.54	0.89
44:DQ:105:PHE:HA	44:DQ:108:LEU:HD12	1.55	0.89
40:BH:31:VAL:HB	40:BH:32:PRO:HD3	1.53	0.89
19:CU:36:PHE:HA	19:CU:39:LYS:HE2	1.55	0.89
33:B1:49:LYS:HG3	33:B1:50:GLU:H	1.37	0.89
1:AA:406:G:H21	3:AD:115:GLN:HE22	1.18	0.89
23:DB:1060:U:N3	23:DB:1088:A:N7	2.21	0.89
48:BG:148:ARG:HB2	48:BG:152:ARG:HH11	1.38	0.88
18:AB:57:ASN:HB3	18:AB:219:THR:HB	1.55	0.88
10:AK:80:ASN:HD22	10:AK:80:ASN:H	1.20	0.88
50:DT:69:ARG:HB3	50:DT:74:ILE:HA	1.56	0.88
10:CK:80:ASN:H	10:CK:80:ASN:HD22	1.21	0.88
45:BS:66:ILE:HD13	45:BS:66:ILE:H	1.38	0.88
5:CF:98:GLU:HG2	5:CF:99:ALA:H	1.38	0.88
29:BE:158:PHE:HA	29:BE:169:VAL:HG21	1.55	0.88
37:BL:143:GLU:HG2	37:BL:144:GLU:H	1.39	0.88
23:DB:1168:G:H2'	23:DB:1169:A:C8	2.08	0.88
2:CC:2:GLN:H	2:CC:2:GLN:HE21	1.22	0.88
39:BX:1:MET:HB3	39:BX:4:LYS:HB3	1.56	0.88
26:BD:106:LYS:HB3	26:BD:206:ALA:N	1.89	0.88
26:DD:106:LYS:HB3	26:DD:206:ALA:N	1.89	0.88
19:AU:24:LYS:HZ3	19:AU:25:ALA:H	1.17	0.88
2:AC:34:SER:HA	2:AC:37:LYS:HD3	1.56	0.88
23:DB:704:G:H2'	23:DB:726:G:N2	1.89	0.87
40:BH:67:ALA:HB1	40:BH:71:LYS:HD3	1.53	0.87
42:BN:37:THR:HB	42:BN:40:LYS:HG3	1.56	0.87
1:CA:1060:U:H4'	9:CJ:54:SER:HB2	1.55	0.87
2:CC:190:THR:HG23	2:CC:192:TYR:H	1.39	0.87
3:AD:116:LEU:HB3	3:AD:122:ILE:HD11	1.56	0.87
18:CB:19:THR:HA	18:CB:37:VAL:HA	1.56	0.87
26:DD:11:MET:HE1	26:DD:192:ALA:H	1.38	0.87
51:BZ:40:VAL:HG21	51:BZ:43:GLU:HB3	1.56	0.87
27:DK:88:ASN:HD22	27:DK:89:ASN:N	1.73	0.87
18:CB:172:ILE:HG22	18:CB:176:ASN:HD21	1.40	0.87
8:CI:18:VAL:HG11	8:CI:82:ILE:HA	1.56	0.87
48:DG:148:ARG:HB2	48:DG:152:ARG:HH11	1.39	0.87
51:DZ:4:VAL:HG12	51:DZ:11:ARG:HG2	1.54	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1003:G:N2	1:AA:1005:A:H5'	1.89	0.87
43:DO:11:ALA:HB2	43:DO:96:GLY:H	1.40	0.87
48:BG:153:PRO:HG2	48:BG:162:ARG:HB3	1.56	0.87
27:DK:71:ARG:HB3	27:DK:72:PRO:HD2	1.54	0.87
40:DH:69:ALA:HA	40:DH:140:ALA:HB2	1.55	0.87
35:BV:62:THR:HG22	35:BV:71:LYS:HG2	1.57	0.87
5:AF:98:GLU:HG2	5:AF:99:ALA:H	1.40	0.87
23:BB:675:A:H5'	29:BE:60:TRP:HE1	1.39	0.86
33:D1:49:LYS:HG3	33:D1:50:GLU:H	1.38	0.86
27:BK:71:ARG:HB3	27:BK:72:PRO:HD2	1.56	0.86
42:BN:70:THR:HB	42:BN:75:ILE:HD11	1.54	0.86
30:BY:4:ILE:HG23	30:BY:58:GLU:HB3	1.56	0.86
24:BI:27:LEU:HD23	24:BI:27:LEU:H	1.40	0.86
23:BB:855:G:N2	52:BW:23:LYS:HG2	1.89	0.86
18:CB:163:ILE:HG23	18:CB:164:ASP:H	1.41	0.86
32:D4:10:LEU:HD12	32:D4:33:HIS:HA	1.56	0.86
9:AJ:42:LEU:HD23	9:AJ:71:LEU:HD11	1.57	0.86
43:DO:28:VAL:HG22	43:DO:29:HIS:H	1.40	0.86
51:BZ:4:VAL:HG12	51:BZ:11:ARG:HG2	1.57	0.86
37:DL:143:GLU:HG2	37:DL:144:GLU:H	1.41	0.86
38:DM:19:GLY:HA2	38:DM:97:GLN:HB2	1.56	0.86
46:BU:12:VAL:HA	46:BU:69:VAL:HA	1.58	0.86
19:AU:36:PHE:CB	19:AU:40:PRO:HD3	2.02	0.86
23:BB:2269:G:H4'	52:BW:19:ARG:HH12	1.38	0.86
52:BW:47:GLY:HA3	52:BW:80:SER:HA	1.58	0.86
47:DF:115:GLY:HA2	47:DF:177:ARG:HH11	1.41	0.86
14:AQ:60:ILE:HG22	14:AQ:74:LEU:HA	1.56	0.86
46:DU:12:VAL:HA	46:DU:69:VAL:HA	1.58	0.86
44:BQ:105:PHE:HA	44:BQ:108:LEU:HD12	1.57	0.86
38:BM:19:GLY:HA2	38:BM:97:GLN:HB2	1.55	0.86
12:AM:109:LYS:HD3	12:AM:110:GLY:H	1.40	0.85
23:DB:1082:U:C4	23:DB:1086:A:C2	2.64	0.85
19:CU:36:PHE:CB	19:CU:40:PRO:HD3	2.01	0.85
12:AM:52:ILE:HD12	12:AM:55:LEU:HD12	1.56	0.85
3:CD:146:GLU:HA	3:CD:149:LYS:HG2	1.56	0.85
12:AM:85:TYR:HA	12:AM:88:LEU:HD12	1.59	0.85
40:DH:77:THR:HG21	40:DH:145:ASN:HD22	1.41	0.85
16:AS:6:LYS:HD2	16:AS:6:LYS:H	1.42	0.85
49:BR:28:ALA:O	49:BR:63:VAL:HG21	1.76	0.85
32:B4:10:LEU:HD12	32:B4:33:HIS:HA	1.58	0.85
16:AS:15:LEU:HD13	21:AN:46:LYS:HZ1	1.40	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BP:4:ILE:HG22	28:BP:5:LYS:H	1.38	0.85
23:DB:2346:A:H3'	23:DB:2347:C:H5''	1.59	0.85
43:BO:28:VAL:HG22	43:BO:29:HIS:H	1.42	0.85
49:DR:28:ALA:O	49:DR:63:VAL:HG21	1.76	0.85
8:CI:51:LEU:HD22	8:CI:56:MET:HG2	1.57	0.85
23:BB:1082:U:C4	23:BB:1086:A:C2	2.64	0.85
23:DB:899:A:H3'	23:DB:900:A:H8	1.41	0.85
8:CI:66:VAL:HG21	8:CI:74:GLN:HG3	1.57	0.85
21:AN:50:LEU:H	21:AN:51:PRO:HD2	1.40	0.85
48:BG:162:ARG:HB2	48:BG:166:GLU:HG3	1.57	0.85
37:DL:116:VAL:HG13	37:DL:117:THR:H	1.42	0.85
23:DB:2886:A:H62	31:D0:39:ARG:NE	1.73	0.85
5:AF:42:TRP:HE1	5:AF:61:LEU:HD23	1.41	0.85
12:AM:10:ASP:HB3	12:AM:45:SER:HB3	1.59	0.85
47:BF:126:ASN:HB3	47:BF:156:THR:HA	1.58	0.85
23:BB:1913:A:H4'	23:BB:1914:C:H5''	1.55	0.85
29:DE:158:PHE:HA	29:DE:169:VAL:HG21	1.55	0.85
48:DG:153:PRO:HG2	48:DG:162:ARG:HB3	1.55	0.84
47:DF:40:GLY:HA2	47:DF:84:ILE:HA	1.59	0.84
47:DF:110:ILE:HB	47:DF:113:PHE:HB3	1.56	0.84
7:AH:11:THR:HG22	7:AH:14:ARG:HH12	1.42	0.84
30:DY:4:ILE:HG23	30:DY:58:GLU:HB3	1.58	0.84
23:DB:992:C:H4'	49:DR:74:ILE:HD13	1.59	0.84
47:BF:40:GLY:HA2	47:BF:84:ILE:HA	1.59	0.84
46:DU:58:VAL:HG12	46:DU:59:GLU:H	1.42	0.84
1:CA:1086:U:H3	1:CA:1099:G:H22	1.22	0.84
12:AM:53:ASP:HA	12:AM:56:ARG:HD2	1.58	0.84
42:DN:85:PRO:HA	42:DN:88:ALA:HB2	1.60	0.84
23:BB:1203:U:H1'	37:BL:4:ASN:HD21	1.42	0.84
36:D2:30:VAL:HA	36:D2:33:ARG:HH22	1.40	0.84
46:DU:49:PRO:HA	46:DU:53:GLN:HE21	1.41	0.84
23:DB:1024:G:H3'	23:DB:1025:G:H5''	1.56	0.84
12:AM:15:VAL:HG13	12:AM:33:LEU:HD12	1.60	0.84
37:BL:116:VAL:HG13	37:BL:117:THR:H	1.41	0.84
18:AB:83:ALA:O	18:AB:88:GLN:HB2	1.77	0.84
23:BB:704:G:H2'	23:BB:726:G:N2	1.91	0.84
24:DI:11:GLN:HG2	24:DI:55:PRO:HB3	1.60	0.84
43:BO:11:ALA:HB2	43:BO:96:GLY:H	1.43	0.84
46:BU:58:VAL:HG12	46:BU:59:GLU:H	1.41	0.84
46:DU:94:PHE:HA	46:DU:101:THR:HA	1.60	0.84
1:AA:1182:G:H4'	1:AA:1183:U:H5'	1.58	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1024:G:H3'	23:BB:1025:G:H5''	1.59	0.84
36:D2:12:ARG:HE	36:D2:44:VAL:HG11	1.43	0.84
23:BB:2346:A:H3'	23:BB:2347:C:H5''	1.60	0.84
13:AP:54:LEU:HB2	13:AP:82:ALA:HB3	1.60	0.84
35:BV:26:PHE:HE1	35:BV:89:ILE:HD11	1.43	0.84
1:CA:978:A:H5'	1:CA:1362:A:N6	1.91	0.84
48:DG:162:ARG:HB2	48:DG:166:GLU:HG3	1.56	0.84
12:AM:79:LEU:HA	12:AM:82:LEU:HG	1.59	0.84
49:DR:3:ALA:HB2	49:DR:101:ILE:HD11	1.58	0.84
1:CA:1534:A:H62	19:CU:44:ARG:NH1	1.76	0.84
15:CR:60:ARG:HA	15:CR:63:TYR:HD2	1.43	0.84
9:AJ:55:PRO:HA	21:AN:80:ARG:HH21	1.42	0.84
18:CB:86:CYS:SG	18:CB:88:GLN:HG3	2.17	0.84
47:BF:110:ILE:HB	47:BF:113:PHE:HB3	1.58	0.84
23:BB:45:G:H5'	23:BB:46:G:H5'	1.58	0.84
39:DX:1:MET:HB3	39:DX:4:LYS:HB3	1.60	0.83
23:BB:495:G:H21	45:BS:61:ASN:HD21	1.23	0.83
50:DT:57:VAL:HG22	50:DT:58:VAL:H	1.43	0.83
23:BB:1141:U:H4'	23:BB:1142:A:O4'	1.78	0.83
28:DP:63:ILE:HA	28:DP:68:GLY:HA2	1.60	0.83
47:BF:38:GLY:HA2	47:BF:85:GLY:HA3	1.60	0.83
14:CQ:60:ILE:HG22	14:CQ:74:LEU:HA	1.57	0.83
1:AA:939:G:H4'	6:AG:101:ARG:HH12	1.44	0.83
3:CD:116:LEU:HB3	3:CD:122:ILE:HD11	1.58	0.83
2:AC:69:THR:HG21	2:AC:75:VAL:HG21	1.59	0.83
23:DB:2379:G:H4'	43:DO:21:LEU:HD11	1.59	0.83
40:BH:69:ALA:HA	40:BH:140:ALA:HA	1.58	0.83
29:DE:59:PRO:HB2	29:DE:67:ARG:HH22	1.43	0.83
23:DB:495:G:H21	45:DS:61:ASN:HD21	1.27	0.83
50:BT:29:THR:HA	50:BT:86:THR:CA	2.07	0.83
40:BH:81:ALA:HA	40:BH:147:VAL:HB	1.61	0.83
49:DR:39:LEU:HB2	49:DR:49:ILE:HG12	1.60	0.83
33:D1:36:LYS:HB2	33:D1:47:ILE:HA	1.59	0.83
26:DD:51:THR:HG22	26:DD:52:THR:H	1.44	0.83
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.12	0.83
29:BE:5:LEU:HD12	29:BE:10:SER:HB2	1.59	0.83
26:DD:39:ASP:HB3	26:DD:42:ASN:HB3	1.61	0.83
8:CI:45:MET:HA	8:CI:48:ARG:HD2	1.59	0.83
23:DB:2336:A:H62	52:DW:40:ARG:HB3	1.41	0.83
28:DP:91:VAL:HG11	28:DP:96:LEU:HD11	1.60	0.83
36:B2:10:LEU:HD22	36:B2:14:ARG:HD2	1.60	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:84:ASN:ND2	4:AE:101:GLY:HA3	1.94	0.83
40:DH:84:ALA:HA	40:DH:90:LEU:HA	1.60	0.83
18:CB:31:PHE:HB2	18:CB:41:ASN:HA	1.61	0.83
8:CI:16:ALA:HA	8:CI:66:VAL:HA	1.60	0.83
47:BF:102:LEU:HD22	47:BF:103:ILE:H	1.44	0.83
23:BB:495:G:N2	45:BS:61:ASN:HD21	1.77	0.83
35:DV:62:THR:HG22	35:DV:71:LYS:HG2	1.59	0.83
23:DB:1141:U:H4'	23:DB:1142:A:O4'	1.78	0.83
23:BB:1056:G:H1'	23:BB:1103:A:H61	1.44	0.83
1:AA:1338:G:H2'	1:AA:1339:A:C8	2.13	0.83
50:DT:11:LEU:H	50:DT:11:LEU:HD22	1.44	0.83
50:DT:29:THR:HA	50:DT:86:THR:CA	2.09	0.83
1:AA:1236:A:H4'	1:AA:1304:G:H4'	1.59	0.83
18:AB:163:ILE:HG23	18:AB:164:ASP:H	1.43	0.83
47:DF:126:ASN:HB3	47:DF:156:THR:HA	1.59	0.83
47:DF:134:GLN:HE21	47:DF:149:ARG:HG3	1.43	0.83
22:DA:98:G:H1	35:DV:14:LYS:HB2	1.45	0.82
4:CE:132:PRO:HG2	4:CE:133:ILE:HD12	1.59	0.82
26:DD:148:GLN:HG3	26:DD:152:PRO:HG2	1.61	0.82
20:AO:35:GLN:O	20:AO:39:LEU:HB2	1.79	0.82
44:DQ:81:GLY:HA3	44:DQ:112:ALA:HB1	1.61	0.82
50:BT:11:LEU:HD22	50:BT:11:LEU:H	1.45	0.82
1:CA:1000:A:H2'	1:CA:1001:C:C6	2.14	0.82
50:BT:57:VAL:HG22	50:BT:58:VAL:H	1.43	0.82
25:DC:16:VAL:H	25:DC:203:VAL:HB	1.44	0.82
6:CG:87:PRO:HG3	6:CG:148:LYS:HA	1.61	0.82
46:BU:78:LYS:HD3	46:BU:79:ALA:H	1.43	0.82
12:AM:11:HIS:HA	12:AM:43:LYS:HD3	1.61	0.82
23:BB:1021:A:H62	23:BB:1141:U:H3	1.24	0.82
1:CA:17:U:H2'	1:CA:18:C:C6	2.15	0.82
21:CN:59:GLN:N	21:CN:59:GLN:HE21	1.77	0.82
23:BB:100:U:O2	23:BB:100:U:H2'	1.78	0.82
26:BD:11:MET:HE1	26:BD:192:ALA:H	1.43	0.82
23:DB:1021:A:H62	23:DB:1141:U:H3	1.28	0.82
3:CD:166:LYS:HD3	3:CD:167:PRO:HD2	1.62	0.82
50:DT:15:HIS:H	50:DT:32:LEU:HA	1.44	0.82
42:BN:85:PRO:HA	42:BN:88:ALA:HB2	1.62	0.82
23:BB:1060:U:C2	23:BB:1088:A:N7	2.48	0.82
1:AA:1057:G:H5''	2:AC:153:SER:HB2	1.61	0.82
47:BF:134:GLN:HE21	47:BF:149:ARG:HG3	1.44	0.82
24:DI:27:LEU:HD23	24:DI:27:LEU:H	1.45	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1993:U:H4'	26:BD:133:THR:HG21	1.61	0.82
1:CA:1297:G:H4'	1:CA:1298:U:H5'	1.60	0.82
2:AC:179:ALA:HA	2:AC:205:GLU:HA	1.60	0.82
17:CT:59:ARG:HB2	17:CT:59:ARG:HH11	1.45	0.82
51:BZ:7:VAL:HG13	51:BZ:8:THR:HG23	1.60	0.82
10:CK:28:ASN:HD21	10:CK:47:GLY:H	1.24	0.82
15:CR:51:GLN:HA	15:CR:51:GLN:HE21	1.45	0.82
25:DC:27:LYS:HG3	25:DC:28:PRO:HD2	1.61	0.82
23:DB:45:G:H5'	23:DB:46:G:H5'	1.60	0.82
47:DF:3:LEU:HD21	47:DF:172:PHE:HB3	1.62	0.82
29:BE:126:VAL:HG13	29:BE:156:ASN:HD22	1.44	0.81
40:DH:116:ARG:HE	40:DH:118:PRO:HD3	1.43	0.81
18:CB:85:SER:HB2	18:CB:88:GLN:HE22	1.45	0.81
23:DB:1324:G:H1'	23:DB:1616:A:N6	1.95	0.81
1:AA:926:G:H3'	1:AA:1505:G:H21	1.45	0.81
16:AS:44:ILE:HA	16:AS:61:VAL:HG11	1.62	0.81
1:AA:1191:A:H61	55:AA:1662:SCM:H11	1.44	0.81
26:BD:39:ASP:HB3	26:BD:42:ASN:HB3	1.61	0.81
19:CU:38:GLU:C	19:CU:40:PRO:HD2	2.00	0.81
9:CJ:7:ARG:HE	9:CJ:101:SER:HB3	1.43	0.81
29:DE:58:LYS:C	29:DE:60:TRP:H	1.81	0.81
1:AA:981:U:H4'	21:AN:60:ARG:HD2	1.62	0.81
46:DU:78:LYS:HD3	46:DU:79:ALA:H	1.43	0.81
26:BD:148:GLN:HG3	26:BD:152:PRO:HG2	1.61	0.81
23:BB:2353:G:H1'	52:BW:30:VAL:HG13	1.62	0.81
1:AA:1348:U:H4'	8:AI:121:ARG:HG3	1.62	0.81
17:AT:66:ILE:HG23	17:AT:70:LYS:HB3	1.61	0.81
36:B2:12:ARG:HE	36:B2:44:VAL:HG11	1.46	0.81
46:BU:94:PHE:HA	46:BU:101:THR:HA	1.60	0.81
18:CB:151:LYS:HG3	18:CB:152:ASP:N	1.94	0.81
1:CA:975:A:H4'	1:CA:976:G:O5'	1.80	0.81
44:BQ:91:ARG:HH12	49:BR:10:LYS:HB3	1.45	0.81
43:DO:27:VAL:HG21	43:DO:40:ILE:HD12	1.62	0.81
28:BP:63:ILE:HA	28:BP:68:GLY:HA2	1.62	0.81
29:DE:5:LEU:HD12	29:DE:10:SER:HB2	1.62	0.81
51:DZ:7:VAL:HG13	51:DZ:8:THR:HG23	1.60	0.81
26:BD:51:THR:HG22	26:BD:52:THR:H	1.45	0.81
12:AM:21:ILE:HG22	12:AM:23:GLY:H	1.43	0.81
26:BD:53:GLY:HA3	26:BD:77:ARG:HG3	1.63	0.81
23:BB:1324:G:H1'	23:BB:1616:A:N6	1.95	0.81
24:DI:121:ILE:HD13	24:DI:121:ILE:H	1.45	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CH:11:THR:HG22	7:CH:14:ARG:HH12	1.44	0.81
1:AA:1237:C:H3'	1:AA:1238:A:H5'	1.62	0.81
19:AU:38:GLU:C	19:AU:40:PRO:HD2	2.01	0.81
1:AA:437:U:H2'	1:AA:438:U:O4'	1.80	0.81
23:DB:1060:U:C2	23:DB:1088:A:N7	2.49	0.81
9:AJ:32:THR:HG23	9:AJ:83:THR:HG23	1.62	0.81
39:DX:6:LEU:HD13	39:DX:7:ARG:H	1.46	0.81
46:BU:49:PRO:HA	46:BU:53:GLN:HE21	1.45	0.81
23:BB:2269:G:H4'	52:BW:19:ARG:NH1	1.95	0.81
38:DM:19:GLY:HA2	38:DM:98:PRO:HD2	1.63	0.81
3:AD:166:LYS:HD3	3:AD:167:PRO:HD2	1.63	0.81
43:BO:27:VAL:HG21	43:BO:40:ILE:HD12	1.63	0.81
42:BN:33:ILE:HA	42:BN:114:GLU:HB2	1.63	0.81
46:BU:81:ARG:HG3	46:BU:96:LYS:HD2	1.63	0.81
1:CA:437:U:H2'	1:CA:438:U:O4'	1.80	0.81
33:B1:36:LYS:HB2	33:B1:47:ILE:HA	1.61	0.81
13:CP:4:ILE:HG12	13:CP:21:VAL:HG22	1.63	0.81
1:CA:1412:C:H2'	1:CA:1413:A:H8	1.46	0.81
29:BE:58:LYS:C	29:BE:60:TRP:H	1.81	0.81
27:DK:47:ILE:HG13	27:DK:48:PRO:HD2	1.62	0.81
23:DB:1373:A:H2'	23:DB:1374:G:O4'	1.81	0.81
23:BB:1798:U:H5''	25:BC:257:ARG:HB2	1.62	0.81
17:AT:59:ARG:HH11	17:AT:59:ARG:HB2	1.45	0.81
29:BE:59:PRO:HB2	29:BE:67:ARG:HH22	1.45	0.81
8:CI:35:GLU:HA	8:CI:39:GLY:CA	2.11	0.80
6:CG:2:ARG:HB3	6:CG:2:ARG:NH1	1.95	0.80
47:BF:115:GLY:HA2	47:BF:177:ARG:HH11	1.44	0.80
29:DE:29:HIS:NE2	37:DL:8:PRO:HG3	1.97	0.80
37:BL:93:ASN:ND2	37:BL:94:THR:H	1.79	0.80
28:DP:75:THR:HG23	28:DP:76:HIS:H	1.46	0.80
20:AO:36:ILE:HD11	20:AO:59:MET:HG3	1.62	0.80
4:AE:28:ARG:NH2	4:AE:30:PHE:HA	1.95	0.80
34:D3:54:LEU:HG	34:D3:58:ILE:HD11	1.63	0.80
25:BC:16:VAL:H	25:BC:203:VAL:HB	1.46	0.80
1:AA:203:G:H1'	1:AA:465:A:N1	1.96	0.80
10:CK:126:ARG:HB2	19:CU:33:ARG:HD2	1.63	0.80
30:DY:15:ARG:H	30:DY:15:ARG:HD2	1.46	0.80
50:BT:15:HIS:H	50:BT:32:LEU:HA	1.44	0.80
1:CA:1187:G:H4'	8:CI:112:ARG:HH12	1.45	0.80
23:BB:1287:A:OP1	42:BN:104:ALA:HB3	1.82	0.80
16:AS:44:ILE:HD11	16:AS:63:ASP:HA	1.62	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DY:3:THR:HB	30:DY:36:GLU:HG2	1.63	0.80
1:AA:17:U:H2'	1:AA:18:C:C6	2.17	0.80
46:DU:81:ARG:HG3	46:DU:96:LYS:HD2	1.63	0.80
46:DU:50:ALA:H	46:DU:53:GLN:NE2	1.79	0.80
1:AA:973:G:H3'	1:AA:974:A:H5''	1.63	0.80
44:BQ:81:GLY:HA3	44:BQ:112:ALA:HB1	1.61	0.80
2:AC:38:VAL:O	2:AC:42:LEU:HB3	1.81	0.80
1:CA:373:A:H1'	1:CA:481:G:N3	1.97	0.80
23:DB:309:A:H4'	46:DU:15:GLY:HA3	1.64	0.80
39:DX:14:LEU:HD13	39:DX:57:LEU:HD21	1.64	0.80
30:BY:15:ARG:HD2	30:BY:15:ARG:H	1.47	0.80
15:AR:60:ARG:HA	15:AR:63:TYR:HD2	1.45	0.80
23:BB:1082:U:N3	23:BB:1086:A:C2	2.50	0.80
1:AA:926:G:N2	1:AA:1505:G:H2'	1.97	0.80
23:BB:670:A:H4'	23:BB:671:C:H5'	1.64	0.80
43:BO:49:VAL:HG21	43:BO:82:ALA:HB2	1.63	0.80
42:BN:101:GLY:HA2	42:BN:110:MET:N	1.97	0.80
23:DB:1099:G:H5''	24:DI:3:LYS:N	1.97	0.80
49:BR:39:LEU:HB2	49:BR:49:ILE:HG12	1.64	0.80
9:AJ:51:VAL:HG23	21:AN:80:ARG:HB2	1.64	0.80
4:CE:28:ARG:NH2	4:CE:30:PHE:HA	1.97	0.80
25:DC:77:VAL:HG23	25:DC:112:GLY:H	1.47	0.80
2:AC:25:THR:HG23	21:AN:75:LYS:HD2	1.64	0.80
37:DL:96:LYS:HA	37:DL:101:ILE:HB	1.62	0.80
37:DL:93:ASN:ND2	37:DL:94:THR:H	1.80	0.80
25:BC:27:LYS:HG3	25:BC:28:PRO:HD2	1.62	0.80
40:DH:41:LYS:HA	40:DH:44:ILE:HG12	1.62	0.80
6:AG:12:LEU:HD22	6:AG:13:PRO:HD2	1.63	0.80
2:CC:149:LYS:HD3	2:CC:168:ARG:HD3	1.64	0.80
1:AA:1296:C:H4'	1:AA:1302:C:N4	1.97	0.80
28:BP:75:THR:HG23	28:BP:76:HIS:H	1.47	0.80
29:DE:126:VAL:HG13	29:DE:156:ASN:HD22	1.47	0.80
3:AD:146:GLU:HA	3:AD:149:LYS:HG2	1.62	0.80
43:DO:88:LYS:HE2	43:DO:116:GLN:HB2	1.64	0.80
38:BM:19:GLY:HA2	38:BM:98:PRO:HD2	1.64	0.80
23:BB:2472:G:H2'	23:BB:2475:C:H42	1.46	0.80
40:DH:21:VAL:HG22	40:DH:22:LYS:H	1.46	0.80
24:DI:21:PRO:HB2	24:DI:22:PRO:HD3	1.64	0.80
23:BB:1812:U:H1'	25:BC:43:ASN:HD21	1.45	0.80
13:AP:20:VAL:HG23	13:AP:35:ARG:HA	1.63	0.80
23:BB:1728:C:H2'	23:BB:1729:U:H5''	1.63	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DW:47:GLY:HA3	52:DW:80:SER:HA	1.62	0.79
1:AA:1296:C:C4'	1:AA:1302:C:H41	1.93	0.79
51:BZ:45:ARG:HE	51:BZ:47:VAL:HG12	1.46	0.79
47:DF:102:LEU:HD22	47:DF:103:ILE:H	1.46	0.79
36:D2:10:LEU:HD22	36:D2:14:ARG:HD2	1.63	0.79
28:BP:89:GLY:HA2	28:BP:112:ARG:N	1.98	0.79
1:CA:1278:G:H4'	1:CA:1279:G:C5'	2.13	0.79
23:BB:1681:G:N3	23:BB:1762:A:H2'	1.97	0.79
12:CM:47:LEU:HD12	12:CM:51:GLN:HB3	1.61	0.79
38:BM:59:ARG:HH11	38:BM:60:GLN:HB3	1.48	0.79
23:BB:2305:U:C1'	47:BF:132:ARG:HA	2.12	0.79
8:CI:59:LYS:HD2	8:CI:60:LEU:HG	1.65	0.79
26:DD:53:GLY:HA3	26:DD:77:ARG:HG3	1.63	0.79
46:BU:50:ALA:H	46:BU:53:GLN:NE2	1.80	0.79
37:BL:96:LYS:HA	37:BL:101:ILE:HB	1.64	0.79
23:BB:992:C:H4'	49:BR:74:ILE:HD13	1.62	0.79
40:BH:68:ARG:HE	40:BH:68:ARG:HA	1.46	0.79
8:AI:20:ILE:HG23	8:AI:60:LEU:HD13	1.63	0.79
1:CA:1071:C:H2'	1:CA:1072:G:H8	1.46	0.79
23:BB:280:U:H2'	23:BB:281:C:C6	2.18	0.79
18:AB:63:LYS:HA	18:AB:224:ARG:HH21	1.48	0.79
23:DB:1097:U:H2'	23:DB:1098:A:O4'	1.83	0.79
49:DR:49:ILE:HD13	49:DR:53:PHE:H	1.44	0.79
1:CA:1278:G:H4'	1:CA:1279:G:H5'	1.63	0.79
10:AK:28:ASN:HD21	10:AK:47:GLY:H	1.28	0.79
47:DF:38:GLY:HA2	47:DF:85:GLY:HA3	1.64	0.79
19:CU:23:GLU:HA	19:CU:27:VAL:HG21	1.65	0.79
1:AA:1361:G:H2'	1:AA:1362:A:H5''	1.63	0.79
8:CI:87:MET:O	8:CI:91:GLU:HG2	1.83	0.79
18:AB:198:VAL:HG12	18:AB:200:PRO:HD3	1.63	0.79
1:AA:1032:G:N3	1:AA:1032:G:H3'	1.98	0.79
18:AB:187:ASP:HB3	18:AB:201:GLY:O	1.81	0.79
39:BX:6:LEU:HD13	39:BX:7:ARG:H	1.48	0.79
24:BI:21:PRO:HB2	24:BI:22:PRO:HD3	1.62	0.79
1:AA:190:A:H2'	1:AA:191:G:O4'	1.82	0.79
23:DB:1655:A:H5'	26:DD:118:PHE:HB2	1.64	0.79
39:BX:14:LEU:HD13	39:BX:57:LEU:HD21	1.64	0.79
23:BB:181:A:H2'	23:BB:182:A:C8	2.16	0.79
27:BK:19:VAL:HG12	27:BK:43:ILE:HA	1.64	0.79
4:AE:132:PRO:HG2	4:AE:133:ILE:HD12	1.64	0.79
19:AU:35:GLU:HB2	19:AU:37:TYR:CZ	2.18	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1082:U:N3	23:DB:1086:A:C2	2.50	0.79
23:DB:2425:A:H5'	23:DB:2427:C:O4'	1.81	0.79
23:BB:2749:A:H3'	23:BB:2750:A:H5''	1.65	0.79
25:BC:77:VAL:HG23	25:BC:112:GLY:H	1.48	0.79
23:DB:90:U:H3'	23:DB:91:A:H5''	1.64	0.79
48:DG:94:ARG:HB3	48:DG:127:GLN:HG2	1.64	0.79
12:AM:19:THR:HA	12:AM:24:VAL:HG23	1.65	0.79
48:BG:84:LYS:HG3	48:BG:132:LEU:N	1.98	0.79
40:DH:9:VAL:HB	40:DH:13:GLY:HA3	1.65	0.79
1:CA:940:C:H2'	1:CA:941:G:C8	2.17	0.79
10:AK:126:ARG:HB2	19:AU:33:ARG:HD2	1.64	0.78
9:CJ:15:HIS:HA	9:CJ:18:ILE:HG22	1.63	0.78
5:AF:91:ARG:H	5:AF:93:LYS:HZ1	1.30	0.78
37:DL:103:ILE:H	37:DL:103:ILE:HD12	1.47	0.78
38:BM:66:ARG:HG3	38:BM:101:VAL:HG22	1.66	0.78
23:BB:784:G:N1	25:BC:227:VAL:HG11	1.98	0.78
42:DN:33:ILE:HA	42:DN:114:GLU:HB2	1.65	0.78
12:AM:2:ARG:HH11	12:AM:6:ILE:HA	1.48	0.78
48:DG:144:ALA:HA	48:DG:147:LEU:HD12	1.64	0.78
40:DH:84:ALA:HB2	40:DH:90:LEU:HD23	1.63	0.78
42:DN:101:GLY:HA2	42:DN:110:MET:N	1.97	0.78
1:CA:1356:G:H2'	1:CA:1357:A:H8	1.47	0.78
44:BQ:68:ALA:HB1	44:BQ:73:ILE:HG23	1.65	0.78
8:AI:40:ARG:N	8:AI:44:ARG:HD3	1.99	0.78
23:BB:1655:A:H5'	26:BD:118:PHE:HB2	1.64	0.78
3:CD:84:ASN:ND2	4:CE:101:GLY:HA3	1.99	0.78
23:BB:558:U:OP1	41:BJ:113:PRO:HG2	1.84	0.78
37:BL:23:ILE:HD12	37:BL:23:ILE:H	1.48	0.78
23:DB:670:A:H4'	23:DB:671:C:H5'	1.64	0.78
24:BI:55:PRO:HD3	24:BI:74:PRO:HD3	1.64	0.78
18:CB:67:LEU:HD12	18:CB:157:PRO:HG3	1.64	0.78
48:BG:167:VAL:HG23	48:BG:168:VAL:H	1.48	0.78
48:DG:97:VAL:HG11	48:DG:123:GLU:HA	1.65	0.78
23:DB:947:A:H2'	23:DB:948:C:C6	2.19	0.78
16:AS:62:THR:HB	16:AS:65:MET:HB3	1.62	0.78
39:DX:14:LEU:HD22	39:DX:57:LEU:HD11	1.65	0.78
3:AD:152:SER:HA	3:AD:155:LYS:HD3	1.64	0.78
19:AU:23:GLU:HA	19:AU:27:VAL:HG21	1.64	0.78
40:DH:86:ASP:HB2	40:DH:89:LYS:HD3	1.64	0.78
41:DJ:81:ILE:HG23	41:DJ:82:GLY:H	1.49	0.78
8:CI:20:ILE:HD12	8:CI:62:LEU:HB3	1.64	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BL:57:LEU:HB2	37:BL:60:ARG:HH11	1.48	0.78
23:BB:2886:A:H62	31:B0:39:ARG:NE	1.81	0.78
37:DL:57:LEU:HB2	37:DL:60:ARG:HH11	1.48	0.78
21:CN:1:ALA:HB1	21:CN:6:LYS:NZ	1.99	0.78
8:AI:24:ASN:ND2	8:AI:25:GLY:H	1.81	0.78
24:DI:55:PRO:HD3	24:DI:74:PRO:HD3	1.64	0.78
39:BX:14:LEU:HD22	39:BX:57:LEU:HD11	1.64	0.78
45:DS:6:LYS:HB3	45:DS:104:THR:HG22	1.63	0.78
1:AA:1432:G:H5'	28:BP:105:LYS:HG2	1.66	0.78
12:CM:95:PRO:N	12:CM:108:ARG:HG2	1.98	0.78
24:BI:33:ASN:HD21	24:BI:64:ARG:HH11	1.32	0.78
27:BK:47:ILE:HG13	27:BK:48:PRO:HD2	1.66	0.78
45:BS:6:LYS:HB3	45:BS:104:THR:HG22	1.66	0.78
9:CJ:6:ILE:HD12	9:CJ:76:ILE:HD11	1.66	0.78
28:BP:112:ARG:HB2	28:BP:112:ARG:HH11	1.48	0.78
1:AA:1047:G:H21	1:AA:1215:G:H4'	1.49	0.78
45:BS:81:SER:HB2	45:BS:97:LEU:HD12	1.64	0.78
40:BH:9:VAL:HB	40:BH:13:GLY:HA3	1.64	0.78
1:AA:1307:U:H2'	1:AA:1308:U:C6	2.19	0.78
40:BH:68:ARG:O	40:BH:72:ILE:HG22	1.84	0.78
47:BF:66:ILE:HD11	47:BF:83:PRO:HB3	1.64	0.78
38:DM:66:ARG:HG3	38:DM:101:VAL:HG22	1.65	0.78
23:BB:1911:U:H2'	23:BB:1918:A:N1	1.97	0.78
23:DB:558:U:OP1	41:DJ:113:PRO:HG2	1.83	0.78
23:DB:1098:A:C8	24:DI:3:LYS:HB3	2.19	0.78
8:AI:27:ILE:HG23	8:AI:62:LEU:HB2	1.66	0.78
2:AC:13:ILE:HG12	2:AC:14:VAL:HG13	1.66	0.78
1:AA:373:A:H1'	1:AA:481:G:N3	1.98	0.78
23:DB:2498:C:O2'	23:DB:2499:C:H5'	1.84	0.78
20:AO:17:ARG:HD2	20:AO:17:ARG:H	1.48	0.78
2:CC:116:ALA:O	2:CC:119:ILE:HG22	1.82	0.78
48:DG:15:ASP:HB2	48:DG:26:LYS:HB3	1.66	0.77
37:DL:82:LEU:HD23	37:DL:90:VAL:HG21	1.66	0.77
8:AI:40:ARG:H	8:AI:44:ARG:HD3	1.49	0.77
37:BL:95:LEU:HA	37:BL:98:ALA:HB3	1.65	0.77
18:CB:99:MET:HA	18:CB:106:VAL:HG21	1.64	0.77
23:DB:1594:U:H2'	23:DB:1595:C:C6	2.19	0.77
43:DO:49:VAL:HG21	43:DO:82:ALA:HB2	1.64	0.77
47:BF:11:VAL:HG12	47:BF:12:VAL:H	1.48	0.77
19:CU:35:GLU:HB2	19:CU:37:TYR:CZ	2.18	0.77
23:DB:1080:A:H4'	24:DI:126:ARG:CD	2.14	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AB:99:MET:HA	18:AB:106:VAL:HG21	1.66	0.77
42:BN:101:GLY:HA2	42:BN:110:MET:H	1.47	0.77
42:DN:97:ILE:HD12	42:DN:98:LEU:N	1.99	0.77
17:CT:66:ILE:HG23	17:CT:70:LYS:HB3	1.65	0.77
40:DH:46:PHE:HB3	40:DH:50:ARG:HH22	1.46	0.77
46:BU:40:LEU:H	46:BU:40:LEU:HD12	1.49	0.77
30:DY:16:LEU:H	30:DY:16:LEU:HD22	1.49	0.77
21:CN:50:LEU:H	21:CN:51:PRO:HD2	1.48	0.77
8:AI:4:GLN:HE21	8:AI:21:LYS:HE3	1.49	0.77
37:BL:103:ILE:H	37:BL:103:ILE:HD12	1.49	0.77
42:DN:101:GLY:HA2	42:DN:110:MET:H	1.48	0.77
47:BF:3:LEU:HD21	47:BF:172:PHE:HB3	1.64	0.77
23:BB:1594:U:H2'	23:BB:1595:C:C6	2.19	0.77
3:AD:173:ASP:HB3	3:AD:178:GLU:HB2	1.66	0.77
2:CC:64:ARG:HD3	2:CC:99:GLN:HE22	1.50	0.77
49:BR:49:ILE:HD13	49:BR:53:PHE:H	1.47	0.77
28:DP:89:GLY:HA2	28:DP:112:ARG:N	1.99	0.77
42:DN:102:PHE:H	42:DN:109:PRO:HA	1.49	0.77
23:DB:972:A:H3'	23:DB:973:A:H5''	1.64	0.77
48:BG:97:VAL:HG11	48:BG:123:GLU:HA	1.64	0.77
52:BW:19:ARG:HD3	52:BW:36:ILE:HD11	1.66	0.77
47:DF:66:ILE:HD11	47:DF:83:PRO:HB3	1.65	0.77
23:DB:2579:C:O2'	26:DD:136:ASN:HA	1.85	0.77
1:AA:814:A:H5'	1:AA:1511:G:H4'	1.66	0.77
37:DL:30:THR:O	37:DL:33:ARG:HG2	1.83	0.77
36:B2:33:ARG:HH21	36:B2:33:ARG:HB2	1.48	0.77
40:DH:72:ILE:HG12	40:DH:108:VAL:HG11	1.66	0.77
23:DB:117:G:H5'	23:DB:126:A:H8	1.49	0.77
28:DP:61:ARG:HH21	28:DP:61:ARG:HB3	1.50	0.77
28:BP:91:VAL:HG11	28:BP:96:LEU:HD11	1.65	0.77
18:AB:218:ALA:HA	18:AB:221:ARG:HE	1.50	0.77
4:AE:152:VAL:HG21	7:AH:98:LEU:HB3	1.66	0.77
23:DB:855:G:N2	52:DW:23:LYS:HG2	1.97	0.77
23:DB:1168:G:H2'	23:DB:1169:A:H8	1.50	0.77
23:DB:1420:A:H2'	23:DB:2211:A:H62	1.49	0.77
8:AI:55:ASP:HB2	8:AI:59:LYS:HD2	1.66	0.77
23:DB:71:A:H4'	23:DB:72:U:H5'	1.66	0.77
9:AJ:12:ALA:HB2	9:AJ:96:VAL:HG12	1.66	0.77
23:BB:71:A:H4'	23:BB:72:U:H5'	1.66	0.77
5:CF:91:ARG:H	5:CF:93:LYS:HZ1	1.31	0.77
26:DD:114:LYS:HE3	26:DD:116:LYS:HZ2	1.47	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DM:59:ARG:HH11	38:DM:60:GLN:HB3	1.49	0.77
16:CS:30:LEU:HD12	16:CS:48:ILE:HG13	1.66	0.77
1:CA:203:G:H1'	1:CA:465:A:N1	1.99	0.77
28:BP:61:ARG:HH21	28:BP:61:ARG:HB3	1.50	0.77
40:BH:21:VAL:HG22	40:BH:22:LYS:H	1.47	0.77
48:DG:84:LYS:HG3	48:DG:132:LEU:N	1.99	0.77
24:DI:9:LYS:HG2	24:DI:57:VAL:HG13	1.67	0.77
2:CC:26:LYS:HG3	2:CC:27:GLU:H	1.48	0.77
23:BB:2748:A:H1'	48:BG:66:THR:HB	1.67	0.77
40:DH:31:VAL:HB	40:DH:32:PRO:CD	2.15	0.77
23:DB:2572:A:OP1	23:DB:2574:G:H4'	1.85	0.77
21:AN:14:ALA:HB1	21:AN:18:LYS:HE3	1.67	0.77
3:CD:152:SER:HA	3:CD:155:LYS:HD3	1.65	0.77
48:BG:94:ARG:HB3	48:BG:127:GLN:HG2	1.65	0.77
26:BD:5:VAL:HG23	26:BD:32:ASN:HD21	1.50	0.76
27:BK:7:MET:HE3	27:BK:18:ARG:HE	1.50	0.76
9:CJ:29:ALA:O	9:CJ:34:ALA:HB3	1.85	0.76
23:BB:300:A:H3'	46:BU:81:ARG:HH12	1.49	0.76
26:DD:5:VAL:HG23	26:DD:32:ASN:HD21	1.50	0.76
47:DF:11:VAL:HG12	47:DF:12:VAL:H	1.50	0.76
43:DO:47:VAL:HG12	43:DO:48:LEU:H	1.48	0.76
6:CG:58:LEU:HD12	6:CG:58:LEU:H	1.49	0.76
23:DB:2472:G:H2'	23:DB:2475:C:H42	1.49	0.76
52:BW:49:ASN:HB2	52:BW:61:LYS:N	1.99	0.76
25:DC:144:GLU:HA	25:DC:151:GLY:HA2	1.66	0.76
35:BV:31:TYR:HB3	35:BV:37:PRO:HG3	1.68	0.76
35:DV:9:ARG:NH1	35:DV:27:PRO:HB3	2.00	0.76
9:AJ:26:VAL:HG22	9:AJ:74:VAL:HG11	1.67	0.76
6:AG:70:PRO:HA	6:AG:137:ARG:HH11	1.50	0.76
23:DB:2867:G:N3	23:DB:2867:G:H2'	2.00	0.76
42:DN:12:ARG:HG2	42:DN:16:HIS:ND1	2.00	0.76
46:DU:40:LEU:H	46:DU:40:LEU:HD12	1.50	0.76
18:CB:40:ILE:HD13	18:CB:201:GLY:HA2	1.68	0.76
1:CA:1238:A:H5'	1:CA:1336:C:H41	1.49	0.76
5:CF:42:TRP:HE1	5:CF:61:LEU:HD23	1.49	0.76
6:CG:130:LYS:H	6:CG:134:VAL:HG21	1.50	0.76
35:DV:31:TYR:HB3	35:DV:37:PRO:HG3	1.67	0.76
18:AB:67:LEU:HD11	18:AB:150:ILE:HD12	1.67	0.76
46:BU:47:PRO:HB3	46:BU:55:GLY:HA3	1.67	0.76
34:B3:54:LEU:HG	34:B3:58:ILE:HD11	1.68	0.76
25:BC:74:PRO:HG2	25:BC:96:LYS:HG3	1.68	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AN:71:GLY:O	21:AN:79:SER:HA	1.84	0.76
23:DB:1032:A:H1'	32:D4:23:ILE:HD13	1.66	0.76
27:DK:24:VAL:HG13	27:DK:33:ALA:HB2	1.68	0.76
23:DB:1287:A:OP1	42:DN:104:ALA:HB3	1.85	0.76
23:DB:1728:C:H2'	23:DB:1729:U:H5''	1.67	0.76
30:DY:5:LYS:H	30:DY:5:LYS:HE2	1.50	0.76
35:DV:60:VAL:HG12	35:DV:61:LEU:H	1.51	0.76
43:BO:88:LYS:HE2	43:BO:116:GLN:HB2	1.67	0.76
1:AA:72:A:H2'	1:AA:73:C:H6	1.50	0.76
23:BB:2425:A:H5'	23:BB:2427:C:O4'	1.84	0.76
41:DJ:6:ALA:HB3	41:DJ:45:THR:HG21	1.65	0.76
2:AC:78:LYS:HG2	2:AC:81:GLU:HB2	1.66	0.76
23:DB:27:G:N2	23:DB:512:G:H2'	2.01	0.76
23:BB:1080:A:H1'	24:BI:127:SER:HA	1.67	0.76
48:DG:152:ARG:HD3	48:DG:153:PRO:HD2	1.68	0.76
28:BP:50:ARG:HB2	28:BP:56:SER:HB3	1.68	0.76
1:AA:1316:G:H22	1:AA:1318:A:H3'	1.49	0.76
34:B3:49:VAL:HG23	34:B3:51:LYS:H	1.51	0.76
27:DK:19:VAL:HG12	27:DK:43:ILE:HA	1.66	0.76
23:DB:1681:G:N3	23:DB:1762:A:H2'	2.00	0.76
7:CH:31:LEU:HG	7:CH:35:ILE:HD11	1.68	0.76
23:BB:1373:A:H2'	23:BB:1374:G:O4'	1.84	0.76
44:DQ:68:ALA:HB1	44:DQ:73:ILE:HG23	1.67	0.76
37:DL:23:ILE:HD12	37:DL:23:ILE:H	1.50	0.76
23:BB:2181:U:H2'	23:BB:2182:U:C6	2.20	0.76
33:B1:34:GLU:HB3	33:B1:49:LYS:HD3	1.68	0.76
35:BV:80:HIS:HD2	35:BV:82:TYR:H	1.34	0.76
1:AA:978:A:H5'	1:AA:1362:A:N6	2.01	0.76
7:AH:31:LEU:HG	7:AH:35:ILE:HD11	1.67	0.76
1:AA:554:A:H5'	11:AL:25:ALA:HB1	1.68	0.76
1:AA:1021:A:H2'	1:AA:1022:A:O4'	1.86	0.76
30:BY:16:LEU:H	30:BY:16:LEU:HD22	1.51	0.76
23:BB:972:A:H3'	23:BB:973:A:H5''	1.68	0.76
25:BC:129:LEU:HD22	25:BC:134:ILE:HG22	1.68	0.76
1:CA:973:G:H3'	1:CA:974:A:H5''	1.67	0.76
40:DH:68:ARG:HA	40:DH:68:ARG:CZ	2.16	0.76
37:DL:95:LEU:HA	37:DL:98:ALA:HB3	1.66	0.76
29:DE:129:PRO:HB3	29:DE:159:LEU:HD23	1.68	0.76
24:DI:45:THR:HA	24:DI:48:ILE:HG22	1.66	0.76
37:DL:6:LEU:H	37:DL:6:LEU:HD23	1.50	0.76
23:DB:1579:A:H2'	23:DB:1580:A:C8	2.21	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DG:16:VAL:HG22	48:DG:25:ILE:HG13	1.68	0.76
26:DD:20:VAL:HG13	27:DK:72:PRO:HB3	1.67	0.76
30:BY:3:THR:HB	30:BY:36:GLU:HG2	1.66	0.76
12:CM:33:LEU:HD22	12:CM:38:ILE:HB	1.66	0.76
2:CC:116:ALA:HB1	2:CC:186:SER:HB2	1.68	0.76
52:DW:19:ARG:HD3	52:DW:36:ILE:HD11	1.68	0.75
33:D1:9:LYS:H	33:D1:9:LYS:HD3	1.50	0.75
29:DE:127:GLU:HG2	29:DE:133:LEU:HD13	1.68	0.75
18:AB:27:LYS:HB3	18:AB:28:PRO:HD3	1.68	0.75
37:BL:55:MET:HE2	37:BL:56:PRO:HD2	1.66	0.75
12:CM:44:ILE:H	12:CM:44:ILE:HD12	1.51	0.75
3:CD:173:ASP:HB3	3:CD:178:GLU:HB2	1.67	0.75
23:BB:947:A:H2'	23:BB:948:C:C6	2.21	0.75
40:BH:117:LEU:HG	40:BH:130:VAL:HG13	1.67	0.75
12:CM:68:LEU:HD22	12:CM:69:ARG:NH1	2.01	0.75
1:CA:1326:U:H2'	1:CA:1327:C:C6	2.21	0.75
10:CK:111:ASP:HB2	19:CU:19:LYS:HE3	1.68	0.75
40:BH:31:VAL:HB	40:BH:32:PRO:CD	2.15	0.75
28:DP:112:ARG:HB2	28:DP:112:ARG:HH11	1.50	0.75
6:AG:14:ASP:HB3	6:AG:19:SER:H	1.50	0.75
45:DS:81:SER:HB2	45:DS:97:LEU:HD12	1.67	0.75
26:DD:159:LYS:HZ3	26:DD:159:LYS:HA	1.50	0.75
27:BK:60:ALA:HB2	27:BK:86:LEU:HA	1.68	0.75
23:DB:181:A:H2'	23:DB:182:A:C8	2.21	0.75
23:BB:90:U:H3'	23:BB:91:A:H5''	1.66	0.75
12:AM:21:ILE:HB	12:AM:24:VAL:HG22	1.65	0.75
26:DD:13:ARG:HH12	28:DP:74:GLN:HE21	1.33	0.75
44:BQ:111:LYS:HB2	49:BR:48:LYS:NZ	2.01	0.75
23:DB:1798:U:H5''	25:DC:257:ARG:HB2	1.68	0.75
42:BN:102:PHE:H	42:BN:109:PRO:HA	1.50	0.75
11:AL:40:THR:HG22	11:AL:41:PRO:HD2	1.67	0.75
23:DB:546:U:H4'	23:DB:548:G:OP2	1.87	0.75
21:CN:27:LYS:HD3	21:CN:28:ALA:H	1.50	0.75
1:CA:1241:G:H2'	1:CA:1242:G:H8	1.51	0.75
23:BB:27:G:N2	23:BB:512:G:H2'	2.01	0.75
44:DQ:91:ARG:HH12	49:DR:10:LYS:HB3	1.49	0.75
1:AA:85:U:O3'	1:AA:86:G:H4'	1.86	0.75
23:DB:458:G:N2	23:DB:469:G:H2'	2.02	0.75
23:DB:1099:G:P	24:DI:4:VAL:H	2.08	0.75
23:BB:2305:U:H5''	47:BF:130:GLY:HA3	1.66	0.75
42:BN:38:LEU:HB3	42:BN:39:PRO:HD3	1.67	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:95:PHE:HB2	46:BU:100:GLU:HB3	1.67	0.75
49:BR:19:THR:HG22	49:BR:97:LYS:HG3	1.66	0.75
29:BE:29:HIS:NE2	37:BL:8:PRO:HG3	2.00	0.75
1:CA:83:C:O2'	1:CA:84:U:H2'	1.86	0.75
48:DG:148:ARG:HD3	48:DG:152:ARG:HH11	1.52	0.75
23:DB:300:A:H3'	46:DU:81:ARG:HH12	1.51	0.75
28:DP:50:ARG:HB2	28:DP:56:SER:HB3	1.69	0.75
26:DD:148:GLN:HG3	26:DD:152:PRO:CG	2.17	0.75
1:CA:946:A:H2'	1:CA:947:G:C8	2.21	0.75
3:CD:197:HIS:O	3:CD:200:VAL:HG22	1.87	0.75
23:DB:1872:A:H2'	23:DB:1873:G:O4'	1.87	0.75
49:DR:19:THR:HG22	49:DR:97:LYS:HG3	1.68	0.75
1:AA:1389:C:H2'	1:AA:1390:U:C6	2.22	0.75
4:CE:152:VAL:HG21	7:CH:98:LEU:HB3	1.67	0.75
23:BB:796:C:H2'	23:BB:797:G:H8	1.51	0.75
37:DL:73:ILE:HD12	37:DL:106:GLU:HB2	1.68	0.75
48:BG:16:VAL:HG22	48:BG:25:ILE:HG13	1.68	0.75
23:DB:2331:G:O2'	52:DW:40:ARG:HB2	1.86	0.75
37:BL:82:LEU:HD23	37:BL:90:VAL:HG21	1.68	0.75
23:BB:2867:G:H2'	23:BB:2867:G:N3	2.01	0.75
42:BN:12:ARG:HG2	42:BN:16:HIS:ND1	2.01	0.75
33:B1:9:LYS:HD3	33:B1:9:LYS:H	1.52	0.75
23:DB:1098:A:H2'	24:DI:4:VAL:N	2.00	0.75
23:DB:2306:C:H3'	23:DB:2307:G:C5'	2.17	0.75
52:DW:49:ASN:CB	52:DW:61:LYS:H	1.98	0.75
28:BP:50:ARG:CB	28:BP:56:SER:HB3	2.17	0.75
46:DU:47:PRO:HB3	46:DU:55:GLY:HA3	1.68	0.75
21:AN:5:MET:O	21:AN:8:ARG:HB2	1.86	0.75
44:DQ:57:ARG:HH11	44:DQ:61:ILE:HD11	1.51	0.75
45:DS:84:ARG:HB3	45:DS:96:ILE:HG23	1.69	0.75
1:CA:190:A:H2'	1:CA:191:G:O4'	1.87	0.75
11:CL:40:THR:HG22	11:CL:41:PRO:HD2	1.69	0.75
23:DB:1099:G:H5''	24:DI:2:LYS:C	2.07	0.75
52:BW:49:ASN:CB	52:BW:61:LYS:H	2.00	0.75
23:DB:2305:U:H4'	47:DF:132:ARG:HG2	1.68	0.75
8:AI:71:ILE:HD12	8:AI:71:ILE:H	1.51	0.75
35:BV:80:HIS:CD2	35:BV:83:LYS:H	2.05	0.75
4:CE:133:ILE:H	4:CE:133:ILE:HD12	1.51	0.75
6:CG:58:LEU:HA	6:CG:61:PHE:HB3	1.69	0.75
23:BB:2186:G:H2'	23:BB:2187:U:O4'	1.87	0.75
1:AA:237:G:H5''	14:AQ:26:ARG:NH2	2.02	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DE:117:ARG:HH12	37:DL:2:ARG:HB2	1.52	0.74
2:AC:120:THR:HB	2:AC:188:ALA:HB2	1.69	0.74
18:CB:63:LYS:HA	18:CB:224:ARG:NH1	2.02	0.74
1:CA:1218:C:H2'	1:CA:1219:A:C8	2.22	0.74
1:CA:1320:C:H41	16:CS:36:ARG:HG2	1.52	0.74
27:BK:25:LEU:HD13	27:BK:38:ILE:HG22	1.69	0.74
51:DZ:31:PRO:HB2	51:DZ:33:LEU:HD11	1.69	0.74
48:BG:144:ALA:HA	48:BG:147:LEU:HD12	1.68	0.74
41:BJ:81:ILE:HG23	41:BJ:82:GLY:H	1.50	0.74
45:DS:70:LYS:HD3	45:DS:110:ARG:HA	1.68	0.74
48:DG:167:VAL:HG23	48:DG:168:VAL:H	1.50	0.74
23:DB:320:A:H4'	23:DB:322:A:N7	2.02	0.74
1:AA:1003:G:H21	1:AA:1005:A:H5'	1.51	0.74
44:BQ:89:ILE:HG22	44:BQ:91:ARG:H	1.51	0.74
13:AP:4:ILE:HG12	13:AP:21:VAL:HG22	1.68	0.74
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.22	0.74
51:BZ:54:LYS:HA	51:BZ:57:ARG:HD3	1.66	0.74
18:AB:119:GLN:HA	18:AB:124:THR:HG23	1.68	0.74
23:BB:580:U:H2'	23:BB:581:C:C6	2.22	0.74
39:BX:23:ARG:HE	39:BX:27:ASN:HD21	1.32	0.74
2:AC:171:ARG:HB2	2:AC:171:ARG:HH11	1.51	0.74
46:BU:85:ARG:NH1	46:BU:86:PHE:H	1.85	0.74
39:DX:23:ARG:HE	39:DX:27:ASN:HD21	1.32	0.74
24:BI:77:VAL:HA	24:BI:80:LYS:HE2	1.69	0.74
25:BC:116:GLN:HG2	25:BC:117:SER:H	1.52	0.74
48:BG:120:ILE:HD11	48:BG:132:LEU:HB2	1.67	0.74
47:DF:110:ILE:HA	47:DF:111:ARG:CZ	2.17	0.74
47:BF:87:LYS:HG3	47:BF:88:VAL:H	1.51	0.74
47:BF:64:PRO:HA	47:BF:88:VAL:HG22	1.67	0.74
23:BB:1872:A:H2'	23:BB:1873:G:O4'	1.87	0.74
18:CB:163:ILE:HD12	18:CB:185:ILE:HD12	1.69	0.74
50:DT:39:THR:HG23	50:DT:42:GLU:H	1.50	0.74
26:DD:13:ARG:HH12	28:DP:74:GLN:NE2	1.86	0.74
47:DF:64:PRO:HA	47:DF:88:VAL:HG22	1.68	0.74
52:BW:9:THR:HG23	52:BW:10:ARG:HD3	1.69	0.74
5:AF:38:ARG:NH1	5:AF:99:ALA:HB2	2.02	0.74
5:AF:42:TRP:HB2	5:AF:59:TYR:HB2	1.69	0.74
23:DB:2269:G:H4'	52:DW:19:ARG:NH1	2.02	0.74
48:DG:120:ILE:HD11	48:DG:132:LEU:HB2	1.69	0.74
33:D1:34:GLU:HB3	33:D1:49:LYS:HD3	1.69	0.74
23:BB:2572:A:OP1	23:BB:2574:G:H4'	1.87	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DQ:89:ILE:HG22	44:DQ:91:ARG:H	1.52	0.74
27:DK:7:MET:HE3	27:DK:18:ARG:HE	1.51	0.74
20:CO:11:ILE:HA	20:CO:14:GLU:OE2	1.88	0.74
1:CA:408:A:OP1	3:CD:111:ALA:HB3	1.88	0.74
37:BL:30:THR:O	37:BL:33:ARG:HG2	1.86	0.74
9:AJ:77:VAL:HG12	9:AJ:78:GLU:H	1.52	0.74
1:CA:1360:A:H2'	1:CA:1361:G:O4'	1.88	0.74
27:DK:118:LEU:C	27:DK:120:PRO:HD2	2.07	0.74
27:DK:60:ALA:HB2	27:DK:86:LEU:HA	1.68	0.74
1:CA:554:A:H5'	11:CL:25:ALA:HB1	1.68	0.74
4:AE:93:VAL:HG13	4:AE:126:ALA:HB2	1.70	0.74
52:BW:35:ILE:HA	52:BW:57:THR:HG23	1.70	0.74
12:AM:78:ARG:HH12	12:AM:82:LEU:HD11	1.53	0.74
1:CA:923:A:H2'	1:CA:924:C:C6	2.23	0.74
1:CA:1001:C:H2'	1:CA:1002:G:H8	1.52	0.74
7:AH:49:LYS:HB3	7:AH:59:GLU:HB2	1.68	0.74
50:BT:39:THR:HG23	50:BT:42:GLU:H	1.50	0.74
23:BB:2769:U:H2'	23:BB:2770:G:H8	1.53	0.74
51:DZ:64:ILE:HD12	51:DZ:64:ILE:H	1.52	0.74
23:BB:1508:A:H2'	23:BB:1509:A:C2	2.22	0.74
48:BG:15:ASP:HB2	48:BG:26:LYS:HB3	1.69	0.74
48:BG:122:ALA:HB2	48:BG:132:LEU:HB3	1.69	0.74
26:BD:24:VAL:HG21	26:BD:188:LEU:HB3	1.69	0.74
24:BI:27:LEU:HD12	24:BI:32:VAL:HG11	1.69	0.74
23:DB:899:A:H3'	23:DB:900:A:C8	2.22	0.74
26:BD:148:GLN:HG3	26:BD:152:PRO:CG	2.17	0.74
1:CA:243:A:H4'	1:CA:244:U:H5'	1.69	0.74
23:BB:616:A:H4'	29:BE:101:TYR:CE2	2.22	0.74
2:CC:109:GLU:HB3	2:CC:139:ASN:HB3	1.68	0.74
24:DI:105:LEU:HD13	24:DI:129:GLU:HG2	1.68	0.74
43:BO:47:VAL:HG12	43:BO:48:LEU:H	1.50	0.74
9:CJ:36:VAL:HG22	9:CJ:76:ILE:HB	1.70	0.74
25:DC:116:GLN:HG2	25:DC:117:SER:H	1.51	0.74
28:DP:50:ARG:CB	28:DP:56:SER:HB3	2.17	0.74
9:AJ:28:THR:HG22	9:AJ:31:ARG:HH21	1.53	0.74
27:BK:118:LEU:C	27:BK:120:PRO:HD2	2.08	0.74
42:DN:76:VAL:HA	42:DN:79:LEU:HD12	1.68	0.74
25:BC:144:GLU:HA	25:BC:151:GLY:HA2	1.69	0.74
47:BF:110:ILE:HA	47:BF:111:ARG:CZ	2.18	0.74
26:DD:34:VAL:HB	26:DD:48:ILE:HD11	1.70	0.74
23:BB:2353:G:H1'	52:BW:30:VAL:CG1	2.18	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BM:59:ARG:NH1	38:BM:60:GLN:HB3	2.02	0.74
31:D0:38:LEU:HB3	31:D0:41:HIS:NE2	2.03	0.74
23:DB:544:C:H2'	23:DB:545:U:C6	2.23	0.74
6:CG:120:ALA:HA	6:CG:123:LEU:HD12	1.68	0.74
23:DB:2389:G:H5''	23:DB:2390:U:O4'	1.87	0.74
8:CI:48:ARG:HA	8:CI:51:LEU:HD12	1.70	0.73
1:CA:1317:C:H2'	1:CA:1318:A:O4'	1.87	0.73
52:DW:37:VAL:HG12	52:DW:38:ARG:H	1.53	0.73
48:DG:122:ALA:HB2	48:DG:132:LEU:HB3	1.69	0.73
29:BE:129:PRO:HB3	29:BE:159:LEU:HD23	1.70	0.73
18:CB:83:ALA:O	18:CB:88:GLN:HB2	1.88	0.73
1:AA:1338:G:H2'	1:AA:1339:A:H8	1.51	0.73
11:CL:23:LEU:HG	11:CL:24:GLU:HG3	1.69	0.73
39:DX:39:GLN:HB3	39:DX:42:LEU:HD13	1.69	0.73
23:DB:1149:G:H2'	23:DB:1150:C:C6	2.23	0.73
17:AT:3:ILE:H	17:AT:3:ILE:HD12	1.52	0.73
23:BB:1579:A:H2'	23:BB:1580:A:C8	2.23	0.73
6:AG:30:MET:HG3	6:AG:35:LYS:HA	1.71	0.73
9:AJ:7:ARG:HB2	9:AJ:101:SER:N	2.01	0.73
42:DN:38:LEU:HB3	42:DN:39:PRO:HD3	1.69	0.73
41:DJ:17:VAL:HG22	41:DJ:55:ILE:HD11	1.70	0.73
32:B4:1:MET:SD	32:B4:36:ARG:HB2	2.29	0.73
49:DR:4:VAL:HG22	49:DR:40:MET:HB2	1.69	0.73
24:DI:72:THR:HG21	24:DI:112:LYS:HA	1.70	0.73
29:BE:127:GLU:HG2	29:BE:133:LEU:HD13	1.68	0.73
47:DF:87:LYS:HG3	47:DF:88:VAL:H	1.53	0.73
1:AA:80:A:H2'	1:AA:81:A:H4'	1.69	0.73
23:BB:460:A:H4'	50:BT:72:GLN:HB2	1.68	0.73
51:BZ:64:ILE:H	51:BZ:64:ILE:HD12	1.53	0.73
35:BV:60:VAL:HG12	35:BV:61:LEU:H	1.52	0.73
35:BV:9:ARG:NH1	35:BV:27:PRO:HB3	2.02	0.73
29:BE:5:LEU:HD22	29:BE:122:GLU:HG3	1.70	0.73
39:BX:44:LYS:HD2	39:BX:48:ARG:HH22	1.52	0.73
38:DM:59:ARG:NH1	38:DM:60:GLN:HB3	2.03	0.73
23:BB:1420:A:H2'	23:BB:2211:A:H62	1.53	0.73
15:AR:51:GLN:HA	15:AR:51:GLN:HE21	1.51	0.73
40:BH:47:PHE:HA	40:BH:50:ARG:NE	2.03	0.73
46:DU:85:ARG:NE	46:DU:85:ARG:HA	2.03	0.73
8:AI:56:MET:HG3	8:AI:57:VAL:HG23	1.69	0.73
51:DZ:45:ARG:HE	51:DZ:47:VAL:HG12	1.54	0.73
1:AA:1047:G:H21	1:AA:1215:G:C4'	2.01	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2389:G:H5''	23:BB:2390:U:O4'	1.88	0.73
1:CA:76:G:H2'	1:CA:77:A:C8	2.23	0.73
23:DB:2723:C:H5''	42:DN:1:MET:HE2	1.71	0.73
18:AB:120:SER:HA	18:AB:125:PHE:HB3	1.70	0.73
23:BB:62:U:H3'	23:BB:63:A:H8	1.53	0.73
2:CC:113:LYS:HA	2:CC:184:ASN:ND2	2.03	0.73
5:CF:38:ARG:NH1	5:CF:99:ALA:HB2	2.04	0.73
23:DB:142:A:H2'	23:DB:143:C:C6	2.23	0.73
48:BG:152:ARG:HD3	48:BG:153:PRO:HD2	1.71	0.73
23:BB:1056:G:H1'	23:BB:1103:A:N6	2.03	0.73
26:BD:34:VAL:HB	26:BD:48:ILE:HD11	1.71	0.73
41:DJ:45:THR:H	41:DJ:46:PRO:HD3	1.54	0.73
32:D4:1:MET:SD	32:D4:36:ARG:HB2	2.28	0.73
42:BN:97:ILE:HD12	42:BN:98:LEU:N	2.04	0.73
4:CE:82:HIS:HB2	4:CE:83:PRO:HD2	1.69	0.73
2:CC:8:GLY:HA2	2:CC:11:LEU:HG	1.69	0.73
23:DB:3:U:H2'	23:DB:4:U:C6	2.23	0.73
1:AA:239:U:H4'	1:AA:239:U:OP1	1.86	0.73
6:CG:131:GLY:O	6:CG:134:VAL:HG22	1.89	0.73
31:D0:28:SER:HB2	31:D0:39:ARG:NE	2.03	0.73
28:BP:47:ILE:HG13	28:BP:48:ALA:H	1.54	0.73
23:DB:126:A:H5'	36:D2:19:ARG:HG3	1.69	0.73
23:DB:1080:A:H4'	24:DI:126:ARG:HD3	1.68	0.73
40:BH:4:ILE:HG13	40:BH:18:GLN:HB2	1.70	0.73
36:D2:21:ARG:HD2	36:D2:43:THR:HG21	1.70	0.73
1:AA:560:A:H4'	1:AA:561:U:H5''	1.70	0.73
23:DB:281:C:H2'	23:DB:282:A:C8	2.24	0.73
44:BQ:10:ARG:NH1	44:BQ:10:ARG:HB2	2.03	0.73
49:DR:72:VAL:HG23	49:DR:89:HIS:HB3	1.68	0.73
13:CP:20:VAL:HG23	13:CP:35:ARG:HA	1.71	0.73
23:BB:2458:G:H8	23:BB:2459:A:H62	1.37	0.73
23:BB:2306:C:H3'	23:BB:2307:G:C5'	2.18	0.73
52:DW:49:ASN:HB2	52:DW:61:LYS:N	1.98	0.73
35:DV:63:ILE:HB	35:DV:70:ILE:HD11	1.70	0.73
48:DG:85:LYS:HA	48:DG:131:VAL:HG12	1.69	0.73
23:BB:62:U:H3'	23:BB:63:A:C8	2.23	0.73
23:BB:161:A:H3'	23:BB:162:U:H5''	1.70	0.73
8:CI:117:LEU:HD22	8:CI:123:ARG:HB3	1.69	0.73
23:DB:1508:A:H2'	23:DB:1509:A:C2	2.22	0.73
23:DB:572:A:H5''	49:DR:80:ARG:HH22	1.54	0.73
1:AA:1060:U:H5''	9:AJ:53:ILE:HG12	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AE:82:HIS:HB2	4:AE:83:PRO:HD2	1.71	0.73
1:AA:243:A:H4'	1:AA:244:U:H5'	1.70	0.73
2:AC:120:THR:HG21	2:AC:186:SER:HB2	1.70	0.73
25:BC:143:VAL:HB	25:BC:153:LEU:HB2	1.71	0.73
19:CU:5:VAL:HG21	19:CU:16:ARG:HH21	1.53	0.73
26:BD:116:LYS:HG3	26:BD:165:MET:SD	2.29	0.73
46:DU:95:PHE:HB2	46:DU:100:GLU:HB3	1.70	0.73
20:CO:8:THR:O	20:CO:11:ILE:HG13	1.89	0.73
46:DU:85:ARG:NH1	46:DU:86:PHE:H	1.87	0.73
39:BX:39:GLN:HB3	39:BX:42:LEU:HD13	1.71	0.73
27:DK:25:LEU:HD13	27:DK:38:ILE:HG22	1.71	0.73
26:BD:9:VAL:HA	26:BD:197:THR:HG22	1.71	0.73
8:AI:20:ILE:HD13	8:AI:85:ALA:HB3	1.70	0.73
48:DG:132:LEU:HD23	48:DG:132:LEU:H	1.53	0.73
29:DE:5:LEU:HD22	29:DE:122:GLU:HG3	1.71	0.73
4:AE:133:ILE:H	4:AE:133:ILE:HD12	1.54	0.73
46:DU:84:PHE:O	46:DU:85:ARG:HB2	1.89	0.73
23:BB:458:G:N2	23:BB:469:G:H2'	2.03	0.73
20:AO:8:THR:HG23	20:AO:31:LEU:HD21	1.71	0.73
20:AO:49:ASP:OD2	20:AO:52:SER:HB2	1.87	0.73
25:BC:80:LEU:HD11	25:BC:109:LEU:HB2	1.71	0.73
1:AA:269:C:H2'	1:AA:270:A:C8	2.24	0.73
35:BV:51:GLN:HG2	35:BV:86:LEU:HD11	1.71	0.73
49:BR:4:VAL:HG22	49:BR:40:MET:HB2	1.71	0.73
45:DS:29:VAL:HG23	45:DS:70:LYS:HA	1.71	0.73
23:DB:572:A:H5''	49:DR:80:ARG:NH2	2.03	0.73
23:DB:1935:G:H1'	23:DB:1964:G:N2	2.03	0.73
1:CA:1171:A:H2'	1:CA:1172:C:C6	2.24	0.73
2:AC:35:ASP:HB3	2:AC:39:ARG:NH1	2.03	0.73
25:BC:180:MET:HB2	25:BC:268:ARG:H	1.54	0.73
25:DC:80:LEU:HD23	25:DC:91:ALA:HB2	1.70	0.72
23:BB:142:A:O2'	50:BT:2:ILE:HG21	1.88	0.72
46:DU:12:VAL:HG22	46:DU:69:VAL:HG12	1.71	0.72
27:BK:102:PRO:HB3	27:BK:121:GLU:HB2	1.71	0.72
1:AA:946:A:H2'	1:AA:947:G:C8	2.24	0.72
21:CN:8:ARG:HD3	21:CN:12:ARG:HH12	1.53	0.72
1:CA:814:A:H5'	1:CA:1511:G:H4'	1.69	0.72
44:BQ:57:ARG:HH11	44:BQ:61:ILE:HD11	1.55	0.72
12:AM:108:ARG:HH11	12:AM:108:ARG:HA	1.54	0.72
38:DM:108:VAL:HG21	38:DM:112:LEU:HD12	1.71	0.72
23:DB:351:C:H2'	23:DB:352:A:H8	1.54	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CT:3:ILE:H	17:CT:3:ILE:HD12	1.55	0.72
27:DK:53:LYS:H	27:DK:53:LYS:HD3	1.54	0.72
18:CB:44:LYS:O	18:CB:48:MET:HG2	1.89	0.72
12:AM:1:ALA:HB3	12:AM:8:ILE:HG22	1.71	0.72
23:DB:856:G:H1'	52:DW:23:LYS:HB3	1.71	0.72
29:BE:176:ASP:HB3	29:BE:179:SER:HB2	1.70	0.72
23:BB:1060:U:O4	24:BI:131:THR:HG22	1.89	0.72
26:BD:114:LYS:HE3	26:BD:116:LYS:HZ2	1.52	0.72
10:AK:105:ARG:HH21	19:AU:10:PRO:HB3	1.53	0.72
41:DJ:64:VAL:HG22	41:DJ:68:LYS:HD2	1.70	0.72
22:DA:98:G:N1	35:DV:14:LYS:HB2	2.03	0.72
23:BB:2885:G:N2	31:B0:31:LYS:HB3	2.04	0.72
46:BU:85:ARG:HA	46:BU:85:ARG:NE	2.02	0.72
23:DB:580:U:H2'	23:DB:581:C:C6	2.23	0.72
1:CA:958:A:N1	16:CS:53:GLY:HA3	2.05	0.72
3:AD:60:VAL:HA	3:AD:63:ILE:HD12	1.71	0.72
27:BK:24:VAL:HG13	27:BK:33:ALA:HB2	1.69	0.72
45:BS:29:VAL:HG23	45:BS:70:LYS:HA	1.69	0.72
50:DT:34:VAL:HG11	50:DT:43:ILE:HD11	1.71	0.72
23:DB:922:C:H1'	52:DW:22:VAL:HG21	1.71	0.72
18:AB:13:VAL:HB	18:AB:207:ARG:NE	2.02	0.72
30:BY:5:LYS:HE2	30:BY:5:LYS:H	1.53	0.72
41:BJ:64:VAL:HG22	41:BJ:68:LYS:HD2	1.69	0.72
1:AA:1382:C:H4'	6:AG:78:ARG:HH21	1.54	0.72
23:DB:796:C:H2'	23:DB:797:G:H8	1.54	0.72
1:CA:528:C:H41	11:CL:45:ASN:ND2	1.87	0.72
4:AE:106:ALA:HB1	4:AE:110:MET:HB3	1.71	0.72
35:DV:80:HIS:HD2	35:DV:82:TYR:H	1.36	0.72
39:DX:13:GLU:HB2	39:DX:57:LEU:HD13	1.72	0.72
1:CA:1170:A:H2'	1:CA:1171:A:O4'	1.89	0.72
35:BV:29:ILE:HG13	35:BV:88:HIS:HE1	1.54	0.72
5:AF:42:TRP:NE1	5:AF:61:LEU:HD23	2.03	0.72
23:DB:28:A:H61	23:DB:512:G:H1'	1.54	0.72
20:AO:50:HIS:O	20:AO:53:ARG:HB3	1.90	0.72
23:BB:2189:U:H2'	23:BB:2190:G:H8	1.54	0.72
25:DC:74:PRO:HG2	25:DC:96:LYS:HG3	1.71	0.72
26:BD:159:LYS:HA	26:BD:159:LYS:HZ3	1.54	0.72
2:CC:153:SER:HA	2:CC:164:THR:HG22	1.70	0.72
6:CG:111:GLY:H	6:CG:118:ARG:NH1	1.88	0.72
20:AO:70:LEU:HD11	20:AO:77:ARG:HB2	1.72	0.72
25:BC:64:VAL:O	25:BC:65:ASP:HB3	1.89	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1060:U:C4	23:DB:1088:A:N6	2.58	0.72
23:DB:1551:A:H3'	23:DB:1552:A:H5''	1.71	0.72
12:CM:52:ILE:HD12	12:CM:55:LEU:HD12	1.70	0.72
13:AP:39:PHE:HA	13:AP:50:THR:HG23	1.71	0.72
11:CL:78:VAL:HG12	11:CL:101:LEU:HD13	1.72	0.72
12:AM:73:SER:HA	12:AM:76:ILE:HD12	1.71	0.72
23:DB:2336:A:N6	52:DW:40:ARG:HB3	2.05	0.72
23:BB:135:U:H2'	23:BB:136:G:N7	2.05	0.72
1:AA:1147:C:H2'	1:AA:1148:U:C6	2.25	0.72
25:DC:43:ASN:HB2	25:DC:49:THR:HG23	1.72	0.72
44:BQ:91:ARG:NH1	49:BR:11:GLN:H	1.86	0.72
26:BD:32:ASN:HD22	26:BD:50:VAL:HG21	1.55	0.72
24:DI:20:SER:HB3	24:DI:21:PRO:HD3	1.69	0.72
3:CD:84:ASN:ND2	3:CD:86:GLY:H	1.88	0.72
1:AA:1137:C:H1'	1:AA:1138:G:C2	2.25	0.72
27:DK:54:LYS:H	27:DK:54:LYS:HD2	1.55	0.72
23:DB:1019:U:H2'	23:DB:1020:A:C8	2.24	0.72
23:BB:1606:C:H4'	23:BB:1607:C:H5'	1.71	0.72
5:CF:42:TRP:HB2	5:CF:59:TYR:HB2	1.71	0.72
23:BB:1046:A:C3'	23:BB:1047:G:H5''	2.20	0.72
10:CK:105:ARG:HH21	19:CU:10:PRO:HB3	1.54	0.72
40:BH:27:ARG:HE	51:BZ:64:ILE:HD11	1.53	0.72
31:B0:38:LEU:HB3	31:B0:41:HIS:NE2	2.04	0.72
45:BS:70:LYS:HD3	45:BS:110:ARG:HA	1.71	0.72
23:DB:1437:C:H2'	23:DB:1438:U:C6	2.24	0.72
1:AA:1134:G:H21	1:AA:1136:C:N4	1.87	0.72
4:CE:106:ALA:HB1	4:CE:110:MET:HB3	1.72	0.72
4:CE:93:VAL:HG13	4:CE:126:ALA:HB2	1.70	0.72
51:DZ:54:LYS:HA	51:DZ:57:ARG:HD3	1.70	0.72
23:DB:264:C:C2'	23:DB:265:A:H5''	2.20	0.72
19:CU:39:LYS:N	19:CU:40:PRO:HD2	2.05	0.72
52:BW:24:ARG:HD3	52:BW:65:LYS:HG2	1.72	0.72
50:BT:34:VAL:HG11	50:BT:43:ILE:HD11	1.72	0.72
8:CI:11:ARG:HA	8:CI:105:ARG:CZ	2.20	0.72
1:CA:1324:A:H2'	1:CA:1325:C:C6	2.25	0.72
23:BB:320:A:H4'	23:BB:322:A:N7	2.04	0.72
23:DB:161:A:H3'	23:DB:162:U:H5''	1.72	0.72
11:AL:78:VAL:HG12	11:AL:101:LEU:HD13	1.72	0.72
23:DB:559:G:H21	44:DQ:51:GLN:NE2	1.87	0.72
36:B2:21:ARG:HD2	36:B2:43:THR:HG21	1.71	0.72
45:DS:36:LEU:HD23	45:DS:48:LYS:HA	1.71	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:14:ASP:HB3	6:CG:19:SER:H	1.55	0.72
1:CA:1534:A:H62	19:CU:44:ARG:HH12	1.38	0.71
35:BV:77:VAL:HG23	35:BV:89:ILE:HG23	1.72	0.71
36:B2:30:VAL:HA	36:B2:33:ARG:NH2	2.04	0.71
10:AK:111:ASP:HB3	19:AU:3:ILE:HD13	1.72	0.71
23:BB:1060:U:C4	23:BB:1088:A:N6	2.58	0.71
48:BG:85:LYS:HA	48:BG:131:VAL:HG12	1.70	0.71
48:BG:132:LEU:HD23	48:BG:132:LEU:H	1.55	0.71
26:BD:20:VAL:HG13	27:BK:72:PRO:HB3	1.71	0.71
18:AB:52:ALA:HA	18:AB:197:PHE:HE1	1.55	0.71
47:BF:147:ARG:HD2	47:BF:148:VAL:HG22	1.72	0.71
25:BC:43:ASN:HB2	25:BC:49:THR:HG23	1.72	0.71
52:DW:9:THR:HG23	52:DW:10:ARG:HD3	1.72	0.71
11:AL:23:LEU:HG	11:AL:24:GLU:HG3	1.71	0.71
7:AH:58:LEU:HD22	7:AH:60:LEU:HB2	1.72	0.71
1:AA:1060:U:H4'	9:AJ:53:ILE:HG23	1.70	0.71
23:DB:2241:A:H2'	23:DB:2242:G:C8	2.25	0.71
23:BB:2591:C:H2'	23:BB:2592:G:C8	2.25	0.71
51:BZ:31:PRO:HB2	51:BZ:33:LEU:HD11	1.71	0.71
49:BR:72:VAL:HG23	49:BR:89:HIS:HB3	1.71	0.71
1:AA:528:C:H41	11:AL:45:ASN:ND2	1.88	0.71
23:BB:2080:A:OP1	51:BZ:20:HIS:HB3	1.89	0.71
19:AU:39:LYS:N	19:AU:40:PRO:HD2	2.05	0.71
40:BH:99:ILE:HG13	40:BH:130:VAL:HG21	1.72	0.71
23:DB:2885:G:N2	31:D0:31:LYS:HB3	2.05	0.71
1:CA:1004:A:H3'	1:CA:1024:G:H22	1.54	0.71
23:DB:90:U:H3'	23:DB:91:A:C5'	2.21	0.71
12:CM:10:ASP:HA	12:CM:44:ILE:HD13	1.72	0.71
28:DP:47:ILE:HG13	28:DP:48:ALA:H	1.54	0.71
23:BB:1551:A:H3'	23:BB:1552:A:H5''	1.70	0.71
23:BB:930:G:H1'	30:BY:24:LEU:HD11	1.72	0.71
1:AA:505:G:H5'	1:AA:534:U:H2'	1.73	0.71
25:DC:129:LEU:HD22	25:DC:134:ILE:HG22	1.71	0.71
52:BW:37:VAL:HG12	52:BW:38:ARG:H	1.53	0.71
24:BI:122:GLU:O	24:BI:126:ARG:HG3	1.91	0.71
30:BY:30:ARG:NH1	30:BY:30:ARG:HB2	2.05	0.71
35:DV:77:VAL:HG23	35:DV:89:ILE:HG23	1.72	0.71
26:BD:13:ARG:HH12	28:BP:74:GLN:HE21	1.38	0.71
40:DH:4:ILE:HG13	40:DH:18:GLN:HB2	1.71	0.71
40:DH:5:LEU:HD13	40:DH:13:GLY:HA2	1.71	0.71
31:B0:28:SER:HB2	31:B0:39:ARG:NE	2.05	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:84:PHE:O	46:BU:85:ARG:HB2	1.90	0.71
1:AA:56:U:H2'	1:AA:57:G:H8	1.55	0.71
23:DB:2769:U:H2'	23:DB:2770:G:H8	1.54	0.71
10:AK:16:SER:HA	10:AK:78:ILE:HA	1.71	0.71
11:CL:5:GLN:HA	11:CL:8:ARG:HH21	1.54	0.71
23:DB:140:C:H4'	23:DB:141:G:H5''	1.71	0.71
12:CM:21:ILE:HB	12:CM:24:VAL:CG2	2.20	0.71
23:BB:28:A:H61	23:BB:512:G:H1'	1.54	0.71
26:BD:124:ARG:HB2	26:BD:165:MET:HB2	1.70	0.71
41:BJ:45:THR:H	41:BJ:46:PRO:HD3	1.55	0.71
18:AB:23:ASN:HD21	18:AB:25:LYS:HG3	1.55	0.71
4:AE:37:VAL:HA	4:AE:47:PHE:HA	1.71	0.71
27:DK:112:PHE:O	27:DK:115:ILE:HG22	1.90	0.71
25:BC:80:LEU:HD23	25:BC:91:ALA:HB2	1.72	0.71
2:CC:129:PHE:CZ	2:CC:156:LEU:HD11	2.25	0.71
1:CA:239:U:OP1	1:CA:239:U:H4'	1.90	0.71
43:BO:67:ASN:HB3	43:BO:70:ALA:HB2	1.72	0.71
46:BU:80:ASP:HB2	46:BU:95:PHE:HD2	1.54	0.71
35:DV:51:GLN:HG2	35:DV:86:LEU:HD11	1.71	0.71
23:DB:1175:A:H2'	23:DB:1176:U:H5'	1.71	0.71
23:BB:2444:G:OP2	29:BE:63:LYS:HD2	1.89	0.71
41:BJ:6:ALA:HB3	41:BJ:45:THR:HG21	1.71	0.71
6:AG:28:ILE:HG21	6:AG:101:ARG:HG2	1.73	0.71
41:DJ:25:LEU:HD22	41:DJ:26:GLY:H	1.55	0.71
47:DF:147:ARG:HD2	47:DF:148:VAL:HG22	1.71	0.71
23:BB:580:U:H2'	23:BB:581:C:H6	1.54	0.71
1:CA:238:A:H2'	1:CA:239:U:H5''	1.73	0.71
1:AA:1250:A:H4'	8:AI:69:GLY:N	2.05	0.71
23:BB:264:C:C2'	23:BB:265:A:H5''	2.20	0.71
3:AD:192:ALA:HB3	3:AD:194:ILE:HG22	1.72	0.71
44:DQ:10:ARG:HB2	44:DQ:10:ARG:NH1	2.06	0.71
1:CA:237:G:H5''	14:CQ:26:ARG:NH2	2.06	0.71
10:AK:111:ASP:HB2	19:AU:19:LYS:HE3	1.73	0.71
48:DG:87:GLN:HG2	48:DG:164:ALA:HA	1.73	0.71
35:DV:80:HIS:CD2	35:DV:83:LYS:H	2.08	0.71
23:DB:1244:A:H5''	37:DL:8:PRO:HD3	1.71	0.71
16:CS:35:ARG:HA	16:CS:70:LEU:HB3	1.72	0.71
44:DQ:57:ARG:NH1	44:DQ:61:ILE:HD11	2.06	0.71
25:DC:64:VAL:O	25:DC:65:ASP:HB3	1.89	0.71
23:BB:2557:G:H2'	23:BB:2558:C:C6	2.24	0.71
23:DB:784:G:N1	25:DC:227:VAL:HG11	2.04	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:590:A:H2'	23:BB:591:U:C6	2.26	0.71
1:CA:269:C:H2'	1:CA:270:A:C8	2.26	0.71
49:BR:76:LYS:HB2	49:BR:85:LYS:HB2	1.72	0.71
2:AC:122:GLN:HB3	2:AC:127:VAL:HG21	1.72	0.71
41:DJ:51:GLY:HA3	41:DJ:121:LYS:NZ	2.06	0.71
12:AM:23:GLY:HA3	12:AM:68:LEU:HD21	1.72	0.71
43:DO:67:ASN:HB3	43:DO:70:ALA:HB2	1.71	0.71
46:DU:80:ASP:HB2	46:DU:95:PHE:HD2	1.55	0.71
23:BB:674:G:H1'	29:BE:69:ARG:HD2	1.73	0.71
34:D3:49:VAL:HG23	34:D3:51:LYS:H	1.56	0.71
11:CL:23:LEU:HD23	11:CL:29:LYS:HE3	1.72	0.71
1:CA:182:A:O2'	1:CA:183:C:H3'	1.91	0.71
35:BV:14:LYS:HG2	35:BV:18:ARG:HD2	1.72	0.71
40:BH:96:THR:HB	40:BH:115:VAL:HG11	1.70	0.71
46:BU:12:VAL:HG22	46:BU:69:VAL:HG12	1.72	0.71
49:BR:24:LYS:HA	49:BR:94:THR:HG23	1.73	0.71
9:AJ:55:PRO:O	9:AJ:56:HIS:HB3	1.88	0.71
23:BB:181:A:H2'	23:BB:182:A:H8	1.54	0.71
1:CA:950:U:H3'	12:CM:100:ARG:HH22	1.54	0.71
23:BB:1935:G:H1'	23:BB:1964:G:N2	2.05	0.71
23:DB:1203:U:H1'	37:DL:4:ASN:HD21	1.56	0.71
12:AM:9:PRO:O	12:AM:44:ILE:HB	1.91	0.71
52:DW:23:LYS:HD2	52:DW:24:ARG:HB3	1.73	0.71
25:DC:80:LEU:HD11	25:DC:109:LEU:HB2	1.72	0.71
21:CN:50:LEU:HD12	21:CN:51:PRO:HD3	1.72	0.71
23:BB:1063:G:O2'	24:BI:88:GLY:HA3	1.90	0.71
26:DD:151:THR:HB	26:DD:152:PRO:HD3	1.72	0.71
1:AA:1373:G:H5''	6:AG:35:LYS:HD3	1.71	0.71
46:DU:84:PHE:HB3	46:DU:91:LYS:HG2	1.73	0.71
23:DB:359:G:H2'	23:DB:360:U:H5'	1.72	0.71
45:BS:36:LEU:HD23	45:BS:48:LYS:HA	1.73	0.71
17:AT:38:ILE:HD11	17:AT:82:ILE:HG22	1.71	0.71
23:DB:742:A:H2'	23:DB:743:A:H8	1.55	0.71
23:DB:919:U:H2'	23:DB:920:A:C8	2.26	0.71
38:DM:67:VAL:HG11	38:DM:102:LEU:HD13	1.73	0.71
52:BW:23:LYS:HD2	52:BW:24:ARG:HB3	1.72	0.71
52:DW:39:GLN:HG2	52:DW:40:ARG:H	1.55	0.71
23:BB:858:G:H21	23:BB:2268:A:H3'	1.55	0.71
47:DF:135:ILE:HD11	47:DF:137:PHE:HB3	1.72	0.71
44:BQ:57:ARG:NH1	44:BQ:61:ILE:HD11	2.06	0.71
1:AA:1313:U:H3'	16:AS:5:LYS:HD2	1.71	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AJ:56:HIS:H	21:AN:80:ARG:NH2	1.89	0.71
41:BJ:25:LEU:HD22	41:BJ:26:GLY:H	1.55	0.71
27:BK:112:PHE:O	27:BK:115:ILE:HG22	1.91	0.71
23:DB:547:A:C2	23:DB:548:G:H1'	2.25	0.71
40:BH:53:GLU:HA	40:BH:57:LYS:HB3	1.73	0.71
23:DB:2187:U:H2'	23:DB:2188:U:C6	2.25	0.71
11:AL:33:CYS:HA	11:AL:54:VAL:HA	1.72	0.71
6:CG:10:LYS:HZ2	6:CG:11:ILE:N	1.85	0.70
29:DE:176:ASP:HB3	29:DE:179:SER:HB2	1.72	0.70
44:DQ:4:LYS:HE3	44:DQ:8:ILE:HD11	1.72	0.70
43:DO:18:LEU:HD23	43:DO:25:ARG:HD2	1.71	0.70
23:BB:1203:U:H3'	23:BB:1204:A:H5''	1.72	0.70
1:AA:922:G:H2'	1:AA:923:A:C8	2.26	0.70
23:BB:2732:G:H3'	23:BB:2733:A:H5'	1.73	0.70
1:CA:270:A:H2'	1:CA:271:C:C6	2.26	0.70
6:CG:26:VAL:HA	6:CG:42:VAL:HG21	1.71	0.70
28:DP:97:TYR:O	28:DP:100:ARG:HB2	1.91	0.70
38:BM:34:LYS:HB3	38:BM:129:THR:HG22	1.74	0.70
1:CA:56:U:H2'	1:CA:57:G:H8	1.55	0.70
17:CT:38:ILE:HD11	17:CT:82:ILE:HG22	1.73	0.70
1:CA:207:C:H2'	1:CA:208:U:O4'	1.91	0.70
23:DB:705:A:N6	23:DB:726:G:H1'	2.06	0.70
23:BB:705:A:N6	23:BB:726:G:H1'	2.06	0.70
2:AC:137:VAL:HA	2:AC:148:ILE:HD13	1.71	0.70
10:CK:44:ALA:HB2	10:CK:69:CYS:HB3	1.73	0.70
23:BB:675:A:H4'	29:BE:62:GLN:HE22	1.56	0.70
29:BE:60:TRP:O	29:BE:61:ARG:HB2	1.91	0.70
4:AE:113:VAL:HG11	4:AE:136:VAL:HG23	1.73	0.70
1:AA:270:A:H2'	1:AA:271:C:C6	2.25	0.70
23:DB:773:U:H5'	23:DB:774:G:OP2	1.90	0.70
1:AA:370:C:O2'	1:AA:371:A:H5'	1.90	0.70
23:DB:2557:G:H2'	23:DB:2558:C:C6	2.25	0.70
3:CD:32:LYS:O	3:CD:35:GLN:HB2	1.91	0.70
1:AA:518:C:H2'	1:AA:530:G:C8	2.26	0.70
23:DB:1099:G:O4'	24:DI:3:LYS:C	2.30	0.70
23:BB:544:C:H2'	23:BB:545:U:O4'	1.91	0.70
52:BW:39:GLN:HG2	52:BW:40:ARG:H	1.55	0.70
1:CA:1316:G:H22	1:CA:1318:A:H3'	1.55	0.70
52:DW:35:ILE:HA	52:DW:57:THR:HG23	1.73	0.70
8:AI:21:LYS:O	8:AI:60:LEU:HB2	1.91	0.70
40:DH:31:VAL:O	40:DH:33:GLN:N	2.24	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:876:C:H42	23:DB:901:C:N4	1.90	0.70
18:CB:218:ALA:HA	18:CB:221:ARG:CZ	2.21	0.70
39:DX:6:LEU:HD13	39:DX:7:ARG:N	2.06	0.70
24:BI:20:SER:HB3	24:BI:21:PRO:HD3	1.72	0.70
26:DD:124:ARG:HB2	26:DD:165:MET:HB2	1.72	0.70
1:CA:82:G:H2'	1:CA:83:C:O4'	1.92	0.70
23:BB:1437:C:H2'	23:BB:1438:U:C6	2.26	0.70
23:DB:1203:U:H3'	23:DB:1204:A:H5''	1.73	0.70
46:DU:35:VAL:HB	46:DU:38:ILE:HG21	1.73	0.70
2:AC:6:PRO:HA	2:AC:9:ILE:HG22	1.73	0.70
1:AA:1144:G:N2	1:AA:1146:A:H62	1.89	0.70
32:B4:7:VAL:HG13	32:B4:8:LYS:N	2.03	0.70
40:BH:31:VAL:O	40:BH:33:GLN:N	2.24	0.70
10:AK:80:ASN:HD22	10:AK:80:ASN:N	1.88	0.70
18:AB:83:ALA:HA	18:AB:88:GLN:HE21	1.56	0.70
1:CA:1219:A:H2'	1:CA:1220:G:H8	1.56	0.70
23:DB:547:A:H3'	23:DB:548:G:H21	1.57	0.70
23:DB:2742:G:OP1	32:D4:36:ARG:HD3	1.91	0.70
23:DB:930:G:H1'	30:DY:24:LEU:HD11	1.72	0.70
14:CQ:83:LEU:H	14:CQ:83:LEU:HD22	1.55	0.70
23:BB:1857:G:N2	23:BB:1884:G:H2'	2.06	0.70
23:DB:2145:C:H3'	23:DB:2146:C:H5''	1.71	0.70
1:CA:1144:G:N2	1:CA:1146:A:H62	1.89	0.70
23:DB:1099:G:P	24:DI:3:LYS:HA	2.32	0.70
9:CJ:6:ILE:HB	9:CJ:76:ILE:HG13	1.73	0.70
52:DW:39:GLN:HG2	52:DW:40:ARG:N	2.07	0.70
1:CA:922:G:H2'	1:CA:923:A:C8	2.26	0.70
1:AA:1308:U:H5''	12:AM:96:VAL:HG23	1.74	0.70
11:AL:5:GLN:HA	11:AL:8:ARG:HH21	1.57	0.70
1:CA:560:A:H4'	1:CA:561:U:H5''	1.73	0.70
1:AA:408:A:OP1	3:AD:111:ALA:HB3	1.91	0.70
13:AP:28:ARG:CD	13:AP:29:ASN:H	2.04	0.70
14:AQ:66:LEU:HD12	14:AQ:66:LEU:H	1.55	0.70
37:BL:6:LEU:H	37:BL:6:LEU:HD23	1.55	0.70
23:DB:62:U:H3'	23:DB:63:A:C8	2.27	0.70
1:AA:238:A:H2'	1:AA:239:U:H5''	1.74	0.70
1:CA:979:C:H1'	1:CA:1317:C:H41	1.56	0.70
5:AF:5:GLU:HB3	5:AF:90:MET:HB2	1.74	0.70
23:DB:2267:A:C8	23:DB:2267:A:H3'	2.27	0.70
32:B4:5:ALA:HA	32:B4:37:GLN:NE2	2.06	0.70
26:BD:151:THR:HB	26:BD:152:PRO:HD3	1.72	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1306:A:N6	1:CA:1331:G:H1'	2.06	0.70
23:DB:580:U:H2'	23:DB:581:C:H6	1.55	0.70
23:DB:351:C:H2'	23:DB:352:A:C8	2.27	0.70
23:BB:364:C:H2'	23:BB:365:U:C6	2.26	0.70
6:AG:145:GLU:HA	6:AG:148:LYS:HB2	1.72	0.70
24:BI:106:GLN:O	24:BI:110:GLN:HG3	1.92	0.70
41:BJ:17:VAL:HG22	41:BJ:55:ILE:HD11	1.71	0.70
14:CQ:8:GLN:HA	14:CQ:59:GLU:HA	1.73	0.70
23:BB:142:A:H2'	23:BB:143:C:C5	2.27	0.70
19:AU:5:VAL:HG21	19:AU:16:ARG:HH21	1.55	0.70
10:CK:17:ASP:HA	10:CK:80:ASN:O	1.91	0.70
10:CK:80:ASN:HD22	10:CK:80:ASN:N	1.89	0.70
1:AA:1081:A:H2'	1:AA:1082:A:H8	1.57	0.70
39:DX:44:LYS:HD2	39:DX:48:ARG:HH22	1.55	0.70
23:BB:350:G:H2'	23:BB:351:C:O4'	1.91	0.70
16:CS:23:GLU:HG3	16:CS:24:SER:N	2.06	0.70
23:DB:1606:C:H4'	23:DB:1607:C:H5'	1.73	0.70
23:DB:2458:G:H8	23:DB:2459:A:H62	1.38	0.70
7:CH:49:LYS:HB3	7:CH:59:GLU:HB2	1.72	0.70
1:CA:1090:U:H2'	1:CA:1091:U:C6	2.27	0.70
23:BB:287:G:H2'	23:BB:288:U:H6	1.56	0.70
7:AH:94:VAL:HG23	7:AH:101:ALA:HB2	1.74	0.70
23:DB:2291:U:H2'	23:DB:2292:U:C6	2.27	0.70
43:BO:18:LEU:HD23	43:BO:25:ARG:HD2	1.73	0.70
23:DB:1387:A:H2'	23:DB:1388:G:H8	1.57	0.70
1:CA:1054:C:O2'	1:CA:1055:A:H5''	1.92	0.70
12:AM:21:ILE:HG21	12:AM:64:VAL:HB	1.72	0.70
42:BN:76:VAL:HA	42:BN:79:LEU:HD12	1.73	0.70
1:AA:1123:U:O2'	1:AA:1124:G:H5'	1.92	0.70
10:CK:111:ASP:HB3	19:CU:3:ILE:HD13	1.72	0.70
32:B4:5:ALA:HA	32:B4:37:GLN:HE22	1.57	0.70
48:BG:84:LYS:HB3	48:BG:132:LEU:O	1.91	0.70
18:AB:63:LYS:HD3	18:AB:224:ARG:HE	1.57	0.70
1:AA:85:U:H1'	1:AA:86:G:O4'	1.92	0.70
2:AC:66:THR:HG22	2:AC:103:ALA:HB2	1.73	0.70
23:DB:1301:A:O2'	23:DB:1302:A:H2'	1.92	0.70
1:CA:518:C:H2'	1:CA:530:G:C8	2.27	0.70
6:AG:74:VAL:HA	6:AG:86:VAL:O	1.92	0.70
23:BB:1019:U:H2'	23:BB:1020:A:C8	2.26	0.70
12:AM:33:LEU:HD13	12:AM:39:ALA:O	1.92	0.70
50:DT:11:LEU:HD21	50:DT:46:ALA:HB1	1.74	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:D4:7:VAL:HG13	32:D4:8:LYS:N	2.04	0.70
23:DB:857:G:C2'	23:DB:858:G:H5'	2.22	0.70
23:DB:495:G:N2	45:DS:61:ASN:HD21	1.90	0.70
35:DV:14:LYS:HG2	35:DV:18:ARG:HD2	1.72	0.70
1:CA:505:G:H5'	1:CA:534:U:H2'	1.72	0.70
1:AA:840:C:H2'	1:AA:842:U:H5''	1.73	0.70
23:BB:919:U:H2'	23:BB:920:A:C8	2.27	0.70
1:CA:1097:C:H2'	1:CA:1098:C:H6	1.56	0.70
23:BB:1000:A:H2'	23:BB:1001:A:C8	2.26	0.70
41:DJ:56:VAL:HG12	41:DJ:57:LEU:H	1.56	0.70
23:DB:1098:A:H2'	24:DI:4:VAL:CA	2.21	0.70
1:CA:1118:U:H2'	1:CA:1119:C:C6	2.27	0.70
8:AI:38:PHE:HZ	8:AI:74:GLN:HB3	1.55	0.70
8:AI:27:ILE:HG12	8:AI:62:LEU:HD23	1.74	0.70
30:DY:30:ARG:NH1	30:DY:30:ARG:HB2	2.07	0.70
24:DI:85:ILE:HD13	24:DI:137:LEU:HD21	1.73	0.70
26:DD:24:VAL:HG21	26:DD:188:LEU:HB3	1.74	0.70
38:BM:19:GLY:N	38:BM:38:ARG:HH12	1.90	0.70
23:BB:1812:U:H2'	23:BB:1813:G:H8	1.57	0.70
1:CA:1071:C:H2'	1:CA:1072:G:C8	2.27	0.70
41:BJ:77:HIS:CD2	41:BJ:84:ILE:H	2.09	0.70
45:BS:84:ARG:HB3	45:BS:96:ILE:HG23	1.74	0.70
16:CS:62:THR:HG22	16:CS:63:ASP:H	1.56	0.70
23:BB:1149:G:H2'	23:BB:1150:C:C6	2.27	0.70
35:BV:72:VAL:HG21	35:BV:91:PHE:HB3	1.74	0.69
23:BB:2328:A:H2'	23:BB:2329:U:C6	2.27	0.69
12:CM:30:LYS:HG2	12:CM:40:GLU:OE1	1.92	0.69
39:BX:6:LEU:HD13	39:BX:7:ARG:N	2.07	0.69
23:BB:90:U:H3'	23:BB:91:A:C5'	2.21	0.69
1:CA:242:G:H2'	1:CA:243:A:H5''	1.74	0.69
51:BZ:28:ARG:HD3	51:BZ:30:LEU:HD21	1.74	0.69
1:CA:21:G:H2'	1:CA:22:G:C8	2.27	0.69
23:DB:2654:A:N1	23:DB:2665:A:H5''	2.07	0.69
38:BM:67:VAL:HG11	38:BM:102:LEU:HD13	1.74	0.69
23:DB:2591:C:H2'	23:DB:2592:G:C8	2.27	0.69
3:AD:32:LYS:O	3:AD:35:GLN:HB2	1.92	0.69
11:CL:33:CYS:HA	11:CL:54:VAL:HA	1.72	0.69
38:DM:34:LYS:HB3	38:DM:129:THR:HG22	1.74	0.69
13:CP:28:ARG:CD	13:CP:29:ASN:H	2.04	0.69
9:AJ:6:ILE:HA	9:AJ:102:LEU:O	1.92	0.69
23:DB:2336:A:H62	52:DW:40:ARG:CB	2.05	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DP:75:THR:HG23	28:DP:76:HIS:N	2.07	0.69
4:CE:37:VAL:HA	4:CE:47:PHE:HA	1.73	0.69
2:AC:10:ARG:HH22	2:AC:181:ILE:HD13	1.56	0.69
23:BB:2241:A:H2'	23:BB:2242:G:C8	2.27	0.69
25:DC:180:MET:HB2	25:DC:268:ARG:H	1.55	0.69
11:CL:20:VAL:HB	11:CL:94:TYR:CE1	2.27	0.69
51:DZ:28:ARG:HD3	51:DZ:30:LEU:HD21	1.73	0.69
1:AA:207:C:H2'	1:AA:208:U:O4'	1.92	0.69
23:BB:2148:G:H2'	23:BB:2149:U:H4'	1.72	0.69
8:CI:19:PHE:O	8:CI:62:LEU:HA	1.93	0.69
12:AM:21:ILE:HG23	12:AM:65:GLU:H	1.57	0.69
29:BE:18:THR:HG22	29:BE:106:LYS:HE2	1.73	0.69
14:AQ:60:ILE:HA	14:AQ:75:VAL:HG13	1.73	0.69
48:DG:84:LYS:HB3	48:DG:132:LEU:O	1.91	0.69
46:BU:71:ILE:HD11	46:BU:81:ARG:O	1.92	0.69
10:CK:17:ASP:HB3	10:CK:80:ASN:HD21	1.57	0.69
24:DI:105:LEU:HD11	24:DI:139:VAL:HG21	1.72	0.69
23:BB:165:A:H2'	23:BB:166:U:C6	2.27	0.69
1:AA:242:G:H2'	1:AA:243:A:H5''	1.73	0.69
23:DB:1440:U:H2'	23:DB:1441:G:H8	1.56	0.69
11:AL:20:VAL:HB	11:AL:94:TYR:CE1	2.26	0.69
23:DB:98:G:H2'	23:DB:99:U:H5''	1.73	0.69
23:DB:1857:G:N2	23:DB:1884:G:H2'	2.07	0.69
48:DG:9:VAL:HA	48:DG:48:THR:HA	1.74	0.69
23:BB:1381:G:C2'	23:BB:1382:G:H5'	2.22	0.69
51:DZ:77:LYS:H	51:DZ:77:LYS:HD3	1.55	0.69
18:CB:79:VAL:HG23	18:CB:213:LEU:HD11	1.75	0.69
1:CA:1316:G:N2	1:CA:1318:A:H3'	2.08	0.69
5:CF:5:GLU:HB3	5:CF:90:MET:HB2	1.73	0.69
10:AK:17:ASP:HA	10:AK:80:ASN:O	1.92	0.69
2:AC:71:ARG:HD2	2:AC:74:ILE:HG22	1.74	0.69
3:AD:197:HIS:O	3:AD:200:VAL:HG22	1.91	0.69
23:BB:1381:G:H2'	23:BB:1382:G:H5'	1.73	0.69
1:AA:182:A:O2'	1:AA:183:C:H3'	1.92	0.69
45:DS:17:VAL:C	45:DS:19:LEU:H	1.96	0.69
5:CF:42:TRP:NE1	5:CF:61:LEU:HD23	2.07	0.69
18:AB:23:ASN:HD22	18:AB:24:PRO:HD2	1.57	0.69
23:DB:356:G:H2'	23:DB:357:C:C6	2.26	0.69
23:BB:1796:U:H2'	23:BB:1797:G:H8	1.57	0.69
18:AB:116:LEU:HD22	18:AB:140:LEU:HD11	1.74	0.69
1:CA:266:G:O2'	1:CA:267:C:H3'	1.93	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:664:G:H22	1:AA:741:G:H1	1.40	0.69
1:CA:370:C:O2'	1:CA:371:A:H5'	1.91	0.69
49:BR:71:LYS:HE3	49:BR:73:LYS:NZ	2.07	0.69
4:AE:39:GLY:HA3	4:AE:116:VAL:HB	1.74	0.69
1:AA:1175:G:H2'	1:AA:1176:A:H8	1.56	0.69
50:DT:29:THR:HG22	50:DT:86:THR:HG22	1.73	0.69
50:DT:5:GLU:HA	50:DT:8:LEU:HB2	1.74	0.69
50:BT:11:LEU:HD21	50:BT:46:ALA:HB1	1.73	0.69
6:CG:130:LYS:N	6:CG:134:VAL:HG21	2.08	0.69
35:DV:29:ILE:HG13	35:DV:88:HIS:HE1	1.55	0.69
18:CB:33:ALA:CB	18:CB:38:HIS:HA	2.23	0.69
28:BP:75:THR:HG23	28:BP:76:HIS:N	2.07	0.69
28:BP:1:SER:O	28:BP:5:LYS:HB2	1.93	0.69
12:CM:33:LEU:HD13	12:CM:39:ALA:O	1.92	0.69
2:CC:26:LYS:HG3	2:CC:27:GLU:HG3	1.75	0.69
29:BE:29:HIS:O	29:BE:32:VAL:HG22	1.93	0.69
23:BB:796:C:H2'	23:BB:797:G:C8	2.27	0.69
46:BU:84:PHE:HB3	46:BU:91:LYS:HG2	1.73	0.69
32:D4:5:ALA:HA	32:D4:37:GLN:NE2	2.07	0.69
23:DB:2734:A:H2'	23:DB:2735:G:H5'	1.75	0.69
13:CP:39:PHE:HA	13:CP:50:THR:HG23	1.73	0.69
23:DB:590:A:H2'	23:DB:591:U:C6	2.28	0.69
1:CA:1288:A:N1	1:CA:1371:G:H1'	2.08	0.69
40:DH:101:ASP:HA	40:DH:104:THR:HB	1.74	0.69
1:AA:1407:C:H2'	1:AA:1408:A:H5''	1.74	0.69
1:AA:1163:A:H2'	1:AA:1164:G:C8	2.27	0.69
12:AM:47:LEU:HB3	12:AM:52:ILE:HB	1.74	0.69
52:BW:39:GLN:HG2	52:BW:40:ARG:N	2.07	0.69
44:BQ:87:VAL:HB	49:BR:52:PRO:HG3	1.74	0.69
39:BX:13:GLU:HB2	39:BX:57:LEU:HD13	1.73	0.69
21:CN:27:LYS:HA	21:CN:31:SER:HB3	1.73	0.69
27:DK:102:PRO:HB3	27:DK:121:GLU:HB2	1.75	0.69
23:DB:743:A:O2'	23:DB:744:U:H5'	1.92	0.69
23:DB:2690:U:H3	42:DN:7:GLY:HA3	1.56	0.69
23:BB:2:G:H2'	23:BB:3:U:C6	2.27	0.69
46:BU:35:VAL:HB	46:BU:38:ILE:HG21	1.73	0.69
23:BB:2086:U:H2'	23:BB:2087:G:C8	2.28	0.69
23:BB:118:A:H5'	23:BB:119:A:H8	1.56	0.69
27:BK:54:LYS:H	27:BK:54:LYS:HD2	1.55	0.69
6:AG:21:LEU:H	6:AG:21:LEU:HD23	1.57	0.69
23:DB:2021:C:OP1	31:D0:8:THR:HG21	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AM:15:VAL:HG13	12:AM:33:LEU:CD1	2.23	0.69
12:AM:33:LEU:HB3	12:AM:38:ILE:O	1.92	0.69
26:DD:9:VAL:HA	26:DD:197:THR:HG22	1.72	0.69
35:BV:63:ILE:HB	35:BV:70:ILE:HD11	1.73	0.69
35:BV:9:ARG:HH12	35:BV:27:PRO:CB	2.04	0.69
48:DG:34:ARG:HH11	48:DG:34:ARG:N	1.85	0.69
2:AC:168:ARG:HH11	2:AC:172:VAL:HG23	1.58	0.69
48:DG:83:THR:HA	48:DG:84:LYS:NZ	2.07	0.69
29:BE:130:LYS:HB2	29:BE:133:LEU:HG	1.75	0.69
16:AS:43:MET:O	16:AS:61:VAL:HG21	1.93	0.69
16:AS:11:ASP:HB2	16:AS:14:LEU:HG	1.74	0.69
12:AM:82:LEU:HD13	16:AS:65:MET:HB2	1.75	0.69
36:D2:33:ARG:HB2	36:D2:33:ARG:HH21	1.58	0.69
23:DB:1024:G:C3'	23:DB:1025:G:H5''	2.23	0.69
23:BB:1993:U:H4'	26:BD:133:THR:CG2	2.22	0.69
18:AB:186:VAL:HG21	18:AB:192:PRO:HB3	1.74	0.69
29:BE:28:VAL:O	29:BE:32:VAL:HG13	1.92	0.69
23:DB:2722:G:H4'	42:DN:4:ARG:HB2	1.75	0.69
6:AG:149:ALA:HB1	10:AK:58:THR:HB	1.75	0.69
7:CH:58:LEU:HD22	7:CH:60:LEU:HB2	1.75	0.69
41:DJ:93:ILE:HA	41:DJ:97:PRO:HG3	1.75	0.69
12:AM:29:SER:O	12:AM:32:ILE:HG22	1.92	0.69
23:BB:38:A:O2'	29:BE:43:THR:HA	1.93	0.69
2:AC:36:PHE:O	2:AC:40:GLN:HG3	1.93	0.69
23:DB:1993:U:H4'	26:DD:133:THR:HG21	1.73	0.69
1:CA:1226:C:H4'	1:CA:1227:A:OP1	1.93	0.69
1:CA:840:C:H2'	1:CA:842:U:H5''	1.74	0.69
18:AB:131:LYS:O	18:AB:135:MET:HG3	1.93	0.69
23:DB:1736:U:H2'	23:DB:1737:G:O4'	1.93	0.69
23:DB:2066:C:O2'	23:DB:2067:G:H5'	1.93	0.69
23:BB:2841:C:H2'	23:BB:2842:G:H8	1.58	0.69
22:DA:104:A:H2'	22:DA:105:G:O4'	1.93	0.69
23:BB:634:C:H2'	23:BB:635:C:H6	1.58	0.69
12:AM:70:ARG:O	12:AM:74:MET:HG2	1.93	0.69
8:CI:27:ILE:HG22	8:CI:62:LEU:HD21	1.75	0.69
40:DH:128:HIS:HB2	40:DH:144:VAL:HB	1.75	0.69
28:DP:1:SER:O	28:DP:5:LYS:HB2	1.93	0.69
41:BJ:43:GLU:O	41:BJ:45:THR:N	2.25	0.69
16:AS:14:LEU:HD12	16:AS:15:LEU:N	2.08	0.69
1:AA:1316:G:N2	1:AA:1318:A:H3'	2.08	0.69
47:BF:56:LEU:HD22	47:BF:59:ILE:HD12	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AG:13:PRO:HA	6:AG:20:GLU:HA	1.73	0.69
16:CS:10:ILE:HA	16:CS:37:SER:HB2	1.75	0.69
16:CS:18:VAL:O	16:CS:22:VAL:HG23	1.92	0.69
23:DB:1548:A:H2'	23:DB:1549:A:C8	2.28	0.69
23:BB:287:G:H2'	23:BB:288:U:C6	2.28	0.69
41:DJ:57:LEU:HG	41:DJ:128:ASN:H	1.57	0.69
21:CN:52:ARG:HG3	21:CN:58:ARG:HH12	1.55	0.69
23:BB:717:C:H3'	23:BB:718:A:H5'	1.75	0.69
49:DR:76:LYS:HB2	49:DR:85:LYS:HB2	1.73	0.69
41:BJ:57:LEU:HG	41:BJ:128:ASN:H	1.56	0.69
29:BE:117:ARG:HH12	37:BL:2:ARG:HB2	1.57	0.69
23:BB:2680:U:OP2	26:BD:114:LYS:HB3	1.93	0.69
23:DB:1174:U:H1'	23:DB:1176:U:N1	2.07	0.69
23:BB:1287:A:H3'	23:BB:1288:G:N2	2.08	0.69
40:BH:5:LEU:HD13	40:BH:13:GLY:HA2	1.74	0.69
31:B0:42:ILE:HD11	42:BN:98:LEU:HD12	1.73	0.69
18:CB:185:ILE:HA	18:CB:199:ILE:O	1.93	0.68
40:BH:80:ILE:HD13	40:BH:98:ASP:HB2	1.75	0.68
1:CA:920:U:H2'	1:CA:921:U:C6	2.28	0.68
6:CG:145:GLU:HA	6:CG:148:LYS:HB2	1.75	0.68
41:BJ:112:GLY:H	41:BJ:113:PRO:HD2	1.56	0.68
23:BB:322:A:H5'	23:BB:340:A:H1'	1.75	0.68
23:BB:1440:U:H2'	23:BB:1441:G:H8	1.58	0.68
1:CA:1144:G:H21	1:CA:1146:A:H62	1.38	0.68
1:AA:1163:A:H2'	1:AA:1164:G:H8	1.58	0.68
25:DC:75:ALA:HB2	25:DC:95:TYR:HA	1.74	0.68
23:BB:1736:U:H2'	23:BB:1737:G:O4'	1.93	0.68
50:BT:44:LYS:O	50:BT:48:GLN:HG2	1.93	0.68
26:BD:14:ILE:HG23	26:BD:22:ILE:HB	1.74	0.68
23:DB:1381:G:H2'	23:DB:1382:G:H5'	1.76	0.68
7:CH:94:VAL:HG23	7:CH:101:ALA:HB2	1.75	0.68
1:AA:817:C:H1'	1:AA:819:A:H5'	1.74	0.68
30:DY:15:ARG:N	30:DY:15:ARG:HD2	2.08	0.68
50:BT:29:THR:HG22	50:BT:86:THR:HG22	1.75	0.68
35:DV:72:VAL:HG21	35:DV:91:PHE:HB3	1.74	0.68
40:BH:116:ARG:NH2	40:BH:139:PHE:HB3	2.08	0.68
23:DB:1729:U:H3'	23:DB:1730:C:C4'	2.22	0.68
10:CK:44:ALA:HB2	10:CK:69:CYS:CB	2.23	0.68
1:AA:1412:C:H2'	1:AA:1413:A:H8	1.58	0.68
28:DP:88:ARG:HB2	28:DP:112:ARG:NH1	2.09	0.68
48:DG:94:ARG:HB3	48:DG:127:GLN:HE21	1.58	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2471:A:O2'	23:DB:2472:G:H8	1.76	0.68
46:DU:86:PHE:HB2	46:DU:92:VAL:HB	1.75	0.68
23:DB:276:U:H2'	23:DB:277:G:H8	1.58	0.68
23:DB:414:C:H2'	23:DB:415:A:H8	1.57	0.68
23:BB:2461:A:H2'	23:BB:2462:C:C6	2.28	0.68
23:BB:654:A:H2'	23:BB:655:A:H5''	1.75	0.68
1:AA:1038:C:H2'	1:AA:1039:G:C8	2.27	0.68
23:DB:1447:C:H2'	23:DB:1448:G:H8	1.59	0.68
23:BB:2880:C:O4'	42:BN:91:ALA:HB3	1.92	0.68
21:CN:9:GLU:HB2	21:CN:62:ARG:CZ	2.23	0.68
24:BI:129:GLU:HB3	24:BI:133:ARG:NH1	2.08	0.68
23:DB:1081:U:H5'	24:DI:126:ARG:NH1	2.08	0.68
23:DB:165:A:H2'	23:DB:166:U:C6	2.28	0.68
16:CS:62:THR:H	16:CS:65:MET:HB3	1.58	0.68
23:DB:460:A:H4'	50:DT:72:GLN:HB2	1.75	0.68
23:BB:2021:C:OP1	31:B0:8:THR:HG21	1.93	0.68
21:CN:65:GLN:HE22	21:CN:78:LEU:HG	1.58	0.68
23:BB:936:A:H2'	23:BB:937:C:C6	2.29	0.68
23:DB:636:G:O5'	37:DL:128:THR:HG22	1.93	0.68
22:DA:60:C:H2'	22:DA:61:G:H8	1.59	0.68
1:CA:1328:C:H5''	12:CM:27:THR:HG21	1.75	0.68
10:CK:22:ILE:HG12	10:CK:31:VAL:HG12	1.74	0.68
24:DI:73:PRO:HG2	24:DI:78:LEU:HD21	1.74	0.68
3:AD:84:ASN:ND2	3:AD:86:GLY:H	1.91	0.68
1:AA:923:A:H2'	1:AA:924:C:C6	2.28	0.68
23:DB:2186:G:H2'	23:DB:2187:U:O4'	1.93	0.68
1:CA:56:U:H2'	1:CA:57:G:C8	2.28	0.68
23:BB:1447:C:H2'	23:BB:1448:G:H8	1.57	0.68
23:DB:956:G:H4'	38:DM:82:MET:HE1	1.75	0.68
23:DB:1796:U:H2'	23:DB:1797:G:H8	1.57	0.68
36:B2:3:ARG:HA	36:B2:3:ARG:CZ	2.24	0.68
23:DB:833:A:H1'	37:DL:52:GLY:N	2.08	0.68
23:BB:857:G:C2'	23:BB:858:G:H5'	2.24	0.68
23:DB:322:A:H5'	23:DB:340:A:H1'	1.76	0.68
45:DS:24:ILE:HD11	45:DS:36:LEU:HD21	1.75	0.68
23:DB:2732:G:H3'	23:DB:2733:A:H5'	1.75	0.68
41:BJ:93:ILE:HA	41:BJ:97:PRO:HG3	1.75	0.68
50:BT:50:LEU:H	50:BT:50:LEU:HD22	1.58	0.68
6:CG:43:TYR:O	6:CG:47:GLU:HG2	1.94	0.68
23:BB:200:U:H4'	51:BZ:22:LEU:HB2	1.74	0.68
23:BB:2305:U:H2'	23:BB:2306:C:C6	2.28	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BW:23:LYS:HD2	52:BW:24:ARG:H	1.59	0.68
23:DB:2305:U:H2'	23:DB:2306:C:C6	2.29	0.68
35:DV:9:ARG:HH12	35:DV:27:PRO:CB	2.01	0.68
14:AQ:8:GLN:HA	14:AQ:59:GLU:HA	1.76	0.68
14:CQ:60:ILE:HA	14:CQ:75:VAL:HG13	1.75	0.68
44:DQ:4:LYS:HZ3	44:DQ:7:VAL:HG22	1.59	0.68
48:BG:83:THR:HA	48:BG:84:LYS:NZ	2.08	0.68
18:AB:161:PHE:HD2	18:AB:183:PHE:HB3	1.59	0.68
20:AO:53:ARG:HD2	23:BB:715:A:N6	2.09	0.68
23:DB:165:A:H2'	23:DB:166:U:H6	1.59	0.68
1:AA:1367:C:H5''	8:AI:115:VAL:HG23	1.75	0.68
23:DB:96:C:H4'	39:DX:41:HIS:CE1	2.29	0.68
23:BB:988:A:P	30:BY:11:SER:HB3	2.33	0.68
1:CA:1257:A:H5''	1:CA:1257:A:N3	2.08	0.68
25:DC:196:ASN:HD22	25:DC:199:HIS:HB2	1.59	0.68
23:BB:98:G:H2'	23:BB:99:U:H5''	1.74	0.68
52:DW:24:ARG:HD3	52:DW:65:LYS:HG2	1.75	0.68
29:DE:60:TRP:O	29:DE:61:ARG:HB2	1.91	0.68
23:BB:704:G:H1'	23:BB:727:A:H61	1.58	0.68
36:D2:30:VAL:HA	36:D2:33:ARG:NH2	2.07	0.68
1:CA:17:U:H2'	1:CA:18:C:H6	1.59	0.68
45:DS:58:ALA:HB1	45:DS:69:LEU:HD21	1.75	0.68
23:DB:1552:A:H2'	23:DB:1553:A:H5'	1.75	0.68
37:DL:4:ASN:HD22	37:DL:4:ASN:N	1.91	0.68
23:DB:2353:G:H21	52:DW:30:VAL:HG22	1.59	0.68
23:DB:2216:G:H2'	23:DB:2217:G:H8	1.58	0.68
23:BB:743:A:O2'	23:BB:744:U:H5'	1.94	0.68
22:BA:60:C:H2'	22:BA:61:G:H8	1.58	0.68
9:CJ:55:PRO:HA	21:CN:80:ARG:NH2	2.03	0.68
2:CC:65:VAL:HG23	2:CC:100:ILE:HA	1.75	0.68
33:B1:47:ILE:H	33:B1:47:ILE:HD12	1.58	0.68
41:DJ:77:HIS:CD2	41:DJ:84:ILE:H	2.12	0.68
10:CK:16:SER:HA	10:CK:78:ILE:HA	1.74	0.68
23:DB:2461:A:H2'	23:DB:2462:C:C6	2.29	0.68
22:BA:104:A:H2'	22:BA:105:G:O4'	1.93	0.68
1:AA:950:U:H2'	1:AA:951:G:C8	2.28	0.68
1:CA:474:G:H2'	1:CA:475:C:C6	2.29	0.68
23:DB:1640:A:H2'	23:DB:1641:A:C8	2.29	0.68
23:DB:936:A:H2'	23:DB:937:C:C6	2.29	0.68
23:BB:1060:U:O2	23:BB:1088:A:N7	2.27	0.68
26:DD:32:ASN:HD22	26:DD:50:VAL:HG21	1.59	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:458:G:H22	23:DB:469:G:H2'	1.59	0.68
25:BC:103:ILE:HG22	25:BC:105:ALA:H	1.58	0.68
26:BD:159:LYS:HZ2	26:BD:160:LYS:N	1.92	0.68
23:DB:62:U:H3'	23:DB:63:A:H8	1.56	0.68
23:DB:1381:G:C2'	23:DB:1382:G:H5'	2.24	0.68
24:BI:10:LEU:HD13	24:BI:12:VAL:HG13	1.74	0.68
1:AA:651:C:H2'	1:AA:652:U:C6	2.29	0.68
1:AA:844:G:N2	1:AA:845:A:H62	1.92	0.68
1:CA:817:C:H1'	1:CA:819:A:H5'	1.75	0.68
36:D2:41:ARG:HH21	36:D2:41:ARG:HB2	1.58	0.68
27:BK:53:LYS:H	27:BK:53:LYS:HD3	1.58	0.68
5:CF:3:HIS:HB2	5:CF:92:THR:HA	1.74	0.68
41:DJ:11:VAL:HA	41:DJ:12:LYS:HZ2	1.57	0.68
14:CQ:59:GLU:O	14:CQ:75:VAL:HG22	1.94	0.68
23:BB:137:U:H2'	23:BB:138:U:C2	2.28	0.68
23:DB:858:G:H21	23:DB:2268:A:H3'	1.58	0.68
48:BG:140:ILE:HA	48:BG:143:VAL:HG22	1.76	0.68
23:BB:2143:C:H2'	23:BB:2144:G:O4'	1.94	0.68
38:DM:126:ILE:H	38:DM:126:ILE:HD12	1.59	0.68
23:BB:934:U:H2'	23:BB:935:C:C6	2.29	0.68
10:CK:63:GLN:HG3	10:CK:98:ALA:HB2	1.74	0.68
23:BB:2291:U:H2'	23:BB:2292:U:C6	2.28	0.68
28:BP:97:TYR:O	28:BP:100:ARG:HB2	1.93	0.68
48:BG:9:VAL:HA	48:BG:48:THR:HA	1.75	0.68
1:AA:1187:G:H4'	8:AI:114:LYS:HZ2	1.57	0.68
1:AA:390:U:H2'	1:AA:391:G:C8	2.29	0.68
38:BM:108:VAL:HG21	38:BM:112:LEU:HD12	1.74	0.68
5:CF:53:LYS:NZ	5:CF:53:LYS:H	1.91	0.68
20:AO:62:GLN:O	20:AO:66:LEU:HD23	1.94	0.68
9:CJ:12:ALA:HB3	9:CJ:18:ILE:HB	1.76	0.67
29:DE:58:LYS:H	29:DE:58:LYS:NZ	1.92	0.67
51:DZ:40:VAL:CG2	51:DZ:43:GLU:HB3	2.24	0.67
1:CA:940:C:H2'	1:CA:941:G:H8	1.59	0.67
23:DB:558:U:H5''	41:DJ:111:LYS:HD3	1.74	0.67
47:BF:11:VAL:HG21	47:BF:172:PHE:CE1	2.29	0.67
27:DK:41:ILE:HG13	27:DK:42:THR:N	2.08	0.67
40:BH:48:GLU:HG2	40:BH:49:ALA:N	2.08	0.67
44:DQ:30:VAL:CG1	44:DQ:33:VAL:HG22	2.24	0.67
2:AC:68:HIS:HA	2:AC:103:ALA:O	1.94	0.67
6:CG:19:SER:OG	6:CG:22:LEU:HB2	1.93	0.67
37:BL:73:ILE:HD12	37:BL:106:GLU:HB2	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:414:C:H2'	23:DB:415:A:C8	2.28	0.67
26:DD:46:ARG:HB3	26:DD:84:LEU:HD12	1.76	0.67
23:DB:836:G:H2'	23:DB:837:C:C6	2.28	0.67
1:AA:972:C:H4'	9:AJ:59:LYS:HG2	1.75	0.67
37:DL:65:GLY:O	37:DL:66:PHE:HB3	1.93	0.67
23:BB:620:G:H5'	23:BB:620:G:N3	2.09	0.67
10:AK:124:LYS:HA	19:AU:34:ARG:CB	2.24	0.67
5:AF:38:ARG:HB3	5:AF:63:ASN:HB2	1.76	0.67
2:CC:18:ASN:HA	2:CC:53:ARG:HH22	1.58	0.67
48:BG:148:ARG:HD3	48:BG:152:ARG:HH11	1.59	0.67
23:BB:1729:U:H3'	23:BB:1730:C:C4'	2.22	0.67
27:BK:41:ILE:HG13	27:BK:42:THR:N	2.09	0.67
1:CA:1219:A:H2'	1:CA:1220:G:C8	2.29	0.67
23:DB:277:G:H1'	23:DB:278:A:N1	2.09	0.67
23:DB:1019:U:H2'	23:DB:1020:A:H8	1.58	0.67
1:AA:662:U:H2'	1:AA:663:A:C8	2.30	0.67
41:BJ:56:VAL:HG12	41:BJ:57:LEU:H	1.60	0.67
3:CD:2:ARG:NH1	3:CD:114:ARG:HG3	2.09	0.67
52:BW:43:LYS:HD2	52:BW:79:ILE:HD11	1.76	0.67
11:AL:98:ARG:HB2	11:AL:116:TYR:HA	1.77	0.67
23:DB:2841:C:H2'	23:DB:2842:G:H8	1.59	0.67
40:DH:62:LEU:HD12	40:DH:65:ALA:HB3	1.76	0.67
1:CA:1011:C:H2'	1:CA:1012:A:C8	2.29	0.67
50:DT:50:LEU:HD22	50:DT:50:LEU:H	1.59	0.67
50:BT:5:GLU:HA	50:BT:8:LEU:HB2	1.76	0.67
23:BB:2267:A:C8	23:BB:2267:A:H3'	2.28	0.67
8:AI:64:ILE:HG22	8:AI:65:THR:H	1.59	0.67
10:AK:17:ASP:HB3	10:AK:80:ASN:HD21	1.60	0.67
18:CB:18:GLN:HG2	18:CB:189:ASN:HB3	1.75	0.67
38:DM:19:GLY:N	38:DM:38:ARG:HH12	1.93	0.67
38:DM:40:ARG:HD3	38:DM:93:VAL:HG21	1.76	0.67
47:BF:135:ILE:HD11	47:BF:137:PHE:HB3	1.75	0.67
1:AA:1081:A:OP1	4:AE:22:LYS:HB2	1.94	0.67
47:BF:168:LEU:HD13	47:BF:169:LEU:H	1.58	0.67
6:AG:30:MET:HG2	6:AG:31:VAL:H	1.58	0.67
23:DB:1553:A:O2'	23:DB:1554:U:H2'	1.93	0.67
23:DB:742:A:H2'	23:DB:743:A:C8	2.30	0.67
1:CA:382:A:H2'	1:CA:383:A:C8	2.28	0.67
23:DB:106:C:H2'	23:DB:107:G:H8	1.58	0.67
14:AQ:25:GLU:HA	14:AQ:40:THR:HA	1.76	0.67
48:BG:34:ARG:N	48:BG:34:ARG:HH11	1.85	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:58:LYS:NZ	29:BE:58:LYS:H	1.92	0.67
29:BE:60:TRP:HZ3	29:BE:69:ARG:HA	1.57	0.67
12:AM:78:ARG:NH2	12:AM:79:LEU:HB3	2.08	0.67
18:CB:86:CYS:SG	18:CB:87:ASP:N	2.67	0.67
47:BF:102:LEU:HD22	47:BF:103:ILE:N	2.09	0.67
47:DF:11:VAL:HG21	47:DF:172:PHE:CE1	2.29	0.67
6:AG:14:ASP:HB3	6:AG:18:GLY:H	1.58	0.67
1:AA:382:A:H2'	1:AA:383:A:C8	2.30	0.67
1:CA:67:C:H2'	1:CA:68:G:H8	1.59	0.67
51:BZ:77:LYS:H	51:BZ:77:LYS:HD3	1.58	0.67
1:CA:1238:A:H5'	1:CA:1336:C:N4	2.09	0.67
5:CF:38:ARG:HB3	5:CF:63:ASN:HB2	1.77	0.67
23:DB:1788:C:O2'	23:DB:1789:A:H5'	1.95	0.67
31:D0:42:ILE:HD11	42:DN:98:LEU:HD12	1.76	0.67
1:AA:1432:G:C5'	28:BP:105:LYS:HG2	2.25	0.67
32:D4:15:LYS:O	32:D4:16:ILE:HB	1.93	0.67
45:BS:72:THR:HG21	45:BS:108:SER:HB3	1.75	0.67
45:BS:24:ILE:HD11	45:BS:36:LEU:HD21	1.77	0.67
21:CN:65:GLN:H	21:CN:65:GLN:HE21	1.40	0.67
23:BB:2092:U:H4'	23:BB:2093:G:O5'	1.95	0.67
29:DE:48:THR:N	29:DE:51:GLU:HG3	2.10	0.67
1:AA:1513:A:H2'	1:AA:1514:G:C8	2.29	0.67
1:CA:1478:U:H2'	1:CA:1479:C:C6	2.29	0.67
13:AP:22:ALA:HA	13:AP:33:ILE:HG13	1.75	0.67
23:BB:2066:C:O2'	23:BB:2067:G:H5'	1.95	0.67
4:CE:55:VAL:N	4:CE:56:PRO:HD2	2.10	0.67
23:DB:704:G:H1'	23:DB:727:A:H61	1.59	0.67
18:AB:67:LEU:HD21	18:AB:91:VAL:HG23	1.75	0.67
40:BH:47:PHE:HA	40:BH:50:ARG:CZ	2.24	0.67
23:BB:1443:U:H2'	23:BB:1444:G:C8	2.30	0.67
23:BB:265:A:O2'	23:BB:266:G:H4'	1.93	0.67
17:CT:46:ALA:HB1	17:CT:82:ILE:HG22	1.77	0.67
23:BB:2654:A:N1	23:BB:2665:A:H5''	2.10	0.67
17:CT:68:LYS:HA	17:CT:68:LYS:HE2	1.75	0.67
11:CL:98:ARG:HB2	11:CL:116:TYR:HA	1.76	0.67
2:AC:5:HIS:HB3	21:AN:88:MET:SD	2.34	0.67
9:CJ:52:LEU:HA	9:CJ:62:ARG:HA	1.75	0.67
23:DB:1722:A:H2'	23:DB:1723:G:H8	1.60	0.67
48:DG:148:ARG:HD3	48:DG:152:ARG:NH1	2.09	0.67
7:AH:11:THR:HA	7:AH:14:ARG:NH1	2.10	0.67
7:CH:11:THR:HA	7:CH:14:ARG:NH1	2.09	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DE:130:LYS:HB2	29:DE:133:LEU:HG	1.75	0.67
8:CI:87:MET:HB2	8:CI:94:ARG:CZ	2.24	0.67
27:BK:41:ILE:HG13	27:BK:42:THR:H	1.60	0.67
12:AM:95:PRO:HD3	12:AM:108:ARG:HG2	1.76	0.67
23:BB:76:C:OP1	39:BX:48:ARG:HD3	1.95	0.67
23:DB:1149:G:H2'	23:DB:1150:C:H6	1.58	0.67
23:DB:265:A:O2'	23:DB:266:G:H4'	1.94	0.67
2:CC:13:ILE:H	2:CC:13:ILE:HD13	1.60	0.67
23:BB:836:G:H2'	23:BB:837:C:C6	2.29	0.67
23:BB:1301:A:O2'	23:BB:1302:A:H2'	1.95	0.67
23:DB:718:A:H2'	23:DB:719:C:H5'	1.77	0.67
17:AT:68:LYS:HE2	17:AT:68:LYS:HA	1.75	0.67
1:CA:673:A:H2'	1:CA:674:G:C8	2.30	0.67
52:DW:23:LYS:HD2	52:DW:24:ARG:H	1.58	0.67
8:AI:56:MET:C	8:AI:58:GLU:H	1.98	0.67
42:DN:26:GLY:HA2	42:DN:75:ILE:HD13	1.76	0.67
48:DG:140:ILE:HA	48:DG:143:VAL:HG22	1.76	0.67
23:DB:1060:U:O2	23:DB:1088:A:N7	2.27	0.67
46:DU:9:GLU:HG3	46:DU:72:PHE:HB3	1.77	0.67
8:CI:16:ALA:HB2	8:CI:66:VAL:HG23	1.77	0.67
37:BL:4:ASN:N	37:BL:4:ASN:HD22	1.93	0.67
37:DL:93:ASN:O	37:DL:95:LEU:HD12	1.95	0.67
1:CA:1280:A:H3'	1:CA:1281:C:H5''	1.77	0.67
1:CA:950:U:H3'	12:CM:100:ARG:NH2	2.10	0.67
1:CA:467:U:H5'	1:CA:468:A:H2	1.60	0.67
32:D4:5:ALA:HA	32:D4:37:GLN:HE22	1.58	0.67
23:BB:1553:A:O2'	23:BB:1554:U:H2'	1.94	0.67
23:DB:1386:C:H2'	23:DB:1387:A:C8	2.30	0.67
45:BS:17:VAL:C	45:BS:19:LEU:H	1.96	0.67
23:BB:773:U:H5'	23:BB:774:G:OP2	1.95	0.67
1:AA:1018:G:H2'	1:AA:1019:A:H8	1.59	0.67
23:BB:559:G:H21	44:BQ:51:GLN:NE2	1.91	0.67
23:BB:191:A:H2'	23:BB:192:C:C6	2.29	0.67
36:D2:3:ARG:CZ	36:D2:3:ARG:HA	2.24	0.67
23:DB:1099:G:H8	24:DI:3:LYS:CA	2.06	0.67
29:DE:60:TRP:HZ3	29:DE:69:ARG:HA	1.59	0.67
1:CA:235:C:H2'	1:CA:236:A:C8	2.30	0.67
40:BH:40:THR:O	40:BH:42:LYS:HG3	1.94	0.67
1:CA:406:G:N2	3:CD:115:GLN:HE22	1.91	0.67
44:DQ:111:LYS:HB2	49:DR:48:LYS:NZ	2.10	0.67
21:AN:50:LEU:N	21:AN:51:PRO:HD2	2.09	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:165:A:H2'	23:BB:166:U:H6	1.58	0.67
3:AD:59:LYS:O	3:AD:63:ILE:HG13	1.94	0.67
23:BB:2591:C:H2'	23:BB:2592:G:H8	1.60	0.67
13:CP:54:LEU:HD22	13:CP:75:ILE:HG22	1.75	0.67
23:DB:616:A:H3'	23:DB:617:G:H8	1.59	0.67
23:DB:1000:A:H2'	23:DB:1001:A:C8	2.30	0.67
23:BB:2498:C:O2'	23:BB:2499:C:H5'	1.94	0.67
21:AN:20:PHE:CG	21:AN:24:ALA:HB2	2.29	0.67
6:AG:62:GLU:O	6:AG:66:GLU:HG3	1.95	0.67
12:AM:47:LEU:HG	12:AM:52:ILE:HD13	1.77	0.67
23:DB:2834:G:H1'	23:DB:2883:A:N6	2.09	0.67
9:AJ:56:HIS:O	9:AJ:57:VAL:HG12	1.94	0.67
1:CA:1025:U:H4'	1:CA:1026:G:C8	2.30	0.67
26:BD:109:VAL:HG11	26:BD:193:VAL:HB	1.77	0.67
4:AE:37:VAL:HG11	4:AE:113:VAL:HG12	1.77	0.67
23:DB:1548:A:H2'	23:DB:1549:A:H8	1.60	0.67
23:BB:151:C:H2'	23:BB:152:A:H8	1.60	0.67
23:BB:1170:C:H2'	23:BB:1171:G:C8	2.30	0.67
43:DO:5:SER:HA	43:DO:8:ILE:HD12	1.77	0.67
8:CI:43:ALA:O	8:CI:46:VAL:HG22	1.95	0.67
23:BB:1640:A:H2'	23:BB:1641:A:C8	2.30	0.67
1:CA:1148:U:H2'	1:CA:1149:C:O4'	1.95	0.67
23:BB:1485:U:H2'	23:BB:1486:U:C6	2.29	0.67
3:CD:29:THR:HG22	3:CD:30:LYS:H	1.59	0.67
23:DB:1099:G:OP2	24:DI:3:LYS:HA	1.94	0.66
5:CF:86:ARG:CZ	15:CR:63:TYR:HB3	2.24	0.66
5:AF:3:HIS:HB2	5:AF:92:THR:HA	1.78	0.66
29:BE:155:GLU:HA	29:BE:158:PHE:HB3	1.77	0.66
33:D1:47:ILE:H	33:D1:47:ILE:HD12	1.59	0.66
16:AS:62:THR:HG22	16:AS:63:ASP:H	1.59	0.66
18:AB:95:TRP:HZ2	18:AB:100:LEU:HD13	1.59	0.66
1:AA:72:A:H2'	1:AA:73:C:C6	2.29	0.66
27:DK:61:VAL:HG13	27:DK:87:LEU:HD21	1.76	0.66
27:DK:99:ILE:H	27:DK:118:LEU:HD23	1.59	0.66
6:AG:78:ARG:HH11	6:AG:81:GLY:HA2	1.60	0.66
23:DB:2065:C:H2'	23:DB:2066:C:C6	2.29	0.66
23:DB:967:U:H2'	23:DB:968:C:C6	2.30	0.66
3:AD:169:TRP:NE1	3:AD:170:LEU:HD23	2.10	0.66
23:DB:2098:U:H2'	23:DB:2099:U:O4'	1.95	0.66
23:DB:152:A:H2'	23:DB:153:U:C6	2.30	0.66
23:DB:1911:U:H2'	23:DB:1918:A:C2	2.30	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:182:LYS:HG2	3:CD:183:ARG:HG3	1.77	0.66
1:AA:806:C:H2'	1:AA:807:A:H8	1.61	0.66
10:CK:124:LYS:HA	19:CU:34:ARG:CB	2.22	0.66
30:BY:15:ARG:HD2	30:BY:15:ARG:N	2.10	0.66
50:BT:40:LYS:O	50:BT:43:ILE:HG22	1.95	0.66
35:DV:63:ILE:H	35:DV:63:ILE:HD12	1.59	0.66
46:BU:26:ASN:HD21	46:BU:34:ILE:HD12	1.60	0.66
25:BC:140:VAL:O	25:BC:141:HIS:HB2	1.96	0.66
44:DQ:87:VAL:HB	49:DR:52:PRO:HG3	1.76	0.66
1:AA:406:G:N2	3:AD:115:GLN:HE22	1.90	0.66
22:BA:42:C:O4'	47:BF:65:LEU:HB2	1.96	0.66
1:AA:1375:A:H2'	1:AA:1376:U:O4'	1.94	0.66
17:AT:34:VAL:HG11	17:AT:78:LEU:HD22	1.78	0.66
6:AG:52:ARG:HH22	6:AG:121:ASN:HD21	1.44	0.66
44:DQ:30:VAL:HG12	44:DQ:33:VAL:HG22	1.77	0.66
23:BB:1552:A:H2'	23:BB:1553:A:H5'	1.75	0.66
1:AA:1095:U:H2'	1:AA:1096:C:C6	2.30	0.66
50:DT:44:LYS:O	50:DT:48:GLN:HG2	1.95	0.66
41:BJ:51:GLY:HA3	41:BJ:121:LYS:NZ	2.10	0.66
23:BB:570:G:H2'	23:BB:2030:A:N7	2.11	0.66
4:AE:55:VAL:N	4:AE:56:PRO:HD2	2.10	0.66
23:BB:2512:C:H2'	23:BB:2513:A:O4'	1.95	0.66
50:BT:54:GLU:HB3	50:BT:88:LYS:HB2	1.78	0.66
1:CA:1349:A:H1'	1:CA:1374:A:N6	2.10	0.66
14:AQ:45:VAL:HG12	14:AQ:46:HIS:N	2.09	0.66
8:AI:18:VAL:HG21	8:AI:82:ILE:N	2.10	0.66
23:DB:1812:U:H2'	23:DB:1813:G:H8	1.60	0.66
44:BQ:86:SER:HB3	49:BR:51:VAL:HA	1.78	0.66
23:BB:1203:U:H3'	23:BB:1204:A:C5'	2.25	0.66
13:AP:54:LEU:HD22	13:AP:75:ILE:HG22	1.76	0.66
4:AE:23:THR:HA	4:AE:28:ARG:HA	1.78	0.66
44:DQ:60:TRP:O	44:DQ:64:ILE:HG12	1.95	0.66
23:BB:616:A:H3'	23:BB:617:G:H8	1.60	0.66
2:CC:113:LYS:HD2	2:CC:184:ASN:ND2	2.11	0.66
23:DB:796:C:H2'	23:DB:797:G:C8	2.30	0.66
1:AA:462:G:H3'	1:AA:463:U:C6	2.30	0.66
23:DB:570:G:H2'	23:DB:2030:A:N7	2.11	0.66
52:BW:13:ARG:HG3	52:BW:14:ASP:H	1.60	0.66
1:CA:664:G:H22	1:CA:741:G:H1	1.43	0.66
1:CA:651:C:H2'	1:CA:652:U:C6	2.30	0.66
23:DB:441:U:H2'	23:DB:442:G:C8	2.29	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:222:A:N1	23:BB:233:A:H5''	2.10	0.66
10:AK:63:GLN:HG3	10:AK:98:ALA:HB2	1.78	0.66
14:CQ:20:ILE:HD13	14:CQ:52:CYS:HB2	1.76	0.66
2:AC:59:PRO:HG2	2:AC:62:SER:OG	1.96	0.66
40:DH:32:PRO:O	40:DH:33:GLN:HB2	1.95	0.66
40:DH:72:ILE:HB	40:DH:140:ALA:HB1	1.78	0.66
23:DB:2885:G:H2'	23:DB:2886:A:O4'	1.96	0.66
22:DA:43:C:O2'	47:DF:91:ARG:HD2	1.96	0.66
1:AA:920:U:H2'	1:AA:921:U:C6	2.30	0.66
18:CB:67:LEU:H	18:CB:160:LEU:HA	1.61	0.66
40:BH:9:VAL:HB	40:BH:13:GLY:CA	2.26	0.66
47:BF:16:MET:O	47:BF:20:ASN:HA	1.96	0.66
23:BB:1506:U:H2'	23:BB:1507:C:C6	2.30	0.66
23:BB:458:G:H22	23:BB:469:G:H2'	1.60	0.66
1:CA:986:U:H2'	1:CA:987:G:O4'	1.94	0.66
1:AA:56:U:H2'	1:AA:57:G:C8	2.29	0.66
23:DB:717:C:H3'	23:DB:718:A:H5''	1.76	0.66
45:BS:58:ALA:HB1	45:BS:69:LEU:HD21	1.77	0.66
52:DW:13:ARG:HG3	52:DW:14:ASP:H	1.60	0.66
1:CA:1142:G:H2'	1:CA:1143:G:O4'	1.94	0.66
3:CD:60:VAL:HA	3:CD:63:ILE:HD12	1.75	0.66
1:CA:1348:U:H4'	8:CI:121:ARG:HG3	1.76	0.66
16:AS:6:LYS:CD	16:AS:6:LYS:H	2.06	0.66
16:AS:6:LYS:HG3	21:AN:40:ARG:CZ	2.26	0.66
47:DF:65:LEU:HD23	47:DF:87:LYS:HD2	1.77	0.66
46:BU:51:LEU:H	46:BU:53:GLN:NE2	1.93	0.66
23:BB:1788:C:O2'	23:BB:1789:A:H5'	1.96	0.66
43:DO:49:VAL:HG11	43:DO:82:ALA:HA	1.78	0.66
44:DQ:63:ARG:HH12	44:DQ:96:ASP:HB2	1.59	0.66
46:BU:86:PHE:HB2	46:BU:92:VAL:HB	1.76	0.66
12:CM:2:ARG:HD3	12:CM:2:ARG:H	1.61	0.66
23:BB:1019:U:H2'	23:BB:1020:A:H8	1.59	0.66
8:AI:26:LYS:HA	8:AI:26:LYS:HE3	1.77	0.66
26:DD:176:ASP:HB2	26:DD:190:LYS:HG2	1.77	0.66
13:CP:22:ALA:HA	13:CP:33:ILE:HG13	1.76	0.66
23:DB:2795:C:H2'	23:DB:2796:U:O4'	1.96	0.66
3:CD:58:GLN:O	3:CD:62:ARG:HG2	1.95	0.66
23:DB:1099:G:H5''	24:DI:2:LYS:HB2	1.78	0.66
18:CB:47:PRO:O	18:CB:51:GLU:HB3	1.95	0.66
8:CI:98:ARG:HG3	8:CI:103:VAL:CG2	2.22	0.66
42:BN:78:LYS:HG3	42:BN:83:LEU:HG	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AK:22:ILE:HG12	10:AK:31:VAL:HG12	1.77	0.66
9:AJ:27:GLU:O	9:AJ:31:ARG:HG2	1.95	0.66
29:DE:29:HIS:O	29:DE:32:VAL:HG22	1.95	0.66
43:BO:49:VAL:HG11	43:BO:82:ALA:HA	1.77	0.66
28:BP:88:ARG:HB2	28:BP:112:ARG:NH1	2.09	0.66
23:BB:2065:C:H2'	23:BB:2066:C:C6	2.30	0.66
23:BB:150:U:H2'	23:BB:151:C:H6	1.61	0.66
1:CA:1513:A:H2'	1:CA:1514:G:C8	2.31	0.66
1:CA:423:G:H2'	1:CA:424:G:O4'	1.96	0.66
47:DF:41:GLU:HB3	47:DF:44:ALA:HB3	1.78	0.66
1:AA:1323:G:O6	16:AS:2:ARG:HA	1.95	0.66
23:BB:1494:A:H2'	23:BB:1495:A:C8	2.31	0.66
23:DB:912:C:O2'	23:DB:913:U:H5'	1.96	0.66
2:CC:106:ARG:O	2:CC:106:ARG:HD2	1.94	0.66
25:DC:103:ILE:HG22	25:DC:105:ALA:H	1.60	0.66
23:BB:1722:A:H2'	23:BB:1723:G:H8	1.60	0.66
23:BB:871:U:H2'	23:BB:872:U:H6	1.61	0.66
16:AS:45:GLY:N	16:AS:61:VAL:HB	2.10	0.66
29:DE:155:GLU:HA	29:DE:158:PHE:HB3	1.77	0.66
26:DD:116:LYS:HG3	26:DD:165:MET:SD	2.36	0.66
23:DB:1592:C:H2'	23:DB:1593:A:H8	1.60	0.66
23:BB:72:U:H1'	39:BX:51:ALA:HA	1.77	0.66
16:CS:15:LEU:HA	16:CS:18:VAL:HG12	1.75	0.66
16:CS:14:LEU:HD13	16:CS:34:SER:OG	1.96	0.66
44:BQ:27:ARG:HA	44:BQ:33:VAL:HG23	1.78	0.66
23:BB:2064:C:H2'	23:BB:2065:C:C6	2.30	0.66
23:BB:150:U:H2'	23:BB:151:C:C6	2.31	0.66
3:CD:59:LYS:O	3:CD:63:ILE:HG13	1.95	0.66
23:DB:2086:U:H2'	23:DB:2087:G:C8	2.30	0.66
16:AS:7:GLY:H	16:AS:8:PRO:HD3	1.60	0.66
23:DB:19:A:H2'	23:DB:20:C:C6	2.30	0.66
23:BB:1386:C:H2'	23:BB:1387:A:C8	2.31	0.66
33:D1:31:GLU:H	33:D1:31:GLU:CD	1.99	0.66
3:AD:58:GLN:O	3:AD:62:ARG:HG2	1.96	0.66
5:AF:53:LYS:NZ	5:AF:53:LYS:H	1.92	0.66
48:DG:176:LYS:H	48:DG:176:LYS:HE2	1.59	0.66
18:CB:128:LEU:HD23	18:CB:133:ALA:HA	1.77	0.66
35:DV:44:HIS:NE2	35:DV:85:LYS:HB2	2.11	0.66
16:AS:39:ILE:HB	16:AS:66:VAL:O	1.95	0.66
10:CK:28:ASN:ND2	10:CK:46:ALA:HB3	2.11	0.66
18:CB:116:LEU:O	18:CB:119:GLN:HB2	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1320:C:H5'	16:CS:2:ARG:HG3	1.78	0.66
1:CA:953:G:H2'	1:CA:954:G:O4'	1.96	0.66
23:DB:871:U:H2'	23:DB:872:U:H6	1.61	0.66
18:AB:17:HIS:CG	18:AB:18:GLN:H	2.14	0.66
3:CD:192:ALA:HB3	3:CD:194:ILE:HG22	1.76	0.66
26:BD:176:ASP:HB2	26:BD:190:LYS:HG2	1.78	0.66
23:BB:967:U:H2'	23:BB:968:C:C6	2.30	0.66
1:AA:266:G:O2'	1:AA:267:C:H3'	1.95	0.66
1:AA:235:C:H2'	1:AA:236:A:C8	2.31	0.66
35:BV:44:HIS:NE2	35:BV:85:LYS:HB2	2.11	0.66
25:DC:119:VAL:HG13	25:DC:133:ASN:HD21	1.59	0.66
23:DB:2328:A:H2'	23:DB:2329:U:C6	2.29	0.66
23:BB:30:G:H2'	23:BB:31:C:C6	2.31	0.66
28:DP:54:LEU:HA	28:DP:76:HIS:HD2	1.59	0.66
44:BQ:60:TRP:O	44:BQ:64:ILE:HG12	1.94	0.66
1:AA:978:A:H5'	1:AA:1362:A:H62	1.58	0.66
47:BF:125:GLY:HA2	47:BF:162:ASP:HA	1.78	0.66
37:BL:93:ASN:O	37:BL:95:LEU:HD12	1.95	0.66
41:DJ:112:GLY:H	41:DJ:113:PRO:HD2	1.58	0.66
16:CS:35:ARG:HB2	16:CS:71:GLY:HA2	1.77	0.66
27:DK:41:ILE:HG13	27:DK:42:THR:H	1.60	0.66
40:BH:47:PHE:O	40:BH:50:ARG:HB2	1.96	0.66
23:BB:1443:U:H2'	23:BB:1444:G:H8	1.60	0.66
13:CP:28:ARG:HD2	13:CP:29:ASN:H	1.60	0.66
52:BW:44:PHE:CD2	52:BW:76:ARG:HD2	2.31	0.66
26:BD:46:ARG:HB3	26:BD:84:LEU:HD12	1.76	0.66
23:BB:2645:G:H3'	23:BB:2646:C:H5'	1.77	0.66
23:BB:2216:G:H2'	23:BB:2217:G:H8	1.60	0.66
2:CC:161:ILE:H	2:CC:161:ILE:HD12	1.60	0.66
23:DB:2039:U:H2'	23:DB:2040:G:C8	2.31	0.66
25:DC:143:VAL:HB	25:DC:153:LEU:HB2	1.77	0.66
44:BQ:4:LYS:HE3	44:BQ:8:ILE:HD11	1.78	0.66
1:AA:1371:G:O3'	8:AI:70:GLY:HA3	1.94	0.66
27:DK:35:VAL:HG12	27:DK:69:VAL:HG22	1.76	0.66
49:DR:24:LYS:HA	49:DR:94:THR:HG23	1.77	0.66
47:DF:102:LEU:HD22	47:DF:103:ILE:N	2.10	0.66
23:BB:1024:G:C3'	23:BB:1025:G:H5''	2.25	0.66
51:BZ:59:ILE:HA	51:BZ:67:VAL:HG21	1.78	0.66
4:AE:24:VAL:HG23	4:AE:26:GLY:H	1.59	0.66
1:AA:1081:A:H2'	1:AA:1082:A:C8	2.31	0.66
17:CT:34:VAL:HG11	17:CT:78:LEU:HD22	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:94:ARG:HB3	48:BG:127:GLN:HE21	1.61	0.66
23:DB:1287:A:H3'	23:DB:1288:G:N2	2.11	0.66
1:AA:370:C:H2'	1:AA:371:A:H8	1.61	0.66
4:CE:39:GLY:HA3	4:CE:116:VAL:HB	1.75	0.66
1:CA:585:G:H4'	11:CL:4:ASN:HD21	1.61	0.66
4:CE:114:LEU:HD13	4:CE:122:VAL:HG21	1.78	0.66
23:DB:2467:C:O2	38:DM:123:LYS:HE2	1.96	0.66
33:B1:31:GLU:H	33:B1:31:GLU:CD	1.99	0.66
1:AA:585:G:H4'	11:AL:4:ASN:HD21	1.61	0.66
1:CA:285:C:H2'	1:CA:286:C:H6	1.60	0.66
1:AA:89:U:H2'	1:AA:90:C:C6	2.31	0.66
23:BB:2834:G:H1'	23:BB:2883:A:N6	2.11	0.66
1:AA:423:G:H2'	1:AA:424:G:O4'	1.97	0.66
23:DB:1099:G:C5'	24:DI:3:LYS:N	2.59	0.65
1:CA:1333:A:H2'	1:CA:1334:G:O4'	1.96	0.65
35:BV:63:ILE:HD12	35:BV:63:ILE:H	1.60	0.65
14:AQ:20:ILE:HD13	14:AQ:52:CYS:HB2	1.78	0.65
37:BL:143:GLU:CG	37:BL:144:GLU:H	2.10	0.65
48:BG:87:GLN:HG2	48:BG:164:ALA:HA	1.77	0.65
47:DF:56:LEU:HD22	47:DF:59:ILE:HD12	1.76	0.65
47:DF:125:GLY:HA2	47:DF:162:ASP:HA	1.77	0.65
4:CE:24:VAL:HG23	4:CE:26:GLY:H	1.60	0.65
23:BB:2471:A:O2'	23:BB:2472:G:H8	1.77	0.65
23:DB:1871:A:H2'	23:DB:1872:A:C8	2.31	0.65
1:CA:1480:A:H2'	1:CA:1481:U:C6	2.31	0.65
23:BB:171:U:H2'	23:BB:172:A:C8	2.31	0.65
6:AG:131:GLY:O	6:AG:134:VAL:HG23	1.96	0.65
1:CA:1312:G:H2'	1:CA:1313:U:C6	2.31	0.65
1:CA:1450:U:H2'	1:CA:1452:C:C5	2.31	0.65
23:BB:1657:U:O2'	23:BB:1658:C:H5'	1.95	0.65
1:CA:390:U:H2'	1:CA:391:G:C8	2.31	0.65
3:AD:88:ASN:O	3:AD:92:LEU:HD23	1.96	0.65
26:DD:14:ILE:HG23	26:DD:22:ILE:HB	1.78	0.65
25:DC:140:VAL:O	25:DC:141:HIS:HB2	1.97	0.65
40:BH:114:GLU:HB3	40:BH:134:VAL:HB	1.78	0.65
37:DL:124:GLY:N	37:DL:143:GLU:HG3	2.11	0.65
48:DG:132:LEU:HD23	48:DG:132:LEU:N	2.10	0.65
32:B4:15:LYS:O	32:B4:16:ILE:HB	1.94	0.65
27:BK:35:VAL:HG12	27:BK:69:VAL:HG22	1.77	0.65
16:AS:39:ILE:HB	16:AS:66:VAL:HA	1.78	0.65
4:CE:23:THR:HA	4:CE:28:ARG:HA	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:7:VAL:HG21	51:BZ:59:ILE:CD1	2.26	0.65
47:DF:16:MET:O	47:DF:20:ASN:HA	1.97	0.65
23:BB:2867:G:HO2'	23:BB:2868:A:H8	1.44	0.65
2:CC:26:LYS:HG3	2:CC:27:GLU:N	2.11	0.65
2:CC:8:GLY:HA3	21:CN:88:MET:SD	2.37	0.65
40:BH:2:GLN:O	40:BH:3:VAL:HG22	1.96	0.65
11:CL:79:ILE:C	11:CL:101:LEU:HD12	2.17	0.65
1:AA:735:C:H5'	15:AR:59:LYS:HD3	1.79	0.65
23:DB:609:A:H2'	23:DB:610:C:O4'	1.97	0.65
38:BM:64:TRP:HB2	38:BM:104:GLU:HB2	1.78	0.65
23:DB:1092:C:H2'	23:DB:1093:G:H5'	1.79	0.65
29:BE:147:LEU:HB3	29:BE:186:VAL:HG23	1.78	0.65
24:DI:1:ALA:HB1	24:DI:2:LYS:HD2	1.78	0.65
1:CA:120:A:C2'	1:CA:121:U:H5''	2.22	0.65
10:CK:31:VAL:HG21	10:CK:66:ALA:HA	1.78	0.65
49:DR:41:ILE:HD11	49:DR:47:VAL:HB	1.78	0.65
40:BH:32:PRO:O	40:BH:33:GLN:HB2	1.96	0.65
18:AB:163:ILE:HD12	18:AB:185:ILE:HD12	1.78	0.65
20:AO:43:PHE:CE1	20:AO:53:ARG:HA	2.32	0.65
23:DB:1080:A:H2'	23:DB:1081:U:H6	1.60	0.65
10:AK:14:GLN:HA	10:AK:76:TYR:O	1.96	0.65
23:BB:1387:A:H2'	23:BB:1388:G:H8	1.61	0.65
19:AU:18:PHE:HA	19:AU:21:SER:HB3	1.78	0.65
13:CP:48:GLU:HG3	13:CP:49:GLY:H	1.61	0.65
10:AK:18:GLY:HA2	10:AK:36:ARG:HG3	1.76	0.65
23:BB:2039:U:H2'	23:BB:2040:G:C8	2.31	0.65
1:CA:1018:G:H2'	1:CA:1019:A:C8	2.31	0.65
23:BB:2180:U:O2	23:BB:2180:U:H2'	1.97	0.65
38:BM:77:PRO:HB2	38:BM:80:VAL:HB	1.78	0.65
1:CA:1238:A:N7	1:CA:1303:C:H1'	2.11	0.65
1:CA:235:C:H2'	1:CA:236:A:H8	1.60	0.65
48:BG:132:LEU:HD23	48:BG:132:LEU:N	2.11	0.65
15:CR:37:LYS:HZ3	19:CU:22:CYS:HB2	1.60	0.65
38:DM:38:ARG:HG2	38:DM:98:PRO:HD3	1.78	0.65
1:AA:1375:A:H4'	6:AG:28:ILE:HD13	1.78	0.65
6:AG:23:ALA:O	6:AG:26:VAL:HG22	1.97	0.65
23:BB:1548:A:H2'	23:BB:1549:A:C8	2.31	0.65
7:AH:101:ALA:HB3	7:AH:112:ASP:HB3	1.77	0.65
23:BB:742:A:H2'	23:BB:743:A:H8	1.62	0.65
23:BB:152:A:H2'	23:BB:153:U:C6	2.31	0.65
2:AC:24:ASN:O	2:AC:26:LYS:HG2	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CP:57:ILE:O	13:CP:61:VAL:HG23	1.96	0.65
1:AA:812:G:H2'	1:AA:812:G:N3	2.12	0.65
23:DB:171:U:H2'	23:DB:172:A:C8	2.31	0.65
3:CD:169:TRP:NE1	3:CD:170:LEU:HD23	2.12	0.65
23:DB:596:U:H2'	23:DB:597:G:H8	1.62	0.65
23:DB:1485:U:H2'	23:DB:1486:U:C6	2.31	0.65
13:AP:57:ILE:O	13:AP:61:VAL:HG23	1.97	0.65
18:CB:187:ASP:HB3	18:CB:201:GLY:O	1.97	0.65
35:DV:72:VAL:HG12	35:DV:93:ARG:HA	1.77	0.65
52:BW:39:GLN:HG3	52:BW:42:THR:CB	2.23	0.65
32:B4:24:ARG:HG2	32:B4:36:ARG:HG3	1.79	0.65
23:BB:2145:C:H4'	23:BB:2145:C:OP2	1.95	0.65
10:AK:28:ASN:ND2	10:AK:46:ALA:HB3	2.11	0.65
12:AM:6:ILE:HG12	47:BF:143:ASP:HB2	1.79	0.65
18:CB:96:LEU:H	18:CB:99:MET:HE3	1.61	0.65
11:AL:23:LEU:HD23	11:AL:29:LYS:HE3	1.78	0.65
38:BM:105:MET:HB2	38:BM:117:PHE:HZ	1.62	0.65
13:CP:43:ALA:HA	13:CP:46:LYS:HD2	1.79	0.65
29:DE:147:LEU:HB3	29:DE:186:VAL:HG23	1.79	0.65
14:CQ:66:LEU:HD12	14:CQ:66:LEU:H	1.61	0.65
48:BG:34:ARG:NH1	48:BG:34:ARG:H	1.86	0.65
23:DB:2269:G:H4'	52:DW:19:ARG:HH12	1.58	0.65
23:BB:1060:U:OP2	24:BI:74:PRO:HA	1.95	0.65
23:DB:142:A:C2	50:DT:2:ILE:HG21	2.32	0.65
1:AA:1005:A:H3'	1:AA:1006:G:H8	1.61	0.65
1:AA:467:U:H5'	1:AA:468:A:H2	1.62	0.65
23:DB:1654:A:O2'	26:DD:118:PHE:HB2	1.97	0.65
39:BX:52:ARG:O	39:BX:56:LEU:HD22	1.97	0.65
1:CA:642:A:H2'	1:CA:643:C:H6	1.62	0.65
42:BN:97:ILE:HD13	42:BN:99:LYS:HG3	1.79	0.65
23:BB:1440:U:H2'	23:BB:1441:G:C8	2.32	0.65
1:AA:1250:A:H4'	8:AI:69:GLY:H	1.61	0.65
17:AT:79:THR:O	17:AT:82:ILE:HG13	1.97	0.65
1:AA:662:U:H2'	1:AA:663:A:H8	1.62	0.65
23:DB:934:U:H2'	23:DB:935:C:C6	2.31	0.65
4:CE:50:GLY:HA3	4:CE:62:ALA:HB2	1.79	0.65
20:CO:66:LEU:O	20:CO:69:TYR:HB3	1.96	0.65
1:CA:812:G:H2'	1:CA:812:G:N3	2.11	0.65
1:AA:1071:C:H2'	1:AA:1072:G:H8	1.61	0.65
23:BB:414:C:H2'	23:BB:415:A:C8	2.31	0.65
25:BC:75:ALA:HB2	25:BC:95:TYR:HA	1.77	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:90:LEU:N	40:BH:123:ARG:HB3	2.12	0.65
50:DT:54:GLU:HB3	50:DT:88:LYS:HB2	1.77	0.65
10:AK:44:ALA:HB2	10:AK:69:CYS:HB3	1.78	0.65
37:BL:124:GLY:N	37:BL:143:GLU:HG3	2.12	0.65
35:BV:80:HIS:HD2	35:BV:83:LYS:H	1.44	0.65
3:AD:84:ASN:HD21	4:AE:101:GLY:HA3	1.62	0.65
23:BB:1104:C:H2'	23:BB:1105:U:C6	2.32	0.65
22:DA:42:C:O4'	47:DF:65:LEU:HB2	1.97	0.65
16:CS:38:THR:HA	16:CS:69:LYS:HA	1.78	0.65
2:CC:23:ALA:HB1	2:CC:27:GLU:OE2	1.97	0.65
18:AB:120:SER:HA	18:AB:125:PHE:CB	2.27	0.65
1:AA:270:A:H2'	1:AA:271:C:H6	1.62	0.65
29:DE:48:THR:H	29:DE:51:GLU:HG3	1.62	0.65
1:AA:195:A:H2'	1:AA:196:A:C8	2.32	0.65
3:AD:2:ARG:NH1	3:AD:114:ARG:HG3	2.12	0.65
1:CA:844:G:N2	1:CA:845:A:H62	1.94	0.65
23:BB:2795:C:H2'	23:BB:2796:U:O4'	1.97	0.65
50:DT:40:LYS:O	50:DT:43:ILE:HG22	1.97	0.65
35:BV:65:VAL:HG22	35:BV:70:ILE:HD12	1.79	0.65
42:BN:26:GLY:HA2	42:BN:75:ILE:HD13	1.78	0.65
23:BB:2537:U:H2'	23:BB:2538:C:C6	2.32	0.65
51:BZ:40:VAL:HG22	51:BZ:45:ARG:O	1.97	0.65
6:AG:57:GLU:H	6:AG:57:GLU:CD	2.01	0.65
1:CA:1278:G:H4'	1:CA:1279:G:O5'	1.96	0.65
27:DK:2:ILE:HA	27:DK:33:ALA:H	1.62	0.65
1:CA:522:C:H41	11:CL:49:ARG:NH2	1.94	0.65
27:BK:2:ILE:HA	27:BK:33:ALA:H	1.61	0.65
1:CA:370:C:H2'	1:CA:371:A:H8	1.62	0.65
23:DB:2092:U:H4'	23:DB:2093:G:O5'	1.95	0.65
4:AE:50:GLY:HA3	4:AE:62:ALA:HB2	1.79	0.65
23:DB:620:G:H5'	23:DB:620:G:N3	2.11	0.65
1:AA:21:G:H2'	1:AA:22:G:C8	2.31	0.65
19:CU:48:LYS:HG3	19:CU:49:ALA:N	2.12	0.65
23:BB:923:G:H1'	52:BW:23:LYS:HZ1	1.60	0.65
35:DV:41:GLU:C	35:DV:42:LEU:HD23	2.16	0.65
52:DW:18:LYS:HG3	52:DW:19:ARG:CZ	2.27	0.65
43:DO:67:ASN:H	43:DO:70:ALA:HB3	1.61	0.65
46:DU:71:ILE:HD11	46:DU:81:ARG:O	1.97	0.65
38:BM:126:ILE:H	38:BM:126:ILE:HD12	1.62	0.65
38:BM:38:ARG:HG2	38:BM:98:PRO:HD3	1.78	0.65
38:BM:40:ARG:HD3	38:BM:93:VAL:HG21	1.77	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CB:116:LEU:HD22	18:CB:140:LEU:HD11	1.79	0.65
18:CB:151:LYS:HG3	18:CB:152:ASP:H	1.60	0.65
42:BN:33:ILE:HD11	42:BN:112:TYR:HD1	1.60	0.65
9:AJ:52:LEU:HA	9:AJ:62:ARG:HA	1.79	0.65
1:CA:1097:C:H2'	1:CA:1098:C:C6	2.31	0.65
37:BL:65:GLY:O	37:BL:66:PHE:HB3	1.94	0.65
10:CK:14:GLN:HA	10:CK:76:TYR:O	1.97	0.65
23:BB:2216:G:H2'	23:BB:2217:G:C8	2.32	0.65
23:DB:2900:A:H2'	23:DB:2901:C:C6	2.31	0.65
37:DL:110:VAL:HB	37:DL:127:VAL:HA	1.78	0.65
42:DN:58:ASP:O	42:DN:59:SER:HB3	1.97	0.65
23:BB:2602:A:N3	23:BB:2602:A:H2'	2.11	0.65
50:BT:28:ASN:HA	50:BT:91:GLN:HE22	1.61	0.65
23:DB:2387:U:H1'	52:DW:38:ARG:CZ	2.27	0.65
1:AA:1248:A:H4'	8:AI:32:ARG:HH12	1.61	0.65
10:AK:44:ALA:HB2	10:AK:69:CYS:CB	2.26	0.65
44:BQ:63:ARG:HH22	44:BQ:96:ASP:CA	2.10	0.65
1:AA:1014:A:H2'	1:AA:1015:G:O4'	1.97	0.65
47:BF:35:LEU:HD12	47:BF:90:LEU:HD21	1.79	0.65
21:AN:60:ARG:HE	21:AN:62:ARG:HG2	1.61	0.65
21:AN:63:CYS:HB3	21:AN:67:GLY:N	2.12	0.65
47:DF:134:GLN:NE2	47:DF:149:ARG:HG3	2.10	0.65
51:DZ:7:VAL:HG21	51:DZ:59:ILE:CD1	2.27	0.65
13:CP:3:THR:HG22	13:CP:66:THR:HB	1.79	0.65
34:B3:21:PHE:HB2	34:B3:49:VAL:HG12	1.79	0.65
44:BQ:30:VAL:HG12	44:BQ:33:VAL:HG22	1.78	0.65
1:CA:76:G:H2'	1:CA:77:A:H8	1.62	0.65
21:CN:81:ILE:HD12	21:CN:82:LYS:N	2.12	0.65
40:DH:57:LYS:HD2	40:DH:61:VAL:HG21	1.78	0.65
1:AA:1513:A:H2'	1:AA:1514:G:H8	1.61	0.65
1:AA:806:C:H2'	1:AA:807:A:C8	2.32	0.65
23:BB:414:C:H2'	23:BB:415:A:H8	1.60	0.65
1:AA:1458:G:H2'	1:AA:1459:G:H8	1.62	0.65
1:AA:1279:G:H4'	1:AA:1281:C:H5	1.61	0.65
41:BJ:23:LYS:HD2	41:BJ:142:ILE:HG12	1.79	0.65
29:BE:48:THR:N	29:BE:51:GLU:HG3	2.12	0.65
3:AD:29:THR:HG22	3:AD:30:LYS:H	1.62	0.65
43:DO:97:PHE:HB3	43:DO:103:VAL:HG21	1.78	0.65
23:DB:2602:A:N3	23:DB:2602:A:H2'	2.11	0.65
8:CI:40:ARG:N	8:CI:44:ARG:HD3	2.12	0.64
50:DT:87:LEU:HD12	50:DT:91:GLN:HG2	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BJ:11:VAL:HA	41:BJ:12:LYS:HZ2	1.60	0.64
41:DJ:18:VAL:HG12	41:DJ:54:ILE:HD11	1.79	0.64
14:AQ:59:GLU:O	14:AQ:75:VAL:HG22	1.97	0.64
23:DB:2330:G:N3	52:DW:38:ARG:HB3	2.12	0.64
52:BW:18:LYS:HG3	52:BW:19:ARG:CZ	2.27	0.64
37:DL:79:LEU:HG	37:DL:112:LEU:HA	1.79	0.64
23:BB:300:A:H3'	46:BU:81:ARG:NH1	2.12	0.64
40:DH:9:VAL:HB	40:DH:13:GLY:CA	2.27	0.64
23:DB:947:A:H2'	23:DB:948:C:H6	1.61	0.64
23:BB:2885:G:H2'	23:BB:2886:A:O4'	1.96	0.64
23:BB:2734:A:H2'	23:BB:2735:G:H5'	1.77	0.64
12:CM:55:LEU:O	12:CM:59:VAL:HG12	1.97	0.64
7:CH:101:ALA:HB3	7:CH:112:ASP:HB3	1.77	0.64
23:BB:609:A:H2'	23:BB:610:C:O4'	1.96	0.64
23:DB:593:U:H2'	23:DB:594:U:C6	2.31	0.64
23:DB:2078:C:H2'	23:DB:2079:U:C6	2.32	0.64
1:AA:858:G:O6	1:AA:869:G:H3'	1.97	0.64
2:AC:76:ILE:HA	2:AC:83:VAL:HG23	1.78	0.64
23:BB:1491:G:H5'	25:BC:97:ASP:OD1	1.97	0.64
32:D4:13:ASN:O	32:D4:27:CYS:HA	1.97	0.64
23:BB:419:U:H2'	23:BB:420:C:C6	2.32	0.64
42:BN:58:ASP:O	42:BN:59:SER:HB3	1.97	0.64
23:BB:955:U:OP1	38:BM:86:LYS:HE2	1.98	0.64
23:DB:2502:G:H5'	23:DB:2503:A:C5'	2.24	0.64
40:BH:40:THR:N	40:BH:43:ASN:HD22	1.92	0.64
23:BB:28:A:N6	23:BB:512:G:H1'	2.13	0.64
49:BR:15:SER:HB3	49:BR:18:GLN:HE21	1.61	0.64
47:BF:65:LEU:HD23	47:BF:87:LYS:HD2	1.78	0.64
4:CE:28:ARG:HH22	4:CE:30:PHE:HA	1.62	0.64
34:D3:21:PHE:HB2	34:D3:49:VAL:HG12	1.79	0.64
1:AA:17:U:H2'	1:AA:18:C:H6	1.63	0.64
2:CC:22:PHE:HB2	9:CJ:95:GLY:O	1.97	0.64
41:DJ:43:GLU:O	41:DJ:45:THR:N	2.29	0.64
45:DS:72:THR:HG21	45:DS:108:SER:HB3	1.79	0.64
1:AA:559:A:H4'	1:AA:560:A:H3'	1.78	0.64
1:CA:1521:C:H2'	1:CA:1522:U:C6	2.32	0.64
23:BB:2199:A:H5'	23:BB:2200:C:OP2	1.98	0.64
23:BB:1038:G:H2'	23:BB:1039:A:C8	2.33	0.64
23:DB:315:G:H2'	23:DB:316:C:C6	2.32	0.64
1:CA:806:C:H2'	1:CA:807:A:C8	2.32	0.64
23:BB:593:U:H2'	23:BB:594:U:C6	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:21:TRP:HB3	2:CC:58:ARG:H	1.62	0.64
8:CI:17:ARG:O	8:CI:64:ILE:HA	1.98	0.64
23:DB:1192:G:O2'	23:DB:1193:G:H5'	1.97	0.64
3:CD:100:VAL:HG21	3:CD:136:VAL:HG21	1.79	0.64
8:AI:35:GLU:O	8:AI:39:GLY:HA3	1.97	0.64
8:CI:12:LYS:H	8:CI:105:ARG:NH1	1.95	0.64
52:DW:39:GLN:HG3	52:DW:42:THR:CB	2.24	0.64
8:AI:61:ASP:O	8:AI:62:LEU:HD13	1.97	0.64
1:CA:1323:G:H2'	1:CA:1324:A:C8	2.33	0.64
51:BZ:40:VAL:CG2	51:BZ:43:GLU:HB3	2.27	0.64
26:BD:13:ARG:HH12	28:BP:74:GLN:NE2	1.94	0.64
47:DF:168:LEU:HD13	47:DF:169:LEU:H	1.60	0.64
23:BB:1505:A:H2'	23:BB:1506:U:C6	2.33	0.64
23:BB:634:C:H2'	23:BB:635:C:C6	2.32	0.64
21:CN:81:ILE:HD12	21:CN:82:LYS:H	1.61	0.64
23:BB:1447:C:H2'	23:BB:1448:G:C8	2.32	0.64
1:CA:1149:C:H2'	1:CA:1150:A:C8	2.32	0.64
14:CQ:25:GLU:HA	14:CQ:40:THR:HA	1.77	0.64
1:AA:474:G:H2'	1:AA:475:C:C6	2.32	0.64
21:CN:41:TRP:HB3	21:CN:44:VAL:HG23	1.78	0.64
10:CK:42:GLY:HA3	10:CK:73:VAL:HG12	1.79	0.64
23:DB:1105:U:H2'	23:DB:1106:G:H8	1.60	0.64
34:B3:44:ARG:N	34:B3:45:PRO:HD2	2.13	0.64
2:CC:69:THR:HG23	2:CC:72:PRO:HB3	1.79	0.64
35:BV:20:LEU:HB3	35:BV:25:LYS:O	1.98	0.64
23:DB:2720:U:H5''	28:DP:52:ARG:NH2	2.09	0.64
23:DB:137:U:H2'	23:DB:138:U:O4'	1.97	0.64
1:CA:976:G:N1	1:CA:1362:A:H3'	2.13	0.64
48:DG:145:ALA:O	48:DG:148:ARG:HG3	1.98	0.64
1:AA:957:U:H4'	16:AS:78:THR:HB	1.78	0.64
22:BA:43:C:H2'	22:BA:44:G:H5''	1.79	0.64
6:AG:24:LYS:O	6:AG:28:ILE:HG12	1.97	0.64
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.31	0.64
23:DB:2537:U:H2'	23:DB:2538:C:C6	2.33	0.64
23:DB:1440:U:H2'	23:DB:1441:G:C8	2.31	0.64
23:DB:1443:U:H2'	23:DB:1444:G:H8	1.62	0.64
1:CA:270:A:H2'	1:CA:271:C:H6	1.62	0.64
21:CN:78:LEU:HD23	21:CN:82:LYS:HB3	1.79	0.64
23:DB:2216:G:H2'	23:DB:2217:G:C8	2.31	0.64
23:DB:2512:C:H2'	23:DB:2513:A:O4'	1.98	0.64
1:CA:1254:A:H2'	1:CA:1255:G:C8	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:41:G:H2'	1:CA:42:G:C8	2.33	0.64
23:BB:651:G:OP1	34:B3:18:LYS:HG2	1.97	0.64
47:DF:74:ALA:HB3	47:DF:78:ILE:HD13	1.79	0.64
23:DB:1535:A:O2'	23:DB:1536:C:H5'	1.98	0.64
23:DB:354:A:H2'	23:DB:355:U:C6	2.32	0.64
23:DB:2751:G:H3'	23:DB:2752:C:H6	1.63	0.64
23:BB:315:G:H2'	23:BB:316:C:C6	2.32	0.64
23:BB:1041:G:H2'	23:BB:1042:G:H8	1.63	0.64
18:AB:166:ASP:OD1	18:AB:190:SER:HA	1.98	0.64
48:BG:23:ILE:HD11	48:BG:42:VAL:HG11	1.80	0.64
1:AA:235:C:H2'	1:AA:236:A:H8	1.62	0.64
40:BH:100:ALA:HB1	40:BH:111:ALA:O	1.97	0.64
40:DH:119:ASN:OD1	40:DH:121:VAL:HG22	1.98	0.64
1:AA:1101:A:H62	18:AB:173:LYS:HE3	1.61	0.64
18:AB:184:ALA:HB3	18:AB:195:VAL:HG21	1.79	0.64
23:DB:1203:U:H3'	23:DB:1204:A:C5'	2.27	0.64
1:CA:67:C:H2'	1:CA:68:G:C8	2.32	0.64
1:CA:502:A:H2'	1:CA:503:C:C6	2.32	0.64
2:CC:76:ILE:HD11	2:CC:102:ILE:HG21	1.79	0.64
23:BB:1354:A:H2'	23:BB:1355:G:O4'	1.97	0.64
23:DB:79:C:O2'	23:DB:346:A:H1'	1.96	0.64
3:AD:100:VAL:HG21	3:AD:136:VAL:HG21	1.80	0.64
1:AA:1342:C:H2'	1:AA:1343:G:H8	1.62	0.64
43:BO:67:ASN:H	43:BO:70:ALA:HB3	1.61	0.64
25:BC:128:THR:HG23	25:BC:190:THR:HG22	1.80	0.64
47:DF:110:ILE:CB	47:DF:113:PHE:HB3	2.26	0.64
22:DA:43:C:H2'	22:DA:44:G:H5''	1.79	0.64
46:DU:78:LYS:CD	46:DU:79:ALA:H	2.09	0.64
29:DE:5:LEU:HB3	29:DE:122:GLU:OE1	1.98	0.64
1:AA:205:A:H2'	1:AA:206:C:H6	1.63	0.64
38:DM:32:GLY:O	38:DM:131:VAL:HG22	1.98	0.64
23:DB:2065:C:H2'	23:DB:2066:C:H6	1.62	0.64
48:BG:71:LEU:HD13	48:BG:74:MET:SD	2.38	0.64
28:DP:32:VAL:HA	28:DP:37:LYS:HA	1.79	0.64
52:DW:44:PHE:CD2	52:DW:76:ARG:HD2	2.32	0.64
51:DZ:70:GLU:O	51:DZ:72:ARG:N	2.31	0.64
23:DB:825:A:H1'	37:DL:54:GLN:NE2	2.12	0.64
8:CI:56:MET:HE2	8:CI:57:VAL:H	1.62	0.64
19:CU:36:PHE:HD2	19:CU:39:LYS:HE2	1.62	0.64
35:DV:20:LEU:HB3	35:DV:25:LYS:O	1.97	0.64
26:DD:106:LYS:O	26:DD:107:VAL:HB	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:113:SER:CB	26:DD:168:GLU:H	2.11	0.64
23:DB:30:G:H2'	23:DB:31:C:C6	2.33	0.64
18:CB:174:GLU:O	18:CB:178:LEU:HG	1.98	0.64
23:BB:1507:C:C3'	23:BB:1508:A:H4'	2.28	0.64
23:BB:162:U:H4'	23:BB:163:C:OP1	1.97	0.64
44:DQ:27:ARG:HA	44:DQ:33:VAL:HG23	1.80	0.64
12:CM:2:ARG:NH1	12:CM:3:ILE:H	1.95	0.64
17:CT:79:THR:O	17:CT:82:ILE:HG13	1.98	0.64
23:DB:1387:A:H5'	23:DB:1469:A:H1'	1.80	0.64
23:DB:37:C:O2'	29:DE:45:ALA:HA	1.98	0.64
11:CL:113:ARG:HG2	11:CL:118:VAL:HB	1.80	0.64
23:BB:1355:G:O2'	23:BB:1356:G:H5'	1.98	0.64
1:AA:285:C:H2'	1:AA:286:C:H6	1.61	0.64
25:BC:239:PHE:O	25:BC:241:LYS:HG3	1.98	0.64
23:BB:912:C:O2'	23:BB:913:U:H5'	1.97	0.64
1:CA:279:A:H5''	1:CA:280:C:H3'	1.79	0.64
19:AU:48:LYS:HG3	19:AU:49:ALA:N	2.13	0.64
25:BC:196:ASN:HD22	25:BC:199:HIS:HB2	1.61	0.64
1:CA:858:G:O6	1:CA:869:G:H3'	1.98	0.64
23:DB:2199:A:H5'	23:DB:2200:C:OP2	1.98	0.64
23:DB:575:A:O2'	23:DB:576:U:H5'	1.96	0.64
43:BO:5:SER:HA	43:BO:8:ILE:HD12	1.79	0.64
5:AF:86:ARG:CZ	15:AR:63:TYR:HB3	2.27	0.64
2:AC:183:TYR:HA	2:AC:199:VAL:O	1.96	0.64
44:BQ:63:ARG:HH22	44:BQ:96:ASP:HA	1.62	0.64
16:AS:4:LEU:HD11	16:AS:9:PHE:HB3	1.79	0.64
36:D2:12:ARG:HB2	36:D2:12:ARG:NH2	2.13	0.64
42:DN:102:PHE:N	42:DN:109:PRO:HA	2.13	0.64
23:DB:2394:C:OP1	37:DL:63:LYS:HG2	1.98	0.64
27:DK:43:ILE:HG21	27:DK:46:ALA:HB2	1.80	0.64
20:CO:8:THR:O	20:CO:12:VAL:HG23	1.98	0.64
23:DB:1443:U:H2'	23:DB:1444:G:C8	2.32	0.64
23:BB:1548:A:H2'	23:BB:1549:A:H8	1.62	0.64
23:BB:718:A:H5'	23:BB:719:C:C5	2.33	0.64
23:DB:636:G:N7	37:DL:109:LYS:HE2	2.13	0.64
1:AA:652:U:H1'	1:AA:653:U:C5	2.32	0.64
1:CA:502:A:H2'	1:CA:503:C:H6	1.63	0.64
18:CB:127:LYS:HD2	18:CB:128:LEU:N	2.12	0.64
3:AD:25:ARG:CZ	3:AD:26:ALA:HB2	2.28	0.64
8:AI:35:GLU:CD	8:AI:35:GLU:H	2.00	0.64
23:BB:1041:G:H2'	23:BB:1042:G:C8	2.33	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:19:A:H2'	23:BB:20:C:C6	2.32	0.64
23:DB:654:A:H2'	23:DB:655:A:H5''	1.80	0.64
23:DB:2103:C:H2'	23:DB:2104:C:C6	2.33	0.64
21:AN:41:TRP:HB3	21:AN:44:VAL:HG23	1.78	0.64
25:DC:12:ARG:HA	25:DC:15:VAL:HG23	1.80	0.64
23:DB:272:A:H2'	23:DB:273:G:C8	2.33	0.64
1:AA:1142:G:H2'	1:AA:1143:G:O4'	1.97	0.64
13:AP:43:ALA:HA	13:AP:46:LYS:HD2	1.80	0.64
48:BG:145:ALA:O	48:BG:148:ARG:HG3	1.98	0.64
46:BU:73:ASN:HB3	46:BU:95:PHE:CZ	2.32	0.64
10:CK:18:GLY:HA2	10:CK:36:ARG:HG3	1.79	0.64
18:AB:162:VAL:HG21	18:AB:168:GLU:HB2	1.80	0.64
25:DC:77:VAL:CG2	25:DC:112:GLY:H	2.11	0.64
23:DB:2841:C:H2'	23:DB:2842:G:C8	2.33	0.64
1:CA:600:A:H5''	7:CH:88:LYS:HD2	1.79	0.64
23:BB:1809:A:H2'	23:BB:1810:A:C8	2.33	0.64
23:BB:441:U:H2'	23:BB:442:G:C8	2.32	0.64
49:DR:2:TYR:H	49:DR:42:ALA:CB	2.11	0.64
1:CA:590:U:H2'	1:CA:591:U:C6	2.32	0.64
47:BF:41:GLU:HB3	47:BF:44:ALA:HB3	1.78	0.64
8:CI:5:TYR:O	8:CI:19:PHE:HA	1.97	0.64
26:BD:113:SER:CB	26:BD:168:GLU:H	2.11	0.64
1:AA:1149:C:H2'	1:AA:1150:A:C8	2.33	0.64
1:CA:437:U:H1'	3:CD:115:GLN:NE2	2.12	0.64
23:DB:1064:C:H5''	24:DI:87:SER:OG	1.98	0.64
28:DP:13:LYS:HD2	28:DP:76:HIS:HA	1.79	0.64
33:D1:9:LYS:HD3	33:D1:9:LYS:N	2.12	0.64
1:AA:1219:A:H2'	1:AA:1220:G:H8	1.61	0.64
26:BD:25:THR:HG21	26:BD:193:VAL:CG2	2.28	0.64
23:DB:2680:U:OP2	26:DD:114:LYS:HB3	1.98	0.64
40:DH:14:SER:HB2	40:DH:17:ASP:HB3	1.80	0.64
42:DN:33:ILE:HD11	42:DN:112:TYR:HD1	1.62	0.64
1:CA:948:C:H2'	1:CA:949:A:H8	1.62	0.64
43:BO:90:VAL:HG22	43:BO:115:LEU:HD12	1.80	0.64
25:BC:119:VAL:HG13	25:BC:133:ASN:HD21	1.63	0.64
1:CA:522:C:H41	11:CL:49:ARG:HH22	1.46	0.64
23:BB:2190:G:O2'	23:BB:2191:A:H5'	1.97	0.64
23:BB:1871:A:H2'	23:BB:1872:A:C8	2.33	0.64
23:DB:1505:A:H2'	23:DB:1506:U:C6	2.33	0.64
13:AP:28:ARG:HD2	13:AP:29:ASN:H	1.61	0.64
23:BB:742:A:H2'	23:BB:743:A:C8	2.33	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1001:A:H2'	23:DB:1002:G:O4'	1.98	0.64
1:CA:285:C:H2'	1:CA:286:C:C6	2.33	0.64
16:AS:49:ALA:HA	16:AS:57:VAL:O	1.98	0.64
4:CE:95:MET:HA	4:CE:124:ALA:CB	2.28	0.64
22:BA:89:U:O2	23:BB:958:U:H2'	1.98	0.64
23:DB:2645:G:H3'	23:DB:2646:C:H5'	1.80	0.64
18:AB:71:THR:HA	18:AB:92:ASN:O	1.98	0.64
23:BB:572:A:H5''	49:BR:80:ARG:HH22	1.63	0.64
4:AE:92:ARG:HH11	4:AE:92:ARG:HB3	1.63	0.64
33:D1:7:LYS:HD3	34:D3:33:THR:HG21	1.80	0.64
23:DB:466:A:N3	23:DB:683:U:H1'	2.13	0.64
1:AA:1450:U:H2'	1:AA:1452:C:C5	2.33	0.64
18:CB:186:VAL:O	18:CB:200:PRO:HA	1.98	0.63
29:DE:58:LYS:C	29:DE:60:TRP:N	2.51	0.63
1:AA:120:A:C2'	1:AA:121:U:H5''	2.24	0.63
35:BV:41:GLU:C	35:BV:42:LEU:HD23	2.18	0.63
48:DG:23:ILE:HD11	48:DG:42:VAL:HG11	1.80	0.63
23:DB:28:A:N6	23:DB:512:G:H1'	2.12	0.63
26:DD:168:GLU:O	26:DD:170:VAL:HG13	1.99	0.63
23:BB:2267:A:C8	23:BB:2267:A:C3'	2.79	0.63
37:BL:125:LEU:H	37:BL:143:GLU:HG3	1.63	0.63
23:BB:2443:C:H2'	23:BB:2444:G:H8	1.62	0.63
51:DZ:59:ILE:HA	51:DZ:67:VAL:HG21	1.81	0.63
18:AB:23:ASN:HD22	18:AB:24:PRO:CD	2.10	0.63
40:BH:5:LEU:HD22	40:BH:13:GLY:HA2	1.81	0.63
24:DI:123:ALA:HA	24:DI:126:ARG:HH12	1.63	0.63
38:DM:105:MET:HB2	38:DM:117:PHE:HZ	1.63	0.63
23:BB:718:A:H2'	23:BB:719:C:H5'	1.80	0.63
23:DB:150:U:H2'	23:DB:151:C:C6	2.33	0.63
23:DB:2039:U:H2'	23:DB:2040:G:H8	1.62	0.63
25:BC:78:GLU:OE1	25:BC:94:LEU:HD22	1.99	0.63
6:CG:48:THR:O	6:CG:52:ARG:HG3	1.98	0.63
23:BB:661:A:H1'	37:BL:12:SER:O	1.97	0.63
1:AA:801:U:H2'	1:AA:802:A:H8	1.63	0.63
48:BG:23:ILE:O	48:BG:34:ARG:HA	1.99	0.63
26:BD:105:LYS:H	26:BD:106:LYS:NZ	1.96	0.63
22:DA:57:A:H1'	47:DF:25:MET:O	1.98	0.63
43:DO:53:THR:HG22	43:DO:74:VAL:CG2	2.28	0.63
32:B4:4:ARG:HG2	32:B4:5:ALA:H	1.62	0.63
23:BB:674:G:C1'	29:BE:69:ARG:HD2	2.28	0.63
26:DD:5:VAL:N	26:DD:32:ASN:HD21	1.95	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:134:GLN:NE2	47:BF:149:ARG:HG3	2.11	0.63
6:AG:120:ALA:HA	6:AG:123:LEU:HD12	1.80	0.63
1:AA:1308:U:H3'	12:AM:97:ARG:HH11	1.63	0.63
23:DB:163:C:H2'	23:DB:164:C:O4'	1.98	0.63
18:CB:80:LYS:HG3	18:CB:81:ASP:H	1.62	0.63
49:DR:2:TYR:H	49:DR:42:ALA:HB2	1.63	0.63
23:BB:431:U:O2'	23:BB:432:A:H5'	1.99	0.63
23:DB:2814:A:H2'	23:DB:2815:C:C6	2.33	0.63
1:AA:1486:G:H2'	1:AA:1487:G:O4'	1.98	0.63
23:BB:575:A:O2'	23:BB:576:U:H5'	1.98	0.63
37:BL:132:ARG:O	37:BL:135:ILE:HG22	1.98	0.63
23:BB:547:A:C2'	23:BB:548:G:H5'	2.28	0.63
42:DN:78:LYS:HG3	42:DN:83:LEU:HG	1.80	0.63
1:CA:976:G:H1	1:CA:1362:A:H3'	1.64	0.63
49:DR:4:VAL:CG2	49:DR:40:MET:HB2	2.28	0.63
23:DB:1060:U:O4	23:DB:1088:A:N6	2.31	0.63
10:AK:17:ASP:HB3	10:AK:80:ASN:ND2	2.13	0.63
27:DK:71:ARG:CZ	27:DK:72:PRO:HD3	2.28	0.63
6:CG:145:GLU:HG3	6:CG:146:ALA:N	2.12	0.63
28:BP:59:THR:OG1	28:BP:72:VAL:HG12	1.97	0.63
36:B2:12:ARG:NH2	36:B2:12:ARG:HB2	2.13	0.63
27:BK:43:ILE:HG21	27:BK:46:ALA:HB2	1.81	0.63
1:CA:658:C:O3'	20:CO:8:THR:HG21	1.99	0.63
27:BK:99:ILE:H	27:BK:118:LEU:HD23	1.62	0.63
12:CM:2:ARG:N	12:CM:8:ILE:HG22	2.12	0.63
23:BB:2841:C:H2'	23:BB:2842:G:C8	2.33	0.63
1:AA:390:U:H2'	1:AA:391:G:H8	1.62	0.63
23:DB:2516:A:O2'	23:DB:2517:C:H5'	1.98	0.63
26:BD:37:VAL:HG23	26:BD:91:THR:HA	1.80	0.63
17:AT:43:LYS:H	17:AT:43:LYS:HD3	1.64	0.63
12:CM:16:ILE:HD13	12:CM:16:ILE:O	1.99	0.63
23:BB:730:A:H3'	57:BB:3594:HOH:O	1.98	0.63
1:AA:590:U:H2'	1:AA:591:U:H6	1.63	0.63
27:BK:51:LYS:HE3	27:BK:52:VAL:HG13	1.80	0.63
1:AA:140:U:H2'	1:AA:141:G:C8	2.32	0.63
2:AC:102:ILE:H	2:AC:102:ILE:HD12	1.64	0.63
9:CJ:36:VAL:HG13	9:CJ:76:ILE:HG22	1.80	0.63
25:DC:153:LEU:HD13	25:DC:175:LEU:HD21	1.79	0.63
35:BV:72:VAL:HG12	35:BV:93:ARG:HA	1.79	0.63
40:BH:147:VAL:HG12	40:BH:148:ALA:H	1.63	0.63
37:DL:143:GLU:CG	37:DL:144:GLU:H	2.11	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:138:U:H4'	23:DB:139:U:C3'	2.27	0.63
43:DO:36:TYR:HA	43:DO:52:SER:HB3	1.78	0.63
10:CK:17:ASP:HB3	10:CK:80:ASN:ND2	2.12	0.63
28:BP:56:SER:HB2	28:BP:75:THR:HG21	1.79	0.63
29:BE:5:LEU:HB3	29:BE:122:GLU:OE1	1.98	0.63
23:BB:1309:G:H4'	36:B2:7:PRO:HB2	1.80	0.63
2:AC:10:ARG:NH2	2:AC:181:ILE:HD13	2.13	0.63
32:D4:24:ARG:HG2	32:D4:36:ARG:HG3	1.80	0.63
1:CA:1342:C:H2'	1:CA:1343:G:C8	2.33	0.63
27:DK:70:ARG:HB3	27:DK:76:VAL:HG13	1.80	0.63
23:DB:459:U:O2'	23:DB:460:A:H5'	1.99	0.63
23:BB:2065:C:H2'	23:BB:2066:C:H6	1.62	0.63
23:DB:151:C:H2'	23:DB:152:A:H8	1.62	0.63
1:CA:662:U:H2'	1:CA:663:A:C8	2.33	0.63
1:AA:1070:U:H2'	1:AA:1071:C:C6	2.33	0.63
1:CA:806:C:H2'	1:CA:807:A:H8	1.63	0.63
23:DB:2246:G:H2'	23:DB:2247:A:C8	2.34	0.63
2:CC:137:VAL:HG11	2:CC:169:GLU:HG3	1.79	0.63
1:AA:301:G:H2'	1:AA:302:G:H8	1.63	0.63
23:DB:1416:G:HO2'	23:DB:1417:C:H6	1.46	0.63
49:BR:2:TYR:H	49:BR:42:ALA:CB	2.11	0.63
30:BY:23:LEU:HD13	30:BY:28:LEU:HB2	1.80	0.63
23:BB:2321:U:H3'	23:BB:2322:A:H5''	1.81	0.63
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.33	0.63
23:DB:2150:C:H2'	23:DB:2151:U:H6	1.63	0.63
18:AB:15:PHE:HD1	18:AB:16:GLY:H	1.45	0.63
9:CJ:9:ARG:HE	9:CJ:99:GLN:NE2	1.97	0.63
14:CQ:45:VAL:HG12	14:CQ:46:HIS:N	2.08	0.63
28:BP:13:LYS:HD2	28:BP:76:HIS:HA	1.80	0.63
22:BA:43:C:O2'	47:BF:91:ARG:HD2	1.98	0.63
47:DF:134:GLN:HB3	47:DF:149:ARG:HG3	1.80	0.63
1:CA:1001:C:H2'	1:CA:1002:G:C8	2.32	0.63
18:AB:202:ASN:ND2	18:AB:203:ASP:H	1.97	0.63
1:CA:1320:C:N3	16:CS:35:ARG:HD3	2.13	0.63
16:CS:52:ASN:HD22	16:CS:76:THR:HA	1.63	0.63
23:BB:2769:U:H2'	23:BB:2770:G:C8	2.33	0.63
23:BB:1579:A:H2'	23:BB:1580:A:H8	1.63	0.63
1:CA:1169:A:H2'	1:CA:1170:A:C8	2.33	0.63
23:BB:2039:U:H2'	23:BB:2040:G:H8	1.63	0.63
42:DN:24:MET:HG2	42:DN:44:LEU:HD22	1.79	0.63
10:AK:42:GLY:HA3	10:AK:73:VAL:HG12	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DS:13:SER:OG	45:DS:16:LYS:HB2	1.98	0.63
23:DB:988:A:P	30:DY:11:SER:HB3	2.39	0.63
9:CJ:7:ARG:O	9:CJ:100:ILE:HA	1.99	0.63
52:DW:35:ILE:O	52:DW:35:ILE:HG12	1.98	0.63
48:BG:89:VAL:HB	48:BG:159:LYS:HA	1.80	0.63
18:AB:46:VAL:HA	18:AB:49:PHE:HD2	1.63	0.63
51:DZ:40:VAL:HG22	51:DZ:45:ARG:O	1.98	0.63
28:DP:56:SER:HB2	28:DP:75:THR:HG21	1.79	0.63
28:BP:54:LEU:HA	28:BP:76:HIS:HD2	1.63	0.63
23:BB:2303:G:H4'	47:BF:121:PHE:O	1.99	0.63
47:BF:121:PHE:CE1	47:BF:162:ASP:HB2	2.33	0.63
46:DU:51:LEU:H	46:DU:53:GLN:NE2	1.96	0.63
47:DF:121:PHE:CE1	47:DF:162:ASP:HB2	2.33	0.63
25:BC:12:ARG:HA	25:BC:15:VAL:HG23	1.80	0.63
27:BK:17:ARG:HB3	27:BK:45:GLU:CB	2.29	0.63
42:DN:97:ILE:HD13	42:DN:99:LYS:HG3	1.80	0.63
12:CM:79:LEU:HD12	12:CM:87:GLY:HA2	1.79	0.63
42:BN:102:PHE:N	42:BN:109:PRO:HA	2.12	0.63
23:BB:459:U:O2'	23:BB:460:A:H5'	1.98	0.63
3:CD:113:ALA:O	3:CD:117:VAL:HG23	1.98	0.63
1:CA:462:G:H3'	1:CA:463:U:C6	2.34	0.63
28:DP:103:THR:HG22	28:DP:104:GLY:H	1.64	0.63
23:DB:1354:A:H2'	23:DB:1355:G:O4'	1.97	0.63
29:DE:18:THR:HG22	29:DE:106:LYS:HE2	1.80	0.63
23:DB:1494:A:H2'	23:DB:1495:A:C8	2.33	0.63
50:BT:53:VAL:HG12	50:BT:54:GLU:H	1.62	0.63
2:CC:63:ILE:H	2:CC:98:ALA:CB	2.10	0.63
20:AO:26:GLU:HA	20:AO:81:LEU:HD11	1.81	0.63
23:DB:639:U:H2'	23:DB:640:C:H6	1.64	0.63
10:CK:22:ILE:HD12	10:CK:85:VAL:HG22	1.81	0.63
46:BU:9:GLU:HG3	46:BU:72:PHE:HB3	1.79	0.63
21:AN:63:CYS:HB3	21:AN:67:GLY:H	1.63	0.63
1:CA:923:A:H2'	1:CA:924:C:H6	1.63	0.63
1:CA:449:G:H2'	1:CA:450:G:C8	2.34	0.63
24:BI:25:PRO:O	24:BI:29:GLN:HG2	1.99	0.63
34:B3:31:ILE:HD11	34:B3:34:LYS:HD3	1.80	0.63
44:DQ:73:ILE:HD11	44:DQ:77:LYS:HB2	1.80	0.63
23:DB:1579:A:H2'	23:DB:1580:A:H8	1.61	0.63
23:DB:181:A:H2'	23:DB:182:A:H8	1.63	0.63
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.34	0.63
27:DK:12:ASP:OD2	27:DK:85:VAL:HG13	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:163:C:H2'	23:BB:164:C:O4'	1.99	0.63
23:DB:1447:C:H2'	23:DB:1448:G:C8	2.34	0.63
23:BB:1170:C:H2'	23:BB:1171:G:H8	1.63	0.63
1:CA:1513:A:H2'	1:CA:1514:G:H8	1.64	0.63
23:BB:1387:A:C4'	23:BB:1469:A:H1'	2.28	0.63
1:AA:1342:C:H2'	1:AA:1343:G:C8	2.33	0.63
23:DB:2814:A:H2'	23:DB:2815:C:H6	1.63	0.63
2:AC:87:ARG:NH2	2:AC:88:LYS:HA	2.13	0.63
18:CB:8:MET:HG3	18:CB:11:ALA:HB3	1.80	0.63
43:BO:97:PHE:HB3	43:BO:103:VAL:HG21	1.79	0.63
38:DM:26:VAL:HG21	38:DM:133:LYS:HA	1.81	0.63
23:DB:365:U:H2'	23:DB:366:C:C6	2.34	0.63
48:BG:176:LYS:H	48:BG:176:LYS:HE2	1.64	0.63
2:AC:63:ILE:HD12	2:AC:98:ALA:HB2	1.80	0.63
35:DV:63:ILE:HD11	35:DV:72:VAL:HG22	1.80	0.63
1:CA:255:G:H2'	1:CA:256:U:C6	2.34	0.63
37:DL:125:LEU:H	37:DL:143:GLU:HG3	1.64	0.63
8:AI:83:THR:HA	8:AI:86:LEU:HD22	1.81	0.63
47:DF:110:ILE:HA	47:DF:111:ARG:NH2	2.14	0.63
28:BP:4:ILE:O	28:BP:6:GLN:N	2.32	0.63
40:DH:2:GLN:O	40:DH:3:VAL:HG22	1.98	0.63
44:BQ:30:VAL:CG1	44:BQ:33:VAL:HG22	2.28	0.63
23:DB:264:C:H2'	23:DB:265:A:H5''	1.81	0.63
6:AG:129:ASN:HA	6:AG:134:VAL:HG11	1.80	0.63
1:AA:590:U:H2'	1:AA:591:U:C6	2.33	0.63
7:AH:8:ASP:OD1	7:AH:12:ARG:HD2	1.99	0.63
1:AA:188:C:H2'	1:AA:189:A:O4'	1.99	0.63
5:CF:9:MET:HB2	5:CF:57:ALA:HB1	1.81	0.63
23:BB:2109:U:H3'	23:BB:2110:G:H8	1.64	0.63
38:BM:26:VAL:HG21	38:BM:133:LYS:HA	1.81	0.63
28:BP:30:TRP:CD1	28:BP:39:LEU:HG	2.34	0.63
23:BB:1028:A:H2'	23:BB:1029:A:C8	2.34	0.63
1:AA:1329:A:OP1	12:AM:28:ARG:HB2	1.99	0.63
4:CE:81:GLN:HE21	4:CE:149:PRO:HD3	1.64	0.63
46:DU:5:ARG:HH22	46:DU:93:ARG:HD3	1.64	0.63
38:DM:42:THR:HA	38:DM:93:VAL:HA	1.81	0.63
44:BQ:63:ARG:NH2	44:BQ:96:ASP:HA	2.14	0.63
47:BF:121:PHE:HB2	47:BF:126:ASN:O	1.98	0.63
26:BD:148:GLN:HB2	26:BD:152:PRO:HG2	1.81	0.63
13:CP:67:ILE:HD11	13:CP:71:VAL:HG22	1.81	0.63
39:DX:46:VAL:O	39:DX:50:VAL:HG23	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DQ:91:ARG:NH1	49:DR:11:GLN:H	1.96	0.63
23:DB:1506:U:H2'	23:DB:1507:C:C6	2.33	0.63
23:DB:162:U:H4'	23:DB:163:C:OP1	1.98	0.63
2:CC:129:PHE:CG	2:CC:156:LEU:HD21	2.34	0.63
1:AA:840:C:N3	1:AA:842:U:H4'	2.13	0.63
1:CA:1225:A:O2'	16:CS:77:ARG:HD3	1.99	0.63
18:AB:131:LYS:HA	18:AB:134:LEU:HD12	1.80	0.63
23:DB:596:U:H2'	23:DB:597:G:C8	2.34	0.63
1:AA:36:C:O3'	11:AL:119:LYS:HA	1.99	0.63
34:D3:44:ARG:N	34:D3:45:PRO:HD2	2.12	0.63
23:DB:1138:G:H2'	23:DB:1139:G:O4'	1.98	0.63
23:BB:1535:A:O2'	23:BB:1536:C:H5'	1.99	0.63
45:BS:27:LYS:O	45:BS:32:ALA:HB2	1.99	0.63
38:DM:77:PRO:HB2	38:DM:80:VAL:HB	1.80	0.63
23:DB:446:G:C5'	44:DQ:2:ARG:HH22	2.12	0.63
1:AA:313:A:H2'	1:AA:314:C:C6	2.34	0.63
23:BB:1847:A:H4'	23:BB:1848:A:C8	2.34	0.63
11:CL:35:ARG:HH22	11:CL:75:GLU:HA	1.64	0.63
6:AG:58:LEU:HD23	6:AG:58:LEU:H	1.63	0.63
8:CI:56:MET:SD	8:CI:57:VAL:N	2.72	0.62
9:CJ:18:ILE:O	9:CJ:22:THR:HG23	1.99	0.62
23:BB:2272:U:HO2'	23:BB:2273:A:H8	1.46	0.62
1:AA:1148:U:H5'	8:AI:6:TYR:OH	1.99	0.62
10:AK:91:GLY:HA2	10:AK:94:SER:HB3	1.81	0.62
27:DK:73:ASP:O	28:DP:74:GLN:HG3	1.99	0.62
12:AM:84:CYS:O	12:AM:88:LEU:HG	1.99	0.62
1:AA:1271:A:H5'	1:AA:1314:C:H5'	1.80	0.62
24:DI:121:ILE:N	24:DI:121:ILE:HD13	2.13	0.62
46:BU:50:ALA:H	46:BU:53:GLN:HE21	1.45	0.62
2:CC:148:ILE:HA	2:CC:200:TRP:O	1.98	0.62
38:DM:66:ARG:HG3	38:DM:101:VAL:CG2	2.29	0.62
40:BH:50:ARG:HE	40:BH:50:ARG:N	1.96	0.62
17:AT:46:ALA:HB1	17:AT:82:ILE:HG22	1.81	0.62
1:AA:1175:G:H2'	1:AA:1176:A:C8	2.34	0.62
1:CA:777:A:H2'	1:CA:778:G:C8	2.33	0.62
23:DB:594:U:H2'	23:DB:595:C:C6	2.33	0.62
1:AA:285:C:H2'	1:AA:286:C:C6	2.34	0.62
23:DB:2150:C:H2'	23:DB:2151:U:C6	2.34	0.62
51:BZ:70:GLU:O	51:BZ:72:ARG:N	2.31	0.62
23:DB:2809:A:H2'	23:DB:2810:A:C8	2.34	0.62
23:DB:1050:A:H2'	23:DB:1051:G:O4'	1.98	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2849:U:H4'	23:BB:2850:A:H5'	1.80	0.62
23:BB:39:G:H2'	23:BB:40:U:C6	2.34	0.62
1:AA:429:U:H1'	1:AA:430:A:H5''	1.81	0.62
25:DC:239:PHE:O	25:DC:241:LYS:HG3	1.97	0.62
23:BB:1947:C:H2'	23:BB:1948:G:H8	1.64	0.62
23:BB:2246:G:H2'	23:BB:2247:A:C8	2.34	0.62
13:AP:48:GLU:HG3	13:AP:49:GLY:H	1.64	0.62
23:DB:191:A:H2'	23:DB:192:C:C6	2.33	0.62
18:CB:40:ILE:HG22	18:CB:41:ASN:H	1.64	0.62
29:DE:58:LYS:CD	29:DE:58:LYS:H	2.12	0.62
26:BD:8:LYS:N	26:BD:201:LEU:HD11	2.14	0.62
35:BV:30:ILE:HB	35:BV:38:LEU:HB3	1.81	0.62
5:AF:29:ILE:HD13	5:AF:64:VAL:HG11	1.81	0.62
44:DQ:4:LYS:NZ	44:DQ:7:VAL:HG22	2.14	0.62
23:DB:634:C:H2'	23:DB:635:C:H6	1.64	0.62
49:BR:16:GLU:HA	49:BR:98:ILE:HG22	1.79	0.62
49:DR:15:SER:HB3	49:DR:18:GLN:HE21	1.64	0.62
46:BU:78:LYS:CD	46:BU:79:ALA:H	2.09	0.62
24:DI:27:LEU:HD12	24:DI:32:VAL:HG11	1.80	0.62
8:AI:113:LYS:HA	8:AI:120:ALA:HB2	1.81	0.62
39:BX:46:VAL:O	39:BX:50:VAL:HG23	1.99	0.62
1:AA:1047:G:H5''	21:AN:3:GLN:HG2	1.81	0.62
24:DI:41:PHE:O	24:DI:45:THR:HG23	1.99	0.62
51:DZ:31:PRO:HB2	51:DZ:33:LEU:CD1	2.27	0.62
32:D4:4:ARG:HG2	32:D4:5:ALA:H	1.64	0.62
1:AA:947:G:H4'	12:AM:107:THR:OG1	1.99	0.62
23:DB:2591:C:H2'	23:DB:2592:G:H8	1.63	0.62
3:AD:32:LYS:HA	3:AD:35:GLN:HE21	1.62	0.62
48:DG:71:LEU:HD13	48:DG:74:MET:SD	2.39	0.62
23:DB:19:A:H2'	23:DB:20:C:H6	1.64	0.62
23:BB:1387:A:H5'	23:BB:1469:A:H1'	1.81	0.62
23:DB:2600:A:O2'	23:DB:2601:C:H5'	1.99	0.62
1:AA:1007:U:H2'	1:AA:1008:U:H6	1.64	0.62
3:CD:138:PRO:HA	3:CD:181:PHE:HD2	1.64	0.62
1:CA:810:C:O2'	1:CA:811:C:H5'	1.99	0.62
23:DB:348:A:H2'	23:DB:349:U:O4'	1.98	0.62
23:BB:2847:U:H5''	28:BP:94:ALA:CB	2.29	0.62
1:AA:673:A:H2'	1:AA:674:G:C8	2.33	0.62
23:DB:848:C:H2'	23:DB:849:A:C8	2.34	0.62
12:AM:13:HIS:HB3	12:AM:40:GLU:O	1.99	0.62
12:AM:21:ILE:CG2	12:AM:65:GLU:H	2.10	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BT:32:LEU:HG	50:BT:83:ALA:CB	2.30	0.62
26:BD:111:GLY:H	26:BD:194:PRO:HG2	1.65	0.62
36:B2:33:ARG:NH2	36:B2:33:ARG:HB2	2.15	0.62
18:AB:113:LEU:HD21	18:AB:151:LYS:HD2	1.81	0.62
25:BC:77:VAL:CG2	25:BC:112:GLY:H	2.12	0.62
40:DH:5:LEU:HD22	40:DH:13:GLY:HA2	1.80	0.62
48:DG:155:PRO:HA	48:DG:170:THR:HA	1.81	0.62
6:AG:30:MET:SD	6:AG:35:LYS:HD2	2.39	0.62
1:AA:77:A:H2'	1:AA:78:A:C8	2.34	0.62
11:AL:79:ILE:C	11:AL:101:LEU:HD12	2.20	0.62
36:B2:35:ARG:HB2	36:B2:42:LEU:HD21	1.81	0.62
1:CA:559:A:H4'	1:CA:560:A:H3'	1.79	0.62
23:BB:1001:A:H2'	23:BB:1002:G:O4'	1.99	0.62
3:CD:26:ALA:C	3:CD:28:ASP:H	2.03	0.62
2:AC:72:PRO:O	2:AC:76:ILE:HG12	1.99	0.62
23:BB:594:U:H2'	23:BB:595:C:C6	2.34	0.62
23:BB:1353:A:H2'	23:BB:1354:A:C8	2.34	0.62
6:AG:112:ASP:HB2	6:AG:118:ARG:HG2	1.80	0.62
1:AA:74:A:H2'	1:AA:75:G:O4'	1.97	0.62
1:CA:735:C:H5'	15:CR:59:LYS:HD3	1.81	0.62
23:DB:6:A:H2'	23:DB:7:G:H8	1.64	0.62
9:CJ:22:THR:HG21	9:CJ:72:ARG:HG3	1.81	0.62
37:DL:17:LYS:HD2	37:DL:19:LEU:HD11	1.80	0.62
14:CQ:75:VAL:HG23	14:CQ:76:ARG:HG2	1.80	0.62
23:DB:2774:C:OP1	26:DD:169:ARG:HG3	2.00	0.62
28:BP:56:SER:HB2	28:BP:75:THR:CG2	2.29	0.62
44:BQ:63:ARG:HH12	44:BQ:96:ASP:HB2	1.64	0.62
44:BQ:111:LYS:HB2	49:BR:48:LYS:HZ3	1.63	0.62
47:BF:110:ILE:CB	47:BF:113:PHE:HB3	2.27	0.62
4:CE:113:VAL:HG11	4:CE:136:VAL:HG23	1.80	0.62
27:DK:7:MET:SD	27:DK:20:MET:HB2	2.39	0.62
1:AA:1332:A:H2'	1:AA:1333:A:C8	2.35	0.62
23:BB:155:A:H2'	23:BB:156:A:C8	2.34	0.62
25:DC:4:LYS:HE2	25:DC:5:CYS:H	1.64	0.62
23:BB:572:A:H5''	49:BR:80:ARG:NH2	2.13	0.62
23:DB:851:C:H2'	23:DB:852:U:C6	2.35	0.62
23:BB:1459:G:H4'	23:BB:1461:C:C4	2.34	0.62
1:CA:140:U:H2'	1:CA:141:G:C8	2.35	0.62
1:CA:925:G:O2'	1:CA:926:G:H5''	1.99	0.62
51:BZ:39:TRP:HB2	51:BZ:46:PHE:CE2	2.35	0.62
23:DB:1100:C:H2'	23:DB:1101:U:H6	1.65	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:90:LEU:HD22	40:BH:123:ARG:HA	1.80	0.62
50:DT:53:VAL:HG12	50:DT:54:GLU:H	1.64	0.62
2:CC:63:ILE:H	2:CC:98:ALA:HB2	1.65	0.62
44:BQ:4:LYS:NZ	44:BQ:7:VAL:HG22	2.13	0.62
23:BB:1060:U:O4	23:BB:1088:A:N6	2.31	0.62
48:DG:91:VAL:HG23	48:DG:92:GLY:H	1.65	0.62
48:BG:84:LYS:HG2	48:BG:85:LYS:N	2.11	0.62
28:DP:4:ILE:O	28:DP:6:GLN:N	2.32	0.62
18:CB:23:ASN:HB3	18:CB:188:THR:O	1.99	0.62
16:AS:69:LYS:O	16:AS:72:GLU:HG3	2.00	0.62
1:AA:1317:C:OP1	21:AN:56:PRO:HD2	1.99	0.62
24:BI:18:ASN:N	24:BI:19:PRO:HD2	2.13	0.62
38:BM:21:ALA:CB	38:BM:100:LYS:HG2	2.30	0.62
1:CA:947:G:H5'	12:CM:106:ARG:HB2	1.81	0.62
1:CA:205:A:H2'	1:CA:206:C:H6	1.64	0.62
27:DK:19:VAL:C	27:DK:41:ILE:HD11	2.20	0.62
1:AA:522:C:H41	11:AL:49:ARG:NH2	1.98	0.62
1:AA:1132:C:H2'	1:AA:1133:G:C8	2.34	0.62
23:DB:1469:A:H2'	23:DB:1470:A:C8	2.35	0.62
2:CC:46:LEU:HB3	2:CC:49:ALA:HB3	1.80	0.62
34:D3:31:ILE:HD11	34:D3:34:LYS:HD3	1.81	0.62
23:DB:2070:A:H2'	23:DB:2071:A:C8	2.34	0.62
47:BF:78:ILE:HA	47:BF:82:TYR:CG	2.34	0.62
18:CB:9:LEU:O	18:CB:13:VAL:HG23	1.99	0.62
1:CA:188:C:H2'	1:CA:189:A:O4'	1.99	0.62
6:CG:76:SER:HA	6:CG:84:TYR:O	1.99	0.62
23:BB:2787:C:H4'	26:BD:62:LYS:HB3	1.81	0.62
23:DB:1274:A:N3	23:DB:1297:C:H1'	2.14	0.62
1:AA:411:A:C4	1:AA:413:G:H1'	2.35	0.62
1:AA:797:C:O2'	1:AA:798:U:H5'	1.99	0.62
23:BB:2516:A:O2'	23:BB:2517:C:H5'	1.99	0.62
23:BB:1690:A:H2'	23:BB:1691:C:O4'	1.99	0.62
23:BB:2810:A:H2'	23:BB:2811:G:O4'	1.99	0.62
40:BH:90:LEU:HB2	40:BH:123:ARG:HB3	1.80	0.62
18:CB:44:LYS:C	18:CB:47:PRO:HD2	2.19	0.62
42:DN:38:LEU:HD11	42:DN:42:LYS:HE3	1.81	0.62
35:DV:30:ILE:HB	35:DV:38:LEU:HB3	1.81	0.62
26:DD:10:GLY:HA3	26:DD:26:VAL:N	2.15	0.62
23:DB:2267:A:C8	23:DB:2267:A:C3'	2.79	0.62
37:BL:78:ARG:HB3	37:BL:113:ALA:HB2	1.82	0.62
23:DB:1173:U:H2'	23:DB:1174:U:C6	2.35	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:190:THR:HG22	2:CC:193:GLY:O	2.00	0.62
16:AS:52:ASN:HD21	16:AS:54:ARG:HD2	1.63	0.62
47:BF:32:LYS:H	47:BF:95:MET:HE1	1.64	0.62
21:AN:60:ARG:HH21	21:AN:69:PRO:HD3	1.63	0.62
47:DF:29:ARG:HB2	47:DF:29:ARG:HH11	1.64	0.62
43:DO:90:VAL:HG22	43:DO:115:LEU:HD12	1.81	0.62
4:AE:37:VAL:HG12	4:AE:47:PHE:HB3	1.82	0.62
23:DB:1080:A:H4'	24:DI:126:ARG:HD2	1.82	0.62
1:CA:1013:G:H2'	1:CA:1015:G:OP2	1.99	0.62
44:DQ:63:ARG:HH22	44:DQ:96:ASP:CA	2.12	0.62
27:DK:17:ARG:HB3	27:DK:45:GLU:CB	2.30	0.62
44:BQ:26:ALA:HB1	44:BQ:30:VAL:HB	1.82	0.62
45:DS:26:GLY:H	45:DS:71:VAL:HG13	1.64	0.62
41:DJ:49:ASP:OD2	41:DJ:121:LYS:HD3	1.99	0.62
23:DB:2352:A:C6	52:DW:30:VAL:HG11	2.35	0.62
1:CA:1479:C:H2'	1:CA:1480:A:H8	1.64	0.62
23:DB:150:U:H2'	23:DB:151:C:H6	1.65	0.62
23:DB:1911:U:H2'	23:DB:1918:A:N1	2.15	0.62
47:BF:74:ALA:HB3	47:BF:78:ILE:HD13	1.82	0.62
23:BB:2809:A:H2'	23:BB:2810:A:C8	2.34	0.62
43:BO:111:ARG:HD2	43:BO:117:PHE:OXT	1.99	0.62
13:AP:74:LEU:O	13:AP:78:VAL:HG12	1.99	0.62
1:CA:1484:C:O2'	23:DB:1961:C:H5'	1.99	0.62
1:CA:1273:C:H2'	1:CA:1274:A:O4'	1.98	0.62
19:CU:18:PHE:HA	19:CU:21:SER:HB3	1.80	0.62
1:CA:1458:G:H2'	1:CA:1459:G:H8	1.65	0.62
45:DS:27:LYS:O	45:DS:32:ALA:HB2	2.00	0.62
37:BL:110:VAL:HB	37:BL:127:VAL:HA	1.80	0.62
23:DB:1847:A:H4'	23:DB:1848:A:C8	2.34	0.62
8:CI:5:TYR:HB3	8:CI:88:GLU:OE2	1.99	0.62
1:AA:1527:U:O2'	1:AA:1528:U:H5'	1.99	0.62
48:BG:24:THR:HG22	48:BG:32:LEU:HD22	1.82	0.62
29:BE:106:LYS:NZ	29:BE:201:ALA:HB2	2.15	0.62
43:BO:36:TYR:HA	43:BO:52:SER:HB3	1.81	0.62
8:AI:27:ILE:HB	8:AI:34:LEU:HD22	1.81	0.62
12:AM:106:ARG:NE	12:AM:112:ARG:HG2	2.10	0.62
42:BN:37:THR:OG1	42:BN:40:LYS:HE2	2.00	0.62
12:CM:22:TYR:HD1	12:CM:65:GLU:HA	1.63	0.62
15:CR:38:ILE:H	15:CR:38:ILE:HD13	1.65	0.62
30:DY:5:LYS:HE2	30:DY:5:LYS:N	2.15	0.62
23:BB:1241:A:H2'	23:BB:1242:U:H5'	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CB:119:GLN:HE21	18:CB:125:PHE:HB2	1.63	0.62
38:DM:21:ALA:CB	38:DM:100:LYS:HG2	2.29	0.62
27:BK:87:LEU:HD12	27:BK:92:GLU:HA	1.82	0.62
23:BB:2097:A:H2'	23:BB:2098:U:H6	1.65	0.62
23:DB:1387:A:C4'	23:DB:1469:A:H1'	2.29	0.62
23:BB:1469:A:H2'	23:BB:1470:A:C8	2.34	0.62
2:AC:26:LYS:HG3	2:AC:27:GLU:H	1.64	0.62
23:BB:2579:C:O2'	26:BD:136:ASN:HA	1.98	0.62
3:AD:182:LYS:HG2	3:AD:183:ARG:HG3	1.80	0.62
1:CA:1216:A:H5''	21:CN:4:SER:OG	2.00	0.62
23:BB:850:U:O2'	30:BY:22:THR:HG22	2.00	0.62
5:AF:9:MET:HB2	5:AF:57:ALA:HB1	1.81	0.62
16:AS:17:LYS:HD2	16:AS:30:LEU:HD21	1.82	0.62
1:AA:1180:A:P	8:AI:98:ARG:HH22	2.23	0.62
1:CA:411:A:C4	1:CA:413:G:H1'	2.35	0.62
9:CJ:10:LEU:O	9:CJ:71:LEU:HA	2.00	0.62
4:AE:81:GLN:HE21	4:AE:149:PRO:HD3	1.64	0.62
40:BH:116:ARG:HH21	40:BH:139:PHE:HB3	1.63	0.62
23:DB:2330:G:H1'	52:DW:38:ARG:HB2	1.82	0.62
23:BB:146:A:H2'	23:BB:147:C:C6	2.35	0.62
49:BR:14:VAL:HG21	49:BR:98:ILE:HG12	1.81	0.62
44:DQ:86:SER:HB3	49:DR:51:VAL:HA	1.82	0.62
27:BK:71:ARG:CZ	27:BK:72:PRO:HD3	2.29	0.62
35:DV:80:HIS:HD2	35:DV:83:LYS:H	1.46	0.62
23:DB:2052:A:C8	26:DD:146:ILE:HD11	2.35	0.62
23:BB:395:U:H2'	23:BB:396:G:N7	2.14	0.62
51:DZ:5:CYS:HB3	51:DZ:10:LYS:H	1.65	0.62
40:BH:14:SER:HB2	40:BH:17:ASP:HB3	1.79	0.62
1:CA:973:G:OP1	1:CA:974:A:H5'	2.00	0.62
27:DK:85:VAL:O	27:DK:87:LEU:HD23	2.00	0.62
23:DB:2182:U:H2'	23:DB:2183:A:C8	2.35	0.62
23:DB:721:A:H2'	23:DB:722:A:H8	1.64	0.62
23:DB:1535:A:H3'	23:DB:1536:C:H6	1.65	0.62
1:CA:590:U:H2'	1:CA:591:U:H6	1.63	0.62
23:DB:1400:U:H2'	23:DB:1401:G:C8	2.34	0.62
34:D3:56:LEU:HD21	37:DL:51:GLU:HG3	1.81	0.62
1:CA:301:G:H2'	1:CA:302:G:H8	1.65	0.62
18:AB:127:LYS:H	18:AB:127:LYS:HD3	1.64	0.62
36:B2:41:ARG:HH21	36:B2:41:ARG:HB2	1.64	0.62
23:DB:2321:U:H3'	23:DB:2322:A:H5''	1.81	0.62
52:DW:32:ALA:C	52:DW:34:SER:H	2.03	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CB:44:LYS:O	18:CB:47:PRO:HD2	2.00	0.62
2:CC:39:ARG:CG	2:CC:56:ILE:HD11	2.30	0.62
14:AQ:75:VAL:HG23	14:AQ:76:ARG:HG2	1.81	0.62
26:DD:105:LYS:H	26:DD:106:LYS:NZ	1.98	0.62
26:DD:25:THR:HG21	26:DD:193:VAL:CG2	2.29	0.62
52:BW:35:ILE:HG12	52:BW:35:ILE:O	1.99	0.62
2:AC:116:ALA:O	2:AC:119:ILE:HG22	1.99	0.62
23:DB:639:U:H2'	23:DB:640:C:C6	2.34	0.62
35:DV:51:GLN:HB2	35:DV:57:TYR:OH	2.00	0.62
13:AP:67:ILE:HD11	13:AP:71:VAL:HG22	1.81	0.62
38:BM:66:ARG:HB2	38:BM:101:VAL:O	2.00	0.62
48:BG:155:PRO:HA	48:BG:170:THR:HA	1.82	0.62
47:BF:168:LEU:HD13	47:BF:169:LEU:N	2.15	0.62
23:DB:2867:G:HO2'	23:DB:2868:A:H8	1.47	0.62
44:DQ:63:ARG:NH2	44:DQ:96:ASP:HA	2.15	0.62
25:BC:159:THR:O	25:BC:194:VAL:HG12	2.00	0.62
1:CA:1053:G:H4'	1:CA:1054:C:H5'	1.82	0.62
23:BB:39:G:H2'	23:BB:40:U:H6	1.63	0.62
15:CR:34:GLU:HB2	19:CU:18:PHE:CZ	2.34	0.62
1:CA:429:U:H3'	3:CD:8:LEU:HD23	1.82	0.62
7:CH:8:ASP:OD1	7:CH:12:ARG:HD2	2.00	0.62
45:DS:18:ARG:HB3	45:DS:76:VAL:HG22	1.82	0.62
2:CC:32:LEU:HD21	21:CN:92:ILE:HG13	1.80	0.62
43:DO:111:ARG:HD2	43:DO:117:PHE:OXT	1.99	0.62
1:CA:1461:G:H2'	1:CA:1462:C:C6	2.35	0.62
1:AA:600:A:H5''	7:AH:88:LYS:HD2	1.81	0.62
23:BB:1842:G:H2'	23:BB:1843:C:C6	2.35	0.62
1:CA:195:A:H2'	1:CA:196:A:C8	2.34	0.62
23:DB:288:U:H2'	23:DB:289:G:C8	2.34	0.62
20:CO:33:THR:HG23	20:CO:63:ARG:NH1	2.15	0.62
29:DE:192:ALA:O	29:DE:196:VAL:HG23	2.00	0.62
40:DH:77:THR:HG23	40:DH:143:ILE:HG22	1.81	0.62
23:BB:1196:C:H2'	23:BB:1197:G:C8	2.35	0.62
37:BL:143:GLU:HG2	37:BL:144:GLU:N	2.13	0.62
48:BG:148:ARG:HB2	48:BG:152:ARG:NH1	2.13	0.62
42:BN:45:ARG:O	42:BN:49:GLU:HG3	2.00	0.62
23:BB:2443:C:O2'	23:BB:2444:G:H5'	2.00	0.62
49:DR:14:VAL:HG21	49:DR:98:ILE:HG12	1.81	0.62
47:DF:31:GLU:O	47:DF:32:LYS:HD3	2.00	0.62
23:DB:581:C:H2'	23:DB:582:A:C8	2.33	0.62
1:CA:840:C:N3	1:CA:842:U:H4'	2.15	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:639:U:H2'	23:BB:640:C:C6	2.34	0.62
25:DC:196:ASN:ND2	25:DC:199:HIS:HB2	2.14	0.62
1:CA:652:U:H1'	1:CA:653:U:C5	2.35	0.62
3:AD:26:ALA:C	3:AD:28:ASP:H	2.03	0.62
49:BR:2:TYR:H	49:BR:42:ALA:HB2	1.64	0.62
1:AA:674:G:H2'	1:AA:675:A:H8	1.62	0.62
23:DB:1779:U:H5	23:DB:1784:A:N7	1.97	0.62
34:B3:3:ILE:HG21	34:B3:62:PRO:HG2	1.81	0.62
15:AR:37:LYS:HZ3	19:AU:22:CYS:HB2	1.65	0.62
23:DB:1782:U:H3'	57:DB:3606:HOH:O	2.00	0.62
23:BB:2104:C:H2'	23:BB:2105:U:C6	2.34	0.62
3:AD:138:PRO:HA	3:AD:181:PHE:HD2	1.64	0.62
1:AA:441:A:H61	1:AA:493:A:N6	1.97	0.62
1:CA:859:G:H2'	1:CA:860:A:C8	2.35	0.62
23:BB:1400:U:H2'	23:BB:1401:G:C8	2.35	0.62
23:DB:1026:G:H2'	23:DB:1027:A:H8	1.65	0.62
10:AK:31:VAL:HG21	10:AK:66:ALA:HA	1.82	0.61
23:DB:2271:G:H2'	23:DB:2272:U:C5	2.34	0.61
24:DI:72:THR:HG22	24:DI:115:ASP:OD2	1.99	0.61
24:DI:78:LEU:HA	24:DI:81:LYS:HE2	1.81	0.61
18:CB:33:ALA:HB2	18:CB:38:HIS:HA	1.81	0.61
16:AS:44:ILE:HA	16:AS:61:VAL:CG1	2.30	0.61
23:DB:878:A:N3	23:DB:878:A:H2'	2.14	0.61
8:CI:70:GLY:O	8:CI:74:GLN:HB2	2.00	0.61
49:DR:16:GLU:HA	49:DR:98:ILE:HG22	1.82	0.61
26:DD:148:GLN:HB2	26:DD:152:PRO:HG2	1.80	0.61
25:BC:77:VAL:HG23	25:BC:112:GLY:N	2.15	0.61
23:BB:1245:G:OP1	37:BL:13:LYS:HE3	2.00	0.61
23:DB:2143:C:C4	23:DB:2144:G:H1'	2.35	0.61
1:CA:955:U:H1'	1:CA:1227:A:H61	1.64	0.61
21:CN:65:GLN:NE2	21:CN:65:GLN:H	1.98	0.61
1:CA:676:A:H1'	10:CK:116:PRO:HB3	1.82	0.61
3:CD:25:ARG:CZ	3:CD:26:ALA:HB2	2.30	0.61
23:DB:441:U:H2'	23:DB:442:G:H8	1.65	0.61
23:DB:851:C:H2'	23:DB:852:U:H6	1.64	0.61
1:CA:429:U:H1'	1:CA:430:A:H5''	1.82	0.61
45:BS:13:SER:OG	45:BS:16:LYS:HB2	2.00	0.61
1:CA:1422:G:O2'	1:CA:1423:G:H5'	2.00	0.61
23:DB:222:A:N1	23:DB:233:A:H5''	2.15	0.61
1:AA:5:U:H1'	1:AA:6:G:N2	2.15	0.61
23:BB:2569:G:O2'	23:BB:2570:G:H5'	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:532:A:N3	23:DB:532:A:H2'	2.15	0.61
23:BB:346:A:H5'	23:BB:346:A:N3	2.15	0.61
23:DB:1464:G:H2'	23:DB:1465:G:H8	1.65	0.61
1:CA:313:A:H2'	1:CA:314:C:C6	2.34	0.61
1:AA:714:G:H2'	1:AA:715:A:C8	2.35	0.61
10:AK:124:LYS:CA	19:AU:34:ARG:HB3	2.29	0.61
23:DB:923:G:H1'	52:DW:23:LYS:HZ2	1.65	0.61
25:DC:89:ASN:O	25:DC:105:ALA:HB3	2.00	0.61
2:CC:56:ILE:HG23	2:CC:65:VAL:HG12	1.82	0.61
52:DW:35:ILE:HG13	52:DW:57:THR:OG1	2.00	0.61
10:AK:91:GLY:O	10:AK:95:THR:HG22	2.00	0.61
10:CK:91:GLY:O	10:CK:95:THR:HG22	1.99	0.61
13:AP:3:THR:HG22	13:AP:66:THR:HB	1.82	0.61
41:BJ:64:VAL:O	41:BJ:65:THR:HG22	2.00	0.61
47:DF:121:PHE:HB2	47:DF:126:ASN:O	1.99	0.61
4:AE:28:ARG:HH22	4:AE:30:PHE:HA	1.63	0.61
12:CM:94:LEU:C	12:CM:108:ARG:HG2	2.20	0.61
16:CS:52:ASN:HB2	16:CS:76:THR:HA	1.80	0.61
23:BB:1244:A:H5''	37:BL:8:PRO:HD3	1.82	0.61
28:DP:59:THR:OG1	28:DP:72:VAL:HG12	2.00	0.61
23:DB:845:A:C2	23:DB:847:U:H1'	2.35	0.61
29:DE:48:THR:HG22	29:DE:86:ALA:HB3	1.82	0.61
30:DY:18:LYS:O	30:DY:22:THR:HG23	2.00	0.61
30:BY:18:LYS:O	30:BY:22:THR:HG23	1.99	0.61
23:DB:233:A:H61	23:DB:428:A:N6	1.98	0.61
44:DQ:9:ALA:C	44:DQ:11:ALA:H	2.03	0.61
1:AA:41:G:H2'	1:AA:42:G:C8	2.34	0.61
21:CN:73:LEU:HD12	21:CN:83:VAL:HG21	1.81	0.61
23:DB:1412:U:H2'	23:DB:1413:A:C8	2.35	0.61
1:CA:714:G:H2'	1:CA:715:A:C8	2.35	0.61
23:BB:1274:A:N3	23:BB:1297:C:H1'	2.15	0.61
23:BB:2760:C:O2'	23:BB:2761:A:H5'	1.99	0.61
23:DB:431:U:O2'	23:DB:432:A:H5'	2.00	0.61
26:BD:174:SER:O	26:BD:175:LEU:HB2	1.99	0.61
1:CA:1381:U:H2'	1:CA:1382:C:H6	1.65	0.61
3:CD:48:SER:O	3:CD:52:VAL:HG23	2.01	0.61
4:AE:114:LEU:HD13	4:AE:122:VAL:HG21	1.81	0.61
1:AA:524:G:H2'	1:AA:525:C:C6	2.36	0.61
23:DB:1390:U:O2'	23:DB:1391:U:H5'	2.00	0.61
12:AM:80:MET:HA	12:AM:87:GLY:HA3	1.81	0.61
50:DT:30:ILE:O	50:DT:85:VAL:HG23	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1347:G:N2	1:CA:1373:G:H2'	2.14	0.61
2:CC:39:ARG:HG2	2:CC:56:ILE:HD11	1.81	0.61
40:BH:66:ASN:HA	40:BH:135:HIS:ND1	2.15	0.61
25:BC:153:LEU:HD13	25:BC:175:LEU:HD21	1.80	0.61
23:DB:1180:U:H2'	23:DB:1181:U:C6	2.33	0.61
40:DH:94:ILE:O	40:DH:122:LEU:HB2	2.00	0.61
44:BQ:57:ARG:HA	44:BQ:60:TRP:CE3	2.34	0.61
47:BF:91:ARG:HD3	47:BF:91:ARG:N	2.15	0.61
30:DY:6:ILE:O	30:DY:34:THR:HA	1.99	0.61
18:AB:85:SER:HB2	18:AB:88:GLN:HE22	1.65	0.61
29:DE:28:VAL:O	29:DE:32:VAL:HG13	1.99	0.61
40:DH:41:LYS:O	40:DH:45:GLU:HG3	1.99	0.61
12:CM:84:CYS:SG	12:CM:86:ARG:HB2	2.40	0.61
16:CS:52:ASN:HB2	16:CS:76:THR:HG22	1.82	0.61
27:BK:61:VAL:HG13	27:BK:87:LEU:HD21	1.82	0.61
51:BZ:31:PRO:HB2	51:BZ:33:LEU:CD1	2.30	0.61
18:CB:81:ASP:HA	18:CB:84:LEU:HD22	1.82	0.61
23:DB:470:A:H61	50:DT:72:GLN:HE22	1.47	0.61
6:AG:62:GLU:HG3	6:AG:69:ARG:HH22	1.65	0.61
23:DB:155:A:H2'	23:DB:156:A:C8	2.35	0.61
1:CA:1521:C:H2'	1:CA:1522:U:H6	1.63	0.61
1:CA:607:A:H2'	1:CA:608:A:C8	2.35	0.61
23:DB:1028:A:H2'	23:DB:1029:A:C8	2.35	0.61
23:BB:129:C:H2'	23:BB:130:C:C6	2.35	0.61
23:DB:1406:U:H2'	23:DB:1407:G:C8	2.35	0.61
41:DJ:23:LYS:HD2	41:DJ:142:ILE:HG12	1.83	0.61
23:DB:1690:A:H2'	23:DB:1691:C:O4'	1.99	0.61
1:AA:745:G:H2'	1:AA:746:A:C8	2.35	0.61
23:BB:466:A:N3	23:BB:683:U:H1'	2.15	0.61
28:DP:30:TRP:CD1	28:DP:39:LEU:HG	2.35	0.61
23:BB:273:G:H2'	23:BB:274:C:C6	2.36	0.61
38:DM:11:LYS:HD3	38:DM:86:LYS:HD3	1.81	0.61
29:DE:161:ALA:HA	29:DE:164:LEU:HB2	1.82	0.61
22:DA:48:U:H2'	22:DA:49:C:C6	2.35	0.61
1:CA:854:U:H3'	1:CA:871:U:H3	1.64	0.61
50:DT:53:VAL:HG11	50:DT:87:LEU:HD13	1.82	0.61
8:CI:79:ARG:HB3	8:CI:79:ARG:HH11	1.66	0.61
25:DC:156:SER:O	25:DC:194:VAL:HG11	1.99	0.61
23:DB:1199:U:H2'	23:DB:1200:C:C6	2.35	0.61
1:AA:1288:A:H2'	1:AA:1289:A:O4'	2.00	0.61
48:BG:86:LEU:HG	48:BG:163:TYR:HD1	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:27:G:H1'	23:BB:513:A:N6	2.15	0.61
2:AC:168:ARG:NH1	2:AC:172:VAL:HG23	2.16	0.61
27:DK:35:VAL:HG23	27:DK:36:GLY:N	2.13	0.61
50:BT:69:ARG:HB2	50:BT:75:GLY:H	1.65	0.61
46:DU:73:ASN:HB3	46:DU:95:PHE:CZ	2.35	0.61
47:DF:135:ILE:HG12	47:DF:137:PHE:CD1	2.36	0.61
47:BF:110:ILE:HA	47:BF:111:ARG:NH2	2.15	0.61
1:AA:921:U:H2'	1:AA:922:G:C8	2.36	0.61
25:BC:4:LYS:HE2	25:BC:5:CYS:H	1.65	0.61
2:AC:41:TYR:O	2:AC:45:GLU:HG3	2.00	0.61
1:CA:1307:U:H2'	1:CA:1308:U:C6	2.35	0.61
33:B1:9:LYS:N	33:B1:9:LYS:HD3	2.14	0.61
23:BB:2189:U:H2'	23:BB:2190:G:C8	2.36	0.61
23:BB:1149:G:H2'	23:BB:1150:C:H6	1.63	0.61
23:BB:721:A:H2'	23:BB:722:A:H8	1.64	0.61
23:BB:1061:U:O4	24:BI:10:LEU:HA	2.00	0.61
20:AO:67:LEU:HD13	20:AO:88:ARG:HH12	1.65	0.61
1:CA:73:C:H2'	1:CA:74:A:H8	1.66	0.61
38:DM:64:TRP:HB2	38:DM:104:GLU:HB2	1.82	0.61
1:CA:157:U:O2'	1:CA:158:G:H5'	1.99	0.61
49:BR:43:ASN:ND2	49:BR:44:GLY:H	1.98	0.61
1:AA:1476:A:H2'	1:AA:1477:U:C6	2.36	0.61
34:D3:3:ILE:HG21	34:D3:62:PRO:HG2	1.82	0.61
51:DZ:39:TRP:HB2	51:DZ:46:PHE:CE2	2.35	0.61
22:BA:48:U:H2'	22:BA:49:C:C6	2.35	0.61
6:CG:71:THR:HG22	6:CG:141:HIS:NE2	2.16	0.61
7:CH:113:ARG:HH21	7:CH:117:GLN:HB2	1.64	0.61
45:BS:4:ILE:HG22	45:BS:106:VAL:HG22	1.82	0.61
1:AA:1521:C:H2'	1:AA:1522:U:C6	2.35	0.61
23:BB:1230:A:H2'	23:BB:1231:U:H6	1.65	0.61
23:BB:1779:U:H5	23:BB:1784:A:N7	1.97	0.61
23:DB:2135:A:H5''	23:DB:2157:G:N2	2.16	0.61
1:CA:1040:U:H2'	1:CA:1041:G:C8	2.35	0.61
8:CI:5:TYR:HD1	8:CI:20:ILE:HG22	1.66	0.61
32:B4:13:ASN:O	32:B4:27:CYS:HA	2.00	0.61
1:AA:255:G:H2'	1:AA:256:U:C6	2.36	0.61
40:BH:68:ARG:NH1	40:BH:72:ILE:HD13	2.16	0.61
8:AI:28:VAL:HG13	8:AI:32:ARG:O	2.00	0.61
6:CG:62:GLU:O	6:CG:66:GLU:HG3	1.99	0.61
26:BD:118:PHE:HZ	26:BD:123:LYS:HZ3	1.48	0.61
45:BS:59:GLU:OE2	45:BS:66:ILE:HG23	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:58:LYS:C	29:BE:60:TRP:N	2.51	0.61
26:BD:5:VAL:N	26:BD:32:ASN:HD21	1.98	0.61
38:DM:66:ARG:HB2	38:DM:101:VAL:O	1.99	0.61
23:DB:2769:U:H2'	23:DB:2770:G:C8	2.34	0.61
1:CA:239:U:C5'	1:CA:239:U:H6	2.13	0.61
23:DB:2064:C:H2'	23:DB:2065:C:C6	2.34	0.61
26:DD:40:LEU:HD23	26:DD:46:ARG:HG2	1.82	0.61
1:CA:384:G:H2'	1:CA:385:C:C6	2.35	0.61
41:BJ:36:LEU:HD12	41:BJ:121:LYS:HB2	1.83	0.61
23:BB:233:A:H61	23:BB:428:A:N6	1.98	0.61
23:BB:596:U:H2'	23:BB:597:G:C8	2.35	0.61
1:CA:736:C:H2'	1:CA:737:C:C6	2.36	0.61
3:CD:88:ASN:O	3:CD:92:LEU:HD23	2.00	0.61
44:BQ:9:ALA:C	44:BQ:11:ALA:H	2.02	0.61
42:BN:43:GLU:O	42:BN:47:VAL:HG23	2.00	0.61
28:BP:26:GLU:HG3	28:BP:43:GLU:HB2	1.81	0.61
1:AA:607:A:H2'	1:AA:608:A:C8	2.35	0.61
23:BB:2078:C:H2'	23:BB:2079:U:C6	2.35	0.61
1:AA:1077:G:N2	1:AA:1079:G:H3'	2.15	0.61
23:DB:1842:G:H2'	23:DB:1843:C:C6	2.35	0.61
28:BP:32:VAL:HA	28:BP:37:LYS:HA	1.82	0.61
23:DB:27:G:H1'	23:DB:513:A:N6	2.15	0.61
52:DW:37:VAL:HG11	52:DW:38:ARG:HH11	1.65	0.61
48:DG:89:VAL:HB	48:DG:159:LYS:HA	1.81	0.61
46:BU:5:ARG:HH22	46:BU:93:ARG:HD3	1.64	0.61
28:DP:56:SER:HB2	28:DP:75:THR:CG2	2.30	0.61
29:BE:58:LYS:CD	29:BE:58:LYS:H	2.13	0.61
12:AM:79:LEU:HB2	12:AM:84:CYS:SG	2.39	0.61
27:BK:70:ARG:HB3	27:BK:76:VAL:HG13	1.82	0.61
4:AE:152:VAL:HA	4:AE:155:LYS:HD3	1.81	0.61
17:CT:43:LYS:HD3	17:CT:43:LYS:H	1.64	0.61
23:BB:714:U:H1'	23:BB:717:C:H5	1.66	0.61
1:AA:1036:A:H2'	1:AA:1037:C:H5'	1.81	0.61
11:AL:113:ARG:HG2	11:AL:118:VAL:HB	1.82	0.61
42:DN:59:SER:O	42:DN:63:ARG:HB2	2.00	0.61
21:CN:30:ILE:HG22	21:CN:44:VAL:HG21	1.82	0.61
1:AA:1343:G:H4'	8:AI:123:ARG:O	2.00	0.61
1:CA:312:C:H2'	1:CA:313:A:H8	1.64	0.61
1:CA:801:U:H2'	1:CA:802:A:H8	1.65	0.61
23:DB:1924:C:O2'	23:DB:1925:C:H5'	2.00	0.61
1:AA:1117:A:H5''	8:AI:105:ARG:NH2	2.16	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2019:A:H2	23:BB:2035:G:H22	1.49	0.61
23:DB:1531:C:H2'	23:DB:1532:A:C8	2.35	0.61
1:AA:91:U:H2'	1:AA:92:U:C6	2.35	0.61
1:AA:157:U:O2'	1:AA:158:G:H5'	1.99	0.61
23:BB:1138:G:H2'	23:BB:1139:G:O4'	2.01	0.61
50:BT:53:VAL:HG11	50:BT:87:LEU:HD13	1.82	0.61
5:CF:88:MET:HE1	5:CF:90:MET:HG2	1.81	0.61
41:DJ:52:ASP:O	41:DJ:54:ILE:HG22	2.01	0.61
24:BI:11:GLN:HA	24:BI:55:PRO:HA	1.82	0.61
12:CM:22:TYR:HB2	12:CM:65:GLU:CD	2.20	0.61
25:BC:128:THR:HA	25:BC:190:THR:HA	1.83	0.61
18:AB:53:LEU:HD12	18:AB:53:LEU:N	2.16	0.61
50:DT:69:ARG:HG2	50:DT:70:HIS:H	1.65	0.61
30:BY:5:LYS:HG3	30:BY:36:GLU:HG3	1.83	0.61
18:CB:53:LEU:HD22	18:CB:212:TYR:HE1	1.65	0.61
47:DF:32:LYS:H	47:DF:95:MET:HE1	1.66	0.61
1:CA:1006:G:O2'	1:CA:1007:U:H5'	2.00	0.61
28:BP:88:ARG:HB2	28:BP:112:ARG:HH12	1.65	0.61
23:BB:1652:A:H62	42:BN:11:ASN:HD21	1.49	0.61
1:AA:591:U:H2'	1:AA:592:G:C8	2.35	0.61
23:BB:851:C:H2'	23:BB:852:U:H6	1.66	0.61
1:AA:337:G:H2'	1:AA:338:A:H8	1.66	0.61
1:CA:1165:U:H2'	1:CA:1166:G:O4'	2.00	0.61
23:BB:2563:U:H2'	23:BB:2565:A:OP2	2.00	0.61
4:AE:64:GLU:O	4:AE:68:ARG:HG2	2.00	0.61
23:DB:1716:U:H2'	23:DB:1717:A:C8	2.36	0.61
1:CA:1292:G:H2'	1:CA:1293:C:C6	2.36	0.61
52:BW:32:ALA:C	52:BW:34:SER:H	2.04	0.61
1:CA:1028:C:H2'	1:CA:1029:U:O2	2.01	0.61
31:D0:9:ARG:O	31:D0:12:ARG:HB3	2.01	0.61
23:BB:2183:A:H2'	23:BB:2184:A:H8	1.64	0.61
1:AA:1240:U:H4'	1:AA:1241:G:OP2	2.01	0.61
9:CJ:8:ILE:HB	9:CJ:74:VAL:HB	1.82	0.61
5:CF:29:ILE:HD13	5:CF:64:VAL:HG11	1.82	0.61
5:CF:3:HIS:N	5:CF:92:THR:HG23	2.09	0.61
29:DE:105:LEU:O	29:DE:109:LEU:HB2	2.01	0.61
10:AK:22:ILE:HD12	10:AK:85:VAL:HG22	1.81	0.61
23:DB:146:A:H2'	23:DB:147:C:C6	2.35	0.61
48:DG:84:LYS:HG2	48:DG:85:LYS:N	2.12	0.61
27:DK:34:GLY:O	27:DK:36:GLY:N	2.34	0.61
37:BL:79:LEU:HG	37:BL:112:LEU:HA	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:145:ARG:NH2	3:CD:147:LYS:HE2	2.16	0.61
21:AN:46:LYS:HB3	21:AN:46:LYS:NZ	2.16	0.61
47:BF:121:PHE:CB	47:BF:127:TYR:HA	2.30	0.61
4:CE:37:VAL:HG11	4:CE:113:VAL:HG12	1.81	0.61
26:DD:148:GLN:CG	26:DD:152:PRO:HG2	2.31	0.61
11:CL:41:PRO:HB3	11:CL:49:ARG:NH1	2.16	0.61
23:BB:2185:U:H2'	23:BB:2186:G:C8	2.35	0.61
18:CB:79:VAL:HG13	18:CB:80:LYS:N	2.16	0.61
23:DB:2496:C:OP1	38:DM:82:MET:HB2	2.00	0.61
15:AR:34:GLU:HB2	19:AU:18:PHE:CZ	2.36	0.61
4:CE:64:GLU:O	4:CE:68:ARG:HG2	2.01	0.61
23:BB:1716:U:H2'	23:BB:1717:A:C8	2.36	0.61
23:DB:419:U:H2'	23:DB:420:C:C6	2.35	0.61
23:BB:1558:C:H4'	23:BB:1559:U:C5'	2.30	0.61
23:DB:1558:C:H4'	23:DB:1559:U:C5'	2.31	0.61
1:AA:854:U:H3'	1:AA:871:U:H3	1.65	0.61
24:BI:85:ILE:HD13	24:BI:137:LEU:HD21	1.82	0.61
23:BB:1049:C:H1'	23:BB:1113:U:H4'	1.82	0.61
23:DB:1459:G:H4'	23:DB:1461:C:C4	2.35	0.61
23:BB:533:G:H2'	23:BB:534:U:C6	2.35	0.61
2:CC:182:ASP:HB2	2:CC:203:LYS:HE3	1.82	0.61
1:AA:1461:G:H2'	1:AA:1462:C:C6	2.36	0.61
19:CU:41:THR:O	19:CU:45:LYS:HB2	2.01	0.61
1:AA:1328:C:H2'	1:AA:1329:A:O4'	2.01	0.61
50:DT:28:ASN:HA	50:DT:91:GLN:HE22	1.66	0.61
26:DD:8:LYS:N	26:DD:201:LEU:HD11	2.14	0.61
26:BD:106:LYS:O	26:BD:107:VAL:HB	1.99	0.61
5:AF:93:LYS:O	5:AF:94:HIS:HB2	2.01	0.61
26:DD:109:VAL:HG11	26:DD:193:VAL:HB	1.81	0.61
52:DW:19:ARG:NE	52:DW:19:ARG:H	1.98	0.61
21:AN:12:ARG:NE	21:AN:58:ARG:HG3	2.11	0.61
18:AB:53:LEU:HG	18:AB:216:VAL:HA	1.83	0.61
16:AS:45:GLY:H	16:AS:61:VAL:HB	1.66	0.61
1:AA:1314:C:H2'	1:AA:1315:U:C6	2.36	0.61
1:AA:1218:C:H2'	1:AA:1219:A:C8	2.36	0.61
47:BF:134:GLN:HB3	47:BF:149:ARG:HG3	1.81	0.61
2:AC:55:VAL:HG23	2:AC:68:HIS:NE2	2.16	0.61
23:DB:636:G:H3'	37:DL:128:THR:HG21	1.81	0.61
1:AA:384:G:H2'	1:AA:385:C:C6	2.35	0.61
23:BB:233:A:H61	23:BB:428:A:H61	1.47	0.61
23:DB:608:A:H2'	23:DB:609:A:C8	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DL:110:VAL:HG23	37:DL:126:ARG:O	2.00	0.61
23:BB:78:U:O2'	23:BB:79:C:H5'	2.01	0.61
1:AA:1151:A:HO2'	1:AA:1152:A:H8	1.48	0.61
14:CQ:13:SER:HB3	14:CQ:21:VAL:HB	1.82	0.61
1:AA:470:C:H2'	1:AA:471:U:C6	2.36	0.61
24:BI:105:LEU:HD11	24:BI:139:VAL:HG11	1.82	0.61
23:BB:1826:G:H2'	23:BB:1827:U:H6	1.66	0.61
29:BE:161:ALA:HA	29:BE:164:LEU:HB2	1.83	0.61
23:BB:2150:C:H2'	23:BB:2151:U:C6	2.36	0.61
1:CA:692:U:O2	1:CA:694:A:H5''	2.01	0.61
14:AQ:13:SER:HB3	14:AQ:21:VAL:HB	1.83	0.61
18:CB:163:ILE:HD11	18:CB:202:ASN:O	2.00	0.61
9:CJ:10:LEU:HD12	9:CJ:22:THR:HG22	1.83	0.61
40:BH:132:PHE:HB2	40:BH:140:ALA:HB3	1.83	0.61
23:BB:2658:C:C5'	48:BG:159:LYS:HZ2	2.14	0.61
23:DB:635:C:O2'	23:DB:639:U:H5''	2.01	0.61
23:BB:2720:U:H5''	28:BP:52:ARG:NH2	2.11	0.61
28:DP:88:ARG:HB2	28:DP:112:ARG:HH12	1.63	0.61
3:AD:90:LEU:HD21	3:AD:196:GLU:HB3	1.83	0.61
39:BX:14:LEU:CD2	39:BX:57:LEU:HD11	2.31	0.61
27:DK:87:LEU:HD12	27:DK:92:GLU:HA	1.82	0.61
25:BC:89:ASN:O	25:BC:105:ALA:HB3	2.00	0.61
25:BC:156:SER:O	25:BC:194:VAL:HG11	2.00	0.61
1:CA:209:U:H5'	1:CA:210:C:H5	1.66	0.61
23:DB:1796:U:H2'	23:DB:1797:G:C8	2.36	0.61
1:CA:844:G:H2'	1:CA:845:A:H8	1.66	0.61
4:CE:95:MET:HA	4:CE:124:ALA:HB2	1.82	0.61
23:BB:1535:A:H3'	23:BB:1536:C:H6	1.66	0.61
23:BB:851:C:H2'	23:BB:852:U:C6	2.36	0.61
23:DB:1558:C:H4'	23:DB:1559:U:H5''	1.82	0.61
40:DH:27:ARG:NH1	51:DZ:60:ASP:HA	2.16	0.61
37:DL:132:ARG:O	37:DL:135:ILE:HG22	2.00	0.61
1:CA:36:C:O3'	11:CL:119:LYS:HA	2.01	0.61
23:BB:2698:U:H2'	23:BB:2699:C:C6	2.36	0.61
23:DB:997:G:O2'	23:DB:998:C:H5'	2.01	0.61
49:DR:43:ASN:ND2	49:DR:44:GLY:H	1.99	0.61
1:CA:1109:C:H2'	1:CA:1110:A:O4'	2.00	0.61
4:CE:92:ARG:HB3	4:CE:92:ARG:HH11	1.66	0.61
49:DR:71:LYS:HE3	49:DR:73:LYS:NZ	2.16	0.61
23:BB:1406:U:H2'	23:BB:1407:G:C8	2.35	0.61
52:BW:23:LYS:HD2	52:BW:24:ARG:N	2.15	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DT:14:PRO:HA	50:DT:32:LEU:CB	2.31	0.60
10:CK:91:GLY:HA2	10:CK:94:SER:HB3	1.83	0.60
40:DH:110:VAL:HG23	40:DH:132:PHE:CG	2.36	0.60
23:BB:2728:U:H2'	23:BB:2729:G:H8	1.65	0.60
23:DB:321:U:O4'	29:DE:159:LEU:HG	2.01	0.60
47:DF:49:LEU:HD11	47:DF:66:ILE:HD12	1.82	0.60
25:BC:74:PRO:HG2	25:BC:96:LYS:CG	2.31	0.60
23:BB:264:C:H2'	23:BB:265:A:H5''	1.82	0.60
23:DB:714:U:H1'	23:DB:717:C:H5	1.66	0.60
23:BB:1386:C:H5''	23:BB:1396:U:O2	2.01	0.60
18:CB:130:LYS:HA	18:CB:133:ALA:HB3	1.83	0.60
47:DF:78:ILE:HA	47:DF:82:TYR:CG	2.35	0.60
23:DB:233:A:H61	23:DB:428:A:H61	1.48	0.60
1:AA:1521:C:H2'	1:AA:1522:U:H6	1.66	0.60
1:CA:909:A:H2'	1:CA:910:C:O4'	2.00	0.60
43:DO:58:ILE:O	43:DO:62:LEU:HD23	2.01	0.60
23:DB:259:G:H2'	23:DB:260:G:H8	1.66	0.60
1:CA:5:U:H1'	1:CA:6:G:N2	2.16	0.60
23:DB:1657:U:O2'	23:DB:1658:C:H5'	2.01	0.60
23:DB:2849:U:H4'	23:DB:2850:A:H5'	1.83	0.60
1:CA:60:A:H4'	1:CA:61:G:OP1	1.99	0.60
23:DB:2758:A:H2'	23:DB:2759:G:O4'	2.01	0.60
23:BB:1412:U:H2'	23:BB:1413:A:C8	2.36	0.60
23:BB:2814:A:H2'	23:BB:2815:C:H6	1.65	0.60
18:CB:16:GLY:HA2	18:CB:40:ILE:HG13	1.82	0.60
12:AM:48:SER:O	12:AM:52:ILE:HG22	2.00	0.60
23:DB:1197:G:H2'	23:DB:1198:U:H6	1.66	0.60
8:AI:4:GLN:NE2	8:AI:21:LYS:HE3	2.16	0.60
30:BY:30:ARG:H	30:BY:30:ARG:HD3	1.66	0.60
48:DG:102:ILE:HD11	48:DG:116:LEU:HD11	1.83	0.60
23:DB:1060:U:O4	24:DI:131:THR:HG22	2.01	0.60
12:AM:79:LEU:HD13	12:AM:84:CYS:SG	2.40	0.60
18:AB:151:LYS:HG3	18:AB:152:ASP:H	1.65	0.60
47:DF:64:PRO:HA	47:DF:88:VAL:CG2	2.31	0.60
25:DC:77:VAL:HG23	25:DC:112:GLY:N	2.15	0.60
27:BK:7:MET:SD	27:BK:20:MET:HB2	2.41	0.60
38:BM:66:ARG:HG3	38:BM:101:VAL:CG2	2.31	0.60
44:DQ:80:ASN:O	44:DQ:83:LYS:HB3	2.01	0.60
27:BK:85:VAL:O	27:BK:87:LEU:HD23	2.01	0.60
11:AL:49:ARG:HH12	11:AL:88:ASP:CB	2.14	0.60
23:DB:1386:C:H2'	23:DB:1387:A:H8	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:635:C:O2'	23:BB:639:U:H5'	2.00	0.60
1:AA:502:A:H2'	1:AA:503:C:C6	2.35	0.60
23:BB:2064:C:H2'	23:BB:2065:C:H6	1.66	0.60
1:CA:723:U:O4'	19:CU:48:LYS:HD3	2.00	0.60
23:DB:1923:U:H2'	23:DB:1924:C:H6	1.65	0.60
23:DB:775:G:H4'	23:DB:776:G:H5'	1.82	0.60
23:BB:1346:G:O2'	23:BB:1347:A:H5'	2.01	0.60
44:DQ:29:ARG:HG2	44:DQ:29:ARG:HH11	1.66	0.60
23:BB:296:U:H2'	23:BB:297:G:H8	1.66	0.60
23:BB:979:A:H2'	23:BB:982:C:H41	1.66	0.60
50:DT:32:LEU:HG	50:DT:83:ALA:CB	2.32	0.60
19:AU:40:PRO:HA	19:AU:44:ARG:HB2	1.83	0.60
9:AJ:37:ARG:HE	9:AJ:77:VAL:HG21	1.67	0.60
23:DB:898:C:O3'	23:DB:899:A:H4'	2.00	0.60
1:AA:1084:G:H2'	1:AA:1085:U:C5	2.36	0.60
46:BU:47:PRO:O	46:BU:49:PRO:HD3	2.01	0.60
24:DI:25:PRO:O	24:DI:29:GLN:HG3	2.01	0.60
24:BI:20:SER:O	24:BI:25:PRO:HD2	2.02	0.60
39:BX:50:VAL:O	39:BX:54:LYS:HB2	2.02	0.60
23:DB:357:C:H2'	23:DB:358:U:C6	2.36	0.60
1:CA:985:C:H2'	1:CA:986:U:C6	2.36	0.60
23:DB:160:A:H2'	23:DB:161:A:C8	2.37	0.60
23:BB:591:U:H1'	34:B3:1:PRO:N	2.16	0.60
1:CA:209:U:H5'	1:CA:210:C:C5	2.36	0.60
23:DB:62:U:O2'	23:DB:63:A:H5'	2.01	0.60
23:BB:38:A:N3	29:BE:43:THR:HB	2.15	0.60
25:DC:78:GLU:OE1	25:DC:94:LEU:HD22	2.01	0.60
23:DB:106:C:H2'	23:DB:107:G:C8	2.36	0.60
1:AA:723:U:O4'	19:AU:48:LYS:HD3	2.01	0.60
23:BB:532:A:N3	23:BB:532:A:H2'	2.16	0.60
23:BB:2814:A:H2'	23:BB:2815:C:C6	2.36	0.60
23:BB:775:G:H4'	23:BB:776:G:H5'	1.84	0.60
1:CA:176:C:H2'	1:CA:177:G:N3	2.17	0.60
20:CO:71:LYS:HZ2	20:CO:72:ARG:HG2	1.65	0.60
23:DB:1947:C:H2'	23:DB:1948:G:H8	1.66	0.60
8:CI:49:GLN:C	8:CI:51:LEU:H	2.04	0.60
19:CU:40:PRO:HA	19:CU:44:ARG:HB2	1.81	0.60
12:AM:13:HIS:O	12:AM:16:ILE:HG12	2.02	0.60
8:CI:14:SER:HA	8:CI:68:GLY:O	2.01	0.60
25:DC:128:THR:HG23	25:DC:190:THR:HG22	1.82	0.60
35:BV:38:LEU:HG	35:BV:40:ILE:HG23	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DG:24:THR:HG22	48:DG:32:LEU:HD22	1.84	0.60
29:BE:105:LEU:O	29:BE:109:LEU:HB2	2.01	0.60
5:CF:18:VAL:HG11	5:CF:58:HIS:NE2	2.16	0.60
5:AF:38:ARG:HD3	5:AF:97:THR:HA	1.84	0.60
8:AI:5:TYR:HB2	8:AI:20:ILE:HB	1.82	0.60
23:DB:1727:C:H2'	23:DB:1728:C:O4'	2.01	0.60
37:DL:78:ARG:HB3	37:DL:113:ALA:HB2	1.82	0.60
23:DB:1174:U:H1'	23:DB:1176:U:C2	2.36	0.60
26:DD:13:ARG:HD2	28:DP:55:HIS:ND1	2.17	0.60
28:DP:50:ARG:HB2	28:DP:56:SER:CB	2.31	0.60
40:DH:99:ILE:HD12	40:DH:130:VAL:HG11	1.83	0.60
16:AS:15:LEU:HD13	21:AN:46:LYS:NZ	2.15	0.60
16:AS:68:HIS:HB3	16:AS:72:GLU:CD	2.22	0.60
47:BF:64:PRO:HA	47:BF:88:VAL:CG2	2.31	0.60
28:DP:23:ASP:HA	28:DP:88:ARG:HA	1.84	0.60
38:BM:23:GLY:HA3	38:BM:101:VAL:HG12	1.83	0.60
23:DB:1080:A:O2'	24:DI:126:ARG:HD2	2.02	0.60
1:CA:1222:G:H2'	1:CA:1223:C:H6	1.64	0.60
44:DQ:63:ARG:HH22	44:DQ:96:ASP:HA	1.65	0.60
27:DK:60:ALA:CB	27:DK:86:LEU:HA	2.31	0.60
18:AB:117:GLU:HA	18:AB:140:LEU:HD23	1.82	0.60
23:DB:20:C:H2'	23:DB:21:A:H8	1.66	0.60
18:AB:20:ARG:HE	18:AB:38:HIS:CE1	2.20	0.60
1:CA:812:G:O2'	1:CA:813:U:H6	1.83	0.60
29:BE:48:THR:HG22	29:BE:86:ALA:HB3	1.84	0.60
34:D3:57:VAL:C	34:D3:59:ALA:H	2.05	0.60
1:CA:194:C:O2'	1:CA:195:A:H5'	2.02	0.60
1:AA:337:G:H2'	1:AA:338:A:C8	2.36	0.60
23:DB:950:G:H2'	23:DB:951:C:C6	2.36	0.60
22:DA:94:A:H2'	22:DA:95:U:O4'	2.01	0.60
28:BP:103:THR:HG22	28:BP:104:GLY:H	1.66	0.60
13:CP:74:LEU:O	13:CP:78:VAL:HG12	2.01	0.60
40:DH:83:LYS:HB3	40:DH:149:GLU:N	2.16	0.60
1:CA:797:C:O2'	1:CA:798:U:H5'	2.01	0.60
10:CK:124:LYS:CA	19:CU:34:ARG:HB3	2.26	0.60
12:AM:69:ARG:O	12:AM:72:ILE:HB	2.01	0.60
23:BB:546:U:H5''	23:BB:548:G:C6	2.36	0.60
50:BT:30:ILE:O	50:BT:85:VAL:HG23	2.01	0.60
35:BV:63:ILE:HD11	35:BV:72:VAL:HG22	1.83	0.60
23:BB:587:C:O2'	37:BL:19:LEU:HD13	2.01	0.60
23:BB:1727:C:H2'	23:BB:1728:C:O4'	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DH:95:GLY:O	40:DH:99:ILE:HG12	2.02	0.60
30:BY:5:LYS:N	30:BY:5:LYS:HE2	2.17	0.60
49:BR:4:VAL:CG2	49:BR:40:MET:HB2	2.31	0.60
44:BQ:73:ILE:HD11	44:BQ:77:LYS:HB2	1.83	0.60
23:BB:1592:C:H2'	23:BB:1593:A:H8	1.66	0.60
3:CD:90:LEU:HD21	3:CD:196:GLU:HB3	1.83	0.60
23:DB:2292:U:H2'	23:DB:2293:G:H8	1.67	0.60
23:DB:1387:A:C5'	23:DB:1469:A:H1'	2.32	0.60
25:DC:244:VAL:HB	25:DC:249:VAL:H	1.67	0.60
23:DB:1353:A:H2'	23:DB:1354:A:C8	2.36	0.60
23:DB:1355:G:O2'	23:DB:1356:G:H5'	2.00	0.60
2:AC:63:ILE:HD11	2:AC:94:ALA:HB3	1.84	0.60
1:AA:279:A:H5''	1:AA:280:C:H3'	1.82	0.60
1:AA:1469:C:H2'	1:AA:1470:U:O4'	2.00	0.60
23:DB:1704:C:O2'	23:DB:1705:A:H5'	2.02	0.60
22:DA:52:A:H5''	43:DO:33:ARG:HH21	1.66	0.60
1:AA:415:A:H2'	1:AA:416:G:H5'	1.81	0.60
52:DW:23:LYS:HD2	52:DW:24:ARG:N	2.15	0.60
1:AA:239:U:C5'	1:AA:239:U:H6	2.14	0.60
26:BD:168:GLU:O	26:BD:170:VAL:HG13	2.01	0.60
29:BE:176:ASP:O	29:BE:180:LEU:HG	2.01	0.60
8:AI:50:PRO:HD3	8:AI:79:ARG:HD2	1.82	0.60
43:DO:69:ASP:O	43:DO:72:ALA:HB3	2.02	0.60
23:DB:1724:G:H2'	23:DB:1725:U:H6	1.65	0.60
23:BB:1724:G:H2'	23:BB:1725:U:H6	1.65	0.60
23:DB:1176:U:H2'	23:DB:1177:G:C8	2.37	0.60
30:BY:37:ARG:HG3	30:BY:38:GLU:OE1	2.02	0.60
41:BJ:45:THR:N	41:BJ:46:PRO:HD3	2.17	0.60
1:CA:1298:U:H4'	1:CA:1299:A:C4	2.36	0.60
23:DB:45:G:C5'	23:DB:46:G:H5'	2.32	0.60
18:CB:147:LEU:O	18:CB:151:LYS:HB3	2.00	0.60
13:CP:67:ILE:HG13	13:CP:71:VAL:HG13	1.83	0.60
1:AA:202:G:H1'	1:AA:468:A:H8	1.66	0.60
39:DX:50:VAL:O	39:DX:54:LYS:HB2	2.02	0.60
6:AG:52:ARG:HH12	6:AG:121:ASN:HD22	1.49	0.60
44:DQ:57:ARG:HA	44:DQ:60:TRP:CE3	2.35	0.60
24:DI:42:ASN:HA	24:DI:45:THR:OG1	2.01	0.60
4:CE:152:VAL:HA	4:CE:155:LYS:HD3	1.81	0.60
4:CE:156:ARG:O	4:CE:158:LYS:HG3	2.02	0.60
23:DB:278:A:H3'	23:DB:278:A:OP2	2.00	0.60
44:DQ:26:ALA:HB1	44:DQ:30:VAL:HB	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1018:U:O2'	23:DB:1019:U:H5'	2.02	0.60
23:DB:38:A:N3	29:DE:43:THR:HB	2.17	0.60
23:BB:1230:A:H2'	23:BB:1231:U:C6	2.36	0.60
1:CA:1027:C:H2'	1:CA:1028:C:C6	2.37	0.60
1:CA:692:U:H2'	1:CA:694:A:OP2	2.01	0.60
1:CA:405:U:O4	3:CD:1:ALA:HA	2.01	0.60
6:AG:91:ARG:HB3	6:AG:92:PRO:HD2	1.83	0.60
23:DB:1513:U:O2'	23:DB:1514:G:H5'	2.00	0.60
1:AA:859:G:H2'	1:AA:860:A:C8	2.37	0.60
23:BB:2600:A:O2'	23:BB:2601:C:H5'	2.02	0.60
23:BB:1219:U:H2'	23:BB:1220:G:H8	1.67	0.60
23:DB:1118:C:H2'	23:DB:1119:U:O4'	2.02	0.60
23:DB:1491:G:H5'	25:DC:97:ASP:OD1	2.01	0.60
5:AF:40:GLU:HB2	5:AF:61:LEU:HB2	1.84	0.60
26:DD:174:SER:O	26:DD:175:LEU:HB2	2.01	0.60
40:BH:68:ARG:CZ	40:BH:72:ILE:HB	2.32	0.60
23:BB:2271:G:H2'	23:BB:2272:U:C5	2.36	0.60
8:AI:18:VAL:HA	8:AI:64:ILE:HG13	1.84	0.60
8:AI:64:ILE:HG22	8:AI:65:THR:N	2.17	0.60
2:AC:130:ARG:HA	2:AC:133:MET:HE2	1.84	0.60
15:CR:37:LYS:NZ	19:CU:22:CYS:HB2	2.17	0.60
1:AA:437:U:H1'	3:AD:115:GLN:NE2	2.16	0.60
28:BP:74:GLN:O	28:BP:76:HIS:N	2.35	0.60
47:DF:109:ARG:NH1	47:DF:137:PHE:HA	2.17	0.60
44:BQ:78:PHE:CZ	44:BQ:82:LEU:HD11	2.36	0.60
47:DF:121:PHE:CB	47:DF:127:TYR:HA	2.32	0.60
6:CG:145:GLU:CA	6:CG:148:LYS:HB2	2.31	0.60
1:CA:202:G:H1'	1:CA:468:A:H8	1.66	0.60
27:DK:64:ARG:HD2	27:DK:102:PRO:O	2.02	0.60
1:AA:715:A:H2'	1:AA:716:A:C8	2.36	0.60
1:CA:1469:C:H2'	1:CA:1470:U:O4'	2.01	0.60
23:BB:6:A:H2'	23:BB:7:G:H8	1.67	0.60
23:BB:1482:G:H2'	23:BB:1483:G:H8	1.67	0.60
23:BB:2888:C:H2'	23:BB:2889:C:C6	2.37	0.60
34:B3:56:LEU:HD21	37:BL:51:GLU:HG3	1.83	0.60
41:DJ:72:LYS:O	41:DJ:73:VAL:HG13	2.01	0.60
1:AA:724:G:H2'	1:AA:725:G:H8	1.67	0.60
1:CA:1241:G:H2'	1:CA:1242:G:C8	2.36	0.60
29:BE:192:ALA:O	29:BE:196:VAL:HG23	2.01	0.60
40:BH:99:ILE:HG21	40:BH:130:VAL:HB	1.84	0.60
9:AJ:36:VAL:HG12	9:AJ:38:GLY:H	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DG:153:PRO:CG	48:DG:162:ARG:HB3	2.29	0.60
43:DO:109:ALA:HA	43:DO:112:GLU:OE2	2.01	0.60
41:BJ:44:TYR:HB2	44:BQ:63:ARG:CD	2.32	0.60
46:BU:58:VAL:HG12	46:BU:59:GLU:N	2.15	0.60
47:BF:135:ILE:HG12	47:BF:137:PHE:CD1	2.36	0.60
24:DI:27:LEU:CD2	24:DI:27:LEU:H	2.14	0.60
1:AA:16:A:O2'	1:AA:17:U:H5'	2.01	0.60
12:AM:94:LEU:HB3	12:AM:95:PRO:HD2	1.83	0.60
1:AA:449:G:H2'	1:AA:450:G:C8	2.37	0.60
11:AL:32:VAL:O	11:AL:33:CYS:HB3	2.02	0.60
23:DB:470:A:H61	50:DT:72:GLN:NE2	1.99	0.60
18:CB:128:LEU:HG	18:CB:132:GLU:HB3	1.84	0.60
29:BE:48:THR:H	29:BE:51:GLU:HG3	1.66	0.60
23:DB:828:U:H4'	23:DB:831:G:N1	2.16	0.60
23:DB:653:U:H5'	23:DB:654:A:H5''	1.83	0.60
1:AA:676:A:H1'	10:AK:116:PRO:HB3	1.82	0.60
23:DB:1656:C:H2'	23:DB:1657:U:H6	1.66	0.60
22:BA:52:A:H5''	43:BO:33:ARG:HH21	1.67	0.60
23:DB:2366:A:H2'	23:DB:2367:G:O4'	2.02	0.60
23:DB:2107:G:H2'	23:DB:2108:A:C8	2.37	0.60
41:BJ:74:TYR:HB2	41:BJ:87:ALA:O	2.02	0.60
41:DJ:74:TYR:HB2	41:DJ:87:ALA:O	2.02	0.60
8:CI:56:MET:CE	8:CI:57:VAL:H	2.14	0.60
12:AM:68:LEU:O	12:AM:72:ILE:HD13	2.01	0.60
40:BH:69:ALA:HA	40:BH:140:ALA:CA	2.31	0.60
46:DU:26:ASN:HD21	46:DU:34:ILE:HD12	1.67	0.60
1:CA:1323:G:H2'	1:CA:1324:A:H8	1.67	0.60
23:DB:1812:U:H2'	23:DB:1813:G:C8	2.37	0.60
50:DT:69:ARG:HB2	50:DT:75:GLY:H	1.67	0.60
38:BM:19:GLY:H	38:BM:38:ARG:HH12	1.48	0.60
46:DU:58:VAL:HG12	46:DU:59:GLU:N	2.16	0.60
41:DJ:25:LEU:HD13	41:DJ:26:GLY:H	1.67	0.60
47:DF:35:LEU:HD12	47:DF:90:LEU:HD21	1.83	0.60
51:BZ:5:CYS:HB2	51:BZ:10:LYS:HB2	1.84	0.60
47:DF:168:LEU:HD13	47:DF:169:LEU:N	2.17	0.60
24:DI:20:SER:O	24:DI:25:PRO:HD2	2.01	0.60
23:BB:1812:U:H2'	23:BB:1813:G:C8	2.36	0.60
28:BP:112:ARG:HB2	28:BP:112:ARG:NH1	2.17	0.60
18:AB:23:ASN:ND2	18:AB:25:LYS:HG3	2.16	0.60
23:DB:1287:A:N7	42:DN:105:GLY:HA3	2.17	0.60
23:BB:62:U:O2'	23:BB:63:A:H5'	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1342:C:O2'	8:CI:125:GLN:HB3	2.02	0.60
23:DB:2019:A:H2	23:DB:2035:G:H22	1.49	0.60
1:AA:1134:G:C2	1:AA:1135:U:H1'	2.36	0.60
23:BB:1796:U:H2'	23:BB:1797:G:C8	2.35	0.60
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.37	0.60
18:AB:19:THR:HG23	18:AB:20:ARG:H	1.66	0.60
23:BB:1139:G:O2'	23:BB:1140:C:H5'	2.02	0.60
23:BB:2183:A:H2'	23:BB:2184:A:C8	2.37	0.60
38:BM:83:GLY:O	38:BM:84:LYS:HG2	2.02	0.60
45:BS:18:ARG:HB3	45:BS:76:VAL:HG22	1.83	0.60
1:CA:441:A:H61	1:CA:493:A:N6	2.00	0.60
23:BB:845:A:C2	23:BB:847:U:H1'	2.36	0.60
2:AC:110:LEU:HD22	2:AC:145:ALA:HB2	1.83	0.60
25:BC:7:PRO:HB3	25:BC:13:ARG:HG3	1.84	0.60
24:BI:89:SER:HA	24:BI:97:VAL:HG21	1.83	0.60
3:AD:113:ALA:O	3:AD:117:VAL:HG23	2.01	0.60
2:CC:61:LYS:H	2:CC:61:LYS:HZ3	1.49	0.60
2:AC:106:ARG:H	2:AC:106:ARG:HD3	1.66	0.60
9:CJ:52:LEU:HB2	21:CN:80:ARG:CD	2.23	0.60
9:AJ:8:ILE:HD12	9:AJ:75:ASP:HA	1.84	0.60
19:AU:36:PHE:HD2	19:AU:39:LYS:HE2	1.66	0.60
50:BT:31:VAL:HA	50:BT:84:TYR:H	1.67	0.60
15:CR:56:ARG:O	15:CR:60:ARG:HG2	2.01	0.60
43:DO:35:ILE:O	43:DO:53:THR:HG23	2.02	0.60
1:AA:1123:U:H4'	9:AJ:39:PRO:HG2	1.84	0.60
23:BB:1728:C:C2'	23:BB:1729:U:H5''	2.30	0.60
23:DB:634:C:H2'	23:DB:635:C:C6	2.36	0.60
48:DG:148:ARG:HB2	48:DG:152:ARG:NH1	2.13	0.60
16:AS:48:ILE:HG13	16:AS:59:VAL:O	2.02	0.60
16:AS:66:VAL:HG23	16:AS:67:GLY:H	1.67	0.60
18:AB:96:LEU:HB2	18:AB:99:MET:HE2	1.84	0.60
49:DR:60:LYS:H	49:DR:100:GLY:HA3	1.65	0.60
41:DJ:64:VAL:O	41:DJ:65:THR:HG22	2.01	0.60
18:CB:122:ASP:OD2	18:CB:124:THR:HG22	2.01	0.60
3:AD:145:ARG:NH2	3:AD:147:LYS:HE2	2.17	0.60
1:AA:1308:U:H2'	1:AA:1309:G:H8	1.67	0.60
23:BB:160:A:H2'	23:BB:161:A:C8	2.37	0.60
37:DL:4:ASN:ND2	37:DL:4:ASN:N	2.49	0.60
23:DB:2145:C:H3'	23:DB:2146:C:C5'	2.31	0.60
23:BB:286:U:O2'	23:BB:287:G:H5'	2.02	0.60
1:CA:1461:G:H2'	1:CA:1462:C:H6	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DV:55:GLU:H	35:DV:55:GLU:CD	2.04	0.60
24:BI:7:TYR:HB2	24:BI:58:ILE:O	2.01	0.60
23:DB:1047:G:H1'	23:DB:1110:G:N2	2.16	0.60
1:AA:834:U:H2'	1:AA:835:U:C6	2.37	0.60
1:AA:1480:A:H2'	1:AA:1481:U:H6	1.66	0.60
23:BB:528:A:C2	23:BB:2042:A:H2'	2.37	0.60
46:DU:17:ASP:HA	46:DU:20:LYS:HE3	1.84	0.60
23:DB:104:A:H2'	23:DB:105:C:H6	1.66	0.60
23:DB:2888:C:H2'	23:DB:2889:C:C6	2.37	0.60
23:BB:855:G:H21	52:BW:23:LYS:CG	2.05	0.59
12:AM:38:ILE:HB	12:AM:55:LEU:HD21	1.82	0.59
50:DT:57:VAL:HG12	50:DT:86:THR:OG1	2.02	0.59
19:AU:41:THR:O	19:AU:45:LYS:HB2	2.01	0.59
48:DG:33:THR:HA	48:DG:34:ARG:NH1	2.16	0.59
23:BB:2688:G:H1'	23:BB:2721:A:N6	2.17	0.59
1:AA:1219:A:H2'	1:AA:1220:G:C8	2.36	0.59
30:DY:5:LYS:HG3	30:DY:36:GLU:HG3	1.84	0.59
18:AB:110:ILE:O	18:AB:113:LEU:HB3	2.01	0.59
41:BJ:25:LEU:HD22	41:BJ:26:GLY:N	2.17	0.59
23:BB:2572:A:N7	26:BD:150:GLN:HB2	2.17	0.59
6:AG:50:ALA:HB2	6:AG:57:GLU:HG3	1.83	0.59
43:DO:89:ASP:HA	43:DO:116:GLN:O	2.01	0.59
23:DB:2241:A:H2'	23:DB:2242:G:H8	1.66	0.59
23:DB:2648:G:H2'	23:DB:2649:C:C6	2.36	0.59
31:B0:8:THR:HG23	31:B0:11:LYS:H	1.67	0.59
1:AA:844:G:H2'	1:AA:845:A:H8	1.66	0.59
1:CA:390:U:H2'	1:CA:391:G:H8	1.65	0.59
18:CB:8:MET:O	18:CB:10:LYS:N	2.35	0.59
1:AA:678:U:H2'	1:AA:679:C:C6	2.37	0.59
1:CA:193:C:H2'	1:CA:194:C:C6	2.37	0.59
23:BB:435:C:H2'	23:BB:436:C:H5'	1.84	0.59
42:DN:2:ARG:HG2	42:DN:5:LYS:HB2	1.84	0.59
25:BC:137:GLY:H	25:BC:163:ILE:HB	1.67	0.59
23:DB:2548:U:O2	27:DK:23:LYS:HE2	2.02	0.59
17:AT:28:ARG:HA	17:AT:31:ILE:HD12	1.83	0.59
23:BB:479:A:O2'	23:BB:481:G:H5'	2.01	0.59
23:BB:1026:G:H2'	23:BB:1027:A:H8	1.66	0.59
23:BB:950:G:H2'	23:BB:951:C:C6	2.37	0.59
23:BB:2455:G:H2'	23:BB:2456:C:C6	2.37	0.59
35:DV:40:ILE:HD13	35:DV:40:ILE:H	1.68	0.59
40:BH:144:VAL:CG1	40:BH:145:ASN:N	2.66	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DE:109:LEU:O	29:DE:113:VAL:HG23	2.02	0.59
23:BB:30:G:OP1	44:BQ:4:LYS:HG2	2.02	0.59
44:DQ:8:ILE:CD1	44:DQ:8:ILE:H	2.11	0.59
1:AA:1288:A:N1	1:AA:1371:G:H1'	2.18	0.59
48:BG:102:ILE:HD11	48:BG:116:LEU:HD11	1.83	0.59
27:BK:34:GLY:O	27:BK:36:GLY:N	2.35	0.59
35:DV:26:PHE:CE1	35:DV:89:ILE:HD11	2.27	0.59
28:BP:50:ARG:HB2	28:BP:56:SER:CB	2.31	0.59
47:BF:31:GLU:O	47:BF:32:LYS:HD3	2.02	0.59
18:CB:61:SER:HA	18:CB:224:ARG:HA	1.82	0.59
23:DB:395:U:H2'	23:DB:396:G:N7	2.17	0.59
23:DB:3:U:H2'	23:DB:4:U:H6	1.64	0.59
48:DG:40:VAL:HG13	48:DG:64:ALA:HA	1.84	0.59
23:BB:639:U:H2'	23:BB:640:C:H6	1.67	0.59
23:BB:741:U:H2'	23:BB:742:A:C8	2.37	0.59
23:BB:1486:U:H2'	23:BB:1487:U:H6	1.67	0.59
23:DB:1853:A:N1	23:DB:2087:G:H1'	2.17	0.59
1:AA:736:C:H2'	1:AA:737:C:C6	2.37	0.59
23:DB:5:A:H2'	23:DB:6:A:C8	2.37	0.59
15:AR:38:ILE:H	15:AR:38:ILE:HD13	1.66	0.59
23:DB:233:A:N6	23:DB:428:A:H61	1.99	0.59
4:AE:95:MET:HA	4:AE:124:ALA:CB	2.32	0.59
23:DB:863:A:H2'	23:DB:864:G:C8	2.37	0.59
1:CA:250:A:H1'	1:CA:252:U:C5	2.37	0.59
1:AA:1053:G:HO2'	1:AA:1199:U:H5	1.49	0.59
2:AC:52:SER:HB3	2:AC:114:LEU:HG	1.83	0.59
4:CE:33:THR:HG22	4:CE:51:LYS:HB3	1.84	0.59
1:AA:250:A:H1'	1:AA:252:U:C5	2.37	0.59
1:AA:909:A:H2'	1:AA:910:C:O4'	2.01	0.59
23:DB:1098:A:OP2	24:DI:3:LYS:HG2	2.02	0.59
23:BB:856:G:H1'	52:BW:23:LYS:HB3	1.83	0.59
50:DT:59:ASN:O	50:DT:84:TYR:HB2	2.03	0.59
1:CA:1242:G:O2'	1:CA:1243:C:H5'	2.02	0.59
26:BD:107:VAL:H	26:BD:205:PRO:HA	1.67	0.59
48:DG:34:ARG:HD3	48:DG:34:ARG:N	2.17	0.59
26:DD:107:VAL:H	26:DD:205:PRO:HA	1.66	0.59
12:AM:106:ARG:HD3	12:AM:110:GLY:O	2.02	0.59
23:DB:1812:U:H1'	25:DC:43:ASN:ND2	2.15	0.59
49:DR:38:VAL:O	49:DR:53:PHE:HB3	2.01	0.59
28:DP:74:GLN:O	28:DP:76:HIS:N	2.35	0.59
46:BU:17:ASP:HA	46:BU:20:LYS:HE3	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:177:ARG:HA	47:DF:177:ARG:CZ	2.32	0.59
44:BQ:105:PHE:O	44:BQ:108:LEU:HB2	2.02	0.59
44:BQ:56:PHE:O	44:BQ:59:LEU:HB3	2.02	0.59
23:DB:878:A:H4'	23:DB:900:A:N1	2.17	0.59
18:CB:221:ARG:O	18:CB:224:ARG:HB2	2.01	0.59
47:DF:91:ARG:HD3	47:DF:91:ARG:N	2.17	0.59
40:DH:46:PHE:HB3	40:DH:50:ARG:NH2	2.14	0.59
11:CL:49:ARG:HH12	11:CL:88:ASP:CB	2.16	0.59
23:BB:2099:U:H2'	23:BB:2100:G:C8	2.37	0.59
6:AG:150:PHE:H	10:AK:55:ARG:NH2	1.99	0.59
23:BB:1061:U:H4'	23:BB:1070:A:O3'	2.03	0.59
11:CL:106:VAL:HG23	11:CL:116:TYR:HB3	1.84	0.59
1:CA:674:G:H2'	1:CA:675:A:H8	1.67	0.59
23:BB:172:A:H2'	23:BB:173:A:H8	1.67	0.59
1:AA:764:C:H3'	1:AA:765:G:H21	1.68	0.59
1:AA:617:G:H4'	13:AP:46:LYS:HD3	1.85	0.59
23:DB:2758:A:C2	23:DB:2759:G:H1'	2.38	0.59
1:CA:337:G:H2'	1:CA:338:A:C8	2.37	0.59
1:CA:1527:U:O2'	1:CA:1528:U:H5'	2.03	0.59
23:BB:1531:C:H2'	23:BB:1532:A:C8	2.37	0.59
7:CH:124:ILE:HG22	7:CH:125:ILE:N	2.16	0.59
23:DB:435:C:H2'	23:DB:436:C:H5'	1.82	0.59
17:CT:28:ARG:HA	17:CT:31:ILE:HD12	1.85	0.59
1:CA:470:C:H2'	1:CA:471:U:C6	2.36	0.59
41:DJ:114:LEU:O	41:DJ:118:MET:HG3	2.03	0.59
27:BK:68:GLY:HA3	27:BK:78:ARG:HB3	1.84	0.59
8:CI:79:ARG:HB3	8:CI:79:ARG:NH1	2.17	0.59
14:AQ:74:LEU:HD22	14:AQ:75:VAL:H	1.67	0.59
30:DY:30:ARG:HD3	30:DY:30:ARG:H	1.66	0.59
2:AC:149:LYS:HB2	2:AC:172:VAL:HG21	1.84	0.59
28:DP:6:GLN:O	28:DP:10:GLU:HB2	2.03	0.59
35:DV:44:HIS:HE1	35:DV:86:LEU:H	1.49	0.59
49:BR:60:LYS:H	49:BR:100:GLY:HA3	1.66	0.59
49:DR:49:ILE:HD13	49:DR:53:PHE:N	2.16	0.59
40:DH:135:HIS:CG	40:DH:136:SER:H	2.19	0.59
27:BK:73:ASP:O	28:BP:74:GLN:HG3	2.02	0.59
46:DU:47:PRO:O	46:DU:49:PRO:HD3	2.02	0.59
26:BD:10:GLY:HA3	26:BD:26:VAL:N	2.16	0.59
10:CK:28:ASN:ND2	10:CK:29:THR:H	2.01	0.59
26:BD:32:ASN:HA	26:BD:51:THR:O	2.03	0.59
1:AA:373:A:H2'	1:AA:374:A:H8	1.68	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CT:70:LYS:O	17:CT:73:ARG:HG2	2.02	0.59
41:DJ:45:THR:N	41:DJ:46:PRO:HD3	2.17	0.59
27:BK:60:ALA:CB	27:BK:86:LEU:HA	2.32	0.59
23:BB:2229:U:H2'	23:BB:2230:G:H8	1.67	0.59
23:BB:1441:G:H2'	23:BB:1442:U:C6	2.36	0.59
3:CD:32:LYS:HA	3:CD:35:GLN:HE21	1.65	0.59
7:CH:49:LYS:HG3	7:CH:50:VAL:N	2.17	0.59
23:DB:591:U:H1'	34:D3:1:PRO:H2	1.68	0.59
1:CA:1250:A:H2	1:CA:1370:G:H1'	1.66	0.59
23:BB:633:A:OP1	37:BL:68:SER:HB2	2.02	0.59
41:BJ:49:ASP:OD2	41:BJ:121:LYS:HD3	2.01	0.59
23:BB:233:A:N6	23:BB:428:A:H61	2.00	0.59
23:BB:596:U:H2'	23:BB:597:G:H8	1.65	0.59
30:BY:31:ILE:HG13	30:BY:32:GLY:H	1.67	0.59
23:BB:848:C:H2'	23:BB:849:A:C8	2.38	0.59
23:DB:2322:A:H8	23:DB:2322:A:H5'	1.67	0.59
22:BA:49:C:H2'	22:BA:50:A:H8	1.67	0.59
23:DB:1039:A:H2'	23:DB:1040:A:H8	1.66	0.59
23:BB:259:G:H2'	23:BB:260:G:H8	1.66	0.59
23:BB:828:U:H4'	23:BB:831:G:N1	2.18	0.59
23:BB:1192:G:O2'	23:BB:1193:G:H5'	2.02	0.59
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.38	0.59
23:BB:1513:U:O2'	23:BB:1514:G:H5'	2.02	0.59
19:CU:36:PHE:HA	19:CU:39:LYS:CE	2.30	0.59
19:AU:39:LYS:N	19:AU:40:PRO:CD	2.65	0.59
52:BW:19:ARG:H	52:BW:19:ARG:NE	1.99	0.59
48:BG:153:PRO:HA	48:BG:159:LYS:O	2.02	0.59
23:BB:2747:G:O6	23:BB:2755:C:H5''	2.03	0.59
27:BK:35:VAL:HG23	27:BK:36:GLY:N	2.12	0.59
46:DU:11:ILE:HG22	46:DU:70:ALA:HB3	1.83	0.59
23:DB:1082:U:C2	23:DB:1086:A:C6	2.91	0.59
51:BZ:5:CYS:HB3	51:BZ:10:LYS:H	1.68	0.59
10:AK:28:ASN:ND2	10:AK:29:THR:H	2.00	0.59
47:BF:29:ARG:HH11	47:BF:29:ARG:HB2	1.67	0.59
1:AA:642:A:H2'	1:AA:643:C:H6	1.67	0.59
7:AH:49:LYS:HG3	7:AH:50:VAL:N	2.18	0.59
42:BN:87:PHE:HE1	42:BN:116:VAL:HG12	1.68	0.59
23:DB:1437:C:H2'	23:DB:1438:U:H6	1.67	0.59
1:AA:57:G:H2'	1:AA:58:C:C6	2.37	0.59
11:CL:107:LYS:H	11:CL:107:LYS:HD2	1.67	0.59
23:BB:151:C:H2'	23:BB:152:A:C8	2.36	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1486:U:H2'	23:BB:1487:U:C6	2.37	0.59
23:BB:608:A:H2'	23:BB:609:A:C8	2.38	0.59
49:BR:79:ARG:O	49:BR:81:LYS:HG2	2.03	0.59
23:DB:2810:A:H2'	23:DB:2811:G:O4'	2.01	0.59
23:BB:131:A:H2'	23:BB:132:G:H8	1.67	0.59
23:DB:1559:U:H3'	23:DB:1560:G:H5'	1.84	0.59
4:CE:104:ILE:HD11	4:CE:111:ARG:HA	1.85	0.59
23:BB:1545:A:H2'	23:BB:1546:G:O4'	2.02	0.59
17:CT:54:GLN:N	17:CT:55:PRO:HD2	2.18	0.59
12:AM:91:ARG:HD3	12:AM:92:ARG:HE	1.68	0.59
21:AN:89:ARG:HB2	21:AN:91:GLU:HG2	1.85	0.59
8:CI:62:LEU:HD22	8:CI:62:LEU:N	2.18	0.59
9:AJ:6:ILE:H	9:AJ:6:ILE:HD12	1.68	0.59
12:AM:3:ILE:HA	12:AM:56:ARG:HG2	1.83	0.59
50:BT:32:LEU:HG	50:BT:83:ALA:HB2	1.84	0.59
25:DC:128:THR:HA	25:DC:190:THR:HA	1.84	0.59
35:BV:44:HIS:HE1	35:BV:86:LEU:H	1.51	0.59
6:CG:10:LYS:NZ	6:CG:10:LYS:HA	2.18	0.59
21:CN:51:PRO:CB	21:CN:54:SER:HB3	2.26	0.59
5:AF:18:VAL:HG11	5:AF:58:HIS:NE2	2.17	0.59
26:DD:111:GLY:H	26:DD:194:PRO:HG2	1.67	0.59
23:DB:2688:G:H1'	23:DB:2721:A:N6	2.18	0.59
9:AJ:38:GLY:O	9:AJ:74:VAL:HA	2.02	0.59
26:BD:122:VAL:HA	26:BD:127:PHE:H	1.68	0.59
38:DM:135:VAL:O	38:DM:136:MET:HG3	2.02	0.59
16:AS:14:LEU:HD21	16:AS:37:SER:HB3	1.84	0.59
46:DU:51:LEU:HD23	46:DU:52:ASN:H	1.67	0.59
13:AP:67:ILE:HG13	13:AP:71:VAL:HG13	1.85	0.59
26:DD:5:VAL:H	26:DD:32:ASN:ND2	2.00	0.59
26:BD:148:GLN:CG	26:BD:152:PRO:HG2	2.31	0.59
42:DN:87:PHE:HE1	42:DN:116:VAL:HG12	1.66	0.59
37:DL:55:MET:HE1	37:DL:59:ARG:CZ	2.32	0.59
23:BB:2261:C:N4	52:BW:10:ARG:HB3	2.18	0.59
1:AA:522:C:H41	11:AL:49:ARG:HH22	1.49	0.59
23:DB:591:U:H1'	34:D3:1:PRO:N	2.17	0.59
23:DB:172:A:H2'	23:DB:173:A:H8	1.68	0.59
18:CB:10:LYS:HA	18:CB:211:LEU:HD11	1.84	0.59
23:DB:1400:U:H2'	23:DB:1401:G:H8	1.67	0.59
1:AA:454:G:H2'	1:AA:455:G:H8	1.67	0.59
1:CA:524:G:H2'	1:CA:525:C:C6	2.37	0.59
6:AG:77:ARG:HE	6:AG:77:ARG:HA	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:100:MET:O	6:CG:104:VAL:HG23	2.03	0.59
36:D2:46:LYS:HZ2	36:D2:46:LYS:HA	1.67	0.59
23:BB:2893:A:H5''	23:BB:2894:G:H5'	1.84	0.59
23:DB:39:G:H2'	23:DB:40:U:H6	1.67	0.59
23:DB:584:C:OP1	44:DQ:5:ARG:HB3	2.02	0.59
19:CU:39:LYS:N	19:CU:40:PRO:CD	2.65	0.59
19:CU:41:THR:HA	19:CU:45:LYS:HD2	1.84	0.59
23:DB:855:G:N3	52:DW:23:LYS:HE3	2.17	0.59
1:CA:1240:U:O2'	6:CG:31:VAL:HG11	2.03	0.59
35:DV:65:VAL:HG22	35:DV:70:ILE:HD12	1.83	0.59
1:CA:1317:C:H3'	1:CA:1318:A:H8	1.67	0.59
40:BH:84:ALA:H	40:BH:148:ALA:HB2	1.67	0.59
23:DB:2720:U:H2'	23:DB:2721:A:C8	2.38	0.59
18:AB:185:ILE:HG23	18:AB:199:ILE:HG22	1.85	0.59
1:CA:921:U:O2	4:CE:23:THR:HG23	2.03	0.59
23:DB:394:C:H2'	23:DB:395:U:O4'	2.03	0.59
38:DM:35:ALA:HB3	38:DM:99:GLY:N	2.18	0.59
43:BO:89:ASP:HA	43:BO:116:GLN:O	2.03	0.59
1:AA:80:A:C5	1:AA:81:A:H1'	2.38	0.59
6:AG:74:VAL:HB	6:AG:85:GLN:HG3	1.84	0.59
21:CN:52:ARG:HG3	21:CN:58:ARG:NH1	2.17	0.59
1:AA:1039:G:H2'	1:AA:1040:U:H6	1.68	0.59
45:BS:4:ILE:HG22	45:BS:106:VAL:HG13	1.85	0.59
23:BB:1114:C:H2'	23:BB:1115:G:O4'	2.03	0.59
34:B3:57:VAL:C	34:B3:59:ALA:H	2.06	0.59
23:DB:1047:G:OP2	23:DB:1047:G:H2'	2.02	0.59
2:CC:91:ALA:HB2	2:CC:97:PRO:HA	1.85	0.59
23:BB:1183:U:H2'	23:BB:1184:U:C6	2.38	0.59
23:DB:1518:C:H2'	23:DB:1519:G:C8	2.37	0.59
22:BA:94:A:H2'	22:BA:95:U:O4'	2.02	0.59
3:AD:48:SER:O	3:AD:52:VAL:HG23	2.02	0.59
41:BJ:102:GLU:HB3	41:BJ:119:PHE:HZ	1.67	0.59
23:BB:208:C:H2'	23:BB:209:C:C6	2.38	0.59
42:BN:2:ARG:HG2	42:BN:5:LYS:HB2	1.84	0.59
50:BT:87:LEU:HD12	50:BT:91:GLN:HG2	1.84	0.59
23:BB:705:A:H61	23:BB:726:G:H1'	1.67	0.59
25:DC:159:THR:O	25:DC:194:VAL:HG12	2.03	0.59
35:BV:51:GLN:HB2	35:BV:57:TYR:OH	2.02	0.59
23:BB:2355:G:H4'	52:BW:20:LEU:CD1	2.33	0.59
23:BB:2356:U:H5''	52:BW:16:GLU:HG3	1.83	0.59
23:DB:1196:C:H2'	23:DB:1197:G:C8	2.38	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:30:G:OP1	44:DQ:4:LYS:HG2	2.02	0.59
1:AA:1289:A:H61	8:AI:71:ILE:HD11	1.68	0.59
48:BG:148:ARG:HD3	48:BG:152:ARG:NH1	2.16	0.59
23:BB:1654:A:O2'	26:BD:118:PHE:HB2	2.02	0.59
23:BB:2720:U:H2'	23:BB:2721:A:C8	2.37	0.59
28:DP:54:LEU:HA	28:DP:76:HIS:CD2	2.38	0.59
38:BM:42:THR:HA	38:BM:93:VAL:HA	1.84	0.59
1:AA:1317:C:H3'	1:AA:1318:A:H8	1.67	0.59
18:AB:185:ILE:HA	18:AB:199:ILE:HB	1.84	0.59
47:BF:137:PHE:HB2	47:BF:138:PRO:HD2	1.83	0.59
23:BB:45:G:C5'	23:BB:46:G:H5'	2.31	0.59
1:CA:865:A:H2'	1:CA:866:C:C6	2.38	0.59
17:AT:70:LYS:O	17:AT:73:ARG:HG2	2.03	0.59
6:AG:94:ARG:HD3	6:AG:98:LEU:HD11	1.85	0.59
44:DQ:65:ASN:O	44:DQ:69:ARG:HB2	2.02	0.59
25:DC:74:PRO:HG2	25:DC:96:LYS:CG	2.31	0.59
1:AA:209:U:H5'	1:AA:210:C:C5	2.38	0.59
46:BU:35:VAL:HB	46:BU:38:ILE:CG2	2.32	0.59
1:AA:132:C:H5''	17:AT:68:LYS:NZ	2.17	0.59
23:DB:151:C:H2'	23:DB:152:A:C8	2.37	0.59
26:BD:40:LEU:HD23	26:BD:46:ARG:HG2	1.84	0.59
23:DB:1484:U:H2'	23:DB:1485:U:C6	2.37	0.59
28:BP:24:THR:O	28:BP:25:VAL:HG22	2.03	0.59
23:BB:1704:C:O2'	23:BB:1705:A:H5'	2.03	0.59
29:DE:3:LEU:HB2	29:DE:12:LEU:HG	1.84	0.59
51:BZ:35:SER:HA	51:BZ:50:ARG:HA	1.85	0.59
11:AL:35:ARG:HH22	11:AL:75:GLU:HA	1.68	0.59
23:DB:2819:G:H2'	23:DB:2821:A:N7	2.18	0.59
23:DB:528:A:C2	23:DB:2042:A:H2'	2.38	0.59
23:BB:833:A:H1'	37:BL:52:GLY:N	2.18	0.59
18:AB:77:GLU:O	18:AB:80:LYS:HE2	2.01	0.59
22:DA:76:G:H2'	22:DA:77:U:H6	1.68	0.59
41:BJ:52:ASP:O	41:BJ:54:ILE:HG22	2.03	0.59
4:CE:73:VAL:HG11	4:CE:143:LEU:HB3	1.85	0.59
23:DB:139:U:C2'	50:DT:1:MET:HA	2.33	0.59
45:DS:59:GLU:OE2	45:DS:66:ILE:HG23	2.03	0.59
23:DB:1061:U:O4'	23:DB:1070:A:H1'	2.03	0.59
18:AB:53:LEU:HD12	18:AB:53:LEU:H	1.68	0.59
23:DB:1172:C:H2'	23:DB:1173:U:O4'	2.02	0.59
16:AS:65:MET:HA	16:AS:68:HIS:CE1	2.38	0.59
21:AN:50:LEU:H	21:AN:51:PRO:CD	2.13	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1022:G:N2	23:BB:1142:A:N1	2.50	0.59
47:DF:122:ASP:OD2	47:DF:126:ASN:HB2	2.02	0.59
37:BL:101:ILE:HG22	37:BL:102:GLY:N	2.17	0.59
6:AG:29:LEU:HD13	6:AG:42:VAL:HG22	1.85	0.59
37:BL:57:LEU:HA	37:BL:60:ARG:HE	1.68	0.59
49:DR:19:THR:HB	49:DR:97:LYS:HA	1.85	0.59
42:BN:9:GLN:HA	42:BN:17:ARG:NE	2.18	0.59
23:DB:1507:C:C3'	23:DB:1508:A:H4'	2.32	0.59
1:CA:1171:A:H2'	1:CA:1172:C:H6	1.68	0.59
2:AC:39:ARG:CZ	2:AC:56:ILE:HD12	2.33	0.59
2:AC:51:VAL:HG23	2:AC:68:HIS:O	2.03	0.59
23:DB:1441:G:H2'	23:DB:1442:U:C6	2.37	0.59
11:CL:73:LEU:HD13	11:CL:79:ILE:HG21	1.84	0.59
46:DU:35:VAL:HB	46:DU:38:ILE:CG2	2.32	0.59
16:CS:5:LYS:O	16:CS:6:LYS:HD2	2.03	0.59
23:BB:441:U:H2'	23:BB:442:G:H8	1.68	0.59
49:DR:1:MET:HA	49:DR:42:ALA:HB3	1.84	0.59
1:CA:591:U:H2'	1:CA:592:G:C8	2.38	0.59
1:AA:777:A:H2'	1:AA:778:G:C8	2.38	0.59
52:BW:21:GLY:HA3	52:BW:33:GLY:HA2	1.85	0.59
2:CC:146:LYS:HG3	2:CC:203:LYS:O	2.03	0.59
17:AT:54:GLN:N	17:AT:55:PRO:HD2	2.17	0.59
23:DB:1230:A:H2'	23:DB:1231:U:C6	2.36	0.59
23:DB:1996:C:H5	27:DK:32:TYR:HH	1.49	0.59
23:BB:680:C:H2'	23:BB:681:G:C8	2.38	0.59
23:DB:1482:G:H2'	23:DB:1483:G:H8	1.68	0.59
26:DD:38:LYS:HG3	26:DD:47:ALA:HB3	1.84	0.59
24:DI:2:LYS:NZ	24:DI:2:LYS:HB3	2.18	0.59
12:AM:21:ILE:HB	12:AM:24:VAL:CG2	2.31	0.59
5:CF:38:ARG:HD3	5:CF:97:THR:HA	1.85	0.59
22:BA:116:G:H4'	43:BO:54:VAL:HG22	1.84	0.59
23:DB:139:U:H2'	50:DT:1:MET:N	2.18	0.59
1:AA:8:A:H61	3:AD:53:GLN:HE22	1.51	0.59
38:DM:19:GLY:H	38:DM:38:ARG:HH12	1.51	0.59
46:BU:11:ILE:HG22	46:BU:70:ALA:HB3	1.85	0.59
21:AN:50:LEU:HG	21:AN:51:PRO:HD3	1.85	0.59
37:BL:4:ASN:N	37:BL:4:ASN:ND2	2.51	0.59
18:CB:60:ALA:HB1	18:CB:220:VAL:HG13	1.84	0.59
1:AA:1337:G:H5''	1:AA:1338:G:OP1	2.03	0.59
27:BK:13:ASN:HD22	27:BK:98:ARG:HG3	1.68	0.59
23:BB:1551:A:C3'	23:BB:1552:A:H5''	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AG:65:LEU:O	6:AG:69:ARG:HB2	2.03	0.59
23:DB:2898:U:H2'	23:DB:2899:A:H8	1.68	0.59
40:DH:27:ARG:HH21	40:DH:27:ARG:HG2	1.68	0.59
10:AK:23:HIS:HB3	10:AK:30:ILE:HG13	1.84	0.59
30:DY:8:GLN:HB3	30:DY:31:ILE:HA	1.84	0.59
8:AI:84:ARG:O	8:AI:87:MET:HG2	2.03	0.59
22:BA:64:G:H2'	22:BA:65:U:C6	2.38	0.59
1:CA:834:U:H2'	1:CA:835:U:C6	2.38	0.59
23:DB:2662:A:H2'	23:DB:2663:G:O4'	2.03	0.59
4:AE:104:ILE:HD11	4:AE:111:ARG:HA	1.84	0.59
1:AA:401:C:H2'	1:AA:402:G:H8	1.67	0.59
23:DB:479:A:O2'	23:DB:481:G:H5'	2.03	0.59
5:AF:68:GLN:O	5:AF:71:ILE:HG13	2.03	0.59
50:BT:57:VAL:HG12	50:BT:86:THR:OG1	2.02	0.58
25:BC:183:VAL:HG22	25:BC:187:CYS:SG	2.42	0.58
23:BB:1199:U:H2'	23:BB:1200:C:C6	2.38	0.58
8:AI:17:ARG:HB3	8:AI:17:ARG:HH11	1.68	0.58
22:DA:116:G:H4'	43:DO:54:VAL:HG22	1.85	0.58
23:BB:2142:A:H2'	23:BB:2143:C:C6	2.38	0.58
23:BB:2819:G:H2'	23:BB:2821:A:N7	2.18	0.58
47:DF:137:PHE:HB2	47:DF:138:PRO:HD2	1.83	0.58
49:BR:38:VAL:O	49:BR:53:PHE:HB3	2.02	0.58
38:BM:42:THR:O	38:BM:44:ARG:N	2.36	0.58
38:BM:69:PRO:HA	38:BM:94:ALA:HB2	1.85	0.58
43:BO:11:ALA:HB2	43:BO:96:GLY:N	2.17	0.58
21:AN:60:ARG:NH2	21:AN:69:PRO:HD3	2.18	0.58
6:AG:42:VAL:O	6:AG:46:LEU:HB2	2.03	0.58
12:CM:93:GLY:HA2	12:CM:108:ARG:HH12	1.68	0.58
20:AO:17:ARG:HB3	20:AO:17:ARG:NH1	2.18	0.58
23:DB:972:A:C3'	23:DB:973:A:H5''	2.33	0.58
23:DB:2579:C:H1'	26:DD:130:GLN:HE22	1.68	0.58
34:B3:49:VAL:HG23	34:B3:51:LYS:N	2.17	0.58
1:CA:1342:C:H2'	1:CA:1343:G:H8	1.67	0.58
1:CA:1169:A:H2'	1:CA:1170:A:H8	1.65	0.58
23:BB:591:U:H1'	34:B3:1:PRO:H2	1.68	0.58
6:AG:145:GLU:C	6:AG:147:ASN:H	2.05	0.58
23:DB:718:A:H5'	23:DB:719:C:C5	2.37	0.58
1:CA:662:U:H2'	1:CA:663:A:H8	1.67	0.58
23:BB:19:A:H2'	23:BB:20:C:H6	1.67	0.58
27:DK:68:GLY:HA3	27:DK:78:ARG:HB3	1.84	0.58
42:DN:43:GLU:O	42:DN:47:VAL:HG23	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2710:C:H2'	23:BB:2711:A:H8	1.68	0.58
9:AJ:67:ILE:HG12	21:AN:94:GLY:O	2.03	0.58
1:CA:454:G:H2'	1:CA:455:G:H8	1.67	0.58
41:DJ:34:ARG:HG2	41:DJ:39:LYS:HB3	1.85	0.58
23:DB:1545:A:H2'	23:DB:1546:G:O4'	2.03	0.58
41:DJ:40:HIS:HD1	41:DJ:41:LYS:N	2.01	0.58
23:DB:274:C:H2'	23:DB:275:C:O4'	2.02	0.58
23:BB:2070:A:H2'	23:BB:2071:A:C8	2.38	0.58
20:CO:35:GLN:HB2	20:CO:59:MET:HE1	1.84	0.58
21:AN:65:GLN:HB3	21:AN:82:LYS:HG3	1.85	0.58
9:CJ:52:LEU:CB	21:CN:80:ARG:HD2	2.24	0.58
4:AE:81:GLN:N	4:AE:146:MET:HE3	2.11	0.58
35:BV:40:ILE:HD13	35:BV:40:ILE:H	1.68	0.58
23:DB:1728:C:C2'	23:DB:1729:U:H5''	2.33	0.58
28:DP:4:ILE:HG22	28:DP:5:LYS:N	2.15	0.58
38:BM:96:ILE:HD11	38:BM:126:ILE:HG12	1.84	0.58
28:BP:6:GLN:O	28:BP:10:GLU:HB2	2.03	0.58
23:BB:1082:U:N3	23:BB:1086:A:C6	2.72	0.58
47:BF:34:THR:O	47:BF:35:LEU:HB2	2.03	0.58
46:BU:51:LEU:HD23	46:BU:52:ASN:H	1.66	0.58
2:CC:172:VAL:HG11	2:CC:200:TRP:HB3	1.85	0.58
12:AM:2:ARG:HD3	12:AM:6:ILE:HA	1.83	0.58
23:DB:76:C:OP1	39:DX:48:ARG:HD3	2.04	0.58
27:DK:2:ILE:HD12	27:DK:2:ILE:N	2.18	0.58
23:DB:545:U:H5	23:DB:546:U:H1'	1.66	0.58
23:BB:633:A:H8	23:BB:633:A:O5'	1.87	0.58
23:BB:1487:U:H2'	23:BB:1488:C:C6	2.38	0.58
23:BB:1387:A:C5'	23:BB:1469:A:H1'	2.32	0.58
21:CN:73:LEU:O	21:CN:74:ARG:C	2.42	0.58
23:BB:1229:C:H2'	23:BB:1230:A:H8	1.67	0.58
25:DC:33:LEU:HD23	25:DC:62:ARG:HA	1.84	0.58
23:BB:2376:A:H2'	23:BB:2377:A:O4'	2.03	0.58
6:AG:125:ASP:OD1	6:AG:130:LYS:HD2	2.03	0.58
7:AH:124:ILE:HG22	7:AH:125:ILE:N	2.18	0.58
25:BC:181:ARG:HH21	25:BC:265:PHE:HB3	1.68	0.58
44:DQ:45:ALA:O	44:DQ:49:ARG:HB2	2.03	0.58
26:DD:37:VAL:HG23	26:DD:91:THR:HA	1.84	0.58
23:BB:2344:U:H4'	23:BB:2345:G:OP1	2.03	0.58
1:AA:1524:C:H2'	1:AA:1525:G:C8	2.39	0.58
23:BB:2898:U:H2'	23:BB:2899:A:C8	2.38	0.58
48:BG:33:THR:HA	48:BG:34:ARG:NH1	2.18	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BJ:12:LYS:O	41:BJ:13:ARG:HB2	2.03	0.58
8:AI:43:ALA:O	8:AI:46:VAL:HG22	2.02	0.58
50:BT:69:ARG:HG2	50:BT:70:HIS:H	1.69	0.58
23:BB:321:U:OP2	29:BE:130:LYS:HD3	2.03	0.58
46:DU:50:ALA:H	46:DU:53:GLN:HE21	1.46	0.58
41:BJ:25:LEU:HD13	41:BJ:26:GLY:H	1.69	0.58
28:DP:112:ARG:HB2	28:DP:112:ARG:NH1	2.18	0.58
47:DF:21:TYR:HD2	47:DF:27:VAL:HG12	1.68	0.58
1:AA:205:A:H2'	1:AA:206:C:C6	2.38	0.58
28:BP:23:ASP:HA	28:BP:88:ARG:HA	1.84	0.58
23:BB:2075:U:H2'	23:BB:2238:G:N2	2.19	0.58
20:CO:11:ILE:HA	20:CO:14:GLU:CD	2.24	0.58
20:AO:8:THR:O	20:AO:11:ILE:HG22	2.02	0.58
23:DB:1439:A:C6	23:DB:1552:A:N7	2.72	0.58
41:DJ:36:LEU:HD12	41:DJ:121:LYS:HB2	1.84	0.58
23:BB:172:A:H2'	23:BB:173:A:C8	2.38	0.58
23:BB:1656:C:H2'	23:BB:1657:U:H6	1.69	0.58
23:DB:173:A:H2'	23:DB:174:U:C6	2.38	0.58
23:DB:1139:G:O2'	23:DB:1140:C:H5'	2.03	0.58
23:DB:850:U:O2'	30:DY:22:THR:HG22	2.04	0.58
52:DW:21:GLY:HA3	52:DW:33:GLY:HA2	1.85	0.58
44:BQ:65:ASN:O	44:BQ:69:ARG:HB2	2.03	0.58
23:BB:753:A:H2'	23:BB:754:U:C6	2.38	0.58
23:DB:2710:C:H2'	23:DB:2711:A:H8	1.67	0.58
23:DB:1183:U:H2'	23:DB:1184:U:C6	2.39	0.58
18:CB:204:ASP:CG	18:CB:205:ALA:H	2.04	0.58
24:BI:96:LYS:N	24:BI:96:LYS:HD2	2.18	0.58
12:AM:52:ILE:HA	12:AM:55:LEU:HD12	1.85	0.58
12:AM:68:LEU:HD12	12:AM:69:ARG:N	2.18	0.58
19:AU:41:THR:HA	19:AU:45:LYS:HD2	1.86	0.58
9:CJ:6:ILE:O	9:CJ:75:ASP:HA	2.03	0.58
20:AO:78:TYR:CZ	20:AO:82:ILE:HD11	2.39	0.58
41:DJ:123:LYS:N	41:DJ:123:LYS:HD2	2.18	0.58
40:BH:121:VAL:HG21	40:BH:128:HIS:NE2	2.18	0.58
37:DL:141:LYS:NZ	37:DL:143:GLU:HA	2.18	0.58
2:AC:119:ILE:HD11	2:AC:133:MET:HA	1.86	0.58
23:BB:2539:C:H5'	32:B4:3:VAL:HG11	1.86	0.58
24:DI:112:LYS:O	24:DI:116:MET:HG3	2.03	0.58
23:DB:1175:A:C2'	23:DB:1176:U:H5'	2.33	0.58
29:BE:60:TRP:CE3	29:BE:60:TRP:HA	2.39	0.58
38:DM:42:THR:O	38:DM:44:ARG:N	2.34	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AS:43:MET:O	16:AS:46:LEU:HD23	2.02	0.58
16:AS:6:LYS:HZ3	16:AS:6:LYS:N	2.01	0.58
36:D2:12:ARG:HE	36:D2:44:VAL:CG1	2.15	0.58
26:BD:51:THR:HG22	26:BD:52:THR:N	2.17	0.58
27:BK:19:VAL:C	27:BK:41:ILE:HD11	2.24	0.58
1:CA:950:U:H2'	1:CA:951:G:H8	1.68	0.58
1:CA:205:A:H2'	1:CA:206:C:C6	2.38	0.58
44:DQ:94:LEU:C	44:DQ:96:ASP:H	2.07	0.58
23:DB:279:A:H2'	23:DB:280:U:O4'	2.04	0.58
2:AC:66:THR:HA	2:AC:101:ASN:O	2.03	0.58
1:AA:947:G:H2'	1:AA:948:C:C6	2.39	0.58
11:AL:8:ARG:O	11:AL:10:PRO:HD3	2.03	0.58
23:BB:937:C:H2'	23:BB:938:G:H8	1.68	0.58
1:AA:1017:U:H6	1:AA:1017:U:OP2	1.86	0.58
23:BB:1173:U:N3	23:BB:1174:U:H1'	2.18	0.58
23:DB:2898:U:H2'	23:DB:2899:A:C8	2.38	0.58
2:CC:46:LEU:HD11	2:CC:75:VAL:HG13	1.84	0.58
4:CE:95:MET:HG3	4:CE:124:ALA:HB2	1.84	0.58
1:AA:591:U:H2'	1:AA:592:G:H8	1.68	0.58
15:AR:37:LYS:NZ	19:AU:22:CYS:HB2	2.18	0.58
23:DB:532:A:N1	23:DB:2020:A:H1'	2.18	0.58
1:CA:337:G:H2'	1:CA:338:A:H8	1.68	0.58
44:BQ:45:ALA:O	44:BQ:49:ARG:HB2	2.03	0.58
52:DW:70:VAL:HG23	52:DW:75:ASN:HD22	1.68	0.58
23:DB:2836:U:H2'	23:DB:2837:A:H8	1.67	0.58
1:CA:745:G:H2'	1:CA:746:A:C8	2.38	0.58
1:AA:1048:G:H4'	21:AN:2:LYS:HZ3	1.68	0.58
10:CK:34:THR:HA	10:CK:41:LEU:HG	1.84	0.58
21:AN:73:LEU:HB2	21:AN:76:PHE:HB2	1.83	0.58
1:AA:176:C:H2'	1:AA:177:G:N3	2.18	0.58
25:DC:2:VAL:HG23	25:DC:3:VAL:H	1.69	0.58
12:AM:18:LEU:HD11	12:AM:33:LEU:HD21	1.85	0.58
50:BT:32:LEU:N	50:BT:83:ALA:HB3	2.18	0.58
25:DC:102:TYR:O	25:DC:103:ILE:HG13	2.04	0.58
48:BG:34:ARG:HD3	48:BG:34:ARG:N	2.19	0.58
48:DG:23:ILE:O	48:DG:34:ARG:HA	2.02	0.58
29:BE:109:LEU:O	29:BE:113:VAL:HG23	2.04	0.58
43:BO:53:THR:HG22	43:BO:74:VAL:CG2	2.28	0.58
40:DH:141:LYS:H	40:DH:141:LYS:HD2	1.67	0.58
9:AJ:56:HIS:H	21:AN:80:ARG:HH22	1.50	0.58
41:DJ:25:LEU:HD22	41:DJ:26:GLY:N	2.17	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:16:A:O2'	1:CA:17:U:H5'	2.03	0.58
1:AA:1191:A:N6	55:AA:1662:SCM:H11	2.16	0.58
27:BK:85:VAL:HG21	27:BK:115:ILE:HD11	1.86	0.58
23:BB:2230:G:H2'	23:BB:2231:U:C6	2.39	0.58
38:BM:105:MET:HB2	38:BM:117:PHE:CZ	2.38	0.58
29:DE:46:GLN:HG3	29:DE:87:ALA:HB3	1.86	0.58
42:BN:59:SER:O	42:BN:63:ARG:HB2	2.03	0.58
52:DW:43:LYS:HD2	52:DW:79:ILE:HD11	1.84	0.58
51:DZ:71:LEU:HD13	51:DZ:76:GLU:HB3	1.85	0.58
47:BF:77:LYS:HG3	47:BF:78:ILE:N	2.18	0.58
15:AR:32:ILE:HD11	15:AR:58:ILE:HG23	1.85	0.58
23:BB:1716:U:H2'	23:BB:1717:A:H8	1.68	0.58
23:BB:1558:C:H4'	23:BB:1559:U:H5''	1.83	0.58
20:CO:78:TYR:CZ	20:CO:82:ILE:HD11	2.38	0.58
1:AA:272:C:H2'	1:AA:273:U:H6	1.69	0.58
23:BB:863:A:H2'	23:BB:864:G:C8	2.38	0.58
2:CC:77:GLY:HA3	2:CC:81:GLU:HB3	1.84	0.58
38:DM:4:PRO:HG2	38:DM:70:ASP:HA	1.85	0.58
23:DB:680:C:H2'	23:DB:681:G:C8	2.38	0.58
23:BB:1178:C:H2'	23:BB:1179:G:C8	2.38	0.58
1:AA:810:C:O2'	1:AA:811:C:H5'	2.02	0.58
45:DS:4:ILE:HG22	45:DS:106:VAL:HG13	1.85	0.58
23:BB:1390:U:O2'	23:BB:1391:U:H5'	2.03	0.58
23:DB:2784:U:H2'	23:DB:2785:C:H6	1.68	0.58
46:BU:64:ILE:HG13	46:BU:65:GLN:N	2.17	0.58
23:BB:975:A:H1'	23:BB:990:A:C2	2.39	0.58
18:CB:162:VAL:O	18:CB:184:ALA:HA	2.04	0.58
41:DJ:12:LYS:O	41:DJ:13:ARG:HB2	2.03	0.58
40:BH:59:ALA:O	40:BH:62:LEU:HG	2.04	0.58
14:CQ:68:LYS:HG2	14:CQ:69:THR:HG23	1.85	0.58
23:DB:2330:G:H1'	52:DW:38:ARG:CB	2.33	0.58
23:BB:1197:G:H2'	23:BB:1198:U:H6	1.68	0.58
6:CG:2:ARG:HH11	6:CG:2:ARG:CB	2.13	0.58
2:AC:96:VAL:HB	2:AC:97:PRO:HD2	1.85	0.58
26:BD:124:ARG:HA	26:BD:165:MET:HE3	1.86	0.58
1:AA:437:U:H5''	3:AD:151:GLN:HE21	1.68	0.58
24:BI:27:LEU:CD2	24:BI:27:LEU:H	2.16	0.58
47:BF:35:LEU:HD23	47:BF:153:ILE:HG12	1.86	0.58
46:DU:53:GLN:HG2	46:DU:53:GLN:O	2.03	0.58
23:BB:1141:U:H5''	41:BJ:27:ARG:HH21	1.67	0.58
4:CE:37:VAL:HG12	4:CE:47:PHE:HB3	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DL:93:ASN:O	37:DL:95:LEU:N	2.36	0.58
37:DL:57:LEU:HA	37:DL:60:ARG:HE	1.68	0.58
47:BF:15:LEU:HA	47:BF:18:GLU:HB2	1.84	0.58
16:CS:10:ILE:HA	16:CS:37:SER:CB	2.34	0.58
23:BB:581:C:H2'	23:BB:582:A:C8	2.38	0.58
11:CL:8:ARG:O	11:CL:10:PRO:HD3	2.04	0.58
3:AD:35:GLN:O	3:AD:37:PRO:HD3	2.03	0.58
1:AA:502:A:H2'	1:AA:503:C:H6	1.67	0.58
1:AA:193:C:H2'	1:AA:194:C:C6	2.38	0.58
23:DB:594:U:H2'	23:DB:595:C:H6	1.68	0.58
23:DB:418:C:H2'	23:DB:419:U:C6	2.38	0.58
1:AA:1048:G:H4'	21:AN:2:LYS:NZ	2.18	0.58
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.39	0.58
25:BC:33:LEU:HD23	25:BC:62:ARG:HA	1.84	0.58
23:BB:2788:C:H2'	23:BB:2789:C:C6	2.38	0.58
23:BB:696:G:O2'	23:BB:697:G:H5'	2.03	0.58
23:BB:2262:U:H2'	23:BB:2263:C:H6	1.68	0.58
9:AJ:7:ARG:O	9:AJ:8:ILE:HG13	2.04	0.58
22:BA:74:U:H1'	35:BV:37:PRO:HG2	1.85	0.58
25:DC:131:MET:HA	25:DC:134:ILE:HG23	1.86	0.58
10:CK:80:ASN:HB3	10:CK:105:ARG:HB3	1.86	0.58
28:BP:13:LYS:CD	28:BP:76:HIS:HA	2.34	0.58
30:BY:6:ILE:O	30:BY:34:THR:HA	2.04	0.58
46:DU:51:LEU:H	46:DU:53:GLN:HE22	1.51	0.58
26:BD:5:VAL:H	26:BD:32:ASN:ND2	2.02	0.58
46:BU:51:LEU:H	46:BU:53:GLN:HE22	1.50	0.58
1:CA:373:A:H2'	1:CA:374:A:H8	1.69	0.58
39:DX:52:ARG:O	39:DX:56:LEU:HD22	2.02	0.58
48:BG:126:THR:H	48:BG:129:GLU:HB3	1.68	0.58
23:BB:2099:U:H2'	23:BB:2100:G:H8	1.68	0.58
27:DK:99:ILE:H	27:DK:118:LEU:CD2	2.16	0.58
23:DB:1551:A:C3'	23:DB:1552:A:H5''	2.32	0.58
23:DB:833:A:H1'	37:DL:52:GLY:H	1.67	0.58
23:DB:1486:U:H2'	23:DB:1487:U:H6	1.68	0.58
47:DF:77:LYS:HG3	47:DF:78:ILE:N	2.18	0.58
30:BY:8:GLN:HB3	30:BY:31:ILE:HA	1.85	0.58
23:DB:852:U:H2'	23:DB:853:C:C6	2.38	0.58
23:DB:1716:U:H2'	23:DB:1717:A:H8	1.67	0.58
23:DB:1230:A:H2'	23:DB:1231:U:H6	1.68	0.58
35:BV:55:GLU:CD	35:BV:55:GLU:H	2.06	0.58
11:CL:13:ARG:O	11:CL:14:LYS:HB3	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:731:G:OP1	1:CA:766:A:H1'	2.04	0.58
1:CA:555:U:H2'	1:CA:556:C:C6	2.39	0.58
23:DB:2569:G:O2'	23:DB:2570:G:H5'	2.04	0.58
1:CA:1384:C:H2'	1:CA:1385:G:H8	1.67	0.58
23:BB:1859:U:H2'	23:BB:1860:G:C8	2.38	0.58
1:AA:1020:G:H2'	1:AA:1020:G:N3	2.18	0.58
23:DB:1647:U:H3'	23:DB:1647:U:P	2.43	0.58
27:DK:51:LYS:HE3	27:DK:52:VAL:HG13	1.85	0.58
23:BB:12:U:O2	23:BB:2626:C:H4'	2.04	0.58
1:CA:981:U:H4'	21:CN:60:ARG:HD2	1.86	0.58
12:AM:65:GLU:O	12:AM:68:LEU:HG	2.03	0.58
50:DT:57:VAL:HG13	50:DT:58:VAL:N	2.19	0.58
50:BT:14:PRO:HA	50:BT:32:LEU:CB	2.33	0.58
42:DN:45:ARG:O	42:DN:49:GLU:HG3	2.03	0.58
48:BG:17:LYS:HB3	48:BG:24:THR:HB	1.86	0.58
14:CQ:74:LEU:HD22	14:CQ:75:VAL:H	1.68	0.58
48:BG:89:VAL:HG12	48:BG:90:GLY:H	1.68	0.58
42:BN:38:LEU:HD11	42:BN:42:LYS:HE3	1.84	0.58
12:CM:22:TYR:CD1	12:CM:65:GLU:HA	2.39	0.58
2:AC:149:LYS:HA	2:AC:168:ARG:HG3	1.85	0.58
23:BB:2820:A:OP1	42:BN:4:ARG:HA	2.03	0.58
44:DQ:105:PHE:O	44:DQ:108:LEU:HB2	2.04	0.58
27:DK:73:ASP:HB2	28:DP:77:SER:OG	2.03	0.58
28:DP:13:LYS:CD	28:DP:76:HIS:HA	2.33	0.58
41:BJ:44:TYR:CE2	44:BQ:59:LEU:HD11	2.38	0.58
17:AT:64:GLY:HA2	17:AT:67:HIS:HD2	1.69	0.58
38:DM:23:GLY:HA3	38:DM:101:VAL:HG12	1.86	0.58
39:BX:23:ARG:NE	39:BX:27:ASN:HD21	2.02	0.58
1:AA:77:A:O5'	1:AA:77:A:H8	1.86	0.58
31:D0:8:THR:HG23	31:D0:11:LYS:H	1.67	0.58
21:AN:32:ASP:OD2	21:AN:33:VAL:HG23	2.04	0.58
47:DF:41:GLU:HB3	47:DF:44:ALA:CB	2.34	0.58
23:DB:172:A:H2'	23:DB:173:A:C8	2.38	0.58
1:CA:715:A:H2'	1:CA:716:A:C8	2.39	0.58
23:DB:1684:G:H2'	23:DB:1685:C:C6	2.39	0.58
23:DB:2698:U:H2'	23:DB:2699:C:C6	2.38	0.58
23:DB:2443:C:H2'	23:DB:2444:G:H8	1.69	0.58
23:DB:234:U:H2'	23:DB:235:U:H6	1.68	0.58
31:B0:9:ARG:O	31:B0:12:ARG:HB3	2.02	0.58
26:DD:33:ARG:HA	26:DD:95:SER:HA	1.86	0.58
23:DB:1577:C:H2'	23:DB:1578:U:C6	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:57:LYS:O	3:CD:61:ARG:HB2	2.04	0.58
33:D1:32:LYS:HE3	33:D1:52:LYS:HG2	1.85	0.58
24:DI:99:LYS:HD3	24:DI:99:LYS:H	1.69	0.58
9:CJ:25:ILE:HA	9:CJ:90:LEU:HD13	1.86	0.58
1:CA:1118:U:H2'	1:CA:1119:C:H6	1.67	0.58
29:BE:200:LEU:O	29:BE:201:ALA:HB3	2.02	0.58
40:BH:80:ILE:HD11	40:BH:102:ALA:HB2	1.86	0.58
52:BW:35:ILE:HG13	52:BW:57:THR:OG1	2.03	0.58
6:CG:99:ALA:O	6:CG:103:ILE:HG13	2.03	0.58
48:DG:162:ARG:HE	48:DG:166:GLU:CD	2.07	0.58
47:DF:106:ALA:HA	47:DF:135:ILE:HD13	1.84	0.58
23:BB:1082:U:C2	23:BB:1086:A:C6	2.91	0.58
1:AA:958:A:N1	16:AS:53:GLY:HA3	2.19	0.58
16:AS:52:ASN:CG	16:AS:53:GLY:H	2.07	0.58
37:BL:93:ASN:O	37:BL:95:LEU:N	2.37	0.58
37:BL:55:MET:HE1	37:BL:59:ARG:CZ	2.34	0.58
6:AG:71:THR:HG22	6:AG:141:HIS:NE2	2.19	0.58
23:DB:1487:U:H2'	23:DB:1488:C:C6	2.39	0.58
2:CC:75:VAL:O	2:CC:82:ASP:HB2	2.04	0.58
23:DB:987:C:H2'	23:DB:988:A:O4'	2.04	0.58
23:DB:6:A:H2'	23:DB:7:G:C8	2.39	0.58
45:BS:13:SER:HB3	45:BS:16:LYS:HE2	1.86	0.58
23:BB:2150:C:H2'	23:BB:2151:U:H6	1.68	0.58
1:AA:1053:G:N7	1:AA:1200:C:H5''	2.19	0.58
23:DB:2298:A:OP1	47:DF:70:ARG:HD3	2.04	0.58
5:CF:68:GLN:O	5:CF:71:ILE:HG13	2.04	0.58
22:BA:76:G:H2'	22:BA:77:U:H6	1.69	0.58
23:DB:664:G:H2'	23:DB:665:U:H6	1.69	0.58
29:DE:60:TRP:CE3	29:DE:60:TRP:HA	2.39	0.58
25:DC:153:LEU:HD13	25:DC:175:LEU:CD2	2.34	0.58
5:CF:39:LEU:HD13	5:CF:40:GLU:N	2.19	0.58
5:CF:93:LYS:O	5:CF:94:HIS:HB2	2.03	0.58
8:AI:24:ASN:CG	8:AI:25:GLY:H	2.05	0.58
37:BL:141:LYS:NZ	37:BL:143:GLU:HA	2.19	0.58
19:AU:24:LYS:HD2	19:AU:25:ALA:N	2.18	0.58
28:BP:58:PHE:CE2	28:BP:75:THR:HB	2.39	0.58
44:BQ:91:ARG:NH1	49:BR:10:LYS:HB3	2.19	0.58
47:DF:35:LEU:HD23	47:DF:153:ILE:HG12	1.84	0.58
26:BD:25:THR:HG21	26:BD:193:VAL:HG21	1.86	0.58
39:DX:20:ASN:H	39:DX:20:ASN:HD22	1.52	0.58
9:AJ:53:ILE:HG22	9:AJ:61:ALA:HB1	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:947:G:H2'	1:AA:948:C:H6	1.68	0.58
23:DB:2728:U:H2'	23:DB:2729:G:H8	1.68	0.58
1:CA:57:G:H2'	1:CA:58:C:C6	2.39	0.58
11:CL:32:VAL:O	11:CL:33:CYS:HB3	2.03	0.58
28:DP:103:THR:HG22	28:DP:104:GLY:N	2.19	0.58
1:AA:312:C:H2'	1:AA:313:A:H8	1.68	0.58
51:BZ:71:LEU:HD13	51:BZ:76:GLU:HB3	1.84	0.58
1:CA:607:A:H2'	1:CA:608:A:H8	1.68	0.58
1:AA:607:A:H2'	1:AA:608:A:H8	1.69	0.58
1:AA:160:A:H2'	1:AA:161:A:O4'	2.04	0.58
23:BB:1219:U:H2'	23:BB:1220:G:C8	2.39	0.58
23:DB:2836:U:H2'	23:DB:2837:A:C8	2.38	0.58
23:DB:1774:C:O2	23:DB:1774:C:H2'	2.04	0.58
23:DB:1219:U:H2'	23:DB:1220:G:C8	2.39	0.58
46:DU:64:ILE:HG13	46:DU:65:GLN:N	2.19	0.58
23:BB:1464:G:H2'	23:BB:1465:G:H8	1.68	0.58
1:CA:649:A:H2'	1:CA:650:G:O4'	2.04	0.58
8:CI:93:LEU:H	8:CI:93:LEU:HD23	1.69	0.58
25:BC:79:ARG:HD2	25:BC:81:GLU:HG3	1.86	0.58
29:BE:3:LEU:HB2	29:BE:12:LEU:HG	1.86	0.58
34:D3:20:GLY:HA3	34:D3:48:MET:HE1	1.84	0.58
1:CA:230:G:H5''	13:CP:31:ARG:NH2	2.19	0.58
23:DB:208:C:H2'	23:DB:209:C:C6	2.39	0.58
18:CB:40:ILE:HG22	18:CB:41:ASN:N	2.19	0.57
50:BT:57:VAL:HG13	50:BT:58:VAL:N	2.18	0.57
6:CG:27:ASN:O	6:CG:30:MET:HB3	2.03	0.57
48:DG:24:THR:HA	48:DG:33:THR:O	2.04	0.57
29:BE:108:ILE:HD11	29:BE:181:ILE:HG13	1.86	0.57
29:BE:117:ARG:HA	29:BE:185:LYS:HG2	1.86	0.57
5:CF:40:GLU:HB2	5:CF:61:LEU:HB2	1.86	0.57
40:BH:68:ARG:HD3	40:BH:132:PHE:CE2	2.39	0.57
52:BW:18:LYS:HA	52:BW:36:ILE:HG12	1.84	0.57
29:DE:176:ASP:O	29:DE:180:LEU:HG	2.04	0.57
43:BO:35:ILE:O	43:BO:53:THR:HG23	2.04	0.57
43:BO:69:ASP:O	43:BO:72:ALA:HB3	2.04	0.57
42:DN:79:LEU:HA	42:DN:83:LEU:HB2	1.86	0.57
23:BB:2658:C:H5'	48:BG:159:LYS:HZ2	1.69	0.57
48:BG:153:PRO:CG	48:BG:162:ARG:HB3	2.30	0.57
23:DB:1813:G:H1'	25:DC:49:THR:OG1	2.03	0.57
23:BB:2723:C:H5''	42:BN:1:MET:HE2	1.85	0.57
28:DP:58:PHE:CE2	28:DP:75:THR:HB	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BW:47:GLY:HA3	52:BW:80:SER:CA	2.34	0.57
23:BB:1309:G:OP1	36:B2:9:VAL:HG12	2.04	0.57
24:DI:32:VAL:HG22	24:DI:60:VAL:HG21	1.86	0.57
18:CB:116:LEU:HB3	18:CB:140:LEU:HG	1.86	0.57
13:CP:1:MET:C	13:CP:1:MET:HE3	2.25	0.57
3:CD:84:ASN:HD21	4:CE:101:GLY:HA3	1.67	0.57
41:DJ:44:TYR:HB2	44:DQ:63:ARG:CD	2.34	0.57
37:DL:6:LEU:H	37:DL:6:LEU:CD2	2.16	0.57
27:BK:12:ASP:OD2	27:BK:85:VAL:HG13	2.03	0.57
21:CN:26:LEU:HD23	21:CN:27:LYS:H	1.67	0.57
23:BB:470:A:H61	50:BT:72:GLN:HE22	1.51	0.57
45:BS:72:THR:CG2	45:BS:108:SER:HB3	2.34	0.57
23:DB:1387:A:H2'	23:DB:1388:G:C8	2.37	0.57
23:BB:1387:A:H2'	23:BB:1388:G:C8	2.39	0.57
23:DB:1486:U:H2'	23:DB:1487:U:C6	2.38	0.57
1:AA:194:C:O2'	1:AA:195:A:H5'	2.03	0.57
1:CA:160:A:H2'	1:CA:161:A:O4'	2.03	0.57
23:BB:1229:C:H2'	23:BB:1230:A:C8	2.39	0.57
45:BS:15:GLN:HA	45:BS:18:ARG:HD2	1.86	0.57
30:DY:31:ILE:HG13	30:DY:32:GLY:H	1.69	0.57
14:AQ:6:THR:HG22	14:AQ:61:ARG:HB3	1.84	0.57
2:CC:41:TYR:OH	2:CC:89:VAL:HG21	2.04	0.57
15:CR:21:ASP:OD1	15:CR:23:LYS:HE3	2.03	0.57
42:BN:24:MET:HG2	42:BN:44:LEU:HD22	1.86	0.57
38:DM:83:GLY:O	38:DM:84:LYS:HG2	2.03	0.57
23:DB:1666:G:H4'	27:DK:6:THR:HG23	1.85	0.57
1:AA:999:C:H2'	1:AA:1000:A:C8	2.39	0.57
9:CJ:93:ALA:O	9:CJ:96:VAL:HG22	2.04	0.57
23:DB:942:G:H2'	23:DB:943:A:O4'	2.04	0.57
23:BB:2639:A:H2'	23:BB:2640:G:O4'	2.03	0.57
23:DB:1429:G:H2'	23:DB:1430:G:H8	1.70	0.57
50:DT:27:SER:O	50:DT:28:ASN:HB3	2.05	0.57
50:BT:25:GLU:C	50:BT:27:SER:H	2.08	0.57
50:BT:59:ASN:O	50:BT:84:TYR:HB2	2.04	0.57
1:CA:1347:G:H22	1:CA:1373:G:H2'	1.68	0.57
23:DB:673:C:C2'	23:DB:674:G:H5'	2.34	0.57
41:BJ:123:LYS:HD2	41:BJ:123:LYS:N	2.18	0.57
35:DV:38:LEU:HG	35:DV:40:ILE:HG23	1.86	0.57
14:CQ:16:MET:CB	14:CQ:19:SER:HB2	2.29	0.57
23:BB:2502:G:H5'	23:BB:2503:A:C5'	2.27	0.57
8:AI:20:ILE:HD13	8:AI:85:ALA:CB	2.34	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:51:LEU:HB3	8:AI:56:MET:CB	2.34	0.57
23:DB:1063:G:H4'	24:DI:135:MET:HG2	1.85	0.57
40:DH:116:ARG:NE	40:DH:118:PRO:HD3	2.18	0.57
35:BV:80:HIS:CD2	35:BV:82:TYR:H	2.19	0.57
28:DP:26:GLU:HG3	28:DP:43:GLU:HB2	1.85	0.57
36:B2:10:LEU:CD2	36:B2:14:ARG:HD2	2.33	0.57
1:AA:923:A:H2'	1:AA:924:C:H6	1.67	0.57
47:BF:177:ARG:CZ	47:BF:177:ARG:HA	2.34	0.57
18:CB:153:MET:SD	18:CB:157:PRO:HD3	2.45	0.57
6:AG:71:THR:N	6:AG:141:HIS:HE1	2.02	0.57
23:BB:947:A:H2'	23:BB:948:C:H6	1.67	0.57
23:DB:2740:A:H2'	23:DB:2741:A:C8	2.38	0.57
23:DB:572:A:C2	23:DB:2033:A:C2	2.92	0.57
12:CM:1:ALA:O	12:CM:3:ILE:HG13	2.03	0.57
23:BB:1386:C:H2'	23:BB:1387:A:H8	1.69	0.57
23:DB:78:U:O2'	23:DB:79:C:H5'	2.04	0.57
1:AA:429:U:H3'	3:AD:8:LEU:HD23	1.86	0.57
23:BB:1459:G:H4'	23:BB:1461:C:N4	2.18	0.57
1:CA:312:C:H2'	1:CA:313:A:C8	2.38	0.57
23:DB:224:U:O4	23:DB:420:C:H5'	2.04	0.57
4:AE:95:MET:HG3	4:AE:124:ALA:HB2	1.86	0.57
23:DB:39:G:H2'	23:DB:40:U:C6	2.38	0.57
23:BB:2898:U:H2'	23:BB:2899:A:H8	1.69	0.57
23:DB:2344:U:H4'	23:DB:2345:G:OP1	2.05	0.57
23:BB:2756:U:H1'	23:BB:2757:A:H5''	1.85	0.57
23:DB:925:A:O2'	23:DB:926:G:H5'	2.03	0.57
10:CK:23:HIS:HB3	10:CK:30:ILE:HG13	1.85	0.57
2:AC:48:LYS:H	2:AC:48:LYS:HD3	1.68	0.57
1:CA:783:C:O2'	1:CA:784:A:H5'	2.03	0.57
23:DB:2229:U:H2'	23:DB:2230:G:H8	1.69	0.57
2:CC:78:LYS:HZ2	2:CC:79:LYS:HB2	1.69	0.57
23:BB:1518:C:H2'	23:BB:1519:G:C8	2.39	0.57
8:CI:56:MET:HA	8:CI:59:LYS:CB	2.35	0.57
26:DD:169:ARG:O	26:DD:170:VAL:HG22	2.04	0.57
22:BA:57:A:H1'	47:BF:25:MET:O	2.04	0.57
1:AA:980:C:H1'	21:AN:58:ARG:HD2	1.85	0.57
38:DM:1:MET:HB3	38:DM:47:GLU:HG3	1.84	0.57
38:BM:1:MET:HB3	38:BM:47:GLU:HG3	1.86	0.57
26:DD:32:ASN:HA	26:DD:51:THR:O	2.03	0.57
1:AA:918:A:H2'	1:AA:919:A:C8	2.39	0.57
23:DB:1245:G:OP1	37:DL:13:LYS:HE3	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DE:33:VAL:O	29:DE:36:ALA:HB3	2.05	0.57
37:DL:101:ILE:HG22	37:DL:102:GLY:N	2.19	0.57
39:BX:46:VAL:O	39:BX:49:ASP:HB2	2.05	0.57
1:CA:984:C:O2'	1:CA:985:C:H5'	2.05	0.57
25:BC:239:PHE:HD1	25:BC:241:LYS:H	1.51	0.57
49:BR:1:MET:HA	49:BR:42:ALA:HB3	1.86	0.57
45:DS:15:GLN:HA	45:DS:18:ARG:HD2	1.86	0.57
23:DB:533:G:H2'	23:DB:534:U:C6	2.39	0.57
1:CA:161:A:H2'	1:CA:162:A:H8	1.68	0.57
1:CA:35:G:H2'	1:CA:36:C:C6	2.39	0.57
20:CO:71:LYS:HZ3	20:CO:72:ARG:HA	1.68	0.57
23:BB:5:A:H2'	23:BB:6:A:C8	2.39	0.57
1:CA:784:A:H2'	1:CA:785:G:H8	1.69	0.57
23:BB:446:G:C5'	44:BQ:2:ARG:HH22	2.18	0.57
14:CQ:6:THR:HG22	14:CQ:61:ARG:HB3	1.86	0.57
23:BB:925:A:O2'	23:BB:926:G:H5'	2.03	0.57
23:DB:296:U:H2'	23:DB:297:G:H8	1.70	0.57
23:BB:786:C:O2'	23:BB:787:C:H5'	2.04	0.57
26:BD:56:LYS:C	26:BD:58:ASN:H	2.08	0.57
50:DT:25:GLU:C	50:DT:27:SER:H	2.07	0.57
50:DT:38:ALA:O	50:DT:39:THR:HB	2.04	0.57
35:BV:4:ILE:HB	35:BV:63:ILE:HA	1.85	0.57
40:BH:115:VAL:O	40:BH:133:GLN:HB2	2.04	0.57
37:DL:143:GLU:HG2	37:DL:144:GLU:N	2.15	0.57
8:AI:17:ARG:NH1	8:AI:17:ARG:HB3	2.19	0.57
8:AI:17:ARG:O	8:AI:64:ILE:HA	2.04	0.57
23:DB:1722:A:H2'	23:DB:1723:G:C8	2.39	0.57
23:BB:1722:A:H2'	23:BB:1723:G:C8	2.38	0.57
10:AK:80:ASN:HB3	10:AK:105:ARG:HB3	1.86	0.57
9:CJ:53:ILE:HG13	21:CN:84:ARG:NE	2.20	0.57
23:BB:2443:C:H2'	23:BB:2444:G:C8	2.38	0.57
1:CA:1023:U:H2'	1:CA:1024:G:O4'	2.03	0.57
6:AG:16:LYS:HB3	6:AG:43:TYR:CE1	2.40	0.57
47:BF:21:TYR:HD2	47:BF:27:VAL:HG12	1.68	0.57
1:AA:131:A:H2'	1:AA:132:C:C6	2.38	0.57
1:CA:777:A:H2'	1:CA:778:G:H8	1.68	0.57
23:DB:2243:U:H2'	23:DB:2244:U:C6	2.40	0.57
45:DS:18:ARG:HB3	45:DS:76:VAL:CG2	2.35	0.57
29:DE:134:LEU:HD23	29:DE:161:ALA:HB2	1.87	0.57
23:BB:532:A:N1	23:BB:2020:A:H1'	2.19	0.57
1:AA:1461:G:H2'	1:AA:1462:C:H6	1.67	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DR:43:ASN:HD22	49:DR:44:GLY:H	1.52	0.57
25:DC:62:ARG:N	25:DC:62:ARG:HD2	2.19	0.57
23:DB:1212:G:H1'	23:DB:1236:G:N2	2.19	0.57
23:BB:2737:G:H2'	23:BB:2738:A:C8	2.39	0.57
23:BB:1774:C:O2	23:BB:1774:C:H2'	2.04	0.57
45:BS:5:ALA:HB3	45:BS:54:ALA:HB2	1.85	0.57
23:DB:1826:G:H2'	23:DB:1827:U:H6	1.70	0.57
1:AA:993:G:N3	1:AA:993:G:H2'	2.19	0.57
23:DB:286:U:H2'	23:DB:287:G:C8	2.39	0.57
21:CN:20:PHE:CB	21:CN:24:ALA:HB2	2.34	0.57
1:CA:1235:U:H2'	1:CA:1236:A:O4'	2.04	0.57
23:DB:2804:U:H2'	23:DB:2805:C:C6	2.39	0.57
26:BD:169:ARG:O	26:BD:170:VAL:HG22	2.05	0.57
35:DV:70:ILE:HD13	35:DV:70:ILE:N	2.19	0.57
23:DB:2262:U:H2'	23:DB:2263:C:H6	1.69	0.57
29:DE:117:ARG:HA	29:DE:185:LYS:HG2	1.86	0.57
29:DE:108:ILE:HD11	29:DE:181:ILE:HG13	1.85	0.57
19:AU:16:ARG:NH1	19:AU:19:LYS:HE2	2.11	0.57
22:DA:8:C:O2'	43:DO:40:ILE:HD13	2.05	0.57
38:DM:96:ILE:HD11	38:DM:126:ILE:HG12	1.86	0.57
38:DM:43:ALA:O	38:DM:46:ILE:HG13	2.04	0.57
47:BF:102:LEU:HA	47:BF:106:ALA:CB	2.34	0.57
1:CA:1005:A:H3'	1:CA:1006:G:H8	1.68	0.57
1:AA:1349:A:H2'	1:AA:1350:A:O4'	2.04	0.57
51:DZ:5:CYS:HB2	51:DZ:10:LYS:HB2	1.86	0.57
12:CM:33:LEU:HB3	12:CM:38:ILE:O	2.04	0.57
40:DH:89:LYS:H	40:DH:89:LYS:HD2	1.69	0.57
18:CB:101:THR:HG22	18:CB:174:GLU:CD	2.25	0.57
23:BB:611:C:H2'	23:BB:612:G:H5'	1.85	0.57
23:BB:418:C:H2'	23:BB:419:U:C6	2.40	0.57
1:AA:476:U:O2'	1:AA:477:C:H5'	2.04	0.57
23:BB:2322:A:H5'	23:BB:2322:A:H8	1.68	0.57
23:DB:364:C:H2'	23:DB:365:U:C6	2.39	0.57
23:BB:1400:U:H2'	23:BB:1401:G:H8	1.67	0.57
22:BA:49:C:H2'	22:BA:50:A:C8	2.40	0.57
23:DB:104:A:H2'	23:DB:105:C:C6	2.40	0.57
4:AE:95:MET:HA	4:AE:124:ALA:HB2	1.87	0.57
38:BM:4:PRO:HG2	38:BM:70:ASP:HA	1.85	0.57
8:CI:10:ARG:H	8:CI:80:HIS:CD2	2.22	0.57
23:BB:1990:C:H2'	23:BB:1991:U:C6	2.39	0.57
23:DB:699:A:H4'	23:DB:1634:A:N7	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1181:G:O2'	1:CA:1182:G:N7	2.37	0.57
23:DB:2573:C:H3'	57:DB:3628:HOH:O	2.04	0.57
52:BW:23:LYS:C	52:BW:66:VAL:HB	2.25	0.57
12:AM:15:VAL:HG12	12:AM:30:LYS:HA	1.86	0.57
12:AM:22:TYR:HB2	12:AM:65:GLU:HA	1.87	0.57
9:CJ:8:ILE:HG12	9:CJ:100:ILE:HG22	1.86	0.57
6:CG:30:MET:CE	6:CG:33:GLY:H	2.18	0.57
26:BD:113:SER:HB3	26:BD:168:GLU:H	1.70	0.57
23:BB:141:G:H5''	23:BB:142:A:O4'	2.04	0.57
48:BG:162:ARG:HE	48:BG:166:GLU:CD	2.08	0.57
23:BB:2742:G:O2'	23:BB:2743:U:H5'	2.04	0.57
35:DV:24:ASN:O	35:DV:44:HIS:HB2	2.03	0.57
2:CC:2:GLN:NE2	2:CC:2:GLN:H	1.95	0.57
23:BB:871:U:H2'	23:BB:872:U:C6	2.40	0.57
47:BF:106:ALA:HA	47:BF:135:ILE:HD13	1.86	0.57
28:DP:24:THR:O	28:DP:25:VAL:HG22	2.05	0.57
23:DB:125:A:H3'	23:DB:126:A:H5''	1.87	0.57
1:CA:1320:C:N4	16:CS:36:ARG:HG2	2.20	0.57
6:AG:71:THR:H	6:AG:141:HIS:HE1	1.52	0.57
33:B1:7:LYS:HD3	34:B3:33:THR:HG21	1.86	0.57
11:AL:41:PRO:HB3	11:AL:49:ARG:NH1	2.20	0.57
21:CN:27:LYS:CD	21:CN:28:ALA:H	2.16	0.57
23:BB:2097:A:H2'	23:BB:2098:U:C6	2.39	0.57
23:DB:1386:C:H5''	23:DB:1396:U:O2	2.05	0.57
1:CA:1285:A:O2'	1:CA:1286:U:H2'	2.04	0.57
23:BB:638:G:H2'	23:BB:639:U:C6	2.40	0.57
23:DB:171:U:H2'	23:DB:172:A:H8	1.70	0.57
8:CI:29:ILE:HG21	8:CI:37:TYR:CD2	2.40	0.57
23:DB:1777:U:O2'	23:DB:1778:U:H5'	2.05	0.57
45:BS:76:VAL:HG12	45:BS:103:ILE:HA	1.87	0.57
7:CH:86:LYS:HB3	7:CH:90:GLU:HB3	1.87	0.57
30:DY:8:GLN:CB	30:DY:31:ILE:HA	2.35	0.57
23:DB:1684:G:H2'	23:DB:1685:C:H6	1.70	0.57
47:DF:70:ARG:NH2	47:DF:71:LYS:HB2	2.19	0.57
1:AA:927:G:H4'	1:AA:1503:A:N7	2.19	0.57
23:DB:2861:U:H2'	23:DB:2862:G:H8	1.69	0.57
22:BA:102:G:H2'	22:BA:103:U:H6	1.69	0.57
50:DT:18:GLU:O	50:DT:20:ALA:N	2.35	0.57
1:CA:472:U:H2'	1:CA:473:U:C6	2.39	0.57
26:BD:38:LYS:HG3	26:BD:47:ALA:HB3	1.86	0.57
29:BE:189:THR:O	29:BE:193:VAL:HG23	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1583:A:H5''	23:BB:1584:U:OP1	2.03	0.57
29:DE:31:VAL:HG21	29:DE:104:ALA:CB	2.35	0.57
23:DB:2561:U:O3'	27:DK:40:LYS:HE2	2.04	0.57
23:DB:1098:A:C2'	24:DI:4:VAL:N	2.67	0.57
1:CA:1179:A:H2'	1:CA:1180:A:O4'	2.05	0.57
35:BV:4:ILE:HG22	35:BV:63:ILE:HG23	1.86	0.57
23:BB:1199:U:H5'	44:BQ:4:LYS:HD3	1.86	0.57
3:AD:160:LEU:N	3:AD:160:LEU:HD13	2.12	0.57
23:DB:2746:U:H5''	48:DG:137:LYS:HG2	1.86	0.57
48:DG:86:LEU:HG	48:DG:163:TYR:HD1	1.69	0.57
38:DM:69:PRO:HA	38:DM:94:ALA:HB2	1.86	0.57
23:DB:1082:U:N3	23:DB:1086:A:C6	2.71	0.57
47:DF:134:GLN:C	47:DF:136:ILE:H	2.06	0.57
23:DB:1794:A:H2'	23:DB:1795:C:H6	1.68	0.57
1:CA:1414:U:H2'	1:CA:1415:G:H8	1.69	0.57
1:AA:205:A:O2'	1:AA:206:C:H5'	2.04	0.57
44:BQ:80:ASN:O	44:BQ:83:LYS:HB3	2.05	0.57
38:DM:100:LYS:HD3	38:DM:101:VAL:N	2.20	0.57
25:BC:102:TYR:O	25:BC:103:ILE:HG13	2.04	0.57
27:BK:2:ILE:HG23	27:BK:33:ALA:O	2.05	0.57
23:DB:1993:U:H4'	26:DD:133:THR:CG2	2.35	0.57
23:BB:191:A:H2'	23:BB:192:C:H6	1.68	0.57
23:BB:594:U:H2'	23:BB:595:C:H6	1.68	0.57
1:CA:602:A:O2'	1:CA:603:U:H5'	2.05	0.57
47:BF:41:GLU:HB3	47:BF:44:ALA:CB	2.35	0.57
23:DB:445:C:O2'	23:DB:446:G:H5'	2.05	0.57
23:BB:272:A:H2'	23:BB:273:G:C8	2.40	0.57
1:AA:1477:U:H2'	1:AA:1478:U:C6	2.39	0.57
2:CC:179:ALA:HB1	2:CC:202:PHE:CE1	2.39	0.57
1:CA:493:A:H5'	1:CA:494:G:OP2	2.04	0.57
30:DY:23:LEU:HD13	30:DY:28:LEU:HB2	1.85	0.57
23:BB:2710:C:H2'	23:BB:2711:A:C8	2.40	0.57
45:DS:4:ILE:HG22	45:DS:106:VAL:HG22	1.86	0.57
25:BC:62:ARG:HD2	25:BC:62:ARG:N	2.19	0.57
43:BO:58:ILE:O	43:BO:62:LEU:HD23	2.05	0.57
23:BB:2298:A:OP1	47:BF:70:ARG:HD3	2.05	0.57
23:DB:2639:A:H2'	23:DB:2640:G:O4'	2.05	0.57
8:AI:127:SER:HB2	8:AI:128:LYS:HD3	1.86	0.57
29:DE:189:THR:O	29:DE:193:VAL:HG23	2.05	0.57
23:DB:1346:G:O2'	23:DB:1347:A:H5'	2.04	0.57
23:BB:1577:C:H2'	23:BB:1578:U:C6	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:546:U:H5''	23:BB:548:G:C5	2.39	0.57
9:CJ:40:ILE:HD12	9:CJ:74:VAL:H	1.69	0.57
35:BV:70:ILE:HD13	35:BV:70:ILE:N	2.19	0.57
5:AF:1:MET:SD	5:AF:67:PRO:HD3	2.45	0.57
1:CA:254:G:OP1	14:CQ:68:LYS:O	2.22	0.57
37:DL:123:ARG:CZ	37:DL:143:GLU:HB2	2.35	0.57
8:AI:36:GLN:N	8:AI:36:GLN:NE2	2.53	0.57
10:AK:22:ILE:HD13	10:AK:95:THR:CG2	2.35	0.57
23:BB:1724:G:H2'	23:BB:1725:U:C6	2.40	0.57
1:AA:8:A:C6	3:AD:205:LYS:HB2	2.39	0.57
40:DH:134:VAL:HG23	40:DH:138:VAL:HG11	1.86	0.57
43:DO:28:VAL:HG22	43:DO:29:HIS:N	2.16	0.57
47:DF:102:LEU:HA	47:DF:106:ALA:CB	2.35	0.57
47:DF:137:PHE:O	47:DF:139:GLU:N	2.38	0.57
18:CB:58:LYS:HD3	18:CB:59:ILE:HG23	1.85	0.57
47:BF:137:PHE:O	47:BF:139:GLU:N	2.37	0.57
23:DB:2052:A:OP1	26:DD:145:SER:HA	2.04	0.57
47:DF:15:LEU:HA	47:DF:18:GLU:HB2	1.85	0.57
24:DI:121:ILE:CD1	24:DI:121:ILE:H	2.15	0.57
34:D3:49:VAL:HG23	34:D3:51:LYS:N	2.20	0.57
1:AA:1308:U:H5'	12:AM:108:ARG:HH21	1.70	0.57
23:DB:1592:C:H2'	23:DB:1593:A:C8	2.38	0.57
39:DX:26:PHE:HD1	39:DX:27:ASN:HD22	1.51	0.57
27:BK:64:ARG:HD2	27:BK:102:PRO:O	2.05	0.57
46:DU:85:ARG:HD3	46:DU:86:PHE:N	2.19	0.57
36:D2:35:ARG:HB2	36:D2:42:LEU:HD21	1.85	0.57
23:BB:2228:G:H2'	23:BB:2229:U:C6	2.40	0.57
3:CD:35:GLN:O	3:CD:37:PRO:HD3	2.05	0.57
6:AG:149:ALA:HB3	10:AK:55:ARG:NH2	2.20	0.57
23:BB:653:U:H5'	23:BB:654:A:H5''	1.85	0.57
23:BB:2292:U:H2'	23:BB:2293:G:H8	1.70	0.57
48:BG:40:VAL:HG13	48:BG:64:ALA:HA	1.87	0.57
11:AL:107:LYS:HD2	11:AL:107:LYS:H	1.70	0.57
23:BB:2648:G:H2'	23:BB:2649:C:C6	2.39	0.57
23:BB:173:A:H2'	23:BB:174:U:C6	2.40	0.57
38:BM:11:LYS:HD3	38:BM:86:LYS:HD3	1.86	0.57
52:DW:43:LYS:HB3	52:DW:79:ILE:HD11	1.86	0.57
29:DE:17:THR:C	29:DE:19:PHE:H	2.08	0.57
1:CA:401:C:H2'	1:CA:402:G:H8	1.69	0.57
24:BI:58:ILE:N	24:BI:58:ILE:HD12	2.19	0.57
1:AA:1053:G:H4'	1:AA:1054:C:H5'	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CT:56:ILE:O	17:CT:60:GLN:HG2	2.05	0.57
7:AH:86:LYS:HB3	7:AH:90:GLU:HB3	1.87	0.57
23:DB:2710:C:H2'	23:DB:2711:A:C8	2.40	0.57
23:DB:2299:U:H2'	23:DB:2300:C:C6	2.39	0.57
1:CA:994:A:H2'	1:CA:994:A:N3	2.18	0.57
37:DL:131:ALA:HA	37:DL:134:ALA:HB3	1.85	0.57
41:BJ:114:LEU:O	41:BJ:118:MET:HG3	2.04	0.57
33:B1:32:LYS:HE3	33:B1:52:LYS:HG2	1.87	0.57
9:AJ:92:LEU:H	9:AJ:92:LEU:HD22	1.69	0.57
23:DB:397:U:H2'	23:DB:398:C:C6	2.40	0.57
12:CM:105:ALA:HB3	12:CM:109:LYS:HE3	1.86	0.57
2:AC:155:ARG:HD2	2:AC:192:TYR:CD1	2.38	0.57
9:CJ:22:THR:HA	9:CJ:25:ILE:HD12	1.87	0.57
5:CF:66:ALA:HB1	5:CF:67:PRO:HD2	1.87	0.57
5:AF:66:ALA:HB1	5:AF:67:PRO:HD2	1.87	0.57
15:AR:56:ARG:O	15:AR:60:ARG:HG2	2.04	0.57
40:BH:61:VAL:HG13	40:BH:62:LEU:HD23	1.86	0.57
23:DB:1199:U:H5'	44:DQ:4:LYS:HD3	1.85	0.57
37:BL:17:LYS:HD2	37:BL:19:LEU:HD11	1.86	0.57
23:BB:1799:G:C5	25:BC:175:LEU:HD13	2.40	0.57
26:DD:12:THR:O	26:DD:24:VAL:HG12	2.05	0.57
28:BP:47:ILE:HD11	28:BP:59:THR:HG22	1.87	0.57
23:BB:2352:A:C6	52:BW:30:VAL:HG11	2.40	0.57
1:AA:1349:A:OP1	8:AI:121:ARG:HB2	2.05	0.57
41:DJ:44:TYR:CE2	44:DQ:59:LEU:HD11	2.40	0.57
49:DR:79:ARG:O	49:DR:81:LYS:HG2	2.04	0.57
23:DB:2184:A:H2'	23:DB:2185:U:C6	2.40	0.57
18:AB:140:LEU:H	18:AB:140:LEU:HD12	1.69	0.57
23:BB:37:C:O2'	29:BE:45:ALA:HA	2.05	0.57
18:CB:127:LYS:NZ	18:CB:128:LEU:HB2	2.19	0.57
18:CB:128:LEU:O	18:CB:133:ALA:HB2	2.04	0.57
1:CA:617:G:H4'	13:CP:46:LYS:HD3	1.86	0.57
1:CA:1296:C:H4'	1:CA:1302:C:H41	1.69	0.57
1:CA:859:G:H2'	1:CA:860:A:H8	1.70	0.57
1:CA:161:A:H2'	1:CA:162:A:C8	2.40	0.57
7:AH:86:LYS:HD2	7:AH:90:GLU:HG2	1.86	0.57
23:DB:1219:U:H2'	23:DB:1220:G:H8	1.68	0.57
2:AC:19:SER:O	21:AN:93:PRO:HB3	2.05	0.57
23:BB:348:A:H2'	23:BB:349:U:C6	2.40	0.57
23:DB:979:A:H2'	23:DB:982:C:H41	1.69	0.57
23:BB:277:G:N3	23:BB:277:G:H2'	2.20	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1205:A:H4'	23:DB:1206:G:OP2	2.05	0.57
24:DI:5:GLN:O	24:DI:6:ALA:HB3	2.05	0.57
8:CI:41:GLU:O	8:CI:44:ARG:HG2	2.05	0.57
12:AM:39:ALA:HB3	12:AM:42:VAL:HG13	1.86	0.57
37:DL:29:LYS:C	37:DL:31:GLY:H	2.08	0.57
5:CF:88:MET:CE	5:CF:90:MET:HG2	2.34	0.57
37:DL:123:ARG:NH1	37:DL:143:GLU:HB2	2.20	0.57
23:BB:2538:C:H2'	23:BB:2539:C:H6	1.68	0.57
23:BB:2720:U:H2'	23:BB:2721:A:H8	1.70	0.57
18:CB:33:ALA:HA	18:CB:39:ILE:H	1.70	0.57
27:BK:73:ASP:HB2	28:BP:77:SER:OG	2.05	0.57
38:BM:43:ALA:O	38:BM:46:ILE:HG13	2.05	0.57
47:DF:134:GLN:NE2	47:DF:136:ILE:HD13	2.20	0.57
23:BB:2728:U:H2'	23:BB:2729:G:C8	2.40	0.57
42:BN:33:ILE:HD11	42:BN:112:TYR:CD1	2.39	0.57
6:AG:29:LEU:HD11	6:AG:119:LEU:HD22	1.86	0.57
1:AA:994:A:C5	1:AA:1216:A:H4'	2.40	0.57
44:DQ:56:PHE:O	44:DQ:59:LEU:HB3	2.05	0.57
1:CA:268:U:H2'	1:CA:269:C:C6	2.40	0.57
23:BB:987:C:H2'	23:BB:988:A:O4'	2.05	0.57
23:BB:1484:U:H2'	23:BB:1485:U:C6	2.39	0.57
23:DB:170:U:H2'	23:DB:171:U:C6	2.40	0.57
25:BC:94:LEU:HD13	25:BC:100:ARG:HD3	1.87	0.57
1:AA:195:A:H1'	1:AA:222:C:O2'	2.04	0.57
1:CA:1129:C:H5''	8:CI:17:ARG:NH2	2.19	0.57
1:AA:1007:U:H2'	1:AA:1008:U:C6	2.40	0.57
1:AA:677:U:H2'	1:AA:678:U:H6	1.70	0.57
23:BB:479:A:N3	23:BB:481:G:H5''	2.20	0.57
23:BB:951:C:O2'	23:BB:952:G:H5'	2.05	0.57
6:CG:25:PHE:HB2	6:CG:100:MET:SD	2.44	0.57
23:DB:2443:C:O2'	23:DB:2444:G:H5'	2.04	0.57
52:BW:70:VAL:HG23	52:BW:75:ASN:HD22	1.69	0.57
23:BB:1097:U:H2'	23:BB:1098:A:H5'	1.87	0.57
9:CJ:37:ARG:HG3	9:CJ:38:GLY:N	2.19	0.57
23:DB:611:C:H2'	23:DB:612:G:H5'	1.85	0.57
18:AB:205:ALA:O	18:AB:209:VAL:HG22	2.05	0.57
23:DB:1809:A:H2'	23:DB:1810:A:C8	2.39	0.57
26:BD:33:ARG:HA	26:BD:95:SER:HA	1.86	0.57
1:AA:317:U:H2'	1:AA:318:G:H8	1.69	0.57
25:DC:7:PRO:HB3	25:DC:13:ARG:HG3	1.86	0.57
12:CM:15:VAL:HA	12:CM:29:SER:OG	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CO:54:ARG:HG2	20:CO:54:ARG:HH11	1.70	0.57
23:BB:404:A:H4'	23:BB:405:U:H5'	1.86	0.57
3:AD:39:GLN:HG3	3:AD:40:HIS:N	2.19	0.57
23:DB:1100:C:OP2	24:DI:2:LYS:HB3	2.05	0.56
52:BW:49:ASN:HB3	52:BW:81:ILE:CD1	2.35	0.56
23:BB:1429:G:H2'	23:BB:1430:G:H8	1.70	0.56
23:BB:137:U:H3'	23:BB:138:U:C5	2.39	0.56
42:BN:72:ASP:O	42:BN:76:VAL:HG13	2.05	0.56
48:BG:91:VAL:HG23	48:BG:92:GLY:H	1.70	0.56
2:AC:185:THR:HG22	2:AC:186:SER:H	1.69	0.56
1:CA:719:C:H1'	15:CR:37:LYS:HB2	1.87	0.56
1:AA:436:C:O2'	1:AA:437:U:H5'	2.05	0.56
23:BB:321:U:OP2	29:BE:130:LYS:HA	2.05	0.56
28:BP:54:LEU:HA	28:BP:76:HIS:CD2	2.40	0.56
23:DB:2376:A:H2'	23:DB:2377:A:O4'	2.05	0.56
43:BO:109:ALA:HA	43:BO:112:GLU:OE2	2.05	0.56
43:BO:28:VAL:HG22	43:BO:29:HIS:N	2.17	0.56
23:DB:2885:G:H21	31:D0:31:LYS:HB3	1.69	0.56
18:CB:61:SER:HB2	18:CB:62:ARG:NH1	2.20	0.56
28:DP:88:ARG:HH21	28:DP:112:ARG:NH2	2.03	0.56
1:CA:1000:A:H2'	1:CA:1001:C:H6	1.66	0.56
1:CA:1005:A:H3'	1:CA:1006:G:C8	2.39	0.56
47:BF:134:GLN:C	47:BF:136:ILE:H	2.07	0.56
18:AB:186:VAL:O	18:AB:200:PRO:HA	2.05	0.56
26:DD:136:ASN:HD21	26:DD:139:SER:C	2.08	0.56
1:AA:1508:A:H2'	1:AA:1509:C:C6	2.40	0.56
42:DN:9:GLN:HA	42:DN:17:ARG:NE	2.19	0.56
39:BX:26:PHE:HD1	39:BX:27:ASN:HD22	1.52	0.56
46:BU:85:ARG:HD3	46:BU:86:PHE:N	2.20	0.56
24:DI:125:THR:O	24:DI:129:GLU:HG3	2.05	0.56
32:D4:16:ILE:HG12	32:D4:25:VAL:HG22	1.87	0.56
1:AA:244:U:O4	1:AA:906:A:H1'	2.05	0.56
38:DM:105:MET:HB2	38:DM:117:PHE:CZ	2.39	0.56
1:AA:370:C:H2'	1:AA:371:A:C8	2.40	0.56
23:DB:2292:U:H2'	23:DB:2293:G:C8	2.40	0.56
38:BM:32:GLY:O	38:BM:131:VAL:HG22	2.05	0.56
1:CA:370:C:H2'	1:CA:371:A:C8	2.40	0.56
23:BB:1853:A:N1	23:BB:2087:G:H1'	2.20	0.56
22:DA:60:C:H2'	22:DA:61:G:C8	2.40	0.56
1:CA:1128:C:H4'	1:CA:1148:U:O2	2.05	0.56
1:CA:1127:G:H22	1:CA:1145:A:H2	1.53	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:104:GLU:HG2	2:CC:105:VAL:H	1.69	0.56
1:AA:812:G:O2'	1:AA:813:U:H6	1.87	0.56
23:DB:2104:C:H2'	23:DB:2105:U:C6	2.40	0.56
23:DB:1779:U:C5	23:DB:1784:A:N7	2.73	0.56
22:DA:49:C:H2'	22:DA:50:A:H8	1.70	0.56
1:CA:1163:A:H2'	1:CA:1164:G:C8	2.39	0.56
1:CA:32:A:H2'	1:CA:33:A:C8	2.40	0.56
23:BB:296:U:H2'	23:BB:297:G:C8	2.40	0.56
22:DA:32:U:H4'	22:DA:52:A:N6	2.20	0.56
17:AT:56:ILE:O	17:AT:60:GLN:HG2	2.04	0.56
21:AN:86:ALA:HB1	21:AN:91:GLU:HB2	1.87	0.56
23:BB:208:C:H2'	23:BB:209:C:H6	1.70	0.56
23:BB:2757:A:H2'	23:BB:2758:A:H5'	1.87	0.56
10:CK:30:ILE:HG22	10:CK:45:THR:HB	1.87	0.56
1:CA:335:C:H2'	1:CA:336:A:H8	1.70	0.56
1:AA:1465:A:H2'	1:AA:1466:C:C6	2.40	0.56
7:AH:113:ARG:HH21	7:AH:117:GLN:HB2	1.70	0.56
23:DB:696:G:O2'	23:DB:697:G:H5'	2.05	0.56
25:DC:82:TYR:HE1	25:DC:84:PRO:HG3	1.70	0.56
41:DJ:102:GLU:HB3	41:DJ:119:PHE:HZ	1.68	0.56
1:CA:724:G:H2'	1:CA:725:G:H8	1.69	0.56
6:AG:143:MET:N	6:AG:143:MET:SD	2.78	0.56
51:DZ:35:SER:HA	51:DZ:50:ARG:HA	1.86	0.56
23:BB:564:C:H1'	44:BQ:36:GLN:OE1	2.05	0.56
23:DB:2860:A:H8	23:DB:2860:A:O5'	1.88	0.56
1:AA:613:C:H2'	1:AA:614:C:C6	2.39	0.56
23:BB:704:G:H1'	23:BB:727:A:N6	2.19	0.56
21:CN:48:GLN:O	21:CN:50:LEU:HG	2.05	0.56
23:DB:1724:G:H2'	23:DB:1725:U:C6	2.40	0.56
47:DF:111:ARG:O	47:DF:112:ASP:HB2	2.05	0.56
44:BQ:94:LEU:HD12	49:BR:13:ARG:HB2	1.88	0.56
47:BF:111:ARG:O	47:BF:112:ASP:HB2	2.05	0.56
26:DD:51:THR:HG21	26:DD:76:GLY:HA3	1.87	0.56
23:DB:1792:G:OP1	25:DC:204:LEU:HD12	2.05	0.56
13:CP:68:SER:HB3	13:CP:71:VAL:HG12	1.86	0.56
1:CA:986:U:H1'	16:CS:53:GLY:O	2.05	0.56
25:DC:94:LEU:HD13	25:DC:100:ARG:HD3	1.86	0.56
1:AA:652:U:H1'	1:AA:653:U:H5	1.69	0.56
23:BB:2645:G:H3'	23:BB:2646:C:C5'	2.35	0.56
1:AA:222:C:H2'	1:AA:223:A:C8	2.40	0.56
23:BB:1559:U:H3'	23:BB:1560:G:H5'	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:680:C:H2'	23:BB:681:G:H8	1.70	0.56
1:AA:272:C:H2'	1:AA:273:U:C6	2.41	0.56
1:CA:555:U:H2'	1:CA:556:C:H6	1.70	0.56
23:DB:1316:U:O2'	23:DB:1317:G:H5'	2.05	0.56
52:BW:45:HIS:HB3	52:BW:52:CYS:HB2	1.87	0.56
51:DZ:51:VAL:O	51:DZ:52:SER:HB3	2.04	0.56
23:DB:2297:A:N6	23:DB:2319:G:H1'	2.21	0.56
1:AA:230:G:H5''	13:AP:31:ARG:NH2	2.20	0.56
22:DA:89:U:O2	23:DB:958:U:H2'	2.04	0.56
1:CA:598:U:H2'	1:CA:599:C:C6	2.41	0.56
23:DB:2788:C:H2'	23:DB:2789:C:C6	2.40	0.56
4:AE:100:GLU:HA	4:AE:121:ASN:ND2	2.20	0.56
16:AS:24:SER:HB2	16:AS:27:LYS:HE2	1.86	0.56
23:DB:704:G:H1'	23:DB:727:A:N6	2.19	0.56
12:AM:13:HIS:HA	12:AM:41:ASP:O	2.05	0.56
50:DT:31:VAL:HA	50:DT:84:TYR:H	1.70	0.56
50:BT:28:ASN:CA	50:BT:91:GLN:HE22	2.18	0.56
8:CI:11:ARG:HD3	8:CI:76:GLY:HA3	1.86	0.56
38:BM:135:VAL:O	38:BM:136:MET:HG3	2.06	0.56
23:BB:2774:C:OP1	26:BD:169:ARG:HG3	2.06	0.56
1:CA:121:U:H4'	1:CA:122:G:N7	2.20	0.56
48:DG:34:ARG:H	48:DG:34:ARG:NH1	1.86	0.56
5:CF:17:GLN:O	5:CF:21:MET:HG3	2.06	0.56
52:BW:37:VAL:HG12	52:BW:38:ARG:N	2.19	0.56
1:CA:1380:U:O4	6:CG:2:ARG:HB2	2.05	0.56
40:BH:31:VAL:CB	40:BH:32:PRO:HD3	2.32	0.56
24:DI:108:ILE:HG22	24:DI:128:ILE:HD13	1.87	0.56
3:AD:153:ARG:HG3	3:AD:154:VAL:H	1.70	0.56
18:AB:69:VAL:HA	18:AB:91:VAL:O	2.05	0.56
1:CA:16:A:C2'	1:CA:17:U:H5'	2.34	0.56
23:BB:2472:G:C2'	23:BB:2475:C:H42	2.17	0.56
48:DG:126:THR:H	48:DG:129:GLU:HB3	1.68	0.56
47:BF:24:VAL:O	47:BF:27:VAL:HG22	2.06	0.56
16:CS:15:LEU:HA	16:CS:18:VAL:CG1	2.35	0.56
6:AG:138:GLU:HA	6:AG:141:HIS:HB2	1.88	0.56
23:DB:996:A:H4'	44:DQ:91:ARG:HG2	1.87	0.56
50:BT:38:ALA:O	50:BT:39:THR:HB	2.05	0.56
50:BT:39:THR:CG2	50:BT:42:GLU:H	2.15	0.56
27:BK:2:ILE:HD12	27:BK:2:ILE:N	2.20	0.56
23:DB:2674:G:H2'	23:DB:2675:A:H8	1.69	0.56
23:DB:2674:G:H2'	23:DB:2675:A:C8	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2557:G:H2'	23:BB:2558:C:H6	1.70	0.56
23:DB:741:U:H2'	23:DB:742:A:C8	2.40	0.56
1:CA:131:A:H2'	1:CA:132:C:C6	2.39	0.56
23:BB:192:C:H2'	23:BB:193:U:H5'	1.86	0.56
23:DB:616:A:H4'	29:DE:101:TYR:CE2	2.40	0.56
23:DB:871:U:H2'	23:DB:872:U:C6	2.40	0.56
29:BE:46:GLN:HG3	29:BE:87:ALA:HB3	1.87	0.56
51:BZ:51:VAL:O	51:BZ:52:SER:HB3	2.05	0.56
23:DB:2199:A:H3'	23:DB:2200:C:H6	1.69	0.56
6:AG:114:SER:O	6:AG:118:ARG:HG3	2.05	0.56
1:AA:602:A:O2'	1:AA:603:U:H5'	2.05	0.56
1:CA:222:C:H2'	1:CA:223:A:C8	2.40	0.56
23:BB:242:G:H5''	34:B3:63:TYR:CE2	2.41	0.56
1:AA:337:G:O2'	1:AA:338:A:H5'	2.05	0.56
1:CA:35:G:H2'	1:CA:36:C:H6	1.70	0.56
23:BB:1405:U:H2'	23:BB:1406:U:C6	2.41	0.56
23:DB:2784:U:H2'	23:DB:2785:C:C6	2.39	0.56
23:DB:2300:C:H2'	23:DB:2301:C:C6	2.40	0.56
1:AA:562:U:H1'	11:AL:11:ARG:HB3	1.87	0.56
4:CE:100:GLU:HA	4:CE:121:ASN:ND2	2.20	0.56
1:AA:323:U:H2'	1:AA:324:G:O4'	2.05	0.56
15:AR:21:ASP:OD1	15:AR:23:LYS:HE3	2.06	0.56
50:DT:7:LEU:C	50:DT:9:LYS:HE3	2.26	0.56
23:DB:1936:A:N6	23:DB:1963:U:N3	2.53	0.56
1:AA:32:A:H2'	1:AA:33:A:C8	2.40	0.56
23:BB:2825:G:H3'	23:BB:2826:A:H8	1.70	0.56
11:AL:13:ARG:O	11:AL:14:LYS:HB3	2.04	0.56
23:DB:2529:G:H5''	48:DG:174:LYS:HD2	1.87	0.56
23:BB:997:G:O2'	23:BB:998:C:H5'	2.05	0.56
1:CA:1258:G:H2'	1:CA:1259:C:C6	2.41	0.56
4:AE:33:THR:HG22	4:AE:51:LYS:HB3	1.87	0.56
41:BJ:72:LYS:O	41:BJ:73:VAL:HG13	2.05	0.56
25:BC:2:VAL:HG23	25:BC:3:VAL:H	1.70	0.56
23:BB:942:G:H2'	23:BB:943:A:O4'	2.05	0.56
23:BB:2804:U:H2'	23:BB:2805:C:C6	2.40	0.56
40:BH:90:LEU:HD21	40:BH:146:VAL:CG1	2.36	0.56
52:DW:23:LYS:C	52:DW:66:VAL:HB	2.25	0.56
4:AE:73:VAL:HG11	4:AE:143:LEU:HB3	1.87	0.56
48:DG:17:LYS:HB3	48:DG:24:THR:HB	1.87	0.56
14:CQ:19:SER:O	14:CQ:20:ILE:HG13	2.05	0.56
26:DD:106:LYS:HG3	26:DD:206:ALA:HB3	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:68:ARG:NE	40:BH:72:ILE:HB	2.21	0.56
52:DW:18:LYS:HA	52:DW:36:ILE:HG12	1.87	0.56
52:DW:37:VAL:HG12	52:DW:38:ARG:N	2.19	0.56
19:AU:16:ARG:HA	19:AU:16:ARG:NE	2.20	0.56
49:DR:37:GLU:HG3	49:DR:53:PHE:CZ	2.39	0.56
38:DM:71:LYS:HG2	38:DM:93:VAL:HG12	1.88	0.56
16:AS:70:LEU:HA	16:AS:73:PHE:CE1	2.41	0.56
1:AA:1220:G:H2'	1:AA:1221:G:H8	1.69	0.56
23:DB:2834:G:H1'	23:DB:2883:A:H61	1.70	0.56
47:BF:122:ASP:OD2	47:BF:126:ASN:HB2	2.05	0.56
40:DH:7:ASP:CG	40:DH:8:LYS:H	2.09	0.56
23:BB:784:G:H1	25:BC:227:VAL:HG11	1.69	0.56
9:AJ:18:ILE:HG23	9:AJ:19:ASP:N	2.20	0.56
23:DB:2742:G:O2'	23:DB:2743:U:H5'	2.04	0.56
2:AC:6:PRO:O	2:AC:9:ILE:HG22	2.05	0.56
1:AA:841:C:H5'	1:AA:843:U:OP2	2.06	0.56
36:B2:3:ARG:NE	36:B2:3:ARG:HA	2.19	0.56
1:CA:678:U:H2'	1:CA:679:C:C6	2.40	0.56
6:AG:62:GLU:CG	6:AG:69:ARG:HH22	2.18	0.56
1:CA:41:G:H2'	1:CA:42:G:H8	1.70	0.56
23:BB:20:C:H2'	23:BB:21:A:H8	1.70	0.56
23:DB:852:U:H2'	23:DB:853:C:H6	1.71	0.56
47:BF:78:ILE:HA	47:BF:82:TYR:CD1	2.41	0.56
1:CA:1272:G:O2'	1:CA:1273:C:H5'	2.05	0.56
52:BW:34:SER:HB3	52:BW:58:LEU:HD23	1.88	0.56
23:BB:982:C:O4'	23:BB:982:C:O2	2.23	0.56
6:AG:93:VAL:HA	6:AG:96:ASN:HD21	1.71	0.56
23:DB:1636:U:H2'	23:DB:1637:A:H8	1.71	0.56
23:DB:680:C:H2'	23:DB:681:G:H8	1.70	0.56
23:BB:1771:C:H2'	23:BB:1772:A:C8	2.41	0.56
26:DD:69:ALA:HA	26:DD:73:VAL:HB	1.88	0.56
23:BB:2662:A:H2'	23:BB:2663:G:O4'	2.06	0.56
23:BB:1936:A:N6	23:BB:1963:U:N3	2.54	0.56
23:BB:1030:C:O2'	23:BB:1031:G:H5'	2.05	0.56
23:BB:2366:A:H2'	23:BB:2367:G:O4'	2.06	0.56
8:CI:44:ARG:HE	8:CI:48:ARG:HH22	1.53	0.56
18:CB:42:LEU:HA	18:CB:45:THR:HB	1.88	0.56
12:AM:73:SER:HA	12:AM:76:ILE:CD1	2.35	0.56
50:DT:32:LEU:N	50:DT:83:ALA:HB3	2.21	0.56
19:AU:36:PHE:HA	19:AU:39:LYS:CE	2.31	0.56
26:BD:106:LYS:HG3	26:BD:206:ALA:HB3	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CU:24:LYS:HD2	19:CU:25:ALA:N	2.20	0.56
24:BI:76:ALA:O	24:BI:80:LYS:HG3	2.05	0.56
1:CA:8:A:H61	3:CD:53:GLN:HE22	1.52	0.56
47:DF:110:ILE:HG22	47:DF:113:PHE:HD2	1.71	0.56
28:BP:4:ILE:HG22	28:BP:5:LYS:N	2.16	0.56
47:BF:49:LEU:HD11	47:BF:66:ILE:HD12	1.86	0.56
8:AI:118:ARG:HH22	8:AI:122:ARG:NH2	2.03	0.56
46:BU:53:GLN:O	46:BU:53:GLN:HG2	2.05	0.56
24:DI:17:ALA:O	24:DI:18:ASN:CB	2.53	0.56
24:BI:17:ALA:O	24:BI:18:ASN:HB3	2.05	0.56
23:DB:1654:A:H2'	23:DB:1655:A:H8	1.70	0.56
12:AM:2:ARG:HD3	12:AM:6:ILE:H	1.71	0.56
1:AA:1308:U:H5'	12:AM:108:ARG:NH2	2.20	0.56
39:DX:23:ARG:NE	39:DX:27:ASN:HD21	2.02	0.56
27:BK:99:ILE:H	27:BK:118:LEU:CD2	2.18	0.56
23:DB:163:C:O4'	23:DB:163:C:O2	2.23	0.56
1:CA:1287:A:H2'	1:CA:1288:A:C8	2.41	0.56
23:DB:660:C:H2'	23:DB:661:A:C8	2.40	0.56
42:BN:59:SER:C	42:BN:61:ALA:H	2.08	0.56
30:BY:8:GLN:CB	30:BY:31:ILE:HA	2.36	0.56
1:AA:493:A:H5'	1:AA:494:G:OP2	2.06	0.56
23:DB:2230:G:H2'	23:DB:2231:U:C6	2.40	0.56
1:CA:613:C:H2'	1:CA:614:C:C6	2.41	0.56
25:DC:137:GLY:H	25:DC:163:ILE:HB	1.71	0.56
41:BJ:40:HIS:HD1	41:BJ:41:LYS:N	2.04	0.56
23:DB:1153:C:H2'	23:DB:1154:G:O4'	2.05	0.56
1:AA:586:C:H5''	7:AH:81:GLY:HA2	1.87	0.56
23:DB:522:A:H2'	23:DB:523:C:C6	2.40	0.56
1:CA:49:U:O2'	1:CA:50:A:H2'	2.06	0.56
23:DB:2562:U:H2'	23:DB:2563:U:H5'	1.87	0.56
1:AA:1254:A:H2'	1:AA:1255:G:C8	2.41	0.56
23:DB:1764:C:H2'	23:DB:1765:U:H6	1.70	0.56
12:AM:12:LYS:O	12:AM:43:LYS:HA	2.05	0.56
14:AQ:19:SER:O	14:AQ:20:ILE:HG13	2.06	0.56
8:AI:24:ASN:HA	8:AI:58:GLU:O	2.06	0.56
8:AI:51:LEU:HB3	8:AI:56:MET:HB3	1.87	0.56
2:AC:112:ALA:HB1	2:AC:184:ASN:HB2	1.87	0.56
25:BC:66:PHE:HB2	25:BC:150:GLY:O	2.06	0.56
48:DG:89:VAL:HG12	48:DG:90:GLY:H	1.71	0.56
28:DP:3:ILE:O	28:DP:3:ILE:HD13	2.05	0.56
44:BQ:94:LEU:C	44:BQ:96:ASP:H	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:6:G:H2'	22:BA:7:G:C8	2.40	0.56
23:DB:2033:A:O2'	23:DB:2035:G:OP2	2.23	0.56
23:BB:1488:C:O2'	23:BB:1489:C:H5'	2.06	0.56
23:BB:170:U:H2'	23:BB:171:U:C6	2.40	0.56
1:AA:1070:U:H2'	1:AA:1071:C:H6	1.70	0.56
1:AA:1458:G:H5''	17:AT:25:SER:HB2	1.87	0.56
1:CA:926:G:H5'	1:CA:927:G:H5''	1.87	0.56
1:AA:719:C:H1'	15:AR:37:LYS:HB2	1.87	0.56
49:BR:43:ASN:HD22	49:BR:44:GLY:H	1.53	0.56
23:DB:417:C:H2'	23:DB:418:C:C6	2.41	0.56
29:DE:3:LEU:O	29:DE:12:LEU:HB2	2.04	0.56
23:BB:1636:U:H2'	23:BB:1637:A:C8	2.40	0.56
23:DB:1636:U:H2'	23:DB:1637:A:C8	2.40	0.56
23:BB:2496:C:OP1	38:BM:82:MET:HB2	2.06	0.56
23:DB:2787:C:H4'	26:DD:62:LYS:HB3	1.88	0.56
1:AA:69:G:H2'	1:AA:70:U:C6	2.41	0.56
29:DE:72:SER:C	29:DE:74:LYS:H	2.09	0.56
1:AA:731:G:OP1	1:AA:766:A:H1'	2.04	0.56
23:DB:1164:C:H2'	23:DB:1165:A:H8	1.71	0.56
23:BB:1747:U:H2'	23:BB:1748:C:C6	2.41	0.56
23:DB:2008:C:H2'	23:DB:2009:A:H8	1.70	0.56
22:BA:13:G:H1'	22:BA:69:G:N2	2.21	0.56
50:BT:7:LEU:C	50:BT:9:LYS:HE3	2.26	0.56
1:AA:783:C:O2'	1:AA:784:A:H5'	2.05	0.56
36:B2:13:ASN:O	36:B2:17:GLY:N	2.39	0.56
48:BG:36:LEU:HD22	48:BG:36:LEU:N	2.21	0.56
1:CA:415:A:H2'	1:CA:416:G:H5'	1.87	0.56
8:CI:56:MET:C	8:CI:58:GLU:H	2.08	0.56
23:DB:705:A:H61	23:DB:726:G:H1'	1.69	0.56
35:BV:75:GLN:O	38:BM:136:MET:HE1	2.06	0.56
52:DW:39:GLN:CG	52:DW:40:ARG:N	2.69	0.56
1:CA:8:A:C6	3:CD:205:LYS:HB2	2.41	0.56
1:CA:1366:C:O2'	1:CA:1367:C:H5'	2.06	0.56
23:BB:2314:A:H1'	47:BF:154:THR:HG21	1.88	0.56
44:BQ:81:GLY:HA2	44:BQ:116:LEU:HD21	1.88	0.56
40:DH:7:ASP:HA	40:DH:15:LEU:HD23	1.88	0.56
42:DN:33:ILE:HD11	42:DN:112:TYR:CD1	2.40	0.56
17:CT:64:GLY:HA2	17:CT:67:HIS:HD2	1.69	0.56
42:DN:103:ARG:HG2	42:DN:104:ALA:H	1.71	0.56
40:BH:27:ARG:HG2	40:BH:27:ARG:HH21	1.71	0.56
2:CC:152:VAL:HG11	2:CC:156:LEU:HD23	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1250:A:H4'	8:CI:69:GLY:O	2.04	0.56
23:BB:118:A:OP2	23:BB:119:A:H2'	2.06	0.56
36:D2:3:ARG:NE	36:D2:3:ARG:HA	2.20	0.56
36:D2:3:ARG:HH21	36:D2:3:ARG:HG2	1.71	0.56
23:BB:17:G:H2'	23:BB:18:U:C6	2.41	0.56
23:DB:2246:G:H2'	23:DB:2247:A:H8	1.71	0.56
23:BB:2109:U:H2'	23:BB:2110:G:O4'	2.05	0.56
25:DC:239:PHE:HD1	25:DC:241:LYS:H	1.54	0.56
23:BB:2246:G:H2'	23:BB:2247:A:H8	1.71	0.56
23:BB:1461:C:H2'	23:BB:1462:C:H6	1.69	0.56
1:AA:1117:A:H4'	8:AI:105:ARG:NH1	2.21	0.56
28:BP:103:THR:HG22	28:BP:104:GLY:N	2.20	0.56
1:AA:1480:A:H2'	1:AA:1481:U:C6	2.41	0.56
23:DB:1229:C:H2'	23:DB:1230:A:H8	1.70	0.56
30:DY:29:ARG:H	30:DY:33:HIS:CD2	2.24	0.56
47:BF:70:ARG:NH2	47:BF:71:LYS:HB2	2.20	0.56
48:DG:36:LEU:N	48:DG:36:LEU:HD22	2.20	0.56
1:AA:759:A:H2'	1:AA:760:G:O4'	2.06	0.56
23:BB:2860:A:O5'	23:BB:2860:A:H8	1.88	0.56
24:DI:37:PHE:CZ	24:DI:58:ILE:HD11	2.41	0.56
22:BA:66:A:H61	22:BA:107:G:H2'	1.70	0.56
2:CC:37:LYS:HA	2:CC:40:GLN:HE21	1.71	0.56
23:DB:811:U:OP2	37:DL:20:GLY:HA2	2.04	0.56
23:BB:770:G:P	36:B2:11:LYS:HE2	2.45	0.56
11:AL:51:VAL:HG12	11:AL:52:CYS:H	1.71	0.56
1:CA:1405:G:O2'	1:CA:1406:U:H5'	2.06	0.56
52:BW:49:ASN:HB3	52:BW:81:ILE:HG12	1.88	0.56
23:DB:854:C:O2'	23:DB:855:G:H5'	2.06	0.56
1:CA:236:A:H2'	1:CA:237:G:H8	1.70	0.56
40:BH:40:THR:H	40:BH:43:ASN:ND2	1.97	0.56
23:DB:340:A:H2'	23:DB:341:C:O4'	2.06	0.56
46:DU:81:ARG:HG3	46:DU:81:ARG:HH21	1.70	0.56
40:DH:116:ARG:CD	40:DH:131:SER:H	2.19	0.56
16:AS:35:ARG:HA	16:AS:50:VAL:HG11	1.87	0.56
23:DB:877:A:O2'	23:DB:878:A:H5'	2.05	0.56
23:DB:876:C:H5'	23:DB:877:A:OP2	2.05	0.56
23:DB:899:A:H2'	23:DB:900:A:O4'	2.06	0.56
23:BB:1106:G:H2'	23:BB:1107:G:H8	1.71	0.56
18:CB:110:ILE:O	18:CB:113:LEU:HB3	2.05	0.56
4:AE:131:ASN:HD21	4:AE:133:ILE:HB	1.71	0.56
4:AE:152:VAL:HG12	4:AE:156:ARG:HE	1.69	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CS:35:ARG:HB2	16:CS:71:GLY:CA	2.35	0.56
16:CS:43:MET:C	16:CS:46:LEU:HD23	2.25	0.56
1:CA:182:A:HO2'	1:CA:183:C:H3'	1.70	0.56
23:BB:365:U:H2'	23:BB:366:C:C6	2.41	0.56
1:CA:1227:A:H2'	1:CA:1228:C:O4'	2.06	0.56
23:BB:559:G:H1'	44:BQ:55:GLN:NE2	2.21	0.56
18:CB:131:LYS:HG3	18:CB:132:GLU:N	2.20	0.56
1:CA:763:G:H2'	1:CA:764:C:H6	1.71	0.56
4:AE:92:ARG:NH1	4:AE:92:ARG:HB3	2.21	0.56
37:BL:110:VAL:HG23	37:BL:126:ARG:O	2.05	0.56
23:BB:2579:C:H1'	26:BD:130:GLN:HE22	1.71	0.56
45:DS:76:VAL:HG12	45:DS:103:ILE:HA	1.86	0.56
1:CA:860:A:H2'	1:CA:861:G:O4'	2.06	0.56
1:AA:713:G:H2'	1:AA:714:G:C8	2.40	0.56
44:BQ:9:ALA:O	44:BQ:11:ALA:N	2.39	0.56
23:BB:532:A:H4'	23:BB:533:G:C8	2.40	0.56
23:DB:951:C:O2'	23:DB:952:G:H5'	2.05	0.56
1:AA:860:A:H2'	1:AA:861:G:O4'	2.05	0.56
45:BS:15:GLN:HA	45:BS:18:ARG:CD	2.36	0.56
4:CE:17:VAL:HG23	4:CE:33:THR:O	2.05	0.56
23:DB:479:A:N3	23:DB:481:G:H5''	2.21	0.56
23:BB:1248:G:O2'	44:BQ:2:ARG:HA	2.06	0.56
23:BB:1773:A:N7	23:BB:1829:A:H1'	2.21	0.56
1:AA:649:A:H2'	1:AA:650:G:O4'	2.06	0.56
1:CA:108:G:C6	17:CT:9:ARG:HG2	2.41	0.56
26:BD:49:GLN:HE21	26:BD:79:LEU:HD12	1.71	0.56
9:CJ:52:LEU:HG	9:CJ:62:ARG:HE	1.71	0.56
25:DC:146:LYS:HB3	25:DC:147:PRO:HD2	1.88	0.56
5:AF:86:ARG:HH12	5:AF:88:MET:HG3	1.71	0.56
40:DH:127:GLU:H	40:DH:127:GLU:CD	2.08	0.56
10:CK:22:ILE:HD13	10:CK:95:THR:CG2	2.36	0.56
43:BO:106:LEU:HG	43:BO:107:ALA:N	2.21	0.56
23:DB:900:A:O2'	23:DB:901:C:H5'	2.05	0.56
9:AJ:28:THR:HG22	9:AJ:31:ARG:NH2	2.19	0.56
38:BM:66:ARG:HB3	38:BM:66:ARG:NH1	2.20	0.56
18:CB:95:TRP:CZ2	18:CB:100:LEU:HD13	2.41	0.56
1:CA:1218:C:H2'	1:CA:1219:A:H8	1.70	0.56
16:CS:50:VAL:CG2	16:CS:70:LEU:HG	2.35	0.56
23:BB:2185:U:H2'	23:BB:2186:G:H8	1.71	0.56
1:CA:244:U:O4	1:CA:906:A:H1'	2.06	0.56
1:AA:80:A:C2'	1:AA:81:A:H4'	2.36	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1241:A:H2'	23:DB:1242:U:H5'	1.87	0.56
28:DP:100:ARG:HB3	28:DP:101:GLU:OE2	2.06	0.56
1:CA:1286:U:O2	1:CA:1286:U:O4'	2.23	0.56
23:BB:1061:U:H5'	24:BI:9:LYS:NZ	2.21	0.56
29:DE:106:LYS:NZ	29:DE:201:ALA:HB2	2.21	0.56
6:AG:110:ARG:HD2	6:AG:122:GLU:HB2	1.87	0.56
1:CA:195:A:H1'	1:CA:222:C:O2'	2.06	0.56
23:BB:1779:U:C5	23:BB:1784:A:N7	2.74	0.56
23:BB:1406:U:H2'	23:BB:1407:G:H8	1.71	0.56
23:BB:6:A:H2'	23:BB:7:G:C8	2.40	0.56
1:AA:1054:C:H1'	1:AA:1196:A:C2	2.41	0.56
5:AF:79:ARG:HH22	5:AF:87:SER:HB3	1.70	0.56
23:BB:1166:G:H2'	23:BB:1167:C:C6	2.41	0.56
23:DB:975:A:H1'	23:DB:990:A:C2	2.40	0.56
9:CJ:57:VAL:O	9:CJ:58:ASN:HB2	2.04	0.56
1:AA:1410:A:H2'	1:AA:1411:C:C6	2.41	0.56
11:AL:17:LYS:N	11:AL:17:LYS:HE3	2.21	0.56
25:DC:173:LEU:H	25:DC:173:LEU:HD13	1.71	0.56
23:BB:1794:A:O2'	23:BB:1795:C:H5'	2.06	0.56
24:DI:1:ALA:CB	24:DI:2:LYS:HD2	2.35	0.56
23:DB:1799:G:N2	23:DB:1818:U:O2'	2.39	0.56
1:CA:1317:C:OP1	21:CN:55:SER:HB3	2.05	0.56
52:BW:37:VAL:HG11	52:BW:38:ARG:HH11	1.70	0.56
23:BB:145:C:H2'	23:BB:146:A:H8	1.71	0.56
37:DL:122:VAL:O	37:DL:143:GLU:HB3	2.06	0.56
23:DB:139:U:H2'	50:DT:1:MET:HA	1.88	0.56
23:DB:139:U:O2'	50:DT:1:MET:HA	2.06	0.56
2:AC:119:ILE:HG21	2:AC:197:VAL:HG11	1.88	0.56
3:CD:160:LEU:HD23	3:CD:164:ARG:NH2	2.21	0.56
40:DH:72:ILE:HA	40:DH:108:VAL:HG21	1.88	0.56
38:BM:71:LYS:HG2	38:BM:93:VAL:HG12	1.87	0.56
1:AA:1190:G:OP1	2:AC:3:LYS:HA	2.06	0.56
23:BB:558:U:H5''	41:BJ:111:LYS:HD3	1.87	0.56
37:BL:56:PRO:O	37:BL:60:ARG:HG3	2.06	0.56
37:DL:55:MET:HE2	37:DL:56:PRO:HD2	1.87	0.56
4:AE:156:ARG:O	4:AE:158:LYS:HG3	2.05	0.56
1:CA:1014:A:C2	1:CA:1219:A:H1'	2.40	0.56
2:CC:26:LYS:HE2	2:CC:27:GLU:N	2.21	0.56
4:CE:152:VAL:HG12	4:CE:156:ARG:HE	1.71	0.56
24:DI:129:GLU:HB3	24:DI:133:ARG:HH12	1.70	0.56
39:DX:39:GLN:HB2	39:DX:42:LEU:HD22	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:278:A:H2'	23:DB:279:A:C8	2.41	0.56
23:BB:1439:A:C6	23:BB:1552:A:N7	2.74	0.56
45:BS:24:ILE:HG22	45:BS:71:VAL:HG11	1.88	0.56
23:DB:2064:C:H2'	23:DB:2065:C:H6	1.71	0.56
28:BP:100:ARG:HB3	28:BP:101:GLU:OE2	2.06	0.56
23:DB:2847:U:H5''	28:DP:94:ALA:CB	2.36	0.56
23:BB:1173:U:H2'	23:BB:1174:U:H4'	1.87	0.56
1:CA:1157:A:H5'	1:CA:1158:C:C6	2.41	0.56
23:BB:2834:G:H1'	23:BB:2883:A:H61	1.70	0.56
23:DB:170:U:H2'	23:DB:171:U:H6	1.71	0.56
45:DS:10:ALA:HB3	45:DS:101:SER:OG	2.07	0.56
22:DA:52:A:H5''	43:DO:33:ARG:NH2	2.22	0.56
23:DB:1047:G:O3'	23:DB:1048:A:H8	1.89	0.56
1:CA:337:G:O2'	1:CA:338:A:H5'	2.06	0.56
1:CA:470:C:H2'	1:CA:471:U:H6	1.71	0.56
1:AA:405:U:O4	3:AD:1:ALA:HA	2.06	0.56
27:DK:15:GLY:HA3	27:DK:52:VAL:HG23	1.88	0.56
23:DB:1682:G:H2'	23:DB:1683:U:C6	2.41	0.56
34:D3:15:LYS:HA	34:D3:20:GLY:O	2.06	0.56
2:AC:19:SER:HB3	2:AC:21:TRP:HE1	1.70	0.56
26:DD:62:LYS:HB2	26:DD:63:PRO:HD3	1.88	0.56
26:DD:56:LYS:C	26:DD:58:ASN:H	2.07	0.56
1:AA:555:U:H2'	1:AA:556:C:C6	2.40	0.56
6:CG:50:ALA:HB2	6:CG:57:GLU:HA	1.88	0.56
1:CA:1465:A:H2'	1:CA:1466:C:C6	2.41	0.56
23:DB:1190:G:P	37:DL:32:GLY:HA2	2.46	0.56
9:AJ:88:MET:HA	9:AJ:91:ASP:OD1	2.06	0.56
23:DB:2880:C:O4'	42:DN:91:ALA:HB3	2.06	0.56
27:BK:109:SER:HB2	27:BK:111:LYS:HE2	1.88	0.56
27:DK:58:LEU:N	27:DK:58:LEU:HD23	2.21	0.56
44:BQ:29:ARG:HG2	44:BQ:29:ARG:HH11	1.71	0.56
23:BB:235:U:H2'	23:BB:236:C:C6	2.41	0.56
21:CN:62:ARG:HB3	21:CN:67:GLY:HA2	1.88	0.55
30:BY:15:ARG:O	30:BY:20:LYS:HE3	2.06	0.55
52:BW:49:ASN:HA	52:BW:61:LYS:HB2	1.89	0.55
1:CA:1244:G:H2'	1:CA:1245:C:C6	2.41	0.55
19:CU:24:LYS:NZ	19:CU:25:ALA:H	1.97	0.55
21:CN:50:LEU:N	21:CN:51:PRO:HD2	2.19	0.55
29:BE:17:THR:C	29:BE:19:PHE:H	2.09	0.55
5:AF:17:GLN:O	5:AF:21:MET:HG3	2.06	0.55
5:AF:1:MET:HB2	5:AF:65:GLU:O	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DE:108:ILE:HD12	29:DE:180:LEU:HB3	1.89	0.55
12:AM:109:LYS:HD3	12:AM:110:GLY:N	2.16	0.55
23:DB:138:U:C4'	23:DB:139:U:H3'	2.32	0.55
23:BB:2466:C:OP1	32:B4:4:ARG:HG2	2.05	0.55
23:BB:2746:U:H5''	48:BG:137:LYS:HG2	1.88	0.55
1:CA:720:C:OP1	15:CR:40:PRO:HG3	2.06	0.55
40:DH:68:ARG:NH2	40:DH:71:LYS:HB3	2.22	0.55
49:BR:41:ILE:HD11	49:BR:47:VAL:HB	1.87	0.55
38:BM:39:GLY:O	38:BM:96:ILE:HG13	2.06	0.55
39:DX:46:VAL:O	39:DX:49:ASP:HB2	2.05	0.55
39:DX:14:LEU:CD2	39:DX:57:LEU:HD11	2.33	0.55
2:CC:149:LYS:O	2:CC:200:TRP:HE3	1.89	0.55
18:CB:96:LEU:N	18:CB:99:MET:HE3	2.21	0.55
23:DB:2538:C:H2'	23:DB:2539:C:H6	1.69	0.55
36:B2:42:LEU:O	36:B2:43:THR:HG23	2.05	0.55
23:BB:1437:C:H2'	23:BB:1438:U:H6	1.70	0.55
1:CA:1054:C:H1'	1:CA:1196:A:C2	2.41	0.55
1:CA:677:U:H2'	1:CA:678:U:H6	1.71	0.55
6:AG:63:VAL:HA	6:AG:66:GLU:CD	2.27	0.55
23:DB:21:A:O2'	23:DB:22:C:H5'	2.06	0.55
3:CD:187:ARG:O	3:CD:191:SER:HB3	2.05	0.55
23:BB:170:U:H2'	23:BB:171:U:H6	1.72	0.55
23:DB:1248:G:O2'	44:DQ:2:ARG:HA	2.06	0.55
26:BD:136:ASN:HD21	26:BD:139:SER:C	2.09	0.55
45:BS:10:ALA:HB3	45:BS:101:SER:OG	2.06	0.55
1:CA:73:C:H2'	1:CA:74:A:C8	2.41	0.55
23:DB:2135:A:H2'	23:DB:2136:G:H8	1.71	0.55
22:BA:32:U:H4'	22:BA:52:A:N6	2.21	0.55
7:CH:124:ILE:HG22	7:CH:125:ILE:H	1.70	0.55
23:BB:176:A:O2'	23:BB:177:G:H5'	2.06	0.55
1:AA:692:U:O2	1:AA:694:A:H5''	2.06	0.55
1:CA:1115:U:O2'	1:CA:1116:U:H5'	2.06	0.55
38:BM:78:LEU:HD12	38:BM:78:LEU:H	1.71	0.55
23:BB:2690:U:H3	42:BN:7:GLY:HA3	1.71	0.55
23:DB:388:G:N7	23:DB:390:U:H2'	2.21	0.55
45:DS:5:ALA:HB3	45:DS:54:ALA:HB2	1.88	0.55
23:BB:854:C:O2'	23:BB:855:G:H5'	2.06	0.55
50:DT:39:THR:CG2	50:DT:42:GLU:H	2.15	0.55
52:DW:49:ASN:HB3	52:DW:81:ILE:HG12	1.87	0.55
1:CA:1240:U:H3'	1:CA:1241:G:H5'	1.86	0.55
25:DC:183:VAL:HG22	25:DC:187:CYS:SG	2.46	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BV:44:HIS:CE1	35:BV:85:LYS:HB2	2.40	0.55
5:CF:1:MET:HB2	5:CF:65:GLU:O	2.07	0.55
14:AQ:68:LYS:HG2	14:AQ:69:THR:HG23	1.88	0.55
46:DU:3:LYS:CB	46:DU:82:VAL:HG21	2.32	0.55
21:AN:51:PRO:HB2	21:AN:54:SER:HB2	1.88	0.55
47:BF:126:ASN:HD22	47:BF:156:THR:HA	1.71	0.55
27:BK:70:ARG:HB3	27:BK:76:VAL:HG22	1.87	0.55
47:BF:134:GLN:NE2	47:BF:136:ILE:HD13	2.21	0.55
47:DF:7:TYR:O	47:DF:11:VAL:HB	2.06	0.55
1:AA:922:G:N3	1:AA:1398:A:H2	2.03	0.55
22:BA:8:C:O2'	43:BO:40:ILE:HD13	2.05	0.55
1:CA:449:G:H2'	1:CA:450:G:H8	1.71	0.55
38:BM:100:LYS:HD3	38:BM:101:VAL:N	2.21	0.55
23:DB:1080:A:H2'	23:DB:1081:U:C6	2.40	0.55
2:CC:57:GLU:HB2	2:CC:64:ARG:HB3	1.87	0.55
1:CA:977:A:C2	1:CA:1223:C:H2'	2.42	0.55
23:DB:2472:G:C2'	23:DB:2475:C:H42	2.16	0.55
1:CA:642:A:H2'	1:CA:643:C:C6	2.41	0.55
23:DB:357:C:H2'	23:DB:358:U:H6	1.71	0.55
23:DB:1549:A:H2'	23:DB:1550:C:C6	2.42	0.55
1:CA:1369:C:H2'	1:CA:1370:G:C8	2.41	0.55
1:CA:476:U:O2'	1:CA:477:C:H5'	2.07	0.55
23:BB:2291:U:O2'	23:BB:2374:C:H1'	2.06	0.55
23:DB:155:A:H2'	23:DB:156:A:H8	1.70	0.55
23:BB:21:A:O2'	23:BB:22:C:H5'	2.07	0.55
1:AA:470:C:H2'	1:AA:471:U:H6	1.71	0.55
48:BG:35:THR:HG22	48:BG:36:LEU:N	2.21	0.55
3:CD:39:GLN:HG3	3:CD:40:HIS:N	2.19	0.55
23:DB:404:A:H4'	23:DB:405:U:H5'	1.86	0.55
1:AA:472:U:H2'	1:AA:473:U:C6	2.41	0.55
2:CC:180:ASP:HB3	2:CC:204:GLY:O	2.06	0.55
50:DT:38:ALA:HB3	50:DT:81:LYS:NZ	2.20	0.55
48:DG:42:VAL:HA	48:DG:50:THR:O	2.06	0.55
5:AF:39:LEU:HD13	5:AF:40:GLU:N	2.20	0.55
23:BB:2330:G:N3	52:BW:38:ARG:HB3	2.22	0.55
8:AI:56:MET:HE2	8:AI:57:VAL:H	1.71	0.55
37:BL:122:VAL:O	37:BL:143:GLU:HB3	2.07	0.55
29:BE:157:LEU:HG	29:BE:169:VAL:HG11	1.88	0.55
18:CB:26:MET:HG2	18:CB:192:PRO:HD3	1.89	0.55
44:BQ:91:ARG:HD3	49:BR:11:GLN:OE1	2.06	0.55
18:AB:85:SER:HB2	18:AB:88:GLN:NE2	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:104:THR:HG22	47:BF:105:ILE:HG13	1.89	0.55
47:DF:90:LEU:HB3	47:DF:95:MET:HA	1.88	0.55
23:BB:2471:A:HO2'	23:BB:2472:G:H8	1.51	0.55
21:CN:1:ALA:HB1	21:CN:6:LYS:HZ2	1.69	0.55
17:CT:61:ALA:HA	17:CT:67:HIS:H	1.72	0.55
12:CM:84:CYS:O	12:CM:88:LEU:HG	2.06	0.55
23:DB:1652:A:H62	42:DN:11:ASN:HD21	1.53	0.55
18:AB:125:PHE:HD2	18:AB:125:PHE:N	2.04	0.55
23:BB:163:C:O2	23:BB:163:C:O4'	2.23	0.55
23:DB:164:C:H2'	23:DB:165:A:H5'	1.88	0.55
45:DS:24:ILE:HD11	45:DS:36:LEU:HD11	1.87	0.55
23:BB:2229:U:H2'	23:BB:2230:G:C8	2.40	0.55
17:CT:79:THR:HG22	17:CT:83:ASN:ND2	2.22	0.55
52:BW:44:PHE:HD2	52:BW:76:ARG:HD2	1.70	0.55
52:BW:43:LYS:HB3	52:BW:79:ILE:HD11	1.87	0.55
29:DE:48:THR:C	29:DE:50:ALA:H	2.09	0.55
3:CD:56:GLU:O	3:CD:60:VAL:HG12	2.07	0.55
23:BB:2199:A:H3'	23:BB:2200:C:H6	1.70	0.55
8:CI:17:ARG:HB2	8:CI:65:THR:HB	1.87	0.55
18:AB:71:THR:CG2	18:AB:94:ARG:H	2.19	0.55
23:BB:1947:C:H2'	23:BB:1948:G:C8	2.40	0.55
37:BL:77:ILE:HB	37:BL:109:LYS:O	2.07	0.55
15:AR:58:ILE:O	15:AR:62:ARG:HG3	2.06	0.55
45:BS:18:ARG:HB3	45:BS:76:VAL:CG2	2.37	0.55
29:BE:3:LEU:O	29:BE:12:LEU:HB2	2.05	0.55
8:AI:128:LYS:N	8:AI:128:LYS:HD3	2.22	0.55
23:BB:1151:A:H2'	23:BB:1152:C:C6	2.41	0.55
1:CA:1346:A:H2'	6:CG:9:ARG:NH2	2.22	0.55
23:BB:1777:U:O2'	23:BB:1778:U:H5'	2.06	0.55
23:BB:711:G:H2'	23:BB:712:G:O4'	2.06	0.55
23:DB:2195:U:O2'	23:DB:2196:C:H5'	2.07	0.55
1:AA:224:U:H2'	1:AA:225:C:C6	2.41	0.55
3:AD:57:LYS:O	3:AD:61:ARG:HB2	2.07	0.55
2:AC:111:ASP:O	2:AC:115:VAL:HG23	2.06	0.55
50:BT:61:LEU:HD12	50:BT:62:VAL:O	2.06	0.55
11:AL:80:LEU:HD23	11:AL:97:VAL:HG21	1.88	0.55
23:DB:1859:U:H2'	23:DB:1860:G:C8	2.41	0.55
52:DW:49:ASN:HA	52:DW:61:LYS:HB2	1.87	0.55
23:BB:705:A:N6	23:BB:726:G:O2'	2.40	0.55
5:CF:6:ILE:HD12	5:CF:7:VAL:N	2.21	0.55
5:CF:91:ARG:N	5:CF:93:LYS:HZ1	2.03	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:166:TRP:HA	2:AC:166:TRP:CE3	2.41	0.55
48:DG:153:PRO:HA	48:DG:159:LYS:O	2.05	0.55
23:BB:2743:U:H2'	23:BB:2744:G:O4'	2.06	0.55
18:AB:57:ASN:CB	18:AB:219:THR:HB	2.31	0.55
40:DH:68:ARG:O	40:DH:72:ILE:HG13	2.06	0.55
33:D1:37:LYS:H	33:D1:48:TYR:HD2	1.54	0.55
12:CM:70:ARG:HH12	47:DF:109:ARG:HD3	1.71	0.55
23:DB:1082:U:O4	23:DB:1086:A:C2	2.59	0.55
47:BF:90:LEU:HB3	47:BF:95:MET:HA	1.89	0.55
20:AO:39:LEU:HD23	20:AO:56:LEU:HD13	1.87	0.55
26:BD:92:VAL:O	26:BD:94:GLN:N	2.40	0.55
23:BB:2751:G:H5'	48:BG:2:ARG:HD3	1.87	0.55
23:DB:91:A:H1'	23:DB:92:U:C6	2.41	0.55
1:CA:1310:G:O2'	1:CA:1311:A:H5'	2.06	0.55
23:DB:2869:G:H2'	23:DB:2870:C:C6	2.42	0.55
25:BC:131:MET:HA	25:BC:134:ILE:HG23	1.88	0.55
27:BK:99:ILE:HD13	27:BK:118:LEU:HD22	1.89	0.55
23:BB:1606:C:C4'	23:BB:1607:C:H5'	2.36	0.55
23:BB:340:A:H2'	23:BB:341:C:O4'	2.06	0.55
7:AH:94:VAL:HG21	7:AH:100:ILE:O	2.06	0.55
1:CA:1253:G:N1	1:CA:1285:A:N6	2.53	0.55
41:BJ:93:ILE:O	41:BJ:97:PRO:HG3	2.06	0.55
5:AF:53:LYS:H	5:AF:53:LYS:HZ2	1.54	0.55
1:CA:1518:A:H2'	1:CA:1519:A:C8	2.41	0.55
23:BB:1050:A:H2'	23:BB:1051:G:O4'	2.07	0.55
23:BB:533:G:H5'	44:BQ:23:TYR:CE2	2.40	0.55
24:BI:105:LEU:HD11	24:BI:139:VAL:CG1	2.37	0.55
29:BE:134:LEU:HD23	29:BE:161:ALA:HB2	1.88	0.55
23:BB:259:G:H2'	23:BB:260:G:C8	2.40	0.55
23:DB:208:C:H2'	23:DB:209:C:H6	1.72	0.55
23:BB:404:A:H4'	23:BB:405:U:C5'	2.36	0.55
4:AE:17:VAL:HG23	4:AE:33:THR:O	2.07	0.55
7:AH:54:THR:HG23	7:AH:55:LYS:HG3	1.88	0.55
1:CA:1175:G:O2'	1:CA:1176:A:H5'	2.06	0.55
1:CA:562:U:H4'	1:CA:563:A:O5'	2.07	0.55
45:DS:20:VAL:C	45:DS:22:ASP:H	2.09	0.55
23:BB:397:U:H2'	23:BB:398:C:C6	2.41	0.55
46:DU:23:LYS:HD2	46:DU:23:LYS:N	2.21	0.55
18:AB:66:ILE:HD12	18:AB:159:ALA:HB3	1.89	0.55
1:CA:982:U:H4'	1:CA:983:A:O4'	2.07	0.55
1:AA:1330:U:H2'	1:AA:1331:G:H5'	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:113:SER:HB2	26:BD:168:GLU:O	2.07	0.55
52:BW:39:GLN:CG	52:BW:40:ARG:N	2.70	0.55
40:BH:58:LEU:C	40:BH:62:LEU:HD21	2.27	0.55
26:DD:110:THR:HG23	26:DD:171:THR:HA	1.87	0.55
40:BH:99:ILE:HD12	40:BH:144:VAL:HG11	1.88	0.55
23:DB:1198:U:H2'	23:DB:1199:U:C6	2.42	0.55
8:AI:30:ASN:H	8:AI:65:THR:HA	1.72	0.55
23:DB:2272:U:HO2'	23:DB:2273:A:H8	1.55	0.55
1:CA:1206:G:H2'	1:CA:1207:G:O4'	2.07	0.55
18:CB:20:ARG:HA	18:CB:38:HIS:CE1	2.42	0.55
1:AA:1002:G:H2'	1:AA:1003:G:C8	2.42	0.55
44:BQ:91:ARG:HD3	49:BR:11:GLN:HB2	1.89	0.55
1:AA:1494:G:H5'	23:BB:1913:A:C6	2.41	0.55
47:BF:113:PHE:HZ	47:BF:175:PRO:HB2	1.71	0.55
1:CA:922:G:N3	1:CA:1398:A:H2	2.05	0.55
26:BD:51:THR:HG21	26:BD:76:GLY:HA3	1.89	0.55
1:CA:876:C:H1'	7:CH:11:THR:HG21	1.89	0.55
37:BL:23:ILE:N	37:BL:23:ILE:HD12	2.20	0.55
40:BH:7:ASP:CG	40:BH:8:LYS:H	2.09	0.55
43:BO:88:LYS:HE3	43:BO:114:GLY:O	2.06	0.55
23:BB:1549:A:H2'	23:BB:1550:C:C6	2.41	0.55
23:BB:2556:C:H2'	23:BB:2557:G:O4'	2.07	0.55
17:CT:47:GLN:HG2	17:CT:82:ILE:HD13	1.88	0.55
7:CH:49:LYS:O	7:CH:58:LEU:HA	2.06	0.55
1:AA:182:A:HO2'	1:AA:183:C:H3'	1.71	0.55
1:CA:1225:A:H5''	1:CA:1226:C:H5	1.71	0.55
25:DC:93:VAL:HG12	25:DC:101:ARG:H	1.71	0.55
50:BT:49:LYS:HB3	50:BT:50:LEU:HD22	1.89	0.55
23:DB:937:C:H2'	23:DB:938:G:H8	1.71	0.55
1:AA:1458:G:H2'	1:AA:1459:G:C8	2.41	0.55
23:DB:2243:U:O2'	23:DB:2244:U:H5'	2.06	0.55
1:CA:1390:U:H2'	1:CA:1391:U:C6	2.42	0.55
26:BD:62:LYS:HB2	26:BD:63:PRO:HD3	1.88	0.55
23:DB:1947:C:H2'	23:DB:1948:G:C8	2.42	0.55
1:CA:403:C:O2'	1:CA:404:G:H5'	2.07	0.55
23:DB:1030:C:O2'	23:DB:1031:G:H5'	2.06	0.55
20:AO:85:LEU:HB2	20:AO:87:LEU:HG	1.89	0.55
1:CA:1524:C:H2'	1:CA:1525:G:C8	2.41	0.55
23:DB:1889:A:H2'	23:DB:1890:A:H8	1.72	0.55
7:CH:54:THR:HG23	7:CH:55:LYS:HG3	1.87	0.55
23:DB:711:G:H2'	23:DB:712:G:O4'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1133:G:H2'	1:CA:1134:G:H8	1.71	0.55
23:DB:67:U:H2'	23:DB:68:G:H8	1.71	0.55
23:BB:2547:A:H2'	23:BB:2548:U:C6	2.40	0.55
12:CM:28:ARG:HG3	12:CM:62:PHE:CZ	2.42	0.55
48:BG:24:THR:HA	48:BG:33:THR:O	2.07	0.55
41:DJ:98:GLU:HB3	41:DJ:124:VAL:HG21	1.89	0.55
1:CA:1378:C:C5	1:CA:1379:G:H1'	2.41	0.55
48:BG:83:THR:HA	48:BG:84:LYS:HZ1	1.71	0.55
23:DB:1061:U:H4'	23:DB:1070:A:O3'	2.06	0.55
18:CB:20:ARG:HA	18:CB:38:HIS:HE1	1.70	0.55
40:DH:108:VAL:HG12	40:DH:110:VAL:HG12	1.88	0.55
49:BR:37:GLU:HG3	49:BR:53:PHE:CZ	2.40	0.55
16:AS:10:ILE:HG21	16:AS:40:PHE:CE2	2.42	0.55
21:AN:50:LEU:N	21:AN:51:PRO:CD	2.70	0.55
9:AJ:57:VAL:O	9:AJ:58:ASN:HB2	2.06	0.55
1:CA:1300:G:H1'	1:CA:1301:U:C5	2.41	0.55
4:AE:156:ARG:HB3	7:AH:43:GLY:O	2.07	0.55
1:CA:1311:A:N7	16:CS:1:PRO:HD2	2.22	0.55
23:BB:580:U:O2'	23:BB:581:C:H5'	2.07	0.55
18:AB:125:PHE:N	18:AB:125:PHE:CD2	2.75	0.55
25:BC:158:GLY:N	25:BC:194:VAL:HG13	2.22	0.55
1:AA:1382:C:H4'	6:AG:78:ARG:NH2	2.20	0.55
12:CM:7:ASN:H	12:CM:7:ASN:ND2	2.04	0.55
23:BB:1000:A:H2'	23:BB:1001:A:H8	1.70	0.55
25:BC:244:VAL:HB	25:BC:249:VAL:H	1.72	0.55
18:AB:130:LYS:O	18:AB:134:LEU:HG	2.06	0.55
24:BI:10:LEU:HD12	24:BI:10:LEU:O	2.06	0.55
23:BB:2292:U:H2'	23:BB:2293:G:C8	2.42	0.55
11:AL:106:VAL:HG23	11:AL:116:TYR:HB3	1.88	0.55
2:AC:8:GLY:HA3	21:AN:88:MET:SD	2.46	0.55
23:DB:1454:C:C5	42:DN:64:ARG:HG2	2.42	0.55
23:DB:728:G:H4'	25:DC:12:ARG:HD2	1.89	0.55
1:AA:601:G:H2'	1:AA:602:A:C8	2.41	0.55
23:DB:259:G:H2'	23:DB:260:G:C8	2.41	0.55
17:CT:27:MET:O	17:CT:31:ILE:HG13	2.06	0.55
51:BZ:35:SER:HB3	51:BZ:50:ARG:HG3	1.88	0.55
23:DB:1229:C:H2'	23:DB:1230:A:C8	2.41	0.55
23:DB:235:U:H2'	23:DB:236:C:C6	2.41	0.55
34:D3:40:LYS:O	34:D3:43:LEU:HB2	2.07	0.55
23:DB:1666:G:O3'	27:DK:6:THR:HG23	2.06	0.55
41:BJ:72:LYS:HB2	41:BJ:89:PHE:HB2	1.89	0.55

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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	0.55
48:DG:35:THR:HG22	48:DG:36:LEU:N	2.22	0.55
4:CE:45:VAL:HG13	4:CE:117:ALA:HA	1.89	0.55
1:AA:108:G:C6	17:AT:9:ARG:HG2	2.41	0.55
23:DB:2455:G:H2'	23:DB:2456:C:C6	2.41	0.55
1:AA:1025:U:H4'	1:AA:1026:G:H8	1.71	0.55
23:DB:2737:G:H2'	23:DB:2738:A:C8	2.42	0.55
49:DR:27:ILE:HG13	49:DR:33:VAL:HG11	1.88	0.55
23:BB:1923:U:H2'	23:BB:1924:C:C6	2.42	0.55
23:DB:176:A:O2'	23:DB:177:G:H5'	2.06	0.55
23:BB:2339:C:H2'	23:BB:2340:A:C8	2.42	0.55
23:DB:1187:G:HO2'	23:DB:1188:U:H6	1.52	0.55
23:BB:1764:C:H2'	23:BB:1765:U:H6	1.70	0.55
23:DB:2677:G:H2'	23:DB:2678:C:C6	2.41	0.55
1:CA:499:A:H4'	1:CA:500:G:OP1	2.06	0.55
23:BB:1416:G:HO2'	23:BB:1417:C:H6	1.54	0.55
37:BL:131:ALA:HA	37:BL:134:ALA:HB3	1.86	0.55
21:CN:9:GLU:OE2	21:CN:60:ARG:HG2	2.07	0.55
8:CI:34:LEU:HD21	8:CI:48:ARG:HH21	1.70	0.55
23:BB:545:U:H2'	23:BB:546:U:C5'	2.26	0.55
9:CJ:22:THR:CG2	9:CJ:72:ARG:HG3	2.36	0.55
1:CA:1243:C:H2'	1:CA:1244:G:C8	2.42	0.55
26:DD:113:SER:HB3	26:DD:167:ASN:CA	2.36	0.55
40:BH:121:VAL:HG21	40:BH:128:HIS:CD2	2.42	0.55
23:DB:2720:U:H2'	23:DB:2721:A:H8	1.71	0.55
6:CG:67:ASN:HB3	6:CG:137:ARG:NH2	2.21	0.55
19:CU:16:ARG:NE	19:CU:16:ARG:HA	2.21	0.55
1:AA:1002:G:H2'	1:AA:1003:G:H8	1.72	0.55
23:BB:1082:U:O4	23:BB:1086:A:C2	2.59	0.55
47:DF:148:VAL:O	47:DF:149:ARG:HG2	2.07	0.55
36:B2:12:ARG:HE	36:B2:44:VAL:CG1	2.18	0.55
23:BB:728:G:H4'	25:BC:12:ARG:HD2	1.88	0.55
43:DO:79:ALA:HA	43:DO:115:LEU:HD23	1.89	0.55
26:DD:122:VAL:HA	26:DD:127:PHE:H	1.71	0.55
4:AE:132:PRO:O	4:AE:136:VAL:HG12	2.06	0.55
2:AC:10:ARG:HD2	2:AC:14:VAL:HG21	1.89	0.55
24:DI:45:THR:CA	24:DI:48:ILE:HG22	2.36	0.55
46:DU:85:ARG:HD3	46:DU:86:PHE:H	1.72	0.55
44:BQ:10:ARG:HH11	44:BQ:10:ARG:HB2	1.69	0.55
39:BX:39:GLN:HB2	39:BX:42:LEU:HD22	1.88	0.55
6:CG:14:ASP:CB	6:CG:19:SER:H	2.19	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1225:A:H3'	1:CA:1226:C:C6	2.41	0.55
50:DT:49:LYS:HB3	50:DT:50:LEU:HD22	1.89	0.55
23:BB:2093:G:O5'	40:BH:24:GLY:HA3	2.07	0.55
23:DB:661:A:H1'	37:DL:12:SER:O	2.06	0.55
30:BY:29:ARG:H	30:BY:33:HIS:CD2	2.25	0.55
1:CA:713:G:H2'	1:CA:714:G:C8	2.41	0.55
1:CA:715:A:O2'	1:CA:716:A:H5'	2.07	0.55
23:DB:955:U:OP1	38:DM:86:LYS:HE2	2.07	0.55
1:AA:161:A:H2'	1:AA:162:A:H8	1.72	0.55
23:DB:1459:G:H4'	23:DB:1461:C:N4	2.22	0.55
23:DB:2760:C:O2'	23:DB:2761:A:H5'	2.07	0.55
23:DB:1166:G:H2'	23:DB:1167:C:H6	1.71	0.55
23:BB:1794:A:H2'	23:BB:1795:C:H6	1.72	0.55
12:CM:28:ARG:CZ	12:CM:62:PHE:HB2	2.36	0.55
1:AA:1243:C:H2'	1:AA:1244:G:C8	2.42	0.55
23:DB:2893:A:H5'	23:DB:2894:G:H5'	1.87	0.55
23:BB:959:A:O2'	23:BB:960:A:H5'	2.06	0.55
1:AA:49:U:O2'	1:AA:50:A:H2'	2.07	0.55
6:AG:68:VAL:HG11	6:AG:133:ALA:HB1	1.87	0.55
6:AG:135:LYS:HD3	6:AG:136:LYS:N	2.21	0.55
8:AI:109:GLN:OE1	8:AI:110:VAL:HG23	2.06	0.55
24:BI:14:ALA:HB1	24:BI:50:LYS:HA	1.88	0.55
22:BA:91:C:H2'	22:BA:92:C:C6	2.42	0.55
23:DB:2469:A:H4'	38:DM:55:ARG:NE	2.22	0.55
8:CI:7:GLY:O	8:CI:8:THR:C	2.45	0.55
16:CS:4:LEU:HD13	16:CS:8:PRO:HA	1.88	0.55
23:DB:1916:A:H2'	23:DB:1917:U:O4'	2.06	0.55
20:AO:46:HIS:O	20:AO:48:LYS:N	2.35	0.55
21:CN:68:ARG:CZ	21:CN:80:ARG:HH12	2.20	0.55
23:DB:856:G:C1'	52:DW:23:LYS:HB3	2.35	0.55
5:CF:1:MET:SD	5:CF:67:PRO:HD3	2.47	0.55
23:BB:2328:A:H2'	23:BB:2329:U:H6	1.72	0.55
8:AI:19:PHE:O	8:AI:62:LEU:HA	2.07	0.55
43:DO:51:ALA:HB3	43:DO:78:VAL:HG22	1.88	0.55
46:BU:5:ARG:NH2	46:BU:93:ARG:HD3	2.21	0.55
1:CA:1206:G:H4'	2:CC:192:TYR:HA	1.89	0.55
22:DA:6:G:H2'	22:DA:7:G:C8	2.42	0.55
38:DM:19:GLY:N	38:DM:38:ARG:HH22	2.04	0.55
41:BJ:45:THR:OG1	41:BJ:48:VAL:HB	2.07	0.55
44:BQ:108:LEU:O	44:BQ:111:LYS:HB3	2.07	0.55
23:BB:492:A:H2'	23:BB:493:G:O4'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:5:VAL:HG23	26:DD:32:ASN:ND2	2.20	0.55
23:DB:1141:U:OP2	41:DJ:65:THR:HG21	2.06	0.55
29:DE:122:GLU:H	29:DE:122:GLU:CD	2.09	0.55
6:AG:16:LYS:HB3	6:AG:43:TYR:OH	2.07	0.55
23:DB:2393:U:H5''	37:DL:62:PRO:HG3	1.89	0.55
12:CM:89:ARG:NH1	12:CM:94:LEU:HD13	2.21	0.55
1:AA:994:A:C2	21:AN:4:SER:HA	2.42	0.55
45:DS:96:ILE:HG23	45:DS:96:ILE:O	2.05	0.55
23:BB:2674:G:H2'	23:BB:2675:A:H8	1.72	0.55
23:BB:934:U:H2'	23:BB:935:C:H6	1.72	0.55
1:AA:950:U:H2'	1:AA:951:G:H8	1.70	0.55
23:BB:155:A:H2'	23:BB:156:A:H8	1.70	0.55
1:AA:462:G:N3	1:AA:462:G:H2'	2.20	0.55
23:BB:1040:A:O2'	23:BB:1041:G:H5'	2.06	0.55
1:AA:601:G:H2'	1:AA:602:A:H8	1.71	0.55
1:CA:222:C:H2'	1:CA:223:A:H8	1.72	0.55
1:AA:745:G:H2'	1:AA:746:A:H8	1.70	0.55
23:BB:1412:U:H2'	23:BB:1413:A:H8	1.72	0.55
29:DE:1:MET:HB2	29:DE:16:GLU:HA	1.88	0.55
22:BA:102:G:O2'	22:BA:103:U:H5'	2.06	0.55
36:B2:19:ARG:NH2	36:B2:19:ARG:HB3	2.22	0.55
25:DC:79:ARG:HD2	25:DC:81:GLU:HG3	1.89	0.55
23:BB:2836:U:H2'	23:BB:2837:A:H8	1.71	0.55
23:BB:309:A:H4'	46:BU:15:GLY:HA3	1.89	0.55
23:DB:2825:G:H3'	23:DB:2826:A:H8	1.71	0.55
2:AC:131:ARG:HD2	2:AC:131:ARG:H	1.72	0.55
1:AA:1499:A:H2'	1:AA:1500:A:H8	1.72	0.55
23:BB:2861:U:H2'	23:BB:2862:G:H8	1.71	0.55
30:BY:40:THR:O	30:BY:43:ILE:HG23	2.07	0.55
44:BQ:42:GLY:HA3	49:BR:75:VAL:HG21	1.89	0.55
1:CA:1289:A:H3'	1:CA:1290:G:H8	1.72	0.55
23:DB:553:G:O2'	23:DB:554:U:H5'	2.07	0.55
46:BU:23:LYS:HD2	46:BU:23:LYS:N	2.22	0.55
25:BC:82:TYR:HE1	25:BC:84:PRO:HG3	1.71	0.55
11:CL:51:VAL:HG12	11:CL:52:CYS:H	1.72	0.55
23:DB:1583:A:H5''	23:DB:1584:U:OP1	2.07	0.55
50:DT:47:VAL:HB	50:DT:55:VAL:HG21	1.89	0.55
9:CJ:7:ARG:NE	9:CJ:101:SER:HB3	2.17	0.55
24:BI:112:LYS:O	24:BI:116:MET:HG3	2.07	0.55
48:DG:137:LYS:O	48:DG:140:ILE:HG13	2.07	0.55
1:AA:954:G:H2'	1:AA:955:U:C6	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AP:1:MET:C	13:AP:1:MET:HE3	2.27	0.55
23:BB:495:G:H21	45:BS:61:ASN:ND2	1.98	0.55
47:DF:126:ASN:HD22	47:DF:156:THR:HA	1.71	0.55
47:DF:31:GLU:HB3	47:DF:156:THR:O	2.07	0.55
23:DB:2393:U:O2'	23:DB:2394:C:H5'	2.07	0.55
1:AA:1168:U:H4'	1:AA:1169:A:OP2	2.06	0.55
46:BU:6:ARG:O	46:BU:24:VAL:HB	2.07	0.55
1:AA:1039:G:H2'	1:AA:1040:U:C6	2.42	0.55
23:DB:1640:A:H2'	23:DB:1641:A:H8	1.72	0.55
23:DB:936:A:H2'	23:DB:937:C:H6	1.72	0.55
3:CD:104:MET:SD	3:CD:142:VAL:HB	2.47	0.55
25:BC:196:ASN:ND2	25:BC:199:HIS:HB2	2.20	0.55
1:AA:1518:A:H2'	1:AA:1519:A:C8	2.41	0.55
23:DB:2888:C:H2'	23:DB:2889:C:H6	1.72	0.55
23:DB:2228:G:H2'	23:DB:2229:U:C6	2.42	0.55
23:BB:564:C:O2'	23:BB:565:C:H5'	2.07	0.55
1:AA:586:C:O2'	1:AA:587:G:H5'	2.07	0.55
23:DB:1889:A:H2'	23:DB:1890:A:C8	2.42	0.55
10:AK:34:THR:HA	10:AK:41:LEU:HG	1.88	0.55
4:CE:87:VAL:HG23	4:CE:91:SER:O	2.06	0.55
5:CF:69:GLU:O	5:CF:72:ASP:HB3	2.07	0.55
23:DB:1747:U:H2'	23:DB:1748:C:C6	2.42	0.55
1:CA:847:G:H2'	1:CA:848:C:C6	2.42	0.55
1:CA:759:A:H2'	1:CA:760:G:O4'	2.07	0.55
50:DT:32:LEU:HG	50:DT:83:ALA:HB2	1.89	0.55
30:DY:9:THR:HB	30:DY:53:MET:O	2.06	0.55
52:DW:51:GLY:CA	52:DW:59:PHE:HB3	2.26	0.55
41:DJ:11:VAL:HA	41:DJ:12:LYS:NZ	2.22	0.55
14:AQ:74:LEU:HD22	14:AQ:75:VAL:N	2.22	0.55
23:DB:142:A:H2	50:DT:2:ILE:HD12	1.72	0.55
25:BC:153:LEU:HD13	25:BC:175:LEU:CD2	2.37	0.55
48:BG:137:LYS:O	48:BG:140:ILE:HG13	2.06	0.55
1:CA:437:U:H5"	3:CD:151:GLN:HE21	1.71	0.55
35:DV:44:HIS:CE1	35:DV:85:LYS:HB2	2.41	0.55
30:DY:35:VAL:HG11	30:DY:37:ARG:HH12	1.72	0.55
18:CB:83:ALA:C	18:CB:85:SER:H	2.10	0.55
26:DD:55:LYS:HD3	26:DD:77:ARG:HA	1.89	0.55
47:DF:34:THR:O	47:DF:35:LEU:HB2	2.06	0.55
51:DZ:7:VAL:HG13	51:DZ:8:THR:CG2	2.34	0.55
23:BB:729:G:OP1	25:BC:12:ARG:HB2	2.07	0.55
25:BC:12:ARG:HA	25:BC:15:VAL:CG2	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DI:126:ARG:HB3	24:DI:126:ARG:HH11	1.72	0.55
12:CM:76:ILE:O	12:CM:79:LEU:HG	2.07	0.55
44:DQ:91:ARG:NH1	49:DR:10:LYS:HB3	2.19	0.55
23:DB:1874:C:H2'	23:DB:1875:G:O4'	2.07	0.55
27:DK:85:VAL:HG21	27:DK:115:ILE:HD11	1.87	0.55
6:AG:30:MET:CG	6:AG:35:LYS:HA	2.35	0.55
23:BB:164:C:H2'	23:BB:165:A:H5'	1.89	0.55
23:DB:1438:U:H2'	23:DB:1439:A:O4'	2.07	0.55
23:DB:2075:U:H2'	23:DB:2238:G:N2	2.21	0.55
17:CT:79:THR:HG22	17:CT:83:ASN:HD21	1.72	0.55
23:BB:1018:U:O2'	23:BB:1019:U:H5'	2.06	0.55
1:AA:1407:C:C2'	1:AA:1408:A:H5''	2.37	0.55
23:BB:1487:U:H2'	23:BB:1488:C:H6	1.71	0.55
23:DB:1487:U:H2'	23:DB:1488:C:H6	1.72	0.55
23:DB:345:A:H1'	23:DB:346:A:C2	2.42	0.55
27:BK:15:GLY:HA3	27:BK:52:VAL:HG23	1.88	0.55
1:AA:301:G:H2'	1:AA:302:G:C8	2.41	0.55
1:AA:35:G:H2'	1:AA:36:C:H6	1.72	0.55
1:AA:430:A:OP1	3:AD:8:LEU:HB2	2.07	0.55
22:DA:49:C:H2'	22:DA:50:A:C8	2.42	0.55
1:AA:859:G:H2'	1:AA:860:A:H8	1.72	0.55
25:BC:146:LYS:HB3	25:BC:147:PRO:HD2	1.88	0.55
18:AB:118:THR:HA	18:AB:121:GLN:HB3	1.88	0.55
9:AJ:80:THR:O	9:AJ:84:VAL:HG23	2.06	0.55
26:DD:157:LYS:NZ	26:DD:157:LYS:HB3	2.22	0.55
26:BD:69:ALA:HA	26:BD:73:VAL:HB	1.89	0.55
29:BE:1:MET:HB2	29:BE:16:GLU:HA	1.89	0.55
5:AF:69:GLU:O	5:AF:72:ASP:HB3	2.06	0.55
50:BT:27:SER:O	50:BT:28:ASN:HB3	2.05	0.54
1:AA:236:A:H2'	1:AA:237:G:H8	1.72	0.54
6:CG:10:LYS:HA	6:CG:10:LYS:HZ3	1.71	0.54
40:BH:100:ALA:CB	40:BH:112:LYS:HA	2.37	0.54
40:BH:100:ALA:HB3	40:BH:112:LYS:HA	1.88	0.54
29:DE:108:ILE:HA	37:DL:2:ARG:HH12	1.71	0.54
40:DH:128:HIS:O	40:DH:143:ILE:HA	2.08	0.54
42:BN:25:ALA:O	42:BN:29:VAL:HG23	2.07	0.54
42:BN:79:LEU:HA	42:BN:83:LEU:HB2	1.87	0.54
1:AA:1148:U:H2'	1:AA:1149:C:H5'	1.89	0.54
37:BL:123:ARG:NH1	37:BL:143:GLU:HB2	2.23	0.54
37:DL:113:ALA:HB3	37:DL:115:GLU:OE1	2.07	0.54
28:DP:56:SER:O	28:DP:75:THR:HG22	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BR:49:ILE:HD13	49:BR:53:PHE:N	2.19	0.54
13:AP:68:SER:HB3	13:AP:71:VAL:HG12	1.88	0.54
6:AG:11:ILE:HG12	6:AG:24:LYS:HG3	1.88	0.54
1:AA:1398:A:H8	1:AA:1398:A:H5'	1.72	0.54
26:BD:5:VAL:HG23	26:BD:32:ASN:ND2	2.21	0.54
42:BN:103:ARG:HG2	42:BN:104:ALA:H	1.72	0.54
37:BL:23:ILE:H	37:BL:23:ILE:CD1	2.20	0.54
23:DB:182:A:O2'	23:DB:183:C:H5'	2.07	0.54
11:AL:73:LEU:HD13	11:AL:79:ILE:HG21	1.89	0.54
23:BB:590:A:H2'	23:BB:591:U:H6	1.71	0.54
1:AA:209:U:H5'	1:AA:210:C:H5	1.69	0.54
1:CA:1313:U:OP2	16:CS:5:LYS:HA	2.07	0.54
23:DB:2078:C:H2'	23:DB:2079:U:H6	1.71	0.54
23:BB:2322:A:H2'	23:BB:2323:G:O4'	2.07	0.54
1:AA:312:C:H2'	1:AA:313:A:C8	2.41	0.54
23:DB:1464:G:H2'	23:DB:1465:G:C8	2.42	0.54
20:CO:82:ILE:O	20:CO:86:GLY:N	2.37	0.54
23:DB:584:C:P	44:DQ:5:ARG:HD3	2.47	0.54
23:DB:1518:C:H2'	23:DB:1519:G:H8	1.72	0.54
23:BB:1166:G:H2'	23:BB:1167:C:H6	1.72	0.54
1:AA:108:G:H5'	1:AA:109:A:H5''	1.89	0.54
6:AG:132:THR:O	6:AG:135:LYS:HB3	2.06	0.54
35:DV:1:MET:HG2	35:DV:59:GLU:OE1	2.06	0.54
23:BB:1682:G:H2'	23:BB:1683:U:C6	2.43	0.54
52:DW:45:HIS:HB3	52:DW:52:CYS:HB2	1.88	0.54
1:AA:659:U:H2'	1:AA:660:C:C6	2.42	0.54
2:CC:17:TRP:C	2:CC:19:SER:H	2.10	0.54
1:CA:1108:G:H5'	2:CC:175:HIS:CD2	2.41	0.54
23:DB:642:U:O2	23:DB:644:A:H3'	2.07	0.54
11:CL:87:LYS:HE2	11:CL:87:LYS:HA	1.89	0.54
23:DB:1292:G:H2'	23:DB:1293:C:C6	2.42	0.54
22:DA:67:G:O2'	22:DA:68:C:H5'	2.07	0.54
2:AC:139:ASN:HA	2:AC:142:ARG:NH2	2.22	0.54
1:CA:586:C:H5''	7:CH:81:GLY:HA2	1.89	0.54
35:DV:4:ILE:HB	35:DV:63:ILE:HA	1.88	0.54
21:CN:50:LEU:H	21:CN:51:PRO:CD	2.20	0.54
48:DG:25:ILE:O	48:DG:32:LEU:HA	2.08	0.54
5:AF:36:ILE:HG12	5:AF:64:VAL:HG12	1.89	0.54
43:DO:75:GLY:O	43:DO:78:VAL:HG23	2.07	0.54
37:DL:68:SER:C	37:DL:70:LYS:H	2.11	0.54
48:DG:84:LYS:HB2	48:DG:132:LEU:H	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CK:111:ASP:HB2	19:CU:19:LYS:CE	2.37	0.54
1:CA:436:C:O2'	1:CA:437:U:H5'	2.08	0.54
49:BR:19:THR:HB	49:BR:97:LYS:HA	1.87	0.54
1:AA:406:G:H21	3:AD:115:GLN:NE2	1.98	0.54
35:BV:80:HIS:CG	35:BV:83:LYS:HB2	2.43	0.54
12:AM:78:ARG:HH21	12:AM:79:LEU:HD23	1.71	0.54
47:DF:155:ILE:HD12	47:DF:155:ILE:H	1.71	0.54
22:DA:42:C:H4'	47:DF:63:LYS:O	2.07	0.54
1:CA:1298:U:N3	6:CG:113:LYS:HA	2.22	0.54
1:AA:919:A:O2'	1:AA:920:U:H5'	2.07	0.54
18:CB:120:SER:HA	18:CB:125:PHE:CD2	2.42	0.54
39:DX:45:GLN:O	39:DX:47:ARG:N	2.36	0.54
47:BF:7:TYR:O	47:BF:11:VAL:HB	2.06	0.54
17:CT:66:ILE:HG22	17:CT:67:HIS:N	2.22	0.54
44:DQ:59:LEU:C	44:DQ:59:LEU:HD13	2.27	0.54
4:AE:85:LYS:HG3	4:AE:93:VAL:O	2.07	0.54
26:BD:159:LYS:O	26:BD:161:MET:HG2	2.08	0.54
11:AL:74:GLN:H	11:AL:77:SER:CB	2.20	0.54
17:AT:47:GLN:HG2	17:AT:82:ILE:HD13	1.90	0.54
1:AA:1165:U:H2'	1:AA:1166:G:O4'	2.08	0.54
23:BB:1061:U:H5'	24:BI:9:LYS:HZ1	1.72	0.54
23:BB:1038:G:H2'	23:BB:1039:A:H8	1.72	0.54
21:CN:29:ILE:HG22	21:CN:30:ILE:N	2.22	0.54
52:DW:44:PHE:HD2	52:DW:76:ARG:HD2	1.70	0.54
29:DE:15:SER:OG	29:DE:18:THR:HG23	2.07	0.54
7:AH:8:ASP:O	7:AH:12:ARG:HB2	2.07	0.54
23:DB:192:C:H2'	23:DB:193:U:H5'	1.89	0.54
23:BB:79:C:O2'	23:BB:346:A:H1'	2.06	0.54
23:DB:699:A:H2'	23:DB:700:G:O4'	2.08	0.54
51:DZ:35:SER:HB3	51:DZ:50:ARG:HG3	1.89	0.54
23:BB:565:C:H2'	23:BB:566:U:O4'	2.07	0.54
23:DB:1166:G:H2'	23:DB:1167:C:C6	2.41	0.54
23:DB:404:A:H4'	23:DB:405:U:C5'	2.37	0.54
1:AA:989:U:O2'	1:AA:990:C:H5'	2.07	0.54
25:BC:18:VAL:O	25:BC:18:VAL:HG13	2.07	0.54
1:CA:1082:A:H2'	1:CA:1083:U:C6	2.42	0.54
23:BB:1542:U:H2'	23:BB:1543:G:O4'	2.07	0.54
23:BB:2244:U:H2'	23:BB:2245:U:O4'	2.07	0.54
16:CS:64:GLU:C	16:CS:66:VAL:H	2.09	0.54
11:AL:87:LYS:HA	11:AL:87:LYS:HE2	1.89	0.54
26:BD:157:LYS:HB3	26:BD:157:LYS:NZ	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:997:U:O2'	1:AA:998:C:H5'	2.07	0.54
23:BB:2134:A:N1	23:BB:2157:G:H1'	2.22	0.54
35:DV:30:ILE:HA	35:DV:91:PHE:O	2.07	0.54
2:CC:59:PRO:HG2	2:CC:62:SER:CB	2.28	0.54
23:BB:857:G:O2'	23:BB:858:G:H5'	2.07	0.54
22:DA:28:C:H2'	22:DA:29:A:H8	1.72	0.54
23:BB:1723:G:H3'	23:BB:1724:G:H8	1.72	0.54
37:DL:80:SER:HA	37:DL:115:GLU:HB2	1.90	0.54
23:DB:300:A:H3'	46:DU:81:ARG:NH1	2.20	0.54
27:DK:71:ARG:HB3	27:DK:72:PRO:CD	2.33	0.54
3:CD:147:LYS:HG3	3:CD:148:ALA:N	2.21	0.54
13:AP:54:LEU:HD12	13:AP:82:ALA:H	1.71	0.54
18:CB:57:ASN:HB3	18:CB:219:THR:HB	1.90	0.54
1:AA:939:G:C4'	6:AG:101:ARG:HH12	2.19	0.54
1:CA:865:A:H2	1:CA:918:A:H4'	1.73	0.54
23:BB:1792:G:P	25:BC:204:LEU:HD12	2.47	0.54
1:AA:16:A:C2'	1:AA:17:U:H5'	2.36	0.54
23:DB:126:A:H5'	36:D2:19:ARG:CG	2.36	0.54
42:DN:96:ARG:HB3	42:DN:98:LEU:HD22	1.90	0.54
23:BB:91:A:H1'	23:BB:92:U:C6	2.41	0.54
29:BE:33:VAL:O	29:BE:36:ALA:HB3	2.07	0.54
23:DB:2741:A:H2'	23:DB:2742:G:O4'	2.07	0.54
21:CN:8:ARG:HB3	21:CN:12:ARG:NH1	2.22	0.54
12:CM:2:ARG:HH22	12:CM:56:ARG:HH11	1.54	0.54
22:BA:98:G:H1	35:BV:14:LYS:HB2	1.71	0.54
6:CG:23:ALA:O	6:CG:26:VAL:HG22	2.08	0.54
23:BB:2148:G:H2'	23:BB:2149:U:C4'	2.37	0.54
48:DG:53:PRO:HG3	48:DG:61:TRP:HA	1.89	0.54
23:BB:2085:U:O2'	23:BB:2086:U:H5'	2.07	0.54
23:BB:936:A:H2'	23:BB:937:C:H6	1.70	0.54
40:DH:58:LEU:HA	40:DH:61:VAL:HG12	1.89	0.54
6:AG:65:LEU:HB2	6:AG:69:ARG:HH21	1.70	0.54
42:DN:59:SER:C	42:DN:61:ALA:H	2.09	0.54
29:BE:48:THR:C	29:BE:50:ALA:H	2.10	0.54
1:AA:35:G:H2'	1:AA:36:C:C6	2.43	0.54
1:CA:926:G:H5'	1:CA:927:G:C5'	2.37	0.54
23:DB:1406:U:H2'	23:DB:1407:G:H8	1.71	0.54
1:CA:1029:U:O4'	1:CA:1029:U:O2	2.21	0.54
23:BB:2888:C:H2'	23:BB:2889:C:H6	1.72	0.54
6:AG:77:ARG:HG3	6:AG:79:VAL:HG23	1.88	0.54
23:BB:2299:U:H2'	23:BB:2300:C:C6	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2300:C:H2'	23:BB:2301:C:C6	2.41	0.54
1:AA:562:U:H4'	1:AA:563:A:O5'	2.07	0.54
17:AT:42:ASP:OD1	17:AT:44:ALA:HB3	2.08	0.54
1:CA:272:C:H2'	1:CA:273:U:H6	1.73	0.54
45:DS:31:GLN:O	45:DS:35:ILE:HG12	2.07	0.54
34:B3:15:LYS:HA	34:B3:20:GLY:O	2.07	0.54
23:BB:67:U:H2'	23:BB:68:G:H8	1.72	0.54
1:AA:328:C:H4'	1:AA:329:A:H5''	1.89	0.54
22:DA:13:G:H2'	22:DA:70:C:O2'	2.06	0.54
1:CA:328:C:H4'	1:CA:329:A:H5''	1.89	0.54
12:CM:57:ASP:O	12:CM:60:ALA:HB3	2.07	0.54
1:AA:539:A:H2'	1:AA:540:G:C8	2.42	0.54
8:CI:48:ARG:O	8:CI:51:LEU:HB2	2.08	0.54
8:CI:51:LEU:HB3	8:CI:56:MET:CG	2.38	0.54
18:CB:163:ILE:HG23	18:CB:164:ASP:N	2.18	0.54
23:DB:2305:U:C4'	47:DF:132:ARG:HG2	2.36	0.54
25:DC:141:HIS:HB3	25:DC:190:THR:O	2.07	0.54
21:CN:19:TYR:HB2	21:CN:54:SER:OG	2.07	0.54
5:AF:88:MET:HE1	5:AF:90:MET:HG2	1.88	0.54
40:BH:54:LEU:HD23	40:BH:54:LEU:N	2.22	0.54
26:DD:108:ASP:OD2	26:DD:206:ALA:HA	2.08	0.54
23:DB:857:G:H2'	23:DB:858:G:H5'	1.89	0.54
23:DB:1729:U:O2	23:DB:1729:U:H2'	2.07	0.54
2:CC:2:GLN:N	2:CC:2:GLN:HE21	1.99	0.54
35:DV:80:HIS:CD2	35:DV:82:TYR:H	2.22	0.54
47:DF:139:GLU:CD	47:DF:140:ILE:H	2.11	0.54
44:BQ:67:ALA:HB1	44:BQ:105:PHE:CZ	2.42	0.54
18:AB:163:ILE:HG13	18:AB:164:ASP:N	2.22	0.54
49:DR:14:VAL:HG22	49:DR:15:SER:N	2.22	0.54
23:BB:1103:A:H2'	23:BB:1104:C:H5'	1.88	0.54
47:DF:33:ILE:HD13	47:DF:98:PHE:HD2	1.72	0.54
20:AO:36:ILE:CD1	20:AO:59:MET:HG3	2.35	0.54
17:AT:61:ALA:HA	17:AT:67:HIS:H	1.72	0.54
39:DX:52:ARG:O	39:DX:55:THR:HB	2.07	0.54
8:CI:87:MET:HG2	8:CI:91:GLU:CD	2.28	0.54
40:BH:7:ASP:HA	40:BH:15:LEU:HD23	1.88	0.54
22:DA:83:G:H4'	30:DY:52:PHE:CD2	2.42	0.54
1:CA:950:U:H2'	1:CA:951:G:C8	2.42	0.54
16:CS:10:ILE:HD12	16:CS:10:ILE:H	1.72	0.54
41:DJ:44:TYR:O	41:DJ:45:THR:HB	2.07	0.54
23:BB:1507:C:H2'	23:BB:1508:A:H4'	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1438:U:H2'	23:BB:1439:A:O4'	2.08	0.54
23:DB:919:U:H6	23:DB:919:U:O5'	1.91	0.54
7:CH:94:VAL:HG21	7:CH:100:ILE:O	2.07	0.54
22:BA:60:C:H2'	22:BA:61:G:C8	2.39	0.54
23:BB:836:G:H2'	23:BB:837:C:H6	1.72	0.54
16:AS:2:ARG:HH11	16:AS:2:ARG:HB3	1.72	0.54
1:CA:430:A:OP1	3:CD:8:LEU:HB2	2.08	0.54
1:AA:598:U:H2'	1:AA:599:C:C6	2.42	0.54
1:CA:1041:G:H2'	1:CA:1042:A:H8	1.73	0.54
23:DB:1560:G:H2'	23:DB:1561:C:H6	1.72	0.54
23:DB:1461:C:H2'	23:DB:1462:C:H6	1.72	0.54
23:DB:2547:A:H2'	23:DB:2548:U:C6	2.43	0.54
11:CL:14:LYS:HG2	11:CL:16:ALA:H	1.72	0.54
23:DB:2443:C:H2'	23:DB:2444:G:C8	2.42	0.54
23:DB:296:U:H2'	23:DB:297:G:C8	2.43	0.54
1:AA:784:A:H2'	1:AA:785:G:H8	1.72	0.54
23:BB:1164:C:H2'	23:BB:1165:A:H8	1.71	0.54
23:BB:67:U:H2'	23:BB:68:G:C8	2.42	0.54
45:BS:20:VAL:C	45:BS:22:ASP:H	2.11	0.54
50:BT:10:VAL:O	50:BT:12:ARG:N	2.41	0.54
29:DE:4:VAL:C	29:DE:6:LYS:H	2.11	0.54
1:CA:1074:G:H2'	1:CA:1075:U:C6	2.42	0.54
23:BB:738:G:H1'	23:BB:759:G:N2	2.23	0.54
23:DB:2026:U:H2'	23:DB:2027:G:H8	1.72	0.54
8:CI:71:ILE:H	8:CI:71:ILE:HD12	1.73	0.54
1:CA:317:U:H2'	1:CA:318:G:H8	1.72	0.54
14:CQ:74:LEU:HD22	14:CQ:75:VAL:N	2.22	0.54
8:AI:74:GLN:CA	8:AI:74:GLN:HE21	2.20	0.54
42:DN:72:ASP:O	42:DN:76:VAL:HG13	2.08	0.54
23:BB:1081:U:H4'	24:BI:123:ALA:HB1	1.89	0.54
23:DB:857:G:O2'	23:DB:858:G:H5'	2.06	0.54
3:CD:49:ASP:O	3:CD:53:GLN:HG3	2.07	0.54
23:DB:633:A:O5'	23:DB:633:A:H8	1.89	0.54
23:BB:1654:A:H2'	23:BB:1655:A:H8	1.72	0.54
49:BR:27:ILE:HG13	49:BR:33:VAL:HG11	1.88	0.54
24:DI:71:LYS:HB3	24:DI:115:ASP:OD2	2.07	0.54
40:DH:99:ILE:HD11	40:DH:117:LEU:HD22	1.88	0.54
49:BR:21:ARG:HB3	49:BR:95:ASP:OD1	2.08	0.54
23:DB:492:A:H2'	23:DB:493:G:O4'	2.07	0.54
6:CG:144:ALA:O	6:CG:146:ALA:N	2.37	0.54
1:CA:1298:U:P	6:CG:113:LYS:HZ1	2.30	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:926:G:H21	1:AA:1505:G:H2'	1.70	0.54
48:BG:167:VAL:HG23	48:BG:168:VAL:N	2.21	0.54
38:DM:66:ARG:NH1	38:DM:66:ARG:HB3	2.22	0.54
2:AC:14:VAL:O	2:AC:15:LYS:HD2	2.07	0.54
43:DO:47:VAL:HG12	43:DO:48:LEU:N	2.20	0.54
23:DB:359:G:C2'	23:DB:360:U:H5'	2.37	0.54
49:DR:80:ARG:O	49:DR:81:LYS:HD3	2.07	0.54
38:DM:33:LEU:HD22	38:DM:128:THR:OG1	2.08	0.54
45:BS:96:ILE:HG23	45:BS:96:ILE:O	2.08	0.54
1:CA:817:C:H1'	1:CA:819:A:C5'	2.37	0.54
23:DB:2085:U:O2'	23:DB:2086:U:H5'	2.08	0.54
23:BB:2646:C:H2'	23:BB:2647:U:O4'	2.07	0.54
23:DB:2897:U:H2'	23:DB:2898:U:C6	2.43	0.54
47:DF:78:ILE:HA	47:DF:82:TYR:CD1	2.42	0.54
1:CA:591:U:H2'	1:CA:592:G:H8	1.71	0.54
23:DB:418:C:H2'	23:DB:419:U:H6	1.73	0.54
1:AA:1152:A:H2'	1:AA:1153:G:H8	1.73	0.54
41:DJ:72:LYS:HB2	41:DJ:89:PHE:HB2	1.89	0.54
36:D2:13:ASN:O	36:D2:17:GLY:N	2.40	0.54
29:DE:3:LEU:N	29:DE:3:LEU:HD22	2.22	0.54
1:AA:401:C:H2'	1:AA:402:G:C8	2.42	0.54
23:BB:2896:C:H2'	23:BB:2897:U:C6	2.42	0.54
22:BA:13:G:H2'	22:BA:70:C:O2'	2.08	0.54
23:DB:2340:A:H2'	23:DB:2341:G:H8	1.72	0.54
23:BB:2008:C:H2'	23:BB:2009:A:H8	1.72	0.54
41:BJ:34:ARG:HG2	41:BJ:39:LYS:HB3	1.89	0.54
1:CA:545:C:H5'	3:CD:68:GLU:HG2	1.89	0.54
47:BF:141:ASP:O	47:BF:144:LYS:N	2.40	0.54
23:BB:1292:G:H2'	23:BB:1293:C:C6	2.42	0.54
8:AI:96:GLU:HA	8:AI:99:LYS:NZ	2.22	0.54
23:BB:2297:A:N6	23:BB:2319:G:H1'	2.21	0.54
23:BB:1205:A:H4'	23:BB:1206:G:OP2	2.07	0.54
23:BB:782:A:C8	25:BC:219:VAL:HG21	2.42	0.54
24:DI:2:LYS:C	24:DI:3:LYS:HD2	2.28	0.54
26:BD:108:ASP:OD2	26:BD:173:GLN:HA	2.05	0.54
2:CC:67:ILE:HD11	2:CC:100:ILE:HD11	1.89	0.54
26:DD:113:SER:HB3	26:DD:168:GLU:H	1.72	0.54
2:CC:53:ARG:HH12	2:CC:55:VAL:CG2	2.12	0.54
43:BO:75:GLY:O	43:BO:78:VAL:HG23	2.08	0.54
8:AI:33:SER:HB3	8:AI:36:GLN:NE2	2.23	0.54
8:AI:41:GLU:O	8:AI:44:ARG:HG2	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:29:A:H2'	22:DA:30:C:C6	2.43	0.54
46:BU:73:ASN:HB3	46:BU:95:PHE:CE2	2.43	0.54
40:DH:31:VAL:CB	40:DH:32:PRO:HD3	2.32	0.54
33:B1:37:LYS:H	33:B1:48:TYR:HD2	1.55	0.54
38:BM:2:LEU:HD23	38:BM:46:ILE:HD11	1.90	0.54
1:AA:1219:A:H5''	21:AN:52:ARG:NH2	2.22	0.54
51:DZ:5:CYS:SG	51:DZ:8:THR:HG23	2.47	0.54
1:CA:889:A:H5'	1:CA:891:U:H1'	1.89	0.54
23:DB:1244:A:H5''	37:DL:8:PRO:CD	2.36	0.54
36:D2:19:ARG:HB3	36:D2:19:ARG:NH2	2.23	0.54
23:BB:2869:G:H2'	23:BB:2870:C:C6	2.42	0.54
23:DB:2728:U:H2'	23:DB:2729:G:C8	2.42	0.54
23:DB:2073:C:H5''	25:DC:227:VAL:HG12	1.89	0.54
23:DB:2144:G:H3'	23:DB:2145:C:H4'	1.88	0.54
1:CA:22:G:H4'	1:CA:885:G:C8	2.43	0.54
1:CA:882:C:O2'	1:CA:883:C:H5'	2.06	0.54
23:DB:2748:A:H4'	48:DG:3:VAL:HG21	1.88	0.54
1:AA:1035:A:H2'	1:AA:1036:A:C8	2.42	0.54
23:DB:845:A:C8	23:DB:846:U:H5''	2.43	0.54
1:AA:251:G:N3	1:AA:266:G:O6	2.41	0.54
25:BC:93:VAL:HG12	25:BC:101:ARG:H	1.72	0.54
23:BB:2276:G:O2'	23:BB:2277:G:H5'	2.08	0.54
18:AB:93:HIS:O	18:AB:94:ARG:HG2	2.07	0.54
30:BY:8:GLN:OE1	30:BY:23:LEU:HD11	2.06	0.54
1:AA:6:G:HO2'	1:AA:7:A:H8	1.54	0.54
23:DB:1412:U:H2'	23:DB:1413:A:H8	1.72	0.54
1:AA:161:A:H2'	1:AA:162:A:C8	2.42	0.54
23:DB:1773:A:N7	23:DB:1829:A:H1'	2.22	0.54
23:DB:2563:U:H2'	23:DB:2565:A:OP2	2.06	0.54
23:DB:2008:C:H2'	23:DB:2009:A:C8	2.43	0.54
23:BB:2859:G:H2'	23:BB:2860:A:C8	2.42	0.54
1:AA:555:U:H2'	1:AA:556:C:H6	1.73	0.54
23:BB:2836:U:H2'	23:BB:2837:A:C8	2.42	0.54
23:DB:2027:G:O2'	23:DB:2028:U:H5'	2.08	0.54
1:AA:1114:C:H2'	1:AA:1115:U:O4'	2.08	0.54
23:BB:2677:G:H2'	23:BB:2678:C:C6	2.43	0.54
23:BB:1100:C:H2'	23:BB:1101:U:H6	1.72	0.54
6:CG:143:MET:O	6:CG:147:ASN:HB2	2.08	0.54
23:DB:738:G:H1'	23:DB:759:G:N2	2.21	0.54
19:CU:42:THR:C	19:CU:46:ARG:HE	2.11	0.54
29:DE:58:LYS:HD3	29:DE:58:LYS:H	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BV:29:ILE:HG13	35:BV:88:HIS:CE1	2.39	0.54
41:BJ:13:ARG:O	41:BJ:52:ASP:HA	2.07	0.54
1:AA:254:G:OP1	14:AQ:68:LYS:O	2.25	0.54
26:DD:25:THR:HG21	26:DD:193:VAL:HG21	1.89	0.54
40:BH:116:ARG:HH22	40:BH:132:PHE:C	2.10	0.54
3:AD:160:LEU:HD23	3:AD:164:ARG:NH2	2.23	0.54
23:BB:2745:C:H3'	23:BB:2746:U:C6	2.43	0.54
44:DQ:67:ALA:HB1	44:DQ:105:PHE:CZ	2.42	0.54
23:DB:1178:C:H2'	23:DB:1179:G:C8	2.42	0.54
43:DO:106:LEU:HG	43:DO:107:ALA:N	2.22	0.54
16:AS:15:LEU:O	16:AS:15:LEU:HD23	2.08	0.54
22:BA:6:G:H2'	22:BA:7:G:H8	1.70	0.54
30:DY:37:ARG:HG3	30:DY:38:GLU:OE1	2.08	0.54
47:DF:45:ASP:HB3	47:DF:48:LEU:HD22	1.89	0.54
23:DB:1794:A:H2'	23:DB:1795:C:C6	2.42	0.54
51:BZ:7:VAL:HG21	51:BZ:59:ILE:HD11	1.89	0.54
28:BP:88:ARG:HH21	28:BP:112:ARG:NH2	2.05	0.54
1:CA:1354:U:O2'	1:CA:1355:G:H5'	2.08	0.54
3:AD:152:SER:O	3:AD:155:LYS:HG2	2.07	0.54
31:B0:32:THR:OG1	31:B0:50:GLY:HA2	2.07	0.54
37:DL:56:PRO:O	37:DL:60:ARG:HG3	2.07	0.54
1:CA:1308:U:O2'	1:CA:1309:G:H5'	2.08	0.54
43:BO:88:LYS:HA	43:BO:115:LEU:HD13	1.88	0.54
23:DB:996:A:O3'	44:DQ:91:ARG:HG2	2.08	0.54
44:DQ:63:ARG:HH12	44:DQ:96:ASP:CB	2.20	0.54
12:CM:52:ILE:HG23	12:CM:56:ARG:NH2	2.22	0.54
45:DS:24:ILE:HG22	45:DS:71:VAL:HG11	1.90	0.54
11:CL:5:GLN:HG3	11:CL:8:ARG:NH2	2.23	0.54
23:DB:1470:A:H3'	23:DB:1471:G:H8	1.73	0.54
45:BS:86:MET:HG3	45:BS:96:ILE:HD12	1.88	0.54
23:BB:718:A:H5'	23:BB:719:C:H5	1.71	0.54
5:CF:53:LYS:H	5:CF:53:LYS:HZ3	1.56	0.54
23:BB:1470:A:H3'	23:BB:1471:G:H8	1.73	0.54
25:DC:12:ARG:HA	25:DC:15:VAL:CG2	2.37	0.54
1:CA:462:G:H5'	1:CA:463:U:OP2	2.08	0.54
23:BB:2104:C:H2'	23:BB:2105:U:H6	1.72	0.54
23:BB:131:A:H2'	23:BB:132:G:C8	2.42	0.54
1:AA:1151:A:O2'	1:AA:1152:A:H8	1.89	0.54
33:D1:24:LYS:HD3	33:D1:52:LYS:O	2.08	0.54
23:BB:1464:G:H2'	23:BB:1465:G:C8	2.43	0.54
12:CM:29:SER:O	12:CM:32:ILE:HG22	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:234:U:H2'	23:BB:235:U:H6	1.72	0.54
23:DB:1582:C:H3'	23:DB:1583:A:C2	2.43	0.54
22:DA:66:A:H61	22:DA:107:G:H2'	1.72	0.54
23:DB:1151:A:H2'	23:DB:1152:C:C6	2.43	0.54
7:CH:79:ARG:NH2	7:CH:82:LEU:HB2	2.23	0.54
23:DB:565:C:H2'	23:DB:566:U:O4'	2.06	0.54
23:BB:1120:G:O2'	23:BB:1121:C:H5'	2.08	0.54
23:DB:2691:C:H2'	23:DB:2692:G:H8	1.73	0.54
20:CO:31:LEU:HD13	20:CO:32:LEU:HD23	1.89	0.54
6:AG:104:VAL:O	6:AG:108:ARG:HG3	2.07	0.54
23:BB:1599:U:H2'	23:BB:1600:C:C6	2.43	0.54
23:DB:1100:C:H2'	23:DB:1101:U:C6	2.43	0.54
35:BV:24:ASN:O	35:BV:44:HIS:HB2	2.07	0.54
35:BV:30:ILE:HA	35:BV:91:PHE:O	2.08	0.54
21:CN:11:LYS:O	21:CN:15:LEU:HG	2.07	0.54
41:DJ:122:LEU:C	41:DJ:123:LYS:HD2	2.28	0.54
14:CQ:46:HIS:HB2	14:CQ:70:LYS:HE2	1.90	0.54
23:BB:1251:C:H5''	44:BQ:5:ARG:HH11	1.73	0.54
10:CK:31:VAL:CG2	10:CK:44:ALA:HB3	2.38	0.54
19:AU:24:LYS:HZ3	19:AU:24:LYS:HB3	1.73	0.54
46:DU:5:ARG:NH2	46:DU:93:ARG:HD3	2.22	0.54
24:DI:49:GLU:CB	24:DI:52:LEU:HD12	2.38	0.54
47:DF:113:PHE:HZ	47:DF:175:PRO:HB2	1.71	0.54
28:BP:3:ILE:HD13	28:BP:3:ILE:O	2.07	0.54
47:BF:110:ILE:HG22	47:BF:113:PHE:HD2	1.73	0.54
47:BF:113:PHE:HE1	47:BF:116:LEU:N	2.05	0.54
23:DB:1022:G:N2	23:DB:1142:A:N1	2.56	0.54
27:BK:76:VAL:O	28:BP:71:ARG:HA	2.08	0.54
2:AC:42:LEU:O	2:AC:46:LEU:HD23	2.07	0.54
40:DH:41:LYS:CA	40:DH:44:ILE:HG12	2.37	0.54
30:DY:16:LEU:CD2	30:DY:16:LEU:H	2.20	0.54
23:BB:1874:C:H2'	23:BB:1875:G:O4'	2.08	0.54
27:DK:11:ALA:HB3	27:DK:85:VAL:CG2	2.38	0.54
23:BB:2674:G:H2'	23:BB:2675:A:C8	2.43	0.54
21:CN:8:ARG:HB3	21:CN:12:ARG:HH11	1.72	0.54
12:CM:2:ARG:NH1	12:CM:3:ILE:N	2.56	0.54
23:DB:1606:C:C4'	23:DB:1607:C:H5'	2.38	0.54
41:DJ:93:ILE:O	41:DJ:97:PRO:HG3	2.07	0.54
23:DB:660:C:H2'	23:DB:661:A:H8	1.72	0.54
1:AA:1489:G:H2'	1:AA:1490:U:C6	2.43	0.54
23:BB:2847:U:H5''	28:BP:94:ALA:HB3	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:518:G:H4'	45:BS:18:ARG:NH2	2.23	0.54
9:AJ:67:ILE:HG13	21:AN:95:LEU:HD13	1.90	0.54
23:DB:2229:U:H2'	23:DB:2230:G:C8	2.43	0.54
1:CA:586:C:O2'	1:CA:587:G:H5'	2.08	0.54
23:BB:127:A:H5''	23:BB:128:C:C6	2.42	0.54
1:CA:520:A:N1	1:CA:536:C:H1'	2.23	0.54
24:BI:48:ILE:HG22	24:BI:49:GLU:HG2	1.89	0.54
24:BI:5:GLN:HG2	24:BI:6:ALA:N	2.23	0.54
5:CF:79:ARG:HH22	5:CF:87:SER:HB3	1.71	0.54
23:DB:1258:U:H2'	23:DB:1259:G:C8	2.43	0.54
50:DT:12:ARG:NH1	50:DT:12:ARG:HB3	2.23	0.54
34:B3:7:ARG:HH11	34:B3:7:ARG:HG3	1.73	0.54
23:DB:2134:A:N3	23:DB:2134:A:H2'	2.22	0.54
40:BH:90:LEU:HD11	40:BH:146:VAL:HG11	1.90	0.54
35:BV:25:LYS:HE2	35:BV:41:GLU:OE1	2.07	0.54
41:BJ:11:VAL:HA	41:BJ:12:LYS:NZ	2.23	0.54
41:DJ:54:ILE:HD12	41:DJ:55:ILE:N	2.23	0.54
8:AI:51:LEU:HB3	8:AI:56:MET:SD	2.48	0.54
48:BG:84:LYS:HB2	48:BG:132:LEU:H	1.73	0.54
1:AA:8:A:N6	3:AD:205:LYS:HB2	2.23	0.54
1:AA:1317:C:H3'	1:AA:1318:A:C8	2.43	0.54
1:AA:1313:U:H3'	16:AS:5:LYS:CD	2.38	0.54
23:BB:1287:A:N7	42:BN:105:GLY:HA3	2.22	0.54
29:DE:127:GLU:H	29:DE:127:GLU:CD	2.09	0.54
4:AE:37:VAL:HG12	4:AE:47:PHE:CB	2.37	0.54
1:CA:205:A:O2'	1:CA:206:C:H5'	2.08	0.54
7:AH:35:ILE:O	7:AH:39:LEU:HG	2.07	0.54
1:CA:191:G:H2'	1:CA:192:A:C8	2.43	0.54
23:BB:1870:C:H5''	23:BB:1871:A:N7	2.23	0.54
40:BH:27:ARG:NE	51:BZ:64:ILE:HD11	2.20	0.54
46:DU:85:ARG:CZ	46:DU:86:PHE:H	2.21	0.54
10:AK:58:THR:HB	10:AK:59:PRO:HD2	1.90	0.54
1:AA:389:A:H3'	1:AA:390:U:H6	1.73	0.54
23:BB:2093:G:O2'	23:BB:2094:A:H5'	2.07	0.54
23:DB:721:A:H2'	23:DB:722:A:C8	2.43	0.54
1:CA:1512:U:H2'	1:CA:1513:A:H8	1.73	0.54
26:BD:46:ARG:NH1	26:BD:85:ALA:HA	2.23	0.54
1:CA:1018:G:H2'	1:CA:1019:A:H8	1.72	0.54
23:DB:1534:U:H2'	23:DB:1536:C:C5	2.43	0.54
23:BB:2815:C:H2'	23:BB:2816:G:H8	1.73	0.54
11:AL:14:LYS:HG2	11:AL:16:ALA:H	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1025:U:H4'	1:AA:1026:G:C8	2.43	0.54
6:CG:147:ASN:C	6:CG:149:ALA:H	2.10	0.54
24:BI:52:LEU:HD21	24:BI:81:LYS:HZ2	1.73	0.54
1:AA:1463:U:H2'	1:AA:1464:U:C6	2.43	0.54
23:BB:748:G:OP2	45:BS:88:ARG:HG3	2.07	0.54
23:BB:2784:U:H2'	23:BB:2785:C:H6	1.73	0.54
23:BB:2615:U:C2	31:B0:3:GLN:HA	2.43	0.54
17:CT:45:ALA:HA	17:CT:48:LYS:HB3	1.89	0.54
23:DB:1098:A:C3'	24:DI:4:VAL:N	2.71	0.54
18:CB:69:VAL:O	18:CB:162:VAL:HG23	2.07	0.54
21:CN:60:ARG:HE	21:CN:62:ARG:HG2	1.71	0.54
1:AA:1238:A:C8	1:AA:1303:C:H1'	2.42	0.54
23:BB:2336:A:H1'	23:BB:2385:C:O4'	2.08	0.54
41:DJ:13:ARG:O	41:DJ:52:ASP:HA	2.08	0.54
23:DB:2385:C:H2'	23:DB:2386:A:C8	2.43	0.54
42:DN:25:ALA:O	42:DN:29:VAL:HG23	2.08	0.54
37:BL:123:ARG:CZ	37:BL:143:GLU:HB2	2.37	0.54
24:DI:52:LEU:HD22	24:DI:81:LYS:HD3	1.89	0.54
40:DH:94:ILE:HG23	40:DH:98:ASP:HB2	1.89	0.54
38:BM:19:GLY:CA	38:BM:97:GLN:HB2	2.34	0.54
1:AA:1270:G:H2'	1:AA:1271:A:H8	1.73	0.54
44:DQ:78:PHE:CZ	44:DQ:82:LEU:HD11	2.42	0.54
27:BK:70:ARG:HD3	27:BK:76:VAL:HG22	1.90	0.54
23:BB:394:C:H2'	23:BB:395:U:O4'	2.07	0.54
47:DF:168:LEU:O	47:DF:169:LEU:HB2	2.08	0.54
9:AJ:12:ALA:HB3	9:AJ:18:ILE:HB	1.90	0.54
1:AA:1390:U:H2'	1:AA:1391:U:C6	2.43	0.54
7:AH:49:LYS:O	7:AH:58:LEU:HA	2.09	0.54
40:BH:50:ARG:HE	40:BH:50:ARG:H	1.55	0.54
23:BB:161:A:C3'	23:BB:162:U:H5''	2.37	0.54
27:DK:76:VAL:H	28:DP:72:VAL:HG23	1.73	0.54
30:DY:21:ALA:O	30:DY:24:LEU:HB3	2.07	0.54
18:CB:80:LYS:HG3	18:CB:81:ASP:N	2.23	0.54
1:AA:1036:A:C2'	1:AA:1037:C:H5'	2.37	0.54
23:BB:1061:U:O4'	23:BB:1070:A:H1'	2.08	0.54
23:BB:171:U:H2'	23:BB:172:A:H8	1.71	0.54
25:BC:92:LEU:HD12	25:BC:93:VAL:H	1.73	0.54
23:DB:2093:G:O2'	23:DB:2094:A:H5'	2.08	0.54
51:BZ:38:PHE:HE2	51:BZ:51:VAL:HG21	1.73	0.54
1:CA:802:A:H2'	1:CA:803:G:O4'	2.07	0.54
23:DB:2849:U:H4'	23:DB:2850:A:C5'	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DZ:38:PHE:HE2	51:DZ:51:VAL:HG21	1.73	0.54
1:AA:692:U:H2'	1:AA:694:A:OP2	2.08	0.54
20:CO:28:GLN:O	20:CO:32:LEU:HG	2.08	0.54
23:BB:1153:C:H2'	23:BB:1154:G:O4'	2.08	0.54
4:AE:140:ILE:O	4:AE:144:GLU:HG3	2.08	0.54
23:DB:2438:U:O2'	23:DB:2439:A:H5''	2.08	0.54
23:DB:12:U:O2	23:DB:2626:C:H4'	2.08	0.54
23:DB:1599:U:H2'	23:DB:1600:C:C6	2.43	0.54
23:DB:2012:G:OP1	45:DS:98:LYS:HG2	2.08	0.54
1:CA:769:G:O2'	1:CA:770:C:H5'	2.07	0.54
6:CG:21:LEU:H	6:CG:21:LEU:HD23	1.73	0.54
5:CF:51:ILE:HG23	5:CF:51:ILE:O	2.08	0.54
23:BB:1939:U:H6	23:BB:1939:U:H5'	1.73	0.54
2:CC:123:LEU:HA	2:CC:127:VAL:HG22	1.90	0.54
50:DT:25:GLU:OE1	50:DT:30:ILE:HA	2.08	0.53
23:DB:2305:U:C1'	47:DF:132:ARG:HA	2.24	0.53
9:CJ:7:ARG:HG3	9:CJ:102:LEU:C	2.29	0.53
48:BG:42:VAL:HA	48:BG:50:THR:O	2.07	0.53
35:DV:4:ILE:HG22	35:DV:63:ILE:HG23	1.90	0.53
14:AQ:46:HIS:HB2	14:AQ:70:LYS:HE2	1.88	0.53
23:DB:2384:U:H5''	23:DB:2386:A:OP1	2.08	0.53
2:CC:53:ARG:HB3	2:CC:53:ARG:CZ	2.39	0.53
22:BA:28:C:H2'	22:BA:29:A:H8	1.72	0.53
8:AI:6:TYR:HB2	8:AI:19:PHE:CE1	2.43	0.53
23:BB:2688:G:H1'	23:BB:2721:A:H61	1.71	0.53
40:BH:31:VAL:CB	40:BH:32:PRO:CD	2.86	0.53
24:DI:57:VAL:HG23	24:DI:71:LYS:NZ	2.23	0.53
23:DB:1174:U:H1'	23:DB:1176:U:C1'	2.38	0.53
18:CB:30:ILE:HG23	18:CB:39:ILE:O	2.08	0.53
28:BP:56:SER:O	28:BP:75:THR:HG22	2.09	0.53
38:DM:19:GLY:HA3	38:DM:38:ARG:HH22	1.74	0.53
16:AS:35:ARG:HD2	16:AS:51:HIS:O	2.08	0.53
16:AS:62:THR:HG22	16:AS:63:ASP:N	2.22	0.53
26:DD:92:VAL:O	26:DD:94:GLN:N	2.41	0.53
22:DA:98:G:C6	35:DV:14:LYS:HB2	2.43	0.53
4:CE:37:VAL:HG12	4:CE:47:PHE:CB	2.39	0.53
23:DB:1790:C:H2'	23:DB:1791:A:C8	2.43	0.53
26:BD:55:LYS:HD3	26:BD:77:ARG:HA	1.90	0.53
23:BB:1813:G:H1'	25:BC:49:THR:OG1	2.07	0.53
2:AC:13:ILE:C	2:AC:15:LYS:H	2.12	0.53
52:BW:10:ARG:O	52:BW:11:ASN:HB2	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:159:LYS:O	26:DD:161:MET:HG2	2.09	0.53
23:DB:545:U:C5	23:DB:546:U:H1'	2.43	0.53
1:AA:1389:C:H2'	1:AA:1390:U:H6	1.72	0.53
1:CA:190:A:O5'	1:CA:190:A:H8	1.91	0.53
23:DB:2722:G:H2'	23:DB:2723:C:C6	2.43	0.53
1:AA:1135:U:H4'	1:AA:1136:C:C5	2.43	0.53
45:DS:24:ILE:CG1	45:DS:36:LEU:HD11	2.38	0.53
1:AA:57:G:H2'	1:AA:58:C:H6	1.72	0.53
46:DU:6:ARG:O	46:DU:24:VAL:HB	2.08	0.53
1:CA:883:C:O2'	1:CA:884:U:H5'	2.07	0.53
1:AA:1167:A:N3	1:AA:1167:A:H2'	2.23	0.53
1:CA:954:G:H2'	1:CA:955:U:C6	2.43	0.53
23:BB:713:G:H21	23:BB:718:A:H2	1.55	0.53
23:DB:959:A:O2'	23:DB:960:A:H5'	2.08	0.53
23:DB:2353:G:H1'	52:DW:30:VAL:HG13	1.89	0.53
1:CA:652:U:H1'	1:CA:653:U:H5	1.72	0.53
1:AA:1449:C:H2'	1:AA:1450:U:O4'	2.07	0.53
49:BR:2:TYR:CG	49:BR:42:ALA:HB2	2.43	0.53
45:DS:13:SER:O	45:DS:101:SER:HB3	2.08	0.53
51:BZ:3:ARG:HA	51:BZ:50:ARG:HH11	1.73	0.53
23:BB:1636:U:H2'	23:BB:1637:A:H8	1.73	0.53
50:BT:12:ARG:NH1	50:BT:12:ARG:HB3	2.23	0.53
23:DB:2626:C:H2'	23:DB:2627:G:O4'	2.08	0.53
11:CL:80:LEU:HD23	11:CL:97:VAL:HG21	1.89	0.53
1:CA:893:C:H2'	1:CA:894:G:H8	1.73	0.53
23:DB:132:G:H2'	23:DB:133:U:C6	2.43	0.53
17:AT:45:ALA:HA	17:AT:48:LYS:HB3	1.90	0.53
23:DB:437:U:H2'	23:DB:438:G:C8	2.43	0.53
22:DA:2:G:H2'	22:DA:3:C:C6	2.43	0.53
23:BB:1313:U:O2	23:BB:1313:U:H2'	2.07	0.53
1:CA:87:C:H2'	1:CA:88:U:C6	2.43	0.53
18:CB:163:ILE:HD12	18:CB:185:ILE:CD1	2.37	0.53
30:BY:9:THR:HB	30:BY:53:MET:O	2.07	0.53
5:AF:3:HIS:N	5:AF:92:THR:HG23	2.13	0.53
23:DB:2385:C:H2'	23:DB:2386:A:H8	1.71	0.53
24:BI:109:ALA:HB1	24:BI:124:MET:HG3	1.90	0.53
9:AJ:36:VAL:HG22	9:AJ:76:ILE:CG2	2.38	0.53
23:BB:2466:C:H5''	32:B4:6:SER:OG	2.08	0.53
35:DV:29:ILE:HG13	35:DV:88:HIS:CE1	2.40	0.53
37:BL:113:ALA:HB3	37:BL:115:GLU:OE1	2.07	0.53
49:BR:3:ALA:HB3	49:BR:14:VAL:O	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:127:GLU:H	29:BE:127:GLU:CD	2.12	0.53
38:DM:47:GLU:OE2	38:DM:51:ARG:HG3	2.07	0.53
38:DM:40:ARG:HB2	38:DM:93:VAL:HG22	1.89	0.53
23:DB:876:C:H42	23:DB:901:C:H42	1.54	0.53
25:DC:14:HIS:O	25:DC:203:VAL:HG11	2.08	0.53
23:BB:2052:A:C8	26:BD:146:ILE:HD11	2.43	0.53
23:DB:2260:C:O2'	23:DB:2261:C:H5'	2.08	0.53
52:BW:9:THR:OG1	52:BW:10:ARG:N	2.41	0.53
27:BK:108:ARG:HG3	27:BK:108:ARG:O	2.08	0.53
50:BT:38:ALA:HB3	50:BT:81:LYS:NZ	2.23	0.53
36:D2:21:ARG:HH21	36:D2:43:THR:HG22	1.74	0.53
1:CA:1053:G:C4'	1:CA:1054:C:H5'	2.38	0.53
16:CS:44:ILE:CD1	16:CS:63:ASP:HA	2.38	0.53
23:DB:20:C:H2'	23:DB:21:A:C8	2.42	0.53
23:DB:1488:C:O2'	23:DB:1489:C:H5'	2.09	0.53
23:BB:417:C:H2'	23:BB:418:C:C6	2.43	0.53
10:CK:117:HIS:O	10:CK:118:ASN:HB2	2.08	0.53
23:DB:417:C:H2'	23:DB:418:C:H6	1.73	0.53
23:DB:1039:A:H2'	23:DB:1040:A:C8	2.43	0.53
1:CA:1384:C:H2'	1:CA:1385:G:C8	2.43	0.53
2:CC:78:LYS:HD2	2:CC:79:LYS:HE3	1.90	0.53
7:AH:4:ASP:OD1	7:AH:7:ALA:HB2	2.08	0.53
25:DC:69:ASN:O	25:DC:70:LYS:C	2.47	0.53
23:DB:2520:C:O2'	23:DB:2521:C:H5'	2.08	0.53
23:BB:2101:A:H2'	23:BB:2102:G:O4'	2.08	0.53
30:DY:40:THR:O	30:DY:43:ILE:HG23	2.08	0.53
39:BX:31:GLN:O	39:BX:36:GLN:HB2	2.07	0.53
23:DB:1649:G:O2'	23:DB:1650:A:H5'	2.08	0.53
23:BB:388:G:N7	23:BB:390:U:H2'	2.23	0.53
23:BB:1666:G:H4'	27:BK:6:THR:HG23	1.89	0.53
23:BB:107:G:O2'	23:BB:108:G:H5'	2.09	0.53
5:AF:51:ILE:O	5:AF:51:ILE:HG23	2.08	0.53
23:BB:2543:G:H8	23:BB:2543:G:H5'	1.73	0.53
38:DM:78:LEU:HD12	38:DM:78:LEU:H	1.73	0.53
24:BI:2:LYS:NZ	24:BI:2:LYS:HB3	2.24	0.53
23:BB:1647:U:H3'	23:BB:1647:U:P	2.49	0.53
23:BB:302:C:H2'	23:BB:303:G:H8	1.74	0.53
23:BB:1319:C:O2'	23:BB:1320:C:H5'	2.08	0.53
1:AA:66:A:H5'	1:AA:173:U:O4	2.08	0.53
18:CB:48:MET:HA	18:CB:51:GLU:OE2	2.08	0.53
50:DT:28:ASN:CA	50:DT:91:GLN:HE22	2.22	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DG:10:VAL:HG12	48:DG:14:VAL:HG23	1.89	0.53
40:BH:145:ASN:O	40:BH:147:VAL:HG23	2.08	0.53
52:DW:37:VAL:CG1	52:DW:38:ARG:HH11	2.22	0.53
23:BB:138:U:H2'	23:BB:140:C:O2	2.07	0.53
44:BQ:4:LYS:HZ3	44:BQ:7:VAL:HG22	1.73	0.53
42:DN:29:VAL:HG11	42:DN:75:ILE:HB	1.90	0.53
23:DB:2271:G:H2'	23:DB:2272:U:C6	2.43	0.53
2:AC:129:PHE:HE2	2:AC:165:GLU:HG2	1.72	0.53
32:B4:16:ILE:HG12	32:B4:25:VAL:HG22	1.91	0.53
23:BB:1033:U:H4'	23:BB:1034:G:OP1	2.08	0.53
46:BU:80:ASP:OD1	46:BU:97:SER:HB3	2.07	0.53
35:DV:28:ALA:HB2	35:DV:89:ILE:HD12	1.90	0.53
47:DF:113:PHE:HE1	47:DF:116:LEU:N	2.06	0.53
47:DF:51:ASN:O	47:DF:55:ASP:HB2	2.08	0.53
41:BJ:44:TYR:O	41:BJ:45:THR:HB	2.08	0.53
3:CD:144:ILE:HG22	3:CD:145:ARG:N	2.23	0.53
49:DR:3:ALA:HB3	49:DR:14:VAL:O	2.08	0.53
26:DD:5:VAL:H	26:DD:32:ASN:HD21	1.56	0.53
47:DF:134:GLN:H	47:DF:149:ARG:HB3	1.74	0.53
20:AO:43:PHE:HE1	20:AO:53:ARG:HA	1.72	0.53
44:DQ:81:GLY:HA2	44:DQ:116:LEU:HD21	1.90	0.53
3:AD:147:LYS:HG3	3:AD:148:ALA:N	2.23	0.53
1:CA:1306:A:H61	1:CA:1331:G:H1'	1.72	0.53
45:DS:81:SER:HB3	45:DS:99:ARG:HA	1.90	0.53
23:DB:1870:C:H5''	23:DB:1871:A:N7	2.23	0.53
27:DK:116:ILE:HG13	27:DK:117:SER:N	2.23	0.53
40:BH:47:PHE:HD1	40:BH:50:ARG:HG2	1.74	0.53
1:CA:1287:A:N6	1:CA:1288:A:N6	2.57	0.53
23:BB:721:A:H2'	23:BB:722:A:C8	2.43	0.53
36:B2:3:ARG:HH21	36:B2:3:ARG:HG2	1.74	0.53
1:CA:815:A:H4'	1:CA:817:C:C4	2.43	0.53
48:BG:53:PRO:HG3	48:BG:61:TRP:HA	1.88	0.53
23:BB:2651:C:O2'	23:BB:2652:C:H5'	2.08	0.53
23:DB:153:U:O2'	23:DB:154:U:H5'	2.09	0.53
41:BJ:36:LEU:C	41:BJ:121:LYS:HZ1	2.11	0.53
16:CS:6:LYS:NZ	16:CS:6:LYS:HA	2.24	0.53
1:CA:764:C:H3'	1:CA:765:G:H21	1.72	0.53
23:BB:660:C:H2'	23:BB:661:A:C8	2.43	0.53
44:DQ:9:ALA:O	44:DQ:11:ALA:N	2.40	0.53
23:BB:1826:G:H2'	23:BB:1827:U:C6	2.43	0.53
22:BA:52:A:H5''	43:BO:33:ARG:NH2	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DV:53:LYS:NZ	35:DV:53:LYS:HA	2.23	0.53
10:AK:30:ILE:HG22	10:AK:45:THR:HA	1.90	0.53
23:BB:329:G:O4'	23:BB:477:A:H1'	2.08	0.53
9:AJ:88:MET:SD	9:AJ:88:MET:N	2.82	0.53
23:DB:2194:U:H2'	23:DB:2195:U:C6	2.43	0.53
39:DX:31:GLN:O	39:DX:36:GLN:HB2	2.09	0.53
1:AA:1283:U:O2'	1:AA:1284:C:H5'	2.09	0.53
7:AH:115:ALA:O	7:AH:120:LEU:HD23	2.07	0.53
23:BB:699:A:H4'	23:BB:1634:A:N7	2.22	0.53
1:AA:847:G:H2'	1:AA:848:C:C6	2.43	0.53
23:BB:554:U:H2'	23:BB:555:G:O4'	2.09	0.53
23:BB:53:A:H1'	23:BB:179:C:O2'	2.07	0.53
22:DA:37:C:H2'	22:DA:38:C:O4'	2.08	0.53
29:DE:73:ILE:HG12	29:DE:73:ILE:O	2.08	0.53
1:CA:496:A:H2'	1:CA:497:G:C8	2.43	0.53
34:B3:25:HIS:HB2	34:B3:43:LEU:O	2.09	0.53
23:DB:753:A:H2'	23:DB:754:U:C6	2.43	0.53
23:BB:2063:C:O2	23:BB:2450:A:N1	2.41	0.53
1:CA:323:U:H2'	1:CA:324:G:O4'	2.09	0.53
50:BT:31:VAL:HA	50:BT:83:ALA:HB3	1.90	0.53
25:DC:189:ALA:C	25:DC:190:THR:HG23	2.28	0.53
41:BJ:18:VAL:HG12	41:BJ:54:ILE:HD11	1.90	0.53
23:BB:143:C:H6	23:BB:143:C:O5'	1.91	0.53
24:BI:125:THR:O	24:BI:129:GLU:HG3	2.08	0.53
2:AC:153:SER:O	2:AC:164:THR:HA	2.07	0.53
2:AC:116:ALA:HB1	2:AC:186:SER:HB3	1.90	0.53
48:BG:120:ILE:HB	48:BG:140:ILE:HG22	1.91	0.53
15:CR:58:ILE:O	15:CR:62:ARG:HG3	2.09	0.53
43:DO:11:ALA:HB2	43:DO:96:GLY:N	2.16	0.53
44:BQ:91:ARG:HD3	49:BR:11:GLN:CD	2.29	0.53
1:AA:986:U:H2'	1:AA:987:G:O4'	2.07	0.53
1:AA:876:C:H1'	7:AH:11:THR:HG21	1.90	0.53
1:AA:973:G:O2'	9:AJ:56:HIS:HA	2.09	0.53
26:DD:51:THR:HG22	26:DD:52:THR:N	2.17	0.53
1:AA:865:A:H2'	1:AA:866:C:C6	2.43	0.53
1:CA:135:C:O2	13:CP:1:MET:HB2	2.09	0.53
3:AD:144:ILE:HG22	3:AD:145:ARG:N	2.24	0.53
40:DH:25:TYR:CD1	40:DH:30:LEU:HG	2.43	0.53
23:BB:2749:A:C3'	23:BB:2750:A:H5''	2.36	0.53
40:BH:15:LEU:HD13	40:BH:16:GLY:N	2.23	0.53
23:BB:1593:A:H2'	23:BB:1594:U:C6	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CN:26:LEU:HD23	21:CN:27:LYS:N	2.24	0.53
12:CM:56:ARG:HB2	12:CM:56:ARG:CZ	2.38	0.53
27:DK:70:ARG:HB2	27:DK:75:SER:O	2.07	0.53
6:AG:149:ALA:HB1	10:AK:58:THR:CB	2.38	0.53
23:DB:2651:C:O2'	23:DB:2652:C:H5'	2.08	0.53
3:CD:10:LEU:HB3	3:CD:62:ARG:HD3	1.91	0.53
1:CA:462:G:H2'	1:CA:462:G:N3	2.21	0.53
3:AD:8:LEU:HD21	3:AD:21:LYS:HG2	1.91	0.53
23:BB:852:U:H2'	23:BB:853:C:C6	2.43	0.53
23:BB:2699:C:H2'	23:BB:2700:A:H8	1.73	0.53
6:AG:82:SER:HB2	6:AG:84:TYR:CE2	2.43	0.53
26:DD:47:ALA:HB2	26:DD:83:ARG:HD2	1.90	0.53
21:AN:76:PHE:O	21:AN:78:LEU:HD13	2.08	0.53
23:DB:329:G:O4'	23:DB:477:A:H1'	2.09	0.53
23:DB:1783:A:H5'	23:DB:2608:G:H4'	1.91	0.53
23:DB:1771:C:H2'	23:DB:1772:A:C8	2.44	0.53
23:BB:1187:G:HO2'	23:BB:1188:U:H6	1.57	0.53
23:DB:2642:G:O2'	23:DB:2643:G:H5'	2.08	0.53
23:BB:1742:U:H2'	23:BB:1743:G:C8	2.43	0.53
25:DC:18:VAL:O	25:DC:18:VAL:HG13	2.08	0.53
19:CU:7:GLU:HB3	19:CU:11:PHE:HZ	1.74	0.53
27:DK:109:SER:HB2	27:DK:111:LYS:HE2	1.91	0.53
23:BB:855:G:C2	52:BW:23:LYS:HG2	2.43	0.53
9:CJ:70:HIS:CD2	9:CJ:70:HIS:H	2.26	0.53
25:DC:127:ASN:O	25:DC:190:THR:HA	2.08	0.53
48:BG:30:GLY:HA3	48:BG:78:VAL:HG12	1.91	0.53
1:AA:121:U:H4'	1:AA:122:G:N7	2.23	0.53
1:AA:121:U:O4	1:AA:236:A:N7	2.42	0.53
14:AQ:26:ARG:HG2	14:AQ:39:ARG:O	2.09	0.53
35:DV:63:ILE:N	35:DV:63:ILE:HD12	2.22	0.53
40:BH:54:LEU:O	40:BH:59:ALA:HB2	2.09	0.53
23:BB:1729:U:O2	23:BB:1729:U:H2'	2.09	0.53
1:AA:720:C:OP1	15:AR:40:PRO:HG3	2.08	0.53
25:BC:189:ALA:C	25:BC:190:THR:HG23	2.29	0.53
23:DB:2757:A:N3	23:DB:2757:A:H2'	2.21	0.53
23:BB:2145:C:C3'	23:BB:2146:C:H5''	2.38	0.53
46:BU:3:LYS:CB	46:BU:82:VAL:HG21	2.33	0.53
15:CR:32:ILE:HD11	15:CR:58:ILE:HG23	1.90	0.53
3:CD:160:LEU:N	3:CD:160:LEU:HD13	2.14	0.53
49:BR:14:VAL:HG22	49:BR:15:SER:N	2.24	0.53
1:CA:1060:U:H4'	9:CJ:54:SER:CB	2.34	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DR:21:ARG:HB3	49:DR:95:ASP:OD1	2.09	0.53
22:BA:42:C:H4'	47:BF:63:LYS:O	2.08	0.53
23:BB:1106:G:H2'	23:BB:1107:G:C8	2.44	0.53
26:BD:146:ILE:HD12	26:BD:155:VAL:HG21	1.90	0.53
17:AT:66:ILE:HG22	17:AT:67:HIS:N	2.21	0.53
23:DB:115:C:O2'	23:DB:116:C:H5'	2.08	0.53
39:BX:8:GLU:HB3	39:BX:12:GLU:CB	2.39	0.53
24:BI:18:ASN:N	24:BI:19:PRO:CD	2.71	0.53
52:DW:9:THR:OG1	52:DW:10:ARG:N	2.41	0.53
1:CA:1222:G:O2'	1:CA:1223:C:H5'	2.08	0.53
9:CJ:29:ALA:O	9:CJ:32:THR:HG22	2.08	0.53
43:BO:79:ALA:HA	43:BO:115:LEU:HD23	1.91	0.53
37:DL:23:ILE:HD12	37:DL:23:ILE:N	2.21	0.53
1:CA:1167:A:H2'	1:CA:1169:A:C5	2.43	0.53
23:DB:62:U:C2'	23:DB:63:A:H5'	2.39	0.53
23:DB:2648:G:H2'	23:DB:2649:C:H6	1.72	0.53
1:CA:677:U:H2'	1:CA:678:U:C6	2.44	0.53
1:AA:462:G:H5'	1:AA:463:U:OP2	2.09	0.53
23:DB:17:G:H2'	23:DB:18:U:C6	2.43	0.53
1:AA:884:U:H4'	1:AA:885:G:H5''	1.90	0.53
23:DB:2244:U:H2'	23:DB:2245:U:O4'	2.07	0.53
7:CH:8:ASP:O	7:CH:12:ARG:HB2	2.09	0.53
44:DQ:9:ALA:O	44:DQ:13:HIS:HB2	2.09	0.53
17:AT:27:MET:O	17:AT:31:ILE:HG13	2.08	0.53
24:DI:99:LYS:HD3	24:DI:99:LYS:N	2.24	0.53
23:BB:1684:G:H2'	23:BB:1685:C:C6	2.44	0.53
23:BB:1310:G:H21	23:BB:1610:A:H8	1.55	0.53
3:AD:156:ALA:O	3:AD:159:GLU:HB2	2.08	0.53
1:CA:709:U:H2'	1:CA:710:G:C8	2.44	0.53
1:CA:1387:G:H2'	1:CA:1388:C:H6	1.74	0.53
22:DA:64:G:H2'	22:DA:65:U:C6	2.43	0.53
29:BE:4:VAL:C	29:BE:6:LYS:H	2.11	0.53
1:CA:224:U:H2'	1:CA:225:C:C6	2.43	0.53
9:CJ:52:LEU:CD1	9:CJ:52:LEU:H	2.07	0.53
12:AM:56:ARG:O	12:AM:59:VAL:HG12	2.09	0.53
19:AU:34:ARG:NE	19:AU:39:LYS:HE3	2.24	0.53
29:BE:175:ILE:HD11	29:BE:180:LEU:HD11	1.90	0.53
5:CF:86:ARG:NH2	15:CR:63:TYR:HB3	2.23	0.53
5:AF:91:ARG:N	5:AF:93:LYS:HZ1	2.04	0.53
23:BB:2061:G:H5''	23:BB:2503:A:C2	2.44	0.53
23:DB:2271:G:O2'	23:DB:2272:U:H5'	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BL:18:ARG:O	37:BL:19:LEU:HD12	2.08	0.53
37:BL:29:LYS:C	37:BL:31:GLY:H	2.12	0.53
49:BR:59:ILE:HA	49:BR:100:GLY:HA3	1.91	0.53
46:DU:73:ASN:HD22	46:DU:73:ASN:N	2.07	0.53
9:AJ:10:LEU:O	9:AJ:71:LEU:HA	2.08	0.53
38:BM:47:GLU:OE2	38:BM:51:ARG:HG3	2.08	0.53
12:AM:79:LEU:HA	12:AM:82:LEU:CG	2.34	0.53
1:AA:1315:U:H3'	1:AA:1316:G:C8	2.44	0.53
26:DD:55:LYS:H	26:DD:75:ALA:HB1	1.74	0.53
1:CA:921:U:H2'	1:CA:922:G:C8	2.43	0.53
27:BK:75:SER:HA	28:BP:72:VAL:O	2.09	0.53
43:DO:88:LYS:HA	43:DO:115:LEU:HD13	1.90	0.53
47:BF:3:LEU:HB2	47:BF:100:GLU:OE1	2.09	0.53
44:DQ:91:ARG:HD3	49:DR:11:GLN:OE1	2.09	0.53
42:BN:17:ARG:C	42:BN:19:ALA:H	2.12	0.53
27:BK:25:LEU:HD12	27:BK:25:LEU:H	1.73	0.53
2:AC:171:ARG:NH1	2:AC:171:ARG:HB2	2.22	0.53
2:AC:171:ARG:CB	2:AC:171:ARG:HH11	2.21	0.53
1:AA:269:C:H2'	1:AA:270:A:H8	1.69	0.53
1:CA:961:U:O4'	1:CA:961:U:O2	2.26	0.53
1:AA:1135:U:H2'	1:AA:1137:C:O2	2.07	0.53
1:CA:1053:G:C3'	1:CA:1054:C:H5'	2.39	0.53
25:DC:75:ALA:CB	25:DC:95:TYR:HA	2.37	0.53
23:DB:636:G:H3'	37:DL:128:THR:CG2	2.38	0.53
23:DB:718:A:H5'	23:DB:719:C:H5	1.74	0.53
1:CA:1449:C:H2'	1:CA:1450:U:O4'	2.09	0.53
1:AA:222:C:H2'	1:AA:223:A:H8	1.73	0.53
1:AA:1142:G:H3'	1:AA:1143:G:H8	1.71	0.53
1:AA:674:G:H2'	1:AA:675:A:C8	2.42	0.53
23:BB:130:C:O2'	23:BB:131:A:H5'	2.08	0.53
23:DB:1561:C:H2'	23:DB:1562:U:C6	2.43	0.53
22:DA:76:G:H1	22:DA:101:A:N6	2.07	0.53
22:BA:75:G:N1	22:BA:102:G:N2	2.56	0.53
23:BB:1889:A:H2'	23:BB:1890:A:C8	2.44	0.53
20:CO:49:ASP:OD1	20:CO:52:SER:HB2	2.09	0.53
9:AJ:66:GLU:HB3	21:AN:98:ALA:HB2	1.90	0.53
45:BS:49:LYS:HA	45:BS:52:GLU:HG2	1.90	0.53
38:DM:75:GLU:OE1	38:DM:90:GLU:HG2	2.09	0.53
23:BB:2691:C:H2'	23:BB:2692:G:H8	1.73	0.53
1:AA:147:G:H2'	1:AA:148:G:C8	2.43	0.53
29:BE:73:ILE:O	29:BE:73:ILE:HG12	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:965:U:H5'	1:CA:965:U:H6	1.73	0.53
18:CB:31:PHE:N	18:CB:41:ASN:HB2	2.24	0.53
50:BT:40:LYS:HA	50:BT:43:ILE:CG2	2.39	0.53
26:BD:113:SER:HB3	26:BD:167:ASN:CA	2.38	0.53
40:BH:116:ARG:HB3	40:BH:130:VAL:HA	1.91	0.53
40:BH:133:GLN:O	40:BH:133:GLN:HG2	2.08	0.53
43:BO:70:ALA:O	43:BO:74:VAL:HG23	2.09	0.53
23:DB:2688:G:H1'	23:DB:2721:A:H61	1.73	0.53
37:BL:18:ARG:C	37:BL:19:LEU:HD12	2.29	0.53
23:DB:1726:C:H2'	23:DB:1727:C:C6	2.44	0.53
2:AC:112:ALA:CB	2:AC:184:ASN:HB2	2.39	0.53
23:DB:638:G:H2'	23:DB:639:U:C6	2.44	0.53
23:BB:2722:G:H2'	23:BB:2723:C:C6	2.44	0.53
1:CA:406:G:H21	3:CD:115:GLN:NE2	1.99	0.53
46:DU:80:ASP:OD1	46:DU:97:SER:HB3	2.08	0.53
40:DH:116:ARG:HD2	40:DH:131:SER:H	1.74	0.53
46:BU:21:ARG:HD3	46:BU:72:PHE:CD2	2.44	0.53
47:DF:115:GLY:HA3	47:DF:177:ARG:HD2	1.91	0.53
16:AS:66:VAL:C	16:AS:68:HIS:H	2.12	0.53
22:BA:7:G:H1'	43:BO:38:GLN:HE22	1.73	0.53
29:DE:157:LEU:HG	29:DE:169:VAL:HG11	1.90	0.53
36:D2:33:ARG:HB2	36:D2:33:ARG:NH2	2.22	0.53
49:DR:61:ALA:HB2	49:DR:98:ILE:HA	1.90	0.53
47:BF:102:LEU:HA	47:BF:106:ALA:HB2	1.91	0.53
41:DJ:25:LEU:HD13	41:DJ:26:GLY:N	2.23	0.53
47:BF:148:VAL:O	47:BF:149:ARG:HG2	2.08	0.53
10:CK:61:ALA:O	10:CK:64:VAL:HG13	2.09	0.53
34:D3:21:PHE:HB2	34:D3:49:VAL:CG1	2.38	0.53
6:AG:15:PRO:HG2	6:AG:43:TYR:OH	2.09	0.53
43:DO:88:LYS:HE3	43:DO:114:GLY:O	2.09	0.53
27:BK:43:ILE:HD12	27:BK:56:ASP:HB2	1.91	0.53
23:DB:2425:A:H5''	23:DB:2426:A:H3'	1.90	0.53
38:BM:35:ALA:HB3	38:BM:99:GLY:N	2.23	0.53
47:BF:27:VAL:O	47:BF:29:ARG:HD2	2.09	0.53
28:DP:60:VAL:O	28:DP:70:GLU:HA	2.08	0.53
44:DQ:59:LEU:O	44:DQ:62:ALA:HB3	2.07	0.53
1:AA:642:A:H2'	1:AA:643:C:C6	2.44	0.53
25:BC:129:LEU:HD21	25:BC:133:ASN:HB2	1.91	0.53
46:BU:85:ARG:CZ	46:BU:86:PHE:H	2.20	0.53
1:AA:1332:A:H2'	1:AA:1333:A:H8	1.72	0.53
45:DS:26:GLY:N	45:DS:71:VAL:HG13	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BL:6:LEU:H	37:BL:6:LEU:CD2	2.21	0.53
1:AA:1164:G:H2'	1:AA:1165:U:C6	2.43	0.53
23:DB:1733:G:H2'	23:DB:1734:G:C8	2.44	0.53
10:CK:63:GLN:HG3	10:CK:98:ALA:CB	2.39	0.53
15:CR:34:GLU:HB2	19:CU:18:PHE:CE1	2.43	0.53
10:AK:117:HIS:O	10:AK:118:ASN:HB2	2.09	0.53
22:DA:49:C:O3'	43:DO:68:LYS:HE3	2.08	0.53
1:CA:159:G:N2	1:CA:161:A:H3'	2.24	0.53
44:BQ:9:ALA:O	44:BQ:13:HIS:HB2	2.09	0.53
23:BB:2636:C:H2'	23:BB:2637:U:C6	2.44	0.53
26:BD:47:ALA:HB2	26:BD:83:ARG:HD2	1.90	0.53
23:DB:982:C:O2	23:DB:982:C:O4'	2.22	0.53
1:AA:612:C:H2'	1:AA:613:C:C6	2.44	0.53
23:BB:2798:U:H4'	23:BB:2800:A:N1	2.24	0.53
23:BB:2340:A:H2'	23:BB:2341:G:H8	1.72	0.53
50:DT:10:VAL:O	50:DT:12:ARG:N	2.41	0.53
23:BB:2449:U:H4'	23:BB:2450:A:OP1	2.09	0.53
23:DB:302:C:H2'	23:DB:303:G:H8	1.72	0.53
23:BB:2828:G:O2'	23:BB:2829:A:H5'	2.09	0.53
1:AA:545:C:H5''	3:AD:68:GLU:HG2	1.90	0.53
45:DS:49:LYS:HA	45:DS:52:GLU:HG2	1.91	0.53
40:BH:90:LEU:HD21	40:BH:146:VAL:HG11	1.88	0.53
6:CG:10:LYS:NZ	6:CG:11:ILE:H	1.95	0.53
41:DJ:15:TRP:HB3	41:DJ:137:PRO:HB3	1.90	0.53
12:CM:68:LEU:HD22	12:CM:69:ARG:HH11	1.74	0.53
23:BB:2740:A:H2'	23:BB:2741:A:C8	2.44	0.53
47:DF:104:THR:HG22	47:DF:105:ILE:HG13	1.90	0.53
1:AA:1315:U:H3'	1:AA:1316:G:H8	1.74	0.53
18:AB:98:GLY:C	18:AB:100:LEU:H	2.12	0.53
18:CB:57:ASN:HA	18:CB:220:VAL:HA	1.91	0.53
1:CA:1398:A:H8	1:CA:1398:A:H5'	1.74	0.53
47:DF:27:VAL:O	47:DF:29:ARG:HD2	2.08	0.53
2:AC:13:ILE:O	2:AC:14:VAL:HG22	2.09	0.53
2:AC:180:ASP:C	2:AC:181:ILE:HD12	2.29	0.53
16:CS:50:VAL:HG21	16:CS:70:LEU:HG	1.89	0.53
6:AG:70:PRO:HA	6:AG:137:ARG:NH1	2.21	0.53
44:BQ:30:VAL:HG13	44:BQ:31:TYR:N	2.24	0.53
25:BC:91:ALA:CB	25:BC:105:ALA:HB2	2.39	0.53
1:AA:268:U:H2'	1:AA:269:C:C6	2.43	0.53
23:BB:1439:A:H1'	23:BB:1553:A:N6	2.24	0.53
17:AT:79:THR:HG22	17:AT:83:ASN:ND2	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2144:G:H2'	23:DB:2145:C:O3'	2.09	0.53
23:DB:1387:A:H4'	23:DB:1469:A:H1'	1.90	0.53
48:DG:1:SER:H1	48:DG:61:TRP:HE3	1.57	0.53
23:DB:2748:A:H1'	48:DG:66:THR:HB	1.90	0.53
1:CA:1226:C:N4	12:CM:102:LYS:HB3	2.24	0.53
23:DB:2353:G:H1'	52:DW:30:VAL:CG1	2.39	0.53
1:AA:763:G:H2'	1:AA:764:C:H6	1.74	0.53
1:AA:883:C:O2'	1:AA:884:U:H5'	2.09	0.53
3:AD:104:MET:SD	3:AD:142:VAL:HB	2.49	0.53
23:DB:657:U:H2'	23:DB:658:U:C6	2.43	0.53
45:DS:13:SER:HB3	45:DS:16:LYS:HE2	1.91	0.53
1:CA:1458:G:H5''	17:CT:25:SER:HB2	1.89	0.53
23:DB:532:A:H4'	23:DB:533:G:C8	2.43	0.53
1:AA:41:G:H2'	1:AA:42:G:H8	1.73	0.53
23:BB:2813:A:H2'	23:BB:2814:A:C8	2.44	0.53
1:CA:401:C:H2'	1:CA:402:G:C8	2.44	0.53
1:CA:469:C:H2'	1:CA:470:C:C6	2.44	0.53
23:DB:39:G:O2'	23:DB:40:U:H5'	2.09	0.53
30:DY:8:GLN:OE1	30:DY:23:LEU:HD11	2.09	0.53
10:CK:30:ILE:HG22	10:CK:45:THR:HA	1.91	0.53
23:DB:69:C:O2'	23:DB:70:G:H5'	2.08	0.53
1:CA:1074:G:H2'	1:CA:1075:U:H6	1.74	0.53
23:BB:1258:U:H2'	23:BB:1259:G:C8	2.42	0.53
48:BG:72:ASN:O	48:BG:76:ILE:HG12	2.08	0.53
23:BB:1181:U:H2'	23:BB:1182:G:H8	1.74	0.53
23:BB:204:A:H4'	23:BB:205:G:OP1	2.09	0.53
1:CA:729:A:H2'	1:CA:730:G:C8	2.43	0.53
19:AU:7:GLU:HB3	19:AU:11:PHE:HZ	1.73	0.53
23:DB:53:A:H1'	23:DB:179:C:O2'	2.08	0.53
1:AA:420:U:H2'	1:AA:422:C:C5	2.44	0.53
53:DB:3001:NMY:H5	53:DB:3001:NMY:H91	1.74	0.53
23:DB:2543:G:H8	23:DB:2543:G:H5'	1.73	0.53
23:BB:2137:U:O2	23:BB:2137:U:H2'	2.09	0.53
23:DB:1939:U:H5'	23:DB:1939:U:H6	1.74	0.53
1:CA:1499:A:H2'	1:CA:1500:A:H8	1.73	0.53
26:DD:49:GLN:HE21	26:DD:79:LEU:HD12	1.73	0.53
8:CI:49:GLN:HB3	8:CI:102:PHE:CZ	2.44	0.53
8:CI:34:LEU:HD11	8:CI:44:ARG:HB2	1.91	0.53
50:DT:29:THR:CG2	50:DT:86:THR:HG22	2.39	0.53
25:DC:129:LEU:HD21	25:DC:133:ASN:HB2	1.91	0.53
48:DG:30:GLY:HA3	48:DG:78:VAL:HG12	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CQ:45:VAL:CG1	14:CQ:46:HIS:H	2.17	0.53
40:BH:101:ASP:C	40:BH:103:VAL:H	2.11	0.53
8:AI:40:ARG:H	8:AI:44:ARG:CD	2.20	0.53
23:BB:1059:G:H2'	23:BB:1060:U:C5	2.43	0.53
23:DB:1723:G:H3'	23:DB:1724:G:H8	1.74	0.53
46:BU:26:ASN:ND2	46:BU:34:ILE:HD12	2.22	0.53
2:AC:129:PHE:O	2:AC:133:MET:HG3	2.08	0.53
40:DH:116:ARG:O	40:DH:130:VAL:HG13	2.08	0.53
33:D1:49:LYS:HG3	33:D1:50:GLU:N	2.18	0.53
47:BF:155:ILE:H	47:BF:155:ILE:HD12	1.72	0.53
30:DY:56:VAL:HG12	30:DY:58:GLU:H	1.74	0.53
23:BB:1021:A:H61	23:BB:1142:A:N6	2.06	0.53
3:CD:153:ARG:HG3	3:CD:154:VAL:H	1.74	0.53
29:BE:5:LEU:CD1	29:BE:10:SER:HB2	2.37	0.53
47:DF:12:VAL:O	47:DF:16:MET:HG2	2.09	0.53
47:DF:24:VAL:O	47:DF:27:VAL:HG22	2.08	0.53
8:AI:119:LYS:O	8:AI:120:ALA:HB3	2.09	0.53
47:BF:115:GLY:HA3	47:BF:177:ARG:HD2	1.91	0.53
23:DB:309:A:H4'	46:DU:15:GLY:CA	2.36	0.53
1:AA:191:G:H2'	1:AA:192:A:C8	2.44	0.53
23:BB:2393:U:O2'	23:BB:2394:C:H5'	2.09	0.53
2:CC:119:ILE:CG2	2:CC:197:VAL:HG21	2.39	0.53
23:BB:1592:C:H2'	23:BB:1593:A:C8	2.44	0.53
44:DQ:91:ARG:HD3	49:DR:11:GLN:HB2	1.90	0.53
12:CM:10:ASP:CA	12:CM:44:ILE:HD13	2.38	0.53
23:BB:1244:A:H5''	37:BL:8:PRO:CD	2.38	0.53
27:DK:108:ARG:HG3	27:DK:108:ARG:O	2.07	0.53
1:AA:1060:U:O2'	9:AJ:54:SER:HB2	2.08	0.53
27:DK:70:ARG:HD3	27:DK:76:VAL:HG22	1.91	0.53
11:CL:2:THR:OG1	11:CL:5:GLN:HB2	2.09	0.53
17:CT:43:LYS:HA	17:CT:85:LEU:HD11	1.90	0.53
23:BB:98:G:C2'	23:BB:99:U:H5''	2.39	0.53
26:DD:46:ARG:NH1	26:DD:85:ALA:HA	2.24	0.53
23:DB:38:A:O2'	29:DE:43:THR:HA	2.09	0.53
3:AD:10:LEU:HB3	3:AD:62:ARG:HD3	1.90	0.53
3:AD:29:THR:HB	3:AD:30:LYS:NZ	2.23	0.53
1:CA:601:G:H2'	1:CA:602:A:C8	2.44	0.53
23:DB:2645:G:H3'	23:DB:2646:C:C5'	2.37	0.53
23:DB:2322:A:H2'	23:DB:2323:G:O4'	2.08	0.53
9:CJ:65:TYR:HB2	21:CN:95:LEU:HD11	1.91	0.53
23:BB:1560:G:H2'	23:BB:1561:C:H6	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2756:U:C1'	23:BB:2757:A:H5''	2.39	0.53
23:DB:2025:C:H2'	23:DB:2026:U:C6	2.44	0.53
23:BB:2784:U:H2'	23:BB:2785:C:C6	2.44	0.53
11:CL:80:LEU:HB3	11:CL:97:VAL:HG23	1.91	0.53
23:BB:257:C:H2'	23:BB:258:G:O4'	2.09	0.53
23:DB:324:A:H2'	23:DB:325:G:O4'	2.09	0.53
1:AA:1011:C:H2'	1:AA:1012:A:C8	2.44	0.53
1:AA:1208:C:H2'	1:AA:1209:C:C6	2.44	0.53
21:CN:86:ALA:HB1	21:CN:91:GLU:HB2	1.90	0.53
1:AA:496:A:H2'	1:AA:497:G:C8	2.44	0.53
23:BB:9:G:H21	23:BB:10:A:N6	2.06	0.53
1:AA:1222:G:O2'	1:AA:1223:C:H5'	2.09	0.53
18:CB:166:ASP:CG	18:CB:190:SER:HA	2.29	0.53
5:AF:55:HIS:ND1	5:AF:55:HIS:N	2.57	0.53
46:DU:13:LEU:HA	46:DU:18:LYS:CE	2.39	0.53
1:AA:95:C:H2'	1:AA:96:U:H6	1.72	0.53
7:AH:29:SER:O	7:AH:33:VAL:HG23	2.09	0.53
49:DR:62:GLU:O	49:DR:96:VAL:HA	2.08	0.53
8:CI:85:ALA:O	8:CI:89:TYR:HB3	2.09	0.53
18:CB:51:GLU:HG2	18:CB:52:ALA:N	2.24	0.53
23:BB:2384:U:H5''	23:BB:2386:A:OP1	2.09	0.53
41:DJ:124:VAL:HG23	41:DJ:125:TYR:H	1.74	0.53
40:BH:116:ARG:H	40:BH:130:VAL:HG12	1.72	0.53
2:CC:53:ARG:HB3	2:CC:53:ARG:NH1	2.24	0.53
1:AA:1150:A:H4'	9:AJ:43:PRO:HB3	1.91	0.53
27:BK:88:ASN:C	27:BK:88:ASN:HD22	2.06	0.53
18:AB:173:LYS:HA	18:AB:176:ASN:HD21	1.73	0.53
41:BJ:25:LEU:O	41:BJ:27:ARG:N	2.41	0.53
1:CA:1300:G:HO2'	1:CA:1301:U:H6	1.57	0.53
1:AA:923:A:OP1	4:AE:25:LYS:HB3	2.09	0.53
37:DL:93:ASN:CG	37:DL:94:THR:H	2.12	0.53
44:DQ:30:VAL:HG13	44:DQ:31:TYR:N	2.24	0.53
8:AI:14:SER:HB2	8:AI:77:ALA:HB2	1.90	0.53
44:DQ:10:ARG:HB2	44:DQ:10:ARG:HH11	1.71	0.53
46:DU:24:VAL:HA	46:DU:35:VAL:HA	1.90	0.53
11:CL:54:VAL:HG12	11:CL:55:ARG:N	2.24	0.53
50:DT:50:LEU:HD22	50:DT:50:LEU:N	2.24	0.53
23:DB:1854:A:H2	23:DB:2087:G:N3	2.07	0.53
1:AA:736:C:H2'	1:AA:737:C:H6	1.74	0.53
1:AA:22:G:H4'	1:AA:885:G:C8	2.44	0.53
1:AA:777:A:H2'	1:AA:778:G:H8	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:20:LYS:HE2	46:DU:20:LYS:N	2.23	0.53
23:BB:1183:U:H2'	23:BB:1184:U:H6	1.74	0.53
29:BE:3:LEU:N	29:BE:3:LEU:HD22	2.23	0.53
23:BB:445:C:O2'	23:BB:446:G:H5'	2.08	0.53
1:AA:562:U:H5''	1:AA:563:A:C4	2.44	0.53
36:B2:46:LYS:HA	36:B2:46:LYS:HZ2	1.74	0.53
22:BA:91:C:H2'	22:BA:92:C:H6	1.74	0.53
10:AK:32:THR:HG22	10:AK:34:THR:HG22	1.90	0.53
23:BB:252:G:O2'	23:BB:253:C:H5'	2.08	0.53
1:AA:1157:A:H4'	1:AA:1158:C:O5'	2.09	0.53
23:BB:1175:A:H3'	23:BB:1176:U:C6	2.44	0.53
1:AA:1293:C:H2'	1:AA:1294:G:C8	2.44	0.53
23:DB:2449:U:H4'	23:DB:2450:A:OP1	2.09	0.53
1:AA:499:A:H4'	1:AA:500:G:OP1	2.08	0.53
1:CA:1368:A:H5''	8:CI:113:LYS:HB3	1.91	0.53
33:B1:3:GLY:O	33:B1:5:ARG:HG2	2.09	0.53
23:BB:2527:C:O2'	23:BB:2528:U:H5'	2.09	0.53
47:BF:45:ASP:HB3	47:BF:48:LEU:HD22	1.91	0.53
8:CI:56:MET:HB3	8:CI:59:LYS:NZ	2.24	0.52
12:AM:33:LEU:HD13	12:AM:40:GLU:HA	1.91	0.52
29:DE:60:TRP:C	29:DE:62:GLN:H	2.12	0.52
25:DC:91:ALA:CB	25:DC:105:ALA:HB2	2.39	0.52
41:BJ:15:TRP:HB3	41:BJ:137:PRO:HB3	1.91	0.52
29:BE:15:SER:OG	29:BE:18:THR:HG23	2.09	0.52
5:CF:21:MET:HA	5:CF:24:ARG:HD3	1.90	0.52
5:AF:88:MET:CE	5:AF:90:MET:HG2	2.39	0.52
40:BH:132:PHE:CD1	40:BH:142:VAL:HG21	2.45	0.52
40:BH:75:LEU:HD12	40:BH:75:LEU:H	1.75	0.52
10:AK:95:THR:HG23	10:AK:96:ILE:H	1.73	0.52
37:BL:123:ARG:HA	37:BL:143:GLU:CB	2.33	0.52
2:AC:166:TRP:HA	2:AC:166:TRP:HE3	1.74	0.52
19:CU:16:ARG:NH1	19:CU:19:LYS:HE2	2.13	0.52
23:BB:2742:G:OP1	32:B4:36:ARG:HD3	2.09	0.52
40:DH:31:VAL:CB	40:DH:32:PRO:CD	2.86	0.52
40:DH:119:ASN:O	40:DH:121:VAL:HG23	2.08	0.52
40:DH:96:THR:HG23	40:DH:97:ARG:HD2	1.90	0.52
23:BB:673:C:C2'	23:BB:674:G:H5'	2.39	0.52
29:BE:60:TRP:C	29:BE:62:GLN:H	2.12	0.52
29:BE:61:ARG:NH1	29:BE:64:GLY:HA3	2.24	0.52
33:D1:35:LEU:HD11	33:D1:37:LYS:HE3	1.90	0.52
9:AJ:42:LEU:HD23	9:AJ:71:LEU:CD1	2.36	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BR:4:VAL:HA	49:BR:12:HIS:O	2.10	0.52
16:AS:61:VAL:HG12	16:AS:62:THR:N	2.24	0.52
13:AP:1:MET:HE2	13:AP:3:THR:HG22	1.90	0.52
23:BB:1107:G:H2'	23:BB:1108:U:C6	2.44	0.52
47:BF:134:GLN:H	47:BF:149:ARG:HB3	1.74	0.52
1:AA:865:A:H2	1:AA:918:A:H4'	1.74	0.52
2:CC:174:LEU:HD21	2:CC:200:TRP:NE1	2.24	0.52
26:DD:124:ARG:HA	26:DD:165:MET:HE3	1.92	0.52
39:BX:20:ASN:H	39:BX:20:ASN:HD22	1.56	0.52
39:BX:45:GLN:O	39:BX:47:ARG:N	2.36	0.52
40:DH:15:LEU:HD13	40:DH:16:GLY:N	2.24	0.52
23:BB:783:A:H2'	23:BB:784:G:O5'	2.09	0.52
1:AA:449:G:H2'	1:AA:450:G:H8	1.73	0.52
16:CS:10:ILE:HG12	16:CS:40:PHE:CE1	2.44	0.52
3:CD:152:SER:O	3:CD:155:LYS:HG2	2.10	0.52
34:B3:21:PHE:HB2	34:B3:49:VAL:CG1	2.39	0.52
27:DK:2:ILE:HG23	27:DK:33:ALA:O	2.09	0.52
45:DS:72:THR:CG2	45:DS:108:SER:HB3	2.39	0.52
48:DG:168:VAL:HG12	48:DG:170:THR:CG2	2.39	0.52
46:DU:86:PHE:CG	46:DU:87:GLU:N	2.77	0.52
32:D4:3:VAL:HG23	32:D4:4:ARG:H	1.74	0.52
23:DB:2141:G:H2'	23:DB:2142:A:H8	1.75	0.52
37:BL:68:SER:C	37:BL:70:LYS:H	2.12	0.52
1:CA:132:C:H5''	17:CT:68:LYS:NZ	2.23	0.52
23:BB:154:U:H2'	23:BB:155:A:C8	2.44	0.52
15:AR:34:GLU:HB2	19:AU:18:PHE:CE1	2.44	0.52
23:DB:2094:A:H2'	23:DB:2095:A:C8	2.45	0.52
1:CA:868:C:H2'	1:CA:869:G:O4'	2.08	0.52
23:BB:845:A:C8	23:BB:846:U:H5''	2.44	0.52
6:CG:96:ASN:O	6:CG:100:MET:HG3	2.09	0.52
1:CA:648:A:H2'	1:CA:649:A:C8	2.44	0.52
1:AA:556:C:O2'	1:AA:557:G:H5'	2.09	0.52
16:CS:7:GLY:H	16:CS:8:PRO:HD3	1.74	0.52
11:CL:65:TYR:C	11:CL:66:ILE:HD12	2.29	0.52
25:DC:181:ARG:HH21	25:DC:265:PHE:HB3	1.73	0.52
35:BV:1:MET:HG2	35:BV:59:GLU:OE1	2.09	0.52
45:BS:31:GLN:O	45:BS:35:ILE:HG12	2.09	0.52
1:CA:1444:U:H2'	1:CA:1445:U:C6	2.44	0.52
23:DB:257:C:H2'	23:DB:258:G:O4'	2.10	0.52
40:DH:125:THR:HA	40:DH:146:VAL:CG1	2.39	0.52
23:DB:1099:G:C8	24:DI:3:LYS:CA	2.89	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DV:63:ILE:CD1	35:DV:72:VAL:HG22	2.38	0.52
14:CQ:45:VAL:HG11	14:CQ:60:ILE:HG21	1.91	0.52
26:DD:113:SER:HB2	26:DD:168:GLU:O	2.09	0.52
26:DD:108:ASP:OD2	26:DD:173:GLN:HA	2.09	0.52
43:BO:51:ALA:HB3	43:BO:78:VAL:HG22	1.91	0.52
23:BB:1059:G:O2'	24:BI:112:LYS:HE2	2.10	0.52
23:BB:2741:A:H2'	23:BB:2742:G:O4'	2.08	0.52
23:BB:2722:G:H4'	42:BN:4:ARG:HB2	1.91	0.52
44:DQ:108:LEU:O	44:DQ:111:LYS:HB3	2.10	0.52
33:B1:46:VAL:HG22	33:B1:47:ILE:H	1.75	0.52
24:DI:54:ILE:C	24:DI:54:ILE:HD13	2.29	0.52
1:AA:1313:U:H5	16:AS:3:SER:HG	1.57	0.52
36:D2:26:ASN:O	36:D2:30:VAL:HG23	2.09	0.52
29:BE:5:LEU:HB2	29:BE:10:SER:H	1.73	0.52
18:CB:116:LEU:HD13	18:CB:140:LEU:HD12	1.90	0.52
18:CB:114:LYS:O	18:CB:118:THR:HG23	2.10	0.52
38:DM:36:VAL:HB	38:DM:127:LYS:O	2.09	0.52
30:DY:16:LEU:N	30:DY:16:LEU:HD22	2.22	0.52
41:DJ:4:PHE:HB3	41:DJ:44:TYR:CD1	2.44	0.52
1:AA:85:U:H1'	1:AA:86:G:C4'	2.40	0.52
27:DK:99:ILE:HB	27:DK:118:LEU:HD22	1.91	0.52
23:DB:276:U:H2'	23:DB:277:G:C8	2.43	0.52
20:AO:8:THR:HG23	20:AO:31:LEU:CD2	2.37	0.52
23:DB:1550:C:H2'	23:DB:1551:A:H8	1.75	0.52
11:AL:74:GLN:H	11:AL:77:SER:HB3	1.75	0.52
45:BS:26:GLY:H	45:BS:71:VAL:HG13	1.75	0.52
1:CA:57:G:H2'	1:CA:58:C:H6	1.72	0.52
23:BB:118:A:H5'	23:BB:119:A:C8	2.41	0.52
12:AM:71:GLU:CD	12:AM:71:GLU:H	2.11	0.52
25:DC:92:LEU:HD12	25:DC:93:VAL:H	1.74	0.52
1:AA:1018:G:H2'	1:AA:1019:A:C8	2.43	0.52
18:AB:17:HIS:CG	18:AB:18:GLN:N	2.77	0.52
18:AB:32:GLY:O	18:AB:38:HIS:HA	2.09	0.52
23:BB:2849:U:H4'	23:BB:2850:A:C5'	2.39	0.52
23:DB:2323:G:O2'	23:DB:2324:U:H5'	2.08	0.52
23:BB:274:C:H2'	23:BB:275:C:C6	2.43	0.52
23:DB:1843:C:O2'	23:DB:1844:C:H5'	2.09	0.52
2:CC:91:ALA:CB	2:CC:97:PRO:HA	2.38	0.52
1:CA:745:G:H2'	1:CA:746:A:H8	1.74	0.52
2:AC:128:MET:SD	2:AC:131:ARG:HD3	2.49	0.52
23:DB:1582:C:H2'	23:DB:1583:A:O4'	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2339:C:H2'	23:DB:2340:A:C8	2.44	0.52
23:BB:771:G:O2'	23:BB:772:C:H5'	2.08	0.52
23:BB:1904:G:O2'	23:BB:1905:C:H5'	2.09	0.52
21:CN:85:GLU:O	21:CN:89:ARG:HG3	2.08	0.52
12:CM:18:LEU:H	12:CM:18:LEU:HD12	1.74	0.52
1:CA:386:C:C2'	1:CA:387:U:H5'	2.39	0.52
23:BB:1940:U:H5''	23:BB:1940:U:O2	2.10	0.52
40:DH:147:VAL:HG12	40:DH:148:ALA:N	2.24	0.52
50:DT:61:LEU:HD12	50:DT:62:VAL:O	2.09	0.52
8:CI:48:ARG:O	8:CI:52:GLU:HG2	2.10	0.52
50:BT:29:THR:CG2	50:BT:86:THR:HG22	2.40	0.52
23:DB:855:G:H21	52:DW:23:LYS:CG	2.09	0.52
23:BB:1198:U:H2'	23:BB:1199:U:C6	2.45	0.52
50:DT:2:ILE:N	50:DT:2:ILE:HD13	2.24	0.52
1:CA:1362:A:H4'	1:CA:1363:A:OP1	2.09	0.52
35:DV:28:ALA:HA	35:DV:88:HIS:HD1	1.74	0.52
51:BZ:45:ARG:NE	51:BZ:47:VAL:HG12	2.20	0.52
22:DA:6:G:H2'	22:DA:7:G:H8	1.73	0.52
44:BQ:59:LEU:O	44:BQ:62:ALA:HB3	2.08	0.52
38:BM:40:ARG:HB2	38:BM:93:VAL:HG22	1.90	0.52
18:AB:65:LYS:HB2	18:AB:157:PRO:HA	1.89	0.52
49:DR:59:ILE:HA	49:DR:100:GLY:HA3	1.91	0.52
47:DF:147:ARG:O	47:DF:148:VAL:HG22	2.09	0.52
1:CA:918:A:H2'	1:CA:919:A:C8	2.44	0.52
1:AA:921:U:O2	4:AE:23:THR:HG23	2.09	0.52
1:AA:922:G:H4'	4:AE:24:VAL:HA	1.91	0.52
25:BC:14:HIS:O	25:BC:16:VAL:HG23	2.09	0.52
2:AC:46:LEU:HD21	2:AC:86:LEU:HD21	1.92	0.52
39:DX:20:ASN:N	39:DX:20:ASN:HD22	2.06	0.52
26:DD:121:THR:C	26:DD:123:LYS:H	2.13	0.52
1:AA:1307:U:H4'	12:AM:108:ARG:HD2	1.91	0.52
23:DB:1593:A:H2'	23:DB:1594:U:C6	2.45	0.52
47:BF:168:LEU:O	47:BF:169:LEU:HB2	2.09	0.52
44:DQ:91:ARG:HD3	49:DR:11:GLN:CD	2.30	0.52
48:DG:168:VAL:HG12	48:DG:170:THR:HG22	1.91	0.52
7:AH:48:PHE:HB3	7:AH:60:LEU:HD12	1.91	0.52
23:DB:281:C:H2'	23:DB:282:A:H8	1.71	0.52
23:DB:360:U:H2'	23:DB:361:G:C8	2.44	0.52
27:DK:25:LEU:HD12	27:DK:25:LEU:H	1.74	0.52
23:BB:813:U:H2'	23:BB:814:C:C6	2.44	0.52
2:AC:125:ARG:O	2:AC:126:ARG:HB2	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2590:A:H2'	23:DB:2591:C:C6	2.44	0.52
23:DB:98:G:C2'	23:DB:99:U:H5''	2.38	0.52
1:CA:1370:G:O2'	1:CA:1371:G:H5'	2.09	0.52
23:DB:1734:G:O2'	23:DB:1735:A:H5'	2.09	0.52
23:BB:1734:G:O2'	23:BB:1735:A:H5'	2.10	0.52
50:BT:50:LEU:N	50:BT:50:LEU:HD22	2.24	0.52
23:BB:741:U:H2'	23:BB:742:A:H8	1.74	0.52
29:DE:46:GLN:HB3	29:DE:86:ALA:HA	1.92	0.52
2:CC:106:ARG:CZ	2:CC:106:ARG:H	2.22	0.52
23:DB:18:U:H2'	23:DB:19:A:H8	1.74	0.52
23:DB:2704:C:H2'	23:DB:2705:A:O4'	2.09	0.52
29:BE:46:GLN:HB3	29:BE:86:ALA:HA	1.91	0.52
11:CL:35:ARG:NH2	11:CL:75:GLU:HA	2.23	0.52
23:BB:1842:G:H2'	23:BB:1843:C:H6	1.74	0.52
23:BB:2041:U:H2'	23:BB:2042:A:C8	2.45	0.52
23:DB:2636:C:H2'	23:DB:2637:U:C6	2.44	0.52
38:BM:4:PRO:CG	38:BM:70:ASP:HA	2.39	0.52
1:AA:927:G:O2'	1:AA:928:G:H5'	2.09	0.52
1:CA:562:U:H1'	11:CL:11:ARG:HB3	1.90	0.52
1:AA:1243:C:H2'	1:AA:1244:G:H8	1.74	0.52
23:DB:2604:U:O2'	23:DB:2605:U:H5'	2.09	0.52
1:AA:1273:C:H2'	1:AA:1274:A:O4'	2.10	0.52
6:CG:36:SER:HA	6:CG:39:GLU:OE2	2.09	0.52
23:BB:437:U:H2'	23:BB:438:G:C8	2.45	0.52
23:BB:355:U:H2'	23:BB:356:G:H8	1.75	0.52
1:AA:1298:U:H4'	1:AA:1299:A:C5'	2.39	0.52
23:BB:1456:G:O2'	23:BB:1457:U:H5'	2.10	0.52
1:CA:633:G:H2'	1:CA:634:C:C6	2.44	0.52
23:BB:1750:G:H2'	23:BB:1751:U:C6	2.45	0.52
29:BE:148:ILE:HG13	29:BE:167:VAL:HG23	1.90	0.52
10:CK:58:THR:HB	10:CK:59:PRO:HD2	1.91	0.52
47:BF:2:LYS:H	47:BF:2:LYS:CD	2.22	0.52
37:DL:89:VAL:HG13	37:DL:89:VAL:O	2.10	0.52
1:AA:1491:G:N3	1:AA:1491:G:H2'	2.24	0.52
11:CL:17:LYS:HE3	11:CL:17:LYS:N	2.24	0.52
1:AA:1186:G:H4'	8:AI:111:GLU:OE2	2.09	0.52
1:AA:1074:G:H4'	18:AB:102:ASN:HB2	1.92	0.52
1:AA:633:G:H2'	1:AA:634:C:C6	2.44	0.52
8:CI:61:ASP:C	8:CI:62:LEU:HD13	2.30	0.52
26:BD:110:THR:HG23	26:BD:171:THR:HA	1.90	0.52
35:DV:72:VAL:CG1	35:DV:93:ARG:HA	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1198:U:H2'	23:DB:1199:U:H6	1.74	0.52
23:DB:139:U:H2'	50:DT:1:MET:CA	2.40	0.52
37:BL:80:SER:HA	37:BL:115:GLU:HB2	1.90	0.52
47:DF:102:LEU:HA	47:DF:106:ALA:HB2	1.92	0.52
3:CD:145:ARG:O	3:CD:148:ALA:N	2.42	0.52
1:AA:1318:A:H5''	1:AA:1319:A:OP2	2.09	0.52
47:BF:31:GLU:HB3	47:BF:156:THR:O	2.10	0.52
47:BF:109:ARG:HB3	47:BF:135:ILE:HD12	1.91	0.52
47:BF:109:ARG:NH1	47:BF:137:PHE:HA	2.24	0.52
26:DD:5:VAL:H	26:DD:32:ASN:CG	2.13	0.52
4:CE:132:PRO:O	4:CE:136:VAL:HG12	2.09	0.52
29:DE:5:LEU:CD1	29:DE:10:SER:HB2	2.38	0.52
1:AA:205:A:C2'	1:AA:206:C:H5'	2.40	0.52
23:DB:1309:G:OP1	36:D2:9:VAL:HG12	2.09	0.52
23:BB:2074:U:H2'	23:BB:2075:U:C6	2.44	0.52
47:BF:3:LEU:HD12	47:BF:96:TRP:CD1	2.45	0.52
42:DN:13:ASN:OD1	42:DN:16:HIS:HB2	2.08	0.52
44:DQ:73:ILE:HD11	44:DQ:77:LYS:CB	2.39	0.52
30:BY:16:LEU:N	30:BY:16:LEU:HD22	2.23	0.52
23:BB:972:A:C3'	23:BB:973:A:H5''	2.36	0.52
23:DB:545:U:H2'	23:DB:548:G:H5'	1.91	0.52
4:CE:152:VAL:HG11	4:CE:156:ARG:HH21	1.75	0.52
42:BN:13:ASN:OD1	42:BN:16:HIS:HB2	2.09	0.52
1:CA:657:U:O2'	1:CA:658:C:H5'	2.09	0.52
36:D2:42:LEU:O	36:D2:43:THR:HG23	2.08	0.52
23:BB:2230:G:H2'	23:BB:2231:U:H6	1.75	0.52
1:CA:1010:U:H2'	1:CA:1011:C:O4'	2.10	0.52
1:AA:1512:U:H2'	1:AA:1513:A:H8	1.73	0.52
23:BB:1172:C:H3'	23:BB:1173:U:C6	2.45	0.52
23:BB:1640:A:H2'	23:BB:1641:A:H8	1.72	0.52
3:CD:100:VAL:O	3:CD:104:MET:HG3	2.08	0.52
23:BB:2323:G:O2'	23:BB:2324:U:H5'	2.09	0.52
23:DB:446:G:H5''	44:DQ:2:ARG:HH22	1.75	0.52
23:BB:2248:C:H2'	23:BB:2249:U:O4'	2.09	0.52
45:BS:13:SER:CB	45:BS:16:LYS:HE2	2.40	0.52
23:DB:1410:G:H2'	23:DB:1411:U:C6	2.44	0.52
20:CO:81:LEU:HD23	20:CO:82:ILE:N	2.25	0.52
38:DM:4:PRO:CG	38:DM:70:ASP:HA	2.39	0.52
23:DB:1826:G:H2'	23:DB:1827:U:C6	2.45	0.52
2:AC:192:TYR:HE1	2:AC:195:ILE:HD11	1.73	0.52
23:BB:1764:C:H2'	23:BB:1765:U:C6	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2024:G:O2'	23:DB:2025:C:H5'	2.09	0.52
23:BB:2008:C:H2'	23:BB:2009:A:C8	2.44	0.52
23:BB:1175:A:C5	23:BB:1176:U:H1'	2.44	0.52
4:AE:87:VAL:HG23	4:AE:91:SER:O	2.09	0.52
1:CA:434:U:H3'	1:CA:435:A:H8	1.74	0.52
1:CA:1263:C:O2'	1:CA:1264:U:H5'	2.09	0.52
9:CJ:26:VAL:CG1	9:CJ:30:LYS:HE2	2.38	0.52
20:CO:74:ASP:OD1	20:CO:76:ALA:HB3	2.09	0.52
23:BB:2026:U:H2'	23:BB:2027:G:H8	1.74	0.52
18:CB:27:LYS:HB3	18:CB:28:PRO:HD3	1.92	0.52
23:DB:2828:G:O2'	23:DB:2829:A:H5'	2.09	0.52
23:DB:2015:A:H2'	23:DB:2016:U:O4'	2.09	0.52
17:CT:42:ASP:OD1	17:CT:44:ALA:HB3	2.10	0.52
4:CE:19:ARG:O	4:CE:20:VAL:HB	2.10	0.52
23:DB:2586:U:H2'	23:DB:2587:A:C8	2.44	0.52
12:CM:61:LYS:HE2	12:CM:61:LYS:HA	1.91	0.52
23:BB:401:A:H2'	23:BB:402:A:C8	2.45	0.52
23:BB:198:C:H6	23:BB:198:C:O5'	1.93	0.52
27:BK:58:LEU:N	27:BK:58:LEU:HD23	2.24	0.52
1:CA:85:U:O2	1:CA:85:U:O4'	2.26	0.52
10:AK:92:ARG:O	10:AK:92:ARG:HD2	2.09	0.52
43:DO:15:ARG:HH21	43:DO:95:SER:CB	2.22	0.52
1:AA:1444:U:H2'	1:AA:1445:U:C6	2.45	0.52
23:BB:2467:C:O2	38:BM:123:LYS:HE2	2.08	0.52
11:CL:74:GLN:H	11:CL:77:SER:HB3	1.73	0.52
8:CI:27:ILE:HD13	8:CI:34:LEU:HB3	1.92	0.52
25:DC:91:ALA:HB2	25:DC:105:ALA:HB2	1.91	0.52
26:DD:171:THR:OG1	26:DD:172:VAL:N	2.41	0.52
40:BH:144:VAL:HG13	40:BH:145:ASN:N	2.24	0.52
42:BN:29:VAL:HG11	42:BN:75:ILE:HB	1.92	0.52
1:AA:1147:C:H2'	1:AA:1148:U:H6	1.71	0.52
2:AC:186:SER:OG	2:AC:197:VAL:HB	2.10	0.52
1:CA:1325:C:O2'	1:CA:1326:U:H5'	2.10	0.52
1:CA:1366:C:H2'	1:CA:1367:C:H6	1.74	0.52
23:DB:1283:G:N2	23:DB:1286:A:H5'	2.16	0.52
19:AU:24:LYS:NZ	19:AU:25:ALA:H	1.99	0.52
46:BU:73:ASN:HD22	46:BU:73:ASN:N	2.06	0.52
49:BR:14:VAL:HG11	49:BR:98:ILE:HG12	1.91	0.52
51:DZ:11:ARG:HB3	51:DZ:12:PRO:HD2	1.92	0.52
44:BQ:59:LEU:C	44:BQ:59:LEU:HD13	2.30	0.52
18:AB:101:THR:HA	18:AB:178:LEU:HD21	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AB:85:SER:CB	18:AB:88:GLN:HE22	2.23	0.52
41:DJ:25:LEU:O	41:DJ:27:ARG:N	2.42	0.52
20:AO:32:LEU:HD12	20:AO:59:MET:O	2.10	0.52
27:BK:76:VAL:H	28:BP:72:VAL:HG23	1.74	0.52
26:BD:55:LYS:H	26:BD:75:ALA:HB1	1.74	0.52
1:CA:1414:U:H2'	1:CA:1415:G:C8	2.44	0.52
36:D2:10:LEU:CD2	36:D2:14:ARG:HD2	2.38	0.52
23:DB:126:A:H5'	36:D2:19:ARG:HD2	1.90	0.52
48:BG:168:VAL:HG12	48:BG:170:THR:CG2	2.39	0.52
16:CS:47:THR:HG23	16:CS:60:PHE:CE2	2.44	0.52
23:DB:2471:A:O2'	23:DB:2472:G:O5'	2.28	0.52
23:BB:1374:G:O2'	23:BB:1375:U:H5'	2.10	0.52
23:DB:1011:G:O2'	23:DB:1013:C:H5''	2.10	0.52
41:BJ:84:ILE:O	41:BJ:84:ILE:HG13	2.10	0.52
23:DB:582:A:H2'	23:DB:583:G:C8	2.45	0.52
26:BD:159:LYS:HZ2	26:BD:160:LYS:H	1.58	0.52
23:DB:161:A:C3'	23:DB:162:U:H5''	2.39	0.52
2:CC:129:PHE:CG	2:CC:130:ARG:N	2.77	0.52
23:BB:1733:G:H2'	23:BB:1734:G:C8	2.44	0.52
23:DB:934:U:H2'	23:DB:935:C:H6	1.73	0.52
2:AC:26:LYS:CG	2:AC:27:GLU:H	2.23	0.52
23:DB:1105:U:H2'	23:DB:1106:G:C8	2.43	0.52
23:DB:2646:C:H2'	23:DB:2647:U:O4'	2.10	0.52
23:BB:660:C:H2'	23:BB:661:A:H8	1.75	0.52
1:AA:314:C:O2'	1:AA:315:A:H5'	2.10	0.52
1:AA:685:G:O2'	1:AA:686:U:H5'	2.09	0.52
23:BB:2515:C:H2'	23:BB:2516:A:H8	1.75	0.52
1:CA:1216:A:H2'	1:CA:1217:C:C6	2.45	0.52
23:BB:242:G:H5''	34:B3:63:TYR:CZ	2.44	0.52
7:CH:86:LYS:HD2	7:CH:90:GLU:HG2	1.91	0.52
7:AH:124:ILE:HG22	7:AH:125:ILE:H	1.73	0.52
23:BB:974:G:OP2	49:BR:78:ARG:HD3	2.09	0.52
1:CA:993:G:N2	1:CA:996:A:N6	2.58	0.52
23:DB:1764:C:H2'	23:DB:1765:U:C6	2.44	0.52
23:DB:990:A:N1	49:DR:78:ARG:NH1	2.58	0.52
1:CA:1151:A:HO2'	1:CA:1152:A:H8	1.56	0.52
1:AA:895:G:H2'	1:AA:896:C:C6	2.45	0.52
23:DB:1238:G:O2'	23:DB:1239:G:H5'	2.10	0.52
23:DB:794:A:H2'	23:DB:795:C:H6	1.75	0.52
1:AA:572:A:N3	1:AA:917:G:H1'	2.25	0.52
23:DB:598:U:H2'	23:DB:599:A:H8	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AE:45:VAL:HG13	4:AE:117:ALA:HA	1.90	0.52
23:DB:1739:A:H2'	23:DB:1740:G:O4'	2.10	0.52
1:CA:761:G:H2'	1:CA:762:U:C6	2.45	0.52
25:BC:69:ASN:O	25:BC:70:LYS:C	2.47	0.52
23:BB:2333:A:H5'	23:BB:2335:A:H1'	1.92	0.52
50:DT:43:ILE:CG2	50:DT:58:VAL:HG21	2.39	0.52
50:BT:25:GLU:OE1	50:BT:30:ILE:HA	2.09	0.52
1:CA:236:A:H2'	1:CA:237:G:C8	2.44	0.52
10:AK:31:VAL:CG2	10:AK:44:ALA:HB3	2.40	0.52
23:BB:1079:C:O2	24:BI:130:GLY:HA3	2.09	0.52
23:BB:513:A:O5'	23:BB:513:A:H8	1.92	0.52
3:AD:49:ASP:O	3:AD:53:GLN:HG3	2.09	0.52
18:CB:37:VAL:HG22	18:CB:38:HIS:N	2.25	0.52
40:DH:141:LYS:N	40:DH:141:LYS:HD2	2.25	0.52
29:BE:58:LYS:H	29:BE:58:LYS:HD3	1.74	0.52
28:DP:85:VAL:HG21	28:DP:88:ARG:NH1	2.24	0.52
26:DD:146:ILE:HG13	26:DD:147:GLY:N	2.25	0.52
23:DB:1309:G:H4'	36:D2:7:PRO:HB2	1.92	0.52
1:AA:481:G:O2'	1:AA:482:A:H8	1.92	0.52
28:BP:91:VAL:O	28:BP:92:ARG:HB3	2.10	0.52
42:DN:9:GLN:O	42:DN:11:ASN:N	2.43	0.52
2:AC:35:ASP:HB3	2:AC:39:ARG:HH12	1.73	0.52
1:AA:948:C:H5'	1:AA:1306:A:O2'	2.09	0.52
45:BS:24:ILE:HD11	45:BS:36:LEU:HD11	1.91	0.52
23:BB:363:G:H2'	23:BB:364:C:C6	2.44	0.52
23:BB:918:A:H2'	23:BB:919:U:H5'	1.92	0.52
51:DZ:27:ARG:HD3	51:DZ:28:ARG:H	1.74	0.52
23:BB:1854:A:H2	23:BB:2087:G:N3	2.06	0.52
1:CA:1226:C:H5''	12:CM:101:THR:HB	1.91	0.52
1:CA:1480:A:H2'	1:CA:1481:U:H6	1.74	0.52
23:BB:20:C:H2'	23:BB:21:A:C8	2.44	0.52
17:AT:43:LYS:HA	17:AT:85:LEU:HD11	1.91	0.52
1:AA:678:U:H2'	1:AA:679:C:H6	1.75	0.52
23:DB:1958:C:H2'	23:DB:1959:G:H8	1.74	0.52
29:DE:2:GLU:OE2	29:DE:13:THR:HA	2.10	0.52
23:DB:942:G:O2'	23:DB:943:A:H5'	2.10	0.52
23:DB:2798:U:H4'	23:DB:2800:A:N1	2.25	0.52
27:DK:58:LEU:H	27:DK:58:LEU:HD23	1.74	0.52
23:BB:2837:A:H2'	23:BB:2838:G:C8	2.44	0.52
23:DB:564:C:O2'	23:DB:565:C:H5'	2.08	0.52
23:BB:1666:G:O3'	27:BK:6:THR:HG23	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DS:51:LEU:C	45:DS:53:SER:H	2.13	0.52
1:AA:1292:G:H2'	1:AA:1293:C:C6	2.44	0.52
11:CL:74:GLN:H	11:CL:77:SER:CB	2.22	0.52
23:DB:1033:U:H4'	23:DB:1034:G:OP1	2.10	0.52
44:BQ:47:ARG:HH11	44:BQ:48:ASP:CG	2.13	0.52
23:BB:1739:A:H2'	23:BB:1740:G:O4'	2.10	0.52
1:AA:761:G:H2'	1:AA:762:U:C6	2.44	0.52
49:BR:62:GLU:O	49:BR:96:VAL:HA	2.09	0.52
23:BB:467:G:O2'	23:BB:468:G:H5'	2.10	0.52
10:CK:88:PRO:HG3	19:CU:28:LEU:HD21	1.92	0.52
23:BB:2047:C:H2'	23:BB:2048:G:H8	1.74	0.52
1:CA:1036:A:H2'	1:CA:1037:C:C6	2.44	0.52
12:AM:50:GLY:O	12:AM:54:THR:HG23	2.09	0.52
23:BB:2411:A:H2'	23:BB:2412:A:C8	2.45	0.52
2:AC:146:LYS:HA	2:AC:146:LYS:HE3	1.90	0.52
23:DB:2076:U:O2	23:DB:2076:U:O4'	2.28	0.52
23:BB:2473:U:H2'	23:BB:2473:U:O2	2.09	0.52
2:CC:171:ARG:HH11	2:CC:171:ARG:HG3	1.75	0.52
35:BV:69:GLU:CD	35:BV:69:GLU:H	2.13	0.52
26:BD:171:THR:O	26:BD:172:VAL:HG23	2.10	0.52
23:BB:2267:A:OP2	23:BB:2268:A:H5''	2.10	0.52
8:AI:48:ARG:HB3	8:AI:56:MET:SD	2.49	0.52
46:BU:71:ILE:HD11	46:BU:82:VAL:HG22	1.91	0.52
30:BY:56:VAL:HG12	30:BY:58:GLU:H	1.75	0.52
37:BL:116:VAL:HG13	37:BL:117:THR:N	2.20	0.52
13:AP:38:PHE:CE2	13:AP:51:ARG:HD3	2.45	0.52
47:BF:51:ASN:O	47:BF:55:ASP:HB2	2.09	0.52
23:DB:1791:A:H1'	25:DC:205:GLY:O	2.10	0.52
1:CA:1299:A:N7	1:CA:1301:U:H1'	2.25	0.52
7:CH:11:THR:HA	7:CH:14:ARG:HH12	1.74	0.52
39:DX:8:GLU:HB3	39:DX:12:GLU:CB	2.40	0.52
24:BI:17:ALA:O	24:BI:18:ASN:CB	2.58	0.52
25:BC:91:ALA:HB2	25:BC:105:ALA:HB2	1.92	0.52
23:BB:2241:A:H2'	23:BB:2242:G:H8	1.70	0.52
1:AA:1144:G:H21	1:AA:1146:A:H62	1.56	0.52
1:CA:884:U:H4'	1:CA:885:G:H5''	1.91	0.52
11:AL:20:VAL:HG23	11:AL:20:VAL:O	2.10	0.52
23:DB:813:U:H2'	23:DB:814:C:C6	2.44	0.52
1:AA:1038:C:H2'	1:AA:1039:G:H8	1.74	0.52
1:AA:1039:G:H2'	1:AA:1040:U:O4'	2.10	0.52
21:AN:30:ILE:C	21:AN:32:ASP:H	2.12	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:154:U:H2'	23:BB:155:A:H8	1.75	0.52
2:AC:24:ASN:O	2:AC:26:LYS:N	2.43	0.52
23:BB:1490:A:H2'	25:BC:97:ASP:OD1	2.10	0.52
10:CK:70:ALA:HA	10:CK:73:VAL:HG22	1.90	0.52
1:AA:677:U:H2'	1:AA:678:U:C6	2.44	0.52
23:BB:2359:C:O2'	23:BB:2360:G:H5'	2.10	0.52
23:DB:1482:G:H2'	23:DB:1483:G:C8	2.45	0.52
29:BE:2:GLU:OE2	29:BE:13:THR:HA	2.10	0.52
2:CC:78:LYS:CD	2:CC:79:LYS:HE3	2.40	0.52
23:BB:2298:A:H2'	23:BB:2299:U:O4'	2.10	0.52
1:CA:1124:G:H5'	9:CJ:37:ARG:CZ	2.39	0.52
1:CA:847:G:H2'	1:CA:848:C:H6	1.74	0.52
1:CA:272:C:H2'	1:CA:273:U:C6	2.44	0.52
23:BB:69:C:O2'	23:BB:70:G:H5'	2.10	0.52
23:DB:2026:U:H2'	23:DB:2027:G:C8	2.45	0.52
24:BI:81:LYS:HG3	24:BI:82:ALA:N	2.23	0.52
27:DK:13:ASN:HD22	27:DK:98:ARG:HG3	1.74	0.52
23:BB:2015:A:H2'	23:BB:2016:U:O4'	2.10	0.52
23:BB:1919:A:H2'	23:BB:1920:C:H5'	1.91	0.52
23:DB:1310:G:H21	23:DB:1610:A:H8	1.57	0.52
23:BB:779:U:OP1	25:BC:48:ILE:HG13	2.09	0.52
23:DB:1099:G:C8	24:DI:3:LYS:HB2	2.45	0.52
18:CB:14:HIS:O	18:CB:15:PHE:C	2.47	0.52
25:DC:171:VAL:HB	25:DC:183:VAL:HG12	1.91	0.52
35:BV:77:VAL:CG2	35:BV:89:ILE:HG23	2.40	0.52
26:DD:10:GLY:HA3	26:DD:26:VAL:H	1.75	0.52
23:BB:857:G:H2'	23:BB:858:G:H5'	1.91	0.52
22:BA:54:G:H21	47:BF:25:MET:CE	2.23	0.52
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.44	0.52
8:AI:28:VAL:HA	8:AI:33:SER:O	2.10	0.52
40:DH:134:VAL:H	40:DH:138:VAL:HG11	1.73	0.52
38:DM:19:GLY:CA	38:DM:38:ARG:HH22	2.23	0.52
38:DM:39:GLY:O	38:DM:96:ILE:HG13	2.10	0.52
35:DV:80:HIS:CG	35:DV:83:LYS:HB2	2.44	0.52
16:AS:15:LEU:CD1	21:AN:46:LYS:HZ1	2.16	0.52
2:AC:74:ILE:HG13	2:AC:74:ILE:O	2.08	0.52
23:DB:2303:G:H4'	47:DF:121:PHE:O	2.09	0.52
26:BD:146:ILE:HG13	26:BD:147:GLY:N	2.24	0.52
37:BL:93:ASN:CG	37:BL:94:THR:H	2.12	0.52
40:DH:41:LYS:HA	40:DH:44:ILE:CG1	2.39	0.52
6:AG:45:ALA:HA	6:AG:120:ALA:HB2	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CB:95:TRP:CH2	18:CB:99:MET:HG3	2.44	0.52
23:BB:2187:U:H2'	23:BB:2188:U:C6	2.44	0.52
1:CA:659:U:H2'	1:CA:660:C:C6	2.44	0.52
23:DB:282:A:OP2	23:DB:282:A:H3'	2.10	0.52
39:BX:32:ALA:HB2	39:BX:37:LEU:HD12	1.92	0.52
23:DB:1547:C:H2'	23:DB:1548:A:C8	2.44	0.52
2:CC:152:VAL:HB	2:CC:165:GLU:HB2	1.92	0.52
2:CC:156:LEU:HG	2:CC:165:GLU:HG2	1.91	0.52
1:AA:1033:G:H2'	1:AA:1034:G:C8	2.44	0.52
48:BG:67:ALA:O	48:BG:71:LEU:HD23	2.09	0.52
3:CD:191:SER:O	3:CD:192:ALA:HB2	2.10	0.52
2:CC:161:ILE:N	2:CC:161:ILE:HD12	2.24	0.52
23:DB:1534:U:H2'	23:DB:1536:C:C4	2.45	0.52
7:CH:115:ALA:O	7:CH:120:LEU:HD23	2.09	0.52
49:DR:2:TYR:CG	49:DR:42:ALA:HB2	2.45	0.52
1:AA:802:A:H2'	1:AA:803:G:O4'	2.09	0.52
45:BS:13:SER:O	45:BS:101:SER:HB3	2.10	0.52
23:BB:1824:G:O2'	23:BB:1825:U:H5'	2.10	0.52
22:BA:75:G:H1	22:BA:102:G:N2	2.07	0.52
33:B1:24:LYS:HD3	33:B1:52:LYS:O	2.09	0.52
23:DB:67:U:H2'	23:DB:68:G:C8	2.44	0.52
1:AA:1208:C:H2'	1:AA:1209:C:H6	1.74	0.52
22:BA:35:C:H2'	22:BA:36:C:O4'	2.10	0.52
29:BE:102:ARG:HG3	29:BE:102:ARG:HH21	1.74	0.52
43:DO:9:ARG:HA	43:DO:12:THR:OG1	2.10	0.52
44:DQ:40:LYS:HA	44:DQ:43:GLN:OE1	2.10	0.52
23:DB:2286:G:H4'	23:DB:2287:A:O4'	2.09	0.52
1:AA:213:G:H3'	1:AA:214:C:H6	1.74	0.52
23:BB:65:U:H2'	23:BB:66:C:H6	1.75	0.52
23:BB:1126:A:H8	23:BB:1126:A:OP1	1.92	0.52
23:BB:2438:U:O2'	23:BB:2439:A:H5''	2.10	0.52
1:AA:709:U:H2'	1:AA:710:G:C8	2.45	0.52
43:DO:2:ASP:OD2	43:DO:4:LYS:HB3	2.09	0.52
33:D1:8:ILE:CD1	33:D1:51:ALA:HA	2.39	0.52
1:CA:90:C:H2'	1:CA:91:U:H6	1.74	0.52
41:DJ:21:THR:HG23	41:DJ:61:LYS:HB3	1.92	0.52
23:DB:41:C:O2'	23:DB:42:A:H5'	2.10	0.52
23:DB:765:C:H2'	23:DB:766:U:C6	2.45	0.52
23:DB:765:C:H2'	23:DB:766:U:H6	1.75	0.52
23:DB:1099:G:C5'	24:DI:2:LYS:HB2	2.39	0.52
8:CI:49:GLN:HB3	8:CI:102:PHE:HZ	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CB:46:VAL:CG1	18:CB:47:PRO:HD3	2.24	0.52
23:DB:705:A:N6	23:DB:726:G:O2'	2.42	0.52
1:CA:1180:A:OP1	8:CI:104:THR:HG22	2.09	0.52
6:CG:38:ALA:O	6:CG:41:ILE:HB	2.09	0.52
41:BJ:122:LEU:C	41:BJ:123:LYS:HD2	2.31	0.52
35:DV:35:GLU:HB2	35:DV:93:ARG:NH1	2.25	0.52
25:DC:129:LEU:CD2	25:DC:133:ASN:HB2	2.39	0.52
14:CQ:26:ARG:HG2	14:CQ:39:ARG:O	2.10	0.52
23:BB:2271:G:O2'	23:BB:2272:U:H5'	2.09	0.52
23:DB:1197:G:H2'	23:DB:1198:U:C6	2.45	0.52
12:AM:106:ARG:NH1	12:AM:109:LYS:NZ	2.58	0.52
12:CM:21:ILE:HG22	12:CM:23:GLY:H	1.75	0.52
2:AC:186:SER:O	2:AC:196:GLY:HA2	2.10	0.52
48:DG:83:THR:HA	48:DG:84:LYS:HZ1	1.72	0.52
48:DG:148:ARG:HG2	48:DG:163:TYR:CZ	2.45	0.52
46:DU:73:ASN:HB3	46:DU:95:PHE:CE2	2.44	0.52
24:DI:54:ILE:HD13	24:DI:55:PRO:N	2.24	0.52
22:DA:7:G:H1'	43:DO:38:GLN:HE22	1.74	0.52
23:BB:494:G:O2'	23:BB:495:G:H5'	2.10	0.52
29:BE:122:GLU:H	29:BE:122:GLU:CD	2.11	0.52
48:BG:155:PRO:CA	48:BG:170:THR:HA	2.40	0.52
16:CS:33:TRP:C	16:CS:35:ARG:H	2.14	0.52
27:DK:43:ILE:HD12	27:DK:56:ASP:HB2	1.91	0.52
7:CH:35:ILE:O	7:CH:39:LEU:HG	2.10	0.52
42:BN:19:ALA:C	42:BN:21:PHE:H	2.13	0.52
23:DB:2742:G:P	32:D4:36:ARG:HH11	2.33	0.52
12:CM:5:GLY:O	12:CM:6:ILE:C	2.48	0.52
51:BZ:32:ASN:C	51:BZ:33:LEU:HD12	2.31	0.52
28:DP:47:ILE:HG13	28:DP:48:ALA:N	2.22	0.52
3:AD:187:ARG:O	3:AD:191:SER:HB3	2.08	0.52
23:DB:918:A:H2'	23:DB:919:U:H5'	1.91	0.52
11:CL:20:VAL:O	11:CL:20:VAL:HG23	2.10	0.52
38:BM:61:GLY:HA2	38:BM:107:GLY:HA3	1.92	0.52
23:BB:417:C:H2'	23:BB:418:C:H6	1.75	0.52
23:DB:2813:A:H2'	23:DB:2814:A:C8	2.45	0.52
23:BB:39:G:O2'	23:BB:40:U:H5'	2.10	0.52
1:AA:778:G:H2'	1:AA:779:C:C6	2.45	0.52
1:CA:736:C:H2'	1:CA:737:C:H6	1.72	0.52
23:DB:1405:U:H2'	23:DB:1406:U:C6	2.45	0.52
1:CA:6:G:HO2'	1:CA:7:A:H8	1.58	0.52
10:AK:30:ILE:HG22	10:AK:45:THR:HB	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2798:U:H1'	23:DB:2800:A:N6	2.25	0.52
12:CM:15:VAL:HG13	12:CM:29:SER:HB3	1.91	0.52
1:AA:847:G:H2'	1:AA:848:C:H6	1.75	0.52
40:DH:125:THR:HA	40:DH:146:VAL:HB	1.92	0.52
1:CA:154:U:H2'	1:CA:155:A:C8	2.45	0.52
23:DB:2527:C:O2'	23:DB:2528:U:H5'	2.10	0.52
45:BS:33:LEU:HD23	45:BS:37:THR:HG23	1.92	0.52
9:AJ:44:THR:HG23	9:AJ:69:THR:O	2.10	0.52
6:CG:45:ALA:HB2	6:CG:116:ALA:O	2.09	0.52
1:CA:552:U:H2'	1:CA:553:A:H8	1.75	0.52
23:BB:1007:C:O3'	41:BJ:110:PRO:HB3	2.10	0.52
23:DB:464:U:H1'	23:DB:686:U:H5	1.75	0.52
45:DS:33:LEU:HD23	45:DS:37:THR:HG23	1.92	0.52
48:DG:72:ASN:O	48:DG:76:ILE:HG12	2.10	0.52
14:AQ:30:HIS:HB3	14:AQ:34:GLY:N	2.25	0.52
23:DB:9:G:H21	23:DB:10:A:N6	2.07	0.52
1:CA:1230:C:H2'	1:CA:1231:G:H8	1.74	0.52
40:BH:90:LEU:H	40:BH:123:ARG:HB3	1.73	0.52
23:DB:1431:A:H2'	23:DB:1432:G:C8	2.44	0.52
52:BW:51:GLY:CA	52:BW:59:PHE:HB3	2.28	0.52
5:AF:21:MET:HA	5:AF:24:ARG:HD3	1.92	0.52
5:AF:26:THR:HA	5:AF:36:ILE:HD11	1.93	0.52
26:DD:10:GLY:O	26:DD:11:MET:HB2	2.10	0.52
22:DA:28:C:H2'	22:DA:29:A:O4'	2.09	0.52
22:DA:57:A:C4	47:DF:25:MET:HB3	2.45	0.52
23:DB:1060:U:C5	24:DI:131:THR:HG22	2.45	0.52
18:CB:33:ALA:HB1	18:CB:37:VAL:O	2.10	0.52
1:AA:1101:A:H61	18:AB:101:THR:HG21	1.74	0.52
23:BB:2353:G:H21	52:BW:30:VAL:HG22	1.73	0.52
18:CB:122:ASP:CG	18:CB:124:THR:HG22	2.30	0.52
29:DE:28:VAL:HG23	29:DE:29:HIS:N	2.24	0.52
23:BB:2260:C:O2'	23:BB:2261:C:H5'	2.10	0.52
46:BU:85:ARG:HD3	46:BU:86:PHE:H	1.74	0.52
27:DK:70:ARG:HB3	27:DK:76:VAL:HG22	1.91	0.52
23:BB:1441:G:H2'	23:BB:1442:U:H6	1.74	0.52
3:AD:191:SER:O	3:AD:192:ALA:HB2	2.10	0.52
7:CH:48:PHE:HB3	7:CH:60:LEU:HD12	1.91	0.52
46:BU:24:VAL:HA	46:BU:35:VAL:HA	1.90	0.52
23:BB:638:G:O2'	23:BB:639:U:H5'	2.10	0.52
1:CA:674:G:H2'	1:CA:675:A:C8	2.44	0.52
23:BB:153:U:O2'	23:BB:154:U:H5'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BS:55:ILE:O	45:BS:58:ALA:HB3	2.10	0.52
2:CC:104:GLU:HG2	2:CC:105:VAL:N	2.25	0.52
1:AA:868:C:H2'	1:AA:869:G:O4'	2.09	0.52
23:BB:1353:A:H2'	23:BB:1354:A:H8	1.74	0.52
3:AD:100:VAL:O	3:AD:104:MET:HG3	2.10	0.52
1:CA:601:G:H2'	1:CA:602:A:H8	1.74	0.52
1:CA:1458:G:H2'	1:CA:1459:G:C8	2.44	0.52
23:BB:849:A:H2'	23:BB:850:U:C6	2.45	0.52
1:CA:796:C:O2'	1:CA:797:C:H5'	2.10	0.52
25:BC:137:GLY:N	25:BC:163:ILE:HB	2.24	0.52
17:CT:60:GLN:HB3	17:CT:65:LEU:HD23	1.91	0.52
23:DB:2837:A:H2'	23:DB:2838:G:C8	2.44	0.52
16:AS:27:LYS:HG3	16:AS:28:LYS:H	1.74	0.52
1:CA:426:U:H4'	3:CD:39:GLN:HA	1.92	0.52
25:BC:146:LYS:CB	25:BC:147:PRO:HD2	2.40	0.52
23:DB:2341:G:H2'	23:DB:2342:C:C6	2.45	0.52
25:BC:42:ARG:NH2	25:BC:48:ILE:HD11	2.25	0.52
20:CO:56:LEU:O	20:CO:60:VAL:HG23	2.10	0.52
22:BA:37:C:H2'	22:BA:38:C:O4'	2.10	0.52
45:BS:46:LEU:O	45:BS:50:VAL:HG23	2.10	0.52
6:CG:77:ARG:O	6:CG:79:VAL:HG23	2.10	0.52
1:CA:215:C:H2'	1:CA:216:U:C6	2.45	0.52
23:BB:2520:C:O2'	23:BB:2521:C:H5'	2.09	0.52
29:BE:31:VAL:HG21	29:BE:104:ALA:CB	2.41	0.52
37:BL:89:VAL:O	37:BL:89:VAL:HG13	2.10	0.52
23:DB:204:A:H4'	23:DB:205:G:OP1	2.10	0.52
1:CA:1047:G:O2'	1:CA:1048:G:H5'	2.10	0.52
23:BB:324:A:H2'	23:BB:325:G:O4'	2.10	0.52
10:CK:92:ARG:HD2	10:CK:92:ARG:O	2.09	0.52
1:CA:1131:G:O2'	1:CA:1132:C:H5'	2.10	0.51
50:DT:51:PHE:HB3	50:DT:53:VAL:HG23	1.92	0.51
26:BD:171:THR:OG1	26:BD:172:VAL:N	2.40	0.51
1:CA:121:U:O4	1:CA:236:A:N7	2.43	0.51
23:BB:2356:U:C5'	52:BW:16:GLU:HG3	2.40	0.51
32:B4:3:VAL:HG23	32:B4:4:ARG:H	1.75	0.51
18:AB:47:PRO:O	18:AB:51:GLU:HB3	2.10	0.51
1:AA:8:A:N6	3:AD:53:GLN:HE22	2.09	0.51
23:DB:299:A:N6	23:DB:322:A:H1'	2.26	0.51
24:DI:78:LEU:HD13	24:DI:108:ILE:HG23	1.92	0.51
3:CD:146:GLU:CD	3:CD:146:GLU:N	2.63	0.51
16:AS:44:ILE:HG13	16:AS:62:THR:O	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:42:C:C5	47:BF:65:LEU:HD22	2.45	0.51
47:DF:40:GLY:HA2	47:DF:84:ILE:CA	2.38	0.51
47:BF:139:GLU:CD	47:BF:140:ILE:H	2.13	0.51
23:DB:1021:A:H61	23:DB:1142:A:N6	2.08	0.51
47:DF:87:LYS:C	47:DF:88:VAL:HG23	2.30	0.51
1:CA:1411:C:O2'	1:CA:1412:C:H5'	2.10	0.51
1:CA:481:G:O2'	1:CA:482:A:H8	1.93	0.51
2:CC:198:LYS:HD3	2:CC:200:TRP:CH2	2.45	0.51
47:DF:66:ILE:HA	47:DF:85:GLY:O	2.10	0.51
39:BX:52:ARG:O	39:BX:55:THR:HB	2.09	0.51
52:DW:10:ARG:O	52:DW:11:ASN:HB2	2.08	0.51
48:DG:94:ARG:HB3	48:DG:127:GLN:NE2	2.24	0.51
18:CB:160:LEU:HD21	18:CB:182:VAL:HG22	1.91	0.51
28:BP:19:PHE:O	28:BP:20:ARG:HB2	2.10	0.51
3:CD:89:LEU:HD22	3:CD:199:ILE:HD11	1.92	0.51
39:DX:32:ALA:HB2	39:DX:37:LEU:HD12	1.92	0.51
20:AO:27:VAL:HG12	20:AO:31:LEU:HD12	1.92	0.51
1:CA:1508:A:H2'	1:CA:1509:C:C6	2.45	0.51
23:DB:1439:A:H1'	23:DB:1553:A:N6	2.25	0.51
23:BB:2088:A:H2'	23:BB:2089:C:C6	2.45	0.51
23:DB:836:G:H2'	23:DB:837:C:H6	1.71	0.51
23:BB:2649:C:H2'	23:BB:2650:U:H6	1.74	0.51
18:CB:128:LEU:CG	18:CB:132:GLU:HB3	2.40	0.51
8:CI:30:ASN:ND2	8:CI:65:THR:HG23	2.24	0.51
23:DB:1051:G:H2'	23:DB:1052:C:C6	2.46	0.51
23:DB:850:U:H2'	23:DB:851:C:C6	2.45	0.51
47:BF:74:ALA:C	47:BF:76:PHE:H	2.13	0.51
1:CA:1292:G:H2'	1:CA:1293:C:H6	1.74	0.51
1:CA:833:G:H2'	1:CA:834:U:C6	2.44	0.51
10:CK:34:THR:HG22	10:CK:40:ALA:HA	1.91	0.51
23:BB:2626:C:H2'	23:BB:2627:G:O4'	2.08	0.51
23:DB:927:A:H2'	23:DB:928:A:C8	2.45	0.51
23:BB:1097:U:C2'	23:BB:1098:A:H5'	2.39	0.51
23:BB:2798:U:H1'	23:BB:2800:A:N6	2.25	0.51
1:AA:648:A:H2'	1:AA:649:A:C8	2.45	0.51
1:AA:547:A:H4'	1:AA:548:G:O5'	2.11	0.51
23:BB:540:C:O2'	23:BB:541:A:H5'	2.10	0.51
23:DB:786:C:O2'	23:DB:787:C:H5'	2.10	0.51
23:BB:2586:U:H2'	23:BB:2587:A:C8	2.44	0.51
23:BB:2308:G:HO2'	23:BB:2310:C:H5	1.57	0.51
9:AJ:9:ARG:O	9:AJ:98:VAL:HA	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:121:ASN:HD22	6:CG:121:ASN:N	2.08	0.51
1:CA:1051:C:H2'	1:CA:1052:U:C6	2.45	0.51
44:BQ:39:ILE:O	44:BQ:43:GLN:HG3	2.10	0.51
24:BI:23:VAL:HG23	24:BI:24:GLY:N	2.26	0.51
12:AM:48:SER:HB2	12:AM:51:GLN:HG3	1.91	0.51
41:BJ:124:VAL:HG23	41:BJ:125:TYR:H	1.73	0.51
5:CF:6:ILE:HG23	5:CF:62:MET:HB3	1.92	0.51
22:BA:28:C:H2'	22:BA:29:A:O4'	2.09	0.51
8:AI:38:PHE:O	8:AI:44:ARG:HB3	2.08	0.51
24:BI:75:ALA:HB2	24:BI:112:LYS:HE2	1.92	0.51
23:DB:138:U:H1'	23:DB:141:G:H1	1.75	0.51
23:BB:1726:C:H2'	23:BB:1727:C:C6	2.45	0.51
1:CA:978:A:HO2'	1:CA:1322:C:H5	1.57	0.51
23:DB:630:G:N2	23:DB:632:A:H3'	2.25	0.51
40:DH:134:VAL:H	40:DH:138:VAL:CG1	2.23	0.51
46:BU:11:ILE:O	46:BU:12:VAL:HB	2.10	0.51
47:BF:32:LYS:HB2	47:BF:90:LEU:O	2.10	0.51
49:DR:14:VAL:HG11	49:DR:98:ILE:HG12	1.92	0.51
18:CB:56:LEU:HD22	18:CB:216:VAL:HB	1.92	0.51
47:DF:134:GLN:O	47:DF:136:ILE:N	2.44	0.51
1:CA:1078:U:H4'	4:CE:137:ARG:NH1	2.25	0.51
23:DB:2572:A:N7	26:DD:150:GLN:HB2	2.25	0.51
20:AO:33:THR:HG23	20:AO:63:ARG:NH1	2.25	0.51
27:BK:70:ARG:HB2	27:BK:75:SER:O	2.10	0.51
18:AB:45:THR:HG23	18:AB:200:PRO:HG2	1.91	0.51
39:BX:20:ASN:HD22	39:BX:20:ASN:N	2.07	0.51
48:DG:94:ARG:HB3	48:DG:127:GLN:CG	2.38	0.51
44:BQ:73:ILE:HD11	44:BQ:77:LYS:CB	2.40	0.51
1:AA:1432:G:H1'	1:AA:1468:A:N6	2.26	0.51
45:BS:81:SER:HB3	45:BS:99:ARG:HA	1.91	0.51
1:CA:948:C:H2'	1:CA:949:A:C8	2.45	0.51
16:CS:48:ILE:HG21	16:CS:70:LEU:HD21	1.91	0.51
42:BN:9:GLN:O	42:BN:17:ARG:HD3	2.10	0.51
1:CA:554:A:H5'	11:CL:25:ALA:CB	2.38	0.51
23:BB:62:U:C2'	23:BB:63:A:H5'	2.41	0.51
23:DB:2143:C:H3'	23:DB:2144:G:O4'	2.10	0.51
23:DB:2291:U:O2'	23:DB:2374:C:H1'	2.10	0.51
16:CS:44:ILE:HD11	16:CS:63:ASP:HA	1.91	0.51
1:AA:952:U:H2'	1:AA:953:G:C8	2.45	0.51
23:DB:2415:G:H2'	23:DB:2416:C:H6	1.75	0.51
23:DB:1910:G:O2'	23:DB:1911:U:H5'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2088:A:H2'	23:DB:2089:C:C6	2.44	0.51
23:BB:1387:A:H4'	23:BB:1469:A:H1'	1.90	0.51
1:CA:584:G:O2'	1:CA:585:G:H5'	2.09	0.51
25:BC:75:ALA:HB1	25:BC:93:VAL:HG22	1.92	0.51
1:CA:1254:A:H2'	1:CA:1255:G:H8	1.73	0.51
23:DB:729:G:H2'	23:DB:1775:U:H1'	1.92	0.51
17:AT:43:LYS:HD2	17:AT:86:ALA:OXT	2.10	0.51
23:DB:1779:U:H5''	23:DB:1780:A:H5''	1.92	0.51
2:CC:78:LYS:O	2:CC:78:LYS:HG3	2.09	0.51
23:BB:1794:A:H2'	23:BB:1795:C:C6	2.44	0.51
23:DB:598:U:H2'	23:DB:599:A:C8	2.45	0.51
23:BB:245:G:H2'	23:BB:246:C:H6	1.76	0.51
48:DG:39:ALA:HB2	48:DG:57:TYR:CD2	2.45	0.51
38:BM:36:VAL:HB	38:BM:127:LYS:O	2.10	0.51
23:DB:1542:U:H2'	23:DB:1543:G:O4'	2.09	0.51
23:DB:1456:G:O2'	23:DB:1457:U:H5'	2.10	0.51
1:CA:1486:G:H2'	1:CA:1487:G:O4'	2.10	0.51
1:AA:1234:C:O2'	1:AA:1235:U:H5'	2.11	0.51
22:BA:83:G:H4'	30:BY:52:PHE:CD2	2.45	0.51
39:DX:9:LYS:HE3	39:DX:9:LYS:HA	1.92	0.51
21:CN:62:ARG:HB3	21:CN:67:GLY:CA	2.41	0.51
23:BB:922:C:H2'	23:BB:923:G:H8	1.74	0.51
18:CB:185:ILE:HG23	18:CB:199:ILE:O	2.10	0.51
50:DT:14:PRO:HA	50:DT:32:LEU:HB3	1.92	0.51
25:DC:146:LYS:CB	25:DC:147:PRO:HD2	2.41	0.51
35:BV:63:ILE:HD12	35:BV:63:ILE:N	2.23	0.51
35:BV:63:ILE:CD1	35:BV:72:VAL:HG22	2.40	0.51
23:BB:2336:A:H62	52:BW:40:ARG:HB3	1.76	0.51
5:AF:5:GLU:HG3	5:AF:63:ASN:HD21	1.74	0.51
40:BH:116:ARG:H	40:BH:130:VAL:CG1	2.23	0.51
29:DE:108:ILE:HD13	37:DL:2:ARG:HH22	1.76	0.51
23:DB:145:C:H2'	23:DB:146:A:H8	1.74	0.51
6:CG:63:VAL:HA	6:CG:66:GLU:CD	2.31	0.51
18:AB:53:LEU:HB3	18:AB:219:THR:OG1	2.11	0.51
18:CB:26:MET:HE2	18:CB:188:THR:H	1.74	0.51
30:BY:56:VAL:HG12	30:BY:58:GLU:HG3	1.93	0.51
1:AA:1320:C:O2'	1:AA:1321:U:H5'	2.10	0.51
31:D0:48:TYR:C	31:D0:50:GLY:H	2.12	0.51
18:CB:216:VAL:O	18:CB:220:VAL:HG23	2.11	0.51
18:CB:53:LEU:HA	18:CB:56:LEU:HD12	1.92	0.51
23:BB:496:G:H1'	45:BS:61:ASN:ND2	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DP:91:VAL:O	28:DP:92:ARG:HB3	2.10	0.51
51:DZ:7:VAL:HG21	51:DZ:59:ILE:HD11	1.91	0.51
26:BD:53:GLY:C	26:BD:76:GLY:HA2	2.31	0.51
13:CP:1:MET:HE2	13:CP:3:THR:HG22	1.92	0.51
23:DB:1593:A:H2'	23:DB:1594:U:O4'	2.10	0.51
3:CD:71:PHE:CE1	3:CD:89:LEU:HD11	2.45	0.51
42:BN:12:ARG:HG3	42:BN:13:ASN:OD1	2.10	0.51
45:DS:29:VAL:HG23	45:DS:70:LYS:CA	2.40	0.51
1:AA:1347:G:N2	1:AA:1373:G:H2'	2.26	0.51
23:BB:322:A:H5'	23:BB:340:A:C1'	2.40	0.51
23:BB:657:U:H2'	23:BB:658:U:C6	2.45	0.51
23:DB:935:C:O2'	23:DB:936:A:H5'	2.11	0.51
5:CF:53:LYS:N	5:CF:53:LYS:NZ	2.58	0.51
1:CA:1476:A:H2'	1:CA:1477:U:O4'	2.11	0.51
1:CA:502:A:H4'	1:CA:550:G:H4'	1.93	0.51
13:CP:72:ALA:O	13:CP:75:ILE:HG13	2.10	0.51
21:AN:27:LYS:C	21:AN:29:ILE:H	2.13	0.51
4:AE:55:VAL:N	4:AE:56:PRO:CD	2.74	0.51
18:CB:130:LYS:HE2	18:CB:130:LYS:N	2.25	0.51
1:CA:389:A:H3'	1:CA:390:U:H6	1.74	0.51
25:BC:75:ALA:CB	25:BC:93:VAL:HG22	2.39	0.51
23:DB:1454:C:H5'	42:DN:63:ARG:NE	2.25	0.51
23:DB:2813:A:H2'	23:DB:2814:A:H8	1.75	0.51
23:DB:1923:U:O2'	23:DB:1924:C:H5'	2.11	0.51
23:BB:2033:A:O2'	23:BB:2035:G:OP2	2.28	0.51
23:BB:1561:C:H2'	23:BB:1562:U:C6	2.45	0.51
4:CE:92:ARG:HB3	4:CE:92:ARG:NH1	2.24	0.51
23:BB:1410:G:H2'	23:BB:1411:U:C6	2.45	0.51
23:BB:2455:G:H2'	23:BB:2456:C:H6	1.74	0.51
1:AA:404:G:H2'	1:AA:405:U:C6	2.45	0.51
23:DB:1764:C:O2'	23:DB:1765:U:H5'	2.09	0.51
23:DB:974:G:H1'	23:DB:975:A:C8	2.46	0.51
1:CA:69:G:N2	1:CA:71:A:H62	2.08	0.51
23:BB:2024:G:O2'	23:BB:2025:C:H5'	2.10	0.51
1:CA:130:A:H1'	1:CA:263:A:O2'	2.10	0.51
1:AA:399:G:H2'	1:AA:400:C:C6	2.46	0.51
22:BA:2:G:H2'	22:BA:3:C:C6	2.45	0.51
3:CD:156:ALA:O	3:CD:159:GLU:HB2	2.11	0.51
23:DB:1526:C:H2'	23:DB:1527:G:O4'	2.10	0.51
4:CE:140:ILE:O	4:CE:144:GLU:HG3	2.10	0.51
26:DD:142:VAL:HB	26:DD:143:PRO:HD2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AE:14:LEU:HA	4:AE:36:THR:HB	1.92	0.51
3:CD:22:SER:HB3	3:CD:109:THR:HG22	1.93	0.51
31:D0:33:SER:C	31:D0:35:GLU:H	2.13	0.51
1:AA:144:G:O2'	1:AA:145:G:H5'	2.11	0.51
23:DB:1477:A:H2'	23:DB:1478:G:O4'	2.10	0.51
26:DD:36:GLN:O	26:DD:36:GLN:HG3	2.10	0.51
23:DB:1099:G:O5'	24:DI:4:VAL:HG12	2.10	0.51
8:CI:34:LEU:HD11	8:CI:44:ARG:CB	2.40	0.51
50:DT:4:GLU:OE2	50:DT:5:GLU:HG2	2.09	0.51
23:BB:548:G:H3'	23:BB:548:G:OP2	2.10	0.51
50:BT:43:ILE:CG2	50:BT:58:VAL:HG21	2.40	0.51
52:DW:49:ASN:HB3	52:DW:81:ILE:CD1	2.40	0.51
42:DN:37:THR:OG1	42:DN:40:LYS:HE2	2.10	0.51
29:BE:108:ILE:HD12	29:BE:180:LEU:HB3	1.92	0.51
40:BH:114:GLU:CA	40:BH:133:GLN:H	2.22	0.51
40:DH:77:THR:HG22	40:DH:145:ASN:H	1.74	0.51
22:BA:29:A:H2'	22:BA:30:C:C6	2.45	0.51
1:AA:1248:A:H4'	8:AI:32:ARG:NH1	2.24	0.51
8:AI:82:ILE:O	8:AI:86:LEU:HD13	2.10	0.51
23:BB:1060:U:O2	23:BB:1088:A:C8	2.64	0.51
23:BB:1060:U:P	24:BI:74:PRO:HA	2.49	0.51
1:AA:1057:G:H2'	1:AA:1058:G:O4'	2.09	0.51
46:BU:73:ASN:HD22	46:BU:74:ALA:N	2.08	0.51
40:DH:110:VAL:O	40:DH:110:VAL:HG22	2.09	0.51
1:AA:956:U:O2'	16:AS:79:TYR:HA	2.10	0.51
47:BF:127:TYR:HB2	47:BF:155:ILE:HD13	1.91	0.51
30:DY:56:VAL:HG12	30:DY:58:GLU:HG3	1.91	0.51
1:AA:135:C:O2	13:AP:1:MET:HB2	2.10	0.51
13:AP:6:LEU:HD11	13:AP:71:VAL:HB	1.91	0.51
1:AA:922:G:H2'	1:AA:923:A:H8	1.73	0.51
23:BB:1792:G:OP1	25:BC:204:LEU:HD12	2.09	0.51
6:AG:22:LEU:O	6:AG:26:VAL:HG13	2.10	0.51
37:BL:57:LEU:HB2	37:BL:60:ARG:NH1	2.22	0.51
12:CM:90:HIS:HA	12:CM:108:ARG:HH21	1.75	0.51
27:BK:16:ALA:HB3	27:BK:47:ILE:HD13	1.92	0.51
39:DX:44:LYS:CD	39:DX:48:ARG:HH12	2.23	0.51
48:DG:155:PRO:CA	48:DG:170:THR:HA	2.40	0.51
2:CC:113:LYS:HA	2:CC:184:ASN:HD22	1.75	0.51
1:CA:985:C:H2'	1:CA:986:U:H6	1.75	0.51
12:CM:6:ILE:HG22	12:CM:7:ASN:N	2.25	0.51
1:AA:1135:U:H5'	1:AA:1136:C:OP1	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AT:79:THR:HG22	17:AT:83:ASN:HD21	1.75	0.51
23:DB:2144:G:O2'	23:DB:2146:C:H5'	2.11	0.51
21:AN:27:LYS:HG3	21:AN:28:ALA:H	1.75	0.51
23:DB:1454:C:H5'	42:DN:63:ARG:HE	1.75	0.51
23:BB:418:C:H2'	23:BB:419:U:H6	1.76	0.51
23:BB:2199:A:H5''	23:BB:2200:C:H5	1.75	0.51
47:DF:74:ALA:C	47:DF:76:PHE:H	2.13	0.51
23:DB:2751:G:H3'	23:DB:2752:C:C6	2.44	0.51
1:AA:600:A:OP2	7:AH:87:ARG:HG2	2.10	0.51
23:BB:129:C:H2'	23:BB:130:C:H6	1.73	0.51
43:DO:100:HIS:C	43:DO:104:GLN:HB2	2.30	0.51
23:BB:2562:U:H2'	23:BB:2563:U:H5'	1.92	0.51
22:DA:32:U:C4'	22:DA:52:A:H62	2.24	0.51
1:CA:404:G:H2'	1:CA:405:U:C6	2.46	0.51
7:AH:77:VAL:HG23	7:AH:126:CYS:HA	1.93	0.51
23:BB:2345:G:N3	23:BB:2381:A:H2'	2.26	0.51
23:DB:1824:G:O2'	23:DB:1825:U:H5'	2.10	0.51
11:AL:14:LYS:HD3	11:AL:14:LYS:N	2.26	0.51
27:BK:104:THR:H	27:BK:107:LEU:HD13	1.75	0.51
1:AA:1246:A:H2'	1:AA:1247:U:C6	2.44	0.51
1:AA:1207:G:H2'	1:AA:1208:C:O4'	2.11	0.51
47:BF:67:THR:C	47:BF:68:LYS:HD2	2.30	0.51
23:BB:2478:A:OP1	32:B4:32:LYS:HD3	2.11	0.51
21:AN:17:ASP:O	21:AN:21:ALA:HB2	2.10	0.51
28:BP:28:LYS:HE3	28:BP:82:SER:OG	2.10	0.51
22:BA:67:G:O2'	22:BA:68:C:H5'	2.10	0.51
1:CA:478:A:H2'	1:CA:479:U:O4'	2.11	0.51
23:BB:2604:U:O2'	23:BB:2605:U:H5'	2.09	0.51
23:BB:2076:U:O4'	23:BB:2076:U:O2	2.28	0.51
5:CF:55:HIS:N	5:CF:55:HIS:ND1	2.58	0.51
10:AK:52:ARG:NH1	10:AK:52:ARG:HB3	2.26	0.51
1:AA:434:U:H3'	1:AA:435:A:H8	1.75	0.51
52:DW:49:ASN:ND2	52:DW:60:ALA:HA	2.25	0.51
48:BG:25:ILE:O	48:BG:32:LEU:HA	2.10	0.51
1:AA:236:A:H2'	1:AA:237:G:C8	2.45	0.51
35:BV:72:VAL:CG2	35:BV:91:PHE:HB3	2.40	0.51
15:AR:60:ARG:HA	15:AR:63:TYR:CD2	2.36	0.51
41:DJ:12:LYS:NZ	41:DJ:12:LYS:H	2.08	0.51
23:BB:142:A:H2'	23:BB:143:C:H5	1.75	0.51
8:AI:23:GLY:H	8:AI:60:LEU:HA	1.76	0.51
24:BI:11:GLN:O	24:BI:11:GLN:HG3	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:128:THR:HA	25:BC:190:THR:CA	2.41	0.51
27:DK:59:LYS:HD2	27:DK:89:ASN:HD22	1.75	0.51
12:CM:77:LYS:HE2	47:DF:112:ASP:HB2	1.93	0.51
38:BM:19:GLY:N	38:BM:38:ARG:HH22	2.08	0.51
47:BF:147:ARG:HG2	47:BF:148:VAL:HG13	1.92	0.51
2:AC:42:LEU:HD12	2:AC:46:LEU:HD23	1.92	0.51
39:DX:57:LEU:N	39:DX:59:GLU:OE2	2.44	0.51
6:AG:47:GLU:OE1	6:AG:57:GLU:HG2	2.10	0.51
3:AD:146:GLU:N	3:AD:146:GLU:CD	2.64	0.51
3:AD:145:ARG:O	3:AD:148:ALA:N	2.42	0.51
12:CM:38:ILE:HD12	12:CM:47:LEU:HD11	1.93	0.51
1:CA:1070:U:H2'	1:CA:1071:C:C6	2.45	0.51
27:BK:17:ARG:HB3	27:BK:45:GLU:HB3	1.93	0.51
27:BK:7:MET:HE1	27:BK:18:ARG:HB3	1.92	0.51
2:AC:13:ILE:O	2:AC:15:LYS:N	2.44	0.51
1:CA:1103:C:H2'	1:CA:1104:G:O4'	2.11	0.51
48:BG:123:GLU:HG2	48:BG:124:CYS:N	2.26	0.51
1:CA:1220:G:H4'	16:CS:33:TRP:HB3	1.92	0.51
1:CA:1308:U:H5''	12:CM:96:VAL:HG23	1.92	0.51
12:CM:76:ILE:O	12:CM:80:MET:HG3	2.10	0.51
44:DQ:90:ASP:O	44:DQ:94:LEU:HB2	2.10	0.51
44:DQ:94:LEU:HD12	49:DR:13:ARG:HB2	1.92	0.51
37:DL:23:ILE:H	37:DL:23:ILE:CD1	2.21	0.51
1:AA:1060:U:C5'	9:AJ:53:ILE:HG12	2.39	0.51
23:BB:1819:A:OP1	25:BC:159:THR:HG21	2.10	0.51
23:DB:559:G:H1'	44:DQ:55:GLN:NE2	2.24	0.51
6:AG:149:ALA:N	10:AK:55:ARG:NH2	2.59	0.51
23:BB:630:G:N2	23:BB:632:A:H3'	2.25	0.51
1:AA:501:C:O2'	1:AA:502:A:H5'	2.09	0.51
1:AA:1324:A:H2'	1:AA:1325:C:H6	1.75	0.51
5:AF:53:LYS:NZ	5:AF:53:LYS:N	2.59	0.51
23:DB:2093:G:O5'	40:DH:24:GLY:HA3	2.11	0.51
27:BK:51:LYS:HE2	27:BK:95:ILE:HD11	1.92	0.51
23:DB:193:U:H2'	23:DB:194:G:H8	1.74	0.51
1:CA:861:G:O2'	1:CA:862:C:H5'	2.10	0.51
1:CA:1028:C:H2'	1:CA:1028:C:O2	2.10	0.51
23:BB:1482:G:H2'	23:BB:1483:G:C8	2.45	0.51
22:BA:32:U:C4'	22:BA:52:A:H62	2.23	0.51
1:AA:403:C:O2'	1:AA:404:G:H5'	2.11	0.51
2:AC:48:LYS:CD	2:AC:48:LYS:H	2.24	0.51
1:CA:1234:C:O2'	1:CA:1235:U:H5'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1582:C:H3'	23:BB:1583:A:C2	2.45	0.51
1:CA:612:C:H2'	1:CA:613:C:C6	2.46	0.51
23:BB:1747:U:H2'	23:BB:1748:C:H6	1.76	0.51
9:CJ:57:VAL:HG22	9:CJ:58:ASN:H	1.76	0.51
23:BB:699:A:H2'	23:BB:700:G:O4'	2.09	0.51
1:CA:1263:C:H2'	1:CA:1264:U:H6	1.76	0.51
48:DG:28:LYS:NZ	48:DG:29:ASN:HB2	2.26	0.51
23:DB:1313:U:O2	23:DB:1313:U:H2'	2.10	0.51
1:AA:478:A:H2'	1:AA:479:U:O4'	2.10	0.51
5:AF:10:VAL:HA	5:AF:84:VAL:HA	1.92	0.51
1:CA:213:G:H3'	1:CA:214:C:H6	1.75	0.51
9:CJ:50:THR:OG1	9:CJ:64:GLN:HB3	2.10	0.51
23:BB:664:G:H2'	23:BB:665:U:H6	1.74	0.51
11:CL:7:VAL:HG22	14:CQ:33:TYR:HD1	1.75	0.51
23:DB:1126:A:OP1	23:DB:1126:A:H8	1.93	0.51
1:AA:520:A:N1	1:AA:536:C:H1'	2.26	0.51
1:AA:1160:G:H2'	1:AA:1161:C:H6	1.75	0.51
23:DB:922:C:H2'	23:DB:923:G:H8	1.75	0.51
9:CJ:9:ARG:HE	9:CJ:99:GLN:HE22	1.58	0.51
35:BV:28:ALA:HB2	35:BV:89:ILE:HD12	1.93	0.51
35:BV:35:GLU:HB2	35:BV:93:ARG:NH1	2.25	0.51
14:AQ:45:VAL:HG11	14:AQ:60:ILE:HG21	1.92	0.51
40:BH:114:GLU:HA	40:BH:133:GLN:H	1.76	0.51
23:BB:1060:U:C4	24:BI:131:THR:HG22	2.45	0.51
37:BL:82:LEU:O	37:BL:85:VAL:HG12	2.10	0.51
23:BB:1725:U:O2'	23:BB:1726:C:H5'	2.11	0.51
1:CA:1326:U:H2'	1:CA:1327:C:H6	1.73	0.51
46:BU:73:ASN:HD22	46:BU:73:ASN:H	1.57	0.51
49:BR:34:GLU:HG2	49:BR:60:LYS:HG2	1.92	0.51
23:DB:1175:A:H2'	23:DB:1175:A:N3	2.24	0.51
33:D1:36:LYS:CB	33:D1:47:ILE:HA	2.34	0.51
49:BR:4:VAL:CG2	49:BR:39:LEU:HG	2.40	0.51
24:DI:32:VAL:HG22	24:DI:60:VAL:CG2	2.41	0.51
23:DB:125:A:C6	36:D2:10:LEU:HG	2.45	0.51
10:AK:61:ALA:O	10:AK:64:VAL:HG13	2.10	0.51
42:DN:106:ASP:OD1	42:DN:108:ALA:HB3	2.09	0.51
40:BH:14:SER:HB2	40:BH:17:ASP:CB	2.41	0.51
25:BC:130:PRO:HA	25:BC:188:ARG:HA	1.92	0.51
27:BK:11:ALA:HB3	27:BK:85:VAL:CG2	2.40	0.51
1:AA:521:G:O2'	1:AA:522:C:H5'	2.11	0.51
23:DB:2181:U:H2'	23:DB:2182:U:O4'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2557:G:H2'	23:DB:2558:C:H6	1.70	0.51
6:AG:149:ALA:N	10:AK:55:ARG:HH22	2.09	0.51
1:CA:1095:U:H2'	1:CA:1096:C:C6	2.46	0.51
23:DB:2353:G:N3	52:DW:30:VAL:HG13	2.26	0.51
1:CA:475:C:H2'	1:CA:476:U:H6	1.76	0.51
2:CC:13:ILE:HD13	2:CC:13:ILE:N	2.24	0.51
2:AC:63:ILE:HD11	2:AC:94:ALA:CB	2.41	0.51
1:CA:908:A:O2'	1:CA:909:A:H5'	2.10	0.51
23:DB:1490:A:H2'	25:DC:97:ASP:OD1	2.10	0.51
7:CH:77:VAL:HG23	7:CH:126:CYS:HA	1.92	0.51
12:AM:92:ARG:HA	12:AM:92:ARG:NE	2.25	0.51
23:BB:990:A:N1	49:BR:78:ARG:NH1	2.59	0.51
23:BB:277:G:N3	23:BB:277:G:C2'	2.73	0.51
23:DB:323:C:H6	23:DB:1205:A:N1	2.09	0.51
1:CA:613:C:P	3:CD:80:ARG:HH21	2.33	0.51
1:CA:108:G:H5'	1:CA:109:A:H5''	1.92	0.51
23:DB:1585:C:H2'	23:DB:1586:A:C8	2.46	0.51
22:DA:13:G:H1'	22:DA:69:G:N2	2.23	0.51
23:BB:665:U:O2'	23:BB:666:A:H5'	2.11	0.51
23:BB:1867:G:O2'	23:BB:1868:C:H5'	2.11	0.51
1:AA:335:C:H2'	1:AA:336:A:H8	1.75	0.51
1:AA:889:A:H5'	1:AA:891:U:H1'	1.92	0.51
23:DB:2630:G:O2'	23:DB:2631:G:H5'	2.09	0.51
48:DG:41:GLU:HB2	48:DG:52:GLY:O	2.10	0.51
23:BB:41:C:H2'	23:BB:42:A:O4'	2.11	0.51
23:BB:41:C:O2'	23:BB:42:A:H5'	2.11	0.51
23:BB:1472:C:H2'	23:BB:1473:G:C8	2.45	0.51
23:BB:2409:G:H2'	23:BB:2410:G:O4'	2.10	0.51
1:CA:240:G:H5'	1:CA:240:G:H8	1.75	0.51
25:BC:173:LEU:H	25:BC:173:LEU:HD13	1.76	0.51
42:DN:71:ARG:HG2	42:DN:71:ARG:HH21	1.75	0.51
10:CK:52:ARG:HB3	10:CK:52:ARG:NH1	2.25	0.51
24:DI:63:ASP:O	24:DI:64:ARG:HB2	2.09	0.51
25:BC:210:ALA:O	25:BC:215:VAL:HG23	2.11	0.51
23:BB:123:G:H2'	23:BB:124:G:C8	2.46	0.51
40:BH:90:LEU:HB2	40:BH:123:ARG:CB	2.41	0.51
23:BB:547:A:H2'	23:BB:548:G:H5'	1.93	0.51
41:BJ:98:GLU:HB3	41:BJ:124:VAL:HG21	1.91	0.51
23:BB:2336:A:N6	52:BW:40:ARG:HB3	2.26	0.51
40:BH:115:VAL:H	40:BH:133:GLN:HB3	1.75	0.51
23:BB:145:C:H2'	23:BB:146:A:C8	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DH:77:THR:HG21	40:DH:145:ASN:ND2	2.17	0.51
8:AI:6:TYR:HE2	8:AI:17:ARG:HA	1.76	0.51
36:B2:26:ASN:O	36:B2:30:VAL:HG23	2.11	0.51
43:DO:70:ALA:O	43:DO:74:VAL:HG23	2.10	0.51
23:DB:2267:A:OP2	23:DB:2268:A:H5''	2.10	0.51
1:CA:1366:C:H2'	1:CA:1367:C:C6	2.45	0.51
23:BB:2537:U:H2'	23:BB:2538:C:H6	1.72	0.51
46:BU:81:ARG:HG3	46:BU:81:ARG:HH21	1.75	0.51
27:BK:88:ASN:HD22	27:BK:89:ASN:H	1.52	0.51
24:DI:79:LEU:HD11	24:DI:131:THR:OG1	2.10	0.51
33:D1:46:VAL:HG22	33:D1:47:ILE:H	1.75	0.51
1:AA:1314:C:C5	16:AS:5:LYS:HD3	2.46	0.51
18:AB:172:ILE:HD12	18:AB:172:ILE:H	1.76	0.51
18:CB:86:CYS:C	18:CB:88:GLN:H	2.13	0.51
26:DD:4:LEU:HD12	26:DD:32:ASN:HB2	1.92	0.51
23:BB:1107:G:H2'	23:BB:1108:U:H6	1.75	0.51
47:DF:134:GLN:HB3	47:DF:149:ARG:CG	2.40	0.51
29:DE:122:GLU:O	29:DE:123:LYS:HB2	2.09	0.51
26:BD:34:VAL:HG13	26:BD:93:GLY:HA2	1.92	0.51
46:BU:54:PRO:HG2	46:BU:55:GLY:H	1.76	0.51
23:BB:1789:A:H2'	23:BB:1790:C:O4'	2.11	0.51
24:BI:29:GLN:HA	24:BI:29:GLN:HE21	1.76	0.51
12:AM:2:ARG:HD3	12:AM:6:ILE:N	2.26	0.51
48:DG:123:GLU:HG2	48:DG:124:CYS:N	2.25	0.51
16:CS:50:VAL:O	16:CS:57:VAL:N	2.44	0.51
23:BB:2391:G:P	34:B3:34:LYS:HZ3	2.34	0.51
30:BY:16:LEU:H	30:BY:16:LEU:CD2	2.21	0.51
51:BZ:54:LYS:O	51:BZ:57:ARG:HB2	2.11	0.51
23:DB:2074:U:H2'	23:DB:2075:U:C6	2.46	0.51
23:DB:2147:A:H4'	23:DB:2148:G:C8	2.45	0.51
1:CA:1250:A:C2	1:CA:1370:G:H1'	2.44	0.51
1:AA:1164:G:H2'	1:AA:1165:U:H6	1.75	0.51
25:DC:93:VAL:HG13	25:DC:94:LEU:N	2.25	0.51
37:DL:77:ILE:HB	37:DL:109:LYS:O	2.11	0.51
48:BG:1:SER:H1	48:BG:61:TRP:HE3	1.56	0.51
23:DB:154:U:H2'	23:DB:155:A:C8	2.46	0.51
42:BN:62:ASN:N	42:BN:62:ASN:HD22	2.09	0.51
27:BK:51:LYS:HG3	27:BK:52:VAL:N	2.25	0.51
10:AK:70:ALA:HA	10:AK:73:VAL:HG22	1.93	0.51
23:BB:852:U:H2'	23:BB:853:C:H6	1.76	0.51
1:CA:158:G:H1	1:CA:163:C:H42	1.58	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:162:A:H2'	1:AA:163:C:O4'	2.11	0.51
23:BB:2897:U:H2'	23:BB:2898:U:C6	2.46	0.51
23:BB:974:G:H1'	23:BB:975:A:C8	2.46	0.51
23:DB:285:G:H2'	23:DB:286:U:O4'	2.10	0.51
1:CA:770:C:O2'	1:CA:771:G:H5'	2.11	0.51
1:AA:1293:C:H2'	1:AA:1294:G:H8	1.74	0.51
11:CL:82:ARG:HG2	11:CL:82:ARG:HH11	1.76	0.51
14:CQ:30:HIS:HB3	14:CQ:34:GLY:N	2.25	0.51
22:BA:17:C:O2'	22:BA:18:G:H5'	2.11	0.51
1:CA:618:C:H1'	13:CP:14:ARG:NH1	2.26	0.51
23:DB:782:A:C8	25:DC:219:VAL:HG21	2.46	0.51
1:AA:65:A:C2	1:AA:381:C:H2'	2.44	0.51
23:DB:245:G:H2'	23:DB:246:C:H6	1.76	0.51
48:BG:96:ALA:HB1	48:BG:98:LYS:HE3	1.93	0.51
1:AA:215:C:H2'	1:AA:216:U:C6	2.45	0.51
22:DA:35:C:H2'	22:DA:36:C:O4'	2.11	0.51
23:DB:2309:A:N3	23:DB:2309:A:H2'	2.26	0.51
23:BB:527:C:O4'	23:BB:527:C:O2	2.29	0.51
1:AA:1252:A:H2'	1:AA:1253:G:O4'	2.11	0.51
23:BB:2336:A:H62	52:BW:40:ARG:CB	2.24	0.51
12:AM:106:ARG:HH11	12:AM:106:ARG:HA	1.75	0.51
9:AJ:30:LYS:HB2	9:AJ:36:VAL:HG21	1.92	0.51
48:BG:91:VAL:C	48:BG:93:TYR:H	2.14	0.51
10:CK:110:THR:CA	19:CU:19:LYS:HZ1	2.24	0.51
23:BB:2526:G:N3	32:B4:1:MET:N	2.58	0.51
46:DU:73:ASN:HD22	46:DU:73:ASN:H	1.57	0.51
49:DR:7:SER:HB2	49:DR:22:LEU:HD13	1.93	0.51
40:DH:96:THR:OG1	40:DH:112:LYS:HB2	2.11	0.51
51:BZ:11:ARG:HB3	51:BZ:12:PRO:HD2	1.92	0.51
38:BM:40:ARG:HB2	38:BM:93:VAL:CG2	2.40	0.51
1:AA:978:A:C2'	1:AA:979:C:H5'	2.41	0.51
18:AB:56:LEU:HB2	18:AB:183:PHE:HE2	1.76	0.51
1:AA:981:U:H5	1:AA:982:U:HO2'	1.57	0.51
18:CB:63:LYS:HA	18:CB:224:ARG:CZ	2.40	0.51
23:DB:1792:G:P	25:DC:204:LEU:HD12	2.50	0.51
23:BB:729:G:H2'	23:BB:1775:U:H1'	1.92	0.51
10:AK:28:ASN:HD22	10:AK:29:THR:H	1.59	0.51
12:AM:6:ILE:O	12:AM:7:ASN:C	2.49	0.51
45:BS:81:SER:HA	45:BS:99:ARG:HA	1.92	0.51
23:BB:1753:G:H5''	28:BP:92:ARG:HD3	1.93	0.51
38:DM:61:GLY:HA2	38:DM:107:GLY:HA3	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:784:G:H1	25:DC:227:VAL:HG11	1.75	0.51
48:DG:67:ALA:O	48:DG:71:LEU:HD23	2.11	0.51
45:DS:17:VAL:C	45:DS:19:LEU:N	2.63	0.51
40:DH:56:ALA:C	40:DH:58:LEU:H	2.14	0.51
23:BB:2648:G:H2'	23:BB:2649:C:H6	1.76	0.51
1:CA:1125:U:O2'	1:CA:1126:U:H2'	2.11	0.51
29:BE:118:LEU:HA	29:BE:186:VAL:HG13	1.92	0.51
25:BC:75:ALA:CB	25:BC:95:TYR:HA	2.39	0.51
23:DB:6:A:H4'	41:DJ:131:ASN:O	2.11	0.51
26:BD:175:LEU:HD22	26:BD:191:GLY:H	1.75	0.51
24:BI:100:ILE:O	24:BI:139:VAL:HA	2.11	0.51
17:AT:24:ARG:HG3	17:AT:65:LEU:HD11	1.92	0.51
11:AL:35:ARG:NH2	11:AL:75:GLU:HA	2.26	0.51
1:AA:33:A:H2'	1:AA:34:C:C6	2.45	0.51
23:DB:523:C:H4'	23:DB:540:C:O2	2.11	0.51
23:BB:1764:C:O2'	23:BB:1765:U:H5'	2.11	0.51
23:BB:68:G:H2'	23:BB:69:C:H6	1.76	0.51
27:DK:109:SER:OG	27:DK:111:LYS:HG2	2.11	0.51
23:BB:1258:U:H2'	23:BB:1259:G:H8	1.75	0.51
23:BB:2286:G:H4'	23:BB:2287:A:O4'	2.11	0.51
23:DB:1965:C:H3'	23:DB:1966:A:H8	1.76	0.51
25:DC:226:PRO:HA	25:DC:232:GLY:HA3	1.92	0.51
4:AE:59:ILE:O	4:AE:63:MET:HG2	2.10	0.51
3:CD:36:ALA:HB2	3:CD:42:ALA:HA	1.93	0.51
19:CU:4:LYS:HD3	19:CU:4:LYS:H	1.76	0.51
33:D1:18:HIS:CD2	33:D1:40:PRO:HD2	2.46	0.51
1:CA:147:G:H2'	1:CA:148:G:C8	2.46	0.51
1:AA:626:G:H2'	1:AA:627:G:C8	2.46	0.51
23:DB:1098:A:H3'	24:DI:3:LYS:C	2.32	0.51
8:CI:53:LEU:HD12	8:CI:96:GLU:OE2	2.11	0.51
6:CG:30:MET:HG2	6:CG:31:VAL:N	2.26	0.51
23:DB:587:C:O2'	37:DL:19:LEU:HD13	2.11	0.51
25:DC:146:LYS:HB2	25:DC:149:LYS:HB2	1.93	0.51
35:BV:72:VAL:CG1	35:BV:93:ARG:HA	2.40	0.51
5:CF:26:THR:HA	5:CF:36:ILE:HD11	1.93	0.51
5:AF:39:LEU:C	5:AF:40:GLU:HG2	2.31	0.51
40:BH:131:SER:HA	40:BH:142:VAL:HB	1.93	0.51
40:BH:78:VAL:HG12	40:BH:144:VAL:HG23	1.92	0.51
23:DB:633:A:OP1	37:DL:68:SER:HB2	2.10	0.51
48:DG:84:LYS:CB	48:DG:132:LEU:H	2.24	0.51
48:DG:153:PRO:HD3	48:DG:161:VAL:O	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AB:44:LYS:O	18:AB:47:PRO:HD2	2.11	0.51
1:CA:1060:U:C4'	9:CJ:54:SER:HB2	2.35	0.51
27:BK:71:ARG:HB3	27:BK:72:PRO:CD	2.36	0.51
38:DM:2:LEU:HD23	38:DM:46:ILE:HD11	1.91	0.51
28:BP:6:GLN:HA	28:BP:9:GLN:CD	2.31	0.51
47:BF:87:LYS:C	47:BF:88:VAL:HG23	2.31	0.51
1:AA:1084:G:H5'	1:AA:1102:A:OP2	2.10	0.51
18:AB:150:ILE:O	18:AB:150:ILE:HG12	2.10	0.51
28:DP:19:PHE:O	28:DP:20:ARG:HB2	2.11	0.51
4:CE:35:LEU:HD22	4:CE:133:ILE:HA	1.92	0.51
26:DD:148:GLN:CB	26:DD:152:PRO:HG2	2.41	0.51
2:AC:179:ALA:HA	2:AC:205:GLU:CA	2.39	0.51
1:AA:920:U:H2'	1:AA:921:U:H6	1.76	0.51
12:CM:39:ALA:HB3	12:CM:42:VAL:HG13	1.93	0.51
18:AB:27:LYS:C	18:AB:29:PHE:H	2.14	0.51
48:DG:105:SER:OG	48:DG:111:PRO:HA	2.11	0.51
18:CB:158:ASP:HA	18:CB:180:ILE:HD12	1.92	0.51
41:DJ:84:ILE:HG13	41:DJ:84:ILE:O	2.10	0.51
27:DK:99:ILE:HD13	27:DK:118:LEU:HD22	1.93	0.51
27:BK:64:ARG:O	27:BK:82:ASN:HA	2.11	0.51
23:DB:2556:C:H2'	23:DB:2557:G:O4'	2.11	0.51
23:BB:37:C:O2'	23:BB:38:A:H5'	2.11	0.51
23:BB:1454:C:H5'	42:BN:63:ARG:HE	1.75	0.51
23:DB:354:A:H2'	23:DB:355:U:H6	1.76	0.51
26:BD:63:PRO:C	26:BD:65:ALA:H	2.14	0.51
1:AA:159:G:N2	1:AA:161:A:H3'	2.26	0.51
1:CA:1027:C:O2	1:CA:1027:C:H2'	2.10	0.51
1:CA:33:A:H2'	1:CA:34:C:C6	2.46	0.51
1:CA:492:C:H2'	1:CA:493:A:N3	2.26	0.51
35:DV:53:LYS:HB3	35:DV:55:GLU:OE1	2.11	0.51
22:DA:76:G:N1	22:DA:101:A:N6	2.59	0.51
27:DK:51:LYS:HE2	27:DK:95:ILE:HD11	1.93	0.51
23:DB:235:U:H2'	23:DB:236:C:H6	1.76	0.51
23:BB:1518:C:H2'	23:BB:1519:G:H8	1.74	0.51
1:AA:613:C:P	3:AD:80:ARG:HH21	2.32	0.51
26:DD:63:PRO:C	26:DD:65:ALA:H	2.14	0.51
12:CM:28:ARG:NH2	12:CM:62:PHE:HB2	2.26	0.51
45:BS:51:LEU:C	45:BS:53:SER:H	2.14	0.51
23:BB:438:G:H2'	23:BB:439:A:H8	1.76	0.51
23:BB:2586:U:H2'	23:BB:2587:A:H8	1.75	0.51
1:CA:605:U:H2'	1:CA:606:G:C8	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AE:89:THR:HG22	4:AE:90:GLY:N	2.26	0.51
1:CA:895:G:H2'	1:CA:896:C:C6	2.46	0.51
23:DB:401:A:H2'	23:DB:402:A:C8	2.46	0.51
7:CH:29:SER:O	7:CH:33:VAL:HG23	2.10	0.51
23:DB:1785:A:H2'	23:DB:1787:A:N7	2.26	0.51
31:B0:33:SER:C	31:B0:35:GLU:H	2.14	0.51
23:BB:910:A:H2'	23:BB:911:A:C8	2.46	0.51
23:DB:2685:G:O2'	23:DB:2686:G:H5'	2.11	0.51
25:BC:40:GLY:O	25:BC:53:ILE:HG23	2.11	0.51
1:CA:1471:U:O2'	1:CA:1472:U:H5'	2.11	0.51
44:DQ:104:ALA:HA	49:DR:46:GLU:OE1	2.10	0.51
23:DB:2180:U:O4'	23:DB:2180:U:O2	2.28	0.51
23:DB:57:C:H2'	23:DB:58:G:O4'	2.11	0.51
25:DC:52:HIS:O	25:DC:53:ILE:HB	2.11	0.51
19:CU:34:ARG:NE	19:CU:39:LYS:HE3	2.26	0.51
23:DB:1431:A:H2'	23:DB:1432:G:H8	1.76	0.51
30:DY:15:ARG:O	30:DY:20:LYS:HE3	2.10	0.51
20:AO:70:LEU:HD12	20:AO:78:TYR:HB2	1.93	0.51
15:CR:60:ARG:HA	15:CR:63:TYR:CD2	2.34	0.51
5:AF:45:ARG:HG2	5:AF:46:GLN:N	2.26	0.51
5:AF:97:THR:HB	5:AF:98:GLU:OE1	2.11	0.51
41:DJ:18:VAL:CG1	41:DJ:54:ILE:HD11	2.39	0.51
40:BH:83:LYS:HD2	40:BH:91:PHE:HB2	1.93	0.51
52:DW:35:ILE:O	52:DW:37:VAL:N	2.44	0.51
52:BW:19:ARG:HE	52:BW:19:ARG:H	1.59	0.51
1:CA:1379:G:N7	6:CG:2:ARG:CZ	2.74	0.51
24:BI:77:VAL:HA	24:BI:80:LYS:CE	2.38	0.51
46:BU:39:ASN:HB3	46:BU:62:ALA:N	2.26	0.51
23:BB:26:G:H1'	23:BB:514:A:N6	2.26	0.51
25:BC:127:ASN:O	25:BC:190:THR:HA	2.11	0.51
37:DL:79:LEU:HB3	37:DL:115:GLU:O	2.11	0.51
48:DG:120:ILE:HB	48:DG:140:ILE:HG22	1.92	0.51
46:BU:96:LYS:O	46:BU:97:SER:HB3	2.11	0.51
38:DM:40:ARG:HB2	38:DM:93:VAL:CG2	2.40	0.51
38:DM:19:GLY:CA	38:DM:97:GLN:HB2	2.35	0.51
46:BU:20:LYS:HE2	46:BU:20:LYS:N	2.25	0.51
47:DF:102:LEU:O	47:DF:103:ILE:HB	2.11	0.51
47:BF:33:ILE:HG13	47:BF:95:MET:HG2	1.93	0.51
30:DY:35:VAL:HG22	30:DY:36:GLU:N	2.26	0.51
13:AP:6:LEU:HB3	13:AP:17:TYR:HB3	1.92	0.51
18:CB:53:LEU:HB2	18:CB:212:TYR:OH	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:127:TYR:HB2	47:DF:155:ILE:HD13	1.93	0.51
1:CA:1004:A:H2'	1:CA:1005:A:O4'	2.10	0.51
1:CA:1025:U:H5''	1:CA:1026:G:O5'	2.10	0.51
23:BB:1275:A:H2'	23:BB:1276:A:O4'	2.11	0.51
23:BB:1791:A:H1'	25:BC:205:GLY:O	2.10	0.51
1:AA:202:G:H1'	1:AA:468:A:C8	2.45	0.51
23:BB:2885:G:H21	31:B0:31:LYS:HB3	1.72	0.51
31:B0:39:ARG:O	31:B0:40:HIS:HB2	2.11	0.51
24:BI:33:ASN:HD21	24:BI:64:ARG:NH1	2.04	0.51
16:CS:1:PRO:O	16:CS:2:ARG:HB2	2.11	0.51
11:AL:23:LEU:O	11:AL:25:ALA:N	2.44	0.51
43:BO:47:VAL:HG12	43:BO:48:LEU:N	2.22	0.51
23:DB:572:A:C5'	49:DR:80:ARG:HH22	2.21	0.51
23:BB:1820:U:H3	25:BC:197:ALA:HA	1.75	0.51
45:BS:70:LYS:O	45:BS:72:THR:N	2.44	0.51
27:DK:75:SER:HA	28:DP:72:VAL:O	2.11	0.51
1:CA:269:C:H2'	1:CA:270:A:H8	1.72	0.51
23:DB:2141:G:H2'	23:DB:2142:A:C8	2.46	0.51
1:CA:841:C:H5'	1:CA:843:U:OP2	2.11	0.51
1:CA:679:C:O2'	1:CA:680:C:H5'	2.11	0.51
10:AK:63:GLN:HG3	10:AK:98:ALA:CB	2.41	0.51
23:BB:1656:C:H2'	23:BB:1657:U:C6	2.46	0.51
1:CA:764:C:C2'	1:CA:765:G:H5'	2.40	0.51
1:CA:862:C:O2'	1:CA:863:U:H5'	2.11	0.51
1:CA:715:A:H2'	1:CA:716:A:H8	1.76	0.51
44:BQ:9:ALA:C	44:BQ:11:ALA:N	2.64	0.51
21:AN:2:LYS:O	21:AN:6:LYS:HG3	2.11	0.51
33:D1:26:LYS:NZ	33:D1:52:LYS:HB3	2.26	0.51
23:DB:664:G:H2'	23:DB:665:U:C6	2.46	0.51
2:AC:21:TRP:CZ3	2:AC:23:ALA:HB2	2.46	0.51
23:DB:974:G:OP2	49:DR:78:ARG:HD3	2.11	0.51
23:DB:1599:U:H2'	23:DB:1600:C:H6	1.76	0.51
18:CB:27:LYS:C	18:CB:29:PHE:H	2.14	0.51
1:CA:90:C:H2'	1:CA:91:U:C6	2.46	0.51
1:AA:1089:G:C2'	1:AA:1090:U:H5'	2.41	0.51
23:DB:688:U:H2'	23:DB:689:A:H8	1.76	0.51
1:AA:154:U:H2'	1:AA:155:A:C8	2.46	0.51
40:BH:52:ALA:O	40:BH:56:ALA:HB3	2.11	0.51
50:BT:18:GLU:O	50:BT:20:ALA:N	2.33	0.51
23:DB:425:G:H2'	23:DB:426:C:H6	1.75	0.51
1:CA:547:A:H4'	1:CA:548:G:O5'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:62:U:O2'	1:CA:379:C:H1'	2.11	0.51
23:BB:1477:A:H2'	23:BB:1478:G:O4'	2.11	0.51
18:AB:133:ALA:O	18:AB:137:THR:HG23	2.11	0.51
1:AA:605:U:H2'	1:AA:606:G:C8	2.46	0.51
6:AG:53:SER:O	6:AG:55:LYS:HG2	2.11	0.51
33:D1:3:GLY:O	33:D1:5:ARG:HG2	2.11	0.51
23:BB:2630:G:O2'	23:BB:2631:G:H5'	2.10	0.51
20:AO:69:TYR:HA	20:AO:72:ARG:NE	2.26	0.51
18:CB:48:MET:HG3	18:CB:200:PRO:HD2	1.93	0.50
12:AM:33:LEU:CD1	12:AM:40:GLU:HA	2.41	0.50
50:BT:47:VAL:HB	50:BT:55:VAL:HG21	1.91	0.50
50:BT:53:VAL:HG12	50:BT:54:GLU:N	2.26	0.50
25:DC:140:VAL:HG11	25:DC:143:VAL:HG22	1.93	0.50
48:BG:10:VAL:HG12	48:BG:14:VAL:HG23	1.91	0.50
5:AF:80:PHE:CE1	25:BC:123:ILE:HD13	2.47	0.50
23:BB:2385:C:H2'	23:BB:2386:A:C8	2.46	0.50
10:AK:95:THR:HG23	10:AK:96:ILE:N	2.25	0.50
48:DG:93:TYR:HA	48:DG:106:LEU:HA	1.93	0.50
49:DR:39:LEU:CB	49:DR:49:ILE:HG12	2.39	0.50
33:B1:35:LEU:HD11	33:B1:37:LYS:HE3	1.93	0.50
24:DI:75:ALA:O	24:DI:79:LEU:HG	2.11	0.50
29:BE:60:TRP:CZ3	29:BE:69:ARG:HA	2.43	0.50
49:BR:7:SER:OG	49:BR:12:HIS:HE1	1.94	0.50
1:AA:1313:U:OP2	16:AS:5:LYS:HG2	2.11	0.50
47:BF:40:GLY:HA2	47:BF:84:ILE:CA	2.38	0.50
47:BF:103:ILE:HD11	47:BF:174:PHE:CD1	2.46	0.50
26:DD:34:VAL:CG1	26:DD:94:GLN:H	2.24	0.50
29:BE:122:GLU:O	29:BE:123:LYS:HB2	2.10	0.50
28:DP:20:ARG:O	28:DP:46:VAL:HG21	2.10	0.50
1:AA:1339:A:H2'	1:AA:1340:A:H5'	1.94	0.50
23:DB:2052:A:N7	26:DD:146:ILE:HD11	2.26	0.50
23:DB:45:G:H5'	23:DB:46:G:OP1	2.11	0.50
18:AB:202:ASN:ND2	18:AB:203:ASP:N	2.59	0.50
39:BX:20:ASN:O	39:BX:24:GLU:HB3	2.11	0.50
23:BB:433:C:O2'	23:BB:434:U:H5'	2.11	0.50
47:BF:7:TYR:O	47:BF:12:VAL:HG23	2.11	0.50
12:CM:86:ARG:HA	12:CM:96:VAL:HG13	1.94	0.50
42:BN:9:GLN:O	42:BN:11:ASN:N	2.45	0.50
46:BU:86:PHE:CG	46:BU:87:GLU:N	2.77	0.50
23:BB:63:A:H2'	23:BB:63:A:OP2	2.11	0.50
23:DB:559:G:H21	44:DQ:51:GLN:HE22	1.59	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BS:24:ILE:CG1	45:BS:36:LEU:HD11	2.41	0.50
6:AG:149:ALA:HB2	10:AK:60:PHE:HB3	1.93	0.50
23:DB:460:A:H2'	23:DB:461:C:O4'	2.11	0.50
23:DB:2840:C:H2'	23:DB:2841:C:C6	2.46	0.50
11:CL:107:LYS:C	11:CL:109:ARG:H	2.14	0.50
23:DB:2896:C:H2'	23:DB:2897:U:C6	2.46	0.50
23:DB:729:G:OP1	25:DC:12:ARG:HB2	2.10	0.50
23:DB:533:G:H5'	44:DQ:23:TYR:CE2	2.46	0.50
2:CC:33:ASP:HB2	21:CN:64:ARG:HG3	1.92	0.50
23:DB:1923:U:H2'	23:DB:1924:C:C6	2.45	0.50
23:BB:2699:C:H2'	23:BB:2700:A:C8	2.46	0.50
23:BB:2813:A:H2'	23:BB:2814:A:H8	1.75	0.50
17:CT:53:MET:HA	17:CT:56:ILE:HD12	1.93	0.50
23:DB:2041:U:H2'	23:DB:2042:A:C8	2.46	0.50
23:DB:1582:C:H3'	23:DB:1583:A:N3	2.26	0.50
1:AA:657:U:O2'	1:AA:658:C:H5'	2.11	0.50
23:BB:323:C:H6	23:BB:1205:A:N1	2.09	0.50
47:BF:47:LYS:HA	47:BF:50:ASP:OD1	2.11	0.50
23:DB:2257:U:O2'	23:DB:2258:C:H5'	2.11	0.50
7:CH:38:VAL:O	7:CH:42:GLU:HB2	2.10	0.50
23:DB:1742:U:H2'	23:DB:1743:G:C8	2.47	0.50
6:CG:72:VAL:HG12	6:CG:89:GLU:HG3	1.93	0.50
23:DB:1077:A:H4'	24:DI:93:ASN:OD1	2.10	0.50
43:BO:15:ARG:HH21	43:BO:95:SER:CB	2.24	0.50
47:DF:141:ASP:O	47:DF:144:LYS:N	2.40	0.50
23:BB:1785:A:H2'	23:BB:1787:A:N7	2.26	0.50
1:AA:620:C:C2	3:AD:131:ILE:HD13	2.46	0.50
8:CI:20:ILE:HA	8:CI:61:ASP:O	2.12	0.50
12:AM:13:HIS:HB2	12:AM:16:ILE:HG12	1.93	0.50
50:DT:40:LYS:HA	50:DT:43:ILE:CG2	2.41	0.50
25:DC:66:PHE:HB2	25:DC:150:GLY:O	2.10	0.50
40:BH:114:GLU:HB2	40:BH:132:PHE:CG	2.46	0.50
23:DB:2336:A:N6	52:DW:40:ARG:HD2	2.25	0.50
43:DO:36:TYR:HD2	43:DO:36:TYR:N	2.10	0.50
23:DB:1725:U:O2'	23:DB:1726:C:H5'	2.11	0.50
23:BB:27:G:H1'	23:BB:513:A:H61	1.76	0.50
2:AC:119:ILE:O	2:AC:123:LEU:HG	2.11	0.50
18:CB:20:ARG:HH11	18:CB:20:ARG:HG3	1.76	0.50
47:DF:135:ILE:HG13	47:DF:137:PHE:H	1.75	0.50
23:BB:1241:A:H2'	23:BB:1242:U:C5'	2.41	0.50
1:AA:1182:G:C4'	1:AA:1183:U:H5'	2.34	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DR:60:LYS:H	49:DR:100:GLY:CA	2.23	0.50
18:CB:63:LYS:H	18:CB:224:ARG:HD3	1.76	0.50
47:BF:116:LEU:HB3	47:BF:176:PHE:HA	1.94	0.50
47:DF:32:LYS:HB2	47:DF:90:LEU:O	2.10	0.50
22:DA:43:C:H4'	47:DF:91:ARG:NE	2.26	0.50
23:DB:1794:A:O2'	23:DB:1795:C:H5'	2.11	0.50
28:BP:47:ILE:HG13	28:BP:48:ALA:N	2.23	0.50
47:DF:15:LEU:HD12	47:DF:27:VAL:HB	1.93	0.50
18:CB:148:GLY:O	18:CB:151:LYS:HG2	2.11	0.50
39:DX:20:ASN:O	39:DX:24:GLU:HB3	2.12	0.50
1:AA:1028:C:H2'	1:AA:1028:C:O2	2.11	0.50
39:BX:57:LEU:N	39:BX:59:GLU:OE2	2.44	0.50
17:CT:71:ALA:O	17:CT:74:HIS:HB2	2.11	0.50
25:BC:129:LEU:CD2	25:BC:133:ASN:HB2	2.40	0.50
4:CE:156:ARG:HB3	7:CH:43:GLY:O	2.12	0.50
23:BB:582:A:H2'	23:BB:583:G:C8	2.46	0.50
1:AA:890:G:O2'	1:AA:906:A:N6	2.44	0.50
27:DK:76:VAL:O	28:DP:71:ARG:HA	2.11	0.50
23:BB:1550:C:H2'	23:BB:1551:A:H8	1.76	0.50
1:AA:846:G:H2'	1:AA:846:G:N3	2.25	0.50
1:CA:815:A:H4'	1:CA:817:C:C5	2.46	0.50
25:BC:93:VAL:HG13	25:BC:94:LEU:N	2.25	0.50
23:DB:2901:C:O2'	23:DB:2902:C:H5'	2.12	0.50
23:BB:2896:C:H2'	23:BB:2897:U:H6	1.77	0.50
18:CB:205:ALA:O	18:CB:209:VAL:HG22	2.12	0.50
23:DB:2298:A:H2'	23:DB:2299:U:O4'	2.11	0.50
23:BB:1582:C:H2'	23:BB:1583:A:O4'	2.11	0.50
23:BB:2797:U:H4'	23:BB:2798:U:OP2	2.11	0.50
23:DB:1189:A:H2'	23:DB:1190:G:O4'	2.10	0.50
1:AA:224:U:H2'	1:AA:225:C:H6	1.75	0.50
1:CA:1075:U:H2'	1:CA:1076:U:H6	1.77	0.50
23:DB:438:G:H2'	23:DB:439:A:H8	1.76	0.50
27:DK:107:LEU:HD12	27:DK:107:LEU:H	1.76	0.50
1:CA:1387:G:H2'	1:CA:1388:C:C6	2.46	0.50
18:CB:166:ASP:OD2	18:CB:190:SER:HA	2.12	0.50
1:AA:1075:U:H2'	1:AA:1076:U:C6	2.47	0.50
43:DO:6:ALA:HB1	43:DO:10:ARG:HH11	1.77	0.50
14:CQ:32:ILE:HG23	14:CQ:33:TYR:CD2	2.46	0.50
45:DS:43:ALA:HA	45:DS:46:LEU:HD12	1.94	0.50
45:DS:46:LEU:O	45:DS:50:VAL:HG23	2.10	0.50
37:DL:119:PRO:HG3	37:DL:138:ALA:HB1	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:620:C:C2	3:CD:131:ILE:HD13	2.46	0.50
1:CA:393:A:H2'	1:CA:394:G:H8	1.75	0.50
17:AT:4:LYS:HE3	17:AT:6:ALA:HB2	1.93	0.50
22:BA:117:G:N2	22:BA:118:C:H1'	2.26	0.50
17:AT:72:ALA:HA	17:AT:75:LYS:HD3	1.93	0.50
23:BB:2054:A:H2'	31:B0:4:GLN:OE1	2.12	0.50
44:DQ:109:VAL:HG12	44:DQ:113:LYS:HE3	1.92	0.50
23:BB:116:C:O2'	23:BB:117:G:H5'	2.10	0.50
1:AA:1051:C:H2'	1:AA:1052:U:C6	2.47	0.50
21:AN:68:ARG:NH1	21:AN:70:HIS:HB2	2.25	0.50
23:DB:2411:A:H2'	23:DB:2412:A:C8	2.47	0.50
1:AA:171:A:H2'	1:AA:172:A:C8	2.46	0.50
1:CA:1492:A:H2'	1:CA:1493:A:C8	2.46	0.50
1:CA:1130:A:H5'	8:CI:19:PHE:CE2	2.46	0.50
52:BW:49:ASN:ND2	52:BW:60:ALA:HA	2.26	0.50
50:BT:51:PHE:HB3	50:BT:53:VAL:HG23	1.93	0.50
50:BT:4:GLU:OE2	50:BT:5:GLU:HG2	2.11	0.50
4:AE:143:LEU:O	4:AE:146:MET:HG2	2.11	0.50
23:BB:141:G:H1	50:BT:1:MET:HA	1.76	0.50
23:DB:138:U:H2'	23:DB:140:C:C2	2.46	0.50
1:AA:1123:U:H4'	9:AJ:39:PRO:CG	2.41	0.50
46:BU:39:ASN:ND2	46:BU:62:ALA:HB3	2.26	0.50
26:BD:114:LYS:HB2	26:BD:116:LYS:HE3	1.93	0.50
24:DI:85:ILE:CD1	24:DI:137:LEU:HD21	2.41	0.50
30:BY:35:VAL:HG11	30:BY:37:ARG:HH12	1.76	0.50
1:AA:1270:G:H2'	1:AA:1271:A:C8	2.45	0.50
46:DU:54:PRO:HG2	46:DU:55:GLY:H	1.76	0.50
2:AC:49:ALA:HA	2:AC:74:ILE:HG21	1.92	0.50
29:DE:59:PRO:HB2	29:DE:67:ARG:NH2	2.21	0.50
23:BB:1102:C:H2'	23:BB:1103:A:H8	1.76	0.50
26:BD:34:VAL:CG1	26:BD:94:GLN:H	2.24	0.50
27:DK:16:ALA:HB3	27:DK:47:ILE:HD13	1.93	0.50
8:CI:87:MET:HB2	8:CI:94:ARG:NH1	2.25	0.50
23:BB:2073:C:H5''	25:BC:227:VAL:HG12	1.92	0.50
12:AM:95:PRO:CB	12:AM:99:GLN:HB2	2.42	0.50
16:CS:35:ARG:HB3	16:CS:50:VAL:CG1	2.40	0.50
16:CS:49:ALA:O	16:CS:56:HIS:HB3	2.12	0.50
51:DZ:32:ASN:O	51:DZ:33:LEU:O	2.29	0.50
48:DG:167:VAL:HG23	48:DG:168:VAL:N	2.23	0.50
51:BZ:53:ALA:O	51:BZ:55:GLY:N	2.42	0.50
23:BB:2388:A:H5'	23:BB:2389:G:OP2	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BS:45:VAL:O	45:BS:48:LYS:HB3	2.12	0.50
14:CQ:83:LEU:HD22	14:CQ:83:LEU:N	2.26	0.50
23:BB:1737:G:H5'	23:BB:1738:G:OP2	2.12	0.50
4:CE:55:VAL:N	4:CE:56:PRO:CD	2.74	0.50
23:BB:2665:A:C2'	23:BB:2666:C:H5'	2.42	0.50
45:BS:17:VAL:C	45:BS:19:LEU:N	2.64	0.50
23:DB:908:C:O2'	23:DB:909:A:H5'	2.11	0.50
18:AB:18:GLN:HG2	18:AB:189:ASN:OD1	2.11	0.50
23:BB:1454:C:C5	42:BN:64:ARG:HG2	2.45	0.50
47:DF:72:SER:HB2	47:DF:80:GLN:OE1	2.11	0.50
23:BB:1534:U:H2'	23:BB:1536:C:C5	2.46	0.50
1:CA:1163:A:H2'	1:CA:1164:G:H8	1.76	0.50
14:CQ:5:ARG:C	14:CQ:5:ARG:HD3	2.32	0.50
23:DB:2861:U:H2'	23:DB:2862:G:C8	2.46	0.50
1:AA:107:G:O6	17:AT:9:ARG:HD3	2.12	0.50
23:BB:1312:U:H4'	23:BB:1313:U:O5'	2.11	0.50
23:DB:53:A:H2'	23:DB:54:G:O4'	2.11	0.50
41:DJ:58:ASN:HB3	41:DJ:61:LYS:HB2	1.94	0.50
1:CA:552:U:H2'	1:CA:553:A:C8	2.47	0.50
1:CA:420:U:H2'	1:CA:422:C:C5	2.46	0.50
4:CE:59:ILE:O	4:CE:63:MET:HG2	2.11	0.50
23:DB:409:G:H2'	23:DB:410:G:C8	2.46	0.50
37:BL:119:PRO:HG3	37:BL:138:ALA:HB1	1.94	0.50
23:BB:2704:C:H2'	23:BB:2705:A:O4'	2.11	0.50
23:BB:1674:G:N2	23:BB:1677:A:N1	2.53	0.50
23:DB:1340:U:O2	23:DB:1340:U:O4'	2.29	0.50
43:BO:2:ASP:OD2	43:BO:4:LYS:HB3	2.11	0.50
43:BO:4:LYS:C	43:BO:6:ALA:H	2.15	0.50
8:CI:98:ARG:HA	8:CI:103:VAL:HG13	1.94	0.50
1:AA:239:U:H5''	1:AA:239:U:H6	1.75	0.50
35:BV:61:LEU:O	35:BV:71:LYS:HA	2.11	0.50
35:DV:72:VAL:CG2	35:DV:91:PHE:HB3	2.42	0.50
2:CC:35:ASP:HB3	2:CC:39:ARG:NH1	2.26	0.50
5:AF:86:ARG:NH2	15:AR:63:TYR:HB3	2.26	0.50
26:DD:110:THR:HG21	26:DD:169:ARG:HH11	1.76	0.50
26:DD:171:THR:O	26:DD:172:VAL:HG23	2.10	0.50
26:DD:172:VAL:HG23	26:DD:194:PRO:HD3	1.94	0.50
23:BB:2330:G:H1'	52:BW:38:ARG:CB	2.40	0.50
29:DE:143:LEU:HB3	29:DE:146:VAL:HG21	1.93	0.50
8:AI:17:ARG:C	8:AI:64:ILE:HG23	2.30	0.50
46:BU:39:ASN:HB3	46:BU:62:ALA:H	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:129:ASN:HA	6:CG:134:VAL:HG11	1.93	0.50
1:CA:1361:G:H2'	1:CA:1362:A:H5'	1.92	0.50
46:BU:98:ASN:OD1	46:BU:100:GLU:HB2	2.11	0.50
35:DV:44:HIS:HE1	35:DV:86:LEU:N	2.10	0.50
23:BB:321:U:O4'	29:BE:159:LEU:HG	2.11	0.50
44:BQ:63:ARG:HH12	44:BQ:96:ASP:CB	2.24	0.50
44:BQ:90:ASP:O	44:BQ:94:LEU:HB2	2.12	0.50
1:AA:1014:A:H5''	16:AS:13:HIS:HB3	1.93	0.50
23:BB:1203:U:H4'	37:BL:3:LEU:HD12	1.93	0.50
26:BD:5:VAL:H	26:BD:32:ASN:HD21	1.58	0.50
23:BB:1790:C:H2'	23:BB:1791:A:C8	2.47	0.50
23:BB:2598:A:H5''	25:BC:233:GLY:O	2.11	0.50
23:DB:2578:G:H4'	23:DB:2578:G:OP2	2.10	0.50
1:CA:960:U:O2'	1:CA:1223:C:H4'	2.11	0.50
1:CA:202:G:H1'	1:CA:468:A:C8	2.45	0.50
41:DJ:45:THR:OG1	41:DJ:48:VAL:HB	2.11	0.50
44:DQ:83:LYS:HG3	44:DQ:84:LYS:N	2.26	0.50
27:DK:101:GLY:O	27:DK:120:PRO:HB3	2.11	0.50
23:DB:580:U:O2'	23:DB:581:C:H5'	2.11	0.50
23:BB:2592:G:H2'	23:BB:2593:U:O4'	2.11	0.50
1:AA:1250:A:O3'	8:AI:68:GLY:HA2	2.11	0.50
48:DG:9:VAL:HG12	48:DG:11:PRO:HD3	1.94	0.50
40:DH:62:LEU:HD23	40:DH:62:LEU:H	1.76	0.50
23:DB:1000:A:H2'	23:DB:1001:A:H8	1.77	0.50
23:BB:2834:G:O6	23:BB:2879:A:H2'	2.11	0.50
23:DB:2104:C:H2'	23:DB:2105:U:H6	1.76	0.50
23:BB:850:U:H2'	23:BB:851:C:C6	2.47	0.50
44:DQ:9:ALA:C	44:DQ:11:ALA:N	2.65	0.50
27:DK:21:CYS:SG	27:DK:39:ILE:HD12	2.51	0.50
23:BB:1704:C:H2'	23:BB:1705:A:C8	2.47	0.50
23:DB:1183:U:H2'	23:DB:1184:U:H6	1.74	0.50
29:DE:31:VAL:HG21	29:DE:104:ALA:HB2	1.94	0.50
1:CA:335:C:H2'	1:CA:336:A:C8	2.46	0.50
23:BB:2804:U:H2'	23:BB:2805:C:H6	1.77	0.50
36:B2:13:ASN:HD21	36:B2:46:LYS:NZ	2.09	0.50
23:BB:2861:U:H2'	23:BB:2862:G:C8	2.46	0.50
23:BB:927:A:H2'	23:BB:928:A:C8	2.47	0.50
23:DB:554:U:H2'	23:DB:555:G:O4'	2.11	0.50
1:CA:1081:A:H5'	4:CE:22:LYS:HD2	1.93	0.50
18:CB:93:HIS:HB2	18:CB:146:SER:HA	1.93	0.50
29:BE:37:ALA:O	29:BE:39:ALA:N	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:95:A:H4'	39:DX:38:GLN:O	2.10	0.50
23:BB:1035:U:H2'	23:BB:1036:G:H8	1.77	0.50
22:DA:17:C:O2'	22:DA:18:G:H5'	2.11	0.50
40:BH:25:TYR:CD1	40:BH:30:LEU:HG	2.46	0.50
23:DB:65:U:H2'	23:DB:66:C:H6	1.77	0.50
23:DB:1849:G:H2'	23:DB:1850:G:H8	1.77	0.50
9:CJ:59:LYS:HB2	9:CJ:62:ARG:NH2	2.26	0.50
8:CI:18:VAL:HG21	8:CI:82:ILE:N	2.26	0.50
8:CI:12:LYS:H	8:CI:105:ARG:HH12	1.59	0.50
23:DB:675:A:H5'	29:DE:60:TRP:HE1	1.75	0.50
23:BB:1431:A:H2'	23:BB:1432:G:C8	2.46	0.50
25:DC:68:ARG:NE	25:DC:128:THR:OG1	2.45	0.50
25:DC:158:GLY:N	25:DC:194:VAL:HG13	2.27	0.50
1:AA:238:A:C2'	1:AA:239:U:H5''	2.41	0.50
26:BD:105:LYS:H	26:BD:106:LYS:HZ3	1.58	0.50
29:BE:143:LEU:HB3	29:BE:146:VAL:HG21	1.94	0.50
5:CF:5:GLU:HG3	5:CF:63:ASN:HD21	1.77	0.50
5:AF:38:ARG:HD3	5:AF:97:THR:CA	2.41	0.50
52:DW:19:ARG:HE	52:DW:19:ARG:H	1.60	0.50
29:DE:108:ILE:HD13	29:DE:108:ILE:O	2.12	0.50
40:BH:40:THR:O	40:BH:42:LYS:N	2.45	0.50
48:DG:120:ILE:HG13	48:DG:140:ILE:HG22	1.93	0.50
26:BD:121:THR:C	26:BD:123:LYS:H	2.14	0.50
45:BS:66:ILE:HG12	45:BS:67:ASP:N	2.26	0.50
40:DH:119:ASN:CG	40:DH:121:VAL:HG22	2.31	0.50
23:BB:996:A:H4'	44:BQ:91:ARG:HG2	1.94	0.50
49:DR:64:VAL:HB	49:DR:95:ASP:HB3	1.93	0.50
23:BB:1057:A:H62	23:BB:1086:A:H2'	1.77	0.50
23:BB:1913:A:H4'	23:BB:1914:C:C5'	2.35	0.50
18:AB:174:GLU:O	18:AB:178:LEU:HG	2.11	0.50
13:AP:72:ALA:O	13:AP:75:ILE:HG13	2.09	0.50
9:AJ:57:VAL:HG22	9:AJ:58:ASN:H	1.75	0.50
47:DF:7:TYR:O	47:DF:12:VAL:HG23	2.10	0.50
29:DE:29:HIS:O	29:DE:33:VAL:HG23	2.12	0.50
34:D3:54:LEU:HG	34:D3:58:ILE:CD1	2.39	0.50
39:DX:49:ASP:O	39:DX:53:VAL:HG23	2.11	0.50
40:DH:3:VAL:CG2	40:DH:36:ALA:HB1	2.42	0.50
52:DW:47:GLY:HA3	52:DW:80:SER:CA	2.37	0.50
39:BX:17:GLU:HB3	39:BX:53:VAL:HG11	1.93	0.50
39:BX:21:LEU:HD21	39:BX:50:VAL:HG11	1.92	0.50
28:BP:61:ARG:CB	28:BP:61:ARG:HH21	2.22	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:29:HIS:HE2	37:BL:8:PRO:HG3	1.75	0.50
23:BB:1507:C:H3'	23:BB:1508:A:H4'	1.93	0.50
23:BB:460:A:H2'	23:BB:461:C:O4'	2.11	0.50
23:DB:2722:G:O2'	23:DB:2723:C:H5'	2.11	0.50
32:D4:2:LYS:HD3	32:D4:4:ARG:NH2	2.27	0.50
42:BN:96:ARG:HB3	42:BN:98:LEU:HD22	1.92	0.50
1:CA:985:C:O2'	1:CA:986:U:H5'	2.11	0.50
23:DB:1439:A:N7	23:DB:1440:U:C2	2.80	0.50
1:CA:251:G:N3	1:CA:266:G:O6	2.44	0.50
23:DB:590:A:H2'	23:DB:591:U:H6	1.75	0.50
1:CA:955:U:C1'	1:CA:1227:A:H61	2.23	0.50
23:BB:2845:U:O2'	23:BB:2846:G:H5'	2.10	0.50
40:DH:60:GLU:HA	40:DH:60:GLU:OE1	2.10	0.50
23:DB:154:U:H2'	23:DB:155:A:H8	1.77	0.50
23:BB:224:U:O4	23:BB:420:C:H5'	2.11	0.50
23:BB:1454:C:H5'	42:BN:63:ARG:NE	2.27	0.50
23:BB:2247:A:O2'	23:BB:2248:C:H5'	2.11	0.50
23:DB:2071:A:H2'	23:DB:2072:C:C6	2.46	0.50
1:AA:1519:A:H3'	1:AA:1520:C:C5'	2.42	0.50
23:DB:1704:C:H2'	23:DB:1705:A:C8	2.47	0.50
1:AA:862:C:O2'	1:AA:863:U:H5'	2.10	0.50
26:DD:38:LYS:HD3	26:DD:45:TYR:OH	2.12	0.50
11:CL:14:LYS:HD3	11:CL:14:LYS:N	2.26	0.50
23:BB:1586:A:H2'	23:BB:1587:G:O4'	2.11	0.50
23:DB:2859:G:H2'	23:DB:2860:A:C8	2.45	0.50
1:AA:33:A:H2'	1:AA:34:C:H6	1.76	0.50
1:CA:224:U:H2'	1:CA:225:C:H6	1.77	0.50
23:DB:2412:A:H2'	23:DB:2413:G:O4'	2.11	0.50
1:AA:68:G:H5'	1:AA:171:A:O2'	2.11	0.50
1:AA:708:C:H4'	10:AK:38:GLY:HA3	1.94	0.50
23:BB:688:U:O2'	23:BB:689:A:H5'	2.11	0.50
1:CA:1122:U:H2'	1:CA:1123:U:C6	2.47	0.50
8:CI:122:ARG:HG3	8:CI:122:ARG:HH11	1.76	0.50
23:BB:1767:G:O2'	23:BB:1768:C:H5'	2.11	0.50
23:DB:910:A:H2'	23:DB:911:A:C8	2.47	0.50
44:DQ:42:GLY:HA3	49:DR:75:VAL:HG21	1.94	0.50
1:AA:621:A:H2'	1:AA:622:A:C8	2.46	0.50
1:CA:981:U:H4'	21:CN:60:ARG:CD	2.41	0.50
9:AJ:7:ARG:O	9:AJ:100:ILE:HB	2.12	0.50
23:BB:2385:C:H2'	23:BB:2386:A:H8	1.77	0.50
14:AQ:45:VAL:CG1	14:AQ:46:HIS:H	2.17	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:143:ILE:O	40:BH:144:VAL:HG23	2.11	0.50
40:BH:83:LYS:H	40:BH:148:ALA:HA	1.77	0.50
40:BH:68:ARG:CZ	40:BH:72:ILE:HD13	2.42	0.50
29:DE:175:ILE:HD11	29:DE:180:LEU:HD11	1.94	0.50
29:DE:108:ILE:CD1	29:DE:181:ILE:HG13	2.41	0.50
23:BB:139:U:O2'	23:BB:141:G:N2	2.44	0.50
37:DL:123:ARG:HA	37:DL:143:GLU:CB	2.31	0.50
43:BO:36:TYR:HD2	43:BO:36:TYR:N	2.10	0.50
8:AI:30:ASN:C	8:AI:32:ARG:H	2.14	0.50
37:BL:92:LEU:HD22	37:BL:124:GLY:HA3	1.92	0.50
43:DO:34:HIS:O	43:DO:35:ILE:HG12	2.12	0.50
1:AA:1124:G:H5''	9:AJ:37:ARG:O	2.12	0.50
1:CA:8:A:N6	3:CD:53:GLN:HE22	2.10	0.50
23:BB:2748:A:H1'	48:BG:66:THR:CB	2.40	0.50
28:DP:9:GLN:HA	28:DP:12:MET:SD	2.51	0.50
46:DU:73:ASN:HD22	46:DU:74:ALA:N	2.10	0.50
39:BX:1:MET:O	39:BX:5:GLU:HG2	2.10	0.50
1:AA:1005:A:H2'	1:AA:1006:G:O4'	2.11	0.50
47:DF:116:LEU:HB3	47:DF:176:PHE:HA	1.93	0.50
46:DU:11:ILE:O	46:DU:11:ILE:HD13	2.12	0.50
49:BR:41:ILE:HD13	49:BR:41:ILE:N	2.27	0.50
38:BM:94:ALA:O	38:BM:96:ILE:HG23	2.11	0.50
18:AB:163:ILE:HA	18:AB:185:ILE:HD12	1.94	0.50
18:AB:161:PHE:CD2	18:AB:183:PHE:HB3	2.44	0.50
41:BJ:25:LEU:HD13	41:BJ:26:GLY:N	2.25	0.50
3:AD:89:LEU:HD22	3:AD:199:ILE:HD11	1.93	0.50
47:DF:90:LEU:C	47:DF:91:ARG:HD3	2.32	0.50
6:AG:45:ALA:HB1	6:AG:120:ALA:HB2	1.92	0.50
24:DI:21:PRO:CB	24:DI:22:PRO:HD3	2.38	0.50
26:DD:124:ARG:HA	26:DD:165:MET:CE	2.42	0.50
37:BL:57:LEU:CB	37:BL:60:ARG:HH11	2.21	0.50
18:CB:98:GLY:C	18:CB:100:LEU:H	2.15	0.50
27:DK:20:MET:C	27:DK:41:ILE:HD12	2.32	0.50
1:AA:554:A:H5'	11:AL:25:ALA:CB	2.38	0.50
23:DB:543:G:C4	23:DB:544:C:H1'	2.45	0.50
51:BZ:27:ARG:HD3	51:BZ:28:ARG:H	1.77	0.50
23:BB:919:U:H6	23:BB:919:U:O5'	1.94	0.50
23:BB:718:A:H3'	23:BB:719:C:H6	1.76	0.50
1:AA:502:A:H4'	1:AA:550:G:H4'	1.94	0.50
23:DB:606:U:OP1	29:DE:99:LYS:HD2	2.11	0.50
21:AN:26:LEU:HA	21:AN:29:ILE:HD12	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:72:PRO:O	2:CC:76:ILE:HG12	2.11	0.50
1:CA:600:A:OP2	7:CH:87:ARG:HG2	2.11	0.50
23:BB:1461:C:H2'	23:BB:1462:C:C6	2.47	0.50
21:CN:79:SER:O	21:CN:83:VAL:HG23	2.11	0.50
1:AA:469:C:H2'	1:AA:470:C:C6	2.47	0.50
12:AM:92:ARG:HA	12:AM:92:ARG:CZ	2.42	0.50
23:DB:2299:U:H2'	23:DB:2300:C:H6	1.75	0.50
52:BW:73:PRO:C	52:BW:75:ASN:H	2.14	0.50
23:DB:68:G:H2'	23:DB:69:C:H6	1.77	0.50
2:AC:142:ARG:HG2	2:AC:143:LEU:HD23	1.94	0.50
50:DT:61:LEU:HD21	50:DT:82:LYS:HD3	1.93	0.50
1:AA:635:A:H2'	1:AA:636:U:C6	2.46	0.50
50:BT:18:GLU:C	50:BT:20:ALA:H	2.12	0.50
48:BG:41:GLU:HB2	48:BG:52:GLY:O	2.12	0.50
1:AA:728:A:H2'	1:AA:729:A:C8	2.46	0.50
23:BB:1915:U:H2'	23:BB:1916:A:C8	2.47	0.50
1:AA:113:G:H2'	1:AA:114:U:C6	2.47	0.50
23:BB:464:U:H1'	23:BB:686:U:H5	1.76	0.50
23:BB:2037:A:H2'	23:BB:2038:G:C8	2.47	0.50
24:BI:72:THR:HG21	24:BI:111:THR:O	2.12	0.50
23:BB:2708:G:H2'	23:BB:2709:G:H8	1.77	0.50
29:DE:98:LYS:O	29:DE:102:ARG:HG2	2.12	0.50
7:AH:17:GLN:OE1	7:AH:69:ALA:HB1	2.11	0.50
18:CB:121:GLN:HG2	18:CB:121:GLN:O	2.12	0.50
39:BX:9:LYS:HE3	39:BX:9:LYS:HA	1.92	0.50
23:DB:527:C:O2	23:DB:527:C:O4'	2.28	0.50
23:BB:2309:A:H2'	23:BB:2309:A:N3	2.27	0.50
26:BD:36:GLN:O	26:BD:36:GLN:HG3	2.12	0.50
1:CA:144:G:O2'	1:CA:145:G:H5'	2.12	0.50
23:BB:598:U:H2'	23:BB:599:A:H8	1.77	0.50
9:AJ:8:ILE:CD1	9:AJ:75:ASP:HA	2.42	0.50
19:CU:42:THR:HB	19:CU:46:ARG:NE	2.26	0.50
50:DT:54:GLU:CB	50:DT:88:LYS:HB2	2.42	0.50
9:CJ:70:HIS:N	9:CJ:70:HIS:CD2	2.79	0.50
1:CA:1117:A:H4'	8:CI:105:ARG:CZ	2.42	0.50
23:DB:1799:G:C5	25:DC:175:LEU:HD13	2.46	0.50
26:BD:108:ASP:OD2	26:BD:206:ALA:HA	2.12	0.50
5:CF:86:ARG:HH12	5:CF:88:MET:HG3	1.76	0.50
23:DB:2328:A:H2'	23:DB:2329:U:H6	1.76	0.50
23:BB:2271:G:H2'	23:BB:2272:U:C6	2.46	0.50
23:BB:138:U:O3'	23:BB:139:U:H2'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1148:U:C2'	1:AA:1149:C:H5'	2.42	0.50
12:AM:102:LYS:HG3	12:AM:103:THR:N	2.26	0.50
25:BC:141:HIS:HB3	25:BC:190:THR:O	2.11	0.50
10:CK:95:THR:HG23	10:CK:96:ILE:N	2.27	0.50
26:BD:124:ARG:HA	26:BD:165:MET:CE	2.41	0.50
49:DR:7:SER:OG	49:DR:12:HIS:HE1	1.95	0.50
3:AD:116:LEU:HD21	3:AD:153:ARG:HD3	1.92	0.50
30:BY:35:VAL:HG22	30:BY:36:GLU:N	2.26	0.50
44:BQ:87:VAL:CB	49:BR:52:PRO:HG3	2.39	0.50
13:AP:21:VAL:HG21	13:AP:60:TRP:CD1	2.46	0.50
3:AD:71:PHE:CE1	3:AD:89:LEU:HD11	2.47	0.50
10:CK:46:ALA:HB1	10:CK:61:ALA:HB1	1.93	0.50
17:AT:71:ALA:O	17:AT:74:HIS:HB2	2.12	0.50
29:DE:5:LEU:HB2	29:DE:10:SER:H	1.77	0.50
13:CP:6:LEU:HB3	13:CP:17:TYR:HB3	1.94	0.50
2:CC:172:VAL:HG12	2:CC:174:LEU:CD1	2.41	0.50
10:AK:28:ASN:HD22	10:AK:46:ALA:HB3	1.77	0.50
26:DD:116:LYS:HB3	26:DD:118:PHE:CE2	2.47	0.50
21:CN:1:ALA:HB1	21:CN:6:LYS:HZ1	1.74	0.50
18:CB:96:LEU:O	18:CB:99:MET:HG2	2.12	0.50
28:DP:61:ARG:CB	28:DP:61:ARG:HH21	2.23	0.50
23:BB:2848:G:H1'	23:BB:2868:A:N6	2.26	0.50
34:B3:54:LEU:O	34:B3:58:ILE:HG13	2.12	0.50
23:BB:2181:U:H2'	23:BB:2182:U:H6	1.76	0.50
45:DS:81:SER:HA	45:DS:99:ARG:HA	1.94	0.50
27:BK:116:ILE:HG13	27:BK:117:SER:N	2.27	0.50
1:AA:82:G:C6	1:AA:88:U:O2	2.64	0.50
29:BE:28:VAL:HG23	29:BE:29:HIS:N	2.26	0.50
11:CL:30:ARG:HB3	11:CL:57:THR:CG2	2.41	0.50
27:BK:13:ASN:HD21	27:BK:98:ARG:H	1.59	0.50
23:DB:1507:C:H2'	23:DB:1508:A:H4'	1.94	0.50
1:AA:1060:U:H2'	1:AA:1061:G:C8	2.47	0.50
1:AA:1305:G:H1'	1:AA:1332:A:N6	2.27	0.50
3:AD:56:GLU:O	3:AD:60:VAL:HG12	2.11	0.50
23:BB:1547:C:H2'	23:BB:1548:A:C8	2.47	0.50
23:BB:1883:U:H2'	23:BB:1884:G:H1'	1.94	0.50
1:CA:1519:A:H3'	1:CA:1520:C:C5'	2.41	0.50
3:CD:97:LEU:O	3:CD:100:VAL:HG23	2.12	0.50
23:DB:2199:A:H5''	23:DB:2200:C:H5	1.77	0.50
47:BF:72:SER:O	47:BF:78:ILE:HB	2.11	0.50
1:CA:1463:U:H2'	1:CA:1464:U:C6	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:162:A:H2'	1:CA:163:C:O4'	2.11	0.50
23:BB:2078:C:H2'	23:BB:2079:U:H6	1.76	0.50
1:AA:158:G:H1	1:AA:163:C:H42	1.60	0.50
22:DA:94:A:O2'	22:DA:95:U:H5'	2.12	0.50
1:CA:1434:A:H2'	1:CA:1435:G:C8	2.47	0.50
35:BV:53:LYS:HA	35:BV:53:LYS:NZ	2.26	0.50
1:CA:993:G:H21	1:CA:996:A:N6	2.09	0.50
31:B0:2:VAL:HG12	31:B0:3:GLN:H	1.77	0.50
23:BB:1320:C:H5	23:BB:1329:U:H5''	1.76	0.50
23:BB:190:A:H5''	23:BB:204:A:H61	1.76	0.50
26:DD:79:LEU:HD22	26:DD:79:LEU:N	2.27	0.50
23:DB:2063:C:O2	23:DB:2450:A:N1	2.45	0.50
23:DB:794:A:H2'	23:DB:795:C:C6	2.47	0.50
23:BB:523:C:H4'	23:BB:540:C:O2	2.11	0.50
24:BI:23:VAL:HG23	24:BI:24:GLY:H	1.76	0.50
20:AO:69:TYR:CZ	20:AO:73:LYS:HG3	2.46	0.50
1:CA:1438:G:C2'	1:CA:1439:G:H5'	2.42	0.50
23:DB:1786:A:H1'	23:DB:1938:A:N6	2.27	0.50
29:BE:72:SER:C	29:BE:74:LYS:H	2.13	0.50
23:BB:454:A:H3'	23:BB:455:C:H5'	1.94	0.50
23:DB:2822:G:H2'	23:DB:2823:A:H5''	1.92	0.50
23:BB:1189:A:H2'	23:BB:1190:G:O4'	2.10	0.50
23:DB:834:G:O2'	23:DB:835:C:H5'	2.12	0.50
1:CA:1432:G:H1'	1:CA:1468:A:N6	2.26	0.50
23:DB:1083:U:H2'	23:DB:1085:A:OP2	2.12	0.50
14:CQ:80:LYS:HZ3	14:CQ:81:ALA:N	2.10	0.50
2:AC:54:ILE:O	2:AC:54:ILE:HG12	2.11	0.50
23:BB:1315:C:H2'	23:BB:1316:U:C6	2.47	0.50
23:BB:2257:U:O2'	23:BB:2258:C:H5'	2.12	0.50
1:AA:618:C:H1'	13:AP:14:ARG:NH1	2.27	0.50
23:DB:1750:G:H2'	23:DB:1751:U:C6	2.46	0.50
5:CF:10:VAL:HA	5:CF:84:VAL:HA	1.93	0.50
23:BB:1958:C:H2'	23:BB:1959:G:H8	1.75	0.50
23:DB:1098:A:C3'	24:DI:3:LYS:HA	2.24	0.50
1:AA:1238:A:N7	1:AA:1303:C:H1'	2.27	0.50
48:BG:14:VAL:O	48:BG:14:VAL:HG23	2.12	0.50
23:DB:26:G:H1'	23:DB:514:A:N6	2.26	0.50
14:CQ:7:LEU:O	14:CQ:60:ILE:HD13	2.12	0.50
40:BH:114:GLU:HG3	40:BH:132:PHE:CZ	2.47	0.50
40:BH:140:ALA:C	40:BH:141:LYS:HD3	2.32	0.50
42:BN:72:ASP:C	42:BN:74:GLU:H	2.16	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:144:A:H2'	23:DB:145:C:C6	2.47	0.50
48:BG:84:LYS:CB	48:BG:132:LEU:H	2.24	0.50
49:BR:3:ALA:HB1	49:BR:59:ILE:HD13	1.92	0.50
46:DU:73:ASN:C	46:DU:75:ALA:H	2.16	0.50
49:DR:4:VAL:CG2	49:DR:39:LEU:HG	2.42	0.50
49:DR:41:ILE:HD13	49:DR:41:ILE:N	2.26	0.50
3:AD:115:GLN:HG3	3:AD:119:HIS:CE1	2.47	0.50
23:DB:1059:G:H2'	23:DB:1060:U:C5	2.47	0.50
27:DK:88:ASN:HD22	27:DK:89:ASN:H	1.52	0.50
22:DA:7:G:H4'	43:DO:29:HIS:CD2	2.47	0.50
47:DF:115:GLY:HA2	47:DF:177:ARG:NH1	2.20	0.50
28:BP:1:SER:H1	28:BP:4:ILE:HD12	1.77	0.50
37:DL:116:VAL:HG13	37:DL:117:THR:N	2.21	0.50
31:D0:39:ARG:O	31:D0:40:HIS:HB2	2.11	0.50
1:CA:920:U:H2'	1:CA:921:U:H6	1.74	0.50
26:DD:146:ILE:HD12	26:DD:155:VAL:HG21	1.93	0.50
47:BF:134:GLN:HB3	47:BF:149:ARG:CG	2.41	0.50
15:CR:41:SER:HB3	15:CR:51:GLN:HG2	1.94	0.50
46:BU:51:LEU:N	46:BU:53:GLN:NE2	2.60	0.50
4:AE:19:ARG:O	4:AE:20:VAL:HB	2.11	0.50
43:BO:49:VAL:HG11	43:BO:82:ALA:CA	2.40	0.50
40:DH:14:SER:HB2	40:DH:17:ASP:CB	2.42	0.50
31:B0:48:TYR:C	31:B0:50:GLY:H	2.15	0.50
16:CS:30:LEU:HG	16:CS:47:THR:O	2.11	0.50
23:DB:2743:U:H2'	23:DB:2744:G:H5''	1.93	0.50
14:CQ:83:LEU:H	14:CQ:83:LEU:CD2	2.24	0.50
8:AI:112:ARG:HD3	8:AI:114:LYS:HZ3	1.77	0.50
11:AL:107:LYS:C	11:AL:109:ARG:H	2.15	0.50
1:AA:764:C:N4	1:AA:812:G:H1	2.10	0.50
1:AA:22:G:H2'	1:AA:23:C:C6	2.47	0.50
18:AB:166:ASP:CG	18:AB:190:SER:HA	2.32	0.50
1:AA:712:A:O2'	1:AA:713:G:H5'	2.12	0.50
1:AA:715:A:H2'	1:AA:716:A:H8	1.74	0.50
43:BO:100:HIS:C	43:BO:104:GLN:HB2	2.32	0.50
1:CA:801:U:H2'	1:CA:802:A:C8	2.47	0.50
1:AA:1116:U:O2'	1:AA:1117:A:H5'	2.12	0.50
1:CA:744:C:H2'	1:CA:745:G:C8	2.47	0.50
27:DK:51:LYS:HG3	27:DK:52:VAL:N	2.26	0.50
23:DB:1629:U:O2	23:DB:2698:U:H5''	2.12	0.50
23:DB:2700:A:H2'	23:DB:2701:U:H6	1.76	0.50
8:CI:93:LEU:N	8:CI:93:LEU:HD23	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2798:U:H4'	23:DB:2800:A:C2	2.47	0.50
9:CJ:37:ARG:HE	9:CJ:37:ARG:C	2.14	0.50
23:DB:1164:C:H2'	23:DB:1165:A:C8	2.46	0.50
46:BU:13:LEU:HA	46:BU:18:LYS:CE	2.42	0.50
25:BC:146:LYS:HB2	25:BC:149:LYS:HB2	1.94	0.50
23:BB:538:A:H2'	23:BB:539:G:O4'	2.12	0.50
23:BB:2027:G:O2'	23:BB:2028:U:H5'	2.12	0.50
1:AA:605:U:H2'	1:AA:606:G:H8	1.77	0.50
23:BB:1340:U:H3'	23:BB:1341:G:H5'	1.93	0.50
1:AA:62:U:O2'	1:AA:379:C:H1'	2.12	0.50
40:BH:86:ASP:O	40:BH:87:GLU:HG3	2.11	0.50
23:BB:1661:G:O2'	23:BB:1662:U:H5'	2.11	0.50
47:BF:163:GLU:HA	47:BF:166:ARG:HH11	1.77	0.50
27:BK:79:PHE:CD1	27:BK:79:PHE:N	2.80	0.50
5:AF:73:GLU:O	5:AF:77:THR:HG23	2.11	0.50
23:DB:1429:G:O2'	23:DB:1430:G:H5'	2.12	0.50
19:AU:42:THR:C	19:AU:46:ARG:HE	2.14	0.50
29:DE:62:GLN:HG2	29:DE:63:LYS:H	1.75	0.50
2:CC:38:VAL:O	2:CC:42:LEU:HD23	2.12	0.50
5:AF:5:GLU:HG3	5:AF:63:ASN:ND2	2.26	0.50
5:AF:6:ILE:HG23	5:AF:62:MET:HB3	1.92	0.50
5:AF:6:ILE:HD12	5:AF:7:VAL:N	2.27	0.50
48:BG:89:VAL:HG12	48:BG:90:GLY:N	2.26	0.50
37:DL:79:LEU:HD12	37:DL:112:LEU:HB2	1.93	0.50
1:AA:9:G:H2'	1:AA:10:A:H8	1.77	0.50
47:DF:109:ARG:HB3	47:DF:135:ILE:HD12	1.94	0.50
3:CD:145:ARG:HH22	3:CD:147:LYS:HE2	1.77	0.50
28:BP:3:ILE:HG23	28:BP:4:ILE:N	2.26	0.50
47:BF:33:ILE:HD13	47:BF:98:PHE:HD2	1.75	0.50
18:AB:184:ALA:HB3	18:AB:195:VAL:CG2	2.42	0.50
20:AO:33:THR:HG23	20:AO:63:ARG:HH12	1.77	0.50
47:DF:3:LEU:HB2	47:DF:100:GLU:OE1	2.12	0.50
6:AG:117:LEU:HD23	6:AG:120:ALA:HB3	1.94	0.50
42:DN:28:LEU:N	42:DN:34:ILE:HD11	2.27	0.50
23:DB:558:U:P	41:DJ:113:PRO:HG2	2.51	0.50
2:AC:10:ARG:HH11	2:AC:10:ARG:HG3	1.77	0.50
23:DB:2848:G:H1'	23:DB:2868:A:N6	2.27	0.50
27:DK:118:LEU:O	27:DK:120:PRO:HD2	2.12	0.50
6:CG:26:VAL:CA	6:CG:42:VAL:HG21	2.41	0.50
11:AL:2:THR:OG1	11:AL:5:GLN:HB2	2.12	0.50
23:BB:935:C:O2'	23:BB:936:A:H5'	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:847:U:O4'	23:DB:847:U:O2	2.29	0.50
23:DB:969:G:H2'	23:DB:970:U:C6	2.47	0.50
21:CN:30:ILE:HA	21:CN:34:ASN:HB2	1.93	0.50
1:AA:1489:G:H2'	1:AA:1490:U:H6	1.76	0.50
1:CA:1271:A:H2'	1:CA:1272:G:H8	1.76	0.50
1:AA:492:C:H2'	1:AA:493:A:N3	2.26	0.50
2:CC:33:ASP:OD2	21:CN:64:ARG:HB3	2.12	0.50
21:AN:86:ALA:HA	21:AN:91:GLU:HG3	1.93	0.50
9:AJ:67:ILE:HA	21:AN:94:GLY:O	2.12	0.50
34:D3:25:HIS:HB2	34:D3:43:LEU:O	2.11	0.50
23:BB:2758:A:C2'	23:BB:2759:G:H5'	2.41	0.50
23:DB:1210:G:H5'	23:DB:1212:G:H5'	1.94	0.50
23:DB:2194:U:H2'	23:DB:2195:U:H6	1.77	0.50
20:CO:31:LEU:HD22	20:CO:31:LEU:O	2.12	0.50
23:DB:2615:U:C2	31:D0:3:GLN:HA	2.46	0.50
1:CA:605:U:H2'	1:CA:606:G:H8	1.77	0.50
23:BB:1316:U:O2'	23:BB:1317:G:H5'	2.11	0.50
18:CB:104:LYS:O	18:CB:108:GLN:HG2	2.12	0.50
23:BB:1349:C:H2'	23:BB:1350:C:H6	1.77	0.50
1:CA:626:G:H2'	1:CA:627:G:C8	2.47	0.50
23:BB:642:U:O2	23:BB:644:A:H3'	2.11	0.50
23:BB:2778:A:O2'	23:BB:2781:A:H5'	2.12	0.50
23:BB:2315:G:H2'	23:BB:2316:G:H8	1.76	0.50
23:BB:2156:G:H8	23:BB:2156:G:O5'	1.95	0.50
1:AA:538:G:OP2	11:AL:111:GLN:HB2	2.11	0.50
23:DB:1275:A:H2'	23:DB:1276:A:O4'	2.11	0.50
17:CT:72:ALA:HA	17:CT:75:LYS:HD3	1.94	0.50
23:BB:1973:G:O2'	23:BB:1974:C:H5'	2.12	0.50
23:BB:1054:A:H2'	23:BB:1055:G:C8	2.46	0.50
18:CB:48:MET:HB3	18:CB:199:ILE:HA	1.93	0.49
50:DT:53:VAL:HG12	50:DT:54:GLU:N	2.26	0.49
52:BW:59:PHE:O	52:BW:60:ALA:HB3	2.12	0.49
1:CA:1349:A:N6	1:CA:1373:G:H1'	2.26	0.49
26:BD:104:VAL:HG12	26:BD:106:LYS:HE2	1.94	0.49
5:CF:66:ALA:HB1	5:CF:70:VAL:HG21	1.94	0.49
52:BW:35:ILE:O	52:BW:37:VAL:N	2.45	0.49
4:CE:76:ASN:HB2	4:CE:81:GLN:NE2	2.26	0.49
8:AI:34:LEU:H	8:AI:36:GLN:NE2	2.10	0.49
23:BB:28:A:N6	23:BB:512:G:O2'	2.45	0.49
28:DP:3:ILE:HG23	28:DP:4:ILE:N	2.27	0.49
49:BR:61:ALA:HB2	49:BR:98:ILE:HA	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1001:C:H2'	1:AA:1002:G:C8	2.47	0.49
23:BB:674:G:OP1	29:BE:71:GLY:HA3	2.12	0.49
46:DU:10:VAL:HA	46:DU:70:ALA:O	2.12	0.49
1:AA:954:G:H2'	1:AA:955:U:H6	1.76	0.49
37:DL:116:VAL:HG22	37:DL:117:THR:N	2.27	0.49
23:DB:2886:A:N6	31:D0:39:ARG:NE	2.54	0.49
22:BA:43:C:C2'	22:BA:44:G:H5''	2.41	0.49
18:AB:103:TRP:O	18:AB:107:ARG:HG2	2.12	0.49
21:AN:80:ARG:HG3	21:AN:81:ILE:N	2.26	0.49
39:DX:1:MET:O	39:DX:5:GLU:HG2	2.12	0.49
47:DF:13:LYS:HA	47:DF:16:MET:HG2	1.94	0.49
23:DB:126:A:H5'	36:D2:19:ARG:CD	2.42	0.49
27:BK:17:ARG:HH11	27:BK:45:GLU:HG3	1.76	0.49
1:AA:994:A:H2	21:AN:4:SER:HA	1.76	0.49
47:BF:8:LYS:HA	47:BF:12:VAL:HG21	1.94	0.49
47:BF:12:VAL:O	47:BF:16:MET:HG2	2.12	0.49
23:BB:1593:A:H2'	23:BB:1594:U:O4'	2.12	0.49
2:CC:64:ARG:HD3	2:CC:99:GLN:NE2	2.22	0.49
48:BG:94:ARG:HB3	48:BG:127:GLN:NE2	2.26	0.49
51:DZ:54:LYS:O	51:DZ:57:ARG:HB2	2.12	0.49
30:BY:21:ALA:O	30:BY:24:LEU:HB3	2.12	0.49
37:DL:3:LEU:O	37:DL:5:THR:HG23	2.12	0.49
23:DB:2665:A:O2'	23:DB:2666:C:H5'	2.12	0.49
1:AA:182:A:H1'	1:AA:183:C:C5	2.47	0.49
1:CA:678:U:H4'	1:CA:778:G:OP1	2.12	0.49
23:BB:2030:A:H4'	23:BB:2031:A:H5'	1.94	0.49
45:BS:69:LEU:HB3	45:BS:107:VAL:CG2	2.42	0.49
23:BB:1846:G:H2'	23:BB:1847:A:O4'	2.12	0.49
45:DS:15:GLN:HA	45:DS:18:ARG:CD	2.41	0.49
2:CC:179:ALA:HB1	2:CC:202:PHE:HE1	1.76	0.49
1:CA:33:A:H2'	1:CA:34:C:H6	1.76	0.49
44:DQ:24:TYR:CD1	44:DQ:25:GLY:N	2.80	0.49
34:B3:57:VAL:O	34:B3:59:ALA:N	2.41	0.49
23:BB:847:U:O4'	23:BB:847:U:O2	2.29	0.49
23:BB:1026:G:OP2	23:BB:1134:A:H1'	2.12	0.49
23:DB:2799:A:H4'	23:DB:2800:A:C1'	2.42	0.49
2:AC:21:TRP:HZ3	2:AC:23:ALA:HB2	1.77	0.49
1:AA:317:U:H2'	1:AA:318:G:C8	2.46	0.49
11:AL:65:TYR:HB3	11:AL:95:HIS:HD2	1.77	0.49
26:BD:79:LEU:N	26:BD:79:LEU:HD22	2.27	0.49
23:DB:2455:G:H2'	23:DB:2456:C:H6	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2339:C:H2'	23:BB:2340:A:H8	1.77	0.49
23:DB:1258:U:H2'	23:DB:1259:G:H8	1.76	0.49
38:DM:90:GLU:HA	38:DM:90:GLU:OE1	2.11	0.49
18:CB:166:ASP:O	18:CB:169:HIS:HB3	2.11	0.49
1:CA:386:C:O2'	1:CA:387:U:H5'	2.11	0.49
23:DB:2828:G:H2'	23:DB:2829:A:H8	1.77	0.49
27:BK:58:LEU:H	27:BK:58:LEU:HD23	1.77	0.49
9:CJ:47:GLU:HB3	9:CJ:49:PHE:CZ	2.47	0.49
23:BB:598:U:H2'	23:BB:599:A:C8	2.47	0.49
23:DB:1041:G:H2'	23:DB:1042:G:H8	1.77	0.49
47:DF:42:ALA:O	47:DF:46:LYS:HG3	2.12	0.49
23:DB:2037:A:H2'	23:DB:2038:G:C8	2.47	0.49
33:B1:18:HIS:CD2	33:B1:40:PRO:HD2	2.47	0.49
23:DB:1708:C:O2'	23:DB:1709:U:H5'	2.12	0.49
23:BB:57:C:H2'	23:BB:58:G:O4'	2.12	0.49
22:BA:109:A:O2'	22:BA:110:C:H5'	2.12	0.49
1:AA:968:A:H4'	1:AA:969:A:OP2	2.11	0.49
33:B1:8:ILE:CD1	33:B1:51:ALA:HA	2.42	0.49
23:DB:1472:C:H2'	23:DB:1473:G:C8	2.47	0.49
1:AA:610:U:O2	1:AA:610:U:O4'	2.30	0.49
31:D0:56:LYS:O	31:D0:56:LYS:HD3	2.12	0.49
31:B0:56:LYS:O	31:B0:56:LYS:HD3	2.12	0.49
34:B3:50:SER:C	34:B3:52:GLY:H	2.15	0.49
23:DB:2047:C:H2'	23:DB:2048:G:H8	1.76	0.49
47:DF:163:GLU:HA	47:DF:166:ARG:HH11	1.75	0.49
38:BM:75:GLU:OE1	38:BM:90:GLU:HG2	2.12	0.49
38:BM:90:GLU:HA	38:BM:90:GLU:OE1	2.12	0.49
21:CN:60:ARG:NE	21:CN:69:PRO:HB3	2.27	0.49
50:BT:14:PRO:HA	50:BT:32:LEU:HB3	1.94	0.49
26:DD:201:LEU:HD12	26:DD:201:LEU:H	1.77	0.49
41:BJ:54:ILE:HD12	41:BJ:55:ILE:N	2.27	0.49
5:CF:39:LEU:C	5:CF:40:GLU:HG2	2.32	0.49
5:CF:91:ARG:H	5:CF:93:LYS:NZ	2.07	0.49
6:CG:12:LEU:CD2	6:CG:13:PRO:HD2	2.31	0.49
37:DL:82:LEU:O	37:DL:85:VAL:HG12	2.11	0.49
43:DO:36:TYR:N	43:DO:36:TYR:CD2	2.80	0.49
15:CR:33:THR:HG23	15:CR:37:LYS:O	2.11	0.49
46:DU:96:LYS:O	46:DU:97:SER:HB3	2.12	0.49
24:DI:76:ALA:HA	24:DI:135:MET:SD	2.52	0.49
40:DH:131:SER:HB2	40:DH:140:ALA:C	2.32	0.49
47:DF:103:ILE:HD11	47:DF:174:PHE:CD1	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BM:19:GLY:HA3	38:BM:38:ARG:HH22	1.77	0.49
16:AS:37:SER:OG	16:AS:70:LEU:HD13	2.12	0.49
47:BF:90:LEU:C	47:BF:91:ARG:HD3	2.32	0.49
23:BB:1021:A:H2'	23:BB:1023:U:H5''	1.94	0.49
47:BF:147:ARG:O	47:BF:148:VAL:HG22	2.13	0.49
26:BD:148:GLN:CB	26:BD:152:PRO:HG2	2.42	0.49
26:BD:4:LEU:HD12	26:BD:32:ASN:HB2	1.94	0.49
23:BB:182:A:O2'	23:BB:183:C:H5'	2.10	0.49
48:BG:168:VAL:HG12	48:BG:170:THR:HG22	1.95	0.49
23:BB:2884:U:H2'	23:BB:2885:G:C8	2.47	0.49
37:DL:57:LEU:HB2	37:DL:60:ARG:NH1	2.22	0.49
43:DO:49:VAL:HG11	43:DO:82:ALA:CA	2.41	0.49
24:DI:126:ARG:HB3	24:DI:126:ARG:NH1	2.27	0.49
23:BB:2391:G:O6	23:BB:2425:A:H8	1.95	0.49
44:DQ:65:ASN:HB2	44:DQ:75:TYR:HB2	1.94	0.49
1:AA:85:U:O2'	1:AA:86:G:H5''	2.12	0.49
29:BE:29:HIS:O	29:BE:33:VAL:HG23	2.13	0.49
45:DS:55:ILE:O	45:DS:58:ALA:HB3	2.12	0.49
23:BB:470:A:H61	50:BT:72:GLN:NE2	2.10	0.49
15:AR:41:SER:HB3	15:AR:51:GLN:HG2	1.94	0.49
23:DB:2722:G:H2'	23:DB:2723:C:H6	1.77	0.49
1:AA:1305:G:H1'	1:AA:1332:A:H62	1.77	0.49
45:BS:29:VAL:HG23	45:BS:70:LYS:CA	2.39	0.49
1:CA:182:A:H1'	1:CA:183:C:C5	2.46	0.49
6:AG:145:GLU:C	6:AG:147:ASN:N	2.65	0.49
6:AG:144:ALA:O	6:AG:145:GLU:HB3	2.12	0.49
23:DB:2649:C:H2'	23:DB:2650:U:H6	1.77	0.49
1:AA:817:C:H1'	1:AA:819:A:C5'	2.42	0.49
23:BB:2880:C:O2'	23:BB:2881:U:H5'	2.12	0.49
50:BT:50:LEU:C	50:BT:52:GLU:H	2.16	0.49
23:DB:18:U:H2'	23:DB:19:A:C8	2.47	0.49
29:DE:148:ILE:HG13	29:DE:167:VAL:HG23	1.93	0.49
1:AA:1486:G:H2'	1:AA:1487:G:C1'	2.41	0.49
1:CA:139:A:O2'	1:CA:140:U:H5'	2.13	0.49
1:CA:301:G:H2'	1:CA:302:G:C8	2.44	0.49
23:BB:276:U:O2'	23:BB:278:A:N7	2.45	0.49
20:AO:67:LEU:HD12	20:AO:88:ARG:HH22	1.76	0.49
17:AT:60:GLN:HB3	17:AT:65:LEU:HD23	1.93	0.49
1:AA:908:A:O2'	1:AA:909:A:H5'	2.12	0.49
17:CT:50:PHE:O	17:CT:53:MET:HG3	2.12	0.49
7:AH:86:LYS:HG3	7:AH:124:ILE:HD11	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:611:C:C2'	23:DB:612:G:H5'	2.42	0.49
23:DB:2880:C:O2'	23:DB:2881:U:H5'	2.12	0.49
11:AL:80:LEU:HB3	11:AL:97:VAL:HG23	1.94	0.49
16:CS:64:GLU:CD	16:CS:64:GLU:N	2.65	0.49
24:BI:49:GLU:CG	24:BI:54:ILE:HD11	2.42	0.49
44:DQ:39:ILE:O	44:DQ:43:GLN:HG3	2.11	0.49
23:BB:522:A:H2'	23:BB:523:C:C6	2.46	0.49
1:AA:398:U:H2'	1:AA:399:G:H8	1.77	0.49
5:AF:12:PRO:HD3	5:AF:56:LYS:O	2.12	0.49
6:AG:53:SER:C	6:AG:55:LYS:H	2.15	0.49
23:BB:685:A:H1'	23:BB:688:U:O4	2.12	0.49
20:CO:45:GLU:O	20:CO:47:LYS:N	2.41	0.49
14:CQ:23:ALA:C	14:CQ:24:ILE:HD12	2.32	0.49
23:DB:2708:G:H2'	23:DB:2709:G:H8	1.76	0.49
20:CO:50:HIS:O	20:CO:53:ARG:HB3	2.12	0.49
23:DB:1334:G:O2'	23:DB:1335:C:H5'	2.13	0.49
25:DC:51:ARG:NH2	25:DC:246:PRO:HG2	2.26	0.49
2:AC:99:GLN:O	2:AC:100:ILE:HB	2.11	0.49
28:DP:62:LYS:HB3	28:DP:69:VAL:HG22	1.93	0.49
23:BB:227:A:C2	23:BB:2407:A:H1'	2.47	0.49
6:CG:136:LYS:O	6:CG:140:VAL:HG23	2.13	0.49
23:BB:1668:A:N3	23:BB:1670:C:C4	2.80	0.49
1:AA:740:U:H4'	20:AO:42:HIS:CD2	2.47	0.49
23:DB:198:C:H6	23:DB:198:C:O5'	1.95	0.49
1:AA:1360:A:H8	1:AA:1360:A:OP1	1.95	0.49
27:DK:79:PHE:N	27:DK:79:PHE:CD1	2.79	0.49
8:AI:53:LEU:O	8:AI:53:LEU:HD13	2.12	0.49
22:DA:78:A:H2'	22:DA:79:G:O4'	2.12	0.49
21:CN:60:ARG:O	21:CN:62:ARG:N	2.46	0.49
50:BT:34:VAL:HG21	50:BT:43:ILE:HD11	1.94	0.49
9:CJ:28:THR:HG21	9:CJ:90:LEU:HD22	1.94	0.49
26:BD:110:THR:HG21	26:BD:169:ARG:HH11	1.77	0.49
14:AQ:75:VAL:HG23	14:AQ:76:ARG:N	2.28	0.49
40:BH:81:ALA:HA	40:BH:147:VAL:CB	2.38	0.49
23:DB:2355:G:H4'	52:DW:20:LEU:CD1	2.42	0.49
29:DE:141:MET:O	29:DE:143:LEU:HG	2.12	0.49
43:BO:30:ARG:HA	43:BO:35:ILE:HD13	1.93	0.49
43:BO:30:ARG:HG2	43:BO:31:THR:H	1.77	0.49
1:AA:1288:A:H1'	1:AA:1352:C:O2'	2.13	0.49
9:AJ:5:ARG:N	9:AJ:76:ILE:O	2.45	0.49
9:AJ:77:VAL:HG12	9:AJ:78:GLU:N	2.23	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:39:ASN:ND2	46:DU:62:ALA:HB3	2.27	0.49
23:BB:2722:G:H2'	23:BB:2723:C:H6	1.78	0.49
33:B1:49:LYS:HG3	33:B1:50:GLU:N	2.18	0.49
23:DB:1172:C:H3'	23:DB:1173:U:H6	1.77	0.49
28:DP:75:THR:CG2	28:DP:76:HIS:H	2.23	0.49
26:BD:13:ARG:HD2	28:BP:55:HIS:ND1	2.27	0.49
46:BU:10:VAL:HA	46:BU:70:ALA:O	2.12	0.49
8:CI:66:VAL:CG2	8:CI:74:GLN:HG3	2.38	0.49
1:AA:958:A:OP1	16:AS:78:THR:HG21	2.12	0.49
23:DB:2884:U:H2'	23:DB:2885:G:C8	2.48	0.49
23:DB:2303:G:H2'	23:DB:2304:G:O4'	2.12	0.49
47:DF:33:ILE:HG13	47:DF:95:MET:HG2	1.94	0.49
47:DF:147:ARG:HG2	47:DF:148:VAL:HG13	1.93	0.49
47:DF:47:LYS:HA	47:DF:50:ASP:OD1	2.13	0.49
25:DC:14:HIS:O	25:DC:16:VAL:HG23	2.12	0.49
51:BZ:5:CYS:SG	51:BZ:8:THR:HG23	2.52	0.49
24:BI:21:PRO:CB	24:BI:22:PRO:HD3	2.39	0.49
1:AA:1308:U:H2'	1:AA:1309:G:C8	2.46	0.49
23:DB:2579:C:O5'	23:DB:2579:C:H6	1.95	0.49
1:CA:1306:A:H61	1:CA:1331:G:C1'	2.25	0.49
6:AG:70:PRO:HG3	6:AG:102:TRP:CH2	2.48	0.49
23:BB:1507:C:C2'	23:BB:1508:A:H4'	2.42	0.49
27:BK:102:PRO:HD3	28:BP:65:ASN:HB2	1.93	0.49
23:DB:2388:A:H5'	23:DB:2389:G:OP2	2.12	0.49
38:DM:32:GLY:HA3	38:DM:103:TYR:O	2.12	0.49
1:AA:1137:C:O2'	1:AA:1138:G:H5''	2.13	0.49
36:B2:31:LEU:O	36:B2:35:ARG:HB3	2.13	0.49
23:BB:1439:A:N7	23:BB:1440:U:C2	2.80	0.49
1:CA:238:A:C2'	1:CA:239:U:H5''	2.41	0.49
23:DB:2594:C:H2'	23:DB:2595:G:C8	2.47	0.49
23:BB:632:A:H1'	37:BL:66:PHE:HE2	1.76	0.49
1:CA:1476:A:O2'	1:CA:1477:U:H5'	2.12	0.49
11:CL:113:ARG:CG	11:CL:118:VAL:HB	2.42	0.49
3:CD:29:THR:HB	3:CD:30:LYS:NZ	2.28	0.49
1:CA:1157:A:H4'	1:CA:1158:C:O5'	2.12	0.49
47:DF:72:SER:O	47:DF:78:ILE:HB	2.12	0.49
1:CA:900:A:H2'	1:CA:901:A:C8	2.48	0.49
23:BB:1843:C:O2'	23:BB:1844:C:H5'	2.13	0.49
23:BB:78:U:H2'	23:BB:79:C:C6	2.47	0.49
1:CA:712:A:O2'	1:CA:713:G:H5'	2.11	0.49
36:D2:13:ASN:HD21	36:D2:46:LYS:NZ	2.10	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BQ:75:TYR:O	44:BQ:79:ILE:HG22	2.12	0.49
10:CK:32:THR:HG22	10:CK:34:THR:HG22	1.94	0.49
2:CC:89:VAL:O	2:CC:92:ASP:HB2	2.13	0.49
23:DB:2804:U:H2'	23:DB:2805:C:H6	1.76	0.49
23:BB:1585:C:H2'	23:BB:1586:A:C8	2.47	0.49
9:AJ:92:LEU:HD13	9:AJ:92:LEU:N	2.26	0.49
26:DD:69:ALA:C	26:DD:71:ALA:H	2.14	0.49
23:DB:523:C:O2'	23:DB:524:G:H5'	2.12	0.49
23:BB:2496:C:H5'	38:BM:82:MET:HG3	1.95	0.49
17:CT:45:ALA:O	17:CT:48:LYS:HB3	2.12	0.49
23:BB:553:G:O2'	23:BB:554:U:H5'	2.12	0.49
1:CA:635:A:H2'	1:CA:636:U:C6	2.46	0.49
1:AA:62:U:H2'	1:AA:63:C:C6	2.46	0.49
23:BB:2642:G:O2'	23:BB:2643:G:H5'	2.12	0.49
1:CA:1352:C:H2'	1:CA:1353:G:C8	2.48	0.49
23:DB:2308:G:HO2'	23:DB:2310:C:H5	1.58	0.49
23:BB:648:G:O2'	23:BB:649:G:H5'	2.11	0.49
41:BJ:88:THR:HG22	41:BJ:91:GLU:OE1	2.13	0.49
1:CA:399:G:H2'	1:CA:400:C:C6	2.46	0.49
23:BB:586:A:H5'	29:BE:84:THR:OG1	2.12	0.49
48:BG:39:ALA:HB2	48:BG:57:TYR:CD2	2.47	0.49
1:AA:1236:A:H2'	1:AA:1237:C:O4'	2.13	0.49
12:AM:33:LEU:HD22	12:AM:38:ILE:CG2	2.42	0.49
35:DV:38:LEU:HD21	35:DV:65:VAL:HG21	1.95	0.49
29:BE:108:ILE:O	29:BE:108:ILE:HD13	2.12	0.49
23:DB:26:G:H1'	23:DB:514:A:H61	1.77	0.49
29:DE:196:VAL:O	29:DE:200:LEU:HD23	2.12	0.49
8:AI:30:ASN:HA	8:AI:65:THR:HG22	1.93	0.49
43:DO:30:ARG:HA	43:DO:35:ILE:HD13	1.94	0.49
2:AC:129:PHE:CG	2:AC:130:ARG:N	2.79	0.49
2:AC:148:ILE:HA	2:AC:200:TRP:O	2.12	0.49
35:DV:77:VAL:CG2	35:DV:89:ILE:HG23	2.40	0.49
23:DB:1064:C:H5'	24:DI:88:GLY:HA3	1.94	0.49
23:DB:1175:A:C3'	23:DB:1176:U:H5'	2.43	0.49
26:BD:12:THR:O	26:BD:24:VAL:HG12	2.11	0.49
9:AJ:42:LEU:HB3	9:AJ:71:LEU:HD21	1.94	0.49
23:DB:2377:A:O2'	23:DB:2378:A:H5'	2.12	0.49
21:AN:51:PRO:HB2	21:AN:54:SER:CB	2.42	0.49
18:AB:85:SER:HB2	18:AB:88:GLN:OE1	2.12	0.49
49:DR:60:LYS:N	49:DR:100:GLY:HA3	2.28	0.49
1:AA:981:U:H4'	21:AN:60:ARG:CD	2.39	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CB:63:LYS:HE2	18:CB:87:ASP:OD2	2.13	0.49
35:DV:61:LEU:O	35:DV:71:LYS:HA	2.13	0.49
55:AA:1662:SCM:H2M1	4:AE:26:GLY:HA2	1.93	0.49
23:DB:125:A:C2	36:D2:10:LEU:HA	2.47	0.49
12:CM:38:ILE:HG22	12:CM:42:VAL:HG21	1.94	0.49
1:AA:1032:G:N3	1:AA:1032:G:C3'	2.73	0.49
1:AA:190:A:O5'	1:AA:190:A:H8	1.95	0.49
12:AM:2:ARG:HD3	12:AM:6:ILE:CA	2.41	0.49
16:CS:40:PHE:HB2	16:CS:42:ASN:ND2	2.26	0.49
48:BG:94:ARG:HB3	48:BG:127:GLN:CG	2.38	0.49
27:DK:17:ARG:HB3	27:DK:45:GLU:HB3	1.94	0.49
23:DB:543:G:H2'	23:DB:544:C:O4'	2.12	0.49
23:BB:1244:A:O2'	23:BB:1245:G:H5'	2.12	0.49
11:CL:23:LEU:HD23	11:CL:29:LYS:CE	2.42	0.49
11:AL:54:VAL:HG12	11:AL:55:ARG:N	2.26	0.49
1:AA:1169:A:H2'	1:AA:1170:A:C8	2.47	0.49
23:DB:1737:G:H5'	23:DB:1738:G:OP2	2.13	0.49
23:DB:813:U:H2'	23:DB:814:C:H6	1.77	0.49
25:DC:75:ALA:CB	25:DC:93:VAL:HG22	2.42	0.49
25:DC:95:TYR:HE1	25:DC:101:ARG:HD2	1.76	0.49
23:DB:2840:C:H2'	23:DB:2841:C:H6	1.76	0.49
1:CA:1158:C:O2'	18:CB:131:LYS:HB2	2.11	0.49
8:CI:29:ILE:O	8:CI:29:ILE:HG22	2.12	0.49
21:AN:41:TRP:HB3	21:AN:44:VAL:CG2	2.43	0.49
25:DC:4:LYS:HE2	25:DC:5:CYS:N	2.27	0.49
3:CD:8:LEU:HD21	3:CD:21:LYS:HG2	1.94	0.49
29:DE:134:LEU:CD2	29:DE:161:ALA:HB2	2.42	0.49
23:DB:1460:U:H3'	23:DB:1461:C:H5'	1.94	0.49
23:DB:1037:G:O2'	23:DB:1038:G:H5'	2.11	0.49
4:AE:58:ALA:HA	4:AE:61:LYS:HG2	1.94	0.49
23:DB:1165:A:H2'	23:DB:1166:G:H8	1.77	0.49
23:BB:1683:U:H2'	23:BB:1684:G:C8	2.48	0.49
23:DB:566:U:H2'	23:DB:567:U:O4'	2.12	0.49
23:BB:1599:U:H2'	23:BB:1600:C:H6	1.76	0.49
23:BB:2284:A:OP2	33:B1:5:ARG:HG3	2.12	0.49
47:BF:50:ASP:O	47:BF:53:ALA:HB3	2.13	0.49
23:DB:41:C:H2'	23:DB:42:A:O4'	2.12	0.49
23:BB:1340:U:O2	23:BB:1340:U:O4'	2.29	0.49
7:CH:4:ASP:OD1	7:CH:7:ALA:HB2	2.12	0.49
23:DB:2370:G:H2'	23:DB:2371:G:O4'	2.12	0.49
20:CO:30:ALA:HA	20:CO:85:LEU:HD21	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1041:G:O2'	1:AA:1042:A:H5'	2.12	0.49
23:BB:1849:G:H2'	23:BB:1850:G:H8	1.77	0.49
1:AA:793:U:O2	1:AA:1516:G:H4'	2.12	0.49
11:AL:82:ARG:HH11	11:AL:82:ARG:HG2	1.78	0.49
1:CA:981:U:H2'	1:CA:982:U:C5	2.48	0.49
18:CB:42:LEU:HA	18:CB:45:THR:CB	2.42	0.49
12:AM:13:HIS:HB2	12:AM:16:ILE:HG23	1.94	0.49
12:AM:72:ILE:O	12:AM:76:ILE:HG13	2.13	0.49
50:DT:30:ILE:HG12	50:DT:32:LEU:HD23	1.95	0.49
50:BT:54:GLU:CB	50:BT:88:LYS:HB2	2.43	0.49
52:DW:49:ASN:O	52:DW:50:VAL:HG13	2.13	0.49
42:DN:42:LYS:O	42:DN:45:ARG:HB3	2.13	0.49
26:DD:113:SER:HB2	26:DD:168:GLU:H	1.75	0.49
1:CA:1379:G:O2'	1:CA:1380:U:H5'	2.12	0.49
1:AA:1229:A:H2'	1:AA:1230:C:H6	1.76	0.49
25:BC:140:VAL:HG11	25:BC:143:VAL:HG22	1.94	0.49
48:DG:120:ILE:HD12	48:DG:143:VAL:HG21	1.93	0.49
48:DG:84:LYS:HG3	48:DG:131:VAL:C	2.32	0.49
46:DU:81:ARG:HG3	46:DU:81:ARG:NH2	2.27	0.49
40:DH:135:HIS:CG	40:DH:136:SER:N	2.80	0.49
38:DM:2:LEU:O	38:DM:69:PRO:HG3	2.12	0.49
38:DM:94:ALA:O	38:DM:96:ILE:HG23	2.12	0.49
44:BQ:93:ILE:HG23	44:BQ:94:LEU:HD22	1.93	0.49
21:AN:46:LYS:HZ3	21:AN:46:LYS:HB3	1.76	0.49
26:DD:34:VAL:HG13	26:DD:93:GLY:HA2	1.93	0.49
3:CD:166:LYS:CD	3:CD:167:PRO:HD2	2.39	0.49
47:DF:8:LYS:HA	47:DF:12:VAL:HG21	1.93	0.49
1:AA:1387:G:H5''	55:AA:1662:SCM:H8M3	1.95	0.49
1:AA:1349:A:H1'	1:AA:1374:A:N6	2.27	0.49
18:CB:119:GLN:HE22	18:CB:124:THR:CG2	2.24	0.49
26:BD:5:VAL:H	26:BD:32:ASN:CG	2.15	0.49
2:AC:45:GLU:C	2:AC:46:LEU:HD22	2.32	0.49
1:CA:1107:C:H4'	2:CC:168:ARG:NH1	2.28	0.49
23:DB:116:C:O2'	23:DB:126:A:C8	2.63	0.49
10:AK:46:ALA:HB1	10:AK:61:ALA:HB1	1.93	0.49
26:DD:114:LYS:HB2	26:DD:116:LYS:HE3	1.93	0.49
23:BB:783:A:H8	23:BB:784:G:H4'	1.78	0.49
1:AA:1308:U:H3'	12:AM:97:ARG:NH1	2.28	0.49
23:BB:2869:G:H2'	23:BB:2870:C:H6	1.78	0.49
48:BG:94:ARG:HH21	48:BG:105:SER:H	1.59	0.49
23:DB:433:C:O2'	23:DB:434:U:H5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DK:105:ARG:O	27:DK:108:ARG:HG2	2.12	0.49
1:CA:890:G:O2'	1:CA:906:A:N6	2.46	0.49
23:BB:265:A:HO2'	23:BB:266:G:H4'	1.77	0.49
23:DB:783:A:H2'	23:DB:784:G:O5'	2.12	0.49
1:CA:208:U:H2'	1:CA:210:C:C5	2.47	0.49
23:DB:2665:A:C2'	23:DB:2666:C:H5'	2.41	0.49
23:BB:1733:G:H2'	23:BB:1734:G:H8	1.78	0.49
1:AA:1366:C:H2'	1:AA:1367:C:H6	1.76	0.49
1:CA:778:G:H2'	1:CA:779:C:C6	2.47	0.49
1:AA:475:C:H2'	1:AA:476:U:H6	1.77	0.49
1:AA:284:C:O2'	1:AA:285:C:H5'	2.12	0.49
23:BB:18:U:H2'	23:BB:19:A:H8	1.76	0.49
23:DB:446:G:H5'	44:DQ:2:ARG:HH22	1.76	0.49
21:CN:72:PHE:O	21:CN:73:LEU:HD23	2.12	0.49
23:DB:1028:A:N6	23:DB:1125:G:H2'	2.27	0.49
20:CO:71:LYS:HE2	20:CO:71:LYS:O	2.12	0.49
4:CE:58:ALA:HA	4:CE:61:LYS:HG2	1.94	0.49
7:CH:76:ARG:HD2	7:CH:125:ILE:O	2.13	0.49
17:CT:24:ARG:HG3	17:CT:65:LEU:HD11	1.95	0.49
23:DB:2300:C:H2'	23:DB:2301:C:H6	1.77	0.49
1:AA:309:A:H2'	1:AA:310:G:H8	1.78	0.49
1:CA:598:U:H4'	7:CH:85:TYR:CG	2.47	0.49
23:DB:2787:C:H1'	26:DD:63:PRO:HG3	1.94	0.49
11:AL:66:ILE:HG21	11:AL:71:HIS:HB3	1.94	0.49
23:DB:1747:U:H2'	23:DB:1748:C:H6	1.76	0.49
23:BB:1350:C:H5'	23:BB:1351:C:OP2	2.13	0.49
24:DI:102:ARG:HG3	24:DI:141:ASP:HB2	1.94	0.49
23:BB:2369:A:O2'	23:BB:2370:G:H5'	2.12	0.49
23:BB:1526:C:H2'	23:BB:1527:G:O4'	2.11	0.49
23:BB:1649:G:O2'	23:BB:1650:A:H5'	2.13	0.49
23:BB:2875:C:H2'	23:BB:2876:G:C8	2.47	0.49
23:DB:1908:C:O2'	23:DB:1909:C:H5'	2.12	0.49
4:CE:14:LEU:HA	4:CE:36:THR:HB	1.94	0.49
17:CT:4:LYS:HE3	17:CT:6:ALA:HB2	1.94	0.49
1:AA:240:G:H8	1:AA:240:G:H5'	1.76	0.49
25:BC:226:PRO:HA	25:BC:232:GLY:HA3	1.94	0.49
1:CA:1348:U:O2'	1:CA:1349:A:H5'	2.12	0.49
25:BC:171:VAL:HB	25:BC:183:VAL:HG12	1.94	0.49
26:BD:9:VAL:HG22	26:BD:9:VAL:O	2.13	0.49
20:AO:25:THR:O	20:AO:29:VAL:HG23	2.13	0.49
29:BE:173:THR:HA	29:BE:199:MET:SD	2.51	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:108:ILE:CD1	29:BE:181:ILE:HG13	2.43	0.49
14:CQ:75:VAL:HG23	14:CQ:76:ARG:N	2.28	0.49
40:BH:69:ALA:HB3	40:BH:70:GLU:OE2	2.12	0.49
29:DE:108:ILE:HD13	37:DL:2:ARG:NH2	2.28	0.49
23:BB:1197:G:H2'	23:BB:1198:U:C6	2.45	0.49
42:DN:72:ASP:C	42:DN:74:GLU:H	2.15	0.49
23:DB:138:U:H1'	23:DB:141:G:N1	2.27	0.49
48:BG:84:LYS:HG3	48:BG:131:VAL:C	2.32	0.49
28:DP:4:ILE:HA	28:DP:7:LEU:HB3	1.95	0.49
27:BK:59:LYS:HD2	27:BK:89:ASN:HD22	1.77	0.49
46:DU:98:ASN:OD1	46:DU:100:GLU:HB2	2.13	0.49
40:DH:139:PHE:HB2	40:DH:141:LYS:NZ	2.26	0.49
49:BR:63:VAL:HA	49:BR:95:ASP:O	2.13	0.49
1:AA:1014:A:C2	1:AA:1219:A:H1'	2.48	0.49
1:AA:1085:U:H3'	1:AA:1086:U:C6	2.48	0.49
1:AA:1340:A:H2'	1:AA:1341:U:O4'	2.12	0.49
22:DA:42:C:C5	47:DF:65:LEU:HD22	2.47	0.49
6:CG:145:GLU:H	6:CG:148:LYS:HB2	1.76	0.49
26:BD:149:ASN:O	26:BD:152:PRO:HD2	2.13	0.49
7:CH:14:ARG:HE	7:CH:75:GLN:HE22	1.60	0.49
26:DD:118:PHE:O	26:DD:119:ALA:HB3	2.12	0.49
23:BB:2751:G:H5'	48:BG:2:ARG:CD	2.42	0.49
17:CT:66:ILE:HG21	17:CT:71:ALA:HB2	1.93	0.49
27:DK:77:ILE:HA	28:DP:70:GLU:O	2.13	0.49
4:AE:152:VAL:HG11	4:AE:156:ARG:HH21	1.76	0.49
48:BG:94:ARG:NH2	48:BG:104:LEU:HA	2.27	0.49
42:DN:12:ARG:HG3	42:DN:13:ASN:OD1	2.11	0.49
23:DB:547:A:H2'	23:DB:548:G:O4'	2.12	0.49
11:CL:23:LEU:O	11:CL:25:ALA:N	2.45	0.49
27:BK:13:ASN:ND2	27:BK:98:ARG:H	2.11	0.49
1:AA:78:A:H2'	1:AA:79:G:C8	2.47	0.49
36:B2:21:ARG:HH21	36:B2:43:THR:HG22	1.76	0.49
23:BB:929:U:O2'	23:BB:930:G:H5'	2.12	0.49
11:AL:20:VAL:HG12	11:AL:93:ARG:HB3	1.94	0.49
25:BC:242:HIS:O	25:BC:244:VAL:HG13	2.12	0.49
1:AA:1175:G:O2'	1:AA:1176:A:H5'	2.13	0.49
1:CA:1328:C:OP1	12:CM:27:THR:HG21	2.12	0.49
48:BG:6:ALA:HB3	48:BG:68:ARG:CD	2.41	0.49
8:CI:28:VAL:O	8:CI:64:ILE:HB	2.13	0.49
47:DF:74:ALA:HB1	47:DF:76:PHE:CD2	2.48	0.49
23:DB:2105:U:H2'	23:DB:2106:U:C6	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:730:A:O2'	23:BB:731:C:H5'	2.12	0.49
1:AA:299:G:H2'	1:AA:300:A:C8	2.47	0.49
23:BB:1534:U:H2'	23:BB:1536:C:C4	2.47	0.49
1:CA:299:G:H2'	1:CA:300:A:C8	2.48	0.49
15:AR:33:THR:HG22	15:AR:39:VAL:HG12	1.95	0.49
1:AA:441:A:H61	1:AA:493:A:H62	1.59	0.49
7:CH:124:ILE:C	7:CH:125:ILE:HD12	2.33	0.49
22:BA:95:U:H2'	22:BA:96:G:C8	2.47	0.49
23:BB:2262:U:H2'	23:BB:2263:C:C6	2.47	0.49
1:CA:556:C:O2'	1:CA:557:G:H5'	2.12	0.49
23:DB:2345:G:N3	23:DB:2381:A:H2'	2.28	0.49
29:BE:149:ILE:O	29:BE:188:MET:HA	2.12	0.49
23:BB:2800:A:H2'	23:BB:2801:G:O4'	2.13	0.49
1:CA:1114:C:H2'	1:CA:1115:U:C6	2.48	0.49
23:DB:2677:G:H2'	23:DB:2678:C:H6	1.78	0.49
10:AK:34:THR:HG22	10:AK:40:ALA:HA	1.94	0.49
17:AT:45:ALA:O	17:AT:48:LYS:HB3	2.12	0.49
22:DA:2:G:H2'	22:DA:3:C:H6	1.77	0.49
1:CA:184:G:H5'	1:CA:224:U:O2'	2.12	0.49
23:BB:1889:A:H2'	23:BB:1890:A:H8	1.76	0.49
23:BB:2026:U:H2'	23:BB:2027:G:C8	2.47	0.49
43:DO:4:LYS:C	43:DO:6:ALA:H	2.16	0.49
23:DB:1312:U:H4'	23:DB:1313:U:O5'	2.13	0.49
25:DC:40:GLY:O	25:DC:53:ILE:HG23	2.12	0.49
1:CA:62:U:H4'	1:CA:378:G:N2	2.28	0.49
20:AO:69:TYR:HA	20:AO:72:ARG:NH2	2.27	0.49
1:CA:394:G:H2'	1:CA:395:C:H6	1.77	0.49
42:BN:77:ALA:O	42:BN:81:ASN:HB2	2.13	0.49
23:DB:1990:C:H2'	23:DB:1991:U:C6	2.47	0.49
23:BB:1831:G:O2'	23:BB:1832:C:H5'	2.12	0.49
33:D1:25:ASN:OD1	33:D1:27:ARG:HB2	2.13	0.49
51:BZ:17:ASN:HB2	51:BZ:25:THR:HB	1.93	0.49
23:BB:1210:G:H5'	23:BB:1212:G:O4'	2.12	0.49
1:CA:1347:G:O2'	1:CA:1348:U:P	2.70	0.49
25:DC:128:THR:HA	25:DC:190:THR:CA	2.43	0.49
23:BB:26:G:H1'	23:BB:514:A:H61	1.77	0.49
23:BB:2722:G:O2'	23:BB:2723:C:H5'	2.12	0.49
35:DV:28:ALA:HA	35:DV:88:HIS:ND1	2.28	0.49
37:BL:115:GLU:OE1	37:BL:115:GLU:N	2.46	0.49
49:BR:60:LYS:H	49:BR:100:GLY:CA	2.25	0.49
49:DR:4:VAL:HA	49:DR:12:HIS:O	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1060:U:O2	23:DB:1088:A:C8	2.65	0.49
40:DH:67:ALA:O	40:DH:71:LYS:HB2	2.11	0.49
38:BM:41:LEU:HA	38:BM:45:GLN:OE1	2.12	0.49
1:CA:919:A:O2'	1:CA:920:U:H5'	2.12	0.49
20:AO:43:PHE:CE1	20:AO:56:LEU:HD22	2.47	0.49
37:DL:95:LEU:HB3	37:DL:100:ILE:HG23	1.94	0.49
23:BB:2471:A:O2'	23:BB:2472:G:O5'	2.30	0.49
34:B3:21:PHE:CE1	34:B3:58:ILE:HG12	2.48	0.49
23:DB:1013:C:H2'	23:DB:1014:A:C8	2.48	0.49
23:DB:1013:C:H2'	23:DB:1014:A:H8	1.77	0.49
45:DS:70:LYS:O	45:DS:72:THR:N	2.45	0.49
11:CL:29:LYS:HB3	11:CL:56:LEU:HD22	1.94	0.49
17:CT:2:ASN:CG	17:CT:3:ILE:H	2.15	0.49
1:CA:239:U:H5''	1:CA:239:U:H6	1.76	0.49
23:DB:2598:A:H5''	25:DC:233:GLY:O	2.11	0.49
41:DJ:36:LEU:C	41:DJ:121:LYS:HZ1	2.16	0.49
23:DB:62:U:H2'	23:DB:63:A:O4'	2.12	0.49
23:DB:1883:U:H2'	23:DB:1884:G:H1'	1.94	0.49
23:DB:37:C:O2'	23:DB:38:A:H5'	2.13	0.49
2:CC:5:HIS:CD2	2:CC:7:ASN:H	2.31	0.49
23:BB:193:U:H2'	23:BB:194:G:H8	1.77	0.49
3:CD:97:LEU:HA	3:CD:100:VAL:HG23	1.94	0.49
1:CA:1390:U:H2'	1:CA:1391:U:H6	1.78	0.49
1:AA:684:U:H2'	1:AA:685:G:O4'	2.13	0.49
2:CC:32:LEU:HD21	21:CN:92:ILE:CG1	2.43	0.49
23:DB:1409:U:H2'	23:DB:1410:G:H8	1.78	0.49
23:DB:873:C:H2'	23:DB:874:G:H8	1.77	0.49
52:DW:73:PRO:C	52:DW:75:ASN:H	2.16	0.49
21:AN:76:PHE:HE1	21:AN:92:ILE:HD13	1.77	0.49
1:AA:184:G:H5'	1:AA:224:U:O2'	2.12	0.49
23:DB:1915:U:H2'	23:DB:1916:A:O4'	2.13	0.49
23:DB:564:C:H1'	44:DQ:36:GLN:OE1	2.12	0.49
22:DA:2:G:O2'	22:DA:3:C:H5'	2.13	0.49
45:BS:49:LYS:O	45:BS:53:SER:HB2	2.13	0.49
47:BF:2:LYS:CE	47:BF:2:LYS:H	2.25	0.49
1:AA:1186:G:H21	21:AN:100:TRP:C	2.15	0.49
23:BB:523:C:O2'	23:BB:524:G:H5'	2.12	0.49
44:BQ:40:LYS:HA	44:BQ:43:GLN:OE1	2.12	0.49
1:CA:1432:G:H5'	28:DP:105:LYS:HG2	1.94	0.49
23:BB:2469:A:H4'	38:BM:55:ARG:NE	2.28	0.49
15:CR:25:ILE:O	15:CR:29:LYS:HG3	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AS:31:ARG:HG3	16:AS:56:HIS:CE1	2.47	0.49
26:DD:29:VAL:HB	26:DD:98:VAL:CG1	2.42	0.49
43:BO:9:ARG:HA	43:BO:12:THR:OG1	2.12	0.49
23:BB:765:C:H2'	23:BB:766:U:C6	2.47	0.49
1:CA:683:G:O2'	1:CA:684:U:H5'	2.12	0.49
23:DB:1676:A:H2'	23:DB:1677:A:O4'	2.13	0.49
23:DB:1098:A:H2'	24:DI:4:VAL:C	2.34	0.49
12:AM:21:ILE:CG2	12:AM:64:VAL:HB	2.42	0.49
1:CA:1240:U:H3'	1:CA:1241:G:C5'	2.42	0.49
23:DB:27:G:H1'	23:DB:513:A:H61	1.78	0.49
40:BH:96:THR:HB	40:BH:115:VAL:HG21	1.94	0.49
22:BA:27:C:H5'	43:BO:34:HIS:CD2	2.48	0.49
43:BO:34:HIS:O	43:BO:35:ILE:HG12	2.12	0.49
1:AA:10:A:OP2	4:AE:130:THR:HB	2.13	0.49
28:DP:6:GLN:HA	28:DP:9:GLN:CD	2.33	0.49
37:BL:79:LEU:HB3	37:BL:115:GLU:O	2.12	0.49
23:DB:322:A:H5'	23:DB:340:A:C1'	2.41	0.49
18:CB:18:GLN:HB2	18:CB:188:THR:OG1	2.13	0.49
9:AJ:10:LEU:HA	9:AJ:97:ASP:O	2.13	0.49
23:BB:996:A:O3'	44:BQ:91:ARG:HG2	2.13	0.49
7:AH:11:THR:HA	7:AH:14:ARG:HH12	1.77	0.49
13:AP:52:LEU:HD21	13:AP:75:ILE:HG23	1.95	0.49
23:BB:45:G:H5'	23:BB:46:G:OP1	2.12	0.49
28:DP:20:ARG:HG3	28:DP:21:PRO:HD2	1.95	0.49
47:DF:155:ILE:HD12	47:DF:155:ILE:N	2.27	0.49
6:AG:45:ALA:CA	6:AG:120:ALA:HB2	2.43	0.49
43:DO:88:LYS:HG2	43:DO:89:ASP:N	2.27	0.49
36:D2:9:VAL:HG13	36:D2:10:LEU:N	2.28	0.49
39:BX:8:GLU:O	39:BX:12:GLU:HB2	2.11	0.49
23:DB:1654:A:O2'	26:DD:118:PHE:CB	2.60	0.49
47:BF:15:LEU:HD12	47:BF:27:VAL:HB	1.93	0.49
23:BB:1589:U:H2'	23:BB:1590:A:C8	2.47	0.49
23:DB:2471:A:O2'	23:DB:2472:G:C8	2.57	0.49
42:DN:17:ARG:C	42:DN:19:ALA:H	2.15	0.49
23:BB:299:A:N6	23:BB:322:A:H1'	2.28	0.49
17:CT:43:LYS:HD2	17:CT:86:ALA:OXT	2.12	0.49
23:DB:929:U:O2'	23:DB:930:G:H5'	2.12	0.49
51:DZ:14:THR:HA	51:DZ:28:ARG:HA	1.94	0.49
23:DB:2748:A:H2'	23:DB:2749:A:O4'	2.12	0.49
41:BJ:58:ASN:HB3	41:BJ:61:LYS:HB2	1.94	0.49
23:DB:718:A:H3'	23:DB:719:C:H6	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:584:G:O2'	1:AA:585:G:H5'	2.13	0.49
23:BB:873:C:H2'	23:BB:874:G:H8	1.77	0.49
1:CA:764:C:H2'	1:CA:765:G:H5'	1.95	0.49
23:DB:2544:G:H1'	23:DB:2646:C:H5'	1.95	0.49
23:DB:1051:G:H2'	23:DB:1052:C:H6	1.78	0.49
3:CD:138:PRO:HA	3:CD:181:PHE:CD2	2.46	0.49
28:BP:94:ALA:O	28:BP:95:LYS:HD2	2.13	0.49
24:BI:56:VAL:CG2	24:BI:68:PHE:HB2	2.42	0.49
23:BB:528:A:H2	23:BB:2043:C:H4'	1.77	0.49
29:DE:3:LEU:HD21	29:DE:14:VAL:HG22	1.94	0.49
29:DE:3:LEU:HB2	29:DE:12:LEU:CG	2.43	0.49
1:CA:833:G:H2'	1:CA:834:U:H6	1.77	0.49
23:BB:2798:U:H4'	23:BB:2800:A:C2	2.48	0.49
1:AA:328:C:H1'	1:AA:329:A:OP2	2.13	0.49
47:BF:141:ASP:CG	47:BF:144:LYS:HB2	2.33	0.49
19:CU:7:GLU:OE2	19:CU:15:LEU:HG	2.13	0.49
27:DK:104:THR:H	27:DK:107:LEU:HD13	1.78	0.49
1:CA:89:U:O2'	1:CA:90:C:H5'	2.13	0.49
43:BO:6:ALA:HB1	43:BO:10:ARG:HH11	1.78	0.49
1:CA:628:G:H2'	1:CA:629:A:H8	1.76	0.49
23:DB:981:A:H4'	23:DB:2037:A:H5'	1.95	0.49
23:DB:1709:U:H2'	23:DB:1710:G:C8	2.48	0.49
23:BB:1210:G:H5'	23:BB:1212:G:H5'	1.94	0.49
1:AA:386:C:C2'	1:AA:387:U:H5'	2.43	0.49
3:AD:22:SER:HB3	3:AD:109:THR:HG22	1.95	0.49
1:CA:276:G:O2'	1:CA:277:C:H5'	2.12	0.49
1:AA:769:G:O2'	1:AA:770:C:H5'	2.13	0.49
21:CN:14:ALA:O	21:CN:18:LYS:HG3	2.13	0.49
23:DB:455:C:N3	23:DB:472:A:H2'	2.28	0.49
7:AH:38:VAL:O	7:AH:42:GLU:HB2	2.13	0.49
2:AC:29:ALA:HB2	21:AN:74:ARG:O	2.12	0.49
50:DT:85:VAL:C	50:DT:86:THR:HG23	2.32	0.49
1:CA:1240:U:OP1	6:CG:115:MET:HB2	2.13	0.49
35:BV:44:HIS:HE1	35:BV:86:LEU:N	2.11	0.49
35:BV:26:PHE:CE1	35:BV:89:ILE:HD11	2.34	0.49
48:DG:14:VAL:HG23	48:DG:14:VAL:O	2.13	0.49
6:CG:12:LEU:HD13	6:CG:13:PRO:CD	2.43	0.49
23:DB:2262:U:O2'	23:DB:2263:C:H5'	2.13	0.49
37:BL:82:LEU:C	37:BL:84:LYS:H	2.14	0.49
22:DA:28:C:OP1	43:DO:31:THR:HG21	2.12	0.49
23:DB:1729:U:H5	23:DB:1731:G:H21	1.55	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1729:U:H3'	23:BB:1730:C:C5'	2.43	0.49
42:BN:42:LYS:O	42:BN:45:ARG:HB3	2.13	0.49
23:BB:2000:C:O2'	23:BB:2001:C:H5'	2.13	0.49
37:BL:79:LEU:HD12	37:BL:112:LEU:HB2	1.95	0.49
40:BH:31:VAL:O	40:BH:32:PRO:C	2.51	0.49
23:DB:1170:C:H2'	23:DB:1171:G:C8	2.47	0.49
40:DH:116:ARG:HH21	40:DH:118:PRO:HG2	1.78	0.49
22:BA:7:G:H4'	43:BO:29:HIS:CD2	2.47	0.49
47:BF:121:PHE:HB2	47:BF:127:TYR:HA	1.93	0.49
18:AB:68:PHE:HA	18:AB:161:PHE:O	2.13	0.49
18:AB:95:TRP:CH2	18:AB:174:GLU:HB2	2.48	0.49
18:AB:91:VAL:HG11	18:AB:95:TRP:CD1	2.48	0.49
47:BF:102:LEU:O	47:BF:103:ILE:HB	2.12	0.49
36:B2:9:VAL:HG13	36:B2:10:LEU:N	2.28	0.49
25:BC:203:VAL:HG12	25:BC:205:GLY:N	2.28	0.49
23:BB:2751:G:N3	23:BB:2751:G:H2'	2.27	0.49
23:DB:2428:G:H5''	23:DB:2429:G:OP1	2.13	0.49
16:CS:15:LEU:O	16:CS:19:GLU:HB2	2.13	0.49
23:DB:2867:G:N3	23:DB:2867:G:C2'	2.74	0.49
42:DN:9:GLN:O	42:DN:17:ARG:HD3	2.13	0.49
23:BB:2425:A:H5''	23:BB:2426:A:H3'	1.94	0.49
18:AB:120:SER:HA	18:AB:125:PHE:CG	2.48	0.49
23:BB:160:A:H2'	23:BB:161:A:H8	1.78	0.49
9:AJ:52:LEU:HD12	9:AJ:53:ILE:N	2.27	0.49
2:CC:165:GLU:HA	2:CC:165:GLU:OE1	2.12	0.49
18:AB:114:LYS:O	18:AB:117:GLU:HB3	2.13	0.49
25:DC:254:LYS:HB3	25:DC:255:LYS:H	1.48	0.49
23:DB:1092:C:C2'	23:DB:1093:G:H5'	2.43	0.49
13:CP:48:GLU:CG	13:CP:49:GLY:H	2.26	0.49
29:DE:118:LEU:HA	29:DE:186:VAL:HG13	1.94	0.49
23:BB:1902:C:H2'	23:BB:1903:G:O4'	2.12	0.49
1:AA:803:G:H2'	1:AA:804:U:O4'	2.13	0.49
1:AA:598:U:H4'	7:AH:85:TYR:CG	2.47	0.49
22:BA:50:A:OP1	43:BO:68:LYS:HG3	2.13	0.49
29:BE:134:LEU:CD2	29:BE:161:ALA:HB2	2.43	0.49
23:DB:1210:G:H5'	23:DB:1212:G:O4'	2.13	0.49
23:BB:2799:A:H4'	23:BB:2800:A:C1'	2.42	0.49
23:BB:1151:A:H2'	23:BB:1152:C:H6	1.78	0.49
34:B3:40:LYS:O	34:B3:43:LEU:HB2	2.11	0.49
47:BF:2:LYS:N	47:BF:2:LYS:HE3	2.28	0.49
1:CA:435:A:H2'	1:CA:435:A:N3	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2586:U:H2'	23:DB:2587:A:H8	1.77	0.49
29:BE:98:LYS:O	29:BE:102:ARG:HG2	2.13	0.49
5:CF:12:PRO:HD3	5:CF:56:LYS:O	2.12	0.49
17:AT:49:ALA:HA	17:AT:52:GLU:HB3	1.94	0.49
23:DB:2488:G:H2'	23:DB:2489:U:C6	2.48	0.49
9:CJ:82:LYS:HD2	9:CJ:82:LYS:N	2.28	0.49
23:DB:1886:U:H6	23:DB:1886:U:O5'	1.95	0.49
23:DB:1660:G:O2'	23:DB:1661:G:H5'	2.12	0.49
10:AK:124:LYS:O	19:AU:33:ARG:NE	2.42	0.49
25:DC:185:ALA:C	25:DC:187:CYS:H	2.16	0.49
32:D4:7:VAL:HG22	32:D4:8:LYS:N	2.28	0.49
23:BB:1431:A:H2'	23:BB:1432:G:H8	1.78	0.49
5:CF:62:MET:HG3	5:CF:64:VAL:HG13	1.95	0.49
23:DB:2772:C:H2'	23:DB:2773:C:H6	1.78	0.49
4:CE:81:GLN:N	4:CE:146:MET:HE3	2.11	0.49
1:AA:1289:A:H2'	1:AA:1290:G:H5'	1.95	0.49
22:DA:24:G:N7	22:DA:56:G:H2'	2.28	0.49
48:BG:148:ARG:HG2	48:BG:163:TYR:CZ	2.47	0.49
27:BK:35:VAL:HG12	27:BK:69:VAL:CG2	2.43	0.49
46:DU:11:ILE:O	46:DU:12:VAL:HB	2.12	0.49
35:BV:80:HIS:HB3	35:BV:83:LYS:O	2.13	0.49
16:AS:4:LEU:HD13	16:AS:9:PHE:H	1.78	0.49
16:AS:4:LEU:CD1	16:AS:9:PHE:HB3	2.42	0.49
28:BP:4:ILE:HA	28:BP:7:LEU:HB3	1.94	0.49
1:AA:958:A:C2	16:AS:54:ARG:HG3	2.47	0.49
23:DB:2886:A:N7	31:D0:39:ARG:NH2	2.54	0.49
26:DD:148:GLN:HG3	26:DD:152:PRO:CB	2.43	0.49
44:DQ:82:LEU:HB3	44:DQ:88:GLU:OE1	2.12	0.49
23:BB:2729:G:H2'	23:BB:2730:C:C6	2.48	0.49
37:DL:55:MET:CE	37:DL:56:PRO:HD2	2.42	0.49
18:AB:218:ALA:O	18:AB:222:GLU:HG2	2.13	0.49
18:AB:217:ALA:O	18:AB:220:VAL:HB	2.13	0.49
23:DB:545:U:H3'	23:DB:546:U:H4'	1.94	0.49
17:AT:2:ASN:CG	17:AT:3:ILE:H	2.15	0.49
25:BC:161:VAL:HG12	25:BC:162:GLN:N	2.27	0.49
1:AA:1095:U:H2'	1:AA:1096:C:H6	1.76	0.49
1:CA:1392:G:H5'	1:CA:1531:A:H5''	1.95	0.49
1:AA:744:C:H2'	1:AA:745:G:C8	2.48	0.49
23:BB:1409:U:H2'	23:BB:1410:G:H8	1.78	0.49
20:CO:71:LYS:NZ	20:CO:72:ARG:HG2	2.27	0.49
1:AA:833:G:H2'	1:AA:834:U:C6	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:528:A:C2	23:BB:2043:C:H4'	2.47	0.49
22:BA:93:C:O2'	22:BA:94:A:H5'	2.13	0.49
22:BA:12:C:N4	52:BW:73:PRO:HD3	2.28	0.49
51:DZ:3:ARG:HA	51:DZ:50:ARG:HH11	1.77	0.49
1:CA:597:G:H2'	1:CA:598:U:H5'	1.94	0.49
11:AL:52:CYS:SG	11:AL:66:ILE:HD11	2.53	0.49
23:BB:1164:C:H2'	23:BB:1165:A:C8	2.47	0.49
11:CL:66:ILE:HG21	11:CL:71:HIS:HB3	1.95	0.49
23:BB:1100:C:H2'	23:BB:1101:U:C6	2.47	0.49
23:BB:2025:C:H2'	23:BB:2026:U:C6	2.47	0.49
33:D1:8:ILE:HD12	33:D1:51:ALA:HA	1.94	0.49
1:AA:1251:A:H2'	1:AA:1252:A:C8	2.47	0.49
8:CI:118:ARG:NH2	8:CI:122:ARG:HE	2.10	0.49
1:CA:684:U:H2'	1:CA:685:G:O4'	2.12	0.49
1:AA:824:G:O2'	1:AA:825:A:H5'	2.13	0.49
34:D3:50:SER:C	34:D3:52:GLY:H	2.17	0.49
26:BD:142:VAL:HB	26:BD:143:PRO:HD2	1.95	0.49
23:BB:1708:C:O2'	23:BB:1709:U:H5'	2.12	0.49
1:AA:291:U:H2'	1:AA:292:G:C8	2.48	0.49
1:CA:539:A:H2'	1:CA:540:G:C8	2.47	0.49
1:CA:46:G:O2'	1:CA:365:U:H1'	2.13	0.49
42:DN:77:ALA:O	42:DN:81:ASN:HB2	2.13	0.49
7:CH:66:GLN:HB3	7:CH:67:GLY:H	1.45	0.49
23:DB:443:A:N7	29:DE:40:ARG:HG2	2.28	0.49
1:AA:130:A:H1'	1:AA:263:A:O2'	2.13	0.49
1:CA:113:G:H2'	1:CA:114:U:C6	2.48	0.49
26:DD:138:LEU:N	26:DD:138:LEU:HD22	2.27	0.49
23:BB:1145:C:O2'	23:BB:1146:C:H5'	2.13	0.49
1:AA:1239:A:H4'	1:AA:1240:U:C5'	2.42	0.48
50:DT:43:ILE:HG21	50:DT:58:VAL:HG21	1.94	0.48
52:BW:49:ASN:O	52:BW:50:VAL:HG13	2.12	0.48
23:DB:2222:C:H4'	25:DC:184:GLU:CD	2.34	0.48
4:AE:76:ASN:HB2	4:AE:81:GLN:NE2	2.28	0.48
5:AF:98:GLU:HG2	5:AF:99:ALA:N	2.20	0.48
10:AK:110:THR:CA	19:AU:19:LYS:HZ1	2.25	0.48
23:BB:1080:A:O2'	23:BB:1081:U:H5'	2.12	0.48
2:AC:59:PRO:HG2	2:AC:62:SER:CB	2.43	0.48
1:CA:8:A:N6	3:CD:205:LYS:HB2	2.27	0.48
32:B4:2:LYS:HD3	32:B4:4:ARG:NH2	2.28	0.48
48:BG:120:ILE:HG13	48:BG:140:ILE:HG22	1.94	0.48
26:BD:116:LYS:HB3	26:BD:118:PHE:CE2	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DI:79:LEU:HD12	24:DI:135:MET:SD	2.53	0.48
40:DH:110:VAL:HG23	40:DH:132:PHE:CD1	2.48	0.48
44:BQ:63:ARG:NH1	44:BQ:96:ASP:HA	2.28	0.48
22:BA:42:C:C6	47:BF:65:LEU:HD22	2.48	0.48
18:AB:163:ILE:HG23	18:AB:164:ASP:N	2.21	0.48
41:BJ:25:LEU:CD2	41:BJ:26:GLY:H	2.26	0.48
1:CA:865:A:C2	1:CA:918:A:H4'	2.48	0.48
4:CE:136:VAL:HG13	4:CE:137:ARG:H	1.78	0.48
39:BX:13:GLU:O	39:BX:17:GLU:HG3	2.12	0.48
1:CA:949:A:O2'	1:CA:950:U:H5'	2.13	0.48
6:AG:72:VAL:HA	6:AG:89:GLU:HA	1.93	0.48
44:DQ:83:LYS:C	44:DQ:85:ALA:H	2.17	0.48
1:CA:1343:G:H2'	1:CA:1344:C:C6	2.48	0.48
23:DB:2073:C:H2'	23:DB:2074:U:H6	1.78	0.48
23:BB:999:U:O2'	23:BB:1000:A:H5'	2.14	0.48
48:DG:6:ALA:HB3	48:DG:68:ARG:CD	2.43	0.48
23:BB:655:A:H4'	23:BB:656:G:OP1	2.13	0.48
23:BB:2831:G:OP1	23:BB:2834:G:H4'	2.13	0.48
23:DB:1535:A:H3'	23:DB:1536:C:C6	2.48	0.48
23:DB:655:A:H4'	23:DB:656:G:OP1	2.13	0.48
3:AD:138:PRO:HA	3:AD:181:PHE:CD2	2.46	0.48
2:CC:176:THR:HB	2:CC:179:ALA:HB2	1.95	0.48
23:DB:1656:C:H2'	23:DB:1657:U:C6	2.45	0.48
23:DB:2547:A:H5''	27:DK:29:HIS:NE2	2.28	0.48
1:AA:1434:A:H2'	1:AA:1435:G:C8	2.47	0.48
23:BB:2758:A:H2'	23:BB:2759:G:H5'	1.95	0.48
23:BB:2299:U:H2'	23:BB:2300:C:H6	1.78	0.48
29:DE:149:ILE:O	29:DE:188:MET:HA	2.13	0.48
23:DB:521:U:H2'	23:DB:522:A:C8	2.47	0.48
44:BQ:24:TYR:CD1	44:BQ:25:GLY:N	2.80	0.48
1:AA:990:C:H2'	1:AA:991:U:O4'	2.12	0.48
34:B3:7:ARG:HG3	34:B3:7:ARG:NH1	2.27	0.48
31:D0:2:VAL:HG12	31:D0:3:GLN:H	1.78	0.48
31:D0:35:GLU:OE1	31:D0:44:ALA:HB3	2.12	0.48
23:BB:1395:A:H4'	23:BB:1397:U:C5	2.48	0.48
23:BB:642:U:H2'	23:BB:644:A:OP2	2.13	0.48
22:DA:91:C:H2'	22:DA:92:C:C6	2.47	0.48
28:DP:28:LYS:HE3	28:DP:82:SER:OG	2.13	0.48
1:CA:989:U:O2'	1:CA:990:C:H5'	2.13	0.48
36:D2:22:MET:SD	36:D2:28:ARG:HG3	2.53	0.48
23:BB:2660:A:H2'	23:BB:2661:G:O4'	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:824:G:O2'	1:CA:825:A:H5'	2.13	0.48
11:CL:34:THR:N	11:CL:53:ARG:O	2.46	0.48
1:CA:291:U:H2'	1:CA:292:G:C8	2.48	0.48
1:AA:1225:A:H5'	1:AA:1226:C:OP2	2.13	0.48
10:AK:88:PRO:HG3	19:AU:28:LEU:HD21	1.94	0.48
1:CA:610:U:O4'	1:CA:610:U:O2	2.30	0.48
2:CC:178:ARG:O	2:CC:178:ARG:HG2	2.13	0.48
1:CA:846:G:H2'	1:CA:846:G:N3	2.26	0.48
23:BB:409:G:H2'	23:BB:410:G:C8	2.47	0.48
23:DB:2418:A:H2'	23:DB:2419:U:O4'	2.13	0.48
19:CU:42:THR:HB	19:CU:46:ARG:HE	1.79	0.48
12:AM:44:ILE:HA	12:AM:47:LEU:HB2	1.95	0.48
9:CJ:100:ILE:O	9:CJ:100:ILE:HD12	2.13	0.48
23:DB:674:G:OP1	29:DE:71:GLY:HA3	2.13	0.48
23:DB:675:A:H4'	29:DE:62:GLN:HE22	1.78	0.48
23:BB:727:A:OP1	23:BB:1431:A:O2'	2.30	0.48
26:BD:113:SER:HB3	26:BD:167:ASN:HA	1.95	0.48
52:DW:17:ALA:O	52:DW:18:LYS:HD2	2.13	0.48
29:DE:117:ARG:NH1	37:DL:2:ARG:HB2	2.23	0.48
37:BL:120:VAL:HG12	37:BL:121:THR:N	2.28	0.48
40:BH:40:THR:OG1	40:BH:43:ASN:ND2	2.46	0.48
46:DU:26:ASN:ND2	46:DU:34:ILE:HD12	2.27	0.48
48:DG:152:ARG:HD3	48:DG:153:PRO:CD	2.42	0.48
49:DR:23:GLU:O	49:DR:25:LEU:HD22	2.13	0.48
24:DI:128:ILE:HA	24:DI:131:THR:HG23	1.94	0.48
24:DI:85:ILE:HD12	24:DI:87:SER:O	2.13	0.48
49:BR:40:MET:C	49:BR:41:ILE:HD13	2.34	0.48
31:D0:32:THR:OG1	31:D0:50:GLY:HA2	2.13	0.48
23:DB:2834:G:O6	23:DB:2879:A:H2'	2.13	0.48
3:CD:116:LEU:HD21	3:CD:153:ARG:HD3	1.95	0.48
47:DF:147:ARG:HB3	47:DF:147:ARG:CZ	2.43	0.48
9:AJ:29:ALA:HA	9:AJ:32:THR:HG22	1.95	0.48
28:BP:85:VAL:HG21	28:BP:88:ARG:NH1	2.28	0.48
48:DG:94:ARG:HH21	48:DG:105:SER:N	2.11	0.48
42:DN:108:ALA:O	42:DN:110:MET:HE2	2.13	0.48
2:CC:119:ILE:HG23	2:CC:197:VAL:HG21	1.95	0.48
16:CS:38:THR:HG22	16:CS:39:ILE:N	2.28	0.48
7:CH:6:ILE:HD11	7:CH:31:LEU:HD23	1.95	0.48
27:BK:101:GLY:O	27:BK:120:PRO:HB3	2.12	0.48
2:CC:8:GLY:HA2	2:CC:11:LEU:CG	2.42	0.48
25:BC:162:GLN:NE2	25:BC:174:ARG:HH22	2.11	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2729:G:H2'	23:DB:2730:C:C6	2.48	0.48
23:DB:2144:G:N2	23:DB:2148:G:N3	2.62	0.48
23:BB:364:C:H2'	23:BB:365:U:C5	2.48	0.48
1:CA:672:U:H2'	1:CA:673:A:C8	2.47	0.48
23:DB:2087:G:H2'	23:DB:2088:A:C8	2.48	0.48
23:BB:611:C:C2'	23:BB:612:G:H5'	2.43	0.48
23:BB:18:U:H2'	23:BB:19:A:C8	2.48	0.48
22:BA:90:C:OP1	38:BM:16:ARG:HB2	2.13	0.48
23:BB:1629:U:O2	23:BB:2698:U:H5''	2.14	0.48
22:BA:52:A:OP1	22:BA:52:A:H4'	2.13	0.48
35:DV:55:GLU:N	35:DV:55:GLU:CD	2.67	0.48
35:BV:53:LYS:HB3	35:BV:55:GLU:OE1	2.13	0.48
34:D3:20:GLY:HA3	34:D3:48:MET:CE	2.42	0.48
23:DB:286:U:H2'	23:DB:287:G:H8	1.77	0.48
23:DB:1810:A:H2'	23:DB:1811:G:O4'	2.12	0.48
23:BB:2800:A:H2'	23:BB:2801:G:C8	2.49	0.48
6:AG:135:LYS:HG2	6:AG:139:ASP:OD2	2.13	0.48
23:BB:1684:G:H2'	23:BB:1685:C:H6	1.76	0.48
34:B3:20:GLY:HA3	34:B3:48:MET:HE1	1.94	0.48
23:BB:780:G:H2'	23:BB:782:A:N7	2.28	0.48
1:CA:125:U:H2'	1:CA:126:G:C8	2.49	0.48
47:DF:141:ASP:CG	47:DF:144:LYS:HB2	2.34	0.48
23:DB:1340:U:H3'	23:DB:1341:G:H5'	1.94	0.48
1:AA:707:U:H4'	10:AK:21:HIS:CD2	2.48	0.48
1:CA:332:G:OP2	17:CT:4:LYS:HB2	2.12	0.48
23:BB:1709:U:H2'	23:BB:1710:G:H8	1.78	0.48
23:BB:279:A:N6	23:BB:361:G:H1'	2.28	0.48
37:BL:24:GLY:C	37:BL:26:GLY:H	2.16	0.48
1:CA:1190:G:OP1	2:CC:4:VAL:N	2.45	0.48
5:CF:16:GLU:CD	5:CF:16:GLU:H	2.16	0.48
47:DF:2:LYS:HE3	47:DF:2:LYS:N	2.28	0.48
23:DB:2778:A:O2'	23:DB:2781:A:H5'	2.13	0.48
23:DB:1479:G:O2'	23:DB:1480:C:H5'	2.13	0.48
23:DB:1099:G:H4'	24:DI:4:VAL:CG1	2.43	0.48
35:BV:38:LEU:HD21	35:BV:65:VAL:HG21	1.95	0.48
5:CF:38:ARG:HD3	5:CF:97:THR:CA	2.42	0.48
14:AQ:7:LEU:O	14:AQ:60:ILE:HD13	2.12	0.48
40:BH:128:HIS:CB	40:BH:144:VAL:HG12	2.43	0.48
23:DB:2336:A:H1'	23:DB:2385:C:O4'	2.12	0.48
23:BB:2329:U:H2'	23:BB:2330:G:C8	2.48	0.48
48:DG:91:VAL:C	48:DG:93:TYR:H	2.16	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DS:66:ILE:HG12	45:DS:67:ASP:N	2.28	0.48
47:DF:131:VAL:C	47:DF:133:GLU:H	2.16	0.48
46:DU:21:ARG:HD3	46:DU:72:PHE:CD2	2.48	0.48
47:BF:121:PHE:N	47:BF:121:PHE:CD2	2.81	0.48
49:DR:3:ALA:HB1	49:DR:59:ILE:HD13	1.95	0.48
47:BF:107:VAL:N	47:BF:108:PRO:CD	2.76	0.48
23:DB:494:G:O2'	23:DB:495:G:H5'	2.13	0.48
23:BB:2730:C:H2'	23:BB:2731:G:H8	1.78	0.48
27:BK:70:ARG:CB	27:BK:76:VAL:HG22	2.43	0.48
47:BF:147:ARG:HB3	47:BF:147:ARG:CZ	2.43	0.48
1:AA:1190:G:O2'	2:AC:2:GLN:HB3	2.14	0.48
23:BB:2052:A:OP1	26:BD:145:SER:HA	2.12	0.48
13:CP:6:LEU:HD11	13:CP:71:VAL:HB	1.95	0.48
42:DN:97:ILE:HD12	42:DN:98:LEU:H	1.76	0.48
39:DX:44:LYS:HG3	39:DX:48:ARG:HH12	1.77	0.48
34:B3:33:THR:HG23	34:B3:34:LYS:N	2.29	0.48
26:DD:125:TRP:CD2	26:DD:160:LYS:HB3	2.47	0.48
1:CA:521:G:O2'	1:CA:522:C:H5'	2.13	0.48
23:BB:2100:G:C6	23:BB:2190:G:C6	3.01	0.48
27:BK:99:ILE:HB	27:BK:118:LEU:HD22	1.96	0.48
23:BB:2590:A:H2'	23:BB:2591:C:C6	2.48	0.48
51:BZ:32:ASN:O	51:BZ:33:LEU:O	2.31	0.48
23:DB:2595:G:H1	25:DC:238:ASN:HD21	1.61	0.48
23:BB:2665:A:O2'	23:BB:2666:C:H5'	2.14	0.48
23:DB:2087:G:H2'	23:DB:2088:A:H8	1.78	0.48
1:AA:764:C:C2'	1:AA:765:G:H5'	2.43	0.48
1:AA:882:C:O2'	1:AA:883:C:H5'	2.13	0.48
21:CN:41:TRP:HB3	21:CN:44:VAL:CG2	2.41	0.48
3:AD:97:LEU:HA	3:AD:100:VAL:HG23	1.94	0.48
1:AA:1343:G:H2'	1:AA:1344:C:H6	1.78	0.48
1:CA:279:A:C5'	1:CA:280:C:H3'	2.42	0.48
1:AA:1488:G:O2'	1:AA:1489:G:H5'	2.13	0.48
23:DB:2515:C:H2'	23:DB:2516:A:H8	1.78	0.48
2:AC:63:ILE:HG22	2:AC:64:ARG:N	2.28	0.48
1:AA:676:A:H2'	1:AA:677:U:C6	2.48	0.48
1:AA:679:C:O2'	1:AA:680:C:H5'	2.13	0.48
1:AA:715:A:O2'	1:AA:716:A:H5'	2.13	0.48
23:DB:1843:C:H2'	23:DB:1844:C:H6	1.78	0.48
23:BB:1562:U:H2'	23:BB:1563:U:C6	2.48	0.48
1:CA:402:G:H2'	1:CA:403:C:H6	1.77	0.48
17:AT:50:PHE:O	17:AT:53:MET:HG3	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:327:G:O2'	23:DB:328:U:H5'	2.13	0.48
1:CA:229:U:H2'	1:CA:230:G:C8	2.49	0.48
23:DB:2230:G:H2'	23:DB:2231:U:H6	1.77	0.48
22:BA:102:G:H2'	22:BA:103:U:C6	2.49	0.48
1:CA:724:G:H3'	1:CA:724:G:OP2	2.14	0.48
1:CA:107:G:O6	17:CT:9:ARG:HD3	2.13	0.48
25:DC:173:LEU:N	25:DC:173:LEU:HD13	2.28	0.48
1:AA:989:U:C2'	1:AA:990:C:H5'	2.44	0.48
22:DA:106:G:H2'	22:DA:107:G:O4'	2.12	0.48
1:AA:960:U:O2'	1:AA:1223:C:H4'	2.13	0.48
23:DB:780:G:H2'	23:DB:782:A:N7	2.29	0.48
1:AA:620:C:C2	3:AD:131:ILE:HG21	2.49	0.48
18:CB:103:TRP:CZ3	18:CB:107:ARG:HD2	2.48	0.48
1:AA:386:C:O2'	1:AA:387:U:H5'	2.13	0.48
1:AA:893:C:H2'	1:AA:894:G:H8	1.77	0.48
23:BB:2507:C:O2'	23:BB:2508:G:H5'	2.13	0.48
1:AA:792:A:H1'	1:AA:794:A:N7	2.29	0.48
2:CC:111:ASP:O	2:CC:115:VAL:HG23	2.14	0.48
23:DB:1113:U:O2'	23:DB:1114:C:H5'	2.14	0.48
8:CI:56:MET:HA	8:CI:59:LYS:HB3	1.94	0.48
50:BT:30:ILE:CG2	50:BT:85:VAL:HB	2.43	0.48
9:CJ:73:LEU:O	9:CJ:74:VAL:HB	2.12	0.48
6:CG:110:ARG:H	6:CG:118:ARG:HH11	1.60	0.48
32:B4:7:VAL:HG23	32:B4:35:GLN:HB2	1.95	0.48
32:D4:7:VAL:HG23	32:D4:35:GLN:HB2	1.95	0.48
23:DB:2061:G:H5''	23:DB:2503:A:C2	2.47	0.48
1:CA:1317:C:H3'	1:CA:1318:A:C8	2.48	0.48
29:BE:110:SER:O	29:BE:113:VAL:HB	2.13	0.48
23:BB:143:C:H2'	23:BB:144:A:C1'	2.42	0.48
8:AI:43:ALA:HA	8:AI:46:VAL:HG13	1.95	0.48
10:AK:111:ASP:HB3	19:AU:3:ILE:CD1	2.41	0.48
25:BC:68:ARG:NE	25:BC:128:THR:OG1	2.46	0.48
23:BB:1654:A:H2'	23:BB:1655:A:C8	2.48	0.48
3:CD:115:GLN:HG3	3:CD:119:HIS:CE1	2.48	0.48
49:BR:7:SER:HB2	49:BR:22:LEU:HD13	1.95	0.48
12:AM:79:LEU:HD21	12:AM:86:ARG:HE	1.78	0.48
23:BB:2303:G:H2'	23:BB:2304:G:O4'	2.13	0.48
18:CB:218:ALA:HA	18:CB:221:ARG:NH1	2.28	0.48
47:DF:33:ILE:HB	47:DF:90:LEU:HB2	1.96	0.48
20:AO:33:THR:HA	20:AO:36:ILE:HB	1.96	0.48
1:CA:1004:A:H3'	1:CA:1024:G:N2	2.26	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:210:ALA:O	25:DC:215:VAL:HG23	2.14	0.48
26:BD:11:MET:H	26:BD:25:THR:HA	1.78	0.48
39:DX:8:GLU:O	39:DX:12:GLU:HB2	2.12	0.48
29:DE:127:GLU:N	29:DE:127:GLU:CD	2.66	0.48
40:DH:21:VAL:HG22	40:DH:22:LYS:N	2.21	0.48
39:BX:8:GLU:HB3	39:BX:12:GLU:HB2	1.95	0.48
12:AM:95:PRO:HA	12:AM:108:ARG:HE	1.78	0.48
47:BF:24:VAL:C	47:BF:26:GLN:H	2.16	0.48
16:CS:18:VAL:HG21	16:CS:43:MET:HE3	1.94	0.48
16:CS:50:VAL:O	16:CS:57:VAL:HG22	2.12	0.48
1:CA:1320:C:C2	16:CS:71:GLY:HA3	2.48	0.48
27:BK:77:ILE:HA	28:BP:70:GLU:O	2.13	0.48
42:DN:103:ARG:CG	42:DN:104:ALA:H	2.26	0.48
11:AL:23:LEU:HD23	11:AL:29:LYS:CE	2.43	0.48
1:AA:560:A:H4'	1:AA:561:U:C5'	2.42	0.48
1:CA:1232:U:OP1	8:CI:125:GLN:HG3	2.13	0.48
41:DJ:36:LEU:HD12	41:DJ:121:LYS:HE3	1.96	0.48
23:BB:1857:G:H22	23:BB:1884:G:H2'	1.79	0.48
23:DB:814:C:O2'	23:DB:815:C:H5'	2.13	0.48
37:DL:109:LYS:HB3	37:DL:111:ILE:HD11	1.95	0.48
1:CA:1011:C:H2'	1:CA:1012:A:H8	1.74	0.48
50:DT:50:LEU:C	50:DT:52:GLU:H	2.16	0.48
1:CA:1128:C:H1'	1:CA:1148:U:O4	2.12	0.48
18:AB:30:ILE:HD13	18:AB:38:HIS:CD2	2.48	0.48
1:CA:764:C:N4	1:CA:812:G:H1	2.11	0.48
23:DB:2900:A:H2'	23:DB:2901:C:H6	1.78	0.48
23:BB:1810:A:H2'	23:BB:1811:G:O4'	2.14	0.48
22:BA:49:C:O3'	43:BO:68:LYS:HE3	2.13	0.48
45:BS:4:ILE:CG2	45:BS:106:VAL:HG22	2.42	0.48
23:DB:776:G:H4'	23:DB:777:G:O5'	2.14	0.48
1:AA:724:G:H3'	1:AA:724:G:OP2	2.14	0.48
23:BB:2790:U:H5'	23:BB:2893:A:N7	2.28	0.48
22:BA:95:U:H2'	22:BA:96:G:H8	1.78	0.48
23:DB:2699:C:H2'	23:DB:2700:A:H8	1.77	0.48
50:DT:18:GLU:C	50:DT:20:ALA:H	2.13	0.48
23:DB:1315:C:H2'	23:DB:1316:U:H6	1.78	0.48
22:BA:106:G:H2'	22:BA:107:G:O4'	2.13	0.48
1:CA:562:U:H5''	1:CA:563:A:C4	2.48	0.48
27:DK:111:LYS:C	27:DK:113:MET:H	2.17	0.48
33:D1:38:PHE:O	33:D1:40:PRO:HD3	2.13	0.48
1:AA:626:G:H2'	1:AA:627:G:H8	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1786:A:H1'	23:BB:1938:A:N6	2.28	0.48
1:CA:397:A:H5'	1:CA:398:U:OP1	2.13	0.48
23:BB:1709:U:H2'	23:BB:1710:G:C8	2.49	0.48
23:DB:2417:C:O2'	23:DB:2418:A:H5'	2.14	0.48
7:AH:79:ARG:NH2	7:AH:82:LEU:HB2	2.28	0.48
23:DB:1319:C:O2'	23:DB:1320:C:H5'	2.13	0.48
42:DN:62:ASN:HD22	42:DN:62:ASN:N	2.11	0.48
35:DV:21:ARG:HE	35:DV:87:GLN:HB3	1.77	0.48
6:AG:48:THR:O	6:AG:51:GLN:HB3	2.12	0.48
12:CM:36:ALA:HB2	12:CM:58:GLU:OE1	2.13	0.48
23:DB:1099:G:H3'	24:DI:2:LYS:HA	1.95	0.48
12:AM:3:ILE:HA	12:AM:56:ARG:HB3	1.94	0.48
9:CJ:5:ARG:N	9:CJ:76:ILE:O	2.46	0.48
35:BV:9:ARG:HD3	35:BV:20:LEU:HD11	1.95	0.48
5:AF:21:MET:HB3	5:AF:25:TYR:CZ	2.48	0.48
14:CQ:52:CYS:SG	14:CQ:74:LEU:HG	2.53	0.48
40:BH:133:GLN:HA	40:BH:139:PHE:HD2	1.79	0.48
37:DL:92:LEU:HD22	37:DL:124:GLY:HA3	1.96	0.48
23:DB:145:C:H2'	23:DB:146:A:C8	2.47	0.48
23:DB:638:G:O2'	23:DB:639:U:H5'	2.14	0.48
23:BB:2723:C:H2'	23:BB:2724:U:O4'	2.14	0.48
27:DK:71:ARG:NE	27:DK:72:PRO:HD3	2.28	0.48
47:DF:110:ILE:CG2	47:DF:113:PHE:HB3	2.43	0.48
41:BJ:4:PHE:HB3	41:BJ:44:TYR:CD1	2.48	0.48
1:AA:957:U:H2'	1:AA:959:A:OP2	2.13	0.48
49:DR:34:GLU:HG2	49:DR:60:LYS:HG2	1.94	0.48
21:AN:9:GLU:HB2	21:AN:62:ARG:NE	2.28	0.48
47:BF:111:ARG:HG2	47:BF:133:GLU:OE1	2.13	0.48
47:BF:66:ILE:HA	47:BF:85:GLY:O	2.14	0.48
22:DA:43:C:C2'	22:DA:44:G:H5''	2.42	0.48
4:CE:136:VAL:HG13	4:CE:137:ARG:N	2.28	0.48
42:BN:106:ASP:OD1	42:BN:108:ALA:HB3	2.12	0.48
18:AB:61:SER:HA	18:AB:224:ARG:HA	1.95	0.48
23:BB:2073:C:H2'	23:BB:2074:U:H6	1.78	0.48
38:DM:35:ALA:HB2	38:DM:100:LYS:CB	2.44	0.48
46:BU:40:LEU:HA	46:BU:60:LYS:O	2.13	0.48
44:DQ:63:ARG:NH1	44:DQ:96:ASP:HA	2.28	0.48
23:DB:547:A:C5'	23:DB:548:G:H21	2.27	0.48
45:DS:69:LEU:HB3	45:DS:107:VAL:CG2	2.44	0.48
27:DK:64:ARG:O	27:DK:82:ASN:HA	2.14	0.48
1:AA:946:A:O2'	1:AA:1333:A:N3	2.45	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1439:A:N7	23:DB:1440:U:N1	2.62	0.48
4:CE:85:LYS:HG3	4:CE:93:VAL:O	2.13	0.48
51:BZ:14:THR:HA	51:BZ:28:ARG:HA	1.95	0.48
23:BB:815:C:OP2	49:BR:85:LYS:HE2	2.14	0.48
1:AA:840:C:C2	1:AA:842:U:H5''	2.48	0.48
48:BG:9:VAL:HG12	48:BG:11:PRO:HD3	1.95	0.48
23:DB:2030:A:H4'	23:DB:2031:A:H5'	1.95	0.48
32:D4:12:ARG:HG3	32:D4:13:ASN:ND2	2.28	0.48
1:AA:1342:C:O2'	8:AI:125:GLN:HB3	2.13	0.48
1:AA:489:C:H2'	1:AA:490:C:C6	2.49	0.48
23:DB:1842:G:H2'	23:DB:1843:C:H6	1.75	0.48
17:AT:53:MET:HA	17:AT:56:ILE:HD12	1.95	0.48
23:BB:753:A:H2'	23:BB:754:U:H6	1.78	0.48
1:CA:309:A:H2'	1:CA:310:G:H8	1.78	0.48
23:BB:566:U:H2'	23:BB:567:U:O4'	2.13	0.48
50:BT:61:LEU:HD21	50:BT:82:LYS:HD3	1.94	0.48
23:DB:819:A:OP2	23:DB:1187:G:N2	2.46	0.48
1:AA:1245:C:O2'	1:AA:1246:A:H5'	2.13	0.48
52:DW:45:HIS:ND1	52:DW:45:HIS:N	2.58	0.48
1:AA:998:C:H6	1:AA:998:C:OP2	1.97	0.48
23:BB:2101:A:H2'	23:BB:2102:G:C1'	2.44	0.48
26:DD:142:VAL:HB	26:DD:143:PRO:CD	2.43	0.48
23:BB:1830:C:H2'	23:BB:1831:G:H8	1.78	0.48
1:AA:261:U:H2'	1:AA:263:A:OP2	2.13	0.48
26:BD:29:VAL:HB	26:BD:98:VAL:CG1	2.43	0.48
23:BB:1268:A:H2'	23:BB:1269:A:O4'	2.13	0.48
23:DB:2599:G:N7	25:DC:235:GLU:HB2	2.28	0.48
4:CE:89:THR:HG22	4:CE:90:GLY:N	2.29	0.48
1:AA:1211:U:OP1	1:AA:1213:A:H4'	2.14	0.48
41:DJ:30:THR:OG1	41:DJ:31:GLU:N	2.45	0.48
23:BB:1479:G:O2'	23:BB:1480:C:H5'	2.12	0.48
23:DB:2100:G:H2'	23:DB:2101:A:C8	2.47	0.48
25:BC:51:ARG:NH2	25:BC:246:PRO:HG2	2.29	0.48
1:AA:509:A:H3'	57:AA:1775:HOH:O	2.12	0.48
23:DB:83:A:OP2	23:DB:83:A:H8	1.96	0.48
23:DB:2179:C:H2'	23:DB:2179:C:O2	2.13	0.48
1:CA:1402:C:H2'	1:CA:1403:C:O4'	2.14	0.48
12:AM:26:LYS:O	12:AM:30:LYS:HB2	2.13	0.48
1:CA:1349:A:H2'	1:CA:1350:A:O4'	2.13	0.48
32:B4:7:VAL:HG22	32:B4:8:LYS:N	2.29	0.48
41:BJ:12:LYS:NZ	41:BJ:12:LYS:H	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:113:SER:HB2	26:BD:168:GLU:H	1.77	0.48
35:DV:9:ARG:HD3	35:DV:20:LEU:HD11	1.96	0.48
25:DC:130:PRO:HA	25:DC:188:ARG:HA	1.94	0.48
41:DJ:136:GLN:N	41:DJ:137:PRO:HD3	2.28	0.48
23:DB:28:A:N6	23:DB:512:G:O2'	2.47	0.48
4:CE:143:LEU:O	4:CE:146:MET:HG2	2.14	0.48
23:BB:142:A:C2	23:BB:143:C:N4	2.81	0.48
22:BA:28:C:H2'	22:BA:29:A:C8	2.48	0.48
22:BA:28:C:OP1	43:BO:31:THR:HG21	2.14	0.48
1:AA:1229:A:H2'	1:AA:1230:C:C6	2.48	0.48
10:AK:44:ALA:HB2	10:AK:69:CYS:HB2	1.96	0.48
23:DB:1729:U:H5'	23:DB:1730:C:O4'	2.14	0.48
23:BB:1999:C:H5''	23:BB:2723:C:O2'	2.13	0.48
49:BR:19:THR:CB	49:BR:97:LYS:HA	2.44	0.48
1:AA:438:U:H4'	3:AD:119:HIS:HD2	1.79	0.48
44:BQ:90:ASP:H	49:BR:39:LEU:HD11	1.78	0.48
21:AN:5:MET:HB3	21:AN:62:ARG:HH12	1.79	0.48
2:AC:69:THR:O	2:AC:104:GLU:HA	2.13	0.48
29:BE:5:LEU:HD13	29:BE:122:GLU:CG	2.43	0.48
26:DD:149:ASN:O	26:DD:152:PRO:HD2	2.13	0.48
6:CG:145:GLU:N	6:CG:148:LYS:HB2	2.28	0.48
47:BF:134:GLN:O	47:BF:136:ILE:N	2.46	0.48
10:CK:28:ASN:HD22	10:CK:46:ALA:HB3	1.76	0.48
42:BN:28:LEU:N	42:BN:34:ILE:HD11	2.28	0.48
6:AG:45:ALA:CB	6:AG:120:ALA:HB2	2.43	0.48
52:DW:9:THR:HG23	52:DW:10:ARG:CD	2.42	0.48
23:DB:1278:C:O3'	42:DN:34:ILE:HG23	2.13	0.48
47:BF:13:LYS:HA	47:BF:16:MET:HG2	1.95	0.48
1:AA:86:G:C2	1:AA:87:C:N4	2.81	0.48
51:DZ:32:ASN:C	51:DZ:33:LEU:HD12	2.32	0.48
31:B0:41:HIS:HB2	42:BN:99:LYS:O	2.13	0.48
23:BB:2458:G:H2'	23:BB:2458:G:N3	2.29	0.48
23:BB:1439:A:N7	23:BB:1440:U:N1	2.62	0.48
2:CC:156:LEU:HD22	2:CC:157:GLY:N	2.28	0.48
23:DB:63:A:H2'	23:DB:63:A:OP2	2.14	0.48
16:CS:62:THR:H	16:CS:65:MET:CB	2.26	0.48
23:DB:2590:A:H2'	23:DB:2591:C:H6	1.79	0.48
12:AM:71:GLU:HA	12:AM:74:MET:CG	2.44	0.48
11:AL:106:VAL:HA	11:AL:107:LYS:NZ	2.29	0.48
23:DB:2098:U:C2	23:DB:2099:U:H1'	2.48	0.48
3:AD:25:ARG:NE	3:AD:26:ALA:HB2	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:63:ILE:HG22	2:AC:65:VAL:HG23	1.95	0.48
34:D3:57:VAL:O	34:D3:59:ALA:N	2.39	0.48
1:AA:598:U:H4'	7:AH:85:TYR:CD2	2.49	0.48
2:CC:61:LYS:H	2:CC:61:LYS:NZ	2.12	0.48
23:DB:1315:C:H2'	23:DB:1316:U:C6	2.49	0.48
23:DB:1586:A:H2'	23:DB:1587:G:O4'	2.13	0.48
1:AA:636:U:H2'	1:AA:637:C:C6	2.49	0.48
11:AL:7:VAL:HG22	14:AQ:33:TYR:HD1	1.79	0.48
23:DB:1707:G:H2'	23:DB:1708:C:O4'	2.13	0.48
2:CC:115:VAL:HB	2:CC:199:VAL:HG11	1.95	0.48
23:DB:1311:G:H21	23:DB:1603:A:H62	1.61	0.48
1:CA:432:A:H2'	1:CA:433:G:H5'	1.94	0.48
23:DB:789:A:H5''	57:DB:3668:HOH:O	2.14	0.48
43:BO:80:GLU:HA	43:BO:83:LEU:HB2	1.96	0.48
25:DC:222:THR:HA	25:DC:231:HIS:O	2.13	0.48
11:AL:30:ARG:HB3	11:AL:57:THR:CG2	2.44	0.48
1:CA:458:U:H2'	1:CA:459:A:H8	1.78	0.48
47:DF:67:THR:C	47:DF:68:LYS:HD2	2.33	0.48
23:DB:1349:C:H2'	23:DB:1350:C:H6	1.78	0.48
1:AA:1310:G:H2'	1:AA:1311:A:O4'	2.13	0.48
23:BB:111:A:H2'	23:BB:112:U:O4'	2.13	0.48
23:BB:1965:C:H3'	23:BB:1966:A:H8	1.78	0.48
23:BB:875:G:H2'	23:BB:876:C:H5'	1.94	0.48
23:DB:2409:G:H2'	23:DB:2410:G:O4'	2.12	0.48
8:CI:56:MET:HA	8:CI:59:LYS:HB2	1.95	0.48
30:BY:50:VAL:HB	30:BY:53:MET:HB2	1.95	0.48
12:AM:52:ILE:HD12	12:AM:55:LEU:CD1	2.37	0.48
50:DT:39:THR:HG21	50:DT:42:GLU:HB3	1.96	0.48
32:B4:8:LYS:HG2	32:B4:9:LYS:HD3	1.96	0.48
32:D4:8:LYS:HG2	32:D4:9:LYS:HD3	1.94	0.48
26:BD:107:VAL:N	26:BD:206:ALA:H	2.10	0.48
5:CF:36:ILE:HG12	5:CF:64:VAL:HG12	1.96	0.48
5:CF:92:THR:HG22	5:CF:94:HIS:H	1.79	0.48
10:CK:86:LYS:HB2	10:CK:113:THR:HA	1.96	0.48
26:DD:104:VAL:HG12	26:DD:106:LYS:HE2	1.96	0.48
26:DD:107:VAL:N	26:DD:206:ALA:H	2.12	0.48
37:DL:82:LEU:C	37:DL:84:LYS:H	2.15	0.48
43:BO:36:TYR:CD2	43:BO:36:TYR:N	2.80	0.48
10:AK:22:ILE:HD13	10:AK:95:THR:HG21	1.94	0.48
46:DU:39:ASN:HB3	46:DU:62:ALA:H	1.79	0.48
6:CG:63:VAL:HA	6:CG:66:GLU:OE2	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:118:ALA:C	48:BG:120:ILE:H	2.16	0.48
26:DD:186:LEU:CD2	28:DP:3:ILE:HD11	2.43	0.48
49:DR:49:ILE:HB	49:DR:51:VAL:O	2.13	0.48
23:DB:1082:U:C2	23:DB:1086:A:N1	2.82	0.48
49:BR:64:VAL:HB	49:BR:95:ASP:HB3	1.96	0.48
22:BA:5:U:H2'	22:BA:6:G:H8	1.78	0.48
47:BF:133:GLU:HA	47:BF:150:GLY:HA2	1.93	0.48
41:BJ:29:ALA:HB1	41:BJ:105:VAL:HG12	1.95	0.48
1:AA:1339:A:C2'	1:AA:1340:A:H5'	2.44	0.48
47:DF:121:PHE:CD2	47:DF:121:PHE:N	2.81	0.48
47:DF:3:LEU:HG	47:DF:99:PHE:CD2	2.49	0.48
37:BL:95:LEU:HB3	37:BL:100:ILE:CG2	2.43	0.48
42:BN:103:ARG:CG	42:BN:104:ALA:H	2.26	0.48
39:DX:13:GLU:O	39:DX:17:GLU:HG3	2.14	0.48
23:BB:2595:G:H1	25:BC:238:ASN:HD21	1.62	0.48
42:DN:34:ILE:HG22	42:DN:35:LYS:N	2.28	0.48
40:BH:5:LEU:HD11	40:BH:19:VAL:HG22	1.94	0.48
23:BB:2210:U:H4'	23:BB:2211:A:O5'	2.14	0.48
42:BN:19:ALA:C	42:BN:21:PHE:N	2.66	0.48
9:AJ:61:ALA:O	9:AJ:62:ARG:HB2	2.14	0.48
3:AD:14:GLU:HG3	3:AD:59:LYS:HA	1.96	0.48
23:DB:1550:C:H2'	23:DB:1551:A:C8	2.49	0.48
23:DB:2728:U:H5'	27:DK:70:ARG:NH2	2.27	0.48
23:DB:1241:A:H2'	23:DB:1242:U:C5'	2.44	0.48
23:DB:2458:G:N3	23:DB:2458:G:H2'	2.29	0.48
3:AD:36:ALA:HB2	3:AD:42:ALA:HA	1.94	0.48
23:BB:717:C:H2'	23:BB:718:A:O4'	2.14	0.48
23:BB:2373:G:H2'	23:BB:2374:C:C6	2.48	0.48
2:CC:10:ARG:O	2:CC:13:ILE:O	2.31	0.48
21:AN:19:TYR:O	21:AN:23:ARG:HG3	2.13	0.48
23:BB:1171:G:H2'	23:BB:1172:C:O4'	2.14	0.48
23:DB:78:U:H2'	23:DB:79:C:C6	2.49	0.48
51:DZ:72:ARG:HB2	51:DZ:78:TYR:CE2	2.49	0.48
34:D3:33:THR:HG23	34:D3:34:LYS:N	2.27	0.48
23:DB:2815:C:H2'	23:DB:2816:G:H8	1.77	0.48
22:DA:48:U:H2'	22:DA:49:C:H6	1.79	0.48
24:BI:89:SER:HA	24:BI:97:VAL:CG2	2.44	0.48
23:BB:1184:U:O2'	23:BB:1185:G:H5'	2.13	0.48
23:DB:1638:C:H4'	23:DB:2710:C:O2	2.14	0.48
23:BB:1773:A:H2'	23:BB:1774:C:O4'	2.13	0.48
23:DB:2800:A:H2'	23:DB:2801:G:O4'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2802:G:H2'	23:DB:2803:G:C8	2.49	0.48
52:BW:45:HIS:N	52:BW:45:HIS:ND1	2.58	0.48
23:DB:1936:A:H61	23:DB:1963:U:H3	1.60	0.48
27:BK:109:SER:OG	27:BK:111:LYS:HG2	2.13	0.48
20:AO:45:GLU:CD	20:AO:46:HIS:H	2.16	0.48
26:BD:69:ALA:C	26:BD:71:ALA:H	2.16	0.48
1:CA:728:A:H2'	1:CA:729:A:C8	2.49	0.48
25:DC:265:PHE:N	25:DC:265:PHE:CD2	2.82	0.48
23:BB:2412:A:H2'	23:BB:2413:G:O4'	2.14	0.48
24:DI:92:PRO:O	24:DI:93:ASN:HB2	2.13	0.48
23:DB:1709:U:H2'	23:DB:1710:G:H8	1.78	0.48
1:AA:1154:G:O2'	1:AA:1155:A:H5'	2.14	0.48
1:CA:707:U:H4'	10:CK:21:HIS:CD2	2.48	0.48
23:BB:1083:U:H2'	23:BB:1085:A:OP2	2.13	0.48
1:CA:621:A:H2'	1:CA:622:A:C8	2.48	0.48
23:BB:817:C:O2	23:BB:839:U:H4'	2.14	0.48
16:CS:28:LYS:H	16:CS:28:LYS:HD2	1.78	0.48
5:CF:73:GLU:O	5:CF:77:THR:HG23	2.13	0.48
10:AK:81:LEU:HD22	10:AK:104:PHE:CD1	2.49	0.48
1:CA:26:A:N6	1:CA:558:G:H1'	2.29	0.48
1:CA:747:A:H2'	1:CA:748:G:O4'	2.13	0.48
22:BA:112:G:O2'	22:BA:113:C:H5'	2.13	0.48
3:AD:123:MET:HG3	3:AD:127:ARG:C	2.34	0.48
23:BB:83:A:H8	23:BB:83:A:OP2	1.97	0.48
18:AB:156:LEU:N	18:AB:156:LEU:HD12	2.29	0.48
25:BC:86:ARG:HD2	25:BC:90:ILE:HD11	1.95	0.48
37:DL:74:THR:HA	37:DL:107:PHE:O	2.13	0.48
24:DI:2:LYS:N	24:DI:2:LYS:HD2	2.28	0.48
23:DB:727:A:OP1	23:DB:1431:A:O2'	2.31	0.48
50:DT:30:ILE:CG2	50:DT:85:VAL:HB	2.44	0.48
50:DT:57:VAL:HG22	50:DT:58:VAL:N	2.21	0.48
50:BT:32:LEU:H	50:BT:83:ALA:HB3	1.77	0.48
1:CA:1237:C:H2'	1:CA:1336:C:C5	2.48	0.48
29:DE:58:LYS:CE	29:DE:58:LYS:H	2.27	0.48
35:BV:28:ALA:HA	35:BV:88:HIS:ND1	2.28	0.48
25:DC:119:VAL:HG13	25:DC:133:ASN:ND2	2.28	0.48
1:CA:254:G:H4'	14:CQ:19:SER:OG	2.13	0.48
26:DD:11:MET:H	26:DD:25:THR:HA	1.78	0.48
52:DW:39:GLN:O	52:DW:40:ARG:HG2	2.14	0.48
42:DN:55:ALA:HA	42:DN:80:PHE:CD1	2.48	0.48
23:BB:587:C:N3	37:BL:33:ARG:NH2	2.61	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1729:U:H3'	23:DB:1730:C:C5'	2.43	0.48
23:BB:1729:U:H5'	23:BB:1730:C:O4'	2.14	0.48
10:CK:44:ALA:HB2	10:CK:69:CYS:HB2	1.95	0.48
27:DK:35:VAL:HG12	27:DK:69:VAL:CG2	2.42	0.48
18:AB:46:VAL:HA	18:AB:49:PHE:CD2	2.46	0.48
46:DU:3:LYS:CE	46:DU:82:VAL:HB	2.43	0.48
24:DI:49:GLU:HB3	24:DI:52:LEU:HD12	1.96	0.48
23:DB:1181:U:H2'	23:DB:1182:G:H8	1.78	0.48
26:DD:23:PRO:O	26:DD:24:VAL:HB	2.14	0.48
40:DH:122:LEU:HD22	40:DH:122:LEU:N	2.29	0.48
47:DF:107:VAL:N	47:DF:108:PRO:CD	2.76	0.48
38:BM:40:ARG:NH2	38:BM:73:ILE:HD12	2.29	0.48
16:AS:10:ILE:HG21	16:AS:40:PHE:HE2	1.78	0.48
16:AS:32:THR:OG1	16:AS:50:VAL:HA	2.13	0.48
1:AA:1271:A:H5'	1:AA:1314:C:C5'	2.44	0.48
1:AA:1314:C:H2'	1:AA:1315:U:H6	1.78	0.48
16:AS:6:LYS:HG3	21:AN:40:ARG:NH2	2.27	0.48
28:BP:9:GLN:HA	28:BP:12:MET:SD	2.53	0.48
18:CB:86:CYS:CB	18:CB:88:GLN:HE21	2.27	0.48
47:BF:131:VAL:C	47:BF:133:GLU:H	2.16	0.48
47:BF:135:ILE:HG13	47:BF:137:PHE:H	1.78	0.48
23:BB:1141:U:OP2	41:BJ:65:THR:HG21	2.14	0.48
23:DB:2314:A:H1'	47:DF:154:THR:HG21	1.96	0.48
47:DF:3:LEU:HD12	47:DF:96:TRP:CD1	2.48	0.48
23:DB:396:G:H1'	51:DZ:29:PHE:HB3	1.96	0.48
26:BD:32:ASN:HB3	26:BD:50:VAL:HG21	1.96	0.48
23:DB:2210:U:N3	23:DB:2212:A:N7	2.61	0.48
34:D3:21:PHE:CE1	34:D3:58:ILE:HG12	2.49	0.48
39:DX:56:LEU:HA	39:DX:59:GLU:CD	2.33	0.48
24:DI:19:PRO:HB2	24:DI:22:PRO:HD2	1.96	0.48
4:AE:35:LEU:HD22	4:AE:133:ILE:HA	1.94	0.48
44:BQ:83:LYS:HG3	44:BQ:84:LYS:N	2.28	0.48
28:DP:61:ARG:HD3	28:DP:70:GLU:CD	2.34	0.48
28:BP:21:PRO:HB2	28:BP:96:LEU:CD1	2.44	0.48
1:CA:1222:G:H2'	1:CA:1223:C:C6	2.47	0.48
40:BH:21:VAL:HG22	40:BH:22:LYS:N	2.21	0.48
42:DN:19:ALA:C	42:DN:21:PHE:H	2.15	0.48
1:AA:87:C:H6	1:AA:87:C:O5'	1.96	0.48
49:DR:19:THR:CB	49:DR:97:LYS:HA	2.43	0.48
23:DB:582:A:H2'	23:DB:583:G:H8	1.79	0.48
23:DB:1441:G:H2'	23:DB:1442:U:H6	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1131:G:H22	1:AA:1144:G:H4'	1.79	0.48
18:AB:117:GLU:HA	18:AB:140:LEU:CD2	2.43	0.48
3:CD:2:ARG:HB3	3:CD:114:ARG:NH2	2.28	0.48
1:AA:544:G:OP1	3:AD:58:GLN:HG2	2.14	0.48
1:CA:1302:C:C6	12:CM:16:ILE:HG13	2.49	0.48
1:CA:1389:C:H2'	1:CA:1390:U:C6	2.48	0.48
1:CA:735:C:H2'	1:CA:736:C:H6	1.78	0.48
52:DW:32:ALA:O	52:DW:34:SER:N	2.46	0.48
1:AA:489:C:H2'	1:AA:490:C:H6	1.78	0.48
1:CA:158:G:H1	1:CA:163:C:N4	2.12	0.48
1:AA:1477:U:H2'	1:AA:1478:U:H6	1.79	0.48
1:CA:1164:G:H2'	1:CA:1165:U:C6	2.49	0.48
20:CO:26:GLU:HG3	20:CO:70:LEU:HD11	1.94	0.48
1:AA:833:G:O2'	1:AA:834:U:H5'	2.14	0.48
23:DB:1773:A:H2'	23:DB:1774:C:O4'	2.13	0.48
14:AQ:5:ARG:C	14:AQ:5:ARG:HD3	2.34	0.48
23:DB:2797:U:H4'	23:DB:2798:U:OP2	2.14	0.48
25:BC:2:VAL:HG23	25:BC:3:VAL:N	2.29	0.48
23:BB:1745:A:H2'	23:BB:1746:A:O4'	2.14	0.48
27:BK:107:LEU:HD12	27:BK:107:LEU:H	1.78	0.48
23:BB:2243:U:H2'	23:BB:2244:U:C6	2.49	0.48
23:BB:53:A:H2'	23:BB:54:G:O4'	2.14	0.48
23:BB:8:C:O2'	23:BB:9:G:H5'	2.13	0.48
23:DB:685:A:H1'	23:DB:688:U:O4	2.14	0.48
23:BB:1315:C:H2'	23:BB:1316:U:H6	1.77	0.48
23:BB:1317:G:H2'	23:BB:1318:U:O4'	2.14	0.48
1:CA:825:A:H2'	1:CA:826:C:H6	1.79	0.48
1:AA:46:G:O2'	1:AA:365:U:H1'	2.13	0.48
23:DB:2333:A:H5'	23:DB:2335:A:H1'	1.94	0.48
41:DJ:88:THR:HG22	41:DJ:91:GLU:OE1	2.13	0.48
1:CA:1160:G:H2'	1:CA:1161:C:H6	1.79	0.48
23:DB:1145:C:O2'	23:DB:1146:C:H5'	2.14	0.48
46:DU:27:VAL:HG23	46:DU:33:VAL:HG12	1.95	0.48
44:DQ:16:ILE:HG21	44:DQ:35:PHE:HA	1.96	0.48
23:DB:1688:U:H2'	23:DB:1698:A:N6	2.28	0.48
44:DQ:47:ARG:HH11	44:DQ:48:ASP:CG	2.16	0.48
23:BB:841:G:O2'	23:BB:842:U:H5'	2.14	0.48
23:DB:1900:A:N1	23:DB:1970:A:C5	2.82	0.48
23:BB:392:U:O2'	23:BB:393:C:H5'	2.14	0.48
25:DC:34:GLU:HG3	25:DC:34:GLU:O	2.14	0.48
23:DB:2133:G:H5'	23:DB:2133:G:C8	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:93:G:H2'	23:BB:94:A:C8	2.49	0.48
1:AA:1303:C:H2'	1:AA:1304:G:C8	2.49	0.48
1:AA:1327:C:H2'	1:AA:1328:C:C6	2.49	0.48
12:AM:65:GLU:HB3	12:AM:66:GLY:H	1.47	0.48
50:DT:31:VAL:HA	50:DT:83:ALA:HB3	1.94	0.48
50:BT:28:ASN:HA	50:BT:91:GLN:NE2	2.28	0.48
50:BT:30:ILE:HG12	50:BT:32:LEU:HD23	1.96	0.48
1:CA:1332:A:H2'	1:CA:1333:A:C8	2.48	0.48
23:BB:1432:G:O2'	23:BB:1433:A:H5'	2.14	0.48
37:DL:18:ARG:O	37:DL:19:LEU:HD12	2.14	0.48
37:DL:19:LEU:HA	37:DL:27:LEU:HD13	1.96	0.48
48:BG:34:ARG:NH1	48:BG:34:ARG:HG2	2.29	0.48
41:BJ:124:VAL:O	41:BJ:125:TYR:HB2	2.14	0.48
20:AO:15:PHE:HE2	20:AO:84:ARG:HD3	1.78	0.48
5:AF:3:HIS:CE1	5:AF:65:GLU:HG3	2.49	0.48
29:DE:173:THR:C	29:DE:175:ILE:H	2.17	0.48
29:DE:116:ASP:O	29:DE:185:LYS:HE3	2.14	0.48
23:BB:143:C:H2'	23:BB:144:A:O4'	2.14	0.48
37:DL:122:VAL:HB	37:DL:143:GLU:OE2	2.13	0.48
8:AI:23:GLY:O	8:AI:61:ASP:HB3	2.14	0.48
8:AI:29:ILE:HA	8:AI:64:ILE:O	2.13	0.48
23:BB:1059:G:H2'	23:BB:1060:U:C6	2.49	0.48
6:CG:125:ASP:HB3	6:CG:130:LYS:HB3	1.95	0.48
10:CK:111:ASP:HB3	19:CU:3:ILE:CD1	2.41	0.48
10:CK:95:THR:HG23	10:CK:96:ILE:H	1.79	0.48
29:BE:58:LYS:CE	29:BE:58:LYS:H	2.27	0.48
24:BI:32:VAL:HG13	24:BI:66:PHE:CD2	2.49	0.48
47:DF:111:ARG:HG2	47:DF:133:GLU:OE1	2.14	0.48
23:DB:901:C:H2'	23:DB:902:C:O4'	2.14	0.48
37:BL:116:VAL:HG22	37:BL:117:THR:N	2.29	0.48
39:DX:8:GLU:HB3	39:DX:12:GLU:HB2	1.96	0.48
23:BB:1278:C:O3'	42:BN:34:ILE:HG23	2.13	0.48
34:D3:54:LEU:O	34:D3:58:ILE:HG13	2.14	0.48
23:BB:1092:C:OP1	23:BB:2475:C:H4'	2.13	0.48
23:DB:2391:G:O6	23:DB:2425:A:H8	1.96	0.48
48:DG:126:THR:HG22	48:DG:127:GLN:H	1.78	0.48
39:DX:44:LYS:HG3	39:DX:48:ARG:NH1	2.28	0.48
23:DB:2869:G:H2'	23:DB:2870:C:H6	1.78	0.48
49:DR:10:LYS:N	49:DR:10:LYS:HD2	2.28	0.48
11:AL:23:LEU:HD22	11:AL:58:ASN:CG	2.34	0.48
26:DD:159:LYS:HZ2	26:DD:160:LYS:N	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CL:41:PRO:CB	11:CL:88:ASP:HB3	2.44	0.48
6:AG:30:MET:HA	6:AG:38:ALA:CB	2.44	0.48
40:BH:47:PHE:CD1	40:BH:50:ARG:HG2	2.49	0.48
42:BN:96:ARG:HE	42:BN:116:VAL:HA	1.79	0.48
40:BH:3:VAL:CG2	40:BH:36:ALA:HB1	2.43	0.48
23:DB:283:G:H2'	23:DB:284:U:O4'	2.14	0.48
27:DK:53:LYS:N	27:DK:53:LYS:HD3	2.26	0.48
12:CM:6:ILE:O	12:CM:7:ASN:C	2.51	0.48
23:DB:2373:G:H2'	23:DB:2374:C:C6	2.49	0.48
18:CB:79:VAL:CG1	18:CB:80:LYS:N	2.76	0.48
18:CB:84:LEU:O	18:CB:84:LEU:HG	2.14	0.48
1:CA:836:G:H2'	1:CA:837:U:C6	2.49	0.48
3:CD:14:GLU:HG3	3:CD:59:LYS:HA	1.96	0.48
1:CA:279:A:H5'	1:CA:281:G:H5'	1.95	0.48
30:BY:31:ILE:HG13	30:BY:32:GLY:N	2.28	0.48
23:DB:1846:G:H2'	23:DB:1847:A:O4'	2.12	0.48
22:DA:95:U:H2'	22:DA:96:G:C8	2.49	0.48
23:BB:2893:A:H4'	23:BB:2894:G:O5'	2.14	0.48
25:DC:2:VAL:HG23	25:DC:3:VAL:N	2.28	0.48
11:CL:65:TYR:HB3	11:CL:95:HIS:HD2	1.79	0.48
23:DB:642:U:H2'	23:DB:644:A:OP2	2.13	0.48
1:CA:317:U:H2'	1:CA:318:G:C8	2.48	0.48
23:DB:132:G:O2'	23:DB:133:U:H5'	2.14	0.48
23:BB:1320:C:C5	23:BB:1329:U:H5''	2.49	0.48
47:BF:42:ALA:O	47:BF:46:LYS:HG3	2.13	0.48
1:CA:636:U:H2'	1:CA:637:C:C6	2.49	0.48
43:DO:7:ARG:HA	43:DO:10:ARG:NE	2.28	0.48
21:AN:17:ASP:C	21:AN:21:ALA:HB2	2.34	0.48
1:AA:628:G:H2'	1:AA:629:A:H8	1.77	0.48
44:DQ:104:ALA:HA	49:DR:46:GLU:CD	2.34	0.48
37:DL:119:PRO:HA	37:DL:138:ALA:O	2.13	0.48
23:BB:1676:A:H2'	23:BB:1677:A:O4'	2.13	0.48
1:CA:628:G:H2'	1:CA:629:A:C8	2.48	0.48
23:DB:1042:G:H2'	23:DB:1043:C:C6	2.49	0.48
23:BB:765:C:H2'	23:BB:766:U:H6	1.79	0.48
10:AK:88:PRO:HD3	19:AU:28:LEU:HD13	1.94	0.48
23:DB:467:G:O2'	23:DB:468:G:H5'	2.14	0.48
49:BR:68:ARG:NH1	49:BR:90:ARG:HD3	2.29	0.48
23:DB:1564:C:H2'	23:DB:1565:C:C6	2.48	0.48
23:DB:2220:U:H2'	23:DB:2221:G:H8	1.79	0.48
23:DB:2315:G:H2'	23:DB:2316:G:H8	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DE:145:ASP:OD1	29:DE:183:PHE:HA	2.13	0.48
1:CA:790:A:H2'	1:CA:791:G:C8	2.49	0.48
1:CA:1057:G:H2'	1:CA:1058:G:C8	2.49	0.48
21:CN:68:ARG:NH2	21:CN:80:ARG:HH12	2.12	0.48
8:CI:5:TYR:CD2	8:CI:89:TYR:HB2	2.49	0.48
8:CI:86:LEU:HA	8:CI:89:TYR:HD2	1.78	0.48
25:BC:183:VAL:HG22	25:BC:184:GLU:H	1.78	0.48
23:DB:1820:U:H3	25:DC:197:ALA:HA	1.79	0.48
48:BG:15:ASP:O	48:BG:16:VAL:HB	2.14	0.48
35:BV:4:ILE:O	35:BV:64:VAL:N	2.47	0.48
41:BJ:136:GLN:N	41:BJ:137:PRO:HD3	2.29	0.48
14:AQ:16:MET:CB	14:AQ:19:SER:HB2	2.30	0.48
1:AA:254:G:H4'	14:AQ:19:SER:OG	2.14	0.48
26:DD:25:THR:HG21	26:DD:193:VAL:HG22	1.95	0.48
23:BB:1199:U:H2'	23:BB:1200:C:H6	1.79	0.48
42:DN:29:VAL:CG1	42:DN:75:ILE:HB	2.44	0.48
23:DB:136:G:H2'	23:DB:137:U:C6	2.49	0.48
23:DB:138:U:H5''	23:DB:139:U:O5'	2.14	0.48
6:CG:130:LYS:H	6:CG:134:VAL:CG2	2.23	0.48
26:BD:117:GLY:HA2	26:BD:164:GLN:NE2	2.29	0.48
45:BS:66:ILE:HD13	45:BS:66:ILE:N	2.19	0.48
40:DH:111:ALA:C	40:DH:113:SER:H	2.16	0.48
40:DH:96:THR:HG23	40:DH:97:ARG:H	1.79	0.48
44:BQ:88:GLU:HA	49:BR:49:ILE:HD11	1.95	0.48
16:AS:61:VAL:HG12	16:AS:62:THR:H	1.78	0.48
23:DB:899:A:C2	23:DB:900:A:H1'	2.49	0.48
47:BF:155:ILE:N	47:BF:155:ILE:HD12	2.29	0.48
47:BF:91:ARG:O	47:BF:92:GLY:C	2.52	0.48
47:DF:134:GLN:NE2	47:DF:136:ILE:HA	2.29	0.48
26:BD:5:VAL:N	26:BD:32:ASN:ND2	2.59	0.48
12:CM:33:LEU:CD2	12:CM:38:ILE:HB	2.40	0.48
23:BB:2594:C:H2'	23:BB:2595:G:C8	2.49	0.48
39:BX:44:LYS:CD	39:BX:48:ARG:HH12	2.26	0.48
1:CA:1306:A:O2'	1:CA:1307:U:H5'	2.13	0.48
46:DU:40:LEU:HA	46:DU:60:LYS:O	2.13	0.48
23:DB:2539:C:O2'	23:DB:2540:C:H5'	2.14	0.48
23:DB:359:G:H2'	23:DB:360:U:C5'	2.42	0.48
6:AG:149:ALA:HB3	10:AK:55:ARG:CZ	2.44	0.48
23:DB:1387:A:H5'	23:DB:1469:A:O2'	2.12	0.48
1:AA:1407:C:C3'	1:AA:1408:A:H5''	2.44	0.48
48:BG:70:LEU:O	48:BG:74:MET:HG3	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AL:113:ARG:CG	11:AL:118:VAL:HB	2.44	0.48
1:CA:501:C:O2'	1:CA:502:A:H5'	2.14	0.48
23:BB:2794:C:H2'	23:BB:2795:C:C6	2.48	0.48
23:DB:2751:G:H5''	23:DB:2752:C:H5	1.79	0.48
25:DC:5:CYS:HB2	25:DC:15:VAL:O	2.14	0.48
23:DB:851:C:O4'	30:DY:46:MET:HG2	2.13	0.48
1:AA:1479:C:H2'	1:AA:1480:A:H8	1.78	0.48
23:BB:1026:G:H2'	23:BB:1027:A:C8	2.47	0.48
23:DB:528:A:H2	23:DB:2043:C:H4'	1.79	0.48
31:B0:9:ARG:HB2	31:B0:12:ARG:NH2	2.28	0.48
1:AA:426:U:H4'	3:AD:39:GLN:HA	1.96	0.48
1:CA:598:U:H4'	7:CH:85:TYR:CD2	2.48	0.48
11:AL:65:TYR:C	11:AL:66:ILE:HD12	2.33	0.48
1:CA:98:A:H2'	1:CA:99:C:C6	2.49	0.48
23:DB:1745:A:H2'	23:DB:1746:A:O4'	2.13	0.48
23:BB:2243:U:O2'	23:BB:2244:U:H5'	2.13	0.48
12:CM:82:LEU:HD21	16:CS:64:GLU:OE2	2.13	0.48
22:DA:13:G:O2'	22:DA:14:U:H5''	2.14	0.48
24:BI:52:LEU:HD12	24:BI:52:LEU:N	2.29	0.48
10:AK:108:ASN:ND2	19:AU:6:ARG:HB2	2.29	0.48
19:AU:6:ARG:O	19:AU:7:GLU:O	2.32	0.48
23:BB:1740:G:H2'	23:BB:1741:C:H6	1.78	0.48
41:DJ:21:THR:O	41:DJ:62:VAL:HA	2.14	0.48
23:BB:615:U:O4	29:BE:39:ALA:HB2	2.13	0.48
1:AA:729:A:H2'	1:AA:730:G:C8	2.48	0.48
1:CA:685:G:O2'	1:CA:686:U:H5'	2.13	0.48
11:AL:30:ARG:O	11:AL:57:THR:HG23	2.14	0.48
28:BP:62:LYS:HB3	28:BP:69:VAL:HG22	1.96	0.48
23:DB:2276:G:O2'	23:DB:2277:G:H5'	2.13	0.48
23:DB:1830:C:H2'	23:DB:1831:G:H8	1.79	0.48
1:AA:1402:C:H2'	1:AA:1403:C:O4'	2.14	0.48
23:DB:2660:A:H2'	23:DB:2661:G:O4'	2.14	0.48
23:DB:2473:U:H2'	23:DB:2473:U:O2	2.13	0.48
23:DB:1015:U:H2'	23:DB:1016:G:H8	1.78	0.48
6:AG:99:ALA:O	6:AG:103:ILE:HG13	2.14	0.48
10:CK:19:VAL:HG12	10:CK:82:GLU:HB2	1.95	0.48
21:CN:66:THR:C	21:CN:68:ARG:H	2.17	0.47
8:CI:56:MET:HB3	8:CI:59:LYS:HZ2	1.79	0.47
42:DN:90:ARG:HB3	42:DN:94:TYR:HE1	1.79	0.47
19:CU:24:LYS:HZ3	19:CU:25:ALA:N	1.97	0.47
23:DB:513:A:O5'	23:DB:513:A:H8	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:584:C:OP1	44:BQ:5:ARG:HB3	2.14	0.47
48:BG:153:PRO:HG2	48:BG:162:ARG:HD2	1.96	0.47
23:BB:2539:C:O2'	23:BB:2540:C:H5'	2.13	0.47
23:BB:2720:U:C5'	28:BP:52:ARG:HH22	2.19	0.47
49:BR:14:VAL:HG22	49:BR:15:SER:H	1.77	0.47
40:DH:113:SER:C	40:DH:115:VAL:H	2.17	0.47
38:BM:19:GLY:CA	38:BM:38:ARG:HH12	2.27	0.47
7:AH:14:ARG:HE	7:AH:75:GLN:HE22	1.61	0.47
18:AB:95:TRP:CZ2	18:AB:100:LEU:HD13	2.45	0.47
18:CB:60:ALA:HA	18:CB:64:GLY:CA	2.44	0.47
26:DD:53:GLY:C	26:DD:76:GLY:HA2	2.35	0.47
23:DB:1141:U:H5''	41:DJ:27:ARG:HH21	1.78	0.47
1:CA:865:A:H5'	1:CA:1078:U:C4	2.49	0.47
20:AO:33:THR:O	20:AO:36:ILE:HB	2.14	0.47
23:BB:396:G:H5''	51:BZ:10:LYS:HZ3	1.79	0.47
23:DB:2210:U:H4'	23:DB:2211:A:O5'	2.14	0.47
42:BN:108:ALA:O	42:BN:110:MET:HE2	2.14	0.47
6:AG:45:ALA:HB2	6:AG:116:ALA:O	2.14	0.47
23:BB:2531:A:H5'	48:BG:156:TYR:CE2	2.49	0.47
2:CC:120:THR:HG21	2:CC:186:SER:HB3	1.95	0.47
27:DK:7:MET:HE1	27:DK:18:ARG:HB3	1.95	0.47
11:AL:29:LYS:HB3	11:AL:56:LEU:HD22	1.96	0.47
50:BT:39:THR:HG21	50:BT:42:GLU:HB3	1.95	0.47
24:DI:100:ILE:O	24:DI:139:VAL:HG13	2.14	0.47
6:AG:30:MET:HE3	6:AG:33:GLY:H	1.79	0.47
12:CM:2:ARG:O	12:CM:4:ALA:N	2.47	0.47
12:CM:6:ILE:O	12:CM:8:ILE:HG23	2.13	0.47
45:DS:45:VAL:O	45:DS:48:LYS:HB3	2.14	0.47
28:DP:47:ILE:HD11	28:DP:59:THR:HG22	1.95	0.47
2:AC:122:GLN:O	2:AC:127:VAL:HG22	2.13	0.47
23:DB:744:U:H2'	23:DB:745:G:O4'	2.14	0.47
23:DB:1733:G:H2'	23:DB:1734:G:H8	1.79	0.47
48:BG:8:VAL:O	48:BG:9:VAL:HB	2.13	0.47
1:CA:501:C:H2'	1:CA:502:A:H8	1.79	0.47
23:DB:2099:U:O2	23:DB:2099:U:H2'	2.14	0.47
23:BB:1494:A:H2'	23:BB:1495:A:H8	1.79	0.47
23:DB:21:A:H2'	23:DB:22:C:C6	2.49	0.47
23:BB:1387:A:H5'	23:BB:1469:A:O2'	2.13	0.47
1:AA:1277:C:O2'	1:AA:1279:G:C8	2.65	0.47
3:AD:104:MET:SD	3:AD:179:GLY:HA3	2.54	0.47
18:AB:16:GLY:HA2	18:AB:40:ILE:HG13	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1483:A:H1'	23:BB:1948:G:H1'	1.95	0.47
22:BA:48:U:H2'	22:BA:49:C:H6	1.79	0.47
23:DB:1946:U:O2'	23:DB:1947:C:H5'	2.14	0.47
22:DA:100:G:H2'	22:DA:101:A:O4'	2.15	0.47
1:CA:993:G:H4'	1:CA:994:A:OP2	2.14	0.47
23:DB:68:G:H2'	23:DB:69:C:C6	2.49	0.47
23:BB:2341:G:H2'	23:BB:2342:C:C6	2.49	0.47
27:DK:110:GLU:C	27:DK:111:LYS:HD3	2.34	0.47
10:CK:88:PRO:HG3	19:CU:28:LEU:CD2	2.44	0.47
23:BB:1007:C:H4'	41:BJ:110:PRO:HB3	1.96	0.47
22:BA:2:G:H2'	22:BA:3:C:C5	2.48	0.47
23:BB:664:G:H2'	23:BB:665:U:C6	2.49	0.47
34:D3:61:LEU:HD23	34:D3:61:LEU:N	2.29	0.47
9:AJ:63:ASP:OD2	9:AJ:64:GLN:N	2.46	0.47
1:CA:1456:A:H2'	1:CA:1457:G:O4'	2.14	0.47
1:AA:1121:U:O2'	1:AA:1122:U:H5'	2.14	0.47
48:BG:28:LYS:NZ	48:BG:29:ASN:HB2	2.28	0.47
23:BB:81:G:H2'	23:BB:82:U:O4'	2.14	0.47
41:DJ:35:ARG:C	41:DJ:37:ARG:H	2.17	0.47
23:DB:184:C:H2'	23:DB:185:G:H8	1.79	0.47
19:AU:4:LYS:HD3	19:AU:4:LYS:H	1.77	0.47
6:CG:91:ARG:HD2	6:CG:91:ARG:H	1.79	0.47
1:CA:751:U:H4'	20:CO:24:SER:HA	1.96	0.47
23:DB:1007:C:O3'	41:DJ:110:PRO:HB3	2.14	0.47
15:AR:25:ILE:O	15:AR:29:LYS:HG3	2.13	0.47
10:AK:19:VAL:HG12	10:AK:82:GLU:HB2	1.95	0.47
23:BB:425:G:H2'	23:BB:426:C:H6	1.79	0.47
1:AA:1329:A:H5''	12:AM:24:VAL:HA	1.96	0.47
5:CF:5:GLU:HG3	5:CF:63:ASN:ND2	2.29	0.47
6:CG:13:PRO:HB3	6:CG:20:GLU:HG2	1.95	0.47
37:DL:90:VAL:CB	37:DL:122:VAL:HG12	2.35	0.47
22:BA:24:G:N7	22:BA:56:G:H2'	2.29	0.47
1:AA:1149:C:H2'	1:AA:1150:A:H8	1.78	0.47
1:AA:1230:C:H2'	1:AA:1231:G:H8	1.79	0.47
43:DO:52:SER:C	43:DO:54:VAL:H	2.16	0.47
9:AJ:37:ARG:HE	9:AJ:77:VAL:CG2	2.26	0.47
2:AC:116:ALA:O	2:AC:120:THR:HG23	2.14	0.47
37:DL:115:GLU:N	37:DL:115:GLU:OE1	2.47	0.47
48:DG:116:LEU:HD23	48:DG:120:ILE:HD13	1.96	0.47
48:DG:118:ALA:C	48:DG:120:ILE:H	2.16	0.47
23:BB:1119:U:OP1	35:BV:83:LYS:HE3	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AS:37:SER:O	16:AS:69:LYS:HA	2.14	0.47
23:BB:496:G:H1'	45:BS:61:ASN:HD22	1.78	0.47
25:DC:202:ARG:HH11	25:DC:213:ARG:NE	2.12	0.47
26:BD:25:THR:HG21	26:BD:193:VAL:HG22	1.94	0.47
24:DI:24:GLY:HA2	24:DI:34:ILE:HD12	1.96	0.47
23:DB:1244:A:O2'	23:DB:1245:G:H5'	2.13	0.47
23:BB:1792:G:O2'	23:BB:1793:C:H5'	2.14	0.47
25:BC:4:LYS:HE2	25:BC:5:CYS:N	2.27	0.47
1:CA:939:G:H2'	1:CA:940:C:C6	2.49	0.47
40:DH:89:LYS:N	40:DH:89:LYS:HD2	2.28	0.47
23:BB:2867:G:N3	23:BB:2867:G:C2'	2.74	0.47
28:BP:20:ARG:O	28:BP:46:VAL:HG21	2.13	0.47
28:BP:91:VAL:HG11	28:BP:96:LEU:CD1	2.40	0.47
27:DK:17:ARG:HH11	27:DK:45:GLU:HG3	1.79	0.47
1:CA:643:C:H5'	7:CH:31:LEU:HD13	1.96	0.47
44:DQ:65:ASN:CB	44:DQ:75:TYR:HB2	2.43	0.47
44:DQ:75:TYR:O	44:DQ:79:ILE:HG22	2.14	0.47
26:DD:159:LYS:HZ3	26:DD:159:LYS:CA	2.23	0.47
27:BK:105:ARG:O	27:BK:108:ARG:HG2	2.14	0.47
23:DB:1439:A:N7	23:DB:1440:U:C6	2.82	0.47
1:CA:560:A:H5'	1:CA:566:G:N2	2.30	0.47
48:DG:7:PRO:O	48:DG:8:VAL:HB	2.13	0.47
1:CA:952:U:O2'	1:CA:953:G:H5'	2.14	0.47
23:BB:773:U:H4'	25:BC:45:ASN:O	2.15	0.47
13:CP:52:LEU:HD21	13:CP:75:ILE:HG23	1.95	0.47
30:DY:46:MET:O	30:DY:49:ALA:HB3	2.15	0.47
1:AA:1118:U:H1'	1:AA:1179:A:C4	2.49	0.47
2:CC:173:PRO:HD2	2:CC:202:PHE:CD1	2.49	0.47
23:BB:2700:A:H2'	23:BB:2701:U:H6	1.78	0.47
23:DB:1637:A:H2'	23:DB:1638:C:C6	2.49	0.47
23:BB:2300:C:H2'	23:BB:2301:C:H6	1.78	0.47
33:B1:26:LYS:NZ	33:B1:52:LYS:HB3	2.29	0.47
1:AA:328:C:H4'	1:AA:329:A:C5'	2.44	0.47
23:DB:2643:G:H2'	23:DB:2644:G:O4'	2.13	0.47
23:DB:190:A:H5''	23:DB:204:A:H61	1.79	0.47
1:AA:397:A:H5'	1:AA:398:U:OP1	2.15	0.47
31:B0:35:GLU:OE1	31:B0:44:ALA:HB3	2.14	0.47
23:BB:1341:G:H3'	23:BB:1397:U:O2	2.14	0.47
1:CA:708:C:H4'	10:CK:38:GLY:HA3	1.95	0.47
14:AQ:80:LYS:HZ3	14:AQ:81:ALA:N	2.12	0.47
23:DB:2436:G:O2'	23:DB:2437:G:H5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AR:31:TYR:CD1	15:AR:54:LEU:HD21	2.48	0.47
23:BB:901:C:H2'	23:BB:902:C:O4'	2.13	0.47
1:CA:24:U:O2'	1:CA:25:C:H5'	2.15	0.47
23:BB:2488:G:H2'	23:BB:2489:U:C6	2.50	0.47
23:DB:1905:C:O2'	23:DB:1929:G:H1'	2.13	0.47
6:CG:128:GLU:CD	6:CG:128:GLU:N	2.68	0.47
23:BB:1238:G:O2'	23:BB:1239:G:H5'	2.13	0.47
1:CA:1359:C:OP1	21:CN:61:ASN:ND2	2.47	0.47
10:CK:125:LYS:O	19:CU:33:ARG:CZ	2.62	0.47
12:AM:1:ALA:HA	12:AM:56:ARG:HH22	1.80	0.47
42:DN:49:GLU:HA	42:DN:94:TYR:HD2	1.79	0.47
1:CA:1118:U:H1'	1:CA:1179:A:C5	2.48	0.47
23:BB:1430:G:H2'	23:BB:1431:A:C8	2.49	0.47
29:BE:106:LYS:HZ1	29:BE:201:ALA:HB2	1.79	0.47
40:BH:68:ARG:HG3	40:BH:134:VAL:HG11	1.94	0.47
29:DE:105:LEU:HA	29:DE:108:ILE:HG22	1.96	0.47
23:BB:1079:C:H5	23:BB:1088:A:OP1	1.97	0.47
23:DB:138:U:H5'	50:DT:1:MET:N	2.30	0.47
46:DU:39:ASN:HB3	46:DU:62:ALA:N	2.28	0.47
42:BN:38:LEU:CB	42:BN:39:PRO:HD3	2.41	0.47
25:BC:151:GLY:C	25:BC:152:GLN:HG3	2.35	0.47
10:CK:22:ILE:HB	10:CK:85:VAL:HG22	1.96	0.47
26:BD:118:PHE:O	26:BD:119:ALA:HB3	2.15	0.47
33:B1:36:LYS:CB	33:B1:47:ILE:HA	2.37	0.47
23:DB:1063:G:O2'	24:DI:88:GLY:HA3	2.15	0.47
40:DH:103:VAL:CG2	40:DH:108:VAL:HB	2.44	0.47
30:BY:2:LYS:HG2	30:BY:3:THR:H	1.79	0.47
43:DO:105:ALA:C	43:DO:107:ALA:H	2.18	0.47
47:DF:133:GLU:HA	47:DF:150:GLY:HA2	1.96	0.47
44:BQ:64:ILE:HD12	44:BQ:95:ALA:CB	2.43	0.47
49:BR:23:GLU:O	49:BR:25:LEU:HD22	2.15	0.47
8:CI:66:VAL:HG21	8:CI:74:GLN:CG	2.37	0.47
47:BF:121:PHE:N	47:BF:121:PHE:HD2	2.12	0.47
22:BA:43:C:H1'	47:BF:91:ARG:HD2	1.95	0.47
46:DU:51:LEU:N	46:DU:53:GLN:NE2	2.62	0.47
18:AB:103:TRP:HA	18:AB:106:VAL:CG2	2.45	0.47
1:CA:922:G:H2'	1:CA:923:A:H8	1.74	0.47
1:CA:922:G:H4'	4:CE:24:VAL:HA	1.96	0.47
10:CK:28:ASN:HD22	10:CK:29:THR:H	1.61	0.47
3:AD:106:PHE:CG	3:AD:144:ILE:HD11	2.49	0.47
39:BX:17:GLU:O	39:BX:20:ASN:HB2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DM:57:VAL:O	38:DM:57:VAL:HG12	2.15	0.47
48:BG:105:SER:OG	48:BG:111:PRO:HA	2.13	0.47
27:DK:102:PRO:HD3	28:DP:65:ASN:HB2	1.95	0.47
11:CL:23:LEU:HD22	11:CL:58:ASN:CG	2.35	0.47
24:DI:129:GLU:CB	24:DI:133:ARG:HH12	2.27	0.47
1:AA:80:A:C6	1:AA:81:A:H1'	2.48	0.47
18:AB:125:PHE:CD2	18:AB:126:ASP:N	2.79	0.47
23:DB:2080:A:OP1	51:DZ:20:HIS:HB3	2.14	0.47
23:BB:1439:A:N7	23:BB:1440:U:C6	2.82	0.47
23:BB:2840:C:H2'	23:BB:2841:C:C6	2.49	0.47
1:AA:1037:C:O2'	1:AA:1038:C:H5'	2.14	0.47
1:CA:676:A:H2'	1:CA:677:U:C6	2.49	0.47
23:BB:1172:C:H3'	23:BB:1173:U:H6	1.79	0.47
13:CP:48:GLU:HG3	13:CP:49:GLY:N	2.26	0.47
23:DB:2895:G:H2'	23:DB:2896:C:C6	2.49	0.47
49:BR:80:ARG:O	49:BR:81:LYS:HD3	2.14	0.47
23:BB:242:G:N2	23:BB:254:G:H2'	2.30	0.47
1:AA:5:U:H1'	1:AA:6:G:H22	1.78	0.47
1:CA:490:C:H2'	1:CA:491:G:O4'	2.14	0.47
23:BB:1637:A:H2'	23:BB:1638:C:C6	2.49	0.47
23:BB:1638:C:H4'	23:BB:2710:C:O2	2.14	0.47
44:BQ:65:ASN:HB2	44:BQ:75:TYR:HB2	1.96	0.47
2:CC:89:VAL:HA	2:CC:92:ASP:OD2	2.13	0.47
14:CQ:5:ARG:HD3	14:CQ:6:THR:N	2.29	0.47
4:AE:51:LYS:O	4:AE:61:LYS:HD2	2.14	0.47
29:DE:49:ARG:NH1	29:DE:72:SER:HB3	2.29	0.47
23:BB:235:U:H2'	23:BB:236:C:H6	1.78	0.47
23:BB:236:C:O2'	23:BB:237:C:H5'	2.13	0.47
23:DB:538:A:H2'	23:DB:539:G:O4'	2.14	0.47
23:BB:68:G:H2'	23:BB:69:C:C6	2.48	0.47
10:CK:108:ASN:ND2	19:CU:6:ARG:HB2	2.30	0.47
1:CA:1198:G:H2'	1:CA:1199:U:C6	2.50	0.47
1:CA:635:A:H2'	1:CA:636:U:H6	1.80	0.47
1:CA:1121:U:H2'	1:CA:1122:U:C6	2.49	0.47
23:BB:1212:G:H1'	23:BB:1236:G:N2	2.29	0.47
23:DB:771:G:O2'	23:DB:772:C:H5'	2.14	0.47
51:DZ:16:ASN:OD1	51:DZ:26:LYS:HD2	2.14	0.47
23:DB:817:C:O2	23:DB:839:U:H4'	2.14	0.47
23:BB:1403:A:O2'	23:BB:1404:C:H5'	2.15	0.47
9:CJ:83:THR:C	9:CJ:85:ASP:H	2.17	0.47
23:BB:794:A:H2'	23:BB:795:C:H6	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:90:LEU:HB2	40:BH:123:ARG:CG	2.45	0.47
9:AJ:73:LEU:HD13	9:AJ:75:ASP:HB2	1.96	0.47
52:BW:24:ARG:CD	52:BW:65:LYS:HG2	2.41	0.47
52:DW:59:PHE:O	52:DW:60:ALA:HB3	2.14	0.47
32:B4:12:ARG:HG3	32:B4:13:ASN:ND2	2.28	0.47
26:BD:8:LYS:O	26:BD:9:VAL:HB	2.13	0.47
5:AF:92:THR:HG22	5:AF:94:HIS:H	1.78	0.47
48:BG:153:PRO:HB3	48:BG:158:GLY:HA2	1.96	0.47
2:AC:165:GLU:HG3	2:AC:166:TRP:H	1.79	0.47
48:BG:120:ILE:HD12	48:BG:143:VAL:HG21	1.96	0.47
1:CA:438:U:H4'	3:CD:119:HIS:HD2	1.79	0.47
23:DB:1060:U:C4	24:DI:131:THR:HG22	2.49	0.47
40:DH:117:LEU:HG	40:DH:119:ASN:O	2.14	0.47
30:BY:6:ILE:HG23	30:BY:56:VAL:HG22	1.97	0.47
44:BQ:91:ARG:HE	44:BQ:94:LEU:CD2	2.27	0.47
22:BA:43:C:H4'	47:BF:91:ARG:NE	2.28	0.47
1:AA:982:U:N3	1:AA:983:A:N6	2.63	0.47
22:DA:43:C:H1'	47:DF:91:ARG:HD2	1.96	0.47
13:CP:21:VAL:HG21	13:CP:60:TRP:CD1	2.48	0.47
25:BC:5:CYS:HB2	25:BC:15:VAL:O	2.14	0.47
39:DX:20:ASN:O	39:DX:25:GLN:HB2	2.15	0.47
12:CM:47:LEU:HA	12:CM:51:GLN:OE1	2.15	0.47
31:D0:41:HIS:HB2	42:DN:99:LYS:O	2.15	0.47
37:DL:57:LEU:CB	37:DL:60:ARG:HH11	2.23	0.47
18:CB:95:TRP:HZ3	18:CB:98:GLY:H	1.62	0.47
16:CS:29:PRO:HA	16:CS:47:THR:HB	1.95	0.47
16:CS:46:LEU:O	16:CS:48:ILE:HD12	2.14	0.47
6:AG:94:ARG:NH1	6:AG:98:LEU:HD21	2.29	0.47
1:AA:1530:G:H2'	1:AA:1531:A:C8	2.50	0.47
23:DB:1507:C:H3'	23:DB:1508:A:H4'	1.97	0.47
23:DB:160:A:H2'	23:DB:161:A:H8	1.76	0.47
23:BB:813:U:H2'	23:BB:814:C:H6	1.79	0.47
1:CA:208:U:H2'	1:CA:210:C:C4	2.50	0.47
25:DC:161:VAL:HG12	25:DC:162:GLN:N	2.29	0.47
25:DC:174:ARG:HG3	25:DC:180:MET:HE1	1.97	0.47
1:CA:265:G:N2	1:CA:267:C:H5'	2.30	0.47
1:CA:841:C:H3'	1:CA:843:U:OP2	2.15	0.47
23:BB:630:G:H4'	23:BB:640:C:O2'	2.13	0.47
26:BD:14:ILE:CG2	26:BD:22:ILE:HB	2.44	0.47
1:CA:1479:C:H2'	1:CA:1480:A:C8	2.47	0.47
1:CA:678:U:H2'	1:CA:679:C:H6	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:866:A:H61	23:BB:913:U:C1'	2.27	0.47
23:DB:849:A:H2'	23:DB:850:U:C6	2.49	0.47
15:AR:33:THR:HG23	15:AR:37:LYS:O	2.13	0.47
23:BB:5:A:H2'	23:BB:6:A:H8	1.77	0.47
23:DB:1317:G:H2'	23:DB:1318:U:O4'	2.15	0.47
4:CE:45:VAL:HG11	4:CE:117:ALA:HB2	1.95	0.47
1:AA:1499:A:O2'	1:AA:1500:A:H5'	2.14	0.47
19:AU:7:GLU:OE2	19:AU:15:LEU:HG	2.14	0.47
1:AA:125:U:H2'	1:AA:126:G:C8	2.49	0.47
23:DB:1397:U:H5'	23:DB:1398:C:H5	1.80	0.47
1:CA:681:A:H2'	1:CA:682:G:C8	2.50	0.47
23:DB:770:G:O2'	23:DB:771:G:H5'	2.14	0.47
23:DB:1867:G:O2'	23:DB:1868:C:H5'	2.15	0.47
23:BB:2553:G:H2'	23:BB:2554:U:O4'	2.14	0.47
1:AA:552:U:H2'	1:AA:553:A:H8	1.79	0.47
28:DP:31:VAL:C	28:DP:33:GLU:H	2.18	0.47
5:CF:81:ASN:OD1	5:CF:83:ALA:HB3	2.15	0.47
1:CA:572:A:N3	1:CA:917:G:H1'	2.30	0.47
29:BE:165:HIS:CD2	29:BE:166:LYS:HG3	2.50	0.47
23:BB:1474:U:H2'	23:BB:1475:G:H5'	1.96	0.47
29:BE:145:ASP:OD1	29:BE:183:PHE:HA	2.14	0.47
24:BI:91:LYS:HB2	24:BI:94:LYS:HD2	1.94	0.47
23:BB:1886:U:O5'	23:BB:1886:U:H6	1.97	0.47
23:DB:1668:A:N3	23:DB:1670:C:C4	2.82	0.47
1:CA:1373:G:H4'	6:CG:33:GLY:O	2.13	0.47
29:DE:61:ARG:NH1	29:DE:64:GLY:HA3	2.29	0.47
25:DC:141:HIS:CG	25:DC:142:ASN:H	2.33	0.47
35:DV:25:LYS:HA	35:DV:42:LEU:O	2.14	0.47
2:CC:67:ILE:CD1	2:CC:100:ILE:HD11	2.43	0.47
20:AO:26:GLU:CD	20:AO:26:GLU:H	2.18	0.47
1:AA:256:U:H3'	1:AA:257:G:H8	1.77	0.47
14:CQ:59:GLU:C	14:CQ:75:VAL:HG22	2.35	0.47
26:DD:113:SER:HB3	26:DD:167:ASN:HA	1.94	0.47
23:BB:2355:G:H4'	52:BW:20:LEU:HD13	1.96	0.47
22:DA:28:C:H2'	22:DA:29:A:C8	2.48	0.47
6:CG:65:LEU:O	6:CG:69:ARG:HG3	2.14	0.47
2:AC:113:LYS:O	2:AC:116:ALA:HB3	2.13	0.47
28:DP:1:SER:H1	28:DP:4:ILE:HD12	1.80	0.47
23:DB:320:A:C2	29:DE:163:ASN:HB3	2.50	0.47
40:DH:133:GLN:HA	40:DH:138:VAL:O	2.15	0.47
1:AA:978:A:H2'	1:AA:979:C:H5'	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1319:A:OP1	16:AS:4:LEU:HD12	2.15	0.47
23:BB:1082:U:C2	23:BB:1086:A:N1	2.82	0.47
28:DP:21:PRO:HB2	28:DP:96:LEU:CD1	2.44	0.47
47:BF:134:GLN:NE2	47:BF:136:ILE:HA	2.30	0.47
25:BC:43:ASN:ND2	25:BC:44:ASN:H	2.11	0.47
23:DB:2259:U:O2'	23:DB:2260:C:H5'	2.15	0.47
48:DG:94:ARG:HH21	48:DG:105:SER:H	1.62	0.47
48:DG:126:THR:HG22	48:DG:127:GLN:N	2.30	0.47
18:CB:95:TRP:CZ2	18:CB:100:LEU:HD22	2.49	0.47
47:BF:3:LEU:HG	47:BF:99:PHE:CD2	2.49	0.47
43:BO:88:LYS:HG2	43:BO:89:ASP:N	2.29	0.47
21:CN:28:ALA:O	21:CN:32:ASP:HB3	2.14	0.47
1:AA:1392:G:H5'	1:AA:1531:A:H5''	1.97	0.47
45:DS:86:MET:HG3	45:DS:96:ILE:HD12	1.95	0.47
23:BB:2096:C:H2'	23:BB:2097:A:C8	2.50	0.47
36:D2:21:ARG:C	36:D2:23:ALA:H	2.18	0.47
2:AC:39:ARG:NH1	2:AC:56:ILE:HD12	2.30	0.47
12:CM:2:ARG:H	12:CM:2:ARG:CD	2.23	0.47
36:B2:31:LEU:HD22	36:B2:42:LEU:CD1	2.44	0.47
45:DS:36:LEU:HD23	45:DS:48:LYS:CA	2.42	0.47
25:BC:249:VAL:O	25:BC:250:GLN:C	2.52	0.47
23:BB:744:U:H2'	23:BB:745:G:O4'	2.15	0.47
3:AD:97:LEU:O	3:AD:100:VAL:HG23	2.15	0.47
1:AA:672:U:H2'	1:AA:673:A:C8	2.50	0.47
1:AA:675:A:H2'	1:AA:676:A:H8	1.79	0.47
23:BB:2579:C:O5'	23:BB:2579:C:H6	1.96	0.47
1:CA:711:G:O2'	1:CA:712:A:H5'	2.14	0.47
23:DB:1562:U:H2'	23:DB:1563:U:C6	2.49	0.47
23:BB:1113:U:H2'	23:BB:1114:C:C6	2.49	0.47
20:CO:70:LEU:HD22	20:CO:78:TYR:HB2	1.96	0.47
23:DB:950:G:H2'	23:DB:951:C:H6	1.79	0.47
22:DA:52:A:H4'	22:DA:52:A:OP1	2.14	0.47
23:BB:825:A:H2'	23:BB:826:U:O4'	2.14	0.47
23:BB:833:A:H1'	37:BL:52:GLY:H	1.79	0.47
29:BE:188:MET:HG2	29:BE:193:VAL:CG2	2.44	0.47
23:BB:1582:C:H3'	23:BB:1583:A:N3	2.28	0.47
23:DB:1347:A:H2'	23:DB:1348:C:O4'	2.15	0.47
1:AA:229:U:H2'	1:AA:230:G:C8	2.49	0.47
23:BB:2803:G:H2'	23:BB:2804:U:H6	1.79	0.47
26:DD:68:PHE:CD2	26:DD:68:PHE:N	2.83	0.47
1:AA:648:A:H2'	1:AA:649:A:H8	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1075:U:H2'	1:CA:1076:U:C6	2.50	0.47
23:BB:1312:U:O4	50:BT:64:LYS:HG2	2.14	0.47
23:BB:1751:U:H2'	23:BB:1752:C:C6	2.50	0.47
23:DB:2014:A:H2'	23:DB:2015:A:C8	2.49	0.47
14:AQ:32:ILE:HG23	14:AQ:33:TYR:CD2	2.49	0.47
45:BS:43:ALA:HA	45:BS:46:LEU:HD12	1.96	0.47
1:CA:1438:G:O2'	1:CA:1439:G:H5'	2.15	0.47
23:BB:2135:A:H61	23:BB:2156:G:C2'	2.26	0.47
23:DB:1335:C:H2'	23:DB:1336:A:H8	1.78	0.47
23:DB:2334:U:H4'	23:DB:2335:A:OP2	2.14	0.47
23:BB:1076:C:H2'	23:BB:1077:A:C8	2.49	0.47
5:CF:45:ARG:HG2	5:CF:46:GLN:N	2.29	0.47
40:BH:41:LYS:O	40:BH:44:ILE:HD12	2.15	0.47
1:CA:344:A:H5''	1:CA:345:C:C5	2.49	0.47
23:BB:2753:A:O2'	23:BB:2754:U:H5'	2.13	0.47
10:CK:81:LEU:HD22	10:CK:104:PHE:CD1	2.49	0.47
23:BB:1011:G:P	44:BQ:76:SER:HG	2.38	0.47
23:BB:1281:G:H2'	23:BB:1282:U:C6	2.49	0.47
29:DE:165:HIS:CD2	29:DE:166:LYS:HG3	2.49	0.47
23:BB:1422:G:H4'	23:BB:1493:C:OP1	2.15	0.47
37:BL:74:THR:HA	37:BL:107:PHE:O	2.13	0.47
23:DB:1940:U:H5''	23:DB:1940:U:O2	2.15	0.47
42:BN:71:ARG:HG2	42:BN:71:ARG:HH21	1.79	0.47
5:AF:16:GLU:CD	5:AF:16:GLU:H	2.17	0.47
12:AM:9:PRO:HB2	12:AM:17:ALA:HB1	1.96	0.47
50:DT:34:VAL:HG21	50:DT:43:ILE:HD11	1.95	0.47
1:CA:1243:C:H2'	1:CA:1244:G:H8	1.79	0.47
37:DL:17:LYS:CD	37:DL:19:LEU:HD11	2.44	0.47
35:DV:69:GLU:CD	35:DV:69:GLU:H	2.18	0.47
5:AF:3:HIS:CD2	5:AF:65:GLU:HG3	2.49	0.47
40:BH:81:ALA:HB1	40:BH:148:ALA:O	2.15	0.47
23:DB:2262:U:H2'	23:DB:2263:C:C6	2.47	0.47
23:BB:2271:G:H2'	23:BB:2272:U:H5	1.79	0.47
52:BW:37:VAL:CG1	52:BW:38:ARG:HH11	2.27	0.47
37:BL:125:LEU:N	37:BL:143:GLU:HG3	2.27	0.47
25:BC:145:MET:HB2	25:BC:152:GLN:HE22	1.78	0.47
26:BD:121:THR:O	26:BD:122:VAL:HB	2.15	0.47
46:BU:11:ILE:O	46:BU:11:ILE:HD13	2.14	0.47
47:DF:107:VAL:HB	47:DF:108:PRO:HD3	1.96	0.47
46:DU:9:GLU:OE2	46:DU:21:ARG:HG2	2.15	0.47
23:BB:994:C:H3'	44:BQ:53:LYS:NZ	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BM:2:LEU:O	38:BM:69:PRO:HG3	2.13	0.47
49:DR:14:VAL:HG22	49:DR:15:SER:H	1.77	0.47
26:DD:51:THR:CG2	26:DD:76:GLY:HA3	2.43	0.47
47:DF:122:ASP:C	47:DF:124:ARG:H	2.17	0.47
20:AO:56:LEU:O	20:AO:60:VAL:HG23	2.15	0.47
37:DL:103:ILE:H	37:DL:103:ILE:CD1	2.23	0.47
39:BX:43:LEU:O	39:BX:47:ARG:HG3	2.15	0.47
48:DG:94:ARG:NH2	48:DG:104:LEU:HA	2.29	0.47
2:AC:12:GLY:HA3	21:AN:96:LYS:NZ	2.29	0.47
47:BF:11:VAL:O	47:BF:13:LYS:N	2.48	0.47
17:CT:77:ASN:OD1	17:CT:78:LEU:N	2.47	0.47
12:CM:84:CYS:O	12:CM:87:GLY:N	2.47	0.47
1:CA:201:G:H2'	1:CA:202:G:C8	2.49	0.47
37:DL:6:LEU:N	37:DL:6:LEU:HD23	2.24	0.47
23:DB:2537:U:H2'	23:DB:2538:C:H6	1.76	0.47
1:CA:1343:G:H4'	8:CI:123:ARG:O	2.14	0.47
25:BC:192:GLY:O	25:BC:193:GLU:HG3	2.14	0.47
25:BC:193:GLU:O	25:BC:194:VAL:C	2.53	0.47
23:BB:2240:U:O2'	23:BB:2241:A:H5'	2.14	0.47
23:DB:2142:A:H2'	23:DB:2143:C:O4'	2.14	0.47
1:AA:841:C:H42	1:AA:843:U:H5	1.61	0.47
23:BB:969:G:H2'	23:BB:970:U:C6	2.50	0.47
1:AA:735:C:H2'	1:AA:736:C:H6	1.80	0.47
3:CD:169:TRP:CD2	3:CD:185:PRO:HB3	2.50	0.47
23:DB:593:U:H2'	23:DB:594:U:H6	1.79	0.47
23:DB:825:A:H2'	23:DB:826:U:O4'	2.15	0.47
1:CA:279:A:H5'	1:CA:281:G:C5'	2.45	0.47
29:DE:15:SER:C	29:DE:17:THR:H	2.17	0.47
48:BG:176:LYS:CE	48:BG:176:LYS:H	2.27	0.47
51:BZ:72:ARG:HB2	51:BZ:78:TYR:CE2	2.49	0.47
1:CA:1110:A:H2'	1:CA:1111:A:H8	1.79	0.47
34:B3:56:LEU:O	34:B3:59:ALA:HB3	2.15	0.47
1:CA:441:A:H61	1:CA:493:A:H62	1.60	0.47
7:CH:86:LYS:HG3	7:CH:124:ILE:HD11	1.97	0.47
29:BE:12:LEU:HD12	29:BE:14:VAL:CG1	2.45	0.47
27:BK:111:LYS:C	27:BK:113:MET:H	2.18	0.47
20:AO:85:LEU:N	20:AO:85:LEU:HD12	2.30	0.47
23:DB:2676:C:O2'	23:DB:2677:G:H5'	2.14	0.47
23:BB:2828:G:H2'	23:BB:2829:A:H8	1.78	0.47
29:BE:148:ILE:HD13	29:BE:187:VAL:CG2	2.44	0.47
9:CJ:26:VAL:HG13	9:CJ:30:LYS:HE2	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:64:A:H2'	23:BB:65:U:C6	2.50	0.47
1:AA:709:U:H2'	1:AA:710:G:H8	1.80	0.47
1:CA:261:U:H2'	1:CA:263:A:OP2	2.14	0.47
1:AA:335:C:H2'	1:AA:336:A:C8	2.49	0.47
1:AA:628:G:H2'	1:AA:629:A:C8	2.49	0.47
37:DL:136:GLU:C	37:DL:138:ALA:H	2.18	0.47
33:B1:38:PHE:O	33:B1:40:PRO:HD3	2.15	0.47
1:CA:398:U:H2'	1:CA:399:G:H8	1.79	0.47
1:AA:825:A:H2'	1:AA:826:C:H6	1.78	0.47
16:CS:27:LYS:HG2	16:CS:28:LYS:H	1.79	0.47
23:DB:2220:U:O2'	23:DB:2221:G:H5'	2.14	0.47
23:BB:338:G:N2	23:BB:339:U:H1'	2.29	0.47
23:DB:81:G:H2'	23:DB:82:U:O4'	2.14	0.47
23:DB:406:G:O2'	23:DB:407:G:H5'	2.15	0.47
23:BB:1909:C:O2'	23:BB:1910:G:H5'	2.15	0.47
1:AA:393:A:H2'	1:AA:394:G:H8	1.79	0.47
27:BK:21:CYS:SG	27:BK:39:ILE:HD12	2.54	0.47
1:AA:1127:G:O2'	1:AA:1128:C:H5'	2.14	0.47
22:BA:78:A:H2'	22:BA:79:G:O4'	2.14	0.47
25:DC:20:ASN:HB3	25:DC:23:LEU:HD13	1.97	0.47
23:DB:2671:G:H2'	23:DB:2672:U:C6	2.49	0.47
23:DB:2497:A:H5''	57:DB:3698:HOH:O	2.13	0.47
21:AN:66:THR:H	21:AN:66:THR:HG1	1.57	0.47
22:DA:112:G:O2'	22:DA:113:C:H5'	2.15	0.47
32:D4:17:VAL:HG11	32:D4:19:ARG:HE	1.79	0.47
23:BB:1334:G:O2'	23:BB:1335:C:H5'	2.14	0.47
23:BB:855:G:N3	52:BW:23:LYS:HG2	2.30	0.47
18:CB:48:MET:CG	18:CB:200:PRO:HD2	2.45	0.47
12:AM:3:ILE:H	12:AM:56:ARG:HH11	1.63	0.47
12:AM:77:LYS:HA	12:AM:80:MET:HB2	1.96	0.47
30:DY:50:VAL:HB	30:DY:53:MET:HB2	1.95	0.47
52:DW:49:ASN:HB2	52:DW:60:ALA:HA	1.96	0.47
23:DB:922:C:H2'	23:DB:923:G:C8	2.50	0.47
25:DC:170:TYR:HA	25:DC:183:VAL:O	2.14	0.47
23:BB:1429:G:O2'	23:BB:1430:G:H5'	2.14	0.47
25:DC:193:GLU:O	25:DC:194:VAL:C	2.53	0.47
35:BV:26:PHE:CE2	35:BV:44:HIS:HA	2.49	0.47
35:DV:30:ILE:HG12	35:DV:91:PHE:HB2	1.97	0.47
5:AF:18:VAL:O	5:AF:22:ILE:HG13	2.14	0.47
40:BH:100:ALA:O	40:BH:101:ASP:HB2	2.15	0.47
40:BH:95:GLY:O	40:BH:99:ILE:HG12	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2772:C:H2'	23:DB:2773:C:C6	2.50	0.47
23:DB:2329:U:H2'	23:DB:2330:G:C8	2.50	0.47
52:BW:18:LYS:HA	52:BW:18:LYS:HE3	1.96	0.47
29:DE:110:SER:O	29:DE:113:VAL:HB	2.14	0.47
23:BB:1198:U:H2'	23:BB:1199:U:H6	1.79	0.47
44:BQ:8:ILE:CD1	44:BQ:8:ILE:H	2.11	0.47
37:DL:120:VAL:HG12	37:DL:121:THR:N	2.29	0.47
12:AM:100:ARG:CZ	12:AM:102:LYS:HD3	2.45	0.47
12:AM:106:ARG:HH11	12:AM:106:ARG:CA	2.28	0.47
10:AK:22:ILE:HB	10:AK:85:VAL:HG22	1.97	0.47
24:BI:74:PRO:O	24:BI:77:VAL:HG22	2.14	0.47
24:BI:124:MET:O	24:BI:128:ILE:HG12	2.15	0.47
37:BL:122:VAL:HB	37:BL:143:GLU:OE2	2.15	0.47
43:DO:35:ILE:HG21	43:DO:71:ALA:HB1	1.95	0.47
23:DB:1723:G:C2'	23:DB:1724:G:H5'	2.44	0.47
3:AD:160:LEU:H	3:AD:160:LEU:CD1	2.15	0.47
48:BG:93:TYR:HA	48:BG:106:LEU:HA	1.97	0.47
23:BB:1731:G:O2'	23:BB:1732:C:H5"	2.15	0.47
42:BN:49:GLU:HA	42:BN:94:TYR:HD2	1.80	0.47
51:DZ:40:VAL:O	51:DZ:42:SER:N	2.46	0.47
15:CR:33:THR:HG22	15:CR:39:VAL:HG12	1.96	0.47
49:BR:34:GLU:OE1	49:BR:60:LYS:HE2	2.15	0.47
24:DI:52:LEU:HD13	24:DI:81:LYS:NZ	2.30	0.47
40:DH:100:ALA:O	40:DH:103:VAL:HG13	2.15	0.47
40:DH:94:ILE:HG22	40:DH:122:LEU:HG	1.97	0.47
28:BP:50:ARG:HB3	28:BP:57:ALA:N	2.30	0.47
23:DB:2376:A:N1	43:DO:92:PHE:HD2	2.12	0.47
49:BR:49:ILE:HB	49:BR:51:VAL:O	2.14	0.47
38:BM:19:GLY:CA	38:BM:38:ARG:HH22	2.27	0.47
16:AS:66:VAL:C	16:AS:68:HIS:N	2.68	0.47
16:AS:14:LEU:HD23	16:AS:34:SER:OG	2.14	0.47
16:AS:66:VAL:O	16:AS:68:HIS:N	2.48	0.47
1:AA:1220:G:P	21:AN:52:ARG:HH22	2.38	0.47
47:BF:122:ASP:C	47:BF:124:ARG:H	2.18	0.47
30:DY:2:LYS:CG	30:DY:3:THR:H	2.28	0.47
30:DY:2:LYS:HG2	30:DY:3:THR:H	1.80	0.47
18:AB:68:PHE:CD1	18:AB:83:ALA:HB2	2.49	0.47
47:BF:113:PHE:CZ	47:BF:175:PRO:HB2	2.50	0.47
23:BB:1102:C:H2'	23:BB:1103:A:C8	2.49	0.47
47:DF:121:PHE:HD2	47:DF:121:PHE:N	2.12	0.47
4:CE:131:ASN:HD21	4:CE:133:ILE:HB	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:24:VAL:C	47:DF:26:GLN:H	2.17	0.47
17:AT:74:HIS:HA	17:AT:77:ASN:HD21	1.78	0.47
23:DB:2210:U:C4	23:DB:2212:A:N7	2.83	0.47
25:BC:14:HIS:O	25:BC:203:VAL:HG11	2.15	0.47
1:CA:1187:G:C4'	8:CI:112:ARG:HH12	2.24	0.47
38:BM:57:VAL:O	38:BM:57:VAL:HG12	2.15	0.47
24:BI:19:PRO:HB2	24:BI:22:PRO:HD2	1.97	0.47
38:BM:35:ALA:HB2	38:BM:100:LYS:CB	2.45	0.47
23:BB:2394:C:OP1	37:BL:63:LYS:HG2	2.15	0.47
40:DH:50:ARG:C	40:DH:52:ALA:H	2.18	0.47
28:BP:45:VAL:N	28:BP:60:VAL:HG13	2.29	0.47
41:DJ:6:ALA:HB3	41:DJ:45:THR:CG2	2.40	0.47
37:DL:73:ILE:O	37:DL:105:ILE:HG23	2.14	0.47
27:DK:120:PRO:O	27:DK:121:GLU:HG3	2.14	0.47
11:CL:30:ARG:O	11:CL:57:THR:HG23	2.14	0.47
24:DI:100:ILE:O	24:DI:139:VAL:HA	2.15	0.47
36:D2:31:LEU:O	36:D2:35:ARG:HB3	2.15	0.47
44:DQ:30:VAL:HG22	44:DQ:31:TYR:H	1.79	0.47
9:AJ:53:ILE:HG22	9:AJ:61:ALA:CB	2.44	0.47
23:DB:581:C:H2'	23:DB:582:A:H8	1.80	0.47
25:BC:106:PRO:O	25:BC:109:LEU:HD23	2.14	0.47
51:DZ:53:ALA:O	51:DZ:55:GLY:N	2.42	0.47
23:DB:2595:G:H1	25:DC:238:ASN:ND2	2.11	0.47
37:DL:3:LEU:O	37:DL:5:THR:N	2.47	0.47
13:AP:28:ARG:HD2	13:AP:29:ASN:N	2.29	0.47
6:AG:87:PRO:HG3	6:AG:147:ASN:HB2	1.97	0.47
1:CA:1091:U:H3'	6:CG:3:ARG:HH12	1.79	0.47
23:DB:99:U:O2	23:DB:99:U:H5'	2.15	0.47
49:BR:71:LYS:HE3	49:BR:73:LYS:HZ2	1.78	0.47
1:CA:1252:A:H2'	1:CA:1253:G:O4'	2.15	0.47
1:CA:840:C:C2	1:CA:842:U:H5''	2.50	0.47
21:CN:81:ILE:HG13	21:CN:81:ILE:H	1.53	0.47
25:DC:250:GLN:CG	25:DC:254:LYS:HG2	2.44	0.47
25:DC:244:VAL:HB	25:DC:249:VAL:N	2.29	0.47
23:BB:200:U:O2'	51:BZ:22:LEU:HD12	2.14	0.47
1:AA:389:A:H2'	1:AA:389:A:N3	2.30	0.47
23:DB:2845:U:O2'	23:DB:2846:G:H5'	2.14	0.47
3:AD:169:TRP:CD2	3:AD:185:PRO:HB3	2.50	0.47
1:CA:662:U:O2'	1:CA:836:G:H5''	2.14	0.47
23:BB:222:A:N6	23:BB:232:G:H1'	2.29	0.47
18:AB:33:ALA:HA	18:AB:38:HIS:HA	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:389:A:H2'	1:CA:389:A:N3	2.28	0.47
25:BC:95:TYR:HE1	25:BC:101:ARG:HD2	1.80	0.47
42:DN:58:ASP:O	42:DN:59:SER:CB	2.63	0.47
23:BB:419:U:H2'	23:BB:420:C:H6	1.76	0.47
18:AB:76:SER:HA	18:AB:92:ASN:HD22	1.80	0.47
4:CE:95:MET:HG3	4:CE:124:ALA:CB	2.44	0.47
23:BB:1946:U:O2'	23:BB:1947:C:H5'	2.15	0.47
1:AA:682:G:O2'	1:AA:683:G:H5'	2.14	0.47
23:DB:349:U:H2'	23:DB:350:G:H8	1.80	0.47
23:DB:5:A:H2'	23:DB:6:A:H8	1.76	0.47
47:BF:72:SER:HB2	47:BF:80:GLN:OE1	2.15	0.47
34:B3:3:ILE:CG2	34:B3:62:PRO:HG2	2.45	0.47
23:DB:1026:G:OP2	23:DB:1134:A:H1'	2.15	0.47
31:D0:9:ARG:HB2	31:D0:12:ARG:NH2	2.30	0.47
23:DB:1461:C:H2'	23:DB:1462:C:C6	2.49	0.47
1:AA:861:G:O2'	1:AA:862:C:H5'	2.14	0.47
1:AA:402:G:H2'	1:AA:403:C:H6	1.79	0.47
25:BC:265:PHE:CD2	25:BC:265:PHE:N	2.82	0.47
44:BQ:65:ASN:CB	44:BQ:75:TYR:HB2	2.44	0.47
23:DB:2837:A:H2'	23:DB:2838:G:H8	1.79	0.47
23:DB:329:G:OP2	46:DU:64:ILE:HD11	2.14	0.47
25:BC:79:ARG:HD2	25:BC:81:GLU:CG	2.44	0.47
23:DB:2800:A:H2'	23:DB:2801:G:C8	2.50	0.47
21:CN:20:PHE:HB3	21:CN:24:ALA:HB2	1.96	0.47
23:BB:770:G:OP2	36:B2:11:LYS:HE2	2.15	0.47
9:CJ:56:HIS:O	9:CJ:57:VAL:HG12	2.15	0.47
1:AA:26:A:N6	1:AA:558:G:H1'	2.29	0.47
1:AA:1244:G:H2'	1:AA:1245:C:C6	2.49	0.47
23:DB:2339:C:H2'	23:DB:2340:A:H8	1.79	0.47
1:CA:709:U:H2'	1:CA:710:G:H8	1.78	0.47
1:AA:497:G:H2'	1:AA:498:A:C8	2.49	0.47
47:BF:2:LYS:HE3	47:BF:2:LYS:H	1.80	0.47
23:DB:1740:G:H2'	23:DB:1741:C:H6	1.79	0.47
4:AE:12:GLU:HB3	4:AE:63:MET:CE	2.44	0.47
25:BC:52:HIS:O	25:BC:53:ILE:HB	2.14	0.47
1:CA:620:C:C2	3:CD:131:ILE:HG21	2.50	0.47
37:BL:119:PRO:HA	37:BL:138:ALA:O	2.15	0.47
23:BB:981:A:H4'	23:BB:2037:A:H5'	1.95	0.47
48:BG:39:ALA:HA	48:BG:54:ARG:HG3	1.96	0.47
1:CA:538:G:OP2	11:CL:111:GLN:HB2	2.15	0.47
23:DB:1049:C:O2	23:DB:1113:U:H4'	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:432:A:C2'	1:CA:433:G:H5'	2.44	0.47
1:CA:1160:G:O2'	1:CA:1161:C:H5'	2.15	0.47
1:CA:1056:U:O2'	1:CA:1057:G:H5'	2.15	0.47
23:DB:1831:G:O2'	23:DB:1832:C:H5'	2.15	0.47
14:AQ:80:LYS:NZ	14:AQ:80:LYS:H	2.13	0.47
1:AA:394:G:H2'	1:AA:395:C:H6	1.79	0.47
1:AA:747:A:H2'	1:AA:748:G:O4'	2.14	0.47
23:DB:2359:C:O2'	23:DB:2360:G:H5'	2.15	0.47
21:AN:11:LYS:O	21:AN:15:LEU:HG	2.15	0.47
23:BB:2776:A:H4'	23:BB:2777:G:H5''	1.97	0.47
24:DI:46:ASP:HA	24:DI:50:LYS:HE2	1.96	0.47
1:CA:933:G:O2'	1:CA:934:C:H5'	2.15	0.47
2:CC:143:LEU:O	2:CC:143:LEU:HD13	2.14	0.47
23:DB:2623:G:O2'	23:DB:2624:G:H5'	2.15	0.47
23:BB:184:C:H2'	23:BB:185:G:H8	1.80	0.47
23:DB:1422:G:H4'	23:DB:1493:C:OP1	2.15	0.47
8:AI:9:GLY:CA	8:AI:80:HIS:HB3	2.44	0.47
2:AC:70:ALA:HB2	2:AC:105:VAL:HG23	1.96	0.47
42:DN:14:SER:O	42:DN:18:GLN:HB2	2.15	0.47
6:CG:70:PRO:HB3	6:CG:102:TRP:CH2	2.50	0.47
18:AB:86:CYS:HB3	18:AB:87:ASP:H	1.52	0.47
17:CT:49:ALA:HA	17:CT:52:GLU:HB3	1.97	0.47
23:DB:1932:A:H2'	23:DB:1933:G:O4'	2.15	0.47
34:B3:60:CYS:HB2	34:B3:61:LEU:HD23	1.96	0.47
25:BC:222:THR:HA	25:BC:231:HIS:O	2.14	0.47
23:BB:1424:G:H2'	23:BB:1425:G:O4'	2.15	0.47
25:DC:171:VAL:HG23	25:DC:185:ALA:HB2	1.96	0.47
25:DC:151:GLY:C	25:DC:152:GLN:HG3	2.34	0.47
48:BG:16:VAL:HA	48:BG:25:ILE:HA	1.97	0.47
48:BG:34:ARG:HG2	48:BG:34:ARG:HH11	1.80	0.47
26:BD:199:SER:O	26:BD:201:LEU:HG	2.14	0.47
48:DG:34:ARG:HG2	48:DG:34:ARG:NH1	2.30	0.47
29:DE:173:THR:HA	29:DE:199:MET:SD	2.55	0.47
40:DH:127:GLU:CD	40:DH:127:GLU:N	2.68	0.47
23:BB:1251:C:O2'	23:BB:1252:G:H3'	2.15	0.47
8:AI:42:THR:HA	8:AI:45:MET:HE1	1.97	0.47
43:DO:30:ARG:HG2	43:DO:31:THR:H	1.79	0.47
23:DB:1731:G:O2'	23:DB:1732:C:H5''	2.15	0.47
48:BG:153:PRO:HD3	48:BG:161:VAL:O	2.14	0.47
48:DG:89:VAL:HG12	48:DG:90:GLY:N	2.29	0.47
1:CA:720:C:H5''	15:CR:40:PRO:HA	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DV:44:HIS:CE1	35:DV:86:LEU:H	2.31	0.47
44:DQ:107:ALA:HB1	49:DR:48:LYS:HE3	1.97	0.47
24:DI:72:THR:CG2	24:DI:112:LYS:HD2	2.45	0.47
29:BE:129:PRO:HG3	29:BE:156:ASN:OD1	2.15	0.47
1:AA:1001:C:H2'	1:AA:1002:G:O4'	2.14	0.47
1:AA:1004:A:H2'	1:AA:1005:A:O4'	2.14	0.47
29:BE:60:TRP:HB3	29:BE:61:ARG:H	1.45	0.47
30:BY:6:ILE:O	30:BY:34:THR:HG23	2.15	0.47
44:BQ:63:ARG:HH12	44:BQ:96:ASP:HA	1.80	0.47
23:DB:2831:G:OP1	23:DB:2834:G:H4'	2.15	0.47
30:DY:6:ILE:HG23	30:DY:56:VAL:HG22	1.97	0.47
1:AA:1101:A:H4'	1:AA:1102:A:O5'	2.15	0.47
1:AA:202:G:H2'	1:AA:203:G:C8	2.50	0.47
37:DL:95:LEU:HB3	37:DL:100:ILE:CG2	2.44	0.47
24:DI:17:ALA:O	24:DI:18:ASN:HB3	2.14	0.47
1:AA:1309:G:OP1	12:AM:90:HIS:NE2	2.48	0.47
47:BF:27:VAL:O	47:BF:27:VAL:HG23	2.15	0.47
23:BB:2868:A:H2'	23:BB:2869:G:C8	2.50	0.47
1:CA:1221:G:H2'	1:CA:1222:G:H8	1.79	0.47
16:CS:33:TRP:CD1	16:CS:51:HIS:HB3	2.50	0.47
23:BB:582:A:H2'	23:BB:583:G:H8	1.80	0.47
27:DK:115:ILE:HG23	27:DK:116:ILE:N	2.30	0.47
23:BB:591:U:H1'	34:B3:1:PRO:CD	2.45	0.47
23:DB:2666:C:O2	23:DB:2666:C:O5'	2.33	0.47
3:AD:35:GLN:HB3	3:AD:36:ALA:H	1.58	0.47
23:BB:2087:G:H2'	23:BB:2088:A:C8	2.49	0.47
50:DT:72:GLN:HG2	50:DT:72:GLN:H	1.50	0.47
40:DH:57:LYS:C	40:DH:61:VAL:HB	2.34	0.47
1:AA:807:A:H2'	1:AA:808:C:C6	2.50	0.47
1:AA:543:U:O2'	1:AA:544:G:H5'	2.14	0.47
47:DF:78:ILE:N	47:DF:78:ILE:HD12	2.30	0.47
23:DB:346:A:H5'	23:DB:346:A:N3	2.29	0.47
1:CA:1530:G:H2'	1:CA:1531:A:C8	2.50	0.47
23:BB:636:G:O5'	37:BL:128:THR:HG22	2.14	0.47
5:AF:49:TYR:CE1	15:AR:65:SER:HA	2.50	0.47
23:DB:2108:A:N3	23:DB:2108:A:H2'	2.29	0.47
29:BE:3:LEU:HB2	29:BE:12:LEU:CG	2.44	0.47
1:CA:614:C:O2'	1:CA:615:G:H5'	2.15	0.47
24:DI:37:PHE:HB2	24:DI:66:PHE:CE2	2.50	0.47
1:AA:105:G:H2'	1:AA:106:C:C6	2.50	0.47
1:AA:996:A:H2'	1:AA:997:U:C6	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:438:G:H2'	23:DB:439:A:C8	2.50	0.47
1:AA:546:A:P	3:AD:68:GLU:HB3	2.54	0.47
23:BB:2016:U:H2'	23:BB:2017:U:C6	2.49	0.47
1:CA:1486:G:H2'	1:CA:1487:G:C8	2.50	0.47
22:DA:35:C:H2'	22:DA:36:C:C5'	2.45	0.47
23:DB:2685:G:H2'	23:DB:2686:G:H8	1.79	0.47
23:DB:64:A:H2'	23:DB:65:U:C6	2.49	0.47
1:AA:130:A:N1	1:AA:233:C:H1'	2.30	0.47
23:DB:1351:C:H2'	23:DB:1352:U:O4'	2.14	0.47
23:DB:1350:C:H5'	23:DB:1351:C:OP2	2.14	0.47
1:AA:552:U:H2'	1:AA:553:A:C8	2.50	0.47
1:AA:458:U:H2'	1:AA:459:A:H8	1.79	0.47
28:DP:29:VAL:HA	28:DP:79:VAL:O	2.15	0.47
23:DB:2251:G:H2'	23:DB:2252:G:C8	2.50	0.47
37:DL:129:LYS:HG3	37:DL:130:GLY:N	2.29	0.47
23:BB:379:G:O4'	23:BB:2232:C:H5''	2.14	0.47
9:CJ:48:ARG:HG2	9:CJ:66:GLU:CB	2.45	0.47
23:BB:1760:C:H2'	23:BB:1761:C:O4'	2.15	0.47
23:DB:915:C:H3'	23:DB:916:G:H8	1.79	0.47
44:BQ:14:LYS:HA	44:BQ:17:LEU:HB3	1.97	0.47
28:DP:114:ASN:HA	28:DP:114:ASN:HD22	1.57	0.47
51:BZ:16:ASN:OD1	51:BZ:26:LYS:HD2	2.15	0.47
1:AA:24:U:O2'	1:AA:25:C:H5'	2.15	0.47
23:DB:1099:G:OP2	24:DI:2:LYS:O	2.33	0.47
12:AM:64:VAL:HA	12:AM:68:LEU:HD23	1.97	0.47
50:DT:32:LEU:H	50:DT:83:ALA:HB3	1.79	0.47
50:BT:29:THR:CA	50:BT:86:THR:HA	2.24	0.47
9:CJ:40:ILE:CD1	9:CJ:74:VAL:H	2.28	0.47
37:DL:29:LYS:C	37:DL:31:GLY:N	2.68	0.47
23:DB:1819:A:OP1	25:DC:159:THR:HG21	2.15	0.47
23:DB:1818:U:HO2'	23:DB:1819:A:P	2.37	0.47
23:BB:2772:C:H2'	23:BB:2773:C:H6	1.79	0.47
5:CF:3:HIS:CD2	5:CF:65:GLU:HG3	2.50	0.47
23:BB:2272:U:O2'	23:BB:2273:A:H8	1.97	0.47
8:AI:45:MET:SD	8:AI:45:MET:N	2.81	0.47
23:BB:1723:G:C2'	23:BB:1724:G:H5'	2.45	0.47
1:CA:10:A:OP2	4:CE:130:THR:HB	2.14	0.47
12:CM:66:GLY:C	12:CM:68:LEU:H	2.18	0.47
2:AC:149:LYS:CA	2:AC:168:ARG:HG3	2.45	0.47
48:DG:153:PRO:HG2	48:DG:162:ARG:HD2	1.97	0.47
23:DB:299:A:H2'	23:DB:300:A:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DQ:111:LYS:HB2	49:DR:48:LYS:HZ3	1.79	0.47
28:DP:50:ARG:HB3	28:DP:57:ALA:N	2.30	0.47
1:AA:1313:U:H2'	1:AA:1314:C:C6	2.49	0.47
26:DD:5:VAL:N	26:DD:32:ASN:ND2	2.57	0.47
1:AA:865:A:C2	1:AA:918:A:H4'	2.50	0.47
2:AC:82:ASP:O	2:AC:86:LEU:HG	2.14	0.47
42:BN:106:ASP:C	42:BN:108:ALA:H	2.18	0.47
23:DB:126:A:O2'	23:DB:127:A:H5'	2.15	0.47
26:DD:118:PHE:HZ	26:DD:123:LYS:HZ3	1.62	0.47
18:CB:180:ILE:O	18:CB:182:VAL:HG23	2.15	0.47
2:CC:186:SER:O	2:CC:197:VAL:HG23	2.15	0.47
16:CS:47:THR:HA	16:CS:60:PHE:CE2	2.49	0.47
11:AL:41:PRO:CB	11:AL:88:ASP:HB3	2.45	0.47
24:DI:129:GLU:HB3	24:DI:133:ARG:NH1	2.29	0.47
20:AO:8:THR:O	20:AO:12:VAL:HG23	2.15	0.47
1:CA:1168:U:H4'	1:CA:1169:A:OP2	2.13	0.47
11:CL:20:VAL:HG12	11:CL:93:ARG:HB3	1.96	0.47
48:DG:70:LEU:O	48:DG:74:MET:HG3	2.15	0.47
48:DG:8:VAL:O	48:DG:9:VAL:HB	2.15	0.47
18:AB:112:ARG:HD2	18:AB:116:LEU:HD12	1.97	0.47
41:BJ:21:THR:HG23	41:BJ:61:LYS:HB3	1.96	0.47
40:DH:60:GLU:HA	40:DH:62:LEU:HD23	1.96	0.47
50:DT:50:LEU:O	50:DT:52:GLU:N	2.46	0.47
2:CC:7:ASN:OD1	2:CC:15:LYS:HE3	2.15	0.47
23:DB:606:U:P	29:DE:99:LYS:HD2	2.55	0.47
23:DB:1092:C:H2'	23:DB:1093:G:C5'	2.44	0.47
23:DB:2199:A:H3'	23:DB:2200:C:C6	2.49	0.47
1:AA:36:C:O2'	1:AA:37:U:H5'	2.15	0.47
22:BA:49:C:OP1	43:BO:101:GLY:HA3	2.15	0.47
6:AG:91:ARG:CB	6:AG:92:PRO:HD2	2.45	0.47
23:BB:2889:C:H2'	23:BB:2890:G:O4'	2.15	0.47
2:AC:106:ARG:HG2	2:AC:106:ARG:O	2.15	0.47
4:CE:51:LYS:O	4:CE:61:LYS:HD2	2.15	0.47
41:DJ:114:LEU:HG	41:DJ:118:MET:HE2	1.97	0.47
25:DC:137:GLY:N	25:DC:163:ILE:HB	2.30	0.47
23:DB:540:C:O2'	23:DB:541:A:H5'	2.15	0.47
1:CA:1404:C:H2'	1:CA:1405:G:C8	2.50	0.47
23:DB:710:U:H2'	23:DB:711:G:H8	1.79	0.47
23:BB:819:A:OP2	23:BB:1187:G:N2	2.48	0.47
45:DS:49:LYS:O	45:DS:53:SER:HB2	2.15	0.47
23:BB:438:G:H2'	23:BB:439:A:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:635:A:H2'	1:AA:636:U:H6	1.80	0.47
27:DK:13:ASN:HD21	27:DK:98:ARG:H	1.63	0.47
9:CJ:50:THR:HA	9:CJ:64:GLN:HA	1.96	0.47
8:CI:122:ARG:NH1	8:CI:122:ARG:HG3	2.30	0.47
1:AA:61:G:H2'	1:AA:62:U:O4'	2.15	0.47
48:BG:39:ALA:HB1	48:BG:54:ARG:HB2	1.96	0.47
23:BB:2370:G:H2'	23:BB:2371:G:O4'	2.13	0.47
1:AA:179:A:H2'	1:AA:180:U:O4'	2.15	0.47
22:BA:11:C:OP1	52:BW:71:LYS:HG2	2.15	0.47
23:DB:1306:C:O2'	23:DB:1307:A:H5'	2.15	0.47
13:CP:41:PRO:O	13:CP:42:ILE:HD13	2.15	0.47
4:AE:148:SER:OG	4:AE:151:MET:HB2	2.15	0.47
23:DB:1338:G:O2'	23:DB:1339:G:H5'	2.15	0.47
46:BU:27:VAL:HG23	46:BU:33:VAL:HG12	1.97	0.47
23:DB:1268:A:H2'	23:DB:1269:A:O4'	2.14	0.47
23:BB:2236:U:O2'	23:BB:2237:G:H5'	2.14	0.47
23:DB:2875:C:H2'	23:DB:2876:G:C8	2.50	0.47
10:CK:124:LYS:HA	19:CU:34:ARG:CG	2.44	0.47
50:DT:29:THR:CA	50:DT:86:THR:HA	2.26	0.47
10:AK:125:LYS:O	19:AU:33:ARG:CZ	2.63	0.47
23:DB:921:C:H2'	23:DB:922:C:H6	1.79	0.47
25:DC:107:LYS:N	25:DC:193:GLU:O	2.48	0.47
37:DL:125:LEU:H	37:DL:143:GLU:CG	2.28	0.47
37:DL:125:LEU:N	37:DL:143:GLU:HG3	2.28	0.47
43:BO:52:SER:C	43:BO:54:VAL:H	2.17	0.47
32:B4:15:LYS:O	32:B4:16:ILE:CB	2.60	0.47
23:DB:1176:U:O5'	23:DB:1176:U:H6	1.98	0.47
40:DH:114:GLU:OE1	40:DH:133:GLN:HB2	2.14	0.47
43:DO:28:VAL:HG21	43:DO:106:LEU:HD21	1.97	0.47
23:BB:2314:A:H4'	47:BF:34:THR:HG21	1.96	0.47
23:BB:1242:U:H2'	23:BB:1243:C:C6	2.50	0.47
18:CB:60:ALA:O	18:CB:224:ARG:HG2	2.14	0.47
13:CP:66:THR:HG22	13:CP:67:ILE:N	2.30	0.47
39:BX:56:LEU:HA	39:BX:59:GLU:CD	2.35	0.47
40:DH:5:LEU:HD11	40:DH:19:VAL:HG22	1.97	0.47
1:CA:205:A:C2'	1:CA:206:C:H5'	2.45	0.47
42:DN:17:ARG:HH21	42:DN:17:ARG:HB2	1.79	0.47
1:AA:71:A:O2'	1:AA:72:A:H5''	2.14	0.47
10:AK:16:SER:HA	10:AK:77:GLY:O	2.15	0.47
40:BH:53:GLU:CA	40:BH:57:LYS:HB3	2.42	0.47
1:AA:836:G:H2'	1:AA:837:U:C6	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:3:U:H2'	23:BB:4:U:C6	2.49	0.47
23:BB:2462:C:H2'	23:BB:2463:C:C6	2.50	0.47
1:CA:1202:U:O2	21:CN:81:ILE:HD13	2.15	0.47
23:DB:968:C:O2'	23:DB:969:G:H5'	2.15	0.47
50:DT:48:GLN:HA	50:DT:48:GLN:NE2	2.30	0.47
2:CC:46:LEU:HD12	2:CC:75:VAL:HG22	1.96	0.47
45:DS:13:SER:CB	45:DS:16:LYS:HE2	2.45	0.47
2:AC:63:ILE:HD12	2:AC:90:VAL:HG12	1.97	0.47
34:D3:3:ILE:CG2	34:D3:62:PRO:HG2	2.45	0.47
23:DB:2889:C:H2'	23:DB:2890:G:O4'	2.15	0.47
23:DB:528:A:C2	23:DB:2043:C:H4'	2.50	0.47
23:BB:2899:A:O2'	23:BB:2900:A:H5'	2.15	0.47
52:DW:70:VAL:CG2	52:DW:75:ASN:HD22	2.27	0.47
23:BB:2757:A:H2'	23:BB:2757:A:N3	2.30	0.47
26:BD:38:LYS:HA	26:BD:38:LYS:HE2	1.96	0.47
41:BJ:35:ARG:C	41:BJ:37:ARG:H	2.18	0.47
23:DB:538:A:N6	23:DB:555:G:O2'	2.46	0.47
23:DB:1291:C:O2'	23:DB:1292:G:H5'	2.15	0.47
1:CA:328:C:H4'	1:CA:329:A:C5'	2.44	0.47
23:DB:782:A:N7	25:DC:219:VAL:HG21	2.30	0.47
23:DB:1341:G:H3'	23:DB:1397:U:O2	2.14	0.47
23:BB:688:U:H2'	23:BB:689:A:H8	1.80	0.47
14:CQ:80:LYS:O	14:CQ:81:ALA:HB3	2.15	0.47
23:BB:2643:G:H2'	23:BB:2644:G:O4'	2.14	0.47
23:DB:1904:G:O2'	23:DB:1905:C:H5'	2.15	0.47
1:CA:345:C:P	28:DP:36:LYS:HZ2	2.38	0.47
23:BB:2776:A:H3'	23:BB:2776:A:OP1	2.15	0.47
23:BB:588:U:H1'	29:BE:85:PHE:CD2	2.49	0.47
44:DQ:14:LYS:HA	44:DQ:17:LEU:HB3	1.97	0.47
23:DB:312:G:H2'	23:DB:313:G:H8	1.80	0.47
42:BN:14:SER:O	42:BN:18:GLN:HB2	2.15	0.47
1:AA:971:G:H3'	1:AA:971:G:OP1	2.14	0.47
23:DB:392:U:O2'	23:DB:393:C:H5'	2.15	0.47
23:DB:1760:C:H2'	23:DB:1761:C:O4'	2.15	0.47
6:CG:30:MET:HA	6:CG:38:ALA:HB2	1.97	0.46
1:AA:119:A:H4'	1:AA:120:A:O4'	2.15	0.46
35:BV:21:ARG:HE	35:BV:87:GLN:HB3	1.80	0.46
29:BE:105:LEU:HA	29:BE:108:ILE:HG22	1.97	0.46
23:DB:27:G:HO2'	23:DB:28:A:H8	1.53	0.46
40:BH:65:ALA:O	40:BH:135:HIS:HB2	2.15	0.46
40:BH:147:VAL:HG12	40:BH:148:ALA:N	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DL:141:LYS:HZ2	37:DL:143:GLU:HA	1.80	0.46
1:AA:1248:A:C4'	8:AI:32:ARG:HH12	2.27	0.46
12:AM:106:ARG:NH1	12:AM:109:LYS:HD2	2.30	0.46
1:AA:720:C:H5''	15:AR:40:PRO:HA	1.97	0.46
32:B4:4:ARG:CG	32:B4:5:ALA:H	2.27	0.46
48:BG:136:ASP:O	48:BG:140:ILE:HG23	2.15	0.46
46:BU:81:ARG:HG3	46:BU:81:ARG:NH2	2.31	0.46
35:DV:31:TYR:CB	35:DV:37:PRO:HG3	2.43	0.46
40:DH:67:ALA:O	40:DH:70:GLU:HG3	2.15	0.46
13:AP:6:LEU:CD1	13:AP:71:VAL:HB	2.46	0.46
47:BF:104:THR:O	47:BF:108:PRO:HG2	2.15	0.46
47:BF:110:ILE:CG2	47:BF:113:PHE:HB3	2.45	0.46
47:BF:116:LEU:HD22	47:BF:175:PRO:HG2	1.97	0.46
26:DD:32:ASN:HB3	26:DD:50:VAL:HG21	1.96	0.46
47:DF:121:PHE:HB2	47:DF:127:TYR:HA	1.95	0.46
47:DF:50:ASP:O	47:DF:53:ALA:HB3	2.15	0.46
25:DC:203:VAL:HG12	25:DC:205:GLY:N	2.29	0.46
23:BB:2727:A:H2'	23:BB:2728:U:C6	2.50	0.46
3:AD:145:ARG:HH22	3:AD:147:LYS:HE2	1.79	0.46
23:BB:2472:G:O6	23:BB:2476:A:H4'	2.15	0.46
24:DI:18:ASN:N	24:DI:19:PRO:CD	2.77	0.46
23:BB:2595:G:H1	25:BC:238:ASN:ND2	2.13	0.46
1:AA:643:C:H5'	7:AH:31:LEU:HD13	1.98	0.46
39:DX:22:LEU:HG	39:DX:23:ARG:HG2	1.96	0.46
23:DB:2734:A:C2'	23:DB:2735:G:H5'	2.44	0.46
45:BS:71:VAL:HG22	45:BS:71:VAL:O	2.14	0.46
28:DP:94:ALA:O	28:DP:95:LYS:HD2	2.15	0.46
23:BB:2649:C:H2'	23:BB:2650:U:C6	2.50	0.46
2:CC:13:ILE:HG12	2:CC:14:VAL:HG22	1.97	0.46
2:AC:87:ARG:CZ	2:AC:88:LYS:HA	2.45	0.46
18:CB:10:LYS:O	18:CB:211:LEU:HG	2.16	0.46
38:BM:26:VAL:CG2	38:BM:133:LYS:HA	2.44	0.46
13:AP:48:GLU:CG	13:AP:49:GLY:H	2.28	0.46
1:AA:683:G:O2'	1:AA:684:U:H5'	2.15	0.46
26:BD:61:THR:OG1	26:BD:63:PRO:HD2	2.16	0.46
1:AA:6:G:H4'	1:AA:298:A:H4'	1.95	0.46
1:CA:803:G:H2'	1:CA:804:U:O4'	2.14	0.46
23:BB:1564:C:H2'	23:BB:1565:C:C6	2.50	0.46
1:CA:5:U:H1'	1:CA:6:G:H22	1.80	0.46
22:BA:32:U:H1'	22:BA:52:A:N7	2.31	0.46
23:DB:2637:U:OP1	26:DD:83:ARG:HD3	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BV:55:GLU:CD	35:BV:55:GLU:N	2.69	0.46
23:DB:1683:U:H2'	23:DB:1684:G:C8	2.50	0.46
8:CI:10:ARG:H	8:CI:80:HIS:HD2	1.63	0.46
52:BW:70:VAL:CG2	52:BW:75:ASN:HD22	2.27	0.46
51:DZ:36:HIS:HB3	51:DZ:38:PHE:CE2	2.50	0.46
1:CA:1114:C:H2'	1:CA:1115:U:H6	1.80	0.46
1:CA:1174:G:O2'	1:CA:1175:G:H5'	2.15	0.46
19:CU:6:ARG:O	19:CU:7:GLU:O	2.33	0.46
25:DC:265:PHE:N	25:DC:265:PHE:HD2	2.13	0.46
12:CM:14:ALA:O	12:CM:18:LEU:HD12	2.15	0.46
10:CK:88:PRO:HD3	19:CU:28:LEU:HD13	1.97	0.46
1:CA:339:C:OP2	27:DK:98:ARG:CZ	2.63	0.46
1:AA:435:A:N3	1:AA:435:A:H2'	2.28	0.46
1:AA:124:C:O2'	1:AA:125:U:H5'	2.15	0.46
1:AA:113:G:O4'	1:AA:354:G:H4'	2.15	0.46
23:BB:1351:C:H2'	23:BB:1352:U:O4'	2.14	0.46
23:DB:2488:G:O2'	23:DB:2489:U:H5'	2.15	0.46
23:DB:1322:A:H2'	23:DB:1323:C:H5'	1.97	0.46
11:AL:34:THR:N	11:AL:53:ARG:O	2.47	0.46
23:DB:509:C:H5'	23:DB:510:C:OP2	2.15	0.46
7:CH:17:GLN:OE1	7:CH:69:ALA:HB1	2.15	0.46
1:AA:1210:C:H4'	1:AA:1214:C:C5	2.50	0.46
23:BB:1932:A:H2'	23:BB:1933:G:O4'	2.15	0.46
23:DB:1815:A:OP1	23:DB:1822:C:H4'	2.15	0.46
23:DB:1475:G:H4'	23:DB:1476:U:O5'	2.16	0.46
23:BB:2250:G:O5'	23:BB:2250:G:H8	1.98	0.46
23:BB:932:U:O4'	23:BB:932:U:O2	2.31	0.46
23:DB:1995:U:H1'	27:DK:3:GLN:NE2	2.29	0.46
23:BB:781:A:OP1	25:BC:216:ARG:NH2	2.48	0.46
1:AA:903:G:H2'	1:AA:904:U:C6	2.50	0.46
18:CB:187:ASP:OD1	18:CB:203:ASP:HB3	2.16	0.46
12:AM:59:VAL:HG22	12:AM:64:VAL:HG11	1.96	0.46
50:DT:32:LEU:O	50:DT:34:VAL:HG13	2.15	0.46
9:CJ:15:HIS:HA	9:CJ:18:ILE:CG2	2.40	0.46
23:DB:673:C:H2'	23:DB:674:G:H5'	1.97	0.46
29:DE:58:LYS:O	29:DE:60:TRP:N	2.47	0.46
25:DC:145:MET:HB2	25:DC:152:GLN:HE22	1.80	0.46
26:BD:201:LEU:H	26:BD:201:LEU:HD12	1.79	0.46
35:BV:76:ASP:HA	38:BM:136:MET:HE3	1.96	0.46
26:BD:172:VAL:HG23	26:BD:194:PRO:HD3	1.96	0.46
20:AO:70:LEU:HD11	20:AO:77:ARG:CB	2.42	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:196:VAL:O	29:BE:200:LEU:HD23	2.14	0.46
14:AQ:52:CYS:SG	14:AQ:74:LEU:HG	2.55	0.46
40:BH:135:HIS:CE1	40:BH:138:VAL:HB	2.50	0.46
37:DL:84:LYS:C	37:DL:86:GLU:H	2.19	0.46
1:AA:1352:C:H2'	1:AA:1353:G:O4'	2.15	0.46
10:AK:111:ASP:HB2	19:AU:19:LYS:CE	2.43	0.46
43:DO:35:ILE:HG21	43:DO:71:ALA:CB	2.45	0.46
46:BU:73:ASN:C	46:BU:75:ALA:H	2.18	0.46
44:BQ:94:LEU:C	44:BQ:96:ASP:N	2.68	0.46
38:BM:97:GLN:HB2	38:BM:98:PRO:HD2	1.97	0.46
43:BO:28:VAL:HG21	43:BO:106:LEU:HD21	1.96	0.46
47:BF:36:ASN:HA	47:BF:87:LYS:HA	1.95	0.46
28:DP:63:ILE:CA	28:DP:68:GLY:HA2	2.39	0.46
26:BD:10:GLY:HA3	26:BD:26:VAL:H	1.76	0.46
26:BD:51:THR:CG2	26:BD:76:GLY:HA3	2.44	0.46
37:BL:95:LEU:HB3	37:BL:100:ILE:HG23	1.95	0.46
39:DX:21:LEU:HD21	39:DX:50:VAL:HG11	1.97	0.46
39:DX:56:LEU:C	39:DX:58:ASN:H	2.18	0.46
23:DB:1654:A:H2'	23:DB:1655:A:C8	2.48	0.46
23:DB:2261:C:N4	52:DW:10:ARG:HB3	2.30	0.46
42:DN:34:ILE:O	42:DN:112:TYR:HA	2.15	0.46
42:DN:19:ALA:C	42:DN:21:PHE:N	2.69	0.46
41:DJ:45:THR:H	41:DJ:46:PRO:CD	2.24	0.46
44:DQ:64:ILE:HD12	44:DQ:95:ALA:CB	2.45	0.46
23:BB:62:U:H2'	23:BB:63:A:O4'	2.14	0.46
32:D4:15:LYS:O	32:D4:16:ILE:CB	2.60	0.46
31:B0:42:ILE:HG12	42:BN:99:LYS:O	2.15	0.46
1:AA:560:A:H5'	1:AA:566:G:N2	2.30	0.46
23:BB:1820:U:OP1	25:BC:176:ARG:HD2	2.14	0.46
25:BC:157:ALA:HA	25:BC:194:VAL:CG2	2.46	0.46
23:DB:2769:U:O2'	23:DB:2770:G:H5'	2.14	0.46
23:DB:2074:U:H1'	23:DB:2598:A:N3	2.31	0.46
22:BA:98:G:N1	35:BV:14:LYS:HB2	2.30	0.46
23:DB:741:U:H2'	23:DB:742:A:H8	1.79	0.46
25:DC:162:GLN:NE2	25:DC:174:ARG:HH22	2.13	0.46
11:CL:81:ILE:HG23	11:CL:94:TYR:HB3	1.96	0.46
23:BB:2840:C:H2'	23:BB:2841:C:H6	1.81	0.46
25:DC:249:VAL:O	25:DC:250:GLN:C	2.54	0.46
23:DB:937:C:H2'	23:DB:938:G:C8	2.50	0.46
48:BG:7:PRO:O	48:BG:8:VAL:HB	2.15	0.46
23:DB:2415:G:H2'	23:DB:2416:C:C6	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:171:A:H2'	1:CA:172:A:C8	2.50	0.46
1:CA:501:C:H2'	1:CA:502:A:C8	2.50	0.46
23:DB:2097:A:H2'	23:DB:2098:U:C6	2.50	0.46
1:AA:265:G:N2	1:AA:267:C:H5'	2.30	0.46
13:CP:43:ALA:HA	13:CP:46:LYS:CD	2.44	0.46
29:BE:48:THR:HG23	29:BE:51:GLU:OE2	2.15	0.46
23:BB:908:C:O2'	23:BB:909:A:H5'	2.14	0.46
23:DB:2247:A:O2'	23:DB:2248:C:H5'	2.14	0.46
29:DE:103:GLY:HA2	29:DE:106:LYS:HB2	1.96	0.46
1:CA:300:A:H2'	1:CA:301:G:O4'	2.14	0.46
1:CA:314:C:O2'	1:CA:315:A:H5'	2.15	0.46
1:CA:1041:G:H2'	1:CA:1042:A:C8	2.50	0.46
52:BW:32:ALA:O	52:BW:34:SER:N	2.48	0.46
23:DB:1458:U:H5''	23:DB:1459:G:OP1	2.15	0.46
20:CO:71:LYS:HB2	20:CO:78:TYR:CD2	2.50	0.46
1:CA:833:G:O2'	1:CA:834:U:H5'	2.14	0.46
23:BB:1774:C:C2'	23:BB:1774:C:O2	2.64	0.46
23:DB:2800:A:O2'	23:DB:2801:G:H5'	2.16	0.46
26:BD:38:LYS:HD3	26:BD:45:TYR:OH	2.15	0.46
1:CA:1259:C:H6	1:CA:1259:C:O5'	1.97	0.46
1:AA:658:C:O2'	1:AA:659:U:H5'	2.15	0.46
23:BB:1291:C:O2'	23:BB:1292:G:H5'	2.15	0.46
1:AA:1464:U:P	28:BP:108:ARG:HH22	2.38	0.46
1:AA:961:U:P	1:AA:1222:G:H21	2.37	0.46
46:DU:13:LEU:HA	46:DU:18:LYS:HE3	1.97	0.46
23:BB:1721:G:H1'	23:BB:1739:A:N6	2.30	0.46
23:BB:455:C:N3	23:BB:472:A:H2'	2.31	0.46
5:CF:10:VAL:HG12	5:CF:11:HIS:N	2.30	0.46
23:BB:1707:G:H2'	23:BB:1708:C:O4'	2.15	0.46
10:AK:88:PRO:HG3	19:AU:28:LEU:CD2	2.45	0.46
23:BB:1013:C:H2'	23:BB:1014:A:H8	1.80	0.46
23:DB:1474:U:H2'	23:DB:1475:G:H5'	1.96	0.46
1:AA:276:G:O2'	1:AA:277:C:H5'	2.15	0.46
1:CA:517:G:H22	1:CA:533:A:P	2.38	0.46
23:DB:1664:A:H1'	23:DB:2726:A:C2	2.49	0.46
1:CA:451:A:H4'	1:CA:452:A:O4'	2.15	0.46
23:DB:1838:C:N4	23:DB:1898:U:H2'	2.30	0.46
23:BB:1836:C:O2'	23:BB:1837:C:H5'	2.15	0.46
23:DB:1623:G:O2'	23:DB:1624:U:H5'	2.14	0.46
1:CA:1032:G:H3'	1:CA:1032:G:N3	2.30	0.46
1:AA:689:C:H2'	1:AA:690:G:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2418:A:H2'	23:BB:2419:U:O4'	2.15	0.46
28:BP:29:VAL:HA	28:BP:79:VAL:O	2.15	0.46
23:BB:443:A:H1'	23:BB:1201:U:O4'	2.15	0.46
35:DV:11:GLU:HB2	35:DV:16:ALA:HB2	1.98	0.46
23:BB:2153:C:H2'	23:BB:2153:C:O2	2.15	0.46
23:BB:2154:A:OP1	23:BB:2154:A:H8	1.98	0.46
23:DB:1107:G:H2'	23:DB:1108:U:C6	2.50	0.46
23:DB:2716:C:O2'	23:DB:2717:C:H5'	2.16	0.46
1:CA:966:G:H2'	1:CA:967:C:C6	2.50	0.46
23:BB:1501:G:O2'	23:BB:1502:A:H5'	2.15	0.46
23:BB:1326:U:H2'	23:BB:1327:A:H8	1.80	0.46
18:CB:14:HIS:O	18:CB:16:GLY:N	2.48	0.46
23:DB:1429:G:H2'	23:DB:1430:G:C8	2.50	0.46
23:DB:1430:G:H2'	23:DB:1431:A:C8	2.50	0.46
50:BT:32:LEU:O	50:BT:34:VAL:HG13	2.15	0.46
48:DG:136:ASP:O	48:DG:140:ILE:HG23	2.14	0.46
10:CK:31:VAL:HG11	10:CK:95:THR:OG1	2.15	0.46
23:BB:2539:C:C5'	32:B4:3:VAL:HG11	2.45	0.46
23:BB:2821:A:OP2	42:BN:3:HIS:NE2	2.48	0.46
23:BB:673:C:H5''	29:BE:76:PRO:HD2	1.98	0.46
43:DO:106:LEU:HA	43:DO:109:ALA:HB3	1.97	0.46
35:DV:80:HIS:HB3	35:DV:83:LYS:O	2.14	0.46
38:BM:38:ARG:NH1	38:BM:38:ARG:HG2	2.30	0.46
23:DB:1057:A:H62	23:DB:1086:A:H2'	1.80	0.46
49:DR:63:VAL:HA	49:DR:95:ASP:O	2.15	0.46
47:BF:127:TYR:CB	47:BF:155:ILE:HD13	2.46	0.46
47:BF:62:GLN:CG	47:BF:91:ARG:HH11	2.28	0.46
1:AA:982:U:H4'	1:AA:983:A:O4'	2.15	0.46
28:DP:91:VAL:HG21	28:DP:96:LEU:HD21	1.98	0.46
23:BB:1105:U:H2'	23:BB:1106:G:H8	1.80	0.46
47:DF:120:SER:O	47:DF:121:PHE:HB3	2.15	0.46
47:DF:91:ARG:O	47:DF:92:GLY:C	2.52	0.46
23:DB:1789:A:H2'	23:DB:1790:C:O4'	2.15	0.46
25:BC:203:VAL:O	25:BC:204:LEU:HB2	2.15	0.46
4:AE:136:VAL:HG13	4:AE:137:ARG:N	2.30	0.46
1:CA:1102:A:O2'	1:CA:1103:C:H5'	2.15	0.46
23:DB:2579:C:H1'	26:DD:130:GLN:NE2	2.29	0.46
1:CA:1306:A:O2'	12:CM:107:THR:HG21	2.15	0.46
44:DQ:59:LEU:HD13	44:DQ:60:TRP:N	2.30	0.46
1:AA:86:G:H1'	1:AA:87:C:H5	1.81	0.46
1:AA:1390:U:H2'	1:AA:1391:U:H6	1.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:B2:21:ARG:C	36:B2:23:ALA:H	2.19	0.46
23:DB:2727:A:H2'	23:DB:2728:U:C6	2.50	0.46
10:AK:76:TYR:HB3	10:AK:78:ILE:HD11	1.98	0.46
25:DC:242:HIS:O	25:DC:244:VAL:HG13	2.16	0.46
23:DB:713:G:H21	23:DB:718:A:H2	1.63	0.46
1:AA:1017:U:C6	1:AA:1017:U:OP2	2.66	0.46
29:DE:99:LYS:C	29:DE:101:TYR:H	2.18	0.46
23:BB:970:U:H1'	23:BB:985:C:P	2.55	0.46
51:BZ:6:GLN:HG3	51:BZ:76:GLU:OE1	2.15	0.46
1:AA:796:C:O2'	1:AA:797:C:H5'	2.15	0.46
1:AA:490:C:H2'	1:AA:491:G:O4'	2.15	0.46
23:BB:132:G:H2'	23:BB:133:U:C6	2.50	0.46
23:BB:275:C:H2'	23:BB:276:U:O4'	2.15	0.46
51:DZ:39:TRP:NE1	51:DZ:41:GLU:HG2	2.31	0.46
24:BI:102:ARG:HA	24:BI:105:LEU:HD12	1.97	0.46
22:DA:93:C:O2'	22:DA:94:A:H5'	2.16	0.46
29:DE:12:LEU:HD12	29:DE:14:VAL:CG1	2.45	0.46
8:AI:81:GLY:O	8:AI:84:ARG:HB2	2.16	0.46
23:BB:2071:A:H2'	23:BB:2072:C:C6	2.50	0.46
23:BB:1584:U:H3'	23:BB:1585:C:H5'	1.96	0.46
23:BB:770:G:H3'	36:B2:11:LYS:NZ	2.29	0.46
23:DB:2893:A:H4'	23:DB:2894:G:O5'	2.15	0.46
11:CL:66:ILE:N	11:CL:66:ILE:HD12	2.30	0.46
10:AK:34:THR:HB	10:AK:39:ASN:O	2.15	0.46
23:DB:1151:A:H2'	23:DB:1152:C:H6	1.81	0.46
1:CA:1499:A:O2'	1:CA:1500:A:H5'	2.14	0.46
37:BL:136:GLU:C	37:BL:138:ALA:H	2.18	0.46
23:BB:1351:C:O2'	23:BB:1571:A:H1'	2.15	0.46
22:BA:110:C:H2'	22:BA:111:U:O4'	2.15	0.46
23:DB:2533:U:H2'	23:DB:2534:A:O4'	2.15	0.46
16:CS:79:TYR:O	16:CS:80:ARG:HB2	2.16	0.46
23:BB:2685:G:O2'	23:BB:2686:G:H5'	2.15	0.46
24:DI:69:VAL:O	24:DI:69:VAL:HG23	2.15	0.46
23:DB:2400:G:O2'	23:DB:2401:U:H5'	2.15	0.46
23:DB:379:G:O4'	23:DB:2232:C:H5''	2.15	0.46
37:BL:129:LYS:HG3	37:BL:130:GLY:N	2.29	0.46
23:DB:841:G:O2'	23:DB:842:U:H5'	2.16	0.46
38:BM:114:ARG:HG3	38:BM:130:PHE:CD2	2.50	0.46
23:BB:2428:G:H5''	23:BB:2429:G:OP1	2.15	0.46
30:BY:46:MET:O	30:BY:49:ALA:HB3	2.15	0.46
23:DB:1589:U:H2'	23:DB:1590:A:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:631:C:H3'	1:AA:632:U:H5'	1.96	0.46
9:AJ:7:ARG:CB	9:AJ:101:SER:H	2.15	0.46
50:DT:11:LEU:N	50:DT:11:LEU:HD22	2.23	0.46
1:CA:1237:C:H4'	1:CA:1334:G:N2	2.31	0.46
29:BE:103:GLY:HA2	29:BE:106:LYS:HB2	1.97	0.46
29:BE:141:MET:O	29:BE:143:LEU:HG	2.15	0.46
5:CF:38:ARG:NH2	5:CF:63:ASN:HD21	2.13	0.46
40:BH:114:GLU:C	40:BH:133:GLN:H	2.19	0.46
23:BB:2746:U:H5''	48:BG:137:LYS:CG	2.46	0.46
48:BG:84:LYS:HG3	48:BG:132:LEU:H	1.78	0.46
35:DV:26:PHE:CE2	35:DV:44:HIS:HA	2.50	0.46
29:BE:68:ALA:O	29:BE:69:ARG:O	2.32	0.46
27:BK:71:ARG:NE	27:BK:72:PRO:HD3	2.30	0.46
23:DB:2883:A:OP1	31:D0:48:TYR:CE1	2.69	0.46
41:BJ:30:THR:OG1	41:BJ:31:GLU:N	2.47	0.46
3:AD:199:ILE:HG13	3:AD:200:VAL:N	2.31	0.46
47:DF:65:LEU:O	47:DF:86:CYS:HA	2.15	0.46
18:CB:118:THR:O	18:CB:122:ASP:HB3	2.15	0.46
42:BN:34:ILE:HG22	42:BN:35:LYS:N	2.29	0.46
6:AG:14:ASP:OD2	6:AG:22:LEU:HD13	2.16	0.46
43:DO:89:ASP:CG	43:DO:116:GLN:HB3	2.36	0.46
42:DN:97:ILE:HG22	42:DN:113:ILE:HD12	1.97	0.46
23:BB:1596:A:O2'	23:BB:1597:A:H5'	2.16	0.46
16:CS:39:ILE:HG21	16:CS:61:VAL:HG21	1.96	0.46
23:DB:2472:G:O6	23:DB:2476:A:H4'	2.15	0.46
42:DN:16:HIS:O	42:DN:19:ALA:N	2.49	0.46
1:CA:658:C:O2'	1:CA:659:U:H5'	2.16	0.46
11:CL:23:LEU:HD22	11:CL:58:ASN:CB	2.45	0.46
6:AG:30:MET:O	6:AG:31:VAL:HB	2.14	0.46
23:DB:1997:C:O2'	23:DB:1998:A:H5'	2.16	0.46
23:DB:1999:C:H5''	23:DB:2723:C:O2'	2.16	0.46
6:AG:147:ASN:C	10:AK:55:ARG:HH22	2.19	0.46
23:BB:978:G:O4'	23:BB:1001:A:H2	1.97	0.46
25:BC:254:LYS:HB3	25:BC:255:LYS:H	1.48	0.46
18:AB:132:GLU:HA	18:AB:135:MET:CE	2.46	0.46
41:BJ:128:ASN:C	41:BJ:129:GLU:HG3	2.35	0.46
27:BK:53:LYS:H	27:BK:53:LYS:CD	2.28	0.46
1:CA:1009:U:C2'	1:CA:1010:U:H5'	2.46	0.46
2:CC:105:VAL:HA	2:CC:106:ARG:NH2	2.30	0.46
42:BN:61:ALA:C	42:BN:63:ARG:N	2.68	0.46
23:BB:2199:A:H3'	23:BB:2200:C:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1487:G:O2'	1:AA:1488:G:H5'	2.14	0.46
1:CA:187:G:N2	1:CA:189:A:H3'	2.30	0.46
21:CN:76:PHE:HZ	21:CN:95:LEU:HD13	1.80	0.46
23:BB:533:G:H2'	23:BB:534:U:H6	1.81	0.46
1:AA:279:A:C5'	1:AA:280:C:H3'	2.45	0.46
23:BB:6:A:H4'	41:BJ:131:ASN:O	2.16	0.46
23:DB:1184:U:O2'	23:DB:1185:G:H5'	2.15	0.46
2:AC:154:GLY:HA2	2:AC:163:ARG:O	2.15	0.46
1:AA:310:G:H5''	13:AP:31:ARG:HB2	1.98	0.46
23:BB:2799:A:H4'	23:BB:2800:A:O4'	2.16	0.46
23:DB:1153:C:O2'	23:DB:1154:G:H5'	2.16	0.46
23:BB:1745:A:H2'	23:BB:1746:A:C8	2.50	0.46
26:BD:68:PHE:N	26:BD:68:PHE:HD2	2.14	0.46
1:CA:586:C:C2'	1:CA:587:G:H5'	2.45	0.46
1:CA:328:C:H1'	1:CA:329:A:OP2	2.15	0.46
6:CG:147:ASN:C	6:CG:149:ALA:N	2.69	0.46
1:CA:1291:U:OP1	6:CG:36:SER:HB2	2.16	0.46
10:AK:52:ARG:HB3	10:AK:52:ARG:HH11	1.80	0.46
48:DG:28:LYS:HZ2	48:DG:29:ASN:HB2	1.79	0.46
1:AA:332:G:OP2	17:AT:4:LYS:HB2	2.15	0.46
23:BB:2135:A:C2	23:BB:2136:G:H1'	2.51	0.46
1:CA:113:G:O4'	1:CA:354:G:H4'	2.16	0.46
23:BB:1013:C:H2'	23:BB:1014:A:C8	2.51	0.46
1:CA:1032:G:H5''	1:CA:1032:G:N3	2.30	0.46
2:AC:173:PRO:C	2:AC:175:HIS:H	2.18	0.46
1:AA:1471:U:O2'	1:AA:1472:U:H5'	2.16	0.46
44:BQ:104:ALA:C	44:BQ:106:THR:H	2.19	0.46
44:BQ:109:VAL:HG12	44:BQ:113:LYS:HE3	1.97	0.46
15:CR:31:TYR:CD1	15:CR:54:LEU:HD21	2.51	0.46
18:AB:10:LYS:C	18:AB:12:GLY:H	2.19	0.46
1:CA:179:A:H2'	1:CA:180:U:O4'	2.15	0.46
1:CA:912:C:O2'	1:CA:913:A:H5'	2.16	0.46
2:AC:4:VAL:HG21	21:AN:97:LYS:NZ	2.31	0.46
23:DB:1625:C:O2'	23:DB:1626:A:H5'	2.15	0.46
3:AD:108:ALA:H	3:AD:112:GLU:CD	2.19	0.46
1:AA:344:A:H5''	1:AA:345:C:C5	2.50	0.46
23:DB:1103:A:H3'	23:DB:1104:C:C6	2.50	0.46
12:AM:77:LYS:HA	12:AM:80:MET:HG3	1.96	0.46
25:DC:86:ARG:HD2	25:DC:90:ILE:HD11	1.96	0.46
26:DD:199:SER:O	26:DD:201:LEU:HG	2.14	0.46
26:DD:9:VAL:O	26:DD:9:VAL:HG22	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BV:30:ILE:HG12	35:BV:91:PHE:HB2	1.96	0.46
25:DC:130:PRO:HG2	25:DC:133:ASN:ND2	2.31	0.46
48:DG:16:VAL:HA	48:DG:25:ILE:HA	1.97	0.46
29:BE:108:ILE:HA	37:BL:2:ARG:HH12	1.80	0.46
14:CQ:20:ILE:HD12	14:CQ:47:ASP:CB	2.46	0.46
40:BH:133:GLN:HA	40:BH:139:PHE:CD2	2.51	0.46
23:BB:136:G:H2'	23:BB:137:U:O4'	2.15	0.46
42:BN:29:VAL:CG1	42:BN:75:ILE:HB	2.45	0.46
8:AI:64:ILE:HD12	8:AI:64:ILE:N	2.31	0.46
37:BL:125:LEU:H	37:BL:143:GLU:CG	2.27	0.46
28:BP:75:THR:CG2	28:BP:76:HIS:H	2.23	0.46
1:AA:975:A:H4'	1:AA:976:G:OP2	2.15	0.46
1:AA:1375:A:H4'	6:AG:28:ILE:CD1	2.43	0.46
28:DP:91:VAL:HG11	28:DP:96:LEU:CD1	2.36	0.46
23:DB:2052:A:H4'	26:DD:148:GLN:O	2.15	0.46
17:AT:74:HIS:O	17:AT:78:LEU:HG	2.15	0.46
29:DE:8:ALA:HB3	29:DE:122:GLU:OE1	2.15	0.46
23:DB:1374:G:O2'	23:DB:1375:U:H5'	2.16	0.46
6:AG:13:PRO:HA	6:AG:23:ALA:HB2	1.97	0.46
16:CS:48:ILE:O	16:CS:58:PRO:HA	2.14	0.46
23:DB:2868:A:H2'	23:DB:2869:G:C8	2.50	0.46
23:BB:2261:C:H41	52:BW:10:ARG:HB3	1.81	0.46
27:DK:20:MET:O	27:DK:41:ILE:HD12	2.16	0.46
11:AL:23:LEU:HD22	11:AL:58:ASN:CB	2.46	0.46
11:CL:26:CYS:SG	11:CL:29:LYS:HE2	2.55	0.46
23:BB:1819:A:OP1	25:BC:154:ALA:HA	2.16	0.46
25:BC:107:LYS:N	25:BC:193:GLU:O	2.49	0.46
23:DB:783:A:H8	23:DB:784:G:H4'	1.79	0.46
23:DB:1468:U:HO2'	23:DB:1469:A:H8	1.62	0.46
18:CB:75:ALA:O	18:CB:79:VAL:HB	2.15	0.46
41:BJ:58:ASN:HA	41:BJ:127:GLY:HA3	1.98	0.46
23:DB:2462:C:H2'	23:DB:2463:C:C6	2.49	0.46
1:CA:131:A:H2'	1:CA:132:C:H6	1.81	0.46
50:DT:45:ALA:HA	50:DT:48:GLN:CG	2.45	0.46
42:DN:61:ALA:C	42:DN:63:ARG:N	2.67	0.46
23:DB:2248:C:H2'	23:DB:2249:U:O4'	2.15	0.46
23:BB:1028:A:N6	23:BB:1125:G:H2'	2.30	0.46
23:DB:1560:G:H2'	23:DB:1561:C:C6	2.51	0.46
22:BA:94:A:O2'	22:BA:95:U:H5'	2.16	0.46
21:AN:76:PHE:CE1	21:AN:92:ILE:HD13	2.51	0.46
23:BB:2262:U:O2'	23:BB:2263:C:H5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1576:U:O2'	23:DB:1577:C:H5'	2.16	0.46
23:BB:446:G:H5'	44:BQ:2:ARG:HH22	1.80	0.46
41:BJ:114:LEU:HG	41:BJ:118:MET:HE2	1.98	0.46
1:AA:613:C:H2'	1:AA:614:C:H6	1.80	0.46
26:DD:68:PHE:HD2	26:DD:68:PHE:N	2.13	0.46
23:DB:1187:G:H5'	49:DR:83:TYR:CE2	2.50	0.46
1:AA:1246:A:H2'	1:AA:1247:U:H6	1.80	0.46
5:AF:72:ASP:HA	5:AF:75:GLU:OE1	2.15	0.46
34:B3:20:GLY:HA3	34:B3:48:MET:CE	2.45	0.46
23:DB:2023:C:O2'	23:DB:2024:G:H5'	2.15	0.46
27:DK:98:ARG:HH11	27:DK:98:ARG:HG2	1.80	0.46
21:AN:68:ARG:HH11	21:AN:70:HIS:HB2	1.80	0.46
4:CE:12:GLU:HB3	4:CE:63:MET:CE	2.45	0.46
23:BB:1915:U:O5'	23:BB:1915:U:H6	1.98	0.46
29:DE:102:ARG:HG3	29:DE:102:ARG:HH21	1.80	0.46
23:DB:443:A:H1'	23:DB:1201:U:O4'	2.14	0.46
23:DB:1338:G:C2'	23:DB:1339:G:H5'	2.46	0.46
44:BQ:104:ALA:HA	49:BR:46:GLU:OE1	2.15	0.46
18:AB:8:MET:O	18:AB:10:LYS:N	2.47	0.46
1:AA:1456:A:H2'	1:AA:1457:G:O4'	2.15	0.46
38:DM:114:ARG:HG3	38:DM:130:PHE:CD2	2.51	0.46
23:DB:1326:U:H2'	23:DB:1327:A:H8	1.80	0.46
23:DB:252:G:O2'	23:DB:253:C:H5'	2.16	0.46
1:CA:1283:U:O2'	1:CA:1284:C:H5'	2.15	0.46
23:DB:447:A:H2'	57:DB:3369:HOH:O	2.15	0.46
40:DH:88:GLY:O	40:DH:124:THR:HA	2.15	0.46
11:CL:43:LYS:CE	11:CL:44:PRO:HD3	2.46	0.46
26:BD:138:LEU:N	26:BD:138:LEU:HD22	2.30	0.46
1:AA:60:A:H8	1:AA:60:A:P	2.39	0.46
23:BB:219:A:O2'	23:BB:220:G:H5'	2.15	0.46
25:BC:211:ARG:HD3	25:BC:217:PRO:HD3	1.98	0.46
41:BJ:130:HIS:HD2	41:BJ:132:HIS:HB2	1.81	0.46
1:AA:624:C:O2'	1:AA:625:U:H5'	2.16	0.46
23:BB:1311:G:H21	23:BB:1603:A:H62	1.62	0.46
8:CI:50:PRO:HG2	8:CI:82:ILE:HG21	1.97	0.46
18:CB:52:ALA:HA	18:CB:55:GLU:HG2	1.98	0.46
50:BT:85:VAL:C	50:BT:86:THR:HG23	2.34	0.46
52:DW:49:ASN:CB	52:DW:60:ALA:HA	2.46	0.46
52:DW:23:LYS:CG	52:DW:24:ARG:N	2.79	0.46
9:CJ:71:LEU:N	9:CJ:71:LEU:HD23	2.31	0.46
35:BV:69:GLU:C	35:BV:70:ILE:HD13	2.35	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DG:15:ASP:O	48:DG:16:VAL:HB	2.15	0.46
29:BE:146:VAL:HA	29:BE:185:LYS:O	2.16	0.46
14:AQ:59:GLU:C	14:AQ:75:VAL:HG22	2.36	0.46
52:DW:18:LYS:HE3	52:DW:18:LYS:HA	1.97	0.46
23:BB:135:U:H2'	23:BB:136:G:C8	2.50	0.46
23:BB:1080:A:O2'	24:BI:126:ARG:HB2	2.16	0.46
23:BB:1080:A:H2'	23:BB:1081:U:H6	1.80	0.46
23:DB:135:U:O2'	23:DB:136:G:H5'	2.15	0.46
25:BC:141:HIS:CG	25:BC:142:ASN:H	2.33	0.46
48:DG:84:LYS:HG3	48:DG:131:VAL:HB	1.98	0.46
10:CK:22:ILE:HD13	10:CK:95:THR:HG21	1.96	0.46
48:DG:91:VAL:HG23	48:DG:92:GLY:N	2.29	0.46
46:BU:73:ASN:HD22	46:BU:74:ALA:H	1.64	0.46
49:BR:60:LYS:N	49:BR:100:GLY:HA3	2.28	0.46
40:DH:116:ARG:HB3	40:DH:131:SER:O	2.15	0.46
30:BY:2:LYS:HE2	30:BY:4:ILE:CD1	2.46	0.46
16:AS:62:THR:HB	16:AS:65:MET:CB	2.40	0.46
18:AB:162:VAL:HG13	18:AB:184:ALA:HB2	1.97	0.46
47:DF:121:PHE:HB3	47:DF:127:TYR:HA	1.98	0.46
26:BD:10:GLY:O	26:BD:11:MET:HB2	2.14	0.46
47:DF:11:VAL:O	47:DF:13:LYS:N	2.48	0.46
1:AA:921:U:H2'	1:AA:922:G:H8	1.75	0.46
18:CB:110:ILE:HG12	18:CB:147:LEU:HD13	1.97	0.46
39:BX:49:ASP:O	39:BX:53:VAL:HG23	2.14	0.46
47:BF:12:VAL:O	47:BF:16:MET:N	2.48	0.46
47:BF:23:SER:O	47:BF:26:GLN:HB2	2.15	0.46
16:CS:52:ASN:ND2	16:CS:76:THR:HA	2.28	0.46
44:BQ:26:ALA:HB1	44:BQ:30:VAL:CG1	2.46	0.46
27:DK:37:ASP:O	27:DK:61:VAL:HA	2.16	0.46
27:BK:120:PRO:O	27:BK:121:GLU:HG3	2.15	0.46
1:CA:961:U:O2'	1:CA:984:C:H5'	2.16	0.46
26:BD:125:TRP:CD2	26:BD:160:LYS:HB3	2.50	0.46
23:DB:2730:C:H2'	23:DB:2731:G:H8	1.80	0.46
23:DB:1242:U:H2'	23:DB:1243:C:C6	2.50	0.46
23:DB:2652:C:H2'	23:DB:2653:U:O4'	2.16	0.46
23:BB:2087:G:H2'	23:BB:2088:A:H8	1.81	0.46
48:BG:6:ALA:HB3	48:BG:68:ARG:HD3	1.96	0.46
1:CA:1476:A:H2'	1:CA:1477:U:H6	1.81	0.46
23:DB:866:A:H61	23:DB:913:U:C1'	2.29	0.46
3:AD:78:ALA:C	3:AD:85:THR:HG23	2.36	0.46
25:BC:94:LEU:O	25:BC:94:LEU:HG	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CN:29:ILE:O	21:CN:33:VAL:N	2.49	0.46
42:DN:24:MET:CE	42:DN:44:LEU:HB2	2.46	0.46
21:CN:63:CYS:SG	21:CN:64:ARG:N	2.89	0.46
28:BP:25:VAL:O	28:BP:43:GLU:HG2	2.15	0.46
52:BW:32:ALA:C	52:BW:34:SER:N	2.69	0.46
23:BB:1825:U:H2'	23:BB:1826:G:C8	2.50	0.46
22:DA:95:U:H2'	22:DA:96:G:H8	1.80	0.46
7:CH:76:ARG:HD2	7:CH:77:VAL:H	1.80	0.46
44:BQ:79:ILE:HD13	44:BQ:79:ILE:O	2.15	0.46
23:BB:1178:C:H2'	23:BB:1179:G:H8	1.79	0.46
23:DB:2699:C:H2'	23:DB:2700:A:C8	2.50	0.46
23:DB:1316:U:H2'	23:DB:1317:G:H8	1.80	0.46
23:BB:768:G:O2'	23:BB:769:U:H5'	2.16	0.46
23:BB:1163:G:O2'	23:BB:1164:C:H5'	2.16	0.46
27:BK:110:GLU:C	27:BK:111:LYS:HD3	2.36	0.46
44:BQ:25:GLY:O	44:BQ:29:ARG:HD2	2.16	0.46
23:DB:1745:A:H2'	23:DB:1746:A:C8	2.50	0.46
23:BB:538:A:N6	23:BB:555:G:O2'	2.45	0.46
4:AE:45:VAL:HG11	4:AE:117:ALA:HB2	1.97	0.46
29:BE:49:ARG:NH1	29:BE:72:SER:HB3	2.31	0.46
33:B1:18:HIS:NE2	33:B1:40:PRO:HD2	2.31	0.46
46:DU:27:VAL:CB	46:DU:33:VAL:HG12	2.46	0.46
34:D3:60:CYS:HB2	34:D3:61:LEU:HD23	1.96	0.46
29:BE:195:GLN:C	29:BE:197:GLU:H	2.19	0.46
1:CA:167:A:O2'	1:CA:168:G:H5'	2.16	0.46
23:DB:506:G:H1'	23:DB:507:A:C8	2.50	0.46
1:AA:1105:A:O2'	1:AA:1106:G:H5'	2.16	0.46
7:CH:92:PRO:HG3	7:CH:127:TYR:OH	2.15	0.46
1:AA:1010:U:H4'	1:AA:1010:U:OP1	2.15	0.46
23:DB:292:U:O2'	23:DB:293:U:H5'	2.16	0.46
23:BB:223:A:N1	23:BB:407:G:O2'	2.43	0.46
15:AR:28:LEU:C	15:AR:30:ASN:H	2.18	0.46
23:DB:1767:G:O2'	23:DB:1768:C:H5'	2.16	0.46
8:CI:18:VAL:HG21	8:CI:81:GLY:C	2.36	0.46
23:BB:922:C:H2'	23:BB:923:G:C8	2.50	0.46
1:AA:1302:C:H4'	1:AA:1303:C:OP1	2.16	0.46
8:CI:76:GLY:HA2	8:CI:79:ARG:NH1	2.31	0.46
1:CA:1244:G:H2'	1:CA:1245:C:H6	1.80	0.46
35:BV:8:VAL:HG12	35:BV:9:ARG:N	2.31	0.46
5:CF:18:VAL:O	5:CF:22:ILE:HG13	2.15	0.46
5:AF:25:TYR:O	5:AF:29:ILE:HG13	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CQ:46:HIS:NE2	14:CQ:48:GLU:HG2	2.30	0.46
40:BH:114:GLU:HA	40:BH:133:GLN:N	2.30	0.46
52:DW:18:LYS:HE2	52:DW:19:ARG:NH2	2.31	0.46
23:BB:858:G:H21	23:BB:2268:A:C3'	2.25	0.46
1:AA:1229:A:N6	12:AM:103:THR:HG22	2.30	0.46
23:DB:858:G:H21	23:DB:2268:A:C3'	2.28	0.46
3:CD:54:LEU:HA	3:CD:202:LEU:HD22	1.98	0.46
2:AC:168:ARG:NH1	2:AC:172:VAL:H	2.14	0.46
23:DB:319:G:H2'	23:DB:320:A:O4'	2.16	0.46
24:DI:11:GLN:HA	24:DI:55:PRO:HA	1.96	0.46
22:DA:5:U:H2'	22:DA:6:G:H8	1.81	0.46
38:DM:19:GLY:HA3	38:DM:38:ARG:NH2	2.31	0.46
38:DM:71:LYS:O	38:DM:92:TRP:HA	2.16	0.46
16:AS:52:ASN:ND2	16:AS:54:ARG:HD2	2.29	0.46
30:DY:7:THR:HG23	30:DY:34:THR:OG1	2.15	0.46
18:AB:172:ILE:HG22	18:AB:176:ASN:HD22	1.81	0.46
29:BE:8:ALA:HB3	29:BE:122:GLU:OE1	2.15	0.46
3:AD:196:GLU:O	3:AD:199:ILE:HG13	2.16	0.46
23:DB:1021:A:H2'	23:DB:1023:U:H5''	1.97	0.46
47:DF:127:TYR:CB	47:DF:155:ILE:HD13	2.46	0.46
47:DF:33:ILE:HG22	47:DF:34:THR:N	2.30	0.46
44:DQ:82:LEU:HD23	44:DQ:112:ALA:HB2	1.98	0.46
42:BN:34:ILE:O	42:BN:112:TYR:HA	2.16	0.46
13:CP:67:ILE:HD11	13:CP:71:VAL:CG2	2.46	0.46
24:DI:18:ASN:HB2	24:DI:38:CYS:SG	2.56	0.46
1:CA:1070:U:H2'	1:CA:1071:C:H6	1.80	0.46
38:DM:101:VAL:HG13	38:DM:101:VAL:O	2.15	0.46
18:CB:95:TRP:HZ2	18:CB:100:LEU:HD13	1.80	0.46
2:CC:24:ASN:O	2:CC:26:LYS:N	2.49	0.46
25:BC:130:PRO:HG2	25:BC:133:ASN:ND2	2.31	0.46
51:BZ:54:LYS:C	51:BZ:54:LYS:HD3	2.36	0.46
23:DB:2000:C:O2'	23:DB:2001:C:H5'	2.15	0.46
36:D2:31:LEU:HD22	36:D2:42:LEU:CD1	2.45	0.46
11:CL:79:ILE:HG22	11:CL:103:CYS:HB2	1.98	0.46
18:CB:76:SER:O	18:CB:79:VAL:HG12	2.16	0.46
18:AB:116:LEU:O	18:AB:140:LEU:HD21	2.16	0.46
1:AA:501:C:H2'	1:AA:502:A:C8	2.50	0.46
23:DB:2843:G:O2'	23:DB:2844:G:H5'	2.16	0.46
23:DB:717:C:H2'	23:DB:718:A:O4'	2.16	0.46
23:DB:999:U:O2'	23:DB:1000:A:H5'	2.16	0.46
1:CA:1512:U:H2'	1:CA:1513:A:C8	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1853:A:H2'	23:DB:1854:A:C8	2.51	0.46
18:AB:33:ALA:HA	18:AB:37:VAL:O	2.15	0.46
1:CA:812:G:HO2'	1:CA:813:U:H6	1.62	0.46
3:AD:2:ARG:HB3	3:AD:114:ARG:NH2	2.31	0.46
23:DB:2902:C:O2'	23:DB:2903:U:H4'	2.15	0.46
23:BB:16:C:H2'	23:BB:17:G:C8	2.51	0.46
1:AA:300:A:H1'	1:AA:565:U:O2	2.15	0.46
1:AA:187:G:N2	1:AA:189:A:H3'	2.30	0.46
23:DB:1902:C:H2'	23:DB:1903:G:O4'	2.15	0.46
47:BF:78:ILE:HD12	47:BF:78:ILE:N	2.30	0.46
23:BB:2786:U:O2'	23:BB:2787:C:H5'	2.16	0.46
23:DB:1961:C:O2'	23:DB:1962:C:H5'	2.16	0.46
23:DB:231:A:H3'	23:DB:232:G:C8	2.51	0.46
21:CN:63:CYS:HB2	21:CN:79:SER:N	2.30	0.46
23:DB:1117:C:H2'	23:DB:1118:C:C6	2.51	0.46
23:DB:862:G:H2'	23:DB:863:A:C8	2.51	0.46
29:DE:2:GLU:O	29:DE:3:LEU:HD13	2.16	0.46
7:AH:76:ARG:HD2	7:AH:125:ILE:O	2.15	0.46
42:BN:24:MET:CE	42:BN:44:LEU:HB2	2.46	0.46
45:BS:5:ALA:CB	45:BS:54:ALA:HB2	2.46	0.46
23:BB:2800:A:H2'	23:BB:2801:G:H8	1.80	0.46
41:BJ:35:ARG:HG3	41:BJ:40:HIS:NE2	2.31	0.46
23:DB:2341:G:H2'	23:DB:2342:C:H6	1.80	0.46
23:BB:106:C:H2'	23:BB:107:G:C8	2.50	0.46
23:BB:2334:U:H4'	23:BB:2335:A:OP2	2.15	0.46
9:CJ:49:PHE:O	9:CJ:64:GLN:HA	2.16	0.46
25:BC:173:LEU:N	25:BC:173:LEU:HD13	2.31	0.46
10:CK:52:ARG:HH11	10:CK:52:ARG:HB3	1.80	0.46
23:BB:1397:U:H5'	23:BB:1398:C:H5	1.80	0.46
23:BB:1710:G:O2'	23:BB:1711:A:H5'	2.16	0.46
23:DB:2334:U:O3'	43:DO:13:ARG:HD3	2.16	0.46
46:DU:27:VAL:HB	46:DU:33:VAL:HG12	1.98	0.46
23:BB:337:C:H2'	23:BB:338:G:O4'	2.16	0.46
3:CD:108:ALA:H	3:CD:112:GLU:CD	2.19	0.46
1:AA:568:G:O6	11:AL:1:ALA:HB2	2.16	0.46
1:CA:721:G:H4'	1:CA:722:G:O4'	2.16	0.46
48:DG:96:ALA:HB1	48:DG:98:LYS:HE3	1.98	0.46
23:BB:282:A:O2'	23:BB:283:G:H5'	2.16	0.46
23:DB:586:A:H5'	29:DE:84:THR:OG1	2.15	0.46
1:CA:1494:G:O2'	1:CA:1495:U:H5'	2.15	0.46
26:BD:30:GLU:HA	26:BD:185:ASN:OD1	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:957:U:H2'	1:CA:959:A:OP2	2.16	0.46
44:BQ:97:ILE:C	44:BQ:99:VAL:H	2.19	0.46
1:CA:1314:C:N4	16:CS:3:SER:HB2	2.31	0.46
1:AA:1399:C:H1'	57:AA:1971:HOH:O	2.16	0.46
37:DL:24:GLY:C	37:DL:26:GLY:H	2.19	0.46
23:DB:51:G:H1'	23:DB:118:A:N6	2.31	0.46
1:AA:1438:G:C2'	1:AA:1439:G:H5'	2.46	0.46
22:DA:109:A:O2'	22:DA:110:C:H5'	2.15	0.46
23:BB:1688:U:H2'	23:BB:1698:A:N6	2.31	0.46
20:CO:40:GLN:O	20:CO:44:ALA:N	2.48	0.46
23:BB:2364:C:H2'	23:BB:2365:G:O4'	2.16	0.46
23:DB:1097:U:H3'	23:DB:1098:A:H8	1.81	0.46
1:AA:1303:C:H2'	1:AA:1304:G:O4'	2.16	0.46
52:BW:49:ASN:HB2	52:BW:60:ALA:HA	1.96	0.46
52:DW:24:ARG:CD	52:DW:65:LYS:HG2	2.43	0.46
23:DB:2222:C:O2'	23:DB:2223:G:H5'	2.14	0.46
35:BV:25:LYS:HA	35:BV:42:LEU:O	2.15	0.46
41:BJ:54:ILE:O	41:BJ:122:LEU:HA	2.16	0.46
35:DV:41:GLU:O	35:DV:42:LEU:HD23	2.15	0.46
48:DG:34:ARG:HH11	48:DG:34:ARG:HG2	1.81	0.46
29:BE:15:SER:C	29:BE:17:THR:H	2.18	0.46
29:BE:173:THR:C	29:BE:175:ILE:H	2.18	0.46
26:DD:113:SER:HB3	26:DD:167:ASN:N	2.30	0.46
40:BH:131:SER:HA	40:BH:142:VAL:H	1.81	0.46
52:DW:18:LYS:HG3	52:DW:19:ARG:NH1	2.31	0.46
43:BO:34:HIS:HB3	43:BO:36:TYR:HE2	1.81	0.46
23:BB:2657:A:O3'	48:BG:159:LYS:NZ	2.49	0.46
48:DG:83:THR:C	48:DG:84:LYS:HD3	2.36	0.46
10:CK:85:VAL:O	10:CK:111:ASP:HA	2.16	0.46
23:BB:2746:U:O2'	23:BB:2747:G:H5'	2.16	0.46
40:DH:31:VAL:O	40:DH:32:PRO:C	2.51	0.46
23:DB:1064:C:H2'	23:DB:1065:U:O4'	2.16	0.46
9:CJ:53:ILE:CG2	9:CJ:61:ALA:HB1	2.46	0.46
29:BE:58:LYS:HB2	29:BE:58:LYS:HE2	1.71	0.46
38:DM:19:GLY:CA	38:DM:38:ARG:HH12	2.28	0.46
1:AA:1220:G:H2'	1:AA:1221:G:C8	2.51	0.46
1:AA:956:U:O2'	1:AA:957:U:H5'	2.15	0.46
41:DJ:26:GLY:O	41:DJ:29:ALA:N	2.48	0.46
23:BB:1104:C:H2'	23:BB:1105:U:H6	1.75	0.46
24:DI:23:VAL:HG12	24:DI:24:GLY:N	2.31	0.46
1:CA:1300:G:H1'	1:CA:1301:U:H5	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:148:GLN:HG3	26:BD:152:PRO:CB	2.45	0.46
40:DH:3:VAL:HG12	40:DH:38:PRO:HA	1.98	0.46
23:BB:2468:A:H2'	23:BB:2476:A:C5	2.51	0.46
24:BI:29:GLN:HA	24:BI:29:GLN:NE2	2.31	0.46
26:DD:117:GLY:HA2	26:DD:164:GLN:NE2	2.31	0.46
23:DB:2428:G:N2	37:DL:60:ARG:NH2	2.64	0.46
18:CB:99:MET:CA	18:CB:106:VAL:HG21	2.41	0.46
47:BF:169:LEU:HA	47:BF:172:PHE:HD2	1.81	0.46
23:BB:1595:C:O2'	23:BB:1596:A:H5'	2.16	0.46
23:BB:2867:G:N7	28:BP:20:ARG:CZ	2.78	0.46
28:BP:91:VAL:HG21	28:BP:96:LEU:HD21	1.97	0.46
39:BX:44:LYS:HD2	39:BX:48:ARG:NH2	2.25	0.46
48:BG:94:ARG:HH21	48:BG:105:SER:N	2.12	0.46
23:BB:1374:G:H2'	23:BB:1375:U:C6	2.51	0.46
27:BK:37:ASP:O	27:BK:61:VAL:HA	2.16	0.46
42:BN:17:ARG:HB2	42:BN:17:ARG:HH21	1.81	0.46
39:BX:22:LEU:HG	39:BX:23:ARG:HG2	1.97	0.46
1:CA:660:C:H2'	1:CA:661:G:O4'	2.16	0.46
27:BK:118:LEU:O	27:BK:120:PRO:HD2	2.15	0.46
23:DB:200:U:H4'	51:DZ:22:LEU:HB2	1.97	0.46
6:CG:26:VAL:HB	6:CG:42:VAL:HG21	1.98	0.46
6:CG:42:VAL:O	6:CG:46:LEU:HD13	2.16	0.46
23:DB:1607:C:N4	23:DB:1622:G:N7	2.63	0.46
41:DJ:128:ASN:C	41:DJ:129:GLU:HG3	2.36	0.46
16:CS:62:THR:HG22	16:CS:63:ASP:N	2.27	0.46
23:DB:2592:G:H2'	23:DB:2593:U:O4'	2.14	0.46
23:DB:589:U:O2'	23:DB:590:A:H5'	2.16	0.46
50:BT:45:ALA:HA	50:BT:48:GLN:CG	2.45	0.46
23:DB:631:A:HO2'	37:DL:66:PHE:HD2	1.62	0.46
3:CD:25:ARG:NE	3:CD:26:ALA:HB2	2.30	0.46
23:DB:970:U:H1'	23:DB:985:C:P	2.56	0.46
23:DB:16:C:H2'	23:DB:17:G:C8	2.51	0.46
23:DB:21:A:H2'	23:DB:22:C:H6	1.80	0.46
25:BC:75:ALA:O	25:BC:114:GLN:HA	2.16	0.46
23:DB:2896:C:H2'	23:DB:2897:U:H6	1.80	0.46
23:DB:2078:C:O2'	23:DB:2079:U:H5'	2.16	0.46
1:CA:600:A:H2'	1:CA:601:G:H8	1.80	0.46
1:AA:676:A:O2'	1:AA:677:U:H5'	2.16	0.46
23:BB:1458:U:H5''	23:BB:1459:G:OP1	2.14	0.46
47:BF:74:ALA:HB1	47:BF:76:PHE:CD2	2.51	0.46
52:DW:34:SER:HB3	52:DW:58:LEU:HD23	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1843:C:H2'	23:BB:1844:C:H6	1.79	0.46
1:AA:279:A:H5'	1:AA:281:G:C5'	2.46	0.46
7:AH:76:ARG:HD2	7:AH:77:VAL:H	1.81	0.46
45:DS:4:ILE:CG2	45:DS:106:VAL:HG22	2.45	0.46
29:DE:188:MET:HG2	29:DE:193:VAL:HG22	1.98	0.46
23:DB:1936:A:H2	23:DB:1943:U:O4	1.98	0.46
23:BB:1165:A:H2'	23:BB:1166:G:H8	1.79	0.46
1:CA:729:A:H2'	1:CA:730:G:H8	1.80	0.46
23:BB:523:C:H2'	23:BB:524:G:H8	1.80	0.46
23:DB:454:A:H3'	23:DB:455:C:H5'	1.97	0.46
23:BB:876:C:H6	23:BB:876:C:H5'	1.81	0.46
9:CJ:48:ARG:HG2	9:CJ:66:GLU:HB3	1.97	0.46
1:CA:967:C:OP1	1:CA:969:A:H5'	2.15	0.46
1:AA:1104:G:H2'	1:AA:1105:A:C8	2.51	0.46
1:AA:1098:C:H2'	1:AA:1099:G:O4'	2.16	0.46
1:CA:1062:U:H2'	1:CA:1063:C:C6	2.50	0.46
23:DB:693:A:O2'	23:DB:694:U:H5'	2.16	0.46
23:BB:1900:A:N1	23:BB:1970:A:C5	2.84	0.46
26:BD:178:VAL:HG12	26:BD:179:ARG:HG3	1.97	0.46
18:AB:211:LEU:O	18:AB:215:ALA:HB2	2.16	0.46
23:BB:2415:G:H2'	23:BB:2416:C:H6	1.80	0.46
25:BC:202:ARG:HH11	25:BC:213:ARG:NE	2.14	0.46
47:DF:10:GLU:O	47:DF:14:LYS:HB2	2.16	0.46
23:BB:500:G:N2	23:BB:502:A:H3'	2.31	0.46
23:BB:1511:G:H2'	23:BB:1512:C:H6	1.81	0.46
1:AA:451:A:H4'	1:AA:452:A:O4'	2.16	0.46
18:CB:203:ASP:C	18:CB:203:ASP:OD2	2.53	0.46
50:BT:55:VAL:HA	50:BT:87:LEU:HA	1.98	0.46
50:BT:43:ILE:HG21	50:BT:58:VAL:HG21	1.97	0.46
25:DC:106:PRO:O	25:DC:109:LEU:HD23	2.15	0.46
21:CN:15:LEU:HD12	21:CN:53:ASP:HB3	1.97	0.46
23:DB:2386:A:C2	52:DW:38:ARG:HD2	2.51	0.46
4:CE:81:GLN:NE2	4:CE:149:PRO:HD3	2.29	0.46
43:BO:35:ILE:C	43:BO:36:TYR:HD2	2.19	0.46
8:AI:56:MET:O	8:AI:58:GLU:N	2.48	0.46
22:DA:27:C:H5'	43:DO:34:HIS:CD2	2.51	0.46
2:AC:133:MET:O	2:AC:137:VAL:HG23	2.16	0.46
18:AB:46:VAL:O	18:AB:49:PHE:HB2	2.16	0.46
26:BD:118:PHE:HZ	26:BD:123:LYS:NZ	2.14	0.46
3:CD:157:ALA:O	3:CD:160:LEU:HD22	2.16	0.46
23:DB:1365:A:O3'	51:DZ:11:ARG:NH1	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2060:A:H3'	29:BE:63:LYS:NZ	2.31	0.46
29:BE:61:ARG:HH12	29:BE:64:GLY:HA3	1.80	0.46
26:BD:24:VAL:CG2	26:BD:188:LEU:HB3	2.41	0.46
38:DM:97:GLN:HB2	38:DM:98:PRO:HD2	1.97	0.46
2:AC:71:ARG:O	2:AC:75:VAL:HG23	2.15	0.46
22:DA:42:C:C6	47:DF:65:LEU:HD22	2.50	0.46
1:CA:922:G:N3	1:CA:1398:A:C2	2.84	0.46
1:AA:1029:U:H1'	1:AA:1032:G:O6	2.15	0.46
39:BX:45:GLN:O	39:BX:46:VAL:HB	2.16	0.46
27:BK:20:MET:C	27:BK:41:ILE:HD12	2.35	0.46
40:BH:8:LYS:O	40:BH:13:GLY:HA3	2.16	0.46
7:AH:43:GLY:HA2	7:AH:63:LYS:HZ1	1.81	0.46
1:CA:1016:A:H4'	1:CA:1218:C:H4'	1.97	0.46
44:DQ:91:ARG:HE	44:DQ:94:LEU:CD2	2.29	0.46
23:DB:548:G:C3'	23:DB:549:G:H5''	2.46	0.46
40:BH:45:GLU:C	40:BH:47:PHE:H	2.20	0.46
25:BC:106:PRO:HB2	25:BC:193:GLU:H	1.79	0.46
51:DZ:54:LYS:HD3	51:DZ:54:LYS:C	2.35	0.46
1:CA:1225:A:H3'	1:CA:1226:C:H6	1.81	0.46
23:BB:2290:G:H2'	23:BB:2291:U:C6	2.51	0.46
29:DE:48:THR:HG23	29:DE:51:GLU:OE2	2.16	0.46
2:CC:9:ILE:HG23	2:CC:10:ARG:HG3	1.97	0.46
23:DB:2793:C:H2'	23:DB:2794:C:C6	2.51	0.46
18:AB:18:GLN:O	18:AB:37:VAL:HG23	2.16	0.46
42:BN:63:ARG:O	42:BN:66:ALA:HB3	2.16	0.46
52:DW:76:ARG:O	52:DW:77:LYS:HD3	2.16	0.46
23:DB:2102:G:O2'	23:DB:2103:C:H5'	2.15	0.46
23:BB:576:U:H2'	23:BB:577:G:C8	2.51	0.46
38:DM:26:VAL:CG2	38:DM:133:LYS:HA	2.45	0.46
1:CA:1483:A:H2'	1:CA:1484:C:O4'	2.16	0.46
1:AA:488:C:O2'	1:AA:489:C:H5'	2.16	0.46
23:DB:1410:G:H2'	23:DB:1411:U:H6	1.79	0.46
23:BB:1347:A:H2'	23:BB:1348:C:O4'	2.16	0.46
23:BB:979:A:H2'	23:BB:982:C:N4	2.29	0.46
1:CA:404:G:H4'	1:CA:439:U:O2	2.16	0.46
1:CA:489:C:H2'	1:CA:490:C:H6	1.81	0.46
24:BI:89:SER:HB2	24:BI:136:GLY:HA3	1.96	0.46
23:DB:435:C:C2'	23:DB:436:C:H5'	2.45	0.46
26:DD:38:LYS:HA	26:DD:38:LYS:HE2	1.97	0.46
23:DB:1544:A:H2'	23:DB:1545:A:C8	2.51	0.46
25:BC:265:PHE:HD2	25:BC:265:PHE:N	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1774:C:O2	23:DB:1774:C:C2'	2.63	0.46
21:CN:20:PHE:CG	21:CN:24:ALA:HB2	2.51	0.46
1:AA:26:A:H61	1:AA:558:G:H1'	1.80	0.46
23:DB:2469:A:C2	23:DB:2482:A:H1'	2.51	0.46
1:CA:1152:A:H2'	1:CA:1153:G:H8	1.80	0.46
1:CA:1488:G:H2'	1:CA:1489:G:H8	1.80	0.46
23:DB:1710:G:O2'	23:DB:1711:A:H5'	2.16	0.46
23:DB:1674:G:N2	23:DB:1677:A:N1	2.53	0.46
1:CA:991:U:C4	1:CA:1212:U:H1'	2.51	0.46
1:AA:1310:G:O2'	1:AA:1311:A:H5'	2.16	0.46
16:CS:27:LYS:HG2	16:CS:28:LYS:HD2	1.97	0.46
49:BR:90:ARG:O	49:BR:91:GLN:HB3	2.16	0.46
23:BB:1076:C:H1'	24:BI:92:PRO:HD2	1.97	0.46
6:CG:70:PRO:HG3	6:CG:98:LEU:HD13	1.96	0.46
25:BC:245:THR:C	25:BC:247:TRP:H	2.20	0.46
23:DB:2250:G:H8	23:DB:2250:G:O5'	1.99	0.46
23:DB:648:G:O2'	23:DB:649:G:H5'	2.16	0.46
31:D0:53:VAL:O	31:D0:54:ILE:HB	2.16	0.46
23:DB:2137:U:O2'	23:DB:2138:G:H5'	2.16	0.46
23:BB:923:G:H1'	52:BW:23:LYS:NZ	2.31	0.46
1:AA:1330:U:C2'	1:AA:1331:G:H5'	2.46	0.46
50:DT:16:VAL:H	50:DT:31:VAL:HG23	1.82	0.46
50:DT:29:THR:HG22	50:DT:86:THR:CG2	2.44	0.46
25:BC:170:TYR:HA	25:BC:183:VAL:O	2.16	0.46
32:D4:33:HIS:O	32:D4:35:GLN:HG3	2.16	0.46
35:DV:42:LEU:HD11	35:DV:91:PHE:HE1	1.81	0.46
8:AI:52:GLU:HG2	8:AI:56:MET:SD	2.55	0.46
1:AA:1229:A:H62	12:AM:103:THR:HG22	1.80	0.46
2:AC:112:ALA:O	2:AC:113:LYS:C	2.54	0.46
48:BG:116:LEU:HD23	48:BG:120:ILE:HD13	1.96	0.46
18:AB:49:PHE:O	18:AB:212:TYR:OH	2.31	0.46
1:CA:719:C:H2'	15:CR:38:ILE:CD1	2.46	0.46
26:BD:164:GLN:HE21	26:BD:165:MET:N	2.14	0.46
23:BB:2442:C:H2'	23:BB:2443:C:H6	1.80	0.46
30:BY:2:LYS:CG	30:BY:3:THR:H	2.28	0.46
43:DO:28:VAL:HB	43:DO:92:PHE:CE1	2.50	0.46
41:BJ:45:THR:HG23	41:BJ:45:THR:O	2.16	0.46
3:CD:106:PHE:CG	3:CD:144:ILE:HD11	2.51	0.46
47:BF:120:SER:O	47:BF:121:PHE:HB3	2.16	0.46
18:AB:103:TRP:CD2	18:AB:107:ARG:HB3	2.51	0.46
21:AN:63:CYS:HB2	21:AN:79:SER:HB3	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:62:GLN:NE2	47:DF:90:LEU:HD13	2.31	0.46
29:DE:5:LEU:HD13	29:DE:122:GLU:CG	2.46	0.46
9:AJ:25:ILE:O	9:AJ:29:ALA:HB3	2.16	0.46
23:BB:670:A:H4'	23:BB:671:C:C5'	2.41	0.46
40:DH:3:VAL:HA	40:DH:37:VAL:O	2.16	0.46
6:AG:50:ALA:CB	6:AG:57:GLU:HG3	2.45	0.46
23:BB:2471:A:O2'	23:BB:2472:G:C8	2.58	0.46
39:BX:20:ASN:O	39:BX:25:GLN:HB2	2.16	0.46
39:BX:59:GLU:OE2	39:BX:59:GLU:N	2.49	0.46
44:BQ:83:LYS:C	44:BQ:85:ALA:H	2.18	0.46
23:DB:547:A:N3	23:DB:548:G:H1'	2.29	0.46
3:CD:196:GLU:O	3:CD:199:ILE:HG13	2.16	0.46
44:BQ:30:VAL:HG22	44:BQ:31:TYR:H	1.81	0.46
43:BO:47:VAL:O	43:BO:48:LEU:HD23	2.16	0.46
2:AC:55:VAL:C	2:AC:56:ILE:HG13	2.36	0.46
23:DB:1439:A:N6	23:DB:1440:U:O2	2.48	0.46
25:BC:244:VAL:HB	25:BC:249:VAL:N	2.31	0.46
26:DD:133:THR:HG23	26:DD:134:HIS:N	2.30	0.46
41:BJ:58:ASN:O	41:BJ:126:ALA:O	2.34	0.46
52:BW:76:ARG:HD3	52:BW:76:ARG:HA	1.78	0.46
23:BB:2650:U:H2'	23:BB:2651:C:C6	2.50	0.46
1:CA:543:U:H2'	1:CA:544:G:H8	1.81	0.46
1:CA:544:G:OP1	3:CD:58:GLN:HG2	2.16	0.46
1:AA:764:C:H2'	1:AA:765:G:H5'	1.98	0.46
25:BC:93:VAL:HG12	25:BC:101:ARG:O	2.16	0.46
3:AD:30:LYS:N	3:AD:30:LYS:HD3	2.31	0.46
21:CN:30:ILE:CG2	21:CN:44:VAL:HG21	2.45	0.46
23:DB:79:C:H2'	23:DB:80:G:H8	1.81	0.46
23:BB:597:G:H21	37:BL:12:SER:HA	1.80	0.46
23:DB:2812:G:H2'	23:DB:2813:A:O4'	2.16	0.46
1:CA:1392:G:O2'	1:CA:1393:U:H5'	2.16	0.46
23:DB:191:A:H2'	23:DB:192:C:H6	1.78	0.46
23:DB:2043:C:H2'	23:DB:2044:C:H6	1.81	0.46
7:AH:124:ILE:C	7:AH:125:ILE:HD12	2.35	0.46
29:BE:3:LEU:HD21	29:BE:14:VAL:HG22	1.98	0.46
23:DB:1825:U:H2'	23:DB:1826:G:C8	2.51	0.46
23:DB:2799:A:H4'	23:DB:2800:A:O4'	2.16	0.46
23:DB:1315:C:O2'	23:DB:1316:U:H5'	2.16	0.46
23:DB:2297:A:H61	23:DB:2319:G:H1'	1.81	0.46
23:BB:1771:C:H2'	23:BB:1772:A:H8	1.79	0.46
1:CA:965:U:OP1	1:CA:1198:G:H5''	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BQ:47:ARG:NH1	44:BQ:48:ASP:OD2	2.49	0.46
23:DB:2369:A:O2'	23:DB:2370:G:H5'	2.15	0.46
23:BB:2875:C:H2'	23:BB:2876:G:H8	1.81	0.46
23:BB:794:A:H2'	23:BB:795:C:C6	2.51	0.46
46:BU:27:VAL:HB	46:BU:33:VAL:HG12	1.97	0.46
1:AA:912:C:O2'	1:AA:913:A:H5'	2.16	0.46
1:AA:102:G:O2'	1:AA:103:U:H5'	2.16	0.46
23:BB:1360:G:H2'	23:BB:1361:G:O4'	2.16	0.46
48:DG:44:HIS:O	48:DG:45:ALA:HB3	2.16	0.46
23:BB:2617:U:O2'	23:BB:2618:G:H5'	2.16	0.46
44:BQ:16:ILE:HG21	44:BQ:35:PHE:HA	1.97	0.46
2:AC:161:ILE:N	2:AC:161:ILE:HD12	2.31	0.46
8:CI:81:GLY:O	8:CI:84:ARG:HB2	2.16	0.45
25:DC:86:ARG:HB3	25:DC:86:ARG:NH1	2.31	0.45
48:BG:14:VAL:HA	48:BG:26:LYS:O	2.16	0.45
4:AE:81:GLN:NE2	4:AE:149:PRO:HD3	2.29	0.45
21:CN:50:LEU:N	21:CN:51:PRO:CD	2.79	0.45
5:CF:90:MET:HB3	5:CF:93:LYS:HZ3	1.80	0.45
41:DJ:55:ILE:HG22	41:DJ:123:LYS:HB2	1.98	0.45
26:DD:175:LEU:HD22	26:DD:191:GLY:H	1.81	0.45
26:DD:10:GLY:HA2	26:DD:26:VAL:HB	1.97	0.45
40:BH:69:ALA:HB2	40:BH:139:PHE:O	2.16	0.45
4:CE:84:VAL:CG1	4:CE:146:MET:HB3	2.45	0.45
37:DL:81:ASP:HA	37:DL:84:LYS:CE	2.46	0.45
8:AI:61:ASP:C	8:AI:62:LEU:HD22	2.36	0.45
19:AU:16:ARG:NH2	19:AU:19:LYS:HD3	2.31	0.45
48:BG:157:LYS:HB3	48:BG:159:LYS:CG	2.36	0.45
25:BC:140:VAL:HG12	25:BC:141:HIS:H	1.80	0.45
26:BD:115:GLY:O	42:BN:3:HIS:NE2	2.44	0.45
46:DU:71:ILE:HD11	46:DU:82:VAL:HG22	1.97	0.45
23:DB:1060:U:OP2	24:DI:74:PRO:HA	2.15	0.45
18:CB:34:ARG:HG3	18:CB:34:ARG:O	2.16	0.45
28:DP:75:THR:O	28:DP:80:VAL:HG11	2.16	0.45
40:DH:135:HIS:N	40:DH:138:VAL:HG21	2.31	0.45
38:DM:41:LEU:O	38:DM:94:ALA:N	2.49	0.45
44:BQ:82:LEU:HB3	44:BQ:88:GLU:OE1	2.16	0.45
44:BQ:64:ILE:HD12	44:BQ:95:ALA:HB3	1.98	0.45
49:BR:49:ILE:HG22	49:BR:54:VAL:HB	1.98	0.45
38:BM:71:LYS:O	38:BM:92:TRP:HA	2.15	0.45
25:DC:204:LEU:HB3	25:DC:209:ALA:HB3	1.98	0.45
17:AT:77:ASN:OD1	17:AT:78:LEU:N	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:34:VAL:HA	26:BD:50:VAL:HA	1.98	0.45
29:BE:59:PRO:HB2	29:BE:67:ARG:NH2	2.23	0.45
6:AG:52:ARG:HH22	6:AG:121:ASN:ND2	2.11	0.45
23:BB:2531:A:C5'	48:BG:156:TYR:CZ	2.99	0.45
28:BP:20:ARG:HG3	28:BP:21:PRO:HD2	1.97	0.45
44:DQ:63:ARG:CZ	44:DQ:96:ASP:HA	2.46	0.45
11:AL:26:CYS:SG	11:AL:29:LYS:HE2	2.56	0.45
21:CN:27:LYS:CG	21:CN:28:ALA:H	2.29	0.45
1:AA:1531:A:C6	1:AA:1532:U:N3	2.84	0.45
29:BE:99:LYS:C	29:BE:101:TYR:H	2.18	0.45
6:AG:31:VAL:HG22	6:AG:32:ASP:N	2.31	0.45
17:CT:2:ASN:OD1	17:CT:3:ILE:N	2.49	0.45
27:DK:53:LYS:H	27:DK:53:LYS:CD	2.25	0.45
27:DK:70:ARG:CB	27:DK:76:VAL:HG22	2.46	0.45
52:DW:28:GLU:O	52:DW:30:VAL:N	2.49	0.45
23:BB:1640:A:O2'	23:BB:1641:A:H5'	2.15	0.45
1:CA:543:U:O2'	1:CA:544:G:H5'	2.15	0.45
23:BB:2544:G:H1'	23:BB:2646:C:H5'	1.97	0.45
23:BB:416:U:H2'	23:BB:417:C:C6	2.51	0.45
1:AA:139:A:O2'	1:AA:140:U:H5'	2.16	0.45
1:AA:778:G:H2'	1:AA:779:C:H6	1.79	0.45
1:AA:1178:G:H2'	1:AA:1180:A:OP2	2.17	0.45
34:D3:3:ILE:HG22	34:D3:4:LYS:N	2.30	0.45
1:CA:489:C:H2'	1:CA:490:C:C6	2.51	0.45
27:DK:22:ILE:O	27:DK:23:LYS:HD2	2.16	0.45
18:AB:80:LYS:O	18:AB:84:LEU:HD13	2.16	0.45
9:AJ:65:TYR:HB3	21:AN:95:LEU:HD11	1.96	0.45
18:CB:204:ASP:CG	18:CB:205:ALA:N	2.69	0.45
14:AQ:5:ARG:HD3	14:AQ:6:THR:N	2.32	0.45
23:BB:2637:U:OP1	26:BD:83:ARG:HD3	2.16	0.45
50:DT:7:LEU:O	50:DT:7:LEU:HD22	2.16	0.45
23:DB:1936:A:H2	23:DB:1943:U:C4	2.34	0.45
11:AL:15:VAL:O	11:AL:16:ALA:C	2.54	0.45
23:BB:126:A:O5'	36:B2:19:ARG:HG3	2.16	0.45
23:BB:2837:A:H2'	23:BB:2838:G:H8	1.79	0.45
26:BD:68:PHE:N	26:BD:68:PHE:CD2	2.83	0.45
1:AA:539:A:H2'	1:AA:540:G:H8	1.81	0.45
1:CA:1262:C:H2'	1:CA:1263:C:C6	2.52	0.45
23:DB:1720:U:O2'	23:DB:1721:G:H5'	2.15	0.45
23:BB:2469:A:C2	23:BB:2482:A:H1'	2.50	0.45
23:DB:1661:G:O2'	23:DB:1662:U:H5'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DJ:130:HIS:HD2	41:DJ:132:HIS:HB2	1.80	0.45
1:AA:1069:C:O2'	1:AA:1192:C:H1'	2.16	0.45
15:CR:44:THR:C	15:CR:46:THR:H	2.19	0.45
1:CA:105:G:H2'	1:CA:106:C:C6	2.50	0.45
23:DB:560:C:H3'	23:DB:561:G:C8	2.51	0.45
1:AA:1268:G:H2'	1:AA:1269:A:C8	2.51	0.45
19:AU:42:THR:HB	19:AU:46:ARG:NE	2.32	0.45
8:CI:11:ARG:O	8:CI:14:SER:HB2	2.16	0.45
1:CA:1238:A:N3	1:CA:1238:A:H2'	2.30	0.45
23:BB:2222:C:O2'	23:BB:2223:G:H5'	2.16	0.45
29:DE:68:ALA:O	29:DE:69:ARG:O	2.34	0.45
35:BV:29:ILE:HD13	35:BV:31:TYR:CE2	2.51	0.45
2:CC:100:ILE:HG23	2:CC:100:ILE:O	2.17	0.45
29:BE:138:LEU:HD22	29:BE:143:LEU:HB2	1.98	0.45
5:CF:3:HIS:CE1	5:CF:65:GLU:HG3	2.51	0.45
5:AF:18:VAL:HG21	5:AF:58:HIS:CG	2.51	0.45
41:DJ:16:TYR:N	41:DJ:137:PRO:HB3	2.31	0.45
23:DB:2773:C:H2'	23:DB:2774:C:H6	1.80	0.45
40:BH:116:ARG:O	40:BH:117:LEU:HD23	2.16	0.45
37:BL:85:VAL:O	37:BL:85:VAL:HG22	2.15	0.45
22:DA:30:C:O2	22:DA:30:C:H2'	2.16	0.45
23:BB:1729:U:H5	23:BB:1731:G:H21	1.57	0.45
40:DH:72:ILE:HG22	40:DH:142:VAL:HG21	1.97	0.45
28:BP:3:ILE:CG2	28:BP:4:ILE:N	2.79	0.45
23:DB:2886:A:H62	31:D0:39:ARG:CZ	2.27	0.45
47:BF:121:PHE:HB3	47:BF:127:TYR:HA	1.97	0.45
47:BF:62:GLN:NE2	47:BF:90:LEU:HD13	2.30	0.45
30:DY:2:LYS:HE2	30:DY:4:ILE:CD1	2.46	0.45
13:AP:67:ILE:HD11	13:AP:71:VAL:CG2	2.45	0.45
41:BJ:101:ILE:O	41:BJ:105:VAL:HG22	2.15	0.45
23:BB:1105:U:H2'	23:BB:1106:G:C8	2.51	0.45
23:BB:715:A:H2'	23:BB:716:A:O4'	2.16	0.45
1:CA:1300:G:O2'	1:CA:1301:U:P	2.74	0.45
1:CA:1411:C:H2'	1:CA:1412:C:C6	2.52	0.45
18:AB:23:ASN:HB3	18:AB:188:THR:O	2.17	0.45
23:BB:2074:U:H1'	23:BB:2598:A:N3	2.32	0.45
18:CB:96:LEU:H	18:CB:99:MET:CE	2.28	0.45
23:BB:76:C:O2'	23:BB:77:G:H5'	2.15	0.45
16:CS:14:LEU:O	16:CS:18:VAL:HG12	2.15	0.45
34:B3:49:VAL:HG21	34:B3:54:LEU:HD13	1.98	0.45
23:BB:2259:U:O2'	23:BB:2260:C:H5'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2210:U:N3	23:BB:2212:A:N7	2.64	0.45
2:CC:109:GLU:C	2:CC:110:LEU:HD12	2.37	0.45
1:CA:77:A:H2'	1:CA:78:A:C8	2.50	0.45
12:CM:7:ASN:ND2	12:CM:7:ASN:N	2.64	0.45
23:DB:2595:G:N2	23:DB:2598:A:OP2	2.42	0.45
23:BB:814:C:O2'	23:BB:815:C:H5'	2.16	0.45
24:BI:107:GLU:HA	24:BI:110:GLN:OE1	2.16	0.45
25:DC:75:ALA:HB1	25:DC:93:VAL:HG22	1.97	0.45
1:AA:652:U:H1'	1:AA:653:U:C6	2.52	0.45
40:DH:57:LYS:HG3	40:DH:57:LYS:O	2.16	0.45
1:CA:1477:U:H2'	1:CA:1478:U:C6	2.51	0.45
2:CC:13:ILE:O	2:CC:15:LYS:N	2.49	0.45
1:CA:663:A:H5''	15:CR:49:LYS:NZ	2.32	0.45
38:BM:28:PHE:HB3	38:BM:64:TRP:CE2	2.51	0.45
23:DB:826:U:H2'	23:DB:828:U:O4'	2.17	0.45
1:AA:801:U:H2'	1:AA:802:A:C8	2.46	0.45
1:AA:300:A:H2'	1:AA:301:G:O4'	2.16	0.45
51:BZ:39:TRP:NE1	51:BZ:41:GLU:HG2	2.32	0.45
23:BB:636:G:N7	37:BL:109:LYS:HE2	2.31	0.45
23:BB:2578:G:H4'	23:BB:2578:G:OP2	2.16	0.45
23:DB:1026:G:H2'	23:DB:1027:A:C8	2.47	0.45
23:BB:776:G:H4'	23:BB:777:G:O5'	2.17	0.45
23:BB:950:G:H2'	23:BB:951:C:H6	1.79	0.45
23:BB:1859:U:H2'	23:BB:1860:G:H8	1.81	0.45
27:BK:107:LEU:HD12	27:BK:107:LEU:N	2.31	0.45
44:DQ:43:GLN:NE2	49:DR:77:PHE:HD1	2.14	0.45
29:BE:31:VAL:HG21	29:BE:104:ALA:HB2	1.98	0.45
33:D1:18:HIS:NE2	33:D1:40:PRO:HD2	2.31	0.45
45:DS:7:HIS:HB2	45:DS:50:VAL:HG22	1.99	0.45
22:BA:117:G:H2'	22:BA:118:C:O4'	2.17	0.45
33:B1:8:ILE:HD12	33:B1:51:ALA:HA	1.97	0.45
1:AA:770:C:O2'	1:AA:771:G:H5'	2.16	0.45
1:CA:707:U:H2'	1:CA:708:C:C6	2.51	0.45
46:BU:27:VAL:CB	46:BU:33:VAL:HG12	2.47	0.45
1:AA:625:U:H4'	13:AP:16:PHE:CE2	2.51	0.45
1:AA:152:A:H3'	1:AA:153:C:H6	1.81	0.45
26:DD:178:VAL:HG12	26:DD:179:ARG:HG3	1.98	0.45
23:BB:811:U:N3	37:BL:21:ARG:NH2	2.65	0.45
23:BB:2220:U:H2'	23:BB:2221:G:H8	1.82	0.45
23:BB:1754:A:H4'	28:BP:102:ARG:HH21	1.80	0.45
28:BP:114:ASN:HA	28:BP:114:ASN:HD22	1.57	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:24:LYS:O	6:CG:28:ILE:HG12	2.17	0.45
1:CA:321:A:O2'	1:CA:322:C:H5'	2.15	0.45
1:CA:1358:U:H2'	1:CA:1359:C:O4'	2.16	0.45
8:CI:44:ARG:NE	8:CI:48:ARG:HH22	2.15	0.45
52:BW:23:LYS:CG	52:BW:24:ARG:N	2.78	0.45
1:AA:1329:A:O2'	1:AA:1330:U:H5'	2.16	0.45
12:AM:12:LYS:HB3	12:AM:16:ILE:HD11	1.98	0.45
9:CJ:40:ILE:O	9:CJ:72:ARG:HA	2.16	0.45
23:DB:587:C:N3	37:DL:33:ARG:NH2	2.61	0.45
48:BG:34:ARG:N	48:BG:34:ARG:CD	2.79	0.45
1:CA:122:G:H8	1:CA:122:G:O5'	1.99	0.45
29:BE:138:LEU:O	29:BE:142:ALA:N	2.49	0.45
40:BH:61:VAL:CG1	40:BH:62:LEU:HD23	2.46	0.45
1:CA:256:U:H3'	1:CA:257:G:H8	1.81	0.45
29:DE:138:LEU:O	29:DE:142:ALA:N	2.49	0.45
40:DH:77:THR:HA	40:DH:143:ILE:O	2.16	0.45
40:DH:77:THR:HG22	40:DH:78:VAL:H	1.81	0.45
19:AU:16:ARG:HH22	19:AU:19:LYS:HD3	1.81	0.45
24:BI:122:GLU:CD	24:BI:122:GLU:H	2.19	0.45
37:BL:84:LYS:C	37:BL:86:GLU:H	2.19	0.45
43:DO:51:ALA:N	43:DO:78:VAL:HG13	2.32	0.45
48:BG:84:LYS:HG3	48:BG:131:VAL:HB	1.99	0.45
25:DC:43:ASN:ND2	25:DC:44:ASN:H	2.15	0.45
49:DR:39:LEU:HA	49:DR:49:ILE:HG21	1.99	0.45
49:DR:40:MET:C	49:DR:41:ILE:HD13	2.36	0.45
10:CK:80:ASN:CB	10:CK:105:ARG:HB3	2.46	0.45
23:BB:675:A:OP1	29:BE:60:TRP:NE1	2.50	0.45
43:BO:105:ALA:O	43:BO:107:ALA:N	2.43	0.45
13:AP:66:THR:HG22	13:AP:67:ILE:N	2.31	0.45
2:AC:47:ALA:C	2:AC:49:ALA:H	2.20	0.45
28:DP:20:ARG:CG	28:DP:21:PRO:HD2	2.47	0.45
23:DB:1753:G:H5''	28:DP:92:ARG:HD3	1.97	0.45
40:DH:90:LEU:HG	40:DH:123:ARG:O	2.15	0.45
41:DJ:105:VAL:O	41:DJ:108:MET:HB2	2.16	0.45
47:DF:33:ILE:HG22	47:DF:34:THR:H	1.81	0.45
47:DF:91:ARG:C	47:DF:95:MET:HB2	2.36	0.45
20:AO:32:LEU:O	20:AO:36:ILE:HG12	2.16	0.45
25:DC:202:ARG:HH21	25:DC:202:ARG:HB2	1.81	0.45
17:CT:59:ARG:HB2	17:CT:59:ARG:NH1	2.23	0.45
47:DF:27:VAL:O	47:DF:27:VAL:HG23	2.16	0.45
23:BB:2352:A:H2'	23:BB:2353:G:O4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:4:LYS:HB3	25:BC:5:CYS:H	1.57	0.45
39:DX:45:GLN:O	39:DX:46:VAL:HB	2.16	0.45
6:AG:13:PRO:HB2	6:AG:18:GLY:C	2.37	0.45
29:DE:130:LYS:CB	29:DE:133:LEU:HG	2.45	0.45
23:DB:117:G:H5'	23:DB:126:A:C8	2.39	0.45
1:AA:1422:G:H5'	27:BK:48:PRO:HB3	1.98	0.45
12:AM:89:ARG:CZ	12:AM:94:LEU:HD13	2.45	0.45
17:CT:74:HIS:HA	17:CT:77:ASN:HD21	1.81	0.45
1:AA:1508:A:H2'	1:AA:1509:C:H6	1.81	0.45
39:BX:48:ARG:O	39:BX:51:ALA:HB3	2.16	0.45
12:CM:88:LEU:O	12:CM:92:ARG:HG3	2.17	0.45
3:CD:199:ILE:HG13	3:CD:200:VAL:N	2.31	0.45
23:DB:1871:A:H2'	23:DB:1872:A:H8	1.81	0.45
23:DB:279:A:H3'	23:DB:280:U:C6	2.51	0.45
12:CM:52:ILE:HD12	12:CM:55:LEU:CD1	2.43	0.45
1:AA:1132:C:H2'	1:AA:1133:G:H8	1.77	0.45
23:DB:1203:U:H4'	37:DL:3:LEU:HD12	1.98	0.45
38:BM:33:LEU:HD22	38:BM:128:THR:OG1	2.16	0.45
18:CB:77:GLU:O	18:CB:80:LYS:HG2	2.17	0.45
25:DC:75:ALA:O	25:DC:114:GLN:HA	2.16	0.45
11:AL:107:LYS:H	11:AL:107:LYS:CD	2.29	0.45
1:AA:1512:U:H2'	1:AA:1513:A:C8	2.50	0.45
1:CA:1126:U:O2'	1:CA:1127:G:O5'	2.32	0.45
23:DB:969:G:H2'	23:DB:970:U:H6	1.81	0.45
2:CC:106:ARG:N	2:CC:106:ARG:CZ	2.80	0.45
1:AA:1343:G:O2'	1:AA:1344:C:H5'	2.17	0.45
1:CA:1463:U:OP1	28:DP:108:ARG:HD2	2.16	0.45
23:DB:2135:A:C8	23:DB:2157:G:N3	2.85	0.45
1:CA:1293:C:H2'	1:CA:1294:G:C8	2.52	0.45
1:AA:1152:A:H2'	1:AA:1153:G:C8	2.51	0.45
23:BB:1220:G:H2'	23:BB:1221:C:C6	2.52	0.45
1:AA:833:G:H2'	1:AA:834:U:H6	1.81	0.45
23:DB:103:A:H3'	23:DB:104:A:H8	1.82	0.45
36:D2:46:LYS:NZ	36:D2:46:LYS:HA	2.30	0.45
5:AF:68:GLN:HA	5:AF:71:ILE:HD11	1.99	0.45
23:BB:329:G:OP2	46:BU:64:ILE:HD11	2.16	0.45
1:CA:229:U:H2'	1:CA:230:G:H8	1.82	0.45
23:DB:523:C:H2'	23:DB:524:G:H8	1.81	0.45
1:CA:1525:G:O2'	1:CA:1526:G:H5'	2.16	0.45
4:CE:45:VAL:O	4:CE:71:ILE:HG22	2.16	0.45
23:BB:2340:A:H2'	23:BB:2341:G:C8	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1584:U:H3'	23:DB:1585:C:H5'	1.98	0.45
1:AA:633:G:H2'	1:AA:634:C:H6	1.81	0.45
23:BB:2605:U:H2'	23:BB:2606:C:C6	2.52	0.45
23:DB:1751:U:H2'	23:DB:1752:C:C6	2.50	0.45
14:CQ:24:ILE:N	14:CQ:24:ILE:HD12	2.31	0.45
20:CO:43:PHE:CE1	20:CO:53:ARG:HA	2.51	0.45
1:CA:1351:U:O2'	1:CA:1352:C:H5'	2.15	0.45
2:CC:183:TYR:HA	2:CC:199:VAL:O	2.16	0.45
23:DB:1351:C:O2'	23:DB:1571:A:H1'	2.16	0.45
23:DB:1831:G:H2'	23:DB:1832:C:H6	1.80	0.45
15:AR:31:TYR:CG	15:AR:54:LEU:HD21	2.51	0.45
23:BB:2752:C:H3'	23:BB:2753:A:H8	1.81	0.45
23:DB:1322:A:C2'	23:DB:1323:C:H5'	2.46	0.45
1:CA:168:G:O2'	1:CA:169:C:H5'	2.16	0.45
29:BE:52:VAL:HG11	29:BE:81:GLY:HA3	1.98	0.45
3:CD:123:MET:HG3	3:CD:127:ARG:C	2.36	0.45
41:BJ:1:MET:HG2	41:BJ:2:LYS:HE2	1.99	0.45
19:AU:17:ARG:HA	19:AU:17:ARG:HE	1.80	0.45
29:BE:21:ARG:HH21	29:BE:21:ARG:HB2	1.82	0.45
48:BG:44:HIS:O	48:BG:45:ALA:HB3	2.17	0.45
23:DB:1499:C:H2'	23:DB:1500:G:H8	1.80	0.45
24:DI:4:VAL:O	24:DI:5:GLN:O	2.35	0.45
23:BB:921:C:H2'	23:BB:922:C:H6	1.81	0.45
12:AM:21:ILE:C	12:AM:23:GLY:H	2.19	0.45
2:CC:39:ARG:HH11	2:CC:39:ARG:HG3	1.82	0.45
26:DD:191:GLY:O	26:DD:192:ALA:HB3	2.16	0.45
37:DL:85:VAL:O	37:DL:85:VAL:HG22	2.15	0.45
12:AM:106:ARG:HH11	12:AM:106:ARG:N	2.15	0.45
42:DN:55:ALA:HA	42:DN:80:PHE:CE1	2.52	0.45
37:BL:108:ALA:O	37:BL:125:LEU:HD23	2.17	0.45
37:BL:17:LYS:CD	37:BL:19:LEU:HD11	2.47	0.45
23:BB:1725:U:H2'	23:BB:1726:C:C6	2.51	0.45
48:BG:84:LYS:CG	48:BG:132:LEU:N	2.76	0.45
23:DB:1062:G:H2'	23:DB:1063:G:H8	1.80	0.45
40:DH:114:GLU:CD	40:DH:133:GLN:HB2	2.37	0.45
44:BQ:63:ARG:CZ	44:BQ:96:ASP:HA	2.47	0.45
47:BF:33:ILE:HB	47:BF:90:LEU:HB2	1.97	0.45
1:AA:981:U:H5''	21:AN:5:MET:HE3	1.98	0.45
47:DF:134:GLN:C	47:DF:136:ILE:N	2.69	0.45
1:CA:1006:G:H2'	1:CA:1007:U:H6	1.80	0.45
26:BD:3:GLY:O	26:BD:4:LEU:HD13	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:372:C:H1'	1:CA:373:A:OP2	2.16	0.45
40:DH:39:ALA:HA	40:DH:44:ILE:CG2	2.47	0.45
29:DE:128:ALA:O	29:DE:130:LYS:N	2.47	0.45
29:DE:129:PRO:HG3	29:DE:156:ASN:OD1	2.15	0.45
52:DW:67:LYS:HB3	52:DW:80:SER:OG	2.17	0.45
12:CM:33:LEU:CD1	12:CM:40:GLU:HA	2.46	0.45
18:AB:21:TYR:O	18:AB:22:TRP:O	2.34	0.45
23:BB:2886:A:N7	31:B0:39:ARG:NH2	2.58	0.45
2:AC:10:ARG:O	2:AC:12:GLY:N	2.49	0.45
1:CA:977:A:OP1	21:CN:70:HIS:HE1	1.98	0.45
16:CS:43:MET:O	16:CS:46:LEU:HB2	2.16	0.45
28:BP:60:VAL:O	28:BP:70:GLU:HA	2.16	0.45
6:AG:71:THR:HA	6:AG:90:VAL:HG22	1.98	0.45
1:AA:1022:A:C2	1:AA:1023:U:H1'	2.51	0.45
27:BK:115:ILE:HG23	27:BK:116:ILE:N	2.32	0.45
40:BH:3:VAL:HA	40:BH:37:VAL:O	2.17	0.45
1:CA:1096:C:H2'	1:CA:1097:C:C6	2.50	0.45
23:DB:2690:U:N3	42:DN:7:GLY:HA3	2.27	0.45
23:BB:37:C:H4'	23:BB:451:U:OP1	2.16	0.45
23:DB:1864:U:O2'	23:DB:1865:U:H5'	2.17	0.45
27:BK:53:LYS:N	27:BK:53:LYS:HD3	2.30	0.45
37:DL:65:GLY:O	37:DL:66:PHE:CB	2.64	0.45
1:AA:501:C:H2'	1:AA:502:A:H8	1.80	0.45
23:BB:192:C:C2'	23:BB:193:U:H5'	2.46	0.45
6:AG:59:GLU:O	6:AG:63:VAL:HG23	2.17	0.45
52:DW:76:ARG:HD3	52:DW:76:ARG:HA	1.75	0.45
23:DB:1902:C:H4'	25:DC:241:LYS:O	2.17	0.45
23:BB:2847:U:OP1	28:BP:95:LYS:HD3	2.17	0.45
23:BB:1460:U:H3'	23:BB:1461:C:H5'	1.99	0.45
52:DW:32:ALA:C	52:DW:34:SER:N	2.69	0.45
1:AA:487:A:H2'	1:AA:488:C:O4'	2.16	0.45
1:CA:1381:U:H2'	1:CA:1382:C:C6	2.48	0.45
23:DB:873:C:H4'	38:DM:64:TRP:HE1	1.81	0.45
1:AA:158:G:H1	1:AA:163:C:N4	2.13	0.45
1:CA:491:G:O2'	1:CA:492:C:H5'	2.17	0.45
30:DY:31:ILE:HG13	30:DY:32:GLY:N	2.31	0.45
52:DW:70:VAL:O	52:DW:70:VAL:HG13	2.17	0.45
23:BB:1465:G:H2'	23:BB:1466:U:O4'	2.17	0.45
23:DB:1316:U:H2'	23:DB:1317:G:C8	2.52	0.45
1:CA:426:U:H2'	1:CA:427:U:C6	2.52	0.45
31:B0:2:VAL:HG12	31:B0:3:GLN:N	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2047:C:O2'	23:BB:2048:G:H5'	2.16	0.45
40:BH:86:ASP:C	40:BH:87:GLU:HG3	2.37	0.45
1:CA:626:G:H2'	1:CA:627:G:H8	1.80	0.45
1:CA:682:G:O2'	1:CA:683:G:H5'	2.17	0.45
1:CA:26:A:H61	1:CA:558:G:H1'	1.81	0.45
23:DB:817:C:O2'	23:DB:839:U:H5'	2.17	0.45
29:BE:165:HIS:NE2	29:BE:166:LYS:HG3	2.31	0.45
23:DB:121:G:H2'	23:DB:122:G:H8	1.80	0.45
23:DB:219:A:O2'	23:DB:220:G:H5'	2.16	0.45
1:CA:1247:U:O2'	1:CA:1248:A:H5'	2.16	0.45
15:CR:28:LEU:C	15:CR:30:ASN:H	2.20	0.45
23:DB:93:G:H2'	23:DB:94:A:C8	2.51	0.45
33:B1:25:ASN:OD1	33:B1:27:ARG:HB2	2.17	0.45
6:CG:78:ARG:HD3	6:CG:83:THR:HG22	1.98	0.45
23:BB:1783:A:H5'	23:BB:2608:G:H4'	1.97	0.45
23:DB:1383:A:P	23:DB:1383:A:H3'	2.57	0.45
23:BB:1044:C:O5'	23:BB:1044:C:H6	1.99	0.45
23:BB:327:G:O2'	23:BB:328:U:H5'	2.17	0.45
52:BW:61:LYS:HB3	52:BW:62:ALA:H	1.53	0.45
9:CJ:25:ILE:HG13	9:CJ:25:ILE:H	1.55	0.45
10:AK:86:LYS:HB2	10:AK:113:THR:HA	1.98	0.45
41:BJ:55:ILE:HG22	41:BJ:123:LYS:HB2	1.98	0.45
5:CF:25:TYR:O	5:CF:29:ILE:HG13	2.16	0.45
5:CF:97:THR:HB	5:CF:98:GLU:OE1	2.16	0.45
5:AF:62:MET:HG3	5:AF:64:VAL:HG13	1.98	0.45
14:AQ:20:ILE:CD1	14:AQ:52:CYS:HB2	2.46	0.45
26:DD:110:THR:HG23	26:DD:171:THR:CA	2.46	0.45
40:BH:69:ALA:HA	40:BH:140:ALA:CB	2.45	0.45
42:BN:55:ALA:HA	42:BN:80:PHE:CD1	2.51	0.45
43:BO:35:ILE:HG21	43:BO:71:ALA:HB1	1.98	0.45
8:AI:66:VAL:HG11	8:AI:74:GLN:HG3	1.98	0.45
1:AA:1228:C:H5'	1:AA:1229:A:OP2	2.16	0.45
24:BI:79:LEU:HD11	24:BI:131:THR:OG1	2.15	0.45
25:BC:145:MET:HB2	25:BC:152:GLN:NE2	2.32	0.45
50:BT:69:ARG:HB2	50:BT:75:GLY:N	2.31	0.45
5:CF:49:TYR:HE1	15:CR:62:ARG:O	2.00	0.45
23:BB:1655:A:C2	23:BB:2049:G:H4'	2.51	0.45
23:BB:1999:C:O2'	23:BB:2000:C:H5'	2.16	0.45
29:BE:127:GLU:N	29:BE:127:GLU:CD	2.69	0.45
49:BR:10:LYS:HD2	49:BR:10:LYS:N	2.30	0.45
35:BV:80:HIS:CD2	35:BV:83:LYS:HB2	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AS:68:HIS:N	16:AS:68:HIS:CD2	2.84	0.45
9:AJ:55:PRO:O	9:AJ:56:HIS:CB	2.61	0.45
41:DJ:25:LEU:CD2	41:DJ:26:GLY:H	2.25	0.45
26:BD:10:GLY:HA2	26:BD:26:VAL:HB	1.97	0.45
1:CA:1300:G:C2'	1:CA:1301:U:OP2	2.64	0.45
36:B2:12:ARG:HB2	36:B2:12:ARG:CZ	2.47	0.45
51:DZ:13:VAL:HG23	51:DZ:29:PHE:HB2	1.98	0.45
37:DL:100:ILE:O	37:DL:100:ILE:HG12	2.17	0.45
12:CM:26:LYS:O	12:CM:30:LYS:HB2	2.17	0.45
41:DJ:81:ILE:HG12	41:DJ:82:GLY:N	2.31	0.45
28:DP:45:VAL:N	28:DP:60:VAL:HG13	2.31	0.45
1:CA:1320:C:H5''	16:CS:2:ARG:NE	2.32	0.45
16:CS:72:GLU:C	16:CS:74:ALA:H	2.20	0.45
44:DQ:63:ARG:HH21	44:DQ:64:ILE:HD11	1.81	0.45
23:BB:1873:G:O2'	23:BB:1874:C:H5'	2.17	0.45
15:AR:41:SER:HB3	15:AR:51:GLN:CG	2.47	0.45
44:DQ:26:ALA:HB1	44:DQ:30:VAL:CG1	2.47	0.45
1:AA:1250:A:H5''	8:AI:68:GLY:H	1.82	0.45
46:DU:8:ASP:O	46:DU:24:VAL:HG23	2.16	0.45
1:AA:1164:G:O2'	1:AA:1165:U:H5'	2.15	0.45
1:CA:841:C:H42	1:CA:843:U:H5	1.63	0.45
23:DB:2354:C:H4'	52:DW:31:LEU:HD23	1.99	0.45
10:CK:16:SER:HA	10:CK:77:GLY:O	2.15	0.45
40:DH:60:GLU:C	40:DH:62:LEU:N	2.68	0.45
1:CA:501:C:OP1	11:CL:113:ARG:NH2	2.50	0.45
2:CC:106:ARG:HD2	2:CC:106:ARG:C	2.37	0.45
6:AG:129:ASN:HA	6:AG:134:VAL:HG21	1.97	0.45
13:AP:43:ALA:HA	13:AP:46:LYS:CD	2.44	0.45
23:BB:1809:A:C6	23:BB:1810:A:C6	3.04	0.45
23:DB:1845:G:O2'	23:DB:1846:G:H5'	2.17	0.45
23:BB:1560:G:H2'	23:BB:1561:C:C6	2.52	0.45
1:CA:60:A:P	1:CA:60:A:H8	2.39	0.45
6:AG:77:ARG:HB3	6:AG:84:TYR:O	2.17	0.45
23:DB:665:U:O2'	23:DB:666:A:H5'	2.17	0.45
34:D3:22:LYS:HA	34:D3:48:MET:HA	1.99	0.45
52:BW:70:VAL:HG13	52:BW:70:VAL:O	2.15	0.45
1:CA:598:U:H2'	1:CA:599:C:H6	1.80	0.45
27:BK:107:LEU:C	27:BK:109:SER:H	2.19	0.45
1:CA:586:C:O2'	1:CA:878:A:H4'	2.17	0.45
23:BB:1175:A:H3'	23:BB:1176:U:O4'	2.16	0.45
10:AK:90:PRO:C	10:AK:92:ARG:H	2.20	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1721:G:H1'	23:DB:1739:A:N6	2.30	0.45
23:BB:521:U:H2'	23:BB:522:A:C8	2.52	0.45
5:AF:10:VAL:HG12	5:AF:11:HIS:N	2.30	0.45
1:AA:1089:G:H2'	1:AA:1090:U:H5'	1.97	0.45
23:BB:2630:G:H2'	23:BB:2631:G:H8	1.81	0.45
1:AA:753:A:OP1	20:AO:73:LYS:HE3	2.17	0.45
20:AO:69:TYR:HA	20:AO:72:ARG:CZ	2.47	0.45
1:AA:1127:G:H5'	1:AA:1280:A:O2'	2.17	0.45
23:BB:2220:U:O2'	23:BB:2221:G:H5'	2.16	0.45
23:BB:995:C:P	44:BQ:52:ARG:HH11	2.39	0.45
29:DE:195:GLN:C	29:DE:197:GLU:H	2.20	0.45
23:DB:603:A:H4'	23:DB:604:G:O5'	2.17	0.45
25:BC:20:ASN:HB3	25:BC:23:LEU:HD13	1.98	0.45
1:CA:1186:G:H21	21:CN:100:TRP:C	2.20	0.45
7:AH:92:PRO:HG3	7:AH:127:TYR:OH	2.16	0.45
23:BB:1015:U:H2'	23:BB:1016:G:H8	1.81	0.45
1:CA:1049:U:H1'	1:CA:1201:A:C5	2.52	0.45
23:BB:2581:G:H2'	23:BB:2581:G:N3	2.31	0.45
28:BP:31:VAL:C	28:BP:33:GLU:H	2.19	0.45
23:BB:2714:G:O2'	23:BB:2715:C:H5'	2.17	0.45
7:AH:25:THR:O	7:AH:26:MET:HB3	2.16	0.45
23:DB:2222:C:H4'	25:DC:184:GLU:OE2	2.17	0.45
29:DE:60:TRP:HE3	29:DE:60:TRP:HA	1.81	0.45
25:DC:102:TYR:C	25:DC:103:ILE:HG13	2.37	0.45
5:AF:86:ARG:NH1	5:AF:88:MET:HG3	2.31	0.45
52:BW:17:ALA:HB2	52:BW:37:VAL:HG23	1.99	0.45
23:BB:1079:C:O2'	24:BI:133:ARG:NH2	2.49	0.45
37:BL:19:LEU:HA	37:BL:27:LEU:HD13	1.97	0.45
23:DB:2756:U:H1'	23:DB:2757:A:H5''	1.97	0.45
23:DB:1170:C:H2'	23:DB:1171:G:H8	1.82	0.45
40:DH:72:ILE:HB	40:DH:140:ALA:CB	2.43	0.45
23:DB:2378:A:N3	43:DO:18:LEU:HD11	2.32	0.45
38:DM:38:ARG:HG2	38:DM:38:ARG:NH1	2.31	0.45
47:DF:104:THR:O	47:DF:108:PRO:HG2	2.16	0.45
49:BR:4:VAL:HG23	49:BR:39:LEU:HG	1.97	0.45
1:AA:1103:C:H5'	18:AB:96:LEU:HD12	1.99	0.45
18:AB:153:MET:CE	18:AB:157:PRO:HB3	2.47	0.45
24:DI:27:LEU:HD23	24:DI:27:LEU:N	2.22	0.45
9:AJ:29:ALA:HA	9:AJ:32:THR:CG2	2.47	0.45
46:BU:53:GLN:O	46:BU:53:GLN:CG	2.65	0.45
1:AA:201:G:H2'	1:AA:202:G:C8	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DL:95:LEU:HB2	37:DL:101:ILE:CG1	2.47	0.45
1:AA:1029:U:O5'	1:AA:1029:U:H6	1.99	0.45
40:BH:15:LEU:C	40:BH:17:ASP:H	2.20	0.45
2:AC:10:ARG:HD2	2:AC:14:VAL:CG2	2.46	0.45
27:DK:43:ILE:CG2	27:DK:46:ALA:HB2	2.44	0.45
39:DX:30:MET:C	39:DX:32:ALA:H	2.20	0.45
40:BH:49:ALA:H	40:BH:50:ARG:HH21	1.65	0.45
18:AB:120:SER:HA	18:AB:125:PHE:CD1	2.51	0.45
31:B0:41:HIS:HB3	42:BN:99:LYS:HB2	1.99	0.45
40:BH:4:ILE:CG1	40:BH:18:GLN:HB2	2.43	0.45
23:DB:1507:C:C2'	23:DB:1508:A:H4'	2.47	0.45
23:BB:319:G:H2'	23:BB:320:A:O4'	2.16	0.45
45:BS:45:VAL:HA	45:BS:48:LYS:HB3	1.98	0.45
23:DB:1607:C:H5''	23:DB:1608:A:H5'	1.99	0.45
23:DB:2650:U:H2'	23:DB:2651:C:C6	2.52	0.45
1:AA:501:C:OP1	11:AL:113:ARG:NH2	2.50	0.45
23:DB:608:A:H2'	23:DB:609:A:H8	1.79	0.45
29:DE:148:ILE:HD13	29:DE:187:VAL:CG2	2.46	0.45
1:AA:1071:C:H2'	1:AA:1072:G:C8	2.47	0.45
51:BZ:36:HIS:HB3	51:BZ:38:PHE:CE2	2.52	0.45
47:DF:74:ALA:CB	47:DF:78:ILE:HD13	2.45	0.45
8:AI:117:LEU:HD22	8:AI:123:ARG:HD2	1.98	0.45
1:AA:592:G:H2'	1:AA:593:U:C6	2.52	0.45
23:BB:2109:U:O2'	23:BB:2110:G:H5'	2.17	0.45
23:DB:349:U:H2'	23:DB:350:G:C8	2.52	0.45
23:BB:1459:G:H4'	23:BB:1461:C:N3	2.32	0.45
13:AP:78:VAL:O	13:AP:79:ASN:C	2.54	0.45
1:CA:1216:A:H2'	1:CA:1217:C:H6	1.82	0.45
1:CA:300:A:H1'	1:CA:565:U:O2	2.17	0.45
34:B3:3:ILE:HG22	34:B3:4:LYS:N	2.31	0.45
23:DB:222:A:N6	23:DB:232:G:H1'	2.31	0.45
23:DB:2759:G:O2'	23:DB:2760:C:H5'	2.17	0.45
23:BB:2812:G:H2'	23:BB:2813:A:O4'	2.17	0.45
1:AA:279:A:H5'	1:AA:281:G:H5'	1.98	0.45
1:AA:861:G:H2'	1:AA:862:C:H6	1.81	0.45
1:CA:488:C:O2'	1:CA:489:C:H5'	2.17	0.45
23:BB:679:C:H2'	23:BB:680:C:H6	1.81	0.45
22:BA:63:C:H2'	22:BA:64:G:H8	1.81	0.45
23:DB:2801:G:H2'	23:DB:2802:G:C8	2.51	0.45
23:DB:2803:G:H2'	23:DB:2804:U:H6	1.81	0.45
29:DE:149:ILE:HD11	29:DE:172:ALA:HA	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:156:LEU:C	2:AC:158:GLY:H	2.18	0.45
2:AC:156:LEU:HD12	2:AC:163:ARG:HG3	1.97	0.45
41:DJ:102:GLU:HB3	41:DJ:119:PHE:CZ	2.50	0.45
23:BB:2802:G:H2'	23:BB:2803:G:C8	2.51	0.45
23:DB:2892:G:H5''	23:DB:2894:G:N2	2.31	0.45
30:BY:43:ILE:O	30:BY:47:ILE:HG12	2.17	0.45
23:DB:2340:A:H2'	23:DB:2341:G:C8	2.50	0.45
1:CA:546:A:P	3:CD:68:GLU:HB3	2.57	0.45
23:BB:782:A:N7	25:BC:219:VAL:HG21	2.32	0.45
1:CA:1386:G:O3'	55:CA:1661:SCM:H1M2	2.15	0.45
10:CK:90:PRO:C	10:CK:92:ARG:H	2.20	0.45
48:DG:39:ALA:HA	48:DG:54:ARG:HG3	1.98	0.45
1:AA:1225:A:N3	1:AA:1225:A:H2'	2.32	0.45
34:B3:61:LEU:HD23	34:B3:61:LEU:N	2.32	0.45
1:CA:1066:C:H2'	1:CA:1067:A:C8	2.52	0.45
1:AA:1195:C:H2'	1:AA:1197:A:O4'	2.17	0.45
27:BK:22:ILE:O	27:BK:23:LYS:HD2	2.16	0.45
35:BV:11:GLU:HB2	35:BV:16:ALA:HB2	1.97	0.45
23:BB:2400:G:O2'	23:BB:2401:U:H5'	2.16	0.45
46:BU:43:LYS:O	46:BU:57:ILE:HA	2.17	0.45
38:BM:31:PHE:CE2	38:BM:110:GLU:HB3	2.52	0.45
23:BB:2694:G:H2'	23:BB:2695:U:C6	2.51	0.45
1:AA:513:C:H2'	1:AA:514:C:H6	1.82	0.45
23:BB:693:A:H2'	23:BB:694:U:C6	2.52	0.45
18:CB:31:PHE:CD1	18:CB:43:GLU:HG3	2.51	0.45
12:AM:1:ALA:HA	12:AM:56:ARG:HH12	1.82	0.45
9:CJ:36:VAL:HG22	9:CJ:76:ILE:CB	2.44	0.45
25:DC:116:GLN:H	25:DC:127:ASN:ND2	2.15	0.45
25:DC:151:GLY:O	25:DC:152:GLN:HG3	2.16	0.45
41:BJ:18:VAL:CG1	41:BJ:54:ILE:HD11	2.46	0.45
2:CC:63:ILE:HD12	2:CC:98:ALA:HB3	1.98	0.45
29:BE:109:LEU:HD13	29:BE:180:LEU:HD13	1.99	0.45
23:DB:2331:G:H2'	23:DB:2332:C:C6	2.52	0.45
29:DE:146:VAL:HA	29:DE:185:LYS:O	2.16	0.45
22:BA:115:A:H2'	22:BA:116:G:C8	2.52	0.45
43:BO:35:ILE:HG21	43:BO:71:ALA:CB	2.47	0.45
48:DG:153:PRO:HB3	48:DG:158:GLY:HA2	1.98	0.45
49:BR:8:GLY:HA3	49:BR:23:GLU:HB2	1.98	0.45
43:BO:106:LEU:CA	43:BO:109:ALA:HB3	2.46	0.45
1:AA:987:G:O2'	1:AA:988:G:H5'	2.17	0.45
23:DB:2886:A:C5	31:D0:39:ARG:NH2	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:107:VAL:HB	47:BF:108:PRO:HD3	1.97	0.45
41:DJ:29:ALA:HB1	41:DJ:105:VAL:HG12	1.99	0.45
23:DB:2302:U:O2'	23:DB:2303:G:H5'	2.17	0.45
25:DC:210:ALA:O	25:DC:213:ARG:N	2.42	0.45
42:BN:31:HIS:O	42:BN:33:ILE:HG22	2.17	0.45
37:BL:103:ILE:CD1	37:BL:103:ILE:H	2.24	0.45
1:CA:1280:A:H3'	1:CA:1281:C:C5'	2.44	0.45
2:AC:13:ILE:H	2:AC:13:ILE:HD13	1.81	0.45
18:CB:100:LEU:HB2	18:CB:174:GLU:OE1	2.17	0.45
23:DB:1591:A:H2'	23:DB:1592:C:O4'	2.17	0.45
28:BP:61:ARG:HD3	28:BP:70:GLU:CD	2.37	0.45
48:BG:126:THR:HG22	48:BG:127:GLN:H	1.81	0.45
48:BG:126:THR:HG22	48:BG:127:GLN:N	2.31	0.45
44:BQ:10:ARG:CZ	44:BQ:10:ARG:HB2	2.47	0.45
23:BB:1550:C:H2'	23:BB:1551:A:C8	2.51	0.45
1:CA:560:A:H4'	1:CA:561:U:C5'	2.45	0.45
16:CS:21:ALA:HA	16:CS:24:SER:OG	2.17	0.45
48:DG:6:ALA:HB3	48:DG:68:ARG:HD3	1.99	0.45
41:BJ:21:THR:O	41:BJ:62:VAL:HA	2.16	0.45
23:DB:2847:U:H5''	28:DP:94:ALA:HB3	1.98	0.45
23:DB:978:G:O4'	23:DB:1001:A:H2	2.00	0.45
1:AA:543:U:H2'	1:AA:544:G:H8	1.82	0.45
3:AD:81:LEU:HB2	3:AD:88:ASN:HD22	1.82	0.45
38:BM:77:PRO:HD2	38:BM:80:VAL:HG11	1.99	0.45
23:BB:1864:U:O2'	23:BB:1865:U:H5'	2.17	0.45
21:CN:30:ILE:HA	21:CN:34:ASN:CB	2.47	0.45
1:AA:140:U:H2'	1:AA:141:G:H8	1.80	0.45
1:CA:140:U:H2'	1:CA:141:G:H8	1.82	0.45
1:AA:411:A:O3'	1:AA:412:A:H4'	2.16	0.45
1:AA:597:G:H2'	1:AA:598:U:H5'	1.99	0.45
1:AA:453:G:H2'	1:AA:454:G:C8	2.52	0.45
23:DB:2442:C:H2'	23:DB:2443:C:C6	2.52	0.45
23:DB:328:U:O3'	46:DU:65:GLN:HG3	2.17	0.45
1:CA:1234:C:H1'	1:CA:1364:U:O2	2.17	0.45
18:AB:209:VAL:HG23	18:AB:210:THR:H	1.80	0.45
26:DD:61:THR:OG1	26:DD:63:PRO:HD2	2.17	0.45
23:BB:1746:A:H2'	23:BB:1747:U:C6	2.51	0.45
24:BI:49:GLU:OE1	24:BI:52:LEU:HD22	2.17	0.45
23:BB:1180:U:H2'	23:BB:1181:U:C6	2.52	0.45
23:BB:190:A:H5''	23:BB:204:A:N6	2.31	0.45
18:CB:93:HIS:HD2	18:CB:94:ARG:HH12	1.65	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1830:C:H2'	23:BB:1831:G:C8	2.52	0.45
6:CG:91:ARG:HD2	6:CG:91:ARG:N	2.32	0.45
23:BB:1064:C:H2'	23:BB:1065:U:O4'	2.17	0.45
1:CA:152:A:H3'	1:CA:153:C:H6	1.81	0.45
23:DB:1281:G:H2'	23:DB:1282:U:C6	2.52	0.45
23:BB:342:A:H2'	23:BB:343:C:O4'	2.17	0.45
1:AA:44:A:H2'	1:AA:45:G:H8	1.82	0.45
1:CA:356:A:H1'	1:CA:368:U:O2'	2.17	0.45
1:CA:568:G:O6	11:CL:1:ALA:HB2	2.16	0.45
19:CU:17:ARG:HE	19:CU:17:ARG:HA	1.81	0.45
23:BB:1306:C:O2'	23:BB:1307:A:H5'	2.16	0.45
26:DD:30:GLU:HA	26:DD:185:ASN:OD1	2.17	0.45
52:BW:54:ARG:C	52:BW:56:HIS:H	2.20	0.45
23:DB:2236:U:O2'	23:DB:2237:G:H5'	2.16	0.45
30:BY:12:ALA:HB2	30:BY:53:MET:CE	2.47	0.45
50:BT:17:SER:N	50:BT:21:SER:OG	2.50	0.45
25:DC:192:GLY:O	25:DC:193:GLU:HG3	2.17	0.45
48:BG:43:LYS:HB2	48:BG:50:THR:HB	1.99	0.45
5:AF:66:ALA:HB1	5:AF:70:VAL:HG21	1.98	0.45
14:CQ:18:LYS:HA	14:CQ:47:ASP:O	2.17	0.45
52:DW:17:ALA:HB2	52:DW:37:VAL:HG23	1.98	0.45
8:AI:41:GLU:C	8:AI:43:ALA:H	2.19	0.45
37:BL:29:LYS:C	37:BL:31:GLY:N	2.70	0.45
35:DV:29:ILE:HD13	35:DV:31:TYR:CE2	2.51	0.45
27:DK:71:ARG:CB	27:DK:72:PRO:HD2	2.35	0.45
23:BB:674:G:H1'	29:BE:69:ARG:CD	2.46	0.45
26:BD:12:THR:HG22	26:BD:13:ARG:H	1.80	0.45
28:BP:75:THR:O	28:BP:80:VAL:HG11	2.17	0.45
30:BY:7:THR:HG23	30:BY:34:THR:OG1	2.16	0.45
38:DM:46:ILE:HG13	38:DM:47:GLU:N	2.32	0.45
47:DF:36:ASN:HA	47:DF:87:LYS:HA	1.97	0.45
26:BD:133:THR:HG23	26:BD:134:HIS:N	2.32	0.45
1:CA:1300:G:O2'	1:CA:1301:U:H6	1.99	0.45
1:AA:1397:C:H4'	1:AA:1398:A:OP2	2.16	0.45
46:BU:47:PRO:CB	46:BU:55:GLY:HA3	2.43	0.45
23:DB:321:U:OP2	29:DE:130:LYS:HD3	2.17	0.45
4:AE:131:ASN:O	4:AE:135:VAL:HG23	2.16	0.45
38:BM:101:VAL:HG13	38:BM:101:VAL:O	2.17	0.45
42:DN:106:ASP:C	42:DN:108:ALA:H	2.19	0.45
38:DM:100:LYS:HD3	38:DM:101:VAL:H	1.81	0.45
1:AA:450:G:N7	1:AA:481:G:O6	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CS:35:ARG:HB3	16:CS:50:VAL:HG13	1.98	0.45
2:AC:81:GLU:O	2:AC:85:LYS:HB2	2.16	0.45
23:DB:2466:C:OP1	32:D4:4:ARG:HG2	2.17	0.45
12:CM:3:ILE:HG12	12:CM:52:ILE:HD11	1.98	0.45
23:BB:1607:C:H5'	23:BB:1608:A:H5'	1.98	0.45
11:AL:79:ILE:HD12	11:AL:96:THR:CG2	2.46	0.45
1:CA:22:G:H2'	1:CA:23:C:C6	2.51	0.45
48:DG:51:PHE:CZ	48:DG:71:LEU:HG	2.52	0.45
18:AB:140:LEU:H	18:AB:140:LEU:CD1	2.29	0.45
23:DB:457:A:N1	23:DB:470:A:H5'	2.32	0.45
23:BB:937:C:H2'	23:BB:938:G:C8	2.49	0.45
1:CA:778:G:H2'	1:CA:779:C:H6	1.82	0.45
23:DB:2752:C:H2'	23:DB:2753:A:O4'	2.17	0.45
1:AA:675:A:H2'	1:AA:676:A:C8	2.52	0.45
23:BB:2579:C:H1'	26:BD:130:GLN:NE2	2.31	0.45
1:CA:36:C:O2'	1:CA:37:U:H5'	2.17	0.45
23:BB:1411:U:H2'	23:BB:1412:U:C6	2.51	0.45
10:CK:34:THR:HB	10:CK:39:ASN:O	2.16	0.45
1:CA:230:G:H2'	1:CA:231:U:O4'	2.16	0.45
29:DE:149:ILE:HG23	29:DE:188:MET:HA	1.99	0.45
46:BU:13:LEU:HA	46:BU:18:LYS:HE3	1.98	0.45
5:CF:72:ASP:O	5:CF:75:GLU:HB2	2.17	0.45
23:BB:2677:G:H2'	23:BB:2678:C:H6	1.80	0.45
1:CA:893:C:H2'	1:CA:894:G:C8	2.52	0.45
46:DU:18:LYS:HD3	46:DU:19:GLY:N	2.31	0.45
23:DB:2829:A:O2'	23:DB:2830:C:H5'	2.16	0.45
23:DB:599:A:O2'	23:DB:600:G:H5'	2.17	0.45
27:DK:13:ASN:ND2	27:DK:98:ARG:H	2.14	0.45
43:DO:6:ALA:CB	43:DO:10:ARG:HH11	2.30	0.45
1:AA:707:U:H2'	1:AA:708:C:C6	2.51	0.45
23:BB:599:A:O2'	23:BB:600:G:H5'	2.16	0.45
23:DB:2047:C:O2'	23:DB:2048:G:H5'	2.17	0.45
1:CA:538:G:O2'	1:CA:539:A:H5'	2.16	0.45
23:BB:1076:C:H2'	23:BB:1077:A:H8	1.80	0.45
1:CA:345:C:OP1	28:DP:38:ARG:HD2	2.17	0.45
23:BB:693:A:O2'	23:BB:694:U:H5'	2.17	0.45
25:DC:115:ILE:HB	25:DC:126:GLY:O	2.17	0.45
25:BC:115:ILE:HB	25:BC:126:GLY:O	2.17	0.45
1:CA:1209:C:O2'	1:CA:1210:C:H5'	2.16	0.45
12:CM:12:LYS:O	12:CM:43:LYS:HA	2.16	0.45
18:AB:74:ALA:HB1	18:AB:206:ILE:CD1	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1361:G:H2'	23:DB:1362:C:C6	2.52	0.45
23:DB:367:G:N2	23:DB:368:A:H1'	2.32	0.45
23:DB:2581:G:N3	23:DB:2581:G:H2'	2.31	0.45
1:AA:1258:G:O2'	1:AA:1259:C:H5'	2.17	0.45
23:BB:2533:U:H2'	23:BB:2534:A:O4'	2.17	0.45
23:DB:2507:C:O2'	23:DB:2508:G:H5'	2.17	0.45
13:AP:2:VAL:HG13	13:AP:65:ALA:HA	1.99	0.45
1:CA:972:C:P	9:CJ:59:LYS:HD3	2.56	0.45
8:CI:49:GLN:C	8:CI:51:LEU:N	2.70	0.45
19:CU:41:THR:C	19:CU:45:LYS:HB2	2.38	0.45
18:CB:55:GLU:HG3	18:CB:197:PHE:CZ	2.52	0.45
12:AM:38:ILE:HG21	12:AM:55:LEU:HD11	1.99	0.45
12:AM:3:ILE:HG23	12:AM:56:ARG:HG2	1.99	0.45
1:AA:1527:U:H2'	1:AA:1528:U:C6	2.52	0.45
52:BW:49:ASN:CB	52:BW:60:ALA:HA	2.46	0.45
9:CJ:18:ILE:HG23	9:CJ:19:ASP:N	2.32	0.45
48:BG:25:ILE:CG2	48:BG:78:VAL:HG21	2.47	0.45
29:BE:116:ASP:O	29:BE:185:LYS:HE3	2.17	0.45
5:AF:61:LEU:HD12	5:AF:62:MET:H	1.81	0.45
5:AF:96:VAL:HG12	5:AF:97:THR:H	1.82	0.45
23:DB:2355:G:H4'	52:DW:20:LEU:HD13	1.99	0.45
23:DB:2272:U:O2'	23:DB:2273:A:H8	1.99	0.45
1:CA:1363:A:H2'	1:CA:1363:A:N3	2.31	0.45
32:B4:5:ALA:CA	32:B4:37:GLN:HE22	2.28	0.45
49:DR:23:GLU:O	49:DR:24:LYS:C	2.55	0.45
49:DR:40:MET:HG2	49:DR:48:LYS:HA	1.99	0.45
33:B1:35:LEU:O	33:B1:36:LYS:HB3	2.17	0.45
38:DM:41:LEU:HA	38:DM:45:GLN:OE1	2.17	0.45
41:BJ:6:ALA:HB3	41:BJ:45:THR:CG2	2.45	0.45
1:AA:988:G:H1'	1:AA:1015:G:H1	1.81	0.45
46:DU:53:GLN:CG	46:DU:53:GLN:O	2.64	0.45
1:AA:977:A:H1'	1:AA:982:U:O4	2.17	0.45
18:CB:60:ALA:CB	18:CB:220:VAL:HG13	2.47	0.45
47:BF:111:ARG:H	47:BF:111:ARG:HD2	1.82	0.45
28:DP:25:VAL:O	28:DP:43:GLU:HG2	2.16	0.45
47:BF:134:GLN:C	47:BF:136:ILE:N	2.70	0.45
43:DO:110:ALA:O	43:DO:115:LEU:HB2	2.17	0.45
39:BX:56:LEU:C	39:BX:58:ASN:H	2.19	0.45
23:DB:670:A:H4'	23:DB:671:C:C5'	2.40	0.45
23:DB:2578:G:O2'	23:DB:2579:C:H5'	2.16	0.45
16:CS:39:ILE:HG22	16:CS:40:PHE:N	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CS:47:THR:HG23	16:CS:60:PHE:CZ	2.51	0.45
43:BO:89:ASP:CG	43:BO:116:GLN:HB3	2.37	0.45
44:DQ:89:ILE:O	44:DQ:90:ASP:HB2	2.17	0.45
44:DQ:94:LEU:C	44:DQ:96:ASP:N	2.69	0.45
42:BN:16:HIS:O	42:BN:19:ALA:N	2.49	0.45
27:BK:119:ALA:O	27:BK:120:PRO:C	2.55	0.45
42:BN:97:ILE:HD12	42:BN:98:LEU:H	1.82	0.45
11:AL:81:ILE:HG23	11:AL:94:TYR:HB3	1.98	0.45
18:AB:140:LEU:HD12	18:AB:140:LEU:N	2.31	0.45
23:BB:38:A:H1'	29:BE:43:THR:HB	1.98	0.45
23:DB:959:A:H62	38:DM:82:MET:HE3	1.82	0.45
23:BB:740:C:O2'	23:BB:741:U:H5'	2.16	0.45
48:BG:9:VAL:C	48:BG:11:PRO:HD3	2.37	0.45
1:AA:383:A:H2'	1:AA:384:G:O4'	2.17	0.45
3:CD:25:ARG:HH21	3:CD:30:LYS:HE3	1.81	0.45
26:DD:14:ILE:O	26:DD:14:ILE:HG12	2.17	0.45
23:BB:1356:G:O2'	23:BB:1357:C:H5'	2.16	0.45
23:BB:16:C:H2'	23:BB:17:G:H8	1.82	0.45
23:DB:1356:G:O2'	23:DB:1357:C:H5'	2.17	0.45
44:DQ:25:GLY:O	44:DQ:29:ARG:HD2	2.17	0.45
20:CO:87:LEU:C	20:CO:89:ARG:H	2.20	0.45
23:BB:2892:G:H5''	23:BB:2894:G:N2	2.32	0.45
29:DE:3:LEU:HD21	29:DE:14:VAL:CG2	2.47	0.45
23:BB:2377:A:O2'	23:BB:2378:A:H5'	2.16	0.45
1:CA:689:C:H2'	1:CA:690:G:C8	2.52	0.45
47:BF:71:LYS:HE2	47:BF:73:VAL:HB	1.98	0.45
29:DE:188:MET:HG2	29:DE:193:VAL:CG2	2.47	0.45
2:AC:192:TYR:CE1	2:AC:195:ILE:HD11	2.50	0.45
23:BB:2801:G:H2'	23:BB:2802:G:C8	2.51	0.45
1:CA:98:A:H2'	1:CA:99:C:H6	1.81	0.45
46:BU:14:THR:HG23	46:BU:15:GLY:N	2.32	0.45
46:BU:18:LYS:HD3	46:BU:19:GLY:N	2.32	0.45
22:DA:14:U:H4'	22:DA:70:C:O2	2.17	0.45
22:DA:63:C:H2'	22:DA:64:G:H8	1.81	0.45
23:BB:1181:U:H2'	23:BB:1182:G:C8	2.52	0.45
1:AA:761:G:H2'	1:AA:762:U:H6	1.81	0.45
11:AL:3:VAL:O	11:AL:7:VAL:HG23	2.16	0.45
45:BS:7:HIS:HB2	45:BS:50:VAL:HG22	1.99	0.45
11:CL:3:VAL:O	11:CL:7:VAL:HG23	2.17	0.45
18:AB:156:LEU:HD12	18:AB:156:LEU:H	1.81	0.45
23:DB:1900:A:N1	23:DB:1970:A:C6	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1015:U:H2'	23:DB:1016:G:C8	2.52	0.45
23:BB:1908:C:O2'	23:BB:1909:C:H5'	2.16	0.45
1:CA:1032:G:H2'	1:CA:1033:G:C4'	2.46	0.45
23:BB:1754:A:N1	23:BB:2716:C:O2'	2.49	0.45
1:CA:1065:U:H1'	1:CA:1066:C:OP2	2.17	0.45
1:CA:1340:A:H2'	1:CA:1341:U:O4'	2.16	0.45
1:CA:631:C:H3'	1:CA:632:U:H5'	1.97	0.45
23:DB:2392:A:H5'	34:D3:27:ASN:HD22	1.82	0.45
1:CA:579:A:H2'	1:CA:580:C:C6	2.51	0.45
23:DB:2054:A:H2'	31:D0:4:GLN:OE1	2.17	0.45
23:DB:2694:G:H2'	23:DB:2695:U:C6	2.52	0.45
14:AQ:23:ALA:C	14:AQ:24:ILE:HD12	2.38	0.45
40:BH:90:LEU:H	40:BH:123:ARG:HD3	1.81	0.45
8:CI:49:GLN:O	8:CI:51:LEU:N	2.50	0.45
19:CU:43:GLU:HB3	19:CU:44:ARG:NH2	2.32	0.45
12:AM:43:LYS:C	12:AM:47:LEU:HD23	2.38	0.45
30:DY:12:ALA:HB2	30:DY:53:MET:CE	2.47	0.45
35:BV:35:GLU:HB2	35:BV:93:ARG:CZ	2.47	0.45
41:BJ:16:TYR:N	41:BJ:137:PRO:HB3	2.32	0.45
1:CA:119:A:H4'	1:CA:120:A:O4'	2.17	0.45
19:CU:24:LYS:HB3	19:CU:24:LYS:NZ	2.32	0.45
48:DG:75:VAL:HA	48:DG:78:VAL:HG22	2.00	0.45
52:BW:18:LYS:HG3	52:BW:19:ARG:NH1	2.31	0.45
4:CE:84:VAL:HG11	4:CE:146:MET:HB3	1.98	0.45
8:AI:51:LEU:CB	8:AI:56:MET:SD	3.05	0.45
8:AI:24:ASN:O	8:AI:60:LEU:N	2.50	0.45
25:BC:116:GLN:H	25:BC:127:ASN:ND2	2.14	0.45
1:CA:976:G:N2	1:CA:1363:A:C2	2.85	0.45
48:BG:122:ALA:HB2	48:BG:132:LEU:CB	2.44	0.45
3:AD:54:LEU:HA	3:AD:202:LEU:HD22	1.98	0.45
26:BD:123:LYS:HD3	26:BD:165:MET:SD	2.57	0.45
50:DT:69:ARG:HG2	50:DT:70:HIS:N	2.29	0.45
23:DB:1177:G:H2'	23:DB:1178:C:H6	1.82	0.45
21:CN:84:ARG:HG3	21:CN:84:ARG:HH11	1.82	0.45
23:BB:675:A:H4'	29:BE:60:TRP:CZ2	2.51	0.45
29:BE:58:LYS:O	29:BE:60:TRP:N	2.49	0.45
26:BD:24:VAL:HG21	26:BD:188:LEU:HD13	1.99	0.45
28:BP:50:ARG:CD	28:BP:56:SER:HB3	2.47	0.45
43:BO:105:ALA:C	43:BO:107:ALA:H	2.19	0.45
43:BO:106:LEU:HA	43:BO:109:ALA:HB3	1.97	0.45
30:DY:5:LYS:CE	30:DY:58:GLU:HA	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:62:GLN:CG	47:DF:91:ARG:HH11	2.30	0.45
17:AT:34:VAL:CG1	17:AT:78:LEU:HD22	2.46	0.45
7:CH:14:ARG:HH21	7:CH:75:GLN:NE2	2.15	0.45
37:BL:103:ILE:O	37:BL:103:ILE:HG22	2.16	0.45
1:CA:450:G:N7	1:CA:481:G:O6	2.50	0.45
6:AG:14:ASP:O	6:AG:18:GLY:HA2	2.16	0.45
2:CC:174:LEU:HD21	2:CC:200:TRP:CD1	2.52	0.45
26:DD:114:LYS:HE3	26:DD:116:LYS:NZ	2.27	0.45
27:BK:43:ILE:CG2	27:BK:46:ALA:HB2	2.44	0.45
44:BQ:77:LYS:O	44:BQ:80:ASN:HB3	2.17	0.45
1:CA:204:G:H2'	1:CA:205:A:O4'	2.17	0.45
23:BB:2259:U:H1'	23:BB:2427:C:C2	2.52	0.45
23:BB:2096:C:H2'	23:BB:2097:A:H8	1.82	0.45
17:AT:2:ASN:OD1	17:AT:3:ILE:N	2.49	0.45
23:DB:1998:A:H2'	23:DB:1999:C:C6	2.52	0.45
11:AL:77:SER:O	11:AL:79:ILE:HG23	2.17	0.45
1:CA:208:U:H3'	1:CA:210:C:H41	1.82	0.45
1:AA:841:C:H3'	1:AA:843:U:OP2	2.16	0.45
38:BM:33:LEU:HB2	38:BM:102:LEU:HB2	1.99	0.45
40:DH:101:ASP:HA	40:DH:104:THR:CB	2.44	0.45
23:DB:2352:A:H2'	23:DB:2353:G:O4'	2.17	0.45
23:BB:607:U:O4	23:BB:620:G:H5''	2.17	0.45
23:DB:2897:U:H2'	23:DB:2898:U:H6	1.79	0.45
3:AD:25:ARG:HH21	3:AD:30:LYS:HE3	1.82	0.45
1:CA:592:G:H2'	1:CA:593:U:C6	2.52	0.45
1:CA:1389:C:H2'	1:CA:1390:U:H6	1.82	0.45
23:BB:1846:G:N2	23:BB:1848:A:N6	2.65	0.45
23:BB:1847:A:H4'	23:BB:1848:A:H8	1.79	0.45
1:AA:711:G:O2'	1:AA:712:A:H5'	2.17	0.45
45:BS:73:LYS:HE3	45:BS:74:ILE:H	1.82	0.45
4:AE:95:MET:HG3	4:AE:124:ALA:CB	2.47	0.45
23:BB:1704:C:H2'	23:BB:1705:A:H8	1.82	0.45
1:AA:404:G:H4'	1:AA:439:U:O2	2.17	0.45
23:DB:1220:G:H2'	23:DB:1221:C:C6	2.51	0.45
1:CA:648:A:H2'	1:CA:649:A:H8	1.80	0.45
23:DB:2800:A:H2'	23:DB:2801:G:H8	1.81	0.45
6:AG:140:VAL:HA	6:AG:143:MET:SD	2.57	0.45
25:DC:79:ARG:HD2	25:DC:81:GLU:CG	2.47	0.45
24:BI:52:LEU:HD21	24:BI:81:LYS:NZ	2.31	0.45
23:BB:2047:C:H2'	23:BB:2048:G:C8	2.51	0.45
14:AQ:34:GLY:O	14:AQ:35:LYS:C	2.55	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1121:U:O2'	1:CA:1122:U:H5'	2.16	0.45
23:BB:877:A:H2	23:BB:900:A:N7	2.15	0.45
29:DE:165:HIS:NE2	29:DE:166:LYS:HG3	2.32	0.45
23:DB:963:U:H2'	23:DB:964:C:C6	2.51	0.45
23:BB:809:G:H2'	23:BB:810:U:C6	2.52	0.45
1:CA:624:C:O2'	1:CA:625:U:H5'	2.17	0.45
23:DB:1613:G:H2'	23:DB:1617:C:H42	1.82	0.45
40:BH:127:GLU:O	40:BH:129:GLU:HG3	2.17	0.45
51:DZ:68:LEU:O	51:DZ:69:ALA:C	2.55	0.45
23:BB:1117:C:H2'	23:BB:1118:C:H6	1.82	0.45
9:CJ:92:LEU:HD22	9:CJ:92:LEU:N	2.32	0.45
24:DI:10:LEU:HD12	24:DI:10:LEU:O	2.16	0.45
40:BH:76:GLU:H	40:BH:76:GLU:CD	2.19	0.45
24:DI:91:LYS:N	24:DI:91:LYS:HD2	2.31	0.45
1:AA:1240:U:H5'	1:AA:1241:G:C8	2.52	0.44
52:DW:61:LYS:HB3	52:DW:62:ALA:H	1.53	0.44
42:DN:38:LEU:CB	42:DN:39:PRO:HD3	2.42	0.44
1:CA:1374:A:H2'	1:CA:1375:A:H8	1.81	0.44
48:BG:25:ILE:HD12	48:BG:25:ILE:H	1.82	0.44
35:DV:69:GLU:C	35:DV:70:ILE:HD13	2.36	0.44
25:DC:134:ILE:HD12	25:DC:135:PRO:N	2.32	0.44
14:AQ:60:ILE:N	14:AQ:60:ILE:HD13	2.32	0.44
52:BW:17:ALA:O	52:BW:18:LYS:HD2	2.17	0.44
23:BB:1196:C:H2'	23:BB:1197:G:H8	1.80	0.44
9:AJ:34:ALA:CB	9:AJ:78:GLU:HB2	2.46	0.44
2:AC:120:THR:HA	2:AC:123:LEU:HD12	1.97	0.44
48:DG:84:LYS:O	48:DG:85:LYS:HG2	2.17	0.44
23:DB:1064:C:H5''	24:DI:88:GLY:H	1.81	0.44
51:BZ:40:VAL:O	51:BZ:42:SER:N	2.48	0.44
40:DH:72:ILE:HG12	40:DH:108:VAL:CG1	2.42	0.44
16:AS:50:VAL:HG21	16:AS:70:LEU:HB3	1.99	0.44
16:AS:44:ILE:CD1	16:AS:63:ASP:HA	2.39	0.44
26:BD:186:LEU:CD2	28:BP:3:ILE:HD11	2.47	0.44
1:AA:959:A:H2	1:AA:1221:G:N3	2.15	0.44
7:AH:11:THR:CG2	7:AH:14:ARG:HH12	2.22	0.44
46:DU:51:LEU:CD2	46:DU:52:ASN:H	2.30	0.44
36:D2:12:ARG:NE	36:D2:44:VAL:HG11	2.22	0.44
26:DD:34:VAL:HA	26:DD:50:VAL:HA	1.98	0.44
29:BE:5:LEU:HD13	29:BE:122:GLU:HG3	1.99	0.44
1:CA:1003:G:N2	1:CA:1005:A:H5'	2.32	0.44
47:DF:12:VAL:O	47:DF:16:MET:N	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AT:66:ILE:HG21	17:AT:71:ALA:HB2	1.99	0.44
13:CP:4:ILE:O	13:CP:71:VAL:HG11	2.17	0.44
39:DX:17:GLU:O	39:DX:20:ASN:HB2	2.16	0.44
3:AD:152:SER:HA	3:AD:155:LYS:CD	2.42	0.44
12:CM:85:TYR:HA	12:CM:88:LEU:CD1	2.47	0.44
44:DQ:79:ILE:O	44:DQ:79:ILE:HD13	2.18	0.44
1:CA:659:U:O2'	1:CA:660:C:H5'	2.17	0.44
24:DI:101:SER:OG	24:DI:104:GLN:HG3	2.17	0.44
39:BX:30:MET:C	39:BX:32:ALA:H	2.21	0.44
23:BB:814:C:H2'	23:BB:815:C:H6	1.82	0.44
6:CG:26:VAL:CB	6:CG:42:VAL:HG21	2.48	0.44
1:AA:517:G:H22	1:AA:533:A:P	2.40	0.44
23:BB:2843:G:O2'	23:BB:2844:G:H5'	2.16	0.44
40:DH:53:GLU:OE2	40:DH:57:LYS:HB3	2.17	0.44
23:DB:720:U:H2'	23:DB:721:A:C8	2.52	0.44
43:DO:5:SER:HA	43:DO:8:ILE:CD1	2.44	0.44
23:DB:152:A:H2'	23:DB:153:U:H6	1.80	0.44
1:CA:663:A:O2'	1:CA:664:G:H5'	2.16	0.44
23:DB:2794:C:H2'	23:DB:2795:C:C6	2.52	0.44
23:BB:1495:A:O2'	23:BB:1496:A:H5'	2.17	0.44
2:CC:105:VAL:HG12	2:CC:105:VAL:O	2.16	0.44
23:BB:2793:C:H2'	23:BB:2794:C:C6	2.52	0.44
42:BN:59:SER:C	42:BN:61:ALA:N	2.70	0.44
8:CI:29:ILE:HA	8:CI:64:ILE:HB	1.99	0.44
10:CK:42:GLY:HA3	10:CK:73:VAL:CG1	2.47	0.44
2:CC:72:PRO:O	2:CC:75:VAL:N	2.49	0.44
51:DZ:72:ARG:HB2	51:DZ:78:TYR:CD2	2.53	0.44
23:BB:909:A:H2'	23:BB:912:C:H5	1.82	0.44
1:AA:1451:U:O5'	1:AA:1452:C:H5	2.01	0.44
23:DB:1495:A:O2'	23:DB:1496:A:H5'	2.16	0.44
51:BZ:70:GLU:O	51:BZ:71:LEU:C	2.56	0.44
23:DB:1779:U:H2'	57:DB:3607:HOH:O	2.17	0.44
23:BB:2699:C:O2'	23:BB:2700:A:H5'	2.17	0.44
23:BB:2900:A:H2'	23:BB:2901:C:C6	2.52	0.44
2:CC:81:GLU:OE1	2:CC:81:GLU:HA	2.17	0.44
22:BA:76:G:H2'	22:BA:77:U:C6	2.51	0.44
11:AL:13:ARG:HB2	11:AL:14:LYS:H	1.62	0.44
11:AL:66:ILE:N	11:AL:66:ILE:HD12	2.32	0.44
1:CA:1081:A:O2'	1:CA:1082:A:H5'	2.16	0.44
23:DB:1251:C:O2'	23:DB:1252:G:H3'	2.17	0.44
23:DB:1939:U:O2	23:DB:1967:C:H4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2016:U:H2'	23:DB:2017:U:C6	2.51	0.44
23:DB:600:G:H1'	29:DE:100:MET:HG2	1.99	0.44
14:AQ:30:HIS:CE1	14:AQ:32:ILE:HG22	2.52	0.44
23:DB:190:A:H5''	23:DB:204:A:N6	2.32	0.44
1:CA:1472:U:O2'	1:CA:1473:G:H5'	2.17	0.44
23:BB:1570:A:H2'	23:BB:1571:A:C8	2.52	0.44
23:BB:57:C:H2'	23:BB:58:G:H8	1.82	0.44
23:BB:817:C:O2'	23:BB:839:U:H5''	2.17	0.44
23:BB:2776:A:H4'	23:BB:2777:G:C5'	2.47	0.44
15:CR:31:TYR:CG	15:CR:54:LEU:HD21	2.52	0.44
23:BB:1360:G:H2'	23:BB:1361:G:C5'	2.48	0.44
23:BB:2618:G:O2'	26:BD:154:LYS:HB2	2.18	0.44
1:CA:1067:A:H4'	1:CA:1068:G:O5'	2.18	0.44
35:BV:11:GLU:HB2	35:BV:16:ALA:CB	2.47	0.44
23:DB:1424:G:H2'	23:DB:1425:G:O4'	2.16	0.44
11:AL:43:LYS:N	11:AL:44:PRO:HD2	2.32	0.44
23:BB:560:C:H3'	23:BB:561:G:C8	2.52	0.44
43:DO:80:GLU:HA	43:DO:83:LEU:HB2	1.99	0.44
1:CA:93:U:H6	1:CA:93:U:O5'	2.00	0.44
48:BG:115:GLN:CD	48:BG:115:GLN:H	2.21	0.44
9:AJ:14:ASP:OD1	9:AJ:16:ARG:HB2	2.17	0.44
23:DB:1099:G:H4'	24:DI:4:VAL:HG12	1.98	0.44
12:AM:33:LEU:HD22	12:AM:38:ILE:HG22	1.99	0.44
12:AM:13:HIS:CG	12:AM:41:ASP:HA	2.51	0.44
10:AK:124:LYS:HA	19:AU:34:ARG:CG	2.47	0.44
1:CA:1238:A:H2	1:CA:1241:G:N3	2.15	0.44
25:DC:185:ALA:C	25:DC:187:CYS:N	2.70	0.44
23:BB:2222:C:H4'	25:BC:184:GLU:CD	2.37	0.44
25:BC:123:ILE:HG12	25:BC:123:ILE:O	2.16	0.44
23:BB:2772:C:H2'	23:BB:2773:C:C6	2.52	0.44
52:BW:39:GLN:O	52:BW:40:ARG:HG2	2.16	0.44
5:CF:21:MET:HB3	5:CF:25:TYR:CZ	2.52	0.44
2:CC:18:ASN:CG	2:CC:53:ARG:HH21	2.20	0.44
44:BQ:6:GLY:N	44:BQ:8:ILE:HD13	2.32	0.44
22:BA:57:A:C4	47:BF:25:MET:HB3	2.52	0.44
23:BB:1080:A:H4'	24:BI:126:ARG:HB3	1.99	0.44
23:DB:2271:G:H2'	23:DB:2272:U:H5	1.77	0.44
48:DG:121:THR:HG22	48:DG:122:ALA:N	2.32	0.44
48:DG:84:LYS:CG	48:DG:132:LEU:N	2.77	0.44
1:AA:9:G:H5'	4:AE:107:GLY:CA	2.36	0.44
51:DZ:45:ARG:NE	51:DZ:47:VAL:HG12	2.27	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DP:3:ILE:C	28:DP:3:ILE:HD13	2.37	0.44
50:BT:69:ARG:HG2	50:BT:70:HIS:N	2.31	0.44
15:CR:38:ILE:HG22	15:CR:58:ILE:HG21	1.98	0.44
45:BS:66:ILE:CD1	45:BS:66:ILE:H	2.18	0.44
23:DB:2683:C:H5''	28:DP:55:HIS:HB3	1.99	0.44
41:BJ:44:TYR:CZ	44:BQ:59:LEU:HD11	2.53	0.44
1:AA:1361:G:C2'	1:AA:1362:A:H5''	2.41	0.44
28:BP:3:ILE:HD13	28:BP:3:ILE:C	2.38	0.44
23:BB:2302:U:O2'	23:BB:2303:G:H5'	2.18	0.44
41:BJ:26:GLY:O	41:BJ:30:THR:HG23	2.17	0.44
47:DF:65:LEU:H	47:DF:88:VAL:HG22	1.83	0.44
1:CA:923:A:OP1	4:CE:25:LYS:HB3	2.17	0.44
20:AO:28:GLN:O	20:AO:32:LEU:HD23	2.17	0.44
1:CA:998:C:H2'	1:CA:999:C:H6	1.83	0.44
9:AJ:28:THR:HA	9:AJ:31:ARG:HE	1.82	0.44
23:DB:1374:G:H2'	23:DB:1375:U:C6	2.52	0.44
17:AT:59:ARG:HB2	17:AT:59:ARG:NH1	2.23	0.44
39:DX:21:LEU:HA	39:DX:25:GLN:HB3	1.98	0.44
23:BB:1072:C:N3	23:BB:1092:C:N4	2.65	0.44
23:BB:1812:U:H1'	25:BC:43:ASN:ND2	2.24	0.44
1:AA:1028:C:H2'	1:AA:1029:U:O5'	2.16	0.44
39:BX:21:LEU:HA	39:BX:25:GLN:HB3	1.98	0.44
23:BB:1911:U:H2'	23:BB:1918:A:C2	2.53	0.44
25:BC:76:VAL:HG23	25:BC:96:LYS:NZ	2.33	0.44
24:DI:45:THR:HA	24:DI:48:ILE:CG2	2.40	0.44
18:AB:115:ASP:O	18:AB:119:GLN:HG2	2.17	0.44
23:BB:1869:G:O2'	23:BB:1871:A:N6	2.47	0.44
24:DI:138:VAL:HG12	24:DI:139:VAL:N	2.32	0.44
11:CL:79:ILE:HD12	11:CL:96:THR:CG2	2.47	0.44
44:DQ:51:GLN:O	44:DQ:55:GLN:HG3	2.17	0.44
23:DB:2589:A:H2'	23:DB:2590:A:C8	2.52	0.44
1:AA:208:U:H2'	1:AA:210:C:C5	2.53	0.44
23:BB:1853:A:H2'	23:BB:1854:A:C8	2.52	0.44
23:BB:2086:U:H2'	23:BB:2087:G:H8	1.79	0.44
7:CH:94:VAL:CG2	7:CH:101:ALA:HB2	2.46	0.44
22:BA:60:C:O2'	22:BA:61:G:H5'	2.17	0.44
10:CK:76:TYR:HB3	10:CK:78:ILE:HD11	1.99	0.44
6:AG:66:GLU:N	6:AG:69:ARG:HH21	2.15	0.44
1:CA:664:G:N2	1:CA:741:G:H1	2.13	0.44
23:BB:231:A:H3'	23:BB:232:G:C8	2.53	0.44
2:CC:106:ARG:NE	2:CC:106:ARG:H	2.14	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:40:LEU:HD23	26:BD:46:ARG:CG	2.46	0.44
33:B1:29:LYS:HA	33:B1:31:GLU:OE1	2.17	0.44
1:CA:763:G:H2'	1:CA:764:C:C6	2.53	0.44
23:BB:2794:C:H2'	23:BB:2795:C:H6	1.81	0.44
1:CA:1147:C:O2	8:CI:17:ARG:NH2	2.50	0.44
21:CN:41:TRP:HA	21:CN:41:TRP:CE3	2.52	0.44
23:DB:576:U:H2'	23:DB:577:G:C8	2.52	0.44
23:BB:21:A:H2'	23:BB:22:C:C6	2.52	0.44
13:AP:41:PRO:O	13:AP:42:ILE:HD13	2.16	0.44
22:BA:87:U:C2'	22:BA:88:C:O5'	2.66	0.44
1:AA:681:A:H2'	1:AA:682:G:C8	2.52	0.44
34:D3:56:LEU:O	34:D3:59:ALA:HB3	2.17	0.44
1:CA:1028:C:H3'	1:CA:1029:U:N3	2.32	0.44
2:AC:108:PRO:C	2:AC:110:LEU:H	2.20	0.44
23:BB:506:G:H1'	23:BB:507:A:C8	2.53	0.44
22:DA:76:G:H2'	22:DA:77:U:C6	2.50	0.44
23:DB:2700:A:H2'	23:DB:2701:U:C6	2.52	0.44
24:DI:140:GLU:CD	24:DI:140:GLU:H	2.20	0.44
29:BE:149:ILE:HG23	29:BE:188:MET:HA	2.00	0.44
2:AC:154:GLY:O	2:AC:155:ARG:HB2	2.16	0.44
23:BB:1313:U:O2	23:BB:1313:U:C2'	2.64	0.44
1:AA:1298:U:H4'	1:AA:1299:A:H5'	1.98	0.44
1:CA:1263:C:H2'	1:CA:1264:U:C6	2.52	0.44
5:AF:81:ASN:OD1	5:AF:83:ALA:HB3	2.17	0.44
23:DB:64:A:H2'	23:DB:65:U:H6	1.81	0.44
7:AH:68:LYS:HG3	7:AH:69:ALA:H	1.82	0.44
10:AK:88:PRO:HD3	19:AU:28:LEU:CD1	2.48	0.44
6:CG:70:PRO:HB3	6:CG:102:TRP:HH2	1.82	0.44
11:CL:43:LYS:N	11:CL:44:PRO:HD2	2.31	0.44
1:CA:1210:C:N4	1:CA:1211:U:N3	2.65	0.44
22:BA:21:G:O2'	22:BA:22:U:H5'	2.16	0.44
8:AI:8:THR:O	8:AI:16:ALA:HB3	2.18	0.44
23:DB:2265:U:H3'	23:DB:2266:A:H5''	1.99	0.44
3:AD:17:ASP:OD2	3:AD:27:ILE:HG22	2.17	0.44
4:AE:38:VAL:HG23	4:AE:66:ALA:HB1	1.99	0.44
1:AA:123:U:H5''	1:AA:311:C:O2'	2.17	0.44
32:B4:17:VAL:HG11	32:B4:19:ARG:HE	1.83	0.44
23:BB:2431:U:H2'	23:BB:2433:A:OP2	2.17	0.44
1:AA:616:G:H2'	1:AA:616:G:N3	2.32	0.44
16:AS:20:LYS:HB3	16:AS:20:LYS:HE3	1.86	0.44
23:BB:1961:C:O2'	23:BB:1962:C:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DQ:97:ILE:C	44:DQ:99:VAL:H	2.19	0.44
29:BE:190:ALA:O	29:BE:194:LYS:HG3	2.17	0.44
1:CA:792:A:H1'	1:CA:794:A:N7	2.32	0.44
9:CJ:52:LEU:HD13	21:CN:80:ARG:HD2	1.98	0.44
21:CN:9:GLU:HB2	21:CN:62:ARG:NH2	2.32	0.44
1:AA:1328:C:H5''	12:AM:27:THR:HB	2.00	0.44
25:DC:150:GLY:O	25:DC:151:GLY:O	2.36	0.44
35:BV:72:VAL:HA	35:BV:94:ALA:H	1.81	0.44
26:BD:107:VAL:CG1	26:BD:108:ASP:N	2.80	0.44
21:CN:53:ASP:C	21:CN:55:SER:H	2.21	0.44
48:DG:14:VAL:HA	48:DG:26:LYS:O	2.18	0.44
48:DG:34:ARG:N	48:DG:34:ARG:CD	2.78	0.44
29:BE:109:LEU:CD1	29:BE:180:LEU:HD13	2.48	0.44
5:CF:98:GLU:HG2	5:CF:99:ALA:N	2.18	0.44
23:BB:1032:A:C1'	32:B4:23:ILE:HD13	2.35	0.44
26:DD:107:VAL:CG1	26:DD:108:ASP:N	2.80	0.44
43:BO:30:ARG:HG2	43:BO:102:ARG:NH1	2.33	0.44
8:AI:41:GLU:O	8:AI:44:ARG:NH1	2.51	0.44
37:BL:81:ASP:HA	37:BL:84:LYS:CE	2.47	0.44
9:AJ:26:VAL:CG2	9:AJ:74:VAL:HG11	2.44	0.44
42:BN:90:ARG:HB3	42:BN:94:TYR:HE1	1.82	0.44
23:BB:2744:G:H5''	23:BB:2755:C:C5	2.53	0.44
46:BU:73:ASN:H	46:BU:73:ASN:ND2	2.14	0.44
35:DV:24:ASN:HB3	35:DV:44:HIS:HB3	2.00	0.44
35:DV:51:GLN:HA	35:DV:56:PHE:CG	2.53	0.44
45:DS:66:ILE:N	45:DS:66:ILE:HD13	2.19	0.44
49:DR:39:LEU:HD23	49:DR:39:LEU:N	2.32	0.44
40:DH:121:VAL:HB	40:DH:122:LEU:HD22	1.99	0.44
28:BP:80:VAL:HG13	28:BP:81:ASP:N	2.32	0.44
43:DO:106:LEU:CA	43:DO:109:ALA:HB3	2.47	0.44
35:DV:80:HIS:CD2	35:DV:81:PRO:HD2	2.53	0.44
47:DF:102:LEU:HA	47:DF:106:ALA:HB3	1.99	0.44
1:AA:1314:C:OP2	16:AS:5:LYS:HD2	2.18	0.44
46:DU:50:ALA:N	46:DU:53:GLN:HE21	2.13	0.44
18:AB:68:PHE:HD1	18:AB:89:PHE:O	2.00	0.44
18:AB:99:MET:O	18:AB:100:LEU:HD12	2.17	0.44
4:CE:15:ILE:HB	4:CE:35:LEU:O	2.18	0.44
6:AG:22:LEU:O	6:AG:25:PHE:HB3	2.18	0.44
26:DD:121:THR:O	26:DD:122:VAL:HB	2.17	0.44
1:AA:1078:U:H4'	4:AE:137:ARG:NH1	2.32	0.44
42:DN:102:PHE:CE2	45:DS:40:ASN:HB3	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2393:U:H5'	37:BL:60:ARG:O	2.18	0.44
1:AA:373:A:P	1:AA:373:A:H3'	2.58	0.44
39:BX:44:LYS:HG3	39:BX:48:ARG:HH12	1.82	0.44
1:CA:1221:G:H4'	16:CS:76:THR:HG21	1.99	0.44
34:B3:54:LEU:HG	34:B3:58:ILE:CD1	2.44	0.44
27:BK:108:ARG:HA	27:BK:116:ILE:HD13	2.00	0.44
20:CO:13:SER:C	20:CO:14:GLU:HG3	2.36	0.44
23:BB:2769:U:O2'	23:BB:2770:G:H5'	2.18	0.44
23:DB:2526:G:N3	32:D4:1:MET:N	2.65	0.44
20:AO:24:SER:OG	20:AO:27:VAL:HG23	2.17	0.44
2:AC:53:ARG:HH21	2:AC:55:VAL:HG22	1.82	0.44
23:DB:1552:A:H2'	23:DB:1553:A:C5'	2.47	0.44
7:CH:94:VAL:HG12	7:CH:99:GLY:HA3	2.00	0.44
23:DB:2844:G:O2'	23:DB:2845:U:H5'	2.16	0.44
13:CP:51:ARG:O	13:CP:52:LEU:HB2	2.16	0.44
41:BJ:36:LEU:HD12	41:BJ:121:LYS:HE3	1.98	0.44
48:DG:176:LYS:H	48:DG:176:LYS:CE	2.26	0.44
1:CA:1147:C:H1'	8:CI:17:ARG:NH1	2.32	0.44
18:AB:165:ALA:O	18:AB:166:ASP:C	2.56	0.44
23:BB:1902:C:H4'	25:BC:241:LYS:O	2.17	0.44
23:BB:2109:U:C2'	23:BB:2110:G:H5'	2.47	0.44
38:DM:77:PRO:HD2	38:DM:80:VAL:HG11	2.00	0.44
23:BB:2247:A:H3'	57:BB:3266:HOH:O	2.17	0.44
3:CD:78:ALA:C	3:CD:85:THR:HG23	2.37	0.44
23:BB:2078:C:O2'	23:BB:2079:U:H5'	2.17	0.44
24:BI:56:VAL:HG13	24:BI:58:ILE:HD11	2.00	0.44
23:DB:862:G:H2'	23:DB:863:A:H8	1.82	0.44
1:AA:1200:C:H4'	1:AA:1201:A:H5'	2.00	0.44
21:AN:64:ARG:HB3	21:AN:78:LEU:HD12	1.98	0.44
23:DB:679:C:H2'	23:DB:680:C:H6	1.81	0.44
47:DF:71:LYS:HG2	47:DF:71:LYS:O	2.18	0.44
1:AA:426:U:H2'	1:AA:427:U:C6	2.51	0.44
50:BT:7:LEU:O	50:BT:7:LEU:HD22	2.17	0.44
22:BA:35:C:H2'	22:BA:36:C:C5'	2.47	0.44
23:DB:8:C:O2'	23:DB:9:G:H5'	2.17	0.44
18:CB:107:ARG:HG3	18:CB:108:GLN:N	2.33	0.44
26:BD:142:VAL:HB	26:BD:143:PRO:CD	2.47	0.44
23:DB:121:G:H2'	23:DB:122:G:C8	2.52	0.44
6:CG:6:ILE:HG22	6:CG:7:GLY:N	2.32	0.44
41:DJ:103:ILE:HG13	41:DJ:104:ALA:N	2.32	0.44
23:DB:338:G:N2	23:DB:339:U:H1'	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2776:A:OP1	23:DB:2776:A:H3'	2.17	0.44
40:DH:40:THR:O	40:DH:42:LYS:N	2.48	0.44
47:BF:10:GLU:O	47:BF:14:LYS:HB2	2.18	0.44
24:BI:4:VAL:HG13	24:BI:4:VAL:O	2.16	0.44
38:BM:10:ARG:HH21	38:BM:10:ARG:HG3	1.82	0.44
23:DB:1098:A:C2'	24:DI:4:VAL:C	2.86	0.44
40:BH:124:THR:O	40:BH:146:VAL:HG11	2.18	0.44
12:AM:76:ILE:HG22	12:AM:80:MET:SD	2.58	0.44
25:BC:185:ALA:C	25:BC:187:CYS:H	2.20	0.44
23:BB:1429:G:H2'	23:BB:1430:G:C8	2.52	0.44
48:BG:12:ALA:C	48:BG:14:VAL:H	2.20	0.44
48:BG:18:ILE:HD12	48:BG:42:VAL:HG22	1.99	0.44
35:BV:51:GLN:HA	35:BV:56:PHE:CG	2.52	0.44
48:DG:43:LYS:HB2	48:DG:50:THR:HB	2.00	0.44
5:AF:91:ARG:H	5:AF:93:LYS:NZ	2.09	0.44
26:DD:105:LYS:H	26:DD:106:LYS:HZ3	1.64	0.44
40:BH:83:LYS:HA	40:BH:148:ALA:CB	2.47	0.44
52:BW:19:ARG:O	52:BW:20:LEU:HD23	2.17	0.44
29:DE:108:ILE:HD12	29:DE:180:LEU:CB	2.47	0.44
8:AI:56:MET:C	8:AI:58:GLU:N	2.66	0.44
48:DG:84:LYS:HG3	48:DG:132:LEU:H	1.80	0.44
35:DV:76:ASP:HA	38:DM:136:MET:HE3	2.00	0.44
44:DQ:111:LYS:NZ	49:DR:50:GLY:HA2	2.32	0.44
49:DR:49:ILE:HG22	49:DR:54:VAL:HB	1.98	0.44
49:DR:8:GLY:HA3	49:DR:23:GLU:HB2	1.99	0.44
40:DH:132:PHE:O	40:DH:139:PHE:HA	2.16	0.44
29:BE:62:GLN:HG2	29:BE:63:LYS:H	1.81	0.44
38:BM:38:ARG:HG2	38:BM:38:ARG:HH11	1.81	0.44
1:AA:1319:A:H4'	1:AA:1320:C:OP1	2.17	0.44
47:BF:33:ILE:HG22	47:BF:34:THR:H	1.82	0.44
47:BF:65:LEU:H	47:BF:88:VAL:HG22	1.82	0.44
30:DY:2:LYS:H	30:DY:2:LYS:HD3	1.82	0.44
18:AB:89:PHE:CE2	18:AB:153:MET:HA	2.52	0.44
47:BF:55:ASP:HA	47:BF:139:GLU:OE2	2.17	0.44
23:DB:2572:A:OP2	26:DD:149:ASN:HB3	2.17	0.44
1:CA:1004:A:H2'	1:CA:1005:A:C8	2.52	0.44
1:CA:998:C:O2'	1:CA:999:C:H5'	2.18	0.44
1:AA:922:G:N3	1:AA:1398:A:C2	2.83	0.44
23:BB:2572:A:OP2	26:BD:152:PRO:HD3	2.16	0.44
46:BU:50:ALA:N	46:BU:53:GLN:HE21	2.12	0.44
37:BL:100:ILE:O	37:BL:100:ILE:HG12	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DO:88:LYS:HG2	43:DO:89:ASP:H	1.81	0.44
23:DB:125:A:H3'	23:DB:126:A:C5'	2.47	0.44
1:CA:1355:G:O2'	1:CA:1356:G:H5'	2.17	0.44
38:DM:57:VAL:O	38:DM:59:ARG:N	2.50	0.44
1:CA:1320:C:C5	16:CS:36:ARG:HA	2.52	0.44
41:DJ:45:THR:HG23	41:DJ:45:THR:O	2.17	0.44
27:DK:108:ARG:HA	27:DK:116:ILE:HD13	1.99	0.44
27:DK:119:ALA:O	27:DK:120:PRO:C	2.55	0.44
23:DB:2538:C:H2'	23:DB:2539:C:C6	2.51	0.44
23:DB:280:U:H2'	23:DB:281:C:C6	2.53	0.44
23:DB:282:A:H2'	23:DB:283:G:C8	2.52	0.44
23:BB:2457:U:O2'	23:BB:2458:G:H5'	2.18	0.44
23:DB:1551:A:H5''	23:DB:1552:A:OP2	2.18	0.44
45:DS:42:LYS:O	45:DS:45:VAL:HG22	2.17	0.44
23:DB:2187:U:H2'	23:DB:2188:U:H6	1.75	0.44
38:BM:32:GLY:HA3	38:BM:103:TYR:O	2.16	0.44
48:DG:51:PHE:CD2	48:DG:68:ARG:HG2	2.52	0.44
25:DC:93:VAL:HG12	25:DC:101:ARG:O	2.16	0.44
8:AI:115:VAL:O	8:AI:115:VAL:HG13	2.18	0.44
23:BB:99:U:O2	23:BB:99:U:H5'	2.16	0.44
52:BW:46:ALA:HB2	52:BW:78:PHE:HD1	1.83	0.44
21:AN:22:LYS:C	21:AN:25:GLU:HG2	2.37	0.44
1:CA:1127:G:H2'	1:CA:1128:C:C6	2.53	0.44
23:DB:1854:A:C2	23:DB:2087:G:N3	2.85	0.44
1:AA:1344:C:H2'	1:AA:1345:U:H5'	2.00	0.44
52:DW:43:LYS:HD3	52:DW:77:LYS:HG2	2.00	0.44
1:CA:619:U:N3	3:CD:130:ASN:OD1	2.49	0.44
6:AG:110:ARG:HH11	6:AG:118:ARG:HA	1.82	0.44
34:D3:57:VAL:C	34:D3:59:ALA:N	2.70	0.44
15:AR:38:ILE:HG22	15:AR:58:ILE:HG21	1.99	0.44
20:AO:67:LEU:CD1	20:AO:88:ARG:HH22	2.30	0.44
1:CA:1110:A:H2'	1:CA:1111:A:C8	2.52	0.44
20:CO:86:GLY:O	20:CO:87:LEU:HD23	2.17	0.44
1:CA:487:A:H2'	1:CA:488:C:O4'	2.18	0.44
29:BE:188:MET:HG2	29:BE:193:VAL:HG22	1.97	0.44
23:BB:1744:A:H2'	23:BB:1745:A:C8	2.52	0.44
4:CE:87:VAL:HA	4:CE:91:SER:O	2.18	0.44
1:AA:660:C:H2'	1:AA:661:G:O4'	2.16	0.44
23:BB:1290:C:H2'	23:BB:1291:C:C6	2.53	0.44
24:BI:49:GLU:HG3	24:BI:54:ILE:HD11	1.99	0.44
1:CA:87:C:OP1	1:CA:87:C:H4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2605:U:H2'	23:DB:2606:C:C6	2.52	0.44
29:BE:148:ILE:HG13	29:BE:167:VAL:CG2	2.47	0.44
1:CA:130:A:N1	1:CA:233:C:H1'	2.33	0.44
1:AA:144:G:H2'	1:AA:145:G:O4'	2.18	0.44
1:CA:144:G:H2'	1:CA:145:G:O4'	2.17	0.44
23:DB:2233:U:H2'	23:DB:2234:G:C8	2.53	0.44
14:AQ:3:LYS:HG3	14:AQ:4:ILE:H	1.82	0.44
52:DW:54:ARG:C	52:DW:56:HIS:H	2.20	0.44
23:DB:2081:U:H2'	23:DB:2082:A:C8	2.52	0.44
1:CA:102:G:O2'	1:CA:103:U:H5'	2.16	0.44
23:BB:24:G:H1'	45:BS:77:ASP:HB3	2.00	0.44
23:DB:659:G:H4'	29:DE:95:LYS:HB3	2.00	0.44
25:BC:34:GLU:O	25:BC:34:GLU:HG3	2.16	0.44
12:CM:48:SER:O	12:CM:49:GLU:C	2.54	0.44
41:DJ:2:LYS:H	41:DJ:2:LYS:CD	2.31	0.44
23:BB:2305:U:C4'	47:BF:132:ARG:HG2	2.34	0.44
48:DG:25:ILE:CG2	48:DG:78:VAL:HG21	2.46	0.44
5:CF:18:VAL:HG21	5:CF:58:HIS:CG	2.52	0.44
37:DL:123:ARG:CZ	37:DL:124:GLY:H	2.29	0.44
23:BB:1079:C:H2'	23:BB:1080:A:H8	1.83	0.44
24:BI:116:MET:SD	24:BI:124:MET:HB2	2.57	0.44
37:BL:121:THR:HB	37:BL:141:LYS:HB3	1.99	0.44
9:AJ:36:VAL:HA	9:AJ:76:ILE:HB	1.98	0.44
1:AA:8:A:H1'	4:AE:107:GLY:HA2	1.98	0.44
25:DC:43:ASN:HB2	25:DC:49:THR:CG2	2.45	0.44
26:BD:122:VAL:HA	26:BD:127:PHE:N	2.33	0.44
10:CK:80:ASN:ND2	10:CK:80:ASN:N	2.61	0.44
29:BE:60:TRP:HE3	29:BE:60:TRP:HA	1.82	0.44
29:BE:60:TRP:CZ2	29:BE:62:GLN:NE2	2.86	0.44
26:BD:23:PRO:O	26:BD:24:VAL:HB	2.17	0.44
49:BR:39:LEU:CB	49:BR:49:ILE:HG12	2.41	0.44
1:AA:1015:G:O2'	1:AA:1016:A:H5'	2.17	0.44
30:DY:6:ILE:O	30:DY:34:THR:HG23	2.16	0.44
15:CR:41:SER:HB3	15:CR:51:GLN:CG	2.48	0.44
47:DF:169:LEU:HA	47:DF:172:PHE:HD2	1.81	0.44
18:CB:113:LEU:HD12	18:CB:144:GLU:HA	1.99	0.44
25:BC:43:ASN:HB2	25:BC:49:THR:CG2	2.45	0.44
18:AB:27:LYS:O	18:AB:29:PHE:N	2.49	0.44
18:AB:25:LYS:O	18:AB:28:PRO:HD2	2.18	0.44
24:BI:62:ALA:C	24:BI:64:ARG:H	2.21	0.44
2:CC:57:GLU:O	2:CC:64:ARG:N	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DO:47:VAL:O	43:DO:48:LEU:HD23	2.16	0.44
44:DQ:63:ARG:HH12	44:DQ:96:ASP:HA	1.82	0.44
23:DB:2723:C:H2'	23:DB:2724:U:O4'	2.16	0.44
23:DB:1547:C:H2'	23:DB:1548:A:H8	1.82	0.44
8:AI:10:ARG:HA	8:AI:77:ALA:HB1	1.99	0.44
23:DB:2144:G:H3'	23:DB:2145:C:C5'	2.47	0.44
18:AB:116:LEU:HD21	18:AB:136:ARG:HD3	2.00	0.44
23:DB:1864:U:C2'	23:DB:1865:U:H5'	2.48	0.44
13:CP:19:VAL:H	13:CP:38:PHE:HA	1.83	0.44
21:AN:24:ALA:O	21:AN:27:LYS:HG2	2.18	0.44
21:AN:26:LEU:HB2	21:AN:30:ILE:CD1	2.47	0.44
1:CA:652:U:H1'	1:CA:653:U:C6	2.53	0.44
23:BB:233:A:N6	23:BB:428:A:N6	2.63	0.44
43:DO:94:ARG:HD2	43:DO:97:PHE:O	2.17	0.44
23:BB:2276:G:OP2	38:BM:85:GLY:N	2.50	0.44
2:CC:137:VAL:O	2:CC:141:MET:HB2	2.17	0.44
23:BB:1846:G:N2	23:BB:1848:A:H62	2.15	0.44
23:DB:1847:A:H4'	23:DB:1848:A:H8	1.79	0.44
23:BB:79:C:H2'	23:BB:80:G:H8	1.82	0.44
35:DV:53:LYS:HZ3	35:DV:53:LYS:HA	1.83	0.44
23:DB:236:C:O2'	23:DB:237:C:H5'	2.17	0.44
29:BE:149:ILE:HD11	29:BE:172:ALA:HA	1.99	0.44
1:AA:229:U:H2'	1:AA:230:G:H8	1.81	0.44
1:AA:586:C:C2'	1:AA:587:G:H5'	2.47	0.44
50:BT:7:LEU:CA	50:BT:9:LYS:HE3	2.48	0.44
10:AK:34:THR:HB	10:AK:39:ASN:C	2.38	0.44
5:CF:72:ASP:HA	5:CF:75:GLU:OE1	2.16	0.44
23:BB:1259:G:O2'	23:BB:1260:A:H5'	2.17	0.44
33:D1:33:LEU:HD23	33:D1:51:ALA:HB1	1.99	0.44
48:DG:39:ALA:HB1	48:DG:54:ARG:HB2	1.99	0.44
1:CA:990:C:H2'	1:CA:991:U:C6	2.52	0.44
8:AI:9:GLY:HA3	8:AI:80:HIS:HB3	1.99	0.44
6:CG:78:ARG:CD	6:CG:83:THR:HG22	2.47	0.44
23:DB:1596:A:O2'	23:DB:1597:A:H5'	2.17	0.44
23:DB:2714:G:O2'	23:DB:2715:C:H5'	2.17	0.44
27:BK:26:GLY:HA3	27:BK:30:ARG:HH11	1.82	0.44
23:BB:32:C:O2'	23:BB:33:C:H5'	2.16	0.44
22:DA:15:A:O2'	22:DA:16:G:H5'	2.18	0.44
36:B2:18:PHE:CE1	36:B2:22:MET:HG3	2.53	0.44
23:DB:342:A:H2'	23:DB:343:C:O4'	2.17	0.44
31:B0:53:VAL:O	31:B0:54:ILE:HB	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AO:3:LEU:HG	20:AO:4:SER:H	1.82	0.44
25:DC:57:HIS:ND1	25:DC:58:LYS:N	2.63	0.44
23:DB:779:U:OP1	25:DC:48:ILE:HG13	2.18	0.44
46:DU:43:LYS:O	46:DU:57:ILE:HA	2.18	0.44
29:DE:37:ALA:C	29:DE:39:ALA:H	2.20	0.44
21:CN:62:ARG:HB3	21:CN:67:GLY:C	2.38	0.44
23:BB:855:G:H1'	52:BW:23:LYS:HD3	2.00	0.44
50:BT:24:MET:O	50:BT:28:ASN:N	2.46	0.44
9:CJ:15:HIS:H	9:CJ:70:HIS:CE1	2.36	0.44
25:DC:145:MET:HB2	25:DC:152:GLN:NE2	2.32	0.44
35:DV:8:VAL:HG12	35:DV:9:ARG:N	2.32	0.44
41:DJ:124:VAL:O	41:DJ:125:TYR:HB2	2.18	0.44
14:AQ:46:HIS:NE2	14:AQ:48:GLU:HG2	2.33	0.44
14:CQ:20:ILE:CD1	14:CQ:52:CYS:HB2	2.44	0.44
8:AI:66:VAL:HG22	8:AI:67:LYS:N	2.33	0.44
48:BG:84:LYS:O	48:BG:85:LYS:HG2	2.17	0.44
24:DI:73:PRO:HA	24:DI:74:PRO:HD3	1.93	0.44
23:DB:1181:U:H2'	23:DB:1182:G:C8	2.52	0.44
30:BY:2:LYS:HD3	30:BY:2:LYS:H	1.83	0.44
1:AA:957:U:H4'	16:AS:78:THR:O	2.17	0.44
47:BF:102:LEU:HA	47:BF:106:ALA:HB3	2.00	0.44
23:BB:1141:U:H4'	23:BB:1142:A:C1'	2.47	0.44
25:DC:203:VAL:O	25:DC:204:LEU:HB2	2.17	0.44
26:BD:25:THR:O	26:BD:27:ILE:HG13	2.18	0.44
47:DF:11:VAL:HG21	47:DF:172:PHE:HE1	1.79	0.44
39:DX:59:GLU:N	39:DX:59:GLU:OE2	2.50	0.44
37:DL:103:ILE:O	37:DL:103:ILE:HG22	2.17	0.44
2:CC:149:LYS:HG3	2:CC:168:ARG:HB2	1.99	0.44
26:DD:123:LYS:HD3	26:DD:165:MET:SD	2.57	0.44
2:CC:120:THR:CG2	2:CC:186:SER:HB3	2.47	0.44
1:CA:1103:C:H5''	18:CB:96:LEU:HD22	1.99	0.44
8:AI:55:ASP:CB	8:AI:59:LYS:HD2	2.42	0.44
2:CC:26:LYS:NZ	2:CC:27:GLU:HB3	2.32	0.44
6:AG:90:VAL:HB	6:AG:94:ARG:HD2	1.99	0.44
12:CM:54:THR:OG1	12:CM:55:LEU:HD23	2.16	0.44
23:BB:322:A:H3'	29:BE:163:ASN:HD21	1.82	0.44
6:CG:19:SER:CB	6:CG:22:LEU:HB2	2.47	0.44
23:BB:2590:A:H2'	23:BB:2591:C:H6	1.82	0.44
2:CC:156:LEU:HD22	2:CC:157:GLY:H	1.83	0.44
23:DB:1204:A:N1	23:DB:1241:A:N1	2.66	0.44
37:BL:6:LEU:N	37:BL:6:LEU:HD23	2.28	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AG:148:LYS:H	10:AK:55:ARG:HH12	1.65	0.44
23:DB:96:C:H4'	39:DX:41:HIS:ND1	2.33	0.44
11:CL:116:TYR:O	11:CL:118:VAL:HG23	2.18	0.44
23:DB:719:C:H2'	23:DB:720:U:O4'	2.18	0.44
13:CP:38:PHE:CE2	13:CP:51:ARG:HD3	2.52	0.44
23:BB:1488:C:C2'	23:BB:1489:C:H5'	2.47	0.44
3:CD:18:LEU:HB2	3:CD:20:LEU:HG	1.99	0.44
23:DB:169:G:O2'	23:DB:170:U:H5'	2.17	0.44
23:DB:656:G:H2'	23:DB:657:U:C6	2.53	0.44
1:AA:678:U:H4'	1:AA:778:G:OP1	2.17	0.44
23:DB:1465:G:H2'	23:DB:1466:U:O4'	2.18	0.44
23:BB:273:G:H2'	23:BB:274:C:H6	1.80	0.44
23:BB:1779:U:H5''	23:BB:1780:A:H5''	1.99	0.44
23:BB:845:A:H3'	23:BB:845:A:H8	1.83	0.44
46:DU:17:ASP:CA	46:DU:20:LYS:HE3	2.46	0.44
1:CA:1527:U:H2'	1:CA:1528:U:C6	2.52	0.44
23:DB:2818:U:O2'	23:DB:2819:G:H5'	2.18	0.44
37:BL:50:PHE:O	37:BL:52:GLY:N	2.50	0.44
23:DB:1228:G:H2'	23:DB:1229:C:C6	2.52	0.44
42:DN:8:ARG:HG2	42:DN:10:LEU:HD22	1.98	0.44
11:CL:15:VAL:O	11:CL:16:ALA:C	2.55	0.44
23:DB:2700:A:O2'	23:DB:2701:U:H5'	2.18	0.44
29:BE:2:GLU:OE1	29:BE:13:THR:N	2.50	0.44
23:BB:446:G:H5''	44:BQ:2:ARG:HH22	1.82	0.44
23:BB:1576:U:O2'	23:BB:1577:C:H5'	2.17	0.44
22:DA:90:C:OP1	38:DM:16:ARG:HB2	2.17	0.44
23:BB:1936:A:H61	23:BB:1963:U:H3	1.60	0.44
23:BB:709:U:H2'	23:BB:710:U:C6	2.53	0.44
1:CA:1133:G:H2'	1:CA:1134:G:C8	2.52	0.44
6:AG:68:VAL:CG1	6:AG:133:ALA:HB1	2.46	0.44
1:AA:659:U:H2'	1:AA:660:C:H6	1.82	0.44
24:BI:44:LYS:O	24:BI:48:ILE:HG13	2.17	0.44
7:AH:110:MET:SD	7:AH:115:ALA:HB2	2.58	0.44
27:DK:107:LEU:N	27:DK:107:LEU:HD12	2.32	0.44
1:AA:960:U:H6	1:AA:1222:G:HO2'	1.61	0.44
23:BB:64:A:H2'	23:BB:65:U:H6	1.82	0.44
1:CA:125:U:H2'	1:CA:126:G:H8	1.83	0.44
36:D2:18:PHE:CE1	36:D2:22:MET:HG3	2.53	0.44
23:BB:406:G:O2'	23:BB:407:G:H5'	2.18	0.44
22:DA:110:C:H2'	22:DA:111:U:O4'	2.17	0.44
23:BB:1838:C:N4	23:BB:1898:U:H2'	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AP:70:ARG:O	13:AP:73:ALA:HB3	2.18	0.44
18:AB:144:GLU:HA	18:AB:148:GLY:CA	2.48	0.44
23:DB:242:G:N2	23:DB:254:G:H2'	2.33	0.44
23:BB:915:C:H3'	23:BB:916:G:H8	1.81	0.44
25:BC:32:LEU:O	25:BC:63:ILE:HG12	2.17	0.44
23:BB:1426:G:H1'	23:BB:1572:A:N6	2.32	0.44
1:AA:325:A:H2'	1:AA:326:G:O4'	2.17	0.44
1:AA:880:C:H2'	1:AA:881:G:H8	1.81	0.44
20:CO:68:ASP:N	20:CO:68:ASP:OD1	2.47	0.44
8:CI:36:GLN:HG2	8:CI:36:GLN:O	2.18	0.44
36:B2:39:ARG:HH11	36:B2:39:ARG:HG3	1.82	0.44
23:DB:1426:G:H1'	23:DB:1572:A:N6	2.33	0.44
23:DB:756:A:H2'	23:DB:757:G:O4'	2.18	0.44
1:AA:1171:A:O2'	1:AA:1172:C:H5'	2.18	0.44
1:CA:325:A:H2'	1:CA:326:G:O4'	2.17	0.44
23:DB:1099:G:C5'	24:DI:4:VAL:HG12	2.48	0.44
23:BB:2307:G:N7	23:BB:2311:A:H5''	2.32	0.44
8:CI:21:LYS:HB3	8:CI:61:ASP:OD2	2.17	0.44
1:AA:1328:C:H5''	12:AM:27:THR:CB	2.47	0.44
23:BB:547:A:O2'	23:BB:548:G:H5'	2.18	0.44
25:DC:183:VAL:HG22	25:DC:184:GLU:H	1.82	0.44
25:BC:171:VAL:HG23	25:BC:185:ALA:HB2	2.00	0.44
25:DC:143:VAL:HG12	25:DC:144:GLU:N	2.32	0.44
25:DC:149:LYS:HG2	25:DC:152:GLN:HE22	1.82	0.44
35:BV:86:LEU:O	35:BV:87:GLN:HG3	2.18	0.44
26:BD:172:VAL:HG12	26:BD:173:GLN:O	2.18	0.44
35:DV:35:GLU:HB2	35:DV:93:ARG:CZ	2.48	0.44
35:DV:4:ILE:O	35:DV:64:VAL:N	2.50	0.44
2:CC:35:ASP:HA	2:CC:38:VAL:HG22	1.99	0.44
2:CC:62:SER:C	2:CC:63:ILE:HG13	2.37	0.44
23:BB:141:G:N1	50:BT:1:MET:HA	2.33	0.44
37:DL:121:THR:HB	37:DL:141:LYS:HB3	1.98	0.44
22:BA:30:C:H2'	22:BA:30:C:O2	2.18	0.44
1:AA:1290:G:H2'	1:AA:1291:U:C6	2.53	0.44
23:DB:1725:U:H2'	23:DB:1726:C:C6	2.53	0.44
23:BB:1159:U:OP1	30:BY:30:ARG:NH2	2.50	0.44
2:AC:149:LYS:O	2:AC:200:TRP:HE3	2.01	0.44
1:CA:978:A:O2'	1:CA:1322:C:H5	2.01	0.44
15:CR:42:ARG:HG3	15:CR:43:ILE:H	1.83	0.44
23:BB:1654:A:O2'	26:BD:118:PHE:CB	2.66	0.44
23:BB:1998:A:H2'	23:BB:1999:C:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:B1:35:LEU:HD23	33:B1:36:LYS:N	2.32	0.44
24:DI:57:VAL:HG23	24:DI:71:LYS:HZ1	1.81	0.44
27:DK:72:PRO:O	27:DK:74:GLY:N	2.51	0.44
43:DO:112:GLU:OE1	43:DO:113:ALA:N	2.51	0.44
47:BF:91:ARG:C	47:BF:95:MET:HB2	2.37	0.44
18:CB:68:PHE:O	18:CB:90:PHE:HA	2.17	0.44
23:BB:496:G:C1'	45:BS:61:ASN:HD22	2.30	0.44
23:DB:2314:A:H4'	47:DF:34:THR:HG21	1.98	0.44
1:CA:1397:C:H4'	1:CA:1398:A:OP2	2.17	0.44
1:CA:865:A:H5'	1:CA:1078:U:O4	2.18	0.44
4:CE:132:PRO:HG2	4:CE:133:ILE:H	1.82	0.44
1:AA:926:G:H3'	1:AA:1505:G:N2	2.23	0.44
1:CA:1411:C:H2'	1:CA:1412:C:H6	1.83	0.44
57:DB:3474:HOH:O	37:DL:99:ASN:HA	2.17	0.44
23:DB:2621:G:P	26:DD:124:ARG:HH22	2.41	0.44
23:DB:2259:U:H1'	23:DB:2427:C:C2	2.53	0.44
42:DN:31:HIS:O	42:DN:33:ILE:HG22	2.17	0.44
23:DB:2393:U:H5'	37:DL:60:ARG:O	2.18	0.44
38:DM:35:ALA:CB	38:DM:100:LYS:H	2.30	0.44
1:CA:947:G:H2'	1:CA:948:C:C6	2.53	0.44
12:CM:72:ILE:HG23	12:CM:73:SER:N	2.32	0.44
16:CS:48:ILE:HB	16:CS:59:VAL:O	2.18	0.44
23:DB:1999:C:O2'	23:DB:2000:C:H5'	2.18	0.44
40:BH:4:ILE:O	40:BH:36:ALA:HA	2.18	0.44
38:DM:106:ASP:O	38:DM:108:VAL:N	2.51	0.44
11:CL:79:ILE:O	11:CL:101:LEU:HD12	2.18	0.44
27:DK:26:GLY:HA3	27:DK:30:ARG:HH11	1.83	0.44
1:CA:880:C:H2'	1:CA:881:G:H8	1.82	0.44
45:BS:26:GLY:N	45:BS:71:VAL:HG13	2.32	0.44
13:CP:28:ARG:HD2	13:CP:29:ASN:N	2.28	0.44
23:DB:188:G:OP1	51:DZ:14:THR:HG22	2.18	0.44
1:AA:815:A:H4'	1:AA:817:C:C4	2.52	0.44
1:AA:1366:C:H2'	1:AA:1367:C:C6	2.52	0.44
1:CA:284:C:O2'	1:CA:285:C:H5'	2.17	0.44
1:AA:737:C:H2'	1:AA:738:C:H6	1.82	0.44
23:DB:607:U:O4	23:DB:620:G:H5''	2.17	0.44
21:CN:25:GLU:O	21:CN:29:ILE:HG13	2.18	0.44
1:CA:1296:C:H4'	1:CA:1302:C:N4	2.33	0.44
1:CA:926:G:N2	1:CA:1505:G:H2'	2.32	0.44
23:DB:1411:U:H2'	23:DB:1412:U:C6	2.53	0.44
2:AC:109:GLU:O	2:AC:110:LEU:HD23	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1047:G:H3'	23:DB:1048:A:H5'	2.00	0.44
42:DN:2:ARG:HG2	42:DN:2:ARG:O	2.18	0.44
41:DJ:114:LEU:HG	41:DJ:118:MET:CE	2.47	0.44
23:BB:1544:A:H2'	23:BB:1545:A:C8	2.53	0.44
23:BB:2901:C:H2'	23:BB:2902:C:H5'	1.99	0.44
1:AA:1048:G:O3'	1:AA:1049:U:H3'	2.17	0.44
26:BD:56:LYS:O	26:BD:58:ASN:N	2.51	0.44
21:CN:20:PHE:CD2	21:CN:24:ALA:HB2	2.53	0.44
23:BB:2805:C:O2'	23:BB:2806:C:H5'	2.17	0.44
23:BB:1936:A:H2	23:BB:1943:U:O4	2.01	0.44
1:AA:105:G:H2'	1:AA:106:C:H6	1.83	0.44
23:BB:325:G:H2'	23:BB:326:G:H8	1.83	0.44
31:D0:35:GLU:HG3	31:D0:45:ASP:OD1	2.18	0.44
31:B0:35:GLU:HG3	31:B0:45:ASP:OD1	2.17	0.44
1:AA:620:C:O2	3:AD:131:ILE:HG21	2.18	0.44
23:DB:1395:A:H4'	23:DB:1397:U:C5	2.52	0.44
47:DF:2:LYS:CD	47:DF:2:LYS:H	2.30	0.44
23:DB:510:C:O2'	23:DB:511:U:H5'	2.18	0.44
23:DB:1754:A:N1	23:DB:2716:C:O2'	2.50	0.44
2:AC:4:VAL:HG21	21:AN:97:LYS:HZ2	1.82	0.44
25:BC:20:ASN:OD1	25:BC:22:GLU:HG2	2.17	0.44
23:BB:2694:G:H2'	23:BB:2695:U:H6	1.83	0.44
1:CA:1453:G:H2'	1:CA:1454:G:O4'	2.17	0.44
25:BC:212:TRP:CD1	25:BC:212:TRP:C	2.90	0.44
23:BB:963:U:H2'	23:BB:964:C:C6	2.53	0.44
23:BB:509:C:H5'	23:BB:510:C:OP2	2.17	0.44
10:CK:124:LYS:O	19:CU:33:ARG:NE	2.44	0.44
1:AA:1328:C:H5''	12:AM:27:THR:HG21	1.99	0.44
50:DT:28:ASN:HA	50:DT:91:GLN:NE2	2.32	0.44
50:DT:58:VAL:HA	50:DT:84:TYR:O	2.17	0.44
52:BW:59:PHE:CE2	52:BW:61:LYS:HA	2.52	0.44
50:BT:27:SER:O	50:BT:28:ASN:CB	2.66	0.44
50:BT:29:THR:HG22	50:BT:86:THR:CG2	2.46	0.44
9:CJ:12:ALA:CB	9:CJ:18:ILE:HB	2.47	0.44
6:CG:30:MET:HE3	6:CG:33:GLY:H	1.81	0.44
35:BV:26:PHE:HE2	35:BV:44:HIS:HA	1.83	0.44
2:CC:63:ILE:HG22	2:CC:65:VAL:HG13	1.98	0.44
5:AF:3:HIS:NE2	5:AF:65:GLU:HG3	2.33	0.44
1:AA:255:G:H5'	14:AQ:17:GLU:O	2.17	0.44
14:AQ:18:LYS:HA	14:AQ:47:ASP:O	2.18	0.44
40:BH:116:ARG:HB2	40:BH:116:ARG:CZ	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:99:ILE:CD1	40:BH:144:VAL:HG11	2.47	0.44
40:BH:75:LEU:HD13	40:BH:78:VAL:HG21	1.99	0.44
43:BO:30:ARG:HG3	43:BO:30:ARG:HH11	1.83	0.44
1:AA:1351:U:O2'	1:AA:1352:C:H5'	2.17	0.44
42:DN:70:THR:C	42:DN:72:ASP:H	2.21	0.44
43:DO:35:ILE:C	43:DO:36:TYR:HD2	2.21	0.44
43:DO:34:HIS:HB3	43:DO:36:TYR:HE2	1.83	0.44
9:AJ:5:ARG:N	9:AJ:77:VAL:HA	2.33	0.44
48:BG:163:TYR:O	48:BG:164:ALA:C	2.56	0.44
32:B4:16:ILE:HG23	32:B4:24:ARG:O	2.18	0.44
48:BG:38:ASP:OD2	48:BG:63:GLN:HG2	2.17	0.44
28:DP:3:ILE:CG2	28:DP:4:ILE:N	2.80	0.44
46:DU:73:ASN:ND2	46:DU:73:ASN:H	2.15	0.44
26:DD:12:THR:HG22	26:DD:13:ARG:H	1.83	0.44
23:BB:2442:C:H2'	23:BB:2443:C:C6	2.53	0.44
28:BP:80:VAL:CG1	28:BP:81:ASP:N	2.81	0.44
38:DM:40:ARG:NH2	38:DM:73:ILE:HD12	2.33	0.44
12:CM:70:ARG:HH11	12:CM:70:ARG:HG2	1.82	0.44
44:BQ:89:ILE:O	44:BQ:90:ASP:HB2	2.17	0.44
1:AA:1314:C:H5	16:AS:5:LYS:HD3	1.83	0.44
43:BO:28:VAL:HB	43:BO:92:PHE:CE1	2.52	0.44
1:AA:955:U:O2'	1:AA:956:U:H5'	2.18	0.44
47:BF:33:ILE:HG22	47:BF:34:THR:N	2.32	0.44
1:CA:1085:U:H3'	1:CA:1086:U:C5	2.53	0.44
18:AB:52:ALA:HA	18:AB:197:PHE:CE1	2.43	0.44
18:CB:57:ASN:HB3	18:CB:219:THR:C	2.38	0.44
23:DB:1141:U:H4'	23:DB:1142:A:C1'	2.46	0.44
41:DJ:101:ILE:O	41:DJ:105:VAL:HG22	2.18	0.44
1:CA:1005:A:H2'	1:CA:1006:G:O4'	2.18	0.44
1:CA:1007:U:O2'	1:CA:1008:U:H5'	2.18	0.44
23:BB:2729:G:H2'	23:BB:2730:C:H6	1.83	0.44
46:BU:51:LEU:CD2	46:BU:52:ASN:H	2.30	0.44
17:AT:59:ARG:HH11	17:AT:59:ARG:CB	2.25	0.44
23:BB:1287:A:H3'	23:BB:1288:G:H21	1.82	0.44
46:DU:14:THR:HG23	46:DU:15:GLY:N	2.33	0.44
40:DH:4:ILE:CG1	40:DH:18:GLN:HB2	2.44	0.44
18:AB:187:ASP:OD1	18:AB:203:ASP:HB3	2.18	0.44
38:BM:100:LYS:HD3	38:BM:101:VAL:H	1.82	0.44
41:DJ:82:GLY:O	41:DJ:84:ILE:HG22	2.18	0.44
6:AG:137:ARG:HD3	6:AG:141:HIS:CE1	2.53	0.44
24:DI:100:ILE:HG23	24:DI:104:GLN:OE1	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1372:U:H2'	1:AA:1373:G:O4'	2.17	0.44
23:DB:1553:A:H2'	23:DB:1555:G:N7	2.33	0.44
12:CM:2:ARG:HH22	12:CM:56:ARG:NH1	2.16	0.44
23:BB:930:G:C1'	30:BY:24:LEU:HD11	2.44	0.44
28:DP:100:ARG:HB3	28:DP:101:GLU:H	1.68	0.44
11:CL:81:ILE:CG2	11:CL:94:TYR:HB3	2.47	0.44
50:BT:50:LEU:O	50:BT:52:GLU:N	2.46	0.44
40:DH:60:GLU:OE2	40:DH:63:ALA:HA	2.18	0.44
16:CS:5:LYS:HB2	16:CS:6:LYS:H	1.47	0.44
23:DB:1488:C:C2'	23:DB:1489:C:H5'	2.48	0.44
22:BA:87:U:H2'	22:BA:88:C:C5'	2.48	0.44
23:DB:2420:C:OP1	34:D3:33:THR:HB	2.18	0.44
1:AA:137:U:H2'	1:AA:138:G:H8	1.83	0.44
23:DB:1353:A:H2'	23:DB:1354:A:H8	1.78	0.44
1:AA:1008:U:O2	1:AA:1008:U:H2'	2.17	0.44
1:AA:719:C:H2'	15:AR:38:ILE:CD1	2.48	0.44
22:DA:50:A:OP1	43:DO:68:LYS:HG3	2.17	0.44
3:CD:78:ALA:HB1	3:CD:88:ASN:HB2	2.00	0.44
23:BB:1409:U:H2'	23:BB:1410:G:C8	2.53	0.44
1:CA:252:U:H2'	1:CA:253:A:C8	2.52	0.44
6:AG:80:GLY:C	6:AG:82:SER:H	2.21	0.44
23:BB:329:G:H22	46:BU:16:LYS:HE3	1.83	0.44
23:DB:303:G:H2'	23:DB:304:U:C6	2.53	0.44
23:DB:325:G:H2'	23:DB:326:G:H8	1.82	0.44
1:CA:636:U:H2'	1:CA:637:C:H6	1.83	0.44
31:D0:2:VAL:HG12	31:D0:3:GLN:N	2.33	0.44
43:DO:7:ARG:HA	43:DO:10:ARG:CD	2.48	0.44
23:DB:1313:U:O2	23:DB:1313:U:C2'	2.66	0.44
1:CA:124:C:O2'	1:CA:125:U:H5'	2.18	0.44
18:CB:93:HIS:O	18:CB:94:ARG:C	2.56	0.44
1:AA:790:A:H2'	1:AA:791:G:C8	2.53	0.44
23:BB:2419:U:H5'	33:B1:21:THR:HG21	1.99	0.44
35:DV:11:GLU:HB2	35:DV:16:ALA:CB	2.48	0.44
1:AA:1438:G:O2'	1:AA:1439:G:H5'	2.17	0.44
25:BC:202:ARG:HB2	25:BC:202:ARG:HH21	1.83	0.44
25:DC:42:ARG:NH2	25:DC:48:ILE:HD11	2.32	0.44
7:AH:5:PRO:HB2	7:AH:32:LYS:NZ	2.33	0.44
23:DB:1403:A:O2'	23:DB:1404:C:H5'	2.18	0.44
23:BB:2484:G:O2'	23:BB:2485:G:H5'	2.17	0.44
3:CD:17:ASP:OD2	3:CD:27:ILE:HG22	2.17	0.44
1:AA:963:G:O2'	1:AA:964:A:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DG:115:GLN:H	48:DG:115:GLN:CD	2.21	0.44
23:BB:312:G:H2'	23:BB:313:G:H8	1.83	0.44
23:BB:690:G:H2'	23:BB:691:C:O4'	2.17	0.44
1:AA:167:A:O2'	1:AA:168:G:H5'	2.18	0.44
1:AA:1265:C:O2'	1:AA:1266:G:H5'	2.18	0.44
23:DB:43:G:H2'	23:DB:44:A:O4'	2.18	0.44
1:AA:1453:G:H2'	1:AA:1454:G:O4'	2.18	0.44
23:BB:1338:G:C2'	23:BB:1339:G:H5'	2.48	0.44
8:CI:5:TYR:CD1	8:CI:20:ILE:HG22	2.50	0.44
50:DT:55:VAL:HA	50:DT:87:LEU:HA	1.98	0.44
50:BT:30:ILE:HG23	50:BT:85:VAL:HB	1.98	0.44
52:DW:50:VAL:HG23	52:DW:61:LYS:CE	2.48	0.44
48:BG:25:ILE:HG22	48:BG:78:VAL:HG21	2.00	0.44
29:BE:196:VAL:HG12	29:BE:200:LEU:HD23	1.99	0.44
1:CA:255:G:H5'	14:CQ:17:GLU:O	2.18	0.44
12:AM:106:ARG:NH1	12:AM:109:LYS:HZ3	2.16	0.44
10:AK:85:VAL:O	10:AK:111:ASP:HA	2.18	0.44
23:BB:2658:C:H5'	48:BG:159:LYS:NZ	2.32	0.44
6:CG:67:ASN:HB3	6:CG:137:ARG:HH21	1.82	0.44
1:CA:719:C:H2'	15:CR:38:ILE:HD11	2.00	0.44
44:DQ:87:VAL:CB	49:DR:52:PRO:HG3	2.46	0.44
18:AB:53:LEU:HB3	18:AB:219:THR:CG2	2.48	0.44
26:DD:24:VAL:CG2	26:DD:188:LEU:HB3	2.45	0.44
40:DH:133:GLN:HA	40:DH:138:VAL:HB	2.00	0.44
30:BY:5:LYS:CE	30:BY:58:GLU:HA	2.48	0.44
35:BV:81:PRO:HG2	38:BM:20:LEU:HD12	2.00	0.44
38:BM:71:LYS:HB3	38:BM:93:VAL:O	2.18	0.44
1:AA:1270:G:H4'	1:AA:1313:U:O2'	2.18	0.44
31:D0:28:SER:HB2	31:D0:39:ARG:HE	1.80	0.44
37:BL:116:VAL:O	37:BL:118:THR:N	2.51	0.44
18:AB:113:LEU:HD12	18:AB:143:LEU:HB3	1.99	0.44
18:CB:218:ALA:O	18:CB:222:GLU:HG2	2.18	0.44
6:AG:11:ILE:O	6:AG:11:ILE:HD12	2.18	0.44
29:DE:5:LEU:HD13	29:DE:122:GLU:HG3	2.00	0.44
23:BB:729:G:H4'	23:BB:763:G:O5'	2.18	0.44
6:AG:117:LEU:HD22	6:AG:121:ASN:ND2	2.32	0.44
6:AG:20:GLU:O	6:AG:23:ALA:HB3	2.18	0.44
40:DH:6:LEU:O	40:DH:7:ASP:HB2	2.18	0.44
23:BB:2595:G:N2	23:BB:2598:A:OP2	2.42	0.44
37:BL:55:MET:HE1	37:BL:59:ARG:NE	2.33	0.44
2:AC:15:LYS:HE3	2:AC:181:ILE:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:947:G:H4'	12:CM:107:THR:HG23	1.99	0.44
16:CS:35:ARG:HH12	16:CS:76:THR:CG2	2.31	0.44
49:DR:6:GLN:HE22	49:DR:10:LYS:N	2.16	0.44
27:DK:19:VAL:HB	27:DK:41:ILE:CG1	2.47	0.44
27:BK:11:ALA:HB3	27:BK:85:VAL:HG23	1.98	0.44
26:DD:115:GLY:O	42:DN:3:HIS:NE2	2.49	0.44
1:AA:842:U:H2'	1:AA:843:U:O3'	2.18	0.44
23:BB:719:C:H2'	23:BB:720:U:O4'	2.17	0.44
23:DB:2496:C:H5'	38:DM:82:MET:HG3	1.99	0.44
11:AL:120:ARG:HG3	11:AL:120:ARG:HH11	1.83	0.44
11:CL:107:LYS:H	11:CL:107:LYS:CD	2.28	0.44
2:CC:104:GLU:CG	2:CC:105:VAL:N	2.81	0.44
2:CC:105:VAL:HA	2:CC:106:ARG:CZ	2.47	0.44
23:DB:16:C:H2'	23:DB:17:G:H8	1.82	0.44
1:AA:737:C:H2'	1:AA:738:C:C6	2.52	0.44
23:BB:873:C:H2'	23:BB:874:G:C8	2.53	0.44
10:AK:18:GLY:HA2	10:AK:36:ARG:CG	2.45	0.44
23:BB:414:C:H1'	23:BB:1864:U:H1'	2.00	0.44
3:AD:24:VAL:HG23	3:AD:25:ARG:H	1.83	0.44
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.52	0.44
23:DB:2249:U:N3	23:DB:2253:G:OP2	2.51	0.44
6:AG:111:GLY:HA2	6:AG:118:ARG:NH1	2.33	0.44
5:AF:49:TYR:HE1	15:AR:62:ARG:O	2.00	0.44
21:CN:72:PHE:CG	21:CN:73:LEU:N	2.86	0.44
24:BI:135:MET:HG3	24:BI:137:LEU:HG	2.00	0.44
23:BB:2700:A:H2'	23:BB:2701:U:C6	2.53	0.44
1:CA:6:G:H4'	1:CA:298:A:H4'	1.98	0.44
23:DB:1808:A:H5''	23:DB:1809:A:OP2	2.18	0.44
45:DS:5:ALA:CB	45:DS:54:ALA:HB2	2.48	0.44
23:BB:708:G:H2'	23:BB:709:U:C6	2.53	0.44
5:CF:79:ARG:NH2	5:CF:87:SER:HB3	2.33	0.44
23:DB:1259:G:O2'	23:DB:1260:A:H5'	2.17	0.44
23:BB:1153:C:O2'	23:BB:1154:G:H5'	2.17	0.44
30:DY:40:THR:HG22	30:DY:42:ALA:H	1.82	0.44
1:AA:1073:U:O2'	18:AB:104:LYS:HE3	2.17	0.44
23:BB:2014:A:H2'	23:BB:2015:A:C8	2.53	0.44
44:DQ:104:ALA:C	44:DQ:106:THR:H	2.20	0.44
23:DB:688:U:O2'	23:DB:689:A:H5'	2.17	0.44
23:DB:1341:G:N2	23:DB:1398:C:H4'	2.33	0.44
23:DB:1320:C:H5	23:DB:1329:U:H5''	1.82	0.44
23:BB:2488:G:O2'	23:BB:2489:U:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2725:A:HO2'	23:DB:2726:A:P	2.41	0.44
1:AA:1437:A:H2'	1:AA:1438:G:H8	1.82	0.44
23:BB:1623:G:O2'	23:BB:1624:U:H5'	2.18	0.44
23:DB:1985:C:O2'	23:DB:1986:C:H5'	2.18	0.44
23:BB:370:G:O2'	23:BB:423:A:H3'	2.18	0.44
23:BB:43:G:H2'	23:BB:44:A:O4'	2.17	0.44
23:DB:1836:C:O2'	23:DB:1837:C:H5'	2.17	0.44
23:DB:715:A:H2'	23:DB:716:A:O4'	2.18	0.44
26:BD:70:LYS:HD3	26:BD:70:LYS:O	2.18	0.44
47:DF:114:ARG:HA	47:DF:114:ARG:HH21	1.83	0.44
18:CB:69:VAL:CG2	18:CB:162:VAL:HB	2.25	0.43
50:BT:89:GLU:C	50:BT:91:GLN:H	2.22	0.43
9:CJ:9:ARG:NE	9:CJ:99:GLN:NE2	2.66	0.43
23:DB:1819:A:H4'	23:DB:1820:U:H5''	2.00	0.43
23:BB:2773:C:H2'	23:BB:2774:C:H6	1.83	0.43
29:BE:108:ILE:HD11	29:BE:181:ILE:CA	2.48	0.43
1:CA:254:G:O2'	1:CA:255:G:H5'	2.18	0.43
14:CQ:60:ILE:HD13	14:CQ:60:ILE:N	2.32	0.43
40:BH:109:GLU:O	40:BH:110:VAL:HG13	2.18	0.43
52:BW:18:LYS:HE2	52:BW:19:ARG:NH2	2.33	0.43
29:DE:109:LEU:HD13	29:DE:180:LEU:HD13	1.99	0.43
22:DA:115:A:H2'	22:DA:116:G:C8	2.53	0.43
48:BG:91:VAL:HG23	48:BG:92:GLY:N	2.32	0.43
46:DU:26:ASN:ND2	46:DU:26:ASN:N	2.65	0.43
15:AR:42:ARG:HG3	15:AR:43:ILE:H	1.81	0.43
19:CU:3:ILE:HG21	19:CU:19:LYS:HA	2.00	0.43
32:B4:36:ARG:O	32:B4:37:GLN:C	2.56	0.43
23:BB:2146:C:OP1	23:BB:2146:C:H2'	2.18	0.43
26:BD:117:GLY:HA2	26:BD:164:GLN:HE22	1.83	0.43
28:BP:50:ARG:HB3	28:BP:56:SER:HB3	2.00	0.43
47:DF:113:PHE:CZ	47:DF:175:PRO:HB2	2.50	0.43
23:DB:2886:A:N6	31:D0:39:ARG:CZ	2.81	0.43
13:AP:38:PHE:CZ	13:AP:51:ARG:HD3	2.52	0.43
28:DP:20:ARG:HD2	28:DP:21:PRO:HD2	2.00	0.43
1:CA:1003:G:H21	1:CA:1005:A:H5'	1.82	0.43
25:BC:204:LEU:HB3	25:BC:209:ALA:HB3	1.99	0.43
40:DH:4:ILE:HD13	40:DH:44:ILE:HG22	2.00	0.43
1:AA:1030:U:H5'	1:AA:1031:C:C5	2.53	0.43
4:AE:132:PRO:HG2	4:AE:133:ILE:H	1.83	0.43
1:AA:372:C:H1'	1:AA:373:A:OP2	2.18	0.43
1:CA:1320:C:H42	16:CS:35:ARG:CD	2.31	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AE:93:VAL:HA	4:AE:126:ALA:CB	2.47	0.43
23:BB:1509:A:H4'	23:BB:1510:G:O5'	2.17	0.43
32:D4:16:ILE:HG12	32:D4:25:VAL:CG2	2.48	0.43
40:BH:3:VAL:HG12	40:BH:38:PRO:HA	2.00	0.43
39:BX:32:ALA:C	39:BX:34:SER:H	2.22	0.43
12:CM:2:ARG:HA	12:CM:7:ASN:O	2.18	0.43
2:AC:6:PRO:HA	2:AC:9:ILE:CG2	2.45	0.43
23:DB:2649:C:H2'	23:DB:2650:U:C6	2.53	0.43
48:DG:63:GLN:O	48:DG:66:THR:HG22	2.17	0.43
41:DJ:93:ILE:CA	41:DJ:97:PRO:HG3	2.46	0.43
1:AA:820:U:H4'	1:AA:821:G:OP2	2.18	0.43
1:CA:475:C:O2'	1:CA:476:U:H5'	2.17	0.43
38:BM:107:GLY:O	38:BM:108:VAL:HB	2.18	0.43
1:AA:503:C:O2'	1:AA:504:C:H5'	2.18	0.43
23:DB:107:G:C2	23:DB:108:G:C8	3.06	0.43
23:BB:2180:U:O2	23:BB:2180:U:C2'	2.65	0.43
29:BE:46:GLN:HB3	29:BE:86:ALA:CA	2.48	0.43
2:CC:76:ILE:CD1	2:CC:102:ILE:HG21	2.47	0.43
23:BB:1946:U:H2'	23:BB:1947:C:H6	1.83	0.43
1:AA:676:A:H2'	1:AA:677:U:H6	1.83	0.43
15:AR:33:THR:HG22	15:AR:39:VAL:CG1	2.48	0.43
23:DB:1409:U:H2'	23:DB:1410:G:C8	2.52	0.43
23:BB:131:A:O2'	23:BB:132:G:H5'	2.18	0.43
1:AA:91:U:H6	1:AA:91:U:O5'	2.01	0.43
52:BW:33:GLY:O	52:BW:34:SER:HB2	2.18	0.43
23:BB:1410:G:H2'	23:BB:1411:U:H6	1.82	0.43
22:BA:32:U:H4'	22:BA:52:A:H62	1.81	0.43
23:BB:435:C:C2'	23:BB:436:C:H5'	2.48	0.43
23:DB:1517:G:O2'	23:DB:1518:C:H5'	2.18	0.43
23:DB:697:G:H2'	23:DB:698:C:C6	2.53	0.43
1:CA:613:C:H2'	1:CA:614:C:H6	1.83	0.43
23:DB:1745:A:H2'	23:DB:1746:A:H8	1.83	0.43
11:CL:82:ARG:HG2	11:CL:82:ARG:NH1	2.32	0.43
1:CA:1229:A:H2'	1:CA:1230:C:C6	2.52	0.43
14:CQ:34:GLY:O	14:CQ:35:LYS:C	2.56	0.43
23:BB:1785:A:O2'	23:BB:1786:A:H2'	2.18	0.43
1:CA:620:C:O2	3:CD:131:ILE:HG21	2.18	0.43
1:AA:969:A:O2'	1:AA:970:C:H5'	2.17	0.43
29:DE:37:ALA:O	29:DE:39:ALA:N	2.38	0.43
23:DB:2611:C:O2'	23:DB:2612:C:H5'	2.18	0.43
38:DM:74:THR:HG22	38:DM:89:VAL:HA	1.98	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CJ:17:LEU:O	9:CJ:20:GLN:HB2	2.18	0.43
49:BR:57:GLY:HA2	49:BR:103:ALA:HA	2.00	0.43
1:AA:83:C:HO2'	1:AA:84:U:P	2.41	0.43
23:BB:944:C:H5'	23:BB:945:A:C5'	2.48	0.43
4:AE:9:GLU:O	4:AE:40:ASP:HA	2.18	0.43
1:CA:258:G:N3	1:CA:258:G:H2'	2.33	0.43
25:DC:6:LYS:C	25:DC:8:THR:H	2.21	0.43
8:CI:56:MET:O	8:CI:57:VAL:HB	2.18	0.43
12:AM:3:ILE:HA	12:AM:56:ARG:CG	2.46	0.43
50:BT:34:VAL:HG21	50:BT:43:ILE:CD1	2.47	0.43
1:CA:1117:A:O2'	1:CA:1118:U:H5'	2.18	0.43
1:CA:1119:C:O2'	1:CA:1120:C:H5'	2.17	0.43
23:BB:726:G:HO2'	23:BB:727:A:P	2.40	0.43
4:AE:84:VAL:CG1	4:AE:146:MET:HB3	2.47	0.43
35:DV:25:LYS:HE2	35:DV:41:GLU:OE1	2.18	0.43
48:DG:25:ILE:HD12	48:DG:25:ILE:H	1.83	0.43
29:BE:108:ILE:HD13	37:BL:2:ARG:HH22	1.82	0.43
5:AF:98:GLU:O	5:AF:99:ALA:HB3	2.18	0.43
40:BH:59:ALA:HA	40:BH:62:LEU:HD11	2.00	0.43
14:AQ:20:ILE:HD12	14:AQ:47:ASP:CB	2.48	0.43
23:BB:917:A:H5''	23:BB:2268:A:H61	1.83	0.43
42:BN:79:LEU:O	42:BN:80:PHE:HB2	2.19	0.43
43:BO:51:ALA:N	43:BO:78:VAL:HG13	2.33	0.43
37:BL:141:LYS:HZ2	37:BL:143:GLU:HA	1.82	0.43
43:DO:30:ARG:HG2	43:DO:102:ARG:NH1	2.33	0.43
23:DB:1730:C:O2'	23:DB:1731:G:N2	2.51	0.43
12:CM:21:ILE:HG23	12:CM:65:GLU:OE2	2.18	0.43
48:DG:163:TYR:O	48:DG:164:ALA:C	2.56	0.43
32:B4:16:ILE:HG12	32:B4:25:VAL:CG2	2.47	0.43
48:BG:139:VAL:O	48:BG:143:VAL:HG13	2.18	0.43
45:DS:66:ILE:CD1	45:DS:66:ILE:H	2.16	0.43
28:DP:50:ARG:CD	28:DP:56:SER:HB3	2.48	0.43
41:BJ:45:THR:N	41:BJ:46:PRO:CD	2.81	0.43
49:BR:23:GLU:O	49:BR:24:LYS:C	2.55	0.43
16:AS:39:ILE:HD13	16:AS:68:HIS:HB2	1.99	0.43
21:AN:52:ARG:O	21:AN:54:SER:N	2.50	0.43
13:AP:19:VAL:H	13:AP:38:PHE:HA	1.83	0.43
23:BB:1141:U:H5''	41:BJ:27:ARG:NH2	2.32	0.43
24:DI:23:VAL:HG12	24:DI:27:LEU:HD21	1.99	0.43
1:CA:202:G:H2'	1:CA:203:G:C8	2.53	0.43
3:CD:152:SER:HA	3:CD:155:LYS:CD	2.42	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AH:6:ILE:HD11	7:AH:31:LEU:HD23	1.99	0.43
23:DB:1419:A:H1'	23:DB:1579:A:N6	2.33	0.43
1:AA:87:C:N4	1:AA:88:U:C2	2.86	0.43
1:CA:191:G:H2'	1:CA:192:A:H8	1.83	0.43
23:BB:2191:A:H2'	23:BB:2192:U:C6	2.54	0.43
23:DB:2539:C:H4'	32:D4:3:VAL:HG11	2.00	0.43
23:DB:279:A:H3'	23:DB:280:U:H6	1.82	0.43
1:AA:241:G:O2'	1:AA:242:G:H5'	2.19	0.43
23:DB:2733:A:H3'	23:DB:2733:A:C8	2.54	0.43
1:CA:1253:G:OP1	9:CJ:46:LYS:HE2	2.18	0.43
1:CA:819:A:H4'	1:CA:820:U:OP2	2.16	0.43
23:BB:2373:G:H2'	23:BB:2374:C:H6	1.82	0.43
1:AA:549:C:H2'	1:AA:550:G:C8	2.53	0.43
1:CA:1476:A:H2'	1:CA:1477:U:C6	2.53	0.43
11:CL:106:VAL:HA	11:CL:107:LYS:NZ	2.34	0.43
36:D2:3:ARG:NH2	36:D2:3:ARG:HG2	2.31	0.43
1:AA:1324:A:H2'	1:AA:1325:C:C6	2.52	0.43
23:BB:2215:C:H2'	23:BB:2216:G:H8	1.82	0.43
16:CS:6:LYS:HZ3	16:CS:6:LYS:HA	1.81	0.43
23:DB:2895:G:H2'	23:DB:2896:C:H6	1.84	0.43
23:DB:825:A:H1'	37:DL:54:GLN:HE21	1.79	0.43
11:CL:35:ARG:HA	11:CL:35:ARG:NE	2.33	0.43
23:DB:2808:G:HO2'	23:DB:2809:A:H8	1.66	0.43
23:DB:192:C:C2'	23:DB:193:U:H5'	2.47	0.43
1:CA:1272:G:H2'	1:CA:1273:C:C6	2.53	0.43
44:DQ:11:ALA:C	44:DQ:13:HIS:N	2.72	0.43
1:AA:1476:A:H2'	1:AA:1477:U:H6	1.80	0.43
23:BB:1049:C:H2'	23:BB:1050:A:H8	1.82	0.43
29:DE:1:MET:HB3	29:DE:14:VAL:O	2.18	0.43
23:DB:522:A:H2'	23:DB:523:C:H6	1.82	0.43
1:CA:71:A:O2'	1:CA:72:A:H5''	2.18	0.43
22:DA:91:C:H2'	22:DA:92:C:H6	1.84	0.43
41:DJ:88:THR:HG22	41:DJ:91:GLU:HG3	2.00	0.43
1:CA:1061:G:H2'	1:CA:1062:U:O4'	2.17	0.43
23:DB:337:C:H2'	23:DB:338:G:O4'	2.17	0.43
29:DE:190:ALA:O	29:DE:194:LYS:HG3	2.19	0.43
23:DB:2484:G:O2'	23:DB:2485:G:H5'	2.18	0.43
26:DD:141:ARG:O	26:DD:141:ARG:HG3	2.18	0.43
23:BB:1330:C:H2'	23:BB:1331:G:H8	1.83	0.43
24:DI:1:ALA:C	24:DI:2:LYS:HD2	2.39	0.43
12:AM:38:ILE:CB	12:AM:55:LEU:HD21	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1523:G:P	10:AK:124:LYS:HZ1	2.41	0.43
50:BT:58:VAL:HA	50:BT:84:TYR:O	2.18	0.43
9:CJ:7:ARG:O	9:CJ:100:ILE:HG22	2.18	0.43
1:CA:1238:A:C2	1:CA:1241:G:N3	2.86	0.43
23:DB:2060:A:H3'	29:DE:63:LYS:NZ	2.34	0.43
1:AA:122:G:O5'	1:AA:122:G:H8	2.01	0.43
48:DG:15:ASP:OD1	48:DG:26:LYS:HD2	2.18	0.43
29:BE:108:ILE:HD11	29:BE:181:ILE:N	2.34	0.43
5:AF:38:ARG:NH2	5:AF:63:ASN:HD21	2.17	0.43
23:DB:2773:C:O2'	23:DB:2774:C:H5'	2.19	0.43
40:BH:68:ARG:C	40:BH:72:ILE:HG22	2.39	0.43
2:CC:18:ASN:HA	2:CC:53:ARG:NH2	2.29	0.43
23:BB:857:G:O2'	52:BW:19:ARG:HD2	2.18	0.43
29:DE:108:ILE:HD11	29:DE:181:ILE:N	2.33	0.43
42:BN:73:ASN:C	42:BN:76:VAL:HG22	2.38	0.43
23:DB:138:U:O3'	23:DB:139:U:H3'	2.18	0.43
23:DB:141:G:H5'	23:DB:142:A:OP2	2.19	0.43
48:BG:90:GLY:HA3	48:BG:93:TYR:CE1	2.52	0.43
23:BB:2144:G:N2	23:BB:2146:C:O4'	2.50	0.43
45:BS:59:GLU:CD	45:BS:66:ILE:HG23	2.39	0.43
44:BQ:59:LEU:HD13	44:BQ:60:TRP:N	2.33	0.43
18:AB:161:PHE:HA	18:AB:183:PHE:O	2.17	0.43
18:AB:184:ALA:O	18:AB:199:ILE:HB	2.18	0.43
18:CB:68:PHE:CE1	18:CB:88:GLN:HB3	2.52	0.43
18:CB:85:SER:HB2	18:CB:88:GLN:NE2	2.24	0.43
23:DB:493:G:H2'	23:DB:494:G:O4'	2.18	0.43
20:AO:57:LEU:O	20:AO:60:VAL:HB	2.18	0.43
51:BZ:7:VAL:HG13	51:BZ:8:THR:CG2	2.40	0.43
26:BD:149:ASN:OD1	26:BD:150:GLN:N	2.51	0.43
18:CB:110:ILE:HG21	18:CB:151:LYS:O	2.18	0.43
13:CP:6:LEU:CD1	13:CP:71:VAL:HB	2.47	0.43
1:CA:481:G:HO2'	1:CA:482:A:H8	1.64	0.43
24:DI:21:PRO:HB2	24:DI:22:PRO:CD	2.43	0.43
23:BB:992:C:O2'	23:BB:993:G:H5'	2.19	0.43
23:BB:2749:A:OP1	23:BB:2751:G:H5''	2.19	0.43
23:DB:946:C:H2'	23:DB:947:A:H8	1.84	0.43
31:B0:31:LYS:HG2	31:B0:32:THR:N	2.33	0.43
16:CS:39:ILE:HG21	16:CS:61:VAL:CG2	2.48	0.43
2:CC:25:THR:O	2:CC:26:LYS:C	2.56	0.43
41:BJ:81:ILE:HG12	41:BJ:82:GLY:N	2.32	0.43
23:BB:2734:A:C2'	23:BB:2735:G:H5'	2.46	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:D2:31:LEU:HB3	36:D2:42:LEU:HD11	2.01	0.43
20:AO:22:THR:HA	20:AO:27:VAL:HG11	2.00	0.43
1:CA:1167:A:H2'	1:CA:1169:A:N7	2.32	0.43
25:BC:174:ARG:HG3	25:BC:180:MET:HE1	1.99	0.43
23:BB:2080:A:N6	23:BB:2241:A:N6	2.66	0.43
23:DB:2075:U:H2'	23:DB:2238:G:H22	1.83	0.43
37:DL:50:PHE:O	37:DL:52:GLY:N	2.52	0.43
24:BI:12:VAL:HG23	24:BI:41:PHE:CE2	2.54	0.43
1:CA:1481:U:O2'	1:CA:1482:G:H5'	2.17	0.43
23:BB:2666:C:O5'	23:BB:2666:C:O2	2.37	0.43
23:BB:1299:G:H4'	23:BB:1301:A:H1'	2.01	0.43
8:CI:46:VAL:CG2	8:CI:75:ALA:HB1	2.48	0.43
1:AA:1093:A:N3	1:AA:1095:U:H5'	2.32	0.43
23:BB:968:C:H2'	23:BB:969:G:H8	1.84	0.43
23:DB:597:G:H21	37:DL:12:SER:HA	1.84	0.43
34:B3:44:ARG:N	34:B3:45:PRO:CD	2.80	0.43
23:BB:1808:A:H5''	23:BB:1809:A:OP2	2.18	0.43
23:BB:1401:G:H2'	23:BB:1402:U:C6	2.53	0.43
28:DP:39:LEU:HD12	28:DP:39:LEU:N	2.33	0.43
23:DB:416:U:H2'	23:DB:417:C:C6	2.53	0.43
1:CA:692:U:C2	1:CA:694:A:H5''	2.53	0.43
1:CA:1111:A:O2'	1:CA:1112:C:H5'	2.18	0.43
29:DE:2:GLU:OE1	29:DE:13:THR:N	2.52	0.43
23:BB:833:A:H2'	23:BB:834:G:C8	2.54	0.43
23:BB:679:C:H2'	23:BB:680:C:C6	2.52	0.43
41:DJ:40:HIS:HD1	41:DJ:41:LYS:H	1.66	0.43
23:BB:2895:G:H2'	23:BB:2896:C:C6	2.53	0.43
47:DF:71:LYS:HE2	47:DF:73:VAL:HB	1.99	0.43
1:CA:992:U:H2'	1:CA:1043:G:N7	2.33	0.43
5:AF:79:ARG:NH2	5:AF:87:SER:HB3	2.33	0.43
7:AH:54:THR:HG23	7:AH:55:LYS:N	2.33	0.43
19:CU:11:PHE:CE1	19:CU:13:VAL:HG12	2.52	0.43
23:BB:1720:U:O2'	23:BB:1721:G:H5'	2.18	0.43
14:CQ:30:HIS:CG	14:CQ:33:TYR:HB2	2.54	0.43
1:CA:62:U:H2'	1:CA:63:C:C6	2.53	0.43
1:AA:126:G:OP1	1:AA:605:U:O2'	2.37	0.43
23:DB:2405:G:H1'	23:DB:2412:A:N6	2.33	0.43
23:DB:409:G:H2'	23:DB:410:G:H8	1.83	0.43
23:DB:2369:A:H2'	23:DB:2370:G:H8	1.83	0.43
24:DI:102:ARG:HG3	24:DI:141:ASP:CB	2.48	0.43
23:DB:443:A:C8	29:DE:40:ARG:HD3	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2752:C:H2'	23:BB:2753:A:O4'	2.18	0.43
32:D4:19:ARG:O	32:D4:20:ASP:HB2	2.18	0.43
23:BB:2415:G:H2'	23:BB:2416:C:C6	2.53	0.43
32:D4:31:PRO:O	32:D4:34:LYS:HB3	2.18	0.43
23:DB:1686:C:H2'	23:DB:1687:G:O4'	2.18	0.43
23:BB:2835:A:H61	23:BB:2878:U:H2'	1.83	0.43
23:DB:500:G:N2	23:DB:502:A:H3'	2.33	0.43
23:DB:2617:U:O2'	23:DB:2618:G:H5'	2.19	0.43
29:DE:7:ASP:OD2	29:DE:7:ASP:N	2.51	0.43
2:AC:189:HIS:ND1	2:AC:189:HIS:N	2.66	0.43
1:CA:64:G:H3'	1:CA:64:G:OP1	2.18	0.43
23:DB:370:G:O2'	23:DB:423:A:H3'	2.18	0.43
4:CE:38:VAL:HG23	4:CE:66:ALA:HB1	2.01	0.43
23:DB:1930:G:H22	23:DB:1969:A:P	2.40	0.43
23:DB:2139:U:O2'	23:DB:2140:G:H5'	2.18	0.43
1:AA:721:G:H4'	1:AA:722:G:O4'	2.18	0.43
49:DR:68:ARG:NH1	49:DR:90:ARG:HD3	2.34	0.43
21:CN:9:GLU:OE1	21:CN:61:ASN:N	2.52	0.43
50:DT:17:SER:N	50:DT:21:SER:OG	2.51	0.43
37:DL:18:ARG:C	37:DL:19:LEU:HD12	2.38	0.43
35:DV:72:VAL:HA	35:DV:94:ALA:H	1.82	0.43
48:DG:12:ALA:C	48:DG:14:VAL:H	2.22	0.43
48:DG:16:VAL:HG13	48:DG:23:ILE:CG2	2.48	0.43
40:BH:104:THR:HA	40:BH:109:GLU:OE2	2.18	0.43
40:BH:117:LEU:HD21	40:BH:130:VAL:HG22	1.98	0.43
12:AM:105:ALA:O	12:AM:109:LYS:HG3	2.18	0.43
10:AK:83:VAL:HG11	10:AK:96:ILE:HG12	2.01	0.43
23:BB:1159:U:O2'	23:BB:1160:G:H5'	2.18	0.43
48:DG:139:VAL:O	48:DG:143:VAL:HG13	2.18	0.43
24:DI:72:THR:OG1	24:DI:73:PRO:HD2	2.18	0.43
10:CK:17:ASP:OD2	10:CK:36:ARG:HD3	2.18	0.43
33:D1:35:LEU:HD23	33:D1:36:LYS:N	2.32	0.43
47:DF:106:ALA:HA	47:DF:135:ILE:CD1	2.48	0.43
12:CM:74:MET:HE3	47:DF:111:ARG:HB3	1.99	0.43
41:BJ:4:PHE:CG	41:BJ:5:THR:N	2.87	0.43
18:CB:86:CYS:SG	18:CB:88:GLN:NE2	2.88	0.43
45:BS:60:HIS:CG	45:BS:61:ASN:H	2.36	0.43
51:BZ:5:CYS:O	51:BZ:7:VAL:N	2.46	0.43
47:DF:23:SER:O	47:DF:26:GLN:HB2	2.19	0.43
1:AA:1191:A:H5''	2:AC:3:LYS:HE3	2.00	0.43
17:AT:73:ARG:O	17:AT:77:ASN:ND2	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:3:GLY:C	26:BD:4:LEU:HD13	2.38	0.43
1:CA:134:G:H2'	1:CA:135:C:O4'	2.18	0.43
26:DD:118:PHE:HZ	26:DD:123:LYS:NZ	2.16	0.43
26:DD:116:LYS:HD3	26:DD:123:LYS:HE2	2.00	0.43
23:BB:2259:U:H2'	23:BB:2260:C:H6	1.84	0.43
41:BJ:81:ILE:HG23	41:BJ:82:GLY:N	2.27	0.43
50:BT:39:THR:C	50:BT:41:ALA:H	2.22	0.43
23:BB:2733:A:H2'	23:BB:2734:A:O4'	2.19	0.43
23:BB:2589:A:H2'	23:BB:2590:A:C8	2.53	0.43
27:DK:70:ARG:CD	27:DK:76:VAL:HG22	2.49	0.43
45:BS:42:LYS:O	45:BS:45:VAL:HG22	2.19	0.43
23:DB:2185:U:H2'	23:DB:2186:G:H8	1.84	0.43
48:DG:6:ALA:HB3	48:DG:68:ARG:NE	2.33	0.43
23:DB:470:A:N6	50:DT:72:GLN:HE22	2.14	0.43
48:BG:6:ALA:HB3	48:BG:68:ARG:NE	2.33	0.43
23:BB:593:U:H2'	23:BB:594:U:H6	1.79	0.43
1:CA:735:C:H2'	1:CA:736:C:C6	2.53	0.43
1:CA:735:C:O2'	1:CA:736:C:H5'	2.18	0.43
1:AA:598:U:H2'	1:AA:599:C:H6	1.82	0.43
3:CD:81:LEU:HB2	3:CD:88:ASN:HD22	1.83	0.43
20:CO:87:LEU:O	20:CO:89:ARG:N	2.41	0.43
22:DA:32:U:H4'	22:DA:52:A:H62	1.81	0.43
23:DB:397:U:H2'	23:DB:398:C:H6	1.79	0.43
23:DB:2562:U:C2'	23:DB:2563:U:H5'	2.48	0.43
26:DD:56:LYS:C	26:DD:58:ASN:N	2.72	0.43
23:DB:1746:A:H2'	23:DB:1747:U:C6	2.53	0.43
23:BB:1683:U:H2'	23:BB:1684:G:H8	1.82	0.43
34:B3:22:LYS:HA	34:B3:48:MET:HA	2.00	0.43
24:BI:52:LEU:O	24:BI:54:ILE:HG13	2.19	0.43
30:DY:43:ILE:O	30:DY:47:ILE:HG12	2.18	0.43
23:DB:753:A:H2'	23:DB:754:U:H6	1.84	0.43
29:BE:7:ASP:OD2	29:BE:7:ASP:N	2.51	0.43
4:AE:45:VAL:O	4:AE:71:ILE:HG22	2.19	0.43
29:BE:98:LYS:HG2	29:BE:102:ARG:NH1	2.34	0.43
23:BB:1660:G:O2'	23:BB:1661:G:H5'	2.18	0.43
1:CA:627:G:H2'	1:CA:628:G:C8	2.53	0.43
41:BJ:88:THR:HG22	41:BJ:91:GLU:HG3	2.01	0.43
9:CJ:82:LYS:CD	9:CJ:82:LYS:N	2.81	0.43
23:BB:1708:C:H2'	23:BB:1709:U:H6	1.84	0.43
23:BB:1900:A:N1	23:BB:1970:A:C6	2.86	0.43
1:AA:152:A:H3'	1:AA:153:C:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1700:A:H3'	23:BB:1701:A:H8	1.83	0.43
25:DC:122:ALA:O	25:DC:124:LYS:N	2.50	0.43
2:CC:145:ALA:C	2:CC:147:GLY:N	2.72	0.43
23:DB:2190:G:O2'	23:DB:2191:A:H5'	2.18	0.43
1:CA:44:A:H2'	1:CA:45:G:H8	1.82	0.43
23:BB:1499:C:H2'	23:BB:1500:G:H8	1.83	0.43
23:DB:730:A:O2'	23:DB:731:C:H5'	2.17	0.43
24:DI:70:THR:O	24:DI:70:THR:HG23	2.18	0.43
1:CA:616:G:H2'	1:CA:616:G:N3	2.32	0.43
1:AA:93:U:O5'	1:AA:93:U:H6	2.02	0.43
25:BC:122:ALA:O	25:BC:124:LYS:N	2.51	0.43
3:AD:96:ARG:NH1	3:AD:133:SER:HA	2.33	0.43
21:CN:60:ARG:NH2	21:CN:69:PRO:HD3	2.33	0.43
23:DB:1431:A:O2'	23:DB:1432:G:H5'	2.19	0.43
1:AA:1534:A:N6	19:AU:43:GLU:HG2	2.33	0.43
19:AU:41:THR:C	19:AU:45:LYS:HB2	2.38	0.43
23:DB:2305:U:H5''	47:DF:130:GLY:HA3	2.00	0.43
23:DB:921:C:H2'	23:DB:922:C:C6	2.53	0.43
1:CA:1333:A:C2	1:CA:1334:G:H1'	2.53	0.43
48:BG:24:THR:HG23	48:BG:34:ARG:HD3	2.01	0.43
26:DD:8:LYS:O	26:DD:9:VAL:HB	2.17	0.43
35:BV:60:VAL:HG12	35:BV:61:LEU:N	2.27	0.43
35:BV:4:ILE:HG21	35:BV:63:ILE:HG13	2.01	0.43
26:BD:110:THR:HG23	26:BD:171:THR:CA	2.48	0.43
15:AR:57:ALA:HA	15:AR:60:ARG:HH11	1.84	0.43
40:BH:104:THR:HA	40:BH:109:GLU:OE1	2.17	0.43
50:BT:2:ILE:N	50:BT:2:ILE:HD13	2.33	0.43
44:DQ:6:GLY:N	44:DQ:8:ILE:HD13	2.34	0.43
24:BI:78:LEU:HD13	24:BI:108:ILE:HG23	1.99	0.43
37:BL:81:ASP:HA	37:BL:84:LYS:HE2	2.01	0.43
3:AD:157:ALA:O	3:AD:160:LEU:HD22	2.17	0.43
2:AC:61:LYS:O	2:AC:97:PRO:HD2	2.19	0.43
23:DB:1062:G:H2'	23:DB:1063:G:C8	2.54	0.43
40:DH:112:LYS:O	40:DH:115:VAL:HG12	2.18	0.43
35:DV:80:HIS:CD2	35:DV:83:LYS:HB2	2.53	0.43
1:AA:1085:U:H3'	1:AA:1086:U:C5	2.54	0.43
18:AB:95:TRP:CZ3	18:AB:170:ILE:HG22	2.53	0.43
36:B2:10:LEU:O	36:B2:14:ARG:HG3	2.18	0.43
20:AO:57:LEU:HD11	23:BB:715:A:N7	2.33	0.43
8:AI:118:ARG:NH2	8:AI:122:ARG:NH2	2.65	0.43
42:DN:96:ARG:HE	42:DN:116:VAL:HA	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:11:LEU:O	2:AC:12:GLY:C	2.54	0.43
48:BG:94:ARG:NH2	48:BG:105:SER:N	2.66	0.43
23:DB:2468:A:H2'	23:DB:2476:A:C5	2.52	0.43
23:BB:580:U:H4'	44:BQ:30:VAL:HG21	2.00	0.43
27:DK:105:ARG:H	27:DK:105:ARG:HD3	1.84	0.43
19:AU:8:ASN:O	19:AU:9:GLU:HB3	2.18	0.43
2:CC:11:LEU:HD11	21:CN:87:ALA:O	2.17	0.43
23:BB:1442:U:H2'	23:BB:1443:U:C6	2.54	0.43
2:AC:125:ARG:HB3	2:AC:127:VAL:HG13	2.00	0.43
6:CG:3:ARG:HB3	6:CG:4:ARG:H	1.55	0.43
46:BU:8:ASP:O	46:BU:24:VAL:HG23	2.19	0.43
50:BT:48:GLN:NE2	50:BT:48:GLN:HA	2.33	0.43
23:BB:656:G:H2'	23:BB:657:U:C6	2.54	0.43
22:DA:60:C:O2'	22:DA:61:G:H5'	2.18	0.43
48:BG:9:VAL:HA	48:BG:48:THR:HG22	1.99	0.43
1:CA:1126:U:O2'	1:CA:1127:G:H8	2.01	0.43
23:BB:968:C:O2'	23:BB:969:G:H5'	2.17	0.43
1:CA:1381:U:O2'	1:CA:1382:C:H5'	2.18	0.43
42:BN:8:ARG:HG2	42:BN:10:LEU:HD22	2.00	0.43
22:DA:32:U:H1'	22:DA:52:A:N7	2.33	0.43
34:B3:57:VAL:C	34:B3:59:ALA:N	2.71	0.43
17:AT:54:GLN:N	17:AT:55:PRO:CD	2.81	0.43
11:AL:35:ARG:HA	11:AL:35:ARG:NE	2.33	0.43
23:DB:2442:C:H2'	23:DB:2443:C:H6	1.83	0.43
23:DB:237:C:O2'	23:DB:238:C:H5'	2.19	0.43
1:AA:230:G:H2'	1:AA:231:U:O4'	2.17	0.43
22:BA:15:A:O2'	22:BA:16:G:H5'	2.19	0.43
1:CA:71:A:HO2'	1:CA:72:A:H5''	1.82	0.43
30:BY:40:THR:HG22	30:BY:42:ALA:H	1.84	0.43
1:AA:636:U:H2'	1:AA:637:C:H6	1.82	0.43
44:BQ:38:VAL:O	44:BQ:39:ILE:C	2.57	0.43
7:CH:5:PRO:HB2	7:CH:32:LYS:NZ	2.34	0.43
33:D1:3:GLY:O	33:D1:4:ILE:HG12	2.19	0.43
20:AO:69:TYR:HA	20:AO:72:ARG:HE	1.83	0.43
23:DB:1076:C:H2'	23:DB:1077:A:C8	2.54	0.43
29:BE:37:ALA:C	29:BE:39:ALA:H	2.20	0.43
1:CA:1437:A:H2'	1:CA:1438:G:H8	1.84	0.43
28:DP:105:LYS:HD3	28:DP:105:LYS:HA	1.90	0.43
23:DB:1711:A:H2'	23:DB:1712:U:C6	2.53	0.43
23:DB:1688:U:O2	23:DB:1700:A:H5'	2.19	0.43
1:AA:1121:U:H2'	1:AA:1122:U:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DR:90:ARG:O	49:DR:91:GLN:HB3	2.19	0.43
1:AA:197:A:N1	1:AA:220:G:O2'	2.50	0.43
23:DB:2553:G:H2'	23:DB:2554:U:O4'	2.18	0.43
40:DH:79:THR:HG22	40:DH:80:ILE:O	2.18	0.43
1:AA:227:G:O2'	1:AA:228:A:H5'	2.18	0.43
5:AF:54:LEU:N	5:AF:54:LEU:HD22	2.33	0.43
23:DB:932:U:O2	23:DB:932:U:O4'	2.32	0.43
23:BB:2081:U:H2'	23:BB:2082:A:C8	2.52	0.43
1:AA:174:A:O2'	1:AA:175:C:H5'	2.17	0.43
23:DB:944:C:H5'	23:DB:945:A:C5'	2.48	0.43
23:BB:1669:A:O3'	23:BB:2549:G:H5'	2.19	0.43
23:DB:1099:G:N7	24:DI:3:LYS:CD	2.81	0.43
1:CA:1203:C:H4'	21:CN:66:THR:HG22	2.00	0.43
8:CI:27:ILE:CG2	8:CI:62:LEU:HD21	2.47	0.43
19:CU:40:PRO:HG2	19:CU:41:THR:H	1.83	0.43
18:CB:185:ILE:HG12	18:CB:199:ILE:HB	1.99	0.43
12:AM:52:ILE:HG12	12:AM:56:ARG:NH2	2.34	0.43
50:BT:57:VAL:HG22	50:BT:58:VAL:N	2.22	0.43
9:CJ:87:LEU:HA	9:CJ:90:LEU:HG	2.01	0.43
35:BV:41:GLU:O	35:BV:42:LEU:HD23	2.19	0.43
2:CC:39:ARG:NH1	2:CC:39:ARG:HG3	2.34	0.43
21:CN:48:GLN:HG3	21:CN:49:THR:N	2.34	0.43
29:BE:18:THR:HA	29:BE:106:LYS:HG2	2.00	0.43
5:CF:18:VAL:N	5:CF:19:PRO:HD2	2.34	0.43
5:AF:18:VAL:N	5:AF:19:PRO:HD2	2.34	0.43
5:AF:62:MET:O	5:AF:63:ASN:HB2	2.18	0.43
26:DD:172:VAL:HG11	26:DD:175:LEU:HD11	2.01	0.43
23:DB:143:C:H2'	23:DB:144:A:C8	2.53	0.43
37:BL:123:ARG:CZ	37:BL:124:GLY:H	2.30	0.43
6:CG:63:VAL:O	6:CG:67:ASN:ND2	2.51	0.43
23:DB:637:A:C5'	37:DL:112:LEU:HD21	2.48	0.43
18:AB:49:PHE:HA	18:AB:212:TYR:OH	2.18	0.43
3:CD:160:LEU:HD23	3:CD:164:ARG:HH22	1.83	0.43
46:BU:17:ASP:CA	46:BU:20:LYS:HE3	2.47	0.43
47:DF:176:PHE:HB3	47:DF:177:ARG:H	1.59	0.43
49:BR:6:GLN:HE22	49:BR:10:LYS:N	2.17	0.43
28:DP:24:THR:N	28:DP:87:ARG:O	2.51	0.43
41:DJ:26:GLY:O	41:DJ:27:ARG:C	2.57	0.43
23:DB:1792:G:O2'	23:DB:1793:C:H5'	2.19	0.43
10:CK:51:PHE:HZ	10:CK:61:ALA:HA	1.84	0.43
28:BP:63:ILE:CA	28:BP:68:GLY:HA2	2.41	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:891:U:O2'	1:CA:892:A:H5'	2.19	0.43
39:DX:43:LEU:O	39:DX:47:ARG:HG3	2.17	0.43
39:BX:56:LEU:O	39:BX:57:LEU:HB3	2.19	0.43
12:CM:93:GLY:HA2	12:CM:108:ARG:NH1	2.32	0.43
1:CA:1084:G:H5'	1:CA:1102:A:OP2	2.19	0.43
18:CB:98:GLY:C	18:CB:100:LEU:N	2.72	0.43
47:BF:11:VAL:HG12	47:BF:15:LEU:HD11	2.00	0.43
17:CT:74:HIS:O	17:CT:78:LEU:HG	2.18	0.43
7:AH:64:TYR:CA	7:AH:70:VAL:HG23	2.49	0.43
1:AA:1392:G:O2'	1:AA:1393:U:H5'	2.18	0.43
27:DK:99:ILE:N	27:DK:118:LEU:CD2	2.82	0.43
17:AT:2:ASN:CG	17:AT:3:ILE:N	2.72	0.43
23:DB:277:G:H1'	23:DB:278:A:C2	2.53	0.43
23:DB:1509:A:H4'	23:DB:1510:G:O5'	2.18	0.43
25:BC:102:TYR:C	25:BC:103:ILE:HG13	2.38	0.43
23:DB:2674:G:H4'	27:DK:30:ARG:HD2	2.01	0.43
23:DB:1607:C:N4	23:DB:1622:G:C5	2.85	0.43
18:CB:80:LYS:HE2	18:CB:81:ASP:OD1	2.18	0.43
25:BC:250:GLN:CG	25:BC:254:LYS:HG2	2.48	0.43
1:AA:664:G:N2	1:AA:741:G:H1	2.11	0.43
1:AA:1166:G:N1	1:AA:1169:A:OP2	2.48	0.43
23:BB:1854:A:C2	23:BB:2087:G:N3	2.85	0.43
3:AD:78:ALA:HB1	3:AD:88:ASN:HB2	2.00	0.43
26:DD:14:ILE:HA	28:DP:11:GLN:HE22	1.84	0.43
23:DB:2899:A:O2'	23:DB:2900:A:H5'	2.18	0.43
1:AA:1276:G:O2'	1:AA:1277:C:H5'	2.19	0.43
21:CN:34:ASN:N	21:CN:40:ARG:N	2.66	0.43
23:DB:353:C:N4	23:DB:354:A:N6	2.66	0.43
3:CD:117:VAL:O	3:CD:130:ASN:HA	2.19	0.43
13:AP:48:GLU:HG3	13:AP:49:GLY:N	2.30	0.43
1:AA:681:A:H2'	1:AA:682:G:H8	1.84	0.43
1:CA:1270:G:H2'	1:CA:1271:A:C8	2.52	0.43
26:BD:130:GLN:O	26:BD:131:ASP:C	2.57	0.43
1:AA:1179:A:H2'	1:AA:1180:A:O4'	2.18	0.43
23:DB:518:G:H4'	45:DS:18:ARG:NH2	2.34	0.43
23:DB:873:C:H2'	23:DB:874:G:C8	2.53	0.43
28:BP:24:THR:N	28:BP:87:ARG:O	2.52	0.43
1:CA:34:C:H2'	1:CA:35:G:C8	2.54	0.43
23:DB:1704:C:H2'	23:DB:1705:A:H8	1.81	0.43
23:DB:679:C:H2'	23:DB:680:C:C6	2.53	0.43
23:DB:2784:U:O2'	23:DB:2785:C:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:979:A:H2'	23:DB:982:C:N4	2.32	0.43
18:AB:159:ALA:HA	18:AB:180:ILE:HG23	2.01	0.43
20:AO:45:GLU:HB3	20:AO:46:HIS:ND1	2.34	0.43
1:CA:497:G:H2'	1:CA:498:A:C8	2.53	0.43
23:BB:2411:A:H2'	23:BB:2412:A:H8	1.82	0.43
23:DB:425:G:O2'	23:DB:426:C:H5'	2.18	0.43
23:BB:2037:A:H2'	23:BB:2038:G:H8	1.82	0.43
23:DB:2037:A:H2'	23:DB:2038:G:H8	1.83	0.43
14:AQ:80:LYS:O	14:AQ:82:VAL:N	2.49	0.43
1:CA:105:G:H2'	1:CA:106:C:H6	1.83	0.43
32:B4:19:ARG:O	32:B4:20:ASP:HB2	2.18	0.43
7:CH:25:THR:O	7:CH:26:MET:HB3	2.18	0.43
4:AE:142:GLY:HA2	4:AE:145:ASN:ND2	2.33	0.43
1:AA:409:U:OP1	3:AD:23:GLY:HA3	2.19	0.43
23:BB:2671:G:H2'	23:BB:2672:U:C6	2.53	0.43
4:CE:148:SER:OG	4:CE:151:MET:HB2	2.18	0.43
24:DI:68:PHE:N	24:DI:68:PHE:CD1	2.87	0.43
1:AA:258:G:H2'	1:AA:258:G:N3	2.33	0.43
3:AD:82:LYS:NZ	3:AD:82:LYS:HB3	2.34	0.43
25:DC:212:TRP:C	25:DC:212:TRP:CD1	2.91	0.43
25:DC:54:GLY:O	25:DC:214:GLY:HA2	2.19	0.43
24:DI:5:GLN:O	24:DI:6:ALA:CB	2.67	0.43
8:CI:47:VAL:O	8:CI:50:PRO:HD2	2.19	0.43
12:AM:1:ALA:CB	12:AM:8:ILE:HG22	2.44	0.43
19:AU:40:PRO:HG2	19:AU:41:THR:H	1.82	0.43
23:DB:2307:G:N7	23:DB:2311:A:H5''	2.34	0.43
32:D4:35:GLN:HB2	32:D4:35:GLN:HE21	1.59	0.43
35:BV:89:ILE:HD13	35:BV:91:PHE:CE1	2.54	0.43
29:BE:117:ARG:NH1	37:BL:2:ARG:HB2	2.31	0.43
40:BH:72:ILE:O	40:BH:142:VAL:HG22	2.19	0.43
23:DB:2331:G:H2'	23:DB:2332:C:H6	1.84	0.43
42:BN:70:THR:C	42:BN:72:ASP:H	2.22	0.43
1:AA:1229:A:OP2	12:AM:112:ARG:HD3	2.19	0.43
22:DA:54:G:O2'	22:DA:55:U:H5'	2.18	0.43
46:BU:26:ASN:ND2	46:BU:26:ASN:O	2.51	0.43
6:CG:125:ASP:HB3	6:CG:130:LYS:CD	2.34	0.43
23:BB:1283:G:N2	23:BB:1286:A:H5'	2.16	0.43
1:CA:1365:G:H2'	1:CA:1366:C:C6	2.54	0.43
48:BG:140:ILE:CA	48:BG:143:VAL:HG22	2.47	0.43
24:DI:54:ILE:HD11	24:DI:71:LYS:N	2.33	0.43
18:CB:26:MET:HE2	18:CB:188:THR:N	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:D1:34:GLU:HA	33:D1:48:TYR:O	2.19	0.43
43:DO:105:ALA:O	43:DO:107:ALA:N	2.43	0.43
41:BJ:45:THR:H	41:BJ:46:PRO:CD	2.25	0.43
3:CD:145:ARG:O	3:CD:146:GLU:C	2.56	0.43
16:AS:59:VAL:HG11	16:AS:73:PHE:O	2.19	0.43
37:DL:116:VAL:O	37:DL:118:THR:N	2.52	0.43
37:BL:3:LEU:O	37:BL:5:THR:HG23	2.18	0.43
18:AB:197:PHE:O	18:AB:199:ILE:HG13	2.18	0.43
13:AP:1:MET:O	13:AP:3:THR:HG23	2.19	0.43
13:AP:1:MET:HB3	13:AP:24:SER:OG	2.18	0.43
18:CB:57:ASN:HB3	18:CB:219:THR:O	2.19	0.43
26:DD:32:ASN:ND2	26:DD:50:VAL:HG21	2.31	0.43
3:AD:166:LYS:CD	3:AD:167:PRO:HD2	2.41	0.43
1:CA:892:A:O2'	1:CA:1415:G:H4'	2.18	0.43
39:DX:20:ASN:HA	39:DX:24:GLU:OE1	2.19	0.43
6:AG:14:ASP:HB3	6:AG:19:SER:N	2.28	0.43
18:CB:89:PHE:CE2	18:CB:153:MET:HA	2.53	0.43
40:BH:6:LEU:O	40:BH:7:ASP:HB2	2.19	0.43
23:BB:1912:A:N7	23:BB:1918:A:C2	2.86	0.43
26:DD:130:GLN:O	26:DD:131:ASP:C	2.56	0.43
42:BN:102:PHE:CE2	45:BS:40:ASN:HB3	2.54	0.43
23:DB:543:G:C2	23:DB:544:C:H1'	2.54	0.43
45:DS:29:VAL:HG11	45:DS:55:ILE:CD1	2.49	0.43
51:BZ:54:LYS:HA	51:BZ:57:ARG:CD	2.42	0.43
27:DK:103:VAL:HG23	27:DK:122:VAL:O	2.19	0.43
23:BB:2733:A:H3'	23:BB:2733:A:C8	2.53	0.43
27:BK:98:ARG:HG2	27:BK:98:ARG:HH11	1.83	0.43
23:DB:2874:C:H5''	42:DN:4:ARG:NH2	2.33	0.43
1:CA:1509:C:H2'	1:CA:1510:C:H6	1.84	0.43
17:CT:38:ILE:HD11	17:CT:82:ILE:CG2	2.45	0.43
13:AP:28:ARG:HD3	13:AP:29:ASN:H	1.81	0.43
23:BB:351:C:H2'	23:BB:352:A:H8	1.83	0.43
48:DG:9:VAL:CA	48:DG:48:THR:HA	2.47	0.43
48:DG:51:PHE:HZ	48:DG:71:LEU:HG	1.83	0.43
1:CA:1250:A:H2'	1:CA:1251:A:C8	2.54	0.43
37:BL:73:ILE:O	37:BL:105:ILE:HG23	2.18	0.43
23:DB:2353:G:H21	52:DW:30:VAL:CG2	2.26	0.43
23:DB:2354:C:H4'	52:DW:31:LEU:CD2	2.48	0.43
23:DB:2462:C:H2'	23:DB:2463:C:H6	1.82	0.43
23:DB:933:A:H5'	23:DB:934:U:OP2	2.19	0.43
1:CA:820:U:H4'	1:CA:821:G:OP2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:67:C:O2	1:CA:171:A:H2	2.02	0.43
1:CA:1265:C:O2'	1:CA:1266:G:H5'	2.19	0.43
1:CA:1451:U:O5'	1:CA:1452:C:H5	2.02	0.43
29:BE:83:VAL:CG1	29:BE:86:ALA:HA	2.48	0.43
51:DZ:70:GLU:O	51:DZ:71:LEU:C	2.57	0.43
23:DB:987:C:O2'	23:DB:988:A:H5'	2.19	0.43
51:BZ:72:ARG:HB2	51:BZ:78:TYR:CD2	2.53	0.43
8:AI:98:ARG:HA	8:AI:103:VAL:HG22	1.99	0.43
1:AA:5:U:H1'	1:AA:6:G:C2	2.54	0.43
1:AA:619:U:N3	3:AD:130:ASN:OD1	2.49	0.43
25:BC:136:VAL:HG12	25:BC:137:GLY:N	2.34	0.43
23:BB:826:U:H2'	23:BB:828:U:O4'	2.19	0.43
41:BJ:102:GLU:HB3	41:BJ:119:PHE:CZ	2.49	0.43
23:BB:477:A:H2'	23:BB:478:A:C8	2.54	0.43
35:BV:53:LYS:HA	35:BV:53:LYS:HZ3	1.82	0.43
1:AA:309:A:O2'	1:AA:310:G:H5'	2.19	0.43
23:BB:2800:A:O2'	23:BB:2801:G:H5'	2.18	0.43
23:DB:1163:G:O2'	23:DB:1164:C:H5'	2.19	0.43
7:CH:54:THR:HG23	7:CH:55:LYS:N	2.34	0.43
23:BB:105:C:O2'	23:BB:106:C:H5'	2.18	0.43
1:CA:633:G:H2'	1:CA:634:C:H6	1.82	0.43
1:CA:148:G:H2'	1:CA:149:A:H5''	2.00	0.43
23:DB:1849:G:H2'	23:DB:1850:G:C8	2.53	0.43
47:BF:163:GLU:C	47:BF:165:GLY:H	2.21	0.43
23:BB:2315:G:H2'	23:BB:2316:G:C8	2.53	0.43
1:CA:681:A:H2'	1:CA:682:G:H8	1.82	0.43
1:CA:364:A:H2'	1:CA:365:U:O2	2.18	0.43
23:BB:1076:C:H5''	24:BI:94:LYS:NZ	2.33	0.43
7:CH:22:ALA:O	7:CH:62:LEU:HB2	2.18	0.43
23:DB:1821:A:H2'	23:DB:1822:C:C6	2.54	0.43
23:DB:649:G:H2'	23:DB:650:C:C6	2.53	0.43
41:DJ:1:MET:HG2	41:DJ:2:LYS:HE2	2.01	0.43
23:DB:1568:G:H4'	25:DC:58:LYS:HB3	2.01	0.43
38:BM:124:LEU:HA	38:BM:125:PRO:HD3	1.89	0.43
1:AA:168:G:O2'	1:AA:169:C:H5'	2.19	0.43
3:AD:18:LEU:HB2	3:AD:20:LEU:HG	1.99	0.43
23:BB:1449:G:O2'	23:BB:1450:G:H5'	2.19	0.43
23:DB:758:C:O2	23:DB:1981:A:H2	2.01	0.43
1:AA:1204:A:H2'	1:AA:1205:U:O4'	2.18	0.43
23:DB:613:A:H2'	23:DB:613:A:N3	2.34	0.43
24:DI:35:MET:HE3	24:DI:39:LYS:HG2	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CK:75:GLU:N	10:CK:75:GLU:CD	2.71	0.43
41:DJ:140:LEU:O	41:DJ:140:LEU:HD23	2.19	0.43
23:BB:1664:A:H1'	23:BB:2726:A:C2	2.54	0.43
23:BB:758:C:O2	23:BB:1981:A:H2	2.00	0.43
8:CI:38:PHE:O	8:CI:44:ARG:HB3	2.18	0.43
18:CB:42:LEU:O	18:CB:46:VAL:HG12	2.19	0.43
19:AU:42:THR:HB	19:AU:46:ARG:HE	1.84	0.43
19:AU:43:GLU:HB3	19:AU:44:ARG:NH2	2.34	0.43
52:BW:49:ASN:HB3	52:BW:81:ILE:CG1	2.49	0.43
9:CJ:100:ILE:HG13	9:CJ:100:ILE:H	1.63	0.43
35:BV:4:ILE:O	35:BV:63:ILE:HA	2.19	0.43
1:CA:123:U:H5''	1:CA:311:C:O2'	2.18	0.43
52:BW:39:GLN:HG2	52:BW:42:THR:H	1.84	0.43
48:DG:25:ILE:HG22	48:DG:78:VAL:HG21	2.00	0.43
5:CF:96:VAL:HG12	5:CF:97:THR:H	1.84	0.43
23:DB:1199:U:C5'	44:DQ:4:LYS:HD3	2.47	0.43
37:DL:108:ALA:HB3	37:DL:125:LEU:HD21	2.00	0.43
8:AI:49:GLN:HB2	8:AI:50:PRO:CD	2.49	0.43
8:AI:67:LYS:HD3	8:AI:67:LYS:C	2.39	0.43
43:DO:34:HIS:ND1	43:DO:53:THR:OG1	2.49	0.43
37:BL:79:LEU:CG	37:BL:112:LEU:HA	2.49	0.43
49:DR:39:LEU:HB2	49:DR:49:ILE:CG1	2.39	0.43
24:DI:131:THR:O	24:DI:135:MET:HG3	2.18	0.43
23:BB:673:C:H2'	23:BB:674:G:H5'	2.01	0.43
46:BU:10:VAL:HB	46:BU:69:VAL:HB	2.00	0.43
49:BR:39:LEU:N	49:BR:39:LEU:HD23	2.34	0.43
16:AS:40:PHE:CB	16:AS:41:PRO:HD2	2.49	0.43
47:BF:137:PHE:O	47:BF:138:PRO:C	2.57	0.43
22:DA:42:C:O2'	47:DF:91:ARG:NH1	2.52	0.43
4:CE:131:ASN:O	4:CE:135:VAL:HG23	2.19	0.43
20:AO:60:VAL:HG11	23:BB:715:A:O4'	2.18	0.43
1:AA:204:G:H2'	1:AA:205:A:O4'	2.18	0.43
25:DC:77:VAL:HG23	25:DC:77:VAL:O	2.18	0.43
36:D2:10:LEU:O	36:D2:14:ARG:HG3	2.19	0.43
40:DH:8:LYS:O	40:DH:13:GLY:HA3	2.19	0.43
12:AM:5:GLY:O	12:AM:7:ASN:ND2	2.51	0.43
23:DB:669:G:O2'	23:DB:670:A:H5'	2.19	0.43
23:BB:1591:A:H2'	23:BB:1592:C:O4'	2.18	0.43
23:BB:581:C:H2'	23:BB:582:A:H8	1.84	0.43
39:BX:23:ARG:HA	39:BX:27:ASN:ND2	2.33	0.43
23:DB:2539:C:H5'	32:D4:3:VAL:HG11	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BS:45:VAL:C	45:BS:48:LYS:HB3	2.39	0.43
23:DB:740:C:O2'	23:DB:741:U:H5'	2.18	0.43
23:DB:2557:G:C6	23:DB:2558:C:N4	2.87	0.43
48:DG:9:VAL:HA	48:DG:48:THR:HG22	2.01	0.43
23:BB:1797:G:O3'	25:BC:255:LYS:O	2.37	0.43
1:AA:1162:C:H2'	1:AA:1163:A:C8	2.54	0.43
25:DC:250:GLN:OE1	25:DC:250:GLN:N	2.51	0.43
48:BG:64:ALA:O	48:BG:68:ARG:N	2.52	0.43
1:AA:501:C:H1'	1:AA:549:C:H1'	2.00	0.43
23:BB:2652:C:H2'	23:BB:2653:U:O4'	2.18	0.43
1:CA:132:C:H5''	17:CT:68:LYS:HZ2	1.84	0.43
11:CL:106:VAL:CG2	11:CL:116:TYR:HB3	2.49	0.43
23:DB:722:A:H2'	23:DB:723:C:C6	2.54	0.43
44:BQ:51:GLN:O	44:BQ:55:GLN:HG3	2.18	0.43
21:AN:25:GLU:O	21:AN:29:ILE:HG13	2.19	0.43
23:DB:156:A:O2'	23:DB:157:C:H5'	2.19	0.43
1:AA:735:C:H2'	1:AA:736:C:C6	2.53	0.43
42:BN:62:ASN:N	42:BN:62:ASN:ND2	2.66	0.43
18:AB:71:THR:O	18:AB:72:LYS:C	2.57	0.43
23:BB:572:A:C5'	49:BR:80:ARG:HH22	2.32	0.43
1:AA:686:U:O4	1:AA:703:G:H1'	2.19	0.43
1:AA:677:U:H1'	10:AK:120:CYS:SG	2.59	0.43
1:CA:177:G:N3	1:CA:177:G:O4'	2.52	0.43
6:AG:82:SER:HB2	6:AG:84:TYR:CZ	2.54	0.43
29:DE:149:ILE:HG23	29:DE:188:MET:CA	2.48	0.43
23:DB:958:U:O4	38:DM:16:ARG:HA	2.19	0.43
41:BJ:40:HIS:O	44:BQ:66:ALA:HB1	2.19	0.43
26:DD:56:LYS:O	26:DD:58:ASN:N	2.50	0.43
1:CA:965:U:H5'	1:CA:965:U:C6	2.53	0.43
1:AA:1253:G:N1	1:AA:1285:A:N6	2.66	0.43
1:AA:629:A:O2'	1:AA:630:A:H5'	2.19	0.43
1:AA:621:A:H2'	1:AA:622:A:H8	1.82	0.43
29:DE:98:LYS:HG2	29:DE:102:ARG:NH1	2.34	0.43
23:BB:649:G:H2'	23:BB:650:C:C6	2.54	0.43
47:DF:2:LYS:H	47:DF:2:LYS:HE3	1.84	0.43
23:DB:1320:C:C5	23:DB:1329:U:H5''	2.53	0.43
23:BB:184:C:H4'	23:BB:217:A:C2	2.54	0.43
1:AA:179:A:O2'	1:AA:180:U:H5'	2.18	0.43
1:CA:152:A:H3'	1:CA:153:C:C6	2.54	0.43
2:CC:145:ALA:C	2:CC:147:GLY:H	2.22	0.43
1:AA:915:A:H2'	1:AA:916:U:H5'	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:644:U:H4'	7:AH:83:ARG:NH2	2.33	0.43
23:DB:2431:U:H2'	23:DB:2433:A:OP2	2.18	0.43
1:AA:1193:G:O2'	1:AA:1194:U:H5'	2.19	0.43
29:DE:52:VAL:HG11	29:DE:81:GLY:HA3	1.99	0.43
51:BZ:66:THR:O	51:BZ:69:ALA:HB3	2.19	0.43
23:BB:2853:C:O2'	23:BB:2854:G:H5'	2.19	0.43
23:DB:1257:C:H5'	29:DE:78:TRP:CZ3	2.53	0.43
23:BB:551:G:O2'	23:BB:552:U:H5'	2.19	0.43
23:DB:1344:U:O2'	23:DB:1385:A:H2'	2.18	0.43
22:DA:21:G:O2'	22:DA:22:U:H5'	2.19	0.43
33:D1:12:SER:C	33:D1:14:ALA:H	2.21	0.43
23:BB:756:A:H2'	23:BB:757:G:O4'	2.19	0.43
3:CD:41:GLY:C	3:CD:43:ARG:H	2.22	0.43
1:AA:874:G:O2'	1:AA:875:U:H5'	2.19	0.43
23:BB:613:A:H2'	23:BB:613:A:N3	2.33	0.43
23:BB:1930:G:H22	23:BB:1969:A:P	2.41	0.43
7:AH:22:ALA:O	7:AH:62:LEU:HB2	2.19	0.43
8:CI:39:GLY:C	8:CI:41:GLU:H	2.22	0.43
23:BB:547:A:H3'	23:BB:547:A:OP2	2.18	0.43
50:BT:11:LEU:HD13	50:BT:11:LEU:N	2.34	0.43
50:BT:11:LEU:HA	50:BT:34:VAL:HG12	1.99	0.43
1:CA:1349:A:H61	1:CA:1373:G:H1'	1.83	0.43
29:DE:60:TRP:HB3	29:DE:61:ARG:H	1.45	0.43
29:DE:60:TRP:CZ3	29:DE:69:ARG:HA	2.46	0.43
26:BD:113:SER:HB3	26:BD:167:ASN:N	2.34	0.43
14:AQ:17:GLU:C	14:AQ:19:SER:H	2.22	0.43
12:CM:68:LEU:HD22	12:CM:69:ARG:HH12	1.81	0.43
1:CA:1323:G:O2'	1:CA:1362:A:O4'	2.36	0.43
37:DL:79:LEU:CG	37:DL:112:LEU:HA	2.47	0.43
48:BG:140:ILE:O	48:BG:143:VAL:HG22	2.19	0.43
49:DR:51:VAL:HB	49:DR:52:PRO:HD2	2.01	0.43
23:DB:1059:G:H2'	23:DB:1060:U:C6	2.54	0.43
40:DH:96:THR:HG23	40:DH:97:ARG:CD	2.48	0.43
46:DU:10:VAL:HB	46:DU:69:VAL:HB	1.99	0.43
43:BO:112:GLU:OE1	43:BO:113:ALA:N	2.52	0.43
22:BA:42:C:O2'	47:BF:91:ARG:NH1	2.52	0.43
47:BF:65:LEU:O	47:BF:86:CYS:HA	2.17	0.43
47:BF:32:LYS:HA	47:BF:95:MET:HG3	2.01	0.43
41:BJ:105:VAL:O	41:BJ:108:MET:HB2	2.19	0.43
23:BB:1103:A:C2'	23:BB:1104:C:H5'	2.49	0.43
2:AC:179:ALA:HB1	2:AC:202:PHE:CE1	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DZ:56:MET:O	51:DZ:59:ILE:HG12	2.18	0.43
1:AA:1082:A:O2'	1:AA:1083:U:H5'	2.18	0.43
24:DI:17:ALA:C	24:DI:19:PRO:HD3	2.39	0.43
1:AA:1031:C:H1'	1:AA:1032:G:C6	2.54	0.43
4:AE:136:VAL:HG13	4:AE:137:ARG:H	1.83	0.43
18:CB:101:THR:HG22	18:CB:174:GLU:OE1	2.18	0.43
17:CT:34:VAL:CG1	17:CT:78:LEU:HD22	2.46	0.43
6:AG:71:THR:O	6:AG:72:VAL:HG13	2.19	0.43
2:AC:81:GLU:O	2:AC:85:LYS:HD2	2.19	0.43
23:BB:1871:A:H2'	23:BB:1872:A:H8	1.83	0.43
27:BK:119:ALA:N	27:BK:120:PRO:HD2	2.34	0.43
39:DX:32:ALA:C	39:DX:34:SER:H	2.21	0.43
25:BC:157:ALA:C	25:BC:159:THR:H	2.22	0.43
17:CT:2:ASN:CG	17:CT:3:ILE:N	2.72	0.43
51:DZ:20:HIS:C	51:DZ:22:LEU:H	2.22	0.43
23:DB:2733:A:H2'	23:DB:2734:A:O4'	2.19	0.43
11:CL:55:ARG:HG3	11:CL:61:GLU:OE2	2.18	0.43
11:AL:81:ILE:CG2	11:AL:94:TYR:HB3	2.48	0.43
23:DB:1883:U:H2'	23:DB:1884:G:C1'	2.48	0.43
48:DG:8:VAL:HG21	48:DG:51:PHE:HE2	1.83	0.43
23:BB:85:G:OP1	46:BU:6:ARG:N	2.52	0.43
41:BJ:58:ASN:HA	41:BJ:127:GLY:CA	2.48	0.43
23:DB:870:U:O2'	23:DB:871:U:H5'	2.18	0.43
23:DB:2705:A:H2	42:DN:64:ARG:NH1	2.16	0.43
42:DN:63:ARG:O	42:DN:66:ALA:HB3	2.18	0.43
29:BE:47:LYS:HB3	29:BE:51:GLU:HB2	2.01	0.43
1:AA:1344:C:C2'	1:AA:1345:U:H5'	2.49	0.43
23:BB:907:G:C2'	23:BB:908:C:H5'	2.48	0.43
23:DB:2105:U:H2'	23:DB:2106:U:H6	1.83	0.43
34:D3:44:ARG:N	34:D3:45:PRO:CD	2.80	0.43
1:AA:600:A:H2'	1:AA:601:G:H8	1.84	0.43
1:AA:1520:C:H2'	1:AA:1521:C:C6	2.54	0.43
23:BB:1825:U:H2'	23:BB:1826:G:H8	1.84	0.43
44:DQ:29:ARG:HG2	44:DQ:29:ARG:NH1	2.31	0.43
41:DJ:72:LYS:CB	41:DJ:89:PHE:HB2	2.49	0.43
23:DB:1045:C:C2	23:DB:1047:G:N2	2.87	0.43
23:BB:481:G:OP2	46:BU:44:HIS:HB2	2.19	0.43
1:AA:252:U:H2'	1:AA:253:A:C8	2.54	0.43
20:CO:55:GLY:O	20:CO:59:MET:HG2	2.18	0.43
10:CK:34:THR:HB	10:CK:39:ASN:C	2.39	0.43
1:CA:308:C:H2'	1:CA:309:A:C8	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:323:C:H6	23:DB:1205:A:C2	2.37	0.43
4:CE:103:GLY:O	4:CE:121:ASN:HA	2.19	0.43
23:BB:710:U:H2'	23:BB:711:G:H8	1.82	0.43
11:CL:80:LEU:HB3	11:CL:97:VAL:CG2	2.49	0.43
22:DA:2:G:H3'	22:DA:2:G:OP2	2.18	0.43
18:CB:27:LYS:O	18:CB:29:PHE:N	2.51	0.43
23:BB:1740:G:H2'	23:BB:1741:C:C6	2.54	0.43
41:DJ:58:ASN:HA	41:DJ:127:GLY:HA3	2.00	0.43
23:DB:425:G:H2'	23:DB:426:C:C6	2.54	0.43
23:BB:409:G:H2'	23:BB:410:G:H8	1.83	0.43
23:DB:1830:C:H2'	23:DB:1831:G:C8	2.54	0.43
9:AJ:50:THR:HA	9:AJ:63:ASP:O	2.19	0.43
15:AR:28:LEU:C	15:AR:30:ASN:N	2.72	0.43
23:BB:692:C:H2'	23:BB:693:A:C8	2.54	0.43
11:AL:43:LYS:CE	11:AL:44:PRO:HD3	2.48	0.43
1:CA:59:A:N6	1:CA:331:G:H1'	2.33	0.43
4:AE:98:ALA:HB2	4:AE:123:LEU:HG	2.01	0.43
31:B0:25:THR:O	31:B0:26:SER:HB2	2.19	0.43
33:B1:12:SER:C	33:B1:14:ALA:H	2.22	0.43
41:BJ:100:VAL:O	41:BJ:104:ALA:HB2	2.19	0.43
1:AA:1424:U:H2'	1:AA:1425:U:C6	2.54	0.43
12:AM:72:ILE:HG22	12:AM:73:SER:N	2.33	0.43
50:DT:34:VAL:HG21	50:DT:43:ILE:CD1	2.48	0.43
50:BT:11:LEU:HD22	50:BT:11:LEU:N	2.23	0.43
52:DW:49:ASN:HB3	52:DW:81:ILE:CG1	2.49	0.43
9:CJ:8:ILE:HD12	9:CJ:74:VAL:HG11	2.00	0.43
48:BG:16:VAL:HG13	48:BG:23:ILE:CG2	2.49	0.43
2:CC:38:VAL:CG2	2:CC:56:ILE:HD13	2.48	0.43
48:DG:30:GLY:O	48:DG:78:VAL:HG12	2.18	0.43
5:CF:98:GLU:O	5:CF:99:ALA:HB3	2.19	0.43
5:AF:61:LEU:HD12	5:AF:63:ASN:OD1	2.19	0.43
8:AI:66:VAL:CG1	8:AI:74:GLN:HG3	2.49	0.43
15:AR:72:ARG:HE	19:AU:3:ILE:HD11	1.84	0.43
23:BB:28:A:O2'	23:BB:29:U:H5'	2.19	0.43
6:CG:68:VAL:HG21	6:CG:103:ILE:HG12	2.00	0.43
37:DL:70:LYS:C	37:DL:72:ALA:H	2.22	0.43
23:BB:1033:U:C5	32:B4:15:LYS:HE3	2.54	0.43
33:B1:34:GLU:HA	33:B1:48:TYR:O	2.19	0.43
40:DH:114:GLU:HB2	40:DH:133:GLN:O	2.19	0.43
40:DH:96:THR:OG1	40:DH:112:LYS:HE3	2.19	0.43
22:DA:7:G:O2'	22:DA:8:C:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DO:28:VAL:O	43:DO:29:HIS:HB2	2.19	0.43
35:DV:81:PRO:HG2	38:DM:20:LEU:HD12	2.00	0.43
47:DF:116:LEU:HD22	47:DF:175:PRO:HG2	2.00	0.43
13:AP:51:ARG:O	13:AP:52:LEU:HB2	2.19	0.43
18:CB:53:LEU:HA	18:CB:56:LEU:CD1	2.48	0.43
47:BF:105:ILE:HA	47:BF:108:PRO:HB2	2.01	0.43
26:DD:150:GLN:O	26:DD:151:THR:C	2.57	0.43
25:DC:14:HIS:C	25:DC:203:VAL:HG11	2.39	0.43
47:DF:11:VAL:HG12	47:DF:15:LEU:HD11	2.01	0.43
26:BD:4:LEU:HD22	26:BD:4:LEU:N	2.34	0.43
9:AJ:28:THR:OG1	9:AJ:29:ALA:N	2.51	0.43
34:D3:49:VAL:HG21	34:D3:54:LEU:HD13	2.01	0.43
23:BB:669:G:O2'	23:BB:670:A:H5'	2.19	0.43
37:DL:96:LYS:HE2	37:DL:103:ILE:HA	2.00	0.43
23:BB:1091:G:O2'	23:BB:1092:C:H5'	2.19	0.43
12:CM:33:LEU:HD12	12:CM:40:GLU:CD	2.39	0.43
1:CA:939:G:H2'	1:CA:940:C:H6	1.83	0.43
12:CM:94:LEU:HB3	12:CM:95:PRO:HD2	2.00	0.43
12:AM:89:ARG:NH1	12:AM:94:LEU:HD13	2.34	0.43
48:BG:123:GLU:O	48:BG:125:PRO:HD3	2.19	0.43
39:BX:44:LYS:HG3	39:BX:48:ARG:NH1	2.34	0.43
16:CS:51:HIS:HA	16:CS:56:HIS:HA	2.00	0.43
6:AG:72:VAL:HG22	6:AG:141:HIS:CE1	2.54	0.43
44:DQ:93:ILE:HG23	44:DQ:94:LEU:N	2.34	0.43
23:BB:948:C:H2'	23:BB:949:G:H8	1.83	0.43
45:DS:84:ARG:HB3	45:DS:96:ILE:CG2	2.45	0.43
11:CL:41:PRO:HB2	11:CL:88:ASP:HB3	1.99	0.43
45:DS:70:LYS:HD3	45:DS:110:ARG:CA	2.44	0.43
42:BN:96:ARG:HG2	42:BN:96:ARG:HH21	1.84	0.43
45:DS:71:VAL:O	45:DS:71:VAL:HG13	2.18	0.43
23:DB:1299:G:H4'	23:DB:1301:A:H1'	2.01	0.43
48:DG:3:VAL:O	48:DG:68:ARG:HG3	2.19	0.43
48:DG:64:ALA:O	48:DG:68:ARG:N	2.51	0.43
48:DG:71:LEU:O	48:DG:74:MET:HB2	2.19	0.43
1:AA:662:U:O2'	1:AA:836:G:H5''	2.19	0.43
37:BL:70:LYS:C	37:BL:72:ALA:H	2.23	0.43
23:DB:845:A:H8	23:DB:845:A:H3'	1.84	0.43
1:AA:1096:C:H2'	1:AA:1097:C:H6	1.84	0.43
23:DB:2094:A:H2'	23:DB:2095:A:H8	1.83	0.43
3:CD:97:LEU:HA	3:CD:100:VAL:CG2	2.49	0.43
23:DB:271:G:HO2'	23:DB:272:A:H8	1.65	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CH:118:ALA:HB3	7:CH:120:LEU:CD2	2.49	0.43
1:CA:1302:C:C5	12:CM:16:ILE:HG13	2.54	0.43
23:BB:1158:C:O4'	30:BY:31:ILE:HD11	2.19	0.43
17:AT:53:MET:O	17:AT:57:VAL:HG22	2.18	0.43
41:DJ:40:HIS:CE1	41:DJ:41:LYS:HG3	2.54	0.43
23:DB:1210:G:C5'	23:DB:1212:G:H5'	2.49	0.43
1:AA:308:C:H2'	1:AA:309:A:C8	2.54	0.43
50:DT:7:LEU:CA	50:DT:9:LYS:HE3	2.49	0.43
50:DT:7:LEU:O	50:DT:7:LEU:HD13	2.19	0.43
23:DB:1744:A:H2'	23:DB:1745:A:C8	2.53	0.43
5:AF:72:ASP:O	5:AF:75:GLU:HB2	2.18	0.43
1:AA:321:A:O2'	1:AA:322:C:H5'	2.19	0.43
1:AA:1113:C:H2'	1:AA:1114:C:H6	1.83	0.43
19:AU:11:PHE:CE1	19:AU:13:VAL:HG12	2.54	0.43
23:BB:1007:C:O2'	41:BJ:110:PRO:HB3	2.19	0.43
23:BB:520:G:O2'	23:BB:521:U:H5'	2.19	0.43
23:DB:1340:U:H3'	23:DB:1341:G:C5'	2.48	0.43
1:CA:1057:G:H5''	2:CC:154:GLY:H	1.83	0.43
23:DB:1007:C:H4'	41:DJ:110:PRO:HB3	2.00	0.43
23:BB:1475:G:H4'	23:BB:1476:U:O5'	2.18	0.43
23:BB:2233:U:H2'	23:BB:2234:G:C8	2.53	0.43
18:AB:8:MET:O	18:AB:9:LEU:HB3	2.19	0.43
22:DA:109:A:H2'	22:DA:110:C:C6	2.53	0.43
15:CR:26:ALA:C	15:CR:28:LEU:H	2.22	0.43
18:AB:144:GLU:HA	18:AB:148:GLY:HA3	2.01	0.43
23:DB:1879:C:H2'	23:DB:1880:U:O4'	2.19	0.43
23:DB:702:U:H2'	23:DB:703:U:C6	2.54	0.43
28:DP:99:LEU:HD22	28:DP:99:LEU:HA	1.88	0.43
23:DB:2010:G:H2'	23:DB:2011:U:C6	2.54	0.43
1:AA:696:A:O2'	1:AA:697:U:H5'	2.18	0.43
49:DR:57:GLY:HA2	49:DR:103:ALA:HA	2.01	0.43
23:DB:550:C:H2'	23:DB:551:G:H8	1.84	0.43
34:D3:14:LYS:O	34:D3:14:LYS:HD2	2.19	0.43
24:DI:59:THR:O	24:DI:59:THR:HG23	2.19	0.43
21:CN:42:ASN:O	21:CN:46:LYS:HG3	2.19	0.43
38:BM:74:THR:HB	38:BM:88:ASN:O	2.19	0.43
1:AA:1173:U:H2'	1:AA:1174:G:O4'	2.18	0.43
23:DB:1432:G:O2'	23:DB:1433:A:H5'	2.18	0.42
52:DW:59:PHE:CE2	52:DW:61:LYS:HA	2.54	0.42
42:DN:49:GLU:HB2	42:DN:50:PRO:HD3	2.00	0.42
8:CI:103:VAL:HG23	8:CI:104:THR:N	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1238:A:C8	1:CA:1303:C:H1'	2.54	0.42
1:CA:1375:A:O2'	1:CA:1376:U:H5'	2.19	0.42
1:CA:121:U:H3'	1:CA:121:U:OP1	2.18	0.42
29:BE:108:ILE:HD13	37:BL:2:ARG:NH2	2.34	0.42
5:CF:43:GLY:HA2	5:CF:58:HIS:NE2	2.34	0.42
26:DD:25:THR:O	26:DD:27:ILE:HG13	2.18	0.42
40:BH:72:ILE:HG23	40:BH:142:VAL:CG2	2.49	0.42
23:BB:2329:U:H2'	23:BB:2330:G:H8	1.83	0.42
23:DB:1199:U:H2'	23:DB:1200:C:H6	1.77	0.42
22:DA:28:C:H5	22:DA:56:G:H1	1.67	0.42
43:DO:53:THR:OG1	43:DO:65:THR:HB	2.19	0.42
12:CM:22:TYR:CB	12:CM:65:GLU:HA	2.49	0.42
12:CM:64:VAL:HA	12:CM:68:LEU:HD12	2.00	0.42
6:CG:125:ASP:CB	6:CG:130:LYS:HB3	2.49	0.42
25:BC:189:ALA:O	25:BC:190:THR:O	2.37	0.42
23:DB:630:G:H4'	23:DB:640:C:O2'	2.19	0.42
48:DG:132:LEU:CD2	48:DG:132:LEU:N	2.81	0.42
10:CK:31:VAL:HG23	10:CK:44:ALA:HB3	2.01	0.42
18:AB:46:VAL:N	18:AB:47:PRO:CD	2.81	0.42
35:DV:29:ILE:CD1	35:DV:90:ASP:HA	2.49	0.42
49:DR:4:VAL:HG23	49:DR:39:LEU:HG	2.00	0.42
23:DB:1079:C:H5	23:DB:1088:A:OP1	2.02	0.42
24:DI:78:LEU:HD23	24:DI:81:LYS:HE2	2.01	0.42
40:DH:72:ILE:CG1	40:DH:108:VAL:HG11	2.44	0.42
47:DF:55:ASP:O	47:DF:59:ILE:HG13	2.18	0.42
18:AB:89:PHE:CD1	18:AB:89:PHE:N	2.87	0.42
23:BB:1025:G:H8	23:BB:1025:G:OP1	2.01	0.42
49:DR:34:GLU:OE1	49:DR:60:LYS:HE2	2.19	0.42
47:BF:37:MET:SD	47:BF:56:LEU:HD23	2.59	0.42
47:DF:33:ILE:HB	47:DF:90:LEU:HD23	2.00	0.42
23:BB:2052:A:H4'	26:BD:148:GLN:O	2.18	0.42
37:BL:96:LYS:HE2	37:BL:103:ILE:HA	2.01	0.42
12:CM:33:LEU:O	12:CM:37:GLY:N	2.49	0.42
27:BK:19:VAL:HB	27:BK:41:ILE:CG1	2.49	0.42
48:DG:123:GLU:O	48:DG:125:PRO:HD3	2.19	0.42
40:BH:15:LEU:C	40:BH:17:ASP:N	2.73	0.42
23:DB:529:A:OP2	41:DJ:113:PRO:HD3	2.19	0.42
28:BP:20:ARG:CG	28:BP:21:PRO:HD2	2.49	0.42
2:AC:78:LYS:O	2:AC:79:LYS:HB2	2.19	0.42
27:DK:41:ILE:CG1	27:DK:42:THR:N	2.81	0.42
23:DB:544:C:O2'	23:DB:545:U:P	2.76	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2732:G:P	26:BD:208:LYS:HZ3	2.42	0.42
1:CA:241:G:O2'	1:CA:242:G:H5'	2.18	0.42
32:D4:36:ARG:O	32:D4:37:GLN:C	2.56	0.42
1:CA:1509:C:O2'	1:CA:1510:C:H5'	2.18	0.42
4:CE:106:ALA:HB1	4:CE:110:MET:CB	2.46	0.42
28:DP:48:ALA:HB3	28:DP:59:THR:CB	2.49	0.42
23:BB:1883:U:H2'	23:BB:1884:G:C1'	2.49	0.42
7:AH:94:VAL:CG2	7:AH:101:ALA:HB2	2.46	0.42
23:DB:2589:A:H2'	23:DB:2590:A:H8	1.84	0.42
23:BB:2844:G:O2'	23:BB:2845:U:H5'	2.19	0.42
23:DB:1804:C:OP1	25:DC:256:THR:HB	2.19	0.42
25:DC:255:LYS:C	25:DC:256:THR:HG23	2.38	0.42
48:BG:51:PHE:CD2	48:BG:68:ARG:HG2	2.53	0.42
1:CA:549:C:H2'	1:CA:550:G:C8	2.53	0.42
3:CD:30:LYS:HD3	3:CD:30:LYS:N	2.34	0.42
33:D1:29:LYS:HA	33:D1:31:GLU:OE1	2.18	0.42
23:DB:1093:G:O2'	23:DB:1094:U:H5'	2.18	0.42
1:AA:764:C:N4	1:AA:812:G:N1	2.67	0.42
42:DN:59:SER:C	42:DN:61:ALA:N	2.71	0.42
52:DW:44:PHE:O	52:DW:78:PHE:HA	2.19	0.42
43:BO:5:SER:HA	43:BO:8:ILE:CD1	2.46	0.42
38:BM:17:ASN:HD21	38:BM:95:LEU:HD23	1.84	0.42
29:DE:106:LYS:HZ3	29:DE:201:ALA:HB2	1.83	0.42
23:DB:364:C:H2'	23:DB:365:U:O4'	2.19	0.42
23:DB:1050:A:O2'	23:DB:1051:G:H5'	2.19	0.42
1:AA:429:U:H4'	1:AA:430:A:O5'	2.18	0.42
1:CA:1027:C:H2'	1:CA:1028:C:H6	1.84	0.42
23:DB:419:U:H2'	23:DB:420:C:H6	1.82	0.42
41:DJ:89:PHE:O	41:DJ:92:MET:HB2	2.19	0.42
29:BE:149:ILE:HG23	29:BE:188:MET:CA	2.49	0.42
41:BJ:40:HIS:CE1	41:BJ:41:LYS:HG3	2.54	0.42
23:BB:397:U:H2'	23:BB:398:C:H6	1.83	0.42
8:CI:71:ILE:HD12	8:CI:71:ILE:N	2.33	0.42
1:CA:184:G:H4'	1:CA:224:U:O3'	2.18	0.42
1:AA:419:C:O2'	1:AA:420:U:H5'	2.18	0.42
23:DB:2448:A:H4'	23:DB:2449:U:OP2	2.19	0.42
1:CA:89:U:H2'	1:CA:90:C:O4'	2.19	0.42
1:AA:398:U:H2'	1:AA:399:G:C8	2.54	0.42
23:BB:1677:A:H2'	23:BB:1678:A:C8	2.53	0.42
44:DQ:47:ARG:NH1	44:DQ:48:ASP:OD2	2.52	0.42
23:BB:1011:G:H5''	44:BQ:76:SER:OG	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AN:11:LYS:HB3	21:AN:15:LEU:HD11	2.01	0.42
23:DB:692:C:H2'	23:DB:693:A:C8	2.54	0.42
41:BJ:2:LYS:CD	41:BJ:2:LYS:H	2.32	0.42
23:DB:1360:G:H2'	23:DB:1361:G:O4'	2.19	0.42
3:CD:72:ARG:HD3	3:CD:203:TYR:CE2	2.54	0.42
23:BB:1613:G:H2'	23:BB:1617:C:H42	1.84	0.42
18:CB:141:GLU:O	18:CB:145:ASN:ND2	2.52	0.42
23:BB:2197:U:O2'	23:BB:2198:A:H2'	2.19	0.42
11:AL:27:PRO:O	11:AL:28:GLN:NE2	2.52	0.42
6:CG:124:SER:O	6:CG:127:ALA:HB3	2.19	0.42
23:BB:2436:G:O2'	23:BB:2437:G:H5'	2.19	0.42
13:CP:36:VAL:O	13:CP:36:VAL:HG13	2.20	0.42
40:BH:51:ARG:HD2	40:BH:51:ARG:H	1.84	0.42
51:BZ:13:VAL:HG23	51:BZ:29:PHE:HB2	2.01	0.42
23:DB:1099:G:C8	24:DI:3:LYS:CB	3.02	0.42
8:CI:20:ILE:HD13	8:CI:85:ALA:HB3	2.01	0.42
1:AA:1302:C:H42	12:AM:16:ILE:HD13	1.84	0.42
50:BT:29:THR:CB	50:BT:86:THR:HG22	2.49	0.42
50:BT:16:VAL:H	50:BT:31:VAL:HG23	1.84	0.42
8:CI:98:ARG:C	8:CI:100:ALA:H	2.22	0.42
29:DE:58:LYS:CD	29:DE:58:LYS:N	2.80	0.42
35:BV:38:LEU:HG	35:BV:40:ILE:CG2	2.46	0.42
35:BV:63:ILE:HB	35:BV:70:ILE:CD1	2.46	0.42
40:BH:128:HIS:HB3	40:BH:144:VAL:HG12	2.01	0.42
23:DB:1728:C:H2'	23:DB:1728:C:O2	2.19	0.42
6:CG:68:VAL:O	6:CG:137:ARG:HG3	2.20	0.42
2:AC:151:GLU:HB2	2:AC:200:TRP:HZ3	1.84	0.42
10:AK:80:ASN:CB	10:AK:105:ARG:HB3	2.48	0.42
23:DB:1171:G:H2'	23:DB:1172:C:C6	2.54	0.42
18:CB:22:TRP:O	18:CB:189:ASN:HA	2.19	0.42
18:CB:34:ARG:HG2	18:CB:39:ILE:HG13	2.01	0.42
40:DH:118:PRO:HB2	40:DH:119:ASN:HD22	1.83	0.42
29:BE:56:GLY:O	29:BE:58:LYS:HD3	2.18	0.42
27:BK:74:GLY:HA3	28:BP:74:GLN:HE21	1.84	0.42
38:DM:38:ARG:O	38:DM:126:ILE:HG12	2.19	0.42
44:BQ:93:ILE:HG23	44:BQ:94:LEU:N	2.34	0.42
16:AS:40:PHE:HB2	16:AS:42:ASN:OD1	2.20	0.42
23:BB:1204:A:N1	23:BB:1241:A:N1	2.67	0.42
21:AN:79:SER:O	21:AN:83:VAL:HG23	2.19	0.42
18:CB:223:GLY:O	18:CB:225:SER:N	2.51	0.42
47:BF:55:ASP:O	47:BF:59:ILE:HG13	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DX:1:MET:HB2	39:DX:5:GLU:OE1	2.19	0.42
23:BB:493:G:H2'	23:BB:494:G:O4'	2.19	0.42
45:DS:60:HIS:CG	45:DS:61:ASN:H	2.37	0.42
1:AA:1341:U:O3'	8:AI:129:ARG:NH2	2.52	0.42
21:CN:59:GLN:H	21:CN:59:GLN:HE21	1.61	0.42
23:BB:1276:A:O2'	23:BB:1277:G:H5'	2.19	0.42
1:AA:1080:A:H2'	1:AA:1081:A:H5'	2.00	0.42
39:DX:56:LEU:O	39:DX:58:ASN:N	2.45	0.42
23:BB:2476:A:N3	23:BB:2476:A:H2'	2.34	0.42
48:DG:94:ARG:CB	48:DG:127:GLN:HE21	2.29	0.42
42:DN:87:PHE:CE1	42:DN:116:VAL:HG12	2.51	0.42
39:DX:44:LYS:HD2	39:DX:48:ARG:NH2	2.27	0.42
23:DB:2476:A:N3	23:DB:2476:A:H2'	2.34	0.42
34:B3:31:ILE:HD11	34:B3:34:LYS:CD	2.49	0.42
41:DJ:4:PHE:CG	41:DJ:5:THR:N	2.87	0.42
23:BB:2210:U:C4	23:BB:2212:A:N7	2.87	0.42
44:DQ:77:LYS:O	44:DQ:80:ASN:HB3	2.19	0.42
45:DS:81:SER:HB3	45:DS:99:ARG:HB3	2.01	0.42
27:BK:60:ALA:HA	27:BK:87:LEU:CD2	2.49	0.42
23:BB:2675:A:N1	23:BB:2732:G:O6	2.53	0.42
45:DS:24:ILE:O	45:DS:25:ARG:C	2.57	0.42
45:DS:45:VAL:HA	45:DS:48:LYS:HB3	2.00	0.42
23:BB:285:G:H2'	23:BB:286:U:C6	2.54	0.42
23:BB:2842:G:O2'	23:BB:2843:G:H5'	2.19	0.42
1:AA:1039:G:O2'	1:AA:1040:U:H5'	2.18	0.42
23:DB:909:A:H2'	23:DB:912:C:H5	1.84	0.42
52:DW:46:ALA:HB2	52:DW:78:PHE:HD1	1.84	0.42
23:DB:2247:A:H3'	57:DB:3577:HOH:O	2.20	0.42
1:CA:859:G:O2'	1:CA:860:A:H5'	2.18	0.42
45:BS:10:ALA:O	45:BS:12:SER:N	2.45	0.42
23:DB:1463:C:H2'	23:DB:1464:G:C8	2.54	0.42
1:CA:402:G:H2'	1:CA:403:C:C6	2.54	0.42
23:BB:2358:A:H61	37:BL:54:GLN:HE22	1.67	0.42
1:AA:402:G:H2'	1:AA:403:C:C6	2.55	0.42
42:DN:8:ARG:HB3	42:DN:43:GLU:OE2	2.19	0.42
25:DC:33:LEU:CD2	25:DC:62:ARG:HA	2.49	0.42
7:AH:77:VAL:HG12	7:AH:84:ILE:HD12	2.00	0.42
29:BE:2:GLU:O	29:BE:3:LEU:HD13	2.19	0.42
16:AS:28:LYS:HD3	16:AS:28:LYS:H	1.83	0.42
23:DB:2786:U:O2'	23:DB:2787:C:H5'	2.20	0.42
23:BB:769:U:H2'	23:BB:770:G:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:98:A:H2'	1:CA:99:C:O4'	2.19	0.42
27:DK:107:LEU:C	27:DK:109:SER:H	2.22	0.42
23:DB:2015:A:N3	31:D0:2:VAL:HG22	2.34	0.42
44:DQ:38:VAL:O	44:DQ:39:ILE:C	2.56	0.42
41:DJ:58:ASN:O	41:DJ:126:ALA:O	2.37	0.42
1:CA:896:C:O2'	1:CA:897:C:H5'	2.19	0.42
23:DB:426:C:O2'	23:DB:427:U:H5'	2.18	0.42
6:CG:136:LYS:NZ	6:CG:136:LYS:HB2	2.34	0.42
47:DF:2:LYS:H	47:DF:2:LYS:CE	2.31	0.42
23:DB:1144:A:O2'	23:DB:1145:C:H5'	2.18	0.42
23:DB:2359:C:H2'	23:DB:2360:G:C8	2.55	0.42
1:CA:956:U:O2'	1:CA:957:U:H5'	2.19	0.42
1:AA:1399:C:N3	1:AA:1502:A:N1	2.66	0.42
23:DB:693:A:H2'	23:DB:694:U:C6	2.54	0.42
23:BB:2081:U:H2'	23:BB:2082:A:H8	1.84	0.42
23:DB:613:A:C2'	23:DB:613:A:N3	2.81	0.42
32:B4:30:GLU:HA	32:B4:31:PRO:HD3	1.94	0.42
1:CA:174:A:O2'	1:CA:175:C:H5'	2.19	0.42
23:BB:1568:G:H4'	25:BC:58:LYS:HB3	2.01	0.42
25:DC:1:ALA:N	25:DC:19:VAL:O	2.47	0.42
1:CA:577:G:O2'	1:CA:578:C:H5'	2.19	0.42
38:DM:17:ASN:ND2	38:DM:95:LEU:HD23	2.33	0.42
2:CC:54:ILE:HG12	2:CC:54:ILE:O	2.19	0.42
19:CU:8:ASN:O	19:CU:9:GLU:HB3	2.18	0.42
1:AA:12:U:H4'	1:AA:526:C:H4'	2.01	0.42
4:CE:9:GLU:O	4:CE:40:ASP:HA	2.18	0.42
16:AS:22:VAL:HB	16:AS:23:GLU:OE1	2.19	0.42
25:DC:179:GLU:HB2	25:DC:270:ARG:HB3	2.01	0.42
24:DI:89:SER:HA	24:DI:97:VAL:HG11	2.01	0.42
8:CI:120:ALA:O	8:CI:121:ARG:HG2	2.20	0.42
32:B4:27:CYS:CB	32:B4:33:HIS:HB2	2.49	0.42
23:DB:1819:A:OP1	25:DC:154:ALA:HA	2.19	0.42
25:DC:106:PRO:HB2	25:DC:193:GLU:H	1.82	0.42
14:CQ:45:VAL:O	14:CQ:70:LYS:HE3	2.19	0.42
6:CG:13:PRO:HB3	6:CG:20:GLU:CG	2.49	0.42
29:DE:108:ILE:HD11	29:DE:181:ILE:CA	2.49	0.42
29:DE:115:GLN:C	29:DE:117:ARG:H	2.23	0.42
43:BO:53:THR:OG1	43:BO:65:THR:HB	2.18	0.42
1:CA:1378:C:O2	1:CA:1378:C:O4'	2.34	0.42
12:AM:106:ARG:HD2	12:AM:111:PRO:HA	2.02	0.42
37:BL:141:LYS:HZ3	37:BL:143:GLU:HA	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:21:ILE:HD12	12:CM:24:VAL:HG21	2.01	0.42
37:DL:79:LEU:HD23	37:DL:79:LEU:HA	1.91	0.42
48:DG:121:THR:O	48:DG:133:LYS:N	2.52	0.42
46:BU:3:LYS:CE	46:BU:82:VAL:HB	2.49	0.42
46:BU:82:VAL:HG13	46:BU:93:ARG:HB3	2.00	0.42
29:BE:126:VAL:HG13	29:BE:156:ASN:ND2	2.24	0.42
23:DB:1169:A:O2'	23:DB:1170:C:H5'	2.19	0.42
28:DP:80:VAL:CG1	28:DP:81:ASP:N	2.82	0.42
38:DM:93:VAL:HG22	38:DM:94:ALA:H	1.83	0.42
47:DF:116:LEU:HA	47:DF:116:LEU:HD12	1.92	0.42
41:BJ:3:THR:HB	41:BJ:44:TYR:CE1	2.53	0.42
18:AB:168:GLU:O	18:AB:172:ILE:HD12	2.19	0.42
47:BF:66:ILE:HD11	47:BF:83:PRO:CB	2.44	0.42
26:BD:149:ASN:CG	26:BD:150:GLN:H	2.22	0.42
1:AA:204:G:C5	1:AA:465:A:N3	2.87	0.42
6:AG:16:LYS:HB3	6:AG:43:TYR:HE1	1.82	0.42
1:CA:1279:G:O2'	1:CA:1281:C:OP2	2.34	0.42
4:AE:131:ASN:ND2	4:AE:134:ASN:H	2.17	0.42
40:DH:15:LEU:C	40:DH:17:ASP:H	2.22	0.42
40:DH:87:GLU:HB2	40:DH:89:LYS:NZ	2.33	0.42
22:DA:82:U:O2'	22:DA:83:G:H5'	2.19	0.42
23:DB:76:C:O2'	23:DB:77:G:H5'	2.20	0.42
1:CA:1320:C:C5'	16:CS:2:ARG:HG3	2.49	0.42
16:CS:48:ILE:HG22	16:CS:49:ALA:N	2.35	0.42
27:BK:105:ARG:HD3	27:BK:105:ARG:H	1.83	0.42
42:BN:12:ARG:HG3	42:BN:13:ASN:N	2.33	0.42
27:DK:86:LEU:HG	27:DK:86:LEU:H	1.51	0.42
1:AA:948:C:O2'	1:AA:949:A:H5'	2.18	0.42
23:DB:1439:A:C5	23:DB:1552:A:N6	2.87	0.42
1:AA:1133:G:O2'	1:AA:1134:G:H5'	2.19	0.42
1:AA:1135:U:H4'	1:AA:1136:C:H5	1.85	0.42
23:DB:2183:A:H2'	23:DB:2184:A:C8	2.54	0.42
23:DB:2290:G:H2'	23:DB:2291:U:C6	2.54	0.42
48:DG:9:VAL:C	48:DG:11:PRO:HD3	2.40	0.42
23:DB:2461:A:H1'	23:DB:2492:U:N3	2.33	0.42
38:BM:106:ASP:O	38:BM:108:VAL:N	2.52	0.42
26:DD:40:LEU:HD23	26:DD:46:ARG:CG	2.47	0.42
23:BB:152:A:H2'	23:BB:153:U:H6	1.82	0.42
3:AD:185:PRO:HB2	3:AD:190:LEU:HD12	2.01	0.42
23:DB:570:G:O2'	23:DB:571:U:H5'	2.19	0.42
3:AD:24:VAL:HG23	3:AD:25:ARG:N	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DZ:70:GLU:HG2	51:DZ:71:LEU:N	2.34	0.42
23:BB:958:U:O4	38:BM:16:ARG:HA	2.19	0.42
23:DB:2149:U:H2'	23:DB:2150:C:C6	2.54	0.42
29:DE:17:THR:C	29:DE:19:PHE:N	2.73	0.42
23:DB:848:C:H2'	23:DB:849:A:H8	1.82	0.42
23:DB:1846:G:N2	23:DB:1848:A:N6	2.67	0.42
1:CA:411:A:O3'	1:CA:412:A:H4'	2.19	0.42
1:AA:599:C:O2'	1:AA:600:A:H5'	2.19	0.42
23:BB:254:G:O6	34:B3:4:LYS:HG3	2.19	0.42
1:AA:524:G:H2'	1:AA:525:C:H6	1.84	0.42
38:DM:28:PHE:HB3	38:DM:64:TRP:CE2	2.55	0.42
45:BS:4:ILE:CG2	45:BS:106:VAL:HG13	2.48	0.42
45:BS:74:ILE:O	45:BS:75:PHE:HB3	2.19	0.42
23:BB:1824:G:H2'	23:BB:1825:U:H6	1.85	0.42
1:AA:1200:C:C3'	1:AA:1201:A:H5'	2.50	0.42
2:CC:41:TYR:CZ	2:CC:89:VAL:HG11	2.54	0.42
23:DB:1827:U:O2'	23:DB:1828:G:H5'	2.19	0.42
23:BB:1714:U:H3'	23:BB:1715:G:C5'	2.49	0.42
27:BK:109:SER:C	27:BK:111:LYS:H	2.23	0.42
23:DB:1292:G:O2'	23:DB:1293:C:H5'	2.19	0.42
1:CA:1073:U:O2'	1:CA:1074:G:H5'	2.19	0.42
27:BK:5:GLN:O	27:BK:6:THR:O	2.38	0.42
1:AA:1222:G:OP1	16:AS:76:THR:HG21	2.18	0.42
23:DB:2630:G:H2'	23:DB:2631:G:H8	1.84	0.42
1:CA:366:A:H1'	1:CA:395:C:O2	2.19	0.42
23:BB:1316:U:H2'	23:BB:1317:G:H8	1.83	0.42
48:BG:54:ARG:HA	48:BG:54:ARG:HE	1.85	0.42
16:AS:31:ARG:HG3	16:AS:56:HIS:NE2	2.34	0.42
23:BB:1711:A:H2'	23:BB:1712:U:C6	2.54	0.42
23:DB:1570:A:H2'	23:DB:1571:A:C8	2.54	0.42
23:BB:817:C:H2'	23:BB:818:G:O4'	2.18	0.42
1:CA:750:C:O2'	20:CO:21:ASP:HB2	2.19	0.42
23:BB:1403:A:H2'	23:BB:1404:C:C6	2.54	0.42
23:BB:613:A:C2'	23:BB:613:A:N3	2.81	0.42
15:AR:44:THR:C	15:AR:46:THR:H	2.22	0.42
25:DC:211:ARG:HD3	25:DC:217:PRO:HD3	2.00	0.42
14:CQ:42:LYS:C	14:CQ:43:LEU:HD12	2.39	0.42
17:CT:15:LYS:HD3	17:CT:18:LYS:HE3	2.01	0.42
1:AA:110:C:H2'	1:AA:111:G:O4'	2.19	0.42
24:BI:63:ASP:O	24:BI:65:SER:N	2.52	0.42
23:DB:708:G:H2'	23:DB:709:U:C6	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CL:27:PRO:O	11:CL:28:GLN:NE2	2.53	0.42
26:BD:141:ARG:HG3	26:BD:141:ARG:O	2.18	0.42
1:CA:484:G:H3'	1:CA:484:G:OP2	2.18	0.42
23:BB:1879:C:H2'	23:BB:1880:U:O4'	2.19	0.42
1:CA:227:G:O2'	1:CA:228:A:H5'	2.20	0.42
1:AA:755:G:OP2	20:AO:65:LYS:HD3	2.19	0.42
23:BB:120:U:H5''	23:BB:122:G:OP2	2.19	0.42
24:DI:1:ALA:C	24:DI:2:LYS:HZ3	2.23	0.42
1:CA:981:U:H2'	1:CA:982:U:H5	1.83	0.42
12:AM:38:ILE:HG22	12:AM:39:ALA:O	2.20	0.42
12:AM:44:ILE:H	12:AM:44:ILE:HD12	1.84	0.42
50:DT:30:ILE:HG23	50:DT:85:VAL:HB	2.00	0.42
32:B4:7:VAL:CG1	32:B4:8:LYS:N	2.73	0.42
29:BE:115:GLN:C	29:BE:117:ARG:H	2.22	0.42
5:CF:3:HIS:NE2	5:CF:65:GLU:HG3	2.35	0.42
14:CQ:45:VAL:CG1	14:CQ:60:ILE:HG21	2.49	0.42
26:DD:172:VAL:HG12	26:DD:173:GLN:O	2.19	0.42
23:DB:2386:A:N3	52:DW:38:ARG:HD2	2.34	0.42
52:DW:37:VAL:O	52:DW:39:GLN:N	2.46	0.42
29:DE:198:GLU:C	29:DE:200:LEU:N	2.72	0.42
23:BB:144:A:H2'	23:BB:145:C:C6	2.55	0.42
40:DH:77:THR:HG21	40:DH:145:ASN:HB2	2.01	0.42
8:AI:27:ILE:O	8:AI:34:LEU:HB2	2.20	0.42
23:DB:1730:C:H2'	23:DB:1731:G:H5''	2.02	0.42
12:CM:65:GLU:O	12:CM:68:LEU:HB3	2.20	0.42
25:BC:143:VAL:HG12	25:BC:144:GLU:N	2.34	0.42
48:BG:121:THR:O	48:BG:133:LYS:N	2.52	0.42
48:BG:122:ALA:HA	48:BG:132:LEU:HA	2.01	0.42
48:BG:134:GLY:HA3	48:BG:140:ILE:HG21	2.02	0.42
48:BG:140:ILE:HA	48:BG:143:VAL:CG2	2.45	0.42
35:DV:26:PHE:HE2	35:DV:44:HIS:HA	1.84	0.42
46:DU:82:VAL:HG13	46:DU:93:ARG:HB3	2.01	0.42
49:DR:36:ALA:C	49:DR:38:VAL:H	2.22	0.42
49:DR:7:SER:OG	49:DR:8:GLY:N	2.52	0.42
23:DB:1060:U:C1'	23:DB:1062:G:H5'	2.49	0.42
33:D1:35:LEU:O	33:D1:36:LYS:HB3	2.19	0.42
44:BQ:57:ARG:HG2	44:BQ:57:ARG:HH11	1.85	0.42
49:BR:24:LYS:HA	49:BR:94:THR:CG2	2.47	0.42
16:AS:15:LEU:O	16:AS:18:VAL:HG12	2.19	0.42
16:AS:14:LEU:CD2	16:AS:37:SER:HB3	2.49	0.42
18:AB:107:ARG:HA	18:AB:110:ILE:CD1	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:494:G:OP1	45:DS:8:ARG:HD3	2.20	0.42
47:DF:45:ASP:OD1	47:DF:47:LYS:HB2	2.19	0.42
1:CA:1022:A:H2'	1:CA:1023:U:H5'	2.00	0.42
1:CA:999:C:H3'	1:CA:1000:A:H8	1.84	0.42
37:DL:103:ILE:N	37:DL:103:ILE:HD12	2.26	0.42
8:CI:94:ARG:O	8:CI:95:SER:C	2.57	0.42
25:BC:237:ARG:O	25:BC:238:ASN:HB2	2.19	0.42
1:AA:1510:C:H2'	1:AA:1511:G:C8	2.55	0.42
1:CA:1309:G:H1'	12:CM:72:ILE:HD12	2.01	0.42
16:CS:51:HIS:HB2	16:CS:56:HIS:CD2	2.54	0.42
23:DB:1869:G:O2'	23:DB:1871:A:N6	2.47	0.42
2:CC:128:MET:O	2:CC:129:PHE:C	2.58	0.42
2:CC:129:PHE:CD1	2:CC:156:LEU:HD21	2.54	0.42
23:DB:2238:G:N3	23:DB:2238:G:H2'	2.34	0.42
48:DG:8:VAL:HG21	48:DG:51:PHE:CE2	2.55	0.42
45:DS:17:VAL:O	45:DS:19:LEU:N	2.51	0.42
26:BD:14:ILE:HG22	26:BD:22:ILE:O	2.19	0.42
23:BB:2462:C:H2'	23:BB:2463:C:H6	1.83	0.42
48:BG:71:LEU:HA	48:BG:74:MET:SD	2.59	0.42
1:CA:1128:C:H4'	1:CA:1148:U:C2	2.54	0.42
3:CD:26:ALA:C	3:CD:28:ASP:N	2.71	0.42
33:D1:28:THR:O	33:D1:29:LYS:HD2	2.19	0.42
1:CA:807:A:H2'	1:CA:808:C:C6	2.53	0.42
1:AA:475:C:O2'	1:AA:476:U:H5'	2.20	0.42
21:CN:29:ILE:HG22	21:CN:30:ILE:H	1.84	0.42
1:AA:138:G:O2'	1:AA:139:A:H5'	2.20	0.42
28:BP:39:LEU:N	28:BP:39:LEU:HD12	2.34	0.42
23:BB:1948:G:O2'	23:BB:1949:G:H5'	2.19	0.42
23:BB:2808:G:HO2'	23:BB:2809:A:H8	1.67	0.42
1:CA:861:G:H2'	1:CA:862:C:H6	1.83	0.42
23:DB:873:C:H4'	38:DM:64:TRP:NE1	2.34	0.42
24:BI:138:VAL:HG12	24:BI:139:VAL:N	2.34	0.42
23:DB:1945:G:H2'	23:DB:1946:U:C6	2.55	0.42
1:CA:1418:A:H2	23:DB:1948:G:N3	2.18	0.42
30:DY:31:ILE:C	30:DY:33:HIS:H	2.22	0.42
2:AC:21:TRP:HE3	2:AC:22:PHE:O	2.03	0.42
22:DA:87:U:H2'	22:DA:88:C:C5'	2.50	0.42
26:DD:68:PHE:HB3	26:DD:73:VAL:HA	2.01	0.42
23:DB:1859:U:H2'	23:DB:1860:G:H8	1.84	0.42
23:BB:1923:U:H2'	23:BB:1924:C:H6	1.84	0.42
1:AA:66:A:O2'	1:AA:67:C:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:45:ASP:OD1	47:BF:47:LYS:HB2	2.19	0.42
10:AK:89:GLY:O	10:AK:92:ARG:HB2	2.19	0.42
1:CA:154:U:O2'	1:CA:155:A:H5'	2.18	0.42
31:B0:33:SER:C	31:B0:35:GLU:N	2.73	0.42
21:AN:70:HIS:O	21:AN:72:PHE:N	2.52	0.42
43:BO:7:ARG:HA	43:BO:10:ARG:NE	2.34	0.42
14:CQ:80:LYS:H	14:CQ:80:LYS:NZ	2.17	0.42
14:CQ:80:LYS:C	14:CQ:80:LYS:HD2	2.38	0.42
23:BB:876:C:H2'	23:BB:877:A:O4'	2.20	0.42
23:DB:2875:C:H2'	23:DB:2876:G:H8	1.84	0.42
7:CH:17:GLN:HE21	7:CH:62:LEU:HD23	1.83	0.42
30:BY:46:MET:HB3	30:BY:46:MET:HE2	1.86	0.42
23:DB:2445:G:O2'	23:DB:2446:G:H5'	2.20	0.42
1:AA:929:G:O2'	1:AA:930:C:H5'	2.20	0.42
23:BB:556:A:C8	23:BB:557:C:C5	3.07	0.42
23:DB:1009:A:H3'	57:DB:3694:HOH:O	2.19	0.42
25:BC:132:ARG:O	25:BC:132:ARG:HG3	2.19	0.42
23:DB:294:A:H2'	23:DB:295:G:H5'	2.02	0.42
23:BB:603:A:H4'	23:BB:604:G:O5'	2.20	0.42
23:BB:1515:A:H3'	23:BB:1516:G:H8	1.85	0.42
23:DB:1098:A:C4	24:DI:3:LYS:O	2.72	0.42
23:BB:2305:U:H2'	23:BB:2306:C:O4'	2.19	0.42
1:CA:1130:A:H2'	1:CA:1131:G:C8	2.54	0.42
23:DB:674:G:C1'	29:DE:69:ARG:HD2	2.50	0.42
5:AF:38:ARG:O	5:AF:39:LEU:HB2	2.18	0.42
14:CQ:17:GLU:C	14:CQ:19:SER:H	2.22	0.42
8:AI:45:MET:O	8:AI:49:GLN:HG3	2.19	0.42
19:AU:3:ILE:HG21	19:AU:19:LYS:HA	2.02	0.42
1:AA:1124:G:O2'	1:AA:1145:A:C6	2.72	0.42
23:BB:1730:C:H2'	23:BB:1731:G:H5''	2.00	0.42
48:BG:83:THR:C	48:BG:84:LYS:HD3	2.39	0.42
35:DV:26:PHE:HE1	35:DV:89:ILE:CD1	2.21	0.42
46:DU:81:ARG:HH21	46:DU:96:LYS:HD2	1.84	0.42
29:BE:155:GLU:O	29:BE:159:LEU:HB2	2.20	0.42
27:BK:71:ARG:CB	27:BK:72:PRO:HD2	2.37	0.42
46:BU:10:VAL:O	46:BU:21:ARG:HA	2.19	0.42
52:BW:67:LYS:HB3	52:BW:80:SER:OG	2.18	0.42
44:BQ:91:ARG:CZ	49:BR:11:GLN:H	2.33	0.42
38:BM:68:PHE:CG	38:BM:69:PRO:HD2	2.55	0.42
16:AS:10:ILE:HB	16:AS:11:ASP:H	1.54	0.42
16:AS:68:HIS:HB3	16:AS:72:GLU:OE1	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AH:14:ARG:HH21	7:AH:75:GLN:NE2	2.18	0.42
18:AB:83:ALA:CA	18:AB:88:GLN:HE21	2.29	0.42
21:AN:80:ARG:HG3	21:AN:81:ILE:H	1.84	0.42
4:CE:131:ASN:HD22	4:CE:134:ASN:HB2	1.83	0.42
20:AO:53:ARG:NH1	23:BB:715:A:N1	2.66	0.42
47:BF:136:ILE:HG22	47:BF:136:ILE:O	2.20	0.42
1:AA:920:U:C2	1:AA:921:U:C5	3.08	0.42
2:AC:1:GLY:C	2:AC:2:GLN:HG3	2.38	0.42
52:BW:28:GLU:H	52:BW:31:LEU:HD11	1.83	0.42
47:BF:115:GLY:CA	47:BF:177:ARG:HD2	2.49	0.42
1:AA:1080:A:H5''	4:AE:20:VAL:HG11	2.02	0.42
24:BI:19:PRO:HG2	24:BI:22:PRO:HB2	2.02	0.42
1:AA:191:G:H2'	1:AA:192:A:H8	1.83	0.42
25:BC:77:VAL:O	25:BC:77:VAL:HG23	2.19	0.42
38:BM:35:ALA:CB	38:BM:100:LYS:H	2.32	0.42
23:DB:556:A:C8	23:DB:557:C:C5	3.07	0.42
17:CT:61:ALA:HA	17:CT:67:HIS:N	2.33	0.42
3:AD:178:GLU:OE1	3:AD:178:GLU:HA	2.19	0.42
1:CA:1221:G:H4'	16:CS:52:ASN:O	2.18	0.42
16:CS:18:VAL:HG11	16:CS:43:MET:CE	2.50	0.42
2:CC:24:ASN:O	2:CC:25:THR:C	2.56	0.42
42:DN:12:ARG:HG3	42:DN:13:ASN:N	2.35	0.42
41:DJ:42:ALA:O	41:DJ:44:TYR:N	2.52	0.42
23:DB:1680:U:H2'	23:DB:1681:G:O4'	2.20	0.42
23:DB:182:A:H2	23:DB:433:C:O2	2.03	0.42
41:BJ:82:GLY:O	41:BJ:84:ILE:HG22	2.20	0.42
1:CA:656:G:O2'	1:CA:657:U:H5'	2.20	0.42
23:DB:2282:G:H4'	23:DB:2389:G:O2'	2.19	0.42
23:BB:1438:U:N3	23:BB:1552:A:N6	2.67	0.42
23:BB:1553:A:H2'	23:BB:1555:G:N7	2.33	0.42
44:DQ:10:ARG:HB2	44:DQ:10:ARG:CZ	2.49	0.42
45:BS:24:ILE:O	45:BS:25:ARG:C	2.57	0.42
23:BB:1735:A:H2'	23:BB:1736:U:O4'	2.19	0.42
1:AA:1034:G:C2'	1:AA:1035:A:H5'	2.49	0.42
23:DB:2415:G:C4'	37:DL:66:PHE:HB2	2.48	0.42
40:DH:62:LEU:HD12	40:DH:65:ALA:CB	2.48	0.42
23:DB:37:C:H4'	23:DB:451:U:OP1	2.20	0.42
1:CA:501:C:H1'	1:CA:549:C:H1'	2.02	0.42
1:CA:1448:C:H2'	1:CA:1449:C:H6	1.84	0.42
38:BM:85:GLY:O	38:BM:86:LYS:C	2.57	0.42
30:DY:46:MET:HB3	30:DY:46:MET:HE2	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1994:C:OP1	26:BD:131:ASP:HA	2.19	0.42
23:DB:1778:U:H2'	23:DB:1784:A:H62	1.84	0.42
1:CA:312:C:O2'	1:CA:313:A:H5'	2.19	0.42
51:DZ:39:TRP:HE1	51:DZ:41:GLU:HG2	1.85	0.42
22:BA:48:U:O2'	43:BO:100:HIS:HE1	2.03	0.42
23:DB:2547:A:H5'	23:DB:2566:A:C2	2.55	0.42
23:DB:863:A:H2'	23:DB:864:G:H8	1.83	0.42
22:BA:64:G:H2'	22:BA:65:U:H6	1.83	0.42
18:CB:204:ASP:O	18:CB:209:VAL:HG13	2.19	0.42
41:BJ:72:LYS:CG	41:BJ:89:PHE:HB2	2.49	0.42
23:BB:956:G:H4'	38:BM:82:MET:HE1	2.00	0.42
23:BB:956:G:O2'	38:BM:82:MET:HE1	2.19	0.42
23:BB:1715:G:N2	23:BB:1744:A:OP2	2.52	0.42
22:BA:14:U:H4'	22:BA:70:C:O2	2.19	0.42
36:B2:46:LYS:HA	36:B2:46:LYS:NZ	2.34	0.42
36:B2:19:ARG:HH21	36:B2:19:ARG:HB3	1.83	0.42
23:BB:2676:C:O2'	23:BB:2677:G:H5'	2.19	0.42
7:AH:118:ALA:HB3	7:AH:120:LEU:HD22	2.01	0.42
1:AA:1292:G:H2'	1:AA:1293:C:H6	1.85	0.42
29:BE:148:ILE:HD13	29:BE:187:VAL:HG21	2.00	0.42
4:AE:87:VAL:HA	4:AE:91:SER:O	2.20	0.42
1:CA:761:G:H2'	1:CA:762:U:H6	1.82	0.42
23:DB:9:G:H21	23:DB:10:A:H62	1.67	0.42
1:CA:970:C:O2	1:CA:1231:G:H1'	2.19	0.42
23:DB:1312:U:O4	50:DT:64:LYS:HG2	2.19	0.42
1:AA:154:U:H2'	1:AA:155:A:H8	1.84	0.42
1:AA:154:U:O2'	1:AA:155:A:H5'	2.19	0.42
23:BB:1849:G:H2'	23:BB:1850:G:C8	2.54	0.42
17:AT:49:ALA:O	17:AT:52:GLU:HB3	2.20	0.42
34:D3:6:VAL:HG23	34:D3:60:CYS:O	2.19	0.42
23:BB:1403:A:H2'	23:BB:1404:C:H6	1.84	0.42
23:BB:1011:G:O2'	23:BB:1013:C:H5''	2.19	0.42
23:DB:962:G:N2	23:DB:2250:G:H1	2.17	0.42
23:BB:995:C:N4	41:BJ:2:LYS:HA	2.34	0.42
23:DB:613:A:OP2	23:DB:614:A:H2	2.01	0.42
1:CA:793:U:O2	1:CA:1516:G:H4'	2.20	0.42
51:DZ:17:ASN:HB2	51:DZ:25:THR:HB	2.00	0.42
50:BT:22:THR:O	50:BT:26:LYS:HG2	2.19	0.42
23:BB:903:C:H2'	23:BB:904:G:H8	1.84	0.42
14:CQ:3:LYS:HG3	14:CQ:4:ILE:H	1.84	0.42
23:DB:1159:U:O2'	23:DB:1160:G:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DT:22:THR:O	50:DT:26:LYS:HG2	2.19	0.42
1:AA:886:G:O2'	1:AA:887:G:H5'	2.20	0.42
52:BW:84:GLU:CD	52:BW:84:GLU:H	2.23	0.42
1:CA:594:U:H2'	1:CA:595:A:O4'	2.19	0.42
23:BB:2623:G:O2'	23:BB:2624:G:H5'	2.19	0.42
1:CA:509:A:C6	1:CA:510:A:N1	2.88	0.42
8:CI:51:LEU:HB3	8:CI:56:MET:SD	2.60	0.42
1:AA:1329:A:H5'	12:AM:28:ARG:HG3	2.00	0.42
12:AM:3:ILE:H	12:AM:56:ARG:NH1	2.17	0.42
23:BB:1430:G:H2'	23:BB:1431:A:H8	1.85	0.42
41:BJ:54:ILE:HD12	41:BJ:55:ILE:H	1.84	0.42
2:CC:35:ASP:O	2:CC:38:VAL:HG22	2.20	0.42
29:BE:108:ILE:HD12	29:BE:180:LEU:CB	2.50	0.42
5:CF:22:ILE:O	5:CF:26:THR:HG23	2.20	0.42
5:CF:29:ILE:HG23	5:CF:66:ALA:HB2	2.02	0.42
26:DD:10:GLY:CA	26:DD:26:VAL:H	2.32	0.42
40:BH:80:ILE:H	40:BH:144:VAL:HG13	1.85	0.42
23:DB:2329:U:H2'	23:DB:2330:G:H8	1.85	0.42
29:DE:138:LEU:HD22	29:DE:143:LEU:HB2	2.00	0.42
40:DH:76:GLU:O	40:DH:143:ILE:HB	2.19	0.42
37:DL:108:ALA:O	37:DL:125:LEU:HD23	2.19	0.42
24:BI:79:LEU:HD23	24:BI:108:ILE:CD1	2.50	0.42
46:BU:62:ALA:O	46:BU:63:ALA:HB3	2.19	0.42
23:BB:1728:C:O2	23:BB:1728:C:H2'	2.19	0.42
23:BB:2538:C:H2'	23:BB:2539:C:C6	2.51	0.42
42:BN:3:HIS:O	42:BN:4:ARG:HB2	2.20	0.42
23:DB:2682:A:O2'	23:DB:2683:C:H5'	2.20	0.42
40:DH:118:PRO:HB2	40:DH:119:ASN:ND2	2.35	0.42
49:BR:40:MET:HG2	49:BR:48:LYS:HA	2.02	0.42
31:D0:31:LYS:HG2	31:D0:32:THR:N	2.35	0.42
23:DB:495:G:H21	45:DS:61:ASN:ND2	2.07	0.42
26:DD:149:ASN:C	26:DD:152:PRO:HD2	2.40	0.42
25:DC:209:ALA:O	25:DC:213:ARG:HB2	2.20	0.42
23:BB:2727:A:H2'	23:BB:2728:U:H6	1.84	0.42
23:DB:114:U:H2'	23:DB:115:C:C6	2.54	0.42
23:DB:1655:A:C2	23:DB:2049:G:H4'	2.54	0.42
31:B0:28:SER:HB2	31:B0:39:ARG:HE	1.81	0.42
44:DQ:93:ILE:HG23	44:DQ:94:LEU:HD22	2.00	0.42
11:CL:49:ARG:HG2	11:CL:89:LEU:HD21	2.00	0.42
39:DX:26:PHE:HD1	39:DX:27:ASN:ND2	2.17	0.42
39:DX:23:ARG:HA	39:DX:27:ASN:ND2	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DK:119:ALA:N	27:DK:120:PRO:HD2	2.34	0.42
39:DX:30:MET:C	39:DX:32:ALA:N	2.73	0.42
23:DB:1998:A:H2'	23:DB:1999:C:H6	1.84	0.42
32:D4:16:ILE:HG23	32:D4:24:ARG:O	2.20	0.42
23:DB:362:A:N3	23:DB:362:A:H2'	2.35	0.42
12:CM:7:ASN:HD22	12:CM:7:ASN:N	2.17	0.42
23:BB:2228:G:H2'	23:BB:2229:U:H6	1.81	0.42
23:BB:2230:G:H4'	51:BZ:31:PRO:O	2.19	0.42
23:BB:1442:U:H2'	23:BB:1443:U:H6	1.84	0.42
1:CA:238:A:C3'	1:CA:239:U:H5''	2.50	0.42
38:DM:33:LEU:HB2	38:DM:102:LEU:HB2	2.01	0.42
17:CT:43:LYS:O	17:CT:46:ALA:HB3	2.19	0.42
11:AL:5:GLN:HG3	11:AL:8:ARG:NH2	2.35	0.42
23:DB:2654:A:H61	23:DB:2665:A:H3'	1.85	0.42
1:AA:208:U:H2'	1:AA:210:C:C4	2.54	0.42
1:AA:663:A:H5''	15:AR:49:LYS:NZ	2.34	0.42
37:BL:65:GLY:O	37:BL:66:PHE:CB	2.65	0.42
23:DB:414:C:H1'	23:DB:1864:U:H1'	2.02	0.42
52:BW:76:ARG:O	52:BW:77:LYS:HD3	2.19	0.42
23:BB:2653:U:H3'	23:BB:2654:A:H2'	2.02	0.42
11:CL:120:ARG:HG3	11:CL:120:ARG:HH11	1.85	0.42
6:AG:65:LEU:CB	6:AG:69:ARG:HH21	2.32	0.42
20:CO:69:TYR:CZ	20:CO:73:LYS:HG3	2.54	0.42
1:CA:1520:C:H2'	1:CA:1521:C:C6	2.54	0.42
51:DZ:6:GLN:HG3	51:DZ:76:GLU:OE1	2.19	0.42
23:DB:657:U:H2'	23:DB:658:U:H6	1.83	0.42
30:BY:31:ILE:C	30:BY:33:HIS:H	2.22	0.42
38:DM:85:GLY:O	38:DM:86:LYS:C	2.55	0.42
23:DB:1047:G:H1'	23:DB:1110:G:H22	1.82	0.42
1:CA:309:A:O2'	1:CA:310:G:H5'	2.19	0.42
48:DG:35:THR:CG2	48:DG:36:LEU:N	2.83	0.42
23:DB:2790:U:H5'	23:DB:2893:A:N7	2.34	0.42
7:AH:118:ALA:HB3	7:AH:120:LEU:CD2	2.49	0.42
25:DC:17:LYS:HB3	25:DC:18:VAL:H	1.73	0.42
23:BB:2829:A:O2'	23:BB:2830:C:H5'	2.19	0.42
1:AA:1073:U:O2'	1:AA:1074:G:H5'	2.20	0.42
1:AA:627:G:H2'	1:AA:628:G:C8	2.54	0.42
23:DB:1076:C:H2'	23:DB:1077:A:H8	1.84	0.42
11:AL:82:ARG:HG2	11:AL:82:ARG:NH1	2.34	0.42
1:AA:791:G:C6	1:AA:792:A:N7	2.88	0.42
23:DB:2315:G:H2'	23:DB:2316:G:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CT:49:ALA:O	17:CT:52:GLU:HB3	2.19	0.42
23:DB:2694:G:H2'	23:DB:2695:U:H6	1.85	0.42
23:DB:1984:G:O2'	23:DB:1985:C:H5'	2.20	0.42
1:CA:44:A:H2'	1:CA:45:G:C8	2.55	0.42
41:BJ:103:ILE:HG13	41:BJ:104:ALA:N	2.35	0.42
23:BB:903:C:H2'	23:BB:904:G:C8	2.55	0.42
1:AA:275:G:H5'	14:AQ:15:LYS:HG2	2.01	0.42
10:AK:27:ASN:O	10:AK:56:LYS:HE3	2.20	0.42
27:BK:103:VAL:HG23	27:BK:122:VAL:O	2.20	0.42
25:BC:61:TYR:HA	25:BC:85:ASN:ND2	2.35	0.42
1:CA:903:G:H2'	1:CA:904:U:C6	2.54	0.42
13:CP:2:VAL:HG13	13:CP:65:ALA:HA	2.02	0.42
45:DS:9:HIS:H	45:DS:102:HIS:CE1	2.36	0.42
1:AA:117:G:H2'	1:AA:118:U:O4'	2.18	0.42
23:BB:292:U:H2'	23:BB:293:U:O4'	2.19	0.42
25:BC:6:LYS:C	25:BC:8:THR:H	2.23	0.42
23:DB:2854:G:H2'	23:DB:2855:C:C6	2.55	0.42
23:BB:333:G:H2'	23:BB:333:G:N3	2.34	0.42
23:BB:2106:U:H6	23:BB:2106:U:O5'	2.02	0.42
25:DC:132:ARG:HG3	25:DC:132:ARG:O	2.20	0.42
17:CT:80:ALA:O	17:CT:84:LYS:HD2	2.19	0.42
24:DI:2:LYS:O	24:DI:3:LYS:HG3	2.18	0.42
40:BH:89:LYS:HA	40:BH:123:ARG:O	2.20	0.42
23:DB:725:G:H2'	23:DB:726:G:O4'	2.20	0.42
1:AA:1239:A:H4'	1:AA:1240:U:H5'	2.01	0.42
6:CG:37:THR:O	6:CG:38:ALA:C	2.57	0.42
37:DL:29:LYS:O	37:DL:31:GLY:N	2.53	0.42
15:CR:57:ALA:HA	15:CR:60:ARG:HH11	1.84	0.42
40:BH:114:GLU:HB3	40:BH:134:VAL:H	1.85	0.42
8:AI:46:VAL:HA	8:AI:49:GLN:CD	2.40	0.42
10:AK:31:VAL:HG11	10:AK:95:THR:OG1	2.19	0.42
43:DO:67:ASN:O	43:DO:69:ASP:N	2.52	0.42
9:AJ:36:VAL:HG12	9:AJ:38:GLY:N	2.34	0.42
23:DB:1727:C:H2'	23:DB:1728:C:H6	1.85	0.42
1:CA:8:A:H1'	4:CE:107:GLY:HA2	2.01	0.42
12:CM:22:TYR:HB2	12:CM:65:GLU:OE2	2.19	0.42
27:BK:88:ASN:C	27:BK:88:ASN:ND2	2.72	0.42
23:BB:321:U:C2	29:BE:159:LEU:HD21	2.55	0.42
40:DH:115:VAL:HA	40:DH:132:PHE:HD1	1.84	0.42
33:D1:49:LYS:CG	33:D1:50:GLU:H	2.17	0.42
23:BB:870:U:O2'	23:BB:871:U:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AS:48:ILE:HD12	16:AS:70:LEU:HD21	2.00	0.42
23:DB:1025:G:H8	23:DB:1025:G:OP1	2.03	0.42
36:D2:12:ARG:CZ	36:D2:12:ARG:HB2	2.50	0.42
13:AP:4:ILE:O	13:AP:71:VAL:HG11	2.20	0.42
21:AN:5:MET:SD	21:AN:8:ARG:NH1	2.92	0.42
28:DP:20:ARG:CD	28:DP:21:PRO:HD2	2.50	0.42
47:DF:136:ILE:O	47:DF:136:ILE:HG22	2.19	0.42
1:CA:1300:G:H1'	1:CA:1301:U:C6	2.55	0.42
47:DF:6:TYR:O	47:DF:11:VAL:HG23	2.20	0.42
1:AA:864:A:H2'	1:AA:865:A:C8	2.54	0.42
26:BD:149:ASN:C	26:BD:152:PRO:HD2	2.40	0.42
17:AT:66:ILE:CG2	17:AT:70:LYS:HB3	2.43	0.42
7:CH:14:ARG:NH2	7:CH:75:GLN:HE21	2.17	0.42
1:CA:373:A:O2'	1:CA:374:A:H5'	2.20	0.42
40:DH:2:GLN:O	40:DH:3:VAL:O	2.37	0.42
27:BK:18:ARG:HB2	27:BK:45:GLU:CG	2.49	0.42
23:DB:948:C:H2'	23:DB:949:G:H8	1.84	0.42
16:CS:10:ILE:N	16:CS:10:ILE:HD12	2.34	0.42
48:BG:94:ARG:HB2	48:BG:95:ALA:H	1.71	0.42
52:BW:8:SER:HA	52:BW:10:ARG:HH12	1.85	0.42
44:DQ:83:LYS:HA	44:DQ:83:LYS:NZ	2.35	0.42
23:DB:182:A:H2'	23:DB:183:C:H6	1.84	0.42
23:BB:1132:U:H5'	41:BJ:84:ILE:HD11	2.01	0.42
13:CP:20:VAL:CG2	13:CP:32:PHE:HB2	2.49	0.42
25:DC:76:VAL:HG23	25:DC:96:LYS:NZ	2.34	0.42
23:BB:1607:C:N4	23:BB:1622:G:C5	2.88	0.42
51:DZ:53:ALA:O	51:DZ:54:LYS:HB3	2.20	0.42
23:BB:322:A:C2	23:BB:340:A:C6	3.08	0.42
23:DB:2729:G:H2'	23:DB:2730:C:H6	1.83	0.42
28:DP:48:ALA:HB3	28:DP:59:THR:HB	2.00	0.42
23:BB:589:U:O2'	23:BB:590:A:H5'	2.19	0.42
45:BS:36:LEU:HD23	45:BS:48:LYS:CA	2.46	0.42
1:AA:370:C:C2'	1:AA:371:A:H5'	2.50	0.42
25:BC:243:PRO:O	25:BC:250:GLN:HA	2.20	0.42
23:DB:814:C:H2'	23:DB:815:C:H6	1.85	0.42
25:DC:94:LEU:HG	25:DC:94:LEU:O	2.19	0.42
1:AA:815:A:H4'	1:AA:817:C:C5	2.54	0.42
23:BB:657:U:H2'	23:BB:658:U:H6	1.84	0.42
25:DC:250:GLN:HG2	25:DC:254:LYS:HG2	2.01	0.42
41:BJ:93:ILE:CA	41:BJ:97:PRO:HG3	2.46	0.42
23:DB:1640:A:O2'	23:DB:1641:A:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1127:G:H2'	1:CA:1128:C:H6	1.84	0.42
3:CD:29:THR:H	3:CD:33:ILE:CG2	2.33	0.42
41:BJ:51:GLY:HA3	41:BJ:121:LYS:HZ2	1.84	0.42
23:BB:570:G:O2'	23:BB:571:U:H5'	2.19	0.42
1:CA:1269:A:H2	1:CA:1312:G:N3	2.16	0.42
23:BB:1864:U:C2'	23:BB:1865:U:H5'	2.50	0.42
23:DB:1191:G:H2'	23:DB:1192:G:H8	1.85	0.42
23:DB:1191:G:O2'	23:DB:1192:G:H5'	2.18	0.42
23:BB:2109:U:H3'	23:BB:2110:G:C8	2.50	0.42
1:AA:491:G:O2'	1:AA:492:C:H5'	2.20	0.42
1:CA:716:A:N3	10:CK:118:ASN:O	2.52	0.42
22:DA:48:U:O2'	43:DO:100:HIS:HE1	2.03	0.42
23:BB:2700:A:O2'	23:BB:2701:U:H5'	2.20	0.42
23:BB:1220:G:H2'	23:BB:1221:C:H6	1.84	0.42
17:AT:24:ARG:HA	17:AT:27:MET:HE1	2.01	0.42
23:BB:260:G:H1'	23:BB:621:A:H1'	2.02	0.42
12:AM:91:ARG:C	12:AM:93:GLY:H	2.23	0.42
29:BE:3:LEU:HD21	29:BE:14:VAL:CG2	2.50	0.42
23:BB:2803:G:H2'	23:BB:2804:U:C6	2.54	0.42
41:BJ:40:HIS:HD1	41:BJ:41:LYS:HG3	1.83	0.42
23:BB:1745:A:H2'	23:BB:1746:A:H8	1.84	0.42
22:BA:13:G:O2'	22:BA:14:U:H5''	2.19	0.42
1:AA:784:A:N6	1:AA:799:G:C6	2.88	0.42
1:CA:1466:C:H2'	1:CA:1467:C:O4'	2.20	0.42
23:DB:941:A:H2	23:DB:1189:A:H2	1.67	0.42
23:BB:1290:C:H2'	23:BB:1291:C:H6	1.83	0.42
23:DB:1771:C:H2'	23:DB:1772:A:H8	1.84	0.42
1:AA:148:G:H2'	1:AA:149:A:H5''	2.01	0.42
23:BB:2405:G:H1'	23:BB:2412:A:N6	2.34	0.42
14:AQ:30:HIS:CG	14:AQ:33:TYR:HB2	2.55	0.42
1:CA:629:A:O2'	1:CA:630:A:H5'	2.18	0.42
23:DB:1480:C:H2'	23:DB:1481:U:O4'	2.20	0.42
23:DB:817:C:H2'	23:DB:818:G:O4'	2.19	0.42
23:BB:1335:C:H2'	23:BB:1336:A:H8	1.84	0.42
1:AA:913:A:H4'	1:AA:914:A:OP1	2.20	0.42
23:BB:1360:G:H2'	23:BB:1361:G:H5'	2.01	0.42
1:CA:625:U:H4'	13:CP:16:PHE:CE2	2.55	0.42
23:BB:2485:G:H5''	38:BM:125:PRO:HG3	2.02	0.42
23:BB:2854:G:H2'	23:BB:2855:C:C6	2.54	0.42
23:DB:551:G:O2'	23:DB:552:U:H5'	2.20	0.42
11:AL:28:GLN:HB3	11:AL:28:GLN:HE21	1.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1973:G:O2'	23:DB:1974:C:H5'	2.19	0.42
23:BB:2218:G:O2'	23:BB:2219:U:H5'	2.20	0.42
25:DC:245:THR:C	25:DC:247:TRP:H	2.22	0.42
1:AA:781:A:H2'	1:AA:782:A:H5'	2.00	0.42
4:AE:43:GLY:O	4:AE:72:ASN:HA	2.19	0.42
5:AF:34:GLY:O	5:AF:35:LYS:HB2	2.19	0.42
8:CI:126:PHE:CD1	8:CI:127:SER:N	2.87	0.42
23:DB:196:A:N3	23:DB:196:A:H2'	2.35	0.42
39:BX:41:HIS:CD2	39:BX:41:HIS:N	2.88	0.42
16:CS:20:LYS:HE3	16:CS:20:LYS:HB3	1.83	0.42
28:DP:111:GLU:CD	28:DP:111:GLU:N	2.73	0.42
26:DD:182:ALA:O	26:DD:183:GLU:C	2.58	0.42
14:AQ:42:LYS:C	14:AQ:43:LEU:HD12	2.39	0.42
8:CI:49:GLN:HB2	8:CI:50:PRO:CD	2.50	0.42
18:CB:40:ILE:H	18:CB:40:ILE:HG13	1.73	0.42
29:DE:61:ARG:HH12	29:DE:64:GLY:HA3	1.84	0.42
4:AE:84:VAL:HG11	4:AE:146:MET:HB3	2.01	0.42
35:BV:24:ASN:HB3	35:BV:44:HIS:HB3	2.01	0.42
41:BJ:140:LEU:HD23	41:BJ:140:LEU:O	2.20	0.42
35:DV:63:ILE:HB	35:DV:70:ILE:CD1	2.43	0.42
5:CF:20:GLY:O	5:CF:24:ARG:HG3	2.20	0.42
1:AA:254:G:O2'	1:AA:255:G:H5'	2.20	0.42
40:BH:101:ASP:HA	40:BH:110:VAL:HG23	2.02	0.42
40:BH:113:SER:O	40:BH:115:VAL:HG22	2.19	0.42
40:BH:144:VAL:HG13	40:BH:145:ASN:H	1.84	0.42
42:BN:85:PRO:HA	42:BN:88:ALA:CB	2.42	0.42
22:DA:54:G:H21	47:DF:25:MET:CE	2.33	0.42
9:AJ:39:PRO:HA	9:AJ:74:VAL:CG2	2.37	0.42
23:DB:637:A:H4'	23:DB:638:G:O5'	2.19	0.42
23:BB:2465:C:O2'	23:BB:2466:C:H5'	2.19	0.42
49:BR:58:VAL:HG22	49:BR:59:ILE:N	2.35	0.42
23:DB:299:A:N6	23:DB:322:A:O2'	2.47	0.42
23:DB:1061:U:C4	24:DI:11:GLN:HG3	2.54	0.42
9:CJ:53:ILE:HG23	9:CJ:54:SER:H	1.84	0.42
27:DK:74:GLY:HA3	28:DP:74:GLN:HE21	1.85	0.42
47:DF:137:PHE:O	47:DF:138:PRO:C	2.57	0.42
49:BR:48:LYS:O	49:BR:49:ILE:C	2.58	0.42
46:DU:47:PRO:CB	46:DU:55:GLY:HA3	2.44	0.42
1:AA:134:G:H2'	1:AA:135:C:O4'	2.20	0.42
13:AP:6:LEU:HD12	13:AP:6:LEU:N	2.35	0.42
21:AN:60:ARG:O	21:AN:62:ARG:N	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CB:62:ARG:H	18:CB:62:ARG:HD2	1.85	0.42
47:BF:102:LEU:C	47:BF:104:THR:H	2.22	0.42
45:BS:60:HIS:CG	45:BS:61:ASN:N	2.88	0.42
28:DP:24:THR:C	28:DP:25:VAL:HG13	2.40	0.42
17:CT:59:ARG:CB	17:CT:59:ARG:HH11	2.24	0.42
26:BD:39:ASP:CB	26:BD:42:ASN:HB3	2.41	0.42
12:CM:47:LEU:HD12	12:CM:51:GLN:CB	2.41	0.42
48:DG:94:ARG:NH2	48:DG:105:SER:N	2.67	0.42
23:DB:2577:A:H5'	23:DB:2578:G:H5'	2.01	0.42
28:BP:20:ARG:HD2	28:BP:21:PRO:HD2	2.00	0.42
1:CA:1320:C:O2'	1:CA:1321:U:H5'	2.19	0.42
6:AG:70:PRO:O	6:AG:95:ARG:HD3	2.20	0.42
6:AG:71:THR:N	6:AG:141:HIS:CE1	2.86	0.42
4:CE:82:HIS:CD2	7:CH:95:MET:HG3	2.54	0.42
23:DB:356:G:H2'	23:DB:357:C:H6	1.80	0.42
23:DB:580:U:H4'	44:DQ:30:VAL:HG21	2.02	0.42
2:AC:35:ASP:HB3	2:AC:39:ARG:HH11	1.82	0.42
1:CA:1096:C:H2'	1:CA:1097:C:H6	1.84	0.42
1:AA:663:A:O2'	1:AA:664:G:H5'	2.20	0.42
23:DB:1735:A:H2'	23:DB:1736:U:O4'	2.20	0.42
21:CN:52:ARG:HA	21:CN:52:ARG:HD3	1.87	0.42
25:DC:94:LEU:CD1	25:DC:100:ARG:HD3	2.50	0.42
1:AA:131:A:H2'	1:AA:132:C:H6	1.80	0.42
52:DW:13:ARG:HD2	52:DW:13:ARG:HA	1.86	0.42
2:CC:106:ARG:HD3	2:CC:107:LYS:HE2	2.01	0.42
18:AB:30:ILE:HG22	18:AB:31:PHE:N	2.35	0.42
1:CA:1312:G:H2'	1:CA:1313:U:H6	1.83	0.42
23:BB:873:C:H4'	38:BM:64:TRP:NE1	2.35	0.42
23:DB:2703:C:N4	23:DB:2704:C:H41	2.18	0.42
2:CC:46:LEU:O	2:CC:49:ALA:HB3	2.20	0.42
23:BB:1845:G:O2'	23:BB:1846:G:H5'	2.20	0.42
51:BZ:70:GLU:HG2	51:BZ:71:LEU:N	2.35	0.42
1:AA:411:A:N9	1:AA:413:G:H1'	2.35	0.42
23:BB:2515:C:H2'	23:BB:2516:A:C8	2.55	0.42
23:DB:1459:G:H4'	23:DB:1461:C:N3	2.34	0.42
1:CA:1418:A:H1'	23:DB:1959:G:O4'	2.18	0.42
35:DV:55:GLU:HA	35:DV:58:SER:HB2	2.01	0.42
1:AA:1200:C:C4'	1:AA:1201:A:H5'	2.50	0.42
1:AA:177:G:N3	1:AA:177:G:O4'	2.52	0.42
23:DB:926:G:O2'	23:DB:927:A:H5'	2.20	0.42
1:CA:1181:G:H4'	1:CA:1182:G:OP1	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2636:C:H2'	23:BB:2637:U:H6	1.83	0.42
41:BJ:72:LYS:CB	41:BJ:89:PHE:HB2	2.48	0.42
1:CA:415:A:N3	1:CA:415:A:O4'	2.53	0.42
23:BB:1292:G:O2'	23:BB:1293:C:H5'	2.19	0.42
1:AA:1223:C:OP1	1:AA:1224:U:H3'	2.20	0.42
47:BF:45:ASP:C	47:BF:46:LYS:HE2	2.39	0.42
1:CA:339:C:P	27:DK:98:ARG:NH1	2.93	0.42
1:CA:1487:G:O2'	1:CA:1488:G:H5'	2.20	0.42
31:D0:33:SER:C	31:D0:35:GLU:N	2.72	0.42
5:AF:81:ASN:HB3	5:AF:84:VAL:HG12	2.02	0.42
23:BB:2703:C:N4	23:BB:2704:C:H41	2.18	0.42
23:DB:1276:A:O2'	23:DB:1277:G:H5'	2.19	0.42
23:BB:57:C:H2'	23:BB:58:G:C8	2.54	0.42
33:B1:33:LEU:HD23	33:B1:51:ALA:HB1	2.01	0.42
47:DF:163:GLU:C	47:DF:165:GLY:H	2.23	0.42
44:DQ:16:ILE:HD12	44:DQ:16:ILE:H	1.84	0.42
14:AQ:80:LYS:N	14:AQ:80:LYS:NZ	2.68	0.42
6:CG:94:ARG:HD3	6:CG:98:LEU:HB2	2.02	0.42
44:BQ:16:ILE:HD12	44:BQ:16:ILE:H	1.85	0.42
38:DM:124:LEU:HA	38:DM:125:PRO:HD3	1.89	0.42
24:BI:63:ASP:C	24:BI:65:SER:H	2.22	0.42
1:CA:532:A:N6	2:CC:126:ARG:HE	2.18	0.42
1:CA:1338:G:H2'	1:CA:1339:A:O4'	2.19	0.42
23:DB:1376:C:H3'	57:DB:3278:HOH:O	2.19	0.42
23:DB:1501:G:O2'	23:DB:1502:A:H5'	2.20	0.42
23:DB:2218:G:O2'	23:DB:2219:U:H5'	2.19	0.42
1:AA:1418:A:N6	1:AA:1482:G:H1'	2.34	0.42
1:AA:668:G:O2'	1:AA:669:G:H5'	2.20	0.42
8:CI:107:ALA:O	8:CI:108:ARG:C	2.58	0.42
18:CB:43:GLU:H	18:CB:43:GLU:HG2	1.44	0.42
1:AA:1240:U:H3'	1:AA:1241:G:H5'	2.02	0.42
50:DT:39:THR:C	50:DT:41:ALA:H	2.22	0.42
48:BG:30:GLY:O	48:BG:78:VAL:HG12	2.20	0.42
35:BV:4:ILE:HB	35:BV:62:THR:O	2.19	0.42
2:CC:63:ILE:O	2:CC:98:ALA:HB1	2.19	0.42
23:DB:2772:C:H4'	26:DD:171:THR:HG21	2.00	0.42
52:DW:19:ARG:O	52:DW:20:LEU:HD23	2.19	0.42
2:CC:55:VAL:HB	2:CC:66:THR:OG1	2.20	0.42
29:DE:108:ILE:HG12	29:DE:181:ILE:HG13	2.01	0.42
8:AI:44:ARG:HH11	8:AI:44:ARG:HG2	1.85	0.42
12:AM:102:LYS:HG3	12:AM:103:THR:H	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1060:U:C1'	23:BB:1062:G:H5'	2.50	0.42
40:BH:42:LYS:O	40:BH:46:PHE:HB2	2.19	0.42
23:BB:26:G:H2'	23:BB:27:G:O4'	2.19	0.42
6:CG:63:VAL:C	6:CG:65:LEU:H	2.23	0.42
23:BB:2141:G:H2'	23:BB:2142:A:C8	2.54	0.42
49:DR:48:LYS:O	49:DR:49:ILE:C	2.58	0.42
23:DB:1178:C:H3'	23:DB:1179:G:H8	1.84	0.42
23:BB:674:G:H4'	29:BE:69:ARG:HB3	2.02	0.42
38:DM:38:ARG:HG2	38:DM:38:ARG:HH11	1.85	0.42
44:BQ:91:ARG:NH2	44:BQ:93:ILE:HG21	2.35	0.42
49:BR:39:LEU:HB2	49:BR:49:ILE:CG1	2.43	0.42
47:BF:92:GLY:O	47:BF:95:MET:HB3	2.20	0.42
21:AN:80:ARG:HG2	21:AN:80:ARG:HH11	1.85	0.42
3:AD:197:HIS:O	3:AD:201:GLU:HG3	2.20	0.42
47:DF:32:LYS:HA	47:DF:95:MET:HG3	2.02	0.42
25:DC:14:HIS:N	25:DC:14:HIS:ND1	2.67	0.42
23:BB:2052:A:H4'	26:BD:148:GLN:C	2.40	0.42
17:AT:61:ALA:HA	17:AT:67:HIS:N	2.34	0.42
29:DE:28:VAL:HG23	29:DE:29:HIS:H	1.84	0.42
37:BL:100:ILE:O	37:BL:101:ILE:HG12	2.19	0.42
23:DB:2049:G:O2'	23:DB:2050:C:H5'	2.20	0.42
42:DN:31:HIS:C	42:DN:33:ILE:H	2.24	0.42
1:CA:1321:U:H5''	12:CM:85:TYR:CE2	2.55	0.42
6:AG:71:THR:H	6:AG:141:HIS:CE1	2.33	0.42
34:B3:14:LYS:O	34:B3:14:LYS:HD2	2.19	0.42
43:BO:88:LYS:HG2	43:BO:89:ASP:H	1.83	0.42
44:DQ:94:LEU:HD13	44:DQ:94:LEU:HA	1.92	0.42
44:DQ:65:ASN:HA	44:DQ:75:TYR:HB2	2.02	0.42
25:BC:119:VAL:HG13	25:BC:133:ASN:ND2	2.32	0.42
27:DK:116:ILE:C	27:DK:118:LEU:H	2.23	0.42
2:CC:108:PRO:C	2:CC:110:LEU:H	2.22	0.42
41:DJ:121:LYS:HB2	41:DJ:121:LYS:HE3	1.83	0.42
38:BM:102:LEU:HB3	38:BM:103:TYR:CD1	2.55	0.42
11:AL:84:GLY:H	11:AL:94:TYR:HA	1.84	0.42
48:DG:6:ALA:HA	48:DG:7:PRO:HD3	1.84	0.42
51:DZ:77:LYS:H	51:DZ:77:LYS:CD	2.24	0.42
1:CA:842:U:H2'	1:CA:843:U:O3'	2.20	0.42
23:DB:413:C:H2'	23:DB:414:C:C6	2.54	0.42
48:BG:9:VAL:CA	48:BG:48:THR:HA	2.47	0.42
48:BG:8:VAL:HG21	48:BG:51:PHE:HE2	1.84	0.42
1:CA:200:G:O2'	1:CA:381:C:N4	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:381:C:O2'	1:CA:382:A:O4'	2.38	0.42
23:BB:1639:C:O2'	23:BB:1640:A:H5'	2.20	0.42
2:CC:104:GLU:OE2	2:CC:106:ARG:N	2.52	0.42
1:CA:600:A:H5'	7:CH:120:LEU:HA	2.02	0.42
45:DS:10:ALA:O	45:DS:12:SER:N	2.42	0.42
1:CA:737:C:H2'	1:CA:738:C:H6	1.85	0.42
20:CO:33:THR:O	20:CO:37:ASN:HB2	2.20	0.42
23:DB:233:A:N6	23:DB:428:A:N6	2.63	0.42
23:BB:1561:C:H2'	23:BB:1562:U:H6	1.84	0.42
24:BI:85:ILE:CD1	24:BI:137:LEU:HD21	2.49	0.42
2:CC:146:LYS:HB2	2:CC:202:PHE:CD2	2.55	0.42
1:CA:5:U:H1'	1:CA:6:G:C2	2.55	0.42
24:BI:37:PHE:HZ	24:BI:56:VAL:HG11	1.85	0.42
25:BC:163:ILE:HG22	25:BC:164:VAL:N	2.35	0.42
23:BB:834:G:O2'	23:BB:835:C:H5'	2.20	0.42
1:CA:453:G:H2'	1:CA:454:G:C8	2.54	0.42
25:BC:181:ARG:NH2	25:BC:265:PHE:HB3	2.33	0.42
44:BQ:65:ASN:HA	44:BQ:75:TYR:HB2	2.01	0.42
2:AC:30:ASP:HA	21:AN:64:ARG:HH12	1.84	0.42
23:BB:862:G:H2'	23:BB:863:A:C8	2.54	0.42
6:AG:140:VAL:C	6:AG:142:ARG:H	2.22	0.42
41:BJ:89:PHE:O	41:BJ:92:MET:HB2	2.20	0.42
22:BA:14:U:HO2'	22:BA:15:A:P	2.41	0.42
1:CA:425:G:H2'	1:CA:426:U:C6	2.54	0.42
20:CO:31:LEU:CD1	20:CO:32:LEU:HD23	2.49	0.42
1:CA:1151:A:C4'	9:CJ:41:PRO:HB2	2.50	0.42
48:DG:54:ARG:HA	48:DG:54:ARG:HE	1.85	0.42
23:BB:1340:U:H3'	23:BB:1341:G:C5'	2.47	0.42
23:DB:1904:G:H1'	23:DB:1927:A:N1	2.34	0.42
23:DB:1269:A:H2'	23:DB:1270:C:C6	2.54	0.42
15:CR:28:LEU:C	15:CR:30:ASN:N	2.72	0.42
14:AQ:24:ILE:HD12	14:AQ:24:ILE:N	2.34	0.42
28:DP:99:LEU:HA	28:DP:102:ARG:HG3	2.02	0.42
38:DM:17:ASN:HD21	38:DM:95:LEU:HD23	1.84	0.42
23:DB:709:U:O5'	23:DB:709:U:H6	2.02	0.42
8:CI:126:PHE:HD1	8:CI:127:SER:N	2.18	0.42
23:BB:702:U:H2'	23:BB:703:U:C6	2.55	0.42
23:BB:2597:G:OP1	25:BC:240:GLY:HA3	2.20	0.42
23:BB:1625:C:O2'	23:BB:1626:A:H5'	2.19	0.42
48:BG:79:THR:HG22	48:BG:80:GLU:N	2.34	0.42
1:AA:218:U:H2'	1:AA:219:U:C6	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1342:A:HO2'	23:BB:1344:U:P	2.43	0.42
1:CA:118:U:O4	1:CA:288:A:H2'	2.20	0.42
45:DS:85:ILE:HD12	45:DS:85:ILE:N	2.35	0.42
3:CD:82:LYS:NZ	3:CD:82:LYS:HB3	2.35	0.42
23:DB:2225:A:H4'	23:DB:2226:C:H6	1.85	0.42
23:BB:305:C:H2'	23:BB:306:U:C6	2.55	0.42
23:BB:335:C:O2'	23:BB:336:C:H5'	2.20	0.42
40:BH:90:LEU:HD22	40:BH:123:ARG:CA	2.48	0.42
9:AJ:6:ILE:HD13	9:AJ:8:ILE:HD11	2.01	0.42
19:CU:43:GLU:N	19:CU:46:ARG:HE	2.17	0.42
18:CB:45:THR:O	18:CB:48:MET:HB2	2.20	0.42
1:AA:1237:C:H4'	1:AA:1334:G:N2	2.35	0.42
1:CA:1179:A:O2'	1:CA:1180:A:H5'	2.19	0.42
32:B4:11:CYS:SG	32:B4:33:HIS:CE1	3.13	0.42
35:BV:44:HIS:CE1	35:BV:86:LEU:H	2.33	0.42
2:CC:35:ASP:O	2:CC:36:PHE:C	2.57	0.42
5:CF:61:LEU:HD12	5:CF:63:ASN:OD1	2.20	0.42
5:AF:38:ARG:CG	5:AF:39:LEU:N	2.83	0.42
14:AQ:45:VAL:CG1	14:AQ:60:ILE:HG21	2.50	0.42
40:BH:128:HIS:N	40:BH:144:VAL:O	2.53	0.42
19:AU:16:ARG:HH22	19:AU:19:LYS:CE	2.33	0.42
1:CA:9:G:H2'	1:CA:10:A:H8	1.83	0.42
6:CG:134:VAL:HB	6:CG:137:ARG:NH2	2.35	0.42
2:AC:133:MET:SD	2:AC:152:VAL:HG21	2.60	0.42
10:CK:22:ILE:HD12	10:CK:85:VAL:CG2	2.48	0.42
35:DV:77:VAL:HG12	38:DM:136:MET:HE2	2.01	0.42
23:DB:1177:G:H2'	23:DB:1178:C:C6	2.55	0.42
18:CB:32:GLY:O	18:CB:39:ILE:HB	2.20	0.42
28:BP:74:GLN:HB2	28:BP:77:SER:HB2	2.02	0.42
38:DM:18:ARG:C	38:DM:38:ARG:HH22	2.23	0.42
47:DF:102:LEU:C	47:DF:104:THR:H	2.22	0.42
47:DF:105:ILE:HA	47:DF:108:PRO:HB2	2.02	0.42
44:BQ:107:ALA:C	49:BR:48:LYS:HE2	2.40	0.42
23:BB:871:U:H4'	38:BM:68:PHE:CZ	2.54	0.42
38:BM:41:LEU:O	38:BM:94:ALA:N	2.52	0.42
16:AS:35:ARG:HB3	16:AS:71:GLY:HA2	2.01	0.42
16:AS:5:LYS:CB	16:AS:6:LYS:HD2	2.49	0.42
16:AS:5:LYS:HB2	16:AS:6:LYS:HD2	2.02	0.42
1:AA:876:C:O2'	7:AH:11:THR:HG21	2.19	0.42
23:BB:2312:U:H1'	47:BF:84:ILE:HG21	2.01	0.42
47:BF:40:GLY:CA	47:BF:84:ILE:HG23	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AB:101:THR:HG22	18:AB:174:GLU:OE1	2.19	0.42
21:AN:60:ARG:NE	21:AN:62:ARG:HG2	2.33	0.42
18:CB:59:ILE:HA	18:CB:62:ARG:CZ	2.50	0.42
40:DH:120:GLY:O	40:DH:123:ARG:HD2	2.19	0.42
1:CA:920:U:C2	1:CA:921:U:C5	3.08	0.42
1:CA:921:U:H2'	1:CA:922:G:H8	1.84	0.42
1:CA:1004:A:H8	1:CA:1025:U:H1'	1.85	0.42
1:AA:16:A:O2'	1:AA:1080:A:H4'	2.20	0.42
39:DX:56:LEU:O	39:DX:57:LEU:HB3	2.20	0.42
3:AD:145:ARG:O	3:AD:146:GLU:C	2.56	0.42
38:BM:57:VAL:O	38:BM:59:ARG:N	2.49	0.42
1:AA:190:A:C4	1:AA:191:G:H1'	2.54	0.42
26:DD:127:PHE:HB3	26:DD:128:ARG:H	1.73	0.42
42:DN:28:LEU:HD21	42:DN:113:ILE:HG23	2.02	0.42
12:CM:108:ARG:HG3	12:CM:108:ARG:NH1	2.35	0.42
1:AA:994:A:H61	1:AA:1047:G:H1'	1.85	0.42
23:DB:1873:G:O2'	23:DB:1874:C:H5'	2.19	0.42
23:BB:2191:A:H2'	23:BB:2192:U:H6	1.85	0.42
41:BJ:80:HIS:HB3	41:BJ:81:ILE:H	1.75	0.42
51:BZ:53:ALA:O	51:BZ:54:LYS:HB3	2.20	0.42
39:DX:28:LEU:HD13	39:DX:37:LEU:HD11	2.01	0.42
40:BH:27:ARG:HH11	51:BZ:64:ILE:CD1	2.32	0.42
13:CP:20:VAL:HG21	13:CP:32:PHE:CG	2.55	0.42
23:BB:1607:C:N4	23:BB:1622:G:N7	2.67	0.42
51:DZ:54:LYS:HA	51:DZ:57:ARG:CD	2.45	0.42
23:BB:1552:A:H2'	23:BB:1553:A:C5'	2.45	0.42
23:BB:264:C:O2'	23:BB:265:A:H5'	2.19	0.42
11:AL:31:GLY:HA3	11:AL:54:VAL:CG1	2.50	0.42
17:CT:46:ALA:HB1	17:CT:82:ILE:CG2	2.48	0.42
6:AG:149:ALA:HB2	10:AK:60:PHE:CB	2.50	0.42
6:AG:150:PHE:H	10:AK:55:ARG:HH22	1.65	0.42
24:BI:103:ALA:O	24:BI:107:GLU:HG3	2.20	0.42
1:CA:1091:U:H2'	1:CA:1093:A:OP2	2.19	0.42
23:DB:1857:G:H22	23:DB:1884:G:H2'	1.82	0.42
52:DW:28:GLU:H	52:DW:31:LEU:HD11	1.85	0.42
1:AA:1187:G:O5'	8:AI:114:LYS:HE3	2.19	0.42
29:DE:46:GLN:HB3	29:DE:86:ALA:CA	2.49	0.42
45:BS:17:VAL:O	45:BS:19:LEU:N	2.53	0.42
1:AA:1096:C:H2'	1:AA:1097:C:C6	2.55	0.42
1:CA:836:G:H2'	1:CA:837:U:H6	1.84	0.42
23:DB:2899:A:H2'	23:DB:2900:A:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BP:30:TRP:HD1	28:BP:39:LEU:HG	1.82	0.42
1:CA:137:U:H2'	1:CA:138:G:H8	1.83	0.42
2:CC:32:LEU:HD11	21:CN:92:ILE:HG12	2.02	0.42
43:DO:59:ALA:HA	43:DO:62:LEU:HB2	2.02	0.42
6:AG:93:VAL:HA	6:AG:96:ASN:ND2	2.33	0.42
23:DB:1038:G:O2'	23:DB:1039:A:H5'	2.20	0.42
41:BJ:99:ARG:HA	41:BJ:102:GLU:HB2	2.02	0.42
23:DB:2043:C:H2'	23:DB:2044:C:C6	2.54	0.42
23:BB:2897:U:H2'	23:BB:2898:U:H6	1.83	0.42
23:BB:329:G:H1	46:BU:16:LYS:HE3	1.83	0.42
1:CA:784:A:H2'	1:CA:785:G:C8	2.51	0.42
8:AI:128:LYS:HD3	8:AI:128:LYS:H	1.85	0.42
1:CA:993:G:H2'	1:CA:993:G:N3	2.35	0.42
25:DC:83:ASP:HA	25:DC:84:PRO:HD3	1.90	0.42
22:DA:87:U:C2'	22:DA:88:C:O5'	2.67	0.42
26:DD:69:ALA:C	26:DD:71:ALA:N	2.73	0.42
1:CA:1465:A:H8	1:CA:1465:A:O5'	2.03	0.42
2:AC:131:ARG:N	2:AC:131:ARG:HD2	2.34	0.42
23:DB:1292:G:H2'	23:DB:1293:C:H6	1.82	0.42
1:CA:496:A:H2'	1:CA:497:G:N7	2.35	0.42
1:CA:1387:G:O2'	1:CA:1388:C:H5'	2.20	0.42
23:BB:2691:C:H2'	23:BB:2692:G:C8	2.54	0.42
3:CD:102:TYR:CE1	3:CD:109:THR:HA	2.55	0.42
1:CA:213:G:C8	1:CA:214:C:C5	3.08	0.42
14:CQ:30:HIS:CE1	14:CQ:32:ILE:HG22	2.55	0.42
23:DB:1965:C:H3'	23:DB:1966:A:C8	2.55	0.42
43:BO:6:ALA:CB	43:BO:10:ARG:HH11	2.32	0.42
23:DB:64:A:O2'	23:DB:65:U:H5'	2.19	0.42
1:AA:729:A:H2'	1:AA:730:G:H8	1.85	0.42
23:BB:1350:C:H2'	23:BB:1350:C:O2	2.20	0.42
23:DB:1700:A:H3'	23:DB:1701:A:H8	1.83	0.42
20:CO:18:ASP:O	20:CO:19:ALA:HB2	2.20	0.42
20:CO:21:ASP:OD2	20:CO:24:SER:HB2	2.19	0.42
14:AQ:80:LYS:O	14:AQ:81:ALA:HB3	2.20	0.42
1:CA:913:A:H4'	1:CA:914:A:OP1	2.20	0.42
23:BB:1015:U:H2'	23:BB:1016:G:C8	2.54	0.42
23:DB:2776:A:H4'	23:DB:2777:G:O5'	2.20	0.42
23:BB:1838:C:H4'	23:BB:1839:G:H8	1.85	0.42
3:CD:11:SER:HB3	3:CD:17:ASP:HA	2.02	0.42
23:BB:2193:G:H2'	23:BB:2194:U:H6	1.85	0.42
23:DB:2350:C:O2'	23:DB:2351:G:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CE:98:ALA:HB2	4:CE:123:LEU:HG	2.02	0.42
1:AA:579:A:H2'	1:AA:580:C:C6	2.55	0.42
43:DO:60:GLU:H	43:DO:60:GLU:HG2	1.69	0.42
43:DO:56:LYS:HG2	43:DO:60:GLU:OE1	2.20	0.42
26:BD:182:ALA:O	26:BD:183:GLU:C	2.59	0.42
1:CA:409:U:OP1	3:CD:23:GLY:HA3	2.19	0.42
23:BB:2331:G:H2'	23:BB:2332:C:C6	2.55	0.42
41:DJ:120:ARG:HG2	41:DJ:120:ARG:H	1.73	0.42
23:BB:2251:G:H2'	23:BB:2252:G:C8	2.55	0.42
23:BB:1383:A:P	23:BB:1383:A:H3'	2.60	0.42
23:DB:55:G:O2'	23:DB:56:A:H5'	2.20	0.42
23:DB:1671:U:H2'	23:DB:1673:G:OP2	2.20	0.42
9:AJ:101:SER:OG	9:AJ:102:LEU:N	2.53	0.41
23:BB:921:C:H2'	23:BB:922:C:C6	2.55	0.41
50:DT:8:LEU:HD22	50:DT:46:ALA:HA	2.02	0.41
1:AA:238:A:C3'	1:AA:239:U:H5''	2.51	0.41
26:DD:172:VAL:CG2	26:DD:194:PRO:HD3	2.50	0.41
23:DB:2262:U:OP1	52:DW:38:ARG:NH2	2.53	0.41
19:AU:3:ILE:HB	19:AU:19:LYS:HD2	2.02	0.41
25:BC:142:ASN:CG	25:BC:142:ASN:O	2.59	0.41
37:DL:112:LEU:O	37:DL:112:LEU:HD23	2.20	0.41
48:DG:134:GLY:HA3	48:DG:140:ILE:HG21	2.02	0.41
19:CU:3:ILE:HB	19:CU:19:LYS:HD2	2.01	0.41
23:BB:2746:U:C4'	48:BG:138:GLN:HA	2.50	0.41
15:CR:33:THR:HG22	15:CR:39:VAL:CG1	2.50	0.41
3:CD:160:LEU:HD23	3:CD:164:ARG:CZ	2.50	0.41
46:DU:73:ASN:HD22	46:DU:74:ALA:H	1.67	0.41
49:DR:49:ILE:HG21	49:DR:53:PHE:C	2.40	0.41
24:DI:54:ILE:O	24:DI:54:ILE:HG23	2.19	0.41
23:DB:1168:G:C6	23:DB:1182:G:C6	3.08	0.41
23:DB:1172:C:H3'	23:DB:1173:U:C6	2.55	0.41
1:AA:1005:A:C2	1:AA:1006:G:H1'	2.54	0.41
44:BQ:60:TRP:C	44:BQ:64:ILE:HG12	2.41	0.41
38:BM:19:GLY:HA3	38:BM:38:ARG:NH2	2.34	0.41
16:AS:40:PHE:HD1	16:AS:43:MET:HB2	1.84	0.41
16:AS:50:VAL:HG13	16:AS:70:LEU:HD23	2.02	0.41
18:AB:91:VAL:HG11	18:AB:95:TRP:HD1	1.85	0.41
49:DR:61:ALA:HB1	49:DR:98:ILE:H	1.85	0.41
3:AD:86:GLY:O	3:AD:196:GLU:HG3	2.20	0.41
20:AO:35:GLN:HB2	20:AO:59:MET:CE	2.50	0.41
20:AO:33:THR:HA	20:AO:63:ARG:HH11	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:150:GLN:O	26:BD:151:THR:C	2.57	0.41
52:BW:28:GLU:O	52:BW:30:VAL:N	2.53	0.41
18:CB:122:ASP:OD1	18:CB:124:THR:HG22	2.20	0.41
18:AB:202:ASN:CG	18:AB:204:ASP:H	2.23	0.41
38:DM:35:ALA:C	38:DM:36:VAL:HG23	2.40	0.41
23:BB:1594:U:H2'	23:BB:1595:C:H6	1.81	0.41
9:AJ:18:ILE:HG23	9:AJ:19:ASP:H	1.85	0.41
16:CS:35:ARG:HH12	16:CS:76:THR:HG23	1.84	0.41
43:BO:24:THR:O	43:BO:90:VAL:HB	2.20	0.41
44:DQ:91:ARG:NH2	44:DQ:93:ILE:HG21	2.35	0.41
23:BB:1420:A:HO2'	23:BB:1421:G:P	2.43	0.41
23:DB:1011:G:P	44:DQ:69:ARG:HH22	2.43	0.41
4:AE:125:LYS:HD2	4:AE:126:ALA:N	2.35	0.41
1:AA:78:A:H2'	1:AA:79:G:H8	1.85	0.41
1:AA:79:G:H2'	1:AA:80:A:N7	2.35	0.41
32:D4:4:ARG:CG	32:D4:5:ALA:H	2.29	0.41
4:AE:106:ALA:HB1	4:AE:110:MET:CB	2.45	0.41
3:AD:192:ALA:C	3:AD:194:ILE:H	2.23	0.41
11:CL:84:GLY:H	11:CL:94:TYR:HA	1.84	0.41
1:CA:369:G:O2'	1:CA:370:C:H5'	2.20	0.41
7:CH:100:ILE:CG1	7:CH:128:VAL:HB	2.50	0.41
48:BG:3:VAL:O	48:BG:68:ARG:HG3	2.19	0.41
1:AA:384:G:H2'	1:AA:385:C:H6	1.83	0.41
1:CA:779:C:H5'	10:CK:123:PRO:HB3	2.02	0.41
23:DB:2794:C:H2'	23:DB:2795:C:H6	1.85	0.41
1:AA:1071:C:O2'	1:AA:1072:G:H5'	2.19	0.41
23:DB:2245:U:H5'	23:DB:2246:G:H5'	2.02	0.41
1:CA:1391:U:H2'	1:CA:1392:G:H8	1.83	0.41
23:DB:1846:G:N2	23:DB:1848:A:H62	2.18	0.41
17:CT:54:GLN:N	17:CT:55:PRO:CD	2.82	0.41
23:DB:2636:C:O5'	26:DD:81:GLU:HB2	2.20	0.41
10:CK:30:ILE:HG22	10:CK:45:THR:CB	2.50	0.41
29:BE:120:VAL:HG23	29:BE:188:MET:O	2.19	0.41
47:BF:71:LYS:HG2	47:BF:71:LYS:O	2.19	0.41
50:BT:7:LEU:O	50:BT:7:LEU:HD13	2.20	0.41
27:BK:63:VAL:HG13	27:BK:107:LEU:HD21	2.02	0.41
11:CL:51:VAL:HG12	11:CL:63:THR:HG22	2.01	0.41
24:BI:5:GLN:HG2	24:BI:6:ALA:H	1.82	0.41
23:BB:2784:U:O2'	23:BB:2785:C:H5'	2.20	0.41
1:CA:771:G:H2'	1:CA:772:U:C6	2.55	0.41
23:BB:303:G:H2'	23:BB:304:U:C6	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1310:G:H1'	23:BB:1611:C:H5'	2.02	0.41
23:BB:1740:G:O2'	23:BB:1741:C:H5'	2.19	0.41
1:CA:551:U:O2'	11:CL:82:ARG:HD2	2.20	0.41
23:DB:2405:G:H1'	23:DB:2412:A:H61	1.84	0.41
1:AA:707:U:H2'	1:AA:708:C:H6	1.85	0.41
1:CA:1122:U:O2'	1:CA:1123:U:H5'	2.20	0.41
5:CF:12:PRO:C	5:CF:14:GLN:H	2.24	0.41
23:DB:1708:C:H2'	23:DB:1709:U:H6	1.85	0.41
26:DD:97:SER:OG	26:DD:98:VAL:N	2.53	0.41
1:AA:291:U:H2'	1:AA:292:G:H8	1.86	0.41
29:DE:40:ARG:NH2	29:DE:92:HIS:NE2	2.68	0.41
1:AA:509:A:C6	1:AA:510:A:N1	2.88	0.41
1:AA:364:A:H2'	1:AA:365:U:O2	2.20	0.41
28:BP:62:LYS:HB3	28:BP:69:VAL:CG2	2.49	0.41
23:DB:2659:G:O2'	23:DB:2661:G:N7	2.46	0.41
1:CA:1032:G:H2'	1:CA:1033:G:O4'	2.20	0.41
44:BQ:104:ALA:HA	49:BR:46:GLU:CD	2.40	0.41
23:DB:690:G:H2'	23:DB:691:C:O4'	2.20	0.41
23:DB:962:G:H21	23:DB:2250:G:H1	1.68	0.41
1:AA:512:U:H2'	1:AA:513:C:C6	2.55	0.41
51:DZ:66:THR:O	51:DZ:69:ALA:HB3	2.20	0.41
20:AO:3:LEU:CG	20:AO:4:SER:H	2.32	0.41
23:BB:1249:U:O4'	44:BQ:3:VAL:HG21	2.20	0.41
45:BS:9:HIS:H	45:BS:102:HIS:CE1	2.38	0.41
31:D0:18:HIS:C	31:D0:20:ALA:H	2.23	0.41
31:B0:47:TYR:CE1	31:B0:52:LYS:HG3	2.55	0.41
27:BK:8:LEU:HD13	27:BK:84:CYS:SG	2.60	0.41
34:B3:9:ALA:HA	37:BL:58:TYR:HB2	2.02	0.41
23:DB:333:G:N3	23:DB:333:G:H2'	2.35	0.41
47:DF:161:SER:HB3	47:DF:164:GLU:HG3	2.02	0.41
23:BB:2519:U:C6	23:BB:2542:A:N6	2.88	0.41
12:AM:19:THR:HG22	12:AM:25:GLY:O	2.20	0.41
12:AM:22:TYR:HB2	12:AM:65:GLU:CA	2.49	0.41
12:AM:11:HIS:CA	12:AM:43:LYS:HD3	2.40	0.41
50:DT:11:LEU:HD13	50:DT:11:LEU:N	2.35	0.41
50:BT:43:ILE:O	50:BT:47:VAL:HG23	2.20	0.41
23:DB:2305:U:H2'	23:DB:2306:C:O4'	2.19	0.41
35:DV:4:ILE:O	35:DV:63:ILE:HA	2.20	0.41
2:CC:63:ILE:H	2:CC:98:ALA:HB1	1.83	0.41
48:DG:15:ASP:CG	48:DG:26:LYS:HD2	2.40	0.41
48:DG:42:VAL:HG13	48:DG:42:VAL:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AF:45:ARG:HG2	5:AF:46:GLN:H	1.85	0.41
41:DJ:54:ILE:O	41:DJ:122:LEU:HA	2.20	0.41
40:BH:73:ASN:OD1	40:BH:141:LYS:HB2	2.20	0.41
52:DW:39:GLN:HG2	52:DW:42:THR:H	1.84	0.41
29:DE:198:GLU:HG3	29:DE:199:MET:N	2.34	0.41
22:BA:28:C:H5	22:BA:56:G:H1	1.66	0.41
36:B2:27:GLY:O	36:B2:30:VAL:HB	2.20	0.41
43:DO:30:ARG:HG3	43:DO:30:ARG:HH11	1.85	0.41
25:BC:151:GLY:O	25:BC:152:GLN:HG3	2.20	0.41
48:DG:122:ALA:HA	48:DG:132:LEU:HA	2.02	0.41
10:CK:95:THR:O	10:CK:99:LEU:HB2	2.21	0.41
26:BD:114:LYS:HB2	26:BD:116:LYS:NZ	2.35	0.41
26:BD:121:THR:HB	26:BD:127:PHE:CD1	2.55	0.41
24:DI:52:LEU:HD13	24:DI:81:LYS:HZ3	1.83	0.41
28:DP:50:ARG:HB3	28:DP:56:SER:HB3	1.99	0.41
28:DP:80:VAL:HG13	28:DP:81:ASP:N	2.34	0.41
40:DH:68:ARG:CG	40:DH:134:VAL:HG21	2.50	0.41
38:DM:68:PHE:CG	38:DM:69:PRO:HD2	2.55	0.41
44:BQ:63:ARG:HH21	44:BQ:64:ILE:HD11	1.84	0.41
23:DB:992:C:O2'	23:DB:993:G:H5'	2.20	0.41
13:AP:71:VAL:HG13	13:AP:72:ALA:N	2.35	0.41
47:BF:116:LEU:HD12	47:BF:116:LEU:HA	1.91	0.41
4:CE:131:ASN:ND2	4:CE:134:ASN:H	2.18	0.41
42:BN:28:LEU:HD21	42:BN:113:ILE:HG23	2.02	0.41
1:AA:202:G:H2'	1:AA:203:G:H8	1.84	0.41
37:DL:95:LEU:HB2	37:DL:101:ILE:HG12	2.02	0.41
40:DH:4:ILE:HD12	40:DH:4:ILE:N	2.35	0.41
6:AG:16:LYS:HB3	6:AG:43:TYR:CZ	2.55	0.41
26:DD:114:LYS:HB2	26:DD:116:LYS:NZ	2.35	0.41
39:BX:20:ASN:HA	39:BX:24:GLU:OE1	2.19	0.41
39:BX:57:LEU:O	39:BX:60:LYS:HB2	2.20	0.41
23:BB:2886:A:H62	31:B0:39:ARG:CZ	2.31	0.41
40:BH:11:ASN:O	40:BH:12:LEU:HB3	2.20	0.41
1:AA:373:A:O2'	1:AA:374:A:H5'	2.20	0.41
47:BF:11:VAL:HG21	47:BF:172:PHE:HE1	1.79	0.41
28:BP:20:ARG:CD	28:BP:21:PRO:HD2	2.50	0.41
1:CA:1014:A:H2'	1:CA:1015:G:O4'	2.20	0.41
2:CC:26:LYS:CG	2:CC:27:GLU:N	2.81	0.41
52:BW:9:THR:HG23	52:BW:10:ARG:CD	2.45	0.41
26:DD:159:LYS:NZ	26:DD:160:LYS:N	2.68	0.41
46:DU:84:PHE:O	46:DU:85:ARG:CB	2.64	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1438:U:C4	23:BB:1552:A:N6	2.88	0.41
25:DC:249:VAL:O	25:DC:251:THR:N	2.53	0.41
23:DB:1797:G:O3'	25:DC:255:LYS:O	2.38	0.41
36:B2:3:ARG:HG2	36:B2:3:ARG:NH2	2.34	0.41
23:BB:987:C:O2'	23:BB:988:A:H5'	2.20	0.41
1:CA:821:G:H4'	57:CA:1751:HOH:O	2.20	0.41
4:CE:54:GLU:C	4:CE:56:PRO:HD2	2.40	0.41
1:CA:502:A:OP1	11:CL:113:ARG:N	2.53	0.41
23:BB:1485:U:H2'	23:BB:1486:U:H6	1.83	0.41
23:DB:968:C:H2'	23:DB:969:G:H8	1.85	0.41
10:AK:63:GLN:O	10:AK:67:GLU:HG2	2.20	0.41
2:AC:26:LYS:HG3	2:AC:27:GLU:N	2.31	0.41
7:CH:110:MET:SD	7:CH:115:ALA:HB2	2.60	0.41
4:CE:80:LEU:CD1	4:CE:95:MET:HB3	2.50	0.41
47:BF:81:GLY:O	47:BF:82:TYR:C	2.58	0.41
1:CA:429:U:H4'	1:CA:430:A:O5'	2.19	0.41
21:CN:76:PHE:HD1	21:CN:83:VAL:HG13	1.84	0.41
45:BS:73:LYS:O	45:BS:106:VAL:N	2.53	0.41
28:BP:36:LYS:HB3	28:BP:37:LYS:H	1.70	0.41
23:BB:1407:G:H2'	23:BB:1408:G:H8	1.85	0.41
23:DB:777:G:H2'	23:DB:778:G:H8	1.84	0.41
41:DJ:72:LYS:CG	41:DJ:89:PHE:HB2	2.50	0.41
17:CT:53:MET:O	17:CT:57:VAL:HG22	2.20	0.41
23:DB:2636:C:H2'	23:DB:2637:U:H6	1.85	0.41
45:DS:4:ILE:CG2	45:DS:106:VAL:HG13	2.48	0.41
23:BB:2262:U:OP2	52:BW:12:GLY:HA3	2.20	0.41
33:D1:32:LYS:HG2	33:D1:52:LYS:HA	2.01	0.41
1:CA:308:C:H2'	1:CA:309:A:H8	1.85	0.41
41:DJ:99:ARG:HA	41:DJ:102:GLU:HB2	2.02	0.41
1:AA:614:C:O2'	1:AA:615:G:H5'	2.20	0.41
23:DB:1936:A:H2	23:DB:1943:U:C5	2.37	0.41
26:DD:68:PHE:HB3	26:DD:73:VAL:HG23	2.01	0.41
35:DV:1:MET:HG3	35:DV:2:PHE:CD2	2.55	0.41
23:DB:132:G:H2'	23:DB:133:U:H6	1.84	0.41
41:DJ:58:ASN:O	41:DJ:60:ASP:N	2.51	0.41
1:CA:154:U:H2'	1:CA:155:A:H8	1.84	0.41
1:AA:891:U:O2'	1:AA:892:A:H5'	2.20	0.41
1:AA:1369:C:H2'	1:AA:1370:G:C8	2.55	0.41
23:DB:471:A:H2'	23:DB:472:A:O4'	2.20	0.41
23:BB:1480:C:H2'	23:BB:1481:U:O4'	2.19	0.41
14:AQ:53:GLY:O	14:AQ:56:ASP:HB2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:768:G:O2'	23:DB:769:U:H5'	2.20	0.41
1:CA:934:C:H5'	57:CA:1895:HOH:O	2.20	0.41
23:DB:1360:G:H2'	23:DB:1361:G:C5'	2.50	0.41
23:DB:2081:U:H2'	23:DB:2082:A:H8	1.85	0.41
23:DB:995:C:N4	41:DJ:2:LYS:HA	2.35	0.41
36:B2:22:MET:SD	36:B2:28:ARG:HG3	2.59	0.41
38:DM:124:LEU:HA	38:DM:124:LEU:HD23	1.93	0.41
23:BB:1344:U:O2'	23:BB:1385:A:H2'	2.19	0.41
46:DU:66:VAL:C	46:DU:68:ASN:H	2.22	0.41
38:BM:30:SER:O	38:BM:132:THR:HA	2.20	0.41
35:DV:49:ASN:O	35:DV:52:ALA:HB3	2.20	0.41
23:BB:1686:C:H2'	23:BB:1687:G:O4'	2.19	0.41
38:DM:31:PHE:CE2	38:DM:110:GLU:HB3	2.55	0.41
3:CD:96:ARG:NH1	3:CD:133:SER:HA	2.35	0.41
1:CA:1188:A:C2'	1:CA:1189:U:H5'	2.50	0.41
23:DB:519:U:H2'	23:DB:520:G:H8	1.85	0.41
29:BE:160:ALA:C	29:BE:162:ARG:H	2.24	0.41
13:AP:23:ASP:OD1	13:AP:25:ARG:NE	2.50	0.41
23:BB:1109:C:H2'	23:BB:1110:G:C4	2.55	0.41
23:BB:1866:A:C4	23:BB:1876:A:C6	3.08	0.41
25:BC:120:ASP:CG	25:BC:121:ALA:H	2.23	0.41
23:DB:1678:A:H2'	23:DB:1679:A:O4'	2.20	0.41
18:CB:41:ASN:C	18:CB:43:GLU:N	2.72	0.41
1:AA:1240:U:C3'	1:AA:1241:G:H5'	2.50	0.41
12:AM:21:ILE:HG23	12:AM:65:GLU:N	2.32	0.41
50:DT:55:VAL:HG13	50:DT:85:VAL:HG12	2.01	0.41
52:BW:50:VAL:HG23	52:BW:61:LYS:CE	2.51	0.41
50:BT:8:LEU:HD22	50:BT:46:ALA:HA	2.02	0.41
25:DC:140:VAL:HG12	25:DC:141:HIS:H	1.85	0.41
35:BV:31:TYR:O	35:BV:92:VAL:HA	2.20	0.41
29:BE:198:GLU:C	29:BE:200:LEU:N	2.74	0.41
37:DL:81:ASP:HA	37:DL:84:LYS:HE2	2.01	0.41
43:BO:51:ALA:O	43:BO:74:VAL:HG12	2.20	0.41
19:AU:16:ARG:CA	19:AU:16:ARG:NE	2.83	0.41
24:BI:11:GLN:NE2	24:BI:74:PRO:HG2	2.35	0.41
3:CD:53:GLN:O	3:CD:202:LEU:HD22	2.20	0.41
23:BB:27:G:HO2'	23:BB:28:A:H8	1.60	0.41
2:AC:184:ASN:O	2:AC:199:VAL:HG22	2.20	0.41
23:DB:633:A:H2'	23:DB:634:C:O4'	2.20	0.41
48:DG:93:TYR:CG	48:DG:106:LEU:HB3	2.55	0.41
46:DU:3:LYS:HE2	46:DU:82:VAL:HB	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:33:ASP:O	2:AC:37:LYS:HG3	2.19	0.41
29:BE:58:LYS:CD	29:BE:58:LYS:N	2.80	0.41
23:DB:2376:A:C2	43:DO:92:PHE:HB3	2.55	0.41
47:DF:111:ARG:H	47:DF:111:ARG:HD2	1.85	0.41
47:DF:37:MET:O	47:DF:37:MET:HG2	2.20	0.41
47:DF:55:ASP:HA	47:DF:139:GLU:OE2	2.20	0.41
49:BR:36:ALA:C	49:BR:38:VAL:H	2.23	0.41
47:BF:87:LYS:HG3	47:BF:88:VAL:N	2.28	0.41
18:AB:169:HIS:CD2	18:AB:170:ILE:H	2.39	0.41
18:AB:169:HIS:NE2	18:AB:170:ILE:HG12	2.34	0.41
25:DC:203:VAL:C	25:DC:205:GLY:H	2.22	0.41
1:AA:1350:A:OP1	8:AI:122:ARG:HD2	2.21	0.41
1:CA:1413:A:O2'	1:CA:1414:U:H5'	2.21	0.41
40:DH:44:ILE:O	40:DH:48:GLU:HG2	2.20	0.41
18:AB:29:PHE:CZ	18:AB:198:VAL:HG11	2.56	0.41
26:DD:122:VAL:HA	26:DD:127:PHE:N	2.35	0.41
23:BB:182:A:H2'	23:BB:183:C:H6	1.84	0.41
23:BB:2075:U:H2'	23:BB:2238:G:H22	1.82	0.41
1:AA:1432:G:H1'	1:AA:1468:A:H61	1.85	0.41
2:AC:11:LEU:O	2:AC:13:ILE:N	2.54	0.41
1:AA:1509:C:O2'	1:AA:1510:C:H5'	2.20	0.41
41:DJ:45:THR:N	41:DJ:46:PRO:CD	2.81	0.41
27:DK:18:ARG:HB2	27:DK:45:GLU:CG	2.49	0.41
24:DI:129:GLU:O	24:DI:133:ARG:HG3	2.20	0.41
24:DI:96:LYS:HD3	24:DI:138:VAL:HG21	2.01	0.41
23:DB:2526:G:C2'	32:D4:1:MET:H1	2.32	0.41
23:DB:280:U:H3	23:DB:360:U:H3	1.68	0.41
23:DB:358:U:H2'	23:DB:359:G:C8	2.55	0.41
23:DB:1439:A:N1	23:DB:1552:A:N7	2.68	0.41
45:DS:26:GLY:O	45:DS:28:LYS:N	2.54	0.41
51:BZ:30:LEU:HA	51:BZ:31:PRO:HD3	1.96	0.41
6:CG:23:ALA:O	6:CG:26:VAL:HG13	2.20	0.41
23:DB:2373:G:H2'	23:DB:2374:C:H6	1.84	0.41
1:AA:836:G:H2'	1:AA:837:U:H6	1.84	0.41
23:DB:589:U:H2'	23:DB:590:A:C8	2.56	0.41
23:BB:2839:G:O2'	23:BB:2840:C:H5'	2.20	0.41
39:DX:41:HIS:N	39:DX:41:HIS:CD2	2.88	0.41
52:BW:43:LYS:HD3	52:BW:77:LYS:HG2	2.03	0.41
40:DH:58:LEU:O	40:DH:58:LEU:HD23	2.20	0.41
23:BB:2511:U:H2'	23:BB:2512:C:C6	2.55	0.41
1:AA:738:C:H2'	1:AA:739:C:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2199:A:O2'	51:BZ:36:HIS:HE1	2.03	0.41
7:CH:118:ALA:HB3	7:CH:120:LEU:HD22	2.02	0.41
2:CC:137:VAL:CG1	2:CC:169:GLU:HG3	2.47	0.41
22:DA:52:A:C2'	22:DA:53:A:H5'	2.50	0.41
1:AA:859:G:O2'	1:AA:860:A:H5'	2.20	0.41
17:AT:53:MET:C	17:AT:55:PRO:HD2	2.41	0.41
1:CA:1124:G:OP1	9:CJ:38:GLY:HA3	2.20	0.41
25:DC:82:TYR:CE1	25:DC:84:PRO:HG3	2.53	0.41
23:DB:957:C:O2'	23:DB:958:U:H5''	2.20	0.41
23:BB:125:A:H5'	36:B2:19:ARG:HD3	2.02	0.41
23:BB:927:A:C2	30:BY:42:ALA:HB1	2.56	0.41
23:DB:1583:A:H5'	23:DB:1585:C:C2	2.56	0.41
23:BB:1258:U:O4'	29:BE:79:ARG:HD2	2.20	0.41
23:BB:1905:C:O2'	23:BB:1929:G:H1'	2.20	0.41
6:AG:55:LYS:HB2	6:AG:55:LYS:NZ	2.35	0.41
42:DN:62:ASN:N	42:DN:62:ASN:ND2	2.68	0.41
23:BB:1223:G:OP2	49:BR:68:ARG:NH1	2.53	0.41
40:BH:41:LYS:HE3	40:BH:41:LYS:H	1.86	0.41
23:DB:312:G:H2'	23:DB:313:G:C8	2.55	0.41
23:BB:480:A:O5'	46:BU:43:LYS:HE2	2.20	0.41
40:DH:42:LYS:O	40:DH:42:LYS:HD3	2.20	0.41
1:AA:375:U:OP1	13:AP:70:ARG:HB2	2.20	0.41
23:DB:1342:A:HO2'	23:DB:1344:U:P	2.43	0.41
1:CA:594:U:O2'	1:CA:595:A:H5'	2.20	0.41
25:DC:32:LEU:O	25:DC:63:ILE:HG12	2.20	0.41
23:DB:1511:G:H2'	23:DB:1512:C:H6	1.85	0.41
48:DG:108:PHE:C	48:DG:110:HIS:H	2.23	0.41
31:D0:25:THR:O	31:D0:26:SER:HB2	2.20	0.41
15:AR:27:THR:O	15:AR:27:THR:HG22	2.20	0.41
23:DB:2337:G:H2'	23:DB:2337:G:N3	2.35	0.41
5:CF:54:LEU:N	5:CF:54:LEU:HD22	2.35	0.41
18:AB:48:MET:HG2	18:AB:48:MET:H	1.44	0.41
25:BC:54:GLY:O	25:BC:214:GLY:HA2	2.20	0.41
23:BB:1123:C:H2'	23:BB:1124:G:H8	1.85	0.41
8:CI:25:GLY:HA2	8:CI:60:LEU:O	2.18	0.41
8:CI:27:ILE:HD12	8:CI:27:ILE:H	1.85	0.41
8:CI:55:ASP:O	8:CI:59:LYS:HE3	2.21	0.41
23:BB:923:G:N3	52:BW:23:LYS:HE3	2.36	0.41
12:AM:14:ALA:N	12:AM:42:VAL:O	2.53	0.41
50:DT:14:PRO:HA	50:DT:32:LEU:HB2	2.00	0.41
50:DT:11:LEU:HA	50:DT:34:VAL:HG12	2.00	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DT:43:ILE:O	50:DT:47:VAL:HG23	2.21	0.41
23:DB:672:C:O2'	23:DB:673:C:H5'	2.20	0.41
35:BV:31:TYR:CB	35:BV:37:PRO:HG3	2.45	0.41
35:BV:75:GLN:HB2	35:BV:90:ASP:O	2.20	0.41
2:CC:63:ILE:N	2:CC:98:ALA:HB2	2.33	0.41
48:DG:25:ILE:HD12	48:DG:25:ILE:N	2.35	0.41
40:BH:98:ASP:C	40:BH:100:ALA:H	2.24	0.41
52:DW:37:VAL:HG12	52:DW:38:ARG:HD3	2.02	0.41
8:AI:74:GLN:HE21	8:AI:74:GLN:N	2.19	0.41
23:DB:2720:U:C5'	28:DP:52:ARG:HH22	2.16	0.41
42:DN:80:PHE:O	42:DN:85:PRO:HD3	2.20	0.41
43:DO:51:ALA:O	43:DO:74:VAL:HG12	2.21	0.41
42:BN:92:GLY:O	42:BN:94:TYR:N	2.53	0.41
10:CK:83:VAL:HG12	10:CK:85:VAL:HG23	2.02	0.41
23:BB:1047:G:HO2'	23:BB:1048:A:P	2.43	0.41
45:DS:59:GLU:CD	45:DS:66:ILE:HG23	2.40	0.41
22:DA:4:C:H2'	22:DA:5:U:C6	2.55	0.41
38:DM:19:GLY:C	38:DM:20:LEU:HD22	2.40	0.41
47:DF:108:PRO:C	47:DF:110:ILE:H	2.24	0.41
35:BV:80:HIS:CD2	35:BV:81:PRO:HD2	2.56	0.41
16:AS:35:ARG:HB3	16:AS:71:GLY:CA	2.50	0.41
16:AS:4:LEU:O	16:AS:4:LEU:HD23	2.19	0.41
18:AB:67:LEU:HD22	18:AB:68:PHE:H	1.84	0.41
18:CB:59:ILE:C	18:CB:59:ILE:HD12	2.40	0.41
26:DD:4:LEU:N	26:DD:4:LEU:HD22	2.35	0.41
28:DP:23:ASP:O	28:DP:46:VAL:HG22	2.20	0.41
1:CA:1002:G:N2	1:CA:1003:G:H1'	2.35	0.41
18:CB:113:LEU:HD23	18:CB:114:LYS:N	2.35	0.41
40:DH:2:GLN:OE1	40:DH:20:ASN:HA	2.20	0.41
31:D0:42:ILE:HG12	42:DN:99:LYS:O	2.20	0.41
23:BB:1589:U:H2'	23:BB:1590:A:H8	1.83	0.41
16:CS:71:GLY:O	16:CS:72:GLU:C	2.58	0.41
34:B3:31:ILE:O	34:B3:31:ILE:HG12	2.20	0.41
23:DB:994:C:O2	49:DR:10:LYS:HE3	2.20	0.41
23:DB:996:A:H4'	44:DQ:91:ARG:CD	2.50	0.41
11:AL:23:LEU:HB2	11:AL:58:ASN:ND2	2.36	0.41
1:CA:190:A:O5'	1:CA:190:A:C8	2.73	0.41
6:AG:33:GLY:C	6:AG:35:LYS:H	2.23	0.41
42:DN:3:HIS:O	42:DN:4:ARG:HB2	2.20	0.41
36:D2:21:ARG:HH21	36:D2:43:THR:CG2	2.31	0.41
23:DB:361:G:O2'	23:DB:362:A:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1510:C:H2'	1:CA:1511:G:C8	2.55	0.41
12:CM:53:ASP:HA	12:CM:56:ARG:NE	2.35	0.41
23:BB:1439:A:C8	23:BB:1440:U:C6	3.08	0.41
1:CA:238:A:H2'	1:CA:239:U:C5'	2.48	0.41
41:DJ:51:GLY:HA3	41:DJ:121:LYS:HZ2	1.83	0.41
38:BM:32:GLY:HA2	38:BM:117:PHE:CZ	2.56	0.41
1:AA:818:G:C2'	1:AA:819:A:H5''	2.50	0.41
40:DH:61:VAL:C	40:DH:63:ALA:H	2.24	0.41
1:CA:383:A:H2'	1:CA:384:G:O4'	2.21	0.41
25:BC:196:ASN:C	25:BC:198:GLU:H	2.23	0.41
38:BM:17:ASN:HD21	38:BM:95:LEU:HB3	1.85	0.41
38:BM:17:ASN:ND2	38:BM:95:LEU:HD23	2.34	0.41
1:CA:737:C:H2'	1:CA:738:C:C6	2.55	0.41
23:BB:2569:G:C2	23:BB:2570:G:C8	3.09	0.41
23:DB:1561:C:H2'	23:DB:1562:U:H6	1.82	0.41
23:BB:777:G:H2'	23:BB:778:G:H8	1.84	0.41
42:BN:2:ARG:HG2	42:BN:2:ARG:O	2.21	0.41
51:BZ:50:ARG:HH21	51:BZ:50:ARG:HG2	1.85	0.41
23:DB:1228:G:H2'	23:DB:1229:C:H6	1.85	0.41
30:DY:23:LEU:HD22	30:DY:23:LEU:HA	1.88	0.41
23:DB:237:C:H2'	23:DB:238:C:H6	1.86	0.41
23:BB:1463:C:H2'	23:BB:1464:G:C8	2.54	0.41
23:BB:2756:U:H4'	23:BB:2757:A:OP1	2.20	0.41
1:CA:689:C:OP1	10:CK:45:THR:OG1	2.38	0.41
4:AE:103:GLY:O	4:AE:121:ASN:HA	2.20	0.41
41:BJ:40:HIS:ND1	41:BJ:41:LYS:HG3	2.36	0.41
1:AA:184:G:H4'	1:AA:224:U:O3'	2.20	0.41
26:BD:68:PHE:HB3	26:BD:73:VAL:HA	2.02	0.41
9:AJ:66:GLU:HB3	21:AN:98:ALA:CB	2.50	0.41
1:AA:1207:G:O2'	1:AA:1208:C:H5'	2.21	0.41
1:AA:1294:G:H2'	1:AA:1295:U:C6	2.56	0.41
23:BB:1904:G:H1'	23:BB:1927:A:N1	2.35	0.41
10:CK:88:PRO:HD3	19:CU:28:LEU:CD1	2.50	0.41
43:DO:7:ARG:O	43:DO:10:ARG:HB2	2.21	0.41
33:D1:33:LEU:O	33:D1:51:ALA:HB3	2.20	0.41
5:AF:12:PRO:C	5:AF:14:GLN:H	2.22	0.41
23:BB:1678:A:H2'	23:BB:1679:A:O4'	2.20	0.41
23:BB:2369:A:H2'	23:BB:2370:G:H8	1.84	0.41
23:DB:1831:G:H2'	23:DB:1832:C:C6	2.54	0.41
23:DB:223:A:N1	23:DB:407:G:O2'	2.43	0.41
7:CH:68:LYS:HG3	7:CH:69:ALA:H	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:179:A:O2'	1:CA:180:U:H5'	2.21	0.41
23:BB:1361:G:H2'	23:BB:1362:C:C6	2.55	0.41
23:BB:706:A:H2'	23:BB:707:G:H8	1.85	0.41
23:BB:2397:G:O2'	23:BB:2398:U:H5'	2.19	0.41
31:B0:37:HIS:HB3	31:B0:43:THR:HG22	2.02	0.41
36:B2:32:ALA:O	36:B2:36:ALA:HB2	2.21	0.41
23:DB:903:C:H2'	23:DB:904:G:H8	1.85	0.41
17:AT:80:ALA:O	17:AT:84:LYS:HD2	2.21	0.41
20:CO:17:ARG:NH1	20:CO:17:ARG:HA	2.34	0.41
46:DU:48:VAL:HG13	46:DU:48:VAL:O	2.20	0.41
1:CA:687:A:C2	1:CA:704:A:C5	3.08	0.41
49:DR:55:ASP:OD2	49:DR:55:ASP:N	2.54	0.41
30:BY:41:PRO:HA	30:BY:44:ARG:HB3	2.03	0.41
8:CI:62:LEU:HD22	8:CI:62:LEU:H	1.84	0.41
12:AM:21:ILE:O	12:AM:23:GLY:N	2.52	0.41
19:AU:35:GLU:HB3	19:AU:36:PHE:H	1.64	0.41
1:CA:1374:A:O2'	1:CA:1375:A:H5'	2.20	0.41
1:AA:237:G:H2'	1:AA:238:A:H8	1.86	0.41
21:CN:51:PRO:O	21:CN:53:ASP:N	2.53	0.41
29:BE:17:THR:C	29:BE:19:PHE:N	2.74	0.41
5:CF:38:ARG:O	5:CF:39:LEU:HB2	2.19	0.41
5:CF:90:MET:HE2	5:CF:90:MET:HA	2.02	0.41
5:CF:97:THR:O	5:CF:99:ALA:N	2.53	0.41
5:AF:17:GLN:HB3	5:AF:17:GLN:HE21	1.74	0.41
40:BH:68:ARG:HD3	40:BH:132:PHE:CD2	2.56	0.41
40:BH:134:VAL:HG13	40:BH:135:HIS:N	2.36	0.41
1:AA:1287:A:H2'	1:AA:1288:A:C8	2.55	0.41
24:BI:109:ALA:HB1	24:BI:124:MET:CG	2.50	0.41
37:BL:108:ALA:HB3	37:BL:125:LEU:HD21	2.03	0.41
48:DG:84:LYS:HB2	48:DG:132:LEU:HD23	2.02	0.41
23:BB:2145:C:H3'	23:BB:2146:C:H5''	2.01	0.41
26:BD:116:LYS:HD3	26:BD:123:LYS:HE2	2.02	0.41
35:DV:31:TYR:O	35:DV:92:VAL:HA	2.20	0.41
49:BR:97:LYS:O	49:BR:98:ILE:HB	2.21	0.41
49:BR:14:VAL:CG2	49:BR:98:ILE:HG12	2.49	0.41
23:DB:299:A:C8	23:DB:322:A:C2	3.09	0.41
38:DM:71:LYS:CG	38:DM:93:VAL:HG12	2.50	0.41
41:BJ:44:TYR:HB2	44:BQ:63:ARG:HD3	2.02	0.41
49:BR:51:VAL:HB	49:BR:52:PRO:HD2	2.03	0.41
38:BM:51:ARG:HG2	38:BM:51:ARG:HH11	1.85	0.41
16:AS:50:VAL:HG22	16:AS:70:LEU:HD23	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:D2:27:GLY:O	36:D2:30:VAL:HB	2.20	0.41
18:AB:67:LEU:HD23	18:AB:89:PHE:O	2.21	0.41
2:AC:71:ARG:HD2	2:AC:71:ARG:O	2.21	0.41
47:DF:32:LYS:O	47:DF:155:ILE:O	2.39	0.41
23:BB:2728:U:H5'	27:BK:70:ARG:NH2	2.36	0.41
36:B2:12:ARG:NE	36:B2:44:VAL:HG11	2.25	0.41
39:DX:6:LEU:C	39:DX:8:GLU:H	2.24	0.41
46:BU:48:VAL:C	46:BU:53:GLN:HG3	2.41	0.41
37:BL:98:ALA:O	37:BL:99:ASN:C	2.58	0.41
26:DD:164:GLN:HE21	26:DD:165:MET:N	2.19	0.41
52:DW:10:ARG:HD3	52:DW:10:ARG:N	2.35	0.41
23:DB:1080:A:O2'	23:DB:1081:U:H5'	2.20	0.41
16:CS:38:THR:HG23	16:CS:68:HIS:O	2.21	0.41
16:CS:40:PHE:HB3	16:CS:41:PRO:HD2	2.02	0.41
23:DB:2867:G:O2'	23:DB:2868:A:H8	2.03	0.41
43:BO:24:THR:CG2	43:BO:42:PRO:HD3	2.50	0.41
11:AL:49:ARG:HH12	11:AL:88:ASP:HB2	1.84	0.41
1:CA:190:A:C4	1:CA:191:G:H1'	2.56	0.41
51:DZ:63:GLY:O	51:DZ:64:ILE:C	2.59	0.41
23:BB:2282:G:H4'	23:BB:2389:G:O2'	2.21	0.41
9:AJ:52:LEU:HD12	9:AJ:53:ILE:H	1.85	0.41
38:DM:107:GLY:O	38:DM:108:VAL:HB	2.20	0.41
23:DB:1442:U:H2'	23:DB:1443:U:C6	2.55	0.41
4:CE:93:VAL:HA	4:CE:126:ALA:CB	2.51	0.41
36:B2:21:ARG:HH21	36:B2:43:THR:CG2	2.33	0.41
45:DS:24:ILE:CD1	45:DS:36:LEU:HD11	2.48	0.41
8:AI:14:SER:HA	8:AI:68:GLY:O	2.21	0.41
2:AC:122:GLN:O	2:AC:127:VAL:HG13	2.21	0.41
7:AH:94:VAL:HG12	7:AH:99:GLY:HA3	2.02	0.41
23:BB:633:A:H2'	23:BB:634:C:O4'	2.21	0.41
23:BB:720:U:H2'	23:BB:721:A:C8	2.55	0.41
1:AA:819:A:H4'	1:AA:820:U:OP2	2.19	0.41
6:CG:15:PRO:HG2	6:CG:43:TYR:OH	2.20	0.41
1:AA:845:A:H5''	1:AA:846:G:C8	2.55	0.41
11:AL:116:TYR:O	11:AL:118:VAL:HG23	2.20	0.41
23:DB:2842:G:O2'	23:DB:2843:G:H5'	2.20	0.41
1:CA:675:A:H2'	1:CA:676:A:H8	1.86	0.41
33:D1:31:GLU:N	33:D1:31:GLU:CD	2.71	0.41
23:BB:969:G:H2'	23:BB:970:U:H6	1.85	0.41
1:CA:1268:G:H2'	1:CA:1269:A:C8	2.55	0.41
23:BB:413:C:H2'	23:BB:414:C:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:46:LEU:HB3	2:CC:49:ALA:CB	2.49	0.41
23:BB:651:G:OP2	34:B3:18:LYS:HD3	2.21	0.41
43:BO:94:ARG:HD2	43:BO:97:PHE:O	2.21	0.41
23:BB:1535:A:H3'	23:BB:1536:C:C6	2.50	0.41
23:BB:1945:G:H2'	23:BB:1946:U:C6	2.55	0.41
47:BF:69:ALA:HB3	47:BF:80:GLN:O	2.20	0.41
23:DB:1401:G:H2'	23:DB:1402:U:C6	2.56	0.41
1:CA:429:U:C1'	1:CA:430:A:H5''	2.50	0.41
44:DQ:11:ALA:C	44:DQ:13:HIS:H	2.22	0.41
23:DB:1410:G:O2'	23:DB:1411:U:H5'	2.20	0.41
1:CA:1028:C:C2	1:CA:1029:U:N3	2.88	0.41
23:BB:1563:U:O2'	23:BB:1564:C:H5'	2.20	0.41
20:CO:70:LEU:HD21	20:CO:77:ARG:HB3	2.01	0.41
23:DB:104:A:O2'	23:DB:105:C:H5'	2.21	0.41
10:AK:45:THR:O	10:AK:49:SER:N	2.53	0.41
1:AA:1524:C:H2'	1:AA:1525:G:H8	1.84	0.41
1:AA:1049:U:H2'	21:AN:2:LYS:HD3	2.02	0.41
34:D3:25:HIS:NE2	34:D3:47:ALA:HB2	2.36	0.41
27:DK:5:GLN:O	27:DK:6:THR:O	2.39	0.41
2:AC:155:ARG:H	2:AC:162:ALA:HB1	1.84	0.41
23:DB:2529:G:H4'	48:DG:174:LYS:HE2	2.02	0.41
1:AA:557:G:N1	1:AA:558:G:C2	2.89	0.41
2:AC:138:GLN:O	2:AC:142:ARG:HB3	2.20	0.41
20:CO:32:LEU:O	20:CO:36:ILE:HG12	2.20	0.41
23:DB:131:A:H2'	23:DB:132:G:H8	1.85	0.41
23:DB:1341:G:H2'	23:DB:1397:U:O2'	2.19	0.41
23:BB:1210:G:C5'	23:BB:1212:G:H5'	2.50	0.41
23:DB:1349:C:H2'	23:DB:1350:C:C6	2.55	0.41
23:BB:2232:C:O2'	23:BB:2233:U:H5'	2.21	0.41
1:AA:1010:U:H2'	1:AA:1010:U:O2	2.20	0.41
23:DB:691:C:O2'	23:DB:692:C:H5'	2.21	0.41
23:DB:2022:U:O2'	23:DB:2617:U:H5'	2.20	0.41
22:DA:22:U:H2'	22:DA:23:G:C8	2.55	0.41
2:CC:54:ILE:O	2:CC:54:ILE:HG23	2.21	0.41
1:CA:512:U:H2'	1:CA:513:C:C6	2.56	0.41
23:BB:627:A:H4'	23:BB:628:G:OP1	2.21	0.41
24:BI:38:CYS:O	24:BI:42:ASN:ND2	2.53	0.41
23:BB:2573:C:H3'	57:BB:3610:HOH:O	2.21	0.41
23:BB:1376:C:H5''	57:BB:3499:HOH:O	2.21	0.41
1:CA:218:U:H2'	1:CA:219:U:C6	2.56	0.41
23:DB:748:G:OP2	45:DS:88:ARG:HG3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:D3:7:ARG:NH1	34:D3:7:ARG:HG3	2.36	0.41
10:AK:75:GLU:N	10:AK:75:GLU:CD	2.74	0.41
5:CF:34:GLY:O	5:CF:35:LYS:HB2	2.20	0.41
40:BH:124:THR:HG22	40:BH:125:THR:N	2.35	0.41
21:CN:60:ARG:CG	21:CN:62:ARG:HE	2.34	0.41
50:DT:89:GLU:C	50:DT:91:GLN:H	2.23	0.41
10:AK:126:ARG:HA	10:AK:126:ARG:NE	2.35	0.41
50:BT:16:VAL:HA	50:BT:21:SER:CB	2.50	0.41
32:D4:10:LEU:HA	32:D4:10:LEU:HD23	1.91	0.41
25:DC:157:ALA:C	25:DC:159:THR:H	2.23	0.41
48:BG:25:ILE:HD12	48:BG:25:ILE:N	2.35	0.41
35:BV:29:ILE:CD1	35:BV:90:ASP:HA	2.50	0.41
40:BH:115:VAL:H	40:BH:133:GLN:CB	2.33	0.41
23:DB:2387:U:H1'	52:DW:38:ARG:NH2	2.36	0.41
52:BW:18:LYS:HE3	52:BW:36:ILE:HG12	2.02	0.41
42:BN:55:ALA:HA	42:BN:80:PHE:CE1	2.54	0.41
22:BA:54:G:O2'	22:BA:55:U:H5'	2.20	0.41
8:AI:70:GLY:O	8:AI:74:GLN:HB2	2.21	0.41
43:DO:53:THR:CG2	43:DO:74:VAL:HG21	2.36	0.41
9:AJ:77:VAL:HB	9:AJ:78:GLU:OE2	2.20	0.41
2:AC:152:VAL:O	2:AC:164:THR:HG23	2.21	0.41
23:BB:2747:G:H2'	23:BB:2748:A:C8	2.56	0.41
48:BG:84:LYS:HB2	48:BG:132:LEU:HD23	2.02	0.41
46:BU:73:ASN:ND2	46:BU:74:ALA:N	2.69	0.41
5:CF:49:TYR:CE1	15:CR:65:SER:HA	2.55	0.41
18:CB:23:ASN:HD22	18:CB:24:PRO:HD2	1.85	0.41
40:DH:132:PHE:CE2	40:DH:134:VAL:HA	2.55	0.41
22:DA:4:C:H2'	22:DA:5:U:H6	1.85	0.41
49:BR:7:SER:OG	49:BR:8:GLY:N	2.54	0.41
38:BM:46:ILE:HG13	38:BM:47:GLU:N	2.35	0.41
38:BM:71:LYS:CG	38:BM:93:VAL:HG12	2.50	0.41
21:AN:79:SER:O	21:AN:80:ARG:C	2.59	0.41
18:CB:63:LYS:HB3	18:CB:87:ASP:OD2	2.20	0.41
26:DD:3:GLY:C	26:DD:4:LEU:HD13	2.40	0.41
20:AO:53:ARG:O	20:AO:56:LEU:HB3	2.20	0.41
24:DI:27:LEU:HB2	24:DI:32:VAL:HG21	2.02	0.41
18:CB:113:LEU:CD1	18:CB:144:GLU:HA	2.51	0.41
25:BC:203:VAL:HG12	25:BC:205:GLY:H	1.86	0.41
1:AA:203:G:N2	1:AA:205:A:N6	2.68	0.41
6:AG:26:VAL:HG12	6:AG:42:VAL:HG11	2.02	0.41
37:DL:55:MET:HE1	37:DL:59:ARG:NE	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:119:ILE:CG2	2:CC:120:THR:N	2.84	0.41
1:CA:1103:C:C4	1:CA:1104:G:N7	2.89	0.41
9:AJ:12:ALA:CB	9:AJ:18:ILE:HB	2.51	0.41
1:CA:1307:U:H2'	1:CA:1308:U:H6	1.81	0.41
16:CS:57:VAL:HG23	16:CS:57:VAL:O	2.21	0.41
1:CA:203:G:N2	1:CA:205:A:N6	2.68	0.41
1:CA:204:G:C5	1:CA:465:A:N3	2.89	0.41
27:BK:86:LEU:H	27:BK:86:LEU:HG	1.52	0.41
23:BB:2095:A:O2'	23:BB:2096:C:H5'	2.21	0.41
2:AC:66:THR:HG23	2:AC:101:ASN:HB2	2.03	0.41
23:BB:2080:A:C6	23:BB:2241:A:C6	3.09	0.41
7:AH:100:ILE:CG1	7:AH:128:VAL:HB	2.50	0.41
1:AA:1167:A:H2'	1:AA:1168:U:H5''	2.02	0.41
26:DD:133:THR:O	26:DD:134:HIS:C	2.58	0.41
1:CA:1225:A:H5''	1:CA:1226:C:C5	2.53	0.41
41:BJ:57:LEU:HB3	41:BJ:58:ASN:H	1.59	0.41
23:DB:845:A:H2'	23:DB:846:U:H5''	2.03	0.41
2:CC:104:GLU:O	2:CC:106:ARG:NH2	2.53	0.41
33:B1:28:THR:O	33:B1:29:LYS:HD2	2.20	0.41
23:BB:172:A:O2'	23:BB:173:A:H5'	2.21	0.41
3:CD:185:PRO:HB2	3:CD:190:LEU:HD12	2.03	0.41
29:BE:46:GLN:HG3	29:BE:87:ALA:N	2.35	0.41
8:CI:6:TYR:HE2	8:CI:17:ARG:HB3	1.86	0.41
22:BA:90:C:H5'	38:BM:17:ASN:O	2.19	0.41
1:CA:1296:C:C4'	1:CA:1302:C:N4	2.84	0.41
23:BB:2323:G:C2'	23:BB:2324:U:H5'	2.51	0.41
51:BZ:6:GLN:NE2	51:BZ:49:LEU:HB2	2.36	0.41
23:DB:2809:A:H2'	23:DB:2810:A:H8	1.84	0.41
23:BB:2578:G:O2'	23:BB:2579:C:H5'	2.20	0.41
45:BS:73:LYS:HD2	45:BS:73:LYS:HA	1.74	0.41
23:BB:1191:G:H2'	23:BB:1192:G:H8	1.85	0.41
1:CA:647:C:H2'	1:CA:648:A:C8	2.55	0.41
23:BB:2857:G:N2	23:BB:2859:G:H3'	2.35	0.41
23:DB:1290:C:H2'	23:DB:1291:C:C6	2.56	0.41
23:DB:2024:G:H2'	23:DB:2025:C:H6	1.86	0.41
17:CT:45:ALA:CA	17:CT:48:LYS:HB3	2.51	0.41
1:CA:1386:G:H2'	1:CA:1387:G:H8	1.86	0.41
9:AJ:66:GLU:OE2	21:AN:98:ALA:HA	2.19	0.41
23:BB:2024:G:H2'	23:BB:2025:C:H6	1.85	0.41
23:DB:1740:G:H2'	23:DB:1741:C:C6	2.55	0.41
10:CK:89:GLY:O	10:CK:92:ARG:HB2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1315:C:O2'	23:BB:1316:U:H5'	2.21	0.41
20:CO:24:SER:O	20:CO:27:VAL:HB	2.21	0.41
14:AQ:56:ASP:N	14:AQ:81:ALA:HB2	2.36	0.41
23:BB:2417:C:O2'	23:BB:2418:A:H5'	2.20	0.41
1:AA:1472:U:O2'	1:AA:1473:G:H5'	2.21	0.41
1:CA:1495:U:O2'	1:CA:1496:C:H5'	2.21	0.41
25:BC:202:ARG:HB2	25:BC:202:ARG:NH2	2.35	0.41
1:AA:44:A:H2'	1:AA:45:G:C8	2.55	0.41
23:DB:995:C:P	44:DQ:52:ARG:HH11	2.44	0.41
23:DB:730:A:H3'	57:DB:3609:HOH:O	2.20	0.41
16:AS:23:GLU:OE1	16:AS:23:GLU:N	2.53	0.41
24:BI:63:ASP:C	24:BI:65:SER:N	2.74	0.41
23:BB:2010:G:H2'	23:BB:2011:U:C6	2.55	0.41
23:BB:1068:G:H21	23:BB:1096:A:H5'	1.84	0.41
6:CG:74:VAL:HG12	6:CG:85:GLN:O	2.21	0.41
23:DB:1714:U:H3'	23:DB:1715:G:C5'	2.49	0.41
23:DB:1359:A:OP2	23:DB:1371:G:N1	2.49	0.41
23:DB:308:G:O2'	46:DU:16:LYS:HE3	2.21	0.41
2:CC:188:ALA:HB3	2:CC:195:ILE:O	2.20	0.41
23:DB:2506:U:H2'	23:DB:2506:U:O2	2.21	0.41
1:AA:1181:G:H2'	1:AA:1181:G:OP2	2.20	0.41
1:AA:485:U:H2'	1:AA:485:U:O2	2.21	0.41
38:DM:10:ARG:HG3	38:DM:10:ARG:HH21	1.85	0.41
23:BB:2350:C:O2'	23:BB:2351:G:H5'	2.20	0.41
9:CJ:59:LYS:HB2	9:CJ:62:ARG:HH22	1.84	0.41
21:CN:68:ARG:HA	21:CN:69:PRO:HD2	1.93	0.41
10:CK:126:ARG:NE	10:CK:126:ARG:HA	2.35	0.41
1:AA:1241:G:H8	1:AA:1241:G:OP2	2.03	0.41
25:DC:189:ALA:O	25:DC:190:THR:O	2.39	0.41
48:BG:75:VAL:HA	48:BG:78:VAL:HG22	2.01	0.41
14:AQ:46:HIS:CB	14:AQ:70:LYS:HE2	2.51	0.41
14:CQ:18:LYS:O	14:CQ:47:ASP:N	2.54	0.41
40:BH:71:LYS:C	40:BH:73:ASN:H	2.23	0.41
23:BB:2266:A:H4'	23:BB:2267:A:O5'	2.21	0.41
29:DE:112:LEU:HD11	29:DE:180:LEU:O	2.20	0.41
22:BA:55:U:H1'	47:BF:25:MET:HE3	2.02	0.41
8:AI:56:MET:O	8:AI:58:GLU:HG2	2.20	0.41
42:DN:78:LYS:CG	42:DN:83:LEU:HG	2.50	0.41
23:BB:2540:C:O2'	23:BB:2541:A:H5'	2.20	0.41
23:BB:2721:A:H2'	23:BB:2722:G:C8	2.55	0.41
1:AA:1004:A:H2'	1:AA:1005:A:C8	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DH:93:SER:O	40:DH:94:ILE:HD12	2.21	0.41
43:DO:28:VAL:CG2	43:DO:29:HIS:H	2.22	0.41
46:BU:21:ARG:HG3	46:BU:21:ARG:HH11	1.85	0.41
49:BR:39:LEU:HA	49:BR:49:ILE:HG21	2.03	0.41
49:BR:49:ILE:HG21	49:BR:53:PHE:C	2.41	0.41
38:BM:20:LEU:HA	38:BM:98:PRO:O	2.20	0.41
28:BP:6:GLN:HA	28:BP:9:GLN:HG2	2.02	0.41
23:DB:900:A:C2'	23:DB:901:C:H5'	2.51	0.41
1:AA:985:C:O2'	1:AA:986:U:H5'	2.20	0.41
47:BF:34:THR:OG1	47:BF:154:THR:HB	2.21	0.41
47:BF:108:PRO:C	47:BF:110:ILE:H	2.23	0.41
1:CA:865:A:H2'	1:CA:866:C:H6	1.81	0.41
25:DC:202:ARG:NH2	25:DC:202:ARG:HB2	2.35	0.41
37:BL:95:LEU:HB2	37:BL:101:ILE:CG1	2.51	0.41
57:DB:3473:HOH:O	37:DL:99:ASN:HB2	2.19	0.41
40:DH:41:LYS:HE3	40:DH:45:GLU:CG	2.51	0.41
40:DH:4:ILE:CD1	40:DH:44:ILE:HG22	2.51	0.41
40:DH:26:ALA:HA	40:DH:30:LEU:HB2	2.02	0.41
23:BB:182:A:H2	23:BB:433:C:O2	2.04	0.41
23:BB:2238:G:H2'	23:BB:2238:G:N3	2.36	0.41
44:BQ:83:LYS:NZ	44:BQ:83:LYS:HA	2.36	0.41
2:CC:119:ILE:HG23	2:CC:120:THR:N	2.35	0.41
23:BB:2867:G:O2'	23:BB:2868:A:H8	2.02	0.41
7:AH:63:LYS:CD	7:AH:70:VAL:HG21	2.50	0.41
1:CA:1221:G:OP1	16:CS:35:ARG:HD2	2.21	0.41
41:DJ:44:TYR:HB2	44:DQ:63:ARG:HD3	2.03	0.41
23:BB:1373:A:H4'	23:BB:2212:A:N3	2.36	0.41
44:DQ:79:ILE:HG23	44:DQ:80:ASN:N	2.36	0.41
1:AA:87:C:H3'	1:AA:87:C:OP2	2.21	0.41
4:CE:152:VAL:CG1	4:CE:156:ARG:HH21	2.32	0.41
23:BB:2188:U:O2'	23:BB:2189:U:H5'	2.20	0.41
27:DK:103:VAL:HG22	27:DK:121:GLU:O	2.21	0.41
7:AH:50:VAL:O	7:AH:50:VAL:HG13	2.21	0.41
1:AA:77:A:H2'	1:AA:78:A:H8	1.85	0.41
38:DM:32:GLY:HA2	38:DM:117:PHE:CZ	2.56	0.41
4:CE:125:LYS:HD2	4:CE:126:ALA:N	2.36	0.41
45:BS:24:ILE:CG2	45:BS:71:VAL:HG11	2.49	0.41
48:DG:38:ASP:OD2	48:DG:63:GLN:HG2	2.21	0.41
41:BJ:59:ALA:C	41:BJ:61:LYS:H	2.24	0.41
23:BB:2461:A:H1'	23:BB:2492:U:N3	2.36	0.41
39:DX:41:HIS:CD2	39:DX:41:HIS:H	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:51:PHE:CZ	48:BG:71:LEU:HG	2.55	0.41
52:BW:44:PHE:CE2	52:BW:76:ARG:HD2	2.55	0.41
40:DH:62:LEU:HG	40:DH:66:ASN:HD21	1.84	0.41
1:CA:677:U:H1'	10:CK:120:CYS:SG	2.61	0.41
1:CA:1266:G:N2	1:CA:1268:G:H3'	2.35	0.41
23:BB:1657:U:C2'	23:BB:1658:C:H5'	2.49	0.41
25:BC:93:VAL:CG1	25:BC:94:LEU:N	2.84	0.41
18:AB:93:HIS:HD2	18:AB:94:ARG:NH2	2.19	0.41
47:BF:74:ALA:CB	47:BF:78:ILE:HD13	2.48	0.41
23:BB:2787:C:H1'	26:BD:63:PRO:HG3	2.02	0.41
23:BB:845:A:H2'	23:BB:846:U:H5''	2.01	0.41
23:BB:481:G:C2	23:BB:507:A:C4	3.09	0.41
45:DS:73:LYS:HD2	45:DS:73:LYS:HA	1.74	0.41
34:D3:22:LYS:HG3	34:D3:47:ALA:O	2.21	0.41
29:DE:120:VAL:HG23	29:DE:188:MET:O	2.20	0.41
1:AA:784:A:H2'	1:AA:785:G:C8	2.53	0.41
11:AL:65:TYR:HB2	11:AL:86:VAL:HG21	2.02	0.41
1:AA:225:C:H2'	1:AA:226:G:O4'	2.21	0.41
23:BB:2547:A:H5''	27:BK:29:HIS:NE2	2.36	0.41
46:BU:14:THR:O	46:BU:18:LYS:HA	2.20	0.41
23:BB:2297:A:H61	23:BB:2319:G:H1'	1.85	0.41
23:DB:1252:G:H1	44:DQ:36:GLN:CG	2.34	0.41
27:DK:109:SER:C	27:DK:111:LYS:H	2.24	0.41
18:CB:27:LYS:HE3	18:CB:27:LYS:HB3	1.92	0.41
41:DJ:59:ALA:O	41:DJ:62:VAL:HG12	2.21	0.41
1:CA:552:U:H5'	11:CL:82:ARG:HH11	1.85	0.41
23:DB:57:C:H2'	23:DB:58:G:C8	2.56	0.41
23:DB:57:C:H2'	23:DB:58:G:H8	1.85	0.41
18:AB:133:ALA:O	18:AB:137:THR:N	2.54	0.41
1:CA:393:A:H2'	1:CA:394:G:C8	2.54	0.41
1:CA:394:G:H2'	1:CA:395:C:C6	2.55	0.41
23:BB:1316:U:H2'	23:BB:1317:G:C8	2.55	0.41
23:BB:2685:G:H2'	23:BB:2686:G:H8	1.85	0.41
20:CO:39:LEU:O	20:CO:40:GLN:C	2.57	0.41
23:BB:811:U:OP2	37:BL:20:GLY:HA2	2.20	0.41
24:DI:90:GLY:C	24:DI:91:LYS:HD2	2.40	0.41
43:DO:56:LYS:O	43:DO:60:GLU:HG2	2.21	0.41
23:BB:1984:G:O2'	23:BB:1985:C:H5'	2.21	0.41
23:DB:2153:C:H2'	23:DB:2154:A:H8	1.85	0.41
48:DG:79:THR:HG22	48:DG:80:GLU:N	2.35	0.41
23:DB:1449:G:O2'	23:DB:1450:G:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:453:A:H5''	57:DB:3501:HOH:O	2.21	0.41
23:DB:2203:U:C2'	23:DB:2204:G:OP2	2.69	0.41
23:DB:2582:G:H3'	57:DB:3622:HOH:O	2.20	0.41
6:AG:6:ILE:HG13	6:AG:6:ILE:H	1.74	0.41
18:AB:35:ASN:HD22	18:AB:35:ASN:N	2.19	0.41
23:BB:1365:A:N3	23:BB:1365:A:H2'	2.35	0.41
52:DW:84:GLU:H	52:DW:84:GLU:CD	2.24	0.41
23:DB:485:C:O2'	23:DB:486:C:H5'	2.21	0.41
8:CI:51:LEU:C	8:CI:53:LEU:H	2.23	0.41
12:AM:15:VAL:CG1	12:AM:30:LYS:HA	2.51	0.41
12:AM:1:ALA:O	12:AM:3:ILE:HG13	2.19	0.41
12:AM:38:ILE:HG13	12:AM:55:LEU:CG	2.51	0.41
50:DT:27:SER:O	50:DT:28:ASN:CB	2.66	0.41
50:DT:34:VAL:HG23	50:DT:81:LYS:HB3	2.02	0.41
23:BB:2222:C:H4'	25:BC:184:GLU:OE2	2.21	0.41
29:BE:198:GLU:HG3	29:BE:199:MET:N	2.35	0.41
5:CF:67:PRO:HG2	5:CF:70:VAL:HG22	2.03	0.41
5:AF:45:ARG:HD3	5:AF:59:TYR:CE1	2.56	0.41
41:DJ:123:LYS:O	41:DJ:124:VAL:HG13	2.21	0.41
41:DJ:18:VAL:HG22	41:DJ:19:ASP:N	2.36	0.41
23:DB:26:G:H2'	23:DB:27:G:O4'	2.20	0.41
23:BB:136:G:O5'	23:BB:136:G:H8	2.03	0.41
23:BB:143:C:N4	23:BB:144:A:C6	2.89	0.41
44:BQ:5:ARG:CA	44:BQ:8:ILE:HD13	2.50	0.41
42:BN:29:VAL:HG13	42:BN:83:LEU:CD1	2.51	0.41
8:AI:24:ASN:CG	8:AI:25:GLY:N	2.72	0.41
8:AI:79:ARG:O	8:AI:83:THR:HG22	2.20	0.41
50:BT:76:ARG:HG2	50:BT:77:ARG:N	2.36	0.41
37:DL:78:ARG:CZ	37:DL:113:ALA:HB1	2.51	0.41
29:BE:130:LYS:CB	29:BE:133:LEU:HG	2.47	0.41
28:DP:74:GLN:HB2	28:DP:77:SER:HB2	2.02	0.41
28:BP:57:ALA:HA	28:BP:73:PHE:O	2.21	0.41
38:DM:1:MET:SD	38:DM:51:ARG:NH2	2.94	0.41
16:AS:40:PHE:CD1	16:AS:43:MET:HB2	2.55	0.41
1:AA:976:G:N2	1:AA:1362:A:H3'	2.36	0.41
1:AA:876:C:C1'	7:AH:11:THR:HG21	2.50	0.41
21:AN:5:MET:O	21:AN:62:ARG:NH1	2.54	0.41
18:CB:83:ALA:C	18:CB:85:SER:N	2.74	0.41
36:B2:14:ARG:H	36:B2:14:ARG:HG3	1.57	0.41
1:AA:866:C:H2'	1:AA:867:G:O4'	2.21	0.41
1:AA:1348:U:O3'	8:AI:121:ARG:HG3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DE:5:LEU:HG	29:DE:11:ALA:O	2.20	0.41
13:CP:66:THR:CG2	13:CP:67:ILE:N	2.84	0.41
40:DH:4:ILE:O	40:DH:36:ALA:HA	2.21	0.41
6:AG:14:ASP:CG	6:AG:15:PRO:HD2	2.41	0.41
39:BX:56:LEU:O	39:BX:58:ASN:N	2.46	0.41
40:BH:5:LEU:HD21	40:BH:12:LEU:HD12	2.01	0.41
2:AC:13:ILE:HD13	2:AC:13:ILE:N	2.34	0.41
47:BF:21:TYR:CD2	47:BF:27:VAL:HG12	2.53	0.41
17:CT:73:ARG:O	17:CT:77:ASN:ND2	2.54	0.41
22:DA:83:G:OP1	30:DY:16:LEU:HD21	2.21	0.41
23:BB:1590:A:H2'	23:BB:1591:A:H8	1.85	0.41
18:AB:217:ALA:O	18:AB:221:ARG:HG2	2.20	0.41
44:DQ:74:SER:O	44:DQ:75:TYR:C	2.59	0.41
23:DB:545:U:H3'	23:DB:546:U:C4'	2.51	0.41
23:BB:1653:G:O6	42:BN:11:ASN:HA	2.21	0.41
9:AJ:53:ILE:HG23	9:AJ:54:SER:N	2.36	0.41
23:BB:1819:A:H4'	23:BB:1820:U:H5''	2.03	0.41
1:AA:1381:U:H2'	1:AA:1382:C:O4'	2.21	0.41
23:DB:1439:A:C8	23:DB:1440:U:C6	3.09	0.41
23:DB:2143:C:C5	23:DB:2144:G:H1'	2.56	0.41
23:DB:2147:A:H4'	23:DB:2148:G:N7	2.35	0.41
25:BC:250:GLN:HG2	25:BC:254:LYS:HG2	2.03	0.41
26:DD:133:THR:HG23	26:DD:134:HIS:CD2	2.55	0.41
1:CA:1228:C:OP1	12:CM:113:LYS:HD3	2.21	0.41
37:BL:70:LYS:O	37:BL:73:ILE:HG12	2.21	0.41
3:CD:25:ARG:HH22	3:CD:30:LYS:HG2	1.86	0.41
1:CA:663:A:H5''	15:CR:49:LYS:HZ2	1.86	0.41
13:AP:78:VAL:HG13	13:AP:78:VAL:O	2.20	0.41
52:DW:58:LEU:N	52:DW:58:LEU:HD22	2.36	0.41
23:DB:1407:G:H2'	23:DB:1408:G:H8	1.86	0.41
42:BN:8:ARG:HB3	42:BN:43:GLU:OE2	2.20	0.41
1:AA:1469:C:H3'	1:AA:1470:U:H6	1.86	0.41
3:AD:117:VAL:O	3:AD:130:ASN:HA	2.21	0.41
9:AJ:67:ILE:HG13	21:AN:95:LEU:CD1	2.50	0.41
29:BE:171:ASP:CG	29:BE:172:ALA:N	2.74	0.41
2:AC:19:SER:HB3	2:AC:21:TRP:NE1	2.34	0.41
23:DB:811:U:N3	37:DL:21:ARG:NH2	2.68	0.41
11:AL:51:VAL:HG12	11:AL:63:THR:HG22	2.03	0.41
9:CJ:57:VAL:HG13	9:CJ:58:ASN:N	2.35	0.41
1:AA:659:U:O2'	1:AA:660:C:H5'	2.21	0.41
23:DB:1260:A:H2'	23:DB:1261:C:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1742:U:H2'	23:BB:1743:G:H8	1.81	0.41
27:DK:109:SER:CB	27:DK:111:LYS:HE2	2.50	0.41
5:AF:47:LEU:HD12	5:AF:55:HIS:C	2.41	0.41
23:BB:519:U:H2'	23:BB:520:G:H8	1.86	0.41
23:BB:523:C:H2'	23:BB:524:G:C8	2.55	0.41
1:CA:126:G:OP1	1:CA:605:U:O2'	2.37	0.41
23:DB:65:U:H2'	23:DB:66:C:C6	2.56	0.41
23:DB:2047:C:H2'	23:DB:2048:G:C8	2.53	0.41
23:DB:443:A:H5''	23:DB:444:C:O5'	2.20	0.41
9:CJ:83:THR:C	9:CJ:85:ASP:N	2.74	0.41
23:DB:1838:C:H4'	23:DB:1839:G:H8	1.86	0.41
23:DB:1103:A:H3'	23:DB:1104:C:H6	1.85	0.41
1:CA:1136:C:OP2	1:CA:1137:C:OP2	2.39	0.41
23:DB:615:U:O4	29:DE:39:ALA:HB2	2.21	0.41
1:AA:875:U:H1'	7:AH:15:ASN:OD1	2.21	0.41
1:AA:1423:G:H2'	1:AA:1424:U:C6	2.55	0.41
38:BM:74:THR:HG22	38:BM:89:VAL:HA	2.03	0.41
39:BX:41:HIS:CD2	39:BX:41:HIS:H	2.39	0.41
44:BQ:46:TYR:O	44:BQ:50:ARG:HD2	2.21	0.41
33:D1:39:ASP:O	33:D1:43:ARG:N	2.51	0.41
25:BC:179:GLU:HB2	25:BC:270:ARG:HB3	2.02	0.41
3:CD:110:ARG:HG3	3:CD:110:ARG:HH11	1.85	0.41
1:AA:704:A:C2	1:AA:705:G:C1'	3.04	0.41
1:AA:432:A:H2'	1:AA:433:G:H5'	2.01	0.41
21:CN:60:ARG:NH2	21:CN:62:ARG:HD3	2.36	0.41
23:BB:922:C:H1'	52:BW:22:VAL:CG2	2.35	0.41
52:BW:23:LYS:CD	52:BW:24:ARG:N	2.84	0.41
1:AA:1238:A:H2	1:AA:1241:G:N3	2.19	0.41
1:AA:1303:C:O2'	1:AA:1304:G:H5'	2.21	0.41
50:DT:16:VAL:HA	50:DT:21:SER:CB	2.51	0.41
19:AU:43:GLU:N	19:AU:46:ARG:HE	2.19	0.41
23:DB:855:G:C2	52:DW:23:LYS:HG2	2.55	0.41
9:CJ:21:ALA:O	9:CJ:25:ILE:HG13	2.20	0.41
1:CA:1178:G:H3'	8:CI:98:ARG:NH2	2.36	0.41
32:B4:33:HIS:O	32:B4:35:GLN:HG3	2.21	0.41
23:BB:705:A:H8	23:BB:705:A:O5'	2.04	0.41
48:BG:42:VAL:O	48:BG:42:VAL:HG13	2.21	0.41
41:BJ:16:TYR:O	41:BJ:55:ILE:HG12	2.20	0.41
23:BB:2773:C:O2'	23:BB:2774:C:H5'	2.21	0.41
35:DV:65:VAL:O	35:DV:67:GLY:N	2.53	0.41
35:DV:8:VAL:HA	35:DV:40:ILE:HG22	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:123:ILE:O	25:DC:123:ILE:HG12	2.20	0.41
5:CF:61:LEU:HD12	5:CF:62:MET:H	1.85	0.41
41:DJ:12:LYS:HZ3	41:DJ:12:LYS:H	1.69	0.41
41:DJ:16:TYR:O	41:DJ:55:ILE:HG12	2.21	0.41
14:AQ:45:VAL:O	14:AQ:70:LYS:HE3	2.21	0.41
23:BB:1251:C:H5'	44:BQ:5:ARG:NH1	2.35	0.41
43:BO:35:ILE:HG13	43:BO:71:ALA:HB2	2.03	0.41
1:AA:1289:A:H61	8:AI:71:ILE:CD1	2.32	0.41
8:AI:18:VAL:HG11	8:AI:82:ILE:CA	2.33	0.41
42:DN:79:LEU:O	42:DN:80:PHE:HB2	2.21	0.41
23:BB:1058:U:O2'	23:BB:1059:G:H5'	2.21	0.41
37:BL:90:VAL:CB	37:BL:122:VAL:HG12	2.36	0.41
23:BB:1732:C:O5'	23:BB:1732:C:H6	2.03	0.41
46:DU:62:ALA:O	46:DU:63:ALA:HB3	2.21	0.41
42:BN:49:GLU:HB2	42:BN:50:PRO:HD3	2.02	0.41
2:AC:149:LYS:CB	2:AC:168:ARG:HG3	2.50	0.41
23:BB:1799:G:N2	23:BB:1818:U:O2'	2.54	0.41
1:CA:1363:A:O2'	1:CA:1365:G:N7	2.45	0.41
48:DG:90:GLY:HA3	48:DG:93:TYR:CE1	2.55	0.41
48:BG:63:GLN:O	48:BG:66:THR:HG22	2.21	0.41
49:BR:15:SER:HB3	49:BR:18:GLN:NE2	2.33	0.41
23:DB:322:A:C2	23:DB:340:A:C6	3.08	0.41
49:DR:25:LEU:HA	49:DR:25:LEU:HD13	1.89	0.41
24:DI:73:PRO:CG	24:DI:78:LEU:HD21	2.48	0.41
2:AC:33:ASP:CG	2:AC:37:LYS:HD2	2.40	0.41
18:CB:17:HIS:ND1	18:CB:18:GLN:N	2.65	0.41
23:BB:675:A:H5'	29:BE:60:TRP:NE1	2.19	0.41
26:BD:187:LEU:O	26:BD:188:LEU:HD23	2.21	0.41
28:BP:50:ARG:HE	28:BP:58:PHE:HE2	1.69	0.41
30:BY:6:ILE:HG22	30:BY:7:THR:H	1.86	0.41
38:DM:51:ARG:HH11	38:DM:51:ARG:HG2	1.85	0.41
46:DU:10:VAL:O	46:DU:21:ARG:HA	2.20	0.41
16:AS:46:LEU:HB2	16:AS:61:VAL:CG2	2.51	0.41
26:BD:184:ARG:HG3	26:BD:186:LEU:HB2	2.02	0.41
26:BD:186:LEU:HD13	28:BP:3:ILE:HG13	2.03	0.41
23:DB:899:A:C4	23:DB:900:A:H1'	2.56	0.41
47:BF:31:GLU:O	47:BF:32:LYS:O	2.39	0.41
47:DF:40:GLY:CA	47:DF:84:ILE:HG23	2.51	0.41
46:DU:50:ALA:N	46:DU:53:GLN:NE2	2.60	0.41
1:AA:1100:C:C2	1:AA:1102:A:H5'	2.56	0.41
18:AB:55:GLU:HB2	18:AB:197:PHE:CZ	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:94:PHE:CA	46:DU:101:THR:HA	2.42	0.41
29:BE:5:LEU:HG	29:BE:11:ALA:O	2.20	0.41
47:DF:48:LEU:HB2	47:DF:147:ARG:NH2	2.36	0.41
47:DF:33:ILE:HB	47:DF:90:LEU:CG	2.51	0.41
1:CA:1300:G:N3	1:CA:1301:U:H5	2.19	0.41
51:BZ:56:MET:O	51:BZ:59:ILE:HG12	2.21	0.41
23:BB:2052:A:N7	26:BD:146:ILE:HD11	2.36	0.41
8:AI:122:ARG:HH11	8:AI:122:ARG:HG3	1.86	0.41
18:CB:119:GLN:HE22	18:CB:124:THR:HG23	1.86	0.41
1:CA:876:C:C1'	7:CH:11:THR:HG21	2.49	0.41
46:BU:48:VAL:HG22	46:BU:48:VAL:O	2.20	0.41
1:AA:14:U:O2	1:AA:17:U:H5	2.04	0.41
2:CC:149:LYS:N	2:CC:200:TRP:O	2.54	0.41
10:AK:51:PHE:HZ	10:AK:61:ALA:HA	1.86	0.41
26:DD:114:LYS:HB2	26:DD:116:LYS:CE	2.51	0.41
27:BK:20:MET:O	27:BK:41:ILE:HD12	2.21	0.41
40:DH:11:ASN:O	40:DH:12:LEU:HB3	2.21	0.41
40:DH:5:LEU:HD21	40:DH:12:LEU:HD12	2.03	0.41
12:AM:95:PRO:CG	12:AM:99:GLN:HB2	2.51	0.41
2:AC:180:ASP:OD1	2:AC:203:LYS:HB2	2.20	0.41
47:BF:6:TYR:O	47:BF:11:VAL:HG23	2.21	0.41
22:DA:83:G:H4'	30:DY:52:PHE:CE2	2.56	0.41
39:DX:48:ARG:O	39:DX:51:ALA:HB3	2.21	0.41
1:CA:1308:U:H2'	1:CA:1309:G:H8	1.85	0.41
1:AA:71:A:O2'	1:AA:72:A:C5'	2.69	0.41
41:DJ:44:TYR:O	41:DJ:45:THR:CB	2.69	0.41
24:DI:12:VAL:HG13	24:DI:41:PHE:CE2	2.56	0.41
3:CD:178:GLU:HA	3:CD:178:GLU:OE1	2.21	0.41
23:BB:2097:A:O2'	23:BB:2098:U:H5'	2.19	0.41
45:DS:108:SER:OG	45:DS:109:ASP:N	2.53	0.41
23:BB:2732:G:N3	23:BB:2732:G:O4'	2.54	0.41
19:AU:9:GLU:HG2	2:CC:109:GLU:CG	2.51	0.41
31:B0:38:LEU:HD13	31:B0:41:HIS:NE2	2.36	0.41
23:DB:796:C:O2'	23:DB:797:G:H5'	2.21	0.41
23:BB:299:A:C8	23:BB:322:A:C2	3.09	0.41
45:DS:45:VAL:C	45:DS:48:LYS:HB3	2.41	0.41
23:DB:2080:A:N6	23:DB:2241:A:N6	2.69	0.41
23:DB:2675:A:N1	23:DB:2732:G:O6	2.54	0.41
23:BB:589:U:H2'	23:BB:590:A:C8	2.56	0.41
45:BS:26:GLY:O	45:BS:28:LYS:N	2.54	0.41
1:AA:517:G:O2'	1:AA:530:G:H4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AG:150:PHE:N	10:AK:55:ARG:NH2	2.68	0.41
7:AH:100:ILE:HG13	7:AH:100:ILE:O	2.21	0.41
1:CA:20:U:H2'	1:CA:21:G:O4'	2.21	0.41
23:DB:2653:U:H3'	23:DB:2654:A:H2'	2.03	0.41
23:BB:2148:G:C2'	23:BB:2149:U:H4'	2.46	0.41
23:BB:637:A:H4'	23:BB:638:G:O5'	2.20	0.41
41:BJ:57:LEU:HA	41:BJ:57:LEU:HD12	1.83	0.41
41:BJ:59:ALA:C	41:BJ:61:LYS:N	2.74	0.41
25:DC:92:LEU:HD12	25:DC:93:VAL:N	2.36	0.41
23:DB:1802:A:H2'	23:DB:1803:A:C8	2.56	0.41
25:DC:196:ASN:C	25:DC:198:GLU:H	2.24	0.41
23:DB:2460:U:H2'	23:DB:2461:A:O4'	2.21	0.41
23:DB:1641:A:H2'	23:DB:1642:G:O4'	2.21	0.41
48:BG:7:PRO:O	48:BG:8:VAL:CB	2.69	0.41
11:AL:106:VAL:HA	11:AL:107:LYS:HZ3	1.86	0.41
1:CA:132:C:H4'	17:CT:68:LYS:HD2	2.03	0.41
3:CD:29:THR:C	3:CD:31:CYS:N	2.74	0.41
1:CA:1514:G:O2'	1:CA:1515:G:H5'	2.21	0.41
3:AD:29:THR:H	3:AD:33:ILE:CG2	2.34	0.41
23:BB:610:C:O2'	23:BB:611:C:H5'	2.20	0.41
42:BN:62:ASN:O	42:BN:66:ALA:HB2	2.21	0.41
2:CC:69:THR:O	2:CC:72:PRO:HD3	2.20	0.41
47:DF:81:GLY:O	47:DF:82:TYR:C	2.58	0.41
51:DZ:6:GLN:NE2	51:DZ:49:LEU:HB2	2.36	0.41
23:BB:909:A:H2'	23:BB:912:C:C5	2.56	0.41
1:CA:278:G:N2	1:CA:279:A:H62	2.19	0.41
1:AA:1142:G:C2	1:AA:1143:G:H1'	2.56	0.41
22:BA:87:U:O2	22:BA:89:U:OP2	2.38	0.41
12:CM:13:HIS:O	12:CM:16:ILE:HG22	2.21	0.41
10:AK:42:GLY:HA3	10:AK:73:VAL:CG1	2.50	0.41
1:AA:429:U:C1'	1:AA:430:A:H5''	2.49	0.41
1:AA:680:C:H2'	1:AA:681:A:H8	1.86	0.41
23:DB:850:U:O2'	30:DY:22:THR:HA	2.21	0.41
1:CA:738:C:H2'	1:CA:739:C:C6	2.56	0.41
1:CA:1459:G:H2'	1:CA:1460:C:H6	1.85	0.41
37:BL:77:ILE:O	37:BL:110:VAL:O	2.39	0.41
52:DW:33:GLY:O	52:DW:34:SER:HB2	2.21	0.41
45:DS:76:VAL:HG12	45:DS:103:ILE:HG12	2.02	0.41
23:BB:79:C:C2	23:BB:80:G:C8	3.08	0.41
1:AA:716:A:N3	10:AK:118:ASN:O	2.54	0.41
41:DJ:23:LYS:HE3	41:DJ:142:ILE:HD11	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:274:C:H2'	23:BB:275:C:H6	1.82	0.41
23:DB:2135:A:H2'	23:DB:2136:G:C8	2.52	0.41
23:DB:1948:G:O2'	23:DB:1949:G:H5'	2.21	0.41
1:CA:1469:C:H3'	1:CA:1470:U:H6	1.86	0.41
27:DK:23:LYS:O	27:DK:39:ILE:HD13	2.21	0.41
23:BB:825:A:H1'	37:BL:54:GLN:NE2	2.36	0.41
29:DE:3:LEU:HD23	29:DE:12:LEU:HG	2.03	0.41
1:AA:1525:G:O2'	1:AA:1526:G:H5'	2.21	0.41
23:BB:2899:A:H2'	23:BB:2900:A:C8	2.56	0.41
23:DB:666:A:H4'	37:DL:48:ARG:HD2	2.03	0.41
1:CA:310:G:H5''	13:CP:31:ARG:HB2	2.02	0.41
33:B1:32:LYS:HG2	33:B1:52:LYS:HA	2.02	0.41
48:DG:174:LYS:O	48:DG:174:LYS:HD3	2.20	0.41
1:AA:586:C:O2'	1:AA:878:A:H4'	2.21	0.41
23:DB:1166:G:O2'	23:DB:1167:C:H5'	2.21	0.41
48:BG:35:THR:CG2	48:BG:36:LEU:N	2.82	0.41
23:DB:2881:U:H2'	23:DB:2882:A:O4'	2.20	0.41
44:BQ:29:ARG:NH1	44:BQ:29:ARG:HG2	2.34	0.41
11:AL:80:LEU:HB3	11:AL:97:VAL:CG2	2.51	0.41
23:DB:2678:C:H2'	23:DB:2679:A:C8	2.56	0.41
6:AG:64:ALA:O	6:AG:68:VAL:HG23	2.21	0.41
46:BU:13:LEU:HD12	46:BU:68:ASN:O	2.21	0.41
23:BB:125:A:OP2	36:B2:19:ARG:NH2	2.53	0.41
26:BD:68:PHE:HB3	26:BD:73:VAL:HG23	2.02	0.41
2:CC:17:TRP:O	2:CC:19:SER:N	2.53	0.41
23:BB:1292:G:H2'	23:BB:1293:C:H6	1.83	0.41
23:DB:2691:C:H2'	23:DB:2692:G:C8	2.54	0.41
23:DB:1258:U:O4'	29:DE:79:ARG:HD2	2.21	0.41
23:BB:1260:A:H2'	23:BB:1261:C:C6	2.55	0.41
33:B1:3:GLY:O	33:B1:4:ILE:HG12	2.21	0.41
1:AA:634:C:H2'	1:AA:635:A:H8	1.86	0.41
1:CA:634:C:H2'	1:CA:635:A:H8	1.86	0.41
23:BB:2405:G:H1'	23:BB:2412:A:H61	1.86	0.41
23:DB:464:U:H1'	23:DB:686:U:C5	2.55	0.41
1:CA:1047:G:C2'	1:CA:1048:G:H5'	2.51	0.41
1:AA:65:A:H2	1:AA:381:C:H2'	1.84	0.41
25:DC:41:GLY:HA3	25:DC:53:ILE:HG21	2.03	0.41
1:AA:125:U:H2'	1:AA:126:G:H8	1.84	0.41
23:DB:1742:U:H2'	23:DB:1743:G:H8	1.86	0.41
40:BH:26:ALA:HA	40:BH:30:LEU:HB2	2.03	0.41
47:BF:163:GLU:C	47:BF:165:GLY:N	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1349:C:H2'	23:BB:1350:C:C6	2.55	0.41
1:CA:398:U:H2'	1:CA:399:G:C8	2.56	0.41
23:BB:766:U:H2'	23:BB:767:U:H6	1.86	0.41
1:AA:771:G:H2'	1:AA:772:U:C6	2.55	0.41
23:BB:1965:C:H3'	23:BB:1966:A:C8	2.56	0.41
48:BG:28:LYS:HZ2	48:BG:29:ASN:HB2	1.86	0.41
23:DB:2358:A:H2'	23:DB:2359:C:C6	2.56	0.41
1:CA:517:G:H4'	1:CA:519:C:C6	2.56	0.41
1:CA:1283:U:H2'	1:CA:1284:C:C6	2.55	0.41
23:BB:693:A:H2'	23:BB:694:U:H6	1.85	0.41
23:DB:1360:G:H2'	23:DB:1361:G:H5'	2.03	0.41
23:BB:1338:G:O2'	23:BB:1339:G:H5'	2.20	0.41
51:BZ:68:LEU:O	51:BZ:69:ALA:C	2.58	0.41
25:BC:61:TYR:HA	25:BC:85:ASN:HD21	1.86	0.41
23:DB:903:C:H2'	23:DB:904:G:C8	2.56	0.41
6:CG:151:ALA:HB3	6:CG:153:TYR:CE1	2.55	0.41
23:DB:305:C:H2'	23:DB:306:U:C6	2.55	0.41
25:DC:120:ASP:CG	25:DC:121:ALA:H	2.24	0.41
48:BG:112:VAL:HG12	48:BG:113:ASP:N	2.36	0.41
23:DB:1978:A:O2'	23:DB:1979:U:H5'	2.20	0.41
23:BB:1279:G:H2'	23:BB:1280:G:H8	1.84	0.41
29:BE:38:GLY:C	29:BE:40:ARG:H	2.23	0.41
1:AA:356:A:H1'	1:AA:368:U:O2'	2.20	0.41
1:CA:96:U:H2'	1:CA:97:G:C8	2.55	0.41
1:AA:376:G:H5''	13:AP:5:ARG:CB	2.51	0.41
1:AA:377:G:H2'	1:AA:378:G:H8	1.86	0.41
23:DB:1515:A:H3'	23:DB:1516:G:H8	1.85	0.41
23:DB:516:C:O2'	23:DB:517:C:H5'	2.21	0.41
23:BB:1821:A:H2'	23:BB:1822:C:C6	2.55	0.41
1:AA:128:G:H2'	1:AA:129:A:C8	2.55	0.41
34:B3:23:HIS:HD1	34:B3:24:LYS:C	2.23	0.41
23:DB:32:C:O2'	23:DB:33:C:H5'	2.21	0.41
23:BB:2337:G:N3	23:BB:2337:G:H2'	2.36	0.41
15:CR:27:THR:HG22	15:CR:27:THR:O	2.21	0.41
43:BO:26:LEU:O	43:BO:26:LEU:HG	2.21	0.41
31:D0:47:TYR:CE1	31:D0:52:LYS:HG3	2.56	0.41
26:BD:60:VAL:HA	26:BD:64:GLU:OE2	2.20	0.41
22:DA:74:U:H2'	22:DA:75:G:C8	2.56	0.41
1:AA:59:A:N6	1:AA:331:G:H1'	2.35	0.41
1:CA:886:G:O2'	1:CA:887:G:H5'	2.21	0.41
23:DB:1098:A:P	24:DI:3:LYS:HG2	2.61	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CB:163:ILE:HG13	18:CB:164:ASP:N	2.36	0.41
25:DC:184:GLU:O	25:DC:185:ALA:HB3	2.21	0.41
32:D4:7:VAL:CG1	32:D4:8:LYS:N	2.74	0.41
23:DB:2060:A:O2'	23:DB:2061:G:OP2	2.38	0.41
29:DE:58:LYS:HE2	29:DE:60:TRP:HB2	2.03	0.41
35:BV:4:ILE:O	35:BV:64:VAL:HG23	2.21	0.41
41:BJ:13:ARG:O	41:BJ:14:ASP:HB2	2.20	0.41
20:AO:15:PHE:HB3	20:AO:26:GLU:HB3	2.03	0.41
21:CN:16:ALA:HA	21:CN:54:SER:OG	2.21	0.41
5:CF:15:SER:HA	5:CF:18:VAL:HG23	2.03	0.41
5:AF:1:MET:O	5:AF:65:GLU:HG2	2.21	0.41
14:AQ:68:LYS:C	14:AQ:70:LYS:H	2.24	0.41
14:CQ:67:SER:HB3	14:CQ:70:LYS:HB3	2.03	0.41
42:BN:80:PHE:O	42:BN:85:PRO:HD3	2.21	0.41
23:BB:1081:U:O2'	24:BI:118:GLY:HA2	2.21	0.41
23:BB:1728:C:C3'	23:BB:1729:U:H5''	2.51	0.41
42:BN:49:GLU:N	42:BN:50:PRO:CD	2.84	0.41
2:AC:129:PHE:CE2	2:AC:165:GLU:HG2	2.55	0.41
25:BC:64:VAL:HG11	25:BC:66:PHE:CZ	2.56	0.41
26:DD:181:ASP:OD2	26:DD:184:ARG:HG2	2.21	0.41
27:BK:89:ASN:C	27:BK:89:ASN:HD22	2.23	0.41
35:DV:28:ALA:CB	35:DV:89:ILE:HD12	2.51	0.41
40:DH:64:ALA:O	40:DH:68:ARG:HG2	2.20	0.41
38:BM:38:ARG:O	38:BM:126:ILE:HG12	2.21	0.41
38:BM:93:VAL:HG22	38:BM:94:ALA:H	1.85	0.41
23:DB:992:C:H2'	23:DB:993:G:H8	1.86	0.41
2:AC:75:VAL:HG12	2:AC:75:VAL:O	2.21	0.41
23:DB:496:G:H1'	45:DS:61:ASN:ND2	2.36	0.41
45:DS:60:HIS:CG	45:DS:61:ASN:N	2.88	0.41
28:DP:19:PHE:CE2	28:DP:25:VAL:HG11	2.56	0.41
1:AA:923:A:O5'	1:AA:923:A:H8	2.04	0.41
23:DB:1373:A:H4'	23:DB:2212:A:N3	2.35	0.41
8:CI:87:MET:HG2	8:CI:91:GLU:OE2	2.21	0.41
1:AA:1029:U:O2'	1:AA:1032:G:N7	2.53	0.41
18:AB:26:MET:HE2	18:AB:187:ASP:HA	2.02	0.41
1:CA:1356:G:O2'	1:CA:1357:A:H5'	2.21	0.41
23:DB:946:C:H2'	23:DB:947:A:C8	2.55	0.41
41:DJ:81:ILE:HG23	41:DJ:82:GLY:N	2.25	0.41
37:BL:57:LEU:HA	37:BL:60:ARG:NE	2.36	0.41
1:CA:1221:G:H2'	1:CA:1222:G:C8	2.56	0.41
16:CS:38:THR:HG23	16:CS:68:HIS:C	2.40	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:201:G:H2'	1:CA:202:G:H8	1.86	0.41
41:DJ:3:THR:HB	41:DJ:44:TYR:CE1	2.55	0.41
27:BK:10:VAL:HG12	27:BK:12:ASP:H	1.86	0.41
23:BB:2733:A:C3'	23:BB:2733:A:C8	3.04	0.41
27:BK:98:ARG:C	27:BK:99:ILE:HD12	2.41	0.41
6:CG:49:LEU:HD13	6:CG:123:LEU:HB2	2.03	0.41
6:AG:30:MET:SD	6:AG:35:LYS:HA	2.62	0.41
23:DB:283:G:H2'	23:DB:284:U:C1'	2.51	0.41
39:BX:30:MET:C	39:BX:32:ALA:N	2.74	0.41
23:BB:1439:A:N3	23:BB:1553:A:C6	2.89	0.41
2:AC:122:GLN:C	2:AC:127:VAL:HG22	2.42	0.41
23:DB:2143:C:H2'	23:DB:2144:G:H4'	2.03	0.41
7:CH:50:VAL:HG22	7:CH:50:VAL:O	2.21	0.41
51:DZ:27:ARG:CG	51:DZ:28:ARG:N	2.83	0.41
1:CA:1287:A:C6	1:CA:1288:A:C6	3.09	0.41
23:BB:629:G:O2'	23:BB:630:G:H5'	2.21	0.41
48:BG:61:TRP:O	48:BG:64:ALA:N	2.53	0.41
52:BW:44:PHE:O	52:BW:78:PHE:HA	2.21	0.41
23:DB:2846:G:H2'	23:DB:2847:U:C6	2.56	0.41
40:DH:60:GLU:CA	40:DH:62:LEU:HD23	2.51	0.41
23:DB:2098:U:H2'	23:DB:2099:U:C1'	2.51	0.41
23:BB:222:A:H61	23:BB:232:G:H1'	1.86	0.41
1:CA:1448:C:H2'	1:CA:1449:C:C6	2.55	0.41
23:BB:873:C:H4'	38:BM:64:TRP:HE1	1.86	0.41
25:BC:92:LEU:HD12	25:BC:93:VAL:N	2.34	0.41
1:AA:20:U:H2'	1:AA:21:G:O4'	2.20	0.41
23:DB:1453:A:H4'	23:DB:1454:C:OP2	2.21	0.41
3:AD:25:ARG:HH22	3:AD:30:LYS:HG2	1.86	0.41
21:CN:34:ASN:H	21:CN:40:ARG:N	2.19	0.41
23:DB:353:C:H3'	23:DB:354:A:H8	1.85	0.41
29:DE:18:THR:HA	29:DE:106:LYS:HG2	2.02	0.41
1:CA:138:G:O2'	1:CA:139:A:H5'	2.21	0.41
23:BB:1228:G:H2'	23:BB:1229:C:C6	2.56	0.41
23:BB:1564:C:O2'	23:BB:1565:C:H5'	2.20	0.41
40:DH:27:ARG:CG	40:DH:27:ARG:HH21	2.34	0.41
23:BB:2887:A:C2	23:BB:2888:C:C6	3.09	0.41
23:DB:1996:C:H5	27:DK:32:TYR:OH	2.01	0.41
44:BQ:74:SER:O	44:BQ:75:TYR:C	2.59	0.41
23:BB:2758:A:H2'	23:BB:2759:G:O4'	2.21	0.41
46:DU:23:LYS:H	46:DU:23:LYS:HD2	1.85	0.41
8:CI:8:THR:OG1	8:CI:9:GLY:N	2.52	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1585:C:H2'	23:DB:1586:A:O4'	2.21	0.41
1:AA:322:C:H5	1:AA:328:C:H5	1.68	0.41
1:AA:1113:C:O2'	1:AA:1114:C:H5'	2.21	0.41
23:BB:1633:G:O2'	23:BB:1634:A:H5''	2.20	0.41
1:AA:496:A:H2'	1:AA:497:G:N7	2.35	0.41
40:DH:147:VAL:HG12	40:DH:148:ALA:H	1.85	0.41
23:DB:2603:G:O2'	23:DB:2604:U:H5'	2.21	0.41
23:DB:600:G:H1'	29:DE:100:MET:CG	2.51	0.41
23:DB:1740:G:O2'	23:DB:1741:C:H5'	2.21	0.41
41:DJ:59:ALA:C	41:DJ:61:LYS:N	2.74	0.41
20:AO:73:LYS:O	20:AO:74:ASP:HB2	2.20	0.41
23:DB:1711:A:O2'	23:DB:1712:U:H5'	2.21	0.41
22:BA:109:A:H2'	22:BA:110:C:C6	2.55	0.41
25:BC:86:ARG:NH1	25:BC:86:ARG:HB3	2.36	0.41
1:CA:1057:G:OP1	2:CC:154:GLY:HA3	2.21	0.41
23:BB:426:C:O2'	23:BB:427:U:H5'	2.20	0.41
29:BE:182:ALA:O	29:BE:183:PHE:HB2	2.21	0.41
25:DC:20:ASN:OD1	25:DC:22:GLU:HG2	2.21	0.41
25:DC:20:ASN:O	25:DC:23:LEU:HD13	2.20	0.41
1:AA:1473:G:H2'	1:AA:1474:U:O4'	2.21	0.41
23:BB:2716:C:O2'	23:BB:2717:C:H5'	2.21	0.41
34:D3:26:ALA:O	34:D3:27:ASN:HB2	2.20	0.41
24:DI:10:LEU:C	24:DI:10:LEU:HD12	2.41	0.41
41:DJ:100:VAL:O	41:DJ:104:ALA:HB2	2.20	0.41
23:DB:242:G:H5''	34:D3:63:TYR:CZ	2.56	0.41
23:DB:1403:A:H2'	23:DB:1404:C:C6	2.56	0.41
1:AA:84:U:O2	1:AA:84:U:O4'	2.34	0.41
32:B4:31:PRO:O	32:B4:34:LYS:HB3	2.21	0.41
34:D3:7:ARG:HG3	34:D3:7:ARG:HH11	1.85	0.41
23:BB:802:A:H2'	23:BB:803:U:C6	2.55	0.41
1:AA:55:A:OP2	1:AA:352:C:N4	2.54	0.41
30:DY:41:PRO:HA	30:DY:44:ARG:HB3	2.03	0.41
23:DB:1330:C:H2'	23:DB:1331:G:H8	1.86	0.41
1:CA:740:U:H4'	20:CO:42:HIS:CD2	2.56	0.41
23:DB:623:C:H2'	23:DB:624:C:H6	1.86	0.41
1:CA:128:G:H2'	1:CA:129:A:C8	2.56	0.41
1:CA:66:A:H4'	1:CA:173:U:C4	2.56	0.41
23:DB:2207:C:H2'	23:DB:2208:C:C6	2.56	0.41
26:BD:59:ARG:HG2	26:BD:59:ARG:HH21	1.86	0.41
1:CA:211:G:H3'	1:CA:211:G:N3	2.35	0.41
28:BP:111:GLU:CD	28:BP:111:GLU:N	2.74	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:754:C:H3'	1:AA:754:C:O2	2.21	0.41
1:AA:211:G:H3'	1:AA:211:G:N3	2.36	0.41
9:AJ:73:LEU:O	9:AJ:75:ASP:N	2.54	0.40
50:DT:24:MET:O	50:DT:28:ASN:N	2.46	0.40
23:BB:546:U:H4'	23:BB:547:A:OP2	2.21	0.40
23:BB:725:G:H2'	23:BB:726:G:O4'	2.21	0.40
25:DC:104:LEU:O	25:DC:105:ALA:HB3	2.21	0.40
35:BV:42:LEU:HD11	35:BV:91:PHE:HE1	1.83	0.40
35:BV:87:GLN:HE21	35:BV:87:GLN:HB2	1.69	0.40
41:BJ:15:TRP:HB3	41:BJ:137:PRO:CB	2.51	0.40
48:DG:24:THR:HG23	48:DG:34:ARG:HD3	2.02	0.40
5:CF:62:MET:O	5:CF:63:ASN:HB2	2.21	0.40
5:AF:97:THR:O	5:AF:99:ALA:N	2.54	0.40
41:DJ:15:TRP:HB3	41:DJ:137:PRO:HG3	2.03	0.40
40:BH:117:LEU:HD22	40:BH:121:VAL:CG2	2.51	0.40
23:BB:2355:G:H4'	52:BW:20:LEU:HD12	2.03	0.40
23:BB:1199:U:C5'	44:BQ:4:LYS:HD3	2.49	0.40
43:BO:67:ASN:H	43:BO:70:ALA:CB	2.33	0.40
8:AI:15:ALA:O	8:AI:66:VAL:HA	2.21	0.40
48:BG:152:ARG:HD3	48:BG:153:PRO:CD	2.44	0.40
12:CM:65:GLU:HB2	12:CM:66:GLY:H	1.55	0.40
23:DB:2756:U:H4'	23:DB:2757:A:OP1	2.19	0.40
19:AU:24:LYS:NZ	19:AU:24:LYS:HB3	2.35	0.40
46:BU:71:ILE:CD1	46:BU:82:VAL:HG22	2.50	0.40
26:DD:184:ARG:HG3	26:DD:186:LEU:HB2	2.02	0.40
26:BD:118:PHE:HE2	42:BN:1:MET:SD	2.44	0.40
18:CB:18:GLN:O	18:CB:37:VAL:HG23	2.21	0.40
27:DK:71:ARG:HD2	27:DK:71:ARG:HA	1.79	0.40
28:DP:57:ALA:HA	28:DP:73:PHE:O	2.21	0.40
29:BE:58:LYS:HZ2	29:BE:58:LYS:H	1.64	0.40
26:BD:24:VAL:HG21	26:BD:188:LEU:CB	2.46	0.40
47:DF:108:PRO:O	47:DF:110:ILE:HG23	2.20	0.40
47:DF:135:ILE:CD1	47:DF:137:PHE:HB3	2.48	0.40
23:BB:994:C:O2	49:BR:10:LYS:HE3	2.21	0.40
49:BR:7:SER:CB	49:BR:22:LEU:HD22	2.51	0.40
16:AS:11:ASP:N	16:AS:11:ASP:OD1	2.53	0.40
47:BF:121:PHE:HB3	47:BF:127:TYR:CD2	2.55	0.40
47:BF:33:ILE:HB	47:BF:90:LEU:HD23	2.03	0.40
49:DR:14:VAL:CG2	49:DR:18:GLN:HG3	2.52	0.40
21:AN:67:GLY:O	21:AN:69:PRO:HD3	2.21	0.40
47:DF:3:LEU:HG	47:DF:99:PHE:HD2	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2353:G:H21	52:BW:30:VAL:CG2	2.34	0.40
51:DZ:5:CYS:SG	51:DZ:7:VAL:HG12	2.61	0.40
25:BC:14:HIS:N	25:BC:14:HIS:ND1	2.68	0.40
25:BC:4:LYS:CD	25:BC:16:VAL:HG22	2.52	0.40
39:DX:57:LEU:O	39:DX:60:LYS:HB2	2.20	0.40
3:AD:106:PHE:N	3:AD:106:PHE:CD1	2.89	0.40
23:BB:2468:A:H2'	23:BB:2476:A:C6	2.56	0.40
23:BB:1680:U:H2'	23:BB:1681:G:O4'	2.21	0.40
1:AA:829:G:H4'	18:AB:24:PRO:HG3	2.02	0.40
39:BX:6:LEU:C	39:BX:8:GLU:H	2.24	0.40
31:D0:38:LEU:HB3	31:D0:41:HIS:CD2	2.55	0.40
1:AA:1308:U:OP1	12:AM:95:PRO:HA	2.21	0.40
23:DB:557:C:H2'	23:DB:558:U:C6	2.56	0.40
47:BF:11:VAL:HG12	47:BF:12:VAL:N	2.26	0.40
1:AA:814:A:H4'	1:AA:1510:C:O2'	2.22	0.40
4:AE:156:ARG:HB2	7:AH:43:GLY:HA3	2.03	0.40
43:BO:110:ALA:O	43:BO:115:LEU:HB2	2.20	0.40
23:BB:2279:G:N7	52:BW:10:ARG:NH2	2.69	0.40
23:DB:994:C:H3'	44:DQ:53:LYS:NZ	2.36	0.40
44:DQ:56:PHE:HA	44:DQ:56:PHE:HD2	1.79	0.40
3:CD:197:HIS:O	3:CD:201:GLU:HG3	2.20	0.40
23:BB:2098:U:C2'	23:BB:2099:U:H5'	2.50	0.40
23:BB:1131:G:C5	41:BJ:77:HIS:ND1	2.87	0.40
23:DB:2540:C:O2'	23:DB:2541:A:H5'	2.20	0.40
39:BX:28:LEU:HD13	39:BX:37:LEU:HD11	2.02	0.40
17:AT:38:ILE:HD11	17:AT:82:ILE:CG2	2.46	0.40
11:AL:85:ARG:HA	11:AL:93:ARG:HA	2.02	0.40
48:DG:7:PRO:O	48:DG:8:VAL:CB	2.69	0.40
1:CA:1251:A:O2'	1:CA:1252:A:H5'	2.20	0.40
23:BB:933:A:H5'	23:BB:934:U:OP2	2.21	0.40
52:BW:13:ARG:HD2	52:BW:13:ARG:HA	1.86	0.40
1:AA:22:G:H2'	1:AA:23:C:H6	1.85	0.40
3:AD:29:THR:C	3:AD:31:CYS:N	2.74	0.40
32:D4:11:CYS:SG	32:D4:13:ASN:HB2	2.61	0.40
23:BB:1454:C:H1'	42:BN:60:VAL:HG13	2.03	0.40
1:CA:1521:C:O2'	1:CA:1522:U:H5'	2.21	0.40
23:DB:729:G:H4'	23:DB:763:G:C5'	2.51	0.40
18:AB:71:THR:HG23	18:AB:94:ARG:H	1.86	0.40
30:BY:23:LEU:HA	30:BY:23:LEU:HD22	1.90	0.40
23:DB:445:C:H2'	23:DB:446:G:O4'	2.21	0.40
23:DB:193:U:H2'	23:DB:194:G:C8	2.55	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:811:C:H4'	1:CA:900:A:N6	2.36	0.40
23:BB:1824:G:N2	25:BC:252:LYS:HE2	2.36	0.40
1:CA:6:G:O2'	1:CA:7:A:H8	2.04	0.40
13:CP:78:VAL:O	13:CP:78:VAL:HG13	2.22	0.40
23:DB:863:A:H2'	23:DB:864:G:O4'	2.21	0.40
7:CH:124:ILE:CG2	7:CH:125:ILE:N	2.84	0.40
17:CT:53:MET:C	17:CT:55:PRO:HD2	2.41	0.40
24:DI:99:LYS:HB2	24:DI:140:GLU:OE1	2.21	0.40
23:DB:1665:A:O2'	23:DB:1666:G:H5'	2.21	0.40
1:AA:999:C:H2'	1:AA:1000:A:H8	1.83	0.40
2:AC:48:LYS:N	2:AC:48:LYS:HE2	2.36	0.40
23:DB:1824:G:H2'	23:DB:1825:U:H6	1.86	0.40
51:DZ:50:ARG:HG2	51:DZ:50:ARG:HH21	1.85	0.40
2:CC:37:LYS:HD3	2:CC:93:ILE:HG22	2.02	0.40
2:AC:131:ARG:HG2	2:AC:131:ARG:HH11	1.84	0.40
1:AA:1463:U:H2'	1:AA:1464:U:H6	1.86	0.40
23:BB:1939:U:O2	23:BB:1967:C:H4'	2.20	0.40
47:BF:48:LEU:H	47:BF:48:LEU:CD2	2.34	0.40
33:D1:8:ILE:HA	33:D1:8:ILE:HD13	1.91	0.40
42:DN:54:LEU:HD11	42:DN:62:ASN:HB3	2.03	0.40
23:DB:769:U:H2'	23:DB:770:G:C8	2.57	0.40
9:CJ:83:THR:HA	9:CJ:86:ALA:HB3	2.02	0.40
15:AR:26:ALA:C	15:AR:28:LEU:H	2.24	0.40
9:AJ:13:PHE:O	9:AJ:14:ASP:HB3	2.20	0.40
9:CJ:16:ARG:O	9:CJ:20:GLN:HG3	2.21	0.40
23:BB:2852:G:H2'	23:BB:2853:C:C6	2.55	0.40
4:AE:43:GLY:C	4:AE:44:ARG:HD2	2.42	0.40
3:CD:98:ASP:OD2	3:CD:99:ASN:N	2.54	0.40
38:DM:30:SER:O	38:DM:132:THR:HA	2.21	0.40
13:CP:70:ARG:O	13:CP:73:ALA:HB3	2.21	0.40
23:DB:248:G:N7	23:DB:250:G:N3	2.69	0.40
23:BB:2599:G:N7	25:BC:235:GLU:HB2	2.36	0.40
23:BB:2422:C:H5	34:B3:30:HIS:HE1	1.69	0.40
43:BO:60:GLU:H	43:BO:60:GLU:HG2	1.71	0.40
27:BK:67:LYS:HD3	27:BK:67:LYS:C	2.42	0.40
34:D3:23:HIS:HD1	34:D3:24:LYS:C	2.23	0.40
48:DG:154:GLU:O	48:DG:156:TYR:N	2.48	0.40
43:DO:24:THR:CG2	43:DO:42:PRO:HD3	2.50	0.40
23:DB:1098:A:O2'	24:DI:4:VAL:C	2.59	0.40
8:CI:34:LEU:O	8:CI:38:PHE:N	2.54	0.40
52:BW:23:LYS:O	52:BW:66:VAL:HB	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DT:25:GLU:C	50:DT:27:SER:N	2.74	0.40
52:BW:49:ASN:ND2	52:BW:50:VAL:N	2.69	0.40
9:CJ:74:VAL:HG12	9:CJ:75:ASP:N	2.36	0.40
1:CA:1336:C:O4'	1:CA:1337:G:C2	2.73	0.40
32:D4:10:LEU:HD12	32:D4:33:HIS:CA	2.40	0.40
35:BV:23:ALA:O	35:BV:24:ASN:HB2	2.21	0.40
41:BJ:16:TYR:CD2	41:BJ:140:LEU:HB2	2.56	0.40
29:BE:105:LEU:O	29:BE:108:ILE:HG22	2.21	0.40
37:DL:143:GLU:CG	37:DL:144:GLU:N	2.80	0.40
22:BA:55:U:H2'	22:BA:56:G:C8	2.56	0.40
43:BO:67:ASN:O	43:BO:69:ASP:N	2.54	0.40
8:AI:46:VAL:HA	8:AI:49:GLN:HG3	2.03	0.40
42:DN:82:GLU:O	42:DN:85:PRO:HD2	2.21	0.40
23:BB:1062:G:H2'	23:BB:1063:G:H8	1.85	0.40
24:BI:73:PRO:HA	24:BI:74:PRO:HD3	1.99	0.40
22:DA:55:U:H2'	22:DA:56:G:C8	2.56	0.40
3:AD:160:LEU:HD23	3:AD:164:ARG:HH22	1.85	0.40
23:BB:2539:C:C2'	23:BB:2540:C:H5'	2.51	0.40
23:BB:300:A:H2'	23:BB:334:C:H1'	2.03	0.40
24:DI:80:LYS:NZ	24:DI:135:MET:HE3	2.36	0.40
40:DH:75:LEU:O	40:DH:142:VAL:HG13	2.20	0.40
27:BK:72:PRO:O	27:BK:74:GLY:N	2.55	0.40
46:BU:20:LYS:HB3	46:BU:21:ARG:H	1.69	0.40
46:BU:21:ARG:HD3	46:BU:72:PHE:CE2	2.56	0.40
16:AS:9:PHE:HA	21:AN:45:LEU:HD11	2.04	0.40
23:DB:2886:A:H62	31:D0:39:ARG:CD	2.33	0.40
13:AP:66:THR:CG2	13:AP:67:ILE:N	2.84	0.40
47:BF:133:GLU:CA	47:BF:150:GLY:HA2	2.51	0.40
26:DD:3:GLY:O	26:DD:4:LEU:HD13	2.20	0.40
1:AA:1336:C:O4'	1:AA:1337:G:C2	2.74	0.40
47:BF:134:GLN:HE21	47:BF:134:GLN:HB3	1.52	0.40
47:BF:136:ILE:HG22	47:BF:142:TYR:CB	2.51	0.40
1:AA:1348:U:C4'	8:AI:121:ARG:HG3	2.44	0.40
18:CB:115:ASP:OD1	18:CB:116:LEU:N	2.54	0.40
23:DB:396:G:H5''	51:DZ:10:LYS:HZ3	1.86	0.40
1:CA:876:C:O2'	7:CH:11:THR:HG21	2.22	0.40
40:DH:37:VAL:HG11	40:DH:47:PHE:HE2	1.86	0.40
23:BB:992:C:H2'	23:BB:993:G:H8	1.86	0.40
44:BQ:68:ALA:HB1	44:BQ:73:ILE:CG2	2.43	0.40
48:BG:156:TYR:N	48:BG:170:THR:HB	2.37	0.40
12:AM:94:LEU:CB	12:AM:95:PRO:HD2	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:13:ILE:C	2:AC:15:LYS:N	2.73	0.40
23:DB:72:U:H1'	39:DX:51:ALA:HA	2.03	0.40
6:AG:94:ARG:CD	6:AG:98:LEU:HD11	2.51	0.40
34:B3:14:LYS:O	34:B3:21:PHE:O	2.38	0.40
44:DQ:93:ILE:HG23	44:DQ:94:LEU:H	1.86	0.40
11:AL:21:PRO:C	11:AL:23:LEU:H	2.25	0.40
11:AL:41:PRO:HB2	11:AL:88:ASP:HB3	2.03	0.40
11:AL:40:THR:CG2	11:AL:41:PRO:HD2	2.45	0.40
27:DK:11:ALA:HB3	27:DK:85:VAL:HG22	2.03	0.40
40:BH:4:ILE:HD12	40:BH:4:ILE:N	2.36	0.40
1:AA:1133:G:C2	1:AA:1134:G:C8	3.10	0.40
23:BB:1547:C:H2'	23:BB:1548:A:H8	1.85	0.40
1:CA:239:U:C6	1:CA:239:U:C5'	2.99	0.40
41:DJ:38:GLY:H	41:DJ:51:GLY:HA2	1.87	0.40
1:AA:1187:G:H4'	8:AI:114:LYS:NZ	2.31	0.40
1:AA:502:A:OP1	11:AL:113:ARG:N	2.53	0.40
1:AA:550:G:H2'	1:AA:551:U:H6	1.85	0.40
11:AL:113:ARG:HH21	11:AL:120:ARG:HB2	1.86	0.40
11:AL:120:ARG:NH1	11:AL:120:ARG:HG3	2.36	0.40
1:CA:676:A:H2'	1:CA:677:U:H6	1.86	0.40
23:BB:559:G:H21	44:BQ:51:GLN:HE22	1.64	0.40
23:BB:570:G:N7	23:BB:2030:A:N6	2.69	0.40
23:DB:570:G:N7	23:DB:2030:A:N6	2.69	0.40
23:DB:1454:C:H1'	42:DN:60:VAL:HG13	2.03	0.40
29:BE:48:THR:C	29:BE:50:ALA:N	2.75	0.40
3:AD:97:LEU:HA	3:AD:100:VAL:CG2	2.51	0.40
1:AA:137:U:O2'	1:AA:138:G:H5'	2.22	0.40
23:BB:2249:U:N3	23:BB:2253:G:OP2	2.54	0.40
1:AA:676:A:C1'	10:AK:116:PRO:HB3	2.48	0.40
44:BQ:11:ALA:C	44:BQ:13:HIS:N	2.74	0.40
1:AA:91:U:H2'	1:AA:92:U:H6	1.85	0.40
1:AA:159:G:N1	1:AA:163:C:N4	2.69	0.40
52:BW:58:LEU:N	52:BW:58:LEU:HD22	2.36	0.40
23:DB:1117:C:H2'	23:DB:1118:C:H6	1.84	0.40
1:AA:1479:C:O2'	1:AA:1480:A:H5'	2.21	0.40
23:DB:2041:U:H2'	23:DB:2042:A:H8	1.84	0.40
23:BB:697:G:H2'	23:BB:698:C:C6	2.56	0.40
11:CL:13:ARG:HB2	11:CL:14:LYS:H	1.62	0.40
11:CL:14:LYS:HG2	11:CL:15:VAL:N	2.36	0.40
23:DB:1683:U:H2'	23:DB:1684:G:H8	1.85	0.40
23:BB:1585:C:H2'	23:BB:1586:A:O4'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:766:A:H2'	1:AA:767:A:O4'	2.22	0.40
2:CC:90:VAL:O	2:CC:93:ILE:HG13	2.21	0.40
1:AA:106:C:O2'	1:AA:107:G:H5'	2.22	0.40
1:CA:225:C:H2'	1:CA:226:G:O4'	2.21	0.40
1:AA:1299:A:H2'	1:AA:1301:U:C1'	2.51	0.40
1:AA:1074:G:H2'	1:AA:1075:U:O4'	2.20	0.40
1:AA:1251:A:H1'	1:AA:1369:C:O2'	2.22	0.40
1:CA:628:G:O2'	1:CA:629:A:H5'	2.20	0.40
23:DB:407:G:O2'	23:DB:408:G:H5'	2.22	0.40
23:BB:217:A:O5'	23:BB:217:A:H8	2.05	0.40
23:DB:2232:C:O2'	23:DB:2233:U:H5'	2.20	0.40
1:AA:625:U:OP1	13:AP:9:HIS:HB3	2.21	0.40
25:BC:30:ALA:C	25:BC:32:LEU:H	2.25	0.40
4:AE:142:GLY:HA2	4:AE:145:ASN:HD22	1.86	0.40
23:BB:2398:U:H2'	23:BB:2399:G:C8	2.56	0.40
1:CA:1426:G:O2'	1:CA:1427:C:H5'	2.21	0.40
17:AT:19:HIS:O	17:AT:23:ARG:HG2	2.21	0.40
23:DB:781:A:OP1	25:DC:216:ARG:NH2	2.54	0.40
23:DB:2519:U:C6	23:DB:2542:A:N6	2.90	0.40
23:DB:2835:A:H61	23:DB:2878:U:H2'	1.85	0.40
23:BB:483:A:H2'	23:BB:484:C:O4'	2.20	0.40
23:DB:2852:G:H2'	23:DB:2853:C:C6	2.56	0.40
18:AB:138:ARG:O	18:AB:139:GLU:C	2.59	0.40
43:DO:26:LEU:HG	43:DO:26:LEU:O	2.22	0.40
3:CD:70:GLN:HB2	3:CD:70:GLN:HE21	1.75	0.40
3:AD:198:LEU:HA	3:AD:198:LEU:HD23	1.92	0.40
23:BB:2138:G:P	23:BB:2138:G:H8	2.44	0.40
45:DS:74:ILE:O	45:DS:75:PHE:HB3	2.21	0.40
1:CA:875:U:H1'	7:CH:15:ASN:OD1	2.21	0.40
1:AA:1527:U:OP2	19:AU:38:GLU:CD	2.60	0.40
52:BW:81:ILE:O	52:BW:81:ILE:HG13	2.20	0.40
52:DW:81:ILE:O	52:DW:81:ILE:HG13	2.21	0.40
42:DN:49:GLU:N	42:DN:50:PRO:CD	2.85	0.40
1:CA:1237:C:H5''	1:CA:1238:A:O4'	2.21	0.40
25:DC:90:ILE:HG22	25:DC:91:ALA:N	2.36	0.40
41:BJ:123:LYS:O	41:BJ:124:VAL:HG13	2.22	0.40
1:CA:122:G:O2'	1:CA:123:U:H5'	2.21	0.40
14:AQ:67:SER:HB3	14:AQ:70:LYS:HB3	2.03	0.40
40:DH:77:THR:HG23	40:DH:143:ILE:CG2	2.49	0.40
42:BN:29:VAL:HG13	42:BN:83:LEU:HD11	2.03	0.40
8:AI:6:TYR:CE2	8:AI:17:ARG:HA	2.55	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:25:GLY:O	8:AI:27:ILE:HG13	2.22	0.40
8:AI:71:ILE:CD1	8:AI:71:ILE:H	2.28	0.40
24:BI:75:ALA:HB3	24:BI:131:THR:HG21	2.03	0.40
48:BG:163:TYR:O	48:BG:166:GLU:HB3	2.22	0.40
48:DG:140:ILE:HA	48:DG:143:VAL:CG2	2.47	0.40
48:BG:121:THR:HG22	48:BG:122:ALA:N	2.36	0.40
3:AD:53:GLN:O	3:AD:202:LEU:HD22	2.22	0.40
26:BD:114:LYS:HB2	26:BD:116:LYS:CE	2.51	0.40
50:DT:69:ARG:HB2	50:DT:75:GLY:N	2.34	0.40
27:DK:89:ASN:C	27:DK:89:ASN:HD22	2.25	0.40
46:DU:21:ARG:HG3	46:DU:21:ARG:HH11	1.85	0.40
16:AS:9:PHE:HB2	21:AN:45:LEU:HD21	2.03	0.40
18:AB:56:LEU:HB2	18:AB:183:PHE:CE2	2.54	0.40
18:CB:61:SER:HA	18:CB:223:GLY:O	2.22	0.40
41:BJ:26:GLY:O	41:BJ:27:ARG:C	2.59	0.40
47:DF:48:LEU:CD2	47:DF:48:LEU:H	2.34	0.40
23:DB:1793:C:H2'	23:DB:1794:A:C8	2.56	0.40
25:DC:208:GLY:O	25:DC:210:ALA:N	2.54	0.40
27:BK:70:ARG:CD	27:BK:76:VAL:HG22	2.51	0.40
1:AA:1066:C:O2	55:AA:1662:SCM:N10	2.52	0.40
23:BB:1277:G:H2'	23:BB:1278:C:C6	2.56	0.40
42:BN:31:HIS:C	42:BN:33:ILE:H	2.24	0.40
1:CA:135:C:C2	13:CP:1:MET:HB2	2.57	0.40
2:AC:28:PHE:HD1	21:AN:75:LYS:HE3	1.86	0.40
6:AG:45:ALA:HB3	6:AG:119:LEU:HD23	2.04	0.40
6:AG:46:LEU:HG	6:AG:57:GLU:HB3	2.03	0.40
28:BP:84:SER:OG	28:BP:85:VAL:N	2.55	0.40
18:AB:23:ASN:HD22	18:AB:24:PRO:N	2.18	0.40
26:DD:117:GLY:HA2	26:DD:164:GLN:HE22	1.85	0.40
40:DH:5:LEU:HD13	40:DH:13:GLY:CA	2.46	0.40
42:DN:96:ARG:O	42:DN:113:ILE:HA	2.21	0.40
1:CA:1101:A:O3'	1:CA:1102:A:O4'	2.40	0.40
17:CT:61:ALA:O	17:CT:67:HIS:HA	2.20	0.40
23:BB:1590:A:H2'	23:BB:1591:A:C8	2.56	0.40
1:CA:1320:C:OP2	16:CS:69:LYS:HE3	2.22	0.40
44:DQ:64:ILE:HD12	44:DQ:95:ALA:HB3	2.02	0.40
44:BQ:26:ALA:HB1	44:BQ:30:VAL:CB	2.49	0.40
23:BB:1870:C:H3'	23:BB:1871:A:C8	2.56	0.40
31:B0:38:LEU:HB3	31:B0:41:HIS:CD2	2.54	0.40
12:CM:54:THR:OG1	12:CM:55:LEU:N	2.55	0.40
45:DS:24:ILE:CG2	45:DS:71:VAL:HG11	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2240:U:O2'	23:DB:2241:A:H5'	2.21	0.40
51:BZ:32:ASN:N	51:BZ:33:LEU:HD12	2.36	0.40
23:BB:1439:A:N6	23:BB:1440:U:O2	2.47	0.40
23:DB:2732:G:O4'	23:DB:2732:G:N3	2.54	0.40
2:AC:6:PRO:CA	2:AC:9:ILE:HG22	2.47	0.40
13:CP:28:ARG:HD3	13:CP:29:ASN:H	1.81	0.40
48:DG:1:SER:O	48:DG:3:VAL:N	2.55	0.40
25:BC:249:VAL:O	25:BC:251:THR:N	2.54	0.40
25:BC:255:LYS:C	25:BC:256:THR:HG23	2.41	0.40
1:CA:1251:A:H1'	1:CA:1369:C:O2'	2.21	0.40
1:CA:954:G:H2'	1:CA:955:U:O4'	2.22	0.40
23:DB:815:C:OP2	49:DR:85:LYS:HE2	2.20	0.40
23:DB:1803:A:O3'	25:DC:256:THR:HB	2.21	0.40
23:BB:607:U:C4	23:BB:620:G:O4'	2.74	0.40
52:BW:46:ALA:HB3	52:BW:78:PHE:HB3	2.03	0.40
23:DB:451:U:OP1	29:DE:47:LYS:HE2	2.22	0.40
29:DE:47:LYS:HB3	29:DE:51:GLU:HB2	2.03	0.40
1:CA:503:C:O2'	1:CA:504:C:H5'	2.21	0.40
3:CD:24:VAL:HG23	3:CD:25:ARG:H	1.87	0.40
29:DE:147:LEU:C	29:DE:148:ILE:HG12	2.42	0.40
13:AP:42:ILE:HG22	13:AP:43:ALA:N	2.36	0.40
23:DB:446:G:H5'	44:DQ:2:ARG:NH2	2.35	0.40
1:CA:1462:C:H2'	1:CA:1463:U:C6	2.57	0.40
1:AA:441:A:N6	1:AA:493:A:N6	2.68	0.40
1:AA:6:G:O2'	1:AA:7:A:H8	2.04	0.40
31:D0:12:ARG:HD2	31:D0:16:ARG:NH1	2.36	0.40
23:BB:1827:U:O2'	23:BB:1828:G:H5'	2.21	0.40
23:BB:2041:U:H2'	23:BB:2042:A:H8	1.83	0.40
23:BB:2358:A:H2'	23:BB:2359:C:C6	2.57	0.40
23:DB:2803:G:H2'	23:DB:2804:U:C6	2.55	0.40
23:DB:2805:C:O2'	23:DB:2806:C:H5'	2.21	0.40
52:BW:73:PRO:C	52:BW:75:ASN:N	2.75	0.40
1:AA:1254:A:H2'	1:AA:1255:G:H8	1.86	0.40
23:DB:2196:C:O2'	23:DB:2197:U:H5'	2.21	0.40
23:BB:2341:G:H2'	23:BB:2342:C:H6	1.86	0.40
11:CL:52:CYS:SG	11:CL:66:ILE:HD11	2.61	0.40
29:DE:4:VAL:C	29:DE:6:LYS:N	2.74	0.40
23:BB:2007:U:O2'	23:BB:2008:C:H5'	2.21	0.40
23:DB:766:U:H2'	23:DB:767:U:H6	1.87	0.40
22:DA:35:C:H5'	22:DA:35:C:O2	2.20	0.40
7:CH:29:SER:H	7:CH:32:LYS:HB2	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DP:62:LYS:HE3	28:DP:64:SER:OG	2.22	0.40
1:CA:824:G:C6	1:CA:877:G:C6	3.09	0.40
23:BB:1269:A:H2'	23:BB:1270:C:C6	2.57	0.40
16:CS:27:LYS:CG	16:CS:28:LYS:HD2	2.51	0.40
23:BB:1076:C:O3'	24:BI:94:LYS:HE3	2.21	0.40
34:B3:6:VAL:HG23	34:B3:60:CYS:O	2.21	0.40
1:CA:966:G:H8	1:CA:966:G:O5'	2.03	0.40
1:CA:957:U:H4'	16:CS:78:THR:O	2.20	0.40
6:CG:5:VAL:HG12	6:CG:6:ILE:N	2.36	0.40
23:DB:2776:A:H4'	23:DB:2777:G:C5'	2.51	0.40
14:AQ:3:LYS:HA	14:AQ:3:LYS:HE2	2.03	0.40
23:BB:312:G:H2'	23:BB:313:G:C8	2.57	0.40
21:CN:42:ASN:C	21:CN:42:ASN:HD22	2.25	0.40
48:BG:108:PHE:C	48:BG:110:HIS:H	2.24	0.40
26:DD:60:VAL:HA	26:DD:64:GLU:OE2	2.22	0.40
1:CA:644:U:H4'	7:CH:83:ARG:NH2	2.37	0.40
3:AD:94:GLU:OE1	3:AD:103:ARG:NE	2.54	0.40
9:CJ:84:VAL:HG12	9:CJ:84:VAL:O	2.21	0.40
24:BI:35:MET:C	24:BI:35:MET:SD	2.99	0.40
49:BR:86:GLN:HE21	49:BR:86:GLN:HB2	1.62	0.40
1:AA:900:A:H2'	1:AA:901:A:C8	2.56	0.40
1:CA:1130:A:H2'	1:CA:1131:G:H8	1.85	0.40
8:CI:51:LEU:HD13	8:CI:56:MET:CE	2.52	0.40
1:AA:1334:G:H2'	1:AA:1335:U:H5'	2.03	0.40
23:BB:547:A:O3'	23:BB:549:G:N2	2.54	0.40
50:BT:25:GLU:C	50:BT:27:SER:N	2.75	0.40
1:CA:1376:U:H2'	1:CA:1377:A:C8	2.56	0.40
35:DV:9:ARG:HH11	35:DV:20:LEU:CD1	2.34	0.40
29:BE:138:LEU:HB3	29:BE:143:LEU:O	2.22	0.40
14:AQ:18:LYS:O	14:AQ:47:ASP:N	2.55	0.40
23:BB:2269:G:O3'	52:BW:18:LYS:HG2	2.22	0.40
23:BB:30:G:H2'	23:BB:31:C:H6	1.85	0.40
37:DL:141:LYS:HZ3	37:DL:143:GLU:HA	1.86	0.40
42:DN:29:VAL:HG13	42:DN:83:LEU:HD11	2.03	0.40
24:BI:116:MET:HE1	24:BI:124:MET:O	2.21	0.40
23:DB:1732:C:O5'	23:DB:1732:C:H6	2.05	0.40
48:BG:89:VAL:CG2	48:BG:162:ARG:HD3	2.52	0.40
6:CG:68:VAL:HG11	6:CG:103:ILE:HG13	2.02	0.40
26:BD:116:LYS:HE2	42:BN:1:MET:HE3	2.04	0.40
35:DV:51:GLN:HB2	35:DV:51:GLN:HE21	1.67	0.40
40:DH:118:PRO:C	40:DH:119:ASN:HD22	2.24	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DH:97:ARG:H	40:DH:97:ARG:HD2	1.87	0.40
23:BB:673:C:C5'	29:BE:76:PRO:HD2	2.52	0.40
33:D1:9:LYS:HE2	33:D1:50:GLU:CG	2.52	0.40
12:AM:75:SER:O	12:AM:78:ARG:HB3	2.21	0.40
1:AA:955:U:H2'	1:AA:956:U:O4'	2.21	0.40
18:AB:95:TRP:CH2	18:AB:100:LEU:HB2	2.57	0.40
49:DR:58:VAL:HG22	49:DR:59:ILE:N	2.36	0.40
18:CB:221:ARG:HG3	18:CB:222:GLU:N	2.37	0.40
47:BF:105:ILE:C	47:BF:108:PRO:HD2	2.42	0.40
47:BF:104:THR:C	47:BF:108:PRO:HG2	2.42	0.40
41:BJ:26:GLY:O	41:BJ:29:ALA:N	2.55	0.40
23:BB:2052:A:O4'	26:BD:147:GLY:HA3	2.21	0.40
46:BU:94:PHE:CA	46:BU:101:THR:HA	2.42	0.40
7:CH:11:THR:CG2	7:CH:14:ARG:HH12	2.23	0.40
40:DH:21:VAL:HG21	40:DH:30:LEU:HD11	2.03	0.40
18:AB:22:TRP:CG	18:AB:23:ASN:N	2.89	0.40
40:DH:15:LEU:C	40:DH:17:ASP:N	2.74	0.40
23:BB:2073:C:H2'	23:BB:2074:U:C6	2.57	0.40
42:DN:101:GLY:O	42:DN:102:PHE:HB2	2.22	0.40
23:BB:2531:A:H5''	48:BG:156:TYR:CZ	2.57	0.40
40:DH:50:ARG:C	40:DH:52:ALA:N	2.75	0.40
9:AJ:15:HIS:HB2	9:AJ:19:ASP:OD1	2.21	0.40
16:CS:38:THR:HG22	16:CS:39:ILE:H	1.86	0.40
2:CC:22:PHE:CD2	2:CC:23:ALA:N	2.90	0.40
41:DJ:44:TYR:CD1	44:DQ:63:ARG:HD3	2.57	0.40
44:DQ:63:ARG:O	44:DQ:64:ILE:C	2.59	0.40
23:DB:547:A:C4	23:DB:548:G:H1'	2.57	0.40
11:CL:30:ARG:O	11:CL:56:LEU:HA	2.22	0.40
39:BX:37:LEU:C	39:BX:39:GLN:H	2.24	0.40
38:DM:105:MET:SD	38:DM:108:VAL:HG11	2.61	0.40
45:DS:71:VAL:O	45:DS:71:VAL:HG22	2.21	0.40
23:BB:1439:A:C5	23:BB:1552:A:N6	2.89	0.40
23:DB:2733:A:C8	23:DB:2733:A:C3'	3.05	0.40
1:CA:881:G:OP2	11:CL:8:ARG:NH2	2.55	0.40
23:BB:619:G:H3'	23:BB:620:G:H21	1.86	0.40
11:CL:113:ARG:HH21	11:CL:120:ARG:HB2	1.86	0.40
1:AA:132:C:H5''	17:AT:68:LYS:HZ2	1.83	0.40
23:BB:191:A:O2'	23:BB:192:C:H5'	2.21	0.40
23:BB:150:U:O2'	23:BB:151:C:H5'	2.22	0.40
41:BJ:121:LYS:HB2	41:BJ:121:LYS:HE3	1.81	0.40
10:CK:33:ILE:N	10:CK:42:GLY:O	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CE:80:LEU:HD13	4:CE:95:MET:HB3	2.03	0.40
23:DB:1494:A:H2'	23:DB:1495:A:H8	1.82	0.40
2:AC:57:GLU:HB2	2:AC:64:ARG:CB	2.52	0.40
51:BZ:71:LEU:HB3	51:BZ:72:ARG:H	1.71	0.40
6:AG:107:ALA:HB1	6:AG:118:ARG:O	2.21	0.40
18:CB:13:VAL:HG12	18:CB:13:VAL:O	2.20	0.40
22:DA:49:C:OP1	43:DO:101:GLY:HA3	2.21	0.40
43:BO:98:GLN:O	43:BO:100:HIS:N	2.55	0.40
1:AA:278:G:N2	1:AA:279:A:H62	2.19	0.40
23:DB:2107:G:H2'	23:DB:2108:A:H8	1.86	0.40
46:DU:64:ILE:CG1	46:DU:65:GLN:N	2.84	0.40
15:CR:22:TYR:CE2	15:CR:23:LYS:HE2	2.57	0.40
23:BB:2636:C:OP1	26:BD:81:GLU:HB2	2.21	0.40
43:BO:59:ALA:HA	43:BO:62:LEU:HB2	2.04	0.40
22:DA:87:U:O2	22:DA:89:U:OP2	2.38	0.40
23:BB:1942:C:N3	23:BB:1943:U:C4	2.89	0.40
23:BB:770:G:H1'	23:BB:1379:U:C4	2.57	0.40
29:BE:16:GLU:O	29:BE:20:GLY:HA3	2.22	0.40
25:BC:17:LYS:HB3	25:BC:18:VAL:H	1.72	0.40
29:BE:6:LYS:HB3	29:BE:7:ASP:H	1.59	0.40
23:DB:257:C:H3'	23:DB:258:G:H8	1.86	0.40
1:CA:85:U:H1'	1:CA:86:G:C5	2.56	0.40
1:CA:339:C:H5''	27:DK:98:ARG:HH22	1.86	0.40
1:AA:1160:G:H2'	1:AA:1161:C:C6	2.56	0.40
24:DI:63:ASP:O	24:DI:63:ASP:OD1	2.40	0.40
23:BB:2630:G:H2'	23:BB:2631:G:C8	2.56	0.40
46:DU:27:VAL:CG2	46:DU:33:VAL:HG12	2.51	0.40
20:CO:19:ALA:C	20:CO:21:ASP:H	2.25	0.40
23:DB:1102:C:O2'	23:DB:1103:A:H5'	2.21	0.40
35:BV:10:LYS:HG2	35:BV:11:GLU:HG3	2.03	0.40
38:DM:89:VAL:O	38:DM:89:VAL:HG23	2.21	0.40
23:DB:2485:G:H5''	38:DM:125:PRO:HG3	2.03	0.40
23:DB:1223:G:P	49:DR:68:ARG:HH12	2.44	0.40
25:DC:270:ARG:HH11	25:DC:270:ARG:HG2	1.86	0.40
23:BB:1168:G:H2'	23:BB:1169:A:O4'	2.21	0.40
23:BB:623:C:H2'	23:BB:624:C:H6	1.86	0.40
23:DB:2363:G:O2'	23:DB:2364:C:H5'	2.21	0.40
29:DE:132:LYS:O	29:DE:135:ALA:HB3	2.21	0.40
23:BB:101:A:H2'	23:BB:102:U:OP2	2.21	0.40
23:BB:1573:G:H2'	23:BB:1574:C:H5'	2.03	0.40
21:AN:53:ASP:C	21:AN:55:SER:H	2.25	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BQ:18:LYS:C	44:BQ:18:LYS:HD2	2.41	0.40
25:DC:47:ARG:HG3	25:DC:47:ARG:NH1	2.37	0.40
16:AS:36:ARG:H	16:AS:36:ARG:HG2	1.70	0.40
26:DD:70:LYS:O	26:DD:70:LYS:HD3	2.21	0.40
4:AE:79:THR:OG1	4:AE:80:LEU:N	2.52	0.40
1:CA:94:G:H4'	1:CA:95:C:O5'	2.22	0.40
23:DB:1099:G:H5''	24:DI:2:LYS:CB	2.49	0.40
23:DB:1100:C:H41	24:DI:1:ALA:N	2.19	0.40
23:BB:2305:U:H6	47:BF:152:ASP:OD2	2.04	0.40
9:AJ:100:ILE:HG13	9:AJ:100:ILE:O	2.21	0.40
50:DT:29:THR:CB	50:DT:86:THR:HG22	2.52	0.40
25:BC:185:ALA:C	25:BC:187:CYS:N	2.74	0.40
20:AO:77:ARG:O	20:AO:81:LEU:HB2	2.21	0.40
5:AF:22:ILE:O	5:AF:26:THR:HG23	2.22	0.40
5:AF:64:VAL:HG23	5:AF:65:GLU:N	2.36	0.40
40:BH:72:ILE:HG12	40:BH:132:PHE:CE1	2.56	0.40
40:BH:99:ILE:CD1	40:BH:128:HIS:HD1	2.33	0.40
6:CG:12:LEU:HD13	6:CG:13:PRO:N	2.37	0.40
52:DW:18:LYS:HE3	52:DW:36:ILE:HG12	2.03	0.40
52:BW:16:GLU:HB2	52:BW:17:ALA:H	1.71	0.40
23:BB:585:G:H2'	23:BB:1251:C:H42	1.86	0.40
42:BN:78:LYS:CG	42:BN:83:LEU:HG	2.48	0.40
43:BO:34:HIS:ND1	43:BO:53:THR:OG1	2.52	0.40
8:AI:34:LEU:C	8:AI:36:GLN:H	2.24	0.40
8:AI:38:PHE:CZ	8:AI:75:ALA:HB2	2.57	0.40
42:DN:72:ASP:OD1	42:DN:75:ILE:HG23	2.22	0.40
23:DB:1729:U:C5	23:DB:1731:G:N2	2.81	0.40
2:AC:165:GLU:HA	2:AC:165:GLU:OE2	2.22	0.40
25:BC:150:GLY:O	25:BC:151:GLY:O	2.40	0.40
23:BB:1818:U:N3	25:BC:152:GLN:HB3	2.37	0.40
23:BB:2742:G:P	32:B4:36:ARG:HH11	2.44	0.40
50:DT:76:ARG:HG2	50:DT:77:ARG:N	2.37	0.40
15:CR:39:VAL:HA	15:CR:40:PRO:HD3	1.97	0.40
49:BR:33:VAL:O	49:BR:60:LYS:HA	2.21	0.40
22:DA:6:G:O2'	22:DA:7:G:H5'	2.21	0.40
47:DF:37:MET:SD	47:DF:56:LEU:HD23	2.62	0.40
46:DU:72:PHE:HE1	46:DU:77:GLY:HA2	1.86	0.40
47:BF:126:ASN:HD22	47:BF:156:THR:CA	2.32	0.40
1:AA:1084:G:H2'	1:AA:1085:U:C6	2.57	0.40
47:DF:126:ASN:HD22	47:DF:156:THR:CA	2.33	0.40
23:DB:2052:A:O4'	26:DD:147:GLY:HA3	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:149:ASN:CG	26:DD:150:GLN:H	2.25	0.40
1:CA:14:U:O2	1:CA:17:U:H5	2.03	0.40
23:BB:2729:G:H1'	26:BD:192:ALA:HB3	2.04	0.40
8:AI:118:ARG:O	8:AI:119:LYS:HB2	2.21	0.40
13:CP:6:LEU:HD12	13:CP:6:LEU:N	2.35	0.40
37:DL:98:ALA:O	37:DL:99:ASN:C	2.59	0.40
23:DB:124:G:N2	23:DB:126:A:H4'	2.36	0.40
1:CA:938:A:N6	1:CA:939:G:C6	2.90	0.40
41:DJ:83:GLY:O	41:DJ:84:ILE:C	2.60	0.40
45:BS:81:SER:HB3	45:BS:99:ARG:HB3	2.03	0.40
12:AM:89:ARG:NH1	12:AM:94:LEU:HB3	2.36	0.40
47:BF:3:LEU:HG	47:BF:99:PHE:HD2	1.86	0.40
18:AB:60:ALA:CB	18:AB:220:VAL:HA	2.51	0.40
1:CA:1014:A:C5'	16:CS:13:HIS:HB3	2.52	0.40
16:CS:18:VAL:HG11	16:CS:43:MET:HE1	2.03	0.40
6:AG:70:PRO:HA	6:AG:141:HIS:CE1	2.57	0.40
11:CL:49:ARG:HH12	11:CL:88:ASP:HB2	1.86	0.40
27:DK:60:ALA:HA	27:DK:87:LEU:CD2	2.51	0.40
27:BK:102:PRO:CB	27:BK:121:GLU:HB2	2.47	0.40
39:DX:37:LEU:C	39:DX:39:GLN:H	2.24	0.40
23:DB:281:C:O2	23:DB:281:C:H2'	2.20	0.40
23:DB:2019:A:H4'	44:DQ:33:VAL:HG11	2.03	0.40
9:AJ:52:LEU:HG	9:AJ:54:SER:O	2.21	0.40
12:CM:5:GLY:O	12:CM:7:ASN:N	2.55	0.40
36:B2:31:LEU:HB3	36:B2:42:LEU:HD11	2.02	0.40
23:DB:2727:A:O2'	27:DK:70:ARG:NH2	2.54	0.40
2:CC:129:PHE:HZ	2:CC:130:ARG:NH1	2.19	0.40
17:CT:43:LYS:HD3	17:CT:43:LYS:N	2.33	0.40
23:BB:1733:G:H2'	23:BB:1734:G:O4'	2.21	0.40
23:DB:2215:C:H2'	23:DB:2216:G:H8	1.86	0.40
1:AA:951:G:O2'	1:AA:952:U:H5'	2.21	0.40
48:BG:51:PHE:HZ	48:BG:71:LEU:HG	1.86	0.40
23:DB:2415:G:O2'	23:DB:2416:C:H5'	2.22	0.40
23:BB:2065:C:C2	23:BB:2066:C:C5	3.09	0.40
1:AA:1017:U:H2'	1:AA:1018:G:C8	2.57	0.40
21:AN:23:ARG:O	21:AN:26:LEU:HD22	2.21	0.40
3:CD:18:LEU:HB3	3:CD:63:ILE:HG12	2.02	0.40
1:AA:1325:C:H2'	1:AA:1326:U:H6	1.85	0.40
29:DE:148:ILE:HG13	29:DE:167:VAL:CG2	2.50	0.40
51:BZ:51:VAL:HG12	51:BZ:52:SER:N	2.37	0.40
23:DB:346:A:O4'	23:DB:346:A:N3	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:79:C:C2	23:DB:80:G:C8	3.10	0.40
23:BB:2809:A:H2'	23:BB:2810:A:H8	1.84	0.40
1:CA:702:A:C6	23:DB:1848:A:C6	3.09	0.40
23:BB:275:C:C2'	23:BB:276:U:H5'	2.52	0.40
6:AG:92:PRO:HG2	6:AG:93:VAL:H	1.86	0.40
1:AA:811:C:H5''	1:AA:898:G:H4'	2.04	0.40
45:DS:73:LYS:O	45:DS:106:VAL:N	2.51	0.40
23:DB:1346:G:HO2'	23:DB:1347:A:H5'	1.87	0.40
1:CA:992:U:H1'	1:CA:993:G:C2	2.57	0.40
1:AA:647:C:H2'	1:AA:648:A:C8	2.56	0.40
1:AA:1242:G:O2'	1:AA:1243:C:H5'	2.21	0.40
24:BI:14:ALA:CB	24:BI:50:LYS:HA	2.50	0.40
23:DB:1252:G:N1	44:DQ:36:GLN:OE1	2.53	0.40
1:CA:1368:A:OP2	8:CI:113:LYS:HD3	2.21	0.40
10:AK:90:PRO:C	10:AK:92:ARG:N	2.75	0.40
23:DB:2295:C:OP2	43:DO:10:ARG:HG2	2.22	0.40
5:AF:11:HIS:CG	5:AF:12:PRO:HD2	2.57	0.40
1:AA:708:C:C4'	10:AK:38:GLY:HA3	2.51	0.40
1:AA:113:G:H2'	1:AA:114:U:H6	1.87	0.40
1:CA:1432:G:H1'	1:CA:1468:A:H61	1.86	0.40
5:CF:11:HIS:CG	5:CF:12:PRO:HD2	2.56	0.40
1:CA:355:C:O2'	1:CA:356:A:H5'	2.22	0.40
1:AA:1258:G:N1	1:AA:1278:G:N1	2.70	0.40
1:AA:1453:G:N3	1:AA:1453:G:H3'	2.36	0.40
23:BB:1930:G:H2'	23:BB:1968:G:O6	2.22	0.40
11:CL:28:GLN:HE21	11:CL:28:GLN:HB3	1.53	0.40
4:CE:96:GLN:HB3	4:CE:123:LEU:CD1	2.51	0.40
1:AA:704:A:C2	1:AA:705:G:H1'	2.57	0.40
1:AA:377:G:O2'	1:AA:378:G:H5'	2.22	0.40
23:BB:802:A:C5	23:BB:803:U:C4	3.10	0.40
49:BR:31:GLU:HG2	49:BR:32:THR:N	2.37	0.40
25:BC:108:GLY:C	25:BC:110:LYS:H	2.25	0.40
23:DB:335:C:O2'	23:DB:336:C:H5'	2.21	0.40
7:CH:64:TYR:CA	7:CH:70:VAL:HG23	2.52	0.40
10:CK:35:ASP:C	10:CK:37:GLN:H	2.24	0.40
36:D2:32:ALA:O	36:D2:36:ALA:HB2	2.21	0.40

There are no symmetry-related clashes.



## 5.3 Torsion angles

### 5.3.1 Protein backbone

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	AC	204/232 (88%)	130 (64%)	44 (22%)	30 (15%)	0	4
2	CC	204/232 (88%)	137 (67%)	49 (24%)	18 (9%)	1	12
3	AD	203/205 (99%)	153 (75%)	40 (20%)	10 (5%)	3	27
3	CD	203/205 (99%)	153 (75%)	40 (20%)	10 (5%)	3	27
4	AE	148/166 (89%)	116 (78%)	24 (16%)	8 (5%)	2	25
4	CE	148/166 (89%)	114 (77%)	25 (17%)	9 (6%)	2	21
5	AF	98/135 (73%)	63 (64%)	25 (26%)	10 (10%)	1	9
5	CF	98/135 (73%)	64 (65%)	24 (24%)	10 (10%)	1	9
6	AG	148/178 (83%)	110 (74%)	30 (20%)	8 (5%)	2	25
6	CG	150/178 (84%)	111 (74%)	28 (19%)	11 (7%)	1	16
7	AH	127/129 (98%)	92 (72%)	31 (24%)	4 (3%)	5	41
7	CH	127/129 (98%)	92 (72%)	31 (24%)	4 (3%)	5	41
8	AI	125/129 (97%)	80 (64%)	35 (28%)	10 (8%)	1	13
8	CI	125/129 (97%)	80 (64%)	34 (27%)	11 (9%)	1	12
9	AJ	96/103 (93%)	59 (62%)	25 (26%)	12 (12%)	0	6
9	CJ	96/103 (93%)	64 (67%)	22 (23%)	10 (10%)	1	8
10	AK	115/128 (90%)	87 (76%)	23 (20%)	5 (4%)	3	31
10	CK	115/128 (90%)	86 (75%)	24 (21%)	5 (4%)	3	31
11	AL	121/123 (98%)	69 (57%)	37 (31%)	15 (12%)	0	6
11	CL	121/123 (98%)	72 (60%)	34 (28%)	15 (12%)	0	6
12	AM	112/117 (96%)	74 (66%)	25 (22%)	13 (12%)	0	7
12	CM	111/117 (95%)	78 (70%)	21 (19%)	12 (11%)	0	8
13	AP	80/82 (98%)	53 (66%)	20 (25%)	7 (9%)	1	12
13	CP	78/82 (95%)	52 (67%)	19 (24%)	7 (9%)	1	11
14	AQ	78/83 (94%)	59 (76%)	15 (19%)	4 (5%)	2	26

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
14	CQ	79/83 (95%)	57 (72%)	18 (23%)	4 (5%)	2	26
15	AR	53/74 (72%)	40 (76%)	13 (24%)	0	100	100
15	CR	53/74 (72%)	41 (77%)	11 (21%)	1 (2%)	10	51
16	AS	77/91 (85%)	49 (64%)	24 (31%)	4 (5%)	2	25
16	CS	78/91 (86%)	57 (73%)	16 (20%)	5 (6%)	2	20
17	AT	83/86 (96%)	62 (75%)	16 (19%)	5 (6%)	2	21
17	CT	83/86 (96%)	63 (76%)	15 (18%)	5 (6%)	2	21
18	AB	216/240 (90%)	135 (62%)	56 (26%)	25 (12%)	0	7
18	CB	216/240 (90%)	145 (67%)	52 (24%)	19 (9%)	1	12
19	AU	49/70 (70%)	29 (59%)	14 (29%)	6 (12%)	0	6
19	CU	49/70 (70%)	29 (59%)	14 (29%)	6 (12%)	0	6
20	AO	86/89 (97%)	62 (72%)	18 (21%)	6 (7%)	1	18
20	CO	86/89 (97%)	60 (70%)	25 (29%)	1 (1%)	16	61
21	AN	92/100 (92%)	53 (58%)	30 (33%)	9 (10%)	1	10
21	CN	92/100 (92%)	49 (53%)	31 (34%)	12 (13%)	0	5
24	BI	139/141 (99%)	118 (85%)	17 (12%)	4 (3%)	6	42
24	DI	139/141 (99%)	115 (83%)	19 (14%)	5 (4%)	4	37
25	BC	269/272 (99%)	163 (61%)	63 (23%)	43 (16%)	0	3
25	DC	269/272 (99%)	162 (60%)	61 (23%)	46 (17%)	0	3
26	BD	207/209 (99%)	118 (57%)	57 (28%)	32 (16%)	0	3
26	DD	207/209 (99%)	118 (57%)	58 (28%)	31 (15%)	0	3
27	BK	119/123 (97%)	70 (59%)	27 (23%)	22 (18%)	0	2
27	DK	119/123 (97%)	69 (58%)	29 (24%)	21 (18%)	0	2
28	BP	112/114 (98%)	66 (59%)	29 (26%)	17 (15%)	0	3
28	DP	112/114 (98%)	66 (59%)	29 (26%)	17 (15%)	0	3
29	BE	199/201 (99%)	124 (62%)	51 (26%)	24 (12%)	0	6
29	DE	199/201 (99%)	124 (62%)	48 (24%)	27 (14%)	0	4
30	BY	56/58 (97%)	39 (70%)	12 (21%)	5 (9%)	1	11
30	DY	56/58 (97%)	40 (71%)	11 (20%)	5 (9%)	1	11
31	B0	54/56 (96%)	36 (67%)	12 (22%)	6 (11%)	0	7
31	D0	54/56 (96%)	36 (67%)	12 (22%)	6 (11%)	0	7

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
32	B4	36/38 (95%)	20 (56%)	9 (25%)	7 (19%)	0	2
32	D4	36/38 (95%)	21 (58%)	8 (22%)	7 (19%)	0	2
33	B1	48/54 (89%)	35 (73%)	9 (19%)	4 (8%)	1	13
33	D1	48/54 (89%)	35 (73%)	9 (19%)	4 (8%)	1	13
34	B3	62/64 (97%)	39 (63%)	17 (27%)	6 (10%)	1	10
34	D3	62/64 (97%)	39 (63%)	18 (29%)	5 (8%)	1	13
35	BV	92/94 (98%)	60 (65%)	22 (24%)	10 (11%)	0	8
35	DV	92/94 (98%)	59 (64%)	23 (25%)	10 (11%)	0	8
36	B2	44/46 (96%)	25 (57%)	16 (36%)	3 (7%)	1	19
36	D2	44/46 (96%)	24 (54%)	16 (36%)	4 (9%)	1	11
37	BL	141/144 (98%)	78 (55%)	44 (31%)	19 (14%)	0	4
37	DL	141/144 (98%)	78 (55%)	42 (30%)	21 (15%)	0	3
38	BM	134/136 (98%)	90 (67%)	28 (21%)	16 (12%)	0	6
38	DM	134/136 (98%)	91 (68%)	26 (19%)	17 (13%)	0	6
39	BX	61/63 (97%)	35 (57%)	22 (36%)	4 (7%)	1	19
39	DX	61/63 (97%)	35 (57%)	22 (36%)	4 (7%)	1	19
40	BH	147/149 (99%)	74 (50%)	42 (29%)	31 (21%)	0	1
40	DH	147/149 (99%)	86 (58%)	38 (26%)	23 (16%)	0	3
41	BJ	140/142 (99%)	88 (63%)	33 (24%)	19 (14%)	0	4
41	DJ	140/142 (99%)	88 (63%)	32 (23%)	20 (14%)	0	4
42	BN	118/127 (93%)	74 (63%)	31 (26%)	13 (11%)	0	8
42	DN	118/127 (93%)	74 (63%)	32 (27%)	12 (10%)	1	9
43	BO	114/117 (97%)	79 (69%)	26 (23%)	9 (8%)	1	14
43	DO	114/117 (97%)	79 (69%)	25 (22%)	10 (9%)	1	12
44	BQ	115/117 (98%)	76 (66%)	32 (28%)	7 (6%)	2	21
44	DQ	115/117 (98%)	75 (65%)	33 (29%)	7 (6%)	2	21
45	BS	108/110 (98%)	67 (62%)	28 (26%)	13 (12%)	0	6
45	DS	108/110 (98%)	67 (62%)	28 (26%)	13 (12%)	0	6
46	BU	100/103 (97%)	50 (50%)	35 (35%)	15 (15%)	0	3
46	DU	100/103 (97%)	54 (54%)	31 (31%)	15 (15%)	0	3
47	BF	176/178 (99%)	102 (58%)	48 (27%)	26 (15%)	0	4

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
47	DF	176/178 (99%)	102 (58%)	48 (27%)	26 (15%)	0	4
48	BG	174/176 (99%)	111 (64%)	40 (23%)	23 (13%)	0	5
48	DG	174/176 (99%)	110 (63%)	40 (23%)	24 (14%)	0	4
49	BR	101/103 (98%)	59 (58%)	31 (31%)	11 (11%)	0	8
49	DR	101/103 (98%)	59 (58%)	31 (31%)	11 (11%)	0	8
50	BT	91/100 (91%)	49 (54%)	25 (28%)	17 (19%)	0	2
50	DT	91/100 (91%)	47 (52%)	27 (30%)	17 (19%)	0	2
51	BZ	75/78 (96%)	50 (67%)	17 (23%)	8 (11%)	0	8
51	DZ	75/78 (96%)	48 (64%)	19 (25%)	8 (11%)	0	8
52	BW	77/84 (92%)	26 (34%)	26 (34%)	25 (32%)	0	0
52	DW	77/84 (92%)	26 (34%)	25 (32%)	26 (34%)	0	0
All	All	11241/11914 (94%)	7227 (64%)	2767 (25%)	1247 (11%)	0	7

All (1247) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AC	11	LEU
2	AC	14	VAL
2	AC	25	THR
2	AC	54	ILE
2	AC	83	VAL
2	AC	112	ALA
2	AC	153	SER
2	AC	205	GLU
3	AD	27	ILE
5	AF	92	THR
6	AG	71	THR
7	AH	66	GLN
8	AI	33	SER
8	AI	57	VAL
8	AI	119	LYS
9	AJ	57	VAL
9	AJ	61	ALA
10	AK	126	ARG
11	AL	3	VAL
11	AL	13	ARG
11	AL	24	GLU
11	AL	75	GLU

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Mol	Chain	Res	Type
12	AM	26	LYS
12	AM	49	GLU
12	AM	65	GLU
12	AM	105	ALA
13	AP	44	SER
16	AS	10	ILE
16	AS	29	PRO
18	AB	19	THR
18	AB	22	TRP
18	AB	49	PHE
18	AB	86	CYS
18	AB	94	ARG
18	AB	163	ILE
19	AU	7	GLU
19	AU	11	PHE
19	AU	22	CYS
19	AU	35	GLU
20	AO	34	ALA
21	AN	32	ASP
21	AN	50	LEU
24	BI	18	ASN
25	BC	15	VAL
25	BC	18	VAL
25	BC	53	ILE
25	BC	135	PRO
25	BC	141	HIS
25	BC	145	MET
25	BC	239	PHE
26	BD	9	VAL
26	BD	74	GLU
26	BD	107	VAL
26	BD	121	THR
26	BD	143	PRO
26	BD	169	ARG
26	BD	184	ARG
27	BK	6	THR
27	BK	31	ARG
27	BK	35	VAL
27	BK	72	PRO
27	BK	89	ASN
27	BK	120	PRO
28	BP	25	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
28	BP	50	ARG
28	BP	64	SER
28	BP	75	THR
29	BE	7	ASP
29	BE	45	ALA
29	BE	60	TRP
29	BE	69	ARG
29	BE	79	ARG
31	B0	42	ILE
35	BV	25	LYS
35	BV	75	GLN
36	B2	44	VAL
37	BL	89	VAL
37	BL	94	THR
37	BL	100	ILE
37	BL	116	VAL
37	BL	143	GLU
38	BM	36	VAL
38	BM	69	PRO
39	BX	2	LYS
40	BH	3	VAL
40	BH	31	VAL
40	BH	32	PRO
40	BH	33	GLN
40	BH	101	ASP
40	BH	125	THR
40	BH	139	PHE
40	BH	144	VAL
41	BJ	44	TYR
41	BJ	45	THR
41	BJ	73	VAL
41	BJ	124	VAL
42	BN	11	ASN
45	BS	3	THR
45	BS	27	LYS
46	BU	6	ARG
46	BU	18	LYS
46	BU	50	ALA
46	BU	85	ARG
47	BF	9	ASP
47	BF	32	LYS
47	BF	77	LYS

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Mol	Chain	Res	Type
47	BF	92	GLY
47	BF	112	ASP
47	BF	138	PRO
47	BF	148	VAL
48	BG	11	PRO
48	BG	85	LYS
48	BG	94	ARG
49	BR	49	ILE
50	BT	11	LEU
50	BT	28	ASN
50	BT	39	THR
50	BT	58	VAL
51	BZ	33	LEU
51	BZ	70	GLU
51	BZ	77	LYS
52	BW	9	THR
52	BW	14	ASP
52	BW	16	GLU
52	BW	36	ILE
52	BW	50	VAL
52	BW	62	ALA
52	BW	70	VAL
3	CD	27	ILE
5	CF	92	THR
7	CH	66	GLN
10	CK	126	ARG
11	CL	3	VAL
11	CL	13	ARG
11	CL	24	GLU
11	CL	75	GLU
13	CP	44	SER
19	CU	7	GLU
19	CU	11	PHE
19	CU	22	CYS
19	CU	35	GLU
2	CC	25	THR
2	CC	54	ILE
2	CC	83	VAL
2	CC	100	ILE
6	CG	3	ARG
8	CI	8	THR
9	CJ	37	ARG

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Mol	Chain	Res	Type
9	CJ	57	VAL
12	CM	6	ILE
12	CM	47	LEU
12	CM	56	ARG
21	CN	27	LYS
21	CN	29	ILE
21	CN	50	LEU
21	CN	61	ASN
21	CN	75	LYS
16	CS	4	LEU
18	CB	15	PHE
18	CB	22	TRP
18	CB	94	ARG
18	CB	163	ILE
24	DI	5	GLN
24	DI	18	ASN
25	DC	15	VAL
25	DC	18	VAL
25	DC	53	ILE
25	DC	135	PRO
25	DC	141	HIS
25	DC	145	MET
26	DD	9	VAL
26	DD	74	GLU
26	DD	107	VAL
26	DD	121	THR
26	DD	143	PRO
26	DD	169	ARG
26	DD	184	ARG
27	DK	6	THR
27	DK	31	ARG
27	DK	35	VAL
27	DK	72	PRO
27	DK	89	ASN
27	DK	120	PRO
28	DP	25	VAL
28	DP	50	ARG
28	DP	64	SER
28	DP	75	THR
29	DE	7	ASP
29	DE	45	ALA
29	DE	60	TRP

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
29	DE	69	ARG
29	DE	79	ARG
31	D0	42	ILE
34	D3	31	ILE
35	DV	75	GLN
36	D2	44	VAL
37	DL	89	VAL
37	DL	94	THR
37	DL	100	ILE
37	DL	116	VAL
38	DM	36	VAL
38	DM	69	PRO
39	DX	2	LYS
40	DH	3	VAL
40	DH	31	VAL
40	DH	32	PRO
40	DH	33	GLN
40	DH	110	VAL
40	DH	113	SER
40	DH	121	VAL
41	DJ	44	TYR
41	DJ	45	THR
41	DJ	73	VAL
41	DJ	124	VAL
42	DN	11	ASN
45	DS	3	THR
45	DS	27	LYS
46	DU	6	ARG
46	DU	18	LYS
46	DU	50	ALA
46	DU	85	ARG
47	DF	9	ASP
47	DF	32	LYS
47	DF	77	LYS
47	DF	92	GLY
47	DF	112	ASP
47	DF	138	PRO
47	DF	148	VAL
48	DG	11	PRO
48	DG	85	LYS
48	DG	94	ARG
49	DR	49	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
50	DT	11	LEU
50	DT	28	ASN
50	DT	39	THR
50	DT	58	VAL
51	DZ	33	LEU
51	DZ	70	GLU
51	DZ	77	LYS
52	DW	9	THR
52	DW	14	ASP
52	DW	16	GLU
52	DW	36	ILE
52	DW	50	VAL
52	DW	62	ALA
52	DW	70	VAL
2	AC	3	LYS
2	AC	17	TRP
2	AC	47	ALA
2	AC	65	VAL
2	AC	168	ARG
2	AC	180	ASP
3	AD	24	VAL
3	AD	25	ARG
3	AD	175	GLY
3	AD	191	SER
3	AD	192	ALA
4	AE	20	VAL
4	AE	71	ILE
4	AE	108	GLY
5	AF	62	MET
5	AF	65	GLU
5	AF	85	ILE
5	AF	89	VAL
5	AF	98	GLU
6	AG	15	PRO
6	AG	23	ALA
8	AI	34	LEU
8	AI	106	ASP
9	AJ	34	ALA
9	AJ	36	VAL
9	AJ	74	VAL
9	AJ	77	VAL
10	AK	14	GLN

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Mol	Chain	Res	Type
10	AK	88	PRO
11	AL	14	LYS
11	AL	17	LYS
11	AL	23	LEU
11	AL	117	GLY
11	AL	122	LYS
12	AM	3	ILE
12	AM	6	ILE
12	AM	7	ASN
12	AM	22	TYR
12	AM	76	ILE
13	AP	28	ARG
13	AP	52	LEU
16	AS	63	ASP
18	AB	188	THR
18	AB	205	ALA
19	AU	34	ARG
21	AN	2	LYS
21	AN	61	ASN
21	AN	71	GLY
24	BI	14	ALA
24	BI	23	VAL
24	BI	64	ARG
25	BC	4	LYS
25	BC	17	LYS
25	BC	35	LYS
25	BC	36	ASN
25	BC	77	VAL
25	BC	93	VAL
25	BC	123	ILE
25	BC	151	GLY
25	BC	190	THR
25	BC	215	VAL
25	BC	250	GLN
25	BC	255	LYS
26	BD	14	ILE
26	BD	24	VAL
26	BD	26	VAL
26	BD	31	ALA
26	BD	52	THR
26	BD	93	GLY
26	BD	112	THR

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Mol	Chain	Res	Type
26	BD	122	VAL
26	BD	136	ASN
26	BD	170	VAL
26	BD	172	VAL
26	BD	183	GLU
28	BP	4	ILE
28	BP	32	VAL
28	BP	36	LYS
28	BP	86	LYS
28	BP	100	ARG
29	BE	70	SER
29	BE	73	ILE
29	BE	153	LEU
29	BE	167	VAL
30	BY	30	ARG
30	BY	33	HIS
31	B0	48	TYR
32	B4	7	VAL
32	B4	16	ILE
32	B4	34	LYS
34	B3	29	ARG
34	B3	31	ILE
34	B3	58	ILE
35	BV	12	GLN
37	BL	19	LEU
37	BL	51	GLU
37	BL	101	ILE
37	BL	111	ILE
37	BL	117	THR
38	BM	20	LEU
38	BM	27	SER
38	BM	30	SER
38	BM	59	ARG
38	BM	79	ALA
38	BM	83	GLY
38	BM	107	GLY
40	BH	12	LEU
40	BH	15	LEU
40	BH	21	VAL
40	BH	28	ASN
40	BH	41	LYS
40	BH	77	THR

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Mol	Chain	Res	Type
40	BH	83	LYS
40	BH	110	VAL
40	BH	127	GLU
40	BH	128	HIS
40	BH	137	GLU
41	BJ	4	PHE
41	BJ	5	THR
41	BJ	26	GLY
41	BJ	41	LYS
41	BJ	64	VAL
41	BJ	65	THR
41	BJ	81	ILE
41	BJ	129	GLU
42	BN	93	GLY
42	BN	100	CYS
42	BN	101	GLY
42	BN	112	TYR
43	BO	8	ILE
43	BO	99	TYR
44	BQ	10	ARG
44	BQ	87	VAL
44	BQ	89	ILE
45	BS	65	ASP
45	BS	71	VAL
45	BS	96	ILE
46	BU	2	ALA
46	BU	12	VAL
46	BU	54	PRO
46	BU	82	VAL
47	BF	11	VAL
47	BF	45	ASP
47	BF	87	LYS
47	BF	106	ALA
47	BF	135	ILE
47	BF	140	ILE
47	BF	145	VAL
48	BG	9	VAL
48	BG	38	ASP
48	BG	84	LYS
48	BG	96	ALA
48	BG	117	PRO
48	BG	118	ALA

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
48	BG	152	ARG
49	BR	7	SER
49	BR	24	LYS
50	BT	9	LYS
50	BT	16	VAL
50	BT	18	GLU
50	BT	19	LYS
51	BZ	31	PRO
51	BZ	35	SER
51	BZ	51	VAL
51	BZ	52	SER
51	BZ	71	LEU
52	BW	13	ARG
52	BW	30	VAL
52	BW	32	ALA
52	BW	40	ARG
52	BW	51	GLY
3	CD	24	VAL
3	CD	25	ARG
3	CD	175	GLY
3	CD	191	SER
3	CD	192	ALA
4	CE	20	VAL
4	CE	71	ILE
4	CE	157	GLY
5	CF	62	MET
5	CF	65	GLU
5	CF	85	ILE
5	CF	89	VAL
5	CF	98	GLU
10	CK	88	PRO
11	CL	14	LYS
11	CL	23	LEU
11	CL	117	GLY
11	CL	122	LYS
13	CP	30	GLY
13	CP	52	LEU
14	CQ	82	VAL
19	CU	34	ARG
2	CC	18	ASN
2	CC	166	TRP
2	CC	205	GLU

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Mol	Chain	Res	Type
6	CG	17	PHE
6	CG	71	THR
6	CG	130	LYS
9	CJ	36	VAL
9	CJ	62	ARG
9	CJ	74	VAL
12	CM	14	ALA
12	CM	104	ASN
12	CM	105	ALA
12	CM	111	PRO
21	CN	52	ARG
21	CN	74	ARG
18	CB	9	LEU
18	CB	18	GLN
18	CB	84	LEU
18	CB	97	GLY
18	CB	127	LYS
25	DC	4	LYS
25	DC	17	LYS
25	DC	35	LYS
25	DC	36	ASN
25	DC	59	GLN
25	DC	77	VAL
25	DC	123	ILE
25	DC	151	GLY
25	DC	190	THR
25	DC	215	VAL
25	DC	239	PHE
25	DC	250	GLN
25	DC	255	LYS
26	DD	14	ILE
26	DD	24	VAL
26	DD	26	VAL
26	DD	31	ALA
26	DD	52	THR
26	DD	93	GLY
26	DD	109	VAL
26	DD	112	THR
26	DD	122	VAL
26	DD	136	ASN
26	DD	170	VAL
26	DD	172	VAL

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Mol	Chain	Res	Type
26	DD	183	GLU
28	DP	4	ILE
28	DP	32	VAL
28	DP	36	LYS
28	DP	86	LYS
28	DP	100	ARG
29	DE	70	SER
29	DE	73	ILE
29	DE	86	ALA
29	DE	153	LEU
29	DE	167	VAL
30	DY	30	ARG
30	DY	33	HIS
31	D0	23	ALA
31	D0	48	TYR
32	D4	7	VAL
32	D4	16	ILE
32	D4	34	LYS
34	D3	29	ARG
34	D3	58	ILE
35	DV	12	GLN
35	DV	25	LYS
36	D2	5	PHE
37	DL	19	LEU
37	DL	51	GLU
37	DL	81	ASP
37	DL	101	ILE
37	DL	111	ILE
37	DL	138	ALA
37	DL	143	GLU
38	DM	20	LEU
38	DM	27	SER
38	DM	30	SER
38	DM	59	ARG
38	DM	79	ALA
38	DM	83	GLY
38	DM	107	GLY
40	DH	12	LEU
40	DH	15	LEU
40	DH	21	VAL
40	DH	28	ASN
40	DH	86	ASP

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Mol	Chain	Res	Type
40	DH	136	SER
40	DH	148	ALA
41	DJ	5	THR
41	DJ	26	GLY
41	DJ	41	LYS
41	DJ	43	GLU
41	DJ	64	VAL
41	DJ	65	THR
41	DJ	81	ILE
41	DJ	129	GLU
42	DN	93	GLY
42	DN	100	CYS
42	DN	101	GLY
42	DN	112	TYR
43	DO	8	ILE
43	DO	99	TYR
44	DQ	10	ARG
44	DQ	87	VAL
44	DQ	89	ILE
45	DS	65	ASP
45	DS	71	VAL
45	DS	96	ILE
46	DU	2	ALA
46	DU	5	ARG
46	DU	12	VAL
46	DU	54	PRO
46	DU	82	VAL
47	DF	11	VAL
47	DF	45	ASP
47	DF	87	LYS
47	DF	106	ALA
47	DF	135	ILE
47	DF	140	ILE
47	DF	145	VAL
48	DG	9	VAL
48	DG	38	ASP
48	DG	84	LYS
48	DG	96	ALA
48	DG	117	PRO
48	DG	118	ALA
48	DG	152	ARG
49	DR	7	SER

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Mol	Chain	Res	Type
49	DR	24	LYS
50	DT	9	LYS
50	DT	16	VAL
50	DT	18	GLU
50	DT	19	LYS
51	DZ	31	PRO
51	DZ	35	SER
51	DZ	51	VAL
51	DZ	52	SER
51	DZ	71	LEU
52	DW	13	ARG
52	DW	29	SER
52	DW	30	VAL
52	DW	32	ALA
52	DW	40	ARG
52	DW	51	GLY
2	AC	60	ALA
2	AC	67	ILE
2	AC	167	TYR
2	AC	192	TYR
4	AE	157	GLY
5	AF	54	LEU
5	AF	69	GLU
6	AG	31	VAL
7	AH	82	LEU
8	AI	8	THR
8	AI	24	ASN
8	AI	55	ASP
9	AJ	75	ASP
11	AL	72	ASN
11	AL	88	ASP
12	AM	104	ASN
12	AM	109	LYS
13	AP	30	GLY
14	AQ	28	VAL
16	AS	7	GLY
17	AT	46	ALA
18	AB	14	HIS
18	AB	15	PHE
18	AB	18	GLN
18	AB	70	GLY
18	AB	99	MET

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Mol	Chain	Res	Type
18	AB	104	LYS
18	AB	114	LYS
18	AB	125	PHE
18	AB	204	ASP
19	AU	9	GLU
21	AN	34	ASN
21	AN	53	ASP
25	BC	37	SER
25	BC	52	HIS
25	BC	59	GLN
25	BC	68	ARG
25	BC	94	LEU
25	BC	110	LYS
25	BC	120	ASP
25	BC	121	ALA
25	BC	140	VAL
25	BC	149	LYS
25	BC	150	GLY
25	BC	205	GLY
25	BC	236	GLY
26	BD	75	ALA
26	BD	109	VAL
26	BD	182	ALA
27	BK	14	SER
27	BK	46	ALA
27	BK	111	LYS
27	BK	112	PHE
28	BP	5	LYS
28	BP	37	LYS
28	BP	38	ARG
29	BE	42	GLY
29	BE	43	THR
29	BE	86	ALA
29	BE	183	PHE
30	BY	2	LYS
30	BY	4	ILE
31	B0	23	ALA
31	B0	54	ILE
32	B4	4	ARG
32	B4	8	LYS
32	B4	9	LYS
33	B1	50	GLU

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Mol	Chain	Res	Type
33	B1	51	ALA
35	BV	66	ASP
36	B2	5	PHE
36	B2	45	SER
37	BL	81	ASP
37	BL	138	ALA
38	BM	72	PRO
38	BM	84	LYS
38	BM	134	THR
39	BX	9	LYS
39	BX	36	GLN
40	BH	7	ASP
40	BH	10	ALA
40	BH	99	ILE
40	BH	102	ALA
40	BH	148	ALA
41	BJ	43	GLU
41	BJ	111	LYS
42	BN	10	LEU
42	BN	56	LYS
43	BO	5	SER
43	BO	60	GLU
43	BO	68	LYS
43	BO	79	ALA
44	BQ	86	SER
44	BQ	91	ARG
45	BS	13	SER
45	BS	18	ARG
45	BS	25	ARG
46	BU	5	ARG
46	BU	96	LYS
47	BF	12	VAL
47	BF	42	ALA
47	BF	69	ALA
47	BF	78	ILE
47	BF	80	GLN
47	BF	136	ILE
48	BG	2	ARG
48	BG	61	TRP
48	BG	100	ASN
48	BG	111	PRO
48	BG	151	ARG

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Mol	Chain	Res	Type
49	BR	3	ALA
50	BT	86	THR
52	BW	17	ALA
52	BW	23	LYS
52	BW	29	SER
52	BW	34	SER
52	BW	53	GLY
52	BW	61	LYS
4	CE	108	GLY
5	CF	54	LEU
5	CF	69	GLU
7	CH	82	LEU
10	CK	14	GLN
10	CK	124	LYS
11	CL	17	LYS
11	CL	70	GLY
11	CL	72	ASN
11	CL	88	ASP
13	CP	28	ARG
14	CQ	28	VAL
17	CT	46	ALA
17	CT	67	HIS
19	CU	9	GLU
2	CC	3	LYS
2	CC	180	ASP
6	CG	129	ASN
8	CI	57	VAL
8	CI	117	LEU
8	CI	127	SER
9	CJ	58	ASN
12	CM	46	GLU
21	CN	32	ASP
21	CN	34	ASN
16	CS	27	LYS
16	CS	65	MET
18	CB	141	GLU
18	CB	205	ALA
24	DI	23	VAL
25	DC	37	SER
25	DC	52	HIS
25	DC	68	ARG
25	DC	93	VAL

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Mol	Chain	Res	Type
25	DC	94	LEU
25	DC	110	LYS
25	DC	120	ASP
25	DC	121	ALA
25	DC	140	VAL
25	DC	149	LYS
25	DC	150	GLY
25	DC	205	GLY
26	DD	75	ALA
26	DD	182	ALA
27	DK	14	SER
27	DK	18	ARG
27	DK	46	ALA
27	DK	73	ASP
27	DK	111	LYS
27	DK	112	PHE
27	DK	117	SER
28	DP	37	LYS
28	DP	38	ARG
28	DP	72	VAL
29	DE	43	THR
29	DE	49	ARG
29	DE	183	PHE
30	DY	2	LYS
30	DY	4	ILE
31	D0	54	ILE
32	D4	4	ARG
32	D4	8	LYS
33	D1	50	GLU
33	D1	51	ALA
35	DV	66	ASP
36	D2	45	SER
37	DL	3	LEU
37	DL	41	ARG
37	DL	117	THR
38	DM	56	ALA
38	DM	72	PRO
38	DM	84	LYS
38	DM	134	THR
39	DX	9	LYS
40	DH	7	ASP
40	DH	10	ALA

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Mol	Chain	Res	Type
40	DH	29	PHE
40	DH	58	LEU
40	DH	114	GLU
40	DH	135	HIS
41	DJ	4	PHE
42	DN	8	ARG
42	DN	10	LEU
42	DN	56	LYS
43	DO	5	SER
43	DO	60	GLU
43	DO	68	LYS
43	DO	79	ALA
44	DQ	86	SER
44	DQ	91	ARG
45	DS	18	ARG
45	DS	25	ARG
46	DU	96	LYS
47	DF	12	VAL
47	DF	42	ALA
47	DF	69	ALA
47	DF	78	ILE
47	DF	80	GLN
47	DF	136	ILE
48	DG	2	ARG
48	DG	61	TRP
48	DG	100	ASN
48	DG	111	PRO
48	DG	164	ALA
49	DR	3	ALA
50	DT	38	ALA
50	DT	86	THR
52	DW	17	ALA
52	DW	23	LYS
52	DW	34	SER
52	DW	53	GLY
52	DW	61	LYS
52	DW	78	PHE
2	AC	19	SER
2	AC	166	TRP
2	AC	174	LEU
3	AD	3	TYR
3	AD	107	GLY

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Mol	Chain	Res	Type
4	AE	110	MET
4	AE	146	MET
8	AI	42	THR
9	AJ	81	GLU
10	AK	124	LYS
11	AL	41	PRO
11	AL	70	GLY
11	AL	77	SER
11	AL	99	GLY
12	AM	70	ARG
13	AP	49	GLY
14	AQ	35	LYS
17	AT	67	HIS
17	AT	84	LYS
18	AB	11	ALA
18	AB	54	ALA
18	AB	202	ASN
18	AB	218	ALA
20	AO	74	ASP
20	AO	76	ALA
21	AN	31	SER
25	BC	3	VAL
25	BC	70	LYS
25	BC	196	ASN
26	BD	57	ALA
26	BD	159	LYS
26	BD	162	ALA
26	BD	178	VAL
27	BK	16	ALA
27	BK	17	ARG
27	BK	18	ARG
27	BK	110	GLU
27	BK	117	SER
28	BP	72	VAL
28	BP	73	PHE
28	BP	104	GLY
28	BP	105	LYS
29	BE	5	LEU
29	BE	12	LEU
29	BE	27	LEU
29	BE	49	ARG
29	BE	81	GLY

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Mol	Chain	Res	Type
31	B0	51	ARG
33	B1	36	LYS
37	BL	41	ARG
37	BL	65	GLY
37	BL	66	PHE
37	BL	127	VAL
38	BM	56	ALA
39	BX	37	LEU
40	BH	29	PHE
40	BH	136	SER
41	BJ	36	LEU
42	BN	8	ARG
42	BN	98	LEU
43	BO	89	ASP
45	BS	40	ASN
46	BU	49	PRO
46	BU	92	VAL
47	BF	28	PRO
47	BF	70	ARG
48	BG	89	VAL
48	BG	112	VAL
48	BG	164	ALA
49	BR	47	VAL
49	BR	52	PRO
49	BR	70	GLU
49	BR	98	ILE
50	BT	29	THR
50	BT	30	ILE
50	BT	38	ALA
50	BT	88	LYS
50	BT	91	GLN
52	BW	10	ARG
52	BW	11	ASN
52	BW	78	PHE
3	CD	3	TYR
3	CD	26	ALA
3	CD	107	GLY
4	CE	110	MET
11	CL	41	PRO
11	CL	99	GLY
13	CP	42	ILE
13	CP	49	GLY

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Mol	Chain	Res	Type
14	CQ	35	LYS
17	CT	65	LEU
17	CT	84	LYS
2	CC	19	SER
2	CC	21	TRP
2	CC	94	ALA
2	CC	145	ALA
6	CG	66	GLU
8	CI	67	LYS
9	CJ	56	HIS
9	CJ	75	ASP
12	CM	7	ASN
21	CN	2	LYS
16	CS	5	LYS
16	CS	34	SER
18	CB	87	ASP
18	CB	128	LEU
25	DC	3	VAL
25	DC	34	GLU
25	DC	63	ILE
25	DC	70	LYS
25	DC	196	ASN
25	DC	236	GLY
26	DD	57	ALA
26	DD	119	ALA
26	DD	127	PHE
26	DD	159	LYS
26	DD	178	VAL
27	DK	110	GLU
28	DP	5	LYS
28	DP	104	GLY
28	DP	105	LYS
29	DE	5	LEU
29	DE	12	LEU
29	DE	27	LEU
29	DE	42	GLY
29	DE	81	GLY
32	D4	9	LYS
33	D1	36	LYS
37	DL	65	GLY
37	DL	66	PHE
39	DX	36	GLN

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Mol	Chain	Res	Type
39	DX	37	LEU
40	DH	68	ARG
41	DJ	36	LEU
41	DJ	111	LYS
42	DN	98	LEU
43	DO	53	THR
43	DO	89	ASP
45	DS	11	ARG
45	DS	13	SER
45	DS	21	ALA
46	DU	49	PRO
46	DU	92	VAL
47	DF	28	PRO
47	DF	70	ARG
48	DG	89	VAL
48	DG	151	ARG
49	DR	52	PRO
49	DR	70	GLU
49	DR	98	ILE
50	DT	30	ILE
50	DT	88	LYS
52	DW	10	ARG
52	DW	11	ASN
2	AC	26	LYS
2	AC	48	LYS
2	AC	100	ILE
2	AC	113	LYS
3	AD	26	ALA
6	AG	10	LYS
6	AG	92	PRO
7	AH	22	ALA
9	AJ	16	ARG
9	AJ	56	HIS
12	AM	37	GLY
13	AP	24	SER
13	AP	42	ILE
14	AQ	16	MET
17	AT	3	ILE
17	AT	65	LEU
18	AB	10	LYS
18	AB	28	PRO
20	AO	47	LYS

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Mol	Chain	Res	Type
21	AN	80	ARG
25	BC	34	GLU
25	BC	63	ILE
25	BC	105	ALA
26	BD	102	ALA
26	BD	119	ALA
26	BD	127	PHE
26	BD	145	SER
27	BK	73	ASP
27	BK	93	GLN
27	BK	101	GLY
29	BE	83	VAL
29	BE	96	VAL
29	BE	148	ILE
29	BE	188	MET
34	B3	49	VAL
35	BV	2	PHE
35	BV	8	VAL
35	BV	71	LYS
37	BL	9	ALA
37	BL	15	ALA
37	BL	85	VAL
40	BH	11	ASN
40	BH	89	LYS
40	BH	131	SER
41	BJ	14	ASP
41	BJ	53	TYR
42	BN	19	ALA
42	BN	102	PHE
43	BO	53	THR
44	BQ	32	ARG
45	BS	11	ARG
45	BS	21	ALA
45	BS	46	LEU
46	BU	9	GLU
48	BG	91	VAL
48	BG	97	VAL
49	BR	91	GLN
49	BR	101	ILE
50	BT	55	VAL
50	BT	65	GLY
52	BW	18	LYS

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Mol	Chain	Res	Type
52	BW	33	GLY
52	BW	44	PHE
4	CE	77	ASN
4	CE	146	MET
7	CH	22	ALA
10	CK	36	ARG
13	CP	24	SER
2	CC	26	LYS
2	CC	53	ARG
6	CG	39	GLU
6	CG	70	PRO
6	CG	151	ALA
8	CI	55	ASP
8	CI	71	ILE
9	CJ	93	ALA
21	CN	8	ARG
21	CN	65	GLN
18	CB	28	PRO
18	CB	49	PHE
18	CB	99	MET
18	CB	188	THR
24	DI	6	ALA
24	DI	14	ALA
25	DC	92	LEU
25	DC	105	ALA
25	DC	111	ALA
25	DC	209	ALA
26	DD	102	ALA
26	DD	141	ARG
26	DD	145	SER
26	DD	162	ALA
27	DK	16	ALA
27	DK	17	ARG
27	DK	93	GLN
27	DK	119	ALA
28	DP	73	PHE
29	DE	18	THR
29	DE	78	TRP
29	DE	83	VAL
29	DE	96	VAL
29	DE	148	ILE
29	DE	188	MET

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
30	DY	34	THR
31	D0	26	SER
31	D0	51	ARG
34	D3	22	LYS
34	D3	49	VAL
35	DV	2	PHE
35	DV	60	VAL
36	D2	14	ARG
37	DL	15	ALA
37	DL	30	THR
37	DL	85	VAL
37	DL	127	VAL
40	DH	11	ASN
41	DJ	14	ASP
45	DS	40	ASN
46	DU	9	GLU
47	DF	35	LEU
48	DG	91	VAL
48	DG	97	VAL
48	DG	112	VAL
49	DR	47	VAL
49	DR	91	GLN
49	DR	101	ILE
49	DR	102	SER
50	DT	29	THR
50	DT	55	VAL
50	DT	65	GLY
50	DT	91	GLN
52	DW	18	LYS
52	DW	33	GLY
52	DW	44	PHE
52	DW	63	ASP
2	AC	12	GLY
2	AC	109	GLU
9	AJ	42	LEU
10	AK	36	ARG
18	AB	166	ASP
20	AO	36	ILE
25	BC	65	ASP
25	BC	111	ALA
25	BC	194	VAL
26	BD	114	LYS

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Mol	Chain	Res	Type
26	BD	141	ARG
27	BK	43	ILE
27	BK	119	ALA
29	BE	18	THR
30	BY	34	THR
31	B0	26	SER
32	B4	37	GLN
34	B3	22	LYS
35	BV	60	VAL
35	BV	84	PRO
38	BM	73	ILE
44	BQ	72	GLY
47	BF	35	LEU
48	BG	16	VAL
49	BR	102	SER
50	BT	32	LEU
4	CE	133	ILE
11	CL	77	SER
15	CR	27	THR
17	CT	3	ILE
2	CC	112	ALA
6	CG	148	LYS
8	CI	30	ASN
12	CM	65	GLU
18	CB	58	LYS
25	DC	65	ASP
25	DC	189	ALA
25	DC	194	VAL
27	DK	43	ILE
27	DK	101	GLY
29	DE	67	ARG
32	D4	37	GLN
35	DV	84	PRO
37	DL	40	SER
38	DM	43	ALA
38	DM	73	ILE
40	DH	115	VAL
41	DJ	53	TYR
41	DJ	83	GLY
42	DN	102	PHE
43	DO	115	LEU
44	DQ	88	GLU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
45	DS	46	LEU
48	DG	16	VAL
48	DG	109	SER
50	DT	32	LEU
2	AC	80	GLY
5	AF	64	VAL
18	AB	98	GLY
25	BC	64	VAL
28	BP	83	ILE
33	B1	4	ILE
38	BM	77	PRO
38	BM	108	VAL
40	BH	147	VAL
41	BJ	83	GLY
47	BF	88	VAL
6	CG	13	PRO
12	CM	3	ILE
18	CB	64	GLY
25	DC	64	VAL
28	DP	83	ILE
33	D1	4	ILE
38	DM	77	PRO
44	DQ	72	GLY
47	DF	88	VAL
52	DW	22	VAL
2	AC	59	PRO
2	AC	90	VAL
4	AE	133	ILE
8	AI	110	VAL
9	AJ	41	PRO
45	BS	29	VAL
48	BG	168	VAL
52	BW	22	VAL
3	CD	66	VAL
5	CF	64	VAL
2	CC	14	VAL
8	CI	29	ILE
8	CI	50	PRO
35	DV	8	VAL
38	DM	108	VAL
47	DF	103	ILE
48	DG	168	VAL

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Mol	Chain	Res	Type
3	AD	66	VAL
5	AF	51	ILE
6	AG	68	VAL
6	AG	70	PRO
7	AH	71	VAL
14	AQ	45	VAL
27	BK	103	VAL
41	BJ	113	PRO
42	BN	60	VAL
46	BU	69	VAL
47	BF	103	ILE
47	BF	110	ILE
5	CF	51	ILE
14	CQ	45	VAL
8	CI	124	PRO
12	CM	63	VAL
20	CO	29	VAL
27	DK	103	VAL
41	DJ	113	PRO
43	DO	35	ILE
45	DS	29	VAL
46	DU	69	VAL
47	DF	110	ILE
25	BC	31	PRO
34	B3	19	GLY
35	BV	70	ILE
40	BH	108	VAL
42	BN	92	GLY
43	BO	35	ILE
48	BG	92	GLY
4	CE	107	GLY
7	CH	71	VAL
2	CC	93	ILE
25	DC	31	PRO
29	DE	177	PRO
42	DN	92	GLY
4	AE	107	GLY
20	AO	12	VAL
27	BK	26	GLY
29	BE	177	PRO
46	BU	58	VAL
9	CJ	41	PRO

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Mol	Chain	Res	Type
29	DE	28	VAL
35	DV	15	GLY
35	DV	70	ILE
41	DJ	56	VAL
42	DN	60	VAL
46	DU	58	VAL
48	DG	8	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.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	AC	170/189 (90%)	137 (81%)	33 (19%)	2	10
2	CC	170/189 (90%)	139 (82%)	31 (18%)	2	12
3	AD	172/172 (100%)	153 (89%)	19 (11%)	8	36
3	CD	172/172 (100%)	154 (90%)	18 (10%)	8	38
4	AE	113/125 (90%)	90 (80%)	23 (20%)	1	8
4	CE	113/125 (90%)	91 (80%)	22 (20%)	2	10
5	AF	87/116 (75%)	75 (86%)	12 (14%)	4	25
5	CF	87/116 (75%)	74 (85%)	13 (15%)	4	22
6	AG	123/146 (84%)	104 (85%)	19 (15%)	3	20
6	CG	125/146 (86%)	102 (82%)	23 (18%)	2	11
7	AH	104/104 (100%)	96 (92%)	8 (8%)	16	54
7	CH	104/104 (100%)	97 (93%)	7 (7%)	20	61
8	AI	105/106 (99%)	88 (84%)	17 (16%)	3	17
8	CI	105/106 (99%)	77 (73%)	28 (27%)	0	4
9	AJ	86/90 (96%)	74 (86%)	12 (14%)	4	24
9	CJ	86/90 (96%)	75 (87%)	11 (13%)	5	28
10	AK	90/98 (92%)	77 (86%)	13 (14%)	4	23
10	CK	90/98 (92%)	76 (84%)	14 (16%)	3	20

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
11	AL	103/103 (100%)	84 (82%)	19 (18%)	2	11
11	CL	103/103 (100%)	84 (82%)	19 (18%)	2	11
12	AM	92/95 (97%)	79 (86%)	13 (14%)	4	24
12	CM	91/95 (96%)	70 (77%)	21 (23%)	1	5
13	AP	65/65 (100%)	56 (86%)	9 (14%)	4	25
13	CP	65/65 (100%)	56 (86%)	9 (14%)	4	25
14	AQ	74/77 (96%)	65 (88%)	9 (12%)	6	29
14	CQ	75/77 (97%)	66 (88%)	9 (12%)	6	30
15	AR	48/64 (75%)	42 (88%)	6 (12%)	6	29
15	CR	48/64 (75%)	42 (88%)	6 (12%)	6	29
16	AS	70/78 (90%)	48 (69%)	22 (31%)	0	3
16	CS	71/78 (91%)	53 (75%)	18 (25%)	1	4
17	AT	65/65 (100%)	56 (86%)	9 (14%)	4	25
17	CT	65/65 (100%)	56 (86%)	9 (14%)	4	25
18	AB	180/198 (91%)	149 (83%)	31 (17%)	2	15
18	CB	180/198 (91%)	141 (78%)	39 (22%)	1	7
19	AU	44/60 (73%)	33 (75%)	11 (25%)	1	4
19	CU	44/60 (73%)	33 (75%)	11 (25%)	1	4
20	AO	76/77 (99%)	69 (91%)	7 (9%)	11	45
20	CO	76/77 (99%)	64 (84%)	12 (16%)	3	19
21	AN	79/83 (95%)	69 (87%)	10 (13%)	5	28
21	CN	79/83 (95%)	64 (81%)	15 (19%)	2	10
24	BI	109/109 (100%)	108 (99%)	1 (1%)	84	94
24	DI	109/109 (100%)	103 (94%)	6 (6%)	27	67
25	BC	216/217 (100%)	184 (85%)	32 (15%)	4	22
25	DC	216/217 (100%)	184 (85%)	32 (15%)	4	22
26	BD	164/164 (100%)	136 (83%)	28 (17%)	2	15
26	DD	164/164 (100%)	136 (83%)	28 (17%)	2	15
27	BK	102/104 (98%)	74 (72%)	28 (28%)	0	3
27	DK	102/104 (98%)	73 (72%)	29 (28%)	0	3
28	BP	99/99 (100%)	83 (84%)	16 (16%)	3	17

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
28	DP	99/99 (100%)	83 (84%)	16 (16%)	3	17
29	BE	165/165 (100%)	146 (88%)	19 (12%)	7	33
29	DE	165/165 (100%)	145 (88%)	20 (12%)	6	30
30	BY	48/48 (100%)	38 (79%)	10 (21%)	1	8
30	DY	48/48 (100%)	37 (77%)	11 (23%)	1	6
31	B0	47/47 (100%)	38 (81%)	9 (19%)	2	10
31	D0	47/47 (100%)	38 (81%)	9 (19%)	2	10
32	B4	34/34 (100%)	31 (91%)	3 (9%)	12	48
32	D4	34/34 (100%)	31 (91%)	3 (9%)	12	48
33	B1	45/48 (94%)	35 (78%)	10 (22%)	1	6
33	D1	45/48 (94%)	35 (78%)	10 (22%)	1	6
34	B3	51/51 (100%)	48 (94%)	3 (6%)	24	65
34	D3	51/51 (100%)	48 (94%)	3 (6%)	24	65
35	BV	78/78 (100%)	65 (83%)	13 (17%)	3	16
35	DV	78/78 (100%)	65 (83%)	13 (17%)	3	16
36	B2	38/38 (100%)	28 (74%)	10 (26%)	0	4
36	D2	38/38 (100%)	28 (74%)	10 (26%)	0	4
37	BL	102/103 (99%)	85 (83%)	17 (17%)	3	16
37	DL	102/103 (99%)	85 (83%)	17 (17%)	3	16
38	BM	109/109 (100%)	93 (85%)	16 (15%)	4	22
38	DM	109/109 (100%)	93 (85%)	16 (15%)	4	22
39	BX	55/55 (100%)	43 (78%)	12 (22%)	1	7
39	DX	55/55 (100%)	43 (78%)	12 (22%)	1	7
40	BH	114/114 (100%)	83 (73%)	31 (27%)	0	3
40	DH	114/114 (100%)	87 (76%)	27 (24%)	1	5
41	BJ	116/116 (100%)	100 (86%)	16 (14%)	4	25
41	DJ	116/116 (100%)	100 (86%)	16 (14%)	4	25
42	BN	100/103 (97%)	86 (86%)	14 (14%)	4	24
42	DN	100/103 (97%)	85 (85%)	15 (15%)	3	21
43	BO	86/87 (99%)	68 (79%)	18 (21%)	1	8
43	DO	86/87 (99%)	67 (78%)	19 (22%)	1	6

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
44	BQ	89/89 (100%)	77 (86%)	12 (14%)	5	26
44	DQ	89/89 (100%)	77 (86%)	12 (14%)	5	26
45	BS	93/93 (100%)	85 (91%)	8 (9%)	13	49
45	DS	93/93 (100%)	83 (89%)	10 (11%)	8	37
46	BU	83/84 (99%)	68 (82%)	15 (18%)	2	12
46	DU	83/84 (99%)	68 (82%)	15 (18%)	2	12
47	BF	149/149 (100%)	111 (74%)	38 (26%)	1	4
47	DF	149/149 (100%)	112 (75%)	37 (25%)	1	5
48	BG	137/137 (100%)	114 (83%)	23 (17%)	2	15
48	DG	137/137 (100%)	113 (82%)	24 (18%)	2	14
49	BR	84/84 (100%)	71 (84%)	13 (16%)	3	20
49	DR	84/84 (100%)	72 (86%)	12 (14%)	4	24
50	BT	80/84 (95%)	66 (82%)	14 (18%)	2	14
50	DT	80/84 (95%)	66 (82%)	14 (18%)	2	14
51	BZ	67/68 (98%)	57 (85%)	10 (15%)	4	22
51	DZ	67/68 (98%)	56 (84%)	11 (16%)	3	17
52	BW	59/62 (95%)	44 (75%)	15 (25%)	1	4
52	DW	59/62 (95%)	44 (75%)	15 (25%)	1	4
All	All	9333/9700 (96%)	7780 (83%)	1553 (17%)	3	16

All (1553) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AC	13	ILE
2	AC	17	TRP
2	AC	18	ASN
2	AC	19	SER
2	AC	20	THR
2	AC	24	ASN
2	AC	27	GLU
2	AC	28	PHE
2	AC	35	ASP
2	AC	40	GLN
2	AC	41	TYR
2	AC	48	LYS
2	AC	62	SER

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Mol	Chain	Res	Type
2	AC	71	ARG
2	AC	87	ARG
2	AC	88	LYS
2	AC	92	ASP
2	AC	106	ARG
2	AC	111	ASP
2	AC	120	THR
2	AC	128	MET
2	AC	131	ARG
2	AC	146	LYS
2	AC	166	TRP
2	AC	167	TYR
2	AC	168	ARG
2	AC	171	ARG
2	AC	174	LEU
2	AC	180	ASP
2	AC	184	ASN
2	AC	185	THR
2	AC	189	HIS
2	AC	192	TYR
3	AD	2	ARG
3	AD	4	LEU
3	AD	25	ARG
3	AD	39	GLN
3	AD	58	GLN
3	AD	87	GLU
3	AD	100	VAL
3	AD	106	PHE
3	AD	137	SER
3	AD	146	GLU
3	AD	147	LYS
3	AD	153	ARG
3	AD	160	LEU
3	AD	176	LYS
3	AD	180	THR
3	AD	186	GLU
3	AD	189	ASP
3	AD	190	LEU
3	AD	196	GLU
4	AE	9	GLU
4	AE	19	ARG
4	AE	21	SER

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Mol	Chain	Res	Type
4	AE	23	THR
4	AE	25	LYS
4	AE	30	PHE
4	AE	36	THR
4	AE	45	VAL
4	AE	51	LYS
4	AE	61	LYS
4	AE	69	ASN
4	AE	72	ASN
4	AE	92	ARG
4	AE	95	MET
4	AE	113	VAL
4	AE	115	GLU
4	AE	123	LEU
4	AE	127	TYR
4	AE	141	ASP
4	AE	147	ASN
4	AE	148	SER
4	AE	151	MET
4	AE	155	LYS
5	AF	6	ILE
5	AF	16	GLU
5	AF	40	GLU
5	AF	53	LYS
5	AF	55	HIS
5	AF	56	LYS
5	AF	61	LEU
5	AF	70	VAL
5	AF	73	GLU
5	AF	86	ARG
5	AF	88	MET
5	AF	97	THR
6	AG	4	ARG
6	AG	5	VAL
6	AG	21	LEU
6	AG	22	LEU
6	AG	55	LYS
6	AG	58	LEU
6	AG	72	VAL
6	AG	74	VAL
6	AG	77	ARG
6	AG	78	ARG

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Mol	Chain	Res	Type
6	AG	89	GLU
6	AG	94	ARG
6	AG	112	ASP
6	AG	117	LEU
6	AG	134	VAL
6	AG	137	ARG
6	AG	141	HIS
6	AG	143	MET
6	AG	148	LYS
7	AH	46	GLU
7	AH	57	GLU
7	AH	61	THR
7	AH	66	GLN
7	AH	72	GLU
7	AH	79	ARG
7	AH	110	MET
7	AH	113	ARG
8	AI	17	ARG
8	AI	26	LYS
8	AI	36	GLN
8	AI	37	TYR
8	AI	40	ARG
8	AI	45	MET
8	AI	58	GLU
8	AI	67	LYS
8	AI	74	GLN
8	AI	79	ARG
8	AI	91	GLU
8	AI	92	SER
8	AI	106	ASP
8	AI	108	ARG
8	AI	109	GLN
8	AI	111	GLU
8	AI	129	ARG
9	AJ	6	ILE
9	AJ	19	ASP
9	AJ	20	GLN
9	AJ	57	VAL
9	AJ	59	LYS
9	AJ	60	ASP
9	AJ	85	ASP
9	AJ	87	LEU

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Mol	Chain	Res	Type
9	AJ	88	MET
9	AJ	89	ARG
9	AJ	92	LEU
9	AJ	97	ASP
10	AK	28	ASN
10	AK	45	THR
10	AK	55	ARG
10	AK	64	VAL
10	AK	69	CYS
10	AK	71	ASP
10	AK	76	TYR
10	AK	80	ASN
10	AK	92	ARG
10	AK	100	ASN
10	AK	105	ARG
10	AK	112	VAL
10	AK	118	ASN
11	AL	2	THR
11	AL	9	LYS
11	AL	13	ARG
11	AL	14	LYS
11	AL	17	LYS
11	AL	18	SER
11	AL	28	GLN
11	AL	40	THR
11	AL	43	LYS
11	AL	49	ARG
11	AL	51	VAL
11	AL	60	PHE
11	AL	63	THR
11	AL	74	GLN
11	AL	85	ARG
11	AL	87	LYS
11	AL	97	VAL
11	AL	107	LYS
11	AL	122	LYS
12	AM	2	ARG
12	AM	15	VAL
12	AM	28	ARG
12	AM	46	GLU
12	AM	56	ARG
12	AM	63	VAL

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Mol	Chain	Res	Type
12	AM	89	ARG
12	AM	91	ARG
12	AM	99	GLN
12	AM	100	ARG
12	AM	101	THR
12	AM	102	LYS
12	AM	109	LYS
13	AP	5	ARG
13	AP	9	HIS
13	AP	25	ARG
13	AP	28	ARG
13	AP	35	ARG
13	AP	51	ARG
13	AP	55	ASP
13	AP	75	ILE
13	AP	79	ASN
14	AQ	3	LYS
14	AQ	4	ILE
14	AQ	5	ARG
14	AQ	15	LYS
14	AQ	39	ARG
14	AQ	56	ASP
14	AQ	60	ILE
14	AQ	66	LEU
14	AQ	80	LYS
15	AR	33	THR
15	AR	35	SER
15	AR	38	ILE
15	AR	47	ARG
15	AR	51	GLN
15	AR	65	SER
16	AS	2	ARG
16	AS	6	LYS
16	AS	9	PHE
16	AS	10	ILE
16	AS	11	ASP
16	AS	12	LEU
16	AS	17	LYS
16	AS	19	GLU
16	AS	20	LYS
16	AS	26	ASP
16	AS	27	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
16	AS	28	LYS
16	AS	30	LEU
16	AS	33	TRP
16	AS	34	SER
16	AS	38	THR
16	AS	40	PHE
16	AS	48	ILE
16	AS	50	VAL
16	AS	54	ARG
16	AS	64	GLU
16	AS	73	PHE
17	AT	4	LYS
17	AT	14	GLU
17	AT	35	TYR
17	AT	43	LYS
17	AT	53	MET
17	AT	59	ARG
17	AT	69	ASN
17	AT	84	LYS
17	AT	85	LEU
18	AB	8	MET
18	AB	22	TRP
18	AB	23	ASN
18	AB	31	PHE
18	AB	36	LYS
18	AB	46	VAL
18	AB	48	MET
18	AB	49	PHE
18	AB	57	ASN
18	AB	62	ARG
18	AB	67	LEU
18	AB	69	VAL
18	AB	81	ASP
18	AB	86	CYS
18	AB	87	ASP
18	AB	89	PHE
18	AB	94	ARG
18	AB	95	TRP
18	AB	100	LEU
18	AB	115	ASP
18	AB	119	GLN
18	AB	124	THR

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Mol	Chain	Res	Type
18	AB	125	PHE
18	AB	127	LYS
18	AB	128	LEU
18	AB	160	LEU
18	AB	169	HIS
18	AB	185	ILE
18	AB	188	THR
18	AB	197	PHE
18	AB	212	TYR
19	AU	3	ILE
19	AU	4	LYS
19	AU	11	PHE
19	AU	15	LEU
19	AU	16	ARG
19	AU	17	ARG
19	AU	24	LYS
19	AU	33	ARG
19	AU	34	ARG
19	AU	44	ARG
19	AU	48	LYS
20	AO	17	ARG
20	AO	24	SER
20	AO	26	GLU
20	AO	45	GLU
20	AO	61	SER
20	AO	70	LEU
20	AO	88	ARG
21	AN	17	ASP
21	AN	25	GLU
21	AN	40	ARG
21	AN	46	LYS
21	AN	48	GLN
21	AN	52	ARG
21	AN	53	ASP
21	AN	65	GLN
21	AN	74	ARG
21	AN	80	ARG
24	BI	96	LYS
25	BC	4	LYS
25	BC	5	CYS
25	BC	9	SER
25	BC	14	HIS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	BC	27	LYS
25	BC	43	ASN
25	BC	62	ARG
25	BC	65	ASP
25	BC	89	ASN
25	BC	92	LEU
25	BC	109	LEU
25	BC	110	LYS
25	BC	113	ASP
25	BC	123	ILE
25	BC	134	ILE
25	BC	155	ARG
25	BC	162	GLN
25	BC	172	THR
25	BC	173	LEU
25	BC	176	ARG
25	BC	181	ARG
25	BC	183	VAL
25	BC	190	THR
25	BC	212	TRP
25	BC	215	VAL
25	BC	235	GLU
25	BC	257	ARG
25	BC	264	LYS
25	BC	265	PHE
25	BC	269	ARG
25	BC	270	ARG
25	BC	271	SER
26	BD	4	LEU
26	BD	11	MET
26	BD	17	GLU
26	BD	18	ASP
26	BD	35	THR
26	BD	36	GLN
26	BD	40	LEU
26	BD	46	ARG
26	BD	52	THR
26	BD	62	LYS
26	BD	68	PHE
26	BD	81	GLU
26	BD	84	LEU
26	BD	88	GLU

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Mol	Chain	Res	Type
26	BD	89	GLU
26	BD	96	ILE
26	BD	99	GLU
26	BD	106	LYS
26	BD	110	THR
26	BD	124	ARG
26	BD	131	ASP
26	BD	141	ARG
26	BD	148	GLN
26	BD	154	LYS
26	BD	159	LYS
26	BD	170	VAL
26	BD	197	THR
26	BD	201	LEU
27	BK	2	ILE
27	BK	8	LEU
27	BK	9	ASN
27	BK	17	ARG
27	BK	21	CYS
27	BK	32	TYR
27	BK	37	ASP
27	BK	39	ILE
27	BK	47	ILE
27	BK	52	VAL
27	BK	53	LYS
27	BK	54	LYS
27	BK	64	ARG
27	BK	72	PRO
27	BK	73	ASP
27	BK	79	PHE
27	BK	80	ASP
27	BK	82	ASN
27	BK	86	LEU
27	BK	87	LEU
27	BK	88	ASN
27	BK	89	ASN
27	BK	95	ILE
27	BK	104	THR
27	BK	105	ARG
27	BK	108	ARG
27	BK	111	LYS
27	BK	120	PRO

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Mol	Chain	Res	Type
28	BP	3	ILE
28	BP	5	LYS
28	BP	6	GLN
28	BP	19	PHE
28	BP	25	VAL
28	BP	32	VAL
28	BP	43	GLU
28	BP	61	ARG
28	BP	83	ILE
28	BP	99	LEU
28	BP	100	ARG
28	BP	109	ILE
28	BP	111	GLU
28	BP	112	ARG
28	BP	113	LEU
28	BP	114	ASN
29	BE	6	LYS
29	BE	12	LEU
29	BE	21	ARG
29	BE	24	ASN
29	BE	40	ARG
29	BE	58	LYS
29	BE	60	TRP
29	BE	67	ARG
29	BE	70	SER
29	BE	78	TRP
29	BE	108	ILE
29	BE	118	LEU
29	BE	122	GLU
29	BE	159	LEU
29	BE	163	ASN
29	BE	165	HIS
29	BE	181	ILE
29	BE	197	GLU
29	BE	198	GLU
30	BY	2	LYS
30	BY	6	ILE
30	BY	15	ARG
30	BY	23	LEU
30	BY	30	ARG
30	BY	37	ARG
30	BY	43	ILE

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Mol	Chain	Res	Type
30	BY	48	ASN
30	BY	57	GLU
30	BY	58	GLU
31	B0	5	ASN
31	B0	21	LEU
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	56	LYS
32	B4	9	LYS
32	B4	26	ILE
32	B4	35	GLN
33	B1	6	GLU
33	B1	8	ILE
33	B1	9	LYS
33	B1	16	THR
33	B1	31	GLU
33	B1	33	LEU
33	B1	34	GLU
33	B1	35	LEU
33	B1	36	LYS
33	B1	49	LYS
34	B3	7	ARG
34	B3	14	LYS
34	B3	61	LEU
35	BV	5	ASN
35	BV	9	ARG
35	BV	40	ILE
35	BV	42	LEU
35	BV	46	LYS
35	BV	51	GLN
35	BV	53	LYS
35	BV	61	LEU
35	BV	69	GLU
35	BV	70	ILE
35	BV	75	GLN
35	BV	79	ARG
35	BV	89	ILE
36	B2	3	ARG

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Mol	Chain	Res	Type
36	B2	10	LEU
36	B2	12	ARG
36	B2	16	HIS
36	B2	33	ARG
36	B2	39	ARG
36	B2	41	ARG
36	B2	42	LEU
36	B2	43	THR
36	B2	46	LYS
37	BL	4	ASN
37	BL	19	LEU
37	BL	27	LEU
37	BL	35	HIS
37	BL	47	ARG
37	BL	61	LEU
37	BL	64	PHE
37	BL	69	ARG
37	BL	92	LEU
37	BL	94	THR
37	BL	95	LEU
37	BL	118	THR
37	BL	122	VAL
37	BL	125	LEU
37	BL	128	THR
37	BL	129	LYS
37	BL	144	GLU
38	BM	3	GLN
38	BM	5	LYS
38	BM	20	LEU
38	BM	46	ILE
38	BM	47	GLU
38	BM	55	ARG
38	BM	59	ARG
38	BM	66	ARG
38	BM	70	ASP
38	BM	78	LEU
38	BM	81	ARG
38	BM	88	ASN
38	BM	90	GLU
38	BM	93	VAL
38	BM	111	GLU
38	BM	115	GLU

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Mol	Chain	Res	Type
39	BX	1	MET
39	BX	6	LEU
39	BX	9	LYS
39	BX	14	LEU
39	BX	17	GLU
39	BX	20	ASN
39	BX	25	GLN
39	BX	34	SER
39	BX	41	HIS
39	BX	49	ASP
39	BX	56	LEU
39	BX	59	GLU
40	BH	12	LEU
40	BH	15	LEU
40	BH	18	GLN
40	BH	25	TYR
40	BH	28	ASN
40	BH	33	GLN
40	BH	41	LYS
40	BH	42	LYS
40	BH	44	ILE
40	BH	46	PHE
40	BH	48	GLU
40	BH	50	ARG
40	BH	51	ARG
40	BH	53	GLU
40	BH	54	LEU
40	BH	62	LEU
40	BH	68	ARG
40	BH	70	GLU
40	BH	75	LEU
40	BH	87	GLU
40	BH	90	LEU
40	BH	91	PHE
40	BH	98	ASP
40	BH	99	ILE
40	BH	103	VAL
40	BH	110	VAL
40	BH	112	LYS
40	BH	116	ARG
40	BH	128	HIS
40	BH	132	PHE

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Mol	Chain	Res	Type
40	BH	144	VAL
41	BJ	2	LYS
41	BJ	3	THR
41	BJ	12	LYS
41	BJ	25	LEU
41	BJ	30	THR
41	BJ	34	ARG
41	BJ	35	ARG
41	BJ	43	GLU
41	BJ	44	TYR
41	BJ	54	ILE
41	BJ	73	VAL
41	BJ	76	HIS
41	BJ	95	ARG
41	BJ	124	VAL
41	BJ	129	GLU
41	BJ	136	GLN
42	BN	1	MET
42	BN	10	LEU
42	BN	11	ASN
42	BN	17	ARG
42	BN	18	GLN
42	BN	35	LYS
42	BN	51	LEU
42	BN	69	ARG
42	BN	71	ARG
42	BN	95	THR
42	BN	96	ARG
42	BN	112	TYR
42	BN	114	GLU
42	BN	118	ARG
43	BO	3	LYS
43	BO	9	ARG
43	BO	24	THR
43	BO	31	THR
43	BO	35	ILE
43	BO	36	TYR
43	BO	46	GLU
43	BO	52	SER
43	BO	53	THR
43	BO	62	LEU
43	BO	69	ASP

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Mol	Chain	Res	Type
43	BO	78	VAL
43	BO	80	GLU
43	BO	89	ASP
43	BO	98	GLN
43	BO	100	HIS
43	BO	106	LEU
43	BO	112	GLU
44	BQ	10	ARG
44	BQ	13	HIS
44	BQ	29	ARG
44	BQ	30	VAL
44	BQ	50	ARG
44	BQ	69	ARG
44	BQ	70	GLN
44	BQ	79	ILE
44	BQ	83	LYS
44	BQ	96	ASP
44	BQ	100	PHE
44	BQ	105	PHE
45	BS	22	ASP
45	BS	62	ASP
45	BS	66	ILE
45	BS	67	ASP
45	BS	84	ARG
45	BS	86	MET
45	BS	88	ARG
45	BS	97	LEU
46	BU	7	ASP
46	BU	11	ILE
46	BU	18	LYS
46	BU	20	LYS
46	BU	26	ASN
46	BU	51	LEU
46	BU	60	LYS
46	BU	61	GLU
46	BU	65	GLN
46	BU	73	ASN
46	BU	78	LYS
46	BU	81	ARG
46	BU	85	ARG
46	BU	87	GLU
46	BU	95	PHE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
47	BF	2	LYS
47	BF	3	LEU
47	BF	13	LYS
47	BF	15	LEU
47	BF	22	ASN
47	BF	25	MET
47	BF	29	ARG
47	BF	32	LYS
47	BF	46	LYS
47	BF	48	LEU
47	BF	50	ASP
47	BF	56	LEU
47	BF	68	LYS
47	BF	76	PHE
47	BF	82	TYR
47	BF	86	CYS
47	BF	91	ARG
47	BF	94	ARG
47	BF	96	TRP
47	BF	100	GLU
47	BF	102	LEU
47	BF	103	ILE
47	BF	105	ILE
47	BF	111	ARG
47	BF	114	ARG
47	BF	121	PHE
47	BF	122	ASP
47	BF	124	ARG
47	BF	128	SER
47	BF	133	GLU
47	BF	134	GLN
47	BF	137	PHE
47	BF	138	PRO
47	BF	142	TYR
47	BF	147	ARG
47	BF	149	ARG
47	BF	168	LEU
47	BF	177	ARG
48	BG	15	ASP
48	BG	17	LYS
48	BG	31	GLU
48	BG	34	ARG

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Mol	Chain	Res	Type
48	BG	41	GLU
48	BG	44	HIS
48	BG	46	ASP
48	BG	54	ARG
48	BG	84	LYS
48	BG	85	LYS
48	BG	86	LEU
48	BG	94	ARG
48	BG	106	LEU
48	BG	120	ILE
48	BG	123	GLU
48	BG	132	LEU
48	BG	138	GLN
48	BG	146	ASP
48	BG	148	ARG
48	BG	166	GLU
48	BG	172	GLU
48	BG	174	LYS
48	BG	176	LYS
49	BR	15	SER
49	BR	19	THR
49	BR	29	THR
49	BR	37	GLU
49	BR	39	LEU
49	BR	40	MET
49	BR	41	ILE
49	BR	48	LYS
49	BR	66	HIS
49	BR	70	GLU
49	BR	72	VAL
49	BR	82	HIS
49	BR	99	THR
50	BT	2	ILE
50	BT	3	ARG
50	BT	6	ARG
50	BT	9	LYS
50	BT	11	LEU
50	BT	22	THR
50	BT	25	GLU
50	BT	32	LEU
50	BT	50	LEU
50	BT	61	LEU

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Mol	Chain	Res	Type
50	BT	64	LYS
50	BT	68	LYS
50	BT	72	GLN
50	BT	86	THR
51	BZ	18	ARG
51	BZ	25	THR
51	BZ	27	ARG
51	BZ	32	ASN
51	BZ	37	ARG
51	BZ	46	PHE
51	BZ	48	THR
51	BZ	49	LEU
51	BZ	77	LYS
51	BZ	78	TYR
52	BW	14	ASP
52	BW	16	GLU
52	BW	18	LYS
52	BW	19	ARG
52	BW	23	LYS
52	BW	24	ARG
52	BW	39	GLN
52	BW	44	PHE
52	BW	45	HIS
52	BW	49	ASN
52	BW	50	VAL
52	BW	61	LYS
52	BW	75	ASN
52	BW	77	LYS
52	BW	82	GLU
3	CD	2	ARG
3	CD	4	LEU
3	CD	25	ARG
3	CD	39	GLN
3	CD	58	GLN
3	CD	87	GLU
3	CD	100	VAL
3	CD	106	PHE
3	CD	137	SER
3	CD	146	GLU
3	CD	147	LYS
3	CD	153	ARG
3	CD	160	LEU

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Mol	Chain	Res	Type
3	CD	176	LYS
3	CD	180	THR
3	CD	189	ASP
3	CD	190	LEU
3	CD	196	GLU
4	CE	9	GLU
4	CE	19	ARG
4	CE	21	SER
4	CE	23	THR
4	CE	25	LYS
4	CE	30	PHE
4	CE	36	THR
4	CE	45	VAL
4	CE	51	LYS
4	CE	61	LYS
4	CE	69	ASN
4	CE	72	ASN
4	CE	95	MET
4	CE	113	VAL
4	CE	115	GLU
4	CE	123	LEU
4	CE	127	TYR
4	CE	141	ASP
4	CE	147	ASN
4	CE	148	SER
4	CE	151	MET
4	CE	155	LYS
5	CF	6	ILE
5	CF	16	GLU
5	CF	40	GLU
5	CF	53	LYS
5	CF	55	HIS
5	CF	56	LYS
5	CF	61	LEU
5	CF	70	VAL
5	CF	73	GLU
5	CF	86	ARG
5	CF	88	MET
5	CF	96	VAL
5	CF	97	THR
7	CH	46	GLU
7	CH	57	GLU

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Mol	Chain	Res	Type
7	CH	61	THR
7	CH	66	GLN
7	CH	79	ARG
7	CH	110	MET
7	CH	113	ARG
10	CK	28	ASN
10	CK	45	THR
10	CK	55	ARG
10	CK	64	VAL
10	CK	69	CYS
10	CK	71	ASP
10	CK	75	GLU
10	CK	76	TYR
10	CK	80	ASN
10	CK	84	MET
10	CK	92	ARG
10	CK	100	ASN
10	CK	105	ARG
10	CK	118	ASN
11	CL	2	THR
11	CL	9	LYS
11	CL	13	ARG
11	CL	14	LYS
11	CL	17	LYS
11	CL	18	SER
11	CL	28	GLN
11	CL	40	THR
11	CL	43	LYS
11	CL	49	ARG
11	CL	51	VAL
11	CL	60	PHE
11	CL	63	THR
11	CL	74	GLN
11	CL	85	ARG
11	CL	87	LYS
11	CL	97	VAL
11	CL	107	LYS
11	CL	122	LYS
13	CP	5	ARG
13	CP	9	HIS
13	CP	25	ARG
13	CP	28	ARG

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Mol	Chain	Res	Type
13	CP	35	ARG
13	CP	51	ARG
13	CP	55	ASP
13	CP	75	ILE
13	CP	79	ASN
14	CQ	3	LYS
14	CQ	4	ILE
14	CQ	5	ARG
14	CQ	15	LYS
14	CQ	39	ARG
14	CQ	56	ASP
14	CQ	60	ILE
14	CQ	66	LEU
14	CQ	80	LYS
15	CR	33	THR
15	CR	35	SER
15	CR	38	ILE
15	CR	47	ARG
15	CR	51	GLN
15	CR	65	SER
17	CT	4	LYS
17	CT	14	GLU
17	CT	35	TYR
17	CT	43	LYS
17	CT	53	MET
17	CT	59	ARG
17	CT	69	ASN
17	CT	84	LYS
17	CT	85	LEU
19	CU	3	ILE
19	CU	4	LYS
19	CU	11	PHE
19	CU	15	LEU
19	CU	16	ARG
19	CU	17	ARG
19	CU	24	LYS
19	CU	33	ARG
19	CU	34	ARG
19	CU	44	ARG
19	CU	48	LYS
2	CC	2	GLN
2	CC	13	ILE

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Mol	Chain	Res	Type
2	CC	17	TRP
2	CC	19	SER
2	CC	26	LYS
2	CC	27	GLU
2	CC	32	LEU
2	CC	33	ASP
2	CC	39	ARG
2	CC	48	LYS
2	CC	63	ILE
2	CC	64	ARG
2	CC	69	THR
2	CC	78	LYS
2	CC	84	GLU
2	CC	99	GLN
2	CC	101	ASN
2	CC	104	GLU
2	CC	106	ARG
2	CC	109	GLU
2	CC	128	MET
2	CC	130	ARG
2	CC	138	GLN
2	CC	143	LEU
2	CC	155	ARG
2	CC	175	HIS
2	CC	180	ASP
2	CC	186	SER
2	CC	192	TYR
2	CC	197	VAL
2	CC	199	VAL
6	CG	16	LYS
6	CG	17	PHE
6	CG	21	LEU
6	CG	22	LEU
6	CG	26	VAL
6	CG	30	MET
6	CG	34	LYS
6	CG	58	LEU
6	CG	62	GLU
6	CG	75	LYS
6	CG	94	ARG
6	CG	98	LEU
6	CG	105	GLU

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Mol	Chain	Res	Type
6	CG	108	ARG
6	CG	115	MET
6	CG	117	LEU
6	CG	118	ARG
6	CG	125	ASP
6	CG	128	GLU
6	CG	132	THR
6	CG	136	LYS
6	CG	145	GLU
6	CG	153	TYR
8	CI	10	ARG
8	CI	11	ARG
8	CI	27	ILE
8	CI	30	ASN
8	CI	35	GLU
8	CI	37	TYR
8	CI	45	MET
8	CI	46	VAL
8	CI	52	GLU
8	CI	53	LEU
8	CI	54	VAL
8	CI	55	ASP
8	CI	58	GLU
8	CI	59	LYS
8	CI	60	LEU
8	CI	62	LEU
8	CI	74	GLN
8	CI	84	ARG
8	CI	88	GLU
8	CI	89	TYR
8	CI	93	LEU
8	CI	94	ARG
8	CI	96	GLU
8	CI	98	ARG
8	CI	106	ASP
8	CI	118	ARG
8	CI	126	PHE
8	CI	128	LYS
9	CJ	35	GLN
9	CJ	47	GLU
9	CJ	52	LEU
9	CJ	57	VAL

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Mol	Chain	Res	Type
9	CJ	64	GLN
9	CJ	73	LEU
9	CJ	85	ASP
9	CJ	88	MET
9	CJ	89	ARG
9	CJ	90	LEU
9	CJ	98	VAL
12	CM	2	ARG
12	CM	10	ASP
12	CM	16	ILE
12	CM	22	TYR
12	CM	28	ARG
12	CM	30	LYS
12	CM	43	LYS
12	CM	46	GLU
12	CM	53	ASP
12	CM	55	LEU
12	CM	57	ASP
12	CM	64	VAL
12	CM	65	GLU
12	CM	77	LYS
12	CM	78	ARG
12	CM	79	LEU
12	CM	81	ASP
12	CM	88	LEU
12	CM	90	HIS
12	CM	91	ARG
12	CM	102	LYS
21	CN	3	GLN
21	CN	25	GLU
21	CN	26	LEU
21	CN	27	LYS
21	CN	31	SER
21	CN	41	TRP
21	CN	42	ASN
21	CN	49	THR
21	CN	50	LEU
21	CN	52	ARG
21	CN	59	GLN
21	CN	60	ARG
21	CN	63	CYS
21	CN	65	GLN

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Mol	Chain	Res	Type
21	CN	80	ARG
16	CS	2	ARG
16	CS	3	SER
16	CS	4	LEU
16	CS	5	LYS
16	CS	10	ILE
16	CS	12	LEU
16	CS	14	LEU
16	CS	20	LYS
16	CS	23	GLU
16	CS	26	ASP
16	CS	27	LYS
16	CS	28	LYS
16	CS	32	THR
16	CS	42	ASN
16	CS	47	THR
16	CS	55	GLN
16	CS	64	GLU
16	CS	80	ARG
18	CB	8	MET
18	CB	19	THR
18	CB	23	ASN
18	CB	27	LYS
18	CB	35	ASN
18	CB	42	LEU
18	CB	43	GLU
18	CB	46	VAL
18	CB	50	ASN
18	CB	56	LEU
18	CB	57	ASN
18	CB	62	ARG
18	CB	67	LEU
18	CB	69	VAL
18	CB	73	ARG
18	CB	76	SER
18	CB	84	LEU
18	CB	86	CYS
18	CB	87	ASP
18	CB	92	ASN
18	CB	94	ARG
18	CB	99	MET
18	CB	113	LEU

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Mol	Chain	Res	Type
18	CB	122	ASP
18	CB	126	ASP
18	CB	127	LYS
18	CB	132	GLU
18	CB	142	LYS
18	CB	152	ASP
18	CB	158	ASP
18	CB	160	LEU
18	CB	163	ILE
18	CB	168	GLU
18	CB	176	ASN
18	CB	196	ASP
18	CB	199	ILE
18	CB	211	LEU
18	CB	213	LEU
18	CB	224	ARG
20	CO	4	SER
20	CO	6	GLU
20	CO	20	ASN
20	CO	31	LEU
20	CO	35	GLN
20	CO	37	ASN
20	CO	45	GLU
20	CO	62	GLN
20	CO	64	ARG
20	CO	68	ASP
20	CO	81	LEU
20	CO	88	ARG
24	DI	2	LYS
24	DI	54	ILE
24	DI	91	LYS
24	DI	99	LYS
24	DI	121	ILE
24	DI	140	GLU
25	DC	4	LYS
25	DC	5	CYS
25	DC	9	SER
25	DC	14	HIS
25	DC	27	LYS
25	DC	43	ASN
25	DC	62	ARG
25	DC	65	ASP

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Mol	Chain	Res	Type
25	DC	89	ASN
25	DC	92	LEU
25	DC	109	LEU
25	DC	110	LYS
25	DC	113	ASP
25	DC	123	ILE
25	DC	134	ILE
25	DC	155	ARG
25	DC	162	GLN
25	DC	172	THR
25	DC	173	LEU
25	DC	176	ARG
25	DC	181	ARG
25	DC	183	VAL
25	DC	190	THR
25	DC	212	TRP
25	DC	215	VAL
25	DC	235	GLU
25	DC	257	ARG
25	DC	264	LYS
25	DC	265	PHE
25	DC	269	ARG
25	DC	270	ARG
25	DC	271	SER
26	DD	4	LEU
26	DD	11	MET
26	DD	17	GLU
26	DD	18	ASP
26	DD	35	THR
26	DD	36	GLN
26	DD	40	LEU
26	DD	46	ARG
26	DD	52	THR
26	DD	62	LYS
26	DD	68	PHE
26	DD	81	GLU
26	DD	84	LEU
26	DD	88	GLU
26	DD	89	GLU
26	DD	96	ILE
26	DD	99	GLU
26	DD	106	LYS

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Mol	Chain	Res	Type
26	DD	110	THR
26	DD	124	ARG
26	DD	141	ARG
26	DD	148	GLN
26	DD	154	LYS
26	DD	157	LYS
26	DD	159	LYS
26	DD	170	VAL
26	DD	201	LEU
26	DD	204	LYS
27	DK	2	ILE
27	DK	8	LEU
27	DK	9	ASN
27	DK	17	ARG
27	DK	21	CYS
27	DK	23	LYS
27	DK	32	TYR
27	DK	37	ASP
27	DK	39	ILE
27	DK	47	ILE
27	DK	52	VAL
27	DK	53	LYS
27	DK	54	LYS
27	DK	64	ARG
27	DK	72	PRO
27	DK	73	ASP
27	DK	79	PHE
27	DK	80	ASP
27	DK	82	ASN
27	DK	86	LEU
27	DK	87	LEU
27	DK	88	ASN
27	DK	89	ASN
27	DK	95	ILE
27	DK	104	THR
27	DK	105	ARG
27	DK	108	ARG
27	DK	111	LYS
27	DK	120	PRO
28	DP	3	ILE
28	DP	5	LYS
28	DP	6	GLN

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Mol	Chain	Res	Type
28	DP	19	PHE
28	DP	25	VAL
28	DP	32	VAL
28	DP	43	GLU
28	DP	61	ARG
28	DP	83	ILE
28	DP	99	LEU
28	DP	100	ARG
28	DP	109	ILE
28	DP	111	GLU
28	DP	112	ARG
28	DP	113	LEU
28	DP	114	ASN
29	DE	3	LEU
29	DE	6	LYS
29	DE	12	LEU
29	DE	21	ARG
29	DE	24	ASN
29	DE	40	ARG
29	DE	58	LYS
29	DE	60	TRP
29	DE	67	ARG
29	DE	70	SER
29	DE	78	TRP
29	DE	108	ILE
29	DE	118	LEU
29	DE	122	GLU
29	DE	159	LEU
29	DE	163	ASN
29	DE	165	HIS
29	DE	181	ILE
29	DE	197	GLU
29	DE	198	GLU
30	DY	2	LYS
30	DY	6	ILE
30	DY	15	ARG
30	DY	23	LEU
30	DY	30	ARG
30	DY	37	ARG
30	DY	43	ILE
30	DY	48	ASN
30	DY	53	MET

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Mol	Chain	Res	Type
30	DY	57	GLU
30	DY	58	GLU
31	D0	5	ASN
31	D0	21	LEU
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	56	LYS
32	D4	9	LYS
32	D4	26	ILE
32	D4	35	GLN
33	D1	6	GLU
33	D1	8	ILE
33	D1	9	LYS
33	D1	16	THR
33	D1	31	GLU
33	D1	33	LEU
33	D1	34	GLU
33	D1	35	LEU
33	D1	36	LYS
33	D1	49	LYS
34	D3	7	ARG
34	D3	14	LYS
34	D3	61	LEU
35	DV	5	ASN
35	DV	9	ARG
35	DV	40	ILE
35	DV	42	LEU
35	DV	46	LYS
35	DV	51	GLN
35	DV	53	LYS
35	DV	61	LEU
35	DV	69	GLU
35	DV	70	ILE
35	DV	75	GLN
35	DV	79	ARG
35	DV	89	ILE
36	D2	3	ARG
36	D2	10	LEU

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Mol	Chain	Res	Type
36	D2	12	ARG
36	D2	16	HIS
36	D2	33	ARG
36	D2	39	ARG
36	D2	41	ARG
36	D2	42	LEU
36	D2	43	THR
36	D2	46	LYS
37	DL	4	ASN
37	DL	19	LEU
37	DL	27	LEU
37	DL	35	HIS
37	DL	47	ARG
37	DL	61	LEU
37	DL	64	PHE
37	DL	69	ARG
37	DL	92	LEU
37	DL	94	THR
37	DL	95	LEU
37	DL	118	THR
37	DL	122	VAL
37	DL	125	LEU
37	DL	128	THR
37	DL	129	LYS
37	DL	144	GLU
38	DM	3	GLN
38	DM	5	LYS
38	DM	20	LEU
38	DM	46	ILE
38	DM	47	GLU
38	DM	55	ARG
38	DM	59	ARG
38	DM	66	ARG
38	DM	70	ASP
38	DM	78	LEU
38	DM	81	ARG
38	DM	88	ASN
38	DM	90	GLU
38	DM	93	VAL
38	DM	111	GLU
38	DM	115	GLU
39	DX	1	MET

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Mol	Chain	Res	Type
39	DX	6	LEU
39	DX	9	LYS
39	DX	14	LEU
39	DX	17	GLU
39	DX	20	ASN
39	DX	25	GLN
39	DX	34	SER
39	DX	41	HIS
39	DX	49	ASP
39	DX	56	LEU
39	DX	59	GLU
40	DH	12	LEU
40	DH	15	LEU
40	DH	18	GLN
40	DH	25	TYR
40	DH	28	ASN
40	DH	33	GLN
40	DH	41	LYS
40	DH	46	PHE
40	DH	60	GLU
40	DH	61	VAL
40	DH	70	GLU
40	DH	77	THR
40	DH	78	VAL
40	DH	83	LYS
40	DH	90	LEU
40	DH	96	THR
40	DH	97	ARG
40	DH	103	VAL
40	DH	113	SER
40	DH	116	ARG
40	DH	119	ASN
40	DH	121	VAL
40	DH	124	THR
40	DH	129	GLU
40	DH	139	PHE
40	DH	144	VAL
40	DH	149	GLU
41	DJ	2	LYS
41	DJ	3	THR
41	DJ	12	LYS
41	DJ	25	LEU

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Mol	Chain	Res	Type
41	DJ	30	THR
41	DJ	34	ARG
41	DJ	35	ARG
41	DJ	43	GLU
41	DJ	44	TYR
41	DJ	54	ILE
41	DJ	73	VAL
41	DJ	76	HIS
41	DJ	95	ARG
41	DJ	124	VAL
41	DJ	129	GLU
41	DJ	136	GLN
42	DN	1	MET
42	DN	10	LEU
42	DN	11	ASN
42	DN	17	ARG
42	DN	18	GLN
42	DN	28	LEU
42	DN	35	LYS
42	DN	51	LEU
42	DN	69	ARG
42	DN	71	ARG
42	DN	95	THR
42	DN	96	ARG
42	DN	112	TYR
42	DN	114	GLU
42	DN	118	ARG
43	DO	3	LYS
43	DO	9	ARG
43	DO	24	THR
43	DO	31	THR
43	DO	35	ILE
43	DO	36	TYR
43	DO	46	GLU
43	DO	52	SER
43	DO	53	THR
43	DO	62	LEU
43	DO	69	ASP
43	DO	78	VAL
43	DO	80	GLU
43	DO	89	ASP
43	DO	91	SER

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Mol	Chain	Res	Type
43	DO	98	GLN
43	DO	100	HIS
43	DO	106	LEU
43	DO	112	GLU
44	DQ	10	ARG
44	DQ	13	HIS
44	DQ	29	ARG
44	DQ	30	VAL
44	DQ	50	ARG
44	DQ	69	ARG
44	DQ	70	GLN
44	DQ	79	ILE
44	DQ	83	LYS
44	DQ	96	ASP
44	DQ	100	PHE
44	DQ	105	PHE
45	DS	22	ASP
45	DS	62	ASP
45	DS	66	ILE
45	DS	67	ASP
45	DS	81	SER
45	DS	84	ARG
45	DS	85	ILE
45	DS	86	MET
45	DS	88	ARG
45	DS	97	LEU
46	DU	7	ASP
46	DU	11	ILE
46	DU	18	LYS
46	DU	20	LYS
46	DU	26	ASN
46	DU	51	LEU
46	DU	60	LYS
46	DU	61	GLU
46	DU	65	GLN
46	DU	73	ASN
46	DU	78	LYS
46	DU	81	ARG
46	DU	85	ARG
46	DU	87	GLU
46	DU	95	PHE
47	DF	2	LYS

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Mol	Chain	Res	Type
47	DF	3	LEU
47	DF	13	LYS
47	DF	15	LEU
47	DF	22	ASN
47	DF	25	MET
47	DF	29	ARG
47	DF	32	LYS
47	DF	46	LYS
47	DF	48	LEU
47	DF	50	ASP
47	DF	56	LEU
47	DF	68	LYS
47	DF	76	PHE
47	DF	82	TYR
47	DF	86	CYS
47	DF	91	ARG
47	DF	94	ARG
47	DF	96	TRP
47	DF	100	GLU
47	DF	102	LEU
47	DF	105	ILE
47	DF	111	ARG
47	DF	114	ARG
47	DF	121	PHE
47	DF	122	ASP
47	DF	124	ARG
47	DF	128	SER
47	DF	133	GLU
47	DF	134	GLN
47	DF	137	PHE
47	DF	138	PRO
47	DF	142	TYR
47	DF	147	ARG
47	DF	149	ARG
47	DF	168	LEU
47	DF	177	ARG
48	DG	15	ASP
48	DG	17	LYS
48	DG	31	GLU
48	DG	34	ARG
48	DG	41	GLU
48	DG	44	HIS

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Mol	Chain	Res	Type
48	DG	46	ASP
48	DG	54	ARG
48	DG	84	LYS
48	DG	85	LYS
48	DG	86	LEU
48	DG	94	ARG
48	DG	101	VAL
48	DG	106	LEU
48	DG	120	ILE
48	DG	123	GLU
48	DG	132	LEU
48	DG	138	GLN
48	DG	146	ASP
48	DG	148	ARG
48	DG	166	GLU
48	DG	172	GLU
48	DG	174	LYS
48	DG	176	LYS
49	DR	19	THR
49	DR	29	THR
49	DR	37	GLU
49	DR	39	LEU
49	DR	40	MET
49	DR	41	ILE
49	DR	48	LYS
49	DR	66	HIS
49	DR	70	GLU
49	DR	72	VAL
49	DR	82	HIS
49	DR	99	THR
50	DT	2	ILE
50	DT	3	ARG
50	DT	6	ARG
50	DT	9	LYS
50	DT	11	LEU
50	DT	22	THR
50	DT	25	GLU
50	DT	32	LEU
50	DT	50	LEU
50	DT	61	LEU
50	DT	64	LYS
50	DT	68	LYS

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Mol	Chain	Res	Type
50	DT	72	GLN
50	DT	86	THR
51	DZ	13	VAL
51	DZ	18	ARG
51	DZ	25	THR
51	DZ	27	ARG
51	DZ	32	ASN
51	DZ	37	ARG
51	DZ	46	PHE
51	DZ	48	THR
51	DZ	49	LEU
51	DZ	77	LYS
51	DZ	78	TYR
52	DW	14	ASP
52	DW	16	GLU
52	DW	18	LYS
52	DW	19	ARG
52	DW	23	LYS
52	DW	24	ARG
52	DW	39	GLN
52	DW	44	PHE
52	DW	45	HIS
52	DW	49	ASN
52	DW	50	VAL
52	DW	61	LYS
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 (349) such sidechains are listed below:

Mol	Chain	Res	Type
2	AC	99	GLN
2	AC	139	ASN
3	AD	35	GLN
3	AD	53	GLN
3	AD	70	GLN
3	AD	73	ASN
3	AD	84	ASN
3	AD	115	GLN
3	AD	119	HIS
3	AD	135	GLN

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Mol	Chain	Res	Type
3	AD	151	GLN
3	AD	195	ASN
4	AE	72	ASN
4	AE	131	ASN
4	AE	145	ASN
5	AF	3	HIS
5	AF	17	GLN
6	AG	96	ASN
6	AG	121	ASN
6	AG	141	HIS
6	AG	147	ASN
7	AH	3	GLN
7	AH	37	ASN
7	AH	66	GLN
7	AH	75	GLN
7	AH	117	GLN
8	AI	4	GLN
8	AI	24	ASN
8	AI	31	GLN
8	AI	36	GLN
8	AI	74	GLN
8	AI	80	HIS
9	AJ	20	GLN
9	AJ	56	HIS
9	AJ	99	GLN
10	AK	21	HIS
10	AK	28	ASN
10	AK	39	ASN
10	AK	80	ASN
11	AL	4	ASN
11	AL	19	ASN
11	AL	28	GLN
11	AL	45	ASN
11	AL	74	GLN
12	AM	7	ASN
13	AP	18	GLN
14	AQ	8	GLN
15	AR	51	GLN
16	AS	68	HIS
17	AT	74	HIS
17	AT	83	ASN
18	AB	17	HIS

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Mol	Chain	Res	Type
18	AB	18	GLN
18	AB	23	ASN
18	AB	35	ASN
18	AB	38	HIS
18	AB	88	GLN
18	AB	145	ASN
18	AB	169	HIS
18	AB	177	ASN
20	AO	37	ASN
20	AO	40	GLN
21	AN	48	GLN
21	AN	59	GLN
21	AN	61	ASN
21	AN	65	GLN
24	BI	11	GLN
24	BI	29	GLN
24	BI	33	ASN
24	BI	93	ASN
25	BC	36	ASN
25	BC	43	ASN
25	BC	45	ASN
25	BC	59	GLN
25	BC	85	ASN
25	BC	89	ASN
25	BC	133	ASN
25	BC	152	GLN
25	BC	162	GLN
25	BC	196	ASN
25	BC	238	ASN
26	BD	32	ASN
26	BD	36	GLN
26	BD	49	GLN
26	BD	130	GLN
26	BD	136	ASN
26	BD	148	GLN
26	BD	164	GLN
27	BK	3	GLN
27	BK	13	ASN
27	BK	88	ASN
27	BK	89	ASN
28	BP	6	GLN
28	BP	40	GLN

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Mol	Chain	Res	Type
28	BP	74	GLN
28	BP	76	HIS
28	BP	114	ASN
29	BE	24	ASN
29	BE	30	GLN
29	BE	62	GLN
29	BE	90	GLN
29	BE	97	ASN
29	BE	156	ASN
29	BE	163	ASN
29	BE	195	GLN
30	BY	33	HIS
30	BY	48	ASN
31	B0	3	GLN
32	B4	13	ASN
32	B4	35	GLN
32	B4	37	GLN
34	B3	27	ASN
34	B3	30	HIS
35	BV	49	ASN
35	BV	51	GLN
35	BV	80	HIS
35	BV	87	GLN
35	BV	88	HIS
36	B2	13	ASN
37	BL	4	ASN
37	BL	35	HIS
37	BL	54	GLN
37	BL	93	ASN
37	BL	99	ASN
38	BM	3	GLN
38	BM	17	ASN
39	BX	20	ASN
39	BX	25	GLN
39	BX	27	ASN
39	BX	31	GLN
39	BX	41	HIS
39	BX	45	GLN
40	BH	28	ASN
40	BH	43	ASN
41	BJ	58	ASN
41	BJ	86	GLN

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Mol	Chain	Res	Type
41	BJ	130	HIS
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	100	HIS
44	BQ	51	GLN
44	BQ	55	GLN
44	BQ	80	ASN
45	BS	57	ASN
45	BS	61	ASN
46	BU	26	ASN
46	BU	53	GLN
46	BU	65	GLN
46	BU	68	ASN
46	BU	73	ASN
47	BF	51	ASN
47	BF	126	ASN
47	BF	134	GLN
48	BG	127	GLN
49	BR	6	GLN
49	BR	12	HIS
49	BR	18	GLN
49	BR	43	ASN
49	BR	86	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	23	ASN
51	BZ	34	HIS
51	BZ	36	HIS
52	BW	11	ASN
52	BW	49	ASN
52	BW	75	ASN
3	CD	35	GLN
3	CD	53	GLN
3	CD	70	GLN

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Mol	Chain	Res	Type
3	CD	73	ASN
3	CD	84	ASN
3	CD	115	GLN
3	CD	119	HIS
3	CD	135	GLN
3	CD	151	GLN
3	CD	195	ASN
4	CE	72	ASN
4	CE	131	ASN
4	CE	145	ASN
5	CF	3	HIS
5	CF	17	GLN
7	CH	3	GLN
7	CH	37	ASN
7	CH	66	GLN
7	CH	75	GLN
7	CH	117	GLN
10	CK	21	HIS
10	CK	28	ASN
10	CK	39	ASN
10	CK	80	ASN
11	CL	4	ASN
11	CL	19	ASN
11	CL	28	GLN
11	CL	45	ASN
11	CL	74	GLN
13	CP	18	GLN
14	CQ	8	GLN
15	CR	51	GLN
17	CT	74	HIS
17	CT	83	ASN
2	CC	2	GLN
2	CC	31	ASN
2	CC	40	GLN
2	CC	68	HIS
2	CC	139	ASN
2	CC	184	ASN
6	CG	27	ASN
6	CG	67	ASN
6	CG	121	ASN
6	CG	152	HIS
8	CI	30	ASN

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Mol	Chain	Res	Type
8	CI	31	GLN
8	CI	80	HIS
9	CJ	20	GLN
9	CJ	70	HIS
9	CJ	99	GLN
12	CM	7	ASN
21	CN	48	GLN
21	CN	59	GLN
21	CN	65	GLN
21	CN	70	HIS
16	CS	42	ASN
18	CB	35	ASN
18	CB	38	HIS
18	CB	50	ASN
18	CB	92	ASN
18	CB	119	GLN
18	CB	176	ASN
20	CO	35	GLN
20	CO	38	HIS
20	CO	62	GLN
24	DI	5	GLN
24	DI	11	GLN
24	DI	33	ASN
25	DC	36	ASN
25	DC	43	ASN
25	DC	45	ASN
25	DC	59	GLN
25	DC	89	ASN
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	130	GLN
26	DD	136	ASN
26	DD	148	GLN
26	DD	164	GLN
27	DK	3	GLN
27	DK	13	ASN
27	DK	88	ASN

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Mol	Chain	Res	Type
27	DK	89	ASN
28	DP	6	GLN
28	DP	40	GLN
28	DP	74	GLN
28	DP	76	HIS
28	DP	114	ASN
29	DE	24	ASN
29	DE	30	GLN
29	DE	62	GLN
29	DE	90	GLN
29	DE	97	ASN
29	DE	156	ASN
29	DE	195	GLN
30	DY	33	HIS
30	DY	48	ASN
31	D0	3	GLN
32	D4	13	ASN
32	D4	35	GLN
32	D4	37	GLN
34	D3	27	ASN
34	D3	30	HIS
35	DV	49	ASN
35	DV	51	GLN
35	DV	80	HIS
35	DV	87	GLN
36	D2	13	ASN
36	D2	16	HIS
37	DL	4	ASN
37	DL	35	HIS
37	DL	54	GLN
37	DL	93	ASN
37	DL	99	ASN
38	DM	3	GLN
38	DM	17	ASN
39	DX	20	ASN
39	DX	25	GLN
39	DX	27	ASN
39	DX	31	GLN
39	DX	41	HIS
39	DX	45	GLN
40	DH	28	ASN
40	DH	66	ASN

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Mol	Chain	Res	Type
40	DH	119	ASN
40	DH	135	HIS
40	DH	145	ASN
41	DJ	58	ASN
41	DJ	86	GLN
41	DJ	130	HIS
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	100	HIS
44	DQ	51	GLN
44	DQ	55	GLN
44	DQ	80	ASN
45	DS	57	ASN
45	DS	61	ASN
46	DU	26	ASN
46	DU	53	GLN
46	DU	65	GLN
46	DU	68	ASN
46	DU	73	ASN
47	DF	51	ASN
47	DF	126	ASN
47	DF	134	GLN
48	DG	127	GLN
49	DR	6	GLN
49	DR	12	HIS
49	DR	18	GLN
49	DR	43	ASN
49	DR	82	HIS
49	DR	86	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	23	ASN
51	DZ	36	HIS
52	DW	11	ASN

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Mol	Chain	Res	Type
52	DW	49	ASN
52	DW	56	HIS
52	DW	75	ASN

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1529/1542 (99%)	285 (18%)	20 (1%)
1	CA	1529/1542 (99%)	255 (16%)	20 (1%)
22	BA	116/120 (96%)	21 (18%)	1 (0%)
22	DA	116/120 (96%)	20 (17%)	1 (0%)
23	BB	2837/2904 (97%)	444 (15%)	16 (0%)
23	DB	2838/2904 (97%)	437 (15%)	20 (0%)
All	All	8965/9132 (98%)	1462 (16%)	78 (0%)

All (1462) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	9	G
1	AA	14	U
1	AA	15	G
1	AA	32	A
1	AA	39	G
1	AA	47	C
1	AA	48	C
1	AA	51	A
1	AA	52	C
1	AA	55	A
1	AA	65	A
1	AA	71	A
1	AA	72	A
1	AA	80	A
1	AA	81	A
1	AA	82	G
1	AA	83	C
1	AA	84	U
1	AA	85	U
1	AA	86	G
1	AA	88	U
1	AA	89	U
1	AA	92	U

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Mol	Chain	Res	Type
1	AA	93	U
1	AA	95	C
1	AA	98	A
1	AA	99	C
1	AA	121	U
1	AA	122	G
1	AA	131	A
1	AA	149	A
1	AA	164	G
1	AA	182	A
1	AA	190	A
1	AA	197	A
1	AA	205	A
1	AA	206	C
1	AA	208	U
1	AA	209	U
1	AA	210	C
1	AA	226	G
1	AA	233	C
1	AA	239	U
1	AA	240	G
1	AA	243	A
1	AA	244	U
1	AA	245	U
1	AA	247	G
1	AA	250	A
1	AA	251	G
1	AA	253	A
1	AA	256	U
1	AA	257	G
1	AA	258	G
1	AA	262	A
1	AA	266	G
1	AA	267	C
1	AA	280	C
1	AA	289	G
1	AA	316	C
1	AA	321	A
1	AA	328	C
1	AA	329	A
1	AA	330	C
1	AA	332	G

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Mol	Chain	Res	Type
1	AA	352	C
1	AA	354	G
1	AA	367	U
1	AA	372	C
1	AA	373	A
1	AA	381	C
1	AA	392	C
1	AA	397	A
1	AA	398	U
1	AA	406	G
1	AA	408	A
1	AA	411	A
1	AA	412	A
1	AA	413	G
1	AA	414	A
1	AA	415	A
1	AA	421	U
1	AA	422	C
1	AA	424	G
1	AA	429	U
1	AA	430	A
1	AA	435	A
1	AA	438	U
1	AA	461	A
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
1	AA	485	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

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Mol	Chain	Res	Type
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	688	G
1	AA	700	G
1	AA	703	G
1	AA	721	G
1	AA	724	G
1	AA	731	G
1	AA	733	G
1	AA	747	A
1	AA	755	G
1	AA	777	A
1	AA	781	A
1	AA	787	A
1	AA	793	U
1	AA	794	A
1	AA	812	G
1	AA	815	A
1	AA	817	C
1	AA	818	G
1	AA	819	A
1	AA	828	U
1	AA	841	C
1	AA	842	U
1	AA	843	U
1	AA	844	G
1	AA	845	A
1	AA	846	G
1	AA	914	A
1	AA	926	G
1	AA	927	G
1	AA	931	C
1	AA	934	C
1	AA	935	A
1	AA	939	G

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Mol	Chain	Res	Type
1	AA	958	A
1	AA	960	U
1	AA	961	U
1	AA	966	G
1	AA	968	A
1	AA	969	A
1	AA	971	G
1	AA	974	A
1	AA	976	G
1	AA	977	A
1	AA	991	U
1	AA	992	U
1	AA	993	G
1	AA	994	A
1	AA	998	C
1	AA	1000	A
1	AA	1003	G
1	AA	1004	A
1	AA	1007	U
1	AA	1009	U
1	AA	1010	U
1	AA	1013	G
1	AA	1017	U
1	AA	1020	G
1	AA	1022	A
1	AA	1024	G
1	AA	1026	G
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	1035	A
1	AA	1040	U
1	AA	1041	G
1	AA	1049	U
1	AA	1050	G
1	AA	1053	G
1	AA	1054	C
1	AA	1055	A
1	AA	1056	U

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Mol	Chain	Res	Type
1	AA	1063	C
1	AA	1064	G
1	AA	1065	U
1	AA	1066	C
1	AA	1091	U
1	AA	1092	A
1	AA	1094	G
1	AA	1095	U
1	AA	1099	G
1	AA	1101	A
1	AA	1127	G
1	AA	1136	C
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1152	A
1	AA	1158	C
1	AA	1159	U
1	AA	1160	G
1	AA	1167	A
1	AA	1168	U
1	AA	1171	A
1	AA	1181	G
1	AA	1184	G
1	AA	1196	A
1	AA	1197	A
1	AA	1201	A
1	AA	1202	U
1	AA	1209	C
1	AA	1211	U
1	AA	1212	U
1	AA	1213	A
1	AA	1214	C
1	AA	1224	U
1	AA	1225	A
1	AA	1226	C
1	AA	1227	A
1	AA	1228	C
1	AA	1238	A
1	AA	1240	U
1	AA	1241	G
1	AA	1245	C

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Mol	Chain	Res	Type
1	AA	1256	A
1	AA	1257	A
1	AA	1258	G
1	AA	1278	G
1	AA	1280	A
1	AA	1281	C
1	AA	1285	A
1	AA	1286	U
1	AA	1289	A
1	AA	1298	U
1	AA	1300	G
1	AA	1302	C
1	AA	1303	C
1	AA	1305	G
1	AA	1307	U
1	AA	1316	G
1	AA	1317	C
1	AA	1319	A
1	AA	1320	C
1	AA	1323	G
1	AA	1324	A
1	AA	1332	A
1	AA	1338	G
1	AA	1345	U
1	AA	1353	G
1	AA	1362	A
1	AA	1363	A
1	AA	1364	U
1	AA	1380	U
1	AA	1381	U
1	AA	1398	A
1	AA	1408	A
1	AA	1411	C
1	AA	1419	G
1	AA	1429	A
1	AA	1432	G
1	AA	1446	A
1	AA	1448	C
1	AA	1452	C
1	AA	1454	G
1	AA	1491	G
1	AA	1492	A

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Mol	Chain	Res	Type
1	AA	1497	G
1	AA	1503	A
1	AA	1506	U
1	AA	1517	G
1	AA	1519	A
1	AA	1520	C
1	AA	1529	G
1	AA	1530	G
1	AA	1533	C
1	AA	1534	A
22	BA	13	G
22	BA	15	A
22	BA	16	G
22	BA	24	G
22	BA	25	U
22	BA	26	C
22	BA	27	C
22	BA	30	C
22	BA	35	C
22	BA	36	C
22	BA	42	C
22	BA	43	C
22	BA	44	G
22	BA	45	A
22	BA	56	G
22	BA	67	G
22	BA	88	C
22	BA	89	U
22	BA	90	C
22	BA	99	A
22	BA	109	A
23	BB	2	G
23	BB	34	U
23	BB	46	G
23	BB	63	A
23	BB	64	A
23	BB	71	A
23	BB	72	U
23	BB	73	A
23	BB	74	A
23	BB	75	G
23	BB	79	C

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Mol	Chain	Res	Type
23	BB	83	A
23	BB	91	A
23	BB	96	C
23	BB	99	U
23	BB	100	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	135	U
23	BB	137	U
23	BB	139	U
23	BB	140	C
23	BB	141	G
23	BB	142	A
23	BB	143	C
23	BB	144	A
23	BB	160	A
23	BB	162	U
23	BB	163	C
23	BB	165	A
23	BB	174	U
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	255	A
23	BB	265	A
23	BB	266	G
23	BB	267	C
23	BB	277	G

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Mol	Chain	Res	Type
23	BB	278	A
23	BB	279	A
23	BB	281	C
23	BB	299	A
23	BB	302	C
23	BB	311	A
23	BB	323	C
23	BB	329	G
23	BB	330	A
23	BB	331	C
23	BB	333	G
23	BB	343	C
23	BB	346	A
23	BB	349	U
23	BB	353	C
23	BB	355	U
23	BB	371	A
23	BB	372	G
23	BB	386	G
23	BB	387	U
23	BB	395	U
23	BB	396	G
23	BB	411	G
23	BB	412	A
23	BB	424	G
23	BB	451	U
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	512	G
23	BB	527	C
23	BB	532	A
23	BB	533	G
23	BB	544	C

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Mol	Chain	Res	Type
23	BB	546	U
23	BB	547	A
23	BB	548	G
23	BB	549	G
23	BB	550	C
23	BB	563	A
23	BB	573	U
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	622	G
23	BB	627	A
23	BB	632	A
23	BB	637	A
23	BB	645	C
23	BB	646	U
23	BB	654	A
23	BB	655	A
23	BB	671	C
23	BB	686	U
23	BB	704	G
23	BB	718	A
23	BB	719	C
23	BB	730	A
23	BB	747	U
23	BB	757	G
23	BB	775	G
23	BB	782	A
23	BB	784	G
23	BB	785	G
23	BB	786	C
23	BB	805	G
23	BB	812	C
23	BB	819	A
23	BB	827	U
23	BB	828	U
23	BB	847	U
23	BB	859	G

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Mol	Chain	Res	Type
23	BB	876	C
23	BB	878	A
23	BB	899	A
23	BB	910	A
23	BB	912	C
23	BB	931	U
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	990	A
23	BB	991	C
23	BB	995	C
23	BB	996	A
23	BB	1005	C
23	BB	1012	U
23	BB	1013	C
23	BB	1022	G
23	BB	1023	U
23	BB	1024	G
23	BB	1025	G
23	BB	1033	U
23	BB	1045	C
23	BB	1046	A
23	BB	1047	G
23	BB	1055	G
23	BB	1056	G
23	BB	1062	G
23	BB	1070	A
23	BB	1088	A
23	BB	1110	G
23	BB	1111	A
23	BB	1112	G
23	BB	1126	A
23	BB	1129	A
23	BB	1132	U
23	BB	1133	A
23	BB	1135	C

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Mol	Chain	Res	Type
23	BB	1136	G
23	BB	1139	G
23	BB	1141	U
23	BB	1142	A
23	BB	1156	A
23	BB	1174	U
23	BB	1177	G
23	BB	1179	G
23	BB	1186	G
23	BB	1195	G
23	BB	1205	A
23	BB	1211	C
23	BB	1212	G
23	BB	1237	A
23	BB	1238	G
23	BB	1242	U
23	BB	1250	G
23	BB	1251	C
23	BB	1253	A
23	BB	1256	G
23	BB	1266	G
23	BB	1271	G
23	BB	1272	A
23	BB	1273	U
23	BB	1275	A
23	BB	1276	A
23	BB	1301	A
23	BB	1302	A
23	BB	1324	G
23	BB	1325	U
23	BB	1330	C
23	BB	1337	G
23	BB	1341	G
23	BB	1345	C
23	BB	1350	C
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	1386	C

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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	1421	G
23	BB	1427	A
23	BB	1428	C
23	BB	1434	A
23	BB	1453	A
23	BB	1454	C
23	BB	1459	G
23	BB	1460	U
23	BB	1461	C
23	BB	1470	A
23	BB	1476	U
23	BB	1477	A
23	BB	1482	G
23	BB	1493	C
23	BB	1504	A
23	BB	1507	C
23	BB	1508	A
23	BB	1509	A
23	BB	1524	G
23	BB	1535	A
23	BB	1537	G
23	BB	1540	G
23	BB	1552	A
23	BB	1559	U
23	BB	1569	A
23	BB	1578	U
23	BB	1584	U
23	BB	1588	G
23	BB	1599	U
23	BB	1607	C
23	BB	1608	A
23	BB	1610	A
23	BB	1613	G
23	BB	1616	A
23	BB	1619	G
23	BB	1626	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	1714	U
23	BB	1715	G
23	BB	1724	G
23	BB	1729	U
23	BB	1730	C
23	BB	1731	G
23	BB	1733	G
23	BB	1738	G
23	BB	1758	U
23	BB	1764	C
23	BB	1773	A
23	BB	1781	U
23	BB	1800	C
23	BB	1801	A
23	BB	1816	C
23	BB	1829	A
23	BB	1870	C
23	BB	1871	A
23	BB	1884	G
23	BB	1906	G
23	BB	1915	U
23	BB	1927	A
23	BB	1929	G
23	BB	1930	G
23	BB	1936	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
23	BB	1997	C
23	BB	2022	U
23	BB	2023	C

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Mol	Chain	Res	Type
23	BB	2031	A
23	BB	2033	A
23	BB	2034	U
23	BB	2035	G
23	BB	2043	C
23	BB	2055	C
23	BB	2056	G
23	BB	2060	A
23	BB	2061	G
23	BB	2062	A
23	BB	2069	G
23	BB	2071	A
23	BB	2072	C
23	BB	2100	G
23	BB	2102	G
23	BB	2103	C
23	BB	2110	G
23	BB	2134	A
23	BB	2138	G
23	BB	2139	U
23	BB	2142	A
23	BB	2143	C
23	BB	2144	G
23	BB	2145	C
23	BB	2146	C
23	BB	2147	A
23	BB	2149	U
23	BB	2153	C
23	BB	2154	A
23	BB	2155	U
23	BB	2180	U
23	BB	2181	U
23	BB	2193	G
23	BB	2198	A
23	BB	2199	A
23	BB	2203	U
23	BB	2204	G
23	BB	2211	A
23	BB	2212	A
23	BB	2213	U
23	BB	2214	C
23	BB	2225	A

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Mol	Chain	Res	Type
23	BB	2238	G
23	BB	2239	G
23	BB	2250	G
23	BB	2266	A
23	BB	2283	C
23	BB	2287	A
23	BB	2304	G
23	BB	2305	U
23	BB	2307	G
23	BB	2308	G
23	BB	2309	A
23	BB	2311	A
23	BB	2321	U
23	BB	2322	A
23	BB	2325	G
23	BB	2333	A
23	BB	2335	A
23	BB	2337	G
23	BB	2345	G
23	BB	2347	C
23	BB	2361	G
23	BB	2379	G
23	BB	2383	G
23	BB	2385	C
23	BB	2396	G
23	BB	2402	U
23	BB	2406	A
23	BB	2423	U
23	BB	2426	A
23	BB	2429	G
23	BB	2430	A
23	BB	2439	A
23	BB	2441	U
23	BB	2448	A
23	BB	2472	G
23	BB	2476	A
23	BB	2477	U
23	BB	2491	U
23	BB	2492	U
23	BB	2494	G
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	2572	A
23	BB	2573	C
23	BB	2574	G
23	BB	2577	A
23	BB	2586	U
23	BB	2602	A
23	BB	2609	U
23	BB	2613	U
23	BB	2629	U
23	BB	2639	A
23	BB	2646	C
23	BB	2654	A
23	BB	2666	C
23	BB	2682	A
23	BB	2689	U
23	BB	2690	U
23	BB	2714	G
23	BB	2726	A
23	BB	2744	G
23	BB	2748	A
23	BB	2750	A
23	BB	2751	G
23	BB	2752	C
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	2834	G

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Mol	Chain	Res	Type
23	BB	2836	U
23	BB	2850	A
23	BB	2861	U
23	BB	2866	U
23	BB	2867	G
23	BB	2868	A
23	BB	2872	A
23	BB	2873	A
23	BB	2880	C
23	BB	2883	A
23	BB	2894	G
23	BB	2901	C
23	BB	2903	U
1	CA	9	G
1	CA	14	U
1	CA	15	G
1	CA	32	A
1	CA	39	G
1	CA	47	C
1	CA	48	C
1	CA	51	A
1	CA	52	C
1	CA	55	A
1	CA	61	G
1	CA	62	U
1	CA	67	C
1	CA	68	G
1	CA	71	A
1	CA	72	A
1	CA	76	G
1	CA	78	A
1	CA	83	C
1	CA	85	U
1	CA	87	C
1	CA	88	U
1	CA	94	G
1	CA	97	G
1	CA	121	U
1	CA	122	G
1	CA	131	A
1	CA	149	A
1	CA	164	G

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Mol	Chain	Res	Type
1	CA	182	A
1	CA	190	A
1	CA	197	A
1	CA	205	A
1	CA	206	C
1	CA	208	U
1	CA	209	U
1	CA	210	C
1	CA	226	G
1	CA	239	U
1	CA	240	G
1	CA	243	A
1	CA	244	U
1	CA	245	U
1	CA	247	G
1	CA	250	A
1	CA	251	G
1	CA	253	A
1	CA	256	U
1	CA	257	G
1	CA	258	G
1	CA	262	A
1	CA	266	G
1	CA	267	C
1	CA	280	C
1	CA	289	G
1	CA	316	C
1	CA	321	A
1	CA	328	C
1	CA	329	A
1	CA	332	G
1	CA	352	C
1	CA	354	G
1	CA	367	U
1	CA	372	C
1	CA	373	A
1	CA	381	C
1	CA	392	C
1	CA	397	A
1	CA	406	G
1	CA	408	A
1	CA	411	A

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Mol	Chain	Res	Type
1	CA	412	A
1	CA	413	G
1	CA	414	A
1	CA	415	A
1	CA	421	U
1	CA	422	C
1	CA	424	G
1	CA	429	U
1	CA	430	A
1	CA	435	A
1	CA	438	U
1	CA	461	A
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	493	A
1	CA	500	G
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	688	G
1	CA	700	G
1	CA	703	G

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Mol	Chain	Res	Type
1	CA	721	G
1	CA	724	G
1	CA	731	G
1	CA	733	G
1	CA	747	A
1	CA	755	G
1	CA	777	A
1	CA	781	A
1	CA	787	A
1	CA	793	U
1	CA	794	A
1	CA	812	G
1	CA	815	A
1	CA	817	C
1	CA	818	G
1	CA	819	A
1	CA	828	U
1	CA	841	C
1	CA	842	U
1	CA	843	U
1	CA	844	G
1	CA	845	A
1	CA	846	G
1	CA	914	A
1	CA	926	G
1	CA	934	C
1	CA	935	A
1	CA	960	U
1	CA	961	U
1	CA	964	A
1	CA	969	A
1	CA	971	G
1	CA	974	A
1	CA	976	G
1	CA	977	A
1	CA	978	A
1	CA	983	A
1	CA	984	C
1	CA	993	G
1	CA	1003	G
1	CA	1004	A
1	CA	1010	U

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Mol	Chain	Res	Type
1	CA	1019	A
1	CA	1026	G
1	CA	1029	U
1	CA	1030	U
1	CA	1031	C
1	CA	1033	G
1	CA	1043	G
1	CA	1050	G
1	CA	1053	G
1	CA	1054	C
1	CA	1064	G
1	CA	1065	U
1	CA	1066	C
1	CA	1068	G
1	CA	1085	U
1	CA	1094	G
1	CA	1095	U
1	CA	1101	A
1	CA	1109	C
1	CA	1124	G
1	CA	1125	U
1	CA	1127	G
1	CA	1128	C
1	CA	1136	C
1	CA	1137	C
1	CA	1138	G
1	CA	1139	G
1	CA	1140	C
1	CA	1145	A
1	CA	1158	C
1	CA	1159	U
1	CA	1160	G
1	CA	1168	U
1	CA	1171	A
1	CA	1184	G
1	CA	1196	A
1	CA	1197	A
1	CA	1201	A
1	CA	1202	U
1	CA	1211	U
1	CA	1212	U
1	CA	1213	A

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Mol	Chain	Res	Type
1	CA	1215	G
1	CA	1225	A
1	CA	1226	C
1	CA	1227	A
1	CA	1236	A
1	CA	1237	C
1	CA	1238	A
1	CA	1240	U
1	CA	1241	G
1	CA	1248	A
1	CA	1250	A
1	CA	1256	A
1	CA	1257	A
1	CA	1258	G
1	CA	1270	G
1	CA	1273	C
1	CA	1278	G
1	CA	1280	A
1	CA	1281	C
1	CA	1285	A
1	CA	1287	A
1	CA	1288	A
1	CA	1289	A
1	CA	1297	G
1	CA	1301	U
1	CA	1302	C
1	CA	1305	G
1	CA	1317	C
1	CA	1319	A
1	CA	1320	C
1	CA	1323	G
1	CA	1346	A
1	CA	1348	U
1	CA	1353	G
1	CA	1363	A
1	CA	1364	U
1	CA	1368	A
1	CA	1379	G
1	CA	1381	U
1	CA	1398	A
1	CA	1410	A
1	CA	1419	G

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Mol	Chain	Res	Type
1	CA	1429	A
1	CA	1432	G
1	CA	1446	A
1	CA	1448	C
1	CA	1452	C
1	CA	1454	G
1	CA	1492	A
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	1533	C
1	CA	1534	A
22	DA	13	G
22	DA	15	A
22	DA	16	G
22	DA	24	G
22	DA	25	U
22	DA	26	C
22	DA	27	C
22	DA	30	C
22	DA	35	C
22	DA	36	C
22	DA	42	C
22	DA	43	C
22	DA	44	G
22	DA	45	A
22	DA	67	G
22	DA	88	C
22	DA	89	U
22	DA	90	C
22	DA	99	A
22	DA	109	A
23	DB	3	U
23	DB	14	A
23	DB	34	U
23	DB	46	G
23	DB	63	A
23	DB	64	A

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Mol	Chain	Res	Type
23	DB	71	A
23	DB	72	U
23	DB	73	A
23	DB	74	A
23	DB	75	G
23	DB	79	C
23	DB	83	A
23	DB	91	A
23	DB	96	C
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	139	U
23	DB	140	C
23	DB	141	G
23	DB	144	A
23	DB	160	A
23	DB	162	U
23	DB	163	C
23	DB	165	A
23	DB	174	U
23	DB	180	G
23	DB	181	A
23	DB	196	A
23	DB	199	A
23	DB	215	G
23	DB	216	A
23	DB	221	A
23	DB	222	A
23	DB	230	G
23	DB	233	A
23	DB	248	G
23	DB	250	G
23	DB	255	A
23	DB	265	A
23	DB	266	G

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Mol	Chain	Res	Type
23	DB	267	C
23	DB	277	G
23	DB	278	A
23	DB	281	C
23	DB	282	A
23	DB	284	U
23	DB	287	G
23	DB	299	A
23	DB	302	C
23	DB	311	A
23	DB	323	C
23	DB	329	G
23	DB	330	A
23	DB	331	C
23	DB	333	G
23	DB	343	C
23	DB	346	A
23	DB	353	C
23	DB	354	A
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	411	G
23	DB	412	A
23	DB	424	G
23	DB	451	U
23	DB	455	C
23	DB	456	C
23	DB	457	A
23	DB	479	A
23	DB	480	A
23	DB	481	G
23	DB	491	G
23	DB	504	A
23	DB	505	A
23	DB	508	A
23	DB	509	C
23	DB	512	G

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Mol	Chain	Res	Type
23	DB	527	C
23	DB	531	C
23	DB	532	A
23	DB	533	G
23	DB	545	U
23	DB	546	U
23	DB	547	A
23	DB	548	G
23	DB	549	G
23	DB	550	C
23	DB	563	A
23	DB	573	U
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	622	G
23	DB	627	A
23	DB	632	A
23	DB	637	A
23	DB	645	C
23	DB	646	U
23	DB	654	A
23	DB	655	A
23	DB	671	C
23	DB	686	U
23	DB	704	G
23	DB	718	A
23	DB	719	C
23	DB	730	A
23	DB	747	U
23	DB	757	G
23	DB	775	G
23	DB	782	A
23	DB	784	G
23	DB	785	G
23	DB	786	C
23	DB	805	G
23	DB	812	C

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Mol	Chain	Res	Type
23	DB	819	A
23	DB	827	U
23	DB	828	U
23	DB	847	U
23	DB	859	G
23	DB	876	C
23	DB	878	A
23	DB	899	A
23	DB	910	A
23	DB	912	C
23	DB	931	U
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	990	A
23	DB	991	C
23	DB	995	C
23	DB	996	A
23	DB	1005	C
23	DB	1012	U
23	DB	1013	C
23	DB	1022	G
23	DB	1023	U
23	DB	1024	G
23	DB	1025	G
23	DB	1033	U
23	DB	1047	G
23	DB	1048	A
23	DB	1070	A
23	DB	1088	A
23	DB	1112	G
23	DB	1115	G
23	DB	1116	G
23	DB	1126	A
23	DB	1129	A
23	DB	1132	U
23	DB	1133	A

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Mol	Chain	Res	Type
23	DB	1135	C
23	DB	1136	G
23	DB	1139	G
23	DB	1141	U
23	DB	1142	A
23	DB	1156	A
23	DB	1174	U
23	DB	1176	U
23	DB	1179	G
23	DB	1186	G
23	DB	1195	G
23	DB	1205	A
23	DB	1211	C
23	DB	1212	G
23	DB	1237	A
23	DB	1238	G
23	DB	1242	U
23	DB	1250	G
23	DB	1251	C
23	DB	1253	A
23	DB	1256	G
23	DB	1266	G
23	DB	1271	G
23	DB	1272	A
23	DB	1273	U
23	DB	1275	A
23	DB	1276	A
23	DB	1301	A
23	DB	1302	A
23	DB	1324	G
23	DB	1325	U
23	DB	1330	C
23	DB	1337	G
23	DB	1341	G
23	DB	1345	C
23	DB	1350	C
23	DB	1352	U
23	DB	1365	A
23	DB	1368	G
23	DB	1379	U
23	DB	1383	A
23	DB	1384	A

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Mol	Chain	Res	Type
23	DB	1386	C
23	DB	1396	U
23	DB	1397	U
23	DB	1416	G
23	DB	1419	A
23	DB	1421	G
23	DB	1427	A
23	DB	1428	C
23	DB	1434	A
23	DB	1453	A
23	DB	1454	C
23	DB	1459	G
23	DB	1460	U
23	DB	1461	C
23	DB	1470	A
23	DB	1476	U
23	DB	1477	A
23	DB	1482	G
23	DB	1493	C
23	DB	1504	A
23	DB	1507	C
23	DB	1508	A
23	DB	1509	A
23	DB	1524	G
23	DB	1535	A
23	DB	1537	G
23	DB	1540	G
23	DB	1552	A
23	DB	1559	U
23	DB	1569	A
23	DB	1578	U
23	DB	1584	U
23	DB	1588	G
23	DB	1599	U
23	DB	1607	C
23	DB	1608	A
23	DB	1610	A
23	DB	1613	G
23	DB	1616	A
23	DB	1619	G
23	DB	1626	A
23	DB	1634	A

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Mol	Chain	Res	Type
23	DB	1635	A
23	DB	1647	U
23	DB	1648	U
23	DB	1674	G
23	DB	1700	A
23	DB	1701	A
23	DB	1714	U
23	DB	1715	G
23	DB	1724	G
23	DB	1729	U
23	DB	1730	C
23	DB	1731	G
23	DB	1733	G
23	DB	1738	G
23	DB	1758	U
23	DB	1764	C
23	DB	1773	A
23	DB	1781	U
23	DB	1800	C
23	DB	1801	A
23	DB	1816	C
23	DB	1829	A
23	DB	1870	C
23	DB	1871	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	1936	A
23	DB	1938	A
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

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Mol	Chain	Res	Type
23	DB	1997	C
23	DB	2022	U
23	DB	2023	C
23	DB	2031	A
23	DB	2033	A
23	DB	2034	U
23	DB	2035	G
23	DB	2043	C
23	DB	2055	C
23	DB	2056	G
23	DB	2060	A
23	DB	2061	G
23	DB	2062	A
23	DB	2069	G
23	DB	2072	C
23	DB	2096	C
23	DB	2099	U
23	DB	2108	A
23	DB	2109	U
23	DB	2110	G
23	DB	2134	A
23	DB	2135	A
23	DB	2138	G
23	DB	2144	G
23	DB	2145	C
23	DB	2147	A
23	DB	2148	G
23	DB	2157	G
23	DB	2180	U
23	DB	2181	U
23	DB	2184	A
23	DB	2188	U
23	DB	2191	A
23	DB	2193	G
23	DB	2198	A
23	DB	2199	A
23	DB	2203	U
23	DB	2204	G
23	DB	2211	A
23	DB	2212	A
23	DB	2213	U
23	DB	2214	C

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Mol	Chain	Res	Type
23	DB	2225	A
23	DB	2238	G
23	DB	2239	G
23	DB	2266	A
23	DB	2283	C
23	DB	2287	A
23	DB	2297	A
23	DB	2304	G
23	DB	2305	U
23	DB	2307	G
23	DB	2308	G
23	DB	2309	A
23	DB	2311	A
23	DB	2321	U
23	DB	2322	A
23	DB	2325	G
23	DB	2333	A
23	DB	2335	A
23	DB	2337	G
23	DB	2345	G
23	DB	2347	C
23	DB	2361	G
23	DB	2379	G
23	DB	2383	G
23	DB	2385	C
23	DB	2396	G
23	DB	2402	U
23	DB	2406	A
23	DB	2423	U
23	DB	2426	A
23	DB	2429	G
23	DB	2430	A
23	DB	2434	A
23	DB	2441	U
23	DB	2448	A
23	DB	2472	G
23	DB	2476	A
23	DB	2477	U
23	DB	2491	U
23	DB	2492	U
23	DB	2494	G
23	DB	2501	C

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Mol	Chain	Res	Type
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	2572	A
23	DB	2573	C
23	DB	2574	G
23	DB	2577	A
23	DB	2586	U
23	DB	2602	A
23	DB	2609	U
23	DB	2613	U
23	DB	2629	U
23	DB	2639	A
23	DB	2646	C
23	DB	2654	A
23	DB	2682	A
23	DB	2689	U
23	DB	2690	U
23	DB	2714	G
23	DB	2726	A
23	DB	2744	G
23	DB	2748	A
23	DB	2751	G
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
23	DB	2800	A
23	DB	2802	G
23	DB	2808	G
23	DB	2820	A
23	DB	2821	A
23	DB	2834	G
23	DB	2836	U

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Mol	Chain	Res	Type
23	DB	2850	A
23	DB	2861	U
23	DB	2866	U
23	DB	2867	G
23	DB	2868	A
23	DB	2872	A
23	DB	2873	A
23	DB	2880	C
23	DB	2883	A
23	DB	2894	G
23	DB	2903	U

All (78) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	51	A
1	AA	239	U
1	AA	243	A
1	AA	279	A
1	AA	328	C
1	AA	366	A
1	AA	372	C
1	AA	429	U
1	AA	484	G
1	AA	960	U
1	AA	975	A
1	AA	1049	U
1	AA	1054	C
1	AA	1065	U
1	AA	1201	A
1	AA	1302	C
1	AA	1319	A
1	AA	1362	A
1	AA	1397	C
1	AA	1451	U
22	BA	66	A
23	BB	63	A
23	BB	162	U
23	BB	670	A
23	BB	1210	G
23	BB	1301	A
23	BB	1607	C

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Mol	Chain	Res	Type
23	BB	1647	U
23	BB	2062	A
23	BB	2213	U
23	BB	2282	G
23	BB	2324	U
23	BB	2336	A
23	BB	2425	A
23	BB	2756	U
23	BB	2867	G
23	BB	2894	G
1	CA	51	A
1	CA	239	U
1	CA	243	A
1	CA	279	A
1	CA	328	C
1	CA	366	A
1	CA	372	C
1	CA	429	U
1	CA	484	G
1	CA	960	U
1	CA	975	A
1	CA	1049	U
1	CA	1065	U
1	CA	1067	A
1	CA	1201	A
1	CA	1226	C
1	CA	1300	G
1	CA	1301	U
1	CA	1397	C
1	CA	1451	U
22	DA	66	A
23	DB	63	A
23	DB	139	U
23	DB	162	U
23	DB	544	C
23	DB	670	A
23	DB	1126	A
23	DB	1210	G
23	DB	1301	A
23	DB	1607	C
23	DB	2062	A
23	DB	2133	G

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Mol	Chain	Res	Type
23	DB	2213	U
23	DB	2282	G
23	DB	2324	U
23	DB	2336	A
23	DB	2425	A
23	DB	2732	G
23	DB	2756	U
23	DB	2867	G
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 348 ligands modelled in this entry, 342 are monoatomic - leaving 6 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	1.93	13 (28%)	58,67,67	1.17	6 (10%)
55	SCM	AA	1662	-	23,25,25	1.67	8 (34%)	22,39,39	1.03	1 (4%)
53	NMY	BB	3001	-	45,45,45	1.86	12 (26%)	58,67,67	1.20	6 (10%)
53	NMY	CA	1601	-	45,45,45	1.85	13 (28%)	58,67,67	1.21	6 (10%)
55	SCM	CA	1661	-	23,25,25	1.67	7 (30%)	22,39,39	1.04	1 (4%)
53	NMY	DB	3001	-	45,45,45	1.90	13 (28%)	58,67,67	1.15	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
55	SCM	AA	1662	-	-	0/4/57/57	0/3/3/3
53	NMY	BB	3001	-	-	0/18/94/94	0/4/4/4
53	NMY	CA	1601	-	-	0/18/94/94	0/4/4/4
55	SCM	CA	1661	-	-	0/4/57/57	0/3/3/3
53	NMY	DB	3001	-	-	0/18/94/94	0/4/4/4

All (66) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	AA	1662	SCM	C5-C4	-2.03	1.52	1.54
53	DB	3001	NMY	C6-C5	2.01	1.57	1.52
53	CA	1601	NMY	C6-C5	2.04	1.57	1.52
53	AA	1601	NMY	C6-C5	2.05	1.57	1.52
53	CA	1601	NMY	C20-C21	2.07	1.57	1.52
53	AA	1601	NMY	C20-C21	2.09	1.57	1.52
53	BB	3001	NMY	C6-C5	2.10	1.57	1.52
53	DB	3001	NMY	C20-C21	2.16	1.58	1.52
53	DB	3001	NMY	C12-C7	2.17	1.58	1.53
53	BB	3001	NMY	C20-C21	2.18	1.58	1.52
55	AA	1662	SCM	O2B-C12	2.20	1.47	1.43
55	CA	1661	SCM	C12-C7	2.20	1.56	1.52
55	CA	1661	SCM	O5-C5	2.21	1.43	1.39
55	AA	1662	SCM	C3-C4	2.22	1.54	1.50
55	CA	1661	SCM	O2B-C12	2.24	1.47	1.43
53	DB	3001	NMY	C4-C5	2.25	1.57	1.53
53	AA	1601	NMY	C4-C5	2.25	1.57	1.53
55	AA	1662	SCM	O5-C5	2.25	1.43	1.39
53	CA	1601	NMY	C12-C7	2.25	1.58	1.53
53	DB	3001	NMY	O5-C5	2.27	1.50	1.44
53	AA	1601	NMY	O5-C5	2.27	1.50	1.44
53	BB	3001	NMY	C4-C5	2.28	1.57	1.53
55	AA	1662	SCM	C12-C7	2.29	1.57	1.52
53	BB	3001	NMY	C12-C7	2.30	1.58	1.53
53	AA	1601	NMY	C12-C7	2.30	1.58	1.53
53	DB	3001	NMY	C14-C15	2.31	1.58	1.53
53	CA	1601	NMY	C14-C15	2.31	1.58	1.53
53	CA	1601	NMY	C4-C5	2.31	1.58	1.53
53	BB	3001	NMY	C14-C15	2.32	1.58	1.53
53	BB	3001	NMY	O5-C5	2.33	1.50	1.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
53	AA	1601	NMY	C14-C15	2.36	1.58	1.53
55	AA	1662	SCM	O2B-C6	2.37	1.46	1.41
53	CA	1601	NMY	O5-C5	2.37	1.50	1.44
55	CA	1661	SCM	C3-C4	2.39	1.54	1.50
55	CA	1661	SCM	O2B-C6	2.49	1.46	1.41
53	BB	3001	NMY	O22-C22	2.53	1.50	1.44
53	DB	3001	NMY	O22-C22	2.54	1.50	1.44
53	CA	1601	NMY	O22-C22	2.61	1.50	1.44
53	AA	1601	NMY	O22-C22	2.63	1.50	1.44
53	CA	1601	NMY	O16-C13	2.72	1.46	1.41
53	AA	1601	NMY	C19-N23	2.73	1.51	1.47
53	CA	1601	NMY	C19-N23	2.74	1.51	1.47
53	CA	1601	NMY	C23-C22	2.76	1.59	1.52
53	AA	1601	NMY	C23-C22	2.77	1.59	1.52
53	BB	3001	NMY	C23-C22	2.78	1.59	1.52
53	BB	3001	NMY	C19-N23	2.80	1.51	1.47
53	DB	3001	NMY	C23-C22	2.80	1.59	1.52
55	AA	1662	SCM	C9-C8	2.81	1.58	1.53
55	CA	1661	SCM	C9-C8	2.82	1.58	1.53
53	DB	3001	NMY	C19-N23	2.85	1.51	1.47
55	CA	1661	SCM	C3-C2	2.87	1.57	1.51
55	AA	1662	SCM	C3-C2	2.88	1.57	1.51
53	DB	3001	NMY	O16-C13	3.34	1.47	1.41
53	BB	3001	NMY	O5-C1	3.49	1.50	1.41
53	DB	3001	NMY	O5-C1	3.52	1.50	1.41
53	AA	1601	NMY	O5-C1	3.53	1.50	1.41
53	CA	1601	NMY	O5-C1	3.61	1.51	1.41
53	AA	1601	NMY	O16-C13	4.43	1.49	1.41
53	CA	1601	NMY	C3-C2	4.48	1.59	1.53
53	DB	3001	NMY	O22-C18	4.59	1.53	1.41
53	BB	3001	NMY	O22-C18	4.59	1.53	1.41
53	AA	1601	NMY	O22-C18	4.61	1.53	1.41
53	CA	1601	NMY	O22-C18	4.68	1.53	1.41
53	DB	3001	NMY	C3-C2	4.70	1.59	1.53
53	BB	3001	NMY	C3-C2	4.72	1.59	1.53
53	AA	1601	NMY	C3-C2	4.78	1.59	1.53

All (26) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	CA	1661	SCM	C2M-C2-C3	-2.96	108.15	113.45
55	AA	1662	SCM	C2M-C2-C3	-2.88	108.28	113.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	DB	3001	NMY	O11-C13-C14	2.08	112.07	107.75
53	CA	1601	NMY	O11-C13-C14	2.14	112.21	107.75
53	CA	1601	NMY	O14-C14-C15	2.18	117.45	111.16
53	AA	1601	NMY	O11-C13-C14	2.20	112.32	107.75
53	AA	1601	NMY	O14-C14-C15	2.25	117.67	111.16
53	BB	3001	NMY	O11-C13-C14	2.26	112.44	107.75
53	CA	1601	NMY	O5-C5-C6	2.30	110.60	106.10
53	DB	3001	NMY	O5-C5-C6	2.33	110.66	106.10
53	AA	1601	NMY	O5-C5-C6	2.34	110.68	106.10
53	BB	3001	NMY	O5-C5-C6	2.37	110.74	106.10
53	BB	3001	NMY	O14-C14-C15	2.42	118.14	111.16
53	DB	3001	NMY	O14-C14-C15	2.48	118.31	111.16
53	DB	3001	NMY	C18-O22-C22	2.83	119.23	113.75
53	BB	3001	NMY	C18-O22-C22	2.83	119.24	113.75
53	BB	3001	NMY	O22-C22-C23	2.86	111.69	106.10
53	DB	3001	NMY	O22-C22-C23	2.90	111.77	106.10
53	AA	1601	NMY	C18-O22-C22	2.91	119.39	113.75
53	AA	1601	NMY	O22-C22-C23	2.91	111.79	106.10
53	CA	1601	NMY	C18-O22-C22	2.94	119.45	113.75
53	CA	1601	NMY	O22-C22-C23	2.97	111.91	106.10
53	DB	3001	NMY	O18-C18-C19	3.32	114.10	107.96
53	AA	1601	NMY	O18-C18-C19	3.32	114.11	107.96
53	CA	1601	NMY	O18-C18-C19	3.48	114.41	107.96
53	BB	3001	NMY	O18-C18-C19	3.50	114.44	107.96

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

3 monomers are involved in 7 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
55	AA	1662	SCM	5	0
55	CA	1661	SCM	1	0
53	DB	3001	NMY	1	0

## 5.7 Other polymers

There are no such residues in this entry.



## 5.8 Polymer linkage issues ⓘ

There are no chain breaks in this entry.



## 6 Fit of model and data ⓘ

### 6.1 Protein, DNA and RNA chains ⓘ

In the following table, the column labelled ‘#RSRZ> 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 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%)	-0.72	8 (0%)	91	88	16, 81, 159, 180	0
1	CA	1530/1542 (99%)	-0.66	1 (0%)	95	94	9, 57, 133, 180	0
2	AC	206/232 (88%)	0.47	20 (9%)	10	9	9, 76, 136, 180	0
2	CC	206/232 (88%)	0.30	16 (7%)	16	13	7, 75, 127, 180	0
3	AD	205/205 (100%)	0.63	25 (12%)	5	6	24, 92, 157, 180	0
3	CD	205/205 (100%)	0.52	16 (7%)	16	13	10, 64, 139, 180	0
4	AE	150/166 (90%)	0.52	13 (8%)	13	12	11, 74, 139, 176	0
4	CE	150/166 (90%)	0.82	25 (16%)	2	2	5, 61, 132, 180	0
5	AF	100/135 (74%)	1.06	17 (17%)	2	2	11, 86, 144, 172	0
5	CF	100/135 (74%)	0.58	9 (9%)	12	10	7, 83, 173, 180	0
6	AG	150/178 (84%)	0.25	9 (6%)	25	19	23, 104, 153, 180	0
6	CG	152/178 (85%)	-0.02	4 (2%)	59	49	27, 90, 147, 180	0
7	AH	129/129 (100%)	0.93	20 (15%)	3	3	13, 88, 155, 180	0
7	CH	129/129 (100%)	0.59	14 (10%)	7	7	5, 61, 127, 180	0
8	AI	127/129 (98%)	0.47	16 (12%)	5	6	36, 91, 150, 180	0
8	CI	127/129 (98%)	0.09	4 (3%)	52	43	20, 92, 148, 180	0
9	AJ	98/103 (95%)	0.42	4 (4%)	41	32	22, 94, 151, 180	0
9	CJ	98/103 (95%)	0.77	12 (12%)	5	6	17, 89, 156, 180	0
10	AK	117/128 (91%)	0.07	6 (5%)	32	24	14, 67, 125, 180	0
10	CK	117/128 (91%)	0.09	3 (2%)	59	49	5, 56, 125, 178	0
11	AL	123/123 (100%)	0.51	14 (11%)	7	7	19, 80, 133, 180	0
11	CL	123/123 (100%)	0.20	6 (4%)	33	25	7, 51, 135, 180	0
12	AM	114/117 (97%)	0.72	21 (18%)	2	2	56, 120, 166, 180	0
12	CM	113/117 (96%)	0.61	17 (15%)	3	3	38, 109, 165, 180	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
13	AP	82/82 (100%)	2.17	30 (36%) 0 0	38, 91, 152, 180	0
13	CP	80/82 (97%)	0.53	10 (12%) 5 6	6, 63, 141, 180	0
14	AQ	80/83 (96%)	0.87	12 (15%) 3 3	37, 99, 151, 180	0
14	CQ	81/83 (97%)	0.56	3 (3%) 45 36	17, 71, 129, 180	0
15	AR	55/74 (74%)	0.57	2 (3%) 46 37	16, 76, 149, 180	0
15	CR	55/74 (74%)	0.43	4 (7%) 18 14	21, 66, 126, 180	0
16	AS	79/91 (86%)	1.61	30 (37%) 0 0	55, 121, 180, 180	0
16	CS	80/91 (87%)	1.06	18 (22%) 1 1	70, 109, 174, 180	0
17	AT	85/86 (98%)	-0.19	0 100 100	49, 106, 179, 180	0
17	CT	85/86 (98%)	-0.05	2 (2%) 62 52	19, 65, 143, 159	0
18	AB	218/240 (90%)	0.25	18 (8%) 14 12	22, 94, 153, 180	0
18	CB	218/240 (90%)	0.77	35 (16%) 3 3	19, 102, 160, 180	0
19	AU	51/70 (72%)	0.27	2 (3%) 43 35	29, 101, 151, 180	0
19	CU	51/70 (72%)	0.44	4 (7%) 16 13	24, 113, 155, 180	0
20	AO	88/89 (98%)	0.54	7 (7%) 15 12	18, 83, 137, 179	0
20	CO	88/89 (98%)	-0.08	0 100 100	7, 60, 118, 161	0
21	AN	96/100 (96%)	0.73	12 (12%) 5 6	13, 98, 151, 180	0
21	CN	96/100 (96%)	0.89	20 (20%) 1 1	12, 81, 150, 180	0
22	BA	117/120 (97%)	-0.21	2 (1%) 73 64	35, 74, 117, 167	0
22	DA	117/120 (97%)	-0.50	1 (0%) 85 78	36, 86, 127, 180	0
23	BB	2841/2904 (97%)	-0.43	28 (0%) 84 76	6, 54, 148, 180	0
23	DB	2841/2904 (97%)	-0.43	15 (0%) 91 88	5, 48, 146, 180	0
24	BI	141/141 (100%)	2.72	78 (55%) 0 0	95, 172, 180, 180	0
24	DI	141/141 (100%)	2.07	61 (43%) 0 0	91, 179, 180, 180	0
25	BC	271/272 (99%)	0.82	42 (15%) 3 3	5, 50, 103, 180	0
25	DC	271/272 (99%)	0.46	17 (6%) 23 18	5, 40, 100, 146	0
26	BD	209/209 (100%)	0.10	8 (3%) 44 36	7, 68, 146, 180	0
26	DD	209/209 (100%)	0.87	41 (19%) 1 2	5, 49, 129, 180	0
27	BK	121/123 (98%)	0.70	11 (9%) 11 10	7, 69, 139, 180	0
27	DK	121/123 (98%)	0.76	10 (8%) 14 12	5, 41, 118, 180	0
28	BP	114/114 (100%)	0.53	11 (9%) 10 9	26, 85, 142, 175	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
28	DP	114/114 (100%)	0.34	2 (1%) 71 62	5, 49, 103, 145	0
29	BE	201/201 (100%)	0.88	35 (17%) 2 2	5, 63, 143, 180	0
29	DE	201/201 (100%)	0.44	17 (8%) 13 12	5, 70, 144, 180	0
30	BY	58/58 (100%)	0.43	4 (6%) 20 16	20, 62, 140, 180	0
30	DY	58/58 (100%)	-0.14	0 100 100	5, 66, 116, 142	0
31	B0	56/56 (100%)	0.18	4 (7%) 19 15	20, 80, 163, 180	0
31	D0	56/56 (100%)	0.24	3 (5%) 29 23	12, 58, 116, 165	0
32	B4	38/38 (100%)	0.17	1 (2%) 59 49	5, 75, 120, 137	0
32	D4	38/38 (100%)	-0.32	0 100 100	7, 60, 114, 135	0
33	B1	50/54 (92%)	1.28	7 (14%) 4 4	15, 70, 135, 180	0
33	D1	50/54 (92%)	0.67	5 (10%) 9 9	20, 69, 142, 157	0
34	B3	64/64 (100%)	0.50	5 (7%) 16 13	13, 50, 102, 148	0
34	D3	64/64 (100%)	0.35	3 (4%) 35 28	5, 42, 88, 133	0
35	BV	94/94 (100%)	0.56	9 (9%) 10 9	21, 89, 143, 180	0
35	DV	94/94 (100%)	0.31	13 (13%) 4 4	9, 96, 151, 169	0
36	B2	46/46 (100%)	0.50	3 (6%) 22 17	5, 43, 120, 143	0
36	D2	46/46 (100%)	0.16	2 (4%) 39 30	11, 43, 103, 159	0
37	BL	143/144 (99%)	0.31	9 (6%) 23 18	8, 67, 133, 172	0
37	DL	143/144 (99%)	0.61	21 (14%) 3 3	5, 56, 119, 164	0
38	BM	136/136 (100%)	0.58	12 (8%) 12 11	9, 59, 117, 170	0
38	DM	136/136 (100%)	0.63	16 (11%) 6 6	7, 60, 116, 137	0
39	BX	63/63 (100%)	1.35	19 (30%) 1 1	6, 86, 135, 180	0
39	DX	63/63 (100%)	0.66	6 (9%) 10 10	38, 106, 178, 180	0
40	BH	149/149 (100%)	2.93	89 (59%) 0 0	26, 134, 177, 180	0
40	DH	149/149 (100%)	1.38	42 (28%) 1 1	11, 112, 162, 180	0
41	BJ	142/142 (100%)	0.55	17 (11%) 6 6	5, 74, 127, 180	0
41	DJ	142/142 (100%)	0.64	12 (8%) 13 12	5, 59, 125, 180	0
42	BN	120/127 (94%)	0.41	8 (6%) 21 16	20, 65, 126, 180	0
42	DN	120/127 (94%)	0.20	5 (4%) 40 31	5, 43, 103, 180	0
43	BO	116/117 (99%)	0.65	18 (15%) 3 3	12, 77, 140, 180	0
43	DO	116/117 (99%)	0.43	10 (8%) 13 12	32, 85, 152, 180	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
44	BQ	117/117 (100%)	-0.24	3 (2%) 59 49	6, 57, 133, 175	0
44	DQ	117/117 (100%)	0.37	10 (8%) 13 12	5, 52, 112, 161	0
45	BS	110/110 (100%)	0.50	8 (7%) 18 14	5, 50, 125, 180	0
45	DS	110/110 (100%)	1.00	22 (20%) 1 2	5, 52, 131, 180	0
46	BU	102/103 (99%)	0.84	11 (10%) 8 7	5, 70, 146, 180	0
46	DU	102/103 (99%)	0.04	1 (0%) 84 76	22, 97, 158, 180	0
47	BF	178/178 (100%)	1.53	65 (36%) 0 0	52, 123, 180, 180	0
47	DF	178/178 (100%)	2.25	84 (47%) 0 0	33, 110, 176, 180	0
48	BG	176/176 (100%)	0.63	19 (10%) 8 7	26, 104, 165, 180	0
48	DG	176/176 (100%)	0.89	37 (21%) 1 1	26, 98, 169, 180	0
49	BR	103/103 (100%)	0.37	9 (8%) 13 12	11, 76, 142, 180	0
49	DR	103/103 (100%)	0.54	10 (9%) 10 9	13, 79, 144, 180	0
50	BT	93/100 (93%)	0.62	7 (7%) 17 14	16, 75, 150, 180	0
50	DT	93/100 (93%)	1.02	21 (22%) 1 1	13, 79, 154, 180	0
51	BZ	77/78 (98%)	0.66	8 (10%) 8 8	5, 53, 122, 137	0
51	DZ	77/78 (98%)	0.22	5 (6%) 22 17	5, 47, 124, 144	0
52	BW	79/84 (94%)	1.17	16 (20%) 1 2	8, 74, 121, 180	0
52	DW	79/84 (94%)	0.12	4 (5%) 32 24	9, 77, 144, 164	0
All	All	20417/21046 (97%)	0.15	1571 (7%) 16 13	5, 69, 155, 180	0

All (1571) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
13	AP	82	ALA	19.5
24	BI	49	GLU	12.2
13	AP	81	ALA	11.9
47	DF	75	GLY	10.9
40	BH	142	VAL	10.7
24	BI	48	ILE	10.6
23	BB	136	G	10.4
40	BH	93	SER	10.2
40	BH	131	SER	10.1
13	AP	47	GLU	9.6
24	BI	52	LEU	9.6
24	BI	60	VAL	9.5
24	BI	47	SER	9.4

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Mol	Chain	Res	Type	RSRZ
40	BH	80	ILE	9.4
33	B1	52	LYS	9.1
33	D1	52	LYS	9.1
13	AP	80	LYS	8.9
47	DF	139	GLU	8.8
23	BB	140	C	8.7
40	BH	132	PHE	8.5
40	BH	130	VAL	8.5
15	AR	19	GLU	8.4
24	BI	51	GLY	8.4
24	BI	97	VAL	8.4
8	CI	129	ARG	8.2
24	DI	137	LEU	7.9
40	BH	128	HIS	7.9
47	BF	139	GLU	7.7
24	BI	18	ASN	7.6
52	BW	84	GLU	7.6
24	BI	141	ASP	7.6
26	DD	32	ASN	7.6
39	DX	63	ALA	7.5
7	AH	129	ALA	7.3
47	DF	10	GLU	7.3
41	BJ	142	ILE	7.2
16	AS	40	PHE	7.2
47	DF	82	TYR	7.1
47	DF	44	ALA	7.1
24	BI	17	ALA	7.0
48	BG	42	VAL	7.0
40	DH	140	ALA	7.0
3	AD	178	GLU	6.9
13	AP	54	LEU	6.9
24	BI	14	ALA	6.9
40	BH	146	VAL	6.8
47	DF	55	ASP	6.8
8	AI	57	VAL	6.7
13	AP	52	LEU	6.7
40	BH	145	ASN	6.7
24	DI	138	VAL	6.5
24	BI	68	PHE	6.5
40	BH	124	THR	6.4
40	BH	92	GLY	6.4
40	BH	48	GLU	6.4

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Mol	Chain	Res	Type	RSRZ
23	BB	1728	C	6.3
24	BI	53	PRO	6.3
47	DF	140	ILE	6.3
40	DH	82	SER	6.3
23	DB	140	C	6.3
51	BZ	76	GLU	6.2
40	BH	102	ALA	6.2
40	BH	101	ASP	6.2
16	AS	41	PRO	6.2
24	BI	45	THR	6.1
40	BH	117	LEU	6.1
24	BI	50	LYS	6.1
40	BH	133	GLN	6.1
40	BH	88	GLY	6.1
48	DG	56	GLY	6.0
40	BH	84	ALA	6.0
9	CJ	102	LEU	6.0
23	BB	1730	C	6.0
40	BH	144	VAL	5.9
24	DI	136	GLY	5.9
40	BH	119	ASN	5.9
3	AD	177	MET	5.8
50	BT	91	GLN	5.8
47	DF	43	ILE	5.8
24	DI	83	ALA	5.8
18	CB	68	PHE	5.8
39	DX	62	GLY	5.8
24	BI	11	GLN	5.8
16	AS	73	PHE	5.7
24	DI	84	GLY	5.7
8	AI	129	ARG	5.7
24	DI	99	LYS	5.6
23	BB	1727	C	5.6
24	BI	54	ILE	5.6
16	AS	65	MET	5.6
40	DH	142	VAL	5.6
40	BH	45	GLU	5.6
40	BH	127	GLU	5.6
24	DI	85	ILE	5.5
51	DZ	78	TYR	5.5
23	BB	1731	G	5.5
49	BR	46	GLU	5.5

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Mol	Chain	Res	Type	RSRZ
13	CP	47	GLU	5.5
8	AI	50	PRO	5.5
30	BY	1	ALA	5.4
18	CB	161	PHE	5.4
46	BU	52	ASN	5.4
40	BH	94	ILE	5.4
40	DH	110	VAL	5.4
24	BI	98	GLY	5.4
24	BI	66	PHE	5.4
24	DI	95	ASP	5.4
37	BL	144	GLU	5.4
47	DF	146	ASP	5.4
50	DT	5	GLU	5.3
23	BB	139	U	5.3
23	BB	1175	A	5.3
41	DJ	20	ALA	5.3
47	BF	44	ALA	5.3
23	BB	137	U	5.3
24	DI	125	THR	5.3
40	BH	115	VAL	5.2
39	BX	10	SER	5.2
1	AA	86	G	5.2
47	DF	174	PHE	5.2
24	DI	98	GLY	5.2
40	BH	122	LEU	5.2
47	BF	112	ASP	5.2
48	DG	42	VAL	5.2
33	B1	51	ALA	5.2
24	BI	59	THR	5.2
38	BM	136	MET	5.1
40	BH	103	VAL	5.1
33	D1	51	ALA	5.1
50	BT	5	GLU	5.1
51	BZ	78	TYR	5.1
47	DF	79	ARG	5.1
39	BX	62	GLY	5.1
40	BH	140	ALA	5.0
16	AS	26	ASP	5.0
40	DH	141	LYS	5.0
24	BI	79	LEU	5.0
16	CS	40	PHE	5.0
40	BH	46	PHE	4.9

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Mol	Chain	Res	Type	RSRZ
38	BM	32	GLY	4.9
24	DI	70	THR	4.9
52	BW	64	GLY	4.9
2	CC	165	GLU	4.9
39	BX	5	GLU	4.9
47	DF	28	PRO	4.9
48	BG	40	VAL	4.9
47	DF	134	GLN	4.9
18	CB	163	ILE	4.9
16	AS	29	PRO	4.9
16	CS	65	MET	4.9
48	DG	40	VAL	4.9
24	DI	100	ILE	4.9
24	DI	80	LYS	4.8
38	DM	32	GLY	4.8
40	BH	139	PHE	4.8
29	BE	11	ALA	4.8
24	BI	58	ILE	4.8
29	DE	124	PHE	4.8
47	BF	174	PHE	4.8
40	BH	85	GLY	4.8
24	BI	29	GLN	4.8
43	BO	51	ALA	4.8
4	CE	158	LYS	4.8
47	DF	77	LYS	4.8
24	BI	108	ILE	4.8
24	DI	82	ALA	4.7
40	BH	123	ARG	4.7
23	BB	2309	A	4.7
47	DF	78	ILE	4.7
47	DF	58	ALA	4.7
21	CN	22	LYS	4.7
24	DI	53	PRO	4.7
3	AD	27	ILE	4.7
47	BF	140	ILE	4.7
47	DF	41	GLU	4.7
40	DH	99	ILE	4.6
12	CM	44	ILE	4.6
40	DH	81	ALA	4.6
18	CB	160	LEU	4.6
47	BF	103	ILE	4.6
24	DI	6	ALA	4.6

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Mol	Chain	Res	Type	RSRZ
7	AH	128	VAL	4.6
29	BE	153	LEU	4.6
12	CM	1	ALA	4.6
40	BH	141	LYS	4.6
41	DJ	44	TYR	4.6
26	DD	87	GLY	4.6
49	DR	50	GLY	4.6
47	BF	127	TYR	4.6
47	DF	142	TYR	4.6
38	DM	1	MET	4.6
50	DT	3	ARG	4.6
40	BH	114	GLU	4.6
24	BI	15	GLY	4.5
40	DH	130	VAL	4.5
16	AS	64	GLU	4.5
39	BX	63	ALA	4.5
48	DG	57	TYR	4.5
52	DW	84	GLU	4.5
5	CF	90	MET	4.5
21	AN	20	PHE	4.5
47	DF	24	VAL	4.5
38	BM	33	LEU	4.5
21	CN	31	SER	4.5
29	DE	155	GLU	4.5
47	DF	84	ILE	4.5
40	BH	76	GLU	4.5
49	BR	3	ALA	4.5
45	DS	110	ARG	4.5
29	BE	124	PHE	4.5
47	BF	35	LEU	4.5
40	BH	134	VAL	4.5
23	DB	2309	A	4.5
30	BY	39	ASP	4.5
42	BN	120	GLU	4.4
9	CJ	90	LEU	4.4
18	CB	216	VAL	4.4
12	CM	3	ILE	4.4
28	BP	75	THR	4.4
46	BU	86	PHE	4.4
24	BI	19	PRO	4.4
47	DF	173	ASP	4.4
24	BI	34	ILE	4.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
49	DR	46	GLU	4.4
29	BE	143	LEU	4.4
47	DF	3	LEU	4.4
40	DH	107	GLY	4.4
40	BH	143	ILE	4.3
8	AI	56	MET	4.3
52	BW	45	HIS	4.3
23	DB	1730	C	4.3
47	DF	83	PRO	4.3
40	BH	148	ALA	4.3
47	DF	76	PHE	4.3
40	BH	60	GLU	4.3
7	CH	129	ALA	4.3
3	AD	106	PHE	4.3
40	BH	116	ARG	4.3
12	AM	82	LEU	4.3
40	BH	98	ASP	4.3
16	AS	42	ASN	4.3
24	DI	94	LYS	4.3
47	DF	74	ALA	4.3
47	DF	172	PHE	4.3
47	BF	37	MET	4.3
47	BF	43	ILE	4.3
21	CN	34	ASN	4.2
40	BH	120	GLY	4.2
29	BE	155	GLU	4.2
39	BX	13	GLU	4.2
21	CN	30	ILE	4.2
40	BH	57	LYS	4.2
48	DG	44	HIS	4.2
40	BH	126	GLY	4.2
33	B1	15	GLY	4.2
2	AC	74	ILE	4.2
3	CD	27	ILE	4.2
16	CS	26	ASP	4.2
24	BI	27	LEU	4.2
24	BI	109	ALA	4.2
37	DL	2	ARG	4.2
48	DG	37	ASN	4.2
26	DD	1	MET	4.2
18	CB	204	ASP	4.2
38	BM	103	TYR	4.2

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Mol	Chain	Res	Type	RSRZ
24	DI	7	TYR	4.2
24	BI	3	LYS	4.2
39	BX	14	LEU	4.1
7	CH	62	LEU	4.1
18	AB	42	LEU	4.1
24	BI	140	GLU	4.1
17	CT	86	ALA	4.1
52	BW	83	ALA	4.1
43	DO	115	LEU	4.1
21	CN	46	LYS	4.1
18	CB	56	LEU	4.1
50	DT	11	LEU	4.1
41	BJ	64	VAL	4.0
26	DD	52	THR	4.0
24	DI	79	LEU	4.0
49	DR	48	LYS	4.0
16	CS	29	PRO	4.0
35	BV	57	TYR	4.0
47	BF	142	TYR	4.0
12	CM	7	ASN	4.0
43	BO	117	PHE	4.0
26	DD	77	ARG	4.0
22	DA	88	C	4.0
33	B1	16	THR	4.0
38	DM	60	GLN	4.0
3	AD	159	GLU	4.0
24	DI	49	GLU	4.0
37	DL	82	LEU	4.0
47	BF	131	VAL	4.0
24	DI	139	VAL	4.0
40	BH	121	VAL	4.0
5	AF	66	ALA	4.0
29	BE	150	THR	4.0
47	DF	171	ALA	4.0
24	DI	101	SER	4.0
26	DD	49	GLN	4.0
14	AQ	7	LEU	4.0
8	AI	20	ILE	3.9
37	DL	85	VAL	3.9
26	BD	111	GLY	3.9
50	DT	91	GLN	3.9
23	BB	1726	C	3.9

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
29	DE	201	ALA	3.9
47	DF	37	MET	3.9
24	BI	6	ALA	3.9
6	CG	152	HIS	3.9
40	BH	56	ALA	3.9
21	AN	40	ARG	3.9
26	DD	33	ARG	3.9
49	BR	48	LYS	3.9
47	DF	45	ASP	3.9
4	CE	37	VAL	3.9
37	BL	124	GLY	3.9
47	DF	27	VAL	3.9
5	AF	78	PHE	3.9
24	BI	70	THR	3.9
25	DC	79	ARG	3.9
15	CR	19	GLU	3.9
31	B0	54	ILE	3.9
18	CB	186	VAL	3.9
44	BQ	90	ASP	3.9
18	CB	213	LEU	3.9
47	DF	127	TYR	3.9
12	AM	56	ARG	3.8
40	BH	77	THR	3.8
47	DF	40	GLY	3.8
13	CP	80	LYS	3.8
3	AD	173	ASP	3.8
47	DF	169	LEU	3.8
33	D1	26	LYS	3.8
21	CN	42	ASN	3.8
47	BF	75	GLY	3.8
6	AG	8	GLN	3.8
12	AM	78	ARG	3.8
40	DH	149	GLU	3.8
26	BD	186	LEU	3.8
11	AL	24	GLU	3.8
38	BM	1	MET	3.8
46	BU	51	LEU	3.8
40	BH	86	ASP	3.8
40	DH	1	MET	3.8
24	BI	41	PHE	3.8
24	BI	1	ALA	3.7
10	CK	18	GLY	3.7

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
48	DG	55	ASP	3.7
24	DI	58	ILE	3.7
40	DH	13	GLY	3.7
16	AS	60	PHE	3.7
26	DD	48	ILE	3.7
16	CS	63	ASP	3.7
44	DQ	90	ASP	3.7
47	DF	7	TYR	3.7
24	BI	37	PHE	3.7
40	BH	87	GLU	3.7
8	AI	49	GLN	3.7
16	AS	43	MET	3.7
41	BJ	63	ALA	3.7
49	BR	50	GLY	3.7
30	BY	38	GLU	3.7
24	DI	48	ILE	3.7
18	AB	192	PRO	3.7
40	DH	51	ARG	3.7
47	DF	33	ILE	3.7
35	BV	56	PHE	3.7
50	DT	72	GLN	3.7
50	DT	12	ARG	3.7
47	BF	146	ASP	3.7
47	DF	21	TYR	3.7
13	AP	6	LEU	3.7
6	AG	58	LEU	3.7
12	AM	51	GLN	3.6
48	DG	153	PRO	3.6
29	BE	188	MET	3.6
29	DE	188	MET	3.6
40	BH	27	ARG	3.6
23	DB	645	C	3.6
16	AS	39	ILE	3.6
19	AU	3	ILE	3.6
29	BE	14	VAL	3.6
40	BH	125	THR	3.6
29	BE	10	SER	3.6
4	CE	72	ASN	3.6
23	BB	715	A	3.6
26	DD	75	ALA	3.6
16	CS	61	VAL	3.6
40	DH	9	VAL	3.6

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Mol	Chain	Res	Type	RSRZ
16	AS	79	TYR	3.6
13	AP	38	PHE	3.6
24	DI	132	ALA	3.6
3	CD	107	GLY	3.6
24	DI	52	LEU	3.6
45	DS	107	VAL	3.6
34	B3	22	LYS	3.5
4	CE	12	GLU	3.5
13	AP	19	VAL	3.5
29	BE	119	ILE	3.5
24	DI	97	VAL	3.5
47	BF	129	MET	3.5
23	BB	613	A	3.5
30	BY	58	GLU	3.5
25	BC	72	GLY	3.5
50	BT	4	GLU	3.5
40	BH	82	SER	3.5
40	DH	139	PHE	3.5
46	BU	89	GLY	3.5
24	BI	12	VAL	3.5
25	DC	109	LEU	3.5
40	BH	95	GLY	3.5
41	BJ	20	ALA	3.5
47	BF	151	LEU	3.5
25	BC	22	GLU	3.5
24	BI	8	VAL	3.5
41	DJ	64	VAL	3.5
7	AH	74	ILE	3.5
12	AM	55	LEU	3.5
42	DN	83	LEU	3.5
7	AH	81	GLY	3.5
11	CL	13	ARG	3.5
29	DE	148	ILE	3.5
43	BO	26	LEU	3.5
5	AF	5	GLU	3.5
40	DH	76	GLU	3.5
18	CB	57	ASN	3.5
52	BW	63	ASP	3.4
7	CH	71	VAL	3.4
52	DW	65	LYS	3.4
3	AD	104	MET	3.4
14	AQ	8	GLN	3.4

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Mol	Chain	Res	Type	RSRZ
13	AP	5	ARG	3.4
40	BH	110	VAL	3.4
40	BH	147	VAL	3.4
3	AD	22	SER	3.4
13	AP	39	PHE	3.4
25	BC	168	GLY	3.4
31	D0	56	LYS	3.4
38	DM	103	TYR	3.4
14	AQ	9	GLY	3.4
40	DH	122	LEU	3.4
47	BF	172	PHE	3.4
9	AJ	89	ARG	3.4
24	BI	57	VAL	3.4
21	CN	23	ARG	3.4
7	AH	47	ASP	3.4
21	CN	21	ALA	3.4
26	BD	25	THR	3.4
45	DS	32	ALA	3.4
50	DT	35	ALA	3.4
29	DE	108	ILE	3.4
13	CP	45	GLU	3.4
24	BI	5	GLN	3.4
43	BO	37	ALA	3.4
28	BP	47	ILE	3.4
40	DH	72	ILE	3.4
24	BI	139	VAL	3.4
47	DF	18	GLU	3.4
4	AE	114	LEU	3.4
38	DM	30	SER	3.4
47	DF	157	THR	3.4
18	CB	212	TYR	3.4
6	AG	61	PHE	3.4
47	DF	149	ARG	3.4
5	AF	62	MET	3.4
25	BC	131	MET	3.4
39	BX	57	LEU	3.4
43	BO	92	PHE	3.3
48	BG	51	PHE	3.3
51	BZ	71	LEU	3.3
24	BI	13	ALA	3.3
14	AQ	58	VAL	3.3
40	BH	79	THR	3.3

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Mol	Chain	Res	Type	RSRZ
47	BF	71	LYS	3.3
25	BC	122	ALA	3.3
26	DD	47	ALA	3.3
26	DD	76	GLY	3.3
46	BU	93	ARG	3.3
8	AI	51	LEU	3.3
21	CN	19	TYR	3.3
5	AF	35	LYS	3.3
13	CP	54	LEU	3.3
12	AM	52	ILE	3.3
21	CN	20	PHE	3.3
25	DC	198	GLU	3.3
5	AF	96	VAL	3.3
41	DJ	45	THR	3.3
7	AH	126	CYS	3.3
9	CJ	36	VAL	3.3
32	B4	7	VAL	3.3
40	BH	99	ILE	3.3
47	BF	143	ASP	3.3
47	DF	30	VAL	3.3
3	CD	108	ALA	3.3
12	CM	62	PHE	3.3
48	DG	88	LEU	3.3
39	DX	24	GLU	3.3
16	CS	30	LEU	3.3
40	BH	149	GLU	3.3
18	CB	69	VAL	3.3
24	DI	89	SER	3.3
40	BH	65	ALA	3.3
40	DH	18	GLN	3.3
13	AP	2	VAL	3.3
24	BI	46	ASP	3.3
2	AC	151	GLU	3.3
38	DM	33	LEU	3.3
4	AE	113	VAL	3.3
47	BF	72	SER	3.3
1	CA	1534	A	3.2
7	CH	44	PHE	3.2
14	AQ	36	PHE	3.2
13	AP	71	VAL	3.2
40	BH	64	ALA	3.2
24	BI	78	LEU	3.2

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Mol	Chain	Res	Type	RSRZ
39	BX	17	GLU	3.2
24	DI	93	ASN	3.2
24	BI	2	LYS	3.2
47	BF	28	PRO	3.2
40	BH	55	GLU	3.2
12	CM	59	VAL	3.2
16	CS	39	ILE	3.2
24	BI	40	ALA	3.2
37	DL	77	ILE	3.2
41	BJ	56	VAL	3.2
43	BO	110	ALA	3.2
26	DD	97	SER	3.2
18	CB	67	LEU	3.2
24	DI	9	LYS	3.2
45	DS	70	LYS	3.2
43	DO	61	GLN	3.2
31	B0	56	LYS	3.2
45	DS	1	MET	3.2
50	DT	92	ASN	3.2
13	CP	38	PHE	3.2
23	BB	62	U	3.2
34	B3	60	CYS	3.2
5	AF	1	MET	3.2
47	DF	136	ILE	3.2
40	DH	111	ALA	3.2
40	DH	5	LEU	3.2
45	BS	47	VAL	3.2
24	BI	125	THR	3.2
46	BU	72	PHE	3.2
48	DG	43	LYS	3.2
12	AM	38	ILE	3.2
25	BC	113	ASP	3.2
47	BF	59	ILE	3.2
47	DF	103	ILE	3.2
5	CF	59	TYR	3.2
48	DG	128	THR	3.2
12	AM	79	LEU	3.1
6	CG	78	ARG	3.1
37	DL	123	ARG	3.1
12	CM	55	LEU	3.1
20	AO	59	MET	3.1
45	DS	94	ASP	3.1

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Mol	Chain	Res	Type	RSRZ
29	DE	169	VAL	3.1
47	DF	12	VAL	3.1
33	D1	27	ARG	3.1
38	DM	57	VAL	3.1
21	AN	65	GLN	3.1
47	DF	1	ALA	3.1
23	BB	1729	U	3.1
8	AI	128	LYS	3.1
40	BH	89	LYS	3.1
16	AS	63	ASP	3.1
23	BB	2147	A	3.1
4	CE	114	LEU	3.1
24	DI	5	GLN	3.1
4	CE	80	LEU	3.1
4	CE	95	MET	3.1
18	AB	195	VAL	3.1
6	AG	4	ARG	3.1
11	CL	24	GLU	3.1
21	AN	28	ALA	3.1
8	AI	48	ARG	3.1
7	AH	60	LEU	3.1
46	DU	52	ASN	3.1
47	BF	10	GLU	3.1
47	DF	6	TYR	3.1
47	DF	156	THR	3.1
23	DB	2306	C	3.1
47	DF	59	ILE	3.1
47	DF	99	PHE	3.1
50	DT	6	ARG	3.1
2	AC	67	ILE	3.1
40	BH	90	LEU	3.1
12	AM	37	GLY	3.1
19	CU	3	ILE	3.1
16	AS	38	THR	3.1
47	DF	42	ALA	3.1
14	AQ	52	CYS	3.1
40	BH	1	MET	3.1
40	BH	135	HIS	3.1
25	BC	114	GLN	3.1
35	DV	5	ASN	3.1
24	DI	78	LEU	3.0
26	DD	96	ILE	3.0

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Mol	Chain	Res	Type	RSRZ
13	AP	46	LYS	3.0
24	BI	7	TYR	3.0
26	DD	30	GLU	3.0
28	BP	71	ARG	3.0
24	BI	115	ASP	3.0
24	DI	54	ILE	3.0
49	DR	37	GLU	3.0
50	DT	90	GLY	3.0
2	AC	167	TYR	3.0
4	CE	55	VAL	3.0
47	DF	86	CYS	3.0
7	AH	110	MET	3.0
48	BG	147	LEU	3.0
47	BF	82	TYR	3.0
24	BI	38	CYS	3.0
4	AE	14	LEU	3.0
25	BC	70	LYS	3.0
27	BK	84	CYS	3.0
23	BB	878	A	3.0
27	BK	102	PRO	3.0
40	DH	131	SER	3.0
48	DG	51	PHE	3.0
3	AD	28	ASP	3.0
43	BO	106	LEU	3.0
3	CD	17	ASP	3.0
12	AM	114	PRO	3.0
24	BI	21	PRO	3.0
31	D0	45	ASP	3.0
10	AK	20	ALA	3.0
24	BI	112	LYS	3.0
40	DH	132	PHE	3.0
4	AE	81	GLN	3.0
12	AM	32	ILE	3.0
13	AP	48	GLU	3.0
25	DC	1	ALA	3.0
43	DO	79	ALA	3.0
47	BF	161	SER	3.0
24	DI	21	PRO	3.0
7	CH	98	LEU	3.0
11	AL	13	ARG	3.0
27	BK	8	LEU	3.0
47	DF	61	GLY	3.0

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Mol	Chain	Res	Type	RSRZ
33	B1	49	LYS	3.0
48	BG	176	LYS	3.0
2	AC	41	TYR	3.0
50	DT	4	GLU	3.0
26	DD	91	THR	3.0
13	CP	52	LEU	3.0
9	AJ	76	ILE	3.0
47	BF	90	LEU	3.0
7	AH	24	VAL	2.9
48	DG	52	GLY	2.9
2	AC	81	GLU	2.9
25	BC	92	LEU	2.9
26	DD	93	GLY	2.9
47	DF	11	VAL	2.9
2	AC	156	LEU	2.9
26	DD	3	GLY	2.9
40	DH	94	ILE	2.9
3	CD	106	PHE	2.9
23	DB	1175	A	2.9
25	BC	93	VAL	2.9
25	DC	19	VAL	2.9
29	DE	190	ALA	2.9
45	BS	103	ILE	2.9
48	BG	37	ASN	2.9
8	CI	40	ARG	2.9
42	BN	70	THR	2.9
50	DT	42	GLU	2.9
47	DF	62	GLN	2.9
48	DG	173	ALA	2.9
8	CI	127	SER	2.9
18	CB	217	ALA	2.9
8	AI	47	VAL	2.9
26	DD	2	ILE	2.9
50	DT	53	VAL	2.9
37	DL	124	GLY	2.9
24	BI	65	SER	2.9
16	AS	75	PRO	2.9
25	DC	78	GLU	2.9
3	AD	145	ARG	2.9
13	AP	60	TRP	2.9
23	DB	1729	U	2.9
52	BW	52	CYS	2.9

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Mol	Chain	Res	Type	RSRZ
27	DK	103	VAL	2.9
45	BS	51	LEU	2.9
48	DG	114	HIS	2.9
25	BC	73	ILE	2.9
5	AF	34	GLY	2.9
12	CM	56	ARG	2.9
23	BB	1176	U	2.9
13	AP	51	ARG	2.9
29	BE	152	GLU	2.9
34	B3	14	LYS	2.9
24	DI	129	GLU	2.9
51	BZ	77	LYS	2.9
5	AF	8	PHE	2.9
13	AP	72	ALA	2.9
40	BH	100	ALA	2.9
10	CK	13	LYS	2.9
46	BU	71	ILE	2.9
15	CR	63	TYR	2.9
47	DF	90	LEU	2.9
23	BB	1459	G	2.9
24	BI	16	MET	2.9
29	DE	191	ASP	2.9
27	DK	46	ALA	2.9
11	AL	11	ARG	2.9
2	CC	200	TRP	2.9
50	DT	51	PHE	2.8
35	BV	94	ALA	2.8
18	AB	66	ILE	2.8
37	DL	144	GLU	2.8
47	DF	9	ASP	2.8
48	DG	113	ASP	2.8
52	DW	45	HIS	2.8
11	AL	52	CYS	2.8
15	AR	22	TYR	2.8
44	BQ	88	GLU	2.8
2	AC	98	ALA	2.8
3	AD	153	ARG	2.8
45	DS	47	VAL	2.8
7	AH	35	ILE	2.8
16	AS	61	VAL	2.8
25	DC	62	ARG	2.8
2	AC	82	ASP	2.8

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Mol	Chain	Res	Type	RSRZ
27	DK	9	ASN	2.8
47	BF	61	GLY	2.8
51	BZ	74	ARG	2.8
7	AH	102	VAL	2.8
40	DH	100	ALA	2.8
40	DH	108	VAL	2.8
40	DH	109	GLU	2.8
48	DG	41	GLU	2.8
47	DF	26	GLN	2.8
23	DB	2310	C	2.8
25	BC	167	ASP	2.8
5	AF	29	ILE	2.8
45	DS	103	ILE	2.8
47	BF	111	ARG	2.8
20	AO	67	LEU	2.8
47	DF	141	ASP	2.8
7	AH	36	ALA	2.8
7	AH	100	ILE	2.8
26	DD	27	ILE	2.8
24	BI	69	VAL	2.8
26	DD	4	LEU	2.8
40	BH	58	LEU	2.8
47	BF	56	LEU	2.8
19	CU	23	GLU	2.8
24	DI	131	THR	2.8
43	BO	89	ASP	2.8
40	BH	136	SER	2.8
7	CH	120	LEU	2.8
12	CM	82	LEU	2.8
21	CN	45	LEU	2.8
39	DX	5	GLU	2.8
43	BO	115	LEU	2.8
34	D3	8	GLY	2.8
24	BI	26	ALA	2.8
13	AP	3	THR	2.8
40	BH	96	THR	2.8
49	DR	96	VAL	2.8
38	DM	105	MET	2.8
18	AB	158	ASP	2.8
29	BE	12	LEU	2.8
9	CJ	101	SER	2.8
24	BI	85	ILE	2.8

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Mol	Chain	Res	Type	RSRZ
41	BJ	54	ILE	2.8
44	DQ	73	ILE	2.8
46	BU	90	LYS	2.8
41	DJ	56	VAL	2.8
48	DG	49	LEU	2.8
16	AS	10	ILE	2.8
16	AS	30	LEU	2.8
47	BF	169	LEU	2.8
47	DF	15	LEU	2.8
50	DT	55	VAL	2.8
2	CC	181	ILE	2.8
47	BF	62	GLN	2.8
25	DC	22	GLU	2.7
40	DH	69	ALA	2.7
47	BF	40	GLY	2.7
18	CB	200	PRO	2.7
47	BF	152	ASP	2.7
35	DV	94	ALA	2.7
47	DF	175	PRO	2.7
7	AH	98	LEU	2.7
45	DS	105	VAL	2.7
3	AD	179	GLY	2.7
13	AP	37	GLY	2.7
29	BE	121	VAL	2.7
41	DJ	140	LEU	2.7
48	DG	106	LEU	2.7
24	DI	96	LYS	2.7
15	CR	22	TYR	2.7
40	BH	68	ARG	2.7
45	DS	3	THR	2.7
11	CL	81	ILE	2.7
16	AS	48	ILE	2.7
7	AH	127	TYR	2.7
13	AP	21	VAL	2.7
13	AP	22	ALA	2.7
13	AP	53	ASP	2.7
2	CC	152	VAL	2.7
4	CE	84	VAL	2.7
25	BC	80	LEU	2.7
48	BG	132	LEU	2.7
34	B3	13	PHE	2.7
40	DH	12	LEU	2.7

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Mol	Chain	Res	Type	RSRZ
16	CS	41	PRO	2.7
18	CB	49	PHE	2.7
23	BB	2306	C	2.7
25	BC	126	GLY	2.7
48	BG	120	ILE	2.7
49	BR	35	PHE	2.7
38	DM	41	LEU	2.7
47	DF	14	LYS	2.7
39	BX	24	GLU	2.7
5	AF	70	VAL	2.7
18	AB	26	MET	2.7
24	BI	31	GLY	2.7
27	DK	43	ILE	2.7
11	AL	1	ALA	2.7
3	AD	151	GLN	2.7
21	CN	76	PHE	2.7
48	BG	102	ILE	2.7
39	DX	23	ARG	2.7
43	BO	49	VAL	2.7
40	DH	96	THR	2.7
3	CD	176	LYS	2.7
7	AH	44	PHE	2.7
13	AP	67	ILE	2.7
25	BC	103	ILE	2.7
24	BI	4	VAL	2.7
47	BF	79	ARG	2.7
50	DT	50	LEU	2.7
7	AH	72	GLU	2.7
29	BE	23	PHE	2.7
25	BC	145	MET	2.7
28	BP	21	PRO	2.7
37	DL	135	ILE	2.7
24	BI	28	GLY	2.7
24	DI	8	VAL	2.7
25	BC	116	GLN	2.7
27	BK	103	VAL	2.7
50	DT	87	LEU	2.7
27	BK	82	ASN	2.7
47	DF	13	LYS	2.7
48	DG	176	LYS	2.7
50	BT	3	ARG	2.7
18	CB	220	VAL	2.7

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Mol	Chain	Res	Type	RSRZ
24	BI	25	PRO	2.7
4	CE	111	ARG	2.7
25	BC	123	ILE	2.7
27	DK	63	VAL	2.7
50	DT	47	VAL	2.7
47	DF	2	LYS	2.7
21	CN	40	ARG	2.7
44	DQ	63	ARG	2.7
51	BZ	38	PHE	2.7
25	DC	5	CYS	2.6
40	BH	138	VAL	2.6
29	BE	148	ILE	2.6
37	DL	91	ASP	2.6
40	BH	97	ARG	2.6
45	DS	69	LEU	2.6
24	BI	33	ASN	2.6
40	BH	91	PHE	2.6
1	AA	85	U	2.6
9	CJ	25	ILE	2.6
18	AB	186	VAL	2.6
26	DD	34	VAL	2.6
43	BO	113	ALA	2.6
4	CE	13	LYS	2.6
6	AG	80	GLY	2.6
8	AI	58	GLU	2.6
16	AS	28	LYS	2.6
26	DD	101	PHE	2.6
2	CC	172	VAL	2.6
5	CF	4	TYR	2.6
14	CQ	52	CYS	2.6
34	D3	28	LEU	2.6
41	BJ	123	LYS	2.6
47	DF	89	THR	2.6
21	AN	91	GLU	2.6
6	CG	153	TYR	2.6
29	BE	19	PHE	2.6
36	B2	1	MET	2.6
23	BB	1174	U	2.6
29	BE	9	GLN	2.6
18	AB	34	ARG	2.6
26	DD	95	SER	2.6
36	D2	1	MET	2.6

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Mol	Chain	Res	Type	RSRZ
24	BI	105	LEU	2.6
25	BC	17	LYS	2.6
43	BO	88	LYS	2.6
3	CD	174	ALA	2.6
35	BV	84	PRO	2.6
35	DV	3	THR	2.6
38	BM	102	LEU	2.6
45	BS	74	ILE	2.6
45	DS	74	ILE	2.6
47	DF	145	VAL	2.6
47	BF	147	ARG	2.6
47	BF	98	PHE	2.6
6	AG	79	VAL	2.6
25	BC	104	LEU	2.6
29	BE	175	ILE	2.6
45	BS	24	ILE	2.6
47	BF	30	VAL	2.6
11	AL	123	ALA	2.6
45	BS	94	ASP	2.6
13	AP	4	ILE	2.6
18	CB	66	ILE	2.6
25	DC	191	LEU	2.6
40	BH	108	VAL	2.6
29	BE	187	VAL	2.6
40	BH	118	PRO	2.6
47	BF	137	PHE	2.6
10	AK	99	LEU	2.6
43	BO	78	VAL	2.6
4	CE	86	GLY	2.6
38	BM	31	PHE	2.6
46	BU	84	PHE	2.6
38	DM	104	GLU	2.6
23	BB	2145	C	2.6
4	CE	10	LEU	2.6
18	CB	185	ILE	2.6
21	AN	23	ARG	2.6
48	DG	25	ILE	2.6
14	AQ	81	ALA	2.6
18	CB	90	PHE	2.6
37	DL	110	VAL	2.6
40	DH	27	ARG	2.6
12	CM	43	LYS	2.6

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Mol	Chain	Res	Type	RSRZ
47	DF	87	LYS	2.6
3	CD	162	GLU	2.6
20	AO	63	ARG	2.6
24	DI	47	SER	2.6
47	BF	86	CYS	2.6
48	DG	59	ASP	2.6
2	AC	90	VAL	2.5
48	BG	161	VAL	2.5
24	DI	20	SER	2.5
33	D1	6	GLU	2.5
45	DS	108	SER	2.5
48	BG	23	ILE	2.5
48	BG	116	LEU	2.5
23	DB	1731	G	2.5
26	DD	94	GLN	2.5
41	BJ	128	ASN	2.5
24	BI	95	ASP	2.5
25	BC	153	LEU	2.5
4	CE	147	ASN	2.5
49	BR	12	HIS	2.5
24	BI	32	VAL	2.5
25	DC	2	VAL	2.5
47	DF	39	VAL	2.5
13	AP	75	ILE	2.5
26	BD	27	ILE	2.5
43	DO	62	LEU	2.5
40	DH	70	GLU	2.5
26	BD	209	ALA	2.5
8	AI	27	ILE	2.5
24	DI	35	MET	2.5
31	B0	26	SER	2.5
40	DH	80	ILE	2.5
9	AJ	63	ASP	2.5
18	CB	183	PHE	2.5
27	DK	45	GLU	2.5
45	DS	34	ASP	2.5
3	AD	154	VAL	2.5
18	CB	10	LYS	2.5
35	BV	83	LYS	2.5
38	BM	128	THR	2.5
26	DD	28	GLU	2.5
3	CD	53	GLN	2.5

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Mol	Chain	Res	Type	RSRZ
4	AE	158	LYS	2.5
16	AS	74	ALA	2.5
24	DI	111	THR	2.5
13	AP	33	ILE	2.5
41	BJ	87	ALA	2.5
2	AC	25	THR	2.5
47	DF	94	ARG	2.5
45	DS	83	LYS	2.5
29	BE	118	LEU	2.5
40	BH	54	LEU	2.5
12	AM	75	SER	2.5
25	BC	188	ARG	2.5
13	CP	36	VAL	2.5
43	BO	29	HIS	2.5
34	D3	3	ILE	2.5
47	BF	155	ILE	2.5
3	CD	177	MET	2.5
26	DD	74	GLU	2.5
40	BH	129	GLU	2.5
11	CL	68	GLY	2.5
27	BK	115	ILE	2.5
25	BC	189	ALA	2.5
9	CJ	35	GLN	2.5
20	AO	20	ASN	2.5
28	BP	58	PHE	2.5
48	BG	19	ASN	2.5
3	CD	66	VAL	2.5
24	BI	138	VAL	2.5
19	CU	43	GLU	2.5
26	BD	140	HIS	2.5
28	BP	70	GLU	2.5
29	DE	157	LEU	2.5
29	BE	149	ILE	2.5
35	DV	51	GLN	2.5
18	AB	17	HIS	2.5
5	AF	56	LYS	2.5
40	DH	77	THR	2.5
47	BF	89	THR	2.5
41	BJ	17	VAL	2.5
18	AB	43	GLU	2.5
26	DD	187	LEU	2.5
27	DK	12	ASP	2.5

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Mol	Chain	Res	Type	RSRZ
51	DZ	76	GLU	2.5
3	AD	23	GLY	2.5
11	AL	14	LYS	2.5
28	BP	73	PHE	2.5
29	DE	134	LEU	2.5
37	DL	58	TYR	2.5
2	AC	99	GLN	2.5
47	BF	116	LEU	2.5
2	CC	56	ILE	2.5
21	CN	9	GLU	2.5
29	DE	158	PHE	2.5
5	AF	88	MET	2.4
37	DL	92	LEU	2.4
38	BM	105	MET	2.4
1	AA	78	A	2.4
47	DF	147	ARG	2.4
47	DF	164	GLU	2.4
47	DF	19	PHE	2.4
25	BC	119	VAL	2.4
47	BF	159	ALA	2.4
9	AJ	64	GLN	2.4
47	BF	78	ILE	2.4
48	DG	112	VAL	2.4
18	CB	127	LYS	2.4
49	DR	40	MET	2.4
52	BW	42	THR	2.4
24	BI	73	PRO	2.4
29	DE	60	TRP	2.4
4	AE	122	VAL	2.4
11	CL	123	ALA	2.4
27	BK	107	LEU	2.4
37	DL	83	ALA	2.4
47	DF	52	ALA	2.4
7	AH	1	SER	2.4
8	CI	50	PRO	2.4
29	BE	144	GLU	2.4
2	AC	46	LEU	2.4
16	CS	20	LYS	2.4
15	CR	71	ASP	2.4
16	AS	11	ASP	2.4
40	BH	113	SER	2.4
52	BW	82	GLU	2.4

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Mol	Chain	Res	Type	RSRZ
4	AE	85	LYS	2.4
38	DM	102	LEU	2.4
47	BF	42	ALA	2.4
3	AD	24	VAL	2.4
42	DN	62	ASN	2.4
23	DB	2146	C	2.4
37	BL	113	ALA	2.4
41	DJ	122	LEU	2.4
47	DF	69	ALA	2.4
13	CP	39	PHE	2.4
12	AM	87	GLY	2.4
26	DD	180	VAL	2.4
47	DF	38	GLY	2.4
24	BI	96	LYS	2.4
33	B1	35	LEU	2.4
43	DO	37	ALA	2.4
1	AA	1362	A	2.4
12	AM	85	TYR	2.4
25	BC	110	LYS	2.4
13	CP	41	PRO	2.4
33	B1	12	SER	2.4
47	BF	55	ASP	2.4
47	BF	74	ALA	2.4
4	CE	104	ILE	2.4
48	DG	147	LEU	2.4
18	AB	212	TYR	2.4
34	B3	50	SER	2.4
35	DV	57	TYR	2.4
27	BK	7	MET	2.4
49	DR	5	PHE	2.4
12	AM	113	LYS	2.4
24	BI	10	LEU	2.4
50	DT	70	HIS	2.4
18	AB	163	ILE	2.4
24	DI	103	ALA	2.4
3	AD	143	SER	2.4
37	BL	90	VAL	2.4
40	DH	17	ASP	2.4
49	DR	20	VAL	2.4
24	BI	72	THR	2.4
11	AL	25	ALA	2.4
24	BI	44	LYS	2.4

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Mol	Chain	Res	Type	RSRZ
26	DD	118	PHE	2.4
36	B2	12	ARG	2.4
48	BG	43	LYS	2.4
6	AG	20	GLU	2.4
16	AS	17	LYS	2.4
35	DV	4	ILE	2.4
41	DJ	142	ILE	2.4
40	BH	5	LEU	2.4
51	BZ	2	SER	2.4
4	AE	147	ASN	2.4
5	CF	58	HIS	2.4
45	DS	66	ILE	2.4
47	BF	166	ARG	2.4
48	DG	58	ALA	2.4
12	CM	15	VAL	2.4
24	DI	73	PRO	2.4
4	AE	94	PHE	2.4
26	DD	200	ASP	2.4
46	BU	91	LYS	2.4
18	CB	198	VAL	2.4
47	BF	80	GLN	2.3
27	DK	18	ARG	2.3
29	BE	140	ASP	2.3
37	DL	121	THR	2.3
18	CB	53	LEU	2.3
25	BC	152	GLN	2.3
25	BC	132	ARG	2.3
47	BF	136	ILE	2.3
52	BW	19	ARG	2.3
6	AG	84	TYR	2.3
10	AK	95	THR	2.3
41	BJ	122	LEU	2.3
51	DZ	49	LEU	2.3
1	AA	121	U	2.3
31	D0	54	ILE	2.3
47	BF	41	GLU	2.3
2	CC	70	ALA	2.3
16	CS	24	SER	2.3
24	BI	20	SER	2.3
25	BC	95	TYR	2.3
52	BW	62	ALA	2.3
48	BG	114	HIS	2.3

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Mol	Chain	Res	Type	RSRZ
3	AD	103	ARG	2.3
39	BX	15	ASN	2.3
47	BF	60	SER	2.3
47	DF	56	LEU	2.3
18	CB	194	GLY	2.3
24	BI	35	MET	2.3
41	BJ	18	VAL	2.3
47	BF	64	PRO	2.3
28	BP	86	LYS	2.3
13	AP	18	GLN	2.3
35	DV	47	VAL	2.3
26	DD	88	GLU	2.3
24	BI	93	ASN	2.3
41	DJ	87	ALA	2.3
11	AL	64	SER	2.3
29	DE	119	ILE	2.3
38	BM	93	VAL	2.3
42	DN	75	ILE	2.3
29	BE	3	LEU	2.3
41	BJ	140	LEU	2.3
42	BN	83	LEU	2.3
47	BF	45	ASP	2.3
9	CJ	12	ALA	2.3
3	AD	175	GLY	2.3
5	CF	88	MET	2.3
20	AO	43	PHE	2.3
24	DI	135	MET	2.3
28	BP	42	PHE	2.3
9	CJ	18	ILE	2.3
21	AN	46	LYS	2.3
25	BC	107	LYS	2.3
3	AD	121	ALA	2.3
11	AL	63	THR	2.3
21	CN	14	ALA	2.3
47	DF	85	GLY	2.3
4	CE	155	LYS	2.3
11	AL	97	VAL	2.3
50	DT	43	ILE	2.3
7	CH	73	SER	2.3
13	AP	24	SER	2.3
40	BH	69	ALA	2.3
35	BV	32	GLY	2.3

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Mol	Chain	Res	Type	RSRZ
35	DV	50	MET	2.3
9	CJ	6	ILE	2.3
11	CL	79	ILE	2.3
21	CN	18	LYS	2.3
27	BK	77	ILE	2.3
49	BR	20	VAL	2.3
3	CD	164	ARG	2.3
19	CU	20	ARG	2.3
24	DI	38	CYS	2.3
3	AD	196	GLU	2.3
16	CS	19	GLU	2.3
41	DJ	63	ALA	2.3
18	AB	161	PHE	2.3
2	CC	38	VAL	2.3
3	CD	33	ILE	2.3
5	CF	96	VAL	2.3
12	AM	83	GLY	2.3
23	DB	1458	U	2.3
23	DB	1728	C	2.3
35	DV	91	PHE	2.3
27	DK	104	THR	2.3
21	AN	95	LEU	2.3
23	DB	1459	G	2.3
3	AD	108	ALA	2.3
12	AM	84	CYS	2.3
2	CC	154	GLY	2.3
12	CM	42	VAL	2.3
16	CS	43	MET	2.3
36	B2	46	LYS	2.3
37	DL	111	ILE	2.3
47	BF	160	LYS	2.3
4	AE	139	THR	2.3
29	BE	138	LEU	2.3
4	CE	109	ALA	2.3
23	BB	645	C	2.3
5	AF	68	GLN	2.3
24	BI	94	LYS	2.3
24	DI	114	ALA	2.3
44	DQ	34	ALA	2.3
44	DQ	88	GLU	2.3
16	CS	48	ILE	2.3
18	CB	162	VAL	2.3

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Mol	Chain	Res	Type	RSRZ
12	CM	4	ALA	2.3
16	AS	21	ALA	2.3
28	BP	67	GLU	2.3
35	BV	2	PHE	2.3
42	BN	21	PHE	2.3
4	AE	15	ILE	2.3
18	CB	39	ILE	2.3
16	AS	15	LEU	2.3
14	CQ	81	ALA	2.3
25	BC	171	VAL	2.3
41	DJ	6	ALA	2.3
43	BO	99	TYR	2.3
16	AS	70	LEU	2.2
16	CS	70	LEU	2.2
24	DI	30	GLN	2.2
4	AE	117	ALA	2.2
12	CM	57	ASP	2.2
25	DC	100	ARG	2.2
48	DG	16	VAL	2.2
41	BJ	86	GLN	2.2
16	CS	42	ASN	2.2
21	AN	55	SER	2.2
14	AQ	27	PHE	2.2
6	AG	39	GLU	2.2
11	AL	62	VAL	2.2
29	DE	126	VAL	2.2
40	BH	81	ALA	2.2
45	DS	67	ASP	2.2
23	DB	100	U	2.2
24	DI	37	PHE	2.2
28	DP	58	PHE	2.2
24	DI	77	VAL	2.2
7	CH	46	GLU	2.2
40	BH	70	GLU	2.2
21	AN	45	LEU	2.2
35	BV	3	THR	2.2
44	DQ	4	LYS	2.2
47	BF	175	PRO	2.2
8	AI	38	PHE	2.2
25	BC	181	ARG	2.2
26	DD	68	PHE	2.2
49	BR	96	VAL	2.2

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Mol	Chain	Res	Type	RSRZ
2	CC	169	GLU	2.2
8	AI	52	GLU	2.2
26	BD	4	LEU	2.2
42	BN	1	MET	2.2
18	CB	29	PHE	2.2
29	BE	116	ASP	2.2
41	DJ	52	ASP	2.2
52	BW	40	ARG	2.2
16	AS	44	ILE	2.2
24	DI	107	GLU	2.2
29	BE	86	ALA	2.2
1	AA	466	A	2.2
4	CE	113	VAL	2.2
23	BB	654	A	2.2
35	DV	65	VAL	2.2
48	DG	89	VAL	2.2
9	CJ	76	ILE	2.2
28	DP	111	GLU	2.2
40	DH	95	GLY	2.2
43	DO	26	LEU	2.2
47	DF	95	MET	2.2
38	DM	42	THR	2.2
45	DS	104	THR	2.2
21	AN	30	ILE	2.2
25	BC	115	ILE	2.2
29	DE	181	ILE	2.2
44	DQ	116	LEU	2.2
7	CH	35	ILE	2.2
16	CS	62	THR	2.2
22	BA	2	G	2.2
24	BI	30	GLN	2.2
25	BC	82	TYR	2.2
35	DV	63	ILE	2.2
43	DO	88	LYS	2.2
47	DF	96	TRP	2.2
49	DR	98	ILE	2.2
26	BD	131	ASP	2.2
45	DS	62	ASP	2.2
52	BW	14	ASP	2.2
5	CF	8	PHE	2.2
24	DI	64	ARG	2.2
11	AL	86	VAL	2.2

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Mol	Chain	Res	Type	RSRZ
24	DI	56	VAL	2.2
2	AC	42	LEU	2.2
7	AH	125	ILE	2.2
7	CH	127	TYR	2.2
38	DM	126	ILE	2.2
20	AO	18	ASP	2.2
24	DI	115	ASP	2.2
39	BX	8	GLU	2.2
2	CC	93	ILE	2.2
21	CN	26	LEU	2.2
20	AO	88	ARG	2.2
24	BI	55	PRO	2.2
22	BA	25	U	2.2
31	B0	55	ALA	2.2
37	BL	2	ARG	2.2
12	AM	59	VAL	2.2
24	DI	116	MET	2.2
35	BV	91	PHE	2.2
39	BX	60	LYS	2.2
47	DF	178	LYS	2.2
29	DE	149	ILE	2.2
45	DS	24	ILE	2.2
48	DG	54	ARG	2.2
27	BK	110	GLU	2.2
42	DN	29	VAL	2.2
4	AE	80	LEU	2.2
4	CE	117	ALA	2.2
40	BH	111	ALA	2.2
25	BC	193	GLU	2.2
37	DL	122	VAL	2.2
42	BN	32	GLU	2.2
48	DG	103	ASN	2.2
43	BO	35	ILE	2.2
16	AS	31	ARG	2.2
29	BE	120	VAL	2.2
40	BH	49	ALA	2.2
43	BO	107	ALA	2.2
38	DM	111	GLU	2.2
2	CC	168	ARG	2.2
38	BM	66	ARG	2.2
48	DG	132	LEU	2.2
1	AA	412	A	2.2

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Mol	Chain	Res	Type	RSRZ
12	AM	36	ALA	2.2
18	CB	52	ALA	2.2
12	AM	65	GLU	2.2
19	AU	23	GLU	2.2
25	BC	143	VAL	2.2
29	BE	15	SER	2.2
29	BE	125	SER	2.2
51	DZ	51	VAL	2.2
51	BZ	6	GLN	2.2
8	AI	60	LEU	2.1
24	DI	128	ILE	2.1
40	BH	75	LEU	2.1
10	AK	110	THR	2.1
47	BF	34	THR	2.1
2	AC	157	GLY	2.1
37	BL	123	ARG	2.1
40	DH	54	LEU	2.1
40	DH	112	LYS	2.1
4	CE	42	ASN	2.1
29	BE	60	TRP	2.1
46	BU	58	VAL	2.1
21	CN	17	ASP	2.1
23	BB	1458	U	2.1
24	DI	124	MET	2.1
2	AC	102	ILE	2.1
5	AF	54	LEU	2.1
17	CT	3	ILE	2.1
48	DG	53	PRO	2.1
16	AS	68	HIS	2.1
10	AK	83	VAL	2.1
10	AK	128	VAL	2.1
18	AB	162	VAL	2.1
18	CB	188	THR	2.1
18	CB	219	THR	2.1
39	BX	7	ARG	2.1
2	AC	63	ILE	2.1
2	CC	156	LEU	2.1
37	BL	77	ILE	2.1
24	DI	81	LYS	2.1
24	DI	110	GLN	2.1
25	DC	11	GLY	2.1
26	DD	73	VAL	2.1

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Mol	Chain	Res	Type	RSRZ
40	BH	9	VAL	2.1
18	CB	165	ALA	2.1
24	BI	83	ALA	2.1
37	BL	126	ARG	2.1
40	BH	67	ALA	2.1
14	AQ	79	GLU	2.1
25	BC	78	GLU	2.1
39	DX	57	LEU	2.1
47	BF	48	LEU	2.1
47	DF	151	LEU	2.1
48	DG	48	THR	2.1
47	BF	138	PRO	2.1
18	AB	216	VAL	2.1
26	DD	5	VAL	2.1
47	BF	99	PHE	2.1
4	CE	28	ARG	2.1
12	CM	26	LYS	2.1
37	DL	79	LEU	2.1
39	BX	12	GLU	2.1
4	CE	47	PHE	2.1
14	AQ	45	VAL	2.1
14	AQ	82	VAL	2.1
21	AN	76	PHE	2.1
40	DH	73	ASN	2.1
44	DQ	105	PHE	2.1
4	CE	118	GLY	2.1
10	CK	12	ARG	2.1
12	CM	2	ARG	2.1
5	CF	62	MET	2.1
35	DV	61	LEU	2.1
52	BW	65	LYS	2.1
48	DG	31	GLU	2.1
25	BC	128	THR	2.1
23	DB	846	U	2.1
25	DC	64	VAL	2.1
26	DD	203	VAL	2.1
48	DG	161	VAL	2.1
50	BT	92	ASN	2.1
3	CD	190	LEU	2.1
37	DL	142	ILE	2.1
50	BT	11	LEU	2.1
16	AS	47	THR	2.1

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Mol	Chain	Res	Type	RSRZ
38	BM	129	THR	2.1
48	BG	128	THR	2.1
4	CE	43	GLY	2.1
24	DI	104	GLN	2.1
25	BC	102	TYR	2.1
7	AH	39	LEU	2.1
26	DD	55	LYS	2.1
48	DG	104	LEU	2.1
25	DC	81	GLU	2.1
37	DL	107	PHE	2.1
43	DO	49	VAL	2.1
3	AD	176	LYS	2.1
25	BC	125	PRO	2.1
3	AD	4	LEU	2.1
5	AF	6	ILE	2.1
47	BF	102	LEU	2.1
16	CS	31	ARG	2.1
25	BC	184	GLU	2.1
41	BJ	141	ASP	2.1
48	BG	59	ASP	2.1
48	BG	20	GLY	2.1
2	CC	94	ALA	2.1
12	CM	47	LEU	2.1
29	BE	172	ALA	2.1
40	DH	104	THR	2.1
44	DQ	62	ALA	2.1
48	BG	101	VAL	2.1
37	BL	6	LEU	2.1
48	DG	150	TYR	2.1
27	BK	11	ALA	2.1
39	BX	16	THR	2.1
45	DS	43	ALA	2.1
2	AC	45	GLU	2.1
2	AC	85	LYS	2.1
40	BH	53	GLU	2.1
29	BE	168	ASP	2.1
39	BX	49	ASP	2.1
47	BF	141	ASP	2.1
3	CD	18	LEU	2.1
52	BW	36	ILE	2.1
6	CG	42	VAL	2.1
18	AB	183	PHE	2.1

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Mol	Chain	Res	Type	RSRZ
14	AQ	80	LYS	2.1
23	BB	2310	C	2.1
38	DM	31	PHE	2.1
24	DI	44	LYS	2.1
44	DQ	30	VAL	2.1
5	CF	54	LEU	2.1
23	BB	138	U	2.1
40	BH	72	ILE	2.1
18	AB	29	PHE	2.1
25	DC	93	VAL	2.1
28	BP	48	ALA	2.1
49	DR	35	PHE	2.1
7	CH	72	GLU	2.1
18	AB	55	GLU	2.1
7	CH	122	GLY	2.1
29	BE	180	LEU	2.1
41	BJ	132	HIS	2.1
43	BO	114	GLY	2.1
50	BT	15	HIS	2.1
43	DO	40	ILE	2.1
40	DH	36	ALA	2.1
42	DN	66	ALA	2.1
45	BS	71	VAL	2.1
47	DF	162	ASP	2.1
27	DK	84	CYS	2.1
14	CQ	51	GLU	2.1
26	DD	35	THR	2.0
9	CJ	95	GLY	2.0
44	BQ	108	LEU	2.0
29	BE	176	ASP	2.0
35	DV	72	VAL	2.0
49	BR	102	SER	2.0
52	DW	18	LYS	2.0
26	DD	165	MET	2.0
40	BH	109	GLU	2.0
8	AI	19	PHE	2.0
5	AF	67	PRO	2.0
18	CB	126	ASP	2.0
25	BC	94	LEU	2.0
13	AP	56	ARG	2.0
36	D2	46	LYS	2.0
37	DL	141	LYS	2.0

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Mol	Chain	Res	Type	RSRZ
26	DD	29	VAL	2.0
3	AD	174	ALA	2.0
9	CJ	34	ALA	2.0
40	DH	102	ALA	2.0
23	BB	653	U	2.0
41	BJ	72	LYS	2.0
47	BF	149	ARG	2.0
51	DZ	6	GLN	2.0
2	CC	167	TYR	2.0
47	DF	110	ILE	2.0
48	DG	23	ILE	2.0
52	BW	59	PHE	2.0
1	AA	77	A	2.0
4	CE	36	THR	2.0
37	DL	108	ALA	2.0
43	DO	24	THR	2.0
13	CP	6	LEU	2.0
21	CN	78	LEU	2.0
45	DS	23	LEU	2.0
12	AM	3	ILE	2.0
47	DF	133	GLU	2.0
2	AC	75	VAL	2.0
38	DM	108	VAL	2.0
42	BN	87	PHE	2.0
47	BF	145	VAL	2.0
3	CD	16	THR	2.0
25	BC	111	ALA	2.0
26	DD	67	HIS	2.0
7	CH	39	LEU	2.0
39	BX	1	MET	2.0
26	DD	46	ARG	2.0
39	BX	37	LEU	2.0
18	CB	199	ILE	2.0
11	AL	16	ALA	2.0
45	BS	93	ALA	2.0
21	CN	64	ARG	2.0
42	BN	118	ARG	2.0
47	DF	35	LEU	2.0
50	DT	36	LYS	2.0
2	CC	151	GLU	2.0
7	CH	102	VAL	2.0
39	BX	53	VAL	2.0

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Mol	Chain	Res	Type	RSRZ
52	BW	26	GLY	2.0
25	DC	141	HIS	2.0
47	BF	153	ILE	2.0
47	DF	155	ILE	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(Å <sup>2</sup> )	Q<0.9
53	NMY	BB	3001	42/42	0.58	0.68	17.78	89,89,89,89	42
53	NMY	DB	3001	42/42	0.70	0.51	13.07	68,68,68,68	42
54	MG	AA	1658	1/1	0.83	0.26	7.04	120,120,120,120	0
54	MG	DB	3090	1/1	0.99	0.25	7.04	99,99,99,99	0
54	MG	BB	3088	1/1	0.95	0.25	5.98	87,87,87,87	0
53	NMY	CA	1601	42/42	0.90	0.22	2.78	47,47,47,47	0
53	NMY	AA	1601	42/42	0.86	0.23	2.55	75,75,75,75	0
54	MG	BB	3087	1/1	0.99	0.20	1.80	23,23,23,23	0
54	MG	CA	1613	1/1	0.88	0.17	1.37	108,108,108,108	0
54	MG	AA	1636	1/1	0.09	0.15	1.13	121,121,121,121	0
55	SCM	CA	1661	23/23	0.94	0.16	0.99	37,37,37,37	0
54	MG	BB	3041	1/1	0.97	0.17	0.53	34,34,34,34	0
54	MG	BB	3111	1/1	0.97	0.12	0.38	90,90,90,90	0
55	SCM	AA	1662	23/23	0.96	0.15	0.37	23,23,23,23	0
54	MG	DB	3013	1/1	0.99	0.17	0.29	12,12,12,12	0
54	MG	BB	3012	1/1	0.97	0.17	0.19	33,33,33,33	0
54	MG	CA	1634	1/1	0.95	0.12	-0.31	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	BB	3086	1/1	0.83	0.16	-0.32	18,18,18,18	0
54	MG	BB	3084	1/1	0.95	0.16	-0.34	61,61,61,61	0
54	MG	BB	3076	1/1	0.98	0.16	-0.51	33,33,33,33	0
54	MG	AA	1616	1/1	0.92	0.14	-0.63	113,113,113,113	0
54	MG	AA	1634	1/1	0.85	0.10	-0.65	88,88,88,88	0
54	MG	AA	1653	1/1	0.78	0.11	-0.79	110,110,110,110	0
54	MG	DB	3111	1/1	0.98	0.09	-0.82	36,36,36,36	0
54	MG	DB	3091	1/1	0.86	0.06	-0.83	55,55,55,55	0
54	MG	DB	3015	1/1	0.97	0.07	-0.99	37,37,37,37	0
54	MG	DB	3031	1/1	0.86	0.16	-1.01	21,21,21,21	0
54	MG	DB	3100	1/1	0.96	0.15	-1.05	6,6,6,6	0
54	MG	CA	1654	1/1	0.80	0.09	-1.10	82,82,82,82	0
54	MG	DB	3088	1/1	0.97	0.16	-1.16	37,37,37,37	0
54	MG	DB	3097	1/1	0.95	0.15	-1.18	12,12,12,12	0
54	MG	DB	3093	1/1	0.90	0.12	-1.18	98,98,98,98	0
54	MG	DB	3079	1/1	0.95	0.12	-1.22	80,80,80,80	0
54	MG	DB	3026	1/1	0.97	0.08	-1.27	16,16,16,16	0
54	MG	AA	1654	1/1	0.93	0.09	-1.31	49,49,49,49	0
54	MG	CA	1648	1/1	0.83	0.05	-1.38	69,69,69,69	0
54	MG	AA	1614	1/1	0.93	0.05	-1.41	66,66,66,66	0
56	ZN	B4	101	1/1	0.96	0.08	-1.47	49,49,49,49	0
54	MG	BB	3013	1/1	0.98	0.11	-1.51	81,81,81,81	0
54	MG	DB	3095	1/1	0.96	0.05	-1.58	39,39,39,39	0
56	ZN	D4	101	1/1	0.95	0.08	-1.59	40,40,40,40	0
54	MG	BB	3024	1/1	0.92	0.15	-1.65	12,12,12,12	0
54	MG	DB	3008	1/1	0.97	0.15	-1.65	41,41,41,41	0
54	MG	CA	1611	1/1	0.99	0.10	-1.70	5,5,5,5	0
54	MG	AA	1644	1/1	0.98	0.09	-1.71	42,42,42,42	0
54	MG	BB	3006	1/1	0.97	0.09	-1.72	9,9,9,9	0
54	MG	BB	3093	1/1	0.86	0.07	-1.79	32,32,32,32	0
54	MG	BB	3002	1/1	0.95	0.08	-1.81	19,19,19,19	0
54	MG	AA	1604	1/1	0.95	0.13	-1.82	43,43,43,43	0
54	MG	BB	3099	1/1	0.94	0.12	-1.84	23,23,23,23	0
54	MG	DB	3048	1/1	0.98	0.16	-1.92	14,14,14,14	0
54	MG	CA	1656	1/1	0.87	0.09	-1.92	135,135,135,135	0
54	MG	DB	3007	1/1	0.93	0.14	-1.98	9,9,9,9	0
54	MG	DB	3110	1/1	0.96	0.09	-2.02	17,17,17,17	0
54	MG	AA	1608	1/1	0.96	0.07	-2.05	53,53,53,53	0
54	MG	CA	1646	1/1	0.90	0.03	-2.08	52,52,52,52	0
54	MG	DB	3010	1/1	0.98	0.12	-2.08	8,8,8,8	0
54	MG	AA	1610	1/1	0.98	0.10	-2.15	5,5,5,5	0
54	MG	DB	3021	1/1	0.99	0.13	-2.36	5,5,5,5	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	AA	1611	1/1	0.98	0.04	-2.41	73,73,73,73	0
54	MG	BB	3083	1/1	0.94	0.13	-2.51	5,5,5,5	0
54	MG	CA	1622	1/1	0.96	0.11	-2.53	44,44,44,44	0
54	MG	DB	3036	1/1	0.90	0.10	-2.61	85,85,85,85	0
54	MG	DB	3004	1/1	0.95	0.12	-2.62	41,41,41,41	0
54	MG	BB	3050	1/1	0.91	0.07	-2.67	16,16,16,16	0
54	MG	BB	3003	1/1	0.97	0.10	-2.72	17,17,17,17	0
54	MG	BB	3104	1/1	0.98	0.12	-2.72	6,6,6,6	0
54	MG	DB	3070	1/1	0.98	0.15	-2.77	38,38,38,38	0
54	MG	AA	1652	1/1	0.88	0.04	-2.91	101,101,101,101	0
54	MG	DB	3104	1/1	0.97	0.11	-2.91	31,31,31,31	0
54	MG	DB	3023	1/1	0.88	0.07	-2.93	7,7,7,7	0
54	MG	AA	1645	1/1	0.86	0.08	-2.94	67,67,67,67	0
54	MG	DB	3056	1/1	0.93	0.11	-2.97	34,34,34,34	0
54	MG	BB	3066	1/1	0.94	0.06	-2.98	10,10,10,10	0
54	MG	DB	3071	1/1	0.93	0.14	-2.98	93,93,93,93	0
54	MG	DB	3086	1/1	0.98	0.11	-3.01	41,41,41,41	0
54	MG	DB	3073	1/1	0.91	0.07	-3.08	62,62,62,62	0
54	MG	DB	3011	1/1	0.97	0.09	-3.08	9,9,9,9	0
54	MG	DB	3089	1/1	0.98	0.10	-3.28	13,13,13,13	0
54	MG	BB	3030	1/1	0.95	0.08	-3.32	16,16,16,16	0
54	MG	DB	3069	1/1	0.97	0.08	-3.40	8,8,8,8	0
54	MG	CA	1628	1/1	0.93	0.09	-3.48	41,41,41,41	0
54	MG	CA	1612	1/1	0.98	0.07	-3.49	25,25,25,25	0
54	MG	DB	3052	1/1	0.96	0.12	-3.56	40,40,40,40	0
54	MG	CA	1621	1/1	0.97	0.10	-3.59	34,34,34,34	0
54	MG	AA	1642	1/1	0.98	0.04	-3.61	51,51,51,51	0
54	MG	CA	1635	1/1	0.91	0.07	-3.62	64,64,64,64	0
54	MG	BB	3022	1/1	0.96	0.09	-3.63	35,35,35,35	0
54	MG	AA	1631	1/1	0.96	0.04	-3.64	84,84,84,84	0
54	MG	BB	3082	1/1	0.92	0.11	-3.67	34,34,34,34	0
54	MG	AA	1639	1/1	0.96	0.05	-3.83	65,65,65,65	0
54	MG	BB	3089	1/1	0.95	0.07	-3.83	7,7,7,7	0
54	MG	BB	3091	1/1	0.95	0.05	-3.91	105,105,105,105	0
54	MG	DB	3057	1/1	0.97	0.09	-4.00	11,11,11,11	0
54	MG	AA	1637	1/1	0.95	0.03	-4.09	62,62,62,62	0
54	MG	CA	1637	1/1	0.99	0.08	-4.18	26,26,26,26	0
54	MG	BB	3095	1/1	0.90	0.08	-4.20	36,36,36,36	0
54	MG	DB	3002	1/1	0.98	0.13	-4.27	5,5,5,5	0
54	MG	DB	3085	1/1	0.96	0.13	-4.53	12,12,12,12	0
54	MG	BB	3075	1/1	0.95	0.08	-4.57	6,6,6,6	0
54	MG	CA	1625	1/1	0.99	0.06	-4.65	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	DB	3109	1/1	0.98	0.08	-4.65	33,33,33,33	0
54	MG	CA	1636	1/1	0.99	0.07	-4.81	37,37,37,37	0
54	MG	AA	1655	1/1	0.92	0.06	-4.85	73,73,73,73	0
54	MG	AA	1602	1/1	0.96	0.06	-4.91	28,28,28,28	0
54	MG	BB	3063	1/1	0.99	0.10	-4.99	7,7,7,7	0
54	MG	BB	3014	1/1	0.92	0.06	-5.20	11,11,11,11	0
54	MG	BB	3080	1/1	0.93	0.10	-5.24	44,44,44,44	0
54	MG	DB	3003	1/1	0.99	0.07	-5.98	21,21,21,21	0
54	MG	BB	3070	1/1	0.97	0.08	-6.05	9,9,9,9	0
54	MG	BB	3033	1/1	0.99	0.05	-6.17	25,25,25,25	0
54	MG	CA	1602	1/1	0.99	0.04	-6.36	7,7,7,7	0
54	MG	CA	1606	1/1	0.95	0.06	-6.46	7,7,7,7	0
54	MG	BB	3057	1/1	0.97	0.05	-6.62	15,15,15,15	0
54	MG	BB	3109	1/1	0.97	0.07	-6.66	19,19,19,19	0
54	MG	DB	3045	1/1	0.85	0.05	-6.69	32,32,32,32	0
54	MG	DB	3076	1/1	0.99	0.05	-6.86	22,22,22,22	0
54	MG	BB	3020	1/1	0.97	0.08	-8.07	28,28,28,28	0
54	MG	DB	3035	1/1	0.86	0.09	-9.10	80,80,80,80	0
54	MG	BB	3060	1/1	0.97	0.06	-9.57	5,5,5,5	0
54	MG	BB	3036	1/1	0.91	0.05	-11.17	26,26,26,26	0
54	MG	BB	3053	1/1	0.95	0.07	-14.14	30,30,30,30	0
54	MG	DB	3081	1/1	0.98	0.08	-15.48	35,35,35,35	0
54	MG	CA	1605	1/1	0.98	0.06	-17.16	12,12,12,12	0
54	MG	BB	3049	1/1	0.96	0.05	-27.29	24,24,24,24	0
54	MG	DB	3046	1/1	0.88	0.08	-	104,104,104,104	0
54	MG	BB	3034	1/1	0.82	0.40	-	130,130,130,130	0
54	MG	BB	3061	1/1	0.99	0.11	-	5,5,5,5	0
54	MG	DB	3055	1/1	0.98	0.09	-	22,22,22,22	0
54	MG	DB	3032	1/1	0.96	0.14	-	5,5,5,5	0
54	MG	CA	1640	1/1	0.97	0.13	-	43,43,43,43	0
54	MG	DB	3051	1/1	0.90	0.11	-	67,67,67,67	0
54	MG	BB	3032	1/1	0.95	0.12	-	38,38,38,38	0
54	MG	BB	3077	1/1	0.99	0.09	-	5,5,5,5	0
54	MG	BB	3039	1/1	0.89	0.09	-	107,107,107,107	0
54	MG	DB	3072	1/1	0.99	0.08	-	36,36,36,36	0
54	MG	BB	3069	1/1	0.87	0.07	-	41,41,41,41	0
54	MG	BB	3044	1/1	0.88	0.15	-	118,118,118,118	0
54	MG	BB	3027	1/1	0.89	0.14	-	42,42,42,42	0
54	MG	BB	3102	1/1	0.98	0.09	-	10,10,10,10	0
54	MG	DB	3024	1/1	0.93	0.07	-	32,32,32,32	0
54	MG	DB	3068	1/1	0.95	0.11	-	36,36,36,36	0
54	MG	DB	3060	1/1	0.49	0.08	-	96,96,96,96	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	BB	3081	1/1	0.83	0.09	-	77,77,77,77	0
54	MG	AA	1620	1/1	0.73	0.12	-	132,132,132,132	0
54	MG	CA	1657	1/1	0.97	0.06	-	14,14,14,14	0
54	MG	BB	3015	1/1	0.96	0.03	-	32,32,32,32	0
54	MG	AA	1630	1/1	0.97	0.08	-	36,36,36,36	0
54	MG	DB	3019	1/1	0.99	0.08	-	25,25,25,25	0
54	MG	CA	1653	1/1	0.71	0.10	-	96,96,96,96	0
54	MG	BB	3046	1/1	0.98	0.10	-	50,50,50,50	0
54	MG	BB	3055	1/1	0.98	0.06	-	46,46,46,46	0
54	MG	BB	3097	1/1	0.99	0.07	-	5,5,5,5	0
54	MG	CA	1638	1/1	0.95	0.10	-	123,123,123,123	0
54	MG	BB	3010	1/1	0.98	0.06	-	123,123,123,123	0
54	MG	BB	3064	1/1	0.99	0.07	-	10,10,10,10	0
54	MG	AA	1638	1/1	0.53	0.31	-	126,126,126,126	0
54	MG	DB	3099	1/1	0.99	0.13	-	9,9,9,9	0
54	MG	AA	1649	1/1	0.97	0.10	-	31,31,31,31	0
54	MG	CA	1627	1/1	0.96	0.07	-	40,40,40,40	0
54	MG	AA	1609	1/1	0.86	0.11	-	107,107,107,107	0
54	MG	CA	1660	1/1	0.98	0.07	-	77,77,77,77	0
54	MG	BB	3096	1/1	0.94	0.08	-	5,5,5,5	0
54	MG	CA	1658	1/1	0.97	0.14	-	50,50,50,50	0
54	MG	BB	3042	1/1	1.00	0.10	-	10,10,10,10	0
54	MG	DB	3105	1/1	0.97	0.10	-	41,41,41,41	0
54	MG	AA	1621	1/1	0.73	0.05	-	82,82,82,82	0
54	MG	AA	1647	1/1	0.82	0.12	-	133,133,133,133	0
54	MG	DB	3018	1/1	0.96	0.15	-	5,5,5,5	0
54	MG	DB	3047	1/1	0.98	0.08	-	27,27,27,27	0
54	MG	AA	1656	1/1	0.97	0.14	-	95,95,95,95	0
54	MG	AA	1626	1/1	0.53	0.24	-	87,87,87,87	1
54	MG	DB	3059	1/1	0.63	0.80	-	180,180,180,180	0
54	MG	AA	1643	1/1	0.94	0.13	-	43,43,43,43	0
54	MG	CA	1647	1/1	0.61	0.08	-	153,153,153,153	0
54	MG	CA	1633	1/1	0.69	0.07	-	48,48,48,48	0
54	MG	DB	3038	1/1	0.95	0.20	-	10,10,10,10	0
54	MG	BB	3079	1/1	0.85	0.08	-	68,68,68,68	0
54	MG	BB	3071	1/1	0.97	0.08	-	33,33,33,33	0
54	MG	DB	3050	1/1	0.97	0.12	-	6,6,6,6	0
54	MG	BB	3065	1/1	0.98	0.09	-	24,24,24,24	0
54	MG	AA	1635	1/1	0.98	0.06	-	86,86,86,86	0
54	MG	DB	3108	1/1	0.99	0.06	-	27,27,27,27	0
54	MG	CA	1644	1/1	0.93	0.08	-	49,49,49,49	0
54	MG	DB	3042	1/1	0.99	0.09	-	17,17,17,17	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	DB	3016	1/1	0.89	0.10	-	53,53,53,53	0
54	MG	CA	1610	1/1	0.95	0.09	-	103,103,103,103	0
54	MG	BB	3085	1/1	0.96	0.15	-	43,43,43,43	0
54	MG	BB	3100	1/1	0.96	0.11	-	34,34,34,34	0
54	MG	DB	3077	1/1	0.98	0.12	-	28,28,28,28	0
54	MG	BB	3052	1/1	0.93	0.12	-	67,67,67,67	0
54	MG	BB	3098	1/1	0.95	0.09	-	85,85,85,85	0
54	MG	CA	1619	1/1	0.92	0.08	-	53,53,53,53	0
54	MG	CA	1609	1/1	0.79	0.07	-	110,110,110,110	0
54	MG	BB	3101	1/1	0.84	0.23	-	157,157,157,157	0
54	MG	BB	3068	1/1	0.96	0.11	-	65,65,65,65	0
54	MG	DB	3033	1/1	0.95	0.07	-	82,82,82,82	0
54	MG	CA	1632	1/1	0.98	0.05	-	31,31,31,31	0
54	MG	AA	1648	1/1	0.86	0.40	-	110,110,110,110	0
54	MG	CA	1614	1/1	0.82	0.34	-	139,139,139,139	0
54	MG	BB	3056	1/1	0.94	0.14	-	23,23,23,23	0
54	MG	DB	3067	1/1	0.49	0.09	-	137,137,137,137	0
54	MG	DB	3043	1/1	0.97	0.09	-	32,32,32,32	0
54	MG	CA	1642	1/1	0.99	0.12	-	49,49,49,49	0
54	MG	DB	3030	1/1	0.82	0.15	-	81,81,81,81	0
54	MG	BB	3040	1/1	0.96	0.18	-	44,44,44,44	0
54	MG	DB	3084	1/1	0.86	0.16	-	109,109,109,109	0
54	MG	CA	1652	1/1	0.29	0.12	-	128,128,128,128	0
54	MG	DB	3005	1/1	0.96	0.14	-	23,23,23,23	0
54	MG	DB	3098	1/1	0.97	0.17	-	41,41,41,41	0
54	MG	AA	1659	1/1	0.87	0.05	-	111,111,111,111	0
54	MG	DB	3101	1/1	0.94	0.12	-	20,20,20,20	0
54	MG	DB	3040	1/1	0.97	0.08	-	78,78,78,78	0
54	MG	AA	1651	1/1	0.88	0.07	-	97,97,97,97	0
54	MG	BB	3025	1/1	0.94	0.11	-	32,32,32,32	0
54	MG	CA	1649	1/1	0.85	0.08	-	92,92,92,92	0
54	MG	BB	3009	1/1	0.95	0.08	-	80,80,80,80	0
54	MG	DB	3066	1/1	0.95	0.06	-	32,32,32,32	0
54	MG	CA	1623	1/1	0.96	0.12	-	21,21,21,21	0
54	MG	DB	3082	1/1	0.98	0.07	-	9,9,9,9	0
54	MG	AA	1660	1/1	0.38	0.40	-	148,148,148,148	0
54	MG	BB	3045	1/1	0.91	0.13	-	42,42,42,42	0
54	MG	BB	3110	1/1	0.98	0.15	-	61,61,61,61	0
54	MG	CA	1641	1/1	0.95	0.14	-	61,61,61,61	0
54	MG	BB	3090	1/1	0.97	0.10	-	54,54,54,54	0
54	MG	CA	1608	1/1	0.94	0.04	-	31,31,31,31	0
54	MG	BB	3028	1/1	0.98	0.05	-	24,24,24,24	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	DB	3103	1/1	0.98	0.13	-	14,14,14,14	0
54	MG	DB	3106	1/1	0.97	0.16	-	53,53,53,53	0
54	MG	AA	1627	1/1	0.97	0.11	-	5,5,5,5	1
54	MG	DB	3006	1/1	0.97	0.14	-	13,13,13,13	0
54	MG	BB	3062	1/1	0.93	0.08	-	38,38,38,38	0
54	MG	DB	3061	1/1	0.28	0.17	-	117,117,117,117	0
54	MG	BB	3008	1/1	0.98	0.18	-	81,81,81,81	0
54	MG	CA	1618	1/1	0.87	0.15	-	104,104,104,104	0
54	MG	AA	1661	1/1	0.94	0.11	-	62,62,62,62	0
54	MG	AA	1633	1/1	0.93	0.14	-	65,65,65,65	0
54	MG	CA	1659	1/1	0.95	0.06	-	45,45,45,45	0
54	MG	CA	1639	1/1	0.96	0.06	-	108,108,108,108	0
54	MG	BB	3073	1/1	0.97	0.06	-	35,35,35,35	0
54	MG	DB	3092	1/1	0.97	0.16	-	12,12,12,12	0
54	MG	DB	3078	1/1	0.98	0.11	-	24,24,24,24	0
54	MG	AA	1650	1/1	0.91	0.06	-	105,105,105,105	0
54	MG	BB	3048	1/1	0.90	0.09	-	145,145,145,145	0
54	MG	CA	1630	1/1	0.88	0.10	-	81,81,81,81	0
54	MG	DB	3094	1/1	0.91	0.15	-	5,5,5,5	0
54	MG	AA	1612	1/1	0.99	0.06	-	70,70,70,70	0
54	MG	BB	3017	1/1	0.96	0.08	-	43,43,43,43	0
54	MG	BB	3092	1/1	0.98	0.11	-	5,5,5,5	0
54	MG	DB	3029	1/1	0.95	0.04	-	30,30,30,30	0
54	MG	BB	3004	1/1	0.96	0.06	-	31,31,31,31	0
54	MG	CA	1616	1/1	0.96	0.07	-	15,15,15,15	0
54	MG	CA	1655	1/1	0.97	0.06	-	52,52,52,52	0
54	MG	CA	1643	1/1	0.82	0.11	-	75,75,75,75	0
54	MG	DB	3012	1/1	0.96	0.14	-	32,32,32,32	0
54	MG	CA	1603	1/1	0.99	0.15	-	25,25,25,25	0
54	MG	CA	1650	1/1	0.39	0.50	-	180,180,180,180	0
54	MG	DB	3075	1/1	0.94	0.17	-	58,58,58,58	0
54	MG	BB	3106	1/1	0.97	0.20	-	11,11,11,11	0
54	MG	CA	1620	1/1	0.98	0.09	-	62,62,62,62	0
54	MG	CA	1615	1/1	0.98	0.07	-	29,29,29,29	0
54	MG	BB	3103	1/1	0.97	0.13	-	25,25,25,25	0
54	MG	AA	1625	1/1	0.84	0.20	-	102,102,102,102	0
54	MG	AA	1618	1/1	0.69	0.20	-	160,160,160,160	0
54	MG	DB	3027	1/1	0.87	0.11	-	72,72,72,72	0
54	MG	AA	1629	1/1	0.96	0.09	-	55,55,55,55	0
54	MG	BB	3051	1/1	0.98	0.05	-	34,34,34,34	0
54	MG	BB	3018	1/1	0.95	0.15	-	31,31,31,31	0
54	MG	BB	3026	1/1	0.98	0.17	-	68,68,68,68	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	DB	3020	1/1	0.98	0.10	-	6,6,6,6	0
54	MG	AA	1622	1/1	0.92	0.06	-	24,24,24,24	0
54	MG	AA	1613	1/1	0.95	0.08	-	80,80,80,80	0
54	MG	BB	3021	1/1	0.97	0.15	-	30,30,30,30	0
54	MG	BB	3054	1/1	0.93	0.07	-	46,46,46,46	0
54	MG	BB	3031	1/1	0.95	0.06	-	53,53,53,53	0
54	MG	DB	3107	1/1	1.00	0.07	-	20,20,20,20	0
54	MG	BB	3011	1/1	0.92	0.10	-	62,62,62,62	0
54	MG	BB	3058	1/1	0.91	0.17	-	63,63,63,63	0
54	MG	DB	3034	1/1	0.99	0.11	-	5,5,5,5	0
54	MG	DB	3014	1/1	0.77	0.15	-	80,80,80,80	0
54	MG	CA	1629	1/1	0.94	0.10	-	57,57,57,57	0
54	MG	CA	1624	1/1	0.97	0.07	-	21,21,21,21	0
54	MG	DB	3065	1/1	0.98	0.07	-	20,20,20,20	0
54	MG	BB	3059	1/1	0.99	0.05	-	13,13,13,13	0
54	MG	BB	3043	1/1	0.29	0.23	-	145,145,145,145	0
54	MG	DB	3009	1/1	0.97	0.09	-	49,49,49,49	0
54	MG	DB	3074	1/1	0.86	0.12	-	29,29,29,29	0
54	MG	BB	3038	1/1	0.92	0.13	-	46,46,46,46	0
54	MG	DB	3049	1/1	0.95	0.06	-	66,66,66,66	0
54	MG	DB	3087	1/1	0.97	0.10	-	11,11,11,11	0
54	MG	AA	1624	1/1	0.95	0.32	-	13,13,13,13	1
54	MG	BB	3016	1/1	0.99	0.09	-	31,31,31,31	0
54	MG	DB	3028	1/1	0.95	0.10	-	17,17,17,17	0
54	MG	AA	1607	1/1	0.66	0.12	-	93,93,93,93	0
54	MG	BB	3108	1/1	0.96	0.14	-	36,36,36,36	0
54	MG	DB	3054	1/1	0.84	0.10	-	80,80,80,80	0
54	MG	AA	1606	1/1	0.95	0.19	-	56,56,56,56	0
54	MG	BB	3007	1/1	0.93	0.06	-	37,37,37,37	0
54	MG	BB	3067	1/1	0.95	0.09	-	26,26,26,26	0
54	MG	AA	1615	1/1	0.89	0.10	-	123,123,123,123	0
54	MG	BB	3029	1/1	0.91	0.22	-	21,21,21,21	0
54	MG	AA	1646	1/1	0.86	0.08	-	89,89,89,89	0
54	MG	BB	3037	1/1	0.98	0.20	-	35,35,35,35	0
54	MG	DB	3112	1/1	0.93	0.23	-	87,87,87,87	0
54	MG	CA	1631	1/1	0.99	0.15	-	43,43,43,43	0
54	MG	DB	3083	1/1	0.98	0.06	-	37,37,37,37	0
54	MG	BB	3072	1/1	0.94	0.08	-	54,54,54,54	0
54	MG	CA	1617	1/1	0.81	0.07	-	83,83,83,83	0
54	MG	CA	1604	1/1	0.95	0.07	-	66,66,66,66	0
54	MG	BB	3094	1/1	0.75	0.08	-	75,75,75,75	0
54	MG	DB	3064	1/1	0.99	0.04	-	34,34,34,34	0

*Continued on next page...*



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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	BB	3105	1/1	0.96	0.17	-	18,18,18,18	0
54	MG	AA	1605	1/1	0.95	0.09	-	46,46,46,46	0
54	MG	DB	3096	1/1	0.91	0.07	-	115,115,115,115	0
54	MG	AA	1657	1/1	0.81	0.24	-	95,95,95,95	0
54	MG	DB	3058	1/1	0.95	0.08	-	39,39,39,39	0
54	MG	CA	1651	1/1	0.84	0.46	-	161,161,161,161	0
54	MG	BB	3019	1/1	0.99	0.11	-	44,44,44,44	0
54	MG	CA	1607	1/1	0.92	0.16	-	129,129,129,129	0
54	MG	BB	3023	1/1	0.99	0.21	-	12,12,12,12	0
54	MG	DB	3017	1/1	0.97	0.11	-	29,29,29,29	0
54	MG	AA	1640	1/1	0.81	0.15	-	110,110,110,110	0
54	MG	AA	1628	1/1	0.96	0.07	-	53,53,53,53	0
54	MG	AA	1619	1/1	0.98	0.06	-	48,48,48,48	0
54	MG	DB	3022	1/1	0.97	0.09	-	5,5,5,5	0
54	MG	AA	1603	1/1	0.87	0.07	-	100,100,100,100	0
54	MG	DB	3063	1/1	0.98	0.04	-	50,50,50,50	0
54	MG	DB	3037	1/1	0.94	0.09	-	23,23,23,23	0
54	MG	CA	1645	1/1	0.90	0.08	-	70,70,70,70	0
54	MG	BB	3074	1/1	0.99	0.09	-	28,28,28,28	0
54	MG	BB	3107	1/1	0.97	0.07	-	30,30,30,30	0
54	MG	AA	1641	1/1	0.96	0.15	-	88,88,88,88	0
54	MG	DB	3102	1/1	0.96	0.17	-	6,6,6,6	0
54	MG	AA	1617	1/1	0.96	0.11	-	47,47,47,47	0
54	MG	DB	3062	1/1	0.96	0.06	-	75,75,75,75	0
54	MG	BB	3047	1/1	0.96	0.11	-	66,66,66,66	0
54	MG	DB	3025	1/1	0.98	0.11	-	47,47,47,47	0
54	MG	DB	3044	1/1	0.98	0.07	-	11,11,11,11	0
54	MG	CA	1626	1/1	0.88	0.08	-	117,117,117,117	0
54	MG	AA	1623	1/1	0.68	0.19	-	157,157,157,157	0
54	MG	BB	3005	1/1	0.91	0.07	-	29,29,29,29	0
54	MG	BB	3035	1/1	0.94	0.06	-	41,41,41,41	0
54	MG	DB	3080	1/1	0.98	0.09	-	46,46,46,46	0
54	MG	BB	3078	1/1	0.96	0.15	-	47,47,47,47	0
54	MG	AA	1632	1/1	0.97	0.11	-	29,29,29,29	0
54	MG	DB	3039	1/1	0.97	0.11	-	19,19,19,19	0
54	MG	DB	3053	1/1	0.91	0.07	-	90,90,90,90	0
54	MG	DB	3041	1/1	0.98	0.09	-	9,9,9,9	0

## 6.5 Other polymers ⓘ

There are no such residues in this entry.