



Full wwPDB X-ray Structure Validation Report ⓘ

Feb 1, 2016 – 09:36 PM GMT

PDB ID : 4V4Q
Title : Crystal structure of the bacterial ribosome from Escherichia coli at 3.5 Å resolution.
Authors : Schuwirth, B.S.; Borovinskaya, M.A.; Hau, C.W.; Zhang, W.; Vila-Sanjurjo, A.; Holton, J.M.; Cate, J.H.D.
Deposited on : 2005-08-30
Resolution : 3.46 Å(reported)

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

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

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

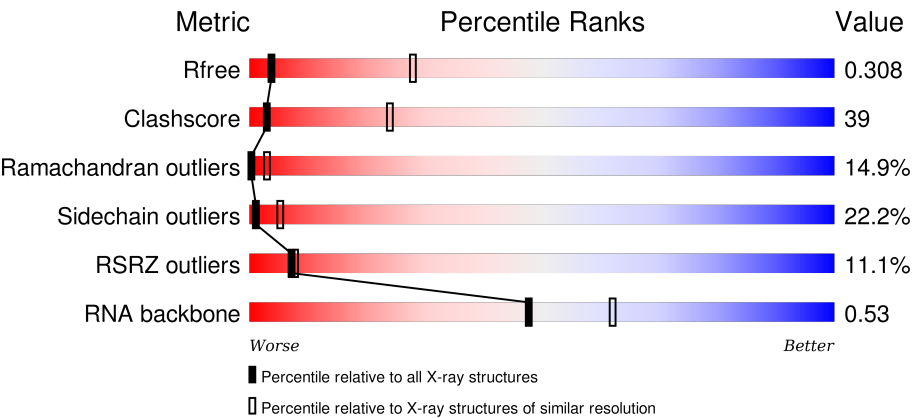
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.46 Å.

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



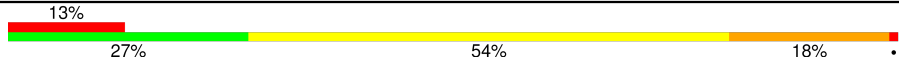
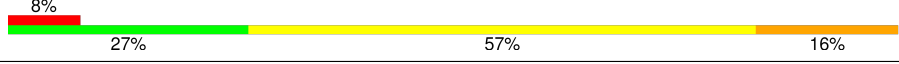
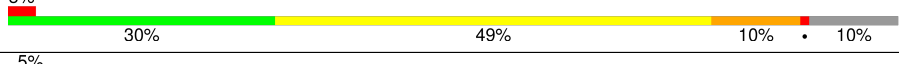
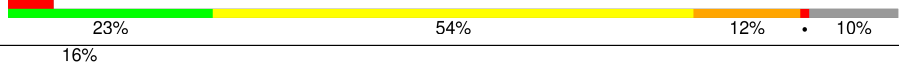
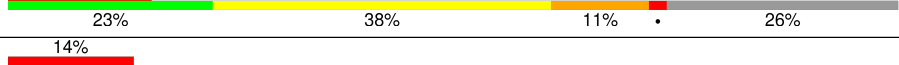
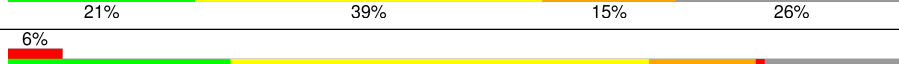
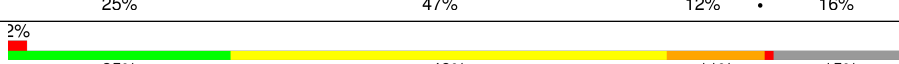
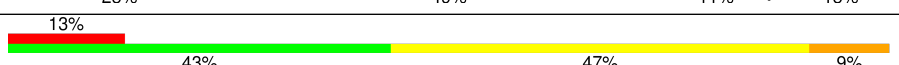
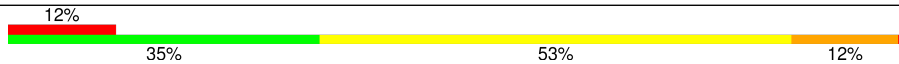
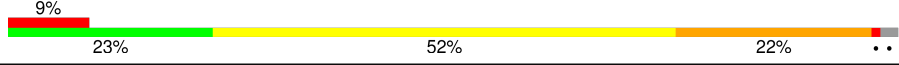
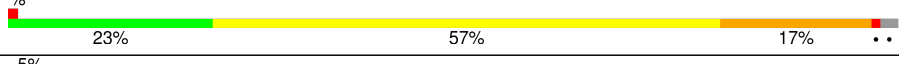
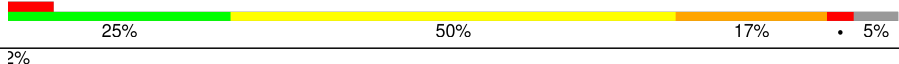
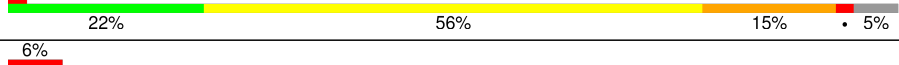
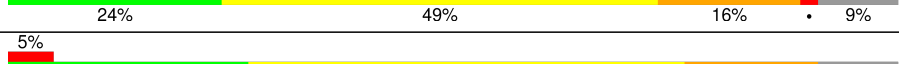
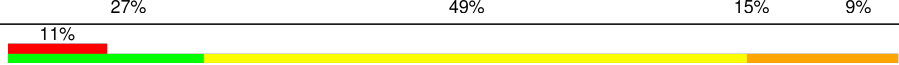
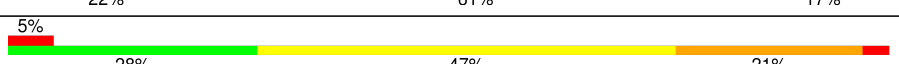
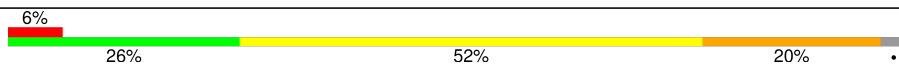
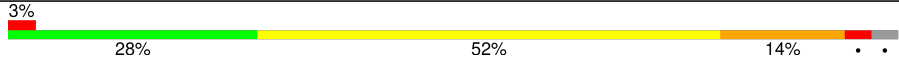
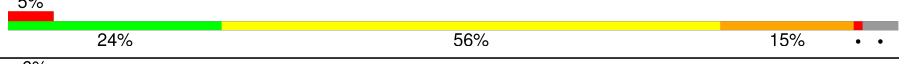
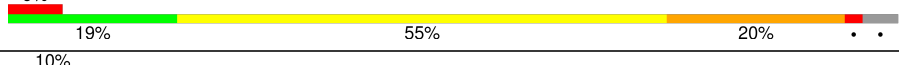





Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R _{free}	91344	1000 (3.56-3.36)
Clashscore	102246	1090 (3.56-3.36)
Ramachandran outliers	100387	1057 (3.56-3.36)
Sidechain outliers	100360	1058 (3.56-3.36)
RSRZ outliers	91569	1005 (3.56-3.36)
RNA backbone	2183	1045 (4.10-2.80)

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

Mol	Chain	Length	Quality of chain
1	AA	1542	<div><div></div><div><div></div><div>25%</div><div>59%</div><div>14%</div><div>.</div></div></div>
1	CA	1542	<div><div></div><div><div></div><div>26%</div><div>60%</div><div>13%</div><div>..</div></div></div>
2	AC	232	<div><div>3%</div><div><div></div><div>26%</div><div>49%</div><div>13%</div><div>.</div><div>11%</div></div></div>
2	CC	232	<div><div>3%</div><div><div></div><div>27%</div><div>50%</div><div>12%</div><div>11%</div></div></div>

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

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Mol	Chain	Length	Quality of chain
15	CP	82	
16	AQ	83	
16	CQ	83	
17	AR	74	
17	CR	74	
18	AS	91	
18	CS	91	
19	AT	86	
19	CT	86	
20	AB	240	
20	CB	240	
21	AU	71	
21	CU	71	
22	BA	120	
22	DA	120	
23	BB	2904	
23	DB	2904	
24	BV	94	
24	DV	94	
25	BC	273	
25	DC	273	
26	BD	209	
26	DD	209	
27	BE	201	
27	DE	201	

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Mol	Chain	Length	Quality of chain
28	BF	178	
28	DF	178	
29	BG	176	
29	DG	176	
30	BH	149	
30	DH	149	
31	BJ	142	
31	DJ	142	
32	BK	123	
32	DK	123	
33	BL	144	
33	DL	144	
34	BM	136	
34	DM	136	
35	BN	127	
35	DN	127	
36	BO	117	
36	DO	117	
37	BP	114	
37	DP	114	
38	BQ	117	
38	DQ	117	
39	BR	103	
39	DR	103	
40	BS	110	

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Mol	Chain	Length	Quality of chain
40	DS	110	
41	BT	100	
41	DT	100	
42	BU	103	
42	DU	103	
43	BW	84	
43	DW	84	
44	BX	63	
44	DX	63	
45	BY	58	
45	DY	58	
46	BZ	70	
46	DZ	70	
47	B0	56	
47	D0	56	
48	B1	54	
48	D1	54	
49	B2	46	
49	D2	46	
50	B3	64	
50	D3	64	
51	B4	38	
51	D4	38	
52	BI	141	
52	DI	141	

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	MG	AA	1656	-	-	-	X

2 Entry composition

There are 54 unique types of molecules in this entry. The entry contains 284107 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 ribosomal RNA.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	AO	88	Total	C	N	O	S	0	0	0
			716	440	146	129	1			
14	CO	88	Total	C	N	O	S	0	0	0
			716	440	146	129	1			

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	AQ	80	Total	C	N	O	S	0	0	0
			648	411	121	113	3			
16	CQ	81	Total	C	N	O	S	0	0	0
			656	417	122	114	3			

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- Molecule 24 is a protein called 50S ribosomal protein L25.

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	BC	267	Total	C	N	O	S	0	0	0
			2053	1271	416	359	7			
25	DC	267	Total	C	N	O	S	0	0	0
			2053	1271	416	359	7			

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

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

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

- Molecule 27 is a protein called 50S ribosomal protein L4.

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

- Molecule 28 is a protein called 50S ribosomal protein L5.

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

- Molecule 29 is a protein called 50S ribosomal protein L6.

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

- Molecule 30 is a protein called 50S ribosomal protein L9.

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

- Molecule 31 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	BJ	140	Total	C	N	O	S	0	0	0
			1112	704	210	194	4			
31	DJ	140	Total	C	N	O	S	0	0	0
			1112	704	210	194	4			

- Molecule 32 is a protein called 50S ribosomal protein L14.

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

- Molecule 33 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	BL	144	Total	C	N	O	S	0	0	0
			1053	654	207	190	2			
33	DL	144	Total	C	N	O	S	0	0	0
			1053	654	207	190	2			

- Molecule 34 is a protein called 50S ribosomal protein L16.

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

- Molecule 35 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	BN	127	Total	C	N	O	S	0	0	0
			1008	621	204	178	5			
35	DN	127	Total	C	N	O	S	0	0	0
			1008	621	204	178	5			

- Molecule 36 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	BO	117	Total	C	N	O	S	0	0	0
			900	557	179	163	1			
36	DO	117	Total	C	N	O	S	0	0	0
			900	557	179	163	1			

- Molecule 37 is a protein called 50S ribosomal protein L19.

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

- Molecule 38 is a protein called 50S ribosomal protein L20.

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

- Molecule 39 is a protein called 50S ribosomal protein L21.

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

- Molecule 40 is a protein called 50S ribosomal protein L22.

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

- Molecule 41 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	BT	99	Total	C	N	O	S	0	0	0
			777	491	145	139	2			
41	DT	99	Total	C	N	O	S	0	0	0
			777	491	145	139	2			

- Molecule 42 is a protein called 50S ribosomal protein L24.

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

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

- Molecule 43 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	BW	84	Total	C	N	O	S			
			634	391	129	113	1	0	0	0
43	DW	84	Total	C	N	O	S			
			634	391	129	113	1	0	0	0

- Molecule 44 is a protein called 50S ribosomal protein L29.

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

- Molecule 45 is a protein called 50S ribosomal protein L30.

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

- Molecule 46 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	BZ	70	Total	C	N	O	S			
			549	339	104	100	6	0	0	0
46	DZ	70	Total	C	N	O	S			
			549	339	104	100	6	0	0	0

- Molecule 47 is a protein called 50S ribosomal protein L32.

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

- Molecule 48 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
48	B1	54	Total	C	N	O	0	0	0
			441	284	81	76			
48	D1	54	Total	C	N	O	0	0	0
			441	284	81	76			

- Molecule 49 is a protein called 50S ribosomal protein L34.

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

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

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

- Molecule 51 is a protein called 50S ribosomal protein L36.

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

- Molecule 52 is a protein called 50S ribosomal protein L11.

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

- Molecule 53 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
53	AP	1	Total Mg 1 1	0	0
53	BB	110	Total Mg 110 110	0	0
53	CA	62	Total Mg 62 62	0	0
53	AA	59	Total Mg 59 59	0	0
53	DN	1	Total Mg 1 1	0	0
53	DB	110	Total Mg 110 110	0	0

- Molecule 54 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
54	AA	290	Total O 290 290	0	0
54	AE	3	Total O 3 3	0	0
54	AK	2	Total O 2 2	0	0
54	AN	4	Total O 4 4	0	0
54	AP	1	Total O 1 1	0	0
54	BB	497	Total O 497 497	0	0
54	BC	1	Total O 1 1	0	0
54	BE	5	Total O 5 5	0	0
54	BH	1	Total O 1 1	0	0
54	BL	2	Total O 2 2	0	0
54	BN	1	Total O 1 1	0	0
54	CA	295	Total O 295 295	0	0
54	CE	3	Total O 3 3	0	0
54	CK	1	Total O 1 1	0	0

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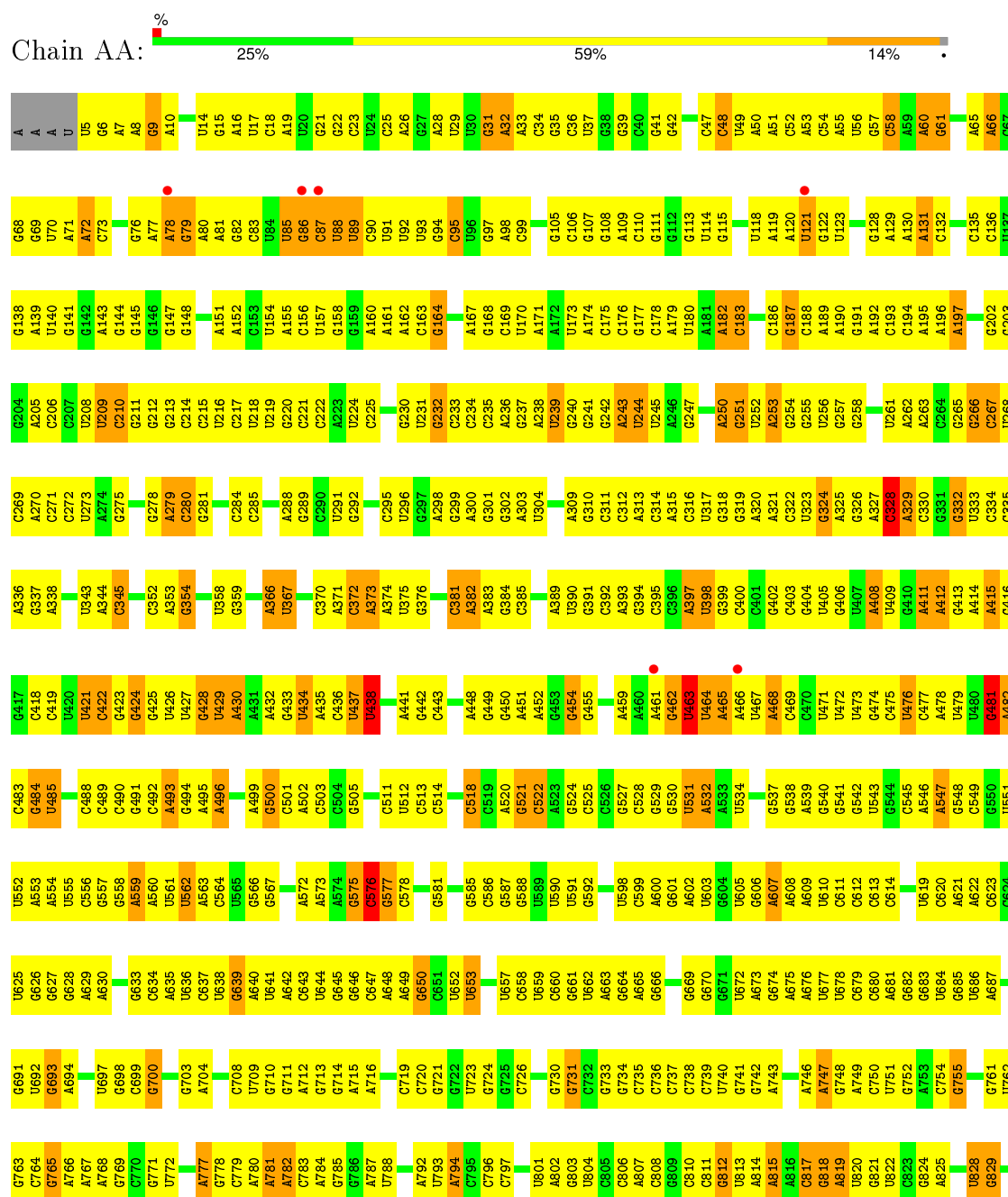
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
54	CL	4	Total 4	O 4	0	0
54	CN	2	Total 2	O 2	0	0
54	CP	1	Total 1	O 1	0	0
54	CT	2	Total 2	O 2	0	0
54	DB	499	Total 499	O 499	0	0
54	DC	1	Total 1	O 1	0	0
54	DD	1	Total 1	O 1	0	0
54	DE	3	Total 3	O 3	0	0
54	DJ	2	Total 2	O 2	0	0
54	DL	1	Total 1	O 1	0	0
54	DN	2	Total 2	O 2	0	0
54	DQ	1	Total 1	O 1	0	0
54	D2	2	Total 2	O 2	0	0

3 Residue-property plots

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

- Molecule 1: 16S ribosomal RNA



G1504	U1440	G1370	U1308	G1242	U1173	C1100	C1038	A978	C912	G832
G1505	A1441	G1371	G1309	C1243	G1174	A1101	G1039	C979	A913	G833
U1506	U1442	U1372	G1310	C1244		A1102	U1040	C980	A914	U834
A1507	U1443	G1373	A1311	C1245	G1178	C1103	G1041	U981	A915	U835
A1508	U1445	A1374	G1312	A1246	A1179		A1042	U982	U916	G836
C1509	A1446	A1375	U1313	U1247	A1180	G1108	G1043	A983	G917	G837
G1510	A1447	U1376	C1314	A1248	G1181	C1109	A1044	C984	A918	G838
G1511	A1448	A1377	U1315	C1249	G1182	A1110	C1045	C985	A919	C839
U1512	C1378	G1316	A1316	A1250	U1183		A1046	U986	U920	C840
A1513	U1450	G1379	C1317	A1251	G1111	C1112	G1047	G987	U921	C841
G1514	U1451	U1380	A1318	A1252	G1190		G1048	G988	G922	U842
G1515	C1452	U1381	A1319	G1253		C1113	U1049	U989	A923	U843
G1516	G1453	C1382	U1320	A1254	G1193	U1115	C990	G844	C924	G844
G1517	G1454		U1321	G1255	U1194	U1122	G1050	U991	G925	
A1518	G1455	G1386	C1322	A1256	C1195	A1117	C1051	U992	G926	A845
A1519	A1456	G1387	G1323	A1257	A1196	U1118	G1053	G993	G927	G847
C1520	G1457	C1388	A1324	G1258	A1197		C1054	A994	G928	C848
C1521	G1458	C1389	C1325	G1259	G1198	U1121	A1055	C995	G929	
G1522	G1459	U1390	U1326	A1260	U1199	U1123	U1056	A996	C930	G857
G1523	C1460	U1391	C1327	A1261	C1200	U1123	G1057	U997	C931	G858
C1524	G1461	G1392	C1328	C1262	A1124	U1058	C998	C998	G859	G859
G1525	C1462	U1393	A1329	C1263	U1202	U1125	G1059	C999	A860	
G1526	U1463	U1330	U1330		C1203	U1126	U1060	A1000	G861	
U1527	A1464	C1397	G1331	A1269		G1127	G1061	C1001	C936	G862
U1528	A1465	A1398	A1332	G1270	G1206	C1128	U1062	G1002	A937	U863
G1529		U1399	A1333	A1271	C1207	C1129	C1063	G1003	A938	A864
G1530		G1401	G1334	C1272	C1208	A1130	G1064	A1004	G939	A865
C1533	A1468	C1402	U1335	A1273	C1209	G1131	U1065	A1005	C940	C866
A1534	U1470	C1403	C1336	A1274	C1210	C1132	C1066	G1006	G941	
C	U1471	C1404	G1337		C1211	G1133	A1067	U1007		G869
C	U1472	G1405	C1338	A1275	U1212	G1134	C1068	U1008	G945	
C	G1473	C1406	A1339	G1278	A1213	U1135	C1069	U1009	A946	U875
U	U1474	C1409	C1340	A1280	C1214	C1136	U1070	U1010	G947	
U	G1475	A1410	C1342	C1281	G1215	G1137	C1071	C1011	C948	A878
C	A1476	C1411	G1343	C1282	A1216	G1138	G1072	A1012	A949	C879
U	U1477	C1412	C1344	U1283	C1217	G1139	U1073	G1013	U950	
U	U1478	U1345	U1345	C1284	C1218	C1140	G1074	A1014	C882	
U	C1479	A1413	A1346	A1285	C1219	C1141	U1075	G1015	U952	
U	A1480	G1347	C1347	U1286	G1220	G1142	C1076	A1016	G953	U884
A	U1481	G1415	U1348	A1287	G1221	G1143	G1077	U1017	G954	C885
	G1482		A1349	A1288	G1222		U1078	G1018	U955	
	A1483		A1350	A1289	C1223	U1148	G1079	A1019	U956	A889
		G1422	U1351	G1290	U1224		C1080	G1020	U957	G890
	G1486	G1423	C1352	A1291	A1151	A1151	A1081	A1021	A958	
	G1487	U1424	G1353	G1292	A1152	A1152	A1082	A1022	A959	C893
	G1488	U1425	U1354	C1293	A1227		U1083	U1023	G894	
	G1489	G1426	G1355	G1294	C1228	A1157	G1084	G1024	G895	
	U1490	C1427	G1356	U1295	A1229	C1158	U1085	U1025	U961	
	G1491	A1428	U1357	C1296	A1296	U1159	G1086	G1026	G896	
	A1492	A1429	U1358	G1297	G1231	G1160		C1027	G967	
	A1493	A1430		U1298	U1232	C1161	U1090	C1028	A900	
	U1495	G1432	A1362	A1299	C1234	G1162	A1092	U1029	A969	A901
	G1496	A1433	A1363	U1301	U1235	G1164	A1093	U1030	C970	G902
	U1497	A1434	C1364	C1302	A1236		G1094	C1031	G971	
	U1498	G1435	U1365	C1303	C1237	U1168	U1095	G1032	C972	A906
	A1499	U1436	C1366	G1304	A1238	A1169	C1096	G1033	G973	A907
	A1500	U1437	C1367	G1305	A1239	A1170	C1097	A1035	A975	A908
		G1438	A1368	A1306	U1240	A1171	C1098	A1036	C910	A909
	A1502	C1439	C1369	U1307	G1241	C1172	C1099	G1037	G976	U911

● Molecule 1: 16S ribosomal RNA

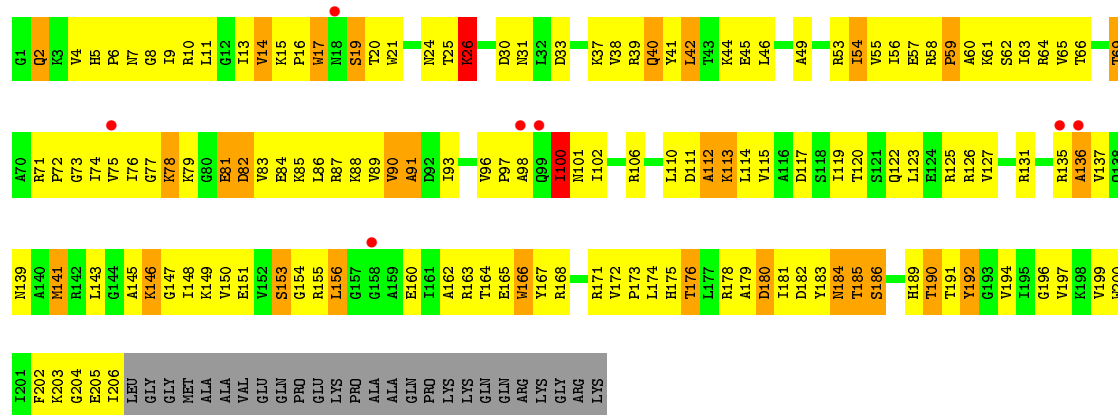


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A65	G69	U70	A71	A72	G75	G76	A77	A78	G79	C83	U84	U85	G86	C87	U88	U89	C90	U91	U92	U93	G94	C95	A98	C99	G105	G106	G107	G108	A109	C110	G111	G112	G113	U114	G115	U118	A119	A120	U121	G122	U123	G128	A129	A130	A131	C132	A135	G138	U140								
G141	G142	A143	G144	G145	G146	G147	G148	A149	U150	A151	A152	A155	C156	U157	G158	G159	A160	A161	A162	C163	G164	A167	G168	C169	U170	U173	A174	C175	G176	G177	C178	A179	U180	A181	A182	C183	C186	G187	C188	A189	A190	G191	A192	C193	C194	A195	A196	A197	G202	G203	G204	A205	C206	C207			
U208	U209	C210	G211	G212	G213	G214	C215	U216	C217	U218	U219	G220	C221	C222	A223	U224	C225	G230	U231	C232	C233	C234	C235	A236	G237	A238	U239	G240	G241	C242	A243	U244	U245	G246	G247	A250	G251	U252	A253	G254	C255	U256	G257	G258	U261	A262	A263	C264	G265	G266	C267	U268	C269	A270	C271	C272	

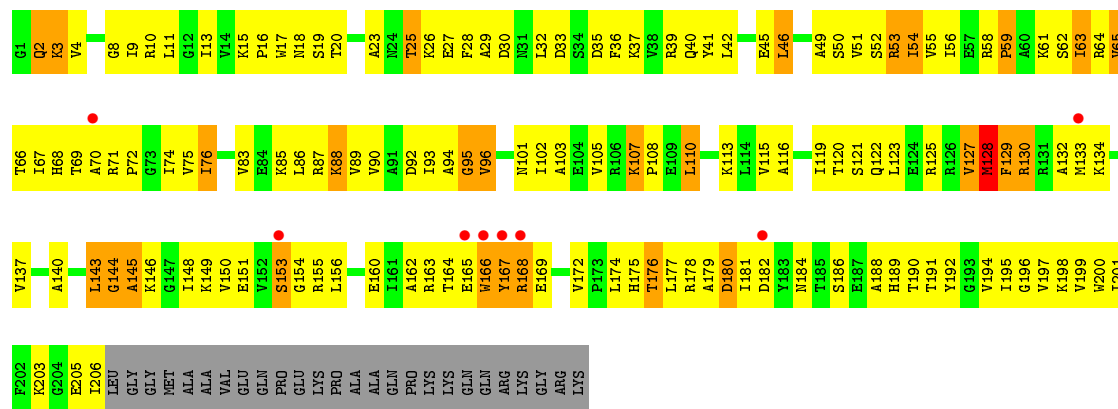
A1306	A1240	A1176	G1108	A1042	C980	A918	G838	A767	A695	G628	A553	C483	C419	C345	U273
U1307	G1241	G1177		G1043	U981	A919	C839	A768	C699	A629	A554	G484	U420	C352	A274
U1308	G1242	A1178	A1111	A1044	U982	U920	C840	G769	G700	A630	U555	U485	U421	C352	G275
G1309	G1243	A1179	C1112	A983	U921	C841	C841	C770			C556		C422	A353	G276
G1310	G1244	A1180	C1113	G1048	C984	G922	U842	G771	G703	G633	G557	C488	G423	G354	G277
A1311	G1245	A1181	C1114	U1049	C985	G923	U843	U772	A704	G634	G558	C489	G424	A379	A278
G1312	A1246	G1182		G1050	U986	C924	C844		G705	A635	A559	C490	G425	U558	C280
U1313	U1247	U1183	U1118	C1051	G987	G925	A845	A777	U706	G637	A560	G491	U426	G359	G281
G1314	G1184	G988	C1119	U1052	G988	G926	G846	G778	G707	U638	A561	C492	U427		
U1315	G1185	G989	U1120	C1053	U989	G927	C847	C779	U708	U639	U562	U493	U428	C384	C284
G1316	C1249	C1196	U1121	C1054	C990	G928	C848	A780	G709	G639	A563	G494	U429	A366	
G1317	U991	U1251	U1122	A1055	G991	G929		A781	U710			A495		U367	C285
A1318	A1252	A1188	U1123	U1056	U992	C930	C857	A782	G710	A642	G566	A496	A430		
A1319	G1189	U1189	G1124	G1057	C993	C931	G858	C783	G711	C643	G567	A432	A432	C370	A288
G1320	A1254	A1190	U1125	G1058	G994	C932	G859	A784	A712	U644	G568	A433	A433	A371	G289
U1321	G1191	A1191	U1126	C1059		G933	A860	G785	G713	G645		U500	U434	C372	
G1322	A1256	C1192	G1127	U1060	U997	C934	G861	G785	G713	G646	A572	C501	A435	A373	C295
G1323	C1257	C1192	G1128	U1061	C998	C935	G862	A792	A715	C647	A574	C503	C436	A374	U296
A1324	A1258	A1196	C1129	U1062	C999	C936	U863	U793	A716	A648	A574	C504	U437	U375	G297
G1325	G1259	A1197	A1130	C1063	A1000	A937	A864	A794		A649	G575	G504	U438	G376	A298
U1326	G1198	G1205	G1131	G1064	A938	A937	A865	C795	C719	U650	C576	G505	U439	G377	G299
G1327	U1199	U1206	C1132	U1065	G1002	G939	C866	C796	G720	U651	C577	C440	A441	A441	A300
C1328	C1200	C1200	G1133	C1066	G1003	C940		C797	G721	U652	C578	C511	G442	A382	G302
A1329	G1268	A1201	G1134	A1067	A1004	G941	G869	U798		U653		C512	G443	A383	A303
U1330	U1202	U1135	U1135	G1068	A1005				G724		G585	C513	C443	A384	U304
G1331	G1270	C1203	C1136	C1069	G1006		U875		G725	G658	C586	C514		C385	
A1332	A1271	A1204	C1137	U1070	U1007	G945		U801	G726	U659	G587		A448	C385	A309
G1333	U1205	G1198	G1138	C1071	U1008	G947	A878	A802		C660		C518	G449	C386	
G1334	G1206	C1071	U1139	U1009	C1071	C948	C879	U804	G730	G661	U590		G450	U387	G310
U1335	G1207	G1140	C1140	U1073	A949	C949	C880	C905	G731	U662	U591	G521	A451	G311	C311
G1336	C1208	C1141	C1141	G1074	U950	U950	G881	C906	G732	G663	G592	C522	A452	A359	C312
G1337	C1209	G1142	C1142	U1075	G951	G951	C882	A807	G733	G664	A523	A523	G453	U390	A313
G1338	G1210	G1143	U1143		U952	U952	C883	C808	G734	A665	G596	C526	G454	G391	C314
A1339	U1211	G1144	G1144	U1078	G953	G953	U884	G909	C735	G666	G597	C526	G455	C392	A315
G1342	A1212	A1145	A1145	G1079	G1015	G954	U885	G909	C736	G667	G598	C526	G456	A393	C316
G1343	A1213	A1146	A1146	A1080	G1015	U955		C811	C737	G668	C599	G527		G394	U317
G1344	G1214	G1147	G1147	A1081	U956	U956	G890	G812	C738	G669	A600	G528	A459	C395	G318
U1283	U1283	G1215	U1148	A1082	U957	U957		U813	C739	G670	G601	G529	A460	G396	G319
C1284	A1216	A1216	C1149	U1083	A958	A958	C893	A814	U740	G671	A602	G530	A461	A397	A320
A1285	C1217	C1217	A1150	U1084	A959	A959	G894	A815	G741	U672	U603	G531	A462	U398	A321
U1286	C1218	C1218	A1151	U1085	A1022	A960	G895	A816	G742	A673	G604	A532	U463	G399	C322
A1287	A1219	A1219	A1152	U1086	U1023	U961	C896	C817	A743	G674	U605	A533	U464	C400	U323
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G1293	G1226	G1226	G1162	C1096	U1030	A968	U904	A825	U751	G682	C612	G541	U471	U407	C330
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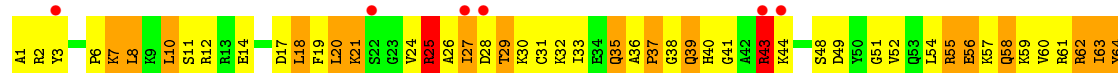
• Molecule 2: 30S ribosomal protein S3

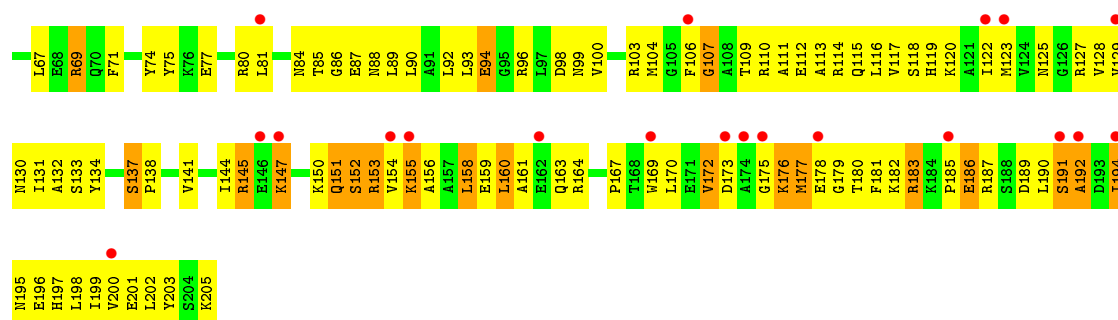


• Molecule 2: 30S ribosomal protein S3

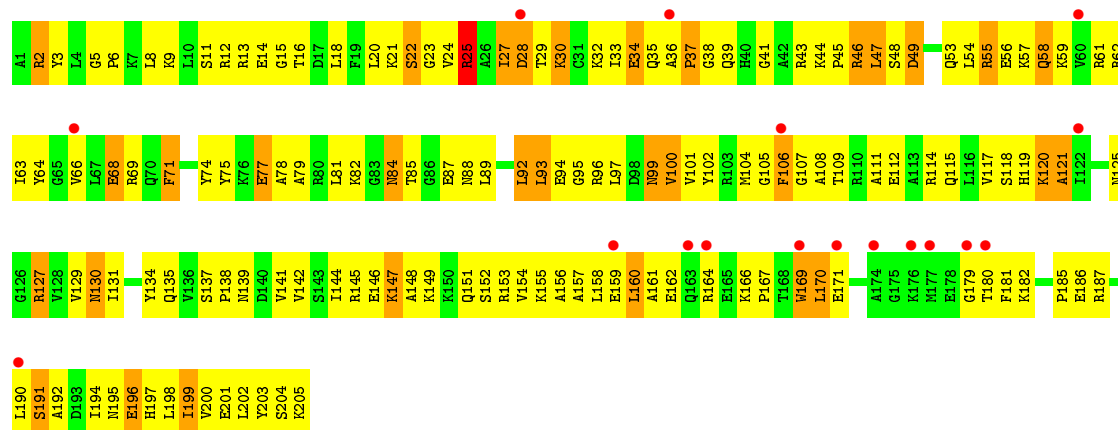


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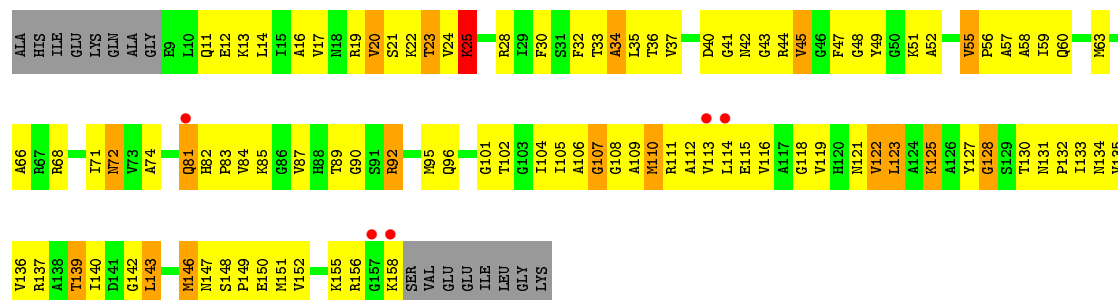




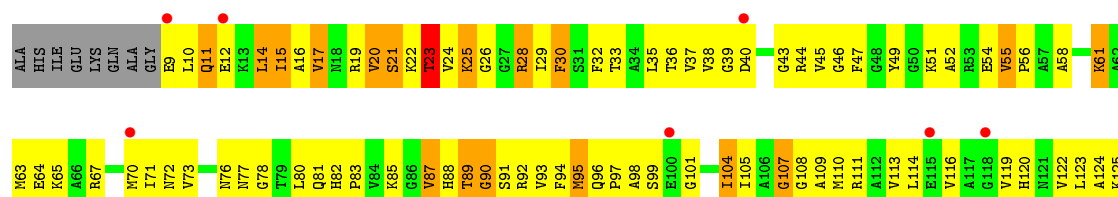
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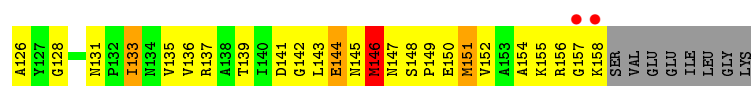


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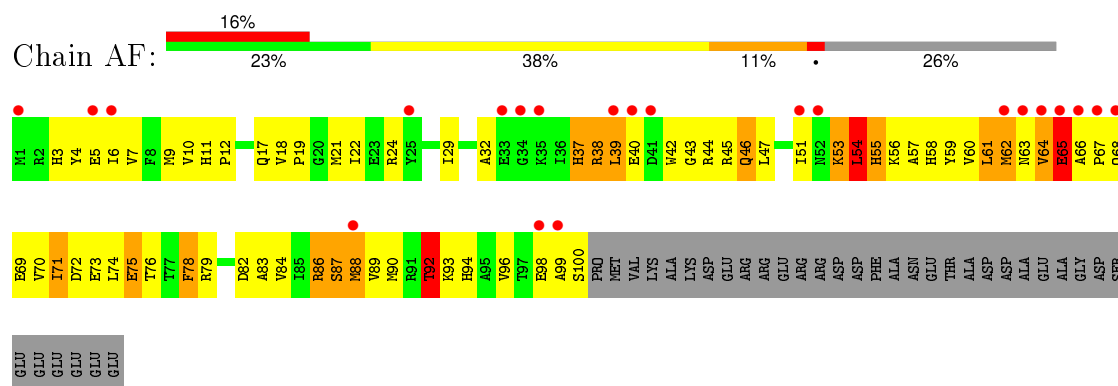


• Molecule 4: 30S ribosomal protein S5

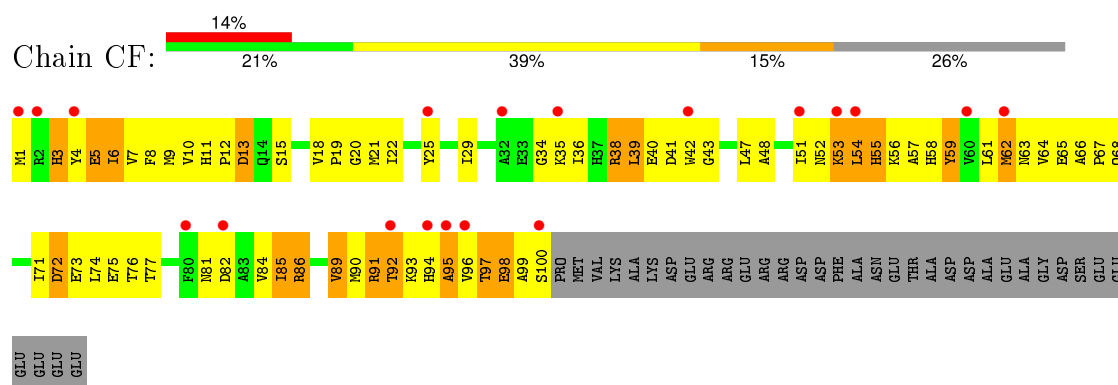




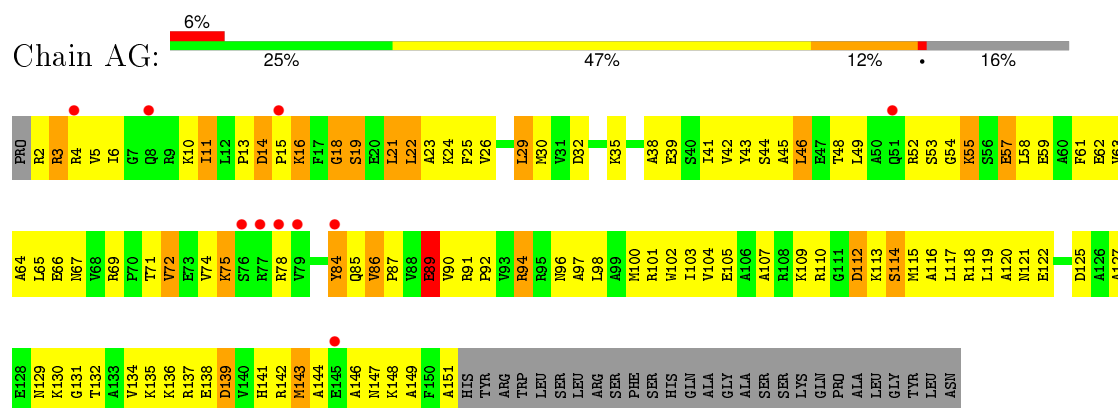
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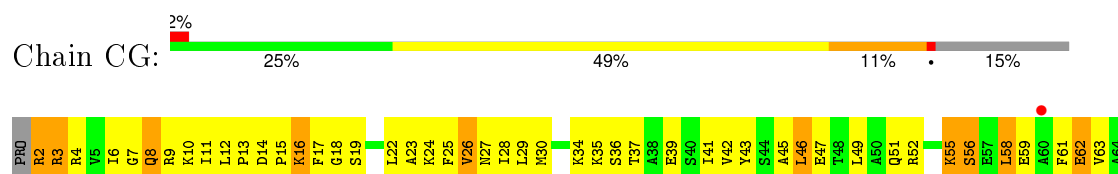
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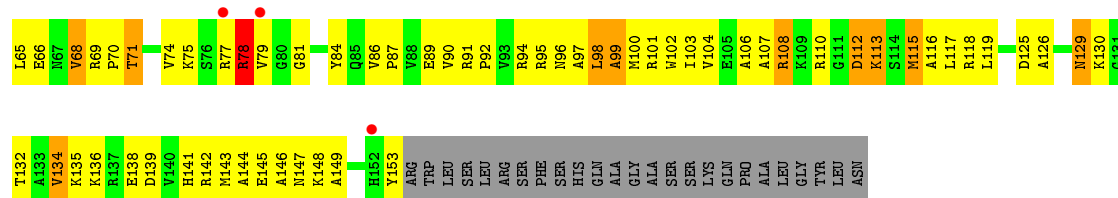


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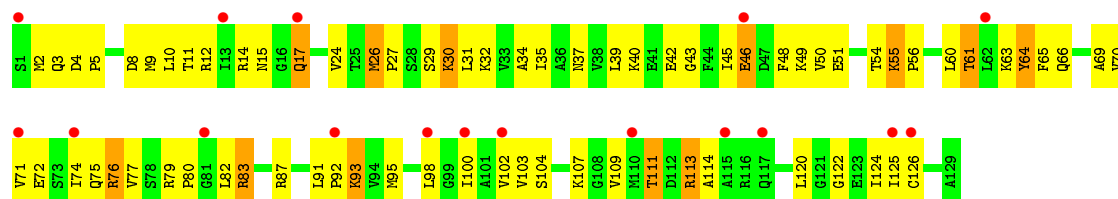


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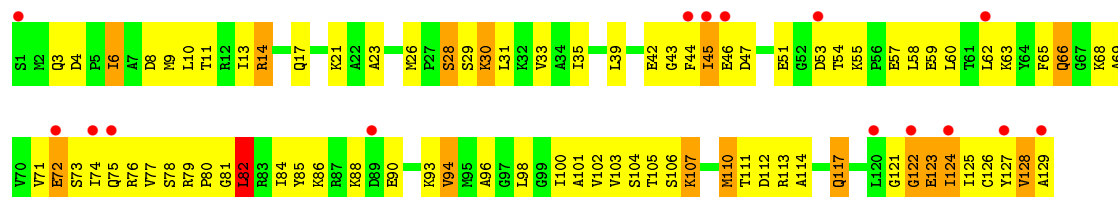




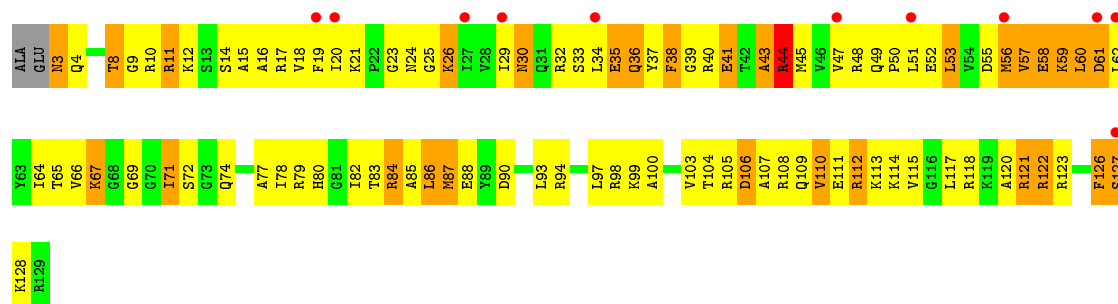
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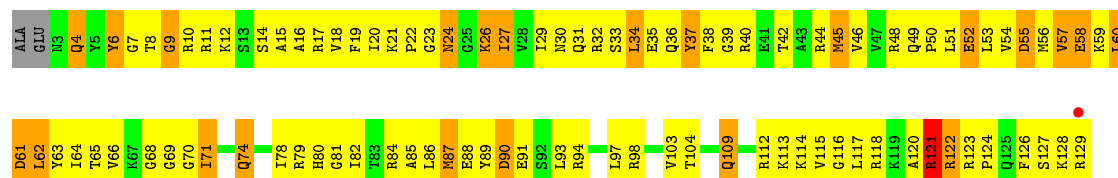
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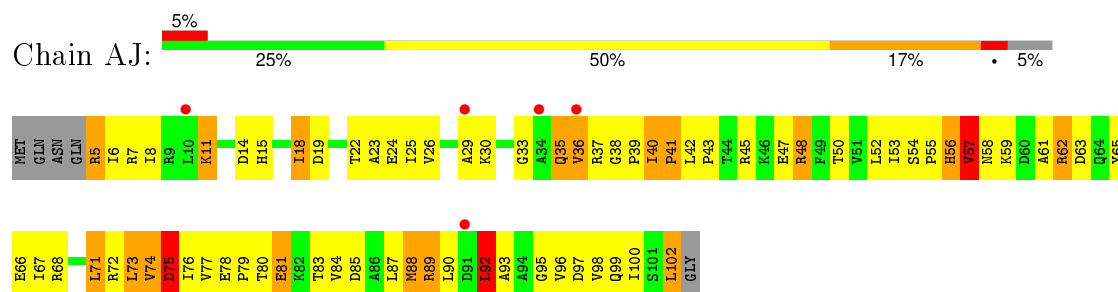
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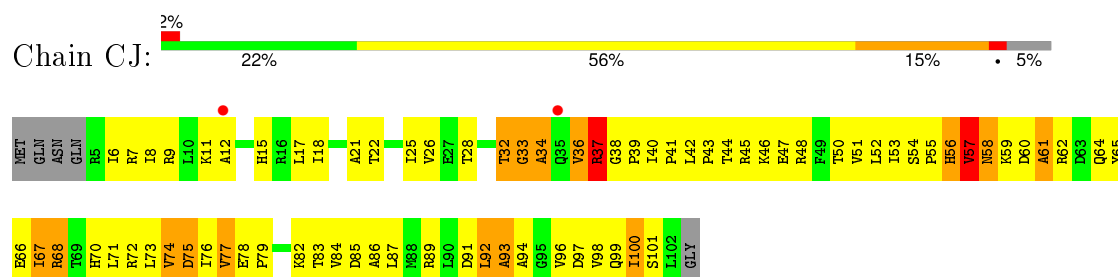
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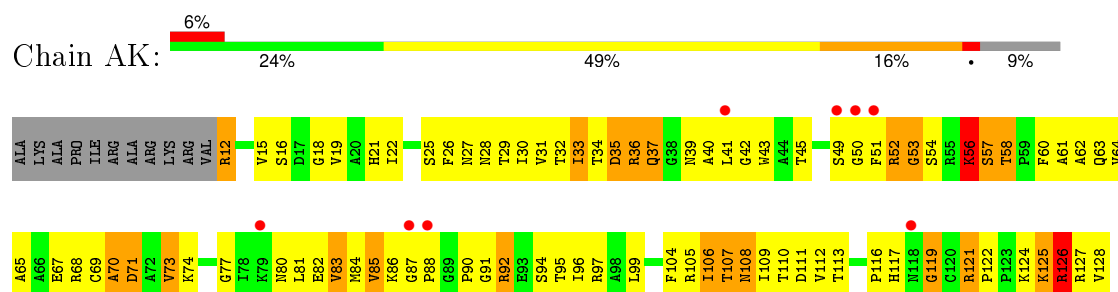
- Molecule 9: 30S ribosomal protein S10



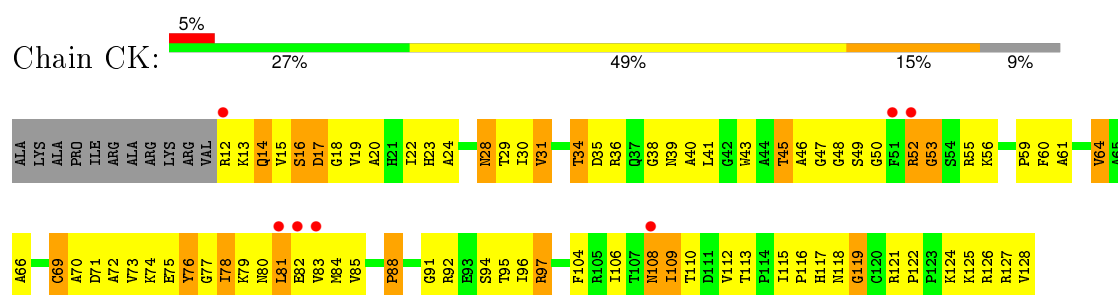
- Molecule 9: 30S ribosomal protein S10



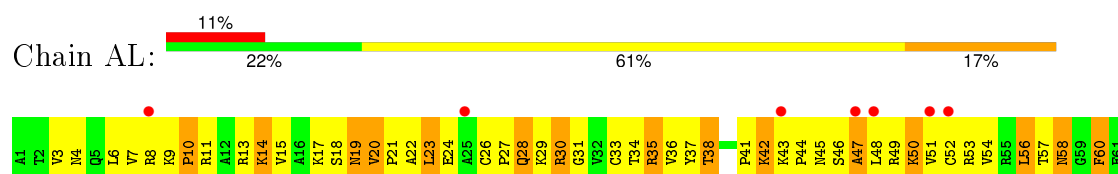
- Molecule 10: 30S ribosomal protein S11

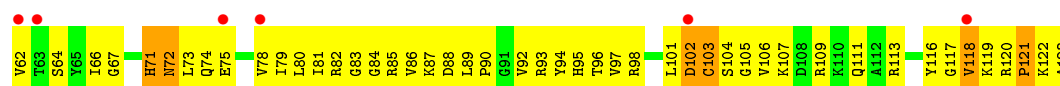


- Molecule 10: 30S ribosomal protein S11



- Molecule 11: 30S ribosomal protein S12





- Molecule 11: 30S ribosomal protein S12



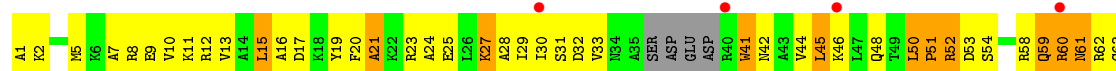
- Molecule 12: 30S ribosomal protein S13



- Molecule 12: 30S ribosomal protein S13

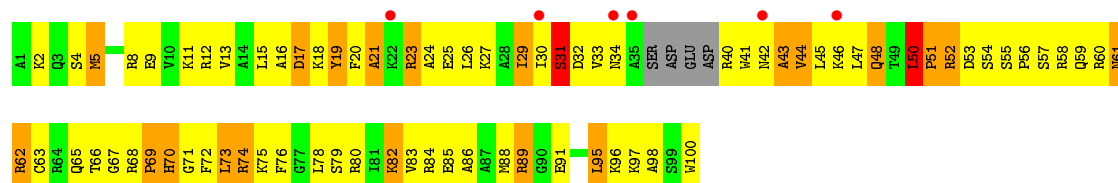


- Molecule 13: 30S ribosomal protein S14

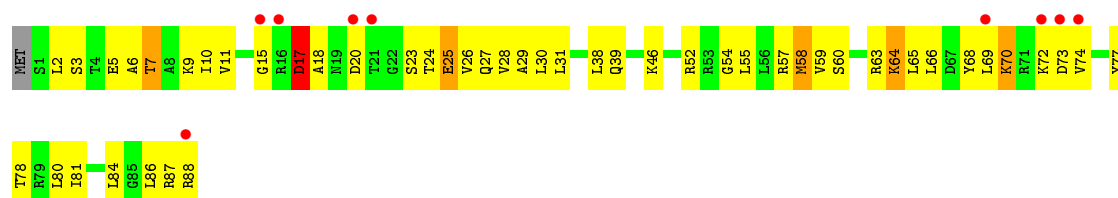


- Molecule 13: 30S ribosomal protein S14

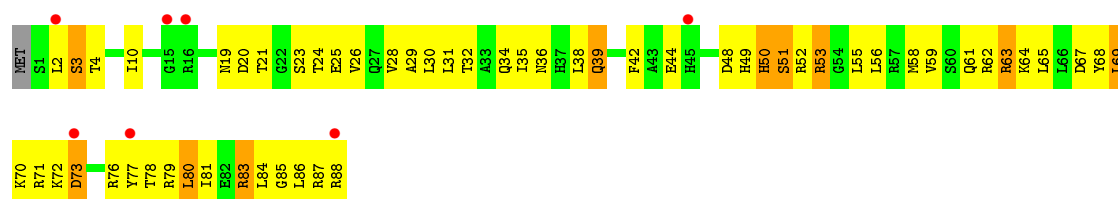




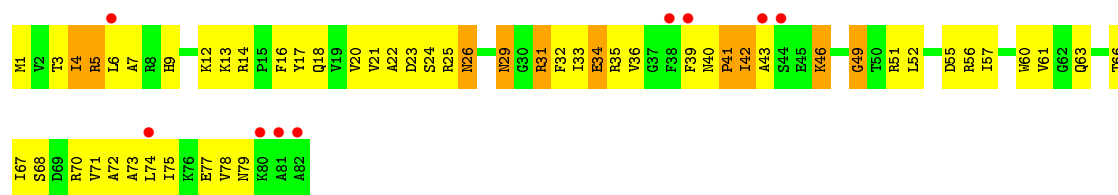
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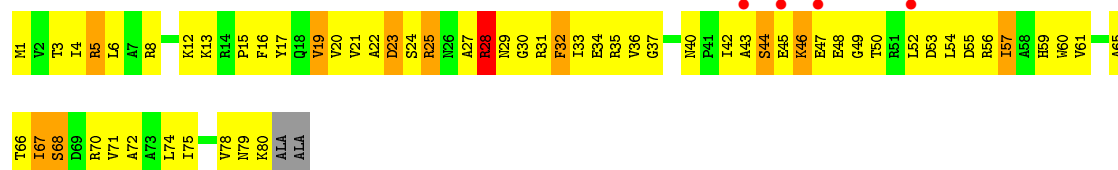
• Molecule 14: 30S ribosomal protein S15



• Molecule 15: 30S ribosomal protein S16

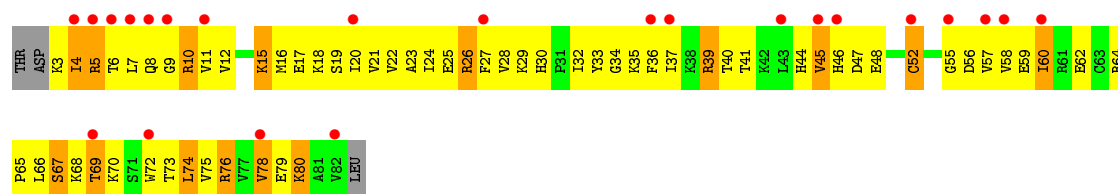


• Molecule 15: 30S ribosomal protein S16

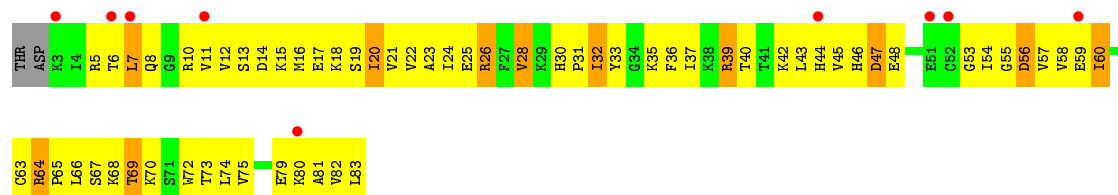
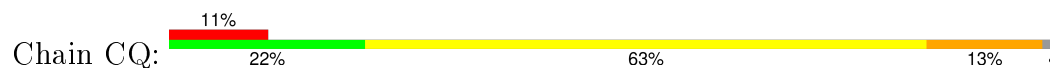


• Molecule 16: 30S ribosomal protein S17

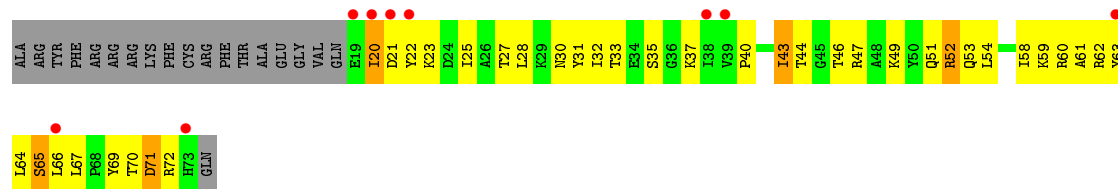




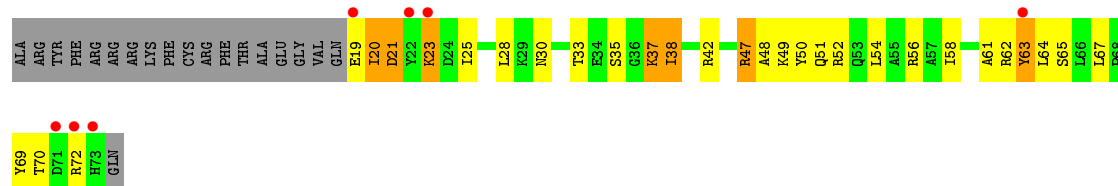
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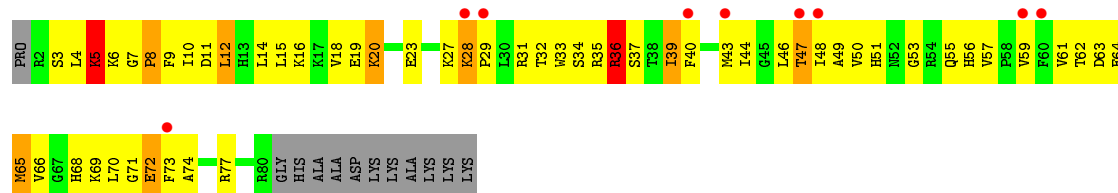
- Molecule 17: 30S ribosomal protein S18



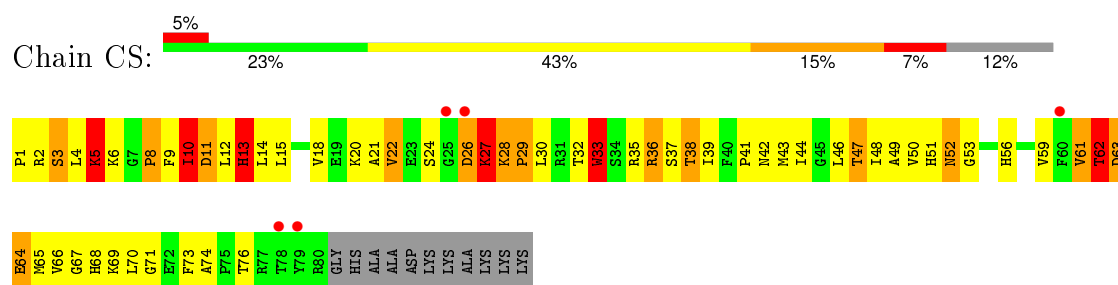
- Molecule 17: 30S ribosomal protein S18



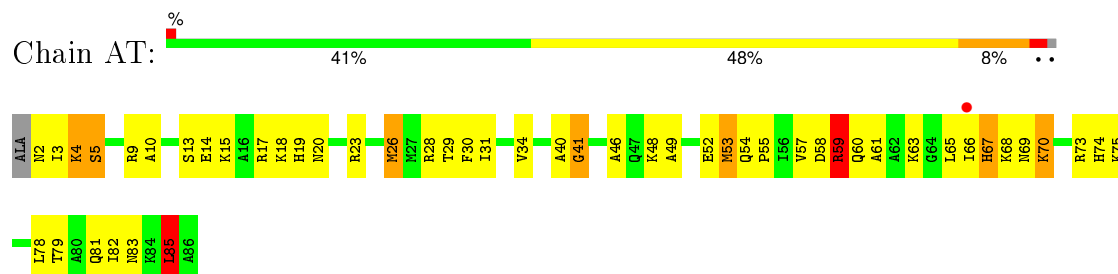
- Molecule 18: 30S ribosomal protein S19



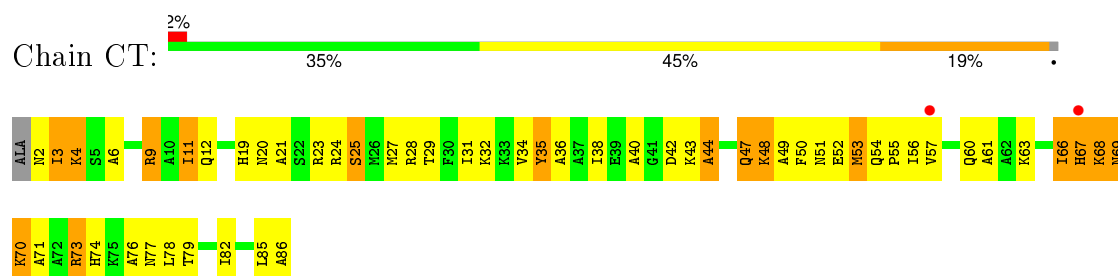
- Molecule 18: 30S ribosomal protein S19



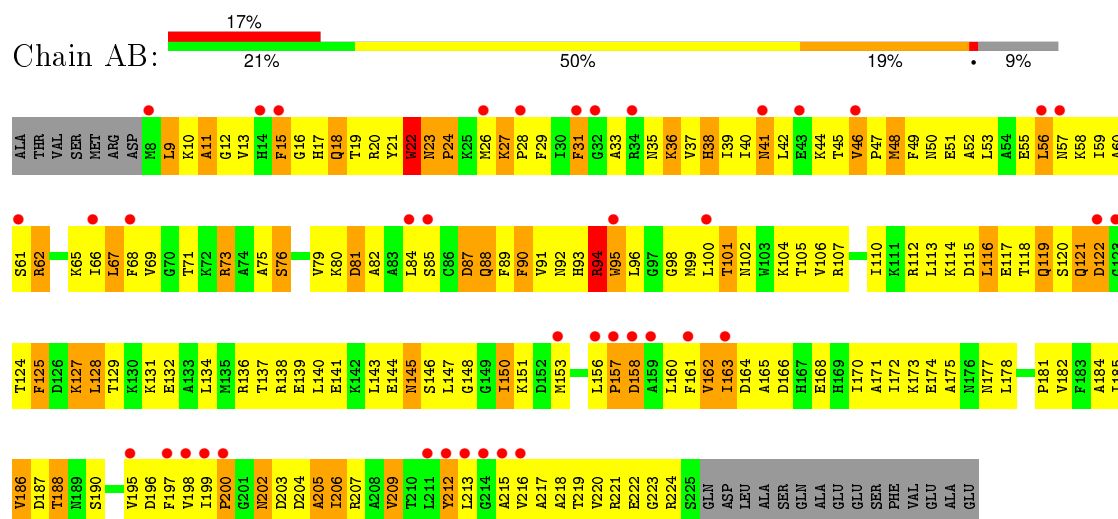
• Molecule 19: 30S ribosomal protein S20



• Molecule 19: 30S ribosomal protein S20

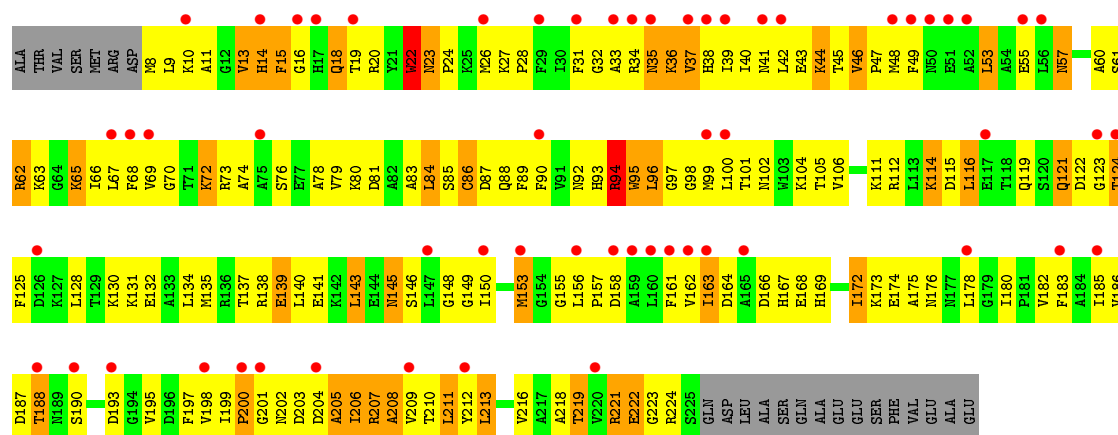


• Molecule 20: 30S ribosomal protein S2

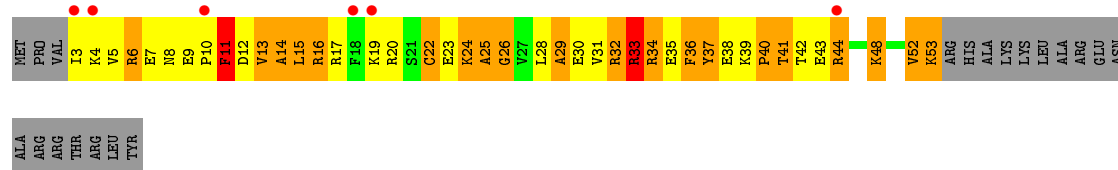


• Molecule 20: 30S ribosomal protein S2

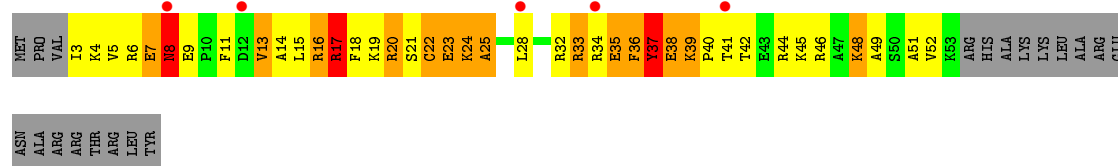




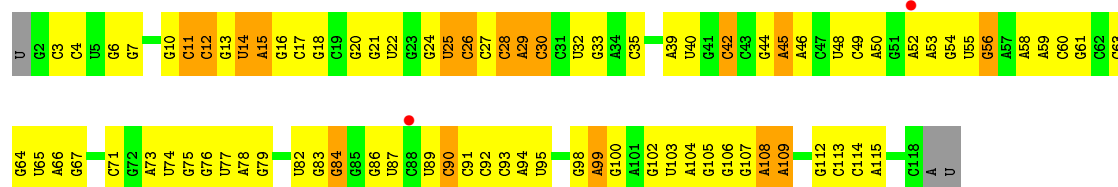
• Molecule 21: 30S ribosomal protein S21



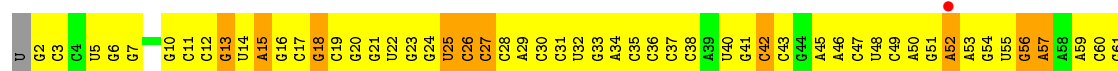
• Molecule 21: 30S ribosomal protein S21



• Molecule 22: 5S ribosomal RNA

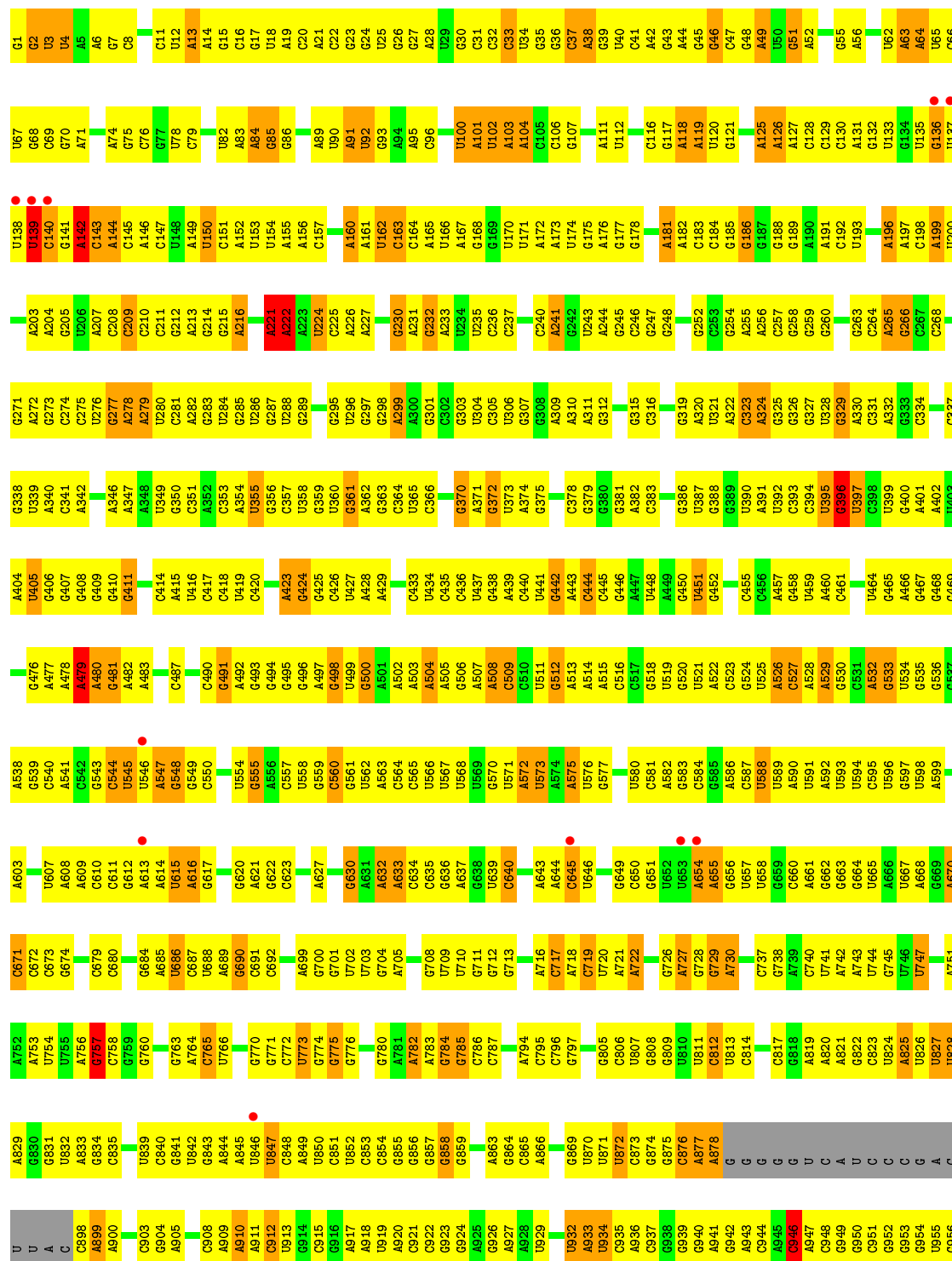


• Molecule 22: 5S ribosomal RNA





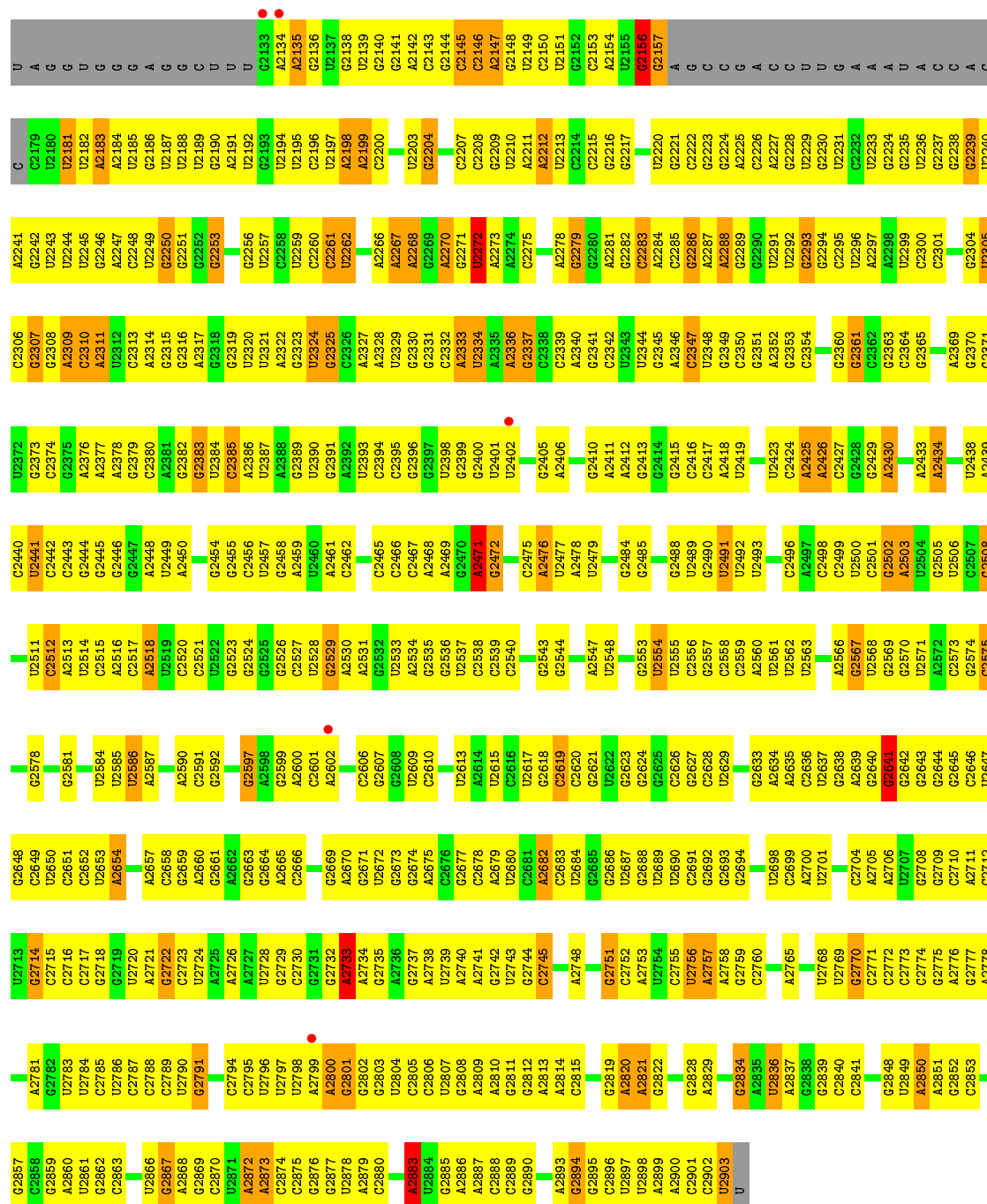
• Molecule 23: 23S ribosomal RNA



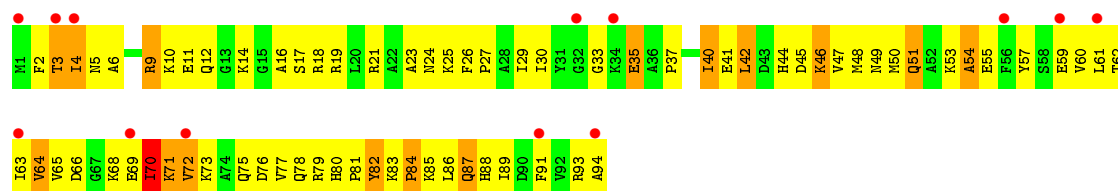
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U1952	C1741	U1542	A1677	U1542	U1543	U1475	G1408	U1273	G1150	U1082	U1082	G1017
A1953	U1742	G1606	G1681	C1606	G1544	U1476	U1409	A1275	G1151	G1150	G1150	G1018
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G1025	U958	A	C835	A756	G674	U606	U545	A479	G409	A345	A279	G212	U139	G70	G1
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A1027	A960		C837	C758	C679	A608	A547	C481	G410	A347	A281	G214	G141	U72	U3
A1028	C961	A899	C838	C679	C679	A609	G548	A482	G411		A282	G215	G142	A73	U4
A1029	G962	A900	C839	G763	C680	C610	G549	A483	A412	G350	G283	A216	C143	A74	A5
C1030	G963	C901	C840	G764	G681	C611	C550	C484	A413	G351	U284	A217	C144	G75	A6
	C964	C902	G841	C765	G682	G612	G551		C414	A352	G285	A218	C145		G7
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G1042	C968	U906	A845	U686	U686	A616	G555	G491	C418		U289	A223	A152	U82	U12
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A973	A973	A911	U850	G776	C691	A621	G560		G424	A362	G297	C228	A160	G88	U18
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	C982	A917	G856	A782	G705	A631	U566	A506	A432	U369	C302	U234	A165	A94	G24
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A1088	A1009	G942	G	C737	C737	G659	A590	G531	U459	C393	U329	G263	U193	U50	U50
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A1090	G1011	C945	U			G662	A592	G533	C461	U395	C331	A265	A196	G51	G51
G1091	U1012	A945	C	U741	U741	G663	U593	G534		G396	A332	G266	A197	A126	A52
C1092	C1013	C946	A	U742	U742	G664	U594	U534	A466	U397	G333	C267	C198	C127	G55
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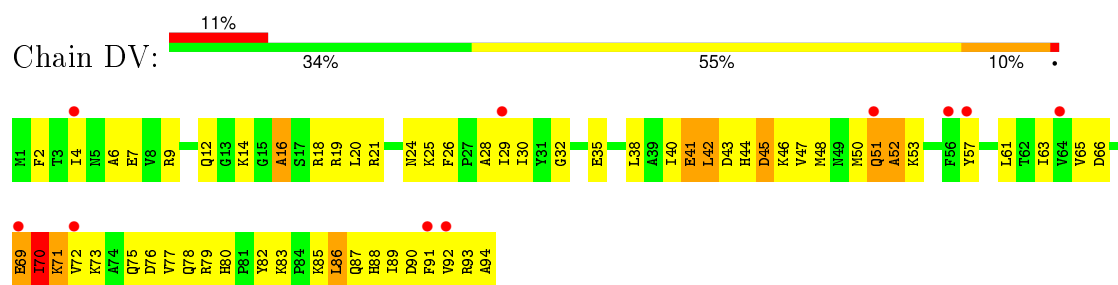
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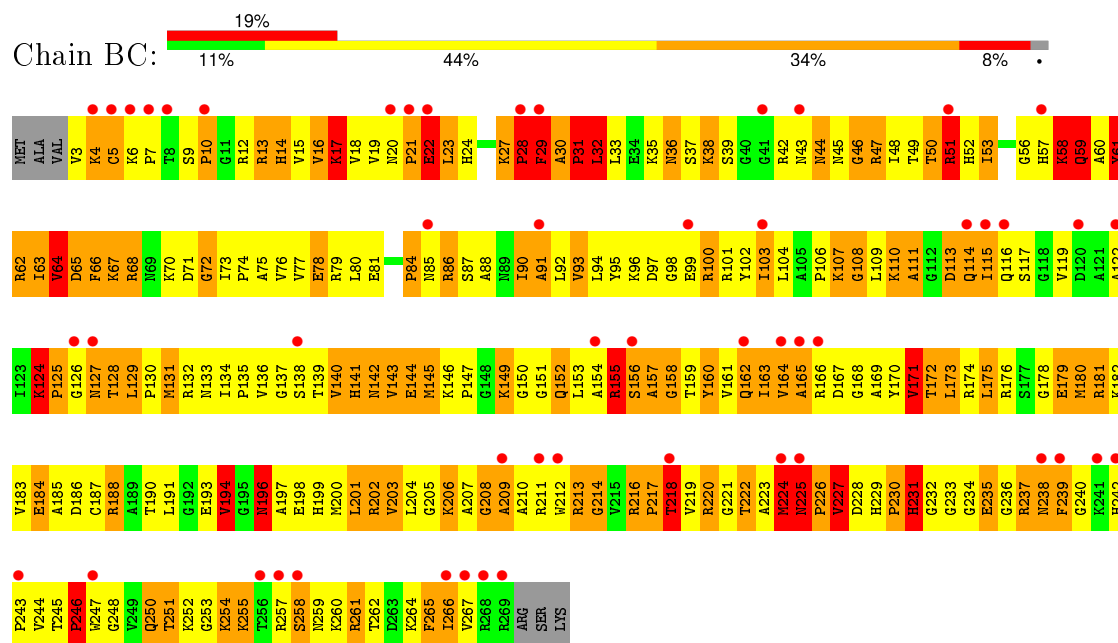
• Molecule 24: 50S ribosomal protein L25



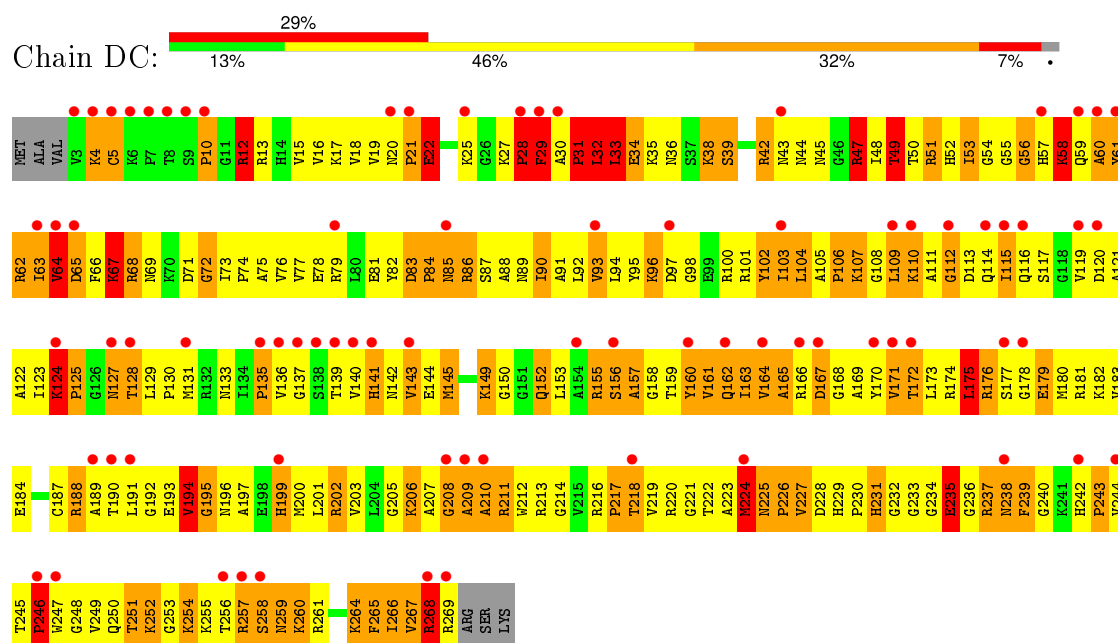
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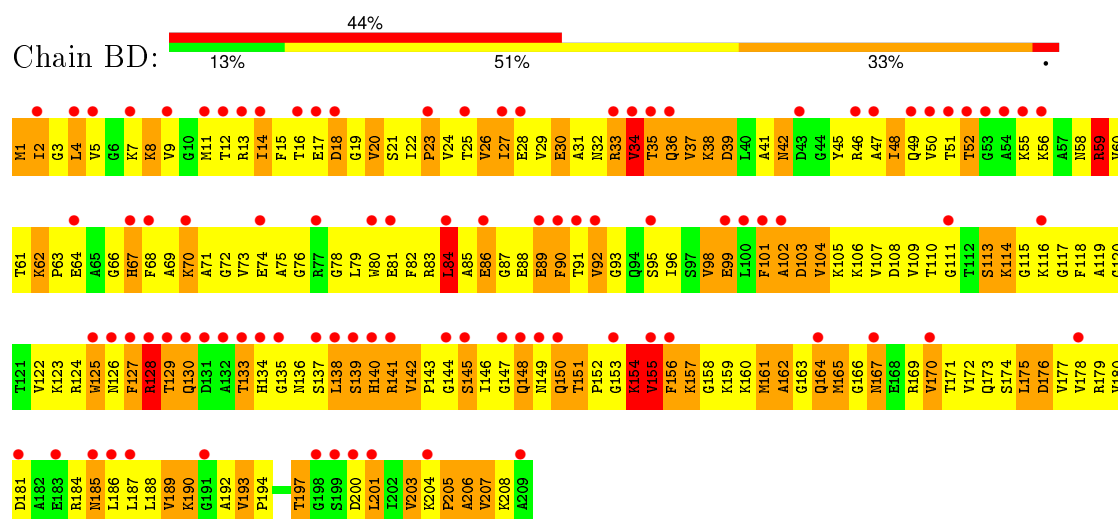
• Molecule 25: 50S ribosomal protein L2



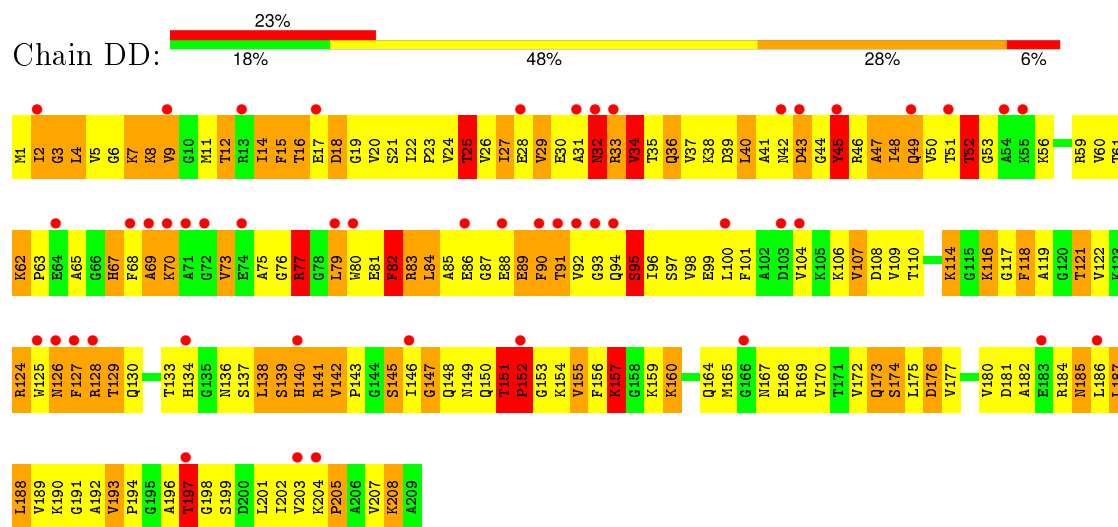
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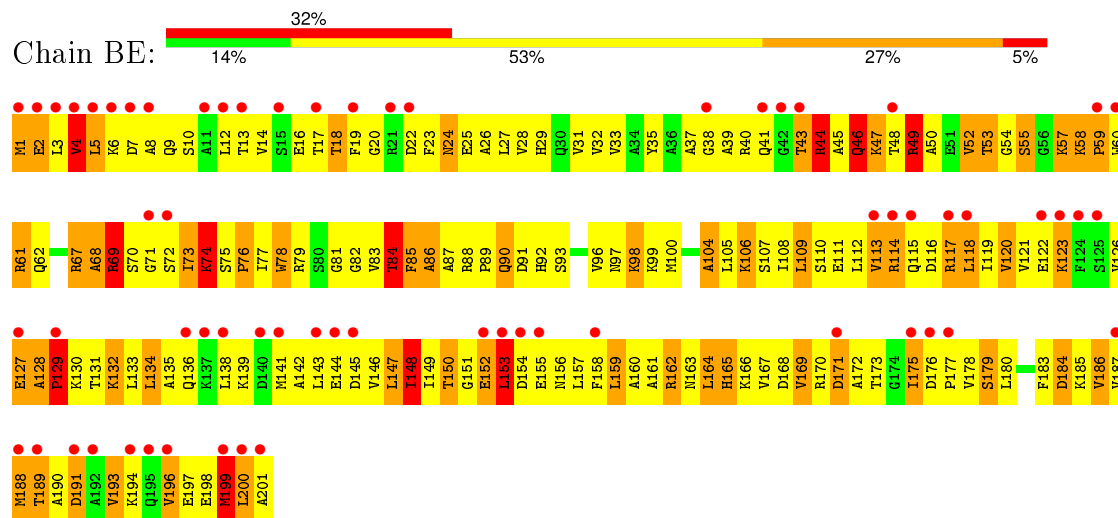
• Molecule 26: 50S ribosomal protein L3



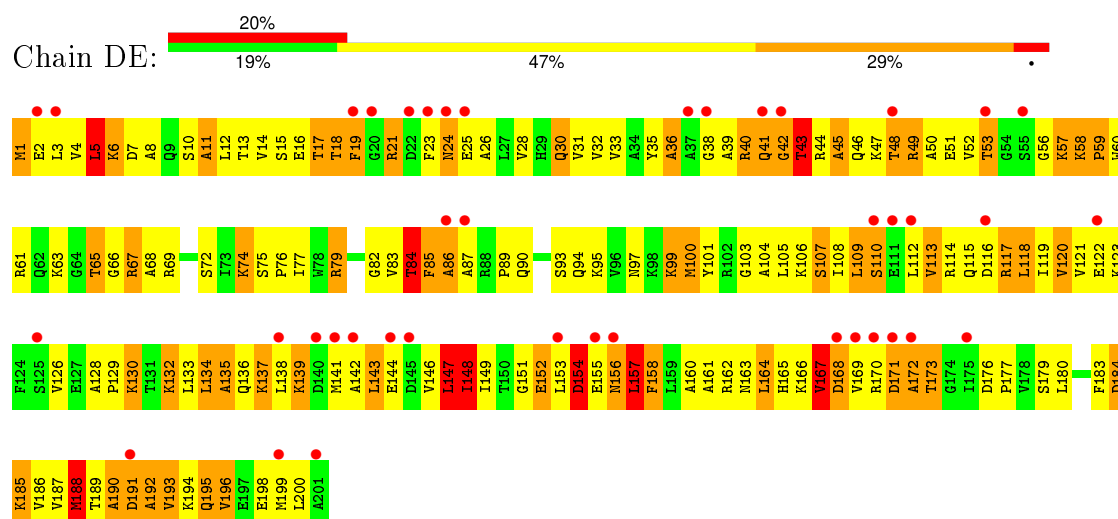
• Molecule 26: 50S ribosomal protein L3



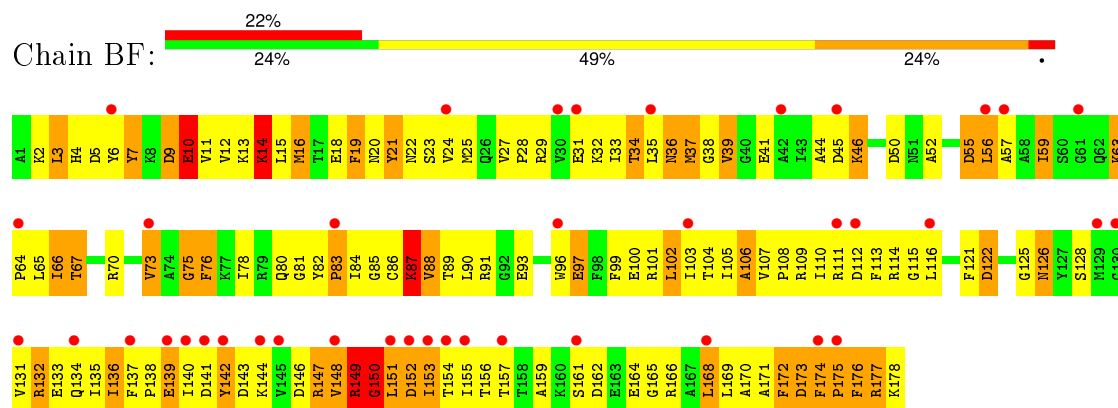
• Molecule 27: 50S ribosomal protein L4



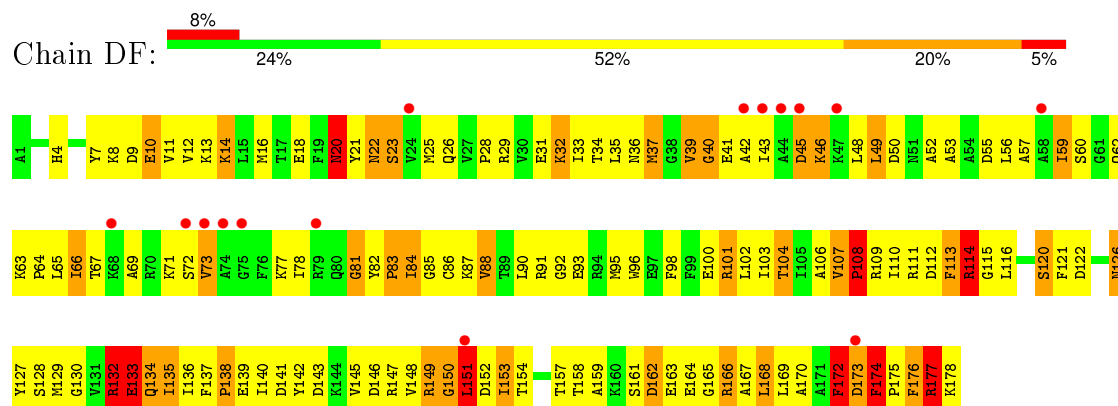
• Molecule 27: 50S ribosomal protein L4



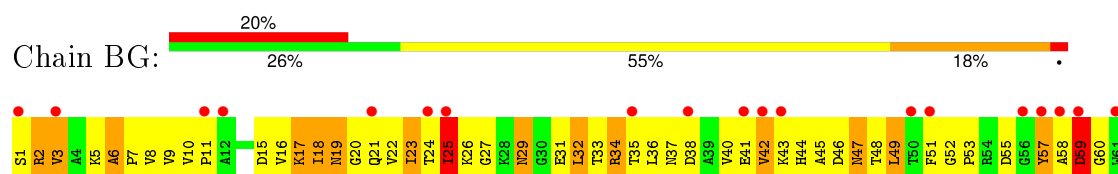
• Molecule 28: 50S ribosomal protein L5

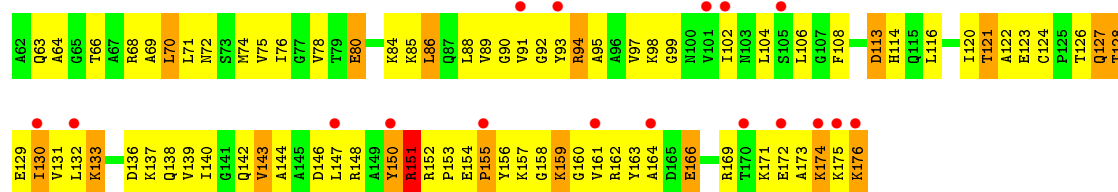


• Molecule 28: 50S ribosomal protein L5

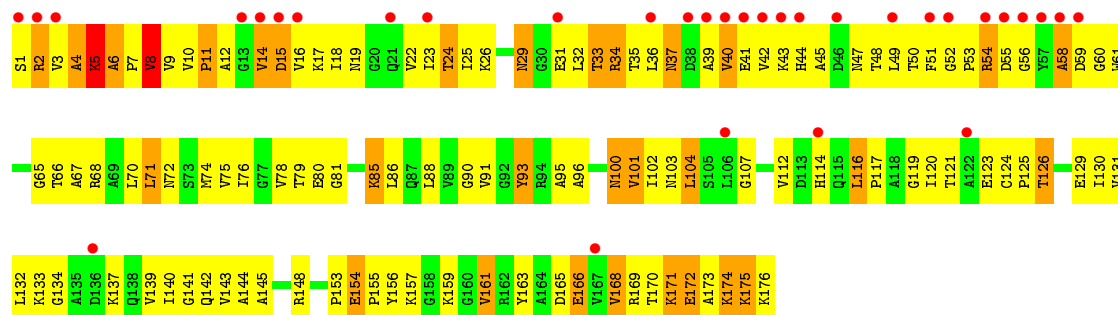


• Molecule 29: 50S ribosomal protein L6

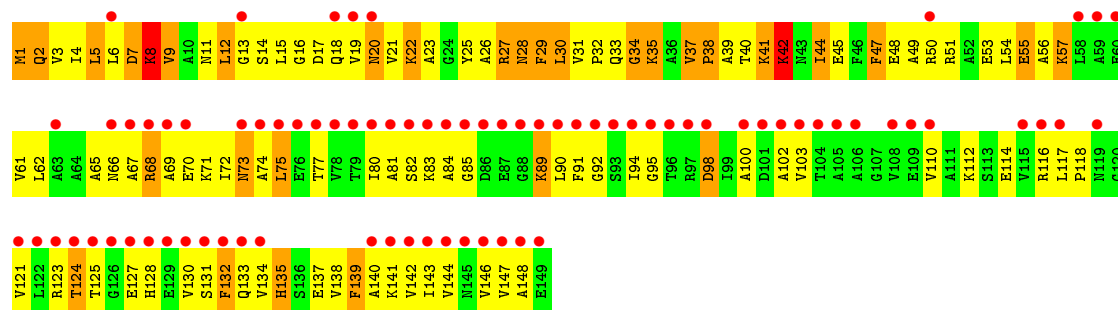




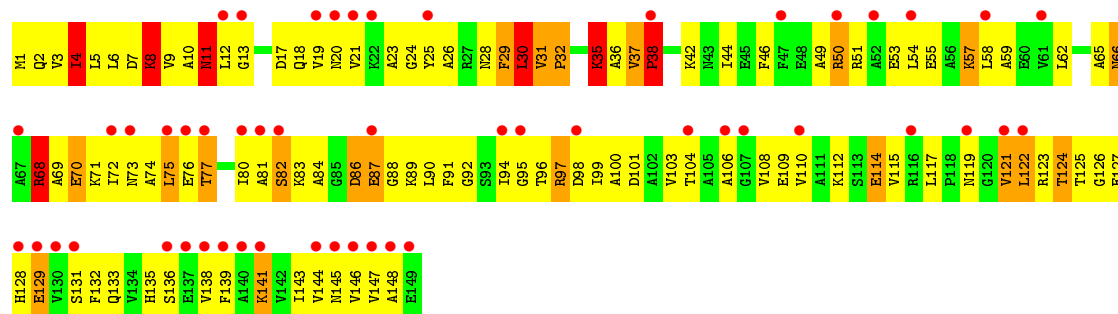
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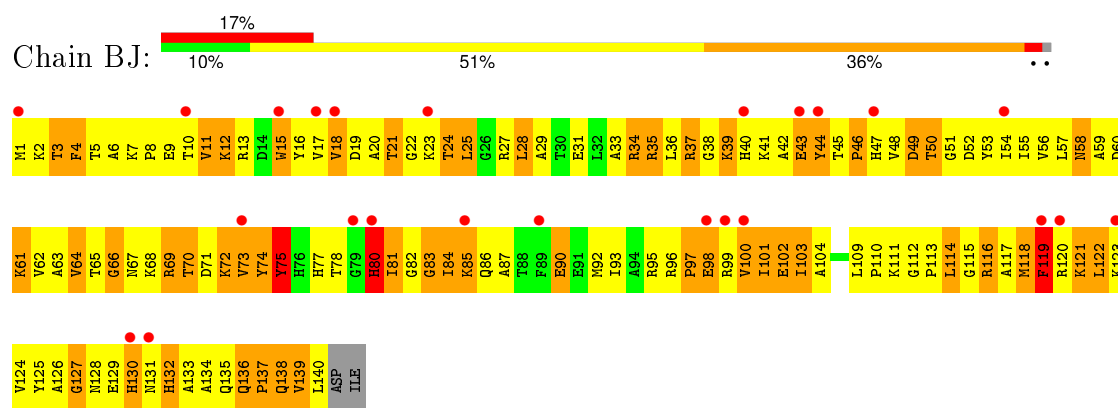
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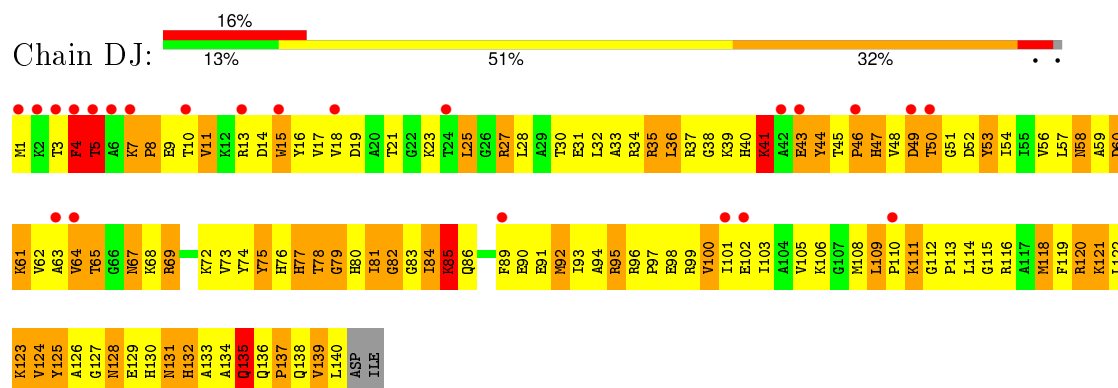
• Molecule 30: 50S ribosomal protein L9



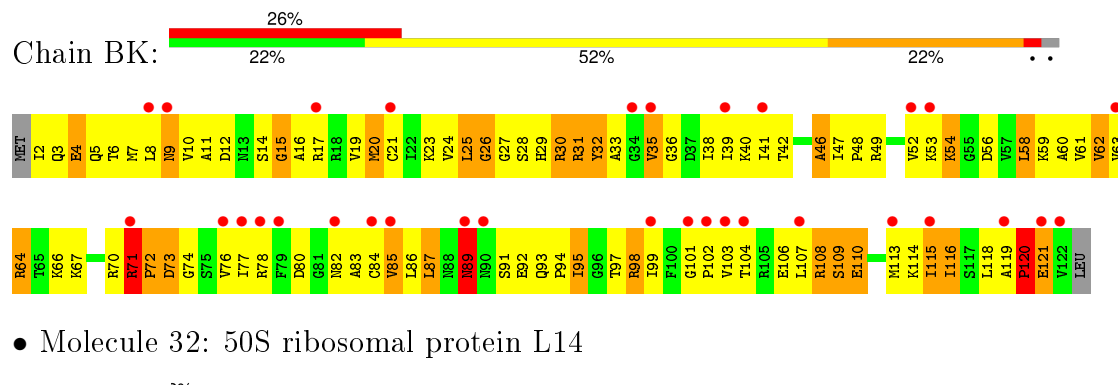
• Molecule 31: 50S ribosomal protein L13



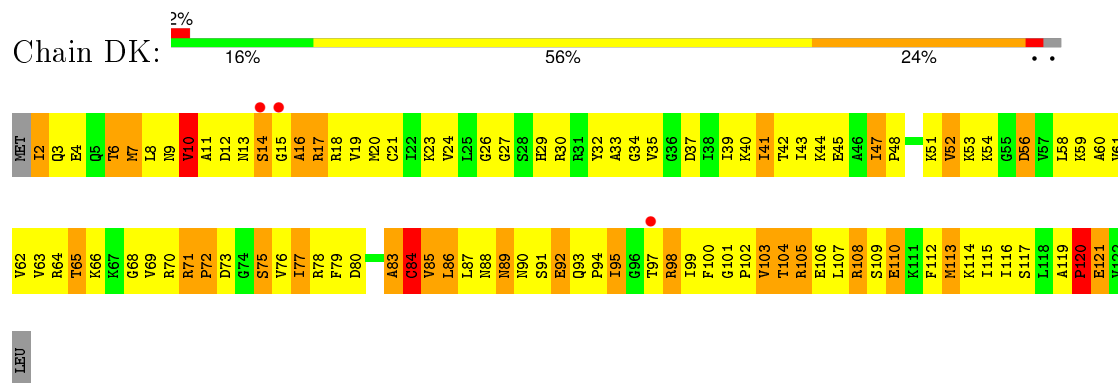
• Molecule 31: 50S ribosomal protein L13



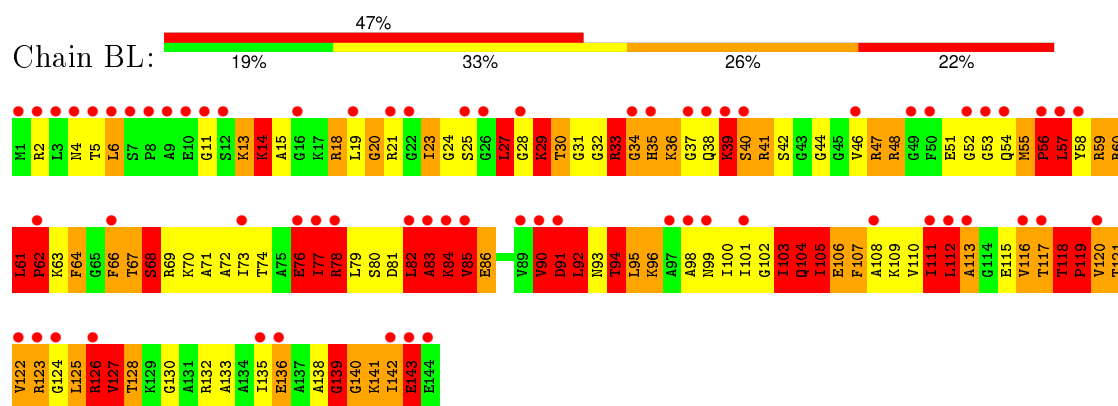
• Molecule 32: 50S ribosomal protein L14



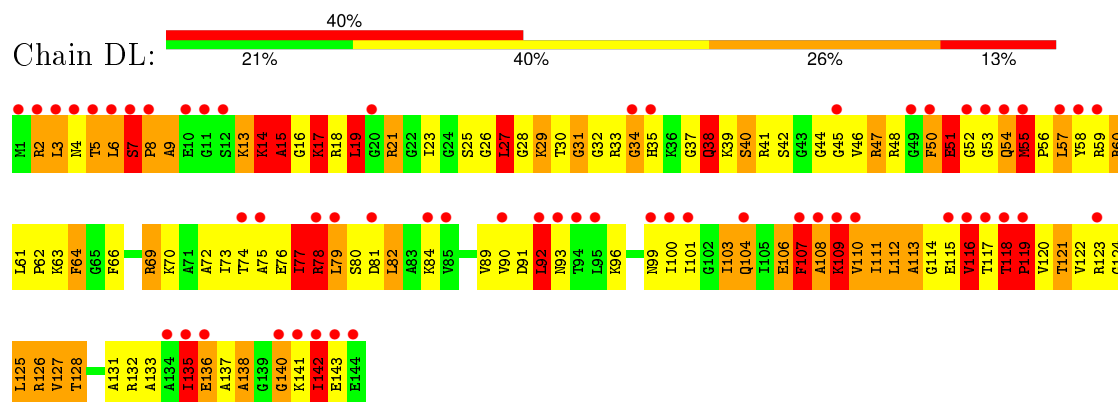
• Molecule 32: 50S ribosomal protein L14



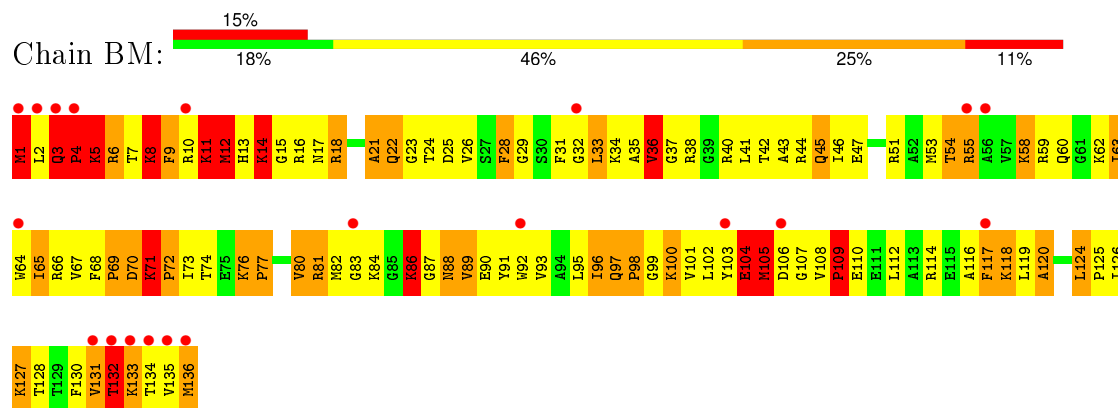
• Molecule 33: 50S ribosomal protein L15



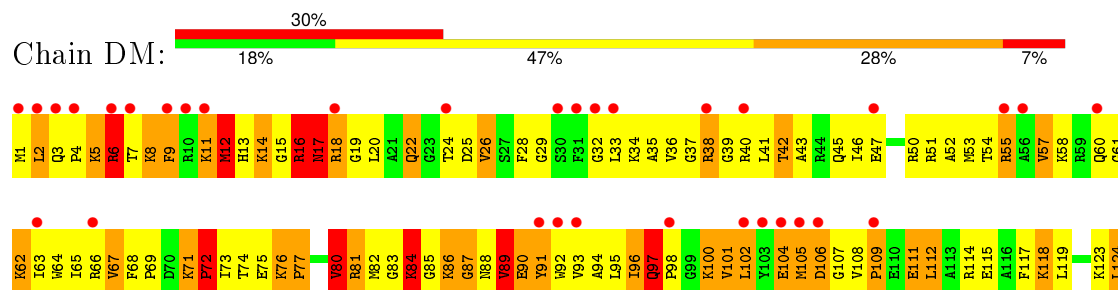
- Molecule 33: 50S ribosomal protein L15



- Molecule 34: 50S ribosomal protein L16

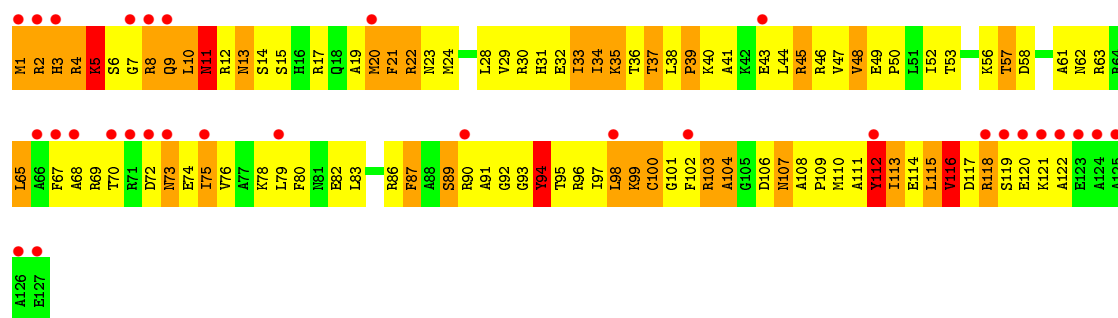
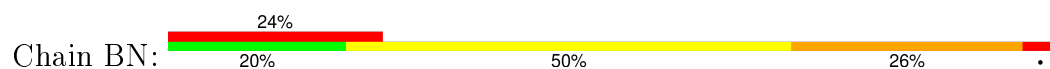


- Molecule 34: 50S ribosomal protein L16

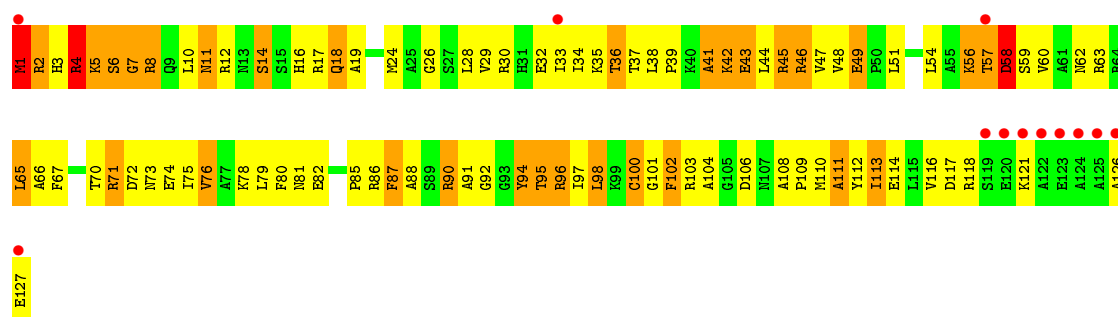




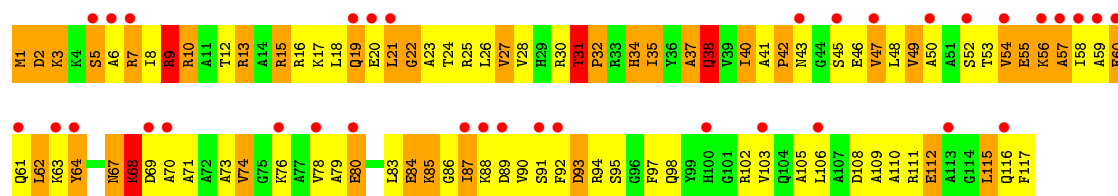
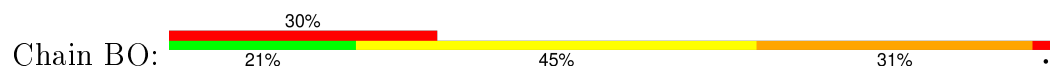
- Molecule 35: 50S ribosomal protein L17



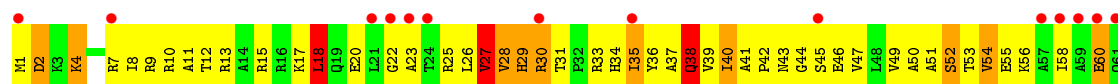
- Molecule 35: 50S ribosomal protein L17

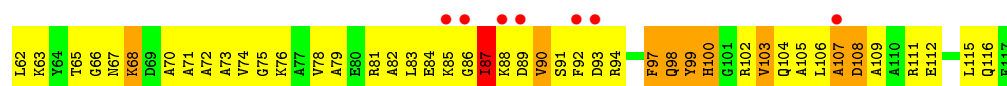


- Molecule 36: 50S ribosomal protein L18

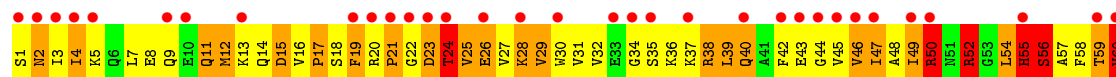


- Molecule 36: 50S ribosomal protein L18





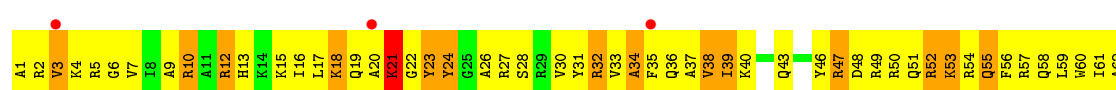
• Molecule 37: 50S ribosomal protein L19



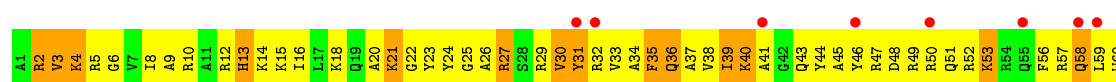
• Molecule 37: 50S ribosomal protein L19



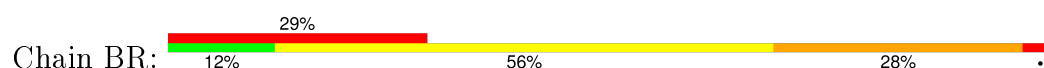
• Molecule 38: 50S ribosomal protein L20

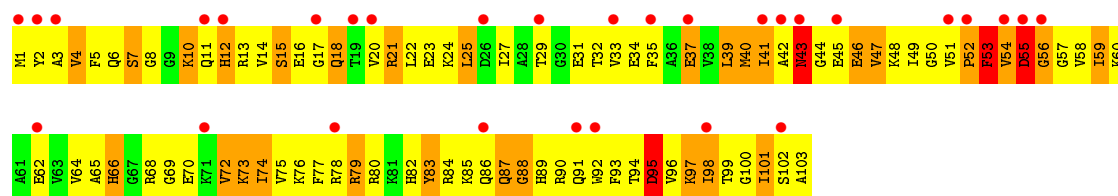


• Molecule 38: 50S ribosomal protein L20

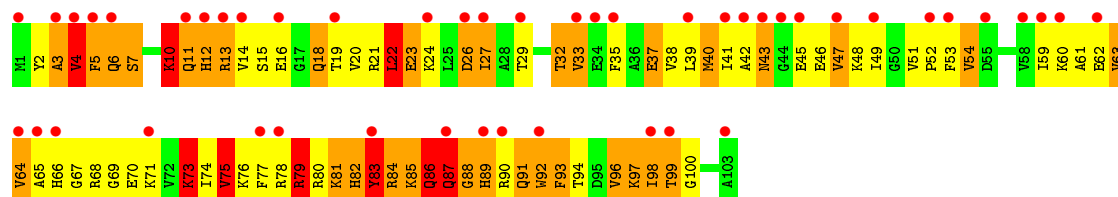
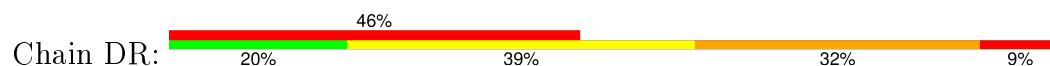


• Molecule 39: 50S ribosomal protein L21

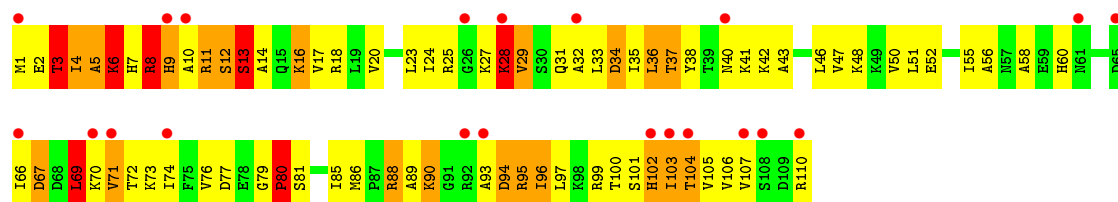




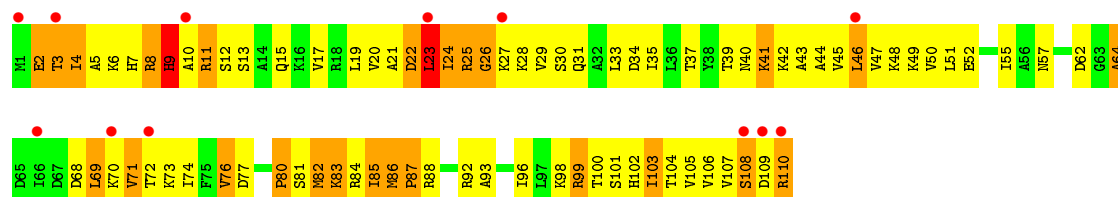
• Molecule 39: 50S ribosomal protein L21



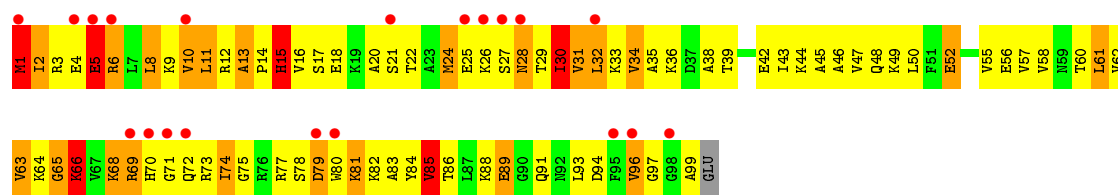
• Molecule 40: 50S ribosomal protein L22



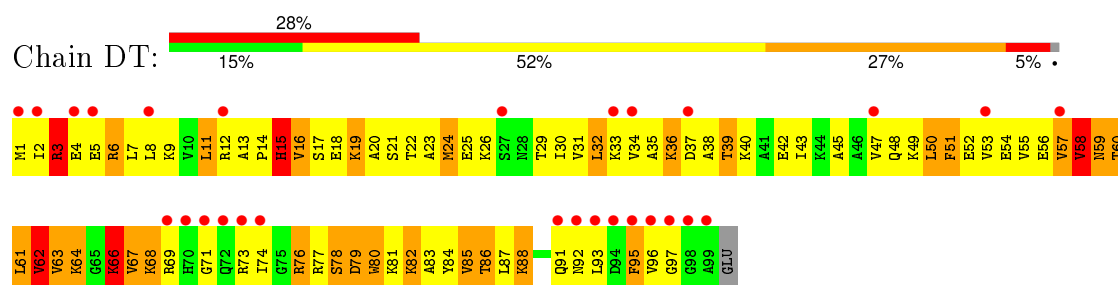
• Molecule 40: 50S ribosomal protein L22



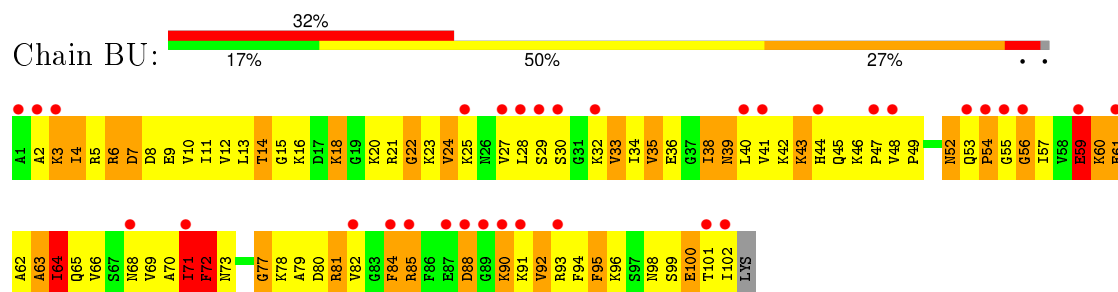
• Molecule 41: 50S ribosomal protein L23



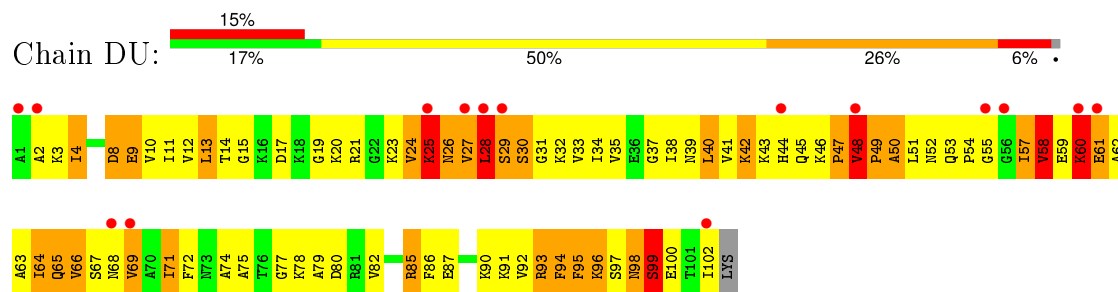
• Molecule 41: 50S ribosomal protein L23



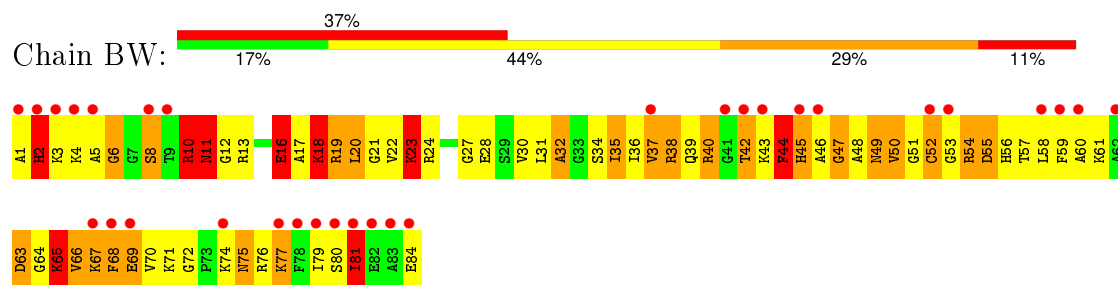
- Molecule 42: 50S ribosomal protein L24



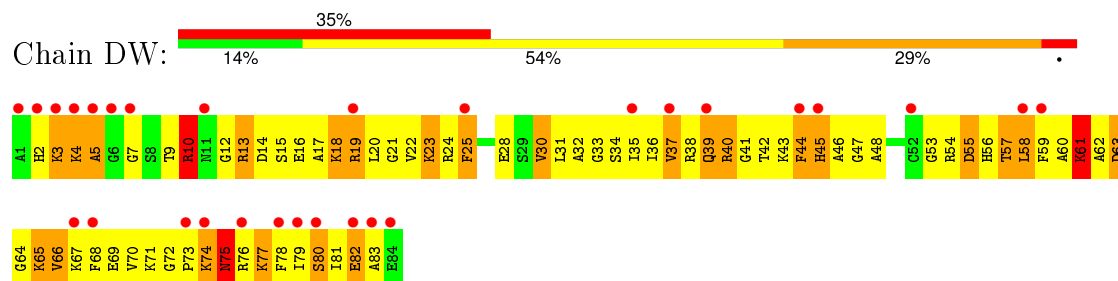
- Molecule 42: 50S ribosomal protein L24



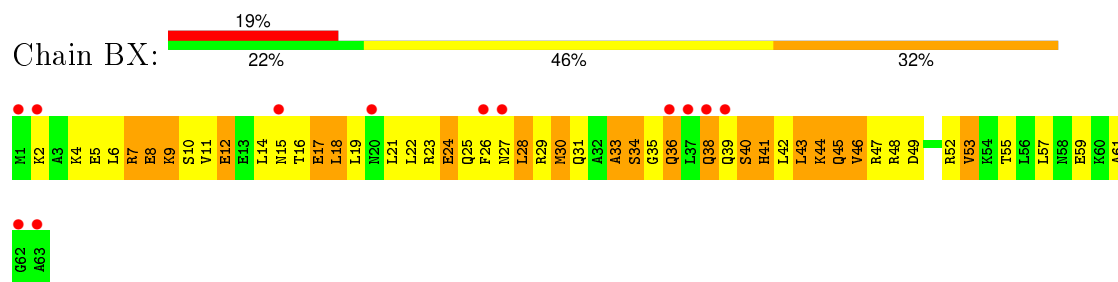
- Molecule 43: 50S ribosomal protein L27



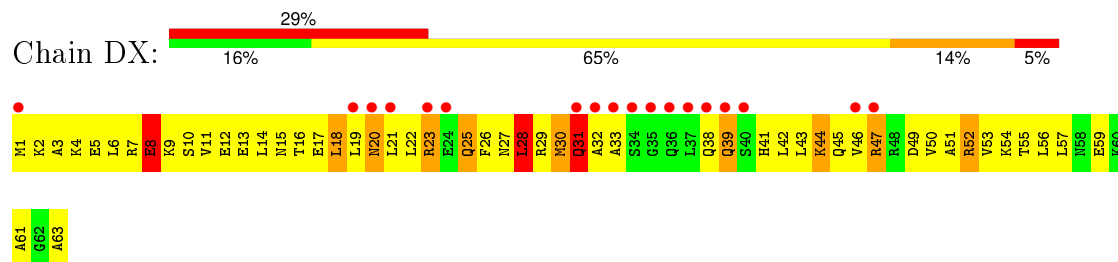
- Molecule 43: 50S ribosomal protein L27



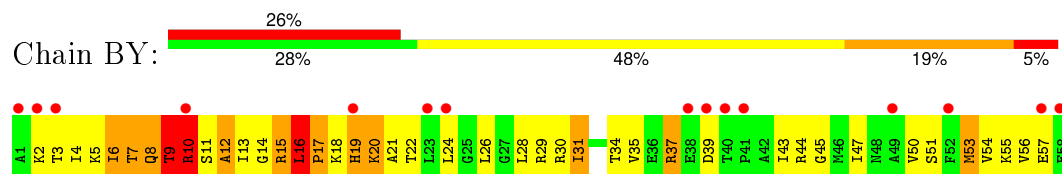
- Molecule 44: 50S ribosomal protein L29



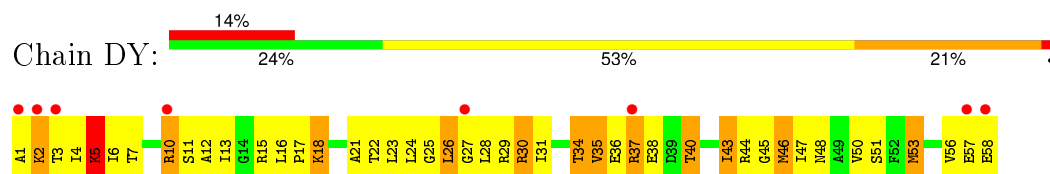
- Molecule 44: 50S ribosomal protein L29



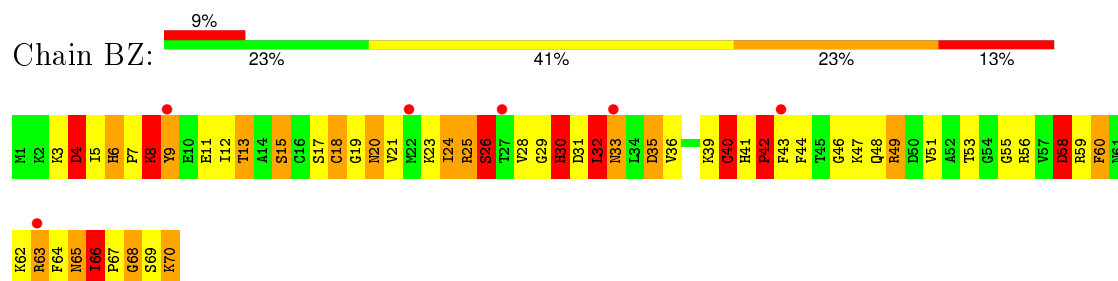
- Molecule 45: 50S ribosomal protein L30



- Molecule 45: 50S ribosomal protein L30

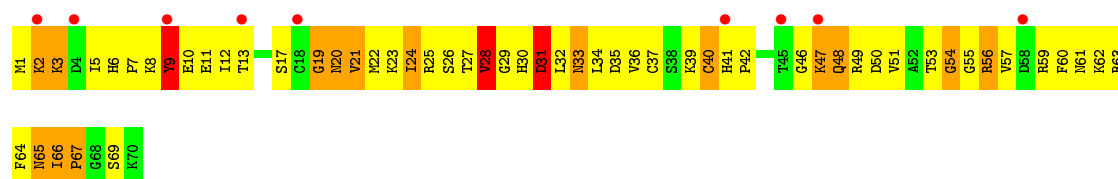


- Molecule 46: 50S ribosomal protein L31

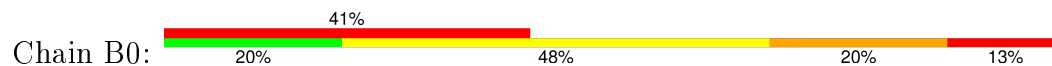


- Molecule 46: 50S ribosomal protein L31

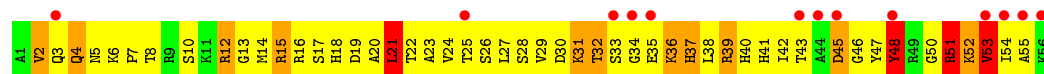
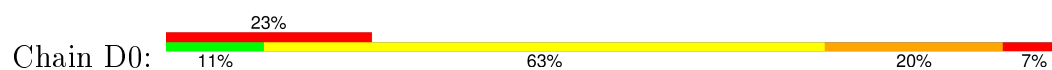




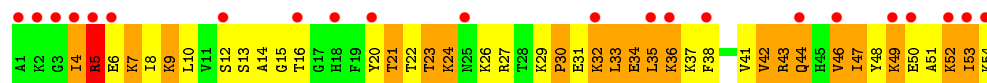
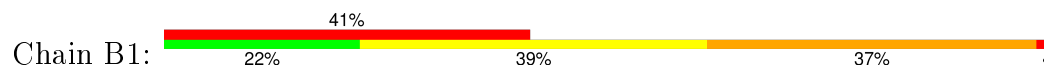
- Molecule 47: 50S ribosomal protein L32



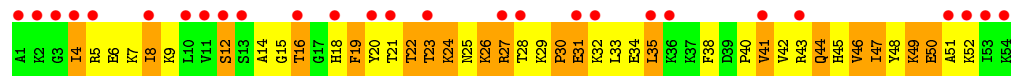
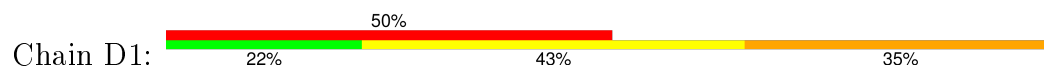
- Molecule 47: 50S ribosomal protein L32



- Molecule 48: 50S ribosomal protein L33



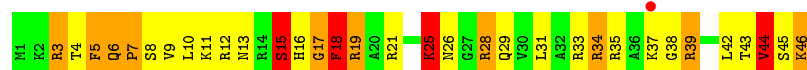
- Molecule 48: 50S ribosomal protein L33



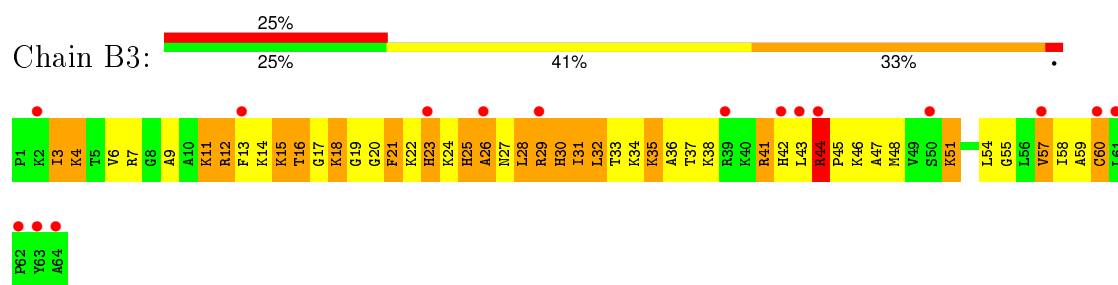
- Molecule 49: 50S ribosomal protein L34



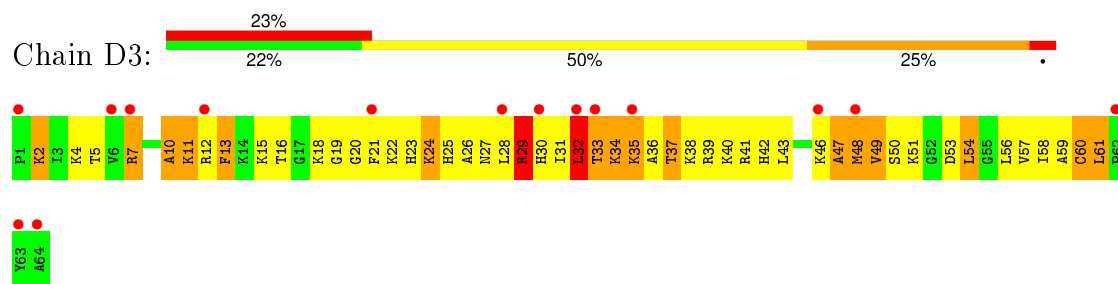
- Molecule 49: 50S ribosomal protein L34



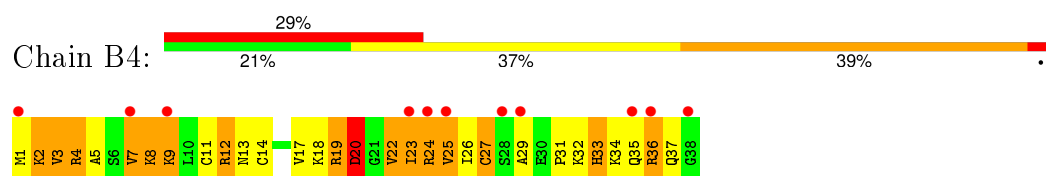
- Molecule 50: 50S ribosomal protein L35



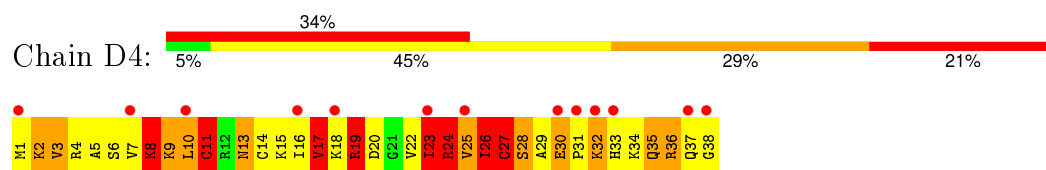
- Molecule 50: 50S ribosomal protein L35



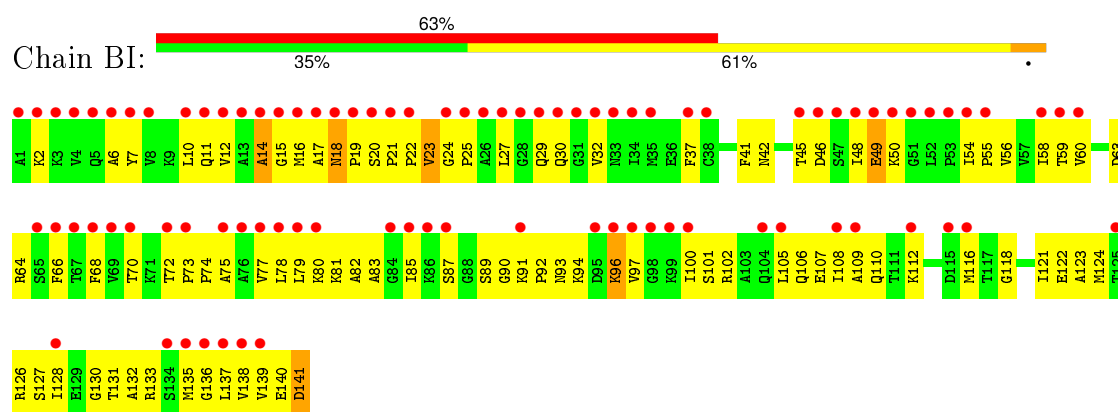
- Molecule 51: 50S ribosomal protein L36



- Molecule 51: 50S ribosomal protein L36

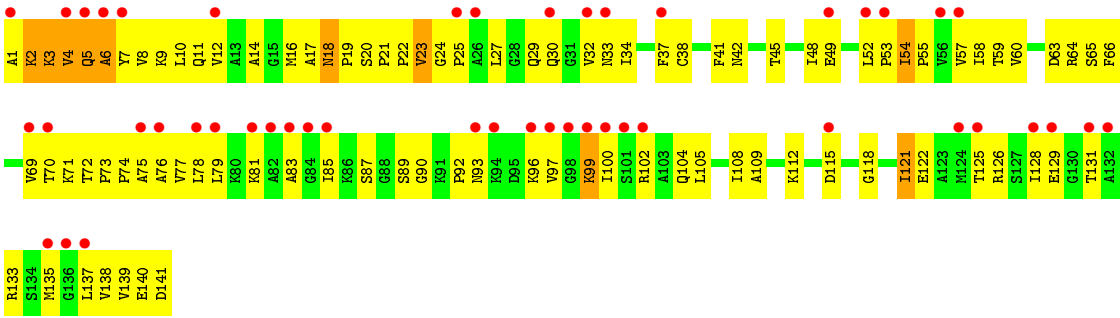


- Molecule 52: 50S ribosomal protein L11



- Molecule 52: 50S ribosomal protein L11





4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	208.85Å 379.20Å 739.30Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	70.00 – 3.46 163.96 – 3.46	Depositor EDS
% Data completeness (in resolution range)	91.6 (70.00-3.46) 91.6 (163.96-3.46)	Depositor EDS
R_{merge}	0.14	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.19 (at 3.49Å)	Xtriage
Refinement program	CNS	Depositor
R, R_{free}	0.279 , 0.331 0.262 , 0.308	Depositor DCC
R_{free} test set	35582 reflections (5.40%)	DCC
Wilson B-factor (Å ²)	77.0	Xtriage
Anisotropy	0.184	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.24 , 65.0	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning ²	$\langle L \rangle = 0.48$, $\langle L^2 \rangle = 0.31$	Xtriage
Outliers	0 of 720727 reflections	Xtriage
F_o, F_c correlation	0.89	EDS
Total number of atoms	284107	wwPDB-VP
Average B, all atoms (Å ²)	64.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.43% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

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

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

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	7/57350 (0.0%)
1	CA	0.26	2/36762 (0.0%)	0.75	11/57350 (0.0%)
2	AC	0.23	0/1651	0.44	0/2225
2	CC	0.23	0/1651	0.47	0/2225
3	AD	0.23	0/1665	0.46	0/2227
3	CD	0.23	0/1665	0.45	0/2227
4	AE	0.23	0/1118	0.45	0/1504
4	CE	0.24	0/1118	0.45	0/1504
5	AF	0.25	0/835	0.47	0/1128
5	CF	0.24	0/835	0.49	0/1128
6	AG	0.23	0/1187	0.45	0/1591
6	CG	0.23	0/1211	0.45	0/1624
7	AH	0.23	0/989	0.45	0/1326
7	CH	0.23	0/989	0.46	0/1326
8	AI	0.24	0/1034	0.45	0/1375
8	CI	0.24	0/1034	0.46	0/1375
9	AJ	0.23	0/796	0.49	0/1077
9	CJ	0.22	0/796	0.49	0/1077
10	AK	0.24	0/893	0.46	0/1205
10	CK	0.24	0/893	0.47	0/1205
11	AL	0.22	0/969	0.47	0/1300
11	CL	0.22	0/969	0.48	0/1300
12	AM	0.21	0/892	0.48	0/1193
12	CM	0.21	0/884	0.46	0/1181
13	AN	0.24	0/785	0.46	0/1043
13	CN	0.24	0/785	0.45	0/1043
14	AO	0.23	0/724	0.45	0/966
14	CO	0.23	0/724	0.44	0/966
15	AP	0.26	0/659	0.44	0/884
15	CP	0.25	0/648	0.45	0/870
16	AQ	0.23	0/657	0.46	0/881
16	CQ	0.24	0/665	0.47	0/892

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	AR	0.23	0/462	0.46	0/621
17	CR	0.23	0/462	0.45	0/621
18	AS	0.25	0/652	0.46	0/877
18	CS	0.25	0/660	0.47	0/888
19	AT	0.23	0/671	0.41	0/888
19	CT	0.24	0/671	0.42	0/888
20	AB	0.25	0/1735	0.47	0/2338
20	CB	0.25	0/1735	0.47	0/2338
21	AU	1.01	4/430 (0.9%)	0.74	2/570 (0.4%)
21	CU	0.98	3/430 (0.7%)	0.82	3/570 (0.5%)
22	BA	0.27	0/2803	0.74	0/4371
22	DA	0.28	0/2803	0.77	0/4371
23	BB	0.33	15/68314 (0.0%)	0.79	63/106569 (0.1%)
23	DB	0.34	18/68314 (0.0%)	0.79	75/106569 (0.1%)
24	BV	0.30	0/766	0.53	0/1025
24	DV	0.25	0/766	0.46	0/1025
25	BC	0.40	0/2092	0.88	7/2813 (0.2%)
25	DC	0.40	0/2092	0.90	8/2813 (0.3%)
26	BD	0.40	0/1586	0.80	2/2134 (0.1%)
26	DD	0.37	0/1586	0.82	4/2134 (0.2%)
27	BE	0.45	1/1571 (0.1%)	0.88	6/2113 (0.3%)
27	DE	0.70	4/1571 (0.3%)	0.83	5/2113 (0.2%)
28	BF	0.33	0/1444	0.87	5/1937 (0.3%)
28	DF	0.41	1/1444 (0.1%)	1.00	10/1937 (0.5%)
29	BG	0.31	0/1343	0.69	0/1816
29	DG	0.30	0/1343	0.67	1/1816 (0.1%)
30	BH	0.28	0/1122	0.60	0/1515
30	DH	0.34	0/1122	0.71	1/1515 (0.1%)
31	BJ	0.41	1/1135 (0.1%)	0.72	3/1529 (0.2%)
31	DJ	0.32	0/1135	0.76	3/1529 (0.2%)
32	BK	0.35	0/939	1.00	2/1258 (0.2%)
32	DK	0.35	0/939	0.99	4/1258 (0.3%)
33	BL	0.69	0/1062	1.60	31/1413 (2.2%)
33	DL	0.74	1/1062 (0.1%)	1.58	25/1413 (1.8%)
34	BM	0.48	0/1093	1.03	8/1460 (0.5%)
34	DM	0.39	0/1093	0.85	5/1460 (0.3%)
35	BN	0.37	0/1021	0.92	7/1364 (0.5%)
35	DN	0.37	0/1021	0.80	3/1364 (0.2%)
36	BO	0.30	0/910	0.67	0/1219
36	DO	0.31	0/910	0.64	0/1219
37	BP	0.55	0/929	1.40	16/1242 (1.3%)
37	DP	0.58	0/929	1.40	16/1242 (1.3%)
38	BQ	0.41	0/960	0.86	3/1278 (0.2%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
38	DQ	0.36	0/960	0.75	0/1278
39	BR	1.06	6/829 (0.7%)	1.42	13/1107 (1.2%)
39	DR	0.38	0/829	0.82	3/1107 (0.3%)
40	BS	0.27	0/864	0.68	1/1156 (0.1%)
40	DS	0.26	0/864	0.60	0/1156
41	BT	0.39	0/784	0.78	4/1048 (0.4%)
41	DT	0.45	1/784 (0.1%)	0.80	1/1048 (0.1%)
42	BU	0.33	0/787	0.74	0/1051
42	DU	0.37	0/787	0.94	7/1051 (0.7%)
43	BW	0.36	0/642	0.96	5/848 (0.6%)
43	DW	0.39	0/642	0.80	2/848 (0.2%)
44	BX	0.29	0/510	0.80	1/677 (0.1%)
44	DX	0.29	0/510	0.66	0/677
45	BY	0.31	0/453	0.64	0/605
45	DY	0.31	0/453	0.69	1/605 (0.2%)
46	BZ	0.48	0/559	1.04	5/745 (0.7%)
46	DZ	0.52	0/559	0.91	1/745 (0.1%)
47	B0	0.53	1/450 (0.2%)	1.15	7/599 (1.2%)
47	D0	0.41	0/450	0.97	3/599 (0.5%)
48	B1	0.36	0/448	0.71	0/594
48	D1	0.32	0/448	0.69	0/594
49	B2	0.33	0/380	0.64	0/498
49	D2	0.30	0/380	0.60	0/498
50	B3	0.47	0/513	0.95	1/676 (0.1%)
50	D3	0.39	0/513	0.80	1/676 (0.1%)
51	B4	0.40	0/303	0.73	0/397
51	D4	0.32	0/303	0.77	0/397
52	BI	0.26	0/1046	0.58	0/1410
52	DI	0.60	4/1046 (0.4%)	0.76	4/1410 (0.3%)
All	All	0.33	63/306469 (0.0%)	0.77	396/458101 (0.1%)

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	16
1	CA	0	20
21	AU	0	1
22	DA	0	1
23	BB	0	60

Continued on next page...

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Mol	Chain	#Chirality outliers	#Planarity outliers
23	DB	1	65
25	BC	0	3
25	DC	0	2
31	BJ	0	2
33	BL	0	1
37	BP	0	1
37	DP	0	1
38	BQ	0	1
39	BR	0	1
39	DR	0	1
46	DZ	0	1
47	D0	0	1
All	All	1	178

All (63) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	DE	79	ARG	CD-NE	18.29	1.77	1.46
39	BR	53	PHE	CB-CG	17.86	1.81	1.51
23	DB	1086	A	C5-C6	-17.70	1.25	1.41
23	BB	1086	A	C5-C6	-17.70	1.25	1.41
21	CU	25	ALA	C-N	15.34	1.60	1.33
21	AU	15	LEU	C-N	-15.04	0.99	1.34
23	DB	448	U	O4'-C1'	12.68	1.58	1.41
39	BR	54	VAL	N-CA	-11.62	1.23	1.46
39	BR	54	VAL	CA-CB	11.15	1.78	1.54
27	DE	79	ARG	CG-CD	10.76	1.78	1.51
23	DB	1088	A	C6-N1	-10.45	1.28	1.35
23	BB	1088	A	C6-N1	-10.40	1.28	1.35
23	BB	2196	C	O3'-P	10.14	1.73	1.61
33	DL	77	ILE	CA-CB	-10.07	1.31	1.54
23	DB	448	U	C3'-C2'	9.55	1.63	1.52
52	DI	3	LYS	CD-CE	9.37	1.74	1.51
21	AU	25	ALA	C-N	-9.34	1.16	1.33
27	DE	79	ARG	NE-CZ	9.31	1.45	1.33
23	DB	448	U	C4'-O4'	9.24	1.57	1.45
52	DI	3	LYS	CG-CD	8.57	1.81	1.52
21	CU	17	ARG	C-N	8.48	1.53	1.34
23	DB	143	C	N1-C2	8.32	1.48	1.40
23	BB	2052	A	C4'-C3'	-8.29	1.44	1.53
27	BE	46	GLN	CB-CG	8.03	1.74	1.52
23	DB	1060	U	C2-N3	7.80	1.43	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	DB	448	U	C2'-C1'	7.79	1.61	1.53
23	BB	1060	U	C2-N3	7.78	1.43	1.37
39	BR	53	PHE	CA-CB	7.52	1.70	1.53
23	BB	2191	A	O3'-P	-7.42	1.52	1.61
23	DB	1086	A	N7-C5	-7.38	1.34	1.39
23	BB	1086	A	N7-C5	-7.36	1.34	1.39
39	BR	54	VAL	CA-C	7.21	1.71	1.52
23	BB	1248	G	C4'-C3'	7.13	1.60	1.53
23	DB	1099	G	C5'-C4'	6.82	1.59	1.51
52	DI	3	LYS	CA-C	6.67	1.70	1.52
1	AA	463	U	O3'-P	-6.67	1.53	1.61
41	DT	1	MET	CG-SD	6.62	1.98	1.81
21	AU	29	ALA	C-N	6.59	1.49	1.34
27	DE	79	ARG	CB-CG	6.35	1.69	1.52
23	DB	1098	A	C5-C4	6.23	1.43	1.38
23	DB	2091	C	O3'-P	6.17	1.68	1.61
1	CA	463	U	O3'-P	-6.06	1.53	1.61
23	BB	37	C	N1-C2	6.03	1.46	1.40
23	BB	442	G	C5-C6	6.00	1.48	1.42
23	DB	1559	U	O3'-P	5.96	1.68	1.61
21	CU	8	ASN	C-N	5.74	1.47	1.34
23	DB	1098	A	O3'-P	5.63	1.68	1.61
31	BJ	75	TYR	CD1-CE1	-5.53	1.31	1.39
23	DB	1098	A	C5'-C4'	5.51	1.57	1.51
39	BR	53	PHE	CG-CD2	5.50	1.47	1.38
52	DI	3	LYS	CB-CG	5.50	1.67	1.52
23	BB	38	A	C5'-C4'	5.42	1.57	1.51
21	AU	11	PHE	C-N	-5.39	1.21	1.34
28	DF	39	VAL	CA-CB	5.32	1.66	1.54
23	BB	1250	G	C4'-C3'	-5.24	1.47	1.52
23	BB	1426	G	O3'-P	5.15	1.67	1.61
23	BB	2267	A	C5-C6	-5.10	1.36	1.41
23	DB	1098	A	C3'-C2'	5.10	1.58	1.52
23	BB	442	G	C6-N1	-5.09	1.35	1.39
1	CA	495	A	N3-C4	-5.08	1.31	1.34
47	B0	52	LYS	N-CA	5.06	1.56	1.46
23	DB	2722	G	C4'-C3'	-5.06	1.47	1.52
23	DB	1099	G	N9-C4	5.04	1.42	1.38

All (396) bond angle outliers are listed below:

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BB	2791	G	O5'-P-OP1	-28.71	76.25	110.70
23	DB	2791	G	O5'-P-OP2	-27.77	77.38	110.70
23	DB	2791	G	O5'-P-OP1	18.50	132.90	110.70
23	BB	2791	G	O5'-P-OP2	18.20	132.54	110.70
23	DB	448	U	N1-C1'-C2'	17.52	136.78	114.00
39	BR	53	PHE	CA-C-N	-17.34	79.05	117.20
39	BR	54	VAL	CB-CA-C	15.11	140.10	111.40
23	DB	2790	U	OP2-P-O3'	14.81	137.79	105.20
23	BB	2790	U	OP1-P-O3'	14.26	136.57	105.20
39	BR	54	VAL	CG1-CB-CG2	-14.14	88.27	110.90
35	BN	118	ARG	NE-CZ-NH1	13.69	127.14	120.30
39	BR	54	VAL	N-CA-C	-13.34	74.98	111.00
33	BL	118	THR	C-N-CD	-12.92	92.18	120.60
33	DL	77	ILE	CB-CA-C	-12.70	86.19	111.60
23	DB	1098	A	N9-C1'-C2'	12.58	130.35	114.00
23	BB	2052	A	C5'-C4'-C3'	-11.99	96.81	116.00
33	DL	77	ILE	CG1-CB-CG2	11.76	137.28	111.40
27	DE	79	ARG	CD-NE-CZ	11.67	139.94	123.60
34	BM	3	GLN	C-N-CD	-11.30	95.73	120.60
33	DL	140	GLY	N-CA-C	11.01	140.62	113.10
33	DL	118	THR	N-CA-C	10.94	140.53	111.00
23	BB	139	U	N1-C1'-C2'	-10.12	100.85	114.00
39	BR	54	VAL	N-CA-CB	-10.11	89.27	111.50
28	DF	39	VAL	CB-CA-C	-10.01	92.38	111.40
37	DP	72	VAL	N-CA-C	9.76	137.36	111.00
52	DI	3	LYS	CD-CE-NZ	9.73	134.08	111.70
37	BP	72	VAL	N-CA-C	9.72	137.25	111.00
35	DN	4	ARG	NE-CZ-NH1	9.71	125.16	120.30
28	DF	113	PHE	N-CA-C	-9.71	84.78	111.00
23	BB	2272	U	C5-C4-O4	-9.61	120.14	125.90
34	BM	5	LYS	N-CA-C	-9.26	86.01	111.00
23	DB	1098	A	C1'-O4'-C4'	9.18	117.24	109.90
28	DF	40	GLY	N-CA-C	-8.94	90.75	113.10
42	DU	28	LEU	CA-CB-CG	-8.88	94.86	115.30
33	DL	77	ILE	C-N-CA	8.86	143.85	121.70
38	BQ	3	VAL	CB-CA-C	-8.85	94.58	111.40
47	B0	52	LYS	CB-CA-C	-8.79	92.81	110.40
37	DP	79	VAL	N-CA-C	8.77	134.68	111.00
39	BR	53	PHE	N-CA-CB	8.77	126.38	110.60
23	DB	143	C	N1-C1'-C2'	8.73	125.35	114.00
33	DL	26	GLY	N-CA-C	-8.67	91.42	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BB	2641	G	N9-C1'-C2'	-8.65	102.49	112.00
33	BL	6	LEU	N-CA-C	8.63	134.30	111.00
33	DL	113	ALA	N-CA-C	-8.57	87.85	111.00
23	DB	2641	G	N9-C1'-C2'	-8.53	102.61	112.00
27	DE	79	ARG	NE-CZ-NH1	8.52	124.56	120.30
33	BL	105	ILE	N-CA-C	8.50	133.95	111.00
23	DB	2272	U	N3-C4-O4	-8.48	113.47	119.40
33	BL	85	VAL	N-CA-C	-8.43	88.24	111.00
29	DG	172	GLU	N-CA-C	-8.42	88.25	111.00
23	DB	1350	C	C5'-C4'-C3'	-8.36	102.63	116.00
33	DL	77	ILE	N-CA-C	8.32	133.45	111.00
23	DB	1098	A	C8-N9-C4	-8.30	102.48	105.80
1	AA	765	G	N9-C1'-C2'	-8.22	102.96	112.00
27	BE	84	THR	N-CA-C	8.21	133.15	111.00
1	CA	765	G	N9-C1'-C2'	-8.20	102.98	112.00
27	BE	44	ARG	NE-CZ-NH2	-8.19	116.20	120.30
37	DP	40	GLN	N-CA-C	-8.15	88.98	111.00
23	DB	1088	A	N1-C6-N6	-8.15	113.71	118.60
37	BP	71	ARG	N-CA-C	8.13	132.96	111.00
23	BB	1088	A	N1-C6-N6	-8.12	113.73	118.60
37	BP	40	GLN	N-CA-C	-8.11	89.10	111.00
37	DP	71	ARG	N-CA-C	8.05	132.74	111.00
23	DB	944	C	C5'-C4'-C3'	-8.04	103.14	116.00
23	DB	2076	U	C2'-C3'-O3'	8.03	127.16	109.50
23	BB	773	U	C5'-C4'-C3'	-7.92	103.32	116.00
23	DB	560	C	C5'-C4'-C3'	-7.92	103.32	116.00
23	BB	1350	C	C5'-C4'-C3'	-7.90	103.36	116.00
34	DM	8	LYS	N-CA-C	-7.87	89.75	111.00
47	B0	52	LYS	N-CA-CB	7.82	124.68	110.60
23	BB	37	C	C4'-C3'-O3'	7.81	128.62	113.00
33	BL	112	LEU	N-CA-C	-7.79	89.97	111.00
47	D0	48	TYR	CA-CB-CG	-7.78	98.62	113.40
25	DC	268	ARG	NE-CZ-NH1	-7.78	116.41	120.30
34	BM	132	THR	N-CA-C	7.72	131.85	111.00
37	BP	79	VAL	N-CA-C	7.72	131.84	111.00
23	DB	773	U	C5'-C4'-C3'	-7.69	103.70	116.00
27	BE	73	ILE	N-CA-C	7.65	131.65	111.00
34	BM	1	MET	CG-SD-CE	7.65	112.44	100.20
39	DR	87	GLN	N-CA-C	7.65	131.66	111.00
23	BB	2733	A	N9-C1'-C2'	-7.65	103.59	112.00
23	DB	2733	A	N9-C1'-C2'	-7.64	103.59	112.00
39	BR	53	PHE	CA-C-O	7.59	136.05	120.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
33	DL	77	ILE	CA-C-N	-7.56	100.57	117.20
23	DB	2760	C	C5'-C4'-C3'	-7.54	103.94	116.00
33	DL	112	LEU	CA-CB-CG	-7.51	98.02	115.30
33	DL	19	LEU	N-CA-C	-7.51	90.72	111.00
23	DB	380	G	C5'-C4'-C3'	-7.50	104.00	116.00
33	BL	68	SER	N-CA-C	7.49	131.22	111.00
27	BE	74	LYS	N-CA-C	-7.46	90.85	111.00
23	BB	1060	U	C5-C4-O4	-7.45	121.43	125.90
23	DB	1060	U	C5-C4-O4	-7.42	121.45	125.90
39	BR	46	GLU	N-CA-C	7.36	130.88	111.00
1	CA	232	G	C5'-C4'-C3'	-7.36	104.23	116.00
23	DB	1552	A	N9-C1'-C2'	-7.35	103.91	112.00
23	BB	1552	A	N9-C1'-C2'	-7.33	103.93	112.00
23	BB	825	A	C5'-C4'-C3'	-7.31	104.31	116.00
38	BQ	52	ARG	NE-CZ-NH2	-7.27	116.66	120.30
23	DB	143	C	N1-C2-O2	7.26	123.26	118.90
23	BB	38	A	C5'-C4'-C3'	-7.25	104.40	116.00
47	B0	27	LEU	CB-CG-CD1	-7.20	98.77	111.00
33	BL	77	ILE	N-CA-C	-7.15	91.69	111.00
23	DB	323	C	N1-C1'-C2'	7.14	123.28	114.00
37	DP	28	LYS	N-CA-C	-7.13	91.74	111.00
37	BP	28	LYS	N-CA-C	-7.12	91.77	111.00
28	BF	150	GLY	N-CA-C	7.11	130.87	113.10
32	BK	91	SER	N-CA-C	-7.09	91.85	111.00
23	DB	448	U	C2'-C3'-O3'	7.08	125.07	109.50
33	BL	126	ARG	N-CA-C	7.07	130.09	111.00
50	B3	44	ARG	NE-CZ-NH2	-7.06	116.77	120.30
39	BR	50	GLY	N-CA-C	-7.04	95.50	113.10
46	BZ	68	GLY	N-CA-C	-7.03	95.53	113.10
33	DL	17	LYS	N-CA-C	7.01	129.93	111.00
31	DJ	5	THR	N-CA-C	-7.00	92.10	111.00
26	DD	90	PHE	N-CA-C	-6.94	92.26	111.00
33	BL	76	GLU	N-CA-C	-6.93	92.28	111.00
33	DL	7	SER	N-CA-C	-6.92	92.31	111.00
33	BL	61	LEU	C-N-CD	-6.92	105.38	120.60
43	BW	11	ASN	N-CA-C	6.92	129.68	111.00
33	DL	79	LEU	CB-CG-CD1	-6.88	99.30	111.00
23	DB	2262	U	C5'-C4'-C3'	-6.88	105.00	116.00
23	DB	1086	A	C6-C5-N7	-6.86	127.50	132.30
21	CU	17	ARG	C-N-CA	-6.85	104.58	121.70
23	BB	1086	A	C6-C5-N7	-6.84	127.51	132.30
33	DL	117	THR	N-CA-C	-6.82	92.57	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BB	1086	A	C4-C5-C6	6.81	120.41	117.00
23	DB	1086	A	C4-C5-C6	6.80	120.40	117.00
23	BB	2052	A	O4'-C4'-C3'	6.79	111.53	106.10
47	B0	52	LYS	CA-CB-CG	6.79	128.33	113.40
47	D0	21	LEU	CA-CB-CG	-6.78	99.71	115.30
23	BB	2259	U	C5'-C4'-C3'	-6.78	105.16	116.00
26	DD	151	THR	N-CA-C	-6.77	92.72	111.00
33	BL	14	LYS	N-CA-C	-6.77	92.72	111.00
23	DB	825	A	C5'-C4'-C3'	-6.71	105.26	116.00
23	DB	1439	A	N9-C1'-C2'	-6.70	104.63	112.00
50	D3	11	LYS	CD-CE-NZ	-6.69	96.32	111.70
23	BB	1439	A	N9-C1'-C2'	-6.68	104.65	112.00
52	DI	4	VAL	CB-CA-C	-6.68	98.72	111.40
27	DE	147	LEU	N-CA-C	6.67	129.02	111.00
33	DL	27	LEU	CA-CB-CG	-6.66	99.97	115.30
37	DP	104	GLY	N-CA-C	6.66	129.75	113.10
37	DP	14	GLN	N-CA-C	-6.66	93.03	111.00
33	BL	78	ARG	N-CA-C	6.58	128.78	111.00
35	BN	118	ARG	CD-NE-CZ	6.57	132.79	123.60
23	DB	955	U	C5'-C4'-C3'	-6.54	105.54	116.00
33	BL	18	ARG	N-CA-C	6.53	128.63	111.00
34	DM	6	ARG	N-CA-C	-6.52	93.39	111.00
37	BP	14	GLN	N-CA-C	-6.49	93.49	111.00
44	BX	33	ALA	N-CA-C	6.48	128.50	111.00
33	DL	6	LEU	CA-CB-CG	6.46	130.15	115.30
42	DU	48	VAL	N-CA-C	6.46	128.44	111.00
25	BC	32	LEU	N-CA-C	6.45	128.42	111.00
23	DB	449	A	O5'-P-OP1	-6.45	99.89	105.70
47	B0	51	ARG	C-N-CA	6.44	137.80	121.70
37	DP	81	ASP	N-CA-C	-6.43	93.63	111.00
42	DU	49	PRO	N-CA-C	-6.43	95.39	112.10
23	BB	479	A	C4'-C3'-O3'	-6.42	95.92	109.40
37	DP	70	GLU	N-CA-C	6.41	128.32	111.00
43	BW	10	ARG	N-CA-C	6.41	128.31	111.00
32	DK	91	SER	N-CA-C	-6.41	93.69	111.00
23	DB	745	G	C5'-C4'-C3'	-6.41	105.75	116.00
25	DC	32	LEU	N-CA-C	6.41	128.30	111.00
42	DU	48	VAL	C-N-CD	6.39	141.83	128.40
37	DP	29	VAL	N-CA-C	-6.39	93.75	111.00
23	DB	690	G	C5'-C4'-C3'	-6.37	105.81	116.00
23	DB	1088	A	C5-C6-N6	6.37	128.79	123.70
1	CA	438	U	N1-C1'-C2'	-6.36	105.01	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
35	DN	1	MET	N-CA-C	-6.34	93.87	111.00
37	BP	29	VAL	N-CA-C	-6.34	93.88	111.00
33	BL	92	LEU	N-CA-C	6.33	128.10	111.00
40	BS	41	LYS	N-CA-C	-6.33	93.90	111.00
1	AA	438	U	N1-C1'-C2'	-6.33	105.04	112.00
33	BL	125	LEU	N-CA-C	-6.33	93.92	111.00
35	BN	5	LYS	N-CA-C	6.32	128.06	111.00
37	BP	70	GLU	N-CA-C	6.32	128.06	111.00
33	BL	139	GLY	N-CA-C	6.31	128.88	113.10
1	CA	576	C	O5'-P-OP1	-6.31	100.02	105.70
35	BN	118	ARG	NH1-CZ-NH2	-6.31	112.46	119.40
33	DL	79	LEU	CA-CB-CG	6.30	129.80	115.30
33	BL	20	GLY	N-CA-C	6.30	128.84	113.10
33	BL	67	THR	N-CA-C	6.29	127.97	111.00
23	BB	1088	A	C5-C6-N6	6.28	128.72	123.70
23	BB	2318	G	N9-C1'-C2'	-6.26	105.11	112.00
26	BD	154	LYS	N-CA-C	-6.26	94.10	111.00
1	AA	232	G	C5'-C4'-C3'	-6.22	106.05	116.00
27	BE	46	GLN	CA-CB-CG	6.21	127.06	113.40
25	DC	238	ASN	N-CA-C	6.21	127.77	111.00
33	BL	103	ILE	N-CA-C	6.20	127.72	111.00
32	DK	89	ASN	N-CA-C	6.15	127.61	111.00
33	BL	86	GLU	N-CA-CB	-6.15	99.53	110.60
23	BB	745	G	C5'-C4'-C3'	-6.11	106.22	116.00
25	BC	238	ASN	N-CA-C	6.10	127.48	111.00
23	DB	973	A	C5'-C4'-C3'	-6.10	106.24	116.00
1	CA	1250	A	C5'-C4'-C3'	6.09	125.75	116.00
37	BP	78	PRO	N-CA-C	6.09	127.94	112.10
43	DW	74	LYS	N-CA-C	6.08	127.41	111.00
23	DB	2790	U	O3'-P-O5'	-6.07	92.46	104.00
47	B0	52	LYS	N-CA-C	-6.07	94.61	111.00
37	DP	82	SER	N-CA-C	6.07	127.39	111.00
33	BL	39	LYS	N-CA-C	-6.06	94.64	111.00
23	BB	2052	A	C1'-O4'-C4'	-6.05	105.06	109.90
27	BE	44	ARG	NE-CZ-NH1	6.04	123.32	120.30
23	BB	1250	G	C4'-C3'-C2'	6.04	108.64	102.60
33	BL	5	THR	C-N-CA	6.02	136.76	121.70
21	CU	17	ARG	O-C-N	6.02	132.33	122.70
23	BB	268	C	C5'-C4'-C3'	-5.99	106.41	116.00
1	AA	66	A	N9-C1'-C2'	-5.97	105.43	112.00
52	DI	3	LYS	C-N-CA	5.97	136.63	121.70
25	DC	28	PRO	CA-C-N	-5.97	104.06	117.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	DK	16	ALA	N-CA-C	5.97	127.12	111.00
37	DP	78	PRO	N-CA-C	5.97	127.62	112.10
23	BB	1397	U	C5'-C4'-C3'	-5.96	106.47	116.00
31	BJ	80	HIS	N-CA-C	5.96	127.08	111.00
23	DB	1397	U	C5'-C4'-C3'	-5.95	106.47	116.00
42	DU	60	LYS	N-CA-C	-5.95	94.92	111.00
46	DZ	54	GLY	N-CA-C	-5.95	98.21	113.10
37	BP	81	ASP	N-CA-C	-5.95	94.93	111.00
23	BB	2619	C	C5'-C4'-C3'	-5.95	106.49	116.00
25	BC	28	PRO	CA-C-N	-5.93	104.14	117.20
26	BD	145	SER	N-CA-CB	-5.92	101.62	110.50
23	BB	690	G	C5'-C4'-C3'	-5.91	106.54	116.00
35	BN	2	ARG	N-CA-C	-5.91	95.05	111.00
23	DB	1098	A	O4'-C4'-C3'	-5.90	98.10	104.00
46	BZ	42	PRO	N-CA-C	5.90	127.44	112.10
34	BM	6	ARG	N-CA-C	-5.90	95.08	111.00
1	CA	1432	G	N9-C1'-C2'	-5.88	105.53	112.00
39	BR	53	PHE	O-C-N	5.87	132.09	122.70
23	BB	1657	U	N1-C1'-C2'	-5.87	105.54	112.00
37	BP	82	SER	N-CA-C	5.86	126.82	111.00
23	BB	38	A	N9-C1'-C2'	5.84	121.59	114.00
23	DB	1098	A	O4'-C1'-C2'	-5.83	99.97	105.80
35	DN	126	ALA	N-CA-C	-5.83	95.26	111.00
41	BT	1	MET	N-CA-C	-5.81	95.31	111.00
46	BZ	43	PHE	N-CA-C	-5.80	95.34	111.00
23	DB	2619	C	C5'-C4'-C3'	-5.80	106.73	116.00
37	BP	109	ILE	N-CA-C	-5.79	95.35	111.00
28	DF	39	VAL	N-CA-CB	5.79	124.25	111.50
23	BB	2790	U	O3'-P-O5'	-5.79	93.01	104.00
34	BM	8	LYS	N-CA-C	-5.78	95.39	111.00
37	BP	54	LEU	N-CA-C	5.78	126.61	111.00
37	DP	109	ILE	N-CA-C	-5.77	95.42	111.00
23	BB	442	G	C5-C6-O6	5.77	132.06	128.60
23	DB	544	C	C4'-C3'-O3'	5.77	124.53	113.00
28	BF	14	LYS	N-CA-C	-5.76	95.45	111.00
33	BL	82	LEU	CA-CB-CG	-5.76	102.06	115.30
21	AU	15	LEU	C-N-CA	5.76	136.09	121.70
25	BC	28	PRO	N-CA-C	5.75	127.06	112.10
43	BW	11	ASN	N-CA-CB	-5.75	100.24	110.60
35	BN	100	CYS	N-CA-C	-5.73	95.53	111.00
35	BN	4	ARG	N-CA-C	5.73	126.46	111.00
31	BJ	115	GLY	N-CA-C	-5.72	98.80	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BB	2575	C	N1-C1'-C2'	-5.72	105.71	112.00
25	DC	28	PRO	N-CA-C	5.70	126.92	112.10
39	BR	88	GLY	N-CA-C	-5.70	98.85	113.10
23	BB	2267	A	C5-C6-N6	-5.70	119.14	123.70
1	CA	814	A	C5'-C4'-C3'	5.69	125.10	116.00
33	BL	111	ILE	N-CA-C	-5.68	95.65	111.00
34	DM	130	PHE	N-CA-C	-5.68	95.65	111.00
32	BK	89	ASN	N-CA-C	5.67	126.30	111.00
33	DL	92	LEU	CA-CB-CG	5.66	128.32	115.30
28	BF	106	ALA	N-CA-C	5.66	126.27	111.00
33	DL	15	ALA	N-CA-C	5.64	126.23	111.00
47	B0	5	ASN	N-CA-C	5.63	126.21	111.00
23	BB	2267	A	O4'-C1'-N9	-5.63	103.70	108.20
27	DE	79	ARG	NE-CZ-NH2	-5.63	117.48	120.30
31	BJ	4	PHE	N-CA-C	-5.62	95.82	111.00
28	DF	14	LYS	N-CA-C	-5.62	95.84	111.00
23	BB	2267	A	C4-N9-C1'	5.61	136.40	126.30
37	DP	71	ARG	C-N-CA	5.61	135.72	121.70
41	BT	2	ILE	CG1-CB-CG2	5.60	123.73	111.40
41	BT	2	ILE	N-CA-C	-5.59	95.91	111.00
23	DB	1657	U	N1-C1'-C2'	-5.58	105.86	112.00
23	DB	1807	G	C5'-C4'-C3'	5.58	124.92	116.00
34	DM	17	ASN	N-CA-C	-5.57	95.96	111.00
46	BZ	26	SER	N-CA-C	5.57	126.04	111.00
41	DT	3	ARG	NE-CZ-NH1	5.57	123.08	120.30
23	DB	1098	A	N7-C8-N9	5.57	116.58	113.80
45	DY	2	LYS	N-CA-C	-5.55	96.01	111.00
33	BL	83	ALA	N-CA-C	-5.55	96.02	111.00
23	DB	1060	U	N1-C2-O2	-5.55	118.92	122.80
23	BB	2272	U	N1-C1'-C2'	-5.55	105.90	112.00
23	DB	401	A	C5'-C4'-C3'	5.53	124.84	116.00
37	DP	50	ARG	N-CA-C	-5.53	96.08	111.00
37	BP	50	ARG	N-CA-C	-5.52	96.08	111.00
23	DB	143	C	C2-N1-C1'	5.52	124.87	118.80
23	DB	126	A	N9-C1'-C2'	5.51	121.17	114.00
23	DB	1363	C	C5'-C4'-C3'	-5.51	107.19	116.00
23	BB	2267	A	C8-N9-C1'	-5.51	117.79	127.70
23	BB	2272	U	N3-C4-O4	-5.50	115.55	119.40
23	DB	2076	U	C4'-C3'-O3'	5.50	123.99	113.00
43	BW	10	ARG	C-N-CA	5.49	135.43	121.70
28	BF	20	ASN	N-CA-C	5.48	125.81	111.00
42	DU	47	PRO	N-CA-C	-5.48	97.85	112.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BB	150	U	C5'-C4'-C3'	-5.48	107.23	116.00
23	DB	700	G	C5'-C4'-C3'	-5.48	107.23	116.00
42	DU	50	ALA	N-CA-C	-5.48	96.22	111.00
37	BP	104	GLY	N-CA-C	5.47	126.78	113.10
28	DF	133	GLU	N-CA-C	5.46	125.75	111.00
25	BC	202	ARG	NE-CZ-NH1	5.46	123.03	120.30
23	BB	1363	C	C5'-C4'-C3'	-5.46	107.27	116.00
1	AA	328	C	C2'-C3'-O3'	5.46	122.43	113.70
23	DB	2272	U	C5-C4-O4	-5.45	122.63	125.90
21	AU	11	PHE	CA-C-N	-5.45	105.21	117.20
43	DW	4	LYS	N-CA-C	5.45	125.70	111.00
23	BB	139	U	O4'-C1'-N1	5.44	112.55	108.20
1	CA	63	C	C5'-C4'-C3'	-5.43	107.31	116.00
23	BB	2052	A	C4'-C3'-C2'	-5.42	97.18	102.60
25	DC	202	ARG	NE-CZ-NH1	5.42	123.01	120.30
23	DB	403	U	C5'-C4'-C3'	-5.42	107.33	116.00
1	CA	328	C	C2'-C3'-O3'	5.42	122.36	113.70
23	BB	848	C	C5'-C4'-C3'	-5.41	107.34	116.00
28	DF	20	ASN	N-CA-C	5.41	125.61	111.00
26	DD	18	ASP	N-CA-C	-5.41	96.41	111.00
23	DB	1135	C	C5'-C4'-C3'	5.40	124.64	116.00
23	BB	1250	G	C5'-C4'-C3'	-5.39	107.37	116.00
23	BB	2191	A	P-O3'-C3'	5.39	126.16	119.70
37	BP	71	ARG	C-N-CA	5.38	135.16	121.70
25	DC	28	PRO	C-N-CA	5.38	135.16	121.70
25	BC	28	PRO	C-N-CA	5.38	135.15	121.70
27	DE	57	LYS	CD-CE-NZ	-5.38	99.33	111.70
23	BB	1060	U	N1-C2-O2	-5.37	119.04	122.80
28	DF	39	VAL	CA-CB-CG2	5.37	118.96	110.90
33	BL	62	PRO	CA-N-CD	-5.37	103.98	111.50
34	DM	133	LYS	N-CA-C	-5.36	96.53	111.00
23	BB	2052	A	N9-C1'-C2'	-5.36	106.11	112.00
32	DK	77	ILE	N-CA-C	-5.35	96.55	111.00
23	BB	2575	C	C5'-C4'-C3'	5.35	124.56	116.00
33	BL	94	THR	N-CA-C	5.35	125.44	111.00
26	DD	95	SER	N-CA-C	-5.35	96.56	111.00
52	DI	3	LYS	CB-CG-CD	5.35	125.50	111.60
23	DB	1080	A	N9-C1'-C2'	-5.34	106.12	112.00
33	BL	77	ILE	C-N-CA	-5.34	108.35	121.70
1	CA	1534	A	C2'-C3'-O3'	-5.34	97.76	109.50
23	BB	2192	U	C5'-C4'-C3'	-5.32	107.48	116.00
39	DR	79	ARG	N-CA-C	5.30	125.32	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BB	375	G	C5'-C4'-C3'	-5.30	107.53	116.00
23	DB	1060	U	N3-C2-O2	5.30	125.91	122.20
33	DL	92	LEU	N-CA-C	5.29	125.28	111.00
23	DB	1294	U	C5'-C4'-C3'	-5.28	107.55	116.00
47	D0	48	TYR	CB-CG-CD1	-5.28	117.83	121.00
33	BL	119	PRO	CA-N-CD	-5.27	104.12	111.50
23	DB	299	A	N9-C1'-C2'	5.27	120.85	114.00
23	DB	461	C	C5'-C4'-C3'	-5.27	107.57	116.00
23	DB	2253	G	C5'-C4'-C3'	-5.26	107.58	116.00
23	DB	375	G	C5'-C4'-C3'	-5.26	107.58	116.00
23	DB	2471	A	C5'-C4'-C3'	-5.26	107.59	116.00
1	AA	1118	U	C5'-C4'-C3'	-5.25	107.60	116.00
43	BW	16	GLU	N-CA-C	5.23	125.13	111.00
23	BB	1251	C	C5'-C4'-C3'	5.23	124.36	116.00
28	DF	150	GLY	N-CA-C	5.23	126.17	113.10
30	DH	8	LYS	N-CA-C	-5.22	96.89	111.00
39	BR	56	GLY	N-CA-C	-5.22	100.04	113.10
23	BB	2471	A	C5'-C4'-C3'	-5.22	107.65	116.00
41	BT	2	ILE	CB-CA-C	5.21	122.02	111.60
23	DB	126	A	C5'-C4'-C3'	5.21	124.34	116.00
23	DB	143	C	N3-C2-O2	-5.21	118.25	121.90
23	BB	1600	C	C5'-C4'-C3'	-5.20	107.69	116.00
23	DB	1098	A	C4-N9-C1'	5.20	135.65	126.30
23	BB	1060	U	N3-C2-O2	5.19	125.83	122.20
23	DB	2293	G	N9-C1'-C2'	-5.18	106.30	112.00
33	DL	112	LEU	N-CA-C	-5.18	97.02	111.00
23	BB	1664	A	C5'-C4'-C3'	-5.17	107.72	116.00
23	BB	560	C	C5'-C4'-C3'	-5.17	107.73	116.00
23	DB	982	C	C4'-C3'-C2'	5.16	107.76	102.60
23	DB	2575	C	N1-C1'-C2'	-5.16	106.33	112.00
39	DR	86	GLN	N-CA-C	-5.15	97.08	111.00
31	DJ	4	PHE	N-CA-C	5.15	124.91	111.00
31	DJ	82	GLY	N-CA-C	-5.15	100.22	113.10
23	DB	143	C	C5'-C4'-O4'	-5.15	102.92	109.10
33	DL	112	LEU	N-CA-CB	5.14	120.69	110.40
23	BB	1086	A	C2-N3-C4	-5.14	108.03	110.60
39	BR	43	ASN	N-CA-C	-5.13	97.14	111.00
23	DB	1600	C	C5'-C4'-C3'	-5.12	107.81	116.00
23	DB	2894	G	C5'-C4'-C3'	-5.12	107.81	116.00
25	DC	31	PRO	N-CA-C	5.12	125.40	112.10
37	DP	57	ALA	N-CA-C	-5.11	97.21	111.00
1	CA	1461	G	N1-C2-N2	-5.10	111.61	116.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DB	1567	G	C5'-C4'-C3'	-5.09	107.86	116.00
21	CU	25	ALA	O-C-N	-5.08	114.57	123.20
46	BZ	20	ASN	N-CA-C	5.07	124.69	111.00
23	BB	1656	C	N1-C1'-C2'	-5.06	106.44	112.00
25	BC	31	PRO	N-CA-C	5.06	125.25	112.10
28	DF	73	VAL	N-CA-C	5.05	124.64	111.00
33	BL	127	VAL	N-CA-C	5.05	124.64	111.00
1	AA	576	C	C5'-C4'-O4'	5.04	115.15	109.10
23	DB	2745	C	C5'-C4'-C3'	-5.04	107.94	116.00
28	BF	73	VAL	N-CA-C	5.04	124.60	111.00
23	DB	1903	G	C5'-C4'-C3'	5.03	124.04	116.00
23	DB	2236	U	C5'-C4'-C3'	-5.03	107.96	116.00
34	BM	4	PRO	N-CA-C	-5.03	99.03	112.10
38	BQ	52	ARG	NE-CZ-NH1	5.02	122.81	120.30
23	BB	2576	G	O5'-P-OP1	-5.02	101.18	105.70
33	BL	123	ARG	N-CA-C	-5.01	97.46	111.00
33	DL	14	LYS	N-CA-C	5.01	124.54	111.00
34	BM	65	ILE	N-CA-C	-5.00	97.49	111.00
33	DL	79	LEU	N-CA-C	5.00	124.50	111.00

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
23	DB	2076	U	C3'

All (178) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	AA	1006	G	Sidechain
1	AA	1028	C	Sidechain
1	AA	1319	A	Sidechain
1	AA	1331	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	454	G	Sidechain
1	AA	481	G	Sidechain
1	AA	496	A	Sidechain
1	AA	521	G	Sidechain
1	AA	575	G	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	58	C	Sidechain
1	AA	703	G	Sidechain
21	AU	11	PHE	Mainchain
23	BB	1060	U	Sidechain
23	BB	1086	A	Sidechain
23	BB	1088	A	Sidechain
23	BB	1119	U	Sidechain
23	BB	1215	G	Sidechain
23	BB	1240	U	Sidechain
23	BB	1247	A	Sidechain
23	BB	1347	A	Sidechain
23	BB	136	G	Sidechain
23	BB	1377	G	Sidechain
23	BB	139	U	Sidechain
23	BB	1419	A	Sidechain
23	BB	142	A	Sidechain
23	BB	1426	G	Sidechain
23	BB	143	C	Sidechain
23	BB	1432	G	Sidechain
23	BB	1439	A	Sidechain
23	BB	1450	G	Sidechain
23	BB	1462	C	Sidechain
23	BB	1546	G	Sidechain
23	BB	1572	A	Sidechain
23	BB	1814	G	Sidechain
23	BB	1828	G	Sidechain
23	BB	1869	G	Sidechain
23	BB	1964	G	Sidechain
23	BB	2052	A	Sidechain
23	BB	2138	G	Sidechain
23	BB	221	A	Sidechain
23	BB	222	A	Sidechain
23	BB	2267	A	Sidechain
23	BB	2272	U	Sidechain
23	BB	2285	C	Sidechain
23	BB	2318	G	Sidechain
23	BB	232	G	Sidechain
23	BB	2471	A	Sidechain
23	BB	2508	G	Sidechain
23	BB	2575	C	Sidechain
23	BB	2638	G	Sidechain
23	BB	2641	G	Sidechain

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Mol	Chain	Res	Type	Group
23	BB	2733	A	Sidechain
23	BB	2770	G	Sidechain
23	BB	2834	G	Sidechain
23	BB	2848	G	Sidechain
23	BB	2857	G	Sidechain
23	BB	2883	A	Sidechain
23	BB	299	A	Sidechain
23	BB	361	G	Sidechain
23	BB	370	G	Sidechain
23	BB	396	G	Sidechain
23	BB	487	C	Sidechain
23	BB	500	G	Sidechain
23	BB	51	G	Sidechain
23	BB	526	A	Sidechain
23	BB	630	G	Sidechain
23	BB	633	A	Sidechain
23	BB	727	A	Sidechain
23	BB	729	G	Sidechain
23	BB	757	G	Sidechain
23	BB	942	G	Sidechain
23	BB	946	C	Sidechain
25	BC	160	TYR	Sidechain
25	BC	29	PHE	Sidechain
25	BC	61	TYR	Sidechain
31	BJ	75	TYR	Sidechain
31	BJ	80	HIS	Sidechain
33	BL	66	PHE	Sidechain
37	BP	97	TYR	Sidechain
38	BQ	46	TYR	Sidechain
39	BR	53	PHE	Mainchain
1	CA	1009	U	Sidechain
1	CA	1048	G	Sidechain
1	CA	1133	G	Sidechain
1	CA	1319	A	Sidechain
1	CA	1362	A	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	454	G	Sidechain

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Mol	Chain	Res	Type	Group
1	CA	481	G	Sidechain
1	CA	496	A	Sidechain
1	CA	521	G	Sidechain
1	CA	575	G	Sidechain
1	CA	58	C	Sidechain
1	CA	703	G	Sidechain
1	CA	83	C	Sidechain
1	CA	86	G	Sidechain
47	D0	48	TYR	Sidechain
22	DA	78	A	Sidechain
23	DB	1047	G	Sidechain
23	DB	1060	U	Sidechain
23	DB	1080	A	Sidechain
23	DB	1086	A	Sidechain
23	DB	1088	A	Sidechain
23	DB	1098	A	Sidechain
23	DB	1132	U	Sidechain
23	DB	1142	A	Sidechain
23	DB	1215	G	Sidechain
23	DB	1247	A	Sidechain
23	DB	1347	A	Sidechain
23	DB	136	G	Sidechain
23	DB	1377	G	Sidechain
23	DB	1419	A	Sidechain
23	DB	1426	G	Sidechain
23	DB	1432	G	Sidechain
23	DB	1439	A	Sidechain
23	DB	1450	G	Sidechain
23	DB	1462	C	Sidechain
23	DB	1546	G	Sidechain
23	DB	1572	A	Sidechain
23	DB	1645	G	Sidechain
23	DB	1814	G	Sidechain
23	DB	1828	G	Sidechain
23	DB	1869	G	Sidechain
23	DB	1964	G	Sidechain
23	DB	2062	A	Sidechain
23	DB	2090	A	Sidechain
23	DB	2108	A	Sidechain
23	DB	214	G	Sidechain
23	DB	2156	G	Sidechain
23	DB	221	A	Sidechain

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Mol	Chain	Res	Type	Group
23	DB	222	A	Sidechain
23	DB	2261	C	Sidechain
23	DB	2267	A	Sidechain
23	DB	2272	U	Sidechain
23	DB	2279	G	Sidechain
23	DB	232	G	Sidechain
23	DB	2471	A	Sidechain
23	DB	2503	A	Sidechain
23	DB	2508	G	Sidechain
23	DB	2512	C	Sidechain
23	DB	2575	C	Sidechain
23	DB	2638	G	Sidechain
23	DB	2641	G	Sidechain
23	DB	2733	A	Sidechain
23	DB	2770	G	Sidechain
23	DB	28	A	Sidechain
23	DB	2834	G	Sidechain
23	DB	2848	G	Sidechain
23	DB	2857	G	Sidechain
23	DB	2883	A	Sidechain
23	DB	299	A	Sidechain
23	DB	370	G	Sidechain
23	DB	448	U	Sidechain
23	DB	481	G	Sidechain
23	DB	500	G	Sidechain
23	DB	557	C	Sidechain
23	DB	630	G	Sidechain
23	DB	633	A	Sidechain
23	DB	727	A	Sidechain
23	DB	729	G	Sidechain
23	DB	757	G	Sidechain
23	DB	858	G	Sidechain
23	DB	942	G	Sidechain
25	DC	160	TYR	Sidechain
25	DC	29	PHE	Sidechain
37	DP	97	TYR	Sidechain
39	DR	83	TYR	Sidechain
46	DZ	9	TYR	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	1157	0
1	CA	32831	0	16521	1198	0
2	AC	1624	0	1699	159	0
2	CC	1624	0	1699	148	0
3	AD	1643	0	1710	172	0
3	CD	1643	0	1710	167	0
4	AE	1105	0	1148	109	0
4	CE	1105	0	1148	143	0
5	AF	817	0	808	78	0
5	CF	817	0	808	93	0
6	AG	1174	0	1230	100	0
6	CG	1196	0	1246	98	0
7	AH	979	0	1034	78	0
7	CH	979	0	1034	86	0
8	AI	1022	0	1070	144	0
8	CI	1022	0	1070	127	0
9	AJ	786	0	828	92	0
9	CJ	786	0	828	106	0
10	AK	877	0	887	111	0
10	CK	877	0	887	108	0
11	AL	955	0	1019	103	0
11	CL	955	0	1019	101	0
12	AM	883	0	944	88	0
12	CM	876	0	937	95	0
13	AN	774	0	827	93	0
13	CN	774	0	827	114	0
14	AO	716	0	742	53	0
14	CO	716	0	742	50	0
15	AP	649	0	666	77	0
15	CP	638	0	656	71	0
16	AQ	648	0	691	80	0
16	CQ	656	0	702	85	0
17	AR	455	0	478	39	0
17	CR	455	0	478	41	0
18	AS	637	0	665	75	0
18	CS	644	0	675	87	0
19	AT	665	0	714	52	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
19	CT	665	0	714	64	0
20	AB	1704	0	1732	195	0
20	CB	1704	0	1732	152	0
21	AU	425	0	447	104	0
21	CU	425	0	449	84	0
22	BA	2507	0	1270	87	0
22	DA	2507	0	1270	97	0
23	BB	60995	0	30678	2393	0
23	DB	60995	0	30677	2365	0
24	BV	753	0	780	107	0
24	DV	753	0	780	69	0
25	BC	2053	0	2122	436	0
25	DC	2053	0	2122	433	0
26	BD	1565	0	1616	372	0
26	DD	1565	0	1616	316	0
27	BE	1552	0	1619	261	0
27	DE	1552	0	1619	266	0
28	BF	1420	0	1460	169	0
28	DF	1420	0	1460	181	0
29	BG	1323	0	1374	175	0
29	DG	1323	0	1374	162	0
30	BH	1111	0	1148	160	0
30	DH	1111	0	1148	145	0
31	BJ	1112	0	1147	219	0
31	DJ	1112	0	1147	231	0
32	BK	930	0	1000	121	0
32	DK	930	0	1000	126	0
33	BL	1053	0	1129	284	0
33	DL	1053	0	1129	227	0
34	BM	1074	0	1157	237	0
34	DM	1074	0	1157	189	0
35	BN	1008	0	1045	157	0
35	DN	1008	0	1045	133	0
36	BO	900	0	935	128	0
36	DO	900	0	935	128	0
37	BP	917	0	965	206	0
37	DP	917	0	965	209	0
38	BQ	947	0	1022	178	0
38	DQ	947	0	1022	161	0
39	BR	816	0	838	165	0
39	DR	816	0	839	180	0
40	BS	857	0	922	122	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
40	DS	857	0	922	111	0
41	BT	777	0	840	139	0
41	DT	777	0	840	129	0
42	BU	779	0	834	152	0
42	DU	779	0	834	134	0
43	BW	634	0	656	155	0
43	DW	634	0	656	156	0
44	BX	509	0	543	73	0
44	DX	509	0	543	90	0
45	BY	449	0	491	57	0
45	DY	449	0	491	64	0
46	BZ	549	0	552	114	0
46	DZ	549	0	552	101	0
47	B0	444	0	461	75	0
47	D0	444	0	461	80	0
48	B1	441	0	485	63	0
48	D1	441	0	485	69	0
49	B2	377	0	418	55	0
49	D2	377	0	418	66	0
50	B3	504	0	574	111	0
50	D3	504	0	574	113	0
51	B4	302	0	343	44	0
51	D4	302	0	343	80	0
52	BI	1032	0	1088	129	0
52	DI	1032	0	1088	214	0
53	AA	59	0	0	0	0
53	AP	1	0	0	0	0
53	BB	110	0	0	0	0
53	CA	62	0	0	0	0
53	DB	110	0	0	0	0
53	DN	1	0	0	0	0
54	AA	290	0	0	0	0
54	AE	3	0	0	0	0
54	AK	2	0	0	0	0
54	AN	4	0	0	0	0
54	AP	1	0	0	0	0
54	BB	497	0	0	12	0
54	BC	1	0	0	0	0
54	BE	5	0	0	0	0
54	BH	1	0	0	0	0
54	BL	2	0	0	0	0
54	BN	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
54	CA	295	0	0	1	0
54	CE	3	0	0	0	0
54	CK	1	0	0	0	0
54	CL	4	0	0	0	0
54	CN	2	0	0	0	0
54	CP	1	0	0	0	0
54	CT	2	0	0	0	0
54	D2	2	0	0	0	0
54	DB	499	0	0	7	0
54	DC	1	0	0	0	0
54	DD	1	0	0	0	0
54	DE	3	0	0	0	0
54	DJ	2	0	0	1	0
54	DL	1	0	0	0	0
54	DN	2	0	0	0	0
54	DQ	1	0	0	0	0
All	All	284107	0	190766	18478	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 39.

All (18478) 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)
52:DI:3:LYS:CE	52:DI:3:LYS:CD	1.74	1.64
39:BR:53:PHE:CG	39:BR:53:PHE:CB	1.81	1.61
39:BR:54:VAL:CA	39:BR:54:VAL:CB	1.78	1.57
27:DE:79:ARG:CG	27:DE:79:ARG:CD	1.78	1.57
52:DI:3:LYS:CG	52:DI:3:LYS:CD	1.81	1.56
27:DE:79:ARG:NE	27:DE:79:ARG:CD	1.77	1.47
21:AU:14:ALA:HA	21:AU:16:ARG:NH1	1.37	1.35
21:AU:14:ALA:O	21:AU:16:ARG:NE	1.57	1.33
21:AU:14:ALA:CA	21:AU:16:ARG:NH1	1.92	1.33
21:AU:14:ALA:N	21:AU:16:ARG:NH1	1.88	1.20
23:DB:1098:A:H3'	52:DI:3:LYS:CA	1.73	1.17
23:DB:1081:U:H5'	52:DI:126:ARG:HH12	1.01	1.17
40:DS:46:LEU:HA	40:DS:49:LYS:HB2	1.21	1.16
23:DB:1099:G:O5'	52:DI:3:LYS:HA	1.44	1.15
21:AU:14:ALA:CA	21:AU:16:ARG:CZ	2.24	1.15
32:BK:71:ARG:HB3	32:BK:72:PRO:HD2	1.22	1.14
27:BE:48:THR:HG22	27:BE:49:ARG:H	0.97	1.12

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:D4:26:ILE:HG13	51:D4:35:GLN:H	1.11	1.11
23:DB:323:C:H1'	27:DE:164:LEU:HB3	1.23	1.11
23:BB:692:C:H5'	25:BC:42:ARG:HB2	1.32	1.11
23:DB:1099:G:P	52:DI:3:LYS:HA	1.90	1.10
25:BC:124:LYS:HB2	25:BC:125:PRO:HD3	1.10	1.10
34:BM:3:GLN:N	34:BM:4:PRO:HD2	1.41	1.10
23:BB:396:G:H4'	46:BZ:28:VAL:HG21	1.29	1.10
39:BR:54:VAL:N	39:BR:54:VAL:CB	2.15	1.09
25:DC:124:LYS:HB2	25:DC:125:PRO:HD3	1.22	1.09
33:BL:55:MET:HG2	33:BL:56:PRO:HD3	1.32	1.09
23:DB:587:C:H3'	33:DL:29:LYS:HD2	1.32	1.09
11:CL:43:LYS:HB3	11:CL:44:PRO:HD2	1.26	1.08
37:BP:52:ARG:HB3	37:BP:60:VAL:HG11	1.30	1.08
26:BD:154:LYS:HZ2	26:BD:156:PHE:HA	1.17	1.08
33:DL:7:SER:HB2	33:DL:8:PRO:HD3	1.34	1.08
23:BB:37:C:H2'	27:BE:46:GLN:HG2	1.36	1.07
33:BL:61:LEU:HB3	33:BL:62:PRO:HD2	1.12	1.07
23:BB:2578:G:H1'	26:BD:145:SER:HB3	1.29	1.07
23:DB:1099:G:O4'	52:DI:3:LYS:C	1.93	1.07
25:BC:107:LYS:HB2	25:BC:194:VAL:HG11	1.36	1.07
48:D1:46:VAL:HG13	48:D1:47:ILE:HG13	1.28	1.07
23:BB:2641:G:H5''	31:BJ:78:THR:HG21	1.30	1.07
38:DQ:97:ILE:HD12	39:DR:13:ARG:HE	1.20	1.07
20:AB:163:ILE:HG23	20:AB:164:ASP:H	1.17	1.06
39:BR:74:ILE:HA	39:BR:90:ARG:HE	1.15	1.06
9:AJ:35:GLN:HB3	9:AJ:77:VAL:HG23	1.34	1.06
23:DB:1098:A:H3'	52:DI:3:LYS:HA	1.35	1.06
23:DB:1099:G:O5'	52:DI:3:LYS:CA	2.03	1.06
45:BY:16:LEU:HB2	45:BY:17:PRO:HD3	1.38	1.06
25:BC:30:ALA:H	25:BC:31:PRO:HD3	1.12	1.06
23:DB:1099:G:H8	52:DI:3:LYS:CA	1.69	1.05
2:AC:78:LYS:HG2	2:AC:81:GLU:HB2	1.36	1.05
27:BE:153:LEU:HD13	27:BE:193:VAL:HG21	1.37	1.05
1:CA:974:A:H4'	1:CA:975:A:H5'	1.28	1.05
37:DP:25:VAL:HG13	37:DP:88:ARG:H	1.13	1.05
23:DB:1081:U:H5'	52:DI:126:ARG:NH1	1.70	1.05
25:BC:20:ASN:HB3	25:BC:202:ARG:HB3	1.33	1.05
33:DL:90:VAL:HG12	33:DL:122:VAL:HG21	1.32	1.05
26:BD:24:VAL:HG21	26:BD:193:VAL:HG11	1.38	1.05
34:DM:5:LYS:HB2	34:DM:69:PRO:HG2	1.37	1.05
31:DJ:68:LYS:HD2	31:DJ:72:LYS:HB3	1.37	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BW:24:ARG:HB2	43:BW:59:PHE:HB2	1.38	1.04
30:DH:3:VAL:HG22	30:DH:21:VAL:HG11	1.36	1.04
35:DN:45:ARG:HH22	35:DN:113:ILE:HG23	1.19	1.03
50:D3:12:ARG:HG2	50:D3:24:LYS:H	1.17	1.03
48:D1:29:LYS:HB2	48:D1:30:PRO:HD3	1.38	1.03
32:BK:66:LYS:HG2	32:BK:80:ASP:HA	1.40	1.03
31:DJ:34:ARG:HD3	31:DJ:39:LYS:HD3	1.36	1.03
20:CB:46:VAL:HG13	20:CB:47:PRO:HD3	1.38	1.03
45:DY:4:ILE:HA	45:DY:36:GLU:HG2	1.39	1.02
36:DO:56:LYS:HE2	36:DO:81:ARG:HE	1.22	1.02
23:DB:1099:G:H5'	52:DI:4:VAL:HB	1.42	1.01
34:BM:3:GLN:C	34:BM:5:LYS:H	1.58	1.01
6:AG:125:ASP:HB3	6:AG:130:LYS:HB3	1.39	1.01
39:BR:78:ARG:HB3	39:BR:87:GLN:HA	1.42	1.01
37:BP:25:VAL:HG13	37:BP:88:ARG:H	1.25	1.01
25:DC:230:PRO:HG2	25:DC:245:THR:H	1.23	1.01
23:DB:1098:A:H2'	52:DI:3:LYS:C	1.80	1.01
39:BR:53:PHE:HB3	39:BR:55:ASP:N	1.76	1.01
45:BY:10:ARG:HE	45:BY:31:ILE:HG13	1.22	1.01
23:BB:37:C:H2'	27:BE:46:GLN:CG	1.91	1.00
34:BM:3:GLN:H	34:BM:4:PRO:CD	1.74	1.00
37:DP:47:ILE:HG22	37:DP:48:ALA:H	1.23	1.00
23:DB:1025:G:H1'	23:DB:1135:C:H5'	1.43	1.00
21:CU:4:LYS:HB3	21:CU:6:ARG:HH12	1.22	1.00
31:DJ:15:TRP:HB2	31:DJ:139:VAL:HA	1.41	1.00
26:DD:31:ALA:HA	26:DD:51:THR:HA	1.37	1.00
5:CF:3:HIS:HB3	5:CF:92:THR:HA	1.42	1.00
27:BE:128:ALA:HB3	27:BE:129:PRO:HD3	1.39	0.99
31:BJ:11:VAL:HG13	31:BJ:12:LYS:H	1.24	0.99
10:CK:113:THR:HG21	21:CU:28:LEU:HD11	1.44	0.99
23:DB:458:G:H5''	49:D2:39:ARG:HB2	1.43	0.99
32:BK:64:ARG:H	32:BK:83:ALA:HB3	1.26	0.99
21:AU:14:ALA:N	21:AU:16:ARG:CZ	2.23	0.99
30:DH:125:THR:HA	30:DH:146:VAL:HB	1.44	0.99
48:D1:47:ILE:HG22	48:D1:48:TYR:H	1.28	0.99
20:AB:46:VAL:HG13	20:AB:47:PRO:HD3	1.45	0.99
35:BN:44:LEU:HD23	35:BN:113:ILE:HD12	1.44	0.98
30:BH:3:VAL:HB	30:BH:37:VAL:HB	1.45	0.98
39:DR:63:VAL:HG22	39:DR:64:VAL:H	1.28	0.98
30:BH:82:SER:H	30:BH:146:VAL:HG13	1.25	0.98
43:DW:38:ARG:HH21	43:DW:40:ARG:HD3	1.25	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:200:U:H5''	46:BZ:20:ASN:HB3	1.41	0.98
26:BD:170:VAL:HG13	26:BD:171:THR:H	1.26	0.98
2:CC:59:PRO:HG2	2:CC:62:SER:HB2	1.46	0.98
25:DC:127:ASN:HD22	25:DC:128:THR:H	1.11	0.98
25:DC:22:GLU:HB2	25:DC:202:ARG:HG3	1.41	0.98
34:BM:3:GLN:H	34:BM:4:PRO:HD2	1.01	0.98
31:DJ:124:VAL:HG23	31:DJ:125:TYR:H	1.27	0.98
1:AA:376:G:H5''	15:AP:5:ARG:HB2	1.45	0.98
23:DB:947:A:HO2'	23:DB:984:A:H2	1.10	0.98
31:DJ:35:ARG:HH12	31:DJ:40:HIS:H	0.98	0.98
46:BZ:3:LYS:HB2	46:BZ:51:VAL:HG21	1.45	0.97
29:BG:15:ASP:HB3	29:BG:26:LYS:HB2	1.47	0.97
42:DU:42:LYS:H	42:DU:57:ILE:HD12	1.26	0.97
23:BB:2575:C:H5''	26:BD:149:ASN:CB	1.94	0.97
35:BN:10:LEU:H	35:BN:17:ARG:HH12	1.12	0.97
37:BP:28:LYS:HD3	37:BP:44:GLY:H	1.29	0.97
23:DB:1654:A:H4'	35:DN:1:MET:HG2	1.43	0.97
26:DD:109:VAL:HG11	26:DD:193:VAL:HG12	1.44	0.97
23:DB:64:A:H5'	41:DT:76:ARG:HH11	1.29	0.97
34:BM:28:PHE:HB3	34:BM:102:LEU:HD21	1.43	0.97
1:AA:1313:U:H5''	18:AS:5:LYS:HG2	1.47	0.97
23:DB:2405:G:H5'	33:DL:70:LYS:HG3	1.47	0.97
13:AN:63:CYS:HB3	13:AN:67:GLY:H	1.30	0.97
34:BM:3:GLN:N	34:BM:4:PRO:CD	2.28	0.96
25:DC:10:PRO:HB2	25:DC:202:ARG:HH12	1.28	0.96
23:BB:547:A:H3'	23:BB:548:G:H8	1.28	0.96
23:DB:631:A:HO2'	33:DL:66:PHE:HD1	1.08	0.96
12:AM:106:ARG:HE	12:AM:112:ARG:HG2	1.29	0.96
23:DB:1099:G:C8	52:DI:3:LYS:N	2.33	0.96
33:BL:77:ILE:HB	33:BL:110:VAL:HG22	1.46	0.96
23:BB:1021:A:H62	23:BB:1141:U:H3	1.01	0.96
27:DE:148:ILE:HA	27:DE:185:LYS:HB3	1.46	0.96
2:AC:58:ARG:HG2	2:AC:63:ILE:HG22	1.48	0.96
31:DJ:40:HIS:HB2	38:DQ:69:ARG:HH22	1.26	0.96
41:BT:12:ARG:HH21	44:BX:29:ARG:HH12	1.03	0.96
23:BB:2575:C:H5''	26:BD:149:ASN:HB2	1.46	0.96
38:BQ:73:ILE:HG23	38:BQ:77:LYS:HB2	1.47	0.96
23:BB:2615:U:H1'	47:B0:6:LYS:HE3	1.46	0.96
44:BX:28:LEU:HB3	44:BX:34:SER:HA	1.46	0.96
20:CB:116:LEU:HD22	20:CB:140:LEU:HD21	1.47	0.96
25:BC:42:ARG:HG2	25:BC:43:ASN:H	1.29	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AK:124:LYS:HA	21:AU:34:ARG:HB3	1.47	0.95
23:BB:2333:A:H4'	23:BB:2334:U:H5''	1.48	0.95
5:AF:53:LYS:HD3	5:AF:54:LEU:H	1.30	0.95
1:CA:973:G:H3'	1:CA:974:A:H5''	1.47	0.95
34:BM:3:GLN:C	34:BM:5:LYS:N	2.15	0.95
21:AU:29:ALA:HB1	21:AU:32:ARG:HH21	1.26	0.95
20:CB:10:LYS:HD2	20:CB:211:LEU:HD21	1.48	0.95
45:BY:9:THR:HB	45:BY:54:VAL:HA	1.45	0.95
31:BJ:100:VAL:HG13	31:BJ:101:ILE:HG22	1.49	0.95
37:DP:76:HIS:CD2	37:DP:76:HIS:H	1.77	0.95
25:DC:48:ILE:HG22	25:DC:49:THR:H	1.29	0.95
23:BB:38:A:O4'	27:BE:46:GLN:HG3	1.65	0.95
30:DH:114:GLU:HB3	30:DH:133:GLN:HE21	1.31	0.95
23:DB:45:G:H5''	23:DB:46:G:H5'	1.45	0.95
44:BX:36:GLN:HE22	44:BX:38:GLN:HE22	1.13	0.95
23:BB:1450:G:H21	23:BB:1452:G:H1	1.14	0.95
21:CU:24:LYS:HD2	21:CU:25:ALA:H	1.29	0.95
50:B3:34:LYS:HB3	50:B3:35:LYS:HE2	1.47	0.95
5:CF:29:ILE:HD13	5:CF:64:VAL:HG11	1.49	0.94
18:AS:49:ALA:HB1	18:AS:56:HIS:HB3	1.47	0.94
46:DZ:33:ASN:HB3	46:DZ:46:GLY:HA2	1.47	0.94
23:DB:1098:A:H2'	52:DI:4:VAL:N	1.82	0.94
27:BE:48:THR:HG22	27:BE:49:ARG:N	1.80	0.94
51:D4:30:GLU:HB3	51:D4:33:HIS:HB2	1.47	0.94
41:DT:14:PRO:HA	41:DT:32:LEU:HA	1.48	0.94
40:DS:29:VAL:HG22	40:DS:71:VAL:HG23	1.49	0.94
32:DK:78:ARG:HH22	37:DP:62:LYS:HZ2	1.10	0.94
37:DP:27:VAL:HA	37:DP:86:LYS:HE2	1.48	0.94
42:DU:9:GLU:HB2	42:DU:71:ILE:HB	1.49	0.94
12:AM:11:HIS:H	12:AM:44:ILE:HD11	1.32	0.94
33:DL:135:ILE:HG22	33:DL:138:ALA:HB3	1.50	0.94
23:DB:1450:G:H21	23:DB:1452:G:H1	1.15	0.94
23:DB:1081:U:C5'	52:DI:126:ARG:HH12	1.81	0.94
23:DB:161:A:H3'	23:DB:162:U:H5''	1.49	0.94
23:BB:2575:C:H4'	26:BD:148:GLN:C	1.88	0.94
9:AJ:88:MET:HB2	9:AJ:89:ARG:HH12	1.32	0.94
23:BB:923:G:H1'	43:BW:23:LYS:HD3	1.50	0.94
23:DB:2333:A:H4'	23:DB:2334:U:H5''	1.47	0.94
31:BJ:16:TYR:HB2	31:BJ:54:ILE:HG22	1.48	0.94
22:BA:75:G:H1'	24:BV:29:ILE:HD13	1.50	0.94
33:BL:61:LEU:CB	33:BL:62:PRO:HD2	1.94	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DJ:73:VAL:HG22	31:DJ:74:TYR:H	1.33	0.94
28:DF:64:PRO:HA	28:DF:88:VAL:HG22	1.47	0.94
23:DB:1099:G:C8	52:DI:3:LYS:HB2	2.03	0.93
31:BJ:73:VAL:HB	31:BJ:75:TYR:HE1	1.34	0.93
37:DP:50:ARG:HH12	37:DP:62:LYS:HB2	1.32	0.93
23:DB:2377:A:H61	36:DO:13:ARG:NH2	1.66	0.93
33:BL:78:ARG:HG2	33:BL:99:ASN:HB3	1.48	0.93
23:DB:1099:G:P	52:DI:4:VAL:H	1.91	0.93
25:BC:124:LYS:HB2	25:BC:125:PRO:CD	1.96	0.93
26:BD:2:ILE:HG21	26:BD:204:LYS:HA	1.50	0.93
20:AB:67:LEU:HD11	20:AB:157:PRO:HB3	1.47	0.93
28:DF:135:ILE:HD11	28:DF:138:PRO:HA	1.50	0.93
21:AU:14:ALA:HA	21:AU:16:ARG:CZ	1.90	0.93
7:AH:103:VAL:HG12	7:AH:124:ILE:HA	1.46	0.93
42:BU:23:LYS:HG3	42:BU:24:VAL:HG23	1.50	0.93
50:D3:49:VAL:HG22	50:D3:50:SER:H	1.33	0.93
23:BB:2204:G:H5'	25:BC:149:LYS:HE3	1.50	0.93
28:DF:32:LYS:HB3	28:DF:91:ARG:HB3	1.49	0.93
23:DB:1024:G:H3'	23:DB:1025:G:H5''	1.50	0.93
12:CM:52:ILE:HG13	12:CM:56:ARG:HH22	1.33	0.93
23:DB:1098:A:C2'	52:DI:3:LYS:C	2.37	0.93
39:DR:6:GLN:HB3	39:DR:41:ILE:HD13	1.48	0.93
1:AA:1086:U:H3	1:AA:1099:G:H22	1.14	0.93
25:DC:139:THR:HA	25:DC:193:GLU:CD	1.89	0.93
37:DP:47:ILE:HG23	37:DP:63:ILE:HG23	1.51	0.93
31:DJ:58:ASN:O	31:DJ:126:ALA:HA	1.69	0.93
38:DQ:73:ILE:HG13	38:DQ:74:SER:H	1.30	0.92
27:BE:60:TRP:HE1	27:BE:73:ILE:HD11	1.32	0.92
30:BH:83:LYS:HB3	30:BH:91:PHE:HB2	1.50	0.92
25:DC:15:VAL:HG13	25:DC:16:VAL:HG23	1.50	0.92
31:BJ:25:LEU:HG	31:BJ:64:VAL:H	1.32	0.92
42:BU:84:PHE:HB3	42:BU:92:VAL:HG22	1.49	0.92
26:BD:149:ASN:HB3	26:BD:150:GLN:HG2	1.49	0.92
1:CA:1250:A:H4'	8:CI:69:GLY:H	1.35	0.92
23:DB:1060:U:N3	23:DB:1088:A:N7	2.18	0.92
32:BK:103:VAL:HB	32:BK:107:LEU:HD23	1.52	0.92
23:DB:250:G:H5'	50:D3:7:ARG:HG2	1.51	0.92
24:DV:25:LYS:HE2	24:DV:41:GLU:HB2	1.50	0.92
2:CC:137:VAL:HA	2:CC:148:ILE:HD13	1.52	0.92
23:BB:1060:U:N3	23:BB:1088:A:N7	2.17	0.92
23:DB:1099:G:C5'	52:DI:4:VAL:N	2.33	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2304:G:H4'	28:DF:129:MET:HA	1.49	0.92
37:DP:90:ALA:HB3	37:DP:112:ARG:H	1.32	0.91
26:DD:24:VAL:HG11	26:DD:193:VAL:HG11	1.51	0.91
10:CK:20:ALA:HB3	10:CK:83:VAL:HA	1.50	0.91
23:DB:1099:G:H5'	52:DI:4:VAL:CB	1.99	0.91
28:DF:136:ILE:O	28:DF:138:PRO:HD3	1.69	0.91
3:CD:167:PRO:HG2	3:CD:170:LEU:HD11	1.50	0.91
11:CL:68:GLY:HA3	11:CL:106:VAL:HG21	1.50	0.91
44:BX:30:MET:HG3	44:BX:31:GLN:H	1.33	0.91
39:DR:22:LEU:HD12	39:DR:24:LYS:H	1.35	0.91
1:CA:1306:A:N6	1:CA:1331:G:HI'	1.86	0.91
40:BS:50:VAL:HG11	40:BS:103:ILE:HG21	1.51	0.91
33:BL:85:VAL:HG21	33:BL:98:ALA:H	1.34	0.91
28:DF:106:ALA:HB1	28:DF:136:ILE:HG23	1.51	0.91
31:DJ:64:VAL:HG12	31:DJ:65:THR:H	1.34	0.91
5:CF:38:ARG:HH11	5:CF:98:GLU:H	1.15	0.91
33:BL:79:LEU:HA	33:BL:113:ALA:HB3	1.50	0.91
49:B2:42:LEU:HD11	49:B2:44:VAL:HG13	1.53	0.91
19:CT:61:ALA:HA	19:CT:67:HIS:H	1.36	0.91
26:BD:8:LYS:HB3	37:BP:5:LYS:NZ	1.85	0.91
26:BD:138:LEU:HD23	26:BD:138:LEU:H	1.34	0.91
23:BB:663:G:H5''	33:BL:25:SER:HB2	1.51	0.91
37:DP:76:HIS:H	37:DP:76:HIS:HD2	1.17	0.91
25:BC:19:VAL:HG12	25:BC:20:ASN:H	1.35	0.91
43:BW:35:ILE:HG23	43:BW:36:ILE:H	1.34	0.91
39:BR:47:VAL:HG22	39:BR:48:LYS:H	1.34	0.91
7:CH:105:THR:HA	7:CH:122:GLY:HA3	1.53	0.91
31:DJ:40:HIS:HA	38:DQ:69:ARG:HH12	1.36	0.90
32:DK:64:ARG:H	32:DK:83:ALA:HB3	1.36	0.90
23:DB:1825:U:H5'	25:DC:244:VAL:CG2	2.01	0.90
38:BQ:48:ASP:HA	38:BQ:51:GLN:HG2	1.50	0.90
31:BJ:73:VAL:HB	31:BJ:75:TYR:CE1	2.06	0.90
41:DT:48:GLN:HA	41:DT:53:VAL:HG22	1.51	0.90
42:BU:78:LYS:HE3	42:BU:96:LYS:HB2	1.51	0.90
32:BK:26:GLY:HA3	32:BK:30:ARG:HE	1.35	0.90
23:BB:1658:C:OP1	26:BD:136:ASN:HA	1.71	0.90
25:BC:20:ASN:HB2	25:BC:203:VAL:HG13	1.51	0.90
32:BK:8:LEU:HD23	32:BK:82:ASN:HB3	1.53	0.90
26:BD:165:MET:HE3	26:BD:166:GLY:H	1.36	0.90
25:DC:243:PRO:HA	25:DC:249:VAL:HG23	1.53	0.90
10:CK:19:VAL:HG22	10:CK:34:THR:HG22	1.51	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BH:132:PHE:HB3	30:BH:140:ALA:HB3	1.54	0.90
46:DZ:3:LYS:HG2	46:DZ:48:GLN:HB2	1.54	0.90
23:DB:1099:G:H8	52:DI:3:LYS:CB	1.83	0.90
25:DC:109:LEU:HD21	25:DC:115:ILE:HD11	1.50	0.90
23:DB:2377:A:H61	36:DO:13:ARG:HH21	1.14	0.90
29:BG:29:ASN:HB2	29:BG:78:VAL:HA	1.54	0.90
19:AT:68:LYS:HG3	19:AT:69:ASN:H	1.36	0.90
13:AN:60:ARG:HD3	13:AN:60:ARG:H	1.37	0.90
45:BY:6:ILE:HG22	45:BY:56:VAL:HG23	1.54	0.89
9:CJ:51:VAL:HG23	13:CN:80:ARG:HB2	1.52	0.89
24:DV:9:ARG:HG2	24:DV:41:GLU:HG2	1.50	0.89
23:DB:1283:G:H22	23:DB:1286:A:H5'	1.36	0.89
34:BM:3:GLN:O	34:BM:6:ARG:N	2.04	0.89
27:DE:169:VAL:HG13	27:DE:170:ARG:H	1.36	0.89
25:DC:107:LYS:HB2	25:DC:194:VAL:HG21	1.55	0.89
37:DP:32:VAL:HA	37:DP:42:PHE:HB3	1.54	0.89
10:CK:88:PRO:HD3	21:CU:28:LEU:HD13	1.52	0.89
27:DE:3:LEU:HD22	27:DE:119:ILE:HD11	1.52	0.89
38:BQ:92:LYS:HA	38:BQ:95:ALA:HB2	1.54	0.89
35:DN:37:THR:HG22	35:DN:39:PRO:HD2	1.55	0.89
18:AS:4:LEU:HD13	18:AS:9:PHE:H	1.37	0.89
23:BB:1283:G:H22	23:BB:1286:A:H5'	1.37	0.89
48:B1:12:SER:HA	48:B1:50:GLU:HB3	1.52	0.89
23:BB:1112:G:H4'	29:BG:2:ARG:HG2	1.53	0.89
50:B3:12:ARG:HB3	50:B3:23:HIS:HA	1.55	0.89
8:CI:27:ILE:HG23	8:CI:34:LEU:HB2	1.54	0.89
28:DF:7:TYR:HA	28:DF:11:VAL:HB	1.55	0.89
32:BK:71:ARG:HB3	32:BK:72:PRO:CD	2.02	0.89
24:BV:4:ILE:HB	24:BV:63:ILE:HA	1.55	0.89
37:BP:47:ILE:HG22	37:BP:48:ALA:H	1.33	0.89
28:DF:36:ASN:HA	28:DF:86:CYS:HB2	1.54	0.89
42:DU:33:VAL:HB	42:DU:65:GLN:HA	1.53	0.89
18:AS:18:VAL:HG21	18:AS:43:MET:HG2	1.53	0.89
28:DF:140:ILE:HG21	28:DF:145:VAL:HG22	1.55	0.89
52:DI:105:LEU:HD11	52:DI:139:VAL:HG21	1.54	0.89
12:AM:48:SER:H	12:AM:51:GLN:HB2	1.38	0.89
23:BB:85:G:H5'	42:BU:28:LEU:HA	1.52	0.89
26:BD:118:PHE:HA	26:BD:164:GLN:HA	1.53	0.89
10:AK:22:ILE:HG21	10:AK:95:THR:HG21	1.53	0.89
31:BJ:7:LYS:HD2	31:BJ:49:ASP:HB2	1.54	0.89
33:DL:39:LYS:HA	33:DL:39:LYS:HZ2	1.37	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:124:LYS:CB	25:BC:125:PRO:HD3	2.00	0.88
26:BD:16:THR:HA	37:BP:79:VAL:HB	1.55	0.88
16:AQ:18:LYS:HG2	16:AQ:48:GLU:HA	1.52	0.88
37:DP:25:VAL:CG1	37:DP:88:ARG:H	1.87	0.88
36:DO:53:THR:O	36:DO:54:VAL:HB	1.70	0.88
49:D2:25:LYS:HD2	49:D2:25:LYS:H	1.38	0.88
12:AM:78:ARG:HH21	12:AM:79:LEU:HG	1.37	0.88
33:DL:19:LEU:H	33:DL:19:LEU:HD22	1.36	0.88
25:BC:30:ALA:N	25:BC:31:PRO:HD3	1.89	0.88
43:BW:42:THR:HB	43:BW:65:LYS:HA	1.56	0.88
31:DJ:41:LYS:HD2	31:DJ:44:TYR:HB3	1.55	0.88
27:DE:191:ASP:HA	27:DE:194:LYS:HE3	1.55	0.88
28:DF:128:SER:HB3	28:DF:154:THR:HG23	1.52	0.88
13:AN:60:ARG:HH21	13:AN:62:ARG:HE	1.21	0.88
32:BK:70:ARG:HB3	32:BK:76:VAL:HG22	1.55	0.88
52:BI:27:LEU:HD23	52:BI:27:LEU:H	1.37	0.88
25:DC:124:LYS:HB2	25:DC:125:PRO:CD	2.02	0.88
11:CL:43:LYS:HB3	11:CL:44:PRO:CD	2.03	0.88
26:BD:8:LYS:HB3	37:BP:5:LYS:HZ1	1.37	0.88
45:BY:9:THR:HA	45:BY:55:LYS:HG3	1.55	0.88
31:DJ:35:ARG:NH1	31:DJ:40:HIS:H	1.70	0.88
38:BQ:30:VAL:HG12	38:BQ:32:ARG:H	1.37	0.88
20:AB:131:LYS:HA	20:AB:134:LEU:HD12	1.56	0.88
25:DC:32:LEU:HB3	25:DC:61:TYR:HE1	1.38	0.88
30:DH:31:VAL:HB	30:DH:32:PRO:HD3	1.55	0.88
31:DJ:102:GLU:HG3	31:DJ:124:VAL:HG12	1.53	0.88
52:DI:27:LEU:HD23	52:DI:27:LEU:H	1.38	0.88
25:BC:53:ILE:HG12	25:BC:218:THR:HA	1.55	0.88
8:AI:34:LEU:HD11	8:AI:47:VAL:HG21	1.56	0.88
50:D3:12:ARG:NE	50:D3:23:HIS:HB2	1.89	0.88
39:DR:65:ALA:HB3	39:DR:100:GLY:H	1.35	0.88
25:BC:181:ARG:HH12	25:BC:260:LYS:HD2	1.38	0.88
5:CF:47:LEU:HD12	5:CF:55:HIS:HA	1.56	0.88
36:BO:26:LEU:HB2	36:BO:93:ASP:HA	1.54	0.88
47:D0:12:ARG:HH21	47:D0:16:ARG:HG3	1.38	0.88
52:DI:11:GLN:HG2	52:DI:55:PRO:HB3	1.56	0.88
50:B3:7:ARG:HE	50:B3:11:LYS:HZ3	1.19	0.88
25:DC:28:PRO:HG2	25:DC:79:ARG:HH21	1.38	0.88
28:BF:33:ILE:HG22	28:BF:155:ILE:HG12	1.56	0.88
43:DW:60:ALA:HB3	43:DW:80:SER:HA	1.54	0.88
27:BE:128:ALA:CB	27:BE:129:PRO:HD3	2.03	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AG:112:ASP:HB2	6:AG:118:ARG:HG2	1.55	0.87
34:DM:33:LEU:HD11	34:DM:124:LEU:HD22	1.55	0.87
1:CA:451:A:H5'	15:CP:70:ARG:HH22	1.37	0.87
23:BB:997:G:H5'	38:BQ:91:ARG:HG3	1.56	0.87
1:CA:9:G:H5'	4:CE:107:GLY:HA3	1.55	0.87
23:DB:784:G:H5''	25:DC:225:ASN:HD21	1.38	0.87
36:BO:68:LYS:H	36:BO:68:LYS:HD3	1.40	0.87
31:DJ:84:ILE:HD12	31:DJ:85:LYS:H	1.36	0.87
39:DR:69:GLY:HA2	39:DR:97:LYS:H	1.39	0.87
23:DB:2527:C:H5''	51:D4:34:LYS:HG3	1.54	0.87
29:BG:26:LYS:HA	29:BG:31:GLU:HG2	1.54	0.87
23:BB:654:A:H2'	23:BB:655:A:H5''	1.55	0.87
33:BL:111:ILE:H	33:BL:111:ILE:HD13	1.38	0.87
32:DK:43:ILE:HG12	32:DK:52:VAL:HG13	1.54	0.87
16:CQ:13:SER:HB3	16:CQ:21:VAL:HB	1.56	0.87
23:DB:1064:C:H4'	52:DI:90:GLY:HA2	1.56	0.87
11:AL:8:ARG:HG3	11:AL:9:LYS:H	1.40	0.87
23:BB:997:G:OP1	38:BQ:92:LYS:HD2	1.74	0.87
21:AU:13:VAL:HG13	21:AU:14:ALA:H	1.38	0.87
46:BZ:36:VAL:HA	46:BZ:42:PRO:HD3	1.55	0.87
37:DP:36:LYS:HG2	37:DP:37:LYS:H	1.38	0.87
13:CN:26:LEU:HG	13:CN:44:VAL:HG22	1.57	0.87
48:D1:49:LYS:HZ2	48:D1:49:LYS:H	1.22	0.87
37:BP:24:THR:HG21	37:BP:111:GLU:HG2	1.55	0.87
34:DM:5:LYS:HZ1	34:DM:8:LYS:HB2	1.37	0.87
21:CU:14:ALA:H	21:CU:16:ARG:NH2	1.71	0.87
23:BB:1141:U:H4'	23:BB:1142:A:O4'	1.74	0.87
1:CA:243:A:H4'	1:CA:244:U:H5'	1.57	0.87
14:CO:69:LEU:HD11	14:CO:76:ARG:HB3	1.56	0.87
30:DH:31:VAL:HA	30:DH:36:ALA:HA	1.55	0.87
23:DB:2305:U:H5''	28:DF:130:GLY:HA3	1.55	0.87
8:CI:51:LEU:HB3	8:CI:56:MET:HG2	1.54	0.87
37:BP:108:ARG:H	37:BP:108:ARG:HD2	1.38	0.87
37:BP:26:GLU:HB3	37:BP:46:VAL:HG22	1.55	0.87
28:DF:56:LEU:HA	28:DF:59:ILE:HG22	1.57	0.87
37:DP:31:VAL:HG13	37:DP:81:ASP:HB3	1.57	0.87
23:DB:972:A:H3'	23:DB:973:A:H5''	1.53	0.87
3:AD:60:VAL:HA	3:AD:63:ILE:HD12	1.57	0.87
46:DZ:54:GLY:H	46:DZ:57:VAL:HG23	1.40	0.87
36:BO:8:ILE:HG22	36:BO:10:ARG:HG2	1.56	0.87
52:BI:105:LEU:HD11	52:BI:139:VAL:HG11	1.54	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AR:52:ARG:HH11	17:AR:52:ARG:HB3	1.40	0.86
23:DB:2502:G:H5'	23:DB:2503:A:H5''	1.57	0.86
31:DJ:35:ARG:HH12	31:DJ:40:HIS:N	1.72	0.86
46:BZ:41:HIS:HB2	46:BZ:42:PRO:HD2	1.58	0.86
52:DI:25:PRO:O	52:DI:29:GLN:HG3	1.75	0.86
46:DZ:59:ARG:HB3	46:DZ:63:ARG:HB2	1.56	0.86
29:BG:32:LEU:HD21	29:BG:74:MET:HB3	1.57	0.86
28:DF:39:VAL:HA	28:DF:84:ILE:HB	1.57	0.86
15:AP:46:LYS:H	15:AP:46:LYS:HD3	1.39	0.86
33:DL:7:SER:CB	33:DL:8:PRO:HD3	2.03	0.86
25:DC:220:ARG:CZ	25:DC:220:ARG:HA	2.05	0.86
26:BD:14:ILE:HA	26:BD:19:GLY:HA2	1.58	0.86
28:DF:116:LEU:HD22	28:DF:129:MET:HE3	1.58	0.86
23:DB:654:A:H2'	23:DB:655:A:H5''	1.57	0.86
21:AU:14:ALA:HA	21:AU:16:ARG:HH11	1.03	0.86
25:BC:143:VAL:HG12	25:BC:144:GLU:H	1.40	0.86
21:CU:3:ILE:HG12	21:CU:19:LYS:HB3	1.57	0.86
23:DB:1060:U:H5	52:DI:131:THR:HG22	1.38	0.86
23:BB:2502:G:H5'	23:BB:2503:A:H5''	1.57	0.86
43:DW:46:ALA:HB2	43:DW:77:LYS:HD3	1.58	0.86
23:BB:855:G:N2	43:BW:23:LYS:HD2	1.91	0.86
23:BB:143:C:O2'	41:BT:5:GLU:HA	1.75	0.86
23:BB:161:A:H3'	23:BB:162:U:H5''	1.56	0.86
27:BE:48:THR:CG2	27:BE:49:ARG:H	1.79	0.86
42:DU:66:VAL:HG22	42:DU:67:SER:H	1.39	0.86
23:DB:27:G:H22	23:DB:512:G:H2'	1.39	0.86
52:BI:25:PRO:O	52:BI:29:GLN:HG2	1.75	0.86
39:BR:1:MET:HA	39:BR:46:GLU:HB2	1.58	0.85
52:DI:27:LEU:HD12	52:DI:32:VAL:HG11	1.56	0.85
3:AD:160:LEU:H	3:AD:160:LEU:HD13	1.41	0.85
23:DB:1080:A:H2'	23:DB:1081:U:H6	1.40	0.85
34:BM:69:PRO:HB3	34:BM:93:VAL:HG12	1.58	0.85
43:DW:20:LEU:HD11	43:DW:31:LEU:HB2	1.56	0.85
20:CB:163:ILE:HG23	20:CB:164:ASP:H	1.39	0.85
18:CS:63:ASP:HB3	28:DF:114:ARG:HH22	1.39	0.85
46:BZ:63:ARG:HA	46:BZ:63:ARG:CZ	2.06	0.85
20:AB:163:ILE:HG23	20:AB:164:ASP:N	1.92	0.85
39:DR:4:VAL:HG12	39:DR:43:ASN:HB3	1.58	0.85
30:BH:84:ALA:HA	30:BH:90:LEU:HG	1.59	0.85
3:CD:63:ILE:HG23	3:CD:64:TYR:HD1	1.41	0.85
25:BC:196:ASN:HB2	25:BC:199:HIS:HD2	1.42	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:229:HIS:NE2	25:BC:244:VAL:HG22	1.91	0.85
23:DB:448:U:H3'	27:DE:79:ARG:HE	1.41	0.85
23:BB:2578:G:C1'	26:BD:145:SER:HB3	2.06	0.85
25:DC:12:ARG:HB2	25:DC:20:ASN:HA	1.55	0.85
23:BB:704:G:H2'	23:BB:726:G:H22	1.41	0.85
23:BB:1639:C:H2'	23:BB:1640:A:H5''	1.58	0.85
1:AA:1422:G:H5'	32:BK:48:PRO:HB3	1.59	0.85
47:D0:53:VAL:HG13	47:D0:54:ILE:HG13	1.57	0.85
21:AU:14:ALA:C	21:AU:16:ARG:NE	2.30	0.85
45:DY:6:ILE:HG13	45:DY:35:VAL:H	1.38	0.85
43:DW:42:THR:HB	43:DW:75:ASN:HB3	1.58	0.85
23:DB:1064:C:C4'	52:DI:90:GLY:HA2	2.05	0.85
23:BB:1368:G:H5'	49:B2:25:LYS:HD3	1.59	0.85
23:BB:528:A:N1	23:BB:2042:A:H2'	1.91	0.85
37:DP:25:VAL:HG11	37:DP:87:ARG:HA	1.56	0.85
23:DB:858:G:N3	23:DB:2268:A:H2'	1.92	0.85
43:DW:35:ILE:HD12	43:DW:35:ILE:H	1.42	0.85
40:DS:21:ALA:HB1	40:DS:74:ILE:HD12	1.57	0.85
51:D4:23:ILE:HD12	51:D4:24:ARG:H	1.41	0.85
35:DN:3:HIS:HB3	35:DN:4:ARG:CZ	2.06	0.85
29:DG:171:LYS:HD3	29:DG:174:LYS:HD3	1.56	0.85
26:DD:17:GLU:HG3	37:DP:80:VAL:HG12	1.58	0.85
20:CB:101:THR:HA	20:CB:178:LEU:HD21	1.58	0.85
26:DD:122:VAL:HA	26:DD:128:ARG:HG3	1.57	0.85
10:CK:78:ILE:HD13	10:CK:78:ILE:H	1.41	0.85
28:BF:115:GLY:HA3	28:BF:177:ARG:HB2	1.58	0.85
36:DO:38:GLN:HA	36:DO:50:ALA:HB3	1.57	0.85
27:DE:149:ILE:HD11	27:DE:187:VAL:H	1.41	0.85
24:DV:72:VAL:HG12	24:DV:93:ARG:HA	1.58	0.85
36:DO:66:GLY:H	36:DO:70:ALA:HB2	1.40	0.85
23:BB:1454:C:H5'	35:BN:63:ARG:HH21	1.41	0.85
40:BS:18:ARG:HH12	40:BS:25:ARG:HH22	1.21	0.84
15:AP:20:VAL:HG23	15:AP:35:ARG:HA	1.57	0.84
11:AL:48:LEU:HD23	11:AL:48:LEU:H	1.42	0.84
8:AI:29:ILE:HG22	8:AI:64:ILE:HB	1.57	0.84
7:AH:54:THR:HG23	7:AH:55:LYS:HG2	1.59	0.84
23:DB:1098:A:H3'	52:DI:3:LYS:C	1.96	0.84
27:BE:141:MET:SD	27:BE:143:LEU:HB2	2.17	0.84
23:BB:2304:G:H22	23:BB:2312:U:H3	1.26	0.84
36:DO:58:ILE:HG13	36:DO:60:GLU:H	1.40	0.84
25:DC:21:PRO:N	25:DC:202:ARG:HD2	1.92	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BL:82:LEU:HD13	33:BL:83:ALA:H	1.39	0.84
9:CJ:6:ILE:HD11	9:CJ:79:PRO:HB3	1.60	0.84
1:AA:699:C:H2'	1:AA:700:G:H5''	1.57	0.84
8:CI:118:ARG:HH21	8:CI:122:ARG:HE	1.21	0.84
26:BD:38:LYS:HG2	26:BD:39:ASP:H	1.42	0.84
21:AU:14:ALA:O	21:AU:16:ARG:CD	2.25	0.84
24:BV:77:VAL:HA	24:BV:89:ILE:HG22	1.58	0.84
36:BO:19:GLN:HA	43:BW:76:ARG:HH22	1.42	0.84
26:BD:115:GLY:HA2	26:BD:165:MET:HG3	1.58	0.84
23:DB:2597:G:H5''	25:DC:239:PHE:HB2	1.58	0.84
31:DJ:81:ILE:HG13	31:DJ:82:GLY:N	1.91	0.84
29:DG:8:VAL:HB	29:DG:49:LEU:HD12	1.57	0.84
47:D0:26:SER:HB2	47:D0:38:LEU:HD21	1.59	0.84
1:AA:1101:A:H4'	1:AA:1102:A:O5'	1.76	0.84
23:BB:1060:U:C2	23:BB:1088:A:N7	2.46	0.84
6:CG:87:PRO:HG3	6:CG:148:LYS:HA	1.57	0.84
37:BP:47:ILE:HG23	37:BP:63:ILE:HG23	1.59	0.84
34:DM:29:GLY:H	34:DM:102:LEU:HD12	1.39	0.84
23:DB:2484:G:H1'	34:DM:119:LEU:HD12	1.60	0.84
23:DB:1639:C:H2'	23:DB:1640:A:H5''	1.56	0.84
23:DB:1198:U:H4'	38:DQ:8:ILE:HD11	1.60	0.84
33:BL:29:LYS:HD2	33:BL:31:GLY:H	1.42	0.84
16:AQ:27:PHE:HB3	16:AQ:36:PHE:HB3	1.59	0.84
38:BQ:33:VAL:HG13	38:BQ:34:ALA:H	1.40	0.84
34:DM:33:LEU:HB3	34:DM:101:VAL:HG21	1.57	0.84
1:AA:664:G:H22	1:AA:741:G:H1	1.25	0.84
21:CU:34:ARG:HG2	21:CU:35:GLU:H	1.43	0.84
20:AB:33:ALA:HA	20:AB:38:HIS:HA	1.59	0.84
9:AJ:8:ILE:HD12	9:AJ:100:ILE:HG22	1.58	0.84
20:AB:202:ASN:HD22	20:AB:204:ASP:H	1.26	0.84
27:BE:153:LEU:H	27:BE:171:ASP:HB3	1.42	0.84
43:DW:42:THR:HG23	43:DW:66:VAL:H	1.40	0.84
23:DB:1060:U:C2	23:DB:1088:A:N7	2.46	0.84
34:DM:11:LYS:O	34:DM:12:MET:HB2	1.77	0.84
4:CE:36:THR:HG21	4:CE:63:MET:HG2	1.60	0.84
23:BB:662:G:H4'	33:BL:24:GLY:H	1.43	0.84
2:AC:146:LYS:HE3	2:AC:202:PHE:HE2	1.42	0.84
23:DB:1098:A:C2'	52:DI:4:VAL:N	2.41	0.83
38:BQ:16:ILE:HD13	38:BQ:34:ALA:HB2	1.57	0.83
49:B2:13:ASN:HA	49:B2:18:PHE:HB2	1.60	0.83
51:D4:26:ILE:HG13	51:D4:35:GLN:N	1.93	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BM:42:THR:HA	34:BM:92:TRP:CD1	2.12	0.83
26:DD:197:THR:HG23	26:DD:198:GLY:H	1.43	0.83
31:BJ:71:ASP:CG	31:BJ:72:LYS:H	1.80	0.83
31:BJ:135:GLN:HG2	31:BJ:137:PRO:HD2	1.60	0.83
34:DM:15:GLY:O	34:DM:16:ARG:HG3	1.79	0.83
23:BB:2053:G:OP1	26:BD:150:GLN:HA	1.78	0.83
26:BD:34:VAL:HG22	26:BD:89:GLU:HG2	1.58	0.83
30:DH:86:ASP:HB2	30:DH:89:LYS:HD3	1.59	0.83
41:BT:64:LYS:HB3	41:BT:77:ARG:HD3	1.59	0.83
33:DL:27:LEU:HG	33:DL:28:GLY:N	1.92	0.83
21:AU:14:ALA:O	21:AU:16:ARG:CZ	2.25	0.83
39:DR:47:VAL:HG12	39:DR:49:ILE:HG12	1.61	0.83
41:DT:66:LYS:H	41:DT:76:ARG:HH21	1.26	0.83
28:BF:151:LEU:HD23	28:BF:153:ILE:HD11	1.60	0.83
23:DB:1309:G:H4'	49:D2:7:PRO:HB2	1.59	0.83
23:BB:858:G:N3	23:BB:2268:A:H2'	1.93	0.83
29:BG:19:ASN:HB3	29:BG:22:VAL:HG13	1.59	0.83
1:AA:243:A:H4'	1:AA:244:U:H5'	1.59	0.83
33:BL:63:LYS:HG3	50:B3:11:LYS:HA	1.59	0.83
11:AL:56:LEU:HD11	11:AL:81:ILE:HD12	1.60	0.83
23:DB:1098:A:P	52:DI:3:LYS:HG2	2.18	0.83
25:DC:171:VAL:HB	25:DC:182:LYS:HB3	1.61	0.83
23:DB:996:A:H5''	38:DQ:93:ILE:HG21	1.57	0.83
21:CU:14:ALA:H	21:CU:16:ARG:HH22	1.26	0.83
44:DX:18:LEU:HD22	44:DX:18:LEU:H	1.42	0.83
26:DD:29:VAL:HG22	26:DD:30:GLU:H	1.42	0.83
41:DT:76:ARG:HG2	41:DT:77:ARG:O	1.78	0.83
15:CP:4:ILE:HG12	15:CP:21:VAL:HG22	1.60	0.83
23:DB:2886:A:N7	47:D0:27:LEU:HG	1.92	0.83
51:D4:3:VAL:HG12	51:D4:4:ARG:H	1.42	0.83
10:AK:126:ARG:HB2	21:AU:33:ARG:HD2	1.61	0.83
1:CA:1306:A:H61	1:CA:1331:G:H1'	1.41	0.83
52:DI:72:THR:HG21	52:DI:112:LYS:HA	1.61	0.83
34:BM:126:ILE:HG13	34:BM:127:LYS:H	1.43	0.83
26:BD:62:LYS:HG2	26:BD:63:PRO:HD3	1.60	0.83
23:DB:2867:G:N3	23:DB:2867:G:H2'	1.93	0.83
25:BC:23:LEU:HD12	25:BC:202:ARG:HH22	1.43	0.83
30:DH:121:VAL:HG23	30:DH:122:LEU:HD23	1.59	0.83
23:BB:27:G:H22	23:BB:512:G:H2'	1.42	0.83
41:BT:64:LYS:HE2	41:BT:79:ASP:HB2	1.59	0.83
23:BB:630:G:H1	33:BL:69:ARG:HH22	1.22	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BE:18:THR:HG23	27:BE:20:GLY:H	1.41	0.83
23:BB:2618:G:H21	26:BD:155:VAL:HG21	1.44	0.82
25:BC:23:LEU:H	25:BC:202:ARG:NH2	1.77	0.82
41:BT:58:VAL:HG13	41:BT:85:VAL:HG12	1.61	0.82
39:BR:5:PHE:HA	39:BR:40:MET:HG2	1.61	0.82
10:CK:28:ASN:HD21	10:CK:47:GLY:H	1.24	0.82
23:DB:2377:A:N6	36:DO:13:ARG:HH21	1.77	0.82
41:DT:66:LYS:N	41:DT:76:ARG:HH21	1.77	0.82
44:BX:22:LEU:HB3	44:BX:26:PHE:HB2	1.61	0.82
1:CA:1320:C:H5''	18:CS:2:ARG:HD3	1.61	0.82
6:CG:12:LEU:HD22	6:CG:13:PRO:HD2	1.62	0.82
46:BZ:32:LEU:HD11	46:BZ:47:LYS:HG3	1.58	0.82
50:B3:11:LYS:HG2	50:B3:12:ARG:HG3	1.61	0.82
23:DB:2091:C:H3'	23:DB:2092:U:H5''	1.60	0.82
52:DI:105:LEU:HD13	52:DI:129:GLU:HG2	1.61	0.82
43:BW:40:ARG:HH12	43:BW:68:PHE:HA	1.44	0.82
31:DJ:84:ILE:CD1	31:DJ:85:LYS:H	1.92	0.82
32:DK:19:VAL:HG12	32:DK:43:ILE:HA	1.60	0.82
29:DG:171:LYS:HD2	29:DG:172:GLU:O	1.77	0.82
14:AO:25:GLU:HG3	14:AO:80:LEU:HD12	1.58	0.82
9:CJ:66:GLU:HB2	13:CN:98:ALA:HB2	1.60	0.82
50:B3:12:ARG:NH1	50:B3:12:ARG:HB2	1.95	0.82
23:BB:2393:U:H5''	33:BL:62:PRO:HA	1.62	0.82
38:DQ:97:ILE:HD12	39:DR:13:ARG:NE	1.94	0.82
33:BL:117:THR:HG21	33:BL:120:VAL:HB	1.61	0.82
13:CN:63:CYS:HB3	13:CN:68:ARG:H	1.43	0.82
25:BC:229:HIS:HE2	25:BC:244:VAL:HG22	1.43	0.82
1:CA:699:C:H2'	1:CA:700:G:H5''	1.59	0.82
30:BH:5:LEU:H	30:BH:5:LEU:HD22	1.44	0.82
26:BD:119:ALA:HA	26:BD:123:LYS:HE2	1.60	0.82
4:AE:105:ILE:HB	4:AE:123:LEU:HA	1.61	0.82
25:DC:68:ARG:NH2	25:DC:127:ASN:HA	1.93	0.82
20:AB:67:LEU:HD12	20:AB:153:MET:HE2	1.60	0.82
23:DB:1083:U:H1'	23:DB:1086:A:H61	1.44	0.82
46:DZ:24:ILE:HD13	46:DZ:24:ILE:H	1.43	0.82
23:DB:2143:C:H2'	23:DB:2144:G:O4'	1.80	0.82
37:DP:47:ILE:HG22	37:DP:48:ALA:N	1.95	0.82
37:DP:50:ARG:HB2	37:DP:50:ARG:HH11	1.45	0.82
42:DU:27:VAL:HG12	42:DU:33:VAL:HG13	1.60	0.82
14:AO:6:ALA:HA	14:AO:9:LYS:HE3	1.58	0.82
33:BL:118:THR:HG23	33:BL:119:PRO:HD3	1.59	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BW:40:ARG:NH1	43:BW:68:PHE:HA	1.95	0.82
21:AU:13:VAL:C	21:AU:16:ARG:HH12	1.81	0.82
30:DH:2:GLN:HB2	30:DH:19:VAL:HA	1.59	0.82
29:DG:41:GLU:HG3	29:DG:54:ARG:HH21	1.45	0.82
51:B4:3:VAL:HB	51:B4:35:GLN:HA	1.62	0.82
36:BO:1:MET:HG2	36:BO:3:LYS:H	1.43	0.82
23:DB:1099:G:C8	52:DI:3:LYS:CB	2.60	0.82
36:BO:19:GLN:H	43:BW:76:ARG:HH12	1.28	0.82
20:CB:218:ALA:HA	20:CB:221:ARG:HD3	1.61	0.82
23:BB:2575:C:H4'	26:BD:149:ASN:N	1.95	0.82
28:BF:107:VAL:N	28:BF:108:PRO:HD2	1.95	0.82
23:BB:2867:G:H2'	23:BB:2867:G:N3	1.93	0.82
6:AG:21:LEU:H	6:AG:21:LEU:HD23	1.45	0.82
33:BL:67:THR:HG23	33:BL:68:SER:H	1.45	0.82
34:BM:67:VAL:HB	34:BM:100:LYS:HG2	1.62	0.81
23:DB:589:U:H4'	27:DE:87:ALA:HB2	1.62	0.81
30:DH:94:ILE:HG22	30:DH:122:LEU:HG	1.62	0.81
52:BI:55:PRO:HD3	52:BI:74:PRO:HD3	1.60	0.81
5:AF:64:VAL:HG12	5:AF:65:GLU:H	1.45	0.81
33:DL:78:ARG:HH11	33:DL:78:ARG:HB3	1.43	0.81
43:BW:27:GLY:HA2	43:BW:60:ALA:HA	1.61	0.81
5:AF:53:LYS:HA	5:AF:53:LYS:HZ3	1.45	0.81
26:BD:16:THR:HG23	26:BD:17:GLU:H	1.43	0.81
4:CE:89:THR:HG22	4:CE:91:SER:H	1.44	0.81
23:DB:1098:A:C3'	52:DI:3:LYS:C	2.48	0.81
38:BQ:93:ILE:HG23	38:BQ:94:LEU:HD13	1.61	0.81
27:BE:89:PRO:O	27:BE:90:GLN:HG2	1.78	0.81
31:DJ:135:GLN:NE2	31:DJ:138:GLN:H	1.78	0.81
20:AB:61:SER:HA	20:AB:224:ARG:HA	1.62	0.81
47:B0:52:LYS:HZ3	47:B0:52:LYS:HA	1.44	0.81
27:DE:142:ALA:H	27:DE:185:LYS:HZ1	1.23	0.81
1:CA:1367:C:H5''	8:CI:115:VAL:HG23	1.60	0.81
39:BR:65:ALA:HB3	39:BR:99:THR:H	1.45	0.81
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.15	0.81
39:BR:37:GLU:HG2	39:BR:62:GLU:H	1.44	0.81
1:CA:1311:A:H62	18:CS:1:PRO:HD3	1.45	0.81
43:BW:43:LYS:HG2	43:BW:76:ARG:HH21	1.44	0.81
1:CA:719:C:H1'	17:CR:37:LYS:HB2	1.59	0.81
39:BR:8:GLY:HA3	39:BR:22:LEU:HD11	1.60	0.81
23:DB:547:A:H2'	23:DB:547:A:N3	1.94	0.81
1:CA:664:G:H22	1:CA:741:G:H1	1.26	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BF:7:TYR:HA	28:BF:11:VAL:HB	1.60	0.81
25:BC:155:ARG:HE	25:BC:157:ALA:HB3	1.44	0.81
1:AA:33:A:H1'	11:AL:27:PRO:HG3	1.61	0.81
34:BM:108:VAL:HG23	34:BM:112:LEU:HD11	1.63	0.81
23:BB:423:A:H5'	23:BB:424:G:H5''	1.62	0.81
23:DB:1099:G:C8	52:DI:3:LYS:CA	2.60	0.81
51:D4:34:LYS:HE2	51:D4:36:ARG:HH22	1.44	0.81
38:DQ:85:ALA:HB3	38:DQ:88:GLU:HG3	1.60	0.81
43:DW:43:LYS:O	43:DW:44:PHE:HB2	1.79	0.81
23:DB:28:A:H61	23:DB:512:G:H1'	1.44	0.81
23:DB:1199:U:H2'	23:DB:1200:C:C6	2.15	0.81
11:CL:84:GLY:H	11:CL:94:TYR:HA	1.45	0.81
23:DB:2574:G:H21	26:DD:147:GLY:CA	1.92	0.81
46:BZ:33:ASN:HB2	46:BZ:44:PHE:HB2	1.60	0.81
23:BB:855:G:H21	43:BW:23:LYS:HD2	1.45	0.81
43:BW:28:GLU:H	43:BW:61:LYS:HB2	1.44	0.81
23:BB:28:A:H61	23:BB:512:G:H1'	1.46	0.81
38:BQ:16:ILE:HD12	38:BQ:17:LEU:N	1.95	0.81
27:DE:112:LEU:HD12	27:DE:115:GLN:HE21	1.45	0.81
44:BX:24:GLU:HA	44:BX:28:LEU:HB2	1.60	0.81
23:DB:1060:U:C5	52:DI:131:THR:HG22	2.16	0.81
34:BM:32:GLY:H	34:BM:128:THR:HG22	1.44	0.81
32:DK:2:ILE:HD13	32:DK:6:THR:HG21	1.61	0.81
31:DJ:133:ALA:HA	31:DJ:136:GLN:HB2	1.61	0.81
39:DR:66:HIS:HA	39:DR:98:ILE:HA	1.63	0.81
23:BB:1131:G:H1'	23:BB:1133:A:H62	1.46	0.81
33:DL:124:GLY:H	33:DL:142:ILE:HA	1.43	0.81
23:BB:2572:A:N7	26:BD:150:GLN:HB2	1.96	0.81
31:DJ:81:ILE:HG23	31:DJ:82:GLY:H	1.46	0.81
23:DB:1199:U:H2'	23:DB:1200:C:H6	1.45	0.81
15:CP:4:ILE:HD13	15:CP:57:ILE:HG12	1.63	0.81
13:CN:40:ARG:HH12	18:CS:5:LYS:HB2	1.44	0.81
38:DQ:39:ILE:HG13	38:DQ:40:LYS:N	1.96	0.81
23:DB:2046:G:H5'	47:D0:15:ARG:HD2	1.61	0.81
23:DB:365:U:H2'	23:DB:366:C:C6	2.16	0.81
23:BB:2478:A:H5'	51:B4:32:LYS:HD2	1.60	0.81
9:CJ:83:THR:HG23	9:CJ:87:LEU:HD23	1.61	0.81
31:DJ:98:GLU:HB3	31:DJ:124:VAL:HB	1.62	0.81
5:CF:47:LEU:HD13	5:CF:51:ILE:HG22	1.62	0.81
23:BB:1178:C:H2'	23:BB:1179:G:C8	2.16	0.81
3:AD:36:ALA:HA	3:AD:41:GLY:HA3	1.61	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BS:27:LYS:H	40:BS:27:LYS:HD2	1.46	0.81
30:BH:3:VAL:HB	30:BH:37:VAL:CB	2.10	0.80
28:DF:107:VAL:N	28:DF:108:PRO:CD	2.40	0.80
38:DQ:39:ILE:HG13	38:DQ:40:LYS:H	1.45	0.80
2:AC:49:ALA:HB1	2:AC:75:VAL:HG22	1.63	0.80
52:BI:89:SER:HA	52:BI:97:VAL:HG21	1.62	0.80
28:DF:53:ALA:HB1	28:DF:64:PRO:HG2	1.63	0.80
26:BD:62:LYS:HG2	26:BD:63:PRO:CD	2.10	0.80
35:BN:119:SER:HB2	35:BN:121:LYS:HG2	1.63	0.80
23:DB:142:A:H2'	23:DB:143:C:C6	2.16	0.80
24:DV:63:ILE:H	24:DV:70:ILE:HD11	1.44	0.80
13:CN:82:LYS:HE2	13:CN:85:GLU:HG3	1.61	0.80
2:AC:155:ARG:H	2:AC:162:ALA:HA	1.45	0.80
48:B1:14:ALA:HA	48:B1:48:TYR:HA	1.61	0.80
23:DB:1098:A:C3'	52:DI:4:VAL:N	2.44	0.80
26:DD:15:PHE:HA	37:DP:79:VAL:HG11	1.64	0.80
26:DD:48:ILE:HA	26:DD:80:TRP:HB3	1.63	0.80
43:BW:31:LEU:HD11	43:BW:34:SER:HB2	1.61	0.80
27:DE:149:ILE:HG12	27:DE:186:VAL:HA	1.62	0.80
4:CE:110:MET:SD	4:CE:126:ALA:HB2	2.22	0.80
52:BI:106:GLN:O	52:BI:110:GLN:HG3	1.81	0.80
43:DW:56:HIS:HA	43:DW:77:LYS:HE2	1.60	0.80
12:AM:33:LEU:HD22	12:AM:38:ILE:HB	1.61	0.80
22:DA:38:C:H4'	36:DO:100:HIS:NE2	1.96	0.80
1:AA:1409:C:N4	1:AA:1491:G:H1	1.79	0.80
9:CJ:40:ILE:HD11	9:CJ:73:LEU:HD12	1.62	0.80
52:DI:45:THR:HA	52:DI:48:ILE:HG22	1.61	0.80
1:CA:1399:C:H4'	1:CA:1400:C:H5''	1.63	0.80
36:BO:50:ALA:HB2	36:BO:83:LEU:HD11	1.64	0.80
45:BY:7:THR:HA	45:BY:34:THR:HA	1.63	0.80
3:CD:58:GLN:HA	3:CD:58:GLN:HE21	1.45	0.80
23:DB:2880:C:H1'	35:DN:92:GLY:O	1.80	0.80
39:BR:1:MET:HA	39:BR:46:GLU:CB	2.11	0.80
23:BB:38:A:H2'	23:BB:39:G:O4'	1.82	0.80
25:DC:124:LYS:CB	25:DC:125:PRO:HD3	2.10	0.80
26:BD:22:ILE:N	26:BD:23:PRO:HD3	1.97	0.80
37:DP:50:ARG:NH1	37:DP:50:ARG:HB2	1.97	0.80
47:D0:41:HIS:CG	47:D0:42:ILE:H	1.99	0.80
26:BD:120:GLY:H	26:BD:123:LYS:HG3	1.47	0.80
9:CJ:9:ARG:HB2	9:CJ:99:GLN:H	1.47	0.80
19:AT:30:PHE:HB3	19:AT:53:MET:HB3	1.63	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AJ:35:GLN:HB2	9:AJ:78:GLU:HB2	1.64	0.80
43:BW:28:GLU:HB3	43:BW:30:VAL:HG23	1.63	0.80
30:BH:37:VAL:H	30:BH:38:PRO:HD2	1.47	0.80
1:CA:1342:C:H5'	8:CI:127:SER:HB3	1.64	0.80
14:AO:7:THR:HG22	14:AO:30:LEU:HD11	1.62	0.80
2:CC:69:THR:HG22	2:CC:71:ARG:H	1.47	0.80
34:DM:41:LEU:HB3	34:DM:93:VAL:HB	1.64	0.80
52:DI:72:THR:HG22	52:DI:115:ASP:OD2	1.81	0.80
26:DD:130:GLN:HB3	26:DD:140:HIS:HA	1.64	0.80
26:DD:121:THR:HG21	26:DD:143:PRO:HD3	1.63	0.80
23:BB:444:C:O2'	27:BE:47:LYS:HE2	1.81	0.80
25:DC:50:THR:HG22	25:DC:51:ARG:HG3	1.64	0.80
46:DZ:1:MET:HA	46:DZ:9:TYR:CE1	2.17	0.80
52:BI:122:GLU:O	52:BI:126:ARG:HG3	1.82	0.80
26:BD:91:THR:HG23	26:BD:92:VAL:HG12	1.61	0.80
30:BH:73:ASN:N	30:BH:73:ASN:HD22	1.80	0.80
40:BS:89:ALA:HA	40:BS:90:LYS:NZ	1.97	0.80
23:DB:919:U:H2'	23:DB:920:A:C8	2.17	0.80
40:DS:64:ALA:H	40:DS:110:ARG:NH2	1.80	0.80
50:B3:31:ILE:HG22	50:B3:32:LEU:HG	1.64	0.80
27:DE:152:GLU:HB2	27:DE:158:PHE:HE1	1.45	0.80
45:BY:15:ARG:N	45:BY:15:ARG:HE	1.79	0.80
33:DL:63:LYS:HB2	50:D3:26:ALA:HB2	1.64	0.79
3:AD:159:GLU:HG3	3:AD:160:LEU:N	1.94	0.79
47:D0:27:LEU:H	47:D0:27:LEU:HD22	1.46	0.79
36:BO:49:VAL:HG22	36:BO:50:ALA:H	1.47	0.79
1:AA:1211:U:H4'	1:AA:1213:A:H1'	1.64	0.79
23:BB:2795:C:H2'	23:BB:2796:U:O4'	1.82	0.79
37:DP:90:ALA:H	37:DP:112:ARG:NH2	1.81	0.79
39:DR:76:LYS:HD2	39:DR:90:ARG:HB3	1.64	0.79
13:CN:50:LEU:H	13:CN:51:PRO:HD2	1.45	0.79
25:BC:50:THR:HG22	25:BC:51:ARG:HG3	1.63	0.79
26:BD:2:ILE:HG13	26:BD:3:GLY:H	1.48	0.79
26:BD:5:VAL:HG11	26:BD:28:GLU:HA	1.64	0.79
43:DW:23:LYS:HD3	43:DW:24:ARG:HD2	1.64	0.79
25:DC:21:PRO:HD2	25:DC:202:ARG:NH1	1.98	0.79
51:B4:24:ARG:HH12	51:B4:36:ARG:HB2	1.48	0.79
16:AQ:10:ARG:CZ	16:AQ:11:VAL:H	1.95	0.79
16:AQ:10:ARG:NH1	16:AQ:56:ASP:H	1.79	0.79
31:BJ:49:ASP:HA	31:BJ:114:LEU:HD11	1.64	0.79
37:BP:9:GLN:HB3	37:BP:56:SER:HB2	1.62	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DQ:47:ARG:HH12	38:DQ:50:ARG:HG3	1.46	0.79
23:BB:1174:U:H4'	23:BB:1176:U:H3	1.46	0.79
23:DB:2346:A:H3'	23:DB:2347:C:H5''	1.64	0.79
7:AH:92:PRO:HA	7:AH:93:LYS:HZ2	1.48	0.79
33:BL:38:GLN:CD	33:BL:39:LYS:H	1.86	0.79
23:DB:2526:G:H21	51:D4:2:LYS:HD2	1.47	0.79
25:BC:77:VAL:HG21	25:BC:109:LEU:HG	1.64	0.79
25:DC:75:ALA:HB1	25:DC:93:VAL:HG13	1.65	0.79
33:DL:6:LEU:HG	33:DL:8:PRO:O	1.82	0.79
23:DB:929:U:H4'	45:DY:2:LYS:HE3	1.62	0.79
31:DJ:81:ILE:HG23	31:DJ:82:GLY:N	1.97	0.79
36:BO:64:TYR:HE1	36:BO:74:VAL:HG11	1.47	0.79
26:DD:204:LYS:HB3	26:DD:205:PRO:HD2	1.65	0.79
20:AB:150:ILE:HG13	20:AB:153:MET:HE3	1.64	0.79
46:DZ:30:HIS:HB2	46:DZ:48:GLN:HG2	1.64	0.79
14:AO:2:LEU:HD22	14:AO:7:THR:HG23	1.65	0.79
1:AA:1005:A:H2'	1:AA:1006:G:O4'	1.82	0.79
44:DX:43:LEU:HB3	44:DX:45:GLN:HE22	1.48	0.79
4:AE:87:VAL:HG12	4:AE:92:ARG:HA	1.64	0.79
23:DB:1099:G:H8	52:DI:3:LYS:N	1.73	0.79
21:AU:13:VAL:C	21:AU:16:ARG:NH1	2.35	0.79
34:BM:69:PRO:HB2	34:BM:71:LYS:HZ1	1.46	0.79
27:BE:120:VAL:H	27:BE:189:THR:HG23	1.47	0.79
43:BW:49:ASN:HB2	43:BW:53:GLY:HA3	1.64	0.79
9:CJ:52:LEU:HG	9:CJ:62:ARG:HE	1.48	0.79
37:BP:13:LYS:NZ	37:BP:17:PRO:HG3	1.98	0.79
51:B4:14:CYS:HA	51:B4:26:ILE:O	1.82	0.79
1:CA:1071:C:H2'	1:CA:1072:G:H8	1.47	0.79
11:CL:98:ARG:HG3	11:CL:105:GLY:HA2	1.65	0.79
4:CE:109:ALA:HB1	4:CE:136:VAL:HG13	1.65	0.79
23:BB:1024:G:H3'	23:BB:1025:G:H5''	1.63	0.79
8:CI:113:LYS:HA	8:CI:120:ALA:HB2	1.65	0.79
9:AJ:56:HIS:H	13:AN:80:ARG:HH22	1.30	0.79
21:AU:14:ALA:N	21:AU:16:ARG:HH12	1.81	0.79
36:BO:19:GLN:HA	43:BW:76:ARG:NH2	1.98	0.79
25:DC:229:HIS:ND1	25:DC:230:PRO:HD2	1.98	0.79
47:B0:52:LYS:NZ	47:B0:52:LYS:HA	1.98	0.79
23:DB:2314:A:H1'	28:DF:154:THR:HG21	1.64	0.79
32:DK:108:ARG:HA	32:DK:116:ILE:HD13	1.64	0.79
1:CA:1296:C:H4'	1:CA:1302:C:N4	1.98	0.79
23:BB:65:U:H4'	41:BT:70:HIS:HD1	1.48	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:140:VAL:O	25:BC:193:GLU:HB2	1.83	0.79
21:AU:36:PHE:HB3	21:AU:40:PRO:HD3	1.64	0.79
28:BF:34:THR:HG23	28:BF:89:THR:HG22	1.63	0.79
1:CA:430:A:OP1	3:CD:8:LEU:HB2	1.83	0.79
40:BS:24:ILE:HD13	40:BS:36:LEU:HD21	1.65	0.79
23:BB:287:G:H2'	23:BB:288:U:C6	2.18	0.79
20:AB:112:ARG:O	20:AB:116:LEU:HB2	1.82	0.79
1:CA:1003:G:H21	1:CA:1005:A:H5'	1.46	0.79
1:CA:1132:C:H2'	1:CA:1133:G:C8	2.18	0.79
26:DD:37:VAL:HG13	26:DD:42:ASN:HB3	1.63	0.79
23:DB:2795:C:H2'	23:DB:2796:U:O4'	1.83	0.79
29:BG:20:GLY:HA2	29:BG:41:GLU:HG2	1.62	0.79
27:BE:84:THR:HG23	27:BE:85:PHE:H	1.48	0.79
50:B3:24:LYS:HA	50:B3:45:PRO:HB3	1.61	0.79
37:DP:25:VAL:HG12	37:DP:27:VAL:H	1.47	0.79
31:DJ:81:ILE:HG13	31:DJ:82:GLY:H	1.48	0.79
4:CE:19:ARG:HG2	4:CE:20:VAL:H	1.46	0.79
26:DD:37:VAL:HB	26:DD:46:ARG:HB2	1.64	0.79
8:CI:17:ARG:HB3	8:CI:65:THR:HB	1.65	0.79
49:D2:35:ARG:NH2	49:D2:43:THR:H	1.81	0.79
44:DX:28:LEU:HD13	44:DX:42:LEU:HD21	1.63	0.79
25:DC:68:ARG:HH21	25:DC:190:THR:HG23	1.47	0.78
23:DB:2722:G:O2'	35:DN:4:ARG:HD2	1.83	0.78
23:BB:543:G:H2'	23:BB:544:C:H5''	1.64	0.78
33:BL:27:LEU:H	33:BL:27:LEU:HD12	1.46	0.78
39:BR:47:VAL:HG13	39:BR:49:ILE:H	1.46	0.78
4:AE:83:PRO:HB3	4:AE:96:GLN:HG3	1.65	0.78
21:AU:3:ILE:HA	21:AU:19:LYS:HG2	1.64	0.78
34:DM:133:LYS:HD2	34:DM:134:THR:H	1.46	0.78
33:DL:55:MET:HB3	33:DL:56:PRO:HD3	1.65	0.78
23:BB:997:G:H4'	38:BQ:91:ARG:HE	1.47	0.78
39:BR:53:PHE:CB	39:BR:55:ASP:H	1.96	0.78
29:BG:71:LEU:HA	29:BG:74:MET:SD	2.23	0.78
41:BT:11:LEU:HB2	41:BT:32:LEU:HD23	1.65	0.78
41:DT:55:VAL:HG22	41:DT:56:GLU:H	1.48	0.78
8:AI:23:GLY:H	8:AI:60:LEU:HA	1.48	0.78
33:BL:38:GLN:H	33:BL:41:ARG:HH11	1.29	0.78
30:BH:128:HIS:HB3	30:BH:144:VAL:HB	1.64	0.78
1:CA:1056:U:H5'	2:CC:162:ALA:HB2	1.66	0.78
34:BM:71:LYS:HD3	34:BM:92:TRP:N	1.98	0.78
23:DB:1818:U:H2'	25:DC:152:GLN:O	1.84	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BP:59:THR:HG23	37:BP:76:HIS:CD2	2.19	0.78
26:DD:73:VAL:HB	26:DD:91:THR:HB	1.63	0.78
36:DO:100:HIS:O	36:DO:104:GLN:HB3	1.83	0.78
1:CA:1078:U:H4'	4:CE:137:ARG:NH1	1.98	0.78
1:AA:65:A:N3	1:AA:65:A:H2'	1.99	0.78
41:BT:96:VAL:HG22	41:BT:97:GLY:H	1.48	0.78
25:BC:153:LEU:H	25:BC:153:LEU:HD23	1.48	0.78
35:DN:2:ARG:NH2	35:DN:4:ARG:HD3	1.98	0.78
37:DP:52:ARG:HH11	37:DP:52:ARG:HG3	1.48	0.78
47:B0:45:ASP:HB2	47:B0:47:TYR:CD1	2.19	0.78
6:AG:87:PRO:HG2	6:AG:151:ALA:HB2	1.66	0.78
6:CG:112:ASP:HB2	6:CG:118:ARG:HG2	1.65	0.78
15:CP:28:ARG:HD3	15:CP:29:ASN:H	1.48	0.78
52:DI:5:GLN:HB3	52:DI:30:GLN:OE1	1.82	0.78
36:DO:29:HIS:HB2	36:DO:36:TYR:HB2	1.65	0.78
3:CD:94:GLU:HG2	3:CD:185:PRO:HG3	1.66	0.78
1:CA:437:U:H2'	1:CA:438:U:O4'	1.84	0.78
40:DS:6:LYS:HA	40:DS:104:THR:HA	1.64	0.78
28:DF:13:LYS:HA	28:DF:16:MET:HB2	1.64	0.78
23:DB:1080:A:H2'	23:DB:1081:U:C6	2.17	0.78
31:DJ:60:ASP:HB3	31:DJ:126:ALA:HB1	1.66	0.78
51:B4:24:ARG:HG2	51:B4:26:ILE:HG12	1.65	0.78
49:D2:16:HIS:NE2	49:D2:44:VAL:HA	1.99	0.78
4:CE:44:ARG:HA	4:CE:71:ILE:O	1.82	0.78
48:B1:31:GLU:HG3	48:B1:32:LYS:H	1.49	0.78
23:DB:11:C:H2'	23:DB:12:U:H5'	1.66	0.78
41:BT:61:LEU:HD12	41:BT:62:VAL:H	1.47	0.78
40:BS:71:VAL:HA	40:BS:106:VAL:O	1.82	0.78
28:BF:36:ASN:HB2	28:BF:87:LYS:HA	1.66	0.78
29:DG:41:GLU:HB2	29:DG:52:GLY:HA3	1.65	0.78
18:CS:15:LEU:HA	18:CS:18:VAL:HG12	1.63	0.78
12:AM:19:THR:HA	12:AM:24:VAL:HG23	1.64	0.78
23:BB:1275:A:N3	23:BB:1275:A:H3'	1.99	0.78
23:BB:1243:C:O2'	33:BL:15:ALA:HB3	1.83	0.78
33:BL:14:LYS:HA	33:BL:14:LYS:HZ3	1.49	0.78
25:BC:30:ALA:H	25:BC:31:PRO:CD	1.93	0.78
32:DK:66:LYS:HG3	32:DK:80:ASP:HA	1.65	0.78
45:DY:6:ILE:HA	45:DY:56:VAL:HG12	1.65	0.78
52:BI:27:LEU:HD12	52:BI:32:VAL:HG11	1.65	0.78
23:DB:534:U:H5'	38:DQ:41:ALA:HA	1.65	0.78
35:DN:102:PHE:HD1	40:DS:40:ASN:HD21	1.31	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AQ:16:MET:HB2	16:AQ:19:SER:HB2	1.64	0.78
25:BC:216:ARG:HH11	25:BC:216:ARG:HB3	1.49	0.78
38:BQ:93:ILE:HG23	38:BQ:94:LEU:H	1.49	0.78
37:DP:25:VAL:HG13	37:DP:88:ARG:N	1.97	0.78
43:BW:16:GLU:HG2	43:BW:37:VAL:HG22	1.64	0.78
23:DB:2081:U:H4'	46:DZ:23:LYS:HD3	1.66	0.78
52:BI:109:ALA:HB1	52:BI:124:MET:HG3	1.66	0.78
25:DC:251:THR:O	25:DC:252:LYS:HB2	1.83	0.78
5:CF:11:HIS:ND1	5:CF:12:PRO:HD2	1.99	0.78
34:BM:3:GLN:O	34:BM:5:LYS:N	2.17	0.78
25:DC:175:LEU:HD11	25:DC:181:ARG:HG2	1.65	0.78
30:DH:11:ASN:HD22	30:DH:20:ASN:HD22	1.29	0.78
30:BH:21:VAL:HG22	30:BH:22:LYS:H	1.48	0.78
41:DT:34:VAL:HG21	41:DT:43:ILE:HD11	1.65	0.78
28:BF:12:VAL:HG13	28:BF:27:VAL:HG21	1.66	0.78
29:BG:157:LYS:HB2	29:BG:159:LYS:HG2	1.64	0.78
23:DB:85:G:H5'	42:DU:28:LEU:HB3	1.65	0.78
28:DF:28:PRO:HB2	28:DF:168:LEU:HD12	1.66	0.78
39:BR:53:PHE:CB	39:BR:55:ASP:N	2.47	0.77
39:BR:74:ILE:HA	39:BR:90:ARG:NE	1.97	0.77
20:CB:15:PHE:HB3	20:CB:42:LEU:HD11	1.65	0.77
23:BB:2420:C:OP1	50:B3:34:LYS:HB2	1.85	0.77
36:BO:48:LEU:HD23	36:BO:49:VAL:H	1.49	0.77
17:CR:51:GLN:HA	17:CR:54:LEU:HD13	1.66	0.77
5:CF:4:TYR:HA	5:CF:91:ARG:HA	1.66	0.77
41:BT:88:LYS:HG2	41:BT:89:GLU:H	1.49	0.77
1:AA:1308:U:H2'	1:AA:1309:G:H8	1.50	0.77
38:BQ:88:GLU:HA	39:BR:53:PHE:CD1	2.18	0.77
32:BK:71:ARG:CB	32:BK:72:PRO:HD2	2.10	0.77
50:D3:12:ARG:HG2	50:D3:24:LYS:N	1.96	0.77
50:D3:49:VAL:HG13	50:D3:51:LYS:H	1.49	0.77
35:BN:19:ALA:HA	35:BN:22:ARG:HG2	1.65	0.77
8:AI:12:LYS:H	8:AI:109:GLN:HE22	1.30	0.77
5:AF:38:ARG:HB3	5:AF:63:ASN:HB2	1.65	0.77
23:DB:578:G:N2	38:DQ:32:ARG:HH21	1.81	0.77
23:BB:483:A:H5'	42:BU:43:LYS:HE2	1.65	0.77
37:BP:52:ARG:O	37:BP:60:VAL:HG21	1.85	0.77
41:BT:12:ARG:HH21	44:BX:29:ARG:NH1	1.82	0.77
23:DB:536:G:C5'	38:DQ:52:ARG:HH22	1.97	0.77
8:AI:110:VAL:HG12	8:AI:111:GLU:H	1.47	0.77
48:D1:32:LYS:HG2	48:D1:52:LYS:HE2	1.66	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BZ:5:ILE:HB	46:BZ:51:VAL:CG1	2.15	0.77
33:BL:56:PRO:HA	33:BL:60:ARG:NH2	1.99	0.77
33:BL:80:SER:HB2	33:BL:113:ALA:H	1.49	0.77
43:BW:17:ALA:HA	43:BW:35:ILE:O	1.83	0.77
23:BB:2723:C:H5''	35:BN:3:HIS:HB2	1.65	0.77
12:AM:23:GLY:HA3	12:AM:64:VAL:HG13	1.67	0.77
13:CN:12:ARG:HA	13:CN:15:LEU:HD12	1.65	0.77
10:AK:30:ILE:HG22	10:AK:45:THR:HA	1.67	0.77
18:CS:30:LEU:HD12	18:CS:48:ILE:HG12	1.67	0.77
51:D4:16:ILE:HG23	51:D4:18:LYS:H	1.49	0.77
34:BM:100:LYS:HE3	34:BM:100:LYS:H	1.49	0.77
31:BJ:81:ILE:HG23	31:BJ:82:GLY:N	1.99	0.77
39:BR:90:ARG:HH11	39:BR:91:GLN:H	1.33	0.77
27:DE:48:THR:C	27:DE:49:ARG:HG2	2.04	0.77
46:DZ:28:VAL:HG23	46:DZ:29:GLY:H	1.48	0.77
19:CT:68:LYS:HB2	19:CT:70:LYS:HD3	1.66	0.77
13:AN:12:ARG:HA	13:AN:15:LEU:HD11	1.66	0.77
18:CS:27:LYS:HB3	18:CS:27:LYS:HZ3	1.49	0.77
42:DU:29:SER:O	42:DU:30:SER:HB3	1.85	0.77
25:DC:72:GLY:O	25:DC:73:ILE:HG13	1.83	0.77
7:AH:113:ARG:HH21	7:AH:114:ALA:HA	1.49	0.77
11:AL:35:ARG:NH2	11:AL:75:GLU:HB3	2.00	0.77
23:DB:1275:A:N3	23:DB:1275:A:H3'	1.99	0.77
31:BJ:7:LYS:HD3	31:BJ:48:VAL:HB	1.66	0.77
25:DC:66:PHE:O	25:DC:68:ARG:N	2.16	0.77
37:DP:29:VAL:HG21	37:DP:61:ARG:HH22	1.46	0.77
18:AS:35:ARG:HG2	18:AS:50:VAL:HG13	1.66	0.77
1:CA:1060:U:H4'	9:CJ:54:SER:HB2	1.67	0.77
23:DB:635:C:H3'	33:DL:126:ARG:HH21	1.49	0.77
23:BB:972:A:H3'	23:BB:973:A:H5''	1.65	0.77
34:BM:65:ILE:HG22	34:BM:101:VAL:HA	1.66	0.77
34:BM:23:GLY:N	34:BM:96:ILE:HD12	2.00	0.77
26:BD:107:VAL:HA	26:BD:205:PRO:O	1.85	0.77
42:BU:7:ASP:CA	42:BU:24:VAL:HA	2.15	0.77
42:DU:12:VAL:HG11	42:DU:17:ASP:HB3	1.67	0.77
18:CS:51:HIS:HA	18:CS:56:HIS:HA	1.67	0.77
1:CA:781:A:H2'	1:CA:782:A:H5'	1.67	0.77
24:BV:80:HIS:HD2	24:BV:82:TYR:H	1.32	0.77
26:DD:96:ILE:HG22	26:DD:98:VAL:H	1.48	0.77
35:BN:114:GLU:HG2	35:BN:115:LEU:H	1.48	0.77
39:DR:47:VAL:HG22	39:DR:48:LYS:H	1.48	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:483:A:H4'	42:BU:45:GLN:HA	1.65	0.77
23:BB:2287:A:O2'	23:BB:2288:A:H2'	1.83	0.77
4:CE:82:HIS:HB2	4:CE:83:PRO:HD2	1.67	0.77
1:AA:78:A:H2'	1:AA:79:G:C8	2.20	0.77
1:CA:60:A:H2'	19:CT:4:LYS:HE3	1.67	0.77
23:DB:1098:A:H2'	52:DI:3:LYS:O	1.82	0.77
37:DP:64:SER:HB2	37:DP:71:ARG:HD2	1.66	0.77
21:CU:19:LYS:HG3	21:CU:20:ARG:HE	1.47	0.77
23:DB:7:G:H5'	31:DJ:134:ALA:O	1.85	0.77
8:CI:74:GLN:HE21	8:CI:74:GLN:HA	1.50	0.77
29:DG:171:LYS:HZ3	29:DG:174:LYS:H	1.33	0.77
51:B4:25:VAL:HB	51:B4:33:HIS:O	1.84	0.77
2:AC:8:GLY:HA2	2:AC:11:LEU:HG	1.67	0.77
3:AD:187:ARG:HA	3:AD:190:LEU:HD22	1.65	0.77
25:BC:179:GLU:HG3	25:BC:266:ILE:HG22	1.67	0.77
1:CA:264:C:H4'	16:CQ:64:ARG:HD2	1.65	0.77
26:DD:125:TRP:HB2	26:DD:160:LYS:HG2	1.67	0.77
23:DB:360:U:H2'	23:DB:361:G:O4'	1.83	0.77
50:B3:41:ARG:HD3	50:B3:43:LEU:H	1.49	0.77
26:BD:128:ARG:HD2	26:BD:144:GLY:HA3	1.66	0.77
32:BK:35:VAL:HG23	32:BK:36:GLY:H	1.49	0.77
23:DB:2331:G:H4'	43:DW:69:GLU:HB2	1.67	0.77
23:DB:856:G:H4'	43:DW:23:LYS:HD2	1.67	0.77
33:DL:108:ALA:HB3	33:DL:125:LEU:HB2	1.67	0.77
23:BB:370:G:O2'	23:BB:423:A:H3'	1.86	0.77
52:BI:63:ASP:O	52:BI:64:ARG:HG3	1.84	0.77
23:DB:1149:G:H2'	23:DB:1150:C:C6	2.20	0.77
20:AB:9:LEU:HD22	20:AB:11:ALA:H	1.48	0.77
21:AU:14:ALA:HA	21:AU:16:ARG:CD	2.16	0.76
50:B3:7:ARG:HH21	50:B3:11:LYS:HZ1	1.33	0.76
31:BJ:75:TYR:HA	31:BJ:86:GLN:O	1.84	0.76
30:DH:26:ALA:C	30:DH:28:ASN:H	1.88	0.76
23:BB:2576:G:N2	26:BD:149:ASN:HD21	1.82	0.76
40:BS:18:ARG:HH12	40:BS:25:ARG:NH2	1.83	0.76
38:DQ:53:LYS:HE2	38:DQ:53:LYS:H	1.50	0.76
23:BB:751:A:H5'	40:BS:90:LYS:HE2	1.67	0.76
4:CE:44:ARG:NH1	4:CE:72:ASN:HD21	1.83	0.76
1:AA:840:C:H2'	1:AA:842:U:H5''	1.67	0.76
48:B1:53:ILE:HD13	48:B1:54:LYS:N	1.99	0.76
23:DB:2755:C:H2'	51:D4:19:ARG:HH21	1.49	0.76
23:DB:2821:A:OP2	35:DN:2:ARG:HD2	1.84	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:928:A:H1'	45:DY:1:ALA:HA	1.66	0.76
41:DT:24:MET:HE2	41:DT:30:ILE:HA	1.66	0.76
41:DT:55:VAL:HG21	41:DT:85:VAL:HB	1.67	0.76
23:BB:742:A:H2'	23:BB:743:A:H8	1.50	0.76
15:AP:42:ILE:HB	15:AP:46:LYS:HD2	1.67	0.76
10:CK:16:SER:HA	10:CK:78:ILE:HA	1.66	0.76
16:AQ:11:VAL:HA	16:AQ:22:VAL:HG22	1.66	0.76
23:BB:2469:A:H4'	34:BM:55:ARG:HG3	1.68	0.76
24:DV:7:GLU:HA	24:DV:65:VAL:HG23	1.65	0.76
23:BB:954:G:OP1	34:BM:17:ASN:HB2	1.86	0.76
45:DY:18:LYS:HD2	45:DY:18:LYS:H	1.49	0.76
46:DZ:62:LYS:C	46:DZ:65:ASN:HD21	1.87	0.76
52:BI:20:SER:HB3	52:BI:21:PRO:HD3	1.67	0.76
23:DB:635:C:H3'	33:DL:126:ARG:NH2	2.00	0.76
4:CE:104:ILE:HD12	4:CE:111:ARG:HD3	1.66	0.76
49:D2:18:PHE:HA	49:D2:21:ARG:HB2	1.66	0.76
23:DB:899:A:H3'	23:DB:900:A:H8	1.49	0.76
1:CA:840:C:H2'	1:CA:842:U:H5''	1.67	0.76
23:DB:2756:U:H1'	23:DB:2757:A:H5''	1.67	0.76
39:DR:65:ALA:HB3	39:DR:99:THR:HG23	1.68	0.76
27:DE:4:VAL:HG13	27:DE:5:LEU:H	1.50	0.76
27:BE:73:ILE:C	27:BE:75:SER:H	1.88	0.76
25:BC:224:MET:HA	25:BC:232:GLY:HA2	1.68	0.76
51:B4:4:ARG:HG2	51:B4:4:ARG:O	1.84	0.76
12:CM:15:VAL:HG22	12:CM:40:GLU:HB2	1.68	0.76
49:B2:44:VAL:HG23	49:B2:45:SER:H	1.49	0.76
20:AB:162:VAL:HG13	20:AB:184:ALA:HB2	1.67	0.76
14:AO:81:ILE:HA	14:AO:86:LEU:HD12	1.67	0.76
25:BC:257:ARG:O	25:BC:261:ARG:HG3	1.85	0.76
1:CA:764:C:H3'	1:CA:765:G:H21	1.50	0.76
25:BC:128:THR:HA	25:BC:190:THR:HA	1.67	0.76
23:DB:137:U:H2'	23:DB:138:U:O4'	1.85	0.76
23:BB:479:A:O2'	23:BB:481:G:H5'	1.86	0.76
22:DA:26:C:H2'	22:DA:27:C:C6	2.19	0.76
26:DD:170:VAL:HB	26:DD:194:PRO:HG2	1.67	0.76
28:BF:101:ARG:HD2	28:BF:105:ILE:HD12	1.68	0.76
26:BD:138:LEU:HD23	26:BD:138:LEU:N	1.99	0.76
30:DH:37:VAL:H	30:DH:38:PRO:HD2	1.51	0.76
45:DY:4:ILE:HG12	45:DY:5:LYS:HG3	1.68	0.76
35:BN:29:VAL:HG21	35:BN:75:ILE:HD11	1.66	0.76
31:BJ:101:ILE:HG23	31:BJ:102:GLU:H	1.51	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:57:LEU:HB3	31:BJ:128:ASN:HA	1.68	0.76
12:AM:11:HIS:N	12:AM:44:ILE:HD11	1.99	0.76
43:BW:39:GLN:HA	43:BW:68:PHE:HA	1.68	0.76
12:AM:21:ILE:HG22	12:AM:64:VAL:HG11	1.67	0.76
39:DR:76:LYS:HA	39:DR:91:GLN:H	1.50	0.76
23:BB:480:A:H4'	42:BU:42:LYS:HG2	1.67	0.76
41:DT:67:VAL:HG12	41:DT:68:LYS:H	1.50	0.76
37:BP:26:GLU:HA	37:BP:47:ILE:H	1.49	0.76
25:BC:87:SER:O	25:BC:157:ALA:HB2	1.84	0.76
37:DP:55:HIS:C	37:DP:57:ALA:H	1.88	0.76
12:CM:38:ILE:HG13	12:CM:55:LEU:HD21	1.67	0.76
28:BF:64:PRO:HA	28:BF:88:VAL:HG22	1.68	0.76
52:DI:21:PRO:HB2	52:DI:22:PRO:HD3	1.66	0.76
23:BB:703:U:H2'	23:BB:704:G:O4'	1.86	0.76
23:BB:1177:G:H2'	23:BB:1178:C:C6	2.20	0.76
42:DU:59:GLU:HG3	42:DU:62:ALA:HB2	1.66	0.76
26:DD:125:TRP:HD1	26:DD:127:PHE:HB2	1.49	0.76
48:B1:42:VAL:HG12	48:B1:43:ARG:NE	2.00	0.76
1:CA:619:U:H3	3:CD:130:ASN:ND2	1.84	0.76
23:BB:2839:G:H21	35:BN:92:GLY:HA3	1.48	0.76
31:BJ:7:LYS:HZ2	31:BJ:48:VAL:HB	1.50	0.76
26:BD:18:ASP:HB3	26:BD:20:VAL:HG22	1.68	0.76
37:BP:49:ILE:C	37:BP:50:ARG:HG3	2.06	0.76
41:BT:24:MET:HG3	41:BT:28:ASN:HA	1.65	0.76
28:DF:140:ILE:HD12	28:DF:140:ILE:H	1.49	0.76
33:DL:78:ARG:NH1	33:DL:78:ARG:HB3	2.01	0.76
34:BM:107:GLY:C	34:BM:109:PRO:HD2	2.06	0.76
34:BM:77:PRO:HD3	34:BM:86:LYS:HD3	1.65	0.76
20:AB:120:SER:HA	20:AB:125:PHE:HB3	1.67	0.76
23:BB:2346:A:H3'	23:BB:2347:C:H5''	1.67	0.76
31:DJ:73:VAL:HG22	31:DJ:74:TYR:N	2.00	0.76
30:DH:10:ALA:O	30:DH:11:ASN:HB3	1.86	0.76
45:DY:2:LYS:HB2	45:DY:37:ARG:HB2	1.67	0.76
27:DE:48:THR:HG23	27:DE:85:PHE:N	2.00	0.76
39:DR:6:GLN:NE2	39:DR:41:ILE:HB	2.00	0.76
13:AN:30:ILE:HG21	13:AN:41:TRP:HB2	1.65	0.76
23:BB:1255:U:H2'	27:BE:67:ARG:HB3	1.68	0.76
6:AG:67:ASN:HD22	6:AG:127:ALA:HA	1.51	0.76
23:DB:1799:G:N7	25:DC:178:GLY:HA3	2.01	0.75
43:DW:66:VAL:HG13	43:DW:67:LYS:H	1.50	0.75
33:BL:103:ILE:HD13	33:BL:105:ILE:H	1.50	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DT:31:VAL:HG13	41:DT:32:LEU:H	1.50	0.75
26:BD:17:GLU:HB2	37:BP:80:VAL:HG21	1.67	0.75
31:DJ:81:ILE:O	31:DJ:84:ILE:HG13	1.86	0.75
29:DG:175:LYS:HG2	29:DG:176:LYS:H	1.50	0.75
36:BO:67:ASN:HA	36:BO:71:ALA:HB3	1.66	0.75
23:BB:2239:G:H5'	25:BC:246:PRO:CD	2.16	0.75
29:DG:120:ILE:HG12	29:DG:134:GLY:HA3	1.66	0.75
8:CI:94:ARG:HD3	8:CI:97:LEU:HD12	1.68	0.75
39:BR:4:VAL:HA	39:BR:12:HIS:HB3	1.69	0.75
23:BB:443:A:H5''	27:BE:44:ARG:HH12	1.50	0.75
24:BV:79:ARG:HA	24:BV:86:LEU:HA	1.69	0.75
23:BB:919:U:H2'	23:BB:920:A:C8	2.21	0.75
1:AA:1219:A:H2'	1:AA:1220:G:C8	2.21	0.75
23:BB:2563:U:H5''	32:BK:27:GLY:HA2	1.68	0.75
23:BB:162:U:H4'	23:BB:163:C:OP1	1.86	0.75
1:CA:1097:C:H2'	1:CA:1098:C:C6	2.20	0.75
1:CA:814:A:H5'	1:CA:1511:G:H4'	1.68	0.75
25:DC:128:THR:HG22	25:DC:188:ARG:HB2	1.68	0.75
35:BN:28:LEU:HD11	35:BN:44:LEU:HD21	1.68	0.75
23:DB:162:U:H4'	23:DB:163:C:OP1	1.87	0.75
23:BB:2674:G:H4'	32:BK:30:ARG:HG2	1.67	0.75
5:CF:47:LEU:HD21	5:CF:57:ALA:HB2	1.68	0.75
8:CI:118:ARG:HH21	8:CI:122:ARG:NE	1.83	0.75
52:DI:42:ASN:HA	52:DI:45:THR:OG1	1.87	0.75
34:BM:69:PRO:HB2	34:BM:71:LYS:NZ	2.02	0.75
33:BL:61:LEU:HB3	33:BL:62:PRO:CD	2.06	0.75
38:DQ:69:ARG:HB3	38:DQ:69:ARG:HH11	1.51	0.75
48:B1:9:LYS:HG2	50:B3:34:LYS:NZ	2.00	0.75
39:BR:69:GLY:HA2	39:BR:96:VAL:HA	1.69	0.75
40:BS:10:ALA:O	40:BS:11:ARG:HB3	1.85	0.75
23:BB:2086:U:H2'	23:BB:2087:G:C8	2.21	0.75
32:DK:71:ARG:HB3	32:DK:72:PRO:CD	2.16	0.75
31:BJ:71:ASP:CG	31:BJ:72:LYS:N	2.39	0.75
52:DI:20:SER:HB3	52:DI:21:PRO:HD3	1.67	0.75
22:DA:30:C:H2'	22:DA:31:C:H5'	1.68	0.75
1:AA:437:U:H2'	1:AA:438:U:O4'	1.85	0.75
27:BE:98:LYS:HG3	27:BE:99:LYS:N	2.02	0.75
34:BM:70:ASP:N	34:BM:71:LYS:HZ2	1.84	0.75
26:BD:154:LYS:HZ1	31:BJ:81:ILE:HD13	1.51	0.75
23:DB:1021:A:H61	23:DB:1142:A:N6	1.85	0.75
33:BL:110:VAL:HB	33:BL:126:ARG:NH2	2.01	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BL:82:LEU:HD21	33:BL:92:LEU:HD12	1.68	0.75
41:BT:30:ILE:HG23	41:BT:31:VAL:N	2.01	0.75
40:DS:2:GLU:HB2	40:DS:108:SER:HA	1.69	0.75
1:CA:946:A:H2'	1:CA:947:G:C8	2.22	0.75
20:AB:41:ASN:HD22	20:AB:44:LYS:HE2	1.51	0.75
10:AK:86:LYS:HB2	10:AK:112:VAL:HG23	1.68	0.75
35:DN:8:ARG:HD2	35:DN:46:ARG:NE	2.01	0.75
2:CC:150:VAL:HG22	2:CC:199:VAL:HG12	1.69	0.75
37:BP:25:VAL:HG11	37:BP:87:ARG:HA	1.68	0.75
35:DN:38:LEU:HB3	35:DN:39:PRO:HD3	1.67	0.75
23:DB:458:G:H5''	49:D2:39:ARG:CB	2.17	0.75
23:BB:28:A:N6	23:BB:512:G:H1'	2.02	0.75
27:DE:116:ASP:HB3	27:DE:185:LYS:HA	1.68	0.75
44:BX:36:GLN:HE22	44:BX:38:GLN:NE2	1.84	0.75
12:AM:44:ILE:HD12	12:AM:45:SER:H	1.52	0.75
52:BI:7:TYR:HB2	52:BI:58:ILE:O	1.87	0.75
23:DB:1064:C:H4'	52:DI:90:GLY:CA	2.17	0.75
3:CD:2:ARG:NH1	3:CD:114:ARG:HD3	2.00	0.75
2:CC:179:ALA:HA	2:CC:205:GLU:HA	1.69	0.75
11:CL:49:ARG:HG2	11:CL:89:LEU:HD21	1.69	0.75
23:DB:1098:A:H3'	52:DI:3:LYS:CB	2.16	0.75
34:BM:11:LYS:HG2	34:BM:12:MET:H	1.51	0.75
46:BZ:3:LYS:HG2	46:BZ:8:LYS:HA	1.68	0.75
1:CA:974:A:C4'	1:CA:975:A:H5'	2.15	0.75
37:DP:50:ARG:NH1	37:DP:62:LYS:HB2	2.01	0.75
35:BN:70:THR:HG21	35:BN:75:ILE:HG22	1.68	0.75
33:BL:117:THR:HG21	33:BL:120:VAL:CB	2.16	0.75
23:DB:1063:G:H1'	52:DI:92:PRO:HG2	1.69	0.75
1:AA:764:C:H3'	1:AA:765:G:H21	1.51	0.75
50:B3:7:ARG:NH2	50:B3:11:LYS:HZ1	1.84	0.75
32:DK:78:ARG:HH22	37:DP:62:LYS:NZ	1.85	0.75
32:DK:108:ARG:NH2	37:DP:36:LYS:H	1.84	0.75
33:DL:74:THR:HB	33:DL:109:LYS:HE3	1.68	0.75
10:AK:110:THR:HG21	21:AU:4:LYS:HD2	1.69	0.75
28:DF:69:ALA:HB3	28:DF:81:GLY:H	1.52	0.75
3:CD:55:ARG:HG3	3:CD:55:ARG:HH11	1.51	0.75
9:AJ:19:ASP:O	9:AJ:22:THR:HG22	1.87	0.75
46:BZ:55:GLY:HA2	46:BZ:63:ARG:HG3	1.69	0.74
26:BD:110:THR:HG22	26:BD:171:THR:HA	1.68	0.74
26:BD:154:LYS:NZ	26:BD:156:PHE:HA	2.00	0.74
37:DP:86:LYS:HE3	37:DP:88:ARG:HB2	1.68	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:101:GLY:O	32:BK:119:ALA:HB1	1.87	0.74
27:BE:59:PRO:HD2	27:BE:60:TRP:NE1	2.01	0.74
48:D1:9:LYS:HA	48:D1:24:LYS:HG2	1.69	0.74
30:BH:41:LYS:H	30:BH:41:LYS:HD2	1.52	0.74
35:BN:100:CYS:HB3	35:BN:110:MET:HB2	1.69	0.74
23:BB:37:C:C2'	27:BE:46:GLN:HG2	2.16	0.74
37:DP:32:VAL:HB	37:DP:80:VAL:O	1.88	0.74
23:BB:2354:C:H4'	43:BW:30:VAL:HG13	1.69	0.74
43:BW:66:VAL:HG22	43:BW:67:LYS:N	2.03	0.74
33:DL:62:PRO:HB3	50:D3:12:ARG:HD3	1.69	0.74
23:DB:458:G:N2	23:DB:469:G:H2'	2.02	0.74
44:BX:38:GLN:H	44:BX:38:GLN:NE2	1.84	0.74
33:DL:19:LEU:N	33:DL:19:LEU:HD13	2.02	0.74
15:CP:67:ILE:HG13	15:CP:71:VAL:HG13	1.67	0.74
29:BG:153:PRO:HG2	29:BG:162:ARG:HB3	1.68	0.74
48:D1:31:GLU:HG2	48:D1:32:LYS:HG3	1.67	0.74
1:CA:108:G:O6	19:CT:9:ARG:HG2	1.87	0.74
23:BB:692:C:C5'	25:BC:42:ARG:HB2	2.15	0.74
37:BP:47:ILE:HG22	37:BP:48:ALA:N	2.01	0.74
31:DJ:19:ASP:HB3	31:DJ:21:THR:HG23	1.67	0.74
23:BB:140:C:H4'	23:BB:141:G:H21	1.51	0.74
25:DC:212:TRP:HZ3	25:DC:217:PRO:HD3	1.50	0.74
23:DB:1283:G:N2	23:DB:1286:A:H5'	2.01	0.74
12:AM:18:LEU:HB3	12:AM:29:SER:HB2	1.67	0.74
52:BI:89:SER:HB2	52:BI:136:GLY:HA3	1.68	0.74
2:AC:5:HIS:HD2	2:AC:8:GLY:H	1.34	0.74
23:BB:812:C:H5'	33:BL:32:GLY:HA2	1.67	0.74
1:CA:1086:U:H3	1:CA:1099:G:H22	1.34	0.74
2:CC:18:ASN:HA	2:CC:55:VAL:HG12	1.67	0.74
23:BB:1469:A:H2'	23:BB:1470:A:C8	2.22	0.74
12:CM:89:ARG:NH1	12:CM:101:THR:HG21	2.02	0.74
20:AB:163:ILE:HD11	20:AB:209:VAL:HG12	1.70	0.74
36:DO:28:VAL:HG22	36:DO:106:LEU:HD13	1.66	0.74
5:CF:62:MET:HG3	5:CF:64:VAL:HG23	1.67	0.74
20:CB:100:LEU:HB3	20:CB:178:LEU:HD11	1.68	0.74
23:BB:858:G:H21	23:BB:2268:A:H3'	1.51	0.74
20:CB:206:ILE:HG22	20:CB:207:ARG:HH21	1.52	0.74
1:AA:135:C:O2	15:AP:1:MET:HB2	1.88	0.74
2:AC:184:ASN:HD22	2:AC:185:THR:H	1.32	0.74
33:BL:63:LYS:N	50:B3:24:LYS:HZ2	1.86	0.74
30:BH:82:SER:N	30:BH:146:VAL:HG13	2.00	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:52:ILE:HA	12:CM:55:LEU:HD12	1.69	0.74
1:AA:781:A:H2'	1:AA:782:A:H5'	1.69	0.74
22:DA:48:U:H2'	22:DA:49:C:C6	2.23	0.74
15:AP:52:LEU:HG	15:AP:75:ILE:HG12	1.69	0.74
34:BM:96:ILE:HG23	34:BM:97:GLN:H	1.52	0.74
30:DH:37:VAL:O	30:DH:38:PRO:C	2.23	0.74
25:DC:22:GLU:CB	25:DC:202:ARG:HG3	2.18	0.74
28:DF:133:GLU:HG3	28:DF:147:ARG:HG2	1.70	0.74
33:BL:30:THR:HA	33:BL:36:LYS:NZ	2.03	0.74
52:BI:89:SER:HA	52:BI:97:VAL:CG2	2.17	0.74
27:BE:133:LEU:HD12	27:BE:136:GLN:HG3	1.68	0.74
29:BG:120:ILE:HG12	29:BG:140:ILE:HG22	1.68	0.74
23:BB:2216:G:H2'	23:BB:2217:G:H8	1.52	0.74
4:CE:33:THR:HG22	4:CE:51:LYS:HG2	1.68	0.74
23:DB:1099:G:H5'	52:DI:4:VAL:N	2.01	0.74
39:BR:54:VAL:N	39:BR:54:VAL:HB	2.01	0.74
51:D4:26:ILE:HG23	51:D4:27:CYS:H	1.52	0.74
25:DC:131:MET:HG3	25:DC:187:CYS:SG	2.27	0.74
25:DC:243:PRO:HB3	25:DC:248:GLY:HA2	1.69	0.74
46:DZ:59:ARG:HA	46:DZ:62:LYS:HB2	1.70	0.74
23:BB:125:A:H3'	23:BB:126:A:C5'	2.17	0.74
23:DB:136:G:H2'	23:DB:137:U:C6	2.22	0.74
26:DD:8:LYS:HG3	37:DP:5:LYS:NZ	2.02	0.74
25:DC:141:HIS:HB3	25:DC:190:THR:HB	1.70	0.74
47:B0:36:LYS:HG3	47:B0:40:HIS:O	1.88	0.74
30:BH:4:ILE:H	30:BH:37:VAL:HB	1.53	0.74
48:B1:12:SER:HB2	48:B1:21:THR:O	1.87	0.74
27:DE:83:VAL:O	27:DE:84:THR:HG22	1.88	0.74
31:BJ:112:GLY:O	31:BJ:116:ARG:HB2	1.88	0.74
2:CC:156:LEU:HB2	2:CC:163:ARG:HD3	1.69	0.74
34:BM:9:PHE:HA	34:BM:10:ARG:HH21	1.53	0.74
24:BV:80:HIS:CD2	24:BV:83:LYS:H	2.05	0.74
25:DC:144:GLU:HG2	25:DC:150:GLY:HA2	1.70	0.74
45:BY:16:LEU:HB2	45:BY:17:PRO:CD	2.13	0.74
27:BE:105:LEU:HD22	27:BE:177:PRO:HG2	1.70	0.74
21:CU:16:ARG:O	21:CU:20:ARG:HD2	1.86	0.74
40:DS:23:LEU:HD13	40:DS:25:ARG:HH22	1.52	0.74
22:DA:104:A:H2'	22:DA:105:G:O4'	1.88	0.74
23:BB:1283:G:N2	23:BB:1286:A:H5'	2.02	0.74
28:DF:31:GLU:HG3	28:DF:158:THR:HG22	1.69	0.74
12:AM:15:VAL:HG23	12:AM:33:LEU:HD12	1.70	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CQ:11:VAL:HG22	16:CQ:22:VAL:HG22	1.70	0.74
23:BB:163:C:H2'	23:BB:164:C:O4'	1.87	0.74
24:DV:63:ILE:N	24:DV:70:ILE:HD11	2.03	0.74
24:BV:35:GLU:HG3	24:BV:93:ARG:HD3	1.69	0.74
20:CB:16:GLY:HA2	20:CB:40:ILE:H	1.51	0.74
35:DN:85:PRO:HA	35:DN:88:ALA:HB2	1.69	0.74
23:BB:150:U:H2'	23:BB:151:C:C6	2.23	0.74
27:BE:113:VAL:HG23	27:BE:117:ARG:CZ	2.18	0.74
34:DM:5:LYS:HZ1	34:DM:8:LYS:CB	2.01	0.74
47:B0:29:VAL:HG23	47:B0:36:LYS:NZ	2.02	0.74
23:DB:2088:A:H2'	23:DB:2089:C:C6	2.23	0.74
1:CA:262:A:OP2	19:CT:70:LYS:HE2	1.88	0.74
23:DB:125:A:H4'	49:D2:13:ASN:ND2	2.03	0.74
49:D2:35:ARG:HH21	49:D2:42:LEU:HD12	1.50	0.74
15:CP:3:THR:HG22	15:CP:66:THR:HB	1.68	0.74
1:AA:1125:U:H2'	1:AA:1126:U:H5''	1.70	0.74
23:DB:1099:G:O5'	52:DI:4:VAL:N	2.20	0.73
20:AB:67:LEU:H	20:AB:67:LEU:HD22	1.52	0.73
43:DW:42:THR:HB	43:DW:75:ASN:CB	2.16	0.73
1:AA:1103:C:H5''	20:AB:96:LEU:HD12	1.68	0.73
23:BB:1112:G:H5'	29:BG:2:ARG:HH21	1.53	0.73
21:AU:20:ARG:HA	21:AU:24:LYS:HG3	1.70	0.73
1:AA:278:G:H21	1:AA:279:A:H62	1.36	0.73
23:DB:2751:G:H5'	29:DG:3:VAL:HG21	1.70	0.73
23:BB:2147:A:H5'	23:BB:2148:G:H5'	1.71	0.73
23:DB:918:A:H2'	23:DB:919:U:H5'	1.68	0.73
27:DE:1:MET:HG3	27:DE:18:THR:OG1	1.88	0.73
36:BO:68:LYS:HD3	36:BO:68:LYS:N	2.02	0.73
28:BF:116:LEU:HG	28:BF:176:PHE:HA	1.68	0.73
23:BB:856:G:H21	43:BW:22:VAL:HG11	1.53	0.73
44:DX:44:LYS:HG3	44:DX:47:ARG:HB2	1.69	0.73
36:BO:17:LYS:HE3	36:BO:43:ASN:HB2	1.70	0.73
45:DY:15:ARG:NE	45:DY:15:ARG:HA	2.03	0.73
8:CI:4:GLN:HG2	8:CI:21:LYS:HD3	1.70	0.73
30:DH:3:VAL:HB	30:DH:37:VAL:HG11	1.68	0.73
23:DB:1006:C:H5''	31:DJ:34:ARG:NE	2.02	0.73
16:CQ:10:ARG:NH1	16:CQ:55:GLY:H	1.87	0.73
23:BB:2527:C:H1'	51:B4:1:MET:HB3	1.71	0.73
19:AT:60:GLN:HE21	19:AT:61:ALA:H	1.36	0.73
23:BB:1324:G:H1'	23:BB:1616:A:N6	2.03	0.73
23:DB:2498:C:O2'	23:DB:2499:C:H5'	1.87	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CK:70:ALA:HA	10:CK:73:VAL:HG22	1.71	0.73
44:BX:49:ASP:HB3	44:BX:52:ARG:HH21	1.52	0.73
1:AA:812:G:H2'	1:AA:812:G:N3	2.02	0.73
34:BM:73:ILE:O	34:BM:74:THR:HB	1.88	0.73
23:DB:1820:U:H3	25:DC:197:ALA:HB1	1.52	0.73
43:DW:42:THR:HG23	43:DW:66:VAL:N	2.03	0.73
23:BB:135:U:H2'	23:BB:136:G:C8	2.23	0.73
23:BB:85:G:C5'	42:BU:28:LEU:HA	2.18	0.73
23:BB:508:A:H2'	23:BB:509:C:H5'	1.69	0.73
23:DB:2895:G:H2'	23:DB:2896:C:C6	2.24	0.73
52:BI:14:ALA:HA	52:BI:45:THR:HG21	1.68	0.73
23:DB:2674:G:H4'	32:DK:30:ARG:HD3	1.70	0.73
19:CT:69:ASN:H	19:CT:69:ASN:ND2	1.85	0.73
4:AE:131:ASN:HD21	4:AE:133:ILE:HB	1.54	0.73
51:D4:24:ARG:HE	51:D4:37:GLN:CA	2.01	0.73
25:DC:161:VAL:HG12	25:DC:173:LEU:HD22	1.70	0.73
10:CK:82:GLU:HB3	10:CK:108:ASN:HD22	1.53	0.73
35:BN:76:VAL:HA	35:BN:79:LEU:HD12	1.71	0.73
39:DR:18:GLN:HB3	39:DR:99:THR:HA	1.71	0.73
31:BJ:25:LEU:HD12	31:BJ:62:VAL:HA	1.70	0.73
25:DC:48:ILE:HG22	25:DC:49:THR:N	2.03	0.73
42:DU:71:ILE:HG21	42:DU:102:ILE:HD12	1.69	0.73
52:DI:108:ILE:HG22	52:DI:128:ILE:HD13	1.71	0.73
23:BB:742:A:H2'	23:BB:743:A:C8	2.21	0.73
52:DI:73:PRO:HG2	52:DI:78:LEU:HD21	1.68	0.73
16:CQ:10:ARG:CZ	16:CQ:55:GLY:H	2.01	0.73
48:D1:49:LYS:N	48:D1:49:LYS:HZ2	1.86	0.73
3:CD:18:LEU:HD12	3:CD:63:ILE:HB	1.70	0.73
23:BB:1203:U:H3'	23:BB:1204:A:H5''	1.70	0.73
31:BJ:39:LYS:HZ1	38:BQ:69:ARG:HD2	1.53	0.73
7:CH:75:GLN:NE2	7:CH:76:ARG:H	1.86	0.73
39:DR:73:LYS:HD2	39:DR:73:LYS:H	1.51	0.73
44:DX:30:MET:HE2	44:DX:30:MET:H	1.54	0.73
1:AA:1461:G:H2'	1:AA:1462:C:C6	2.23	0.73
37:DP:111:GLU:HB2	37:DP:112:ARG:HE	1.54	0.73
33:BL:85:VAL:HG11	33:BL:98:ALA:HB3	1.71	0.73
23:BB:138:U:H2'	23:BB:140:C:H1'	1.71	0.73
46:DZ:21:VAL:HG22	46:DZ:23:LYS:H	1.54	0.73
2:CC:176:THR:OG1	2:CC:179:ALA:HB2	1.88	0.73
1:AA:927:G:H4'	1:AA:1503:A:N7	2.03	0.73
44:DX:4:LYS:HG3	44:DX:7:ARG:HE	1.51	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:17:C:H2'	22:DA:18:G:O4'	1.89	0.73
13:CN:96:LYS:HG2	13:CN:97:LYS:H	1.53	0.73
6:CG:23:ALA:O	6:CG:26:VAL:HG22	1.89	0.73
35:DN:30:ARG:NH1	35:DN:74:GLU:HG2	2.01	0.73
21:AU:14:ALA:C	21:AU:16:ARG:CZ	2.56	0.73
38:BQ:33:VAL:HG23	38:BQ:37:ALA:HB3	1.71	0.73
40:DS:74:ILE:HG22	40:DS:105:VAL:HG23	1.70	0.73
34:BM:109:PRO:HA	34:BM:112:LEU:HB2	1.69	0.73
1:CA:1132:C:H2'	1:CA:1133:G:H8	1.50	0.73
1:AA:429:U:H3'	3:AD:8:LEU:HD23	1.70	0.73
15:AP:71:VAL:HA	15:AP:74:LEU:HG	1.69	0.73
23:BB:1392:A:H62	41:BT:18:GLU:HG2	1.53	0.73
23:BB:45:G:H5'	23:BB:46:G:H5'	1.71	0.73
27:DE:31:VAL:HG21	27:DE:104:ALA:HB2	1.71	0.73
21:AU:14:ALA:C	21:AU:16:ARG:HD2	2.09	0.73
24:BV:24:ASN:O	24:BV:44:HIS:HB2	1.89	0.73
33:BL:120:VAL:HG22	33:BL:122:VAL:HG22	1.71	0.73
23:BB:1021:A:N6	23:BB:1141:U:H3	1.82	0.73
4:CE:98:ALA:HB2	4:CE:123:LEU:HG	1.69	0.73
47:D0:32:THR:HG21	47:D0:41:HIS:NE2	2.03	0.73
1:AA:1308:U:H2'	1:AA:1309:G:C8	2.24	0.73
1:CA:278:G:H21	1:CA:279:A:H62	1.36	0.73
23:DB:1469:A:H2'	23:DB:1470:A:C8	2.23	0.73
26:BD:157:LYS:HZ3	26:BD:158:GLY:HA3	1.53	0.73
35:DN:32:GLU:HG3	35:DN:33:ILE:H	1.54	0.73
21:AU:40:PRO:HG2	21:AU:41:THR:H	1.54	0.73
29:DG:11:PRO:HD2	29:DG:14:VAL:HG21	1.70	0.73
9:AJ:39:PRO:HA	9:AJ:74:VAL:HG22	1.70	0.73
11:AL:66:ILE:HD13	11:AL:73:LEU:HD12	1.69	0.73
28:BF:126:ASN:N	28:BF:126:ASN:HD22	1.87	0.73
23:BB:1453:A:N6	35:BN:74:GLU:HG2	2.04	0.73
27:DE:126:VAL:HG11	27:DE:132:LYS:NZ	2.04	0.73
3:CD:84:ASN:HD21	3:CD:87:GLU:H	1.37	0.73
3:AD:84:ASN:ND2	3:AD:87:GLU:H	1.87	0.73
10:AK:42:GLY:HA3	10:AK:73:VAL:HG22	1.71	0.73
23:BB:2328:A:H2'	23:BB:2329:U:C6	2.24	0.73
47:B0:45:ASP:HB2	47:B0:47:TYR:HD1	1.53	0.73
25:BC:245:THR:O	25:BC:247:TRP:N	2.22	0.73
1:CA:812:G:H2'	1:CA:812:G:N3	2.02	0.73
22:DA:47:C:OP1	36:DO:1:MET:HA	1.89	0.73
15:AP:67:ILE:HG13	15:AP:71:VAL:HG13	1.71	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:442:G:H1'	27:BE:44:ARG:HD2	1.70	0.72
37:BP:59:THR:HG23	37:BP:76:HIS:NE2	2.04	0.72
35:DN:45:ARG:NH2	35:DN:113:ILE:HD12	2.03	0.72
41:BT:8:LEU:HB3	44:BX:19:LEU:HD11	1.71	0.72
46:DZ:5:ILE:HG13	46:DZ:51:VAL:HG13	1.69	0.72
19:CT:66:ILE:HG13	19:CT:70:LYS:HG3	1.71	0.72
26:BD:33:ARG:HG3	26:BD:93:GLY:HA2	1.70	0.72
23:BB:1178:C:H2'	23:BB:1179:G:H8	1.53	0.72
20:AB:116:LEU:HD11	20:AB:139:GLU:HB3	1.71	0.72
40:DS:85:ILE:HD11	40:DS:93:ALA:HB1	1.70	0.72
47:B0:39:ARG:HH11	47:B0:39:ARG:HB3	1.52	0.72
23:DB:1324:G:H1'	23:DB:1616:A:N6	2.04	0.72
46:BZ:25:ARG:HG3	46:BZ:26:SER:N	2.04	0.72
37:BP:28:LYS:HD3	37:BP:44:GLY:N	2.03	0.72
25:BC:141:HIS:CD2	25:BC:193:GLU:H	2.07	0.72
48:D1:46:VAL:HG22	48:D1:47:ILE:H	1.53	0.72
38:DQ:91:ARG:HA	38:DQ:94:LEU:HD21	1.71	0.72
36:DO:50:ALA:HB1	36:DO:78:VAL:HG13	1.69	0.72
31:DJ:15:TRP:CB	31:DJ:139:VAL:HA	2.19	0.72
42:BU:69:VAL:HG13	42:BU:77:GLY:H	1.54	0.72
25:DC:224:MET:HA	25:DC:233:GLY:H	1.54	0.72
1:CA:1078:U:H4'	4:CE:137:ARG:HH12	1.54	0.72
3:CD:138:PRO:HA	3:CD:181:PHE:HD2	1.54	0.72
23:BB:2498:C:O2'	23:BB:2499:C:H5'	1.89	0.72
41:BT:93:LEU:HD22	41:BT:93:LEU:H	1.53	0.72
12:AM:77:LYS:HA	12:AM:80:MET:HB3	1.71	0.72
13:CN:42:ASN:HB3	13:CN:46:LYS:HE2	1.71	0.72
28:DF:102:LEU:HG	28:DF:107:VAL:HG23	1.69	0.72
23:DB:2511:U:H5''	26:DD:129:THR:HG23	1.71	0.72
28:BF:107:VAL:HG21	28:BF:175:PRO:HG3	1.71	0.72
26:DD:42:ASN:O	26:DD:43:ASP:HB2	1.89	0.72
33:DL:115:GLU:O	33:DL:116:VAL:HG22	1.89	0.72
38:DQ:70:GLN:HG2	38:DQ:71:ASN:N	2.05	0.72
31:DJ:112:GLY:O	31:DJ:116:ARG:HB2	1.88	0.72
2:CC:120:THR:HG23	2:CC:188:ALA:HB2	1.71	0.72
26:BD:8:LYS:HA	26:BD:197:THR:HG23	1.69	0.72
26:BD:154:LYS:O	26:BD:155:VAL:HG12	1.88	0.72
25:BC:88:ALA:HB1	25:BC:156:SER:HB3	1.71	0.72
26:DD:30:GLU:HG2	26:DD:94:GLN:NE2	2.05	0.72
43:BW:24:ARG:HB3	43:BW:57:THR:O	1.90	0.72
27:BE:60:TRP:NE1	27:BE:73:ILE:HD11	2.03	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CN:30:ILE:HG21	13:CN:43:ALA:HB3	1.70	0.72
36:BO:8:ILE:HG22	36:BO:10:ARG:H	1.52	0.72
9:CJ:25:ILE:HG23	9:CJ:87:LEU:HD12	1.70	0.72
8:AI:71:ILE:HD12	8:AI:71:ILE:H	1.55	0.72
23:DB:2257:U:H5'	43:DW:5:ALA:HB2	1.69	0.72
23:DB:179:C:H5''	49:D2:28:ARG:NH1	2.05	0.72
1:AA:946:A:H2'	1:AA:947:G:C8	2.24	0.72
3:AD:10:LEU:HD21	3:AD:62:ARG:HD3	1.71	0.72
1:AA:1250:A:H4'	8:AI:69:GLY:H	1.54	0.72
2:CC:182:ASP:HB3	2:CC:201:ILE:HB	1.70	0.72
23:BB:1813:G:H21	25:BC:51:ARG:HG2	1.55	0.72
21:CU:17:ARG:H	21:CU:17:ARG:HD2	1.54	0.72
31:DJ:37:ARG:HH21	31:DJ:46:PRO:HB3	1.53	0.72
5:CF:6:ILE:HG23	5:CF:62:MET:HB3	1.71	0.72
33:BL:30:THR:HB	33:BL:36:LYS:HB2	1.70	0.72
26:DD:156:PHE:HB3	31:DJ:81:ILE:HG21	1.70	0.72
32:DK:104:THR:HG22	32:DK:105:ARG:HD3	1.71	0.72
23:DB:28:A:N6	23:DB:512:G:H1'	2.04	0.72
49:B2:13:ASN:HB2	49:B2:18:PHE:HD2	1.53	0.72
12:CM:79:LEU:HA	12:CM:82:LEU:HG	1.72	0.72
12:CM:85:TYR:HA	12:CM:88:LEU:HD12	1.70	0.72
23:BB:442:G:H22	27:BE:46:GLN:NE2	1.87	0.72
26:BD:154:LYS:NZ	26:BD:157:LYS:H	1.86	0.72
25:DC:42:ARG:HE	25:DC:43:ASN:H	1.36	0.72
6:AG:13:PRO:HB2	6:AG:18:GLY:HA2	1.72	0.72
22:DA:32:U:H1'	22:DA:52:A:N7	2.04	0.72
23:DB:179:C:H5''	49:D2:28:ARG:HH12	1.54	0.72
11:CL:82:ARG:HG2	11:CL:82:ARG:HH11	1.54	0.72
23:BB:1913:A:H1'	23:BB:1914:C:OP1	1.90	0.72
2:AC:153:SER:HB2	2:AC:196:GLY:H	1.54	0.72
23:DB:1857:G:H2'	23:DB:1884:G:H22	1.55	0.72
23:DB:1099:G:C5'	52:DI:4:VAL:H	2.03	0.72
39:BR:42:ALA:HA	39:BR:54:VAL:HA	1.71	0.72
26:DD:36:GLN:HG2	26:DD:88:GLU:HA	1.70	0.72
45:BY:10:ARG:NE	45:BY:31:ILE:HG13	2.02	0.72
20:AB:46:VAL:HA	20:AB:49:PHE:HD2	1.55	0.72
24:DV:21:ARG:HE	24:DV:87:GLN:HA	1.54	0.72
23:DB:1639:C:C2'	23:DB:1640:A:H5''	2.18	0.72
35:DN:86:ARG:HH22	35:DN:116:VAL:HG12	1.54	0.72
3:AD:94:GLU:HG3	3:AD:103:ARG:HH12	1.55	0.72
9:AJ:92:LEU:H	9:AJ:92:LEU:HD22	1.55	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:501:C:H2'	1:CA:502:A:H8	1.53	0.72
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.24	0.72
1:AA:501:C:H2'	1:AA:502:A:H8	1.53	0.72
38:BQ:88:GLU:HA	39:BR:53:PHE:CE1	2.25	0.72
12:AM:38:ILE:HG13	12:AM:55:LEU:HD21	1.72	0.72
26:BD:92:VAL:HG13	26:BD:93:GLY:H	1.53	0.72
13:CN:60:ARG:O	13:CN:61:ASN:HB2	1.90	0.72
3:CD:55:ARG:NH1	3:CD:55:ARG:HG3	2.05	0.72
23:BB:2471:A:O2'	23:BB:2472:G:H8	1.73	0.72
44:BX:14:LEU:O	44:BX:17:GLU:HB2	1.87	0.72
23:BB:146:A:H2'	23:BB:147:C:C6	2.25	0.72
27:BE:131:THR:O	27:BE:134:LEU:HB2	1.90	0.72
26:DD:31:ALA:HB3	26:DD:95:SER:HB3	1.72	0.72
30:DH:2:GLN:HA	30:DH:21:VAL:HG13	1.72	0.72
23:DB:2405:G:C5'	33:DL:70:LYS:HG3	2.19	0.72
33:BL:94:THR:HG23	33:BL:95:LEU:HD12	1.72	0.72
1:AA:1218:C:H2'	1:AA:1219:A:C8	2.25	0.72
33:BL:27:LEU:C	33:BL:29:LYS:H	1.93	0.72
52:BI:21:PRO:HB2	52:BI:22:PRO:HD3	1.70	0.72
2:AC:179:ALA:HB1	2:AC:202:PHE:HE1	1.52	0.72
1:CA:1060:U:H5''	9:CJ:53:ILE:HG12	1.72	0.72
23:DB:630:G:H1	33:DL:69:ARG:HH12	1.37	0.72
48:D1:7:LYS:HG2	48:D1:26:LYS:HB3	1.71	0.72
8:CI:98:ARG:HG2	8:CI:103:VAL:HG11	1.72	0.72
1:AA:430:A:OP1	3:AD:8:LEU:HB2	1.89	0.72
20:CB:139:GLU:O	20:CB:143:LEU:HB2	1.90	0.72
27:DE:106:LYS:HG3	27:DE:107:SER:N	2.05	0.72
1:CA:1289:A:H3'	1:CA:1290:G:H8	1.53	0.72
51:D4:15:LYS:NZ	51:D4:22:VAL:HG12	2.05	0.72
37:BP:23:ASP:H	37:BP:93:LYS:HE2	1.54	0.72
26:BD:129:THR:O	26:BD:130:GLN:HB2	1.90	0.72
40:BS:47:VAL:HG12	40:BS:103:ILE:HD13	1.70	0.72
43:DW:81:ILE:HG23	43:DW:83:ALA:H	1.54	0.72
21:CU:24:LYS:CD	21:CU:25:ALA:H	2.03	0.72
32:BK:2:ILE:HG22	32:BK:67:LYS:NZ	2.04	0.72
29:DG:8:VAL:HG23	29:DG:49:LEU:H	1.52	0.72
23:DB:2633:G:H1'	26:DD:62:LYS:HG3	1.71	0.72
23:BB:1797:G:O3'	25:BC:253:GLY:HA2	1.89	0.72
1:CA:1097:C:H2'	1:CA:1098:C:H6	1.53	0.72
26:BD:187:LEU:HD23	26:BD:188:LEU:N	2.05	0.72
10:AK:56:LYS:O	10:AK:58:THR:HG22	1.90	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AL:98:ARG:HA	11:AL:98:ARG:HE	1.55	0.72
46:BZ:59:ARG:HH21	46:BZ:62:LYS:NZ	1.88	0.71
27:BE:146:VAL:O	27:BE:147:LEU:HB2	1.88	0.71
23:DB:2393:U:H4'	33:DL:62:PRO:O	1.90	0.71
36:DO:74:VAL:O	36:DO:78:VAL:HG23	1.89	0.71
5:CF:29:ILE:HG21	5:CF:64:VAL:HG11	1.72	0.71
43:DW:38:ARG:NH2	43:DW:40:ARG:HD3	2.02	0.71
13:AN:63:CYS:HB3	13:AN:67:GLY:N	2.04	0.71
40:DS:3:THR:HG21	40:DS:107:VAL:HG22	1.69	0.71
37:BP:13:LYS:HZ2	37:BP:17:PRO:HG3	1.54	0.71
23:DB:1309:G:C4'	49:D2:7:PRO:HB2	2.19	0.71
23:DB:1252:G:H21	38:DQ:32:ARG:NE	1.88	0.71
11:AL:35:ARG:HG3	11:AL:36:VAL:H	1.55	0.71
23:BB:1437:C:H2'	23:BB:1438:U:C6	2.25	0.71
2:CC:11:LEU:HD22	2:CC:17:TRP:HE1	1.55	0.71
24:DV:30:ILE:HG12	24:DV:91:PHE:HB2	1.70	0.71
11:CL:78:VAL:HG12	11:CL:101:LEU:HD13	1.70	0.71
21:AU:14:ALA:C	21:AU:16:ARG:CD	2.58	0.71
34:BM:41:LEU:HB2	34:BM:93:VAL:HG22	1.70	0.71
45:BY:54:VAL:HG22	45:BY:55:LYS:H	1.55	0.71
12:AM:78:ARG:NH2	12:AM:79:LEU:HG	2.05	0.71
23:DB:1903:G:H5''	25:DC:239:PHE:CE2	2.25	0.71
1:CA:1296:C:H4'	1:CA:1302:C:C4	2.24	0.71
1:AA:1471:U:O2'	1:AA:1472:U:H5'	1.90	0.71
19:CT:19:HIS:O	19:CT:23:ARG:HG2	1.91	0.71
23:BB:78:U:H2'	23:BB:79:C:C6	2.25	0.71
23:DB:1437:C:H2'	23:DB:1438:U:C6	2.25	0.71
6:CG:14:ASP:HB3	6:CG:18:GLY:N	2.05	0.71
14:AO:70:LYS:HZ1	14:AO:74:VAL:HG13	1.54	0.71
23:BB:265:A:O2'	23:BB:266:G:H4'	1.90	0.71
31:BJ:11:VAL:HG13	31:BJ:12:LYS:N	2.02	0.71
38:BQ:96:ASP:O	38:BQ:99:VAL:HG22	1.90	0.71
26:BD:154:LYS:HZ3	26:BD:157:LYS:H	1.37	0.71
26:BD:142:VAL:C	26:BD:144:GLY:N	2.39	0.71
25:BC:127:ASN:HD22	25:BC:128:THR:H	1.35	0.71
38:DQ:98:ALA:HA	38:DQ:105:PHE:CD1	2.24	0.71
31:DJ:89:PHE:HD1	31:DJ:92:MET:HG3	1.53	0.71
39:DR:63:VAL:HG22	39:DR:64:VAL:N	2.03	0.71
27:DE:115:GLN:CD	27:DE:184:ASP:HB2	2.10	0.71
23:DB:2088:A:H2'	23:DB:2089:C:H6	1.55	0.71
23:BB:85:G:H5'	42:BU:28:LEU:CA	2.21	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:63:ILE:HG23	3:CD:64:TYR:CD1	2.25	0.71
23:BB:1993:U:H4'	26:BD:134:HIS:HE1	1.55	0.71
2:CC:149:LYS:HB2	2:CC:168:ARG:HG3	1.70	0.71
1:AA:878:A:H5''	7:AH:80:PRO:HG2	1.73	0.71
34:DM:77:PRO:HD3	34:DM:86:LYS:HD3	1.71	0.71
1:AA:239:U:H4'	1:AA:239:U:OP1	1.90	0.71
6:AG:100:MET:HA	6:AG:103:ILE:HD12	1.71	0.71
33:BL:62:PRO:O	50:B3:24:LYS:HD3	1.90	0.71
5:CF:29:ILE:HG22	5:CF:34:GLY:HA3	1.71	0.71
28:DF:137:PHE:O	28:DF:139:GLU:HG2	1.90	0.71
23:DB:1060:U:C4	23:DB:1088:A:N6	2.58	0.71
23:BB:743:A:O2'	23:BB:744:U:H5'	1.91	0.71
8:AI:40:ARG:H	8:AI:44:ARG:HE	1.39	0.71
28:BF:135:ILE:HD13	28:BF:138:PRO:HA	1.72	0.71
38:DQ:47:ARG:O	38:DQ:51:GLN:HG3	1.90	0.71
52:DI:41:PHE:O	52:DI:45:THR:HG23	1.91	0.71
23:DB:414:C:H2'	23:DB:415:A:C8	2.25	0.71
1:AA:1179:A:H4'	8:AI:104:THR:HA	1.73	0.71
34:DM:26:VAL:HG21	34:DM:66:ARG:HG3	1.72	0.71
23:BB:1486:U:H2'	23:BB:1487:U:C6	2.25	0.71
23:BB:2895:G:H2'	23:BB:2896:C:C6	2.25	0.71
23:DB:1099:G:O4'	52:DI:3:LYS:O	2.07	0.71
25:DC:103:ILE:HG22	25:DC:104:LEU:H	1.53	0.71
33:BL:118:THR:CG2	33:BL:119:PRO:HD3	2.19	0.71
3:AD:156:ALA:O	3:AD:159:GLU:HG2	1.89	0.71
28:DF:107:VAL:N	28:DF:108:PRO:HD2	2.05	0.71
51:B4:24:ARG:HA	51:B4:34:LYS:O	1.90	0.71
38:DQ:48:ASP:HA	38:DQ:51:GLN:NE2	2.05	0.71
42:BU:40:LEU:HD13	42:BU:41:VAL:N	2.06	0.71
23:BB:1803:A:O3'	25:BC:254:LYS:HD2	1.90	0.71
20:CB:16:GLY:HA3	20:CB:39:ILE:HA	1.70	0.71
1:AA:1057:G:H5''	2:AC:153:SER:HB3	1.72	0.71
25:BC:50:THR:O	25:BC:51:ARG:HG3	1.89	0.71
34:BM:100:LYS:O	34:BM:100:LYS:HD2	1.90	0.71
39:DR:64:VAL:HG22	39:DR:65:ALA:H	1.55	0.71
41:DT:21:SER:H	41:DT:24:MET:HE3	1.53	0.71
20:AB:96:LEU:HB2	20:AB:99:MET:HE3	1.72	0.71
33:BL:29:LYS:HD2	33:BL:30:THR:H	1.55	0.71
8:CI:118:ARG:NH2	8:CI:122:ARG:HE	1.87	0.71
24:DV:70:ILE:HD12	24:DV:71:LYS:H	1.55	0.71
23:BB:445:C:OP1	38:BQ:1:ALA:HB3	1.89	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1238:A:H5'	1:CA:1336:C:H41	1.56	0.71
43:BW:47:GLY:HA3	43:BW:55:ASP:HB3	1.72	0.71
38:BQ:30:VAL:O	38:BQ:33:VAL:HG12	1.91	0.71
40:BS:7:HIS:HB3	40:BS:102:HIS:HA	1.71	0.71
41:BT:8:LEU:H	41:BT:8:LEU:HD23	1.56	0.71
41:DT:47:VAL:HG22	41:DT:53:VAL:HG21	1.72	0.71
23:BB:1060:U:C4	23:BB:1088:A:N6	2.58	0.71
52:BI:135:MET:HG3	52:BI:137:LEU:HG	1.73	0.71
23:DB:365:U:H2'	23:DB:366:C:H6	1.55	0.71
1:CA:1218:C:H2'	1:CA:1219:A:H8	1.55	0.71
48:D1:8:ILE:HB	48:D1:27:ARG:NH1	2.05	0.71
8:CI:94:ARG:HB3	8:CI:98:ARG:NE	2.06	0.71
40:DS:84:ARG:HH21	40:DS:98:LYS:NZ	1.87	0.71
29:DG:153:PRO:HA	29:DG:159:LYS:O	1.91	0.71
46:BZ:69:SER:O	46:BZ:70:LYS:HB2	1.90	0.71
27:BE:4:VAL:HB	27:BE:117:ARG:HH21	1.56	0.71
34:DM:71:LYS:O	34:DM:73:ILE:HG12	1.90	0.71
23:BB:1083:U:H1'	23:BB:1086:A:H61	1.55	0.71
49:B2:34:ARG:HE	49:B2:42:LEU:HD13	1.55	0.71
23:BB:662:G:H4'	33:BL:24:GLY:N	2.05	0.71
44:DX:26:PHE:HA	44:DX:29:ARG:HD2	1.73	0.71
1:CA:922:G:H2'	1:CA:923:A:C8	2.26	0.71
29:DG:3:VAL:HG22	29:DG:4:ALA:N	2.06	0.71
38:DQ:87:VAL:HB	39:DR:54:VAL:HG11	1.71	0.71
23:DB:1080:A:H4'	52:DI:126:ARG:HD3	1.71	0.71
23:BB:25:U:H5''	40:BS:80:PRO:HD3	1.73	0.71
27:DE:138:LEU:O	27:DE:143:LEU:HD21	1.91	0.71
12:AM:44:ILE:HA	12:AM:47:LEU:HD13	1.71	0.71
42:BU:11:ILE:HB	42:BU:69:VAL:HB	1.72	0.71
28:BF:133:GLU:HG2	28:BF:147:ARG:HG2	1.71	0.71
1:CA:1320:C:H41	18:CS:36:ARG:HG3	1.55	0.71
13:CN:51:PRO:HG2	13:CN:52:ARG:H	1.54	0.71
23:DB:1440:U:H2'	23:DB:1441:G:H8	1.55	0.71
37:DP:13:LYS:HD2	37:DP:77:SER:HB2	1.73	0.71
3:CD:21:LYS:O	3:CD:21:LYS:HD3	1.91	0.71
16:AQ:29:LYS:HD3	16:AQ:35:LYS:N	2.05	0.71
52:DI:5:GLN:O	52:DI:6:ALA:HB3	1.90	0.71
39:BR:53:PHE:HB3	39:BR:55:ASP:H	1.47	0.71
27:DE:164:LEU:HD13	27:DE:165:HIS:N	2.05	0.71
35:DN:45:ARG:HH21	35:DN:97:ILE:HG12	1.56	0.71
35:BN:115:LEU:O	35:BN:116:VAL:HG12	1.91	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2052:A:H4'	26:BD:148:GLN:HG2	1.73	0.71
23:DB:1082:U:N3	23:DB:1086:A:C6	2.59	0.71
8:CI:98:ARG:HA	8:CI:103:VAL:HG22	1.70	0.71
35:BN:101:GLY:HA2	35:BN:109:PRO:HA	1.73	0.71
23:DB:718:A:H2'	23:DB:719:C:H5'	1.72	0.71
1:CA:1386:G:H2'	1:CA:1387:G:H8	1.54	0.71
25:BC:106:PRO:HD2	25:BC:109:LEU:HD22	1.72	0.70
31:DJ:41:LYS:HZ2	38:DQ:63:ARG:HD2	1.54	0.70
35:BN:44:LEU:O	35:BN:47:VAL:HG22	1.90	0.70
26:BD:151:THR:O	26:BD:152:PRO:C	2.26	0.70
1:CA:239:U:OP1	1:CA:239:U:H4'	1.91	0.70
52:BI:32:VAL:HG22	52:BI:60:VAL:HG21	1.73	0.70
22:BA:49:C:H2'	22:BA:50:A:H8	1.56	0.70
47:D0:15:ARG:HB3	47:D0:15:ARG:CZ	2.21	0.70
49:D2:43:THR:O	49:D2:44:VAL:HG13	1.90	0.70
5:AF:86:ARG:HH11	17:AR:63:TYR:HB3	1.55	0.70
1:AA:1330:U:H2'	1:AA:1331:G:H5'	1.72	0.70
14:CO:72:LYS:O	14:CO:73:ASP:HB2	1.91	0.70
23:DB:743:A:O2'	23:DB:744:U:H5'	1.91	0.70
30:BH:134:VAL:HG13	30:BH:135:HIS:H	1.56	0.70
7:AH:49:LYS:HG3	7:AH:50:VAL:H	1.56	0.70
23:DB:1099:G:O5'	52:DI:3:LYS:N	2.23	0.70
23:DB:2291:U:H2'	23:DB:2292:U:C6	2.26	0.70
36:DO:10:ARG:HD2	36:DO:94:ARG:HD2	1.72	0.70
21:AU:29:ALA:CB	21:AU:32:ARG:HH21	2.02	0.70
27:BE:73:ILE:O	27:BE:73:ILE:HG22	1.91	0.70
23:BB:1082:U:N3	23:BB:1086:A:C6	2.60	0.70
10:AK:113:THR:HG21	21:AU:28:LEU:HD11	1.72	0.70
10:AK:92:ARG:HB3	10:AK:92:ARG:HH11	1.55	0.70
13:AN:30:ILE:HD12	13:AN:30:ILE:H	1.56	0.70
35:DN:8:ARG:HD2	35:DN:46:ARG:HE	1.54	0.70
23:DB:2012:G:OP1	40:DS:98:LYS:HD3	1.91	0.70
1:AA:412:A:H1'	1:AA:413:G:H8	1.54	0.70
22:DA:61:G:H2'	22:DA:62:C:H6	1.55	0.70
1:CA:412:A:H1'	1:CA:413:G:H8	1.55	0.70
23:DB:1098:A:OP2	52:DI:3:LYS:HG2	1.91	0.70
26:BD:3:GLY:HA2	26:BD:49:GLN:OE1	1.91	0.70
31:BJ:77:HIS:HD2	31:BJ:85:LYS:H	1.39	0.70
2:AC:72:PRO:O	2:AC:76:ILE:HG12	1.90	0.70
36:DO:73:ALA:HA	36:DO:76:LYS:HZ2	1.56	0.70
33:BL:82:LEU:HD13	33:BL:83:ALA:N	2.05	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DS:28:LYS:HB3	40:DS:31:GLN:HB2	1.74	0.70
28:DF:35:LEU:HB3	28:DF:151:LEU:HD11	1.72	0.70
1:CA:1342:C:H2'	1:CA:1343:G:H8	1.57	0.70
1:CA:1526:G:P	21:CU:38:GLU:HB2	2.31	0.70
33:DL:79:LEU:HD11	33:DL:112:LEU:HD23	1.73	0.70
23:DB:532:A:N1	23:DB:2020:A:H1'	2.06	0.70
23:BB:1676:A:O2'	26:BD:133:THR:HG23	1.92	0.70
11:AL:20:VAL:HG13	11:AL:94:TYR:HH	1.55	0.70
30:BH:57:LYS:HG3	30:BH:61:VAL:HG21	1.71	0.70
19:AT:81:GLN:O	19:AT:85:LEU:HB3	1.90	0.70
23:DB:1486:U:H2'	23:DB:1487:U:C6	2.27	0.70
26:BD:154:LYS:C	26:BD:156:PHE:H	1.91	0.70
23:DB:2684:U:H4'	32:DK:76:VAL:HG21	1.73	0.70
26:DD:34:VAL:HG12	26:DD:91:THR:HG23	1.73	0.70
35:DN:4:ARG:H	35:DN:4:ARG:NE	1.89	0.70
31:DJ:96:ARG:HD2	31:DJ:99:ARG:HH21	1.56	0.70
30:BH:3:VAL:HG22	30:BH:21:VAL:HG11	1.72	0.70
41:DT:66:LYS:HA	41:DT:76:ARG:O	1.90	0.70
31:BJ:24:THR:C	31:BJ:25:LEU:HD22	2.12	0.70
23:BB:811:U:H2'	33:BL:31:GLY:HA3	1.71	0.70
3:AD:194:ILE:HD13	3:AD:195:ASN:N	2.06	0.70
23:DB:2311:A:N3	28:DF:39:VAL:HG23	2.07	0.70
21:CU:36:PHE:HB2	21:CU:39:LYS:HB2	1.73	0.70
18:CS:30:LEU:H	18:CS:48:ILE:HA	1.57	0.70
50:B3:41:ARG:HB3	50:B3:43:LEU:HD22	1.73	0.70
23:BB:590:A:H2'	23:BB:591:U:C6	2.27	0.70
25:BC:3:VAL:HG12	25:BC:4:LYS:H	1.56	0.70
39:BR:90:ARG:NH1	39:BR:91:GLN:H	1.90	0.70
43:BW:66:VAL:HG13	43:BW:67:LYS:H	1.56	0.70
31:DJ:18:VAL:O	31:DJ:56:VAL:HA	1.91	0.70
23:DB:2196:C:O2'	23:DB:2197:U:H5'	1.91	0.70
23:DB:2305:U:H3	28:DF:149:ARG:HB3	1.56	0.70
39:DR:68:ARG:HB2	39:DR:97:LYS:HG3	1.74	0.70
23:DB:2144:G:O2'	23:DB:2145:C:H5'	1.90	0.70
33:DL:34:GLY:HA3	39:DR:85:LYS:HD3	1.73	0.70
9:AJ:56:HIS:O	9:AJ:57:VAL:HG12	1.92	0.70
44:DX:4:LYS:O	44:DX:7:ARG:HG2	1.91	0.70
23:DB:775:G:H4'	23:DB:776:G:H5'	1.73	0.70
25:BC:180:MET:HB2	25:BC:265:PHE:HB3	1.73	0.70
15:AP:7:ALA:HB1	15:AP:29:ASN:HB3	1.74	0.70
43:BW:6:GLY:C	43:BW:8:SER:H	1.94	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1458:G:H5'	19:AT:26:MET:HB2	1.73	0.70
39:BR:6:GLN:HA	39:BR:10:LYS:HA	1.74	0.70
25:DC:143:VAL:HG11	25:DC:173:LEU:HD11	1.74	0.70
26:DD:116:LYS:HB2	26:DD:165:MET:HG3	1.73	0.70
33:DL:124:GLY:N	33:DL:142:ILE:HA	2.05	0.70
36:DO:25:ARG:HH21	36:DO:94:ARG:NH1	1.90	0.70
31:DJ:50:THR:H	31:DJ:118:MET:HE1	1.56	0.70
26:BD:148:GLN:HG3	26:BD:151:THR:OG1	1.91	0.70
27:DE:147:LEU:HB3	27:DE:167:VAL:HG13	1.71	0.70
52:DI:32:VAL:HG22	52:DI:60:VAL:HG21	1.73	0.70
23:DB:876:C:C2	23:DB:877:A:H1'	2.27	0.70
10:AK:19:VAL:HG12	10:AK:82:GLU:HB2	1.74	0.70
3:CD:141:VAL:HA	3:CD:180:THR:H	1.56	0.70
38:BQ:10:ARG:HA	38:BQ:10:ARG:CZ	2.22	0.70
46:BZ:59:ARG:HE	46:BZ:62:LYS:HD2	1.56	0.70
23:BB:2512:C:H4'	26:BD:146:ILE:HG12	1.72	0.70
20:AB:204:ASP:CG	20:AB:205:ALA:H	1.95	0.70
26:DD:33:ARG:HH11	26:DD:33:ARG:HB2	1.56	0.70
36:DO:40:ILE:HD13	36:DO:40:ILE:H	1.55	0.70
38:DQ:73:ILE:HG23	38:DQ:74:SER:N	2.05	0.70
20:AB:212:TYR:O	20:AB:216:VAL:HG23	1.92	0.70
40:BS:8:ARG:CZ	40:BS:102:HIS:NE2	2.55	0.70
23:BB:2575:C:C5'	26:BD:149:ASN:HB2	2.21	0.70
44:BX:21:LEU:HD23	44:BX:47:ARG:HG3	1.74	0.70
28:BF:63:LYS:HE2	28:BF:64:PRO:HD2	1.73	0.70
21:CU:37:TYR:O	21:CU:40:PRO:HD2	1.90	0.70
4:CE:36:THR:HG22	4:CE:37:VAL:H	1.56	0.70
51:D4:3:VAL:HG12	51:D4:4:ARG:N	2.06	0.70
29:DG:40:VAL:HG22	29:DG:51:PHE:CE2	2.27	0.70
49:D2:45:SER:HB3	49:D2:46:LYS:HE3	1.72	0.70
42:DU:26:ASN:O	42:DU:28:LEU:HD23	1.90	0.70
6:AG:38:ALA:O	6:AG:41:ILE:HG22	1.92	0.70
12:CM:18:LEU:HD22	12:CM:29:SER:HA	1.74	0.70
11:AL:79:ILE:HD13	11:AL:96:THR:HG22	1.74	0.70
23:BB:2064:C:H2'	23:BB:2065:C:C6	2.27	0.70
37:BP:92:ARG:CZ	37:BP:110:LYS:HB3	2.21	0.70
25:BC:117:SER:HB3	25:BC:127:ASN:CG	2.12	0.70
25:BC:107:LYS:H	25:BC:194:VAL:HG21	1.55	0.70
33:DL:90:VAL:H	33:DL:122:VAL:HG22	1.57	0.70
27:DE:148:ILE:HG13	27:DE:148:ILE:O	1.92	0.70
17:CR:70:THR:HB	17:CR:72:ARG:NH1	2.06	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DG:156:TYR:HA	29:DG:171:LYS:HG2	1.73	0.70
21:CU:34:ARG:HG2	21:CU:35:GLU:N	2.06	0.70
23:DB:2574:G:H21	26:DD:147:GLY:HA2	1.56	0.70
42:DU:11:ILE:HG22	42:DU:12:VAL:H	1.55	0.70
1:AA:1182:G:H4'	1:AA:1183:U:C5'	2.21	0.70
27:BE:31:VAL:HG22	27:BE:96:VAL:HG21	1.72	0.70
44:DX:1:MET:HB2	44:DX:6:LEU:HA	1.73	0.70
23:BB:851:C:O2'	45:BY:45:GLY:HA3	1.92	0.70
22:DA:57:A:H4'	28:DF:26:GLN:NE2	2.07	0.70
23:BB:101:A:OP1	42:BU:90:LYS:HB3	1.92	0.70
10:CK:16:SER:CA	10:CK:78:ILE:HA	2.22	0.70
13:CN:31:SER:HA	13:CN:40:ARG:HA	1.74	0.70
36:BO:17:LYS:HE2	43:BW:77:LYS:HD2	1.73	0.70
1:AA:186:C:H4'	19:AT:75:LYS:HB2	1.74	0.70
1:CA:473:U:H2'	1:CA:474:G:H8	1.57	0.70
52:DI:1:ALA:H3	52:DI:3:LYS:HE2	1.56	0.70
34:BM:100:LYS:HE3	34:BM:100:LYS:N	2.07	0.70
33:BL:63:LYS:HD3	50:B3:7:ARG:CZ	2.22	0.70
27:BE:119:ILE:HA	27:BE:189:THR:HA	1.74	0.70
27:BE:135:ALA:HA	27:BE:138:LEU:HB2	1.74	0.70
37:DP:47:ILE:CG2	37:DP:48:ALA:H	2.02	0.70
23:DB:1141:U:H4'	23:DB:1142:A:O4'	1.91	0.70
15:AP:42:ILE:HG22	15:AP:43:ALA:H	1.55	0.70
6:CG:11:ILE:HG21	6:CG:27:ASN:HD21	1.57	0.70
34:BM:108:VAL:N	34:BM:109:PRO:HD2	2.06	0.70
8:CI:79:ARG:HA	8:CI:82:ILE:HD12	1.74	0.70
23:BB:775:G:H4'	23:BB:776:G:H5'	1.72	0.70
1:AA:390:U:H2'	1:AA:391:G:C8	2.27	0.70
27:DE:137:LYS:HA	27:DE:137:LYS:NZ	2.07	0.70
40:BS:66:ILE:HD12	40:BS:66:ILE:H	1.54	0.70
25:BC:42:ARG:HG2	25:BC:43:ASN:N	2.06	0.69
23:BB:2484:G:H1'	34:BM:119:LEU:HD12	1.73	0.69
26:BD:11:MET:HG2	26:BD:12:THR:H	1.55	0.69
33:BL:25:SER:HB3	33:BL:27:LEU:HG	1.72	0.69
49:D2:25:LYS:HD2	49:D2:25:LYS:N	2.05	0.69
35:DN:8:ARG:NH1	35:DN:46:ARG:HG3	2.07	0.69
2:CC:39:ARG:NH2	13:CN:91:GLU:HB3	2.07	0.69
1:CA:1316:G:H2'	1:CA:1318:A:OP2	1.92	0.69
26:BD:106:LYS:NZ	26:BD:208:LYS:HD3	2.07	0.69
39:DR:42:ALA:HB1	39:DR:53:PHE:CD1	2.27	0.69
30:BH:81:ALA:HA	30:BH:146:VAL:HA	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BU:7:ASP:HA	42:BU:24:VAL:HA	1.72	0.69
42:BU:79:ALA:O	42:BU:96:LYS:HA	1.92	0.69
23:BB:2621:G:O2'	26:BD:164:GLN:HB2	1.93	0.69
23:DB:742:A:H2'	23:DB:743:A:H8	1.56	0.69
23:DB:2471:A:O2'	23:DB:2472:G:H8	1.74	0.69
2:AC:57:GLU:HB2	2:AC:64:ARG:HB2	1.73	0.69
4:CE:152:VAL:HG21	7:CH:98:LEU:HB3	1.74	0.69
23:DB:1799:G:H4'	23:DB:1800:C:O5'	1.92	0.69
25:BC:127:ASN:HD22	25:BC:128:THR:N	1.90	0.69
27:BE:146:VAL:O	27:BE:184:ASP:HB2	1.92	0.69
32:DK:71:ARG:CB	32:DK:72:PRO:HD2	2.22	0.69
30:BH:125:THR:HA	30:BH:146:VAL:HB	1.73	0.69
33:BL:142:ILE:HG13	33:BL:143:GLU:H	1.56	0.69
31:BJ:17:VAL:HG13	31:BJ:57:LEU:HD21	1.73	0.69
23:DB:1825:U:H5'	25:DC:244:VAL:HG22	1.73	0.69
42:DU:71:ILE:HD12	42:DU:102:ILE:HD12	1.74	0.69
32:BK:2:ILE:HD11	32:BK:8:LEU:HD11	1.75	0.69
26:DD:122:VAL:HA	26:DD:128:ARG:CG	2.21	0.69
26:BD:62:LYS:CD	26:BD:62:LYS:H	2.04	0.69
23:BB:630:G:H1	33:BL:69:ARG:NH2	1.90	0.69
34:BM:108:VAL:O	34:BM:110:GLU:N	2.25	0.69
11:CL:98:ARG:HB3	11:CL:116:TYR:HA	1.73	0.69
1:AA:814:A:H5'	1:AA:1511:G:H4'	1.73	0.69
23:BB:1440:U:H2'	23:BB:1441:G:H8	1.57	0.69
1:AA:922:G:H2'	1:AA:923:A:C8	2.27	0.69
14:CO:88:ARG:HH22	23:DB:714:U:H3'	1.57	0.69
23:BB:118:A:H5'	23:BB:119:A:H8	1.56	0.69
50:B3:24:LYS:HZ3	50:B3:29:ARG:HH22	1.38	0.69
11:CL:43:LYS:CB	11:CL:44:PRO:HD2	2.16	0.69
25:BC:136:VAL:HG12	25:BC:165:ALA:HA	1.75	0.69
27:BE:128:ALA:HB3	27:BE:129:PRO:CD	2.20	0.69
27:DE:14:VAL:HG11	27:DE:16:GLU:OE1	1.91	0.69
23:DB:704:G:H1'	23:DB:727:A:N6	2.07	0.69
25:BC:181:ARG:NH1	25:BC:260:LYS:HD2	2.08	0.69
29:DG:53:PRO:HG2	29:DG:61:TRP:CZ3	2.27	0.69
33:DL:79:LEU:HD23	33:DL:110:VAL:HB	1.75	0.69
1:AA:1409:C:H42	1:AA:1491:G:H1	1.39	0.69
1:CA:1071:C:H2'	1:CA:1072:G:C8	2.27	0.69
4:CE:35:LEU:HD21	4:CE:136:VAL:HG21	1.72	0.69
42:DU:11:ILE:HB	42:DU:69:VAL:HG23	1.74	0.69
14:CO:38:LEU:HD23	14:CO:55:LEU:HD13	1.73	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:210:ALA:HA	25:DC:213:ARG:HD2	1.74	0.69
25:BC:61:TYR:CD2	25:BC:84:PRO:HD2	2.28	0.69
23:BB:2786:U:H4'	26:BD:66:GLY:HA2	1.74	0.69
26:DD:189:VAL:HG12	26:DD:190:LYS:H	1.57	0.69
12:CM:10:ASP:HA	12:CM:44:ILE:HD11	1.72	0.69
23:DB:1105:U:H2'	23:DB:1106:G:H8	1.57	0.69
24:BV:76:ASP:HB2	34:BM:136:MET:SD	2.33	0.69
27:BE:193:VAL:HG12	27:BE:194:LYS:HD2	1.73	0.69
25:BC:22:GLU:HA	25:BC:202:ARG:CZ	2.21	0.69
31:DJ:135:GLN:HE22	31:DJ:137:PRO:HB2	1.57	0.69
33:BL:120:VAL:HG12	33:BL:138:ALA:HB3	1.73	0.69
26:BD:114:LYS:HB3	35:BN:3:HIS:NE2	2.08	0.69
52:DI:55:PRO:HD3	52:DI:74:PRO:HD3	1.75	0.69
23:BB:1639:C:C2'	23:BB:1640:A:H5''	2.21	0.69
9:CJ:37:ARG:HB2	9:CJ:76:ILE:HA	1.72	0.69
23:DB:1225:G:OP1	39:DR:90:ARG:HD2	1.91	0.69
10:AK:88:PRO:HD3	21:AU:28:LEU:HD13	1.73	0.69
1:CA:1009:U:H1'	1:CA:1021:A:N1	2.07	0.69
23:DB:1262:A:H2	47:D0:6:LYS:HD2	1.57	0.69
38:DQ:89:ILE:H	38:DQ:89:ILE:HD12	1.56	0.69
1:AA:541:G:O2'	3:AD:39:GLN:HB2	1.92	0.69
38:BQ:52:ARG:NH2	38:BQ:55:GLN:HG2	2.07	0.69
25:BC:119:VAL:HG22	25:BC:133:ASN:HD21	1.57	0.69
47:B0:31:LYS:HD3	47:B0:47:TYR:HE2	1.57	0.69
23:DB:922:C:H1'	43:DW:22:VAL:HG21	1.74	0.69
42:BU:3:LYS:HE3	42:BU:81:ARG:NH2	2.07	0.69
29:DG:171:LYS:HZ2	29:DG:173:ALA:HA	1.57	0.69
33:DL:78:ARG:O	33:DL:81:ASP:HB2	1.92	0.69
33:BL:38:GLN:O	33:BL:39:LYS:HG3	1.92	0.69
23:BB:1485:U:H2'	23:BB:1486:U:C6	2.28	0.69
7:CH:31:LEU:HG	7:CH:35:ILE:HD11	1.73	0.69
23:BB:1902:C:H4'	25:BC:240:GLY:O	1.92	0.69
1:AA:71:A:H61	1:AA:99:C:H1'	1.56	0.69
23:DB:936:A:H2'	23:DB:937:C:C6	2.28	0.69
25:DC:174:ARG:HG3	25:DC:180:MET:HG3	1.74	0.69
26:BD:15:PHE:HD2	26:BD:18:ASP:HB2	1.58	0.69
26:DD:89:GLU:HB3	26:DD:92:VAL:O	1.93	0.69
39:BR:78:ARG:CB	39:BR:87:GLN:HA	2.20	0.69
27:DE:4:VAL:HA	27:DE:14:VAL:HG22	1.74	0.69
41:BT:13:ALA:O	41:BT:32:LEU:HA	1.93	0.69
9:CJ:57:VAL:HG22	9:CJ:58:ASN:H	1.56	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DK:110:GLU:HA	32:DK:113:MET:HG2	1.73	0.69
26:DD:140:HIS:O	26:DD:141:ARG:HG2	1.92	0.69
33:DL:109:LYS:NZ	33:DL:109:LYS:HB2	2.08	0.69
1:AA:1326:U:H2'	1:AA:1327:C:C6	2.28	0.69
39:BR:62:GLU:HG3	39:BR:103:ALA:HA	1.75	0.69
1:CA:1218:C:H2'	1:CA:1219:A:C8	2.28	0.69
1:CA:918:A:H2'	1:CA:919:A:C8	2.28	0.69
18:CS:14:LEU:HD12	18:CS:15:LEU:N	2.07	0.69
23:BB:150:U:H2'	23:BB:151:C:H6	1.58	0.69
3:CD:87:GLU:HG2	3:CD:187:ARG:HD3	1.75	0.69
6:AG:149:ALA:HB1	10:AK:58:THR:HG21	1.75	0.69
2:CC:95:GLY:O	2:CC:96:VAL:HG13	1.91	0.69
4:CE:157:GLY:H	7:CH:43:GLY:HA3	1.57	0.69
23:DB:2185:U:H2'	23:DB:2186:G:O4'	1.93	0.69
52:DI:9:LYS:HG2	52:DI:57:VAL:HG22	1.74	0.69
1:CA:390:U:H2'	1:CA:391:G:C8	2.27	0.69
15:AP:26:ASN:CG	15:AP:31:ARG:HB3	2.13	0.69
1:AA:1320:C:H41	18:AS:36:ARG:HG2	1.57	0.69
1:AA:1251:A:H2'	1:AA:1252:A:C8	2.28	0.69
21:AU:14:ALA:CA	21:AU:16:ARG:HD2	2.22	0.69
23:BB:450:G:H4'	27:BE:47:LYS:HZ2	1.57	0.69
25:BC:50:THR:C	25:BC:51:ARG:HG3	2.12	0.69
25:BC:110:LYS:HD2	25:BC:111:ALA:N	2.07	0.69
25:BC:110:LYS:HD2	25:BC:111:ALA:H	1.55	0.69
46:BZ:3:LYS:HE3	46:BZ:8:LYS:HA	1.75	0.69
46:BZ:63:ARG:HA	46:BZ:63:ARG:NE	2.07	0.69
37:BP:22:GLY:HA3	37:BP:91:VAL:HG13	1.75	0.69
23:BB:2512:C:H1'	26:BD:146:ILE:HG23	1.75	0.69
27:BE:118:LEU:HD12	27:BE:187:VAL:HG12	1.73	0.69
43:BW:43:LYS:HG2	43:BW:76:ARG:NH2	2.07	0.69
23:DB:2898:U:O2'	31:DJ:137:PRO:HB3	1.91	0.69
31:DJ:41:LYS:HG2	38:DQ:63:ARG:NH1	2.08	0.69
43:DW:42:THR:H	43:DW:65:LYS:HA	1.57	0.69
33:BL:78:ARG:HH21	33:BL:82:LEU:HD23	1.58	0.69
27:DE:190:ALA:HB3	27:DE:193:VAL:HG22	1.73	0.69
40:DS:25:ARG:HD2	40:DS:26:GLY:N	2.08	0.69
41:DT:15:HIS:O	41:DT:16:VAL:HB	1.93	0.69
28:DF:56:LEU:HD13	28:DF:88:VAL:HG21	1.75	0.69
28:BF:33:ILE:HG13	28:BF:34:THR:H	1.58	0.69
23:DB:2620:C:OP1	26:DD:157:LYS:HB2	1.92	0.69
23:DB:2511:U:H5''	26:DD:129:THR:CG2	2.22	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:17:U:H2'	1:CA:18:C:C6	2.27	0.69
42:BU:43:LYS:HA	42:BU:57:ILE:HA	1.74	0.69
23:BB:990:A:H1'	23:BB:1156:A:C2	2.27	0.69
1:CA:279:A:H5''	1:CA:280:C:H3'	1.75	0.69
1:AA:473:U:H2'	1:AA:474:G:H8	1.58	0.69
15:CP:40:ASN:HD21	15:CP:42:ILE:HG12	1.57	0.69
42:DU:95:PHE:HD2	42:DU:99:SER:HB3	1.56	0.69
3:CD:160:LEU:HD13	3:CD:161:ALA:N	2.08	0.69
23:DB:1174:U:H1'	23:DB:1176:U:C4	2.28	0.69
21:CU:48:LYS:HA	21:CU:51:ALA:HB3	1.73	0.69
19:CT:38:ILE:HD11	19:CT:82:ILE:HG22	1.74	0.69
29:BG:9:VAL:HG23	29:BG:47:ASN:HB2	1.74	0.69
23:DB:1028:A:H2'	23:DB:1029:A:C8	2.28	0.69
38:DQ:29:ARG:HH11	38:DQ:29:ARG:HA	1.56	0.69
1:AA:673:A:H2'	1:AA:674:G:C8	2.27	0.69
33:BL:106:GLU:HG2	33:BL:107:PHE:H	1.57	0.69
33:BL:56:PRO:HA	33:BL:60:ARG:CZ	2.23	0.69
23:BB:1565:C:OP1	25:BC:23:LEU:HD23	1.93	0.69
30:DH:8:LYS:HE2	30:DH:9:VAL:H	1.57	0.69
32:BK:85:VAL:HG11	32:BK:115:ILE:HD12	1.73	0.69
43:DW:44:PHE:HB3	43:DW:77:LYS:CB	2.23	0.69
23:DB:65:U:H2'	23:DB:66:C:H6	1.58	0.69
18:AS:48:ILE:HB	18:AS:59:VAL:HB	1.73	0.69
23:DB:1368:G:H5''	49:D2:25:LYS:HE3	1.75	0.69
34:DM:53:MET:O	34:DM:112:LEU:HD21	1.93	0.69
29:DG:39:ALA:HB1	29:DG:54:ARG:HB2	1.74	0.69
39:BR:66:HIS:H	39:BR:98:ILE:HD13	1.57	0.69
4:CE:87:VAL:HG13	4:CE:88:HIS:N	2.07	0.69
1:CA:439:U:H4'	3:CD:120:LYS:HD2	1.74	0.69
9:CJ:32:THR:HG23	9:CJ:33:GLY:H	1.58	0.69
20:AB:102:ASN:O	20:AB:106:VAL:HG23	1.93	0.69
23:DB:1118:C:H2'	23:DB:1119:U:H6	1.58	0.69
25:DC:156:SER:O	25:DC:195:GLY:HA3	1.93	0.69
33:BL:56:PRO:C	33:BL:60:ARG:HB2	2.13	0.69
43:DW:66:VAL:HG22	43:DW:67:LYS:N	2.08	0.69
23:DB:946:C:H2'	23:DB:947:A:H8	1.58	0.69
39:DR:22:LEU:HD12	39:DR:23:GLU:H	1.58	0.69
23:DB:2025:C:H2'	23:DB:2026:U:C6	2.28	0.69
47:D0:36:LYS:HB2	47:D0:41:HIS:HA	1.74	0.69
20:CB:65:LYS:HB2	20:CB:157:PRO:HA	1.74	0.69
30:BH:6:LEU:HA	30:BH:15:LEU:C	2.14	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:125:A:H4'	49:D2:13:ASN:HD21	1.54	0.69
4:AE:101:GLY:H	4:AE:121:ASN:HD21	1.41	0.69
11:CL:77:SER:O	11:CL:79:ILE:HG23	1.92	0.69
25:BC:27:LYS:N	25:BC:28:PRO:CD	2.56	0.69
13:AN:50:LEU:HD23	13:AN:51:PRO:HD3	1.73	0.69
36:BO:55:GLU:HG3	36:BO:56:LYS:H	1.58	0.69
31:BJ:10:THR:HB	31:BJ:13:ARG:HH12	1.58	0.69
39:BR:54:VAL:CG1	39:BR:54:VAL:CA	2.69	0.68
25:DC:193:GLU:O	25:DC:194:VAL:HG13	1.93	0.68
37:BP:5:LYS:C	37:BP:7:LEU:H	1.96	0.68
43:DW:44:PHE:HB3	43:DW:77:LYS:HB3	1.75	0.68
43:DW:39:GLN:HG2	43:DW:66:VAL:O	1.93	0.68
43:DW:67:LYS:HG2	43:DW:71:LYS:HB2	1.74	0.68
12:CM:14:ALA:HB3	12:CM:40:GLU:HA	1.75	0.68
28:BF:174:PHE:N	28:BF:175:PRO:CD	2.57	0.68
9:AJ:52:LEU:HB2	13:AN:80:ARG:HD2	1.74	0.68
26:DD:62:LYS:HG2	26:DD:63:PRO:HD3	1.75	0.68
1:AA:780:A:O2'	1:AA:781:A:H5''	1.91	0.68
26:DD:22:ILE:O	26:DD:22:ILE:HG13	1.93	0.68
23:BB:1594:U:H2'	23:BB:1595:C:C6	2.27	0.68
1:CA:268:U:H2'	1:CA:269:C:C6	2.28	0.68
9:AJ:6:ILE:HG12	9:AJ:102:LEU:HD11	1.74	0.68
1:AA:1208:C:H2'	1:AA:1209:C:O4'	1.93	0.68
11:AL:80:LEU:HD23	11:AL:97:VAL:HG21	1.74	0.68
34:DM:20:LEU:HD13	34:DM:38:ARG:HG3	1.75	0.68
30:DH:129:GLU:HA	30:DH:143:ILE:HA	1.75	0.68
23:DB:1201:U:H2'	23:DB:1202:G:H8	1.58	0.68
52:DI:1:ALA:N	52:DI:3:LYS:HE2	2.08	0.68
25:BC:155:ARG:HB3	25:BC:159:THR:HG21	1.74	0.68
31:DJ:97:PRO:O	31:DJ:100:VAL:HG12	1.93	0.68
23:BB:2052:A:H5'	26:BD:148:GLN:C	2.12	0.68
41:BT:30:ILE:HG22	41:BT:85:VAL:HG22	1.74	0.68
10:CK:83:VAL:HG21	10:CK:96:ILE:HG23	1.74	0.68
41:BT:66:LYS:H	41:BT:77:ARG:HA	1.56	0.68
2:AC:154:GLY:HA3	2:AC:162:ALA:HB1	1.76	0.68
30:BH:73:ASN:ND2	30:BH:74:ALA:H	1.91	0.68
23:DB:2680:U:H5'	26:DD:194:PRO:HA	1.73	0.68
45:DY:26:LEU:HD12	45:DY:28:LEU:HD22	1.74	0.68
23:DB:570:G:H2'	23:DB:2030:A:N7	2.08	0.68
29:DG:95:ALA:HB1	29:DG:130:ILE:HD11	1.75	0.68
1:CA:1030:U:H5''	1:CA:1031:C:H5	1.57	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:559:A:H4'	1:CA:560:A:H3'	1.75	0.68
38:DQ:102:LYS:O	38:DQ:106:THR:HG22	1.92	0.68
23:DB:2615:U:H1'	47:D0:3:GLN:HG3	1.74	0.68
1:AA:518:C:H2'	1:AA:530:G:C8	2.28	0.68
7:CH:11:THR:HG22	7:CH:14:ARG:HH12	1.56	0.68
31:BJ:43:GLU:HG3	31:BJ:44:TYR:H	1.58	0.68
25:DC:179:GLU:OE2	25:DC:266:ILE:HA	1.93	0.68
50:B3:7:ARG:NE	50:B3:11:LYS:HZ3	1.90	0.68
26:BD:170:VAL:HG13	26:BD:171:THR:N	2.06	0.68
25:BC:140:VAL:O	25:BC:141:HIS:HB2	1.93	0.68
37:DP:80:VAL:O	37:DP:80:VAL:HG13	1.92	0.68
23:DB:1285:A:H2'	23:DB:1286:A:H5''	1.73	0.68
26:BD:37:VAL:HG22	26:BD:46:ARG:HE	1.57	0.68
5:AF:37:HIS:CE1	5:AF:65:GLU:HB2	2.29	0.68
34:BM:108:VAL:N	34:BM:109:PRO:CD	2.56	0.68
23:DB:1797:G:O3'	25:DC:253:GLY:HA2	1.91	0.68
42:BU:38:ILE:HB	42:BU:62:ALA:HB3	1.75	0.68
10:CK:69:CYS:O	10:CK:73:VAL:HG13	1.92	0.68
23:DB:1485:U:H2'	23:DB:1486:U:C6	2.28	0.68
35:BN:73:ASN:N	35:BN:73:ASN:HD22	1.92	0.68
11:AL:24:GLU:HB3	11:AL:26:CYS:SG	2.34	0.68
1:AA:1021:A:H2'	1:AA:1022:A:O4'	1.93	0.68
23:BB:2301:C:H2'	23:BB:2302:U:C6	2.28	0.68
23:BB:1857:G:H2'	23:BB:1884:G:H22	1.57	0.68
20:AB:141:GLU:O	20:AB:145:ASN:HB2	1.93	0.68
8:AI:112:ARG:HB2	8:AI:112:ARG:NH1	2.07	0.68
23:BB:2155:U:H2'	23:BB:2156:G:O4'	1.91	0.68
33:DL:62:PRO:HB3	50:D3:12:ARG:CD	2.24	0.68
21:CU:4:LYS:HB3	21:CU:6:ARG:NH1	2.04	0.68
39:DR:47:VAL:CG1	39:DR:49:ILE:HG12	2.22	0.68
36:DO:15:ARG:NH1	43:DW:76:ARG:HD2	2.07	0.68
1:AA:1060:U:H5''	9:AJ:53:ILE:HG22	1.75	0.68
1:AA:1218:C:H2'	1:AA:1219:A:H8	1.55	0.68
42:DU:27:VAL:HA	42:DU:33:VAL:HG22	1.76	0.68
1:CA:429:U:P	3:CD:12:ARG:HH21	2.16	0.68
9:AJ:40:ILE:HG13	9:AJ:73:LEU:HB3	1.75	0.68
23:DB:135:U:H2'	23:DB:136:G:C8	2.27	0.68
1:CA:1080:A:H4'	4:CE:20:VAL:HG21	1.75	0.68
48:D1:24:LYS:HB2	48:D1:24:LYS:HZ3	1.58	0.68
35:DN:86:ARG:NE	35:DN:117:ASP:HA	2.08	0.68
1:CA:1031:C:H4'	1:CA:1032:G:C5'	2.24	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2395:C:H2'	23:DB:2396:G:O4'	1.93	0.68
23:DB:2755:C:H2'	51:D4:19:ARG:NH2	2.09	0.68
51:D4:26:ILE:CG1	51:D4:35:GLN:H	2.00	0.68
25:BC:155:ARG:HH21	25:BC:155:ARG:HG2	1.59	0.68
45:DY:2:LYS:HB3	45:DY:6:ILE:HD13	1.75	0.68
45:DY:4:ILE:HG23	45:DY:5:LYS:HD3	1.74	0.68
33:BL:85:VAL:CG2	33:BL:98:ALA:H	2.06	0.68
25:DC:216:ARG:HB3	25:DC:217:PRO:CD	2.23	0.68
40:DS:3:THR:OG1	40:DS:57:ASN:HB2	1.94	0.68
42:BU:3:LYS:HE3	42:BU:81:ARG:HH22	1.59	0.68
33:DL:78:ARG:NE	33:DL:113:ALA:HB1	2.08	0.68
23:BB:1182:G:H2'	23:BB:1183:U:O4'	1.93	0.68
39:DR:78:ARG:HD3	39:DR:88:GLY:O	1.94	0.68
49:D2:13:ASN:HA	49:D2:16:HIS:O	1.92	0.68
25:BC:220:ARG:NE	25:BC:220:ARG:HA	2.09	0.68
27:DE:103:GLY:O	27:DE:106:LYS:HG2	1.92	0.68
16:CQ:59:GLU:O	16:CQ:75:VAL:HG22	1.93	0.68
9:AJ:71:LEU:H	9:AJ:71:LEU:HD12	1.58	0.68
2:CC:116:ALA:HB1	2:CC:186:SER:OG	1.94	0.68
1:AA:268:U:H2'	1:AA:269:C:C6	2.28	0.68
25:BC:74:PRO:HB2	25:BC:96:LYS:HE3	1.74	0.68
21:AU:14:ALA:HA	21:AU:16:ARG:HD2	1.76	0.68
34:BM:70:ASP:H	34:BM:71:LYS:HZ2	1.41	0.68
25:BC:68:ARG:HH21	25:BC:190:THR:HG23	1.59	0.68
37:DP:90:ALA:H	37:DP:112:ARG:HH21	1.41	0.68
33:DL:58:TYR:HE1	50:D3:51:LYS:HG2	1.58	0.68
31:DJ:135:GLN:HE21	31:DJ:138:GLN:H	1.41	0.68
30:DH:122:LEU:HD13	30:DH:146:VAL:HG22	1.74	0.68
18:AS:49:ALA:HA	18:AS:57:VAL:O	1.93	0.68
23:DB:1368:G:H5'	49:D2:25:LYS:HG2	1.74	0.68
44:DX:25:GLN:O	44:DX:29:ARG:HG3	1.93	0.68
23:DB:536:G:H5''	38:DQ:52:ARG:HH22	1.58	0.68
48:B1:46:VAL:HG22	48:B1:47:ILE:H	1.59	0.68
21:AU:7:GLU:OE2	21:AU:15:LEU:HD22	1.93	0.68
23:BB:1799:G:H4'	23:BB:1800:C:O5'	1.92	0.68
11:AL:28:GLN:HG3	11:AL:80:LEU:HD21	1.74	0.68
23:DB:1406:U:H2'	23:DB:1407:G:H8	1.58	0.68
1:AA:1000:A:H2'	1:AA:1001:C:C6	2.29	0.68
31:BJ:37:ARG:HH21	31:BJ:110:PRO:HG3	1.58	0.68
49:B2:33:ARG:O	49:B2:37:LYS:HB2	1.93	0.68
20:CB:185:ILE:HA	20:CB:199:ILE:HG13	1.74	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DS:46:LEU:CA	40:DS:49:LYS:HB2	2.13	0.68
33:BL:95:LEU:H	33:BL:95:LEU:HD12	1.58	0.68
27:DE:136:GLN:O	27:DE:139:LYS:HG2	1.94	0.68
26:BD:117:GLY:O	26:BD:165:MET:HB2	1.94	0.68
23:BB:1113:U:H5'	29:BG:2:ARG:N	2.09	0.68
12:AM:64:VAL:HA	12:AM:68:LEU:HD12	1.76	0.68
37:BP:77:SER:HB2	37:BP:78:PRO:HD3	1.76	0.68
39:BR:18:GLN:HB3	39:BR:99:THR:HA	1.75	0.68
49:D2:12:ARG:HG2	49:D2:46:LYS:HA	1.75	0.68
35:DN:86:ARG:NH2	35:DN:116:VAL:HG12	2.09	0.68
23:DB:304:U:H2'	23:DB:305:C:C6	2.29	0.68
23:DB:864:G:O2'	23:DB:865:C:H5'	1.94	0.68
38:BQ:92:LYS:HG2	38:BQ:93:ILE:H	1.59	0.68
34:BM:8:LYS:HD2	34:BM:70:ASP:HA	1.76	0.68
21:CU:15:LEU:HA	21:CU:17:ARG:HH11	1.59	0.68
35:BN:10:LEU:H	35:BN:17:ARG:NH1	1.88	0.68
23:DB:160:A:N6	23:DB:167:A:H1'	2.09	0.68
23:BB:1060:U:O2	23:BB:1088:A:N7	2.27	0.68
23:BB:2723:C:OP1	35:BN:3:HIS:HB3	1.94	0.68
33:DL:39:LYS:CA	33:DL:39:LYS:HZ2	2.06	0.68
1:CA:673:A:H2'	1:CA:674:G:C8	2.28	0.68
23:BB:2307:G:H4'	23:BB:2311:A:H61	1.58	0.68
41:BT:65:GLY:O	41:BT:66:LYS:HB3	1.93	0.68
36:BO:15:ARG:HH22	36:BO:17:LYS:HD2	1.59	0.68
16:AQ:20:ILE:HG13	16:AQ:45:VAL:HB	1.73	0.68
17:AR:46:THR:HG23	17:AR:51:GLN:HB2	1.75	0.68
1:CA:1436:U:H2'	1:CA:1437:A:H8	1.58	0.68
23:BB:1354:A:H2'	23:BB:1355:G:O4'	1.94	0.68
23:BB:191:A:H2'	23:BB:192:C:C6	2.29	0.68
23:BB:320:A:H4'	23:BB:322:A:N7	2.09	0.68
27:BE:164:LEU:O	27:BE:165:HIS:HB2	1.93	0.68
31:BJ:67:ASN:O	31:BJ:70:THR:HG22	1.94	0.68
34:BM:101:VAL:O	34:BM:102:LEU:HD12	1.94	0.68
46:BZ:5:ILE:HB	46:BZ:51:VAL:HG12	1.74	0.68
33:DL:3:LEU:HD23	33:DL:4:ASN:H	1.59	0.68
25:BC:22:GLU:HA	25:BC:202:ARG:NH2	2.09	0.68
12:AM:109:LYS:HG3	12:AM:110:GLY:H	1.59	0.68
31:BJ:58:ASN:ND2	31:BJ:128:ASN:HB2	2.08	0.68
42:BU:95:PHE:HD1	42:BU:96:LYS:HG2	1.59	0.68
1:CA:1342:C:H2'	1:CA:1343:G:C8	2.28	0.68
23:BB:1112:G:H5'	29:BG:2:ARG:HE	1.58	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1454:C:C5'	35:BN:63:ARG:HH21	2.07	0.68
29:DG:71:LEU:HA	29:DG:74:MET:SD	2.34	0.68
4:CE:87:VAL:HG22	4:CE:88:HIS:H	1.58	0.68
2:CC:166:TRP:HE1	2:CC:168:ARG:HB2	1.58	0.68
19:CT:27:MET:HG2	19:CT:31:ILE:HD11	1.75	0.68
1:CA:518:C:H2'	1:CA:530:G:C8	2.29	0.68
23:BB:2769:U:H2'	23:BB:2770:G:H8	1.58	0.68
30:DH:115:VAL:HG22	30:DH:117:LEU:H	1.59	0.68
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.29	0.68
1:AA:967:C:H3'	1:AA:968:A:H5'	1.75	0.68
14:AO:68:TYR:CZ	14:AO:72:LYS:HG3	2.29	0.68
29:BG:40:VAL:HG13	29:BG:52:GLY:O	1.92	0.68
23:BB:956:G:N2	23:BB:959:A:H3'	2.09	0.68
23:BB:1818:U:H5''	25:BC:155:ARG:CG	2.24	0.68
5:CF:3:HIS:HB3	5:CF:92:THR:CA	2.22	0.68
13:AN:66:THR:HG23	13:AN:67:GLY:H	1.59	0.68
25:DC:224:MET:O	25:DC:225:ASN:HB2	1.92	0.68
47:D0:41:HIS:CD2	47:D0:46:GLY:HA2	2.29	0.68
29:DG:17:LYS:NZ	29:DG:19:ASN:HB2	2.09	0.68
9:CJ:39:PRO:HA	9:CJ:74:VAL:HG22	1.76	0.68
23:DB:992:C:H4'	38:DQ:46:TYR:OH	1.94	0.68
23:BB:2840:C:H5''	35:BN:53:THR:HG21	1.75	0.68
1:CA:1225:A:H5'	12:CM:101:THR:OG1	1.93	0.68
39:DR:73:LYS:HD2	39:DR:73:LYS:N	2.08	0.68
23:DB:1856:U:H2'	23:DB:1857:G:O4'	1.94	0.68
23:BB:1568:G:OP1	25:BC:61:TYR:HB2	1.94	0.68
45:DY:26:LEU:HB2	45:DY:28:LEU:HD13	1.74	0.68
4:CE:95:MET:HA	4:CE:124:ALA:HB2	1.74	0.68
6:CG:59:GLU:HA	6:CG:62:GLU:OE2	1.93	0.68
22:BA:98:G:H1	24:BV:14:LYS:HB2	1.58	0.68
13:CN:62:ARG:H	13:CN:72:PHE:HZ	1.41	0.68
41:DT:62:VAL:HG23	41:DT:63:VAL:H	1.59	0.68
50:D3:33:THR:C	50:D3:34:LYS:HD2	2.15	0.68
23:DB:1098:A:C4'	52:DI:3:LYS:HB3	2.22	0.67
31:BJ:11:VAL:HG11	31:BJ:44:TYR:CE1	2.29	0.67
24:BV:57:TYR:HB3	34:BM:133:LYS:HG3	1.76	0.67
37:DP:90:ALA:HB3	37:DP:112:ARG:N	2.08	0.67
37:BP:70:GLU:HG2	37:BP:71:ARG:HG2	1.75	0.67
45:DY:2:LYS:CB	45:DY:37:ARG:HB2	2.24	0.67
12:AM:9:PRO:O	12:AM:44:ILE:HG12	1.94	0.67
52:BI:11:GLN:HA	52:BI:55:PRO:HA	1.74	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:479:A:N3	23:BB:481:G:H5''	2.09	0.67
42:BU:60:LYS:HG3	42:BU:61:GLU:H	1.58	0.67
25:BC:28:PRO:HB2	25:BC:79:ARG:HH21	1.59	0.67
34:DM:38:ARG:HD2	34:DM:39:GLY:N	2.09	0.67
20:CB:94:ARG:N	20:CB:94:ARG:HE	1.93	0.67
23:DB:2769:U:H2'	23:DB:2770:G:H8	1.58	0.67
23:DB:1508:A:H5''	23:DB:1509:A:N7	2.09	0.67
29:BG:175:LYS:HD3	29:BG:176:LYS:N	2.09	0.67
1:AA:1236:A:H4'	1:AA:1304:G:H4'	1.76	0.67
23:DB:483:A:H2'	23:DB:484:C:H5'	1.76	0.67
1:AA:1241:G:H2'	1:AA:1242:G:H8	1.59	0.67
35:BN:98:LEU:O	35:BN:111:ALA:HA	1.94	0.67
29:DG:15:ASP:HB2	29:DG:26:LYS:HE3	1.76	0.67
38:BQ:57:ARG:HD2	38:BQ:92:LYS:HZ2	1.59	0.67
23:DB:448:U:H6	27:DE:79:ARG:HG3	1.58	0.67
27:DE:164:LEU:HD22	27:DE:164:LEU:O	1.94	0.67
25:BC:22:GLU:HA	25:BC:202:ARG:NE	2.09	0.67
25:BC:19:VAL:HG12	25:BC:20:ASN:N	2.08	0.67
20:AB:67:LEU:HD21	20:AB:157:PRO:HG3	1.76	0.67
30:BH:82:SER:HB2	30:BH:94:ILE:HD11	1.74	0.67
29:BG:29:ASN:N	29:BG:29:ASN:HD22	1.92	0.67
13:CN:26:LEU:HA	13:CN:29:ILE:HD12	1.75	0.67
28:BF:107:VAL:N	28:BF:108:PRO:CD	2.55	0.67
23:BB:91:A:H2'	23:BB:92:U:C6	2.29	0.67
23:DB:1387:A:H2'	23:DB:1388:G:H8	1.58	0.67
23:DB:1178:C:H2'	23:DB:1179:G:C8	2.29	0.67
23:DB:2393:U:H5'	33:DL:61:LEU:O	1.95	0.67
23:DB:590:A:H2'	23:DB:591:U:C6	2.28	0.67
33:BL:118:THR:N	33:BL:119:PRO:CD	2.56	0.67
27:DE:143:LEU:HD22	27:DE:143:LEU:N	2.08	0.67
23:DB:165:A:H2'	23:DB:166:U:H6	1.59	0.67
23:DB:1060:U:O2	23:DB:1088:A:N7	2.27	0.67
23:BB:2039:U:H2'	23:BB:2040:G:H8	1.59	0.67
23:DB:1197:G:H2'	23:DB:1198:U:H6	1.59	0.67
7:AH:111:THR:HG23	7:AH:114:ALA:HB2	1.76	0.67
7:AH:111:THR:H	7:AH:114:ALA:HB3	1.60	0.67
23:DB:742:A:H2'	23:DB:743:A:C8	2.28	0.67
23:DB:2157:G:N3	23:DB:2157:G:H2'	2.09	0.67
34:BM:40:ARG:HH11	34:BM:92:TRP:HE3	1.40	0.67
46:BZ:26:SER:O	46:BZ:28:VAL:HG13	1.93	0.67
23:DB:1820:U:H3	25:DC:197:ALA:CB	2.07	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:77:HIS:CD2	31:BJ:84:ILE:HB	2.29	0.67
26:DD:70:LYS:H	26:DD:92:VAL:HG11	1.59	0.67
26:DD:77:ARG:HB2	26:DD:77:ARG:NH1	2.08	0.67
31:DJ:35:ARG:HB3	31:DJ:54:ILE:HD11	1.77	0.67
30:BH:26:ALA:HB1	30:BH:31:VAL:HG23	1.76	0.67
24:DV:9:ARG:HH12	24:DV:12:GLN:HA	1.58	0.67
23:BB:2270:A:H4'	43:BW:18:LYS:CG	2.25	0.67
52:DI:27:LEU:HB2	52:DI:32:VAL:HG21	1.74	0.67
36:BO:10:ARG:HH11	36:BO:10:ARG:HG3	1.59	0.67
42:DU:38:ILE:HD13	42:DU:64:ILE:HG13	1.75	0.67
1:AA:279:A:H5''	1:AA:280:C:H3'	1.74	0.67
2:AC:33:ASP:HB2	13:AN:64:ARG:HD3	1.75	0.67
3:AD:12:ARG:HD2	3:AD:37:PRO:HA	1.75	0.67
23:DB:1099:G:OP1	52:DI:4:VAL:HG12	1.94	0.67
40:DS:46:LEU:HD23	40:DS:49:LYS:HD2	1.75	0.67
23:BB:2572:A:C5	26:BD:150:GLN:HB2	2.30	0.67
8:CI:70:GLY:O	8:CI:74:GLN:HG2	1.94	0.67
28:BF:56:LEU:O	28:BF:59:ILE:HG22	1.93	0.67
35:BN:37:THR:HA	35:BN:109:PRO:O	1.95	0.67
44:DX:4:LYS:HD2	44:DX:7:ARG:HH21	1.60	0.67
19:CT:47:GLN:HG2	19:CT:82:ILE:HD12	1.77	0.67
29:DG:29:ASN:HB2	29:DG:78:VAL:O	1.95	0.67
23:BB:594:U:H2'	23:BB:595:C:C6	2.29	0.67
20:AB:198:VAL:HG22	20:AB:200:PRO:HD3	1.76	0.67
1:AA:1071:C:H2'	1:AA:1072:G:H8	1.60	0.67
20:CB:27:LYS:HB3	20:CB:28:PRO:HD3	1.76	0.67
1:CA:89:U:H2'	1:CA:90:C:C6	2.30	0.67
39:BR:53:PHE:CD1	39:BR:54:VAL:HB	2.30	0.67
23:BB:869:G:H2'	23:BB:870:U:H6	1.58	0.67
25:BC:144:GLU:HB2	25:BC:146:LYS:O	1.94	0.67
27:BE:149:ILE:HG13	27:BE:186:VAL:HG13	1.77	0.67
43:BW:23:LYS:HB2	43:BW:23:LYS:HZ2	1.60	0.67
23:DB:1801:A:N6	25:DC:259:ASN:HD21	1.93	0.67
23:DB:1190:G:OP1	33:DL:39:LYS:N	2.28	0.67
1:AA:1422:G:OP1	32:BK:48:PRO:HA	1.94	0.67
29:DG:36:LEU:H	29:DG:36:LEU:HD12	1.59	0.67
17:AR:58:ILE:O	17:AR:62:ARG:HG3	1.94	0.67
1:CA:1256:A:N1	1:CA:1278:G:H1'	2.10	0.67
1:AA:1029:U:H5''	1:AA:1030:U:H5	1.59	0.67
23:BB:95:A:H4'	44:BX:40:SER:HB3	1.77	0.67
23:BB:324:A:H2'	23:BB:325:G:O4'	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BE:48:THR:HG23	27:BE:86:ALA:HB1	1.76	0.67
1:CA:975:A:O2'	1:CA:1358:U:H1'	1.95	0.67
45:DY:2:LYS:H	45:DY:37:ARG:HB3	1.60	0.67
36:DO:25:ARG:HH21	36:DO:94:ARG:HH12	1.43	0.67
27:DE:47:LYS:HA	27:DE:49:ARG:HE	1.58	0.67
47:B0:29:VAL:HG23	47:B0:36:LYS:HZ2	1.58	0.67
28:DF:98:PHE:HA	28:DF:101:ARG:HG2	1.75	0.67
26:BD:34:VAL:HG22	26:BD:89:GLU:CG	2.25	0.67
29:BG:23:ILE:O	29:BG:33:THR:HA	1.95	0.67
39:BR:18:GLN:HE21	39:BR:99:THR:HB	1.57	0.67
4:CE:87:VAL:HG13	4:CE:88:HIS:H	1.58	0.67
18:CS:32:THR:HG22	18:CS:33:TRP:H	1.60	0.67
35:DN:11:ASN:HB3	35:DN:12:ARG:HD2	1.77	0.67
2:CC:166:TRP:CG	2:CC:167:TYR:N	2.63	0.67
23:BB:2784:U:H5''	26:BD:41:ALA:HB1	1.75	0.67
19:CT:79:THR:HA	19:CT:82:ILE:HG12	1.76	0.67
23:BB:192:C:H2'	23:BB:193:U:H5'	1.77	0.67
43:DW:13:ARG:NE	43:DW:13:ARG:H	1.93	0.67
1:CA:131:A:H2'	1:CA:132:C:C6	2.30	0.67
13:CN:73:LEU:HD12	13:CN:83:VAL:HG21	1.76	0.67
34:DM:16:ARG:HH22	34:DM:72:PRO:HG2	1.59	0.67
40:DS:17:VAL:O	40:DS:20:VAL:HG12	1.95	0.67
23:DB:974:G:H1'	23:DB:975:A:C8	2.30	0.67
16:CQ:10:ARG:NH2	16:CQ:11:VAL:HB	2.10	0.67
23:BB:2037:A:H2'	23:BB:2038:G:C8	2.30	0.67
47:D0:27:LEU:N	47:D0:27:LEU:HD22	2.09	0.67
9:CJ:9:ARG:HH11	9:CJ:73:LEU:HD23	1.58	0.67
52:DI:41:PHE:CE2	52:DI:45:THR:HG21	2.30	0.67
7:AH:92:PRO:HA	7:AH:93:LYS:NZ	2.09	0.67
49:D2:46:LYS:H	49:D2:46:LYS:HE3	1.57	0.67
30:BH:130:VAL:HB	30:BH:142:VAL:HB	1.76	0.67
23:BB:2239:G:H5'	25:BC:246:PRO:HD2	1.77	0.67
5:AF:86:ARG:NH1	17:AR:63:TYR:HB3	2.09	0.67
45:BY:20:LYS:HA	45:BY:24:LEU:HB2	1.77	0.67
19:AT:28:ARG:HA	19:AT:31:ILE:HD12	1.77	0.67
30:BH:8:LYS:HB3	30:BH:14:SER:HA	1.75	0.67
24:DV:48:MET:HE1	24:DV:85:LYS:HA	1.77	0.67
23:BB:1015:U:H2'	23:BB:1016:G:H8	1.60	0.67
25:DC:58:LYS:HG3	25:DC:58:LYS:O	1.95	0.67
14:CO:31:LEU:O	14:CO:35:ILE:HG12	1.95	0.67
31:BJ:7:LYS:NZ	31:BJ:48:VAL:HB	2.09	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:128:ARG:HD2	26:BD:144:GLY:CA	2.25	0.67
23:BB:1818:U:H2'	25:BC:152:GLN:O	1.94	0.67
25:BC:163:ILE:HG22	25:BC:164:VAL:H	1.59	0.67
39:DR:42:ALA:HB1	39:DR:53:PHE:CG	2.30	0.67
26:DD:32:ASN:HB3	26:DD:91:THR:HA	1.77	0.67
32:BK:98:ARG:HA	32:BK:118:LEU:HD22	1.77	0.67
38:BQ:33:VAL:HG13	38:BQ:34:ALA:N	2.08	0.67
36:DO:15:ARG:HD2	36:DO:18:LEU:HD12	1.77	0.67
31:BJ:100:VAL:HG22	31:BJ:101:ILE:H	1.59	0.67
27:DE:120:VAL:HG12	27:DE:121:VAL:H	1.60	0.67
38:BQ:77:LYS:HB3	38:BQ:116:LEU:HD11	1.75	0.67
44:BX:30:MET:HG3	44:BX:31:GLN:N	2.08	0.67
23:DB:1813:G:N3	25:DC:50:THR:HG21	2.10	0.67
8:CI:114:LYS:HB2	8:CI:117:LEU:HD12	1.75	0.67
23:DB:2039:U:H2'	23:DB:2040:G:H8	1.60	0.67
32:DK:24:VAL:HG13	32:DK:33:ALA:HB2	1.75	0.67
23:BB:1843:C:H5''	25:BC:252:LYS:NZ	2.10	0.67
15:AP:51:ARG:HB3	15:AP:51:ARG:NH1	2.10	0.67
3:CD:187:ARG:HH12	3:CD:191:SER:HA	1.60	0.67
12:CM:78:ARG:NH1	12:CM:79:LEU:HD23	2.10	0.67
23:BB:2645:G:H3'	23:BB:2646:C:H5'	1.76	0.67
26:BD:101:PHE:O	26:BD:102:ALA:HB3	1.95	0.67
23:DB:1241:A:H2'	23:DB:1242:U:H5'	1.77	0.67
4:AE:109:ALA:HB3	4:AE:135:VAL:HG23	1.76	0.67
1:AA:901:A:H5'	1:AA:902:G:OP2	1.94	0.67
38:BQ:39:ILE:O	38:BQ:43:GLN:HG3	1.95	0.67
23:DB:1098:A:C4	52:DI:3:LYS:O	2.48	0.67
51:D4:22:VAL:HG13	51:D4:37:GLN:HB3	1.77	0.67
51:D4:2:LYS:HG2	51:D4:38:GLY:HA3	1.76	0.67
50:B3:16:THR:HG21	50:B3:22:LYS:HZ1	1.60	0.67
23:BB:2393:U:H5'	33:BL:62:PRO:HD3	1.77	0.67
37:BP:52:ARG:HB3	37:BP:60:VAL:CG1	2.18	0.67
48:D1:40:PRO:HD2	48:D1:44:GLN:O	1.95	0.67
2:AC:77:GLY:HA3	2:AC:82:ASP:H	1.59	0.67
26:DD:175:LEU:HD21	26:DD:192:ALA:HB3	1.77	0.67
43:BW:66:VAL:HG22	43:BW:67:LYS:H	1.60	0.67
39:BR:78:ARG:HD3	39:BR:88:GLY:N	2.10	0.67
39:DR:4:VAL:O	39:DR:41:ILE:HG12	1.95	0.67
42:DU:42:LYS:N	42:DU:57:ILE:HD12	2.04	0.67
31:BJ:58:ASN:HA	31:BJ:126:ALA:HA	1.76	0.67
23:BB:1022:G:N7	31:BJ:68:LYS:HE3	2.10	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:99:ARG:HA	31:BJ:103:ILE:HG13	1.75	0.67
32:DK:15:GLY:HA3	32:DK:52:VAL:HG12	1.77	0.67
23:DB:630:G:H1	33:DL:69:ARG:NH1	1.92	0.67
7:AH:64:TYR:HB3	7:AH:69:ALA:HA	1.77	0.67
1:CA:1170:A:H2'	1:CA:1171:A:O4'	1.96	0.67
9:AJ:65:TYR:HB3	13:AN:95:LEU:HD11	1.77	0.67
23:DB:2008:C:H2'	23:DB:2009:A:H8	1.60	0.67
6:CG:70:PRO:HA	6:CG:141:HIS:HE1	1.58	0.67
44:BX:55:THR:HG22	44:BX:59:GLU:OE1	1.95	0.67
23:BB:215:G:H4'	23:BB:216:A:H4'	1.76	0.67
34:BM:4:PRO:O	34:BM:5:LYS:O	2.12	0.66
26:BD:21:SER:C	26:BD:23:PRO:HD3	2.15	0.66
20:AB:202:ASN:ND2	20:AB:204:ASP:H	1.92	0.66
27:BE:116:ASP:HB2	27:BE:185:LYS:HA	1.78	0.66
33:DL:90:VAL:H	33:DL:122:VAL:CG2	2.08	0.66
33:DL:62:PRO:HB3	50:D3:12:ARG:NE	2.10	0.66
23:DB:64:A:H2'	23:DB:65:U:C6	2.30	0.66
1:AA:1060:U:H2'	1:AA:1061:G:H8	1.58	0.66
23:DB:1459:G:O2'	23:DB:1460:U:H5'	1.95	0.66
23:BB:86:G:OP1	42:BU:29:SER:HB2	1.95	0.66
22:BA:114:C:O2'	36:BO:49:VAL:HG21	1.95	0.66
3:CD:84:ASN:ND2	3:CD:87:GLU:H	1.92	0.66
23:DB:1203:U:H3'	23:DB:1204:A:H5''	1.76	0.66
29:BG:5:LYS:HB3	29:BG:68:ARG:NH2	2.10	0.66
1:CA:529:G:O6	11:CL:45:ASN:HA	1.95	0.66
23:DB:2238:G:H2'	23:DB:2238:G:N3	2.10	0.66
20:CB:18:GLN:O	20:CB:37:VAL:HG23	1.94	0.66
35:DN:34:ILE:HG22	35:DN:35:LYS:H	1.59	0.66
5:AF:10:VAL:HA	5:AF:84:VAL:HA	1.77	0.66
25:DC:76:VAL:HG13	25:DC:112:GLY:HA2	1.77	0.66
26:BD:109:VAL:HG11	26:BD:193:VAL:HG23	1.76	0.66
33:DL:118:THR:CG2	33:DL:137:ALA:HB3	2.25	0.66
16:CQ:10:ARG:NH2	16:CQ:55:GLY:N	2.43	0.66
23:DB:1083:U:H1'	23:DB:1086:A:N6	2.10	0.66
47:D0:32:THR:HG21	47:D0:41:HIS:CE1	2.30	0.66
1:CA:1124:G:H5'	9:CJ:37:ARG:NH2	2.10	0.66
33:DL:109:LYS:CG	33:DL:126:ARG:HD3	2.25	0.66
33:DL:82:LEU:HD21	33:DL:110:VAL:HG12	1.77	0.66
44:DX:28:LEU:HD22	44:DX:42:LEU:HG	1.76	0.66
29:BG:86:LEU:HB2	29:BG:130:ILE:HB	1.76	0.66
5:AF:40:GLU:HG3	5:AF:42:TRP:HE1	1.60	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1387:A:H2'	23:BB:1388:G:H8	1.61	0.66
3:AD:19:PHE:HB2	3:AD:110:ARG:HH12	1.61	0.66
1:CA:501:C:H2'	1:CA:502:A:C8	2.30	0.66
1:AA:501:C:H2'	1:AA:502:A:C8	2.30	0.66
40:DS:84:ARG:HH21	40:DS:98:LYS:HZ3	1.43	0.66
46:DZ:25:ARG:HG3	46:DZ:26:SER:H	1.60	0.66
4:CE:96:GLN:HG3	4:CE:97:PRO:HD2	1.77	0.66
1:CA:1034:G:H2'	1:CA:1035:A:C8	2.29	0.66
1:AA:17:U:H2'	1:AA:18:C:C6	2.30	0.66
23:DB:615:U:O4	27:DE:36:ALA:HB2	1.96	0.66
34:BM:38:ARG:HG2	34:BM:96:ILE:HG12	1.76	0.66
46:BZ:5:ILE:HD12	46:BZ:5:ILE:H	1.58	0.66
33:BL:62:PRO:HB3	50:B3:29:ARG:NH2	2.10	0.66
26:BD:170:VAL:HG21	26:BD:194:PRO:HG2	1.77	0.66
48:D1:16:THR:HG22	48:D1:47:ILE:HD12	1.77	0.66
48:D1:47:ILE:HG22	48:D1:48:TYR:N	2.07	0.66
35:DN:2:ARG:HH21	35:DN:4:ARG:HD3	1.59	0.66
34:DM:5:LYS:HG3	34:DM:68:PHE:CE1	2.30	0.66
35:DN:41:ALA:HB1	35:DN:113:ILE:HD11	1.77	0.66
40:BS:17:VAL:HA	40:BS:43:ALA:HB1	1.77	0.66
39:DR:41:ILE:HG23	39:DR:43:ASN:HB2	1.77	0.66
23:DB:950:G:H2'	23:DB:951:C:C6	2.30	0.66
43:DW:47:GLY:HA2	43:DW:71:LYS:O	1.94	0.66
33:BL:30:THR:HG22	33:BL:36:LYS:HZ2	1.61	0.66
36:BO:9:ARG:HA	36:BO:12:THR:HG23	1.76	0.66
23:BB:528:A:C2	23:BB:2043:C:H4'	2.30	0.66
32:DK:21:CYS:HA	32:DK:41:ILE:HD12	1.77	0.66
2:AC:46:LEU:HD11	2:AC:86:LEU:HD21	1.76	0.66
36:BO:38:GLN:HA	36:BO:50:ALA:HB3	1.77	0.66
36:BO:40:ILE:HA	36:BO:48:LEU:HB3	1.77	0.66
23:BB:287:G:H2'	23:BB:288:U:H6	1.58	0.66
42:DU:13:LEU:H	42:DU:13:LEU:HD12	1.59	0.66
26:DD:125:TRP:CB	26:DD:160:LYS:HG2	2.24	0.66
20:AB:119:GLN:HE22	20:AB:127:LYS:HD3	1.60	0.66
1:CA:1241:G:H2'	1:CA:1242:G:H8	1.60	0.66
39:DR:40:MET:O	39:DR:40:MET:HG2	1.95	0.66
20:CB:70:GLY:O	20:CB:92:ASN:HA	1.95	0.66
7:AH:102:VAL:HG12	7:AH:125:ILE:HD12	1.76	0.66
23:BB:2198:A:H4'	23:BB:2199:A:OP1	1.95	0.66
23:DB:1531:C:H2'	23:DB:1532:A:C8	2.31	0.66
1:AA:619:U:N3	3:AD:131:ILE:HD12	2.09	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CE:52:ALA:HB2	4:CE:61:LYS:HE2	1.77	0.66
23:BB:38:A:C8	27:BE:46:GLN:CD	2.69	0.66
25:BC:155:ARG:NH2	25:BC:155:ARG:HG2	2.10	0.66
23:BB:27:G:N2	23:BB:512:G:H2'	2.09	0.66
13:AN:60:ARG:HE	13:AN:62:ARG:NE	1.93	0.66
37:BP:45:VAL:HG13	37:BP:65:ASN:HD22	1.59	0.66
32:DK:51:LYS:O	32:DK:52:VAL:HG23	1.95	0.66
23:BB:784:G:H5''	25:BC:225:ASN:HD21	1.60	0.66
21:CU:39:LYS:H	21:CU:40:PRO:HD2	1.60	0.66
1:AA:1123:U:O2'	1:AA:1124:G:H5'	1.96	0.66
15:CP:61:VAL:HA	15:CP:65:ALA:HB3	1.78	0.66
33:DL:78:ARG:HH22	33:DL:80:SER:HB2	1.61	0.66
1:AA:922:G:H4'	4:AE:24:VAL:HA	1.77	0.66
2:AC:13:ILE:O	2:AC:14:VAL:HG22	1.96	0.66
23:BB:1459:G:O2'	23:BB:1460:U:H5'	1.95	0.66
23:BB:2308:G:H5'	23:BB:2309:A:H5''	1.77	0.66
23:BB:2339:C:H2'	23:BB:2340:A:C8	2.30	0.66
23:DB:1447:C:H2'	23:DB:1448:G:H8	1.61	0.66
39:BR:42:ALA:HA	39:BR:54:VAL:HG22	1.77	0.66
25:DC:63:ILE:HD12	25:DC:83:ASP:OD1	1.95	0.66
23:DB:2873:A:H1'	35:DN:5:LYS:O	1.96	0.66
30:DH:122:LEU:HA	30:DH:146:VAL:HG21	1.76	0.66
40:BS:52:GLU:HA	40:BS:55:ILE:HG22	1.77	0.66
52:BI:27:LEU:CD2	52:BI:27:LEU:H	2.08	0.66
25:DC:225:ASN:O	25:DC:227:VAL:N	2.28	0.66
13:CN:30:ILE:CG2	13:CN:41:TRP:HB3	2.25	0.66
33:BL:69:ARG:HG3	33:BL:69:ARG:O	1.95	0.66
21:AU:3:ILE:HG12	21:AU:19:LYS:HG2	1.77	0.66
23:BB:1440:U:H2'	23:BB:1441:G:C8	2.31	0.66
26:BD:98:VAL:HA	26:BD:101:PHE:CE1	2.30	0.66
1:CA:1244:G:H2'	1:CA:1245:C:C6	2.30	0.66
23:DB:1594:U:H2'	23:DB:1595:C:C6	2.30	0.66
23:DB:594:U:H2'	23:DB:595:C:C6	2.30	0.66
50:D3:21:PHE:HB2	50:D3:48:MET:HG2	1.77	0.66
23:DB:1373:A:H2'	23:DB:1374:G:O4'	1.95	0.66
1:AA:559:A:H4'	1:AA:560:A:H3'	1.77	0.66
23:DB:2859:G:H2'	23:DB:2860:A:C8	2.30	0.66
23:BB:279:A:N6	23:BB:361:G:H1'	2.10	0.66
23:DB:643:A:N6	23:DB:2370:G:H1'	2.11	0.66
23:DB:1354:A:H2'	23:DB:1355:G:O4'	1.96	0.66
23:BB:934:U:H2'	23:BB:935:C:C6	2.31	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:960:U:O2'	1:CA:1223:C:H5'	1.96	0.66
25:BC:92:LEU:O	25:BC:93:VAL:HB	1.95	0.66
47:B0:41:HIS:CG	47:B0:48:TYR:HA	2.31	0.66
40:BS:6:LYS:HB3	40:BS:104:THR:HG22	1.78	0.66
31:BJ:119:PHE:CG	31:BJ:120:ARG:N	2.63	0.66
27:BE:59:PRO:HD2	27:BE:60:TRP:CE2	2.31	0.66
23:BB:1285:A:H2'	23:BB:1286:A:H5''	1.75	0.66
5:CF:42:TRP:HB2	5:CF:59:TYR:HB2	1.78	0.66
26:DD:129:THR:HA	26:DD:140:HIS:CE1	2.31	0.66
51:B4:14:CYS:SG	51:B4:25:VAL:HG12	2.36	0.66
42:DU:28:LEU:C	42:DU:28:LEU:HD12	2.16	0.66
1:CA:780:A:O2'	1:CA:781:A:H5''	1.94	0.66
23:BB:1844:C:OP1	25:BC:252:LYS:HA	1.95	0.66
1:AA:238:A:H2'	1:AA:239:U:H5''	1.77	0.66
1:CA:408:A:OP1	3:CD:111:ALA:HB3	1.95	0.66
23:BB:322:A:OP1	27:BE:162:ARG:HG2	1.95	0.66
23:DB:2064:C:H2'	23:DB:2065:C:C6	2.30	0.66
47:B0:11:LYS:HG3	47:B0:12:ARG:N	2.10	0.66
5:CF:66:ALA:HB1	5:CF:67:PRO:HD2	1.77	0.66
14:AO:31:LEU:HD12	14:AO:58:MET:HB2	1.78	0.66
23:DB:1794:A:H2'	23:DB:1795:C:C6	2.30	0.66
23:DB:526:A:N6	23:DB:2626:C:H4'	2.10	0.66
1:CA:188:C:H2'	1:CA:189:A:O4'	1.95	0.66
1:AA:1342:C:H2'	1:AA:1343:G:H8	1.61	0.66
8:AI:33:SER:HB3	8:AI:36:GLN:HB2	1.76	0.66
25:DC:179:GLU:CD	25:DC:266:ILE:HA	2.15	0.66
34:DM:3:GLN:HG3	34:DM:6:ARG:NH1	2.10	0.66
43:BW:44:PHE:O	43:BW:76:ARG:HA	1.96	0.66
20:CB:14:HIS:CG	20:CB:15:PHE:H	2.13	0.66
31:DJ:98:GLU:HG3	31:DJ:126:ALA:HB2	1.77	0.66
33:BL:100:ILE:HG12	33:BL:102:GLY:H	1.59	0.66
28:BF:35:LEU:HA	28:BF:153:ILE:HA	1.78	0.66
31:DJ:81:ILE:CG1	31:DJ:82:GLY:H	2.08	0.66
52:BI:20:SER:O	52:BI:25:PRO:HD2	1.96	0.66
23:BB:2216:G:H2'	23:BB:2217:G:C8	2.30	0.66
39:DR:40:MET:HG3	39:DR:54:VAL:HG13	1.75	0.66
47:B0:8:THR:HG23	47:B0:9:ARG:H	1.61	0.66
1:CA:909:A:H2'	1:CA:910:C:O4'	1.95	0.66
2:AC:178:ARG:HG2	2:AC:178:ARG:O	1.96	0.66
22:BA:60:C:H2'	22:BA:61:G:C8	2.31	0.66
4:CE:12:GLU:HG2	4:CE:38:VAL:HG22	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:538:G:OP2	11:CL:111:GLN:HB2	1.95	0.66
23:DB:1098:A:O2'	52:DI:4:VAL:C	2.34	0.66
27:BE:44:ARG:H	27:BE:44:ARG:HD3	1.60	0.66
23:BB:855:G:H21	43:BW:23:LYS:CD	2.09	0.66
32:DK:8:LEU:HB3	32:DK:83:ALA:O	1.95	0.66
20:CB:153:MET:SD	20:CB:157:PRO:HD3	2.36	0.66
23:DB:536:G:H5'	38:DQ:52:ARG:HH22	1.61	0.66
23:BB:1856:U:H2'	23:BB:1857:G:O4'	1.95	0.66
23:BB:155:A:H2'	23:BB:156:A:C8	2.30	0.66
1:CA:505:G:H5'	1:CA:534:U:H2'	1.78	0.66
23:DB:794:A:H2'	23:DB:795:C:C6	2.31	0.66
20:CB:26:MET:HE1	20:CB:186:VAL:HB	1.78	0.66
50:D3:2:LYS:NZ	50:D3:2:LYS:HB2	2.11	0.66
2:AC:141:MET:HE1	2:AC:147:GLY:H	1.61	0.66
2:CC:115:VAL:O	2:CC:119:ILE:HG22	1.96	0.66
12:CM:102:LYS:HZ1	12:CM:103:THR:HG23	1.60	0.66
23:DB:1098:A:H2'	52:DI:4:VAL:CA	2.26	0.66
23:BB:442:G:N2	27:BE:46:GLN:NE2	2.44	0.66
25:DC:137:GLY:C	25:DC:139:THR:H	1.96	0.66
37:DP:18:SER:HB2	37:DP:87:ARG:CZ	2.26	0.66
37:DP:46:VAL:C	37:DP:47:ILE:HG12	2.15	0.66
45:DY:2:LYS:HD2	45:DY:35:VAL:HB	1.77	0.66
27:DE:147:LEU:HB3	27:DE:167:VAL:HG22	1.78	0.66
40:DS:64:ALA:H	40:DS:110:ARG:HH21	1.41	0.66
23:BB:1654:A:OP1	35:BN:1:MET:HB2	1.95	0.66
52:DI:27:LEU:CD2	52:DI:27:LEU:H	2.09	0.66
28:BF:33:ILE:HA	28:BF:155:ILE:HA	1.77	0.66
34:DM:33:LEU:HB3	34:DM:101:VAL:CG2	2.26	0.66
51:B4:20:ASP:OD2	51:B4:22:VAL:HG13	1.96	0.66
23:DB:143:C:O5'	23:DB:143:C:H6	1.78	0.66
35:BN:34:ILE:HD13	35:BN:34:ILE:N	2.11	0.66
35:BN:72:ASP:HB3	35:BN:74:GLU:HG3	1.76	0.66
19:CT:73:ARG:HG3	19:CT:74:HIS:N	2.10	0.66
23:BB:2395:C:H2'	23:BB:2396:G:O4'	1.96	0.66
23:DB:522:A:H2'	23:DB:523:C:C6	2.31	0.66
23:DB:350:G:H2'	23:DB:351:C:O4'	1.96	0.66
23:DB:1727:C:H2'	23:DB:1728:C:C6	2.30	0.66
4:AE:104:ILE:HD13	4:AE:115:GLU:HG3	1.78	0.66
2:CC:53:ARG:HA	2:CC:113:LYS:NZ	2.11	0.66
23:BB:394:C:H2'	23:BB:395:U:O4'	1.96	0.66
23:DB:784:G:O2'	23:DB:785:G:H5''	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DI:45:THR:CA	52:DI:48:ILE:HG22	2.26	0.66
23:BB:65:U:H4'	41:BT:70:HIS:ND1	2.10	0.66
1:CA:763:G:H2'	1:CA:764:C:H6	1.61	0.66
1:CA:278:G:N2	1:CA:279:A:H62	1.93	0.66
23:DB:1440:U:H2'	23:DB:1441:G:C8	2.30	0.66
36:BO:56:LYS:HE3	36:BO:57:ALA:N	2.11	0.66
1:CA:1323:G:H2'	1:CA:1324:A:C8	2.31	0.66
23:BB:21:A:O2'	23:BB:22:C:H5'	1.97	0.66
19:AT:48:LYS:O	19:AT:52:GLU:HB2	1.96	0.66
1:AA:1017:U:H2'	1:AA:1018:G:C8	2.31	0.66
23:BB:2324:U:H5'	23:BB:2325:G:H5''	1.77	0.66
9:AJ:11:LYS:HG2	9:AJ:97:ASP:HB3	1.78	0.66
6:CG:144:ALA:C	6:CG:146:ALA:H	1.99	0.66
23:BB:1309:G:H4'	49:B2:7:PRO:HG2	1.78	0.66
25:DC:32:LEU:HB3	25:DC:61:TYR:CE1	2.27	0.65
26:BD:23:PRO:HB3	26:BD:189:VAL:N	2.11	0.65
37:DP:63:ILE:O	37:DP:72:VAL:HA	1.96	0.65
35:DN:98:LEU:HD11	35:DN:114:GLU:HG2	1.76	0.65
20:AB:53:LEU:HD21	20:AB:212:TYR:HE2	1.60	0.65
30:BH:3:VAL:HG22	30:BH:21:VAL:HG21	1.78	0.65
27:DE:142:ALA:H	27:DE:185:LYS:NZ	1.93	0.65
25:DC:28:PRO:HG2	25:DC:79:ARG:NH2	2.11	0.65
9:CJ:9:ARG:HB3	9:CJ:99:GLN:HE21	1.61	0.65
9:CJ:9:ARG:HG3	9:CJ:99:GLN:HB2	1.77	0.65
23:DB:2784:U:H2'	23:DB:2785:C:C6	2.31	0.65
42:DU:69:VAL:HG11	42:DU:77:GLY:HA2	1.79	0.65
23:BB:1797:G:H5'	25:BC:251:THR:HA	1.78	0.65
23:BB:222:A:H61	23:BB:232:G:H1'	1.61	0.65
12:CM:9:PRO:HB2	12:CM:17:ALA:HB1	1.78	0.65
23:BB:340:A:H2'	23:BB:341:C:O4'	1.95	0.65
1:AA:562:U:H1'	11:AL:11:ARG:HB3	1.78	0.65
52:BI:91:LYS:HB2	52:BI:94:LYS:HD2	1.78	0.65
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.32	0.65
7:CH:54:THR:HG23	7:CH:55:LYS:HE2	1.77	0.65
23:BB:1373:A:H2'	23:BB:1374:G:O4'	1.96	0.65
1:CA:1191:A:OP1	2:CC:3:LYS:HG3	1.96	0.65
1:CA:859:G:H2'	1:CA:860:A:C8	2.30	0.65
23:DB:2328:A:H2'	23:DB:2329:U:C6	2.30	0.65
33:DL:103:ILE:HB	33:DL:104:GLN:NE2	2.11	0.65
31:BJ:3:THR:HG21	38:BQ:93:ILE:HG13	1.78	0.65
46:BZ:25:ARG:HH11	46:BZ:25:ARG:HB2	1.60	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:D1:19:PHE:HD1	48:D1:20:TYR:H	1.44	0.65
38:DQ:111:LYS:NZ	39:DR:52:PRO:HA	2.10	0.65
37:DP:89:GLY:HA2	37:DP:112:ARG:HH22	1.60	0.65
35:DN:97:ILE:HA	35:DN:113:ILE:HD13	1.78	0.65
31:DJ:40:HIS:HA	38:DQ:69:ARG:NH1	2.09	0.65
38:DQ:69:ARG:HB3	38:DQ:69:ARG:NH1	2.10	0.65
20:AB:52:ALA:O	20:AB:56:LEU:HD22	1.96	0.65
21:AU:36:PHE:HB3	21:AU:40:PRO:CD	2.25	0.65
52:DI:85:ILE:HD13	52:DI:137:LEU:HD21	1.78	0.65
33:BL:29:LYS:HD2	33:BL:31:GLY:N	2.12	0.65
9:CJ:56:HIS:O	9:CJ:57:VAL:HG12	1.97	0.65
28:BF:132:ARG:HD3	28:BF:133:GLU:HB2	1.78	0.65
33:BL:38:GLN:H	33:BL:41:ARG:NH1	1.94	0.65
23:BB:64:A:H2'	23:BB:65:U:C6	2.31	0.65
29:BG:157:LYS:HG3	29:BG:159:LYS:HZ2	1.61	0.65
1:AA:278:G:N2	1:AA:279:A:H62	1.93	0.65
30:DH:115:VAL:HB	30:DH:132:PHE:HD1	1.61	0.65
23:BB:2339:C:H2'	23:BB:2340:A:H8	1.61	0.65
23:DB:1866:A:H2'	23:DB:1867:G:O4'	1.95	0.65
23:BB:1447:C:H2'	23:BB:1448:G:H8	1.60	0.65
23:BB:1727:C:H2'	23:BB:1728:C:C6	2.31	0.65
23:BB:1652:A:H62	35:BN:11:ASN:ND2	1.94	0.65
1:AA:1225:A:H3'	1:AA:1226:C:H6	1.61	0.65
23:BB:1794:A:H2'	23:BB:1795:C:C6	2.31	0.65
1:CA:882:C:O2'	1:CA:883:C:H5'	1.95	0.65
23:BB:441:U:H2'	23:BB:442:G:H8	1.61	0.65
23:BB:691:C:O2'	25:BC:42:ARG:HD2	1.96	0.65
23:BB:2512:C:H5''	26:BD:125:TRP:HZ3	1.61	0.65
26:DD:33:ARG:HB3	26:DD:89:GLU:HB2	1.78	0.65
26:DD:89:GLU:HG2	26:DD:93:GLY:O	1.96	0.65
31:DJ:96:ARG:HG3	31:DJ:98:GLU:OE1	1.95	0.65
25:DC:205:GLY:C	25:DC:206:LYS:HG2	2.15	0.65
12:AM:106:ARG:HH11	12:AM:106:ARG:HA	1.61	0.65
33:DL:78:ARG:CZ	33:DL:113:ALA:HB1	2.26	0.65
36:BO:40:ILE:HD13	36:BO:40:ILE:H	1.62	0.65
26:DD:56:LYS:HD3	26:DD:59:ARG:HB2	1.79	0.65
2:AC:9:ILE:HG23	2:AC:10:ARG:HG3	1.76	0.65
23:BB:1484:U:H2'	23:BB:1485:U:C6	2.31	0.65
23:BB:1531:C:H2'	23:BB:1532:A:C8	2.31	0.65
23:DB:320:A:H4'	23:DB:322:A:N7	2.11	0.65
23:DB:235:U:H2'	23:DB:236:C:C6	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CL:14:LYS:HE2	11:CL:16:ALA:HB2	1.78	0.65
41:DT:17:SER:H	41:DT:20:ALA:CB	2.09	0.65
23:BB:2859:G:H2'	23:BB:2860:A:C8	2.31	0.65
23:BB:1508:A:H5''	23:BB:1509:A:N7	2.12	0.65
1:CA:1054:C:O2'	1:CA:1055:A:H5''	1.95	0.65
39:BR:43:ASN:C	39:BR:45:GLU:H	1.98	0.65
39:BR:6:GLN:HB3	39:BR:10:LYS:HE3	1.76	0.65
24:BV:70:ILE:HG12	24:BV:71:LYS:H	1.61	0.65
23:BB:2619:C:H4'	26:BD:157:LYS:HA	1.78	0.65
25:BC:171:VAL:HB	25:BC:182:LYS:HB3	1.77	0.65
26:DD:5:VAL:HB	26:DD:27:ILE:O	1.95	0.65
43:BW:32:ALA:O	43:BW:66:VAL:HG11	1.96	0.65
25:DC:20:ASN:HB2	25:DC:202:ARG:HD3	1.78	0.65
9:AJ:53:ILE:HG12	9:AJ:63:ASP:HB2	1.78	0.65
33:BL:30:THR:HA	33:BL:36:LYS:HZ1	1.60	0.65
23:BB:85:G:OP1	42:BU:5:ARG:HA	1.96	0.65
26:DD:37:VAL:HG13	26:DD:42:ASN:CB	2.25	0.65
23:DB:1118:C:H2'	23:DB:1119:U:C6	2.32	0.65
1:AA:270:A:H2'	1:AA:271:C:C6	2.32	0.65
23:DB:773:U:H5'	23:DB:774:G:OP2	1.95	0.65
1:AA:1302:C:O4'	12:AM:16:ILE:HD11	1.96	0.65
23:BB:2025:C:H2'	23:BB:2026:U:C6	2.31	0.65
1:AA:1026:G:H2'	1:AA:1027:C:C6	2.31	0.65
23:DB:616:A:H3'	23:DB:617:G:H8	1.62	0.65
12:AM:3:ILE:HG23	12:AM:56:ARG:HG2	1.78	0.65
23:DB:1381:G:C2'	23:DB:1382:G:H5'	2.27	0.65
19:CT:52:GLU:O	19:CT:56:ILE:HD13	1.97	0.65
23:DB:448:U:C5'	27:DE:79:ARG:HH21	2.09	0.65
23:BB:441:U:O2'	23:BB:442:G:H5'	1.97	0.65
23:BB:1224:U:H4'	39:BR:90:ARG:HB3	1.79	0.65
30:BH:3:VAL:HG13	30:BH:21:VAL:HG11	1.79	0.65
35:BN:12:ARG:HD3	35:BN:20:MET:HG3	1.78	0.65
27:DE:153:LEU:HD13	27:DE:154:ASP:N	2.11	0.65
44:BX:19:LEU:O	44:BX:22:LEU:HB2	1.96	0.65
46:DZ:48:GLN:NE2	46:DZ:49:ARG:H	1.94	0.65
23:DB:2642:G:OP1	31:DJ:84:ILE:HG12	1.97	0.65
47:D0:41:HIS:HB3	47:D0:46:GLY:CA	2.26	0.65
23:BB:633:A:O5'	23:BB:633:A:H8	1.79	0.65
29:DG:41:GLU:CG	29:DG:54:ARG:HH21	2.09	0.65
23:DB:117:G:H5'	23:DB:126:A:H8	1.60	0.65
23:BB:2880:C:H1'	35:BN:92:GLY:O	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:93:LEU:O	8:CI:97:LEU:HG	1.97	0.65
31:BJ:39:LYS:NZ	38:BQ:69:ARG:HD2	2.11	0.65
25:BC:76:VAL:O	25:BC:93:VAL:HA	1.96	0.65
23:DB:1794:A:H2'	23:DB:1795:C:H6	1.62	0.65
1:AA:188:C:H2'	1:AA:189:A:O4'	1.97	0.65
19:CT:11:ILE:HG13	19:CT:12:GLN:N	2.11	0.65
23:DB:1838:C:N4	23:DB:1898:U:H2'	2.11	0.65
7:AH:30:LYS:HA	7:AH:30:LYS:NZ	2.12	0.65
1:AA:87:C:H2'	1:AA:88:U:H4'	1.79	0.65
24:BV:77:VAL:HG21	24:BV:79:ARG:HH21	1.61	0.65
26:DD:4:LEU:HD23	26:DD:77:ARG:HD3	1.78	0.65
43:BW:66:VAL:HG13	43:BW:67:LYS:HG3	1.79	0.65
5:CF:38:ARG:HD3	5:CF:97:THR:HA	1.78	0.65
23:BB:811:U:C5	33:BL:29:LYS:HD3	2.31	0.65
23:BB:2336:A:H1'	23:BB:2337:G:OP1	1.95	0.65
1:AA:131:A:H2'	1:AA:132:C:C6	2.32	0.65
5:CF:53:LYS:HE2	5:CF:54:LEU:HD23	1.79	0.65
3:AD:159:GLU:HG3	3:AD:160:LEU:H	1.59	0.65
9:CJ:53:ILE:HG13	13:CN:84:ARG:CZ	2.26	0.65
38:DQ:24:TYR:O	38:DQ:27:ARG:HB2	1.97	0.65
24:DV:63:ILE:H	24:DV:70:ILE:CD1	2.09	0.65
42:BU:39:ASN:ND2	42:BU:42:LYS:HE2	2.12	0.65
1:CA:1096:C:H2'	1:CA:1097:C:C6	2.32	0.65
3:CD:141:VAL:HG12	3:CD:180:THR:HA	1.79	0.65
1:CA:269:C:H2'	1:CA:270:A:C8	2.31	0.65
7:CH:11:THR:HA	7:CH:14:ARG:NH1	2.12	0.65
23:BB:329:G:H1	42:BU:16:LYS:HD3	1.61	0.65
1:CA:1186:G:H21	13:CN:100:TRP:C	1.99	0.65
35:DN:70:THR:OG1	35:DN:75:ILE:HD11	1.96	0.65
1:AA:1513:A:H2'	1:AA:1514:G:C8	2.32	0.65
23:BB:1406:U:H2'	23:BB:1407:G:H8	1.60	0.65
25:BC:138:SER:HA	25:BC:162:GLN:HG2	1.79	0.65
23:BB:559:G:H1'	38:BQ:55:GLN:NE2	2.12	0.65
51:D4:26:ILE:O	51:D4:27:CYS:HB2	1.96	0.65
23:BB:911:A:N6	34:BM:13:HIS:HB3	2.12	0.65
34:BM:33:LEU:N	34:BM:101:VAL:HG22	2.12	0.65
34:BM:73:ILE:HD11	34:BM:92:TRP:HB2	1.79	0.65
25:BC:127:ASN:ND2	25:BC:128:THR:H	1.95	0.65
31:DJ:73:VAL:HG11	31:DJ:75:TYR:CZ	2.31	0.65
43:BW:23:LYS:HE3	43:BW:24:ARG:O	1.96	0.65
30:DH:4:ILE:HD13	30:DH:4:ILE:H	1.62	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DL:58:TYR:HA	33:DL:62:PRO:HG2	1.77	0.65
20:CB:212:TYR:O	20:CB:216:VAL:HG22	1.97	0.65
27:DE:48:THR:HG23	27:DE:85:PHE:H	1.60	0.65
23:BB:139:U:N3	41:BT:1:MET:HB2	2.11	0.65
22:DA:76:G:H2'	22:DA:77:U:H6	1.60	0.65
23:BB:2759:G:H4'	29:BG:34:ARG:HH12	1.62	0.65
23:BB:2758:A:H2'	23:BB:2759:G:O4'	1.97	0.65
5:AF:3:HIS:HA	5:AF:65:GLU:HA	1.77	0.65
4:CE:14:LEU:HD22	4:CE:15:ILE:N	2.12	0.65
1:CA:620:C:C2	3:CD:131:ILE:HD13	2.31	0.65
23:DB:1386:C:H2'	23:DB:1387:A:C8	2.31	0.65
23:BB:329:G:H1	42:BU:16:LYS:HZ3	1.43	0.65
23:DB:2243:U:H2'	23:DB:2244:U:C6	2.31	0.65
51:D4:30:GLU:CB	51:D4:33:HIS:HB2	2.23	0.65
26:BD:128:ARG:HH11	26:BD:144:GLY:CA	2.10	0.65
23:DB:1006:C:H5''	31:DJ:34:ARG:HE	1.61	0.65
23:DB:455:C:N3	23:DB:472:A:H2'	2.12	0.65
25:DC:19:VAL:HB	25:DC:205:GLY:HA2	1.78	0.65
33:BL:91:ASP:HB2	33:BL:123:ARG:HH11	1.62	0.65
23:BB:138:U:H2'	23:BB:140:C:C1'	2.25	0.65
41:DT:53:VAL:HG12	41:DT:93:LEU:HD21	1.79	0.65
34:DM:114:ARG:O	34:DM:117:PHE:HD1	1.80	0.65
16:CQ:16:MET:CB	16:CQ:19:SER:HB2	2.26	0.65
1:CA:1008:U:H5''	13:CN:23:ARG:HH21	1.62	0.65
52:BI:100:ILE:O	52:BI:139:VAL:HA	1.97	0.65
20:CB:95:TRP:HZ3	20:CB:98:GLY:H	1.44	0.65
15:CP:4:ILE:O	15:CP:71:VAL:HG11	1.97	0.65
33:DL:77:ILE:HD13	33:DL:110:VAL:C	2.17	0.65
1:AA:1326:U:H2'	1:AA:1327:C:H6	1.61	0.65
33:DL:33:ARG:HB3	39:DR:85:LYS:NZ	2.11	0.65
23:DB:1224:U:O3'	39:DR:90:ARG:HB2	1.97	0.65
23:DB:2784:U:H2'	23:DB:2785:C:H6	1.60	0.65
29:BG:157:LYS:HG3	29:BG:159:LYS:NZ	2.11	0.65
2:CC:8:GLY:HA3	13:CN:88:MET:SD	2.37	0.65
23:DB:1484:U:H2'	23:DB:1485:U:C6	2.32	0.65
13:CN:86:ALA:HB1	13:CN:91:GLU:HB2	1.79	0.65
1:AA:269:C:H2'	1:AA:270:A:C8	2.32	0.65
1:CA:1281:C:H5'	1:CA:1282:C:H5	1.61	0.65
16:CQ:66:LEU:HD12	16:CQ:66:LEU:H	1.62	0.65
13:CN:32:ASP:HB2	13:CN:34:ASN:ND2	2.12	0.65
1:CA:312:C:H2'	1:CA:313:A:C8	2.32	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:546:A:P	3:CD:68:GLU:HB3	2.36	0.65
3:CD:78:ALA:HB1	3:CD:85:THR:HA	1.78	0.65
39:BR:5:PHE:HA	39:BR:40:MET:CG	2.27	0.65
25:BC:68:ARG:HD3	25:BC:103:ILE:CD1	2.27	0.65
23:DB:993:G:H21	39:DR:93:PHE:HZ	1.45	0.65
10:CK:92:ARG:HH11	10:CK:92:ARG:HG2	1.62	0.65
25:DC:259:ASN:O	25:DC:261:ARG:HG3	1.97	0.65
23:BB:2331:G:H5'	43:BW:70:VAL:HG13	1.79	0.65
13:AN:12:ARG:HH11	13:AN:60:ARG:NH1	1.95	0.65
25:BC:53:ILE:HG21	25:BC:218:THR:HG23	1.78	0.65
30:BH:6:LEU:HD12	30:BH:15:LEU:HA	1.77	0.65
29:BG:86:LEU:HD13	29:BG:163:TYR:HA	1.78	0.65
31:BJ:10:THR:HB	31:BJ:13:ARG:NH1	2.11	0.65
4:AE:104:ILE:HD11	4:AE:114:LEU:HB2	1.79	0.65
1:CA:652:U:H4'	7:CH:55:LYS:HE3	1.78	0.65
4:AE:23:THR:HG23	4:AE:28:ARG:HD3	1.78	0.65
1:AA:859:G:H2'	1:AA:860:A:C8	2.32	0.65
23:DB:2102:G:H2'	23:DB:2103:C:O4'	1.97	0.65
23:DB:283:G:H2'	23:DB:284:U:C6	2.32	0.65
38:BQ:57:ARG:HA	38:BQ:60:TRP:HE3	1.62	0.65
39:BR:53:PHE:O	39:BR:54:VAL:O	2.15	0.65
38:DQ:97:ILE:HG23	39:DR:13:ARG:NH2	2.11	0.65
9:AJ:37:ARG:NE	9:AJ:77:VAL:HG11	2.11	0.65
23:DB:1022:G:H8	31:DJ:68:LYS:HE3	1.62	0.65
23:BB:854:C:H2'	23:BB:855:G:H8	1.61	0.65
50:D3:7:ARG:HA	50:D3:7:ARG:HH11	1.61	0.65
10:CK:85:VAL:HG21	10:CK:92:ARG:HH12	1.62	0.65
35:BN:96:ARG:HH21	35:BN:118:ARG:HB3	1.62	0.65
41:DT:77:ARG:HG2	41:DT:78:SER:H	1.60	0.65
33:BL:94:THR:HB	33:BL:103:ILE:HG13	1.78	0.65
27:DE:109:LEU:HB2	27:DE:117:ARG:HE	1.62	0.65
41:DT:45:ALA:HA	41:DT:48:GLN:HG2	1.78	0.65
5:CF:86:ARG:NH1	17:CR:63:TYR:HB3	2.12	0.65
9:CJ:37:ARG:HG2	9:CJ:37:ARG:HH11	1.62	0.65
47:D0:31:LYS:HB2	47:D0:31:LYS:NZ	2.11	0.65
2:AC:146:LYS:HE3	2:AC:202:PHE:CE2	2.30	0.65
33:DL:109:LYS:HG2	33:DL:126:ARG:HH11	1.61	0.65
33:DL:109:LYS:HZ3	33:DL:109:LYS:HB2	1.62	0.65
13:AN:30:ILE:HB	13:AN:44:VAL:HG11	1.77	0.65
2:AC:185:THR:HG22	2:AC:186:SER:H	1.62	0.65
11:CL:80:LEU:O	11:CL:97:VAL:HG22	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DG:102:ILE:HD11	29:DG:130:ILE:HD12	1.79	0.65
24:BV:14:LYS:NZ	24:BV:18:ARG:HD2	2.11	0.65
12:AM:103:THR:HG22	12:AM:104:ASN:H	1.62	0.65
51:D4:26:ILE:HD13	51:D4:27:CYS:C	2.18	0.64
23:DB:2537:U:H2'	23:DB:2538:C:C6	2.32	0.64
24:BV:80:HIS:N	24:BV:87:GLN:HE22	1.94	0.64
33:BL:63:LYS:HG3	50:B3:11:LYS:CA	2.26	0.64
27:BE:113:VAL:HG23	27:BE:117:ARG:NH2	2.11	0.64
23:DB:907:G:O2'	23:DB:908:C:H5'	1.96	0.64
39:DR:39:LEU:H	39:DR:61:ALA:HB1	1.62	0.64
27:DE:108:ILE:HG13	27:DE:109:LEU:H	1.62	0.64
25:DC:49:THR:O	25:DC:50:THR:HB	1.96	0.64
23:BB:1113:U:H5''	29:BG:1:SER:HA	1.78	0.64
26:BD:83:ARG:HG2	26:BD:84:LEU:N	2.11	0.64
33:DL:109:LYS:HG3	33:DL:126:ARG:HB3	1.78	0.64
1:AA:36:C:H5''	11:AL:119:LYS:HB3	1.79	0.64
36:BO:37:ALA:O	36:BO:38:GLN:HG2	1.97	0.64
29:BG:148:ARG:HH21	29:BG:153:PRO:HD2	1.62	0.64
1:CA:1508:A:H2'	1:CA:1509:C:C6	2.33	0.64
9:AJ:15:HIS:HA	9:AJ:18:ILE:HG22	1.79	0.64
23:BB:1386:C:H2'	23:BB:1387:A:C8	2.32	0.64
23:DB:352:A:H3'	23:DB:353:C:H6	1.62	0.64
7:AH:5:PRO:HB2	7:AH:32:LYS:NZ	2.11	0.64
10:AK:105:ARG:NH2	21:AU:10:PRO:HG3	2.12	0.64
23:DB:279:A:H2'	23:DB:280:U:O4'	1.96	0.64
32:BK:108:ARG:HA	32:BK:116:ILE:HG21	1.79	0.64
23:DB:1826:G:OP2	25:DC:221:GLY:HA2	1.97	0.64
37:BP:38:ARG:HG3	37:BP:39:LEU:H	1.62	0.64
3:AD:88:ASN:O	3:AD:92:LEU:HD23	1.97	0.64
38:BQ:85:ALA:CB	38:BQ:88:GLU:HB2	2.27	0.64
34:BM:67:VAL:HG21	34:BM:95:LEU:HD21	1.78	0.64
24:BV:69:GLU:HG2	24:BV:70:ILE:N	2.12	0.64
33:BL:54:GLN:HB3	33:BL:56:PRO:HD2	1.78	0.64
25:BC:143:VAL:O	25:BC:152:GLN:HB2	1.97	0.64
43:BW:23:LYS:HB2	43:BW:23:LYS:NZ	2.12	0.64
50:D3:12:ARG:HE	50:D3:23:HIS:HB2	1.60	0.64
32:BK:99:ILE:HG12	32:BK:115:ILE:HG13	1.80	0.64
27:DE:149:ILE:HD11	27:DE:188:MET:N	2.11	0.64
1:CA:952:U:H2'	1:CA:953:G:H8	1.62	0.64
26:BD:83:ARG:HG2	26:BD:84:LEU:H	1.63	0.64
1:CA:865:A:H5'	1:CA:1078:U:O4	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1238:A:H5'	1:CA:1336:C:N4	2.13	0.64
22:DA:61:G:H2'	22:DA:62:C:C6	2.31	0.64
42:DU:98:ASN:O	42:DU:99:SER:HB2	1.95	0.64
1:AA:620:C:H1'	3:AD:131:ILE:HG21	1.79	0.64
23:BB:1838:C:N4	23:BB:1898:U:H2'	2.11	0.64
1:CA:678:U:H2'	1:CA:679:C:C6	2.32	0.64
20:CB:69:VAL:HB	20:CB:162:VAL:HB	1.78	0.64
23:DB:608:A:H2'	23:DB:609:A:C8	2.32	0.64
1:CA:205:A:H2'	1:CA:206:C:H6	1.62	0.64
11:CL:34:THR:HB	11:CL:53:ARG:HE	1.62	0.64
1:AA:539:A:H2'	1:AA:540:G:C8	2.32	0.64
1:CA:878:A:O4'	7:CH:3:GLN:HG3	1.97	0.64
23:BB:418:C:H2'	23:BB:419:U:C6	2.32	0.64
34:BM:12:MET:HG2	34:BM:12:MET:O	1.96	0.64
25:BC:23:LEU:H	25:BC:202:ARG:HH21	1.45	0.64
34:DM:2:LEU:HD13	34:DM:47:GLU:HB3	1.80	0.64
31:BJ:18:VAL:HG22	31:BJ:56:VAL:HA	1.78	0.64
23:BB:143:C:H2'	23:BB:144:A:C1'	2.27	0.64
41:BT:28:ASN:HD22	41:BT:28:ASN:N	1.95	0.64
46:DZ:47:LYS:HB2	46:DZ:51:VAL:CG1	2.27	0.64
52:DI:11:GLN:HA	52:DI:55:PRO:HA	1.79	0.64
23:BB:2039:U:H2'	23:BB:2040:G:C8	2.31	0.64
23:DB:813:U:H2'	23:DB:814:C:C6	2.32	0.64
31:BJ:37:ARG:NH2	31:BJ:110:PRO:HG3	2.13	0.64
7:AH:63:LYS:HG2	7:AH:70:VAL:HG21	1.80	0.64
23:BB:1410:G:H2'	23:BB:1411:U:C6	2.31	0.64
37:BP:38:ARG:CG	37:BP:39:LEU:H	2.10	0.64
37:BP:1:SER:HA	37:BP:4:ILE:HD12	1.79	0.64
23:BB:1866:A:H2'	23:BB:1867:G:O4'	1.96	0.64
23:BB:2557:G:H2'	23:BB:2558:C:C6	2.32	0.64
23:DB:242:G:N2	23:DB:254:G:H2'	2.12	0.64
23:BB:2800:A:H2'	23:BB:2801:G:O4'	1.98	0.64
20:CB:81:ASP:HA	20:CB:84:LEU:HD22	1.78	0.64
12:CM:68:LEU:HD22	12:CM:69:ARG:NH1	2.13	0.64
34:BM:33:LEU:HB2	34:BM:101:VAL:CG2	2.27	0.64
34:BM:36:VAL:HA	34:BM:97:GLN:HG2	1.78	0.64
26:BD:128:ARG:NH1	26:BD:130:GLN:NE2	2.46	0.64
25:BC:68:ARG:NH2	25:BC:127:ASN:HA	2.13	0.64
23:DB:1695:G:O2'	25:DC:15:VAL:HG23	1.98	0.64
1:CA:238:A:H2'	1:CA:239:U:H5''	1.78	0.64
8:CI:27:ILE:HD13	8:CI:34:LEU:HD13	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CO:24:THR:HG21	14:CO:69:LEU:HD23	1.80	0.64
14:CO:88:ARG:NH2	23:DB:714:U:H3'	2.12	0.64
44:DX:31:GLN:O	44:DX:32:ALA:HB3	1.97	0.64
1:CA:807:A:H1'	25:DC:4:LYS:NZ	2.12	0.64
33:BL:132:ARG:O	33:BL:136:GLU:HB3	1.98	0.64
34:BM:70:ASP:H	34:BM:71:LYS:NZ	1.95	0.64
24:BV:26:PHE:HE2	24:BV:44:HIS:HA	1.61	0.64
23:BB:2228:G:H2'	23:BB:2229:U:C6	2.33	0.64
25:BC:66:PHE:O	25:BC:68:ARG:N	2.30	0.64
27:BE:115:GLN:HA	27:BE:185:LYS:HE3	1.79	0.64
34:DM:15:GLY:C	34:DM:16:ARG:HG3	2.18	0.64
20:CB:46:VAL:CG1	20:CB:47:PRO:HD3	2.23	0.64
27:DE:109:LEU:HG	27:DE:117:ARG:HG3	1.78	0.64
5:AF:53:LYS:HA	5:AF:53:LYS:NZ	2.12	0.64
28:DF:132:ARG:NH1	28:DF:147:ARG:HD3	2.12	0.64
42:BU:78:LYS:HG3	42:BU:96:LYS:HE3	1.79	0.64
1:CA:947:G:H2'	1:CA:948:C:C6	2.32	0.64
23:DB:2039:U:H2'	23:DB:2040:G:C8	2.32	0.64
32:DK:108:ARG:HH22	37:DP:36:LYS:H	1.45	0.64
13:CN:50:LEU:H	13:CN:51:PRO:CD	2.08	0.64
42:DU:4:ILE:HG21	42:DU:25:LYS:HB3	1.79	0.64
14:AO:29:ALA:HA	14:AO:84:LEU:HD21	1.80	0.64
11:CL:65:TYR:HB2	11:CL:92:VAL:HG11	1.78	0.64
15:AP:68:SER:HB3	15:AP:71:VAL:HG12	1.80	0.64
23:BB:215:G:C4'	23:BB:216:A:H4'	2.27	0.64
1:AA:1342:C:H2'	1:AA:1343:G:C8	2.32	0.64
4:AE:45:VAL:O	4:AE:71:ILE:HG22	1.98	0.64
41:DT:17:SER:H	41:DT:20:ALA:HB3	1.61	0.64
2:AC:113:LYS:HE2	2:AC:117:ASP:OD2	1.97	0.64
1:CA:1520:C:H2'	1:CA:1521:C:C6	2.32	0.64
23:BB:1412:U:H2'	23:BB:1413:A:C8	2.33	0.64
20:CB:130:LYS:HB3	20:CB:134:LEU:HB2	1.79	0.64
32:BK:71:ARG:O	32:BK:72:PRO:C	2.34	0.64
23:BB:2467:C:O4'	34:BM:118:LYS:HG2	1.98	0.64
34:BM:35:ALA:O	34:BM:36:VAL:HG22	1.98	0.64
25:DC:61:TYR:CE1	25:DC:63:ILE:HD11	2.33	0.64
32:DK:71:ARG:HB3	32:DK:72:PRO:HD2	1.78	0.64
33:DL:132:ARG:HH22	33:DL:140:GLY:HA3	1.63	0.64
23:DB:589:U:H2'	23:DB:590:A:C8	2.31	0.64
40:BS:71:VAL:HG22	40:BS:107:VAL:HG12	1.80	0.64
26:BD:149:ASN:CB	26:BD:150:GLN:HG2	2.25	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:704:G:H1'	23:DB:727:A:H61	1.62	0.64
23:DB:704:G:O2'	23:DB:726:G:N2	2.28	0.64
23:BB:2336:A:N6	43:BW:69:GLU:HG3	2.12	0.64
30:BH:140:ALA:C	30:BH:141:LYS:HD3	2.18	0.64
13:AN:60:ARG:NH2	13:AN:62:ARG:HE	1.92	0.64
12:AM:52:ILE:HD12	12:AM:55:LEU:HD12	1.78	0.64
25:DC:27:LYS:N	25:DC:28:PRO:CD	2.60	0.64
23:DB:2037:A:H2'	23:DB:2038:G:C8	2.32	0.64
28:DF:107:VAL:HG12	28:DF:108:PRO:HD3	1.79	0.64
23:BB:784:G:O2'	23:BB:785:G:H5''	1.97	0.64
2:AC:146:LYS:HD3	2:AC:204:GLY:HA2	1.79	0.64
9:CJ:53:ILE:HG22	9:CJ:61:ALA:HB1	1.80	0.64
33:DL:110:VAL:HG22	33:DL:127:VAL:HA	1.78	0.64
8:CI:45:MET:O	8:CI:49:GLN:HG3	1.98	0.64
22:BA:20:G:H2'	22:BA:21:G:H8	1.63	0.64
23:DB:374:A:N6	23:DB:400:G:H1'	2.12	0.64
11:CL:64:SER:OG	11:CL:96:THR:HG23	1.97	0.64
23:BB:172:A:H2'	23:BB:173:A:C8	2.32	0.64
23:DB:796:C:H2'	23:DB:797:G:H8	1.62	0.64
30:DH:68:ARG:HD3	30:DH:71:LYS:HE2	1.80	0.64
1:CA:441:A:H61	1:CA:493:A:H62	1.45	0.64
20:CB:195:VAL:HG12	20:CB:197:PHE:H	1.62	0.64
3:AD:123:MET:HA	3:AD:128:VAL:HA	1.78	0.64
31:BJ:45:THR:HG22	38:BQ:63:ARG:NH2	2.13	0.64
23:BB:450:G:H4'	27:BE:47:LYS:HG2	1.80	0.64
48:D1:45:HIS:O	48:D1:46:VAL:HG12	1.96	0.64
33:DL:90:VAL:HG22	33:DL:92:LEU:HD22	1.79	0.64
21:CU:14:ALA:HB3	21:CU:16:ARG:NH1	2.13	0.64
40:BS:28:LYS:HD3	40:BS:71:VAL:HG21	1.80	0.64
29:BG:25:ILE:O	29:BG:31:GLU:HA	1.97	0.64
23:BB:2053:G:OP1	26:BD:149:ASN:O	2.16	0.64
23:BB:547:A:H3'	23:BB:548:G:C8	2.21	0.64
23:DB:396:G:H5'	46:DZ:11:GLU:HG3	1.80	0.64
28:DF:132:ARG:HD3	28:DF:133:GLU:N	2.12	0.64
1:CA:1250:A:H2'	1:CA:1251:A:C8	2.33	0.64
32:DK:8:LEU:HD12	32:DK:8:LEU:N	2.12	0.64
18:AS:39:ILE:HG21	18:AS:65:MET:HB3	1.79	0.64
29:DG:9:VAL:HG23	29:DG:11:PRO:HD3	1.79	0.64
2:AC:176:THR:HB	2:AC:179:ALA:HB2	1.77	0.64
44:DX:51:ALA:O	44:DX:53:VAL:N	2.31	0.64
23:BB:632:A:H2'	23:BB:633:A:C8	2.33	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CS:39:ILE:HB	18:CS:66:VAL:HA	1.79	0.64
16:AQ:10:ARG:HA	16:AQ:10:ARG:HE	1.62	0.64
23:DB:1151:A:H2'	23:DB:1152:C:C6	2.32	0.64
23:BB:813:U:H2'	23:BB:814:C:C6	2.33	0.64
2:CC:11:LEU:HD22	2:CC:17:TRP:NE1	2.11	0.64
23:DB:1590:A:H2'	23:DB:1591:A:C8	2.33	0.64
1:CA:598:U:H4'	7:CH:85:TYR:CD2	2.33	0.64
1:CA:524:G:H2'	1:CA:525:C:C6	2.33	0.64
23:BB:170:U:H2'	23:BB:171:U:C6	2.33	0.64
23:BB:720:U:H2'	23:BB:721:A:C8	2.32	0.64
1:AA:522:C:H41	11:AL:49:ARG:HH22	1.45	0.64
31:BJ:15:TRP:HA	31:BJ:53:TYR:O	1.98	0.64
1:CA:1422:G:O2'	1:CA:1423:G:H5'	1.97	0.64
23:DB:321:U:OP2	27:DE:130:LYS:HG3	1.98	0.64
23:BB:2901:C:H2'	23:BB:2902:C:H5'	1.80	0.64
39:BR:53:PHE:HB3	39:BR:55:ASP:HB2	1.79	0.64
27:BE:43:THR:HG23	27:BE:44:ARG:NE	2.12	0.64
23:DB:2526:G:N2	51:D4:2:LYS:HD2	2.13	0.64
34:BM:9:PHE:CG	34:BM:10:ARG:N	2.64	0.64
25:DC:170:TYR:O	25:DC:171:VAL:HG13	1.98	0.64
33:BL:122:VAL:HG23	33:BL:139:GLY:O	1.98	0.64
1:AA:1101:A:H61	20:AB:173:LYS:HD2	1.63	0.64
1:CA:1286:U:O2'	1:CA:1287:A:H5''	1.97	0.64
46:DZ:55:GLY:HA2	46:DZ:59:ARG:HD2	1.80	0.64
39:BR:66:HIS:N	39:BR:98:ILE:HD13	2.12	0.64
10:AK:88:PRO:HA	10:AK:92:ARG:HE	1.63	0.64
16:AQ:59:GLU:H	16:AQ:74:LEU:HD23	1.62	0.64
3:AD:84:ASN:HD22	3:AD:87:GLU:H	1.43	0.64
11:CL:71:HIS:HD2	11:CL:73:LEU:HD12	1.62	0.64
23:BB:263:G:H2'	23:BB:264:C:O4'	1.97	0.64
12:CM:18:LEU:HG	12:CM:21:ILE:HD12	1.79	0.64
1:CA:270:A:H2'	1:CA:271:C:C6	2.33	0.64
1:CA:1031:C:H4'	1:CA:1032:G:H5''	1.80	0.64
1:AA:269:C:H2'	1:AA:270:A:H8	1.63	0.64
1:CA:1292:G:H2'	1:CA:1293:C:C6	2.32	0.64
3:CD:97:LEU:HB2	3:CD:134:TYR:HB3	1.79	0.64
23:BB:282:A:H2'	23:BB:283:G:C8	2.32	0.64
23:DB:2645:G:H3'	23:DB:2646:C:H5'	1.79	0.64
20:AB:118:THR:O	20:AB:121:GLN:HB3	1.98	0.64
23:BB:62:U:H3'	23:BB:63:A:H8	1.62	0.64
1:CA:1129:C:H1'	1:CA:1146:A:H61	1.63	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BR:2:TYR:H	39:BR:46:GLU:HB2	1.63	0.64
23:BB:773:U:H5'	23:BB:774:G:OP2	1.97	0.64
25:DC:124:LYS:CB	25:DC:125:PRO:CD	2.75	0.64
23:DB:1819:A:OP1	25:DC:153:LEU:HB2	1.98	0.64
26:BD:5:VAL:HG11	26:BD:29:VAL:H	1.63	0.64
23:BB:1132:U:H5''	31:BJ:85:LYS:HZ2	1.61	0.64
37:DP:52:ARG:O	37:DP:60:VAL:HG21	1.96	0.64
1:AA:1221:G:H5''	18:AS:35:ARG:HH11	1.62	0.64
23:DB:163:C:H2'	23:DB:164:C:O4'	1.98	0.64
13:CN:30:ILE:HG22	13:CN:41:TRP:HB3	1.79	0.64
23:BB:7:G:H1'	31:BJ:135:GLN:HE21	1.63	0.64
15:CP:54:LEU:HD13	15:CP:80:LYS:HZ2	1.63	0.64
1:CA:1270:G:H2'	1:CA:1271:A:H8	1.63	0.64
13:CN:40:ARG:HG3	18:CS:6:LYS:O	1.97	0.64
4:CE:87:VAL:HG22	4:CE:88:HIS:N	2.12	0.64
26:DD:60:VAL:O	26:DD:63:PRO:HD2	1.97	0.64
41:DT:38:ALA:HB1	41:DT:43:ILE:HD11	1.79	0.64
50:B3:41:ARG:NH1	50:B3:42:HIS:HB3	2.13	0.64
41:DT:68:LYS:HB2	41:DT:68:LYS:NZ	2.11	0.64
23:BB:467:G:OP1	49:B2:33:ARG:HD3	1.96	0.64
23:DB:1219:U:OP2	38:DQ:18:LYS:HE2	1.98	0.64
23:DB:2339:C:H2'	23:DB:2340:A:C8	2.32	0.64
23:DB:2339:C:H2'	23:DB:2340:A:H8	1.62	0.64
1:AA:205:A:H2'	1:AA:206:C:H6	1.61	0.64
23:BB:1041:G:H2'	23:BB:1042:G:C8	2.33	0.64
23:BB:877:A:H2'	23:BB:899:A:N1	2.13	0.64
35:BN:62:ASN:ND2	35:BN:80:PHE:HB3	2.12	0.64
31:BJ:41:LYS:O	38:BQ:66:ALA:HB1	1.98	0.64
40:DS:9:HIS:O	40:DS:10:ALA:HB3	1.98	0.64
46:BZ:8:LYS:HD2	46:BZ:9:TYR:H	1.63	0.64
25:DC:127:ASN:HD22	25:DC:128:THR:N	1.89	0.64
50:B3:24:LYS:NZ	50:B3:29:ARG:HH22	1.96	0.64
26:BD:2:ILE:HB	26:BD:205:PRO:HD3	1.80	0.64
25:BC:29:PHE:HB2	25:BC:31:PRO:CD	2.28	0.64
26:DD:107:VAL:HA	26:DD:205:PRO:O	1.98	0.64
43:BW:31:LEU:HD11	43:BW:34:SER:CB	2.27	0.64
45:DY:2:LYS:H	45:DY:37:ARG:CB	2.10	0.64
23:BB:2575:C:H5''	26:BD:149:ASN:HB3	1.80	0.64
17:CR:72:ARG:HH21	21:CU:23:GLU:HG3	1.61	0.64
23:DB:2199:A:O3'	46:DZ:34:LEU:HD22	1.97	0.64
46:DZ:49:ARG:C	46:DZ:51:VAL:H	2.01	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2749:A:OP2	29:BG:3:VAL:HG11	1.97	0.64
28:DF:29:ARG:HD2	28:DF:158:THR:HG21	1.80	0.64
3:AD:2:ARG:HG3	3:AD:114:ARG:CZ	2.28	0.64
9:CJ:36:VAL:HG13	9:CJ:76:ILE:HD11	1.80	0.64
33:DL:75:ALA:HB3	33:DL:108:ALA:HA	1.80	0.64
31:BJ:35:ARG:HH21	31:BJ:40:HIS:N	1.95	0.64
1:CA:1277:C:O2'	1:CA:1279:G:H1'	1.98	0.64
29:BG:6:ALA:HB3	29:BG:7:PRO:HD3	1.80	0.64
5:CF:68:GLN:O	5:CF:71:ILE:HG22	1.98	0.64
46:DZ:53:THR:HA	46:DZ:56:ARG:HG2	1.78	0.64
2:AC:61:LYS:O	2:AC:96:VAL:HB	1.98	0.64
1:AA:875:U:O2'	7:AH:14:ARG:HD2	1.97	0.64
1:AA:524:G:H2'	1:AA:525:C:C6	2.33	0.64
26:BD:167:ASN:H	26:BD:167:ASN:ND2	1.96	0.64
1:AA:1447:A:H5'	1:AA:1448:C:H5	1.63	0.64
20:CB:83:ALA:O	20:CB:88:GLN:HB2	1.98	0.64
19:AT:15:LYS:HD3	19:AT:18:LYS:HE3	1.79	0.64
25:BC:170:TYR:O	25:BC:171:VAL:HG13	1.97	0.63
20:AB:202:ASN:HD22	20:AB:204:ASP:N	1.95	0.63
36:DO:109:ALA:O	36:DO:112:GLU:HB2	1.98	0.63
36:DO:39:VAL:HG12	36:DO:50:ALA:HB2	1.79	0.63
33:BL:91:ASP:HA	33:BL:123:ARG:HB2	1.80	0.63
21:AU:40:PRO:O	21:AU:44:ARG:HB2	1.98	0.63
18:AS:31:ARG:HG3	18:AS:56:HIS:NE2	2.13	0.63
20:AB:41:ASN:ND2	20:AB:44:LYS:HB2	2.13	0.63
23:DB:632:A:H2'	23:DB:633:A:C8	2.33	0.63
23:BB:423:A:H5'	23:BB:424:G:C5'	2.28	0.63
40:BS:89:ALA:HA	40:BS:90:LYS:HZ2	1.63	0.63
41:BT:63:VAL:HG13	41:BT:80:TRP:HB2	1.79	0.63
44:BX:12:GLU:HB2	44:BX:14:LEU:CD1	2.28	0.63
23:BB:589:U:H2'	23:BB:590:A:C8	2.33	0.63
30:DH:72:ILE:HG12	30:DH:108:VAL:HG21	1.81	0.63
23:DB:1179:G:H2'	23:DB:1180:U:C6	2.33	0.63
1:AA:1468:A:H2'	1:AA:1469:C:O4'	1.98	0.63
23:DB:1229:C:H2'	23:DB:1230:A:C8	2.33	0.63
23:BB:275:C:H2'	23:BB:276:U:O4'	1.98	0.63
23:DB:181:A:H1'	23:DB:435:C:H5'	1.80	0.63
23:DB:345:A:H1'	23:DB:346:A:C2	2.33	0.63
23:DB:990:A:N6	23:DB:1186:G:H1'	2.13	0.63
23:BB:2789:C:H2'	23:BB:2893:A:N7	2.13	0.63
40:DS:82:MET:HG3	40:DS:83:LYS:N	2.13	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BQ:97:ILE:HA	38:BQ:100:PHE:CZ	2.33	0.63
39:BR:39:LEU:HD12	39:BR:60:LYS:HB2	1.80	0.63
37:BP:84:SER:O	37:BP:86:LYS:N	2.31	0.63
26:BD:130:GLN:NE2	26:BD:138:LEU:HD12	2.12	0.63
25:BC:164:VAL:HB	25:BC:167:ASP:OD1	1.98	0.63
25:BC:68:ARG:NH2	25:BC:190:THR:HG23	2.13	0.63
27:BE:147:LEU:O	27:BE:148:ILE:HG13	1.98	0.63
37:DP:52:ARG:HG3	37:DP:52:ARG:NH1	2.09	0.63
33:DL:63:LYS:HB2	50:D3:26:ALA:CB	2.29	0.63
10:CK:110:THR:HG22	21:CU:5:VAL:H	1.62	0.63
23:DB:2415:G:H4'	33:DL:66:PHE:HB2	1.81	0.63
5:CF:47:LEU:HD21	5:CF:57:ALA:CB	2.28	0.63
39:DR:74:ILE:O	39:DR:75:VAL:HG13	1.98	0.63
11:CL:86:VAL:HG11	11:CL:89:LEU:HD23	1.79	0.63
23:BB:1470:A:H3'	23:BB:1471:G:H8	1.62	0.63
26:DD:8:LYS:HZ3	37:DP:5:LYS:HG3	1.64	0.63
23:BB:346:A:H2'	23:BB:347:A:O4'	1.99	0.63
11:AL:85:ARG:HA	11:AL:93:ARG:HA	1.80	0.63
1:CA:1436:U:H2'	1:CA:1437:A:C8	2.33	0.63
27:BE:127:GLU:HB2	27:BE:130:LYS:HB2	1.80	0.63
32:DK:94:PRO:HG3	32:DK:114:LYS:HB3	1.80	0.63
1:CA:1354:U:H2'	1:CA:1355:G:H8	1.63	0.63
36:BO:87:ILE:HG22	36:BO:115:LEU:H	1.63	0.63
23:BB:596:U:H2'	23:BB:597:G:C8	2.34	0.63
3:CD:151:GLN:NE2	3:CD:153:ARG:HD2	2.13	0.63
20:AB:75:ALA:O	20:AB:79:VAL:HB	1.98	0.63
1:AA:531:U:H6	1:AA:531:U:H5'	1.63	0.63
1:AA:817:C:H1'	1:AA:819:A:H5'	1.80	0.63
25:DC:136:VAL:HA	25:DC:165:ALA:HA	1.80	0.63
23:BB:968:C:H2'	23:BB:969:G:H8	1.61	0.63
23:DB:1654:A:H4'	35:DN:1:MET:N	2.12	0.63
45:DY:3:THR:HA	45:DY:37:ARG:O	1.99	0.63
36:DO:73:ALA:HA	36:DO:76:LYS:NZ	2.12	0.63
27:DE:47:LYS:HD2	27:DE:52:VAL:HG23	1.80	0.63
35:BN:116:VAL:HG22	35:BN:117:ASP:H	1.63	0.63
33:BL:142:ILE:HG13	33:BL:143:GLU:N	2.13	0.63
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.33	0.63
25:BC:53:ILE:HD13	25:BC:218:THR:HG23	1.80	0.63
25:BC:181:ARG:HH22	25:BC:260:LYS:HZ2	1.46	0.63
5:AF:92:THR:HG23	5:AF:93:LYS:H	1.64	0.63
39:BR:37:GLU:OE1	39:BR:62:GLU:HB2	1.97	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DV:4:ILE:O	24:DV:63:ILE:HA	1.98	0.63
16:AQ:10:ARG:HH11	16:AQ:55:GLY:H	1.43	0.63
23:DB:2783:U:H2'	23:DB:2784:U:C6	2.33	0.63
23:BB:607:U:OP2	27:BE:98:LYS:HG2	1.97	0.63
23:DB:1410:G:H2'	23:DB:1411:U:C6	2.32	0.63
9:AJ:67:ILE:HD11	13:AN:95:LEU:HD22	1.81	0.63
7:AH:30:LYS:HA	7:AH:30:LYS:HZ2	1.62	0.63
23:BB:616:A:H3'	23:BB:617:G:H8	1.62	0.63
8:AI:113:LYS:HA	8:AI:120:ALA:HB2	1.81	0.63
1:AA:1011:C:H2'	1:AA:1012:A:H8	1.64	0.63
2:CC:54:ILE:HB	2:CC:67:ILE:HD12	1.81	0.63
1:AA:1300:G:H1'	1:AA:1301:U:H5	1.61	0.63
23:BB:2820:A:C4	35:BN:4:ARG:HD3	2.34	0.63
23:DB:479:A:N3	23:DB:481:G:H5''	2.13	0.63
26:BD:154:LYS:C	26:BD:156:PHE:N	2.51	0.63
20:AB:163:ILE:O	20:AB:185:ILE:HG13	1.99	0.63
45:DY:43:ILE:HA	45:DY:46:MET:HB2	1.80	0.63
23:DB:453:A:H4'	23:DB:472:A:N6	2.14	0.63
23:DB:966:G:H5'	23:DB:2272:U:O2	1.98	0.63
13:AN:71:GLY:O	13:AN:79:SER:HA	1.98	0.63
33:BL:118:THR:CB	33:BL:119:PRO:HD3	2.28	0.63
20:CB:137:THR:HA	20:CB:140:LEU:HD12	1.81	0.63
21:AU:36:PHE:HB3	21:AU:40:PRO:CG	2.29	0.63
23:DB:1450:G:N2	23:DB:1452:G:H1	1.93	0.63
23:BB:469:G:OP2	27:BE:55:SER:HB3	1.99	0.63
19:CT:61:ALA:HA	19:CT:67:HIS:N	2.10	0.63
48:B1:13:SER:N	48:B1:50:GLU:HA	2.14	0.63
8:AI:40:ARG:N	8:AI:44:ARG:HE	1.96	0.63
8:AI:20:ILE:HG23	8:AI:60:LEU:HD13	1.79	0.63
38:DQ:48:ASP:HA	38:DQ:51:GLN:HE21	1.60	0.63
27:DE:134:LEU:HD22	27:DE:134:LEU:H	1.63	0.63
1:CA:1213:A:O2'	1:CA:1214:C:H5''	1.98	0.63
1:CA:476:U:H2'	1:CA:477:C:C6	2.34	0.63
1:CA:63:C:H5'	1:CA:64:G:OP2	1.99	0.63
23:DB:1495:A:H2'	23:DB:1496:A:C8	2.33	0.63
23:DB:1098:A:H3'	52:DI:3:LYS:HB3	1.79	0.63
23:DB:1098:A:O5'	52:DI:3:LYS:HG2	1.98	0.63
23:DB:587:C:C3'	33:DL:29:LYS:HD2	2.20	0.63
25:BC:141:HIS:CB	25:BC:190:THR:HB	2.28	0.63
25:BC:20:ASN:HD22	25:BC:202:ARG:HA	1.63	0.63
30:BH:35:LYS:O	30:BH:37:VAL:HG13	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DR:49:ILE:HG13	39:DR:51:VAL:HG23	1.80	0.63
43:DW:36:ILE:HD12	43:DW:37:VAL:H	1.64	0.63
31:BJ:90:GLU:O	31:BJ:93:ILE:HG22	1.98	0.63
27:DE:149:ILE:HD11	27:DE:188:MET:H	1.63	0.63
27:BE:72:SER:O	27:BE:75:SER:HB2	1.99	0.63
13:CN:44:VAL:HA	13:CN:47:LEU:HB3	1.81	0.63
36:BO:10:ARG:NH1	36:BO:10:ARG:HG3	2.13	0.63
44:DX:25:GLN:HG2	44:DX:26:PHE:N	2.12	0.63
23:BB:1189:A:O3'	33:BL:41:ARG:HG2	1.98	0.63
35:DN:87:PHE:HB2	35:DN:94:TYR:CE2	2.33	0.63
23:BB:1484:U:H2'	23:BB:1485:U:H6	1.64	0.63
23:DB:717:C:H3'	23:DB:718:A:H5''	1.80	0.63
11:AL:20:VAL:HG13	11:AL:94:TYR:OH	1.99	0.63
2:CC:39:ARG:HH22	13:CN:91:GLU:HB3	1.63	0.63
23:BB:1590:A:H2'	23:BB:1591:A:C8	2.34	0.63
5:CF:1:MET:SD	5:CF:67:PRO:HD3	2.38	0.63
34:BM:82:MET:HB2	34:BM:84:LYS:NZ	2.13	0.63
23:BB:1097:U:H2'	23:BB:1098:A:H5'	1.80	0.63
1:AA:312:C:H2'	1:AA:313:A:C8	2.33	0.63
20:CB:202:ASN:ND2	20:CB:203:ASP:H	1.95	0.63
1:CA:531:U:H5'	1:CA:531:U:H6	1.62	0.63
12:CM:92:ARG:CZ	12:CM:92:ARG:HA	2.29	0.63
30:DH:62:LEU:O	30:DH:66:ASN:HB2	1.98	0.63
23:DB:289:G:H2'	23:DB:290:U:C6	2.33	0.63
23:DB:2054:A:H2'	47:D0:4:GLN:HE22	1.63	0.63
51:D4:24:ARG:HB2	51:D4:36:ARG:HA	1.80	0.63
25:BC:117:SER:HB3	25:BC:127:ASN:ND2	2.14	0.63
34:DM:16:ARG:HE	34:DM:18:ARG:HH12	1.44	0.63
23:DB:2360:G:H1'	33:DL:61:LEU:HD11	1.80	0.63
31:DJ:64:VAL:HG12	31:DJ:65:THR:N	2.12	0.63
35:BN:49:GLU:HB2	35:BN:50:PRO:HD3	1.78	0.63
40:BS:34:ASP:H	40:BS:37:THR:HG22	1.62	0.63
9:AJ:87:LEU:HD22	9:AJ:90:LEU:HD12	1.79	0.63
52:DI:105:LEU:CD1	52:DI:129:GLU:HG2	2.28	0.63
52:DI:105:LEU:HD11	52:DI:139:VAL:CG2	2.28	0.63
23:BB:1060:U:O4	23:BB:1088:A:N6	2.31	0.63
52:BI:77:VAL:HA	52:BI:80:LYS:CE	2.29	0.63
52:DI:54:ILE:HD11	52:DI:71:LYS:O	1.98	0.63
29:DG:171:LYS:NZ	29:DG:173:ALA:HA	2.14	0.63
36:DO:66:GLY:N	36:DO:70:ALA:HB2	2.13	0.63
8:AI:51:LEU:HB3	8:AI:56:MET:HG2	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2574:G:H21	26:DD:147:GLY:HA3	1.62	0.63
8:CI:22:PRO:HA	8:CI:60:LEU:HA	1.79	0.63
26:DD:186:LEU:HD11	37:DP:5:LYS:HD3	1.80	0.63
23:DB:2471:A:HO2'	23:DB:2472:G:H8	1.42	0.63
13:AN:51:PRO:HB2	13:AN:54:SER:HB3	1.79	0.63
23:DB:1406:U:H2'	23:DB:1407:G:C8	2.33	0.63
23:DB:1178:C:H2'	23:DB:1179:G:H8	1.62	0.63
23:BB:1460:U:H5''	23:BB:1461:C:C6	2.34	0.63
23:DB:1590:A:H2'	23:DB:1591:A:H8	1.64	0.63
1:CA:194:C:O2'	1:CA:195:A:H5'	1.98	0.63
23:BB:794:A:H2'	23:BB:795:C:C6	2.33	0.63
23:BB:1854:A:H62	23:BB:1888:G:H8	1.47	0.63
23:BB:946:C:H2'	23:BB:947:A:C8	2.33	0.63
6:AG:44:SER:O	6:AG:48:THR:HG23	1.99	0.63
38:BQ:60:TRP:CE2	38:BQ:93:ILE:HA	2.34	0.63
23:BB:2354:C:H4'	43:BW:30:VAL:HG22	1.79	0.63
50:D3:12:ARG:O	50:D3:13:PHE:HB2	1.98	0.63
23:BB:1251:C:H6	38:BQ:5:ARG:HH21	1.46	0.63
39:DR:18:GLN:CD	39:DR:18:GLN:H	2.02	0.63
23:DB:856:G:C4'	43:DW:23:LYS:HD2	2.28	0.63
36:DO:15:ARG:HH12	43:DW:74:LYS:HG2	1.62	0.63
19:CT:57:VAL:HG12	19:CT:71:ALA:HB1	1.81	0.63
25:DC:225:ASN:H	25:DC:226:PRO:HD3	1.64	0.63
14:CO:62:ARG:CZ	14:CO:86:LEU:HD21	2.29	0.63
23:DB:138:U:H2'	23:DB:140:C:O4'	1.97	0.63
48:D1:4:ILE:HA	48:D1:27:ARG:NH1	2.13	0.63
23:DB:401:A:H2'	23:DB:402:A:C8	2.34	0.63
1:AA:105:G:H2'	1:AA:106:C:C6	2.33	0.63
23:DB:2376:A:H1'	36:DO:111:ARG:HH22	1.63	0.63
47:B0:51:ARG:HD2	47:B0:56:LYS:OXT	1.97	0.63
6:CG:125:ASP:HB3	6:CG:129:ASN:HA	1.81	0.63
23:BB:395:U:H2'	23:BB:396:G:N7	2.14	0.63
46:BZ:3:LYS:HB2	46:BZ:51:VAL:CG2	2.25	0.63
20:CB:11:ALA:HB1	20:CB:42:LEU:HD13	1.81	0.63
39:DR:46:GLU:HG3	39:DR:51:VAL:HG21	1.81	0.63
23:DB:2405:G:H1'	23:DB:2412:A:N6	2.14	0.63
12:AM:106:ARG:NE	12:AM:112:ARG:HG2	2.08	0.63
33:BL:78:ARG:N	33:BL:110:VAL:HG13	2.13	0.63
23:BB:142:A:H1'	41:BT:2:ILE:HG21	1.80	0.63
3:AD:56:GLU:HG2	3:AD:195:ASN:HD22	1.63	0.63
46:DZ:59:ARG:O	46:DZ:60:PHE:HB3	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:156:LEU:HD11	20:CB:178:LEU:HD13	1.80	0.63
23:DB:2887:A:N9	47:D0:27:LEU:HD21	2.13	0.63
29:DG:40:VAL:HG22	29:DG:51:PHE:HE2	1.64	0.63
23:BB:1176:U:H2'	23:BB:1177:G:O4'	1.98	0.63
26:DD:60:VAL:HG23	26:DD:63:PRO:HD2	1.80	0.63
40:DS:40:ASN:O	40:DS:41:LYS:HB3	1.99	0.63
1:CA:817:C:H1'	1:CA:819:A:H5'	1.80	0.63
2:AC:151:GLU:O	2:AC:197:VAL:HA	1.99	0.63
7:CH:76:ARG:HA	7:CH:126:CYS:HB3	1.81	0.63
15:AP:67:ILE:HD11	15:AP:72:ALA:HA	1.81	0.63
19:CT:78:LEU:O	19:CT:82:ILE:HG23	1.99	0.63
11:CL:6:LEU:HD11	11:CL:11:ARG:HE	1.63	0.63
23:BB:903:C:H2'	23:BB:904:G:H8	1.64	0.63
19:AT:59:ARG:HH11	19:AT:59:ARG:HB2	1.62	0.63
5:AF:9:MET:HA	5:AF:58:HIS:O	1.99	0.63
30:DH:76:GLU:O	30:DH:77:THR:HG23	1.98	0.63
23:BB:1219:U:H2'	23:BB:1220:G:C8	2.33	0.63
23:DB:2500:U:H5'	23:DB:2501:C:OP2	1.99	0.63
1:AA:10:A:OP2	4:AE:130:THR:HB	1.99	0.63
26:DD:3:GLY:C	26:DD:4:LEU:HD13	2.19	0.63
33:DL:58:TYR:HB3	50:D3:13:PHE:CE1	2.34	0.63
36:DO:25:ARG:HE	36:DO:94:ARG:HH12	1.47	0.63
31:DJ:49:ASP:HA	31:DJ:114:LEU:HD11	1.81	0.63
39:DR:63:VAL:CG2	39:DR:64:VAL:H	2.04	0.63
25:DC:10:PRO:HB2	25:DC:202:ARG:NH1	2.08	0.63
23:BB:2420:C:OP1	50:B3:34:LYS:HE3	1.99	0.63
40:DS:3:THR:CG2	40:DS:4:ILE:N	2.62	0.63
23:BB:704:G:H1'	23:BB:727:A:N6	2.14	0.63
28:BF:107:VAL:H	28:BF:108:PRO:HD2	1.64	0.63
30:DH:124:THR:HG23	30:DH:128:HIS:HE1	1.63	0.63
23:DB:1309:G:H5'	49:D2:8:SER:H	1.63	0.63
23:BB:2813:A:H2'	23:BB:2814:A:C8	2.33	0.63
1:CA:1320:C:N3	18:CS:35:ARG:HD3	2.14	0.63
13:CN:82:LYS:O	13:CN:85:GLU:HB2	1.99	0.63
41:DT:34:VAL:HG22	41:DT:35:ALA:N	2.13	0.63
6:CG:22:LEU:O	6:CG:26:VAL:HG13	1.99	0.63
2:CC:149:LYS:HE3	2:CC:200:TRP:CE3	2.33	0.63
16:CQ:74:LEU:HD22	16:CQ:75:VAL:N	2.13	0.63
35:DN:24:MET:HG2	35:DN:44:LEU:HD13	1.81	0.63
23:BB:2834:G:H1'	23:BB:2883:A:N6	2.14	0.63
52:DI:63:ASP:O	52:DI:64:ARG:HB2	1.97	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:443:A:H5'	23:DB:444:C:OP1	1.98	0.63
23:DB:1098:A:C3'	52:DI:3:LYS:HB3	2.28	0.62
34:BM:71:LYS:HE2	34:BM:91:TYR:HB3	1.79	0.62
25:DC:141:HIS:CB	25:DC:190:THR:HB	2.28	0.62
37:BP:23:ASP:N	37:BP:93:LYS:HE2	2.13	0.62
25:BC:119:VAL:HG22	25:BC:133:ASN:ND2	2.13	0.62
26:DD:52:THR:OG1	26:DD:75:ALA:HB1	1.98	0.62
50:D3:11:LYS:O	50:D3:12:ARG:HB2	1.98	0.62
32:BK:102:PRO:HA	32:BK:121:GLU:HB3	1.80	0.62
20:AB:148:GLY:O	20:AB:151:LYS:HE2	1.99	0.62
20:AB:65:LYS:HD2	20:AB:157:PRO:HA	1.80	0.62
23:BB:636:G:OP2	33:BL:128:THR:HG22	1.99	0.62
33:BL:94:THR:HA	33:BL:96:LYS:HE2	1.79	0.62
27:DE:161:ALA:O	27:DE:169:VAL:HB	1.99	0.62
23:BB:142:A:H2'	23:BB:143:C:C6	2.34	0.62
23:DB:1060:U:O4	23:DB:1088:A:N6	2.31	0.62
23:DB:974:G:H1'	23:DB:975:A:H8	1.63	0.62
28:BF:133:GLU:HG3	28:BF:134:GLN:H	1.64	0.62
22:BA:49:C:H2'	22:BA:50:A:C8	2.34	0.62
39:DR:67:GLY:H	39:DR:98:ILE:HA	1.61	0.62
26:DD:129:THR:HG23	26:DD:130:GLN:H	1.64	0.62
33:DL:25:SER:C	33:DL:27:LEU:H	2.02	0.62
26:BD:60:VAL:HB	26:BD:63:PRO:HG2	1.80	0.62
40:BS:89:ALA:HA	40:BS:90:LYS:HZ1	1.64	0.62
1:AA:79:G:H2'	1:AA:80:A:C8	2.34	0.62
37:DP:8:GLU:HA	37:DP:11:GLN:HG2	1.81	0.62
1:AA:1182:G:H4'	1:AA:1183:U:H5'	1.79	0.62
1:CA:269:C:H2'	1:CA:270:A:H8	1.62	0.62
4:AE:114:LEU:HD22	4:AE:119:VAL:HG21	1.80	0.62
10:AK:105:ARG:HH21	21:AU:10:PRO:HG3	1.63	0.62
27:DE:39:ALA:O	27:DE:41:GLN:HG2	1.99	0.62
23:DB:2800:A:H2'	23:DB:2801:G:O4'	1.99	0.62
23:DB:2461:A:H2'	23:DB:2462:C:C6	2.34	0.62
23:BB:1210:G:H5'	23:BB:1212:G:O4'	1.99	0.62
40:DS:7:HIS:HD2	40:DS:10:ALA:HB2	1.63	0.62
25:BC:146:LYS:HB3	25:BC:147:PRO:HD2	1.81	0.62
43:BW:30:VAL:HG12	43:BW:31:LEU:N	2.14	0.62
23:DB:250:G:OP2	50:D3:7:ARG:NE	2.31	0.62
45:DY:38:GLU:O	45:DY:43:ILE:HG21	1.99	0.62
30:BH:124:THR:HG22	30:BH:125:THR:H	1.64	0.62
23:BB:1450:G:N2	23:BB:1452:G:H1	1.91	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:16:VAL:HG12	25:DC:16:VAL:O	1.99	0.62
52:BI:74:PRO:O	52:BI:77:VAL:HG22	1.99	0.62
5:CF:38:ARG:NH1	5:CF:98:GLU:H	1.95	0.62
23:BB:85:G:H5''	42:BU:28:LEU:HD23	1.79	0.62
23:DB:1791:A:C5'	25:DC:211:ARG:HE	2.11	0.62
23:BB:2041:U:H2'	23:BB:2042:A:C8	2.34	0.62
1:CA:1014:A:C5'	18:CS:13:HIS:HB3	2.29	0.62
1:CA:1000:A:H2'	1:CA:1001:C:C6	2.34	0.62
49:D2:12:ARG:CG	49:D2:46:LYS:HA	2.29	0.62
42:BU:39:ASN:HD21	42:BU:60:LYS:HB3	1.64	0.62
1:AA:501:C:H1'	1:AA:549:C:H1'	1.81	0.62
1:AA:1118:U:H1'	1:AA:1179:A:C4	2.34	0.62
22:BA:98:G:H1	24:BV:14:LYS:CB	2.12	0.62
23:BB:1794:A:H2'	23:BB:1795:C:H6	1.64	0.62
23:DB:401:A:H2'	23:DB:402:A:H8	1.64	0.62
23:BB:2591:C:H2'	23:BB:2592:G:C8	2.33	0.62
23:BB:1381:G:C2'	23:BB:1382:G:H5'	2.29	0.62
1:AA:1171:A:H2'	1:AA:1172:C:H6	1.64	0.62
23:BB:2179:C:H2'	23:BB:2180:U:C6	2.34	0.62
46:BZ:9:TYR:CZ	46:BZ:11:GLU:HB2	2.34	0.62
25:DC:107:LYS:HG2	25:DC:194:VAL:HG11	1.80	0.62
26:BD:170:VAL:HG11	26:BD:194:PRO:HG2	1.80	0.62
25:BC:103:ILE:HG22	25:BC:104:LEU:N	2.15	0.62
27:BE:150:THR:HA	27:BE:187:VAL:HG23	1.81	0.62
30:DH:4:ILE:HG12	30:DH:37:VAL:HG22	1.81	0.62
30:DH:114:GLU:HB3	30:DH:133:GLN:NE2	2.10	0.62
12:CM:53:ASP:HA	12:CM:56:ARG:NH2	2.15	0.62
1:CA:1287:A:H2'	1:CA:1288:A:C8	2.35	0.62
23:BB:2722:G:H2'	23:BB:2723:C:C6	2.33	0.62
1:AA:981:U:H4'	13:AN:60:ARG:HG3	1.81	0.62
13:AN:11:LYS:O	13:AN:15:LEU:HG	2.00	0.62
28:DF:7:TYR:CA	28:DF:11:VAL:HB	2.28	0.62
25:BC:196:ASN:HB2	25:BC:199:HIS:CD2	2.30	0.62
33:DL:109:LYS:HG2	33:DL:126:ARG:NH1	2.14	0.62
34:DM:131:VAL:HG22	34:DM:133:LYS:H	1.65	0.62
2:AC:5:HIS:CD2	2:AC:8:GLY:H	2.16	0.62
23:DB:2012:G:H4'	40:DS:96:ILE:HD11	1.80	0.62
1:CA:1386:G:H2'	1:CA:1387:G:C8	2.34	0.62
1:AA:69:G:H2'	1:AA:70:U:C6	2.34	0.62
1:CA:586:C:O2'	1:CA:587:G:H5'	1.99	0.62
1:AA:678:U:H2'	1:AA:679:C:C6	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2077:A:H2'	23:BB:2078:C:C6	2.34	0.62
13:CN:5:MET:HA	13:CN:8:ARG:HG3	1.80	0.62
46:BZ:32:LEU:HD22	46:BZ:33:ASN:N	2.14	0.62
25:DC:128:THR:HA	25:DC:189:ALA:O	2.00	0.62
23:DB:588:U:H5'	33:DL:29:LYS:HZ2	1.63	0.62
26:BD:142:VAL:HB	26:BD:143:PRO:HD2	1.80	0.62
26:DD:27:ILE:HG12	26:DD:185:ASN:O	1.98	0.62
36:DO:27:VAL:HG13	36:DO:40:ILE:HD11	1.81	0.62
31:DJ:7:LYS:NZ	31:DJ:45:THR:HG21	2.14	0.62
27:DE:108:ILE:HG22	27:DE:180:LEU:HD13	1.82	0.62
23:BB:142:A:H1'	41:BT:2:ILE:CG2	2.30	0.62
23:DB:2228:G:N2	46:DZ:32:LEU:HD11	2.15	0.62
46:DZ:30:HIS:CE1	46:DZ:49:ARG:HH12	2.17	0.62
28:BF:83:PRO:HG2	28:BF:84:ILE:H	1.64	0.62
25:BC:231:HIS:ND1	25:BC:231:HIS:O	2.31	0.62
34:DM:119:LEU:HD22	34:DM:119:LEU:H	1.64	0.62
39:BR:68:ARG:HD2	39:BR:70:GLU:OE1	1.99	0.62
4:CE:104:ILE:HG23	4:CE:104:ILE:O	2.00	0.62
16:AQ:10:ARG:HH11	16:AQ:55:GLY:N	1.97	0.62
49:D2:17:GLY:O	49:D2:19:ARG:N	2.27	0.62
10:AK:69:CYS:C	10:AK:71:ASP:H	2.01	0.62
1:CA:1387:G:H2'	1:CA:1388:C:C6	2.34	0.62
3:CD:71:PHE:HE2	3:CD:89:LEU:HD11	1.64	0.62
31:BJ:28:LEU:HD23	31:BJ:29:ALA:N	2.14	0.62
23:BB:2008:C:H2'	23:BB:2009:A:H8	1.63	0.62
23:BB:181:A:H2'	23:BB:182:A:H8	1.63	0.62
30:BH:116:ARG:HB2	30:BH:133:GLN:HB2	1.80	0.62
19:AT:4:LYS:HD2	19:AT:5:SER:N	2.13	0.62
1:AA:441:A:H61	1:AA:493:A:H62	1.44	0.62
1:AA:1038:C:H2'	1:AA:1039:G:H8	1.64	0.62
1:CA:105:G:H2'	1:CA:106:C:C6	2.34	0.62
42:DU:51:LEU:HG	42:DU:53:GLN:H	1.64	0.62
1:AA:505:G:H5'	1:AA:534:U:H2'	1.81	0.62
23:DB:2147:A:H2'	23:DB:2147:A:N3	2.14	0.62
38:BQ:92:LYS:CG	38:BQ:93:ILE:H	2.12	0.62
23:BB:444:C:H5''	27:BE:44:ARG:NH1	2.14	0.62
25:DC:139:THR:HA	25:DC:193:GLU:OE1	2.00	0.62
26:DD:48:ILE:HA	26:DD:79:LEU:O	1.99	0.62
23:BB:854:C:H2'	23:BB:855:G:C8	2.34	0.62
31:DJ:25:LEU:HG	31:DJ:64:VAL:H	1.64	0.62
32:BK:103:VAL:HB	32:BK:107:LEU:CD2	2.28	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:18:VAL:CG2	31:BJ:56:VAL:HA	2.30	0.62
31:BJ:58:ASN:HA	31:BJ:127:GLY:N	2.14	0.62
23:BB:143:C:O2	41:BT:4:GLU:HG2	2.00	0.62
21:AU:39:LYS:N	21:AU:40:PRO:HD2	2.13	0.62
40:DS:68:ASP:HB2	40:DS:69:LEU:HD22	1.81	0.62
42:BU:4:ILE:HG21	42:BU:25:LYS:HE2	1.80	0.62
13:AN:15:LEU:HD12	13:AN:16:ALA:N	2.14	0.62
28:BF:64:PRO:HA	28:BF:88:VAL:CG2	2.29	0.62
15:AP:42:ILE:HG22	15:AP:43:ALA:N	2.14	0.62
23:BB:1429:G:H2'	23:BB:1430:G:H8	1.64	0.62
8:AI:30:ASN:ND2	8:AI:65:THR:HA	2.14	0.62
16:AQ:26:ARG:HE	16:AQ:39:ARG:NH1	1.97	0.62
29:BG:16:VAL:HG21	29:BG:44:HIS:NE2	2.14	0.62
42:DU:24:VAL:HG12	42:DU:26:ASN:OD1	1.99	0.62
3:AD:99:ASN:ND2	3:AD:110:ARG:HE	1.97	0.62
23:DB:1484:U:H2'	23:DB:1485:U:H6	1.64	0.62
23:BB:2597:G:H5''	25:BC:239:PHE:O	2.00	0.62
1:CA:677:U:H3	1:CA:713:G:H22	1.48	0.62
14:AO:87:ARG:HA	14:AO:87:ARG:NH1	2.15	0.62
6:CG:39:GLU:HG3	6:CG:43:TYR:HD2	1.65	0.62
1:CA:554:A:H5'	11:CL:25:ALA:HB1	1.80	0.62
12:AM:1:ALA:O	12:AM:8:ILE:HG22	1.98	0.62
23:DB:564:C:O2'	23:DB:565:C:H5'	2.00	0.62
24:BV:5:ASN:HA	24:BV:64:VAL:HB	1.79	0.62
23:BB:2537:U:H2'	23:BB:2538:C:C6	2.34	0.62
23:DB:1818:U:H5''	25:DC:155:ARG:CG	2.29	0.62
43:BW:46:ALA:H	43:BW:75:ASN:CG	2.02	0.62
47:B0:35:GLU:CD	47:B0:43:THR:HG22	2.20	0.62
31:BJ:102:GLU:HG2	31:BJ:103:ILE:HG12	1.81	0.62
24:DV:9:ARG:HH22	24:DV:16:ALA:HB1	1.65	0.62
23:DB:1790:C:P	25:DC:219:VAL:HB	2.40	0.62
23:DB:543:G:H2'	23:DB:544:C:H4'	1.82	0.62
1:CA:1072:G:H2'	1:CA:1073:U:C6	2.35	0.62
23:BB:482:A:H5''	42:BU:43:LYS:HE3	1.82	0.62
23:BB:990:A:H1'	23:BB:1156:A:H2	1.64	0.62
2:CC:55:VAL:HG23	2:CC:66:THR:HB	1.82	0.62
23:BB:1590:A:H2'	23:BB:1591:A:H8	1.65	0.62
23:BB:279:A:C2	23:BB:362:A:H4'	2.34	0.62
22:BA:60:C:H2'	22:BA:61:G:H8	1.63	0.62
23:BB:1219:U:H2'	23:BB:1220:G:H8	1.65	0.62
23:BB:181:A:H2'	23:BB:182:A:C8	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1535:A:H3'	23:BB:1536:C:C6	2.35	0.62
1:AA:9:G:H5'	4:AE:107:GLY:HA3	1.81	0.62
23:DB:2814:A:H2'	23:DB:2815:C:H6	1.65	0.62
11:AL:43:LYS:N	11:AL:44:PRO:HD2	2.14	0.62
26:BD:5:VAL:HG11	26:BD:29:VAL:N	2.14	0.62
37:DP:32:VAL:HA	37:DP:42:PHE:CB	2.29	0.62
34:DM:71:LYS:O	34:DM:73:ILE:N	2.32	0.62
47:B0:32:THR:HG23	47:B0:34:GLY:H	1.63	0.62
35:BN:32:GLU:HA	35:BN:115:LEU:HD21	1.82	0.62
29:BG:32:LEU:HD21	29:BG:74:MET:CB	2.29	0.62
23:BB:545:U:H2'	23:BB:547:A:OP2	2.00	0.62
30:BH:69:ALA:HB2	30:BH:139:PHE:O	1.98	0.62
12:AM:68:LEU:O	12:AM:72:ILE:HD13	1.99	0.62
42:BU:88:ASP:HB2	42:BU:91:LYS:O	1.99	0.62
34:DM:28:PHE:HB2	34:DM:102:LEU:HG	1.81	0.62
52:BI:105:LEU:HD11	52:BI:139:VAL:CG1	2.28	0.62
10:CK:121:ARG:HE	21:CU:34:ARG:CG	2.13	0.62
21:CU:40:PRO:O	21:CU:44:ARG:N	2.33	0.62
39:BR:37:GLU:CG	39:BR:62:GLU:H	2.13	0.62
22:DA:52:A:H2'	22:DA:53:A:H8	1.65	0.62
35:BN:37:THR:HG1	35:BN:40:LYS:HB2	1.64	0.62
23:BB:1485:U:H2'	23:BB:1486:U:H6	1.64	0.62
26:DD:11:MET:HG3	26:DD:12:THR:H	1.65	0.62
30:DH:95:GLY:O	30:DH:99:ILE:HG12	2.00	0.62
23:BB:2591:C:H2'	23:BB:2592:G:H8	1.65	0.62
23:DB:2071:A:H2'	23:DB:2072:C:C6	2.35	0.62
23:DB:2250:G:C6	34:DM:81:ARG:HG2	2.34	0.62
1:AA:882:C:O2'	1:AA:883:C:H5'	1.99	0.62
1:CA:1024:G:O2'	1:CA:1025:U:H5'	2.00	0.62
38:BQ:92:LYS:CA	38:BQ:95:ALA:HB2	2.29	0.62
25:DC:95:TYR:HE2	25:DC:101:ARG:HG3	1.64	0.62
50:B3:7:ARG:HE	50:B3:11:LYS:NZ	1.95	0.62
33:BL:55:MET:N	33:BL:56:PRO:CD	2.62	0.62
23:BB:992:C:H2'	23:BB:993:G:H8	1.63	0.62
26:DD:31:ALA:HA	26:DD:51:THR:CA	2.21	0.62
22:DA:5:U:H2'	22:DA:6:G:C8	2.35	0.62
27:DE:42:GLY:HA2	27:DE:89:PRO:HB3	1.81	0.62
18:AS:5:LYS:N	18:AS:5:LYS:HE3	2.15	0.62
1:AA:1060:U:H2'	1:AA:1061:G:C8	2.35	0.62
27:DE:133:LEU:HD22	27:DE:136:GLN:HG3	1.81	0.62
43:BW:17:ALA:O	43:BW:35:ILE:HA	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2722:G:H2'	23:BB:2723:C:H6	1.64	0.62
28:BF:140:ILE:HG22	28:BF:142:TYR:H	1.64	0.62
14:CO:80:LEU:HD23	14:CO:84:LEU:HD13	1.81	0.62
46:DZ:59:ARG:C	46:DZ:61:ASN:H	2.03	0.62
25:BC:224:MET:HG3	25:BC:233:GLY:O	1.99	0.62
44:DX:18:LEU:O	44:DX:22:LEU:HB2	2.00	0.62
1:AA:37:U:P	11:AL:119:LYS:HB2	2.40	0.62
4:CE:114:LEU:HB3	4:CE:119:VAL:HB	1.81	0.62
23:DB:2789:C:H2'	23:DB:2893:A:N7	2.14	0.62
18:CS:48:ILE:O	18:CS:59:VAL:HG22	2.00	0.62
1:AA:1109:C:H42	1:AA:1110:A:N6	1.98	0.62
23:BB:1406:U:H2'	23:BB:1407:G:C8	2.35	0.62
37:BP:38:ARG:C	37:BP:39:LEU:HD12	2.20	0.62
23:DB:2147:A:H4'	23:DB:2148:G:H8	1.64	0.62
23:DB:2813:A:H2'	23:DB:2814:A:C8	2.35	0.62
23:DB:2704:C:H2'	23:DB:2705:A:O4'	1.99	0.62
36:DO:51:ALA:O	36:DO:52:SER:HB3	1.98	0.62
1:CA:376:G:H5''	15:CP:5:ARG:HB2	1.81	0.62
23:BB:2405:G:H1'	23:BB:2412:A:H61	1.64	0.62
1:AA:1505:G:H4'	1:AA:1506:U:H5''	1.81	0.62
23:BB:1495:A:H2'	23:BB:1496:A:C8	2.33	0.62
1:CA:970:C:H42	8:CI:128:LYS:HG2	1.65	0.62
6:AG:49:LEU:HB2	6:AG:57:GLU:HG3	1.82	0.62
31:BJ:81:ILE:HG12	31:BJ:82:GLY:H	1.65	0.62
27:BE:152:GLU:HG2	27:BE:153:LEU:N	2.13	0.62
27:BE:151:GLY:O	27:BE:190:ALA:HB2	2.00	0.62
1:CA:976:G:OP1	13:CN:70:HIS:HA	2.00	0.62
37:DP:91:VAL:HG12	37:DP:93:LYS:H	1.64	0.62
10:CK:82:GLU:HB3	10:CK:108:ASN:ND2	2.15	0.62
39:DR:64:VAL:HG22	39:DR:100:GLY:HA2	1.81	0.62
27:DE:183:PHE:C	27:DE:185:LYS:H	2.02	0.62
28:BF:106:ALA:CB	28:BF:136:ILE:HG23	2.30	0.62
25:DC:226:PRO:HG3	25:DC:232:GLY:O	2.00	0.62
1:AA:662:U:H2'	1:AA:663:A:C8	2.34	0.62
9:CJ:37:ARG:N	9:CJ:76:ILE:HG12	2.14	0.62
6:AG:148:LYS:HG3	6:AG:151:ALA:HB3	1.80	0.62
23:BB:1791:A:H1'	25:BC:206:LYS:NZ	2.14	0.62
23:DB:1515:A:H2'	23:DB:1516:G:O4'	1.99	0.62
15:AP:9:HIS:HE1	15:AP:29:ASN:HB2	1.63	0.62
23:BB:2784:U:H2'	23:BB:2785:C:H6	1.65	0.62
1:AA:1074:G:H5'	20:AB:104:LYS:NZ	2.15	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1225:A:H3'	1:AA:1226:C:C6	2.35	0.62
1:CA:1373:G:H5''	6:CG:35:LYS:HB2	1.81	0.62
13:AN:78:LEU:HB2	13:AN:83:VAL:HG22	1.82	0.62
6:CG:2:ARG:HB3	6:CG:2:ARG:NH1	2.14	0.62
28:BF:9:ASP:O	28:BF:10:GLU:HB2	2.00	0.62
23:DB:1181:U:H2'	23:DB:1182:G:C8	2.35	0.62
23:DB:460:A:H2'	23:DB:461:C:O4'	2.00	0.62
23:BB:1158:C:H5''	45:BY:30:ARG:HD3	1.82	0.62
1:AA:1518:A:H2'	1:AA:1519:A:C8	2.35	0.62
24:BV:21:ARG:HA	24:BV:25:LYS:O	2.00	0.62
46:BZ:53:THR:HA	46:BZ:56:ARG:HD2	1.81	0.62
23:DB:2722:G:H2'	23:DB:2723:C:C6	2.35	0.62
26:DD:50:VAL:HG11	26:DD:75:ALA:HB3	1.81	0.62
26:DD:77:ARG:HH21	26:DD:79:LEU:HB2	1.65	0.62
39:DR:92:TRP:O	39:DR:93:PHE:HB2	2.00	0.62
46:DZ:1:MET:HA	46:DZ:9:TYR:CZ	2.34	0.62
1:AA:132:C:H5''	19:AT:68:LYS:HE3	1.82	0.62
20:CB:163:ILE:HG23	20:CB:164:ASP:N	2.13	0.62
16:AQ:26:ARG:HH21	16:AQ:39:ARG:CZ	2.13	0.62
51:B4:33:HIS:CD2	51:B4:33:HIS:H	2.17	0.62
23:DB:633:A:O5'	23:DB:633:A:H8	1.82	0.62
23:BB:1790:C:H4'	25:BC:207:ALA:HB2	1.81	0.62
1:AA:763:G:H2'	1:AA:764:C:H6	1.64	0.62
23:BB:1442:U:H2'	23:BB:1443:U:C6	2.34	0.62
1:CA:1237:C:H3'	1:CA:1336:C:H41	1.65	0.62
23:DB:1201:U:H2'	23:DB:1202:G:C8	2.34	0.62
35:BN:98:LEU:HB2	35:BN:112:TYR:CE1	2.35	0.62
1:AA:1074:G:H5'	20:AB:104:LYS:HZ1	1.64	0.62
1:AA:203:G:H1'	1:AA:465:A:N6	2.13	0.62
23:BB:2405:G:H1'	23:BB:2412:A:N6	2.15	0.62
23:BB:13:A:H61	23:BB:525:U:H2'	1.63	0.62
23:BB:2836:U:H2'	23:BB:2837:A:H8	1.65	0.62
23:DB:93:G:H2'	23:DB:94:A:O4'	1.99	0.62
23:DB:1412:U:H2'	23:DB:1413:A:C8	2.35	0.62
6:CG:25:PHE:HD1	6:CG:100:MET:HB2	1.63	0.62
1:CA:7:A:H2	4:CE:125:LYS:HE2	1.65	0.62
23:DB:139:U:P	23:DB:139:U:H3'	2.40	0.62
23:DB:388:G:N7	23:DB:390:U:H2'	2.15	0.62
23:BB:796:C:H2'	23:BB:797:G:H8	1.64	0.62
23:DB:69:C:H2'	23:DB:70:G:H8	1.64	0.62
31:BJ:11:VAL:HG11	31:BJ:44:TYR:CD1	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AU:14:ALA:CA	21:AU:16:ARG:NE	2.59	0.61
48:D1:29:LYS:HB2	48:D1:30:PRO:CD	2.24	0.61
23:BB:580:U:H2'	23:BB:581:C:C6	2.35	0.61
23:DB:2405:G:H1'	23:DB:2412:A:H61	1.64	0.61
9:AJ:87:LEU:H	9:AJ:88:MET:HE1	1.64	0.61
42:BU:9:GLU:HA	42:BU:23:LYS:HA	1.80	0.61
20:AB:96:LEU:HD21	20:AB:146:SER:HB2	1.82	0.61
23:DB:873:C:H2'	23:DB:874:G:H8	1.65	0.61
23:DB:1199:U:O2'	38:DQ:2:ARG:HB2	2.00	0.61
27:BE:18:THR:HG23	27:BE:20:GLY:N	2.15	0.61
2:AC:69:THR:HG21	2:AC:75:VAL:HG21	1.81	0.61
23:BB:2292:U:H2'	23:BB:2293:G:H8	1.65	0.61
23:DB:1437:C:H2'	23:DB:1438:U:H6	1.65	0.61
7:AH:11:THR:HA	7:AH:14:ARG:NH1	2.14	0.61
5:CF:43:GLY:HA2	5:CF:58:HIS:CD2	2.35	0.61
20:AB:27:LYS:HB3	20:AB:28:PRO:HD3	1.82	0.61
8:AI:10:ARG:HB2	8:AI:14:SER:O	2.00	0.61
1:AA:476:U:H2'	1:AA:477:C:C6	2.35	0.61
6:CG:58:LEU:H	6:CG:58:LEU:HD23	1.65	0.61
1:CA:1351:U:O2'	1:CA:1352:C:H5'	2.00	0.61
23:BB:527:C:H5''	23:BB:2779:U:O2	2.00	0.61
23:DB:2295:C:O2'	23:DB:2296:U:H5'	1.99	0.61
23:BB:1064:C:H4'	52:BI:90:GLY:HA2	1.82	0.61
14:CO:20:ASP:OD2	14:CO:23:SER:HB2	2.00	0.61
23:DB:2834:G:H1'	23:DB:2883:A:N6	2.15	0.61
25:DC:178:GLY:C	25:DC:179:GLU:HG2	2.19	0.61
26:BD:12:THR:OG1	26:BD:14:ILE:HG12	2.00	0.61
25:BC:30:ALA:N	25:BC:31:PRO:CD	2.53	0.61
23:DB:2636:C:P	26:DD:80:TRP:HE1	2.22	0.61
30:DH:26:ALA:C	30:DH:28:ASN:N	2.53	0.61
31:DJ:131:ASN:C	31:DJ:133:ALA:H	2.02	0.61
30:DH:122:LEU:HD13	30:DH:146:VAL:HG13	1.82	0.61
39:DR:5:PHE:HB3	39:DR:12:HIS:CE1	2.35	0.61
30:BH:125:THR:CB	30:BH:146:VAL:HB	2.30	0.61
23:DB:1460:U:H5''	23:DB:1461:C:C6	2.35	0.61
42:BU:35:VAL:HG12	42:BU:36:GLU:H	1.64	0.61
32:DK:64:ARG:HD2	32:DK:102:PRO:O	2.00	0.61
1:CA:1343:G:H2'	1:CA:1344:C:C6	2.34	0.61
42:BU:27:VAL:HA	42:BU:32:LYS:O	1.99	0.61
23:BB:2621:G:HO2'	26:BD:164:GLN:HB2	1.65	0.61
12:AM:5:GLY:O	12:AM:6:ILE:HG12	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:D0:42:ILE:O	47:D0:42:ILE:HG23	2.00	0.61
23:BB:2814:A:H2'	23:BB:2815:C:H6	1.64	0.61
33:DL:79:LEU:H	33:DL:113:ALA:CB	2.13	0.61
23:BB:1183:U:H2'	23:BB:1184:U:C6	2.35	0.61
49:D2:35:ARG:HH22	49:D2:44:VAL:HG22	1.64	0.61
42:DU:10:VAL:HG11	42:DU:25:LYS:HE3	1.80	0.61
19:CT:3:ILE:O	19:CT:4:LYS:HB2	2.00	0.61
23:BB:2144:G:H22	23:BB:2148:G:H1'	1.64	0.61
11:AL:64:SER:OG	11:AL:96:THR:HG23	2.00	0.61
26:DD:11:MET:O	26:DD:22:ILE:HD12	2.00	0.61
50:D3:42:HIS:O	50:D3:43:LEU:HD12	2.00	0.61
1:AA:590:U:H2'	1:AA:591:U:C6	2.35	0.61
30:DH:66:ASN:HA	30:DH:138:VAL:HG22	1.81	0.61
23:DB:307:G:N2	23:DB:309:A:H3'	2.14	0.61
23:DB:2309:A:H3'	23:DB:2310:C:H5''	1.82	0.61
1:CA:1134:G:C6	1:CA:1135:U:H1'	2.35	0.61
38:BQ:60:TRP:O	38:BQ:63:ARG:HG2	2.00	0.61
34:BM:63:ILE:HD11	34:BM:65:ILE:HG23	1.82	0.61
37:BP:47:ILE:CG2	37:BP:48:ALA:H	2.11	0.61
26:BD:140:HIS:O	26:BD:142:VAL:N	2.32	0.61
25:BC:143:VAL:HG11	25:BC:173:LEU:HD11	1.81	0.61
33:DL:58:TYR:HA	33:DL:62:PRO:CG	2.30	0.61
38:DQ:63:ARG:HB2	38:DQ:95:ALA:HB1	1.82	0.61
32:BK:63:VAL:HB	32:BK:83:ALA:CB	2.29	0.61
41:DT:60:THR:HA	41:DT:82:LYS:O	1.99	0.61
23:DB:165:A:H2'	23:DB:166:U:C6	2.35	0.61
10:AK:95:THR:HG23	10:AK:96:ILE:H	1.65	0.61
5:CF:86:ARG:HD3	17:CR:63:TYR:O	1.99	0.61
48:D1:49:LYS:H	48:D1:49:LYS:NZ	1.95	0.61
3:AD:20:LEU:HD12	3:AD:20:LEU:H	1.65	0.61
47:D0:27:LEU:H	47:D0:27:LEU:CD2	2.13	0.61
23:BB:856:G:H2'	23:BB:857:G:C8	2.36	0.61
23:BB:639:U:H2'	23:BB:640:C:C6	2.35	0.61
23:BB:2527:C:O2'	51:B4:1:MET:HA	2.00	0.61
23:BB:1175:A:H3'	23:BB:1176:U:O4'	2.01	0.61
4:AE:85:LYS:HE2	4:AE:92:ARG:NH1	2.16	0.61
4:CE:35:LEU:HD13	4:CE:133:ILE:HA	1.81	0.61
41:BT:69:ARG:H	41:BT:75:GLY:HA3	1.66	0.61
16:CQ:64:ARG:HH11	16:CQ:64:ARG:HB3	1.65	0.61
23:DB:899:A:H3'	23:DB:900:A:C8	2.34	0.61
1:CA:763:G:H2'	1:CA:764:C:C6	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BE:98:LYS:HG3	27:BE:99:LYS:H	1.64	0.61
29:BG:137:LYS:HA	29:BG:140:ILE:HG12	1.80	0.61
23:BB:107:G:H21	23:BB:346:A:N6	1.98	0.61
23:BB:1198:U:H2'	23:BB:1199:U:C6	2.35	0.61
29:DG:91:VAL:H	29:DG:159:LYS:HZ1	1.47	0.61
1:AA:918:A:H2'	1:AA:919:A:C8	2.35	0.61
23:BB:1405:U:H2'	23:BB:1406:U:C6	2.36	0.61
23:DB:2147:A:H4'	23:DB:2148:G:C8	2.36	0.61
23:DB:962:G:N2	34:DM:81:ARG:HD3	2.14	0.61
23:BB:608:A:H2'	23:BB:609:A:C8	2.35	0.61
14:CO:61:GLN:O	14:CO:65:LEU:HG	1.99	0.61
10:CK:46:ALA:HB1	10:CK:61:ALA:HB1	1.82	0.61
23:DB:925:A:O2'	23:DB:926:G:H5'	2.01	0.61
10:CK:22:ILE:HG21	10:CK:95:THR:HG21	1.81	0.61
10:CK:23:HIS:HB3	10:CK:30:ILE:HG13	1.81	0.61
11:CL:8:ARG:O	11:CL:10:PRO:HD3	1.99	0.61
9:AJ:80:THR:H	9:AJ:84:VAL:HG11	1.66	0.61
3:CD:195:ASN:HB2	3:CD:198:LEU:HD12	1.81	0.61
23:DB:845:A:C2	23:DB:847:U:H1'	2.35	0.61
23:BB:929:U:H5'	45:BY:37:ARG:NH1	2.15	0.61
31:BJ:8:PRO:HB2	31:BJ:11:VAL:HB	1.81	0.61
46:BZ:15:SER:HB2	46:BZ:25:ARG:NH1	2.15	0.61
25:BC:191:LEU:HD22	25:BC:191:LEU:O	2.01	0.61
37:DP:49:ILE:O	37:DP:50:ARG:HD3	1.99	0.61
50:D3:51:LYS:HA	50:D3:51:LYS:NZ	2.16	0.61
31:DJ:124:VAL:HG23	31:DJ:125:TYR:N	2.07	0.61
27:BE:128:ALA:CB	27:BE:129:PRO:CD	2.78	0.61
9:AJ:88:MET:HB2	9:AJ:89:ARG:NH1	2.11	0.61
28:DF:55:ASP:O	28:DF:59:ILE:HB	2.01	0.61
28:DF:140:ILE:HG22	28:DF:142:TYR:H	1.65	0.61
42:BU:11:ILE:HB	42:BU:69:VAL:CB	2.30	0.61
32:DK:119:ALA:O	32:DK:120:PRO:C	2.37	0.61
46:DZ:37:CYS:SG	46:DZ:39:LYS:HB2	2.41	0.61
23:BB:1117:C:H2'	23:BB:1118:C:C6	2.35	0.61
23:BB:1174:U:H4'	23:BB:1176:U:N3	2.13	0.61
1:CA:815:A:H62	1:CA:1509:C:H1'	1.66	0.61
23:BB:2144:G:H2'	23:BB:2146:C:OP2	2.01	0.61
23:BB:1515:A:H2'	23:BB:1516:G:O4'	2.00	0.61
23:DB:1442:U:H2'	23:DB:1443:U:C6	2.35	0.61
2:CC:151:GLU:HA	2:CC:166:TRP:HA	1.81	0.61
29:BG:10:VAL:HG12	29:BG:47:ASN:O	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1171:A:H2'	1:CA:1172:C:C6	2.35	0.61
35:DN:28:LEU:HA	35:DN:34:ILE:HD11	1.80	0.61
23:DB:2557:G:H2'	23:DB:2558:C:C6	2.35	0.61
22:BA:29:A:H3'	22:BA:30:C:H6	1.65	0.61
28:DF:9:ASP:O	28:DF:10:GLU:HB2	2.00	0.61
22:BA:104:A:H2'	22:BA:105:G:O4'	2.00	0.61
23:DB:1259:G:H2'	23:DB:1260:A:H8	1.65	0.61
28:BF:41:GLU:HB2	28:BF:45:ASP:N	2.15	0.61
23:DB:664:G:H2'	23:DB:665:U:H6	1.65	0.61
32:DK:35:VAL:HG21	32:DK:69:VAL:HG22	1.83	0.61
2:CC:49:ALA:HB2	2:CC:74:ILE:CG2	2.30	0.61
37:BP:59:THR:O	37:BP:60:VAL:HG13	1.99	0.61
23:BB:1821:A:H5'	25:BC:155:ARG:HD2	1.81	0.61
20:AB:17:HIS:HB2	20:AB:202:ASN:OD1	2.00	0.61
26:DD:69:ALA:HB2	26:DD:90:PHE:HB2	1.82	0.61
23:BB:917:A:C2	23:BB:918:A:H1'	2.36	0.61
20:CB:78:ALA:HB1	20:CB:213:LEU:HD22	1.80	0.61
44:BX:22:LEU:HA	44:BX:47:ARG:HH12	1.65	0.61
19:CT:68:LYS:HB2	19:CT:70:LYS:CD	2.30	0.61
30:BH:69:ALA:HB2	30:BH:140:ALA:HA	1.83	0.61
19:AT:68:LYS:CG	19:AT:69:ASN:H	2.12	0.61
23:DB:1188:U:H4'	39:DR:84:ARG:HD3	1.83	0.61
46:DZ:59:ARG:CB	46:DZ:63:ARG:HB2	2.29	0.61
25:BC:229:HIS:ND1	25:BC:230:PRO:HD2	2.16	0.61
32:BK:47:ILE:HG23	32:BK:48:PRO:HD2	1.83	0.61
26:DD:128:ARG:HD3	26:DD:128:ARG:N	2.15	0.61
9:CJ:66:GLU:HB2	13:CN:98:ALA:CB	2.28	0.61
25:BC:209:ALA:HB1	25:BC:213:ARG:NH1	2.15	0.61
23:BB:1197:G:H2'	23:BB:1198:U:C6	2.35	0.61
23:BB:2783:U:H2'	23:BB:2784:U:C6	2.35	0.61
23:DB:1405:U:H2'	23:DB:1406:U:C6	2.36	0.61
3:CD:151:GLN:HE21	3:CD:153:ARG:HD2	1.66	0.61
4:AE:140:ILE:HA	4:AE:143:LEU:HD12	1.81	0.61
28:BF:125:GLY:HA3	28:BF:159:ALA:HB3	1.83	0.61
23:BB:2704:C:H2'	23:BB:2705:A:O4'	1.99	0.61
1:AA:121:U:H3'	1:AA:121:U:OP1	2.00	0.61
27:BE:159:LEU:HA	27:BE:169:VAL:HG21	1.80	0.61
23:BB:564:C:O2'	23:BB:565:C:H5'	2.00	0.61
1:CA:590:U:H2'	1:CA:591:U:C6	2.36	0.61
52:DI:121:ILE:HD13	52:DI:121:ILE:H	1.65	0.61
1:AA:1438:G:O2'	1:AA:1439:G:H5'	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BE:9:GLN:NE2	27:BE:120:VAL:HG13	2.15	0.61
34:DM:41:LEU:CB	34:DM:93:VAL:HB	2.30	0.61
30:DH:125:THR:HA	30:DH:146:VAL:CB	2.26	0.61
23:DB:2271:G:O2'	23:DB:2272:U:H5'	2.00	0.61
18:AS:4:LEU:HD13	18:AS:9:PHE:N	2.13	0.61
18:AS:50:VAL:O	18:AS:56:HIS:HA	2.00	0.61
23:DB:2198:A:H4'	23:DB:2199:A:OP1	2.01	0.61
12:CM:47:LEU:H	12:CM:47:LEU:HD23	1.66	0.61
23:BB:2751:G:O5'	29:BG:3:VAL:HG13	2.01	0.61
28:BF:34:THR:O	28:BF:153:ILE:HA	2.01	0.61
34:DM:53:MET:HA	34:DM:112:LEU:HD21	1.82	0.61
39:DR:85:LYS:O	39:DR:86:GLN:HG3	2.00	0.61
42:DU:28:LEU:HD21	42:DU:32:LYS:N	2.16	0.61
1:AA:80:A:H2'	1:AA:81:A:O4'	2.01	0.61
3:CD:117:VAL:HG12	3:CD:130:ASN:HA	1.81	0.61
1:CA:1021:A:H2'	1:CA:1022:A:C8	2.35	0.61
1:CA:1361:G:H2'	1:CA:1362:A:H5''	1.82	0.61
47:B0:8:THR:HG23	47:B0:9:ARG:N	2.16	0.61
23:BB:274:C:H2'	23:BB:275:C:O4'	2.00	0.61
1:AA:105:G:H2'	1:AA:106:C:H6	1.66	0.61
23:DB:2309:A:H5'	23:DB:2310:C:OP2	1.99	0.61
23:BB:2241:A:H2'	23:BB:2242:G:C8	2.34	0.61
1:AA:1285:A:H4'	1:AA:1286:U:C5	2.36	0.61
34:DM:60:GLN:HE21	34:DM:61:GLY:H	1.49	0.61
4:AE:152:VAL:HG21	7:AH:98:LEU:HD23	1.83	0.61
1:AA:1295:U:H2'	1:AA:1296:C:C6	2.35	0.61
1:AA:60:A:H4'	1:AA:61:G:O5'	1.99	0.61
23:DB:2562:U:H1'	32:DK:23:LYS:HE2	1.82	0.61
23:BB:2266:A:H4'	23:BB:2267:A:N7	2.16	0.61
38:BQ:88:GLU:OE1	38:BQ:111:LYS:HD2	2.00	0.61
23:BB:437:U:H2'	23:BB:438:G:C8	2.36	0.61
24:BV:70:ILE:N	24:BV:70:ILE:HD13	2.16	0.61
33:BL:64:PHE:CD1	50:B3:24:LYS:HB2	2.36	0.61
26:BD:175:LEU:HD11	26:BD:192:ALA:HB3	1.82	0.61
23:DB:2820:A:C5	26:DD:197:THR:HB	2.36	0.61
37:DP:27:VAL:HG13	37:DP:29:VAL:HG23	1.82	0.61
50:D3:12:ARG:CG	50:D3:24:LYS:H	2.04	0.61
43:DW:19:ARG:HB3	43:DW:35:ILE:HG13	1.82	0.61
42:DU:43:LYS:HG2	42:DU:57:ILE:HB	1.81	0.61
23:DB:65:U:H2'	23:DB:66:C:C6	2.35	0.61
33:BL:77:ILE:HG22	33:BL:78:ARG:H	1.64	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:102:GLU:HG2	31:BJ:103:ILE:N	2.15	0.61
40:DS:3:THR:O	40:DS:4:ILE:O	2.18	0.61
13:CN:63:CYS:O	13:CN:67:GLY:HA2	2.01	0.61
52:BI:37:PHE:HB2	52:BI:66:PHE:CZ	2.36	0.61
25:DC:110:LYS:HE3	25:DC:110:LYS:HA	1.83	0.61
1:CA:451:A:H5'	15:CP:70:ARG:NH2	2.14	0.61
26:DD:152:PRO:HB2	26:DD:154:LYS:HE2	1.83	0.61
13:CN:25:GLU:O	13:CN:29:ILE:HG13	1.99	0.61
25:BC:224:MET:HA	25:BC:232:GLY:CA	2.30	0.61
23:BB:2037:A:H2'	23:BB:2038:G:H8	1.65	0.61
26:BD:37:VAL:HB	26:BD:42:ASN:CG	2.21	0.61
26:BD:84:LEU:HD21	26:BD:86:GLU:HB2	1.82	0.61
29:DG:70:LEU:O	29:DG:74:MET:HG3	2.01	0.61
33:DL:125:LEU:O	33:DL:127:VAL:HG13	2.00	0.61
3:AD:191:SER:O	3:AD:192:ALA:HB2	2.01	0.61
6:AG:64:ALA:HA	6:AG:127:ALA:HB2	1.83	0.61
23:BB:1469:A:H2'	23:BB:1470:A:H8	1.66	0.61
23:DB:1113:U:H5''	29:DG:2:ARG:NE	2.16	0.61
50:D3:32:LEU:HD13	50:D3:33:THR:H	1.65	0.61
20:AB:76:SER:O	20:AB:79:VAL:HG12	2.01	0.61
1:AA:8:A:H2'	3:AD:205:LYS:O	2.00	0.61
23:DB:184:C:H2'	23:DB:185:G:H8	1.66	0.61
1:AA:983:A:H5'	1:AA:984:C:OP2	1.99	0.61
23:DB:651:G:OP1	50:D3:18:LYS:HG2	1.99	0.61
23:DB:2591:C:H2'	23:DB:2592:G:C8	2.35	0.61
35:BN:13:ASN:HD22	35:BN:15:SER:HB2	1.65	0.61
5:AF:99:ALA:O	5:AF:100:SER:HB2	2.00	0.61
23:BB:240:C:H3'	23:BB:241:A:H5''	1.83	0.61
38:BQ:57:ARG:HD2	38:BQ:92:LYS:NZ	2.16	0.61
37:BP:27:VAL:HG21	37:BP:86:LYS:HB2	1.82	0.61
23:BB:1818:U:O3'	25:BC:155:ARG:HB2	2.01	0.61
37:DP:89:GLY:HA2	37:DP:112:ARG:NH2	2.15	0.61
35:BN:7:GLY:O	35:BN:8:ARG:HB2	2.01	0.61
38:BQ:27:ARG:HA	38:BQ:33:VAL:HB	1.83	0.61
43:DW:44:PHE:HD2	43:DW:77:LYS:HB3	1.64	0.61
27:DE:149:ILE:HD13	27:DE:186:VAL:HG13	1.83	0.61
23:BB:55:G:P	49:B2:35:ARG:HH21	2.23	0.61
23:BB:587:C:OP2	33:BL:29:LYS:HG2	2.01	0.61
45:BY:3:THR:HG21	45:BY:43:ILE:HB	1.83	0.61
52:DI:32:VAL:HG22	52:DI:60:VAL:CG2	2.30	0.61
39:DR:67:GLY:H	39:DR:98:ILE:CA	2.14	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CQ:12:VAL:HG11	16:CQ:42:LYS:NZ	2.16	0.61
47:D0:51:ARG:HG3	47:D0:55:ALA:HB2	1.83	0.61
26:BD:37:VAL:HG12	26:BD:38:LYS:HZ3	1.66	0.61
23:BB:2291:U:H2'	23:BB:2292:U:C6	2.36	0.61
13:CN:12:ARG:HG3	13:CN:53:ASP:O	2.01	0.61
16:AQ:59:GLU:H	16:AQ:74:LEU:CD2	2.14	0.61
3:AD:58:GLN:HA	3:AD:61:ARG:HB2	1.83	0.61
23:BB:2267:A:N6	23:BB:2272:U:C4	2.68	0.61
23:DB:969:G:H2'	23:DB:970:U:C6	2.35	0.61
23:BB:708:G:H2'	23:BB:709:U:C6	2.36	0.61
1:CA:939:G:H5''	6:CG:101:ARG:NH2	2.15	0.61
1:CA:212:G:H2'	1:CA:213:G:H8	1.66	0.61
1:AA:212:G:H2'	1:AA:213:G:H8	1.65	0.61
14:AO:55:LEU:O	14:AO:59:VAL:HG23	2.01	0.61
1:CA:1118:U:H2'	1:CA:1119:C:H6	1.66	0.61
1:CA:121:U:H3'	1:CA:121:U:OP1	2.01	0.61
23:BB:19:A:H2'	23:BB:20:C:C6	2.36	0.61
12:AM:98:GLY:H	12:AM:99:GLN:HE21	1.49	0.61
39:BR:42:ALA:CA	39:BR:54:VAL:HA	2.30	0.61
51:D4:10:LEU:HB2	51:D4:25:VAL:CG2	2.31	0.61
27:DE:164:LEU:HD22	27:DE:164:LEU:C	2.20	0.61
25:BC:77:VAL:HG23	25:BC:115:ILE:HD11	1.83	0.61
37:BP:52:ARG:HG2	37:BP:54:LEU:HB2	1.83	0.61
37:DP:23:ASP:O	37:DP:25:VAL:N	2.34	0.61
43:BW:49:ASN:HB2	43:BW:53:GLY:CA	2.30	0.61
35:DN:42:LYS:HE3	35:DN:45:ARG:HG3	1.83	0.61
23:DB:850:U:H2'	23:DB:851:C:C6	2.36	0.61
30:BH:2:GLN:N	30:BH:21:VAL:HG12	2.16	0.61
25:DC:20:ASN:HB2	25:DC:202:ARG:CD	2.30	0.61
1:CA:451:A:H4'	1:CA:452:A:O4'	2.00	0.61
23:DB:639:U:H2'	23:DB:640:C:C6	2.36	0.61
19:AT:60:GLN:NE2	19:AT:61:ALA:H	1.99	0.61
23:BB:478:A:N1	23:BB:500:G:H4'	2.16	0.61
48:B1:42:VAL:CG1	48:B1:43:ARG:HG3	2.30	0.61
31:BJ:34:ARG:HB3	31:BJ:39:LYS:HB2	1.83	0.61
23:DB:414:C:H2'	23:DB:415:A:H8	1.65	0.61
23:BB:2784:U:H2'	23:BB:2785:C:C6	2.35	0.61
23:BB:1076:C:H4'	52:BI:94:LYS:NZ	2.15	0.61
23:BB:278:A:H2'	23:BB:278:A:N3	2.16	0.61
23:DB:479:A:O2'	23:DB:481:G:H5'	2.00	0.61
1:CA:970:C:N4	8:CI:128:LYS:HG2	2.16	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1151:A:O2'	1:CA:1152:A:H5''	2.00	0.61
2:CC:37:LYS:HB3	2:CC:41:TYR:CE1	2.36	0.61
20:AB:128:LEU:HG	20:AB:132:GLU:HG2	1.83	0.61
6:AG:3:ARG:NH1	6:AG:3:ARG:HB3	2.16	0.61
23:BB:1874:C:H2'	23:BB:1875:G:O4'	2.00	0.61
12:AM:88:LEU:O	12:AM:92:ARG:HG3	2.00	0.61
25:BC:37:SER:OG	25:BC:38:LYS:N	2.34	0.61
52:DI:5:GLN:O	52:DI:6:ALA:CB	2.49	0.61
31:BJ:41:LYS:NZ	31:BJ:46:PRO:HD3	2.15	0.61
26:BD:12:THR:HB	26:BD:21:SER:O	2.01	0.61
23:DB:930:G:H1'	45:DY:24:LEU:HD12	1.83	0.61
33:BL:78:ARG:H	33:BL:78:ARG:CZ	2.13	0.61
25:DC:243:PRO:CA	25:DC:249:VAL:HG23	2.29	0.61
40:DS:64:ALA:HB1	40:DS:69:LEU:HD21	1.83	0.61
23:DB:704:G:HO2'	23:DB:726:G:H22	1.48	0.61
52:BI:85:ILE:HD13	52:BI:137:LEU:HD21	1.83	0.61
25:DC:27:LYS:HG2	25:DC:81:GLU:CA	2.31	0.61
3:AD:7:LYS:HE2	3:AD:20:LEU:HD22	1.83	0.61
15:AP:46:LYS:H	15:AP:46:LYS:CD	2.10	0.61
3:AD:163:GLN:HB2	3:AD:164:ARG:NH1	2.14	0.61
4:AE:96:GLN:HB3	4:AE:123:LEU:CD1	2.31	0.61
6:AG:22:LEU:O	6:AG:25:PHE:HB3	2.01	0.61
9:CJ:38:GLY:O	9:CJ:74:VAL:HA	2.00	0.61
36:BO:41:ALA:HB1	36:BO:42:PRO:HD2	1.82	0.61
5:AF:40:GLU:HG3	5:AF:42:TRP:NE1	2.16	0.61
38:BQ:65:ASN:HA	38:BQ:75:TYR:HB2	1.81	0.61
1:CA:1324:A:H5'	1:CA:1362:A:O2'	2.01	0.61
1:AA:1074:G:H2'	1:AA:1075:U:C6	2.35	0.61
7:CH:81:GLY:O	7:CH:82:LEU:HB2	2.01	0.61
1:CA:105:G:H2'	1:CA:106:C:H6	1.66	0.61
1:AA:1193:G:O2'	1:AA:1194:U:H5'	2.01	0.61
39:BR:79:ARG:HD3	39:BR:86:GLN:NE2	2.16	0.61
23:BB:116:C:H2'	23:BB:117:G:C8	2.36	0.61
23:DB:1013:C:H2'	23:DB:1014:A:H8	1.66	0.61
23:DB:448:U:O4	23:DB:583:G:H1'	2.01	0.60
21:AU:14:ALA:CA	21:AU:16:ARG:CD	2.78	0.60
33:BL:55:MET:N	33:BL:56:PRO:HD2	2.16	0.60
37:BP:31:VAL:HA	37:BP:81:ASP:CB	2.31	0.60
37:BP:26:GLU:HA	37:BP:47:ILE:N	2.15	0.60
25:BC:140:VAL:HG23	25:BC:193:GLU:OE2	2.01	0.60
20:AB:69:VAL:O	20:AB:163:ILE:HG22	2.00	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DJ:40:HIS:HB2	38:DQ:69:ARG:NH2	2.08	0.60
23:DB:920:A:H2'	23:DB:921:C:C6	2.36	0.60
23:DB:950:G:H2'	23:DB:951:C:H6	1.66	0.60
43:DW:38:ARG:HE	43:DW:40:ARG:HA	1.65	0.60
31:BJ:25:LEU:HG	31:BJ:64:VAL:N	2.10	0.60
27:DE:136:GLN:HA	27:DE:139:LYS:HG2	1.82	0.60
27:DE:14:VAL:HG12	27:DE:15:SER:H	1.66	0.60
41:BT:3:ARG:O	41:BT:3:ARG:HG2	2.00	0.60
42:BU:12:VAL:HG11	42:BU:18:LYS:H	1.65	0.60
23:BB:1082:U:O4	23:BB:1086:A:C2	2.54	0.60
23:BB:1060:U:C5	52:BI:131:THR:HG22	2.35	0.60
8:AI:35:GLU:HA	8:AI:39:GLY:HA3	1.82	0.60
33:DL:126:ARG:O	33:DL:127:VAL:HG22	2.01	0.60
36:BO:41:ALA:HB3	36:BO:45:SER:HB3	1.82	0.60
23:DB:878:A:N3	23:DB:878:A:H2'	2.15	0.60
1:CA:501:C:H1'	1:CA:549:C:H1'	1.83	0.60
16:CQ:60:ILE:HG22	16:CQ:74:LEU:HA	1.82	0.60
35:BN:35:LYS:HA	35:BN:112:TYR:HA	1.83	0.60
1:CA:89:U:H2'	1:CA:90:C:H6	1.64	0.60
1:AA:1225:A:H4'	18:AS:77:ARG:NH2	2.16	0.60
1:AA:194:C:O2'	1:AA:195:A:H5'	2.01	0.60
7:AH:5:PRO:HB2	7:AH:32:LYS:HZ1	1.65	0.60
23:DB:79:C:O2'	23:DB:346:A:H1'	2.01	0.60
32:DK:93:GLN:HG2	32:DK:94:PRO:HD2	1.83	0.60
23:DB:289:G:H2'	23:DB:290:U:H6	1.65	0.60
1:AA:1254:A:OP1	9:AJ:47:GLU:HG3	2.01	0.60
19:AT:54:GLN:N	19:AT:55:PRO:HD2	2.16	0.60
23:DB:438:G:H2'	23:DB:439:A:H8	1.65	0.60
29:BG:88:LEU:HD11	29:BG:95:ALA:HB2	1.81	0.60
3:CD:25:ARG:HB2	3:CD:25:ARG:HH11	1.65	0.60
14:CO:21:THR:HA	14:CO:26:VAL:HG11	1.81	0.60
3:AD:120:LYS:HB2	3:AD:145:ARG:HH21	1.66	0.60
23:DB:1099:G:P	52:DI:4:VAL:N	2.71	0.60
40:DS:46:LEU:O	40:DS:50:VAL:HG13	2.01	0.60
23:BB:36:G:H2'	23:BB:37:C:O4'	2.00	0.60
24:BV:44:HIS:NE2	24:BV:85:LYS:HB2	2.16	0.60
25:DC:136:VAL:CA	25:DC:165:ALA:HA	2.31	0.60
37:BP:93:LYS:HB3	37:BP:96:LEU:HA	1.83	0.60
23:BB:992:C:O2'	23:BB:993:G:H5'	2.01	0.60
25:BC:29:PHE:HB2	25:BC:31:PRO:HD2	1.83	0.60
30:DH:11:ASN:HD22	30:DH:20:ASN:ND2	1.97	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DY:3:THR:O	45:DY:36:GLU:HA	2.02	0.60
31:DJ:124:VAL:CG2	31:DJ:125:TYR:H	2.09	0.60
39:DR:3:ALA:HB1	39:DR:12:HIS:HB3	1.81	0.60
33:BL:118:THR:H	33:BL:119:PRO:CD	2.11	0.60
1:AA:1219:A:H2'	1:AA:1220:G:H8	1.65	0.60
52:DI:85:ILE:CD1	52:DI:137:LEU:HD21	2.31	0.60
42:DU:33:VAL:HG23	42:DU:65:GLN:HE21	1.66	0.60
39:DR:81:LYS:O	39:DR:83:TYR:N	2.33	0.60
25:BC:224:MET:O	25:BC:225:ASN:HB2	2.01	0.60
39:BR:35:PHE:HB2	39:BR:64:VAL:CG2	2.31	0.60
4:CE:113:VAL:HG23	4:CE:114:LEU:H	1.66	0.60
23:BB:2292:U:H2'	23:BB:2293:G:C8	2.37	0.60
13:CN:53:ASP:HA	13:CN:58:ARG:HH11	1.67	0.60
9:AJ:56:HIS:N	13:AN:80:ARG:HH22	1.98	0.60
21:AU:26:GLY:C	21:AU:28:LEU:H	2.05	0.60
1:AA:78:A:H2'	1:AA:79:G:H8	1.62	0.60
26:DD:146:ILE:HG12	26:DD:155:VAL:HG13	1.83	0.60
23:DB:361:G:O2'	23:DB:362:A:H5'	2.01	0.60
1:CA:1508:A:H2'	1:CA:1509:C:H6	1.64	0.60
23:DB:936:A:H2'	23:DB:937:C:H6	1.66	0.60
7:AH:42:GLU:HG3	7:AH:100:ILE:HD13	1.84	0.60
23:DB:1299:G:H4'	23:DB:1301:A:H1'	1.83	0.60
23:DB:1854:A:H62	23:DB:1888:G:H8	1.50	0.60
4:AE:33:THR:O	4:AE:34:ALA:HB3	2.00	0.60
29:BG:97:VAL:HG23	29:BG:124:CYS:SG	2.41	0.60
11:CL:51:VAL:HG12	11:CL:52:CYS:H	1.67	0.60
38:DQ:9:ALA:O	38:DQ:12:ARG:HB3	2.01	0.60
23:BB:2872:A:O2'	23:BB:2873:A:H5''	2.01	0.60
23:DB:383:C:N4	23:DB:385:C:H2'	2.16	0.60
23:BB:414:C:H2'	23:BB:415:A:C8	2.36	0.60
30:DH:131:SER:HB2	30:DH:141:LYS:HG3	1.83	0.60
44:DX:17:GLU:HA	44:DX:21:LEU:HB2	1.82	0.60
25:BC:50:THR:HG22	25:BC:51:ARG:CG	2.31	0.60
46:BZ:49:ARG:C	46:BZ:51:VAL:H	2.03	0.60
33:BL:63:LYS:HB2	50:B3:11:LYS:NZ	2.15	0.60
23:BB:833:A:H2'	23:BB:834:G:C8	2.36	0.60
34:DM:41:LEU:HD22	34:DM:95:LEU:HD13	1.83	0.60
50:D3:7:ARG:NH1	50:D3:10:ALA:HB3	2.17	0.60
23:DB:1162:G:O2'	23:DB:1163:G:H5'	2.01	0.60
23:DB:947:A:H2'	23:DB:948:C:C6	2.37	0.60
31:BJ:20:ALA:HB1	31:BJ:59:ALA:HA	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DV:16:ALA:N	24:DV:19:ARG:HH21	1.98	0.60
52:BI:32:VAL:HG22	52:BI:60:VAL:CG2	2.31	0.60
22:BA:48:U:H2'	22:BA:49:C:C6	2.36	0.60
39:DR:66:HIS:HA	39:DR:98:ILE:HD13	1.83	0.60
16:CQ:10:ARG:CZ	16:CQ:55:GLY:N	2.64	0.60
23:BB:1188:U:H4'	39:BR:83:TYR:HB2	1.82	0.60
10:AK:86:LYS:HG3	10:AK:113:THR:HA	1.82	0.60
23:BB:2469:A:H5''	34:BM:55:ARG:HD2	1.82	0.60
23:DB:1857:G:H1'	23:DB:1885:A:N6	2.16	0.60
37:DP:13:LYS:HG3	37:DP:78:PRO:HG3	1.83	0.60
23:BB:280:U:H2'	23:BB:281:C:C6	2.36	0.60
23:BB:946:C:H2'	23:BB:947:A:H8	1.66	0.60
30:BH:116:ARG:HB3	30:BH:131:SER:O	2.01	0.60
32:DK:35:VAL:HA	32:DK:62:VAL:O	2.01	0.60
23:BB:2873:A:N3	35:BN:6:SER:HA	2.16	0.60
29:BG:173:ALA:HB3	29:BG:174:LYS:NZ	2.16	0.60
31:BJ:63:ALA:HA	31:BJ:69:ARG:HD2	1.81	0.60
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.35	0.60
27:DE:23:PHE:C	27:DE:110:SER:HB2	2.21	0.60
27:BE:106:LYS:HA	27:BE:108:ILE:HD13	1.83	0.60
23:DB:2204:G:O5'	25:DC:149:LYS:HE3	2.01	0.60
23:BB:2393:U:C5'	33:BL:62:PRO:HA	2.31	0.60
30:DH:6:LEU:HD12	30:DH:36:ALA:H	1.67	0.60
45:BY:9:THR:HB	45:BY:54:VAL:CA	2.25	0.60
40:BS:7:HIS:CG	40:BS:8:ARG:H	2.19	0.60
40:DS:31:GLN:O	40:DS:35:ILE:HG13	2.01	0.60
52:BI:130:GLY:HA2	52:BI:133:ARG:HH21	1.67	0.60
23:BB:100:U:H4'	42:BU:90:LYS:CE	2.31	0.60
23:DB:598:U:H2'	23:DB:599:A:H8	1.66	0.60
30:DH:89:LYS:HA	30:DH:123:ARG:O	2.00	0.60
23:BB:2849:U:H4'	23:BB:2850:A:H5'	1.84	0.60
4:CE:91:SER:HA	4:CE:128:GLY:O	2.00	0.60
1:CA:662:U:H2'	1:CA:663:A:C8	2.36	0.60
10:AK:83:VAL:HG23	10:AK:109:ILE:HA	1.84	0.60
35:DN:102:PHE:CZ	35:DN:104:ALA:HB2	2.35	0.60
48:D1:8:ILE:HG21	48:D1:27:ARG:HD3	1.83	0.60
48:B1:42:VAL:HG13	48:B1:43:ARG:N	2.16	0.60
4:AE:35:LEU:HD11	4:AE:136:VAL:HG11	1.81	0.60
23:DB:906:U:H4'	34:DM:26:VAL:CG1	2.31	0.60
23:DB:352:A:H3'	23:DB:353:C:C6	2.37	0.60
1:CA:1179:A:H2'	1:CA:1180:A:O4'	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:598:U:H2'	23:BB:599:A:H8	1.65	0.60
23:BB:2852:G:H2'	23:BB:2853:C:C6	2.36	0.60
1:CA:1105:A:H2'	1:CA:1106:G:H8	1.65	0.60
10:CK:53:GLY:O	10:CK:56:LYS:HB3	2.02	0.60
23:BB:1690:A:H2'	23:BB:1691:C:O4'	2.01	0.60
33:BL:66:PHE:N	33:BL:66:PHE:CD1	2.68	0.60
18:AS:28:LYS:HB2	18:AS:29:PRO:HD2	1.84	0.60
23:BB:2229:U:H2'	23:BB:2230:G:C8	2.37	0.60
23:DB:1568:G:OP1	25:DC:61:TYR:HB2	2.00	0.60
33:BL:61:LEU:CB	33:BL:62:PRO:CD	2.75	0.60
37:BP:62:LYS:HE2	37:BP:74:GLN:HE22	1.66	0.60
25:DC:245:THR:O	25:DC:247:TRP:N	2.35	0.60
47:B0:26:SER:HB2	47:B0:38:LEU:HD12	1.83	0.60
14:CO:25:GLU:HA	14:CO:80:LEU:HD11	1.82	0.60
1:CA:429:U:H1'	1:CA:430:A:H5''	1.84	0.60
23:DB:1902:C:H4'	25:DC:240:GLY:O	2.01	0.60
9:AJ:38:GLY:O	9:AJ:74:VAL:HA	2.02	0.60
39:BR:97:LYS:O	39:BR:98:ILE:HB	2.01	0.60
35:DN:108:ALA:HB1	35:DN:109:PRO:HD2	1.83	0.60
23:DB:1252:G:C2	38:DQ:32:ARG:HG3	2.36	0.60
3:AD:154:VAL:HG13	3:AD:155:LYS:H	1.67	0.60
23:BB:45:G:C5'	23:BB:46:G:H5'	2.32	0.60
45:BY:44:ARG:HG3	45:BY:45:GLY:N	2.15	0.60
1:AA:1513:A:H2'	1:AA:1514:G:H8	1.65	0.60
23:DB:283:G:H2'	23:DB:284:U:H6	1.66	0.60
23:BB:417:C:H2'	23:BB:418:C:H6	1.65	0.60
1:AA:1260:G:H4'	1:AA:1284:C:H5'	1.84	0.60
15:CP:44:SER:HB3	15:CP:46:LYS:HZ2	1.64	0.60
25:BC:16:VAL:C	25:BC:17:LYS:HE2	2.22	0.60
23:DB:297:G:H5''	42:DU:92:VAL:HG11	1.83	0.60
23:BB:198:C:C2'	23:BB:199:A:H5''	2.32	0.60
23:DB:1429:G:H2'	23:DB:1430:G:H8	1.66	0.60
23:DB:19:A:OP1	38:DQ:22:GLY:HA2	1.99	0.60
30:BH:66:ASN:HA	30:BH:138:VAL:HG21	1.81	0.60
23:BB:2138:G:H2'	23:BB:2139:U:C6	2.36	0.60
23:DB:380:G:O2'	46:DZ:13:THR:HB	2.01	0.60
39:DR:60:LYS:O	39:DR:60:LYS:HD3	2.02	0.60
12:CM:2:ARG:HB3	12:CM:6:ILE:H	1.65	0.60
9:AJ:25:ILE:HG23	9:AJ:29:ALA:HB3	1.83	0.60
28:DF:167:ALA:HA	28:DF:170:ALA:HB3	1.82	0.60
38:BQ:94:LEU:H	38:BQ:94:LEU:HD13	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:D4:16:ILE:O	51:D4:17:VAL:HG12	2.02	0.60
34:BM:64:TRP:O	34:BM:102:LEU:HB2	2.00	0.60
34:BM:88:ASN:O	34:BM:89:VAL:HG12	2.00	0.60
46:BZ:25:ARG:HG3	46:BZ:26:SER:H	1.65	0.60
37:BP:27:VAL:HG12	37:BP:47:ILE:HD11	1.82	0.60
26:BD:157:LYS:NZ	26:BD:158:GLY:HA3	2.15	0.60
31:DJ:74:TYR:O	31:DJ:75:TYR:HB2	2.00	0.60
30:DH:26:ALA:HB3	30:DH:31:VAL:HG23	1.83	0.60
23:DB:1007:C:H5''	31:DJ:37:ARG:HH12	1.66	0.60
31:DJ:120:ARG:HB3	31:DJ:121:LYS:HZ1	1.66	0.60
43:DW:42:THR:H	43:DW:65:LYS:HG2	1.66	0.60
23:BB:143:C:H2'	23:BB:144:A:N9	2.16	0.60
20:CB:112:ARG:O	20:CB:116:LEU:HB2	2.02	0.60
28:DF:35:LEU:HD23	28:DF:153:ILE:HG12	1.83	0.60
28:BF:36:ASN:HD22	28:BF:87:LYS:H	1.48	0.60
32:DK:33:ALA:HB2	32:DK:39:ILE:HD11	1.84	0.60
6:AG:144:ALA:C	6:AG:146:ALA:H	2.04	0.60
23:BB:764:A:OP2	25:BC:213:ARG:NH2	2.33	0.60
23:BB:1790:C:P	25:BC:219:VAL:HB	2.42	0.60
1:AA:1307:U:H2'	1:AA:1308:U:C6	2.36	0.60
2:CC:18:ASN:O	2:CC:55:VAL:HA	2.01	0.60
20:CB:34:ARG:HG2	20:CB:39:ILE:HD11	1.84	0.60
23:DB:1485:U:H2'	23:DB:1486:U:H6	1.66	0.60
1:CA:390:U:H2'	1:CA:391:G:H8	1.66	0.60
30:DH:108:VAL:HG12	30:DH:110:VAL:HB	1.82	0.60
23:BB:1015:U:H2'	23:BB:1016:G:C8	2.37	0.60
23:DB:1203:U:H3'	23:DB:1204:A:C5'	2.31	0.60
35:DN:26:GLY:HA2	35:DN:75:ILE:HD13	1.83	0.60
1:AA:1011:C:H2'	1:AA:1012:A:C8	2.37	0.60
12:AM:98:GLY:H	12:AM:99:GLN:NE2	1.99	0.60
23:BB:1192:G:O2'	23:BB:1193:G:H5'	2.01	0.60
23:DB:833:A:H2'	23:DB:834:G:C8	2.36	0.60
1:AA:93:U:H3'	1:AA:94:G:H5''	1.83	0.60
23:BB:1040:A:H2	23:BB:1115:G:H22	1.47	0.60
1:CA:858:G:O6	1:CA:869:G:H3'	2.01	0.60
50:D3:46:LYS:HD2	50:D3:47:ALA:H	1.66	0.60
23:BB:558:U:OP1	31:BJ:113:PRO:HG2	2.01	0.60
23:BB:37:C:C2	27:BE:46:GLN:CD	2.75	0.60
23:BB:2228:G:H2'	23:BB:2229:U:H6	1.66	0.60
25:DC:127:ASN:ND2	25:DC:128:THR:H	1.93	0.60
23:BB:2774:C:H2'	23:BB:2775:G:O4'	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DP:28:LYS:HD3	37:DP:44:GLY:H	1.67	0.60
37:DP:52:ARG:HH11	37:DP:52:ARG:CG	2.15	0.60
30:DH:90:LEU:HD22	30:DH:122:LEU:HB3	1.83	0.60
13:AN:60:ARG:HD3	13:AN:60:ARG:N	2.11	0.60
42:BU:5:ARG:HG2	42:BU:6:ARG:H	1.67	0.60
52:DI:71:LYS:HB3	52:DI:115:ASP:OD2	2.00	0.60
23:BB:2305:U:N3	28:BF:150:GLY:HA3	2.17	0.60
22:BA:50:A:H5''	36:BO:68:LYS:HD2	1.82	0.60
26:BD:34:VAL:HG23	26:BD:93:GLY:HA3	1.84	0.60
51:B4:7:VAL:O	51:B4:23:ILE:HG21	2.01	0.60
39:BR:69:GLY:O	39:BR:70:GLU:HG3	2.02	0.60
23:BB:1203:U:H3'	23:BB:1204:A:C5'	2.30	0.60
42:DU:13:LEU:HD21	42:DU:69:VAL:HG13	1.82	0.60
45:DY:50:VAL:HG12	45:DY:53:MET:HG2	1.83	0.60
23:DB:1439:A:C6	23:DB:1552:A:N7	2.70	0.60
23:BB:1486:U:H2'	23:BB:1487:U:H6	1.66	0.60
23:BB:1857:G:H1'	23:BB:1885:A:N6	2.17	0.60
4:AE:110:MET:HB3	4:AE:139:THR:HG21	1.82	0.60
1:CA:1355:G:H2'	1:CA:1356:G:H8	1.67	0.60
25:BC:37:SER:H	25:BC:62:ARG:HB2	1.66	0.60
1:AA:95:C:H2'	1:AA:95:C:O2	2.02	0.60
14:AO:11:VAL:HG23	14:AO:26:VAL:HG11	1.82	0.60
23:BB:664:G:H2'	23:BB:665:U:H6	1.65	0.60
36:BO:35:ILE:HD13	36:BO:35:ILE:N	2.17	0.60
23:BB:1319:C:O2'	23:BB:1320:C:H5'	2.01	0.60
23:BB:1779:U:H5	23:BB:1784:A:N7	2.00	0.60
1:AA:801:U:H2'	1:AA:802:A:H8	1.66	0.60
6:AG:59:GLU:O	6:AG:63:VAL:HG23	2.02	0.60
15:CP:23:ASP:OD1	15:CP:25:ARG:HB2	2.02	0.60
23:BB:2688:G:H1'	23:BB:2721:A:N6	2.17	0.60
23:DB:2600:A:O2'	23:DB:2601:C:H5'	2.02	0.60
23:DB:1098:A:N3	52:DI:3:LYS:O	2.35	0.60
23:DB:448:U:H5''	27:DE:79:ARG:HH21	1.65	0.60
23:DB:2741:A:H2'	23:DB:2742:G:O4'	2.02	0.60
50:B3:44:ARG:HB3	50:B3:45:PRO:HD2	1.84	0.60
23:BB:2848:G:C4	37:BP:96:LEU:HD23	2.37	0.60
23:DB:2774:C:H2'	23:DB:2775:G:O4'	2.01	0.60
23:DB:849:A:H2'	23:DB:850:U:C6	2.35	0.60
31:DJ:100:VAL:HG22	31:DJ:101:ILE:H	1.67	0.60
23:BB:26:G:H1'	23:BB:515:A:N6	2.17	0.60
13:AN:63:CYS:SG	13:AN:66:THR:HG22	2.41	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DE:6:LYS:HZ2	27:DE:8:ALA:HB2	1.66	0.60
23:BB:1054:A:H2'	23:BB:1055:G:H8	1.65	0.60
23:BB:1080:A:H2'	23:BB:1081:U:H6	1.67	0.60
52:BI:11:GLN:O	52:BI:11:GLN:HG3	2.00	0.60
32:DK:43:ILE:H	32:DK:43:ILE:HD12	1.67	0.60
23:DB:2886:A:C8	47:D0:27:LEU:HG	2.37	0.60
39:BR:20:VAL:HG13	39:BR:97:LYS:NZ	2.16	0.60
30:BH:121:VAL:HG21	30:BH:128:HIS:NE2	2.16	0.60
23:DB:898:C:O2'	23:DB:899:A:H5''	2.01	0.60
9:AJ:15:HIS:HD2	9:AJ:18:ILE:HG22	1.65	0.60
22:DA:50:A:OP1	36:DO:68:LYS:HB2	2.02	0.60
23:DB:1548:A:H2'	23:DB:1549:A:C8	2.37	0.60
23:BB:222:A:N6	23:BB:232:G:H1'	2.17	0.60
28:DF:21:TYR:HB3	28:DF:26:GLN:OE1	2.01	0.60
11:AL:78:VAL:HG12	11:AL:101:LEU:HD23	1.82	0.60
7:AH:46:GLU:HA	7:AH:63:LYS:HZ3	1.66	0.60
4:AE:155:LYS:HA	7:AH:65:PHE:CD1	2.36	0.60
23:DB:594:U:H2'	23:DB:595:C:H6	1.66	0.60
1:AA:590:U:H2'	1:AA:591:U:H6	1.66	0.60
23:BB:417:C:H2'	23:BB:418:C:C6	2.37	0.60
6:AG:117:LEU:HD22	6:AG:120:ALA:HB3	1.83	0.60
1:AA:1090:U:H2'	1:AA:1091:U:C6	2.37	0.60
1:AA:720:C:H5''	17:AR:40:PRO:HA	1.84	0.60
38:BQ:101:ASP:HB3	38:BQ:104:ALA:HB3	1.84	0.60
18:CS:29:PRO:HB3	18:CS:47:THR:HB	1.83	0.60
23:BB:364:C:H2'	23:BB:365:U:C6	2.36	0.60
28:DF:173:ASP:CG	28:DF:174:PHE:H	2.05	0.60
28:DF:67:THR:OG1	28:DF:85:GLY:HA3	2.02	0.60
1:CA:1108:G:H5''	2:CC:175:HIS:ND1	2.16	0.60
9:CJ:41:PRO:HA	9:CJ:72:ARG:HD3	1.83	0.60
36:DO:86:GLY:O	36:DO:87:ILE:HD13	2.01	0.60
15:CP:20:VAL:HG21	15:CP:32:PHE:CD2	2.37	0.60
15:CP:20:VAL:HG23	15:CP:34:GLU:O	2.02	0.60
23:DB:189:G:H2'	23:DB:205:G:N2	2.17	0.60
26:BD:154:LYS:HZ3	26:BD:157:LYS:N	1.99	0.60
25:BC:198:GLU:HA	25:BC:201:LEU:HB2	1.83	0.60
33:DL:132:ARG:NH2	33:DL:140:GLY:HA3	2.17	0.60
33:DL:89:VAL:HA	33:DL:122:VAL:HG22	1.84	0.60
35:DN:96:ARG:O	35:DN:113:ILE:HA	2.02	0.60
45:DY:18:LYS:O	45:DY:22:THR:HG23	2.02	0.60
18:AS:7:GLY:H	18:AS:8:PRO:HD3	1.67	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:16:TYR:O	31:BJ:55:ILE:HG22	2.01	0.60
27:DE:139:LYS:HA	27:DE:143:LEU:CD2	2.32	0.60
28:BF:59:ILE:HD11	28:BF:137:PHE:CD2	2.37	0.60
28:DF:40:GLY:H	28:DF:84:ILE:CG2	2.15	0.60
47:D0:41:HIS:NE2	47:D0:42:ILE:HG22	2.17	0.60
23:DB:1997:C:P	26:DD:140:HIS:HE2	2.25	0.60
44:DX:50:VAL:O	44:DX:54:LYS:HB2	2.02	0.60
39:DR:89:HIS:O	39:DR:90:ARG:HG3	2.02	0.60
34:DM:131:VAL:HG22	34:DM:132:THR:H	1.66	0.60
44:DX:7:ARG:NH1	44:DX:7:ARG:HB3	2.16	0.60
10:AK:69:CYS:O	10:AK:73:VAL:HG23	2.00	0.60
23:DB:179:C:H2'	23:DB:180:G:O4'	2.01	0.60
52:DI:7:TYR:CZ	52:DI:57:VAL:HG11	2.36	0.60
23:DB:1176:U:H2'	23:DB:1177:G:C8	2.36	0.60
16:CQ:60:ILE:HA	16:CQ:75:VAL:HG13	1.84	0.60
23:DB:2156:G:H2'	23:DB:2157:G:H4'	1.84	0.60
23:DB:337:C:H2'	23:DB:338:G:O4'	2.01	0.60
35:DN:66:ALA:O	35:DN:70:THR:HG22	2.01	0.60
1:CA:203:G:H1'	1:CA:465:A:N6	2.17	0.60
32:DK:47:ILE:HG22	32:DK:48:PRO:HD2	1.83	0.60
23:BB:2461:A:H2'	23:BB:2462:C:C6	2.36	0.60
23:DB:2281:A:H62	43:DW:3:LYS:HD2	1.66	0.60
23:DB:1454:C:H5'	35:DN:63:ARG:HD2	1.82	0.60
8:AI:15:ALA:O	8:AI:66:VAL:HG23	2.01	0.60
1:CA:1462:C:H4'	37:DP:110:LYS:HE2	1.84	0.60
2:AC:59:PRO:HG2	2:AC:60:ALA:H	1.65	0.60
23:BB:2386:A:H4'	43:BW:38:ARG:HB2	1.84	0.60
23:BB:2804:U:H2'	23:BB:2805:C:H6	1.66	0.60
38:BQ:85:ALA:HB1	38:BQ:88:GLU:HB2	1.83	0.60
27:BE:48:THR:CG2	27:BE:86:ALA:HB1	2.32	0.60
23:BB:855:G:H21	43:BW:23:LYS:CB	2.15	0.60
36:DO:53:THR:O	36:DO:54:VAL:CB	2.47	0.60
45:BY:9:THR:CB	45:BY:54:VAL:HA	2.26	0.60
35:BN:28:LEU:H	35:BN:28:LEU:HD12	1.67	0.60
23:DB:2336:A:H1'	23:DB:2337:G:OP1	2.00	0.60
31:BJ:17:VAL:CG1	31:BJ:57:LEU:HD21	2.32	0.60
41:DT:55:VAL:HG23	41:DT:87:LEU:N	2.17	0.60
37:DP:36:LYS:HG2	37:DP:37:LYS:N	2.14	0.60
8:CI:40:ARG:HA	8:CI:44:ARG:NH1	2.17	0.60
25:BC:226:PRO:HD3	25:BC:233:GLY:N	2.17	0.60
23:BB:126:A:O5'	49:B2:19:ARG:HB3	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AL:35:ARG:HA	11:AL:35:ARG:HE	1.67	0.60
37:DP:4:ILE:O	37:DP:4:ILE:HG22	2.01	0.60
44:BX:49:ASP:HB3	44:BX:52:ARG:NH2	2.15	0.60
23:BB:2769:U:H2'	23:BB:2770:G:C8	2.37	0.60
23:BB:956:G:H5''	34:BM:76:LYS:HD3	1.83	0.60
1:CA:539:A:H2'	1:CA:540:G:C8	2.37	0.60
23:DB:324:A:H2'	23:DB:325:G:O4'	2.02	0.60
1:AA:1026:G:H2'	1:AA:1027:C:H6	1.67	0.60
23:BB:419:U:H2'	23:BB:420:C:H6	1.66	0.60
23:DB:139:U:H3'	23:DB:139:U:OP2	2.02	0.60
50:D3:4:LYS:HE3	50:D3:61:LEU:H	1.65	0.60
1:AA:57:G:H2'	1:AA:58:C:C6	2.37	0.60
23:DB:1327:A:H2'	23:DB:1328:A:O4'	2.02	0.60
24:BV:40:ILE:H	24:BV:40:ILE:HD13	1.66	0.60
23:BB:315:G:H2'	23:BB:316:C:C6	2.37	0.60
1:CA:83:C:O2'	1:CA:84:U:H2'	2.02	0.60
1:CA:398:U:H2'	1:CA:399:G:H8	1.66	0.60
14:AO:60:SER:HA	14:AO:63:ARG:NH1	2.17	0.60
50:B3:12:ARG:HB2	50:B3:12:ARG:HH11	1.64	0.59
50:B3:26:ALA:HB1	50:B3:29:ARG:CG	2.32	0.59
37:BP:76:HIS:CD2	37:BP:76:HIS:H	2.18	0.59
23:BB:2512:C:C4'	26:BD:146:ILE:HG12	2.31	0.59
25:BC:68:ARG:HD2	25:BC:127:ASN:HD21	1.67	0.59
23:DB:2292:U:H2'	23:DB:2293:G:H8	1.67	0.59
36:DO:25:ARG:CG	36:DO:94:ARG:HH22	2.15	0.59
39:DR:4:VAL:HG12	39:DR:43:ASN:CB	2.32	0.59
23:DB:1824:G:O2'	25:DC:244:VAL:HG21	2.02	0.59
23:BB:1060:U:OP2	52:BI:74:PRO:HA	2.01	0.59
43:BW:40:ARG:N	43:BW:40:ARG:NH1	2.50	0.59
23:BB:2723:C:H5''	35:BN:3:HIS:CB	2.32	0.59
23:DB:2032:G:N2	26:DD:150:GLN:HB3	2.17	0.59
26:DD:150:GLN:O	26:DD:152:PRO:HD3	2.02	0.59
1:CA:1008:U:H5''	13:CN:23:ARG:NH2	2.17	0.59
14:CO:29:ALA:HA	14:CO:84:LEU:HD21	1.82	0.59
3:AD:20:LEU:O	3:AD:21:LYS:HE3	2.02	0.59
23:DB:1082:U:O4	23:DB:1086:A:C2	2.54	0.59
26:BD:88:GLU:CG	26:BD:89:GLU:H	2.14	0.59
4:CE:131:ASN:O	4:CE:135:VAL:HG23	2.02	0.59
25:BC:220:ARG:HG3	25:BC:220:ARG:HH11	1.67	0.59
23:DB:659:G:H21	27:DE:30:GLN:NE2	2.00	0.59
3:AD:90:LEU:HA	3:AD:93:LEU:HD12	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:33:A:H1'	11:CL:27:PRO:HG3	1.84	0.59
1:CA:1009:U:H2'	1:CA:1010:U:C6	2.37	0.59
23:BB:2301:C:H2'	23:BB:2302:U:H6	1.65	0.59
23:DB:1951:U:H2'	23:DB:1953:A:OP2	2.01	0.59
23:DB:1874:C:H2'	23:DB:1875:G:O4'	2.01	0.59
23:DB:2307:G:N3	23:DB:2307:G:H2'	2.17	0.59
45:DY:45:GLY:HA2	45:DY:48:ASN:ND2	2.17	0.59
13:AN:20:PHE:HA	13:AN:24:ALA:HB2	1.83	0.59
2:CC:23:ALA:HB1	2:CC:27:GLU:HB2	1.83	0.59
1:AA:1278:G:H4'	1:AA:1279:G:O5'	2.01	0.59
12:AM:89:ARG:HB2	12:AM:96:VAL:HG12	1.84	0.59
23:DB:672:C:O2'	23:DB:673:C:H5'	2.02	0.59
40:DS:46:LEU:O	40:DS:50:VAL:HG22	2.01	0.59
34:BM:66:ARG:H	34:BM:100:LYS:HB2	1.67	0.59
31:BJ:81:ILE:HG23	31:BJ:82:GLY:H	1.67	0.59
23:BB:2579:C:O2'	26:BD:138:LEU:HD13	2.01	0.59
25:BC:172:THR:O	25:BC:173:LEU:HB2	2.01	0.59
26:DD:116:LYS:CB	26:DD:165:MET:HG3	2.31	0.59
37:DP:54:LEU:HD13	37:DP:55:HIS:H	1.67	0.59
37:DP:59:THR:HG23	37:DP:76:HIS:NE2	2.16	0.59
33:DL:120:VAL:HG12	33:DL:122:VAL:HG23	1.82	0.59
35:DN:97:ILE:HG23	35:DN:113:ILE:HD11	1.84	0.59
33:DL:58:TYR:CE1	50:D3:51:LYS:HG2	2.36	0.59
23:DB:2898:U:H2'	23:DB:2899:A:H8	1.66	0.59
31:DJ:105:VAL:HG11	31:DJ:122:LEU:HD11	1.83	0.59
23:DB:455:C:H42	23:DB:472:A:H2'	1.67	0.59
30:BH:37:VAL:N	30:BH:38:PRO:HD2	2.13	0.59
43:DW:56:HIS:CD2	43:DW:57:THR:H	2.20	0.59
1:AA:376:G:H5''	15:AP:5:ARG:CB	2.28	0.59
23:BB:2053:G:OP1	26:BD:150:GLN:CA	2.50	0.59
33:BL:109:LYS:HA	33:BL:126:ARG:HB2	1.82	0.59
23:BB:1082:U:C4	23:BB:1086:A:C2	2.90	0.59
8:CI:123:ARG:HD3	8:CI:124:PRO:HD2	1.84	0.59
28:BF:135:ILE:C	28:BF:137:PHE:H	2.05	0.59
3:AD:11:SER:OG	3:AD:17:ASP:HA	2.02	0.59
23:BB:671:C:N4	33:BL:39:LYS:HG2	2.18	0.59
2:AC:5:HIS:CD2	13:AN:88:MET:HB3	2.37	0.59
1:AA:783:C:O2'	1:AA:784:A:H5'	2.02	0.59
3:AD:94:GLU:HG3	3:AD:103:ARG:NH1	2.16	0.59
1:CA:37:U:OP1	11:CL:120:ARG:HB3	2.02	0.59
29:BG:42:VAL:HG12	29:BG:51:PHE:HD1	1.68	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:721:A:H2'	23:BB:722:A:C8	2.37	0.59
23:DB:1229:C:H2'	23:DB:1230:A:H8	1.66	0.59
1:AA:1300:G:H1'	1:AA:1301:U:C5	2.36	0.59
23:BB:1381:G:H2'	23:BB:1382:G:H5'	1.84	0.59
1:CA:937:A:H1'	1:CA:1379:G:N2	2.17	0.59
22:BA:27:C:H5'	36:BO:34:HIS:CE1	2.37	0.59
1:AA:1284:C:H3'	1:AA:1285:A:H5''	1.84	0.59
23:BB:364:C:H2'	23:BB:365:U:H6	1.67	0.59
28:DF:173:ASP:CG	28:DF:174:PHE:N	2.55	0.59
1:AA:1257:A:H2'	1:AA:1257:A:N3	2.16	0.59
23:BB:2600:A:O2'	23:BB:2601:C:H5'	2.01	0.59
1:CA:801:U:H2'	1:CA:802:A:H8	1.66	0.59
27:BE:91:ASP:O	27:BE:92:HIS:HB2	2.01	0.59
1:AA:858:G:O6	1:AA:869:G:H3'	2.01	0.59
23:DB:171:U:H2'	23:DB:172:A:C8	2.37	0.59
23:DB:541:A:H2'	23:DB:542:C:H5''	1.84	0.59
23:DB:1676:A:H2'	23:DB:1677:A:O4'	2.01	0.59
10:CK:127:ARG:HH11	10:CK:127:ARG:HG3	1.66	0.59
27:BE:43:THR:O	27:BE:89:PRO:HA	2.02	0.59
24:BV:46:LYS:O	24:BV:50:MET:HG3	2.02	0.59
46:BZ:44:PHE:H	46:BZ:44:PHE:HD1	1.50	0.59
27:BE:170:ARG:HH21	27:BE:175:ILE:HD12	1.66	0.59
27:BE:180:LEU:HA	27:BE:186:VAL:HG21	1.84	0.59
26:DD:49:GLN:HG2	26:DD:49:GLN:O	2.02	0.59
37:DP:64:SER:HB2	37:DP:71:ARG:CD	2.30	0.59
35:DN:45:ARG:NH2	35:DN:113:ILE:HG23	2.04	0.59
33:DL:62:PRO:HA	50:D3:12:ARG:NH1	2.17	0.59
23:DB:6:A:H4'	31:DJ:133:ALA:O	2.02	0.59
32:BK:97:THR:OG1	32:BK:98:ARG:HD2	2.02	0.59
33:BL:77:ILE:HG13	33:BL:108:ALA:HB1	1.83	0.59
31:BJ:64:VAL:HG11	31:BJ:68:LYS:HD2	1.84	0.59
40:DS:23:LEU:HB2	47:D0:21:LEU:HD13	1.83	0.59
28:DF:35:LEU:HD11	28:DF:60:SER:HB3	1.83	0.59
30:BH:83:LYS:CB	30:BH:91:PHE:HB2	2.31	0.59
22:DA:75:G:H5''	24:DV:12:GLN:OE1	2.02	0.59
23:BB:459:U:H5'	49:B2:41:ARG:HE	1.67	0.59
16:CQ:68:LYS:HG2	16:CQ:69:THR:HG23	1.85	0.59
46:DZ:54:GLY:N	46:DZ:57:VAL:HG23	2.14	0.59
28:BF:177:ARG:HG2	28:BF:178:LYS:H	1.67	0.59
12:CM:78:ARG:HH11	12:CM:79:LEU:HD23	1.67	0.59
1:AA:1074:G:H2'	1:AA:1075:U:H6	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1191:A:OP1	2:CC:2:GLN:HB2	2.02	0.59
35:BN:4:ARG:HG3	35:BN:5:LYS:N	2.16	0.59
23:BB:19:A:H5'	38:BQ:20:ALA:O	2.02	0.59
29:BG:124:CYS:HB3	29:BG:129:GLU:O	2.01	0.59
50:B3:48:MET:SD	50:B3:51:LYS:HG2	2.42	0.59
23:BB:1709:U:H2'	23:BB:1710:G:H8	1.66	0.59
23:BB:2669:G:H2'	23:BB:2670:A:H8	1.65	0.59
1:AA:107:G:O6	19:AT:9:ARG:HD3	2.03	0.59
23:DB:2639:A:H2'	23:DB:2640:G:O4'	2.02	0.59
23:DB:30:G:H2'	23:DB:31:C:C6	2.36	0.59
1:CA:1041:G:H2'	1:CA:1042:A:H8	1.67	0.59
2:CC:127:VAL:HG23	2:CC:128:MET:H	1.66	0.59
23:DB:580:U:H2'	23:DB:581:C:C6	2.36	0.59
34:BM:35:ALA:HB3	34:BM:97:GLN:C	2.23	0.59
25:DC:33:LEU:HD22	25:DC:34:GLU:HG3	1.83	0.59
25:DC:34:GLU:OE2	25:DC:35:LYS:HG3	2.03	0.59
23:BB:2428:G:HO2'	33:BL:58:TYR:HE2	1.49	0.59
23:BB:1820:U:O2	25:BC:200:MET:HB2	2.02	0.59
26:DD:117:GLY:HA3	35:DN:1:MET:HA	1.82	0.59
26:DD:35:THR:HB	26:DD:48:ILE:HG13	1.84	0.59
43:BW:66:VAL:HG13	43:BW:67:LYS:N	2.16	0.59
31:DJ:41:LYS:CD	31:DJ:44:TYR:HB3	2.31	0.59
32:BK:60:ALA:HA	32:BK:87:LEU:HG	1.83	0.59
39:DR:63:VAL:HG13	39:DR:64:VAL:N	2.17	0.59
42:DU:41:VAL:HA	42:DU:57:ILE:HD12	1.84	0.59
27:DE:115:GLN:NE2	27:DE:184:ASP:HB2	2.17	0.59
41:BT:24:MET:HE2	41:BT:29:THR:H	1.67	0.59
23:DB:2091:C:H1'	46:DZ:32:LEU:HG	1.83	0.59
40:DS:23:LEU:C	40:DS:24:ILE:HD13	2.23	0.59
42:BU:81:ARG:N	42:BU:81:ARG:HD2	2.16	0.59
52:DI:100:ILE:O	52:DI:139:VAL:HA	2.01	0.59
23:DB:2037:A:H2'	23:DB:2038:G:H8	1.68	0.59
19:AT:67:HIS:O	19:AT:70:LYS:HG2	2.02	0.59
42:DU:17:ASP:OD2	42:DU:20:LYS:HB2	2.01	0.59
1:AA:763:G:H2'	1:AA:764:C:C6	2.36	0.59
10:CK:31:VAL:HG21	10:CK:66:ALA:HA	1.84	0.59
7:CH:101:ALA:O	7:CH:103:VAL:HG23	2.01	0.59
23:DB:1469:A:H2'	23:DB:1470:A:H8	1.67	0.59
23:DB:1550:C:H2'	23:DB:1551:A:H8	1.66	0.59
22:DA:57:A:H4'	28:DF:26:GLN:HE21	1.67	0.59
23:DB:2286:G:H5'	23:DB:2286:G:C8	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2391:G:OP2	50:D3:32:LEU:HG	2.03	0.59
2:AC:30:ASP:O	2:AC:33:ASP:HB3	2.01	0.59
23:BB:594:U:H2'	23:BB:595:C:H6	1.66	0.59
12:CM:102:LYS:HZ2	12:CM:102:LYS:HB2	1.66	0.59
2:AC:183:TYR:HA	2:AC:199:VAL:O	2.03	0.59
5:CF:18:VAL:HG21	5:CF:58:HIS:CE1	2.37	0.59
2:CC:41:TYR:O	2:CC:45:GLU:HB2	2.03	0.59
2:CC:89:VAL:O	2:CC:93:ILE:HD12	2.03	0.59
38:BQ:102:LYS:N	38:BQ:102:LYS:HD2	2.17	0.59
1:AA:1281:C:H5'	1:AA:1282:C:H5	1.66	0.59
23:DB:224:U:O4	23:DB:420:C:H5'	2.02	0.59
23:BB:196:A:H2'	23:BB:196:A:N3	2.16	0.59
40:DS:81:SER:HB2	40:DS:99:ARG:H	1.68	0.59
23:BB:967:U:H2'	23:BB:968:C:C6	2.37	0.59
26:DD:48:ILE:HG22	26:DD:49:GLN:N	2.18	0.59
37:DP:47:ILE:HG23	37:DP:63:ILE:CG2	2.30	0.59
37:DP:49:ILE:C	37:DP:50:ARG:HD3	2.22	0.59
32:BK:11:ALA:HB3	32:BK:85:VAL:CG2	2.32	0.59
25:DC:21:PRO:HD2	25:DC:202:ARG:HH11	1.68	0.59
23:DB:2415:G:H2'	23:DB:2416:C:C6	2.37	0.59
31:BJ:17:VAL:HG23	31:BJ:139:VAL:HB	1.83	0.59
27:DE:135:ALA:O	27:DE:139:LYS:HB3	2.03	0.59
23:DB:2230:G:H2'	23:DB:2231:U:C6	2.38	0.59
41:DT:21:SER:H	41:DT:24:MET:CE	2.15	0.59
28:DF:132:ARG:HH12	28:DF:147:ARG:HD3	1.66	0.59
23:BB:811:U:H2'	33:BL:31:GLY:CA	2.33	0.59
33:BL:47:ARG:HD2	33:BL:48:ARG:N	2.17	0.59
25:DC:224:MET:CA	25:DC:233:GLY:H	2.15	0.59
26:DD:150:GLN:HG3	26:DD:150:GLN:O	2.03	0.59
32:DK:11:ALA:HB1	32:DK:100:PHE:O	2.02	0.59
8:AI:18:VAL:HG11	8:AI:82:ILE:HG12	1.83	0.59
1:AA:241:G:O2'	1:AA:242:G:H5'	2.03	0.59
23:BB:2813:A:H2'	23:BB:2814:A:H8	1.67	0.59
26:BD:62:LYS:H	26:BD:62:LYS:HE3	1.68	0.59
52:DI:45:THR:HA	52:DI:48:ILE:CG2	2.30	0.59
14:AO:78:THR:HA	14:AO:81:ILE:HG12	1.85	0.59
26:DD:8:LYS:O	26:DD:9:VAL:HG22	2.03	0.59
23:DB:1470:A:H3'	23:DB:1471:G:H8	1.65	0.59
3:AD:94:GLU:HA	3:AD:103:ARG:HH22	1.67	0.59
23:DB:1262:A:C2	47:D0:6:LYS:HD2	2.38	0.59
3:CD:160:LEU:HD22	3:CD:160:LEU:O	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DG:125:PRO:HG2	29:DG:129:GLU:HB3	1.83	0.59
23:DB:1381:G:H2'	23:DB:1382:G:H5'	1.82	0.59
1:CA:678:U:H2'	1:CA:679:C:H6	1.66	0.59
23:DB:172:A:H2'	23:DB:173:A:C8	2.38	0.59
20:CB:99:MET:HA	20:CB:106:VAL:HG21	1.83	0.59
23:DB:2547:A:H2'	23:DB:2548:U:C6	2.38	0.59
23:DB:155:A:H2'	23:DB:156:A:H8	1.68	0.59
23:BB:1826:G:OP2	25:BC:221:GLY:HA2	2.01	0.59
1:AA:118:U:O4	1:AA:288:A:H2'	2.02	0.59
1:CA:370:C:H2'	1:CA:371:A:H8	1.66	0.59
23:DB:2669:G:H2'	23:DB:2670:A:H8	1.67	0.59
23:DB:1019:U:O2'	23:DB:1020:A:H5'	2.02	0.59
27:BE:198:GLU:C	27:BE:200:LEU:H	2.05	0.59
27:BE:109:LEU:HD23	27:BE:110:SER:N	2.18	0.59
23:BB:2547:A:H2'	23:BB:2548:U:C6	2.37	0.59
1:AA:451:A:H4'	1:AA:452:A:O4'	2.02	0.59
46:BZ:66:ILE:HB	46:BZ:67:PRO:HD3	1.85	0.59
25:DC:137:GLY:C	25:DC:139:THR:N	2.55	0.59
23:DB:588:U:H5'	33:DL:29:LYS:NZ	2.17	0.59
27:BE:3:LEU:O	27:BE:4:VAL:HG12	2.02	0.59
31:DJ:13:ARG:HG2	31:DJ:53:TYR:HE1	1.67	0.59
27:BE:156:ASN:ND2	27:BE:157:LEU:HG	2.17	0.59
41:BT:30:ILE:O	41:BT:84:TYR:HA	2.02	0.59
41:BT:8:LEU:HA	44:BX:19:LEU:HD21	1.84	0.59
23:BB:458:G:N2	23:BB:469:G:H2'	2.17	0.59
26:BD:17:GLU:CB	37:BP:80:VAL:HG21	2.32	0.59
23:DB:782:A:O2'	25:DC:223:ALA:HB1	2.02	0.59
46:DZ:65:ASN:H	46:DZ:65:ASN:ND2	1.99	0.59
47:D0:52:LYS:O	47:D0:53:VAL:HG12	2.03	0.59
20:AB:37:VAL:HG22	20:AB:38:HIS:N	2.17	0.59
32:DK:24:VAL:HA	32:DK:39:ILE:CD1	2.32	0.59
26:DD:46:ARG:HA	26:DD:82:PHE:HA	1.84	0.59
1:CA:783:C:O2'	1:CA:784:A:H5'	2.02	0.59
8:CI:29:ILE:HB	8:CI:64:ILE:HD12	1.84	0.59
23:BB:1387:A:H5'	23:BB:1469:A:H1'	1.84	0.59
23:DB:2256:G:O2'	43:DW:5:ALA:HB1	2.03	0.59
23:BB:1552:A:H2'	23:BB:1553:A:H5'	1.84	0.59
26:BD:101:PHE:O	26:BD:102:ALA:CB	2.51	0.59
1:CA:1292:G:H2'	1:CA:1293:C:H6	1.67	0.59
1:CA:1144:G:N2	1:CA:1146:A:H62	2.01	0.59
23:BB:2741:A:H2'	23:BB:2742:G:O4'	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1690:A:H2'	23:DB:1691:C:O4'	2.03	0.59
20:CB:169:HIS:CE1	20:CB:173:LYS:HB2	2.38	0.59
23:BB:1187:G:H5''	39:BR:84:ARG:NE	2.18	0.59
1:AA:398:U:H2'	1:AA:399:G:H8	1.66	0.59
6:CG:77:ARG:HD3	6:CG:79:VAL:HG23	1.83	0.59
23:BB:2236:U:H2'	23:BB:2237:G:O4'	2.02	0.59
23:DB:2852:G:H2'	23:DB:2853:C:C6	2.38	0.59
23:DB:553:G:C2'	23:DB:554:U:H5'	2.32	0.59
9:CJ:84:VAL:HB	9:CJ:89:ARG:HH21	1.68	0.59
23:DB:660:C:H2'	23:DB:661:A:C8	2.38	0.59
23:BB:450:G:H4'	27:BE:47:LYS:NZ	2.18	0.59
23:BB:2845:U:H4'	37:BP:54:LEU:HD21	1.85	0.59
23:BB:2619:C:H1'	26:BD:155:VAL:HG11	1.85	0.59
25:BC:171:VAL:HG12	25:BC:183:VAL:C	2.22	0.59
48:D1:16:THR:CG2	48:D1:47:ILE:HD12	2.33	0.59
26:DD:204:LYS:HE2	26:DD:204:LYS:HA	1.85	0.59
34:DM:73:ILE:HG21	34:DM:90:GLU:OE2	2.03	0.59
35:BN:82:GLU:O	35:BN:86:ARG:HG3	2.02	0.59
43:DW:67:LYS:HD2	43:DW:70:VAL:N	2.17	0.59
33:BL:117:THR:HB	33:BL:119:PRO:O	2.02	0.59
44:BX:36:GLN:NE2	44:BX:38:GLN:HE22	1.93	0.59
42:BU:23:LYS:O	42:BU:25:LYS:HG3	2.03	0.59
43:BW:40:ARG:H	43:BW:40:ARG:NH1	2.01	0.59
52:DI:23:VAL:HG12	52:DI:27:LEU:HD21	1.83	0.59
25:DC:79:ARG:HD2	25:DC:110:LYS:HE2	1.84	0.59
28:BF:108:PRO:HA	28:BF:113:PHE:CD1	2.38	0.59
32:DK:24:VAL:HA	32:DK:39:ILE:HD12	1.84	0.59
23:DB:141:G:H5'	23:DB:142:A:OP2	2.02	0.59
36:BO:48:LEU:HD23	36:BO:49:VAL:N	2.16	0.59
29:BG:148:ARG:NH2	29:BG:153:PRO:HD2	2.18	0.59
23:DB:358:U:H2'	23:DB:359:G:C8	2.37	0.59
10:CK:66:ALA:O	10:CK:69:CYS:HB2	2.03	0.59
10:CK:70:ALA:C	10:CK:72:ALA:H	2.06	0.59
23:BB:1437:C:H2'	23:BB:1438:U:H6	1.67	0.59
1:CA:977:A:H3'	1:CA:1362:A:H62	1.68	0.59
23:DB:374:A:H61	23:DB:400:G:H1'	1.66	0.59
1:AA:926:G:N2	1:AA:1505:G:H2'	2.18	0.59
8:CI:62:LEU:HD22	8:CI:62:LEU:H	1.67	0.59
1:CA:77:A:H2'	1:CA:78:A:C8	2.37	0.59
20:CB:63:LYS:HG3	20:CB:224:ARG:HD3	1.85	0.59
49:B2:17:GLY:HA2	49:B2:21:ARG:NH1	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2296:U:H4'	23:BB:2297:A:OP1	2.02	0.59
6:CG:90:VAL:HG12	6:CG:91:ARG:N	2.18	0.59
1:AA:1163:A:H2'	1:AA:1164:G:H8	1.68	0.59
23:BB:2898:U:H2'	23:BB:2899:A:H8	1.68	0.59
34:BM:96:ILE:HG23	34:BM:97:GLN:N	2.18	0.59
37:BP:23:ASP:HA	37:BP:49:ILE:HB	1.83	0.59
23:BB:1131:G:H1'	23:BB:1133:A:N6	2.14	0.59
23:DB:2722:G:H2'	23:DB:2723:C:H6	1.67	0.59
26:DD:172:VAL:HG21	26:DD:192:ALA:HB1	1.85	0.59
26:DD:33:ARG:O	26:DD:34:VAL:HG22	2.02	0.59
37:DP:59:THR:HG23	37:DP:76:HIS:CD2	2.37	0.59
34:DM:2:LEU:HD12	34:DM:2:LEU:H	1.68	0.59
31:DJ:105:VAL:HG11	31:DJ:122:LEU:CD1	2.33	0.59
27:DE:53:THR:HB	27:DE:74:LYS:HE2	1.85	0.59
32:BK:99:ILE:HD13	32:BK:118:LEU:HD13	1.83	0.59
23:DB:921:C:H2'	23:DB:922:C:H6	1.67	0.59
27:DE:189:THR:C	27:DE:191:ASP:H	2.06	0.59
23:BB:2000:C:O2'	23:BB:2001:C:H5'	2.02	0.59
12:AM:48:SER:O	12:AM:52:ILE:HG22	2.03	0.59
33:DL:19:LEU:N	33:DL:19:LEU:HD22	2.14	0.59
17:AR:52:ARG:HH11	17:AR:52:ARG:CB	2.15	0.59
23:DB:1082:U:C4	23:DB:1086:A:N1	2.70	0.59
23:BB:704:G:H1'	23:BB:727:A:H61	1.67	0.59
26:DD:122:VAL:HG21	26:DD:141:ARG:HD3	1.85	0.59
16:AQ:10:ARG:NE	16:AQ:10:ARG:HA	2.18	0.59
33:BL:38:GLN:C	33:BL:40:SER:N	2.53	0.59
1:AA:436:C:O2'	1:AA:437:U:H5'	2.03	0.59
3:CD:2:ARG:O	3:CD:3:TYR:HB3	2.03	0.59
15:AP:1:MET:N	15:AP:24:SER:HB3	2.18	0.59
2:AC:184:ASN:HD22	2:AC:185:THR:N	1.98	0.59
23:DB:1387:A:H5'	23:DB:1469:A:H1'	1.84	0.59
43:BW:10:ARG:HH11	43:BW:10:ARG:CB	2.16	0.59
23:DB:2769:U:H2'	23:DB:2770:G:C8	2.38	0.59
3:AD:118:SER:HA	3:AD:130:ASN:HB2	1.85	0.59
23:DB:2591:C:H2'	23:DB:2592:G:H8	1.66	0.59
23:DB:2804:U:H2'	23:DB:2805:C:H6	1.66	0.59
17:CR:47:ARG:CZ	17:CR:48:ALA:H	2.14	0.59
23:DB:1535:A:H3'	23:DB:1536:C:C6	2.38	0.59
28:BF:161:SER:OG	28:BF:164:GLU:HB2	2.03	0.59
23:DB:1932:A:H2'	23:DB:1933:G:O4'	2.02	0.59
20:AB:166:ASP:OD1	20:AB:190:SER:HA	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DQ:57:ARG:HH21	38:DQ:92:LYS:HZ3	1.51	0.59
23:DB:997:G:H5'	38:DQ:92:LYS:HG3	1.85	0.59
26:DD:31:ALA:HB3	26:DD:95:SER:CB	2.32	0.59
32:DK:71:ARG:O	32:DK:72:PRO:C	2.40	0.59
32:BK:99:ILE:HG22	32:BK:119:ALA:HB2	1.84	0.59
23:DB:1813:G:H1'	25:DC:45:ASN:HB3	1.85	0.59
42:BU:7:ASP:N	42:BU:24:VAL:HA	2.17	0.59
16:CQ:11:VAL:HG13	16:CQ:20:ILE:HG23	1.85	0.59
49:B2:12:ARG:HH21	49:B2:18:PHE:H	1.50	0.59
34:BM:105:MET:HE3	34:BM:106:ASP:C	2.23	0.59
38:BQ:47:ARG:HH22	38:BQ:50:ARG:HG2	1.66	0.59
19:CT:2:ASN:O	19:CT:4:LYS:N	2.36	0.59
23:DB:1548:A:H2'	23:DB:1549:A:H8	1.66	0.59
26:DD:14:ILE:HG23	26:DD:19:GLY:CA	2.33	0.59
23:BB:1007:C:H5''	31:BJ:37:ARG:NH2	2.16	0.59
4:CE:95:MET:CE	4:CE:143:LEU:HD13	2.33	0.59
4:AE:156:ARG:HB2	7:AH:43:GLY:HA3	1.85	0.59
23:DB:2008:C:H2'	23:DB:2009:A:C8	2.38	0.59
25:BC:75:ALA:HB1	25:BC:93:VAL:HG13	1.84	0.59
3:CD:61:ARG:HG3	3:CD:66:VAL:O	2.02	0.59
1:CA:590:U:H2'	1:CA:591:U:H6	1.67	0.59
2:CC:45:GLU:HB3	2:CC:46:LEU:HD23	1.84	0.59
6:AG:74:VAL:HG12	6:AG:75:LYS:H	1.68	0.59
1:AA:832:G:O2'	1:AA:833:G:H5'	2.02	0.59
23:DB:1319:C:O2'	23:DB:1320:C:H5'	2.03	0.59
23:BB:936:A:H2'	23:BB:937:C:C6	2.37	0.59
1:AA:1048:G:H4'	13:AN:2:LYS:NZ	2.18	0.59
28:BF:13:LYS:HD3	28:BF:16:MET:HG3	1.85	0.59
44:BX:44:LYS:HD2	44:BX:48:ARG:HE	1.68	0.59
23:BB:2274:A:H2'	23:BB:2276:G:OP1	2.02	0.59
1:AA:1243:C:H2'	1:AA:1244:G:H8	1.67	0.59
23:DB:1099:G:OP2	52:DI:2:LYS:O	2.21	0.59
25:BC:45:ASN:O	25:BC:46:GLY:C	2.41	0.59
34:BM:3:GLN:OE1	34:BM:47:GLU:HB2	2.03	0.59
46:BZ:59:ARG:HH21	46:BZ:62:LYS:HZ1	1.50	0.59
23:DB:1818:U:H5''	25:DC:155:ARG:HG2	1.85	0.59
25:DC:140:VAL:HA	25:DC:191:LEU:HA	1.84	0.59
25:DC:153:LEU:C	25:DC:155:ARG:H	2.05	0.59
25:DC:179:GLU:OE1	25:DC:267:VAL:HG23	2.02	0.59
33:BL:60:ARG:HD3	50:B3:11:LYS:HE2	1.84	0.59
26:BD:193:VAL:HG13	26:BD:193:VAL:O	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:23:PRO:HB3	26:BD:189:VAL:H	1.67	0.59
34:DM:72:PRO:O	34:DM:73:ILE:HD13	2.03	0.59
23:BB:1155:A:N6	45:BY:10:ARG:HH22	2.00	0.59
23:DB:2900:A:H2'	23:DB:2901:C:C6	2.38	0.59
31:DJ:59:ALA:C	31:DJ:61:LYS:H	2.07	0.59
20:AB:147:LEU:O	20:AB:150:ILE:HG22	2.03	0.59
20:AB:53:LEU:HD21	20:AB:212:TYR:CE2	2.37	0.59
20:AB:67:LEU:HD13	20:AB:67:LEU:N	2.18	0.59
30:BH:17:ASP:OD2	30:BH:21:VAL:HB	2.02	0.59
38:DQ:90:ASP:OD1	39:DR:10:LYS:HG2	2.03	0.59
31:BJ:125:TYR:HE2	31:BJ:134:ALA:HB2	1.67	0.59
1:AA:1217:C:OP1	13:AN:8:ARG:HD3	2.03	0.59
41:DT:48:GLN:CA	41:DT:53:VAL:HG22	2.31	0.59
28:DF:151:LEU:HG	28:DF:153:ILE:HG13	1.83	0.59
32:DK:15:GLY:HA3	32:DK:52:VAL:CG1	2.32	0.59
8:AI:17:ARG:O	8:AI:64:ILE:HA	2.02	0.59
20:AB:18:GLN:O	20:AB:37:VAL:HG23	2.03	0.59
36:BO:16:ARG:HG3	36:BO:20:GLU:HG3	1.85	0.59
12:CM:89:ARG:HB3	12:CM:96:VAL:HG22	1.84	0.59
23:DB:287:G:H2'	23:DB:288:U:C6	2.37	0.59
23:BB:1722:A:N6	23:BB:1738:G:H1'	2.17	0.59
3:AD:173:ASP:HB3	3:AD:178:GLU:HB3	1.85	0.59
8:AI:117:LEU:HD22	8:AI:123:ARG:HG2	1.83	0.59
3:AD:137:SER:HB2	3:AD:138:PRO:HD2	1.85	0.59
3:AD:138:PRO:HA	3:AD:181:PHE:HD2	1.67	0.59
6:AG:11:ILE:HG12	6:AG:24:LYS:HE2	1.85	0.59
6:CG:139:ASP:O	6:CG:142:ARG:HB3	2.02	0.59
1:AA:1142:G:H2'	1:AA:1143:G:O4'	2.03	0.59
1:CA:1496:C:H4'	23:DB:1920:C:O2'	2.02	0.59
40:BS:86:MET:O	40:BS:94:ASP:HB3	2.03	0.59
3:CD:30:LYS:HB2	3:CD:30:LYS:HZ2	1.67	0.59
20:CB:57:ASN:HA	20:CB:60:ALA:HB3	1.85	0.59
46:BZ:25:ARG:HH11	46:BZ:25:ARG:CB	2.17	0.58
50:B3:16:THR:HG21	50:B3:22:LYS:NZ	2.18	0.58
26:BD:22:ILE:N	26:BD:23:PRO:CD	2.65	0.58
43:BW:23:LYS:NZ	43:BW:24:ARG:HG2	2.18	0.58
31:DJ:100:VAL:HG13	31:DJ:101:ILE:HG12	1.85	0.58
35:BN:116:VAL:HG13	35:BN:117:ASP:N	2.17	0.58
30:BH:11:ASN:ND2	30:BH:12:LEU:H	2.00	0.58
23:BB:139:U:O2'	41:BT:1:MET:HA	2.03	0.58
18:AS:50:VAL:HB	18:AS:57:VAL:HG22	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1853:A:N1	23:DB:2087:G:H1'	2.18	0.58
46:DZ:33:ASN:O	46:DZ:34:LEU:HD23	2.03	0.58
42:BU:94:PHE:HD2	42:BU:95:PHE:H	1.50	0.58
32:BK:25:LEU:HD12	32:BK:38:ILE:HB	1.84	0.58
23:DB:301:G:H3'	23:DB:335:C:OP2	2.02	0.58
12:AM:21:ILE:CG2	12:AM:64:VAL:HG11	2.32	0.58
3:AD:25:ARG:NH1	3:AD:30:LYS:HG2	2.18	0.58
3:AD:59:LYS:O	3:AD:63:ILE:HG13	2.02	0.58
52:DI:20:SER:O	52:DI:25:PRO:HD2	2.03	0.58
46:DZ:39:LYS:HD3	46:DZ:61:ASN:ND2	2.18	0.58
23:DB:27:G:H22	23:DB:512:G:C2'	2.14	0.58
20:CB:67:LEU:HD22	20:CB:157:PRO:HG3	1.85	0.58
8:AI:18:VAL:HG13	8:AI:64:ILE:HG12	1.85	0.58
1:AA:699:C:C2'	1:AA:700:G:H5''	2.30	0.58
23:BB:2814:A:H2'	23:BB:2815:C:C6	2.38	0.58
1:CA:1060:U:H2'	1:CA:1061:G:H8	1.66	0.58
4:CE:110:MET:HG2	4:CE:139:THR:OG1	2.03	0.58
36:BO:16:ARG:NE	36:BO:16:ARG:HA	2.18	0.58
23:DB:2785:C:H2'	23:DB:2786:U:C6	2.38	0.58
29:BG:159:LYS:HG3	29:BG:159:LYS:O	2.02	0.58
3:CD:2:ARG:HA	3:CD:2:ARG:HE	1.65	0.58
7:AH:79:ARG:HB2	7:AH:80:PRO:HD2	1.84	0.58
1:CA:908:A:H2'	1:CA:909:A:H8	1.68	0.58
2:AC:141:MET:HA	2:AC:141:MET:HE2	1.84	0.58
1:CA:599:C:H5''	7:CH:86:LYS:O	2.03	0.58
23:BB:1041:G:H2'	23:BB:1042:G:H8	1.68	0.58
23:DB:2074:U:H2'	23:DB:2075:U:C6	2.38	0.58
23:DB:1779:U:H5	23:DB:1784:A:N7	2.00	0.58
17:CR:20:ILE:O	17:CR:21:ASP:HB2	2.03	0.58
1:CA:118:U:O4	1:CA:288:A:H2'	2.03	0.58
1:AA:1444:U:H2'	1:AA:1445:U:C6	2.38	0.58
15:CP:1:MET:HB3	15:CP:24:SER:OG	2.03	0.58
23:BB:2639:A:H2'	23:BB:2640:G:O4'	2.02	0.58
23:DB:1099:G:O4'	52:DI:3:LYS:CA	2.50	0.58
31:BJ:41:LYS:HD2	31:BJ:44:TYR:O	2.03	0.58
37:BP:5:LYS:C	37:BP:7:LEU:N	2.55	0.58
23:BB:921:C:O2'	23:BB:922:C:H5'	2.02	0.58
50:D3:49:VAL:HG22	50:D3:50:SER:N	2.13	0.58
31:DJ:25:LEU:HB3	31:DJ:62:VAL:CG1	2.33	0.58
40:BS:103:ILE:HG23	40:BS:104:THR:N	2.18	0.58
35:BN:19:ALA:C	35:BN:21:PHE:H	2.06	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2089:C:H2'	23:DB:2090:A:O4'	2.03	0.58
41:DT:24:MET:CE	41:DT:30:ILE:HA	2.32	0.58
28:DF:56:LEU:HA	28:DF:59:ILE:CG2	2.30	0.58
42:BU:13:LEU:HG	42:BU:69:VAL:HG22	1.85	0.58
23:BB:1082:U:C4	23:BB:1086:A:N1	2.71	0.58
52:BI:77:VAL:HA	52:BI:80:LYS:HE2	1.85	0.58
1:CA:1306:A:O2'	12:CM:107:THR:HG21	2.03	0.58
1:CA:673:A:H1'	17:CR:63:TYR:CE1	2.38	0.58
28:DF:39:VAL:HG12	28:DF:40:GLY:N	2.18	0.58
23:BB:2478:A:H5''	51:B4:1:MET:H1	1.68	0.58
36:BO:17:LYS:O	36:BO:21:LEU:HA	2.03	0.58
36:BO:40:ILE:HG12	36:BO:41:ALA:O	2.03	0.58
3:CD:58:GLN:O	3:CD:62:ARG:HG2	2.02	0.58
30:BH:73:ASN:HD22	30:BH:73:ASN:H	1.47	0.58
23:DB:1113:U:OP1	29:DG:2:ARG:HG2	2.03	0.58
3:AD:99:ASN:CG	3:AD:103:ARG:HH21	2.06	0.58
6:AG:97:ALA:HA	6:AG:100:MET:HE3	1.85	0.58
44:DX:1:MET:HB2	44:DX:6:LEU:HG	1.85	0.58
29:BG:10:VAL:HG12	29:BG:47:ASN:HA	1.85	0.58
16:CQ:60:ILE:HG12	16:CQ:72:TRP:HE3	1.68	0.58
1:AA:270:A:H2'	1:AA:271:C:H6	1.68	0.58
1:CA:1323:G:H2'	1:CA:1324:A:H8	1.68	0.58
50:D3:32:LEU:CD1	50:D3:33:THR:H	2.15	0.58
1:CA:545:C:H5''	3:CD:68:GLU:HG2	1.84	0.58
1:AA:677:U:H3	1:AA:713:G:H22	1.51	0.58
23:DB:2814:A:H2'	23:DB:2815:C:C6	2.38	0.58
9:AJ:26:VAL:O	9:AJ:30:LYS:HB3	2.02	0.58
1:CA:1338:G:H2'	1:CA:1339:A:C8	2.38	0.58
23:BB:303:G:H2'	23:BB:304:U:C6	2.39	0.58
1:AA:626:G:H2'	1:AA:627:G:C8	2.38	0.58
16:AQ:7:LEU:HD13	16:AQ:24:ILE:HG12	1.84	0.58
20:CB:80:LYS:HA	20:CB:90:PHE:CE1	2.38	0.58
11:CL:75:GLU:CD	11:CL:75:GLU:H	2.06	0.58
23:BB:869:G:H2'	23:BB:870:U:C6	2.37	0.58
37:BP:99:LEU:HD12	37:BP:101:GLU:OE2	2.02	0.58
23:DB:2722:G:O2'	35:DN:4:ARG:CD	2.49	0.58
37:DP:69:VAL:HG13	37:DP:70:GLU:H	1.67	0.58
40:BS:14:ALA:O	40:BS:17:VAL:HG22	2.03	0.58
33:BL:119:PRO:O	33:BL:120:VAL:HB	2.03	0.58
33:BL:96:LYS:N	33:BL:96:LYS:HD3	2.19	0.58
44:BX:36:GLN:NE2	44:BX:36:GLN:H	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DF:140:ILE:HG21	28:DF:145:VAL:CG2	2.32	0.58
34:DM:101:VAL:HG12	34:DM:102:LEU:N	2.18	0.58
32:DK:63:VAL:HG11	32:DK:103:VAL:HG12	1.85	0.58
44:DX:26:PHE:HA	44:DX:29:ARG:CD	2.33	0.58
23:BB:1171:G:H2'	23:BB:1172:C:O4'	2.02	0.58
26:DD:151:THR:O	26:DD:153:GLY:N	2.36	0.58
23:DB:1150:C:O2'	23:DB:1151:A:H5'	2.02	0.58
7:CH:75:GLN:HE21	7:CH:76:ARG:H	1.50	0.58
1:AA:429:U:H1'	1:AA:430:A:H5''	1.84	0.58
23:DB:1857:G:H2'	23:DB:1884:G:N2	2.19	0.58
1:CA:1237:C:H3'	1:CA:1238:A:H5'	1.84	0.58
23:BB:2278:A:C8	43:BW:8:SER:HB3	2.38	0.58
4:AE:108:GLY:H	4:AE:110:MET:HE1	1.68	0.58
23:BB:419:U:H2'	23:BB:420:C:C6	2.38	0.58
20:CB:86:CYS:HB3	20:CB:88:GLN:NE2	2.18	0.58
23:BB:363:G:H2'	23:BB:364:C:C6	2.38	0.58
23:DB:596:U:H2'	23:DB:597:G:C8	2.37	0.58
1:AA:370:C:H2'	1:AA:371:A:H8	1.67	0.58
44:DX:2:LYS:HB2	44:DX:5:GLU:HG3	1.85	0.58
41:BT:38:ALA:O	41:BT:42:GLU:HB2	2.03	0.58
22:DA:35:C:H2'	22:DA:36:C:O4'	2.02	0.58
23:BB:2500:U:H5'	23:BB:2501:C:OP2	2.02	0.58
3:CD:34:GLU:O	3:CD:35:GLN:HG3	2.03	0.58
11:AL:42:LYS:HE3	11:AL:90:PRO:HD3	1.84	0.58
23:BB:1973:G:H2'	23:BB:1974:C:C6	2.38	0.58
7:AH:8:ASP:O	7:AH:12:ARG:HG3	2.03	0.58
23:DB:987:C:H2'	23:DB:988:A:O4'	2.03	0.58
39:BR:53:PHE:O	39:BR:54:VAL:C	2.37	0.58
21:AU:14:ALA:H	21:AU:16:ARG:CZ	2.15	0.58
24:BV:63:ILE:O	24:BV:65:VAL:HG22	2.03	0.58
25:DC:172:THR:HG22	25:DC:173:LEU:N	2.17	0.58
25:BC:10:PRO:HD2	25:BC:202:ARG:HH12	1.67	0.58
30:DH:26:ALA:HB2	30:DH:30:LEU:HG	1.86	0.58
35:BN:83:LEU:HA	35:BN:86:ARG:HD3	1.84	0.58
33:BL:78:ARG:NH2	33:BL:82:LEU:HD23	2.16	0.58
23:BB:1083:U:H1'	23:BB:1086:A:N6	2.19	0.58
52:BI:79:LEU:HD23	52:BI:108:ILE:CD1	2.33	0.58
42:BU:90:LYS:HG3	42:BU:91:LYS:H	1.68	0.58
34:DM:117:PHE:HB2	34:DM:124:LEU:HD11	1.85	0.58
25:DC:226:PRO:HG3	25:DC:232:GLY:C	2.23	0.58
16:CQ:16:MET:HB2	16:CQ:19:SER:HB2	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CQ:42:LYS:C	16:CQ:43:LEU:HD12	2.23	0.58
28:DF:40:GLY:H	28:DF:84:ILE:HG21	1.69	0.58
28:BF:174:PHE:N	28:BF:175:PRO:HD2	2.18	0.58
30:DH:86:ASP:C	30:DH:88:GLY:H	2.05	0.58
33:DL:108:ALA:HB3	33:DL:125:LEU:CB	2.32	0.58
38:DQ:39:ILE:HA	38:DQ:43:GLN:HB3	1.84	0.58
23:BB:2392:A:OP2	50:B3:31:ILE:HD13	2.03	0.58
23:BB:1024:G:C3'	23:BB:1025:G:H5''	2.34	0.58
16:AQ:46:HIS:HB2	16:AQ:70:LYS:HE3	1.85	0.58
29:BG:132:LEU:HD11	29:BG:144:ALA:HB2	1.85	0.58
11:AL:19:ASN:HB2	11:AL:93:ARG:NH1	2.18	0.58
1:AA:920:U:H2'	1:AA:921:U:C6	2.38	0.58
16:CQ:45:VAL:HG21	16:CQ:60:ILE:HG21	1.85	0.58
1:AA:312:C:H2'	1:AA:313:A:H8	1.68	0.58
23:BB:2415:G:H2'	23:BB:2416:C:H6	1.69	0.58
20:CB:96:LEU:HB2	20:CB:99:MET:SD	2.43	0.58
9:AJ:30:LYS:HB2	9:AJ:36:VAL:HG21	1.85	0.58
1:CA:945:G:H21	1:CA:1334:G:H4'	1.68	0.58
29:BG:8:VAL:O	29:BG:48:THR:HA	2.02	0.58
43:DW:48:ALA:HA	43:DW:54:ARG:H	1.67	0.58
29:BG:94:ARG:HB2	29:BG:94:ARG:HH11	1.68	0.58
16:CQ:56:ASP:N	16:CQ:81:ALA:HB2	2.18	0.58
23:DB:2213:U:O2	23:DB:2213:U:H2'	2.04	0.58
23:BB:2809:A:H2'	23:BB:2810:A:C8	2.39	0.58
39:BR:4:VAL:CA	39:BR:12:HIS:HB3	2.34	0.58
37:BP:27:VAL:HG12	37:BP:47:ILE:CD1	2.33	0.58
33:DL:4:ASN:O	33:DL:6:LEU:HD22	2.03	0.58
26:DD:204:LYS:HB3	26:DD:205:PRO:CD	2.32	0.58
23:DB:910:A:N7	34:DM:16:ARG:HG2	2.19	0.58
23:DB:1022:G:C8	31:DJ:68:LYS:HE3	2.38	0.58
30:DH:19:VAL:HG22	30:DH:20:ASN:N	2.19	0.58
23:DB:2292:U:H2'	23:DB:2293:G:C8	2.39	0.58
31:DJ:69:ARG:HH11	31:DJ:69:ARG:HG3	1.69	0.58
23:DB:2386:A:H4'	43:DW:38:ARG:HB2	1.86	0.58
23:DB:2354:C:H4'	43:DW:30:VAL:HG13	1.85	0.58
34:DM:29:GLY:N	34:DM:102:LEU:HD12	2.14	0.58
25:BC:227:VAL:HG12	25:BC:228:ASP:OD1	2.03	0.58
47:D0:45:ASP:HA	47:D0:55:ALA:HA	1.83	0.58
29:DG:10:VAL:HG13	29:DG:14:VAL:CG1	2.33	0.58
1:CA:1221:G:O3'	18:CS:76:THR:HG21	2.03	0.58
46:DZ:24:ILE:CD1	46:DZ:24:ILE:H	2.08	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CJ:40:ILE:HG13	9:CJ:73:LEU:HB3	1.85	0.58
4:CE:15:ILE:HD12	4:CE:35:LEU:HD23	1.85	0.58
52:BI:121:ILE:O	52:BI:124:MET:HG2	2.04	0.58
26:DD:145:SER:HA	26:DD:159:LYS:HZ3	1.68	0.58
8:CI:18:VAL:HG12	8:CI:64:ILE:HG12	1.86	0.58
10:CK:12:ARG:N	10:CK:76:TYR:HA	2.19	0.58
23:DB:1593:A:H2'	23:DB:1594:U:C6	2.38	0.58
1:CA:312:C:H2'	1:CA:313:A:H8	1.67	0.58
23:BB:1534:U:H2'	23:BB:1536:C:C4	2.39	0.58
48:B1:22:THR:O	48:B1:23:THR:HG23	2.03	0.58
10:AK:18:GLY:O	10:AK:81:LEU:HB2	2.03	0.58
23:BB:1655:A:C2	23:BB:2049:G:H5''	2.38	0.58
36:BO:13:ARG:HH11	36:BO:13:ARG:HB2	1.69	0.58
7:CH:93:LYS:HG2	7:CH:96:ALA:HA	1.83	0.58
23:BB:1327:A:H2'	23:BB:1328:A:O4'	2.02	0.58
21:AU:14:ALA:HA	21:AU:16:ARG:NE	2.18	0.58
37:BP:47:ILE:HA	37:BP:63:ILE:HG23	1.86	0.58
31:BJ:81:ILE:O	31:BJ:84:ILE:HG12	2.04	0.58
25:BC:140:VAL:HG23	25:BC:141:HIS:H	1.67	0.58
38:DQ:92:LYS:C	38:DQ:93:ILE:HG23	2.24	0.58
23:BB:966:G:H2'	23:BB:967:U:C6	2.38	0.58
23:DB:871:U:H4'	34:DM:68:PHE:CE1	2.39	0.58
23:DB:1025:G:H1'	23:DB:1135:C:C5'	2.28	0.58
38:BQ:27:ARG:HG3	38:BQ:32:ARG:NH2	2.19	0.58
40:BS:17:VAL:HG23	40:BS:76:VAL:HG11	1.85	0.58
39:DR:3:ALA:HB2	39:DR:14:VAL:O	2.04	0.58
23:DB:857:G:C2'	23:DB:858:G:H5'	2.33	0.58
25:DC:20:ASN:C	25:DC:202:ARG:HD2	2.23	0.58
23:BB:2052:A:H5'	26:BD:148:GLN:O	2.03	0.58
33:BL:77:ILE:HA	33:BL:101:ILE:HD13	1.86	0.58
3:CD:169:TRP:CD1	3:CD:170:LEU:HG	2.38	0.58
42:BU:6:ARG:C	42:BU:8:ASP:H	2.07	0.58
23:DB:873:C:H2'	23:DB:874:G:C8	2.38	0.58
25:DC:227:VAL:HG13	25:DC:228:ASP:OD1	2.04	0.58
16:CQ:24:ILE:HD13	16:CQ:43:LEU:HD13	1.84	0.58
8:CI:56:MET:SD	8:CI:57:VAL:N	2.77	0.58
23:DB:1082:U:C4	23:DB:1086:A:C2	2.92	0.58
8:AI:82:ILE:O	8:AI:86:LEU:HD22	2.03	0.58
11:AL:22:ALA:HB2	11:AL:56:LEU:HD21	1.85	0.58
1:CA:699:C:C2'	1:CA:700:G:H5''	2.32	0.58
29:DG:36:LEU:CB	29:DG:40:VAL:HG21	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DG:42:VAL:HA	29:DG:50:THR:O	2.04	0.58
33:DL:109:LYS:HA	33:DL:127:VAL:H	1.68	0.58
33:DL:109:LYS:HG2	33:DL:126:ARG:HD3	1.85	0.58
39:BR:37:GLU:HG2	39:BR:62:GLU:N	2.16	0.58
23:DB:136:G:C2	41:DT:3:ARG:NH2	2.71	0.58
45:BY:7:THR:HB	45:BY:34:THR:HB	1.85	0.58
23:DB:2786:U:O2'	26:DD:65:ALA:HB3	2.03	0.58
10:AK:25:SER:HB3	10:AK:28:ASN:O	2.04	0.58
23:BB:974:G:H1'	23:BB:975:A:C8	2.38	0.58
1:CA:1513:A:H2'	1:CA:1514:G:H8	1.69	0.58
23:BB:1439:A:C6	23:BB:1552:A:N7	2.71	0.58
6:AG:96:ASN:O	6:AG:100:MET:HG3	2.04	0.58
42:DU:82:VAL:HG21	42:DU:95:PHE:O	2.02	0.58
3:CD:75:TYR:HE1	3:CD:200:VAL:HG23	1.69	0.58
23:DB:962:G:O2'	23:DB:963:U:H5'	2.04	0.58
23:BB:17:G:H2'	23:BB:18:U:C6	2.38	0.58
6:CG:42:VAL:O	6:CG:46:LEU:HB2	2.02	0.58
23:DB:228:C:H4'	23:DB:229:C:H5''	1.85	0.58
1:CA:1458:G:H5''	19:CT:25:SER:HB3	1.84	0.58
1:CA:1254:A:H2'	1:CA:1255:G:C8	2.39	0.58
23:DB:2836:U:H2'	23:DB:2837:A:H8	1.68	0.58
23:BB:1681:G:H2'	23:BB:1757:A:N1	2.19	0.58
51:D4:11:CYS:SG	51:D4:25:VAL:HG23	2.43	0.58
23:BB:2328:A:H2'	23:BB:2329:U:H6	1.67	0.58
46:BZ:30:HIS:H	46:BZ:48:GLN:CD	2.07	0.58
37:BP:25:VAL:CG1	37:BP:87:ARG:HA	2.33	0.58
38:DQ:108:LEU:HA	38:DQ:111:LYS:HD2	1.86	0.58
27:BE:152:GLU:HB3	27:BE:171:ASP:OD2	2.04	0.58
26:DD:5:VAL:CG2	26:DD:28:GLU:HA	2.34	0.58
30:BH:85:GLY:O	30:BH:89:LYS:N	2.36	0.58
25:DC:42:ARG:NE	25:DC:44:ASN:HB2	2.19	0.58
41:DT:56:GLU:O	41:DT:57:VAL:HG22	2.03	0.58
26:DD:156:PHE:CB	31:DJ:81:ILE:HG21	2.33	0.58
26:BD:1:MET:HE2	26:BD:84:LEU:HD13	1.85	0.58
23:DB:2887:A:C8	47:D0:27:LEU:HD21	2.39	0.58
23:DB:532:A:N3	23:DB:532:A:H2'	2.17	0.58
36:BO:64:TYR:CE1	36:BO:74:VAL:HG11	2.34	0.58
26:DD:60:VAL:HG23	26:DD:63:PRO:CD	2.34	0.58
23:DB:1552:A:H2'	23:DB:1553:A:H5'	1.85	0.58
11:AL:19:ASN:O	11:AL:20:VAL:HG23	2.03	0.58
23:DB:1176:U:H6	23:DB:1176:U:O5'	1.87	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BP:38:ARG:HH11	37:BP:39:LEU:H	1.52	0.58
23:BB:276:U:O2'	23:BB:277:G:H5'	2.03	0.58
1:CA:1355:G:H2'	1:CA:1356:G:C8	2.39	0.58
23:DB:288:U:H2'	23:DB:289:G:C8	2.39	0.58
1:AA:272:C:H2'	1:AA:273:U:H6	1.68	0.58
27:BE:50:ALA:O	27:BE:74:LYS:HB2	2.03	0.58
1:CA:985:C:H2'	1:CA:986:U:C6	2.39	0.58
23:DB:90:U:H3'	23:DB:91:A:H5''	1.84	0.58
22:BA:39:A:O2'	22:BA:40:U:H5'	2.03	0.58
23:DB:811:U:OP2	33:DL:31:GLY:HA2	2.04	0.58
32:BK:41:ILE:HG23	32:BK:42:THR:N	2.19	0.58
25:DC:38:LYS:HG3	25:DC:39:SER:N	2.19	0.58
23:DB:1973:G:H2'	23:DB:1974:C:C6	2.37	0.58
23:DB:2902:C:O2'	23:DB:2903:U:H4'	2.03	0.58
1:AA:586:C:O2'	1:AA:587:G:H5'	2.04	0.58
23:DB:2688:G:H1'	23:DB:2721:A:N6	2.18	0.58
40:BS:88:ARG:HD2	40:BS:93:ALA:HB3	1.86	0.58
1:CA:832:G:O2'	1:CA:833:G:H5'	2.04	0.58
23:BB:2888:C:H2'	23:BB:2889:C:C6	2.39	0.58
42:BU:85:ARG:HD3	42:BU:85:ARG:N	2.18	0.58
1:AA:168:G:O2'	1:AA:169:C:H5'	2.04	0.58
23:DB:1570:A:H2'	23:DB:1571:A:C8	2.39	0.58
52:BI:10:LEU:HD12	52:BI:10:LEU:O	2.04	0.58
23:BB:910:A:H62	34:BM:15:GLY:HA3	1.68	0.58
26:BD:107:VAL:HG23	26:BD:204:LYS:O	2.04	0.58
43:DW:44:PHE:CD2	43:DW:77:LYS:HB3	2.38	0.58
46:DZ:49:ARG:C	46:DZ:51:VAL:N	2.57	0.58
52:DI:73:PRO:CG	52:DI:78:LEU:HD21	2.34	0.58
52:DI:17:ALA:C	52:DI:19:PRO:HD3	2.24	0.58
20:CB:102:ASN:ND2	20:CB:105:THR:HB	2.19	0.58
28:BF:116:LEU:HD12	28:BF:176:PHE:CD2	2.39	0.58
26:BD:45:TYR:O	26:BD:46:ARG:HG2	2.04	0.58
23:BB:125:A:H4'	49:B2:13:ASN:CG	2.23	0.58
9:CJ:65:TYR:HB3	13:CN:95:LEU:HD11	1.84	0.58
9:CJ:64:GLN:HB3	13:CN:98:ALA:HB3	1.86	0.58
33:DL:81:ASP:HA	33:DL:84:LYS:HD2	1.85	0.58
1:CA:1313:U:P	18:CS:5:LYS:HA	2.44	0.58
13:CN:40:ARG:HH12	18:CS:6:LYS:H	1.51	0.58
34:BM:31:PHE:CD2	34:BM:128:THR:HG21	2.38	0.58
19:AT:60:GLN:H	19:AT:60:GLN:CD	2.07	0.58
23:DB:2785:C:H2'	23:DB:2786:U:H6	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1151:A:H2'	23:DB:1152:C:H6	1.67	0.58
1:CA:1095:U:H2'	1:CA:1096:C:C6	2.39	0.58
31:BJ:35:ARG:HA	31:BJ:35:ARG:NE	2.19	0.58
7:CH:78:SER:HB2	7:CH:124:ILE:O	2.03	0.58
23:DB:1175:A:H2'	23:DB:1176:U:H5'	1.86	0.58
23:BB:2213:U:O2	23:BB:2213:U:C2'	2.52	0.58
23:DB:324:A:N6	23:DB:339:U:H5'	2.19	0.58
23:DB:322:A:H1'	23:DB:339:U:O2	2.04	0.58
23:DB:69:C:H2'	23:DB:70:G:C8	2.38	0.58
23:DB:310:A:H5''	42:DU:14:THR:CG2	2.33	0.58
1:AA:57:G:H2'	1:AA:58:C:H6	1.68	0.58
23:BB:1187:G:H5''	39:BR:84:ARG:CZ	2.33	0.58
24:DV:2:PHE:HB2	24:DV:61:LEU:HD22	1.86	0.58
1:AA:555:U:H2'	1:AA:556:C:C6	2.39	0.58
33:DL:53:GLY:HA3	50:D3:54:LEU:HD21	1.86	0.58
1:CA:810:C:O2'	1:CA:811:C:H5'	2.04	0.58
1:CA:1476:A:H2'	1:CA:1477:U:O4'	2.04	0.58
12:CM:39:ALA:O	12:CM:42:VAL:HG22	2.04	0.58
23:BB:2246:G:H2'	23:BB:2247:A:C8	2.38	0.58
23:BB:1505:A:H2'	23:BB:1506:U:C6	2.38	0.58
1:CA:98:A:H2'	1:CA:99:C:C6	2.39	0.58
36:BO:108:ASP:HB3	36:BO:111:ARG:NH2	2.19	0.58
23:BB:958:U:C4	34:BM:18:ARG:HB2	2.39	0.58
34:BM:88:ASN:N	34:BM:88:ASN:HD22	2.02	0.58
25:DC:128:THR:HA	25:DC:190:THR:HA	1.86	0.58
37:BP:47:ILE:HG23	37:BP:63:ILE:CG2	2.33	0.58
25:BC:21:PRO:O	25:BC:22:GLU:HB2	2.04	0.58
22:DA:5:U:H2'	22:DA:6:G:H8	1.68	0.58
38:BQ:27:ARG:HG3	38:BQ:32:ARG:HH21	1.69	0.58
39:DR:6:GLN:HE21	39:DR:41:ILE:HB	1.67	0.58
43:DW:31:LEU:O	43:DW:66:VAL:HB	2.04	0.58
1:AA:1361:G:H2'	1:AA:1362:A:H5''	1.85	0.58
23:DB:2415:G:H2'	23:DB:2416:C:H6	1.68	0.58
52:BI:85:ILE:CD1	52:BI:137:LEU:HD21	2.34	0.58
37:BP:13:LYS:HA	37:BP:15:ASP:OD1	2.04	0.58
23:BB:2502:G:H5'	23:BB:2503:A:C5'	2.33	0.58
23:BB:519:U:H5''	40:BS:18:ARG:NH2	2.19	0.58
29:DG:17:LYS:HZ1	29:DG:19:ASN:HB2	1.65	0.58
23:DB:2886:A:C5	47:D0:27:LEU:HG	2.38	0.58
23:DB:1197:G:H2'	23:DB:1198:U:C6	2.39	0.58
20:AB:31:PHE:HB3	20:AB:39:ILE:HB	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2811:G:OP1	26:BD:62:LYS:HE2	2.04	0.58
29:DG:66:THR:O	29:DG:70:LEU:HD13	2.04	0.58
23:DB:1666:G:H4'	32:DK:6:THR:HG23	1.85	0.58
38:DQ:50:ARG:NH1	38:DQ:53:LYS:HE3	2.19	0.58
34:DM:133:LYS:HD2	34:DM:134:THR:N	2.18	0.58
25:BC:204:LEU:HB3	25:BC:210:ALA:HB1	1.85	0.58
25:BC:216:ARG:HB3	25:BC:217:PRO:CD	2.33	0.58
48:D1:27:ARG:H	48:D1:27:ARG:NE	2.01	0.58
3:AD:170:LEU:HB2	3:AD:180:THR:O	2.04	0.58
22:DA:25:U:O4	22:DA:54:G:H3'	2.03	0.58
11:CL:80:LEU:HD23	11:CL:97:VAL:HG21	1.86	0.58
1:CA:389:A:H3'	1:CA:390:U:H6	1.69	0.58
1:CA:406:G:H21	3:CD:115:GLN:HE22	1.52	0.58
6:CG:15:PRO:HG2	6:CG:43:TYR:OH	2.04	0.58
23:DB:962:G:H21	23:DB:2250:G:H1	1.52	0.58
49:B2:21:ARG:HB3	49:B2:31:LEU:HD21	1.86	0.58
23:BB:2297:A:N6	23:BB:2319:G:H5''	2.18	0.58
44:BX:44:LYS:CD	44:BX:48:ARG:HE	2.16	0.58
1:AA:1116:U:O2'	1:AA:1117:A:H5'	2.03	0.58
52:DI:53:PRO:CG	52:DI:77:VAL:HG11	2.33	0.58
3:AD:69:ARG:HE	3:AD:69:ARG:HA	1.68	0.58
24:BV:66:ASP:HB3	24:BV:68:LYS:HG2	1.85	0.58
26:BD:52:THR:HG22	26:BD:75:ALA:HB1	1.84	0.58
3:CD:106:PHE:CD1	3:CD:158:LEU:HD21	2.39	0.58
51:D4:14:CYS:SG	51:D4:27:CYS:N	2.77	0.58
34:BM:4:PRO:O	34:BM:5:LYS:C	2.36	0.58
23:BB:189:G:H2'	23:BB:205:G:N2	2.18	0.58
25:DC:172:THR:HG22	25:DC:173:LEU:H	1.69	0.58
37:BP:8:GLU:HA	37:BP:11:GLN:HG3	1.86	0.58
25:BC:139:THR:HA	25:BC:193:GLU:OE1	2.03	0.58
39:BR:75:VAL:H	39:BR:90:ARG:NE	2.02	0.58
23:DB:1654:A:C4'	35:DN:1:MET:H1	2.17	0.58
26:DD:173:GLN:HG3	26:DD:208:LYS:HB3	1.85	0.58
23:DB:1802:A:H2'	23:DB:1803:A:C8	2.39	0.58
31:DJ:36:LEU:HA	31:DJ:51:GLY:O	2.03	0.58
23:BB:580:U:O3'	38:BQ:30:VAL:HG13	2.03	0.58
30:BH:89:LYS:O	30:BH:90:LEU:HD12	2.03	0.58
27:DE:115:GLN:HB3	27:DE:117:ARG:HD3	1.86	0.58
23:BB:144:A:H2'	23:BB:145:C:H6	1.69	0.58
52:DI:108:ILE:CG2	52:DI:128:ILE:HD13	2.34	0.58
23:DB:972:A:C3'	23:DB:973:A:H5''	2.27	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:672:U:H2'	1:CA:673:A:C8	2.39	0.58
31:DJ:76:HIS:HB2	31:DJ:86:GLN:CG	2.33	0.58
32:DK:104:THR:HG22	32:DK:105:ARG:H	1.68	0.58
47:D0:41:HIS:CG	47:D0:42:ILE:N	2.67	0.58
29:DG:171:LYS:NZ	29:DG:174:LYS:H	2.02	0.58
25:DC:234:GLY:HA3	25:DC:237:ARG:HH12	1.67	0.58
23:BB:1204:A:N1	23:BB:1241:A:N1	2.52	0.58
23:BB:1799:G:OP1	25:BC:255:LYS:HG2	2.04	0.58
13:AN:30:ILE:CG2	13:AN:41:TRP:HB2	2.34	0.58
23:DB:1486:U:H2'	23:DB:1487:U:H6	1.68	0.58
1:AA:390:U:H2'	1:AA:391:G:H8	1.66	0.58
1:CA:190:A:O5'	1:CA:190:A:H8	1.86	0.58
23:DB:2103:C:H2'	23:DB:2104:C:O4'	2.03	0.58
23:BB:272:A:H2'	23:BB:273:G:H8	1.69	0.58
2:CC:68:HIS:HA	2:CC:103:ALA:HB3	1.85	0.58
1:AA:1172:C:H2'	1:AA:1173:U:C6	2.39	0.58
6:CG:100:MET:HA	6:CG:103:ILE:HD12	1.85	0.58
23:DB:438:G:H2'	23:DB:439:A:C8	2.39	0.58
1:CA:1392:G:O2'	1:CA:1393:U:H5'	2.04	0.58
23:BB:2803:G:H2'	23:BB:2804:U:C6	2.39	0.58
3:CD:101:VAL:O	3:CD:104:MET:HB2	2.04	0.58
14:CO:10:ILE:HD13	14:CO:30:LEU:HA	1.85	0.58
1:AA:1338:G:H2'	1:AA:1339:A:C8	2.38	0.58
23:DB:955:U:H5'	23:DB:956:G:OP2	2.04	0.58
23:BB:1166:G:H2'	23:BB:1167:C:C6	2.39	0.58
1:AA:987:G:H2'	1:AA:988:G:H8	1.69	0.58
30:BH:80:ILE:HD11	30:BH:102:ALA:HA	1.86	0.58
1:AA:1201:A:H1'	1:AA:1202:U:OP2	2.04	0.58
22:BA:52:A:H2'	22:BA:53:A:O4'	2.03	0.58
1:AA:1035:A:H2'	1:AA:1036:A:H8	1.69	0.58
23:BB:657:U:H2'	23:BB:658:U:C6	2.39	0.58
21:CU:8:ASN:HB2	21:CU:9:GLU:CD	2.25	0.58
52:DI:2:LYS:O	52:DI:3:LYS:HG3	2.04	0.57
38:BQ:92:LYS:O	38:BQ:94:LEU:HD13	2.04	0.57
23:BB:1818:U:C3'	25:BC:155:ARG:HB2	2.34	0.57
27:BE:115:GLN:HB3	27:BE:185:LYS:HZ2	1.69	0.57
23:DB:2849:U:H4'	23:DB:2850:A:H5'	1.85	0.57
37:DP:25:VAL:HG11	37:DP:87:ARG:CA	2.33	0.57
20:CB:208:ALA:O	20:CB:211:LEU:HB3	2.04	0.57
36:DO:109:ALA:HA	36:DO:112:GLU:OE2	2.04	0.57
31:DJ:98:GLU:O	31:DJ:102:GLU:HG2	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:139:VAL:O	31:BJ:140:LEU:HD23	2.03	0.57
32:DK:64:ARG:N	32:DK:83:ALA:HB3	2.14	0.57
13:AN:61:ASN:O	13:AN:62:ARG:HB2	2.03	0.57
52:DI:24:GLY:HA2	52:DI:34:ILE:HD12	1.85	0.57
47:D0:12:ARG:HH21	47:D0:16:ARG:CG	2.14	0.57
33:BL:111:ILE:CD1	33:BL:111:ILE:H	2.12	0.57
1:CA:254:G:OP1	16:CQ:68:LYS:O	2.21	0.57
13:CN:23:ARG:O	13:CN:26:LEU:HB2	2.04	0.57
3:AD:24:VAL:HG23	3:AD:25:ARG:HD2	1.86	0.57
28:DF:107:VAL:H	28:DF:108:PRO:CD	2.16	0.57
8:AI:56:MET:CE	8:AI:57:VAL:H	2.17	0.57
9:CJ:36:VAL:HG13	9:CJ:76:ILE:CD1	2.34	0.57
23:DB:72:U:H1'	44:DX:51:ALA:HB2	1.86	0.57
26:BD:120:GLY:H	26:BD:123:LYS:CG	2.16	0.57
36:BO:15:ARG:NH2	36:BO:17:LYS:HD2	2.19	0.57
13:CN:9:GLU:HA	13:CN:12:ARG:HB3	1.85	0.57
23:BB:65:U:H2'	23:BB:66:C:H6	1.69	0.57
23:BB:1791:A:OP1	25:BC:211:ARG:HG2	2.04	0.57
22:DA:26:C:OP1	22:DA:26:C:H3'	2.03	0.57
48:B1:42:VAL:HG12	48:B1:43:ARG:HG3	1.86	0.57
23:BB:2840:C:H5''	35:BN:53:THR:CG2	2.34	0.57
23:BB:1151:A:H4'	38:BQ:80:ASN:OD1	2.04	0.57
1:AA:1463:U:H2'	1:AA:1464:U:C6	2.39	0.57
10:AK:58:THR:HG23	10:AK:61:ALA:HB2	1.85	0.57
23:BB:1676:A:H2'	23:BB:1677:A:O4'	2.04	0.57
42:DU:46:LYS:HD3	42:DU:53:GLN:HG3	1.85	0.57
23:DB:2813:A:H2'	23:DB:2814:A:H8	1.69	0.57
6:AG:53:SER:HB2	6:AG:55:LYS:NZ	2.18	0.57
27:DE:21:ARG:HB3	27:DE:21:ARG:NH1	2.18	0.57
28:DF:165:GLY:O	28:DF:167:ALA:N	2.36	0.57
1:AA:1091:U:H2'	1:AA:1093:A:OP2	2.04	0.57
28:BF:70:ARG:HA	28:BF:80:GLN:HG3	1.85	0.57
1:CA:626:G:H2'	1:CA:627:G:C8	2.39	0.57
23:DB:1722:A:N6	23:DB:1738:G:H1'	2.18	0.57
4:AE:13:LYS:HD2	4:AE:112:ALA:HB1	1.85	0.57
33:DL:51:GLU:HG2	33:DL:52:GLY:N	2.18	0.57
29:DG:85:LYS:HB3	29:DG:131:VAL:HA	1.85	0.57
23:BB:586:A:H5''	27:BE:85:PHE:CE1	2.39	0.57
23:BB:2262:U:H2'	23:BB:2263:C:H6	1.69	0.57
34:BM:41:LEU:HG	34:BM:95:LEU:HD12	1.85	0.57
24:BV:46:LYS:HA	24:BV:46:LYS:HE3	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BZ:47:LYS:HB2	46:BZ:51:VAL:HB	1.86	0.57
50:B3:24:LYS:HZ1	50:B3:29:ARG:HH12	1.49	0.57
48:D1:14:ALA:HB1	48:D1:48:TYR:CZ	2.39	0.57
27:BE:153:LEU:HD21	27:BE:201:ALA:O	2.04	0.57
34:DM:71:LYS:HZ2	34:DM:71:LYS:HA	1.68	0.57
34:DM:14:LYS:HB3	34:DM:72:PRO:HG3	1.85	0.57
20:CB:44:LYS:O	20:CB:47:PRO:HD2	2.04	0.57
23:DB:6:A:H2'	23:DB:7:G:C8	2.40	0.57
47:B0:42:ILE:HD11	47:B0:44:ALA:HB3	1.86	0.57
43:DW:30:VAL:HG12	43:DW:31:LEU:H	1.69	0.57
23:DB:945:A:H3'	23:DB:946:C:H5''	1.85	0.57
46:DZ:1:MET:O	46:DZ:2:LYS:HG3	2.03	0.57
1:AA:1100:C:OP2	20:AB:94:ARG:HD3	2.04	0.57
5:CF:85:ILE:HG22	5:CF:86:ARG:H	1.69	0.57
23:BB:784:G:H5''	25:BC:225:ASN:ND2	2.19	0.57
8:AI:18:VAL:HG22	8:AI:64:ILE:HG12	1.85	0.57
29:BG:17:LYS:HB3	29:BG:24:THR:CG2	2.34	0.57
26:BD:62:LYS:H	26:BD:62:LYS:CE	2.17	0.57
23:BB:751:A:C5'	40:BS:90:LYS:HE2	2.33	0.57
10:AK:88:PRO:HD3	21:AU:28:LEU:CD1	2.34	0.57
41:BT:61:LEU:HD12	41:BT:62:VAL:N	2.19	0.57
18:CS:30:LEU:HB2	18:CS:48:ILE:HG23	1.86	0.57
3:CD:130:ASN:H	3:CD:130:ASN:HD22	1.49	0.57
20:AB:119:GLN:O	20:AB:124:THR:HG23	2.04	0.57
12:CM:78:ARG:O	12:CM:82:LEU:HG	2.04	0.57
23:BB:79:C:O2'	23:BB:346:A:H1'	2.05	0.57
23:DB:2469:A:H5'	34:DM:55:ARG:NE	2.19	0.57
1:CA:1009:U:H1'	1:CA:1021:A:C6	2.39	0.57
1:AA:967:C:H3'	1:AA:968:A:C5'	2.33	0.57
23:BB:2308:G:N3	23:BB:2308:G:H5''	2.20	0.57
23:BB:329:G:O6	42:BU:16:LYS:HB2	2.04	0.57
2:AC:112:ALA:HB1	2:AC:199:VAL:HG23	1.84	0.57
1:AA:1446:A:H2'	1:AA:1447:A:H5''	1.86	0.57
23:DB:19:A:H2'	23:DB:20:C:C6	2.39	0.57
1:AA:1163:A:H2'	1:AA:1164:G:C8	2.39	0.57
23:BB:184:C:H2'	23:BB:185:G:H8	1.68	0.57
22:BA:107:G:O2'	22:BA:108:A:H5'	2.04	0.57
11:CL:24:GLU:HB2	11:CL:26:CYS:SG	2.44	0.57
1:CA:129:A:H1'	1:CA:130:A:C8	2.39	0.57
34:DM:36:VAL:HG12	34:DM:125:PRO:HD3	1.86	0.57
1:CA:1038:C:H2'	1:CA:1039:G:C8	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:963:G:H2'	1:CA:964:A:H8	1.68	0.57
1:AA:625:U:H4'	15:AP:16:PHE:CE2	2.39	0.57
23:DB:2204:G:H4'	25:DC:149:LYS:HG3	1.85	0.57
33:BL:54:GLN:C	33:BL:56:PRO:HD2	2.25	0.57
37:BP:97:TYR:O	37:BP:98:TYR:HB2	2.03	0.57
26:BD:142:VAL:O	26:BD:143:PRO:C	2.42	0.57
25:BC:141:HIS:HB3	25:BC:190:THR:HB	1.85	0.57
27:BE:152:GLU:O	27:BE:153:LEU:HB2	2.04	0.57
37:DP:26:GLU:HA	37:DP:47:ILE:H	1.70	0.57
30:DH:30:LEU:O	30:DH:35:LYS:HD3	2.04	0.57
47:B0:2:VAL:HG22	47:B0:3:GLN:H	1.67	0.57
42:BU:73:ASN:HB2	42:BU:96:LYS:NZ	2.18	0.57
33:BL:29:LYS:HZ3	33:BL:31:GLY:HA3	1.70	0.57
39:DR:82:HIS:O	39:DR:84:ARG:N	2.38	0.57
31:DJ:81:ILE:C	31:DJ:83:GLY:N	2.55	0.57
13:CN:41:TRP:O	13:CN:45:LEU:HG	2.04	0.57
23:DB:2502:G:H5'	23:DB:2503:A:C5'	2.31	0.57
1:AA:450:G:H4'	15:AP:41:PRO:HB2	1.85	0.57
28:DF:100:GLU:C	28:DF:102:LEU:H	2.08	0.57
8:AI:80:HIS:O	8:AI:84:ARG:HB2	2.04	0.57
26:BD:45:TYR:CE2	26:BD:83:ARG:HG3	2.40	0.57
36:DO:30:ARG:NH1	36:DO:97:PHE:HB2	2.19	0.57
1:AA:922:G:N3	1:AA:1398:A:H2	2.02	0.57
4:AE:156:ARG:HD2	7:AH:42:GLU:O	2.02	0.57
4:AE:104:ILE:CD1	4:AE:114:LEU:HB2	2.34	0.57
19:AT:34:VAL:HG22	19:AT:49:ALA:HB1	1.87	0.57
1:AA:190:A:O5'	1:AA:190:A:H8	1.87	0.57
27:DE:129:PRO:O	27:DE:130:LYS:HB2	2.04	0.57
42:DU:44:HIS:O	42:DU:46:LYS:HD2	2.04	0.57
23:BB:2415:G:H2'	23:BB:2416:C:C6	2.38	0.57
38:BQ:102:LYS:H	38:BQ:102:LYS:HD2	1.68	0.57
1:CA:1461:G:H2'	1:CA:1462:C:H6	1.68	0.57
13:AN:24:ALA:HB1	13:AN:27:LYS:HE3	1.87	0.57
6:CG:71:THR:HA	6:CG:95:ARG:HE	1.69	0.57
23:DB:213:A:O2'	23:DB:214:G:H5'	2.05	0.57
8:AI:118:ARG:HH22	8:AI:122:ARG:HH21	1.52	0.57
23:DB:2578:G:O2'	26:DD:138:LEU:HD13	2.04	0.57
27:DE:10:SER:C	27:DE:12:LEU:H	2.05	0.57
3:CD:192:ALA:HB3	3:CD:194:ILE:HG22	1.85	0.57
22:BA:63:C:H2'	22:BA:64:G:H8	1.69	0.57
23:DB:264:C:H2'	23:DB:265:A:H5''	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1932:A:H2'	23:BB:1933:G:O4'	2.04	0.57
1:CA:1298:U:H2'	6:CG:113:LYS:NZ	2.19	0.57
1:AA:91:U:H2'	1:AA:92:U:C6	2.40	0.57
23:DB:657:U:H2'	23:DB:658:U:C6	2.39	0.57
1:AA:1053:G:H4'	1:AA:1054:C:H5'	1.87	0.57
38:DQ:57:ARG:HH21	38:DQ:92:LYS:NZ	2.03	0.57
23:DB:2000:C:O2'	23:DB:2001:C:H5'	2.04	0.57
37:DP:71:ARG:NH2	37:DP:102:ARG:HA	2.20	0.57
30:DH:6:LEU:HB2	30:DH:35:LYS:HB3	1.86	0.57
35:DN:45:ARG:HH22	35:DN:113:ILE:CG2	2.07	0.57
23:DB:1164:C:H2'	23:DB:1165:A:C8	2.40	0.57
31:DJ:41:LYS:NZ	31:DJ:45:THR:HA	2.19	0.57
43:DW:19:ARG:CZ	43:DW:19:ARG:HB2	2.34	0.57
43:DW:39:GLN:CD	43:DW:66:VAL:HA	2.25	0.57
2:CC:59:PRO:CG	2:CC:62:SER:HB2	2.29	0.57
17:CR:70:THR:HB	17:CR:72:ARG:HH11	1.67	0.57
40:DS:23:LEU:HB3	47:D0:21:LEU:HD22	1.86	0.57
1:CA:239:U:C5'	1:CA:239:U:H6	2.18	0.57
39:DR:69:GLY:H	39:DR:97:LYS:HB2	1.69	0.57
25:BC:222:THR:C	25:BC:224:MET:H	2.06	0.57
28:BF:102:LEU:O	28:BF:107:VAL:HG23	2.04	0.57
8:AI:18:VAL:HG22	8:AI:64:ILE:HG23	1.85	0.57
1:CA:1312:G:H2'	1:CA:1313:U:C6	2.39	0.57
5:AF:4:TYR:O	5:AF:63:ASN:HA	2.04	0.57
23:BB:972:A:C3'	23:BB:973:A:H5''	2.33	0.57
3:AD:169:TRP:NE1	3:AD:170:LEU:HD23	2.18	0.57
40:BS:9:HIS:O	40:BS:10:ALA:HB3	2.04	0.57
7:CH:10:LEU:HD22	7:CH:74:ILE:HD11	1.85	0.57
11:CL:82:ARG:HG2	11:CL:82:ARG:NH1	2.16	0.57
1:AA:674:G:H2'	1:AA:675:A:H8	1.70	0.57
1:AA:1238:A:C2	1:AA:1241:G:H1'	2.38	0.57
23:DB:2646:C:H2'	23:DB:2647:U:O4'	2.04	0.57
3:CD:25:ARG:HG3	3:CD:25:ARG:O	2.03	0.57
23:BB:1040:A:H4'	24:BV:49:ASN:ND2	2.20	0.57
50:D3:4:LYS:HE3	50:D3:61:LEU:HB2	1.86	0.57
52:DI:102:ARG:HG3	52:DI:141:ASP:CB	2.34	0.57
1:CA:1063:C:H3'	1:CA:1064:G:H2'	1.86	0.57
24:DV:77:VAL:HG13	24:DV:89:ILE:HD11	1.85	0.57
23:BB:433:C:O2'	23:BB:434:U:H5'	2.04	0.57
23:DB:1042:G:H2'	23:DB:1043:C:C6	2.40	0.57
4:CE:142:GLY:HA2	4:CE:145:ASN:HD22	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:865:A:H5'	1:AA:1078:U:O4	2.04	0.57
1:CA:1013:G:N2	1:CA:1015:G:H3'	2.20	0.57
23:BB:1229:C:H2'	23:BB:1230:A:H8	1.68	0.57
23:BB:2061:G:H3'	54:BB:3544:HOH:O	2.05	0.57
1:AA:1380:U:O4	6:AG:2:ARG:HA	2.04	0.57
6:AG:4:ARG:NE	6:AG:5:VAL:H	2.03	0.57
23:BB:1244:A:O2'	23:BB:1245:G:H5'	2.04	0.57
23:BB:441:U:H2'	23:BB:442:G:C8	2.38	0.57
23:BB:2578:G:N3	26:BD:145:SER:HB2	2.19	0.57
27:BE:138:LEU:HD22	27:BE:144:GLU:HA	1.86	0.57
23:DB:2872:A:O2'	23:DB:2873:A:H5''	2.05	0.57
31:DJ:73:VAL:CG2	31:DJ:74:TYR:H	2.13	0.57
35:DN:42:LYS:O	35:DN:42:LYS:HE3	2.05	0.57
32:BK:80:ASP:OD1	37:BP:70:GLU:HB3	2.03	0.57
20:CB:209:VAL:O	20:CB:213:LEU:HD12	2.05	0.57
45:DY:2:LYS:HA	45:DY:43:ILE:HG13	1.86	0.57
36:DO:27:VAL:HG22	36:DO:38:GLN:O	2.05	0.57
38:DQ:73:ILE:HG13	38:DQ:74:SER:N	2.10	0.57
30:DH:94:ILE:HG23	30:DH:98:ASP:CB	2.34	0.57
39:DR:2:TYR:HB2	39:DR:45:GLU:OE1	2.04	0.57
39:DR:6:GLN:HG2	39:DR:7:SER:N	2.19	0.57
23:DB:64:A:H2'	23:DB:65:U:H6	1.69	0.57
31:BJ:19:ASP:HB2	31:BJ:21:THR:HG23	1.85	0.57
23:DB:396:G:OP1	46:DZ:8:LYS:HD2	2.04	0.57
23:BB:1079:C:O2'	52:BI:133:ARG:NH2	2.38	0.57
52:DI:72:THR:CG2	52:DI:112:LYS:HD2	2.34	0.57
1:AA:1422:G:O2'	1:AA:1423:G:H5'	2.05	0.57
20:AB:41:ASN:ND2	20:AB:44:LYS:HE2	2.17	0.57
30:DH:87:GLU:HB2	30:DH:89:LYS:NZ	2.19	0.57
44:DX:23:ARG:HA	44:DX:26:PHE:CD1	2.40	0.57
51:B4:11:CYS:SG	51:B4:12:ARG:N	2.75	0.57
33:DL:78:ARG:HA	33:DL:113:ALA:HB2	1.86	0.57
1:CA:1001:C:H2'	1:CA:1002:G:C8	2.40	0.57
5:AF:42:TRP:HB2	5:AF:59:TYR:HB2	1.85	0.57
23:BB:2287:A:HO2'	23:BB:2288:A:H2'	1.68	0.57
22:DA:51:G:H2'	22:DA:52:A:H5''	1.86	0.57
38:BQ:10:ARG:NE	38:BQ:10:ARG:HA	2.19	0.57
23:DB:1105:U:H2'	23:DB:1106:G:C8	2.38	0.57
3:CD:157:ALA:HA	3:CD:160:LEU:HD12	1.84	0.57
23:BB:956:G:H22	23:BB:959:A:H3'	1.68	0.57
30:BH:8:LYS:HD3	30:BH:8:LYS:O	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AH:64:TYR:HA	7:AH:70:VAL:HG23	1.85	0.57
1:CA:1069:C:H4'	1:CA:1192:C:O2	2.05	0.57
23:BB:596:U:H2'	23:BB:597:G:H8	1.69	0.57
5:AF:18:VAL:N	5:AF:19:PRO:HD2	2.19	0.57
23:BB:527:C:H5''	23:BB:2779:U:C2	2.40	0.57
15:CP:44:SER:C	15:CP:46:LYS:H	2.08	0.57
50:D3:4:LYS:HD2	50:D3:60:CYS:H	1.69	0.57
14:AO:60:SER:HA	14:AO:63:ARG:HH12	1.69	0.57
23:BB:1709:U:H2'	23:BB:1710:G:C8	2.40	0.57
3:CD:28:ASP:HB3	3:CD:33:ILE:HD12	1.85	0.57
23:BB:1714:U:H3'	23:BB:1715:G:C5'	2.35	0.57
23:BB:1301:A:O2'	23:BB:1302:A:H2'	2.05	0.57
5:AF:17:GLN:HG2	5:AF:21:MET:HG3	1.86	0.57
23:DB:2686:G:H2'	23:DB:2687:U:C6	2.39	0.57
22:DA:22:U:H2'	22:DA:23:G:C8	2.40	0.57
1:AA:1508:A:H2'	1:AA:1509:C:C6	2.39	0.57
22:BA:86:G:H2'	22:BA:87:U:O4'	2.04	0.57
45:BY:13:ILE:HA	45:BY:19:HIS:HE1	1.70	0.57
4:CE:21:SER:HA	4:CE:29:ILE:O	2.04	0.57
23:DB:2888:C:H2'	23:DB:2889:C:C6	2.40	0.57
51:D4:23:ILE:CD1	51:D4:24:ARG:H	2.16	0.57
51:D4:26:ILE:HG23	51:D4:27:CYS:N	2.19	0.57
34:BM:116:ALA:HA	34:BM:119:LEU:HD23	1.86	0.57
34:BM:5:LYS:O	34:BM:5:LYS:HD2	2.05	0.57
24:BV:4:ILE:HD11	24:BV:61:LEU:HD12	1.87	0.57
25:DC:139:THR:HA	25:DC:193:GLU:OE2	2.03	0.57
25:BC:66:PHE:O	25:BC:67:LYS:C	2.42	0.57
23:DB:2399:G:H1'	48:D1:20:TYR:OH	2.04	0.57
22:BA:12:C:H41	43:BW:50:VAL:HG23	1.67	0.57
31:DJ:44:TYR:HD1	31:DJ:45:THR:H	1.50	0.57
5:CF:3:HIS:HA	5:CF:65:GLU:HG3	1.87	0.57
23:DB:455:C:N4	23:DB:472:A:H2'	2.20	0.57
32:BK:98:ARG:C	32:BK:99:ILE:HD12	2.23	0.57
23:BB:27:G:H1'	23:BB:513:A:N6	2.19	0.57
41:BT:8:LEU:CB	44:BX:19:LEU:HD11	2.34	0.57
10:AK:126:ARG:HB2	21:AU:33:ARG:CD	2.32	0.57
23:DB:2091:C:H3'	23:DB:2092:U:C5'	2.33	0.57
23:DB:495:G:H4'	40:DS:3:THR:O	2.05	0.57
8:CI:14:SER:HA	8:CI:68:GLY:O	2.04	0.57
1:CA:1307:U:H2'	1:CA:1308:U:H6	1.68	0.57
48:B1:12:SER:HA	48:B1:50:GLU:CB	2.30	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2749:A:P	29:BG:3:VAL:HG11	2.44	0.57
42:BU:29:SER:O	42:BU:30:SER:HB2	2.04	0.57
5:CF:9:MET:HE1	17:CR:64:LEU:O	2.05	0.57
32:DK:43:ILE:HD13	32:DK:56:ASP:HB3	1.87	0.57
1:AA:1422:G:C5'	32:BK:48:PRO:HB3	2.33	0.57
23:BB:6:A:O2'	31:BJ:135:GLN:HB2	2.04	0.57
23:BB:634:C:H2'	23:BB:635:C:C6	2.40	0.57
1:CA:1320:C:OP1	18:CS:69:LYS:HE3	2.05	0.57
23:DB:634:C:H2'	23:DB:635:C:C6	2.40	0.57
2:AC:46:LEU:HD23	2:AC:75:VAL:HG13	1.86	0.57
23:DB:1225:G:H5''	39:DR:90:ARG:HG3	1.87	0.57
46:DZ:20:ASN:O	46:DZ:21:VAL:HB	2.04	0.57
42:BU:45:GLN:C	42:BU:47:PRO:HD3	2.24	0.57
8:CI:87:MET:HB2	8:CI:94:ARG:NH2	2.20	0.57
23:BB:2144:G:C4	23:BB:2146:C:H5'	2.39	0.57
28:BF:126:ASN:N	28:BF:126:ASN:ND2	2.51	0.57
23:BB:1548:A:H2'	23:BB:1549:A:H8	1.70	0.57
2:CC:168:ARG:HG2	2:CC:169:GLU:N	2.19	0.57
23:DB:1172:C:H2'	23:DB:1173:U:O4'	2.04	0.57
23:BB:1593:A:H2'	23:BB:1594:U:C6	2.39	0.57
23:BB:1447:C:H2'	23:BB:1448:G:C8	2.39	0.57
11:CL:23:LEU:CD2	11:CL:58:ASN:HD22	2.16	0.57
22:BA:26:C:H2'	22:BA:27:C:O4'	2.05	0.57
50:D3:4:LYS:HG3	50:D3:61:LEU:HB2	1.86	0.57
23:BB:1299:G:H4'	23:BB:1301:A:H1'	1.86	0.57
1:CA:241:G:O2'	1:CA:242:G:H5'	2.05	0.57
23:DB:770:G:O2'	23:DB:771:G:H5'	2.05	0.57
37:BP:2:ASN:H	37:BP:2:ASN:HD22	1.52	0.57
1:CA:176:C:H2'	1:CA:177:G:N3	2.20	0.57
36:BO:98:GLN:O	36:BO:103:VAL:HG21	2.04	0.57
1:AA:940:C:H2'	1:AA:941:G:H8	1.69	0.57
28:DF:162:ASP:HB3	28:DF:166:ARG:HH21	1.69	0.57
23:DB:259:G:O2'	23:DB:260:G:H5'	2.05	0.57
31:BJ:61:LYS:HE2	31:BJ:61:LYS:HA	1.86	0.57
38:DQ:116:LEU:HD22	38:DQ:116:LEU:H	1.70	0.57
2:AC:90:VAL:CG2	2:AC:98:ALA:HB3	2.34	0.57
23:BB:244:A:H2'	23:BB:245:G:O4'	2.04	0.57
39:BR:1:MET:HA	39:BR:46:GLU:HB3	1.86	0.57
23:BB:1812:U:H1'	25:BC:45:ASN:OD1	2.05	0.57
25:DC:163:ILE:HG12	25:DC:173:LEU:HD23	1.86	0.57
26:BD:4:LEU:HD13	26:BD:79:LEU:HD11	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:20:ASN:HB2	25:BC:203:VAL:CG1	2.31	0.57
30:DH:3:VAL:CG2	30:DH:37:VAL:HG21	2.34	0.57
30:DH:6:LEU:HD12	30:DH:36:ALA:N	2.20	0.57
45:DY:6:ILE:CG1	45:DY:35:VAL:H	2.13	0.57
36:DO:108:ASP:O	36:DO:112:GLU:HG3	2.04	0.57
25:DC:247:TRP:HZ2	25:DC:254:LYS:HZ3	1.52	0.57
27:DE:5:LEU:HA	27:DE:11:ALA:O	2.05	0.57
52:DI:79:LEU:HD11	52:DI:131:THR:OG1	2.04	0.57
23:BB:2331:G:H2'	23:BB:2332:C:C6	2.40	0.57
32:DK:64:ARG:O	32:DK:65:THR:HG23	2.04	0.57
3:AD:25:ARG:HH12	3:AD:30:LYS:HG2	1.69	0.57
36:BO:49:VAL:HG22	36:BO:50:ALA:N	2.19	0.57
26:DD:62:LYS:HZ2	26:DD:62:LYS:H	1.52	0.57
23:BB:764:A:H5''	25:BC:208:GLY:CA	2.35	0.57
35:BN:34:ILE:HG12	35:BN:34:ILE:O	2.05	0.57
1:AA:239:U:C5'	1:AA:239:U:H6	2.18	0.57
23:BB:2895:G:H2'	23:BB:2896:C:H6	1.68	0.57
1:AA:672:U:H2'	1:AA:673:A:C8	2.39	0.57
36:BO:55:GLU:HB2	36:BO:60:GLU:O	2.05	0.57
30:DH:127:GLU:HA	30:DH:144:VAL:O	2.04	0.57
23:BB:170:U:H2'	23:BB:171:U:H6	1.69	0.57
3:CD:147:LYS:HD3	3:CD:148:ALA:N	2.19	0.57
23:BB:903:C:H2'	23:BB:904:G:C8	2.40	0.57
11:CL:23:LEU:HD22	11:CL:58:ASN:HD22	1.69	0.57
1:AA:796:C:H5'	10:AK:128:VAL:HG13	1.86	0.57
39:BR:79:ARG:HD3	39:BR:86:GLN:CD	2.25	0.57
32:BK:7:MET:HE1	32:BK:20:MET:HA	1.86	0.57
1:AA:384:G:H2'	1:AA:385:C:C6	2.39	0.57
50:B3:15:LYS:HG2	50:B3:19:GLY:HA2	1.87	0.57
23:BB:660:C:H2'	23:BB:661:A:C8	2.40	0.57
36:BO:105:ALA:O	36:BO:109:ALA:HB2	2.05	0.57
23:DB:1098:A:O3'	52:DI:4:VAL:N	2.36	0.57
34:BM:8:LYS:H	34:BM:8:LYS:HE2	1.70	0.57
24:BV:42:LEU:HB2	24:BV:47:VAL:HG21	1.87	0.57
24:BV:80:HIS:HB2	24:BV:85:LYS:HG3	1.85	0.57
27:BE:122:GLU:HB3	27:BE:152:GLU:HB2	1.85	0.57
23:DB:2729:G:H2'	23:DB:2730:C:C6	2.40	0.57
43:BW:45:HIS:N	43:BW:45:HIS:ND1	2.52	0.57
50:D3:24:LYS:NZ	50:D3:24:LYS:HB3	2.20	0.57
35:BN:24:MET:HE2	35:BN:44:LEU:HD13	1.86	0.57
25:DC:22:GLU:N	25:DC:202:ARG:NE	2.52	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BL:77:ILE:HG22	33:BL:78:ARG:N	2.19	0.57
25:DC:208:GLY:HA2	25:DC:212:TRP:CB	2.34	0.57
1:AA:1102:A:H2'	1:AA:1103:C:C6	2.40	0.57
28:DF:7:TYR:OH	28:DF:29:ARG:HG2	2.04	0.57
23:DB:1064:C:O4'	52:DI:90:GLY:HA2	2.04	0.57
32:DK:113:MET:SD	32:DK:116:ILE:HD11	2.45	0.57
23:DB:1656:C:OP1	26:DD:141:ARG:HD2	2.04	0.57
38:DQ:52:ARG:HH21	38:DQ:56:PHE:HE2	1.52	0.57
33:BL:38:GLN:NE2	33:BL:39:LYS:H	2.03	0.57
1:CA:922:G:H2'	1:CA:923:A:H8	1.70	0.57
10:AK:92:ARG:NH1	10:AK:92:ARG:HB3	2.19	0.57
28:BF:12:VAL:HG22	28:BF:27:VAL:HG11	1.86	0.57
3:CD:55:ARG:HH11	3:CD:55:ARG:CG	2.17	0.57
10:AK:52:ARG:HD2	10:AK:53:GLY:N	2.19	0.57
11:CL:72:ASN:ND2	11:CL:73:LEU:H	2.03	0.57
26:DD:14:ILE:HG23	26:DD:19:GLY:HA3	1.86	0.57
23:DB:863:A:H2'	23:DB:864:G:C8	2.40	0.57
23:DB:2135:A:H61	23:DB:2156:G:C2'	2.18	0.57
23:BB:416:U:H2'	23:BB:417:C:C6	2.39	0.57
30:DH:65:ALA:HA	30:DH:68:ARG:HB2	1.87	0.57
1:AA:1294:G:H2'	1:AA:1295:U:C6	2.40	0.57
23:DB:1301:A:O2'	23:DB:1302:A:H2'	2.04	0.57
23:BB:2688:G:H1'	23:BB:2721:A:H61	1.69	0.57
23:BB:2804:U:H2'	23:BB:2805:C:C6	2.38	0.57
7:AH:26:MET:HB2	7:AH:27:PRO:HD2	1.86	0.57
1:AA:940:C:H2'	1:AA:941:G:C8	2.40	0.57
23:BB:448:U:H1'	27:BE:79:ARG:HG3	1.85	0.57
1:AA:528:C:H41	11:AL:45:ASN:CG	2.07	0.57
23:DB:1346:G:O2'	23:DB:1347:A:H5'	2.05	0.57
23:BB:2218:G:H2'	23:BB:2219:U:C6	2.40	0.57
1:AA:129:A:H1'	1:AA:130:A:C8	2.40	0.57
1:AA:85:U:H4'	1:AA:86:G:H4'	1.86	0.57
1:CA:384:G:H2'	1:CA:385:C:C6	2.40	0.57
1:AA:160:A:H2'	1:AA:161:A:O4'	2.04	0.57
23:DB:2220:U:H2'	23:DB:2221:G:H8	1.70	0.57
23:DB:1759:A:H4'	23:DB:2715:C:O4'	2.05	0.57
43:DW:21:GLY:HA2	43:DW:25:PHE:CE1	2.40	0.57
36:BO:58:ILE:HG13	36:BO:59:ALA:N	2.19	0.57
24:DV:26:PHE:HE2	24:DV:44:HIS:HA	1.70	0.57
24:DV:26:PHE:CE2	24:DV:44:HIS:HA	2.39	0.57
23:DB:1099:G:O5'	52:DI:3:LYS:C	2.42	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:997:G:C5'	38:BQ:91:ARG:HG3	2.32	0.57
40:DS:46:LEU:HA	40:DS:49:LYS:CB	2.15	0.57
23:BB:910:A:H2'	23:BB:911:A:C8	2.39	0.57
34:BM:88:ASN:N	34:BM:88:ASN:ND2	2.49	0.57
25:DC:107:LYS:CB	25:DC:194:VAL:HG21	2.32	0.57
48:D1:20:TYR:O	48:D1:21:THR:HB	2.05	0.57
40:BS:70:LYS:O	40:BS:71:VAL:HB	2.04	0.57
43:DW:24:ARG:HG3	43:DW:57:THR:O	2.05	0.57
1:AA:978:A:H5'	1:AA:1362:A:N6	2.19	0.57
23:DB:784:G:H5''	25:DC:225:ASN:ND2	2.16	0.57
31:DJ:84:ILE:HD12	31:DJ:85:LYS:N	2.15	0.57
16:CQ:10:ARG:NH2	16:CQ:55:GLY:H	2.03	0.57
23:DB:2528:U:O2'	23:DB:2529:G:H3'	2.05	0.57
1:AA:1129:C:H5''	8:AI:17:ARG:HH22	1.70	0.57
26:BD:84:LEU:CD2	26:BD:86:GLU:HB2	2.35	0.57
4:CE:39:GLY:HA3	4:CE:116:VAL:HB	1.85	0.57
33:DL:108:ALA:C	33:DL:109:LYS:HD3	2.25	0.57
33:DL:126:ARG:O	33:DL:127:VAL:O	2.23	0.57
26:DD:46:ARG:H	26:DD:82:PHE:HA	1.70	0.57
15:CP:28:ARG:CD	15:CP:29:ASN:H	2.18	0.57
26:DD:153:GLY:C	26:DD:155:VAL:H	2.08	0.57
7:CH:103:VAL:HG22	7:CH:124:ILE:HA	1.85	0.57
3:AD:32:LYS:O	3:AD:35:GLN:HB2	2.05	0.57
23:BB:2064:C:H2'	23:BB:2065:C:H6	1.69	0.57
23:BB:2650:U:H2'	23:BB:2651:C:C6	2.40	0.57
9:AJ:67:ILE:HG13	13:AN:95:LEU:HD13	1.87	0.57
23:BB:2800:A:N3	23:BB:2801:G:H1'	2.20	0.57
22:BA:20:G:H2'	22:BA:21:G:C8	2.40	0.57
1:AA:676:A:H1'	10:AK:116:PRO:HB3	1.86	0.57
23:BB:182:A:H2'	23:BB:183:C:C6	2.40	0.57
11:CL:23:LEU:C	11:CL:25:ALA:H	2.07	0.57
28:BF:41:GLU:HB3	28:BF:44:ALA:HB3	1.87	0.57
23:BB:2898:U:H2'	23:BB:2899:A:C8	2.40	0.57
12:AM:22:TYR:HB3	12:AM:69:ARG:NH2	2.20	0.57
23:DB:151:C:H2'	23:DB:152:A:C8	2.40	0.57
1:CA:372:C:H4'	1:CA:373:A:H5'	1.86	0.57
23:BB:943:A:P	33:BL:42:SER:HB3	2.44	0.57
32:BK:73:ASP:OD1	32:BK:74:GLY:N	2.37	0.57
25:DC:56:GLY:HA3	25:DC:214:GLY:H	1.70	0.57
23:DB:1583:A:H4'	23:DB:1585:C:C4	2.40	0.57
23:DB:1098:A:O4'	52:DI:3:LYS:HB3	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AU:13:VAL:O	21:AU:14:ALA:HB2	2.05	0.57
40:DS:7:HIS:CD2	40:DS:10:ALA:HB2	2.40	0.57
23:DB:1820:U:H5	25:DC:176:ARG:NH2	2.02	0.57
50:B3:12:ARG:NH2	50:B3:55:GLY:HA3	2.20	0.57
37:BP:7:LEU:O	37:BP:7:LEU:HD13	2.05	0.57
25:BC:159:THR:C	25:BC:160:TYR:HD2	2.07	0.57
45:BY:16:LEU:N	45:BY:16:LEU:HD12	2.19	0.57
32:DK:70:ARG:HB3	32:DK:76:VAL:HG13	1.86	0.57
34:DM:4:PRO:HD3	34:DM:47:GLU:OE2	2.04	0.57
43:BW:45:HIS:HA	43:BW:75:ASN:CB	2.34	0.57
20:CB:11:ALA:HA	20:CB:14:HIS:CE1	2.40	0.57
31:DJ:98:GLU:HG3	31:DJ:126:ALA:CB	2.34	0.57
27:DE:42:GLY:O	27:DE:43:THR:HG23	2.05	0.57
43:DW:19:ARG:NH1	43:DW:19:ARG:HB2	2.19	0.57
33:BL:94:THR:HB	33:BL:103:ILE:CG1	2.34	0.57
23:BB:2270:A:H4'	43:BW:18:LYS:HG2	1.87	0.57
52:DI:54:ILE:HD13	52:DI:55:PRO:N	2.20	0.57
23:DB:1131:G:OP1	31:DJ:83:GLY:HA2	2.04	0.57
36:BO:8:ILE:O	36:BO:10:ARG:N	2.38	0.57
28:DF:83:PRO:C	28:DF:84:ILE:HG13	2.24	0.57
25:BC:225:ASN:O	25:BC:227:VAL:N	2.38	0.57
32:BK:47:ILE:HG22	32:BK:49:ARG:H	1.68	0.57
15:AP:18:GLN:NE2	15:AP:35:ARG:HD2	2.20	0.57
5:AF:3:HIS:HB2	5:AF:92:THR:CB	2.35	0.57
1:CA:1270:G:H2'	1:CA:1271:A:C8	2.39	0.57
2:AC:71:ARG:HB3	2:AC:74:ILE:HG22	1.87	0.57
16:AQ:45:VAL:HG12	16:AQ:46:HIS:H	1.70	0.57
25:BC:257:ARG:HA	25:BC:257:ARG:NH1	2.20	0.57
23:DB:2679:A:O2'	23:DB:2680:U:H5'	2.05	0.57
4:CE:33:THR:HB	4:CE:49:TYR:CE1	2.39	0.57
4:AE:90:GLY:O	4:AE:128:GLY:HA3	2.04	0.57
27:DE:134:LEU:HD22	27:DE:134:LEU:N	2.20	0.57
23:BB:1676:A:C1'	26:BD:134:HIS:HB3	2.35	0.57
1:CA:1030:U:H5''	1:CA:1031:C:C5	2.38	0.57
1:AA:967:C:OP1	1:AA:969:A:H5'	2.04	0.57
23:DB:1447:C:H2'	23:DB:1448:G:C8	2.40	0.57
23:DB:18:U:H2'	23:DB:19:A:C8	2.40	0.57
23:DB:1534:U:H2'	23:DB:1536:C:C4	2.40	0.57
23:BB:1570:A:H2'	23:BB:1571:A:C8	2.40	0.57
15:CP:12:LYS:O	15:CP:13:LYS:HB2	2.05	0.57
25:BC:12:ARG:NE	25:BC:18:VAL:HG11	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:123:ILE:HG12	25:DC:135:PRO:CD	2.35	0.57
1:CA:903:G:H2'	1:CA:904:U:C6	2.40	0.57
1:AA:72:A:H2'	1:AA:73:C:H6	1.70	0.57
15:AP:12:LYS:HD2	15:AP:13:LYS:HE3	1.87	0.57
26:DD:114:LYS:HB2	26:DD:114:LYS:NZ	2.20	0.57
35:BN:57:THR:OG1	35:BN:61:ALA:HB3	2.04	0.57
23:BB:1759:A:H4'	23:BB:2715:C:O4'	2.04	0.57
1:AA:803:G:H2'	1:AA:804:U:C6	2.40	0.57
23:DB:1100:C:H2'	23:DB:1101:U:H6	1.70	0.56
26:BD:31:ALA:HB2	26:BD:49:GLN:NE2	2.19	0.56
23:BB:2617:U:C2'	23:BB:2618:G:H5'	2.35	0.56
39:BR:90:ARG:NH2	39:BR:92:TRP:HB3	2.20	0.56
27:BE:120:VAL:H	27:BE:189:THR:CG2	2.15	0.56
23:DB:2867:G:N3	23:DB:2867:G:C2'	2.67	0.56
26:DD:118:PHE:HA	26:DD:164:GLN:HG2	1.87	0.56
26:DD:27:ILE:HD13	26:DD:28:GLU:N	2.20	0.56
37:DP:28:LYS:NZ	37:DP:44:GLY:N	2.52	0.56
35:DN:45:ARG:HE	35:DN:97:ILE:HD11	1.69	0.56
20:CB:46:VAL:HA	20:CB:49:PHE:CD2	2.40	0.56
27:DE:49:ARG:HG3	27:DE:52:VAL:HG22	1.87	0.56
30:DH:82:SER:O	30:DH:83:LYS:HD2	2.04	0.56
35:BN:48:VAL:O	35:BN:52:ILE:HG12	2.05	0.56
33:BL:77:ILE:HD13	33:BL:92:LEU:HD13	1.87	0.56
40:DS:4:ILE:HG12	40:DS:106:VAL:HG12	1.85	0.56
35:BN:1:MET:HE1	35:BN:2:ARG:HB2	1.85	0.56
18:AS:44:ILE:HA	18:AS:61:VAL:HB	1.86	0.56
5:CF:81:ASN:O	5:CF:84:VAL:HG12	2.04	0.56
3:AD:111:ALA:O	3:AD:114:ARG:HB3	2.04	0.56
3:AD:196:GLU:HA	3:AD:199:ILE:HD12	1.85	0.56
25:DC:234:GLY:HA3	25:DC:237:ARG:NH1	2.20	0.56
23:DB:534:U:H5'	38:DQ:41:ALA:CA	2.35	0.56
1:CA:1220:G:P	13:CN:52:ARG:HH22	2.28	0.56
23:DB:2784:U:H4'	26:DD:42:ASN:H	1.69	0.56
48:B1:31:GLU:HB3	48:B1:32:LYS:HE3	1.86	0.56
26:DD:125:TRP:CD1	26:DD:127:PHE:HB2	2.35	0.56
15:AP:51:ARG:O	15:AP:52:LEU:HD13	2.03	0.56
27:DE:126:VAL:HG11	27:DE:132:LYS:HZ2	1.70	0.56
1:AA:1329:A:OP1	12:AM:28:ARG:HB2	2.04	0.56
15:AP:23:ASP:O	15:AP:26:ASN:HB2	2.05	0.56
1:AA:1077:G:N2	1:AA:1079:G:H3'	2.19	0.56
23:DB:299:A:H2	23:DB:319:G:N3	2.03	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:278:A:O2'	23:DB:279:A:H5'	2.04	0.56
23:DB:796:C:H2'	23:DB:797:G:C8	2.39	0.56
1:AA:176:C:H2'	1:AA:177:G:N3	2.20	0.56
25:BC:15:VAL:HG12	25:BC:16:VAL:HG23	1.86	0.56
6:AG:4:ARG:CZ	6:AG:5:VAL:H	2.18	0.56
23:DB:2150:C:H2'	23:DB:2151:U:C6	2.39	0.56
14:CO:48:ASP:CG	14:CO:51:SER:HB2	2.25	0.56
38:BQ:106:THR:O	38:BQ:109:VAL:HG22	2.05	0.56
34:DM:127:LYS:HD3	34:DM:128:THR:H	1.70	0.56
23:DB:1537:G:H3'	23:DB:1537:G:N3	2.20	0.56
23:BB:977:G:O2'	23:BB:978:G:H5'	2.04	0.56
23:BB:37:C:O2'	27:BE:46:GLN:HB3	2.04	0.56
51:D4:6:SER:HA	51:D4:23:ILE:HD13	1.86	0.56
34:BM:33:LEU:HB2	34:BM:101:VAL:HG21	1.87	0.56
25:DC:33:LEU:HD22	25:DC:34:GLU:N	2.20	0.56
33:BL:63:LYS:CG	50:B3:11:LYS:HA	2.32	0.56
50:B3:29:ARG:HA	50:B3:33:THR:CG2	2.35	0.56
23:BB:832:U:H2'	23:BB:833:A:C8	2.39	0.56
31:BJ:73:VAL:HG23	31:BJ:74:TYR:H	1.69	0.56
23:BB:992:C:H1'	39:BR:91:GLN:HG3	1.87	0.56
26:DD:18:ASP:C	26:DD:20:VAL:H	2.07	0.56
37:DP:55:HIS:C	37:DP:57:ALA:N	2.58	0.56
34:DM:43:ALA:H	34:DM:91:TYR:HB2	1.70	0.56
43:BW:21:GLY:HA3	43:BW:32:ALA:CB	2.34	0.56
30:DH:6:LEU:HB2	30:DH:35:LYS:CB	2.35	0.56
23:DB:1803:A:O2'	25:DC:254:LYS:HD3	2.04	0.56
31:DJ:102:GLU:CG	31:DJ:124:VAL:HG12	2.30	0.56
47:B0:35:GLU:C	47:B0:37:HIS:H	2.06	0.56
39:DR:38:VAL:HA	39:DR:61:ALA:HB3	1.87	0.56
23:DB:2386:A:H2'	23:DB:2387:U:C6	2.40	0.56
43:DW:67:LYS:HG2	43:DW:71:LYS:CA	2.35	0.56
1:AA:1392:G:H2'	1:AA:1393:U:C6	2.41	0.56
39:DR:22:LEU:HD12	39:DR:24:LYS:N	2.15	0.56
28:BF:133:GLU:OE1	28:BF:147:ARG:HD3	2.05	0.56
42:DU:66:VAL:HG13	42:DU:67:SER:N	2.19	0.56
1:CA:1084:G:H5'	1:CA:1102:A:OP2	2.05	0.56
26:BD:35:THR:HG22	26:BD:46:ARG:HH22	1.70	0.56
10:CK:121:ARG:HH21	21:CU:34:ARG:NE	2.03	0.56
39:BR:22:LEU:O	39:BR:96:VAL:HG22	2.05	0.56
1:AA:1490:U:H5'	1:AA:1491:G:OP2	2.05	0.56
13:CN:50:LEU:HD12	13:CN:51:PRO:HD3	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BL:13:LYS:O	33:BL:14:LYS:HB2	2.05	0.56
52:BI:109:ALA:HB1	52:BI:124:MET:CG	2.33	0.56
1:AA:784:A:H2'	1:AA:785:G:H8	1.69	0.56
10:AK:61:ALA:O	10:AK:64:VAL:HG12	2.06	0.56
23:BB:1550:C:H2'	23:BB:1551:A:H8	1.69	0.56
23:DB:2650:U:H2'	23:DB:2651:C:C6	2.40	0.56
1:AA:177:G:H5''	19:AT:59:ARG:HH21	1.70	0.56
1:AA:1170:A:O5'	1:AA:1170:A:H8	1.88	0.56
13:AN:65:GLN:HB2	13:AN:78:LEU:HD22	1.87	0.56
23:DB:2556:C:H2'	23:DB:2557:G:O4'	2.05	0.56
22:BA:28:C:H5'	22:BA:29:A:OP2	2.05	0.56
23:BB:18:U:H2'	23:BB:19:A:H8	1.69	0.56
23:BB:2246:G:H2'	23:BB:2247:A:H8	1.70	0.56
1:CA:449:G:H2'	1:CA:450:G:C8	2.39	0.56
49:D2:26:ASN:O	49:D2:29:GLN:HB2	2.05	0.56
39:BR:59:ILE:HG13	39:BR:59:ILE:O	2.05	0.56
35:BN:107:ASN:OD1	40:BS:40:ASN:HB3	2.04	0.56
41:BT:48:GLN:HG3	41:BT:49:LYS:N	2.20	0.56
34:DM:24:THR:O	34:DM:98:PRO:HA	2.04	0.56
6:CG:63:VAL:HG12	6:CG:126:ALA:HB1	1.88	0.56
23:DB:1709:U:H2'	23:DB:1710:G:H8	1.69	0.56
23:DB:1714:U:H3'	23:DB:1715:G:C5'	2.35	0.56
23:DB:723:C:H2'	23:DB:724:U:C6	2.41	0.56
23:BB:1121:C:H2'	23:BB:1122:G:O4'	2.05	0.56
23:BB:2189:U:H2'	23:BB:2190:G:H8	1.70	0.56
23:DB:2527:C:H4'	51:D4:34:LYS:O	2.05	0.56
34:BM:3:GLN:HG2	34:BM:47:GLU:N	2.20	0.56
34:BM:73:ILE:HD11	34:BM:92:TRP:H	1.71	0.56
37:BP:22:GLY:HA2	37:BP:93:LYS:HE2	1.87	0.56
25:BC:164:VAL:HB	25:BC:167:ASP:OD2	2.05	0.56
27:BE:6:LYS:NZ	27:BE:119:ILE:H	2.03	0.56
27:BE:149:ILE:HD11	27:BE:180:LEU:HD23	1.87	0.56
26:DD:34:VAL:HA	26:DD:90:PHE:HA	1.86	0.56
32:DK:66:LYS:HA	32:DK:79:PHE:O	2.06	0.56
33:DL:90:VAL:HG13	33:DL:122:VAL:HG11	1.87	0.56
32:BK:64:ARG:N	32:BK:83:ALA:HB3	2.09	0.56
30:BH:82:SER:HB3	30:BH:90:LEU:HD23	1.86	0.56
33:BL:79:LEU:CA	33:BL:113:ALA:HB3	2.31	0.56
27:DE:2:GLU:HA	27:DE:16:GLU:HB3	1.85	0.56
30:DH:133:GLN:HB3	30:DH:139:PHE:HB3	1.86	0.56
41:DT:53:VAL:HB	41:DT:93:LEU:HD11	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DU:79:ALA:O	42:DU:96:LYS:HB3	2.05	0.56
42:BU:11:ILE:HG23	42:BU:20:LYS:O	2.04	0.56
52:DI:79:LEU:HD12	52:DI:135:MET:SD	2.46	0.56
23:BB:1060:U:H5	52:BI:131:THR:HG22	1.70	0.56
26:BD:115:GLY:O	35:BN:3:HIS:NE2	2.37	0.56
13:AN:12:ARG:HH21	13:AN:58:ARG:HH12	1.53	0.56
26:BD:16:THR:CA	37:BP:79:VAL:HB	2.31	0.56
23:DB:1368:G:C5'	49:D2:25:LYS:HG2	2.34	0.56
32:BK:70:ARG:CB	32:BK:76:VAL:HG22	2.31	0.56
39:DR:97:LYS:O	39:DR:98:ILE:HB	2.06	0.56
16:CQ:10:ARG:CZ	16:CQ:11:VAL:H	2.18	0.56
3:AD:60:VAL:HB	3:AD:194:ILE:HG13	1.86	0.56
15:AP:41:PRO:O	15:AP:42:ILE:HD13	2.06	0.56
29:DG:6:ALA:H	29:DG:7:PRO:CD	2.18	0.56
24:BV:84:PRO:HG3	34:BM:127:LYS:CE	2.34	0.56
23:BB:634:C:H2'	23:BB:635:C:H6	1.70	0.56
23:DB:2143:C:H3'	23:DB:2144:G:H8	1.70	0.56
23:BB:2528:U:O2'	23:BB:2529:G:H3'	2.06	0.56
1:CA:1217:C:H2'	1:CA:1218:C:C6	2.40	0.56
1:CA:16:A:O2'	1:CA:17:U:H5'	2.05	0.56
4:CE:47:PHE:HE1	4:CE:137:ARG:HE	1.54	0.56
48:B1:31:GLU:O	48:B1:33:LEU:HG	2.06	0.56
16:AQ:16:MET:CB	16:AQ:19:SER:HB2	2.35	0.56
25:BC:216:ARG:HH11	25:BC:217:PRO:HD2	1.70	0.56
5:CF:10:VAL:HG12	5:CF:11:HIS:N	2.19	0.56
23:DB:1275:A:N7	35:DN:16:HIS:ND1	2.53	0.56
2:AC:39:ARG:HG3	2:AC:54:ILE:HG21	1.87	0.56
23:BB:1802:A:H2'	23:BB:1803:A:C8	2.39	0.56
13:AN:30:ILE:HG21	13:AN:44:VAL:HG21	1.88	0.56
1:AA:1280:A:O4'	9:AJ:43:PRO:HG3	2.06	0.56
27:DE:126:VAL:HG11	27:DE:132:LYS:HZ3	1.70	0.56
23:BB:2471:A:HO2'	23:BB:2472:G:H8	1.49	0.56
23:DB:1553:A:O2'	23:DB:1554:U:H2'	2.05	0.56
1:AA:389:A:H3'	1:AA:390:U:H6	1.71	0.56
25:BC:80:LEU:HA	25:BC:91:ALA:HA	1.87	0.56
23:BB:2646:C:H2'	23:BB:2647:U:O4'	2.04	0.56
29:BG:5:LYS:HB3	29:BG:68:ARG:CZ	2.35	0.56
1:AA:560:A:H4'	1:AA:561:U:H5''	1.86	0.56
1:CA:1053:G:HO2'	1:CA:1199:U:H5	1.52	0.56
20:CB:85:SER:O	20:CB:86:CYS:HB2	2.05	0.56
23:DB:286:U:H2'	23:DB:287:G:H8	1.69	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1534:U:HO2'	23:BB:1535:A:H8	1.53	0.56
2:CC:49:ALA:HB2	2:CC:74:ILE:HG21	1.87	0.56
52:DI:121:ILE:N	52:DI:121:ILE:HD13	2.20	0.56
29:BG:122:ALA:HA	29:BG:131:VAL:O	2.05	0.56
28:DF:172:PHE:H	28:DF:172:PHE:HD1	1.49	0.56
1:CA:85:U:H4'	1:CA:86:G:H5'	1.86	0.56
23:DB:2804:U:H2'	23:DB:2805:C:C6	2.39	0.56
1:AA:1244:G:H2'	1:AA:1245:C:C6	2.40	0.56
52:BI:10:LEU:HD13	52:BI:12:VAL:HG13	1.87	0.56
26:BD:52:THR:HG22	26:BD:76:GLY:N	2.20	0.56
8:AI:118:ARG:NH1	8:AI:122:ARG:HE	2.03	0.56
52:DI:102:ARG:HG3	52:DI:141:ASP:HB2	1.87	0.56
23:BB:1229:C:H2'	23:BB:1230:A:C8	2.40	0.56
23:BB:1258:U:O4'	27:BE:79:ARG:HD3	2.06	0.56
23:BB:1038:G:H2'	23:BB:1039:A:C8	2.41	0.56
23:BB:296:U:H2'	23:BB:297:G:H8	1.69	0.56
13:AN:42:ASN:O	13:AN:46:LYS:HG3	2.05	0.56
38:BQ:4:LYS:O	38:BQ:7:VAL:HG13	2.05	0.56
22:BA:32:U:H2'	22:BA:33:G:O4'	2.04	0.56
6:AG:132:THR:HG22	6:AG:136:LYS:HG3	1.87	0.56
23:DB:2283:C:H5''	23:DB:2389:G:O2'	2.05	0.56
27:DE:67:ARG:N	27:DE:67:ARG:HD2	2.20	0.56
1:AA:163:C:H2'	1:AA:164:G:O4'	2.06	0.56
23:BB:2443:C:O2'	23:BB:2444:G:H5'	2.05	0.56
23:BB:1951:U:H2'	23:BB:1953:A:OP2	2.05	0.56
1:CA:415:A:H3'	1:CA:416:G:H8	1.71	0.56
31:BJ:45:THR:CB	38:BQ:63:ARG:HH22	2.18	0.56
39:BR:5:PHE:CG	39:BR:6:GLN:N	2.73	0.56
34:BM:11:LYS:HG2	34:BM:12:MET:N	2.20	0.56
25:DC:163:ILE:HG22	25:DC:164:VAL:H	1.71	0.56
25:DC:173:LEU:HD12	25:DC:183:VAL:HG11	1.87	0.56
25:DC:179:GLU:HG3	25:DC:266:ILE:HG22	1.85	0.56
26:BD:170:VAL:HG11	26:BD:194:PRO:CB	2.35	0.56
48:D1:15:GLY:HA3	48:D1:47:ILE:CG2	2.36	0.56
20:AB:163:ILE:CG2	20:AB:164:ASP:N	2.64	0.56
37:DP:52:ARG:HB3	37:DP:60:VAL:HG11	1.85	0.56
43:BW:44:PHE:CE2	43:BW:60:ALA:HB3	2.41	0.56
45:DY:6:ILE:HG12	45:DY:35:VAL:O	2.06	0.56
31:DJ:132:HIS:HB3	31:DJ:136:GLN:OE1	2.04	0.56
31:DJ:40:HIS:CA	38:DQ:69:ARG:HH12	2.14	0.56
43:DW:73:PRO:HB2	43:DW:74:LYS:HD2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:985:C:H2'	1:AA:986:U:C6	2.41	0.56
46:DZ:47:LYS:HG2	46:DZ:48:GLN:O	2.05	0.56
23:DB:493:G:H2'	23:DB:494:G:O4'	2.05	0.56
23:BB:310:A:H5''	42:BU:14:THR:O	2.06	0.56
12:CM:52:ILE:HD12	12:CM:55:LEU:HD12	1.88	0.56
33:BL:27:LEU:N	33:BL:27:LEU:HD12	2.16	0.56
13:AN:9:GLU:HB2	13:AN:60:ARG:NH2	2.20	0.56
23:BB:82:U:H2'	23:BB:83:A:C8	2.41	0.56
5:CF:51:ILE:HD13	5:CF:86:ARG:HG3	1.87	0.56
23:BB:2304:G:N2	23:BB:2312:U:H3	2.00	0.56
25:DC:225:ASN:N	25:DC:226:PRO:HD3	2.19	0.56
17:AR:52:ARG:HB3	17:AR:52:ARG:NH1	2.14	0.56
1:AA:449:G:H2'	1:AA:450:G:C8	2.40	0.56
47:D0:41:HIS:CE1	47:D0:42:ILE:HG22	2.41	0.56
47:D0:36:LYS:HE3	47:D0:48:TYR:HE1	1.71	0.56
8:AI:56:MET:HE2	8:AI:57:VAL:H	1.70	0.56
18:CS:38:THR:HA	18:CS:69:LYS:HA	1.88	0.56
33:DL:79:LEU:H	33:DL:113:ALA:HB2	1.69	0.56
23:BB:1163:G:O2'	23:BB:1164:C:H5'	2.06	0.56
23:BB:1181:U:H2'	23:BB:1182:G:C8	2.40	0.56
4:CE:113:VAL:HG23	4:CE:114:LEU:N	2.20	0.56
36:BO:21:LEU:HD13	36:BO:22:GLY:N	2.21	0.56
6:AG:72:VAL:HA	6:AG:89:GLU:HA	1.86	0.56
16:AQ:74:LEU:HD22	16:AQ:75:VAL:N	2.21	0.56
35:BN:38:LEU:HB2	35:BN:39:PRO:HD3	1.86	0.56
11:CL:80:LEU:HB3	11:CL:97:VAL:CG2	2.35	0.56
3:CD:171:GLU:HG3	3:CD:182:LYS:HD2	1.87	0.56
12:CM:23:GLY:N	12:CM:69:ARG:HH22	2.03	0.56
23:BB:1412:U:H2'	23:BB:1413:A:H8	1.69	0.56
1:AA:313:A:H2'	1:AA:314:C:C6	2.41	0.56
23:DB:90:U:H3'	23:DB:91:A:C5'	2.35	0.56
1:AA:1115:U:H2'	1:AA:1116:U:C6	2.41	0.56
1:CA:160:A:H2'	1:CA:161:A:O4'	2.04	0.56
23:BB:737:C:O2'	23:BB:738:G:H5'	2.05	0.56
23:BB:644:A:O2'	23:BB:645:C:H2'	2.05	0.56
23:BB:1464:G:H2'	23:BB:1465:G:H8	1.69	0.56
23:DB:1700:A:H2'	23:DB:1701:A:H5'	1.86	0.56
23:DB:2045:C:H5''	47:D0:14:MET:HE3	1.86	0.56
1:CA:57:G:H2'	1:CA:58:C:C6	2.40	0.56
31:BJ:41:LYS:HD2	31:BJ:44:TYR:HB2	1.87	0.56
39:BR:54:VAL:HA	39:BR:54:VAL:CB	2.17	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BM:102:LEU:HB3	34:BM:104:GLU:OE2	2.05	0.56
34:BM:14:LYS:HB3	34:BM:14:LYS:NZ	2.20	0.56
46:BZ:5:ILE:HB	46:BZ:51:VAL:HG13	1.86	0.56
27:BE:118:LEU:HD23	27:BE:118:LEU:N	2.21	0.56
26:DD:4:LEU:N	26:DD:4:LEU:HD22	2.19	0.56
20:CB:15:PHE:HB3	20:CB:42:LEU:HD21	1.86	0.56
36:DO:56:LYS:CE	36:DO:81:ARG:HE	2.08	0.56
23:DB:2898:U:H2'	23:DB:2899:A:C8	2.40	0.56
23:DB:6:A:H2'	23:DB:7:G:H8	1.70	0.56
36:DO:18:LEU:HD22	43:DW:76:ARG:HH21	1.69	0.56
33:BL:126:ARG:HE	33:BL:127:VAL:N	2.04	0.56
33:BL:82:LEU:HD22	33:BL:86:GLU:OE1	2.06	0.56
5:AF:54:LEU:CD1	5:AF:55:HIS:H	2.18	0.56
25:DC:53:ILE:HD13	25:DC:218:THR:CG2	2.35	0.56
42:BU:82:VAL:HB	42:BU:94:PHE:CD2	2.40	0.56
26:BD:118:PHE:CA	26:BD:164:GLN:HG3	2.35	0.56
23:DB:1188:U:H4'	39:DR:84:ARG:CD	2.36	0.56
3:AD:25:ARG:HH11	3:AD:30:LYS:HE3	1.70	0.56
41:BT:77:ARG:HG2	41:BT:78:SER:H	1.69	0.56
50:B3:27:ASN:HB3	50:B3:28:LEU:HG	1.88	0.56
1:CA:1219:A:H2'	1:CA:1220:G:C8	2.40	0.56
49:D2:46:LYS:H	49:D2:46:LYS:CE	2.17	0.56
23:BB:729:G:H5''	23:BB:730:A:H5''	1.86	0.56
12:AM:95:PRO:HD3	12:AM:108:ARG:HG2	1.87	0.56
48:D1:7:LYS:HB3	48:D1:24:LYS:HZ1	1.71	0.56
42:DU:10:VAL:O	42:DU:21:ARG:HA	2.06	0.56
23:DB:876:C:H3'	23:DB:877:A:O4'	2.06	0.56
1:CA:1085:U:H3'	1:CA:1086:U:C5	2.41	0.56
20:CB:16:GLY:CA	20:CB:39:ILE:HA	2.33	0.56
10:CK:12:ARG:HD3	10:CK:13:LYS:NZ	2.21	0.56
23:BB:1197:G:H2'	23:BB:1198:U:H6	1.70	0.56
1:CA:1021:A:H2'	1:CA:1022:A:O4'	2.06	0.56
36:BO:54:VAL:O	36:BO:62:LEU:HD23	2.06	0.56
23:BB:322:A:H5'	23:BB:340:A:H1'	1.86	0.56
1:CA:1141:C:H2'	1:CA:1142:G:H8	1.70	0.56
23:BB:2836:U:H2'	23:BB:2837:A:C8	2.41	0.56
1:AA:86:G:H4'	1:AA:86:G:OP1	2.05	0.56
23:DB:1709:U:H2'	23:DB:1710:G:C8	2.41	0.56
23:BB:1700:A:H2'	23:BB:1701:A:H5'	1.87	0.56
11:AL:37:TYR:HB2	11:AL:51:VAL:HG23	1.88	0.56
23:BB:2150:C:H2'	23:BB:2151:U:O4'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1742:U:H2'	23:DB:1743:G:C8	2.41	0.56
4:CE:81:GLN:HE22	4:CE:148:SER:HA	1.70	0.56
52:BI:49:GLU:CG	52:BI:54:ILE:HD11	2.36	0.56
23:BB:2314:A:H2'	23:BB:2315:G:C8	2.40	0.56
22:DA:112:G:O2'	22:DA:113:C:H5'	2.05	0.56
23:DB:1847:A:H4'	23:DB:1848:A:C8	2.41	0.56
28:DF:115:GLY:HA3	28:DF:177:ARG:HB2	1.87	0.56
1:CA:994:A:C5	1:CA:1216:A:H4'	2.40	0.56
23:DB:1100:C:OP2	52:DI:2:LYS:HB3	2.05	0.56
23:BB:2485:G:H1'	34:BM:118:LYS:HZ3	1.71	0.56
26:BD:29:VAL:HG12	26:BD:185:ASN:ND2	2.21	0.56
27:BE:194:LYS:HE3	27:BE:201:ALA:HB2	1.88	0.56
30:BH:2:GLN:HE22	30:BH:19:VAL:C	2.09	0.56
43:DW:81:ILE:HG12	43:DW:82:GLU:H	1.71	0.56
25:DC:12:ARG:HH11	25:DC:18:VAL:HB	1.69	0.56
31:BJ:102:GLU:OE2	31:BJ:124:VAL:HG11	2.06	0.56
23:BB:143:C:H2'	23:BB:144:A:C8	2.40	0.56
18:AS:32:THR:HB	18:AS:49:ALA:O	2.06	0.56
28:DF:135:ILE:O	28:DF:136:ILE:HB	2.05	0.56
12:AM:2:ARG:HB3	12:AM:6:ILE:O	2.06	0.56
28:DF:41:GLU:OE1	28:DF:49:LEU:HG	2.05	0.56
28:DF:107:VAL:H	28:DF:108:PRO:HD2	1.70	0.56
25:BC:242:HIS:N	25:BC:243:PRO:CD	2.68	0.56
8:AI:51:LEU:HD11	8:AI:82:ILE:HG21	1.87	0.56
23:DB:663:G:OP1	33:DL:27:LEU:HD22	2.06	0.56
23:BB:1117:C:H2'	23:BB:1118:C:H6	1.71	0.56
23:DB:544:C:H2'	23:DB:545:U:C4	2.41	0.56
4:CE:104:ILE:HG13	4:CE:114:LEU:HB2	1.87	0.56
29:BG:84:LYS:HZ2	29:BG:85:LYS:N	2.03	0.56
48:D1:31:GLU:HG2	48:D1:32:LYS:N	2.20	0.56
1:CA:784:A:H2'	1:CA:785:G:H8	1.69	0.56
26:DD:146:ILE:H	26:DD:146:ILE:HD12	1.71	0.56
8:CI:50:PRO:O	8:CI:54:VAL:HG22	2.05	0.56
27:DE:126:VAL:HG22	27:DE:128:ALA:H	1.70	0.56
23:BB:1548:A:H2'	23:BB:1549:A:C8	2.40	0.56
23:BB:2786:U:C4'	26:BD:66:GLY:HA2	2.36	0.56
23:DB:2615:U:C1'	47:D0:3:GLN:HG3	2.35	0.56
1:CA:189:A:H2'	1:CA:190:A:C8	2.41	0.56
52:BI:91:LYS:HG3	52:BI:91:LYS:O	2.05	0.56
23:BB:2213:U:O2	23:BB:2213:U:H2'	2.04	0.56
1:CA:859:G:H2'	1:CA:860:A:H8	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:117:VAL:O	3:AD:130:ASN:HA	2.05	0.56
1:AA:202:G:H2'	1:AA:203:G:C8	2.39	0.56
1:AA:203:G:H1'	1:AA:465:A:H62	1.69	0.56
26:BD:167:ASN:H	26:BD:167:ASN:HD22	1.53	0.56
6:CG:39:GLU:HG3	6:CG:43:TYR:CD2	2.40	0.56
1:AA:883:C:O2'	1:AA:884:U:H5'	2.05	0.56
29:BG:97:VAL:HG21	29:BG:123:GLU:HA	1.87	0.56
32:BK:5:GLN:HA	32:BK:20:MET:SD	2.46	0.56
23:DB:2617:U:C2'	23:DB:2618:G:H5'	2.36	0.56
23:BB:1537:G:N3	23:BB:1537:G:H3'	2.21	0.56
9:CJ:12:ALA:HB3	9:CJ:18:ILE:HB	1.88	0.56
1:AA:844:G:N2	1:AA:845:A:H62	2.03	0.56
1:AA:372:C:H4'	1:AA:373:A:H5'	1.87	0.56
22:BA:6:G:H2'	22:BA:7:G:C8	2.40	0.56
23:BB:1013:C:H2'	23:BB:1014:A:C8	2.40	0.56
1:AA:1055:A:H4'	2:AC:160:GLU:CG	2.35	0.56
23:DB:1464:G:H2'	23:DB:1465:G:H8	1.69	0.56
1:AA:1522:U:O2'	1:AA:1523:G:H5'	2.06	0.56
23:BB:407:G:O2'	23:BB:408:G:H5'	2.06	0.56
23:DB:2139:U:O2'	23:DB:2140:G:H5'	2.05	0.56
23:DB:1945:G:H2'	23:DB:1946:U:C6	2.41	0.56
1:CA:275:G:O5'	16:CQ:15:LYS:HG2	2.05	0.56
23:BB:2729:G:H2'	23:BB:2730:C:C6	2.41	0.56
23:BB:436:C:O2'	23:BB:437:U:H5'	2.05	0.56
27:BE:48:THR:HG23	27:BE:87:ALA:H	1.70	0.56
23:BB:2230:G:H1'	46:BZ:30:HIS:CD2	2.41	0.56
25:DC:191:LEU:HG	25:DC:191:LEU:O	2.05	0.56
25:BC:22:GLU:CD	25:BC:202:ARG:HE	2.09	0.56
34:DM:71:LYS:HE3	34:DM:91:TYR:HB3	1.87	0.56
43:BW:55:ASP:CG	43:BW:56:HIS:N	2.59	0.56
23:DB:250:G:C5'	50:D3:7:ARG:HG2	2.31	0.56
36:DO:49:VAL:HG22	36:DO:50:ALA:N	2.20	0.56
23:DB:3:U:H2'	23:DB:4:U:C6	2.41	0.56
35:BN:22:ARG:HG3	35:BN:23:ASN:N	2.21	0.56
12:AM:106:ARG:NH1	12:AM:109:LYS:HD2	2.21	0.56
40:DS:33:LEU:HD22	40:DS:51:LEU:HD23	1.87	0.56
22:DA:76:G:H2'	22:DA:77:U:C6	2.41	0.56
9:CJ:55:PRO:HA	13:CN:80:ARG:NH2	2.19	0.56
23:BB:2751:G:H5''	29:BG:3:VAL:HA	1.88	0.56
10:AK:95:THR:HG23	10:AK:96:ILE:N	2.20	0.56
25:DC:28:PRO:HB2	25:DC:79:ARG:NE	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AE:82:HIS:HB2	4:AE:83:PRO:HD2	1.88	0.56
5:AF:64:VAL:HG12	5:AF:65:GLU:N	2.17	0.56
23:DB:144:A:H1'	41:DT:3:ARG:HA	1.87	0.56
23:BB:2294:G:O2'	23:BB:2295:C:H5'	2.06	0.56
1:AA:973:G:H1'	9:AJ:56:HIS:ND1	2.20	0.56
25:BC:257:ARG:HA	25:BC:257:ARG:CZ	2.36	0.56
22:DA:54:G:H21	28:DF:25:MET:HG2	1.70	0.56
23:BB:2840:C:H2'	23:BB:2841:C:H6	1.71	0.56
8:CI:54:VAL:HG11	8:CI:86:LEU:HD13	1.86	0.56
10:AK:58:THR:HG23	10:AK:61:ALA:CB	2.36	0.56
11:AL:105:GLY:HA3	11:AL:117:GLY:HA3	1.88	0.56
1:AA:1330:U:C2'	1:AA:1331:G:H5'	2.35	0.56
1:CA:270:A:H2'	1:CA:271:C:H6	1.70	0.56
23:DB:319:G:H2'	23:DB:320:A:O4'	2.06	0.56
23:DB:1019:U:H2'	23:DB:1020:A:C8	2.39	0.56
23:BB:2734:A:H2'	23:BB:2735:G:H5'	1.86	0.56
29:BG:106:LEU:HD23	29:BG:151:ARG:HB2	1.88	0.56
23:DB:1505:A:H2'	23:DB:1506:U:C6	2.41	0.56
38:DQ:30:VAL:HG12	38:DQ:31:TYR:N	2.20	0.56
36:BO:76:LYS:HG2	36:BO:110:ALA:HB2	1.87	0.56
23:DB:1332:G:N3	23:DB:1332:G:H2'	2.21	0.56
23:DB:281:C:H2'	23:DB:282:A:C8	2.41	0.56
52:BI:102:ARG:HD3	52:BI:141:ASP:OD2	2.04	0.56
44:DX:11:VAL:HG12	44:DX:13:GLU:H	1.70	0.56
31:BJ:46:PRO:O	31:BJ:47:HIS:HB2	2.05	0.56
23:DB:2526:G:H2'	23:DB:2527:C:C6	2.41	0.56
50:B3:26:ALA:HB1	50:B3:29:ARG:HG3	1.87	0.56
26:BD:15:PHE:CD2	26:BD:18:ASP:HB2	2.40	0.56
25:BC:155:ARG:HH11	25:BC:157:ALA:HB2	1.70	0.56
38:DQ:97:ILE:HG23	39:DR:13:ARG:CZ	2.36	0.56
37:DP:73:PHE:CD2	37:DP:75:THR:HG23	2.41	0.56
43:BW:42:THR:HG22	43:BW:43:LYS:O	2.05	0.56
23:BB:1251:C:H2'	38:BQ:5:ARG:NH2	2.21	0.56
30:BH:21:VAL:HG13	30:BH:22:LYS:O	2.05	0.56
23:DB:857:G:O2'	23:DB:858:G:H5'	2.06	0.56
41:BT:15:HIS:ND1	41:BT:31:VAL:HG11	2.21	0.56
41:BT:9:LYS:HG2	44:BX:22:LEU:HD11	1.88	0.56
24:DV:9:ARG:NH1	24:DV:12:GLN:HA	2.21	0.56
1:CA:948:C:O2'	1:CA:949:A:H5'	2.05	0.56
43:BW:36:ILE:HD12	43:BW:70:VAL:HG21	1.86	0.56
32:BK:2:ILE:HG22	32:BK:67:LYS:HZ2	1.69	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CJ:51:VAL:O	9:CJ:62:ARG:HA	2.05	0.56
28:BF:33:ILE:HD11	28:BF:90:LEU:HD13	1.87	0.56
18:CS:62:THR:HG21	18:CS:64:GLU:OE1	2.06	0.56
23:DB:2484:G:O2'	23:DB:2485:G:H5'	2.05	0.56
10:CK:124:LYS:CD	21:CU:34:ARG:HD3	2.36	0.56
23:BB:686:U:H1'	49:B2:5:PHE:O	2.06	0.56
26:BD:62:LYS:H	26:BD:62:LYS:HD3	1.71	0.56
9:CJ:66:GLU:HG2	9:CJ:67:ILE:H	1.71	0.56
13:CN:27:LYS:O	13:CN:31:SER:HB3	2.06	0.56
13:CN:17:ASP:C	13:CN:19:TYR:H	2.10	0.56
1:CA:865:A:H2'	1:CA:866:C:C6	2.40	0.56
1:CA:1348:U:H4'	8:CI:121:ARG:HG3	1.87	0.56
26:DD:60:VAL:HB	26:DD:62:LYS:HZ3	1.71	0.56
16:AQ:75:VAL:HG23	16:AQ:76:ARG:H	1.70	0.56
23:BB:813:U:H2'	23:BB:814:C:H6	1.70	0.56
27:DE:31:VAL:HG21	27:DE:104:ALA:CB	2.35	0.56
1:AA:1246:A:H2'	1:AA:1247:U:C6	2.41	0.56
12:CM:75:SER:O	12:CM:78:ARG:HB3	2.06	0.56
23:BB:1441:G:H2'	23:BB:1442:U:C6	2.41	0.56
23:BB:1553:A:O2'	23:BB:1554:U:H2'	2.06	0.56
25:BC:27:LYS:HB3	25:BC:80:LEU:O	2.06	0.56
4:CE:73:VAL:HG21	4:CE:143:LEU:O	2.05	0.56
1:AA:1241:G:H2'	1:AA:1242:G:C8	2.39	0.56
16:CQ:63:CYS:SG	16:CQ:66:LEU:HD11	2.46	0.56
44:DX:15:ASN:HA	44:DX:17:GLU:OE2	2.05	0.56
9:CJ:42:LEU:HB3	9:CJ:43:PRO:HD2	1.88	0.56
23:DB:417:C:H2'	23:DB:418:C:C6	2.41	0.56
6:CG:91:ARG:O	6:CG:95:ARG:HG3	2.06	0.56
1:CA:629:A:H2'	1:CA:630:A:O4'	2.05	0.56
23:BB:243:U:OP1	50:B3:4:LYS:HG2	2.05	0.56
6:CG:37:THR:O	6:CG:41:ILE:HG13	2.05	0.56
1:CA:335:C:H2'	1:CA:336:A:C8	2.41	0.56
23:DB:620:G:N3	23:DB:620:G:H5'	2.21	0.56
23:BB:1935:G:H1'	23:BB:1964:G:N2	2.21	0.56
52:DI:37:PHE:CE1	52:DI:58:ILE:HD11	2.40	0.56
23:BB:209:C:H2'	23:BB:210:C:H6	1.71	0.56
20:CB:104:LYS:HZ2	20:CB:104:LYS:HB2	1.69	0.56
18:AS:11:ASP:CG	18:AS:34:SER:HB2	2.26	0.56
25:BC:63:ILE:HG22	25:BC:64:VAL:H	1.70	0.56
51:D4:26:ILE:O	51:D4:27:CYS:CB	2.53	0.56
23:BB:395:U:H2'	23:BB:396:G:C8	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:828:U:H4'	23:BB:831:G:N1	2.20	0.56
23:BB:2680:U:H5'	26:BD:194:PRO:HA	1.87	0.56
26:BD:4:LEU:HB2	26:BD:201:LEU:O	2.05	0.56
37:DP:76:HIS:CD2	37:DP:76:HIS:N	2.55	0.56
34:DM:16:ARG:HE	34:DM:18:ARG:NH1	2.04	0.56
34:DM:90:GLU:HG3	34:DM:91:TYR:N	2.17	0.56
23:BB:2354:C:O2'	43:BW:31:LEU:HB2	2.06	0.56
35:DN:45:ARG:HH21	35:DN:113:ILE:HD12	1.69	0.56
32:BK:107:LEU:HD11	32:BK:115:ILE:HG21	1.87	0.56
20:AB:216:VAL:O	20:AB:220:VAL:HG23	2.06	0.56
35:BN:33:ILE:HD13	35:BN:33:ILE:N	2.21	0.56
27:DE:169:VAL:HG13	27:DE:170:ARG:N	2.13	0.56
41:DT:21:SER:N	41:DT:24:MET:HE3	2.20	0.56
39:BR:47:VAL:HG22	39:BR:48:LYS:N	2.14	0.56
13:CN:68:ARG:NH2	13:CN:80:ARG:HH12	2.04	0.56
1:CA:1006:G:H2'	1:CA:1007:U:C6	2.41	0.56
23:BB:2335:A:OP2	36:BO:9:ARG:HG3	2.06	0.56
23:DB:1083:U:C2	23:DB:1086:A:N1	2.74	0.56
40:BS:18:ARG:NH1	40:BS:25:ARG:HH22	1.97	0.56
26:BD:35:THR:HB	26:BD:48:ILE:HB	1.88	0.56
15:CP:68:SER:OG	15:CP:71:VAL:HG12	2.06	0.56
38:DQ:39:ILE:CG1	38:DQ:40:LYS:N	2.67	0.56
2:AC:45:GLU:C	2:AC:46:LEU:HD12	2.25	0.56
2:AC:154:GLY:HA2	2:AC:163:ARG:O	2.06	0.56
23:BB:2794:C:H2'	23:BB:2795:C:C6	2.41	0.56
4:CE:136:VAL:HG23	4:CE:137:ARG:H	1.70	0.56
40:DS:103:ILE:O	40:DS:104:THR:HB	2.06	0.56
23:BB:643:A:N6	23:BB:2370:G:H1'	2.21	0.56
20:AB:125:PHE:HD2	20:AB:125:PHE:H	1.53	0.56
1:AA:878:A:H1'	7:AH:3:GLN:HE22	1.70	0.56
11:AL:83:GLY:HA2	11:AL:94:TYR:HD1	1.70	0.56
50:D3:33:THR:HG23	50:D3:36:ALA:HB3	1.86	0.56
4:CE:61:LYS:O	4:CE:64:GLU:HB3	2.06	0.56
23:BB:932:U:H5'	23:BB:933:A:OP1	2.05	0.56
1:CA:883:C:O2'	1:CA:884:U:H5'	2.06	0.56
20:CB:162:VAL:HG11	20:CB:172:ILE:HD11	1.88	0.56
1:AA:1171:A:H2'	1:AA:1172:C:C6	2.40	0.56
2:CC:37:LYS:HB3	2:CC:41:TYR:CZ	2.41	0.56
23:DB:19:A:H2'	23:DB:20:C:H6	1.71	0.56
1:AA:555:U:H2'	1:AA:556:C:H6	1.71	0.56
4:CE:142:GLY:HA2	4:CE:145:ASN:ND2	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:21:G:H2'	22:DA:22:U:O4'	2.06	0.56
38:DQ:26:ALA:O	38:DQ:30:VAL:HG23	2.06	0.56
1:AA:335:C:H2'	1:AA:336:A:C8	2.41	0.56
10:AK:32:THR:HA	10:AK:43:TRP:HA	1.87	0.56
44:DX:55:THR:O	44:DX:56:LEU:HB2	2.05	0.56
46:DZ:41:HIS:CG	46:DZ:42:PRO:HD2	2.40	0.56
23:BB:11:C:H2'	23:BB:12:U:H5'	1.88	0.56
23:BB:2533:U:H2'	23:BB:2534:A:O4'	2.06	0.56
23:DB:1579:A:H2'	23:DB:1580:A:C8	2.41	0.56
1:CA:149:A:H1'	1:CA:1446:A:C2	2.41	0.56
40:DS:7:HIS:CD2	40:DS:46:LEU:HD13	2.41	0.56
34:BM:18:ARG:HB3	34:BM:40:ARG:NH2	2.22	0.56
25:DC:167:ASP:HB3	25:DC:172:THR:OG1	2.06	0.56
50:B3:23:HIS:CD2	50:B3:47:ALA:HA	2.41	0.56
23:BB:2679:A:O2'	23:BB:2680:U:H5'	2.05	0.56
23:BB:1819:A:OP1	25:BC:153:LEU:HB2	2.05	0.56
25:BC:144:GLU:OE1	25:BC:188:ARG:HG3	2.06	0.56
23:BB:969:G:H2'	23:BB:970:U:C6	2.41	0.56
23:DB:1654:A:H4'	35:DN:1:MET:H1	1.69	0.56
33:DL:63:LYS:H	50:D3:12:ARG:HD3	1.71	0.56
23:DB:2365:G:H4'	43:DW:65:LYS:HD2	1.88	0.56
26:BD:151:THR:O	26:BD:152:PRO:O	2.24	0.56
33:BL:95:LEU:N	33:BL:95:LEU:HD12	2.21	0.56
31:BJ:58:ASN:O	31:BJ:126:ALA:HA	2.05	0.56
31:BJ:25:LEU:HD12	31:BJ:62:VAL:CA	2.35	0.56
27:DE:149:ILE:CD1	27:DE:187:VAL:H	2.15	0.56
23:BB:141:G:C2	41:BT:2:ILE:HG13	2.40	0.56
25:DC:51:ARG:HH12	25:DC:54:GLY:HA3	1.71	0.56
25:DC:258:SER:N	25:DC:261:ARG:NH1	2.54	0.56
40:DS:42:LYS:HG2	40:DS:45:VAL:HG13	1.88	0.56
13:AN:15:LEU:HD12	13:AN:16:ALA:H	1.71	0.56
28:BF:36:ASN:O	28:BF:152:ASP:HB2	2.06	0.56
32:DK:12:ASP:HA	32:DK:99:ILE:HA	1.88	0.56
23:BB:705:A:N6	23:BB:726:G:H1'	2.19	0.56
41:BT:64:LYS:HB3	41:BT:77:ARG:HH11	1.70	0.56
29:DG:39:ALA:HB1	29:DG:54:ARG:H	1.71	0.56
6:AG:19:SER:OG	6:AG:22:LEU:HB2	2.06	0.56
38:DQ:39:ILE:O	38:DQ:43:GLN:HB3	2.06	0.56
1:AA:1492:A:H2'	1:AA:1493:A:O4'	2.06	0.56
22:BA:113:C:H4'	36:BO:47:VAL:HG12	1.88	0.56
23:DB:2789:C:H3'	23:DB:2893:A:H62	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BI:124:MET:O	52:BI:128:ILE:HG12	2.06	0.56
35:DN:10:LEU:HG	35:DN:11:ASN:N	2.21	0.56
42:DU:23:LYS:O	42:DU:25:LYS:N	2.39	0.56
48:B1:42:VAL:CG1	48:B1:43:ARG:N	2.69	0.56
8:CI:49:GLN:N	8:CI:50:PRO:HD2	2.21	0.56
23:BB:45:G:H5'	23:BB:46:G:OP1	2.06	0.56
25:BC:28:PRO:HB2	25:BC:79:ARG:NH2	2.20	0.56
13:AN:50:LEU:CD2	13:AN:51:PRO:HD3	2.36	0.56
23:DB:1179:G:H2'	23:DB:1180:U:H6	1.68	0.56
1:AA:16:A:O2'	1:AA:17:U:H5'	2.05	0.56
23:DB:2064:C:H2'	23:DB:2065:C:H6	1.70	0.56
1:AA:1027:C:H2'	1:AA:1028:C:H6	1.70	0.56
23:DB:2800:A:N3	23:DB:2801:G:H1'	2.21	0.56
23:BB:16:C:O3'	47:B0:10:SER:HA	2.06	0.56
27:BE:106:LYS:HB2	27:BE:106:LYS:NZ	2.20	0.56
1:CA:1298:U:H2'	6:CG:113:LYS:HZ1	1.69	0.56
1:AA:372:C:H1'	1:AA:373:A:OP2	2.06	0.56
43:BW:19:ARG:HH22	43:BW:71:LYS:HD2	1.70	0.56
23:BB:1061:U:O4'	23:BB:1070:A:H1'	2.06	0.56
23:DB:2539:C:O2'	23:DB:2540:C:H5'	2.06	0.56
11:CL:30:ARG:HB3	11:CL:57:THR:HG23	1.88	0.56
23:DB:644:A:O2'	23:DB:645:C:H2'	2.06	0.56
29:DG:93:TYR:HD1	29:DG:93:TYR:H	1.54	0.56
25:DC:75:ALA:HA	25:DC:94:LEU:O	2.06	0.55
37:BP:91:VAL:HB	37:BP:113:LEU:CB	2.35	0.55
37:BP:47:ILE:HG23	37:BP:63:ILE:HA	1.88	0.55
37:BP:52:ARG:HH11	37:BP:54:LEU:CB	2.19	0.55
25:BC:67:LYS:HG3	25:BC:68:ARG:H	1.71	0.55
26:DD:89:GLU:HG2	26:DD:93:GLY:HA3	1.87	0.55
43:BW:58:LEU:HA	43:BW:79:ILE:HG21	1.87	0.55
30:DH:8:LYS:HA	30:DH:13:GLY:O	2.06	0.55
31:DJ:37:ARG:NH1	31:DJ:110:PRO:HG3	2.21	0.55
39:DR:3:ALA:O	39:DR:4:VAL:HG13	2.06	0.55
30:BH:125:THR:CA	30:BH:146:VAL:HB	2.34	0.55
13:AN:66:THR:HG23	13:AN:67:GLY:N	2.20	0.55
33:BL:103:ILE:HD13	33:BL:104:GLN:H	1.70	0.55
41:BT:1:MET:HE1	41:BT:2:ILE:HB	1.87	0.55
41:BT:56:GLU:HB2	41:BT:86:THR:OG1	2.06	0.55
42:DU:96:LYS:HD3	42:DU:97:SER:N	2.20	0.55
42:BU:23:LYS:O	42:BU:25:LYS:N	2.39	0.55
28:BF:37:MET:HG2	28:BF:86:CYS:HB2	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BR:20:VAL:HB	39:BR:95:ASP:HB2	1.87	0.55
39:BR:62:GLU:CG	39:BR:103:ALA:HA	2.36	0.55
48:B1:47:ILE:HG13	48:B1:48:TYR:H	1.71	0.55
1:AA:1491:G:H5''	1:AA:1492:A:OP2	2.07	0.55
39:DR:85:LYS:C	39:DR:86:GLN:HG3	2.27	0.55
1:CA:16:A:O2'	4:CE:20:VAL:HG23	2.06	0.55
41:BT:96:VAL:HG22	41:BT:97:GLY:N	2.18	0.55
23:BB:973:A:OP1	23:BB:973:A:H8	1.89	0.55
23:BB:2369:A:O2'	23:BB:2370:G:H5'	2.06	0.55
2:AC:151:GLU:HB2	2:AC:200:TRP:HZ3	1.71	0.55
3:AD:99:ASN:HD21	3:AD:110:ARG:HE	1.52	0.55
23:BB:1551:A:H3'	23:BB:1552:A:H5''	1.88	0.55
30:BH:134:VAL:HG13	30:BH:135:HIS:N	2.21	0.55
29:DG:124:CYS:HB3	29:DG:130:ILE:HD13	1.88	0.55
23:BB:322:A:H5'	23:BB:340:A:C1'	2.36	0.55
4:AE:132:PRO:HA	4:AE:135:VAL:HG22	1.88	0.55
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.87	0.55
23:BB:2789:C:H3'	23:BB:2893:A:H62	1.70	0.55
23:BB:2008:C:H2'	23:BB:2009:A:C8	2.40	0.55
1:CA:801:U:H2'	1:CA:802:A:C8	2.41	0.55
23:BB:2247:A:H2'	23:BB:2248:C:C6	2.41	0.55
7:CH:9:MET:HG3	7:CH:26:MET:SD	2.46	0.55
23:BB:771:G:O2'	23:BB:772:C:H5'	2.06	0.55
1:CA:168:G:O2'	1:CA:169:C:H5'	2.06	0.55
37:DP:38:ARG:HH11	37:DP:39:LEU:H	1.54	0.55
1:AA:6:G:H4'	1:AA:298:A:H4'	1.88	0.55
23:BB:866:A:H61	23:BB:913:U:C4'	2.19	0.55
52:BI:23:VAL:HG23	52:BI:24:GLY:H	1.70	0.55
51:D4:26:ILE:CG1	51:D4:35:GLN:HG2	2.36	0.55
23:BB:1754:A:OP1	37:BP:95:LYS:HB2	2.06	0.55
25:BC:68:ARG:HD3	25:BC:103:ILE:HD11	1.88	0.55
26:DD:89:GLU:CG	26:DD:93:GLY:HA3	2.36	0.55
37:DP:61:ARG:NH2	37:DP:63:ILE:HD11	2.21	0.55
23:BB:923:G:H1'	43:BW:23:LYS:CD	2.31	0.55
30:DH:3:VAL:HB	30:DH:37:VAL:CG1	2.36	0.55
31:DJ:118:MET:O	31:DJ:121:LYS:HD2	2.07	0.55
27:DE:45:ALA:O	27:DE:46:GLN:HB3	2.06	0.55
20:AB:67:LEU:HD22	20:AB:67:LEU:N	2.21	0.55
31:BJ:58:ASN:HA	31:BJ:127:GLY:H	1.70	0.55
27:DE:192:ALA:HB1	27:DE:199:MET:HB2	1.86	0.55
41:BT:1:MET:CG	41:BT:2:ILE:H	2.19	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1307:U:H2'	1:CA:1308:U:C6	2.41	0.55
28:BF:169:LEU:HA	28:BF:172:PHE:CZ	2.42	0.55
15:AP:20:VAL:HG22	15:AP:21:VAL:N	2.21	0.55
8:AI:61:ASP:O	8:AI:62:LEU:HD13	2.05	0.55
9:CJ:36:VAL:HA	9:CJ:76:ILE:CG2	2.37	0.55
20:AB:38:HIS:O	20:AB:39:ILE:HD13	2.06	0.55
4:CE:10:LEU:HA	4:CE:39:GLY:O	2.06	0.55
23:BB:1162:G:O2'	23:BB:1163:G:H5'	2.06	0.55
41:BT:62:VAL:O	41:BT:63:VAL:HG12	2.06	0.55
29:BG:85:LYS:HA	29:BG:130:ILE:O	2.06	0.55
35:BN:37:THR:OG1	35:BN:40:LYS:HB2	2.04	0.55
12:CM:78:ARG:HG3	28:DF:111:ARG:NH1	2.20	0.55
24:DV:30:ILE:HG12	24:DV:91:PHE:CB	2.36	0.55
23:DB:1441:G:H2'	23:DB:1442:U:C6	2.42	0.55
23:DB:2286:G:O6	48:D1:23:THR:HG22	2.06	0.55
1:AA:1225:A:O5'	12:AM:102:LYS:HB3	2.06	0.55
7:CH:82:LEU:HD22	16:CQ:35:LYS:HB2	1.86	0.55
23:BB:2077:A:H2'	23:BB:2078:C:H6	1.69	0.55
23:DB:2072:C:O2'	23:DB:2073:C:H5'	2.07	0.55
10:CK:61:ALA:O	10:CK:64:VAL:HG22	2.06	0.55
23:DB:2688:G:H1'	23:DB:2721:A:H61	1.70	0.55
1:AA:987:G:H2'	1:AA:988:G:C8	2.40	0.55
1:CA:57:G:H2'	1:CA:58:C:H6	1.70	0.55
28:BF:110:ILE:HG22	28:BF:112:ASP:H	1.71	0.55
23:DB:1316:U:O2'	23:DB:1317:G:H5'	2.06	0.55
23:DB:1878:G:H2'	23:DB:1879:C:C6	2.41	0.55
23:BB:1716:U:H2'	23:BB:1717:A:C8	2.41	0.55
1:CA:272:C:H2'	1:CA:273:U:H6	1.71	0.55
23:BB:864:G:O2'	23:BB:865:C:H5'	2.05	0.55
32:BK:56:ASP:O	32:BK:58:LEU:HG	2.07	0.55
23:DB:828:U:H4'	23:DB:831:G:N1	2.21	0.55
10:AK:97:ARG:HB3	10:AK:97:ARG:NH1	2.21	0.55
23:DB:753:A:H2'	23:DB:754:U:H6	1.70	0.55
9:CJ:17:LEU:HD22	9:CJ:17:LEU:O	2.06	0.55
1:CA:1057:G:H4'	2:CC:196:GLY:H	1.70	0.55
37:BP:99:LEU:HD21	37:BP:109:ILE:HG23	1.88	0.55
25:BC:129:LEU:HD23	25:BC:130:PRO:HD2	1.88	0.55
23:BB:1820:U:H3	25:BC:197:ALA:CB	2.20	0.55
43:BW:44:PHE:HB3	43:BW:76:ARG:CG	2.35	0.55
23:DB:4:U:H2'	23:DB:5:A:C8	2.41	0.55
31:DJ:93:ILE:HG22	31:DJ:93:ILE:O	2.04	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BS:7:HIS:HB3	40:BS:102:HIS:CA	2.36	0.55
39:DR:3:ALA:HB1	39:DR:12:HIS:CB	2.37	0.55
31:BJ:64:VAL:HG12	31:BJ:65:THR:H	1.71	0.55
27:DE:192:ALA:O	27:DE:195:GLN:HG3	2.05	0.55
41:BT:8:LEU:HA	44:BX:19:LEU:HD11	1.88	0.55
23:BB:84:A:H3'	42:BU:5:ARG:HG3	1.87	0.55
37:BP:15:ASP:N	37:BP:15:ASP:OD1	2.38	0.55
23:DB:1656:C:H5''	26:DD:141:ARG:HB3	1.88	0.55
26:BD:37:VAL:HG22	26:BD:46:ARG:NE	2.21	0.55
23:DB:1309:G:H4'	49:D2:7:PRO:CB	2.32	0.55
36:BO:1:MET:HG2	36:BO:2:ASP:N	2.21	0.55
6:AG:13:PRO:HB2	6:AG:18:GLY:CA	2.35	0.55
4:CE:89:THR:C	4:CE:91:SER:H	2.08	0.55
4:CE:113:VAL:HG21	4:CE:139:THR:HG21	1.88	0.55
10:AK:113:THR:CG2	21:AU:28:LEU:HD21	2.36	0.55
23:DB:1252:G:N3	38:DQ:32:ARG:HG3	2.21	0.55
48:B1:42:VAL:HG12	48:B1:43:ARG:HE	1.70	0.55
23:BB:1387:A:H2'	23:BB:1388:G:C8	2.41	0.55
23:BB:1442:U:H2'	23:BB:1443:U:H6	1.71	0.55
23:BB:1515:A:H5'	23:BB:1557:C:H5'	1.87	0.55
23:DB:1550:C:H2'	23:DB:1551:A:C8	2.41	0.55
26:DD:21:SER:C	26:DD:23:PRO:HD3	2.27	0.55
1:CA:642:A:H2'	1:CA:643:C:H6	1.71	0.55
23:DB:935:C:O2'	23:DB:936:A:H5'	2.07	0.55
23:BB:1857:G:H2'	23:BB:1884:G:N2	2.20	0.55
23:BB:2556:C:H2'	23:BB:2557:G:O4'	2.06	0.55
23:BB:172:A:H2'	23:BB:173:A:H8	1.70	0.55
1:CA:1355:G:O2'	1:CA:1356:G:H5'	2.07	0.55
34:BM:84:LYS:NZ	34:BM:84:LYS:H	2.04	0.55
52:DI:63:ASP:OD1	52:DI:65:SER:HB2	2.06	0.55
23:BB:414:C:H2'	23:BB:415:A:H8	1.71	0.55
23:DB:170:U:H2'	23:DB:171:U:C6	2.41	0.55
4:CE:22:LYS:HB3	4:CE:29:ILE:HB	1.89	0.55
9:CJ:15:HIS:HA	9:CJ:18:ILE:HG22	1.88	0.55
23:DB:1935:G:H1'	23:DB:1964:G:N2	2.22	0.55
23:DB:2078:C:O2'	23:DB:2079:U:H5'	2.06	0.55
23:DB:1061:U:O4'	23:DB:1070:A:H1'	2.05	0.55
12:CM:48:SER:C	12:CM:50:GLY:H	2.09	0.55
23:BB:1878:G:H2'	23:BB:1879:C:C6	2.41	0.55
28:BF:46:LYS:O	28:BF:50:ASP:HB3	2.06	0.55
28:DF:175:PRO:O	28:DF:176:PHE:HB2	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:586:A:H5''	27:BE:85:PHE:HE1	1.72	0.55
34:BM:5:LYS:HD3	34:BM:91:TYR:CG	2.41	0.55
23:BB:2682:A:H5''	37:BP:55:HIS:NE2	2.21	0.55
37:BP:18:SER:HB2	37:BP:87:ARG:NE	2.22	0.55
31:BJ:81:ILE:CG1	31:BJ:82:GLY:H	2.19	0.55
25:BC:160:TYR:O	25:BC:161:VAL:HG23	2.06	0.55
1:CA:973:G:H3'	1:CA:974:A:C5'	2.29	0.55
23:DB:2849:U:N3	23:DB:2867:G:H1'	2.22	0.55
37:DP:18:SER:HB2	37:DP:87:ARG:NH2	2.22	0.55
34:DM:42:THR:HG22	34:DM:45:GLN:NE2	2.22	0.55
30:DH:1:MET:HG3	30:DH:21:VAL:CG2	2.36	0.55
36:DO:25:ARG:HG2	36:DO:94:ARG:HH22	1.72	0.55
23:DB:2899:A:H2'	23:DB:2900:A:C8	2.42	0.55
40:BS:29:VAL:HG11	40:BS:69:LEU:HB2	1.89	0.55
9:AJ:53:ILE:HG23	13:AN:84:ARG:CZ	2.37	0.55
25:DC:212:TRP:CZ3	25:DC:217:PRO:HD3	2.38	0.55
42:BU:94:PHE:CZ	42:BU:100:GLU:HA	2.42	0.55
43:BW:39:GLN:C	43:BW:40:ARG:HG3	2.26	0.55
32:BK:2:ILE:HG23	32:BK:33:ALA:O	2.06	0.55
26:BD:116:LYS:H	26:BD:165:MET:HG3	1.70	0.55
23:BB:2305:U:H1'	28:BF:132:ARG:HA	1.87	0.55
46:BZ:41:HIS:CB	46:BZ:42:PRO:HD2	2.27	0.55
23:BB:1429:G:H2'	23:BB:1430:G:C8	2.41	0.55
26:BD:88:GLU:HG2	26:BD:89:GLU:H	1.70	0.55
23:DB:634:C:H2'	23:DB:635:C:H6	1.71	0.55
2:AC:42:LEU:O	2:AC:46:LEU:HB2	2.07	0.55
1:AA:278:G:H21	1:AA:279:A:N6	2.04	0.55
1:AA:924:C:O2'	1:AA:925:G:H5'	2.05	0.55
1:AA:97:G:H2'	1:AA:98:A:O4'	2.07	0.55
20:AB:138:ARG:HA	20:AB:141:GLU:OE2	2.06	0.55
4:CE:95:MET:HG3	4:CE:124:ALA:HB2	1.88	0.55
4:AE:45:VAL:CG1	4:AE:116:VAL:HG23	2.37	0.55
23:BB:1534:U:H2'	23:BB:1536:C:N3	2.21	0.55
23:BB:2852:G:H2'	23:BB:2853:C:H6	1.72	0.55
23:DB:2361:G:OP1	50:D3:25:HIS:HA	2.07	0.55
23:DB:660:C:H2'	23:DB:661:A:H8	1.71	0.55
1:CA:77:A:H2'	1:CA:78:A:H8	1.70	0.55
23:BB:1166:G:H2'	23:BB:1167:C:H6	1.72	0.55
15:AP:12:LYS:HD2	15:AP:13:LYS:HG3	1.89	0.55
16:AQ:32:ILE:HG13	16:AQ:33:TYR:N	2.22	0.55
23:DB:2294:G:P	36:DO:9:ARG:HH11	2.29	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:431:U:O2'	23:DB:432:A:H5'	2.06	0.55
23:BB:758:C:O2	23:BB:1981:A:H2	1.88	0.55
1:CA:1011:C:H2'	1:CA:1012:A:C8	2.42	0.55
3:CD:22:SER:HB3	3:CD:109:THR:HG22	1.88	0.55
23:DB:196:A:H2'	23:DB:196:A:N3	2.20	0.55
23:DB:378:C:O2'	23:DB:379:G:H5'	2.06	0.55
27:BE:1:MET:O	27:BE:14:VAL:HG22	2.06	0.55
23:BB:2351:G:O6	50:B3:38:LYS:HD2	2.06	0.55
51:D4:15:LYS:C	51:D4:17:VAL:H	2.10	0.55
51:D4:24:ARG:CB	51:D4:36:ARG:HA	2.37	0.55
37:BP:47:ILE:CG2	37:BP:63:ILE:HG23	2.34	0.55
37:BP:63:ILE:O	37:BP:72:VAL:HG12	2.07	0.55
37:BP:76:HIS:CD2	37:BP:76:HIS:N	2.74	0.55
25:BC:155:ARG:O	25:BC:157:ALA:N	2.39	0.55
20:AB:163:ILE:CG2	20:AB:164:ASP:H	1.98	0.55
23:DB:2873:A:N3	35:DN:6:SER:HA	2.21	0.55
37:DP:51:ASN:C	37:DP:60:VAL:HG11	2.27	0.55
35:DN:33:ILE:CG2	35:DN:112:TYR:HB3	2.37	0.55
45:DY:1:ALA:O	45:DY:43:ILE:HB	2.07	0.55
36:DO:106:LEU:O	36:DO:109:ALA:HB3	2.07	0.55
23:BB:1155:A:H61	45:BY:10:ARG:HH22	1.53	0.55
32:BK:104:THR:O	32:BK:107:LEU:HB3	2.07	0.55
41:BT:30:ILE:HG22	41:BT:84:TYR:O	2.07	0.55
23:DB:2090:A:H2'	46:DZ:49:ARG:CZ	2.35	0.55
23:DB:2305:U:H1'	28:DF:132:ARG:HG2	1.88	0.55
42:DU:33:VAL:CB	42:DU:65:GLN:HA	2.32	0.55
52:BI:138:VAL:HG12	52:BI:139:VAL:N	2.21	0.55
15:AP:42:ILE:HB	15:AP:46:LYS:CD	2.36	0.55
25:BC:222:THR:HA	25:BC:231:HIS:CE1	2.42	0.55
25:BC:238:ASN:HB3	25:BC:242:HIS:NE2	2.21	0.55
15:CP:60:TRP:HB3	15:CP:65:ALA:HB2	1.89	0.55
29:DG:36:LEU:HB2	29:DG:40:VAL:HG11	1.89	0.55
23:DB:545:U:H3'	23:DB:546:U:C5'	2.36	0.55
23:DB:143:C:N3	41:DT:3:ARG:NH1	2.54	0.55
5:AF:61:LEU:HD12	5:AF:63:ASN:OD1	2.07	0.55
23:DB:878:A:H1'	23:DB:899:A:H62	1.72	0.55
1:AA:1250:A:H4'	8:AI:69:GLY:N	2.22	0.55
30:BH:56:ALA:HB3	30:BH:57:LYS:NZ	2.21	0.55
42:DU:95:PHE:CD2	42:DU:99:SER:HB3	2.40	0.55
44:BX:41:HIS:HB2	44:BX:45:GLN:OE1	2.06	0.55
23:DB:2369:A:O2'	23:DB:2370:G:H5'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2212:A:N7	23:BB:2214:C:N4	2.54	0.55
3:AD:117:VAL:HG12	3:AD:130:ASN:HA	1.88	0.55
23:BB:272:A:H2'	23:BB:273:G:C8	2.41	0.55
3:CD:115:GLN:NE2	3:CD:153:ARG:HH12	2.05	0.55
6:AG:45:ALA:HB1	6:AG:120:ALA:HB2	1.88	0.55
1:CA:556:C:O2'	1:CA:557:G:H5'	2.06	0.55
11:CL:23:LEU:O	11:CL:25:ALA:N	2.39	0.55
23:BB:796:C:H2'	23:BB:797:G:C8	2.41	0.55
3:CD:195:ASN:HB3	3:CD:197:HIS:NE2	2.22	0.55
25:BC:235:GLU:HG3	25:BC:237:ARG:HD3	1.89	0.55
9:CJ:85:ASP:HB2	9:CJ:89:ARG:CZ	2.36	0.55
1:AA:1243:C:H2'	1:AA:1244:G:C8	2.41	0.55
23:DB:2097:A:H2'	23:DB:2098:U:C6	2.41	0.55
1:AA:415:A:H3'	1:AA:416:G:H8	1.72	0.55
1:AA:1346:A:N1	1:AA:1374:A:H5''	2.22	0.55
23:DB:667:U:H2'	23:DB:668:A:O4'	2.07	0.55
31:BJ:1:MET:SD	39:BR:14:VAL:HG21	2.47	0.55
23:DB:2233:U:H2'	23:DB:2234:G:C8	2.42	0.55
1:CA:1414:U:H2'	1:CA:1415:G:H8	1.72	0.55
31:BJ:7:LYS:C	31:BJ:9:GLU:H	2.10	0.55
25:BC:124:LYS:CB	25:BC:125:PRO:CD	2.71	0.55
25:DC:144:GLU:HB2	25:DC:187:CYS:HB2	1.89	0.55
25:DC:65:ASP:OD2	25:DC:101:ARG:HD3	2.07	0.55
37:DP:27:VAL:HG22	37:DP:28:LYS:C	2.26	0.55
37:DP:86:LYS:CE	37:DP:88:ARG:HB2	2.37	0.55
37:DP:93:LYS:HD3	37:DP:96:LEU:HA	1.88	0.55
31:DJ:15:TRP:CE3	31:DJ:138:GLN:HB2	2.42	0.55
30:BH:26:ALA:HA	30:BH:30:LEU:HB2	1.88	0.55
30:BH:4:ILE:C	30:BH:37:VAL:HG12	2.26	0.55
43:DW:20:LEU:CD1	43:DW:31:LEU:HB2	2.32	0.55
27:DE:4:VAL:HA	27:DE:14:VAL:HG13	1.87	0.55
27:DE:163:ASN:HB2	27:DE:167:VAL:O	2.07	0.55
23:BB:142:A:H2'	23:BB:143:C:C5	2.42	0.55
5:AF:46:GLN:HA	5:AF:56:LYS:HG3	1.88	0.55
9:AJ:24:GLU:OE1	9:AJ:90:LEU:HD22	2.06	0.55
12:CM:106:ARG:HH11	12:CM:106:ARG:CA	2.20	0.55
23:BB:663:G:OP1	33:BL:27:LEU:HD21	2.07	0.55
28:DF:7:TYR:HA	28:DF:11:VAL:CB	2.34	0.55
44:DX:22:LEU:HD11	44:DX:47:ARG:CZ	2.37	0.55
16:AQ:10:ARG:CZ	16:AQ:56:ASP:H	2.20	0.55
26:DD:181:ASP:CG	26:DD:184:ARG:HB3	2.27	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2895:G:H2'	23:DB:2896:C:H6	1.66	0.55
52:BI:46:ASP:HA	52:BI:50:LYS:HG3	1.87	0.55
31:BJ:35:ARG:HE	31:BJ:39:LYS:HB3	1.71	0.55
44:BX:14:LEU:HG	44:BX:53:VAL:HG12	1.88	0.55
14:AO:70:LYS:HZ1	14:AO:74:VAL:HA	1.71	0.55
23:DB:906:U:H4'	34:DM:26:VAL:HG12	1.88	0.55
1:AA:921:U:H2'	1:AA:922:G:O4'	2.06	0.55
23:BB:1903:G:OP1	25:BC:239:PHE:HA	2.05	0.55
42:DU:82:VAL:HB	42:DU:94:PHE:HB3	1.89	0.55
1:AA:810:C:O2'	1:AA:811:C:H5'	2.06	0.55
1:CA:1171:A:H2'	1:CA:1172:C:H6	1.71	0.55
1:AA:1111:A:HO2'	1:AA:1112:C:H6	1.54	0.55
23:DB:299:A:N6	23:DB:322:A:H1'	2.21	0.55
1:AA:1027:C:H2'	1:AA:1028:C:C6	2.41	0.55
7:AH:29:SER:CB	7:AH:32:LYS:HZ2	2.19	0.55
27:DE:130:LYS:NZ	27:DE:130:LYS:HB2	2.21	0.55
1:AA:398:U:H2'	1:AA:399:G:C8	2.42	0.55
52:BI:102:ARG:HD3	52:BI:141:ASP:CG	2.27	0.55
31:DJ:94:ALA:HB1	31:DJ:95:ARG:HH21	1.70	0.55
1:AA:1008:U:H2'	1:AA:1009:U:H4'	1.88	0.55
23:BB:1742:U:H2'	23:BB:1743:G:C8	2.42	0.55
23:DB:2839:G:H4'	35:DN:49:GLU:HG2	1.87	0.55
41:BT:50:LEU:C	41:BT:52:GLU:H	2.08	0.55
1:CA:844:G:N2	1:CA:845:A:H62	2.04	0.55
1:CA:845:A:H3'	1:CA:846:G:O4'	2.06	0.55
1:AA:1363:A:H2'	1:AA:1363:A:N3	2.22	0.55
2:CC:110:LEU:O	2:CC:110:LEU:HG	2.07	0.55
41:DT:54:GLU:HB3	41:DT:91:GLN:OE1	2.06	0.55
30:DH:126:GLY:O	30:DH:145:ASN:HA	2.06	0.55
31:BJ:45:THR:HG22	38:BQ:63:ARG:HH22	1.72	0.55
26:BD:2:ILE:HG21	26:BD:203:VAL:O	2.07	0.55
37:BP:7:LEU:HD13	37:BP:11:GLN:HG2	1.88	0.55
23:BB:1818:U:OP1	25:BC:155:ARG:HA	2.06	0.55
25:BC:129:LEU:CD2	25:BC:133:ASN:HB2	2.37	0.55
23:DB:2771:C:H2'	23:DB:2772:C:C6	2.41	0.55
26:DD:5:VAL:HG22	26:DD:51:THR:O	2.06	0.55
34:DM:40:ARG:HA	34:DM:92:TRP:NE1	2.20	0.55
30:DH:122:LEU:HA	30:DH:146:VAL:CG2	2.36	0.55
23:DB:499:U:H2'	23:DB:500:G:O4'	2.07	0.55
13:AN:81:ILE:HD12	13:AN:82:LYS:H	1.72	0.55
41:DT:86:THR:O	41:DT:87:LEU:HB2	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DS:20:VAL:O	40:DS:24:ILE:HG13	2.06	0.55
40:DS:3:THR:HG22	40:DS:4:ILE:N	2.22	0.55
42:BU:25:LYS:HG2	42:BU:35:VAL:HG22	1.87	0.55
1:CA:1250:A:H4'	8:CI:69:GLY:N	2.13	0.55
16:CQ:16:MET:HB3	16:CQ:19:SER:HB2	1.87	0.55
11:AL:3:VAL:O	11:AL:7:VAL:HG23	2.06	0.55
32:DK:63:VAL:CG1	32:DK:103:VAL:HG12	2.37	0.55
23:DB:1789:A:OP1	25:DC:219:VAL:HG12	2.05	0.55
28:BF:121:PHE:CZ	28:BF:169:LEU:HD12	2.42	0.55
23:DB:1250:G:H4'	38:DQ:5:ARG:HD3	1.88	0.55
38:DQ:2:ARG:HB3	38:DQ:4:LYS:HZ1	1.72	0.55
9:CJ:66:GLU:HG2	9:CJ:67:ILE:N	2.22	0.55
29:DG:34:ARG:NH1	29:DG:70:LEU:HG	2.21	0.55
23:BB:2849:U:N3	23:BB:2867:G:H1'	2.22	0.55
23:BB:2527:C:H5''	51:B4:31:PRO:HB2	1.89	0.55
1:CA:436:C:O2'	1:CA:437:U:H5'	2.06	0.55
41:BT:62:VAL:O	41:BT:63:VAL:O	2.24	0.55
48:D1:7:LYS:HB3	48:D1:24:LYS:NZ	2.22	0.55
8:CI:50:PRO:HD3	8:CI:79:ARG:HD3	1.89	0.55
36:DO:30:ARG:O	36:DO:31:THR:HB	2.06	0.55
1:AA:764:C:C2'	1:AA:765:G:H5'	2.37	0.55
22:DA:49:C:H2'	22:DA:50:A:C8	2.42	0.55
23:DB:1387:A:H2'	23:DB:1388:G:C8	2.39	0.55
23:BB:1676:A:O4'	26:BD:134:HIS:HB3	2.06	0.55
13:CN:89:ARG:NH1	13:CN:91:GLU:HG3	2.21	0.55
39:BR:80:ARG:O	39:BR:80:ARG:HG3	2.07	0.55
23:BB:934:U:H2'	23:BB:935:C:H6	1.71	0.55
12:AM:13:HIS:HB2	12:AM:16:ILE:CG2	2.37	0.55
23:BB:898:C:H2'	23:BB:899:A:C8	2.41	0.55
23:BB:986:C:O2'	23:BB:987:C:H5'	2.05	0.55
23:DB:21:A:H2'	23:DB:22:C:C6	2.42	0.55
1:CA:370:C:H2'	1:CA:371:A:C8	2.42	0.55
23:DB:2836:U:H2'	23:DB:2837:A:C8	2.42	0.55
46:DZ:41:HIS:ND1	46:DZ:42:PRO:HD2	2.21	0.55
23:BB:718:A:H3'	23:BB:719:C:H6	1.71	0.55
1:AA:1473:G:H2'	1:AA:1474:U:O4'	2.07	0.55
23:BB:1641:A:H2'	23:BB:1642:G:O4'	2.07	0.55
1:AA:521:G:OP2	11:AL:50:LYS:HE3	2.06	0.55
8:CI:24:ASN:OD1	8:CI:26:LYS:HG2	2.07	0.55
23:BB:1847:A:H4'	23:BB:1848:A:C8	2.42	0.55
23:BB:753:A:H2'	23:BB:754:U:C6	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CK:126:ARG:HG2	10:CK:126:ARG:HH11	1.71	0.55
23:DB:1939:U:H5'	23:DB:1939:U:H6	1.72	0.55
1:AA:532:A:H62	2:AC:191:THR:HB	1.72	0.55
23:BB:650:C:H5''	50:B3:22:LYS:NZ	2.22	0.55
37:BP:25:VAL:HG13	37:BP:88:ARG:N	2.09	0.55
23:BB:2578:G:N3	26:BD:145:SER:CB	2.70	0.55
37:DP:52:ARG:HB3	37:DP:60:VAL:CG1	2.36	0.55
33:DL:62:PRO:HB3	50:D3:12:ARG:CZ	2.36	0.55
33:DL:63:LYS:HG3	33:DL:64:PHE:H	1.72	0.55
23:BB:1155:A:H61	45:BY:10:ARG:HH12	1.54	0.55
31:DJ:90:GLU:HG3	31:DJ:93:ILE:HD12	1.88	0.55
1:AA:978:A:HO2'	1:AA:1322:C:H5	1.52	0.55
33:BL:117:THR:CG2	33:BL:120:VAL:HB	2.36	0.55
42:BU:25:LYS:HA	42:BU:35:VAL:H	1.70	0.55
24:DV:21:ARG:HH21	24:DV:88:HIS:N	2.05	0.55
32:BK:76:VAL:O	37:BP:73:PHE:HA	2.06	0.55
1:AA:408:A:H5'	3:AD:21:LYS:HE2	1.88	0.55
8:AI:51:LEU:HD11	8:AI:82:ILE:HD13	1.87	0.55
26:BD:48:ILE:HD12	26:BD:80:TRP:HE1	1.72	0.55
23:BB:6:A:H2'	23:BB:7:G:C8	2.42	0.55
23:BB:1118:C:H5''	24:BV:84:PRO:HD2	1.89	0.55
1:AA:37:U:OP1	11:AL:119:LYS:HE3	2.07	0.55
9:CJ:83:THR:O	9:CJ:83:THR:HG22	2.07	0.55
7:AH:93:LYS:H	7:AH:93:LYS:HZ2	1.54	0.55
9:AJ:55:PRO:HA	13:AN:80:ARG:NH2	2.21	0.55
29:BG:86:LEU:HD12	29:BG:161:VAL:HG12	1.88	0.55
1:AA:764:C:H2'	1:AA:765:G:H5'	1.87	0.55
10:CK:73:VAL:O	10:CK:76:TYR:HB2	2.07	0.55
23:BB:1551:A:C3'	23:BB:1552:A:H5''	2.37	0.55
11:CL:54:VAL:HG11	11:CL:79:ILE:HD11	1.89	0.55
12:CM:10:ASP:HA	12:CM:44:ILE:CD1	2.36	0.55
1:CA:391:G:HO2'	1:CA:482:A:H2	1.55	0.55
20:CB:26:MET:HG3	20:CB:188:THR:O	2.05	0.55
1:AA:190:A:H2'	1:AA:191:G:O4'	2.07	0.55
31:BJ:15:TRP:HB3	31:BJ:53:TYR:CD2	2.41	0.55
1:CA:1143:G:H2'	1:CA:1144:G:H8	1.72	0.55
10:CK:22:ILE:HD13	10:CK:95:THR:HG23	1.89	0.55
5:AF:100:SER:HA	17:AR:23:LYS:NZ	2.21	0.55
23:BB:1816:C:C5	25:BC:62:ARG:HD2	2.42	0.55
1:AA:801:U:H2'	1:AA:802:A:C8	2.42	0.55
23:BB:1506:U:H2'	23:BB:1507:C:C6	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:372:C:H1'	1:CA:373:A:OP2	2.07	0.55
23:DB:753:A:H2'	23:DB:754:U:C6	2.42	0.55
26:BD:58:ASN:O	26:BD:59:ARG:HB2	2.06	0.55
14:CO:2:LEU:O	14:CO:3:SER:HB3	2.07	0.55
23:DB:2533:U:H2'	23:DB:2534:A:O4'	2.07	0.55
5:CF:99:ALA:HA	17:CR:23:LYS:HE2	1.89	0.55
1:CA:1036:A:H2'	1:CA:1037:C:C6	2.42	0.55
1:CA:575:G:H4'	1:CA:576:C:O5'	2.07	0.55
23:DB:818:G:H3'	23:DB:1187:G:H22	1.71	0.55
23:DB:527:C:O2	23:DB:527:C:O4'	2.23	0.55
23:DB:106:C:H2'	23:DB:107:G:H8	1.71	0.55
1:AA:173:U:H5'	1:AA:197:A:O4'	2.07	0.55
23:DB:1117:C:H1'	34:DM:136:MET:HE1	1.89	0.55
23:BB:1332:G:H2'	23:BB:1332:G:N3	2.21	0.55
23:BB:37:C:H2'	27:BE:46:GLN:CB	2.36	0.55
25:DC:137:GLY:O	25:DC:140:VAL:HG13	2.07	0.55
25:DC:86:ARG:C	25:DC:155:ARG:HH12	2.10	0.55
33:BL:60:ARG:HA	33:BL:60:ARG:HH11	1.72	0.55
23:BB:2678:C:H2'	23:BB:2679:A:C8	2.42	0.55
26:BD:11:MET:SD	37:BP:9:GLN:HG2	2.46	0.55
31:BJ:80:HIS:O	31:BJ:81:ILE:C	2.45	0.55
26:BD:138:LEU:CD2	26:BD:138:LEU:N	2.66	0.55
23:DB:2820:A:C6	26:DD:197:THR:HB	2.42	0.55
26:DD:4:LEU:HB3	26:DD:202:ILE:HA	1.88	0.55
32:DK:78:ARG:HG2	37:DP:72:VAL:HG21	1.89	0.55
43:BW:43:LYS:HA	43:BW:63:ASP:OD1	2.07	0.55
35:BN:86:ARG:HH21	35:BN:116:VAL:CG1	2.20	0.55
30:BH:31:VAL:HG22	30:BH:37:VAL:HG22	1.89	0.55
31:BJ:57:LEU:HD12	31:BJ:128:ASN:HA	1.89	0.55
31:BJ:25:LEU:N	31:BJ:25:LEU:HD13	2.21	0.55
2:AC:21:TRP:CB	2:AC:58:ARG:HB2	2.37	0.55
38:BQ:73:ILE:HG13	38:BQ:77:LYS:HD2	1.88	0.55
41:DT:15:HIS:HB3	41:DT:31:VAL:HG11	1.87	0.55
1:AA:1100:C:O2'	1:AA:1101:A:H5'	2.07	0.55
5:CF:38:ARG:HH21	5:CF:63:ASN:HD21	1.54	0.55
47:D0:32:THR:HG21	47:D0:41:HIS:CD2	2.41	0.55
8:AI:23:GLY:O	8:AI:24:ASN:HB2	2.06	0.55
23:BB:633:A:OP1	33:BL:69:ARG:HB2	2.07	0.55
10:CK:28:ASN:HD21	10:CK:47:GLY:N	2.00	0.55
39:BR:66:HIS:HA	39:BR:98:ILE:HD13	1.89	0.55
36:BO:24:THR:OG1	36:BO:91:SER:HA	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DR:76:LYS:HB3	39:DR:90:ARG:CB	2.37	0.55
10:AK:113:THR:HG21	21:AU:28:LEU:HD21	1.88	0.55
23:BB:1242:U:H2'	23:BB:1243:C:C6	2.42	0.55
2:AC:53:ARG:HG2	2:AC:54:ILE:H	1.72	0.55
29:BG:116:LEU:HD21	29:BG:120:ILE:HB	1.88	0.55
37:DP:7:LEU:HA	37:DP:10:GLU:CD	2.27	0.55
29:DG:3:VAL:CG2	29:DG:4:ALA:N	2.69	0.55
23:BB:346:A:H5'	23:BB:346:A:N3	2.22	0.55
52:DI:7:TYR:CE1	52:DI:57:VAL:HG11	2.41	0.55
47:B0:9:ARG:O	47:B0:11:LYS:N	2.40	0.55
1:AA:1111:A:O2'	1:AA:1112:C:H6	1.90	0.55
1:CA:1226:C:H4'	1:CA:1227:A:OP1	2.06	0.55
1:CA:600:A:H2'	1:CA:601:G:H8	1.72	0.55
1:CA:476:U:H2'	1:CA:477:C:H6	1.72	0.55
54:BB:3363:HOH:O	35:BN:15:SER:HB3	2.07	0.55
23:BB:598:U:H2'	23:BB:599:A:C8	2.42	0.55
23:DB:155:A:H2'	23:DB:156:A:C8	2.42	0.55
23:DB:2803:G:H2'	23:DB:2804:U:C6	2.41	0.55
1:CA:1283:U:O2'	1:CA:1284:C:H5'	2.07	0.55
32:BK:58:LEU:HB3	32:BK:89:ASN:HD21	1.70	0.55
1:AA:1479:C:H2'	1:AA:1480:A:H8	1.71	0.55
23:BB:1270:C:H5''	23:BB:1271:G:O5'	2.06	0.55
24:DV:76:ASP:H	24:DV:90:ASP:HB2	1.71	0.55
22:DA:10:G:H2'	22:DA:11:C:O4'	2.06	0.55
23:DB:2093:G:O2'	23:DB:2094:A:H5'	2.07	0.55
40:BS:56:ALA:C	40:BS:58:ALA:H	2.11	0.55
23:BB:1583:A:H4'	23:BB:1585:C:C4	2.42	0.55
1:CA:1026:G:H2'	1:CA:1027:C:H6	1.72	0.55
2:AC:166:TRP:HA	2:AC:166:TRP:CE3	2.42	0.55
18:AS:20:LYS:O	18:AS:23:GLU:HB3	2.07	0.55
39:BR:39:LEU:HG	39:BR:41:ILE:CG1	2.37	0.55
34:BM:3:GLN:HB3	34:BM:46:ILE:HB	1.89	0.55
23:BB:922:C:H2'	23:BB:923:G:C8	2.42	0.55
36:DO:27:VAL:HG23	36:DO:28:VAL:H	1.70	0.55
23:BB:988:A:H3'	45:BY:12:ALA:HB2	1.89	0.55
21:CU:16:ARG:C	21:CU:18:PHE:N	2.60	0.55
5:CF:29:ILE:CG2	5:CF:34:GLY:HA3	2.37	0.55
20:AB:67:LEU:HD21	20:AB:157:PRO:CG	2.37	0.55
30:BH:82:SER:H	30:BH:146:VAL:CG1	2.10	0.55
23:DB:2386:A:C4'	43:DW:38:ARG:HB2	2.37	0.55
43:DW:38:ARG:HG3	43:DW:39:GLN:N	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AU:36:PHE:CB	21:AU:40:PRO:HD3	2.35	0.55
23:BB:1060:U:O2	23:BB:1088:A:C8	2.61	0.55
19:CT:68:LYS:HA	19:CT:68:LYS:HE2	1.87	0.55
39:BR:48:LYS:HG3	39:BR:49:ILE:CD1	2.37	0.55
5:CF:86:ARG:HH11	17:CR:63:TYR:HB3	1.72	0.55
32:DK:11:ALA:O	32:DK:99:ILE:HG23	2.07	0.55
8:AI:49:GLN:NE2	8:AI:79:ARG:HD2	2.22	0.55
26:BD:86:GLU:HG2	26:BD:87:GLY:H	1.71	0.55
23:DB:2466:C:O2	34:DM:118:LYS:HD3	2.07	0.55
36:BO:20:GLU:HB3	36:BO:23:ALA:CB	2.37	0.55
39:DR:76:LYS:HB3	39:DR:90:ARG:HG2	1.88	0.55
20:AB:112:ARG:HA	20:AB:115:ASP:OD2	2.07	0.55
16:AQ:45:VAL:HG11	16:AQ:74:LEU:HB2	1.89	0.55
29:BG:163:TYR:HB2	29:BG:166:GLU:HB2	1.88	0.55
26:DD:146:ILE:N	26:DD:146:ILE:HD12	2.22	0.55
22:DA:59:A:H2'	22:DA:60:C:O4'	2.07	0.55
1:CA:411:A:O2'	1:CA:412:A:H4'	2.07	0.55
44:DX:1:MET:H3	44:DX:6:LEU:HD23	1.72	0.55
14:CO:88:ARG:HH11	14:CO:88:ARG:HG3	1.72	0.55
1:CA:642:A:H2'	1:CA:643:C:C6	2.42	0.55
15:CP:40:ASN:ND2	15:CP:42:ILE:HG12	2.20	0.55
23:BB:1006:C:O2'	23:BB:1007:C:H5'	2.07	0.55
22:BA:78:A:H2'	22:BA:79:G:O4'	2.07	0.55
7:CH:54:THR:HG23	7:CH:55:LYS:HG2	1.88	0.55
1:CA:477:C:H2'	1:CA:478:A:C8	2.42	0.55
1:CA:1380:U:O4	6:CG:2:ARG:HB2	2.06	0.55
23:BB:2240:U:O2'	23:BB:2241:A:H5'	2.07	0.55
23:DB:1429:G:H2'	23:DB:1430:G:C8	2.42	0.55
40:BS:85:ILE:HG22	40:BS:86:MET:N	2.22	0.55
1:CA:1254:A:H2'	1:CA:1255:G:H8	1.70	0.55
4:CE:23:THR:HA	4:CE:28:ARG:HA	1.88	0.55
1:AA:845:A:H3'	1:AA:846:G:O4'	2.06	0.55
36:BO:76:LYS:HB2	36:BO:106:LEU:HD22	1.88	0.55
49:B2:8:SER:OG	49:B2:11:LYS:HB2	2.07	0.55
23:BB:770:G:O2'	23:BB:771:G:H5'	2.07	0.55
33:DL:37:GLY:O	33:DL:38:GLN:HG3	2.06	0.55
11:AL:30:ARG:HH11	11:AL:30:ARG:CB	2.19	0.55
2:AC:126:ARG:HH22	2:AC:190:THR:HG22	1.72	0.55
1:AA:1310:G:H2'	1:AA:1311:A:O4'	2.07	0.55
27:BE:29:HIS:O	27:BE:33:VAL:HG23	2.07	0.55
48:B1:8:ILE:HG23	48:B1:27:ARG:HE	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:823:C:O2'	23:DB:824:U:H5'	2.07	0.55
1:CA:208:U:H2'	1:CA:210:C:C5	2.42	0.55
5:CF:39:LEU:O	5:CF:39:LEU:HD13	2.06	0.55
23:BB:2066:C:O2'	23:BB:2067:G:H5'	2.07	0.55
38:BQ:51:GLN:O	38:BQ:54:ARG:HG2	2.07	0.54
51:D4:24:ARG:HE	51:D4:37:GLN:N	2.03	0.54
50:B3:7:ARG:NE	50:B3:11:LYS:NZ	2.54	0.54
2:AC:78:LYS:CG	2:AC:81:GLU:HB2	2.24	0.54
31:DJ:7:LYS:HE3	31:DJ:47:HIS:HD2	1.72	0.54
32:BK:119:ALA:O	32:BK:120:PRO:C	2.44	0.54
43:DW:67:LYS:HG2	43:DW:71:LYS:CB	2.37	0.54
43:DW:69:GLU:HG3	43:DW:70:VAL:H	1.72	0.54
23:BB:2576:G:N2	26:BD:149:ASN:ND2	2.54	0.54
26:DD:24:VAL:HG13	26:DD:193:VAL:HG21	1.87	0.54
44:BX:30:MET:CG	44:BX:31:GLN:H	2.11	0.54
41:DT:49:LYS:O	41:DT:50:LEU:HG	2.07	0.54
40:DS:23:LEU:CB	47:D0:21:LEU:HD22	2.38	0.54
28:DF:4:HIS:O	28:DF:7:TYR:HB3	2.06	0.54
12:AM:2:ARG:NH2	28:BF:142:TYR:HB3	2.23	0.54
9:CJ:37:ARG:HG2	9:CJ:37:ARG:NH1	2.22	0.54
1:CA:1320:C:OP2	18:CS:2:ARG:HB3	2.06	0.54
9:CJ:65:TYR:HE1	13:CN:84:ARG:HA	1.71	0.54
38:DQ:50:ARG:HH12	38:DQ:53:LYS:HE3	1.72	0.54
36:BO:40:ILE:HG22	36:BO:48:LEU:O	2.06	0.54
10:AK:110:THR:CG2	21:AU:4:LYS:HA	2.37	0.54
7:CH:77:VAL:HG23	7:CH:126:CYS:HA	1.88	0.54
27:DE:99:LYS:C	27:DE:99:LYS:HZ3	2.11	0.54
25:BC:27:LYS:HA	25:BC:79:ARG:NH1	2.22	0.54
44:BX:45:GLN:H	44:BX:45:GLN:NE2	2.05	0.54
4:AE:95:MET:HE2	4:AE:114:LEU:HD11	1.88	0.54
23:BB:2893:A:H5''	23:BB:2894:G:H5'	1.90	0.54
23:BB:2820:A:O4'	35:BN:4:ARG:HB2	2.07	0.54
23:DB:170:U:H2'	23:DB:171:U:H6	1.72	0.54
28:BF:165:GLY:HA2	28:BF:168:LEU:HD21	1.87	0.54
23:BB:2218:G:H2'	23:BB:2219:U:H6	1.71	0.54
23:DB:1771:C:H2'	23:DB:1772:A:C8	2.42	0.54
23:DB:2809:A:H2'	23:DB:2810:A:C8	2.41	0.54
1:CA:1093:A:P	6:CG:3:ARG:HH22	2.30	0.54
23:DB:225:C:H2'	23:DB:226:A:O4'	2.06	0.54
9:CJ:22:THR:O	9:CJ:26:VAL:HG23	2.06	0.54
1:AA:393:A:H5'	1:AA:483:C:O2'	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AB:113:LEU:HG	20:AB:143:LEU:HB3	1.89	0.54
23:DB:1804:C:O2'	23:DB:1805:A:H5'	2.07	0.54
30:DH:50:ARG:HG3	30:DH:51:ARG:N	2.22	0.54
1:AA:1427:C:O2'	1:AA:1428:A:H5'	2.07	0.54
23:DB:1099:G:C4'	52:DI:3:LYS:C	2.75	0.54
34:BM:3:GLN:HG2	34:BM:46:ILE:HB	1.89	0.54
34:BM:69:PRO:O	34:BM:70:ASP:HB3	2.06	0.54
25:DC:171:VAL:HG23	25:DC:182:LYS:NZ	2.21	0.54
23:BB:651:G:P	50:B3:16:THR:HB	2.47	0.54
33:DL:8:PRO:O	33:DL:9:ALA:HB2	2.07	0.54
30:DH:3:VAL:HG22	30:DH:21:VAL:CG1	2.26	0.54
31:DJ:96:ARG:CD	31:DJ:99:ARG:HH21	2.19	0.54
20:AB:148:GLY:HA2	20:AB:151:LYS:HD3	1.89	0.54
40:BS:29:VAL:HG22	40:BS:71:VAL:HG23	1.89	0.54
43:DW:82:GLU:HG3	43:DW:83:ALA:N	2.23	0.54
26:BD:150:GLN:C	26:BD:151:THR:CG2	2.75	0.54
18:AS:4:LEU:CD1	18:AS:9:PHE:H	2.17	0.54
33:BL:77:ILE:HG22	33:BL:78:ARG:CZ	2.37	0.54
27:DE:151:GLY:HA2	27:DE:169:VAL:O	2.08	0.54
40:DS:22:ASP:C	40:DS:24:ILE:H	2.10	0.54
40:DS:29:VAL:O	40:DS:33:LEU:HD23	2.08	0.54
1:CA:1308:U:H2'	1:CA:1309:G:C8	2.43	0.54
23:BB:2751:G:OP1	29:BG:1:SER:HB2	2.07	0.54
8:AI:38:PHE:O	8:AI:44:ARG:HG2	2.07	0.54
28:BF:33:ILE:HD11	28:BF:90:LEU:HB2	1.90	0.54
47:D0:29:VAL:HG21	47:D0:34:GLY:H	1.73	0.54
11:AL:58:ASN:H	11:AL:58:ASN:ND2	2.05	0.54
18:CS:28:LYS:H	18:CS:28:LYS:HZ3	1.53	0.54
39:BR:35:PHE:HB2	39:BR:64:VAL:HG21	1.88	0.54
23:DB:543:G:C5	23:DB:544:C:H1'	2.42	0.54
1:AA:32:A:H2'	1:AA:33:A:C8	2.41	0.54
26:DD:37:VAL:HG11	26:DD:46:ARG:HD3	1.89	0.54
49:D2:18:PHE:CE2	49:D2:44:VAL:HB	2.42	0.54
17:CR:51:GLN:HE21	17:CR:54:LEU:HB2	1.72	0.54
42:DU:23:LYS:O	42:DU:25:LYS:HD2	2.07	0.54
42:DU:25:LYS:HA	42:DU:25:LYS:NZ	2.23	0.54
23:BB:2839:G:H2'	23:BB:2840:C:C6	2.42	0.54
8:CI:94:ARG:HG3	8:CI:98:ARG:NH2	2.22	0.54
23:DB:1551:A:H3'	23:DB:1552:A:H5''	1.89	0.54
43:BW:6:GLY:O	43:BW:8:SER:N	2.40	0.54
44:DX:1:MET:HB2	44:DX:6:LEU:CA	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CQ:45:VAL:HG11	16:CQ:60:ILE:HG21	1.89	0.54
29:BG:5:LYS:HG3	29:BG:68:ARG:HB2	1.89	0.54
1:CA:313:A:H2'	1:CA:314:C:C6	2.42	0.54
1:CA:712:A:O2'	1:CA:713:G:H5'	2.07	0.54
23:DB:963:U:H2'	23:DB:964:C:C6	2.42	0.54
23:BB:664:G:H2'	23:BB:665:U:C6	2.42	0.54
1:AA:370:C:H2'	1:AA:371:A:C8	2.42	0.54
3:CD:104:MET:SD	3:CD:179:GLY:HA2	2.46	0.54
23:DB:1506:U:H2'	23:DB:1507:C:C6	2.43	0.54
23:DB:326:G:O2'	23:DB:327:G:H5'	2.07	0.54
8:CI:15:ALA:O	8:CI:66:VAL:HA	2.07	0.54
29:BG:126:THR:C	29:BG:128:THR:H	2.11	0.54
1:AA:332:G:OP2	19:AT:2:ASN:HB3	2.06	0.54
1:CA:824:G:O2'	1:CA:825:A:H5'	2.07	0.54
23:DB:175:G:H2'	23:DB:176:A:C8	2.42	0.54
23:BB:111:A:H2'	23:BB:112:U:O4'	2.06	0.54
29:DG:163:TYR:HB2	29:DG:166:GLU:HG3	1.88	0.54
46:BZ:59:ARG:HE	46:BZ:62:LYS:CD	2.18	0.54
23:BB:1130:U:O2'	23:BB:1131:G:H2'	2.07	0.54
26:BD:146:ILE:HD12	26:BD:146:ILE:N	2.22	0.54
27:BE:187:VAL:HG23	27:BE:187:VAL:O	2.07	0.54
26:DD:50:VAL:CG1	26:DD:75:ALA:HB3	2.37	0.54
25:BC:21:PRO:N	25:BC:202:ARG:HD2	2.22	0.54
20:CB:205:ALA:HB3	20:CB:208:ALA:HB3	1.89	0.54
30:DH:121:VAL:O	30:DH:122:LEU:HB2	2.07	0.54
20:AB:144:GLU:O	20:AB:148:GLY:HA3	2.06	0.54
35:BN:113:ILE:HG22	35:BN:114:GLU:N	2.22	0.54
33:BL:78:ARG:NH2	33:BL:110:VAL:HG11	2.22	0.54
27:DE:116:ASP:CB	27:DE:185:LYS:HA	2.37	0.54
23:BB:142:A:N3	41:BT:2:ILE:HG23	2.22	0.54
17:CR:72:ARG:HH21	21:CU:23:GLU:CG	2.19	0.54
42:BU:100:GLU:O	42:BU:102:ILE:HG13	2.08	0.54
23:BB:588:U:OP1	33:BL:28:GLY:HA2	2.07	0.54
13:AN:17:ASP:HA	13:AN:21:ALA:CB	2.37	0.54
12:AM:64:VAL:HG12	12:AM:65:GLU:H	1.71	0.54
23:DB:2466:C:OP1	51:D4:5:ALA:HB3	2.07	0.54
29:BG:17:LYS:O	29:BG:23:ILE:HD12	2.08	0.54
9:CJ:64:GLN:CB	13:CN:98:ALA:HB3	2.37	0.54
36:BO:16:ARG:O	36:BO:20:GLU:HB2	2.07	0.54
13:CN:51:PRO:HB2	13:CN:54:SER:HB3	1.88	0.54
26:DD:37:VAL:HG12	26:DD:44:GLY:O	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AO:84:LEU:HD22	14:AO:86:LEU:HD11	1.89	0.54
27:DE:134:LEU:H	27:DE:134:LEU:HD13	1.71	0.54
2:CC:182:ASP:HB2	2:CC:203:LYS:HE2	1.88	0.54
1:CA:1319:A:H2'	1:CA:1323:G:N7	2.22	0.54
1:CA:981:U:H2'	1:CA:982:U:C5	2.42	0.54
1:AA:1512:U:O2'	1:AA:1513:A:H5'	2.07	0.54
23:BB:277:G:H5''	23:BB:278:A:N7	2.22	0.54
23:DB:285:G:H2'	23:DB:286:U:O4'	2.07	0.54
23:BB:2273:A:H2'	23:BB:2274:A:C8	2.43	0.54
23:DB:264:C:C2'	23:DB:265:A:H5''	2.37	0.54
23:DB:721:A:H2'	23:DB:722:A:H8	1.73	0.54
23:BB:2626:C:O2'	23:BB:2627:G:H5'	2.08	0.54
23:DB:2246:G:H2'	23:DB:2247:A:C8	2.42	0.54
7:CH:45:ILE:HG21	7:CH:60:LEU:HD11	1.88	0.54
1:CA:163:C:H2'	1:CA:164:G:O4'	2.06	0.54
42:DU:86:PHE:O	42:DU:87:GLU:C	2.46	0.54
23:DB:1716:U:H2'	23:DB:1717:A:C8	2.42	0.54
20:AB:87:ASP:O	20:AB:88:GLN:HG3	2.07	0.54
4:AE:56:PRO:O	4:AE:60:GLN:HG3	2.07	0.54
34:BM:58:LYS:C	34:BM:60:GLN:H	2.09	0.54
23:BB:1939:U:H6	23:BB:1939:U:H5'	1.72	0.54
1:AA:1160:G:H2'	1:AA:1161:C:H6	1.72	0.54
23:BB:1254:A:H2'	27:BE:69:ARG:HH12	1.73	0.54
23:BB:997:G:O2'	23:BB:998:C:H5'	2.07	0.54
38:BQ:94:LEU:HD22	38:BQ:95:ALA:N	2.23	0.54
33:BL:57:LEU:C	33:BL:59:ARG:H	2.11	0.54
37:BP:96:LEU:HG	37:BP:97:TYR:H	1.72	0.54
26:BD:142:VAL:HB	26:BD:143:PRO:CD	2.37	0.54
27:BE:141:MET:SD	27:BE:143:LEU:HD22	2.48	0.54
33:DL:119:PRO:HD3	33:DL:137:ALA:O	2.08	0.54
23:BB:1000:A:H2'	23:BB:1001:A:C8	2.42	0.54
31:DJ:37:ARG:CZ	31:DJ:110:PRO:HG3	2.37	0.54
31:DJ:40:HIS:O	38:DQ:66:ALA:HB1	2.08	0.54
30:BH:90:LEU:HD13	30:BH:123:ARG:O	2.08	0.54
43:DW:42:THR:N	43:DW:65:LYS:HA	2.20	0.54
43:DW:42:THR:HG21	43:DW:66:VAL:HG13	1.90	0.54
25:DC:12:ARG:HB2	25:DC:20:ASN:CA	2.33	0.54
25:DC:53:ILE:HG12	25:DC:218:THR:HA	1.89	0.54
23:DB:2229:U:H2'	23:DB:2230:G:C8	2.42	0.54
23:DB:1341:G:H5'	41:DT:61:LEU:HD21	1.88	0.54
42:DU:78:LYS:HD2	42:DU:96:LYS:HG3	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1060:U:OP1	52:DI:75:ALA:HB3	2.06	0.54
23:DB:598:U:H2'	23:DB:599:A:C8	2.43	0.54
25:DC:77:VAL:HB	25:DC:110:LYS:O	2.06	0.54
18:CS:62:THR:HG23	18:CS:63:ASP:H	1.73	0.54
28:DF:108:PRO:HB3	28:DF:113:PHE:CE2	2.42	0.54
44:DX:51:ALA:O	44:DX:53:VAL:HG12	2.07	0.54
23:BB:2849:U:H4'	23:BB:2850:A:C5'	2.38	0.54
1:AA:1323:G:H2'	1:AA:1324:A:H8	1.65	0.54
9:CJ:11:LYS:HB2	9:CJ:97:ASP:HB3	1.88	0.54
1:CA:1014:A:C2	1:CA:1219:A:H1'	2.42	0.54
4:CE:19:ARG:O	4:CE:20:VAL:HB	2.06	0.54
48:B1:35:LEU:C	48:B1:36:LYS:HD2	2.28	0.54
42:DU:60:LYS:HE3	42:DU:61:GLU:N	2.22	0.54
48:D1:26:LYS:HE2	48:D1:28:THR:HB	1.89	0.54
48:D1:8:ILE:HD13	48:D1:9:LYS:N	2.22	0.54
22:DA:25:U:H4'	22:DA:27:C:OP1	2.08	0.54
20:CB:45:THR:HG23	20:CB:200:PRO:HG2	1.89	0.54
32:BK:108:ARG:HD2	32:BK:113:MET:HE1	1.89	0.54
32:BK:108:ARG:HD2	32:BK:113:MET:CE	2.38	0.54
8:AI:113:LYS:HG2	8:AI:114:LYS:N	2.22	0.54
23:BB:1097:U:C2'	23:BB:1098:A:H5'	2.36	0.54
23:DB:566:U:O2'	23:DB:567:U:H5'	2.07	0.54
6:CG:2:ARG:HH11	6:CG:2:ARG:HB3	1.71	0.54
1:AA:477:C:H2'	1:AA:478:A:C8	2.42	0.54
50:D3:4:LYS:CE	50:D3:61:LEU:H	2.21	0.54
1:AA:629:A:H2'	1:AA:630:A:O4'	2.06	0.54
16:AQ:64:ARG:HG3	16:AQ:65:PRO:HD2	1.89	0.54
1:AA:766:A:H2'	1:AA:767:A:O4'	2.08	0.54
1:CA:1057:G:O3'	2:CC:196:GLY:HA3	2.07	0.54
23:DB:2294:G:OP1	36:DO:9:ARG:HD3	2.07	0.54
23:BB:2011:U:OP2	40:BS:16:LYS:HE3	2.07	0.54
41:DT:64:LYS:HA	41:DT:79:ASP:HA	1.87	0.54
32:DK:87:LEU:HD22	32:DK:92:GLU:O	2.07	0.54
29:BG:102:ILE:HG22	29:BG:114:HIS:O	2.06	0.54
34:DM:88:ASN:O	34:DM:89:VAL:HG12	2.06	0.54
23:BB:2206:C:O2'	23:BB:2207:C:H5'	2.07	0.54
39:DR:26:ASP:O	39:DR:27:ILE:HB	2.06	0.54
35:DN:73:ASN:O	35:DN:76:VAL:HG12	2.07	0.54
23:BB:41:C:H2'	23:BB:42:A:C8	2.42	0.54
32:BK:16:ALA:N	32:BK:46:ALA:HA	2.22	0.54
23:BB:926:G:H2'	23:BB:927:A:H8	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:218:U:H2'	1:AA:219:U:C6	2.41	0.54
1:CA:393:A:H5'	1:CA:483:C:O2'	2.06	0.54
23:DB:686:U:H5''	49:D2:11:LYS:HE3	1.89	0.54
23:BB:498:G:O2'	23:BB:499:U:H5'	2.07	0.54
6:CG:16:LYS:HD3	6:CG:16:LYS:O	2.06	0.54
23:BB:404:A:H4'	23:BB:405:U:H5'	1.89	0.54
1:CA:403:C:O2'	1:CA:404:G:H5'	2.08	0.54
1:AA:1332:A:H2'	1:AA:1333:A:C8	2.42	0.54
1:AA:636:U:H2'	1:AA:637:C:C6	2.43	0.54
23:BB:995:C:N4	31:BJ:2:LYS:HB3	2.22	0.54
38:BQ:97:ILE:HD13	38:BQ:100:PHE:CZ	2.42	0.54
26:BD:15:PHE:HB3	26:BD:18:ASP:HB2	1.89	0.54
26:BD:109:VAL:O	26:BD:172:VAL:HG22	2.06	0.54
37:BP:8:GLU:HA	37:BP:11:GLN:CG	2.38	0.54
25:BC:154:ALA:C	25:BC:156:SER:H	2.11	0.54
23:DB:2820:A:OP1	35:DN:5:LYS:N	2.33	0.54
26:DD:69:ALA:CB	26:DD:90:PHE:HB2	2.38	0.54
37:DP:49:ILE:HA	37:DP:62:LYS:O	2.07	0.54
33:DL:123:ARG:HB3	33:DL:141:LYS:HB2	1.89	0.54
23:DB:1802:A:H4'	25:DC:255:LYS:HE2	1.90	0.54
23:DB:7:G:H2'	23:DB:8:C:C6	2.43	0.54
23:BB:548:G:H5''	23:BB:549:G:O4'	2.07	0.54
33:BL:123:ARG:HB3	33:BL:143:GLU:OE1	2.07	0.54
27:DE:139:LYS:HA	27:DE:143:LEU:HD23	1.90	0.54
27:DE:148:ILE:CA	27:DE:185:LYS:HB3	2.27	0.54
44:BX:27:ASN:O	44:BX:30:MET:HG2	2.08	0.54
21:AU:39:LYS:N	21:AU:40:PRO:CD	2.69	0.54
46:DZ:11:GLU:O	46:DZ:27:THR:HG22	2.08	0.54
42:BU:99:SER:OG	42:BU:102:ILE:HD11	2.07	0.54
13:CN:63:CYS:HB3	13:CN:68:ARG:N	2.17	0.54
23:DB:25:U:H5''	40:DS:80:PRO:HD3	1.89	0.54
1:CA:1527:U:H2'	1:CA:1528:U:C6	2.42	0.54
1:CA:1314:C:OP2	18:CS:5:LYS:HG2	2.07	0.54
19:AT:53:MET:O	19:AT:57:VAL:HG23	2.08	0.54
1:CA:1217:C:H2'	1:CA:1218:C:H6	1.72	0.54
1:AA:973:G:H3'	1:AA:974:A:H5''	1.90	0.54
23:DB:2786:U:O2	26:DD:62:LYS:HB3	2.07	0.54
1:AA:1307:U:H2'	1:AA:1308:U:H6	1.72	0.54
23:DB:899:A:H2'	23:DB:900:A:O4'	2.08	0.54
1:CA:764:C:H2'	1:CA:765:G:H5'	1.90	0.54
1:CA:815:A:H4'	1:CA:817:C:C4	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BH:40:THR:O	30:BH:41:LYS:C	2.45	0.54
1:CA:279:A:H4'	1:CA:280:C:OP2	2.08	0.54
23:BB:2785:C:H2'	23:BB:2786:U:C6	2.42	0.54
23:BB:1252:G:O6	38:BQ:35:PHE:HB2	2.08	0.54
1:AA:1112:C:O2	2:AC:178:ARG:N	2.40	0.54
23:DB:351:C:H2'	23:DB:352:A:H8	1.72	0.54
23:BB:1509:A:H5'	23:BB:1510:G:H5'	1.89	0.54
11:CL:34:THR:HB	11:CL:53:ARG:NE	2.23	0.54
7:CH:86:LYS:HB3	7:CH:90:GLU:O	2.08	0.54
23:BB:2184:A:H2'	23:BB:2185:U:C6	2.42	0.54
23:DB:2590:A:H2'	23:DB:2591:C:C6	2.43	0.54
23:DB:2213:U:O2	23:DB:2213:U:C2'	2.55	0.54
1:AA:930:C:H2'	1:AA:931:C:O4'	2.08	0.54
22:BA:90:C:H2'	22:BA:91:C:O4'	2.08	0.54
23:DB:2734:A:H2'	23:DB:2735:G:H5'	1.89	0.54
40:DS:27:LYS:HA	40:DS:70:LYS:HG2	1.90	0.54
7:CH:107:LYS:HB2	7:CH:110:MET:HE1	1.88	0.54
23:DB:2363:G:OP2	50:D3:39:ARG:HD2	2.07	0.54
39:BR:41:ILE:C	39:BR:43:ASN:H	2.11	0.54
39:BR:53:PHE:HB3	39:BR:55:ASP:CA	2.37	0.54
46:BZ:29:GLY:HA3	46:BZ:48:GLN:OE1	2.07	0.54
26:BD:192:ALA:O	26:BD:193:VAL:HG12	2.08	0.54
37:BP:54:LEU:O	37:BP:56:SER:N	2.41	0.54
23:BB:1132:U:H5	31:BJ:85:LYS:HE2	1.71	0.54
25:BC:160:TYR:CG	25:BC:193:GLU:HG2	2.43	0.54
37:DP:25:VAL:O	37:DP:27:VAL:N	2.40	0.54
37:DP:67:GLU:O	37:DP:69:VAL:N	2.40	0.54
31:DJ:61:LYS:HE3	31:DJ:61:LYS:HA	1.88	0.54
5:CF:92:THR:HG22	5:CF:93:LYS:N	2.22	0.54
35:BN:86:ARG:HH21	35:BN:116:VAL:HG11	1.72	0.54
43:DW:44:PHE:HB3	43:DW:77:LYS:C	2.27	0.54
23:BB:2052:A:C4'	26:BD:148:GLN:H	2.19	0.54
31:BJ:119:PHE:HE1	31:BJ:121:LYS:HD3	1.72	0.54
27:DE:105:LEU:O	27:DE:108:ILE:HG23	2.08	0.54
27:DE:109:LEU:HD23	27:DE:117:ARG:NE	2.23	0.54
41:BT:24:MET:CE	41:BT:29:THR:H	2.20	0.54
46:DZ:3:LYS:NZ	46:DZ:29:GLY:HA3	2.22	0.54
23:BB:1083:U:H2'	23:BB:1085:A:OP2	2.08	0.54
23:BB:1112:G:H4'	29:BG:2:ARG:HE	1.73	0.54
8:AI:30:ASN:N	8:AI:30:ASN:HD22	2.04	0.54
31:BJ:136:GLN:N	31:BJ:137:PRO:CD	2.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BH:6:LEU:HA	30:BH:15:LEU:CA	2.38	0.54
13:CN:51:PRO:CB	13:CN:54:SER:HB3	2.37	0.54
23:BB:1188:U:O2'	23:BB:1189:A:H5'	2.08	0.54
42:DU:8:ASP:O	42:DU:10:VAL:HG13	2.07	0.54
27:BE:133:LEU:HD12	27:BE:136:GLN:CG	2.38	0.54
43:BW:6:GLY:C	43:BW:8:SER:N	2.60	0.54
23:BB:2784:U:H4'	26:BD:41:ALA:O	2.08	0.54
6:CG:55:LYS:HB3	6:CG:59:GLU:CD	2.27	0.54
1:CA:190:A:H2'	1:CA:191:G:O4'	2.07	0.54
1:CA:908:A:H2'	1:CA:909:A:C8	2.42	0.54
23:DB:479:A:H4'	23:DB:479:A:OP1	2.08	0.54
1:AA:1040:U:H2'	1:AA:1041:G:C8	2.43	0.54
1:CA:84:U:O2'	1:CA:85:U:H5'	2.07	0.54
38:BQ:4:LYS:O	38:BQ:7:VAL:HG22	2.07	0.54
23:DB:104:A:H2'	23:DB:105:C:H6	1.72	0.54
23:BB:2698:U:H2'	23:BB:2699:C:C6	2.42	0.54
23:BB:49:A:H4'	23:BB:49:A:OP1	2.07	0.54
1:CA:1376:U:H2'	1:CA:1377:A:C8	2.43	0.54
28:DF:157:THR:HG22	28:DF:159:ALA:H	1.73	0.54
48:D1:42:VAL:O	48:D1:43:ARG:HB2	2.08	0.54
23:BB:1125:G:H3'	23:BB:1126:A:H5''	1.88	0.54
21:AU:14:ALA:N	21:AU:16:ARG:NH2	2.55	0.54
46:BZ:69:SER:C	46:BZ:70:LYS:HE2	2.28	0.54
23:BB:968:C:H2'	23:BB:969:G:C8	2.42	0.54
26:DD:35:THR:HB	26:DD:48:ILE:HB	1.89	0.54
35:DN:2:ARG:HH21	35:DN:4:ARG:HB3	1.72	0.54
23:DB:871:U:H2'	23:DB:872:U:H6	1.71	0.54
34:DM:16:ARG:NH2	34:DM:72:PRO:HG2	2.22	0.54
45:DY:7:THR:HG22	45:DY:34:THR:HB	1.89	0.54
23:DB:2239:G:OP1	25:DC:246:PRO:HG3	2.08	0.54
5:CF:6:ILE:HD12	5:CF:7:VAL:N	2.22	0.54
20:AB:67:LEU:HA	20:AB:89:PHE:O	2.07	0.54
23:BB:26:G:H1'	23:BB:514:A:N6	2.22	0.54
35:BN:33:ILE:HD13	35:BN:33:ILE:H	1.71	0.54
39:DR:65:ALA:CB	39:DR:99:THR:HG23	2.36	0.54
43:DW:23:LYS:HG2	43:DW:57:THR:HA	1.88	0.54
43:DW:75:ASN:C	43:DW:77:LYS:H	2.11	0.54
33:BL:77:ILE:HG22	33:BL:78:ARG:NE	2.23	0.54
23:BB:144:A:H2'	23:BB:145:C:C6	2.43	0.54
41:BT:30:ILE:CG2	41:BT:31:VAL:N	2.71	0.54
5:AF:53:LYS:CD	5:AF:54:LEU:H	2.11	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DZ:47:LYS:HB2	46:DZ:51:VAL:HG12	1.88	0.54
12:CM:15:VAL:O	12:CM:19:THR:HG23	2.07	0.54
1:AA:1101:A:N6	20:AB:173:LYS:HD2	2.22	0.54
23:DB:1060:U:O2	23:DB:1088:A:C8	2.61	0.54
23:BB:55:G:H2'	23:BB:56:A:H8	1.73	0.54
18:AS:69:LYS:O	18:AS:72:GLU:HB2	2.07	0.54
33:DL:18:ARG:C	33:DL:19:LEU:HD13	2.27	0.54
1:CA:673:A:H4'	5:CF:86:ARG:HD2	1.88	0.54
28:BF:59:ILE:HD13	28:BF:59:ILE:O	2.08	0.54
52:DI:18:ASN:HB2	52:DI:38:CYS:SG	2.47	0.54
52:BI:18:ASN:N	52:BI:19:PRO:HD2	2.23	0.54
23:DB:1198:U:H2'	23:DB:1199:U:C6	2.43	0.54
51:D4:3:VAL:CG1	51:D4:4:ARG:H	2.18	0.54
18:CS:27:LYS:HG3	18:CS:28:LYS:HD2	1.89	0.54
23:BB:2867:G:N3	23:BB:2867:G:C2'	2.67	0.54
1:AA:1324:A:H2'	1:AA:1325:C:H6	1.72	0.54
26:DD:37:VAL:HG21	26:DD:46:ARG:NH1	2.23	0.54
16:AQ:17:GLU:C	16:AQ:19:SER:H	2.11	0.54
29:BG:153:PRO:HB3	29:BG:158:GLY:O	2.07	0.54
8:CI:20:ILE:HG23	8:CI:60:LEU:HD13	1.90	0.54
23:BB:620:G:H5'	23:BB:620:G:N3	2.22	0.54
10:CK:70:ALA:HB1	10:CK:74:LYS:HD2	1.89	0.54
3:CD:138:PRO:O	3:CD:139:ASN:HB3	2.07	0.54
23:BB:146:A:H2'	23:BB:147:C:H6	1.72	0.54
11:AL:20:VAL:O	11:AL:23:LEU:HG	2.08	0.54
48:D1:22:THR:HG21	50:D3:34:LYS:NZ	2.23	0.54
4:CE:52:ALA:C	4:CE:54:GLU:H	2.10	0.54
50:D3:21:PHE:H	50:D3:48:MET:HB2	1.72	0.54
14:AO:54:GLY:O	14:AO:58:MET:HG2	2.07	0.54
6:CG:2:ARG:HH11	6:CG:2:ARG:CB	2.20	0.54
9:AJ:81:GLU:HA	9:AJ:84:VAL:HG22	1.89	0.54
23:DB:20:C:H2'	23:DB:21:A:H8	1.73	0.54
1:AA:1035:A:H2'	1:AA:1036:A:C8	2.43	0.54
1:CA:1216:A:H5''	13:CN:4:SER:HB2	1.87	0.54
1:CA:423:G:H2'	1:CA:424:G:O4'	2.08	0.54
10:AK:70:ALA:HB1	10:AK:74:LYS:HE3	1.89	0.54
30:DH:75:LEU:H	30:DH:75:LEU:HD23	1.71	0.54
22:DA:63:C:H2'	22:DA:64:G:H8	1.73	0.54
22:DA:66:A:O2'	22:DA:67:G:H5''	2.07	0.54
1:CA:93:U:H2'	1:CA:94:G:H5'	1.88	0.54
31:BJ:7:LYS:CD	31:BJ:48:VAL:HB	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2538:C:O2	51:D4:2:LYS:HE3	2.07	0.54
23:DB:1820:U:O2	25:DC:200:MET:HB2	2.06	0.54
23:BB:2617:U:H2'	23:BB:2618:G:H5'	1.89	0.54
45:BY:16:LEU:HD12	45:BY:16:LEU:H	1.71	0.54
34:DM:5:LYS:HE3	34:DM:6:ARG:H	1.72	0.54
45:DY:37:ARG:NE	45:DY:37:ARG:HA	2.22	0.54
32:BK:98:ARG:H	32:BK:98:ARG:HD2	1.71	0.54
30:BH:11:ASN:HD22	30:BH:12:LEU:H	1.54	0.54
47:B0:4:GLN:O	47:B0:5:ASN:C	2.44	0.54
21:CU:24:LYS:HB3	21:CU:24:LYS:NZ	2.23	0.54
23:DB:2085:U:O2'	23:DB:2086:U:H5'	2.08	0.54
39:BR:47:VAL:C	39:BR:49:ILE:H	2.11	0.54
48:B1:13:SER:H	48:B1:50:GLU:HA	1.72	0.54
25:BC:224:MET:HB3	25:BC:233:GLY:H	1.72	0.54
49:B2:25:LYS:HE3	49:B2:25:LYS:H	1.73	0.54
29:DG:53:PRO:HG2	29:DG:61:TRP:HZ3	1.72	0.54
2:AC:156:LEU:HD11	2:AC:163:ARG:O	2.08	0.54
9:CJ:8:ILE:HD11	9:CJ:74:VAL:HB	1.90	0.54
3:CD:196:GLU:O	3:CD:199:ILE:HG23	2.06	0.54
39:DR:74:ILE:HG13	39:DR:76:LYS:HG2	1.90	0.54
44:DX:43:LEU:CB	44:DX:45:GLN:HE22	2.20	0.54
23:DB:1152:C:O2'	23:DB:1153:C:H5'	2.08	0.54
23:DB:2680:U:C5'	26:DD:194:PRO:HA	2.38	0.54
26:DD:8:LYS:HG3	37:DP:5:LYS:HZ1	1.71	0.54
10:AK:15:VAL:HG21	10:AK:41:LEU:HD11	1.88	0.54
23:BB:230:G:H2'	23:BB:231:A:H8	1.72	0.54
7:AH:50:VAL:HG22	7:AH:51:GLU:N	2.22	0.54
29:DG:125:PRO:CG	29:DG:129:GLU:HB3	2.37	0.54
47:B0:11:LYS:HG3	47:B0:12:ARG:H	1.72	0.54
1:AA:189:A:H2'	1:AA:190:A:C8	2.43	0.54
32:DK:17:ARG:HB2	32:DK:45:GLU:CB	2.38	0.54
23:DB:346:A:C8	23:DB:347:A:H1'	2.42	0.54
23:BB:2590:A:H2'	23:BB:2591:C:C6	2.43	0.54
14:AO:88:ARG:HG3	23:BB:716:A:OP1	2.08	0.54
23:DB:18:U:H2'	23:DB:19:A:H8	1.73	0.54
1:CA:1254:A:H61	1:CA:1283:U:H3	1.56	0.54
23:BB:184:C:H2'	23:BB:185:G:C8	2.43	0.54
24:DV:44:HIS:C	24:DV:46:LYS:H	2.11	0.54
13:AN:42:ASN:HB3	13:AN:46:LYS:HE2	1.89	0.54
52:BI:23:VAL:HG23	52:BI:24:GLY:N	2.23	0.54
39:DR:27:ILE:HG12	39:DR:33:VAL:HG11	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1256:G:H21	27:BE:77:ILE:HG23	1.73	0.54
1:CA:638:U:H2'	1:CA:639:G:O4'	2.08	0.54
1:CA:173:U:H5'	1:CA:197:A:O4'	2.08	0.54
2:AC:111:ASP:O	2:AC:115:VAL:HG23	2.08	0.54
19:AT:74:HIS:O	19:AT:78:LEU:HD12	2.08	0.54
23:BB:845:A:C2	23:BB:847:U:H1'	2.42	0.54
25:DC:122:ALA:O	25:DC:124:LYS:HG2	2.08	0.54
25:DC:63:ILE:O	25:DC:64:VAL:HG13	2.08	0.54
25:BC:172:THR:HG22	25:BC:173:LEU:H	1.73	0.54
25:BC:23:LEU:N	25:BC:202:ARG:NH2	2.51	0.54
39:BR:78:ARG:HB3	39:BR:87:GLN:CA	2.29	0.54
31:DJ:100:VAL:O	31:DJ:101:ILE:HB	2.08	0.54
23:DB:38:A:N3	27:DE:43:THR:HG22	2.23	0.54
27:DE:53:THR:HG21	27:DE:74:LYS:HB3	1.90	0.54
30:DH:94:ILE:HG23	30:DH:98:ASP:HB2	1.90	0.54
20:AB:46:VAL:O	20:AB:49:PHE:HB2	2.07	0.54
31:BJ:99:ARG:O	31:BJ:100:VAL:HB	2.08	0.54
27:DE:188:MET:SD	27:DE:190:ALA:HB2	2.47	0.54
27:DE:189:THR:HG23	27:DE:194:LYS:CG	2.38	0.54
23:BB:2615:U:H1'	47:B0:6:LYS:CE	2.29	0.54
41:BT:16:VAL:O	41:BT:16:VAL:HG13	2.08	0.54
18:AS:59:VAL:HG11	18:AS:70:LEU:HD11	1.88	0.54
23:DB:2197:U:O2'	23:DB:2198:A:H2'	2.07	0.54
1:CA:1288:A:N1	1:CA:1371:G:H1'	2.23	0.54
52:DI:76:ALA:HA	52:DI:135:MET:SD	2.48	0.54
26:BD:17:GLU:CG	37:BP:80:VAL:HG21	2.38	0.54
22:BA:42:C:H6	28:BF:65:LEU:HD13	1.73	0.54
15:AP:40:ASN:HB3	15:AP:49:GLY:O	2.08	0.54
23:BB:705:A:N6	23:BB:726:G:O2'	2.41	0.54
23:DB:813:U:H2'	23:DB:814:C:H6	1.70	0.54
23:BB:1181:U:H2'	23:BB:1182:G:H8	1.72	0.54
23:DB:144:A:C6	41:DT:3:ARG:NH1	2.75	0.54
39:DR:76:LYS:HB3	39:DR:90:ARG:CG	2.38	0.54
52:BI:63:ASP:O	52:BI:64:ARG:CG	2.53	0.54
6:AG:67:ASN:ND2	6:AG:127:ALA:HA	2.21	0.54
29:BG:137:LYS:HA	29:BG:140:ILE:CG1	2.38	0.54
4:AE:134:ASN:O	4:AE:137:ARG:HG2	2.07	0.54
44:DX:4:LYS:CG	44:DX:7:ARG:HE	2.20	0.54
23:DB:1515:A:H5'	23:DB:1557:C:H5'	1.89	0.54
11:AL:20:VAL:HG12	11:AL:20:VAL:O	2.08	0.54
48:D1:22:THR:HG21	50:D3:34:LYS:HZ1	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AJ:11:LYS:NZ	9:AJ:99:GLN:H	2.05	0.54
1:CA:1422:G:H5''	32:DK:48:PRO:HB3	1.89	0.54
1:CA:1354:U:H2'	1:CA:1355:G:C8	2.42	0.54
6:AG:45:ALA:HA	6:AG:48:THR:OG1	2.08	0.54
5:AF:18:VAL:O	5:AF:22:ILE:HG13	2.07	0.54
1:AA:678:U:H2'	1:AA:679:C:H6	1.70	0.54
11:CL:36:VAL:HG12	11:CL:52:CYS:HB2	1.89	0.54
18:AS:29:PRO:HA	18:AS:47:THR:HB	1.89	0.54
30:BH:66:ASN:CB	30:BH:138:VAL:HG11	2.37	0.54
1:CA:398:U:H2'	1:CA:399:G:C8	2.43	0.54
3:AD:138:PRO:HA	3:AD:181:PHE:CD2	2.43	0.54
15:CP:1:MET:HA	15:CP:1:MET:HE3	1.88	0.54
8:AI:11:ARG:HA	8:AI:105:ARG:NE	2.23	0.54
23:DB:1736:U:H2'	23:DB:1737:G:O4'	2.08	0.54
50:B3:4:LYS:HE3	50:B3:58:ILE:HB	1.90	0.54
34:DM:127:LYS:CD	34:DM:128:THR:H	2.21	0.54
23:DB:1688:U:O2	23:DB:1700:A:H5'	2.07	0.54
23:DB:2153:C:H2'	23:DB:2154:A:H8	1.72	0.54
1:CA:426:U:OP1	3:CD:32:LYS:HE3	2.08	0.54
23:DB:1244:A:O2'	23:DB:1245:G:H5'	2.07	0.54
1:AA:1042:A:H2'	1:AA:1043:G:O4'	2.08	0.54
1:AA:513:C:H2'	1:AA:514:C:H6	1.73	0.54
1:AA:716:A:N3	10:AK:119:GLY:HA2	2.22	0.54
23:DB:1098:A:C5'	52:DI:3:LYS:HB3	2.37	0.54
40:DS:8:ARG:O	40:DS:9:HIS:HB2	2.06	0.54
23:BB:396:G:H5'	46:BZ:9:TYR:HB2	1.89	0.54
25:DC:160:TYR:CE2	25:DC:193:GLU:HG2	2.43	0.54
23:BB:2771:C:H2'	23:BB:2772:C:C6	2.43	0.54
25:BC:128:THR:HG22	25:BC:188:ARG:HB2	1.89	0.54
37:DP:25:VAL:HG12	37:DP:25:VAL:O	2.07	0.54
37:DP:27:VAL:HG21	37:DP:84:SER:O	2.08	0.54
37:DP:45:VAL:HG12	37:DP:46:VAL:O	2.08	0.54
37:DP:26:GLU:HA	37:DP:47:ILE:N	2.23	0.54
37:DP:51:ASN:OD1	37:DP:52:ARG:N	2.41	0.54
37:DP:61:ARG:O	37:DP:63:ILE:HG13	2.07	0.54
23:DB:1164:C:H2'	23:DB:1165:A:H8	1.72	0.54
36:DO:18:LEU:HD13	43:DW:76:ARG:HE	1.73	0.54
28:DF:56:LEU:HD11	28:DF:86:CYS:HB3	1.90	0.54
8:CI:34:LEU:HG	8:CI:35:GLU:N	2.23	0.54
40:DS:15:GLN:HE22	47:D0:12:ARG:HH12	1.56	0.54
25:DC:27:LYS:HG2	25:DC:81:GLU:HA	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DJ:76:HIS:HB2	31:DJ:86:GLN:HG3	1.90	0.54
1:CA:1007:U:H2'	1:CA:1008:U:C6	2.43	0.54
8:AI:50:PRO:HG2	8:AI:51:LEU:HD12	1.88	0.54
33:DL:110:VAL:HG13	33:DL:127:VAL:HG12	1.90	0.54
1:CA:16:A:N1	1:CA:919:A:H2	2.06	0.54
4:CE:136:VAL:HG23	4:CE:137:ARG:N	2.22	0.54
10:AK:88:PRO:HA	10:AK:92:ARG:NE	2.23	0.54
42:DU:25:LYS:HZ3	42:DU:25:LYS:HA	1.73	0.54
1:AA:77:A:H2'	1:AA:78:A:C8	2.43	0.54
2:AC:39:ARG:HG3	2:AC:54:ILE:HD13	1.91	0.54
48:B1:42:VAL:O	48:B1:43:ARG:HB2	2.07	0.54
6:AG:100:MET:O	6:AG:104:VAL:HG23	2.08	0.54
23:BB:1488:C:O2'	23:BB:1489:C:H5'	2.09	0.54
23:BB:2278:A:H8	43:BW:8:SER:HB3	1.72	0.54
1:AA:1320:C:N4	18:AS:36:ARG:HG2	2.21	0.54
23:DB:862:G:H2'	23:DB:863:A:O4'	2.08	0.54
1:CA:203:G:H1'	1:CA:465:A:H62	1.73	0.54
1:CA:1141:C:H2'	1:CA:1142:G:C8	2.43	0.54
1:AA:1039:G:H2'	1:AA:1040:U:C6	2.43	0.54
23:DB:70:G:H3'	23:DB:113:U:H4'	1.90	0.54
28:DF:103:ILE:CG2	28:DF:173:ASP:HA	2.38	0.54
23:DB:596:U:H2'	23:DB:597:G:H8	1.73	0.54
23:DB:2617:U:H2'	23:DB:2618:G:H5'	1.90	0.54
23:BB:1013:C:H2'	23:BB:1014:A:H8	1.72	0.54
52:BI:102:ARG:HD3	52:BI:141:ASP:OD1	2.08	0.54
32:DK:84:CYS:O	32:DK:85:VAL:HB	2.08	0.54
23:BB:1724:G:H2'	23:BB:1725:U:H6	1.73	0.54
23:BB:2760:C:O2'	23:BB:2761:A:H5'	2.07	0.54
23:DB:1911:U:H2'	23:DB:1918:A:N1	2.22	0.54
10:CK:59:PRO:HA	10:CK:91:GLY:H	1.72	0.54
1:AA:1135:U:O2	1:AA:1135:U:H2'	2.07	0.54
1:AA:621:A:H2'	1:AA:622:A:C8	2.43	0.54
30:DH:147:VAL:HG12	30:DH:148:ALA:N	2.23	0.54
17:AR:33:THR:HG23	17:AR:35:SER:H	1.73	0.54
23:BB:950:G:H2'	23:BB:951:C:C6	2.43	0.54
52:DI:3:LYS:CD	52:DI:3:LYS:HE2	2.18	0.53
31:BJ:7:LYS:HD2	31:BJ:49:ASP:CB	2.34	0.53
34:BM:72:PRO:HB3	34:BM:88:ASN:OD1	2.08	0.53
24:BV:77:VAL:HG21	24:BV:79:ARG:HE	1.71	0.53
24:BV:89:ILE:HD12	24:BV:89:ILE:O	2.08	0.53
25:DC:103:ILE:HG22	25:DC:104:LEU:N	2.21	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DQ:92:LYS:C	38:DQ:94:LEU:H	2.11	0.53
20:AB:185:ILE:HA	20:AB:199:ILE:HB	1.90	0.53
23:DB:249:C:O2'	50:D3:7:ARG:NE	2.42	0.53
21:CU:11:PHE:HD1	21:CU:13:VAL:HG12	1.72	0.53
35:BN:32:GLU:HB3	35:BN:33:ILE:HD13	1.89	0.53
39:DR:6:GLN:O	39:DR:7:SER:HB3	2.07	0.53
21:AU:36:PHE:HB3	21:AU:40:PRO:HG3	1.90	0.53
23:BB:1054:A:O2'	23:BB:1055:G:H5'	2.08	0.53
5:CF:5:GLU:HA	5:CF:63:ASN:HA	1.88	0.53
27:BE:53:THR:O	27:BE:55:SER:N	2.41	0.53
28:DF:31:GLU:O	28:DF:95:MET:HE1	2.07	0.53
23:DB:336:C:H5''	42:DU:3:LYS:NZ	2.23	0.53
26:BD:118:PHE:N	26:BD:164:GLN:HG3	2.23	0.53
8:AI:44:ARG:N	8:AI:44:ARG:HH11	2.06	0.53
5:CF:55:HIS:N	5:CF:55:HIS:ND1	2.56	0.53
6:AG:112:ASP:CB	6:AG:118:ARG:HG2	2.33	0.53
28:BF:121:PHE:HE2	28:BF:166:ARG:H	1.56	0.53
8:AI:30:ASN:ND2	8:AI:30:ASN:N	2.56	0.53
29:DG:10:VAL:HG23	29:DG:47:ASN:O	2.07	0.53
44:DX:22:LEU:HD22	44:DX:25:GLN:OE1	2.08	0.53
36:BO:1:MET:HG3	36:BO:3:LYS:HE3	1.89	0.53
23:DB:533:G:H2'	23:DB:534:U:C6	2.43	0.53
1:CA:1014:A:H5''	18:CS:13:HIS:HB3	1.88	0.53
49:D2:43:THR:C	49:D2:44:VAL:HG22	2.29	0.53
30:BH:121:VAL:HG11	30:BH:128:HIS:CD2	2.43	0.53
16:AQ:44:HIS:O	16:AQ:72:TRP:HB2	2.07	0.53
25:BC:212:TRP:CZ3	25:BC:217:PRO:HD3	2.43	0.53
48:D1:9:LYS:HG3	48:D1:24:LYS:HG2	1.89	0.53
8:CI:29:ILE:HA	8:CI:64:ILE:HB	1.91	0.53
23:DB:586:A:H5'	27:DE:84:THR:HG21	1.89	0.53
23:DB:1113:U:H5''	29:DG:2:ARG:CD	2.38	0.53
23:BB:1550:C:H2'	23:BB:1551:A:C8	2.43	0.53
1:CA:408:A:H3'	1:CA:409:U:H6	1.72	0.53
1:AA:187:G:H4'	19:AT:79:THR:HG21	1.89	0.53
7:CH:100:ILE:HG13	7:CH:128:VAL:HG23	1.90	0.53
17:AR:62:ARG:HD3	17:AR:69:TYR:HA	1.90	0.53
35:DN:54:LEU:HD22	35:DN:66:ALA:HB2	1.90	0.53
23:DB:2103:C:H3'	23:DB:2104:C:O2	2.08	0.53
36:BO:87:ILE:HG13	36:BO:88:LYS:H	1.73	0.53
23:DB:288:U:O2'	23:DB:289:G:H5'	2.07	0.53
45:BY:35:VAL:CG1	45:BY:37:ARG:HH21	2.21	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:566:U:O2'	23:BB:567:U:H5'	2.08	0.53
25:BC:37:SER:H	25:BC:62:ARG:CB	2.20	0.53
20:CB:96:LEU:HB2	20:CB:99:MET:CG	2.39	0.53
36:BO:73:ALA:HA	36:BO:109:ALA:HB2	1.90	0.53
34:DM:97:GLN:N	34:DM:98:PRO:CD	2.71	0.53
23:BB:1464:G:H2'	23:BB:1465:G:C8	2.43	0.53
4:AE:55:VAL:N	4:AE:56:PRO:HD2	2.23	0.53
23:BB:1259:G:H2'	23:BB:1260:A:H8	1.73	0.53
23:BB:540:C:O2'	23:BB:541:A:H5'	2.08	0.53
23:BB:823:C:O2'	23:BB:824:U:H5'	2.09	0.53
25:DC:235:GLU:HG3	25:DC:236:GLY:H	1.72	0.53
23:DB:168:G:H2'	23:DB:169:G:H8	1.73	0.53
23:DB:2666:C:O4'	23:DB:2666:C:O2	2.25	0.53
19:AT:82:ILE:HG13	19:AT:83:ASN:N	2.22	0.53
23:BB:1046:A:C3'	23:BB:1047:G:H5''	2.37	0.53
10:CK:106:ILE:HD11	10:CK:109:ILE:HG13	1.89	0.53
4:CE:55:VAL:N	4:CE:56:PRO:HD2	2.22	0.53
24:BV:63:ILE:HD11	24:BV:72:VAL:HG21	1.91	0.53
25:DC:107:LYS:HD2	25:DC:196:ASN:ND2	2.24	0.53
25:DC:32:LEU:HD13	25:DC:36:ASN:ND2	2.23	0.53
25:BC:160:TYR:CD2	25:BC:193:GLU:HG2	2.44	0.53
34:DM:6:ARG:O	34:DM:7:THR:C	2.43	0.53
31:DJ:73:VAL:HG11	31:DJ:75:TYR:CE1	2.43	0.53
30:DH:2:GLN:CB	30:DH:19:VAL:HA	2.34	0.53
45:BY:54:VAL:HG22	45:BY:55:LYS:N	2.22	0.53
35:BN:96:ARG:O	35:BN:113:ILE:HA	2.08	0.53
30:BH:11:ASN:ND2	30:BH:12:LEU:N	2.55	0.53
23:DB:64:A:O3'	41:DT:76:ARG:HG3	2.07	0.53
31:BJ:18:VAL:HG22	31:BJ:55:ILE:O	2.07	0.53
27:DE:109:LEU:HD21	27:DE:113:VAL:O	2.07	0.53
25:DC:216:ARG:HB3	25:DC:217:PRO:HD2	1.89	0.53
25:DC:244:VAL:HG23	25:DC:249:VAL:CG2	2.38	0.53
39:DR:69:GLY:HA2	39:DR:97:LYS:N	2.16	0.53
23:BB:161:A:C3'	23:BB:162:U:H5''	2.34	0.53
6:CG:145:GLU:H	6:CG:148:LYS:HB2	1.72	0.53
1:CA:766:A:H2'	1:CA:767:A:O4'	2.08	0.53
9:AJ:39:PRO:CA	9:AJ:74:VAL:HG22	2.39	0.53
9:CJ:65:TYR:OH	13:CN:84:ARG:HG3	2.08	0.53
9:CJ:40:ILE:CD1	9:CJ:73:LEU:HB3	2.38	0.53
4:CE:109:ALA:HB3	4:CE:135:VAL:CG1	2.37	0.53
10:AK:110:THR:HG22	21:AU:4:LYS:HA	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:38:VAL:HG23	2:AC:39:ARG:N	2.23	0.53
23:DB:1442:U:H2'	23:DB:1443:U:H6	1.73	0.53
17:AR:44:THR:HG22	17:AR:46:THR:HB	1.91	0.53
1:CA:131:A:H2'	1:CA:132:C:H6	1.74	0.53
1:CA:711:G:O2'	1:CA:712:A:H5'	2.08	0.53
23:DB:1534:U:H2'	23:DB:1536:C:N3	2.22	0.53
23:DB:686:U:H1'	49:D2:5:PHE:O	2.08	0.53
5:AF:6:ILE:HD13	5:AF:89:VAL:HB	1.90	0.53
1:CA:997:U:H2'	1:CA:998:C:C6	2.43	0.53
23:BB:1904:G:H1'	23:BB:1927:A:N1	2.23	0.53
23:DB:836:G:H2'	23:DB:837:C:C6	2.43	0.53
1:CA:218:U:H2'	1:CA:219:U:C6	2.43	0.53
1:CA:6:G:H4'	1:CA:298:A:H4'	1.90	0.53
51:B4:2:LYS:HB3	51:B4:2:LYS:NZ	2.23	0.53
1:CA:1409:C:H2'	1:CA:1410:A:C8	2.43	0.53
31:BJ:42:ALA:HB1	38:BQ:67:ALA:HB2	1.90	0.53
25:DC:92:LEU:O	25:DC:93:VAL:HB	2.07	0.53
35:DN:45:ARG:HH21	35:DN:97:ILE:CG1	2.20	0.53
27:DE:46:GLN:NE2	27:DE:87:ALA:N	2.56	0.53
27:DE:48:THR:OG1	27:DE:86:ALA:HB3	2.08	0.53
32:BK:102:PRO:HB3	32:BK:121:GLU:OE1	2.08	0.53
40:BS:32:ALA:O	40:BS:33:LEU:HD13	2.08	0.53
41:DT:14:PRO:CA	41:DT:32:LEU:HD23	2.38	0.53
41:DT:53:VAL:CG1	41:DT:93:LEU:HD21	2.39	0.53
23:DB:726:G:H5''	23:DB:1432:G:O2'	2.08	0.53
37:BP:16:VAL:O	37:BP:17:PRO:O	2.26	0.53
3:AD:17:ASP:OD2	3:AD:27:ILE:HG12	2.08	0.53
29:DG:18:ILE:HG13	29:DG:18:ILE:O	2.08	0.53
16:AQ:28:VAL:C	16:AQ:36:PHE:HA	2.27	0.53
2:AC:156:LEU:H	2:AC:156:LEU:HD12	1.72	0.53
48:B1:44:GLN:OE1	48:B1:46:VAL:HB	2.09	0.53
48:B1:34:GLU:O	48:B1:35:LEU:HB3	2.08	0.53
23:DB:2678:C:H2'	23:DB:2679:A:C8	2.43	0.53
36:DO:30:ARG:HG2	36:DO:31:THR:H	1.73	0.53
35:DN:30:ARG:HH12	35:DN:74:GLU:HG2	1.72	0.53
26:BD:26:VAL:HG23	26:BD:187:LEU:HB3	1.90	0.53
23:DB:1551:A:C3'	23:DB:1552:A:H5''	2.38	0.53
23:DB:1515:A:H4'	23:DB:1556:C:O2'	2.09	0.53
7:AH:49:LYS:HG3	7:AH:50:VAL:N	2.21	0.53
1:AA:1412:C:H2'	1:AA:1413:A:H8	1.73	0.53
4:CE:61:LYS:HB3	4:CE:61:LYS:NZ	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:521:U:H2'	23:DB:522:A:C8	2.43	0.53
9:AJ:11:LYS:HZ3	9:AJ:99:GLN:H	1.55	0.53
1:AA:860:A:H2'	1:AA:861:G:O4'	2.09	0.53
1:AA:1448:C:H2'	1:AA:1449:C:C6	2.42	0.53
1:AA:1040:U:H2'	1:AA:1041:G:H8	1.74	0.53
1:CA:1119:C:H2'	1:CA:1120:C:H6	1.73	0.53
44:DX:16:THR:HG23	44:DX:21:LEU:HD12	1.89	0.53
30:BH:66:ASN:HB2	30:BH:138:VAL:HG11	1.91	0.53
24:BV:40:ILE:HD13	24:BV:40:ILE:N	2.23	0.53
1:CA:797:C:OP1	10:CK:125:LYS:HG3	2.08	0.53
8:CI:19:PHE:O	8:CI:62:LEU:HA	2.08	0.53
1:CA:135:C:O2	15:CP:1:MET:HB2	2.09	0.53
1:CA:128:G:H2'	1:CA:129:A:C8	2.43	0.53
15:CP:36:VAL:HG23	15:CP:56:ARG:HB2	1.89	0.53
23:BB:1810:A:H2'	23:BB:1811:G:O4'	2.08	0.53
2:CC:155:ARG:HH21	2:CC:160:GLU:HA	1.72	0.53
32:DK:7:MET:HA	32:DK:7:MET:HE3	1.90	0.53
23:BB:131:A:H2'	23:BB:132:G:C8	2.44	0.53
23:BB:2097:A:H2'	23:BB:2098:U:C6	2.43	0.53
39:BR:39:LEU:HD11	39:BR:57:GLY:O	2.08	0.53
23:DB:488:G:H1'	23:DB:492:A:N6	2.24	0.53
23:BB:2682:A:N3	26:BD:22:ILE:HD11	2.24	0.53
26:DD:50:VAL:HG13	26:DD:77:ARG:O	2.08	0.53
26:DD:7:LYS:HB3	26:DD:201:LEU:HD22	1.89	0.53
37:DP:18:SER:HA	37:DP:87:ARG:HH22	1.74	0.53
34:DM:40:ARG:HG2	34:DM:92:TRP:CZ2	2.44	0.53
43:BW:42:THR:CB	43:BW:66:VAL:H	2.22	0.53
45:DY:40:THR:HG23	45:DY:43:ILE:HG22	1.91	0.53
41:DT:76:ARG:N	41:DT:76:ARG:HD3	2.23	0.53
33:BL:117:THR:HG21	33:BL:120:VAL:CG1	2.38	0.53
5:CF:38:ARG:HH21	5:CF:63:ASN:ND2	2.06	0.53
29:BG:27:GLY:HA3	29:BG:78:VAL:HB	1.91	0.53
52:DI:23:VAL:HG12	52:DI:24:GLY:N	2.24	0.53
1:CA:1124:G:H5'	9:CJ:37:ARG:HH21	1.73	0.53
23:DB:1197:G:O2'	23:DB:1198:U:H5'	2.08	0.53
46:DZ:24:ILE:HD13	46:DZ:24:ILE:N	2.18	0.53
39:BR:66:HIS:CA	39:BR:98:ILE:HD13	2.38	0.53
4:CE:88:HIS:CE1	4:CE:137:ARG:HG2	2.44	0.53
23:BB:64:A:H2'	23:BB:65:U:H6	1.72	0.53
8:AI:110:VAL:HG12	8:AI:111:GLU:N	2.20	0.53
2:AC:55:VAL:HG12	2:AC:56:ILE:N	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1153:C:O2'	23:DB:1154:G:H5'	2.08	0.53
24:DV:6:ALA:O	24:DV:65:VAL:HA	2.08	0.53
23:BB:1799:G:C5	25:BC:175:LEU:HD13	2.44	0.53
3:AD:144:ILE:CD1	3:AD:154:VAL:HG21	2.38	0.53
2:AC:186:SER:HB3	2:AC:197:VAL:CG1	2.38	0.53
31:BJ:34:ARG:HB3	31:BJ:39:LYS:HD2	1.89	0.53
44:BX:14:LEU:HD21	44:BX:57:LEU:HB2	1.90	0.53
23:BB:1441:G:H2'	23:BB:1442:U:H6	1.73	0.53
2:CC:36:PHE:O	2:CC:39:ARG:HB2	2.09	0.53
14:CO:88:ARG:HH21	23:DB:715:A:H5''	1.72	0.53
14:CO:42:PHE:CD1	14:CO:55:LEU:HD22	2.44	0.53
29:DG:124:CYS:HA	29:DG:129:GLU:O	2.09	0.53
4:AE:71:ILE:HG12	4:AE:72:ASN:N	2.24	0.53
1:AA:859:G:H2'	1:AA:860:A:H8	1.71	0.53
7:AH:5:PRO:O	7:AH:32:LYS:HE3	2.09	0.53
1:AA:202:G:H2'	1:AA:203:G:H8	1.74	0.53
23:BB:2787:C:O2'	23:BB:2788:C:H5'	2.08	0.53
8:AI:113:LYS:HG2	8:AI:114:LYS:H	1.74	0.53
23:DB:664:G:H2'	23:DB:665:U:C6	2.42	0.53
1:AA:1283:U:H2'	1:AA:1284:C:C6	2.44	0.53
23:DB:1429:G:O2'	23:DB:1430:G:H5'	2.07	0.53
1:AA:865:A:H2'	1:AA:866:C:C6	2.43	0.53
1:CA:1216:A:OP1	13:CN:2:LYS:HE2	2.08	0.53
23:DB:1464:G:H2'	23:DB:1465:G:C8	2.44	0.53
23:BB:2728:U:H2'	23:BB:2729:G:H8	1.74	0.53
11:CL:30:ARG:O	11:CL:56:LEU:HA	2.09	0.53
23:BB:753:A:H2'	23:BB:754:U:H6	1.72	0.53
29:BG:126:THR:HG23	29:BG:128:THR:HG23	1.91	0.53
23:DB:2516:A:O2'	23:DB:2517:C:H5'	2.07	0.53
34:DM:62:LYS:H	34:DM:104:GLU:HB2	1.72	0.53
1:AA:742:G:O2'	1:AA:743:A:H5'	2.08	0.53
23:BB:538:A:O2'	23:BB:539:G:H5'	2.08	0.53
23:DB:2215:C:O2'	23:DB:2216:G:H5'	2.09	0.53
6:AG:91:ARG:HB3	6:AG:92:PRO:HD2	1.91	0.53
1:CA:1181:G:H4'	1:CA:1182:G:OP1	2.09	0.53
23:BB:2027:G:O2'	23:BB:2028:U:H5'	2.08	0.53
23:DB:1168:G:O2'	23:DB:1169:A:H5'	2.09	0.53
1:AA:956:U:O2'	1:AA:957:U:H5'	2.09	0.53
5:AF:47:LEU:HD13	5:AF:51:ILE:HG22	1.91	0.53
1:CA:53:A:C2	1:CA:54:C:H1'	2.43	0.53
23:BB:2586:U:H2'	23:BB:2587:A:C8	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DO:62:LEU:HD12	36:DO:62:LEU:H	1.73	0.53
23:BB:1316:U:O2'	23:BB:1317:G:H5'	2.08	0.53
1:AA:252:U:H2'	1:AA:253:A:H8	1.74	0.53
1:AA:602:A:O2'	1:AA:603:U:H5'	2.07	0.53
1:CA:1234:C:H1'	1:CA:1364:U:O2	2.09	0.53
24:BV:79:ARG:C	24:BV:87:GLN:HE22	2.12	0.53
25:DC:169:ALA:O	25:DC:170:TYR:HB2	2.08	0.53
25:DC:68:ARG:HB2	25:DC:128:THR:OG1	2.08	0.53
50:B3:26:ALA:HB3	50:B3:29:ARG:CZ	2.39	0.53
23:BB:1821:A:H2'	23:BB:1822:C:C6	2.43	0.53
2:AC:77:GLY:HA3	2:AC:81:GLU:HB3	1.90	0.53
26:DD:116:LYS:HB2	26:DD:165:MET:HB2	1.90	0.53
43:BW:42:THR:HG21	43:BW:66:VAL:HG12	1.90	0.53
20:CB:14:HIS:CD2	20:CB:15:PHE:H	2.26	0.53
33:BL:90:VAL:HG21	33:BL:121:THR:H	1.74	0.53
41:BT:1:MET:CE	41:BT:2:ILE:HB	2.38	0.53
25:DC:48:ILE:CG2	25:DC:49:THR:H	2.11	0.53
30:DH:114:GLU:CB	30:DH:133:GLN:HG3	2.39	0.53
23:DB:1395:A:H4'	23:DB:1397:U:C5	2.44	0.53
40:DS:72:THR:HG23	40:DS:106:VAL:HG23	1.89	0.53
12:CM:52:ILE:O	12:CM:55:LEU:HB2	2.08	0.53
27:BE:52:VAL:HG22	27:BE:53:THR:H	1.72	0.53
52:DI:89:SER:HA	52:DI:97:VAL:HG11	1.91	0.53
1:CA:1006:G:H2'	1:CA:1007:U:H6	1.73	0.53
3:AD:25:ARG:HD3	3:AD:26:ALA:H	1.73	0.53
25:DC:237:ARG:HD2	25:DC:239:PHE:CE1	2.43	0.53
23:DB:2465:C:O2'	23:DB:2466:C:H5'	2.09	0.53
23:DB:2484:G:N2	34:DM:118:LYS:HG2	2.23	0.53
23:BB:2526:G:H2'	23:BB:2527:C:C6	2.44	0.53
52:DI:12:VAL:HG13	52:DI:41:PHE:CE2	2.44	0.53
23:DB:1225:G:P	39:DR:90:ARG:HB2	2.48	0.53
1:CA:922:G:N3	1:CA:1398:A:H2	2.07	0.53
23:DB:2080:A:H2'	23:DB:2081:U:C6	2.44	0.53
23:DB:1645:G:H5''	23:DB:1646:C:H5'	1.91	0.53
26:DD:153:GLY:O	26:DD:155:VAL:HG23	2.08	0.53
12:CM:89:ARG:HH12	12:CM:101:THR:HG21	1.73	0.53
10:AK:33:ILE:O	10:AK:41:LEU:HB2	2.07	0.53
23:BB:1515:A:H4'	23:BB:1556:C:O2'	2.08	0.53
23:DB:1439:A:C5	23:DB:1552:A:N6	2.76	0.53
14:AO:66:LEU:HB3	14:AO:77:TYR:HE1	1.74	0.53
39:DR:40:MET:O	39:DR:54:VAL:HG22	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1170:A:H5'	20:CB:138:ARG:HH22	1.73	0.53
1:CA:202:G:H2'	1:CA:203:G:C8	2.43	0.53
1:CA:370:C:O2'	1:CA:371:A:H5'	2.08	0.53
1:AA:1507:A:H2'	1:AA:1508:A:C8	2.44	0.53
25:DC:56:GLY:HA3	25:DC:214:GLY:N	2.23	0.53
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.43	0.53
2:CC:110:LEU:HD13	2:CC:143:LEU:HD23	1.89	0.53
1:AA:532:A:H62	2:AC:191:THR:CG2	2.22	0.53
7:CH:28:SER:HB2	7:CH:58:LEU:HD12	1.91	0.53
23:DB:1684:G:H2'	23:DB:1685:C:C6	2.44	0.53
1:AA:1381:U:O2'	1:AA:1382:C:H5'	2.08	0.53
23:BB:378:C:O2'	23:BB:379:G:H5'	2.08	0.53
1:AA:214:C:H2'	1:AA:215:C:C6	2.44	0.53
32:BK:59:LYS:HD2	32:BK:92:GLU:OE2	2.08	0.53
6:AG:16:LYS:HG3	6:AG:43:TYR:OH	2.08	0.53
1:CA:317:U:H2'	1:CA:318:G:H8	1.73	0.53
23:DB:51:G:O2'	23:DB:118:A:N6	2.41	0.53
1:AA:1452:C:H4'	1:AA:1453:G:C5'	2.39	0.53
24:BV:76:ASP:OD1	34:BM:135:VAL:HA	2.09	0.53
26:DD:33:ARG:HG2	26:DD:36:GLN:HG3	1.91	0.53
25:BC:10:PRO:HG2	25:BC:23:LEU:HD11	1.90	0.53
33:DL:124:GLY:H	33:DL:142:ILE:CA	2.17	0.53
21:CU:14:ALA:HB3	21:CU:16:ARG:CZ	2.38	0.53
31:DJ:43:GLU:C	38:DQ:63:ARG:HH12	2.12	0.53
23:DB:162:U:H5	23:DB:165:A:N1	2.07	0.53
49:B2:43:THR:O	49:B2:44:VAL:C	2.47	0.53
23:BB:452:G:OP1	27:BE:52:VAL:HG22	2.07	0.53
27:BE:52:VAL:HG13	27:BE:53:THR:N	2.23	0.53
23:BB:1658:C:OP1	26:BD:136:ASN:CA	2.50	0.53
45:BY:3:THR:O	45:BY:6:ILE:HG23	2.08	0.53
46:BZ:40:CYS:O	46:BZ:41:HIS:HB3	2.08	0.53
3:CD:102:TYR:HE1	3:CD:108:ALA:O	1.91	0.53
23:BB:6:A:H2'	23:BB:7:G:H8	1.74	0.53
30:DH:124:THR:HG23	30:DH:128:HIS:CE1	2.43	0.53
38:DQ:50:ARG:CZ	38:DQ:50:ARG:HA	2.39	0.53
23:DB:364:C:H2'	23:DB:365:U:C5	2.44	0.53
4:AE:84:VAL:HG22	4:AE:85:LYS:H	1.73	0.53
40:DS:41:LYS:O	40:DS:41:LYS:HG3	2.07	0.53
30:DH:108:VAL:C	30:DH:110:VAL:H	2.11	0.53
22:BA:99:A:H2'	22:BA:99:A:N3	2.23	0.53
23:DB:2103:C:H3'	23:DB:2104:C:C2	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2539:C:O2'	23:BB:2540:C:H5'	2.09	0.53
23:DB:2250:G:H21	23:DB:2496:C:H4'	1.73	0.53
34:DM:60:GLN:NE2	34:DM:61:GLY:H	2.06	0.53
23:BB:18:U:H2'	23:BB:19:A:C8	2.43	0.53
18:CS:29:PRO:HA	18:CS:47:THR:O	2.08	0.53
23:BB:365:U:H2'	23:BB:366:C:C6	2.43	0.53
1:CA:1190:G:H5'	2:CC:175:HIS:HE2	1.74	0.53
1:CA:399:G:H2'	1:CA:400:C:C6	2.44	0.53
1:CA:796:C:OP1	10:CK:127:ARG:HB2	2.09	0.53
1:CA:994:A:H2'	1:CA:994:A:N3	2.23	0.53
23:BB:1028:A:H2'	23:BB:1029:A:C8	2.43	0.53
23:DB:1681:G:H2'	23:DB:1757:A:N1	2.23	0.53
23:BB:1771:C:H2'	23:BB:1772:A:C8	2.42	0.53
23:BB:520:G:H2'	23:BB:521:U:C6	2.44	0.53
1:AA:53:A:C2	1:AA:54:C:H1'	2.43	0.53
23:BB:1545:A:H2'	23:BB:1546:G:O4'	2.08	0.53
23:DB:2063:C:O2	23:DB:2450:A:N1	2.42	0.53
23:DB:2191:A:H2'	23:DB:2192:U:C6	2.44	0.53
23:BB:2862:G:H2'	23:BB:2863:C:C6	2.43	0.53
23:BB:496:G:H2'	23:BB:497:A:O4'	2.09	0.53
23:BB:871:U:H2'	23:BB:872:U:H6	1.72	0.53
16:CQ:14:ASP:OD2	16:CQ:53:GLY:HA2	2.09	0.53
21:AU:13:VAL:HG13	21:AU:14:ALA:N	2.16	0.53
27:BE:44:ARG:HG2	27:BE:45:ALA:H	1.73	0.53
23:BB:37:C:C2'	27:BE:46:GLN:HB3	2.38	0.53
51:D4:19:ARG:HB3	51:D4:19:ARG:HH11	1.74	0.53
51:D4:9:LYS:O	51:D4:25:VAL:HA	2.08	0.53
25:BC:114:GLN:HB2	25:BC:124:LYS:NZ	2.23	0.53
34:BM:96:ILE:HD13	34:BM:97:GLN:CB	2.38	0.53
34:BM:96:ILE:HD13	34:BM:97:GLN:HB2	1.91	0.53
25:DC:168:GLY:C	25:DC:170:TYR:H	2.11	0.53
25:DC:171:VAL:HA	25:DC:183:VAL:O	2.08	0.53
26:BD:170:VAL:HG11	26:BD:194:PRO:CG	2.39	0.53
37:BP:92:ARG:NH2	37:BP:110:LYS:HE2	2.24	0.53
37:BP:24:THR:CG2	37:BP:111:GLU:HG2	2.33	0.53
23:DB:997:G:H2'	23:DB:997:G:N3	2.24	0.53
20:AB:185:ILE:HG22	20:AB:199:ILE:HB	1.91	0.53
34:DM:5:LYS:O	34:DM:6:ARG:HB2	2.08	0.53
35:DN:33:ILE:HG12	35:DN:114:GLU:HB3	1.91	0.53
36:DO:25:ARG:NH2	36:DO:94:ARG:HH12	2.05	0.53
21:CU:15:LEU:HA	21:CU:17:ARG:NH1	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DJ:13:ARG:HG2	31:DJ:53:TYR:CE1	2.43	0.53
30:BH:3:VAL:CG2	30:BH:21:VAL:HG21	2.39	0.53
35:BN:21:PHE:CE1	35:BN:43:GLU:HG2	2.44	0.53
13:AN:81:ILE:O	13:AN:84:ARG:HB3	2.09	0.53
47:B0:2:VAL:HG22	47:B0:3:GLN:N	2.23	0.53
1:AA:1221:G:H5''	18:AS:35:ARG:NH1	2.23	0.53
3:CD:167:PRO:CG	3:CD:170:LEU:HD11	2.30	0.53
39:BR:49:ILE:O	39:BR:51:VAL:HG23	2.09	0.53
33:DL:18:ARG:NH2	33:DL:21:ARG:HD3	2.23	0.53
28:BF:66:ILE:HA	28:BF:85:GLY:O	2.08	0.53
23:DB:2027:G:O2'	23:DB:2028:U:H5'	2.08	0.53
32:DK:77:ILE:HD11	32:DK:105:ARG:NH1	2.23	0.53
25:BC:247:TRP:HD1	25:BC:247:TRP:O	1.92	0.53
20:CB:175:ALA:HA	20:CB:178:LEU:HD12	1.90	0.53
9:AJ:7:ARG:HA	9:AJ:75:ASP:HB2	1.90	0.53
29:DG:36:LEU:HB2	29:DG:40:VAL:HG21	1.90	0.53
23:DB:96:C:H4'	44:DX:41:HIS:CE1	2.44	0.53
10:AK:111:ASP:O	17:AR:72:ARG:HD3	2.09	0.53
5:AF:40:GLU:CG	5:AF:42:TRP:HE1	2.22	0.53
23:DB:2052:A:H5'	26:DD:146:ILE:O	2.08	0.53
1:CA:764:C:C2'	1:CA:765:G:H5'	2.39	0.53
10:AK:54:SER:HA	10:AK:56:LYS:HE3	1.90	0.53
26:DD:23:PRO:HA	26:DD:189:VAL:O	2.08	0.53
1:AA:472:U:H2'	1:AA:473:U:C6	2.44	0.53
6:CG:55:LYS:HB3	6:CG:59:GLU:OE2	2.08	0.53
35:BN:35:LYS:HA	35:BN:111:ALA:O	2.08	0.53
1:AA:1071:C:H2'	1:AA:1072:G:C8	2.42	0.53
43:DW:9:THR:OG1	43:DW:10:ARG:N	2.41	0.53
1:CA:1143:G:H2'	1:CA:1144:G:C8	2.44	0.53
23:DB:1219:U:H2'	23:DB:1220:G:C8	2.43	0.53
1:CA:555:U:H2'	1:CA:556:C:C6	2.43	0.53
23:DB:845:A:N1	23:DB:847:U:H1'	2.23	0.53
17:AR:25:ILE:HG13	17:AR:67:LEU:HD11	1.91	0.53
1:CA:120:A:H2'	1:CA:121:U:H5''	1.91	0.53
23:BB:1192:G:C2'	23:BB:1193:G:H5'	2.39	0.53
23:DB:2852:G:H2'	23:DB:2853:C:H6	1.74	0.53
27:BE:50:ALA:O	27:BE:74:LYS:HD2	2.08	0.53
23:DB:1116:G:H21	34:DM:136:MET:HE1	1.72	0.53
27:BE:123:LYS:HB3	27:BE:126:VAL:HG23	1.90	0.53
23:BB:1346:G:O2'	23:BB:1347:A:H5'	2.08	0.53
1:CA:252:U:H2'	1:CA:253:A:H8	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1165:U:H2'	1:CA:1166:G:O4'	2.09	0.53
23:BB:2298:A:H2'	23:BB:2299:U:O4'	2.09	0.53
1:CA:266:G:O2'	1:CA:267:C:H3'	2.09	0.53
29:BG:139:VAL:O	29:BG:143:VAL:HG23	2.09	0.53
1:AA:196:A:O5'	19:AT:63:LYS:HE2	2.09	0.53
29:DG:58:ALA:C	29:DG:60:GLY:H	2.11	0.53
29:DG:142:GLN:HG3	29:DG:143:VAL:N	2.22	0.53
23:BB:699:A:H2'	23:BB:700:G:O4'	2.08	0.53
23:BB:557:C:O2'	31:BJ:114:LEU:HD13	2.08	0.53
25:DC:142:ASN:HA	25:DC:153:LEU:CD2	2.39	0.53
25:DC:155:ARG:NH2	25:DC:155:ARG:HG2	2.23	0.53
23:BB:2618:G:O2'	26:BD:154:LYS:O	2.26	0.53
26:DD:7:LYS:HA	26:DD:26:VAL:HA	1.91	0.53
30:DH:4:ILE:HD13	30:DH:37:VAL:HG13	1.90	0.53
40:BS:34:ASP:H	40:BS:37:THR:CG2	2.20	0.53
40:BS:33:LEU:HB3	40:BS:37:THR:HB	1.90	0.53
27:DE:169:VAL:HG22	27:DE:170:ARG:N	2.24	0.53
27:DE:2:GLU:O	27:DE:3:LEU:HB2	2.09	0.53
23:DB:1825:U:H5'	25:DC:244:VAL:HG21	1.89	0.53
41:DT:61:LEU:HB2	41:DT:82:LYS:HB3	1.91	0.53
40:DS:71:VAL:HA	40:DS:107:VAL:HG12	1.91	0.53
43:BW:35:ILE:HG23	43:BW:36:ILE:N	2.14	0.53
11:AL:8:ARG:HG3	11:AL:9:LYS:N	2.17	0.53
52:BI:83:ALA:N	52:BI:100:ILE:HD11	2.24	0.53
18:CS:41:PRO:HA	18:CS:44:ILE:HG13	1.90	0.53
28:DF:98:PHE:HA	28:DF:101:ARG:HE	1.74	0.53
26:BD:1:MET:CE	26:BD:84:LEU:HD13	2.39	0.53
4:CE:36:THR:HG22	4:CE:37:VAL:N	2.22	0.53
23:BB:857:G:O2'	23:BB:858:G:H5'	2.09	0.53
1:AA:263:A:P	19:AT:73:ARG:HH22	2.32	0.53
23:DB:2893:A:H5''	23:DB:2894:G:H5'	1.90	0.53
20:CB:40:ILE:HG23	20:CB:200:PRO:HB2	1.89	0.53
7:CH:102:VAL:HG23	7:CH:125:ILE:HB	1.91	0.53
23:BB:1453:A:H61	35:BN:74:GLU:HG2	1.73	0.53
10:AK:51:PHE:CE1	10:AK:61:ALA:HB1	2.43	0.53
18:CS:3:SER:O	18:CS:4:LEU:HD12	2.08	0.53
14:CO:35:ILE:O	14:CO:39:GLN:HG2	2.08	0.53
35:DN:29:VAL:HG21	35:DN:75:ILE:HB	1.91	0.53
1:CA:586:C:H5''	7:CH:81:GLY:HA2	1.89	0.53
23:DB:565:C:O2'	23:DB:566:U:H5'	2.08	0.53
34:DM:81:ARG:HG3	34:DM:82:MET:N	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1499:A:O2'	1:AA:1500:A:H5'	2.09	0.53
4:AE:149:PRO:HA	7:AH:98:LEU:HD21	1.91	0.53
3:CD:100:VAL:HG12	3:CD:101:VAL:N	2.24	0.53
23:DB:2234:G:O2'	23:DB:2235:G:H5'	2.09	0.53
23:DB:2840:C:H2'	23:DB:2841:C:H6	1.72	0.53
23:DB:1681:G:N3	23:DB:1762:A:H2'	2.24	0.53
1:AA:824:G:O2'	1:AA:825:A:H5'	2.08	0.53
23:BB:1123:C:H2'	23:BB:1124:G:H8	1.73	0.53
1:CA:621:A:H2'	1:CA:622:A:C8	2.44	0.53
29:BG:171:LYS:O	29:BG:172:GLU:HG2	2.08	0.53
22:DA:33:G:O2'	22:DA:34:A:H5'	2.09	0.53
1:AA:1130:A:H5'	8:AI:19:PHE:CE2	2.44	0.53
23:BB:1579:A:H2'	23:BB:1580:A:C8	2.43	0.53
23:DB:1810:A:H2'	23:DB:1811:G:O4'	2.08	0.53
10:CK:115:ILE:HD12	10:CK:115:ILE:O	2.08	0.53
34:DM:51:ARG:HH11	34:DM:51:ARG:HG2	1.73	0.53
23:BB:1979:U:O2'	23:BB:1980:G:H5'	2.09	0.53
23:DB:1099:G:H5'	52:DI:4:VAL:CA	2.39	0.53
34:BM:18:ARG:HB3	34:BM:40:ARG:HH22	1.73	0.53
25:DC:61:TYR:CZ	25:DC:63:ILE:HD11	2.43	0.53
23:BB:2393:U:H5'	33:BL:62:PRO:CD	2.39	0.53
23:BB:2678:C:H2'	23:BB:2679:A:H8	1.73	0.53
26:BD:175:LEU:HD22	26:BD:189:VAL:HG12	1.91	0.53
26:BD:5:VAL:HB	26:BD:27:ILE:O	2.09	0.53
37:BP:83:ILE:HG22	37:BP:85:VAL:H	1.73	0.53
23:BB:2620:C:O4'	26:BD:161:MET:HG3	2.09	0.53
23:BB:2511:U:H4'	26:BD:128:ARG:CZ	2.39	0.53
25:BC:171:VAL:HB	25:BC:182:LYS:CB	2.39	0.53
37:DP:23:ASP:O	37:DP:25:VAL:HG23	2.09	0.53
25:BC:10:PRO:HD2	25:BC:23:LEU:HD11	1.91	0.53
33:DL:90:VAL:N	33:DL:122:VAL:HG22	2.23	0.53
25:DC:231:HIS:ND1	25:DC:242:HIS:HA	2.24	0.53
23:DB:453:A:H4'	23:DB:472:A:H61	1.72	0.53
23:DB:589:U:H2'	23:DB:590:A:H8	1.74	0.53
40:BS:8:ARG:NH1	40:BS:80:PRO:HD2	2.24	0.53
31:BJ:19:ASP:OD1	31:BJ:20:ALA:N	2.42	0.53
27:DE:152:GLU:O	27:DE:153:LEU:HB2	2.08	0.53
25:DC:258:SER:H	25:DC:261:ARG:NH1	2.06	0.53
23:BB:1082:U:C2	23:BB:1086:A:C6	2.97	0.53
52:BI:130:GLY:HA2	52:BI:133:ARG:NH2	2.23	0.53
12:CM:106:ARG:NH1	12:CM:109:LYS:HD2	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BR:47:VAL:HG13	39:BR:49:ILE:N	2.20	0.53
33:DL:17:LYS:HG3	33:DL:18:ARG:N	2.24	0.53
25:DC:224:MET:CB	25:DC:233:GLY:H	2.22	0.53
39:DR:32:THR:CB	39:DR:66:HIS:HB3	2.39	0.53
34:DM:9:PHE:CD2	34:DM:11:LYS:HG2	2.44	0.53
23:DB:364:C:H2'	23:DB:365:U:C6	2.42	0.53
13:CN:15:LEU:O	13:CN:19:TYR:HB2	2.08	0.53
7:AH:93:LYS:N	7:AH:93:LYS:HZ2	2.07	0.53
23:BB:809:G:O6	33:BL:39:LYS:HE3	2.09	0.53
4:CE:19:ARG:HG2	4:CE:20:VAL:N	2.22	0.53
35:DN:103:ARG:O	35:DN:104:ALA:HB3	2.09	0.53
22:DA:51:G:C2'	22:DA:52:A:H5''	2.39	0.53
1:CA:278:G:H21	1:CA:279:A:N6	2.04	0.53
1:CA:32:A:H2'	1:CA:33:A:C8	2.44	0.53
4:CE:156:ARG:HD2	7:CH:42:GLU:O	2.08	0.53
29:BG:42:VAL:HG12	29:BG:51:PHE:CD1	2.44	0.53
29:BG:60:GLY:O	29:BG:63:GLN:HG2	2.08	0.53
23:DB:340:A:H2'	23:DB:341:C:O4'	2.09	0.53
1:AA:1299:A:H62	1:AA:1302:C:H5	1.57	0.53
23:BB:2800:A:H2'	23:BB:2801:G:C1'	2.39	0.53
44:DX:31:GLN:HA	44:DX:31:GLN:HE21	1.74	0.53
34:BM:82:MET:HB2	34:BM:84:LYS:CE	2.38	0.53
23:BB:182:A:H2'	23:BB:183:C:H6	1.74	0.53
23:DB:1013:C:H2'	23:DB:1014:A:C8	2.44	0.53
25:DC:38:LYS:HG3	25:DC:39:SER:H	1.74	0.53
15:CP:8:ARG:CZ	15:CP:15:PRO:HB3	2.39	0.53
23:BB:1688:U:O2	23:BB:1700:A:H5'	2.09	0.53
44:DX:52:ARG:O	44:DX:56:LEU:HD12	2.09	0.53
23:DB:1915:U:H2'	23:DB:1916:A:O4'	2.08	0.53
1:CA:1409:C:H2'	1:CA:1410:A:H8	1.73	0.53
23:BB:1771:C:H2'	23:BB:1772:A:H8	1.73	0.53
1:CA:407:U:O2'	3:CD:112:GLU:HG3	2.08	0.53
6:AG:110:ARG:HH22	6:AG:121:ASN:HB3	1.72	0.53
1:CA:1432:G:OP1	37:DP:105:LYS:HB2	2.09	0.53
23:DB:2869:G:H2'	23:DB:2870:C:C6	2.44	0.53
23:DB:1528:A:H2'	23:DB:1529:G:O4'	2.09	0.53
23:DB:1270:C:H5''	23:DB:1271:G:O5'	2.09	0.53
23:DB:729:G:H2'	23:DB:1775:U:H1'	1.91	0.53
14:CO:53:ARG:HG2	14:CO:53:ARG:HH11	1.72	0.53
1:CA:610:U:O4'	1:CA:610:U:O2	2.27	0.53
52:DI:10:LEU:O	52:DI:10:LEU:HD12	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2074:U:H2'	23:BB:2075:U:C6	2.44	0.53
22:BA:17:C:O2'	22:BA:18:G:H5'	2.09	0.53
23:BB:529:A:OP2	31:BJ:113:PRO:HD3	2.08	0.53
23:BB:2484:G:O2'	23:BB:2485:G:H5'	2.08	0.53
46:BZ:17:SER:N	46:BZ:21:VAL:HG23	2.23	0.53
25:DC:145:MET:HG2	25:DC:152:GLN:HG2	1.91	0.53
25:DC:163:ILE:HG12	25:DC:173:LEU:CD2	2.38	0.53
25:DC:136:VAL:HA	25:DC:165:ALA:CB	2.39	0.53
50:B3:24:LYS:HA	50:B3:45:PRO:CB	2.34	0.53
27:BE:3:LEU:HB2	27:BE:12:LEU:HD13	1.91	0.53
26:DD:77:ARG:HB2	26:DD:77:ARG:CZ	2.38	0.53
26:DD:79:LEU:HG	26:DD:80:TRP:H	1.74	0.53
34:DM:71:LYS:HA	34:DM:71:LYS:NZ	2.23	0.53
36:BO:19:GLN:N	43:BW:76:ARG:HH12	2.01	0.53
5:CF:3:HIS:CB	5:CF:92:THR:HA	2.29	0.53
27:DE:46:GLN:HG3	27:DE:49:ARG:NH2	2.23	0.53
40:BS:7:HIS:CD2	40:BS:8:ARG:H	2.27	0.53
23:DB:920:A:H2'	23:DB:921:C:H6	1.74	0.53
27:DE:149:ILE:HD12	27:DE:152:GLU:OE2	2.09	0.53
27:DE:144:GLU:HA	27:DE:166:LYS:HE2	1.90	0.53
52:DI:83:ALA:HB3	52:DI:85:ILE:HG12	1.91	0.53
49:B2:34:ARG:HG3	49:B2:34:ARG:HH11	1.74	0.53
52:BI:27:LEU:HB2	52:BI:32:VAL:HG21	1.91	0.53
23:BB:2379:G:H2'	23:BB:2380:C:C6	2.43	0.53
39:DR:78:ARG:HH21	39:DR:90:ARG:HH21	1.57	0.53
23:DB:2787:C:O2'	23:DB:2788:C:H5'	2.09	0.53
23:DB:125:A:H4'	23:DB:126:A:OP2	2.08	0.53
50:B3:41:ARG:CZ	50:B3:42:HIS:H	2.22	0.53
11:CL:49:ARG:CG	11:CL:89:LEU:HD21	2.36	0.53
27:BE:132:LYS:HZ2	27:BE:132:LYS:HB2	1.74	0.53
10:CK:70:ALA:CA	10:CK:73:VAL:HG22	2.36	0.53
1:CA:474:G:H2'	1:CA:475:C:C6	2.44	0.53
23:DB:1509:A:H5'	23:DB:1510:G:H5'	1.90	0.53
10:CK:60:PHE:O	10:CK:64:VAL:HG13	2.09	0.53
1:AA:1439:G:H2'	1:AA:1440:U:O4'	2.08	0.53
23:BB:554:U:H2'	23:BB:555:G:O4'	2.09	0.53
11:CL:35:ARG:NE	11:CL:36:VAL:H	2.07	0.53
44:DX:16:THR:OG1	44:DX:19:LEU:HB3	2.09	0.53
18:AS:29:PRO:CA	18:AS:47:THR:HB	2.39	0.53
8:CI:19:PHE:HD1	8:CI:63:TYR:HB3	1.73	0.53
1:AA:1117:A:H5"	8:AI:105:ARG:HH12	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:12:ARG:HB2	25:BC:18:VAL:HG12	1.91	0.53
25:BC:63:ILE:O	25:BC:64:VAL:HG13	2.09	0.53
9:CJ:93:ALA:HB1	9:CJ:96:VAL:HG22	1.91	0.53
23:DB:1061:U:H4'	23:DB:1070:A:O3'	2.09	0.53
1:CA:846:G:N3	1:CA:846:G:H2'	2.24	0.53
23:DB:1771:C:H2'	23:DB:1772:A:H8	1.73	0.53
1:CA:636:U:H2'	1:CA:637:C:C6	2.44	0.53
16:AQ:4:ILE:HD12	16:AQ:5:ARG:H	1.73	0.53
52:DI:99:LYS:HD3	52:DI:99:LYS:H	1.72	0.53
1:CA:1068:G:N7	1:CA:1094:G:H2'	2.24	0.53
23:BB:1528:A:H2'	23:BB:1529:G:O4'	2.09	0.53
35:DN:67:PHE:O	35:DN:71:ARG:HA	2.09	0.53
23:BB:354:A:H2'	23:BB:355:U:O4'	2.09	0.53
8:CI:33:SER:HB2	8:CI:36:GLN:HG2	1.91	0.53
23:DB:1923:U:H2'	23:DB:1924:C:C6	2.44	0.53
22:BA:54:G:H2'	22:BA:55:U:C6	2.43	0.53
1:AA:499:A:H4'	1:AA:500:G:OP1	2.09	0.53
14:CO:81:ILE:HD12	14:CO:87:ARG:HB2	1.91	0.53
14:AO:15:GLY:HA3	14:AO:20:ASP:OD1	2.09	0.53
23:BB:672:C:O2'	23:BB:673:C:H5'	2.09	0.53
27:BE:38:GLY:C	27:BE:40:ARG:H	2.12	0.52
34:BM:73:ILE:HG22	34:BM:74:THR:N	2.24	0.52
34:BM:23:GLY:H	34:BM:96:ILE:HD12	1.75	0.52
25:DC:268:ARG:O	25:DC:269:ARG:HB2	2.08	0.52
25:BC:68:ARG:HD2	25:BC:127:ASN:ND2	2.23	0.52
1:CA:975:A:H1'	1:CA:1358:U:O2	2.07	0.52
32:DK:70:ARG:O	32:DK:71:ARG:HG2	2.09	0.52
25:BC:21:PRO:HG2	25:BC:202:ARG:NH1	2.23	0.52
23:BB:854:C:O2'	23:BB:855:G:H5'	2.09	0.52
39:BR:85:LYS:C	39:BR:87:GLN:H	2.13	0.52
45:BY:9:THR:OG1	45:BY:10:ARG:N	2.42	0.52
23:DB:4:U:H2'	23:DB:5:A:H8	1.73	0.52
5:CF:92:THR:O	5:CF:93:LYS:HB2	2.08	0.52
32:BK:63:VAL:HB	32:BK:83:ALA:HB3	1.91	0.52
35:BN:19:ALA:C	35:BN:21:PHE:N	2.62	0.52
35:BN:22:ARG:NH1	35:BN:69:ARG:HA	2.24	0.52
33:BL:77:ILE:HB	33:BL:110:VAL:CG2	2.28	0.52
23:BB:2615:U:C1'	47:B0:6:LYS:HE3	2.28	0.52
5:AF:55:HIS:O	5:AF:56:LYS:HG3	2.09	0.52
23:DB:1801:A:H5'	23:DB:2203:U:O2'	2.08	0.52
42:DU:96:LYS:O	42:DU:97:SER:HB3	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DV:9:ARG:HE	24:DV:20:LEU:HD11	1.74	0.52
1:CA:954:G:H2'	1:CA:955:U:C6	2.44	0.52
3:CD:64:TYR:CE2	3:CD:93:LEU:HB2	2.45	0.52
23:BB:2811:G:OP1	26:BD:61:THR:HB	2.09	0.52
23:BB:1842:G:H2'	23:BB:1843:C:H6	1.74	0.52
29:BG:137:LYS:O	29:BG:140:ILE:HG13	2.09	0.52
23:BB:2147:A:H5'	23:BB:2148:G:C5'	2.39	0.52
44:DX:30:MET:CE	44:DX:30:MET:H	2.22	0.52
1:AA:411:A:O2'	1:AA:412:A:H4'	2.09	0.52
23:DB:1488:C:O2'	23:DB:1489:C:H5'	2.09	0.52
25:BC:84:PRO:O	25:BC:86:ARG:N	2.39	0.52
23:BB:2195:U:H2'	23:BB:2196:C:C6	2.44	0.52
1:CA:860:A:H2'	1:CA:861:G:O4'	2.10	0.52
23:DB:1219:U:H2'	23:DB:1220:G:H8	1.74	0.52
11:CL:6:LEU:HB3	16:CQ:33:TYR:OH	2.09	0.52
1:AA:1170:A:H2'	1:AA:1171:A:O4'	2.09	0.52
42:DU:51:LEU:C	42:DU:53:GLN:H	2.12	0.52
1:CA:555:U:H2'	1:CA:556:C:H6	1.75	0.52
23:BB:740:C:H5''	23:BB:1784:A:OP1	2.09	0.52
1:CA:1190:G:H5'	2:CC:175:HIS:NE2	2.24	0.52
23:DB:2669:G:H2'	23:DB:2670:A:C8	2.44	0.52
23:BB:2740:A:H2'	23:BB:2741:A:C8	2.44	0.52
23:BB:2743:U:H2'	23:BB:2744:G:O4'	2.09	0.52
1:AA:399:G:H2'	1:AA:400:C:C6	2.43	0.52
1:AA:1508:A:H2'	1:AA:1509:C:H6	1.73	0.52
23:BB:718:A:H3'	23:BB:719:C:C6	2.44	0.52
1:AA:1132:C:H2'	1:AA:1133:G:O4'	2.09	0.52
1:AA:275:G:C5'	16:AQ:15:LYS:HG2	2.39	0.52
23:DB:131:A:H2'	23:DB:132:G:H8	1.75	0.52
23:DB:2443:C:O2'	23:DB:2444:G:H5'	2.09	0.52
1:CA:22:G:H4'	1:CA:885:G:C8	2.45	0.52
23:DB:611:C:H2'	23:DB:612:G:O4'	2.10	0.52
23:BB:1474:U:H2'	23:BB:1475:G:H5'	1.90	0.52
3:AD:197:HIS:HA	3:AD:200:VAL:HG22	1.91	0.52
1:CA:1402:C:H2'	1:CA:1403:C:O4'	2.08	0.52
38:BQ:23:TYR:O	38:BQ:24:TYR:HB2	2.09	0.52
38:BQ:111:LYS:HB2	39:BR:52:PRO:HB3	1.91	0.52
23:BB:615:U:C2	27:BE:38:GLY:HA3	2.44	0.52
27:BE:44:ARG:N	27:BE:44:ARG:HD3	2.24	0.52
51:D4:15:LYS:HZ3	51:D4:22:VAL:HG12	1.74	0.52
23:BB:691:C:H4'	25:BC:42:ARG:NE	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BZ:13:THR:HG23	46:BZ:25:ARG:HB3	1.91	0.52
37:BP:52:ARG:CG	37:BP:54:LEU:HB2	2.40	0.52
25:BC:139:THR:CG2	25:BC:193:GLU:HB3	2.40	0.52
25:BC:107:LYS:H	25:BC:194:VAL:CG2	2.20	0.52
26:DD:34:VAL:HG11	26:DD:50:VAL:HG23	1.90	0.52
37:DP:25:VAL:O	37:DP:47:ILE:HG13	2.09	0.52
36:BO:19:GLN:CA	43:BW:76:ARG:HH22	2.18	0.52
39:BR:78:ARG:HG2	39:BR:88:GLY:H	1.74	0.52
31:DJ:7:LYS:HD2	31:DJ:45:THR:OG1	2.09	0.52
31:DJ:4:PHE:HB2	31:DJ:5:THR:O	2.08	0.52
39:DR:6:GLN:HE21	39:DR:6:GLN:N	2.07	0.52
23:DB:2266:A:H4'	23:DB:2267:A:C2	2.45	0.52
36:DO:18:LEU:HD13	43:DW:76:ARG:NE	2.25	0.52
1:AA:1060:U:H5''	9:AJ:53:ILE:CG2	2.40	0.52
31:BJ:72:LYS:HB2	31:BJ:90:GLU:HB2	1.91	0.52
33:BL:29:LYS:NZ	33:BL:31:GLY:HA3	2.24	0.52
13:AN:9:GLU:O	13:AN:13:VAL:HG23	2.10	0.52
52:BI:27:LEU:N	52:BI:27:LEU:HD23	2.17	0.52
28:BF:106:ALA:HB1	28:BF:136:ILE:HG23	1.90	0.52
32:DK:53:LYS:O	32:DK:56:ASP:HB2	2.09	0.52
29:DG:14:VAL:HG12	29:DG:16:VAL:HG23	1.92	0.52
4:CE:37:VAL:HG12	4:CE:116:VAL:HG21	1.92	0.52
2:AC:146:LYS:HG3	2:AC:202:PHE:HD2	1.74	0.52
11:AL:22:ALA:HB2	11:AL:56:LEU:CD2	2.40	0.52
44:DX:44:LYS:HE3	44:DX:47:ARG:HB2	1.91	0.52
14:AO:6:ALA:O	14:AO:9:LYS:HB3	2.10	0.52
13:CN:19:TYR:HE2	13:CN:50:LEU:HD13	1.73	0.52
23:BB:1601:G:OP1	41:BT:62:VAL:HG21	2.10	0.52
18:CS:22:VAL:HG22	18:CS:42:ASN:OD1	2.09	0.52
25:BC:209:ALA:HA	25:BC:213:ARG:CZ	2.39	0.52
41:DT:34:VAL:HG22	41:DT:35:ALA:H	1.73	0.52
42:DU:60:LYS:HE3	42:DU:61:GLU:H	1.74	0.52
23:DB:359:G:H2'	23:DB:360:U:H5'	1.89	0.52
13:AN:30:ILE:C	13:AN:32:ASP:H	2.13	0.52
22:DA:47:C:H5'	36:DO:97:PHE:CZ	2.43	0.52
14:AO:70:LYS:NZ	14:AO:74:VAL:HG13	2.22	0.52
2:CC:172:VAL:O	2:CC:174:LEU:HD12	2.09	0.52
50:D3:37:THR:HA	50:D3:40:LYS:HD3	1.91	0.52
23:DB:300:A:H2'	23:DB:334:C:O2'	2.09	0.52
23:DB:2101:A:O2'	23:DB:2102:G:H5'	2.09	0.52
23:BB:418:C:H2'	23:BB:419:U:H6	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:815:A:H4'	1:AA:817:C:C4	2.45	0.52
15:CP:22:ALA:CB	15:CP:32:PHE:HA	2.40	0.52
23:DB:204:A:H4'	23:DB:205:G:OP1	2.08	0.52
23:DB:2281:A:N6	43:DW:3:LYS:HE3	2.24	0.52
23:DB:553:G:O2'	23:DB:554:U:H5'	2.09	0.52
23:DB:988:A:OP1	45:DY:10:ARG:HB3	2.09	0.52
50:B3:13:PHE:O	50:B3:14:LYS:HG2	2.09	0.52
23:BB:943:A:OP1	33:BL:42:SER:HB3	2.09	0.52
23:BB:2734:A:C2'	23:BB:2735:G:H5'	2.39	0.52
30:DH:54:LEU:HA	30:DH:57:LYS:HD2	1.92	0.52
7:CH:13:ILE:HD11	7:CH:60:LEU:HD21	1.90	0.52
1:AA:638:U:H2'	1:AA:639:G:O4'	2.08	0.52
23:BB:950:G:H2'	23:BB:951:C:H6	1.74	0.52
23:BB:131:A:H2'	23:BB:132:G:H8	1.73	0.52
1:AA:960:U:O2'	1:AA:1223:C:H4'	2.08	0.52
31:BJ:109:LEU:O	31:BJ:111:LYS:HG3	2.09	0.52
1:AA:403:C:O2'	1:AA:404:G:H5'	2.08	0.52
1:AA:320:A:H2'	1:AA:321:A:C8	2.44	0.52
23:DB:1545:A:H2'	23:DB:1546:G:O4'	2.09	0.52
37:DP:108:ARG:H	37:DP:108:ARG:HD3	1.73	0.52
1:CA:320:A:H2'	1:CA:321:A:C8	2.44	0.52
28:DF:18:GLU:C	28:DF:20:ASN:H	2.12	0.52
38:BQ:93:ILE:HG23	38:BQ:94:LEU:N	2.19	0.52
38:BQ:92:LYS:O	38:BQ:94:LEU:N	2.42	0.52
40:DS:48:LYS:O	40:DS:52:GLU:HG3	2.08	0.52
46:BZ:30:HIS:HE1	46:BZ:49:ARG:HB2	1.74	0.52
23:DB:587:C:H4'	23:DB:588:U:C6	2.44	0.52
26:DD:172:VAL:HB	26:DD:175:LEU:HD11	1.91	0.52
36:DO:25:ARG:HE	36:DO:94:ARG:HH22	1.58	0.52
31:DJ:64:VAL:HG21	31:DJ:90:GLU:OE1	2.08	0.52
32:BK:84:CYS:O	32:BK:85:VAL:HB	2.10	0.52
40:BS:32:ALA:C	40:BS:33:LEU:HD22	2.29	0.52
31:BJ:25:LEU:HD12	31:BJ:62:VAL:HG12	1.92	0.52
41:BT:84:TYR:O	41:BT:85:VAL:HG22	2.08	0.52
10:AK:124:LYS:CA	21:AU:34:ARG:HB3	2.29	0.52
40:DS:25:ARG:HD2	40:DS:26:GLY:H	1.73	0.52
23:DB:1450:G:N2	23:DB:1452:G:N1	2.56	0.52
8:CI:74:GLN:HE21	8:CI:74:GLN:CA	2.20	0.52
9:CJ:56:HIS:H	13:CN:80:ARG:NH2	2.06	0.52
32:DK:86:LEU:HB2	32:DK:95:ILE:HG23	1.91	0.52
32:DK:107:LEU:HG	32:DK:115:ILE:HG21	1.89	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:405:U:O4	3:AD:1:ALA:HA	2.09	0.52
28:BF:173:ASP:O	28:BF:173:ASP:CG	2.47	0.52
44:DX:25:GLN:NE2	44:DX:29:ARG:HH21	2.08	0.52
33:DL:109:LYS:HE2	33:DL:126:ARG:NH1	2.24	0.52
9:CJ:8:ILE:HG12	9:CJ:75:ASP:HA	1.90	0.52
4:CE:15:ILE:HG22	4:CE:16:ALA:H	1.74	0.52
9:AJ:55:PRO:O	9:AJ:56:HIS:HB3	2.10	0.52
23:BB:1395:A:H4'	23:BB:1397:U:C5	2.44	0.52
23:BB:1789:A:OP1	25:BC:219:VAL:HG12	2.09	0.52
42:DU:59:GLU:HG2	42:DU:60:LYS:N	2.24	0.52
1:AA:1308:U:OP1	12:AM:95:PRO:HA	2.09	0.52
23:DB:2285:C:C5	48:D1:7:LYS:HE3	2.44	0.52
23:BB:1842:G:H2'	23:BB:1843:C:C6	2.45	0.52
9:AJ:22:THR:HG23	9:AJ:23:ALA:N	2.23	0.52
27:DE:76:PRO:HA	27:DE:82:GLY:O	2.10	0.52
10:AK:56:LYS:O	10:AK:58:THR:N	2.43	0.52
23:BB:1439:A:C5	23:BB:1552:A:N6	2.77	0.52
20:AB:95:TRP:HH2	20:AB:100:LEU:HB2	1.75	0.52
23:BB:2732:G:H3'	23:BB:2733:A:H5'	1.91	0.52
44:BX:40:SER:O	44:BX:42:LEU:HD12	2.09	0.52
14:CO:36:ASN:HA	14:CO:39:GLN:HG3	1.90	0.52
50:D3:2:LYS:HZ2	50:D3:2:LYS:HB2	1.72	0.52
23:BB:1750:G:H2'	23:BB:1751:U:C6	2.45	0.52
23:DB:1259:G:H2'	23:DB:1260:A:C8	2.44	0.52
1:CA:1118:U:H2'	1:CA:1119:C:C6	2.44	0.52
2:CC:63:ILE:HG12	2:CC:65:VAL:CG2	2.39	0.52
23:BB:1785:A:H2'	23:BB:1787:A:N7	2.24	0.52
23:DB:189:G:H1	23:DB:205:G:HO2'	1.56	0.52
23:BB:1187:G:H5''	39:BR:84:ARG:CD	2.39	0.52
3:CD:101:VAL:HG13	3:CD:106:PHE:HD2	1.74	0.52
23:DB:1737:G:H5'	23:DB:1738:G:OP2	2.09	0.52
1:CA:1062:U:H2'	1:CA:1063:C:C6	2.44	0.52
14:CO:48:ASP:OD2	14:CO:51:SER:HB2	2.08	0.52
1:AA:846:G:H2'	1:AA:846:G:N3	2.23	0.52
23:DB:2839:G:H2'	23:DB:2840:C:C6	2.43	0.52
1:CA:1026:G:H2'	1:CA:1027:C:C6	2.45	0.52
29:BG:126:THR:CG2	29:BG:128:THR:HG23	2.39	0.52
7:CH:45:ILE:HD13	7:CH:60:LEU:HD11	1.89	0.52
14:CO:63:ARG:HH21	14:CO:87:ARG:NH1	2.07	0.52
11:AL:86:VAL:HG11	11:AL:89:LEU:HD23	1.90	0.52
6:AG:143:MET:O	6:AG:147:ASN:HB2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:889:A:H61	1:AA:907:A:H3'	1.74	0.52
23:DB:1641:A:H2'	23:DB:1642:G:O4'	2.09	0.52
23:DB:575:A:O2'	23:DB:576:U:H5'	2.09	0.52
43:DW:28:GLU:N	43:DW:61:LYS:HB2	2.25	0.52
15:AP:57:ILE:O	15:AP:61:VAL:HG22	2.09	0.52
44:BX:8:GLU:O	44:BX:10:SER:N	2.42	0.52
39:BR:42:ALA:C	39:BR:44:GLY:N	2.60	0.52
51:D4:34:LYS:HE3	51:D4:36:ARG:HH12	1.74	0.52
27:DE:164:LEU:HD13	27:DE:164:LEU:C	2.30	0.52
24:BV:9:ARG:HH12	24:BV:27:PRO:HA	1.74	0.52
46:BZ:15:SER:HG	46:BZ:23:LYS:HD3	1.74	0.52
25:DC:94:LEU:HD12	25:DC:95:TYR:N	2.24	0.52
26:BD:8:LYS:HD2	37:BP:5:LYS:NZ	2.24	0.52
37:BP:25:VAL:HG11	37:BP:86:LYS:O	2.09	0.52
48:D1:47:ILE:O	48:D1:48:TYR:HB2	2.10	0.52
33:DL:90:VAL:CG1	33:DL:122:VAL:HG11	2.39	0.52
23:DB:851:C:H2'	23:DB:852:U:H6	1.75	0.52
21:CU:3:ILE:CG1	21:CU:19:LYS:HB3	2.36	0.52
31:DJ:41:LYS:HG2	38:DQ:63:ARG:CZ	2.39	0.52
5:CF:64:VAL:HG12	5:CF:65:GLU:N	2.23	0.52
30:DH:82:SER:C	30:DH:83:LYS:HD2	2.30	0.52
40:BS:34:ASP:N	40:BS:37:THR:HG22	2.23	0.52
23:DB:860:U:O2'	23:DB:2267:A:H4'	2.09	0.52
43:DW:38:ARG:HE	43:DW:40:ARG:CA	2.22	0.52
42:DU:57:ILE:HD13	42:DU:58:VAL:N	2.24	0.52
42:DU:41:VAL:HG23	42:DU:57:ILE:HG23	1.91	0.52
23:DB:2086:U:H2'	23:DB:2087:G:C8	2.44	0.52
46:DZ:47:LYS:HB2	46:DZ:51:VAL:HG11	1.90	0.52
28:DF:59:ILE:O	28:DF:59:ILE:HD13	2.10	0.52
1:AA:1103:C:C5'	20:AB:96:LEU:HD12	2.37	0.52
52:BI:122:GLU:CD	52:BI:122:GLU:H	2.12	0.52
16:AQ:18:LYS:HA	16:AQ:47:ASP:O	2.08	0.52
6:AG:114:SER:C	6:AG:118:ARG:HG3	2.30	0.52
23:DB:2032:G:H21	26:DD:150:GLN:HB3	1.74	0.52
32:DK:98:ARG:NH1	32:DK:98:ARG:HB3	2.23	0.52
28:DF:39:VAL:HG13	28:DF:84:ILE:HG12	1.91	0.52
23:BB:784:G:C5'	25:BC:225:ASN:HD21	2.23	0.52
1:AA:1422:G:P	32:BK:54:LYS:HZ1	2.32	0.52
47:D0:36:LYS:CB	47:D0:41:HIS:HA	2.40	0.52
9:CJ:37:ARG:H	9:CJ:76:ILE:HG12	1.74	0.52
29:DG:67:ALA:O	29:DG:71:LEU:HG	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DL:107:PHE:CE2	33:DL:126:ARG:HB2	2.44	0.52
23:DB:363:G:H2'	23:DB:364:C:C6	2.45	0.52
14:AO:2:LEU:HD23	14:AO:3:SER:N	2.24	0.52
23:DB:2794:C:H2'	23:DB:2795:C:C6	2.44	0.52
42:BU:38:ILE:CB	42:BU:62:ALA:HB3	2.40	0.52
10:AK:28:ASN:ND2	10:AK:29:THR:N	2.58	0.52
23:DB:1000:A:H2'	23:DB:1001:A:C8	2.45	0.52
23:DB:877:A:N6	23:DB:898:C:H2'	2.24	0.52
8:CI:78:ILE:O	8:CI:82:ILE:HG13	2.10	0.52
2:AC:6:PRO:HG3	2:AC:200:TRP:HE1	1.73	0.52
1:CA:280:C:O2	16:CQ:39:ARG:HG3	2.09	0.52
23:DB:2471:A:O2'	23:DB:2472:G:O5'	2.28	0.52
19:CT:79:THR:O	19:CT:82:ILE:HG12	2.09	0.52
7:AH:43:GLY:O	7:AH:63:LYS:HE3	2.09	0.52
12:CM:102:LYS:NZ	12:CM:102:LYS:HB2	2.23	0.52
23:DB:299:A:H2'	23:DB:300:A:C8	2.44	0.52
1:CA:545:C:O2'	1:CA:546:A:H5'	2.08	0.52
37:BP:38:ARG:HH11	37:BP:39:LEU:N	2.06	0.52
11:CL:34:THR:OG1	11:CL:53:ARG:HB3	2.10	0.52
1:CA:492:C:H2'	1:CA:493:A:H5''	1.91	0.52
6:CG:134:VAL:O	6:CG:138:GLU:HG3	2.09	0.52
13:CN:5:MET:HG2	13:CN:8:ARG:HD2	1.92	0.52
1:AA:492:C:H2'	1:AA:493:A:H5''	1.92	0.52
23:BB:15:G:O2'	23:BB:16:C:H5'	2.10	0.52
27:DE:21:ARG:HB3	27:DE:21:ARG:HH11	1.74	0.52
23:BB:1736:U:H2'	23:BB:1737:G:O4'	2.09	0.52
23:DB:90:U:H2'	23:DB:91:A:C2	2.44	0.52
23:BB:1028:A:N6	23:BB:1125:G:H2'	2.24	0.52
23:BB:167:A:H2'	23:BB:168:G:O4'	2.10	0.52
23:BB:2104:C:H2'	23:BB:2105:U:C5	2.44	0.52
1:AA:1488:G:O2'	1:AA:1489:G:H5'	2.08	0.52
22:DA:13:G:H2'	22:DA:14:U:H5''	1.92	0.52
22:DA:43:C:H4'	28:DF:62:GLN:HE21	1.75	0.52
20:CB:23:ASN:HD22	20:CB:24:PRO:HD2	1.74	0.52
41:BT:34:VAL:CG1	41:BT:43:ILE:HD11	2.39	0.52
3:AD:54:LEU:O	3:AD:54:LEU:HD22	2.09	0.52
25:DC:201:LEU:O	25:DC:201:LEU:HD23	2.10	0.52
4:CE:65:LYS:HB3	4:CE:65:LYS:NZ	2.24	0.52
23:DB:1292:G:H2'	23:DB:1293:C:C6	2.44	0.52
16:AQ:80:LYS:O	16:AQ:80:LYS:HE3	2.09	0.52
37:DP:6:GLN:OE1	37:DP:6:GLN:N	2.35	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:B3:12:ARG:CZ	50:B3:12:ARG:HB2	2.38	0.52
23:BB:2848:G:O2'	37:BP:96:LEU:HD22	2.10	0.52
25:BC:68:ARG:HD3	25:BC:103:ILE:HD12	1.91	0.52
23:BB:991:C:H2'	23:BB:992:C:H6	1.74	0.52
27:BE:142:ALA:C	27:BE:143:LEU:HD12	2.29	0.52
27:BE:149:ILE:CG1	27:BE:186:VAL:HG13	2.39	0.52
26:DD:6:GLY:HA2	26:DD:199:SER:O	2.09	0.52
26:DD:79:LEU:CG	26:DD:80:TRP:H	2.23	0.52
30:BH:21:VAL:HG22	30:BH:22:LYS:N	2.21	0.52
23:DB:2331:G:H2'	23:DB:2332:C:C6	2.45	0.52
43:DW:55:ASP:CG	43:DW:56:HIS:H	2.13	0.52
27:DE:141:MET:HG3	27:DE:185:LYS:HE3	1.90	0.52
23:BB:142:A:OP2	23:BB:142:A:H8	1.93	0.52
28:DF:133:GLU:HG2	28:DF:149:ARG:O	2.08	0.52
28:DF:37:MET:HB2	28:DF:86:CYS:SG	2.49	0.52
24:DV:9:ARG:NE	24:DV:20:LEU:HD11	2.25	0.52
23:BB:587:C:H4'	23:BB:588:U:C6	2.44	0.52
23:BB:811:U:O2	23:BB:1250:G:H3'	2.10	0.52
43:BW:36:ILE:HG21	43:BW:68:PHE:HD2	1.75	0.52
23:BB:1112:G:H5'	29:BG:2:ARG:NH2	2.22	0.52
23:DB:26:G:OP2	40:DS:80:PRO:HG3	2.10	0.52
23:BB:125:A:H3'	23:BB:126:A:H5''	1.88	0.52
1:AA:36:C:H2'	1:AA:37:U:O4'	2.09	0.52
36:DO:104:GLN:O	36:DO:107:ALA:HB3	2.09	0.52
23:BB:747:U:H4'	40:BS:89:ALA:HB2	1.91	0.52
10:AK:109:ILE:H	21:AU:5:VAL:HB	1.75	0.52
48:B1:33:LEU:O	48:B1:34:GLU:HG2	2.10	0.52
11:AL:35:ARG:CZ	11:AL:75:GLU:HB3	2.39	0.52
8:CI:8:THR:OG1	8:CI:84:ARG:HG3	2.10	0.52
23:BB:812:C:C5'	33:BL:32:GLY:HA2	2.39	0.52
7:CH:10:LEU:HD11	7:CH:126:CYS:SG	2.48	0.52
23:DB:1517:G:O2'	23:DB:1518:C:H5'	2.08	0.52
29:DG:145:ALA:HA	29:DG:148:ARG:HG2	1.92	0.52
23:DB:1487:U:H2'	23:DB:1488:C:H6	1.75	0.52
23:DB:2471:A:O2'	23:DB:2472:G:C8	2.55	0.52
20:AB:95:TRP:CZ3	20:AB:171:ALA:HA	2.44	0.52
23:DB:1374:G:H2'	23:DB:1375:U:C6	2.45	0.52
23:DB:2860:A:H8	23:DB:2860:A:O5'	1.92	0.52
3:AD:122:ILE:O	3:AD:128:VAL:HG23	2.10	0.52
23:DB:2645:G:H4'	23:DB:2732:G:H2'	1.92	0.52
23:BB:2820:A:O5'	35:BN:4:ARG:HA	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CK:30:ILE:HG22	10:CK:45:THR:HB	1.91	0.52
23:BB:1817:G:OP1	25:BC:62:ARG:NH2	2.43	0.52
23:DB:1854:A:N6	23:DB:1888:G:H1'	2.25	0.52
28:DF:172:PHE:CD1	28:DF:172:PHE:N	2.75	0.52
43:DW:54:ARG:HD2	43:DW:54:ARG:N	2.24	0.52
23:BB:1681:G:N3	23:BB:1762:A:H2'	2.25	0.52
21:CU:8:ASN:HB2	21:CU:9:GLU:OE1	2.09	0.52
24:DV:43:ASP:O	24:DV:47:VAL:HG23	2.10	0.52
23:DB:721:A:H2'	23:DB:722:A:C8	2.45	0.52
6:AG:110:ARG:HH22	6:AG:121:ASN:CB	2.23	0.52
16:AQ:4:ILE:HD12	16:AQ:4:ILE:H	1.74	0.52
1:AA:1289:A:H2'	1:AA:1290:G:H5'	1.91	0.52
23:BB:1573:G:H2'	23:BB:1574:C:H5'	1.91	0.52
20:CB:187:ASP:HB3	20:CB:201:GLY:O	2.09	0.52
1:CA:841:C:H3'	1:CA:843:U:OP2	2.10	0.52
23:BB:203:A:H2'	23:BB:204:A:C8	2.44	0.52
23:DB:1474:U:H2'	23:DB:1475:G:H5'	1.91	0.52
23:BB:1945:G:H2'	23:BB:1946:U:C6	2.43	0.52
23:DB:1264:A:H5'	47:D0:7:PRO:HG3	1.92	0.52
1:AA:997:U:O2'	1:AA:998:C:H5'	2.09	0.52
3:CD:202:LEU:C	3:CD:204:SER:H	2.13	0.52
27:BE:43:THR:O	27:BE:43:THR:HG22	2.08	0.52
23:DB:1821:A:H5'	25:DC:155:ARG:HH21	1.72	0.52
26:BD:154:LYS:NZ	26:BD:157:LYS:N	2.57	0.52
25:BC:141:HIS:CG	25:BC:190:THR:HB	2.44	0.52
20:AB:163:ILE:CD1	20:AB:209:VAL:HG12	2.38	0.52
23:DB:2849:U:H4'	23:DB:2850:A:C5'	2.39	0.52
23:DB:250:G:H4'	33:DL:60:ARG:HE	1.74	0.52
22:DA:7:G:H4'	36:DO:29:HIS:NE2	2.25	0.52
31:DJ:19:ASP:CB	31:DJ:21:THR:HG23	2.39	0.52
31:DJ:58:ASN:C	31:DJ:60:ASP:H	2.13	0.52
20:AB:53:LEU:HA	20:AB:56:LEU:HD23	1.92	0.52
40:BS:28:LYS:HB3	40:BS:71:VAL:HB	1.91	0.52
33:BL:80:SER:O	33:BL:116:VAL:HA	2.10	0.52
27:DE:138:LEU:HD22	27:DE:187:VAL:HG11	1.92	0.52
28:DF:147:ARG:O	28:DF:147:ARG:HD2	2.09	0.52
23:BB:1055:G:HO2'	23:BB:1085:A:H2	1.55	0.52
23:BB:1083:U:C2	23:BB:1086:A:N1	2.78	0.52
52:BI:79:LEU:HD11	52:BI:131:THR:OG1	2.08	0.52
18:AS:62:THR:HB	18:AS:64:GLU:OE1	2.10	0.52
23:BB:160:A:H2'	23:BB:161:A:C8	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:D0:41:HIS:HB3	47:D0:46:GLY:HA3	1.90	0.52
23:DB:1657:U:OP2	26:DD:141:ARG:HG3	2.09	0.52
11:AL:56:LEU:HB3	11:AL:58:ASN:ND2	2.24	0.52
39:BR:64:VAL:HB	39:BR:98:ILE:HD12	1.90	0.52
4:CE:114:LEU:HD13	4:CE:122:VAL:HG21	1.91	0.52
21:AU:3:ILE:HA	21:AU:19:LYS:CG	2.37	0.52
10:AK:111:ASP:HB3	21:AU:3:ILE:HD13	1.92	0.52
1:AA:1309:G:N7	12:AM:97:ARG:NH2	2.57	0.52
48:D1:27:ARG:HE	48:D1:27:ARG:H	1.56	0.52
3:AD:183:ARG:HH22	3:AD:186:GLU:H	1.58	0.52
23:BB:1843:C:H5''	25:BC:252:LYS:HZ3	1.75	0.52
8:CI:79:ARG:O	8:CI:79:ARG:HD2	2.10	0.52
11:CL:88:ASP:C	11:CL:89:LEU:HD22	2.29	0.52
27:BE:132:LYS:NZ	27:BE:132:LYS:HB2	2.23	0.52
23:DB:2751:G:H5'	29:DG:3:VAL:CG2	2.38	0.52
2:CC:180:ASP:OD1	2:CC:203:LYS:HB2	2.09	0.52
20:AB:76:SER:OG	20:AB:92:ASN:HB2	2.10	0.52
23:BB:1220:G:H2'	23:BB:1221:C:C6	2.45	0.52
1:AA:712:A:O2'	1:AA:713:G:H5'	2.10	0.52
42:DU:49:PRO:HG2	42:DU:50:ALA:H	1.75	0.52
45:BY:37:ARG:HH11	45:BY:37:ARG:HG3	1.75	0.52
2:CC:86:LEU:O	2:CC:89:VAL:HG22	2.10	0.52
1:AA:626:G:H2'	1:AA:627:G:H8	1.74	0.52
23:BB:2222:C:O2'	23:BB:2223:G:H5'	2.09	0.52
22:BA:91:C:O2'	22:BA:92:C:H5'	2.09	0.52
23:BB:355:U:H2'	23:BB:356:G:C8	2.44	0.52
14:CO:81:ILE:O	14:CO:85:GLY:N	2.41	0.52
23:BB:2285:C:H41	48:B1:24:LYS:HZ2	1.58	0.52
23:BB:1444:G:H2'	23:BB:1445:G:H8	1.74	0.52
20:AB:55:GLU:HG3	20:AB:197:PHE:CZ	2.45	0.52
23:BB:43:G:H2'	23:BB:44:A:O4'	2.10	0.52
1:CA:65:A:H2	1:CA:381:C:H2'	1.73	0.52
2:CC:121:SER:O	2:CC:125:ARG:HG3	2.09	0.52
27:BE:88:ARG:HB2	27:BE:88:ARG:NH1	2.24	0.52
25:BC:44:ASN:HA	25:BC:49:THR:O	2.09	0.52
34:BM:8:LYS:O	34:BM:9:PHE:C	2.47	0.52
46:BZ:59:ARG:HG3	46:BZ:62:LYS:HB2	1.91	0.52
23:DB:1816:C:C5	25:DC:62:ARG:HD2	2.45	0.52
26:BD:175:LEU:HD13	26:BD:189:VAL:HG11	1.92	0.52
37:BP:59:THR:O	37:BP:59:THR:HG22	2.10	0.52
27:BE:149:ILE:HG12	27:BE:186:VAL:HG22	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2729:G:H2'	23:DB:2730:C:H6	1.75	0.52
37:BP:69:VAL:HG12	37:BP:70:GLU:N	2.24	0.52
31:DJ:21:THR:HG22	31:DJ:58:ASN:OD1	2.10	0.52
20:AB:49:PHE:O	20:AB:53:LEU:HD23	2.10	0.52
23:DB:64:A:H5''	41:DT:76:ARG:HG3	1.92	0.52
23:DB:64:A:H4'	41:DT:76:ARG:HD2	1.92	0.52
33:BL:82:LEU:HD21	33:BL:92:LEU:CD1	2.38	0.52
27:DE:112:LEU:O	27:DE:114:ARG:N	2.42	0.52
23:BB:139:U:H5''	23:BB:140:C:C5	2.45	0.52
18:AS:49:ALA:HB1	18:AS:56:HIS:CB	2.30	0.52
23:BB:1113:U:H5''	29:BG:1:SER:CA	2.39	0.52
33:DL:35:HIS:CE1	39:DR:84:ARG:HB3	2.45	0.52
28:BF:78:ILE:HG23	28:BF:82:TYR:HD1	1.74	0.52
23:DB:2641:G:OP1	31:DJ:78:THR:HG22	2.10	0.52
23:DB:1082:U:C2	23:DB:1086:A:C6	2.97	0.52
29:DG:17:LYS:O	29:DG:23:ILE:HA	2.09	0.52
26:BD:62:LYS:N	26:BD:63:PRO:HD2	2.25	0.52
17:CR:33:THR:HG22	17:CR:37:LYS:HG2	1.92	0.52
3:CD:57:LYS:HB2	3:CD:199:ILE:HB	1.92	0.52
16:AQ:56:ASP:HB3	16:AQ:79:GLU:O	2.09	0.52
36:BO:64:TYR:CD1	36:BO:74:VAL:HG21	2.45	0.52
1:AA:1005:A:H3'	1:AA:1006:G:H8	1.74	0.52
40:DS:76:VAL:HG12	40:DS:103:ILE:HA	1.91	0.52
2:CC:174:LEU:HD21	2:CC:200:TRP:CD1	2.45	0.52
16:AQ:35:LYS:O	16:AQ:37:ILE:HG13	2.10	0.52
1:AA:16:A:O2'	4:AE:20:VAL:HG13	2.10	0.52
23:BB:1374:G:H2'	23:BB:1375:U:C6	2.45	0.52
23:BB:173:A:H2'	23:BB:174:U:H6	1.75	0.52
1:AA:177:G:P	19:AT:59:ARG:HE	2.33	0.52
23:BB:2834:G:H1'	23:BB:2883:A:H61	1.74	0.52
34:DM:81:ARG:HG3	34:DM:82:MET:HG2	1.92	0.52
1:AA:476:U:H2'	1:AA:477:C:H6	1.73	0.52
1:AA:120:A:H2'	1:AA:121:U:H5''	1.90	0.52
6:AG:3:ARG:CZ	6:AG:3:ARG:HB3	2.40	0.52
1:AA:1376:U:H2'	1:AA:1377:A:H8	1.75	0.52
40:BS:86:MET:HB2	40:BS:96:ILE:HD11	1.92	0.52
23:DB:230:G:H2'	23:DB:231:A:C8	2.45	0.52
23:BB:1259:G:H2'	23:BB:1260:A:C8	2.45	0.52
1:AA:936:C:H1'	1:AA:1382:C:H42	1.74	0.52
23:DB:197:A:H4'	23:DB:2069:G:OP2	2.10	0.52
1:CA:1177:G:H3'	1:CA:1178:G:H8	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:900:A:O2'	1:CA:901:A:H5'	2.10	0.52
30:BH:100:ALA:O	30:BH:103:VAL:HG22	2.10	0.52
8:AI:93:LEU:HD13	8:AI:97:LEU:HD23	1.92	0.52
17:CR:61:ALA:HB3	17:CR:67:LEU:HD12	1.91	0.52
23:DB:1633:G:O2'	23:DB:1634:A:H5''	2.09	0.52
1:CA:1363:A:H2'	1:CA:1363:A:N3	2.24	0.52
38:BQ:111:LYS:O	38:BQ:115:ALA:HB2	2.10	0.52
39:BR:53:PHE:CB	39:BR:55:ASP:HB2	2.39	0.52
23:DB:1819:A:OP1	25:DC:155:ARG:HB3	2.10	0.52
25:DC:163:ILE:HG22	25:DC:164:VAL:N	2.25	0.52
25:DC:32:LEU:HD13	25:DC:36:ASN:HD21	1.75	0.52
26:BD:2:ILE:HG13	26:BD:3:GLY:N	2.23	0.52
37:BP:90:ALA:HB3	37:BP:112:ARG:HA	1.92	0.52
25:BC:164:VAL:HB	25:BC:167:ASP:CG	2.29	0.52
37:DP:52:ARG:N	37:DP:60:VAL:HG11	2.25	0.52
43:BW:23:LYS:HG3	43:BW:24:ARG:N	2.23	0.52
30:DH:3:VAL:CB	30:DH:37:VAL:HG11	2.38	0.52
30:DH:3:VAL:HB	30:DH:37:VAL:HG21	1.90	0.52
36:DO:72:ALA:HA	36:DO:109:ALA:HB2	1.91	0.52
31:DJ:44:TYR:OH	31:DJ:49:ASP:O	2.28	0.52
31:DJ:69:ARG:HA	31:DJ:90:GLU:OE1	2.10	0.52
23:BB:582:A:H2'	23:BB:583:G:H8	1.75	0.52
35:BN:115:LEU:HG	35:BN:115:LEU:O	2.10	0.52
39:DR:64:VAL:CG2	39:DR:100:GLY:HA2	2.40	0.52
31:BJ:36:LEU:HD11	31:BJ:122:LEU:HD23	1.92	0.52
31:BJ:57:LEU:HD12	31:BJ:128:ASN:C	2.30	0.52
41:BT:31:VAL:O	41:BT:83:ALA:O	2.28	0.52
25:DC:51:ARG:HD3	25:DC:51:ARG:O	2.10	0.52
1:AA:958:A:N1	18:AS:53:GLY:HA3	2.25	0.52
18:AS:50:VAL:H	18:AS:57:VAL:H	1.57	0.52
12:CM:33:LEU:HD22	12:CM:38:ILE:HG21	1.92	0.52
1:AA:1390:U:H2'	1:AA:1391:U:C6	2.45	0.52
42:BU:94:PHE:CD2	42:BU:95:PHE:N	2.78	0.52
1:CA:947:G:H2'	1:CA:948:C:H6	1.71	0.52
1:AA:131:A:H2'	1:AA:132:C:H6	1.75	0.52
8:AI:38:PHE:O	8:AI:41:GLU:HB2	2.09	0.52
25:DC:29:PHE:CE1	25:DC:81:GLU:HG3	2.45	0.52
13:CN:30:ILE:O	13:CN:44:VAL:HB	2.10	0.52
23:DB:27:G:H1'	23:DB:513:A:N6	2.25	0.52
44:DX:18:LEU:HA	44:DX:22:LEU:HD12	1.92	0.52
6:AG:19:SER:OG	6:AG:21:LEU:HG	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BI:116:MET:CE	52:BI:127:SER:HB2	2.40	0.52
41:DT:34:VAL:HG21	41:DT:43:ILE:CD1	2.35	0.52
42:BU:59:GLU:O	42:BU:60:LYS:HB2	2.08	0.52
3:CD:118:SER:HA	3:CD:130:ASN:HB2	1.91	0.52
8:CI:20:ILE:HD12	8:CI:85:ALA:HB3	1.92	0.52
15:AP:51:ARG:HB3	15:AP:51:ARG:HH11	1.71	0.52
1:AA:279:A:H4'	1:AA:280:C:OP2	2.10	0.52
38:BQ:69:ARG:HG3	38:BQ:70:GLN:N	2.23	0.52
23:BB:2785:C:H2'	23:BB:2786:U:H6	1.73	0.52
1:AA:71:A:N6	1:AA:99:C:H1'	2.24	0.52
1:AA:474:G:H2'	1:AA:475:C:C6	2.45	0.52
1:AA:195:A:H1'	1:AA:222:C:O2'	2.09	0.52
3:CD:71:PHE:HA	3:CD:74:TYR:HD2	1.74	0.52
5:AF:43:GLY:O	5:AF:58:HIS:HA	2.09	0.52
23:BB:2181:U:H2'	23:BB:2182:U:O4'	2.10	0.52
23:BB:433:C:H2'	23:BB:434:U:C6	2.45	0.52
36:BO:58:ILE:HG13	36:BO:59:ALA:H	1.74	0.52
1:CA:56:U:H2'	1:CA:57:G:C8	2.45	0.52
23:BB:2149:U:O2'	23:BB:2150:C:H5'	2.10	0.52
1:CA:337:G:H2'	1:CA:338:A:C8	2.45	0.52
23:DB:2440:C:H5'	54:DB:3426:HOH:O	2.10	0.52
6:CG:8:GLN:NE2	6:CG:9:ARG:H	2.07	0.52
23:BB:1739:A:H2'	23:BB:1740:G:C8	2.44	0.52
23:BB:852:U:H2'	23:BB:853:C:C6	2.45	0.52
23:BB:1051:G:H2'	23:BB:1052:C:C6	2.45	0.52
27:BE:88:ARG:HH11	27:BE:88:ARG:HB2	1.75	0.52
24:BV:6:ALA:HB1	24:BV:41:GLU:O	2.10	0.52
23:DB:1821:A:H2'	23:DB:1822:C:C6	2.45	0.52
32:DK:80:ASP:OD1	37:DP:70:GLU:HB3	2.10	0.52
33:DL:123:ARG:HB2	33:DL:142:ILE:HA	1.92	0.52
34:DM:18:ARG:HD3	34:DM:18:ARG:H	1.75	0.52
43:BW:57:THR:O	43:BW:58:LEU:HB3	2.09	0.52
20:CB:216:VAL:C	20:CB:218:ALA:H	2.13	0.52
23:DB:2377:A:C2	36:DO:92:PHE:HE1	2.28	0.52
36:DO:13:ARG:O	36:DO:17:LYS:HB2	2.10	0.52
23:DB:458:G:H22	23:DB:469:G:H2'	1.72	0.52
27:DE:47:LYS:HD2	27:DE:52:VAL:CG2	2.39	0.52
40:BS:6:LYS:HA	40:BS:104:THR:HA	1.91	0.52
46:DZ:48:GLN:NE2	46:DZ:49:ARG:HB3	2.24	0.52
40:DS:20:VAL:HB	40:DS:43:ALA:HB1	1.90	0.52
52:BI:85:ILE:HD12	52:BI:87:SER:O	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BF:59:ILE:HD11	28:BF:137:PHE:CG	2.45	0.52
28:BF:65:LEU:C	28:BF:67:THR:H	2.12	0.52
36:BO:68:LYS:H	36:BO:68:LYS:CD	2.19	0.52
23:DB:1082:U:H2'	23:DB:1083:U:O4'	2.10	0.52
47:D0:41:HIS:CD2	47:D0:42:ILE:HG22	2.44	0.52
8:AI:24:ASN:O	8:AI:61:ASP:HA	2.09	0.52
8:AI:56:MET:SD	8:AI:57:VAL:N	2.82	0.52
41:BT:66:LYS:N	41:BT:77:ARG:HA	2.24	0.52
2:AC:155:ARG:N	2:AC:162:ALA:HA	2.21	0.52
23:BB:328:U:H4'	42:BU:65:GLN:HG3	1.92	0.52
8:CI:32:ARG:HD3	8:CI:37:TYR:HD1	1.75	0.52
11:CL:82:ARG:HB2	11:CL:97:VAL:HG13	1.90	0.52
3:AD:96:ARG:O	3:AD:100:VAL:HG23	2.09	0.52
29:DG:148:ARG:HH21	29:DG:153:PRO:HD2	1.74	0.52
31:BJ:13:ARG:HH11	31:BJ:13:ARG:HG3	1.73	0.52
30:DH:99:ILE:HG13	30:DH:100:ALA:N	2.24	0.52
23:DB:2626:C:O2'	23:DB:2627:G:H5'	2.10	0.52
23:BB:877:A:H2	23:BB:900:A:N7	2.07	0.52
1:CA:1461:G:H2'	1:CA:1462:C:C6	2.44	0.52
1:AA:857:C:H2'	1:AA:858:G:O4'	2.10	0.52
6:AG:11:ILE:HD12	6:AG:11:ILE:H	1.75	0.52
8:AI:11:ARG:HA	8:AI:105:ARG:HE	1.75	0.52
34:DM:37:GLY:H	34:DM:97:GLN:HG3	1.74	0.52
11:AL:30:ARG:HB3	11:AL:30:ARG:HH11	1.75	0.52
1:CA:93:U:C2'	1:CA:94:G:H5'	2.40	0.52
1:AA:275:G:H5'	16:AQ:15:LYS:HG2	1.92	0.52
22:DA:14:U:H4'	22:DA:70:C:O2	2.09	0.52
49:D2:3:ARG:HE	49:D2:4:THR:H	1.56	0.52
7:AH:104:SER:O	7:AH:122:GLY:HA3	2.10	0.52
4:AE:74:ALA:HB1	4:AE:148:SER:HB3	1.91	0.52
23:BB:254:G:O6	50:B3:3:ILE:HG22	2.09	0.52
23:BB:176:A:O2'	23:BB:177:G:H5'	2.10	0.52
23:BB:2014:A:P	40:BS:95:ARG:HH21	2.33	0.52
10:AK:63:GLN:HB3	10:AK:94:SER:OG	2.10	0.52
23:BB:1923:U:H2'	23:BB:1924:C:C6	2.45	0.52
6:CG:135:LYS:HD3	6:CG:136:LYS:HE3	1.91	0.52
32:DK:34:GLY:O	32:DK:37:ASP:HB2	2.10	0.52
23:DB:55:G:H2'	23:DB:56:A:H8	1.74	0.52
33:DL:44:GLY:HA2	33:DL:47:ARG:HH21	1.75	0.52
23:DB:41:C:O2'	23:DB:42:A:H5'	2.10	0.52
21:AU:14:ALA:H	21:AU:16:ARG:NH2	2.07	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2740:A:H2'	23:DB:2741:A:C8	2.45	0.52
25:DC:87:SER:O	25:DC:157:ALA:HB2	2.10	0.52
25:DC:140:VAL:HG11	25:DC:163:ILE:CD1	2.39	0.52
26:BD:128:ARG:C	26:BD:128:ARG:HE	2.13	0.52
27:BE:104:ALA:O	27:BE:105:LEU:HD23	2.09	0.52
27:BE:143:LEU:HD23	27:BE:185:LYS:HB2	1.92	0.52
23:BB:2365:G:H4'	43:BW:65:LYS:HD3	1.91	0.52
23:DB:2360:G:O2'	33:DL:61:LEU:HD11	2.10	0.52
22:DA:115:A:H2'	22:DA:116:G:O4'	2.10	0.52
35:BN:75:ILE:HD13	35:BN:75:ILE:O	2.10	0.52
38:BQ:27:ARG:O	38:BQ:33:VAL:HG21	2.10	0.52
23:BB:136:G:H2'	23:BB:137:U:C6	2.44	0.52
23:BB:2333:A:O2'	36:BO:7:ARG:HD3	2.09	0.52
25:DC:208:GLY:HA2	25:DC:212:TRP:HB2	1.91	0.52
23:BB:337:C:H2'	23:BB:338:G:O4'	2.10	0.52
1:AA:1098:C:C2'	1:AA:1099:G:H5'	2.40	0.52
12:CM:106:ARG:N	12:CM:106:ARG:HH11	2.08	0.52
37:BP:32:VAL:HB	37:BP:80:VAL:HG22	1.91	0.52
1:CA:8:A:C6	3:CD:205:LYS:HA	2.45	0.52
13:CN:30:ILE:HB	13:CN:44:VAL:HB	1.91	0.52
3:AD:107:GLY:HA2	3:AD:112:GLU:OE1	2.10	0.52
23:BB:6:A:HO2'	31:BJ:135:GLN:HB2	1.75	0.52
1:CA:663:A:O2'	1:CA:664:G:H5'	2.10	0.52
30:BH:73:ASN:ND2	30:BH:73:ASN:N	2.52	0.52
26:DD:56:LYS:HD3	26:DD:59:ARG:HD3	1.92	0.52
25:BC:208:GLY:C	25:BC:210:ALA:H	2.12	0.52
1:CA:1513:A:H2'	1:CA:1514:G:C8	2.45	0.52
3:AD:186:GLU:O	3:AD:190:LEU:HD13	2.09	0.52
23:DB:2678:C:H2'	23:DB:2679:A:H8	1.75	0.52
37:DP:7:LEU:HA	37:DP:10:GLU:CG	2.40	0.52
10:AK:80:ASN:HD21	10:AK:107:THR:CG2	2.23	0.52
7:CH:100:ILE:HG13	7:CH:128:VAL:CG2	2.39	0.52
23:DB:1175:A:C2'	23:DB:1176:U:H5'	2.39	0.52
36:BO:54:VAL:HG21	36:BO:78:VAL:HG11	1.91	0.52
4:AE:109:ALA:CB	4:AE:135:VAL:HG23	2.39	0.52
23:BB:156:A:H2'	23:BB:157:C:C6	2.45	0.52
23:DB:1412:U:H2'	23:DB:1413:A:H8	1.73	0.52
23:DB:968:C:O2'	23:DB:969:G:H5'	2.10	0.52
1:AA:56:U:H2'	1:AA:57:G:C8	2.45	0.52
13:AN:27:LYS:C	13:AN:27:LYS:HD2	2.30	0.52
23:BB:2669:G:H2'	23:BB:2670:A:C8	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:660:C:H2'	23:BB:661:A:H8	1.74	0.52
1:AA:128:G:H2'	1:AA:129:A:C8	2.44	0.52
1:AA:1521:C:O2'	1:AA:1522:U:H5'	2.10	0.52
29:BG:104:LEU:HB3	29:BG:106:LEU:HD13	1.92	0.52
30:DH:75:LEU:N	30:DH:75:LEU:HD23	2.25	0.52
23:BB:1444:G:H2'	23:BB:1445:G:C8	2.44	0.52
4:AE:81:GLN:HG2	4:AE:148:SER:HA	1.92	0.52
47:B0:16:ARG:HA	47:B0:19:ASP:OD2	2.09	0.52
23:BB:1682:G:H2'	23:BB:1683:U:C6	2.45	0.52
23:DB:1139:G:O2'	23:DB:1140:C:H5'	2.10	0.52
11:CL:85:ARG:NH1	11:CL:93:ARG:HB3	2.24	0.52
23:BB:2491:U:H5''	23:BB:2570:G:C5'	2.40	0.52
23:DB:1904:G:H1'	23:DB:1927:A:N1	2.25	0.52
23:DB:1724:G:H2'	23:DB:1725:U:H6	1.75	0.52
1:AA:545:C:O2'	1:AA:546:A:H5'	2.10	0.52
38:BQ:91:ARG:HG2	39:BR:10:LYS:CE	2.40	0.51
51:D4:32:LYS:O	51:D4:34:LYS:HG2	2.11	0.51
46:BZ:3:LYS:O	46:BZ:3:LYS:HG3	2.09	0.51
50:B3:23:HIS:CD2	50:B3:23:HIS:H	2.27	0.51
26:BD:5:VAL:HG21	26:BD:28:GLU:HA	1.92	0.51
37:BP:26:GLU:CB	37:BP:46:VAL:HG22	2.32	0.51
25:BC:119:VAL:HG22	25:BC:130:PRO:HG2	1.92	0.51
32:DK:76:VAL:HB	37:DP:74:GLN:HE21	1.75	0.51
35:DN:2:ARG:HG2	35:DN:3:HIS:N	2.24	0.51
33:DL:90:VAL:HG13	33:DL:90:VAL:O	2.10	0.51
36:DO:26:LEU:O	36:DO:27:VAL:HG13	2.09	0.51
36:DO:38:GLN:HG3	36:DO:40:ILE:HD13	1.92	0.51
23:DB:455:C:C4	23:DB:472:A:H2'	2.45	0.51
23:BB:26:G:H1'	23:BB:515:A:H61	1.74	0.51
31:BJ:18:VAL:O	31:BJ:57:LEU:HD23	2.09	0.51
41:BT:12:ARG:NH2	44:BX:29:ARG:HH12	1.88	0.51
48:B1:9:LYS:HG2	50:B3:34:LYS:HZ3	1.73	0.51
28:DF:65:LEU:O	28:DF:66:ILE:HB	2.10	0.51
1:CA:1252:A:H2'	1:CA:1253:G:O4'	2.11	0.51
2:CC:140:ALA:HB2	2:CC:148:ILE:HD12	1.91	0.51
23:BB:458:G:H5''	49:B2:39:ARG:O	2.10	0.51
8:CI:117:LEU:HD21	8:CI:123:ARG:HE	1.75	0.51
23:BB:100:U:OP1	23:BB:100:U:H2'	2.10	0.51
25:DC:27:LYS:HB3	25:DC:81:GLU:HA	1.92	0.51
23:DB:1791:A:H5'	25:DC:207:ALA:HA	1.91	0.51
23:DB:1657:U:OP1	26:DD:141:ARG:HB2	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CP:54:LEU:HD13	15:CP:80:LYS:NZ	2.25	0.51
15:CP:75:ILE:HG23	15:CP:80:LYS:HD2	1.92	0.51
9:CJ:48:ARG:HB3	9:CJ:66:GLU:HG3	1.92	0.51
23:DB:1844:C:H5'	25:DC:251:THR:HB	1.92	0.51
23:BB:975:A:H1'	23:BB:990:A:C2	2.45	0.51
1:CA:1096:C:H2'	1:CA:1097:C:H6	1.74	0.51
20:CB:40:ILE:HG21	20:CB:200:PRO:O	2.11	0.51
1:CA:33:A:H2'	1:CA:34:C:H6	1.75	0.51
26:BD:7:LYS:HA	26:BD:26:VAL:HG12	1.92	0.51
10:AK:56:LYS:H	10:AK:56:LYS:HD3	1.75	0.51
23:BB:1549:A:H2'	23:BB:1550:C:C6	2.45	0.51
17:AR:60:ARG:HG3	17:AR:61:ALA:N	2.25	0.51
1:AA:922:G:H2'	1:AA:923:A:H8	1.75	0.51
23:DB:1591:A:H2'	23:DB:1592:C:C6	2.45	0.51
23:BB:1405:U:H2'	23:BB:1406:U:H6	1.74	0.51
27:BE:130:LYS:HA	27:BE:130:LYS:HE2	1.91	0.51
1:CA:939:G:H5''	6:CG:101:ARG:HH22	1.75	0.51
23:BB:1722:A:H61	23:BB:1738:G:H1'	1.75	0.51
16:AQ:24:ILE:HB	16:AQ:41:THR:HB	1.92	0.51
10:AK:81:LEU:HD22	10:AK:104:PHE:HB3	1.92	0.51
1:AA:272:C:H2'	1:AA:273:U:C6	2.45	0.51
23:DB:1571:A:H2'	23:DB:1572:A:C8	2.45	0.51
50:B3:4:LYS:NZ	50:B3:59:ALA:H	2.07	0.51
1:AA:520:A:OP2	11:AL:47:ALA:HB1	2.09	0.51
23:DB:16:C:O3'	47:D0:10:SER:HA	2.09	0.51
23:DB:1948:G:O2'	23:DB:1949:G:H5'	2.10	0.51
36:BO:76:LYS:HE3	36:BO:80:GLU:HB2	1.91	0.51
25:BC:63:ILE:HG21	25:BC:90:ILE:HD13	1.92	0.51
36:DO:7:ARG:O	36:DO:11:ALA:HB2	2.08	0.51
1:CA:1026:G:H2'	1:CA:1027:C:O4'	2.10	0.51
1:AA:600:A:H2'	1:AA:601:G:H8	1.74	0.51
1:CA:157:U:O2'	1:CA:158:G:H5'	2.10	0.51
1:AA:644:U:H4'	7:AH:83:ARG:HH22	1.75	0.51
6:AG:85:GLN:O	6:AG:86:VAL:C	2.49	0.51
23:BB:1274:A:N3	23:BB:1297:C:H1'	2.25	0.51
23:BB:460:A:H2'	23:BB:461:C:O4'	2.10	0.51
1:CA:214:C:H2'	1:CA:215:C:C6	2.44	0.51
1:CA:926:G:H5'	1:CA:927:G:C5'	2.39	0.51
23:BB:667:U:H2'	23:BB:668:A:O4'	2.10	0.51
23:BB:575:A:O2'	23:BB:576:U:H5'	2.10	0.51
23:BB:494:G:O2'	23:BB:495:G:H5'	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:110:C:H2'	1:CA:111:G:O4'	2.11	0.51
23:DB:1751:U:H2'	23:DB:1752:C:C6	2.46	0.51
1:CA:692:U:H2'	1:CA:694:A:OP2	2.10	0.51
1:AA:1366:C:H2'	1:AA:1367:C:C6	2.45	0.51
38:BQ:60:TRP:O	38:BQ:64:ILE:HG13	2.10	0.51
51:D4:25:VAL:O	51:D4:35:GLN:HB2	2.10	0.51
24:BV:77:VAL:CG2	24:BV:79:ARG:HE	2.23	0.51
26:BD:13:ARG:HB2	26:BD:21:SER:HG	1.75	0.51
26:BD:128:ARG:HH11	26:BD:144:GLY:HA3	1.75	0.51
25:BC:136:VAL:HA	25:BC:165:ALA:HA	1.92	0.51
25:BC:66:PHE:O	25:BC:68:ARG:HG2	2.10	0.51
23:DB:2821:A:H2'	23:DB:2822:G:C8	2.45	0.51
26:DD:174:SER:HB2	26:DD:208:LYS:HD3	1.92	0.51
34:DM:71:LYS:HZ1	34:DM:91:TYR:HB3	1.75	0.51
30:DH:3:VAL:O	30:DH:18:GLN:HA	2.10	0.51
33:DL:63:LYS:HG3	33:DL:64:PHE:N	2.25	0.51
31:DJ:123:LYS:N	31:DJ:123:LYS:HD2	2.25	0.51
20:CB:116:LEU:O	20:CB:119:GLN:HB2	2.09	0.51
23:DB:396:G:H2'	23:DB:397:U:H6	1.75	0.51
30:BH:83:LYS:HB2	30:BH:92:GLY:H	1.75	0.51
1:CA:952:U:H2'	1:CA:953:G:C8	2.43	0.51
42:BU:5:ARG:CG	42:BU:6:ARG:H	2.24	0.51
23:BB:2305:U:H2'	23:BB:2306:C:C6	2.45	0.51
28:BF:63:LYS:HE2	28:BF:64:PRO:CD	2.38	0.51
23:DB:2025:C:H2'	23:DB:2026:U:H6	1.75	0.51
3:AD:18:LEU:HB2	3:AD:20:LEU:HD11	1.92	0.51
23:BB:705:A:H61	23:BB:726:G:H1'	1.75	0.51
23:BB:1454:C:H5'	35:BN:63:ARG:NH2	2.19	0.51
1:AA:1122:U:H2'	1:AA:1123:U:C6	2.45	0.51
44:DX:47:ARG:HA	44:DX:50:VAL:HG23	1.91	0.51
34:BM:126:ILE:HG13	34:BM:127:LYS:N	2.19	0.51
29:DG:36:LEU:HD21	29:DG:71:LEU:HD21	1.92	0.51
6:AG:14:ASP:OD2	6:AG:22:LEU:HD12	2.10	0.51
26:DD:42:ASN:O	26:DD:43:ASP:CB	2.58	0.51
28:BF:99:PHE:C	28:BF:101:ARG:H	2.13	0.51
28:BF:126:ASN:ND2	28:BF:157:THR:H	2.09	0.51
1:CA:499:A:H4'	1:CA:500:G:OP1	2.09	0.51
26:DD:14:ILE:HD12	37:DP:78:PRO:HG2	1.91	0.51
11:AL:95:HIS:HD1	11:AL:96:THR:N	2.09	0.51
26:DD:11:MET:O	26:DD:23:PRO:HD2	2.10	0.51
1:CA:642:A:C5	7:CH:106:SER:HA	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DG:102:ILE:O	29:DG:102:ILE:HG23	2.11	0.51
23:DB:1405:U:H2'	23:DB:1406:U:H6	1.75	0.51
23:DB:2259:U:O2'	23:DB:2260:C:H5'	2.10	0.51
23:DB:1592:C:H2'	23:DB:1593:A:H8	1.75	0.51
3:CD:148:ALA:O	3:CD:151:GLN:HG2	2.11	0.51
23:DB:417:C:H2'	23:DB:418:C:H6	1.74	0.51
6:CG:77:ARG:HD3	6:CG:79:VAL:CG2	2.39	0.51
23:DB:1785:A:H2'	23:DB:1787:A:N7	2.26	0.51
3:CD:15:GLY:HA2	3:CD:34:GLU:HB2	1.92	0.51
45:DY:10:ARG:O	45:DY:11:SER:HB3	2.11	0.51
23:DB:91:A:H1'	23:DB:92:U:C6	2.45	0.51
26:DD:138:LEU:CD1	26:DD:142:VAL:HB	2.40	0.51
23:BB:2188:U:H2'	23:BB:2189:U:C6	2.44	0.51
23:DB:222:A:N6	23:DB:232:G:H1'	2.25	0.51
34:BM:53:MET:O	34:BM:54:THR:HG23	2.11	0.51
30:BH:47:PHE:HE1	30:BH:51:ARG:NE	2.08	0.51
1:AA:736:C:H2'	1:AA:737:C:C6	2.45	0.51
1:AA:1197:A:O2'	1:AA:1198:G:H5'	2.10	0.51
23:DB:1400:U:H2'	23:DB:1401:G:C8	2.45	0.51
8:AI:99:LYS:HD3	8:AI:100:ALA:N	2.25	0.51
23:DB:1692:U:H2'	23:DB:1694:C:C5	2.45	0.51
23:BB:2665:A:C2'	23:BB:2666:C:H5'	2.40	0.51
23:DB:1754:A:OP1	37:DP:95:LYS:HB2	2.11	0.51
12:CM:95:PRO:N	12:CM:108:ARG:HG2	2.25	0.51
2:AC:110:LEU:O	2:AC:203:LYS:HE2	2.11	0.51
20:CB:222:GLU:HG2	20:CB:222:GLU:O	2.10	0.51
7:AH:76:ARG:HH11	7:AH:76:ARG:HG3	1.74	0.51
26:DD:99:GLU:OE1	26:DD:99:GLU:HA	2.10	0.51
23:BB:1889:A:H2'	23:BB:1890:A:C8	2.45	0.51
23:DB:110:G:O2'	23:DB:111:A:H5'	2.09	0.51
51:D4:34:LYS:HE2	51:D4:36:ARG:NH2	2.21	0.51
24:BV:21:ARG:HE	24:BV:87:GLN:CB	2.23	0.51
46:BZ:5:ILE:HD13	46:BZ:47:LYS:HB3	1.92	0.51
25:DC:155:ARG:HD3	25:DC:155:ARG:O	2.11	0.51
37:BP:59:THR:HG1	37:BP:76:HIS:CG	2.28	0.51
31:BJ:84:ILE:HG22	31:BJ:85:LYS:N	2.26	0.51
27:BE:141:MET:CG	27:BE:143:LEU:HB2	2.40	0.51
27:BE:6:LYS:HB2	27:BE:12:LEU:HD11	1.92	0.51
23:DB:2683:C:H2'	23:DB:2684:U:C6	2.46	0.51
26:DD:197:THR:HG23	26:DD:198:GLY:N	2.21	0.51
23:BB:2364:C:H2'	23:BB:2365:G:O4'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DO:36:TYR:O	36:DO:37:ALA:HB2	2.10	0.51
31:DJ:100:VAL:HG22	31:DJ:101:ILE:N	2.26	0.51
31:DJ:36:LEU:HD13	31:DJ:54:ILE:HD12	1.92	0.51
31:DJ:7:LYS:HD2	31:DJ:45:THR:CB	2.40	0.51
12:AM:106:ARG:HD3	12:AM:110:GLY:O	2.09	0.51
33:BL:120:VAL:HG13	33:BL:120:VAL:O	2.10	0.51
33:BL:92:LEU:HG	33:BL:96:LYS:HZ3	1.75	0.51
31:BJ:56:VAL:HG12	31:BJ:57:LEU:N	2.26	0.51
27:DE:148:ILE:HA	27:DE:185:LYS:O	2.11	0.51
25:DC:243:PRO:HA	25:DC:249:VAL:CG2	2.33	0.51
25:DC:257:ARG:N	25:DC:261:ARG:CZ	2.74	0.51
41:DT:47:VAL:HG13	41:DT:48:GLN:N	2.26	0.51
52:DI:125:THR:O	52:DI:129:GLU:HG3	2.10	0.51
43:BW:16:GLU:HA	43:BW:18:LYS:HE2	1.93	0.51
17:CR:62:ARG:HB3	17:CR:69:TYR:CE1	2.46	0.51
1:CA:255:G:H2'	1:CA:256:U:C6	2.45	0.51
8:AI:51:LEU:HD23	8:AI:56:MET:CE	2.40	0.51
26:BD:83:ARG:HG2	26:BD:83:ARG:HH11	1.75	0.51
4:CE:89:THR:C	4:CE:91:SER:N	2.64	0.51
23:BB:671:C:N4	33:BL:39:LYS:HE3	2.25	0.51
33:BL:39:LYS:HB3	33:BL:46:VAL:HG13	1.91	0.51
46:DZ:21:VAL:O	46:DZ:22:MET:HG2	2.10	0.51
1:AA:840:C:C2'	1:AA:842:U:H5''	2.38	0.51
1:CA:1085:U:H3'	1:CA:1086:U:C6	2.45	0.51
4:AE:14:LEU:HA	4:AE:36:THR:HG22	1.91	0.51
15:AP:71:VAL:HA	15:AP:74:LEU:CG	2.39	0.51
27:DE:132:LYS:H	27:DE:134:LEU:HD11	1.74	0.51
23:DB:1441:G:H2'	23:DB:1442:U:H6	1.74	0.51
34:DM:54:THR:O	34:DM:55:ARG:C	2.48	0.51
1:AA:1320:C:H41	18:AS:36:ARG:HE	1.57	0.51
3:CD:160:LEU:C	3:CD:160:LEU:HD13	2.30	0.51
23:BB:95:A:H1'	44:BX:41:HIS:ND1	2.26	0.51
14:CO:35:ILE:HD11	14:CO:58:MET:HB3	1.92	0.51
32:DK:16:ALA:H	32:DK:47:ILE:CG1	2.24	0.51
23:BB:2412:A:H2'	23:BB:2413:G:O4'	2.10	0.51
5:AF:100:SER:HA	17:AR:23:LYS:HD2	1.91	0.51
36:DO:4:LYS:O	36:DO:7:ARG:HG2	2.11	0.51
1:AA:1477:U:H2'	1:AA:1478:U:C6	2.46	0.51
23:DB:2665:A:C2'	23:DB:2666:C:H5'	2.40	0.51
34:DM:62:LYS:HB2	34:DM:104:GLU:CD	2.31	0.51
8:AI:90:ASP:O	8:AI:93:LEU:HG	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BH:44:ILE:O	30:BH:47:PHE:HD2	1.94	0.51
1:CA:513:C:H2'	1:CA:514:C:H6	1.75	0.51
1:CA:75:G:H3'	1:CA:76:G:H8	1.75	0.51
10:AK:36:ARG:HG2	10:AK:37:GLN:H	1.74	0.51
23:DB:1599:U:H2'	23:DB:1600:C:C6	2.45	0.51
40:BS:42:LYS:O	40:BS:46:LEU:HG	2.09	0.51
24:DV:82:TYR:HE1	24:DV:83:LYS:HE3	1.75	0.51
24:BV:16:ALA:HA	24:BV:19:ARG:HE	1.76	0.51
23:BB:2599:G:N7	25:BC:234:GLY:HA2	2.25	0.51
23:DB:441:U:H2'	23:DB:442:G:C8	2.44	0.51
29:DG:72:ASN:O	29:DG:76:ILE:HG13	2.09	0.51
1:CA:932:C:H2'	1:CA:933:G:C8	2.46	0.51
23:BB:948:C:H2'	23:BB:949:G:H8	1.76	0.51
51:D4:13:ASN:N	51:D4:13:ASN:ND2	2.58	0.51
26:BD:74:GLU:HA	26:BD:74:GLU:OE1	2.11	0.51
39:BR:42:ALA:HB3	39:BR:45:GLU:HB2	1.92	0.51
23:DB:582:A:H2'	23:DB:583:G:H8	1.75	0.51
34:BM:34:LYS:HA	34:BM:99:GLY:HA3	1.92	0.51
25:DC:131:MET:HE1	25:DC:173:LEU:HD11	1.91	0.51
23:BB:650:C:H5''	50:B3:22:LYS:HZ3	1.76	0.51
13:CN:79:SER:O	13:CN:83:VAL:HG23	2.09	0.51
37:DP:80:VAL:CG1	37:DP:80:VAL:O	2.58	0.51
43:BW:45:HIS:HA	43:BW:75:ASN:HB3	1.92	0.51
38:DQ:63:ARG:O	38:DQ:66:ALA:HB3	2.10	0.51
47:B0:46:GLY:O	47:B0:52:LYS:HB3	2.10	0.51
29:BG:15:ASP:O	29:BG:25:ILE:HA	2.11	0.51
27:DE:192:ALA:HB1	27:DE:199:MET:CG	2.40	0.51
40:DS:24:ILE:HG23	40:DS:35:ILE:HG21	1.92	0.51
37:BP:77:SER:H	37:BP:78:PRO:CD	2.23	0.51
22:BA:42:C:C6	28:BF:65:LEU:HD13	2.46	0.51
23:BB:2307:G:H2'	23:BB:2307:G:N3	2.25	0.51
32:DK:43:ILE:N	32:DK:43:ILE:HD12	2.25	0.51
1:AA:1423:G:H2'	1:AA:1424:U:O4'	2.10	0.51
28:BF:107:VAL:HB	28:BF:108:PRO:HD3	1.91	0.51
25:DC:237:ARG:HD2	25:DC:239:PHE:HE1	1.75	0.51
23:DB:1196:C:H2'	23:DB:1197:G:H8	1.75	0.51
18:CS:39:ILE:HA	18:CS:43:MET:SD	2.50	0.51
26:BD:119:ALA:HA	26:BD:123:LYS:CE	2.34	0.51
40:BS:90:LYS:N	40:BS:90:LYS:HE3	2.25	0.51
1:AA:255:G:H5'	16:AQ:17:GLU:O	2.10	0.51
29:BG:84:LYS:HB3	29:BG:132:LEU:HD12	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CL:86:VAL:CG1	11:CL:89:LEU:HD23	2.40	0.51
15:AP:51:ARG:C	15:AP:52:LEU:HD22	2.31	0.51
23:BB:2471:A:O2'	23:BB:2472:G:C8	2.55	0.51
30:BH:57:LYS:HE3	30:BH:61:VAL:HG23	1.91	0.51
2:CC:95:GLY:C	2:CC:96:VAL:HG22	2.30	0.51
23:DB:2184:A:H2'	23:DB:2185:U:C5	2.45	0.51
1:AA:590:U:OP1	7:AH:30:LYS:HE2	2.10	0.51
23:DB:2250:G:N7	34:DM:82:MET:SD	2.83	0.51
23:DB:967:U:H2'	23:DB:968:C:C6	2.45	0.51
23:BB:709:U:H2'	23:BB:710:U:C6	2.44	0.51
36:DO:86:GLY:C	36:DO:88:LYS:H	2.12	0.51
23:DB:212:G:H2'	23:DB:213:A:C8	2.46	0.51
1:CA:1299:A:N7	1:CA:1301:U:H1'	2.25	0.51
1:AA:1051:C:H2'	1:AA:1052:U:C6	2.46	0.51
1:AA:1524:C:H2'	1:AA:1525:G:C8	2.46	0.51
1:AA:731:G:OP1	1:AA:766:A:H1'	2.10	0.51
31:DJ:94:ALA:CB	31:DJ:95:ARG:HH21	2.24	0.51
23:DB:2654:A:N1	23:DB:2665:A:H5''	2.26	0.51
23:DB:2216:G:H2'	23:DB:2217:G:C8	2.45	0.51
1:AA:824:G:H2'	1:AA:825:A:H8	1.76	0.51
1:CA:1176:A:H2'	1:CA:1177:G:O4'	2.11	0.51
1:AA:423:G:H2'	1:AA:424:G:O4'	2.09	0.51
1:CA:716:A:N3	10:CK:119:GLY:HA2	2.26	0.51
1:CA:1456:A:H2'	1:CA:1457:G:H8	1.75	0.51
15:CP:52:LEU:HD21	15:CP:74:LEU:HB2	1.91	0.51
1:CA:684:U:O2'	10:CK:39:ASN:HB3	2.09	0.51
23:BB:570:G:H2'	23:BB:2030:A:N7	2.26	0.51
23:BB:2516:A:O2'	23:BB:2517:C:H5'	2.11	0.51
20:CB:53:LEU:HD11	20:CB:219:THR:OG1	2.10	0.51
26:BD:67:HIS:O	26:BD:71:ALA:HB3	2.10	0.51
23:DB:1099:G:N7	52:DI:3:LYS:HD3	2.24	0.51
23:DB:488:G:H1'	23:DB:492:A:H62	1.76	0.51
23:DB:2537:U:H2'	23:DB:2538:C:H6	1.76	0.51
34:BM:69:PRO:CB	34:BM:93:VAL:HG12	2.37	0.51
25:DC:171:VAL:HG23	25:DC:182:LYS:HZ3	1.76	0.51
23:BB:649:G:N2	50:B3:44:ARG:HH22	2.09	0.51
26:BD:12:THR:O	26:BD:13:ARG:HD2	2.11	0.51
26:BD:13:ARG:HA	26:BD:13:ARG:HH11	1.75	0.51
26:BD:108:ASP:CB	26:BD:173:GLN:HA	2.40	0.51
25:BC:143:VAL:HG12	25:BC:144:GLU:N	2.19	0.51
2:AC:77:GLY:CA	2:AC:81:GLU:HB3	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BE:150:THR:HB	27:BE:171:ASP:OD2	2.10	0.51
13:CN:71:GLY:O	13:CN:79:SER:HA	2.10	0.51
36:DO:25:ARG:O	36:DO:26:LEU:HD12	2.10	0.51
40:BS:71:VAL:HG22	40:BS:107:VAL:CG1	2.40	0.51
43:DW:24:ARG:HB3	43:DW:59:PHE:CD2	2.46	0.51
33:BL:93:ASN:O	33:BL:94:THR:HB	2.10	0.51
27:DE:188:MET:CE	27:DE:190:ALA:HB2	2.41	0.51
27:DE:189:THR:CG2	27:DE:194:LYS:HD3	2.40	0.51
21:AU:38:GLU:C	21:AU:40:PRO:HD2	2.31	0.51
21:CU:24:LYS:HD2	21:CU:25:ALA:N	2.12	0.51
23:DB:2090:A:H2'	46:DZ:49:ARG:NH2	2.25	0.51
41:DT:31:VAL:O	41:DT:32:LEU:HB2	2.09	0.51
18:AS:18:VAL:CG2	18:AS:43:MET:HG2	2.32	0.51
26:BD:16:THR:C	37:BP:80:VAL:HB	2.29	0.51
25:DC:27:LYS:HG2	25:DC:81:GLU:N	2.24	0.51
28:DF:45:ASP:O	28:DF:46:LYS:HG3	2.09	0.51
23:BB:1429:G:O2'	23:BB:1430:G:H5'	2.09	0.51
47:D0:36:LYS:HB2	47:D0:41:HIS:ND1	2.24	0.51
23:DB:1656:C:H2'	23:DB:1657:U:H6	1.76	0.51
29:BG:34:ARG:HG3	29:BG:35:THR:N	2.25	0.51
30:BH:6:LEU:H	30:BH:16:GLY:N	2.09	0.51
6:AG:30:MET:SD	6:AG:35:LYS:HB2	2.50	0.51
5:AF:32:ALA:HB1	5:AF:70:VAL:HG11	1.93	0.51
36:BO:43:ASN:HA	36:BO:46:GLU:OE2	2.10	0.51
1:CA:923:A:OP1	4:CE:25:LYS:HB3	2.10	0.51
10:AK:92:ARG:CB	10:AK:92:ARG:HH11	2.23	0.51
33:BL:14:LYS:HA	33:BL:14:LYS:NZ	2.24	0.51
42:DU:28:LEU:HD13	42:DU:31:GLY:N	2.25	0.51
42:DU:38:ILE:HG13	42:DU:62:ALA:HB1	1.93	0.51
1:CA:838:G:H2'	1:CA:839:C:O4'	2.10	0.51
23:BB:2839:G:H2'	23:BB:2840:C:H6	1.75	0.51
1:AA:1247:U:O2'	1:AA:1248:A:H5'	2.10	0.51
1:CA:33:A:H2'	1:CA:34:C:C6	2.46	0.51
11:AL:106:VAL:CG2	11:AL:116:TYR:HB3	2.40	0.51
15:AP:9:HIS:CE1	15:AP:29:ASN:HB2	2.44	0.51
34:DM:52:ALA:O	34:DM:55:ARG:HB2	2.09	0.51
23:BB:956:G:H1'	34:BM:81:ARG:HH22	1.76	0.51
6:CG:59:GLU:HA	6:CG:62:GLU:CD	2.30	0.51
23:BB:2210:U:N3	23:BB:2212:A:N7	2.58	0.51
1:CA:1053:G:H4'	1:CA:1054:C:H5'	1.92	0.51
1:CA:587:G:H4'	7:CH:3:GLN:HA	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:21:G:O2'	22:BA:22:U:H5'	2.11	0.51
1:CA:600:A:H2'	1:CA:601:G:C8	2.46	0.51
23:DB:286:U:H2'	23:DB:287:G:C8	2.46	0.51
23:BB:1854:A:N6	23:BB:1888:G:H1'	2.25	0.51
2:CC:45:GLU:HG2	2:CC:85:LYS:NZ	2.25	0.51
2:CC:65:VAL:HG21	2:CC:90:VAL:HG11	1.93	0.51
23:DB:17:G:H2'	23:DB:18:U:C6	2.46	0.51
9:CJ:41:PRO:O	9:CJ:42:LEU:HB2	2.10	0.51
9:CJ:82:LYS:C	9:CJ:84:VAL:H	2.14	0.51
23:BB:2297:A:H61	23:BB:2319:G:C3'	2.23	0.51
23:BB:185:G:H2'	23:BB:186:G:O4'	2.10	0.51
23:BB:1231:U:H2'	23:BB:1232:G:H8	1.75	0.51
28:DF:162:ASP:O	28:DF:166:ARG:HG3	2.10	0.51
23:DB:2247:A:H2'	23:DB:2248:C:H6	1.75	0.51
1:AA:219:U:H2'	1:AA:220:G:C8	2.46	0.51
22:DA:65:U:O2'	22:DA:66:A:H5'	2.10	0.51
23:DB:215:G:H4'	23:DB:216:A:OP1	2.10	0.51
23:BB:611:C:H2'	23:BB:612:G:O4'	2.10	0.51
49:D2:33:ARG:NE	49:D2:33:ARG:HA	2.26	0.51
23:BB:1633:G:O2'	23:BB:1634:A:H5''	2.10	0.51
50:D3:15:LYS:HD3	50:D3:19:GLY:HA2	1.93	0.51
23:BB:2869:G:H2'	23:BB:2870:C:C6	2.46	0.51
11:AL:103:CYS:SG	11:AL:104:SER:N	2.83	0.51
1:AA:610:U:O2	1:AA:610:U:O4'	2.28	0.51
23:BB:236:C:O2'	23:BB:237:C:H5'	2.09	0.51
1:AA:975:A:H5''	1:AA:976:G:O5'	2.10	0.51
38:BQ:48:ASP:O	38:BQ:52:ARG:HB2	2.11	0.51
27:BE:43:THR:HG1	27:BE:44:ARG:HH21	1.59	0.51
34:BM:96:ILE:O	34:BM:97:GLN:HG3	2.10	0.51
46:BZ:58:ASP:CG	46:BZ:63:ARG:HH11	2.13	0.51
33:BL:62:PRO:C	50:B3:24:LYS:HD3	2.31	0.51
23:BB:1132:U:C5	31:BJ:85:LYS:HE2	2.46	0.51
23:BB:2578:G:H1'	26:BD:145:SER:CB	2.20	0.51
36:DO:35:ILE:CG1	36:DO:106:LEU:HD12	2.40	0.51
31:DJ:136:GLN:N	31:DJ:137:PRO:CD	2.74	0.51
31:DJ:49:ASP:O	31:DJ:50:THR:CB	2.58	0.51
47:B0:32:THR:OG1	47:B0:42:ILE:HD12	2.10	0.51
40:BS:29:VAL:HG21	40:BS:69:LEU:C	2.30	0.51
27:DE:115:GLN:HG2	27:DE:184:ASP:O	2.10	0.51
41:BT:5:GLU:CG	41:BT:6:ARG:H	2.23	0.51
5:CF:38:ARG:NH2	5:CF:63:ASN:HD21	2.08	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BW:69:GLU:O	43:BW:69:GLU:HG2	2.10	0.51
13:AN:17:ASP:HA	13:AN:21:ALA:HB2	1.92	0.51
12:AM:18:LEU:O	12:AM:21:ILE:HG13	2.10	0.51
1:CA:674:G:H2'	1:CA:675:A:H8	1.74	0.51
28:BF:66:ILE:HG22	28:BF:83:PRO:HB2	1.91	0.51
43:DW:60:ALA:HB3	43:DW:80:SER:CA	2.34	0.51
16:CQ:68:LYS:O	16:CQ:70:LYS:N	2.43	0.51
26:BD:45:TYR:CZ	26:BD:83:ARG:HG3	2.45	0.51
29:DG:10:VAL:HG21	29:DG:44:HIS:NE2	2.26	0.51
23:BB:125:A:OP2	49:B2:19:ARG:NH2	2.44	0.51
33:DL:25:SER:C	33:DL:27:LEU:N	2.63	0.51
27:BE:17:THR:O	27:BE:18:THR:HG22	2.10	0.51
36:BO:2:ASP:HA	36:BO:5:SER:O	2.10	0.51
23:BB:1164:C:H2'	23:BB:1165:A:C8	2.45	0.51
1:AA:33:A:H2'	1:AA:34:C:C6	2.46	0.51
3:CD:58:GLN:NE2	3:CD:58:GLN:HA	2.21	0.51
39:DR:86:GLN:HE21	39:DR:87:GLN:NE2	2.09	0.51
1:CA:17:U:H2'	1:CA:18:C:H6	1.71	0.51
10:AK:83:VAL:HG21	10:AK:109:ILE:HG12	1.92	0.51
33:DL:55:MET:CB	33:DL:56:PRO:HD3	2.38	0.51
1:AA:266:G:O2'	1:AA:267:C:H3'	2.10	0.51
31:BJ:34:ARG:HD3	31:BJ:39:LYS:HB2	1.92	0.51
35:DN:86:ARG:CZ	35:DN:117:ASP:HA	2.41	0.51
1:CA:36:C:H2'	1:CA:37:U:O4'	2.10	0.51
38:DQ:87:VAL:CB	39:DR:54:VAL:HG11	2.39	0.51
1:CA:472:U:H2'	1:CA:473:U:C6	2.46	0.51
29:DG:29:ASN:CB	29:DG:78:VAL:HA	2.41	0.51
17:AR:62:ARG:HD2	17:AR:69:TYR:CD2	2.46	0.51
38:BQ:39:ILE:HG23	39:BR:80:ARG:HD3	1.91	0.51
1:AA:17:U:H2'	1:AA:18:C:H6	1.74	0.51
20:CB:172:ILE:CD1	20:CB:182:VAL:HG11	2.41	0.51
32:DK:18:ARG:HB2	32:DK:45:GLU:CG	2.41	0.51
34:BM:84:LYS:H	34:BM:84:LYS:HZ2	1.58	0.51
17:AR:23:LYS:C	17:AR:25:ILE:H	2.14	0.51
23:DB:20:C:O2'	23:DB:21:A:H5'	2.10	0.51
20:CB:96:LEU:HD11	20:CB:146:SER:HB2	1.93	0.51
49:B2:17:GLY:HA2	49:B2:21:ARG:HH12	1.76	0.51
1:CA:1337:G:H5''	1:CA:1338:G:OP1	2.11	0.51
1:AA:90:C:H2'	1:AA:91:U:H6	1.76	0.51
38:DQ:116:LEU:HD22	38:DQ:116:LEU:N	2.25	0.51
23:BB:1571:A:H2'	23:BB:1572:A:C8	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:208:C:H2'	23:BB:209:C:C6	2.46	0.51
32:DK:61:VAL:CG1	32:DK:87:LEU:HD11	2.41	0.51
23:DB:2153:C:H2'	23:DB:2154:A:C8	2.45	0.51
23:BB:2491:U:H5''	23:BB:2570:G:H5''	1.93	0.51
23:BB:523:C:O2'	23:BB:524:G:H5'	2.11	0.51
23:DB:2439:A:C8	23:DB:2586:U:H4'	2.46	0.51
1:CA:708:C:H2'	1:CA:709:U:C6	2.45	0.51
23:DB:2862:G:H2'	23:DB:2863:C:C6	2.45	0.51
1:CA:633:G:H2'	1:CA:634:C:C6	2.46	0.51
24:BV:10:LYS:HG2	24:BV:11:GLU:HG3	1.93	0.51
1:AA:1033:G:H2'	1:AA:1034:G:O4'	2.10	0.51
24:DV:53:LYS:NZ	24:DV:53:LYS:HB3	2.26	0.51
38:BQ:92:LYS:O	38:BQ:93:ILE:CG2	2.59	0.51
23:DB:448:U:H5	23:DB:583:G:N2	2.08	0.51
24:BV:26:PHE:CE2	24:BV:44:HIS:HA	2.44	0.51
25:DC:155:ARG:O	25:DC:157:ALA:N	2.43	0.51
23:DB:1817:G:H5''	25:DC:86:ARG:NH1	2.25	0.51
50:B3:29:ARG:HA	50:B3:33:THR:HG23	1.91	0.51
37:BP:29:VAL:O	37:BP:31:VAL:HG23	2.10	0.51
37:BP:83:ILE:HB	37:BP:85:VAL:HG23	1.93	0.51
26:BD:142:VAL:C	26:BD:144:GLY:H	2.13	0.51
23:BB:969:G:H2'	23:BB:970:U:H6	1.73	0.51
27:BE:138:LEU:HD21	27:BE:167:VAL:HG21	1.92	0.51
26:DD:15:PHE:HA	37:DP:79:VAL:CG1	2.38	0.51
31:DJ:45:THR:O	31:DJ:47:HIS:N	2.42	0.51
31:DJ:7:LYS:HG3	31:DJ:48:VAL:CG2	2.41	0.51
32:BK:85:VAL:O	32:BK:87:LEU:HD23	2.11	0.51
29:BG:25:ILE:HG23	29:BG:25:ILE:O	2.10	0.51
23:DB:2412:A:H2'	23:DB:2413:G:O4'	2.09	0.51
27:DE:187:VAL:HG23	27:DE:188:MET:H	1.75	0.51
12:AM:44:ILE:HD12	12:AM:45:SER:N	2.23	0.51
1:AA:979:C:H2'	1:AA:980:C:O4'	2.10	0.51
37:BP:80:VAL:O	37:BP:80:VAL:HG13	2.11	0.51
25:DC:29:PHE:HE1	25:DC:81:GLU:HG3	1.75	0.51
13:CN:26:LEU:HD12	13:CN:29:ILE:HD12	1.91	0.51
28:DF:40:GLY:C	28:DF:41:GLU:HG3	2.30	0.51
30:DH:86:ASP:OD2	30:DH:89:LYS:HB2	2.11	0.51
11:AL:31:GLY:HA3	11:AL:54:VAL:CG1	2.41	0.51
23:BB:1164:C:H2'	23:BB:1165:A:H8	1.76	0.51
23:BB:2527:C:H1'	51:B4:1:MET:CB	2.40	0.51
1:CA:1072:G:H2'	1:CA:1073:U:H6	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AG:72:VAL:HB	6:AG:144:ALA:HB3	1.92	0.51
18:CS:18:VAL:C	18:CS:42:ASN:HD21	2.14	0.51
25:DC:251:THR:O	25:DC:252:LYS:CB	2.56	0.51
48:D1:27:ARG:HB2	48:D1:31:GLU:HB3	1.93	0.51
42:DU:8:ASP:O	42:DU:10:VAL:N	2.44	0.51
3:CD:13:ARG:HG3	3:CD:13:ARG:O	2.10	0.51
1:AA:1460:C:H2'	1:AA:1461:G:O4'	2.11	0.51
3:AD:58:GLN:OE1	3:AD:62:ARG:HG3	2.09	0.51
2:CC:11:LEU:HD22	2:CC:17:TRP:CD1	2.46	0.51
1:CA:1009:U:H2'	1:CA:1010:U:C5	2.46	0.51
1:CA:980:C:H2'	1:CA:981:U:H5'	1.93	0.51
6:AG:45:ALA:HB2	6:AG:116:ALA:O	2.10	0.51
23:BB:2186:G:H2'	23:BB:2187:U:O4'	2.09	0.51
23:DB:832:U:H2'	23:DB:833:A:C8	2.46	0.51
35:DN:63:ARG:HA	35:DN:80:PHE:CZ	2.45	0.51
23:BB:2600:A:H62	25:BC:235:GLU:HB3	1.75	0.51
23:DB:416:U:H2'	23:DB:417:C:C6	2.45	0.51
1:CA:1496:C:H2'	1:CA:1497:G:O4'	2.11	0.51
23:DB:811:U:H3'	33:DL:32:GLY:O	2.11	0.51
23:DB:1583:A:H4'	23:DB:1585:C:N3	2.26	0.51
23:BB:1061:U:H4'	23:BB:1070:A:O3'	2.11	0.51
1:CA:219:U:H2'	1:CA:220:G:C8	2.46	0.51
1:CA:1234:C:H2'	1:CA:1235:U:C6	2.45	0.51
1:AA:49:U:O2'	1:AA:50:A:H2'	2.11	0.51
23:DB:1227:G:OP2	38:DQ:15:LYS:HE2	2.11	0.51
1:CA:803:G:H2'	1:CA:804:U:C6	2.46	0.51
3:AD:71:PHE:O	3:AD:74:TYR:HB2	2.11	0.51
1:CA:1082:A:O2'	1:CA:1083:U:H5'	2.11	0.51
23:DB:2563:U:H5''	32:DK:27:GLY:H	1.76	0.51
23:DB:1444:G:H2'	23:DB:1445:G:C8	2.45	0.51
28:DF:78:ILE:HG23	28:DF:82:TYR:HD1	1.75	0.51
35:BN:30:ARG:HB3	35:BN:31:HIS:ND1	2.26	0.51
4:CE:67:ARG:HH11	4:CE:67:ARG:HB2	1.75	0.51
3:AD:115:GLN:HE21	3:AD:119:HIS:CE1	2.28	0.51
23:DB:765:C:H2'	23:DB:766:U:C6	2.46	0.51
23:BB:1599:U:H2'	23:BB:1600:C:C6	2.45	0.51
23:BB:2455:G:H2'	23:BB:2456:C:C6	2.46	0.51
23:BB:1334:G:O2'	23:BB:1335:C:H5'	2.11	0.51
23:DB:1099:G:OP2	52:DI:3:LYS:HA	2.11	0.51
34:BM:34:LYS:O	34:BM:124:LEU:HB2	2.11	0.51
34:BM:71:LYS:HZ3	34:BM:91:TYR:HD2	1.59	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BV:80:HIS:CD2	24:BV:81:PRO:HD2	2.46	0.51
37:BP:61:ARG:NH2	37:BP:75:THR:HB	2.26	0.51
27:BE:153:LEU:HD11	27:BE:201:ALA:HA	1.93	0.51
43:BW:59:PHE:HE2	43:BW:81:ILE:HD13	1.75	0.51
45:DY:37:ARG:CZ	45:DY:37:ARG:HA	2.41	0.51
31:DJ:98:GLU:CD	31:DJ:98:GLU:H	2.14	0.51
32:BK:87:LEU:HA	32:BK:95:ILE:H	1.76	0.51
20:AB:53:LEU:HD12	20:AB:219:THR:HG21	1.92	0.51
20:AB:67:LEU:HD11	20:AB:157:PRO:CB	2.30	0.51
23:DB:946:C:H2'	23:DB:947:A:C8	2.41	0.51
27:DE:1:MET:HG3	27:DE:18:THR:HG1	1.74	0.51
41:BT:3:ARG:HH21	41:BT:8:LEU:CD2	2.24	0.51
41:DT:55:VAL:HG22	41:DT:56:GLU:N	2.23	0.51
25:BC:53:ILE:HD13	25:BC:218:THR:CG2	2.39	0.51
28:BF:151:LEU:CD2	28:BF:153:ILE:HD11	2.36	0.51
1:AA:408:A:H3'	1:AA:409:U:H6	1.74	0.51
23:DB:1790:C:O2'	25:DC:207:ALA:HB2	2.11	0.51
26:BD:35:THR:HG22	26:BD:46:ARG:NH2	2.26	0.51
44:DX:44:LYS:HG3	44:DX:47:ARG:CB	2.40	0.51
15:CP:54:LEU:HD22	15:CP:80:LYS:HZ2	1.75	0.51
51:B4:9:LYS:O	51:B4:25:VAL:HG13	2.10	0.51
33:BL:67:THR:O	33:BL:68:SER:CB	2.59	0.51
33:DL:108:ALA:O	33:DL:109:LYS:HB2	2.11	0.51
32:DK:20:MET:HG2	32:DK:21:CYS:O	2.11	0.51
23:DB:138:U:H2'	23:DB:140:C:C6	2.46	0.51
1:CA:865:A:C2	1:CA:918:A:H4'	2.46	0.51
42:BU:44:HIS:HB2	42:BU:55:GLY:C	2.31	0.51
8:CI:90:ASP:HB3	8:CI:93:LEU:HG	1.93	0.51
8:CI:98:ARG:HA	8:CI:103:VAL:CG2	2.40	0.51
22:DA:48:U:H2'	22:DA:49:C:H6	1.74	0.51
15:CP:3:THR:HB	15:CP:66:THR:O	2.10	0.51
29:DG:148:ARG:HA	29:DG:161:VAL:CG1	2.41	0.51
23:DB:2472:G:H2'	23:DB:2475:C:H42	1.76	0.51
29:BG:10:VAL:HG13	29:BG:10:VAL:O	2.11	0.51
3:AD:131:ILE:O	3:AD:134:TYR:HB2	2.10	0.51
1:CA:195:A:H1'	1:CA:222:C:O2'	2.10	0.51
1:CA:1226:C:C5	12:CM:102:LYS:HB3	2.46	0.51
1:CA:1054:C:H1'	1:CA:1196:A:C5	2.46	0.51
23:DB:310:A:H5''	42:DU:14:THR:HG21	1.91	0.51
1:AA:1285:A:N6	1:AA:1355:G:H4'	2.26	0.51
2:CC:122:GLN:HB3	2:CC:127:VAL:HG11	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:90:VAL:HG12	6:CG:91:ARG:H	1.76	0.51
1:CA:626:G:H2'	1:CA:627:G:H8	1.75	0.51
28:DF:120:SER:HB3	28:DF:127:TYR:CE1	2.45	0.51
23:DB:152:A:H2'	23:DB:153:U:C6	2.46	0.51
1:AA:1434:A:H2'	1:AA:1435:G:C8	2.46	0.51
23:BB:2439:A:C8	23:BB:2586:U:H4'	2.46	0.51
38:BQ:21:LYS:C	38:BQ:23:TYR:H	2.12	0.51
1:AA:642:A:H2'	1:AA:643:C:H6	1.76	0.51
1:AA:1190:G:O2'	2:AC:2:GLN:HB2	2.10	0.51
12:AM:27:THR:O	12:AM:30:LYS:HB3	2.11	0.51
23:DB:2379:G:H2'	23:DB:2380:C:C6	2.45	0.51
1:AA:300:A:H2'	1:AA:301:G:O4'	2.11	0.51
1:AA:216:U:H2'	1:AA:217:C:C6	2.46	0.51
23:BB:1292:G:H2'	23:BB:1293:C:C6	2.46	0.51
1:AA:751:U:H2'	1:AA:752:G:O4'	2.11	0.51
37:DP:83:ILE:HG12	37:DP:85:VAL:HG23	1.92	0.51
23:BB:2425:A:H5'	23:BB:2427:C:O4'	2.10	0.51
1:AA:939:G:H4'	6:AG:101:ARG:NH2	2.25	0.51
23:BB:2483:C:H4'	34:BM:51:ARG:HH12	1.76	0.51
23:BB:443:A:H5"	27:BE:44:ARG:NH1	2.24	0.51
23:BB:443:A:OP1	27:BE:44:ARG:NH2	2.44	0.51
27:BE:44:ARG:O	27:BE:45:ALA:C	2.49	0.51
34:BM:42:THR:HG22	34:BM:45:GLN:HB2	1.93	0.51
24:BV:23:ALA:O	24:BV:24:ASN:HB2	2.10	0.51
46:BZ:59:ARG:HG3	46:BZ:62:LYS:CG	2.41	0.51
46:BZ:66:ILE:C	46:BZ:68:GLY:H	2.13	0.51
46:BZ:66:ILE:C	46:BZ:68:GLY:N	2.64	0.51
25:DC:156:SER:O	25:DC:158:GLY:N	2.43	0.51
33:BL:63:LYS:HG3	50:B3:11:LYS:HZ2	1.76	0.51
33:BL:56:PRO:O	33:BL:60:ARG:N	2.44	0.51
26:BD:206:ALA:C	26:BD:208:LYS:H	2.15	0.51
23:BB:2511:U:H2'	23:BB:2512:C:O4'	2.11	0.51
33:DL:118:THR:O	33:DL:120:VAL:HG23	2.11	0.51
33:DL:142:ILE:O	33:DL:142:ILE:HD13	2.11	0.51
23:DB:871:U:H2'	23:DB:872:U:C6	2.46	0.51
23:DB:1021:A:H61	23:DB:1142:A:H61	1.59	0.51
30:DH:19:VAL:HG22	30:DH:20:ASN:H	1.75	0.51
31:DJ:23:LYS:O	31:DJ:25:LEU:HD13	2.10	0.51
38:DQ:69:ARG:HH11	38:DQ:69:ARG:CB	2.22	0.51
35:BN:97:ILE:CD1	35:BN:113:ILE:HG12	2.41	0.51
30:BH:3:VAL:HB	30:BH:37:VAL:CG2	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DW:42:THR:HG22	43:DW:67:LYS:O	2.10	0.51
12:AM:106:ARG:CZ	12:AM:109:LYS:HD2	2.40	0.51
33:BL:118:THR:N	33:BL:119:PRO:HD3	2.20	0.51
31:BJ:125:TYR:CE2	31:BJ:134:ALA:HB2	2.45	0.51
10:AK:125:LYS:O	10:AK:126:ARG:O	2.29	0.51
5:CF:52:ASN:O	5:CF:53:LYS:HB3	2.10	0.51
17:CR:62:ARG:C	17:CR:64:LEU:H	2.14	0.51
23:BB:2305:U:H3	28:BF:150:GLY:HA3	1.75	0.51
34:DM:100:LYS:O	34:DM:101:VAL:HG23	2.11	0.51
34:DM:33:LEU:CD1	34:DM:124:LEU:HD22	2.34	0.51
15:AP:40:ASN:HD21	15:AP:42:ILE:HG13	1.75	0.51
8:AI:49:GLN:HE21	8:AI:79:ARG:HD2	1.75	0.51
1:CA:1060:U:OP1	9:CJ:53:ILE:HD11	2.11	0.51
33:DL:77:ILE:HD13	33:DL:110:VAL:CA	2.41	0.51
33:DL:107:PHE:HE2	33:DL:126:ARG:HB2	1.76	0.51
33:DL:77:ILE:H	33:DL:77:ILE:HD12	1.76	0.51
39:DR:80:ARG:HB3	39:DR:86:GLN:O	2.11	0.51
1:CA:1002:G:H2'	1:CA:1003:G:O4'	2.11	0.51
23:DB:2783:U:H2'	23:DB:2784:U:H6	1.76	0.51
10:AK:88:PRO:HD3	21:AU:28:LEU:HD22	1.91	0.51
21:AU:5:VAL:HG12	21:AU:6:ARG:N	2.25	0.51
23:BB:1645:G:H5''	23:BB:1646:C:H5'	1.93	0.51
23:DB:585:G:H2'	23:DB:1251:C:H42	1.76	0.51
28:BF:126:ASN:OD1	28:BF:156:THR:HG23	2.11	0.51
23:DB:2257:U:H5'	43:DW:5:ALA:CB	2.40	0.51
1:CA:34:C:H2'	1:CA:35:G:C8	2.46	0.51
1:CA:34:C:H2'	1:CA:35:G:H8	1.76	0.51
23:BB:445:C:O2'	23:BB:446:G:H5'	2.10	0.51
23:DB:718:A:H3'	23:DB:719:C:H6	1.76	0.51
10:AK:80:ASN:HD21	10:AK:107:THR:HG23	1.76	0.51
20:AB:101:THR:HG23	20:AB:102:ASN:H	1.75	0.51
50:D3:33:THR:HG23	50:D3:36:ALA:CB	2.41	0.51
23:DB:794:A:H2'	23:DB:795:C:H6	1.71	0.51
3:AD:116:LEU:HB3	3:AD:122:ILE:HD11	1.93	0.51
32:DK:16:ALA:H	32:DK:47:ILE:HG13	1.75	0.51
1:AA:711:G:O2'	1:AA:712:A:H5'	2.11	0.51
3:AD:172:VAL:HA	3:AD:178:GLU:O	2.11	0.51
1:CA:1335:U:H5''	1:CA:1337:G:N2	2.26	0.51
23:BB:2219:U:O2'	23:BB:2220:U:H5'	2.11	0.51
1:AA:337:G:H2'	1:AA:338:A:C8	2.45	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)
1:AA:275:G:O5'	16:AQ:15:LYS:HG2	2.11	0.51
23:DB:2299:U:H2'	23:DB:2300:C:H6	1.76	0.51
26:BD:124:ARG:NH2	26:BD:163:GLY:HA3	2.25	0.51
1:AA:309:A:H2'	1:AA:310:G:H8	1.76	0.51
23:BB:1107:G:H2'	23:BB:1108:U:O4'	2.10	0.51
23:BB:2344:U:H4'	23:BB:2345:G:OP1	2.09	0.51
21:AU:43:GLU:HA	21:AU:43:GLU:OE1	2.10	0.51
3:AD:64:TYR:H	3:AD:64:TYR:HD1	1.59	0.51
23:DB:1287:A:O2'	23:DB:1288:G:H5'	2.10	0.51
1:CA:1404:C:H2'	1:CA:1405:G:C8	2.45	0.51
1:CA:1326:U:O2'	1:CA:1327:C:H5'	2.11	0.51
6:AG:66:GLU:HA	6:AG:69:ARG:HE	1.75	0.51
25:DC:136:VAL:C	25:DC:165:ALA:HA	2.32	0.51
33:BL:55:MET:HG2	33:BL:56:PRO:CD	2.22	0.51
23:BB:2512:C:H2'	23:BB:2513:A:O4'	2.11	0.51
2:AC:78:LYS:HE3	2:AC:81:GLU:OE2	2.11	0.51
23:DB:1022:G:N2	23:DB:1142:A:N1	2.59	0.51
23:DB:851:C:H2'	23:DB:852:U:C6	2.46	0.51
5:CF:62:MET:HG3	5:CF:64:VAL:CG2	2.41	0.51
47:B0:29:VAL:HB	47:B0:36:LYS:HD2	1.93	0.51
43:DW:57:THR:HG22	43:DW:77:LYS:HG2	1.93	0.51
43:DW:76:ARG:C	43:DW:78:PHE:H	2.14	0.51
33:BL:81:ASP:HB3	33:BL:86:GLU:OE2	2.10	0.51
18:AS:35:ARG:HG2	18:AS:50:VAL:CG1	2.39	0.51
12:CM:55:LEU:O	12:CM:59:VAL:HG12	2.11	0.51
24:DV:21:ARG:NH2	24:DV:87:GLN:HB3	2.26	0.51
13:AN:11:LYS:HZ2	13:AN:11:LYS:HA	1.76	0.51
33:DL:19:LEU:O	33:DL:21:ARG:HG2	2.09	0.51
1:AA:663:A:O2'	1:AA:664:G:H5'	2.11	0.51
36:BO:1:MET:HG2	36:BO:2:ASP:H	1.76	0.51
1:CA:1073:U:O2'	1:CA:1074:G:H5'	2.10	0.51
16:AQ:60:ILE:N	16:AQ:60:ILE:HD13	2.25	0.51
42:BU:43:LYS:HD2	42:BU:44:HIS:N	2.26	0.51
3:AD:169:TRP:HB3	3:AD:183:ARG:HH21	1.76	0.51
10:CK:70:ALA:HB1	10:CK:74:LYS:HB2	1.93	0.51
1:AA:920:U:H2'	1:AA:921:U:H6	1.74	0.51
23:BB:1568:G:C5'	25:BC:60:ALA:HB3	2.41	0.51
16:CQ:6:THR:HG23	16:CQ:59:GLU:OE1	2.11	0.51
23:DB:863:A:H2'	23:DB:864:G:H8	1.76	0.51
20:CB:22:TRP:HA	20:CB:188:THR:HB	1.92	0.51
23:DB:2649:C:H2'	23:DB:2650:U:H6	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:85:LYS:HG3	2:CC:86:LEU:N	2.26	0.51
23:DB:1328:A:H2'	23:DB:1330:C:C4	2.46	0.51
13:AN:27:LYS:HD2	13:AN:28:ALA:N	2.26	0.51
23:BB:2712:C:H3'	23:BB:2714:G:H5''	1.92	0.51
1:AA:1332:A:H2'	1:AA:1333:A:H8	1.75	0.51
1:AA:251:G:H4'	1:AA:252:U:H5'	1.93	0.51
1:CA:1177:G:H3'	1:CA:1178:G:C8	2.46	0.51
1:CA:693:G:H2'	1:CA:694:A:O4'	2.11	0.51
1:CA:75:G:H2'	1:CA:76:G:O4'	2.11	0.51
1:CA:1426:G:H2'	1:CA:1427:C:H6	1.75	0.51
7:AH:60:LEU:HD12	7:AH:60:LEU:N	2.26	0.51
2:CC:88:LYS:O	2:CC:92:ASP:HB2	2.11	0.51
23:DB:1213:A:N6	23:DB:1236:G:H1'	2.26	0.51
1:AA:685:G:O4'	10:AK:40:ALA:HB3	2.11	0.51
23:DB:331:C:O2'	23:DB:332:A:H5'	2.11	0.51
34:DM:83:GLY:O	34:DM:84:LYS:HB2	2.10	0.51
23:BB:1011:G:H5''	38:BQ:76:SER:OG	2.11	0.51
32:BK:14:SER:O	32:BK:52:VAL:HB	2.11	0.51
23:BB:1400:U:H2'	23:BB:1401:G:C8	2.46	0.51
23:DB:277:G:H2'	23:DB:277:G:N3	2.26	0.51
33:DL:41:ARG:HA	33:DL:41:ARG:CZ	2.41	0.51
23:BB:1215:G:O2'	23:BB:1216:G:H5'	2.11	0.51
46:BZ:15:SER:CB	46:BZ:23:LYS:HD3	2.41	0.50
25:DC:182:LYS:HG3	25:DC:264:LYS:NZ	2.26	0.50
23:BB:1132:U:H5''	31:BJ:85:LYS:NZ	2.25	0.50
27:BE:143:LEU:HD21	27:BE:185:LYS:HD3	1.92	0.50
26:DD:17:GLU:HG3	37:DP:80:VAL:CG1	2.36	0.50
23:DB:2683:C:OP1	37:DP:55:HIS:CG	2.64	0.50
34:DM:5:LYS:HE3	34:DM:6:ARG:N	2.26	0.50
45:DY:6:ILE:O	45:DY:34:THR:HA	2.11	0.50
36:DO:40:ILE:HD13	36:DO:40:ILE:N	2.25	0.50
31:DJ:121:LYS:N	31:DJ:121:LYS:HE3	2.26	0.50
31:DJ:41:LYS:HZ3	31:DJ:44:TYR:C	2.15	0.50
32:BK:104:THR:HB	32:BK:106:GLU:OE1	2.10	0.50
27:DE:115:GLN:HG3	27:DE:184:ASP:OD2	2.10	0.50
2:AC:21:TRP:HB3	2:AC:58:ARG:HB2	1.93	0.50
1:CA:1370:G:O2'	1:CA:1371:G:H5'	2.11	0.50
33:DL:18:ARG:HG3	33:DL:18:ARG:HH11	1.76	0.50
31:DJ:77:HIS:N	31:DJ:85:LYS:HE3	2.25	0.50
14:CO:84:LEU:HB3	14:CO:86:LEU:HD13	1.93	0.50
10:CK:122:PRO:HG2	21:CU:34:ARG:HA	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1312:U:OP2	41:BT:66:LYS:HG2	2.11	0.50
1:CA:1060:U:H2'	1:CA:1061:G:C8	2.46	0.50
4:CE:89:THR:O	4:CE:91:SER:N	2.44	0.50
1:AA:1206:G:H4'	2:AC:192:TYR:HA	1.93	0.50
33:BL:38:GLN:H	33:BL:41:ARG:HD2	1.76	0.50
34:DM:133:LYS:CD	34:DM:134:THR:H	2.21	0.50
3:CD:2:ARG:HH11	3:CD:114:ARG:HD3	1.74	0.50
35:DN:72:ASP:OD1	35:DN:74:GLU:HB3	2.11	0.50
15:AP:71:VAL:CA	15:AP:74:LEU:HG	2.41	0.50
38:DQ:25:GLY:O	38:DQ:29:ARG:HG2	2.11	0.50
1:CA:376:G:H4'	15:CP:5:ARG:HD3	1.93	0.50
32:DK:35:VAL:HG21	32:DK:69:VAL:CG2	2.41	0.50
28:DF:172:PHE:O	28:DF:173:ASP:C	2.49	0.50
23:DB:2306:C:H3'	23:DB:2307:G:H5''	1.91	0.50
23:DB:30:G:H2'	23:DB:31:C:H6	1.76	0.50
23:DB:419:U:H2'	23:DB:420:C:C6	2.46	0.50
40:DS:81:SER:HB3	40:DS:99:ARG:HA	1.93	0.50
23:BB:2049:G:O2'	23:BB:2050:C:H5'	2.11	0.50
23:DB:1939:U:O2	23:DB:1967:C:H4'	2.11	0.50
1:AA:214:C:H2'	1:AA:215:C:H6	1.76	0.50
23:BB:532:A:H4'	23:BB:533:G:C8	2.46	0.50
23:DB:1400:U:H2'	23:DB:1401:G:H8	1.77	0.50
23:DB:441:U:H2'	23:DB:442:G:H8	1.77	0.50
1:CA:1516:G:H2'	1:CA:1518:A:OP2	2.10	0.50
1:AA:746:A:H2'	1:AA:747:A:C8	2.45	0.50
1:CA:179:A:H2'	1:CA:180:U:C6	2.47	0.50
33:DL:99:ASN:C	33:DL:100:ILE:HG13	2.31	0.50
23:BB:2400:G:O2'	23:BB:2401:U:H5'	2.12	0.50
23:DB:1274:A:N3	23:DB:1297:C:H1'	2.26	0.50
21:CU:41:THR:HA	21:CU:45:LYS:HD3	1.92	0.50
1:AA:613:C:H2'	1:AA:614:C:C6	2.46	0.50
27:DE:176:ASP:HB3	27:DE:179:SER:OG	2.11	0.50
3:AD:98:ASP:CG	3:AD:132:ALA:HB1	2.30	0.50
20:AB:68:PHE:HA	20:AB:161:PHE:O	2.10	0.50
20:CB:132:GLU:HA	20:CB:135:MET:HE3	1.93	0.50
34:BM:42:THR:HG23	34:BM:45:GLN:H	1.77	0.50
26:BD:175:LEU:HB3	26:BD:189:VAL:CG1	2.41	0.50
26:BD:170:VAL:HG21	26:BD:194:PRO:CG	2.42	0.50
37:BP:61:ARG:NH2	37:BP:63:ILE:HD11	2.25	0.50
26:BD:128:ARG:CZ	26:BD:130:GLN:CD	2.80	0.50
26:BD:128:ARG:HH12	26:BD:130:GLN:NE2	2.09	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:5:VAL:HG21	26:DD:28:GLU:HA	1.92	0.50
37:DP:47:ILE:CG2	37:DP:63:ILE:HG23	2.34	0.50
33:DL:61:LEU:N	33:DL:62:PRO:CD	2.73	0.50
23:DB:458:G:H2'	23:DB:469:G:O6	2.11	0.50
39:DR:10:LYS:HD3	39:DR:41:ILE:HD11	1.93	0.50
43:DW:33:GLY:O	43:DW:66:VAL:HG23	2.11	0.50
25:DC:53:ILE:HD13	25:DC:218:THR:HG23	1.92	0.50
23:DB:2313:C:H2'	23:DB:2314:A:H8	1.75	0.50
23:BB:298:G:H2'	23:BB:339:U:O4	2.12	0.50
5:CF:38:ARG:NH2	5:CF:96:VAL:HB	2.26	0.50
1:CA:1202:U:H1'	13:CN:68:ARG:HD2	1.91	0.50
28:BF:106:ALA:HB3	28:BF:136:ILE:HG23	1.92	0.50
32:DK:13:ASN:HD21	32:DK:98:ARG:HG2	1.76	0.50
29:DG:171:LYS:HZ3	29:DG:174:LYS:N	2.05	0.50
29:DG:17:LYS:HZ2	29:DG:18:ILE:C	2.14	0.50
38:DQ:3:VAL:O	38:DQ:4:LYS:HG2	2.11	0.50
10:CK:124:LYS:HD3	21:CU:34:ARG:HD3	1.93	0.50
23:BB:125:A:H3'	23:BB:126:A:H5'	1.93	0.50
18:CS:43:MET:C	18:CS:46:LEU:HD23	2.31	0.50
51:B4:12:ARG:HD2	51:B4:12:ARG:H	1.77	0.50
6:AG:23:ALA:O	6:AG:26:VAL:HG22	2.11	0.50
34:BM:112:LEU:N	34:BM:112:LEU:HD12	2.26	0.50
41:DT:2:ILE:HG12	41:DT:3:ARG:N	2.26	0.50
1:AA:1490:U:H3'	1:AA:1491:G:H8	1.76	0.50
23:DB:1251:C:O2'	23:DB:1252:G:H3'	2.11	0.50
20:CB:40:ILE:CG2	20:CB:200:PRO:HB2	2.41	0.50
1:AA:946:A:H2'	1:AA:947:G:H8	1.75	0.50
20:AB:100:LEU:O	20:AB:178:LEU:HG	2.12	0.50
1:CA:560:A:H4'	1:CA:561:U:H5''	1.92	0.50
9:AJ:41:PRO:O	9:AJ:42:LEU:HB2	2.12	0.50
1:CA:982:U:OP2	13:CN:62:ARG:NH2	2.43	0.50
50:D3:40:LYS:O	50:D3:43:LEU:HD13	2.11	0.50
4:AE:110:MET:O	4:AE:113:VAL:HG22	2.10	0.50
23:BB:1373:A:H4'	23:BB:2212:A:N3	2.27	0.50
19:CT:49:ALA:O	19:CT:52:GLU:HB3	2.12	0.50
23:BB:172:A:O2'	23:BB:173:A:H5'	2.11	0.50
22:BA:58:A:H2'	22:BA:59:A:O4'	2.11	0.50
1:AA:1285:A:H62	1:AA:1355:G:H4'	1.76	0.50
23:BB:1737:G:H5'	23:BB:1738:G:OP2	2.10	0.50
26:BD:51:THR:O	26:BD:52:THR:HB	2.11	0.50
37:BP:2:ASN:N	37:BP:2:ASN:HD22	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:123:ILE:HG12	25:DC:135:PRO:HD2	1.93	0.50
38:BQ:68:ALA:HB2	38:BQ:105:PHE:HZ	1.75	0.50
23:DB:1317:G:H2'	23:DB:1318:U:O4'	2.11	0.50
20:AB:113:LEU:O	20:AB:117:GLU:HG3	2.12	0.50
23:DB:197:A:N6	23:DB:2430:A:H2'	2.26	0.50
1:AA:642:A:H2'	1:AA:643:C:C6	2.45	0.50
23:DB:943:A:P	33:DL:40:SER:HA	2.51	0.50
23:BB:536:G:H4'	38:BQ:56:PHE:CZ	2.46	0.50
1:CA:366:A:O2'	1:CA:394:G:N2	2.45	0.50
6:CG:29:LEU:HD11	6:CG:119:LEU:HD22	1.94	0.50
6:CG:74:VAL:HA	6:CG:86:VAL:O	2.11	0.50
1:AA:208:U:H2'	1:AA:210:C:C5	2.45	0.50
23:BB:1105:U:H2'	23:BB:1106:G:C8	2.46	0.50
1:AA:317:U:H2'	1:AA:318:G:H8	1.74	0.50
3:CD:127:ARG:HD2	3:CD:127:ARG:H	1.76	0.50
23:DB:1573:G:H2'	23:DB:1574:C:H5'	1.92	0.50
23:BB:2352:A:H2'	23:BB:2353:G:O4'	2.12	0.50
1:CA:1417:G:O2'	1:CA:1483:A:N6	2.44	0.50
24:BV:26:PHE:HZ	24:BV:47:VAL:HB	1.77	0.50
23:DB:1820:U:H5	25:DC:176:ARG:HH21	1.58	0.50
25:DC:76:VAL:O	25:DC:93:VAL:HA	2.11	0.50
37:BP:55:HIS:O	37:BP:57:ALA:N	2.44	0.50
34:DM:2:LEU:HB2	34:DM:47:GLU:HG2	1.92	0.50
43:BW:65:LYS:O	43:BW:66:VAL:HB	2.12	0.50
35:DN:42:LYS:HZ2	35:DN:45:ARG:HD2	1.77	0.50
10:CK:88:PRO:CD	21:CU:28:LEU:HD13	2.33	0.50
35:BN:52:ILE:HG21	35:BN:94:TYR:CE2	2.46	0.50
40:BS:29:VAL:CG2	40:BS:71:VAL:HG23	2.41	0.50
43:DW:67:LYS:HE3	43:DW:71:LYS:H	1.77	0.50
12:AM:106:ARG:HH11	12:AM:106:ARG:CA	2.24	0.50
25:DC:244:VAL:HG23	25:DC:249:VAL:HG21	1.93	0.50
46:DZ:11:GLU:H	46:DZ:27:THR:CG2	2.25	0.50
23:DB:2314:A:H2'	23:DB:2315:G:H8	1.77	0.50
22:DA:75:G:N1	22:DA:102:G:N2	2.60	0.50
23:BB:1080:A:O2'	23:BB:1081:U:H5'	2.10	0.50
23:BB:2336:A:H61	43:BW:69:GLU:HG3	1.74	0.50
23:BB:1112:G:C4'	29:BG:2:ARG:HG2	2.32	0.50
32:DK:110:GLU:HA	32:DK:113:MET:HE3	1.94	0.50
23:DB:1083:U:H2'	23:DB:1085:A:OP2	2.11	0.50
11:AL:48:LEU:CD2	11:AL:48:LEU:H	2.18	0.50
33:DL:108:ALA:O	33:DL:109:LYS:HD3	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:636:G:OP2	33:DL:126:ARG:NH2	2.44	0.50
40:BS:24:ILE:O	40:BS:74:ILE:HD12	2.11	0.50
49:D2:34:ARG:HD2	49:D2:43:THR:OG1	2.12	0.50
25:BC:220:ARG:NH1	25:BC:220:ARG:HG3	2.26	0.50
23:BB:2840:C:H2'	23:BB:2841:C:C6	2.46	0.50
23:BB:2879:A:H4'	23:BB:2880:C:OP1	2.12	0.50
1:AA:764:C:H3'	1:AA:765:G:N2	2.25	0.50
2:AC:149:LYS:HB3	2:AC:200:TRP:HB2	1.94	0.50
10:CK:12:ARG:HD3	10:CK:13:LYS:HZ1	1.76	0.50
26:DD:14:ILE:HD12	37:DP:78:PRO:CG	2.41	0.50
20:AB:95:TRP:CE3	20:AB:171:ALA:HA	2.46	0.50
4:AE:37:VAL:HG11	4:AE:113:VAL:HG12	1.92	0.50
8:AI:32:ARG:NH2	8:AI:36:GLN:HG2	2.25	0.50
23:BB:2860:A:O5'	23:BB:2860:A:H8	1.93	0.50
9:CJ:85:ASP:CG	9:CJ:89:ARG:HB2	2.31	0.50
33:DL:54:GLN:HB2	33:DL:57:LEU:HD23	1.94	0.50
29:BG:102:ILE:O	29:BG:113:ASP:HA	2.11	0.50
23:BB:2097:A:H2'	23:BB:2098:U:H6	1.77	0.50
23:DB:1138:G:H2'	23:DB:1139:G:O4'	2.12	0.50
23:BB:2666:C:O4'	23:BB:2666:C:O2	2.25	0.50
1:CA:932:C:H2'	1:CA:933:G:H8	1.75	0.50
23:DB:1287:A:H3'	23:DB:1288:G:N2	2.26	0.50
1:CA:607:A:H2'	1:CA:608:A:C8	2.45	0.50
1:CA:894:G:O2'	1:CA:895:G:H5'	2.12	0.50
45:BY:4:ILE:O	45:BY:5:LYS:HB2	2.12	0.50
2:AC:83:VAL:HG12	2:AC:87:ARG:HE	1.75	0.50
23:DB:1143:A:N6	31:DJ:27:ARG:HA	2.26	0.50
23:BB:2756:U:OP2	51:B4:19:ARG:HD3	2.12	0.50
23:BB:1287:A:O2'	23:BB:1288:G:H5'	2.12	0.50
23:BB:1747:U:H2'	23:BB:1748:C:C6	2.47	0.50
3:CD:27:ILE:C	3:CD:29:THR:H	2.15	0.50
23:DB:99:U:O2	23:DB:99:U:O4'	2.27	0.50
23:DB:291:G:O2'	23:DB:292:U:H5'	2.11	0.50
20:AB:10:LYS:C	20:AB:12:GLY:H	2.14	0.50
6:AG:61:PHE:O	6:AG:65:LEU:HD13	2.11	0.50
23:BB:37:C:O2'	27:BE:47:LYS:HG3	2.12	0.50
51:D4:26:ILE:HB	51:D4:35:GLN:HB2	1.92	0.50
34:BM:95:LEU:HD22	34:BM:98:PRO:HG3	1.94	0.50
23:BB:827:U:H5'	23:BB:828:U:O5'	2.12	0.50
37:BP:8:GLU:N	37:BP:8:GLU:OE1	2.45	0.50
25:BC:136:VAL:O	25:BC:163:ILE:HB	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:116:LYS:HB2	26:DD:165:MET:CG	2.39	0.50
26:DD:32:ASN:HD22	26:DD:94:GLN:HA	1.77	0.50
37:DP:25:VAL:C	37:DP:27:VAL:H	2.14	0.50
23:BB:1564:C:O2'	23:BB:1565:C:H5'	2.10	0.50
33:DL:124:GLY:H	33:DL:142:ILE:HB	1.76	0.50
35:DN:97:ILE:HG23	35:DN:113:ILE:CD1	2.41	0.50
31:DJ:25:LEU:N	31:DJ:25:LEU:HD13	2.26	0.50
23:BB:584:C:OP2	38:BQ:5:ARG:HB2	2.11	0.50
23:DB:919:U:H6	23:DB:919:U:O5'	1.95	0.50
33:BL:116:VAL:HG12	33:BL:117:THR:H	1.75	0.50
10:AK:122:PRO:HG2	21:AU:35:GLU:HG2	1.93	0.50
21:AU:29:ALA:HB1	21:AU:32:ARG:NH2	2.10	0.50
42:DU:9:GLU:HB2	42:DU:71:ILE:CB	2.33	0.50
30:BH:83:LYS:HB2	30:BH:92:GLY:N	2.27	0.50
52:BI:77:VAL:HA	52:BI:80:LYS:HE3	1.92	0.50
52:DI:72:THR:HG23	52:DI:112:LYS:HD2	1.93	0.50
28:BF:109:ARG:CB	28:BF:136:ILE:HG13	2.41	0.50
31:DJ:78:THR:OG1	31:DJ:79:GLY:N	2.44	0.50
26:DD:157:LYS:NZ	31:DJ:80:HIS:HA	2.26	0.50
47:D0:42:ILE:O	47:D0:46:GLY:N	2.45	0.50
29:DG:175:LYS:HG2	29:DG:176:LYS:N	2.23	0.50
23:DB:2511:U:H2'	23:DB:2512:C:O4'	2.11	0.50
20:AB:37:VAL:HG22	20:AB:38:HIS:H	1.76	0.50
44:DX:27:ASN:C	44:DX:29:ARG:H	2.15	0.50
15:CP:57:ILE:HD11	15:CP:75:ILE:HD11	1.93	0.50
18:CS:24:SER:HB2	18:CS:27:LYS:HZ1	1.77	0.50
13:CN:40:ARG:NH1	18:CS:6:LYS:H	2.10	0.50
10:AK:88:PRO:HA	10:AK:92:ARG:HD2	1.93	0.50
42:BU:47:PRO:O	42:BU:49:PRO:HD3	2.11	0.50
23:DB:359:G:C2'	23:DB:360:U:H5'	2.41	0.50
14:AO:78:THR:HA	14:AO:81:ILE:CD1	2.42	0.50
23:BB:643:A:C6	48:B1:42:VAL:HG22	2.46	0.50
2:AC:186:SER:O	2:AC:197:VAL:HG12	2.11	0.50
23:BB:1547:C:H2'	23:BB:1548:A:H8	1.75	0.50
30:BH:57:LYS:HG3	30:BH:61:VAL:CG2	2.40	0.50
29:DG:102:ILE:HG22	29:DG:114:HIS:O	2.12	0.50
1:CA:1438:G:O2'	1:CA:1439:G:H5'	2.11	0.50
30:DH:115:VAL:HB	30:DH:132:PHE:CD1	2.44	0.50
1:AA:969:A:N3	1:AA:970:C:O2	2.45	0.50
26:BD:98:VAL:HA	26:BD:101:PHE:CZ	2.46	0.50
2:CC:53:ARG:HG3	2:CC:113:LYS:HD3	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:224:U:O4	23:BB:420:C:H5'	2.12	0.50
23:DB:345:A:H1'	23:DB:346:A:H2	1.74	0.50
23:BB:2820:A:H4'	35:BN:4:ARG:H	1.76	0.50
2:CC:89:VAL:HG23	2:CC:90:VAL:N	2.26	0.50
37:DP:92:ARG:HD3	37:DP:110:LYS:O	2.12	0.50
23:DB:2140:G:H2'	23:DB:2141:G:O4'	2.11	0.50
23:BB:207:A:H2'	23:BB:208:C:O4'	2.12	0.50
23:BB:1317:G:H2'	23:BB:1318:U:O4'	2.11	0.50
1:AA:546:A:H4'	1:AA:548:G:O3'	2.12	0.50
34:DM:107:GLY:O	34:DM:109:PRO:HD2	2.12	0.50
28:BF:128:SER:HA	28:BF:154:THR:HG23	1.94	0.50
23:BB:685:A:H1'	23:BB:688:U:O4	2.12	0.50
6:AG:94:ARG:HD3	6:AG:98:LEU:HD11	1.93	0.50
28:BF:97:GLU:O	28:BF:100:GLU:HG3	2.11	0.50
30:DH:46:PHE:O	30:DH:49:ALA:HB3	2.11	0.50
39:BR:72:VAL:HG23	39:BR:73:LYS:N	2.27	0.50
23:DB:2657:A:H2'	23:DB:2658:C:O4'	2.12	0.50
1:CA:1128:C:H4'	1:CA:1148:U:O2	2.11	0.50
1:AA:693:G:H2'	1:AA:694:A:O4'	2.10	0.50
2:CC:190:THR:HG22	2:CC:191:THR:H	1.76	0.50
1:AA:22:G:H4'	1:AA:885:G:C8	2.47	0.50
38:BQ:112:ALA:HA	38:BQ:115:ALA:HB3	1.94	0.50
23:BB:440:C:H2'	23:BB:441:U:H6	1.77	0.50
51:D4:30:GLU:O	51:D4:32:LYS:N	2.45	0.50
25:DC:115:ILE:O	25:DC:116:GLN:HG3	2.12	0.50
23:DB:2636:C:H2'	23:DB:2637:U:C6	2.46	0.50
26:DD:15:PHE:O	26:DD:16:THR:HG22	2.12	0.50
26:DD:173:GLN:HG3	26:DD:208:LYS:CB	2.42	0.50
37:DP:52:ARG:CB	37:DP:60:VAL:HG11	2.42	0.50
37:DP:86:LYS:NZ	37:DP:88:ARG:HD3	2.26	0.50
34:DM:93:VAL:O	34:DM:94:ALA:HB3	2.12	0.50
23:BB:584:C:OP2	38:BQ:5:ARG:HD3	2.12	0.50
30:BH:81:ALA:CB	30:BH:147:VAL:H	2.24	0.50
46:BZ:19:GLY:O	46:BZ:20:ASN:HB2	2.11	0.50
33:BL:77:ILE:CD1	33:BL:92:LEU:HD22	2.41	0.50
41:BT:9:LYS:HE3	44:BX:22:LEU:HD21	1.93	0.50
25:DC:50:THR:C	25:DC:51:ARG:HG3	2.32	0.50
25:DC:43:ASN:OD1	25:DC:51:ARG:HD3	2.12	0.50
1:AA:1101:A:N7	20:AB:170:ILE:HD12	2.26	0.50
1:CA:1251:A:O2'	1:CA:1252:A:H5'	2.11	0.50
33:BL:27:LEU:C	33:BL:29:LYS:N	2.62	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BW:16:GLU:N	43:BW:18:LYS:NZ	2.60	0.50
23:BB:2751:G:P	29:BG:3:VAL:HG13	2.51	0.50
23:BB:704:G:C2'	23:BB:726:G:H22	2.20	0.50
47:D0:41:HIS:HB3	47:D0:47:TYR:H	1.77	0.50
23:DB:2885:G:O6	47:D0:30:ASP:HB3	2.12	0.50
21:CU:36:PHE:O	21:CU:38:GLU:N	2.44	0.50
51:B4:22:VAL:HG11	51:B4:36:ARG:HE	1.75	0.50
39:BR:33:VAL:O	39:BR:34:GLU:HB2	2.12	0.50
39:BR:65:ALA:O	39:BR:66:HIS:HB2	2.11	0.50
1:AA:33:A:H2'	1:AA:34:C:H6	1.77	0.50
32:DK:41:ILE:HG23	32:DK:42:THR:N	2.27	0.50
23:BB:1180:U:O2'	23:BB:1181:U:H5'	2.11	0.50
33:DL:34:GLY:HA3	39:DR:85:LYS:CD	2.41	0.50
4:AE:92:ARG:HB3	4:AE:127:TYR:HB2	1.94	0.50
41:BT:33:LYS:HE3	41:BT:80:TRP:NE1	2.26	0.50
1:CA:769:G:O2'	1:CA:770:C:H5'	2.12	0.50
1:AA:838:G:H2'	1:AA:839:C:O4'	2.11	0.50
1:AA:840:C:C2	1:AA:842:U:H4'	2.47	0.50
23:BB:1843:C:H5''	25:BC:252:LYS:HZ1	1.77	0.50
8:CI:94:ARG:HB3	8:CI:98:ARG:HE	1.76	0.50
23:BB:1676:A:H1'	26:BD:134:HIS:HB3	1.94	0.50
42:DU:94:PHE:CD2	42:DU:100:GLU:HG2	2.47	0.50
31:BJ:13:ARG:NH1	31:BJ:13:ARG:HG3	2.26	0.50
4:AE:155:LYS:HE3	7:AH:70:VAL:HG13	1.94	0.50
25:BC:71:ASP:C	25:BC:73:ILE:HD12	2.31	0.50
2:AC:141:MET:CE	2:AC:147:GLY:H	2.23	0.50
1:CA:205:A:H2'	1:CA:206:C:C6	2.44	0.50
23:BB:62:U:H3'	23:BB:63:A:C8	2.44	0.50
23:BB:2874:C:H2'	23:BB:2875:C:C6	2.46	0.50
23:DB:2800:A:H2'	23:DB:2801:G:C1'	2.42	0.50
23:DB:437:U:O2'	23:DB:438:G:H5'	2.11	0.50
1:CA:857:C:H2'	1:CA:858:G:O4'	2.10	0.50
7:AH:8:ASP:OD2	7:AH:12:ARG:HD2	2.11	0.50
1:AA:633:G:H2'	1:AA:634:C:C6	2.47	0.50
1:AA:1452:C:H5'	1:AA:1453:G:C4	2.47	0.50
1:AA:1366:C:H2'	1:AA:1367:C:H6	1.76	0.50
23:DB:1444:G:H2'	23:DB:1445:G:H8	1.75	0.50
1:CA:1157:A:H5'	1:CA:1158:C:C6	2.47	0.50
23:DB:1889:A:H2'	23:DB:1890:A:C8	2.47	0.50
23:DB:1334:G:O2'	23:DB:1335:C:H5'	2.12	0.50
23:BB:1289:C:H2'	23:BB:1290:C:C6	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CK:17:ASP:OD1	10:CK:36:ARG:HG3	2.11	0.50
1:CA:746:A:H2'	1:CA:747:A:C8	2.46	0.50
23:DB:1560:G:H2'	23:DB:1561:C:C6	2.47	0.50
1:CA:1478:U:H2'	1:CA:1479:C:C6	2.46	0.50
27:BE:176:ASP:OD1	27:BE:178:VAL:HG22	2.11	0.50
23:DB:274:C:H2'	23:DB:275:C:O4'	2.12	0.50
23:BB:2076:U:O4'	23:BB:2076:U:O2	2.29	0.50
39:BR:39:LEU:HD12	39:BR:60:LYS:N	2.26	0.50
25:BC:115:ILE:HG23	25:BC:126:GLY:O	2.12	0.50
34:BM:65:ILE:HA	34:BM:101:VAL:HA	1.94	0.50
34:BM:71:LYS:HD2	34:BM:71:LYS:C	2.32	0.50
34:BM:34:LYS:HD3	34:BM:98:PRO:O	2.12	0.50
31:BJ:78:THR:HB	31:BJ:80:HIS:HD2	1.76	0.50
26:BD:142:VAL:O	26:BD:144:GLY:N	2.44	0.50
48:D1:46:VAL:HG22	48:D1:47:ILE:N	2.22	0.50
43:BW:49:ASN:O	43:BW:50:VAL:HB	2.11	0.50
30:DH:35:LYS:NZ	30:DH:35:LYS:HB2	2.27	0.50
23:DB:1006:C:H4'	31:DJ:34:ARG:HG3	1.93	0.50
36:DO:35:ILE:HG13	36:DO:35:ILE:O	2.10	0.50
40:BS:33:LEU:O	40:BS:35:ILE:N	2.45	0.50
23:DB:2386:A:H4'	43:DW:38:ARG:HD3	1.93	0.50
35:BN:22:ARG:HE	35:BN:69:ARG:HE	1.59	0.50
27:DE:123:LYS:NZ	27:DE:158:PHE:HA	2.27	0.50
46:DZ:3:LYS:HZ3	46:DZ:29:GLY:HA3	1.76	0.50
41:DT:31:VAL:HG23	41:DT:83:ALA:O	2.11	0.50
42:BU:25:LYS:CG	42:BU:35:VAL:HA	2.42	0.50
12:CM:52:ILE:HG13	12:CM:56:ARG:NH2	2.15	0.50
1:CA:1250:A:H5''	8:CI:69:GLY:N	2.26	0.50
8:CI:10:ARG:HA	8:CI:14:SER:O	2.12	0.50
1:CA:237:G:O2'	1:CA:238:A:H5'	2.12	0.50
23:BB:1999:C:O2'	23:BB:2000:C:H5'	2.11	0.50
25:DC:28:PRO:HB2	25:DC:79:ARG:HE	1.76	0.50
34:DM:50:ARG:HH21	34:DM:101:VAL:HG22	1.74	0.50
32:DK:99:ILE:CD1	32:DK:115:ILE:HG13	2.41	0.50
3:AD:112:GLU:OE2	3:AD:153:ARG:HD3	2.11	0.50
3:AD:2:ARG:O	3:AD:3:TYR:HB2	2.11	0.50
28:DF:98:PHE:HB2	28:DF:101:ARG:HE	1.77	0.50
8:AI:56:MET:HA	8:AI:59:LYS:HZ1	1.76	0.50
26:BD:38:LYS:HG2	26:BD:39:ASP:N	2.19	0.50
47:D0:26:SER:HB2	47:D0:38:LEU:CD2	2.35	0.50
26:BD:120:GLY:HA2	26:BD:162:ALA:HA	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DL:110:VAL:HG23	33:DL:131:ALA:CB	2.41	0.50
1:AA:1324:A:H2'	1:AA:1325:C:C6	2.46	0.50
23:DB:547:A:H62	23:DB:548:G:H21	1.59	0.50
2:AC:154:GLY:HA2	2:AC:163:ARG:H	1.77	0.50
1:CA:1003:G:N2	1:CA:1005:A:H5'	2.23	0.50
10:AK:110:THR:CG2	21:AU:4:LYS:HD2	2.40	0.50
23:BB:2659:G:OP1	29:BG:157:LYS:HE2	2.12	0.50
5:AF:39:LEU:HD13	5:AF:40:GLU:H	1.77	0.50
42:BU:52:ASN:O	42:BU:54:PRO:HD3	2.11	0.50
3:CD:130:ASN:N	3:CD:130:ASN:HD22	2.07	0.50
4:AE:89:THR:HG21	4:AE:134:ASN:ND2	2.27	0.50
7:CH:77:VAL:O	7:CH:84:ILE:HD12	2.12	0.50
35:DN:87:PHE:CD1	35:DN:90:ARG:HB2	2.46	0.50
1:CA:1107:C:H4'	2:CC:172:VAL:HG23	1.92	0.50
23:BB:1591:A:H2'	23:BB:1592:C:C6	2.47	0.50
23:BB:2645:G:H4'	23:BB:2732:G:H2'	1.92	0.50
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.46	0.50
1:AA:1110:A:C2'	1:AA:1111:A:H5'	2.42	0.50
23:DB:521:U:H2'	23:DB:522:A:H8	1.75	0.50
3:CD:97:LEU:CB	3:CD:134:TYR:HB3	2.40	0.50
30:DH:135:HIS:HB3	30:DH:138:VAL:HB	1.92	0.50
1:AA:1169:A:H2'	1:AA:1170:A:C8	2.47	0.50
23:BB:1494:A:H2'	23:BB:1495:A:C8	2.46	0.50
20:AB:132:GLU:O	20:AB:136:ARG:HG3	2.11	0.50
23:DB:1300:G:H4'	23:DB:1301:A:O5'	2.11	0.50
23:BB:2803:G:H2'	23:BB:2804:U:H6	1.76	0.50
23:DB:171:U:H2'	23:DB:172:A:H8	1.75	0.50
23:BB:2297:A:N6	23:BB:2319:G:H3'	2.26	0.50
23:DB:153:U:H2'	23:DB:154:U:C6	2.46	0.50
23:BB:2729:G:H2'	23:BB:2730:C:H6	1.75	0.50
23:BB:866:A:H61	23:BB:913:U:H4'	1.77	0.50
39:BR:3:ALA:HB3	39:BR:14:VAL:O	2.11	0.50
8:CI:30:ASN:HD21	8:CI:66:VAL:N	2.09	0.50
1:AA:218:U:H2'	1:AA:219:U:H6	1.77	0.50
23:BB:2073:C:O2'	23:BB:2074:U:H5'	2.11	0.50
23:DB:466:A:H2'	23:DB:467:G:H5'	1.93	0.50
1:CA:300:A:H2'	1:CA:301:G:O4'	2.11	0.50
23:BB:1909:C:H2'	23:BB:1910:G:H8	1.76	0.50
23:DB:528:A:C2	23:DB:2042:A:H2'	2.47	0.50
3:CD:37:PRO:HD2	3:CD:41:GLY:CA	2.41	0.50
1:CA:751:U:H2'	1:CA:752:G:O4'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2207:C:H2'	23:DB:2208:C:H6	1.77	0.50
1:CA:940:C:H2'	1:CA:941:G:H8	1.77	0.50
23:DB:1739:A:H2'	23:DB:1740:G:C8	2.47	0.50
23:DB:2698:U:H2'	23:DB:2699:C:C6	2.47	0.50
23:BB:559:G:H1'	38:BQ:55:GLN:HE22	1.76	0.50
23:BB:2263:C:H2'	23:BB:2264:C:H6	1.77	0.50
37:BP:61:ARG:HB2	37:BP:61:ARG:CZ	2.41	0.50
23:BB:1821:A:H5'	25:BC:155:ARG:NH2	2.27	0.50
27:BE:13:THR:HG22	27:BE:119:ILE:HD12	1.94	0.50
35:DN:3:HIS:HB3	35:DN:4:ARG:NH1	2.26	0.50
23:BB:1560:G:H2'	23:BB:1561:C:C6	2.47	0.50
30:DH:3:VAL:CG1	30:DH:37:VAL:HG11	2.42	0.50
23:DB:1024:G:C3'	23:DB:1025:G:H5''	2.30	0.50
10:CK:92:ARG:HD3	21:CU:20:ARG:HH22	1.77	0.50
31:DJ:131:ASN:C	31:DJ:133:ALA:N	2.65	0.50
5:CF:92:THR:HG22	5:CF:93:LYS:H	1.77	0.50
40:BS:29:VAL:C	40:BS:31:GLN:H	2.15	0.50
33:BL:108:ALA:O	33:BL:109:LYS:HB3	2.11	0.50
27:DE:15:SER:O	27:DE:17:THR:HG22	2.12	0.50
5:AF:12:PRO:HG3	5:AF:54:LEU:HG	1.94	0.50
28:DF:56:LEU:HD13	28:DF:88:VAL:CG2	2.40	0.50
42:BU:78:LYS:HB3	42:BU:96:LYS:HB3	1.93	0.50
3:AD:11:SER:HB2	3:AD:20:LEU:HD11	1.92	0.50
23:BB:161:A:H62	23:BB:165:A:H61	1.58	0.50
29:DG:37:ASN:N	29:DG:40:VAL:HG21	2.26	0.50
39:BR:18:GLN:HA	39:BR:99:THR:HA	1.93	0.50
1:CA:664:G:N2	1:CA:741:G:H1	2.03	0.50
13:CN:65:GLN:HB3	13:CN:82:LYS:HG2	1.92	0.50
9:CJ:8:ILE:HG13	9:CJ:73:LEU:O	2.11	0.50
23:DB:96:C:OP1	44:DX:41:HIS:HB2	2.12	0.50
23:BB:1025:G:H8	23:BB:1025:G:OP1	1.94	0.50
23:BB:65:U:H2'	23:BB:66:C:C6	2.46	0.50
23:DB:11:C:H2'	23:DB:12:U:C5'	2.39	0.50
42:BU:34:ILE:HG23	42:BU:61:GLU:HB2	1.94	0.50
23:BB:1797:G:OP1	25:BC:251:THR:HG23	2.11	0.50
8:CI:9:GLY:HA2	8:CI:80:HIS:HB3	1.93	0.50
41:BT:93:LEU:HD22	41:BT:93:LEU:N	2.25	0.50
1:AA:235:C:H2'	1:AA:236:A:C8	2.47	0.50
1:AA:237:G:O2'	1:AA:238:A:H5'	2.11	0.50
6:AG:103:ILE:O	6:AG:107:ALA:HB2	2.11	0.50
11:AL:20:VAL:HG22	11:AL:94:TYR:CE1	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:806:C:H2'	1:AA:807:A:H8	1.77	0.50
43:BW:10:ARG:HB3	43:BW:10:ARG:HH11	1.76	0.50
31:BJ:10:THR:CB	31:BJ:13:ARG:HH22	2.25	0.50
16:CQ:58:VAL:HB	16:CQ:74:LEU:HD23	1.94	0.50
23:DB:241:A:O3'	23:DB:242:G:H4'	2.12	0.50
36:BO:34:HIS:N	36:BO:34:HIS:ND1	2.60	0.50
44:DX:12:GLU:HG2	44:DX:12:GLU:O	2.11	0.50
17:AR:40:PRO:HD2	17:AR:43:ILE:HD11	1.94	0.50
16:AQ:23:ALA:HB1	16:AQ:40:THR:HG23	1.94	0.50
23:BB:2247:A:H3'	54:BB:3265:HOH:O	2.11	0.50
8:AI:11:ARG:HG3	8:AI:11:ARG:O	2.10	0.50
23:BB:1313:U:H4'	23:BB:1332:G:H4'	1.92	0.50
5:AF:6:ILE:HB	5:AF:89:VAL:HB	1.93	0.50
34:DM:62:LYS:H	34:DM:104:GLU:CB	2.25	0.50
32:BK:40:LYS:HA	32:BK:59:LYS:HA	1.94	0.50
23:BB:355:U:H2'	23:BB:356:G:H8	1.77	0.50
23:BB:2285:C:H41	48:B1:24:LYS:NZ	2.09	0.50
1:CA:214:C:H2'	1:CA:215:C:H6	1.76	0.50
23:DB:1599:U:H2'	23:DB:1600:C:H6	1.76	0.50
20:CB:132:GLU:HG2	20:CB:135:MET:HE2	1.94	0.50
23:DB:1979:U:O2'	23:DB:1980:G:H5'	2.11	0.50
23:BB:1360:G:H2'	23:BB:1361:G:H5'	1.92	0.50
22:BA:15:A:H1'	22:BA:109:A:C8	2.46	0.50
10:AK:49:SER:HA	10:AK:68:ARG:HH21	1.77	0.50
3:CD:36:ALA:C	3:CD:38:GLY:H	2.14	0.50
20:CB:72:LYS:O	20:CB:74:ALA:N	2.44	0.50
27:DE:28:VAL:O	27:DE:32:VAL:HG23	2.12	0.50
23:DB:1480:C:H2'	23:DB:1481:U:C6	2.47	0.50
23:DB:581:C:H2'	23:DB:582:A:C8	2.47	0.50
46:BZ:32:LEU:O	46:BZ:46:GLY:HA2	2.12	0.50
25:DC:164:VAL:O	25:DC:165:ALA:HB3	2.12	0.50
33:BL:63:LYS:N	50:B3:24:LYS:NZ	2.56	0.50
25:BC:164:VAL:HG12	25:BC:164:VAL:O	2.12	0.50
25:BC:128:THR:CA	25:BC:190:THR:HA	2.39	0.50
27:BE:173:THR:O	27:BE:175:ILE:HG22	2.12	0.50
23:DB:1654:A:C4'	35:DN:1:MET:N	2.73	0.50
26:DD:173:GLN:HE21	26:DD:208:LYS:HB2	1.77	0.50
23:DB:2730:C:H4'	26:DD:174:SER:O	2.11	0.50
37:DP:112:ARG:H	37:DP:112:ARG:HE	1.60	0.50
45:DY:1:ALA:CB	45:DY:37:ARG:HB3	2.42	0.50
20:AB:59:ILE:HD12	20:AB:60:ALA:N	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DR:4:VAL:C	39:DR:41:ILE:HG21	2.32	0.50
12:AM:106:ARG:HE	12:AM:112:ARG:CG	2.14	0.50
31:BJ:20:ALA:HB2	31:BJ:56:VAL:HG13	1.93	0.50
27:DE:4:VAL:HA	27:DE:14:VAL:CG2	2.40	0.50
39:DR:11:GLN:C	39:DR:21:ARG:HH22	2.15	0.50
43:BW:36:ILE:HG21	43:BW:68:PHE:CD2	2.46	0.50
16:CQ:13:SER:HB3	16:CQ:21:VAL:CB	2.34	0.50
28:DF:113:PHE:O	28:DF:114:ARG:HD3	2.12	0.50
1:CA:1527:U:OP2	21:CU:38:GLU:HG3	2.11	0.50
11:AL:54:VAL:HG12	11:AL:56:LEU:HD12	1.93	0.50
23:BB:1184:U:O2'	23:BB:1185:G:H5'	2.11	0.50
22:BA:113:C:H2'	22:BA:114:C:O4'	2.11	0.50
14:AO:7:THR:CG2	14:AO:30:LEU:HD11	2.38	0.50
26:DD:1:MET:HB2	26:DD:81:GLU:OE1	2.12	0.50
49:D2:13:ASN:OD1	49:D2:17:GLY:HA3	2.12	0.50
48:B1:34:GLU:N	48:B1:52:LYS:O	2.45	0.50
26:DD:148:GLN:CD	26:DD:148:GLN:N	2.65	0.50
20:CB:13:VAL:HG11	20:CB:207:ARG:HB3	1.94	0.50
1:AA:1372:U:OP1	8:AI:72:SER:HB2	2.12	0.50
1:AA:413:G:O6	3:AD:32:LYS:HE3	2.11	0.50
1:AA:807:A:H2'	1:AA:808:C:C6	2.47	0.50
23:BB:2301:C:O2'	23:BB:2302:U:H5'	2.11	0.50
16:CQ:74:LEU:HD22	16:CQ:75:VAL:H	1.76	0.50
29:BG:51:PHE:HE2	29:BG:63:GLN:HE21	1.60	0.50
4:AE:110:MET:SD	4:AE:110:MET:N	2.85	0.50
9:AJ:67:ILE:HG12	13:AN:94:GLY:O	2.11	0.50
35:DN:110:MET:O	35:DN:111:ALA:HB3	2.12	0.50
23:BB:2195:U:H2'	23:BB:2196:C:H6	1.76	0.50
23:BB:1076:C:H4'	52:BI:94:LYS:HE3	1.94	0.50
11:CL:13:ARG:O	11:CL:14:LYS:HB3	2.11	0.50
12:AM:13:HIS:O	12:AM:16:ILE:HG22	2.11	0.50
3:AD:77:GLU:O	3:AD:81:LEU:HG	2.11	0.50
1:AA:205:A:H2'	1:AA:206:C:C6	2.43	0.50
1:AA:1172:C:H2'	1:AA:1173:U:H6	1.76	0.50
42:DU:51:LEU:CG	42:DU:53:GLN:HB3	2.42	0.50
5:AF:98:GLU:HG2	5:AF:99:ALA:H	1.76	0.50
44:DX:17:GLU:HA	44:DX:21:LEU:CB	2.42	0.50
28:DF:103:ILE:HG21	28:DF:173:ASP:HA	1.93	0.50
23:BB:2386:A:H2'	23:BB:2387:U:C6	2.47	0.50
23:BB:2276:G:OP2	34:BM:83:GLY:HA3	2.12	0.50
1:CA:15:G:N3	4:CE:23:THR:HG21	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:167:A:O2'	1:CA:168:G:H5'	2.12	0.50
23:BB:1939:U:O2	23:BB:1967:C:H4'	2.11	0.50
23:DB:2734:A:C2'	23:DB:2735:G:H5'	2.42	0.50
23:BB:540:C:H2'	23:BB:541:A:H8	1.77	0.50
1:CA:1163:A:H2'	1:CA:1164:G:H8	1.76	0.50
3:CD:37:PRO:HD2	3:CD:41:GLY:HA3	1.94	0.50
1:CA:890:G:O2'	1:CA:906:A:N6	2.45	0.50
23:BB:2686:G:H2'	23:BB:2687:U:C6	2.47	0.50
1:CA:1471:U:O2'	1:CA:1472:U:H5'	2.12	0.50
3:AD:51:GLY:O	3:AD:55:ARG:HB2	2.12	0.50
20:AB:218:ALA:HA	20:AB:221:ARG:HE	1.76	0.50
36:DO:90:VAL:HG22	36:DO:116:GLN:OE1	2.11	0.50
23:BB:1692:U:H2'	23:BB:1694:C:C5	2.47	0.50
23:BB:121:G:H4'	23:BB:149:A:H5'	1.94	0.50
52:DI:4:VAL:HG22	52:DI:5:GLN:N	2.27	0.50
39:BR:39:LEU:HA	39:BR:60:LYS:O	2.12	0.50
51:D4:14:CYS:HA	51:D4:27:CYS:HA	1.93	0.50
34:BM:97:GLN:N	34:BM:98:PRO:CD	2.75	0.50
25:DC:156:SER:O	25:DC:194:VAL:O	2.30	0.50
33:BL:61:LEU:O	33:BL:62:PRO:O	2.29	0.50
26:BD:106:LYS:HZ1	26:BD:208:LYS:HD3	1.76	0.50
37:BP:31:VAL:HA	37:BP:81:ASP:HA	1.94	0.50
23:BB:1656:C:H2'	23:BB:1657:U:H6	1.77	0.50
23:BB:1821:A:H5'	25:BC:155:ARG:HH21	1.76	0.50
27:BE:141:MET:HG3	27:BE:143:LEU:HB2	1.93	0.50
27:BE:6:LYS:HB2	27:BE:12:LEU:CD1	2.42	0.50
1:CA:975:A:H61	9:CJ:50:THR:HB	1.77	0.50
26:DD:202:ILE:CG2	26:DD:204:LYS:HE3	2.41	0.50
26:DD:48:ILE:CA	26:DD:80:TRP:HB3	2.39	0.50
26:DD:96:ILE:HG22	26:DD:97:SER:H	1.76	0.50
37:DP:25:VAL:HG22	37:DP:89:GLY:O	2.12	0.50
34:DM:95:LEU:HD23	34:DM:95:LEU:H	1.76	0.50
21:CU:19:LYS:C	21:CU:21:SER:H	2.15	0.50
35:BN:45:ARG:HB2	35:BN:49:GLU:OE2	2.12	0.50
40:BS:28:LYS:CB	40:BS:71:VAL:HB	2.42	0.50
30:BH:9:VAL:C	30:BH:11:ASN:H	2.14	0.50
27:DE:154:ASP:OD2	27:DE:156:ASN:HB3	2.12	0.50
27:DE:15:SER:HB3	27:DE:196:VAL:HG22	1.94	0.50
41:BT:28:ASN:N	41:BT:28:ASN:ND2	2.58	0.50
41:BT:29:THR:HG22	41:BT:86:THR:HG22	1.94	0.50
21:AU:37:TYR:C	21:AU:40:PRO:HD2	2.33	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DS:2:GLU:HB2	40:DS:108:SER:CA	2.40	0.50
26:BD:16:THR:HG23	26:BD:17:GLU:N	2.21	0.50
16:AQ:18:LYS:HE3	16:AQ:48:GLU:HG2	1.93	0.50
18:AS:64:GLU:OE1	18:AS:65:MET:HG3	2.12	0.50
52:BI:7:TYR:HB2	52:BI:59:THR:HA	1.93	0.50
17:CR:58:ILE:O	17:CR:62:ARG:HG3	2.12	0.50
34:DM:35:ALA:HA	34:DM:124:LEU:HB3	1.93	0.50
16:CQ:13:SER:O	16:CQ:20:ILE:HG13	2.11	0.50
52:DI:89:SER:OG	52:DI:92:PRO:HA	2.12	0.50
46:BZ:35:ASP:C	46:BZ:42:PRO:HB3	2.32	0.50
23:BB:702:U:O2'	23:BB:703:U:H5'	2.12	0.50
23:BB:727:A:OP1	23:BB:1431:A:O2'	2.28	0.50
10:CK:121:ARG:HE	21:CU:34:ARG:HG2	1.77	0.50
5:AF:67:PRO:HG2	5:AF:70:VAL:HG22	1.92	0.50
33:DL:77:ILE:HG12	33:DL:109:LYS:C	2.31	0.50
1:AA:34:C:H2'	1:AA:35:G:C8	2.47	0.50
23:DB:532:A:H5'	38:DQ:27:ARG:NH2	2.26	0.50
49:D2:35:ARG:HH22	49:D2:43:THR:H	1.58	0.50
35:DN:101:GLY:O	35:DN:102:PHE:HB3	2.12	0.50
42:DU:39:ASN:CB	42:DU:59:GLU:HB2	2.42	0.50
20:AB:9:LEU:HD11	20:AB:11:ALA:HB3	1.93	0.50
23:BB:1547:C:H2'	23:BB:1548:A:C8	2.47	0.50
23:DB:1439:A:N7	23:DB:1440:U:C6	2.80	0.50
23:DB:1547:C:H2'	23:DB:1548:A:H8	1.75	0.50
23:BB:1199:U:C1'	38:BQ:2:ARG:HB2	2.42	0.50
1:AA:98:A:H2'	1:AA:99:C:C6	2.47	0.50
41:DT:62:VAL:O	41:DT:63:VAL:HB	2.11	0.50
23:DB:2261:C:H3'	43:DW:13:ARG:HD3	1.94	0.50
23:BB:156:A:H2'	23:BB:157:C:H6	1.76	0.50
16:CQ:30:HIS:CE1	16:CQ:32:ILE:HG22	2.47	0.50
1:CA:1023:U:H2'	1:CA:1024:G:C8	2.47	0.50
23:BB:527:C:H4'	23:BB:527:C:OP1	2.10	0.50
25:BC:16:VAL:CA	25:BC:17:LYS:HE2	2.42	0.50
23:BB:2247:A:O2'	23:BB:2248:C:H5'	2.12	0.50
1:CA:1039:G:H2'	1:CA:1040:U:H6	1.77	0.50
40:DS:27:LYS:N	40:DS:70:LYS:O	2.45	0.50
2:CC:155:ARG:NH2	2:CC:160:GLU:HA	2.27	0.50
23:DB:729:G:H4'	23:DB:763:G:H5'	1.92	0.50
1:CA:829:G:H4'	20:CB:24:PRO:HG3	1.93	0.50
23:BB:1400:U:H2'	23:BB:1401:G:H8	1.77	0.50
1:AA:1096:C:O2'	1:AA:1097:C:H5'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2192:U:H2'	23:BB:2193:G:O4'	2.12	0.50
23:BB:257:C:H2'	23:BB:258:G:O4'	2.12	0.50
36:DO:41:ALA:HB3	36:DO:46:GLU:HA	1.93	0.50
44:DX:46:VAL:O	44:DX:49:ASP:HB3	2.11	0.50
23:BB:1541:C:H2'	23:BB:1542:U:C6	2.46	0.50
23:DB:1184:U:O2'	23:DB:1185:G:H5'	2.12	0.50
28:BF:23:SER:C	28:BF:25:MET:H	2.14	0.50
23:DB:2491:U:H5''	23:DB:2570:G:C5'	2.42	0.50
27:BE:57:LYS:HA	27:BE:57:LYS:HE3	1.94	0.50
23:BB:2441:U:O2'	23:BB:2442:C:H5'	2.12	0.50
23:BB:1311:G:H21	23:BB:1603:A:H62	1.60	0.50
34:BM:67:VAL:CG2	34:BM:95:LEU:HD21	2.42	0.49
24:BV:60:VAL:HG13	24:BV:72:VAL:O	2.12	0.49
26:BD:106:LYS:HA	26:BD:176:ASP:HA	1.93	0.49
23:BB:1131:G:C1'	31:BJ:85:LYS:HZ1	2.25	0.49
27:BE:3:LEU:HB2	27:BE:12:LEU:HB2	1.94	0.49
37:DP:52:ARG:HG2	37:DP:53:GLY:N	2.27	0.49
37:DP:59:THR:HA	37:DP:76:HIS:HA	1.94	0.49
37:DP:52:ARG:HA	37:DP:98:TYR:OH	2.11	0.49
30:DH:1:MET:C	30:DH:21:VAL:HG22	2.33	0.49
23:BB:988:A:OP2	45:BY:11:SER:HA	2.11	0.49
35:BN:87:PHE:HB2	35:BN:94:TYR:CZ	2.47	0.49
15:AP:5:ARG:HD2	15:AP:5:ARG:H	1.77	0.49
42:DU:42:LYS:H	42:DU:57:ILE:CD1	2.11	0.49
35:BN:9:GLN:HA	35:BN:17:ARG:NH1	2.27	0.49
23:DB:64:A:H5'	41:DT:76:ARG:NH1	2.11	0.49
33:BL:82:LEU:HD12	33:BL:90:VAL:HG13	1.93	0.49
31:BJ:103:ILE:O	31:BJ:103:ILE:HG22	2.12	0.49
47:B0:3:GLN:N	47:B0:3:GLN:NE2	2.60	0.49
23:DB:1812:U:H2'	23:DB:1813:G:H8	1.77	0.49
41:DT:14:PRO:HA	41:DT:32:LEU:HD23	1.94	0.49
40:DS:42:LYS:O	40:DS:45:VAL:HG13	2.12	0.49
28:DF:33:ILE:HG22	28:DF:34:THR:O	2.12	0.49
52:DI:108:ILE:HG22	52:DI:128:ILE:CD1	2.41	0.49
23:BB:1112:G:C5'	29:BG:2:ARG:HE	2.25	0.49
23:BB:2303:G:H2'	23:BB:2304:G:H5'	1.94	0.49
39:DR:69:GLY:CA	39:DR:97:LYS:H	2.19	0.49
16:CQ:25:GLU:HA	16:CQ:40:THR:HA	1.94	0.49
52:DI:92:PRO:O	52:DI:93:ASN:HB2	2.12	0.49
11:AL:3:VAL:HG23	11:AL:4:ASN:OD1	2.11	0.49
23:DB:2531:A:OP1	29:DG:176:LYS:HA	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2512:C:H2'	23:DB:2513:A:O4'	2.11	0.49
26:BD:92:VAL:HG13	26:BD:93:GLY:N	2.23	0.49
15:CP:67:ILE:CG1	15:CP:71:VAL:HG13	2.40	0.49
23:BB:671:C:H42	33:BL:39:LYS:HE3	1.76	0.49
29:BG:84:LYS:O	29:BG:132:LEU:HG	2.12	0.49
26:DD:153:GLY:C	26:DD:155:VAL:N	2.64	0.49
1:CA:840:C:C2'	1:CA:842:U:H5''	2.38	0.49
23:BB:1255:U:C2'	27:BE:67:ARG:HB3	2.40	0.49
31:BJ:35:ARG:NH2	31:BJ:40:HIS:N	2.60	0.49
11:AL:113:ARG:HA	11:AL:118:VAL:HG23	1.93	0.49
23:BB:1487:U:H2'	23:BB:1488:C:H6	1.75	0.49
49:B2:30:VAL:O	49:B2:33:ARG:HG3	2.11	0.49
48:D1:22:THR:O	48:D1:23:THR:C	2.49	0.49
1:AA:16:A:N1	1:AA:919:A:H2	2.10	0.49
1:AA:1225:A:H4'	18:AS:77:ARG:HH22	1.75	0.49
19:CT:54:GLN:N	19:CT:55:PRO:HD2	2.27	0.49
23:DB:181:A:H2'	23:DB:182:A:C8	2.47	0.49
30:DH:135:HIS:CG	30:DH:136:SER:N	2.79	0.49
23:BB:794:A:H2'	23:BB:795:C:H6	1.74	0.49
4:AE:17:VAL:HA	4:AE:34:ALA:HA	1.93	0.49
15:CP:22:ALA:HB2	15:CP:32:PHE:HA	1.93	0.49
12:AM:89:ARG:NH1	12:AM:94:LEU:HD13	2.27	0.49
23:BB:2899:A:H2'	23:BB:2900:A:C8	2.47	0.49
23:BB:295:G:O2'	23:BB:296:U:H5'	2.12	0.49
4:CE:149:PRO:HG2	4:CE:150:GLU:OE2	2.11	0.49
46:DZ:36:VAL:HG12	46:DZ:42:PRO:HB3	1.94	0.49
2:CC:108:PRO:C	2:CC:110:LEU:H	2.16	0.49
48:B1:7:LYS:HD2	48:B1:8:ILE:O	2.12	0.49
22:DA:43:C:C4'	28:DF:62:GLN:HE21	2.25	0.49
23:DB:1750:G:H2'	23:DB:1751:U:C6	2.47	0.49
12:CM:95:PRO:HB2	12:CM:99:GLN:OE1	2.12	0.49
23:DB:311:A:H1'	23:DB:332:A:O4'	2.12	0.49
1:AA:182:A:H1'	1:AA:183:C:C5	2.47	0.49
23:DB:1211:C:H4'	23:DB:1212:G:OP2	2.12	0.49
23:DB:1215:G:O2'	23:DB:1216:G:H5'	2.12	0.49
22:DA:78:A:H4'	34:DM:22:GLN:CD	2.32	0.49
1:CA:182:A:H1'	1:CA:183:C:C5	2.47	0.49
23:DB:1541:C:H2'	23:DB:1542:U:C6	2.47	0.49
2:AC:100:ILE:O	2:AC:100:ILE:HG23	2.11	0.49
1:AA:971:G:OP1	1:AA:971:G:H3'	2.12	0.49
23:BB:2258:C:OP2	43:BW:3:LYS:HG2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BG:154:GLU:OE1	29:BG:156:TYR:HB2	2.11	0.49
31:BJ:46:PRO:C	31:BJ:48:VAL:H	2.15	0.49
27:BE:43:THR:HG23	27:BE:44:ARG:CZ	2.42	0.49
23:BB:37:C:H2'	27:BE:46:GLN:HB3	1.94	0.49
25:BC:42:ARG:CG	25:BC:43:ASN:H	2.11	0.49
23:BB:189:G:H2'	23:BB:205:G:H22	1.76	0.49
50:B3:11:LYS:HG2	50:B3:12:ARG:CG	2.39	0.49
23:BB:2683:C:H2'	23:BB:2684:U:C6	2.47	0.49
23:BB:1562:U:H2'	23:BB:1563:U:C6	2.46	0.49
23:DB:910:A:H62	34:DM:15:GLY:HA3	1.78	0.49
34:DM:40:ARG:HG3	34:DM:40:ARG:NH1	2.26	0.49
39:DR:92:TRP:CE3	39:DR:93:PHE:N	2.80	0.49
21:CU:7:GLU:OE1	21:CU:11:PHE:HZ	1.95	0.49
23:DB:2900:A:H2'	23:DB:2901:C:H6	1.76	0.49
31:DJ:49:ASP:O	31:DJ:50:THR:HB	2.12	0.49
31:DJ:51:GLY:N	31:DJ:118:MET:HE2	2.26	0.49
23:DB:458:G:O2'	23:DB:469:G:N1	2.44	0.49
27:DE:47:LYS:C	27:DE:49:ARG:HG2	2.32	0.49
40:BS:28:LYS:HB3	40:BS:71:VAL:CG2	2.43	0.49
39:DR:4:VAL:HA	39:DR:43:ASN:CG	2.32	0.49
43:DW:47:GLY:HA2	43:DW:71:LYS:C	2.31	0.49
29:BG:26:LYS:CA	29:BG:31:GLU:HG2	2.34	0.49
35:BN:65:LEU:CD1	35:BN:68:ALA:HB3	2.42	0.49
27:DE:199:MET:HG3	27:DE:200:LEU:H	1.77	0.49
41:BT:29:THR:HG22	41:BT:86:THR:HA	1.94	0.49
20:CB:137:THR:HA	20:CB:140:LEU:CD1	2.42	0.49
42:BU:10:VAL:HG21	42:BU:25:LYS:HZ2	1.77	0.49
42:BU:3:LYS:NZ	42:BU:3:LYS:HB2	2.28	0.49
23:BB:741:U:H2'	23:BB:742:A:C8	2.45	0.49
42:DU:27:VAL:CB	42:DU:33:VAL:HG22	2.42	0.49
52:DI:52:LEU:HD22	52:DI:81:LYS:HD3	1.93	0.49
23:DB:2032:G:N3	26:DD:150:GLN:HG2	2.27	0.49
32:DK:63:VAL:HG22	32:DK:107:LEU:HD21	1.94	0.49
14:CO:25:GLU:OE2	14:CO:76:ARG:HD3	2.11	0.49
47:D0:32:THR:OG1	47:D0:33:SER:N	2.43	0.49
51:B4:24:ARG:NH1	51:B4:36:ARG:HB2	2.24	0.49
1:CA:662:U:O2'	1:CA:836:G:H5''	2.12	0.49
2:AC:71:ARG:NH2	2:AC:74:ILE:HB	2.26	0.49
44:DX:41:HIS:CE1	44:DX:43:LEU:HB2	2.48	0.49
9:AJ:57:VAL:HG13	9:AJ:58:ASN:N	2.27	0.49
23:BB:92:U:H2'	23:BB:93:G:O4'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1131:G:C2'	1:CA:1132:C:H5'	2.42	0.49
23:BB:1275:A:N3	23:BB:1275:A:C3'	2.75	0.49
41:DT:38:ALA:O	41:DT:42:GLU:HB3	2.13	0.49
48:D1:24:LYS:HZ3	48:D1:24:LYS:CB	2.23	0.49
25:BC:248:GLY:HA3	25:BC:252:LYS:HE3	1.95	0.49
20:CB:38:HIS:O	20:CB:39:ILE:HD13	2.12	0.49
23:BB:1010:A:O2'	23:BB:1152:C:H1'	2.12	0.49
33:DL:115:GLU:C	33:DL:116:VAL:HG13	2.32	0.49
23:DB:2076:U:O2	23:DB:2076:U:O4'	2.29	0.49
2:CC:2:GLN:H	2:CC:2:GLN:HE21	1.61	0.49
7:AH:29:SER:HB3	7:AH:32:LYS:HZ2	1.78	0.49
33:BL:133:ALA:HA	33:BL:136:GLU:OE2	2.12	0.49
23:DB:2461:A:H2'	23:DB:2462:C:H6	1.76	0.49
1:AA:677:U:H2'	1:AA:678:U:H6	1.77	0.49
23:DB:2250:G:N2	23:DB:2496:C:H4'	2.27	0.49
23:DB:651:G:H5'	50:D3:18:LYS:HE3	1.94	0.49
40:BS:86:MET:HB2	40:BS:96:ILE:CD1	2.42	0.49
3:CD:30:LYS:HB2	3:CD:30:LYS:NZ	2.27	0.49
1:AA:370:C:O2'	1:AA:371:A:H5'	2.13	0.49
3:CD:106:PHE:HD1	3:CD:158:LEU:HD21	1.76	0.49
34:DM:127:LYS:HD3	34:DM:128:THR:N	2.25	0.49
44:DX:55:THR:C	44:DX:57:LEU:H	2.14	0.49
23:DB:2840:C:H2'	23:DB:2841:C:C6	2.47	0.49
20:AB:114:LYS:HA	20:AB:117:GLU:OE1	2.12	0.49
23:BB:2665:A:O2'	23:BB:2666:C:H5'	2.12	0.49
23:DB:943:A:OP1	33:DL:41:ARG:HG2	2.12	0.49
23:BB:689:A:H2'	23:BB:690:G:C8	2.47	0.49
23:DB:685:A:H1'	23:DB:688:U:O4	2.12	0.49
23:DB:1311:G:H21	23:DB:1603:A:H62	1.60	0.49
23:DB:2712:C:H3'	23:DB:2714:G:H5''	1.94	0.49
1:AA:841:C:H3'	1:AA:843:U:OP2	2.11	0.49
7:CH:72:GLU:H	7:CH:129:ALA:HB2	1.76	0.49
46:DZ:66:ILE:HB	46:DZ:67:PRO:HD3	1.94	0.49
23:DB:866:A:H61	23:DB:913:U:C1'	2.24	0.49
23:BB:2623:G:O2'	23:BB:2624:G:H5'	2.12	0.49
23:DB:1098:A:C2'	52:DI:3:LYS:O	2.53	0.49
23:DB:1100:C:H41	52:DI:1:ALA:H1	1.60	0.49
31:BJ:7:LYS:HD3	31:BJ:48:VAL:CB	2.39	0.49
39:BR:42:ALA:HA	39:BR:54:VAL:HG13	1.94	0.49
34:BM:8:LYS:N	34:BM:8:LYS:HE2	2.27	0.49
24:BV:21:ARG:NH2	24:BV:27:PRO:HG3	2.26	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BV:6:ALA:HB3	24:BV:65:VAL:CG1	2.43	0.49
23:BB:2229:U:H2'	23:BB:2230:G:H8	1.75	0.49
46:BZ:48:GLN:H	46:BZ:51:VAL:HB	1.78	0.49
26:BD:13:ARG:CZ	37:BP:8:GLU:HB3	2.43	0.49
26:BD:13:ARG:HA	26:BD:13:ARG:NH1	2.27	0.49
26:BD:128:ARG:NE	26:BD:129:THR:O	2.45	0.49
26:DD:172:VAL:O	26:DD:173:GLN:HB3	2.12	0.49
37:DP:54:LEU:HD22	37:DP:55:HIS:N	2.28	0.49
30:DH:4:ILE:CD1	30:DH:37:VAL:HG13	2.42	0.49
33:DL:64:PHE:CZ	50:D3:7:ARG:NH2	2.80	0.49
23:DB:2393:U:O2'	23:DB:2394:C:H5'	2.12	0.49
45:DY:7:THR:HA	45:DY:34:THR:HB	1.93	0.49
36:DO:25:ARG:HB3	36:DO:94:ARG:HH22	1.77	0.49
45:BY:8:GLN:O	45:BY:55:LYS:HE2	2.12	0.49
21:CU:16:ARG:HB3	21:CU:20:ARG:HD3	1.95	0.49
31:DJ:25:LEU:HD11	31:DJ:63:ALA:H	1.77	0.49
20:AB:150:ILE:HG13	20:AB:153:MET:CE	2.39	0.49
47:B0:28:SER:O	47:B0:36:LYS:HB2	2.13	0.49
40:BS:47:VAL:O	40:BS:51:LEU:HB2	2.13	0.49
40:BS:32:ALA:HA	40:BS:51:LEU:HD11	1.94	0.49
33:BL:125:LEU:C	33:BL:126:ARG:HG3	2.31	0.49
33:BL:125:LEU:HA	33:BL:142:ILE:O	2.11	0.49
41:DT:47:VAL:HG22	41:DT:53:VAL:HG11	1.94	0.49
41:DT:53:VAL:HB	41:DT:87:LEU:HD21	1.93	0.49
22:DA:94:A:OP1	24:DV:19:ARG:HD3	2.10	0.49
37:BP:45:VAL:HG21	37:BP:73:PHE:HD1	1.77	0.49
26:DD:154:LYS:C	26:DD:156:PHE:H	2.16	0.49
26:DD:154:LYS:O	26:DD:156:PHE:N	2.45	0.49
3:CD:59:LYS:O	3:CD:63:ILE:HG22	2.12	0.49
25:BC:242:HIS:N	25:BC:242:HIS:ND1	2.60	0.49
23:BB:2636:C:H2'	23:BB:2637:U:C6	2.47	0.49
29:BG:17:LYS:HB3	29:BG:24:THR:HG22	1.93	0.49
1:CA:1060:U:C5'	9:CJ:53:ILE:HG12	2.41	0.49
36:BO:1:MET:CG	36:BO:2:ASP:N	2.73	0.49
23:DB:2879:A:H4'	23:DB:2880:C:OP1	2.11	0.49
1:CA:919:A:O2'	1:CA:920:U:H5'	2.12	0.49
26:DD:1:MET:HB2	26:DD:81:GLU:CD	2.33	0.49
38:DQ:32:ARG:NH1	38:DQ:33:VAL:HG22	2.27	0.49
35:DN:10:LEU:HG	35:DN:11:ASN:H	1.76	0.49
1:CA:1512:U:H2'	1:CA:1513:A:H8	1.77	0.49
50:B3:41:ARG:HB3	50:B3:43:LEU:CD2	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:837:U:H2'	1:AA:838:G:H8	1.77	0.49
2:AC:150:VAL:HG12	2:AC:151:GLU:H	1.77	0.49
15:AP:52:LEU:HG	15:AP:75:ILE:CG1	2.40	0.49
3:AD:84:ASN:HD22	3:AD:87:GLU:N	2.10	0.49
12:CM:84:CYS:O	12:CM:88:LEU:HG	2.12	0.49
44:BX:12:GLU:HB2	44:BX:14:LEU:HD12	1.93	0.49
23:BB:589:U:H2'	23:BB:590:A:H8	1.76	0.49
30:DH:72:ILE:HG22	30:DH:72:ILE:O	2.12	0.49
23:DB:2278:A:H62	43:DW:10:ARG:C	2.16	0.49
44:BX:59:GLU:C	44:BX:61:ALA:H	2.15	0.49
1:AA:16:A:H4'	4:AE:21:SER:H	1.76	0.49
32:BK:108:ARG:HH21	37:BP:36:LYS:HG3	1.77	0.49
2:AC:113:LYS:HG3	2:AC:117:ASP:OD2	2.13	0.49
42:DU:46:LYS:HD3	42:DU:53:GLN:HA	1.94	0.49
23:BB:609:A:H2'	23:BB:610:C:O4'	2.12	0.49
5:AF:100:SER:HA	17:AR:23:LYS:CE	2.42	0.49
2:CC:85:LYS:HG3	2:CC:86:LEU:HD23	1.93	0.49
1:CA:83:C:OP1	1:CA:83:C:H4'	2.11	0.49
6:CG:90:VAL:HG13	6:CG:94:ARG:HD3	1.93	0.49
20:CB:57:ASN:ND2	20:CB:223:GLY:HA2	2.28	0.49
8:AI:118:ARG:HH22	8:AI:122:ARG:NH2	2.10	0.49
23:DB:2888:C:H2'	23:DB:2889:C:H6	1.76	0.49
1:AA:529:G:H22	11:AL:47:ALA:CB	2.24	0.49
34:DM:24:THR:HG22	34:DM:25:ASP:N	2.27	0.49
23:BB:926:G:H2'	23:BB:927:A:C8	2.47	0.49
50:B3:3:ILE:HD13	50:B3:3:ILE:N	2.27	0.49
23:DB:506:G:H4'	23:DB:509:C:O2	2.12	0.49
1:AA:1108:G:H5'	2:AC:175:HIS:CD2	2.47	0.49
23:BB:2398:U:H2'	23:BB:2399:G:H8	1.77	0.49
23:BB:2700:A:H2'	23:BB:2701:U:H6	1.77	0.49
10:CK:24:ALA:HB2	10:CK:29:THR:HG23	1.93	0.49
1:CA:880:C:P	11:CL:4:ASN:HD22	2.36	0.49
1:CA:930:C:H2'	1:CA:931:C:C6	2.47	0.49
1:CA:961:U:O4'	1:CA:961:U:O2	2.29	0.49
29:DG:168:VAL:O	29:DG:168:VAL:HG13	2.12	0.49
30:DH:109:GLU:O	30:DH:109:GLU:HG3	2.12	0.49
1:CA:309:A:H2'	1:CA:310:G:H8	1.77	0.49
24:BV:78:GLN:HB2	24:BV:88:HIS:O	2.13	0.49
38:BQ:92:LYS:O	38:BQ:94:LEU:HD22	2.11	0.49
23:BB:2465:C:O2'	23:BB:2466:C:H5'	2.11	0.49
34:BM:65:ILE:HG22	34:BM:101:VAL:HG12	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2484:G:H4'	34:BM:45:GLN:OE1	2.12	0.49
26:BD:170:VAL:HG22	26:BD:171:THR:N	2.27	0.49
25:BC:131:MET:O	25:BC:134:ILE:HB	2.13	0.49
25:BC:172:THR:O	25:BC:173:LEU:CB	2.60	0.49
33:DL:118:THR:HG23	33:DL:137:ALA:O	2.12	0.49
23:BB:922:C:H2'	23:BB:923:G:H8	1.77	0.49
6:AG:125:ASP:HB3	6:AG:130:LYS:CB	2.27	0.49
21:CU:3:ILE:HB	21:CU:18:PHE:CD2	2.48	0.49
31:DJ:120:ARG:N	31:DJ:121:LYS:HZ2	2.10	0.49
31:DJ:47:HIS:O	31:DJ:47:HIS:ND1	2.46	0.49
43:DW:45:HIS:HB2	43:DW:66:VAL:HG11	1.93	0.49
26:BD:148:GLN:HB2	26:BD:151:THR:HG23	1.95	0.49
33:BL:117:THR:OG1	33:BL:118:THR:N	2.45	0.49
33:BL:79:LEU:HD12	33:BL:79:LEU:N	2.27	0.49
23:BB:1019:U:H2'	23:BB:1020:A:C8	2.47	0.49
27:DE:116:ASP:O	27:DE:117:ARG:HD2	2.13	0.49
23:BB:2322:A:N6	23:BB:2333:A:H62	2.10	0.49
46:DZ:1:MET:HA	46:DZ:9:TYR:CD1	2.46	0.49
12:AM:10:ASP:HA	12:AM:44:ILE:CD1	2.41	0.49
23:BB:811:U:OP2	33:BL:31:GLY:HA2	2.13	0.49
12:AM:78:ARG:HH12	18:AS:64:GLU:HG2	1.76	0.49
28:BF:65:LEU:HD23	28:BF:87:LYS:HD2	1.94	0.49
34:DM:50:ARG:NE	34:DM:53:MET:HE2	2.27	0.49
46:DZ:54:GLY:O	46:DZ:57:VAL:HB	2.12	0.49
49:B2:25:LYS:HE3	49:B2:25:LYS:N	2.28	0.49
26:BD:34:VAL:CG2	26:BD:93:GLY:HA3	2.42	0.49
15:CP:54:LEU:HA	15:CP:57:ILE:CG2	2.42	0.49
15:CP:57:ILE:HD13	15:CP:57:ILE:C	2.33	0.49
26:BD:62:LYS:N	26:BD:62:LYS:HE3	2.27	0.49
2:AC:71:ARG:O	2:AC:74:ILE:HG22	2.11	0.49
26:DD:59:ARG:HE	26:DD:63:PRO:CB	2.25	0.49
6:CG:108:ARG:HA	6:CG:118:ARG:HE	1.77	0.49
48:B1:33:LEU:N	48:B1:52:LYS:HB3	2.27	0.49
18:CS:15:LEU:HA	18:CS:18:VAL:CG1	2.37	0.49
23:DB:1857:G:HO2'	23:DB:1858:A:H8	1.57	0.49
16:CQ:18:LYS:HA	16:CQ:47:ASP:O	2.13	0.49
23:BB:323:C:H6	27:BE:164:LEU:HB3	1.77	0.49
23:DB:483:A:H2'	23:DB:484:C:C5'	2.42	0.49
23:BB:2196:C:O2'	23:BB:2197:U:H5'	2.12	0.49
1:CA:1244:G:H2'	1:CA:1245:C:H6	1.77	0.49
23:DB:643:A:H61	23:DB:2370:G:H1'	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:2:GLN:HE21	2:CC:2:GLN:N	2.10	0.49
23:BB:1751:U:H2'	23:BB:1752:C:C6	2.47	0.49
3:CD:89:LEU:HA	3:CD:92:LEU:HB2	1.93	0.49
23:DB:609:A:H2'	23:DB:610:C:O4'	2.13	0.49
20:CB:55:GLU:HG3	20:CB:197:PHE:HZ	1.77	0.49
23:DB:288:U:H2'	23:DB:289:G:H8	1.77	0.49
23:BB:716:A:H2'	23:BB:717:C:O4'	2.11	0.49
23:BB:19:A:H2'	23:BB:20:C:H6	1.78	0.49
23:BB:2888:C:H2'	23:BB:2889:C:H6	1.76	0.49
1:AA:90:C:H2'	1:AA:91:U:C6	2.46	0.49
23:BB:1230:A:H2'	23:BB:1231:U:H6	1.77	0.49
23:BB:2712:C:H2'	23:BB:2714:G:O3'	2.12	0.49
23:DB:1313:U:H4'	23:DB:1332:G:H4'	1.94	0.49
1:CA:272:C:H2'	1:CA:273:U:C6	2.47	0.49
1:AA:1007:U:H2'	1:AA:1008:U:H6	1.77	0.49
20:AB:107:ARG:HA	20:AB:110:ILE:CD1	2.42	0.49
1:AA:600:A:H2'	1:AA:601:G:C8	2.48	0.49
30:BH:51:ARG:O	30:BH:54:LEU:HB2	2.12	0.49
1:AA:685:G:O2'	1:AA:686:U:H5'	2.12	0.49
23:BB:1917:U:H2'	23:BB:1918:A:H5'	1.93	0.49
1:AA:110:C:H2'	1:AA:111:G:O4'	2.12	0.49
23:BB:1009:A:O2'	38:BQ:61:ILE:HD11	2.13	0.49
23:BB:817:C:O2'	23:BB:839:U:H5''	2.12	0.49
7:AH:10:LEU:HA	7:AH:74:ILE:HD11	1.95	0.49
20:CB:111:LYS:O	20:CB:114:LYS:HB3	2.11	0.49
23:DB:737:C:O2'	23:DB:738:G:H5'	2.11	0.49
13:CN:16:ALA:O	13:CN:20:PHE:N	2.46	0.49
18:AS:12:LEU:O	18:AS:15:LEU:HB3	2.13	0.49
23:DB:1661:G:O2'	23:DB:1662:U:H5'	2.13	0.49
23:DB:679:C:O2'	23:DB:680:C:H5'	2.12	0.49
34:BM:74:THR:HA	34:BM:87:GLY:O	2.12	0.49
37:BP:109:ILE:O	37:BP:110:LYS:C	2.49	0.49
27:BE:170:ARG:HH21	27:BE:175:ILE:CD1	2.24	0.49
23:DB:2728:U:H5'	32:DK:70:ARG:NH2	2.27	0.49
33:DL:141:LYS:O	33:DL:142:ILE:HD13	2.11	0.49
35:DN:112:TYR:O	35:DN:113:ILE:HB	2.13	0.49
23:DB:853:C:H2'	23:DB:854:C:H6	1.78	0.49
31:DJ:102:GLU:O	31:DJ:105:VAL:HG12	2.12	0.49
47:B0:28:SER:O	47:B0:32:THR:HG22	2.11	0.49
30:BH:147:VAL:HG12	30:BH:148:ALA:H	1.77	0.49
30:BH:89:LYS:HZ1	30:BH:90:LEU:HB2	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DW:18:LYS:HE3	43:DW:20:LEU:HD23	1.95	0.49
43:DW:43:LYS:O	43:DW:44:PHE:CB	2.55	0.49
25:DC:205:GLY:O	25:DC:206:LYS:HG2	2.12	0.49
40:DS:64:ALA:HA	40:DS:110:ARG:HE	1.77	0.49
23:DB:160:A:H2'	23:DB:161:A:C8	2.48	0.49
1:CA:235:C:H2'	1:CA:236:A:C8	2.47	0.49
45:BY:6:ILE:HD13	45:BY:6:ILE:N	2.28	0.49
8:CI:115:VAL:HG22	8:CI:116:GLY:H	1.78	0.49
23:BB:1113:U:H5''	29:BG:2:ARG:H	1.76	0.49
28:BF:109:ARG:HG2	28:BF:136:ILE:HG13	1.95	0.49
16:CQ:17:GLU:C	16:CQ:19:SER:H	2.15	0.49
23:DB:372:G:N7	46:DZ:57:VAL:HG21	2.27	0.49
23:DB:1057:A:C8	23:DB:1086:A:C8	3.00	0.49
18:CS:62:THR:HG22	18:CS:65:MET:CE	2.42	0.49
26:BD:38:LYS:N	26:BD:38:LYS:HD3	2.27	0.49
18:CS:27:LYS:NZ	18:CS:27:LYS:HB3	2.23	0.49
23:BB:1188:U:H4'	39:BR:83:TYR:CB	2.42	0.49
4:CE:15:ILE:HG22	4:CE:16:ALA:N	2.27	0.49
26:DD:81:GLU:O	26:DD:82:PHE:HB2	2.13	0.49
23:BB:1791:A:H5'	25:BC:207:ALA:HA	1.93	0.49
42:BU:38:ILE:O	42:BU:39:ASN:HB2	2.12	0.49
1:CA:764:C:H3'	1:CA:765:G:N2	2.24	0.49
8:CI:42:THR:O	8:CI:45:MET:HG2	2.12	0.49
10:CK:31:VAL:HG21	10:CK:66:ALA:CA	2.42	0.49
28:DF:110:ILE:HG22	28:DF:111:ARG:N	2.27	0.49
23:BB:1993:U:H4'	26:BD:134:HIS:CE1	2.41	0.49
23:BB:446:G:OP2	38:BQ:2:ARG:HD2	2.12	0.49
19:CT:34:VAL:HG11	19:CT:78:LEU:HD13	1.93	0.49
16:CQ:60:ILE:HD13	16:CQ:60:ILE:H	1.77	0.49
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.48	0.49
23:BB:962:G:N2	34:BM:81:ARG:HH21	2.11	0.49
29:DG:29:ASN:HB2	29:DG:78:VAL:HA	1.93	0.49
1:CA:89:U:O2'	1:CA:90:C:H5'	2.13	0.49
23:BB:95:A:H4'	44:BX:40:SER:CB	2.40	0.49
23:DB:2732:G:H3'	23:DB:2733:A:H5'	1.94	0.49
23:BB:15:G:H2'	23:BB:16:C:H6	1.76	0.49
52:DI:121:ILE:CD1	52:DI:121:ILE:H	2.25	0.49
28:BF:16:MET:HE3	28:BF:21:TYR:HD1	1.77	0.49
23:BB:1722:A:H2'	23:BB:1723:G:C8	2.47	0.49
37:DP:38:ARG:HD2	37:DP:39:LEU:N	2.27	0.49
35:DN:73:ASN:HA	35:DN:76:VAL:CG1	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1629:U:O2	23:BB:2698:U:H5''	2.13	0.49
2:AC:115:VAL:CG1	2:AC:137:VAL:HG13	2.43	0.49
23:DB:1682:G:H2'	23:DB:1683:U:C6	2.47	0.49
1:CA:265:G:H2'	1:CA:267:C:H5	1.77	0.49
23:BB:235:U:H2'	23:BB:236:C:C6	2.47	0.49
23:DB:765:C:H2'	23:DB:766:U:H6	1.77	0.49
27:DE:176:ASP:OD1	27:DE:177:PRO:HD2	2.12	0.49
23:DB:1564:C:O2'	23:DB:1565:C:H5'	2.12	0.49
20:CB:150:ILE:O	20:CB:150:ILE:HG12	2.13	0.49
23:DB:2455:G:H2'	23:DB:2456:C:C6	2.47	0.49
23:BB:2776:A:H4'	23:BB:2777:G:C5'	2.42	0.49
23:DB:1359:A:H2'	23:DB:1360:G:O4'	2.13	0.49
23:DB:1360:G:H2'	23:DB:1361:G:H5'	1.94	0.49
23:DB:1477:A:H2'	23:DB:1478:G:O4'	2.13	0.49
2:CC:56:ILE:N	2:CC:56:ILE:HD12	2.28	0.49
1:AA:1432:G:OP1	37:BP:105:LYS:HB2	2.12	0.49
1:AA:909:A:H2'	1:AA:910:C:O4'	2.11	0.49
12:CM:64:VAL:HB	12:CM:65:GLU:OE2	2.13	0.49
23:BB:1424:G:H2'	23:BB:1425:G:O4'	2.13	0.49
50:B3:12:ARG:HG2	50:B3:23:HIS:HB3	1.94	0.49
23:BB:831:G:O3'	33:BL:44:GLY:HA3	2.13	0.49
26:BD:200:ASP:O	26:BD:201:LEU:HB2	2.13	0.49
23:BB:2848:G:C5	37:BP:96:LEU:HD23	2.48	0.49
2:AC:78:LYS:H	2:AC:81:GLU:CB	2.25	0.49
26:DD:96:ILE:HG22	26:DD:97:SER:N	2.27	0.49
26:DD:116:LYS:O	35:DN:2:ARG:HB3	2.12	0.49
34:DM:71:LYS:NZ	34:DM:91:TYR:HB3	2.28	0.49
25:DC:229:HIS:CE1	25:DC:231:HIS:HE2	2.31	0.49
31:DJ:38:GLY:O	31:DJ:41:LYS:HD3	2.13	0.49
27:DE:85:PHE:O	27:DE:86:ALA:HB2	2.13	0.49
32:BK:107:LEU:C	32:BK:109:SER:H	2.15	0.49
32:BK:11:ALA:HB3	32:BK:85:VAL:HG23	1.94	0.49
38:BQ:16:ILE:HD11	38:BQ:31:TYR:CD1	2.47	0.49
38:BQ:13:HIS:O	38:BQ:17:LEU:HB2	2.13	0.49
30:BH:35:LYS:H	30:BH:35:LYS:HD2	1.76	0.49
39:DR:4:VAL:HG11	39:DR:46:GLU:OE2	2.12	0.49
23:DB:2364:C:H2'	23:DB:2365:G:O4'	2.12	0.49
36:DO:18:LEU:HD22	43:DW:76:ARG:NH2	2.27	0.49
1:AA:1060:U:C5'	9:AJ:53:ILE:HG22	2.42	0.49
41:DT:92:ASN:O	41:DT:93:LEU:HD12	2.11	0.49
28:DF:133:GLU:O	28:DF:134:GLN:HB2	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BU:78:LYS:HB3	42:BU:96:LYS:CB	2.43	0.49
1:CA:1308:U:P	12:CM:97:ARG:HD3	2.53	0.49
19:AT:68:LYS:HG3	19:AT:69:ASN:ND2	2.27	0.49
23:BB:2751:G:OP2	29:BG:3:VAL:HG22	2.12	0.49
23:DB:973:A:H1'	23:DB:1188:U:C6	2.47	0.49
1:CA:8:A:H1'	4:CE:107:GLY:HA2	1.94	0.49
28:DF:98:PHE:CB	28:DF:101:ARG:HE	2.26	0.49
26:DD:139:SER:O	26:DD:141:ARG:N	2.46	0.49
8:AI:18:VAL:HG21	8:AI:82:ILE:CG1	2.43	0.49
38:DQ:4:LYS:O	38:DQ:5:ARG:C	2.50	0.49
23:DB:533:G:N3	38:DQ:40:LYS:HG2	2.27	0.49
48:B1:15:GLY:HA3	48:B1:47:ILE:HD12	1.95	0.49
35:BN:101:GLY:H	35:BN:110:MET:HB2	1.78	0.49
45:DY:15:ARG:HD2	45:DY:53:MET:SD	2.53	0.49
1:CA:625:U:H4'	15:CP:16:PHE:CE2	2.47	0.49
38:DQ:29:ARG:CA	38:DQ:29:ARG:HH11	2.25	0.49
23:DB:1531:C:H2'	23:DB:1532:A:H8	1.78	0.49
1:CA:537:G:H2'	1:CA:538:G:C8	2.48	0.49
1:CA:807:A:H2'	1:CA:808:C:C6	2.48	0.49
5:CF:18:VAL:O	5:CF:22:ILE:HG13	2.12	0.49
23:BB:1710:G:H4'	23:BB:2858:C:O2	2.12	0.49
23:BB:2318:G:O2'	23:BB:2319:G:C2	2.65	0.49
23:BB:296:U:H2'	23:BB:297:G:C8	2.48	0.49
2:CC:105:VAL:HG12	2:CC:108:PRO:HD3	1.93	0.49
22:DA:63:C:H2'	22:DA:64:G:C8	2.48	0.49
3:CD:32:LYS:HG3	3:CD:32:LYS:O	2.13	0.49
1:CA:21:G:H2'	1:CA:22:G:C8	2.48	0.49
1:CA:301:G:H2'	1:CA:302:G:H8	1.76	0.49
20:AB:22:TRP:CG	20:AB:23:ASN:N	2.81	0.49
23:BB:1637:A:H2'	23:BB:1638:C:C6	2.47	0.49
1:AA:1481:U:H2'	1:AA:1482:G:C8	2.47	0.49
23:DB:2776:A:H4'	23:DB:2777:G:O5'	2.13	0.49
38:DQ:109:VAL:O	38:DQ:113:LYS:HB2	2.12	0.49
23:BB:511:U:H6	23:BB:511:U:O5'	1.95	0.49
1:AA:708:C:H2'	1:AA:709:U:C6	2.47	0.49
1:CA:1137:C:H1'	1:CA:1138:G:C2	2.47	0.49
23:BB:2634:A:H2'	23:BB:2635:A:C8	2.48	0.49
23:DB:581:C:H2'	23:DB:582:A:H8	1.77	0.49
23:DB:582:A:H2'	23:DB:583:G:C8	2.48	0.49
34:BM:29:GLY:HA3	34:BM:104:GLU:OE2	2.12	0.49
25:DC:104:LEU:HD13	25:DC:156:SER:HB3	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2684:U:OP1	37:BP:59:THR:HG22	2.12	0.49
37:BP:62:LYS:HG2	37:BP:74:GLN:OE1	2.13	0.49
26:BD:125:TRP:O	26:BD:126:ASN:HB2	2.12	0.49
37:DP:25:VAL:O	37:DP:47:ILE:HB	2.13	0.49
37:DP:70:GLU:CD	37:DP:71:ARG:HE	2.14	0.49
45:DY:2:LYS:CE	45:DY:27:GLY:H	2.25	0.49
23:DB:2293:G:OP1	36:DO:13:ARG:NH2	2.46	0.49
39:BR:85:LYS:C	39:BR:87:GLN:N	2.66	0.49
23:DB:921:C:H2'	23:DB:922:C:C6	2.47	0.49
31:BJ:120:ARG:O	31:BJ:122:LEU:N	2.37	0.49
27:DE:153:LEU:HG	27:DE:173:THR:HB	1.94	0.49
23:BB:2334:U:OP2	36:BO:7:ARG:HA	2.13	0.49
21:AU:29:ALA:HA	21:AU:32:ARG:HB2	1.94	0.49
12:CM:37:GLY:O	12:CM:38:ILE:HD13	2.12	0.49
20:AB:71:THR:CG2	20:AB:94:ARG:HH21	2.25	0.49
22:BA:50:A:H5''	36:BO:68:LYS:HG3	1.94	0.49
26:DD:157:LYS:HZ2	31:DJ:80:HIS:HA	1.77	0.49
16:CQ:19:SER:O	16:CQ:20:ILE:HD12	2.13	0.49
13:CN:42:ASN:HA	13:CN:45:LEU:HD12	1.95	0.49
52:DI:19:PRO:HB2	52:DI:22:PRO:HD2	1.93	0.49
8:AI:4:GLN:NE2	8:AI:21:LYS:HE3	2.28	0.49
1:AA:1409:C:N4	1:AA:1491:G:N1	2.54	0.49
36:BO:41:ALA:CB	36:BO:45:SER:HB3	2.43	0.49
33:DL:33:ARG:HB3	39:DR:85:LYS:HZ3	1.78	0.49
6:AG:72:VAL:HB	6:AG:144:ALA:CB	2.41	0.49
11:AL:35:ARG:O	11:AL:52:CYS:HB2	2.13	0.49
11:CL:65:TYR:HB3	11:CL:95:HIS:CD2	2.47	0.49
23:DB:2256:G:H2'	23:DB:2257:U:H6	1.77	0.49
3:CD:141:VAL:HG12	3:CD:180:THR:CA	2.41	0.49
19:CT:38:ILE:HD13	19:CT:85:LEU:HD23	1.95	0.49
23:BB:1652:A:H62	35:BN:11:ASN:HD21	1.61	0.49
5:CF:68:GLN:HA	5:CF:71:ILE:HG22	1.94	0.49
26:BD:113:SER:O	26:BD:167:ASN:HA	2.13	0.49
20:CB:86:CYS:HB3	20:CB:88:GLN:CD	2.32	0.49
23:BB:565:C:O2'	23:BB:566:U:H5'	2.13	0.49
23:DB:969:G:OP1	45:DY:17:PRO:HG3	2.13	0.49
1:AA:556:C:O2'	1:AA:557:G:H5'	2.11	0.49
23:DB:1722:A:H61	23:DB:1738:G:H1'	1.77	0.49
12:AM:22:TYR:HB3	12:AM:69:ARG:HH22	1.78	0.49
23:BB:1351:C:O2'	23:BB:1571:A:H1'	2.12	0.49
52:DI:37:PHE:CZ	52:DI:58:ILE:HD11	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:957:U:H3	1:AA:960:U:H5''	1.77	0.49
23:BB:1684:G:H2'	23:BB:1685:C:C6	2.48	0.49
30:BH:47:PHE:HE1	30:BH:51:ARG:CZ	2.25	0.49
23:DB:2586:U:H2'	23:DB:2587:A:C8	2.47	0.49
1:CA:1082:A:H2'	1:CA:1083:U:O4'	2.12	0.49
23:DB:2207:C:H2'	23:DB:2208:C:C6	2.46	0.49
1:CA:613:C:H2'	1:CA:614:C:C6	2.48	0.49
1:CA:1451:U:H5''	1:CA:1452:C:OP2	2.12	0.49
1:CA:49:U:O2'	1:CA:50:A:H2'	2.13	0.49
1:AA:327:A:H1'	1:AA:329:A:O4'	2.13	0.49
45:DY:30:ARG:N	45:DY:30:ARG:HD2	2.28	0.49
23:BB:2757:A:N3	23:BB:2757:A:H2'	2.26	0.49
26:BD:68:PHE:O	26:BD:70:LYS:N	2.40	0.49
1:AA:1271:A:H2'	1:AA:1272:G:H8	1.78	0.49
23:DB:1081:U:C5'	52:DI:126:ARG:NH1	2.54	0.49
40:DS:7:HIS:NE2	40:DS:46:LEU:HD13	2.28	0.49
34:BM:42:THR:HA	34:BM:92:TRP:HD1	1.73	0.49
46:BZ:49:ARG:O	46:BZ:51:VAL:HG23	2.13	0.49
23:BB:1818:U:H5''	25:BC:155:ARG:HG2	1.95	0.49
25:BC:141:HIS:N	25:BC:193:GLU:OE2	2.46	0.49
26:DD:117:GLY:O	26:DD:164:GLN:HA	2.13	0.49
34:DM:40:ARG:HH11	34:DM:40:ARG:HG3	1.77	0.49
30:DH:37:VAL:HG12	30:DH:38:PRO:N	2.28	0.49
23:DB:2360:G:O2'	33:DL:61:LEU:HD21	2.12	0.49
20:CB:209:VAL:C	20:CB:213:LEU:HD12	2.33	0.49
21:CU:16:ARG:O	21:CU:18:PHE:N	2.46	0.49
31:DJ:15:TRP:HB2	31:DJ:139:VAL:CA	2.27	0.49
31:DJ:99:ARG:O	31:DJ:103:ILE:HG12	2.12	0.49
30:DH:94:ILE:CG2	30:DH:122:LEU:HG	2.39	0.49
23:BB:1018:U:O2'	23:BB:1019:U:H5'	2.13	0.49
27:DE:187:VAL:HG23	27:DE:188:MET:N	2.28	0.49
23:BB:141:G:N2	41:BT:2:ILE:HG13	2.27	0.49
18:AS:51:HIS:HA	18:AS:55:GLN:O	2.13	0.49
22:BA:74:U:H2'	22:BA:75:G:O4'	2.13	0.49
1:AA:1086:U:H4'	1:AA:1389:C:H5''	1.94	0.49
23:DB:1060:U:H5	52:DI:131:THR:CG2	2.19	0.49
52:BI:75:ALA:CB	52:BI:131:THR:HG21	2.43	0.49
49:B2:35:ARG:NH1	49:B2:39:ARG:HA	2.28	0.49
23:DB:335:C:O2'	23:DB:336:C:H5'	2.13	0.49
26:BD:118:PHE:HA	26:BD:164:GLN:HG3	1.93	0.49
8:AI:34:LEU:HD11	8:AI:47:VAL:CG2	2.36	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:222:THR:HG21	25:DC:238:ASN:ND2	2.27	0.49
3:AD:7:LYS:HG3	3:AD:20:LEU:HB2	1.94	0.49
3:AD:17:ASP:HB2	3:AD:27:ILE:HG23	1.94	0.49
3:AD:29:THR:O	3:AD:30:LYS:HB2	2.13	0.49
23:BB:125:A:H4'	49:B2:13:ASN:OD1	2.13	0.49
26:BD:61:THR:H	26:BD:62:LYS:HE3	1.77	0.49
18:CS:43:MET:O	18:CS:46:LEU:HB2	2.12	0.49
23:DB:2748:A:H1'	29:DG:66:THR:OG1	2.13	0.49
17:CR:33:THR:CG2	17:CR:37:LYS:HG2	2.43	0.49
38:DQ:36:GLN:O	38:DQ:39:ILE:HG23	2.13	0.49
23:BB:1190:G:P	33:BL:41:ARG:HG2	2.52	0.49
23:DB:95:A:O2'	44:DX:43:LEU:HD23	2.12	0.49
1:CA:1001:C:H2'	1:CA:1002:G:H8	1.76	0.49
29:BG:85:LYS:HB2	29:BG:164:ALA:HB2	1.94	0.49
42:DU:34:ILE:HG21	42:DU:61:GLU:HA	1.94	0.49
23:BB:327:G:H2'	23:BB:328:U:C6	2.47	0.49
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.95	0.49
25:BC:266:ILE:HG13	25:BC:266:ILE:O	2.13	0.49
23:DB:898:C:C2'	23:DB:899:A:H5''	2.43	0.49
20:AB:162:VAL:HG13	20:AB:184:ALA:CB	2.39	0.49
23:DB:2752:C:H2'	23:DB:2753:A:O4'	2.13	0.49
1:CA:409:U:OP2	3:CD:21:LYS:HE2	2.12	0.49
1:AA:900:A:H2'	1:AA:901:A:C8	2.47	0.49
23:DB:526:A:N6	23:DB:2626:C:C4'	2.75	0.49
23:BB:1076:C:H4'	52:BI:94:LYS:CE	2.43	0.49
20:CB:172:ILE:HD13	20:CB:182:VAL:HG11	1.94	0.49
23:BB:877:A:C2	23:BB:900:A:N7	2.80	0.49
20:AB:76:SER:HA	20:AB:92:ASN:HB2	1.94	0.49
1:CA:1373:G:H4'	6:CG:30:MET:HE3	1.93	0.49
23:DB:2834:G:H1'	23:DB:2883:A:H61	1.76	0.49
23:DB:383:C:H41	23:DB:385:C:H2'	1.76	0.49
1:AA:1281:C:H5'	1:AA:1282:C:C5	2.48	0.49
39:BR:58:VAL:HG22	39:BR:59:ILE:N	2.28	0.49
52:BI:49:GLU:HG2	52:BI:54:ILE:HD11	1.94	0.49
23:DB:1878:G:H2'	23:DB:1879:C:H6	1.76	0.49
23:BB:1269:A:H2'	23:BB:1270:C:C6	2.48	0.49
1:AA:252:U:H2'	1:AA:253:A:C8	2.48	0.49
1:AA:1130:A:O2'	1:AA:1131:G:H5'	2.13	0.49
23:BB:2285:C:OP1	48:B1:26:LYS:HE3	2.12	0.49
1:CA:708:C:H2'	1:CA:709:U:H6	1.78	0.49
23:DB:2776:A:H4'	23:DB:2777:G:C5'	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:85:LYS:O	2:AC:89:VAL:HG23	2.13	0.49
25:DC:30:ALA:N	25:DC:31:PRO:HD3	2.27	0.49
1:AA:157:U:O2'	1:AA:158:G:H5'	2.13	0.49
23:DB:572:A:H5''	23:DB:573:U:OP2	2.13	0.49
33:DL:91:ASP:O	33:DL:93:ASN:N	2.46	0.49
8:AI:87:MET:SD	8:AI:94:ARG:HG3	2.53	0.49
1:AA:1137:C:O2'	1:AA:1138:G:H5''	2.12	0.49
23:DB:2758:A:C2'	23:DB:2759:G:H5'	2.43	0.49
1:CA:577:G:O2'	1:CA:578:C:H5'	2.13	0.49
16:CQ:83:LEU:HD22	16:CQ:83:LEU:N	2.28	0.49
23:BB:679:C:O2'	23:BB:680:C:H5'	2.13	0.49
23:DB:2518:A:N3	23:DB:2518:A:H2'	2.27	0.49
1:CA:959:A:C6	1:CA:1222:G:H4'	2.48	0.49
1:CA:1229:A:H2'	1:CA:1230:C:H6	1.78	0.49
23:BB:211:C:O2'	23:BB:212:G:H5'	2.13	0.49
38:BQ:92:LYS:CG	38:BQ:93:ILE:N	2.75	0.49
34:BM:22:GLN:HG2	34:BM:23:GLY:N	2.28	0.49
37:BP:85:VAL:O	37:BP:87:ARG:NH1	2.46	0.49
37:BP:91:VAL:HB	37:BP:113:LEU:HB2	1.93	0.49
45:BY:16:LEU:CB	45:BY:17:PRO:HD3	2.26	0.49
26:DD:29:VAL:HG22	26:DD:30:GLU:N	2.21	0.49
26:DD:32:ASN:O	26:DD:34:VAL:HG13	2.13	0.49
34:DM:71:LYS:CE	34:DM:91:TYR:HB3	2.42	0.49
23:BB:918:A:H2'	23:BB:919:U:H5'	1.95	0.49
43:BW:44:PHE:HB3	43:BW:76:ARG:HG2	1.95	0.49
50:D3:51:LYS:HA	50:D3:51:LYS:HZ2	1.78	0.49
23:DB:1163:G:HO2'	39:DR:92:TRP:HH2	1.60	0.49
31:DJ:4:PHE:CD1	31:DJ:5:THR:N	2.81	0.49
30:BH:30:LEU:HD13	30:BH:35:LYS:HD3	1.95	0.49
33:BL:77:ILE:HG22	33:BL:78:ARG:NH2	2.28	0.49
41:BT:58:VAL:HA	41:BT:85:VAL:HA	1.95	0.49
49:B2:34:ARG:HE	49:B2:42:LEU:CD1	2.23	0.49
5:CF:51:ILE:CD1	5:CF:86:ARG:HG3	2.43	0.49
26:DD:156:PHE:CA	31:DJ:81:ILE:HG21	2.43	0.49
31:DJ:81:ILE:CG2	31:DJ:82:GLY:N	2.65	0.49
48:D1:49:LYS:NZ	48:D1:50:GLU:N	2.61	0.49
36:BO:8:ILE:HG23	36:BO:9:ARG:N	2.26	0.49
28:DF:41:GLU:O	28:DF:45:ASP:OD2	2.31	0.49
23:DB:1791:A:H5''	25:DC:211:ARG:HE	1.77	0.49
18:CS:62:THR:HG22	18:CS:65:MET:HE2	1.95	0.49
28:BF:103:ILE:HG13	28:BF:104:THR:H	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DG:10:VAL:HG12	29:DG:10:VAL:O	2.13	0.49
13:CN:40:ARG:HG3	13:CN:40:ARG:HH11	1.78	0.49
16:AQ:10:ARG:CA	16:AQ:10:ARG:NE	2.76	0.49
16:AQ:10:ARG:NH2	16:AQ:11:VAL:HG23	2.27	0.49
4:CE:43:GLY:O	4:CE:72:ASN:HA	2.13	0.49
48:B1:34:GLU:OE1	48:B1:36:LYS:HE2	2.13	0.49
41:DT:12:ARG:HG2	41:DT:13:ALA:H	1.78	0.49
1:CA:782:A:H2'	1:CA:783:C:O4'	2.12	0.49
1:AA:79:G:H2'	1:AA:80:A:O4'	2.13	0.49
35:BN:38:LEU:N	35:BN:39:PRO:CD	2.75	0.49
2:CC:154:GLY:HA2	2:CC:163:ARG:HG2	1.94	0.49
12:CM:79:LEU:HA	12:CM:82:LEU:CG	2.40	0.49
1:CA:500:G:H5''	11:CL:120:ARG:HH21	1.76	0.49
2:CC:8:GLY:O	2:CC:11:LEU:HG	2.13	0.49
24:DV:30:ILE:HB	24:DV:38:LEU:HB3	1.94	0.49
1:AA:806:C:H2'	1:AA:807:A:C8	2.48	0.49
34:DM:54:THR:O	34:DM:57:VAL:N	2.44	0.49
30:DH:104:THR:HA	30:DH:108:VAL:H	1.77	0.49
6:CG:61:PHE:O	6:CG:62:GLU:C	2.49	0.49
4:AE:111:ARG:O	4:AE:115:GLU:HG3	2.13	0.49
1:AA:537:G:H2'	1:AA:538:G:H8	1.78	0.49
32:DK:9:ASN:O	32:DK:10:VAL:HG13	2.13	0.49
1:CA:1142:G:H2'	1:CA:1143:G:H8	1.78	0.49
23:DB:968:C:H2'	23:DB:969:G:H8	1.77	0.49
23:BB:712:G:H2'	23:BB:713:G:O4'	2.12	0.49
1:AA:1142:G:H3'	1:AA:1143:G:H8	1.76	0.49
1:CA:985:C:H2'	1:CA:986:U:H6	1.76	0.49
23:BB:1714:U:H3'	23:BB:1715:G:H5'	1.95	0.49
1:CA:208:U:C2'	1:CA:209:U:H5''	2.42	0.49
1:AA:220:G:O2'	1:AA:221:C:H5'	2.12	0.49
30:DH:81:ALA:HA	30:DH:147:VAL:O	2.13	0.49
6:AG:16:LYS:HD3	6:AG:16:LYS:C	2.34	0.49
20:AB:195:VAL:HG12	20:AB:197:PHE:H	1.78	0.49
7:AH:24:VAL:CG1	7:AH:60:LEU:HB2	2.43	0.49
23:BB:2398:U:H2'	23:BB:2399:G:C8	2.48	0.49
23:BB:1919:A:H2'	23:BB:1920:C:H5'	1.95	0.49
1:CA:1229:A:H2'	1:CA:1230:C:C6	2.48	0.49
23:DB:2241:A:H2'	23:DB:2242:G:C8	2.48	0.49
34:BM:130:PHE:CD2	34:BM:131:VAL:HG22	2.47	0.49
1:AA:915:A:H2'	1:AA:916:U:H5'	1.94	0.49
5:AF:88:MET:CE	5:AF:90:MET:HG3	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1719:G:O2'	23:BB:1720:U:H5'	2.13	0.49
23:DB:1983:G:H4'	23:DB:2606:C:H4'	1.95	0.49
1:CA:1121:U:H2'	1:CA:1122:U:C6	2.47	0.49
28:DF:71:LYS:HE2	28:DF:72:SER:O	2.13	0.49
23:BB:2047:C:OP1	47:B0:15:ARG:HD2	2.13	0.49
1:CA:1481:U:H2'	1:CA:1482:G:C8	2.47	0.49
1:AA:1234:C:H2'	1:AA:1235:U:C6	2.48	0.49
23:DB:1909:C:H2'	23:DB:1910:G:H8	1.76	0.49
8:AI:53:LEU:O	8:AI:53:LEU:HD13	2.12	0.49
23:BB:2518:A:H2'	23:BB:2518:A:N3	2.28	0.49
23:DB:208:C:H2'	23:DB:209:C:H6	1.78	0.49
31:BJ:7:LYS:HZ2	31:BJ:49:ASP:H	1.60	0.49
25:BC:115:ILE:HA	25:BC:126:GLY:CA	2.42	0.49
34:BM:2:LEU:HB3	34:BM:4:PRO:HD2	1.94	0.49
34:BM:73:ILE:HD11	34:BM:92:TRP:N	2.28	0.49
24:BV:17:SER:HB3	24:BV:21:ARG:HH12	1.78	0.49
24:BV:30:ILE:HD11	24:BV:63:ILE:HD12	1.94	0.49
23:BB:651:G:H4'	50:B3:17:GLY:HA3	1.93	0.49
33:BL:63:LYS:HB2	50:B3:11:LYS:HZ1	1.76	0.49
25:BC:140:VAL:HG23	25:BC:141:HIS:N	2.28	0.49
20:AB:206:ILE:O	20:AB:209:VAL:HG23	2.13	0.49
23:BB:991:C:H2'	23:BB:992:C:C6	2.48	0.49
34:DM:90:GLU:CG	34:DM:91:TYR:N	2.76	0.49
23:BB:923:G:O2'	23:BB:924:G:H5'	2.13	0.49
36:DO:105:ALA:HA	36:DO:108:ASP:OD1	2.13	0.49
36:DO:25:ARG:HE	36:DO:94:ARG:NH1	2.11	0.49
45:BY:9:THR:HB	45:BY:53:MET:O	2.12	0.49
10:CK:110:THR:HB	21:CU:3:ILE:O	2.13	0.49
32:BK:36:GLY:HA2	32:BK:62:VAL:O	2.12	0.49
35:BN:116:VAL:O	35:BN:117:ASP:HB2	2.13	0.49
40:BS:3:THR:HG23	40:BS:107:VAL:HG23	1.95	0.49
43:DW:56:HIS:CD2	43:DW:58:LEU:H	2.30	0.49
33:BL:124:GLY:O	33:BL:125:LEU:HB2	2.13	0.49
33:BL:92:LEU:CG	33:BL:96:LYS:HZ3	2.25	0.49
27:DE:146:VAL:HG11	27:DE:184:ASP:OD1	2.13	0.49
25:DC:208:GLY:HA2	25:DC:212:TRP:HB3	1.95	0.49
46:DZ:27:THR:OG1	46:DZ:28:VAL:N	2.46	0.49
42:BU:96:LYS:HE2	42:BU:98:ASN:HB3	1.95	0.49
1:CA:232:G:H1'	1:CA:262:A:N1	2.28	0.49
10:CK:34:THR:CG2	10:CK:38:GLY:HA2	2.43	0.49
37:BP:77:SER:CB	37:BP:78:PRO:HD3	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AM:84:CYS:HA	18:AS:72:GLU:O	2.13	0.49
52:DI:72:THR:HG23	52:DI:112:LYS:NZ	2.28	0.49
31:DJ:80:HIS:O	31:DJ:81:ILE:C	2.51	0.49
32:DK:105:ARG:O	32:DK:108:ARG:HB3	2.12	0.49
1:AA:664:G:H5''	17:AR:52:ARG:NH2	2.27	0.49
23:BB:1430:G:H2'	23:BB:1431:A:C8	2.48	0.49
8:AI:56:MET:HA	8:AI:59:LYS:HB2	1.94	0.49
21:CU:34:ARG:HH21	21:CU:36:PHE:HA	1.77	0.49
15:CP:57:ILE:CD1	15:CP:75:ILE:HD11	2.43	0.49
18:CS:38:THR:HG22	18:CS:39:ILE:H	1.78	0.49
5:AF:67:PRO:O	5:AF:70:VAL:HG22	2.13	0.49
23:BB:1183:U:H2'	23:BB:1184:U:H6	1.78	0.49
23:DB:144:A:C2	41:DT:3:ARG:CZ	2.96	0.49
23:DB:136:G:C2	41:DT:3:ARG:CZ	2.96	0.49
16:AQ:8:GLN:HB3	16:AQ:57:VAL:HG13	1.95	0.49
4:CE:19:ARG:CG	4:CE:20:VAL:H	2.20	0.49
26:DD:46:ARG:N	26:DD:82:PHE:HA	2.28	0.49
30:BH:121:VAL:HG21	30:BH:128:HIS:HE2	1.78	0.49
1:AA:265:G:H2'	1:AA:267:C:H5	1.78	0.49
28:DF:28:PRO:HB2	28:DF:168:LEU:CD1	2.41	0.49
42:BU:44:HIS:ND1	42:BU:56:GLY:HA3	2.28	0.49
25:DC:72:GLY:C	25:DC:73:ILE:HG13	2.33	0.49
25:BC:179:GLU:CG	25:BC:266:ILE:HG22	2.40	0.49
1:AA:782:A:H2'	1:AA:783:C:O4'	2.13	0.49
23:DB:1547:C:H2'	23:DB:1548:A:C8	2.47	0.49
23:DB:1549:A:H2'	23:DB:1550:C:C6	2.48	0.49
1:CA:1238:A:C2	1:CA:1241:G:N3	2.80	0.49
1:AA:1329:A:O2'	1:AA:1330:U:H5'	2.13	0.49
25:BC:4:LYS:HG3	25:BC:5:CYS:SG	2.52	0.49
1:CA:1318:A:OP2	1:CA:1318:A:H8	1.95	0.49
23:BB:299:A:N6	23:BB:322:A:H1'	2.28	0.49
23:BB:2649:C:H2'	23:BB:2650:U:H6	1.78	0.49
34:BM:80:VAL:HG12	34:BM:81:ARG:N	2.27	0.49
4:AE:45:VAL:HG23	4:AE:71:ILE:CG2	2.43	0.49
1:AA:1018:G:H2'	1:AA:1019:A:C8	2.48	0.49
31:BJ:15:TRP:HB3	31:BJ:53:TYR:CE2	2.48	0.49
2:CC:63:ILE:HG12	2:CC:65:VAL:HG23	1.94	0.49
44:DX:17:GLU:CD	44:DX:17:GLU:H	2.15	0.49
23:BB:363:G:H2'	23:BB:364:C:H6	1.77	0.49
12:AM:89:ARG:HH11	12:AM:94:LEU:HD13	1.76	0.49
9:CJ:85:ASP:HB2	9:CJ:89:ARG:NH2	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:52:A:H3'	22:BA:53:A:C8	2.47	0.49
23:DB:1723:G:N7	23:DB:1737:G:N2	2.60	0.49
1:CA:174:A:O2'	1:CA:175:C:H5'	2.12	0.49
23:BB:2221:G:H2'	23:BB:2222:C:H6	1.78	0.49
23:DB:2077:A:O2'	23:DB:2078:C:H5'	2.12	0.49
23:BB:757:G:H2'	23:BB:758:C:H5'	1.95	0.49
23:DB:2839:G:H2'	23:DB:2840:C:H6	1.76	0.49
23:BB:41:C:H2'	23:BB:42:A:H8	1.76	0.49
23:BB:847:U:O4'	23:BB:847:U:O2	2.29	0.49
14:CO:87:ARG:HE	14:CO:87:ARG:HA	1.77	0.49
1:CA:1426:G:H2'	1:CA:1427:C:C6	2.47	0.49
20:AB:215:ALA:O	20:AB:218:ALA:HB3	2.13	0.49
8:AI:43:ALA:C	8:AI:45:MET:H	2.16	0.49
29:BG:66:THR:O	29:BG:70:LEU:HB2	2.13	0.49
23:DB:1424:G:H2'	23:DB:1425:G:O4'	2.13	0.49
28:BF:14:LYS:O	28:BF:18:GLU:HB3	2.13	0.49
22:BA:82:U:O2'	22:BA:83:G:H5'	2.12	0.49
27:BE:97:ASN:ND2	27:BE:97:ASN:N	2.61	0.49
6:CG:4:ARG:HB2	6:CG:4:ARG:NH1	2.27	0.49
28:BF:144:LYS:HG2	28:BF:144:LYS:O	2.13	0.49
1:AA:1526:G:O2'	1:AA:1527:U:H5'	2.13	0.49
30:BH:29:PHE:H	30:BH:32:PRO:CG	2.25	0.49
23:BB:557:C:H2'	23:BB:558:U:C6	2.47	0.48
38:BQ:52:ARG:CZ	38:BQ:55:GLN:HG2	2.44	0.48
23:DB:491:G:H2'	23:DB:492:A:O4'	2.13	0.48
23:BB:39:G:H2'	23:BB:40:U:H6	1.78	0.48
25:DC:82:TYR:CD2	25:DC:84:PRO:HD3	2.47	0.48
33:BL:64:PHE:H	50:B3:24:LYS:HD2	1.78	0.48
37:BP:92:ARG:HH22	37:BP:110:LYS:HE2	1.77	0.48
23:BB:1133:A:H4'	23:BB:1134:A:H5''	1.95	0.48
48:D1:19:PHE:CD2	48:D1:41:VAL:HG22	2.48	0.48
27:BE:151:GLY:HA2	27:BE:171:ASP:HA	1.95	0.48
26:DD:90:PHE:H	26:DD:92:VAL:HG22	1.78	0.48
37:DP:90:ALA:N	37:DP:112:ARG:NH2	2.58	0.48
37:DP:93:LYS:HB3	37:DP:96:LEU:HG	1.94	0.48
23:DB:848:C:H2'	23:DB:849:A:H8	1.78	0.48
22:DA:114:C:O2'	36:DO:49:VAL:HG23	2.12	0.48
36:DO:35:ILE:HG12	36:DO:106:LEU:HD12	1.95	0.48
36:DO:56:LYS:HE2	36:DO:81:ARG:NE	2.07	0.48
6:AG:131:GLY:O	6:AG:134:VAL:HG12	2.13	0.48
27:DE:49:ARG:HG3	27:DE:52:VAL:CG2	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:103:VAL:HG22	32:BK:121:GLU:O	2.13	0.48
35:BN:28:LEU:HD22	35:BN:48:VAL:HG11	1.95	0.48
1:AA:1060:U:H4'	9:AJ:54:SER:HB2	1.95	0.48
33:BL:85:VAL:N	33:BL:86:GLU:HG3	2.28	0.48
42:BU:35:VAL:HG12	42:BU:36:GLU:N	2.27	0.48
25:DC:15:VAL:O	25:DC:15:VAL:HG22	2.13	0.48
3:CD:169:TRP:CE3	3:CD:185:PRO:HB3	2.48	0.48
37:BP:13:LYS:HZ2	37:BP:15:ASP:HB2	1.78	0.48
34:DM:50:ARG:HE	34:DM:53:MET:HE2	1.78	0.48
28:DF:41:GLU:O	28:DF:42:ALA:C	2.51	0.48
28:DF:39:VAL:HG13	28:DF:84:ILE:CG1	2.43	0.48
23:DB:2530:A:H5'	29:DG:176:LYS:O	2.13	0.48
8:AI:51:LEU:CD1	8:AI:82:ILE:HG21	2.42	0.48
8:AI:64:ILE:HG22	8:AI:65:THR:N	2.28	0.48
20:AB:31:PHE:HA	20:AB:41:ASN:HB2	1.94	0.48
4:CE:11:GLN:OE1	4:CE:116:VAL:HA	2.12	0.48
23:DB:1309:G:H5''	49:D2:9:VAL:HG13	1.95	0.48
11:AL:58:ASN:HD22	11:AL:58:ASN:N	2.11	0.48
5:AF:37:HIS:HE1	5:AF:65:GLU:HB2	1.73	0.48
52:DI:45:THR:O	52:DI:48:ILE:HG22	2.12	0.48
19:AT:60:GLN:N	19:AT:60:GLN:CD	2.67	0.48
39:DR:86:GLN:O	39:DR:87:GLN:HB2	2.11	0.48
1:CA:1074:G:H2'	1:CA:1075:U:H6	1.78	0.48
1:CA:1302:C:H5''	1:CA:1303:C:OP2	2.13	0.48
6:AG:137:ARG:HG2	6:AG:141:HIS:CE1	2.48	0.48
11:AL:35:ARG:HG3	11:AL:36:VAL:N	2.26	0.48
19:CT:2:ASN:O	19:CT:3:ILE:C	2.51	0.48
34:BM:86:LYS:HD2	34:BM:86:LYS:H	1.78	0.48
31:BJ:35:ARG:HH21	31:BJ:40:HIS:H	1.61	0.48
1:AA:1464:U:H2'	1:AA:1465:A:C8	2.48	0.48
10:AK:15:VAL:HG11	10:AK:35:ASP:HB2	1.94	0.48
10:AK:52:ARG:O	10:AK:54:SER:N	2.46	0.48
29:DG:91:VAL:N	29:DG:159:LYS:HZ1	2.10	0.48
10:AK:82:GLU:HG3	10:AK:107:THR:OG1	2.13	0.48
27:DE:137:LYS:HZ2	27:DE:137:LYS:HA	1.76	0.48
23:DB:2425:A:H5'	23:DB:2427:C:O4'	2.13	0.48
23:BB:932:U:H2'	23:BB:934:U:C4	2.48	0.48
23:BB:1309:G:H4'	49:B2:7:PRO:CG	2.43	0.48
32:DK:10:VAL:HG21	32:DK:16:ALA:HB1	1.93	0.48
23:DB:2250:G:H21	23:DB:2496:C:C4'	2.25	0.48
44:DX:12:GLU:O	44:DX:15:ASN:HB3	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1723:G:N7	23:BB:1737:G:N2	2.61	0.48
22:BA:64:G:O2'	22:BA:65:U:H5'	2.11	0.48
23:DB:723:C:H2'	23:DB:724:U:H6	1.77	0.48
1:CA:335:C:H2'	1:CA:336:A:H8	1.78	0.48
23:BB:208:C:H2'	23:BB:209:C:H6	1.78	0.48
1:AA:5:U:H1'	1:AA:6:G:C2	2.48	0.48
20:AB:113:LEU:C	20:AB:113:LEU:HD23	2.33	0.48
23:DB:1269:A:H2'	23:DB:1270:C:C6	2.48	0.48
23:DB:699:A:H2'	23:DB:700:G:O4'	2.13	0.48
4:AE:81:GLN:HE21	4:AE:147:ASN:C	2.17	0.48
23:BB:2776:A:H4'	23:BB:2777:G:O5'	2.13	0.48
1:CA:1480:A:H2'	1:CA:1481:U:C6	2.47	0.48
23:BB:2657:A:H2'	23:BB:2658:C:O4'	2.13	0.48
1:CA:1492:A:H3'	1:CA:1493:A:C5'	2.42	0.48
9:AJ:48:ARG:HA	9:AJ:66:GLU:HA	1.95	0.48
4:CE:158:LYS:HB3	7:CH:63:LYS:HD3	1.93	0.48
7:CH:111:THR:H	7:CH:114:ALA:HB3	1.77	0.48
1:AA:1178:G:H2'	1:AA:1180:A:OP2	2.13	0.48
23:BB:1666:G:C2'	23:BB:1667:G:H5'	2.43	0.48
23:BB:1666:G:O2'	23:BB:1667:G:H5'	2.12	0.48
7:CH:94:VAL:HG21	7:CH:127:TYR:HB2	1.95	0.48
23:DB:32:C:O2'	23:DB:33:C:H5'	2.13	0.48
13:AN:59:GLN:NE2	13:AN:59:GLN:N	2.61	0.48
31:BJ:43:GLU:O	31:BJ:44:TYR:C	2.50	0.48
40:DS:49:LYS:O	40:DS:52:GLU:HB2	2.13	0.48
25:BC:130:PRO:HD2	25:BC:133:ASN:HD22	1.77	0.48
27:BE:9:GLN:CD	27:BE:120:VAL:HG13	2.33	0.48
37:DP:47:ILE:HD13	37:DP:63:ILE:HG21	1.95	0.48
43:BW:28:GLU:C	43:BW:30:VAL:H	2.16	0.48
43:BW:44:PHE:CD2	43:BW:60:ALA:HB3	2.48	0.48
31:DJ:125:TYR:OH	31:DJ:134:ALA:HB2	2.13	0.48
38:DQ:68:ALA:CB	38:DQ:73:ILE:HG21	2.43	0.48
32:BK:119:ALA:N	32:BK:120:PRO:CD	2.76	0.48
38:BQ:33:VAL:CG2	38:BQ:37:ALA:HB3	2.41	0.48
39:DR:6:GLN:OE1	39:DR:38:VAL:HG22	2.13	0.48
10:AK:125:LYS:O	21:AU:33:ARG:NH2	2.45	0.48
5:AF:54:LEU:HD13	5:AF:55:HIS:H	1.77	0.48
48:B1:9:LYS:HG2	50:B3:34:LYS:HZ1	1.76	0.48
19:CT:66:ILE:HG22	19:CT:67:HIS:N	2.28	0.48
12:AM:15:VAL:HG13	12:AM:29:SER:OG	2.13	0.48
23:DB:1133:A:H2	23:DB:2038:G:H21	1.61	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2597:G:H5''	25:DC:239:PHE:CB	2.38	0.48
47:D0:30:ASP:O	47:D0:31:LYS:HB2	2.12	0.48
6:AG:14:ASP:OD1	6:AG:15:PRO:HD2	2.14	0.48
23:DB:632:A:H5''	33:DL:69:ARG:HD3	1.95	0.48
19:AT:61:ALA:HA	19:AT:66:ILE:O	2.13	0.48
1:AA:254:G:O2'	1:AA:255:G:H5'	2.13	0.48
16:AQ:20:ILE:HG21	16:AQ:52:CYS:SG	2.53	0.48
29:BG:89:VAL:HG21	29:BG:162:ARG:HE	1.77	0.48
42:BU:46:LYS:HB3	42:BU:53:GLN:HB3	1.94	0.48
23:DB:2756:U:C1'	23:DB:2757:A:H5''	2.42	0.48
23:DB:2756:U:H4'	23:DB:2757:A:OP1	2.12	0.48
20:AB:162:VAL:HG21	20:AB:168:GLU:HB2	1.95	0.48
3:CD:121:ALA:HA	3:CD:145:ARG:HG3	1.94	0.48
2:AC:150:VAL:HG12	2:AC:151:GLU:N	2.27	0.48
29:BG:136:ASP:O	29:BG:140:ILE:HG23	2.13	0.48
52:BI:14:ALA:HB1	52:BI:50:LYS:HA	1.95	0.48
35:DN:86:ARG:HD3	35:DN:94:TYR:OH	2.14	0.48
44:BX:14:LEU:CD2	44:BX:57:LEU:HB2	2.44	0.48
27:DE:99:LYS:HD2	27:DE:99:LYS:O	2.12	0.48
24:DV:29:ILE:O	24:DV:91:PHE:HB2	2.14	0.48
12:CM:21:ILE:O	12:CM:21:ILE:HG22	2.13	0.48
23:DB:1107:G:O2'	23:DB:1108:U:H5'	2.13	0.48
16:CQ:46:HIS:CG	16:CQ:47:ASP:N	2.81	0.48
23:DB:351:C:H2'	23:DB:352:A:C8	2.48	0.48
23:BB:273:G:H2'	23:BB:274:C:C6	2.48	0.48
23:DB:346:A:N7	23:DB:347:A:H1'	2.27	0.48
16:CQ:30:HIS:CG	16:CQ:33:TYR:HB2	2.47	0.48
2:CC:128:MET:O	2:CC:130:ARG:N	2.40	0.48
30:BH:98:ASP:O	30:BH:102:ALA:HB2	2.13	0.48
1:CA:56:U:H2'	1:CA:57:G:H8	1.78	0.48
1:CA:844:G:H21	1:CA:845:A:H62	1.61	0.48
7:CH:107:LYS:HB3	7:CH:107:LYS:NZ	2.28	0.48
2:AC:135:ARG:C	2:AC:137:VAL:H	2.17	0.48
23:BB:1948:G:O2'	23:BB:1949:G:H5'	2.13	0.48
1:CA:301:G:H2'	1:CA:302:G:C8	2.49	0.48
23:DB:2241:A:O2'	23:DB:2242:G:H5'	2.12	0.48
23:BB:2821:A:H2'	23:BB:2822:G:C8	2.48	0.48
1:CA:1248:A:H2'	1:CA:1249:C:H6	1.79	0.48
27:BE:78:TRP:HE3	27:BE:78:TRP:N	2.12	0.48
35:DN:57:THR:O	35:DN:59:SER:N	2.46	0.48
23:BB:2016:U:H2'	23:BB:2017:U:C6	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1986:C:O2'	23:DB:1987:A:H5'	2.13	0.48
23:DB:247:G:H4'	23:DB:386:G:C4	2.49	0.48
1:CA:736:C:H2'	1:CA:737:C:C6	2.47	0.48
24:DV:73:LYS:HB2	24:DV:92:VAL:HG13	1.95	0.48
2:AC:119:ILE:O	2:AC:123:LEU:HG	2.12	0.48
23:DB:1027:A:H2	23:DB:2488:G:H4'	1.78	0.48
23:DB:1426:G:H8	23:DB:1426:G:OP2	1.95	0.48
23:BB:875:G:H2'	23:BB:876:C:O2	2.12	0.48
39:BR:53:PHE:HB3	39:BR:55:ASP:CB	2.43	0.48
27:BE:44:ARG:N	27:BE:44:ARG:CD	2.75	0.48
51:D4:36:ARG:HD2	51:D4:37:GLN:O	2.14	0.48
23:BB:1812:U:H2'	23:BB:1813:G:H8	1.78	0.48
24:BV:26:PHE:HB2	24:BV:27:PRO:HD2	1.95	0.48
26:BD:172:VAL:HG21	26:BD:175:LEU:HD12	1.95	0.48
26:BD:5:VAL:HG11	26:BD:28:GLU:CA	2.40	0.48
25:BC:163:ILE:HG22	25:BC:164:VAL:N	2.27	0.48
25:BC:29:PHE:HB2	25:BC:31:PRO:HD3	1.94	0.48
23:DB:869:G:H2'	23:DB:870:U:O4'	2.13	0.48
34:DM:5:LYS:HG3	34:DM:68:PHE:HE1	1.74	0.48
43:BW:44:PHE:CE2	43:BW:80:SER:HA	2.49	0.48
31:DJ:10:THR:O	31:DJ:11:VAL:HB	2.14	0.48
31:DJ:25:LEU:HD12	31:DJ:62:VAL:CA	2.43	0.48
31:DJ:5:THR:HG21	31:DJ:7:LYS:NZ	2.28	0.48
23:DB:801:G:N7	27:DE:51:GLU:OE1	2.46	0.48
40:BS:48:LYS:O	40:BS:51:LEU:HB3	2.12	0.48
30:BH:4:ILE:O	30:BH:37:VAL:HG12	2.14	0.48
36:DO:15:ARG:CD	36:DO:18:LEU:HD12	2.43	0.48
23:BB:2053:G:O2'	23:BB:2054:A:H5'	2.13	0.48
12:AM:109:LYS:HG3	12:AM:110:GLY:N	2.28	0.48
33:BL:140:GLY:O	33:BL:141:LYS:O	2.32	0.48
27:DE:14:VAL:HG12	27:DE:15:SER:N	2.28	0.48
23:DB:1824:G:OP1	25:DC:52:HIS:CE1	2.66	0.48
28:DF:34:THR:HG22	28:DF:35:LEU:N	2.29	0.48
20:AB:71:THR:HG23	20:AB:93:HIS:C	2.33	0.48
43:BW:40:ARG:HG3	43:BW:40:ARG:HH11	1.78	0.48
42:BU:27:VAL:HB	42:BU:33:VAL:HG13	1.95	0.48
34:DM:117:PHE:HB2	34:DM:124:LEU:CD1	2.42	0.48
39:DR:67:GLY:H	39:DR:98:ILE:N	2.11	0.48
39:DR:69:GLY:H	39:DR:97:LYS:CB	2.25	0.48
39:DR:69:GLY:H	39:DR:97:LYS:CG	2.27	0.48
8:CI:51:LEU:HD13	8:CI:56:MET:SD	2.53	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:162:U:O2'	23:BB:163:C:H5'	2.13	0.48
52:BI:19:PRO:HB2	52:BI:22:PRO:HD2	1.95	0.48
23:BB:782:A:O2'	25:BC:223:ALA:HB1	2.13	0.48
10:CK:78:ILE:CD1	10:CK:78:ILE:H	2.18	0.48
28:BF:107:VAL:HG12	28:BF:113:PHE:CE1	2.47	0.48
15:CP:6:LEU:HB3	15:CP:17:TYR:HB3	1.94	0.48
51:B4:11:CYS:HB3	51:B4:14:CYS:SG	2.52	0.48
33:DL:74:THR:O	33:DL:75:ALA:C	2.52	0.48
23:BB:1177:G:H2'	23:BB:1178:C:H6	1.76	0.48
39:DR:77:PHE:O	39:DR:78:ARG:HG2	2.13	0.48
23:BB:286:U:H2'	23:BB:287:G:H8	1.78	0.48
22:DA:52:A:H2'	22:DA:53:A:C8	2.45	0.48
8:CI:6:TYR:HA	8:CI:18:VAL:O	2.13	0.48
26:DD:180:VAL:HA	26:DD:187:LEU:HA	1.95	0.48
10:AK:69:CYS:C	10:AK:71:ASP:N	2.66	0.48
23:DB:1439:A:N7	23:DB:1440:U:N1	2.60	0.48
23:BB:1199:U:H1'	38:BQ:2:ARG:HB2	1.95	0.48
1:AA:391:G:HO2'	1:AA:482:A:H2	1.60	0.48
52:DI:59:THR:O	52:DI:59:THR:HG23	2.12	0.48
23:BB:2648:G:H2'	23:BB:2649:C:C6	2.48	0.48
1:AA:193:C:H2'	1:AA:194:C:C6	2.49	0.48
1:AA:537:G:H2'	1:AA:538:G:C8	2.47	0.48
7:AH:11:THR:HG22	7:AH:15:ASN:ND2	2.29	0.48
1:AA:174:A:O2'	1:AA:175:C:H5'	2.13	0.48
23:BB:1220:G:H2'	23:BB:1221:C:H6	1.77	0.48
6:CG:96:ASN:O	6:CG:100:MET:HG2	2.14	0.48
1:AA:1284:C:H3'	1:AA:1285:A:C5'	2.42	0.48
23:BB:2461:A:H2'	23:BB:2462:C:H6	1.78	0.48
1:AA:56:U:H2'	1:AA:57:G:H8	1.77	0.48
28:BF:165:GLY:HA2	28:BF:168:LEU:HD11	1.95	0.48
23:DB:1722:A:H2'	23:DB:1723:G:C8	2.48	0.48
24:DV:44:HIS:O	24:DV:46:LYS:N	2.46	0.48
23:BB:1878:G:H2'	23:BB:1879:C:H6	1.78	0.48
1:CA:252:U:H2'	1:CA:253:A:C8	2.49	0.48
23:BB:1947:C:O2'	23:BB:1948:G:H5'	2.13	0.48
23:BB:1287:A:H3'	23:BB:1288:G:N2	2.28	0.48
23:DB:302:C:H2'	23:DB:303:G:H8	1.77	0.48
1:AA:31:G:H2'	1:AA:48:C:H5	1.77	0.48
20:AB:36:LYS:N	20:AB:36:LYS:HE3	2.27	0.48
21:AU:8:ASN:O	21:AU:9:GLU:HB2	2.12	0.48
29:DG:100:ASN:HA	29:DG:116:LEU:HD11	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DH:69:ALA:O	30:DH:73:ASN:N	2.47	0.48
23:BB:492:A:H2'	23:BB:493:G:O4'	2.12	0.48
1:AA:1002:G:N3	1:AA:1002:G:H2'	2.27	0.48
10:CK:48:GLY:C	10:CK:50:GLY:H	2.15	0.48
40:DS:9:HIS:HA	40:DS:100:THR:OG1	2.13	0.48
51:D4:26:ILE:HB	51:D4:35:GLN:CB	2.43	0.48
34:BM:41:LEU:HB2	34:BM:93:VAL:CG2	2.43	0.48
46:BZ:8:LYS:HD2	46:BZ:9:TYR:N	2.28	0.48
25:DC:84:PRO:C	25:DC:86:ARG:H	2.15	0.48
50:B3:44:ARG:CB	50:B3:45:PRO:HD2	2.43	0.48
37:BP:11:GLN:O	37:BP:12:MET:HG3	2.13	0.48
37:BP:59:THR:HA	37:BP:76:HIS:HA	1.95	0.48
33:DL:2:ARG:NH1	33:DL:6:LEU:HD13	2.28	0.48
25:BC:168:GLY:O	25:BC:169:ALA:HB3	2.14	0.48
38:DQ:111:LYS:HZ2	39:DR:52:PRO:HA	1.75	0.48
23:BB:992:C:H2'	23:BB:993:G:C8	2.46	0.48
37:DP:26:GLU:O	37:DP:27:VAL:C	2.51	0.48
23:BB:1560:G:H2'	23:BB:1561:C:H6	1.78	0.48
23:DB:870:U:O2'	23:DB:871:U:H5'	2.14	0.48
43:BW:24:ARG:HD2	43:BW:59:PHE:HD1	1.77	0.48
23:DB:2082:A:N6	23:DB:2237:G:H1'	2.28	0.48
31:DJ:64:VAL:CG1	31:DJ:65:THR:H	2.17	0.48
40:BS:106:VAL:HG12	40:BS:107:VAL:N	2.28	0.48
39:DR:18:GLN:CB	39:DR:99:THR:HA	2.40	0.48
30:BH:82:SER:HB3	30:BH:90:LEU:CD2	2.43	0.48
23:BB:2052:A:H4'	26:BD:148:GLN:CG	2.43	0.48
33:BL:78:ARG:CG	33:BL:99:ASN:HB3	2.33	0.48
44:BX:47:ARG:O	44:BX:47:ARG:HG2	2.13	0.48
9:AJ:88:MET:C	9:AJ:90:LEU:H	2.17	0.48
42:BU:2:ALA:C	42:BU:4:ILE:H	2.16	0.48
23:BB:2331:G:C5'	43:BW:70:VAL:HG13	2.43	0.48
35:BN:1:MET:SD	35:BN:2:ARG:HD3	2.54	0.48
13:AN:12:ARG:HH11	13:AN:60:ARG:HH12	1.62	0.48
8:CI:116:GLY:O	8:CI:117:LEU:HD23	2.13	0.48
23:DB:372:G:C8	46:DZ:57:VAL:HG21	2.48	0.48
25:DC:207:ALA:HA	25:DC:211:ARG:HB3	1.95	0.48
28:DF:108:PRO:HB3	28:DF:113:PHE:CZ	2.48	0.48
26:BD:86:GLU:CG	26:BD:87:GLY:H	2.26	0.48
10:CK:121:ARG:HE	21:CU:34:ARG:CD	2.26	0.48
1:CA:1221:G:OP1	18:CS:35:ARG:HD2	2.13	0.48
1:CA:1060:U:C4'	9:CJ:54:SER:HB2	2.40	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1311:A:N6	18:CS:1:PRO:HD3	2.22	0.48
32:DK:2:ILE:N	32:DK:33:ALA:HB3	2.27	0.48
23:BB:1171:G:H2'	23:BB:1172:C:C1'	2.43	0.48
23:DB:144:A:N9	41:DT:3:ARG:HD3	2.28	0.48
9:AJ:55:PRO:HA	13:AN:80:ARG:HH22	1.78	0.48
23:DB:2787:C:H4'	26:DD:61:THR:OG1	2.12	0.48
21:AU:26:GLY:C	21:AU:28:LEU:N	2.66	0.48
52:BI:116:MET:HE1	52:BI:124:MET:O	2.13	0.48
38:BQ:47:ARG:HH12	38:BQ:50:ARG:HD2	1.79	0.48
4:CE:82:HIS:CE1	4:CE:146:MET:HB2	2.48	0.48
20:AB:9:LEU:H	20:AB:9:LEU:HD12	1.78	0.48
20:AB:162:VAL:HG11	20:AB:172:ILE:HG12	1.96	0.48
37:DP:7:LEU:O	37:DP:11:GLN:HG2	2.13	0.48
11:CL:73:LEU:HD21	11:CL:103:CYS:HA	1.95	0.48
23:BB:2783:U:H2'	23:BB:2784:U:H6	1.79	0.48
9:AJ:41:PRO:O	9:AJ:71:LEU:HD13	2.13	0.48
2:AC:178:ARG:O	2:AC:206:ILE:HA	2.14	0.48
32:DK:18:ARG:HB2	32:DK:45:GLU:HG3	1.95	0.48
23:BB:2185:U:H2'	23:BB:2186:G:H8	1.78	0.48
1:AA:677:U:H2'	1:AA:678:U:C6	2.48	0.48
1:CA:26:A:H61	1:CA:558:G:H1'	1.79	0.48
1:AA:1506:U:H4'	10:AK:128:VAL:OXT	2.13	0.48
3:CD:197:HIS:O	3:CD:201:GLU:HG3	2.13	0.48
23:DB:845:A:C6	23:DB:847:U:H1'	2.47	0.48
23:BB:116:C:H2'	23:BB:117:G:H8	1.79	0.48
22:DA:35:C:O2'	22:DA:36:C:H5'	2.13	0.48
23:DB:682:G:H5'	49:D2:26:ASN:ND2	2.28	0.48
1:AA:1478:U:H2'	1:AA:1479:C:C6	2.48	0.48
1:CA:218:U:H2'	1:CA:219:U:H6	1.78	0.48
1:AA:1369:C:H2'	1:AA:1370:G:C8	2.49	0.48
23:BB:1661:G:O2'	23:BB:1662:U:H5'	2.13	0.48
1:CA:1472:U:O2'	1:CA:1473:G:H5'	2.13	0.48
23:BB:1957:C:H2'	23:BB:1958:C:H6	1.77	0.48
23:DB:1957:C:H2'	23:DB:1958:C:H6	1.78	0.48
28:DF:50:ASP:C	28:DF:52:ALA:N	2.65	0.48
23:BB:1729:U:C5	23:BB:1730:C:H1'	2.48	0.48
23:BB:1729:U:H2'	23:BB:1730:C:H4'	1.95	0.48
29:DG:103:ASN:HA	29:DG:112:VAL:O	2.12	0.48
27:BE:24:ASN:O	27:BE:24:ASN:CG	2.52	0.48
1:AA:179:A:H2'	1:AA:180:U:C6	2.48	0.48
39:BR:53:PHE:HA	39:BR:54:VAL:HB	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2329:U:H2'	23:BB:2330:G:C8	2.49	0.48
34:BM:62:LYS:CB	34:BM:104:GLU:HB2	2.43	0.48
34:BM:95:LEU:HD22	34:BM:98:PRO:CG	2.44	0.48
46:BZ:31:ASP:HA	46:BZ:47:LYS:O	2.14	0.48
25:DC:136:VAL:HA	25:DC:165:ALA:CA	2.43	0.48
25:DC:142:ASN:HA	25:DC:153:LEU:HD21	1.96	0.48
25:DC:90:ILE:O	25:DC:91:ALA:HB3	2.13	0.48
23:BB:825:A:H2'	23:BB:826:U:O4'	2.12	0.48
25:BC:140:VAL:HA	25:BC:191:LEU:HA	1.95	0.48
26:DD:15:PHE:CA	37:DP:79:VAL:HG11	2.40	0.48
23:BB:1563:U:H2'	23:BB:1564:C:C6	2.48	0.48
43:BW:45:HIS:CE1	43:BW:64:GLY:HA3	2.49	0.48
23:DB:850:U:H2'	23:DB:851:C:H6	1.78	0.48
39:BR:76:LYS:HE3	39:BR:78:ARG:HD2	1.95	0.48
10:CK:85:VAL:CG2	10:CK:92:ARG:HH12	2.26	0.48
31:DJ:58:ASN:O	31:DJ:60:ASP:N	2.42	0.48
23:BB:582:A:H2'	23:BB:583:G:C8	2.49	0.48
40:BS:4:ILE:HG22	40:BS:5:ALA:H	1.79	0.48
30:BH:1:MET:N	30:BH:23:ALA:HB2	2.29	0.48
27:DE:116:ASP:CG	27:DE:185:LYS:HE2	2.33	0.48
28:DF:66:ILE:O	28:DF:66:ILE:HG22	2.12	0.48
23:BB:1057:A:C8	23:BB:1086:A:C8	3.01	0.48
39:DR:11:GLN:N	39:DR:21:ARG:NH2	2.61	0.48
12:CM:106:ARG:HH11	12:CM:106:ARG:HA	1.78	0.48
1:CA:1343:G:H2'	1:CA:1344:C:H6	1.76	0.48
28:DF:7:TYR:O	28:DF:12:VAL:HG23	2.13	0.48
23:DB:972:A:OP1	23:DB:974:G:H5'	2.12	0.48
37:BP:13:LYS:HE3	37:BP:77:SER:HB3	1.96	0.48
37:BP:77:SER:N	37:BP:78:PRO:CD	2.76	0.48
31:DJ:81:ILE:HG13	31:DJ:83:GLY:H	1.78	0.48
13:CN:26:LEU:HD21	13:CN:47:LEU:HG	1.95	0.48
8:AI:18:VAL:HG21	8:AI:82:ILE:HG13	1.95	0.48
1:CA:1125:U:O2	1:CA:1126:U:H6	1.97	0.48
29:DG:36:LEU:HD22	29:DG:40:VAL:HG11	1.96	0.48
51:B4:7:VAL:HG12	51:B4:8:LYS:H	1.79	0.48
4:CE:89:THR:HG23	4:CE:90:GLY:N	2.29	0.48
23:DB:547:A:N3	23:DB:547:A:C2'	2.72	0.48
30:BH:128:HIS:CB	30:BH:144:VAL:HB	2.38	0.48
25:BC:205:GLY:O	25:BC:206:LYS:HG2	2.14	0.48
23:BB:478:A:H5''	23:BB:479:A:OP2	2.13	0.48
42:DU:69:VAL:CG1	42:DU:77:GLY:HA2	2.41	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:178:ARG:HG2	2:CC:205:GLU:O	2.14	0.48
35:BN:99:LYS:CE	47:B0:39:ARG:HH12	2.27	0.48
23:BB:233:A:H61	23:BB:428:A:H61	1.61	0.48
1:CA:1238:A:N3	1:CA:1241:G:H1'	2.29	0.48
15:AP:29:ASN:N	15:AP:29:ASN:ND2	2.60	0.48
1:AA:1397:C:H4'	1:AA:1398:A:OP2	2.13	0.48
8:AI:32:ARG:HD3	8:AI:37:TYR:HD1	1.77	0.48
2:AC:61:LYS:O	2:AC:97:PRO:HD2	2.14	0.48
28:DF:121:PHE:CE1	28:DF:166:ARG:HG2	2.49	0.48
34:DM:34:LYS:HG3	34:DM:98:PRO:O	2.12	0.48
38:DQ:30:VAL:O	38:DQ:31:TYR:HB2	2.14	0.48
23:DB:827:U:H5'	23:DB:828:U:O5'	2.13	0.48
1:CA:1164:G:O2'	1:CA:1165:U:H5'	2.12	0.48
52:DI:99:LYS:HD3	52:DI:99:LYS:N	2.28	0.48
1:AA:321:A:O2'	1:AA:322:C:H5'	2.14	0.48
23:DB:467:G:OP1	49:D2:33:ARG:HB3	2.13	0.48
1:AA:208:U:C2'	1:AA:209:U:H5''	2.43	0.48
23:DB:1560:G:H2'	23:DB:1561:C:H6	1.79	0.48
1:CA:930:C:H2'	1:CA:931:C:H6	1.78	0.48
23:BB:1159:U:H2'	23:BB:1160:G:H8	1.78	0.48
23:BB:1168:G:H2'	23:BB:1169:A:O4'	2.13	0.48
1:CA:432:A:H2'	1:CA:433:G:H5'	1.96	0.48
23:BB:807:U:O2'	23:BB:808:G:H5'	2.14	0.48
29:BG:75:VAL:HG23	29:BG:76:ILE:N	2.28	0.48
6:CG:45:ALA:HB2	6:CG:116:ALA:HA	1.94	0.48
1:AA:953:G:H2'	1:AA:954:G:O4'	2.14	0.48
9:CJ:44:THR:HG21	9:CJ:70:HIS:ND1	2.29	0.48
2:AC:122:GLN:HE22	2:AC:136:ALA:HB1	1.78	0.48
1:CA:685:G:O2'	1:CA:686:U:H5'	2.14	0.48
23:BB:1137:G:H2'	23:BB:1138:G:O4'	2.13	0.48
1:CA:966:G:H2'	1:CA:967:C:C6	2.48	0.48
1:AA:755:G:OP2	14:AO:64:LYS:HG2	2.13	0.48
1:AA:426:U:H2'	1:AA:427:U:C6	2.48	0.48
52:DI:1:ALA:C	52:DI:2:LYS:HD2	2.33	0.48
34:BM:64:TRP:O	34:BM:102:LEU:N	2.47	0.48
23:BB:189:G:OP1	46:BZ:24:ILE:HD12	2.13	0.48
46:BZ:5:ILE:HG23	46:BZ:63:ARG:HE	1.78	0.48
50:B3:7:ARG:HH21	50:B3:11:LYS:NZ	2.08	0.48
37:BP:61:ARG:HH22	37:BP:63:ILE:HD11	1.77	0.48
37:BP:7:LEU:O	37:BP:11:GLN:HG2	2.13	0.48
23:DB:2821:A:H5''	26:DD:167:ASN:HD21	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DL:122:VAL:HG12	33:DL:123:ARG:N	2.28	0.48
33:DL:90:VAL:O	33:DL:122:VAL:HG11	2.14	0.48
23:BB:2354:C:C4'	43:BW:30:VAL:HG13	2.42	0.48
43:BW:30:VAL:CG1	43:BW:31:LEU:N	2.76	0.48
23:BB:580:U:O2'	23:BB:581:C:H5'	2.14	0.48
35:BN:8:ARG:CZ	35:BN:46:ARG:HD2	2.44	0.48
39:DR:6:GLN:NE2	39:DR:6:GLN:N	2.62	0.48
23:DB:2336:A:HO2'	23:DB:2337:G:P	2.36	0.48
23:DB:918:A:H2'	23:DB:919:U:C5'	2.40	0.48
33:BL:103:ILE:CD1	33:BL:105:ILE:H	2.24	0.48
41:BT:31:VAL:CG1	41:BT:82:LYS:HE3	2.44	0.48
23:DB:2305:U:N3	28:DF:149:ARG:HB3	2.26	0.48
24:DV:21:ARG:CZ	24:DV:87:GLN:HB3	2.44	0.48
1:CA:235:C:H2'	1:CA:236:A:H8	1.78	0.48
1:CA:238:A:C2'	1:CA:239:U:H5''	2.44	0.48
23:BB:587:C:O5'	23:BB:587:C:H6	1.97	0.48
48:B1:20:TYR:O	48:B1:21:THR:HB	2.13	0.48
26:BD:83:ARG:O	26:BD:84:LEU:HB3	2.13	0.48
1:CA:766:A:H2	1:CA:1525:G:N3	2.11	0.48
23:BB:7:G:H2'	23:BB:8:C:O4'	2.13	0.48
36:BO:64:TYR:CE1	36:BO:74:VAL:HG21	2.49	0.48
16:AQ:60:ILE:HB	16:AQ:72:TRP:HE3	1.78	0.48
23:BB:1255:U:C2	27:BE:67:ARG:HA	2.48	0.48
8:CI:32:ARG:HD3	8:CI:37:TYR:CD1	2.48	0.48
7:CH:77:VAL:CG2	7:CH:126:CYS:HA	2.44	0.48
3:AD:10:LEU:HD21	3:AD:62:ARG:CD	2.41	0.48
23:DB:1438:U:N3	23:DB:1552:A:N6	2.61	0.48
1:AA:239:U:H5''	1:AA:239:U:H6	1.78	0.48
23:DB:905:A:O2'	23:DB:906:U:H5'	2.14	0.48
1:AA:1456:A:H2'	1:AA:1457:G:O4'	2.14	0.48
23:DB:1176:U:H2'	23:DB:1177:G:O4'	2.14	0.48
1:AA:672:U:H2'	1:AA:673:A:H8	1.78	0.48
1:CA:1278:G:H3'	1:CA:1279:G:H5'	1.95	0.48
1:AA:560:A:H5'	1:AA:566:G:N2	2.28	0.48
23:DB:2327:A:H2'	23:DB:2328:A:C8	2.49	0.48
1:CA:546:A:H4'	1:CA:548:G:O3'	2.13	0.48
23:BB:984:A:P	23:BB:985:C:H41	2.37	0.48
23:BB:2537:U:H2'	23:BB:2538:C:H6	1.76	0.48
23:DB:2811:G:O2'	23:DB:2812:G:H5'	2.14	0.48
1:AA:1504:G:H4'	1:AA:1505:G:C4	2.49	0.48
6:CG:17:PHE:HD2	6:CG:58:LEU:HD22	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:38:LYS:HD3	25:BC:39:SER:O	2.12	0.48
20:CB:76:SER:O	20:CB:80:LYS:HG2	2.14	0.48
9:CJ:17:LEU:CD1	9:CJ:96:VAL:HG13	2.44	0.48
5:CF:99:ALA:O	5:CF:100:SER:HB2	2.13	0.48
23:DB:1916:A:H2'	23:DB:1917:U:O4'	2.14	0.48
38:BQ:21:LYS:HB3	38:BQ:23:TYR:CD1	2.48	0.48
22:DA:12:C:H4'	22:DA:15:A:N6	2.29	0.48
1:CA:1174:G:O2'	1:CA:1175:G:H5'	2.13	0.48
1:CA:1426:G:O2'	1:CA:1427:C:H5'	2.13	0.48
1:AA:911:U:H2'	1:AA:912:C:C6	2.49	0.48
25:DC:71:ASP:HA	25:DC:117:SER:OG	2.13	0.48
1:AA:575:G:H4'	1:AA:576:C:O5'	2.13	0.48
23:BB:2671:G:H2'	23:BB:2672:U:C6	2.49	0.48
1:CA:730:G:O6	14:CO:50:HIS:NE2	2.46	0.48
23:DB:1747:U:H2'	23:DB:1748:C:C6	2.49	0.48
2:AC:66:THR:HA	2:AC:101:ASN:O	2.14	0.48
4:AE:41:GLY:HA2	4:AE:118:GLY:HA2	1.94	0.48
23:DB:1729:U:C5	23:DB:1730:C:H1'	2.49	0.48
25:BC:262:THR:O	25:BC:262:THR:HG23	2.13	0.48
1:AA:723:U:O4'	21:AU:48:LYS:HD3	2.12	0.48
38:BQ:59:LEU:HD11	38:BQ:63:ARG:NH2	2.29	0.48
23:BB:39:G:H2'	23:BB:40:U:C6	2.48	0.48
24:BV:21:ARG:HE	24:BV:87:GLN:HB3	1.78	0.48
25:DC:193:GLU:C	25:DC:194:VAL:HG22	2.34	0.48
26:BD:111:GLY:HA3	26:BD:194:PRO:O	2.13	0.48
37:BP:23:ASP:H	37:BP:93:LYS:CE	2.22	0.48
33:DL:3:LEU:HD23	33:DL:4:ASN:N	2.27	0.48
23:DB:2636:C:H5'	26:DD:80:TRP:HZ2	1.79	0.48
37:DP:96:LEU:HD12	37:DP:96:LEU:N	2.29	0.48
25:BC:19:VAL:CG1	25:BC:20:ASN:H	2.18	0.48
33:DL:140:GLY:O	33:DL:142:ILE:N	2.47	0.48
31:DJ:130:HIS:O	31:DJ:131:ASN:C	2.52	0.48
31:DJ:41:LYS:O	38:DQ:63:ARG:NH2	2.46	0.48
20:AB:66:ILE:C	20:AB:67:LEU:HD13	2.34	0.48
25:DC:20:ASN:CB	25:DC:202:ARG:HD3	2.43	0.48
33:BL:126:ARG:O	33:BL:127:VAL:HG13	2.13	0.48
1:AA:1220:G:H4'	18:AS:33:TRP:O	2.14	0.48
42:BU:2:ALA:C	42:BU:3:LYS:HD3	2.34	0.48
1:CA:239:U:H5''	1:CA:239:U:H6	1.78	0.48
43:BW:35:ILE:HG13	43:BW:36:ILE:N	2.27	0.48
47:D0:12:ARG:HG3	47:D0:13:GLY:N	2.24	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:49:C:OP2	36:BO:30:ARG:NH2	2.47	0.48
23:BB:1430:G:H2'	23:BB:1431:A:H8	1.77	0.48
15:AP:20:VAL:HG21	15:AP:32:PHE:CD2	2.49	0.48
38:DQ:44:TYR:O	38:DQ:48:ASP:N	2.44	0.48
38:DQ:47:ARG:NH1	38:DQ:47:ARG:HA	2.29	0.48
48:B1:37:LYS:NZ	48:B1:46:VAL:HA	2.29	0.48
41:BT:69:ARG:N	41:BT:75:GLY:HA3	2.27	0.48
25:BC:216:ARG:HB3	25:BC:217:PRO:HD2	1.94	0.48
1:CA:619:U:N3	3:CD:130:ASN:ND2	2.58	0.48
10:CK:70:ALA:C	10:CK:72:ALA:N	2.67	0.48
23:DB:659:G:C5'	27:DE:95:LYS:HD3	2.44	0.48
2:CC:168:ARG:HG2	2:CC:169:GLU:H	1.78	0.48
23:DB:741:U:H2'	23:DB:742:A:C8	2.48	0.48
7:CH:35:ILE:HG22	7:CH:39:LEU:HD23	1.94	0.48
23:DB:938:G:O2'	23:DB:939:G:H5'	2.13	0.48
3:CD:107:GLY:O	3:CD:157:ALA:HB1	2.13	0.48
34:BM:80:VAL:HG12	34:BM:81:ARG:HG2	1.95	0.48
38:BQ:35:PHE:HB3	38:BQ:39:ILE:HD12	1.94	0.48
7:AH:29:SER:HB3	7:AH:32:LYS:HG3	1.95	0.48
23:DB:321:U:OP2	27:DE:130:LYS:HA	2.14	0.48
23:BB:898:C:N3	23:BB:899:A:N6	2.61	0.48
23:BB:2874:C:OP1	35:BN:5:LYS:HG2	2.13	0.48
23:BB:1533:C:O2'	23:BB:1534:U:H5'	2.13	0.48
1:AA:720:C:C5'	17:AR:40:PRO:HA	2.43	0.48
1:CA:1041:G:H2'	1:CA:1042:A:C8	2.48	0.48
32:BK:20:MET:O	32:BK:42:THR:N	2.47	0.48
23:DB:1351:C:O2'	23:DB:1571:A:H1'	2.14	0.48
23:BB:1230:A:H2'	23:BB:1231:U:C6	2.49	0.48
38:BQ:105:PHE:O	38:BQ:109:VAL:HG13	2.13	0.48
12:AM:67:ASP:CG	28:BF:111:ARG:HB3	2.34	0.48
1:CA:844:G:N7	1:CA:846:G:N3	2.62	0.48
23:DB:1529:G:H2'	23:DB:1530:G:C8	2.49	0.48
23:DB:866:A:N1	23:DB:913:U:H4'	2.29	0.48
20:AB:23:ASN:HD22	20:AB:23:ASN:C	2.16	0.48
23:BB:1957:C:H2'	23:BB:1958:C:C6	2.48	0.48
1:CA:333:U:H2'	1:CA:334:C:C6	2.48	0.48
23:BB:2373:G:H2'	23:BB:2374:C:C6	2.49	0.48
23:BB:350:G:H2'	23:BB:351:C:C6	2.49	0.48
1:CA:303:A:H2'	1:CA:304:U:O4'	2.13	0.48
1:AA:684:U:O2'	10:AK:39:ASN:HB3	2.14	0.48
26:BD:181:ASP:O	26:BD:184:ARG:HB3	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:44:LYS:NZ	3:CD:46:ARG:HA	2.28	0.48
23:BB:765:C:H2'	23:BB:766:U:C6	2.48	0.48
38:BQ:89:ILE:O	38:BQ:89:ILE:HG12	2.14	0.48
23:DB:1047:G:H1'	23:DB:1110:G:N2	2.28	0.48
1:AA:333:U:H2'	1:AA:334:C:C6	2.49	0.48
23:DB:1099:G:C5'	52:DI:3:LYS:C	2.82	0.48
34:BM:73:ILE:HD13	34:BM:90:GLU:HG2	1.94	0.48
34:BM:73:ILE:CD1	34:BM:92:TRP:H	2.27	0.48
24:BV:77:VAL:HG13	34:BM:134:THR:O	2.13	0.48
26:BD:2:ILE:CG2	26:BD:204:LYS:HA	2.33	0.48
2:AC:77:GLY:O	2:AC:79:LYS:N	2.46	0.48
23:DB:1999:C:O2'	23:DB:2000:C:H5'	2.14	0.48
23:DB:2771:C:H2'	23:DB:2772:C:H6	1.78	0.48
26:DD:17:GLU:OE1	32:DK:73:ASP:HB3	2.12	0.48
26:DD:7:LYS:O	26:DD:198:GLY:HA2	2.14	0.48
35:DN:4:ARG:CD	35:DN:4:ARG:N	2.77	0.48
37:DP:29:VAL:HG22	37:DP:84:SER:HB2	1.95	0.48
37:DP:47:ILE:HG23	37:DP:63:ILE:HG12	1.95	0.48
33:DL:120:VAL:HG12	33:DL:122:VAL:CG2	2.42	0.48
50:D3:7:ARG:CA	50:D3:7:ARG:HH11	2.26	0.48
23:BB:1225:G:H5''	39:BR:78:ARG:HH22	1.78	0.48
23:DB:458:G:C5'	49:D2:39:ARG:HB2	2.30	0.48
27:DE:49:ARG:C	27:DE:51:GLU:H	2.16	0.48
20:AB:160:LEU:O	20:AB:182:VAL:HA	2.14	0.48
40:BS:29:VAL:C	40:BS:31:GLN:N	2.67	0.48
39:DR:5:PHE:HB2	39:DR:37:GLU:OE1	2.14	0.48
44:BX:22:LEU:CD2	44:BX:25:GLN:HB3	2.43	0.48
41:BT:99:ALA:HB3	44:BX:30:MET:SD	2.54	0.48
25:DC:216:ARG:O	25:DC:218:THR:N	2.46	0.48
1:AA:1220:G:H2'	1:AA:1221:G:H8	1.77	0.48
23:DB:396:G:H2'	23:DB:397:U:C6	2.48	0.48
41:DT:30:ILE:O	41:DT:85:VAL:HG22	2.14	0.48
49:B2:34:ARG:NE	49:B2:42:LEU:HD13	2.26	0.48
19:CT:66:ILE:HA	19:CT:70:LYS:HZ2	1.79	0.48
39:BR:47:VAL:C	39:BR:49:ILE:N	2.67	0.48
12:AM:33:LEU:HB3	12:AM:38:ILE:O	2.14	0.48
33:DL:17:LYS:HG3	33:DL:18:ARG:H	1.79	0.48
36:BO:26:LEU:HD13	36:BO:92:PHE:O	2.14	0.48
23:DB:28:A:O2'	23:DB:29:U:H5'	2.13	0.48
3:CD:11:SER:HA	3:CD:18:LEU:HD23	1.95	0.48
15:CP:53:ASP:O	15:CP:57:ILE:HG22	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BM:108:VAL:HG23	34:BM:112:LEU:CD1	2.40	0.48
40:BS:27:LYS:CD	40:BS:27:LYS:H	2.22	0.48
23:DB:143:C:O2	41:DT:3:ARG:HD2	2.14	0.48
8:CI:120:ALA:O	8:CI:121:ARG:HG2	2.13	0.48
49:D2:16:HIS:CE1	49:D2:44:VAL:HA	2.49	0.48
10:AK:83:VAL:CG2	10:AK:109:ILE:HG12	2.44	0.48
6:AG:142:ARG:C	6:AG:146:ALA:HB3	2.34	0.48
16:AQ:68:LYS:O	16:AQ:69:THR:CB	2.61	0.48
18:CS:51:HIS:HB2	18:CS:56:HIS:CD2	2.49	0.48
4:CE:33:THR:HB	4:CE:49:TYR:HE1	1.79	0.48
23:BB:2471:A:O2'	23:BB:2472:G:O5'	2.30	0.48
1:CA:1238:A:C2	1:CA:1241:G:H1'	2.49	0.48
1:AA:734:G:H2'	1:AA:735:C:C6	2.49	0.48
19:CT:28:ARG:HA	19:CT:31:ILE:HD12	1.94	0.48
6:CG:55:LYS:HG3	6:CG:56:SER:N	2.29	0.48
1:CA:979:C:H2'	1:CA:980:C:O4'	2.13	0.48
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.48	0.48
23:BB:2197:U:O2'	23:BB:2198:A:H2'	2.14	0.48
23:DB:354:A:H2'	23:DB:355:U:C6	2.48	0.48
23:BB:309:A:H1'	23:BB:329:G:N3	2.29	0.48
23:DB:2243:U:O2	23:DB:2434:A:C2	2.67	0.48
3:CD:78:ALA:HB1	3:CD:88:ASN:HB2	1.96	0.48
6:AG:58:LEU:HB3	6:AG:59:GLU:OE2	2.14	0.48
23:BB:2743:U:H3'	23:BB:2744:G:H5''	1.96	0.48
6:CG:91:ARG:HB3	6:CG:92:PRO:HD2	1.95	0.48
3:AD:69:ARG:HE	3:AD:69:ARG:CA	2.25	0.48
23:DB:2665:A:O2'	23:DB:2666:C:H5'	2.13	0.48
1:AA:1452:C:H4'	1:AA:1453:G:H5''	1.96	0.48
23:DB:2444:G:P	27:DE:63:LYS:HZ3	2.37	0.48
23:BB:2654:A:N1	23:BB:2665:A:H5''	2.28	0.48
23:DB:1561:C:H2'	23:DB:1562:U:C6	2.48	0.48
23:DB:2240:U:O2'	23:DB:2241:A:H5'	2.12	0.48
23:BB:2819:G:H2'	23:BB:2821:A:N7	2.29	0.48
23:DB:1957:C:H2'	23:DB:1958:C:C6	2.48	0.48
1:AA:333:U:H2'	1:AA:334:C:H6	1.79	0.48
23:DB:1312:U:H5'	54:DB:3537:HOH:O	2.13	0.48
1:AA:1475:G:OP1	23:BB:1689:A:H1'	2.13	0.48
23:DB:2181:U:H2'	23:DB:2182:U:C6	2.48	0.48
23:BB:1295:C:H2'	23:BB:1296:G:C8	2.49	0.48
23:DB:1278:C:O2'	23:DB:1279:G:H5'	2.14	0.48
1:AA:418:C:H2'	1:AA:419:C:H6	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:434:U:H2'	1:AA:434:U:O2	2.14	0.48
13:AN:74:ARG:HD3	13:AN:74:ARG:O	2.13	0.48
23:DB:2400:G:O2'	23:DB:2401:U:H5'	2.13	0.48
40:DS:10:ALA:O	40:DS:11:ARG:HB3	2.14	0.48
23:DB:1817:G:H5''	25:DC:86:ARG:HH11	1.78	0.48
26:BD:170:VAL:HG11	26:BD:194:PRO:HB2	1.95	0.48
26:BD:4:LEU:HD23	26:BD:49:GLN:HG2	1.96	0.48
26:DD:174:SER:C	26:DD:175:LEU:HD12	2.34	0.48
37:DP:54:LEU:HD22	37:DP:55:HIS:H	1.78	0.48
43:BW:21:GLY:HA3	43:BW:32:ALA:HB1	1.96	0.48
33:DL:62:PRO:HA	50:D3:12:ARG:HH11	1.78	0.48
31:DJ:61:LYS:O	31:DJ:62:VAL:HG13	2.13	0.48
49:D2:39:ARG:HG3	49:D2:39:ARG:HH11	1.79	0.48
20:AB:45:THR:HA	20:AB:48:MET:HG3	1.95	0.48
23:BB:28:A:O2'	23:BB:583:G:H5'	2.14	0.48
35:BN:114:GLU:HG2	35:BN:115:LEU:N	2.25	0.48
39:DR:64:VAL:HG13	39:DR:65:ALA:N	2.29	0.48
30:BH:84:ALA:CA	30:BH:90:LEU:HG	2.39	0.48
43:DW:72:GLY:C	43:DW:74:LYS:H	2.17	0.48
23:BB:2052:A:H2'	23:BB:2052:A:N3	2.29	0.48
35:BN:19:ALA:O	35:BN:21:PHE:N	2.47	0.48
23:BB:636:G:O6	33:BL:76:GLU:HG2	2.14	0.48
23:BB:1141:U:OP1	31:BJ:27:ARG:HD3	2.13	0.48
23:BB:1450:G:N2	23:BB:1452:G:N1	2.55	0.48
1:AA:1014:A:C2	1:AA:1219:A:H1'	2.49	0.48
23:DB:2229:U:H2'	23:DB:2230:G:H8	1.79	0.48
28:DF:141:ASP:O	28:DF:142:TYR:HB3	2.14	0.48
27:BE:72:SER:O	27:BE:73:ILE:HD13	2.14	0.48
52:DI:85:ILE:HD12	52:DI:87:SER:O	2.14	0.48
32:BK:25:LEU:C	32:BK:27:GLY:H	2.16	0.48
1:CA:254:G:O2'	1:CA:255:G:H5'	2.13	0.48
1:CA:276:G:H5'	16:CQ:16:MET:SD	2.54	0.48
32:DK:105:ARG:H	32:DK:105:ARG:HD3	1.77	0.48
26:BD:84:LEU:O	26:BD:85:ALA:HB3	2.14	0.48
23:DB:1196:C:H2'	23:DB:1197:G:C8	2.48	0.48
49:D2:7:PRO:O	49:D2:8:SER:HB3	2.13	0.48
23:DB:633:A:H2'	23:DB:634:C:H5'	1.95	0.48
16:AQ:10:ARG:NH1	16:AQ:11:VAL:HB	2.28	0.48
44:DX:28:LEU:HB3	44:DX:42:LEU:HG	1.95	0.48
23:BB:974:G:O4'	23:BB:990:A:N6	2.47	0.48
2:AC:5:HIS:CD2	2:AC:7:ASN:HB2	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2052:A:OP1	26:DD:145:SER:HB3	2.13	0.48
36:DO:67:ASN:HD22	36:DO:68:LYS:N	2.12	0.48
26:DD:8:LYS:NZ	37:DP:5:LYS:HG3	2.27	0.48
23:BB:2472:G:H2'	23:BB:2475:C:H42	1.79	0.48
1:CA:471:U:H2'	1:CA:472:U:H6	1.78	0.48
19:AT:49:ALA:HA	19:AT:52:GLU:HB3	1.96	0.48
23:BB:2213:U:H2'	23:BB:2214:C:H5'	1.96	0.48
23:DB:1221:C:O2'	23:DB:1222:U:H5'	2.13	0.48
3:CD:115:GLN:NE2	3:CD:153:ARG:HH22	2.11	0.48
42:DU:46:LYS:HA	42:DU:47:PRO:HD3	1.63	0.48
23:DB:2250:G:C5	34:DM:81:ARG:HG2	2.48	0.48
4:AE:33:THR:O	4:AE:34:ALA:CB	2.61	0.48
25:BC:16:VAL:O	25:BC:16:VAL:HG12	2.14	0.48
36:DO:86:GLY:O	36:DO:88:LYS:N	2.46	0.48
23:BB:1708:C:H2'	23:BB:1709:U:H6	1.78	0.48
1:AA:72:A:H2'	1:AA:73:C:C6	2.47	0.48
23:DB:722:A:H2'	23:DB:723:C:O4'	2.13	0.48
23:BB:526:A:N6	23:BB:2626:C:H4'	2.29	0.48
1:CA:1036:A:H2'	1:CA:1037:C:H6	1.78	0.48
5:CF:39:LEU:HD22	5:CF:39:LEU:O	2.14	0.48
30:DH:50:ARG:HD3	30:DH:54:LEU:HD12	1.95	0.48
1:AA:513:C:H2'	1:AA:514:C:C6	2.49	0.48
1:CA:220:G:O2'	1:CA:221:C:H5'	2.13	0.48
23:DB:2299:U:H2'	23:DB:2300:C:C6	2.49	0.48
1:CA:1325:C:O2'	1:CA:1326:U:H5'	2.13	0.48
23:DB:2712:C:H2'	23:DB:2714:G:O3'	2.13	0.48
1:AA:577:G:O2'	1:AA:578:C:H5'	2.14	0.48
31:DJ:106:LYS:C	31:DJ:108:MET:H	2.16	0.48
4:AE:63:MET:O	4:AE:66:ALA:HB3	2.14	0.48
23:DB:244:A:H2'	23:DB:245:G:O4'	2.14	0.48
22:BA:76:G:H2'	22:BA:77:U:O4'	2.13	0.48
1:AA:343:U:O2'	1:AA:344:A:H2'	2.14	0.48
23:BB:1144:A:O2'	23:BB:1145:C:H5'	2.13	0.48
25:DC:78:GLU:CD	25:DC:100:ARG:HH21	2.17	0.48
31:BJ:43:GLU:HB3	38:BQ:99:VAL:HG12	1.96	0.48
31:BJ:49:ASP:O	31:BJ:50:THR:HB	2.14	0.48
31:BJ:5:THR:HB	31:BJ:45:THR:HG23	1.96	0.48
25:DC:84:PRO:O	25:DC:86:ARG:N	2.44	0.48
33:BL:61:LEU:HD13	33:BL:61:LEU:N	2.28	0.48
23:DB:2398:U:H2'	23:DB:2399:G:C8	2.48	0.48
38:DQ:78:PHE:HE1	38:DQ:82:LEU:HD13	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:78:LYS:H	2:AC:81:GLU:HB3	1.79	0.48
30:DH:24:GLY:O	30:DH:26:ALA:N	2.47	0.48
45:DY:4:ILE:HG12	45:DY:5:LYS:CG	2.41	0.48
36:DO:26:LEU:HD22	36:DO:93:ASP:HA	1.95	0.48
47:B0:35:GLU:OE2	47:B0:43:THR:HG22	2.13	0.48
30:BH:1:MET:C	30:BH:21:VAL:HG12	2.34	0.48
39:DR:6:GLN:CG	39:DR:7:SER:N	2.77	0.48
30:BH:89:LYS:HZ2	30:BH:123:ARG:HD3	1.79	0.48
43:DW:33:GLY:C	43:DW:66:VAL:HG23	2.35	0.48
35:BN:17:ARG:O	35:BN:21:PHE:HB2	2.14	0.48
33:BL:85:VAL:HG21	33:BL:98:ALA:N	2.16	0.48
27:DE:120:VAL:O	27:DE:189:THR:HG21	2.14	0.48
41:DT:31:VAL:HG13	41:DT:32:LEU:N	2.25	0.48
42:BU:70:ALA:O	42:BU:72:PHE:N	2.47	0.48
23:BB:1081:U:C5'	52:BI:126:ARG:HD2	2.44	0.48
52:BI:77:VAL:HG23	52:BI:78:LEU:N	2.29	0.48
14:CO:62:ARG:NH1	14:CO:86:LEU:HD21	2.28	0.48
3:AD:194:ILE:HD11	3:AD:199:ILE:HD11	1.95	0.48
29:DG:174:LYS:O	29:DG:175:LYS:HB2	2.14	0.48
23:BB:639:U:H2'	23:BB:640:C:H6	1.79	0.48
29:DG:51:PHE:CE1	29:DG:53:PRO:HG3	2.48	0.48
34:BM:109:PRO:HA	34:BM:112:LEU:HD22	1.95	0.48
23:DB:561:G:H1'	38:DQ:40:LYS:HE2	1.96	0.48
9:CJ:40:ILE:CG1	9:CJ:73:LEU:HB3	2.43	0.48
9:CJ:40:ILE:HD11	9:CJ:73:LEU:HB3	1.96	0.48
39:DR:76:LYS:O	39:DR:77:PHE:HB2	2.14	0.48
1:CA:920:U:H2'	1:CA:921:U:C6	2.49	0.48
1:CA:1000:A:O2'	1:CA:1001:C:H5'	2.14	0.48
49:D2:13:ASN:C	49:D2:15:SER:H	2.17	0.48
1:AA:1348:U:H4'	8:AI:121:ARG:HH11	1.79	0.48
23:BB:1156:A:N6	38:BQ:47:ARG:CD	2.77	0.48
1:CA:840:C:C2	1:CA:842:U:H4'	2.48	0.48
28:DF:23:SER:C	28:DF:25:MET:H	2.17	0.48
25:BC:174:ARG:HG3	25:BC:180:MET:SD	2.53	0.48
1:AA:541:G:H2'	1:AA:542:G:H8	1.79	0.48
36:BO:53:THR:O	36:BO:54:VAL:C	2.52	0.48
11:AL:80:LEU:O	11:AL:97:VAL:HG23	2.14	0.48
49:B2:30:VAL:HA	49:B2:33:ARG:HD2	1.96	0.48
1:CA:1437:A:H2'	1:CA:1438:G:H8	1.78	0.48
23:DB:2382:G:H1'	50:D3:38:LYS:NZ	2.29	0.48
1:AA:1343:G:H2'	1:AA:1344:C:H6	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AE:104:ILE:O	4:AE:104:ILE:HG23	2.14	0.48
1:AA:87:C:N3	1:AA:88:U:H1'	2.29	0.48
23:DB:2645:G:H3'	23:DB:2646:C:C5'	2.44	0.48
1:CA:1129:C:H1'	1:CA:1146:A:N6	2.28	0.48
33:BL:21:ARG:NH1	33:BL:21:ARG:HB3	2.28	0.48
20:AB:80:LYS:O	20:AB:84:LEU:N	2.47	0.48
6:CG:30:MET:HG3	6:CG:34:LYS:O	2.14	0.48
9:AJ:80:THR:N	9:AJ:84:VAL:HG11	2.29	0.48
22:BA:29:A:H3'	22:BA:30:C:C6	2.45	0.48
52:DI:121:ILE:HD11	52:DI:122:GLU:OE2	2.13	0.48
2:CC:76:ILE:O	2:CC:83:VAL:HG23	2.13	0.48
33:DL:51:GLU:HG3	50:D3:58:ILE:HG22	1.96	0.48
1:AA:1473:G:O2'	23:BB:1702:G:H4'	2.14	0.48
23:DB:1938:A:O2'	23:DB:1939:U:H5''	2.14	0.48
23:DB:106:C:H2'	23:DB:107:G:C8	2.49	0.48
23:DB:1771:C:O2'	23:DB:1772:A:H5'	2.14	0.48
23:DB:230:G:H2'	23:DB:231:A:H8	1.79	0.48
1:CA:251:G:H4'	1:CA:252:U:H5'	1.94	0.48
30:BH:100:ALA:HB1	30:BH:110:VAL:CG2	2.44	0.48
1:CA:1456:A:H2'	1:CA:1457:G:C8	2.49	0.48
23:BB:1599:U:H2'	23:BB:1600:C:H6	1.78	0.48
23:DB:1210:G:H4'	23:DB:1211:C:OP2	2.14	0.48
1:AA:109:A:H4'	1:AA:110:C:OP2	2.14	0.48
1:AA:462:G:H3'	1:AA:463:U:H5''	1.95	0.48
23:DB:2708:G:O2'	23:DB:2709:G:H5'	2.13	0.48
23:DB:2352:A:H2'	23:DB:2353:G:O4'	2.13	0.48
22:BA:94:A:H2'	22:BA:95:U:O4'	2.14	0.48
23:DB:2005:A:H5''	54:DB:3350:HOH:O	2.13	0.48
12:AM:58:GLU:HA	12:AM:61:LYS:HE2	1.94	0.48
1:AA:1414:U:H2'	1:AA:1415:G:H8	1.79	0.48
23:DB:1091:G:O2'	23:DB:1092:C:H5'	2.14	0.48
23:BB:2152:G:H2'	23:BB:2153:C:C6	2.49	0.48
40:DS:39:THR:O	40:DS:39:THR:HG23	2.13	0.48
23:DB:1289:C:H2'	23:DB:1290:C:C6	2.49	0.48
1:AA:719:C:H1'	17:AR:37:LYS:HE3	1.96	0.48
23:BB:2543:G:H2'	23:BB:2544:G:O4'	2.14	0.48
1:AA:588:G:H5'	7:AH:2:MET:O	2.14	0.48
39:BR:43:ASN:C	39:BR:45:GLU:N	2.67	0.47
51:D4:24:ARG:HE	51:D4:37:GLN:CB	2.27	0.47
23:BB:773:U:H4'	25:BC:47:ARG:HA	1.95	0.47
24:BV:44:HIS:O	24:BV:48:MET:HB3	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BZ:59:ARG:NE	46:BZ:62:LYS:HD2	2.26	0.47
25:DC:162:GLN:HE22	25:DC:174:ARG:NH1	2.11	0.47
50:B3:16:THR:C	50:B3:18:LYS:H	2.16	0.47
23:BB:1995:U:OP1	26:BD:129:THR:HG22	2.14	0.47
23:BB:2512:C:O2'	26:BD:146:ILE:HG21	2.13	0.47
25:BC:87:SER:O	25:BC:155:ARG:NH1	2.47	0.47
20:AB:163:ILE:HG13	20:AB:185:ILE:HD11	1.96	0.47
23:DB:2728:U:H2'	23:DB:2729:G:H8	1.79	0.47
23:DB:908:C:O2'	23:DB:909:A:H5'	2.14	0.47
43:BW:44:PHE:C	43:BW:44:PHE:CD1	2.87	0.47
43:BW:46:ALA:O	43:BW:55:ASP:O	2.32	0.47
43:BW:56:HIS:CE1	43:BW:58:LEU:HB2	2.48	0.47
23:DB:930:G:H5'	23:DB:931:U:P	2.54	0.47
36:DO:17:LYS:O	36:DO:20:GLU:HG2	2.14	0.47
23:BB:26:G:H2'	23:BB:27:G:C1'	2.44	0.47
40:BS:34:ASP:HA	40:BS:37:THR:HG22	1.96	0.47
39:DR:47:VAL:HG13	39:DR:48:LYS:N	2.28	0.47
36:DO:15:ARG:NH1	43:DW:74:LYS:HE3	2.28	0.47
23:BB:1022:G:N2	23:BB:1142:A:C2	2.81	0.47
27:DE:183:PHE:C	27:DE:185:LYS:N	2.68	0.47
46:DZ:31:ASP:HB3	46:DZ:32:LEU:H	1.48	0.47
12:AM:11:HIS:O	12:AM:12:LYS:HG2	2.14	0.47
9:AJ:87:LEU:HB3	9:AJ:88:MET:HE3	1.94	0.47
1:CA:1307:U:H5'	12:CM:107:THR:HG21	1.95	0.47
23:BB:2331:G:H2'	23:BB:2332:C:H6	1.79	0.47
23:DB:2641:G:O2'	23:DB:2642:G:H5'	2.14	0.47
23:DB:2024:G:H5"	26:DD:154:LYS:HZ2	1.78	0.47
32:DK:43:ILE:HG12	32:DK:52:VAL:CG1	2.36	0.47
52:DI:21:PRO:CB	52:DI:22:PRO:HD3	2.42	0.47
5:AF:66:ALA:HB1	5:AF:67:PRO:HD2	1.96	0.47
36:BO:20:GLU:HB3	36:BO:23:ALA:HB2	1.96	0.47
1:CA:1014:A:H2	1:CA:1219:A:H1'	1.77	0.47
33:BL:38:GLN:N	33:BL:41:ARG:CD	2.78	0.47
1:CA:16:A:N1	1:CA:919:A:C2	2.82	0.47
48:B1:51:ALA:C	48:B1:52:LYS:HD2	2.33	0.47
25:BC:216:ARG:NH1	25:BC:217:PRO:HD2	2.29	0.47
25:BC:179:GLU:OE2	25:BC:267:VAL:HG22	2.14	0.47
23:DB:2751:G:O2'	23:DB:2752:C:H5'	2.13	0.47
10:CK:12:ARG:HB3	10:CK:13:LYS:NZ	2.29	0.47
15:AP:67:ILE:HG13	15:AP:71:VAL:CG1	2.42	0.47
10:AK:15:VAL:HG21	10:AK:41:LEU:CD1	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:94:GLU:CA	3:AD:103:ARG:HH22	2.27	0.47
1:AA:238:A:C2'	1:AA:239:U:H5''	2.43	0.47
15:AP:29:ASN:HD22	15:AP:29:ASN:N	2.11	0.47
30:DH:110:VAL:HG23	30:DH:132:PHE:CE2	2.49	0.47
29:BG:5:LYS:HA	29:BG:5:LYS:HD2	1.71	0.47
23:DB:615:U:C4	27:DE:36:ALA:HB2	2.48	0.47
1:AA:87:C:H2'	1:AA:88:U:C4'	2.44	0.47
1:CA:202:G:H2'	1:CA:203:G:H8	1.79	0.47
11:CL:81:ILE:HD13	11:CL:96:THR:HG22	1.95	0.47
1:AA:1448:C:H2'	1:AA:1449:C:H6	1.79	0.47
15:CP:5:ARG:O	15:CP:19:VAL:HA	2.14	0.47
1:CA:1517:G:H1'	23:DB:1919:A:O3'	2.14	0.47
50:D3:54:LEU:HA	50:D3:57:VAL:HG12	1.96	0.47
15:AP:12:LYS:C	15:AP:14:ARG:H	2.17	0.47
23:DB:1714:U:H3'	23:DB:1715:G:H5'	1.96	0.47
23:DB:2019:A:O3'	38:DQ:26:ALA:HB3	2.14	0.47
25:BC:36:ASN:HB3	25:BC:63:ILE:HD13	1.96	0.47
41:BT:50:LEU:N	41:BT:50:LEU:HD22	2.29	0.47
23:BB:41:C:O2'	23:BB:42:A:H5'	2.13	0.47
23:BB:2761:A:H1'	29:BG:142:GLN:NE2	2.29	0.47
23:DB:2491:U:H5''	23:DB:2570:G:H5''	1.94	0.47
23:BB:2543:G:H8	23:BB:2543:G:H5'	1.79	0.47
10:CK:94:SER:HA	10:CK:97:ARG:HG3	1.95	0.47
40:BS:20:VAL:O	40:BS:23:LEU:HB2	2.14	0.47
23:DB:2344:U:H4'	23:DB:2345:G:OP1	2.13	0.47
1:CA:989:U:O2'	1:CA:990:C:H5'	2.14	0.47
20:CB:161:PHE:HA	20:CB:183:PHE:O	2.13	0.47
1:AA:659:U:H2'	1:AA:660:C:C6	2.49	0.47
23:DB:2543:G:H8	23:DB:2543:G:H5'	1.79	0.47
17:AR:70:THR:OG1	17:AR:71:ASP:N	2.46	0.47
1:CA:216:U:H2'	1:CA:217:C:C6	2.49	0.47
23:BB:1477:A:H2'	23:BB:1478:G:O4'	2.14	0.47
23:DB:802:A:H4'	54:DB:3289:HOH:O	2.14	0.47
1:AA:1314:C:H2'	1:AA:1315:U:C6	2.49	0.47
4:AE:40:ASP:C	4:AE:42:ASN:H	2.17	0.47
32:BK:31:ARG:HG2	32:BK:31:ARG:H	1.44	0.47
1:AA:1215:G:H5'	1:AA:1215:G:H8	1.78	0.47
1:AA:608:A:H2'	1:AA:609:A:O4'	2.14	0.47
1:CA:418:C:H2'	1:CA:419:C:H6	1.79	0.47
23:DB:1098:A:O5'	52:DI:3:LYS:HB3	2.14	0.47
23:DB:1100:C:H2'	23:DB:1101:U:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DI:5:GLN:CB	52:DI:30:GLN:OE1	2.57	0.47
23:BB:38:A:H1'	27:BE:44:ARG:HA	1.95	0.47
25:DC:67:LYS:HG2	25:DC:149:LYS:O	2.14	0.47
25:DC:155:ARG:HG2	25:DC:155:ARG:HH21	1.79	0.47
25:DC:171:VAL:HB	25:DC:182:LYS:CB	2.39	0.47
26:BD:22:ILE:O	26:BD:23:PRO:O	2.32	0.47
37:BP:91:VAL:HG12	37:BP:92:ARG:N	2.29	0.47
23:DB:2773:C:H5''	26:DD:169:ARG:HB2	1.95	0.47
26:DD:116:LYS:N	26:DD:116:LYS:HD2	2.29	0.47
43:BW:47:GLY:HA2	43:BW:67:LYS:HZ3	1.79	0.47
36:DO:26:LEU:O	36:DO:40:ILE:HD11	2.13	0.47
31:DJ:25:LEU:HD12	31:DJ:62:VAL:CB	2.45	0.47
40:BS:6:LYS:HB3	40:BS:104:THR:HA	1.95	0.47
39:DR:5:PHE:HB3	39:DR:12:HIS:NE2	2.29	0.47
1:AA:1313:U:H5''	18:AS:5:LYS:CG	2.33	0.47
18:AS:3:SER:O	18:AS:4:LEU:HG	2.14	0.47
33:BL:85:VAL:CG1	33:BL:86:GLU:HG2	2.44	0.47
31:BJ:55:ILE:HA	31:BJ:122:LEU:O	2.14	0.47
2:AC:21:TRP:CD1	2:AC:58:ARG:HD2	2.49	0.47
47:B0:3:GLN:HB2	47:B0:6:LYS:HE2	1.96	0.47
40:DS:71:VAL:HG22	40:DS:107:VAL:HG12	1.94	0.47
52:BI:81:LYS:HG3	52:BI:82:ALA:N	2.29	0.47
30:BH:69:ALA:CB	30:BH:140:ALA:HA	2.43	0.47
23:BB:1112:G:H5'	29:BG:2:ARG:NE	2.28	0.47
5:CF:51:ILE:O	5:CF:51:ILE:HG23	2.14	0.47
31:DJ:77:HIS:HA	31:DJ:85:LYS:HA	1.96	0.47
1:CA:1103:C:O2	20:CB:105:THR:HG21	2.14	0.47
28:BF:102:LEU:C	28:BF:107:VAL:HG23	2.35	0.47
23:DB:1971:U:O2	25:DC:237:ARG:HB2	2.14	0.47
1:CA:731:G:OP1	1:CA:766:A:H1'	2.13	0.47
26:BD:61:THR:HB	26:BD:62:LYS:CE	2.43	0.47
4:CE:89:THR:CG2	4:CE:90:GLY:N	2.77	0.47
38:DQ:49:ARG:NH1	38:DQ:52:ARG:NH1	2.62	0.47
48:B1:46:VAL:HG22	48:B1:47:ILE:N	2.28	0.47
4:CE:85:LYS:HG3	4:CE:94:PHE:HD2	1.78	0.47
39:DR:80:ARG:HD2	39:DR:85:LYS:CB	2.45	0.47
23:BB:1241:A:H2'	23:BB:1242:U:H5'	1.96	0.47
1:AA:255:G:H2'	1:AA:256:U:C6	2.48	0.47
23:DB:1842:G:H2'	23:DB:1843:C:C6	2.49	0.47
1:CA:837:U:H2'	1:CA:838:G:H8	1.78	0.47
20:AB:172:ILE:O	20:AB:175:ALA:HB3	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AB:162:VAL:O	20:AB:184:ALA:HA	2.14	0.47
38:BQ:79:ILE:HA	38:BQ:82:LEU:HD12	1.96	0.47
27:DE:137:LYS:HA	27:DE:137:LYS:HZ3	1.78	0.47
23:DB:934:U:H2'	23:DB:935:C:C6	2.49	0.47
1:CA:389:A:H2'	1:CA:389:A:N3	2.29	0.47
19:CT:34:VAL:CG1	19:CT:78:LEU:HD22	2.44	0.47
33:BL:71:ALA:HB1	33:BL:74:THR:OG1	2.14	0.47
23:BB:1594:U:H2'	23:BB:1595:C:H6	1.75	0.47
23:DB:1594:U:H2'	23:DB:1595:C:H6	1.79	0.47
23:DB:2628:C:O2'	23:DB:2781:A:H2'	2.14	0.47
6:CG:144:ALA:C	6:CG:146:ALA:N	2.67	0.47
25:BC:162:GLN:HB3	25:BC:162:GLN:HE21	1.53	0.47
1:AA:1038:C:H2'	1:AA:1039:G:C8	2.47	0.47
23:DB:184:C:H2'	23:DB:185:G:C8	2.47	0.47
1:AA:1376:U:H2'	1:AA:1377:A:C8	2.49	0.47
16:AQ:24:ILE:O	16:AQ:40:THR:HA	2.14	0.47
3:CD:104:MET:HG3	3:CD:142:VAL:HG21	1.96	0.47
1:AA:864:A:H2'	1:AA:865:A:C8	2.49	0.47
36:DO:45:SER:O	36:DO:47:VAL:N	2.47	0.47
29:BG:104:LEU:HB3	29:BG:106:LEU:CD1	2.44	0.47
44:DX:55:THR:O	44:DX:57:LEU:N	2.44	0.47
46:DZ:36:VAL:O	46:DZ:36:VAL:HG23	2.14	0.47
23:DB:2839:G:O2'	35:DN:49:GLU:HG2	2.14	0.47
23:DB:2443:C:H2'	23:DB:2444:G:C8	2.49	0.47
6:CG:106:ALA:HB1	6:CG:132:THR:OG1	2.14	0.47
1:CA:1157:A:H4'	1:CA:1158:C:O5'	2.15	0.47
25:DC:30:ALA:N	25:DC:31:PRO:CD	2.77	0.47
1:AA:1137:C:H1'	1:AA:1138:G:N2	2.29	0.47
23:DB:1958:C:O2'	23:DB:1959:G:H5'	2.15	0.47
23:DB:2543:G:H2'	23:DB:2544:G:O4'	2.14	0.47
1:AA:649:A:H2'	1:AA:650:G:O4'	2.14	0.47
28:BF:75:GLY:O	28:BF:76:PHE:HB2	2.13	0.47
3:CD:152:SER:HA	3:CD:155:LYS:HB3	1.95	0.47
4:CE:154:ALA:HB1	7:CH:65:PHE:CZ	2.49	0.47
23:DB:1745:A:H2'	23:DB:1746:A:C8	2.49	0.47
2:AC:139:ASN:O	2:AC:143:LEU:HD22	2.14	0.47
23:DB:1637:A:H2'	23:DB:1638:C:C6	2.49	0.47
15:AP:33:ILE:HD12	15:AP:33:ILE:N	2.29	0.47
23:BB:401:A:H2'	23:BB:402:A:C8	2.49	0.47
52:DI:4:VAL:HG13	52:DI:4:VAL:O	2.14	0.47
23:DB:1081:U:C4'	52:DI:126:ARG:HH12	2.25	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2526:G:H21	51:D4:1:MET:HG2	1.80	0.47
46:BZ:59:ARG:HG3	46:BZ:62:LYS:CB	2.44	0.47
46:BZ:59:ARG:HE	46:BZ:62:LYS:CE	2.27	0.47
26:DD:33:ARG:CB	26:DD:89:GLU:HB2	2.44	0.47
34:DM:68:PHE:HA	34:DM:69:PRO:HD2	1.79	0.47
43:BW:64:GLY:O	43:BW:65:LYS:O	2.33	0.47
50:D3:7:ARG:HH12	50:D3:10:ALA:HB3	1.76	0.47
25:DC:231:HIS:ND1	25:DC:242:HIS:ND1	2.62	0.47
39:DR:2:TYR:HD2	39:DR:46:GLU:O	1.98	0.47
43:DW:58:LEU:HD11	43:DW:82:GLU:HB3	1.96	0.47
26:DD:24:VAL:CG1	26:DD:193:VAL:HG21	2.44	0.47
41:BT:8:LEU:CA	44:BX:19:LEU:HD11	2.44	0.47
23:DB:493:G:O2'	23:DB:494:G:H5'	2.14	0.47
52:DI:23:VAL:HG12	52:DI:24:GLY:H	1.79	0.47
28:BF:107:VAL:HG11	28:BF:175:PRO:HB2	1.95	0.47
29:DG:6:ALA:HB3	29:DG:7:PRO:HD3	1.96	0.47
10:CK:124:LYS:HB3	21:CU:33:ARG:NH1	2.29	0.47
18:CS:43:MET:CB	18:CS:61:VAL:HG11	2.44	0.47
39:BR:23:GLU:HA	39:BR:96:VAL:HG13	1.97	0.47
48:B1:46:VAL:C	48:B1:47:ILE:HG12	2.34	0.47
23:BB:2379:G:H5'	36:BO:20:GLU:OE1	2.13	0.47
13:CN:11:LYS:O	13:CN:15:LEU:HG	2.14	0.47
23:BB:1789:A:H5'	25:BC:220:ARG:HH21	1.78	0.47
23:DB:1050:A:H2'	23:DB:1051:G:O4'	2.15	0.47
23:DB:2751:G:OP2	29:DG:3:VAL:HB	2.14	0.47
45:DY:23:LEU:HD21	45:DY:50:VAL:HG11	1.96	0.47
15:AP:39:PHE:CE1	15:AP:74:LEU:HD22	2.49	0.47
15:AP:39:PHE:HE2	15:AP:70:ARG:HH21	1.63	0.47
1:CA:280:C:N3	16:CQ:39:ARG:HA	2.29	0.47
28:BF:32:LYS:O	28:BF:156:THR:N	2.42	0.47
2:CC:145:ALA:HA	2:CC:203:LYS:HA	1.96	0.47
23:BB:1439:A:N7	23:BB:1440:U:C6	2.82	0.47
1:AA:1118:U:H1'	1:AA:1179:A:C5	2.50	0.47
1:CA:1434:A:H2'	1:CA:1435:G:C8	2.48	0.47
29:BG:37:ASN:HB3	29:BG:63:GLN:HE22	1.78	0.47
7:AH:64:TYR:CB	7:AH:69:ALA:HA	2.44	0.47
1:CA:193:C:H2'	1:CA:194:C:C6	2.49	0.47
1:AA:539:A:H2'	1:AA:540:G:H8	1.78	0.47
1:CA:807:A:H1'	25:DC:4:LYS:HZ1	1.79	0.47
1:AA:1258:G:C4	1:AA:1278:G:N2	2.82	0.47
23:DB:1973:G:H2'	23:DB:1974:C:H6	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1300:G:H4'	23:BB:1301:A:O5'	2.13	0.47
34:DM:32:GLY:O	34:DM:127:LYS:HB3	2.15	0.47
23:DB:1708:C:H2'	23:DB:1709:U:H6	1.79	0.47
28:DF:177:ARG:O	28:DF:178:LYS:HB2	2.15	0.47
23:BB:1583:A:H4'	23:BB:1585:C:N3	2.29	0.47
23:DB:175:G:H2'	23:DB:176:A:H8	1.78	0.47
23:DB:51:G:H1'	23:DB:118:A:H61	1.79	0.47
23:BB:1771:C:O2'	23:BB:1772:A:H5'	2.14	0.47
10:AK:63:GLN:O	10:AK:67:GLU:HB3	2.14	0.47
1:CA:513:C:H2'	1:CA:514:C:C6	2.49	0.47
1:AA:975:A:H4'	1:AA:976:G:OP2	2.14	0.47
1:CA:940:C:H2'	1:CA:941:G:C8	2.49	0.47
1:AA:1432:G:C5'	37:BP:106:ALA:HB2	2.44	0.47
23:DB:2441:U:O2'	23:DB:2442:C:H5'	2.14	0.47
23:DB:511:U:H4'	23:DB:1235:G:H4'	1.97	0.47
3:CD:95:GLY:HA3	3:CD:135:GLN:NE2	2.29	0.47
26:DD:83:ARG:O	26:DD:84:LEU:HB2	2.12	0.47
4:CE:99:SER:C	4:CE:101:GLY:H	2.17	0.47
1:CA:563:A:H2'	1:CA:567:G:C8	2.50	0.47
23:DB:1191:G:O2'	23:DB:1192:G:H5'	2.14	0.47
23:BB:2692:G:O2'	23:BB:2693:G:H5'	2.14	0.47
41:DT:19:LYS:O	41:DT:22:THR:HG22	2.14	0.47
33:DL:14:LYS:HE2	33:DL:15:ALA:N	2.29	0.47
1:CA:695:A:H5'	10:CK:52:ARG:HH22	1.79	0.47
23:DB:1098:A:HO2'	52:DI:4:VAL:C	2.16	0.47
31:BJ:41:LYS:HZ3	31:BJ:46:PRO:HD3	1.79	0.47
25:BC:46:GLY:O	25:BC:47:ARG:HB2	2.14	0.47
34:BM:42:THR:HG22	34:BM:45:GLN:HG2	1.96	0.47
24:BV:41:GLU:C	24:BV:42:LEU:HD23	2.35	0.47
24:BV:80:HIS:CD2	24:BV:83:LYS:HB2	2.50	0.47
24:BV:80:HIS:HD2	24:BV:83:LYS:H	1.58	0.47
26:BD:13:ARG:NH1	37:BP:8:GLU:HB3	2.30	0.47
26:BD:122:VAL:HG21	26:BD:141:ARG:HA	1.96	0.47
25:BC:141:HIS:O	25:BC:143:VAL:HG23	2.14	0.47
27:BE:121:VAL:HG12	27:BE:122:GLU:N	2.30	0.47
37:DP:64:SER:HB2	37:DP:71:ARG:HH11	1.78	0.47
23:DB:853:C:H2'	23:DB:854:C:C6	2.50	0.47
21:CU:6:ARG:C	21:CU:7:GLU:HG2	2.34	0.47
31:DJ:41:LYS:HE2	31:DJ:46:PRO:HD3	1.95	0.47
39:DR:18:GLN:N	39:DR:18:GLN:CD	2.68	0.47
23:DB:2271:G:C2'	23:DB:2272:U:H5'	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:200:U:C5'	46:BZ:20:ASN:HB3	2.28	0.47
23:BB:543:G:C2'	23:BB:544:C:H5''	2.38	0.47
33:BL:85:VAL:HG12	33:BL:86:GLU:CG	2.44	0.47
33:BL:96:LYS:O	33:BL:100:ILE:HD12	2.14	0.47
23:DB:2087:G:H2'	23:DB:2088:A:C8	2.49	0.47
25:DC:257:ARG:C	25:DC:261:ARG:HD2	2.35	0.47
23:DB:1432:G:O2'	23:DB:1433:A:H5'	2.14	0.47
25:DC:16:VAL:O	25:DC:17:LYS:HD2	2.14	0.47
22:DA:102:G:H2'	22:DA:103:U:C6	2.50	0.47
23:BB:2336:A:HO2'	23:BB:2337:G:P	2.37	0.47
1:CA:1366:C:H2'	1:CA:1367:C:C6	2.50	0.47
28:DF:7:TYR:O	28:DF:11:VAL:HB	2.14	0.47
12:AM:38:ILE:HG13	12:AM:55:LEU:CD2	2.41	0.47
10:AK:22:ILE:CG2	10:AK:95:THR:HG21	2.35	0.47
28:BF:35:LEU:O	28:BF:36:ASN:HB3	2.13	0.47
36:BO:30:ARG:NH2	36:BO:102:ARG:HD2	2.29	0.47
16:CQ:10:ARG:CZ	16:CQ:11:VAL:N	2.77	0.47
14:CO:76:ARG:O	14:CO:79:ARG:HB2	2.15	0.47
23:DB:2597:G:C5'	25:DC:239:PHE:HB2	2.37	0.47
29:DG:8:VAL:HG21	29:DG:49:LEU:HB2	1.97	0.47
34:DM:118:LYS:HB2	34:DM:118:LYS:NZ	2.30	0.47
29:DG:71:LEU:O	29:DG:74:MET:HB2	2.14	0.47
38:DQ:40:LYS:O	38:DQ:44:TYR:HB3	2.15	0.47
40:BS:27:LYS:N	40:BS:27:LYS:HD2	2.23	0.47
22:BA:112:G:O2'	22:BA:113:C:H5'	2.14	0.47
41:DT:34:VAL:O	41:DT:81:LYS:HB3	2.14	0.47
8:AI:12:LYS:N	8:AI:109:GLN:HE22	2.07	0.47
17:AR:64:LEU:CB	17:AR:66:LEU:HG	2.44	0.47
42:BU:42:LYS:O	42:BU:57:ILE:HG13	2.14	0.47
25:BC:258:SER:HB2	25:BC:261:ARG:NH1	2.30	0.47
23:BB:2147:A:H5'	23:BB:2148:G:C4'	2.44	0.47
3:AD:93:LEU:O	3:AD:96:ARG:HB3	2.14	0.47
1:AA:232:G:H1'	1:AA:262:A:N1	2.29	0.47
25:BC:59:GLN:O	25:BC:60:ALA:HB3	2.14	0.47
23:DB:2860:A:H2'	23:DB:2861:U:O4'	2.15	0.47
3:CD:71:PHE:CE2	3:CD:89:LEU:HD11	2.48	0.47
30:BH:114:GLU:O	30:BH:133:GLN:HB3	2.14	0.47
22:BA:27:C:H3'	22:BA:28:C:H6	1.78	0.47
25:BC:13:ARG:O	25:BC:15:VAL:HG23	2.14	0.47
3:CD:101:VAL:HG13	3:CD:106:PHE:CD2	2.49	0.47
24:DV:77:VAL:HG13	24:DV:89:ILE:CD1	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:209:C:H2'	23:BB:210:C:C6	2.49	0.47
23:DB:1315:C:H2'	23:DB:1316:U:C6	2.50	0.47
23:BB:822:G:H2'	23:BB:823:C:H6	1.79	0.47
10:CK:109:ILE:H	10:CK:109:ILE:HD12	1.80	0.47
37:DP:108:ARG:N	37:DP:108:ARG:HD3	2.29	0.47
23:BB:570:G:O2'	23:BB:571:U:H5'	2.14	0.47
1:AA:182:A:H1'	1:AA:183:C:H5	1.79	0.47
20:CB:158:ASP:HA	20:CB:180:ILE:HD12	1.97	0.47
23:DB:518:G:H2'	23:DB:519:U:C6	2.50	0.47
23:DB:1719:G:O2'	23:DB:1720:U:H5'	2.14	0.47
14:AO:28:VAL:HG22	14:AO:65:LEU:HB3	1.96	0.47
27:BE:28:VAL:O	27:BE:32:VAL:HG23	2.14	0.47
19:CT:42:ASP:OD2	19:CT:44:ALA:HB3	2.15	0.47
6:CG:147:ASN:C	6:CG:149:ALA:H	2.17	0.47
3:CD:43:ARG:HA	3:CD:43:ARG:NH1	2.30	0.47
23:BB:1936:A:H2	23:BB:1943:U:C5	2.32	0.47
1:AA:1081:A:O2'	1:AA:1082:A:H5'	2.14	0.47
20:AB:15:PHE:HD1	20:AB:16:GLY:H	1.61	0.47
23:BB:1517:G:O2'	23:BB:1518:C:H5'	2.14	0.47
23:BB:152:A:H2'	23:BB:153:U:C6	2.49	0.47
39:BR:5:PHE:N	39:BR:12:HIS:CB	2.77	0.47
23:DB:581:C:O2'	23:DB:582:A:H5'	2.14	0.47
23:DB:2526:G:H2'	23:DB:2527:C:H6	1.76	0.47
34:BM:36:VAL:CG1	34:BM:125:PRO:HD2	2.45	0.47
34:BM:38:ARG:HA	34:BM:96:ILE:O	2.14	0.47
25:DC:155:ARG:HE	25:DC:157:ALA:CB	2.27	0.47
50:B3:44:ARG:HB3	50:B3:45:PRO:CD	2.43	0.47
33:BL:64:PHE:CE1	50:B3:24:LYS:HB2	2.50	0.47
26:BD:13:ARG:NH1	37:BP:12:MET:SD	2.87	0.47
27:BE:111:GLU:C	27:BE:113:VAL:H	2.16	0.47
23:BB:917:A:H2'	23:BB:918:A:O4'	2.14	0.47
50:D3:12:ARG:O	50:D3:13:PHE:CB	2.63	0.47
40:BS:6:LYS:HB2	40:BS:6:LYS:NZ	2.30	0.47
25:DC:10:PRO:O	25:DC:202:ARG:NH1	2.47	0.47
26:BD:150:GLN:C	26:BD:151:THR:HG22	2.35	0.47
33:BL:95:LEU:H	33:BL:95:LEU:CD1	2.27	0.47
31:BJ:93:ILE:CD1	31:BJ:100:VAL:HG11	2.44	0.47
41:DT:15:HIS:O	41:DT:16:VAL:CB	2.61	0.47
41:DT:55:VAL:CG2	41:DT:86:THR:H	2.27	0.47
41:DT:55:VAL:HG23	41:DT:87:LEU:H	1.79	0.47
9:AJ:88:MET:CE	9:AJ:88:MET:H	2.26	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:705:A:N6	23:DB:726:G:O2'	2.48	0.47
1:CA:1252:A:H4'	1:CA:1369:C:H4'	1.96	0.47
43:BW:16:GLU:O	43:BW:16:GLU:HG3	2.14	0.47
43:BW:16:GLU:CG	43:BW:37:VAL:HG22	2.39	0.47
5:CF:48:ALA:H	17:CR:65:SER:HB2	1.79	0.47
34:DM:64:TRP:HB2	34:DM:102:LEU:HB2	1.96	0.47
22:BA:50:A:H5''	36:BO:68:LYS:CG	2.45	0.47
16:CQ:44:HIS:HB2	16:CQ:69:THR:O	2.14	0.47
28:DF:39:VAL:HG12	28:DF:84:ILE:HG21	1.96	0.47
10:CK:121:ARG:HE	21:CU:34:ARG:HD2	1.78	0.47
15:CP:61:VAL:CA	15:CP:65:ALA:HB3	2.44	0.47
15:CP:67:ILE:HD11	15:CP:71:VAL:HG22	1.96	0.47
1:CA:1312:G:H2'	1:CA:1313:U:H6	1.78	0.47
34:BM:109:PRO:O	34:BM:112:LEU:HB2	2.14	0.47
30:BH:128:HIS:HB3	30:BH:144:VAL:CB	2.42	0.47
1:AA:65:A:N3	1:AA:65:A:C2'	2.74	0.47
42:DU:34:ILE:HG22	42:DU:62:ALA:O	2.13	0.47
3:CD:118:SER:C	3:CD:120:LYS:H	2.18	0.47
37:DP:7:LEU:HD23	37:DP:7:LEU:C	2.35	0.47
11:CL:29:LYS:O	11:CL:80:LEU:HD12	2.14	0.47
15:AP:26:ASN:OD1	15:AP:31:ARG:HB3	2.14	0.47
7:AH:17:GLN:NE2	7:AH:69:ALA:HB1	2.28	0.47
3:CD:61:ARG:HE	3:CD:68:GLU:N	2.13	0.47
23:BB:173:A:H2'	23:BB:174:U:C6	2.48	0.47
35:DN:47:VAL:O	35:DN:51:LEU:HG	2.15	0.47
6:AG:53:SER:HB2	6:AG:55:LYS:HZ2	1.78	0.47
22:BA:30:C:H1'	22:BA:58:A:N1	2.29	0.47
4:AE:150:GLU:C	4:AE:152:VAL:H	2.16	0.47
1:CA:824:G:H2'	1:CA:825:A:H8	1.78	0.47
1:CA:109:A:H4'	1:CA:110:C:OP2	2.14	0.47
23:DB:1692:U:H2'	23:DB:1694:C:C4	2.50	0.47
23:DB:1739:A:H2'	23:DB:1740:G:O4'	2.14	0.47
1:AA:708:C:H2'	1:AA:709:U:H6	1.80	0.47
7:CH:65:PHE:CD2	7:CH:66:GLN:HG2	2.50	0.47
15:AP:33:ILE:HD12	15:AP:33:ILE:H	1.79	0.47
27:BE:158:PHE:C	27:BE:160:ALA:H	2.17	0.47
23:DB:2671:G:H2'	23:DB:2672:U:C6	2.49	0.47
23:BB:2070:A:H2'	23:BB:2071:A:C8	2.49	0.47
43:BW:2:HIS:CE1	43:BW:4:LYS:HB3	2.48	0.47
31:BJ:43:GLU:CB	38:BQ:99:VAL:HG12	2.45	0.47
23:BB:38:A:C4'	27:BE:46:GLN:HG3	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BM:42:THR:O	34:BM:44:ARG:N	2.41	0.47
34:BM:6:ARG:HG3	34:BM:7:THR:O	2.15	0.47
24:BV:80:HIS:CA	24:BV:87:GLN:HE22	2.28	0.47
26:BD:127:PHE:O	26:BD:128:ARG:HB2	2.14	0.47
26:BD:130:GLN:O	26:BD:140:HIS:ND1	2.48	0.47
25:BC:160:TYR:HA	25:BC:193:GLU:CG	2.45	0.47
27:BE:104:ALA:C	27:BE:105:LEU:HD23	2.35	0.47
27:BE:122:GLU:OE2	27:BE:152:GLU:HG3	2.14	0.47
37:DP:60:VAL:HB	37:DP:61:ARG:H	1.30	0.47
43:BW:44:PHE:O	43:BW:76:ARG:CA	2.63	0.47
33:DL:63:LYS:O	50:D3:11:LYS:HB2	2.15	0.47
45:DY:18:LYS:O	45:DY:21:ALA:HB3	2.14	0.47
23:DB:37:C:O2'	23:DB:38:A:H5'	2.15	0.47
27:DE:53:THR:HB	27:DE:74:LYS:HZ3	1.79	0.47
47:B0:32:THR:HG22	47:B0:32:THR:O	2.13	0.47
35:BN:122:ALA:HA	47:B0:49:ARG:NH1	2.29	0.47
33:BL:116:VAL:HG12	33:BL:117:THR:HG23	1.97	0.47
33:BL:109:LYS:HA	33:BL:126:ARG:CB	2.44	0.47
33:BL:94:THR:OG1	33:BL:103:ILE:HB	2.14	0.47
31:BJ:100:VAL:HG22	31:BJ:101:ILE:N	2.27	0.47
27:DE:120:VAL:HG12	27:DE:121:VAL:N	2.29	0.47
21:AU:35:GLU:HB2	21:AU:37:TYR:CZ	2.50	0.47
42:BU:84:PHE:HA	42:BU:94:PHE:HD1	1.79	0.47
52:DI:79:LEU:HB3	52:DI:137:LEU:HD12	1.96	0.47
35:BN:1:MET:CE	35:BN:2:ARG:HB2	2.45	0.47
12:AM:78:ARG:HH22	12:AM:82:LEU:HD11	1.78	0.47
36:BO:8:ILE:C	36:BO:10:ARG:H	2.18	0.47
3:CD:64:TYR:CD2	3:CD:93:LEU:HB2	2.49	0.47
29:DG:10:VAL:HG13	29:DG:14:VAL:HG12	1.95	0.47
38:DQ:50:ARG:NH2	38:DQ:53:LYS:HE3	2.29	0.47
49:D2:12:ARG:HH21	49:D2:16:HIS:HB2	1.79	0.47
23:BB:976:G:H5'	23:BB:1156:A:N6	2.30	0.47
8:CI:103:VAL:HG23	8:CI:104:THR:N	2.29	0.47
1:CA:812:G:C2'	1:CA:812:G:N3	2.75	0.47
9:AJ:22:THR:CG2	9:AJ:23:ALA:N	2.77	0.47
11:AL:106:VAL:HG22	11:AL:117:GLY:H	1.79	0.47
23:BB:107:G:H21	23:BB:346:A:H62	1.61	0.47
25:BC:180:MET:HB2	25:BC:265:PHE:CB	2.40	0.47
3:CD:171:GLU:HB2	3:CD:180:THR:HG21	1.97	0.47
52:DI:7:TYR:HA	52:DI:59:THR:HA	1.95	0.47
17:AR:46:THR:CG2	17:AR:51:GLN:HB2	2.43	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BG:40:VAL:CG2	29:BG:53:PRO:HA	2.44	0.47
23:DB:322:A:H5'	23:DB:340:A:O4'	2.14	0.47
3:AD:81:LEU:CD1	3:AD:92:LEU:HD21	2.45	0.47
1:CA:806:C:H2'	1:CA:807:A:H8	1.80	0.47
1:CA:807:A:H1'	25:DC:4:LYS:HZ2	1.78	0.47
3:AD:117:VAL:HG12	3:AD:130:ASN:C	2.35	0.47
32:DK:112:PHE:O	32:DK:114:LYS:N	2.45	0.47
30:DH:135:HIS:HD2	30:DH:138:VAL:HG23	1.80	0.47
5:AF:43:GLY:HA2	5:AF:58:HIS:CE1	2.49	0.47
25:BC:16:VAL:HA	25:BC:17:LYS:HE2	1.95	0.47
11:AL:90:PRO:C	11:AL:92:VAL:H	2.17	0.47
1:CA:628:G:H2'	1:CA:629:A:C8	2.50	0.47
24:DV:57:TYR:HE2	24:DV:77:VAL:HG21	1.79	0.47
23:BB:2221:G:H2'	23:BB:2222:C:C6	2.50	0.47
23:BB:2443:C:H2'	23:BB:2444:G:C8	2.50	0.47
23:DB:15:G:O2'	23:DB:16:C:H5'	2.14	0.47
1:AA:636:U:H2'	1:AA:637:C:H6	1.78	0.47
23:BB:2862:G:H2'	23:BB:2863:C:H6	1.79	0.47
23:DB:2700:A:H2'	23:DB:2701:U:H6	1.80	0.47
6:CG:132:THR:O	6:CG:135:LYS:HB3	2.15	0.47
1:AA:301:G:H2'	1:AA:302:G:H8	1.79	0.47
1:AA:317:U:H2'	1:AA:318:G:C8	2.49	0.47
23:BB:1692:U:H2'	23:BB:1694:C:C4	2.49	0.47
30:BH:29:PHE:H	30:BH:32:PRO:HD2	1.79	0.47
1:CA:333:U:H2'	1:CA:334:C:H6	1.79	0.47
1:AA:607:A:H2'	1:AA:608:A:C8	2.50	0.47
23:DB:123:G:H2'	23:DB:124:G:C8	2.49	0.47
23:BB:1526:C:H2'	23:BB:1527:G:O4'	2.13	0.47
1:CA:343:U:O2'	1:CA:344:A:H2'	2.15	0.47
41:BT:26:LYS:HD2	41:BT:27:SER:HB2	1.97	0.47
3:CD:144:ILE:HG23	3:CD:149:LYS:HE2	1.97	0.47
23:DB:1513:U:O2'	23:DB:1514:G:H5'	2.15	0.47
1:CA:454:G:O2'	1:CA:455:G:H5'	2.15	0.47
1:CA:647:C:O2'	1:CA:648:A:H5'	2.15	0.47
20:AB:13:VAL:HG11	20:AB:207:ARG:HB2	1.95	0.47
47:D0:25:THR:O	47:D0:25:THR:HG23	2.15	0.47
1:AA:1410:A:H2'	1:AA:1411:C:C6	2.50	0.47
23:BB:490:C:H3'	23:BB:491:G:H5''	1.96	0.47
20:AB:156:LEU:HD12	20:AB:156:LEU:H	1.80	0.47
33:BL:84:LYS:HA	33:BL:84:LYS:HE3	1.97	0.47
2:CC:177:LEU:HD22	2:CC:177:LEU:H	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1501:G:O2'	23:BB:1502:A:H5'	2.15	0.47
23:BB:306:U:H2'	23:BB:307:G:O4'	2.14	0.47
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.50	0.47
23:DB:62:U:H3'	23:DB:63:A:C8	2.50	0.47
23:DB:1098:A:O5'	52:DI:3:LYS:CG	2.61	0.47
38:BQ:93:ILE:CG2	38:BQ:94:LEU:HD13	2.40	0.47
31:BJ:7:LYS:CE	31:BJ:48:VAL:HB	2.45	0.47
23:DB:2742:G:O2'	23:DB:2743:U:H5'	2.15	0.47
25:BC:49:THR:O	25:BC:50:THR:HB	2.15	0.47
24:BV:53:LYS:HD2	24:BV:54:ALA:N	2.29	0.47
24:BV:72:VAL:O	24:BV:94:ALA:HB2	2.14	0.47
22:BA:89:U:O2	23:BB:958:U:H2'	2.15	0.47
24:BV:61:LEU:O	24:BV:71:LYS:HA	2.15	0.47
23:BB:2261:C:OP2	43:BW:13:ARG:HB2	2.14	0.47
46:BZ:59:ARG:CG	46:BZ:62:LYS:HB2	2.44	0.47
23:DB:1818:U:C3'	25:DC:155:ARG:HB2	2.44	0.47
23:BB:2773:C:O2'	23:BB:2774:C:H5'	2.15	0.47
26:BD:15:PHE:HB3	26:BD:18:ASP:CB	2.45	0.47
37:BP:57:ALA:C	37:BP:59:THR:H	2.18	0.47
38:DQ:86:SER:C	38:DQ:88:GLU:H	2.18	0.47
9:AJ:35:GLN:H	9:AJ:78:GLU:HB3	1.80	0.47
27:BE:119:ILE:HG23	27:BE:189:THR:O	2.15	0.47
37:DP:29:VAL:HG23	37:DP:47:ILE:HD11	1.96	0.47
34:DM:41:LEU:CD2	34:DM:46:ILE:HD11	2.44	0.47
30:DH:36:ALA:O	30:DH:37:VAL:HG23	2.15	0.47
35:DN:42:LYS:NZ	35:DN:45:ARG:HD2	2.30	0.47
45:DY:1:ALA:HB1	45:DY:37:ARG:HB3	1.97	0.47
45:BY:50:VAL:O	45:BY:53:MET:HB2	2.15	0.47
30:DH:122:LEU:HD22	30:DH:146:VAL:HG22	1.97	0.47
30:DH:90:LEU:HD22	30:DH:122:LEU:O	2.15	0.47
23:BB:2019:A:O2'	38:BQ:32:ARG:NH2	2.47	0.47
40:BS:17:VAL:HG21	40:BS:101:SER:OG	2.15	0.47
40:BS:102:HIS:HB2	40:BS:103:ILE:H	1.50	0.47
30:BH:7:ASP:O	30:BH:9:VAL:HG23	2.14	0.47
23:BB:26:G:H1'	23:BB:514:A:H61	1.80	0.47
39:DR:5:PHE:HD2	39:DR:12:HIS:CE1	2.33	0.47
30:BH:89:LYS:HZ3	30:BH:90:LEU:H	1.63	0.47
23:DB:2270:A:H4'	43:DW:18:LYS:HD2	1.96	0.47
23:DB:1773:A:N6	25:DC:206:LYS:HE2	2.29	0.47
23:BB:2053:G:H5'	26:BD:151:THR:O	2.14	0.47
33:BL:78:ARG:HB2	33:BL:79:LEU:H	1.33	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DE:192:ALA:HB1	27:DE:199:MET:CB	2.45	0.47
27:DE:158:PHE:HE2	27:DE:161:ALA:HB3	1.80	0.47
27:DE:163:ASN:H	27:DE:168:ASP:HA	1.80	0.47
25:DC:53:ILE:CG1	25:DC:218:THR:HA	2.45	0.47
23:DB:46:G:H2'	23:DB:47:C:C6	2.49	0.47
1:CA:1251:A:O2'	1:CA:1370:G:H5'	2.15	0.47
23:BB:1059:G:N2	52:BI:130:GLY:HA3	2.29	0.47
19:CT:66:ILE:O	19:CT:70:LYS:HD3	2.14	0.47
43:BW:16:GLU:O	43:BW:18:LYS:HD2	2.15	0.47
18:AS:43:MET:O	18:AS:46:LEU:HB2	2.14	0.47
12:AM:72:ILE:O	12:AM:76:ILE:HG13	2.15	0.47
42:BU:5:ARG:HG2	42:BU:6:ARG:N	2.28	0.47
1:CA:673:A:H1'	17:CR:63:TYR:CD1	2.49	0.47
52:DI:49:GLU:CB	52:DI:52:LEU:HD12	2.44	0.47
31:DJ:76:HIS:O	31:DJ:77:HIS:O	2.33	0.47
39:DR:32:THR:HG22	39:DR:66:HIS:HB3	1.96	0.47
16:CQ:23:ALA:C	16:CQ:24:ILE:HD12	2.35	0.47
23:DB:1791:A:C4'	25:DC:207:ALA:H	2.28	0.47
23:DB:1789:A:H5'	25:DC:220:ARG:NH2	2.29	0.47
28:DF:96:TRP:O	28:DF:100:GLU:HG3	2.14	0.47
25:BC:222:THR:C	25:BC:224:MET:N	2.67	0.47
9:CJ:36:VAL:HA	9:CJ:76:ILE:HG23	1.96	0.47
26:BD:38:LYS:N	26:BD:38:LYS:CD	2.78	0.47
29:DG:18:ILE:HA	29:DG:22:VAL:O	2.14	0.47
49:B2:18:PHE:HB3	49:B2:19:ARG:H	1.62	0.47
44:DX:22:LEU:HD11	44:DX:47:ARG:NH2	2.30	0.47
15:CP:67:ILE:HG12	15:CP:72:ALA:HB2	1.95	0.47
6:AG:22:LEU:O	6:AG:26:VAL:HG13	2.14	0.47
48:B1:15:GLY:CA	48:B1:47:ILE:HD12	2.44	0.47
36:BO:71:ALA:O	36:BO:74:VAL:HG23	2.14	0.47
23:BB:64:A:N6	23:BB:91:A:N6	2.62	0.47
49:D2:18:PHE:CD2	49:D2:18:PHE:N	2.82	0.47
6:AG:71:THR:HA	6:AG:90:VAL:HG22	1.96	0.47
23:BB:1790:C:H4'	25:BC:207:ALA:CB	2.45	0.47
25:BC:208:GLY:O	25:BC:210:ALA:N	2.48	0.47
23:DB:1842:G:H2'	23:DB:1843:C:H6	1.80	0.47
29:BG:153:PRO:HG3	29:BG:160:GLY:C	2.35	0.47
5:AF:5:GLU:HG3	5:AF:63:ASN:OD1	2.15	0.47
10:AK:30:ILE:HG22	10:AK:45:THR:CA	2.41	0.47
23:BB:1156:A:N6	38:BQ:47:ARG:HD3	2.29	0.47
1:AA:78:A:O2'	1:AA:79:G:H5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:103:VAL:HG23	8:CI:104:THR:H	1.79	0.47
2:CC:129:PHE:CE2	2:CC:156:LEU:HD13	2.50	0.47
4:AE:35:LEU:HD23	4:AE:36:THR:N	2.30	0.47
2:CC:146:LYS:HD3	2:CC:203:LYS:O	2.15	0.47
1:CA:1412:C:H2'	1:CA:1413:A:H8	1.75	0.47
23:DB:1438:U:H5'	23:DB:1516:G:O2'	2.14	0.47
23:BB:233:A:N6	23:BB:428:A:H61	2.12	0.47
23:BB:230:G:H2'	23:BB:231:A:C8	2.48	0.47
29:DG:90:GLY:HA3	29:DG:159:LYS:HG2	1.97	0.47
23:DB:579:G:H4'	23:DB:2017:U:H2'	1.97	0.47
2:CC:94:ALA:O	2:CC:96:VAL:N	2.48	0.47
25:BC:27:LYS:HA	25:BC:79:ARG:HH12	1.78	0.47
1:CA:1438:G:C2'	1:CA:1439:G:H5'	2.45	0.47
1:AA:950:U:H2'	1:AA:951:G:C8	2.50	0.47
23:DB:2286:G:H1	48:D1:23:THR:HG21	1.80	0.47
6:CG:56:SER:HB3	6:CG:59:GLU:HG3	1.96	0.47
1:CA:1319:A:P	18:CS:4:LEU:HD21	2.55	0.47
1:CA:1277:C:H1'	1:CA:1282:C:O2	2.15	0.47
44:BX:45:GLN:H	44:BX:45:GLN:HE21	1.61	0.47
24:DV:48:MET:SD	24:DV:86:LEU:HD12	2.54	0.47
1:CA:1245:C:H2'	1:CA:1246:A:H8	1.79	0.47
1:CA:537:G:H2'	1:CA:538:G:H8	1.80	0.47
1:CA:1054:C:H1'	1:CA:1196:A:C6	2.50	0.47
32:BK:108:ARG:HH11	32:BK:108:ARG:HG3	1.79	0.47
23:DB:279:A:H3'	23:DB:280:U:H6	1.79	0.47
1:CA:806:C:H2'	1:CA:807:A:C8	2.49	0.47
1:CA:602:A:O2'	1:CA:603:U:H5'	2.14	0.47
3:CD:115:GLN:HE22	3:CD:153:ARG:HH22	1.62	0.47
23:DB:1494:A:H2'	23:DB:1495:A:C8	2.50	0.47
31:BJ:29:ALA:O	31:BJ:33:ALA:N	2.44	0.47
34:DM:81:ARG:CG	34:DM:82:MET:HG2	2.45	0.47
15:CP:19:VAL:HG13	15:CP:37:GLY:C	2.35	0.47
5:CF:18:VAL:HG21	5:CF:58:HIS:ND1	2.30	0.47
1:CA:1390:U:H2'	1:CA:1391:U:C6	2.50	0.47
23:DB:18:U:H5''	38:DQ:23:TYR:O	2.15	0.47
28:DF:103:ILE:HD12	28:DF:104:THR:N	2.30	0.47
37:DP:92:ARG:HB2	37:DP:110:LYS:O	2.15	0.47
17:CR:20:ILE:O	17:CR:20:ILE:HG12	2.14	0.47
23:BB:2249:U:H4'	23:BB:2275:C:C5	2.50	0.47
29:DG:123:GLU:HG2	29:DG:131:VAL:HG13	1.96	0.47
1:CA:1299:A:C5	1:CA:1301:U:H1'	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:23:G:N2	22:DA:24:G:H1	2.13	0.47
22:BA:86:G:H3'	22:BA:87:U:H6	1.80	0.47
23:DB:153:U:O5'	23:DB:153:U:H6	1.98	0.47
35:BN:57:THR:HG23	35:BN:58:ASP:H	1.80	0.47
52:BI:48:ILE:O	52:BI:49:GLU:HB3	2.14	0.47
52:BI:54:ILE:HG21	52:BI:70:THR:CG2	2.45	0.47
23:BB:2728:U:H2'	23:BB:2729:G:C8	2.50	0.47
34:DM:104:GLU:HB3	34:DM:105:MET:H	1.55	0.47
22:BA:54:G:H2'	22:BA:55:U:H6	1.79	0.47
23:BB:673:C:H5''	27:BE:76:PRO:HD2	1.96	0.47
1:CA:841:C:H6	1:CA:843:U:OP1	1.98	0.47
1:AA:1198:G:H2'	1:AA:1199:U:C6	2.50	0.47
1:CA:179:A:H2'	1:CA:180:U:H6	1.79	0.47
2:AC:84:GLU:HA	2:AC:87:ARG:NH2	2.30	0.47
1:AA:21:G:H2'	1:AA:22:G:C8	2.49	0.47
1:AA:1096:C:H2'	1:AA:1097:C:C6	2.50	0.47
23:BB:1637:A:H2'	23:BB:1638:C:H6	1.80	0.47
1:CA:1122:U:H2'	1:CA:1123:U:C6	2.50	0.47
23:DB:1729:U:H2'	23:DB:1730:C:H4'	1.96	0.47
26:BD:184:ARG:HG3	26:BD:184:ARG:O	2.14	0.47
23:DB:1745:A:H2'	23:DB:1746:A:H8	1.80	0.47
41:DT:19:LYS:HA	41:DT:19:LYS:HD2	1.54	0.47
23:DB:314:C:H2'	23:DB:315:G:H8	1.80	0.47
23:DB:2643:G:H2'	23:DB:2644:G:O4'	2.15	0.47
7:CH:71:VAL:HG23	7:CH:71:VAL:O	2.14	0.47
1:AA:303:A:H2'	1:AA:304:U:O4'	2.14	0.47
23:DB:2659:G:N2	23:DB:2661:G:H5''	2.29	0.47
23:BB:840:C:O2'	23:BB:841:G:H5'	2.15	0.47
44:BX:9:LYS:HE3	44:BX:11:VAL:HG13	1.97	0.47
1:AA:147:G:H2'	1:AA:148:G:C8	2.49	0.47
10:AK:121:ARG:HG3	10:AK:121:ARG:NH1	2.29	0.47
23:BB:2083:G:H2'	23:BB:2084:C:C6	2.49	0.47
23:DB:2249:U:H4'	23:DB:2275:C:C5	2.50	0.47
1:AA:894:G:O2'	1:AA:895:G:H5'	2.15	0.47
23:DB:562:U:C4	23:DB:2036:C:O4'	2.68	0.47
14:AO:17:ASP:HB2	14:AO:18:ALA:H	1.59	0.47
38:DQ:59:LEU:O	38:DQ:62:ALA:HB3	2.15	0.47
20:AB:82:ALA:O	20:AB:217:ALA:HB2	2.15	0.47
23:BB:1205:A:H4'	23:BB:1206:G:OP2	2.14	0.47
19:CT:50:PHE:O	19:CT:53:MET:HG3	2.13	0.47
36:DO:115:LEU:N	36:DO:115:LEU:HD12	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AN:72:PHE:CE2	13:AN:77:GLY:HA2	2.49	0.47
23:BB:1986:C:O2'	23:BB:1987:A:H5'	2.14	0.47
38:BQ:57:ARG:HA	38:BQ:60:TRP:CE3	2.46	0.47
23:DB:448:U:H2'	27:DE:79:ARG:CG	2.45	0.47
23:BB:2230:G:H1'	46:BZ:30:HIS:HD2	1.80	0.47
46:BZ:58:ASP:HB3	46:BZ:59:ARG:H	1.27	0.47
46:BZ:59:ARG:HG3	46:BZ:62:LYS:HG3	1.97	0.47
25:DC:161:VAL:O	25:DC:161:VAL:HG12	2.15	0.47
26:BD:3:GLY:CA	26:BD:49:GLN:HE22	2.28	0.47
26:BD:4:LEU:CD2	26:BD:49:GLN:HG2	2.45	0.47
23:BB:1754:A:OP2	37:BP:94:ALA:HB1	2.15	0.47
23:BB:2617:U:H2'	23:BB:2618:G:C5'	2.45	0.47
23:BB:2617:U:O2'	23:BB:2618:G:H5'	2.15	0.47
23:BB:1132:U:H6	31:BJ:85:LYS:HZ3	1.63	0.47
25:BC:103:ILE:CG2	25:BC:104:LEU:N	2.77	0.47
26:DD:4:LEU:H	26:DD:4:LEU:HD22	1.78	0.47
37:DP:79:VAL:HB	37:DP:80:VAL:H	1.57	0.47
25:BC:10:PRO:CD	25:BC:202:ARG:HH12	2.27	0.47
23:DB:852:U:O2'	23:DB:853:C:H5'	2.14	0.47
31:DJ:19:ASP:HB3	31:DJ:21:THR:CG2	2.43	0.47
30:DH:125:THR:CA	30:DH:146:VAL:HB	2.30	0.47
20:AB:60:ALA:HB3	20:AB:223:GLY:HA3	1.95	0.47
23:BB:27:G:H1'	23:BB:513:A:H61	1.79	0.47
35:BN:46:ARG:O	35:BN:50:PRO:HG2	2.14	0.47
40:BS:28:LYS:HA	40:BS:31:GLN:HB2	1.95	0.47
13:AN:79:SER:O	13:AN:81:ILE:HD12	2.15	0.47
44:BX:22:LEU:O	44:BX:23:ARG:C	2.53	0.47
1:AA:986:U:H1'	18:AS:53:GLY:O	2.14	0.47
23:DB:2199:A:H5''	23:DB:2200:C:OP2	2.14	0.47
40:DS:45:VAL:O	40:DS:47:VAL:HG23	2.15	0.47
28:DF:34:THR:O	28:DF:35:LEU:HD23	2.14	0.47
52:DI:109:ALA:HA	52:DI:128:ILE:CD1	2.45	0.47
23:BB:1999:C:H5''	23:BB:2723:C:O2'	2.14	0.47
52:DI:27:LEU:HD23	52:DI:27:LEU:N	2.17	0.47
28:BF:133:GLU:O	28:BF:134:GLN:HB2	2.14	0.47
28:BF:67:THR:O	28:BF:83:PRO:HA	2.15	0.47
1:CA:451:A:C5'	15:CP:70:ARG:HH22	2.20	0.47
39:DR:67:GLY:H	39:DR:98:ILE:H	1.62	0.47
16:CQ:43:LEU:HD12	16:CQ:43:LEU:N	2.29	0.47
46:DZ:55:GLY:HA2	46:DZ:59:ARG:HB2	1.96	0.47
42:DU:66:VAL:HG22	42:DU:67:SER:N	2.17	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AJ:8:ILE:H	9:AJ:75:ASP:HB2	1.80	0.47
23:DB:639:U:H2'	23:DB:640:C:H6	1.79	0.47
1:CA:1313:U:OP2	18:CS:5:LYS:HA	2.14	0.47
23:BB:1170:C:O2'	23:BB:1171:G:H5'	2.15	0.47
13:CN:82:LYS:HA	13:CN:82:LYS:HE2	1.96	0.47
36:BO:46:GLU:C	36:BO:48:LEU:H	2.18	0.47
23:BB:1189:A:H2'	23:BB:1190:G:O4'	2.15	0.47
23:DB:2634:A:H2'	23:DB:2635:A:C8	2.50	0.47
1:AA:1348:U:H2'	1:AA:1349:A:H8	1.80	0.47
2:CC:156:LEU:HD12	2:CC:163:ARG:HG3	1.97	0.47
23:DB:2896:C:H2'	23:DB:2897:U:H6	1.80	0.47
23:DB:2673:G:H2'	23:DB:2674:G:C8	2.50	0.47
1:AA:948:C:O2'	1:AA:949:A:H5'	2.15	0.47
11:AL:121:PRO:C	11:AL:123:ALA:H	2.18	0.47
23:BB:1438:U:N3	23:BB:1552:A:N6	2.63	0.47
11:CL:100:ALA:C	11:CL:103:CYS:HG	2.17	0.47
14:AO:70:LYS:HZ1	14:AO:74:VAL:CG1	2.25	0.47
4:CE:152:VAL:HA	4:CE:155:LYS:HD3	1.96	0.47
25:DC:209:ALA:O	25:DC:213:ARG:NH1	2.47	0.47
23:DB:1409:U:O2'	23:DB:1410:G:H5'	2.14	0.47
1:CA:979:C:H41	1:CA:1360:A:H62	1.63	0.47
23:DB:2391:G:P	50:D3:32:LEU:HG	2.55	0.47
23:DB:1241:A:O4'	23:DB:1241:A:N3	2.48	0.47
12:AM:13:HIS:HB2	12:AM:16:ILE:HG22	1.97	0.47
1:CA:123:U:H5''	1:CA:311:C:O2'	2.15	0.47
23:BB:2800:A:C4	23:BB:2801:G:H1'	2.50	0.47
23:DB:2648:G:H2'	23:DB:2649:C:C6	2.49	0.47
35:DN:44:LEU:HD12	35:DN:47:VAL:CG2	2.44	0.47
11:CL:23:LEU:C	11:CL:25:ALA:N	2.68	0.47
38:BQ:101:ASP:OD2	38:BQ:104:ALA:HB2	2.14	0.47
43:DW:48:ALA:HA	43:DW:54:ARG:N	2.30	0.47
52:BI:12:VAL:HG23	52:BI:41:PHE:CZ	2.50	0.47
33:DL:51:GLU:HG3	50:D3:58:ILE:CG2	2.45	0.47
1:CA:1298:U:H4'	1:CA:1299:A:C2	2.50	0.47
2:AC:90:VAL:HG21	2:AC:98:ALA:HB3	1.97	0.47
23:BB:1351:C:H4'	23:BB:1572:A:O4'	2.14	0.47
23:DB:1537:G:H2'	23:DB:1538:G:C4'	2.45	0.47
23:DB:2617:U:O2'	23:DB:2618:G:H5'	2.15	0.47
29:DG:93:TYR:CD1	29:DG:93:TYR:N	2.83	0.47
10:CK:126:ARG:HG2	10:CK:126:ARG:NH1	2.30	0.47
23:BB:1724:G:H2'	23:BB:1725:U:C6	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:317:U:H2'	1:CA:318:G:C8	2.49	0.47
22:DA:13:G:H4'	22:DA:15:A:H2'	1.96	0.47
10:AK:60:PHE:HA	10:AK:63:GLN:OE1	2.14	0.47
23:BB:2425:A:H5''	23:BB:2426:A:H3'	1.97	0.47
23:DB:689:A:H2'	23:DB:690:G:C8	2.50	0.47
10:AK:21:HIS:CE1	10:AK:34:THR:HG21	2.50	0.47
1:CA:31:G:H2'	1:CA:48:C:H5	1.79	0.47
1:CA:1019:A:H2'	1:CA:1020:G:C8	2.50	0.47
47:D0:24:VAL:O	47:D0:24:VAL:HG12	2.14	0.47
23:BB:1965:C:H5''	23:BB:1966:A:H2'	1.96	0.47
23:BB:1870:C:H3'	23:BB:1871:A:C8	2.49	0.47
35:BN:106:ASP:O	35:BN:108:ALA:N	2.48	0.47
23:BB:535:G:H3'	54:BB:3417:HOH:O	2.15	0.47
38:BQ:93:ILE:C	38:BQ:95:ALA:N	2.69	0.47
34:BM:33:LEU:CD2	34:BM:124:LEU:HG	2.45	0.47
24:BV:2:PHE:CB	24:BV:61:LEU:HD22	2.45	0.47
24:BV:2:PHE:HB2	24:BV:61:LEU:HD22	1.97	0.47
46:BZ:49:ARG:C	46:BZ:51:VAL:N	2.69	0.47
25:DC:160:TYR:CD2	25:DC:193:GLU:HG2	2.50	0.47
23:BB:832:U:O2'	33:BL:53:GLY:HA3	2.15	0.47
25:BC:156:SER:O	25:BC:194:VAL:O	2.32	0.47
23:DB:2874:C:H2'	23:DB:2875:C:C6	2.50	0.47
37:DP:47:ILE:CG2	37:DP:49:ILE:HG13	2.45	0.47
21:CU:16:ARG:C	21:CU:18:PHE:H	2.18	0.47
31:DJ:128:ASN:O	31:DJ:130:HIS:N	2.48	0.47
32:BK:107:LEU:HD12	32:BK:107:LEU:O	2.14	0.47
39:DR:46:GLU:HB3	39:DR:47:VAL:H	1.58	0.47
18:AS:4:LEU:N	18:AS:5:LYS:HE3	2.29	0.47
31:BJ:58:ASN:HA	31:BJ:126:ALA:CA	2.44	0.47
23:BB:144:A:O2'	23:BB:145:C:H5'	2.15	0.47
41:BT:30:ILE:CG2	41:BT:32:LEU:HD13	2.45	0.47
1:CA:948:C:OP1	12:CM:107:THR:HG22	2.15	0.47
1:CA:954:G:H2'	1:CA:955:U:H6	1.80	0.47
49:B2:35:ARG:O	49:B2:39:ARG:HA	2.15	0.47
42:DU:27:VAL:CA	42:DU:33:VAL:HG22	2.44	0.47
23:BB:86:G:P	42:BU:29:SER:HB2	2.55	0.47
23:BB:100:U:H4'	42:BU:90:LYS:CD	2.44	0.47
18:AS:37:SER:O	18:AS:69:LYS:HG2	2.15	0.47
1:AA:664:G:N2	1:AA:741:G:H1	2.02	0.47
20:CB:101:THR:HG22	20:CB:174:GLU:OE1	2.14	0.47
29:DG:40:VAL:HG13	29:DG:51:PHE:CE2	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DL:81:ASP:HA	33:DL:84:LYS:CD	2.45	0.47
39:BR:35:PHE:HB2	39:BR:64:VAL:HG22	1.96	0.47
23:DB:543:G:C6	23:DB:544:C:H1'	2.49	0.47
28:BF:6:TYR:O	28:BF:11:VAL:HG23	2.15	0.47
38:DQ:47:ARG:C	38:DQ:51:GLN:HE21	2.18	0.47
2:AC:75:VAL:O	2:AC:75:VAL:HG12	2.14	0.47
4:CE:80:LEU:CD2	4:CE:122:VAL:HG11	2.45	0.47
16:AQ:22:VAL:HG21	16:AQ:58:VAL:HG21	1.96	0.47
42:DU:28:LEU:HD12	42:DU:29:SER:N	2.30	0.47
5:AF:38:ARG:HH21	5:AF:96:VAL:CG1	2.28	0.47
42:BU:60:LYS:HG3	42:BU:61:GLU:N	2.28	0.47
48:D1:26:LYS:HD3	48:D1:28:THR:H	1.80	0.47
26:DD:159:LYS:HB3	26:DD:160:LYS:H	1.62	0.47
23:DB:876:C:H5'	23:DB:877:A:OP2	2.15	0.47
9:AJ:18:ILE:HD12	9:AJ:72:ARG:HG3	1.97	0.47
31:BJ:35:ARG:CZ	31:BJ:40:HIS:HB2	2.45	0.47
15:AP:6:LEU:HD11	15:AP:71:VAL:HB	1.96	0.47
19:CT:19:HIS:CE1	19:CT:23:ARG:HG3	2.50	0.47
2:CC:61:LYS:HE2	2:CC:96:VAL:HG12	1.96	0.47
30:DH:129:GLU:HG3	30:DH:129:GLU:H	1.49	0.47
23:DB:570:G:O2'	23:DB:571:U:H5'	2.15	0.47
1:AA:1071:C:O2'	1:AA:1072:G:H5'	2.14	0.47
4:AE:108:GLY:H	4:AE:110:MET:CE	2.28	0.47
1:AA:1110:A:N7	1:AA:1111:A:N6	2.58	0.47
1:AA:1018:G:H2'	1:AA:1019:A:H8	1.80	0.47
23:BB:2860:A:H2'	23:BB:2861:U:O4'	2.14	0.47
1:CA:586:C:C2'	1:CA:587:G:H5'	2.44	0.47
3:AD:147:LYS:H	3:AD:147:LYS:HE3	1.80	0.47
27:DE:21:ARG:NH1	27:DE:25:GLU:HB2	2.29	0.47
23:DB:1430:G:H2'	23:DB:1431:A:H8	1.80	0.47
23:DB:2281:A:H62	43:DW:3:LYS:CD	2.28	0.47
43:DW:3:LYS:HA	43:DW:3:LYS:NZ	2.30	0.47
27:BE:198:GLU:C	27:BE:200:LEU:N	2.69	0.47
23:DB:263:G:H2'	23:DB:264:C:O4'	2.15	0.47
50:B3:13:PHE:O	50:B3:13:PHE:CG	2.68	0.47
23:BB:2223:G:H2'	23:BB:2224:G:H5'	1.96	0.47
23:BB:978:G:H2'	23:BB:979:A:H8	1.80	0.47
36:BO:76:LYS:HB2	36:BO:106:LEU:HD13	1.97	0.47
23:BB:863:A:H2'	23:BB:864:G:C8	2.50	0.47
23:DB:2207:C:O2'	23:DB:2208:C:H5'	2.15	0.47
23:BB:1359:A:H2'	23:BB:1360:G:O4'	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1492:A:H2'	1:CA:1492:A:N3	2.29	0.47
20:AB:35:ASN:O	20:AB:36:LYS:HB2	2.13	0.47
23:BB:2070:A:H2'	23:BB:2071:A:O4'	2.14	0.47
34:DM:108:VAL:HB	34:DM:111:GLU:HB2	1.95	0.47
1:AA:563:A:H2'	1:AA:567:G:C8	2.50	0.47
1:CA:1268:G:H2'	1:CA:1269:A:C8	2.50	0.47
7:AH:87:ARG:O	7:AH:91:LEU:HG	2.14	0.47
23:DB:2553:G:H2'	23:DB:2554:U:C4'	2.45	0.47
23:DB:1352:U:O2'	23:DB:1353:A:H5'	2.15	0.47
33:BL:51:GLU:HG3	33:BL:51:GLU:O	2.15	0.47
23:DB:757:G:H2'	23:DB:758:C:H5'	1.97	0.47
9:CJ:91:ASP:C	9:CJ:92:LEU:HD23	2.35	0.47
28:BF:55:ASP:OD1	28:BF:148:VAL:HG11	2.15	0.47
23:BB:246:C:C2'	23:BB:247:G:H5'	2.45	0.47
31:BJ:43:GLU:O	31:BJ:45:THR:N	2.48	0.47
23:DB:448:U:H5	23:DB:583:G:C2	2.33	0.47
23:BB:443:A:H2	23:BB:1245:G:N3	2.13	0.47
34:BM:62:LYS:HB2	34:BM:104:GLU:HB2	1.96	0.47
34:BM:117:PHE:HB2	34:BM:124:LEU:HD21	1.97	0.47
34:BM:43:ALA:C	34:BM:45:GLN:N	2.68	0.47
34:BM:90:GLU:O	34:BM:91:TYR:HB2	2.14	0.47
37:BP:29:VAL:O	37:BP:44:GLY:HA3	2.15	0.47
23:DB:2683:C:H2'	23:DB:2684:U:H6	1.80	0.47
34:DM:71:LYS:HZ2	34:DM:91:TYR:HA	1.80	0.47
43:DW:42:THR:HB	43:DW:75:ASN:ND2	2.29	0.47
43:DW:56:HIS:CG	43:DW:57:THR:H	2.33	0.47
35:BN:65:LEU:HD12	35:BN:68:ALA:HB3	1.97	0.47
31:BJ:58:ASN:C	31:BJ:60:ASP:H	2.18	0.47
1:CA:1371:G:O3'	8:CI:70:GLY:HA3	2.15	0.47
52:BI:72:THR:HB	52:BI:73:PRO:HD2	1.96	0.47
28:BF:82:TYR:HB3	28:BF:83:PRO:HD2	1.97	0.47
25:BC:230:PRO:O	25:BC:231:HIS:HB3	2.15	0.47
47:D0:28:SER:HB3	47:D0:34:GLY:O	2.14	0.47
20:CB:153:MET:C	20:CB:155:GLY:H	2.19	0.47
26:BD:33:ARG:HG3	26:BD:93:GLY:CA	2.41	0.47
23:DB:812:C:H2'	23:DB:813:U:H6	1.79	0.47
23:DB:534:U:C5'	38:DQ:41:ALA:HA	2.42	0.47
3:CD:57:LYS:HD3	3:CD:58:GLN:N	2.30	0.47
13:CN:50:LEU:N	13:CN:51:PRO:CD	2.75	0.47
23:BB:1188:U:C2'	23:BB:1189:A:H5'	2.44	0.47
10:AK:92:ARG:NH2	10:AK:111:ASP:OD1	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:B1:10:LEU:HD21	48:B1:34:GLU:HG3	1.97	0.47
33:BL:13:LYS:CG	33:BL:14:LYS:H	2.28	0.47
1:CA:782:A:H4'	1:CA:1514:G:O2'	2.15	0.47
3:AD:170:LEU:HD12	3:AD:170:LEU:O	2.15	0.47
1:CA:619:U:H3	3:CD:130:ASN:HD21	1.57	0.47
23:BB:1278:C:O2'	23:BB:1279:G:H5'	2.15	0.47
35:BN:36:THR:O	35:BN:40:LYS:HB2	2.14	0.47
12:CM:89:ARG:CB	12:CM:96:VAL:HG22	2.45	0.47
23:DB:2896:C:H2'	23:DB:2897:U:C6	2.49	0.47
38:BQ:75:TYR:CZ	38:BQ:79:ILE:HD11	2.49	0.47
1:AA:1057:G:H4'	2:AC:194:VAL:O	2.15	0.47
1:AA:878:A:C5'	7:AH:80:PRO:HG2	2.43	0.47
19:CT:74:HIS:O	19:CT:78:LEU:HG	2.15	0.47
20:AB:95:TRP:CH2	20:AB:100:LEU:HB2	2.50	0.47
50:D3:38:LYS:HG3	50:D3:41:ARG:HH21	1.80	0.47
1:AA:901:A:H3'	1:AA:902:G:O4'	2.15	0.47
23:BB:2309:A:C5	23:BB:2310:C:N3	2.83	0.47
23:DB:2803:G:H2'	23:DB:2804:U:H6	1.78	0.47
23:DB:1919:A:H2'	23:DB:1920:C:H5'	1.95	0.47
23:BB:1973:G:H2'	23:BB:1974:C:H6	1.80	0.47
32:BK:7:MET:HE3	32:BK:20:MET:HB2	1.96	0.47
23:BB:2220:U:O2'	23:BB:2221:G:H5'	2.15	0.47
23:BB:1846:G:H2'	23:BB:1847:A:O4'	2.15	0.47
30:DH:54:LEU:O	30:DH:58:LEU:HD23	2.15	0.47
23:BB:2438:U:O2'	23:BB:2439:A:H5''	2.15	0.47
23:BB:2653:U:H5	23:BB:2654:A:HO2'	1.62	0.47
24:BV:16:ALA:HA	24:BV:19:ARG:NE	2.29	0.47
10:CK:117:HIS:O	10:CK:118:ASN:HB2	2.14	0.47
1:AA:301:G:H2'	1:AA:302:G:C8	2.50	0.47
23:DB:1563:U:H2'	23:DB:1564:C:C6	2.50	0.47
23:BB:256:A:H2'	23:BB:257:C:H6	1.80	0.47
1:AA:916:U:H2'	1:AA:917:G:H8	1.80	0.47
23:DB:2567:G:H2'	23:DB:2568:U:C6	2.50	0.47
30:BH:49:ALA:O	30:BH:53:GLU:HB2	2.15	0.47
23:DB:2188:U:H2'	23:DB:2189:U:O4'	2.14	0.47
23:DB:622:G:H2'	23:DB:623:C:C6	2.50	0.47
23:DB:825:A:H2'	23:DB:826:U:O4'	2.15	0.47
15:AP:36:VAL:HG13	15:AP:36:VAL:O	2.14	0.47
20:CB:145:ASN:HD22	20:CB:145:ASN:HA	1.55	0.47
23:DB:1936:A:H2	23:DB:1943:U:C5	2.33	0.47
5:AF:71:ILE:HG13	5:AF:72:ASP:N	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:D4:15:LYS:C	51:D4:17:VAL:N	2.68	0.46
51:D4:2:LYS:HA	51:D4:36:ARG:O	2.15	0.46
23:DB:1205:A:N7	27:DE:164:LEU:HD21	2.29	0.46
25:DC:164:VAL:HB	25:DC:167:ASP:OD1	2.15	0.46
25:DC:172:THR:O	25:DC:182:LYS:HA	2.15	0.46
37:BP:47:ILE:CA	37:BP:63:ILE:HG23	2.45	0.46
26:BD:154:LYS:NZ	31:BJ:81:ILE:HG21	2.30	0.46
26:DD:35:THR:HB	26:DD:48:ILE:CG1	2.45	0.46
23:DB:850:U:O2'	45:DY:22:THR:HG22	2.15	0.46
5:CF:3:HIS:NE2	5:CF:95:ALA:HB2	2.30	0.46
27:BE:128:ALA:O	27:BE:157:LEU:HB2	2.15	0.46
23:DB:452:G:OP1	27:DE:53:THR:O	2.34	0.46
27:DE:85:PHE:O	27:DE:86:ALA:CB	2.63	0.46
30:BH:4:ILE:H	30:BH:37:VAL:CB	2.25	0.46
39:DR:4:VAL:N	39:DR:12:HIS:HB3	2.30	0.46
43:DW:67:LYS:HG2	43:DW:71:LYS:N	2.31	0.46
33:BL:82:LEU:O	33:BL:117:THR:HG22	2.15	0.46
44:BX:38:GLN:HG2	44:BX:39:GLN:N	2.29	0.46
23:DB:398:C:OP1	46:DZ:49:ARG:NH1	2.48	0.46
42:BU:81:ARG:HH11	42:BU:81:ARG:HA	1.81	0.46
49:B2:35:ARG:HH12	49:B2:39:ARG:HG2	1.80	0.46
49:B2:44:VAL:HG23	49:B2:45:SER:N	2.24	0.46
1:AA:981:U:H4'	13:AN:60:ARG:CG	2.45	0.46
13:CN:63:CYS:CB	13:CN:68:ARG:H	2.21	0.46
8:AI:40:ARG:HA	8:AI:44:ARG:HH21	1.81	0.46
34:DM:53:MET:HE3	34:DM:63:ILE:HD12	1.96	0.46
36:BO:8:ILE:CG2	36:BO:9:ARG:N	2.77	0.46
15:AP:42:ILE:CG2	15:AP:43:ALA:H	2.20	0.46
47:D0:50:GLY:O	47:D0:51:ARG:C	2.53	0.46
8:AI:23:GLY:N	8:AI:60:LEU:HA	2.24	0.46
23:DB:2599:G:N7	25:DC:234:GLY:HA2	2.31	0.46
15:CP:67:ILE:HG13	15:CP:71:VAL:CG1	2.40	0.46
6:CG:11:ILE:HG22	6:CG:12:LEU:N	2.30	0.46
9:CJ:66:GLU:O	13:CN:95:LEU:HA	2.15	0.46
1:AA:34:C:H2'	1:AA:35:G:H8	1.79	0.46
23:DB:532:A:H4'	23:DB:533:G:C8	2.50	0.46
23:BB:1184:U:H2'	23:BB:1185:G:H8	1.80	0.46
2:AC:46:LEU:CD2	2:AC:75:VAL:HG13	2.44	0.46
16:AQ:10:ARG:NE	16:AQ:11:VAL:H	2.12	0.46
33:BL:39:LYS:HB2	33:BL:46:VAL:HG22	1.97	0.46
23:BB:288:U:O2'	23:BB:289:G:H5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:46:ARG:CA	26:DD:82:PHE:HA	2.45	0.46
26:DD:37:VAL:CB	26:DD:46:ARG:HB2	2.41	0.46
6:AG:139:ASP:HA	6:AG:142:ARG:HH12	1.81	0.46
33:BL:13:LYS:HG3	33:BL:14:LYS:H	1.80	0.46
42:DU:11:ILE:HG22	42:DU:19:GLY:HA2	1.96	0.46
1:CA:523:A:N1	11:CL:88:ASP:HB2	2.30	0.46
20:CB:206:ILE:HG22	20:CB:207:ARG:NH2	2.26	0.46
26:DD:8:LYS:HG3	37:DP:5:LYS:HZ2	1.79	0.46
10:CK:69:CYS:C	10:CK:73:VAL:HG22	2.36	0.46
23:DB:2673:G:H2'	23:DB:2674:G:H8	1.80	0.46
26:DD:22:ILE:O	26:DD:22:ILE:CG1	2.63	0.46
1:AA:471:U:H2'	1:AA:472:U:H6	1.80	0.46
9:AJ:6:ILE:HG12	9:AJ:102:LEU:CD1	2.45	0.46
3:CD:61:ARG:HE	3:CD:68:GLU:CA	2.28	0.46
23:BB:1413:A:H2'	23:BB:1414:C:C6	2.49	0.46
1:AA:1294:G:H2'	1:AA:1295:U:H6	1.79	0.46
1:CA:1461:G:O2'	1:CA:1462:C:H5'	2.15	0.46
1:AA:167:A:O2'	1:AA:168:G:H5'	2.15	0.46
28:BF:70:ARG:HA	28:BF:80:GLN:HE21	1.80	0.46
1:AA:384:G:H2'	1:AA:385:C:H6	1.80	0.46
38:DQ:13:HIS:HB2	38:DQ:31:TYR:CE2	2.50	0.46
43:BW:19:ARG:NH2	43:BW:71:LYS:HD2	2.30	0.46
32:BK:58:LEU:HB3	32:BK:89:ASN:ND2	2.29	0.46
23:DB:327:G:H2'	23:DB:328:U:O4'	2.14	0.46
2:AC:131:ARG:HB3	2:AC:131:ARG:CZ	2.45	0.46
6:AG:94:ARG:CD	6:AG:98:LEU:HD11	2.45	0.46
2:AC:120:THR:HA	2:AC:123:LEU:HD12	1.96	0.46
7:AH:34:ALA:HB1	7:AH:109:VAL:HG21	1.97	0.46
23:BB:2553:G:H2'	23:BB:2554:U:C4'	2.44	0.46
22:DA:92:C:O2'	22:DA:93:C:H5'	2.15	0.46
5:CF:8:PHE:HE1	5:CF:21:MET:HE1	1.79	0.46
23:DB:409:G:O2'	23:DB:410:G:H5'	2.15	0.46
23:BB:1091:G:O2'	23:BB:1092:C:H5'	2.15	0.46
23:DB:2262:U:O4	43:DW:12:GLY:HA2	2.15	0.46
41:BT:35:ALA:O	41:BT:81:LYS:HD3	2.15	0.46
33:BL:19:LEU:HD22	33:BL:19:LEU:N	2.30	0.46
1:AA:421:U:H1'	2:AC:125:ARG:HH12	1.79	0.46
40:DS:11:ARG:HH11	40:DS:11:ARG:HG3	1.81	0.46
24:BV:63:ILE:HG22	24:BV:65:VAL:HG13	1.97	0.46
46:BZ:3:LYS:CD	46:BZ:6:HIS:HB3	2.44	0.46
25:DC:172:THR:O	25:DC:173:LEU:HB2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:172:VAL:O	26:BD:173:GLN:HB2	2.16	0.46
26:BD:108:ASP:HB3	26:BD:173:GLN:HA	1.96	0.46
26:BD:175:LEU:CD2	26:BD:190:LYS:HB3	2.45	0.46
31:BJ:78:THR:C	31:BJ:80:HIS:H	2.19	0.46
33:DL:3:LEU:HD22	33:DL:4:ASN:OD1	2.15	0.46
26:BD:130:GLN:HG2	26:BD:138:LEU:CD1	2.45	0.46
23:BB:993:G:HO2'	39:BR:93:PHE:HE2	1.60	0.46
27:BE:153:LEU:HA	27:BE:171:ASP:O	2.15	0.46
23:DB:2773:C:O2'	23:DB:2774:C:H5'	2.14	0.46
37:DP:23:ASP:H	37:DP:93:LYS:HE2	1.79	0.46
23:DB:1163:G:O2'	23:DB:1164:C:H5'	2.15	0.46
32:BK:12:ASP:HB3	32:BK:85:VAL:HG13	1.97	0.46
35:BN:29:VAL:HB	35:BN:75:ILE:HG12	1.96	0.46
35:BN:7:GLY:O	35:BN:8:ARG:CB	2.63	0.46
38:BQ:32:ARG:HD2	38:BQ:32:ARG:C	2.36	0.46
40:BS:76:VAL:HG12	40:BS:103:ILE:HA	1.97	0.46
39:DR:4:VAL:HB	39:DR:41:ILE:HG21	1.96	0.46
26:DD:193:VAL:HG23	26:DD:193:VAL:O	2.15	0.46
31:BJ:124:VAL:O	31:BJ:125:TYR:HB2	2.16	0.46
27:DE:143:LEU:H	27:DE:143:LEU:HD22	1.77	0.46
27:DE:172:ALA:O	27:DE:173:THR:HB	2.14	0.46
23:BB:139:U:C4	41:BT:1:MET:HB2	2.50	0.46
25:DC:54:GLY:H	25:DC:216:ARG:HG3	1.80	0.46
1:AA:1016:A:H5'	1:AA:1218:C:H4'	1.97	0.46
23:DB:1365:A:OP2	46:DZ:9:TYR:HE2	1.97	0.46
12:CM:56:ARG:HH11	12:CM:56:ARG:HG3	1.80	0.46
52:DI:100:ILE:CG2	52:DI:104:GLN:HB2	2.45	0.46
23:BB:1080:A:H2'	23:BB:1081:U:C6	2.48	0.46
23:BB:1081:U:H5'	52:BI:126:ARG:HD2	1.97	0.46
3:CD:94:GLU:HG2	3:CD:190:LEU:HD21	1.97	0.46
19:CT:67:HIS:CG	19:CT:68:LYS:H	2.33	0.46
22:BA:49:C:O2'	22:BA:50:A:H5'	2.14	0.46
14:CO:32:THR:HG23	14:CO:62:ARG:NH1	2.30	0.46
25:BC:227:VAL:HG12	25:BC:228:ASP:N	2.29	0.46
10:CK:16:SER:OG	10:CK:79:LYS:HB2	2.14	0.46
44:DX:22:LEU:HD22	44:DX:25:GLN:CD	2.35	0.46
29:DG:61:TRP:CE3	29:DG:61:TRP:HA	2.49	0.46
5:AF:70:VAL:HA	5:AF:73:GLU:HG3	1.96	0.46
19:AT:70:LYS:NZ	19:AT:70:LYS:HB2	2.31	0.46
21:AU:3:ILE:CA	21:AU:19:LYS:HG2	2.39	0.46
33:BL:14:LYS:CA	33:BL:14:LYS:HZ3	2.24	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:212:TRP:C	25:BC:214:GLY:H	2.18	0.46
18:CS:56:HIS:CD2	18:CS:56:HIS:N	2.83	0.46
1:AA:437:U:H5''	3:AD:151:GLN:NE2	2.29	0.46
35:DN:7:GLY:O	35:DN:8:ARG:HB2	2.14	0.46
23:BB:1439:A:N7	23:BB:1440:U:N1	2.63	0.46
7:AH:51:GLU:O	7:AH:56:PRO:HA	2.16	0.46
4:CE:95:MET:HG3	4:CE:124:ALA:CB	2.45	0.46
4:AE:19:ARG:O	4:AE:20:VAL:HB	2.14	0.46
25:BC:75:ALA:HB2	25:BC:95:TYR:CE1	2.50	0.46
2:AC:205:GLU:HB2	2:AC:206:ILE:H	1.51	0.46
1:CA:538:G:P	11:CL:111:GLN:HB2	2.55	0.46
12:AM:53:ASP:OD1	12:AM:56:ARG:HD2	2.15	0.46
1:CA:599:C:H4'	7:CH:121:GLY:C	2.36	0.46
5:AF:18:VAL:HG21	5:AF:58:HIS:CG	2.49	0.46
27:DE:24:ASN:N	27:DE:110:SER:HB2	2.30	0.46
23:DB:1430:G:H2'	23:DB:1431:A:C8	2.50	0.46
23:BB:943:A:OP2	33:BL:42:SER:HB3	2.15	0.46
23:DB:810:U:C2	33:DL:37:GLY:HA2	2.51	0.46
23:DB:2247:A:H2'	23:DB:2248:C:C6	2.50	0.46
23:DB:2216:G:H2'	23:DB:2217:G:H8	1.80	0.46
1:AA:1131:G:O2'	1:AA:1132:C:H5'	2.15	0.46
23:BB:1529:G:H2'	23:BB:1530:G:C8	2.50	0.46
23:DB:2443:C:H2'	23:DB:2444:G:H8	1.80	0.46
23:DB:2862:G:H2'	23:DB:2863:C:H6	1.80	0.46
23:BB:1399:C:H2'	23:BB:1400:U:C6	2.50	0.46
23:BB:1541:C:H2'	23:BB:1542:U:O4'	2.16	0.46
1:CA:182:A:H1'	1:CA:183:C:H5	1.80	0.46
1:AA:552:U:H2'	1:AA:553:A:C8	2.50	0.46
42:DU:35:VAL:HG13	42:DU:37:GLY:H	1.81	0.46
1:CA:1453:G:H2'	1:CA:1454:G:O4'	2.16	0.46
23:DB:2828:G:O2'	23:DB:2829:A:H5'	2.15	0.46
23:DB:2718:G:OP1	37:DP:100:ARG:HG3	2.15	0.46
1:CA:742:G:O2'	1:CA:743:A:H5'	2.16	0.46
1:CA:114:U:H2'	1:CA:115:G:C8	2.51	0.46
1:CA:1028:C:H2'	1:CA:1029:U:C6	2.50	0.46
23:BB:1396:U:O4'	23:BB:1396:U:O2	2.34	0.46
7:AH:40:LYS:HA	7:AH:45:ILE:HG13	1.97	0.46
20:CB:89:PHE:HB3	20:CB:149:GLY:O	2.15	0.46
1:CA:325:A:H2'	1:CA:326:G:O4'	2.16	0.46
38:BQ:90:ASP:OD1	39:BR:54:VAL:HG11	2.15	0.46
21:AU:13:VAL:CG1	21:AU:14:ALA:H	2.21	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:D4:24:ARG:HH21	51:D4:37:GLN:HB2	1.81	0.46
25:BC:42:ARG:CG	25:BC:43:ASN:N	2.73	0.46
34:BM:64:TRP:HB3	34:BM:102:LEU:HB2	1.96	0.46
46:BZ:24:ILE:HG12	46:BZ:25:ARG:N	2.28	0.46
46:BZ:31:ASP:O	46:BZ:32:LEU:HB3	2.15	0.46
26:BD:49:GLN:O	26:BD:78:GLY:HA2	2.15	0.46
37:BP:23:ASP:O	37:BP:25:VAL:N	2.48	0.46
37:BP:24:THR:HG21	37:BP:111:GLU:CG	2.38	0.46
37:BP:31:VAL:HA	37:BP:81:ASP:HB3	1.97	0.46
37:BP:22:GLY:CA	37:BP:91:VAL:HG13	2.43	0.46
23:BB:2620:C:C4'	26:BD:161:MET:HG3	2.45	0.46
25:BC:139:THR:HG22	25:BC:193:GLU:HB3	1.98	0.46
25:BC:155:ARG:NE	25:BC:157:ALA:HB3	2.23	0.46
23:DB:2398:U:H2'	23:DB:2399:G:H8	1.80	0.46
26:DD:4:LEU:CD1	26:DD:79:LEU:HD22	2.45	0.46
37:DP:25:VAL:CG1	37:DP:88:ARG:N	2.66	0.46
37:DP:61:ARG:HH22	37:DP:63:ILE:HD11	1.80	0.46
43:BW:23:LYS:HZ2	43:BW:24:ARG:HG2	1.78	0.46
43:BW:43:LYS:O	43:BW:45:HIS:N	2.47	0.46
36:DO:25:ARG:CB	36:DO:94:ARG:HH22	2.28	0.46
38:DQ:68:ALA:HB1	38:DQ:73:ILE:HG21	1.97	0.46
23:DB:37:C:H1'	27:DE:45:ALA:HB2	1.97	0.46
32:BK:63:VAL:HB	32:BK:83:ALA:HB1	1.98	0.46
32:BK:85:VAL:O	32:BK:85:VAL:HG12	2.14	0.46
30:BH:1:MET:HA	30:BH:21:VAL:O	2.15	0.46
39:DR:3:ALA:HB1	39:DR:12:HIS:CD2	2.50	0.46
18:AS:4:LEU:O	18:AS:6:LYS:N	2.48	0.46
44:BX:43:LEU:HA	44:BX:47:ARG:HB3	1.96	0.46
9:AJ:89:ARG:HA	9:AJ:89:ARG:NE	2.31	0.46
1:AA:1085:U:H3'	1:AA:1086:U:C5	2.51	0.46
22:DA:75:G:H1	22:DA:102:G:N2	2.12	0.46
13:AN:60:ARG:HE	13:AN:62:ARG:CZ	2.28	0.46
23:BB:2305:U:O4	28:BF:37:MET:HA	2.16	0.46
25:DC:220:ARG:NE	25:DC:220:ARG:HA	2.29	0.46
40:DS:21:ALA:HB1	40:DS:74:ILE:CD1	2.38	0.46
28:BF:171:ALA:N	28:BF:173:ASP:OD1	2.48	0.46
9:CJ:37:ARG:C	9:CJ:37:ARG:NE	2.69	0.46
4:CE:89:THR:HG22	4:CE:91:SER:N	2.22	0.46
23:BB:1172:C:H2'	23:BB:1173:U:O4'	2.14	0.46
2:AC:49:ALA:HB1	2:AC:75:VAL:CG2	2.40	0.46
18:CS:18:VAL:HG22	18:CS:42:ASN:ND2	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:220:ARG:CZ	25:BC:220:ARG:HA	2.45	0.46
41:DT:11:LEU:HA	41:DT:34:VAL:HA	1.98	0.46
25:BC:179:GLU:HB2	25:BC:266:ILE:HG22	1.96	0.46
16:CQ:64:ARG:HH11	16:CQ:64:ARG:CB	2.27	0.46
31:BJ:34:ARG:CG	31:BJ:39:LYS:HD2	2.44	0.46
12:CM:79:LEU:HD12	12:CM:80:MET:N	2.30	0.46
3:AD:94:GLU:HA	3:AD:94:GLU:OE2	2.14	0.46
27:DE:99:LYS:O	27:DE:103:GLY:N	2.44	0.46
29:DG:88:LEU:HG	29:DG:161:VAL:HB	1.96	0.46
38:DQ:87:VAL:HB	39:DR:54:VAL:CG1	2.43	0.46
38:DQ:87:VAL:HB	39:DR:54:VAL:HG21	1.96	0.46
23:DB:2186:G:H2'	23:DB:2187:U:O4'	2.16	0.46
1:CA:1281:C:H5'	1:CA:1282:C:C5	2.46	0.46
7:AH:65:PHE:CD2	7:AH:66:GLN:HG3	2.51	0.46
50:D3:21:PHE:HE1	50:D3:56:LEU:HB3	1.81	0.46
23:BB:279:A:H61	23:BB:361:G:H1'	1.76	0.46
25:BC:78:GLU:CB	25:BC:92:LEU:HD23	2.45	0.46
7:AH:29:SER:HB3	7:AH:32:LYS:CG	2.46	0.46
23:BB:416:U:H2'	23:BB:417:C:H6	1.79	0.46
1:AA:123:U:H5''	1:AA:311:C:O2'	2.16	0.46
32:DK:4:GLU:OE2	32:DK:23:LYS:HD2	2.16	0.46
23:BB:2266:A:C4'	23:BB:2267:A:N7	2.78	0.46
1:CA:1118:U:O2'	1:CA:1119:C:H5'	2.15	0.46
20:AB:128:LEU:HD13	20:AB:129:THR:H	1.80	0.46
2:CC:127:VAL:HB	2:CC:128:MET:CE	2.46	0.46
23:DB:90:U:OP2	23:DB:91:A:H3'	2.16	0.46
1:AA:26:A:H61	1:AA:558:G:H1'	1.81	0.46
3:CD:105:GLY:HA3	3:CD:158:LEU:HD23	1.98	0.46
1:CA:627:G:H2'	1:CA:628:G:C8	2.50	0.46
39:BR:58:VAL:HG22	39:BR:59:ILE:HG23	1.96	0.46
1:AA:767:A:H2'	1:AA:768:A:C8	2.50	0.46
23:BB:1938:A:O2'	23:BB:1939:U:H5''	2.15	0.46
1:AA:692:U:H2'	1:AA:694:A:OP2	2.15	0.46
23:BB:2623:G:N2	47:B0:18:HIS:NE2	2.63	0.46
18:AS:10:ILE:HD11	18:AS:15:LEU:HD13	1.96	0.46
3:CD:44:LYS:O	3:CD:44:LYS:HD3	2.15	0.46
7:CH:17:GLN:HG3	7:CH:71:VAL:CG2	2.44	0.46
2:AC:171:ARG:NH1	2:AC:173:PRO:HG3	2.31	0.46
23:BB:1606:C:H5''	23:BB:1607:C:OP1	2.15	0.46
6:CG:49:LEU:C	6:CG:51:GLN:H	2.17	0.46
38:DQ:34:ALA:O	38:DQ:37:ALA:HB3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AJ:5:ARG:HD3	9:AJ:5:ARG:N	2.29	0.46
23:DB:1076:C:O2'	23:DB:1077:A:H5'	2.16	0.46
1:CA:956:U:H2'	1:CA:957:U:C6	2.50	0.46
23:BB:1774:C:H2'	23:BB:1774:C:O2	2.15	0.46
1:AA:1430:A:H2'	1:AA:1431:A:O4'	2.16	0.46
1:CA:138:G:O2'	1:CA:139:A:H5'	2.14	0.46
5:AF:75:GLU:O	5:AF:79:ARG:HG2	2.14	0.46
22:BA:10:G:H2'	22:BA:11:C:O4'	2.16	0.46
27:BE:44:ARG:CG	27:BE:45:ALA:H	2.28	0.46
34:BM:119:LEU:N	34:BM:119:LEU:HD22	2.30	0.46
25:DC:107:LYS:HE3	25:DC:108:GLY:H	1.79	0.46
31:BJ:74:TYR:O	31:BJ:87:ALA:HA	2.15	0.46
26:BD:138:LEU:O	26:BD:139:SER:C	2.53	0.46
38:DQ:94:LEU:HA	38:DQ:97:ILE:HG12	1.98	0.46
2:AC:76:ILE:C	2:AC:82:ASP:HB2	2.36	0.46
26:DD:110:THR:HB	26:DD:202:ILE:HB	1.97	0.46
37:DP:29:VAL:HG13	37:DP:84:SER:HB2	1.96	0.46
20:CB:14:HIS:CG	20:CB:15:PHE:N	2.81	0.46
31:DJ:15:TRP:CD2	31:DJ:138:GLN:HB2	2.49	0.46
23:BB:581:C:H2'	23:BB:582:A:C8	2.51	0.46
38:BQ:34:ALA:O	38:BQ:38:VAL:HG12	2.16	0.46
40:BS:79:GLY:O	40:BS:80:PRO:C	2.54	0.46
30:BH:4:ILE:HD11	30:BH:39:ALA:HA	1.97	0.46
39:DR:39:LEU:H	39:DR:61:ALA:CB	2.26	0.46
33:BL:91:ASP:HB2	33:BL:123:ARG:HD2	1.97	0.46
33:BL:85:VAL:O	33:BL:85:VAL:HG13	2.15	0.46
31:BJ:125:TYR:OH	31:BJ:133:ALA:HB3	2.15	0.46
27:DE:17:THR:OG1	27:DE:18:THR:N	2.48	0.46
23:BB:144:A:H2'	23:BB:145:C:O4'	2.15	0.46
41:BT:8:LEU:H	41:BT:8:LEU:CD2	2.19	0.46
25:DC:50:THR:O	25:DC:51:ARG:C	2.52	0.46
25:DC:53:ILE:HG21	25:DC:218:THR:CA	2.44	0.46
23:DB:704:G:HO2'	23:DB:726:G:N2	2.12	0.46
23:BB:1082:U:H2'	23:BB:1083:U:O4'	2.16	0.46
32:BK:8:LEU:O	32:BK:19:VAL:HG23	2.16	0.46
9:CJ:57:VAL:HG13	9:CJ:58:ASN:N	2.31	0.46
23:BB:2751:G:N2	29:BG:1:SER:HB3	2.31	0.46
28:BF:136:ILE:C	28:BF:138:PRO:HD3	2.36	0.46
28:BF:56:LEU:HD13	28:BF:86:CYS:HB3	1.98	0.46
23:DB:2061:G:H5''	23:DB:2503:A:N1	2.30	0.46
23:BB:1971:U:H1'	25:BC:238:ASN:HD22	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:51:LEU:HD23	8:AI:56:MET:HE3	1.97	0.46
29:DG:19:ASN:HB3	29:DG:22:VAL:HB	1.97	0.46
30:DH:84:ALA:HA	30:DH:89:LYS:O	2.15	0.46
33:DL:110:VAL:HG23	33:DL:131:ALA:HB1	1.97	0.46
13:CN:31:SER:O	13:CN:40:ARG:HD3	2.15	0.46
1:CA:719:C:O2'	17:CR:37:LYS:HG3	2.16	0.46
23:DB:1666:G:C2'	23:DB:1667:G:H5'	2.46	0.46
2:AC:71:ARG:O	2:AC:75:VAL:HG23	2.14	0.46
23:BB:1789:A:H2'	23:BB:1790:C:C6	2.51	0.46
38:BQ:53:LYS:H	38:BQ:53:LYS:HD2	1.80	0.46
2:AC:11:LEU:HD22	2:AC:17:TRP:CD1	2.50	0.46
3:AD:167:PRO:HB2	3:AD:170:LEU:HG	1.97	0.46
23:BB:1843:C:H4'	25:BC:250:GLN:HB3	1.96	0.46
8:CI:29:ILE:O	8:CI:29:ILE:HG23	2.16	0.46
23:BB:2896:C:H2'	23:BB:2897:U:H6	1.81	0.46
1:CA:1021:A:H2'	1:CA:1022:A:C1'	2.45	0.46
25:BC:24:HIS:HB2	25:BC:27:LYS:HE3	1.96	0.46
34:DM:20:LEU:HD13	34:DM:38:ARG:CG	2.44	0.46
7:AH:64:TYR:CA	7:AH:70:VAL:HG23	2.45	0.46
23:BB:2395:C:H6	23:BB:2395:C:O5'	1.98	0.46
1:AA:591:U:H2'	1:AA:592:G:H8	1.79	0.46
23:BB:878:A:OP1	23:BB:899:A:N6	2.47	0.46
23:BB:946:C:P	54:BB:3389:HOH:O	2.72	0.46
35:DN:48:VAL:HA	35:DN:51:LEU:HD12	1.97	0.46
23:DB:2799:A:H4'	23:DB:2800:A:C8	2.51	0.46
42:DU:46:LYS:HG2	42:DU:52:ASN:O	2.14	0.46
23:DB:2561:U:O2'	32:DK:23:LYS:HG2	2.15	0.46
2:CC:85:LYS:O	2:CC:89:VAL:HG13	2.15	0.46
50:D3:4:LYS:HD3	50:D3:59:ALA:HA	1.97	0.46
28:BF:165:GLY:HA2	28:BF:168:LEU:CG	2.46	0.46
50:B3:14:LYS:O	50:B3:21:PHE:HB3	2.16	0.46
23:BB:1537:G:H2'	23:BB:1538:G:C4'	2.46	0.46
23:DB:1946:U:H2'	23:DB:1947:C:C6	2.50	0.46
32:BK:58:LEU:CB	32:BK:89:ASN:HD21	2.28	0.46
1:CA:1375:A:H2'	1:CA:1376:U:C6	2.50	0.46
1:CA:636:U:H2'	1:CA:637:C:H6	1.80	0.46
19:AT:74:HIS:O	19:AT:78:LEU:HB2	2.16	0.46
23:BB:131:A:O2'	23:BB:132:G:H5'	2.15	0.46
23:DB:1684:G:H2'	23:DB:1685:C:H6	1.80	0.46
43:DW:28:GLU:OE1	43:DW:28:GLU:HA	2.16	0.46
1:AA:746:A:H2'	1:AA:747:A:H8	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1483:A:H2'	1:CA:1484:C:O4'	2.16	0.46
1:CA:608:A:H2'	1:CA:609:A:O4'	2.15	0.46
1:AA:841:C:H6	1:AA:843:U:OP1	1.99	0.46
23:DB:506:G:H1'	23:DB:507:A:C8	2.50	0.46
34:BM:131:VAL:HG23	34:BM:132:THR:H	1.80	0.46
23:BB:1295:C:H2'	23:BB:1296:G:H8	1.81	0.46
23:BB:1476:U:HO2'	23:BB:1477:A:H8	1.62	0.46
23:DB:409:G:H2'	23:DB:410:G:C8	2.51	0.46
26:BD:135:GLY:C	26:BD:137:SER:N	2.68	0.46
16:CQ:57:VAL:HB	16:CQ:79:GLU:HB2	1.98	0.46
1:AA:1494:G:O2'	1:AA:1495:U:H5'	2.15	0.46
3:AD:43:ARG:HB3	3:AD:44:LYS:H	1.49	0.46
33:DL:101:ILE:O	33:DL:101:ILE:HG22	2.15	0.46
1:CA:434:U:H2'	1:CA:434:U:O2	2.15	0.46
31:BJ:45:THR:CG2	38:BQ:63:ARG:HH22	2.28	0.46
27:BE:88:ARG:HA	27:BE:89:PRO:HD3	1.71	0.46
34:BM:3:GLN:CB	34:BM:46:ILE:HB	2.46	0.46
34:BM:36:VAL:CA	34:BM:97:GLN:HG2	2.45	0.46
24:BV:4:ILE:HG22	24:BV:63:ILE:HG23	1.96	0.46
24:BV:82:TYR:CB	34:BM:36:VAL:HG12	2.45	0.46
25:DC:32:LEU:HD12	25:DC:33:LEU:O	2.15	0.46
25:DC:83:ASP:OD2	25:DC:86:ARG:NE	2.49	0.46
26:BD:4:LEU:O	26:BD:5:VAL:HG13	2.16	0.46
37:BP:52:ARG:HH11	37:BP:54:LEU:HB2	1.79	0.46
38:DQ:88:GLU:HA	39:DR:53:PHE:HB3	1.96	0.46
26:DD:204:LYS:CB	26:DD:205:PRO:HD2	2.43	0.46
43:BW:74:LYS:O	43:BW:75:ASN:CB	2.64	0.46
23:DB:1651:G:H4'	35:DN:39:PRO:HG2	1.97	0.46
35:DN:38:LEU:O	35:DN:41:ALA:HB3	2.16	0.46
31:DJ:34:ARG:CD	31:DJ:39:LYS:HD3	2.26	0.46
36:DO:55:GLU:O	36:DO:56:LYS:C	2.54	0.46
6:AG:130:LYS:N	6:AG:134:VAL:HG11	2.31	0.46
40:BS:71:VAL:CG2	40:BS:107:VAL:HG12	2.43	0.46
30:BH:89:LYS:HE3	30:BH:123:ARG:HB2	1.96	0.46
26:BD:150:GLN:O	26:BD:151:THR:HG22	2.15	0.46
33:BL:80:SER:OG	33:BL:116:VAL:HG13	2.15	0.46
33:BL:92:LEU:HD21	33:BL:96:LYS:NZ	2.30	0.46
27:DE:147:LEU:HB2	27:DE:183:PHE:CD1	2.51	0.46
21:AU:40:PRO:O	21:AU:42:THR:N	2.48	0.46
12:CM:53:ASP:HA	12:CM:56:ARG:HH21	1.81	0.46
1:CA:1329:A:H5''	12:CM:25:GLY:N	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:10:VAL:HG11	32:BK:15:GLY:O	2.15	0.46
28:DF:92:GLY:O	28:DF:95:MET:HG2	2.16	0.46
25:BC:181:ARG:NH2	25:BC:260:LYS:HZ2	2.10	0.46
14:CO:83:ARG:C	14:CO:84:LEU:HD12	2.35	0.46
28:DF:100:GLU:O	28:DF:102:LEU:N	2.49	0.46
28:DF:98:PHE:HA	28:DF:101:ARG:NE	2.29	0.46
1:AA:1121:U:H2'	1:AA:1122:U:O4'	2.15	0.46
30:BH:5:LEU:O	30:BH:6:LEU:HB3	2.16	0.46
23:DB:136:G:H2'	23:DB:137:U:H6	1.76	0.46
23:BB:1190:G:OP1	33:BL:41:ARG:HG2	2.15	0.46
15:CP:28:ARG:HD3	15:CP:29:ASN:OD1	2.16	0.46
4:CE:40:ASP:CG	4:CE:44:ARG:HB2	2.36	0.46
16:AQ:20:ILE:CG1	16:AQ:45:VAL:HB	2.43	0.46
41:BT:88:LYS:HG2	41:BT:89:GLU:N	2.23	0.46
23:DB:999:U:O2'	23:DB:1000:A:H5'	2.15	0.46
23:BB:2226:C:H2'	23:BB:2227:A:O4'	2.16	0.46
11:CL:110:LYS:O	11:CL:113:ARG:HG3	2.15	0.46
29:DG:148:ARG:HA	29:DG:161:VAL:HG13	1.98	0.46
17:AR:63:TYR:C	17:AR:65:SER:H	2.19	0.46
1:AA:389:A:H2'	1:AA:389:A:N3	2.30	0.46
23:DB:1028:A:N6	23:DB:1125:G:H2'	2.30	0.46
29:DG:75:VAL:O	29:DG:79:THR:HG22	2.16	0.46
23:DB:2261:C:N4	43:DW:10:ARG:NH2	2.64	0.46
1:AA:1109:C:N4	1:AA:1110:A:N6	2.62	0.46
11:CL:34:THR:CB	11:CL:53:ARG:HB3	2.46	0.46
11:AL:49:ARG:HH12	11:AL:88:ASP:CB	2.28	0.46
23:BB:904:G:H2'	23:BB:905:A:H8	1.81	0.46
23:BB:1114:C:H2'	23:BB:1115:G:C8	2.50	0.46
1:AA:628:G:H2'	1:AA:629:A:C8	2.51	0.46
11:CL:75:GLU:OE2	11:CL:76:HIS:N	2.48	0.46
6:CG:63:VAL:CG1	6:CG:126:ALA:HB1	2.45	0.46
23:DB:1846:G:H2'	23:DB:1847:A:O4'	2.15	0.46
1:AA:335:C:H2'	1:AA:336:A:H8	1.78	0.46
37:DP:38:ARG:HH11	37:DP:39:LEU:N	2.13	0.46
23:BB:2299:U:H2'	23:BB:2300:C:C6	2.50	0.46
6:AG:110:ARG:HH12	6:AG:122:GLU:N	2.13	0.46
37:DP:1:SER:O	37:DP:2:ASN:C	2.54	0.46
1:AA:299:G:H2'	1:AA:300:A:C8	2.51	0.46
20:CB:148:GLY:C	20:CB:150:ILE:H	2.19	0.46
16:CQ:82:VAL:O	16:CQ:83:LEU:HD13	2.15	0.46
1:AA:1527:U:O2'	1:AA:1528:U:H5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CH:17:GLN:HE21	7:CH:71:VAL:HG22	1.81	0.46
23:BB:2828:G:O2'	23:BB:2829:A:H5'	2.14	0.46
2:AC:24:ASN:O	2:AC:26:LYS:N	2.49	0.46
1:AA:366:A:O2'	1:AA:394:G:N2	2.49	0.46
23:BB:32:C:H5'	23:BB:1238:G:OP1	2.14	0.46
23:DB:976:G:H4'	23:DB:1156:A:N7	2.30	0.46
1:CA:552:U:H2'	1:CA:553:A:C8	2.51	0.46
15:AP:3:THR:HG22	15:AP:66:THR:HB	1.98	0.46
23:DB:491:G:C2	23:DB:492:A:H1'	2.51	0.46
23:BB:442:G:N2	27:BE:46:GLN:HE21	2.10	0.46
34:BM:67:VAL:HG13	34:BM:67:VAL:O	2.15	0.46
34:BM:96:ILE:HD13	34:BM:97:GLN:N	2.31	0.46
46:BZ:65:ASN:O	46:BZ:69:SER:HB2	2.16	0.46
23:BB:834:G:H4'	33:BL:59:ARG:HH22	1.80	0.46
26:BD:170:VAL:CG2	26:BD:194:PRO:HG2	2.44	0.46
37:BP:84:SER:O	37:BP:85:VAL:C	2.53	0.46
27:BE:147:LEU:HB3	27:BE:183:PHE:CD2	2.50	0.46
37:DP:86:LYS:HZ2	37:DP:88:ARG:HD3	1.81	0.46
33:DL:122:VAL:CG1	33:DL:123:ARG:N	2.79	0.46
34:DM:92:TRP:HD1	34:DM:93:VAL:N	2.14	0.46
33:DL:59:ARG:O	33:DL:60:ARG:HD2	2.16	0.46
23:DB:2291:U:H2'	23:DB:2292:U:H6	1.77	0.46
31:DJ:130:HIS:O	31:DJ:132:HIS:N	2.49	0.46
31:DJ:62:VAL:HG11	31:DJ:101:ILE:HD11	1.98	0.46
35:BN:114:GLU:O	35:BN:115:LEU:HB3	2.15	0.46
33:BL:117:THR:C	33:BL:118:THR:HG22	2.36	0.46
33:BL:117:THR:HG21	33:BL:120:VAL:HG11	1.97	0.46
33:BL:78:ARG:CZ	33:BL:110:VAL:HG11	2.46	0.46
46:DZ:48:GLN:HE21	46:DZ:49:ARG:H	1.63	0.46
42:BU:25:LYS:HA	42:BU:35:VAL:N	2.31	0.46
12:CM:3:ILE:O	12:CM:56:ARG:HD3	2.15	0.46
49:B2:42:LEU:HG	49:B2:43:THR:N	2.31	0.46
32:BK:33:ALA:HB3	32:BK:39:ILE:HD11	1.96	0.46
13:AN:10:VAL:HG12	13:AN:11:LYS:NZ	2.31	0.46
52:DI:72:THR:OG1	52:DI:73:PRO:HD2	2.15	0.46
28:BF:87:LYS:O	28:BF:88:VAL:HB	2.15	0.46
8:CI:56:MET:O	8:CI:58:GLU:HG2	2.15	0.46
3:AD:1:ALA:O	3:AD:67:LEU:HD21	2.16	0.46
1:AA:662:U:O2'	1:AA:836:G:H5''	2.15	0.46
3:CD:93:LEU:HA	3:CD:96:ARG:HG3	1.98	0.46
47:D0:27:LEU:O	47:D0:38:LEU:HD22	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:663:G:OP1	33:DL:27:LEU:HD13	2.16	0.46
29:DG:36:LEU:HB3	29:DG:40:VAL:HG21	1.97	0.46
1:CA:1271:A:H5'	1:CA:1314:C:OP1	2.15	0.46
1:CA:1312:G:O6	18:CS:1:PRO:HA	2.15	0.46
23:DB:144:A:C2	41:DT:3:ARG:NH2	2.84	0.46
13:CN:9:GLU:OE2	13:CN:60:ARG:HB3	2.15	0.46
4:CE:109:ALA:HB3	4:CE:135:VAL:HG11	1.96	0.46
1:CA:1302:C:H4'	1:CA:1303:C:OP1	2.14	0.46
5:AF:42:TRP:CZ2	5:AF:61:LEU:HD23	2.51	0.46
42:DU:4:ILE:HG13	42:DU:25:LYS:HG2	1.97	0.46
2:AC:8:GLY:HA2	2:AC:11:LEU:CG	2.41	0.46
23:DB:358:U:H2'	23:DB:359:G:H8	1.78	0.46
35:DN:8:ARG:HA	35:DN:43:GLU:OE2	2.16	0.46
29:DG:4:ALA:O	29:DG:5:LYS:HB2	2.15	0.46
23:BB:2896:C:H2'	23:BB:2897:U:C6	2.50	0.46
15:AP:7:ALA:HB1	15:AP:29:ASN:CB	2.45	0.46
23:BB:1592:C:H2'	23:BB:1593:A:H8	1.80	0.46
1:CA:1030:U:H4'	1:CA:1031:C:OP2	2.16	0.46
23:BB:341:C:O2'	23:BB:342:A:H5'	2.16	0.46
23:BB:2645:G:H3'	23:BB:2646:C:C5'	2.42	0.46
23:BB:2650:U:H2'	23:BB:2651:C:H6	1.81	0.46
6:CG:55:LYS:HG3	6:CG:56:SER:H	1.81	0.46
1:CA:1275:A:H2'	1:CA:1276:G:O4'	2.16	0.46
23:DB:2259:U:O4'	23:DB:2427:C:H2'	2.15	0.46
23:BB:215:G:H4'	23:BB:216:A:OP1	2.16	0.46
47:B0:11:LYS:O	47:B0:12:ARG:HB3	2.15	0.46
1:CA:538:G:H2'	1:CA:539:A:C8	2.51	0.46
12:AM:3:ILE:HA	12:AM:56:ARG:HG2	1.98	0.46
32:BK:108:ARG:HH21	37:BP:36:LYS:CB	2.29	0.46
3:AD:117:VAL:HG12	3:AD:130:ASN:CA	2.45	0.46
23:BB:2788:C:H2'	23:BB:2789:C:C6	2.50	0.46
5:CF:18:VAL:N	5:CF:19:PRO:HD2	2.30	0.46
9:AJ:80:THR:HG22	9:AJ:81:GLU:H	1.81	0.46
22:BA:26:C:H2'	22:BA:27:C:C6	2.50	0.46
23:DB:1300:G:H5'	23:DB:1301:A:N3	2.30	0.46
50:B3:48:MET:SD	50:B3:51:LYS:HE3	2.55	0.46
23:DB:1018:U:O2'	23:DB:1019:U:H5'	2.15	0.46
23:DB:1351:C:H4'	23:DB:1572:A:O4'	2.16	0.46
1:AA:1113:C:H2'	1:AA:1114:C:H6	1.81	0.46
1:CA:1039:G:H2'	1:CA:1040:U:C6	2.51	0.46
1:AA:844:G:H21	1:AA:845:A:H62	1.61	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:100:G:H5'	23:BB:915:C:O2'	2.15	0.46
1:AA:1367:C:O2'	1:AA:1368:A:H5'	2.14	0.46
12:CM:95:PRO:HD3	12:CM:108:ARG:HG2	1.96	0.46
23:BB:2868:A:H2'	23:BB:2869:G:C8	2.50	0.46
1:AA:1432:G:OP2	1:AA:1432:G:H8	1.97	0.46
28:DF:50:ASP:C	28:DF:52:ALA:H	2.18	0.46
23:BB:1704:C:O2'	23:BB:1705:A:H5'	2.16	0.46
1:AA:284:C:H2'	1:AA:285:C:H6	1.81	0.46
23:BB:622:G:H2'	23:BB:623:C:C6	2.50	0.46
23:BB:2752:C:H2'	23:BB:2753:A:O4'	2.15	0.46
7:AH:31:LEU:O	7:AH:35:ILE:HG13	2.15	0.46
13:CN:21:ALA:N	13:CN:24:ALA:HB2	2.30	0.46
23:DB:2383:G:N7	50:D3:35:LYS:HD3	2.31	0.46
34:BM:124:LEU:HD23	34:BM:124:LEU:N	2.31	0.46
34:BM:3:GLN:HE22	34:BM:5:LYS:HB2	1.81	0.46
24:BV:77:VAL:HG21	24:BV:79:ARG:NH2	2.27	0.46
24:BV:82:TYR:CD2	24:BV:82:TYR:N	2.83	0.46
46:BZ:30:HIS:O	46:BZ:48:GLN:NE2	2.49	0.46
25:DC:64:VAL:HB	25:DC:65:ASP:H	1.32	0.46
23:DB:587:C:H6	23:DB:587:C:O5'	1.97	0.46
38:DQ:88:GLU:HB3	39:DR:53:PHE:HD1	1.81	0.46
23:BB:968:C:H4'	45:BY:16:LEU:HD23	1.98	0.46
27:BE:111:GLU:O	27:BE:113:VAL:HG12	2.14	0.46
27:BE:134:LEU:HD22	27:BE:138:LEU:HG	1.96	0.46
23:DB:2636:C:O5'	26:DD:80:TRP:NE1	2.39	0.46
34:DM:2:LEU:O	34:DM:3:GLN:HG2	2.16	0.46
43:BW:48:ALA:HA	43:BW:54:ARG:HA	1.98	0.46
36:DO:25:ARG:NE	36:DO:94:ARG:HH12	2.11	0.46
23:DB:2899:A:H2'	23:DB:2900:A:H8	1.79	0.46
40:BS:29:VAL:HG21	40:BS:70:LYS:N	2.30	0.46
43:DW:73:PRO:C	43:DW:74:LYS:HD2	2.36	0.46
29:BG:71:LEU:HA	29:BG:74:MET:HG3	1.98	0.46
27:DE:115:GLN:HG2	27:DE:116:ASP:H	1.81	0.46
41:BT:8:LEU:N	41:BT:8:LEU:HD23	2.27	0.46
41:DT:48:GLN:HG3	41:DT:49:LYS:N	2.30	0.46
42:DU:9:GLU:OE1	42:DU:71:ILE:HG13	2.16	0.46
28:DF:135:ILE:O	28:DF:137:PHE:N	2.45	0.46
42:BU:10:VAL:HG21	42:BU:25:LYS:NZ	2.31	0.46
1:AA:1085:U:H3'	1:AA:1086:U:H5	1.80	0.46
23:DB:1433:A:H2'	23:DB:1434:A:O4'	2.15	0.46
37:BP:13:LYS:CE	37:BP:77:SER:HB3	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:53:ILE:CD1	25:BC:218:THR:HG23	2.45	0.46
12:AM:2:ARG:HH22	28:BF:142:TYR:HB3	1.81	0.46
32:DK:120:PRO:O	32:DK:121:GLU:HB2	2.16	0.46
8:CI:48:ARG:HA	8:CI:51:LEU:HD12	1.97	0.46
28:DF:100:GLU:C	28:DF:102:LEU:N	2.68	0.46
2:AC:146:LYS:HG3	2:AC:202:PHE:CD2	2.51	0.46
41:BT:64:LYS:CB	41:BT:77:ARG:HD3	2.39	0.46
1:AA:244:U:O4	1:AA:906:A:H1'	2.16	0.46
6:CG:24:LYS:HA	6:CG:27:ASN:HD22	1.81	0.46
6:AG:35:LYS:O	6:AG:39:GLU:HG2	2.16	0.46
28:BF:3:LEU:HA	28:BF:6:TYR:CD1	2.51	0.46
42:BU:43:LYS:HZ3	42:BU:45:GLN:N	2.14	0.46
23:DB:1275:A:N3	23:DB:1275:A:C3'	2.75	0.46
42:DU:11:ILE:HB	42:DU:69:VAL:CG2	2.44	0.46
25:BC:251:THR:O	25:BC:252:LYS:HB2	2.16	0.46
41:DT:68:LYS:HB2	41:DT:68:LYS:HZ2	1.81	0.46
23:BB:812:C:H2'	23:BB:813:U:H6	1.81	0.46
38:BQ:78:PHE:CE1	38:BQ:82:LEU:HD21	2.51	0.46
3:AD:99:ASN:ND2	3:AD:110:ARG:NE	2.64	0.46
10:AK:52:ARG:HD2	10:AK:53:GLY:H	1.80	0.46
11:CL:100:ALA:O	11:CL:101:LEU:C	2.54	0.46
1:AA:235:C:H2'	1:AA:236:A:H8	1.78	0.46
23:BB:1568:G:H5'	25:BC:60:ALA:HB3	1.97	0.46
23:DB:1108:U:H2'	23:DB:1109:C:H6	1.81	0.46
2:CC:61:LYS:O	2:CC:96:VAL:HB	2.15	0.46
29:BG:40:VAL:HG22	29:BG:53:PRO:HA	1.98	0.46
23:DB:2382:G:H1'	50:D3:38:LYS:CE	2.46	0.46
4:AE:108:GLY:N	4:AE:110:MET:SD	2.89	0.46
9:AJ:67:ILE:CG1	13:AN:95:LEU:HD13	2.45	0.46
25:BC:70:LYS:HE3	25:BC:99:GLU:HG2	1.97	0.46
44:DX:31:GLN:CA	44:DX:31:GLN:HE21	2.28	0.46
44:DX:31:GLN:O	44:DX:32:ALA:CB	2.62	0.46
32:DK:17:ARG:HB2	32:DK:45:GLU:HB2	1.97	0.46
23:DB:962:G:H21	34:DM:81:ARG:HD3	1.81	0.46
23:BB:1064:C:O2'	23:BB:1065:U:H5'	2.16	0.46
22:BA:25:U:H5''	22:BA:26:C:OP1	2.15	0.46
23:BB:198:C:O2'	23:BB:199:A:H5''	2.16	0.46
50:D3:4:LYS:CG	50:D3:61:LEU:HB2	2.45	0.46
23:DB:538:A:N6	23:DB:555:G:O2'	2.49	0.46
24:DV:28:ALA:HB1	24:DV:89:ILE:O	2.16	0.46
2:AC:126:ARG:HH22	2:AC:190:THR:CG2	2.28	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2653:U:H5	23:DB:2654:A:HO2'	1.64	0.46
23:BB:533:G:H2'	23:BB:534:U:C6	2.51	0.46
30:BH:103:VAL:HG21	30:BH:110:VAL:HG13	1.97	0.46
4:CE:67:ARG:NH1	4:CE:67:ARG:HB2	2.30	0.46
27:BE:178:VAL:HG23	27:BE:179:SER:N	2.31	0.46
23:BB:1917:U:C2'	23:BB:1918:A:H5'	2.45	0.46
30:BH:29:PHE:N	30:BH:32:PRO:CG	2.79	0.46
1:AA:1180:A:P	8:AI:98:ARG:HH22	2.38	0.46
35:DN:56:LYS:HD3	35:DN:57:THR:OG1	2.15	0.46
20:AB:158:ASP:O	20:AB:181:PRO:HD2	2.15	0.46
23:DB:780:G:H21	23:DB:783:A:H62	1.63	0.46
23:BB:908:C:O2'	23:BB:909:A:H5'	2.16	0.46
34:BM:24:THR:HG23	34:BM:25:ASP:OD1	2.16	0.46
1:CA:659:U:H2'	1:CA:660:C:C6	2.51	0.46
27:BE:25:GLU:O	27:BE:26:ALA:C	2.53	0.46
23:BB:1480:C:H2'	23:BB:1481:U:C6	2.50	0.46
10:AK:12:ARG:HD2	10:AK:12:ARG:N	2.30	0.46
23:DB:580:U:O2'	23:DB:581:C:H5'	2.16	0.46
23:DB:1205:A:N7	27:DE:164:LEU:HD11	2.31	0.46
34:BM:73:ILE:HD11	34:BM:92:TRP:CB	2.46	0.46
34:BM:73:ILE:HD13	34:BM:90:GLU:OE2	2.15	0.46
24:BV:80:HIS:CD2	24:BV:82:TYR:H	2.23	0.46
25:DC:104:LEU:O	25:DC:106:PRO:HD3	2.16	0.46
25:DC:107:LYS:HG2	25:DC:194:VAL:CG1	2.46	0.46
23:BB:2771:C:H2'	23:BB:2772:C:H6	1.81	0.46
37:BP:62:LYS:HE2	37:BP:74:GLN:NE2	2.30	0.46
25:BC:107:LYS:HB2	25:BC:194:VAL:CG1	2.27	0.46
20:AB:204:ASP:CG	20:AB:205:ALA:N	2.63	0.46
23:DB:2722:G:O2'	35:DN:4:ARG:CZ	2.64	0.46
26:DD:33:ARG:CZ	26:DD:86:GLU:HG2	2.46	0.46
26:DD:90:PHE:H	26:DD:92:VAL:CG2	2.28	0.46
32:DK:70:ARG:HA	32:DK:75:SER:O	2.15	0.46
37:DP:87:ARG:HH11	37:DP:87:ARG:HG2	1.80	0.46
33:DL:90:VAL:HG22	33:DL:92:LEU:HD13	1.97	0.46
34:DM:43:ALA:HB3	34:DM:91:TYR:CG	2.51	0.46
36:DO:102:ARG:O	36:DO:105:ALA:HB3	2.15	0.46
25:DC:229:HIS:CE1	25:DC:231:HIS:NE2	2.83	0.46
47:B0:42:ILE:HD13	47:B0:47:TYR:CE1	2.50	0.46
43:DW:56:HIS:HA	43:DW:77:LYS:CE	2.39	0.46
42:DU:43:LYS:HZ2	42:DU:43:LYS:CB	2.29	0.46
31:BJ:122:LEU:HD12	31:BJ:123:LYS:N	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:124:VAL:HG12	31:BJ:125:TYR:O	2.16	0.46
27:DE:17:THR:HG23	27:DE:18:THR:N	2.31	0.46
42:BU:35:VAL:C	42:BU:36:GLU:HG2	2.35	0.46
1:AA:1101:A:O2'	1:AA:1102:A:OP2	2.33	0.46
52:DI:109:ALA:CA	52:DI:128:ILE:HD12	2.46	0.46
23:BB:1054:A:H2'	23:BB:1055:G:C8	2.50	0.46
23:BB:1081:U:O2'	23:BB:1082:U:H5'	2.16	0.46
43:BW:35:ILE:CG2	43:BW:36:ILE:H	2.15	0.46
42:DU:3:LYS:H	42:DU:27:VAL:HG21	1.81	0.46
37:BP:77:SER:H	37:BP:78:PRO:HD2	1.81	0.46
8:AI:44:ARG:O	8:AI:47:VAL:HG22	2.15	0.46
52:DI:78:LEU:HD23	52:DI:81:LYS:HE2	1.98	0.46
23:DB:1062:G:H2'	23:DB:1063:G:H8	1.81	0.46
32:DK:13:ASN:ND2	32:DK:98:ARG:HG2	2.30	0.46
13:CN:30:ILE:HB	13:CN:44:VAL:CG2	2.46	0.46
48:D1:50:GLU:HG2	48:D1:51:ALA:N	2.31	0.46
15:AP:43:ALA:H	15:AP:46:LYS:HD2	1.81	0.46
3:AD:163:GLN:HB2	3:AD:164:ARG:HH12	1.80	0.46
25:BC:242:HIS:N	25:BC:243:PRO:HD3	2.30	0.46
23:BB:702:U:H2'	23:BB:703:U:C6	2.51	0.46
40:DS:21:ALA:O	40:DS:74:ILE:HD11	2.16	0.46
28:BF:103:ILE:HA	28:BF:107:VAL:HG21	1.98	0.46
8:AI:49:GLN:N	8:AI:50:PRO:HD2	2.30	0.46
29:DG:16:VAL:HG12	29:DG:17:LYS:N	2.31	0.46
6:CG:24:LYS:O	6:CG:28:ILE:HG12	2.16	0.46
14:AO:6:ALA:O	14:AO:10:ILE:HG22	2.16	0.46
1:AA:36:C:HO2'	1:AA:37:U:H5'	1.81	0.46
50:B3:27:ASN:OD1	50:B3:28:LEU:N	2.49	0.46
1:CA:1295:U:H2'	1:CA:1296:C:O4'	2.16	0.46
20:AB:116:LEU:CD1	20:AB:139:GLU:HB3	2.44	0.46
48:B1:31:GLU:CG	48:B1:32:LYS:H	2.20	0.46
29:BG:89:VAL:HG21	29:BG:162:ARG:NE	2.30	0.46
23:DB:877:A:H2	23:DB:900:A:N7	2.13	0.46
23:BB:2880:C:O2	35:BN:93:GLY:HA3	2.15	0.46
28:DF:69:ALA:HB3	28:DF:81:GLY:N	2.26	0.46
4:AE:89:THR:HG21	4:AE:134:ASN:HD21	1.81	0.46
11:CL:79:ILE:C	11:CL:101:LEU:HD12	2.36	0.46
2:CC:166:TRP:HE1	2:CC:168:ARG:CB	2.25	0.46
1:AA:950:U:H2'	1:AA:951:G:H8	1.81	0.46
23:BB:959:A:O2'	23:BB:960:A:H5'	2.15	0.46
11:CL:111:GLN:HB3	11:CL:112:ALA:H	1.64	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1381:G:O2'	23:DB:1382:G:H5'	2.16	0.46
3:AD:117:VAL:HG22	3:AD:122:ILE:HG13	1.97	0.46
1:AA:522:C:H41	11:AL:49:ARG:NH2	2.09	0.46
1:AA:1446:A:C2'	1:AA:1447:A:H5''	2.46	0.46
6:CG:98:LEU:HA	6:CG:101:ARG:HB3	1.98	0.46
1:CA:212:G:H2'	1:CA:213:G:C8	2.46	0.46
2:CC:58:ARG:HA	2:CC:63:ILE:HA	1.97	0.46
23:DB:439:A:O2'	23:DB:440:C:H5'	2.16	0.46
23:DB:297:G:H5''	42:DU:92:VAL:CG1	2.44	0.46
23:BB:198:C:H2'	23:BB:199:A:H5''	1.97	0.46
23:BB:199:A:N6	23:BB:2433:A:H2'	2.31	0.46
1:AA:627:G:H2'	1:AA:628:G:C8	2.51	0.46
22:BA:63:C:H2'	22:BA:64:G:C8	2.49	0.46
23:DB:1947:C:O2'	23:DB:1948:G:H5'	2.16	0.46
25:BC:81:GLU:O	25:BC:90:ILE:HG22	2.15	0.46
1:CA:1057:G:H5''	2:CC:153:SER:HB2	1.97	0.46
36:DO:9:ARG:O	36:DO:12:THR:HG22	2.15	0.46
23:DB:2839:G:H4'	35:DN:49:GLU:CG	2.45	0.46
23:BB:1256:G:H21	27:BE:77:ILE:CG2	2.29	0.46
23:DB:131:A:H2'	23:DB:132:G:C8	2.50	0.46
43:DW:28:GLU:H	43:DW:61:LYS:HB2	1.81	0.46
23:BB:1745:A:H2'	23:BB:1746:A:C8	2.51	0.46
1:CA:299:G:H2'	1:CA:300:A:C8	2.50	0.46
23:DB:2208:C:H2'	23:DB:2209:G:C8	2.51	0.46
1:AA:1272:G:H2'	1:AA:1273:C:C6	2.50	0.46
23:DB:1278:C:H2'	23:DB:1279:G:H8	1.81	0.46
1:CA:649:A:H2'	1:CA:650:G:O4'	2.15	0.46
23:DB:622:G:H2'	23:DB:623:C:H6	1.81	0.46
39:BR:31:GLU:O	39:BR:32:THR:HB	2.14	0.46
1:AA:155:A:H2'	1:AA:156:C:O4'	2.16	0.46
23:BB:2747:G:H2'	23:BB:2748:A:C8	2.51	0.46
41:BT:20:ALA:C	41:BT:22:THR:H	2.19	0.46
23:DB:1322:A:C2'	23:DB:1323:C:H5'	2.46	0.46
23:BB:2568:U:H2'	23:BB:2569:G:O4'	2.15	0.46
38:BQ:92:LYS:O	38:BQ:93:ILE:HG22	2.16	0.46
40:DS:9:HIS:O	40:DS:10:ALA:CB	2.63	0.46
23:BB:1813:G:N2	25:BC:51:ARG:HG2	2.27	0.46
24:BV:44:HIS:O	24:BV:46:LYS:N	2.49	0.46
46:BZ:59:ARG:HH21	46:BZ:62:LYS:HZ2	1.61	0.46
25:DC:192:GLY:O	25:DC:194:VAL:HG22	2.15	0.46
23:DB:587:C:H5''	33:DL:29:LYS:NZ	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:106:LYS:HZ3	26:BD:208:LYS:HD3	1.77	0.46
37:BP:24:THR:O	37:BP:26:GLU:N	2.49	0.46
38:DQ:60:TRP:CZ3	38:DQ:93:ILE:HG22	2.51	0.46
23:BB:993:G:O2'	23:BB:994:C:H5'	2.15	0.46
26:DD:18:ASP:C	26:DD:20:VAL:N	2.69	0.46
20:CB:209:VAL:HG23	20:CB:210:THR:H	1.81	0.46
23:DB:931:U:H3	23:DB:1166:G:N2	2.14	0.46
36:DO:26:LEU:HD13	36:DO:92:PHE:O	2.16	0.46
21:CU:17:ARG:H	21:CU:17:ARG:CD	2.19	0.46
31:DJ:62:VAL:O	31:DJ:69:ARG:NH2	2.49	0.46
32:BK:119:ALA:N	32:BK:120:PRO:HD3	2.31	0.46
23:BB:24:G:O2'	23:BB:25:U:H5'	2.16	0.46
35:BN:113:ILE:CG2	35:BN:114:GLU:N	2.79	0.46
40:BS:103:ILE:HG23	40:BS:104:THR:H	1.80	0.46
25:DC:22:GLU:CD	25:DC:202:ARG:HE	2.19	0.46
29:BG:25:ILE:HG21	29:BG:74:MET:HB3	1.98	0.46
23:BB:137:U:H2'	23:BB:138:U:O4'	2.15	0.46
41:BT:85:VAL:CG2	41:BT:85:VAL:O	2.62	0.46
21:AU:40:PRO:HG2	21:AU:41:THR:N	2.27	0.46
23:DB:1341:G:H1'	41:DT:59:ASN:HB3	1.97	0.46
40:DS:42:LYS:HE2	40:DS:45:VAL:HG11	1.98	0.46
52:DI:129:GLU:O	52:DI:133:ARG:HG3	2.16	0.46
7:CH:104:SER:O	7:CH:122:GLY:HA3	2.15	0.46
23:BB:2673:G:H2'	23:BB:2674:G:H8	1.81	0.46
1:CA:1367:C:H5''	8:CI:115:VAL:CG2	2.39	0.46
8:CI:115:VAL:HG21	9:CJ:62:ARG:HG3	1.98	0.46
25:BC:53:ILE:HG21	25:BC:218:THR:CG2	2.45	0.46
43:DW:60:ALA:CB	43:DW:80:SER:HA	2.37	0.46
23:DB:1131:G:N7	23:DB:2025:C:H4'	2.31	0.46
3:CD:18:LEU:HD11	3:CD:59:LYS:HG3	1.97	0.46
3:CD:96:ARG:O	3:CD:99:ASN:HB3	2.16	0.46
25:BC:229:HIS:ND1	25:BC:230:PRO:CD	2.79	0.46
15:AP:4:ILE:HA	15:AP:20:VAL:O	2.15	0.46
29:BG:17:LYS:HD2	29:BG:24:THR:HG22	1.98	0.46
32:DK:2:ILE:HA	32:DK:33:ALA:H	1.81	0.46
32:DK:6:THR:O	32:DK:20:MET:HG3	2.16	0.46
23:BB:1173:U:O2	23:BB:1177:G:C2	2.69	0.46
4:CE:111:ARG:HG2	4:CE:111:ARG:HH11	1.80	0.46
36:BO:17:LYS:HE3	36:BO:43:ASN:CB	2.44	0.46
45:BY:15:ARG:N	45:BY:15:ARG:NE	2.58	0.46
23:BB:285:G:O2'	23:BB:286:U:H5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:D2:21:ARG:HG3	49:D2:31:LEU:HD11	1.98	0.46
30:BH:130:VAL:HG21	30:BH:144:VAL:HG23	1.98	0.46
5:AF:5:GLU:HA	5:AF:63:ASN:HA	1.97	0.46
38:BQ:47:ARG:HA	38:BQ:47:ARG:NE	2.26	0.46
23:DB:361:G:H2'	23:DB:362:A:H8	1.80	0.46
41:DT:68:LYS:HG3	41:DT:74:ILE:O	2.15	0.46
8:CI:87:MET:HB2	8:CI:94:ARG:HH21	1.80	0.46
1:CA:1095:U:H2'	1:CA:1096:C:H6	1.81	0.46
23:BB:1853:A:N1	23:BB:2087:G:H1'	2.30	0.46
2:CC:129:PHE:CD2	2:CC:129:PHE:C	2.89	0.46
29:DG:90:GLY:CA	29:DG:159:LYS:HG2	2.46	0.46
15:AP:26:ASN:ND2	15:AP:31:ARG:HB3	2.31	0.46
25:BC:28:PRO:HD2	25:BC:79:ARG:HH22	1.81	0.46
29:DG:96:ALA:O	29:DG:102:ILE:HG13	2.15	0.46
30:DH:99:ILE:O	30:DH:103:VAL:HG12	2.16	0.46
50:D3:33:THR:CG2	50:D3:40:LYS:HD2	2.45	0.46
50:D3:28:LEU:HD13	50:D3:33:THR:HG21	1.98	0.46
6:CG:144:ALA:O	6:CG:146:ALA:N	2.46	0.46
35:DN:29:VAL:HG11	35:DN:79:LEU:HD21	1.98	0.46
3:CD:75:TYR:HA	3:CD:89:LEU:HD13	1.98	0.46
12:CM:63:VAL:O	12:CM:68:LEU:HD12	2.16	0.46
25:DC:4:LYS:HG3	25:DC:5:CYS:SG	2.56	0.46
2:AC:112:ALA:HB2	2:AC:182:ASP:O	2.16	0.46
3:AD:123:MET:HG3	3:AD:127:ARG:C	2.36	0.46
20:AB:79:VAL:HG13	20:AB:90:PHE:HD1	1.79	0.46
1:AA:123:U:OP1	1:AA:312:C:H5'	2.16	0.46
42:DU:51:LEU:HG	42:DU:53:GLN:HB3	1.98	0.46
9:AJ:80:THR:H	9:AJ:84:VAL:CG1	2.29	0.46
23:BB:711:G:H2'	23:BB:712:G:O4'	2.15	0.46
1:CA:1119:C:H2'	1:CA:1120:C:C6	2.51	0.46
15:CP:44:SER:C	15:CP:46:LYS:N	2.68	0.46
1:AA:1256:A:O4'	1:AA:1278:G:N2	2.49	0.46
23:BB:1710:G:H2'	23:BB:1711:A:H8	1.81	0.46
23:DB:1533:C:O2'	23:DB:1534:U:H5'	2.15	0.46
21:CU:8:ASN:HB2	21:CU:9:GLU:OE2	2.15	0.46
1:AA:844:G:N7	1:AA:846:G:N3	2.63	0.46
39:BR:14:VAL:HG12	39:BR:15:SER:N	2.31	0.46
22:DA:67:G:O2'	22:DA:68:C:H5'	2.16	0.46
2:AC:131:ARG:HH22	2:AC:135:ARG:NH1	2.14	0.46
23:BB:2028:U:H2'	23:BB:2029:G:C8	2.51	0.46
1:AA:601:G:H2'	1:AA:602:A:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:872:U:H1'	34:BM:68:PHE:CZ	2.51	0.46
23:BB:1979:U:C2'	23:BB:1980:G:H5'	2.46	0.46
23:BB:2105:U:H2'	23:BB:2106:U:C6	2.51	0.46
23:BB:1739:A:H2'	23:BB:1740:G:O4'	2.16	0.46
23:DB:2563:U:H4'	32:DK:27:GLY:HA2	1.97	0.46
3:AD:64:TYR:N	3:AD:64:TYR:CD1	2.84	0.46
19:AT:23:ARG:HB2	19:AT:65:LEU:HD11	1.98	0.46
23:DB:312:G:H2'	23:DB:313:G:H8	1.81	0.46
18:CS:50:VAL:HG21	18:CS:70:LEU:HG	1.98	0.46
1:AA:489:C:H2'	1:AA:490:C:C6	2.51	0.46
41:DT:88:LYS:HG3	41:DT:88:LYS:H	1.49	0.46
26:DD:124:ARG:HB3	26:DD:124:ARG:HH11	1.80	0.46
23:BB:550:C:H2'	23:BB:550:C:O2	2.16	0.46
1:AA:1425:U:H2'	1:AA:1426:G:H8	1.81	0.46
1:AA:114:U:H2'	1:AA:115:G:C8	2.50	0.46
23:BB:2063:C:O2	23:BB:2450:A:N1	2.49	0.46
1:CA:1328:C:H5''	12:CM:27:THR:HG21	1.97	0.46
1:CA:327:A:H1'	1:CA:329:A:O4'	2.15	0.46
23:DB:1099:G:C5'	52:DI:4:VAL:HB	2.29	0.46
25:BC:46:GLY:O	25:BC:47:ARG:CB	2.64	0.46
23:BB:954:G:P	34:BM:17:ASN:HB2	2.56	0.46
23:BB:188:G:OP1	46:BZ:11:GLU:HA	2.16	0.46
23:DB:1818:U:OP1	25:DC:155:ARG:HG2	2.16	0.46
25:DC:33:LEU:HD22	25:DC:34:GLU:H	1.80	0.46
50:B3:54:LEU:HD23	50:B3:54:LEU:HA	1.86	0.46
37:BP:59:THR:HG23	37:BP:76:HIS:CE1	2.51	0.46
33:DL:4:ASN:O	33:DL:5:THR:HG22	2.15	0.46
25:BC:156:SER:O	25:BC:157:ALA:C	2.54	0.46
27:BE:177:PRO:HA	27:BE:180:LEU:HD12	1.97	0.46
1:CA:975:A:C2'	1:CA:976:G:OP2	2.64	0.46
30:DH:4:ILE:O	30:DH:5:LEU:HD22	2.16	0.46
45:BY:47:ILE:HG23	45:BY:54:VAL:HG11	1.98	0.46
31:DJ:122:LEU:O	31:DJ:123:LYS:HB2	2.16	0.46
23:DB:856:G:H21	43:DW:22:VAL:HG11	1.80	0.46
31:BJ:19:ASP:C	31:BJ:21:THR:H	2.19	0.46
25:DC:47:ARG:HB3	25:DC:48:ILE:H	1.53	0.46
48:B1:9:LYS:HD2	48:B1:9:LYS:N	2.31	0.46
23:DB:2090:A:C2'	46:DZ:49:ARG:CZ	2.94	0.46
24:DV:78:GLN:NE2	24:DV:88:HIS:HB3	2.30	0.46
49:B2:41:ARG:O	49:B2:42:LEU:HB3	2.14	0.46
19:CT:66:ILE:HG23	19:CT:70:LYS:CG	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:112:ARG:O	8:CI:114:LYS:HD2	2.16	0.46
26:BD:17:GLU:HA	37:BP:80:VAL:HG11	1.97	0.46
33:DL:19:LEU:O	33:DL:21:ARG:N	2.45	0.46
31:DJ:81:ILE:CG1	31:DJ:82:GLY:N	2.60	0.46
32:DK:11:ALA:O	32:DK:100:PHE:N	2.46	0.46
1:AA:664:G:H5'	17:AR:52:ARG:CZ	2.46	0.46
15:AP:40:ASN:HA	15:AP:41:PRO:HD3	1.73	0.46
26:DD:129:THR:O	26:DD:140:HIS:HA	2.16	0.46
49:B2:13:ASN:OD1	49:B2:18:PHE:HB3	2.16	0.46
15:CP:21:VAL:O	15:CP:33:ILE:HB	2.15	0.46
23:BB:2811:G:H5'	26:BD:62:LYS:HD2	1.98	0.46
34:BM:31:PHE:HE2	34:BM:110:GLU:HG2	1.81	0.46
1:CA:864:A:H2'	1:CA:865:A:C8	2.51	0.46
1:CA:1080:A:C4'	4:CE:20:VAL:HG21	2.44	0.46
9:AJ:57:VAL:HG22	9:AJ:58:ASN:H	1.80	0.46
23:DB:126:A:O5'	49:D2:18:PHE:HE1	1.99	0.46
23:BB:729:G:H2'	23:BB:1775:U:H1'	1.98	0.46
1:AA:1348:U:H2'	1:AA:1349:A:C8	2.51	0.46
14:AO:78:THR:HA	14:AO:81:ILE:CG1	2.46	0.46
2:CC:120:THR:OG1	2:CC:197:VAL:HG21	2.16	0.46
34:DM:86:LYS:HE3	34:DM:87:GLY:N	2.31	0.46
3:AD:32:LYS:HB3	3:AD:35:GLN:HE21	1.81	0.46
18:CS:8:PRO:O	18:CS:9:PHE:HB2	2.14	0.46
34:DM:57:VAL:O	34:DM:58:LYS:HG2	2.16	0.46
50:D3:36:ALA:O	50:D3:38:LYS:N	2.47	0.46
1:AA:1342:C:H5'	8:AI:127:SER:HA	1.98	0.46
23:BB:329:G:H1	42:BU:16:LYS:NZ	2.12	0.46
6:CG:129:ASN:HB3	6:CG:134:VAL:HG21	1.97	0.46
1:CA:26:A:N6	1:CA:558:G:H1'	2.30	0.46
23:DB:844:A:C2	23:DB:845:A:N1	2.84	0.46
1:AA:212:G:H2'	1:AA:213:G:C8	2.47	0.46
30:BH:68:ARG:O	30:BH:72:ILE:HG22	2.15	0.46
23:DB:2306:C:H3'	23:DB:2307:G:C5'	2.44	0.46
33:DL:57:LEU:HB3	50:D3:54:LEU:HD22	1.97	0.46
28:DF:177:ARG:NH2	28:DF:178:LYS:HA	2.31	0.46
1:AA:1435:G:H2'	1:AA:1436:U:H6	1.81	0.46
4:AE:57:ALA:O	4:AE:60:GLN:HB2	2.16	0.46
23:DB:1917:U:C2'	23:DB:1918:A:H5'	2.46	0.46
11:CL:85:ARG:HA	11:CL:93:ARG:HA	1.98	0.46
1:AA:751:U:H4'	14:AO:23:SER:HA	1.97	0.46
1:AA:22:G:O2'	1:AA:23:C:H5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AK:121:ARG:HG3	10:AK:121:ARG:HH11	1.79	0.46
23:DB:2568:U:H2'	23:DB:2569:G:O4'	2.16	0.46
1:AA:1494:G:H2'	1:AA:1495:U:C6	2.50	0.46
1:CA:230:G:O2'	1:CA:231:U:H5'	2.16	0.46
23:DB:957:C:O2'	23:DB:958:U:H5''	2.16	0.46
14:CO:49:HIS:O	14:CO:52:ARG:HB3	2.16	0.46
25:DC:89:ASN:HB2	25:DC:105:ALA:HB3	1.97	0.46
27:DE:58:LYS:HA	27:DE:59:PRO:HD3	1.63	0.46
23:BB:2489:U:O2'	23:BB:2490:G:H5'	2.16	0.46
2:CC:15:LYS:NZ	2:CC:16:PRO:HD2	2.30	0.46
1:CA:462:G:H3'	1:CA:463:U:H5''	1.96	0.46
29:BG:90:GLY:HA3	29:BG:93:TYR:CD2	2.51	0.46
1:AA:778:G:O2'	1:AA:779:C:H5'	2.16	0.46
23:DB:817:C:O2'	23:DB:839:U:H5''	2.15	0.46
9:AJ:33:GLY:HA3	9:AJ:83:THR:OG1	2.16	0.46
23:BB:2877:G:H2'	23:BB:2878:U:C6	2.51	0.46
23:BB:572:A:H5''	23:BB:573:U:OP2	2.15	0.46
1:AA:325:A:H2'	1:AA:326:G:O4'	2.16	0.46
1:AA:792:A:H1'	1:AA:794:A:N7	2.31	0.46
1:CA:1200:C:C4'	1:CA:1201:A:H5'	2.46	0.46
30:DH:80:ILE:N	30:DH:80:ILE:HD12	2.30	0.46
28:DF:148:VAL:HG12	28:DF:148:VAL:O	2.15	0.46
23:BB:995:C:O2	31:BJ:3:THR:HG23	2.16	0.45
31:BJ:41:LYS:HG2	31:BJ:42:ALA:N	2.30	0.45
31:BJ:50:THR:OG1	31:BJ:51:GLY:N	2.47	0.45
23:BB:2261:C:O2'	23:BB:2262:U:H5'	2.15	0.45
25:DC:95:TYR:CE2	25:DC:101:ARG:HG3	2.48	0.45
31:BJ:85:LYS:HD3	31:BJ:85:LYS:HA	1.78	0.45
26:BD:138:LEU:O	26:BD:142:VAL:HG22	2.16	0.45
26:BD:141:ARG:CG	26:BD:141:ARG:HH11	2.29	0.45
2:AC:72:PRO:HG2	2:AC:73:GLY:H	1.81	0.45
27:BE:113:VAL:HG13	27:BE:114:ARG:H	1.82	0.45
27:BE:117:ARG:HA	27:BE:188:MET:SD	2.56	0.45
33:DL:89:VAL:HG21	33:DL:123:ARG:CZ	2.46	0.45
50:D3:49:VAL:HG13	50:D3:50:SER:N	2.32	0.45
50:D3:7:ARG:O	50:D3:7:ARG:NH1	2.48	0.45
23:DB:1165:A:H2'	23:DB:1166:G:H8	1.81	0.45
23:DB:848:C:H2'	23:DB:849:A:C8	2.51	0.45
23:DB:2270:A:H4'	43:DW:18:LYS:CB	2.46	0.45
33:BL:81:ASP:O	33:BL:82:LEU:C	2.54	0.45
27:DE:153:LEU:HG	27:DE:172:ALA:O	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DF:36:ASN:HD22	28:DF:87:LYS:H	1.63	0.45
28:DF:135:ILE:HD11	28:DF:139:GLU:H	1.81	0.45
42:BU:10:VAL:O	42:BU:11:ILE:HD13	2.15	0.45
29:BG:29:ASN:N	29:BG:29:ASN:ND2	2.61	0.45
37:BP:13:LYS:NZ	37:BP:15:ASP:HB2	2.31	0.45
12:AM:75:SER:O	12:AM:78:ARG:HB3	2.16	0.45
18:AS:61:VAL:HA	18:AS:65:MET:SD	2.56	0.45
52:DI:23:VAL:CG1	52:DI:27:LEU:HD21	2.45	0.45
5:CF:59:TYR:N	5:CF:59:TYR:CD1	2.85	0.45
52:DI:54:ILE:HD11	52:DI:71:LYS:C	2.36	0.45
1:CA:8:A:C5	3:CD:205:LYS:HA	2.51	0.45
18:CS:63:ASP:HB3	28:DF:114:ARG:NH2	2.20	0.45
47:D0:36:LYS:HG2	47:D0:37:HIS:O	2.16	0.45
20:CB:101:THR:HG22	20:CB:174:GLU:CD	2.36	0.45
23:DB:1903:G:H5''	25:DC:239:PHE:CD2	2.51	0.45
29:BG:23:ILE:HG13	29:BG:24:THR:N	2.30	0.45
14:AO:80:LEU:HD23	14:AO:80:LEU:C	2.36	0.45
6:AG:14:ASP:CG	6:AG:15:PRO:HD2	2.35	0.45
26:DD:81:GLU:HG3	26:DD:82:PHE:N	2.30	0.45
30:BH:128:HIS:CG	30:BH:144:VAL:HB	2.51	0.45
23:BB:1394:U:O2'	23:BB:1395:A:H5'	2.16	0.45
23:BB:1203:U:O2'	33:BL:14:LYS:HE2	2.16	0.45
42:DU:24:VAL:HB	42:DU:34:ILE:O	2.16	0.45
38:BQ:47:ARG:HH22	38:BQ:50:ARG:CG	2.29	0.45
23:BB:2227:A:O3'	25:BC:258:SER:HA	2.16	0.45
25:BC:250:GLN:O	25:BC:251:THR:HB	2.15	0.45
1:CA:815:A:N6	1:CA:1509:C:H1'	2.29	0.45
1:AA:812:G:H4'	1:AA:812:G:OP1	2.16	0.45
1:AA:947:G:H2'	1:AA:948:C:C6	2.51	0.45
11:AL:98:ARG:CB	11:AL:116:TYR:HA	2.46	0.45
23:BB:850:U:H2'	23:BB:851:C:C6	2.51	0.45
1:AA:1252:A:H2'	1:AA:1253:G:H5''	1.98	0.45
23:DB:1173:U:H2'	23:DB:1174:U:C6	2.51	0.45
6:CG:65:LEU:CD2	6:CG:69:ARG:HH21	2.29	0.45
23:DB:2348:U:O2'	23:DB:2349:G:H5'	2.16	0.45
35:BN:98:LEU:HB2	35:BN:112:TYR:HE1	1.81	0.45
2:AC:33:ASP:O	2:AC:37:LYS:HE2	2.16	0.45
35:DN:35:LYS:HD2	35:DN:110:MET:HB3	1.97	0.45
23:BB:2308:G:H5'	23:BB:2309:A:C5'	2.44	0.45
23:BB:154:U:H2'	23:BB:155:A:H8	1.81	0.45
23:DB:279:A:C2	23:DB:280:U:H1'	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:81:LEU:HD11	3:AD:92:LEU:HD21	1.97	0.45
7:CH:82:LEU:HD21	11:CL:3:VAL:HG21	1.97	0.45
30:DH:135:HIS:HB3	30:DH:138:VAL:CG2	2.46	0.45
6:CG:125:ASP:O	6:CG:129:ASN:ND2	2.49	0.45
23:DB:2800:A:C4	23:DB:2801:G:H1'	2.51	0.45
23:DB:2801:G:H2'	23:DB:2802:G:C8	2.51	0.45
1:AA:1171:A:O2'	1:AA:1172:C:H5'	2.15	0.45
13:AN:20:PHE:CG	13:AN:24:ALA:HB2	2.51	0.45
2:CC:128:MET:SD	2:CC:132:ALA:N	2.89	0.45
22:BA:52:A:H3'	22:BA:53:A:H8	1.80	0.45
23:DB:771:G:O2'	23:DB:772:C:H5'	2.16	0.45
1:AA:382:A:H2'	1:AA:383:A:C8	2.51	0.45
6:AG:132:THR:HA	6:AG:135:LYS:HB3	1.97	0.45
23:DB:1313:U:O2	23:DB:1313:U:H2'	2.14	0.45
1:AA:512:U:H2'	1:AA:513:C:C6	2.51	0.45
23:BB:1260:A:O2'	23:BB:1261:C:H5'	2.15	0.45
23:DB:40:U:H2'	23:DB:41:C:C6	2.51	0.45
1:CA:432:A:C2'	1:CA:433:G:H5'	2.46	0.45
23:BB:621:A:H2'	23:BB:622:G:O4'	2.15	0.45
23:BB:1804:C:O2'	23:BB:1805:A:H5'	2.15	0.45
23:DB:1526:C:H2'	23:DB:1527:G:O4'	2.15	0.45
23:DB:1272:A:N7	23:DB:1618:A:H1'	2.31	0.45
52:BI:92:PRO:O	52:BI:93:ASN:HB2	2.16	0.45
23:DB:1295:C:H2'	23:DB:1296:G:C8	2.50	0.45
23:DB:1820:U:H4'	23:DB:1821:A:OP2	2.16	0.45
23:DB:1821:A:C5'	25:DC:155:ARG:HH21	2.28	0.45
25:DC:68:ARG:HD2	25:DC:127:ASN:HD21	1.79	0.45
23:DB:1820:U:O2'	25:DC:157:ALA:HB3	2.16	0.45
26:BD:178:VAL:O	26:BD:179:ARG:HG3	2.15	0.45
37:BP:18:SER:OG	37:BP:21:PRO:HD3	2.17	0.45
27:BE:120:VAL:HG12	27:BE:121:VAL:HG23	1.99	0.45
37:DP:25:VAL:HG12	37:DP:27:VAL:N	2.23	0.45
34:DM:15:GLY:O	34:DM:16:ARG:O	2.33	0.45
43:BW:42:THR:HB	43:BW:66:VAL:H	1.81	0.45
45:DY:21:ALA:O	45:DY:24:LEU:HB2	2.16	0.45
45:DY:43:ILE:HD11	45:DY:47:ILE:HD11	1.97	0.45
31:DJ:58:ASN:OD1	31:DJ:128:ASN:HA	2.17	0.45
31:DJ:133:ALA:C	31:DJ:135:GLN:N	2.69	0.45
32:BK:99:ILE:CG2	32:BK:119:ALA:HB2	2.46	0.45
39:DR:6:GLN:NE2	39:DR:6:GLN:H	2.14	0.45
23:BB:2574:G:O2'	26:BD:151:THR:HG21	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2090:A:N3	46:DZ:49:ARG:NH2	2.64	0.45
23:DB:2092:U:H5	23:DB:2226:C:OP2	1.99	0.45
41:DT:31:VAL:HG22	41:DT:32:LEU:N	2.30	0.45
42:DU:78:LYS:HA	42:DU:96:LYS:HG2	1.98	0.45
12:AM:10:ASP:HA	12:AM:44:ILE:HD11	1.98	0.45
52:BI:79:LEU:CD1	52:BI:131:THR:OG1	2.64	0.45
23:BB:2673:G:H2'	23:BB:2674:G:C8	2.51	0.45
26:BD:17:GLU:HB2	37:BP:80:VAL:CG2	2.44	0.45
18:AS:39:ILE:CG2	18:AS:65:MET:HB3	2.46	0.45
52:DI:54:ILE:O	52:DI:54:ILE:HG23	2.16	0.45
23:DB:2028:U:H2'	23:DB:2029:G:C8	2.52	0.45
32:DK:99:ILE:HD13	32:DK:115:ILE:HG13	1.97	0.45
8:CI:56:MET:C	8:CI:58:GLU:H	2.19	0.45
52:BI:83:ALA:CA	52:BI:100:ILE:HD11	2.46	0.45
28:DF:39:VAL:HG12	28:DF:40:GLY:H	1.81	0.45
47:D0:47:TYR:HB3	47:D0:52:LYS:N	2.32	0.45
8:AI:56:MET:HA	8:AI:59:LYS:NZ	2.31	0.45
8:AI:64:ILE:HD13	8:AI:78:ILE:HG21	1.98	0.45
1:AA:1124:G:H5''	9:AJ:38:GLY:HA3	1.97	0.45
9:AJ:73:LEU:CD1	9:AJ:75:ASP:HB3	2.47	0.45
23:DB:662:G:H4'	33:DL:25:SER:OG	2.17	0.45
9:CJ:67:ILE:HG23	9:CJ:67:ILE:O	2.16	0.45
30:BH:5:LEU:O	30:BH:6:LEU:CB	2.65	0.45
36:BO:1:MET:CG	36:BO:3:LYS:HE3	2.47	0.45
39:BR:62:GLU:OE1	39:BR:62:GLU:N	2.49	0.45
1:AA:1211:U:H1'	1:AA:1213:A:C2	2.52	0.45
25:BC:219:VAL:O	25:BC:220:ARG:NE	2.48	0.45
5:CF:11:HIS:NE2	5:CF:13:ASP:HB3	2.31	0.45
41:BT:89:GLU:N	41:BT:89:GLU:CD	2.69	0.45
5:AF:38:ARG:HH21	5:AF:96:VAL:HG11	1.81	0.45
1:CA:839:C:O2'	1:CA:840:C:H5'	2.17	0.45
23:DB:2751:G:N2	29:DG:2:ARG:HD2	2.31	0.45
35:BN:99:LYS:HE2	47:B0:39:ARG:O	2.16	0.45
23:DB:1616:A:H4'	23:DB:1617:C:OP2	2.17	0.45
41:BT:93:LEU:H	41:BT:93:LEU:CD2	2.26	0.45
23:BB:264:C:C2'	23:BB:265:A:H5''	2.46	0.45
1:CA:1387:G:H2'	1:CA:1388:C:H6	1.81	0.45
1:AA:734:G:O2'	17:AR:59:LYS:HD3	2.17	0.45
44:DX:1:MET:HG3	44:DX:6:LEU:HA	1.98	0.45
1:AA:968:A:H5'	1:AA:968:A:N3	2.31	0.45
23:DB:2425:A:H5''	23:DB:2426:A:H3'	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:620:C:C6	3:AD:131:ILE:HD13	2.51	0.45
2:CC:113:LYS:HA	2:CC:184:ASN:ND2	2.32	0.45
19:AT:49:ALA:O	19:AT:52:GLU:HB3	2.16	0.45
1:AA:87:C:C2	1:AA:88:U:H1'	2.51	0.45
32:BK:108:ARG:HE	37:BP:36:LYS:HB2	1.81	0.45
23:BB:274:C:H2'	23:BB:275:C:C6	2.52	0.45
19:AT:4:LYS:HD2	19:AT:5:SER:H	1.79	0.45
1:AA:491:G:H2'	1:AA:492:C:C6	2.51	0.45
1:AA:982:U:H4'	1:AA:983:A:O4'	2.16	0.45
2:CC:72:PRO:HB2	2:CC:76:ILE:HG12	1.98	0.45
8:AI:15:ALA:O	8:AI:66:VAL:HA	2.16	0.45
1:CA:397:A:H5'	1:CA:398:U:OP1	2.16	0.45
23:DB:552:U:O2'	23:DB:553:G:H5'	2.17	0.45
23:BB:1300:G:H5'	23:BB:1301:A:N3	2.31	0.45
23:DB:2220:U:H2'	23:DB:2221:G:C8	2.50	0.45
23:DB:151:C:H2'	23:DB:152:A:H8	1.78	0.45
25:BC:63:ILE:HG21	25:BC:90:ILE:CD1	2.46	0.45
23:BB:12:U:O2	23:BB:2626:C:H4'	2.17	0.45
23:DB:1315:C:H2'	23:DB:1316:U:H6	1.81	0.45
11:AL:50:LYS:HE2	11:AL:50:LYS:N	2.30	0.45
23:DB:822:G:H2'	23:DB:823:C:H6	1.80	0.45
22:DA:66:A:O2'	22:DA:67:G:H8	1.99	0.45
2:AC:131:ARG:HH22	2:AC:135:ARG:CZ	2.30	0.45
1:CA:251:G:H4'	1:CA:252:U:C5'	2.47	0.45
1:CA:321:A:O2'	1:CA:322:C:H5'	2.16	0.45
48:B1:29:LYS:O	48:B1:30:PRO:C	2.55	0.45
23:BB:1049:C:O2'	23:BB:1050:A:H5'	2.16	0.45
23:BB:2776:A:H4'	23:BB:2777:G:H5''	1.97	0.45
20:AB:21:TYR:O	20:AB:22:TRP:O	2.34	0.45
23:DB:208:C:H2'	23:DB:209:C:C6	2.52	0.45
23:DB:302:C:H2'	23:DB:303:G:C8	2.50	0.45
1:AA:1314:C:H2'	1:AA:1315:U:H6	1.81	0.45
1:AA:551:U:O2'	1:AA:552:U:H5'	2.16	0.45
23:DB:1525:A:H2'	23:DB:1526:C:C6	2.51	0.45
7:CH:29:SER:O	7:CH:30:LYS:C	2.54	0.45
17:AR:20:ILE:HG23	17:AR:53:GLN:NE2	2.32	0.45
23:DB:2623:G:O2'	23:DB:2624:G:H5'	2.16	0.45
1:CA:734:G:H2'	1:CA:735:C:C6	2.51	0.45
23:DB:2284:A:O2'	23:DB:2288:A:N6	2.48	0.45
19:CT:36:ALA:O	19:CT:40:ALA:N	2.50	0.45
23:DB:1128:G:N7	23:DB:2490:G:H5'	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:189:HIS:CD2	2:CC:194:VAL:HG22	2.52	0.45
29:DG:137:LYS:O	29:DG:140:ILE:HB	2.16	0.45
23:DB:2877:G:H2'	23:DB:2878:U:C6	2.52	0.45
23:DB:1764:C:H2'	23:DB:1765:U:C6	2.51	0.45
19:AT:10:ALA:O	19:AT:13:SER:HB3	2.17	0.45
38:BQ:91:ARG:HD2	38:BQ:91:ARG:HA	1.78	0.45
39:BR:39:LEU:CD1	39:BR:60:LYS:HB2	2.44	0.45
27:BE:85:PHE:O	27:BE:86:ALA:C	2.55	0.45
46:BZ:6:HIS:H	46:BZ:51:VAL:HG13	1.82	0.45
25:DC:87:SER:N	25:DC:155:ARG:HH12	2.14	0.45
26:BD:13:ARG:O	26:BD:15:PHE:N	2.49	0.45
26:BD:20:VAL:HG23	26:BD:21:SER:H	1.81	0.45
31:BJ:81:ILE:CG1	31:BJ:82:GLY:N	2.80	0.45
23:BB:2354:C:H4'	43:BW:30:VAL:CG1	2.45	0.45
30:DH:5:LEU:HD11	30:DH:9:VAL:HG22	1.98	0.45
35:DN:96:ARG:CZ	35:DN:98:LEU:HD21	2.46	0.45
23:BB:988:A:H4'	23:BB:1155:A:N1	2.31	0.45
31:DJ:50:THR:N	31:DJ:118:MET:HE1	2.27	0.45
23:BB:514:A:O2'	23:BB:515:A:H5'	2.16	0.45
38:BQ:33:VAL:O	38:BQ:34:ALA:C	2.55	0.45
43:DW:30:VAL:HG12	43:DW:31:LEU:N	2.31	0.45
29:BG:71:LEU:HA	29:BG:74:MET:CG	2.46	0.45
33:BL:85:VAL:HG13	33:BL:86:GLU:HG2	1.98	0.45
41:BT:57:VAL:HG12	41:BT:58:VAL:H	1.82	0.45
5:AF:53:LYS:HZ2	5:AF:54:LEU:N	2.14	0.45
23:DB:2228:G:OP1	25:DC:257:ARG:HB2	2.16	0.45
46:DZ:33:ASN:C	46:DZ:34:LEU:HD23	2.36	0.45
11:CL:68:GLY:HA3	11:CL:106:VAL:CG2	2.33	0.45
1:CA:234:C:H2'	1:CA:235:C:C6	2.52	0.45
37:BP:78:PRO:C	37:BP:79:VAL:HG23	2.36	0.45
33:DL:21:ARG:H	33:DL:21:ARG:HG2	1.62	0.45
5:CF:47:LEU:HD22	17:CR:65:SER:OG	2.15	0.45
28:BF:38:GLY:O	28:BF:39:VAL:C	2.54	0.45
3:AD:160:LEU:HD22	3:AD:161:ALA:N	2.31	0.45
28:BF:107:VAL:HB	28:BF:108:PRO:CD	2.46	0.45
23:DB:2467:C:O4'	34:DM:118:LYS:HD2	2.17	0.45
18:CS:26:ASP:OD2	18:CS:46:LEU:HA	2.15	0.45
29:DG:39:ALA:HA	29:DG:54:ARG:HD2	1.97	0.45
33:DL:79:LEU:HG	33:DL:111:ILE:O	2.15	0.45
39:BR:68:ARG:HD2	39:BR:70:GLU:CD	2.37	0.45
34:BM:31:PHE:HA	34:BM:128:THR:CG2	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1184:U:H2'	23:BB:1185:G:C8	2.51	0.45
9:CJ:11:LYS:HE3	9:CJ:99:GLN:NE2	2.31	0.45
23:BB:1190:G:OP1	33:BL:41:ARG:CD	2.64	0.45
8:CI:17:ARG:O	8:CI:65:THR:N	2.50	0.45
10:AK:88:PRO:HA	10:AK:92:ARG:CD	2.47	0.45
23:DB:2051:A:H4'	26:DD:145:SER:HB2	1.98	0.45
23:DB:1149:G:H2'	23:DB:1150:C:H6	1.73	0.45
22:DA:32:U:H4'	22:DA:52:A:N6	2.31	0.45
1:AA:136:C:H1'	15:AP:1:MET:HE1	1.98	0.45
4:CE:17:VAL:HG22	4:CE:17:VAL:O	2.17	0.45
37:DP:4:ILE:HA	37:DP:7:LEU:HD13	1.98	0.45
23:DB:1051:G:H2'	23:DB:1052:C:H6	1.82	0.45
1:AA:473:U:C2	1:AA:474:G:N7	2.85	0.45
1:AA:674:G:H2'	1:AA:675:A:C8	2.49	0.45
20:AB:102:ASN:OD1	20:AB:105:THR:HG22	2.16	0.45
23:BB:2250:G:O5'	23:BB:2250:G:H8	1.98	0.45
26:BD:98:VAL:HA	26:BD:101:PHE:HE1	1.80	0.45
2:AC:14:VAL:HG23	2:AC:15:LYS:HG2	1.98	0.45
20:CB:69:VAL:HB	20:CB:162:VAL:CB	2.46	0.45
20:CB:130:LYS:HE2	20:CB:130:LYS:N	2.32	0.45
20:CB:86:CYS:SG	20:CB:87:ASP:N	2.89	0.45
23:DB:346:A:H2'	23:DB:347:A:O4'	2.17	0.45
2:CC:51:VAL:HB	2:CC:68:HIS:O	2.16	0.45
23:BB:18:U:O2	23:BB:554:U:H5''	2.16	0.45
19:AT:54:GLN:N	19:AT:55:PRO:CD	2.80	0.45
1:CA:1280:A:O4'	9:CJ:43:PRO:HG3	2.16	0.45
23:BB:1710:G:H2'	23:BB:1711:A:C8	2.51	0.45
23:BB:1826:G:H2'	23:BB:1827:U:H6	1.81	0.45
23:DB:2720:U:H2'	23:DB:2721:A:C8	2.51	0.45
23:BB:656:G:H2'	23:BB:657:U:C6	2.52	0.45
23:DB:1735:A:H2'	23:DB:1736:U:C6	2.52	0.45
24:DV:26:PHE:CE1	24:DV:42:LEU:HD12	2.51	0.45
36:BO:76:LYS:CG	36:BO:110:ALA:HB2	2.46	0.45
25:DC:235:GLU:CG	25:DC:236:GLY:H	2.29	0.45
23:BB:1921:G:O2'	23:BB:1922:G:H5'	2.16	0.45
12:CM:95:PRO:CD	12:CM:108:ARG:HG2	2.46	0.45
15:CP:74:LEU:O	15:CP:78:VAL:HG12	2.16	0.45
1:CA:1427:C:O2'	1:CA:1428:A:H5'	2.16	0.45
23:BB:2633:G:H2'	23:BB:2634:A:O4'	2.17	0.45
1:AA:1315:U:H3'	1:AA:1316:G:C8	2.51	0.45
1:AA:828:U:H2'	1:AA:829:G:O5'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:820:U:H4'	1:AA:821:G:OP2	2.16	0.45
23:BB:129:C:H2'	23:BB:130:C:H6	1.81	0.45
37:DP:33:GLU:OE1	37:DP:35:SER:N	2.49	0.45
1:CA:1260:G:HO2'	1:CA:1261:A:H8	1.59	0.45
25:BC:145:MET:H	25:BC:145:MET:HG2	1.35	0.45
10:CK:14:GLN:HA	10:CK:77:GLY:HA3	1.97	0.45
34:BM:42:THR:HG23	34:BM:45:GLN:N	2.30	0.45
46:BZ:30:HIS:HB2	46:BZ:31:ASP:H	1.48	0.45
23:BB:2393:U:O2'	23:BB:2394:C:H5'	2.16	0.45
37:BP:93:LYS:HD2	37:BP:96:LEU:HD12	1.99	0.45
27:BE:149:ILE:O	27:BE:149:ILE:HG13	2.15	0.45
23:DB:1022:G:N2	23:DB:1142:A:C2	2.84	0.45
20:CB:209:VAL:HG23	20:CB:210:THR:N	2.32	0.45
32:BK:62:VAL:HA	32:BK:83:ALA:O	2.15	0.45
47:B0:28:SER:O	47:B0:29:VAL:HB	2.16	0.45
40:BS:3:THR:CG2	40:BS:107:VAL:HG23	2.47	0.45
13:AN:63:CYS:HB2	13:AN:79:SER:OG	2.17	0.45
33:BL:110:VAL:HB	33:BL:126:ARG:CZ	2.46	0.45
23:BB:1017:G:H2'	23:BB:1018:U:C6	2.52	0.45
31:BJ:100:VAL:O	31:BJ:102:GLU:N	2.49	0.45
41:BT:15:HIS:HB2	41:BT:31:VAL:HB	1.98	0.45
21:AU:40:PRO:C	21:AU:42:THR:N	2.69	0.45
25:DC:42:ARG:CZ	25:DC:44:ASN:HB2	2.46	0.45
23:BB:2674:G:H4'	32:BK:30:ARG:CG	2.42	0.45
23:BB:744:U:OP1	26:BD:136:ASN:O	2.35	0.45
23:BB:2750:A:H3'	29:BG:3:VAL:HG22	1.98	0.45
23:BB:102:U:H4'	23:BB:103:A:OP2	2.14	0.45
10:AK:22:ILE:HD13	10:AK:95:THR:CG2	2.46	0.45
23:DB:1188:U:O2'	23:DB:1189:A:H5'	2.16	0.45
1:CA:674:G:H2'	1:CA:675:A:C8	2.52	0.45
36:BO:9:ARG:HA	36:BO:12:THR:CG2	2.45	0.45
1:AA:448:A:H2'	1:AA:449:G:C8	2.51	0.45
23:DB:2597:G:OP1	25:DC:239:PHE:CG	2.69	0.45
29:DG:11:PRO:CD	29:DG:14:VAL:HG21	2.44	0.45
10:CK:121:ARG:NE	21:CU:34:ARG:HD2	2.31	0.45
4:AE:82:HIS:CD2	7:AH:95:MET:HG3	2.51	0.45
29:DG:36:LEU:HD23	29:DG:67:ALA:HB1	1.99	0.45
28:BF:2:LYS:O	28:BF:3:LEU:CB	2.64	0.45
1:CA:1219:A:H2'	1:CA:1220:G:H8	1.81	0.45
26:DD:61:THR:HG23	26:DD:62:LYS:HD3	1.99	0.45
23:BB:729:G:H4'	23:BB:763:G:C5'	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:204:LEU:HD12	25:BC:211:ARG:HD3	1.97	0.45
29:BG:130:ILE:HG21	29:BG:147:LEU:HD13	1.97	0.45
42:BU:64:ILE:HD13	42:BU:65:GLN:H	1.82	0.45
20:AB:9:LEU:HD22	20:AB:11:ALA:N	2.24	0.45
23:BB:1796:U:O2'	25:BC:251:THR:HA	2.16	0.45
8:CI:6:TYR:OH	8:CI:8:THR:HG22	2.17	0.45
23:BB:1152:C:H3'	54:BB:3241:HOH:O	2.15	0.45
23:BB:1515:A:H5'	23:BB:1557:C:C5'	2.45	0.45
23:BB:233:A:H61	23:BB:428:A:N6	2.13	0.45
1:CA:1238:A:H2	1:CA:1241:G:N3	2.12	0.45
1:CA:1388:C:H2'	1:CA:1389:C:H6	1.81	0.45
23:DB:2581:G:N3	23:DB:2581:G:H2'	2.32	0.45
1:AA:807:A:O2'	25:BC:4:LYS:HB2	2.17	0.45
44:DX:1:MET:CB	44:DX:6:LEU:HA	2.43	0.45
23:BB:1567:G:H5''	25:BC:84:PRO:HG3	1.99	0.45
19:CT:73:ARG:HG3	19:CT:74:HIS:H	1.79	0.45
20:AB:174:GLU:O	20:AB:178:LEU:HD23	2.16	0.45
23:DB:2260:C:O2'	23:DB:2261:C:H5'	2.17	0.45
1:CA:1499:A:O2'	1:CA:1500:A:H5'	2.16	0.45
23:BB:170:U:O2'	23:BB:171:U:H5'	2.16	0.45
23:DB:1413:A:H2'	23:DB:1414:C:C6	2.51	0.45
23:DB:969:G:H2'	23:DB:970:U:H6	1.78	0.45
2:CC:83:VAL:HA	2:CC:86:LEU:CD1	2.46	0.45
20:CB:96:LEU:HB2	20:CB:99:MET:HG3	1.97	0.45
23:DB:656:G:H2'	23:DB:657:U:C6	2.51	0.45
50:B3:21:PHE:CD1	50:B3:21:PHE:N	2.84	0.45
50:B3:57:VAL:HG13	50:B3:58:ILE:N	2.31	0.45
23:DB:1585:C:H2'	23:DB:1586:A:O4'	2.16	0.45
31:DJ:95:ARG:NE	31:DJ:95:ARG:N	2.64	0.45
22:DA:64:G:H2'	22:DA:65:U:C6	2.51	0.45
23:BB:1347:A:H2'	23:BB:1348:C:O4'	2.17	0.45
22:BA:54:G:O2'	22:BA:55:U:H5'	2.16	0.45
23:BB:1946:U:H2'	23:BB:1947:C:C6	2.52	0.45
23:BB:175:G:H2'	23:BB:176:A:C8	2.52	0.45
23:DB:1561:C:H2'	23:DB:1562:U:H6	1.80	0.45
1:AA:647:C:O2'	1:AA:648:A:H5'	2.16	0.45
23:BB:1433:A:H2'	23:BB:1434:A:O4'	2.15	0.45
32:BK:28:SER:O	32:BK:29:HIS:HB2	2.15	0.45
23:DB:1511:G:H2'	23:DB:1512:C:H6	1.82	0.45
1:AA:687:A:C2	1:AA:704:A:C5	3.05	0.45
30:BH:62:LEU:HG	30:BH:137:GLU:HG2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1382:C:H2'	1:CA:1383:C:H6	1.81	0.45
5:CF:82:ASP:OD1	25:DC:166:ARG:HD2	2.17	0.45
1:AA:1148:U:H5''	8:AI:8:THR:HG23	1.99	0.45
41:BT:71:GLY:C	41:BT:72:GLN:HG3	2.37	0.45
31:BJ:130:HIS:HB3	31:BJ:131:ASN:H	1.60	0.45
23:BB:1062:G:H2'	23:BB:1063:G:H8	1.81	0.45
39:BR:4:VAL:O	39:BR:4:VAL:HG13	2.16	0.45
51:D4:10:LEU:HB2	51:D4:25:VAL:HG21	1.98	0.45
34:BM:42:THR:O	34:BM:43:ALA:HB3	2.16	0.45
23:DB:1821:A:H5'	25:DC:155:ARG:NH2	2.32	0.45
23:DB:1820:U:N3	25:DC:197:ALA:HB1	2.27	0.45
50:B3:7:ARG:NH2	50:B3:11:LYS:NZ	2.62	0.45
1:CA:1358:U:OP2	13:CN:74:ARG:HG3	2.17	0.45
26:DD:117:GLY:HA3	35:DN:1:MET:CA	2.46	0.45
23:DB:910:A:C8	34:DM:16:ARG:HB3	2.52	0.45
23:BB:2354:C:O3'	43:BW:30:VAL:HG13	2.16	0.45
30:DH:12:LEU:HD22	30:DH:19:VAL:CG1	2.47	0.45
35:DN:41:ALA:HB1	35:DN:113:ILE:CD1	2.44	0.45
50:D3:7:ARG:HH12	50:D3:11:LYS:HG2	1.81	0.45
33:DL:63:LYS:H	50:D3:12:ARG:CD	2.29	0.45
31:DJ:45:THR:HG22	31:DJ:47:HIS:H	1.81	0.45
20:AB:56:LEU:O	20:AB:59:ILE:HG13	2.16	0.45
47:B0:31:LYS:NZ	47:B0:49:ARG:HA	2.31	0.45
23:BB:28:A:H1'	23:BB:513:A:C2	2.52	0.45
38:BQ:33:VAL:CG1	38:BQ:34:ALA:H	2.19	0.45
41:BT:3:ARG:HH21	41:BT:8:LEU:HD22	1.80	0.45
41:BT:57:VAL:HG12	41:BT:58:VAL:N	2.32	0.45
41:BT:6:ARG:C	41:BT:8:LEU:N	2.68	0.45
25:DC:243:PRO:CB	25:DC:248:GLY:HA2	2.44	0.45
18:AS:31:ARG:HG3	18:AS:56:HIS:HE2	1.81	0.45
46:DZ:32:LEU:N	46:DZ:32:LEU:HD22	2.31	0.45
1:CA:1287:A:H2'	1:CA:1288:A:H8	1.81	0.45
34:DM:33:LEU:HD21	34:DM:124:LEU:HB2	1.98	0.45
29:DG:171:LYS:HD3	29:DG:174:LYS:CD	2.38	0.45
24:DV:32:GLY:O	24:DV:93:ARG:HB3	2.17	0.45
23:DB:534:U:H5'	38:DQ:41:ALA:CB	2.47	0.45
9:CJ:8:ILE:HG22	9:CJ:100:ILE:HG22	1.98	0.45
22:BA:114:C:H2'	22:BA:115:A:H8	1.80	0.45
33:BL:38:GLN:HA	33:BL:41:ARG:CZ	2.47	0.45
28:BF:12:VAL:HG13	28:BF:27:VAL:CG2	2.42	0.45
4:CE:17:VAL:HA	4:CE:33:THR:O	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:100:VAL:HA	3:AD:103:ARG:HD2	1.99	0.45
23:BB:106:C:H2'	23:BB:107:G:H8	1.82	0.45
23:DB:1487:U:H2'	23:DB:1488:C:C6	2.51	0.45
20:AB:101:THR:HG23	20:AB:102:ASN:N	2.32	0.45
1:CA:560:A:H5'	1:CA:566:G:N2	2.32	0.45
9:AJ:42:LEU:HB2	9:AJ:71:LEU:HD13	1.99	0.45
1:AA:1231:G:H2'	1:AA:1232:U:H6	1.80	0.45
23:DB:2329:U:H2'	23:DB:2330:G:C8	2.51	0.45
1:AA:191:G:H2'	1:AA:192:A:C8	2.52	0.45
7:AH:9:MET:HE3	7:AH:32:LYS:HB3	1.98	0.45
1:CA:1143:G:O2'	1:CA:1144:G:H5'	2.17	0.45
1:AA:1300:G:O2'	1:AA:1301:U:P	2.75	0.45
42:DU:48:VAL:HG13	42:DU:51:LEU:HA	1.99	0.45
3:CD:25:ARG:CB	3:CD:25:ARG:HH11	2.29	0.45
23:BB:1735:A:H2'	23:BB:1736:U:C6	2.52	0.45
25:DC:38:LYS:O	25:DC:60:ALA:HA	2.16	0.45
1:AA:586:C:C2'	1:AA:587:G:H5'	2.46	0.45
24:DV:2:PHE:HB3	24:DV:50:MET:SD	2.57	0.45
1:CA:627:G:H2'	1:CA:628:G:H8	1.82	0.45
27:DE:10:SER:C	27:DE:12:LEU:N	2.70	0.45
1:CA:903:G:H2'	1:CA:904:U:H6	1.80	0.45
23:DB:2045:C:H5''	47:D0:14:MET:SD	2.57	0.45
22:BA:100:G:N2	23:BB:863:A:O3'	2.50	0.45
5:AF:51:ILE:O	5:AF:51:ILE:HG23	2.17	0.45
22:DA:13:G:C2'	22:DA:14:U:H5''	2.46	0.45
8:CI:71:ILE:H	8:CI:71:ILE:HG13	1.64	0.45
23:DB:1637:A:H2'	23:DB:1638:C:H6	1.82	0.45
42:DU:91:LYS:HD3	42:DU:93:ARG:HE	1.81	0.45
23:DB:2034:U:H5''	54:DB:3318:HOH:O	2.15	0.45
23:DB:960:A:C4'	23:DB:2457:U:H4'	2.47	0.45
2:AC:41:TYR:HA	2:AC:44:LYS:HD3	1.98	0.45
23:BB:1376:C:H5''	54:BB:3500:HOH:O	2.16	0.45
13:AN:25:GLU:O	13:AN:29:ILE:HG13	2.16	0.45
37:DP:58:PHE:CD2	37:DP:58:PHE:N	2.85	0.45
33:BL:6:LEU:HD22	33:BL:6:LEU:N	2.32	0.45
23:BB:2886:A:C2	23:BB:2887:A:N7	2.84	0.45
1:AA:230:G:O2'	1:AA:231:U:H5'	2.15	0.45
23:BB:1881:C:H2'	23:BB:1882:U:O4'	2.16	0.45
39:BR:41:ILE:HD12	39:BR:41:ILE:O	2.17	0.45
33:BL:59:ARG:HE	50:B3:54:LEU:HD12	1.81	0.45
37:BP:93:LYS:CB	37:BP:96:LEU:HD12	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:157:LYS:HG3	26:BD:157:LYS:O	2.15	0.45
25:BC:140:VAL:C	25:BC:193:GLU:HB2	2.36	0.45
34:DM:5:LYS:HD2	34:DM:8:LYS:NZ	2.31	0.45
23:DB:1005:C:H2'	23:DB:1006:C:H6	1.81	0.45
10:CK:110:THR:HG22	21:CU:4:LYS:HA	1.99	0.45
27:DE:46:GLN:NE2	27:DE:48:THR:HB	2.32	0.45
47:B0:26:SER:CB	47:B0:38:LEU:HD12	2.46	0.45
23:DB:2387:U:O2'	43:DW:37:VAL:HG11	2.17	0.45
27:DE:136:GLN:HA	27:DE:139:LYS:CG	2.46	0.45
27:DE:190:ALA:HB3	27:DE:193:VAL:CG2	2.44	0.45
27:DE:4:VAL:HG13	27:DE:5:LEU:N	2.25	0.45
40:DS:2:GLU:CB	40:DS:108:SER:HA	2.44	0.45
40:DS:43:ALA:C	40:DS:45:VAL:H	2.19	0.45
40:DS:72:THR:HG23	40:DS:73:LYS:H	1.81	0.45
23:DB:1459:G:C2'	23:DB:1460:U:H5'	2.47	0.45
52:DI:79:LEU:HD23	52:DI:108:ILE:CD1	2.46	0.45
1:CA:1330:U:H2'	1:CA:1331:G:O4'	2.16	0.45
12:CM:106:ARG:HH12	12:CM:109:LYS:HD2	1.80	0.45
33:DL:18:ARG:HH22	33:DL:21:ARG:HD3	1.81	0.45
25:BC:53:ILE:CG1	25:BC:218:THR:HG23	2.47	0.45
1:CA:672:U:H2'	1:CA:673:A:H8	1.79	0.45
23:DB:873:C:H4'	34:DM:64:TRP:CZ3	2.52	0.45
3:AD:29:THR:OG1	3:AD:30:LYS:HD3	2.17	0.45
47:D0:42:ILE:HG21	47:D0:45:ASP:OD2	2.17	0.45
40:DS:74:ILE:CG2	40:DS:105:VAL:HG23	2.42	0.45
20:CB:101:THR:HG23	20:CB:102:ASN:N	2.31	0.45
20:CB:156:LEU:HG	20:CB:157:PRO:HD2	1.99	0.45
20:CB:95:TRP:HZ2	20:CB:100:LEU:HD13	1.80	0.45
29:DG:23:ILE:HG13	29:DG:23:ILE:O	2.17	0.45
23:BB:2811:G:O2'	23:BB:2812:G:H5'	2.16	0.45
23:BB:1032:A:OP1	51:B4:8:LYS:HB3	2.17	0.45
23:DB:1666:G:O2'	23:DB:1667:G:H5'	2.15	0.45
23:BB:64:A:N6	23:BB:91:A:H61	2.14	0.45
1:CA:1131:G:H2'	1:CA:1132:C:H5'	1.97	0.45
23:BB:729:G:H4'	23:BB:763:G:H5'	1.98	0.45
52:BI:116:MET:SD	52:BI:124:MET:HB2	2.56	0.45
29:BG:89:VAL:HB	29:BG:160:GLY:H	1.82	0.45
1:AA:1348:U:H4'	8:AI:121:ARG:NH1	2.31	0.45
23:DB:1275:A:H2	23:DB:1645:G:H21	1.59	0.45
1:CA:619:U:H3	3:CD:130:ASN:HD22	1.62	0.45
3:CD:117:VAL:HG12	3:CD:130:ASN:CA	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AB:119:GLN:HA	20:AB:124:THR:HG23	1.97	0.45
1:AA:1462:C:H2'	1:AA:1463:U:C6	2.52	0.45
24:DV:29:ILE:HG13	24:DV:30:ILE:N	2.32	0.45
15:CP:40:ASN:HD21	15:CP:42:ILE:CG1	2.28	0.45
16:CQ:60:ILE:HB	16:CQ:73:THR:O	2.16	0.45
23:BB:2675:A:N1	23:BB:2732:G:O6	2.50	0.45
30:DH:108:VAL:CG1	30:DH:110:VAL:HB	2.47	0.45
25:BC:78:GLU:HB3	25:BC:92:LEU:HD23	1.99	0.45
23:DB:235:U:H2'	23:DB:236:C:H6	1.78	0.45
23:BB:720:U:H2'	23:BB:721:A:H8	1.77	0.45
23:BB:2183:A:H2'	23:BB:2184:A:C8	2.52	0.45
23:BB:527:C:C5'	23:BB:2779:U:H3	2.29	0.45
14:AO:11:VAL:HA	14:AO:26:VAL:HG13	1.98	0.45
2:AC:59:PRO:HD2	2:AC:62:SER:O	2.17	0.45
20:AB:187:ASP:CG	20:AB:188:THR:N	2.70	0.45
17:CR:20:ILE:HG23	17:CR:20:ILE:O	2.17	0.45
2:AC:90:VAL:HA	2:AC:93:ILE:HG21	1.97	0.45
23:DB:2022:U:O2'	23:DB:2617:U:H5'	2.15	0.45
1:AA:766:A:H2	1:AA:1525:G:N3	2.15	0.45
46:DZ:36:VAL:HA	46:DZ:42:PRO:HA	1.98	0.45
1:CA:1036:A:H2'	1:CA:1037:C:O4'	2.16	0.45
23:BB:1259:G:O2'	23:BB:1260:A:H5'	2.17	0.45
1:CA:22:G:H2'	1:CA:23:C:H6	1.82	0.45
38:BQ:21:LYS:HD2	38:BQ:23:TYR:HE1	1.81	0.45
1:AA:22:G:H2'	1:AA:23:C:C6	2.52	0.45
23:DB:2570:G:O2'	23:DB:2571:U:H5'	2.17	0.45
23:DB:1027:A:N3	23:DB:2488:G:H5''	2.32	0.45
1:AA:463:U:H5'	1:AA:464:U:OP2	2.17	0.45
4:AE:40:ASP:O	4:AE:42:ASN:N	2.45	0.45
23:BB:2693:G:O2'	23:BB:2694:G:H5'	2.17	0.45
23:BB:2071:A:H2'	23:BB:2072:C:C6	2.51	0.45
23:BB:2567:G:H2'	23:BB:2568:U:C6	2.51	0.45
23:BB:2099:U:H2'	23:BB:2100:G:H8	1.81	0.45
23:BB:2643:G:H2'	23:BB:2644:G:O4'	2.16	0.45
1:CA:1475:G:OP1	23:DB:1689:A:H1'	2.17	0.45
23:DB:82:U:H5''	23:DB:296:U:H5''	1.97	0.45
17:CR:28:LEU:C	17:CR:30:ASN:N	2.70	0.45
23:BB:48:G:H4'	23:BB:52:A:O4'	2.16	0.45
1:AA:1404:C:H2'	1:AA:1405:G:C8	2.52	0.45
1:AA:138:G:O2'	1:AA:139:A:H5'	2.17	0.45
23:DB:1774:C:H2'	23:DB:1774:C:O2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1914:C:H3'	23:DB:1914:C:OP2	2.17	0.45
35:DN:100:CYS:SG	47:D0:43:THR:HG21	2.57	0.45
23:DB:1851:U:H2'	23:DB:1852:U:C6	2.52	0.45
23:DB:1098:A:C2'	52:DI:4:VAL:CA	2.91	0.45
51:D4:32:LYS:HE3	51:D4:33:HIS:ND1	2.32	0.45
24:BV:4:ILE:O	24:BV:63:ILE:HA	2.16	0.45
23:BB:2618:G:N2	26:BD:155:VAL:HG21	2.22	0.45
27:BE:144:GLU:C	27:BE:146:VAL:H	2.18	0.45
26:DD:118:PHE:CA	26:DD:164:GLN:HG2	2.46	0.45
37:DP:28:LYS:HZ2	37:DP:44:GLY:N	2.13	0.45
23:BB:1561:C:H2'	23:BB:1562:U:C6	2.52	0.45
45:DY:2:LYS:HB2	45:DY:36:GLU:O	2.16	0.45
21:CU:3:ILE:HD11	21:CU:19:LYS:HD3	1.98	0.45
31:DJ:53:TYR:HA	31:DJ:121:LYS:HB3	1.99	0.45
5:CF:29:ILE:HG21	5:CF:64:VAL:CG1	2.42	0.45
20:AB:147:LEU:O	20:AB:151:LYS:HG3	2.17	0.45
23:BB:2093:G:H2'	23:BB:2094:A:H8	1.82	0.45
43:DW:57:THR:O	43:DW:59:PHE:N	2.50	0.45
23:BB:2576:G:H22	26:BD:149:ASN:HD21	1.62	0.45
33:BL:103:ILE:HD11	33:BL:105:ILE:HD13	1.99	0.45
27:DE:141:MET:HB3	27:DE:185:LYS:HZ1	1.82	0.45
44:BX:24:GLU:HG3	44:BX:43:LEU:HD11	1.97	0.45
23:DB:1824:G:H2'	23:DB:1825:U:H6	1.82	0.45
41:DT:87:LEU:HD13	41:DT:93:LEU:HD13	1.99	0.45
40:DS:68:ASP:C	40:DS:69:LEU:HD22	2.37	0.45
39:DR:11:GLN:CA	39:DR:21:ARG:HH22	2.29	0.45
33:BL:30:THR:CB	33:BL:36:LYS:HB2	2.44	0.45
23:BB:743:A:C2'	23:BB:744:U:H5'	2.46	0.45
32:BK:23:LYS:HG3	32:BK:24:VAL:H	1.81	0.45
26:BD:117:GLY:N	26:BD:165:MET:HB3	2.32	0.45
18:AS:18:VAL:HG13	18:AS:19:GLU:N	2.32	0.45
28:BF:135:ILE:HD12	28:BF:140:ILE:HD12	1.98	0.45
23:BB:2306:C:H42	28:BF:38:GLY:N	2.15	0.45
14:CO:70:LYS:HB2	14:CO:77:TYR:CG	2.51	0.45
3:AD:25:ARG:HD3	3:AD:26:ALA:N	2.31	0.45
47:D0:40:HIS:ND1	47:D0:41:HIS:O	2.44	0.45
20:CB:102:ASN:HD21	20:CB:105:THR:HB	1.82	0.45
26:DD:122:VAL:CA	26:DD:128:ARG:HG3	2.38	0.45
8:CI:122:ARG:HH11	8:CI:122:ARG:HG2	1.81	0.45
26:BD:88:GLU:CG	26:BD:89:GLU:N	2.80	0.45
1:CA:767:A:H2'	1:CA:768:A:C8	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:176:THR:O	2:AC:179:ALA:HB3	2.17	0.45
23:BB:2291:U:H5''	23:BB:2380:C:H1'	1.98	0.45
1:CA:923:A:O2'	1:CA:924:C:H5'	2.16	0.45
26:DD:60:VAL:HG23	26:DD:63:PRO:HG2	1.99	0.45
49:D2:12:ARG:HH21	49:D2:16:HIS:CB	2.30	0.45
10:AK:88:PRO:HD3	21:AU:28:LEU:CD2	2.47	0.45
21:AU:3:ILE:CG1	21:AU:19:LYS:HG2	2.46	0.45
21:AU:5:VAL:HG22	21:AU:19:LYS:NZ	2.31	0.45
6:AG:144:ALA:C	6:AG:146:ALA:N	2.70	0.45
6:AG:71:THR:O	6:AG:72:VAL:HG13	2.17	0.45
18:CS:14:LEU:HD12	18:CS:15:LEU:H	1.80	0.45
23:BB:2659:G:N2	23:BB:2661:G:H5''	2.32	0.45
42:DU:28:LEU:C	42:DU:28:LEU:CD1	2.85	0.45
18:CS:30:LEU:O	18:CS:49:ALA:HB3	2.17	0.45
28:BF:99:PHE:C	28:BF:101:ARG:N	2.69	0.45
37:DP:5:LYS:C	37:DP:7:LEU:N	2.70	0.45
1:AA:812:G:C2'	1:AA:812:G:N3	2.75	0.45
52:BI:14:ALA:CB	52:BI:50:LYS:HA	2.47	0.45
1:AA:429:U:H4'	1:AA:430:A:O5'	2.16	0.45
1:AA:1056:U:O2'	1:AA:1057:G:H5'	2.16	0.45
23:BB:1438:U:H5'	23:BB:1516:G:O2'	2.17	0.45
23:BB:2733:A:H3'	23:BB:2733:A:C8	2.52	0.45
1:AA:1239:A:H1'	1:AA:1241:G:C5	2.52	0.45
4:AE:45:VAL:HG12	4:AE:116:VAL:HG23	1.98	0.45
23:BB:1409:U:O2'	23:BB:1410:G:H5'	2.16	0.45
33:BL:21:ARG:CZ	33:BL:21:ARG:HB3	2.47	0.45
23:BB:1534:U:O2'	23:BB:1535:A:H8	2.00	0.45
8:AI:10:ARG:HA	8:AI:77:ALA:HB1	1.98	0.45
45:DY:45:GLY:HA2	45:DY:48:ASN:HD22	1.81	0.45
23:BB:2249:U:H4'	23:BB:2275:C:H5	1.82	0.45
1:CA:99:C:H2'	54:CA:1944:HOH:O	2.16	0.45
23:DB:956:G:N2	23:DB:959:A:H3'	2.32	0.45
28:DF:166:ARG:O	28:DF:169:LEU:N	2.50	0.45
50:B3:59:ALA:O	50:B3:60:CYS:HB2	2.17	0.45
1:AA:373:A:H1'	1:AA:481:G:H1'	1.99	0.45
40:BS:56:ALA:C	40:BS:58:ALA:N	2.70	0.45
18:AS:20:LYS:HB3	18:AS:20:LYS:HZ2	1.82	0.45
1:CA:402:G:H2'	1:CA:403:C:H6	1.81	0.45
10:AK:70:ALA:HA	10:AK:74:LYS:HD3	1.99	0.45
1:CA:22:G:H2'	1:CA:23:C:C6	2.52	0.45
6:CG:74:VAL:HG21	6:CG:143:MET:HG2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2700:A:H2'	23:BB:2701:U:C6	2.52	0.45
23:DB:1476:U:HO2'	23:DB:1477:A:H8	1.61	0.45
23:BB:2152:G:H2'	23:BB:2153:C:H6	1.82	0.45
5:AF:79:ARG:HH21	5:AF:87:SER:HB2	1.81	0.45
2:CC:29:ALA:HB2	13:CN:75:LYS:O	2.17	0.45
16:AQ:66:LEU:HD11	16:AQ:73:THR:HG22	1.98	0.45
23:BB:2316:G:H2'	23:BB:2317:A:H8	1.81	0.45
1:CA:666:G:H5'	1:CA:726:C:H1'	1.98	0.45
48:B1:4:ILE:HG13	48:B1:4:ILE:H	1.58	0.45
48:B1:5:ARG:HB3	48:B1:5:ARG:HH11	1.82	0.45
1:AA:295:C:H2'	1:AA:296:U:C6	2.52	0.45
39:BR:7:SER:CB	39:BR:21:ARG:HH22	2.30	0.45
27:BE:87:ALA:O	27:BE:88:ARG:HG3	2.16	0.45
23:BB:873:C:H2'	23:BB:874:G:H8	1.82	0.45
24:BV:80:HIS:HB3	24:BV:83:LYS:O	2.17	0.45
46:BZ:3:LYS:HD2	46:BZ:6:HIS:HB3	1.98	0.45
25:DC:175:LEU:H	25:DC:175:LEU:HG	1.45	0.45
25:BC:171:VAL:HA	25:BC:183:VAL:O	2.17	0.45
26:DD:33:ARG:HB2	26:DD:33:ARG:NH1	2.29	0.45
22:DA:6:G:O2'	22:DA:7:G:H5'	2.16	0.45
36:DO:72:ALA:O	36:DO:76:LYS:HG3	2.17	0.45
36:DO:92:PHE:CG	36:DO:93:ASP:N	2.84	0.45
31:DJ:135:GLN:HA	31:DJ:135:GLN:OE1	2.16	0.45
20:AB:67:LEU:HD23	20:AB:160:LEU:HG	1.99	0.45
39:DR:14:VAL:HG21	39:DR:19:THR:HG23	1.99	0.45
43:DW:31:LEU:O	43:DW:32:ALA:HB3	2.17	0.45
23:DB:948:C:H2'	23:DB:949:G:H8	1.81	0.45
33:BL:91:ASP:CB	33:BL:123:ARG:HD2	2.47	0.45
27:DE:116:ASP:OD1	27:DE:118:LEU:HD21	2.16	0.45
27:DE:139:LYS:HA	27:DE:143:LEU:HD21	1.98	0.45
46:DZ:33:ASN:HB3	46:DZ:46:GLY:CA	2.33	0.45
40:DS:29:VAL:HG21	40:DS:69:LEU:C	2.37	0.45
42:BU:23:LYS:H	42:BU:36:GLU:HG3	1.81	0.45
23:BB:1081:U:H4'	52:BI:123:ALA:HB1	1.99	0.45
39:DR:11:GLN:HB3	39:DR:21:ARG:NH2	2.32	0.45
1:CA:232:G:H2'	1:CA:233:C:O4'	2.16	0.45
39:BR:47:VAL:HG22	39:BR:48:LYS:HG2	1.97	0.45
34:DM:53:MET:HA	34:DM:112:LEU:CD2	2.46	0.45
1:CA:255:G:H5'	16:CQ:17:GLU:O	2.17	0.45
25:BC:225:ASN:H	25:BC:226:PRO:HD3	1.82	0.45
8:AI:51:LEU:N	8:AI:51:LEU:HD12	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1902:C:H2'	23:DB:1903:G:H5'	1.99	0.45
21:CU:33:ARG:HB3	21:CU:34:ARG:H	1.60	0.45
49:B2:12:ARG:O	49:B2:18:PHE:CG	2.70	0.45
23:BB:2759:G:H4'	29:BG:34:ARG:HH22	1.81	0.45
33:DL:77:ILE:N	33:DL:77:ILE:HD12	2.31	0.45
23:DB:544:C:O2'	23:DB:545:U:O4'	2.35	0.45
4:CE:108:GLY:O	4:CE:111:ARG:HB3	2.16	0.45
36:BO:21:LEU:O	36:BO:42:PRO:HB3	2.17	0.45
15:CP:28:ARG:C	15:CP:30:GLY:H	2.20	0.45
52:BI:116:MET:HE2	52:BI:124:MET:HA	1.99	0.45
42:BU:49:PRO:HG2	42:BU:49:PRO:O	2.17	0.45
42:DU:15:GLY:C	42:DU:17:ASP:H	2.20	0.45
29:DG:119:GLY:C	29:DG:120:ILE:HG13	2.37	0.45
29:BG:136:ASP:OD1	29:BG:138:GLN:HB3	2.17	0.45
44:DX:7:ARG:C	44:DX:8:GLU:HG3	2.35	0.45
1:AA:501:C:O2'	1:AA:502:A:H5'	2.17	0.45
40:DS:84:ARG:HB3	40:DS:96:ILE:CG2	2.46	0.45
34:DM:57:VAL:HG12	34:DM:58:LYS:N	2.32	0.45
13:AN:50:LEU:CG	13:AN:51:PRO:HD3	2.46	0.45
8:AI:112:ARG:HB2	8:AI:112:ARG:HH11	1.77	0.45
1:AA:1230:C:H2'	1:AA:1231:G:H8	1.81	0.45
25:BC:70:LYS:HG2	25:BC:71:ASP:N	2.32	0.45
12:AM:49:GLU:O	12:AM:53:ASP:HB3	2.17	0.45
23:DB:2733:A:H3'	23:DB:2733:A:C8	2.51	0.45
1:AA:1010:U:H2'	1:AA:1011:C:C6	2.51	0.45
42:DU:48:VAL:O	42:DU:49:PRO:C	2.50	0.45
34:DM:80:VAL:HG12	34:DM:81:ARG:H	1.82	0.45
20:AB:27:LYS:C	20:AB:29:PHE:H	2.21	0.45
1:CA:1135:U:H4'	1:CA:1136:C:OP1	2.16	0.45
23:BB:711:G:O2'	23:BB:712:G:H5'	2.16	0.45
6:CG:113:LYS:HE2	6:CG:113:LYS:HA	1.98	0.45
24:DV:24:ASN:HB3	24:DV:45:ASP:OD1	2.17	0.45
39:BR:58:VAL:HG13	39:BR:59:ILE:HG12	1.98	0.45
22:DA:113:C:O2'	36:DO:47:VAL:HA	2.16	0.45
9:CJ:15:HIS:O	9:CJ:18:ILE:HG22	2.16	0.45
46:DZ:36:VAL:HG12	46:DZ:42:PRO:CB	2.47	0.45
2:CC:143:LEU:HD22	2:CC:143:LEU:H	1.80	0.45
23:DB:105:C:H2'	23:DB:106:C:C6	2.52	0.45
23:BB:1313:U:O2	23:BB:1313:U:H2'	2.16	0.45
1:CA:426:U:H2'	1:CA:427:U:C6	2.52	0.45
1:CA:5:U:H1'	1:CA:6:G:C2	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:14:U:O2'	22:DA:107:G:H1'	2.16	0.45
1:AA:1197:A:P	1:AA:1197:A:H3'	2.57	0.45
23:BB:522:A:H2'	23:BB:523:C:C6	2.52	0.45
1:AA:1432:G:H5''	37:BP:106:ALA:HB2	1.98	0.45
1:AA:1410:A:H2'	1:AA:1411:C:H6	1.81	0.45
23:DB:1120:G:H2'	23:DB:1121:C:C6	2.52	0.45
38:DQ:10:ARG:O	38:DQ:14:LYS:HB2	2.17	0.45
23:DB:149:A:H2'	23:DB:150:U:C6	2.51	0.45
23:DB:24:G:H1'	40:DS:77:ASP:HB3	1.98	0.45
23:BB:1733:G:H2'	23:BB:1734:G:H8	1.82	0.45
14:AO:24:THR:HB	14:AO:69:LEU:HD21	1.98	0.45
6:AG:42:VAL:O	6:AG:46:LEU:HB2	2.15	0.45
1:CA:687:A:C2	1:CA:704:A:C5	3.05	0.45
1:CA:1503:A:C8	1:CA:1531:A:H1'	2.51	0.45
39:BR:2:TYR:N	39:BR:46:GLU:HB2	2.30	0.45
27:BE:145:ASP:C	27:BE:147:LEU:H	2.20	0.45
27:BE:145:ASP:C	27:BE:147:LEU:N	2.70	0.45
27:BE:146:VAL:O	27:BE:147:LEU:CB	2.63	0.45
27:BE:148:ILE:H	27:BE:183:PHE:HB3	1.81	0.45
37:DP:71:ARG:HB3	37:DP:72:VAL:HG13	1.99	0.45
25:BC:21:PRO:HG2	25:BC:202:ARG:HH11	1.81	0.45
34:DM:5:LYS:C	34:DM:6:ARG:O	2.48	0.45
23:DB:1005:C:H2'	23:DB:1006:C:C6	2.52	0.45
36:DO:71:ALA:O	36:DO:74:VAL:HG22	2.17	0.45
31:DJ:35:ARG:CZ	31:DJ:40:HIS:H	2.28	0.45
31:DJ:69:ARG:NH1	31:DJ:69:ARG:HG3	2.31	0.45
38:DQ:69:ARG:HA	38:DQ:73:ILE:HG22	1.98	0.45
35:BN:87:PHE:HB2	35:BN:94:TYR:OH	2.16	0.45
40:BS:48:LYS:O	40:BS:52:GLU:HG3	2.16	0.45
43:DW:35:ILE:HB	43:DW:67:LYS:NZ	2.31	0.45
43:DW:64:GLY:O	43:DW:65:LYS:HB2	2.17	0.45
43:DW:44:PHE:HB3	43:DW:77:LYS:O	2.16	0.45
42:DU:43:LYS:HG2	42:DU:57:ILE:CG2	2.47	0.45
27:DE:166:LYS:HB3	27:DE:167:VAL:H	1.39	0.45
41:BT:60:THR:HG22	41:BT:83:ALA:CB	2.47	0.45
30:DH:114:GLU:HB2	30:DH:133:GLN:O	2.17	0.45
25:DC:258:SER:OG	25:DC:261:ARG:NH1	2.50	0.45
46:DZ:30:HIS:HB2	46:DZ:48:GLN:HE21	1.81	0.45
9:AJ:89:ARG:HA	9:AJ:89:ARG:CZ	2.47	0.45
22:BA:74:U:H2'	22:BA:75:G:C8	2.51	0.45
23:DB:2313:C:H2'	23:DB:2314:A:C8	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BE:72:SER:C	27:BE:73:ILE:HD13	2.37	0.45
23:DB:728:G:O3'	25:DC:16:VAL:HG11	2.17	0.45
23:BB:670:A:P	33:BL:47:ARG:HD3	2.57	0.45
23:DB:973:A:H1'	23:DB:1188:U:C5	2.52	0.45
52:BI:37:PHE:CZ	52:BI:58:ILE:HD11	2.51	0.45
23:DB:2038:G:H2'	23:DB:2039:U:O4'	2.17	0.45
23:DB:981:A:N1	23:DB:2027:G:O2'	2.39	0.45
52:DI:17:ALA:O	52:DI:18:ASN:CB	2.64	0.45
46:DZ:61:ASN:C	46:DZ:63:ARG:H	2.20	0.45
25:BC:242:HIS:HD1	25:BC:242:HIS:N	2.15	0.45
23:BB:704:G:O2'	23:BB:727:A:N6	2.49	0.45
28:BF:107:VAL:HG11	28:BF:116:LEU:HD21	1.99	0.45
24:DV:93:ARG:HG2	24:DV:94:ALA:H	1.81	0.45
8:AI:24:ASN:CA	8:AI:26:LYS:HZ2	2.30	0.45
23:DB:1198:U:H2'	23:DB:1199:U:H6	1.82	0.45
1:CA:1528:U:H2'	21:CU:46:ARG:HH22	1.81	0.45
1:AA:890:G:O2'	1:AA:906:A:N6	2.49	0.45
23:DB:72:U:O2'	23:DB:73:A:H5'	2.17	0.45
51:B4:3:VAL:HG11	51:B4:35:GLN:HG2	1.98	0.45
5:AF:64:VAL:CG1	5:AF:65:GLU:H	2.15	0.45
11:AL:119:LYS:HG3	11:AL:119:LYS:O	2.16	0.45
52:DI:45:THR:C	52:DI:48:ILE:HG22	2.37	0.45
33:BL:40:SER:O	33:BL:41:ARG:HB2	2.17	0.45
4:CE:45:VAL:O	4:CE:71:ILE:HG22	2.17	0.45
1:AA:267:C:OP2	16:AQ:68:LYS:HD2	2.17	0.45
1:CA:619:U:O2	3:CD:129:VAL:HG13	2.17	0.45
8:CI:8:THR:OG1	8:CI:9:GLY:N	2.50	0.45
35:BN:38:LEU:HG	35:BN:109:PRO:HB2	1.99	0.45
23:DB:1113:U:H5''	29:DG:2:ARG:HD3	1.99	0.45
52:BI:14:ALA:CA	52:BI:45:THR:HG21	2.42	0.45
1:AA:927:G:O2'	1:AA:928:G:H5'	2.16	0.45
23:BB:425:G:H2'	23:BB:426:C:H6	1.82	0.45
1:AA:734:G:N2	17:AR:63:TYR:CE2	2.84	0.45
23:DB:776:G:H4'	23:DB:777:G:C5'	2.47	0.45
23:DB:2468:A:H2'	23:DB:2476:A:C6	2.52	0.45
4:CE:156:ARG:HH22	7:CH:100:ILE:HG23	1.82	0.45
19:CT:73:ARG:O	19:CT:74:HIS:C	2.54	0.45
23:DB:1029:A:H3'	23:DB:1030:C:H6	1.81	0.45
35:BN:67:PHE:HD2	35:BN:73:ASN:HD21	1.64	0.45
16:CQ:7:LEU:HD23	16:CQ:7:LEU:N	2.32	0.45
23:BB:1353:A:H2'	23:BB:1354:A:C8	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1352:U:O2'	23:BB:1353:A:H5'	2.16	0.45
29:BG:51:PHE:CD2	29:BG:64:ALA:HA	2.51	0.45
50:D3:33:THR:O	50:D3:34:LYS:HD2	2.17	0.45
35:BN:112:TYR:HE2	47:B0:53:VAL:HG22	1.80	0.45
24:DV:48:MET:HA	24:DV:51:GLN:HG3	1.99	0.45
14:AO:27:GLN:O	14:AO:31:LEU:HD23	2.16	0.45
1:AA:1110:A:H2'	1:AA:1111:A:H5'	1.99	0.45
12:CM:102:LYS:HE3	12:CM:103:THR:HG23	1.98	0.45
37:BP:36:LYS:HD3	37:BP:37:LYS:H	1.82	0.45
30:DH:66:ASN:HA	30:DH:138:VAL:CG2	2.47	0.45
23:BB:710:U:H2'	23:BB:711:G:H8	1.82	0.45
29:BG:97:VAL:HG11	29:BG:122:ALA:O	2.16	0.45
30:BH:65:ALA:O	30:BH:138:VAL:HG21	2.17	0.45
23:DB:554:U:H2'	23:DB:555:G:O4'	2.17	0.45
6:CG:91:ARG:CB	6:CG:92:PRO:HD2	2.47	0.45
23:BB:1328:A:H2'	23:BB:1330:C:C4	2.52	0.45
4:CE:24:VAL:HG22	4:CE:29:ILE:HD11	1.99	0.45
23:BB:2223:G:C2'	23:BB:2224:G:H5'	2.47	0.45
1:CA:902:G:H2'	1:CA:903:G:H8	1.82	0.45
28:BF:110:ILE:HG22	28:BF:111:ARG:N	2.32	0.45
1:CA:1414:U:O2'	1:CA:1415:G:H5'	2.17	0.45
23:DB:327:G:O2'	23:DB:328:U:H5'	2.17	0.45
2:AC:131:ARG:HB3	2:AC:131:ARG:NH1	2.31	0.45
32:DK:7:MET:CE	32:DK:7:MET:HA	2.46	0.45
29:DG:117:PRO:HB2	29:DG:139:VAL:HG11	1.97	0.45
23:BB:948:C:H2'	23:BB:949:G:C8	2.52	0.45
1:AA:692:U:H5	10:AK:27:ASN:HD22	1.64	0.45
23:DB:1541:C:O2'	23:DB:1542:U:H5'	2.17	0.45
23:DB:2454:G:O2'	23:DB:2455:G:H5'	2.17	0.45
2:AC:89:VAL:C	2:AC:91:ALA:H	2.19	0.45
28:BF:18:GLU:HA	28:BF:18:GLU:OE2	2.17	0.45
22:BA:76:G:H2'	22:BA:77:U:H6	1.82	0.45
23:BB:129:C:H2'	23:BB:130:C:C6	2.51	0.45
23:BB:1733:G:H2'	23:BB:1734:G:C8	2.51	0.45
1:CA:155:A:H2'	1:CA:156:C:O4'	2.16	0.45
23:BB:760:G:H4'	23:BB:1776:G:OP1	2.16	0.45
1:CA:1522:U:O2'	1:CA:1523:G:H5'	2.17	0.45
8:AI:115:VAL:HG21	9:AJ:62:ARG:HB2	1.98	0.45
31:DJ:28:LEU:HD22	31:DJ:28:LEU:O	2.17	0.45
52:BI:140:GLU:OE1	52:BI:140:GLU:HA	2.17	0.45
1:AA:432:A:H2'	1:AA:433:G:H5'	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:780:G:H21	23:BB:783:A:H62	1.64	0.45
23:DB:1099:G:H5'	52:DI:4:VAL:CG1	2.47	0.45
39:BR:41:ILE:O	39:BR:54:VAL:HA	2.17	0.45
46:BZ:3:LYS:HA	46:BZ:47:LYS:HA	1.99	0.45
46:BZ:68:GLY:O	46:BZ:69:SER:C	2.56	0.45
23:DB:1818:U:HO2'	23:DB:1819:A:P	2.39	0.45
23:BB:2772:C:H2'	23:BB:2773:C:H6	1.82	0.45
25:BC:143:VAL:CG1	25:BC:144:GLU:H	2.21	0.45
25:BC:155:ARG:NE	25:BC:155:ARG:O	2.50	0.45
45:BY:16:LEU:CB	45:BY:17:PRO:CD	2.88	0.45
23:DB:2849:U:O4	37:DP:96:LEU:HD21	2.17	0.45
26:DD:172:VAL:CG1	26:DD:175:LEU:HD11	2.47	0.45
37:DP:55:HIS:O	37:DP:57:ALA:N	2.50	0.45
33:DL:140:GLY:O	33:DL:141:LYS:HB2	2.16	0.45
34:DM:5:LYS:HZ1	34:DM:8:LYS:CG	2.30	0.45
45:DY:2:LYS:CA	45:DY:43:ILE:HG13	2.47	0.45
31:DJ:23:LYS:HE3	31:DJ:63:ALA:CB	2.47	0.45
40:BS:33:LEU:HD12	40:BS:37:THR:HB	1.99	0.45
23:DB:480:A:H4'	42:DU:40:LEU:HD13	1.99	0.45
27:DE:172:ALA:O	27:DE:173:THR:CB	2.64	0.45
41:BT:16:VAL:O	41:BT:16:VAL:HG22	2.17	0.45
5:AF:45:ARG:HG2	5:AF:46:GLN:N	2.31	0.45
25:DC:259:ASN:HB3	25:DC:260:LYS:H	1.55	0.45
23:DB:2230:G:N3	46:DZ:30:HIS:NE2	2.65	0.45
41:DT:82:LYS:HG3	41:DT:83:ALA:H	1.82	0.45
22:BA:102:G:O2'	22:BA:103:U:H5'	2.17	0.45
28:DF:130:GLY:HA2	28:DF:152:ASP:O	2.17	0.45
42:BU:13:LEU:O	42:BU:15:GLY:N	2.49	0.45
43:BW:40:ARG:NH1	43:BW:68:PHE:CA	2.75	0.45
43:BW:36:ILE:HD12	43:BW:70:VAL:CG2	2.46	0.45
25:BC:259:ASN:O	25:BC:260:LYS:HB2	2.17	0.45
28:BF:133:GLU:HG3	28:BF:134:GLN:N	2.32	0.45
28:BF:33:ILE:HG13	28:BF:34:THR:N	2.27	0.45
1:CA:255:G:H2'	1:CA:256:U:H6	1.81	0.45
32:DK:101:GLY:O	32:DK:119:ALA:HB1	2.17	0.45
32:DK:12:ASP:CG	32:DK:13:ASN:N	2.71	0.45
14:CO:69:LEU:HD12	14:CO:77:TYR:N	2.32	0.45
29:DG:12:ALA:C	29:DG:14:VAL:H	2.19	0.45
16:AQ:26:ARG:HH21	16:AQ:39:ARG:NH2	2.15	0.45
23:BB:2759:G:H4'	29:BG:34:ARG:NH1	2.30	0.45
18:CS:21:ALA:HA	18:CS:24:SER:OG	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:B4:11:CYS:SG	51:B4:12:ARG:HD2	2.57	0.45
23:DB:633:A:H2'	23:DB:634:C:C5'	2.46	0.45
23:DB:1266:G:OP1	47:D0:15:ARG:NH2	2.45	0.45
9:CJ:7:ARG:O	9:CJ:100:ILE:HA	2.17	0.45
38:DQ:45:ALA:O	38:DQ:46:TYR:C	2.55	0.45
13:CN:50:LEU:CD1	13:CN:51:PRO:HD3	2.46	0.45
10:AK:109:ILE:O	10:AK:110:THR:HG23	2.16	0.45
16:AQ:20:ILE:CD1	16:AQ:45:VAL:HB	2.47	0.45
23:DB:2080:A:O2'	46:DZ:21:VAL:HG21	2.16	0.45
23:DB:1252:G:N2	38:DQ:32:ARG:NE	2.62	0.45
7:AH:111:THR:HG23	7:AH:114:ALA:CB	2.44	0.45
3:AD:191:SER:O	3:AD:192:ALA:CB	2.65	0.45
8:CI:49:GLN:O	8:CI:53:LEU:HD23	2.17	0.45
35:BN:37:THR:HB	35:BN:39:PRO:HD2	1.98	0.45
23:DB:1515:A:H5'	23:DB:1557:C:C5'	2.47	0.45
1:CA:1275:A:H2'	1:CA:1276:G:C8	2.51	0.45
1:AA:811:C:O2'	1:AA:901:A:N1	2.48	0.45
2:CC:52:SER:O	2:CC:53:ARG:HG3	2.17	0.45
23:BB:1373:A:OP1	23:BB:2213:U:O4	2.35	0.45
23:BB:1750:G:O2'	23:BB:1751:U:H5'	2.17	0.45
23:DB:198:C:H5'	23:DB:2244:U:OP1	2.17	0.45
1:CA:123:U:OP1	1:CA:312:C:H5'	2.17	0.45
30:DH:68:ARG:HB3	30:DH:68:ARG:HH11	1.81	0.45
1:CA:598:U:H2'	1:CA:599:C:C6	2.51	0.45
23:DB:2675:A:N1	23:DB:2732:G:O6	2.49	0.45
2:CC:51:VAL:HG11	2:CC:67:ILE:HD11	1.99	0.45
16:CQ:32:ILE:O	16:CQ:32:ILE:HG12	2.17	0.45
1:CA:554:A:H2'	1:CA:555:U:C6	2.52	0.45
1:CA:591:U:H2'	1:CA:592:G:H8	1.81	0.45
1:AA:1438:G:C2'	1:AA:1439:G:H5'	2.47	0.45
7:AH:98:LEU:HD12	7:AH:98:LEU:H	1.82	0.45
50:D3:22:LYS:HA	50:D3:46:LYS:O	2.17	0.45
6:CG:95:ARG:O	6:CG:99:ALA:HB2	2.16	0.45
1:AA:1376:U:P	6:AG:24:LYS:HD3	2.57	0.45
52:BI:12:VAL:HG23	52:BI:41:PHE:CE2	2.51	0.45
1:CA:1297:G:H4'	1:CA:1298:U:H5'	1.98	0.45
1:AA:1051:C:H2'	1:AA:1052:U:H6	1.82	0.45
23:DB:1042:G:H2'	23:DB:1043:C:H6	1.80	0.45
1:CA:175:C:H2'	1:CA:176:C:H6	1.81	0.45
25:BC:32:LEU:HA	25:BC:81:GLU:OE1	2.17	0.45
1:CA:147:G:H2'	1:CA:148:G:C8	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1008:U:H2'	1:AA:1009:U:C4'	2.47	0.45
10:CK:59:PRO:HA	10:CK:91:GLY:N	2.32	0.45
23:DB:1683:U:O2'	23:DB:1684:G:H5'	2.16	0.45
23:BB:1745:A:H2'	23:BB:1746:A:H8	1.82	0.45
28:BF:15:LEU:HD22	28:BF:28:PRO:HG3	1.99	0.45
9:CJ:46:LYS:HA	9:CJ:68:ARG:HA	1.99	0.45
23:DB:621:A:H2'	23:DB:622:G:O4'	2.16	0.45
1:CA:1382:C:H2'	1:CA:1383:C:C6	2.52	0.45
15:CP:48:GLU:HG2	15:CP:49:GLY:N	2.32	0.45
1:AA:834:U:H2'	1:AA:835:U:C6	2.52	0.45
1:AA:652:U:H1'	1:AA:653:U:C5	2.52	0.45
20:CB:61:SER:HG	20:CB:62:ARG:HH11	1.64	0.45
50:D3:16:THR:HG23	50:D3:20:GLY:O	2.17	0.45
22:BA:24:G:N7	22:BA:56:G:H2'	2.32	0.45
1:AA:682:G:O2'	1:AA:683:G:H5'	2.18	0.45
23:DB:2477:U:H4'	23:DB:2479:U:O4	2.16	0.45
1:CA:382:A:H2'	1:CA:383:A:C8	2.51	0.45
23:BB:843:G:H2'	23:BB:844:A:C8	2.52	0.45
23:BB:1671:U:H2'	23:BB:1673:G:OP2	2.17	0.45
23:BB:2348:U:O2'	23:BB:2349:G:H5'	2.16	0.45
38:BQ:91:ARG:HD2	38:BQ:91:ARG:N	2.28	0.44
38:BQ:107:ALA:O	39:BR:52:PRO:HG3	2.17	0.44
21:AU:14:ALA:CA	21:AU:16:ARG:HH11	1.88	0.44
23:DB:492:A:H2	40:DS:46:LEU:HD22	1.82	0.44
23:BB:2467:C:C1'	34:BM:118:LYS:HG2	2.47	0.44
34:BM:101:VAL:C	34:BM:102:LEU:HD12	2.37	0.44
34:BM:114:ARG:HH21	34:BM:125:PRO:HA	1.81	0.44
24:BV:81:PRO:HB2	24:BV:82:TYR:HD2	1.81	0.44
46:BZ:15:SER:HB3	46:BZ:23:LYS:HD3	1.97	0.44
46:BZ:66:ILE:O	46:BZ:68:GLY:N	2.50	0.44
25:DC:104:LEU:HD13	25:DC:156:SER:CB	2.47	0.44
23:DB:669:G:O2'	23:DB:670:A:H5'	2.17	0.44
26:BD:205:PRO:O	26:BD:206:ALA:HB2	2.17	0.44
26:BD:141:ARG:O	26:BD:142:VAL:C	2.54	0.44
38:DQ:83:LYS:C	38:DQ:85:ALA:H	2.21	0.44
38:DQ:91:ARG:HD2	38:DQ:91:ARG:H	1.83	0.44
23:DB:2820:A:HO2'	23:DB:2821:A:P	2.40	0.44
23:DB:2874:C:P	35:DN:5:LYS:HD3	2.57	0.44
26:DD:15:PHE:C	26:DD:17:GLU:H	2.19	0.44
34:DM:40:ARG:HA	34:DM:92:TRP:HE1	1.83	0.44
23:DB:929:U:O2	45:DY:25:GLY:HA2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BR:88:GLY:O	39:BR:89:HIS:HB2	2.17	0.44
5:CF:25:TYR:O	5:CF:29:ILE:HG13	2.18	0.44
35:BN:32:GLU:HA	35:BN:115:LEU:CD2	2.47	0.44
40:BS:31:GLN:C	40:BS:33:LEU:N	2.70	0.44
43:DW:38:ARG:HB3	43:DW:68:PHE:CZ	2.52	0.44
25:DC:20:ASN:OD1	25:DC:202:ARG:HB3	2.17	0.44
23:DB:65:U:OP1	41:DT:76:ARG:HB3	2.16	0.44
33:BL:76:GLU:HA	33:BL:109:LYS:O	2.17	0.44
31:BJ:24:THR:O	31:BJ:25:LEU:HD22	2.17	0.44
23:DB:764:A:H5'	25:DC:208:GLY:HA3	1.98	0.44
40:DS:72:THR:HG23	40:DS:73:LYS:N	2.32	0.44
23:BB:310:A:OP1	42:BU:15:GLY:HA2	2.17	0.44
42:BU:84:PHE:CA	42:BU:94:PHE:HD1	2.30	0.44
42:BU:78:LYS:CE	42:BU:96:LYS:HB2	2.34	0.44
52:DI:138:VAL:HG12	52:DI:139:VAL:N	2.31	0.44
23:BB:2750:A:H3'	29:BG:3:VAL:CG2	2.47	0.44
23:DB:1188:U:H5'	39:DR:84:ARG:HG2	1.99	0.44
52:BI:7:TYR:CB	52:BI:59:THR:HA	2.48	0.44
52:BI:7:TYR:CD1	52:BI:7:TYR:C	2.91	0.44
20:AB:134:LEU:HA	20:AB:137:THR:OG1	2.17	0.44
1:CA:374:A:H2'	1:CA:375:U:C6	2.52	0.44
14:CO:80:LEU:O	14:CO:84:LEU:HD13	2.17	0.44
28:BF:103:ILE:HA	28:BF:107:VAL:CG2	2.47	0.44
23:DB:2597:G:OP1	25:DC:239:PHE:CD2	2.70	0.44
29:BG:22:VAL:HG23	29:BG:33:THR:HG23	1.99	0.44
44:DX:44:LYS:CE	44:DX:47:ARG:HB2	2.47	0.44
23:BB:633:A:H2'	23:BB:634:C:H5'	1.98	0.44
9:CJ:7:ARG:HD2	9:CJ:101:SER:OG	2.17	0.44
50:B3:28:LEU:HB2	50:B3:32:LEU:O	2.17	0.44
36:BO:67:ASN:CA	36:BO:71:ALA:HB3	2.41	0.44
49:D2:12:ARG:NH2	49:D2:16:HIS:HB2	2.31	0.44
49:D2:18:PHE:CD2	49:D2:44:VAL:HB	2.52	0.44
21:AU:3:ILE:HA	21:AU:19:LYS:HE3	1.97	0.44
23:BB:1791:A:C4'	25:BC:207:ALA:H	2.30	0.44
5:AF:7:VAL:HB	5:AF:61:LEU:HD22	2.00	0.44
5:AF:7:VAL:HG11	17:AR:64:LEU:HD21	1.99	0.44
4:CE:146:MET:N	4:CE:146:MET:SD	2.90	0.44
35:BN:103:ARG:HB2	35:BN:110:MET:SD	2.57	0.44
23:BB:2147:A:C5'	23:BB:2148:G:H5'	2.44	0.44
15:AP:70:ARG:O	15:AP:74:LEU:HG	2.18	0.44
1:AA:1246:A:H2'	1:AA:1247:U:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CL:73:LEU:HA	11:CL:77:SER:OG	2.17	0.44
23:BB:231:A:H3'	23:BB:232:G:C8	2.52	0.44
23:BB:1196:C:H2'	23:BB:1197:G:H8	1.82	0.44
29:DG:91:VAL:HG12	29:DG:159:LYS:HZ1	1.81	0.44
1:AA:1320:C:H2'	1:AA:1321:U:O4'	2.16	0.44
42:DU:82:VAL:HB	42:DU:94:PHE:CD1	2.52	0.44
23:BB:962:G:H21	23:BB:2250:G:H1	1.65	0.44
1:AA:1238:A:C8	1:AA:1303:C:H1'	2.52	0.44
29:DG:75:VAL:O	29:DG:78:VAL:HG12	2.17	0.44
1:CA:90:C:H2'	1:CA:91:U:H6	1.81	0.44
23:BB:1459:G:C2'	23:BB:1460:U:H5'	2.47	0.44
2:CC:53:ARG:HA	2:CC:113:LYS:CE	2.46	0.44
23:DB:2328:A:H2'	23:DB:2329:U:H6	1.77	0.44
23:DB:279:A:H3'	23:DB:280:U:C6	2.52	0.44
3:AD:113:ALA:O	3:AD:117:VAL:HG23	2.17	0.44
2:CC:54:ILE:HB	2:CC:67:ILE:CD1	2.47	0.44
42:DU:48:VAL:HG13	42:DU:51:LEU:N	2.32	0.44
20:AB:132:GLU:HG3	20:AB:136:ARG:HD2	1.99	0.44
8:AI:66:VAL:CG2	8:AI:74:GLN:HG3	2.47	0.44
1:CA:84:U:O2'	1:CA:86:G:N2	2.50	0.44
23:BB:2236:U:O2'	23:BB:2237:G:H5'	2.18	0.44
28:BF:21:TYR:HB2	28:BF:22:ASN:H	1.58	0.44
3:CD:30:LYS:HD3	3:CD:30:LYS:N	2.31	0.44
23:BB:977:G:C2'	23:BB:978:G:H5'	2.47	0.44
13:AN:45:LEU:O	13:AN:48:GLN:HB3	2.16	0.44
1:AA:143:A:H2	1:AA:220:G:H22	1.65	0.44
23:BB:49:A:OP1	23:BB:51:G:H5'	2.17	0.44
22:DA:14:U:H3'	22:DA:15:A:C5'	2.47	0.44
3:CD:53:GLN:HB3	3:CD:202:LEU:HB2	1.99	0.44
23:BB:2014:A:OP1	40:BS:95:ARG:NE	2.48	0.44
1:AA:736:C:H2'	1:AA:737:C:H6	1.82	0.44
24:DV:80:HIS:HD2	24:DV:83:LYS:H	1.65	0.44
1:CA:1405:G:O2'	1:CA:1406:U:H5'	2.17	0.44
23:DB:912:C:O2'	23:DB:913:U:H5'	2.18	0.44
3:CD:44:LYS:HZ2	3:CD:45:PRO:C	2.21	0.44
23:BB:1432:G:O2'	23:BB:1433:A:H5'	2.16	0.44
23:DB:84:A:OP2	42:DU:91:LYS:HD2	2.16	0.44
23:BB:1195:G:N3	23:BB:1226:A:H2	2.14	0.44
22:DA:2:G:H2'	22:DA:3:C:C6	2.52	0.44
23:DB:2108:A:N3	23:DB:2108:A:H2'	2.31	0.44
23:BB:69:C:O2'	23:BB:70:G:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:778:G:O2'	1:CA:779:C:H5'	2.17	0.44
23:BB:1783:A:H5'	23:BB:2608:G:H4'	1.99	0.44
19:CT:63:LYS:O	19:CT:63:LYS:HD3	2.17	0.44
10:CK:80:ASN:OD1	10:CK:80:ASN:N	2.50	0.44
31:DJ:109:LEU:HD22	31:DJ:115:GLY:O	2.17	0.44
23:BB:1511:G:H2'	23:BB:1512:C:H6	1.81	0.44
23:BB:438:G:H2'	23:BB:439:A:H8	1.82	0.44
25:DC:124:LYS:HE2	25:DC:125:PRO:HD2	1.99	0.44
25:DC:91:ALA:O	25:DC:102:TYR:HD2	1.99	0.44
37:BP:92:ARG:NE	37:BP:110:LYS:HB3	2.32	0.44
23:BB:1820:U:C4	25:BC:158:GLY:HA3	2.52	0.44
38:DQ:111:LYS:HE2	39:DR:52:PRO:HG3	2.00	0.44
43:BW:52:CYS:HB2	43:BW:53:GLY:H	1.52	0.44
50:D3:24:LYS:HZ2	50:D3:24:LYS:HB3	1.82	0.44
31:DJ:7:LYS:CE	31:DJ:45:THR:HG21	2.47	0.44
31:DJ:58:ASN:O	31:DJ:59:ALA:HB3	2.18	0.44
27:DE:48:THR:CG2	27:DE:85:PHE:N	2.77	0.44
47:B0:27:LEU:O	47:B0:36:LYS:HB3	2.16	0.44
39:DR:37:GLU:HG2	39:DR:63:VAL:N	2.32	0.44
23:BB:2576:G:P	26:BD:149:ASN:HB2	2.57	0.44
33:BL:82:LEU:O	33:BL:83:ALA:HB3	2.17	0.44
31:BJ:102:GLU:HG3	31:BJ:124:VAL:HG11	1.99	0.44
27:DE:14:VAL:HG12	27:DE:16:GLU:H	1.82	0.44
23:DB:1824:G:O2'	25:DC:244:VAL:CG2	2.65	0.44
28:DF:86:CYS:O	28:DF:88:VAL:HG23	2.17	0.44
42:BU:71:ILE:HG23	42:BU:72:PHE:N	2.32	0.44
12:CM:56:ARG:HB2	12:CM:56:ARG:CZ	2.47	0.44
23:DB:2038:G:H2'	23:DB:2039:U:C6	2.53	0.44
23:DB:2025:C:P	26:DD:154:LYS:HZ1	2.40	0.44
32:DK:107:LEU:C	32:DK:109:SER:H	2.19	0.44
29:DG:171:LYS:CD	29:DG:174:LYS:HD3	2.37	0.44
15:AP:20:VAL:HG22	15:AP:21:VAL:H	1.83	0.44
8:AI:58:GLU:H	8:AI:58:GLU:HG2	1.38	0.44
34:DM:9:PHE:CE2	34:DM:11:LYS:HG2	2.52	0.44
29:DG:36:LEU:HD13	29:DG:40:VAL:HG11	1.99	0.44
1:CA:1271:A:H2'	1:CA:1272:G:H8	1.81	0.44
23:BB:2291:U:H2'	23:BB:2292:U:H6	1.81	0.44
13:CN:53:ASP:HA	13:CN:58:ARG:HD2	2.00	0.44
4:AE:85:LYS:HE2	4:AE:92:ARG:HH11	1.82	0.44
16:AQ:19:SER:O	16:AQ:20:ILE:HG23	2.16	0.44
5:CF:12:PRO:HD3	5:CF:56:LYS:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BU:42:LYS:O	42:BU:43:LYS:HB3	2.17	0.44
11:AL:52:CYS:SG	11:AL:66:ILE:HD11	2.57	0.44
2:AC:5:HIS:O	2:AC:9:ILE:HG22	2.17	0.44
25:BC:258:SER:HB2	25:BC:261:ARG:HH12	1.82	0.44
20:AB:119:GLN:O	20:AB:125:PHE:HB3	2.17	0.44
3:AD:152:SER:O	3:AD:155:LYS:HG3	2.17	0.44
12:CM:96:VAL:C	12:CM:98:GLY:H	2.20	0.44
1:AA:1126:U:O2'	1:AA:1280:A:H2'	2.17	0.44
44:DX:4:LYS:HG3	44:DX:7:ARG:NE	2.27	0.44
40:DS:87:PRO:O	40:DS:88:ARG:CB	2.65	0.44
38:DQ:87:VAL:O	39:DR:54:VAL:HG21	2.17	0.44
9:CJ:33:GLY:O	9:CJ:34:ALA:HB2	2.16	0.44
23:BB:2340:A:H2'	23:BB:2341:G:H8	1.82	0.44
23:BB:1531:C:H2'	23:BB:1532:A:H8	1.78	0.44
23:BB:1750:G:O2'	23:BB:2860:A:H2	2.00	0.44
20:CB:69:VAL:O	20:CB:162:VAL:HA	2.17	0.44
2:AC:112:ALA:HB1	2:AC:199:VAL:CG2	2.47	0.44
14:AO:87:ARG:HH11	14:AO:87:ARG:HA	1.78	0.44
1:CA:25:C:H2'	1:CA:26:A:C8	2.52	0.44
38:BQ:19:GLN:O	38:BQ:20:ALA:C	2.55	0.44
23:BB:1708:C:H2'	23:BB:1709:U:C6	2.52	0.44
23:BB:2742:G:O2'	23:BB:2743:U:H5'	2.17	0.44
9:CJ:82:LYS:HD2	9:CJ:82:LYS:N	2.31	0.44
3:CD:28:ASP:HB3	3:CD:33:ILE:HB	2.00	0.44
32:BK:5:GLN:O	32:BK:6:THR:HB	2.17	0.44
23:DB:2686:G:H2'	23:DB:2687:U:H6	1.82	0.44
23:DB:2221:G:H2'	23:DB:2222:C:C6	2.52	0.44
24:DV:43:ASP:OD2	24:DV:46:LYS:HB2	2.18	0.44
1:CA:448:A:H2'	1:CA:449:G:C8	2.52	0.44
23:DB:1708:C:H2'	23:DB:1709:U:C6	2.53	0.44
23:BB:770:G:P	49:B2:11:LYS:HD3	2.56	0.44
1:CA:844:G:H2'	1:CA:845:A:H5''	1.99	0.44
1:AA:251:G:H4'	1:AA:252:U:C5'	2.48	0.44
23:DB:1685:C:H2'	23:DB:1686:C:H6	1.82	0.44
23:BB:673:C:O2'	23:BB:674:G:H5'	2.17	0.44
23:DB:1724:G:H2'	23:DB:1725:U:C6	2.52	0.44
23:DB:1399:C:H2'	23:DB:1400:U:C6	2.52	0.44
44:BX:11:VAL:HG22	44:BX:11:VAL:O	2.17	0.44
23:DB:758:C:O2	23:DB:1981:A:H2	2.00	0.44
23:DB:2520:C:C6	23:DB:2567:G:H1'	2.52	0.44
23:BB:2553:G:H2'	23:BB:2554:U:H4'	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:113:G:O4'	1:AA:354:G:H4'	2.18	0.44
1:CA:735:C:OP1	17:CR:56:ARG:CZ	2.65	0.44
1:CA:71:A:O2'	1:CA:72:A:H5''	2.17	0.44
17:AR:31:TYR:CG	17:AR:54:LEU:HD21	2.52	0.44
1:CA:489:C:H2'	1:CA:490:C:C6	2.52	0.44
3:AD:75:TYR:CE1	3:AD:203:TYR:HB3	2.51	0.44
23:BB:1824:G:OP1	25:BC:52:HIS:CE1	2.70	0.44
1:CA:1187:G:H2'	1:CA:1188:A:O4'	2.17	0.44
19:CT:20:ASN:O	19:CT:24:ARG:HB2	2.18	0.44
1:CA:834:U:H2'	1:CA:835:U:C6	2.52	0.44
23:BB:2628:C:O2'	23:BB:2781:A:H2'	2.17	0.44
45:BY:22:THR:O	45:BY:26:LEU:N	2.50	0.44
6:AG:102:TRP:CD1	6:AG:102:TRP:N	2.83	0.44
52:DI:96:LYS:O	52:DI:96:LYS:HG3	2.17	0.44
34:DM:123:LYS:HB3	34:DM:123:LYS:NZ	2.32	0.44
38:DQ:58:GLN:HB2	38:DQ:58:GLN:HE21	1.54	0.44
1:AA:1515:G:O2'	1:AA:1516:G:H5'	2.17	0.44
23:BB:1239:G:H2'	23:BB:1240:U:C6	2.52	0.44
19:CT:43:LYS:HB3	19:CT:86:ALA:HB3	2.00	0.44
23:BB:37:C:C2	27:BE:46:GLN:OE1	2.70	0.44
25:BC:115:ILE:HA	25:BC:126:GLY:HA3	1.99	0.44
23:BB:2262:U:H2'	23:BB:2263:C:C6	2.52	0.44
34:BM:117:PHE:O	34:BM:120:ALA:HB3	2.18	0.44
34:BM:71:LYS:HG2	34:BM:92:TRP:O	2.17	0.44
34:BM:98:PRO:HG2	34:BM:99:GLY:H	1.82	0.44
24:BV:30:ILE:O	24:BV:37:PRO:HA	2.17	0.44
23:BB:2848:G:N9	37:BP:96:LEU:HD23	2.32	0.44
25:BC:137:GLY:C	25:BC:139:THR:N	2.69	0.44
23:BB:968:C:O2'	45:BY:16:LEU:HD23	2.18	0.44
27:BE:6:LYS:HZ1	27:BE:119:ILE:N	2.15	0.44
37:DP:32:VAL:H	37:DP:81:ASP:HA	1.82	0.44
43:BW:66:VAL:O	43:BW:67:LYS:C	2.56	0.44
33:DL:58:TYR:HB3	50:D3:13:PHE:HE1	1.80	0.44
45:BY:50:VAL:CA	45:BY:53:MET:HB2	2.48	0.44
23:DB:1007:C:H5''	31:DJ:37:ARG:NH1	2.30	0.44
31:DJ:32:LEU:O	31:DJ:36:LEU:HD13	2.17	0.44
31:DJ:5:THR:HG21	31:DJ:7:LYS:HZ2	1.81	0.44
10:CK:113:THR:HG21	21:CU:28:LEU:CD1	2.32	0.44
20:AB:67:LEU:HD23	20:AB:160:LEU:CG	2.48	0.44
23:BB:581:C:H2'	23:BB:582:A:H8	1.82	0.44
35:BN:75:ILE:C	35:BN:75:ILE:HD13	2.38	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DO:18:LEU:HD13	43:DW:76:ARG:NH2	2.32	0.44
33:BL:109:LYS:H	33:BL:126:ARG:HB3	1.82	0.44
31:BJ:25:LEU:HD23	31:BJ:64:VAL:HA	1.98	0.44
27:DE:149:ILE:HD11	27:DE:187:VAL:N	2.21	0.44
27:DE:151:GLY:O	27:DE:171:ASP:HA	2.18	0.44
10:AK:124:LYS:O	21:AU:33:ARG:NH2	2.51	0.44
28:DF:36:ASN:O	28:DF:151:LEU:HA	2.17	0.44
28:DF:37:MET:N	28:DF:86:CYS:SG	2.90	0.44
1:CA:1308:U:OP2	12:CM:97:ARG:HD3	2.17	0.44
1:CA:1343:G:H4'	8:CI:123:ARG:O	2.18	0.44
46:DZ:59:ARG:C	46:DZ:61:ASN:N	2.70	0.44
23:DB:1828:G:O6	25:DC:219:VAL:HG11	2.17	0.44
25:BC:231:HIS:CD2	25:BC:242:HIS:HB3	2.53	0.44
40:DS:5:ALA:HB3	40:DS:105:VAL:HG13	1.99	0.44
26:BD:33:ARG:C	26:BD:35:THR:H	2.21	0.44
23:BB:2812:G:H2'	23:BB:2813:A:O4'	2.17	0.44
18:CS:43:MET:O	18:CS:61:VAL:HB	2.17	0.44
33:DL:77:ILE:HG12	33:DL:108:ALA:O	2.17	0.44
39:BR:22:LEU:O	39:BR:96:VAL:HG13	2.16	0.44
23:BB:1179:G:O2'	23:BB:1180:U:H5'	2.18	0.44
4:AE:84:VAL:HG21	4:AE:142:GLY:O	2.15	0.44
4:CE:87:VAL:O	4:CE:88:HIS:HB3	2.18	0.44
23:BB:1341:G:H5'	41:BT:61:LEU:HD22	1.99	0.44
16:AQ:62:GLU:HG3	16:AQ:72:TRP:CH2	2.53	0.44
25:BC:207:ALA:HA	25:BC:211:ARG:HB2	1.98	0.44
12:CM:80:MET:HA	12:CM:87:GLY:CA	2.48	0.44
11:AL:106:VAL:CG1	11:AL:116:TYR:HB3	2.47	0.44
23:DB:1441:G:O2'	23:DB:1442:U:H5'	2.18	0.44
1:AA:234:C:H2'	1:AA:235:C:C6	2.52	0.44
1:AA:1306:A:N6	1:AA:1331:G:H1'	2.32	0.44
23:DB:743:A:C2'	23:DB:744:U:H5'	2.46	0.44
1:CA:412:A:H1'	1:CA:413:G:C8	2.43	0.44
15:AP:7:ALA:O	15:AP:17:TYR:HA	2.17	0.44
1:CA:471:U:H2'	1:CA:472:U:C6	2.51	0.44
33:BL:72:ALA:HB3	33:BL:106:GLU:OE2	2.17	0.44
36:BO:55:GLU:HB2	36:BO:61:GLN:HA	1.99	0.44
45:DY:26:LEU:CB	45:DY:28:LEU:HD13	2.45	0.44
23:BB:2647:U:O2'	23:BB:2648:G:H5'	2.17	0.44
30:DH:70:GLU:C	30:DH:72:ILE:H	2.20	0.44
1:AA:1238:A:H2	1:AA:1241:G:H1'	1.83	0.44
1:AA:657:U:H4'	14:AO:27:GLN:HG3	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:201:GLU:OE1	4:AE:104:ILE:HG22	2.17	0.44
3:AD:77:GLU:OE1	3:AD:80:ARG:NH2	2.48	0.44
23:BB:597:G:H4'	33:BL:21:ARG:HD2	1.99	0.44
23:BB:466:A:H2	23:BB:795:C:O2	1.99	0.44
23:BB:1854:A:H2'	23:BB:1855:U:O4'	2.16	0.44
30:BH:116:ARG:O	30:BH:117:LEU:HG	2.16	0.44
14:CO:65:LEU:O	14:CO:68:TYR:HB3	2.18	0.44
9:AJ:81:GLU:O	9:AJ:85:ASP:HB2	2.18	0.44
23:DB:438:G:O2'	23:DB:439:A:H5'	2.17	0.44
38:BQ:102:LYS:H	38:BQ:102:LYS:CD	2.29	0.44
23:DB:1454:C:H1'	35:DN:60:VAL:HG13	2.00	0.44
1:CA:86:G:O2'	1:CA:87:C:P	2.75	0.44
23:DB:420:C:H2'	23:DB:421:C:H6	1.82	0.44
1:AA:397:A:H5'	1:AA:398:U:OP1	2.18	0.44
1:AA:397:A:N3	1:AA:397:A:H3'	2.33	0.44
23:BB:2889:C:H2'	23:BB:2890:G:C8	2.52	0.44
33:DL:54:GLN:HG2	33:DL:57:LEU:HD23	1.99	0.44
23:BB:2876:G:H4'	37:BP:2:ASN:HA	1.98	0.44
23:DB:1847:A:H4'	23:DB:1848:A:H8	1.82	0.44
38:DQ:13:HIS:O	38:DQ:16:ILE:HG12	2.17	0.44
23:BB:1585:C:H2'	23:BB:1586:A:O4'	2.17	0.44
1:AA:392:C:H2'	1:AA:393:A:H8	1.82	0.44
34:BM:58:LYS:C	34:BM:60:GLN:N	2.71	0.44
1:CA:392:C:H2'	1:CA:393:A:H8	1.82	0.44
23:BB:1047:G:HO2'	23:BB:1048:A:P	2.39	0.44
52:DI:10:LEU:C	52:DI:10:LEU:HD12	2.38	0.44
1:CA:828:U:H2'	1:CA:829:G:O5'	2.18	0.44
16:AQ:80:LYS:H	16:AQ:80:LYS:HE3	1.82	0.44
23:DB:2717:C:O2'	37:DP:95:LYS:HE3	2.16	0.44
23:DB:1092:C:O2'	23:DB:1093:G:H5'	2.18	0.44
1:AA:394:G:H2'	1:AA:395:C:H6	1.82	0.44
17:CR:52:ARG:O	17:CR:56:ARG:HG3	2.17	0.44
2:CC:123:LEU:HD23	2:CC:195:ILE:HD12	1.98	0.44
38:DQ:35:PHE:O	38:DQ:38:VAL:HG22	2.17	0.44
31:BJ:92:MET:O	31:BJ:95:ARG:HG3	2.17	0.44
30:BH:50:ARG:HG2	30:BH:50:ARG:O	2.17	0.44
3:CD:6:PRO:HG2	3:CD:9:LYS:HE2	2.00	0.44
1:AA:1237:C:H4'	1:AA:1334:G:N2	2.32	0.44
23:DB:1588:G:H2'	23:DB:1589:U:C6	2.53	0.44
23:DB:1097:U:C5	23:DB:1098:A:C8	3.05	0.44
23:BB:559:G:H2'	23:BB:560:C:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BE:46:GLN:HB3	27:BE:47:LYS:H	1.63	0.44
46:BZ:66:ILE:O	46:BZ:69:SER:O	2.35	0.44
23:DB:1821:A:C5'	25:DC:155:ARG:NH2	2.81	0.44
23:BB:650:C:O3'	50:B3:16:THR:HB	2.16	0.44
26:BD:172:VAL:HG23	26:BD:173:GLN:N	2.32	0.44
26:BD:170:VAL:CG1	26:BD:194:PRO:HG2	2.46	0.44
37:BP:31:VAL:HB	37:BP:43:GLU:O	2.17	0.44
25:BC:131:MET:HE1	25:BC:143:VAL:HG11	1.98	0.44
38:DQ:82:LEU:O	38:DQ:88:GLU:HB2	2.17	0.44
23:DB:2722:G:C2'	35:DN:4:ARG:HD2	2.47	0.44
37:DP:32:VAL:N	37:DP:81:ASP:HA	2.31	0.44
31:DJ:44:TYR:HE2	31:DJ:50:THR:HB	1.82	0.44
27:DE:46:GLN:OE1	27:DE:86:ALA:HB3	2.18	0.44
23:BB:28:A:N6	23:BB:512:G:O2'	2.51	0.44
35:BN:70:THR:HG21	35:BN:75:ILE:CG2	2.44	0.44
30:BH:19:VAL:O	30:BH:20:ASN:C	2.54	0.44
23:DB:2266:A:O4'	23:DB:2272:U:O4	2.35	0.44
23:BB:2576:G:OP2	26:BD:149:ASN:HB2	2.17	0.44
33:BL:110:VAL:HB	33:BL:126:ARG:HH22	1.76	0.44
42:DU:72:PHE:CE2	42:DU:74:ALA:HB3	2.52	0.44
1:CA:1250:A:H2'	1:CA:1251:A:H8	1.81	0.44
42:BU:6:ARG:O	42:BU:8:ASP:N	2.51	0.44
52:BI:27:LEU:O	52:BI:30:GLN:HB2	2.17	0.44
28:BF:56:LEU:HA	28:BF:59:ILE:CG2	2.48	0.44
16:CQ:10:ARG:HH22	16:CQ:54:ILE:HA	1.82	0.44
28:BF:172:PHE:CD1	28:BF:173:ASP:N	2.84	0.44
1:CA:1525:G:O2'	1:CA:1526:G:H5'	2.17	0.44
9:CJ:59:LYS:C	9:CJ:61:ALA:H	2.20	0.44
26:BD:120:GLY:H	26:BD:123:LYS:HB2	1.82	0.44
33:DL:69:ARG:HG2	33:DL:69:ARG:H	1.34	0.44
39:DR:78:ARG:O	39:DR:79:ARG:HB2	2.17	0.44
23:DB:125:A:C4'	49:D2:13:ASN:ND2	2.78	0.44
29:BG:89:VAL:O	29:BG:160:GLY:N	2.50	0.44
48:D1:8:ILE:HD13	48:D1:9:LYS:C	2.38	0.44
24:DV:7:GLU:C	24:DV:40:ILE:HG22	2.37	0.44
3:CD:121:ALA:C	3:CD:145:ARG:HG3	2.38	0.44
27:DE:30:GLN:O	27:DE:31:VAL:C	2.55	0.44
29:DG:91:VAL:HG12	29:DG:159:LYS:NZ	2.32	0.44
1:AA:71:A:N1	1:AA:99:C:H1'	2.32	0.44
23:DB:1203:U:O5'	23:DB:1203:U:H6	2.00	0.44
23:DB:353:C:H3'	23:DB:354:A:H8	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:677:U:H2'	1:CA:678:U:H6	1.82	0.44
23:BB:2799:A:H4'	23:BB:2800:A:C8	2.52	0.44
23:DB:400:G:O5'	23:DB:400:G:H8	2.00	0.44
1:CA:491:G:H2'	1:CA:492:C:C6	2.52	0.44
23:DB:2340:A:H2'	23:DB:2341:G:H8	1.82	0.44
23:BB:2182:U:H2'	23:BB:2183:A:C8	2.53	0.44
42:DU:48:VAL:HG13	42:DU:51:LEU:CA	2.48	0.44
23:DB:515:A:H2	23:DB:1260:A:N3	2.15	0.44
3:CD:33:ILE:O	3:CD:34:GLU:C	2.55	0.44
28:DF:163:GLU:HG2	28:DF:166:ARG:CZ	2.48	0.44
23:DB:1463:C:H2'	23:DB:1464:G:C8	2.53	0.44
25:BC:64:VAL:HB	25:BC:65:ASP:H	1.33	0.44
27:BE:1:MET:HG3	27:BE:2:GLU:N	2.33	0.44
4:CE:32:PHE:CE2	4:CE:55:VAL:HG22	2.53	0.44
34:DM:62:LYS:HA	34:DM:62:LYS:HD2	1.68	0.44
23:BB:1315:C:H2'	23:BB:1316:U:C6	2.53	0.44
22:DA:40:U:O2	22:DA:43:C:H5''	2.17	0.44
23:BB:1739:A:H2'	23:BB:1740:G:H8	1.81	0.44
1:CA:691:G:H2'	1:CA:692:U:C6	2.53	0.44
23:BB:1704:C:H2'	23:BB:1705:A:C8	2.53	0.44
23:BB:2747:G:O6	23:BB:2755:C:H5''	2.17	0.44
23:BB:1511:G:H2'	23:BB:1512:C:C6	2.53	0.44
23:DB:1862:G:O2'	23:DB:1863:G:H5'	2.18	0.44
1:CA:992:U:H1'	1:CA:993:G:C2	2.52	0.44
23:BB:2468:A:H2'	23:BB:2476:A:C6	2.52	0.44
1:AA:1386:G:O2'	1:AA:1387:G:H5'	2.17	0.44
23:BB:1456:G:O2'	23:BB:1457:U:H5'	2.16	0.44
43:BW:11:ASN:OD1	43:BW:12:GLY:N	2.45	0.44
1:CA:386:C:C2'	1:CA:387:U:H5'	2.47	0.44
23:BB:444:C:H5''	27:BE:44:ARG:HH11	1.82	0.44
34:BM:11:LYS:HZ2	34:BM:12:MET:H	1.64	0.44
34:BM:97:GLN:H	34:BM:98:PRO:CD	2.31	0.44
46:BZ:29:GLY:C	46:BZ:30:HIS:CG	2.91	0.44
25:DC:116:GLN:C	25:DC:127:ASN:HB3	2.38	0.44
26:BD:129:THR:O	26:BD:130:GLN:CB	2.64	0.44
48:D1:47:ILE:CG2	48:D1:48:TYR:H	2.11	0.44
38:DQ:100:PHE:HD2	39:DR:13:ARG:HH22	1.65	0.44
1:CA:975:A:OP2	1:CA:975:A:H4'	2.18	0.44
26:DD:35:THR:HB	26:DD:48:ILE:CB	2.48	0.44
37:DP:25:VAL:O	37:DP:27:VAL:HG12	2.17	0.44
34:DM:71:LYS:HZ1	34:DM:92:TRP:H	1.63	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DH:8:LYS:HE2	30:DH:9:VAL:N	2.29	0.44
20:CB:31:PHE:N	20:CB:41:ASN:HB2	2.32	0.44
31:DJ:135:GLN:HE21	31:DJ:138:GLN:N	2.13	0.44
27:DE:46:GLN:HB2	27:DE:87:ALA:O	2.17	0.44
23:BB:27:G:HO2'	23:BB:28:A:H8	1.59	0.44
40:BS:38:TYR:CZ	47:B0:37:HIS:HA	2.52	0.44
40:BS:8:ARG:HH12	40:BS:79:GLY:HA2	1.82	0.44
23:DB:952:G:C6	23:DB:966:G:C6	3.06	0.44
23:DB:922:C:O2	43:DW:22:VAL:HG21	2.17	0.44
33:BL:82:LEU:HD22	33:BL:82:LEU:HA	1.49	0.44
33:BL:96:LYS:HB2	33:BL:96:LYS:HE3	1.79	0.44
31:BJ:101:ILE:HG23	31:BJ:102:GLU:OE1	2.18	0.44
44:BX:23:ARG:HH21	44:BX:27:ASN:CG	2.20	0.44
23:DB:2091:C:C5'	46:DZ:49:ARG:HE	2.31	0.44
46:DZ:48:GLN:HB3	46:DZ:51:VAL:HB	2.00	0.44
23:DB:1394:U:O2'	23:DB:1395:A:H5'	2.17	0.44
1:CA:1329:A:O2'	1:CA:1330:U:H5'	2.18	0.44
32:BK:25:LEU:O	32:BK:30:ARG:HG3	2.17	0.44
23:BB:2722:G:O2'	23:BB:2723:C:H5'	2.18	0.44
9:CJ:55:PRO:O	9:CJ:56:HIS:HB3	2.16	0.44
23:BB:1112:G:O2'	23:BB:1113:U:H5'	2.16	0.44
1:CA:673:A:H1'	17:CR:63:TYR:HE1	1.81	0.44
28:BF:135:ILE:O	28:BF:136:ILE:HB	2.17	0.44
1:AA:408:A:OP1	3:AD:109:THR:HG21	2.18	0.44
3:AD:24:VAL:O	3:AD:25:ARG:C	2.55	0.44
36:BO:8:ILE:C	36:BO:10:ARG:N	2.71	0.44
17:AR:49:LYS:HA	17:AR:52:ARG:HD2	2.00	0.44
47:D0:53:VAL:CG1	47:D0:54:ILE:N	2.81	0.44
44:DX:51:ALA:HA	44:DX:54:LYS:HB3	1.99	0.44
34:BM:126:ILE:O	34:BM:127:LYS:HB2	2.18	0.44
33:DL:113:ALA:HB3	33:DL:114:GLY:H	1.63	0.44
23:DB:2574:G:N2	26:DD:147:GLY:HA3	2.30	0.44
19:AT:70:LYS:HA	19:AT:73:ARG:CZ	2.47	0.44
40:BS:90:LYS:N	40:BS:90:LYS:CE	2.80	0.44
49:D2:35:ARG:NH2	49:D2:44:VAL:HG22	2.31	0.44
6:CG:107:ALA:O	6:CG:118:ARG:HD2	2.18	0.44
35:DN:101:GLY:HA2	35:DN:109:PRO:HA	2.00	0.44
41:DT:38:ALA:O	41:DT:39:THR:OG1	2.33	0.44
35:DN:11:ASN:HB3	35:DN:12:ARG:CD	2.46	0.44
3:AD:104:MET:SD	3:AD:179:GLY:HA3	2.57	0.44
1:CA:502:A:OP1	11:CL:114:SER:HB2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1439:A:N7	23:DB:1440:U:C2	2.86	0.44
23:DB:1439:A:N1	23:DB:1552:A:N7	2.66	0.44
1:AA:412:A:H1'	1:AA:413:G:C8	2.43	0.44
1:CA:473:U:C2	1:CA:474:G:N7	2.86	0.44
1:CA:875:U:O2'	7:CH:14:ARG:HD2	2.18	0.44
23:DB:1826:G:H2'	23:DB:1827:U:H6	1.82	0.44
1:CA:677:U:H2'	1:CA:678:U:C6	2.53	0.44
1:AA:175:C:H2'	1:AA:176:C:H6	1.83	0.44
23:DB:2559:C:O2'	23:DB:2560:A:H5'	2.17	0.44
2:CC:33:ASP:OD1	2:CC:37:LYS:HE2	2.17	0.44
23:DB:384:A:H2'	23:DB:385:C:H5'	1.99	0.44
36:DO:83:LEU:CA	36:DO:87:ILE:HD12	2.47	0.44
23:BB:2319:G:N3	23:BB:2319:G:H3'	2.32	0.44
15:AP:12:LYS:O	15:AP:14:ARG:HG3	2.17	0.44
23:BB:2714:G:O2'	23:BB:2715:C:H5'	2.18	0.44
23:DB:2617:U:H2'	23:DB:2618:G:C5'	2.47	0.44
20:CB:104:LYS:NZ	20:CB:104:LYS:HB2	2.33	0.44
44:DX:59:GLU:HA	44:DX:63:ALA:OXT	2.18	0.44
1:AA:1007:U:H2'	1:AA:1008:U:C6	2.52	0.44
2:CC:107:LYS:O	2:CC:110:LEU:HD23	2.18	0.44
23:DB:818:G:N1	23:DB:1187:G:H2'	2.32	0.44
23:BB:822:G:H2'	23:BB:823:C:C6	2.52	0.44
1:CA:1162:C:H2'	1:CA:1163:A:C8	2.51	0.44
1:AA:1486:G:H2'	1:AA:1487:G:C8	2.53	0.44
4:AE:81:GLN:N	4:AE:81:GLN:OE1	2.50	0.44
23:BB:576:U:H2'	23:BB:577:G:C8	2.53	0.44
23:DB:1541:C:H2'	23:DB:1542:U:O4'	2.16	0.44
28:DF:71:LYS:HD3	28:DF:71:LYS:O	2.18	0.44
30:BH:29:PHE:H	30:BH:32:PRO:CD	2.31	0.44
1:AA:552:U:H5'	11:AL:82:ARG:HH11	1.82	0.44
23:BB:226:A:H2'	23:BB:227:A:C8	2.52	0.44
23:DB:1248:G:P	27:DE:44:ARG:HH22	2.40	0.44
23:BB:2477:U:H4'	23:BB:2479:U:O4	2.18	0.44
1:AA:1023:U:H2'	1:AA:1024:G:H8	1.82	0.44
20:CB:35:ASN:O	20:CB:36:LYS:HB2	2.18	0.44
30:DH:97:ARG:H	30:DH:97:ARG:HG2	1.39	0.44
8:CI:109:GLN:HE21	8:CI:109:GLN:HB3	1.57	0.44
28:BF:4:HIS:HB2	28:BF:96:TRP:CD1	2.51	0.44
23:BB:1864:U:O2'	23:BB:1865:U:H5'	2.17	0.44
31:BJ:11:VAL:HG22	31:BJ:12:LYS:N	2.32	0.44
51:D4:11:CYS:HB2	51:D4:14:CYS:SG	2.58	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BZ:12:ILE:H	46:BZ:12:ILE:HG13	1.26	0.44
23:BB:2677:G:H2'	23:BB:2678:C:C6	2.51	0.44
23:BB:2683:C:H2'	23:BB:2684:U:H6	1.83	0.44
26:DD:34:VAL:CG1	26:DD:91:THR:HG23	2.44	0.44
25:BC:23:LEU:O	25:BC:23:LEU:HD12	2.18	0.44
33:DL:58:TYR:HB3	50:D3:13:PHE:CZ	2.53	0.44
23:DB:2237:G:O2'	23:DB:2239:G:N7	2.50	0.44
27:BE:154:ASP:OD1	27:BE:156:ASN:HB2	2.18	0.44
23:DB:452:G:N2	23:DB:458:G:H1'	2.33	0.44
27:DE:53:THR:H	27:DE:74:LYS:CE	2.31	0.44
30:BH:81:ALA:HA	30:BH:147:VAL:H	1.83	0.44
43:DW:65:LYS:HB2	43:DW:65:LYS:NZ	2.33	0.44
23:BB:2572:A:C8	26:BD:150:GLN:O	2.70	0.44
18:AS:4:LEU:HD13	18:AS:8:PRO:HA	1.99	0.44
33:BL:77:ILE:HG21	33:BL:92:LEU:HD13	1.98	0.44
23:BB:140:C:OP2	23:BB:140:C:H6	2.00	0.44
41:BT:55:VAL:HG13	41:BT:86:THR:O	2.18	0.44
44:BX:46:VAL:HG13	44:BX:47:ARG:N	2.32	0.44
23:DB:1813:G:N3	25:DC:50:THR:CG2	2.77	0.44
41:DT:53:VAL:HA	41:DT:93:LEU:HG	1.99	0.44
28:DF:150:GLY:O	28:DF:151:LEU:HB2	2.17	0.44
39:DR:22:LEU:CD1	39:DR:23:GLU:H	2.29	0.44
23:BB:55:G:H2'	23:BB:56:A:C8	2.51	0.44
1:CA:233:C:O2'	1:CA:234:C:H5'	2.18	0.44
42:DU:2:ALA:HA	42:DU:27:VAL:HG23	1.99	0.44
23:BB:103:A:H2'	23:BB:104:A:O4'	2.17	0.44
25:DC:110:LYS:HB3	25:DC:111:ALA:H	1.40	0.44
6:AG:112:ASP:HB3	6:AG:113:LYS:H	1.65	0.44
3:AD:109:THR:HG23	3:AD:112:GLU:H	1.83	0.44
23:DB:1789:A:H5'	25:DC:220:ARG:HH21	1.82	0.44
18:CS:62:THR:OG1	18:CS:63:ASP:N	2.48	0.44
25:BC:229:HIS:O	25:BC:231:HIS:N	2.39	0.44
1:CA:1102:A:O2'	1:CA:1103:C:H5'	2.18	0.44
8:AI:79:ARG:O	8:AI:83:THR:HG22	2.17	0.44
29:DG:10:VAL:N	29:DG:11:PRO:HD3	2.33	0.44
1:CA:768:A:H5'	1:CA:1524:C:H1'	1.99	0.44
34:DM:9:PHE:HD1	34:DM:9:PHE:N	2.15	0.44
4:AE:105:ILE:HD12	4:AE:123:LEU:HB3	1.99	0.44
1:AA:261:U:H2'	1:AA:263:A:OP2	2.18	0.44
23:BB:2795:C:H6	23:BB:2795:C:O5'	2.00	0.44
4:CE:87:VAL:CG2	4:CE:88:HIS:H	2.23	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:65:U:H4'	41:BT:70:HIS:CE1	2.53	0.44
26:DD:59:ARG:HD2	26:DD:60:VAL:H	1.82	0.44
24:DV:52:ALA:HA	34:DM:134:THR:OG1	2.18	0.44
23:BB:476:G:N2	23:BB:478:A:H3'	2.33	0.44
23:DB:2677:G:H2'	23:DB:2678:C:C6	2.52	0.44
23:BB:1278:C:OP1	35:BN:36:THR:HB	2.18	0.44
37:DP:7:LEU:HA	37:DP:10:GLU:HG2	2.00	0.44
23:BB:1616:A:H4'	23:BB:1617:C:OP2	2.17	0.44
1:AA:813:U:O2'	1:AA:814:A:H5'	2.18	0.44
23:BB:1151:A:H2'	23:BB:1152:C:C6	2.53	0.44
23:DB:2256:G:H2'	23:DB:2257:U:C6	2.53	0.44
11:CL:97:VAL:O	11:CL:97:VAL:HG23	2.17	0.44
30:BH:55:GLU:C	30:BH:57:LYS:N	2.70	0.44
1:AA:471:U:H2'	1:AA:472:U:C6	2.52	0.44
19:CT:27:MET:O	19:CT:31:ILE:HG13	2.17	0.44
4:CE:95:MET:HA	4:CE:124:ALA:CB	2.44	0.44
13:CN:62:ARG:N	13:CN:72:PHE:CZ	2.82	0.44
23:DB:2278:A:H62	43:DW:10:ARG:HB2	1.82	0.44
5:AF:10:VAL:CG1	5:AF:83:ALA:HB1	2.48	0.44
16:CQ:35:LYS:HG3	16:CQ:35:LYS:O	2.17	0.44
1:AA:203:G:N2	1:AA:205:A:H61	2.16	0.44
23:DB:443:A:H3'	27:DE:40:ARG:HG2	2.00	0.44
23:DB:2591:C:O2'	23:DB:2592:G:H5'	2.17	0.44
14:AO:52:ARG:HG3	14:AO:55:LEU:HD23	1.99	0.44
1:CA:119:A:H4'	1:CA:120:A:O4'	2.18	0.44
23:DB:1347:A:H2'	23:DB:1348:C:O4'	2.17	0.44
41:BT:45:ALA:O	41:BT:48:GLN:HB3	2.17	0.44
23:BB:2443:C:H2'	23:BB:2444:G:H8	1.81	0.44
23:DB:2093:G:OP2	30:DH:23:ALA:HB3	2.17	0.44
23:DB:822:G:H2'	23:DB:823:C:C6	2.53	0.44
23:BB:132:G:H2'	23:BB:133:U:C6	2.53	0.44
22:DA:70:C:H2'	22:DA:71:C:H6	1.83	0.44
23:DB:1562:U:H2'	23:DB:1563:U:C6	2.52	0.44
1:CA:737:C:H5'	5:CF:89:VAL:O	2.18	0.44
23:BB:765:C:H2'	23:BB:766:U:H6	1.82	0.44
23:DB:2659:G:C2	23:DB:2661:G:H5''	2.53	0.44
23:BB:2082:A:O2'	23:BB:2083:G:H5'	2.18	0.44
25:BC:145:MET:O	25:BC:184:GLU:HG3	2.18	0.44
23:BB:2885:G:H2'	23:BB:2886:A:O4'	2.17	0.44
1:CA:488:C:H2'	1:CA:489:C:H6	1.83	0.44
27:DE:68:ALA:O	27:DE:69:ARG:C	2.55	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:669:G:O2'	1:AA:670:G:H5'	2.18	0.44
11:AL:34:THR:HG21	11:AL:53:ARG:CZ	2.47	0.44
1:CA:705:G:N2	10:CK:43:TRP:CE3	2.85	0.44
22:DA:41:G:H5'	22:DA:42:C:H5'	2.00	0.44
26:BD:47:ALA:HB3	26:BD:81:GLU:HB2	1.99	0.44
1:CA:682:G:O2'	1:CA:683:G:H5'	2.18	0.44
32:BK:4:GLU:HG2	32:BK:4:GLU:H	1.46	0.44
47:D0:39:ARG:HA	47:D0:39:ARG:HD3	1.72	0.44
23:BB:2423:U:H3	43:BW:1:ALA:HB2	1.83	0.44
51:D4:18:LYS:O	51:D4:19:ARG:CB	2.65	0.44
34:BM:1:MET:HG2	34:BM:64:TRP:CD1	2.53	0.44
46:BZ:15:SER:HB2	46:BZ:25:ARG:HH12	1.81	0.44
25:DC:181:ARG:O	25:DC:181:ARG:HG3	2.18	0.44
23:BB:2619:C:H2'	23:BB:2620:C:C6	2.52	0.44
33:DL:2:ARG:NH2	33:DL:6:LEU:HD13	2.33	0.44
25:BC:107:LYS:CB	25:BC:194:VAL:HG11	2.27	0.44
48:D1:35:LEU:HA	48:D1:48:TYR:O	2.18	0.44
37:DP:111:GLU:C	37:DP:113:LEU:H	2.21	0.44
33:DL:120:VAL:O	33:DL:122:VAL:N	2.50	0.44
43:BW:44:PHE:HB3	43:BW:76:ARG:HG3	2.00	0.44
47:B0:29:VAL:HG23	47:B0:36:LYS:HZ3	1.79	0.44
35:BN:75:ILE:HG23	35:BN:76:VAL:N	2.33	0.44
40:BS:6:LYS:CA	40:BS:104:THR:HA	2.48	0.44
42:DU:40:LEU:O	42:DU:58:VAL:HA	2.18	0.44
31:BJ:57:LEU:HD12	31:BJ:128:ASN:CA	2.48	0.44
27:DE:122:GLU:HG3	27:DE:123:LYS:H	1.82	0.44
27:DE:199:MET:HG3	27:DE:200:LEU:N	2.33	0.44
23:DB:1824:G:H2'	23:DB:1825:U:C6	2.53	0.44
12:AM:44:ILE:CA	12:AM:47:LEU:HD13	2.46	0.44
28:DF:135:ILE:HD12	28:DF:140:ILE:O	2.17	0.44
23:BB:1079:C:C2	23:BB:1080:A:C8	3.06	0.44
1:CA:1308:U:H2'	1:CA:1309:G:H8	1.82	0.44
35:BN:1:MET:CE	35:BN:3:HIS:H	2.31	0.44
1:CA:1342:C:H4'	8:CI:126:PHE:O	2.18	0.44
42:BU:5:ARG:O	42:BU:8:ASP:HB2	2.18	0.44
12:AM:78:ARG:HE	12:AM:79:LEU:HG	1.82	0.44
32:DK:103:VAL:HG23	32:DK:104:THR:N	2.33	0.44
26:DD:129:THR:CG2	26:DD:130:GLN:H	2.26	0.44
8:AI:30:ASN:HD21	8:AI:65:THR:HA	1.79	0.44
23:DB:2887:A:O4'	47:D0:27:LEU:HD11	2.18	0.44
20:AB:31:PHE:CD1	20:AB:41:ASN:HA	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B2:13:ASN:HB2	49:B2:18:PHE:CD2	2.43	0.44
49:B2:13:ASN:O	49:B2:16:HIS:N	2.49	0.44
24:BV:84:PRO:HG3	34:BM:127:LYS:NZ	2.32	0.44
6:CG:12:LEU:HD13	6:CG:13:PRO:CD	2.47	0.44
33:DL:109:LYS:HG3	33:DL:126:ARG:HD3	1.99	0.44
28:BF:7:TYR:OH	28:BF:29:ARG:HA	2.17	0.44
38:DQ:50:ARG:CZ	38:DQ:53:LYS:HE3	2.48	0.44
13:CN:52:ARG:O	13:CN:58:ARG:HD2	2.18	0.44
26:DD:1:MET:O	26:DD:2:ILE:HB	2.17	0.44
23:DB:126:A:O5'	49:D2:18:PHE:CE1	2.71	0.44
6:AG:87:PRO:CG	6:AG:151:ALA:HB2	2.41	0.44
15:CP:28:ARG:HD2	15:CP:28:ARG:N	2.33	0.44
16:AQ:45:VAL:HG13	16:AQ:60:ILE:CG2	2.48	0.44
42:BU:63:ALA:O	42:BU:64:ILE:HG22	2.17	0.44
1:CA:812:G:H4'	1:CA:812:G:OP1	2.17	0.44
11:CL:65:TYR:HB3	11:CL:95:HIS:HD2	1.82	0.44
9:AJ:15:HIS:CD2	9:AJ:19:ASP:HB2	2.52	0.44
4:CE:17:VAL:O	4:CE:17:VAL:HG13	2.17	0.44
10:CK:70:ALA:O	10:CK:72:ALA:N	2.50	0.44
4:AE:89:THR:HG22	4:AE:90:GLY:N	2.33	0.44
1:AA:947:G:H2'	1:AA:948:C:H6	1.81	0.44
44:BX:14:LEU:N	44:BX:14:LEU:HD12	2.32	0.44
24:DV:29:ILE:HG13	24:DV:30:ILE:H	1.81	0.44
16:AQ:30:HIS:H	16:AQ:35:LYS:H	1.66	0.44
3:CD:171:GLU:HG3	3:CD:182:LYS:CD	2.46	0.44
1:AA:924:C:H2'	1:AA:925:G:H8	1.83	0.44
25:BC:79:ARG:HG3	25:BC:79:ARG:HH11	1.82	0.44
16:CQ:58:VAL:HB	16:CQ:74:LEU:CD2	2.48	0.44
23:DB:2259:U:C1'	23:DB:2427:C:H2'	2.47	0.44
14:CO:31:LEU:HA	14:CO:34:GLN:OE1	2.17	0.44
23:DB:1240:U:O2'	23:DB:1241:A:H5''	2.17	0.44
7:AH:46:GLU:HB2	7:AH:61:THR:OG1	2.18	0.44
1:AA:191:G:H2'	1:AA:192:A:H8	1.83	0.44
7:AH:11:THR:HG23	7:AH:14:ARG:NH1	2.33	0.44
1:AA:119:A:H4'	1:AA:120:A:O4'	2.17	0.44
20:AB:128:LEU:CG	20:AB:132:GLU:HG2	2.46	0.44
4:AE:33:THR:O	4:AE:58:ALA:HB1	2.17	0.44
23:DB:418:C:H2'	23:DB:419:U:C6	2.53	0.44
23:DB:420:C:H2'	23:DB:421:C:C6	2.53	0.44
1:CA:963:G:H2'	1:CA:964:A:C8	2.51	0.44
29:BG:108:PHE:CE1	29:BG:151:ARG:HD2	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BO:76:LYS:NZ	36:BO:79:ALA:HB3	2.33	0.44
29:BG:114:HIS:HB2	29:BG:150:TYR:HE2	1.83	0.44
1:CA:143:A:H2	1:CA:220:G:H22	1.64	0.44
23:DB:2191:A:H2'	23:DB:2192:U:H6	1.82	0.44
1:CA:1432:G:H8	1:CA:1432:G:OP2	2.00	0.44
48:B1:26:LYS:HD3	48:B1:29:LYS:CD	2.48	0.44
2:AC:100:ILE:C	2:AC:100:ILE:HD13	2.38	0.44
23:DB:2776:A:H4'	23:DB:2777:G:H5''	1.99	0.44
1:AA:913:A:H1'	1:AA:914:A:O4'	2.17	0.44
1:AA:1082:A:O2'	1:AA:1083:U:H5'	2.18	0.44
23:DB:314:C:H2'	23:DB:315:G:C8	2.53	0.44
23:DB:2489:U:O2'	23:DB:2490:G:H5'	2.18	0.44
23:DB:1870:C:H3'	23:DB:1871:A:C8	2.53	0.44
23:DB:1881:C:H2'	23:DB:1882:U:O4'	2.18	0.44
27:DE:75:SER:OG	27:DE:77:ILE:HG22	2.18	0.44
23:BB:829:A:H4'	54:BB:3321:HOH:O	2.17	0.44
49:B2:22:MET:SD	49:B2:28:ARG:HG3	2.58	0.44
1:CA:284:C:H2'	1:CA:285:C:H6	1.82	0.44
23:DB:2663:G:H2'	23:DB:2664:G:C8	2.52	0.44
1:AA:323:U:H2'	1:AA:324:G:O4'	2.18	0.44
23:DB:2320:U:O2	23:DB:2320:U:O4'	2.35	0.44
1:CA:965:U:OP1	1:CA:1198:G:H5''	2.18	0.44
39:BR:60:LYS:HA	39:BR:60:LYS:HD2	1.79	0.44
39:BR:6:GLN:HG3	39:BR:7:SER:H	1.83	0.44
23:DB:448:U:H2'	27:DE:79:ARG:HG3	1.98	0.44
23:DB:2526:G:N2	51:D4:1:MET:HG2	2.33	0.44
23:BB:2263:C:H2'	23:BB:2264:C:C6	2.52	0.44
25:DC:91:ALA:HB3	25:DC:103:ILE:HB	2.00	0.44
25:BC:185:ALA:C	25:BC:187:CYS:H	2.21	0.44
32:DK:72:PRO:HB2	32:DK:73:ASP:H	1.62	0.44
37:DP:111:GLU:H	37:DP:111:GLU:HG3	1.45	0.44
33:DL:89:VAL:HG21	33:DL:123:ARG:NH1	2.33	0.44
34:DM:71:LYS:O	34:DM:72:PRO:C	2.55	0.44
30:DH:2:GLN:HB2	30:DH:19:VAL:CA	2.40	0.44
40:BS:29:VAL:CG2	40:BS:69:LEU:HB3	2.48	0.44
23:BB:137:U:O5'	23:BB:137:U:H6	2.01	0.44
20:CB:119:GLN:O	20:CB:125:PHE:HB3	2.18	0.44
25:DC:50:THR:HG22	25:DC:51:ARG:CG	2.42	0.44
41:DT:85:VAL:HG23	41:DT:86:THR:N	2.33	0.44
40:DS:107:VAL:C	40:DS:109:ASP:H	2.22	0.44
40:DS:68:ASP:HB3	40:DS:110:ARG:HD2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1055:G:O2'	23:BB:1085:A:C2	2.66	0.44
32:BK:10:VAL:HG13	32:BK:19:VAL:HG21	1.99	0.44
32:BK:23:LYS:CG	32:BK:24:VAL:H	2.31	0.44
1:AA:132:C:H5''	19:AT:68:LYS:CE	2.47	0.44
12:AM:14:ALA:HB1	12:AM:33:LEU:HD11	1.99	0.44
48:D1:49:LYS:CA	48:D1:49:LYS:HZ2	2.30	0.44
23:DB:1789:A:H2'	23:DB:1790:C:C6	2.53	0.44
23:BB:2038:G:H2'	23:BB:2039:U:O4'	2.18	0.44
26:DD:140:HIS:O	26:DD:141:ARG:CG	2.62	0.44
8:AI:59:LYS:HB3	8:AI:59:LYS:HZ2	1.83	0.44
29:DG:24:THR:HG23	29:DG:33:THR:HG23	2.00	0.44
47:D0:31:LYS:HB2	47:D0:31:LYS:HZ3	1.80	0.44
23:BB:2526:G:H2'	23:BB:2527:C:H6	1.81	0.44
23:DB:136:G:N1	41:DT:3:ARG:NH2	2.65	0.44
39:DR:80:ARG:O	39:DR:80:ARG:HG3	2.18	0.44
23:DB:2633:G:H2'	23:DB:2634:A:O4'	2.16	0.44
6:AG:148:LYS:HA	6:AG:151:ALA:HB3	2.00	0.44
23:DB:2018:G:H1'	38:DQ:32:ARG:NH2	2.31	0.44
10:AK:28:ASN:HD21	10:AK:30:ILE:HG23	1.83	0.44
37:DP:5:LYS:C	37:DP:7:LEU:H	2.21	0.44
37:DP:5:LYS:HA	37:DP:5:LYS:HD2	1.65	0.44
23:DB:1050:A:O2'	23:DB:2752:C:H1'	2.18	0.44
3:AD:14:GLU:OE2	3:AD:58:GLN:HG3	2.18	0.44
23:BB:222:A:N1	23:BB:233:A:H5''	2.32	0.44
1:AA:878:A:H2'	1:AA:879:C:C6	2.53	0.44
1:AA:232:G:H2'	1:AA:233:C:O4'	2.17	0.44
1:AA:238:A:H3'	1:AA:239:U:H5''	2.00	0.44
23:DB:1106:G:H2'	23:DB:1107:G:H8	1.83	0.44
11:AL:101:LEU:HB3	11:AL:102:ASP:H	1.61	0.44
11:AL:80:LEU:HD13	11:AL:101:LEU:HD11	1.99	0.44
23:DB:2157:G:N3	23:DB:2157:G:C2'	2.78	0.44
43:DW:13:ARG:CZ	43:DW:13:ARG:H	2.31	0.44
23:DB:2370:G:H2'	23:DB:2371:G:O4'	2.18	0.44
1:CA:861:G:O2'	1:CA:862:C:H5'	2.17	0.44
1:AA:88:U:O2'	1:AA:89:U:C6	2.68	0.44
3:CD:66:VAL:HG22	3:CD:71:PHE:HB2	2.00	0.44
1:AA:538:G:OP2	11:AL:111:GLN:HB2	2.18	0.44
23:DB:401:A:O2'	23:DB:402:A:H5'	2.18	0.44
23:DB:2812:G:H2'	23:DB:2813:A:O4'	2.18	0.44
28:BF:41:GLU:OE1	28:BF:45:ASP:HA	2.18	0.44
4:AE:16:ALA:O	4:AE:34:ALA:HA	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:664:G:O2'	23:BB:665:U:H5'	2.17	0.44
1:CA:397:A:H3'	1:CA:397:A:N3	2.33	0.44
23:BB:2297:A:N6	23:BB:2319:G:C5'	2.81	0.44
3:AD:137:SER:CB	3:AD:138:PRO:HD2	2.47	0.44
23:BB:2248:C:C2'	23:BB:2249:U:H5'	2.47	0.44
4:CE:28:ARG:NH2	4:CE:30:PHE:HB3	2.33	0.44
1:CA:1216:A:OP1	13:CN:4:SER:HB3	2.18	0.44
1:CA:1414:U:H2'	1:CA:1415:G:C8	2.53	0.44
1:CA:250:A:H1'	1:CA:252:U:C5	2.53	0.44
24:DV:53:LYS:HB3	24:DV:53:LYS:HZ2	1.82	0.44
1:AA:893:C:H2'	1:AA:894:G:H8	1.83	0.44
6:CG:49:LEU:HA	6:CG:52:ARG:HG3	1.99	0.44
19:AT:20:ASN:O	19:AT:65:LEU:HD21	2.18	0.44
42:DU:90:LYS:O	42:DU:91:LYS:HB2	2.18	0.44
3:CD:77:GLU:C	3:CD:79:ALA:H	2.20	0.44
23:DB:2806:C:H2'	23:DB:2807:U:O4'	2.17	0.44
1:CA:295:C:H2'	1:CA:296:U:C6	2.53	0.44
1:AA:68:G:H5'	1:AA:171:A:O2'	2.17	0.44
6:CG:78:ARG:HD2	6:CG:81:GLY:H	1.83	0.44
23:BB:1:G:H2'	23:BB:2:G:H8	1.83	0.44
1:CA:771:G:H2'	1:CA:772:U:C6	2.52	0.44
23:DB:1010:A:H4'	38:DQ:75:TYR:CD2	2.53	0.44
45:BY:18:LYS:O	45:BY:21:ALA:HB3	2.17	0.44
11:CL:17:LYS:HB2	11:CL:17:LYS:NZ	2.33	0.44
23:BB:1513:U:O2'	23:BB:1514:G:H5'	2.18	0.44
31:BJ:114:LEU:O	31:BJ:117:ALA:HB3	2.18	0.44
25:DC:153:LEU:C	25:DC:155:ARG:N	2.71	0.44
25:DC:153:LEU:O	25:DC:153:LEU:HG	2.17	0.44
25:DC:159:THR:O	25:DC:160:TYR:HD2	2.00	0.44
23:BB:2393:U:OP1	50:B3:29:ARG:NE	2.51	0.44
23:DB:2772:C:H2'	23:DB:2773:C:H6	1.82	0.44
32:DK:70:ARG:HD3	32:DK:76:VAL:HG22	2.00	0.44
23:DB:852:U:H2'	23:DB:853:C:C6	2.53	0.44
39:DR:35:PHE:HB3	39:DR:64:VAL:HG12	2.00	0.44
23:DB:2386:A:H2'	23:DB:2387:U:H6	1.83	0.44
43:DW:43:LYS:O	43:DW:78:PHE:HA	2.18	0.44
31:BJ:60:ASP:OD1	31:BJ:97:PRO:HG2	2.18	0.44
31:BJ:68:LYS:HA	31:BJ:71:ASP:OD1	2.18	0.44
27:DE:189:THR:HG23	27:DE:194:LYS:HD3	2.00	0.44
18:AS:48:ILE:HG22	18:AS:49:ALA:N	2.33	0.44
23:DB:1341:G:H2'	23:DB:1397:U:HO2'	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:164:C:H2'	23:DB:165:A:H5'	2.00	0.44
28:DF:140:ILE:H	28:DF:140:ILE:CD1	2.21	0.44
28:DF:116:LEU:HD13	28:DF:129:MET:HE1	2.00	0.44
1:CA:950:U:H2'	1:CA:951:G:H8	1.83	0.44
23:BB:458:G:H1'	23:BB:459:U:H5	1.82	0.44
19:CT:66:ILE:HG23	19:CT:70:LYS:HG3	2.00	0.44
23:BB:1250:G:H5'	38:BQ:3:VAL:CG1	2.48	0.44
32:BK:23:LYS:HG3	32:BK:24:VAL:N	2.32	0.44
26:BD:116:LYS:HG3	35:BN:3:HIS:CE1	2.53	0.44
23:BB:2751:G:C5'	29:BG:3:VAL:HG13	2.48	0.44
46:DZ:39:LYS:NZ	46:DZ:61:ASN:HD21	2.15	0.44
23:DB:2599:G:C8	25:DC:234:GLY:HA2	2.53	0.44
29:DG:23:ILE:O	29:DG:33:THR:HA	2.18	0.44
11:AL:22:ALA:HB1	11:AL:29:LYS:HG3	2.00	0.44
23:DB:1666:G:O3'	32:DK:6:THR:HG23	2.18	0.44
24:DV:63:ILE:N	24:DV:63:ILE:HD12	2.33	0.44
24:DV:70:ILE:HD12	24:DV:71:LYS:N	2.28	0.44
52:DI:16:MET:N	52:DI:42:ASN:OD1	2.51	0.44
33:BL:38:GLN:N	33:BL:41:ARG:NH1	2.64	0.44
1:CA:921:U:H2'	1:CA:922:G:O4'	2.17	0.44
42:DU:64:ILE:HG22	42:DU:64:ILE:O	2.18	0.44
23:BB:971:G:H2'	23:BB:972:A:O4'	2.18	0.44
2:AC:19:SER:HB2	2:AC:39:ARG:HH22	1.82	0.44
23:DB:900:A:H2'	23:DB:901:C:H6	1.82	0.44
1:AA:238:A:C3'	1:AA:239:U:H5''	2.47	0.44
2:CC:32:LEU:O	2:CC:35:ASP:HB3	2.18	0.44
14:CO:88:ARG:NH1	14:CO:88:ARG:HG3	2.32	0.44
12:CM:17:ALA:O	12:CM:20:SER:HB2	2.18	0.44
7:CH:31:LEU:O	7:CH:35:ILE:HG13	2.17	0.44
20:AB:101:THR:HG22	20:AB:174:GLU:OE1	2.18	0.44
38:DQ:102:LYS:HA	38:DQ:102:LYS:HD2	1.88	0.44
27:BE:165:HIS:C	27:BE:166:LYS:HG3	2.39	0.44
23:BB:2768:U:H2'	23:BB:2769:U:O4'	2.18	0.44
23:DB:1593:A:H2'	23:DB:1594:U:H6	1.83	0.44
23:DB:523:C:H4'	23:DB:540:C:O2	2.18	0.44
3:CD:81:LEU:HB2	3:CD:88:ASN:ND2	2.33	0.44
23:DB:1826:G:H2'	23:DB:1827:U:C6	2.53	0.44
23:BB:2893:A:H4'	23:BB:2894:G:H5'	2.00	0.44
23:BB:527:C:H5''	23:BB:2779:U:N3	2.33	0.44
22:BA:27:C:H3'	22:BA:28:C:C6	2.53	0.44
23:DB:1854:A:H2'	23:DB:1855:U:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:538:A:H2'	23:DB:539:G:O4'	2.18	0.44
23:BB:936:A:H2'	23:BB:937:C:H6	1.81	0.44
1:AA:1048:G:H4'	13:AN:2:LYS:HZ3	1.82	0.44
1:AA:25:C:H2'	1:AA:26:A:C8	2.53	0.44
1:AA:26:A:N6	1:AA:558:G:H1'	2.33	0.44
1:CA:373:A:H1'	1:CA:481:G:H1'	1.99	0.44
23:BB:533:G:H5'	38:BQ:23:TYR:CD1	2.52	0.44
23:DB:1291:C:O2'	23:DB:1292:G:H5'	2.18	0.44
1:AA:22:G:H2'	1:AA:23:C:H6	1.83	0.44
1:CA:614:C:OP1	3:CD:82:LYS:HE3	2.18	0.44
23:DB:207:A:H2'	23:DB:208:C:O4'	2.17	0.44
1:CA:1493:A:C2'	1:CA:1494:G:OP2	2.65	0.44
23:DB:756:A:H2'	23:DB:757:G:O4'	2.18	0.44
1:CA:113:G:O4'	1:CA:354:G:H4'	2.18	0.44
1:CA:1049:U:H1'	1:CA:1201:A:N7	2.33	0.44
20:AB:165:ALA:CB	20:AB:186:VAL:HG12	2.48	0.44
1:CA:442:G:H2'	1:CA:443:C:C6	2.53	0.44
14:CO:67:ASP:O	14:CO:71:ARG:HB2	2.17	0.44
25:DC:96:LYS:HG2	25:DC:96:LYS:H	1.37	0.44
35:DN:78:LYS:HG3	35:DN:82:GLU:HG3	1.99	0.44
23:DB:1606:C:H5''	23:DB:1607:C:OP1	2.17	0.44
1:CA:706:A:H2	10:CK:40:ALA:HB2	1.83	0.44
13:CN:13:VAL:HG22	13:CN:59:GLN:CD	2.38	0.44
23:BB:1764:C:H2'	23:BB:1765:U:C6	2.52	0.44
36:DO:98:GLN:NE2	36:DO:99:TYR:H	2.16	0.44
23:BB:1403:A:H2'	23:BB:1404:C:C6	2.53	0.44
36:BO:94:ARG:HG3	36:BO:94:ARG:O	2.18	0.44
22:DA:55:U:H2'	22:DA:56:G:C8	2.53	0.44
13:CN:56:PRO:HG2	13:CN:57:SER:H	1.83	0.44
38:BQ:95:ALA:C	38:BQ:97:ILE:H	2.21	0.43
40:DS:11:ARG:NH1	40:DS:11:ARG:HG3	2.33	0.43
27:BE:49:ARG:HH11	27:BE:49:ARG:CG	2.31	0.43
23:BB:1814:G:C4'	25:BC:51:ARG:HD2	2.48	0.43
34:BM:21:ALA:O	34:BM:96:ILE:HG13	2.18	0.43
24:BV:89:ILE:HD13	24:BV:91:PHE:CE1	2.52	0.43
23:BB:1821:A:H2'	23:BB:1822:C:H6	1.83	0.43
25:BC:170:TYR:HB3	25:BC:185:ALA:HB3	2.00	0.43
27:BE:6:LYS:HZ1	27:BE:119:ILE:H	1.65	0.43
37:DP:111:GLU:HB2	37:DP:112:ARG:NE	2.28	0.43
34:DM:5:LYS:O	34:DM:6:ARG:CB	2.62	0.43
31:DJ:72:LYS:O	31:DJ:72:LYS:HG3	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:D3:12:ARG:CG	50:D3:23:HIS:HB2	2.48	0.43
20:CB:78:ALA:CB	20:CB:213:LEU:HD13	2.47	0.43
31:DJ:25:LEU:HD12	31:DJ:62:VAL:HA	1.98	0.43
5:CF:3:HIS:CE1	5:CF:95:ALA:HB2	2.53	0.43
27:DE:53:THR:CB	27:DE:74:LYS:HE2	2.47	0.43
20:AB:46:VAL:CG1	20:AB:47:PRO:HD3	2.31	0.43
47:B0:27:LEU:C	47:B0:36:LYS:HD3	2.38	0.43
35:BN:24:MET:HE3	35:BN:44:LEU:HD22	1.99	0.43
40:BS:80:PRO:O	40:BS:100:THR:HG22	2.18	0.43
39:DR:37:GLU:HB3	39:DR:63:VAL:HA	1.99	0.43
43:DW:76:ARG:NH1	43:DW:76:ARG:HB3	2.33	0.43
23:DB:948:C:O2'	23:DB:949:G:H5'	2.18	0.43
29:BG:32:LEU:HD11	29:BG:74:MET:SD	2.59	0.43
12:AM:106:ARG:HG2	12:AM:106:ARG:NH1	2.32	0.43
41:BT:84:TYR:O	41:BT:85:VAL:O	2.36	0.43
40:DS:72:THR:HG21	40:DS:108:SER:OG	2.18	0.43
12:CM:3:ILE:HA	12:CM:56:ARG:NH1	2.32	0.43
28:DF:116:LEU:CD2	28:DF:129:MET:HE3	2.37	0.43
1:CA:1307:U:H2'	1:CA:1308:U:O4'	2.18	0.43
8:CI:35:GLU:O	8:CI:39:GLY:HA2	2.18	0.43
12:AM:21:ILE:HG22	12:AM:64:VAL:CG1	2.41	0.43
33:DL:35:HIS:O	33:DL:35:HIS:CG	2.71	0.43
8:AI:38:PHE:C	8:AI:44:ARG:HG2	2.39	0.43
28:BF:135:ILE:HG23	28:BF:136:ILE:N	2.33	0.43
22:BA:50:A:H5''	36:BO:68:LYS:CD	2.46	0.43
26:DD:156:PHE:HA	31:DJ:81:ILE:HG21	2.00	0.43
31:DJ:82:GLY:O	31:DJ:83:GLY:C	2.56	0.43
48:D1:34:GLU:HB3	48:D1:50:GLU:HB3	2.00	0.43
3:AD:18:LEU:HD22	3:AD:63:ILE:HG12	2.00	0.43
18:CS:44:ILE:HG23	18:CS:62:THR:O	2.18	0.43
15:AP:18:GLN:NE2	15:AP:35:ARG:HH11	2.16	0.43
9:AJ:7:ARG:O	9:AJ:8:ILE:HD13	2.18	0.43
1:AA:1325:C:O2'	1:AA:1326:U:H5'	2.18	0.43
36:BO:15:ARG:HH12	36:BO:17:LYS:HD3	1.83	0.43
26:DD:62:LYS:HD3	26:DD:62:LYS:H	1.82	0.43
42:DU:28:LEU:HB2	42:DU:29:SER:H	1.47	0.43
42:BU:40:LEU:O	42:BU:42:LYS:HD2	2.18	0.43
30:BH:40:THR:O	30:BH:42:LYS:N	2.51	0.43
24:BV:35:GLU:HB2	24:BV:93:ARG:NH1	2.33	0.43
20:CB:33:ALA:HA	20:CB:39:ILE:HG12	2.00	0.43
4:AE:36:THR:O	4:AE:48:GLY:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1487:U:H2'	23:BB:1488:C:C6	2.52	0.43
1:AA:1458:G:H2'	1:AA:1459:G:H8	1.83	0.43
30:DH:103:VAL:HG22	30:DH:108:VAL:HB	2.00	0.43
1:CA:1319:A:P	18:CS:4:LEU:HD11	2.58	0.43
29:DG:25:ILE:CD1	29:DG:75:VAL:HG22	2.48	0.43
4:AE:114:LEU:C	4:AE:116:VAL:H	2.21	0.43
16:CQ:66:LEU:O	16:CQ:67:SER:HB2	2.18	0.43
1:AA:1505:G:H5'	1:AA:1506:U:O5'	2.17	0.43
10:CK:60:PHE:CE1	10:CK:64:VAL:HG11	2.52	0.43
22:BA:30:C:H2'	22:BA:30:C:O2	2.18	0.43
23:DB:1259:G:O2'	23:DB:1260:A:H5'	2.18	0.43
50:D3:4:LYS:CD	50:D3:59:ALA:HA	2.48	0.43
2:AC:90:VAL:HA	2:AC:93:ILE:CG2	2.48	0.43
39:BR:58:VAL:HG22	39:BR:59:ILE:H	1.83	0.43
4:CE:148:SER:HB2	4:CE:149:PRO:HD2	2.00	0.43
1:CA:336:A:O2'	1:CA:337:G:H5'	2.18	0.43
23:BB:1716:U:H2'	23:BB:1717:A:H8	1.81	0.43
23:DB:231:A:H3'	23:DB:232:G:H8	1.83	0.43
20:AB:113:LEU:CG	20:AB:143:LEU:HB3	2.47	0.43
27:BE:68:ALA:O	27:BE:69:ARG:HB3	2.18	0.43
23:BB:570:G:C2'	23:BB:571:U:H5'	2.48	0.43
30:BH:28:ASN:O	30:BH:29:PHE:HB2	2.17	0.43
9:CJ:68:ARG:HD3	9:CJ:70:HIS:NE2	2.34	0.43
23:BB:1525:A:H2'	23:BB:1526:C:C6	2.52	0.43
7:AH:35:ILE:O	7:AH:39:LEU:HD12	2.18	0.43
23:DB:1295:C:H2'	23:DB:1296:G:H8	1.83	0.43
23:BB:68:G:H3'	23:BB:69:C:H6	1.83	0.43
1:CA:777:A:H2'	1:CA:778:G:C8	2.52	0.43
1:CA:29:U:H5'	1:CA:296:U:OP1	2.18	0.43
1:AA:41:G:H2'	1:AA:42:G:H8	1.83	0.43
23:BB:1623:G:O2'	23:BB:1624:U:H5'	2.18	0.43
36:BO:84:GLU:OE1	36:BO:85:LYS:HG3	2.17	0.43
38:BQ:58:GLN:O	38:BQ:62:ALA:HB2	2.18	0.43
33:DL:133:ALA:HA	33:DL:136:GLU:OE2	2.18	0.43
23:BB:359:G:O2'	23:BB:360:U:H5'	2.17	0.43
1:AA:1402:C:H2'	1:AA:1403:C:O4'	2.18	0.43
27:BE:27:LEU:HD23	27:BE:100:MET:HE2	1.99	0.43
40:BS:72:THR:O	40:BS:73:LYS:HG2	2.18	0.43
35:DN:17:ARG:C	35:DN:19:ALA:H	2.21	0.43
23:BB:2320:U:H3'	23:BB:2321:U:C5'	2.48	0.43
1:AA:442:G:H2'	1:AA:443:C:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:995:C:C4	31:BJ:2:LYS:HB3	2.53	0.43
38:BQ:97:ILE:HD13	38:BQ:100:PHE:HZ	1.79	0.43
39:BR:42:ALA:HA	39:BR:54:VAL:CG2	2.46	0.43
34:BM:15:GLY:O	34:BM:16:ARG:HB3	2.18	0.43
24:BV:54:ALA:O	24:BV:57:TYR:N	2.50	0.43
23:DB:1819:A:OP1	25:DC:159:THR:HG21	2.18	0.43
33:BL:55:MET:O	33:BL:56:PRO:O	2.36	0.43
26:BD:24:VAL:CG2	26:BD:193:VAL:HG11	2.27	0.43
23:DB:2819:G:H2'	23:DB:2821:A:N7	2.32	0.43
26:DD:34:VAL:HA	26:DD:90:PHE:CA	2.49	0.43
25:BC:10:PRO:CD	25:BC:23:LEU:HD11	2.47	0.43
36:DO:26:LEU:HB2	36:DO:94:ARG:H	1.83	0.43
23:DB:1025:G:OP1	23:DB:1025:G:H8	2.00	0.43
31:DJ:102:GLU:HB3	31:DJ:119:PHE:CZ	2.52	0.43
38:BQ:16:ILE:HD12	38:BQ:17:LEU:H	1.77	0.43
39:DR:49:ILE:HG13	39:DR:49:ILE:O	2.17	0.43
23:BB:2053:G:OP1	26:BD:149:ASN:C	2.56	0.43
13:AN:84:ARG:HH11	13:AN:84:ARG:HG3	1.83	0.43
31:BJ:98:GLU:O	31:BJ:100:VAL:N	2.51	0.43
27:DE:6:LYS:CB	27:DE:11:ALA:HA	2.48	0.43
41:BT:6:ARG:HG3	41:BT:10:VAL:HG13	1.99	0.43
44:BX:30:MET:CG	44:BX:31:GLN:N	2.77	0.43
23:DB:2228:G:H2'	23:DB:2229:U:C6	2.53	0.43
8:CI:11:ARG:HD2	8:CI:12:LYS:HG3	2.00	0.43
23:DB:1189:A:H2'	23:DB:1190:G:O4'	2.18	0.43
18:AS:68:HIS:NE2	18:AS:72:GLU:HG3	2.33	0.43
25:DC:222:THR:OG1	25:DC:223:ALA:N	2.51	0.43
13:CN:45:LEU:O	13:CN:48:GLN:HG3	2.18	0.43
1:AA:740:U:O3'	14:AO:38:LEU:HD21	2.18	0.43
52:BI:29:GLN:HA	52:BI:29:GLN:HE21	1.83	0.43
29:DG:155:PRO:O	29:DG:171:LYS:N	2.51	0.43
28:BF:176:PHE:O	28:BF:177:ARG:HB3	2.17	0.43
8:AI:25:GLY:HA3	8:AI:57:VAL:O	2.16	0.43
8:AI:3:ASN:HB3	8:AI:4:GLN:H	1.54	0.43
34:DM:9:PHE:CD1	34:DM:9:PHE:N	2.85	0.43
11:AL:56:LEU:HD11	11:AL:81:ILE:CD1	2.42	0.43
23:BB:2811:G:C5'	26:BD:62:LYS:HD2	2.48	0.43
18:CS:66:VAL:HG23	18:CS:67:GLY:H	1.82	0.43
30:BH:6:LEU:HA	30:BH:15:LEU:HA	2.00	0.43
51:B4:14:CYS:SG	51:B4:27:CYS:SG	3.14	0.43
23:DB:546:U:O2	23:DB:546:U:H5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:71:ARG:HB3	2:AC:74:ILE:CG2	2.47	0.43
23:BB:2290:G:H2'	23:BB:2291:U:C6	2.53	0.43
1:CA:1294:G:H2'	1:CA:1295:U:C6	2.53	0.43
23:BB:286:U:O2'	23:BB:287:G:H5'	2.18	0.43
26:DD:40:LEU:O	26:DD:41:ALA:HB3	2.18	0.43
18:CS:18:VAL:HG13	18:CS:42:ASN:ND2	2.34	0.43
25:BC:209:ALA:HA	25:BC:213:ARG:NE	2.33	0.43
25:BC:217:PRO:C	25:BC:219:VAL:H	2.20	0.43
41:DT:36:LYS:O	41:DT:38:ALA:N	2.49	0.43
29:BG:84:LYS:HA	29:BG:84:LYS:NZ	2.33	0.43
42:BU:60:LYS:HA	42:BU:60:LYS:HD2	1.81	0.43
1:CA:1512:U:H2'	1:CA:1513:A:C8	2.54	0.43
52:BI:64:ARG:HD2	52:BI:64:ARG:C	2.38	0.43
1:CA:818:G:C3'	1:CA:819:A:H5''	2.47	0.43
36:DO:30:ARG:CZ	36:DO:97:PHE:HD2	2.30	0.43
30:BH:41:LYS:O	30:BH:42:LYS:C	2.56	0.43
35:BN:34:ILE:O	35:BN:36:THR:HG22	2.18	0.43
23:BB:221:A:H2'	23:BB:266:G:N7	2.32	0.43
23:DB:2468:A:H4'	34:DM:55:ARG:HH21	1.83	0.43
24:BV:14:LYS:HZ2	24:BV:18:ARG:HD2	1.80	0.43
23:DB:483:A:OP2	23:DB:484:C:H5	2.01	0.43
23:DB:2259:U:C2'	23:DB:2260:C:H5'	2.48	0.43
1:AA:619:U:C2	3:AD:131:ILE:HD12	2.53	0.43
23:BB:279:A:H2'	23:BB:280:U:H5'	2.01	0.43
47:B0:11:LYS:C	47:B0:13:GLY:H	2.22	0.43
1:CA:538:G:H2'	1:CA:539:A:H8	1.83	0.43
31:BJ:52:ASP:CG	31:BJ:53:TYR:H	2.20	0.43
23:BB:2787:C:H2'	23:BB:2788:C:C6	2.53	0.43
23:BB:2893:A:H4'	23:BB:2894:G:C5'	2.48	0.43
22:BA:105:G:O2'	22:BA:106:G:H5'	2.19	0.43
1:AA:1254:A:H61	1:AA:1283:U:H3	1.66	0.43
23:DB:2590:A:H2'	23:DB:2591:C:H6	1.83	0.43
2:CC:42:LEU:O	2:CC:46:LEU:HG	2.18	0.43
23:BB:2806:C:H2'	23:BB:2807:U:O4'	2.18	0.43
23:BB:1826:G:H2'	23:BB:1827:U:C6	2.53	0.43
15:CP:13:LYS:O	15:CP:15:PRO:HD3	2.17	0.43
20:CB:104:LYS:HZ2	20:CB:104:LYS:CB	2.31	0.43
25:BC:65:ASP:OD2	25:BC:101:ARG:HB3	2.18	0.43
1:AA:336:A:O2'	1:AA:337:G:H5'	2.17	0.43
23:BB:540:C:H2'	23:BB:541:A:C8	2.53	0.43
1:AA:598:U:H2'	1:AA:599:C:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:601:G:H2'	1:AA:602:A:H8	1.83	0.43
23:DB:1922:G:H2'	23:DB:1923:U:O4'	2.17	0.43
23:DB:1213:A:H62	23:DB:1236:G:H1'	1.83	0.43
1:CA:607:A:H2'	1:CA:608:A:H8	1.83	0.43
22:BA:15:A:H1'	22:BA:109:A:N7	2.33	0.43
1:AA:284:C:H2'	1:AA:285:C:C6	2.53	0.43
1:AA:489:C:H2'	1:AA:490:C:H6	1.84	0.43
25:BC:184:GLU:H	25:BC:184:GLU:HG2	1.46	0.43
23:BB:67:U:C4	23:BB:68:G:N7	2.86	0.43
23:DB:188:G:OP1	46:DZ:12:ILE:HG12	2.18	0.43
13:CN:76:PHE:O	13:CN:78:LEU:HD13	2.18	0.43
23:BB:1272:A:N7	23:BB:1618:A:H1'	2.32	0.43
1:CA:541:G:H2'	1:CA:542:G:H8	1.82	0.43
23:BB:1801:A:H5'	23:BB:2203:U:O2'	2.18	0.43
1:CA:644:U:O2'	1:CA:645:G:H5'	2.18	0.43
23:BB:390:U:H4'	23:BB:391:A:H5'	2.00	0.43
23:DB:35:G:H2'	23:DB:36:G:O4'	2.18	0.43
1:CA:1206:G:H2'	1:CA:1207:G:O4'	2.18	0.43
23:BB:2716:C:O2'	23:BB:2717:C:H5'	2.18	0.43
23:DB:1671:U:H2'	23:DB:1673:G:OP2	2.19	0.43
23:BB:1664:A:H1'	23:BB:2726:A:N1	2.33	0.43
1:AA:454:G:O2'	1:AA:455:G:H5'	2.17	0.43
38:BQ:63:ARG:HB3	38:BQ:63:ARG:CZ	2.48	0.43
39:BR:7:SER:HB2	39:BR:21:ARG:HH22	1.83	0.43
34:BM:1:MET:HA	34:BM:65:ILE:O	2.19	0.43
24:BV:2:PHE:O	24:BV:3:THR:HG23	2.18	0.43
23:BB:397:U:OP1	46:BZ:29:GLY:HA2	2.18	0.43
25:DC:168:GLY:O	25:DC:169:ALA:HB3	2.17	0.43
23:BB:2022:U:O2'	23:BB:2617:U:H5'	2.19	0.43
25:BC:155:ARG:O	25:BC:156:SER:C	2.57	0.43
23:DB:996:A:H2'	23:DB:997:G:H8	1.84	0.43
38:DQ:79:ILE:HD12	38:DQ:91:ARG:HG3	2.00	0.43
20:AB:164:ASP:OD2	20:AB:203:ASP:HB2	2.18	0.43
39:BR:90:ARG:NH1	39:BR:91:GLN:N	2.62	0.43
27:BE:117:ARG:HA	27:BE:188:MET:CE	2.48	0.43
27:BE:173:THR:HA	27:BE:201:ALA:O	2.18	0.43
23:DB:1999:C:H5''	23:DB:2723:C:O2'	2.17	0.43
37:DP:27:VAL:HG22	37:DP:28:LYS:O	2.18	0.43
43:BW:74:LYS:HB3	43:BW:75:ASN:H	1.51	0.43
5:CF:92:THR:CG2	5:CF:93:LYS:H	2.31	0.43
27:DE:51:GLU:N	27:DE:74:LYS:HZ1	2.16	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:87:LEU:HA	32:BK:94:PRO:HA	2.00	0.43
40:BS:32:ALA:HA	40:BS:51:LEU:CD1	2.48	0.43
30:BH:37:VAL:O	30:BH:38:PRO:C	2.56	0.43
30:BH:9:VAL:HB	30:BH:35:LYS:HZ1	1.82	0.43
39:DR:39:LEU:O	39:DR:41:ILE:N	2.50	0.43
23:DB:2270:A:H5''	23:DB:2271:G:OP2	2.19	0.43
43:DW:42:THR:H	43:DW:65:LYS:CG	2.30	0.43
25:DC:19:VAL:HG12	25:DC:20:ASN:N	2.33	0.43
23:BB:545:U:H2'	23:BB:547:A:P	2.58	0.43
33:BL:91:ASP:OD1	33:BL:92:LEU:N	2.51	0.43
27:DE:112:LEU:HD11	33:DL:13:LYS:NZ	2.33	0.43
27:DE:14:VAL:HG11	27:DE:16:GLU:CD	2.38	0.43
27:DE:195:GLN:HE21	27:DE:199:MET:HA	1.82	0.43
23:DB:2090:A:O2'	46:DZ:49:ARG:CZ	2.66	0.43
12:CM:15:VAL:HG13	12:CM:33:LEU:HD12	1.99	0.43
22:DA:94:A:O2'	22:DA:95:U:H5'	2.17	0.43
24:DV:16:ALA:CA	24:DV:19:ARG:HH21	2.31	0.43
23:BB:1082:U:N3	23:BB:1086:A:C2	2.84	0.43
49:B2:42:LEU:HD12	49:B2:43:THR:H	1.83	0.43
23:BB:663:G:C5'	33:BL:25:SER:HB2	2.35	0.43
1:CA:1366:C:H2'	1:CA:1367:C:H6	1.83	0.43
12:AM:63:VAL:HB	12:AM:68:LEU:HG	2.00	0.43
23:BB:84:A:OP2	42:BU:91:LYS:HD3	2.18	0.43
18:AS:44:ILE:HA	18:AS:61:VAL:CG1	2.48	0.43
5:CF:85:ILE:HG22	5:CF:86:ARG:N	2.32	0.43
23:DB:1082:U:N3	23:DB:1086:A:C2	2.87	0.43
52:BI:17:ALA:C	52:BI:19:PRO:HD2	2.38	0.43
3:AD:163:GLN:N	3:AD:163:GLN:OE1	2.52	0.43
47:D0:47:TYR:CD2	47:D0:51:ARG:HA	2.53	0.43
8:AI:48:ARG:HA	8:AI:51:LEU:HD13	1.98	0.43
41:BT:66:LYS:HA	41:BT:77:ARG:HA	2.00	0.43
44:DX:18:LEU:HD12	44:DX:47:ARG:NH2	2.33	0.43
18:CS:35:ARG:HB2	18:CS:71:GLY:CA	2.48	0.43
51:B4:23:ILE:O	51:B4:24:ARG:O	2.36	0.43
51:B4:25:VAL:HG23	51:B4:35:GLN:HB2	2.01	0.43
39:BR:20:VAL:HG13	39:BR:97:LYS:HZ1	1.83	0.43
23:BB:2379:G:H2'	23:BB:2380:C:H6	1.82	0.43
20:AB:116:LEU:HD22	20:AB:140:LEU:HG	1.99	0.43
21:AU:5:VAL:HG13	21:AU:15:LEU:HD23	1.99	0.43
28:BF:12:VAL:CG1	28:BF:27:VAL:HG21	2.42	0.43
1:AA:1348:U:OP1	8:AI:111:GLU:HB2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AK:15:VAL:O	10:AK:16:SER:HB2	2.17	0.43
11:CL:97:VAL:O	11:CL:99:GLY:N	2.50	0.43
6:CG:14:ASP:CB	6:CG:19:SER:H	2.32	0.43
6:AG:29:LEU:HD12	6:AG:104:VAL:CG1	2.48	0.43
23:BB:1196:C:H2'	23:BB:1197:G:C8	2.54	0.43
7:CH:6:ILE:HD11	7:CH:31:LEU:HD23	2.00	0.43
1:AA:969:A:H2'	1:AA:970:C:O2	2.18	0.43
22:BA:78:A:H61	22:BA:98:G:H1'	1.83	0.43
4:AE:109:ALA:O	4:AE:113:VAL:HG13	2.18	0.43
8:AI:32:ARG:HG2	8:AI:32:ARG:HH11	1.83	0.43
19:CT:56:ILE:O	19:CT:60:GLN:HG2	2.19	0.43
1:CA:1142:G:H2'	1:CA:1143:G:C8	2.52	0.43
20:CB:202:ASN:ND2	20:CB:203:ASP:N	2.64	0.43
23:BB:2590:A:H2'	23:BB:2591:C:H6	1.83	0.43
23:BB:2180:U:H2'	23:BB:2181:U:C5	2.52	0.43
1:AA:8:A:H1'	4:AE:107:GLY:HA2	2.00	0.43
23:DB:390:U:H1'	23:DB:391:A:C8	2.53	0.43
23:DB:834:G:O2'	23:DB:835:C:H5'	2.17	0.43
1:AA:627:G:H2'	1:AA:628:G:H8	1.83	0.43
29:BG:94:ARG:NH1	29:BG:127:GLN:HB2	2.34	0.43
1:AA:554:A:H2'	1:AA:555:U:C6	2.53	0.43
26:DD:138:LEU:HD11	26:DD:142:VAL:HB	1.99	0.43
23:DB:1348:C:H2'	23:DB:1349:C:H5'	1.99	0.43
23:BB:1717:A:H2'	23:BB:1718:G:O4'	2.19	0.43
21:AU:11:PHE:CD2	2:CC:105:VAL:HG11	2.54	0.43
23:BB:1268:A:H2'	23:BB:1269:A:O4'	2.19	0.43
8:CI:33:SER:HB2	8:CI:36:GLN:CG	2.48	0.43
22:DA:107:G:O2'	22:DA:108:A:H5'	2.18	0.43
1:CA:746:A:H2'	1:CA:747:A:H8	1.83	0.43
23:DB:275:C:H2'	23:DB:276:U:O4'	2.18	0.43
36:DO:89:ASP:O	36:DO:90:VAL:HB	2.18	0.43
23:BB:1426:G:H8	23:BB:1426:G:OP2	2.01	0.43
28:BF:14:LYS:HG3	28:BF:15:LEU:N	2.33	0.43
30:BH:32:PRO:C	30:BH:34:GLY:H	2.21	0.43
1:AA:179:A:H2'	1:AA:180:U:H6	1.83	0.43
23:BB:490:C:H4'	23:BB:491:G:OP2	2.17	0.43
23:BB:622:G:H2'	23:BB:623:C:H6	1.82	0.43
1:AA:777:A:H2'	1:AA:778:G:C8	2.53	0.43
1:CA:645:G:O2'	1:CA:646:G:H5'	2.19	0.43
23:BB:1281:G:H2'	23:BB:1282:U:O4'	2.18	0.43
19:CT:32:LYS:O	19:CT:35:TYR:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:13:HIS:HA	12:CM:43:LYS:HA	2.00	0.43
1:AA:224:U:H2'	1:AA:225:C:C6	2.54	0.43
3:AD:125:ASN:HA	3:AD:141:VAL:HG23	2.00	0.43
34:DM:17:ASN:N	34:DM:17:ASN:HD22	2.17	0.43
1:AA:989:U:H2'	1:AA:990:C:H6	1.84	0.43
23:DB:2693:G:O2'	23:DB:2694:G:H5'	2.18	0.43
38:BQ:22:GLY:HA2	38:BQ:28:SER:HB3	1.99	0.43
23:BB:503:A:H5''	23:BB:504:A:H3'	2.01	0.43
1:AA:1350:A:H2'	1:AA:1351:U:C6	2.53	0.43
22:DA:87:U:N3	22:DA:89:U:OP1	2.52	0.43
23:BB:438:G:H2'	23:BB:439:A:C8	2.54	0.43
23:BB:870:U:O2'	34:BM:8:LYS:HB3	2.18	0.43
24:BV:4:ILE:N	24:BV:62:THR:O	2.50	0.43
24:BV:77:VAL:HG12	34:BM:133:LYS:HZ1	1.84	0.43
25:DC:140:VAL:O	25:DC:193:GLU:HG3	2.19	0.43
25:BC:141:HIS:ND1	25:BC:142:ASN:N	2.64	0.43
27:BE:151:GLY:O	27:BE:153:LEU:HD12	2.18	0.43
23:DB:1654:A:C4'	35:DN:1:MET:HG2	2.32	0.43
34:DM:4:PRO:HD3	34:DM:47:GLU:CG	2.48	0.43
43:BW:27:GLY:HA2	43:BW:60:ALA:CA	2.39	0.43
36:DO:35:ILE:O	36:DO:36:TYR:HB2	2.18	0.43
21:CU:14:ALA:N	21:CU:16:ARG:HH22	2.04	0.43
43:DW:67:LYS:HG2	43:DW:71:LYS:C	2.39	0.43
25:DC:12:ARG:HG3	25:DC:21:PRO:HD3	2.00	0.43
23:DB:480:A:H2	23:DB:499:U:O2	2.01	0.43
23:DB:2415:G:H4'	33:DL:66:PHE:CB	2.47	0.43
33:BL:82:LEU:HA	33:BL:86:GLU:OE1	2.19	0.43
31:BJ:102:GLU:HG2	31:BJ:103:ILE:H	1.83	0.43
27:DE:192:ALA:O	27:DE:194:LYS:N	2.51	0.43
21:AU:34:ARG:NH1	21:AU:39:LYS:HE3	2.33	0.43
22:BA:75:G:H5''	24:BV:12:GLN:OE1	2.19	0.43
23:DB:704:G:HO2'	23:DB:705:A:P	2.40	0.43
39:DR:11:GLN:HB3	39:DR:21:ARG:NH1	2.32	0.43
12:CM:22:TYR:O	12:CM:24:VAL:N	2.50	0.43
8:CI:115:VAL:HG22	8:CI:116:GLY:N	2.33	0.43
42:DU:27:VAL:HB	42:DU:33:VAL:HG22	1.99	0.43
42:BU:27:VAL:O	42:BU:28:LEU:HG	2.19	0.43
23:DB:1064:C:H2'	23:DB:1065:U:O4'	2.17	0.43
8:CI:56:MET:HA	8:CI:59:LYS:HB2	2.01	0.43
3:AD:2:ARG:NH1	3:AD:114:ARG:HD2	2.32	0.43
9:CJ:6:ILE:HD12	9:CJ:76:ILE:O	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DG:10:VAL:HA	29:DG:14:VAL:HG11	1.99	0.43
1:CA:1526:G:H2'	1:CA:1527:U:C6	2.53	0.43
29:BG:21:GLN:HG2	29:BG:38:ASP:HA	2.00	0.43
44:DX:18:LEU:HA	44:DX:22:LEU:HB2	2.01	0.43
15:CP:6:LEU:CD1	15:CP:71:VAL:HB	2.49	0.43
51:B4:33:HIS:HD2	51:B4:33:HIS:H	1.66	0.43
32:DK:39:ILE:N	32:DK:60:ALA:O	2.51	0.43
23:DB:138:U:O2'	23:DB:140:C:H5'	2.18	0.43
9:CJ:8:ILE:CG1	9:CJ:75:ASP:H	2.31	0.43
23:BB:284:U:H2'	23:BB:285:G:C8	2.53	0.43
30:BH:142:VAL:HG12	30:BH:143:ILE:H	1.83	0.43
52:BI:121:ILE:HA	52:BI:124:MET:HG2	2.00	0.43
41:DT:34:VAL:CG2	41:DT:35:ALA:N	2.79	0.43
42:DU:29:SER:O	42:DU:30:SER:CB	2.58	0.43
3:AD:169:TRP:O	3:AD:182:LYS:HB3	2.19	0.43
23:BB:2200:C:O2	23:BB:2226:C:N4	2.51	0.43
25:BC:255:LYS:HZ2	25:BC:261:ARG:CZ	2.30	0.43
8:CI:9:GLY:O	8:CI:16:ALA:HB3	2.17	0.43
27:DE:76:PRO:HB3	27:DE:84:THR:HB	2.01	0.43
29:DG:5:LYS:O	29:DG:68:ARG:HD2	2.18	0.43
23:DB:1386:C:H2'	23:DB:1387:A:H8	1.81	0.43
3:AD:100:VAL:HA	3:AD:103:ARG:CD	2.48	0.43
23:DB:743:A:OP1	26:DD:134:HIS:NE2	2.51	0.43
2:CC:35:ASP:O	2:CC:39:ARG:HG3	2.18	0.43
38:BQ:40:LYS:HA	38:BQ:43:GLN:HE21	1.82	0.43
20:CB:138:ARG:HA	20:CB:141:GLU:CD	2.39	0.43
9:AJ:65:TYR:C	13:AN:98:ALA:HB2	2.39	0.43
6:CG:70:PRO:HD3	6:CG:102:TRP:HZ3	1.83	0.43
1:AA:1226:C:H4'	1:AA:1227:A:OP1	2.19	0.43
11:CL:14:LYS:HE2	11:CL:16:ALA:CB	2.47	0.43
3:CD:88:ASN:O	3:CD:92:LEU:N	2.51	0.43
3:AD:89:LEU:O	3:AD:92:LEU:HB2	2.18	0.43
1:AA:538:G:H2'	1:AA:539:A:C8	2.54	0.43
11:AL:43:LYS:N	11:AL:44:PRO:CD	2.80	0.43
23:DB:217:A:H3'	23:DB:218:A:H8	1.82	0.43
2:CC:76:ILE:HA	2:CC:83:VAL:CG2	2.49	0.43
18:AS:29:PRO:HB3	18:AS:47:THR:HB	2.01	0.43
30:BH:72:ILE:O	30:BH:72:ILE:HG23	2.18	0.43
1:CA:796:C:O2'	1:CA:797:C:H5'	2.17	0.43
23:DB:90:U:O5'	23:DB:91:A:H5''	2.18	0.43
23:BB:1228:G:H2'	23:BB:1229:C:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AL:41:PRO:HG3	11:AL:46:SER:O	2.18	0.43
23:DB:2223:G:O2'	23:DB:2224:G:H5'	2.19	0.43
41:BT:48:GLN:CG	41:BT:49:LYS:N	2.81	0.43
1:AA:844:G:H2'	1:AA:845:A:H5''	2.00	0.43
29:BG:155:PRO:HB2	29:BG:172:GLU:HG3	2.00	0.43
23:DB:576:U:H2'	23:DB:577:G:C8	2.52	0.43
28:DF:57:ALA:HA	28:DF:62:GLN:O	2.19	0.43
26:BD:67:HIS:NE2	26:BD:72:GLY:N	2.67	0.43
1:CA:394:G:H2'	1:CA:395:C:H6	1.83	0.43
18:AS:12:LEU:CD2	18:AS:15:LEU:HD23	2.49	0.43
23:BB:1958:C:O2'	23:BB:1959:G:H5'	2.18	0.43
23:BB:1987:A:H2'	23:BB:1988:G:C8	2.53	0.43
33:BL:51:GLU:O	33:BL:52:GLY:C	2.55	0.43
23:BB:1072:C:N3	23:BB:1092:C:N4	2.66	0.43
1:CA:1420:U:O2'	1:CA:1421:G:H5'	2.19	0.43
29:BG:57:TYR:OH	29:BG:59:ASP:HB2	2.18	0.43
5:CF:40:GLU:H	5:CF:61:LEU:HB2	1.82	0.43
36:BO:86:GLY:O	36:BO:89:ASP:HB2	2.18	0.43
23:BB:2243:U:O2	23:BB:2434:A:C2	2.71	0.43
1:AA:771:G:H2'	1:AA:772:U:C6	2.53	0.43
23:BB:392:U:O2'	23:BB:393:C:H5'	2.17	0.43
35:DN:106:ASP:OD1	35:DN:106:ASP:C	2.56	0.43
25:DC:172:THR:CG2	25:DC:173:LEU:H	2.29	0.43
37:BP:92:ARG:NH2	37:BP:110:LYS:HB3	2.34	0.43
37:BP:27:VAL:HG22	37:BP:28:LYS:N	2.34	0.43
37:BP:96:LEU:O	37:BP:97:TYR:C	2.57	0.43
26:BD:144:GLY:O	26:BD:145:SER:HB2	2.18	0.43
27:BE:117:ARG:H	27:BE:118:LEU:HD23	1.82	0.43
26:DD:110:THR:HG21	26:DD:169:ARG:HH21	1.84	0.43
26:DD:32:ASN:HB2	26:DD:91:THR:HG22	2.00	0.43
37:DP:50:ARG:HG3	37:DP:99:LEU:H	1.84	0.43
25:BC:22:GLU:HA	25:BC:202:ARG:HH21	1.83	0.43
34:DM:5:LYS:HE2	34:DM:8:LYS:HD2	2.00	0.43
35:DN:45:ARG:CZ	35:DN:95:THR:HB	2.48	0.43
23:DB:250:G:OP2	50:D3:7:ARG:CZ	2.66	0.43
31:DJ:110:PRO:O	31:DJ:111:LYS:HB2	2.18	0.43
31:DJ:67:ASN:C	31:DJ:69:ARG:H	2.22	0.43
27:DE:46:GLN:HG3	27:DE:49:ARG:CZ	2.49	0.43
32:BK:102:PRO:HA	32:BK:121:GLU:CB	2.46	0.43
40:BS:1:MET:HB3	40:BS:4:ILE:HG12	1.99	0.43
39:DR:35:PHE:O	39:DR:63:VAL:HG23	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2270:A:H3'	23:DB:2271:G:H8	1.83	0.43
27:DE:198:GLU:HB3	27:DE:199:MET:H	1.55	0.43
23:DB:2230:G:H2'	23:DB:2231:U:H6	1.82	0.43
41:DT:92:ASN:C	41:DT:93:LEU:HD12	2.37	0.43
23:BB:337:C:OP1	42:BU:81:ARG:NH2	2.51	0.43
12:CM:33:LEU:HB3	12:CM:38:ILE:HB	1.99	0.43
52:BI:75:ALA:HB2	52:BI:112:LYS:HE2	2.00	0.43
1:CA:948:C:OP1	12:CM:105:ALA:HA	2.18	0.43
32:BK:24:VAL:HG22	32:BK:39:ILE:HD12	2.00	0.43
13:AN:15:LEU:C	13:AN:17:ASP:H	2.21	0.43
26:BD:16:THR:OG1	37:BP:80:VAL:HB	2.19	0.43
37:BP:13:LYS:HZ1	37:BP:17:PRO:HG3	1.78	0.43
12:AM:79:LEU:HD22	12:AM:86:ARG:NH2	2.34	0.43
5:CF:57:ALA:HB3	5:CF:59:TYR:HE1	1.84	0.43
23:DB:2619:C:H2'	23:DB:2620:C:C6	2.53	0.43
13:CN:41:TRP:HD1	13:CN:43:ALA:HB2	1.82	0.43
1:CA:429:U:H4'	1:CA:430:A:O5'	2.18	0.43
28:BF:107:VAL:CG1	28:BF:116:LEU:HD21	2.48	0.43
28:BF:177:ARG:NE	28:BF:178:LYS:N	2.66	0.43
15:AP:21:VAL:HG21	15:AP:60:TRP:CD1	2.53	0.43
26:BD:37:VAL:HG12	26:BD:38:LYS:NZ	2.34	0.43
23:BB:6:A:O2'	23:BB:7:G:H5'	2.18	0.43
23:BB:858:G:N2	23:BB:2269:G:OP2	2.52	0.43
29:BG:35:THR:O	29:BG:36:LEU:HD12	2.18	0.43
44:DX:23:ARG:O	44:DX:26:PHE:HB2	2.19	0.43
23:DB:545:U:H3'	23:DB:546:U:H5''	2.01	0.43
34:BM:31:PHE:CD2	34:BM:109:PRO:HB2	2.53	0.43
32:DK:2:ILE:HD12	32:DK:2:ILE:N	2.32	0.43
24:DV:69:GLU:O	24:DV:70:ILE:HG23	2.18	0.43
36:BO:41:ALA:O	36:BO:42:PRO:C	2.56	0.43
4:CE:87:VAL:CG1	4:CE:88:HIS:N	2.75	0.43
26:DD:41:ALA:C	26:DD:43:ASP:H	2.22	0.43
48:B1:31:GLU:HB3	48:B1:32:LYS:CE	2.49	0.43
23:BB:764:A:N1	23:BB:1789:A:O2'	2.48	0.43
42:DU:39:ASN:HB3	42:DU:59:GLU:HB2	2.01	0.43
3:AD:169:TRP:CE2	3:AD:185:PRO:HB3	2.54	0.43
26:DD:146:ILE:CD1	26:DD:155:VAL:HG13	2.47	0.43
28:DF:23:SER:C	28:DF:25:MET:N	2.71	0.43
20:AB:120:SER:HA	20:AB:125:PHE:CB	2.44	0.43
10:CK:70:ALA:N	10:CK:73:VAL:HG22	2.33	0.43
44:DX:7:ARG:HH11	44:DX:7:ARG:HB3	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:920:U:O2'	1:AA:921:U:H5'	2.19	0.43
23:DB:934:U:H2'	23:DB:935:C:H6	1.84	0.43
2:CC:61:LYS:HB3	2:CC:61:LYS:HE2	1.89	0.43
25:BC:27:LYS:N	25:BC:28:PRO:HD3	2.31	0.43
23:BB:319:G:H2'	23:BB:320:A:O4'	2.18	0.43
3:AD:12:ARG:HG3	3:AD:33:ILE:HA	2.00	0.43
13:AN:92:ILE:HG21	13:AN:95:LEU:HD23	1.99	0.43
1:CA:191:G:H2'	1:CA:192:A:C8	2.53	0.43
23:DB:324:A:C6	23:DB:339:U:H5'	2.54	0.43
23:DB:324:A:H61	23:DB:338:G:C2'	2.31	0.43
7:AH:9:MET:HE1	7:AH:32:LYS:O	2.19	0.43
23:BB:282:A:H2'	23:BB:283:G:H8	1.82	0.43
23:DB:2732:G:H5'	23:DB:2733:A:O4'	2.18	0.43
30:DH:135:HIS:CD2	30:DH:138:VAL:HG23	2.54	0.43
23:DB:285:G:H2'	23:DB:286:U:C6	2.53	0.43
1:CA:24:U:O2'	1:CA:25:C:H5'	2.18	0.43
23:BB:1064:C:C4'	52:BI:90:GLY:HA2	2.45	0.43
4:AE:17:VAL:HB	4:AE:34:ALA:HB2	2.00	0.43
27:BE:108:ILE:HD12	27:BE:108:ILE:H	1.83	0.43
36:DO:86:GLY:C	36:DO:88:LYS:N	2.72	0.43
19:CT:21:ALA:O	19:CT:25:SER:HB2	2.18	0.43
1:CA:984:C:H2'	1:CA:985:C:C6	2.54	0.43
23:DB:2889:C:H2'	23:DB:2890:G:C8	2.53	0.43
1:CA:415:A:N3	1:CA:415:A:O4'	2.52	0.43
42:DU:85:ARG:O	42:DU:87:GLU:HG3	2.19	0.43
23:BB:871:U:H2'	23:BB:872:U:C6	2.51	0.43
23:BB:2285:C:N4	48:B1:24:LYS:NZ	2.67	0.43
1:CA:709:U:H2'	1:CA:710:G:H8	1.84	0.43
23:BB:1289:C:H2'	23:BB:1290:C:H6	1.83	0.43
1:AA:709:U:H2'	1:AA:710:G:H8	1.83	0.43
1:CA:1121:U:O2'	1:CA:1122:U:H5'	2.18	0.43
23:BB:1936:A:N6	23:BB:1963:U:N3	2.66	0.43
19:AT:19:HIS:O	19:AT:23:ARG:HG2	2.18	0.43
23:DB:1511:G:H2'	23:DB:1512:C:C6	2.54	0.43
33:BL:4:ASN:C	33:BL:6:LEU:H	2.20	0.43
23:BB:1824:G:H2'	23:BB:1825:U:H6	1.84	0.43
1:AA:1386:G:H2'	1:AA:1387:G:H8	1.83	0.43
23:DB:1281:G:H2'	23:DB:1282:U:O4'	2.18	0.43
1:CA:11:G:H2'	1:CA:12:U:C6	2.54	0.43
23:BB:357:C:H2'	23:BB:358:U:C6	2.53	0.43
5:AF:82:ASP:CG	25:BC:166:ARG:HH21	2.22	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2508:G:O3'	23:DB:2555:U:H5'	2.18	0.43
23:DB:2373:G:O2'	23:DB:2374:C:H5'	2.19	0.43
2:CC:10:ARG:HG2	2:CC:10:ARG:HH11	1.84	0.43
2:CC:9:ILE:HG23	2:CC:10:ARG:HG2	2.00	0.43
10:CK:35:ASP:N	10:CK:41:LEU:HD11	2.34	0.43
33:BL:35:HIS:ND1	33:BL:35:HIS:O	2.52	0.43
11:CL:28:GLN:HE21	11:CL:28:GLN:HB3	1.58	0.43
23:BB:535:G:O2'	38:BQ:52:ARG:HD3	2.18	0.43
38:BQ:52:ARG:NH1	38:BQ:55:GLN:HE21	2.17	0.43
27:BE:48:THR:CG2	27:BE:49:ARG:N	2.52	0.43
24:BV:4:ILE:HB	24:BV:63:ILE:CA	2.40	0.43
46:BZ:58:ASP:O	46:BZ:59:ARG:HD3	2.18	0.43
46:BZ:59:ARG:O	46:BZ:60:PHE:CG	2.71	0.43
25:DC:143:VAL:O	25:DC:152:GLN:HB2	2.19	0.43
25:DC:196:ASN:HB2	25:DC:199:HIS:CE1	2.54	0.43
26:BD:108:ASP:HB2	26:BD:173:GLN:HA	2.01	0.43
26:BD:23:PRO:HA	26:BD:190:LYS:N	2.33	0.43
26:BD:109:VAL:HG22	26:BD:203:VAL:HG22	2.00	0.43
37:BP:60:VAL:HB	37:BP:61:ARG:H	1.23	0.43
27:BE:144:GLU:C	27:BE:146:VAL:N	2.71	0.43
37:DP:51:ASN:HB2	37:DP:60:VAL:HB	2.01	0.43
33:DL:90:VAL:C	33:DL:92:LEU:H	2.22	0.43
43:BW:44:PHE:H	43:BW:76:ARG:HG3	1.83	0.43
31:DJ:5:THR:HG23	31:DJ:7:LYS:HD3	2.00	0.43
23:DB:454:A:C3'	23:DB:455:C:H5'	2.48	0.43
47:B0:35:GLU:CG	47:B0:36:LYS:N	2.81	0.43
47:B0:45:ASP:HB3	47:B0:54:ILE:O	2.17	0.43
35:BN:78:LYS:O	35:BN:82:GLU:HB2	2.19	0.43
40:BS:28:LYS:HD3	40:BS:29:VAL:H	1.83	0.43
30:BH:82:SER:O	30:BH:90:LEU:HD23	2.18	0.43
35:BN:65:LEU:HD23	35:BN:69:ARG:HG3	1.99	0.43
33:BL:118:THR:HG23	33:BL:119:PRO:CD	2.41	0.43
27:DE:149:ILE:O	27:DE:149:ILE:HG13	2.18	0.43
27:DE:6:LYS:CG	27:DE:7:ASP:H	2.32	0.43
23:BB:138:U:H2'	23:BB:140:C:C2	2.53	0.43
1:AA:1014:A:H2	1:AA:1219:A:H1'	1.83	0.43
18:AS:31:ARG:NH2	18:AS:55:GLN:HE22	2.16	0.43
41:DT:40:LYS:HB3	41:DT:58:VAL:CG2	2.48	0.43
41:DT:58:VAL:HG12	41:DT:59:ASN:H	1.83	0.43
42:BU:2:ALA:O	42:BU:4:ILE:N	2.46	0.43
1:AA:1389:C:H2'	1:AA:1390:U:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:953:G:H3'	1:CA:954:G:H8	1.83	0.43
1:CA:1330:U:OP1	12:CM:22:TYR:O	2.36	0.43
52:BI:96:LYS:HG3	52:BI:138:VAL:HG23	1.99	0.43
23:DB:512:G:H4'	23:DB:512:G:OP1	2.18	0.43
52:BI:17:ALA:O	52:BI:18:ASN:CB	2.67	0.43
47:D0:36:LYS:HE3	47:D0:48:TYR:CE1	2.51	0.43
8:AI:86:LEU:N	8:AI:86:LEU:HD13	2.34	0.43
11:CL:20:VAL:HA	11:CL:94:TYR:HE2	1.83	0.43
41:DT:3:ARG:H	41:DT:3:ARG:HG2	1.62	0.43
4:CE:104:ILE:C	4:CE:104:ILE:HD13	2.38	0.43
26:DD:81:GLU:CG	26:DD:82:PHE:N	2.81	0.43
10:AK:88:PRO:CD	21:AU:28:LEU:HD22	2.48	0.43
34:DM:133:LYS:HD2	34:DM:134:THR:O	2.18	0.43
23:BB:730:A:H3'	54:BB:3595:HOH:O	2.19	0.43
23:BB:500:G:N2	23:BB:502:A:H3'	2.34	0.43
3:AD:151:GLN:HB3	3:AD:154:VAL:CG1	2.49	0.43
7:CH:74:ILE:O	7:CH:74:ILE:HG23	2.18	0.43
38:DQ:70:GLN:HG2	38:DQ:71:ASN:H	1.80	0.43
44:BX:14:LEU:HD22	44:BX:57:LEU:HD22	1.99	0.43
23:DB:1552:A:C2'	23:DB:1553:A:H5'	2.48	0.43
23:BB:264:C:O2'	23:BB:265:A:H5''	2.19	0.43
23:DB:713:G:O2'	23:DB:714:U:H5'	2.19	0.43
23:DB:2016:U:H2'	23:DB:2017:U:C6	2.54	0.43
1:CA:643:C:H4'	7:CH:31:LEU:HD22	2.00	0.43
1:AA:473:U:N3	1:AA:474:G:N7	2.67	0.43
23:BB:2648:G:H2'	23:BB:2649:C:H6	1.83	0.43
22:BA:78:A:C2	22:BA:99:A:C4	3.06	0.43
1:AA:1073:U:O3'	20:AB:104:LYS:NZ	2.51	0.43
1:CA:91:U:H2'	1:CA:92:U:C6	2.54	0.43
25:BC:78:GLU:H	25:BC:93:VAL:H	1.66	0.43
23:DB:2065:C:H1'	23:DB:2449:U:O2	2.19	0.43
4:AE:95:MET:CE	4:AE:114:LEU:HD21	2.48	0.43
4:AE:114:LEU:CD2	4:AE:119:VAL:HG21	2.47	0.43
2:CC:53:ARG:HA	2:CC:113:LYS:HZ3	1.83	0.43
1:AA:82:G:C6	1:AA:88:U:O2	2.71	0.43
23:BB:1407:G:H2'	23:BB:1408:G:H8	1.84	0.43
23:BB:224:U:H2'	23:BB:225:C:O4'	2.18	0.43
1:AA:1300:G:O2'	1:AA:1301:U:O5'	2.37	0.43
1:AA:177:G:N3	1:AA:177:G:O4'	2.51	0.43
23:BB:181:A:O2'	23:BB:182:A:H5'	2.19	0.43
23:DB:2070:A:H2'	23:DB:2071:A:C8	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BG:122:ALA:O	29:BG:123:GLU:HG3	2.19	0.43
23:BB:2720:U:H2'	23:BB:2721:A:C8	2.53	0.43
1:AA:1048:G:H4'	13:AN:2:LYS:HZ2	1.82	0.43
29:BG:94:ARG:CB	29:BG:94:ARG:HH11	2.31	0.43
25:DC:56:GLY:CA	25:DC:214:GLY:H	2.30	0.43
34:DM:127:LYS:CG	34:DM:128:THR:H	2.31	0.43
2:AC:160:GLU:O	2:AC:160:GLU:HG2	2.19	0.43
23:BB:409:G:O2'	23:BB:410:G:H5'	2.18	0.43
23:DB:1946:U:H2'	23:DB:1947:C:H6	1.83	0.43
23:DB:231:A:H3'	23:DB:232:G:C8	2.54	0.43
1:AA:1033:G:H3'	1:AA:1034:G:H5''	2.01	0.43
23:DB:573:U:N3	23:DB:2031:A:OP1	2.45	0.43
23:BB:2691:C:H2'	23:BB:2692:G:H8	1.84	0.43
1:CA:648:A:H2'	1:CA:649:A:C8	2.54	0.43
23:DB:1607:C:N4	23:DB:1622:G:OP2	2.51	0.43
23:BB:2663:G:H2'	23:BB:2664:G:C8	2.53	0.43
22:BA:14:U:H5''	22:BA:71:C:O4'	2.18	0.43
1:CA:484:G:H4'	1:CA:485:U:H5'	2.00	0.43
1:CA:1204:A:H2'	1:CA:1205:U:C6	2.53	0.43
23:BB:373:U:O2'	23:BB:374:A:H5'	2.18	0.43
23:BB:372:G:N2	23:BB:400:G:H2'	2.34	0.43
27:BE:83:VAL:O	27:BE:83:VAL:HG13	2.19	0.43
23:BB:2133:G:N3	23:BB:2133:G:C2'	2.80	0.43
23:DB:1864:U:O2'	23:DB:1865:U:H5'	2.17	0.43
39:BR:2:TYR:HB2	39:BR:44:GLY:O	2.19	0.43
23:BB:36:G:C2	23:BB:37:C:C2	3.07	0.43
51:D4:26:ILE:CD1	51:D4:34:LYS:HA	2.48	0.43
25:BC:47:ARG:HB3	25:BC:48:ILE:H	1.60	0.43
34:BM:67:VAL:HB	34:BM:100:LYS:CG	2.39	0.43
50:B3:23:HIS:HB2	50:B3:24:LYS:H	1.47	0.43
23:DB:588:U:O4	23:DB:670:A:H1'	2.18	0.43
26:BD:31:ALA:O	26:BD:32:ASN:ND2	2.51	0.43
37:BP:18:SER:C	37:BP:20:ARG:H	2.21	0.43
37:BP:52:ARG:CB	37:BP:60:VAL:HG11	2.22	0.43
37:BP:47:ILE:HG23	37:BP:63:ILE:CB	2.49	0.43
23:BB:2848:G:C8	37:BP:96:LEU:HD23	2.54	0.43
33:DL:2:ARG:HH22	33:DL:6:LEU:CD1	2.32	0.43
25:BC:160:TYR:HA	25:BC:193:GLU:HG2	2.01	0.43
27:BE:149:ILE:HA	27:BE:168:ASP:O	2.18	0.43
26:DD:52:THR:HB	26:DD:53:GLY:H	1.58	0.43
37:DP:111:GLU:O	37:DP:113:LEU:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DL:118:THR:O	33:DL:119:PRO:C	2.57	0.43
23:DB:929:U:H1'	45:DY:24:LEU:O	2.18	0.43
22:DA:116:G:H4'	36:DO:54:VAL:HG13	2.01	0.43
31:DJ:17:VAL:CG2	31:DJ:139:VAL:HB	2.49	0.43
5:CF:64:VAL:CG1	5:CF:65:GLU:N	2.81	0.43
32:BK:63:VAL:HG21	32:BK:85:VAL:HG21	2.00	0.43
35:BN:94:TYR:HB3	35:BN:95:THR:H	1.70	0.43
30:BH:125:THR:HA	30:BH:146:VAL:CB	2.46	0.43
43:DW:24:ARG:HE	43:DW:58:LEU:HB2	1.82	0.43
43:DW:66:VAL:HG13	43:DW:67:LYS:N	2.28	0.43
43:DW:72:GLY:C	43:DW:74:LYS:N	2.70	0.43
25:DC:22:GLU:HA	25:DC:202:ARG:HH21	1.83	0.43
42:DU:57:ILE:HD13	42:DU:58:VAL:O	2.19	0.43
35:BN:20:MET:HG2	35:BN:20:MET:H	1.58	0.43
27:DE:147:LEU:HD22	27:DE:167:VAL:HG22	2.00	0.43
41:BT:6:ARG:C	41:BT:8:LEU:H	2.21	0.43
23:DB:1814:G:H5'	25:DC:51:ARG:HG2	2.00	0.43
44:BX:36:GLN:H	44:BX:36:GLN:CD	2.21	0.43
40:DS:29:VAL:CG2	40:DS:71:VAL:HG23	2.33	0.43
22:DA:76:G:O2'	22:DA:77:U:H5'	2.18	0.43
23:BB:1079:C:O2'	52:BI:133:ARG:CZ	2.66	0.43
19:CT:66:ILE:CA	19:CT:70:LYS:HZ2	2.31	0.43
23:BB:86:G:OP2	42:BU:28:LEU:HB3	2.19	0.43
42:BU:90:LYS:CG	42:BU:91:LYS:H	2.32	0.43
18:AS:62:THR:HG22	18:AS:63:ASP:N	2.33	0.43
52:DI:32:VAL:HG12	52:DI:33:ASN:N	2.34	0.43
34:DM:50:ARG:O	34:DM:53:MET:HG3	2.18	0.43
25:BC:196:ASN:O	25:BC:199:HIS:HB2	2.18	0.43
47:D0:29:VAL:HG22	47:D0:32:THR:HG23	2.00	0.43
28:BF:121:PHE:CE2	28:BF:166:ARG:N	2.87	0.43
8:AI:9:GLY:HA2	8:AI:80:HIS:CD2	2.53	0.43
30:DH:87:GLU:HB2	30:DH:89:LYS:HZ3	1.82	0.43
18:CS:35:ARG:NH2	18:CS:52:ASN:ND2	2.67	0.43
51:B4:14:CYS:SG	51:B4:25:VAL:O	2.77	0.43
36:BO:24:THR:HG22	36:BO:41:ALA:HA	2.00	0.43
19:AT:66:ILE:HG23	19:AT:70:LYS:CD	2.48	0.43
39:DR:87:GLN:O	39:DR:89:HIS:N	2.52	0.43
13:CN:60:ARG:O	13:CN:61:ASN:CB	2.62	0.43
23:DB:1796:U:O3'	25:DC:251:THR:HA	2.18	0.43
42:BU:39:ASN:HD21	42:BU:42:LYS:HE2	1.83	0.43
8:CI:46:VAL:O	8:CI:49:GLN:HB2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:813:U:O2'	1:CA:814:A:H5'	2.19	0.43
23:DB:2751:G:OP2	29:DG:2:ARG:HG3	2.18	0.43
10:CK:69:CYS:O	10:CK:73:VAL:N	2.51	0.43
4:AE:49:TYR:HE2	4:AE:133:ILE:HG12	1.83	0.43
10:AK:69:CYS:O	10:AK:71:ASP:N	2.51	0.43
3:AD:19:PHE:CB	3:AD:110:ARG:HH12	2.30	0.43
6:CG:14:ASP:HB3	6:CG:18:GLY:H	1.79	0.43
23:BB:849:A:O2'	45:BY:20:LYS:HG2	2.18	0.43
25:DC:209:ALA:O	25:DC:210:ALA:HB2	2.18	0.43
26:DD:22:ILE:HG23	26:DD:191:GLY:N	2.33	0.43
42:DU:95:PHE:HB2	42:DU:99:SER:O	2.18	0.43
20:AB:98:GLY:C	20:AB:100:LEU:H	2.22	0.43
36:BO:55:GLU:HA	36:BO:62:LEU:HB2	2.01	0.43
1:CA:1032:G:H2'	1:CA:1033:G:C4'	2.49	0.43
23:DB:1408:G:O2'	23:DB:1409:U:H5'	2.19	0.43
23:DB:2349:G:OP2	50:D3:41:ARG:HD3	2.18	0.43
4:AE:155:LYS:HG3	7:AH:65:PHE:HB2	2.01	0.43
35:DN:54:LEU:HD11	35:DN:65:LEU:HB3	2.01	0.43
12:CM:63:VAL:HG12	12:CM:68:LEU:HB2	2.01	0.43
27:BE:127:GLU:OE1	27:BE:130:LYS:HG3	2.19	0.43
1:AA:818:G:O2'	1:AA:819:A:H5''	2.19	0.43
34:BM:82:MET:HB2	34:BM:84:LYS:CD	2.49	0.43
23:BB:2241:A:H2'	23:BB:2242:G:H8	1.78	0.43
1:AA:93:U:H2'	1:AA:95:C:C5	2.53	0.43
23:DB:1534:U:O2'	23:DB:1535:A:H8	2.01	0.43
1:AA:1114:C:H2'	1:AA:1115:U:O4'	2.19	0.43
26:BD:52:THR:N	26:BD:75:ALA:HB1	2.33	0.43
1:CA:1300:G:C2'	1:CA:1301:U:OP2	2.67	0.43
1:CA:177:G:N3	1:CA:177:G:O4'	2.51	0.43
4:CE:81:GLN:NE2	4:CE:148:SER:HA	2.32	0.43
1:CA:337:G:O2'	1:CA:338:A:H5'	2.19	0.43
23:DB:828:U:H2'	23:DB:829:A:C8	2.53	0.43
5:CF:100:SER:N	17:CR:23:LYS:NZ	2.66	0.43
1:CA:93:U:O5'	1:CA:93:U:H6	2.01	0.43
2:AC:111:ASP:OD2	2:AC:114:LEU:HG	2.19	0.43
23:DB:1911:U:H2'	23:DB:1918:A:C2	2.54	0.43
14:CO:87:ARG:HA	14:CO:87:ARG:NE	2.34	0.43
22:DA:15:A:H1'	22:DA:109:A:C5	2.54	0.43
23:BB:1050:A:H2'	23:BB:1051:G:O4'	2.18	0.43
1:AA:644:U:O2'	1:AA:645:G:H5'	2.19	0.43
23:DB:2438:U:O2'	23:DB:2439:A:H5''	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:68:PHE:HA	20:CB:161:PHE:O	2.19	0.43
19:CT:44:ALA:O	19:CT:48:LYS:HB3	2.18	0.43
23:DB:1322:A:H2'	23:DB:1323:C:H5'	1.99	0.43
1:CA:463:U:H5'	1:CA:464:U:OP2	2.18	0.43
29:BG:93:TYR:CD1	29:BG:93:TYR:N	2.84	0.43
23:DB:1008:A:N6	23:DB:1136:G:C6	2.87	0.43
23:DB:97:C:H2'	23:DB:98:G:O4'	2.18	0.43
10:CK:81:LEU:HD22	10:CK:104:PHE:CD1	2.54	0.43
23:DB:1068:G:C6	23:DB:1069:A:N6	2.87	0.43
23:BB:2708:G:O2'	23:BB:2709:G:H5'	2.19	0.43
1:AA:144:G:H2'	1:AA:145:G:O4'	2.19	0.43
8:CI:91:GLU:N	8:CI:91:GLU:CD	2.72	0.43
23:DB:841:G:O2'	23:DB:842:U:H5'	2.18	0.43
23:BB:2355:G:O3'	43:BW:20:LEU:HD22	2.19	0.43
23:BB:910:A:H2	23:BB:2264:C:O2	2.01	0.43
24:BV:42:LEU:HD12	24:BV:47:VAL:HG11	2.01	0.43
46:BZ:9:TYR:CE1	46:BZ:11:GLU:HB2	2.53	0.43
46:BZ:30:HIS:C	46:BZ:48:GLN:HG2	2.39	0.43
25:DC:194:VAL:HB	25:DC:195:GLY:H	1.59	0.43
37:BP:27:VAL:HG22	37:BP:28:LYS:O	2.18	0.43
23:BB:2578:G:N3	26:BD:145:SER:HB3	2.34	0.43
27:BE:4:VAL:HG13	27:BE:5:LEU:N	2.33	0.43
20:CB:205:ALA:O	20:CB:209:VAL:HG22	2.19	0.43
20:CB:42:LEU:C	20:CB:44:LYS:H	2.21	0.43
23:DB:850:U:H6	23:DB:850:U:O5'	2.01	0.43
45:DY:47:ILE:O	45:DY:51:SER:N	2.52	0.43
39:BR:78:ARG:HD3	39:BR:87:GLN:C	2.39	0.43
31:DJ:25:LEU:HD11	31:DJ:63:ALA:N	2.33	0.43
32:BK:99:ILE:N	32:BK:99:ILE:HD12	2.34	0.43
35:BN:114:GLU:OE1	47:B0:52:LYS:NZ	2.51	0.43
35:BN:33:ILE:HG22	35:BN:113:ILE:O	2.18	0.43
40:BS:34:ASP:HA	40:BS:38:TYR:CD2	2.53	0.43
39:DR:18:GLN:HA	39:DR:99:THR:HA	2.01	0.43
43:DW:67:LYS:HD3	43:DW:68:PHE:H	1.84	0.43
1:AA:978:A:O2'	1:AA:1322:C:H5	2.02	0.43
23:BB:144:A:OP2	23:BB:144:A:H8	2.00	0.43
25:DC:45:ASN:ND2	25:DC:50:THR:OG1	2.52	0.43
30:DH:114:GLU:HB3	30:DH:133:GLN:HG3	2.00	0.43
42:BU:22:GLY:HA2	42:BU:36:GLU:HB2	2.01	0.43
25:DC:16:VAL:O	25:DC:17:LYS:HB2	2.19	0.43
24:DV:21:ARG:NH2	24:DV:88:HIS:H	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:262:A:H5''	19:CT:70:LYS:HD2	2.01	0.43
26:BD:115:GLY:HA2	26:BD:165:MET:CE	2.48	0.43
10:CK:19:VAL:CG2	10:CK:34:THR:HG22	2.36	0.43
48:B1:49:LYS:HG2	48:B1:50:GLU:O	2.18	0.43
23:BB:1113:U:H5''	29:BG:1:SER:C	2.39	0.43
23:BB:2751:G:H5''	29:BG:2:ARG:O	2.18	0.43
42:BU:6:ARG:C	42:BU:8:ASP:N	2.71	0.43
33:DL:39:LYS:HZ2	33:DL:39:LYS:N	2.16	0.43
25:DC:224:MET:HG3	25:DC:233:GLY:N	2.33	0.43
16:CQ:10:ARG:NE	16:CQ:11:VAL:H	2.16	0.43
46:DZ:59:ARG:HB2	46:DZ:60:PHE:H	1.59	0.43
28:BF:170:ALA:HA	28:BF:173:ASP:OD2	2.18	0.43
1:CA:1125:U:OP1	9:CJ:37:ARG:NH1	2.52	0.43
26:BD:1:MET:HB2	26:BD:84:LEU:HD22	2.01	0.43
41:DT:8:LEU:HD21	44:DX:26:PHE:CZ	2.54	0.43
44:DX:18:LEU:HD12	44:DX:47:ARG:HH22	1.82	0.43
9:CJ:65:TYR:CE1	13:CN:84:ARG:HA	2.52	0.43
4:CE:93:VAL:HG13	4:CE:110:MET:SD	2.58	0.43
13:CN:11:LYS:NZ	13:CN:11:LYS:HA	2.34	0.43
1:AA:973:G:O2'	9:AJ:56:HIS:HA	2.18	0.43
30:BH:130:VAL:O	30:BH:142:VAL:N	2.45	0.43
5:CF:12:PRO:HB3	5:CF:56:LYS:O	2.19	0.43
5:AF:7:VAL:HG23	5:AF:60:VAL:O	2.17	0.43
23:BB:481:G:OP2	42:BU:43:LYS:HG3	2.18	0.43
20:AB:175:ALA:C	20:AB:177:ASN:H	2.20	0.43
25:BC:253:GLY:O	25:BC:254:LYS:HG3	2.19	0.43
8:CI:80:HIS:HE1	8:CI:103:VAL:O	2.01	0.43
2:CC:129:PHE:O	2:CC:133:MET:HG3	2.18	0.43
15:AP:67:ILE:CD1	15:AP:72:ALA:HA	2.49	0.43
1:AA:1057:G:H2'	1:AA:1058:G:O4'	2.19	0.43
35:DN:117:ASP:CG	35:DN:118:ARG:N	2.72	0.43
10:AK:57:SER:O	10:AK:90:PRO:HG2	2.19	0.43
23:BB:1552:A:C2'	23:BB:1553:A:H5'	2.47	0.43
26:DD:176:ASP:OD2	26:DD:190:LYS:HD2	2.18	0.43
26:DD:21:SER:O	26:DD:23:PRO:HD3	2.19	0.43
7:AH:69:ALA:HB3	7:AH:72:GLU:OE2	2.19	0.43
23:DB:2065:C:H2'	23:DB:2066:C:H6	1.83	0.43
20:CB:186:VAL:HG21	20:CB:198:VAL:HG13	2.01	0.43
23:BB:1410:G:H2'	23:BB:1411:U:H6	1.80	0.43
16:CQ:35:LYS:O	16:CQ:37:ILE:HG23	2.19	0.43
36:BO:87:ILE:CG1	36:BO:88:LYS:H	2.31	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:459:U:O2'	23:DB:460:A:H5'	2.19	0.43
23:BB:18:U:O2'	23:BB:19:A:H5'	2.18	0.43
1:CA:1151:A:O2'	1:CA:1152:A:H8	2.02	0.43
3:AD:147:LYS:N	3:AD:147:LYS:HE3	2.34	0.43
27:BE:108:ILE:HD12	27:BE:108:ILE:N	2.34	0.43
1:AA:93:U:H2'	1:AA:95:C:H5	1.82	0.43
23:BB:2805:C:O2'	23:BB:2806:C:H5'	2.19	0.43
1:AA:1256:A:O2'	1:AA:1257:A:H5''	2.18	0.43
1:AA:1244:G:H2'	1:AA:1245:C:H6	1.81	0.43
1:CA:902:G:H2'	1:CA:903:G:C8	2.54	0.43
23:BB:1038:G:H2'	23:BB:1039:A:H8	1.80	0.43
1:AA:532:A:N6	2:AC:191:THR:HB	2.33	0.43
5:CF:100:SER:H	17:CR:23:LYS:HZ1	1.67	0.43
1:CA:576:C:OP2	1:CA:576:C:H3'	2.18	0.43
23:DB:819:A:OP2	23:DB:1187:G:N2	2.51	0.43
20:AB:110:ILE:O	20:AB:113:LEU:HB3	2.18	0.43
11:CL:19:ASN:HB3	11:CL:85:ARG:HD2	2.00	0.43
1:CA:716:A:N3	10:CK:118:ASN:O	2.51	0.43
1:CA:178:C:O2'	1:CA:179:A:H5'	2.19	0.43
1:CA:367:U:OP1	1:CA:395:C:H1'	2.19	0.43
1:CA:394:G:H2'	1:CA:395:C:C6	2.54	0.43
1:AA:1096:C:H2'	1:AA:1097:C:H6	1.82	0.43
5:AF:88:MET:HE1	5:AF:90:MET:HG3	2.00	0.43
1:AA:1483:A:H2	23:BB:1959:G:HO2'	1.62	0.43
23:BB:1987:A:H2'	23:BB:1988:G:H8	1.84	0.43
23:BB:2642:G:O2'	23:BB:2643:G:H5'	2.19	0.43
23:DB:2373:G:H2'	23:DB:2374:C:C6	2.53	0.43
23:BB:374:A:H61	23:BB:400:G:H1'	1.84	0.43
23:DB:1864:U:OP1	23:DB:2411:A:H5'	2.17	0.43
4:CE:76:ASN:O	4:CE:77:ASN:HB3	2.19	0.43
5:CF:72:ASP:HA	5:CF:75:GLU:HB3	2.00	0.43
18:CS:10:ILE:HG22	18:CS:37:SER:HB2	2.00	0.43
23:BB:381:G:O2'	23:BB:382:A:H5'	2.19	0.43
23:DB:1623:G:O2'	23:DB:1624:U:H5'	2.18	0.43
21:CU:49:ALA:O	21:CU:52:VAL:HG12	2.18	0.43
1:AA:697:U:H2'	1:AA:698:G:H5'	2.00	0.43
23:DB:902:C:O2'	23:DB:903:C:H5'	2.19	0.43
31:DJ:9:GLU:HG2	31:DJ:9:GLU:O	2.17	0.43
23:BB:2581:G:N3	23:BB:2581:G:H2'	2.33	0.43
23:BB:963:U:H2'	23:BB:964:C:C6	2.54	0.43
1:CA:140:U:H2'	1:CA:141:G:H8	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:39:G:O2'	23:BB:40:U:H5'	2.18	0.43
51:D4:15:LYS:HZ2	51:D4:22:VAL:HG12	1.83	0.43
51:D4:6:SER:OG	51:D4:23:ILE:HG21	2.19	0.43
46:BZ:15:SER:O	46:BZ:21:VAL:HB	2.19	0.43
46:BZ:30:HIS:O	46:BZ:31:ASP:HB3	2.19	0.43
50:B3:25:HIS:HB3	50:B3:26:ALA:H	1.57	0.43
26:BD:154:LYS:CD	26:BD:157:LYS:H	2.32	0.43
23:BB:1657:U:OP1	26:BD:139:SER:O	2.36	0.43
26:BD:128:ARG:NH2	26:BD:130:GLN:HG3	2.34	0.43
25:BC:107:LYS:HG3	25:BC:108:GLY:N	2.34	0.43
25:BC:153:LEU:CD1	25:BC:161:VAL:HG23	2.49	0.43
23:BB:952:G:C6	23:BB:966:G:C6	3.07	0.43
27:BE:115:GLN:C	27:BE:185:LYS:HG2	2.39	0.43
23:DB:2728:U:H2'	23:DB:2729:G:C8	2.54	0.43
37:DP:109:ILE:O	37:DP:111:GLU:N	2.51	0.43
37:DP:31:VAL:HG13	37:DP:81:ASP:CB	2.37	0.43
43:BW:31:LEU:O	43:BW:66:VAL:HB	2.19	0.43
43:BW:21:GLY:HA3	43:BW:32:ALA:HA	2.01	0.43
30:DH:4:ILE:HA	30:DH:17:ASP:O	2.19	0.43
33:DL:58:TYR:HD2	33:DL:62:PRO:HG3	1.84	0.43
21:CU:14:ALA:N	21:CU:16:ARG:NH2	2.54	0.43
32:BK:9:ASN:H	32:BK:9:ASN:ND2	2.15	0.43
20:AB:59:ILE:CD1	20:AB:66:ILE:HD11	2.48	0.43
47:B0:26:SER:OG	47:B0:27:LEU:N	2.52	0.43
47:B0:29:VAL:CB	47:B0:36:LYS:HD2	2.49	0.43
40:BS:103:ILE:HG13	40:BS:105:VAL:HG23	2.01	0.43
23:DB:2385:C:H2'	23:DB:2386:A:C8	2.53	0.43
42:DU:42:LYS:O	42:DU:57:ILE:HG13	2.18	0.43
33:BL:85:VAL:HG21	33:BL:98:ALA:CB	2.48	0.43
31:BJ:132:HIS:C	31:BJ:134:ALA:N	2.72	0.43
27:DE:109:LEU:CB	27:DE:117:ARG:HE	2.31	0.43
25:DC:49:THR:HB	25:DC:50:THR:H	1.45	0.43
46:DZ:11:GLU:N	46:DZ:27:THR:HG22	2.33	0.43
46:DZ:48:GLN:NE2	46:DZ:49:ARG:N	2.65	0.43
46:DZ:5:ILE:O	46:DZ:51:VAL:HG13	2.18	0.43
46:DZ:3:LYS:O	46:DZ:7:PRO:HA	2.19	0.43
23:DB:1341:G:H2'	23:DB:1397:U:O2'	2.19	0.43
40:DS:28:LYS:O	40:DS:29:VAL:HB	2.19	0.43
30:BH:83:LYS:HE3	1:CA:359:G:O2'	2.19	0.43
52:DI:109:ALA:HB2	52:DI:125:THR:HA	2.00	0.43
52:BI:78:LEU:O	52:BI:81:LYS:HG3	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:458:G:H22	23:BB:469:G:H2'	1.84	0.43
8:CI:27:ILE:HG21	8:CI:34:LEU:HD13	2.00	0.43
12:AM:84:CYS:SG	12:AM:86:ARG:HB3	2.59	0.43
22:BA:48:U:H2'	22:BA:49:C:H6	1.80	0.43
36:BO:30:ARG:O	36:BO:31:THR:C	2.57	0.43
23:DB:2025:C:P	26:DD:154:LYS:NZ	2.92	0.43
13:CN:42:ASN:CB	13:CN:46:LYS:HE2	2.44	0.43
41:BT:64:LYS:HD3	41:BT:79:ASP:HA	2.00	0.43
23:BB:2293:G:H2'	23:BB:2294:G:O4'	2.19	0.43
50:B3:28:LEU:H	50:B3:28:LEU:HG	1.45	0.43
11:CL:98:ARG:O	11:CL:117:GLY:N	2.52	0.43
44:DX:28:LEU:HD13	44:DX:42:LEU:CD2	2.43	0.43
44:DX:28:LEU:HD22	44:DX:42:LEU:CG	2.47	0.43
23:BB:1791:A:H1'	25:BC:206:LYS:HZ1	1.84	0.43
25:DC:251:THR:HB	25:DC:252:LYS:H	1.45	0.43
42:BU:60:LYS:CG	42:BU:61:GLU:H	2.27	0.43
41:DT:67:VAL:HG12	41:DT:68:LYS:N	2.28	0.43
22:DA:30:C:OP1	36:DO:1:MET:HE1	2.19	0.43
44:DX:8:GLU:HB2	44:DX:9:LYS:H	1.58	0.43
23:BB:1675:C:O2	26:BD:134:HIS:CG	2.71	0.43
16:AQ:29:LYS:HA	16:AQ:35:LYS:C	2.39	0.43
7:AH:49:LYS:CG	7:AH:50:VAL:H	2.27	0.43
30:BH:57:LYS:N	30:BH:57:LYS:HD2	2.33	0.43
1:AA:474:G:H2'	1:AA:475:C:H6	1.83	0.43
23:BB:1076:C:H4'	52:BI:94:LYS:HZ2	1.82	0.43
37:BP:38:ARG:CG	37:BP:39:LEU:N	2.81	0.43
1:CA:878:A:H2'	1:CA:879:C:C6	2.54	0.43
23:DB:2647:U:O2'	23:DB:2648:G:H5'	2.19	0.43
36:BO:115:LEU:HD22	36:BO:117:PHE:CZ	2.54	0.43
1:AA:493:A:N3	1:AA:493:A:O4'	2.52	0.43
23:DB:2072:C:H2'	23:DB:2073:C:H6	1.84	0.43
23:BB:527:C:H5'	54:BB:3416:HOH:O	2.19	0.43
10:CK:60:PHE:CZ	10:CK:64:VAL:HG11	2.54	0.43
1:CA:1118:U:H5'	1:CA:1118:U:H6	1.83	0.43
23:BB:1115:G:H2'	23:BB:1116:G:H8	1.84	0.43
1:CA:1190:G:P	2:CC:4:VAL:HG12	2.58	0.43
23:BB:2899:A:H2'	23:BB:2900:A:H8	1.84	0.43
1:CA:384:G:H2'	1:CA:385:C:H6	1.80	0.43
23:BB:2313:C:O2'	23:BB:2314:A:H5'	2.19	0.43
23:DB:1945:G:H2'	23:DB:1946:U:H6	1.84	0.43
23:BB:526:A:N3	23:BB:2044:C:H1'	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AU:11:PHE:HD1	21:AU:11:PHE:O	2.02	0.43
23:BB:1254:A:H2'	27:BE:69:ARG:NH1	2.32	0.43
34:DM:74:THR:HA	34:DM:88:ASN:HA	2.01	0.43
23:DB:1245:G:H4'	27:DE:33:VAL:CG2	2.49	0.43
23:BB:2653:U:H2'	23:BB:2654:A:C8	2.54	0.43
1:CA:1427:C:H2'	1:CA:1428:A:C8	2.53	0.43
6:AG:94:ARG:NH1	6:AG:98:LEU:HD21	2.34	0.43
37:BP:105:LYS:HB2	37:BP:106:ALA:H	1.59	0.43
23:BB:1205:A:C4'	23:BB:1206:G:OP2	2.67	0.43
34:DM:108:VAL:HG12	34:DM:111:GLU:OE1	2.19	0.43
5:AF:68:GLN:O	5:AF:71:ILE:HG13	2.19	0.43
1:CA:231:U:P	15:CP:31:ARG:HH12	2.41	0.43
40:DS:77:ASP:O	40:DS:101:SER:HB2	2.18	0.43
23:DB:2107:G:H2'	23:DB:2108:A:H8	1.84	0.43
1:AA:1157:A:H4'	1:AA:1158:C:O5'	2.19	0.43
15:CP:43:ALA:C	15:CP:45:GLU:H	2.21	0.43
1:AA:1291:U:O2'	1:AA:1292:G:H5'	2.18	0.43
19:AT:40:ALA:O	19:AT:41:GLY:C	2.56	0.43
30:BH:67:ALA:O	30:BH:71:LYS:N	2.46	0.43
40:DS:34:ASP:HA	40:DS:37:THR:HG22	2.00	0.43
27:BE:58:LYS:HB3	27:BE:71:GLY:C	2.39	0.43
1:CA:144:G:H2'	1:CA:145:G:O4'	2.19	0.43
1:AA:1454:G:H2'	1:AA:1455:G:O4'	2.19	0.43
23:BB:953:G:H2'	23:BB:954:G:H8	1.84	0.43
50:B3:23:HIS:HD2	50:B3:23:HIS:H	1.67	0.43
37:BP:22:GLY:O	37:BP:90:ALA:O	2.37	0.43
27:BE:144:GLU:HG3	27:BE:145:ASP:H	1.84	0.43
27:BE:193:VAL:HG12	27:BE:194:LYS:N	2.34	0.43
26:DD:16:THR:HG22	26:DD:18:ASP:OD2	2.19	0.43
21:CU:4:LYS:O	21:CU:5:VAL:HG23	2.18	0.43
31:DJ:25:LEU:HB3	31:DJ:62:VAL:HG12	2.00	0.43
30:BH:19:VAL:HG12	30:BH:20:ASN:N	2.33	0.43
31:BJ:138:GLN:O	31:BJ:139:VAL:HG13	2.19	0.43
31:BJ:25:LEU:HD12	31:BJ:62:VAL:CB	2.49	0.43
27:DE:142:ALA:O	27:DE:185:LYS:HG2	2.19	0.43
48:B1:9:LYS:H	48:B1:9:LYS:HD2	1.81	0.43
41:DT:59:ASN:OD1	41:DT:84:TYR:HB2	2.19	0.43
42:BU:69:VAL:HG13	42:BU:77:GLY:N	2.29	0.43
42:BU:9:GLU:CG	42:BU:23:LYS:HB3	2.49	0.43
1:AA:1099:G:H2'	1:AA:1100:C:O4'	2.19	0.43
5:CF:38:ARG:NH2	5:CF:63:ASN:ND2	2.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:B1:49:LYS:N	48:B1:49:LYS:HD2	2.33	0.43
33:DL:19:LEU:C	33:DL:21:ARG:H	2.22	0.43
52:BI:32:VAL:CG2	52:BI:60:VAL:HG21	2.46	0.43
23:BB:2307:G:O2'	23:BB:2311:A:N6	2.52	0.43
28:BF:67:THR:OG1	28:BF:85:GLY:HA3	2.19	0.43
1:AA:661:G:O2'	1:AA:662:U:H5'	2.18	0.43
23:BB:161:A:O5'	23:BB:161:A:H8	2.02	0.43
29:DG:172:GLU:O	29:DG:173:ALA:C	2.57	0.43
28:BF:173:ASP:OD1	28:BF:173:ASP:N	2.52	0.43
8:AI:51:LEU:HD21	8:AI:62:LEU:HG	2.01	0.43
8:AI:82:ILE:HG22	8:AI:86:LEU:HD21	2.01	0.43
23:DB:2885:G:H2'	23:DB:2886:A:O4'	2.18	0.43
51:B4:22:VAL:HG11	51:B4:36:ARG:NE	2.34	0.43
33:DL:111:ILE:HA	33:DL:128:THR:HG21	2.01	0.43
23:BB:1162:G:H4'	39:BR:23:GLU:HG2	2.01	0.43
1:CA:661:G:O2'	1:CA:662:U:H5'	2.19	0.43
9:AJ:57:VAL:HG13	9:AJ:58:ASN:CG	2.40	0.43
1:AA:255:G:H2'	1:AA:256:U:H6	1.84	0.43
46:DZ:21:VAL:HG22	46:DZ:22:MET:N	2.34	0.43
23:BB:2286:G:H2'	23:BB:2287:A:OP2	2.18	0.43
1:AA:839:C:O2'	1:AA:840:C:H5'	2.19	0.43
40:BS:9:HIS:HB3	40:BS:10:ALA:H	1.50	0.43
23:BB:607:U:O4	23:BB:620:G:H5''	2.19	0.43
27:BE:132:LYS:HD3	27:BE:133:LEU:HD23	2.00	0.43
34:DM:75:GLU:O	34:DM:86:LYS:HB3	2.19	0.43
4:CE:152:VAL:HG12	4:CE:156:ARG:HG2	2.01	0.43
23:BB:1007:C:H5''	31:BJ:37:ARG:HH21	1.82	0.43
20:CB:48:MET:HB2	20:CB:199:ILE:HG22	2.00	0.43
1:AA:970:C:C5	1:AA:1231:G:H1'	2.54	0.43
6:CG:65:LEU:HD21	6:CG:69:ARG:HH21	1.84	0.43
4:AE:106:ALA:HB1	4:AE:110:MET:HB2	2.00	0.43
23:BB:1076:C:O2'	23:BB:1077:A:H5'	2.19	0.43
23:BB:2209:G:H2'	23:BB:2210:U:C5	2.54	0.43
33:BL:133:ALA:C	33:BL:136:GLU:HG2	2.39	0.43
23:BB:2893:A:H4'	23:BB:2894:G:O5'	2.18	0.43
23:BB:465:G:H2'	23:BB:466:A:C8	2.53	0.43
52:DI:63:ASP:O	52:DI:63:ASP:OD1	2.37	0.43
8:CI:62:LEU:N	8:CI:62:LEU:HD13	2.33	0.43
10:AK:81:LEU:O	10:AK:106:ILE:HA	2.19	0.43
1:CA:1458:G:O2'	1:CA:1459:G:H5'	2.19	0.43
24:DV:57:TYR:CE2	24:DV:77:VAL:HG21	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1313:U:C2'	23:BB:1313:U:O2	2.67	0.43
18:AS:20:LYS:O	18:AS:20:LYS:HD2	2.19	0.43
10:CK:109:ILE:N	10:CK:109:ILE:HD12	2.34	0.43
1:AA:1452:C:H5'	1:AA:1453:G:N9	2.34	0.43
23:DB:1694:C:OP1	25:DC:13:ARG:NH2	2.52	0.43
23:BB:689:A:H2'	23:BB:690:G:H8	1.84	0.43
23:DB:687:C:H2'	23:DB:688:U:O4'	2.19	0.43
1:AA:31:G:H2'	1:AA:48:C:C5	2.53	0.43
41:DT:23:ALA:HA	41:DT:26:LYS:HD2	2.00	0.43
17:CR:28:LEU:C	17:CR:30:ASN:H	2.22	0.43
1:CA:489:C:H2'	1:CA:490:C:H6	1.84	0.43
1:AA:41:G:H2'	1:AA:42:G:C8	2.54	0.43
23:BB:391:A:H1'	23:BB:411:G:O4'	2.19	0.43
1:AA:224:U:H2'	1:AA:225:C:H6	1.83	0.43
23:BB:372:G:O2'	23:BB:373:U:P	2.77	0.43
23:DB:1304:A:O2'	23:DB:1305:C:H5'	2.19	0.43
1:CA:421:U:H5'	1:CA:422:C:C5	2.54	0.43
54:BB:3336:HOH:O	27:BE:81:GLY:HA2	2.18	0.43
23:BB:1100:C:H2'	23:BB:1101:U:H6	1.83	0.43
30:BH:27:ARG:HH11	30:BH:27:ARG:CB	2.31	0.43
51:D4:28:SER:O	51:D4:29:ALA:HB3	2.19	0.43
23:BB:558:U:H5'	31:BJ:114:LEU:HD22	2.00	0.42
40:DS:8:ARG:HA	40:DS:102:HIS:ND1	2.34	0.42
23:DB:1205:A:H1'	23:DB:1206:G:P	2.59	0.42
23:BB:2485:G:H1'	34:BM:118:LYS:NZ	2.33	0.42
25:DC:175:LEU:HD12	25:DC:178:GLY:O	2.19	0.42
26:BD:170:VAL:CG1	26:BD:171:THR:H	2.10	0.42
26:BD:4:LEU:HG	26:BD:4:LEU:O	2.17	0.42
37:BP:52:ARG:HG3	37:BP:54:LEU:HD12	2.00	0.42
23:BB:2845:U:O3'	37:BP:54:LEU:HG	2.18	0.42
37:BP:61:ARG:HB2	37:BP:61:ARG:NH1	2.34	0.42
25:BC:128:THR:HA	25:BC:190:THR:CA	2.43	0.42
25:BC:156:SER:O	25:BC:159:THR:N	2.52	0.42
27:BE:141:MET:HG3	27:BE:143:LEU:HD13	2.00	0.42
27:BE:170:ARG:O	27:BE:172:ALA:N	2.52	0.42
23:DB:2683:C:O2'	23:DB:2684:U:H5'	2.19	0.42
26:DD:47:ALA:H	26:DD:80:TRP:HB2	1.84	0.42
37:DP:61:ARG:O	37:DP:62:LYS:C	2.56	0.42
34:DM:71:LYS:NZ	34:DM:92:TRP:H	2.17	0.42
23:BB:919:U:H6	23:BB:919:U:O5'	2.02	0.42
31:DJ:41:LYS:HZ1	31:DJ:45:THR:HA	1.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DJ:7:LYS:N	31:DJ:8:PRO:CD	2.81	0.42
23:DB:38:A:C2	27:DE:43:THR:HG22	2.54	0.42
23:BB:512:G:OP2	23:BB:1234:U:O2'	2.32	0.42
38:BQ:16:ILE:CD1	38:BQ:34:ALA:HB2	2.39	0.42
40:BS:28:LYS:HB3	40:BS:71:VAL:HG21	2.01	0.42
23:DB:858:G:H21	23:DB:2268:A:H3'	1.84	0.42
43:DW:81:ILE:HG12	43:DW:82:GLU:N	2.33	0.42
35:BN:14:SER:HA	35:BN:17:ARG:HB2	2.00	0.42
23:BB:1019:U:O2'	23:BB:1021:A:C2	2.69	0.42
27:DE:152:GLU:HA	27:DE:188:MET:HE2	2.01	0.42
23:BB:2615:U:O2'	47:B0:6:LYS:HD2	2.19	0.42
41:DT:58:VAL:CG1	41:DT:59:ASN:H	2.32	0.42
8:CI:11:ARG:O	8:CI:14:SER:HB2	2.18	0.42
1:CA:1306:A:N6	1:CA:1331:G:O2'	2.52	0.42
1:CA:238:A:H3'	1:CA:239:U:H5''	2.01	0.42
5:CF:9:MET:HB2	5:CF:57:ALA:HB1	2.00	0.42
25:DC:225:ASN:N	25:DC:226:PRO:CD	2.82	0.42
25:DC:224:MET:HG3	25:DC:233:GLY:H	1.84	0.42
36:BO:68:LYS:C	36:BO:70:ALA:N	2.72	0.42
23:DB:1133:A:N6	23:DB:2025:C:O2'	2.52	0.42
32:DK:13:ASN:HB2	32:DK:14:SER:H	1.56	0.42
1:AA:408:A:OP1	3:AD:111:ALA:HB3	2.19	0.42
1:AA:740:U:O2'	1:AA:741:G:H5'	2.19	0.42
46:DZ:59:ARG:O	46:DZ:61:ASN:N	2.44	0.42
3:AD:159:GLU:HG3	3:AD:160:LEU:HD13	2.01	0.42
23:BB:2040:G:H2'	23:BB:2041:U:O4'	2.19	0.42
15:AP:22:ALA:HB2	15:AP:32:PHE:HB3	2.01	0.42
8:AI:21:LYS:O	8:AI:60:LEU:HB2	2.19	0.42
8:AI:64:ILE:HD13	8:AI:78:ILE:CG2	2.49	0.42
26:BD:36:GLN:HA	26:BD:46:ARG:CZ	2.49	0.42
26:BD:84:LEU:O	26:BD:84:LEU:HD12	2.19	0.42
23:DB:1198:U:C2	23:DB:1199:U:C5	3.07	0.42
1:AA:1124:G:C5'	9:AJ:38:GLY:HA3	2.49	0.42
33:BL:67:THR:O	33:BL:68:SER:HB2	2.18	0.42
23:DB:144:A:O2'	41:DT:4:GLU:HB2	2.19	0.42
50:B3:27:ASN:OD1	50:B3:28:LEU:HD23	2.19	0.42
26:DD:38:LYS:H	26:DD:42:ASN:HB2	1.84	0.42
41:BT:63:VAL:CG1	41:BT:80:TRP:HB2	2.46	0.42
16:AQ:67:SER:HB2	16:AQ:70:LYS:HB3	2.01	0.42
42:BU:46:LYS:HE2	42:BU:54:PRO:O	2.19	0.42
23:BB:2239:G:H5'	25:BC:246:PRO:CG	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CL:86:VAL:HG22	11:CL:95:HIS:HE2	1.83	0.42
10:CK:70:ALA:O	10:CK:74:LYS:HB2	2.18	0.42
23:BB:265:A:N6	23:BB:427:U:O2'	2.52	0.42
1:CA:1317:C:H2'	1:CA:1318:A:O4'	2.19	0.42
4:CE:152:VAL:HG21	7:CH:98:LEU:HD13	2.01	0.42
30:DH:103:VAL:O	30:DH:106:ALA:HB3	2.19	0.42
23:BB:957:C:OP1	34:BM:76:LYS:HG2	2.18	0.42
29:DG:29:ASN:OD1	29:DG:81:GLY:HA2	2.19	0.42
4:AE:37:VAL:HA	4:AE:47:PHE:HA	2.01	0.42
4:CE:52:ALA:HB3	4:CE:58:ALA:HB2	2.01	0.42
1:CA:1246:A:C6	1:CA:1292:G:C6	3.06	0.42
12:CM:102:LYS:NZ	12:CM:103:THR:HG23	2.32	0.42
1:CA:492:C:C2'	1:CA:493:A:H5''	2.49	0.42
35:BN:4:ARG:CG	35:BN:5:LYS:N	2.80	0.42
6:AG:55:LYS:HE2	6:AG:57:GLU:OE1	2.18	0.42
1:AA:478:A:H2'	1:AA:479:U:O4'	2.19	0.42
23:DB:20:C:H2'	23:DB:21:A:C8	2.53	0.42
23:DB:1784:A:H4'	23:DB:1785:A:O5'	2.19	0.42
22:DA:23:G:C2	22:DA:24:G:N1	2.88	0.42
1:AA:383:A:H2'	1:AA:384:G:O4'	2.18	0.42
11:AL:41:PRO:HD3	11:AL:47:ALA:O	2.19	0.42
23:DB:1710:G:H2'	23:DB:1711:A:H8	1.84	0.42
47:D0:10:SER:O	47:D0:14:MET:HB2	2.19	0.42
23:BB:1847:A:H4'	23:BB:1848:A:H8	1.83	0.42
4:AE:56:PRO:O	4:AE:59:ILE:HG22	2.19	0.42
23:BB:1348:C:H2'	23:BB:1349:C:H5'	2.00	0.42
1:CA:1163:A:H2'	1:CA:1164:G:C8	2.52	0.42
1:CA:512:U:H2'	1:CA:513:C:C6	2.54	0.42
13:AN:73:LEU:O	13:AN:75:LYS:N	2.52	0.42
23:BB:687:C:H2'	23:BB:688:U:O4'	2.19	0.42
23:BB:2531:A:H5'	29:BG:156:TYR:CE1	2.54	0.42
33:BL:84:LYS:CE	33:BL:84:LYS:HA	2.49	0.42
1:AA:394:G:H2'	1:AA:395:C:C6	2.53	0.42
1:CA:551:U:H2'	1:CA:552:U:C6	2.54	0.42
1:AA:488:C:H2'	1:AA:489:C:H6	1.84	0.42
1:AA:114:U:O2'	1:AA:115:G:H5'	2.19	0.42
23:BB:1068:G:C6	23:BB:1069:A:N6	2.87	0.42
29:DG:169:ARG:HB2	29:DG:170:THR:H	1.73	0.42
23:DB:2523:G:O2'	23:DB:2524:G:H5'	2.19	0.42
35:BN:89:SER:O	35:BN:91:ALA:N	2.52	0.42
10:AK:62:ALA:O	10:AK:65:ALA:HB3	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2478:A:O2'	23:DB:2536:G:N2	2.51	0.42
23:DB:1733:G:H2'	23:DB:1734:G:C8	2.54	0.42
23:DB:557:C:O3'	31:DJ:113:PRO:HB2	2.19	0.42
2:CC:75:VAL:HG11	2:CC:102:ILE:HD13	2.01	0.42
41:DT:6:ARG:HG2	41:DT:9:LYS:O	2.19	0.42
1:CA:968:A:H4'	1:CA:969:A:OP2	2.19	0.42
23:BB:1792:G:O2'	23:BB:1793:C:H5'	2.19	0.42
23:BB:560:C:H3'	23:BB:561:G:C8	2.55	0.42
51:D4:22:VAL:CG1	51:D4:37:GLN:HB3	2.48	0.42
34:BM:73:ILE:CD1	34:BM:92:TRP:N	2.82	0.42
24:BV:2:PHE:CG	24:BV:61:LEU:HD22	2.54	0.42
46:BZ:55:GLY:HA2	46:BZ:63:ARG:CG	2.45	0.42
25:DC:155:ARG:C	25:DC:157:ALA:H	2.22	0.42
25:DC:171:VAL:HG12	25:DC:183:VAL:C	2.38	0.42
25:DC:177:SER:C	25:DC:179:GLU:H	2.22	0.42
50:B3:24:LYS:HE2	50:B3:25:HIS:O	2.18	0.42
33:BL:55:MET:O	33:BL:59:ARG:HG2	2.20	0.42
26:BD:78:GLY:C	26:BD:79:LEU:HD23	2.39	0.42
25:BC:170:TYR:C	25:BC:171:VAL:HG22	2.39	0.42
38:DQ:78:PHE:C	38:DQ:78:PHE:CD1	2.93	0.42
26:DD:4:LEU:HD23	26:DD:77:ARG:CD	2.48	0.42
32:DK:70:ARG:CB	32:DK:76:VAL:HG22	2.49	0.42
23:DB:2:G:H2'	23:DB:3:U:C6	2.53	0.42
47:B0:28:SER:O	47:B0:29:VAL:CB	2.68	0.42
38:BQ:5:ARG:O	38:BQ:6:GLY:C	2.57	0.42
40:BS:6:LYS:CB	40:BS:104:THR:HG22	2.49	0.42
39:DR:65:ALA:H	39:DR:100:GLY:HA2	1.84	0.42
43:DW:38:ARG:HB3	43:DW:68:PHE:CE1	2.54	0.42
23:DB:1773:A:H62	25:DC:206:LYS:HE2	1.83	0.42
33:BL:96:LYS:HE3	33:BL:100:ILE:HG13	2.01	0.42
41:BT:60:THR:HA	41:BT:83:ALA:HA	2.01	0.42
23:DB:1813:G:H21	25:DC:50:THR:HG23	1.83	0.42
18:AS:57:VAL:HG21	18:AS:74:ALA:HB2	2.01	0.42
41:DT:53:VAL:HG12	41:DT:93:LEU:CD2	2.48	0.42
41:DT:58:VAL:HG13	41:DT:85:VAL:H	1.84	0.42
28:DF:65:LEU:CD2	28:DF:87:LYS:HD2	2.48	0.42
42:BU:78:LYS:CG	42:BU:96:LYS:HE3	2.48	0.42
23:BB:2723:C:H2'	23:BB:2724:U:O4'	2.19	0.42
23:DB:1368:G:OP1	49:D2:25:LYS:HG3	2.19	0.42
23:BB:2307:G:H4'	23:BB:2311:A:N6	2.29	0.42
28:BF:146:ASP:O	28:BF:147:ARG:C	2.57	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DR:69:GLY:HA2	39:DR:96:VAL:HA	1.99	0.42
23:DB:1199:U:H4'	38:DQ:4:LYS:HZ1	1.84	0.42
30:DH:86:ASP:C	30:DH:88:GLY:N	2.71	0.42
41:BT:64:LYS:HD3	41:BT:64:LYS:HA	1.87	0.42
49:D2:6:GLN:HB3	49:D2:7:PRO:HD2	2.01	0.42
44:DX:27:ASN:O	44:DX:29:ARG:N	2.47	0.42
27:BE:18:THR:O	27:BE:19:PHE:C	2.57	0.42
39:BR:33:VAL:HB	39:BR:35:PHE:CE2	2.54	0.42
33:DL:33:ARG:O	33:DL:34:GLY:C	2.57	0.42
23:DB:2788:C:H2'	23:DB:2789:C:C6	2.53	0.42
26:DD:62:LYS:CD	26:DD:62:LYS:H	2.32	0.42
26:DD:1:MET:N	26:DD:81:GLU:HB2	2.34	0.42
23:DB:2795:C:O5'	23:DB:2795:C:H6	2.02	0.42
42:BU:43:LYS:NZ	42:BU:45:GLN:HG2	2.34	0.42
48:D1:4:ILE:HG23	48:D1:4:ILE:O	2.19	0.42
38:BQ:47:ARG:HD2	38:BQ:47:ARG:HA	1.67	0.42
4:CE:144:GLU:HA	4:CE:146:MET:SD	2.59	0.42
23:DB:999:U:H5''	23:DB:1154:G:O6	2.18	0.42
23:BB:2370:G:H2'	23:BB:2371:G:O4'	2.18	0.42
8:CI:22:PRO:HA	8:CI:60:LEU:HB3	2.00	0.42
8:CI:86:LEU:HB3	8:CI:93:LEU:CD1	2.49	0.42
37:DP:8:GLU:H	37:DP:8:GLU:HG2	1.52	0.42
2:CC:129:PHE:CZ	2:CC:156:LEU:HD13	2.55	0.42
19:CT:69:ASN:ND2	19:CT:69:ASN:N	2.57	0.42
27:DE:132:LYS:HG3	27:DE:134:LEU:CD1	2.50	0.42
44:DX:3:ALA:O	44:DX:6:LEU:HD12	2.18	0.42
23:DB:2017:U:O2	47:D0:6:LYS:HG3	2.20	0.42
23:DB:1029:A:H2'	23:DB:1030:C:O4'	2.19	0.42
23:BB:1588:G:H2'	23:BB:1589:U:C6	2.54	0.42
30:DH:70:GLU:O	30:DH:74:ALA:N	2.45	0.42
48:D1:22:THR:CB	50:D3:34:LYS:HZ2	2.32	0.42
13:AN:86:ALA:HB3	13:AN:92:ILE:HD11	2.02	0.42
23:BB:2025:C:H2'	23:BB:2026:U:H6	1.80	0.42
1:AA:861:G:H2'	1:AA:862:C:H6	1.84	0.42
32:DK:10:VAL:HG21	32:DK:17:ARG:N	2.34	0.42
34:BM:82:MET:HB2	34:BM:84:LYS:HD3	2.01	0.42
23:DB:962:G:O2'	23:DB:2250:G:N2	2.52	0.42
1:AA:1519:A:H3'	1:AA:1520:C:C5'	2.49	0.42
23:BB:15:G:H2'	23:BB:16:C:C6	2.54	0.42
3:CD:195:ASN:HB3	3:CD:197:HIS:CD2	2.54	0.42
18:AS:28:LYS:HD3	18:AS:28:LYS:H	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:419:U:H2'	23:DB:420:C:H6	1.85	0.42
44:BX:44:LYS:HD2	44:BX:48:ARG:NE	2.34	0.42
40:BS:86:MET:SD	40:BS:96:ILE:HD11	2.59	0.42
23:BB:2247:A:H2'	23:BB:2248:C:H6	1.83	0.42
8:AI:118:ARG:HH12	8:AI:122:ARG:HE	1.67	0.42
28:DF:163:GLU:HA	28:DF:166:ARG:CD	2.49	0.42
23:DB:153:U:H2'	23:DB:154:U:O4'	2.19	0.42
23:BB:2103:C:H3'	23:BB:2104:C:O4'	2.19	0.42
23:DB:1143:A:H61	31:DJ:27:ARG:HA	1.84	0.42
23:BB:1425:G:H2'	23:BB:1426:G:C8	2.54	0.42
1:AA:914:A:O2'	1:AA:915:A:H5'	2.19	0.42
23:DB:2606:C:O2'	23:DB:2607:G:H5'	2.19	0.42
28:BF:52:ALA:HA	28:BF:148:VAL:CG1	2.49	0.42
1:CA:113:G:H2'	1:CA:114:U:C6	2.54	0.42
1:AA:1495:U:H1'	23:BB:1912:A:N3	2.34	0.42
2:AC:40:GLN:O	2:AC:44:LYS:HG3	2.18	0.42
23:DB:903:C:H2'	23:DB:904:G:C8	2.53	0.42
35:DN:58:ASP:O	35:DN:62:ASN:HB2	2.17	0.42
23:BB:820:A:H2'	23:BB:821:A:O4'	2.19	0.42
1:CA:820:U:H4'	1:CA:821:G:OP2	2.19	0.42
33:BL:33:ARG:HH11	33:BL:34:GLY:HA3	1.85	0.42
1:CA:847:G:H2'	1:CA:848:C:C6	2.53	0.42
23:DB:1456:G:O2'	23:DB:1457:U:H5'	2.18	0.42
20:AB:81:ASP:O	20:AB:85:SER:HB2	2.19	0.42
1:AA:140:U:H2'	1:AA:141:G:H8	1.82	0.42
29:DG:157:LYS:HA	29:DG:157:LYS:HD2	1.84	0.42
30:DH:42:LYS:HE2	30:DH:42:LYS:C	2.39	0.42
7:CH:117:GLN:HE21	7:CH:117:GLN:HB3	1.62	0.42
23:BB:1149:G:H2'	23:BB:1150:C:C6	2.54	0.42
23:BB:558:U:O2'	23:BB:559:G:H5'	2.19	0.42
38:BQ:92:LYS:HD3	38:BQ:92:LYS:N	2.34	0.42
39:BR:4:VAL:HG11	39:BR:42:ALA:N	2.34	0.42
23:DB:1079:C:C4	23:DB:1080:A:N7	2.87	0.42
23:BB:38:A:O4'	27:BE:46:GLN:CG	2.52	0.42
23:DB:2755:C:H6	23:DB:2755:C:O5'	2.02	0.42
34:BM:12:MET:O	34:BM:13:HIS:HB2	2.19	0.42
34:BM:35:ALA:C	34:BM:36:VAL:HG13	2.39	0.42
25:BC:159:THR:O	25:BC:160:TYR:HD2	2.02	0.42
25:BC:130:PRO:HA	25:BC:188:ARG:HA	2.01	0.42
13:CN:69:PRO:O	13:CN:71:GLY:N	2.52	0.42
26:DD:48:ILE:CG2	26:DD:49:GLN:N	2.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DR:92:TRP:CD1	39:DR:92:TRP:N	2.84	0.42
36:DO:75:GLY:HA3	36:DO:109:ALA:HB3	2.00	0.42
31:DJ:18:VAL:HG23	31:DJ:54:ILE:HG23	2.01	0.42
5:CF:36:ILE:HG12	5:CF:64:VAL:HG22	2.00	0.42
23:BB:26:G:OP2	40:BS:80:PRO:HG3	2.19	0.42
33:BL:90:VAL:HG11	33:BL:120:VAL:HG23	2.01	0.42
27:DE:105:LEU:O	27:DE:108:ILE:HG12	2.19	0.42
27:DE:189:THR:HG23	27:DE:194:LYS:HG3	2.01	0.42
27:DE:6:LYS:HB3	27:DE:11:ALA:HA	2.01	0.42
44:BX:21:LEU:O	44:BX:47:ARG:NH1	2.52	0.42
23:DB:779:U:P	25:DC:49:THR:HG1	2.40	0.42
1:AA:985:C:H2'	1:AA:986:U:H6	1.82	0.42
25:DC:258:SER:N	25:DC:261:ARG:HH11	2.16	0.42
42:DU:78:LYS:HD2	42:DU:96:LYS:CG	2.49	0.42
52:BI:74:PRO:HD2	52:BI:77:VAL:HG21	2.01	0.42
23:BB:2270:A:N6	23:BB:2271:G:C2	2.87	0.42
9:CJ:51:VAL:CG2	13:CN:80:ARG:HB2	2.36	0.42
5:CF:54:LEU:HD13	5:CF:55:HIS:H	1.85	0.42
28:DF:107:VAL:HG12	28:DF:108:PRO:CD	2.48	0.42
25:BC:222:THR:O	25:BC:224:MET:N	2.52	0.42
25:BC:226:PRO:O	25:BC:227:VAL:HG23	2.19	0.42
23:BB:701:G:O2'	23:BB:702:U:H5'	2.18	0.42
23:BB:633:A:H2'	23:BB:634:C:C5'	2.49	0.42
18:CS:26:ASP:OD1	18:CS:46:LEU:HD13	2.18	0.42
51:B4:12:ARG:HD2	51:B4:12:ARG:N	2.34	0.42
33:DL:77:ILE:HD11	33:DL:111:ILE:HG23	2.01	0.42
23:DB:544:C:O5'	23:DB:545:U:OP1	2.37	0.42
23:BB:1566:A:N1	25:BC:213:ARG:NH2	2.67	0.42
23:DB:1843:C:H2'	23:DB:1844:C:H6	1.84	0.42
23:DB:1051:G:H2'	23:DB:1052:C:C6	2.54	0.42
1:AA:19:A:OP1	4:AE:134:ASN:ND2	2.51	0.42
7:CH:76:ARG:HE	7:CH:125:ILE:HG23	1.84	0.42
40:DS:86:MET:HG3	40:DS:87:PRO:HD2	2.02	0.42
1:AA:237:G:H2'	1:AA:238:A:C8	2.54	0.42
6:AG:29:LEU:HD21	6:AG:41:ILE:CG2	2.48	0.42
1:AA:923:A:H2'	1:AA:924:C:C6	2.55	0.42
2:AC:13:ILE:HG22	2:AC:14:VAL:HG13	2.01	0.42
12:CM:102:LYS:HG3	12:CM:103:THR:N	2.35	0.42
1:AA:1299:A:N6	1:AA:1302:C:H5	2.17	0.42
19:CT:55:PRO:HG2	19:CT:56:ILE:HD12	2.00	0.42
23:BB:329:G:H1	42:BU:16:LYS:CD	2.31	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2244:U:H2'	23:DB:2245:U:C6	2.54	0.42
23:DB:242:G:H22	23:DB:254:G:H2'	1.84	0.42
23:BB:2801:G:H2'	23:BB:2802:G:C8	2.54	0.42
1:CA:601:G:H2'	1:CA:602:A:C8	2.55	0.42
23:DB:182:A:H2'	23:DB:183:C:C6	2.53	0.42
2:CC:68:HIS:HA	2:CC:103:ALA:CB	2.49	0.42
23:BB:2185:U:H2'	23:BB:2186:G:C8	2.54	0.42
3:AD:145:ARG:C	3:AD:147:LYS:H	2.22	0.42
11:CL:35:ARG:HH21	11:CL:36:VAL:C	2.23	0.42
1:CA:1105:A:O2'	1:CA:1106:G:H5'	2.18	0.42
9:CJ:41:PRO:HA	9:CJ:72:ARG:CD	2.48	0.42
8:AI:66:VAL:HG22	8:AI:67:LYS:N	2.34	0.42
1:CA:1462:C:H4'	37:DP:110:LYS:CE	2.47	0.42
13:AN:20:PHE:HA	13:AN:24:ALA:CB	2.47	0.42
1:CA:78:A:O2'	1:CA:79:G:H5'	2.19	0.42
23:BB:1736:U:H2'	23:BB:1737:G:C8	2.54	0.42
1:CA:984:C:H2'	1:CA:985:C:H6	1.83	0.42
28:DF:121:PHE:HB2	28:DF:162:ASP:OD2	2.19	0.42
23:DB:2222:C:O2'	23:DB:2223:G:H5'	2.19	0.42
38:BQ:68:ALA:HB2	38:BQ:105:PHE:CZ	2.54	0.42
23:BB:1463:C:H2'	23:BB:1464:G:C8	2.53	0.42
38:DQ:26:ALA:CA	38:DQ:30:VAL:HG23	2.49	0.42
38:DQ:30:VAL:CG1	38:DQ:31:TYR:N	2.79	0.42
23:DB:2233:U:H2'	23:DB:2234:G:H8	1.82	0.42
2:CC:143:LEU:HB2	2:CC:144:GLY:H	1.65	0.42
40:BS:12:SER:OG	40:BS:16:LYS:NZ	2.53	0.42
1:AA:599:C:O2'	1:AA:600:A:H5'	2.19	0.42
23:DB:118:A:OP2	23:DB:119:A:H2'	2.19	0.42
3:AD:54:LEU:HA	3:AD:202:LEU:HD22	2.00	0.42
37:DP:1:SER:O	37:DP:6:GLN:OE1	2.38	0.42
23:BB:1541:C:O2'	23:BB:1542:U:H5'	2.19	0.42
1:CA:736:C:H2'	1:CA:737:C:H6	1.84	0.42
23:BB:1159:U:H2'	23:BB:1160:G:C8	2.53	0.42
1:AA:1081:A:OP1	4:AE:22:LYS:HB2	2.19	0.42
23:DB:2660:A:H2'	23:DB:2661:G:O4'	2.19	0.42
23:BB:1206:G:H2'	23:BB:1207:C:H6	1.85	0.42
23:BB:246:C:H2'	23:BB:247:G:H5'	1.99	0.42
1:AA:113:G:H21	1:AA:353:A:H8	1.68	0.42
27:DE:59:PRO:HB2	27:DE:60:TRP:CD1	2.54	0.42
23:BB:1824:G:H2'	23:BB:1825:U:C6	2.54	0.42
23:DB:2692:G:O2'	23:DB:2693:G:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2737:G:H2'	23:BB:2738:A:C8	2.54	0.42
1:AA:1065:U:H1'	1:AA:1066:C:OP2	2.19	0.42
23:DB:1372:U:O2'	23:DB:2212:A:C8	2.70	0.42
29:BG:121:THR:HG23	29:BG:133:LYS:O	2.19	0.42
1:CA:41:G:H2'	1:CA:42:G:C8	2.54	0.42
23:DB:267:C:H2'	23:DB:268:C:H6	1.83	0.42
1:CA:69:G:H2'	1:CA:70:U:C6	2.53	0.42
15:AP:25:ARG:HD3	15:AP:25:ARG:N	2.34	0.42
25:BC:42:ARG:NH1	25:BC:44:ASN:OD1	2.52	0.42
25:BC:51:ARG:O	25:BC:51:ARG:NE	2.53	0.42
34:BM:10:ARG:HB2	34:BM:11:LYS:HE3	2.02	0.42
24:BV:26:PHE:HD2	24:BV:44:HIS:HD1	1.65	0.42
25:DC:188:ARG:HE	25:DC:188:ARG:HB3	1.63	0.42
25:DC:265:PHE:O	25:DC:266:ILE:HG12	2.20	0.42
23:BB:2772:C:H5''	26:BD:171:THR:HG21	1.99	0.42
31:BJ:77:HIS:HD2	31:BJ:84:ILE:HB	1.82	0.42
23:BB:967:U:H2'	23:BB:968:C:H6	1.80	0.42
37:DP:47:ILE:HD13	37:DP:63:ILE:CG2	2.49	0.42
34:DM:69:PRO:N	34:DM:93:VAL:HG22	2.34	0.42
33:DL:63:LYS:CB	50:D3:26:ALA:HB2	2.40	0.42
22:DA:114:C:H2'	22:DA:115:A:C8	2.54	0.42
21:CU:17:ARG:HA	21:CU:20:ARG:HB2	2.01	0.42
31:DJ:10:THR:HB	31:DJ:43:GLU:OE2	2.20	0.42
10:CK:113:THR:CG2	21:CU:28:LEU:HD21	2.49	0.42
27:DE:53:THR:HB	27:DE:74:LYS:CE	2.49	0.42
32:BK:114:LYS:O	32:BK:118:LEU:HD12	2.19	0.42
32:BK:61:VAL:HG23	32:BK:84:CYS:O	2.19	0.42
30:BH:23:ALA:C	30:BH:25:TYR:H	2.23	0.42
30:BH:30:LEU:CD1	30:BH:35:LYS:HD3	2.49	0.42
43:DW:77:LYS:C	43:DW:79:ILE:N	2.71	0.42
42:DU:43:LYS:HB2	42:DU:43:LYS:HZ2	1.84	0.42
23:BB:544:C:H2'	23:BB:545:U:C2	2.54	0.42
33:BL:78:ARG:HD3	33:BL:81:ASP:HB2	2.00	0.42
2:AC:21:TRP:CH2	13:AN:93:PRO:HG3	2.54	0.42
41:BT:15:HIS:CG	41:BT:31:VAL:HG11	2.54	0.42
5:AF:11:HIS:CG	5:AF:12:PRO:HD2	2.54	0.42
30:DH:114:GLU:HB2	30:DH:133:GLN:HG3	2.00	0.42
22:BA:75:G:N1	22:BA:102:G:N2	2.67	0.42
23:BB:743:A:H4'	26:BD:136:ASN:HD22	1.84	0.42
18:AS:16:LYS:HA	18:AS:19:GLU:OE1	2.19	0.42
1:CA:374:A:H5''	1:CA:452:A:N1	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AL:4:ASN:O	11:AL:8:ARG:HG2	2.19	0.42
8:CI:51:LEU:CB	8:CI:56:MET:HG2	2.39	0.42
18:CS:62:THR:HG23	18:CS:65:MET:HG2	2.00	0.42
9:AJ:40:ILE:CG1	9:AJ:73:LEU:HB3	2.46	0.42
11:AL:56:LEU:HB2	11:AL:60:PHE:O	2.19	0.42
6:AG:13:PRO:HA	6:AG:23:ALA:HB2	2.00	0.42
3:CD:54:LEU:O	3:CD:58:GLN:HB2	2.20	0.42
21:AU:20:ARG:O	21:AU:20:ARG:HG2	2.20	0.42
18:CS:14:LEU:HD23	18:CS:32:THR:HG21	2.02	0.42
29:BG:162:ARG:HA	29:BG:166:GLU:OE1	2.20	0.42
35:DN:10:LEU:O	35:DN:11:ASN:ND2	2.53	0.42
23:BB:1153:C:H5'	38:BQ:75:TYR:HE1	1.85	0.42
3:AD:84:ASN:ND2	3:AD:86:GLY:N	2.67	0.42
11:AL:117:GLY:O	11:AL:118:VAL:HG13	2.19	0.42
23:BB:265:A:H2'	23:BB:266:G:O4'	2.19	0.42
23:BB:426:C:O2'	23:BB:427:U:H5'	2.20	0.42
1:AA:236:A:H2'	1:AA:237:G:H8	1.85	0.42
23:DB:1261:C:C2'	23:DB:1262:A:O5'	2.67	0.42
1:CA:1030:U:O2'	1:CA:1031:C:P	2.77	0.42
23:BB:2732:G:H5'	23:BB:2733:A:O4'	2.18	0.42
29:BG:40:VAL:HG11	29:BG:63:GLN:NE2	2.34	0.42
50:D3:34:LYS:HE3	50:D3:34:LYS:HB3	1.80	0.42
43:DW:10:ARG:HB3	43:DW:10:ARG:CZ	2.49	0.42
1:AA:15:G:O2'	4:AE:21:SER:HB2	2.18	0.42
1:CA:652:U:H1'	1:CA:653:U:C5	2.53	0.42
23:BB:1446:C:O2'	23:BB:1447:C:H5'	2.19	0.42
23:DB:242:G:O2'	23:DB:243:U:P	2.78	0.42
1:CA:1499:A:OP2	1:CA:1500:A:OP2	2.38	0.42
1:CA:1379:G:N7	6:CG:2:ARG:CZ	2.82	0.42
23:DB:185:G:H4'	23:DB:218:A:H4'	2.00	0.42
10:CK:127:ARG:NH1	10:CK:127:ARG:HG3	2.34	0.42
50:B3:9:ALA:O	50:B3:13:PHE:HB3	2.19	0.42
23:BB:661:A:O2'	33:BL:23:ILE:HA	2.20	0.42
1:AA:373:A:C1'	1:AA:481:G:H1'	2.50	0.42
12:CM:48:SER:C	12:CM:50:GLY:N	2.71	0.42
1:AA:532:A:H62	2:AC:191:THR:CB	2.31	0.42
23:DB:226:A:H1'	23:DB:230:G:N2	2.34	0.42
23:BB:2028:U:H2'	23:BB:2029:G:O4'	2.19	0.42
23:DB:1529:G:H2'	23:DB:1530:G:H8	1.84	0.42
3:AD:54:LEU:HA	3:AD:57:LYS:HB3	2.01	0.42
23:DB:39:G:H2'	23:DB:40:U:C6	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BY:4:ILE:HG12	45:BY:5:LYS:HG3	2.02	0.42
23:BB:1662:U:O2	23:BB:2687:U:H4'	2.18	0.42
23:BB:2373:G:O2'	23:BB:2374:C:H5'	2.20	0.42
23:DB:2182:U:H2'	23:DB:2183:A:C8	2.54	0.42
41:DT:19:LYS:NZ	41:DT:22:THR:HG23	2.34	0.42
9:AJ:5:ARG:HG3	9:AJ:79:PRO:HD3	2.01	0.42
23:BB:383:C:N3	23:BB:391:A:N6	2.68	0.42
23:BB:388:G:N7	23:BB:390:U:H2'	2.34	0.42
1:AA:847:G:H2'	1:AA:848:C:C6	2.54	0.42
1:CA:720:C:O4'	17:CR:38:ILE:HG12	2.19	0.42
7:CH:112:ASP:N	7:CH:112:ASP:OD1	2.52	0.42
3:AD:49:ASP:O	3:AD:52:VAL:HG22	2.19	0.42
23:BB:1668:A:N3	23:BB:1670:C:C4	2.87	0.42
1:CA:749:A:O2'	1:CA:750:C:H5'	2.20	0.42
23:DB:915:C:H3'	23:DB:916:G:H8	1.84	0.42
1:AA:1262:C:H2'	1:AA:1263:C:O4'	2.19	0.42
23:DB:1112:G:H4'	29:DG:1:SER:O	2.18	0.42
31:BJ:41:LYS:NZ	31:BJ:43:GLU:O	2.52	0.42
34:BM:41:LEU:C	34:BM:43:ALA:H	2.21	0.42
25:DC:267:VAL:HG11	25:DC:269:ARG:NH2	2.35	0.42
23:BB:832:U:OP1	33:BL:44:GLY:HA3	2.19	0.42
33:BL:63:LYS:HG2	33:BL:63:LYS:O	2.20	0.42
26:BD:110:THR:HG22	26:BD:171:THR:CA	2.44	0.42
48:D1:15:GLY:HA3	48:D1:47:ILE:HG22	2.01	0.42
13:CN:73:LEU:O	13:CN:74:ARG:C	2.58	0.42
23:DB:2821:A:H2'	23:DB:2822:G:H8	1.84	0.42
35:DN:97:ILE:HA	35:DN:113:ILE:CD1	2.48	0.42
50:D3:49:VAL:CG1	50:D3:51:LYS:HB2	2.49	0.42
20:CB:49:PHE:HB3	20:CB:212:TYR:OH	2.20	0.42
45:DY:2:LYS:HG3	45:DY:37:ARG:HG3	2.01	0.42
36:DO:39:VAL:HG13	36:DO:39:VAL:O	2.19	0.42
35:BN:29:VAL:HG12	35:BN:78:LYS:HG2	2.02	0.42
35:BN:29:VAL:HG13	35:BN:83:LEU:HD13	2.02	0.42
40:BS:6:LYS:HA	40:BS:104:THR:H	1.84	0.42
40:BS:28:LYS:HB3	40:BS:71:VAL:CB	2.49	0.42
40:BS:7:HIS:CG	40:BS:8:ARG:N	2.87	0.42
43:DW:44:PHE:O	43:DW:44:PHE:CG	2.72	0.42
23:BB:2575:C:H4'	26:BD:148:GLN:CA	2.48	0.42
41:DT:76:ARG:C	41:DT:76:ARG:CD	2.87	0.42
28:DF:146:ASP:O	28:DF:147:ARG:C	2.57	0.42
20:AB:94:ARG:HG2	20:AB:94:ARG:H	1.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:84:A:H2'	42:BU:5:ARG:HD2	2.00	0.42
37:BP:32:VAL:HG22	37:BP:40:GLN:HE21	1.85	0.42
16:CQ:24:ILE:HD12	16:CQ:24:ILE:N	2.34	0.42
29:DG:171:LYS:CE	29:DG:173:ALA:HA	2.50	0.42
29:DG:174:LYS:HB3	29:DG:175:LYS:H	1.50	0.42
8:AI:56:MET:O	8:AI:58:GLU:N	2.52	0.42
1:AA:1121:U:O2'	1:AA:1122:U:H5'	2.20	0.42
13:CN:40:ARG:HH12	18:CS:6:LYS:N	2.17	0.42
23:DB:545:U:H2'	23:DB:547:A:OP1	2.20	0.42
9:CJ:11:LYS:HE3	9:CJ:99:GLN:HE22	1.85	0.42
23:DB:2893:A:H4'	23:DB:2894:G:O5'	2.18	0.42
10:AK:26:PHE:HE1	10:AK:88:PRO:HG2	1.85	0.42
17:CR:50:TYR:O	17:CR:54:LEU:HD12	2.19	0.42
23:BB:508:A:N3	23:BB:508:A:O4'	2.51	0.42
2:AC:39:ARG:HH21	2:AC:56:ILE:HD12	1.83	0.42
15:AP:75:ILE:O	15:AP:78:VAL:HG12	2.19	0.42
23:DB:78:U:OP1	44:DX:7:ARG:NH2	2.52	0.42
44:DX:8:GLU:OE2	44:DX:9:LYS:N	2.53	0.42
3:CD:21:LYS:O	3:CD:23:GLY:N	2.52	0.42
1:AA:411:A:C4	1:AA:413:G:H1'	2.55	0.42
42:DU:82:VAL:HB	42:DU:94:PHE:CB	2.50	0.42
50:D3:48:MET:CE	50:D3:48:MET:HA	2.47	0.42
1:CA:203:G:N2	1:CA:205:A:H61	2.18	0.42
2:AC:112:ALA:O	2:AC:113:LYS:C	2.57	0.42
1:CA:1520:C:H2'	1:CA:1521:C:H6	1.81	0.42
1:AA:818:G:C3'	1:AA:819:A:H5''	2.50	0.42
42:DU:45:GLN:NE2	42:DU:47:PRO:HG3	2.34	0.42
23:DB:963:U:H2'	23:DB:964:C:H6	1.83	0.42
1:AA:796:C:O2'	1:AA:797:C:H5'	2.19	0.42
15:CP:32:PHE:CD1	15:CP:32:PHE:C	2.93	0.42
44:BX:44:LYS:O	44:BX:48:ARG:HD2	2.19	0.42
1:AA:585:G:O2'	1:AA:586:C:H5'	2.20	0.42
50:B3:20:GLY:O	50:B3:21:PHE:C	2.58	0.42
23:DB:1313:U:O2	23:DB:1313:U:C2'	2.67	0.42
33:DL:30:THR:HG21	33:DL:38:GLN:NE2	2.35	0.42
32:DK:61:VAL:HG13	32:DK:87:LEU:HD11	2.01	0.42
1:CA:425:G:O2'	1:CA:426:U:H5'	2.20	0.42
23:DB:729:G:H4'	23:DB:763:G:C5'	2.49	0.42
48:B1:26:LYS:HD3	48:B1:29:LYS:CG	2.49	0.42
23:DB:942:G:H2'	23:DB:943:A:H8	1.84	0.42
21:CU:41:THR:CA	21:CU:45:LYS:HD3	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:210:C:H4'	1:AA:211:G:H5''	2.01	0.42
4:CE:158:LYS:HB3	7:CH:63:LYS:HE2	2.02	0.42
23:DB:1636:U:O2'	23:DB:1637:A:H5'	2.18	0.42
1:CA:551:U:H2'	1:CA:552:U:H6	1.84	0.42
25:DC:74:PRO:HD2	25:DC:96:LYS:HG3	2.01	0.42
13:CN:55:SER:OG	13:CN:56:PRO:HD2	2.19	0.42
46:DZ:17:SER:O	46:DZ:19:GLY:N	2.45	0.42
21:AU:22:CYS:O	21:AU:23:GLU:HG2	2.20	0.42
1:AA:761:G:H2'	1:AA:762:U:C6	2.55	0.42
8:AI:85:ALA:O	8:AI:88:GLU:HB2	2.20	0.42
21:AU:52:VAL:HG13	21:AU:53:LYS:N	2.34	0.42
1:CA:755:G:OP2	14:CO:64:LYS:HE2	2.19	0.42
1:CA:761:G:H2'	1:CA:762:U:C6	2.54	0.42
4:AE:30:PHE:CD1	4:AE:30:PHE:N	2.87	0.42
39:BR:82:HIS:ND1	39:BR:82:HIS:O	2.53	0.42
37:BP:34:GLY:C	37:BP:35:SER:O	2.57	0.42
52:BI:15:GLY:O	52:BI:16:MET:HB2	2.19	0.42
23:DB:2323:G:C2'	23:DB:2324:U:H5'	2.49	0.42
23:BB:213:A:H2'	23:BB:214:G:C8	2.55	0.42
23:DB:1099:G:O4'	52:DI:3:LYS:N	2.52	0.42
38:BQ:52:ARG:HD2	38:BQ:52:ARG:HA	1.74	0.42
27:BE:48:THR:O	27:BE:49:ARG:O	2.38	0.42
23:DB:2526:G:H21	51:D4:1:MET:CG	2.32	0.42
23:BB:2263:C:H4'	23:BB:2329:U:H4'	2.01	0.42
34:BM:33:LEU:HD22	34:BM:124:LEU:HG	2.02	0.42
34:BM:5:LYS:HE3	34:BM:5:LYS:HB3	1.88	0.42
46:BZ:49:ARG:HH21	46:BZ:53:THR:HG21	1.85	0.42
50:B3:24:LYS:HZ3	50:B3:29:ARG:NH2	2.12	0.42
23:BB:834:G:O2'	23:BB:835:C:H5'	2.20	0.42
26:BD:128:ARG:HH11	26:BD:144:GLY:HA2	1.83	0.42
48:D1:14:ALA:HB1	48:D1:48:TYR:CE2	2.55	0.42
38:DQ:92:LYS:O	38:DQ:93:ILE:HG23	2.20	0.42
23:BB:994:C:OP1	38:BQ:49:ARG:HG2	2.19	0.42
26:DD:116:LYS:O	35:DN:2:ARG:N	2.52	0.42
23:BB:920:A:H2'	23:BB:921:C:H6	1.83	0.42
23:DB:852:U:H2'	23:DB:853:C:H6	1.83	0.42
31:DJ:15:TRP:O	31:DJ:16:TYR:C	2.58	0.42
31:DJ:44:TYR:CD1	31:DJ:45:THR:N	2.77	0.42
31:DJ:57:LEU:HG	31:DJ:128:ASN:HA	2.01	0.42
38:DQ:64:ILE:HG13	38:DQ:95:ALA:HB2	2.01	0.42
49:D2:38:GLY:C	49:D2:39:ARG:HD2	2.40	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:9:ASN:O	32:BK:84:CYS:HB2	2.20	0.42
42:DU:43:LYS:HG2	42:DU:57:ILE:CB	2.49	0.42
35:BN:65:LEU:HA	35:BN:65:LEU:HD12	1.82	0.42
27:DE:6:LYS:HG2	27:DE:119:ILE:O	2.19	0.42
25:DC:260:LYS:C	25:DC:261:ARG:HG3	2.40	0.42
46:DZ:31:ASP:C	46:DZ:32:LEU:HD22	2.40	0.42
46:DZ:8:LYS:O	46:DZ:9:TYR:HB2	2.20	0.42
40:DS:22:ASP:O	40:DS:25:ARG:HG3	2.19	0.42
42:DU:72:PHE:CD2	42:DU:74:ALA:HB3	2.53	0.42
23:DB:1461:C:H2'	23:DB:1462:C:C6	2.55	0.42
28:DF:106:ALA:O	28:DF:136:ILE:HG23	2.19	0.42
42:BU:15:GLY:HA2	42:BU:18:LYS:HE2	2.02	0.42
1:AA:1098:C:H2'	1:AA:1099:G:O4'	2.20	0.42
35:BN:1:MET:SD	35:BN:2:ARG:HB2	2.60	0.42
35:BN:1:MET:CG	35:BN:2:ARG:H	2.32	0.42
25:DC:224:MET:HA	25:DC:233:GLY:N	2.29	0.42
16:CQ:23:ALA:HB1	16:CQ:40:THR:CG2	2.50	0.42
23:DB:1064:C:C1'	52:DI:90:GLY:HA2	2.50	0.42
52:DI:90:GLY:C	52:DI:92:PRO:HD3	2.40	0.42
52:DI:17:ALA:O	52:DI:18:ASN:HB3	2.19	0.42
28:DF:39:VAL:CA	28:DF:84:ILE:HB	2.38	0.42
15:AP:42:ILE:CB	15:AP:46:LYS:HD2	2.42	0.42
32:BK:47:ILE:HG22	32:BK:49:ARG:N	2.32	0.42
47:D0:29:VAL:HB	47:D0:34:GLY:HA2	2.02	0.42
23:BB:2038:G:H2'	23:BB:2039:U:C6	2.54	0.42
1:AA:1129:C:H5''	8:AI:17:ARG:NH2	2.34	0.42
8:AI:4:GLN:HE21	8:AI:21:LYS:HE3	1.84	0.42
23:BB:686:U:H1'	49:B2:6:GLN:O	2.19	0.42
23:BB:686:U:O4	49:B2:12:ARG:HG3	2.19	0.42
1:AA:242:G:H2'	1:AA:243:A:H5''	2.01	0.42
23:BB:635:C:O2'	23:BB:639:U:H5''	2.19	0.42
27:BE:17:THR:C	27:BE:199:MET:SD	2.98	0.42
30:BH:6:LEU:HD12	30:BH:15:LEU:CA	2.47	0.42
26:BD:120:GLY:N	26:BD:123:LYS:HG3	2.26	0.42
38:DQ:48:ASP:O	38:DQ:51:GLN:HB2	2.19	0.42
2:CC:69:THR:HG22	2:CC:70:ALA:N	2.35	0.42
1:CA:1000:A:H2'	1:CA:1001:C:H6	1.78	0.42
23:BB:1791:A:N6	23:BB:1828:G:H1'	2.34	0.42
17:AR:64:LEU:C	17:AR:66:LEU:H	2.23	0.42
23:BB:480:A:C4'	42:BU:42:LYS:HG2	2.44	0.42
23:BB:1799:G:N7	25:BC:178:GLY:HA3	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AB:119:GLN:HE21	20:AB:119:GLN:HB3	1.59	0.42
8:CI:7:GLY:HA3	8:CI:81:GLY:O	2.19	0.42
22:DA:46:A:H4'	36:DO:1:MET:HB2	2.01	0.42
29:DG:65:GLY:HA2	29:DG:68:ARG:HH21	1.84	0.42
52:BI:14:ALA:HA	52:BI:45:THR:CG2	2.43	0.42
31:BJ:34:ARG:CB	31:BJ:39:LYS:HD2	2.49	0.42
11:CL:100:ALA:O	11:CL:101:LEU:O	2.37	0.42
29:DG:88:LEU:HD21	29:DG:104:LEU:HD11	2.02	0.42
11:AL:21:PRO:HD2	11:AL:94:TYR:OH	2.19	0.42
23:BB:2277:G:N7	43:BW:8:SER:O	2.52	0.42
45:BY:20:LYS:HG3	45:BY:24:LEU:HD12	2.02	0.42
23:DB:2016:U:H1'	47:D0:2:VAL:HG11	2.01	0.42
35:BN:112:TYR:CE2	47:B0:53:VAL:HG22	2.54	0.42
23:BB:325:G:H2'	23:BB:326:G:H8	1.85	0.42
23:DB:2007:U:H2'	23:DB:2008:C:C6	2.55	0.42
23:DB:1446:C:O2'	23:DB:1447:C:H5'	2.19	0.42
3:CD:74:TYR:HB3	3:CD:89:LEU:HD12	2.00	0.42
11:AL:38:THR:HA	11:AL:49:ARG:O	2.19	0.42
26:BD:167:ASN:N	26:BD:167:ASN:ND2	2.65	0.42
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.54	0.42
52:DI:63:ASP:O	52:DI:64:ARG:CB	2.66	0.42
42:DU:46:LYS:HE2	42:DU:52:ASN:O	2.20	0.42
29:BG:173:ALA:C	29:BG:174:LYS:HD2	2.40	0.42
23:BB:1784:A:H4'	23:BB:1785:A:O5'	2.20	0.42
23:DB:212:G:H2'	23:DB:213:A:H8	1.84	0.42
52:DI:102:ARG:HG3	52:DI:141:ASP:HA	2.02	0.42
22:DA:22:U:H2'	22:DA:23:G:H8	1.85	0.42
50:B3:15:LYS:NZ	50:B3:59:ALA:HB1	2.34	0.42
6:CG:36:SER:OG	6:CG:37:THR:N	2.52	0.42
36:DO:8:ILE:O	36:DO:11:ALA:HB3	2.19	0.42
23:BB:1260:A:H2'	23:BB:1261:C:C6	2.54	0.42
29:DG:139:VAL:O	29:DG:143:VAL:HG12	2.20	0.42
41:BT:34:VAL:HG13	41:BT:43:ILE:HD11	2.01	0.42
23:BB:203:A:H2'	23:BB:204:A:H8	1.84	0.42
1:AA:691:G:H2'	1:AA:692:U:C6	2.55	0.42
27:BE:35:TYR:CD2	27:BE:178:VAL:HG21	2.54	0.42
1:CA:611:C:H2'	1:CA:612:C:H6	1.84	0.42
1:CA:1248:A:H2'	1:CA:1249:C:C6	2.55	0.42
1:AA:552:U:H4'	11:AL:82:ARG:HG2	2.01	0.42
1:CA:551:U:O2'	1:CA:552:U:H5'	2.19	0.42
6:AG:46:LEU:O	6:AG:46:LEU:HD13	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:69:C:H2'	23:BB:70:G:C8	2.55	0.42
23:DB:1864:U:OP1	23:DB:2410:G:O2'	2.32	0.42
10:CK:18:GLY:O	10:CK:81:LEU:HD12	2.19	0.42
46:DZ:17:SER:C	46:DZ:19:GLY:H	2.21	0.42
1:CA:1209:C:O2'	1:CA:1210:C:H5'	2.20	0.42
23:BB:2140:G:H2'	23:BB:2141:G:C8	2.54	0.42
23:DB:1012:U:O4	31:DJ:30:THR:HG21	2.20	0.42
23:BB:2445:G:O2'	23:BB:2446:G:H5'	2.19	0.42
23:BB:1322:A:C2'	23:BB:1323:C:H5'	2.50	0.42
23:DB:2417:C:O2'	23:DB:2418:A:H5'	2.18	0.42
31:BJ:38:GLY:HA2	31:BJ:41:LYS:HB3	2.01	0.42
46:BZ:64:PHE:C	46:BZ:66:ILE:H	2.22	0.42
25:DC:173:LEU:HD23	25:DC:173:LEU:HA	1.81	0.42
25:DC:75:ALA:HB1	25:DC:93:VAL:CG1	2.44	0.42
33:BL:57:LEU:HD13	33:BL:58:TYR:CE1	2.54	0.42
23:DB:2723:C:H2'	23:DB:2724:U:O4'	2.19	0.42
26:DD:118:PHE:HD2	26:DD:119:ALA:N	2.17	0.42
37:DP:46:VAL:HB	37:DP:65:ASN:OD1	2.18	0.42
37:DP:29:VAL:HA	37:DP:84:SER:HA	2.00	0.42
34:DM:73:ILE:CG2	34:DM:90:GLU:HG2	2.49	0.42
23:DB:1021:A:O2'	23:DB:1123:C:H5''	2.20	0.42
37:BP:64:SER:OG	37:BP:71:ARG:NH1	2.52	0.42
20:CB:41:ASN:ND2	20:CB:44:LYS:HB2	2.35	0.42
22:DA:116:G:H4'	36:DO:54:VAL:CG1	2.49	0.42
23:BB:1000:A:H1'	45:BY:10:ARG:HH12	1.85	0.42
31:DJ:14:ASP:HB3	31:DJ:16:TYR:HD1	1.84	0.42
20:AB:53:LEU:HD12	20:AB:219:THR:CG2	2.49	0.42
23:BB:24:G:HO2'	23:BB:25:U:H5'	1.85	0.42
38:BQ:5:ARG:O	38:BQ:9:ALA:HB2	2.18	0.42
23:BB:2094:A:H5'	30:BH:25:TYR:CD1	2.54	0.42
39:DR:6:GLN:CG	39:DR:7:SER:H	2.30	0.42
23:DB:2267:A:H3'	23:DB:2267:A:N3	2.34	0.42
35:BN:10:LEU:O	35:BN:12:ARG:N	2.53	0.42
27:DE:122:GLU:CG	27:DE:123:LYS:H	2.32	0.42
27:DE:156:ASN:OD1	27:DE:157:LEU:HD23	2.18	0.42
41:BT:84:TYR:C	41:BT:85:VAL:HG13	2.39	0.42
41:BT:29:THR:HB	41:BT:85:VAL:O	2.20	0.42
25:DC:52:HIS:O	25:DC:53:ILE:HB	2.19	0.42
23:DB:2228:G:H21	46:DZ:32:LEU:HD11	1.84	0.42
41:DT:61:LEU:HB2	41:DT:82:LYS:CB	2.49	0.42
20:AB:71:THR:HG22	20:AB:94:ARG:HH21	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:103:U:O2'	22:DA:104:A:H5'	2.20	0.42
22:DA:75:G:H2'	22:DA:76:G:O4'	2.19	0.42
1:CA:238:A:C3'	1:CA:239:U:H5''	2.49	0.42
19:CT:66:ILE:HA	19:CT:70:LYS:NZ	2.34	0.42
43:BW:39:GLN:HA	43:BW:68:PHE:CA	2.43	0.42
32:BK:2:ILE:HG22	32:BK:67:LYS:HZ1	1.85	0.42
23:BB:2751:G:N3	23:BB:2751:G:H5'	2.34	0.42
34:DM:53:MET:CA	34:DM:112:LEU:HD21	2.48	0.42
8:AI:17:ARG:HE	8:AI:65:THR:HB	1.85	0.42
10:CK:124:LYS:HD3	21:CU:34:ARG:HH11	1.85	0.42
18:CS:26:ASP:O	18:CS:27:LYS:HB3	2.20	0.42
34:BM:109:PRO:N	34:BM:112:LEU:HD13	2.35	0.42
14:AO:2:LEU:HD13	14:AO:7:THR:HG23	2.02	0.42
18:CS:13:HIS:ND1	18:CS:13:HIS:N	2.58	0.42
16:AQ:56:ASP:C	16:AQ:79:GLU:HB3	2.40	0.42
21:AU:5:VAL:O	21:AU:6:ARG:HB2	2.19	0.42
41:BT:62:VAL:O	41:BT:63:VAL:CG1	2.67	0.42
18:CS:11:ASP:OD1	18:CS:14:LEU:HD21	2.20	0.42
23:BB:1789:A:H2'	23:BB:1790:C:H6	1.83	0.42
2:AC:54:ILE:HG12	2:AC:54:ILE:O	2.19	0.42
8:CI:29:ILE:HD13	8:CI:37:TYR:CD2	2.55	0.42
1:CA:108:G:C6	19:CT:9:ARG:HG2	2.54	0.42
27:DE:83:VAL:HG23	27:DE:84:THR:N	2.34	0.42
2:CC:156:LEU:CB	2:CC:163:ARG:HD3	2.46	0.42
52:BI:46:ASP:HA	52:BI:50:LYS:CG	2.49	0.42
3:AD:84:ASN:OD1	4:AE:101:GLY:HA2	2.19	0.42
34:DM:54:THR:O	34:DM:57:VAL:HG23	2.19	0.42
23:BB:2651:C:O2'	23:BB:2652:C:H5'	2.20	0.42
1:CA:1172:C:H2'	1:CA:1173:U:C6	2.54	0.42
1:CA:562:U:H1'	11:CL:11:ARG:HB3	2.02	0.42
23:BB:13:A:O2'	23:BB:15:G:N7	2.43	0.42
8:AI:10:ARG:HA	8:AI:77:ALA:CB	2.50	0.42
4:AE:143:LEU:O	4:AE:146:MET:HB2	2.20	0.42
35:DN:63:ARG:HA	35:DN:80:PHE:CE1	2.54	0.42
50:D3:4:LYS:HZ1	50:D3:60:CYS:HB3	1.84	0.42
20:AB:187:ASP:H	20:AB:190:SER:HB2	1.85	0.42
33:DL:51:GLU:CG	33:DL:52:GLY:N	2.81	0.42
24:DV:45:ASP:O	24:DV:46:LYS:HD2	2.19	0.42
23:DB:1710:G:H2'	23:DB:1711:A:C8	2.54	0.42
23:DB:2141:G:H2'	23:DB:2142:A:C8	2.55	0.42
23:DB:1506:U:H2'	23:DB:1507:C:H6	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:148:G:N3	1:CA:1446:A:H2	2.18	0.42
9:CJ:21:ALA:CB	9:CJ:96:VAL:HG11	2.49	0.42
29:DG:163:TYR:C	29:DG:165:ASP:H	2.22	0.42
23:DB:1717:A:H2'	23:DB:1718:G:O4'	2.19	0.42
1:AA:512:U:O2'	1:AA:513:C:H5'	2.19	0.42
23:DB:51:G:O2'	23:DB:119:A:N6	2.52	0.42
1:CA:512:U:O2'	1:CA:513:C:H5'	2.20	0.42
23:DB:510:C:O2'	23:DB:1236:G:H5'	2.19	0.42
1:AA:1273:C:H2'	1:AA:1274:A:O4'	2.20	0.42
27:BE:97:ASN:HD22	27:BE:97:ASN:N	2.16	0.42
23:DB:1987:A:H2'	23:DB:1988:G:C8	2.54	0.42
7:CH:17:GLN:HG2	7:CH:62:LEU:HG	2.02	0.42
23:DB:2520:C:O2'	23:DB:2521:C:H5'	2.20	0.42
1:AA:421:U:H5'	1:AA:422:C:C5	2.55	0.42
6:CG:47:GLU:C	6:CG:49:LEU:H	2.22	0.42
1:CA:1475:G:H4'	23:DB:1689:A:H4'	2.01	0.42
1:CA:714:G:H2'	1:CA:715:A:C8	2.54	0.42
23:DB:601:C:H2'	23:DB:602:A:H8	1.85	0.42
20:AB:50:ASN:O	20:AB:51:GLU:C	2.58	0.42
23:DB:1704:C:H2'	23:DB:1705:A:C8	2.55	0.42
23:DB:252:G:H2'	23:DB:253:C:H6	1.84	0.42
11:AL:6:LEU:O	11:AL:10:PRO:HG3	2.19	0.42
23:BB:1428:C:H2'	23:BB:1569:A:OP2	2.20	0.42
1:CA:928:G:O2'	1:CA:929:G:H5'	2.20	0.42
30:DH:55:GLU:O	30:DH:59:ALA:HB2	2.20	0.42
23:DB:2251:G:H8	23:DB:2251:G:OP2	2.03	0.42
33:DL:76:GLU:OE1	33:DL:76:GLU:HA	2.20	0.42
44:BX:18:LEU:HD12	44:BX:18:LEU:H	1.84	0.42
14:AO:46:LYS:HB2	14:AO:46:LYS:HE3	1.89	0.42
23:BB:786:C:O2'	23:BB:787:C:H5'	2.19	0.42
23:DB:2316:G:O2'	23:DB:2317:A:H5'	2.20	0.42
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.54	0.42
34:BM:100:LYS:O	34:BM:101:VAL:HG13	2.20	0.42
34:BM:13:HIS:O	34:BM:14:LYS:HD2	2.20	0.42
34:BM:29:GLY:H	34:BM:102:LEU:HG	1.84	0.42
34:BM:71:LYS:NZ	34:BM:91:TYR:HD2	2.17	0.42
25:BC:130:PRO:HA	25:BC:187:CYS:O	2.19	0.42
27:BE:189:THR:O	27:BE:190:ALA:HB3	2.20	0.42
26:DD:116:LYS:HB2	26:DD:165:MET:CB	2.49	0.42
26:DD:6:GLY:C	26:DD:26:VAL:HG23	2.40	0.42
20:CB:31:PHE:HB3	20:CB:32:GLY:H	1.71	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BR:78:ARG:CG	39:BR:87:GLN:HA	2.49	0.42
39:BR:78:ARG:CD	39:BR:87:GLN:HG2	2.50	0.42
31:DJ:32:LEU:O	31:DJ:36:LEU:HD22	2.19	0.42
31:DJ:90:GLU:C	31:DJ:92:MET:N	2.72	0.42
32:BK:87:LEU:CA	32:BK:95:ILE:HG22	2.49	0.42
39:DR:15:SER:HB2	39:DR:16:GLU:H	1.68	0.42
23:DB:2384:U:H5''	23:DB:2386:A:OP1	2.19	0.42
23:BB:1140:C:OP1	31:BJ:64:VAL:HG13	2.20	0.42
31:BJ:128:ASN:CG	31:BJ:129:GLU:N	2.73	0.42
25:DC:53:ILE:CD1	25:DC:218:THR:HA	2.50	0.42
25:DC:257:ARG:HA	25:DC:261:ARG:NE	2.35	0.42
46:DZ:2:LYS:O	46:DZ:7:PRO:HA	2.19	0.42
41:DT:40:LYS:HE3	41:DT:59:ASN:O	2.20	0.42
28:DF:60:SER:OG	28:DF:88:VAL:HG11	2.19	0.42
1:CA:359:G:O2'	1:CA:360:G:H5'	2.20	0.42
52:DI:131:THR:O	52:DI:135:MET:HG3	2.20	0.42
1:CA:237:G:H2'	1:CA:238:A:C8	2.55	0.42
23:BB:83:A:H2'	23:BB:84:A:C8	2.55	0.42
11:AL:8:ARG:CZ	11:AL:9:LYS:HE3	2.50	0.42
8:CI:56:MET:C	8:CI:58:GLU:N	2.73	0.42
52:BI:18:ASN:N	52:BI:19:PRO:CD	2.82	0.42
25:BC:244:VAL:O	25:BC:245:THR:C	2.58	0.42
23:DB:2529:G:H5'	29:DG:175:LYS:HB3	2.01	0.42
38:DQ:2:ARG:NE	38:DQ:4:LYS:HE3	2.34	0.42
18:CS:39:ILE:HG12	18:CS:68:HIS:O	2.19	0.42
18:CS:43:MET:HB3	18:CS:61:VAL:HG11	2.01	0.42
26:BD:120:GLY:N	26:BD:123:LYS:HB2	2.35	0.42
51:B4:24:ARG:HD3	51:B4:26:ILE:HG23	2.01	0.42
33:BL:67:THR:OG1	33:BL:68:SER:N	2.47	0.42
33:DL:126:ARG:O	33:DL:127:VAL:CG2	2.67	0.42
39:BR:18:GLN:HE21	39:BR:99:THR:CB	2.29	0.42
19:AT:53:MET:SD	19:AT:57:VAL:HG21	2.60	0.42
23:BB:90:U:O4	23:BB:91:A:N6	2.53	0.42
26:DD:60:VAL:HB	26:DD:62:LYS:NZ	2.34	0.42
23:DB:126:A:OP2	49:D2:13:ASN:ND2	2.52	0.42
48:B1:36:LYS:HD2	48:B1:36:LYS:N	2.35	0.42
23:BB:2659:G:C2	23:BB:2661:G:H5''	2.55	0.42
48:D1:24:LYS:C	48:D1:24:LYS:HZ3	2.23	0.42
18:CS:30:LEU:HB2	18:CS:48:ILE:HA	2.01	0.42
3:AD:190:LEU:O	3:AD:192:ALA:N	2.51	0.42
8:CI:6:TYR:CG	8:CI:7:GLY:N	2.86	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:185:THR:O	2:AC:186:SER:HB2	2.19	0.42
23:BB:2146:C:H1'	23:BB:2147:A:H1'	2.02	0.42
23:DB:2012:G:C5'	40:DS:96:ILE:HD11	2.50	0.42
3:CD:171:GLU:O	3:CD:180:THR:HB	2.19	0.42
25:BC:61:TYR:HD2	25:BC:84:PRO:HD2	1.76	0.42
23:BB:1902:C:H2'	23:BB:1903:G:H5'	2.00	0.42
34:DM:38:ARG:HD2	34:DM:38:ARG:C	2.39	0.42
30:DH:127:GLU:HB2	30:DH:143:ILE:CG2	2.49	0.42
29:DG:125:PRO:HD2	29:DG:129:GLU:O	2.19	0.42
27:BE:161:ALA:O	27:BE:162:ARG:HD2	2.19	0.42
30:DH:70:GLU:HG3	30:DH:70:GLU:H	1.59	0.42
50:D3:38:LYS:HD2	50:D3:38:LYS:H	1.85	0.42
23:DB:1204:A:N1	23:DB:1241:A:N1	2.67	0.42
23:DB:2007:U:H2'	23:DB:2008:C:H6	1.85	0.42
44:BX:55:THR:HG22	44:BX:59:GLU:CD	2.40	0.42
45:BY:29:ARG:O	45:BY:30:ARG:HB2	2.20	0.42
23:BB:1064:C:H2'	23:BB:1065:U:O4'	2.20	0.42
15:CP:44:SER:HB3	15:CP:46:LYS:HG2	2.02	0.42
49:B2:21:ARG:CB	49:B2:31:LEU:HD21	2.49	0.42
1:AA:1113:C:H2'	1:AA:1114:C:C6	2.55	0.42
8:AI:11:ARG:NH1	8:AI:106:ASP:OD1	2.53	0.42
28:BF:70:ARG:CA	28:BF:80:GLN:HE21	2.31	0.42
29:DG:131:VAL:O	29:DG:131:VAL:HG13	2.19	0.42
44:DX:55:THR:HG22	44:DX:56:LEU:H	1.84	0.42
1:CA:167:A:H2'	1:CA:168:G:H8	1.85	0.42
48:B1:8:ILE:HG21	48:B1:27:ARG:NH2	2.34	0.42
30:DH:50:ARG:HD3	30:DH:54:LEU:CD1	2.50	0.42
29:BG:102:ILE:CG2	29:BG:114:HIS:HB3	2.49	0.42
23:DB:1915:U:H2'	23:DB:1916:A:C8	2.54	0.42
23:DB:2869:G:H2'	23:DB:2870:C:H6	1.83	0.42
23:DB:1921:G:O2'	23:DB:1922:G:H5'	2.20	0.42
23:DB:1544:A:H2'	23:DB:1545:A:C8	2.54	0.42
11:CL:91:GLY:O	11:CL:93:ARG:NE	2.52	0.42
15:CP:78:VAL:O	15:CP:78:VAL:HG13	2.19	0.42
1:CA:709:U:H2'	1:CA:710:G:C8	2.55	0.42
1:AA:611:C:H2'	1:AA:612:C:H6	1.83	0.42
1:CA:612:C:H2'	1:CA:613:C:C6	2.54	0.42
1:AA:1528:U:H6	1:AA:1528:U:O5'	2.03	0.42
1:AA:343:U:H2'	1:AA:345:C:C5	2.55	0.42
23:DB:1936:A:N6	23:DB:1963:U:N3	2.63	0.42
2:AC:40:GLN:OE1	2:AC:44:LYS:HD2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:432:A:C2'	1:AA:433:G:H5'	2.49	0.42
23:DB:2479:U:H6	23:DB:2479:U:O5'	2.03	0.42
23:DB:268:C:O2	23:DB:268:C:H2'	2.19	0.42
23:DB:2324:U:H3'	23:DB:2325:G:C5'	2.49	0.42
1:CA:1349:A:H2'	1:CA:1350:A:O4'	2.19	0.42
52:BI:56:VAL:CG2	52:BI:68:PHE:HB2	2.50	0.42
1:AA:680:C:H2'	1:AA:681:A:H8	1.85	0.42
23:BB:939:G:O2'	23:BB:940:G:H5'	2.20	0.42
23:DB:1276:A:O2'	23:DB:1277:G:H5'	2.19	0.42
11:AL:71:HIS:CG	11:AL:72:ASN:N	2.86	0.42
27:DE:19:PHE:O	27:DE:19:PHE:HD1	2.03	0.42
5:CF:74:LEU:HD22	5:CF:74:LEU:O	2.20	0.42
1:CA:596:A:O2'	1:CA:597:G:H5'	2.20	0.42
1:CA:792:A:H1'	1:CA:794:A:N7	2.34	0.42
38:BQ:59:LEU:CG	38:BQ:63:ARG:HH21	2.32	0.42
23:DB:1079:C:C2	23:DB:1080:A:C8	3.08	0.42
23:BB:440:C:H2'	23:BB:441:U:C6	2.55	0.42
51:D4:26:ILE:HD13	51:D4:27:CYS:N	2.34	0.42
34:BM:65:ILE:CG2	34:BM:101:VAL:HA	2.44	0.42
24:BV:44:HIS:CE1	24:BV:85:LYS:HB2	2.55	0.42
46:BZ:60:PHE:HD2	46:BZ:60:PHE:HA	1.69	0.42
25:DC:140:VAL:HG11	25:DC:163:ILE:HG13	2.01	0.42
23:BB:2678:C:O2'	23:BB:2679:A:H5'	2.20	0.42
26:BD:23:PRO:HG2	26:BD:178:VAL:HG21	2.02	0.42
37:BP:62:LYS:NZ	37:BP:102:ARG:HH22	2.17	0.42
23:BB:1818:U:H5''	25:BC:155:ARG:CB	2.50	0.42
37:DP:98:TYR:N	37:DP:98:TYR:CD1	2.88	0.42
33:DL:124:GLY:H	33:DL:142:ILE:CB	2.32	0.42
23:DB:1142:A:C4	23:DB:1144:A:C8	3.08	0.42
20:CB:14:HIS:HB3	20:CB:208:ALA:HB1	2.02	0.42
45:DY:36:GLU:O	45:DY:37:ARG:CB	2.67	0.42
36:DO:25:ARG:HE	36:DO:94:ARG:NH2	2.18	0.42
23:DB:2082:A:H61	23:DB:2237:G:H1'	1.85	0.42
47:B0:29:VAL:HG21	47:B0:41:HIS:HA	2.02	0.42
23:BB:23:G:O2'	23:BB:24:G:H5'	2.20	0.42
30:BH:9:VAL:HG12	30:BH:9:VAL:O	2.19	0.42
39:DR:5:PHE:HD1	39:DR:37:GLU:OE2	2.02	0.42
30:BH:147:VAL:HG12	30:BH:148:ALA:N	2.35	0.42
43:DW:68:PHE:CE1	43:DW:69:GLU:HG2	2.54	0.42
25:DC:20:ASN:CB	25:DC:202:ARG:CD	2.96	0.42
23:BB:2780:G:C2	31:BJ:120:ARG:HG3	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:128:ASN:CG	31:BJ:129:GLU:H	2.22	0.42
27:DE:154:ASP:OD1	27:DE:158:PHE:HB2	2.20	0.42
27:DE:193:VAL:HA	27:DE:198:GLU:C	2.40	0.42
47:B0:6:LYS:HA	47:B0:6:LYS:HD3	1.82	0.42
5:AF:46:GLN:HE21	5:AF:46:GLN:HB2	1.50	0.42
28:DF:35:LEU:O	28:DF:152:ASP:HB2	2.20	0.42
23:BB:670:A:OP1	33:BL:47:ARG:HD3	2.20	0.42
8:CI:44:ARG:HB3	8:CI:48:ARG:HH12	1.85	0.42
3:CD:99:ASN:O	3:CD:102:TYR:HB3	2.20	0.42
28:BF:103:ILE:HG13	28:BF:104:THR:N	2.34	0.42
26:BD:1:MET:HE2	26:BD:1:MET:HB2	1.89	0.42
26:BD:83:ARG:NH1	26:BD:83:ARG:HG2	2.35	0.42
38:DQ:3:VAL:O	38:DQ:4:LYS:C	2.58	0.42
23:BB:126:A:O5'	49:B2:19:ARG:HG2	2.20	0.42
51:B4:27:CYS:SG	51:B4:33:HIS:NE2	2.93	0.42
23:BB:2849:U:O4	23:BB:2867:G:C8	2.73	0.42
1:AA:1324:A:H2'	1:AA:1325:C:O4'	2.19	0.42
34:BM:105:MET:HE3	34:BM:106:ASP:O	2.20	0.42
19:AT:57:VAL:O	19:AT:61:ALA:HB2	2.19	0.42
19:AT:60:GLN:HE21	19:AT:61:ALA:N	2.10	0.42
39:DR:78:ARG:HA	39:DR:88:GLY:O	2.20	0.42
23:BB:286:U:H2'	23:BB:287:G:C8	2.55	0.42
21:AU:3:ILE:HG23	21:AU:19:LYS:HE3	2.01	0.42
23:BB:1241:A:H2'	23:BB:1242:U:C5'	2.48	0.42
41:DT:38:ALA:O	41:DT:39:THR:O	2.37	0.42
29:BG:89:VAL:HG12	29:BG:159:LYS:HA	2.01	0.42
42:DU:59:GLU:HG3	42:DU:62:ALA:CB	2.43	0.42
5:AF:7:VAL:HA	5:AF:60:VAL:O	2.20	0.42
23:BB:477:A:H2'	23:BB:478:A:O4'	2.20	0.42
23:DB:1275:A:N7	35:DN:16:HIS:CG	2.88	0.42
19:CT:4:LYS:HE2	19:CT:6:ALA:HB3	2.02	0.42
3:AD:169:TRP:CB	3:AD:183:ARG:HH21	2.32	0.42
24:DV:65:VAL:O	24:DV:66:ASP:HB3	2.19	0.42
8:CI:85:ALA:C	8:CI:87:MET:N	2.73	0.42
36:DO:31:THR:C	36:DO:33:ARG:H	2.22	0.42
7:CH:125:ILE:HG22	7:CH:126:CYS:SG	2.60	0.42
3:AD:58:GLN:CD	3:AD:62:ARG:HG3	2.39	0.42
23:BB:1439:A:N1	23:BB:1552:A:N7	2.68	0.42
23:BB:1556:C:H2'	23:BB:1557:C:C6	2.55	0.42
23:DB:1516:G:O2'	23:DB:1517:G:H5'	2.20	0.42
17:AR:60:ARG:HA	17:AR:63:TYR:CD1	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BH:55:GLU:C	30:BH:57:LYS:H	2.23	0.42
23:BB:2784:U:O2'	23:BB:2785:C:H5'	2.20	0.42
26:DD:25:THR:HA	26:DD:188:LEU:HD12	2.01	0.42
1:AA:473:U:C2	1:AA:474:G:C8	3.07	0.42
23:DB:570:G:C2'	23:DB:571:U:H5'	2.50	0.42
23:DB:2395:C:H6	23:DB:2395:C:O5'	2.02	0.42
4:AE:95:MET:HE2	4:AE:114:LEU:HD21	2.02	0.42
1:CA:585:G:O2'	1:CA:879:C:OP1	2.37	0.42
12:CM:68:LEU:HD22	12:CM:69:ARG:HH11	1.82	0.42
23:DB:2649:C:H2'	23:DB:2650:U:C6	2.55	0.42
23:DB:2651:C:O2'	23:DB:2652:C:H5'	2.20	0.42
11:CL:6:LEU:CD1	11:CL:11:ARG:HE	2.29	0.42
16:CQ:30:HIS:HB3	16:CQ:33:TYR:HB2	2.01	0.42
1:AA:441:A:N6	1:AA:493:A:H62	2.15	0.42
1:AA:1037:C:H2'	1:AA:1038:C:C6	2.55	0.42
23:DB:2813:A:O2'	23:DB:2814:A:H5'	2.19	0.42
5:CF:19:PRO:HG2	5:CF:20:GLY:H	1.84	0.42
23:BB:2265:U:H3'	23:BB:2266:A:C5'	2.50	0.42
23:BB:709:U:H2'	23:BB:710:U:H6	1.85	0.42
13:AN:1:ALA:O	13:AN:2:LYS:HB2	2.20	0.42
9:AJ:30:LYS:HG3	9:AJ:36:VAL:HB	2.01	0.42
4:CE:28:ARG:HB2	4:CE:28:ARG:HE	1.73	0.42
23:DB:2389:G:H5''	23:DB:2390:U:O4'	2.20	0.42
32:DK:87:LEU:O	32:DK:88:ASN:C	2.58	0.42
1:AA:957:U:O2	1:AA:959:A:H8	2.03	0.42
23:DB:2868:A:H2'	23:DB:2869:G:C8	2.55	0.42
1:CA:22:G:O2'	1:CA:23:C:H5'	2.20	0.42
1:AA:402:G:H2'	1:AA:403:C:H6	1.84	0.42
23:BB:1922:G:H2'	23:BB:1923:U:O4'	2.19	0.42
1:CA:707:U:H2'	1:CA:708:C:C6	2.55	0.42
23:DB:2379:G:H2'	23:DB:2380:C:H6	1.84	0.42
1:CA:893:C:H2'	1:CA:894:G:H8	1.84	0.42
23:BB:1746:A:O2'	23:BB:1747:U:H5'	2.20	0.42
34:DM:106:ASP:O	34:DM:109:PRO:HD3	2.19	0.42
36:DO:90:VAL:HG12	36:DO:91:SER:N	2.35	0.42
1:AA:709:U:H2'	1:AA:710:G:C8	2.54	0.42
23:BB:2047:C:H2'	23:BB:2048:G:H8	1.84	0.42
23:BB:2544:G:H2'	23:BB:2545:G:H8	1.85	0.42
1:CA:31:G:H2'	1:CA:48:C:C5	2.54	0.42
23:DB:957:C:H5	34:DM:76:LYS:NZ	2.18	0.42
23:BB:562:U:H2'	23:BB:572:A:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AL:34:THR:HB	11:AL:53:ARG:HB2	2.02	0.42
1:CA:28:A:H2'	1:CA:29:U:O4'	2.20	0.42
41:DT:6:ARG:O	41:DT:7:LEU:C	2.56	0.42
1:CA:41:G:H2'	1:CA:42:G:H8	1.83	0.42
23:DB:88:G:O2'	23:DB:89:A:H5'	2.20	0.42
27:DE:61:ARG:NH1	27:DE:65:THR:HG23	2.34	0.42
3:AD:176:LYS:O	3:AD:177:MET:C	2.57	0.42
23:DB:1310:G:H1'	23:DB:1611:C:H5'	2.01	0.42
1:AA:787:A:O2'	1:AA:788:U:H5'	2.20	0.42
23:DB:559:G:H2'	23:DB:560:C:O4'	2.20	0.42
1:CA:1486:G:H2'	1:CA:1487:G:O4'	2.19	0.42
23:BB:2604:U:O2'	23:BB:2605:U:H5'	2.20	0.42
23:BB:2251:G:OP2	23:BB:2251:G:H8	2.02	0.42
23:DB:2419:U:O4	50:D3:29:ARG:CZ	2.67	0.42
16:AQ:12:VAL:HG13	16:AQ:21:VAL:HB	2.01	0.42
1:CA:1058:G:H2'	1:CA:1059:C:O4'	2.19	0.42
1:AA:666:G:H5'	1:AA:726:C:H1'	2.02	0.42
39:BR:43:ASN:OD1	39:BR:56:GLY:HA3	2.20	0.42
27:BE:44:ARG:C	27:BE:46:GLN:N	2.68	0.42
25:BC:114:GLN:O	25:BC:115:ILE:HB	2.20	0.42
24:BV:75:GLN:HG2	34:BM:136:MET:HG2	2.02	0.42
25:DC:130:PRO:HA	25:DC:188:ARG:HA	2.01	0.42
50:B3:16:THR:C	50:B3:18:LYS:N	2.73	0.42
25:BC:168:GLY:C	25:BC:170:TYR:H	2.21	0.42
20:AB:205:ALA:O	20:AB:209:VAL:HG22	2.20	0.42
27:BE:120:VAL:HG12	27:BE:121:VAL:N	2.34	0.42
26:DD:5:VAL:HG12	26:DD:6:GLY:N	2.34	0.42
26:DD:94:GLN:HG2	26:DD:95:SER:O	2.19	0.42
37:DP:72:VAL:HB	37:DP:73:PHE:H	1.65	0.42
50:D3:12:ARG:CD	50:D3:23:HIS:HB2	2.50	0.42
50:D3:7:ARG:HA	50:D3:7:ARG:HD2	1.84	0.42
22:DA:115:A:H4'	36:DO:55:GLU:OE2	2.20	0.42
21:CU:3:ILE:HB	21:CU:18:PHE:CE2	2.54	0.42
31:DJ:11:VAL:O	31:DJ:11:VAL:HG22	2.19	0.42
20:AB:48:MET:H	20:AB:48:MET:HG2	1.50	0.42
20:AB:61:SER:HB3	20:AB:223:GLY:O	2.20	0.42
33:BL:127:VAL:HB	33:BL:128:THR:H	1.32	0.42
27:DE:169:VAL:O	27:DE:170:ARG:HB2	2.19	0.42
27:DE:142:ALA:C	27:DE:185:LYS:HZ2	2.22	0.42
21:AU:31:VAL:O	21:AU:32:ARG:C	2.57	0.42
50:B3:35:LYS:O	50:B3:36:ALA:HB3	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DZ:27:THR:O	46:DZ:28:VAL:HG13	2.20	0.42
41:DT:32:LEU:O	41:DT:83:ALA:HB3	2.19	0.42
12:CM:1:ALA:O	12:CM:3:ILE:HG13	2.20	0.42
30:BH:83:LYS:HG3	1:CA:360:G:OP1	2.19	0.42
42:BU:73:ASN:HB2	42:BU:96:LYS:HZ2	1.83	0.42
22:DA:75:G:H21	24:DV:88:HIS:CD2	2.38	0.42
52:BI:132:ALA:HA	52:BI:135:MET:HG2	2.02	0.42
3:CD:169:TRP:CD2	3:CD:185:PRO:HB3	2.55	0.42
19:CT:66:ILE:CG2	19:CT:67:HIS:N	2.81	0.42
43:BW:36:ILE:O	43:BW:37:VAL:HB	2.20	0.42
26:DD:157:LYS:HD2	31:DJ:80:HIS:HA	2.01	0.42
39:DR:67:GLY:N	39:DR:98:ILE:HA	2.32	0.42
11:AL:9:LYS:O	11:AL:9:LYS:HG3	2.20	0.42
1:AA:405:U:OP2	3:AD:114:ARG:NH2	2.53	0.42
8:AI:20:ILE:HA	8:AI:61:ASP:O	2.19	0.42
20:AB:33:ALA:HA	20:AB:38:HIS:CA	2.39	0.42
29:DG:50:THR:HG22	29:DG:51:PHE:O	2.20	0.42
33:BL:67:THR:HG23	33:BL:68:SER:N	2.25	0.42
23:BB:1161:C:O2'	39:BR:22:LEU:HD13	2.19	0.42
36:BO:17:LYS:NZ	43:BW:77:LYS:HE3	2.35	0.42
48:B1:35:LEU:O	48:B1:35:LEU:HG	2.20	0.42
48:D1:8:ILE:CG2	48:D1:27:ARG:HD3	2.50	0.42
23:BB:972:A:OP2	23:BB:974:G:H5''	2.20	0.42
42:DU:13:LEU:HD11	42:DU:68:ASN:HA	2.00	0.42
26:DD:148:GLN:HB3	26:DD:151:THR:HG23	2.01	0.42
23:BB:1843:C:H2'	23:BB:1844:C:H6	1.84	0.42
2:AC:148:ILE:HA	2:AC:200:TRP:O	2.20	0.42
12:CM:79:LEU:HD22	12:CM:86:ARG:HE	1.85	0.42
11:AL:113:ARG:HD3	11:AL:121:PRO:HD3	2.02	0.42
1:AA:233:C:O2'	1:AA:234:C:H5'	2.20	0.42
19:CT:31:ILE:HD13	19:CT:74:HIS:CE1	2.55	0.42
1:AA:999:C:O2'	1:AA:1000:A:H5'	2.20	0.42
23:DB:2768:U:H2'	23:DB:2769:U:O4'	2.20	0.42
25:BC:99:GLU:HG3	25:BC:100:ARG:N	2.35	0.42
23:DB:2627:G:O2'	23:DB:2781:A:N1	2.46	0.42
5:CF:15:SER:HA	5:CF:18:VAL:HG23	2.01	0.42
45:BY:37:ARG:NH1	45:BY:37:ARG:HG3	2.34	0.42
1:CA:1119:C:O2'	1:CA:1120:C:H5'	2.20	0.42
25:BC:12:ARG:HE	25:BC:12:ARG:HB3	1.60	0.42
29:DG:93:TYR:HD1	29:DG:93:TYR:N	2.16	0.42
23:BB:912:C:H2'	23:BB:913:U:C6	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DO:9:ARG:C	36:DO:11:ALA:N	2.73	0.42
23:DB:2294:G:OP2	36:DO:9:ARG:HD2	2.19	0.42
8:CI:30:ASN:O	8:CI:31:GLN:HB2	2.19	0.42
1:AA:250:A:H1'	1:AA:252:U:C5	2.55	0.42
23:BB:1683:U:O2'	23:BB:1684:G:H5'	2.19	0.42
23:BB:2653:U:H3'	23:BB:2654:A:H2'	2.02	0.42
23:BB:1541:C:H2'	23:BB:1542:U:H6	1.85	0.42
28:BF:23:SER:C	28:BF:25:MET:N	2.73	0.42
23:BB:1636:U:O2'	23:BB:1637:A:H5'	2.20	0.42
7:CH:46:GLU:HA	7:CH:63:LYS:HE3	2.01	0.42
8:AI:98:ARG:HA	8:AI:103:VAL:HG22	2.02	0.42
2:AC:122:GLN:O	2:AC:127:VAL:HG22	2.20	0.42
1:AA:581:G:OP1	14:AO:64:LYS:HE3	2.20	0.42
41:BT:25:GLU:CG	41:BT:26:LYS:H	2.33	0.42
28:BF:148:VAL:O	28:BF:149:ARG:C	2.58	0.42
22:DA:92:C:H2'	22:DA:93:C:H6	1.83	0.42
33:BL:33:ARG:NH1	33:BL:34:GLY:HA3	2.35	0.42
23:DB:2514:U:H2'	23:DB:2515:C:C6	2.55	0.42
11:AL:14:LYS:NZ	11:AL:17:LYS:HE2	2.34	0.42
23:DB:1147:A:O2'	23:DB:1148:U:H5'	2.19	0.42
29:DG:55:ASP:CG	29:DG:56:GLY:N	2.74	0.42
23:BB:1420:A:N3	23:BB:2211:A:N7	2.68	0.42
36:DO:79:ALA:O	36:DO:82:ALA:HB3	2.20	0.42
23:DB:381:G:O2'	23:DB:382:A:H5'	2.20	0.42
44:DX:39:GLN:H	44:DX:39:GLN:HG2	1.64	0.42
51:B4:13:ASN:ND2	51:B4:13:ASN:N	2.67	0.42
41:BT:68:LYS:HB2	41:BT:68:LYS:HE2	1.81	0.42
23:BB:2718:G:H5''	37:BP:100:ARG:HD2	2.02	0.42
42:DU:54:PRO:HD2	42:DU:55:GLY:H	1.83	0.42
1:CA:1050:G:H2'	1:CA:1051:C:C6	2.55	0.42
23:DB:448:U:H3'	27:DE:79:ARG:NE	2.22	0.41
23:DB:1033:U:C4	51:D4:16:ILE:HD11	2.54	0.41
25:BC:109:LEU:HB3	25:BC:110:LYS:H	1.64	0.41
34:BM:71:LYS:O	34:BM:72:PRO:C	2.58	0.41
46:BZ:4:ASP:O	46:BZ:5:ILE:C	2.59	0.41
25:DC:176:ARG:HB3	25:DC:177:SER:H	1.66	0.41
50:B3:11:LYS:HB2	50:B3:11:LYS:NZ	2.35	0.41
37:BP:59:THR:C	37:BP:60:VAL:HG22	2.39	0.41
23:BB:2683:C:O3'	37:BP:59:THR:HG21	2.20	0.41
25:BC:141:HIS:CG	25:BC:142:ASN:H	2.34	0.41
38:DQ:94:LEU:HA	38:DQ:97:ILE:CG1	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DN:2:ARG:C	35:DN:3:HIS:HD2	2.23	0.41
43:BW:28:GLU:CB	43:BW:30:VAL:HG23	2.41	0.41
20:CB:31:PHE:HB2	20:CB:41:ASN:HA	2.01	0.41
31:DJ:59:ALA:C	31:DJ:61:LYS:N	2.71	0.41
20:AB:45:THR:HA	20:AB:48:MET:CG	2.50	0.41
20:AB:67:LEU:HD12	20:AB:153:MET:CE	2.39	0.41
30:BH:3:VAL:C	30:BH:4:ILE:HG13	2.39	0.41
43:DW:24:ARG:NE	43:DW:58:LEU:HB2	2.35	0.41
25:DC:20:ASN:CG	25:DC:202:ARG:HD3	2.40	0.41
23:BB:2053:G:C2'	23:BB:2054:A:H5'	2.50	0.41
41:DT:77:ARG:HG2	41:DT:78:SER:N	2.32	0.41
33:BL:82:LEU:HD12	33:BL:90:VAL:CG1	2.49	0.41
27:DE:169:VAL:HG22	27:DE:171:ASP:H	1.85	0.41
44:BX:22:LEU:HB3	44:BX:26:PHE:CB	2.42	0.41
21:CU:24:LYS:CG	21:CU:25:ALA:H	2.33	0.41
41:DT:87:LEU:HD22	41:DT:93:LEU:HD11	2.02	0.41
42:BU:70:ALA:HB3	42:BU:77:GLY:O	2.20	0.41
19:CT:66:ILE:HG21	19:CT:71:ALA:HB2	2.02	0.41
23:BB:2331:G:O2'	43:BW:69:GLU:CD	2.58	0.41
10:AK:22:ILE:HD13	10:AK:95:THR:HG21	2.01	0.41
28:BF:36:ASN:HB2	28:BF:87:LYS:CA	2.45	0.41
34:DM:67:VAL:HG23	34:DM:100:LYS:HG2	2.02	0.41
23:DB:2028:U:H2'	23:DB:2029:G:O4'	2.19	0.41
31:DJ:85:LYS:C	31:DJ:85:LYS:HE2	2.40	0.41
32:DK:109:SER:C	32:DK:113:MET:HE2	2.40	0.41
36:BO:6:ALA:C	36:BO:8:ILE:H	2.23	0.41
8:AI:20:ILE:HD12	8:AI:20:ILE:N	2.35	0.41
8:AI:29:ILE:CG2	8:AI:64:ILE:HB	2.40	0.41
39:BR:35:PHE:H	39:BR:64:VAL:HG22	1.85	0.41
23:DB:545:U:C6	23:DB:546:U:H4'	2.54	0.41
34:BM:105:MET:HE1	34:BM:107:GLY:HA3	2.02	0.41
9:CJ:40:ILE:HG12	9:CJ:74:VAL:H	1.86	0.41
41:BT:70:HIS:ND1	41:BT:74:ILE:HB	2.35	0.41
23:DB:2893:A:H4'	23:DB:2894:G:C5'	2.50	0.41
21:AU:26:GLY:O	21:AU:30:GLU:N	2.53	0.41
6:AG:138:GLU:HA	6:AG:141:HIS:HB2	2.02	0.41
41:BT:61:LEU:CD1	41:BT:62:VAL:H	2.25	0.41
16:AQ:76:ARG:HE	16:AQ:78:VAL:HG22	1.85	0.41
28:BF:24:VAL:HA	28:BF:27:VAL:HG23	2.02	0.41
2:AC:4:VAL:HG21	2:AC:9:ILE:HD13	2.02	0.41
3:AD:104:MET:CE	3:AD:170:LEU:HD13	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AB:9:LEU:CD1	20:AB:11:ALA:HB3	2.50	0.41
4:AE:35:LEU:CD1	4:AE:133:ILE:HA	2.50	0.41
2:CC:8:GLY:HA2	2:CC:11:LEU:HG	2.02	0.41
1:AA:1470:U:O2'	1:AA:1471:U:H5'	2.20	0.41
23:BB:263:G:O2'	23:BB:429:A:N3	2.52	0.41
1:AA:542:G:O2'	1:AA:543:U:H5'	2.20	0.41
16:CQ:7:LEU:O	16:CQ:59:GLU:HA	2.20	0.41
32:BK:108:ARG:NH1	32:BK:108:ARG:HG3	2.35	0.41
1:CA:493:A:O4'	1:CA:493:A:N3	2.52	0.41
1:CA:1354:U:O2'	1:CA:1355:G:H5'	2.20	0.41
20:AB:80:LYS:HB3	20:AB:90:PHE:CE1	2.54	0.41
23:BB:904:G:H2'	23:BB:905:A:C8	2.54	0.41
23:DB:2798:U:H1'	23:DB:2800:A:N6	2.35	0.41
45:BY:28:LEU:C	45:BY:29:ARG:HG2	2.39	0.41
1:AA:1286:U:C2	1:AA:1286:U:OP1	2.72	0.41
30:BH:66:ASN:C	30:BH:68:ARG:H	2.23	0.41
20:CB:96:LEU:O	20:CB:99:MET:HG3	2.20	0.41
23:BB:76:C:OP1	44:BX:48:ARG:NH1	2.52	0.41
1:CA:1284:C:H3'	1:CA:1285:A:H8	1.84	0.41
1:CA:1284:C:C2	1:CA:1285:A:N7	2.88	0.41
21:AU:11:PHE:HD2	2:CC:105:VAL:HG11	1.85	0.41
1:CA:1092:A:H5''	6:CG:3:ARG:NH1	2.35	0.41
40:BS:13:SER:OG	40:BS:16:LYS:HB2	2.20	0.41
22:DA:66:A:HO2'	22:DA:67:G:H8	1.59	0.41
1:AA:321:A:H2'	1:AA:322:C:H6	1.84	0.41
23:BB:1107:G:H2'	23:BB:1108:U:C6	2.55	0.41
7:AH:24:VAL:HG13	7:AH:60:LEU:HB2	2.00	0.41
23:DB:1979:U:C2'	23:DB:1980:G:H5'	2.50	0.41
23:BB:2047:C:H2'	23:BB:2048:G:C8	2.55	0.41
1:CA:343:U:H2'	1:CA:345:C:C5	2.55	0.41
23:BB:305:C:H2'	23:BB:306:U:C6	2.55	0.41
1:AA:821:G:H2'	1:AA:822:U:C6	2.56	0.41
23:DB:600:G:H1'	27:DE:100:MET:SD	2.60	0.41
38:DQ:20:ALA:O	38:DQ:21:LYS:C	2.58	0.41
1:AA:972:C:H4'	9:AJ:59:LYS:HB3	2.02	0.41
7:CH:51:GLU:OE2	7:CH:59:GLU:HG3	2.20	0.41
38:DQ:101:ASP:HB3	38:DQ:104:ALA:HB3	2.02	0.41
23:BB:2523:G:O2'	23:BB:2524:G:H5'	2.20	0.41
19:AT:17:ARG:HD2	19:AT:17:ARG:C	2.40	0.41
1:CA:754:C:O2	1:CA:754:C:H3'	2.20	0.41
17:AR:27:THR:O	17:AR:28:LEU:HD12	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AN:68:ARG:HH11	13:AN:70:HIS:HB2	1.85	0.41
20:CB:121:GLN:NE2	20:CB:122:ASP:N	2.67	0.41
23:BB:1056:G:N2	23:BB:1104:C:N4	2.68	0.41
5:AF:74:LEU:HG	5:AF:78:PHE:CD1	2.55	0.41
23:BB:981:A:H3'	23:BB:982:C:C5'	2.50	0.41
23:BB:535:G:N3	38:BQ:52:ARG:NH1	2.69	0.41
51:D4:14:CYS:CA	51:D4:27:CYS:HA	2.49	0.41
34:BM:17:ASN:ND2	34:BM:18:ARG:NH2	2.67	0.41
25:DC:107:LYS:HD2	25:DC:107:LYS:HA	1.87	0.41
26:BD:11:MET:HG2	26:BD:12:THR:N	2.31	0.41
26:BD:13:ARG:HB2	26:BD:21:SER:CB	2.50	0.41
37:BP:22:GLY:O	37:BP:91:VAL:HA	2.20	0.41
33:DL:2:ARG:HH12	33:DL:6:LEU:HD13	1.82	0.41
23:BB:1821:A:H5'	25:BC:155:ARG:CD	2.50	0.41
25:BC:144:GLU:HG2	25:BC:150:GLY:HA2	2.00	0.41
25:BC:67:LYS:O	25:BC:68:ARG:CB	2.67	0.41
27:BE:148:ILE:HB	27:BE:185:LYS:O	2.20	0.41
27:BE:148:ILE:N	27:BE:183:PHE:HB3	2.36	0.41
27:BE:118:LEU:CD1	27:BE:187:VAL:HG12	2.46	0.41
26:DD:34:VAL:HG11	26:DD:50:VAL:CG2	2.49	0.41
26:DD:4:LEU:HD12	26:DD:79:LEU:HD22	2.02	0.41
34:DM:42:THR:OG1	34:DM:91:TYR:HB2	2.20	0.41
30:DH:29:PHE:HB3	30:DH:30:LEU:H	1.58	0.41
20:CB:218:ALA:HA	20:CB:221:ARG:HB3	2.02	0.41
39:BR:85:LYS:O	39:BR:85:LYS:HG3	2.19	0.41
21:CU:4:LYS:HB2	21:CU:4:LYS:HE3	1.89	0.41
23:DB:5:A:H2'	23:DB:6:A:C8	2.56	0.41
27:BE:128:ALA:O	27:BE:157:LEU:HD22	2.20	0.41
23:BB:515:A:H2'	23:BB:516:C:O4'	2.20	0.41
23:BB:583:G:H2'	23:BB:584:C:H6	1.85	0.41
35:BN:97:ILE:HD12	35:BN:113:ILE:HG12	2.02	0.41
40:BS:70:LYS:O	40:BS:71:VAL:CB	2.65	0.41
30:BH:89:LYS:C	30:BH:90:LEU:HD12	2.40	0.41
33:BL:92:LEU:HD21	33:BL:96:LYS:HZ3	1.85	0.41
27:DE:189:THR:HG23	27:DE:194:LYS:HB2	2.02	0.41
47:B0:4:GLN:O	47:B0:6:LYS:HE2	2.20	0.41
41:BT:15:HIS:O	41:BT:16:VAL:C	2.58	0.41
20:CB:115:ASP:O	20:CB:119:GLN:HG2	2.20	0.41
1:AA:1220:G:H21	18:AS:53:GLY:HA2	1.84	0.41
23:DB:2226:C:H2'	23:DB:2227:A:O4'	2.19	0.41
46:DZ:34:LEU:H	46:DZ:47:LYS:HZ2	1.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DU:72:PHE:CZ	42:DU:78:LYS:HE2	2.55	0.41
23:BB:338:G:C2	23:BB:339:U:H1'	2.55	0.41
42:BU:13:LEU:HG	42:BU:69:VAL:CG2	2.49	0.41
42:BU:69:VAL:O	42:BU:70:ALA:C	2.58	0.41
42:BU:70:ALA:O	42:BU:71:ILE:C	2.59	0.41
12:CM:51:GLN:O	12:CM:55:LEU:HG	2.20	0.41
1:AA:1391:U:H2'	1:AA:1392:G:H8	1.80	0.41
42:BU:84:PHE:HB3	42:BU:92:VAL:O	2.20	0.41
43:BW:16:GLU:C	43:BW:18:LYS:HD2	2.40	0.41
45:BY:6:ILE:HD13	45:BY:6:ILE:H	1.85	0.41
28:DF:29:ARG:HB2	28:DF:158:THR:CG2	2.50	0.41
18:AS:16:LYS:HD3	18:AS:16:LYS:HA	1.83	0.41
25:DC:79:ARG:HD2	25:DC:110:LYS:CE	2.49	0.41
39:DR:20:VAL:HA	39:DR:96:VAL:O	2.20	0.41
52:BI:100:ILE:HG22	52:BI:101:SER:O	2.20	0.41
23:DB:654:A:H2'	23:DB:655:A:C5'	2.41	0.41
8:AI:25:GLY:HA2	8:AI:60:LEU:O	2.19	0.41
10:CK:121:ARG:HH21	21:CU:34:ARG:CD	2.33	0.41
1:CA:1526:G:O5'	21:CU:38:GLU:HB2	2.20	0.41
1:CA:972:C:OP1	9:CJ:59:LYS:HD2	2.21	0.41
33:DL:111:ILE:HA	33:DL:128:THR:CG2	2.50	0.41
9:CJ:8:ILE:HD11	9:CJ:74:VAL:CG1	2.49	0.41
36:BO:16:ARG:HE	36:BO:16:ARG:HA	1.82	0.41
36:BO:16:ARG:CG	36:BO:20:GLU:HG3	2.48	0.41
2:AC:55:VAL:HG12	2:AC:56:ILE:H	1.84	0.41
23:BB:1901:A:H1'	25:BC:250:GLN:NE2	2.35	0.41
25:BC:254:LYS:HB3	25:BC:255:LYS:H	1.55	0.41
1:CA:812:G:C4'	1:CA:812:G:OP1	2.69	0.41
11:CL:73:LEU:HD22	11:CL:79:ILE:HG21	2.01	0.41
1:AA:237:G:H2'	1:AA:238:A:H8	1.84	0.41
11:AL:83:GLY:HA2	11:AL:94:TYR:CD1	2.52	0.41
23:DB:1485:U:O2'	23:DB:1486:U:H5'	2.20	0.41
7:CH:44:PHE:CE2	7:CH:128:VAL:HG21	2.55	0.41
23:BB:118:A:H1'	23:BB:178:G:O4'	2.20	0.41
4:CE:157:GLY:H	7:CH:43:GLY:CA	2.31	0.41
3:CD:156:ALA:O	3:CD:160:LEU:HD12	2.20	0.41
23:BB:322:A:H5'	23:BB:340:A:O4'	2.20	0.41
27:BE:163:ASN:OD1	27:BE:166:LYS:N	2.53	0.41
29:BG:42:VAL:HG23	29:BG:43:LYS:N	2.35	0.41
1:CA:1279:G:N2	9:CJ:45:ARG:HD2	2.35	0.41
32:BK:108:ARG:HG3	32:BK:108:ARG:O	2.17	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BP:38:ARG:HG3	37:BP:38:ARG:HH11	1.85	0.41
20:AB:79:VAL:HG11	20:AB:92:ASN:HB3	2.01	0.41
23:BB:1097:U:H2'	23:BB:1098:A:C5'	2.49	0.41
23:DB:567:U:H2'	23:DB:568:U:O4'	2.20	0.41
23:DB:21:A:H2'	23:DB:22:C:H6	1.81	0.41
23:DB:673:C:O2'	23:DB:674:G:H5'	2.19	0.41
10:AK:81:LEU:CD2	10:AK:104:PHE:HB3	2.50	0.41
4:CE:28:ARG:O	4:CE:29:ILE:HD13	2.19	0.41
23:BB:406:G:H2'	23:BB:407:G:H8	1.85	0.41
23:DB:2539:C:C2'	23:DB:2540:C:H5'	2.50	0.41
23:DB:753:A:O2'	23:DB:754:U:H5'	2.19	0.41
11:AL:30:ARG:HB3	11:AL:57:THR:CG2	2.50	0.41
1:AA:622:A:H2'	1:AA:623:C:H5'	2.02	0.41
23:DB:2653:U:H2'	23:DB:2654:A:C8	2.55	0.41
23:BB:1544:A:H2'	23:BB:1545:A:C8	2.55	0.41
1:CA:265:G:H5'	16:CQ:65:PRO:O	2.19	0.41
29:DG:58:ALA:O	29:DG:60:GLY:N	2.53	0.41
52:DI:99:LYS:HB2	52:DI:140:GLU:OE1	2.19	0.41
23:DB:2443:C:OP1	27:DE:63:LYS:HG3	2.20	0.41
1:AA:319:G:O2'	1:AA:320:A:H5'	2.21	0.41
1:CA:829:G:O2'	1:CA:830:G:H5'	2.20	0.41
23:DB:1750:G:O2'	23:DB:1751:U:H5'	2.19	0.41
23:BB:1287:A:OP1	35:BN:104:ALA:HB3	2.20	0.41
34:DM:107:GLY:C	34:DM:109:PRO:HD2	2.40	0.41
7:CH:72:GLU:OE1	7:CH:73:SER:N	2.52	0.41
1:CA:958:A:C6	1:CA:959:A:N1	2.88	0.41
1:CA:1480:A:H2'	1:CA:1481:U:H6	1.83	0.41
1:CA:688:G:H5'	10:CK:48:GLY:HA2	2.01	0.41
23:DB:2553:G:H2'	23:DB:2554:U:H4'	2.01	0.41
1:AA:29:U:H5'	1:AA:296:U:OP1	2.20	0.41
1:CA:777:A:H2'	1:CA:778:G:H8	1.84	0.41
50:D3:29:ARG:O	50:D3:31:ILE:N	2.53	0.41
1:AA:152:A:N6	1:AA:170:U:C2	2.88	0.41
1:CA:261:U:H2'	1:CA:263:A:OP2	2.20	0.41
5:CF:73:GLU:O	5:CF:77:THR:HG23	2.20	0.41
23:BB:1139:G:H5'	31:BJ:104:ALA:HB1	2.02	0.41
27:BE:16:GLU:CG	27:BE:196:VAL:HG13	2.50	0.41
23:BB:1851:U:H2'	23:BB:1852:U:C6	2.55	0.41
23:DB:2492:U:O2'	23:DB:2493:U:H5'	2.20	0.41
23:DB:2745:C:O2'	29:DG:141:GLY:HA3	2.19	0.41
16:AQ:3:LYS:O	16:AQ:3:LYS:HD2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BO:18:LEU:HD12	36:BO:18:LEU:C	2.40	0.41
3:AD:106:PHE:CD1	3:AD:106:PHE:N	2.88	0.41
2:CC:64:ARG:HD3	2:CC:101:ASN:ND2	2.35	0.41
23:DB:1668:A:N3	23:DB:1670:C:C4	2.88	0.41
1:CA:323:U:H2'	1:CA:324:G:O4'	2.20	0.41
23:BB:2630:G:H2'	23:BB:2631:G:H8	1.84	0.41
23:BB:535:G:H21	38:BQ:52:ARG:HH22	1.67	0.41
38:BQ:91:ARG:O	38:BQ:94:LEU:HD21	2.20	0.41
23:BB:439:A:H2'	23:BB:440:C:O4'	2.21	0.41
27:BE:40:ARG:HD2	27:BE:43:THR:OG1	2.20	0.41
34:BM:63:ILE:HA	34:BM:102:LEU:O	2.20	0.41
34:BM:36:VAL:HG11	34:BM:125:PRO:HD2	2.03	0.41
46:BZ:44:PHE:CD1	46:BZ:44:PHE:N	2.82	0.41
25:DC:161:VAL:O	25:DC:162:GLN:C	2.58	0.41
25:DC:66:PHE:HB3	25:DC:67:LYS:H	1.67	0.41
23:BB:2845:U:H2'	23:BB:2846:G:C8	2.56	0.41
23:BB:2682:A:C2	26:BD:22:ILE:HD11	2.56	0.41
37:BP:56:SER:O	37:BP:58:PHE:HD2	2.02	0.41
23:BB:1820:U:H3	25:BC:197:ALA:HA	1.85	0.41
27:BE:149:ILE:HG23	27:BE:183:PHE:CG	2.55	0.41
1:CA:975:A:H2'	1:CA:976:G:OP2	2.21	0.41
31:DJ:72:LYS:HE3	31:DJ:74:TYR:CE1	2.55	0.41
39:BR:78:ARG:CD	39:BR:88:GLY:N	2.82	0.41
10:CK:92:ARG:HH11	10:CK:92:ARG:CG	2.28	0.41
10:CK:110:THR:CG2	21:CU:4:LYS:HA	2.50	0.41
23:DB:4:U:O2'	23:DB:5:A:H5'	2.19	0.41
31:DJ:25:LEU:CG	31:DJ:64:VAL:H	2.31	0.41
5:CF:93:LYS:O	5:CF:94:HIS:HB2	2.20	0.41
23:DB:453:A:N3	23:DB:457:A:O2'	2.49	0.41
30:DH:125:THR:HG22	30:DH:146:VAL:HG12	2.02	0.41
20:AB:42:LEU:O	20:AB:46:VAL:HG12	2.20	0.41
23:BB:27:G:HO2'	23:BB:513:A:N6	2.17	0.41
23:BB:2092:U:H4'	23:BB:2093:G:O5'	2.20	0.41
36:DO:18:LEU:HD13	43:DW:76:ARG:HH21	1.85	0.41
23:BB:142:A:N3	41:BT:2:ILE:HD13	2.35	0.41
41:BT:6:ARG:O	41:BT:8:LEU:N	2.53	0.41
23:DB:764:A:H5''	25:DC:208:GLY:CA	2.50	0.41
46:DZ:6:HIS:HB3	46:DZ:51:VAL:HG22	2.01	0.41
28:DF:132:ARG:HB3	28:DF:133:GLU:H	1.65	0.41
42:BU:69:VAL:CG1	42:BU:77:GLY:H	2.29	0.41
23:DB:1434:A:OP1	23:DB:1434:A:H4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BI:55:PRO:CD	52:BI:74:PRO:HD3	2.42	0.41
10:AK:22:ILE:HA	10:AK:31:VAL:HG22	2.03	0.41
18:AS:64:GLU:O	18:AS:66:VAL:HG23	2.20	0.41
52:DI:54:ILE:C	52:DI:54:ILE:HD13	2.40	0.41
28:BF:150:GLY:O	28:BF:151:LEU:HD12	2.20	0.41
34:DM:33:LEU:H	34:DM:101:VAL:HB	1.85	0.41
8:CI:38:PHE:HB2	8:CI:44:ARG:HG3	2.02	0.41
36:DO:58:ILE:C	36:DO:60:GLU:H	2.23	0.41
23:BB:684:G:OP1	49:B2:16:HIS:ND1	2.53	0.41
29:BG:33:THR:CG2	29:BG:34:ARG:N	2.82	0.41
11:AL:56:LEU:HB3	11:AL:58:ASN:HD21	1.83	0.41
44:DX:44:LYS:HG3	44:DX:47:ARG:HG3	2.02	0.41
15:CP:54:LEU:HD22	15:CP:80:LYS:NZ	2.35	0.41
18:CS:24:SER:HB2	18:CS:27:LYS:NZ	2.35	0.41
14:AO:5:GLU:O	14:AO:9:LYS:HB2	2.20	0.41
29:DG:39:ALA:CB	29:DG:54:ARG:HB2	2.44	0.41
1:CA:740:U:O2'	1:CA:741:G:H5'	2.20	0.41
13:CN:65:GLN:HG2	13:CN:82:LYS:HG3	2.03	0.41
2:AC:155:ARG:NH1	2:AC:192:TYR:HB2	2.36	0.41
19:AT:57:VAL:C	19:AT:60:GLN:HE22	2.22	0.41
7:AH:92:PRO:CA	7:AH:93:LYS:HZ2	2.24	0.41
1:CA:1070:U:H2'	1:CA:1071:C:C6	2.55	0.41
1:CA:1070:U:H2'	1:CA:1071:C:H6	1.84	0.41
26:DD:59:ARG:CZ	26:DD:63:PRO:HG2	2.50	0.41
1:AA:65:A:N7	1:AA:381:C:C4	2.89	0.41
6:AG:87:PRO:HB2	6:AG:144:ALA:CB	2.50	0.41
4:CE:70:MET:HB3	4:CE:71:ILE:H	1.60	0.41
12:AM:108:ARG:HD2	12:AM:108:ARG:HA	1.93	0.41
16:CQ:64:ARG:HB3	16:CQ:64:ARG:NH1	2.32	0.41
26:DD:146:ILE:HG21	26:DD:155:VAL:HA	2.02	0.41
26:DD:146:ILE:CG1	26:DD:155:VAL:HG13	2.50	0.41
8:CI:46:VAL:HA	8:CI:49:GLN:OE1	2.20	0.41
31:BJ:39:LYS:HE2	31:BJ:39:LYS:HA	2.02	0.41
7:CH:10:LEU:HD13	7:CH:74:ILE:HG12	2.01	0.41
41:BT:17:SER:OG	41:BT:18:GLU:N	2.54	0.41
35:BN:99:LYS:HE3	47:B0:39:ARG:HH12	1.84	0.41
12:CM:78:ARG:HE	28:DF:111:ARG:HH12	1.69	0.41
23:BB:1913:A:C1'	23:BB:1914:C:OP1	2.65	0.41
1:CA:1238:A:O2'	1:CA:1239:A:H5'	2.21	0.41
22:DA:60:C:H2'	22:DA:61:G:H8	1.85	0.41
1:CA:473:U:N3	1:CA:474:G:N7	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:57:GLU:HB2	2:AC:64:ARG:CB	2.45	0.41
1:CA:1434:A:H2'	1:CA:1435:G:O4'	2.21	0.41
29:BG:37:ASN:HB3	29:BG:63:GLN:NE2	2.35	0.41
23:DB:1601:G:OP1	41:DT:62:VAL:HG21	2.20	0.41
1:AA:1238:A:N7	1:AA:1303:C:H1'	2.35	0.41
23:DB:2076:U:OP2	23:DB:2238:G:N2	2.51	0.41
23:DB:523:C:O2'	23:DB:524:G:H5'	2.20	0.41
12:AM:16:ILE:CG2	12:AM:17:ALA:N	2.84	0.41
23:BB:2798:U:H1'	23:BB:2800:A:N6	2.35	0.41
23:DB:2733:A:C8	23:DB:2733:A:C3'	3.04	0.41
1:AA:9:G:OP2	4:AE:125:LYS:HD3	2.20	0.41
1:CA:376:G:O2'	1:CA:377:G:H5'	2.21	0.41
10:CK:23:HIS:HB3	10:CK:30:ILE:CG1	2.48	0.41
1:AA:60:A:H1'	1:AA:61:G:O4'	2.20	0.41
23:BB:2265:U:H3'	23:BB:2266:A:H5''	2.01	0.41
38:BQ:102:LYS:HG2	38:BQ:103:VAL:N	2.36	0.41
37:DP:92:ARG:HG2	37:DP:110:LYS:N	2.35	0.41
20:CB:60:ALA:HB2	20:CB:66:ILE:HD11	2.01	0.41
1:AA:382:A:O2'	1:AA:383:A:H5'	2.19	0.41
13:AN:45:LEU:HD23	13:AN:46:LYS:N	2.35	0.41
37:DP:38:ARG:NH1	37:DP:39:LEU:HA	2.36	0.41
23:BB:756:A:H2'	23:BB:757:G:O4'	2.21	0.41
1:CA:162:A:H2'	1:CA:163:C:O4'	2.19	0.41
50:D3:39:ARG:HD3	50:D3:39:ARG:HA	1.76	0.41
1:AA:959:A:H2'	1:AA:960:U:O4'	2.21	0.41
23:DB:2716:C:O2'	23:DB:2717:C:H5'	2.20	0.41
6:AG:62:GLU:O	6:AG:66:GLU:HG3	2.21	0.41
23:DB:1541:C:H2'	23:DB:1542:U:H6	1.86	0.41
1:AA:1271:A:H2'	1:AA:1272:G:C8	2.55	0.41
1:CA:1492:A:N6	1:CA:1494:G:C8	2.88	0.41
23:BB:1257:C:H5'	27:BE:78:TRP:CH2	2.55	0.41
23:DB:1278:C:H2'	23:DB:1279:G:C8	2.54	0.41
1:AA:113:G:H2'	1:AA:114:U:C6	2.55	0.41
23:DB:1764:C:H2'	23:DB:1765:U:H6	1.85	0.41
2:AC:41:TYR:HA	2:AC:44:LYS:CD	2.49	0.41
1:CA:666:G:O2'	1:CA:667:G:H5'	2.20	0.41
23:DB:2691:C:H2'	23:DB:2692:G:H8	1.86	0.41
29:BG:121:THR:O	29:BG:133:LYS:HD3	2.20	0.41
1:AA:1261:A:H2'	1:AA:1262:C:O4'	2.20	0.41
23:DB:2445:G:O2'	23:DB:2446:G:H5'	2.20	0.41
23:DB:1989:G:H2'	23:DB:1990:C:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1832:C:H2'	23:DB:1833:C:O5'	2.19	0.41
20:AB:58:LYS:HD3	20:AB:62:ARG:NH2	2.34	0.41
12:CM:28:ARG:O	12:CM:32:ILE:HB	2.20	0.41
23:DB:367:G:H2'	23:DB:368:A:O4'	2.19	0.41
26:BD:55:LYS:NZ	26:BD:55:LYS:HB2	2.34	0.41
24:BV:51:GLN:HE21	24:BV:51:GLN:HB2	1.66	0.41
23:DB:1396:U:O2	23:DB:1396:U:O4'	2.34	0.41
23:DB:2056:G:N3	23:DB:2056:G:H2'	2.34	0.41
1:CA:1321:U:H2'	1:CA:1322:C:C5	2.55	0.41
23:BB:2458:G:H8	23:BB:2459:A:H62	1.67	0.41
52:DI:8:VAL:CG1	52:DI:30:GLN:HG3	2.50	0.41
23:BB:557:C:H2'	23:BB:558:U:H6	1.84	0.41
23:BB:443:A:C2	23:BB:1245:G:N3	2.88	0.41
23:BB:37:C:H4'	23:BB:451:U:P	2.60	0.41
23:BB:36:G:H4'	23:BB:451:U:N3	2.35	0.41
34:BM:11:LYS:HE3	34:BM:11:LYS:N	2.36	0.41
24:BV:77:VAL:HG21	24:BV:79:ARG:NE	2.35	0.41
24:BV:79:ARG:CZ	24:BV:86:LEU:HD11	2.50	0.41
23:BB:2081:U:H5''	46:BZ:23:LYS:HD2	2.02	0.41
25:DC:130:PRO:HA	25:DC:187:CYS:O	2.20	0.41
25:DC:63:ILE:HG21	25:DC:90:ILE:CD1	2.50	0.41
25:DC:94:LEU:HD11	25:DC:98:GLY:HA2	2.02	0.41
23:BB:833:A:H2'	23:BB:834:G:H8	1.85	0.41
33:BL:59:ARG:HD2	33:BL:59:ARG:HA	1.82	0.41
26:BD:170:VAL:O	26:BD:171:THR:HB	2.20	0.41
23:BB:1131:G:C1'	23:BB:1133:A:H62	2.26	0.41
25:BC:157:ALA:C	25:BC:159:THR:H	2.23	0.41
38:DQ:82:LEU:HB2	38:DQ:112:ALA:HB2	2.02	0.41
38:DQ:82:LEU:HD21	38:DQ:91:ARG:HB3	2.02	0.41
38:DQ:94:LEU:O	38:DQ:98:ALA:N	2.50	0.41
23:DB:2682:A:O2'	23:DB:2683:C:H5'	2.20	0.41
43:BW:47:GLY:H	43:BW:67:LYS:NZ	2.18	0.41
30:DH:29:PHE:O	30:DH:31:VAL:N	2.53	0.41
31:DJ:14:ASP:H	31:DJ:53:TYR:HD1	1.68	0.41
30:BH:11:ASN:C	30:BH:13:GLY:H	2.22	0.41
43:DW:42:THR:HB	43:DW:75:ASN:CG	2.41	0.41
43:DW:42:THR:N	43:DW:65:LYS:HG2	2.31	0.41
23:BB:1019:U:OP1	23:BB:1035:U:O2'	2.38	0.41
31:BJ:64:VAL:HB	31:BJ:68:LYS:HB2	2.03	0.41
27:DE:147:LEU:HB3	27:DE:167:VAL:CG1	2.44	0.41
21:AU:33:ARG:CZ	21:AU:34:ARG:HG3	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BX:38:GLN:H	44:BX:38:GLN:HE21	1.65	0.41
23:DB:2199:A:OP2	23:DB:2200:C:H5	2.02	0.41
41:DT:49:LYS:O	41:DT:51:PHE:N	2.44	0.41
23:DB:494:G:O2'	23:DB:495:G:H5'	2.21	0.41
23:DB:162:U:O2'	23:DB:163:C:H5'	2.20	0.41
23:DB:727:A:O2'	23:DB:728:G:H5'	2.19	0.41
23:BB:1081:U:O2'	52:BI:118:GLY:HA2	2.20	0.41
1:CA:237:G:H2'	1:CA:238:A:H8	1.85	0.41
19:CT:61:ALA:HA	19:CT:66:ILE:HG22	2.02	0.41
23:BB:2336:A:C1'	23:BB:2337:G:OP1	2.67	0.41
32:BK:24:VAL:HA	32:BK:39:ILE:CD1	2.50	0.41
13:AN:12:ARG:NH2	13:AN:58:ARG:HH12	2.18	0.41
42:DU:33:VAL:HG23	42:DU:65:GLN:NE2	2.34	0.41
23:DB:1064:C:O2'	23:DB:1065:U:H5'	2.20	0.41
52:DI:89:SER:HA	52:DI:97:VAL:CG1	2.50	0.41
11:AL:8:ARG:CG	11:AL:9:LYS:H	2.21	0.41
3:AD:25:ARG:HB2	3:AD:26:ALA:H	1.68	0.41
52:BI:138:VAL:CG1	52:BI:139:VAL:N	2.83	0.41
23:DB:1789:A:H2'	23:DB:1790:C:H6	1.85	0.41
23:DB:27:G:H1'	23:DB:513:A:H61	1.85	0.41
8:AI:83:THR:HA	8:AI:86:LEU:CD2	2.51	0.41
8:AI:9:GLY:O	8:AI:16:ALA:HB3	2.20	0.41
23:DB:2886:A:C2	23:DB:2887:A:N7	2.89	0.41
21:CU:36:PHE:HB2	21:CU:39:LYS:CB	2.47	0.41
34:DM:9:PHE:H	34:DM:9:PHE:HD1	1.68	0.41
29:BG:18:ILE:HA	29:BG:23:ILE:CD1	2.50	0.41
23:BB:2528:U:P	51:B4:31:PRO:HG2	2.59	0.41
4:CE:110:MET:O	4:CE:114:LEU:HG	2.20	0.41
36:BO:21:LEU:O	36:BO:23:ALA:N	2.53	0.41
23:DB:2787:C:H2'	23:DB:2788:C:C6	2.55	0.41
44:DX:28:LEU:CB	44:DX:42:LEU:HG	2.51	0.41
23:DB:1797:G:H5'	25:DC:251:THR:O	2.21	0.41
48:D1:32:LYS:CG	48:D1:52:LYS:HE2	2.44	0.41
3:CD:129:VAL:HG12	3:CD:131:ILE:H	1.86	0.41
26:DD:184:ARG:HD2	37:DP:4:ILE:CG2	2.49	0.41
31:BJ:35:ARG:NH2	31:BJ:40:HIS:H	2.18	0.41
13:CN:96:LYS:HG2	13:CN:97:LYS:N	2.27	0.41
8:AI:71:ILE:CD1	8:AI:71:ILE:H	2.30	0.41
3:AD:99:ASN:HB3	3:AD:103:ARG:HH21	1.85	0.41
11:CL:113:ARG:CZ	11:CL:120:ARG:HA	2.51	0.41
11:CL:113:ARG:O	11:CL:114:SER:C	2.58	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2581:G:OP1	26:DD:134:HIS:CD2	2.73	0.41
23:DB:937:C:H2'	23:DB:938:G:H8	1.85	0.41
1:AA:1252:A:H2'	1:AA:1253:G:C5'	2.49	0.41
29:BG:10:VAL:CG1	29:BG:47:ASN:HA	2.50	0.41
20:CB:199:ILE:O	20:CB:199:ILE:HG13	2.19	0.41
23:BB:2733:A:C3'	23:BB:2733:A:C8	3.04	0.41
1:AA:1231:G:H2'	1:AA:1232:U:C6	2.55	0.41
23:DB:2278:A:N6	43:DW:10:ARG:HB2	2.35	0.41
1:AA:619:U:O2	3:AD:129:VAL:HG13	2.20	0.41
25:BC:71:ASP:HB3	25:BC:72:GLY:H	1.38	0.41
4:AE:114:LEU:HD13	4:AE:122:VAL:HG21	2.01	0.41
2:CC:52:SER:O	2:CC:113:LYS:HD3	2.20	0.41
33:DL:103:ILE:HG13	33:DL:106:GLU:OE2	2.21	0.41
23:DB:324:A:N6	23:DB:338:G:H2'	2.36	0.41
1:AA:591:U:H2'	1:AA:592:G:C8	2.54	0.41
1:AA:861:G:H2'	1:AA:862:C:C6	2.55	0.41
11:CL:34:THR:HB	11:CL:53:ARG:HB3	2.03	0.41
20:AB:121:GLN:NE2	20:AB:122:ASP:HB2	2.35	0.41
23:DB:1952:A:N3	23:DB:2560:A:O2'	2.46	0.41
14:AO:52:ARG:O	14:AO:55:LEU:HB3	2.21	0.41
15:CP:44:SER:HB3	15:CP:46:LYS:NZ	2.34	0.41
23:BB:2805:C:H2'	23:BB:2806:C:H6	1.86	0.41
23:DB:1330:C:H2'	23:DB:1331:G:H8	1.86	0.41
9:AJ:30:LYS:HD2	9:AJ:30:LYS:O	2.21	0.41
9:AJ:36:VAL:CG2	9:AJ:76:ILE:HG22	2.50	0.41
1:AA:557:G:H2'	1:AA:558:G:O4'	2.20	0.41
1:CA:628:G:O2'	1:CA:629:A:H5'	2.21	0.41
1:AA:1050:G:C2'	1:AA:1051:C:H5'	2.49	0.41
1:CA:373:A:C1'	1:CA:481:G:H1'	2.50	0.41
1:AA:730:G:O2'	1:AA:766:A:H5'	2.20	0.41
23:BB:526:A:N6	23:BB:2626:C:C4'	2.84	0.41
1:AA:564:C:H1'	16:AQ:32:ILE:O	2.19	0.41
31:BJ:1:MET:HG2	39:BR:14:VAL:CG2	2.50	0.41
1:CA:65:A:N1	1:CA:381:C:C2	2.88	0.41
1:CA:1175:G:O2'	1:CA:1176:A:H5'	2.19	0.41
33:DL:45:GLY:C	33:DL:47:ARG:N	2.73	0.41
23:DB:1213:A:C6	23:DB:1237:A:H1'	2.55	0.41
23:BB:1747:U:H2'	23:BB:1748:C:H6	1.85	0.41
24:DV:92:VAL:O	24:DV:92:VAL:HG13	2.21	0.41
26:DD:84:LEU:HA	26:DD:84:LEU:HD12	1.91	0.41
23:BB:1607:C:N4	23:BB:1622:G:OP2	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1403:A:H2'	23:BB:1404:C:H6	1.86	0.41
1:CA:1486:G:H2'	1:CA:1487:G:C8	2.54	0.41
23:BB:127:A:H5''	23:BB:128:C:C6	2.55	0.41
26:DD:67:HIS:O	26:DD:68:PHE:HB2	2.20	0.41
23:BB:2745:C:H3'	23:BB:2746:U:C6	2.55	0.41
1:AA:1067:A:H1'	1:AA:1068:G:C8	2.55	0.41
23:DB:1238:G:O2'	23:DB:1239:G:H5'	2.21	0.41
4:AE:25:LYS:C	4:AE:25:LYS:HE2	2.41	0.41
13:AN:89:ARG:HB2	13:AN:91:GLU:HG3	2.02	0.41
52:DI:2:LYS:O	52:DI:3:LYS:CG	2.69	0.41
38:BQ:93:ILE:C	38:BQ:95:ALA:H	2.23	0.41
39:BR:1:MET:CA	39:BR:46:GLU:HB2	2.39	0.41
39:BR:5:PHE:HD1	39:BR:40:MET:CB	2.33	0.41
51:D4:24:ARG:HE	51:D4:37:GLN:HA	1.82	0.41
23:BB:2484:G:P	34:BM:44:ARG:HD2	2.61	0.41
34:BM:45:GLN:NE2	34:BM:119:LEU:O	2.54	0.41
23:BB:2080:A:H2'	23:BB:2081:U:C6	2.55	0.41
46:BZ:17:SER:OG	46:BZ:18:CYS:N	2.53	0.41
25:DC:143:VAL:HG12	25:DC:144:GLU:H	1.84	0.41
25:DC:61:TYR:CD2	25:DC:84:PRO:HD2	2.55	0.41
31:BJ:81:ILE:C	31:BJ:83:GLY:N	2.73	0.41
31:BJ:81:ILE:CG2	31:BJ:82:GLY:N	2.68	0.41
25:BC:171:VAL:HB	25:BC:182:LYS:CG	2.51	0.41
27:BE:113:VAL:C	27:BE:115:GLN:H	2.24	0.41
27:BE:7:ASP:O	27:BE:8:ALA:HB3	2.21	0.41
37:DP:23:ASP:HB3	37:DP:24:THR:H	1.33	0.41
32:DK:78:ARG:HH12	37:DP:62:LYS:HZ3	1.68	0.41
20:CB:10:LYS:HB3	20:CB:211:LEU:HD11	2.01	0.41
20:CB:15:PHE:CA	20:CB:42:LEU:HD21	2.50	0.41
20:CB:78:ALA:HB1	20:CB:213:LEU:HD13	2.01	0.41
36:DO:35:ILE:HG21	36:DO:71:ALA:HA	2.03	0.41
31:DJ:120:ARG:C	31:DJ:122:LEU:H	2.23	0.41
27:DE:47:LYS:HA	27:DE:49:ARG:NE	2.32	0.41
39:DR:65:ALA:N	39:DR:100:GLY:HA2	2.35	0.41
23:BB:2052:A:H4'	26:BD:148:GLN:CB	2.51	0.41
1:AA:1322:C:O4'	1:AA:1322:C:O2	2.38	0.41
31:BJ:19:ASP:O	31:BJ:20:ALA:HB3	2.21	0.41
27:DE:161:ALA:HB1	27:DE:168:ASP:O	2.21	0.41
27:DE:189:THR:C	27:DE:191:ASP:N	2.72	0.41
44:BX:21:LEU:HD12	44:BX:21:LEU:HA	1.80	0.41
18:AS:31:ARG:HH11	18:AS:31:ARG:HG2	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DZ:27:THR:HG23	46:DZ:28:VAL:N	2.36	0.41
28:DF:36:ASN:ND2	28:DF:87:LYS:H	2.19	0.41
42:BU:78:LYS:HA	42:BU:78:LYS:HD2	1.93	0.41
52:DI:79:LEU:HD23	52:DI:108:ILE:HD12	2.03	0.41
2:CC:140:ALA:HB3	2:CC:148:ILE:HG21	2.02	0.41
23:BB:1996:C:H5	32:BK:32:TYR:HH	1.67	0.41
52:DI:60:VAL:HG22	52:DI:66:PHE:HB3	2.02	0.41
23:BB:2304:G:H1'	28:BF:152:ASP:OD1	2.20	0.41
31:DJ:81:ILE:CG2	31:DJ:82:GLY:H	2.11	0.41
8:CI:48:ARG:O	8:CI:52:GLU:HB2	2.20	0.41
3:AD:30:LYS:HB2	3:AD:30:LYS:HE2	1.93	0.41
23:DB:1791:A:N6	23:DB:1828:G:H1'	2.35	0.41
28:BF:172:PHE:O	28:BF:174:PHE:N	2.53	0.41
8:AI:62:LEU:N	8:AI:62:LEU:HD22	2.35	0.41
16:AQ:28:VAL:HG13	16:AQ:28:VAL:O	2.19	0.41
23:DB:630:G:N1	33:DL:69:ARG:NH1	2.62	0.41
52:BI:89:SER:HA	52:BI:97:VAL:HG23	2.01	0.41
23:DB:136:G:N1	41:DT:3:ARG:CZ	2.84	0.41
23:BB:729:G:H8	23:BB:764:A:OP1	2.04	0.41
25:BC:206:LYS:O	25:BC:207:ALA:C	2.58	0.41
5:CF:10:VAL:HG12	5:CF:11:HIS:H	1.85	0.41
23:BB:2660:A:H2'	23:BB:2661:G:O4'	2.20	0.41
17:CR:51:GLN:NE2	17:CR:54:LEU:HB2	2.36	0.41
1:AA:1371:G:OP1	8:AI:12:LYS:HG2	2.20	0.41
17:AR:64:LEU:HB3	17:AR:66:LEU:HG	2.02	0.41
48:D1:4:ILE:C	48:D1:5:ARG:HG3	2.39	0.41
48:D1:6:GLU:O	48:D1:27:ARG:NH2	2.54	0.41
2:AC:39:ARG:NH2	2:AC:56:ILE:HD12	2.35	0.41
26:DD:159:LYS:O	26:DD:160:LYS:HB2	2.19	0.41
23:DB:360:U:H2'	23:DB:361:G:C1'	2.51	0.41
41:DT:68:LYS:HZ3	41:DT:68:LYS:HB2	1.85	0.41
3:CD:121:ALA:CA	3:CD:145:ARG:HG3	2.51	0.41
1:CA:814:A:H5'	1:CA:1511:G:C4'	2.44	0.41
15:AP:52:LEU:HD22	15:AP:52:LEU:N	2.36	0.41
23:BB:2143:C:H2'	23:BB:2144:G:O4'	2.20	0.41
10:CK:70:ALA:HA	10:CK:73:VAL:CG2	2.47	0.41
23:DB:659:G:H4'	27:DE:95:LYS:HD3	2.03	0.41
1:AA:502:A:O2'	1:AA:503:C:H5'	2.20	0.41
23:BB:1439:A:N7	23:BB:1440:U:C2	2.88	0.41
23:BB:2278:A:H62	43:BW:10:ARG:HG2	1.85	0.41
29:BG:40:VAL:HB	29:BG:63:GLN:HE22	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1304:G:H2'	1:AA:1305:G:C1'	2.51	0.41
1:AA:1072:G:H2'	1:AA:1073:U:H6	1.84	0.41
1:CA:1276:G:H2'	1:CA:1277:C:H6	1.86	0.41
2:AC:15:LYS:HA	2:AC:16:PRO:HD2	1.97	0.41
23:DB:299:A:N7	23:DB:322:A:C2	2.88	0.41
3:CD:61:ARG:HE	3:CD:68:GLU:HA	1.86	0.41
1:AA:711:G:H2'	1:AA:712:A:H8	1.85	0.41
23:DB:964:C:O2'	23:DB:2273:A:H1'	2.19	0.41
1:AA:1517:G:H2'	1:AA:1518:A:C8	2.55	0.41
14:AO:52:ARG:HA	14:AO:55:LEU:HB3	2.03	0.41
25:BC:38:LYS:O	25:BC:39:SER:HB3	2.21	0.41
23:DB:1014:A:H2'	23:DB:1015:U:C6	2.56	0.41
44:DX:15:ASN:CG	44:DX:15:ASN:O	2.59	0.41
1:CA:797:C:OP1	10:CK:125:LYS:HE2	2.21	0.41
20:CB:79:VAL:HG12	20:CB:90:PHE:HB2	2.02	0.41
29:BG:94:ARG:HH12	29:BG:127:GLN:CD	2.24	0.41
1:CA:1254:A:N6	1:CA:1283:U:H3	2.17	0.41
25:DC:59:GLN:HB2	25:DC:60:ALA:H	1.43	0.41
1:AA:1338:G:H2'	1:AA:1339:A:H8	1.83	0.41
23:DB:1736:U:H2'	23:DB:1737:G:C8	2.55	0.41
23:DB:606:U:H4'	23:DB:658:U:H4'	2.02	0.41
1:AA:1052:U:H5'	1:AA:1053:G:OP2	2.19	0.41
38:DQ:26:ALA:HA	38:DQ:30:VAL:HG23	2.02	0.41
24:DV:75:GLN:HB3	24:DV:90:ASP:HB3	2.01	0.41
1:CA:94:G:H4'	1:CA:95:C:O5'	2.18	0.41
23:DB:1268:A:H2'	23:DB:1269:A:O4'	2.20	0.41
23:BB:1529:G:H2'	23:BB:1530:G:H8	1.86	0.41
1:CA:1401:G:H2'	1:CA:1402:C:O4'	2.20	0.41
44:BX:6:LEU:O	44:BX:8:GLU:N	2.50	0.41
1:AA:547:A:H4'	1:AA:548:G:O5'	2.21	0.41
1:CA:1455:G:O2'	1:CA:1456:A:H5'	2.20	0.41
1:CA:1148:U:H2'	1:CA:1149:C:O4'	2.20	0.41
1:AA:841:C:H3'	1:AA:843:U:P	2.61	0.41
23:BB:817:C:O2	23:BB:839:U:H4'	2.20	0.41
1:AA:328:C:H4'	1:AA:329:A:H5''	2.02	0.41
1:CA:1494:G:O2'	1:CA:1495:U:H5'	2.21	0.41
13:AN:74:ARG:HD3	13:AN:74:ARG:C	2.41	0.41
31:DJ:28:LEU:C	31:DJ:28:LEU:HD13	2.41	0.41
1:CA:847:G:H2'	1:CA:848:C:H6	1.84	0.41
6:AG:115:MET:CE	6:AG:119:LEU:HB2	2.50	0.41
22:BA:3:C:H2'	22:BA:4:C:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:915:A:H2'	1:CA:916:U:H5'	2.02	0.41
1:CA:738:C:H2'	1:CA:739:C:C6	2.56	0.41
1:CA:738:C:H2'	1:CA:739:C:H6	1.86	0.41
20:CB:166:ASP:HB2	20:CB:190:SER:OG	2.20	0.41
13:AN:5:MET:C	13:AN:7:ALA:H	2.24	0.41
33:DL:143:GLU:HG2	33:DL:143:GLU:O	2.20	0.41
1:AA:993:G:C2'	1:AA:995:C:H41	2.34	0.41
1:AA:358:U:H2'	1:AA:359:G:C8	2.55	0.41
52:DI:3:LYS:CD	52:DI:3:LYS:HE3	2.18	0.41
38:BQ:92:LYS:HD3	38:BQ:92:LYS:C	2.41	0.41
23:DB:490:C:H3'	23:DB:491:G:H5''	2.01	0.41
34:BM:71:LYS:HG2	34:BM:93:VAL:HA	2.02	0.41
46:BZ:5:ILE:N	46:BZ:5:ILE:HD12	2.32	0.41
50:B3:44:ARG:CB	50:B3:45:PRO:CD	2.97	0.41
23:DB:587:C:H5''	33:DL:29:LYS:HZ2	1.85	0.41
25:BC:141:HIS:O	25:BC:153:LEU:HD21	2.21	0.41
38:DQ:81:GLY:O	38:DQ:85:ALA:HB2	2.20	0.41
37:DP:70:GLU:C	37:DP:71:ARG:HG2	2.40	0.41
23:BB:1561:C:H2'	23:BB:1562:U:H6	1.84	0.41
34:DM:41:LEU:HG	34:DM:46:ILE:HD11	2.03	0.41
34:DM:14:LYS:HB2	34:DM:72:PRO:HA	2.02	0.41
43:BW:42:THR:O	43:BW:43:LYS:HB2	2.21	0.41
43:BW:47:GLY:O	43:BW:54:ARG:HA	2.20	0.41
22:DA:7:G:H5''	36:DO:29:HIS:CE1	2.56	0.41
21:CU:14:ALA:O	21:CU:16:ARG:N	2.53	0.41
31:DJ:25:LEU:HG	31:DJ:64:VAL:N	2.31	0.41
31:DJ:33:ALA:O	31:DJ:36:LEU:HB2	2.20	0.41
23:BB:26:G:C1'	23:BB:515:A:H61	2.34	0.41
40:BS:1:MET:HB3	40:BS:4:ILE:CG1	2.50	0.41
23:BB:2093:G:O2'	23:BB:2094:A:H5'	2.21	0.41
23:DB:2331:G:H21	23:DB:2336:A:H8	1.66	0.41
43:DW:42:THR:H	43:DW:65:LYS:CA	2.29	0.41
43:DW:74:LYS:HB3	43:DW:75:ASN:H	1.34	0.41
31:BJ:55:ILE:HD13	31:BJ:132:HIS:NE2	2.35	0.41
31:BJ:58:ASN:O	31:BJ:59:ALA:HB3	2.20	0.41
31:BJ:99:ARG:NH1	31:BJ:99:ARG:HB3	2.36	0.41
44:BX:29:ARG:HG2	44:BX:29:ARG:O	2.21	0.41
41:BT:56:GLU:HB3	41:BT:57:VAL:HG23	2.01	0.41
21:AU:34:ARG:C	21:AU:34:ARG:HD2	2.40	0.41
23:BB:2420:C:N4	50:B3:30:HIS:O	2.54	0.41
1:AA:1219:A:OP1	13:AN:52:ARG:HG2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2204:G:O2'	23:BB:2205:A:H5'	2.21	0.41
49:B2:34:ARG:HG3	49:B2:34:ARG:NH1	2.33	0.41
23:BB:2331:G:H21	23:BB:2336:A:H8	1.67	0.41
47:D0:16:ARG:C	47:D0:18:HIS:H	2.24	0.41
28:BF:35:LEU:HA	28:BF:153:ILE:CA	2.49	0.41
25:DC:222:THR:C	25:DC:224:MET:N	2.73	0.41
16:CQ:22:VAL:O	16:CQ:42:LYS:HA	2.20	0.41
23:DB:1790:C:H2'	23:DB:1791:A:C8	2.56	0.41
29:BG:16:VAL:HG12	29:BG:17:LYS:N	2.36	0.41
44:DX:44:LYS:HG3	44:DX:47:ARG:CG	2.50	0.41
6:CG:12:LEU:HD13	6:CG:13:PRO:HD2	2.02	0.41
29:DG:39:ALA:O	29:DG:40:VAL:C	2.59	0.41
23:DB:994:C:OP2	38:DQ:50:ARG:NE	2.45	0.41
3:AD:36:ALA:C	3:AD:38:GLY:H	2.24	0.41
23:DB:136:G:H8	23:DB:136:G:P	2.44	0.41
48:B1:46:VAL:O	48:B1:47:ILE:HG12	2.20	0.41
4:CE:104:ILE:HD11	4:CE:111:ARG:HA	2.03	0.41
16:AQ:57:VAL:N	16:AQ:79:GLU:HB3	2.35	0.41
20:AB:116:LEU:HD13	20:AB:140:LEU:HD23	2.02	0.41
10:AK:85:VAL:O	10:AK:111:ASP:HA	2.20	0.41
26:DD:181:ASP:OD1	26:DD:184:ARG:HB3	2.19	0.41
1:AA:1126:U:O2'	1:AA:1127:G:H5'	2.21	0.41
7:CH:123:GLU:OE1	7:CH:125:ILE:HG12	2.21	0.41
12:CM:80:MET:HA	12:CM:87:GLY:HA2	2.01	0.41
1:CA:35:G:H2'	1:CA:36:C:H6	1.86	0.41
24:DV:30:ILE:HD12	24:DV:38:LEU:HD23	2.03	0.41
11:CL:100:ALA:O	11:CL:103:CYS:SG	2.78	0.41
1:CA:1241:G:H2'	1:CA:1242:G:C8	2.49	0.41
1:AA:186:C:H2'	1:AA:187:G:O4'	2.21	0.41
36:BO:56:LYS:HE3	36:BO:57:ALA:CA	2.50	0.41
16:CQ:45:VAL:HA	16:CQ:72:TRP:O	2.20	0.41
50:D3:28:LEU:HD21	50:D3:33:THR:OG1	2.20	0.41
23:DB:1592:C:H2'	23:DB:1593:A:C8	2.55	0.41
23:BB:154:U:O2'	23:BB:155:A:H5'	2.21	0.41
1:CA:1053:G:O2'	1:CA:1199:U:H5	2.04	0.41
23:BB:1867:G:O2'	23:BB:1868:C:H5'	2.20	0.41
23:DB:2341:G:H2'	23:DB:2342:C:C6	2.56	0.41
1:AA:202:G:H1'	1:AA:468:A:H8	1.85	0.41
1:AA:818:G:C2'	1:AA:819:A:H5''	2.51	0.41
23:DB:2054:A:H2'	47:D0:4:GLN:NE2	2.33	0.41
23:BB:947:A:O2'	23:BB:984:A:H2	2.04	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2376:A:N3	36:DO:111:ARG:NH2	2.68	0.41
27:DE:39:ALA:O	27:DE:40:ARG:C	2.58	0.41
6:CG:100:MET:O	6:CG:104:VAL:HG23	2.21	0.41
23:DB:307:G:N1	23:DB:310:A:OP2	2.52	0.41
22:BA:27:C:H5'	36:BO:34:HIS:HE1	1.83	0.41
23:BB:2705:A:H2'	23:BB:2706:A:O4'	2.20	0.41
23:DB:1014:A:O2'	23:DB:1015:U:H5'	2.20	0.41
23:BB:2415:G:H5''	33:BL:66:PHE:H	1.84	0.41
23:DB:2361:G:H5''	50:D3:27:ASN:HB2	2.02	0.41
2:CC:127:VAL:HG23	2:CC:128:MET:N	2.35	0.41
17:CR:47:ARG:HH12	17:CR:49:LYS:H	1.67	0.41
17:CR:19:GLU:O	17:CR:21:ASP:N	2.53	0.41
1:CA:1015:G:O2'	1:CA:1016:A:H5'	2.21	0.41
1:AA:162:A:H2'	1:AA:163:C:O4'	2.20	0.41
1:CA:56:U:O5'	1:CA:56:U:H6	2.03	0.41
23:DB:105:C:H2'	23:DB:106:C:H6	1.84	0.41
1:AA:634:C:O2'	1:AA:635:A:H5'	2.20	0.41
1:AA:957:U:H2'	1:AA:959:A:OP2	2.21	0.41
14:CO:63:ARG:O	14:CO:63:ARG:HD3	2.21	0.41
23:DB:699:A:H4'	23:DB:1634:A:N7	2.35	0.41
1:AA:1358:U:OP1	13:AN:73:LEU:HA	2.20	0.41
22:BA:83:G:H2'	22:BA:84:G:O4'	2.20	0.41
9:AJ:48:ARG:HB3	9:AJ:66:GLU:HB3	2.01	0.41
23:DB:1278:C:OP1	35:DN:36:THR:HG23	2.20	0.41
1:AA:462:G:H2'	1:AA:463:U:C6	2.55	0.41
1:AA:648:A:H2'	1:AA:649:A:C8	2.56	0.41
1:AA:893:C:H2'	1:AA:894:G:C8	2.55	0.41
1:CA:284:C:H2'	1:CA:285:C:C6	2.56	0.41
35:DN:14:SER:HA	35:DN:17:ARG:HH22	1.85	0.41
1:AA:1351:U:H4'	6:AG:32:ASP:OD1	2.21	0.41
23:BB:1989:G:H2'	23:BB:1990:C:O4'	2.21	0.41
23:DB:1126:A:H4'	23:DB:1127:A:O5'	2.21	0.41
1:AA:374:A:H2'	1:AA:375:U:C6	2.56	0.41
23:BB:30:G:O2'	23:BB:31:C:H5'	2.21	0.41
1:CA:1240:U:P	6:CG:115:MET:H	2.44	0.41
49:B2:26:ASN:HA	49:B2:29:GLN:HB2	2.03	0.41
23:BB:2864:G:H2'	23:BB:2865:U:C6	2.56	0.41
23:DB:2105:U:H2'	23:DB:2106:U:H6	1.85	0.41
25:BC:57:HIS:HB3	25:BC:58:LYS:H	1.63	0.41
35:DN:18:GLN:HB2	35:DN:18:GLN:HE21	1.50	0.41
23:DB:2742:G:H5''	51:D4:38:GLY:HA2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2329:U:H2'	23:BB:2330:G:H8	1.84	0.41
25:DC:162:GLN:HE22	25:DC:174:ARG:HH12	1.69	0.41
23:BB:2682:A:O2'	23:BB:2683:C:H5'	2.20	0.41
23:BB:2771:C:O2'	26:BD:173:GLN:NE2	2.53	0.41
26:BD:20:VAL:HG23	26:BD:21:SER:N	2.36	0.41
37:BP:29:VAL:O	37:BP:30:TRP:C	2.56	0.41
37:BP:52:ARG:HH11	37:BP:54:LEU:HB3	1.85	0.41
25:BC:116:GLN:O	25:BC:127:ASN:HB3	2.20	0.41
25:BC:136:VAL:O	25:BC:137:GLY:C	2.59	0.41
25:BC:152:GLN:HB3	25:BC:153:LEU:H	1.58	0.41
38:DQ:98:ALA:HA	38:DQ:105:PHE:CG	2.55	0.41
23:DB:2850:A:H2'	23:DB:2851:A:H8	1.85	0.41
54:DB:3474:HOH:O	35:DN:3:HIS:HB2	2.20	0.41
31:DJ:73:VAL:HG11	31:DJ:75:TYR:CE2	2.56	0.41
45:DY:6:ILE:HG22	45:DY:56:VAL:HG11	2.03	0.41
25:DC:229:HIS:ND1	25:DC:230:PRO:CD	2.78	0.41
23:DB:453:A:H5''	54:DB:3499:HOH:O	2.20	0.41
39:DR:41:ILE:O	39:DR:43:ASN:N	2.53	0.41
1:AA:1319:A:H5''	18:AS:3:SER:OG	2.21	0.41
1:AA:1361:G:H2'	1:AA:1362:A:C5'	2.49	0.41
33:BL:122:VAL:O	33:BL:141:LYS:HB3	2.21	0.41
31:BJ:118:MET:O	31:BJ:121:LYS:HB2	2.21	0.41
27:DE:116:ASP:C	27:DE:117:ARG:HD2	2.40	0.41
27:DE:143:LEU:HD13	27:DE:185:LYS:HZ2	1.85	0.41
41:BT:10:VAL:CG2	41:BT:46:ALA:HB2	2.51	0.41
41:BT:11:LEU:HD23	41:BT:46:ALA:HB1	2.03	0.41
21:AU:37:TYR:HB2	21:AU:38:GLU:H	1.73	0.41
23:BB:2322:A:N6	23:BB:2333:A:N6	2.69	0.41
23:BB:2333:A:C4'	23:BB:2334:U:H5''	2.35	0.41
23:BB:2420:C:H41	50:B3:30:HIS:CA	2.34	0.41
23:DB:2091:C:H5'	46:DZ:49:ARG:CD	2.51	0.41
23:DB:2199:A:H3'	23:DB:2200:C:H6	1.86	0.41
28:DF:135:ILE:HG23	28:DF:136:ILE:H	1.86	0.41
22:DA:45:A:O4'	28:DF:91:ARG:CZ	2.68	0.41
52:BI:79:LEU:HB3	52:BI:137:LEU:HD12	2.03	0.41
1:CA:949:A:O2'	1:CA:950:U:H5'	2.20	0.41
52:BI:6:ALA:O	52:BI:7:TYR:HB3	2.21	0.41
16:CQ:68:LYS:C	16:CQ:70:LYS:N	2.74	0.41
13:CN:43:ALA:O	13:CN:47:LEU:HB2	2.20	0.41
28:DF:96:TRP:C	28:DF:98:PHE:N	2.74	0.41
26:BD:37:VAL:HB	26:BD:42:ASN:ND2	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:39:LYS:N	21:CU:40:PRO:HD2	2.31	0.41
4:CE:37:VAL:HA	4:CE:46:GLY:O	2.20	0.41
23:DB:2144:G:C2	23:DB:2146:C:H5'	2.56	0.41
5:AF:29:ILE:HD13	5:AF:64:VAL:CG1	2.51	0.41
39:BR:18:GLN:NE2	39:BR:99:THR:HB	2.31	0.41
23:DB:533:G:N3	38:DQ:40:LYS:CG	2.84	0.41
23:BB:1183:U:C2	23:BB:1184:U:C5	3.08	0.41
23:DB:140:C:H4'	23:DB:141:G:C2	2.55	0.41
2:CC:71:ARG:HG3	2:CC:71:ARG:O	2.20	0.41
33:BL:38:GLN:H	33:BL:41:ARG:CD	2.33	0.41
23:DB:2787:C:H5'	26:DD:65:ALA:CB	2.51	0.41
6:CG:108:ARG:HA	6:CG:118:ARG:NE	2.36	0.41
18:CS:15:LEU:CA	18:CS:18:VAL:HG12	2.44	0.41
5:AF:38:ARG:CB	5:AF:63:ASN:HB2	2.43	0.41
48:D1:27:ARG:HE	48:D1:27:ARG:N	2.18	0.41
35:DN:12:ARG:CD	35:DN:16:HIS:HD2	2.34	0.41
3:AD:187:ARG:HG3	3:AD:187:ARG:HH11	1.86	0.41
23:DB:998:C:H2'	23:DB:999:U:O4'	2.20	0.41
23:BB:1797:G:H5'	25:BC:251:THR:CA	2.50	0.41
1:CA:1095:U:O2'	1:CA:1096:C:H5'	2.20	0.41
15:AP:39:PHE:HE2	15:AP:70:ARG:NH2	2.18	0.41
1:AA:1248:A:H2	8:AI:71:ILE:HD11	1.85	0.41
26:BD:187:LEU:O	26:BD:188:LEU:HD12	2.19	0.41
23:BB:1439:A:N6	23:BB:1440:U:O2	2.50	0.41
23:BB:1515:A:C5'	23:BB:1557:C:H5'	2.51	0.41
23:BB:428:A:H2'	23:BB:429:A:O4'	2.19	0.41
40:DS:84:ARG:C	40:DS:96:ILE:HG22	2.41	0.41
26:DD:14:ILE:HD12	37:DP:78:PRO:HB2	2.03	0.41
1:AA:1457:G:H2'	1:AA:1458:G:H8	1.86	0.41
9:AJ:6:ILE:HA	9:AJ:102:LEU:CD2	2.51	0.41
29:DG:126:THR:HG23	29:DG:129:GLU:H	1.84	0.41
6:CG:61:PHE:CD2	6:CG:65:LEU:HD13	2.55	0.41
20:CB:93:HIS:O	20:CB:94:ARG:C	2.58	0.41
44:BX:45:GLN:N	44:BX:45:GLN:NE2	2.68	0.41
1:CA:192:A:O2'	1:CA:193:C:H5'	2.21	0.41
23:BB:1408:G:O2'	23:BB:1409:U:H5'	2.21	0.41
1:AA:1437:A:H2'	1:AA:1438:G:H8	1.86	0.41
1:AA:56:U:H6	1:AA:56:U:O5'	2.04	0.41
13:AN:20:PHE:HA	13:AN:24:ALA:H	1.85	0.41
44:DX:2:LYS:HD3	44:DX:2:LYS:N	2.36	0.41
23:BB:2050:C:H2'	23:BB:2051:A:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DF:121:PHE:CE2	28:DF:127:TYR:HB2	2.56	0.41
23:DB:2715:C:O5'	23:DB:2715:C:H6	2.04	0.41
26:DD:114:LYS:HB2	26:DD:114:LYS:HZ2	1.84	0.41
23:DB:1710:G:O2'	23:DB:1711:A:H5'	2.21	0.41
23:DB:619:G:H2'	23:DB:620:G:H5''	2.03	0.41
1:AA:415:A:N1	1:AA:428:G:O6	2.53	0.41
8:CI:26:LYS:HG3	8:CI:61:ASP:OD2	2.20	0.41
40:DS:27:LYS:HA	40:DS:70:LYS:CG	2.50	0.41
1:CA:219:U:H2'	1:CA:220:G:H8	1.85	0.41
34:DM:62:LYS:HB2	34:DM:104:GLU:OE1	2.19	0.41
23:BB:1685:C:H2'	23:BB:1686:C:H6	1.85	0.41
1:AA:737:C:H2'	1:AA:738:C:H6	1.86	0.41
24:BV:16:ALA:O	24:BV:19:ARG:HB2	2.19	0.41
23:BB:2514:U:H2'	23:BB:2515:C:C6	2.56	0.41
23:BB:2515:C:H2'	23:BB:2516:A:H8	1.85	0.41
23:BB:2869:G:H2'	23:BB:2870:C:H6	1.86	0.41
23:BB:2455:G:H2'	23:BB:2456:C:H6	1.85	0.41
23:BB:1291:C:O2'	23:BB:1292:G:H5'	2.20	0.41
23:DB:688:U:O2'	23:DB:689:A:H5'	2.20	0.41
1:CA:1492:A:N6	1:CA:1494:G:N9	2.68	0.41
1:AA:178:C:O2'	1:AA:179:A:H5'	2.20	0.41
12:AM:58:GLU:HA	12:AM:61:LYS:CE	2.50	0.41
1:CA:455:G:H2'	1:CA:456:A:C8	2.55	0.41
41:BT:36:LYS:O	41:BT:81:LYS:HD2	2.21	0.41
2:CC:15:LYS:HZ3	2:CC:16:PRO:HD2	1.85	0.41
1:CA:382:A:O2'	1:CA:383:A:H5'	2.21	0.41
12:CM:13:HIS:HB2	12:CM:16:ILE:HG22	2.02	0.41
1:CA:1349:A:H1'	1:CA:1374:A:N6	2.35	0.41
41:BT:68:LYS:C	41:BT:68:LYS:HD3	2.41	0.41
1:CA:669:G:O2'	1:CA:670:G:H5'	2.21	0.41
1:AA:1181:G:P	1:AA:1181:G:O4'	2.78	0.41
26:DD:100:LEU:HD13	26:DD:100:LEU:O	2.21	0.41
1:AA:1347:G:N2	1:AA:1373:G:H2'	2.35	0.41
52:DI:8:VAL:HG11	52:DI:30:GLN:HG3	2.02	0.41
38:BQ:97:ILE:H	38:BQ:97:ILE:HG12	1.70	0.41
23:BB:2466:C:O2'	23:BB:2467:C:H5'	2.21	0.41
34:BM:71:LYS:HD3	34:BM:92:TRP:C	2.41	0.41
23:BB:399:U:OP2	46:BZ:49:ARG:NH1	2.54	0.41
46:BZ:3:LYS:CE	46:BZ:8:LYS:HA	2.48	0.41
23:DB:1799:G:N2	23:DB:1818:U:O2'	2.54	0.41
25:DC:173:LEU:HD12	25:DC:183:VAL:CG1	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:4:LEU:HD13	26:BD:79:LEU:CD1	2.51	0.41
25:BC:116:GLN:OE1	25:BC:122:ALA:HB3	2.21	0.41
23:BB:321:U:OP2	27:BE:131:THR:HG22	2.21	0.41
27:BE:141:MET:O	27:BE:142:ALA:HB3	2.21	0.41
27:BE:7:ASP:C	27:BE:9:GLN:H	2.24	0.41
23:DB:2849:U:O4	23:DB:2867:G:C8	2.73	0.41
26:DD:116:LYS:O	35:DN:1:MET:C	2.59	0.41
37:DP:50:ARG:CG	37:DP:99:LEU:H	2.34	0.41
30:DH:30:LEU:HD12	30:DH:30:LEU:O	2.21	0.41
25:DC:245:THR:O	25:DC:246:PRO:C	2.59	0.41
47:B0:37:HIS:HB3	47:B0:38:LEU:H	1.57	0.41
27:DE:193:VAL:C	27:DE:195:GLN:N	2.73	0.41
41:BT:30:ILE:HG23	41:BT:32:LEU:HD13	2.01	0.41
21:CU:23:GLU:HB3	21:CU:24:LYS:H	1.67	0.41
23:DB:2313:C:O2'	28:DF:34:THR:HG21	2.21	0.41
8:CI:70:GLY:O	8:CI:74:GLN:N	2.53	0.41
1:CA:951:G:O2'	1:CA:952:U:H5'	2.20	0.41
32:BK:32:TYR:HB3	32:BK:67:LYS:NZ	2.36	0.41
10:AK:95:THR:HG23	10:AK:96:ILE:HG13	2.02	0.41
28:BF:135:ILE:CG2	28:BF:136:ILE:N	2.83	0.41
28:BF:34:THR:CG2	28:BF:89:THR:HG22	2.44	0.41
1:CA:8:A:C8	4:CE:105:ILE:HG23	2.56	0.41
16:CQ:24:ILE:HD13	16:CQ:43:LEU:CD1	2.50	0.41
46:BZ:35:ASP:O	46:BZ:42:PRO:HB3	2.21	0.41
52:DI:18:ASN:N	52:DI:19:PRO:CD	2.84	0.41
25:DC:220:ARG:NH1	25:DC:220:ARG:HA	2.32	0.41
23:DB:26:G:H2'	23:DB:27:G:C1'	2.50	0.41
3:AD:160:LEU:HA	3:AD:163:GLN:OE1	2.21	0.41
3:CD:64:TYR:CE2	3:CD:93:LEU:HD13	2.56	0.41
8:AI:59:LYS:HD2	8:AI:60:LEU:HD23	2.03	0.41
29:DG:44:HIS:HB2	29:DG:49:LEU:HD23	2.03	0.41
34:DM:119:LEU:N	34:DM:119:LEU:HD22	2.32	0.41
15:CP:57:ILE:O	15:CP:61:VAL:HG23	2.21	0.41
34:BM:103:TYR:O	34:BM:105:MET:N	2.54	0.41
32:DK:20:MET:HB2	32:DK:44:LYS:HE2	2.02	0.41
32:DK:39:ILE:O	32:DK:60:ALA:N	2.50	0.41
38:DQ:52:ARG:O	38:DQ:53:LYS:C	2.59	0.41
38:DQ:50:ARG:HH22	38:DQ:53:LYS:HE3	1.85	0.41
23:DB:363:G:H2'	23:DB:364:C:H6	1.86	0.41
23:BB:2527:C:H1'	51:B4:1:MET:HA	2.02	0.41
36:BO:16:ARG:HG3	36:BO:20:GLU:CG	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CE:35:LEU:CD1	4:CE:133:ILE:HA	2.48	0.41
26:DD:81:GLU:O	26:DD:82:PHE:CB	2.68	0.41
49:D2:17:GLY:C	49:D2:18:PHE:CG	2.93	0.41
29:BG:148:ARG:HE	29:BG:153:PRO:HD2	1.85	0.41
5:CF:90:MET:HB3	5:CF:91:ARG:H	1.68	0.41
42:DU:10:VAL:O	42:DU:11:ILE:HD13	2.20	0.41
8:CI:20:ILE:CD1	8:CI:86:LEU:HG	2.50	0.41
2:AC:172:VAL:HG11	2:AC:200:TRP:HB3	2.02	0.41
27:BE:133:LEU:HD13	27:BE:133:LEU:HA	1.88	0.41
1:CA:502:A:O2'	1:CA:503:C:H5'	2.21	0.41
23:BB:1441:G:O2'	23:BB:1442:U:H5'	2.21	0.41
23:DB:1556:C:H2'	23:DB:1557:C:C6	2.56	0.41
2:CC:166:TRP:O	2:CC:167:TYR:HB3	2.21	0.41
1:CA:1318:A:H4'	18:CS:9:PHE:CE2	2.56	0.41
15:CP:16:PHE:CE2	15:CP:40:ASN:HB2	2.55	0.41
34:DM:19:GLY:C	34:DM:20:LEU:HD12	2.41	0.41
23:BB:2645:G:H4'	23:BB:2646:C:OP2	2.19	0.41
29:BG:5:LYS:HE3	29:BG:69:ALA:CA	2.51	0.41
1:AA:16:A:H4'	4:AE:21:SER:N	2.35	0.41
4:CE:52:ALA:C	4:CE:54:GLU:N	2.74	0.41
23:DB:1727:C:H2'	23:DB:1728:C:H6	1.81	0.41
23:DB:608:A:H2'	23:DB:609:A:H8	1.85	0.41
16:CQ:30:HIS:ND1	16:CQ:31:PRO:HD2	2.36	0.41
23:BB:241:A:OP1	23:BB:241:A:H8	2.03	0.41
1:AA:95:C:O2	1:AA:95:C:C2'	2.67	0.41
20:CB:80:LYS:HA	20:CB:90:PHE:CZ	2.55	0.41
45:DY:10:ARG:HA	45:DY:31:ILE:HD12	2.03	0.41
3:CD:106:PHE:CD1	3:CD:106:PHE:N	2.87	0.41
23:BB:408:G:O2'	23:BB:409:G:H5'	2.19	0.41
1:AA:337:G:O2'	1:AA:338:A:H5'	2.21	0.41
23:BB:863:A:O2'	23:BB:864:G:H5'	2.20	0.41
8:CI:15:ALA:O	8:CI:66:VAL:HG23	2.20	0.41
23:DB:836:G:H2'	23:DB:837:C:H6	1.84	0.41
1:CA:1409:C:O2	23:DB:1913:A:N6	2.54	0.41
23:DB:1682:G:C4	23:DB:1757:A:H1'	2.56	0.41
23:DB:2700:A:H2	35:DN:71:ARG:NH2	2.18	0.41
3:AD:54:LEU:HD13	3:AD:54:LEU:C	2.41	0.41
1:CA:841:C:H3'	1:CA:843:U:P	2.60	0.41
49:D2:3:ARG:HH21	49:D2:4:THR:HG23	1.86	0.41
23:BB:2454:G:O2'	23:BB:2455:G:H5'	2.21	0.41
23:DB:2300:C:H2'	23:DB:2301:C:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CE:158:LYS:HB3	7:CH:63:LYS:CD	2.50	0.41
23:DB:1987:A:H2'	23:DB:1988:G:H8	1.84	0.41
9:CJ:44:THR:HG23	9:CJ:70:HIS:HA	2.01	0.41
1:CA:967:C:O2'	8:CI:129:ARG:HG3	2.21	0.41
41:DT:19:LYS:HE3	41:DT:23:ALA:HB2	2.02	0.41
1:AA:367:U:OP1	1:AA:395:C:H1'	2.21	0.41
1:CA:1200:C:C3'	1:CA:1201:A:H5'	2.50	0.41
23:DB:1880:U:H2'	23:DB:1881:C:C6	2.55	0.41
8:CI:91:GLU:H	8:CI:91:GLU:CD	2.23	0.41
23:DB:557:C:H2'	23:DB:558:U:H6	1.84	0.41
23:DB:1704:C:O2'	23:DB:1705:A:H5'	2.20	0.41
23:DB:251:A:H2'	23:DB:252:G:O4'	2.21	0.41
1:CA:1058:G:OP1	2:CC:198:LYS:HE3	2.20	0.41
22:DA:82:U:O3'	45:DY:16:LEU:HD11	2.20	0.41
23:DB:127:A:H5''	23:DB:128:C:O4'	2.21	0.41
16:CQ:28:VAL:O	16:CQ:36:PHE:HA	2.20	0.41
23:DB:2710:C:H2'	23:DB:2711:A:H8	1.86	0.41
1:CA:1447:A:H5'	1:CA:1448:C:H5	1.85	0.41
51:D4:7:VAL:O	51:D4:8:LYS:HB2	2.21	0.41
23:DB:1428:C:H2'	23:DB:1569:A:OP2	2.20	0.41
25:BC:6:LYS:HA	25:BC:7:PRO:HA	1.75	0.41
1:CA:1111:A:H2'	1:CA:1112:C:C6	2.56	0.41
23:DB:683:U:O5'	23:DB:683:U:H6	2.04	0.41
38:BQ:108:LEU:O	38:BQ:108:LEU:HD13	2.21	0.41
23:BB:1695:G:H2'	23:BB:1696:G:O4'	2.21	0.41
1:AA:714:G:H2'	1:AA:715:A:C8	2.56	0.41
23:DB:393:C:O2'	23:DB:394:C:H5'	2.21	0.41
33:BL:112:LEU:HD22	33:BL:130:GLY:HA3	2.03	0.41
31:BJ:43:GLU:HG3	31:BJ:44:TYR:N	2.32	0.41
39:BR:5:PHE:N	39:BR:12:HIS:HB3	2.36	0.41
39:BR:42:ALA:C	39:BR:54:VAL:HA	2.41	0.41
27:BE:46:GLN:O	27:BE:48:THR:OG1	2.24	0.41
51:D4:11:CYS:HB3	51:D4:27:CYS:SG	2.61	0.41
51:D4:16:ILE:HG23	51:D4:18:LYS:N	2.28	0.41
51:D4:26:ILE:CB	51:D4:35:GLN:HG2	2.50	0.41
25:BC:50:THR:O	25:BC:51:ARG:C	2.59	0.41
23:BB:2230:G:H2'	23:BB:2231:U:C6	2.56	0.41
23:BB:2232:C:P	46:BZ:25:ARG:HH21	2.44	0.41
23:DB:1817:G:OP1	25:DC:62:ARG:NH2	2.54	0.41
25:DC:104:LEU:HD23	25:DC:104:LEU:HA	1.79	0.41
25:DC:155:ARG:NE	25:DC:157:ALA:HB3	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BP:29:VAL:HG23	37:BP:47:ILE:HD11	2.03	0.41
26:BD:12:THR:CG2	26:BD:22:ILE:HD12	2.51	0.41
26:BD:3:GLY:HA3	26:BD:49:GLN:HE22	1.86	0.41
26:BD:4:LEU:HD22	26:BD:79:LEU:HD12	2.02	0.41
33:DL:2:ARG:HG3	33:DL:2:ARG:NH1	2.35	0.41
25:BC:198:GLU:C	25:BC:200:MET:H	2.24	0.41
23:BB:1820:U:H4'	23:BB:1821:A:OP2	2.21	0.41
25:BC:140:VAL:HG22	25:BC:161:VAL:O	2.20	0.41
48:D1:40:PRO:O	48:D1:41:VAL:C	2.59	0.41
20:AB:202:ASN:HD21	20:AB:204:ASP:HB3	1.86	0.41
27:BE:118:LEU:HD11	27:BE:143:LEU:HD22	2.02	0.41
26:DD:116:LYS:O	35:DN:1:MET:HB2	2.21	0.41
23:DB:2683:C:OP1	37:DP:55:HIS:CD2	2.73	0.41
26:DD:95:SER:C	26:DD:96:ILE:HG13	2.41	0.41
37:DP:54:LEU:CD1	37:DP:55:HIS:H	2.33	0.41
33:DL:90:VAL:C	33:DL:92:LEU:N	2.74	0.41
23:DB:909:A:H5''	34:DM:18:ARG:NH2	2.35	0.41
33:DL:61:LEU:HB3	33:DL:62:PRO:HD3	2.03	0.41
33:DL:62:PRO:CB	50:D3:12:ARG:HD3	2.42	0.41
20:CB:11:ALA:O	20:CB:15:PHE:HD2	2.04	0.41
45:DY:7:THR:CA	45:DY:34:THR:HB	2.51	0.41
35:BN:118:ARG:HH22	47:B0:49:ARG:HB3	1.86	0.41
40:BS:2:GLU:O	40:BS:4:ILE:HD13	2.20	0.41
40:BS:8:ARG:HH12	40:BS:80:PRO:HD2	1.85	0.41
30:BH:1:MET:H1	30:BH:23:ALA:HB2	1.86	0.41
38:BQ:16:ILE:HG13	38:BQ:16:ILE:H	1.73	0.41
39:DR:2:TYR:HD1	39:DR:15:SER:OG	2.04	0.41
33:BL:78:ARG:NH1	33:BL:110:VAL:HG11	2.36	0.41
33:BL:79:LEU:O	33:BL:81:ASP:OD1	2.39	0.41
27:DE:109:LEU:N	27:DE:117:ARG:HH21	2.19	0.41
27:DE:153:LEU:CB	27:DE:173:THR:HB	2.51	0.41
41:DT:84:TYR:O	41:DT:85:VAL:C	2.59	0.41
40:DS:73:LYS:HA	40:DS:73:LYS:HD3	1.91	0.41
42:DU:71:ILE:CG1	42:DU:72:PHE:N	2.84	0.41
28:DF:56:LEU:CD1	28:DF:86:CYS:HB3	2.51	0.41
12:CM:52:ILE:HG23	12:CM:53:ASP:N	2.36	0.41
42:BU:101:THR:C	42:BU:102:ILE:HG13	2.41	0.41
42:BU:92:VAL:HG13	42:BU:92:VAL:O	2.21	0.41
42:BU:78:LYS:HE2	42:BU:96:LYS:HE3	2.02	0.41
1:CA:1369:C:H2'	1:CA:1370:G:C8	2.55	0.41
52:BI:78:LEU:HA	52:BI:81:LYS:HG2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CL:106:VAL:CG1	11:CL:109:ARG:HG3	2.51	0.41
1:CA:947:G:H5''	12:CM:106:ARG:HB2	2.03	0.41
1:CA:236:A:H2'	1:CA:237:G:H8	1.86	0.41
33:BL:47:ARG:HG3	33:BL:47:ARG:O	2.21	0.41
23:DB:598:U:H5'	33:DL:21:ARG:HB2	2.03	0.41
23:BB:2306:C:OP1	23:BB:2307:G:H8	2.04	0.41
25:DC:28:PRO:CB	25:DC:79:ARG:HE	2.34	0.41
25:DC:27:LYS:N	25:DC:28:PRO:HD3	2.34	0.41
28:BF:140:ILE:HG22	28:BF:141:ASP:N	2.35	0.41
28:BF:89:THR:C	28:BF:90:LEU:HD12	2.41	0.41
6:AG:114:SER:O	6:AG:118:ARG:HG3	2.21	0.41
13:CN:26:LEU:HA	13:CN:29:ILE:CD1	2.47	0.41
37:BP:108:ARG:H	37:BP:108:ARG:CD	2.14	0.41
3:AD:26:ALA:O	3:AD:27:ILE:O	2.38	0.41
28:DF:41:GLU:H	28:DF:45:ASP:HB3	1.86	0.41
15:AP:46:LYS:HD3	15:AP:46:LYS:N	2.19	0.41
23:DB:27:G:O5'	23:DB:27:G:H8	2.04	0.41
25:BC:228:ASP:N	25:BC:228:ASP:OD1	2.53	0.41
10:CK:16:SER:N	10:CK:78:ILE:HA	2.35	0.41
1:CA:1101:A:H61	20:CB:101:THR:HG21	1.85	0.41
8:AI:24:ASN:O	8:AI:61:ASP:HB2	2.21	0.41
23:BB:2637:U:C2'	23:BB:2638:G:H5'	2.50	0.41
26:BD:88:GLU:C	26:BD:90:PHE:H	2.22	0.41
23:DB:1250:G:C5'	38:DQ:5:ARG:HD3	2.50	0.41
9:AJ:73:LEU:O	9:AJ:74:VAL:HB	2.21	0.41
29:BG:18:ILE:HA	29:BG:23:ILE:HD13	2.01	0.41
29:BG:35:THR:C	29:BG:36:LEU:HD12	2.41	0.41
18:CS:35:ARG:NH2	18:CS:52:ASN:HD22	2.19	0.41
51:B4:7:VAL:H	51:B4:23:ILE:CD1	2.34	0.41
6:AG:26:VAL:O	6:AG:30:MET:N	2.54	0.41
5:AF:3:HIS:HB2	5:AF:92:THR:OG1	2.21	0.41
1:CA:719:C:O2'	17:CR:37:LYS:HE3	2.20	0.41
39:BR:69:GLY:C	39:BR:70:GLU:HG3	2.40	0.41
28:BF:3:LEU:O	28:BF:3:LEU:HD23	2.21	0.41
28:BF:7:TYR:CA	28:BF:11:VAL:HB	2.42	0.41
23:DB:144:A:C5	41:DT:3:ARG:NH1	2.89	0.41
19:AT:58:ASP:HA	19:AT:61:ALA:HB3	2.03	0.41
38:DQ:46:TYR:CD2	39:DR:89:HIS:NE2	2.89	0.41
16:AQ:11:VAL:CA	16:AQ:22:VAL:HG22	2.44	0.41
36:BO:67:ASN:HD22	36:BO:67:ASN:HA	1.56	0.41
1:CA:1080:A:O3'	4:CE:20:VAL:HG21	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BT:73:ARG:O	41:BT:74:ILE:HD13	2.20	0.41
23:BB:64:A:O2'	41:BT:69:ARG:HB3	2.20	0.41
26:DD:59:ARG:NH2	26:DD:63:PRO:HG2	2.35	0.41
6:AG:141:HIS:O	6:AG:144:ALA:O	2.39	0.41
1:AA:254:G:OP1	16:AQ:68:LYS:O	2.39	0.41
29:BG:153:PRO:HG3	29:BG:160:GLY:CA	2.51	0.41
42:BU:46:LYS:O	42:BU:47:PRO:C	2.59	0.41
1:AA:1288:A:N1	1:AA:1371:G:H1'	2.36	0.41
5:AF:62:MET:O	5:AF:63:ASN:HB2	2.21	0.41
1:CA:781:A:H2'	1:CA:782:A:C5'	2.45	0.41
2:AC:17:TRP:C	2:AC:19:SER:H	2.24	0.41
26:DD:146:ILE:CD1	26:DD:146:ILE:H	2.34	0.41
1:AA:842:U:H3'	1:AA:842:U:OP1	2.21	0.41
23:DB:877:A:C6	23:DB:898:C:H2'	2.56	0.41
25:BC:251:THR:HG22	25:BC:252:LYS:N	2.35	0.41
23:BB:2347:C:H4'	23:BB:2347:C:OP1	2.21	0.41
8:CI:87:MET:SD	8:CI:88:GLU:N	2.93	0.41
1:CA:1509:C:O2'	1:CA:1510:C:H5'	2.21	0.41
3:CD:2:ARG:O	3:CD:3:TYR:CB	2.68	0.41
3:CD:3:TYR:C	3:CD:5:GLY:H	2.24	0.41
11:CL:49:ARG:HD3	11:CL:89:LEU:HD21	2.02	0.41
3:CD:13:ARG:HG3	3:CD:55:ARG:NH2	2.36	0.41
22:DA:37:C:N3	22:DA:48:U:O2'	2.52	0.41
26:DD:180:VAL:HG23	26:DD:181:ASP:H	1.85	0.41
4:AE:35:LEU:HD12	4:AE:133:ILE:HA	2.01	0.41
38:BQ:65:ASN:O	38:BQ:69:ARG:HG2	2.21	0.41
7:CH:124:ILE:HD12	7:CH:125:ILE:N	2.36	0.41
38:BQ:78:PHE:CE2	38:BQ:82:LEU:HD11	2.56	0.41
40:DS:87:PRO:O	40:DS:93:ALA:HA	2.21	0.41
8:AI:71:ILE:O	8:AI:72:SER:C	2.59	0.41
14:AO:70:LYS:NZ	14:AO:74:VAL:HA	2.36	0.41
14:AO:70:LYS:HG2	14:AO:77:TYR:CG	2.56	0.41
1:AA:234:C:H2'	1:AA:235:C:H6	1.86	0.41
1:AA:236:A:H2'	1:AA:237:G:C8	2.56	0.41
23:BB:1485:U:O2'	23:BB:1486:U:H5'	2.20	0.41
37:DP:77:SER:HB2	37:DP:78:PRO:HD3	2.03	0.41
1:CA:1386:G:O2'	1:CA:1387:G:H5'	2.20	0.41
23:DB:742:A:O2'	23:DB:743:A:H5'	2.21	0.41
30:BH:56:ALA:HB3	30:BH:57:LYS:HZ2	1.86	0.41
23:BB:849:A:H2'	23:BB:850:U:C6	2.55	0.41
1:CA:473:U:C2	1:CA:474:G:C8	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:474:G:H2'	1:CA:475:C:H6	1.82	0.41
23:BB:118:A:H5'	23:BB:119:A:C8	2.45	0.41
26:DD:177:VAL:HG23	26:DD:188:LEU:O	2.21	0.41
33:BL:106:GLU:HG2	33:BL:107:PHE:N	2.32	0.41
23:BB:1589:U:H2'	23:BB:1590:A:C8	2.56	0.41
11:AL:80:LEU:HD13	11:AL:101:LEU:CD1	2.51	0.41
45:DY:26:LEU:C	45:DY:28:LEU:H	2.24	0.41
16:CQ:8:GLN:HA	16:CQ:59:GLU:HA	2.03	0.41
9:AJ:71:LEU:N	9:AJ:71:LEU:HD12	2.27	0.41
23:DB:1407:G:H2'	23:DB:1408:G:H8	1.85	0.41
30:DH:104:THR:HA	30:DH:108:VAL:O	2.20	0.41
29:BG:42:VAL:HA	29:BG:51:PHE:HA	2.02	0.41
4:CE:95:MET:HE2	4:CE:143:LEU:HD13	2.03	0.41
1:CA:977:A:H1'	1:CA:981:U:H3	1.86	0.41
23:BB:592:A:H2'	23:BB:593:U:C6	2.56	0.41
1:CA:1276:G:H2'	1:CA:1277:C:C6	2.56	0.41
23:DB:2261:C:OP2	43:DW:13:ARG:HB2	2.21	0.41
14:CO:35:ILE:HD11	14:CO:58:MET:CB	2.50	0.41
35:DN:28:LEU:HA	35:DN:34:ILE:CD1	2.50	0.41
23:DB:593:U:H2'	23:DB:594:U:C6	2.56	0.41
14:AO:58:MET:HG2	14:AO:58:MET:H	1.59	0.41
1:CA:191:G:H2'	1:CA:192:A:H8	1.85	0.41
23:DB:1726:C:H2'	23:DB:1727:C:C6	2.56	0.41
4:AE:71:ILE:HG12	4:AE:72:ASN:H	1.86	0.41
1:CA:1192:C:OP2	2:CC:3:LYS:NZ	2.53	0.41
1:CA:861:G:H2'	1:CA:862:C:H6	1.86	0.41
23:BB:1446:C:H2'	23:BB:1447:C:C6	2.55	0.41
23:DB:236:C:H2'	23:DB:237:C:H6	1.86	0.41
1:AA:192:A:O2'	1:AA:193:C:H5'	2.20	0.41
1:CA:202:G:H1'	1:CA:468:A:H8	1.86	0.41
1:AA:537:G:H5''	11:AL:109:ARG:NH1	2.36	0.41
33:BL:133:ALA:HA	33:BL:136:GLU:HG2	2.03	0.41
1:CA:599:C:O2'	1:CA:600:A:H5'	2.20	0.41
1:CA:601:G:O2'	1:CA:602:A:H5'	2.21	0.41
23:BB:273:G:H2'	23:BB:274:C:H6	1.85	0.41
3:CD:151:GLN:HG3	3:CD:153:ARG:HB3	2.03	0.41
1:CA:478:A:H2'	1:CA:479:U:O4'	2.20	0.41
30:DH:135:HIS:H	30:DH:138:VAL:HB	1.85	0.41
23:BB:464:U:H2'	23:BB:465:G:O4'	2.21	0.41
16:CQ:30:HIS:CB	16:CQ:33:TYR:HB2	2.51	0.41
1:CA:557:G:H2'	1:CA:558:G:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2538:C:O2'	23:BB:2539:C:H5'	2.21	0.41
1:CA:1352:C:H2'	1:CA:1353:G:C8	2.56	0.41
32:DK:69:VAL:HG11	32:DK:106:GLU:CD	2.41	0.41
3:AD:120:LYS:CB	3:AD:145:ARG:HH21	2.32	0.41
31:BJ:63:ALA:CA	31:BJ:69:ARG:HD2	2.47	0.41
23:BB:598:U:H5'	33:BL:20:GLY:HA2	2.03	0.41
50:D3:25:HIS:CE1	50:D3:46:LYS:HB2	2.55	0.41
38:BQ:102:LYS:N	38:BQ:102:LYS:CD	2.84	0.41
40:BS:85:ILE:HG22	40:BS:86:MET:H	1.86	0.41
17:CR:19:GLU:CD	17:CR:20:ILE:N	2.74	0.41
23:BB:1655:A:H2	23:BB:2049:G:O3'	2.03	0.41
36:BO:108:ASP:O	36:BO:112:GLU:CD	2.59	0.41
1:AA:945:G:N1	1:AA:1337:G:C2	2.89	0.41
8:AI:118:ARG:HG2	8:AI:118:ARG:O	2.21	0.41
15:AP:12:LYS:C	15:AP:14:ARG:N	2.75	0.41
23:DB:1945:G:C4	23:DB:1946:U:C5	3.09	0.41
1:AA:1521:C:H2'	1:AA:1522:U:C6	2.56	0.41
44:DX:56:LEU:O	44:DX:59:GLU:HB2	2.21	0.41
1:AA:5:U:H1'	1:AA:6:G:N1	2.35	0.41
1:AA:415:A:O4'	1:AA:415:A:N3	2.52	0.41
1:CA:210:C:H4'	1:CA:211:G:H5''	2.02	0.41
23:DB:1716:U:H2'	23:DB:1717:A:H8	1.83	0.41
1:AA:637:C:H2'	1:AA:638:U:C6	2.56	0.41
41:DT:79:ASP:O	41:DT:80:TRP:HB2	2.20	0.41
22:BA:92:C:H2'	22:BA:93:C:C6	2.55	0.41
1:CA:637:C:H2'	1:CA:638:U:C6	2.56	0.41
1:CA:426:U:O2'	1:CA:427:U:H5'	2.20	0.41
1:AA:499:A:H4'	1:AA:500:G:H5'	2.03	0.41
11:CL:93:ARG:H	11:CL:93:ARG:HD2	1.85	0.41
30:BH:47:PHE:CD1	30:BH:47:PHE:C	2.89	0.41
1:AA:738:C:H2'	1:AA:739:C:C6	2.56	0.41
2:CC:190:THR:HG22	2:CC:191:THR:N	2.35	0.41
1:CA:1158:C:O3'	20:CB:131:LYS:HD3	2.20	0.41
23:BB:839:U:H1'	23:BB:1191:G:H1'	2.02	0.41
23:DB:678:C:O2'	23:DB:679:C:H5'	2.20	0.41
4:CE:158:LYS:CB	7:CH:63:LYS:HD3	2.50	0.41
29:BG:76:ILE:O	29:BG:80:GLU:HB2	2.20	0.41
1:CA:113:G:H21	1:CA:353:A:H8	1.68	0.41
6:CG:49:LEU:C	6:CG:51:GLN:N	2.74	0.41
23:BB:32:C:H2'	23:BB:33:C:H5''	2.03	0.41
30:BH:27:ARG:HH11	30:BH:27:ARG:HB2	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:847:G:H2'	1:AA:848:C:H6	1.86	0.41
1:CA:792:A:O2'	1:CA:794:A:N7	2.49	0.41
23:BB:2389:G:H5''	23:BB:2390:U:O4'	2.20	0.41
1:AA:896:C:O2'	1:AA:897:C:H5'	2.20	0.41
26:BD:103:ASP:O	26:BD:104:VAL:HB	2.21	0.41
23:DB:709:U:H2'	23:DB:710:U:C6	2.54	0.41
1:AA:605:U:H2'	1:AA:606:G:C8	2.55	0.41
1:AA:1529:G:OP2	1:AA:1529:G:H3'	2.20	0.41
1:CA:1359:C:O5'	1:CA:1359:C:H6	2.04	0.41
14:AO:39:GLN:HB2	14:AO:39:GLN:HE21	1.65	0.41
11:CL:107:LYS:O	11:CL:108:ASP:HB2	2.20	0.41
11:CL:107:LYS:HG2	11:CL:108:ASP:N	2.34	0.41
29:DG:31:GLU:O	29:DG:32:LEU:HD23	2.21	0.41
6:CG:6:ILE:HG22	6:CG:7:GLY:N	2.36	0.41
1:CA:186:C:H2'	1:CA:187:G:O4'	2.21	0.41
49:D2:37:LYS:HD3	49:D2:37:LYS:C	2.42	0.41
10:CK:128:VAL:HG23	10:CK:128:VAL:OXT	2.21	0.41
6:AG:109:LYS:N	6:AG:109:LYS:HD2	2.36	0.41
3:AD:158:LEU:N	3:AD:158:LEU:HD23	2.36	0.41
49:B2:10:LEU:O	49:B2:10:LEU:HD23	2.21	0.41
23:BB:2584:U:H6	23:BB:2584:U:O5'	2.04	0.41
41:DT:33:LYS:O	41:DT:33:LYS:HD2	2.21	0.41
23:BB:1304:A:O2'	23:BB:1305:C:H5'	2.20	0.41
1:CA:224:U:H2'	1:CA:225:C:C6	2.56	0.41
23:BB:331:C:O2'	23:BB:332:A:H5'	2.21	0.41
23:BB:873:C:OP1	34:BM:1:MET:HG3	2.21	0.41
34:BM:11:LYS:C	34:BM:12:MET:SD	3.00	0.41
34:BM:96:ILE:C	34:BM:96:ILE:HD13	2.41	0.41
34:BM:96:ILE:HD13	34:BM:97:GLN:CG	2.51	0.41
24:BV:83:LYS:O	24:BV:85:LYS:N	2.53	0.41
25:DC:103:ILE:CG2	25:DC:104:LEU:N	2.83	0.41
26:BD:18:ASP:HB3	26:BD:20:VAL:H	1.86	0.41
26:BD:106:LYS:O	26:BD:206:ALA:HB2	2.21	0.41
37:BP:29:VAL:CG2	37:BP:47:ILE:HD11	2.51	0.41
23:BB:2023:C:H4'	23:BB:2617:U:O3'	2.21	0.41
23:BB:1132:U:H6	31:BJ:85:LYS:NZ	2.18	0.41
25:BC:140:VAL:CG2	25:BC:141:HIS:H	2.28	0.41
38:DQ:88:GLU:CD	39:DR:53:PHE:HB2	2.41	0.41
20:AB:204:ASP:O	20:AB:205:ALA:HB3	2.21	0.41
32:DK:70:ARG:CD	32:DK:76:VAL:HG22	2.51	0.41
43:BW:28:GLU:N	43:BW:61:LYS:HB2	2.25	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DN:33:ILE:HG12	35:DN:114:GLU:CB	2.51	0.41
23:DB:1802:A:O3'	25:DC:255:LYS:HD2	2.21	0.41
23:BB:1001:A:H2'	23:BB:1002:G:O4'	2.21	0.41
32:BK:98:ARG:N	32:BK:98:ARG:HD2	2.35	0.41
35:BN:49:GLU:O	35:BN:52:ILE:HB	2.20	0.41
39:DR:47:VAL:HG22	39:DR:48:LYS:N	2.25	0.41
25:DC:22:GLU:H	25:DC:202:ARG:CZ	2.34	0.41
23:BB:2419:U:O2'	23:BB:2420:C:H5'	2.21	0.41
12:CM:47:LEU:HD12	12:CM:51:GLN:HB2	2.02	0.41
42:BU:5:ARG:CG	42:BU:6:ARG:N	2.83	0.41
23:BB:100:U:H4'	42:BU:90:LYS:HD3	2.01	0.41
23:BB:2305:U:O2	28:BF:132:ARG:HG2	2.21	0.41
28:BF:34:THR:HA	28:BF:89:THR:HA	2.03	0.41
23:DB:2026:U:C2	23:DB:2027:G:C8	3.08	0.41
39:DR:32:THR:HB	39:DR:66:HIS:HB3	2.03	0.41
32:DK:99:ILE:O	32:DK:119:ALA:HB2	2.20	0.41
20:CB:163:ILE:CG2	20:CB:164:ASP:H	2.21	0.41
28:DF:102:LEU:O	28:DF:107:VAL:HB	2.20	0.41
28:BF:116:LEU:CG	28:BF:176:PHE:HA	2.46	0.41
8:AI:52:GLU:N	8:AI:56:MET:HG2	2.35	0.41
51:B4:7:VAL:HB	51:B4:35:GLN:NE2	2.36	0.41
39:BR:18:GLN:N	39:BR:18:GLN:CD	2.74	0.41
52:BI:107:GLU:O	52:BI:110:GLN:HB2	2.21	0.41
38:DQ:46:TYR:HB2	39:DR:78:ARG:O	2.22	0.41
33:BL:40:SER:C	33:BL:41:ARG:HE	2.23	0.41
11:CL:98:ARG:HD2	11:CL:104:SER:O	2.21	0.41
26:DD:59:ARG:HE	26:DD:63:PRO:HB2	1.85	0.41
21:AU:24:LYS:O	21:AU:26:GLY:N	2.54	0.41
23:BB:1275:A:H2	23:BB:1645:G:H21	1.64	0.41
23:BB:506:G:H4'	23:BB:509:C:O2	2.21	0.41
38:BQ:50:ARG:O	38:BQ:53:LYS:HD3	2.21	0.41
2:AC:38:VAL:CG2	2:AC:39:ARG:N	2.84	0.41
29:DG:120:ILE:HG23	29:DG:133:LYS:C	2.41	0.41
30:BH:41:LYS:N	30:BH:41:LYS:HD2	2.20	0.41
23:BB:1010:A:N3	23:BB:1153:C:H1'	2.36	0.41
38:BQ:78:PHE:CZ	38:BQ:82:LEU:HD11	2.56	0.41
3:CD:187:ARG:HH12	3:CD:191:SER:CA	2.30	0.41
43:DW:5:ALA:C	43:DW:7:GLY:H	2.25	0.41
1:AA:1057:G:O2'	1:AA:1058:G:H5'	2.20	0.41
1:CA:500:G:H2'	1:CA:501:C:C6	2.56	0.41
20:AB:91:VAL:HG11	20:AB:95:TRP:CD1	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:951:G:H1'	1:AA:970:C:O2'	2.22	0.41
23:DB:1446:C:H2'	23:DB:1447:C:C6	2.56	0.41
2:AC:181:ILE:HG22	2:AC:182:ASP:N	2.35	0.41
1:CA:1499:A:H1'	1:CA:1520:C:H5'	2.03	0.41
32:DK:16:ALA:O	32:DK:17:ARG:O	2.38	0.41
32:DK:47:ILE:O	32:DK:48:PRO:C	2.59	0.41
23:DB:2650:U:H2'	23:DB:2651:C:H6	1.83	0.41
23:BB:985:C:H2'	23:BB:986:C:H6	1.86	0.41
45:BY:28:LEU:N	45:BY:28:LEU:HD12	2.36	0.41
23:BB:527:C:H5'	23:BB:2779:U:H3	1.86	0.41
23:BB:567:U:H2'	23:BB:568:U:O4'	2.20	0.41
11:CL:36:VAL:HA	11:CL:52:CYS:CB	2.51	0.41
27:DE:21:ARG:HH12	27:DE:23:PHE:HB3	1.86	0.41
38:BQ:103:VAL:HG23	38:BQ:104:ALA:N	2.35	0.41
50:D3:60:CYS:O	50:D3:61:LEU:C	2.59	0.41
1:CA:399:G:H2'	1:CA:400:C:H6	1.84	0.41
23:DB:1779:U:C5	23:DB:1784:A:N7	2.86	0.41
3:CD:28:ASP:CB	3:CD:33:ILE:HD12	2.50	0.41
1:CA:1333:A:H2'	1:CA:1334:G:O4'	2.21	0.41
35:BN:57:THR:CB	35:BN:61:ALA:HB3	2.51	0.41
23:DB:1537:G:H2'	23:DB:1538:G:O4'	2.20	0.41
23:DB:104:A:H2'	23:DB:105:C:C6	2.54	0.41
23:DB:2246:G:H2'	23:DB:2247:A:H8	1.81	0.41
23:DB:2700:A:H2'	23:DB:2701:U:C6	2.56	0.41
1:AA:1487:G:O2'	1:AA:1488:G:H5'	2.21	0.41
47:B0:16:ARG:O	47:B0:19:ASP:HB2	2.21	0.41
1:CA:633:G:H2'	1:CA:634:C:H6	1.84	0.41
6:AG:101:ARG:HB3	6:AG:105:GLU:OE2	2.20	0.41
23:DB:2300:C:H2'	23:DB:2301:C:H6	1.85	0.41
23:DB:941:A:H2'	23:DB:942:G:C8	2.56	0.41
23:DB:1561:C:O2'	23:DB:1562:U:H5'	2.21	0.41
23:DB:678:C:H2'	23:DB:679:C:H6	1.86	0.41
9:CJ:68:ARG:HB3	9:CJ:68:ARG:CZ	2.50	0.41
3:CD:44:LYS:HZ2	3:CD:46:ARG:HA	1.86	0.41
23:BB:2545:G:N3	23:BB:2565:A:H2	2.19	0.41
1:CA:567:G:H2'	1:CA:568:G:O4'	2.21	0.41
1:AA:154:U:H2'	1:AA:155:A:C8	2.56	0.41
23:BB:2520:C:C6	23:BB:2567:G:H1'	2.56	0.41
2:AC:40:GLN:CD	2:AC:44:LYS:HD2	2.42	0.41
1:CA:542:G:O2'	1:CA:543:U:H5'	2.20	0.41
3:AD:48:SER:OG	3:AD:49:ASP:N	2.52	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:605:U:H2'	1:CA:606:G:C8	2.56	0.41
23:DB:1403:A:H2'	23:DB:1404:C:C6	2.56	0.41
23:DB:1965:C:H5''	23:DB:1966:A:H2'	2.03	0.41
1:AA:291:U:O2'	1:AA:292:G:H5'	2.21	0.41
7:AH:75:GLN:O	7:AH:126:CYS:HB2	2.21	0.41
23:DB:1792:G:O2'	23:DB:1793:C:H5'	2.21	0.41
23:DB:516:C:O2'	23:DB:517:C:H5'	2.21	0.41
23:DB:1539:U:H2'	23:DB:1540:G:C8	2.56	0.41
5:AF:44:ARG:HA	5:AF:57:ALA:O	2.21	0.41
52:DI:70:THR:O	52:DI:70:THR:CG2	2.68	0.41
29:BG:49:LEU:N	29:BG:49:LEU:HD12	2.36	0.41
23:DB:1114:C:H2'	23:DB:1115:G:O4'	2.21	0.41
23:DB:1498:C:H2'	23:DB:1499:C:C6	2.56	0.41
38:BQ:97:ILE:HA	38:BQ:100:PHE:CE2	2.56	0.40
51:D4:1:MET:HG3	51:D4:2:LYS:CD	2.51	0.40
23:DB:1205:A:C1'	23:DB:1206:G:P	3.09	0.40
23:BB:1812:U:H2'	23:BB:1813:G:C8	2.56	0.40
25:BC:114:GLN:HB2	25:BC:124:LYS:HZ1	1.86	0.40
23:BB:911:A:C6	34:BM:13:HIS:HB3	2.56	0.40
25:DC:162:GLN:NE2	25:DC:174:ARG:NH1	2.69	0.40
37:BP:93:LYS:HB2	37:BP:96:LEU:HD12	2.02	0.40
37:BP:94:ALA:C	37:BP:96:LEU:H	2.23	0.40
26:BD:155:VAL:HG13	26:BD:155:VAL:O	2.21	0.40
27:BE:188:MET:O	27:BE:194:LYS:NZ	2.54	0.40
27:BE:191:ASP:C	27:BE:193:VAL:H	2.22	0.40
23:DB:2636:C:H5'	26:DD:80:TRP:CZ2	2.56	0.40
26:DD:89:GLU:HG2	26:DD:93:GLY:CA	2.51	0.40
37:DP:28:LYS:HZ2	37:DP:44:GLY:H	1.69	0.40
25:BC:10:PRO:CG	25:BC:23:LEU:HD11	2.51	0.40
34:DM:5:LYS:O	34:DM:6:ARG:C	2.57	0.40
50:D3:12:ARG:HB3	50:D3:23:HIS:CB	2.51	0.40
23:DB:3:U:H2'	23:DB:4:U:H6	1.83	0.40
5:CF:3:HIS:CA	5:CF:65:GLU:HG3	2.51	0.40
23:DB:452:G:C2	23:DB:458:G:C4	3.09	0.40
38:BQ:34:ALA:C	38:BQ:38:VAL:HG12	2.42	0.40
40:BS:71:VAL:HG12	40:BS:71:VAL:O	2.21	0.40
25:DC:19:VAL:HG23	25:DC:206:LYS:NZ	2.36	0.40
35:BN:12:ARG:HD3	35:BN:20:MET:CG	2.49	0.40
26:DD:24:VAL:HG21	26:DD:193:VAL:CG1	2.51	0.40
33:BL:110:VAL:O	33:BL:126:ARG:NH2	2.53	0.40
18:AS:35:ARG:HB3	18:AS:71:GLY:HA2	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DS:51:LEU:HD12	40:DS:51:LEU:HA	1.84	0.40
28:DF:135:ILE:HD11	28:DF:138:PRO:CA	2.36	0.40
1:AA:1084:G:H2'	1:AA:1085:U:C5	2.56	0.40
1:AA:1391:U:O2'	1:AA:1392:G:H5'	2.21	0.40
1:CA:1305:G:HO2'	1:CA:1306:A:H8	1.67	0.40
32:BK:23:LYS:CG	32:BK:24:VAL:N	2.85	0.40
1:CA:1368:A:OP1	8:CI:112:ARG:NH2	2.54	0.40
52:BI:32:VAL:HG13	52:BI:66:PHE:CD2	2.55	0.40
8:AI:38:PHE:O	8:AI:39:GLY:C	2.59	0.40
25:DC:225:ASN:O	25:DC:227:VAL:HG12	2.21	0.40
32:DK:52:VAL:HG21	32:DK:86:LEU:HD13	2.01	0.40
14:CO:28:VAL:O	14:CO:32:THR:N	2.54	0.40
23:BB:2335:A:P	36:BO:9:ARG:HG3	2.61	0.40
1:AA:662:U:H2'	1:AA:663:A:H8	1.81	0.40
23:DB:1791:A:O5'	25:DC:211:ARG:NE	2.52	0.40
3:CD:8:LEU:O	3:CD:11:SER:HB2	2.20	0.40
28:BF:108:PRO:HB3	28:BF:113:PHE:CE2	2.56	0.40
8:AI:64:ILE:HG22	8:AI:65:THR:H	1.86	0.40
8:AI:83:THR:HG23	8:AI:84:ARG:N	2.35	0.40
7:AH:55:LYS:HA	7:AH:55:LYS:HE3	2.03	0.40
29:DG:7:PRO:C	29:DG:8:VAL:HG22	2.40	0.40
51:B4:25:VAL:HB	51:B4:33:HIS:C	2.39	0.40
1:AA:1269:A:H1'	1:AA:1326:U:O4'	2.20	0.40
1:CA:1314:C:H2'	1:CA:1315:U:C6	2.56	0.40
39:DR:74:ILE:C	39:DR:75:VAL:HG22	2.40	0.40
13:CN:51:PRO:HG2	13:CN:52:ARG:N	2.30	0.40
23:DB:2784:U:O2'	23:DB:2785:C:H5'	2.21	0.40
23:DB:1797:G:H2'	23:DB:1798:U:H6	1.85	0.40
42:BU:43:LYS:HZ3	42:BU:45:GLN:HG2	1.87	0.40
42:BU:62:ALA:O	42:BU:63:ALA:C	2.60	0.40
42:DU:13:LEU:HD11	42:DU:69:VAL:H	1.85	0.40
23:DB:877:A:H2'	23:DB:877:A:N3	2.36	0.40
23:DB:899:A:C2	23:DB:900:A:H1'	2.56	0.40
23:DB:900:A:H2'	23:DB:901:C:C6	2.55	0.40
8:CI:94:ARG:HH11	8:CI:98:ARG:NH1	2.18	0.40
9:AJ:15:HIS:HD2	9:AJ:18:ILE:CG2	2.31	0.40
35:BN:34:ILE:HD13	35:BN:34:ILE:H	1.83	0.40
1:CA:108:G:N3	1:CA:108:G:O4'	2.54	0.40
29:DG:3:VAL:O	29:DG:4:ALA:HB2	2.20	0.40
1:AA:812:G:OP1	1:AA:812:G:C4'	2.68	0.40
4:AE:131:ASN:ND2	4:AE:134:ASN:H	2.19	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AE:131:ASN:ND2	4:AE:134:ASN:N	2.69	0.40
1:CA:35:G:H2'	1:CA:36:C:C6	2.56	0.40
44:BX:12:GLU:HB2	44:BX:14:LEU:HD11	2.03	0.40
26:BD:187:LEU:C	26:BD:188:LEU:HD12	2.41	0.40
23:DB:1439:A:C6	23:DB:1552:A:C5	3.09	0.40
23:DB:2184:A:H2'	23:DB:2185:U:C6	2.56	0.40
1:AA:1029:U:H5''	1:AA:1030:U:C5	2.46	0.40
38:BQ:35:PHE:H	38:BQ:35:PHE:HD2	1.69	0.40
25:BC:70:LYS:HE3	25:BC:95:TYR:CD2	2.57	0.40
2:CC:2:GLN:HE21	2:CC:2:GLN:CA	2.34	0.40
23:BB:1726:C:H2'	23:BB:1727:C:C6	2.57	0.40
6:CG:68:VAL:HG12	6:CG:134:VAL:HA	2.02	0.40
23:BB:2007:U:H2'	23:BB:2008:C:C6	2.56	0.40
1:AA:1499:A:C1'	1:AA:1520:C:H5'	2.51	0.40
1:CA:1118:U:O4'	1:CA:1179:A:H1'	2.21	0.40
23:BB:2385:C:H2'	23:BB:2386:A:C8	2.56	0.40
16:AQ:7:LEU:C	16:AQ:9:GLY:H	2.24	0.40
23:DB:265:A:O2'	23:DB:266:G:H4'	2.20	0.40
23:DB:153:U:H2'	23:DB:154:U:H6	1.84	0.40
1:CA:415:A:N1	1:CA:428:G:O6	2.54	0.40
28:DF:177:ARG:CZ	28:DF:178:LYS:HA	2.51	0.40
1:AA:768:A:H4'	1:AA:1523:G:N2	2.35	0.40
41:BT:50:LEU:O	41:BT:52:GLU:N	2.54	0.40
4:AE:55:VAL:N	4:AE:56:PRO:CD	2.84	0.40
23:DB:1917:U:O2'	23:DB:1918:A:H5'	2.21	0.40
23:BB:1315:C:H2'	23:BB:1316:U:H6	1.85	0.40
23:BB:2530:A:N6	29:BG:155:PRO:HG3	2.37	0.40
1:AA:976:G:H5''	1:AA:1358:U:O2'	2.21	0.40
1:CA:1149:C:O2'	1:CA:1150:A:H5'	2.21	0.40
20:AB:15:PHE:HD1	20:AB:16:GLY:N	2.19	0.40
23:BB:2520:C:O2'	23:BB:2521:C:H5'	2.21	0.40
1:AA:28:A:H2'	1:AA:29:U:O4'	2.21	0.40
23:BB:2133:G:H2'	23:BB:2133:G:N3	2.36	0.40
23:DB:1427:A:H4'	23:DB:1428:C:O4'	2.20	0.40
1:AA:1151:A:HO2'	1:AA:1152:A:H8	1.63	0.40
15:AP:73:ALA:HB1	15:AP:77:GLU:OE2	2.21	0.40
23:DB:1501:G:O2'	23:DB:1502:A:H5'	2.20	0.40
41:DT:95:PHE:HD1	41:DT:97:GLY:N	2.19	0.40
1:CA:152:A:N6	1:CA:170:U:C2	2.89	0.40
1:AA:484:G:H4'	1:AA:485:U:H5'	2.02	0.40
23:DB:2458:G:H8	23:DB:2459:A:H62	1.68	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1830:C:H2'	23:BB:1831:G:H8	1.86	0.40
40:BS:81:SER:OG	40:BS:97:LEU:HB3	2.21	0.40
23:BB:1201:U:H2'	23:BB:1202:G:H8	1.86	0.40
11:AL:87:LYS:NZ	11:AL:87:LYS:HA	2.36	0.40
50:D3:5:THR:O	50:D3:5:THR:HG23	2.21	0.40
25:BC:77:VAL:HG23	25:BC:115:ILE:CD1	2.48	0.40
24:BV:75:GLN:C	34:BM:133:LYS:HZ3	2.25	0.40
34:BM:33:LEU:HD12	34:BM:101:VAL:HG11	2.04	0.40
24:BV:82:TYR:HB2	34:BM:36:VAL:HG12	2.01	0.40
34:BM:38:ARG:NH1	34:BM:38:ARG:HG3	2.36	0.40
34:BM:73:ILE:HD13	34:BM:90:GLU:CG	2.52	0.40
25:DC:172:THR:O	25:DC:181:ARG:O	2.39	0.40
25:DC:87:SER:O	25:DC:155:ARG:NH1	2.54	0.40
33:BL:63:LYS:CG	50:B3:11:LYS:HZ2	2.34	0.40
23:BB:826:U:H2'	23:BB:828:U:O4'	2.21	0.40
23:BB:2845:U:H4'	37:BP:54:LEU:CD2	2.50	0.40
23:DB:997:G:OP1	38:DQ:92:LYS:HB3	2.20	0.40
27:BE:120:VAL:N	27:BE:189:THR:HG23	2.26	0.40
26:DD:107:VAL:HG23	26:DD:175:LEU:O	2.20	0.40
26:DD:4:LEU:HD22	26:DD:51:THR:HB	2.02	0.40
37:DP:42:PHE:O	37:DP:43:GLU:HG2	2.21	0.40
25:BC:10:PRO:O	25:BC:21:PRO:HD2	2.21	0.40
23:DB:1021:A:N6	23:DB:1142:A:N6	2.63	0.40
43:BW:44:PHE:HD1	43:BW:44:PHE:O	2.04	0.40
43:BW:31:LEU:CD1	43:BW:66:VAL:HG23	2.51	0.40
23:DB:927:A:H2'	23:DB:928:A:C8	2.56	0.40
31:DJ:120:ARG:HB3	31:DJ:121:LYS:NZ	2.34	0.40
32:BK:119:ALA:O	32:BK:121:GLU:N	2.53	0.40
43:DW:41:GLY:HA2	43:DW:65:LYS:HB3	2.02	0.40
33:BL:120:VAL:HG11	33:BL:135:ILE:HG22	2.03	0.40
31:BJ:66:GLY:C	31:BJ:68:LYS:H	2.25	0.40
1:CA:358:U:H2'	1:CA:359:G:C8	2.56	0.40
42:BU:73:ASN:HB2	42:BU:96:LYS:HZ3	1.83	0.40
1:CA:1250:A:H5''	8:CI:68:GLY:HA2	2.03	0.40
23:BB:468:G:H5''	27:BE:55:SER:O	2.22	0.40
1:AA:980:C:H2'	1:AA:981:U:H5'	2.03	0.40
39:DR:81:LYS:O	39:DR:82:HIS:C	2.59	0.40
5:CF:84:VAL:HG22	5:CF:85:ILE:N	2.36	0.40
6:AG:112:ASP:H	6:AG:118:ARG:HD3	1.86	0.40
34:DM:33:LEU:HD12	34:DM:101:VAL:HG21	2.03	0.40
26:DD:150:GLN:O	26:DD:152:PRO:CD	2.68	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:26:G:H2'	23:DB:27:G:N9	2.36	0.40
23:DB:2529:G:C4'	29:DG:175:LYS:HD3	2.52	0.40
26:DD:122:VAL:HA	26:DD:128:ARG:CD	2.51	0.40
8:AI:49:GLN:HB3	8:AI:50:PRO:CD	2.51	0.40
26:BD:46:ARG:HD2	26:BD:80:TRP:CE2	2.56	0.40
34:DM:119:LEU:CD2	34:DM:119:LEU:H	2.32	0.40
23:BB:2813:A:O2'	23:BB:2814:A:H5'	2.21	0.40
26:BD:60:VAL:HB	26:BD:63:PRO:CG	2.47	0.40
29:DG:36:LEU:HD22	29:DG:40:VAL:CG1	2.51	0.40
33:DL:84:LYS:HG2	33:DL:84:LYS:O	2.22	0.40
3:AD:36:ALA:O	3:AD:38:GLY:N	2.54	0.40
33:BL:38:GLN:HA	33:BL:41:ARG:NH1	2.36	0.40
1:CA:918:A:H2'	1:CA:919:A:H8	1.82	0.40
4:CE:131:ASN:C	4:CE:135:VAL:HG23	2.41	0.40
1:AA:974:A:H8	1:AA:974:A:OP1	2.04	0.40
16:AQ:59:GLU:N	16:AQ:74:LEU:HD23	2.34	0.40
23:BB:1566:A:C6	25:BC:213:ARG:CZ	3.05	0.40
41:BT:88:LYS:CG	41:BT:89:GLU:H	2.20	0.40
8:AI:107:ALA:O	8:AI:109:GLN:HG2	2.21	0.40
5:AF:7:VAL:O	5:AF:7:VAL:HG13	2.21	0.40
18:CS:30:LEU:HB2	18:CS:48:ILE:HG12	2.03	0.40
11:AL:35:ARG:HH21	11:AL:75:GLU:HB3	1.78	0.40
23:BB:2350:C:OP2	50:B3:41:ARG:HD2	2.21	0.40
1:CA:1510:C:H2'	1:CA:1511:G:H8	1.86	0.40
1:AA:438:U:H2'	1:AA:494:G:O6	2.21	0.40
23:BB:1278:C:H2'	23:BB:1279:G:C8	2.57	0.40
24:BV:33:GLY:C	24:BV:35:GLU:H	2.25	0.40
1:AA:812:G:O2'	1:AA:813:U:H6	2.04	0.40
19:CT:69:ASN:H	19:CT:69:ASN:HD22	1.66	0.40
15:AP:6:LEU:HD21	15:AP:74:LEU:HD11	2.02	0.40
12:AM:77:LYS:O	12:AM:81:ASP:N	2.44	0.40
3:AD:99:ASN:CB	3:AD:103:ARG:HH21	2.34	0.40
1:CA:1316:G:N2	1:CA:1318:A:H3'	2.36	0.40
23:DB:2472:G:O6	23:DB:2476:A:H4'	2.22	0.40
14:CO:88:ARG:NH2	23:DB:715:A:H5''	2.36	0.40
52:DI:59:THR:O	52:DI:59:THR:CG2	2.69	0.40
42:DU:99:SER:O	42:DU:100:GLU:HG2	2.21	0.40
23:BB:2649:C:H2'	23:BB:2650:U:C6	2.56	0.40
50:D3:28:LEU:CD1	50:D3:33:THR:HG21	2.50	0.40
23:DB:2135:A:C2	23:DB:2136:G:C8	3.09	0.40
47:B0:12:ARG:C	47:B0:14:MET:N	2.74	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:547:A:H4'	1:CA:548:G:O5'	2.22	0.40
12:AM:100:ARG:HH11	12:AM:103:THR:HB	1.86	0.40
23:DB:240:C:N4	23:DB:241:A:C6	2.90	0.40
1:CA:806:C:O2'	1:CA:807:A:H5'	2.21	0.40
7:CH:85:TYR:N	7:CH:85:TYR:CD1	2.89	0.40
23:DB:2645:G:H4'	23:DB:2646:C:OP2	2.22	0.40
23:DB:1220:G:H2'	23:DB:1221:C:C6	2.56	0.40
23:BB:2077:A:O2'	23:BB:2078:C:H5'	2.22	0.40
34:DM:81:ARG:HB2	34:DM:81:ARG:HH11	1.87	0.40
6:AG:53:SER:OG	6:AG:54:GLY:N	2.53	0.40
3:CD:56:GLU:HG2	3:CD:198:LEU:HD13	2.03	0.40
23:DB:664:G:O2'	23:DB:665:U:H5'	2.21	0.40
15:CP:32:PHE:HD1	15:CP:32:PHE:C	2.24	0.40
23:BB:1330:C:H2'	23:BB:1331:G:H8	1.86	0.40
33:DL:50:PHE:O	33:DL:51:GLU:C	2.59	0.40
23:BB:1231:U:H2'	23:BB:1232:G:C8	2.56	0.40
1:AA:529:G:H22	11:AL:47:ALA:HB2	1.85	0.40
23:DB:1708:C:O2'	23:DB:1709:U:H5'	2.22	0.40
4:CE:148:SER:O	4:CE:151:MET:HB2	2.21	0.40
1:AA:1311:A:H2'	1:AA:1312:G:O4'	2.21	0.40
1:AA:219:U:H2'	1:AA:220:G:H8	1.85	0.40
1:CA:635:A:H2'	1:CA:636:U:C6	2.56	0.40
15:CP:56:ARG:O	15:CP:59:HIS:HB3	2.22	0.40
28:DF:62:GLN:HB3	28:DF:63:LYS:H	1.68	0.40
23:DB:2876:G:H5''	37:DP:2:ASN:HA	2.03	0.40
3:CD:37:PRO:CD	3:CD:41:GLY:HA3	2.51	0.40
23:BB:1918:A:H1'	23:BB:1919:A:N7	2.37	0.40
23:DB:2758:A:O2'	23:DB:2759:G:H5'	2.21	0.40
7:CH:21:LYS:O	7:CH:62:LEU:HD22	2.21	0.40
23:BB:573:U:H5'	54:BB:3434:HOH:O	2.20	0.40
2:CC:194:VAL:HG12	2:CC:195:ILE:N	2.36	0.40
1:CA:1261:A:N3	1:CA:1261:A:H2'	2.36	0.40
23:BB:2884:U:H2'	23:BB:2885:G:H8	1.86	0.40
1:AA:1401:G:H2'	1:AA:1402:C:O4'	2.21	0.40
23:BB:2737:G:H2'	23:BB:2738:A:O4'	2.21	0.40
23:BB:1322:A:H2'	23:BB:1323:C:H5'	2.03	0.40
1:CA:987:G:H2'	1:CA:988:G:C8	2.55	0.40
23:BB:1597:A:H5''	23:BB:1598:A:H5'	2.03	0.40
23:DB:426:C:H2'	23:DB:427:U:C6	2.56	0.40
8:AI:126:PHE:O	8:AI:128:LYS:N	2.54	0.40
23:BB:2492:U:O2'	23:BB:2493:U:H5'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:495:A:H4'	1:AA:496:A:O5'	2.21	0.40
23:DB:2194:U:O2'	23:DB:2195:U:H5'	2.20	0.40
23:BB:2033:A:H1'	23:BB:2035:G:OP2	2.20	0.40
38:DQ:77:LYS:O	38:DQ:80:ASN:HB3	2.20	0.40
1:CA:1113:C:O2'	1:CA:1114:C:H5'	2.21	0.40
30:BH:45:GLU:HA	30:BH:45:GLU:OE1	2.21	0.40
23:BB:944:C:O2	23:BB:944:C:H2'	2.21	0.40
23:DB:192:C:C2'	23:DB:193:U:H5'	2.51	0.40
23:DB:192:C:H2'	23:DB:193:U:H5'	2.04	0.40
23:BB:1030:C:O2'	23:BB:1031:G:H5'	2.21	0.40
25:BC:113:ASP:O	25:BC:115:ILE:HD12	2.21	0.40
24:BV:77:VAL:CA	24:BV:89:ILE:HG22	2.42	0.40
25:DC:125:PRO:HA	25:DC:192:GLY:HA2	2.02	0.40
50:B3:22:LYS:O	50:B3:23:HIS:O	2.39	0.40
23:BB:2683:C:O2'	23:BB:2684:U:H5'	2.21	0.40
37:BP:19:PHE:O	37:BP:20:ARG:HB2	2.21	0.40
23:BB:1656:C:P	26:BD:141:ARG:HD3	2.61	0.40
48:D1:44:GLN:HB2	48:D1:44:GLN:HE21	1.66	0.40
38:DQ:97:ILE:CD1	39:DR:13:ARG:HH21	2.34	0.40
39:DR:52:PRO:O	39:DR:53:PHE:C	2.59	0.40
26:DD:164:GLN:HG3	26:DD:164:GLN:H	1.65	0.40
26:DD:196:ALA:O	26:DD:197:THR:C	2.60	0.40
26:DD:29:VAL:CG2	26:DD:30:GLU:H	2.24	0.40
33:DL:123:ARG:CB	33:DL:142:ILE:H	2.33	0.40
45:BY:9:THR:HG23	45:BY:10:ARG:H	1.86	0.40
23:DB:671:C:HO2'	27:DE:85:PHE:HZ	1.64	0.40
30:DH:83:LYS:O	30:DH:90:LEU:HA	2.22	0.40
47:B0:49:ARG:O	47:B0:49:ARG:HG2	2.21	0.40
35:BN:29:VAL:CG2	35:BN:75:ILE:HD11	2.44	0.40
23:DB:951:C:O2'	23:DB:952:G:H5'	2.21	0.40
43:DW:59:PHE:CD1	43:DW:59:PHE:N	2.87	0.40
43:DW:43:LYS:HB3	43:DW:78:PHE:HB2	2.03	0.40
25:DC:19:VAL:CG1	25:DC:20:ASN:N	2.85	0.40
29:BG:71:LEU:HD12	29:BG:74:MET:HE3	2.02	0.40
31:BJ:103:ILE:HD11	31:BJ:124:VAL:HG21	2.03	0.40
25:DC:44:ASN:HA	25:DC:48:ILE:O	2.22	0.40
23:DB:396:G:O2'	23:DB:397:U:H5'	2.21	0.40
41:DT:21:SER:HA	41:DT:24:MET:SD	2.61	0.40
40:DS:24:ILE:HD12	40:DS:35:ILE:HG21	2.03	0.40
42:DU:71:ILE:HG12	42:DU:72:PHE:N	2.37	0.40
42:BU:11:ILE:HB	42:BU:69:VAL:CG1	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DR:21:ARG:O	39:DR:22:LEU:O	2.40	0.40
49:B2:42:LEU:CG	49:B2:43:THR:N	2.85	0.40
23:BB:670:A:H3'	33:BL:47:ARG:HD3	2.02	0.40
33:BL:29:LYS:O	33:BL:36:LYS:NZ	2.54	0.40
10:CK:19:VAL:N	10:CK:34:THR:O	2.47	0.40
36:BO:26:LEU:O	36:BO:27:VAL:HB	2.22	0.40
39:DR:96:VAL:HG13	39:DR:98:ILE:HG12	2.03	0.40
23:DB:1790:C:OP2	25:DC:219:VAL:HB	2.21	0.40
8:AI:57:VAL:C	8:AI:59:LYS:H	2.25	0.40
23:BB:2636:C:H4'	26:BD:80:TRP:CE3	2.57	0.40
23:DB:2484:G:H21	34:DM:118:LYS:HG2	1.86	0.40
23:DB:812:C:H5''	23:DB:1250:G:O2'	2.21	0.40
23:BB:7:G:H1'	31:BJ:135:GLN:NE2	2.32	0.40
23:DB:1309:G:C5'	49:D2:7:PRO:HB2	2.50	0.40
11:AL:58:ASN:H	11:AL:58:ASN:HD22	1.67	0.40
14:AO:25:GLU:HA	14:AO:80:LEU:CD1	2.52	0.40
30:BH:6:LEU:H	30:BH:16:GLY:CA	2.34	0.40
1:AA:35:G:H2'	1:AA:36:C:H6	1.86	0.40
4:CE:93:VAL:HG12	4:CE:94:PHE:N	2.36	0.40
19:AT:57:VAL:HG12	19:AT:57:VAL:O	2.21	0.40
16:AQ:10:ARG:HD3	16:AQ:55:GLY:H	1.87	0.40
23:DB:125:A:OP2	49:D2:19:ARG:NE	2.53	0.40
24:DV:52:ALA:O	34:DM:133:LYS:HG2	2.21	0.40
23:DB:1841:U:C2	23:DB:1842:G:C8	3.10	0.40
5:CF:11:HIS:CD2	5:CF:13:ASP:HB3	2.56	0.40
41:DT:11:LEU:HB2	41:DT:12:ARG:H	1.55	0.40
23:BB:482:A:N6	23:BB:506:G:H1'	2.37	0.40
23:BB:507:A:OP1	23:BB:508:A:N7	2.55	0.40
20:AB:9:LEU:H	20:AB:9:LEU:CD1	2.33	0.40
1:CA:1510:C:H2'	1:CA:1511:G:C8	2.57	0.40
23:BB:1278:C:H2'	23:BB:1279:G:H8	1.86	0.40
16:CQ:26:ARG:HH21	16:CQ:39:ARG:HG2	1.86	0.40
10:AK:52:ARG:HB3	10:AK:53:GLY:H	1.65	0.40
6:AG:29:LEU:HD12	6:AG:104:VAL:HG13	2.04	0.40
1:CA:411:A:C4	1:CA:413:G:H1'	2.56	0.40
28:DF:26:GLN:HG2	28:DF:26:GLN:O	2.20	0.40
26:DD:23:PRO:HB3	26:DD:188:LEU:HG	2.04	0.40
1:AA:70:U:H1'	1:AA:71:A:N7	2.36	0.40
33:BL:71:ALA:O	33:BL:72:ALA:C	2.59	0.40
29:BG:58:ALA:C	29:BG:60:GLY:H	2.25	0.40
23:BB:956:G:C1'	34:BM:81:ARG:HH22	2.33	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1074:G:O2'	1:AA:1075:U:H5'	2.21	0.40
20:CB:27:LYS:CB	20:CB:28:PRO:HD3	2.44	0.40
1:AA:17:U:H1'	1:AA:1080:A:N3	2.36	0.40
50:D3:56:LEU:HD12	50:D3:56:LEU:C	2.42	0.40
25:BC:95:TYR:HB2	25:BC:99:GLU:HB3	2.03	0.40
1:AA:657:U:O2'	1:AA:658:C:H5'	2.21	0.40
23:DB:523:C:H2'	23:DB:524:G:H8	1.87	0.40
4:AE:95:MET:CE	4:AE:114:LEU:HD11	2.51	0.40
23:DB:338:G:H2'	23:DB:338:G:N3	2.36	0.40
23:DB:616:A:H3'	23:DB:617:G:C8	2.50	0.40
23:DB:2648:G:H2'	23:DB:2649:C:H6	1.85	0.40
1:AA:1468:A:O2'	1:AA:1469:C:H5'	2.20	0.40
23:BB:278:A:C2'	23:BB:278:A:N3	2.84	0.40
23:DB:79:C:O2'	23:DB:346:A:C8	2.74	0.40
23:DB:444:C:H2'	23:DB:445:C:C6	2.56	0.40
1:AA:676:A:O2'	1:AA:677:U:H5'	2.21	0.40
42:DU:46:LYS:CB	42:DU:53:GLN:HB2	2.51	0.40
23:DB:2705:A:H2'	23:DB:2706:A:O4'	2.21	0.40
23:DB:2558:C:O2'	23:DB:2559:C:H5'	2.22	0.40
23:BB:710:U:H2'	23:BB:711:G:C8	2.56	0.40
28:BF:164:GLU:O	28:BF:168:LEU:HD21	2.21	0.40
28:BF:165:GLY:HA2	28:BF:168:LEU:CD2	2.51	0.40
1:AA:167:A:H2'	1:AA:168:G:H8	1.86	0.40
1:AA:1036:A:N3	1:AA:1036:A:H2'	2.36	0.40
52:DI:102:ARG:HG3	52:DI:141:ASP:CA	2.51	0.40
4:CE:24:VAL:HG23	4:CE:26:GLY:H	1.86	0.40
23:BB:1537:G:H2'	23:BB:1538:G:O4'	2.21	0.40
49:B2:11:LYS:HE2	49:B2:11:LYS:HB3	1.85	0.40
48:B1:8:ILE:HG21	48:B1:27:ARG:HH21	1.86	0.40
7:CH:23:ALA:HB1	7:CH:60:LEU:O	2.21	0.40
23:DB:2653:U:H3'	23:DB:2654:A:H2'	2.03	0.40
52:DI:140:GLU:HG2	52:DI:140:GLU:O	2.22	0.40
1:CA:321:A:H2'	1:CA:322:C:H6	1.87	0.40
23:DB:1292:G:H2'	23:DB:1293:C:H6	1.84	0.40
1:CA:1176:A:H3'	1:CA:1177:G:H8	1.86	0.40
23:BB:852:U:H2'	23:BB:853:C:H6	1.83	0.40
33:DL:47:ARG:HE	33:DL:47:ARG:HB3	1.56	0.40
7:AH:76:ARG:NH1	7:AH:76:ARG:HG3	2.36	0.40
10:CK:116:PRO:C	10:CK:118:ASN:H	2.24	0.40
1:AA:612:C:H2'	1:AA:613:C:C6	2.55	0.40
20:CB:132:GLU:HA	20:CB:135:MET:CE	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BP:104:GLY:O	37:BP:105:LYS:HB3	2.22	0.40
28:BF:18:GLU:O	28:BF:19:PHE:HB3	2.20	0.40
1:CA:1248:A:H2	8:CI:71:ILE:HD11	1.85	0.40
23:DB:1027:A:C2	23:DB:2488:G:H5''	2.56	0.40
1:AA:425:G:O2'	1:AA:426:U:H5'	2.21	0.40
26:BD:181:ASP:OD2	26:BD:186:LEU:HD23	2.21	0.40
22:BA:76:G:H2'	22:BA:77:U:C6	2.56	0.40
23:BB:2083:G:H2'	23:BB:2084:C:H6	1.86	0.40
37:DP:56:SER:HA	37:DP:58:PHE:HE2	1.87	0.40
23:BB:2316:G:H2'	23:BB:2317:A:C8	2.56	0.40
7:CH:112:ASP:CG	7:CH:113:ARG:H	2.24	0.40
29:DG:141:GLY:O	29:DG:144:ALA:HB3	2.22	0.40
23:DB:1396:U:O2	23:DB:1396:U:H5'	2.21	0.40
1:CA:896:C:O2'	1:CA:897:C:H5'	2.21	0.40
23:DB:1145:C:O2'	23:DB:1146:C:H5'	2.21	0.40
1:AA:749:A:O2'	1:AA:750:C:H5'	2.22	0.40
9:CJ:28:THR:CG2	9:CJ:86:ALA:HB1	2.51	0.40
23:DB:1891:G:H2'	23:DB:1892:C:H6	1.86	0.40
23:DB:2737:G:H2'	23:DB:2738:A:O4'	2.21	0.40
23:BB:197:A:N6	23:BB:2430:A:H2'	2.36	0.40
22:DA:19:C:O2'	22:DA:20:G:H5'	2.21	0.40
27:DE:38:GLY:CA	27:DE:93:SER:HB3	2.51	0.40
23:DB:1658:C:OP1	26:DD:136:ASN:ND2	2.54	0.40
7:CH:4:ASP:HB2	7:CH:80:PRO:HG3	2.04	0.40
9:CJ:98:VAL:O	9:CJ:98:VAL:HG23	2.21	0.40
28:DF:126:ASN:N	28:DF:126:ASN:OD1	2.54	0.40
1:CA:521:G:OP1	11:CL:69:GLU:HB3	2.20	0.40
25:BC:132:ARG:HH22	3:CD:159:GLU:HB3	1.85	0.40
23:DB:199:A:N6	23:DB:2433:A:H2'	2.37	0.40
51:D4:18:LYS:O	51:D4:19:ARG:HG3	2.22	0.40
51:D4:30:GLU:CG	51:D4:33:HIS:HB2	2.52	0.40
23:BB:958:U:O4	34:BM:18:ARG:HB2	2.21	0.40
24:BV:62:THR:HG22	24:BV:71:LYS:HG2	2.02	0.40
24:BV:63:ILE:HD12	24:BV:72:VAL:HG11	2.04	0.40
23:BB:189:G:P	46:BZ:12:ILE:HG21	2.61	0.40
46:BZ:12:ILE:O	46:BZ:12:ILE:HD12	2.22	0.40
46:BZ:63:ARG:HH22	46:BZ:66:ILE:HD11	1.87	0.40
26:BD:13:ARG:NH2	37:BP:12:MET:SD	2.95	0.40
37:BP:111:GLU:H	37:BP:111:GLU:HG3	1.61	0.40
32:DK:68:GLY:HA2	32:DK:78:ARG:HA	2.02	0.40
37:DP:47:ILE:HG21	37:DP:49:ILE:HG13	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DH:12:LEU:C	30:DH:12:LEU:HD23	2.42	0.40
45:DY:1:ALA:C	45:DY:43:ILE:HB	2.42	0.40
36:DO:92:PHE:CE2	36:DO:94:ARG:HA	2.57	0.40
32:BK:60:ALA:HA	32:BK:87:LEU:CG	2.51	0.40
47:B0:35:GLU:C	47:B0:37:HIS:N	2.72	0.40
47:B0:47:TYR:HA	47:B0:52:LYS:HB2	2.03	0.40
35:BN:32:GLU:HG2	35:BN:114:GLU:HG3	2.04	0.40
38:BQ:16:ILE:C	38:BQ:18:LYS:N	2.75	0.40
38:BQ:33:VAL:CG1	38:BQ:34:ALA:N	2.78	0.40
23:DB:856:G:H2'	23:DB:857:G:C8	2.56	0.40
43:DW:47:GLY:HA2	43:DW:71:LYS:HB3	2.04	0.40
43:DW:67:LYS:CD	43:DW:71:LYS:H	2.35	0.40
43:DW:81:ILE:HG23	43:DW:83:ALA:N	2.28	0.40
29:BG:26:LYS:HG2	29:BG:31:GLU:CD	2.42	0.40
26:BD:152:PRO:C	26:BD:153:GLY:O	2.59	0.40
23:DB:631:A:O2'	33:DL:66:PHE:HB3	2.21	0.40
31:BJ:128:ASN:ND2	31:BJ:129:GLU:H	2.19	0.40
31:BJ:56:VAL:HB	31:BJ:124:VAL:HA	2.03	0.40
23:BB:2057:G:O4'	47:B0:2:VAL:HG11	2.22	0.40
25:DC:53:ILE:HG23	25:DC:216:ARG:HB2	2.03	0.40
18:AS:57:VAL:HG21	18:AS:74:ALA:CB	2.51	0.40
23:BB:1059:G:O2'	52:BI:112:LYS:HE2	2.21	0.40
52:BI:75:ALA:HB3	52:BI:131:THR:HG21	2.03	0.40
52:BI:73:PRO:HA	52:BI:74:PRO:HD3	1.98	0.40
23:BB:588:U:O4	23:BB:670:A:H1'	2.22	0.40
43:BW:40:ARG:CZ	43:BW:68:PHE:O	2.69	0.40
10:CK:34:THR:HG21	10:CK:38:GLY:HA2	2.04	0.40
23:BB:1112:G:O3'	29:BG:2:ARG:HG2	2.22	0.40
32:BK:76:VAL:HG12	32:BK:77:ILE:N	2.36	0.40
20:AB:131:LYS:O	20:AB:134:LEU:HB2	2.21	0.40
8:AI:41:GLU:H	8:AI:44:ARG:CZ	2.34	0.40
3:AD:195:ASN:HB2	3:AD:198:LEU:HG	2.03	0.40
23:DB:1789:A:C5'	25:DC:220:ARG:HH21	2.34	0.40
3:CD:18:LEU:HB3	3:CD:20:LEU:HG	2.03	0.40
16:AQ:26:ARG:NH2	16:AQ:28:VAL:HG11	2.36	0.40
20:AB:37:VAL:CG2	20:AB:38:HIS:N	2.84	0.40
5:AF:29:ILE:HG23	5:AF:66:ALA:HB2	2.03	0.40
1:CA:1271:A:H2'	1:CA:1272:G:C8	2.57	0.40
1:AA:36:C:O2'	1:AA:37:U:H5'	2.20	0.40
32:DK:39:ILE:CG2	32:DK:40:LYS:N	2.84	0.40
13:CN:66:THR:CG2	13:CN:82:LYS:HD3	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2291:U:OP1	23:BB:2380:C:O2'	2.38	0.40
45:BY:15:ARG:H	45:BY:15:ARG:HE	1.63	0.40
23:DB:992:C:O2'	39:DR:91:GLN:HG2	2.21	0.40
49:D2:12:ARG:HD2	49:D2:12:ARG:HA	1.84	0.40
23:BB:1341:G:H2'	23:BB:1397:U:HO2'	1.85	0.40
25:BC:207:ALA:O	25:BC:208:GLY:C	2.59	0.40
29:BG:84:LYS:HA	29:BG:84:LYS:HZ3	1.86	0.40
17:AR:64:LEU:C	17:AR:66:LEU:N	2.74	0.40
25:BC:264:LYS:O	25:BC:266:ILE:HG23	2.21	0.40
22:DA:53:A:O2'	22:DA:54:G:H5'	2.20	0.40
48:B1:41:VAL:O	48:B1:42:VAL:HG23	2.21	0.40
8:CI:89:TYR:O	8:CI:90:ASP:HB2	2.21	0.40
27:DE:132:LYS:H	27:DE:134:LEU:CD1	2.34	0.40
10:AK:33:ILE:HG13	10:AK:73:VAL:HG21	2.01	0.40
1:CA:501:C:O2'	1:CA:502:A:H5'	2.21	0.40
10:AK:57:SER:O	10:AK:58:THR:C	2.60	0.40
23:DB:1439:A:C8	23:DB:1440:U:C6	3.10	0.40
16:AQ:30:HIS:N	16:AQ:35:LYS:H	2.19	0.40
28:DF:21:TYR:O	28:DF:22:ASN:HB2	2.21	0.40
12:CM:9:PRO:O	12:CM:44:ILE:HG12	2.21	0.40
36:BO:53:THR:O	36:BO:54:VAL:O	2.40	0.40
16:CQ:45:VAL:HG12	16:CQ:46:HIS:O	2.21	0.40
23:BB:593:U:H2'	23:BB:594:U:C6	2.57	0.40
1:CA:1279:G:N1	9:CJ:45:ARG:NH1	2.70	0.40
23:BB:215:G:O4'	23:BB:216:A:H4'	2.22	0.40
1:AA:861:G:O2'	1:AA:862:C:H5'	2.20	0.40
1:CA:598:U:H2'	1:CA:599:C:H6	1.86	0.40
23:DB:476:G:H22	23:DB:479:A:C5'	2.33	0.40
14:AO:87:ARG:C	14:AO:88:ARG:HG2	2.41	0.40
23:DB:565:C:H4'	23:DB:1253:A:C6	2.56	0.40
23:BB:364:C:O2'	23:BB:365:U:H5'	2.21	0.40
23:DB:205:G:O2'	23:DB:206:U:P	2.79	0.40
1:AA:1047:G:O2'	1:AA:1048:G:H5'	2.21	0.40
1:AA:938:A:H1'	1:AA:1376:U:O2'	2.22	0.40
7:AH:12:ARG:HD3	7:AH:26:MET:HE2	2.04	0.40
1:AA:1337:G:H5''	1:AA:1338:G:OP1	2.21	0.40
8:AI:122:ARG:HH11	8:AI:122:ARG:HG3	1.87	0.40
50:B3:19:GLY:O	50:B3:20:GLY:C	2.60	0.40
1:AA:529:G:O6	11:AL:45:ASN:HA	2.22	0.40
1:AA:130:A:O4'	16:AQ:64:ARG:HD2	2.21	0.40
34:DM:97:GLN:N	34:DM:98:PRO:HD3	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:994:A:C2	13:CN:4:SER:HA	2.56	0.40
1:AA:335:C:H4'	1:AA:1434:A:H5'	2.03	0.40
48:B1:7:LYS:HG3	48:B1:7:LYS:O	2.20	0.40
23:DB:222:A:H61	23:DB:232:G:H1'	1.85	0.40
22:BA:92:C:H2'	22:BA:93:C:H6	1.85	0.40
28:DF:157:THR:C	28:DF:159:ALA:H	2.25	0.40
1:AA:956:U:H2'	1:AA:957:U:O4'	2.22	0.40
1:CA:1067:A:H3'	1:CA:1094:G:OP1	2.21	0.40
10:AK:60:PHE:HA	10:AK:63:GLN:CD	2.42	0.40
23:BB:1684:G:H2'	23:BB:1685:C:H6	1.86	0.40
23:DB:1904:G:O2'	23:DB:1905:C:H5'	2.21	0.40
1:AA:1368:A:O2'	1:AA:1369:C:H5'	2.22	0.40
1:AA:1195:C:H2'	1:AA:1197:A:O4'	2.21	0.40
23:BB:1399:C:H2'	23:BB:1400:U:H6	1.87	0.40
23:BB:688:U:O2'	23:BB:689:A:H5'	2.22	0.40
23:DB:1183:U:O2'	23:DB:1184:U:H5'	2.22	0.40
23:DB:1747:U:H2'	23:DB:1748:C:H6	1.87	0.40
23:BB:1524:G:O2'	23:BB:1525:A:H5'	2.21	0.40
47:D0:23:ALA:C	47:D0:25:THR:H	2.24	0.40
7:CH:17:GLN:HG3	7:CH:71:VAL:HG21	2.03	0.40
23:BB:841:G:O2'	23:BB:842:U:H5'	2.22	0.40
22:DA:92:C:H2'	22:DA:93:C:C6	2.57	0.40
1:CA:658:C:O2'	1:CA:659:U:H5'	2.22	0.40
1:CA:462:G:H2'	1:CA:463:U:C6	2.56	0.40
7:CH:29:SER:O	7:CH:33:VAL:HG23	2.21	0.40
23:DB:1120:G:H2'	23:DB:1121:C:H6	1.86	0.40
23:BB:2479:U:H6	23:BB:2479:U:O5'	2.05	0.40
23:BB:359:G:C2'	23:BB:360:U:H5'	2.51	0.40
52:BI:16:MET:N	52:BI:42:ASN:OD1	2.55	0.40
23:DB:2105:U:H2'	23:DB:2106:U:C6	2.57	0.40
1:CA:224:U:H2'	1:CA:225:C:H6	1.85	0.40
1:AA:640:A:O2'	1:AA:641:U:H5'	2.22	0.40
36:DO:43:ASN:OD1	36:DO:44:GLY:N	2.54	0.40
39:BR:101:ILE:HG22	39:BR:102:SER:H	1.86	0.40
23:BB:3:U:HO2'	23:BB:4:U:H6	1.68	0.40
4:AE:51:LYS:O	4:AE:52:ALA:HB2	2.21	0.40
52:DI:69:VAL:O	52:DI:69:VAL:HG23	2.22	0.40
34:DM:96:ILE:HD12	34:DM:96:ILE:N	2.36	0.40
20:CB:123:GLY:O	20:CB:124:THR:HB	2.22	0.40
23:BB:2089:C:C2	23:BB:2090:A:C8	3.09	0.40
24:BV:79:ARG:NH1	24:BV:86:LEU:HD11	2.35	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:B3:11:LYS:HZ2	50:B3:11:LYS:HB2	1.86	0.40
37:BP:50:ARG:HD2	37:BP:62:LYS:HB2	2.03	0.40
23:BB:1132:U:C2	31:BJ:75:TYR:CE2	3.10	0.40
25:BC:139:THR:HG22	25:BC:139:THR:O	2.22	0.40
48:D1:40:PRO:HD2	48:D1:45:HIS:HA	2.02	0.40
20:AB:209:VAL:O	20:AB:213:LEU:HB2	2.21	0.40
27:BE:115:GLN:CA	27:BE:185:LYS:HE3	2.49	0.40
37:DP:62:LYS:HD3	37:DP:74:GLN:OE1	2.22	0.40
37:DP:74:GLN:O	37:DP:76:HIS:N	2.55	0.40
43:BW:48:ALA:O	43:BW:49:ASN:ND2	2.54	0.40
43:BW:76:ARG:HB3	43:BW:76:ARG:NH1	2.37	0.40
23:DB:2377:A:H2'	23:DB:2378:A:C8	2.56	0.40
10:CK:108:ASN:OD1	10:CK:110:THR:HG23	2.21	0.40
31:DJ:111:LYS:HE3	54:DJ:202:HOH:O	2.20	0.40
23:DB:589:U:H4'	27:DE:87:ALA:CB	2.44	0.40
20:AB:42:LEU:HA	20:AB:45:THR:OG1	2.21	0.40
47:B0:43:THR:O	47:B0:44:ALA:C	2.59	0.40
40:BS:2:GLU:OE1	40:BS:107:VAL:O	2.39	0.40
40:BS:34:ASP:CA	40:BS:37:THR:HG22	2.51	0.40
40:BS:1:MET:O	40:BS:3:THR:N	2.55	0.40
43:DW:30:VAL:CG1	43:DW:31:LEU:H	2.31	0.40
23:BB:2575:C:H1'	26:BD:147:GLY:O	2.21	0.40
35:BN:41:ALA:C	35:BN:43:GLU:N	2.75	0.40
27:DE:101:TYR:O	27:DE:105:LEU:HD22	2.21	0.40
27:DE:118:LEU:O	27:DE:119:ILE:HD13	2.21	0.40
23:BB:138:U:H5''	23:BB:139:U:OP1	2.21	0.40
1:AA:1217:C:H2'	1:AA:1218:C:C6	2.56	0.40
28:DF:151:LEU:HG	28:DF:153:ILE:CD1	2.52	0.40
28:DF:136:ILE:HG22	28:DF:137:PHE:N	2.37	0.40
23:DB:725:G:H2'	23:DB:726:G:C1'	2.52	0.40
25:DC:16:VAL:CG1	25:DC:16:VAL:O	2.69	0.40
42:BU:95:PHE:CD1	42:BU:102:ILE:HD12	2.56	0.40
39:DR:21:ARG:HB3	39:DR:22:LEU:H	1.79	0.40
32:BK:2:ILE:CD1	32:BK:8:LEU:HD21	2.52	0.40
28:BF:87:LYS:HB3	28:BF:88:VAL:H	1.51	0.40
4:CE:105:ILE:HD12	4:CE:123:LEU:CD2	2.51	0.40
36:BO:30:ARG:O	36:BO:31:THR:O	2.39	0.40
48:D1:49:LYS:HZ2	48:D1:50:GLU:N	2.20	0.40
8:CI:51:LEU:HD22	8:CI:56:MET:HG2	2.02	0.40
23:BB:165:A:H2'	23:BB:166:U:H6	1.87	0.40
42:DU:66:VAL:CG2	42:DU:67:SER:H	2.17	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CS:44:ILE:HG23	18:CS:63:ASP:HB2	2.03	0.40
23:BB:782:A:H2	25:BC:228:ASP:HB3	1.87	0.40
30:DH:88:GLY:O	30:DH:124:THR:HA	2.21	0.40
33:DL:27:LEU:HG	33:DL:28:GLY:O	2.21	0.40
29:BG:21:GLN:O	29:BG:36:LEU:HD13	2.21	0.40
4:AE:105:ILE:HB	4:AE:123:LEU:CA	2.42	0.40
23:DB:635:C:O2'	23:DB:639:U:H5''	2.20	0.40
39:BR:33:VAL:O	39:BR:33:VAL:HG12	2.22	0.40
23:DB:544:C:O2'	23:DB:545:U:O5'	2.39	0.40
23:DB:143:C:C2	41:DT:3:ARG:NH1	2.89	0.40
23:DB:1226:A:P	39:DR:78:ARG:HH22	2.44	0.40
23:DB:2347:C:H4'	23:DB:2347:C:OP1	2.21	0.40
4:CE:137:ARG:HH11	4:CE:137:ARG:HG2	1.87	0.40
23:BB:89:A:O2'	23:BB:90:U:H5'	2.21	0.40
23:BB:64:A:H1'	41:BT:69:ARG:HE	1.86	0.40
41:BT:70:HIS:CG	41:BT:74:ILE:HB	2.56	0.40
23:DB:2633:G:H1'	26:DD:62:LYS:CG	2.45	0.40
26:DD:45:TYR:HB3	26:DD:46:ARG:H	1.73	0.40
10:AK:87:GLY:HA2	10:AK:113:THR:HG23	2.04	0.40
1:CA:438:U:H2'	1:CA:494:G:O6	2.22	0.40
48:D1:24:LYS:O	48:D1:24:LYS:HD3	2.22	0.40
35:DN:11:ASN:HA	35:DN:11:ASN:HD22	1.68	0.40
3:CD:120:LYS:O	3:CD:121:ALA:HB2	2.22	0.40
1:CA:812:G:O2'	1:CA:813:U:C6	2.72	0.40
35:DN:8:ARG:HD3	35:DN:43:GLU:OE2	2.20	0.40
11:CL:89:LEU:N	11:CL:89:LEU:HD22	2.36	0.40
35:BN:37:THR:OG1	35:BN:40:LYS:HD2	2.22	0.40
44:DX:9:LYS:HG2	44:DX:10:SER:H	1.85	0.40
23:BB:46:G:H2'	23:BB:47:C:C6	2.57	0.40
23:DB:2257:U:C5'	43:DW:5:ALA:HB2	2.46	0.40
1:CA:1236:A:H2'	1:CA:1237:C:C6	2.57	0.40
40:DS:84:ARG:NH2	40:DS:96:ILE:HD13	2.36	0.40
29:DG:154:GLU:OE2	29:DG:159:LYS:HB2	2.22	0.40
1:CA:1031:C:H5'	1:CA:1032:G:C4	2.57	0.40
20:AB:138:ARG:HA	20:AB:141:GLU:CD	2.40	0.40
29:BG:51:PHE:HE2	29:BG:63:GLN:NE2	2.18	0.40
23:DB:2279:G:O6	43:DW:10:ARG:NH2	2.55	0.40
1:AA:1225:A:N3	1:AA:1225:A:H2'	2.37	0.40
1:CA:525:C:H2'	1:CA:526:C:C6	2.56	0.40
20:AB:73:ARG:C	20:AB:75:ALA:H	2.25	0.40
1:AA:314:C:O2'	1:AA:315:A:H5'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1212:G:O2'	23:BB:1236:G:N2	2.46	0.40
42:DU:49:PRO:CG	42:DU:50:ALA:H	2.34	0.40
23:DB:2147:A:C2'	23:DB:2147:A:N3	2.84	0.40
1:CA:1023:U:H2'	1:CA:1024:G:O4'	2.21	0.40
13:AN:65:GLN:HE21	13:AN:65:GLN:HA	1.86	0.40
1:AA:1499:A:H2'	1:AA:1500:A:H8	1.87	0.40
11:CL:51:VAL:HG12	11:CL:52:CYS:N	2.35	0.40
38:BQ:101:ASP:O	38:BQ:104:ALA:HB3	2.22	0.40
23:DB:2306:C:OP2	23:DB:2307:G:H8	2.04	0.40
1:CA:797:C:O2'	1:CA:798:U:H5'	2.21	0.40
1:AA:1202:U:H2'	1:AA:1203:C:H5'	2.02	0.40
1:CA:481:G:OP1	1:CA:481:G:H4'	2.21	0.40
1:CA:449:G:H2'	1:CA:450:G:H8	1.86	0.40
2:CC:143:LEU:HD13	2:CC:143:LEU:H	1.86	0.40
23:DB:222:A:N1	23:DB:233:A:H5''	2.37	0.40
1:AA:635:A:H2'	1:AA:636:U:C6	2.56	0.40
23:DB:1916:A:H2'	23:DB:1917:U:C6	2.57	0.40
23:BB:533:G:H5'	38:BQ:23:TYR:CE1	2.57	0.40
41:BT:34:VAL:HG11	41:BT:43:ILE:HD11	2.03	0.40
41:BT:39:THR:O	41:BT:43:ILE:HG12	2.22	0.40
1:AA:645:G:O2'	1:AA:646:G:H5'	2.22	0.40
28:DF:78:ILE:CG2	28:DF:82:TYR:HD1	2.35	0.40
1:CA:893:C:H2'	1:CA:894:G:C8	2.57	0.40
23:DB:2758:A:H2'	23:DB:2759:G:H5'	2.03	0.40
30:BH:32:PRO:O	30:BH:34:GLY:N	2.47	0.40
7:CH:94:VAL:CG2	7:CH:127:TYR:HB2	2.51	0.40
23:BB:1206:G:H2'	23:BB:1207:C:C6	2.56	0.40
1:AA:113:G:N2	1:AA:353:A:H8	2.20	0.40
1:AA:777:A:H2'	1:AA:778:G:H8	1.86	0.40
1:AA:829:G:H4'	20:AB:24:PRO:HG3	2.04	0.40
37:DP:34:GLY:O	37:DP:35:SER:HB3	2.20	0.40
1:AA:68:G:C4'	1:AA:171:A:H1'	2.51	0.40
23:BB:1765:U:O2'	23:BB:1766:G:H5'	2.21	0.40
29:BG:57:TYR:CZ	29:BG:59:ASP:HB2	2.56	0.40
38:BQ:108:LEU:HA	38:BQ:108:LEU:HD22	1.95	0.40
52:DI:70:THR:O	52:DI:70:THR:HG23	2.22	0.40
23:DB:691:C:O2'	23:DB:692:C:H5'	2.21	0.40
23:BB:259:G:H2'	23:BB:260:G:H8	1.87	0.40
23:DB:2350:C:O2'	23:DB:2351:G:H5'	2.21	0.40
22:BA:45:A:O2'	22:BA:46:A:H5'	2.21	0.40
13:AN:19:TYR:HD2	13:AN:23:ARG:HD3	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1558:C:H4'	23:BB:1559:U:H5''	2.03	0.40
1:CA:61:G:H2'	1:CA:62:U:O4'	2.21	0.40
38:BQ:12:ARG:O	38:BQ:15:LYS:HB3	2.21	0.40
12:CM:113:LYS:HD3	12:CM:113:LYS:N	2.37	0.40
1:AA:754:C:H3'	1:AA:754:C:O2	2.21	0.40
22:BA:73:A:H2'	22:BA:73:A:N3	2.36	0.40
21:CU:32:ARG:O	21:CU:32:ARG:HG2	2.21	0.40
2:CC:192:TYR:N	2:CC:192:TYR:CD2	2.89	0.40
23:DB:2584:U:H6	23:DB:2584:U:O5'	2.05	0.40
23:BB:301:G:H5'	23:BB:334:C:O2'	2.21	0.40
15:AP:34:GLU:CD	15:AP:56:ARG:HD3	2.42	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	AC	204/232 (88%)	135 (66%)	49 (24%)	20 (10%)	1	9
2	CC	204/232 (88%)	139 (68%)	45 (22%)	20 (10%)	1	9
3	AD	203/205 (99%)	131 (64%)	54 (27%)	18 (9%)	1	11
3	CD	203/205 (99%)	137 (68%)	49 (24%)	17 (8%)	1	12
4	AE	148/166 (89%)	107 (72%)	34 (23%)	7 (5%)	3	28
4	CE	148/166 (89%)	108 (73%)	31 (21%)	9 (6%)	2	19
5	AF	98/135 (73%)	69 (70%)	23 (24%)	6 (6%)	2	19
5	CF	98/135 (73%)	65 (66%)	23 (24%)	10 (10%)	1	9
6	AG	148/178 (83%)	103 (70%)	37 (25%)	8 (5%)	2	23
6	CG	150/178 (84%)	101 (67%)	36 (24%)	13 (9%)	1	11
7	AH	127/129 (98%)	105 (83%)	19 (15%)	3 (2%)	7	45

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
7	CH	127/129 (98%)	90 (71%)	31 (24%)	6 (5%)	3	28
8	AI	125/129 (97%)	87 (70%)	27 (22%)	11 (9%)	1	11
8	CI	125/129 (97%)	82 (66%)	33 (26%)	10 (8%)	1	13
9	AJ	96/103 (93%)	63 (66%)	21 (22%)	12 (12%)	0	5
9	CJ	96/103 (93%)	58 (60%)	21 (22%)	17 (18%)	0	2
10	AK	115/128 (90%)	75 (65%)	27 (24%)	13 (11%)	0	7
10	CK	115/128 (90%)	78 (68%)	27 (24%)	10 (9%)	1	11
11	AL	121/123 (98%)	74 (61%)	30 (25%)	17 (14%)	0	4
11	CL	121/123 (98%)	75 (62%)	28 (23%)	18 (15%)	0	3
12	AM	112/117 (96%)	87 (78%)	14 (12%)	11 (10%)	1	9
12	CM	111/117 (95%)	79 (71%)	17 (15%)	15 (14%)	0	4
13	AN	92/100 (92%)	59 (64%)	24 (26%)	9 (10%)	1	9
13	CN	92/100 (92%)	53 (58%)	24 (26%)	15 (16%)	0	2
14	AO	86/89 (97%)	66 (77%)	18 (21%)	2 (2%)	8	46
14	CO	86/89 (97%)	67 (78%)	16 (19%)	3 (4%)	4	36
15	AP	80/82 (98%)	59 (74%)	17 (21%)	4 (5%)	3	25
15	CP	78/82 (95%)	52 (67%)	19 (24%)	7 (9%)	1	10
16	AQ	78/83 (94%)	48 (62%)	26 (33%)	4 (5%)	2	25
16	CQ	79/83 (95%)	61 (77%)	13 (16%)	5 (6%)	2	19
17	AR	53/74 (72%)	27 (51%)	19 (36%)	7 (13%)	0	4
17	CR	53/74 (72%)	39 (74%)	11 (21%)	3 (6%)	2	22
18	AS	77/91 (85%)	57 (74%)	14 (18%)	6 (8%)	1	13
18	CS	78/91 (86%)	48 (62%)	17 (22%)	13 (17%)	0	2
19	AT	83/86 (96%)	69 (83%)	8 (10%)	6 (7%)	1	15
19	CT	83/86 (96%)	61 (74%)	16 (19%)	6 (7%)	1	15
20	AB	216/240 (90%)	145 (67%)	53 (24%)	18 (8%)	1	12
20	CB	216/240 (90%)	150 (69%)	36 (17%)	30 (14%)	0	4
21	AU	49/71 (69%)	22 (45%)	12 (24%)	15 (31%)	0	0
21	CU	49/71 (69%)	28 (57%)	15 (31%)	6 (12%)	0	6
24	BV	92/94 (98%)	62 (67%)	21 (23%)	9 (10%)	1	9
24	DV	92/94 (98%)	59 (64%)	27 (29%)	6 (6%)	1	18

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
25	BC	265/273 (97%)	103 (39%)	83 (31%)	79 (30%)	0	0
25	DC	265/273 (97%)	97 (37%)	93 (35%)	75 (28%)	0	0
26	BD	207/209 (99%)	90 (44%)	69 (33%)	48 (23%)	0	1
26	DD	207/209 (99%)	96 (46%)	67 (32%)	44 (21%)	0	1
27	BE	199/201 (99%)	98 (49%)	60 (30%)	41 (21%)	0	1
27	DE	199/201 (99%)	87 (44%)	63 (32%)	49 (25%)	0	1
28	BF	176/178 (99%)	95 (54%)	48 (27%)	33 (19%)	0	2
28	DF	176/178 (99%)	91 (52%)	53 (30%)	32 (18%)	0	2
29	BG	174/176 (99%)	118 (68%)	39 (22%)	17 (10%)	1	9
29	DG	174/176 (99%)	117 (67%)	39 (22%)	18 (10%)	1	8
30	BH	147/149 (99%)	87 (59%)	45 (31%)	15 (10%)	1	9
30	DH	147/149 (99%)	84 (57%)	44 (30%)	19 (13%)	0	5
31	BJ	138/142 (97%)	67 (49%)	42 (30%)	29 (21%)	0	1
31	DJ	138/142 (97%)	70 (51%)	36 (26%)	32 (23%)	0	1
32	BK	119/123 (97%)	71 (60%)	32 (27%)	16 (13%)	0	4
32	DK	119/123 (97%)	72 (60%)	25 (21%)	22 (18%)	0	2
33	BL	142/144 (99%)	60 (42%)	40 (28%)	42 (30%)	0	0
33	DL	142/144 (99%)	66 (46%)	37 (26%)	39 (28%)	0	0
34	BM	134/136 (98%)	69 (52%)	37 (28%)	28 (21%)	0	1
34	DM	134/136 (98%)	79 (59%)	31 (23%)	24 (18%)	0	2
35	BN	125/127 (98%)	73 (58%)	35 (28%)	17 (14%)	0	4
35	DN	125/127 (98%)	82 (66%)	32 (26%)	11 (9%)	1	11
36	BO	115/117 (98%)	64 (56%)	26 (23%)	25 (22%)	0	1
36	DO	115/117 (98%)	63 (55%)	33 (29%)	19 (16%)	0	2
37	BP	112/114 (98%)	39 (35%)	36 (32%)	37 (33%)	0	0
37	DP	112/114 (98%)	42 (38%)	38 (34%)	32 (29%)	0	0
38	BQ	115/117 (98%)	81 (70%)	22 (19%)	12 (10%)	1	8
38	DQ	115/117 (98%)	79 (69%)	22 (19%)	14 (12%)	0	6
39	BR	101/103 (98%)	44 (44%)	31 (31%)	26 (26%)	0	1
39	DR	101/103 (98%)	42 (42%)	31 (31%)	28 (28%)	0	0
40	BS	108/110 (98%)	63 (58%)	27 (25%)	18 (17%)	0	2

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
40	DS	108/110 (98%)	67 (62%)	20 (18%)	21 (19%)	0	2
41	BT	97/100 (97%)	42 (43%)	40 (41%)	15 (16%)	0	3
41	DT	97/100 (97%)	42 (43%)	32 (33%)	23 (24%)	0	1
42	BU	100/103 (97%)	33 (33%)	46 (46%)	21 (21%)	0	1
42	DU	100/103 (97%)	46 (46%)	41 (41%)	13 (13%)	0	4
43	BW	82/84 (98%)	29 (35%)	26 (32%)	27 (33%)	0	0
43	DW	82/84 (98%)	31 (38%)	30 (37%)	21 (26%)	0	1
44	BX	61/63 (97%)	28 (46%)	21 (34%)	12 (20%)	0	2
44	DX	61/63 (97%)	38 (62%)	15 (25%)	8 (13%)	0	4
45	BY	56/58 (97%)	29 (52%)	17 (30%)	10 (18%)	0	2
45	DY	56/58 (97%)	35 (62%)	17 (30%)	4 (7%)	1	16
46	BZ	68/70 (97%)	29 (43%)	26 (38%)	13 (19%)	0	2
46	DZ	68/70 (97%)	37 (54%)	22 (32%)	9 (13%)	0	4
47	B0	54/56 (96%)	30 (56%)	15 (28%)	9 (17%)	0	2
47	D0	54/56 (96%)	30 (56%)	15 (28%)	9 (17%)	0	2
48	B1	52/54 (96%)	19 (36%)	23 (44%)	10 (19%)	0	2
48	D1	52/54 (96%)	21 (40%)	22 (42%)	9 (17%)	0	2
49	B2	44/46 (96%)	23 (52%)	14 (32%)	7 (16%)	0	2
49	D2	44/46 (96%)	24 (54%)	12 (27%)	8 (18%)	0	2
50	B3	62/64 (97%)	30 (48%)	25 (40%)	7 (11%)	0	7
50	D3	62/64 (97%)	35 (56%)	17 (27%)	10 (16%)	0	2
51	B4	36/38 (95%)	18 (50%)	9 (25%)	9 (25%)	0	1
51	D4	36/38 (95%)	13 (36%)	11 (31%)	12 (33%)	0	0
52	BI	139/141 (99%)	124 (89%)	11 (8%)	4 (3%)	6	40
52	DI	139/141 (99%)	123 (88%)	11 (8%)	5 (4%)	4	35
All	All	11263/11902 (95%)	6645 (59%)	2936 (26%)	1682 (15%)	0	3

All (1682) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AC	2	GLN
2	AC	91	ALA
2	AC	153	SER

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Mol	Chain	Res	Type
3	AD	18	LEU
3	AD	31	CYS
3	AD	191	SER
5	AF	92	THR
8	AI	8	THR
8	AI	43	ALA
9	AJ	57	VAL
10	AK	56	LYS
10	AK	126	ARG
11	AL	10	PRO
11	AL	23	LEU
12	AM	6	ILE
12	AM	14	ALA
13	AN	52	ARG
20	AB	19	THR
20	AB	22	TRP
20	AB	163	ILE
20	AB	186	VAL
21	AU	14	ALA
21	AU	22	CYS
25	BC	21	PRO
25	BC	22	GLU
25	BC	28	PRO
25	BC	29	PHE
25	BC	31	PRO
25	BC	32	LEU
25	BC	47	ARG
25	BC	63	ILE
25	BC	64	VAL
25	BC	67	LYS
25	BC	68	ARG
25	BC	97	ASP
25	BC	103	ILE
25	BC	111	ALA
25	BC	114	GLN
25	BC	124	LYS
25	BC	125	PRO
25	BC	135	PRO
25	BC	141	HIS
25	BC	149	LYS
25	BC	156	SER
25	BC	176	ARG

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Mol	Chain	Res	Type
25	BC	209	ALA
25	BC	226	PRO
25	BC	227	VAL
25	BC	239	PHE
25	BC	246	PRO
25	BC	258	SER
25	BC	266	ILE
26	BD	9	VAL
26	BD	14	ILE
26	BD	18	ASP
26	BD	23	PRO
26	BD	27	ILE
26	BD	30	GLU
26	BD	33	ARG
26	BD	42	ASN
26	BD	59	ARG
26	BD	84	LEU
26	BD	92	VAL
26	BD	102	ALA
26	BD	114	LYS
26	BD	128	ARG
26	BD	130	GLN
26	BD	139	SER
26	BD	141	ARG
26	BD	154	LYS
26	BD	170	VAL
27	BE	4	VAL
27	BE	37	ALA
27	BE	44	ARG
27	BE	46	GLN
27	BE	49	ARG
27	BE	59	PRO
27	BE	84	THR
27	BE	86	ALA
27	BE	117	ARG
27	BE	129	PRO
27	BE	147	LEU
27	BE	148	ILE
27	BE	165	HIS
27	BE	196	VAL
28	BF	66	ILE
28	BF	73	VAL

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Mol	Chain	Res	Type
28	BF	76	PHE
28	BF	131	VAL
28	BF	139	GLU
28	BF	149	ARG
28	BF	173	ASP
29	BG	6	ALA
29	BG	19	ASN
29	BG	91	VAL
30	BH	29	PHE
30	BH	38	PRO
30	BH	41	LYS
31	BJ	43	GLU
31	BJ	44	TYR
31	BJ	64	VAL
31	BJ	74	TYR
31	BJ	100	VAL
31	BJ	101	ILE
31	BJ	119	PHE
32	BK	35	VAL
32	BK	46	ALA
32	BK	53	LYS
32	BK	71	ARG
32	BK	72	PRO
32	BK	85	VAL
32	BK	89	ASN
32	BK	110	GLU
32	BK	120	PRO
33	BL	40	SER
33	BL	56	PRO
33	BL	62	PRO
33	BL	68	SER
33	BL	73	ILE
33	BL	85	VAL
33	BL	90	VAL
33	BL	117	THR
33	BL	118	THR
33	BL	119	PRO
33	BL	120	VAL
33	BL	126	ARG
33	BL	127	VAL
33	BL	141	LYS
34	BM	4	PRO

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Mol	Chain	Res	Type
34	BM	14	LYS
34	BM	69	PRO
34	BM	77	PRO
34	BM	80	VAL
34	BM	98	PRO
34	BM	109	PRO
35	BN	37	THR
35	BN	89	SER
35	BN	94	TYR
35	BN	107	ASN
35	BN	113	ILE
35	BN	116	VAL
36	BO	37	ALA
36	BO	42	PRO
36	BO	54	VAL
37	BP	17	PRO
37	BP	23	ASP
37	BP	24	THR
37	BP	52	ARG
37	BP	55	HIS
37	BP	60	VAL
37	BP	72	VAL
37	BP	76	HIS
37	BP	85	VAL
37	BP	90	ALA
37	BP	94	ALA
38	BQ	34	ALA
38	BQ	91	ARG
39	BR	11	GLN
39	BR	15	SER
39	BR	17	GLY
39	BR	24	LYS
39	BR	47	VAL
39	BR	59	ILE
39	BR	74	ILE
39	BR	95	ASP
39	BR	101	ILE
40	BS	3	THR
40	BS	6	LYS
40	BS	67	ASP
40	BS	96	ILE
40	BS	103	ILE

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Mol	Chain	Res	Type
41	BT	5	GLU
41	BT	34	VAL
42	BU	24	VAL
42	BU	54	PRO
42	BU	63	ALA
42	BU	71	ILE
42	BU	92	VAL
43	BW	11	ASN
43	BW	16	GLU
43	BW	18	LYS
43	BW	32	ALA
43	BW	44	PHE
43	BW	66	VAL
43	BW	75	ASN
43	BW	81	ILE
44	BX	7	ARG
44	BX	9	LYS
44	BX	33	ALA
45	BY	9	THR
45	BY	51	SER
46	BZ	7	PRO
46	BZ	8	LYS
46	BZ	40	CYS
46	BZ	58	ASP
46	BZ	60	PHE
47	B0	10	SER
47	B0	29	VAL
47	B0	35	GLU
48	B1	46	VAL
49	B2	4	THR
49	B2	44	VAL
50	B3	15	LYS
50	B3	23	HIS
50	B3	31	ILE
50	B3	57	VAL
50	B3	60	CYS
51	B4	5	ALA
51	B4	22	VAL
51	B4	24	ARG
51	B4	29	ALA
52	BI	18	ASN
2	CC	54	ILE

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Mol	Chain	Res	Type
3	CD	22	SER
3	CD	24	VAL
3	CD	121	ALA
4	CE	23	THR
5	CF	98	GLU
6	CG	16	LYS
6	CG	62	GLU
7	CH	66	GLN
7	CH	82	LEU
9	CJ	34	ALA
9	CJ	57	VAL
9	CJ	61	ALA
9	CJ	67	ILE
11	CL	10	PRO
11	CL	32	VAL
11	CL	33	CYS
11	CL	43	LYS
11	CL	88	ASP
11	CL	101	LEU
11	CL	111	GLN
11	CL	117	GLY
11	CL	121	PRO
12	CM	105	ALA
13	CN	29	ILE
13	CN	50	LEU
14	CO	3	SER
14	CO	73	ASP
15	CP	28	ARG
16	CQ	56	ASP
18	CS	62	THR
19	CT	3	ILE
19	CT	4	LYS
20	CB	22	TRP
20	CB	72	LYS
20	CB	73	ARG
20	CB	124	THR
20	CB	206	ILE
20	CB	208	ALA
21	CU	37	TYR
25	DC	21	PRO
25	DC	22	GLU
25	DC	28	PRO

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Mol	Chain	Res	Type
25	DC	29	PHE
25	DC	31	PRO
25	DC	47	ARG
25	DC	49	THR
25	DC	63	ILE
25	DC	64	VAL
25	DC	67	LYS
25	DC	97	ASP
25	DC	106	PRO
25	DC	113	ASP
25	DC	124	LYS
25	DC	125	PRO
25	DC	135	PRO
25	DC	149	LYS
25	DC	157	ALA
25	DC	163	ILE
25	DC	176	ARG
25	DC	194	VAL
25	DC	226	PRO
25	DC	227	VAL
25	DC	246	PRO
25	DC	266	ILE
26	DD	2	ILE
26	DD	9	VAL
26	DD	34	VAL
26	DD	39	ASP
26	DD	43	ASP
26	DD	73	VAL
26	DD	82	PHE
26	DD	84	LEU
26	DD	85	ALA
26	DD	89	GLU
26	DD	129	THR
26	DD	145	SER
26	DD	152	PRO
26	DD	155	VAL
26	DD	157	LYS
26	DD	160	LYS
26	DD	168	GLU
26	DD	193	VAL
26	DD	197	THR
26	DD	205	PRO

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Mol	Chain	Res	Type
27	DE	17	THR
27	DE	35	TYR
27	DE	59	PRO
27	DE	86	ALA
27	DE	90	GLN
27	DE	147	LEU
28	DF	20	ASN
28	DF	46	LYS
28	DF	66	ILE
28	DF	73	VAL
28	DF	83	PRO
28	DF	104	THR
28	DF	132	ARG
28	DF	172	PHE
28	DF	173	ASP
28	DF	174	PHE
28	DF	176	PHE
29	DG	4	ALA
29	DG	8	VAL
29	DG	101	VAL
29	DG	175	LYS
30	DH	11	ASN
30	DH	38	PRO
30	DH	91	PHE
31	DJ	4	PHE
31	DJ	8	PRO
31	DJ	11	VAL
31	DJ	44	TYR
31	DJ	64	VAL
31	DJ	124	VAL
31	DJ	129	GLU
31	DJ	131	ASN
32	DK	17	ARG
32	DK	29	HIS
32	DK	71	ARG
32	DK	72	PRO
32	DK	120	PRO
33	DL	7	SER
33	DL	8	PRO
33	DL	9	ALA
33	DL	14	LYS
33	DL	15	ALA

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Mol	Chain	Res	Type
33	DL	17	LYS
33	DL	40	SER
33	DL	54	GLN
33	DL	72	ALA
33	DL	77	ILE
33	DL	82	LEU
33	DL	92	LEU
33	DL	103	ILE
33	DL	111	ILE
33	DL	119	PRO
33	DL	121	THR
33	DL	126	ARG
33	DL	138	ALA
34	DM	16	ARG
34	DM	65	ILE
34	DM	72	PRO
34	DM	80	VAL
34	DM	84	LYS
34	DM	86	LYS
34	DM	101	VAL
34	DM	106	ASP
34	DM	109	PRO
35	DN	5	LYS
35	DN	58	ASP
35	DN	91	ALA
36	DO	27	VAL
36	DO	54	VAL
36	DO	90	VAL
37	DP	23	ASP
37	DP	24	THR
37	DP	39	LEU
37	DP	55	HIS
37	DP	60	VAL
37	DP	72	VAL
37	DP	75	THR
37	DP	76	HIS
37	DP	77	SER
37	DP	90	ALA
37	DP	110	LYS
37	DP	111	GLU
38	DQ	30	VAL
38	DQ	73	ILE

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Mol	Chain	Res	Type
38	DQ	89	ILE
38	DQ	93	ILE
39	DR	5	PHE
39	DR	22	LEU
39	DR	27	ILE
39	DR	33	VAL
39	DR	64	VAL
39	DR	73	LYS
39	DR	75	VAL
39	DR	82	HIS
39	DR	83	TYR
39	DR	89	HIS
39	DR	93	PHE
39	DR	97	LYS
40	DS	4	ILE
40	DS	12	SER
40	DS	41	LYS
40	DS	103	ILE
41	DT	57	VAL
41	DT	62	VAL
41	DT	95	PHE
42	DU	63	ALA
42	DU	66	VAL
42	DU	75	ALA
42	DU	99	SER
43	DW	5	ALA
43	DW	10	ARG
43	DW	17	ALA
43	DW	30	VAL
43	DW	34	SER
43	DW	44	PHE
43	DW	45	HIS
43	DW	57	THR
43	DW	66	VAL
45	DY	37	ARG
46	DZ	3	LYS
46	DZ	10	GLU
46	DZ	21	VAL
46	DZ	28	VAL
47	D0	31	LYS
47	D0	35	GLU
47	D0	45	ASP

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Mol	Chain	Res	Type
48	D1	12	SER
48	D1	23	THR
48	D1	46	VAL
49	D2	18	PHE
49	D2	44	VAL
51	D4	3	VAL
51	D4	19	ARG
51	D4	24	ARG
51	D4	26	ILE
52	DI	18	ASN
2	AC	19	SER
2	AC	25	THR
2	AC	54	ILE
2	AC	81	GLU
2	AC	100	ILE
2	AC	180	ASP
3	AD	25	ARG
3	AD	107	GLY
3	AD	152	SER
3	AD	172	VAL
3	AD	192	ALA
4	AE	20	VAL
4	AE	128	GLY
5	AF	62	MET
5	AF	64	VAL
5	AF	65	GLU
6	AG	84	TYR
6	AG	129	ASN
8	AI	57	VAL
8	AI	71	ILE
8	AI	108	ARG
9	AJ	75	ASP
9	AJ	92	LEU
10	AK	50	GLY
10	AK	53	GLY
10	AK	125	LYS
11	AL	19	ASN
11	AL	72	ASN
11	AL	84	GLY
12	AM	3	ILE
12	AM	66	GLY
12	AM	104	ASN

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Mol	Chain	Res	Type
13	AN	51	PRO
13	AN	61	ASN
14	AO	73	ASP
15	AP	79	ASN
16	AQ	6	THR
16	AQ	34	GLY
17	AR	32	ILE
18	AS	5	LYS
19	AT	85	LEU
20	AB	18	GLN
21	AU	32	ARG
21	AU	34	ARG
24	BV	45	ASP
24	BV	64	VAL
24	BV	71	LYS
25	BC	53	ILE
25	BC	72	GLY
25	BC	90	ILE
25	BC	98	GLY
25	BC	107	LYS
25	BC	140	VAL
25	BC	143	VAL
25	BC	157	ALA
25	BC	163	ILE
25	BC	194	VAL
25	BC	196	ASN
25	BC	208	GLY
25	BC	255	LYS
26	BD	2	ILE
26	BD	34	VAL
26	BD	104	VAL
26	BD	129	THR
26	BD	155	VAL
26	BD	162	ALA
26	BD	180	VAL
26	BD	206	ALA
26	BD	207	VAL
27	BE	23	PHE
27	BE	52	VAL
27	BE	61	ARG
27	BE	62	GLN
27	BE	82	GLY

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Mol	Chain	Res	Type
27	BE	90	GLN
27	BE	104	ALA
27	BE	120	VAL
27	BE	128	ALA
27	BE	171	ASP
27	BE	186	VAL
28	BF	3	LEU
28	BF	7	TYR
28	BF	19	PHE
28	BF	31	GLU
28	BF	46	LYS
28	BF	57	ALA
28	BF	67	THR
28	BF	75	GLY
28	BF	122	ASP
28	BF	136	ILE
28	BF	148	VAL
28	BF	150	GLY
28	BF	153	ILE
28	BF	162	ASP
28	BF	176	PHE
29	BG	25	ILE
29	BG	151	ARG
29	BG	159	LYS
29	BG	166	GLU
30	BH	8	LYS
31	BJ	4	PHE
31	BJ	6	ALA
31	BJ	50	THR
31	BJ	73	VAL
31	BJ	81	ILE
31	BJ	83	GLY
31	BJ	130	HIS
31	BJ	137	PRO
32	BK	25	LEU
32	BK	73	ASP
33	BL	29	LYS
33	BL	34	GLY
33	BL	48	ARG
33	BL	57	LEU
33	BL	77	ILE
33	BL	95	LEU

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Mol	Chain	Res	Type
33	BL	128	THR
33	BL	140	GLY
34	BM	11	LYS
34	BM	36	VAL
34	BM	58	LYS
34	BM	86	LYS
34	BM	104	GLU
35	BN	5	LYS
35	BN	8	ARG
35	BN	11	ASN
35	BN	90	ARG
35	BN	112	TYR
36	BO	9	ARG
36	BO	21	LEU
36	BO	28	VAL
36	BO	32	PRO
36	BO	47	VAL
36	BO	49	VAL
36	BO	63	LYS
36	BO	95	SER
36	BO	115	LEU
37	BP	49	ILE
37	BP	78	PRO
37	BP	82	SER
37	BP	83	ILE
37	BP	91	VAL
37	BP	97	TYR
37	BP	102	ARG
37	BP	112	ARG
39	BR	25	LEU
39	BR	87	GLN
39	BR	97	LYS
39	BR	100	GLY
40	BS	5	ALA
40	BS	8	ARG
40	BS	29	VAL
41	BT	14	PRO
41	BT	30	ILE
41	BT	32	LEU
41	BT	63	VAL
41	BT	65	GLY
41	BT	81	LYS

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Mol	Chain	Res	Type
41	BT	85	VAL
42	BU	21	ARG
42	BU	22	GLY
42	BU	64	ILE
42	BU	77	GLY
43	BW	2	HIS
43	BW	23	LYS
43	BW	37	VAL
43	BW	42	THR
43	BW	47	GLY
43	BW	49	ASN
43	BW	50	VAL
43	BW	52	CYS
43	BW	63	ASP
43	BW	65	LYS
43	BW	67	LYS
43	BW	68	PHE
43	BW	72	GLY
44	BX	16	THR
44	BX	30	MET
44	BX	40	SER
44	BX	46	VAL
46	BZ	4	ASP
46	BZ	9	TYR
46	BZ	26	SER
46	BZ	30	HIS
46	BZ	32	LEU
46	BZ	39	LYS
47	B0	39	ARG
47	B0	51	ARG
48	B1	5	ARG
48	B1	35	LEU
49	B2	43	THR
50	B3	16	THR
51	B4	3	VAL
51	B4	17	VAL
2	CC	25	THR
2	CC	63	ILE
2	CC	95	GLY
2	CC	128	MET
2	CC	145	ALA
2	CC	153	SER

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Mol	Chain	Res	Type
3	CD	47	LEU
3	CD	49	ASP
3	CD	120	LYS
3	CD	169	TRP
3	CD	191	SER
4	CE	15	ILE
4	CE	20	VAL
5	CF	95	ALA
6	CG	97	ALA
6	CG	130	LYS
7	CH	69	ALA
7	CH	122	GLY
8	CI	34	LEU
8	CI	55	ASP
9	CJ	33	GLY
9	CJ	37	ARG
9	CJ	60	ASP
9	CJ	68	ARG
9	CJ	74	VAL
9	CJ	94	ALA
10	CK	14	GLN
10	CK	17	ASP
10	CK	52	ARG
10	CK	53	GLY
10	CK	108	ASN
11	CL	13	ARG
11	CL	24	GLU
11	CL	73	LEU
11	CL	97	VAL
11	CL	104	SER
12	CM	3	ILE
12	CM	21	ILE
12	CM	23	GLY
12	CM	62	PHE
12	CM	65	GLU
13	CN	51	PRO
13	CN	70	HIS
15	CP	46	LYS
15	CP	47	GLU
15	CP	79	ASN
16	CQ	69	THR
17	CR	21	ASP

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Mol	Chain	Res	Type
18	CS	8	PRO
18	CS	22	VAL
18	CS	27	LYS
20	CB	18	GLN
20	CB	44	LYS
20	CB	97	GLY
20	CB	153	MET
20	CB	188	THR
21	CU	22	CYS
21	CU	23	GLU
24	DV	14	LYS
24	DV	45	ASP
24	DV	70	ILE
25	DC	12	ARG
25	DC	39	SER
25	DC	53	ILE
25	DC	58	LYS
25	DC	65	ASP
25	DC	72	GLY
25	DC	88	ALA
25	DC	90	ILE
25	DC	93	VAL
25	DC	103	ILE
25	DC	115	ILE
25	DC	156	SER
25	DC	172	THR
25	DC	208	GLY
25	DC	210	ALA
25	DC	252	LYS
25	DC	257	ARG
25	DC	259	ASN
26	DD	45	TYR
26	DD	69	ALA
26	DD	77	ARG
26	DD	140	HIS
26	DD	141	ARG
26	DD	147	GLY
27	DE	5	LEU
27	DE	13	THR
27	DE	41	GLN
27	DE	42	GLY
27	DE	43	THR

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Mol	Chain	Res	Type
27	DE	56	GLY
27	DE	66	GLY
27	DE	67	ARG
27	DE	72	SER
27	DE	84	THR
27	DE	85	PHE
27	DE	135	ALA
27	DE	148	ILE
27	DE	156	ASN
27	DE	162	ARG
27	DE	192	ALA
28	DF	10	GLU
28	DF	22	ASN
28	DF	101	ARG
28	DF	122	ASP
28	DF	166	ARG
29	DG	2	ARG
29	DG	5	LYS
29	DG	59	ASP
29	DG	168	VAL
29	DG	174	LYS
30	DH	25	TYR
30	DH	29	PHE
30	DH	30	LEU
30	DH	121	VAL
31	DJ	43	GLU
31	DJ	65	THR
31	DJ	77	HIS
31	DJ	78	THR
31	DJ	81	ILE
31	DJ	128	ASN
31	DJ	135	GLN
32	DK	3	GLN
32	DK	52	VAL
32	DK	84	CYS
32	DK	85	VAL
32	DK	86	LEU
32	DK	97	THR
32	DK	110	GLU
33	DL	16	GLY
33	DL	27	LEU
33	DL	34	GLY

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Mol	Chain	Res	Type
33	DL	38	GLN
33	DL	51	GLU
33	DL	78	ARG
33	DL	108	ALA
33	DL	116	VAL
33	DL	127	VAL
33	DL	142	ILE
34	DM	55	ARG
34	DM	89	VAL
34	DM	102	LEU
34	DM	132	THR
35	DN	7	GLY
36	DO	22	GLY
36	DO	84	GLU
36	DO	87	ILE
37	DP	19	PHE
37	DP	26	GLU
37	DP	41	ALA
37	DP	49	ILE
37	DP	68	GLY
37	DP	82	SER
37	DP	97	TYR
37	DP	105	LYS
38	DQ	6	GLY
38	DQ	21	LYS
38	DQ	31	TYR
38	DQ	87	VAL
38	DQ	88	GLU
39	DR	3	ALA
39	DR	4	VAL
39	DR	10	LYS
39	DR	11	GLN
39	DR	87	GLN
39	DR	98	ILE
40	DS	2	GLU
40	DS	9	HIS
40	DS	26	GLY
40	DS	44	ALA
40	DS	64	ALA
40	DS	69	LEU
40	DS	108	SER
41	DT	63	VAL

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Mol	Chain	Res	Type
41	DT	71	GLY
41	DT	78	SER
41	DT	85	VAL
42	DU	24	VAL
42	DU	58	VAL
42	DU	64	ILE
43	DW	4	LYS
43	DW	58	LEU
43	DW	62	ALA
43	DW	63	ASP
43	DW	75	ASN
43	DW	77	LYS
43	DW	80	SER
44	DX	33	ALA
44	DX	61	ALA
46	DZ	31	ASP
46	DZ	40	CYS
47	D0	20	ALA
47	D0	36	LYS
48	D1	4	ILE
48	D1	16	THR
48	D1	30	PRO
48	D1	38	PHE
48	D1	47	ILE
49	D2	5	PHE
49	D2	7	PRO
49	D2	17	GLY
50	D3	29	ARG
51	D4	10	LEU
51	D4	27	CYS
51	D4	31	PRO
2	AC	59	PRO
2	AC	78	LYS
2	AC	136	ALA
3	AD	27	ILE
3	AD	28	ASP
3	AD	43	ARG
3	AD	151	GLN
3	AD	177	MET
4	AE	43	GLY
5	AF	94	HIS
6	AG	89	GLU

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Mol	Chain	Res	Type
8	AI	44	ARG
8	AI	55	ASP
8	AI	127	SER
9	AJ	62	ARG
9	AJ	93	ALA
10	AK	70	ALA
10	AK	77	GLY
10	AK	91	GLY
11	AL	13	ARG
11	AL	60	PHE
11	AL	122	LYS
12	AM	7	ASN
12	AM	22	TYR
12	AM	65	GLU
12	AM	98	GLY
13	AN	21	ALA
13	AN	74	ARG
13	AN	80	ARG
16	AQ	5	ARG
17	AR	21	ASP
17	AR	71	ASP
19	AT	59	ARG
20	AB	20	ARG
20	AB	76	SER
21	AU	6	ARG
21	AU	24	LYS
21	AU	25	ALA
21	AU	40	PRO
24	BV	54	ALA
25	BC	4	LYS
25	BC	51	ARG
25	BC	56	GLY
25	BC	58	LYS
25	BC	59	GLN
25	BC	65	ASP
25	BC	91	ALA
25	BC	93	VAL
25	BC	142	ASN
25	BC	151	GLY
25	BC	164	VAL
25	BC	165	ALA
25	BC	173	LEU

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Mol	Chain	Res	Type
25	BC	214	GLY
26	BD	69	ALA
26	BD	99	GLU
26	BD	140	HIS
26	BD	156	PHE
26	BD	169	ARG
26	BD	174	SER
26	BD	185	ASN
26	BD	190	LYS
26	BD	193	VAL
26	BD	205	PRO
27	BE	54	GLY
27	BE	68	ALA
27	BE	69	ARG
27	BE	93	SER
27	BE	127	GLU
27	BE	191	ASP
28	BF	10	GLU
28	BF	14	LYS
28	BF	81	GLY
28	BF	83	PRO
28	BF	87	LYS
28	BF	114	ARG
29	BG	45	ALA
29	BG	127	GLN
30	BH	20	ASN
30	BH	37	VAL
30	BH	44	ILE
30	BH	127	GLU
31	BJ	46	PRO
31	BJ	121	LYS
31	BJ	127	GLY
31	BJ	138	GLN
32	BK	3	GLN
32	BK	121	GLU
33	BL	27	LEU
33	BL	64	PHE
33	BL	82	LEU
33	BL	84	LYS
33	BL	91	ASP
33	BL	94	THR
33	BL	143	GLU

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Mol	Chain	Res	Type
34	BM	12	MET
34	BM	72	PRO
34	BM	81	ARG
34	BM	97	GLN
34	BM	105	MET
34	BM	131	VAL
35	BN	104	ALA
35	BN	115	LEU
36	BO	7	ARG
36	BO	38	GLN
36	BO	57	ALA
36	BO	68	LYS
37	BP	12	MET
37	BP	25	VAL
37	BP	39	LEU
37	BP	56	SER
37	BP	81	ASP
37	BP	105	LYS
38	BQ	23	TYR
38	BQ	26	ALA
38	BQ	73	ILE
38	BQ	88	GLU
38	BQ	92	LYS
39	BR	7	SER
39	BR	10	LYS
39	BR	29	THR
39	BR	37	GLU
39	BR	41	ILE
39	BR	72	VAL
39	BR	73	LYS
39	BR	98	ILE
40	BS	11	ARG
40	BS	12	SER
40	BS	104	THR
41	BT	13	ALA
41	BT	15	HIS
41	BT	74	ILE
41	BT	96	VAL
42	BU	14	THR
42	BU	35	VAL
42	BU	39	ASN
42	BU	59	GLU

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Mol	Chain	Res	Type
42	BU	60	LYS
42	BU	72	PHE
43	BW	5	ALA
43	BW	77	LYS
44	BX	4	LYS
44	BX	28	LEU
45	BY	2	LYS
45	BY	10	ARG
45	BY	12	ALA
45	BY	14	GLY
45	BY	16	LEU
45	BY	57	GLU
48	B1	16	THR
48	B1	43	ARG
48	B1	47	ILE
50	B3	26	ALA
52	BI	23	VAL
2	CC	3	LYS
2	CC	65	VAL
2	CC	167	TYR
2	CC	180	ASP
3	CD	14	GLU
3	CD	34	GLU
5	CF	5	GLU
5	CF	89	VAL
6	CG	3	ARG
6	CG	78	ARG
6	CG	99	ALA
6	CG	112	ASP
6	CG	113	LYS
8	CI	121	ARG
9	CJ	75	ASP
9	CJ	77	VAL
9	CJ	93	ALA
10	CK	88	PRO
11	CL	98	ARG
12	CM	7	ASN
13	CN	31	SER
13	CN	52	ARG
13	CN	69	PRO
13	CN	73	LEU
14	CO	19	ASN

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Mol	Chain	Res	Type
15	CP	27	ALA
15	CP	44	SER
16	CQ	28	VAL
16	CQ	47	ASP
17	CR	20	ILE
18	CS	33	TRP
18	CS	63	ASP
19	CT	68	LYS
20	CB	14	HIS
20	CB	15	PHE
20	CB	19	THR
20	CB	20	ARG
20	CB	43	GLU
20	CB	86	CYS
20	CB	94	ARG
20	CB	95	TRP
20	CB	114	LYS
20	CB	204	ASP
21	CU	17	ARG
25	DC	4	LYS
25	DC	109	LEU
25	DC	112	GLY
25	DC	121	ALA
25	DC	152	GLN
25	DC	165	ALA
25	DC	175	LEU
25	DC	209	ALA
25	DC	224	MET
25	DC	239	PHE
25	DC	243	PRO
26	DD	25	THR
26	DD	29	VAL
26	DD	47	ALA
26	DD	174	SER
26	DD	182	ALA
26	DD	187	LEU
27	DE	26	ALA
27	DE	36	ALA
27	DE	48	THR
27	DE	65	THR
27	DE	110	SER
27	DE	139	LYS

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Mol	Chain	Res	Type
27	DE	154	ASP
27	DE	157	LEU
27	DE	168	ASP
27	DE	188	MET
27	DE	195	GLN
28	DF	43	ILE
28	DF	49	LEU
28	DF	108	PRO
28	DF	109	ARG
28	DF	114	ARG
28	DF	151	LEU
29	DG	6	ALA
29	DG	34	ARG
29	DG	45	ALA
29	DG	58	ALA
30	DH	32	PRO
30	DH	37	VAL
30	DH	66	ASN
30	DH	82	SER
31	DJ	46	PRO
31	DJ	53	TYR
31	DJ	58	ASN
31	DJ	60	ASP
31	DJ	125	TYR
31	DJ	127	GLY
32	DK	54	LYS
32	DK	83	ALA
32	DK	89	ASN
33	DL	5	THR
33	DL	13	LYS
33	DL	55	MET
33	DL	57	LEU
33	DL	107	PHE
34	DM	12	MET
34	DM	85	GLY
34	DM	104	GLU
36	DO	18	LEU
36	DO	23	ALA
36	DO	34	HIS
36	DO	52	SER
36	DO	63	LYS
36	DO	100	HIS

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Mol	Chain	Res	Type
37	DP	17	PRO
37	DP	91	VAL
37	DP	112	ARG
38	DQ	86	SER
39	DR	29	THR
39	DR	40	MET
40	DS	8	ARG
40	DS	92	ARG
41	DT	15	HIS
41	DT	16	VAL
41	DT	32	LEU
41	DT	36	LYS
41	DT	37	ASP
41	DT	39	THR
41	DT	52	GLU
41	DT	60	THR
42	DU	30	SER
42	DU	93	ARG
43	DW	23	LYS
44	DX	8	GLU
44	DX	28	LEU
44	DX	31	GLN
45	DY	5	LYS
45	DY	12	ALA
46	DZ	2	LYS
46	DZ	35	ASP
47	D0	17	SER
47	D0	51	ARG
50	D3	10	ALA
50	D3	30	HIS
50	D3	47	ALA
51	D4	8	LYS
51	D4	28	SER
52	DI	23	VAL
2	AC	65	VAL
2	AC	186	SER
3	AD	29	THR
4	AE	25	LYS
4	AE	34	ALA
5	AF	54	LEU
6	AG	18	GLY
6	AG	57	GLU

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Mol	Chain	Res	Type
6	AG	75	LYS
6	AG	86	VAL
7	AH	46	GLU
8	AI	67	LYS
9	AJ	56	HIS
9	AJ	61	ALA
9	AJ	74	VAL
10	AK	57	SER
10	AK	108	ASN
11	AL	14	LYS
11	AL	15	VAL
11	AL	47	ALA
11	AL	56	LEU
11	AL	67	GLY
11	AL	120	ARG
13	AN	31	SER
13	AN	94	GLY
15	AP	42	ILE
17	AR	22	TYR
17	AR	47	ARG
18	AS	27	LYS
18	AS	36	ARG
18	AS	65	MET
20	AB	11	ALA
20	AB	41	ASN
20	AB	88	GLN
20	AB	200	PRO
21	AU	26	GLY
21	AU	33	ARG
21	AU	36	PHE
21	AU	37	TYR
21	AU	41	THR
25	BC	61	TYR
25	BC	66	PHE
25	BC	224	MET
25	BC	230	PRO
25	BC	231	HIS
25	BC	251	THR
25	BC	265	PHE
26	BD	73	VAL
26	BD	125	TRP
26	BD	201	LEU

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Mol	Chain	Res	Type
27	BE	39	ALA
27	BE	53	THR
27	BE	112	LEU
27	BE	123	LYS
27	BE	153	LEU
28	BF	175	PRO
29	BG	11	PRO
29	BG	155	PRO
30	BH	12	LEU
30	BH	42	LYS
30	BH	118	PRO
31	BJ	11	VAL
31	BJ	85	LYS
33	BL	23	ILE
33	BL	30	THR
33	BL	33	ARG
33	BL	35	HIS
34	BM	3	GLN
34	BM	21	ALA
34	BM	59	ARG
34	BM	70	ASP
34	BM	71	LYS
34	BM	120	ALA
34	BM	127	LYS
35	BN	20	MET
36	BO	19	GLN
36	BO	55	GLU
36	BO	80	GLU
37	BP	26	GLU
37	BP	79	VAL
37	BP	96	LEU
37	BP	98	TYR
38	BQ	21	LYS
38	BQ	24	TYR
39	BR	21	ARG
39	BR	55	ASP
40	BS	13	SER
40	BS	28	LYS
40	BS	34	ASP
40	BS	71	VAL
40	BS	80	PRO
41	BT	61	LEU

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Mol	Chain	Res	Type
41	BT	66	LYS
42	BU	7	ASP
42	BU	18	LYS
43	BW	6	GLY
43	BW	38	ARG
44	BX	24	GLU
44	BX	43	LEU
46	BZ	42	PRO
47	B0	53	VAL
48	B1	21	THR
49	B2	36	ALA
51	B4	7	VAL
51	B4	20	ASP
52	BI	49	GLU
2	CC	50	SER
2	CC	59	PRO
2	CC	110	LEU
3	CD	166	LYS
3	CD	203	TYR
4	CE	78	GLY
4	CE	87	VAL
4	CE	107	GLY
4	CE	146	MET
6	CG	129	ASN
7	CH	30	LYS
7	CH	94	VAL
8	CI	24	ASN
8	CI	57	VAL
8	CI	58	GLU
8	CI	90	ASP
9	CJ	56	HIS
9	CJ	58	ASN
10	CK	49	SER
10	CK	71	ASP
11	CL	23	LEU
12	CM	14	ALA
12	CM	22	TYR
12	CM	97	ARG
12	CM	102	LYS
12	CM	104	ASN
13	CN	18	LYS
13	CN	21	ALA

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Mol	Chain	Res	Type
17	CR	63	TYR
18	CS	5	LYS
19	CT	67	HIS
20	CB	96	LEU
20	CB	128	LEU
20	CB	167	HIS
20	CB	193	ASP
24	DV	16	ALA
24	DV	71	LYS
25	DC	25	LYS
25	DC	32	LEU
25	DC	33	LEU
25	DC	56	GLY
25	DC	60	ALA
25	DC	68	ARG
25	DC	85	ASN
25	DC	161	VAL
25	DC	184	GLU
25	DC	199	HIS
25	DC	225	ASN
25	DC	235	GLU
25	DC	258	SER
25	DC	260	LYS
25	DC	265	PHE
26	DD	3	GLY
26	DD	32	ASN
26	DD	52	THR
26	DD	126	ASN
26	DD	173	GLN
27	DE	18	THR
27	DE	30	GLN
27	DE	45	ALA
27	DE	50	ALA
27	DE	160	ALA
28	DF	138	PRO
29	DG	11	PRO
29	DG	107	GLY
30	DH	86	ASP
30	DH	87	GLU
30	DH	92	GLY
31	DJ	50	THR
31	DJ	67	ASN

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Mol	Chain	Res	Type
31	DJ	75	TYR
31	DJ	85	LYS
31	DJ	123	LYS
31	DJ	137	PRO
32	DK	113	MET
32	DK	121	GLU
33	DL	109	LYS
35	DN	100	CYS
35	DN	113	ILE
36	DO	2	ASP
36	DO	28	VAL
36	DO	38	GLN
36	DO	42	PRO
37	DP	79	VAL
37	DP	96	LEU
38	DQ	85	ALA
38	DQ	101	ASP
39	DR	81	LYS
39	DR	88	GLY
40	DS	46	LEU
40	DS	80	PRO
40	DS	87	PRO
40	DS	99	ARG
41	DT	79	ASP
41	DT	80	TRP
41	DT	86	THR
42	DU	9	GLU
42	DU	25	LYS
42	DU	48	VAL
43	DW	55	ASP
46	DZ	19	GLY
47	D0	39	ARG
48	D1	50	GLU
49	D2	25	LYS
50	D3	32	LEU
50	D3	33	THR
50	D3	37	THR
52	DI	6	ALA
2	AC	14	VAL
2	AC	145	ALA
2	AC	167	TYR
4	AE	146	MET

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Mol	Chain	Res	Type
8	AI	122	ARG
9	AJ	36	VAL
10	AK	127	ARG
11	AL	42	LYS
11	AL	121	PRO
12	AM	105	ALA
14	AO	17	ASP
16	AQ	69	THR
17	AR	20	ILE
18	AS	8	PRO
19	AT	5	SER
19	AT	46	ALA
20	AB	24	PRO
20	AB	27	LYS
20	AB	87	ASP
20	AB	94	ARG
24	BV	55	GLU
25	BC	50	THR
25	BC	85	ASN
25	BC	115	ILE
25	BC	218	THR
25	BC	225	ASN
25	BC	236	GLY
26	BD	52	THR
26	BD	95	SER
26	BD	101	PHE
26	BD	189	VAL
28	BF	34	THR
28	BF	36	ASN
28	BF	88	VAL
29	BG	42	VAL
31	BJ	72	LYS
31	BJ	97	PRO
31	BJ	132	HIS
33	BL	83	ALA
33	BL	92	LEU
33	BL	104	GLN
33	BL	113	ALA
33	BL	136	GLU
35	BN	56	LYS
35	BN	102	PHE
36	BO	52	SER

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Mol	Chain	Res	Type
36	BO	90	VAL
37	BP	3	ILE
37	BP	19	PHE
37	BP	59	THR
37	BP	92	ARG
37	BP	110	LYS
38	BQ	93	ILE
39	BR	77	PHE
40	BS	69	LEU
40	BS	99	ARG
42	BU	56	GLY
42	BU	84	PHE
44	BX	35	GLY
45	BY	17	PRO
45	BY	53	MET
46	BZ	66	ILE
47	B0	5	ASN
49	B2	8	SER
52	BI	14	ALA
2	CC	53	ARG
3	CD	25	ARG
3	CD	119	HIS
5	CF	35	LYS
5	CF	38	ARG
5	CF	41	ASP
5	CF	85	ILE
5	CF	92	THR
6	CG	55	LYS
6	CG	66	GLU
9	CJ	36	VAL
12	CM	49	GLU
12	CM	100	ARG
13	CN	43	ALA
13	CN	61	ASN
13	CN	74	ARG
15	CP	55	ASP
18	CS	13	HIS
18	CS	29	PRO
18	CS	53	GLY
18	CS	61	VAL
20	CB	172	ILE
20	CB	205	ALA

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Mol	Chain	Res	Type
24	DV	52	ALA
25	DC	114	GLN
26	DD	48	ILE
26	DD	95	SER
26	DD	149	ASN
26	DD	203	VAL
27	DE	6	LYS
27	DE	11	ALA
27	DE	57	LYS
27	DE	58	LYS
27	DE	113	VAL
27	DE	130	LYS
27	DE	172	ALA
27	DE	190	ALA
27	DE	193	VAL
28	DF	8	LYS
28	DF	88	VAL
28	DF	134	GLN
28	DF	149	ARG
28	DF	153	ILE
28	DF	177	ARG
29	DG	40	VAL
30	DH	35	LYS
30	DH	68	ARG
30	DH	114	GLU
31	DJ	41	LYS
31	DJ	79	GLY
31	DJ	111	LYS
32	DK	14	SER
33	DL	23	ILE
33	DL	118	THR
34	DM	17	ASN
34	DM	71	LYS
34	DM	77	PRO
35	DN	11	ASN
35	DN	111	ALA
36	DO	107	ALA
37	DP	18	SER
37	DP	71	ARG
37	DP	85	VAL
38	DQ	78	PHE
39	DR	59	ILE

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Mol	Chain	Res	Type
39	DR	71	LYS
39	DR	79	ARG
40	DS	22	ASP
40	DS	23	LEU
42	DU	28	LEU
43	DW	53	GLY
43	DW	61	LYS
43	DW	65	LYS
44	DX	20	ASN
44	DX	38	GLN
44	DX	52	ARG
49	D2	15	SER
50	D3	13	PHE
50	D3	60	CYS
51	D4	11	CYS
51	D4	17	VAL
52	DI	14	ALA
2	AC	26	LYS
2	AC	112	ALA
3	AD	6	PRO
4	AE	107	GLY
6	AG	6	ILE
9	AJ	95	GLY
10	AK	106	ILE
13	AN	33	VAL
18	AS	39	ILE
20	AB	205	ALA
21	AU	13	VAL
25	BC	14	HIS
25	BC	17	LYS
25	BC	30	ALA
25	BC	155	ARG
26	BD	175	LEU
27	BE	24	ASN
27	BE	199	MET
29	BG	32	LEU
29	BG	59	ASP
30	BH	75	LEU
31	BJ	84	ILE
33	BL	37	GLY
38	BQ	18	LYS
39	BR	4	VAL

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Mol	Chain	Res	Type
48	B1	38	PHE
49	B2	6	GLN
2	CC	26	LYS
2	CC	144	GLY
3	CD	68	GLU
4	CE	17	VAL
5	CF	53	LYS
11	CL	99	GLY
13	CN	62	ARG
19	CT	44	ALA
19	CT	76	ALA
20	CB	200	PRO
26	DD	76	GLY
26	DD	87	GLY
26	DD	207	VAL
28	DF	84	ILE
28	DF	120	SER
29	DG	166	GLU
30	DH	31	VAL
32	DK	10	VAL
32	DK	108	ARG
34	DM	13	HIS
34	DM	111	GLU
35	DN	8	ARG
35	DN	41	ALA
35	DN	102	PHE
36	DO	85	LYS
37	DP	54	LEU
37	DP	80	VAL
40	DS	13	SER
41	DT	59	ASN
41	DT	66	LYS
41	DT	67	VAL
45	DY	30	ARG
50	D3	49	VAL
2	AC	90	VAL
3	AD	63	ILE
3	AD	175	GLY
10	AK	119	GLY
15	AP	41	PRO
20	AB	157	PRO
24	BV	72	VAL

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Mol	Chain	Res	Type
24	BV	84	PRO
25	BC	16	VAL
27	BE	113	VAL
29	BG	99	GLY
34	BM	26	VAL
34	BM	89	VAL
35	BN	39	PRO
37	BP	21	PRO
37	BP	69	VAL
38	BQ	89	ILE
49	B2	9	VAL
2	CC	107	LYS
8	CI	9	GLY
20	CB	163	ILE
21	CU	39	LYS
25	DC	55	GLY
25	DC	83	ASP
25	DC	164	VAL
32	DK	103	VAL
36	DO	103	VAL
39	DR	63	VAL
41	DT	58	VAL
49	D2	6	GLN
15	AP	49	GLY
19	AT	3	ILE
25	BC	158	GLY
31	BJ	18	VAL
31	BJ	22	GLY
31	BJ	103	ILE
32	BK	26	GLY
33	BL	139	GLY
33	BL	142	ILE
36	BO	27	VAL
36	BO	31	THR
48	B1	30	PRO
51	B4	25	VAL
2	CC	76	ILE
2	CC	127	VAL
4	CE	90	GLY
10	CK	15	VAL
10	CK	119	GLY
11	CL	78	VAL

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Mol	Chain	Res	Type
13	CN	33	VAL
20	CB	13	VAL
27	DE	120	VAL
29	DG	14	VAL
31	DJ	139	VAL
37	DP	21	PRO
38	DQ	3	VAL
40	DS	71	VAL
3	AD	37	PRO
7	AH	71	VAL
9	AJ	41	PRO
9	AJ	96	VAL
11	AL	62	VAL
12	AM	23	GLY
19	AT	41	GLY
21	AU	52	VAL
25	BC	108	GLY
25	BC	171	VAL
25	BC	217	PRO
26	BD	98	VAL
28	BF	39	VAL
30	BH	34	GLY
30	BH	95	GLY
31	BJ	66	GLY
32	BK	115	ILE
34	BM	37	GLY
36	BO	87	ILE
42	BU	4	ILE
43	BW	35	ILE
3	CD	37	PRO
6	CG	68	VAL
8	CI	23	GLY
8	CI	71	ILE
9	CJ	100	ILE
18	CS	74	ALA
25	DC	195	GLY
27	DE	167	VAL
28	DF	81	GLY
31	DJ	100	VAL
32	DK	26	GLY
33	DL	31	GLY
33	DL	110	VAL

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Mol	Chain	Res	Type
33	DL	135	ILE
34	DM	57	VAL
39	DR	47	VAL
39	DR	54	VAL
41	DT	96	VAL
52	DI	118	GLY
7	AH	77	VAL
8	AI	110	VAL
17	AR	43	ILE
20	AB	150	ILE
25	BC	46	GLY
26	BD	203	VAL
27	BE	76	PRO
27	BE	175	ILE
29	BG	130	ILE
30	BH	9	VAL
33	BL	11	GLY
36	BO	22	GLY
39	BR	27	ILE
43	BW	51	GLY
47	B0	34	GLY
48	B1	42	VAL
12	CM	42	VAL
16	CQ	32	ILE
18	CS	10	ILE
25	DC	217	PRO
30	DH	4	ILE
34	DM	87	GLY
34	DM	97	GLN
37	DP	69	VAL
47	D0	53	VAL
51	D4	23	ILE
24	BV	4	ILE
24	BV	70	ILE
29	BG	92	GLY
32	BK	15	GLY
37	BP	4	ILE
42	BU	48	VAL
47	B0	42	ILE
3	CD	27	ILE
21	CU	13	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%)	142 (84%)	28 (16%)	3	15
2	CC	170/189 (90%)	146 (86%)	24 (14%)	4	22
3	AD	172/172 (100%)	140 (81%)	32 (19%)	2	9
3	CD	172/172 (100%)	137 (80%)	35 (20%)	1	7
4	AE	113/125 (90%)	92 (81%)	21 (19%)	2	9
4	CE	113/125 (90%)	92 (81%)	21 (19%)	2	9
5	AF	87/116 (75%)	68 (78%)	19 (22%)	1	5
5	CF	87/116 (75%)	74 (85%)	13 (15%)	4	20
6	AG	123/146 (84%)	102 (83%)	21 (17%)	2	14
6	CG	125/146 (86%)	106 (85%)	19 (15%)	3	19
7	AH	104/104 (100%)	87 (84%)	17 (16%)	3	16
7	CH	104/104 (100%)	85 (82%)	19 (18%)	2	10
8	AI	105/106 (99%)	83 (79%)	22 (21%)	1	6
8	CI	105/106 (99%)	89 (85%)	16 (15%)	3	19
9	AJ	86/90 (96%)	66 (77%)	20 (23%)	1	4
9	CJ	86/90 (96%)	78 (91%)	8 (9%)	11	44
10	AK	90/98 (92%)	70 (78%)	20 (22%)	1	5
10	CK	90/98 (92%)	74 (82%)	16 (18%)	2	12
11	AL	103/103 (100%)	88 (85%)	15 (15%)	4	21
11	CL	103/103 (100%)	79 (77%)	24 (23%)	1	4
12	AM	92/95 (97%)	70 (76%)	22 (24%)	1	4
12	CM	91/95 (96%)	75 (82%)	16 (18%)	2	12
13	AN	79/83 (95%)	67 (85%)	12 (15%)	3	19
13	CN	79/83 (95%)	68 (86%)	11 (14%)	4	23
14	AO	76/77 (99%)	69 (91%)	7 (9%)	11	44
14	CO	76/77 (99%)	63 (83%)	13 (17%)	2	14

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
15	AP	65/65 (100%)	56 (86%)	9 (14%)	4	23
15	CP	65/65 (100%)	54 (83%)	11 (17%)	2	14
16	AQ	74/77 (96%)	60 (81%)	14 (19%)	2	9
16	CQ	75/77 (97%)	66 (88%)	9 (12%)	6	29
17	AR	48/64 (75%)	45 (94%)	3 (6%)	22	62
17	CR	48/64 (75%)	41 (85%)	7 (15%)	4	21
18	AS	70/78 (90%)	60 (86%)	10 (14%)	4	22
18	CS	71/78 (91%)	53 (75%)	18 (25%)	1	4
19	AT	65/65 (100%)	56 (86%)	9 (14%)	4	23
19	CT	65/65 (100%)	51 (78%)	14 (22%)	1	6
20	AB	180/198 (91%)	142 (79%)	38 (21%)	1	6
20	CB	180/198 (91%)	153 (85%)	27 (15%)	3	20
21	AU	44/61 (72%)	36 (82%)	8 (18%)	2	11
21	CU	44/61 (72%)	30 (68%)	14 (32%)	0	2
24	BV	78/78 (100%)	66 (85%)	12 (15%)	3	19
24	DV	78/78 (100%)	69 (88%)	9 (12%)	7	31
25	BC	213/218 (98%)	145 (68%)	68 (32%)	0	2
25	DC	213/218 (98%)	150 (70%)	63 (30%)	0	3
26	BD	164/164 (100%)	112 (68%)	52 (32%)	0	2
26	DD	164/164 (100%)	113 (69%)	51 (31%)	0	2
27	BE	165/165 (100%)	115 (70%)	50 (30%)	0	3
27	DE	165/165 (100%)	127 (77%)	38 (23%)	1	4
28	BF	149/149 (100%)	119 (80%)	30 (20%)	1	7
28	DF	149/149 (100%)	122 (82%)	27 (18%)	2	11
29	BG	137/137 (100%)	105 (77%)	32 (23%)	1	4
29	DG	137/137 (100%)	111 (81%)	26 (19%)	2	9
30	BH	114/114 (100%)	85 (75%)	29 (25%)	1	4
30	DH	114/114 (100%)	90 (79%)	24 (21%)	1	6
31	BJ	114/116 (98%)	84 (74%)	30 (26%)	0	3
31	DJ	114/116 (98%)	85 (75%)	29 (25%)	1	4
32	BK	102/104 (98%)	78 (76%)	24 (24%)	1	4

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
32	DK	102/104 (98%)	81 (79%)	21 (21%)	1	7
33	BL	103/103 (100%)	62 (60%)	41 (40%)	0	1
33	DL	103/103 (100%)	68 (66%)	35 (34%)	0	2
34	BM	109/109 (100%)	77 (71%)	32 (29%)	0	3
34	DM	109/109 (100%)	75 (69%)	34 (31%)	0	2
35	BN	103/103 (100%)	78 (76%)	25 (24%)	1	4
35	DN	103/103 (100%)	76 (74%)	27 (26%)	0	3
36	BO	87/87 (100%)	58 (67%)	29 (33%)	0	2
36	DO	87/87 (100%)	69 (79%)	18 (21%)	1	7
37	BP	99/99 (100%)	77 (78%)	22 (22%)	1	5
37	DP	99/99 (100%)	67 (68%)	32 (32%)	0	2
38	BQ	89/89 (100%)	66 (74%)	23 (26%)	0	3
38	DQ	89/89 (100%)	71 (80%)	18 (20%)	1	7
39	BR	84/84 (100%)	68 (81%)	16 (19%)	2	9
39	DR	84/84 (100%)	58 (69%)	26 (31%)	0	2
40	BS	93/93 (100%)	72 (77%)	21 (23%)	1	5
40	DS	93/93 (100%)	77 (83%)	16 (17%)	2	14
41	BT	83/84 (99%)	60 (72%)	23 (28%)	0	3
41	DT	83/84 (99%)	60 (72%)	23 (28%)	0	3
42	BU	83/84 (99%)	62 (75%)	21 (25%)	1	4
42	DU	83/84 (99%)	60 (72%)	23 (28%)	0	3
43	BW	62/62 (100%)	46 (74%)	16 (26%)	0	3
43	DW	62/62 (100%)	45 (73%)	17 (27%)	0	3
44	BX	55/55 (100%)	40 (73%)	15 (27%)	0	3
44	DX	55/55 (100%)	43 (78%)	12 (22%)	1	5
45	BY	48/48 (100%)	36 (75%)	12 (25%)	1	4
45	DY	48/48 (100%)	33 (69%)	15 (31%)	0	2
46	BZ	62/62 (100%)	43 (69%)	19 (31%)	0	2
46	DZ	62/62 (100%)	46 (74%)	16 (26%)	0	3
47	B0	47/47 (100%)	31 (66%)	16 (34%)	0	2
47	D0	47/47 (100%)	33 (70%)	14 (30%)	0	3

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
48	B1	48/48 (100%)	33 (69%)	15 (31%)	0	2
48	D1	48/48 (100%)	33 (69%)	15 (31%)	0	2
49	B2	38/38 (100%)	27 (71%)	11 (29%)	0	3
49	D2	38/38 (100%)	27 (71%)	11 (29%)	0	3
50	B3	51/51 (100%)	33 (65%)	18 (35%)	0	2
50	D3	51/51 (100%)	40 (78%)	11 (22%)	1	6
51	B4	34/34 (100%)	21 (62%)	13 (38%)	0	1
51	D4	34/34 (100%)	17 (50%)	17 (50%)	0	0
52	BI	109/109 (100%)	106 (97%)	3 (3%)	51	82
52	DI	109/109 (100%)	104 (95%)	5 (5%)	33	72
All	All	9341/9692 (96%)	7268 (78%)	2073 (22%)	1	5

All (2073) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AC	17	TRP
2	AC	20	THR
2	AC	26	LYS
2	AC	31	ASN
2	AC	40	GLN
2	AC	42	LEU
2	AC	69	THR
2	AC	82	ASP
2	AC	88	LYS
2	AC	100	ILE
2	AC	102	ILE
2	AC	106	ARG
2	AC	113	LYS
2	AC	141	MET
2	AC	146	LYS
2	AC	156	LEU
2	AC	164	THR
2	AC	165	GLU
2	AC	166	TRP
2	AC	168	ARG
2	AC	174	LEU
2	AC	176	THR
2	AC	180	ASP

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Mol	Chain	Res	Type
2	AC	184	ASN
2	AC	185	THR
2	AC	189	HIS
2	AC	190	THR
2	AC	192	TYR
3	AD	7	LYS
3	AD	8	LEU
3	AD	10	LEU
3	AD	20	LEU
3	AD	21	LYS
3	AD	25	ARG
3	AD	35	GLN
3	AD	39	GLN
3	AD	40	HIS
3	AD	43	ARG
3	AD	55	ARG
3	AD	56	GLU
3	AD	58	GLN
3	AD	62	ARG
3	AD	64	TYR
3	AD	69	ARG
3	AD	85	THR
3	AD	94	GLU
3	AD	133	SER
3	AD	137	SER
3	AD	145	ARG
3	AD	147	LYS
3	AD	150	LYS
3	AD	153	ARG
3	AD	155	LYS
3	AD	158	LEU
3	AD	160	LEU
3	AD	176	LYS
3	AD	183	ARG
3	AD	186	GLU
3	AD	189	ASP
3	AD	194	ILE
4	AE	11	GLN
4	AE	12	GLU
4	AE	23	THR
4	AE	25	LYS
4	AE	32	PHE

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Mol	Chain	Res	Type
4	AE	44	ARG
4	AE	45	VAL
4	AE	55	VAL
4	AE	68	ARG
4	AE	72	ASN
4	AE	81	GLN
4	AE	92	ARG
4	AE	102	THR
4	AE	110	MET
4	AE	122	VAL
4	AE	123	LEU
4	AE	125	LYS
4	AE	139	THR
4	AE	143	LEU
4	AE	151	MET
4	AE	158	LYS
5	AF	24	ARG
5	AF	37	HIS
5	AF	38	ARG
5	AF	39	LEU
5	AF	46	GLN
5	AF	53	LYS
5	AF	54	LEU
5	AF	55	HIS
5	AF	61	LEU
5	AF	65	GLU
5	AF	69	GLU
5	AF	71	ILE
5	AF	75	GLU
5	AF	76	THR
5	AF	78	PHE
5	AF	86	ARG
5	AF	87	SER
5	AF	88	MET
5	AF	92	THR
6	AG	3	ARG
6	AG	10	LYS
6	AG	11	ILE
6	AG	14	ASP
6	AG	16	LYS
6	AG	19	SER
6	AG	21	LEU

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Mol	Chain	Res	Type
6	AG	22	LEU
6	AG	29	LEU
6	AG	46	LEU
6	AG	52	ARG
6	AG	55	LYS
6	AG	72	VAL
6	AG	78	ARG
6	AG	84	TYR
6	AG	89	GLU
6	AG	94	ARG
6	AG	112	ASP
6	AG	114	SER
6	AG	139	ASP
6	AG	143	MET
7	AH	4	ASP
7	AH	17	GLN
7	AH	26	MET
7	AH	30	LYS
7	AH	37	ASN
7	AH	48	PHE
7	AH	55	LYS
7	AH	61	THR
7	AH	64	TYR
7	AH	76	ARG
7	AH	82	LEU
7	AH	83	ARG
7	AH	93	LYS
7	AH	107	LYS
7	AH	111	THR
7	AH	113	ARG
7	AH	120	LEU
8	AI	3	ASN
8	AI	11	ARG
8	AI	26	LYS
8	AI	30	ASN
8	AI	35	GLU
8	AI	36	GLN
8	AI	38	PHE
8	AI	41	GLU
8	AI	44	ARG
8	AI	53	LEU
8	AI	56	MET

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Mol	Chain	Res	Type
8	AI	58	GLU
8	AI	59	LYS
8	AI	60	LEU
8	AI	61	ASP
8	AI	84	ARG
8	AI	86	LEU
8	AI	87	MET
8	AI	106	ASP
8	AI	112	ARG
8	AI	121	ARG
8	AI	126	PHE
9	AJ	5	ARG
9	AJ	11	LYS
9	AJ	14	ASP
9	AJ	18	ILE
9	AJ	35	GLN
9	AJ	40	ILE
9	AJ	45	ARG
9	AJ	48	ARG
9	AJ	50	THR
9	AJ	57	VAL
9	AJ	68	ARG
9	AJ	71	LEU
9	AJ	73	LEU
9	AJ	75	ASP
9	AJ	81	GLU
9	AJ	88	MET
9	AJ	89	ARG
9	AJ	92	LEU
9	AJ	98	VAL
9	AJ	102	LEU
10	AK	12	ARG
10	AK	33	ILE
10	AK	35	ASP
10	AK	36	ARG
10	AK	37	GLN
10	AK	52	ARG
10	AK	56	LYS
10	AK	58	THR
10	AK	71	ASP
10	AK	73	VAL
10	AK	83	VAL

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Mol	Chain	Res	Type
10	AK	84	MET
10	AK	85	VAL
10	AK	92	ARG
10	AK	99	LEU
10	AK	107	THR
10	AK	108	ASN
10	AK	117	HIS
10	AK	121	ARG
10	AK	126	ARG
11	AL	18	SER
11	AL	20	VAL
11	AL	28	GLN
11	AL	30	ARG
11	AL	33	CYS
11	AL	35	ARG
11	AL	38	THR
11	AL	50	LYS
11	AL	58	ASN
11	AL	71	HIS
11	AL	74	GLN
11	AL	102	ASP
11	AL	103	CYS
11	AL	107	LYS
11	AL	118	VAL
12	AM	2	ARG
12	AM	11	HIS
12	AM	18	LEU
12	AM	27	THR
12	AM	28	ARG
12	AM	41	ASP
12	AM	43	LYS
12	AM	44	ILE
12	AM	57	ASP
12	AM	62	PHE
12	AM	64	VAL
12	AM	67	ASP
12	AM	68	LEU
12	AM	81	ASP
12	AM	90	HIS
12	AM	91	ARG
12	AM	97	ARG
12	AM	99	GLN

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Mol	Chain	Res	Type
12	AM	100	ARG
12	AM	101	THR
12	AM	102	LYS
12	AM	106	ARG
13	AN	15	LEU
13	AN	27	LYS
13	AN	41	TRP
13	AN	45	LEU
13	AN	50	LEU
13	AN	53	ASP
13	AN	59	GLN
13	AN	60	ARG
13	AN	65	GLN
13	AN	73	LEU
13	AN	74	ARG
13	AN	76	PHE
14	AO	7	THR
14	AO	17	ASP
14	AO	25	GLU
14	AO	57	ARG
14	AO	58	MET
14	AO	64	LYS
14	AO	70	LYS
15	AP	4	ILE
15	AP	5	ARG
15	AP	26	ASN
15	AP	29	ASN
15	AP	31	ARG
15	AP	34	GLU
15	AP	46	LYS
15	AP	55	ASP
15	AP	63	GLN
16	AQ	4	ILE
16	AQ	10	ARG
16	AQ	15	LYS
16	AQ	25	GLU
16	AQ	26	ARG
16	AQ	39	ARG
16	AQ	45	VAL
16	AQ	52	CYS
16	AQ	60	ILE
16	AQ	67	SER

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Mol	Chain	Res	Type
16	AQ	74	LEU
16	AQ	76	ARG
16	AQ	78	VAL
16	AQ	80	LYS
17	AR	30	ASN
17	AR	52	ARG
17	AR	65	SER
18	AS	5	LYS
18	AS	12	LEU
18	AS	14	LEU
18	AS	20	LYS
18	AS	28	LYS
18	AS	36	ARG
18	AS	40	PHE
18	AS	47	THR
18	AS	72	GLU
18	AS	73	PHE
19	AT	4	LYS
19	AT	14	GLU
19	AT	26	MET
19	AT	29	THR
19	AT	53	MET
19	AT	59	ARG
19	AT	67	HIS
19	AT	70	LYS
19	AT	85	LEU
20	AB	9	LEU
20	AB	15	PHE
20	AB	22	TRP
20	AB	23	ASN
20	AB	26	MET
20	AB	31	PHE
20	AB	36	LYS
20	AB	38	HIS
20	AB	40	ILE
20	AB	46	VAL
20	AB	48	MET
20	AB	56	LEU
20	AB	57	ASN
20	AB	62	ARG
20	AB	67	LEU
20	AB	73	ARG

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Mol	Chain	Res	Type
20	AB	81	ASP
20	AB	90	PHE
20	AB	94	ARG
20	AB	95	TRP
20	AB	101	THR
20	AB	116	LEU
20	AB	119	GLN
20	AB	121	GLN
20	AB	122	ASP
20	AB	125	PHE
20	AB	127	LYS
20	AB	128	LEU
20	AB	145	ASN
20	AB	158	ASP
20	AB	162	VAL
20	AB	188	THR
20	AB	196	ASP
20	AB	202	ASN
20	AB	206	ILE
20	AB	209	VAL
20	AB	212	TYR
20	AB	222	GLU
21	AU	11	PHE
21	AU	12	ASP
21	AU	16	ARG
21	AU	17	ARG
21	AU	33	ARG
21	AU	44	ARG
21	AU	48	LYS
21	AU	53	LYS
24	BV	3	THR
24	BV	9	ARG
24	BV	35	GLU
24	BV	40	ILE
24	BV	42	LEU
24	BV	46	LYS
24	BV	51	GLN
24	BV	59	GLU
24	BV	70	ILE
24	BV	73	LYS
24	BV	82	TYR
24	BV	87	GLN

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Mol	Chain	Res	Type
25	BC	5	CYS
25	BC	9	SER
25	BC	10	PRO
25	BC	13	ARG
25	BC	14	HIS
25	BC	17	LYS
25	BC	22	GLU
25	BC	23	LEU
25	BC	27	LYS
25	BC	28	PRO
25	BC	32	LEU
25	BC	33	LEU
25	BC	35	LYS
25	BC	36	ASN
25	BC	38	LYS
25	BC	44	ASN
25	BC	51	ARG
25	BC	58	LYS
25	BC	59	GLN
25	BC	62	ARG
25	BC	64	VAL
25	BC	78	GLU
25	BC	84	PRO
25	BC	86	ARG
25	BC	94	LEU
25	BC	100	ARG
25	BC	102	TYR
25	BC	110	LYS
25	BC	113	ASP
25	BC	124	LYS
25	BC	127	ASN
25	BC	128	THR
25	BC	129	LEU
25	BC	131	MET
25	BC	144	GLU
25	BC	145	MET
25	BC	152	GLN
25	BC	155	ARG
25	BC	162	GLN
25	BC	171	VAL
25	BC	172	THR
25	BC	175	LEU

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Mol	Chain	Res	Type
25	BC	179	GLU
25	BC	180	MET
25	BC	181	ARG
25	BC	184	GLU
25	BC	186	ASP
25	BC	188	ARG
25	BC	194	VAL
25	BC	196	ASN
25	BC	201	LEU
25	BC	203	VAL
25	BC	206	LYS
25	BC	213	ARG
25	BC	216	ARG
25	BC	218	THR
25	BC	220	ARG
25	BC	222	THR
25	BC	224	MET
25	BC	225	ASN
25	BC	227	VAL
25	BC	231	HIS
25	BC	235	GLU
25	BC	237	ARG
25	BC	246	PRO
25	BC	250	GLN
25	BC	254	LYS
25	BC	261	ARG
26	BD	1	MET
26	BD	4	LEU
26	BD	8	LYS
26	BD	20	VAL
26	BD	25	THR
26	BD	26	VAL
26	BD	30	GLU
26	BD	34	VAL
26	BD	35	THR
26	BD	36	GLN
26	BD	37	VAL
26	BD	38	LYS
26	BD	39	ASP
26	BD	48	ILE
26	BD	50	VAL
26	BD	56	LYS

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Mol	Chain	Res	Type
26	BD	59	ARG
26	BD	62	LYS
26	BD	64	GLU
26	BD	67	HIS
26	BD	70	LYS
26	BD	82	PHE
26	BD	84	LEU
26	BD	86	GLU
26	BD	89	GLU
26	BD	90	PHE
26	BD	96	ILE
26	BD	99	GLU
26	BD	103	ASP
26	BD	105	LYS
26	BD	113	SER
26	BD	127	PHE
26	BD	128	ARG
26	BD	133	THR
26	BD	138	LEU
26	BD	142	VAL
26	BD	148	GLN
26	BD	150	GLN
26	BD	151	THR
26	BD	154	LYS
26	BD	155	VAL
26	BD	157	LYS
26	BD	159	LYS
26	BD	160	LYS
26	BD	161	MET
26	BD	164	GLN
26	BD	165	MET
26	BD	167	ASN
26	BD	176	ASP
26	BD	177	VAL
26	BD	197	THR
26	BD	207	VAL
27	BE	1	MET
27	BE	2	GLU
27	BE	4	VAL
27	BE	5	LEU
27	BE	10	SER
27	BE	18	THR

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Mol	Chain	Res	Type
27	BE	22	ASP
27	BE	41	GLN
27	BE	43	THR
27	BE	44	ARG
27	BE	46	GLN
27	BE	47	LYS
27	BE	49	ARG
27	BE	55	SER
27	BE	57	LYS
27	BE	58	LYS
27	BE	61	ARG
27	BE	67	ARG
27	BE	69	ARG
27	BE	70	SER
27	BE	74	LYS
27	BE	78	TRP
27	BE	85	PHE
27	BE	98	LYS
27	BE	106	LYS
27	BE	107	SER
27	BE	109	LEU
27	BE	114	ARG
27	BE	118	LEU
27	BE	129	PRO
27	BE	132	LYS
27	BE	134	LEU
27	BE	139	LYS
27	BE	148	ILE
27	BE	150	THR
27	BE	152	GLU
27	BE	153	LEU
27	BE	155	GLU
27	BE	159	LEU
27	BE	162	ARG
27	BE	164	LEU
27	BE	169	VAL
27	BE	179	SER
27	BE	184	ASP
27	BE	188	MET
27	BE	189	THR
27	BE	193	VAL
27	BE	197	GLU

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Mol	Chain	Res	Type
27	BE	199	MET
27	BE	200	LEU
28	BF	5	ASP
28	BF	9	ASP
28	BF	10	GLU
28	BF	14	LYS
28	BF	16	MET
28	BF	21	TYR
28	BF	37	MET
28	BF	55	ASP
28	BF	56	LEU
28	BF	59	ILE
28	BF	63	LYS
28	BF	87	LYS
28	BF	91	ARG
28	BF	93	GLU
28	BF	97	GLU
28	BF	102	LEU
28	BF	122	ASP
28	BF	126	ASN
28	BF	132	ARG
28	BF	139	GLU
28	BF	142	TYR
28	BF	143	ASP
28	BF	147	ARG
28	BF	149	ARG
28	BF	151	LEU
28	BF	152	ASP
28	BF	168	LEU
28	BF	172	PHE
28	BF	174	PHE
28	BF	177	ARG
29	BG	2	ARG
29	BG	3	VAL
29	BG	17	LYS
29	BG	18	ILE
29	BG	23	ILE
29	BG	25	ILE
29	BG	29	ASN
29	BG	34	ARG
29	BG	46	ASP
29	BG	47	ASN

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Mol	Chain	Res	Type
29	BG	49	LEU
29	BG	55	ASP
29	BG	57	TYR
29	BG	59	ASP
29	BG	70	LEU
29	BG	72	ASN
29	BG	80	GLU
29	BG	86	LEU
29	BG	94	ARG
29	BG	98	LYS
29	BG	113	ASP
29	BG	121	THR
29	BG	128	THR
29	BG	133	LYS
29	BG	143	VAL
29	BG	146	ASP
29	BG	150	TYR
29	BG	151	ARG
29	BG	152	ARG
29	BG	169	ARG
29	BG	174	LYS
29	BG	176	LYS
30	BH	1	MET
30	BH	2	GLN
30	BH	5	LEU
30	BH	7	ASP
30	BH	8	LYS
30	BH	18	GLN
30	BH	22	LYS
30	BH	27	ARG
30	BH	28	ASN
30	BH	30	LEU
30	BH	33	GLN
30	BH	35	LYS
30	BH	42	LYS
30	BH	47	PHE
30	BH	48	GLU
30	BH	55	GLU
30	BH	57	LYS
30	BH	68	ARG
30	BH	70	GLU
30	BH	73	ASN

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Mol	Chain	Res	Type
30	BH	75	LEU
30	BH	77	THR
30	BH	89	LYS
30	BH	98	ASP
30	BH	112	LYS
30	BH	124	THR
30	BH	132	PHE
30	BH	135	HIS
30	BH	139	PHE
31	BJ	3	THR
31	BJ	12	LYS
31	BJ	15	TRP
31	BJ	21	THR
31	BJ	23	LYS
31	BJ	24	THR
31	BJ	25	LEU
31	BJ	28	LEU
31	BJ	31	GLU
31	BJ	34	ARG
31	BJ	35	ARG
31	BJ	37	ARG
31	BJ	39	LYS
31	BJ	49	ASP
31	BJ	58	ASN
31	BJ	61	LYS
31	BJ	69	ARG
31	BJ	70	THR
31	BJ	75	TYR
31	BJ	90	GLU
31	BJ	96	ARG
31	BJ	98	GLU
31	BJ	102	GLU
31	BJ	114	LEU
31	BJ	116	ARG
31	BJ	118	MET
31	BJ	119	PHE
31	BJ	122	LEU
31	BJ	136	GLN
31	BJ	139	VAL
32	BK	4	GLU
32	BK	9	ASN
32	BK	17	ARG

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Mol	Chain	Res	Type
32	BK	20	MET
32	BK	21	CYS
32	BK	30	ARG
32	BK	31	ARG
32	BK	32	TYR
32	BK	54	LYS
32	BK	58	LEU
32	BK	62	VAL
32	BK	64	ARG
32	BK	71	ARG
32	BK	78	ARG
32	BK	86	LEU
32	BK	87	LEU
32	BK	93	GLN
32	BK	95	ILE
32	BK	98	ARG
32	BK	108	ARG
32	BK	109	SER
32	BK	110	GLU
32	BK	116	ILE
32	BK	120	PRO
33	BL	2	ARG
33	BL	13	LYS
33	BL	14	LYS
33	BL	18	ARG
33	BL	27	LEU
33	BL	29	LYS
33	BL	33	ARG
33	BL	36	LYS
33	BL	39	LYS
33	BL	41	ARG
33	BL	47	ARG
33	BL	55	MET
33	BL	56	PRO
33	BL	57	LEU
33	BL	59	ARG
33	BL	60	ARG
33	BL	61	LEU
33	BL	70	LYS
33	BL	76	GLU
33	BL	78	ARG
33	BL	82	LEU

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Mol	Chain	Res	Type
33	BL	84	LYS
33	BL	90	VAL
33	BL	91	ASP
33	BL	92	LEU
33	BL	96	LYS
33	BL	103	ILE
33	BL	104	GLN
33	BL	105	ILE
33	BL	106	GLU
33	BL	107	PHE
33	BL	111	ILE
33	BL	112	LEU
33	BL	115	GLU
33	BL	116	VAL
33	BL	118	THR
33	BL	121	THR
33	BL	122	VAL
33	BL	126	ARG
33	BL	127	VAL
33	BL	143	GLU
34	BM	1	MET
34	BM	3	GLN
34	BM	5	LYS
34	BM	8	LYS
34	BM	9	PHE
34	BM	11	LYS
34	BM	12	MET
34	BM	14	LYS
34	BM	18	ARG
34	BM	22	GLN
34	BM	28	PHE
34	BM	33	LEU
34	BM	36	VAL
34	BM	45	GLN
34	BM	54	THR
34	BM	55	ARG
34	BM	63	ILE
34	BM	71	LYS
34	BM	76	LYS
34	BM	86	LYS
34	BM	88	ASN
34	BM	96	ILE

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Mol	Chain	Res	Type
34	BM	100	LYS
34	BM	104	GLU
34	BM	105	MET
34	BM	109	PRO
34	BM	117	PHE
34	BM	118	LYS
34	BM	124	LEU
34	BM	132	THR
34	BM	133	LYS
34	BM	136	MET
35	BN	1	MET
35	BN	3	HIS
35	BN	9	GLN
35	BN	10	LEU
35	BN	11	ASN
35	BN	13	ASN
35	BN	21	PHE
35	BN	22	ARG
35	BN	33	ILE
35	BN	34	ILE
35	BN	35	LYS
35	BN	45	ARG
35	BN	48	VAL
35	BN	57	THR
35	BN	65	LEU
35	BN	73	ASN
35	BN	75	ILE
35	BN	87	PHE
35	BN	94	TYR
35	BN	98	LEU
35	BN	99	LYS
35	BN	103	ARG
35	BN	112	TYR
35	BN	116	VAL
35	BN	120	GLU
36	BO	1	MET
36	BO	2	ASP
36	BO	3	LYS
36	BO	5	SER
36	BO	9	ARG
36	BO	10	ARG
36	BO	13	ARG

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Mol	Chain	Res	Type
36	BO	15	ARG
36	BO	25	ARG
36	BO	31	THR
36	BO	32	PRO
36	BO	34	HIS
36	BO	35	ILE
36	BO	38	GLN
36	BO	40	ILE
36	BO	56	LYS
36	BO	60	GLU
36	BO	62	LEU
36	BO	64	TYR
36	BO	67	ASN
36	BO	68	LYS
36	BO	69	ASP
36	BO	74	VAL
36	BO	84	GLU
36	BO	85	LYS
36	BO	93	ASP
36	BO	97	PHE
36	BO	112	GLU
36	BO	116	GLN
37	BP	2	ASN
37	BP	11	GLN
37	BP	15	ASP
37	BP	24	THR
37	BP	38	ARG
37	BP	42	PHE
37	BP	46	VAL
37	BP	47	ILE
37	BP	50	ARG
37	BP	52	ARG
37	BP	55	HIS
37	BP	56	SER
37	BP	60	VAL
37	BP	73	PHE
37	BP	74	GLN
37	BP	79	VAL
37	BP	87	ARG
37	BP	88	ARG
37	BP	100	ARG
37	BP	108	ARG

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Mol	Chain	Res	Type
37	BP	111	GLU
37	BP	113	LEU
38	BQ	10	ARG
38	BQ	12	ARG
38	BQ	21	LYS
38	BQ	32	ARG
38	BQ	36	GLN
38	BQ	38	VAL
38	BQ	39	ILE
38	BQ	47	ARG
38	BQ	53	LYS
38	BQ	55	GLN
38	BQ	65	ASN
38	BQ	71	ASN
38	BQ	80	ASN
38	BQ	84	LYS
38	BQ	87	VAL
38	BQ	90	ASP
38	BQ	91	ARG
38	BQ	92	LYS
38	BQ	94	LEU
38	BQ	96	ASP
38	BQ	101	ASP
38	BQ	102	LYS
38	BQ	108	LEU
39	BR	12	HIS
39	BR	13	ARG
39	BR	16	GLU
39	BR	18	GLN
39	BR	25	LEU
39	BR	39	LEU
39	BR	40	MET
39	BR	43	ASN
39	BR	52	PRO
39	BR	53	PHE
39	BR	55	ASP
39	BR	66	HIS
39	BR	79	ARG
39	BR	83	TYR
39	BR	94	THR
39	BR	95	ASP
40	BS	3	THR

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Mol	Chain	Res	Type
40	BS	4	ILE
40	BS	6	LYS
40	BS	8	ARG
40	BS	9	HIS
40	BS	13	SER
40	BS	16	LYS
40	BS	28	LYS
40	BS	36	LEU
40	BS	37	THR
40	BS	60	HIS
40	BS	67	ASP
40	BS	69	LEU
40	BS	77	ASP
40	BS	80	PRO
40	BS	88	ARG
40	BS	90	LYS
40	BS	94	ASP
40	BS	95	ARG
40	BS	102	HIS
40	BS	110	ARG
41	BT	1	MET
41	BT	5	GLU
41	BT	6	ARG
41	BT	8	LEU
41	BT	10	VAL
41	BT	11	LEU
41	BT	15	HIS
41	BT	21	SER
41	BT	24	MET
41	BT	28	ASN
41	BT	30	ILE
41	BT	31	VAL
41	BT	44	LYS
41	BT	47	VAL
41	BT	52	GLU
41	BT	66	LYS
41	BT	68	LYS
41	BT	69	ARG
41	BT	79	ASP
41	BT	85	VAL
41	BT	89	GLU
41	BT	91	GLN

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Mol	Chain	Res	Type
41	BT	94	ASP
42	BU	3	LYS
42	BU	6	ARG
42	BU	33	VAL
42	BU	38	ILE
42	BU	43	LYS
42	BU	52	ASN
42	BU	59	GLU
42	BU	61	GLU
42	BU	64	ILE
42	BU	66	VAL
42	BU	68	ASN
42	BU	71	ILE
42	BU	72	PHE
42	BU	80	ASP
42	BU	81	ARG
42	BU	85	ARG
42	BU	88	ASP
42	BU	90	LYS
42	BU	93	ARG
42	BU	95	PHE
42	BU	100	GLU
43	BW	2	HIS
43	BW	8	SER
43	BW	10	ARG
43	BW	18	LYS
43	BW	19	ARG
43	BW	20	LEU
43	BW	23	LYS
43	BW	40	ARG
43	BW	44	PHE
43	BW	45	HIS
43	BW	54	ARG
43	BW	55	ASP
43	BW	65	LYS
43	BW	69	GLU
43	BW	81	ILE
43	BW	84	GLU
44	BX	2	LYS
44	BX	5	GLU
44	BX	7	ARG
44	BX	8	GLU

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Mol	Chain	Res	Type
44	BX	12	GLU
44	BX	15	ASN
44	BX	17	GLU
44	BX	18	LEU
44	BX	34	SER
44	BX	36	GLN
44	BX	38	GLN
44	BX	41	HIS
44	BX	44	LYS
44	BX	45	GLN
44	BX	53	VAL
45	BY	6	ILE
45	BY	7	THR
45	BY	8	GLN
45	BY	9	THR
45	BY	10	ARG
45	BY	15	ARG
45	BY	16	LEU
45	BY	19	HIS
45	BY	20	LYS
45	BY	31	ILE
45	BY	37	ARG
45	BY	39	ASP
46	BZ	4	ASP
46	BZ	6	HIS
46	BZ	8	LYS
46	BZ	13	THR
46	BZ	15	SER
46	BZ	18	CYS
46	BZ	24	ILE
46	BZ	25	ARG
46	BZ	30	HIS
46	BZ	32	LEU
46	BZ	33	ASN
46	BZ	35	ASP
46	BZ	40	CYS
46	BZ	49	ARG
46	BZ	58	ASP
46	BZ	63	ARG
46	BZ	65	ASN
46	BZ	66	ILE
46	BZ	70	LYS

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Mol	Chain	Res	Type
47	B0	3	GLN
47	B0	4	GLN
47	B0	5	ASN
47	B0	11	LYS
47	B0	12	ARG
47	B0	14	MET
47	B0	16	ARG
47	B0	21	LEU
47	B0	25	THR
47	B0	27	LEU
47	B0	29	VAL
47	B0	32	THR
47	B0	35	GLU
47	B0	39	ARG
47	B0	51	ARG
47	B0	52	LYS
48	B1	4	ILE
48	B1	5	ARG
48	B1	6	GLU
48	B1	7	LYS
48	B1	9	LYS
48	B1	23	THR
48	B1	24	LYS
48	B1	32	LYS
48	B1	33	LEU
48	B1	34	GLU
48	B1	36	LYS
48	B1	44	GLN
48	B1	49	LYS
48	B1	52	LYS
48	B1	53	ILE
49	B2	12	ARG
49	B2	18	PHE
49	B2	19	ARG
49	B2	21	ARG
49	B2	25	LYS
49	B2	26	ASN
49	B2	29	GLN
49	B2	33	ARG
49	B2	41	ARG
49	B2	45	SER
49	B2	46	LYS

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Mol	Chain	Res	Type
50	B3	3	ILE
50	B3	4	LYS
50	B3	6	VAL
50	B3	11	LYS
50	B3	12	ARG
50	B3	18	LYS
50	B3	21	PHE
50	B3	25	HIS
50	B3	28	LEU
50	B3	29	ARG
50	B3	30	HIS
50	B3	32	LEU
50	B3	35	LYS
50	B3	37	THR
50	B3	41	ARG
50	B3	44	ARG
50	B3	46	LYS
50	B3	51	LYS
51	B4	2	LYS
51	B4	4	ARG
51	B4	8	LYS
51	B4	9	LYS
51	B4	12	ARG
51	B4	18	LYS
51	B4	19	ARG
51	B4	20	ASP
51	B4	23	ILE
51	B4	27	CYS
51	B4	33	HIS
51	B4	36	ARG
51	B4	37	GLN
52	BI	2	LYS
52	BI	96	LYS
52	BI	141	ASP
2	CC	2	GLN
2	CC	13	ILE
2	CC	19	SER
2	CC	20	THR
2	CC	25	THR
2	CC	28	PHE
2	CC	30	ASP
2	CC	40	GLN

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Mol	Chain	Res	Type
2	CC	46	LEU
2	CC	87	ARG
2	CC	88	LYS
2	CC	96	VAL
2	CC	128	MET
2	CC	129	PHE
2	CC	130	ARG
2	CC	134	LYS
2	CC	143	LEU
2	CC	164	THR
2	CC	165	GLU
2	CC	166	TRP
2	CC	168	ARG
2	CC	176	THR
2	CC	181	ILE
2	CC	206	ILE
3	CD	2	ARG
3	CD	16	THR
3	CD	25	ARG
3	CD	28	ASP
3	CD	30	LYS
3	CD	39	GLN
3	CD	46	ARG
3	CD	47	LEU
3	CD	48	SER
3	CD	49	ASP
3	CD	55	ARG
3	CD	58	GLN
3	CD	69	ARG
3	CD	71	PHE
3	CD	77	GLU
3	CD	84	ASN
3	CD	92	LEU
3	CD	93	LEU
3	CD	99	ASN
3	CD	100	VAL
3	CD	106	PHE
3	CD	125	ASN
3	CD	127	ARG
3	CD	130	ASN
3	CD	137	SER
3	CD	146	GLU

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Mol	Chain	Res	Type
3	CD	147	LYS
3	CD	154	VAL
3	CD	160	LEU
3	CD	162	GLU
3	CD	164	ARG
3	CD	170	LEU
3	CD	186	GLU
3	CD	196	GLU
3	CD	199	ILE
4	CE	9	GLU
4	CE	11	GLN
4	CE	14	LEU
4	CE	21	SER
4	CE	23	THR
4	CE	25	LYS
4	CE	28	ARG
4	CE	30	PHE
4	CE	55	VAL
4	CE	61	LYS
4	CE	89	THR
4	CE	92	ARG
4	CE	95	MET
4	CE	104	ILE
4	CE	120	HIS
4	CE	133	ILE
4	CE	141	ASP
4	CE	144	GLU
4	CE	146	MET
4	CE	147	ASN
4	CE	151	MET
5	CF	3	HIS
5	CF	6	ILE
5	CF	13	ASP
5	CF	39	LEU
5	CF	54	LEU
5	CF	55	HIS
5	CF	59	TYR
5	CF	62	MET
5	CF	72	ASP
5	CF	76	THR
5	CF	86	ARG
5	CF	91	ARG

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Mol	Chain	Res	Type
5	CF	97	THR
6	CG	2	ARG
6	CG	8	GLN
6	CG	10	LYS
6	CG	26	VAL
6	CG	46	LEU
6	CG	56	SER
6	CG	58	LEU
6	CG	71	THR
6	CG	75	LYS
6	CG	78	ARG
6	CG	84	TYR
6	CG	89	GLU
6	CG	98	LEU
6	CG	108	ARG
6	CG	110	ARG
6	CG	115	MET
6	CG	117	LEU
6	CG	134	VAL
6	CG	153	TYR
7	CH	6	ILE
7	CH	8	ASP
7	CH	14	ARG
7	CH	28	SER
7	CH	45	ILE
7	CH	47	ASP
7	CH	53	ASP
7	CH	57	GLU
7	CH	68	LYS
7	CH	72	GLU
7	CH	79	ARG
7	CH	82	LEU
7	CH	88	LYS
7	CH	107	LYS
7	CH	110	MET
7	CH	117	GLN
7	CH	123	GLU
7	CH	124	ILE
7	CH	128	VAL
8	CI	4	GLN
8	CI	6	TYR
8	CI	26	LYS

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Mol	Chain	Res	Type
8	CI	27	ILE
8	CI	37	TYR
8	CI	45	MET
8	CI	52	GLU
8	CI	55	ASP
8	CI	60	LEU
8	CI	61	ASP
8	CI	62	LEU
8	CI	74	GLN
8	CI	87	MET
8	CI	109	GLN
8	CI	121	ARG
8	CI	122	ARG
9	CJ	32	THR
9	CJ	37	ARG
9	CJ	47	GLU
9	CJ	57	VAL
9	CJ	71	LEU
9	CJ	77	VAL
9	CJ	78	GLU
9	CJ	92	LEU
10	CK	16	SER
10	CK	28	ASN
10	CK	31	VAL
10	CK	34	THR
10	CK	45	THR
10	CK	55	ARG
10	CK	64	VAL
10	CK	69	CYS
10	CK	75	GLU
10	CK	76	TYR
10	CK	78	ILE
10	CK	81	LEU
10	CK	84	MET
10	CK	97	ARG
10	CK	109	ILE
10	CK	112	VAL
11	CL	8	ARG
11	CL	14	LYS
11	CL	17	LYS
11	CL	26	CYS
11	CL	28	GLN

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Mol	Chain	Res	Type
11	CL	33	CYS
11	CL	34	THR
11	CL	40	THR
11	CL	42	LYS
11	CL	46	SER
11	CL	49	ARG
11	CL	53	ARG
11	CL	61	GLU
11	CL	69	GLU
11	CL	73	LEU
11	CL	75	GLU
11	CL	88	ASP
11	CL	93	ARG
11	CL	98	ARG
11	CL	107	LYS
11	CL	109	ARG
11	CL	111	GLN
11	CL	120	ARG
11	CL	122	LYS
12	CM	2	ARG
12	CM	15	VAL
12	CM	40	GLU
12	CM	45	SER
12	CM	46	GLU
12	CM	49	GLU
12	CM	56	ARG
12	CM	65	GLU
12	CM	67	ASP
12	CM	88	LEU
12	CM	92	ARG
12	CM	97	ARG
12	CM	102	LYS
12	CM	106	ARG
12	CM	109	LYS
12	CM	112	ARG
13	CN	5	MET
13	CN	17	ASP
13	CN	19	TYR
13	CN	23	ARG
13	CN	31	SER
13	CN	44	VAL
13	CN	48	GLN

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Mol	Chain	Res	Type
13	CN	50	LEU
13	CN	82	LYS
13	CN	89	ARG
13	CN	95	LEU
14	CO	4	THR
14	CO	39	GLN
14	CO	44	GLU
14	CO	50	HIS
14	CO	51	SER
14	CO	53	ARG
14	CO	56	LEU
14	CO	59	VAL
14	CO	63	ARG
14	CO	69	LEU
14	CO	78	THR
14	CO	80	LEU
14	CO	83	ARG
15	CP	5	ARG
15	CP	19	VAL
15	CP	23	ASP
15	CP	25	ARG
15	CP	28	ARG
15	CP	32	PHE
15	CP	35	ARG
15	CP	50	THR
15	CP	57	ILE
15	CP	67	ILE
15	CP	68	SER
16	CQ	5	ARG
16	CQ	7	LEU
16	CQ	20	ILE
16	CQ	26	ARG
16	CQ	39	ARG
16	CQ	48	GLU
16	CQ	60	ILE
16	CQ	64	ARG
16	CQ	80	LYS
17	CR	23	LYS
17	CR	25	ILE
17	CR	35	SER
17	CR	37	LYS
17	CR	38	ILE

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Mol	Chain	Res	Type
17	CR	42	ARG
17	CR	47	ARG
18	CS	3	SER
18	CS	5	LYS
18	CS	10	ILE
18	CS	11	ASP
18	CS	12	LEU
18	CS	13	HIS
18	CS	20	LYS
18	CS	26	ASP
18	CS	27	LYS
18	CS	28	LYS
18	CS	33	TRP
18	CS	36	ARG
18	CS	38	THR
18	CS	47	THR
18	CS	52	ASN
18	CS	62	THR
18	CS	64	GLU
18	CS	73	PHE
19	CT	9	ARG
19	CT	11	ILE
19	CT	25	SER
19	CT	29	THR
19	CT	35	TYR
19	CT	47	GLN
19	CT	48	LYS
19	CT	51	ASN
19	CT	53	MET
19	CT	66	ILE
19	CT	69	ASN
19	CT	70	LYS
19	CT	73	ARG
19	CT	77	ASN
20	CB	8	MET
20	CB	9	LEU
20	CB	22	TRP
20	CB	23	ASN
20	CB	35	ASN
20	CB	36	LYS
20	CB	37	VAL
20	CB	46	VAL

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Mol	Chain	Res	Type
20	CB	53	LEU
20	CB	57	ASN
20	CB	62	ARG
20	CB	65	LYS
20	CB	84	LEU
20	CB	94	ARG
20	CB	116	LEU
20	CB	121	GLN
20	CB	139	GLU
20	CB	143	LEU
20	CB	145	ASN
20	CB	168	GLU
20	CB	176	ASN
20	CB	207	ARG
20	CB	211	LEU
20	CB	213	LEU
20	CB	219	THR
20	CB	221	ARG
20	CB	222	GLU
21	CU	7	GLU
21	CU	8	ASN
21	CU	16	ARG
21	CU	17	ARG
21	CU	20	ARG
21	CU	22	CYS
21	CU	24	LYS
21	CU	33	ARG
21	CU	35	GLU
21	CU	36	PHE
21	CU	37	TYR
21	CU	38	GLU
21	CU	42	THR
21	CU	48	LYS
24	DV	18	ARG
24	DV	35	GLU
24	DV	41	GLU
24	DV	42	LEU
24	DV	51	GLN
24	DV	69	GLU
24	DV	70	ILE
24	DV	79	ARG
24	DV	86	LEU

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Mol	Chain	Res	Type
25	DC	5	CYS
25	DC	10	PRO
25	DC	12	ARG
25	DC	22	GLU
25	DC	28	PRO
25	DC	29	PHE
25	DC	32	LEU
25	DC	33	LEU
25	DC	34	GLU
25	DC	38	LYS
25	DC	42	ARG
25	DC	47	ARG
25	DC	49	THR
25	DC	51	ARG
25	DC	57	HIS
25	DC	58	LYS
25	DC	61	TYR
25	DC	62	ARG
25	DC	64	VAL
25	DC	67	LYS
25	DC	69	ASN
25	DC	84	PRO
25	DC	85	ASN
25	DC	86	ARG
25	DC	96	LYS
25	DC	102	TYR
25	DC	104	LEU
25	DC	107	LYS
25	DC	110	LYS
25	DC	119	VAL
25	DC	120	ASP
25	DC	124	LYS
25	DC	127	ASN
25	DC	128	THR
25	DC	129	LEU
25	DC	133	ASN
25	DC	141	HIS
25	DC	143	VAL
25	DC	145	MET
25	DC	155	ARG
25	DC	162	GLN
25	DC	167	ASP

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Mol	Chain	Res	Type
25	DC	171	VAL
25	DC	175	LEU
25	DC	179	GLU
25	DC	188	ARG
25	DC	194	VAL
25	DC	203	VAL
25	DC	206	LYS
25	DC	211	ARG
25	DC	218	THR
25	DC	224	MET
25	DC	231	HIS
25	DC	235	GLU
25	DC	237	ARG
25	DC	246	PRO
25	DC	250	GLN
25	DC	251	THR
25	DC	254	LYS
25	DC	256	THR
25	DC	264	LYS
25	DC	267	VAL
25	DC	268	ARG
26	DD	4	LEU
26	DD	7	LYS
26	DD	8	LYS
26	DD	12	THR
26	DD	14	ILE
26	DD	15	PHE
26	DD	16	THR
26	DD	25	THR
26	DD	27	ILE
26	DD	32	ASN
26	DD	33	ARG
26	DD	34	VAL
26	DD	36	GLN
26	DD	40	LEU
26	DD	45	TYR
26	DD	49	GLN
26	DD	52	THR
26	DD	62	LYS
26	DD	67	HIS
26	DD	70	LYS
26	DD	77	ARG

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Mol	Chain	Res	Type
26	DD	79	LEU
26	DD	82	PHE
26	DD	83	ARG
26	DD	91	THR
26	DD	101	PHE
26	DD	104	VAL
26	DD	106	LYS
26	DD	107	VAL
26	DD	108	ASP
26	DD	114	LYS
26	DD	116	LYS
26	DD	118	PHE
26	DD	121	THR
26	DD	124	ARG
26	DD	126	ASN
26	DD	127	PHE
26	DD	128	ARG
26	DD	133	THR
26	DD	137	SER
26	DD	138	LEU
26	DD	139	SER
26	DD	142	VAL
26	DD	151	THR
26	DD	152	PRO
26	DD	157	LYS
26	DD	176	ASP
26	DD	185	ASN
26	DD	188	LEU
26	DD	197	THR
26	DD	208	LYS
27	DE	1	MET
27	DE	5	LEU
27	DE	19	PHE
27	DE	21	ARG
27	DE	24	ASN
27	DE	40	ARG
27	DE	43	THR
27	DE	49	ARG
27	DE	53	THR
27	DE	74	LYS
27	DE	84	THR
27	DE	94	GLN

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Mol	Chain	Res	Type
27	DE	97	ASN
27	DE	99	LYS
27	DE	100	MET
27	DE	107	SER
27	DE	109	LEU
27	DE	117	ARG
27	DE	118	LEU
27	DE	132	LYS
27	DE	134	LEU
27	DE	137	LYS
27	DE	143	LEU
27	DE	148	ILE
27	DE	152	GLU
27	DE	154	ASP
27	DE	155	GLU
27	DE	157	LEU
27	DE	158	PHE
27	DE	164	LEU
27	DE	167	VAL
27	DE	171	ASP
27	DE	173	THR
27	DE	184	ASP
27	DE	185	LYS
27	DE	188	MET
27	DE	191	ASP
27	DE	196	VAL
28	DF	14	LYS
28	DF	23	SER
28	DF	32	LYS
28	DF	37	MET
28	DF	45	ASP
28	DF	48	LEU
28	DF	59	ILE
28	DF	77	LYS
28	DF	90	LEU
28	DF	93	GLU
28	DF	107	VAL
28	DF	108	PRO
28	DF	112	ASP
28	DF	114	ARG
28	DF	126	ASN
28	DF	132	ARG

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Mol	Chain	Res	Type
28	DF	133	GLU
28	DF	135	ILE
28	DF	143	ASP
28	DF	151	LEU
28	DF	161	SER
28	DF	162	ASP
28	DF	164	GLU
28	DF	168	LEU
28	DF	172	PHE
28	DF	174	PHE
28	DF	177	ARG
29	DG	5	LYS
29	DG	8	VAL
29	DG	15	ASP
29	DG	24	THR
29	DG	29	ASN
29	DG	33	THR
29	DG	35	THR
29	DG	37	ASN
29	DG	43	LYS
29	DG	48	THR
29	DG	54	ARG
29	DG	71	LEU
29	DG	80	GLU
29	DG	85	LYS
29	DG	86	LEU
29	DG	93	TYR
29	DG	100	ASN
29	DG	101	VAL
29	DG	104	LEU
29	DG	116	LEU
29	DG	121	THR
29	DG	126	THR
29	DG	132	LEU
29	DG	154	GLU
29	DG	161	VAL
29	DG	171	LYS
30	DH	4	ILE
30	DH	7	ASP
30	DH	8	LYS
30	DH	11	ASN
30	DH	30	LEU

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Mol	Chain	Res	Type
30	DH	35	LYS
30	DH	38	PRO
30	DH	44	ILE
30	DH	50	ARG
30	DH	53	GLU
30	DH	57	LYS
30	DH	68	ARG
30	DH	70	GLU
30	DH	75	LEU
30	DH	77	THR
30	DH	96	THR
30	DH	97	ARG
30	DH	101	ASP
30	DH	112	LYS
30	DH	119	ASN
30	DH	122	LEU
30	DH	124	THR
30	DH	129	GLU
30	DH	141	LYS
31	DJ	1	MET
31	DJ	3	THR
31	DJ	4	PHE
31	DJ	5	THR
31	DJ	7	LYS
31	DJ	15	TRP
31	DJ	25	LEU
31	DJ	27	ARG
31	DJ	31	GLU
31	DJ	35	ARG
31	DJ	36	LEU
31	DJ	41	LYS
31	DJ	47	HIS
31	DJ	49	ASP
31	DJ	52	ASP
31	DJ	61	LYS
31	DJ	69	ARG
31	DJ	84	ILE
31	DJ	85	LYS
31	DJ	91	GLU
31	DJ	92	MET
31	DJ	95	ARG
31	DJ	109	LEU

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Mol	Chain	Res	Type
31	DJ	118	MET
31	DJ	120	ARG
31	DJ	121	LYS
31	DJ	132	HIS
31	DJ	135	GLN
31	DJ	140	LEU
32	DK	2	ILE
32	DK	6	THR
32	DK	7	MET
32	DK	10	VAL
32	DK	32	TYR
32	DK	41	ILE
32	DK	47	ILE
32	DK	56	ASP
32	DK	58	LEU
32	DK	59	LYS
32	DK	65	THR
32	DK	75	SER
32	DK	84	CYS
32	DK	90	ASN
32	DK	92	GLU
32	DK	95	ILE
32	DK	98	ARG
32	DK	104	THR
32	DK	105	ARG
32	DK	117	SER
32	DK	120	PRO
33	DL	2	ARG
33	DL	3	LEU
33	DL	14	LYS
33	DL	19	LEU
33	DL	21	ARG
33	DL	27	LEU
33	DL	29	LYS
33	DL	38	GLN
33	DL	42	SER
33	DL	46	VAL
33	DL	47	ARG
33	DL	48	ARG
33	DL	50	PHE
33	DL	51	GLU
33	DL	55	MET

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Mol	Chain	Res	Type
33	DL	60	ARG
33	DL	64	PHE
33	DL	69	ARG
33	DL	73	ILE
33	DL	77	ILE
33	DL	78	ARG
33	DL	92	LEU
33	DL	96	LYS
33	DL	104	GLN
33	DL	106	GLU
33	DL	107	PHE
33	DL	109	LYS
33	DL	116	VAL
33	DL	119	PRO
33	DL	121	THR
33	DL	125	LEU
33	DL	128	THR
33	DL	135	ILE
33	DL	136	GLU
33	DL	142	ILE
34	DM	1	MET
34	DM	2	LEU
34	DM	5	LYS
34	DM	6	ARG
34	DM	9	PHE
34	DM	11	LYS
34	DM	12	MET
34	DM	14	LYS
34	DM	16	ARG
34	DM	17	ASN
34	DM	18	ARG
34	DM	22	GLN
34	DM	26	VAL
34	DM	38	ARG
34	DM	42	THR
34	DM	62	LYS
34	DM	67	VAL
34	DM	72	PRO
34	DM	76	LYS
34	DM	80	VAL
34	DM	81	ARG
34	DM	84	LYS

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Mol	Chain	Res	Type
34	DM	89	VAL
34	DM	90	GLU
34	DM	91	TYR
34	DM	96	ILE
34	DM	97	GLN
34	DM	100	LYS
34	DM	105	MET
34	DM	112	LEU
34	DM	115	GLU
34	DM	118	LYS
34	DM	124	LEU
34	DM	134	THR
35	DN	1	MET
35	DN	2	ARG
35	DN	4	ARG
35	DN	6	SER
35	DN	14	SER
35	DN	18	GLN
35	DN	36	THR
35	DN	42	LYS
35	DN	43	GLU
35	DN	45	ARG
35	DN	46	ARG
35	DN	49	GLU
35	DN	56	LYS
35	DN	57	THR
35	DN	58	ASP
35	DN	65	LEU
35	DN	71	ARG
35	DN	76	VAL
35	DN	81	ASN
35	DN	87	PHE
35	DN	90	ARG
35	DN	94	TYR
35	DN	95	THR
35	DN	96	ARG
35	DN	98	LEU
35	DN	121	LYS
35	DN	127	GLU
36	DO	2	ASP
36	DO	4	LYS
36	DO	18	LEU

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Mol	Chain	Res	Type
36	DO	27	VAL
36	DO	29	HIS
36	DO	30	ARG
36	DO	35	ILE
36	DO	38	GLN
36	DO	40	ILE
36	DO	60	GLU
36	DO	65	THR
36	DO	68	LYS
36	DO	87	ILE
36	DO	97	PHE
36	DO	98	GLN
36	DO	99	TYR
36	DO	103	VAL
36	DO	108	ASP
37	DP	1	SER
37	DP	8	GLU
37	DP	15	ASP
37	DP	18	SER
37	DP	24	THR
37	DP	28	LYS
37	DP	38	ARG
37	DP	46	VAL
37	DP	47	ILE
37	DP	50	ARG
37	DP	52	ARG
37	DP	54	LEU
37	DP	58	PHE
37	DP	60	VAL
37	DP	70	GLU
37	DP	73	PHE
37	DP	74	GLN
37	DP	75	THR
37	DP	76	HIS
37	DP	79	VAL
37	DP	80	VAL
37	DP	81	ASP
37	DP	83	ILE
37	DP	84	SER
37	DP	87	ARG
37	DP	91	VAL
37	DP	97	TYR

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Mol	Chain	Res	Type
37	DP	101	GLU
37	DP	108	ARG
37	DP	109	ILE
37	DP	111	GLU
37	DP	112	ARG
38	DQ	2	ARG
38	DQ	4	LYS
38	DQ	13	HIS
38	DQ	27	ARG
38	DQ	35	PHE
38	DQ	36	GLN
38	DQ	39	ILE
38	DQ	40	LYS
38	DQ	53	LYS
38	DQ	58	GLN
38	DQ	70	GLN
38	DQ	78	PHE
38	DQ	84	LYS
38	DQ	90	ASP
38	DQ	91	ARG
38	DQ	93	ILE
38	DQ	101	ASP
38	DQ	116	LEU
39	DR	4	VAL
39	DR	6	GLN
39	DR	7	SER
39	DR	10	LYS
39	DR	12	HIS
39	DR	13	ARG
39	DR	18	GLN
39	DR	22	LEU
39	DR	23	GLU
39	DR	26	ASP
39	DR	32	THR
39	DR	37	GLU
39	DR	43	ASN
39	DR	62	GLU
39	DR	70	GLU
39	DR	73	LYS
39	DR	75	VAL
39	DR	79	ARG
39	DR	84	ARG

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Mol	Chain	Res	Type
39	DR	85	LYS
39	DR	86	GLN
39	DR	91	GLN
39	DR	92	TRP
39	DR	94	THR
39	DR	96	VAL
39	DR	99	THR
40	DS	3	THR
40	DS	9	HIS
40	DS	11	ARG
40	DS	19	LEU
40	DS	23	LEU
40	DS	24	ILE
40	DS	25	ARG
40	DS	30	SER
40	DS	55	ILE
40	DS	62	ASP
40	DS	76	VAL
40	DS	82	MET
40	DS	83	LYS
40	DS	85	ILE
40	DS	86	MET
40	DS	110	ARG
41	DT	3	ARG
41	DT	5	GLU
41	DT	6	ARG
41	DT	11	LEU
41	DT	15	HIS
41	DT	18	GLU
41	DT	19	LYS
41	DT	24	MET
41	DT	25	GLU
41	DT	29	THR
41	DT	50	LEU
41	DT	51	PHE
41	DT	58	VAL
41	DT	61	LEU
41	DT	62	VAL
41	DT	64	LYS
41	DT	66	LYS
41	DT	68	LYS
41	DT	69	ARG

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Mol	Chain	Res	Type
41	DT	73	ARG
41	DT	76	ARG
41	DT	82	LYS
41	DT	88	LYS
42	DU	4	ILE
42	DU	8	ASP
42	DU	13	LEU
42	DU	25	LYS
42	DU	26	ASN
42	DU	27	VAL
42	DU	29	SER
42	DU	40	LEU
42	DU	42	LYS
42	DU	57	ILE
42	DU	58	VAL
42	DU	60	LYS
42	DU	61	GLU
42	DU	65	GLN
42	DU	69	VAL
42	DU	71	ILE
42	DU	80	ASP
42	DU	85	ARG
42	DU	94	PHE
42	DU	95	PHE
42	DU	96	LYS
42	DU	98	ASN
42	DU	99	SER
43	DW	2	HIS
43	DW	3	LYS
43	DW	10	ARG
43	DW	13	ARG
43	DW	14	ASP
43	DW	15	SER
43	DW	16	GLU
43	DW	18	LYS
43	DW	19	ARG
43	DW	25	PHE
43	DW	37	VAL
43	DW	39	GLN
43	DW	40	ARG
43	DW	61	LYS
43	DW	63	ASP

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Mol	Chain	Res	Type
43	DW	75	ASN
43	DW	82	GLU
44	DX	8	GLU
44	DX	14	LEU
44	DX	18	LEU
44	DX	20	ASN
44	DX	23	ARG
44	DX	25	GLN
44	DX	28	LEU
44	DX	30	MET
44	DX	31	GLN
44	DX	39	GLN
44	DX	44	LYS
44	DX	47	ARG
45	DY	5	LYS
45	DY	10	ARG
45	DY	13	ILE
45	DY	18	LYS
45	DY	26	LEU
45	DY	29	ARG
45	DY	34	THR
45	DY	35	VAL
45	DY	40	THR
45	DY	43	ILE
45	DY	44	ARG
45	DY	46	MET
45	DY	53	MET
45	DY	57	GLU
45	DY	58	GLU
46	DZ	9	TYR
46	DZ	20	ASN
46	DZ	24	ILE
46	DZ	28	VAL
46	DZ	31	ASP
46	DZ	33	ASN
46	DZ	40	CYS
46	DZ	47	LYS
46	DZ	48	GLN
46	DZ	50	ASP
46	DZ	56	ARG
46	DZ	64	PHE
46	DZ	65	ASN

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Mol	Chain	Res	Type
46	DZ	66	ILE
46	DZ	67	PRO
46	DZ	69	SER
47	D0	2	VAL
47	D0	4	GLN
47	D0	5	ASN
47	D0	8	THR
47	D0	12	ARG
47	D0	15	ARG
47	D0	19	ASP
47	D0	21	LEU
47	D0	22	THR
47	D0	32	THR
47	D0	37	HIS
47	D0	51	ARG
47	D0	52	LYS
47	D0	53	VAL
48	D1	8	ILE
48	D1	12	SER
48	D1	18	HIS
48	D1	19	PHE
48	D1	22	THR
48	D1	24	LYS
48	D1	25	ASN
48	D1	26	LYS
48	D1	27	ARG
48	D1	31	GLU
48	D1	33	LEU
48	D1	35	LEU
48	D1	41	VAL
48	D1	44	GLN
48	D1	49	LYS
49	D2	3	ARG
49	D2	10	LEU
49	D2	15	SER
49	D2	18	PHE
49	D2	19	ARG
49	D2	25	LYS
49	D2	28	ARG
49	D2	34	ARG
49	D2	39	ARG
49	D2	44	VAL

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Mol	Chain	Res	Type
49	D2	46	LYS
50	D3	2	LYS
50	D3	7	ARG
50	D3	24	LYS
50	D3	29	ARG
50	D3	32	LEU
50	D3	34	LYS
50	D3	35	LYS
50	D3	48	MET
50	D3	53	ASP
50	D3	54	LEU
50	D3	61	LEU
51	D4	2	LYS
51	D4	8	LYS
51	D4	9	LYS
51	D4	11	CYS
51	D4	13	ASN
51	D4	17	VAL
51	D4	19	ARG
51	D4	20	ASP
51	D4	23	ILE
51	D4	24	ARG
51	D4	25	VAL
51	D4	26	ILE
51	D4	27	CYS
51	D4	30	GLU
51	D4	32	LYS
51	D4	35	GLN
51	D4	36	ARG
52	DI	2	LYS
52	DI	5	GLN
52	DI	54	ILE
52	DI	99	LYS
52	DI	121	ILE

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (317) such sidechains are listed below:

Mol	Chain	Res	Type
2	AC	2	GLN
2	AC	5	HIS
2	AC	40	GLN
2	AC	68	HIS

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Mol	Chain	Res	Type
2	AC	122	GLN
2	AC	139	ASN
2	AC	184	ASN
3	AD	35	GLN
3	AD	84	ASN
3	AD	99	ASN
3	AD	135	GLN
3	AD	195	ASN
4	AE	69	ASN
4	AE	72	ASN
4	AE	96	GLN
4	AE	121	ASN
4	AE	131	ASN
5	AF	14	GLN
5	AF	17	GLN
5	AF	46	GLN
5	AF	58	HIS
6	AG	67	ASN
6	AG	85	GLN
6	AG	121	ASN
7	AH	3	GLN
7	AH	17	GLN
8	AI	4	GLN
8	AI	24	ASN
8	AI	30	ASN
8	AI	31	GLN
8	AI	36	GLN
8	AI	49	GLN
8	AI	109	GLN
9	AJ	15	HIS
9	AJ	20	GLN
9	AJ	70	HIS
9	AJ	99	GLN
10	AK	28	ASN
10	AK	37	GLN
10	AK	100	ASN
11	AL	58	ASN
11	AL	72	ASN
12	AM	99	GLN
13	AN	59	GLN
13	AN	61	ASN
13	AN	65	GLN

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Mol	Chain	Res	Type
14	AO	27	GLN
14	AO	34	GLN
14	AO	39	GLN
15	AP	9	HIS
15	AP	18	GLN
15	AP	29	ASN
15	AP	63	GLN
17	AR	53	GLN
18	AS	51	HIS
18	AS	55	GLN
19	AT	12	GLN
19	AT	20	ASN
19	AT	54	GLN
19	AT	60	GLN
20	AB	23	ASN
20	AB	35	ASN
20	AB	108	GLN
20	AB	119	GLN
20	AB	121	GLN
20	AB	145	ASN
20	AB	167	HIS
20	AB	202	ASN
24	BV	49	ASN
24	BV	51	GLN
24	BV	80	HIS
24	BV	88	HIS
25	BC	20	ASN
25	BC	36	ASN
25	BC	43	ASN
25	BC	52	HIS
25	BC	89	ASN
25	BC	127	ASN
25	BC	133	ASN
25	BC	162	GLN
25	BC	225	ASN
25	BC	250	GLN
26	BD	32	ASN
26	BD	58	ASN
26	BD	130	GLN
26	BD	134	HIS
26	BD	149	ASN
26	BD	164	GLN

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Mol	Chain	Res	Type
26	BD	167	ASN
26	BD	173	GLN
26	BD	185	ASN
27	BE	29	HIS
27	BE	46	GLN
27	BE	92	HIS
27	BE	97	ASN
27	BE	136	GLN
27	BE	156	ASN
27	BE	195	GLN
28	BF	26	GLN
28	BF	36	ASN
28	BF	80	GLN
28	BF	126	ASN
29	BG	19	ASN
29	BG	21	GLN
29	BG	29	ASN
29	BG	142	GLN
30	BH	2	GLN
30	BH	11	ASN
30	BH	43	ASN
30	BH	73	ASN
31	BJ	40	HIS
31	BJ	77	HIS
31	BJ	80	HIS
31	BJ	131	ASN
31	BJ	135	GLN
31	BJ	136	GLN
32	BK	5	GLN
32	BK	9	ASN
32	BK	82	ASN
32	BK	88	ASN
33	BL	38	GLN
33	BL	99	ASN
34	BM	3	GLN
34	BM	17	ASN
35	BN	9	GLN
35	BN	13	ASN
35	BN	73	ASN
35	BN	81	ASN
36	BO	38	GLN
36	BO	67	ASN

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Mol	Chain	Res	Type
36	BO	98	GLN
36	BO	104	GLN
37	BP	2	ASN
37	BP	11	GLN
37	BP	40	GLN
38	BQ	43	GLN
38	BQ	51	GLN
38	BQ	55	GLN
38	BQ	58	GLN
38	BQ	80	ASN
39	BR	18	GLN
39	BR	86	GLN
39	BR	87	GLN
40	BS	9	HIS
40	BS	57	ASN
41	BT	28	ASN
42	BU	39	ASN
42	BU	65	GLN
42	BU	68	ASN
43	BW	2	HIS
43	BW	49	ASN
43	BW	56	HIS
44	BX	31	GLN
44	BX	36	GLN
44	BX	38	GLN
44	BX	45	GLN
44	BX	58	ASN
45	BY	8	GLN
45	BY	19	HIS
46	BZ	30	HIS
46	BZ	41	HIS
46	BZ	65	ASN
47	B0	3	GLN
48	B1	25	ASN
50	B3	23	HIS
51	B4	13	ASN
51	B4	35	GLN
52	BI	11	GLN
52	BI	29	GLN
52	BI	30	GLN
52	BI	33	ASN
52	BI	93	ASN

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Mol	Chain	Res	Type
2	CC	2	GLN
2	CC	101	ASN
2	CC	184	ASN
2	CC	189	HIS
3	CD	39	GLN
3	CD	53	GLN
3	CD	58	GLN
3	CD	99	ASN
3	CD	115	GLN
3	CD	119	HIS
3	CD	130	ASN
3	CD	135	GLN
3	CD	151	GLN
3	CD	163	GLN
4	CE	42	ASN
4	CE	72	ASN
4	CE	145	ASN
5	CF	17	GLN
5	CF	46	GLN
5	CF	63	ASN
6	CG	8	GLN
6	CG	27	ASN
6	CG	121	ASN
7	CH	3	GLN
7	CH	17	GLN
7	CH	37	ASN
7	CH	75	GLN
7	CH	117	GLN
8	CI	80	HIS
8	CI	109	GLN
9	CJ	58	ASN
9	CJ	99	GLN
10	CK	28	ASN
10	CK	37	GLN
10	CK	63	GLN
10	CK	108	ASN
10	CK	118	ASN
11	CL	28	GLN
11	CL	45	ASN
11	CL	71	HIS
12	CM	7	ASN
13	CN	34	ASN

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Mol	Chain	Res	Type
13	CN	61	ASN
14	CO	36	ASN
15	CP	40	ASN
15	CP	63	GLN
16	CQ	8	GLN
17	CR	51	GLN
18	CS	42	ASN
18	CS	52	ASN
19	CT	2	ASN
19	CT	69	ASN
19	CT	74	HIS
19	CT	83	ASN
20	CB	23	ASN
20	CB	50	ASN
20	CB	108	GLN
20	CB	119	GLN
20	CB	121	GLN
20	CB	145	ASN
20	CB	202	ASN
24	DV	78	GLN
24	DV	87	GLN
25	DC	45	ASN
25	DC	52	HIS
25	DC	59	GLN
25	DC	127	ASN
25	DC	133	ASN
25	DC	141	HIS
25	DC	162	GLN
25	DC	196	ASN
25	DC	199	HIS
25	DC	225	ASN
25	DC	238	ASN
25	DC	259	ASN
26	DD	32	ASN
26	DD	36	GLN
26	DD	94	GLN
26	DD	164	GLN
26	DD	173	GLN
27	DE	24	ASN
27	DE	30	GLN
27	DE	94	GLN
27	DE	195	GLN

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Mol	Chain	Res	Type
28	DF	36	ASN
28	DF	134	GLN
29	DG	29	ASN
29	DG	63	GLN
29	DG	72	ASN
29	DG	87	GLN
30	DH	20	ASN
30	DH	128	HIS
30	DH	133	GLN
31	DJ	135	GLN
32	DK	13	ASN
33	DL	104	GLN
34	DM	17	ASN
34	DM	22	GLN
34	DM	45	GLN
34	DM	60	GLN
34	DM	97	GLN
35	DN	9	GLN
35	DN	11	ASN
35	DN	18	GLN
35	DN	73	ASN
35	DN	81	ASN
35	DN	107	ASN
36	DO	34	HIS
36	DO	67	ASN
36	DO	98	GLN
36	DO	100	HIS
36	DO	104	GLN
37	DP	9	GLN
37	DP	11	GLN
37	DP	55	HIS
38	DQ	19	GLN
38	DQ	43	GLN
38	DQ	51	GLN
38	DQ	58	GLN
38	DQ	80	ASN
39	DR	6	GLN
39	DR	12	HIS
39	DR	43	ASN
39	DR	86	GLN
40	DS	7	HIS
40	DS	15	GLN

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Mol	Chain	Res	Type
40	DS	40	ASN
40	DS	57	ASN
41	DT	48	GLN
42	DU	52	ASN
42	DU	53	GLN
42	DU	65	GLN
43	DW	39	GLN
43	DW	56	HIS
44	DX	31	GLN
44	DX	45	GLN
45	DY	48	ASN
46	DZ	48	GLN
46	DZ	65	ASN
47	D0	4	GLN
48	D1	44	GLN
48	D1	45	HIS
49	D2	29	GLN
51	D4	13	ASN
52	DI	33	ASN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1529/1542 (99%)	277 (18%)	25 (1%)
1	CA	1529/1542 (99%)	249 (16%)	26 (1%)
22	BA	116/120 (96%)	23 (19%)	0
22	DA	116/120 (96%)	20 (17%)	1 (0%)
23	BB	2837/2904 (97%)	451 (15%)	18 (0%)
23	DB	2837/2904 (97%)	482 (16%)	22 (0%)
All	All	8964/9132 (98%)	1502 (16%)	92 (1%)

All (1502) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	7	A
1	AA	9	G
1	AA	14	U
1	AA	31	G
1	AA	32	A
1	AA	39	G
1	AA	47	C

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Mol	Chain	Res	Type
1	AA	48	C
1	AA	51	A
1	AA	52	C
1	AA	55	A
1	AA	61	G
1	AA	66	A
1	AA	72	A
1	AA	76	G
1	AA	78	A
1	AA	79	G
1	AA	83	C
1	AA	85	U
1	AA	86	G
1	AA	87	C
1	AA	88	U
1	AA	89	U
1	AA	95	C
1	AA	108	G
1	AA	121	U
1	AA	122	G
1	AA	131	A
1	AA	151	A
1	AA	164	G
1	AA	182	A
1	AA	183	C
1	AA	197	A
1	AA	209	U
1	AA	210	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	257	G
1	AA	258	G
1	AA	266	G
1	AA	267	C
1	AA	280	C

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Mol	Chain	Res	Type
1	AA	289	G
1	AA	316	C
1	AA	324	G
1	AA	328	C
1	AA	329	A
1	AA	330	C
1	AA	332	G
1	AA	345	C
1	AA	352	C
1	AA	354	G
1	AA	367	U
1	AA	372	C
1	AA	373	A
1	AA	381	C
1	AA	382	A
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	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	434	U
1	AA	435	A
1	AA	438	U
1	AA	459	A
1	AA	461	A
1	AA	462	G
1	AA	463	U
1	AA	464	U
1	AA	465	A
1	AA	466	A
1	AA	467	U
1	AA	468	A
1	AA	469	C
1	AA	476	U

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Mol	Chain	Res	Type
1	AA	481	G
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	522	C
1	AA	527	G
1	AA	531	U
1	AA	532	A
1	AA	547	A
1	AA	559	A
1	AA	562	U
1	AA	572	A
1	AA	573	A
1	AA	576	C
1	AA	577	G
1	AA	607	A
1	AA	639	G
1	AA	650	G
1	AA	653	U
1	AA	665	A
1	AA	693	G
1	AA	700	G
1	AA	721	G
1	AA	724	G
1	AA	731	G
1	AA	733	G
1	AA	747	A
1	AA	748	G
1	AA	755	G
1	AA	777	A
1	AA	781	A
1	AA	782	A
1	AA	793	U
1	AA	794	A
1	AA	812	G
1	AA	815	A
1	AA	817	C
1	AA	818	G

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Mol	Chain	Res	Type
1	AA	819	A
1	AA	828	U
1	AA	829	G
1	AA	841	C
1	AA	842	U
1	AA	843	U
1	AA	844	G
1	AA	845	A
1	AA	902	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	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	983	A
1	AA	991	U
1	AA	992	U
1	AA	993	G
1	AA	1002	G
1	AA	1004	A
1	AA	1009	U
1	AA	1022	A
1	AA	1026	G
1	AA	1030	U
1	AA	1031	C
1	AA	1034	G
1	AA	1035	A
1	AA	1043	G
1	AA	1044	A
1	AA	1045	C
1	AA	1049	U
1	AA	1050	G

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Mol	Chain	Res	Type
1	AA	1051	C
1	AA	1053	G
1	AA	1054	C
1	AA	1055	A
1	AA	1065	U
1	AA	1066	C
1	AA	1070	U
1	AA	1094	G
1	AA	1095	U
1	AA	1101	A
1	AA	1102	A
1	AA	1108	G
1	AA	1111	A
1	AA	1112	C
1	AA	1126	U
1	AA	1130	A
1	AA	1136	C
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1140	C
1	AA	1158	C
1	AA	1159	U
1	AA	1168	U
1	AA	1169	A
1	AA	1174	G
1	AA	1179	A
1	AA	1181	G
1	AA	1183	U
1	AA	1196	A
1	AA	1197	A
1	AA	1201	A
1	AA	1202	U
1	AA	1209	C
1	AA	1212	U
1	AA	1213	A
1	AA	1214	C
1	AA	1215	G
1	AA	1225	A
1	AA	1226	C
1	AA	1227	A
1	AA	1228	C

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Mol	Chain	Res	Type
1	AA	1238	A
1	AA	1240	U
1	AA	1241	G
1	AA	1253	G
1	AA	1256	A
1	AA	1258	G
1	AA	1261	A
1	AA	1270	G
1	AA	1278	G
1	AA	1279	G
1	AA	1280	A
1	AA	1281	C
1	AA	1285	A
1	AA	1286	U
1	AA	1287	A
1	AA	1298	U
1	AA	1300	G
1	AA	1301	U
1	AA	1305	G
1	AA	1316	G
1	AA	1317	C
1	AA	1320	C
1	AA	1322	C
1	AA	1323	G
1	AA	1336	C
1	AA	1338	G
1	AA	1346	A
1	AA	1347	G
1	AA	1353	G
1	AA	1362	A
1	AA	1363	A
1	AA	1364	U
1	AA	1378	C
1	AA	1379	G
1	AA	1380	U
1	AA	1381	U
1	AA	1398	A
1	AA	1403	C
1	AA	1404	C
1	AA	1409	C
1	AA	1419	G
1	AA	1432	G

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Mol	Chain	Res	Type
1	AA	1446	A
1	AA	1447	A
1	AA	1451	U
1	AA	1452	C
1	AA	1490	U
1	AA	1493	A
1	AA	1497	G
1	AA	1499	A
1	AA	1503	A
1	AA	1506	U
1	AA	1507	A
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	11	C
22	BA	12	C
22	BA	13	G
22	BA	14	U
22	BA	15	A
22	BA	16	G
22	BA	25	U
22	BA	26	C
22	BA	28	C
22	BA	29	A
22	BA	30	C
22	BA	35	C
22	BA	42	C
22	BA	44	G
22	BA	45	A
22	BA	56	G
22	BA	66	A
22	BA	67	G
22	BA	84	G
22	BA	90	C
22	BA	99	A
22	BA	108	A
22	BA	109	A
23	BB	2	G

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Mol	Chain	Res	Type
23	BB	3	U
23	BB	4	U
23	BB	13	A
23	BB	14	A
23	BB	33	C
23	BB	34	U
23	BB	35	G
23	BB	46	G
23	BB	49	A
23	BB	63	A
23	BB	64	A
23	BB	71	A
23	BB	74	A
23	BB	75	G
23	BB	84	A
23	BB	85	G
23	BB	91	A
23	BB	92	U
23	BB	96	C
23	BB	100	U
23	BB	101	A
23	BB	102	U
23	BB	103	A
23	BB	104	A
23	BB	118	A
23	BB	119	A
23	BB	120	U
23	BB	125	A
23	BB	126	A
23	BB	140	C
23	BB	142	A
23	BB	144	A
23	BB	160	A
23	BB	162	U
23	BB	163	C
23	BB	181	A
23	BB	186	G
23	BB	196	A
23	BB	199	A
23	BB	209	C
23	BB	216	A
23	BB	221	A

Continued on next page...

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Mol	Chain	Res	Type
23	BB	222	A
23	BB	224	U
23	BB	230	G
23	BB	241	A
23	BB	248	G
23	BB	252	G
23	BB	255	A
23	BB	265	A
23	BB	266	G
23	BB	271	G
23	BB	277	G
23	BB	278	A
23	BB	279	A
23	BB	311	A
23	BB	312	G
23	BB	323	C
23	BB	324	A
23	BB	329	G
23	BB	330	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	397	U
23	BB	405	U
23	BB	411	G
23	BB	423	A
23	BB	424	G
23	BB	435	C
23	BB	444	C
23	BB	451	U
23	BB	455	C
23	BB	457	A
23	BB	479	A
23	BB	480	A
23	BB	481	G
23	BB	491	G

Continued on next page...

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Mol	Chain	Res	Type
23	BB	498	G
23	BB	504	A
23	BB	505	A
23	BB	508	A
23	BB	509	C
23	BB	512	G
23	BB	518	G
23	BB	527	C
23	BB	530	G
23	BB	532	A
23	BB	533	G
23	BB	544	C
23	BB	545	U
23	BB	546	U
23	BB	547	A
23	BB	548	G
23	BB	555	G
23	BB	563	A
23	BB	572	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	627	A
23	BB	632	A
23	BB	637	A
23	BB	640	C
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	717	C
23	BB	719	C
23	BB	722	A
23	BB	728	G
23	BB	730	A

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Mol	Chain	Res	Type
23	BB	747	U
23	BB	757	G
23	BB	765	C
23	BB	775	G
23	BB	782	A
23	BB	784	G
23	BB	785	G
23	BB	805	G
23	BB	806	C
23	BB	812	C
23	BB	819	A
23	BB	827	U
23	BB	828	U
23	BB	846	U
23	BB	847	U
23	BB	859	G
23	BB	872	U
23	BB	876	C
23	BB	877	A
23	BB	878	A
23	BB	899	A
23	BB	910	A
23	BB	912	C
23	BB	932	U
23	BB	933	A
23	BB	934	U
23	BB	941	A
23	BB	946	C
23	BB	955	U
23	BB	961	C
23	BB	973	A
23	BB	974	G
23	BB	983	A
23	BB	985	C
23	BB	989	G
23	BB	991	C
23	BB	993	G
23	BB	995	C
23	BB	996	A
23	BB	1005	C
23	BB	1012	U
23	BB	1013	C

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Mol	Chain	Res	Type
23	BB	1019	U
23	BB	1022	G
23	BB	1025	G
23	BB	1026	G
23	BB	1033	U
23	BB	1042	G
23	BB	1046	A
23	BB	1047	G
23	BB	1070	A
23	BB	1088	A
23	BB	1090	A
23	BB	1112	G
23	BB	1122	G
23	BB	1126	A
23	BB	1132	U
23	BB	1133	A
23	BB	1134	A
23	BB	1135	C
23	BB	1136	G
23	BB	1139	G
23	BB	1142	A
23	BB	1156	A
23	BB	1157	G
23	BB	1172	C
23	BB	1174	U
23	BB	1176	U
23	BB	1179	G
23	BB	1195	G
23	BB	1205	A
23	BB	1206	G
23	BB	1211	C
23	BB	1212	G
23	BB	1218	G
23	BB	1237	A
23	BB	1247	A
23	BB	1248	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

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Mol	Chain	Res	Type
23	BB	1273	U
23	BB	1275	A
23	BB	1276	A
23	BB	1301	A
23	BB	1302	A
23	BB	1312	U
23	BB	1325	U
23	BB	1330	C
23	BB	1337	G
23	BB	1341	G
23	BB	1345	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	1396	U
23	BB	1397	U
23	BB	1416	G
23	BB	1419	A
23	BB	1420	A
23	BB	1427	A
23	BB	1428	C
23	BB	1434	A
23	BB	1450	G
23	BB	1451	C
23	BB	1453	A
23	BB	1454	C
23	BB	1455	G
23	BB	1459	G
23	BB	1460	U
23	BB	1461	C
23	BB	1476	U
23	BB	1477	A
23	BB	1478	G
23	BB	1482	G
23	BB	1490	A
23	BB	1493	C
23	BB	1494	A
23	BB	1504	A
23	BB	1508	A

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Mol	Chain	Res	Type
23	BB	1509	A
23	BB	1510	G
23	BB	1524	G
23	BB	1532	A
23	BB	1535	A
23	BB	1537	G
23	BB	1538	G
23	BB	1540	G
23	BB	1552	A
23	BB	1558	C
23	BB	1559	U
23	BB	1567	G
23	BB	1569	A
23	BB	1578	U
23	BB	1583	A
23	BB	1585	C
23	BB	1608	A
23	BB	1610	A
23	BB	1613	G
23	BB	1634	A
23	BB	1635	A
23	BB	1640	A
23	BB	1647	U
23	BB	1648	U
23	BB	1649	G
23	BB	1674	G
23	BB	1700	A
23	BB	1701	A
23	BB	1703	G
23	BB	1706	C
23	BB	1707	G
23	BB	1713	A
23	BB	1715	G
23	BB	1716	U
23	BB	1723	G
23	BB	1729	U
23	BB	1730	C
23	BB	1731	G
23	BB	1733	G
23	BB	1738	G
23	BB	1756	G
23	BB	1758	U

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Mol	Chain	Res	Type
23	BB	1764	C
23	BB	1773	A
23	BB	1776	G
23	BB	1781	U
23	BB	1786	A
23	BB	1791	A
23	BB	1800	C
23	BB	1801	A
23	BB	1816	C
23	BB	1829	A
23	BB	1833	C
23	BB	1870	C
23	BB	1873	G
23	BB	1876	A
23	BB	1884	G
23	BB	1906	G
23	BB	1914	C
23	BB	1927	A
23	BB	1929	G
23	BB	1930	G
23	BB	1937	A
23	BB	1938	A
23	BB	1939	U
23	BB	1940	U
23	BB	1955	U
23	BB	1967	C
23	BB	1970	A
23	BB	1971	U
23	BB	1972	G
23	BB	1991	U
23	BB	1993	U
23	BB	1997	C
23	BB	2022	U
23	BB	2023	C
23	BB	2031	A
23	BB	2032	G
23	BB	2033	A
23	BB	2043	C
23	BB	2052	A
23	BB	2055	C
23	BB	2056	G
23	BB	2060	A

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Mol	Chain	Res	Type
23	BB	2061	G
23	BB	2062	A
23	BB	2069	G
23	BB	2072	C
23	BB	2095	A
23	BB	2102	G
23	BB	2104	C
23	BB	2137	U
23	BB	2140	G
23	BB	2141	G
23	BB	2144	G
23	BB	2145	C
23	BB	2147	A
23	BB	2149	U
23	BB	2181	U
23	BB	2187	U
23	BB	2192	U
23	BB	2199	A
23	BB	2204	G
23	BB	2211	A
23	BB	2212	A
23	BB	2225	A
23	BB	2226	C
23	BB	2238	G
23	BB	2239	G
23	BB	2243	U
23	BB	2259	U
23	BB	2266	A
23	BB	2273	A
23	BB	2276	G
23	BB	2278	A
23	BB	2283	C
23	BB	2286	G
23	BB	2287	A
23	BB	2297	A
23	BB	2304	G
23	BB	2305	U
23	BB	2307	G
23	BB	2310	C
23	BB	2315	G
23	BB	2318	G
23	BB	2319	G

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Mol	Chain	Res	Type
23	BB	2320	U
23	BB	2321	U
23	BB	2322	A
23	BB	2325	G
23	BB	2333	A
23	BB	2334	U
23	BB	2336	A
23	BB	2337	G
23	BB	2347	C
23	BB	2383	G
23	BB	2385	C
23	BB	2402	U
23	BB	2406	A
23	BB	2423	U
23	BB	2424	C
23	BB	2426	A
23	BB	2429	G
23	BB	2430	A
23	BB	2434	A
23	BB	2441	U
23	BB	2448	A
23	BB	2472	G
23	BB	2476	A
23	BB	2491	U
23	BB	2502	G
23	BB	2505	G
23	BB	2506	U
23	BB	2518	A
23	BB	2529	G
23	BB	2535	G
23	BB	2554	U
23	BB	2566	A
23	BB	2567	G
23	BB	2573	C
23	BB	2585	U
23	BB	2586	U
23	BB	2597	G
23	BB	2602	A
23	BB	2609	U
23	BB	2610	C
23	BB	2613	U
23	BB	2621	G

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Mol	Chain	Res	Type
23	BB	2629	U
23	BB	2654	A
23	BB	2682	A
23	BB	2689	U
23	BB	2690	U
23	BB	2714	G
23	BB	2726	A
23	BB	2739	U
23	BB	2744	G
23	BB	2748	A
23	BB	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	2800	A
23	BB	2801	G
23	BB	2808	G
23	BB	2820	A
23	BB	2821	A
23	BB	2836	U
23	BB	2850	A
23	BB	2866	U
23	BB	2867	G
23	BB	2872	A
23	BB	2873	A
23	BB	2883	A
23	BB	2903	U
1	CA	7	A
1	CA	9	G
1	CA	14	U
1	CA	31	G
1	CA	32	A
1	CA	39	G
1	CA	47	C
1	CA	48	C
1	CA	51	A
1	CA	52	C
1	CA	55	A
1	CA	61	G

Continued on next page...

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Mol	Chain	Res	Type
1	CA	71	A
1	CA	72	A
1	CA	83	C
1	CA	85	U
1	CA	87	C
1	CA	92	U
1	CA	93	U
1	CA	94	G
1	CA	108	G
1	CA	121	U
1	CA	122	G
1	CA	131	A
1	CA	151	A
1	CA	164	G
1	CA	182	A
1	CA	183	C
1	CA	197	A
1	CA	209	U
1	CA	210	C
1	CA	239	U
1	CA	240	G
1	CA	243	A
1	CA	244	U
1	CA	245	U
1	CA	247	G
1	CA	250	A
1	CA	251	G
1	CA	253	A
1	CA	257	G
1	CA	258	G
1	CA	266	G
1	CA	267	C
1	CA	280	C
1	CA	289	G
1	CA	316	C
1	CA	324	G
1	CA	328	C
1	CA	329	A
1	CA	330	C
1	CA	332	G
1	CA	345	C
1	CA	352	C

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Mol	Chain	Res	Type
1	CA	354	G
1	CA	367	U
1	CA	372	C
1	CA	373	A
1	CA	382	A
1	CA	397	A
1	CA	398	U
1	CA	406	G
1	CA	408	A
1	CA	411	A
1	CA	412	A
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	434	U
1	CA	435	A
1	CA	438	U
1	CA	459	A
1	CA	461	A
1	CA	462	G
1	CA	463	U
1	CA	464	U
1	CA	465	A
1	CA	466	A
1	CA	467	U
1	CA	468	A
1	CA	469	C
1	CA	476	U
1	CA	479	U
1	CA	481	G
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	522	C

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Mol	Chain	Res	Type
1	CA	527	G
1	CA	531	U
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	607	A
1	CA	639	G
1	CA	650	G
1	CA	653	U
1	CA	665	A
1	CA	693	G
1	CA	700	G
1	CA	721	G
1	CA	724	G
1	CA	731	G
1	CA	733	G
1	CA	747	A
1	CA	748	G
1	CA	755	G
1	CA	781	A
1	CA	782	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	829	G
1	CA	841	C
1	CA	842	U
1	CA	843	U
1	CA	844	G
1	CA	845	A
1	CA	907	A
1	CA	914	A

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Mol	Chain	Res	Type
1	CA	926	G
1	CA	927	G
1	CA	934	C
1	CA	935	A
1	CA	945	G
1	CA	961	U
1	CA	966	G
1	CA	969	A
1	CA	974	A
1	CA	976	G
1	CA	977	A
1	CA	981	U
1	CA	984	C
1	CA	991	U
1	CA	992	U
1	CA	993	G
1	CA	1004	A
1	CA	1009	U
1	CA	1010	U
1	CA	1020	G
1	CA	1022	A
1	CA	1023	U
1	CA	1025	U
1	CA	1031	C
1	CA	1033	G
1	CA	1034	G
1	CA	1036	A
1	CA	1044	A
1	CA	1050	G
1	CA	1053	G
1	CA	1054	C
1	CA	1063	C
1	CA	1065	U
1	CA	1066	C
1	CA	1091	U
1	CA	1094	G
1	CA	1095	U
1	CA	1101	A
1	CA	1118	U
1	CA	1129	C
1	CA	1130	A
1	CA	1135	U

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Mol	Chain	Res	Type
1	CA	1136	C
1	CA	1137	C
1	CA	1138	G
1	CA	1139	G
1	CA	1140	C
1	CA	1144	G
1	CA	1159	U
1	CA	1160	G
1	CA	1166	G
1	CA	1178	G
1	CA	1184	G
1	CA	1188	A
1	CA	1190	G
1	CA	1196	A
1	CA	1197	A
1	CA	1201	A
1	CA	1202	U
1	CA	1212	U
1	CA	1213	A
1	CA	1214	C
1	CA	1225	A
1	CA	1226	C
1	CA	1227	A
1	CA	1241	G
1	CA	1250	A
1	CA	1256	A
1	CA	1257	A
1	CA	1258	G
1	CA	1279	G
1	CA	1280	A
1	CA	1281	C
1	CA	1282	C
1	CA	1285	A
1	CA	1298	U
1	CA	1300	G
1	CA	1301	U
1	CA	1302	C
1	CA	1303	C
1	CA	1305	G
1	CA	1317	C
1	CA	1318	A
1	CA	1320	C

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Mol	Chain	Res	Type
1	CA	1331	G
1	CA	1362	A
1	CA	1363	A
1	CA	1364	U
1	CA	1380	U
1	CA	1397	C
1	CA	1398	A
1	CA	1400	C
1	CA	1401	G
1	CA	1419	G
1	CA	1426	G
1	CA	1432	G
1	CA	1446	A
1	CA	1451	U
1	CA	1452	C
1	CA	1491	G
1	CA	1493	A
1	CA	1497	G
1	CA	1503	A
1	CA	1506	U
1	CA	1507	A
1	CA	1517	G
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	18	G
22	DA	25	U
22	DA	26	C
22	DA	27	C
22	DA	28	C
22	DA	29	A
22	DA	42	C
22	DA	52	A
22	DA	56	G
22	DA	57	A
22	DA	66	A
22	DA	67	G

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Mol	Chain	Res	Type
22	DA	89	U
22	DA	90	C
22	DA	96	G
22	DA	99	A
22	DA	109	A
23	DB	2	G
23	DB	12	U
23	DB	27	G
23	DB	35	G
23	DB	46	G
23	DB	49	A
23	DB	51	G
23	DB	52	A
23	DB	63	A
23	DB	64	A
23	DB	71	A
23	DB	74	A
23	DB	75	G
23	DB	91	A
23	DB	98	G
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	124	G
23	DB	125	A
23	DB	126	A
23	DB	128	C
23	DB	139	U
23	DB	141	G
23	DB	144	A
23	DB	160	A
23	DB	162	U
23	DB	163	C
23	DB	180	G
23	DB	181	A
23	DB	196	A
23	DB	206	U

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Mol	Chain	Res	Type
23	DB	216	A
23	DB	221	A
23	DB	222	A
23	DB	227	A
23	DB	230	G
23	DB	243	U
23	DB	248	G
23	DB	250	G
23	DB	252	G
23	DB	255	A
23	DB	265	A
23	DB	266	G
23	DB	267	C
23	DB	271	G
23	DB	277	G
23	DB	278	A
23	DB	281	C
23	DB	288	U
23	DB	289	G
23	DB	299	A
23	DB	301	G
23	DB	302	C
23	DB	311	A
23	DB	312	G
23	DB	322	A
23	DB	323	C
23	DB	329	G
23	DB	330	A
23	DB	333	G
23	DB	346	A
23	DB	353	C
23	DB	354	A
23	DB	355	U
23	DB	361	G
23	DB	362	A
23	DB	363	G
23	DB	365	U
23	DB	371	A
23	DB	372	G
23	DB	376	G
23	DB	386	G
23	DB	387	U

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Mol	Chain	Res	Type
23	DB	396	G
23	DB	403	U
23	DB	404	A
23	DB	405	U
23	DB	406	G
23	DB	411	G
23	DB	412	A
23	DB	424	G
23	DB	444	C
23	DB	448	U
23	DB	449	A
23	DB	450	G
23	DB	451	U
23	DB	455	C
23	DB	456	C
23	DB	457	A
23	DB	458	G
23	DB	475	C
23	DB	479	A
23	DB	480	A
23	DB	481	G
23	DB	491	G
23	DB	492	A
23	DB	504	A
23	DB	505	A
23	DB	506	G
23	DB	508	A
23	DB	509	C
23	DB	512	G
23	DB	515	A
23	DB	527	C
23	DB	529	A
23	DB	530	G
23	DB	531	C
23	DB	532	A
23	DB	533	G
23	DB	542	C
23	DB	544	C
23	DB	545	U
23	DB	546	U
23	DB	547	A
23	DB	548	G

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Mol	Chain	Res	Type
23	DB	549	G
23	DB	550	C
23	DB	554	U
23	DB	563	A
23	DB	572	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	627	A
23	DB	632	A
23	DB	637	A
23	DB	640	C
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	727	A
23	DB	730	A
23	DB	747	U
23	DB	757	G
23	DB	765	C
23	DB	775	G
23	DB	782	A
23	DB	784	G
23	DB	785	G
23	DB	805	G
23	DB	806	C
23	DB	812	C
23	DB	819	A
23	DB	827	U
23	DB	828	U
23	DB	844	A

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Mol	Chain	Res	Type
23	DB	846	U
23	DB	847	U
23	DB	859	G
23	DB	869	G
23	DB	873	C
23	DB	877	A
23	DB	899	A
23	DB	910	A
23	DB	912	C
23	DB	919	U
23	DB	931	U
23	DB	932	U
23	DB	933	A
23	DB	941	A
23	DB	946	C
23	DB	955	U
23	DB	961	C
23	DB	973	A
23	DB	974	G
23	DB	982	C
23	DB	983	A
23	DB	989	G
23	DB	990	A
23	DB	991	C
23	DB	995	C
23	DB	996	A
23	DB	1012	U
23	DB	1013	C
23	DB	1022	G
23	DB	1025	G
23	DB	1033	U
23	DB	1034	G
23	DB	1046	A
23	DB	1047	G
23	DB	1062	G
23	DB	1070	A
23	DB	1088	A
23	DB	1090	A
23	DB	1098	A
23	DB	1099	G
23	DB	1111	A
23	DB	1112	G

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Mol	Chain	Res	Type
23	DB	1116	G
23	DB	1130	U
23	DB	1132	U
23	DB	1133	A
23	DB	1134	A
23	DB	1136	G
23	DB	1171	G
23	DB	1174	U
23	DB	1176	U
23	DB	1179	G
23	DB	1195	G
23	DB	1205	A
23	DB	1206	G
23	DB	1211	C
23	DB	1212	G
23	DB	1225	G
23	DB	1237	A
23	DB	1238	G
23	DB	1241	A
23	DB	1242	U
23	DB	1247	A
23	DB	1248	G
23	DB	1249	U
23	DB	1251	C
23	DB	1252	G
23	DB	1253	A
23	DB	1256	G
23	DB	1258	U
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	1312	U
23	DB	1325	U
23	DB	1330	C
23	DB	1337	G
23	DB	1341	G
23	DB	1342	A

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Mol	Chain	Res	Type
23	DB	1345	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
23	DB	1396	U
23	DB	1397	U
23	DB	1416	G
23	DB	1419	A
23	DB	1420	A
23	DB	1427	A
23	DB	1428	C
23	DB	1434	A
23	DB	1450	G
23	DB	1451	C
23	DB	1453	A
23	DB	1454	C
23	DB	1455	G
23	DB	1459	G
23	DB	1460	U
23	DB	1461	C
23	DB	1476	U
23	DB	1477	A
23	DB	1478	G
23	DB	1482	G
23	DB	1490	A
23	DB	1493	C
23	DB	1494	A
23	DB	1504	A
23	DB	1508	A
23	DB	1509	A
23	DB	1510	G
23	DB	1524	G
23	DB	1532	A
23	DB	1535	A
23	DB	1537	G
23	DB	1538	G
23	DB	1540	G
23	DB	1552	A
23	DB	1558	C

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Mol	Chain	Res	Type
23	DB	1559	U
23	DB	1567	G
23	DB	1569	A
23	DB	1578	U
23	DB	1583	A
23	DB	1585	C
23	DB	1608	A
23	DB	1610	A
23	DB	1613	G
23	DB	1634	A
23	DB	1635	A
23	DB	1640	A
23	DB	1647	U
23	DB	1648	U
23	DB	1649	G
23	DB	1674	G
23	DB	1700	A
23	DB	1701	A
23	DB	1703	G
23	DB	1706	C
23	DB	1707	G
23	DB	1713	A
23	DB	1715	G
23	DB	1716	U
23	DB	1723	G
23	DB	1729	U
23	DB	1730	C
23	DB	1731	G
23	DB	1733	G
23	DB	1738	G
23	DB	1756	G
23	DB	1758	U
23	DB	1764	C
23	DB	1773	A
23	DB	1776	G
23	DB	1781	U
23	DB	1786	A
23	DB	1791	A
23	DB	1800	C
23	DB	1801	A
23	DB	1816	C
23	DB	1829	A

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Mol	Chain	Res	Type
23	DB	1833	C
23	DB	1870	C
23	DB	1873	G
23	DB	1876	A
23	DB	1884	G
23	DB	1906	G
23	DB	1913	A
23	DB	1914	C
23	DB	1927	A
23	DB	1929	G
23	DB	1930	G
23	DB	1937	A
23	DB	1938	A
23	DB	1939	U
23	DB	1940	U
23	DB	1955	U
23	DB	1967	C
23	DB	1970	A
23	DB	1971	U
23	DB	1972	G
23	DB	1991	U
23	DB	1993	U
23	DB	1997	C
23	DB	2022	U
23	DB	2023	C
23	DB	2031	A
23	DB	2032	G
23	DB	2033	A
23	DB	2043	C
23	DB	2055	C
23	DB	2056	G
23	DB	2060	A
23	DB	2061	G
23	DB	2062	A
23	DB	2069	G
23	DB	2076	U
23	DB	2077	A
23	DB	2094	A
23	DB	2096	C
23	DB	2100	G
23	DB	2104	C
23	DB	2106	U

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Mol	Chain	Res	Type
23	DB	2107	G
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	2145	C
23	DB	2146	C
23	DB	2147	A
23	DB	2149	U
23	DB	2156	G
23	DB	2157	G
23	DB	2181	U
23	DB	2183	A
23	DB	2190	G
23	DB	2199	A
23	DB	2204	G
23	DB	2210	U
23	DB	2211	A
23	DB	2212	A
23	DB	2225	A
23	DB	2239	G
23	DB	2250	G
23	DB	2253	G
23	DB	2268	A
23	DB	2270	A
23	DB	2283	C
23	DB	2287	A
23	DB	2288	A
23	DB	2289	G
23	DB	2297	A
23	DB	2305	U
23	DB	2307	G
23	DB	2308	G
23	DB	2309	A
23	DB	2310	C
23	DB	2311	A
23	DB	2319	G
23	DB	2321	U
23	DB	2322	A
23	DB	2325	G

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Mol	Chain	Res	Type
23	DB	2333	A
23	DB	2334	U
23	DB	2336	A
23	DB	2337	G
23	DB	2347	C
23	DB	2361	G
23	DB	2383	G
23	DB	2385	C
23	DB	2402	U
23	DB	2406	A
23	DB	2423	U
23	DB	2424	C
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	2491	U
23	DB	2502	G
23	DB	2505	G
23	DB	2506	U
23	DB	2518	A
23	DB	2529	G
23	DB	2535	G
23	DB	2554	U
23	DB	2566	A
23	DB	2567	G
23	DB	2573	C
23	DB	2585	U
23	DB	2586	U
23	DB	2597	G
23	DB	2602	A
23	DB	2609	U
23	DB	2610	C
23	DB	2613	U
23	DB	2621	G
23	DB	2629	U
23	DB	2654	A
23	DB	2682	A

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Mol	Chain	Res	Type
23	DB	2689	U
23	DB	2690	U
23	DB	2714	G
23	DB	2726	A
23	DB	2739	U
23	DB	2744	G
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	2800	A
23	DB	2801	G
23	DB	2808	G
23	DB	2820	A
23	DB	2821	A
23	DB	2836	U
23	DB	2850	A
23	DB	2866	U
23	DB	2867	G
23	DB	2872	A
23	DB	2873	A
23	DB	2883	A
23	DB	2903	U

All (92) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	51	A
1	AA	60	A
1	AA	243	A
1	AA	279	A
1	AA	328	C
1	AA	366	A
1	AA	372	C
1	AA	428	G
1	AA	429	U
1	AA	484	G
1	AA	576	C
1	AA	913	A
1	AA	960	U

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Mol	Chain	Res	Type
1	AA	975	A
1	AA	1025	U
1	AA	1049	U
1	AA	1065	U
1	AA	1101	A
1	AA	1181	G
1	AA	1201	A
1	AA	1226	C
1	AA	1300	G
1	AA	1302	C
1	AA	1397	C
1	AA	1528	U
23	BB	63	A
23	BB	102	U
23	BB	162	U
23	BB	529	A
23	BB	670	A
23	BB	858	G
23	BB	1205	A
23	BB	1210	G
23	BB	1236	G
23	BB	1250	G
23	BB	1301	A
23	BB	1913	A
23	BB	2198	A
23	BB	2258	C
23	BB	2282	G
23	BB	2336	A
23	BB	2425	A
23	BB	2756	U
1	CA	51	A
1	CA	60	A
1	CA	243	A
1	CA	279	A
1	CA	328	C
1	CA	366	A
1	CA	372	C
1	CA	428	G
1	CA	429	U
1	CA	484	G
1	CA	960	U
1	CA	975	A

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Mol	Chain	Res	Type
1	CA	1030	U
1	CA	1049	U
1	CA	1064	G
1	CA	1065	U
1	CA	1135	U
1	CA	1201	A
1	CA	1224	U
1	CA	1226	C
1	CA	1300	G
1	CA	1301	U
1	CA	1302	C
1	CA	1319	A
1	CA	1397	C
1	CA	1451	U
22	DA	25	U
23	DB	63	A
23	DB	125	A
23	DB	143	C
23	DB	162	U
23	DB	199	A
23	DB	301	G
23	DB	544	C
23	DB	670	A
23	DB	982	C
23	DB	1133	A
23	DB	1205	A
23	DB	1210	G
23	DB	1211	C
23	DB	1301	A
23	DB	2076	U
23	DB	2198	A
23	DB	2282	G
23	DB	2286	G
23	DB	2324	U
23	DB	2336	A
23	DB	2425	A
23	DB	2756	U

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

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

5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

5.6 Ligand geometry [i](#)

Of 343 ligands modelled in this entry, 343 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
21	AU	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	AU	15:LEU	C	16:ARG	N	0.99

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	AA	1530/1542 (99%)	-0.26	11 (0%) 89 84	16, 66, 135, 180	0
1	CA	1530/1542 (99%)	-0.35	8 (0%) 91 89	11, 49, 119, 180	0
2	AC	206/232 (88%)	0.35	7 (3%) 49 42	8, 56, 116, 163	0
2	CC	206/232 (88%)	0.23	8 (3%) 43 37	13, 68, 122, 154	0
3	AD	205/205 (100%)	0.81	26 (12%) 5 6	16, 65, 125, 180	0
3	CD	205/205 (100%)	0.81	17 (8%) 14 14	5, 49, 103, 156	0
4	AE	150/166 (90%)	0.51	5 (3%) 50 43	5, 56, 104, 151	0
4	CE	150/166 (90%)	0.64	9 (6%) 25 22	5, 49, 101, 167	0
5	AF	100/135 (74%)	1.27	22 (22%) 1 1	19, 64, 113, 150	0
5	CF	100/135 (74%)	1.20	19 (19%) 2 2	10, 65, 113, 147	0
6	AG	150/178 (84%)	0.29	10 (6%) 21 19	23, 86, 133, 180	0
6	CG	152/178 (85%)	-0.05	4 (2%) 59 52	22, 83, 132, 166	0
7	AH	129/129 (100%)	0.86	17 (13%) 4 5	8, 63, 113, 155	0
7	CH	129/129 (100%)	0.77	15 (11%) 6 7	5, 49, 104, 154	0
8	AI	127/129 (98%)	0.28	11 (8%) 13 13	5, 83, 126, 169	0
8	CI	127/129 (98%)	-0.17	1 (0%) 87 81	23, 81, 135, 161	0
9	AJ	98/103 (95%)	0.39	5 (5%) 32 27	14, 76, 141, 160	0
9	CJ	98/103 (95%)	0.12	2 (2%) 68 62	27, 78, 122, 143	0
10	AK	117/128 (91%)	0.73	8 (6%) 20 19	6, 56, 99, 164	0
10	CK	117/128 (91%)	0.41	7 (5%) 25 22	5, 44, 95, 117	0
11	AL	123/123 (100%)	0.80	13 (10%) 8 8	18, 59, 115, 162	0
11	CL	123/123 (100%)	0.55	6 (4%) 33 28	5, 34, 109, 141	0
12	AM	114/117 (97%)	0.40	7 (6%) 25 22	37, 96, 137, 155	0
12	CM	113/117 (96%)	0.11	4 (3%) 48 40	19, 92, 143, 180	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
13	AN	96/100 (96%)	0.14	5 (5%) 31 27	11, 76, 133, 147	0
13	CN	96/100 (96%)	0.08	6 (6%) 23 21	32, 73, 130, 160	0
14	AO	88/89 (98%)	0.73	9 (10%) 9 9	15, 62, 104, 177	0
14	CO	88/89 (98%)	0.83	7 (7%) 15 14	5, 46, 113, 136	0
15	AP	82/82 (100%)	0.57	9 (10%) 7 8	20, 72, 132, 171	0
15	CP	80/82 (97%)	0.37	4 (5%) 32 27	5, 42, 126, 137	0
16	AQ	80/83 (96%)	1.34	23 (28%) 1 1	34, 77, 119, 158	0
16	CQ	81/83 (97%)	0.89	9 (11%) 7 8	11, 52, 113, 155	0
17	AR	55/74 (74%)	0.92	9 (16%) 2 3	16, 60, 124, 148	0
17	CR	55/74 (74%)	0.79	7 (12%) 5 6	17, 45, 118, 139	0
18	AS	79/91 (86%)	0.57	9 (11%) 7 7	44, 110, 140, 169	0
18	CS	80/91 (87%)	0.41	5 (6%) 23 21	47, 99, 151, 161	0
19	AT	85/86 (98%)	0.11	1 (1%) 81 74	37, 83, 123, 155	0
19	CT	85/86 (98%)	0.20	2 (2%) 62 55	9, 49, 103, 139	0
20	AB	218/240 (90%)	0.98	40 (18%) 2 2	17, 82, 131, 156	0
20	CB	218/240 (90%)	1.32	58 (26%) 1 1	13, 90, 135, 162	0
21	AU	51/71 (71%)	0.71	6 (11%) 6 7	29, 80, 131, 158	0
21	CU	51/71 (71%)	0.66	5 (9%) 10 11	34, 73, 112, 140	0
22	BA	117/120 (97%)	-0.22	2 (1%) 73 66	36, 62, 94, 157	0
22	DA	117/120 (97%)	-0.20	2 (1%) 73 66	27, 62, 113, 180	0
23	BB	2841/2904 (97%)	-0.07	31 (1%) 82 76	10, 49, 134, 180	0
23	DB	2841/2904 (97%)	-0.15	24 (0%) 87 81	5, 39, 133, 180	0
24	BV	94/94 (100%)	0.78	13 (13%) 4 5	20, 75, 130, 149	0
24	DV	94/94 (100%)	0.87	10 (10%) 8 8	17, 71, 119, 130	0
25	BC	267/273 (97%)	1.27	52 (19%) 1 2	5, 51, 136, 180	0
25	DC	267/273 (97%)	1.65	78 (29%) 1 1	5, 46, 139, 180	0
26	BD	209/209 (100%)	2.32	93 (44%) 0 0	21, 82, 174, 180	0
26	DD	209/209 (100%)	1.26	48 (22%) 1 1	5, 60, 139, 180	0
27	BE	201/201 (100%)	1.64	64 (31%) 1 1	8, 78, 147, 180	0
27	DE	201/201 (100%)	1.35	41 (20%) 1 2	5, 76, 164, 180	0
28	BF	178/178 (100%)	1.24	40 (22%) 1 1	43, 98, 152, 180	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
28	DF	178/178 (100%)	0.43	15 (8%) 14 14	29, 89, 138, 180	0
29	BG	176/176 (100%)	1.24	36 (20%) 1 2	23, 94, 154, 180	0
29	DG	176/176 (100%)	1.07	33 (18%) 2 2	20, 86, 154, 172	0
30	BH	149/149 (100%)	2.86	79 (53%) 0 0	23, 120, 170, 180	0
30	DH	149/149 (100%)	1.63	51 (34%) 0 0	31, 100, 153, 180	0
31	BJ	140/142 (98%)	1.07	24 (17%) 2 2	14, 79, 160, 180	0
31	DJ	140/142 (98%)	0.98	23 (16%) 2 3	14, 61, 136, 162	0
32	BK	121/123 (98%)	1.49	32 (26%) 1 1	13, 57, 106, 147	0
32	DK	121/123 (98%)	0.56	3 (2%) 61 54	5, 37, 84, 143	0
33	BL	144/144 (100%)	2.87	67 (46%) 0 0	19, 93, 160, 180	0
33	DL	144/144 (100%)	2.09	58 (40%) 0 0	7, 74, 150, 179	0
34	BM	136/136 (100%)	0.88	20 (14%) 3 4	16, 71, 168, 180	0
34	DM	136/136 (100%)	1.70	41 (30%) 1 1	10, 66, 152, 180	0
35	BN	127/127 (100%)	1.70	31 (24%) 1 1	19, 67, 149, 180	0
35	DN	127/127 (100%)	0.92	12 (9%) 11 11	5, 45, 143, 180	0
36	BO	117/117 (100%)	2.10	35 (29%) 1 1	20, 82, 150, 180	0
36	DO	117/117 (100%)	1.27	21 (17%) 2 2	20, 77, 150, 169	0
37	BP	114/114 (100%)	1.91	52 (45%) 0 0	21, 84, 177, 180	0
37	DP	114/114 (100%)	1.46	30 (26%) 1 1	8, 69, 148, 180	0
38	BQ	117/117 (100%)	0.49	9 (7%) 16 15	8, 63, 125, 174	0
38	DQ	117/117 (100%)	1.17	20 (17%) 2 2	11, 57, 127, 180	0
39	BR	103/103 (100%)	1.56	30 (29%) 1 1	33, 100, 153, 180	0
39	DR	103/103 (100%)	2.42	47 (45%) 0 0	26, 92, 154, 180	0
40	BS	110/110 (100%)	1.17	21 (19%) 2 2	14, 57, 132, 180	0
40	DS	110/110 (100%)	0.73	12 (10%) 7 8	5, 45, 137, 175	0
41	BT	99/100 (99%)	1.17	20 (20%) 1 2	25, 73, 150, 170	0
41	DT	99/100 (99%)	1.60	28 (28%) 1 1	16, 84, 160, 180	0
42	BU	102/103 (99%)	1.69	33 (32%) 1 0	18, 92, 158, 178	0
42	DU	102/103 (99%)	0.64	15 (14%) 3 4	11, 103, 161, 180	0
43	BW	84/84 (100%)	2.34	31 (36%) 0 0	22, 87, 153, 180	0
43	DW	84/84 (100%)	1.64	29 (34%) 0 0	20, 81, 149, 180	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
44	BX	63/63 (100%)	1.50	12 (19%) 2 2	28, 92, 148, 170	0
44	DX	63/63 (100%)	1.54	18 (28%) 1 1	47, 96, 162, 171	0
45	BY	58/58 (100%)	1.68	15 (25%) 1 1	29, 72, 150, 180	0
45	DY	58/58 (100%)	1.21	8 (13%) 4 5	5, 60, 129, 177	0
46	BZ	70/70 (100%)	0.74	6 (8%) 13 13	20, 68, 134, 168	0
46	DZ	70/70 (100%)	0.93	9 (12%) 5 5	16, 59, 132, 180	0
47	B0	56/56 (100%)	2.22	23 (41%) 0 0	23, 89, 163, 180	0
47	D0	56/56 (100%)	1.61	13 (23%) 1 1	12, 61, 148, 180	0
48	B1	54/54 (100%)	2.37	22 (40%) 0 0	18, 89, 142, 179	0
48	D1	54/54 (100%)	2.87	27 (50%) 0 0	22, 77, 153, 173	0
49	B2	46/46 (100%)	0.79	8 (17%) 2 2	11, 47, 152, 180	0
49	D2	46/46 (100%)	0.62	1 (2%) 65 59	13, 48, 112, 129	0
50	B3	64/64 (100%)	1.54	16 (25%) 1 1	15, 61, 149, 180	0
50	D3	64/64 (100%)	1.39	15 (23%) 1 1	8, 55, 125, 169	0
51	B4	38/38 (100%)	1.68	11 (28%) 1 1	36, 85, 161, 180	0
51	D4	38/38 (100%)	1.68	13 (34%) 0 0	20, 80, 168, 180	0
52	BI	141/141 (100%)	2.99	89 (63%) 0 0	61, 151, 180, 180	0
52	DI	141/141 (100%)	1.61	47 (33%) 0 0	84, 157, 180, 180	0
All	All	20439/21034 (97%)	0.55	2265 (11%) 7 8	5, 61, 145, 180	0

All (2265) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
36	BO	57	ALA	23.9
36	BO	58	ILE	22.0
33	BL	98	ALA	18.7
45	BY	3	THR	18.1
36	BO	59	ALA	16.8
26	BD	92	VAL	14.0
35	BN	126	ALA	13.8
33	BL	82	LEU	13.2
43	BW	83	ALA	12.9
48	D1	4	ILE	12.7
35	BN	124	ALA	12.7
33	BL	83	ALA	12.7
33	BL	99	ASN	12.5

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Mol	Chain	Res	Type	RSRZ
26	BD	90	PHE	12.5
25	DC	7	PRO	12.4
33	BL	1	MET	12.3
25	BC	7	PRO	12.0
33	DL	100	ILE	11.8
27	DE	3	LEU	11.8
26	BD	133	THR	11.7
35	BN	125	ALA	11.7
27	DE	2	GLU	11.5
33	BL	9	ALA	11.5
44	BX	1	MET	11.4
48	D1	3	GLY	11.2
33	DL	99	ASN	11.1
33	BL	8	PRO	11.1
30	DH	122	LEU	11.1
27	BE	2	GLU	10.9
26	DD	69	ALA	10.8
42	BU	29	SER	10.8
40	BS	1	MET	10.8
33	BL	97	ALA	10.7
35	BN	127	GLU	10.7
26	BD	91	THR	10.6
51	B4	1	MET	10.6
33	BL	7	SER	10.6
35	BN	123	GLU	10.6
23	BB	139	U	10.3
30	BH	91	PHE	10.2
30	BH	90	LEU	10.2
35	DN	119	SER	10.2
45	DY	58	GLU	10.2
45	DY	1	ALA	10.1
26	BD	17	GLU	10.1
42	BU	1	ALA	10.1
43	BW	58	LEU	10.0
36	BO	69	ASP	9.8
27	BE	1	MET	9.8
34	DM	132	THR	9.8
30	BH	124	THR	9.8
30	BH	93	SER	9.7
36	BO	60	GLU	9.7
30	BH	147	VAL	9.7
43	BW	52	CYS	9.7

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Mol	Chain	Res	Type	RSRZ
35	BN	119	SER	9.6
44	DX	37	LEU	9.6
34	DM	134	THR	9.6
48	D1	5	ARG	9.5
47	B0	56	LYS	9.5
42	BU	89	GLY	9.5
43	BW	79	ILE	9.4
26	DD	90	PHE	9.4
34	DM	133	LYS	9.4
27	BE	4	VAL	9.4
33	BL	5	THR	9.4
28	DF	74	ALA	9.3
31	BJ	131	ASN	9.3
27	BE	5	LEU	9.3
52	BI	47	SER	9.3
44	DX	34	SER	9.3
35	BN	121	LYS	9.2
27	BE	201	ALA	9.2
52	BI	97	VAL	9.2
33	DL	11	GLY	9.2
39	DR	55	ASP	9.2
44	DX	36	GLN	9.1
48	B1	1	ALA	9.1
50	B3	63	TYR	9.0
35	DN	124	ALA	9.0
25	DC	5	CYS	9.0
25	BC	5	CYS	8.9
29	BG	176	LYS	8.8
48	D1	53	ILE	8.8
27	DE	19	PHE	8.7
37	DP	59	THR	8.7
35	BN	122	ALA	8.7
27	DE	171	ASP	8.7
39	DR	44	GLY	8.6
29	BG	1	SER	8.6
50	D3	63	TYR	8.6
39	DR	53	PHE	8.6
39	DR	26	ASP	8.6
47	D0	44	ALA	8.6
47	B0	51	ARG	8.5
52	DI	98	GLY	8.5
30	BH	122	LEU	8.5

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Mol	Chain	Res	Type	RSRZ
47	D0	55	ALA	8.5
28	DF	73	VAL	8.5
26	BD	140	HIS	8.4
26	DD	70	LYS	8.4
48	B1	4	ILE	8.3
42	BU	88	ASP	8.3
48	B1	3	GLY	8.3
29	BG	58	ALA	8.3
25	BC	166	ARG	8.2
26	BD	132	ALA	8.2
35	DN	123	GLU	8.2
43	BW	2	HIS	8.1
41	DT	2	ILE	8.1
26	BD	134	HIS	8.1
26	BD	149	ASN	8.1
26	DD	91	THR	8.0
30	BH	128	HIS	8.0
25	DC	8	THR	8.0
30	BH	86	ASP	7.9
30	BH	92	GLY	7.9
41	DT	4	GLU	7.9
36	DO	58	ILE	7.8
27	DE	169	VAL	7.8
29	DG	42	VAL	7.7
36	DO	59	ALA	7.7
38	DQ	117	ALA	7.7
27	BE	3	LEU	7.6
37	DP	19	PHE	7.6
44	BX	38	GLN	7.6
30	BH	130	VAL	7.5
41	DT	93	LEU	7.5
47	D0	33	SER	7.5
34	BM	136	MET	7.5
34	BM	56	ALA	7.5
26	DD	92	VAL	7.5
43	DW	58	LEU	7.5
31	DJ	1	MET	7.4
52	BI	85	ILE	7.4
23	DB	1175	A	7.4
39	DR	42	ALA	7.4
51	B4	23	ILE	7.4
43	BW	78	PHE	7.4

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Mol	Chain	Res	Type	RSRZ
44	DX	32	ALA	7.4
27	DE	170	ARG	7.4
39	DR	59	ILE	7.4
26	BD	126	ASN	7.4
52	BI	21	PRO	7.4
27	DE	145	ASP	7.4
27	BE	15	SER	7.3
36	DO	21	LEU	7.3
31	BJ	1	MET	7.3
33	BL	39	LYS	7.3
33	BL	77	ILE	7.3
52	BI	48	ILE	7.3
52	BI	60	VAL	7.3
50	B3	61	LEU	7.3
30	BH	142	VAL	7.3
52	BI	52	LEU	7.3
29	DG	43	LYS	7.2
52	BI	58	ILE	7.2
39	DR	12	HIS	7.2
39	DR	34	GLU	7.2
39	DR	33	VAL	7.2
30	BH	84	ALA	7.2
25	DC	268	ARG	7.2
33	DL	52	GLY	7.1
47	B0	34	GLY	7.1
43	BW	82	GLU	7.0
39	DR	43	ASN	7.0
26	BD	150	GLN	7.0
30	BH	123	ARG	7.0
47	D0	43	THR	7.0
22	DA	88	C	7.0
48	B1	54	LYS	6.9
27	BE	114	ARG	6.9
48	B1	53	ILE	6.9
23	BB	137	U	6.9
26	DD	71	ALA	6.9
50	B3	60	CYS	6.9
37	DP	80	VAL	6.9
29	BG	42	VAL	6.9
30	BH	80	ILE	6.9
33	DL	55	MET	6.9
26	BD	89	GLU	6.8

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Mol	Chain	Res	Type	RSRZ
45	DY	57	GLU	6.8
34	DM	91	TYR	6.8
33	DL	143	GLU	6.8
33	DL	1	MET	6.8
27	DE	23	PHE	6.8
4	CE	158	LYS	6.8
47	B0	33	SER	6.8
42	BU	2	ALA	6.8
48	D1	27	ARG	6.8
47	B0	55	ALA	6.8
26	BD	34	VAL	6.8
15	AP	43	ALA	6.7
29	BG	51	PHE	6.7
43	DW	52	CYS	6.7
13	CN	35	ALA	6.7
4	AE	158	LYS	6.7
33	BL	6	LEU	6.7
37	BP	3	ILE	6.7
33	DL	144	GLU	6.7
30	BH	81	ALA	6.6
52	BI	79	LEU	6.6
26	BD	16	THR	6.6
52	BI	1	ALA	6.6
37	DP	97	TYR	6.6
52	BI	78	LEU	6.6
43	DW	83	ALA	6.6
43	BW	45	HIS	6.5
52	BI	59	THR	6.5
25	BC	114	GLN	6.5
30	BH	144	VAL	6.5
35	DN	120	GLU	6.5
26	BD	139	SER	6.5
36	DO	24	THR	6.5
36	BO	61	GLN	6.5
48	D1	2	LYS	6.4
30	DH	149	GLU	6.4
33	DL	74	THR	6.4
47	B0	8	THR	6.4
33	BL	28	GLY	6.4
44	DX	35	GLY	6.4
35	DN	126	ALA	6.4
33	BL	38	GLN	6.4

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Mol	Chain	Res	Type	RSRZ
36	BO	56	LYS	6.4
48	D1	32	LYS	6.3
39	BR	52	PRO	6.3
48	D1	52	LYS	6.3
51	D4	31	PRO	6.3
47	D0	56	LYS	6.3
25	BC	21	PRO	6.2
26	BD	135	GLY	6.2
38	DQ	96	ASP	6.2
52	BI	20	SER	6.2
42	BU	56	GLY	6.2
50	B3	23	HIS	6.1
30	BH	87	GLU	6.1
41	DT	1	MET	6.1
33	BL	53	GLY	6.1
15	AP	81	ALA	6.1
25	BC	267	VAL	6.1
37	BP	26	GLU	6.1
25	DC	6	LYS	6.1
44	DX	33	ALA	6.1
48	D1	54	LYS	6.1
30	DH	76	GLU	6.0
30	BH	148	ALA	6.0
43	BW	4	LYS	6.0
29	DG	56	GLY	6.0
37	BP	59	THR	6.0
20	AB	15	PHE	6.0
3	AD	146	GLU	6.0
43	BW	81	ILE	6.0
43	BW	59	PHE	6.0
52	BI	49	GLU	6.0
37	BP	97	TYR	6.0
33	DL	2	ARG	6.0
33	DL	12	SER	6.0
48	B1	5	ARG	6.0
35	BN	67	PHE	5.9
48	D1	13	SER	5.9
39	BR	11	GLN	5.9
52	BI	6	ALA	5.9
39	DR	5	PHE	5.9
25	BC	8	THR	5.9
50	B3	62	PRO	5.9

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Mol	Chain	Res	Type	RSRZ
23	BB	645	C	5.9
36	BO	88	LYS	5.9
36	BO	89	ASP	5.8
30	BH	76	GLU	5.8
43	DW	2	HIS	5.8
25	BC	256	THR	5.8
34	DM	135	VAL	5.8
26	BD	186	LEU	5.8
20	CB	124	THR	5.8
44	DX	20	ASN	5.8
48	B1	49	LYS	5.8
42	BU	30	SER	5.8
33	DL	6	LEU	5.7
25	DC	85	ASN	5.7
25	DC	209	ALA	5.7
27	BE	7	ASP	5.7
38	DQ	91	ARG	5.7
43	DW	79	ILE	5.7
33	BL	56	PRO	5.7
25	BC	6	LYS	5.7
33	BL	117	THR	5.7
36	DO	23	ALA	5.7
33	BL	10	GLU	5.7
30	BH	141	LYS	5.6
38	DQ	72	GLY	5.6
27	DE	201	ALA	5.6
26	BD	100	LEU	5.6
33	DL	92	LEU	5.6
43	DW	5	ALA	5.6
52	BI	34	ILE	5.6
27	BE	145	ASP	5.6
30	BH	94	ILE	5.6
10	AK	49	SER	5.6
39	BR	43	ASN	5.6
33	BL	2	ARG	5.5
21	AU	10	PRO	5.5
34	DM	10	ARG	5.5
29	BG	35	THR	5.5
44	BX	37	LEU	5.5
8	CI	129	ARG	5.5
47	B0	49	ARG	5.5
6	CG	152	HIS	5.5

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Mol	Chain	Res	Type	RSRZ
39	BR	56	GLY	5.5
52	BI	11	GLN	5.5
35	BN	72	ASP	5.5
39	DR	98	ILE	5.5
38	DQ	46	TYR	5.5
52	BI	86	LYS	5.5
34	BM	135	VAL	5.4
35	BN	3	HIS	5.4
35	BN	120	GLU	5.4
30	BH	102	ALA	5.4
48	B1	2	LYS	5.4
52	BI	54	ILE	5.4
31	BJ	44	TYR	5.4
33	BL	78	ARG	5.3
27	DE	112	LEU	5.3
25	DC	166	ARG	5.3
41	DT	71	GLY	5.3
50	D3	62	PRO	5.3
35	DN	125	ALA	5.3
43	BW	84	GLU	5.3
34	BM	2	LEU	5.3
39	BR	41	ILE	5.3
34	BM	1	MET	5.3
34	DM	56	ALA	5.3
43	BW	1	ALA	5.3
33	BL	52	GLY	5.3
31	BJ	10	THR	5.2
23	BB	546	U	5.2
33	BL	3	LEU	5.2
26	BD	183	GLU	5.2
7	AH	1	SER	5.2
30	BH	82	SER	5.2
36	BO	19	GLN	5.2
36	DO	45	SER	5.2
48	D1	1	ALA	5.2
36	DO	60	GLU	5.2
29	DG	51	PHE	5.1
40	BS	10	ALA	5.1
30	BH	149	GLU	5.1
3	CD	171	GLU	5.1
52	BI	135	MET	5.1
36	DO	22	GLY	5.1

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Mol	Chain	Res	Type	RSRZ
44	DX	38	GLN	5.1
29	DG	59	ASP	5.1
26	DD	49	GLN	5.1
43	DW	84	GLU	5.1
23	BB	140	C	5.1
44	DX	31	GLN	5.1
30	BH	50	ARG	5.1
52	DI	137	LEU	5.1
30	BH	127	GLU	5.1
47	D0	34	GLY	5.1
20	CB	220	VAL	5.1
35	DN	122	ALA	5.1
46	DZ	4	ASP	5.1
31	DJ	43	GLU	5.0
5	CF	96	VAL	5.0
23	BB	1175	A	5.0
14	AO	88	ARG	5.0
17	CR	19	GLU	5.0
20	AB	199	ILE	5.0
23	BB	2145	C	5.0
33	DL	4	ASN	5.0
33	BL	25	SER	5.0
45	BY	2	LYS	5.0
52	BI	31	GLY	5.0
26	DD	103	ASP	5.0
33	BL	144	GLU	5.0
20	CB	38	HIS	5.0
25	DC	3	VAL	5.0
52	BI	96	LYS	5.0
30	BH	126	GLY	5.0
37	BP	4	ILE	4.9
26	DD	51	THR	4.9
23	BB	136	G	4.9
27	BE	143	LEU	4.9
50	D3	64	ALA	4.9
28	BF	140	ILE	4.9
42	BU	47	PRO	4.9
44	BX	63	ALA	4.9
33	DL	53	GLY	4.9
30	DH	20	ASN	4.9
51	B4	28	SER	4.9
51	D4	1	MET	4.9

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Mol	Chain	Res	Type	RSRZ
40	BS	103	ILE	4.9
26	BD	25	THR	4.9
34	BM	92	TRP	4.9
26	BD	9	VAL	4.9
27	DE	125	SER	4.9
33	BL	12	SER	4.8
27	BE	188	MET	4.8
6	AG	76	SER	4.8
25	DC	242	HIS	4.8
36	DO	57	ALA	4.8
27	DE	140	ASP	4.8
20	AB	8	MET	4.8
25	BC	165	ALA	4.8
27	BE	144	GLU	4.8
45	BY	38	GLU	4.8
35	DN	127	GLU	4.8
25	BC	127	ASN	4.8
48	B1	52	LYS	4.8
36	DO	89	ASP	4.8
42	DU	27	VAL	4.8
15	AP	82	ALA	4.8
43	BW	80	SER	4.8
27	BE	136	GLN	4.8
52	BI	68	PHE	4.8
45	DY	3	THR	4.8
52	BI	10	LEU	4.8
3	CD	163	GLN	4.7
37	BP	20	ARG	4.7
43	DW	82	GLU	4.7
30	DH	19	VAL	4.7
34	DM	40	ARG	4.7
41	DT	70	HIS	4.7
14	CO	15	GLY	4.7
41	BT	95	PHE	4.7
41	DT	72	GLN	4.7
52	DI	25	PRO	4.7
45	BY	40	THR	4.7
25	BC	85	ASN	4.7
27	BE	17	THR	4.7
29	BG	21	GLN	4.7
30	DH	130	VAL	4.7
25	DC	139	THR	4.7

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Mol	Chain	Res	Type	RSRZ
38	DQ	86	SER	4.7
30	BH	85	GLY	4.7
52	BI	25	PRO	4.7
48	D1	31	GLU	4.7
33	BL	11	GLY	4.7
33	BL	84	LYS	4.7
41	DT	99	ALA	4.7
47	D0	35	GLU	4.6
40	BS	110	ARG	4.6
36	DO	86	GLY	4.6
34	DM	2	LEU	4.6
23	BB	613	A	4.6
26	DD	93	GLY	4.6
34	DM	136	MET	4.6
25	DC	247	TRP	4.6
30	BH	105	ALA	4.6
38	DQ	87	VAL	4.6
52	BI	51	GLY	4.6
36	BO	7	ARG	4.6
30	DH	145	ASN	4.6
37	DP	26	GLU	4.5
45	DY	2	LYS	4.5
27	BE	115	GLN	4.5
27	BE	199	MET	4.5
23	BB	2799	A	4.5
50	D3	28	LEU	4.5
30	BH	66	ASN	4.5
27	DE	25	GLU	4.5
30	BH	108	VAL	4.5
27	DE	111	GLU	4.5
7	CH	129	ALA	4.5
32	BK	122	VAL	4.5
4	AE	157	GLY	4.5
51	D4	30	GLU	4.5
52	BI	18	ASN	4.5
30	BH	125	THR	4.5
37	BP	24	THR	4.5
30	BH	19	VAL	4.5
41	BT	96	VAL	4.5
52	DI	83	ALA	4.5
33	BL	35	HIS	4.5
52	BI	27	LEU	4.5

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Mol	Chain	Res	Type	RSRZ
1	AA	845	A	4.5
25	DC	256	THR	4.5
16	AQ	5	ARG	4.5
25	BC	268	ARG	4.5
44	BX	39	GLN	4.5
25	BC	242	HIS	4.5
26	DD	94	GLN	4.4
36	BO	116	GLN	4.4
33	DL	58	TYR	4.4
34	BM	103	TYR	4.4
37	BP	28	LYS	4.4
52	BI	65	SER	4.4
52	BI	35	MET	4.4
44	BX	2	LYS	4.4
29	DG	55	ASP	4.4
30	BH	74	ALA	4.4
40	BS	93	ALA	4.4
33	BL	19	LEU	4.4
30	BH	20	ASN	4.4
47	B0	45	ASP	4.4
52	BI	115	ASP	4.4
32	BK	104	THR	4.4
12	AM	55	LEU	4.4
20	CB	51	GLU	4.4
25	DC	65	ASP	4.4
27	BE	200	LEU	4.4
38	DQ	88	GLU	4.4
26	BD	64	GLU	4.4
38	BQ	111	LYS	4.4
37	BP	87	ARG	4.4
41	DT	96	VAL	4.4
36	BO	43	ASN	4.4
36	DO	35	ILE	4.4
20	CB	17	HIS	4.4
43	BW	68	PHE	4.4
34	DM	102	LEU	4.4
42	BU	87	GLU	4.4
30	BH	146	VAL	4.4
52	BI	84	GLY	4.4
33	DL	85	VAL	4.4
29	DG	44	HIS	4.4
37	BP	30	TRP	4.3

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Mol	Chain	Res	Type	RSRZ
37	BP	50	ARG	4.3
27	DE	199	MET	4.3
52	DI	135	MET	4.3
31	BJ	130	HIS	4.3
43	BW	69	GLU	4.3
42	DU	2	ALA	4.3
52	BI	14	ALA	4.3
47	B0	53	VAL	4.3
3	AD	43	ARG	4.3
26	BD	111	GLY	4.3
27	DE	24	ASN	4.3
45	BY	57	GLU	4.3
29	BG	59	ASP	4.3
20	AB	43	GLU	4.3
27	BE	19	PHE	4.3
44	DX	24	GLU	4.3
8	AI	34	LEU	4.3
30	BH	110	VAL	4.3
25	DC	114	GLN	4.3
37	BP	13	LYS	4.3
27	DE	22	ASP	4.3
34	DM	1	MET	4.3
27	BE	42	GLY	4.3
20	CB	52	ALA	4.3
29	DG	39	ALA	4.3
17	CR	63	TYR	4.3
43	DW	3	LYS	4.3
50	B3	64	ALA	4.3
23	DB	2799	A	4.2
41	BT	25	GLU	4.2
47	B0	37	HIS	4.2
48	D1	12	SER	4.2
35	DN	121	LYS	4.2
25	DC	28	PRO	4.2
28	BF	45	ASP	4.2
36	BO	87	ILE	4.2
39	DR	60	LYS	4.2
5	AF	1	MET	4.2
30	BH	132	PHE	4.2
27	DE	153	LEU	4.2
20	AB	212	TYR	4.2
34	BM	55	ARG	4.2

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Mol	Chain	Res	Type	RSRZ
15	AP	44	SER	4.2
34	DM	128	THR	4.2
26	BD	209	ALA	4.2
51	D4	23	ILE	4.2
39	BR	55	ASP	4.2
28	BF	35	LEU	4.2
31	DJ	2	LYS	4.2
44	DX	19	LEU	4.2
31	DJ	4	PHE	4.2
33	BL	49	GLY	4.2
35	DN	1	MET	4.2
52	BI	26	ALA	4.2
43	DW	35	ILE	4.2
50	D3	33	THR	4.2
52	BI	4	VAL	4.2
26	DD	55	LYS	4.2
11	AL	102	ASP	4.2
31	DJ	49	ASP	4.2
39	BR	29	THR	4.2
6	AG	78	ARG	4.2
30	BH	133	GLN	4.2
30	BH	115	VAL	4.1
37	BP	109	ILE	4.1
39	DR	58	VAL	4.1
24	BV	1	MET	4.1
23	DB	1174	U	4.1
26	BD	131	ASP	4.1
30	BH	63	ALA	4.1
42	BU	61	GLU	4.1
26	BD	53	GLY	4.1
49	B2	14	ARG	4.1
52	BI	53	PRO	4.1
30	BH	67	ALA	4.1
30	DH	106	ALA	4.1
31	DJ	10	THR	4.1
41	DT	91	GLN	4.1
25	BC	224	MET	4.1
15	CP	47	GLU	4.1
42	DU	60	LYS	4.1
7	CH	127	TYR	4.1
23	BB	1728	C	4.1
52	BI	3	LYS	4.1

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Mol	Chain	Res	Type	RSRZ
52	DI	99	LYS	4.1
25	DC	156	SER	4.1
37	BP	1	SER	4.1
41	BT	27	SER	4.1
26	BD	130	GLN	4.1
52	BI	70	THR	4.1
1	AA	86	G	4.1
25	DC	257	ARG	4.1
3	CD	176	LYS	4.1
26	BD	33	ARG	4.1
45	DY	10	ARG	4.1
39	DR	27	ILE	4.1
42	BU	71	ILE	4.1
52	BI	100	ILE	4.1
23	DB	2133	G	4.1
25	DC	160	TYR	4.1
43	BW	67	LYS	4.1
30	BH	121	VAL	4.1
30	DH	77	THR	4.1
20	CB	56	LEU	4.1
3	AD	173	ASP	4.1
28	BF	31	GLU	4.1
52	DI	97	VAL	4.1
30	DH	72	ILE	4.1
33	BL	66	PHE	4.1
28	DF	79	ARG	4.1
20	CB	126	ASP	4.1
30	BH	98	ASP	4.1
52	BI	73	PRO	4.1
12	AM	42	VAL	4.0
20	CB	35	ASN	4.0
44	DX	46	VAL	4.0
20	CB	163	ILE	4.0
39	DR	78	ARG	4.0
26	DD	68	PHE	4.0
27	DE	141	MET	4.0
28	BF	42	ALA	4.0
52	DI	84	GLY	4.0
30	BH	73	ASN	4.0
30	BH	104	THR	4.0
5	AF	62	MET	4.0
30	BH	59	ALA	4.0

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Mol	Chain	Res	Type	RSRZ
26	DD	33	ARG	4.0
26	DD	17	GLU	4.0
25	BC	122	ALA	4.0
45	BY	1	ALA	4.0
16	AQ	45	VAL	4.0
29	DG	40	VAL	4.0
33	BL	34	GLY	4.0
37	BP	44	GLY	4.0
33	DL	3	LEU	4.0
43	DW	6	GLY	4.0
26	BD	2	ILE	4.0
37	BP	19	PHE	4.0
52	BI	66	PHE	4.0
34	DM	60	GLN	4.0
52	DI	136	GLY	4.0
33	DL	115	GLU	4.0
30	DH	21	VAL	4.0
25	DC	269	ARG	4.0
27	BE	192	ALA	3.9
30	BH	60	GLU	4.0
43	DW	37	VAL	3.9
34	DM	106	ASP	3.9
1	AA	461	A	3.9
20	CB	34	ARG	3.9
43	DW	1	ALA	3.9
39	BR	54	VAL	3.9
26	DD	127	PHE	3.9
47	D0	45	ASP	3.9
52	BI	7	TYR	3.9
20	AB	195	VAL	3.9
16	AQ	82	VAL	3.9
36	BO	106	LEU	3.9
41	BT	26	LYS	3.9
27	DE	110	SER	3.9
31	BJ	99	ARG	3.9
27	BE	155	GLU	3.9
34	DM	32	GLY	3.9
23	DB	1459	G	3.9
39	BR	71	LYS	3.9
23	BB	654	A	3.9
20	AB	157	PRO	3.9
35	BN	112	TYR	3.9

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Mol	Chain	Res	Type	RSRZ
43	DW	68	PHE	3.9
25	DC	59	GLN	3.9
33	BL	135	ILE	3.9
38	BQ	88	GLU	3.9
38	DQ	58	GLN	3.9
27	BE	38	GLY	3.9
20	AB	68	PHE	3.8
28	BF	151	LEU	3.8
27	BE	117	ARG	3.8
33	DL	49	GLY	3.8
37	DP	112	ARG	3.8
41	BT	5	GLU	3.8
30	DH	82	SER	3.8
41	DT	98	GLY	3.8
18	AS	40	PHE	3.8
28	BF	145	VAL	3.8
30	DH	131	SER	3.8
25	DC	190	THR	3.8
33	DL	136	GLU	3.8
40	DS	110	ARG	3.8
30	BH	88	GLY	3.8
42	BU	32	LYS	3.8
42	BU	91	LYS	3.8
51	D4	25	VAL	3.8
27	DE	172	ALA	3.8
34	DM	103	TYR	3.8
26	BD	148	GLN	3.8
28	BF	116	LEU	3.8
27	BE	129	PRO	3.8
25	BC	258	SER	3.8
45	BY	41	PRO	3.8
31	BJ	100	VAL	3.8
30	BH	143	ILE	3.8
35	BN	1	MET	3.8
39	BR	98	ILE	3.8
39	DR	16	GLU	3.8
45	BY	39	ASP	3.8
52	BI	95	ASP	3.8
30	DH	137	GLU	3.8
33	BL	4	ASN	3.8
40	BS	66	ILE	3.8
40	BS	92	ARG	3.8

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Mol	Chain	Res	Type	RSRZ
16	AQ	6	THR	3.8
25	DC	167	ASP	3.8
5	AF	52	ASN	3.8
52	BI	2	LYS	3.8
49	B2	15	SER	3.8
29	BG	93	TYR	3.7
44	BX	62	GLY	3.8
7	AH	117	GLN	3.7
33	BL	123	ARG	3.7
50	B3	44	ARG	3.7
28	BF	129	MET	3.7
37	BP	74	GLN	3.7
30	DH	81	ALA	3.7
33	BL	91	ASP	3.7
43	BW	53	GLY	3.7
29	DG	38	ASP	3.7
20	AB	156	LEU	3.7
37	DP	60	VAL	3.7
23	DB	645	C	3.7
20	AB	31	PHE	3.7
33	DL	119	PRO	3.7
45	BY	23	LEU	3.7
31	DJ	13	ARG	3.7
36	BO	92	PHE	3.7
30	DH	75	LEU	3.7
37	DP	55	HIS	3.7
26	BD	86	GLU	3.7
30	BH	79	THR	3.7
27	BE	153	LEU	3.7
33	DL	107	PHE	3.7
25	DC	136	VAL	3.7
33	DL	8	PRO	3.7
12	CM	3	ILE	3.7
38	BQ	90	ASP	3.7
30	DH	139	PHE	3.7
3	AD	178	GLU	3.7
52	BI	8	VAL	3.7
28	BF	64	PRO	3.7
43	BW	77	LYS	3.7
26	BD	127	PHE	3.7
27	BE	191	ASP	3.7
41	DT	94	ASP	3.7

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Mol	Chain	Res	Type	RSRZ
26	BD	99	GLU	3.7
35	BN	118	ARG	3.7
16	AQ	20	ILE	3.7
20	CB	123	GLY	3.6
25	BC	116	GLN	3.6
30	BH	106	ALA	3.6
33	DL	59	ARG	3.6
34	DM	3	GLN	3.6
35	BN	71	ARG	3.6
52	BI	76	ALA	3.6
31	DJ	50	THR	3.6
43	DW	4	LYS	3.6
30	BH	100	ALA	3.6
30	BH	109	GLU	3.6
43	DW	11	ASN	3.6
36	BO	6	ALA	3.6
14	CO	16	ARG	3.6
52	DI	7	TYR	3.6
5	CF	94	HIS	3.6
26	BD	144	GLY	3.6
26	DD	104	VAL	3.6
39	DR	92	TRP	3.6
27	BE	8	ALA	3.6
7	CH	89	ASP	3.6
32	BK	79	PHE	3.6
37	BP	22	GLY	3.6
47	B0	27	LEU	3.6
41	BT	69	ARG	3.6
27	BE	176	ASP	3.6
38	DQ	116	LEU	3.6
2	AC	136	ALA	3.6
37	DP	75	THR	3.6
35	BN	20	MET	3.6
30	DH	98	ASP	3.6
20	AB	46	VAL	3.6
30	BH	83	LYS	3.6
26	BD	35	THR	3.6
20	CB	68	PHE	3.6
25	DC	127	ASN	3.6
26	DD	42	ASN	3.6
26	DD	100	LEU	3.6
15	AP	80	LYS	3.6

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Mol	Chain	Res	Type	RSRZ
27	DE	168	ASP	3.6
47	B0	28	SER	3.6
25	DC	199	HIS	3.6
23	BB	2402	U	3.6
26	BD	14	ILE	3.6
20	AB	32	GLY	3.6
26	BD	84	LEU	3.6
13	CN	34	ASN	3.6
37	BP	75	THR	3.6
44	BX	27	ASN	3.6
52	DI	70	THR	3.6
30	BH	70	GLU	3.5
32	BK	89	ASN	3.5
30	BH	116	ARG	3.5
5	AF	40	GLU	3.5
25	BC	22	GLU	3.5
30	DH	128	HIS	3.5
32	BK	84	CYS	3.5
25	BC	218	THR	3.5
45	BY	49	ALA	3.5
48	B1	44	GLN	3.5
28	BF	56	LEU	3.5
37	DP	4	ILE	3.5
40	BS	61	ASN	3.5
25	DC	162	GLN	3.5
39	DR	6	GLN	3.5
44	DX	39	GLN	3.5
44	DX	1	MET	3.5
33	BL	40	SER	3.5
24	BV	69	GLU	3.5
27	DE	144	GLU	3.5
25	DC	218	THR	3.5
30	BH	75	LEU	3.5
42	BU	55	GLY	3.5
48	B1	16	THR	3.5
25	DC	164	VAL	3.5
52	BI	138	VAL	3.5
37	DP	1	SER	3.5
35	BN	9	GLN	3.5
26	BD	4	LEU	3.5
20	CB	69	VAL	3.5
16	CQ	6	THR	3.5

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Mol	Chain	Res	Type	RSRZ
49	B2	1	MET	3.5
48	B1	35	LEU	3.5
18	CS	25	GLY	3.5
25	BC	247	TRP	3.5
31	BJ	79	GLY	3.5
24	BV	34	LYS	3.5
36	DO	85	LYS	3.5
28	BF	141	ASP	3.5
28	BF	152	ASP	3.5
42	DU	61	GLU	3.5
1	CA	461	A	3.5
30	DH	141	LYS	3.5
5	AF	41	ASP	3.5
25	DC	57	HIS	3.5
38	DQ	59	LEU	3.5
25	BC	266	ILE	3.5
52	BI	87	SER	3.5
32	BK	121	GLU	3.5
16	AQ	60	ILE	3.4
27	BE	48	THR	3.4
27	DE	48	THR	3.4
45	BY	24	LEU	3.5
47	B0	41	HIS	3.4
30	DH	144	VAL	3.4
26	BD	28	GLU	3.4
20	AB	213	LEU	3.4
27	BE	6	LYS	3.4
30	DH	94	ILE	3.4
26	DD	88	GLU	3.4
33	DL	10	GLU	3.4
50	D3	32	LEU	3.4
28	DF	43	ILE	3.4
28	BF	131	VAL	3.4
34	DM	24	THR	3.4
40	BS	40	ASN	3.4
26	BD	201	LEU	3.4
41	BT	72	GLN	3.4
52	BI	134	SER	3.4
46	BZ	27	THR	3.4
41	BT	4	GLU	3.4
52	DI	37	PHE	3.4
5	AF	66	ALA	3.4

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Mol	Chain	Res	Type	RSRZ
5	AF	98	GLU	3.4
25	BC	138	SER	3.4
25	DC	9	SER	3.4
40	DS	108	SER	3.4
9	AJ	91	ASP	3.4
30	BH	129	GLU	3.4
42	BU	59	GLU	3.4
5	AF	63	ASN	3.4
28	BF	111	ARG	3.4
33	DL	117	THR	3.4
52	DI	30	GLN	3.4
27	BE	113	VAL	3.4
28	DF	75	GLY	3.4
52	DI	81	LYS	3.4
8	AI	127	SER	3.4
39	BR	42	ALA	3.4
23	BB	2308	G	3.4
24	BV	56	PHE	3.4
25	BC	43	ASN	3.4
52	BI	30	GLN	3.4
39	DR	24	LYS	3.4
40	BS	9	HIS	3.4
26	BD	147	GLY	3.4
34	BM	132	THR	3.4
31	BJ	89	PHE	3.4
24	BV	61	LEU	3.4
36	BO	76	LYS	3.4
26	DD	140	HIS	3.4
51	B4	25	VAL	3.4
52	BI	28	GLY	3.4
29	BG	50	THR	3.4
32	BK	90	ASN	3.4
29	DG	106	LEU	3.4
6	CG	79	VAL	3.3
20	CB	160	LEU	3.3
14	AO	16	ARG	3.3
33	DL	35	HIS	3.3
43	BW	3	LYS	3.3
49	B2	18	PHE	3.3
52	BI	38	CYS	3.3
25	BC	154	ALA	3.3
37	BP	46	VAL	3.3

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Mol	Chain	Res	Type	RSRZ
37	BP	55	HIS	3.3
33	DL	50	PHE	3.3
11	AL	43	LYS	3.3
26	DD	32	ASN	3.3
34	DM	104	GLU	3.3
39	DR	45	GLU	3.3
8	AI	19	PHE	3.3
8	AI	51	LEU	3.3
27	DE	42	GLY	3.3
28	BF	175	PRO	3.3
51	B4	29	ALA	3.3
28	DF	72	SER	3.3
39	BR	37	GLU	3.3
20	CB	50	ASN	3.3
52	BI	137	LEU	3.3
30	DH	52	ALA	3.3
23	DB	2402	U	3.3
39	DR	77	PHE	3.3
25	DC	116	GLN	3.3
30	BH	145	ASN	3.3
25	DC	172	THR	3.3
20	CB	55	GLU	3.3
29	DG	2	ARG	3.3
7	CH	44	PHE	3.3
28	BF	161	SER	3.3
30	DH	47	PHE	3.3
51	D4	32	LYS	3.3
50	B3	26	ALA	3.3
25	BC	4	LYS	3.3
52	BI	32	VAL	3.3
33	BL	85	VAL	3.3
45	BY	52	PHE	3.3
25	BC	120	ASP	3.3
41	BT	1	MET	3.2
26	DD	125	TRP	3.2
34	BM	3	GLN	3.2
39	DR	11	GLN	3.2
1	CA	412	A	3.2
1	AA	844	G	3.2
2	AC	98	ALA	3.2
33	BL	54	GLN	3.2
26	BD	156	PHE	3.2

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Mol	Chain	Res	Type	RSRZ
20	AB	41	ASN	3.2
35	BN	2	ARG	3.2
49	B2	13	ASN	3.2
28	BF	153	ILE	3.2
29	DG	15	ASP	3.2
29	DG	57	TYR	3.2
33	BL	76	GLU	3.2
37	DP	30	TRP	3.2
26	BD	46	ARG	3.2
32	BK	21	CYS	3.2
41	BT	32	LEU	3.2
26	BD	74	GLU	3.2
20	CB	158	ASP	3.2
25	DC	178	GLY	3.2
30	BH	95	GLY	3.2
31	BJ	18	VAL	3.2
33	DL	90	VAL	3.2
38	DQ	89	ILE	3.2
42	DU	56	GLY	3.2
51	D4	38	GLY	3.2
20	CB	153	MET	3.2
6	AG	145	GLU	3.2
33	DL	94	THR	3.2
42	BU	90	LYS	3.2
52	BI	45	THR	3.2
1	AA	78	A	3.2
52	BI	37	PHE	3.2
33	DL	81	ASP	3.2
3	AD	3	TYR	3.2
18	CS	79	TYR	3.2
31	DJ	24	THR	3.2
33	BL	57	LEU	3.2
5	AF	35	LYS	3.2
28	BF	83	PRO	3.2
5	AF	51	ILE	3.2
28	BF	6	TYR	3.2
29	BG	56	GLY	3.2
51	D4	7	VAL	3.2
26	BD	200	ASP	3.2
29	DG	1	SER	3.2
39	DR	13	ARG	3.2
25	DC	93	VAL	3.2

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Mol	Chain	Res	Type	RSRZ
24	BV	94	ALA	3.2
52	BI	15	GLY	3.2
30	DH	25	TYR	3.2
26	DD	74	GLU	3.2
27	DE	191	ASP	3.2
31	BJ	43	GLU	3.2
2	AC	158	GLY	3.2
33	DL	57	LEU	3.2
23	DB	2602	A	3.2
32	BK	53	LYS	3.2
42	BU	28	LEU	3.2
28	DF	42	ALA	3.2
7	CH	75	GLN	3.2
39	DR	19	THR	3.1
20	AB	158	ASP	3.1
40	DS	46	LEU	3.1
47	D0	54	ILE	3.1
50	D3	7	ARG	3.1
52	DI	5	GLN	3.1
26	BD	155	VAL	3.1
28	BF	154	THR	3.1
7	CH	120	LEU	3.1
29	DG	167	VAL	3.1
30	DH	110	VAL	3.1
33	DL	5	THR	3.1
33	BL	21	ARG	3.1
33	DL	34	GLY	3.1
5	CF	95	ALA	3.1
27	DE	41	GLN	3.1
5	AF	88	MET	3.1
7	CH	122	GLY	3.1
14	CO	45	HIS	3.1
26	BD	11	MET	3.1
48	D1	20	TYR	3.1
26	BD	187	LEU	3.1
43	BW	37	VAL	3.1
35	BN	7	GLY	3.1
47	B0	42	ILE	3.1
18	CS	78	THR	3.1
26	BD	12	THR	3.1
26	BD	43	ASP	3.1
43	BW	42	THR	3.1

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Mol	Chain	Res	Type	RSRZ
26	DD	183	GLU	3.1
25	DC	115	ILE	3.1
30	DH	61	VAL	3.1
48	D1	51	ALA	3.1
52	BI	22	PRO	3.1
2	AC	75	VAL	3.1
23	DB	139	U	3.1
13	AN	30	ILE	3.1
23	BB	2309	A	3.1
3	CD	159	GLU	3.1
27	DE	87	ALA	3.1
29	DG	41	GLU	3.1
3	AD	28	ASP	3.1
29	BG	155	PRO	3.1
29	DG	21	GLN	3.1
10	CK	81	LEU	3.1
36	DO	92	PHE	3.1
16	CQ	3	LYS	3.1
34	BM	133	LYS	3.1
41	BT	71	GLY	3.1
52	BI	24	GLY	3.1
16	CQ	51	GLU	3.1
30	DH	67	ALA	3.1
39	DR	62	GLU	3.1
52	BI	109	ALA	3.1
6	AG	84	TYR	3.1
39	BR	92	TRP	3.1
3	CD	180	THR	3.1
15	AP	6	LEU	3.1
20	CB	162	VAL	3.1
32	BK	107	LEU	3.1
39	BR	51	VAL	3.1
38	BQ	86	SER	3.1
4	CE	115	GLU	3.1
25	DC	210	ALA	3.1
44	BX	15	ASN	3.1
43	BW	9	THR	3.1
37	DP	20	ARG	3.1
1	AA	842	U	3.1
20	AB	153	MET	3.1
26	BD	199	SER	3.1
5	CF	1	MET	3.0

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Mol	Chain	Res	Type	RSRZ
29	BG	41	GLU	3.0
41	DT	27	SER	3.0
46	BZ	63	ARG	3.0
12	AM	52	ILE	3.0
47	B0	46	GLY	3.0
23	BB	1537	G	3.0
36	DO	88	LYS	3.0
37	BP	21	PRO	3.0
26	BD	51	THR	3.0
48	D1	28	THR	3.0
26	DD	79	LEU	3.0
25	DC	141	HIS	3.0
39	BR	12	HIS	3.0
26	BD	18	ASP	3.0
37	DP	96	LEU	3.0
39	DR	39	LEU	3.0
41	DT	53	VAL	3.0
51	B4	7	VAL	3.0
28	DF	24	VAL	3.0
48	D1	8	ILE	3.0
27	DE	155	GLU	3.0
27	BE	60	TRP	3.0
42	BU	44	HIS	3.0
20	CB	147	LEU	3.0
25	BC	241	LYS	3.0
27	DE	86	ALA	3.0
47	B0	52	LYS	3.0
52	BI	69	VAL	3.0
24	BV	3	THR	3.0
23	BB	1726	C	3.0
25	DC	110	LYS	3.0
27	BE	137	LYS	3.0
40	BS	32	ALA	3.0
7	CH	45	ILE	3.0
1	CA	466	A	3.0
20	CB	161	PHE	3.0
3	AD	185	PRO	3.0
28	DF	44	ALA	3.0
26	BD	77	ARG	3.0
11	AL	51	VAL	3.0
20	CB	159	ALA	3.0
29	BG	147	LEU	3.0

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Mol	Chain	Res	Type	RSRZ
41	DT	57	VAL	3.0
10	AK	50	GLY	3.0
32	BK	77	ILE	3.0
52	BI	108	ILE	3.0
26	BD	7	LYS	3.0
6	AG	77	ARG	3.0
30	BH	69	ALA	3.0
4	CE	157	GLY	3.0
25	BC	28	PRO	3.0
33	BL	142	ILE	3.0
1	AA	121	U	3.0
7	AH	110	MET	3.0
30	DH	146	VAL	3.0
39	DR	1	MET	3.0
39	DR	29	THR	3.0
52	BI	50	LYS	3.0
34	BM	4	PRO	3.0
33	BL	126	ARG	3.0
37	DP	65	ASN	3.0
24	DV	72	VAL	3.0
52	BI	80	LYS	3.0
25	DC	103	ILE	3.0
26	BD	80	TRP	3.0
33	BL	124	GLY	3.0
37	BP	35	SER	2.9
43	DW	73	PRO	2.9
20	AB	100	LEU	2.9
51	D4	37	GLN	2.9
33	DL	101	ILE	2.9
33	DL	118	THR	2.9
35	DN	57	THR	2.9
3	CD	28	ASP	2.9
26	BD	5	VAL	2.9
3	AD	175	GLY	2.9
29	DG	58	ALA	2.9
37	BP	33	GLU	2.9
52	BI	128	ILE	2.9
21	AU	4	LYS	2.9
24	BV	91	PHE	2.9
29	BG	57	TYR	2.9
26	BD	145	SER	2.9
34	DM	66	ARG	2.9

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Mol	Chain	Res	Type	RSRZ
41	DT	97	GLY	2.9
29	DG	36	LEU	2.9
26	BD	49	GLN	2.9
32	BK	101	GLY	2.9
39	BR	3	ALA	2.9
10	AK	41	LEU	2.9
28	BF	174	PHE	2.9
40	DS	23	LEU	2.9
52	BI	67	THR	2.9
37	BP	67	GLU	2.9
16	AQ	55	GLY	2.9
18	AS	48	ILE	2.9
28	BF	144	LYS	2.9
1	AA	466	A	2.9
24	DV	91	PHE	2.9
26	BD	167	ASN	2.9
37	BP	85	VAL	2.9
47	D0	25	THR	2.9
12	AM	38	ILE	2.9
28	BF	134	GLN	2.9
7	CH	62	LEU	2.9
26	BD	68	PHE	2.9
29	DG	49	LEU	2.9
44	BX	20	ASN	2.9
52	DI	52	LEU	2.9
47	B0	32	THR	2.9
18	AS	60	PHE	2.9
37	BP	61	ARG	2.9
28	BF	30	VAL	2.9
48	B1	46	VAL	2.9
26	BD	27	ILE	2.9
52	DI	125	THR	2.9
30	BH	97	ARG	2.9
37	BP	77	SER	2.9
26	BD	56	LYS	2.9
27	BE	123	LYS	2.9
30	BH	89	LYS	2.9
25	BC	164	VAL	2.9
16	AQ	4	ILE	2.9
25	DC	128	THR	2.9
37	BP	88	ARG	2.9
52	BI	72	THR	2.9

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Mol	Chain	Res	Type	RSRZ
39	BR	20	VAL	2.9
39	DR	83	TYR	2.9
42	DU	69	VAL	2.9
26	BD	153	GLY	2.9
2	CC	133	MET	2.9
9	AJ	34	ALA	2.9
27	BE	158	PHE	2.9
43	BW	43	LYS	2.9
30	BH	117	LEU	2.9
52	BI	125	THR	2.9
25	BC	126	GLY	2.9
29	DG	23	ILE	2.8
30	DH	73	ASN	2.8
46	BZ	22	MET	2.8
3	AD	22	SER	2.8
44	DX	40	SER	2.8
1	AA	1493	A	2.8
5	CF	62	MET	2.8
35	BN	98	LEU	2.8
6	AG	79	VAL	2.8
27	BE	196	VAL	2.8
5	CF	92	THR	2.8
7	AH	13	ILE	2.8
12	AM	29	SER	2.8
3	AD	81	LEU	2.8
21	CU	28	LEU	2.8
48	D1	10	LEU	2.8
52	BI	29	GLN	2.8
20	CB	198	VAL	2.8
26	BD	204	LYS	2.8
12	AM	83	GLY	2.8
17	AR	20	ILE	2.8
25	BC	239	PHE	2.8
32	BK	119	ALA	2.8
7	AH	102	VAL	2.8
34	DM	92	TRP	2.8
5	AF	6	ILE	2.8
24	BV	4	ILE	2.8
11	AL	48	LEU	2.8
12	CM	47	LEU	2.8
16	AQ	27	PHE	2.8
34	DM	7	THR	2.8

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Mol	Chain	Res	Type	RSRZ
40	DS	3	THR	2.8
44	BX	26	PHE	2.8
27	BE	140	ASP	2.8
6	AG	8	GLN	2.8
26	DD	204	LYS	2.8
31	BJ	40	HIS	2.8
34	DM	38	ARG	2.8
50	D3	48	MET	2.8
25	BC	257	ARG	2.8
42	BU	101	THR	2.8
52	DI	78	LEU	2.8
4	CE	9	GLU	2.8
25	DC	120	ASP	2.8
30	BH	101	ASP	2.8
31	BJ	15	TRP	2.8
20	AB	159	ALA	2.8
28	BF	157	THR	2.8
28	BF	148	VAL	2.8
30	BH	131	SER	2.8
20	CB	150	ILE	2.8
25	DC	112	GLY	2.8
28	BF	142	TYR	2.8
31	DJ	46	PRO	2.8
33	BL	50	PHE	2.8
33	DL	109	LYS	2.8
38	DQ	32	ARG	2.8
41	DT	74	ILE	2.8
52	DI	128	ILE	2.8
25	DC	154	ALA	2.8
52	DI	132	ALA	2.8
35	BN	70	THR	2.8
11	CL	85	ARG	2.8
32	BK	78	ARG	2.8
34	DM	11	LYS	2.8
33	BL	101	ILE	2.8
37	BP	49	ILE	2.8
27	DE	138	LEU	2.8
27	BE	122	GLU	2.8
5	CF	32	ALA	2.8
31	BJ	120	ARG	2.8
39	DR	90	ARG	2.8
40	BS	28	LYS	2.8

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Mol	Chain	Res	Type	RSRZ
20	CB	200	PRO	2.8
36	BO	64	TYR	2.8
1	AA	1492	A	2.8
25	DC	20	ASN	2.8
27	BE	21	ARG	2.8
30	BH	78	VAL	2.8
42	DU	1	ALA	2.8
37	BP	37	LYS	2.8
48	B1	32	LYS	2.8
17	CR	71	ASP	2.8
27	BE	43	THR	2.8
28	BF	137	PHE	2.8
29	BG	170	THR	2.8
25	DC	171	VAL	2.8
29	BG	175	LYS	2.8
38	BQ	3	VAL	2.8
39	DR	64	VAL	2.8
27	BE	141	MET	2.8
36	DO	1	MET	2.8
10	CK	51	PHE	2.7
24	DV	56	PHE	2.7
41	DT	95	PHE	2.7
43	DW	45	HIS	2.7
40	DS	109	ASP	2.7
48	B1	50	GLU	2.7
23	BB	653	U	2.7
37	BP	94	ALA	2.7
38	BQ	117	ALA	2.7
20	CB	41	ASN	2.7
33	BL	16	GLY	2.7
43	DW	44	PHE	2.7
5	AF	65	GLU	2.7
18	CS	26	ASP	2.7
52	BI	91	LYS	2.7
31	DJ	15	TRP	2.7
33	BL	113	ALA	2.7
33	DL	7	SER	2.7
34	BM	131	VAL	2.7
36	BO	5	SER	2.7
7	AH	98	LEU	2.7
27	BE	195	GLN	2.7
26	BD	70	LYS	2.7

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Mol	Chain	Res	Type	RSRZ
31	BJ	119	PHE	2.7
26	BD	13	ARG	2.7
5	AF	64	VAL	2.7
48	D1	21	THR	2.7
20	AB	85	SER	2.7
23	DB	1171	G	2.7
39	BR	102	SER	2.7
3	AD	194	ILE	2.7
18	AS	28	LYS	2.7
12	CM	46	GLU	2.7
46	BZ	33	ASN	2.7
25	DC	61	TYR	2.7
16	AQ	11	VAL	2.7
37	BP	81	ASP	2.7
34	DM	4	PRO	2.7
43	BW	74	LYS	2.7
7	AH	17	GLN	2.7
20	AB	211	LEU	2.7
25	BC	269	ARG	2.7
34	BM	117	PHE	2.7
51	B4	38	GLY	2.7
52	BI	16	MET	2.7
17	CR	22	TYR	2.7
30	BH	134	VAL	2.7
25	DC	4	LYS	2.7
31	DJ	63	ALA	2.7
39	BR	19	THR	2.7
45	DY	37	ARG	2.7
7	CH	46	GLU	2.7
52	DI	85	ILE	2.7
16	AQ	8	GLN	2.7
25	BC	238	ASN	2.7
13	AN	46	LYS	2.7
26	BD	116	LYS	2.7
31	BJ	123	LYS	2.7
33	BL	122	VAL	2.7
40	BS	107	VAL	2.7
33	BL	108	ALA	2.7
39	DR	65	ALA	2.7
25	BC	41	GLY	2.7
40	BS	108	SER	2.7
30	DH	121	VAL	2.7

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Mol	Chain	Res	Type	RSRZ
32	BK	17	ARG	2.7
7	AH	81	GLY	2.7
33	BL	112	LEU	2.7
46	DZ	18	CYS	2.7
20	AB	26	MET	2.7
39	DR	41	ILE	2.7
47	B0	35	GLU	2.7
33	DL	141	LYS	2.7
48	D1	16	THR	2.7
48	D1	36	LYS	2.7
52	DI	131	THR	2.7
17	AR	63	TYR	2.7
18	AS	59	VAL	2.7
2	AC	18	ASN	2.7
1	CA	84	U	2.7
25	DC	189	ALA	2.7
26	BD	101	PHE	2.7
29	BG	38	ASP	2.7
35	DN	33	ILE	2.7
37	DP	14	GLN	2.7
8	AI	47	VAL	2.7
29	DG	3	VAL	2.7
43	DW	80	SER	2.7
37	BP	43	GLU	2.7
41	DT	33	LYS	2.7
7	AH	92	PRO	2.7
17	AR	21	ASP	2.7
26	DD	80	TRP	2.7
41	DT	73	ARG	2.7
23	BB	1095	A	2.7
36	BO	52	SER	2.7
28	BF	57	ALA	2.7
29	BG	43	LYS	2.7
52	DI	1	ALA	2.7
24	BV	63	ILE	2.7
26	BD	141	ARG	2.7
20	CB	193	ASP	2.7
3	AD	200	VAL	2.7
26	BD	23	PRO	2.7
28	BF	73	VAL	2.7
33	DL	116	VAL	2.7
48	D1	11	VAL	2.7

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Mol	Chain	Res	Type	RSRZ
5	CF	80	PHE	2.6
7	CH	1	SER	2.6
15	AP	39	PHE	2.6
15	CP	43	ALA	2.6
16	CQ	52	CYS	2.6
20	AB	84	LEU	2.6
22	BA	52	A	2.6
42	BU	40	LEU	2.6
7	AH	125	ILE	2.6
39	BR	1	MET	2.6
20	AB	28	PRO	2.6
31	DJ	64	VAL	2.6
42	BU	54	PRO	2.6
20	CB	67	LEU	2.6
24	DV	69	GLU	2.6
7	AH	100	ILE	2.6
32	BK	34	GLY	2.6
36	BO	45	SER	2.6
52	DI	101	SER	2.6
5	AF	68	GLN	2.6
7	AH	71	VAL	2.6
25	DC	238	ASN	2.6
52	BI	46	ASP	2.6
26	DD	128	ARG	2.6
33	DL	20	GLY	2.6
33	DL	78	ARG	2.6
48	B1	6	GLU	2.6
13	CN	30	ILE	2.6
40	BS	104	THR	2.6
25	DC	143	VAL	2.6
33	DL	93	ASN	2.6
41	BT	28	ASN	2.6
34	BM	10	ARG	2.6
47	D0	3	GLN	2.6
17	AR	19	GLU	2.6
14	AO	15	GLY	2.6
20	CB	14	HIS	2.6
51	D4	33	HIS	2.6
4	AE	113	VAL	2.6
23	DB	898	C	2.6
43	BW	8	SER	2.6
3	AD	162	GLU	2.6

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Mol	Chain	Res	Type	RSRZ
27	BE	177	PRO	2.6
23	DB	2134	A	2.6
28	BF	155	ILE	2.6
43	BW	60	ALA	2.6
50	B3	2	LYS	2.6
20	CB	26	MET	2.6
20	CB	190	SER	2.6
50	D3	12	ARG	2.6
3	CD	106	PHE	2.6
15	CP	52	LEU	2.6
37	DP	40	GLN	2.6
51	B4	35	GLN	2.6
30	DH	13	GLY	2.6
20	CB	75	ALA	2.6
28	BF	112	ASP	2.6
29	BG	150	TYR	2.6
31	BJ	23	LYS	2.6
37	BP	2	ASN	2.6
39	BR	26	ASP	2.6
43	BW	62	ALA	2.6
52	DI	75	ALA	2.6
37	DP	61	ARG	2.6
20	CB	29	PHE	2.6
27	DE	53	THR	2.6
25	DC	258	SER	2.6
43	DW	67	LYS	2.6
37	BP	45	VAL	2.6
13	CN	22	LYS	2.6
26	BD	129	THR	2.6
27	BE	41	GLN	2.6
39	DR	99	THR	2.6
48	D1	23	THR	2.6
9	CJ	12	ALA	2.6
11	CL	123	ALA	2.6
26	DD	31	ALA	2.6
39	BR	2	TYR	2.6
25	BC	225	ASN	2.6
39	DR	47	VAL	2.6
42	BU	82	VAL	2.6
17	AR	73	HIS	2.6
31	DJ	89	PHE	2.6
50	B3	13	PHE	2.6

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Mol	Chain	Res	Type	RSRZ
26	BD	36	GLN	2.6
26	BD	52	THR	2.6
37	DP	24	THR	2.6
38	DQ	50	ARG	2.6
40	BS	74	ILE	2.6
25	BC	10	PRO	2.6
7	CH	53	ASP	2.6
43	DW	78	PHE	2.6
32	BK	115	ILE	2.6
33	BL	111	ILE	2.6
52	DI	100	ILE	2.6
27	BE	194	LYS	2.6
30	DH	136	SER	2.6
20	AB	198	VAL	2.6
25	DC	29	PHE	2.6
28	BF	96	TRP	2.6
32	BK	8	LEU	2.6
44	DX	21	LEU	2.6
10	CK	12	ARG	2.6
30	DH	50	ARG	2.6
31	BJ	47	HIS	2.6
41	DT	12	ARG	2.6
30	DH	107	GLY	2.6
44	BX	36	GLN	2.6
5	CF	25	TYR	2.6
26	BD	170	VAL	2.6
33	BL	89	VAL	2.6
41	DT	92	ASN	2.5
7	AH	74	ILE	2.5
37	DP	74	GLN	2.5
38	DQ	55	GLN	2.5
39	DR	87	GLN	2.5
20	CB	178	LEU	2.5
24	BV	59	GLU	2.5
52	DI	12	VAL	2.5
20	AB	200	PRO	2.5
27	DE	55	SER	2.5
30	DH	12	LEU	2.5
34	DM	105	MET	2.5
34	DM	109	PRO	2.5
41	BT	6	ARG	2.5
50	B3	50	SER	2.5

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Mol	Chain	Res	Type	RSRZ
8	AI	61	ASP	2.5
13	CN	42	ASN	2.5
29	DG	114	HIS	2.5
11	AL	62	VAL	2.5
25	DC	30	ALA	2.5
31	DJ	6	ALA	2.5
42	BU	53	GLN	2.5
26	BD	178	VAL	2.5
26	DD	13	ARG	2.5
31	DJ	18	VAL	2.5
33	BL	116	VAL	2.5
11	AL	63	THR	2.5
34	BM	134	THR	2.5
52	BI	105	LEU	2.5
34	DM	30	SER	2.5
52	BI	19	PRO	2.5
20	CB	39	ILE	2.5
41	BT	70	HIS	2.5
32	BK	35	VAL	2.5
33	DL	75	ALA	2.5
34	DM	9	PHE	2.5
28	DF	68	LYS	2.5
36	BO	63	LYS	2.5
3	AD	191	SER	2.5
25	DC	21	PRO	2.5
23	BB	1731	G	2.5
25	DC	60	ALA	2.5
52	BI	12	VAL	2.5
30	DH	95	GLY	2.5
2	CC	182	ASP	2.5
34	DM	93	VAL	2.5
50	D3	35	LYS	2.5
16	AQ	52	CYS	2.5
23	BB	138	U	2.5
33	DL	95	LEU	2.5
50	B3	43	LEU	2.5
52	DI	79	LEU	2.5
26	DD	152	PRO	2.5
27	BE	59	PRO	2.5
38	DQ	73	ILE	2.5
5	CF	42	TRP	2.5
25	BC	212	TRP	2.5

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Mol	Chain	Res	Type	RSRZ
29	DG	46	ASP	2.5
37	BP	9	GLN	2.5
39	BR	62	GLU	2.5
3	CD	169	TRP	2.5
23	BB	2286	G	2.5
26	BD	47	ALA	2.5
36	BO	54	VAL	2.5
42	DU	48	VAL	2.5
52	DI	69	VAL	2.5
30	DH	54	LEU	2.5
29	DG	136	ASP	2.5
14	AO	72	LYS	2.5
22	DA	52	A	2.5
34	BM	83	GLY	2.5
52	DI	96	LYS	2.5
23	BB	1727	C	2.5
34	DM	47	GLU	2.5
27	BE	22	ASP	2.5
43	DW	74	LYS	2.5
17	AR	38	ILE	2.5
6	AG	15	PRO	2.5
14	AO	69	LEU	2.5
25	DC	10	PRO	2.5
36	BO	103	VAL	2.5
43	DW	59	PHE	2.5
14	CO	77	TYR	2.5
30	BH	18	GLN	2.5
42	BU	93	ARG	2.5
16	AQ	46	HIS	2.5
31	DJ	7	LYS	2.5
39	DR	71	LYS	2.5
52	DI	124	MET	2.5
5	AF	33	GLU	2.5
25	BC	51	ARG	2.5
29	BG	101	VAL	2.5
37	DP	87	ARG	2.5
38	BQ	35	PHE	2.5
50	B3	29	ARG	2.5
52	BI	139	VAL	2.5
20	CB	165	ALA	2.5
49	D2	37	LYS	2.5
16	AQ	37	ILE	2.5

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Mol	Chain	Res	Type	RSRZ
11	CL	24	GLU	2.5
30	BH	119	ASN	2.5
30	DH	138	VAL	2.5
33	BL	90	VAL	2.5
33	DL	84	LYS	2.5
37	BP	73	PHE	2.5
51	B4	9	LYS	2.5
26	BD	102	ALA	2.4
30	DH	38	PRO	2.4
52	DI	6	ALA	2.4
25	BC	162	GLN	2.4
1	CA	86	G	2.4
29	BG	61	TRP	2.4
46	DZ	9	TYR	2.4
42	DU	55	GLY	2.4
20	AB	66	ILE	2.4
1	CA	747	A	2.4
42	BU	68	ASN	2.4
29	DG	13	GLY	2.4
33	BL	26	GLY	2.4
11	AL	75	GLU	2.4
28	BF	139	GLU	2.4
33	BL	143	GLU	2.4
43	DW	19	ARG	2.4
26	BD	181	ASP	2.4
27	DE	116	ASP	2.4
31	BJ	17	VAL	2.4
32	BK	85	VAL	2.4
6	CG	77	ARG	2.4
52	BI	5	GLN	2.4
10	CK	82	GLU	2.4
29	DG	16	VAL	2.4
27	BE	72	SER	2.4
27	BE	11	ALA	2.4
52	DI	26	ALA	2.4
28	DF	47	LYS	2.4
50	B3	39	ARG	2.4
25	BC	115	ILE	2.4
26	BD	81	GLU	2.4
26	DD	64	GLU	2.4
20	CB	156	LEU	2.4
30	BH	6	LEU	2.4

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Mol	Chain	Res	Type	RSRZ
34	DM	33	LEU	2.4
37	DP	113	LEU	2.4
46	BZ	43	PHE	2.4
23	DB	846	U	2.4
36	DO	93	ASP	2.4
46	DZ	45	THR	2.4
28	BF	130	GLY	2.4
33	BL	37	GLY	2.4
21	AU	3	ILE	2.4
26	DD	2	ILE	2.4
35	BN	75	ILE	2.4
26	DD	203	VAL	2.4
32	BK	103	VAL	2.4
23	DB	548	G	2.4
50	D3	30	HIS	2.4
10	CK	52	ARG	2.4
25	DC	177	SER	2.4
52	BI	136	GLY	2.4
33	DL	104	GLN	2.4
37	DP	47	ILE	2.4
14	AO	74	VAL	2.4
16	AQ	36	PHE	2.4
20	CB	90	PHE	2.4
20	CB	99	MET	2.4
25	DC	131	MET	2.4
41	BT	10	VAL	2.4
52	BI	13	ALA	2.4
52	DI	82	ALA	2.4
43	BW	41	GLY	2.4
3	AD	122	ILE	2.4
29	BG	25	ILE	2.4
31	BJ	54	ILE	2.4
37	DP	3	ILE	2.4
10	AK	88	PRO	2.4
16	AQ	57	VAL	2.4
26	DD	126	ASN	2.4
17	CR	72	ARG	2.4
29	BG	91	VAL	2.4
2	CC	70	ALA	2.4
11	AL	47	ALA	2.4
16	AQ	9	GLY	2.4
33	DL	140	GLY	2.4

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Mol	Chain	Res	Type	RSRZ
37	DP	33	GLU	2.4
47	B0	50	GLY	2.4
7	CH	124	ILE	2.4
23	DB	654	A	2.4
41	BT	21	SER	2.4
36	BO	78	VAL	2.4
37	DP	36	LYS	2.4
52	BI	77	VAL	2.4
25	DC	43	ASN	2.4
45	BY	19	HIS	2.4
6	CG	60	ALA	2.4
30	BH	140	ALA	2.4
2	CC	168	ARG	2.4
5	AF	25	TYR	2.4
14	CO	88	ARG	2.4
18	AS	47	THR	2.4
18	AS	73	PHE	2.4
37	BP	23	ASP	2.4
40	DS	66	ILE	2.4
20	CB	42	LEU	2.4
52	BI	112	LYS	2.4
33	BL	62	PRO	2.4
26	BD	125	TRP	2.4
17	CR	23	LYS	2.4
35	BN	66	ALA	2.4
17	AR	66	LEU	2.4
33	DL	142	ILE	2.4
32	BK	63	VAL	2.4
47	B0	38	LEU	2.4
47	D0	48	TYR	2.4
26	DD	197	THR	2.4
23	DB	1913	A	2.4
25	DC	137	GLY	2.4
27	BE	71	GLY	2.4
27	DE	20	GLY	2.4
27	DE	38	GLY	2.4
33	DL	134	ALA	2.4
9	AJ	36	VAL	2.4
26	BD	138	LEU	2.4
39	DR	35	PHE	2.4
13	AN	40	ARG	2.3
31	DJ	110	PRO	2.3

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Mol	Chain	Res	Type	RSRZ
39	DR	52	PRO	2.3
52	DI	94	LYS	2.3
29	BG	12	ALA	2.3
33	DL	45	GLY	2.3
24	DV	4	ILE	2.3
30	DH	80	ILE	2.3
24	DV	92	VAL	2.3
25	DC	119	VAL	2.3
41	DT	8	LEU	2.3
25	DC	224	MET	2.3
52	BI	116	MET	2.3
7	CH	72	GLU	2.3
20	AB	61	SER	2.3
33	DL	108	ALA	2.3
36	BO	70	ALA	2.3
52	BI	98	GLY	2.3
3	AD	106	PHE	2.3
8	AI	62	LEU	2.3
25	DC	109	LEU	2.3
27	DE	175	ILE	2.3
16	AQ	78	VAL	2.3
25	BC	211	ARG	2.3
34	DM	127	LYS	2.3
52	BI	99	LYS	2.3
25	BC	243	PRO	2.3
16	AQ	43	LEU	2.3
20	AB	161	PHE	2.3
3	AD	154	VAL	2.3
30	DH	119	ASN	2.3
31	BJ	80	HIS	2.3
42	BU	41	VAL	2.3
33	DL	54	GLN	2.3
33	DL	123	ARG	2.3
34	DM	18	ARG	2.3
37	BP	40	GLN	2.3
43	DW	76	ARG	2.3
25	DC	97	ASP	2.3
28	DF	45	ASP	2.3
34	BM	32	GLY	2.3
27	BE	118	LEU	2.3
37	BP	42	PHE	2.3
47	B0	25	THR	2.3

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Mol	Chain	Res	Type	RSRZ
48	B1	12	SER	2.3
17	AR	39	VAL	2.3
37	BP	60	VAL	2.3
39	BR	78	ARG	2.3
5	CF	4	TYR	2.3
38	DQ	31	TYR	2.3
11	CL	75	GLU	2.3
35	BN	43	GLU	2.3
4	AE	114	LEU	2.3
14	CO	73	ASP	2.3
25	DC	208	GLY	2.3
26	DD	72	GLY	2.3
8	AI	29	ILE	2.3
20	AB	56	LEU	2.3
30	DH	140	ALA	2.3
31	DJ	42	ALA	2.3
34	DM	31	PHE	2.3
22	BA	88	C	2.3
37	DP	37	LYS	2.3
38	DQ	41	ALA	2.3
48	B1	36	LYS	2.3
42	DU	44	HIS	2.3
4	CE	100	GLU	2.3
39	BR	45	GLU	2.3
41	DT	5	GLU	2.3
16	CQ	80	LYS	2.3
31	BJ	85	LYS	2.3
7	AH	62	LEU	2.3
7	CH	74	ILE	2.3
16	AQ	7	LEU	2.3
27	DE	142	ALA	2.3
37	DP	92	ARG	2.3
41	DT	37	ASP	2.3
2	AC	99	GLN	2.3
26	DD	28	GLU	2.3
34	BM	64	TRP	2.3
36	DO	61	GLN	2.3
52	DI	129	GLU	2.3
26	BD	198	GLY	2.3
48	D1	43	ARG	2.3
49	B2	41	ARG	2.3
52	DI	57	VAL	2.3

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Mol	Chain	Res	Type	RSRZ
46	DZ	13	THR	2.3
23	DB	1870	C	2.3
34	DM	6	ARG	2.3
25	BC	29	PHE	2.3
32	BK	99	ILE	2.3
3	AD	44	LYS	2.3
7	AH	126	CYS	2.3
23	DB	1173	U	2.3
52	BI	55	PRO	2.3
20	CB	117	GLU	2.3
20	AB	34	ARG	2.3
20	CB	100	LEU	2.3
39	DR	14	VAL	2.3
7	AH	46	GLU	2.3
34	DM	98	PRO	2.3
44	DX	47	ARG	2.3
52	DI	102	ARG	2.3
4	AE	81	GLN	2.3
5	CF	54	LEU	2.3
17	CR	73	HIS	2.3
18	AS	43	MET	2.3
5	CF	51	ILE	2.3
20	AB	163	ILE	2.3
27	BE	189	THR	2.3
30	BH	77	THR	2.3
32	DK	97	THR	2.3
28	DF	58	ALA	2.3
52	DI	56	VAL	2.3
25	DC	79	ARG	2.3
17	AR	22	TYR	2.3
20	CB	204	ASP	2.3
20	CB	31	PHE	2.3
35	BN	79	LEU	2.3
39	BR	91	GLN	2.3
48	B1	38	PHE	2.3
3	AD	155	LYS	2.3
11	AL	52	CYS	2.3
23	BB	1538	G	2.3
14	AO	21	THR	2.3
20	AB	216	VAL	2.3
34	DM	63	ILE	2.3
41	DT	47	VAL	2.3

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Mol	Chain	Res	Type	RSRZ
26	BD	54	ALA	2.2
51	B4	36	ARG	2.2
36	BO	80	GLU	2.2
24	BV	32	GLY	2.2
25	DC	170	TYR	2.2
46	BZ	9	TYR	2.2
25	DC	191	LEU	2.2
20	CB	209	VAL	2.2
20	CB	188	THR	2.2
32	BK	71	ARG	2.2
42	DU	29	SER	2.2
23	DB	278	A	2.2
31	BJ	98	GLU	2.2
31	DJ	102	GLU	2.2
25	DC	246	PRO	2.2
27	BE	124	PHE	2.2
30	BH	58	LEU	2.2
3	AD	129	VAL	2.2
20	CB	37	VAL	2.2
26	DD	146	ILE	2.2
42	BU	102	ILE	2.2
5	CF	100	SER	2.2
16	AQ	72	TRP	2.2
25	DC	138	SER	2.2
23	BB	1067	A	2.2
39	BR	35	PHE	2.2
11	AL	78	VAL	2.2
21	AU	44	ARG	2.2
29	DG	14	VAL	2.2
2	CC	165	GLU	2.2
9	AJ	29	ALA	2.2
12	AM	36	ALA	2.2
16	CQ	59	GLU	2.2
52	BI	75	ALA	2.2
27	BE	125	SER	2.2
29	BG	105	SER	2.2
42	BU	25	LYS	2.2
29	DG	52	GLY	2.2
29	DG	54	ARG	2.2
34	DM	130	PHE	2.2
4	CE	70	MET	2.2
8	AI	27	ILE	2.2

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Mol	Chain	Res	Type	RSRZ
23	DB	1490	A	2.2
41	BT	79	ASP	2.2
20	AB	14	HIS	2.2
40	BS	102	HIS	2.2
23	BB	1459	G	2.2
21	AU	18	PHE	2.2
23	DB	546	U	2.2
23	DB	1460	U	2.2
38	DQ	108	LEU	2.2
30	BH	103	VAL	2.2
37	BP	72	VAL	2.2
18	AS	29	PRO	2.2
26	BD	55	LYS	2.2
25	BC	91	ALA	2.2
25	BC	209	ALA	2.2
29	BG	164	ALA	2.2
30	DH	129	GLU	2.2
32	BK	76	VAL	2.2
4	CE	12	GLU	2.2
6	AG	51	GLN	2.2
15	CP	45	GLU	2.2
20	AB	57	ASN	2.2
42	BU	3	LYS	2.2
27	BE	127	GLU	2.2
29	BG	172	GLU	2.2
33	BL	136	GLU	2.2
52	BI	104	GLN	2.2
14	AO	20	ASP	2.2
20	AB	215	ALA	2.2
35	BN	90	ARG	2.2
36	BO	50	ALA	2.2
38	BQ	20	ALA	2.2
43	BW	46	ALA	2.2
14	CO	2	LEU	2.2
33	DL	79	LEU	2.2
42	BU	48	VAL	2.2
36	BO	20	GLU	2.2
37	BP	10	GLU	2.2
21	CU	8	ASN	2.2
42	DU	68	ASN	2.2
48	B1	25	ASN	2.2
26	DD	54	ALA	2.2

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Mol	Chain	Res	Type	RSRZ
26	DD	134	HIS	2.2
50	B3	42	HIS	2.2
20	CB	16	GLY	2.2
40	DS	70	LYS	2.2
24	DV	64	VAL	2.2
27	BE	175	ILE	2.2
27	BE	187	VAL	2.2
29	BG	3	VAL	2.2
42	DU	102	ILE	2.2
5	AF	5	GLU	2.2
1	CA	1534	A	2.2
20	CB	48	MET	2.2
25	BC	156	SER	2.2
26	BD	95	SER	2.2
32	DK	14	SER	2.2
44	DX	23	ARG	2.2
13	AN	86	ALA	2.2
29	DG	122	ALA	2.2
3	CD	190	LEU	2.2
23	BB	846	U	2.2
26	DD	43	ASP	2.2
27	BE	171	ASP	2.2
39	DR	66	HIS	2.2
46	DZ	47	LYS	2.2
26	BD	50	VAL	2.2
28	BF	103	ILE	2.2
32	BK	52	VAL	2.2
33	BL	58	TYR	2.2
37	DP	98	TYR	2.2
20	CB	33	ALA	2.2
31	DJ	3	THR	2.2
18	CS	60	PHE	2.2
19	CT	67	HIS	2.2
20	AB	122	ASP	2.2
39	DR	89	HIS	2.2
3	AD	169	TRP	2.2
13	AN	60	ARG	2.2
21	CU	34	ARG	2.2
37	BP	63	ILE	2.2
37	DP	79	VAL	2.2
42	BU	27	VAL	2.2
23	BB	1870	C	2.2

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Mol	Chain	Res	Type	RSRZ
20	AB	197	PHE	2.2
29	BG	11	PRO	2.2
50	D3	1	PRO	2.2
5	CF	82	ASP	2.2
11	CL	92	VAL	2.2
25	BC	57	HIS	2.2
30	DH	22	LYS	2.1
42	DU	25	LYS	2.1
2	CC	153	SER	2.1
20	CB	19	THR	2.1
20	CB	201	GLY	2.1
16	AQ	58	VAL	2.1
16	CQ	11	VAL	2.1
16	CQ	44	HIS	2.1
19	AT	66	ILE	2.1
25	BC	103	ILE	2.1
40	BS	65	ASP	2.1
46	DZ	58	ASP	2.1
50	D3	46	LYS	2.1
23	BB	2797	U	2.1
3	AD	174	ALA	2.1
26	BD	164	GLN	2.1
3	CD	122	ILE	2.1
16	AQ	69	THR	2.1
25	DC	135	PRO	2.1
36	BO	91	SER	2.1
26	DD	86	GLU	2.1
4	CE	40	ASP	2.1
21	CU	12	ASP	2.1
32	BK	82	ASN	2.1
36	BO	100	HIS	2.1
3	CD	177	MET	2.1
35	BN	102	PHE	2.1
36	DO	7	ARG	2.1
41	BT	80	TRP	2.1
27	DE	37	ALA	2.1
43	DW	25	PHE	2.1
48	D1	35	LEU	2.1
49	B2	28	ARG	2.1
8	AI	20	ILE	2.1
10	CK	83	VAL	2.1
27	DE	122	GLU	2.1

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Mol	Chain	Res	Type	RSRZ
31	BJ	73	VAL	2.1
37	BP	5	LYS	2.1
50	B3	57	VAL	2.1
31	DJ	5	THR	2.1
28	DF	173	ASP	2.1
20	CB	49	PHE	2.1
29	BG	132	LEU	2.1
32	BK	113	MET	2.1
11	AL	25	ALA	2.1
20	AB	214	GLY	2.1
33	BL	22	GLY	2.1
43	DW	39	GLN	2.1
25	DC	63	ILE	2.1
36	BO	47	VAL	2.1
26	BD	128	ARG	2.1
29	BG	24	THR	2.1
30	BH	68	ARG	2.1
48	B1	20	TYR	2.1
26	DD	186	LEU	2.1
34	BM	106	ASP	2.1
2	CC	166	TRP	2.1
3	AD	192	ALA	2.1
25	DC	124	LYS	2.1
40	DS	10	ALA	2.1
40	DS	27	LYS	2.1
4	CE	118	GLY	2.1
26	BD	191	GLY	2.1
41	BT	98	GLY	2.1
43	BW	5	ALA	2.1
52	DI	76	ALA	2.1
11	AL	118	VAL	2.1
25	BC	99	GLU	2.1
30	DH	147	VAL	2.1
33	BL	73	ILE	2.1
33	BL	120	VAL	2.1
37	BP	47	ILE	2.1
11	CL	93	ARG	2.1
41	DT	69	ARG	2.1
16	CQ	7	LEU	2.1
25	DC	25	LYS	2.1
26	BD	185	ASN	2.1
30	BH	96	THR	2.1

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Mol	Chain	Res	Type	RSRZ
3	CD	174	ALA	2.1
1	AA	87	C	2.1
3	AD	27	ILE	2.1
5	CF	60	VAL	2.1
30	DH	87	GLU	2.1
29	BG	102	ILE	2.1
41	DT	34	VAL	2.1
48	D1	41	VAL	2.1
37	BP	71	ARG	2.1
42	BU	85	ARG	2.1
5	AF	67	PRO	2.1
23	DB	1458	U	2.1
9	AJ	10	LEU	2.1
10	AK	51	PHE	2.1
15	AP	38	PHE	2.1
32	BK	102	PRO	2.1
7	AH	115	ALA	2.1
36	BO	113	ALA	2.1
39	DR	103	ALA	2.1
40	BS	26	GLY	2.1
43	DW	7	GLY	2.1
2	AC	135	ARG	2.1
3	CD	164	ARG	2.1
23	DB	549	G	2.1
25	DC	244	VAL	2.1
52	DI	4	VAL	2.1
52	DI	49	GLU	2.1
45	BY	10	ARG	2.1
28	DF	151	LEU	2.1
37	BP	98	TYR	2.1
8	AI	56	MET	2.1
33	BL	46	VAL	2.1
34	DM	55	ARG	2.1
35	BN	8	ARG	2.1
35	BN	73	ASN	2.1
36	DO	30	ARG	2.1
37	BP	70	GLU	2.1
10	AK	118	ASN	2.1
32	BK	39	ILE	2.1
52	DI	33	ASN	2.1
27	BE	138	LEU	2.1
42	BU	84	PHE	2.1

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Mol	Chain	Res	Type	RSRZ
51	D4	10	LEU	2.1
48	D1	18	HIS	2.1
13	CN	46	LYS	2.1
24	BV	72	VAL	2.1
25	DC	64	VAL	2.1
33	DL	110	VAL	2.1
50	D3	6	VAL	2.1
14	AO	73	ASP	2.1
39	BR	86	GLN	2.1
52	DI	93	ASN	2.1
50	D3	21	PHE	2.1
30	DH	116	ARG	2.1
27	BE	152	GLU	2.1
52	DI	53	PRO	2.1
3	CD	66	VAL	2.1
25	DC	140	VAL	2.1
46	DZ	2	LYS	2.1
9	CJ	35	GLN	2.1
39	DR	49	ILE	2.1
10	CK	108	ASN	2.1
27	BE	12	LEU	2.1
36	BO	21	LEU	2.1
5	AF	34	GLY	2.1
26	DD	166	GLY	2.1
40	BS	70	LYS	2.1
51	D4	16	ILE	2.0
23	BB	1509	A	2.0
26	BD	137	SER	2.0
32	BK	9	ASN	2.0
51	B4	24	ARG	2.0
52	BI	33	ASN	2.0
20	CB	10	LYS	2.0
3	AD	123	MET	2.0
10	AK	87	GLY	2.0
26	DD	9	VAL	2.0
39	DR	3	ALA	2.0
20	CB	185	ILE	2.0
15	AP	74	LEU	2.0
28	BF	168	LEU	2.0
42	DU	28	LEU	2.0
10	AK	79	LYS	2.0
20	AB	95	TRP	2.0

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Mol	Chain	Res	Type	RSRZ
49	B2	46	LYS	2.0
21	CU	41	THR	2.0
27	BE	13	THR	2.0
20	AB	123	GLY	2.0
3	CD	60	VAL	2.0
5	AF	99	ALA	2.0
12	CM	4	ALA	2.0
19	CT	57	VAL	2.0
26	DD	45	TYR	2.0
31	DJ	101	ILE	2.0
5	CF	2	ARG	2.0
6	AG	4	ARG	2.0
27	BE	154	ASP	2.0
1	CA	85	U	2.0
29	DG	31	GLU	2.0
2	CC	167	TYR	2.0
20	CB	212	TYR	2.0
27	DE	156	ASN	2.0
28	BF	61	GLY	2.0
29	BG	161	VAL	2.0
30	DH	104	THR	2.0
39	BR	17	GLY	2.0
30	DH	148	ALA	2.0
39	DR	4	VAL	2.0
29	BG	130	ILE	2.0
32	BK	41	ILE	2.0
40	DS	1	MET	2.0
5	CF	53	LYS	2.0
5	AF	39	LEU	2.0
26	BD	67	HIS	2.0
45	BY	58	GLU	2.0
30	BH	13	GLY	2.0
24	DV	57	TYR	2.0
38	DQ	69	ARG	2.0
39	BR	33	VAL	2.0
40	DS	72	THR	2.0
52	DI	32	VAL	2.0
3	CD	36	ALA	2.0
5	CF	35	LYS	2.0
29	BG	174	LYS	2.0
51	D4	18	LYS	2.0
52	BI	17	ALA	2.0

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Mol	Chain	Res	Type	RSRZ
20	CB	183	PHE	2.0
24	DV	51	GLN	2.0
46	DZ	41	HIS	2.0
48	B1	18	HIS	2.0
3	CD	179	GLY	2.0
3	AD	147	LYS	2.0
11	AL	8	ARG	2.0
21	AU	19	LYS	2.0
28	BF	24	VAL	2.0
32	DK	15	GLY	2.0
37	BP	34	GLY	2.0
38	BQ	99	VAL	2.0
40	BS	71	VAL	2.0
45	DY	27	GLY	2.0
47	B0	30	ASP	2.0
47	D0	53	VAL	2.0
52	DI	115	ASP	2.0
24	DV	29	ILE	2.0
23	BB	1729	U	2.0
25	BC	20	ASN	2.0
33	DL	135	ILE	2.0
35	BN	68	ALA	2.0
36	DO	107	ALA	2.0
47	B0	54	ILE	2.0
30	DH	58	LEU	2.0
37	BP	99	LEU	2.0

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

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

6.3 Carbohydrates [i](#)

There are no carbohydrates in this entry.

6.4 Ligands [i](#)

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

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
53	MG	AA	1656	1/1	0.93	0.26	8.42	66,66,66,66	0
53	MG	BB	3078	1/1	0.95	0.19	1.62	25,25,25,25	0
53	MG	DB	3110	1/1	0.90	0.18	0.55	54,54,54,54	0
53	MG	AA	1629	1/1	0.84	0.14	-0.49	138,138,138,138	0
53	MG	DB	3001	1/1	0.94	0.16	-0.52	7,7,7,7	0
53	MG	AA	1615	1/1	0.86	0.12	-0.59	43,43,43,43	0
53	MG	BB	3098	1/1	0.93	0.16	-0.62	45,45,45,45	0
53	MG	DB	3077	1/1	0.94	0.17	-0.79	57,57,57,57	0
53	MG	DB	3057	1/1	0.81	0.09	-0.85	28,28,28,28	0
53	MG	BB	3088	1/1	0.83	0.15	-0.86	34,34,34,34	0
53	MG	DN	201	1/1	0.92	0.19	-0.90	49,49,49,49	0
53	MG	BB	3110	1/1	0.86	0.13	-0.91	60,60,60,60	0
53	MG	BB	3005	1/1	0.90	0.12	-1.09	5,5,5,5	0
53	MG	DB	3083	1/1	0.93	0.17	-1.11	27,27,27,27	0
53	MG	CA	1634	1/1	0.93	0.14	-1.16	61,61,61,61	0
53	MG	DB	3024	1/1	0.80	0.11	-1.19	36,36,36,36	0
53	MG	AA	1634	1/1	0.93	0.10	-1.25	85,85,85,85	0
53	MG	DB	3095	1/1	0.97	0.16	-1.30	55,55,55,55	0
53	MG	DB	3063	1/1	0.91	0.08	-1.33	13,13,13,13	0
53	MG	DB	3055	1/1	0.93	0.09	-1.36	19,19,19,19	0
53	MG	BB	3021	1/1	0.86	0.14	-1.37	55,55,55,55	0
53	MG	DB	3062	1/1	0.93	0.13	-1.45	43,43,43,43	0
53	MG	DB	3010	1/1	0.97	0.09	-1.46	12,12,12,12	0
53	MG	BB	3034	1/1	0.86	0.12	-1.48	25,25,25,25	0
53	MG	DB	3025	1/1	0.92	0.15	-1.52	21,21,21,21	0
53	MG	DB	3003	1/1	0.98	0.07	-1.56	14,14,14,14	0
53	MG	CA	1614	1/1	0.91	0.09	-1.59	47,47,47,47	0
53	MG	DB	3068	1/1	0.98	0.12	-1.61	14,14,14,14	0
53	MG	CA	1616	1/1	0.91	0.08	-1.70	68,68,68,68	0
53	MG	AA	1637	1/1	0.93	0.11	-1.76	81,81,81,81	0
53	MG	DB	3030	1/1	0.80	0.15	-1.81	23,23,23,23	0
53	MG	CA	1641	1/1	0.97	0.11	-1.84	92,92,92,92	0
53	MG	BB	3051	1/1	0.84	0.09	-1.86	71,71,71,71	0
53	MG	BB	3012	1/1	0.99	0.08	-1.90	41,41,41,41	0
53	MG	BB	3081	1/1	0.83	0.16	-1.90	46,46,46,46	0
53	MG	DB	3026	1/1	0.95	0.14	-1.92	18,18,18,18	0
53	MG	AA	1653	1/1	0.85	0.10	-2.09	65,65,65,65	0
53	MG	BB	3049	1/1	0.85	0.10	-2.09	11,11,11,11	0
53	MG	BB	3087	1/1	0.94	0.13	-2.27	45,45,45,45	0
53	MG	CA	1639	1/1	0.89	0.08	-2.28	117,117,117,117	0
53	MG	DB	3109	1/1	0.97	0.07	-2.31	24,24,24,24	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
53	MG	CA	1612	1/1	0.95	0.08	-2.48	29,29,29,29	0
53	MG	CA	1656	1/1	0.94	0.11	-2.49	48,48,48,48	0
53	MG	DB	3073	1/1	0.96	0.11	-2.54	16,16,16,16	0
53	MG	BB	3029	1/1	0.97	0.08	-2.63	13,13,13,13	0
53	MG	DB	3047	1/1	0.98	0.13	-2.81	17,17,17,17	0
53	MG	BB	3056	1/1	0.97	0.10	-2.85	19,19,19,19	0
53	MG	BB	3096	1/1	0.91	0.14	-2.86	43,43,43,43	0
53	MG	BB	3016	1/1	0.95	0.13	-2.87	15,15,15,15	0
53	MG	CA	1646	1/1	0.92	0.08	-2.99	42,42,42,42	0
53	MG	AA	1603	1/1	0.94	0.11	-3.00	43,43,43,43	0
53	MG	BB	3086	1/1	0.99	0.15	-3.05	37,37,37,37	0
53	MG	BB	3011	1/1	0.97	0.13	-3.06	7,7,7,7	0
53	MG	CA	1618	1/1	0.96	0.10	-3.08	5,5,5,5	0
53	MG	AA	1607	1/1	0.86	0.09	-3.22	27,27,27,27	0
53	MG	DB	3088	1/1	0.95	0.14	-3.25	35,35,35,35	0
53	MG	DB	3051	1/1	0.96	0.13	-3.26	53,53,53,53	0
53	MG	AA	1652	1/1	0.95	0.08	-3.29	25,25,25,25	0
53	MG	AA	1601	1/1	0.95	0.06	-3.29	26,26,26,26	0
53	MG	AA	1610	1/1	0.96	0.09	-3.33	34,34,34,34	0
53	MG	BB	3090	1/1	0.75	0.08	-3.35	74,74,74,74	0
53	MG	AA	1632	1/1	0.93	0.05	-3.38	53,53,53,53	0
53	MG	DB	3086	1/1	0.97	0.14	-3.44	69,69,69,69	0
53	MG	DB	3036	1/1	0.96	0.09	-3.45	16,16,16,16	0
53	MG	DB	3091	1/1	0.96	0.08	-3.45	96,96,96,96	0
53	MG	DB	3035	1/1	0.97	0.10	-3.51	30,30,30,30	0
53	MG	DB	3014	1/1	0.88	0.07	-3.68	5,5,5,5	0
53	MG	AA	1609	1/1	0.98	0.14	-3.69	8,8,8,8	0
53	MG	CA	1657	1/1	0.91	0.07	-3.79	37,37,37,37	0
53	MG	BB	3073	1/1	0.97	0.09	-3.81	28,28,28,28	0
53	MG	DB	3098	1/1	0.95	0.12	-4.07	18,18,18,18	0
53	MG	BB	3040	1/1	0.92	0.10	-4.12	21,21,21,21	0
53	MG	BB	3079	1/1	0.91	0.10	-4.13	38,38,38,38	0
53	MG	BB	3077	1/1	0.96	0.08	-4.14	44,44,44,44	0
53	MG	BB	3018	1/1	0.87	0.09	-4.15	27,27,27,27	0
53	MG	DB	3097	1/1	0.99	0.11	-4.21	15,15,15,15	0
53	MG	BB	3052	1/1	0.93	0.10	-4.24	19,19,19,19	0
53	MG	DB	3087	1/1	0.97	0.12	-4.25	6,6,6,6	0
53	MG	DB	3012	1/1	0.98	0.12	-4.27	6,6,6,6	0
53	MG	BB	3026	1/1	0.97	0.10	-4.35	5,5,5,5	0
53	MG	CA	1617	1/1	0.98	0.10	-4.63	9,9,9,9	0
53	MG	CA	1605	1/1	0.95	0.07	-4.85	18,18,18,18	0
53	MG	BB	3019	1/1	0.95	0.08	-4.88	27,27,27,27	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
53	MG	DB	3107	1/1	0.94	0.09	-4.95	19,19,19,19	0
53	MG	BB	3013	1/1	0.96	0.09	-5.04	31,31,31,31	0
53	MG	BB	3061	1/1	0.97	0.06	-5.06	42,42,42,42	0
53	MG	BB	3108	1/1	0.96	0.08	-5.10	19,19,19,19	0
53	MG	CA	1601	1/1	0.98	0.06	-5.13	5,5,5,5	0
53	MG	BB	3037	1/1	0.96	0.08	-5.16	24,24,24,24	0
53	MG	BB	3083	1/1	0.94	0.09	-5.22	20,20,20,20	0
53	MG	DB	3069	1/1	0.98	0.09	-5.28	44,44,44,44	0
53	MG	BB	3094	1/1	0.82	0.09	-5.38	35,35,35,35	0
53	MG	BB	3065	1/1	0.93	0.13	-5.46	47,47,47,47	0
53	MG	CA	1647	1/1	0.99	0.06	-5.59	32,32,32,32	0
53	MG	DB	3007	1/1	0.91	0.10	-5.95	12,12,12,12	0
53	MG	BB	3066	1/1	0.97	0.09	-6.04	59,59,59,59	0
53	MG	DB	3084	1/1	0.98	0.07	-6.08	8,8,8,8	0
53	MG	DB	3027	1/1	0.95	0.08	-6.14	10,10,10,10	0
53	MG	DB	3009	1/1	0.98	0.08	-6.34	7,7,7,7	0
53	MG	BB	3069	1/1	0.97	0.07	-6.50	9,9,9,9	0
53	MG	AA	1642	1/1	0.94	0.08	-6.65	70,70,70,70	0
53	MG	BB	3103	1/1	0.98	0.07	-6.86	7,7,7,7	0
53	MG	DB	3002	1/1	0.95	0.12	-7.09	37,37,37,37	0
53	MG	BB	3035	1/1	0.93	0.08	-7.33	12,12,12,12	0
53	MG	BB	3002	1/1	0.98	0.10	-7.69	10,10,10,10	0
53	MG	DB	3078	1/1	0.98	0.08	-8.04	18,18,18,18	0
53	MG	BB	3023	1/1	0.98	0.07	-8.15	22,22,22,22	0
53	MG	CA	1633	1/1	0.97	0.09	-8.28	47,47,47,47	0
53	MG	DB	3102	1/1	0.94	0.10	-8.54	26,26,26,26	0
53	MG	BB	3085	1/1	0.97	0.07	-9.40	22,22,22,22	0
53	MG	DB	3079	1/1	0.98	0.10	-10.18	5,5,5,5	0
53	MG	DB	3006	1/1	0.98	0.07	-10.25	5,5,5,5	0
53	MG	CA	1644	1/1	0.96	0.06	-10.32	29,29,29,29	0
53	MG	DB	3056	1/1	0.98	0.09	-10.43	11,11,11,11	0
53	MG	BB	3001	1/1	0.97	0.06	-10.68	10,10,10,10	0
53	MG	DB	3019	1/1	0.98	0.04	-11.05	5,5,5,5	0
53	MG	BB	3062	1/1	0.98	0.09	-15.28	22,22,22,22	0
53	MG	DB	3103	1/1	0.96	0.12	-	50,50,50,50	0
53	MG	BB	3045	1/1	0.97	0.05	-	31,31,31,31	0
53	MG	AA	1643	1/1	0.93	0.09	-	73,73,73,73	0
53	MG	AA	1635	1/1	0.92	0.06	-	85,85,85,85	0
53	MG	BB	3053	1/1	0.93	0.07	-	6,6,6,6	0
53	MG	BB	3033	1/1	0.78	0.29	-	93,93,93,93	0
53	MG	CA	1645	1/1	0.90	0.12	-	82,82,82,82	0
53	MG	AA	1646	1/1	0.95	0.30	-	60,60,60,60	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
53	MG	DB	3082	1/1	0.69	0.16	-	73,73,73,73	0
53	MG	AA	1636	1/1	0.77	0.60	-	127,127,127,127	0
53	MG	DB	3050	1/1	0.84	0.11	-	74,74,74,74	0
53	MG	DB	3101	1/1	0.98	0.11	-	27,27,27,27	0
53	MG	AA	1626	1/1	0.96	0.06	-	35,35,35,35	0
53	MG	CA	1630	1/1	0.87	0.09	-	5,5,5,5	1
53	MG	CA	1615	1/1	0.96	0.09	-	101,101,101,101	0
53	MG	DB	3099	1/1	0.95	0.07	-	9,9,9,9	0
53	MG	CA	1620	1/1	0.95	0.07	-	35,35,35,35	0
53	MG	AA	1654	1/1	0.81	0.10	-	59,59,59,59	0
53	MG	DB	3058	1/1	0.78	0.31	-	30,30,30,30	1
53	MG	DB	3064	1/1	0.98	0.07	-	28,28,28,28	0
53	MG	BB	3054	1/1	0.83	0.13	-	72,72,72,72	0
53	MG	DB	3096	1/1	0.94	0.08	-	20,20,20,20	0
53	MG	AA	1627	1/1	0.95	0.14	-	72,72,72,72	0
53	MG	AA	1658	1/1	0.94	0.21	-	167,167,167,167	0
53	MG	BB	3102	1/1	0.97	0.13	-	19,19,19,19	0
53	MG	CA	1623	1/1	0.53	0.16	-	151,151,151,151	0
53	MG	CA	1653	1/1	0.93	0.26	-	45,45,45,45	0
53	MG	DB	3049	1/1	0.98	0.06	-	5,5,5,5	0
53	MG	DB	3034	1/1	0.84	0.16	-	66,66,66,66	0
53	MG	AA	1633	1/1	0.95	0.05	-	75,75,75,75	0
53	MG	BB	3030	1/1	0.95	0.05	-	53,53,53,53	0
53	MG	BB	3015	1/1	0.97	0.08	-	24,24,24,24	0
53	MG	DB	3076	1/1	0.94	0.07	-	17,17,17,17	0
53	MG	DB	3054	1/1	0.87	0.07	-	15,15,15,15	0
53	MG	BB	3048	1/1	0.96	0.06	-	20,20,20,20	0
53	MG	BB	3080	1/1	0.92	0.08	-	31,31,31,31	0
53	MG	BB	3067	1/1	0.87	0.18	-	78,78,78,78	0
53	MG	BB	3038	1/1	0.96	0.04	-	58,58,58,58	0
53	MG	DB	3059	1/1	0.72	0.09	-	127,127,127,127	0
53	MG	AA	1630	1/1	0.94	0.08	-	30,30,30,30	0
53	MG	AP	101	1/1	0.41	0.38	-	53,53,53,53	1
53	MG	CA	1613	1/1	0.93	0.14	-	78,78,78,78	0
53	MG	CA	1638	1/1	0.93	0.04	-	37,37,37,37	0
53	MG	DB	3031	1/1	0.92	0.12	-	18,18,18,18	0
53	MG	DB	3041	1/1	0.97	0.07	-	18,18,18,18	0
53	MG	DB	3044	1/1	0.97	0.07	-	7,7,7,7	0
53	MG	BB	3046	1/1	0.88	0.07	-	51,51,51,51	0
53	MG	BB	3027	1/1	0.95	0.09	-	23,23,23,23	0
53	MG	AA	1647	1/1	0.93	0.10	-	23,23,23,23	0
53	MG	CA	1627	1/1	0.88	0.14	-	29,29,29,29	1

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
53	MG	AA	1623	1/1	0.82	0.17	-	32,32,32,32	1
53	MG	DB	3020	1/1	0.95	0.12	-	20,20,20,20	0
53	MG	BB	3042	1/1	0.49	0.09	-	95,95,95,95	0
53	MG	DB	3022	1/1	0.96	0.07	-	15,15,15,15	0
53	MG	DB	3018	1/1	0.93	0.09	-	29,29,29,29	0
53	MG	BB	3097	1/1	0.92	0.16	-	74,74,74,74	0
53	MG	AA	1657	1/1	0.91	0.06	-	81,81,81,81	0
53	MG	CA	1631	1/1	0.91	0.08	-	36,36,36,36	0
53	MG	BB	3025	1/1	0.97	0.16	-	53,53,53,53	0
53	MG	CA	1602	1/1	0.98	0.15	-	32,32,32,32	0
53	MG	BB	3055	1/1	0.96	0.13	-	27,27,27,27	0
53	MG	BB	3072	1/1	0.94	0.09	-	24,24,24,24	0
53	MG	DB	3094	1/1	0.90	0.24	-	5,5,5,5	1
53	MG	DB	3080	1/1	0.98	0.09	-	12,12,12,12	0
53	MG	DB	3060	1/1	0.79	0.11	-	77,77,77,77	0
53	MG	DB	3005	1/1	0.96	0.07	-	9,9,9,9	0
53	MG	CA	1629	1/1	0.92	0.06	-	45,45,45,45	0
53	MG	BB	3064	1/1	0.95	0.06	-	39,39,39,39	0
53	MG	DB	3071	1/1	0.93	0.08	-	39,39,39,39	0
53	MG	AA	1613	1/1	0.94	0.06	-	42,42,42,42	0
53	MG	BB	3004	1/1	0.96	0.04	-	21,21,21,21	0
53	MG	CA	1625	1/1	0.95	0.09	-	26,26,26,26	0
53	MG	DB	3013	1/1	0.84	0.15	-	34,34,34,34	0
53	MG	DB	3105	1/1	0.95	0.10	-	23,23,23,23	0
53	MG	DB	3061	1/1	0.91	0.07	-	78,78,78,78	0
53	MG	DB	3052	1/1	0.89	0.17	-	60,60,60,60	0
53	MG	DB	3090	1/1	0.96	0.15	-	28,28,28,28	0
53	MG	BB	3017	1/1	0.82	0.10	-	72,72,72,72	0
53	MG	BB	3043	1/1	0.90	0.09	-	75,75,75,75	0
53	MG	DB	3017	1/1	0.93	0.12	-	5,5,5,5	0
53	MG	DB	3040	1/1	0.95	0.12	-	5,5,5,5	0
53	MG	DB	3042	1/1	0.96	0.10	-	27,27,27,27	0
53	MG	CA	1606	1/1	0.95	0.09	-	74,74,74,74	0
53	MG	AA	1617	1/1	0.91	0.12	-	78,78,78,78	0
53	MG	AA	1648	1/1	0.95	0.05	-	94,94,94,94	0
53	MG	DB	3053	1/1	0.88	0.12	-	27,27,27,27	0
53	MG	DB	3066	1/1	0.95	0.08	-	5,5,5,5	0
53	MG	BB	3060	1/1	0.91	0.08	-	69,69,69,69	0
53	MG	BB	3076	1/1	0.96	0.05	-	24,24,24,24	0
53	MG	CA	1648	1/1	0.95	0.08	-	56,56,56,56	0
53	MG	BB	3082	1/1	0.68	0.16	-	19,19,19,19	0
53	MG	AA	1631	1/1	0.90	0.08	-	61,61,61,61	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
53	MG	DB	3081	1/1	0.99	0.06	-	25,25,25,25	0
53	MG	BB	3028	1/1	0.84	0.20	-	40,40,40,40	0
53	MG	CA	1650	1/1	0.92	0.12	-	82,82,82,82	0
53	MG	BB	3036	1/1	0.95	0.14	-	37,37,37,37	0
53	MG	BB	3101	1/1	0.95	0.05	-	12,12,12,12	0
53	MG	BB	3109	1/1	0.92	0.14	-	15,15,15,15	0
53	MG	BB	3058	1/1	0.95	0.10	-	28,28,28,28	0
53	MG	AA	1604	1/1	0.93	0.14	-	45,45,45,45	0
53	MG	AA	1612	1/1	0.58	0.16	-	104,104,104,104	0
53	MG	CA	1632	1/1	0.92	0.12	-	61,61,61,61	0
53	MG	DB	3067	1/1	0.92	0.11	-	17,17,17,17	0
53	MG	CA	1654	1/1	0.94	0.05	-	40,40,40,40	0
53	MG	DB	3039	1/1	0.96	0.07	-	19,19,19,19	0
53	MG	DB	3065	1/1	0.84	0.16	-	47,47,47,47	1
53	MG	AA	1622	1/1	0.75	0.21	-	116,116,116,116	0
53	MG	DB	3043	1/1	0.94	0.14	-	9,9,9,9	0
53	MG	DB	3075	1/1	0.98	0.04	-	5,5,5,5	0
53	MG	BB	3059	1/1	0.92	0.08	-	10,10,10,10	0
53	MG	BB	3006	1/1	0.98	0.07	-	10,10,10,10	0
53	MG	AA	1650	1/1	0.90	0.05	-	72,72,72,72	0
53	MG	AA	1625	1/1	0.80	0.19	-	5,5,5,5	1
53	MG	BB	3068	1/1	0.98	0.09	-	24,24,24,24	0
53	MG	BB	3095	1/1	0.98	0.09	-	34,34,34,34	0
53	MG	AA	1645	1/1	0.94	0.11	-	27,27,27,27	0
53	MG	CA	1642	1/1	0.94	0.09	-	45,45,45,45	0
53	MG	AA	1620	1/1	0.90	0.12	-	62,62,62,62	0
53	MG	AA	1616	1/1	0.95	0.07	-	46,46,46,46	0
53	MG	CA	1624	1/1	0.90	0.13	-	48,48,48,48	0
53	MG	BB	3107	1/1	0.97	0.07	-	27,27,27,27	0
53	MG	BB	3093	1/1	0.94	0.23	-	5,5,5,5	1
53	MG	CA	1611	1/1	0.91	0.12	-	71,71,71,71	0
53	MG	BB	3104	1/1	0.89	0.12	-	18,18,18,18	0
53	MG	DB	3016	1/1	0.91	0.11	-	23,23,23,23	0
53	MG	BB	3031	1/1	0.94	0.19	-	45,45,45,45	0
53	MG	BB	3010	1/1	0.85	0.11	-	39,39,39,39	0
53	MG	DB	3015	1/1	0.95	0.09	-	49,49,49,49	0
53	MG	DB	3093	1/1	0.98	0.06	-	10,10,10,10	0
53	MG	BB	3024	1/1	0.98	0.09	-	22,22,22,22	0
53	MG	AA	1606	1/1	0.93	0.06	-	59,59,59,59	0
53	MG	BB	3044	1/1	0.99	0.07	-	32,32,32,32	0
53	MG	DB	3070	1/1	0.96	0.08	-	46,46,46,46	0
53	MG	CA	1603	1/1	0.95	0.13	-	69,69,69,69	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
53	MG	AA	1651	1/1	0.97	0.07	-	84,84,84,84	0
53	MG	AA	1619	1/1	0.73	0.13	-	100,100,100,100	0
53	MG	DB	3048	1/1	0.99	0.05	-	20,20,20,20	0
53	MG	CA	1652	1/1	0.94	0.07	-	44,44,44,44	0
53	MG	BB	3063	1/1	0.96	0.14	-	27,27,27,27	0
53	MG	DB	3072	1/1	0.94	0.07	-	30,30,30,30	0
53	MG	BB	3039	1/1	0.95	0.18	-	45,45,45,45	0
53	MG	CA	1609	1/1	0.91	0.18	-	45,45,45,45	0
53	MG	CA	1661	1/1	0.98	0.04	-	62,62,62,62	0
53	MG	CA	1604	1/1	0.98	0.09	-	18,18,18,18	0
53	MG	BB	3014	1/1	0.97	0.04	-	29,29,29,29	0
53	MG	DB	3046	1/1	0.96	0.08	-	33,33,33,33	0
53	MG	DB	3028	1/1	0.97	0.12	-	28,28,28,28	0
53	MG	DB	3037	1/1	0.98	0.09	-	13,13,13,13	0
53	MG	AA	1640	1/1	0.97	0.08	-	44,44,44,44	0
53	MG	AA	1659	1/1	0.85	0.12	-	105,105,105,105	0
53	MG	CA	1651	1/1	0.97	0.09	-	14,14,14,14	0
53	MG	BB	3003	1/1	0.97	0.06	-	13,13,13,13	0
53	MG	CA	1607	1/1	0.92	0.06	-	18,18,18,18	0
53	MG	CA	1643	1/1	0.90	0.08	-	41,41,41,41	0
53	MG	CA	1655	1/1	0.97	0.14	-	48,48,48,48	0
53	MG	CA	1635	1/1	0.91	0.11	-	20,20,20,20	0
53	MG	CA	1619	1/1	0.97	0.09	-	26,26,26,26	0
53	MG	BB	3020	1/1	0.97	0.06	-	23,23,23,23	0
53	MG	CA	1636	1/1	0.83	0.10	-	51,51,51,51	0
53	MG	DB	3104	1/1	0.85	0.12	-	50,50,50,50	0
53	MG	CA	1621	1/1	0.96	0.24	-	113,113,113,113	0
53	MG	AA	1628	1/1	0.95	0.10	-	26,26,26,26	0
53	MG	AA	1602	1/1	0.91	0.08	-	62,62,62,62	0
53	MG	CA	1659	1/1	0.96	0.17	-	48,48,48,48	0
53	MG	BB	3100	1/1	0.87	0.20	-	11,11,11,11	1
53	MG	DB	3038	1/1	0.98	0.09	-	16,16,16,16	0
53	MG	CA	1640	1/1	0.94	0.07	-	11,11,11,11	0
53	MG	BB	3070	1/1	0.99	0.09	-	32,32,32,32	0
53	MG	CA	1608	1/1	0.90	0.06	-	110,110,110,110	0
53	MG	AA	1621	1/1	0.96	0.09	-	23,23,23,23	0
53	MG	DB	3045	1/1	0.92	0.07	-	61,61,61,61	0
53	MG	BB	3099	1/1	0.94	0.11	-	30,30,30,30	0
53	MG	DB	3074	1/1	0.98	0.09	-	25,25,25,25	0
53	MG	BB	3106	1/1	0.98	0.11	-	46,46,46,46	0
53	MG	DB	3092	1/1	0.98	0.08	-	23,23,23,23	0
53	MG	BB	3041	1/1	0.95	0.05	-	30,30,30,30	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
53	MG	AA	1614	1/1	0.72	0.11	-	62,62,62,62	0
53	MG	DB	3021	1/1	0.92	0.10	-	16,16,16,16	0
53	MG	DB	3033	1/1	0.96	0.09	-	11,11,11,11	0
53	MG	BB	3091	1/1	0.92	0.07	-	19,19,19,19	0
53	MG	BB	3105	1/1	0.90	0.22	-	64,64,64,64	0
53	MG	BB	3057	1/1	0.90	0.17	-	27,27,27,27	0
53	MG	AA	1649	1/1	0.77	0.18	-	114,114,114,114	0
53	MG	BB	3089	1/1	0.92	0.09	-	45,45,45,45	0
53	MG	BB	3009	1/1	0.92	0.07	-	35,35,35,35	0
53	MG	BB	3075	1/1	0.94	0.18	-	31,31,31,31	0
53	MG	AA	1644	1/1	0.70	0.10	-	96,96,96,96	0
53	MG	AA	1611	1/1	0.94	0.06	-	40,40,40,40	0
53	MG	DB	3004	1/1	0.95	0.13	-	19,19,19,19	0
53	MG	CA	1660	1/1	0.81	0.15	-	65,65,65,65	0
53	MG	CA	1626	1/1	0.91	0.10	-	73,73,73,73	0
53	MG	DB	3085	1/1	0.97	0.09	-	17,17,17,17	0
53	MG	CA	1628	1/1	0.92	0.06	-	55,55,55,55	1
53	MG	BB	3047	1/1	0.96	0.06	-	114,114,114,114	0
53	MG	BB	3008	1/1	0.97	0.06	-	58,58,58,58	0
53	MG	DB	3008	1/1	0.96	0.13	-	24,24,24,24	0
53	MG	BB	3007	1/1	0.87	0.15	-	28,28,28,28	0
53	MG	BB	3032	1/1	0.96	0.12	-	9,9,9,9	0
53	MG	AA	1655	1/1	0.66	0.18	-	75,75,75,75	0
53	MG	DB	3106	1/1	0.95	0.06	-	21,21,21,21	0
53	MG	BB	3084	1/1	0.93	0.11	-	5,5,5,5	0
53	MG	AA	1638	1/1	0.82	0.20	-	98,98,98,98	0
53	MG	BB	3074	1/1	0.87	0.11	-	13,13,13,13	0
53	MG	CA	1658	1/1	0.97	0.07	-	38,38,38,38	0
53	MG	BB	3022	1/1	0.97	0.09	-	38,38,38,38	0
53	MG	CA	1610	1/1	0.98	0.03	-	34,34,34,34	0
53	MG	AA	1605	1/1	0.93	0.09	-	48,48,48,48	0
53	MG	DB	3108	1/1	0.93	0.07	-	5,5,5,5	0
53	MG	CA	1637	1/1	0.90	0.09	-	68,68,68,68	0
53	MG	CA	1649	1/1	0.90	0.18	-	88,88,88,88	0
53	MG	BB	3092	1/1	0.98	0.07	-	11,11,11,11	0
53	MG	DB	3011	1/1	0.99	0.09	-	8,8,8,8	0
53	MG	AA	1639	1/1	0.89	0.06	-	47,47,47,47	0
53	MG	DB	3032	1/1	0.94	0.10	-	46,46,46,46	0
53	MG	CA	1662	1/1	0.85	0.14	-	26,26,26,26	0
53	MG	AA	1641	1/1	0.86	0.11	-	49,49,49,49	0
53	MG	BB	3071	1/1	0.93	0.11	-	24,24,24,24	0
53	MG	BB	3050	1/1	0.98	0.10	-	35,35,35,35	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
53	MG	AA	1618	1/1	0.92	0.06	-	46,46,46,46	0
53	MG	DB	3023	1/1	0.92	0.06	-	34,34,34,34	0
53	MG	AA	1608	1/1	0.81	0.08	-	121,121,121,121	0
53	MG	AA	1624	1/1	0.92	0.17	-	79,79,79,79	0
53	MG	DB	3089	1/1	0.94	0.06	-	65,65,65,65	0
53	MG	CA	1622	1/1	0.92	0.09	-	67,67,67,67	0
53	MG	DB	3100	1/1	0.97	0.09	-	11,11,11,11	0
53	MG	DB	3029	1/1	0.91	0.29	-	41,41,41,41	0

6.5 Other polymers [i](#)

There are no such residues in this entry.