Full wwPDB X-ray Structure Validation Report ⓘ

Apr 25, 2026 – 03:54 PM EDT

PDB ID	:	4V56 / pdb_00004v56
Title	:	Crystal structure of the bacterial ribosome from Escherichia coli in complex with spectinomycin.
Authors	:	Borovinskaya, M.A.; Shoji, S.; Holton, J.M.; Fredrick, K.; Cate, J.H.D.
Deposited on	:	2007-07-21
Resolution	:	3.93 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
https://www.wwpdb.org/validation/2017/XrayValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

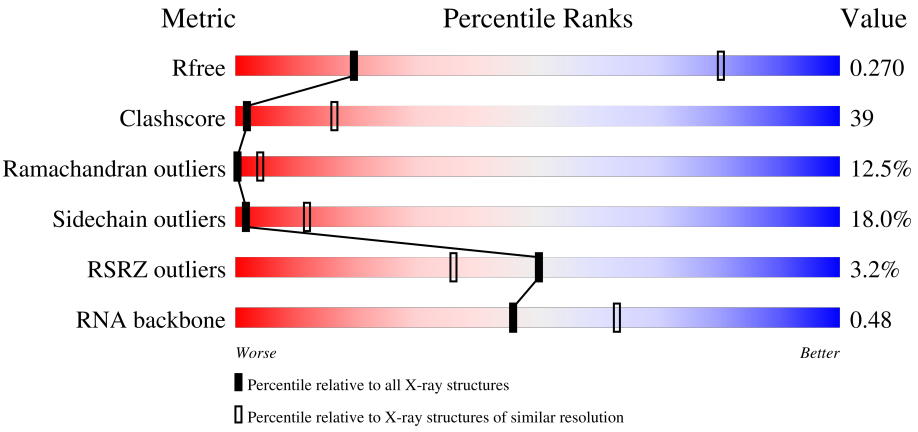
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

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 3.93 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}	180053	1022 (4.12-3.76)
Clashscore	190562	1000 (4.10-3.78)
Ramachandran outliers	187476	1009 (4.12-3.76)
Sidechain outliers	187428	1002 (4.12-3.76)
RSRZ outliers	180081	1022 (4.12-3.76)
RNA backbone	3983	1015 (4.76-3.10)

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 of the lower bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	AA	1542	19% 63% 16%
1	CA	1542	20% 62% 16%
2	AC	232	18% 45% 24% 11%
2	CC	232	22% 48% 19% 11%

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Mol	Chain	Length	Quality of chain
3	AD	205	2% 28% 55% 17%
3	CD	205	5% 29% 55% 16%
4	AE	166	2% 26% 49% 13% 10%
4	CE	166	2% 28% 48% 13% 10%
5	AF	135	16% 47% 10% 26%
5	CF	135	% 19% 44% 10% 26%
6	AG	178	2% 18% 51% 15% 16%
6	CG	178	21% 47% 17% 15%
7	AH	129	7% 36% 53% 10%
7	CH	129	4% 36% 53% 10%
8	AI	129	5% 11% 65% 22%
8	CI	129	6% 18% 61% 19%
9	AJ	103	8% 24% 48% 21% 5%
9	CJ	103	% 22% 50% 21% 5%
10	AK	128	2% 26% 56% 9% 9%
10	CK	128	% 27% 53% 11% 9%
11	AL	123	7% 26% 59% 14%
11	CL	123	7% 28% 56% 14%
12	AM	117	% 16% 63% 17%
12	CM	117	% 19% 60% 16%
13	AP	82	4% 28% 61% 10%
13	CP	82	11% 26% 61% 10%
14	AQ	83	25% 60% 10%
14	CQ	83	2% 29% 57% 11%
15	AR	74	% 20% 45% 8% 26%

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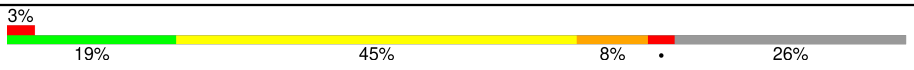
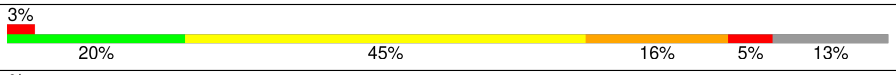
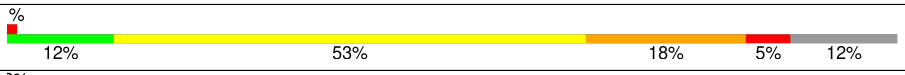
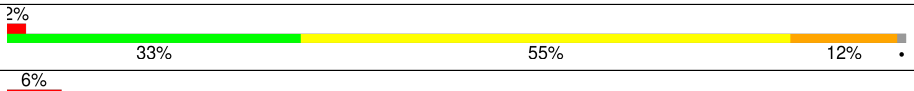
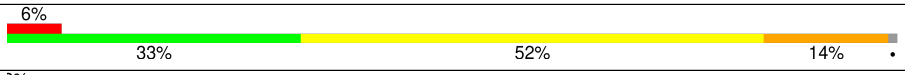
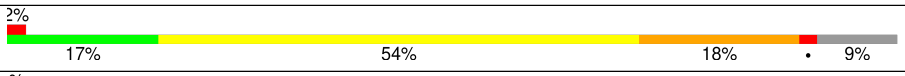
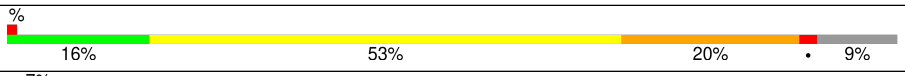
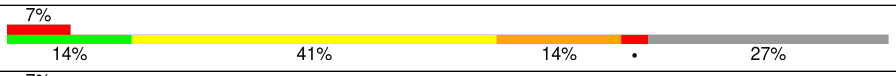
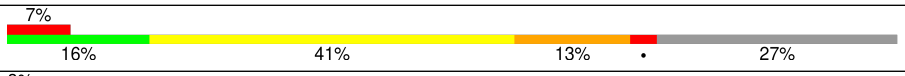
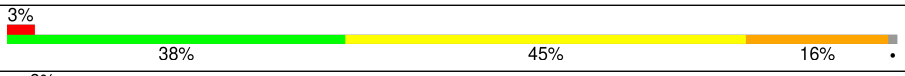
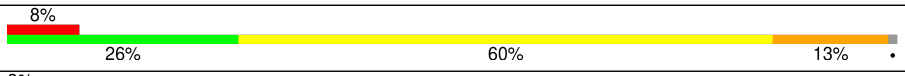
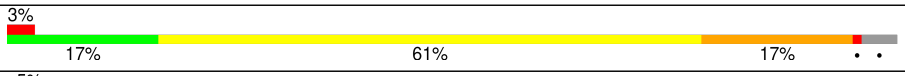
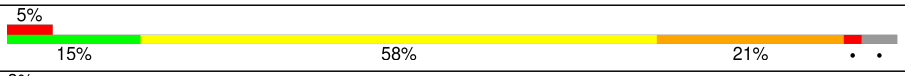
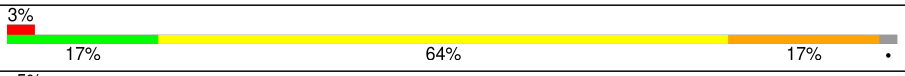
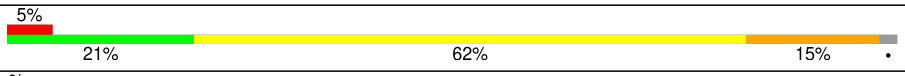
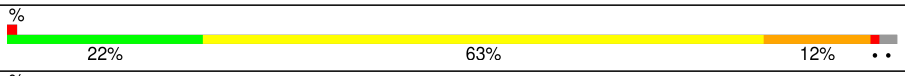
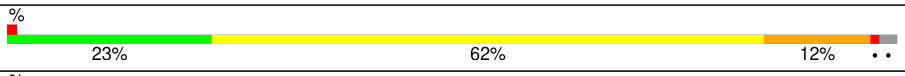
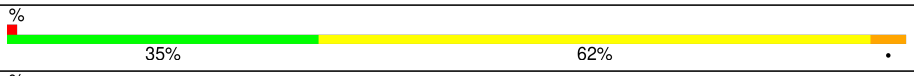
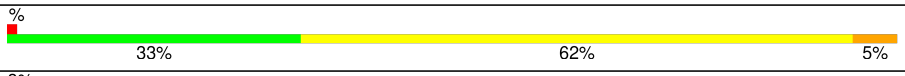
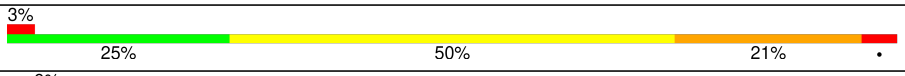
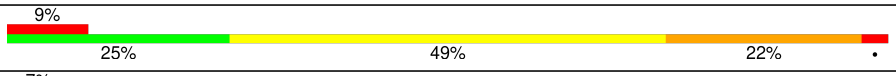
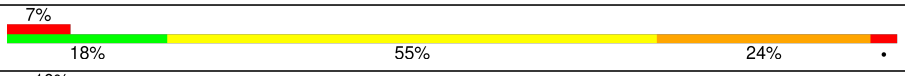
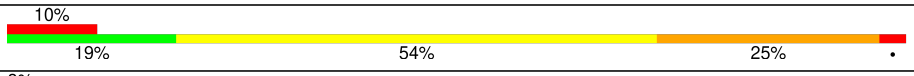
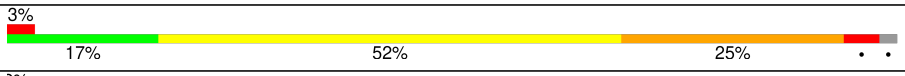
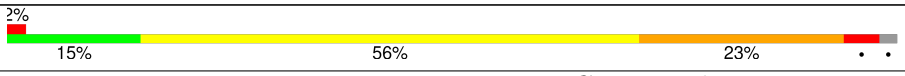
Mol	Chain	Length	Quality of chain
15	CR	74	
16	AS	91	
16	CS	91	
17	AT	86	
17	CT	86	
18	AB	240	
18	CB	240	
19	AU	70	
19	CU	70	
20	AO	89	
20	CO	89	
21	AN	100	
21	CN	100	
22	BA	120	
22	DA	120	
23	BB	2904	
23	DB	2904	
24	BI	141	
24	DI	141	
25	BC	272	
25	DC	272	
26	BD	209	
26	DD	209	
27	BK	123	
27	DK	123	

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Mol	Chain	Length	Quality of chain
28	BP	114	6% 23% 50% 23%
28	DP	114	5% 21% 52% 23%
29	BE	201	2% 20% 61% 17%
29	DE	201	4% 21% 59% 19%
30	BY	58	3% 29% 52% 17%
30	DY	58	3% 28% 52% 19%
31	B0	56	4% 25% 46% 25%
31	D0	56	2% 29% 46% 23%
32	B4	38	8% 21% 61% 18%
32	D4	38	16% 68% 16%
33	B1	54	2% 28% 50% 13% 7%
33	D1	54	22% 56% 13% 7%
34	B3	64	20% 34% 44% 20%
34	D3	64	11% 33% 45% 20%
35	BV	94	2% 31% 51% 17%
35	DV	94	2% 30% 51% 18%
36	B2	46	11% 35% 43% 22%
36	D2	46	13% 26% 50% 24%
37	BL	144	3% 23% 56% 18%
37	DL	144	7% 22% 57% 19%
38	BM	136	4% 31% 50% 15%
38	DM	136	9% 31% 51% 15%
39	BX	63	5% 25% 51% 21%
39	DX	63	19% 59% 19%
40	BH	149	3% 22% 48% 23% 7%

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Mol	Chain	Length	Quality of chain
40	DH	149	3% 21% 56% 19%
41	BJ	142	14% 23% 61% 13%
41	DJ	142	8% 22% 61% 14%
42	BN	127	5% 15% 65% 14% 6%
42	DN	127	6% 13% 67% 13% 6%
43	BO	117	3% 28% 52% 18%
43	DO	117	4% 26% 56% 16%
44	BQ	117	3% 15% 68% 16%
44	DQ	117	9% 15% 68% 16%
45	BS	110	7% 21% 57% 19%
45	DS	110	7% 20% 57% 20%
46	BU	103	22% 51% 21%
46	DU	103	5% 22% 50% 23%
47	BF	178	% 16% 53% 26% 6%
47	DF	178	8% 17% 53% 24% 6%
48	BG	176	4% 22% 56% 20%
48	DG	176	5% 20% 57% 20%
49	BR	103	4% 22% 55% 18%
49	DR	103	5% 22% 57% 17%
50	BT	100	3% 17% 48% 27% 7%
50	DT	100	11% 20% 46% 25% 7%
51	BZ	78	8% 18% 64% 14%
51	DZ	78	9% 18% 63% 14%
52	BW	84	5% 15% 45% 29% 5% 6%
52	DW	84	18% 14% 45% 30% 5% 6%

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	1623	-	-	-	X

2 Entry composition (i)

There are 56 unique types of molecules in this entry. The entry contains 284033 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- Molecule 13 is a protein called 30S ribosomal protein S16.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

There are 2 discrepancies between the modelled and reference sequences:

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

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

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

There are 4 discrepancies between the modelled and reference sequences:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

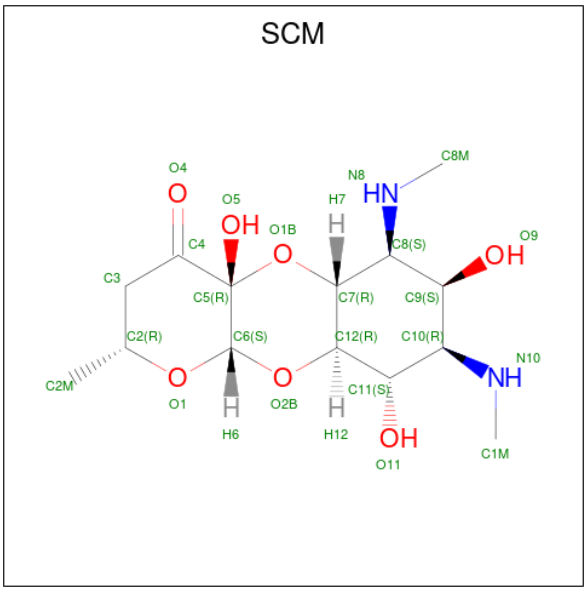
- Molecule 52 is a protein called 50S ribosomal protein L27.

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

- Molecule 53 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
53	AA	60	Total	Mg	0	0
			60	60		
53	BB	110	Total	Mg	0	0
			110	110		
53	CA	58	Total	Mg	0	0
			58	58		
53	CE	1	Total	Mg	0	0
			1	1		
53	DB	110	Total	Mg	0	0
			110	110		
53	DN	1	Total	Mg	0	0
			1	1		

- Molecule 54 is SPECTINOMYCIN (CCD ID: SCM) (formula: $C_{14}H_{24}N_2O_7$).



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

- Molecule 55 is ZINC ION (CCD ID: ZN) (formula: Zn).

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

- Molecule 56 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
56	AA	288	Total O 288 288	0	0
56	AE	3	Total O 3 3	0	0
56	AK	1	Total O 1 1	0	0
56	AL	4	Total O 4 4	0	0
56	AP	1	Total O 1 1	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
56	AT	1	Total O 1 1	0	0
56	AN	2	Total O 2 2	0	0
56	BB	494	Total O 494 494	0	0
56	BC	4	Total O 4 4	0	0
56	BE	3	Total O 3 3	0	0
56	BL	4	Total O 4 4	0	0
56	BH	1	Total O 1 1	0	0
56	BT	1	Total O 1 1	0	0
56	CA	275	Total O 275 275	0	0
56	CE	4	Total O 4 4	0	0
56	CK	1	Total O 1 1	0	0
56	CL	5	Total O 5 5	0	0
56	CP	1	Total O 1 1	0	0
56	CT	2	Total O 2 2	0	0
56	CN	5	Total O 5 5	0	0
56	DB	500	Total O 500 500	0	0
56	DC	3	Total O 3 3	0	0
56	DD	1	Total O 1 1	0	0
56	DP	1	Total O 1 1	0	0
56	DE	1	Total O 1 1	0	0
56	DL	3	Total O 3 3	0	0

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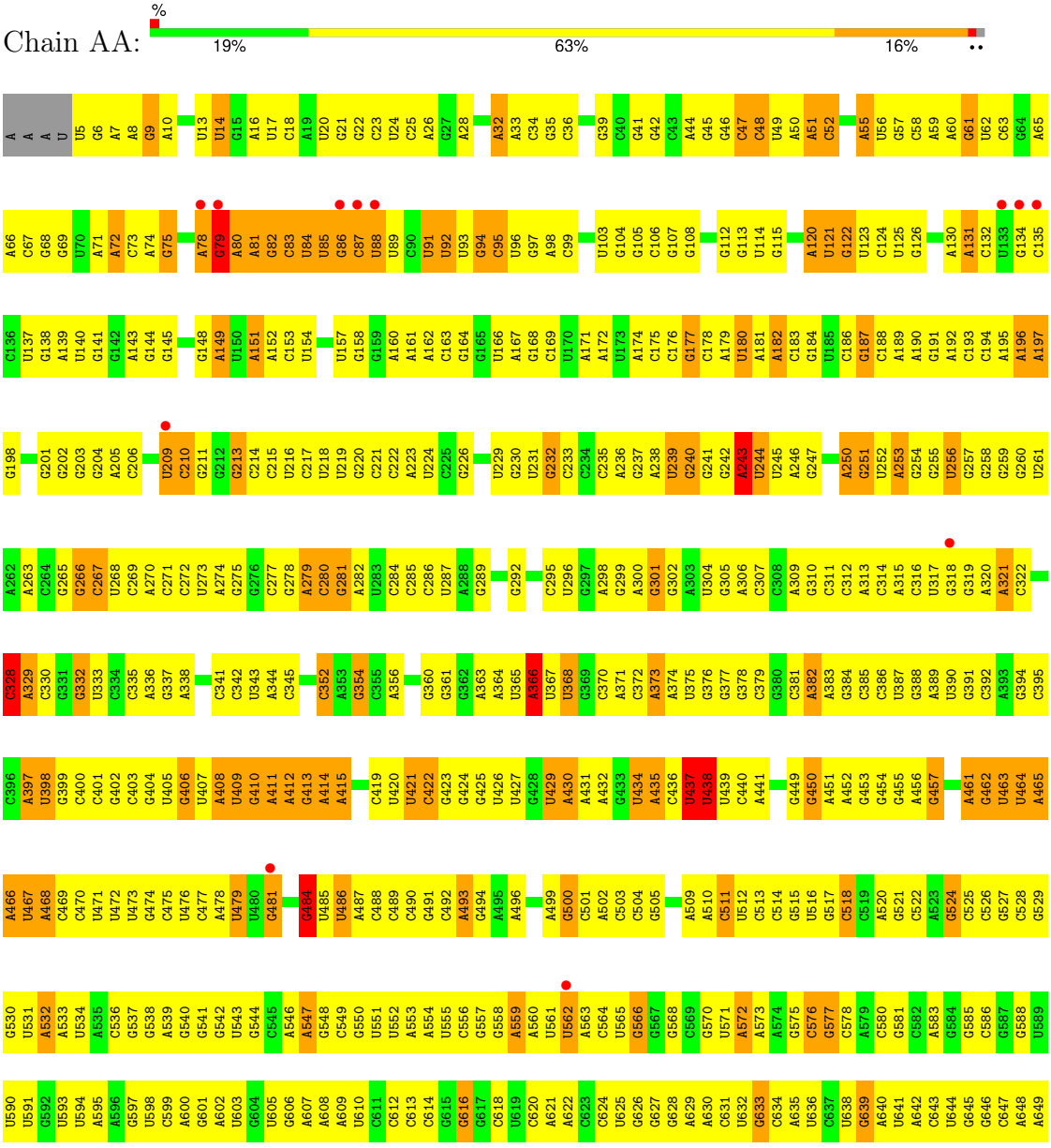
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
56	DJ	1	Total O 1 1	0	0
56	DN	2	Total O 2 2	0	0
56	DR	1	Total O 1 1	0	0

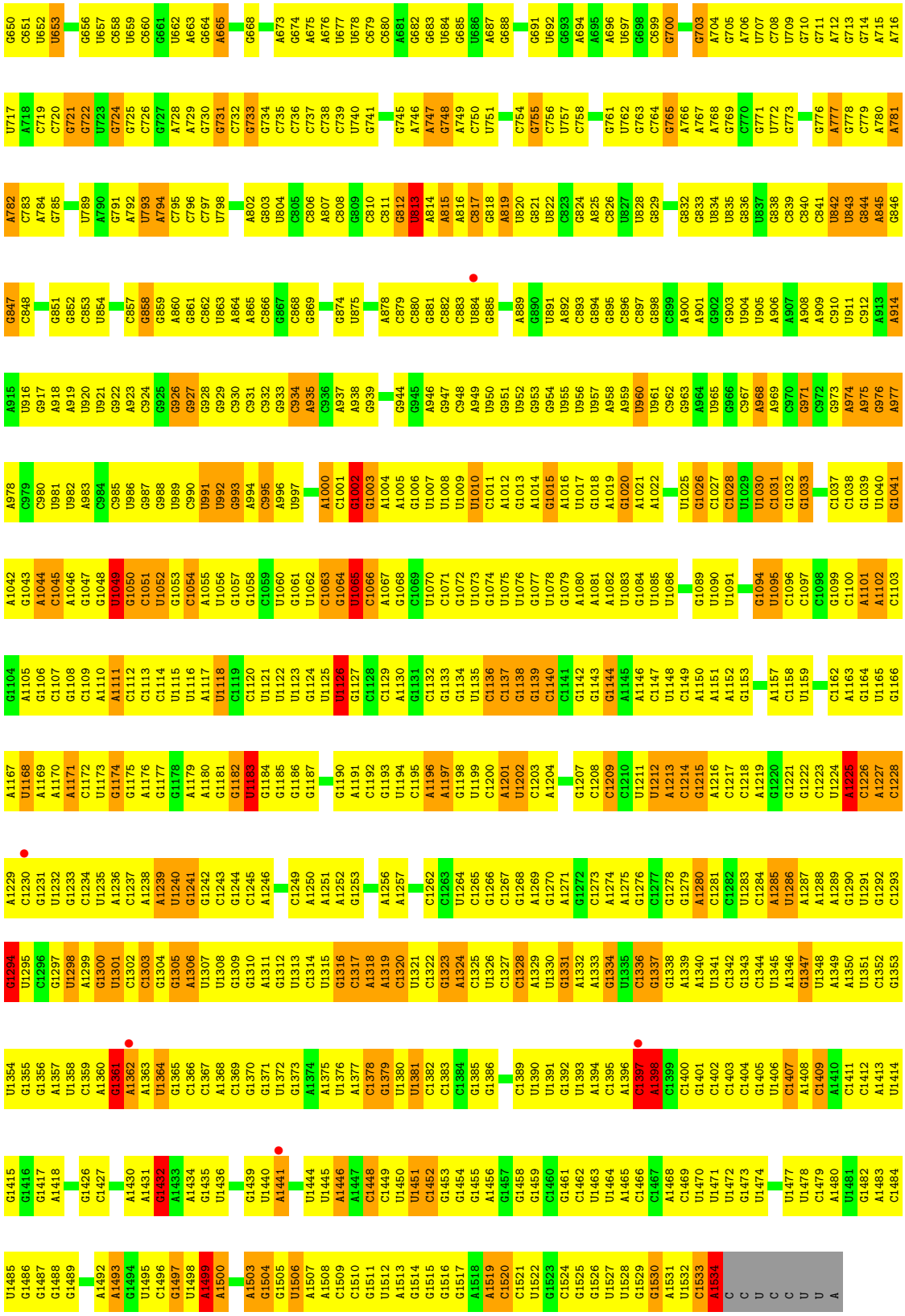
3 Residue-property plots (i)

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

- Molecule 1: 16S rRNA

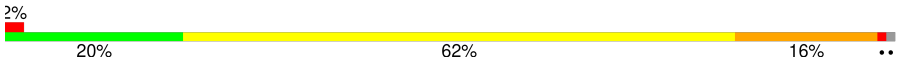
Chain AA:

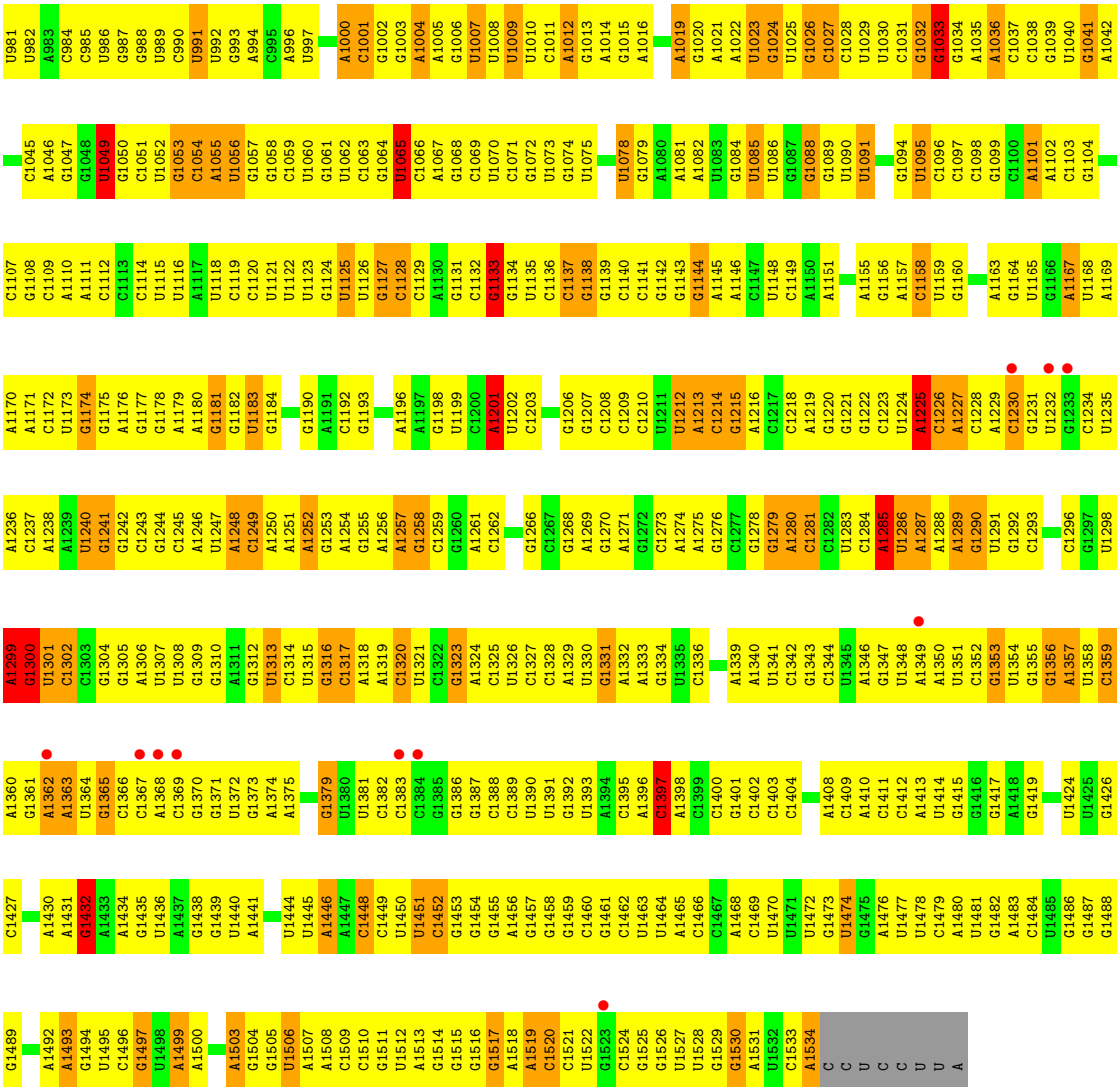




• Molecule 1: 16S rRNA

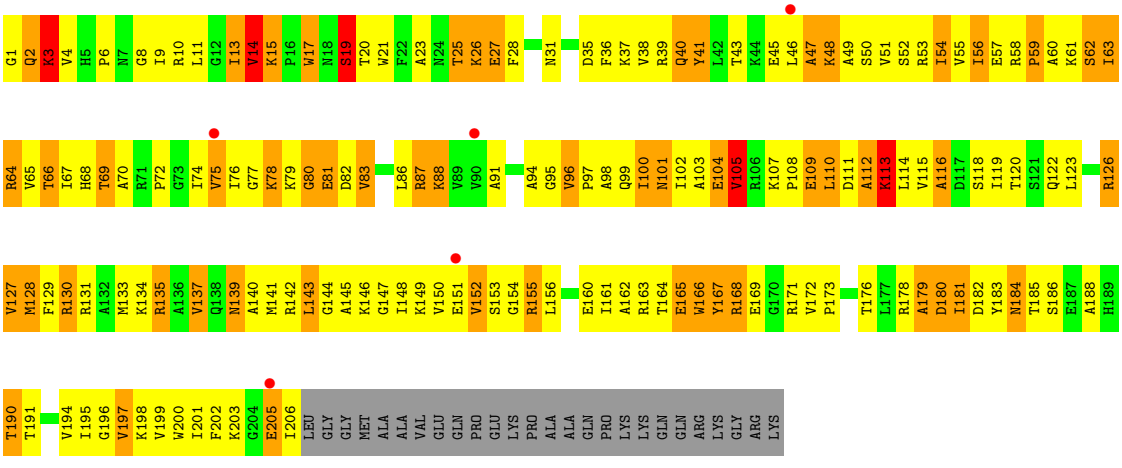
Chain CA:





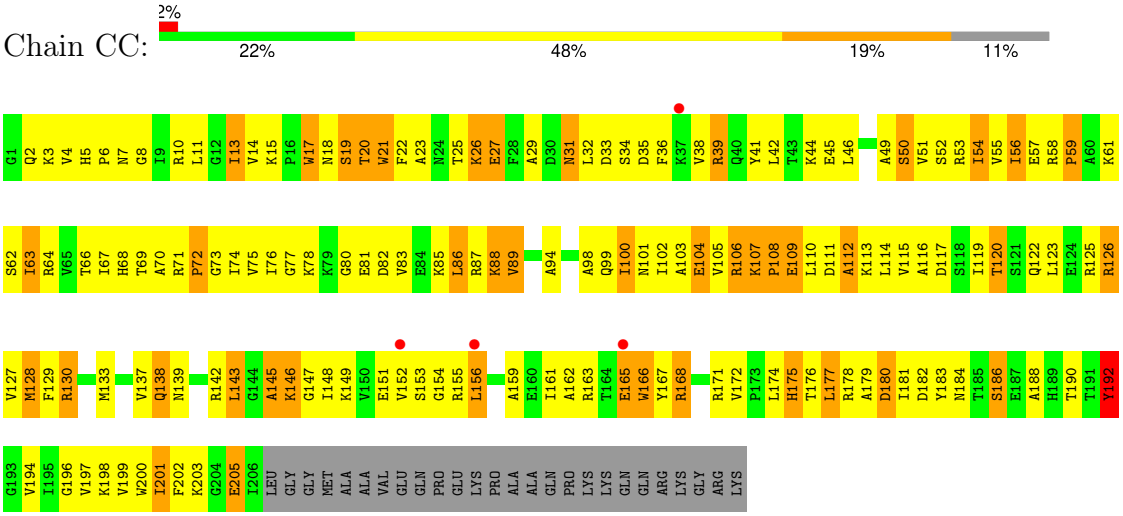
• Molecule 2: 30S ribosomal protein S3

Chain AC:



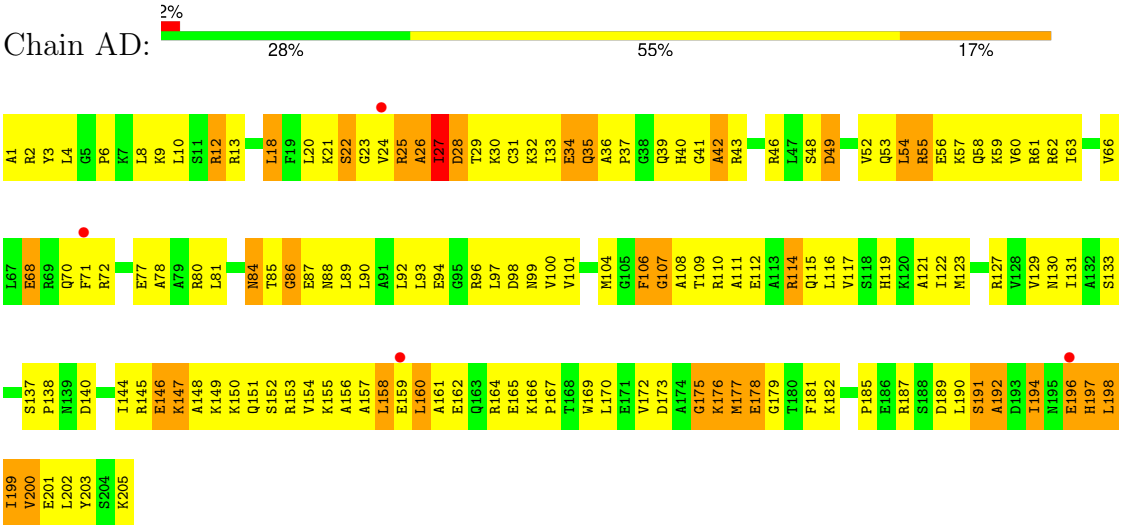
• Molecule 2: 30S ribosomal protein S3

Chain CC:



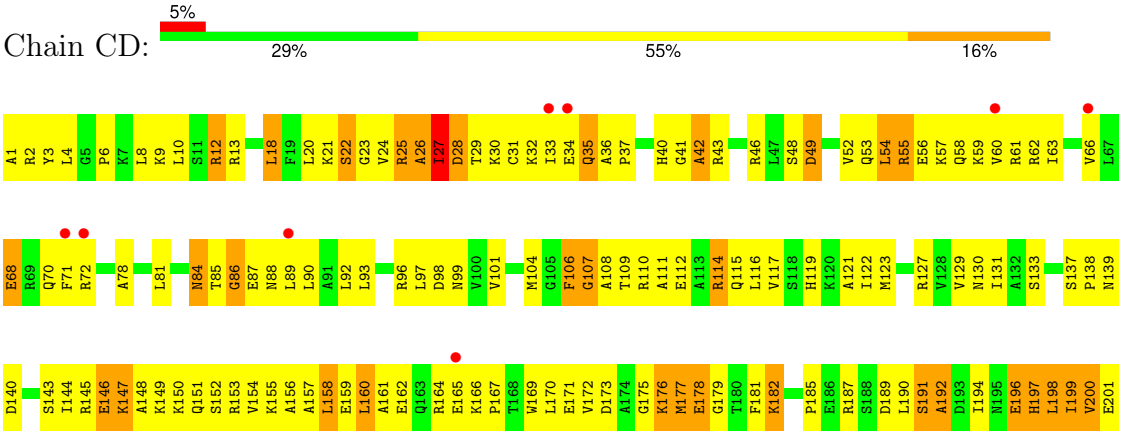
• Molecule 3: 30S ribosomal protein S4

Chain AD:



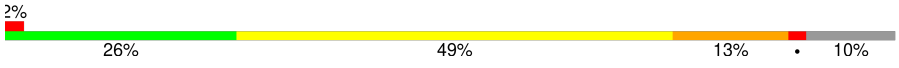
• Molecule 3: 30S ribosomal protein S4

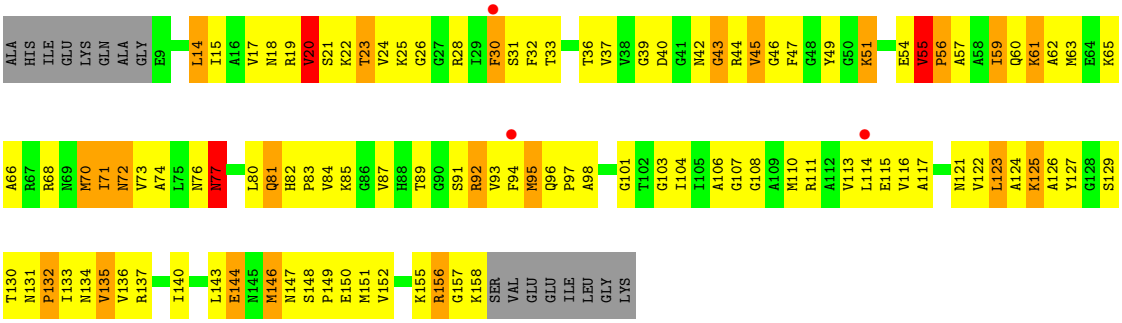
Chain CD:



• Molecule 4: 30S ribosomal protein S5

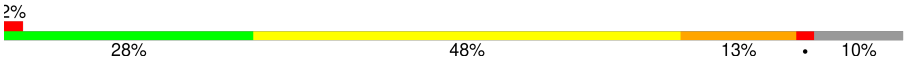
Chain AE:

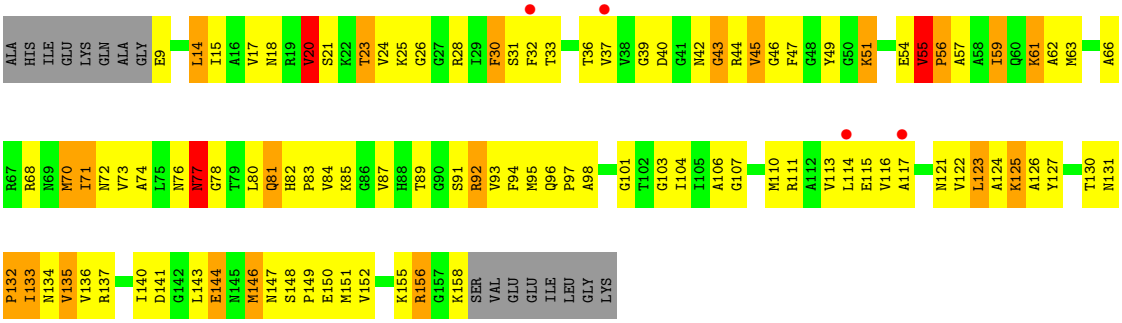




• Molecule 4: 30S ribosomal protein S5

Chain CE:



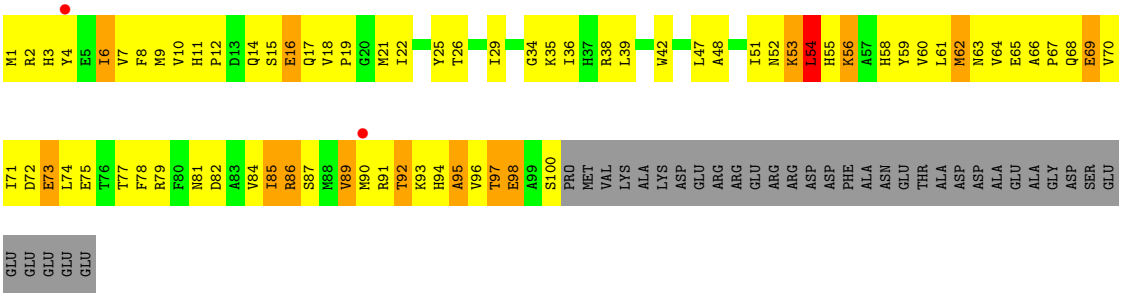


• Molecule 5: 30S ribosomal protein S6

Chain AF:

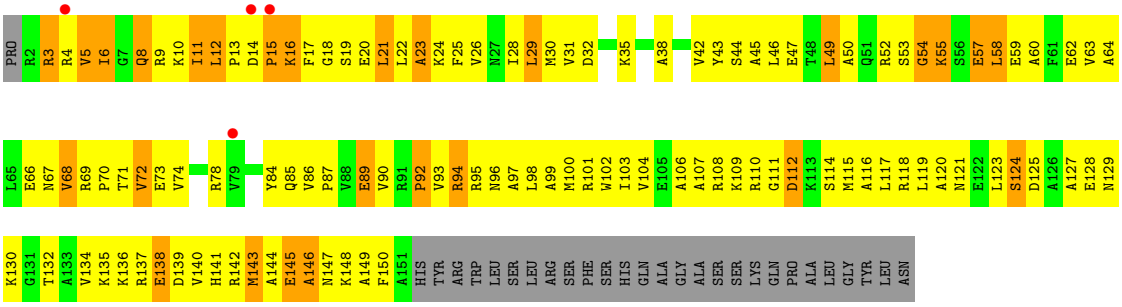
• Molecule 5: 30S ribosomal protein S6

Chain CF:



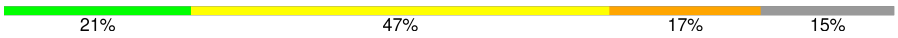
• Molecule 6: 30S ribosomal protein S7

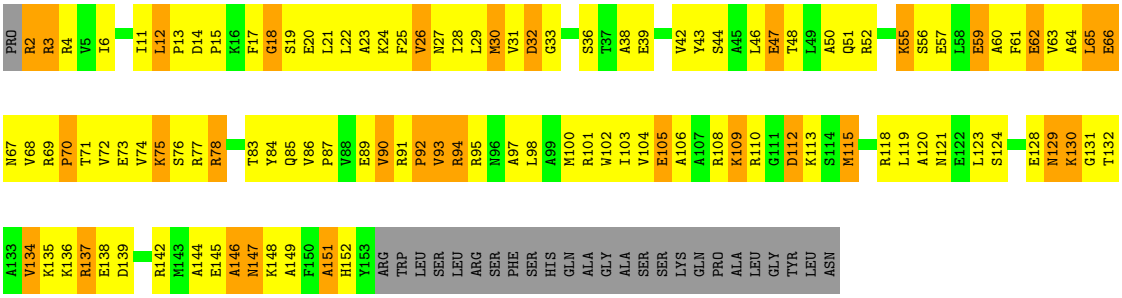
Chain AG:



• Molecule 6: 30S ribosomal protein S7

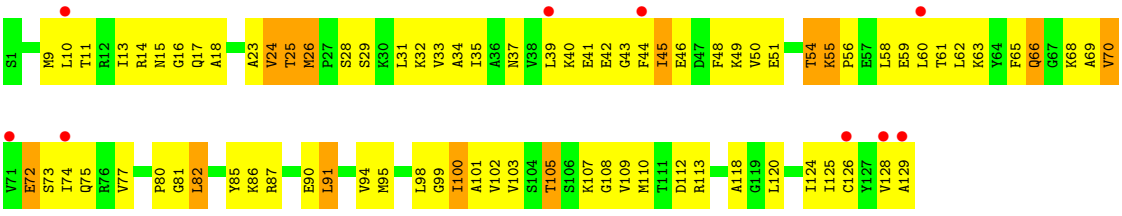
Chain CG:





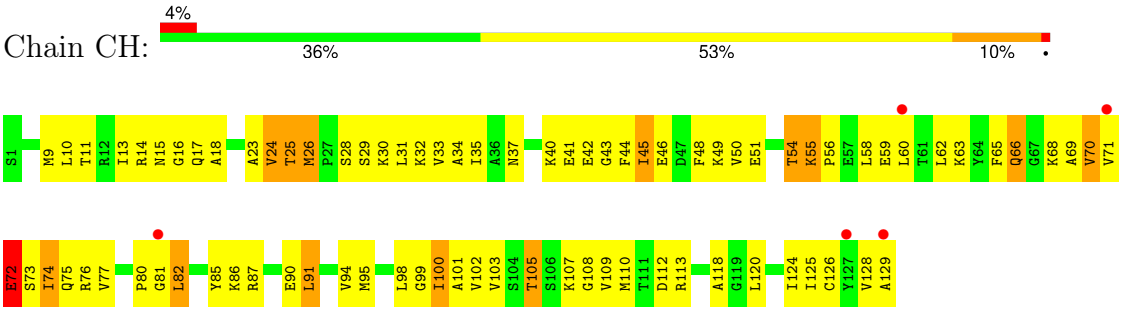
• Molecule 7: 30S ribosomal protein S8

Chain AH:



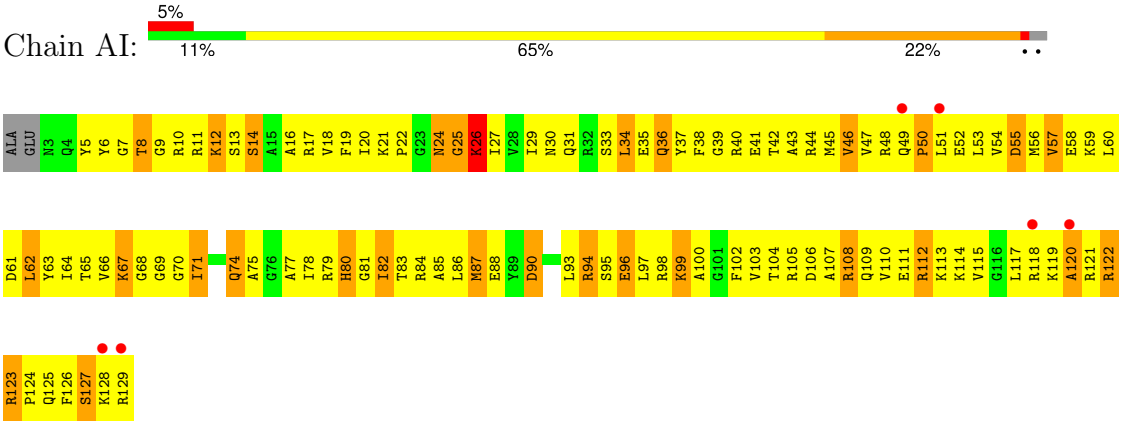
• Molecule 7: 30S ribosomal protein S8

Chain CH:



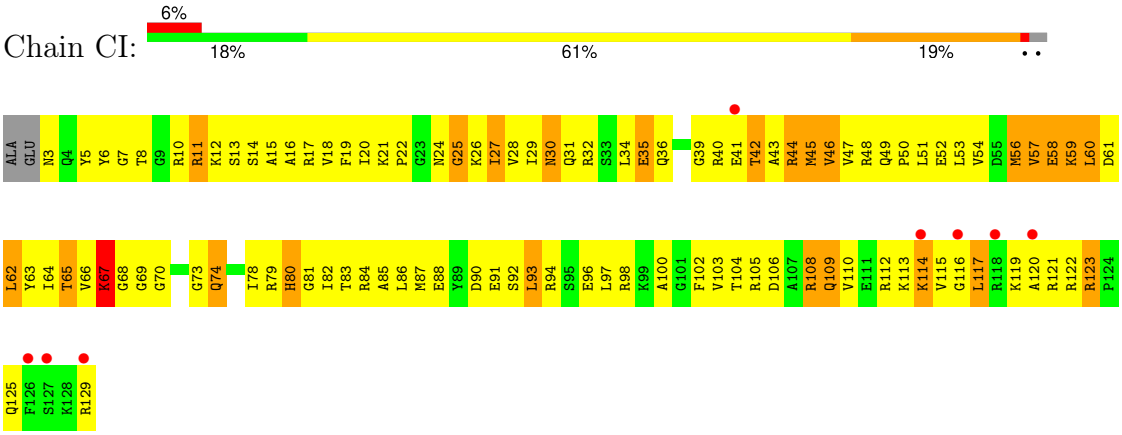
• Molecule 8: 30S ribosomal protein S9

Chain AI:



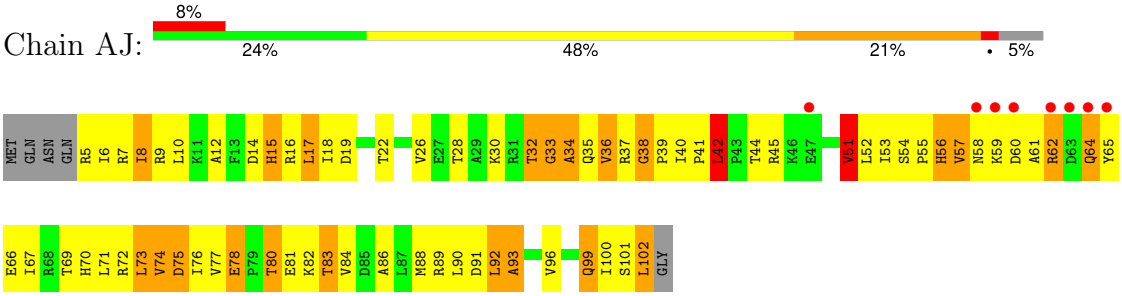
• Molecule 8: 30S ribosomal protein S9

Chain CI:



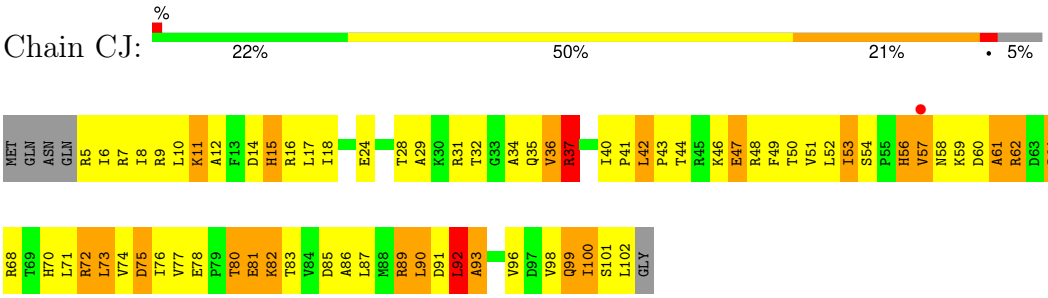
• Molecule 9: 30S ribosomal protein S10

Chain AJ:



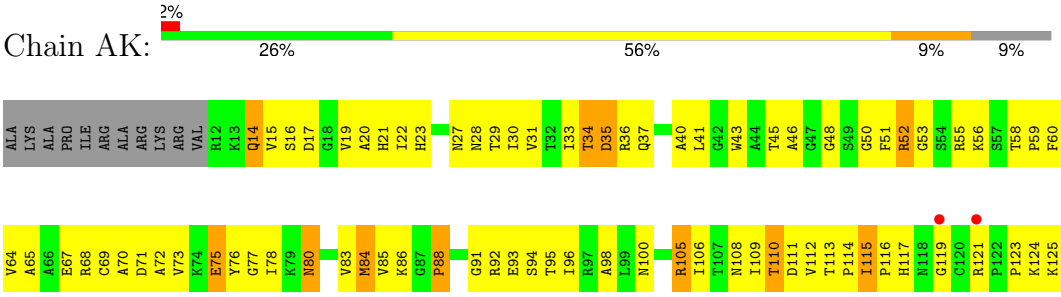
• Molecule 9: 30S ribosomal protein S10

Chain CJ:



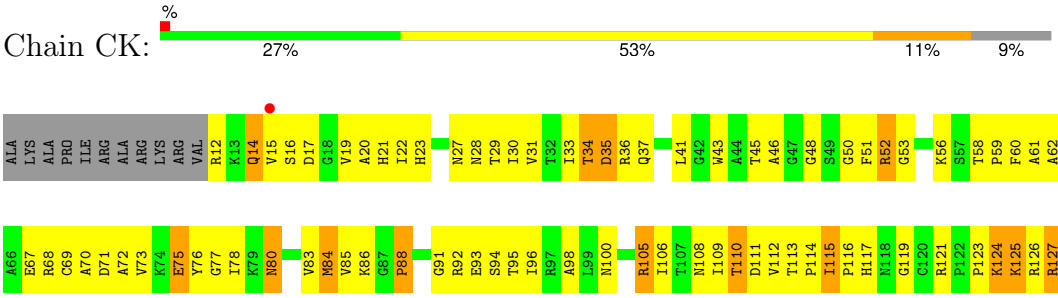
• Molecule 10: 30S ribosomal protein S11

Chain AK:



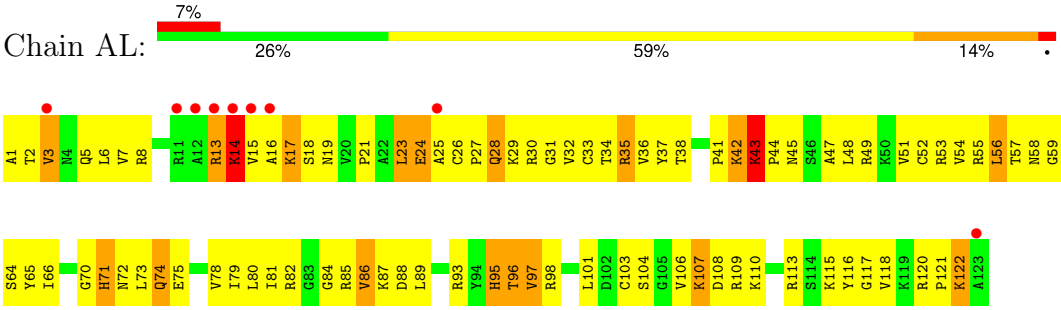
• Molecule 10: 30S ribosomal protein S11

Chain CK:



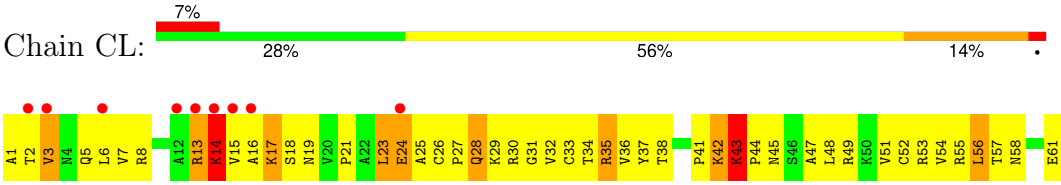
• Molecule 11: 30S ribosomal protein S12

Chain AL:



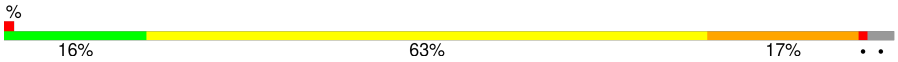
• Molecule 11: 30S ribosomal protein S12

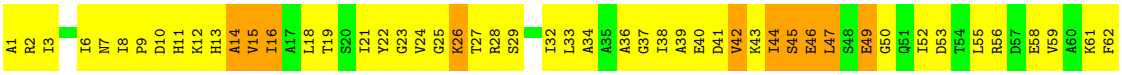
Chain CL:

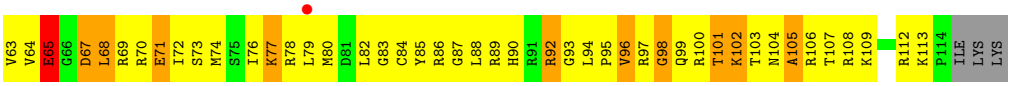


• Molecule 12: 30S ribosomal protein S13

Chain AM:

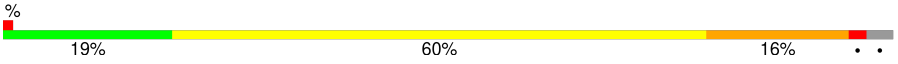


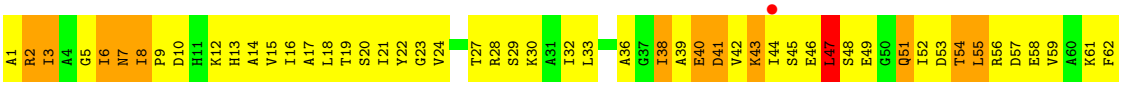




• Molecule 12: 30S ribosomal protein S13

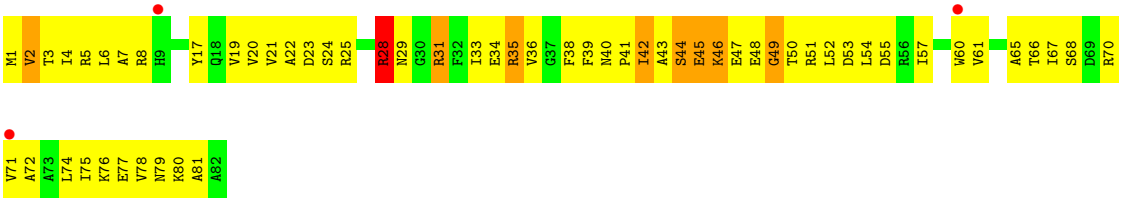
Chain CM:





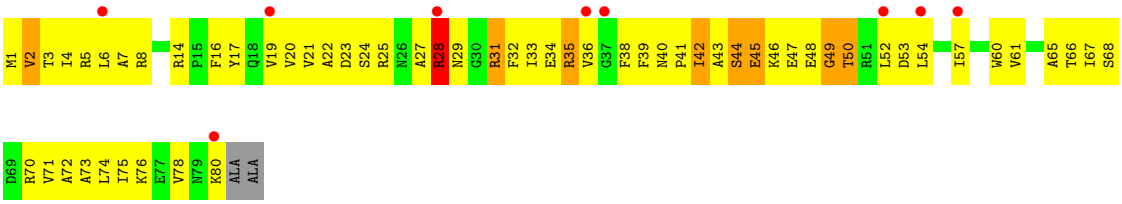
• Molecule 13: 30S ribosomal protein S16

Chain AP:



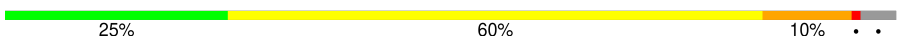
• Molecule 13: 30S ribosomal protein S16

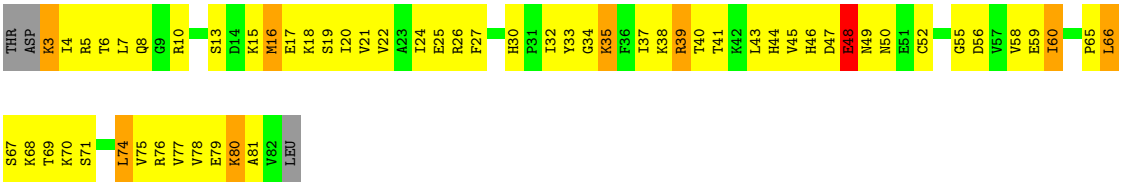
Chain CP:



• Molecule 14: 30S ribosomal protein S17

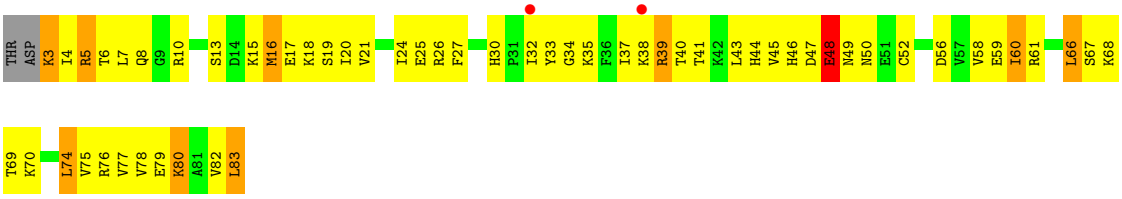
Chain AQ:





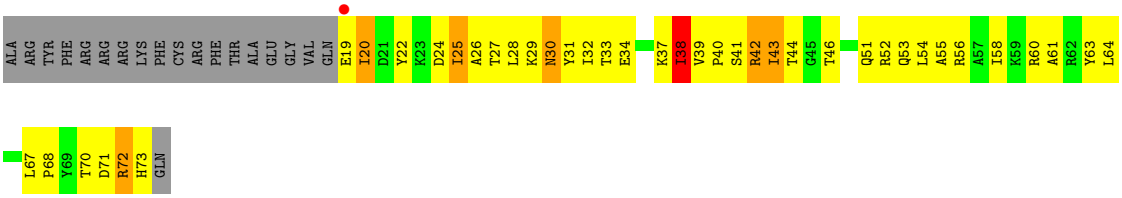
• Molecule 14: 30S ribosomal protein S17

Chain CQ:



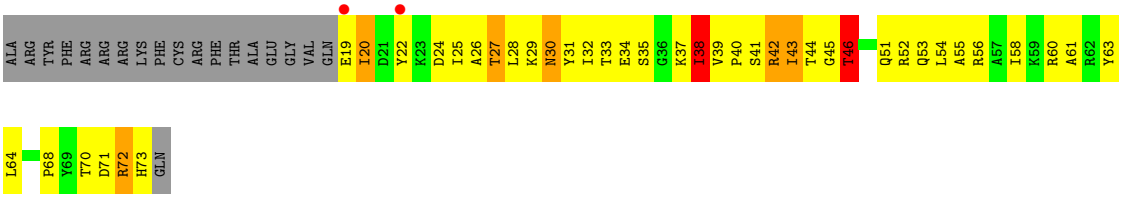
• Molecule 15: 30S ribosomal protein S18

Chain AR:



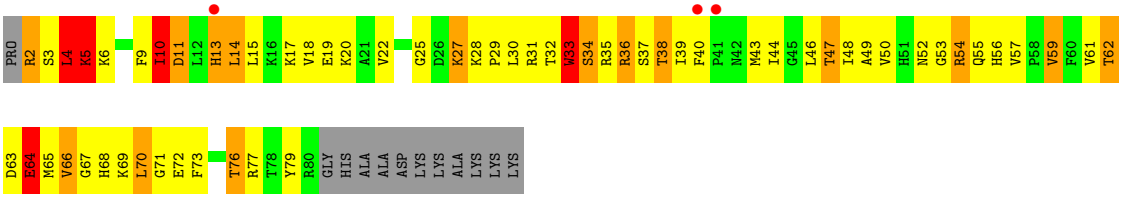
• Molecule 15: 30S ribosomal protein S18

Chain CR:



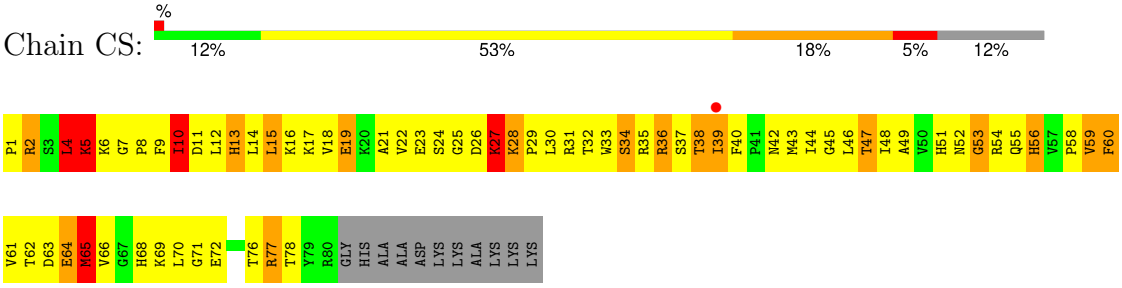
• Molecule 16: 30S ribosomal protein S19

Chain AS:



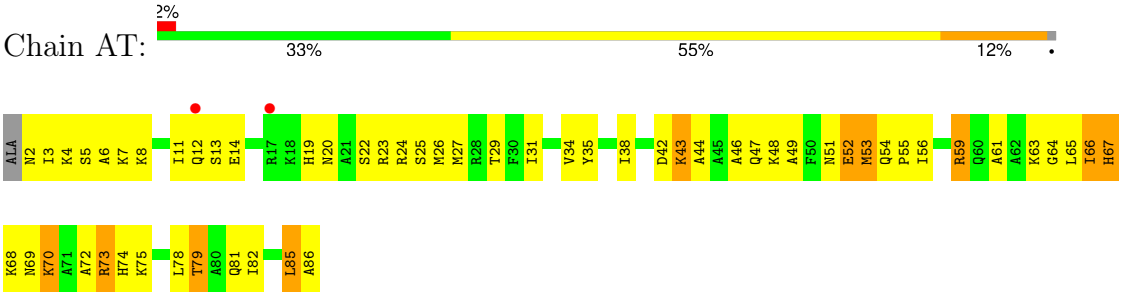
• Molecule 16: 30S ribosomal protein S19

Chain CS:



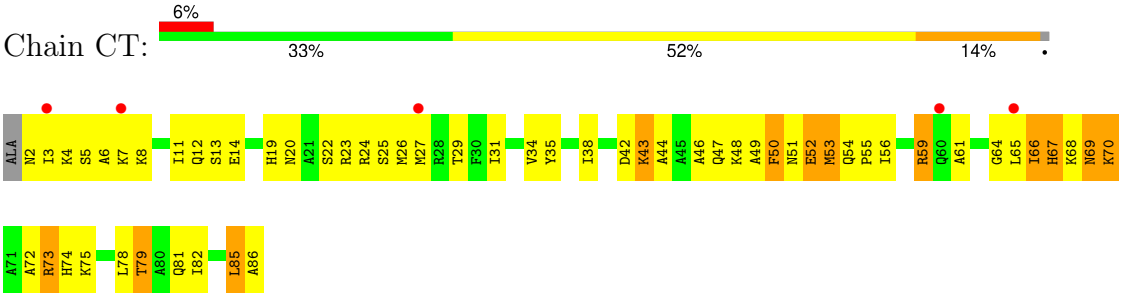
• Molecule 17: 30S ribosomal protein S20

Chain AT:



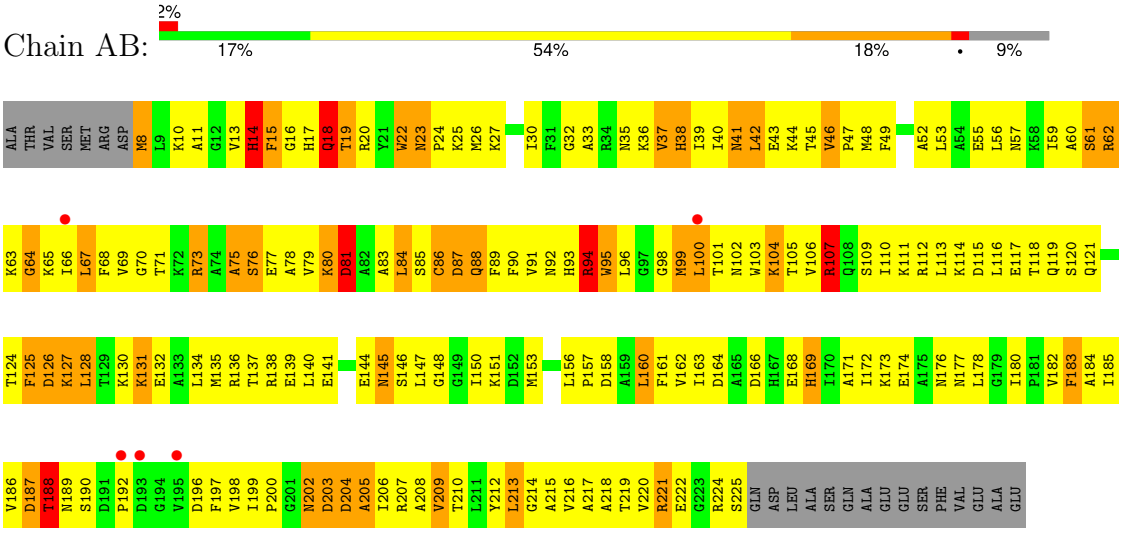
• Molecule 17: 30S ribosomal protein S20

Chain CT:



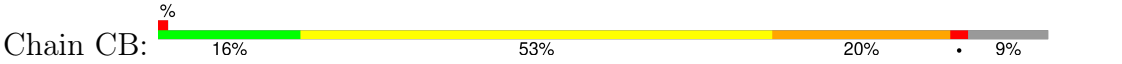
• Molecule 18: 30S ribosomal protein S2

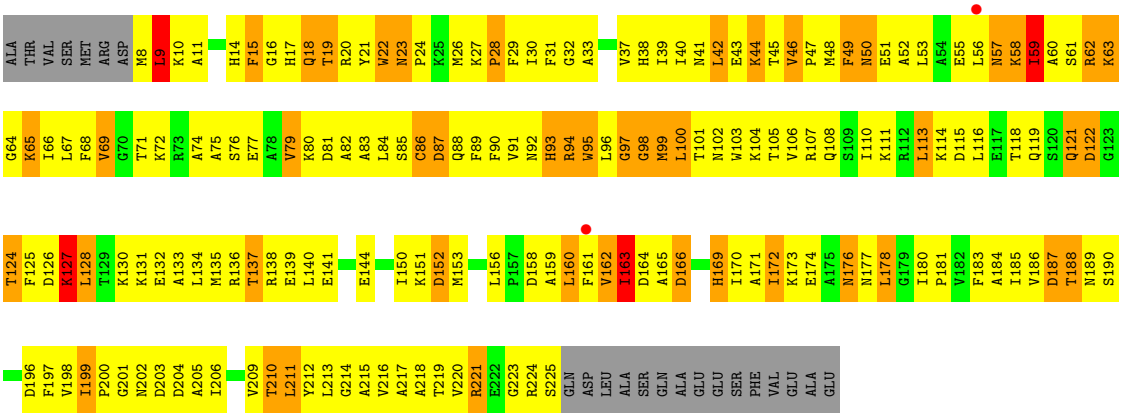
Chain AB:



• Molecule 18: 30S ribosomal protein S2

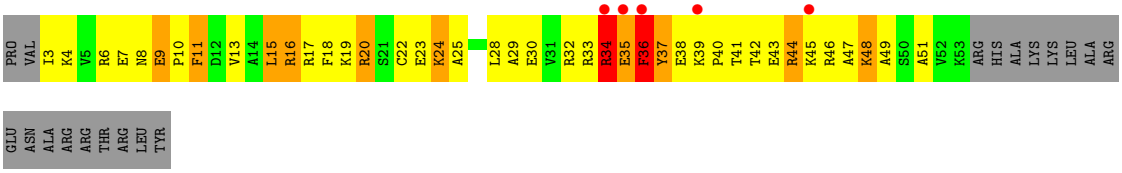
Chain CB:





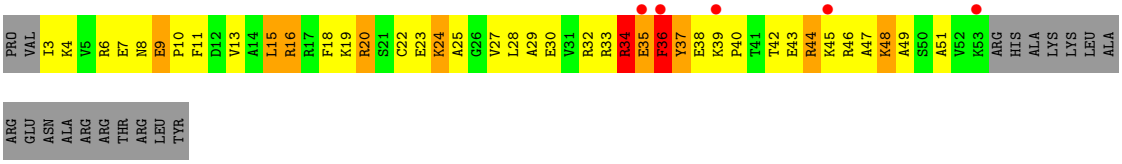
• Molecule 19: 30S ribosomal protein S21

Chain AU:



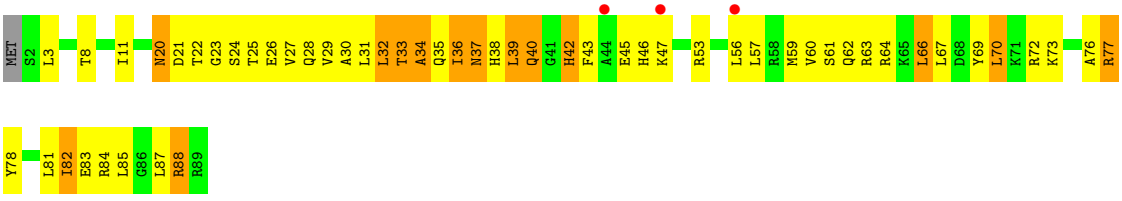
• Molecule 19: 30S ribosomal protein S21

Chain CU:



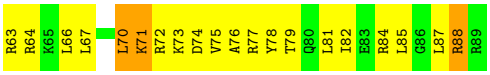
• Molecule 20: 30S ribosomal protein S15

Chain AO:

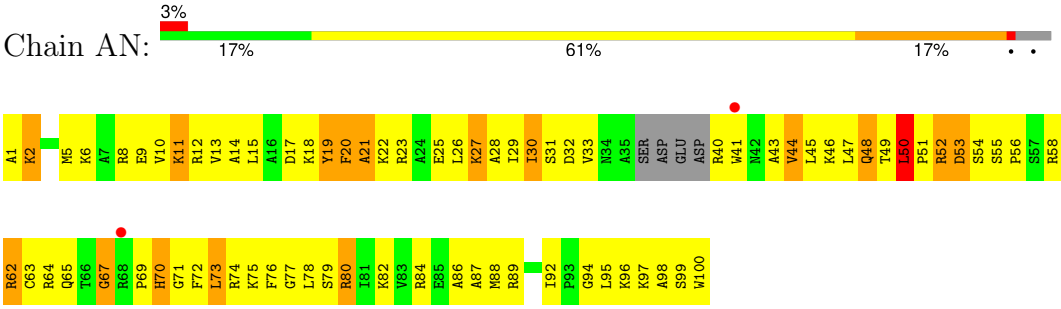


• Molecule 20: 30S ribosomal protein S15

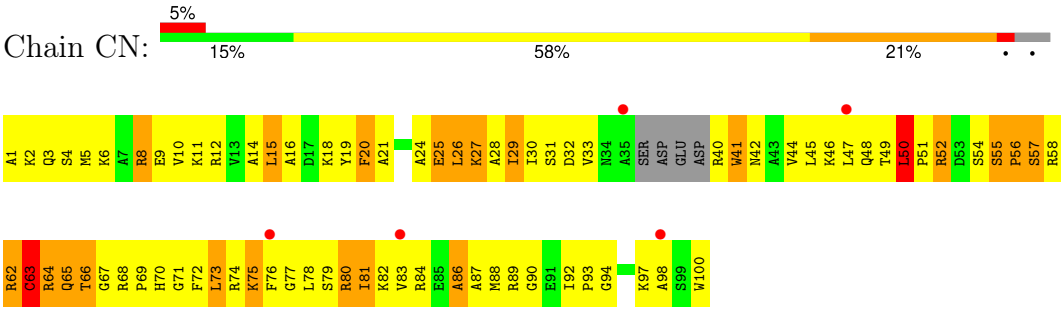
Chain CO:



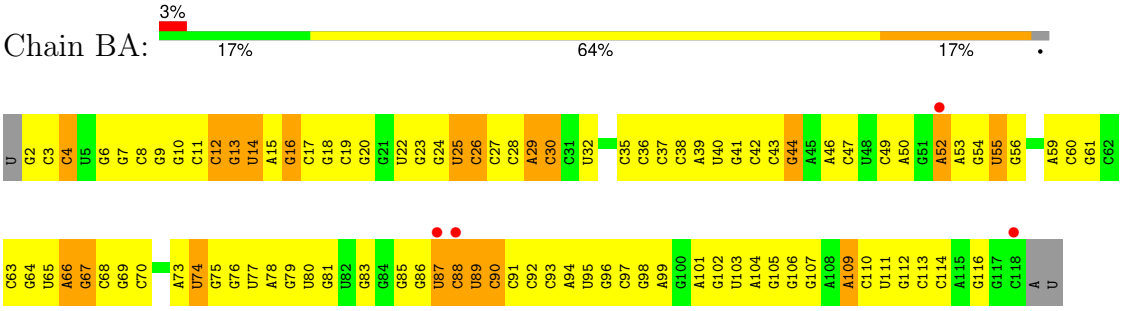
• Molecule 21: 30S ribosomal protein S14



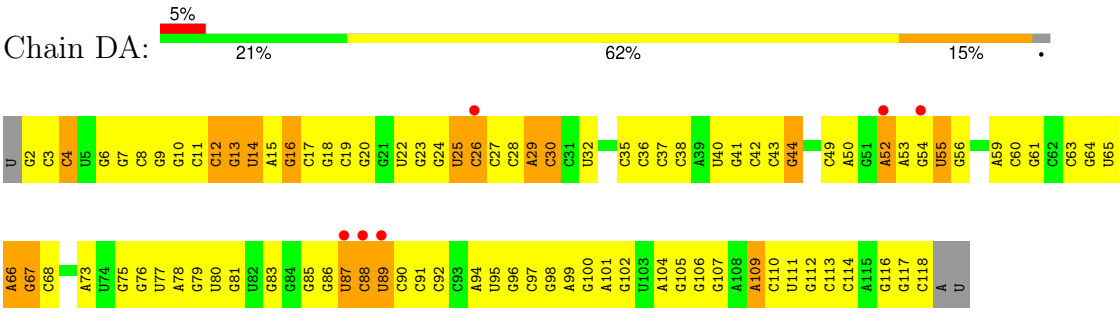
• Molecule 21: 30S ribosomal protein S14



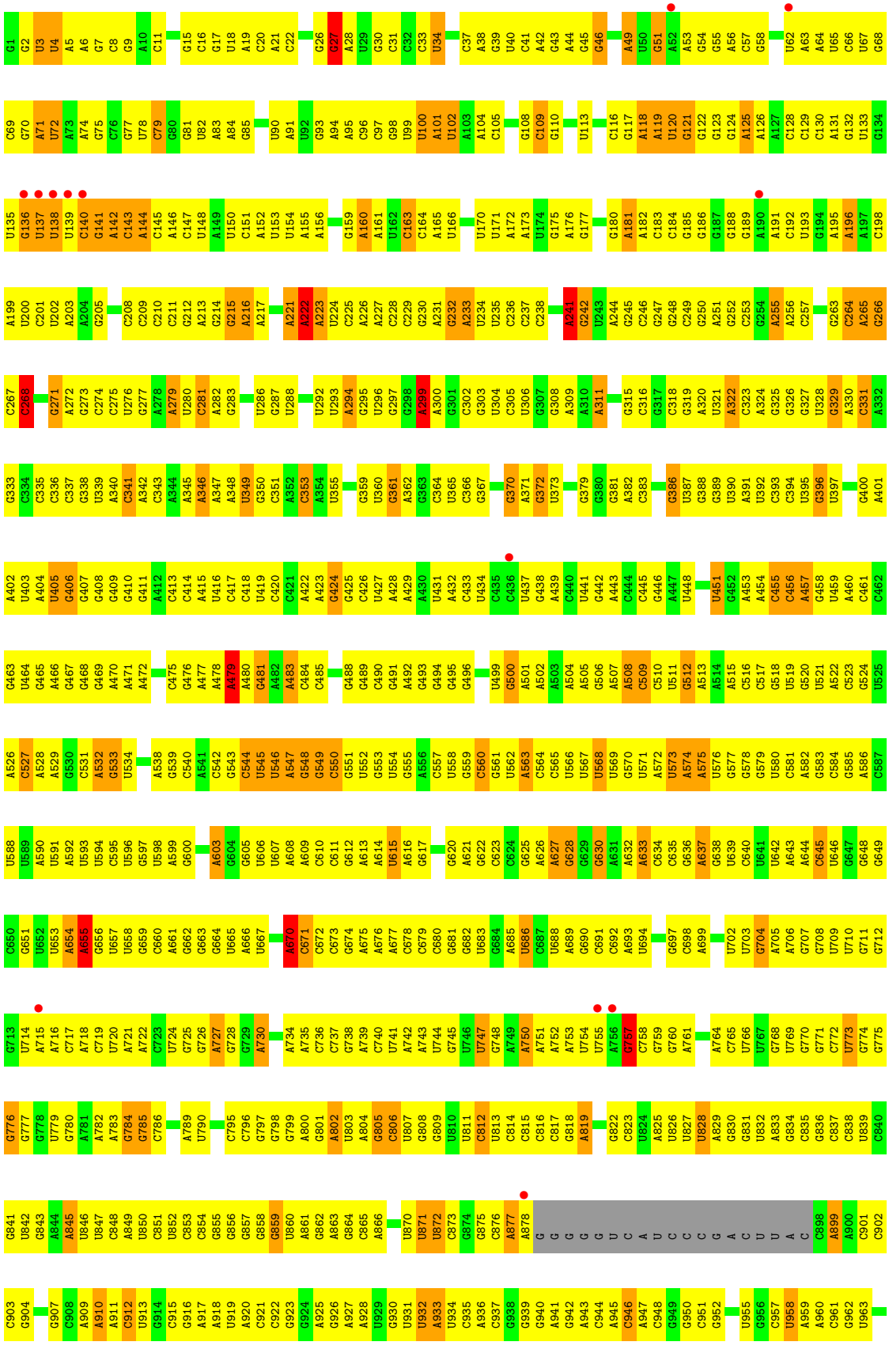
• Molecule 22: 5S rRNA

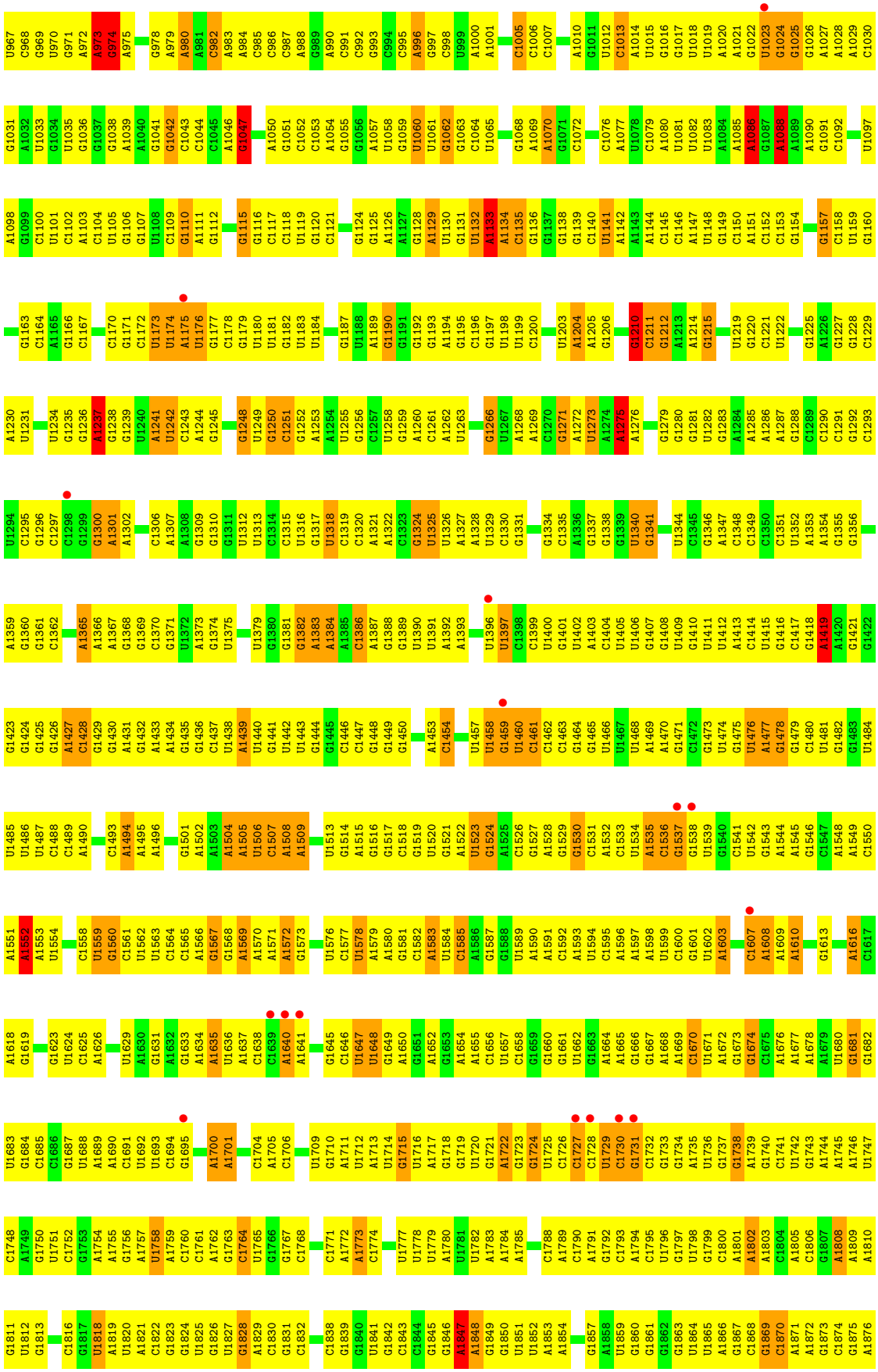


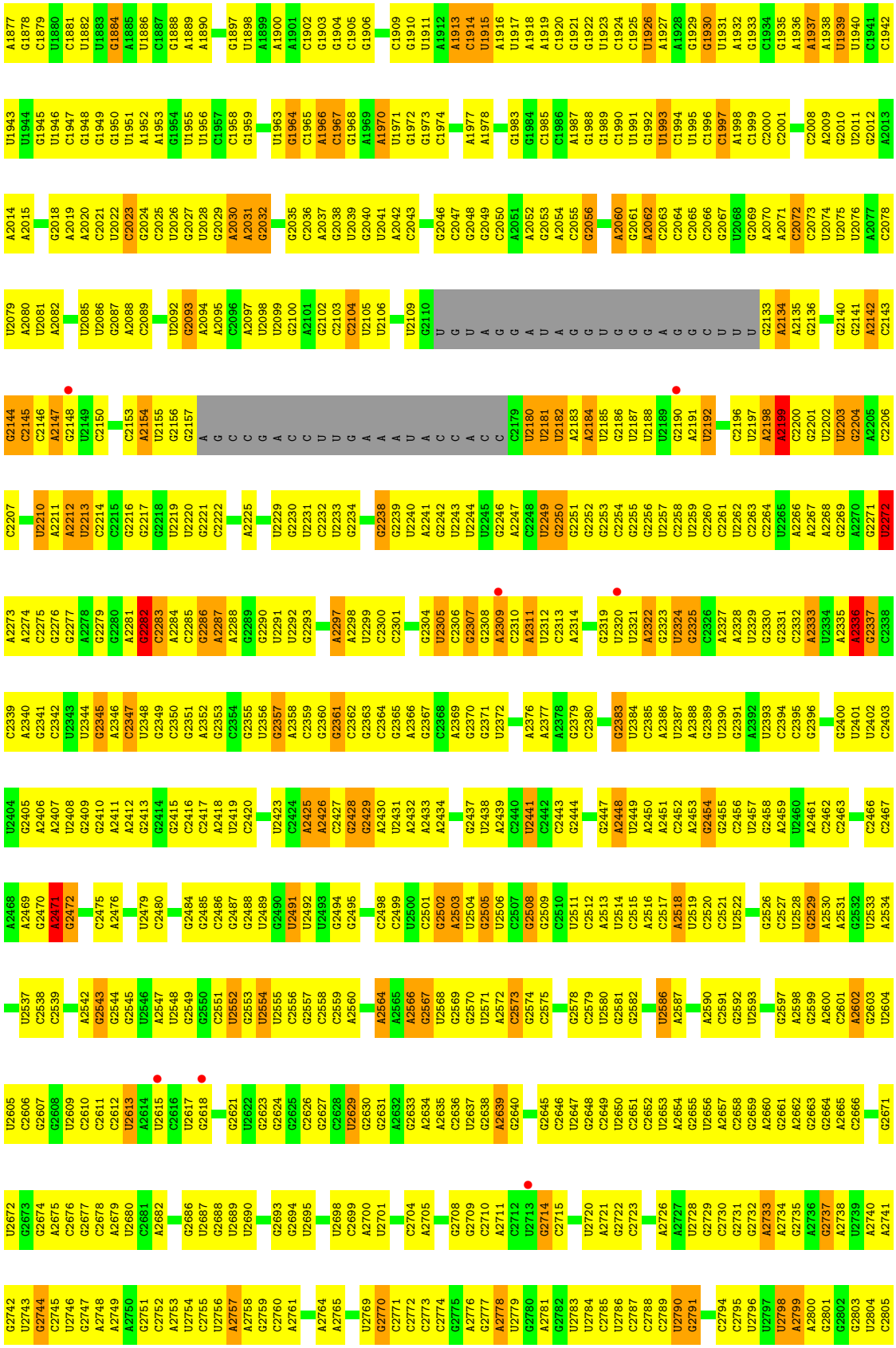
• Molecule 22: 5S rRNA

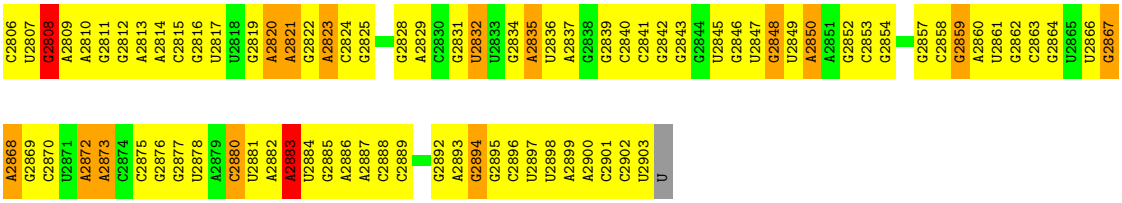


• Molecule 23: 23S rRNA



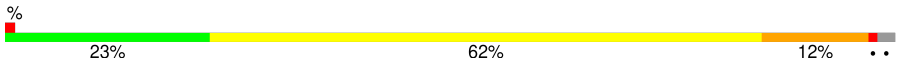


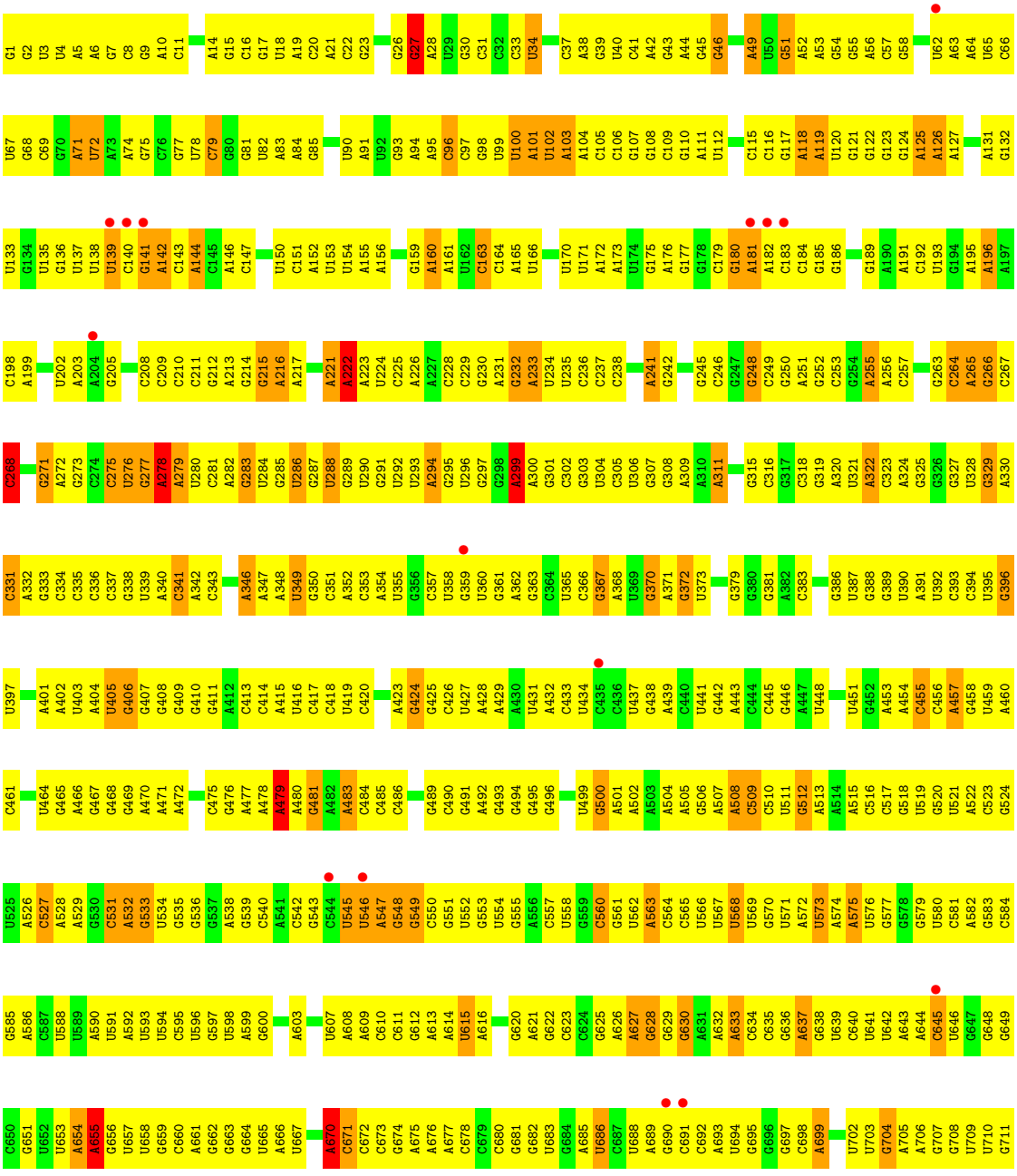


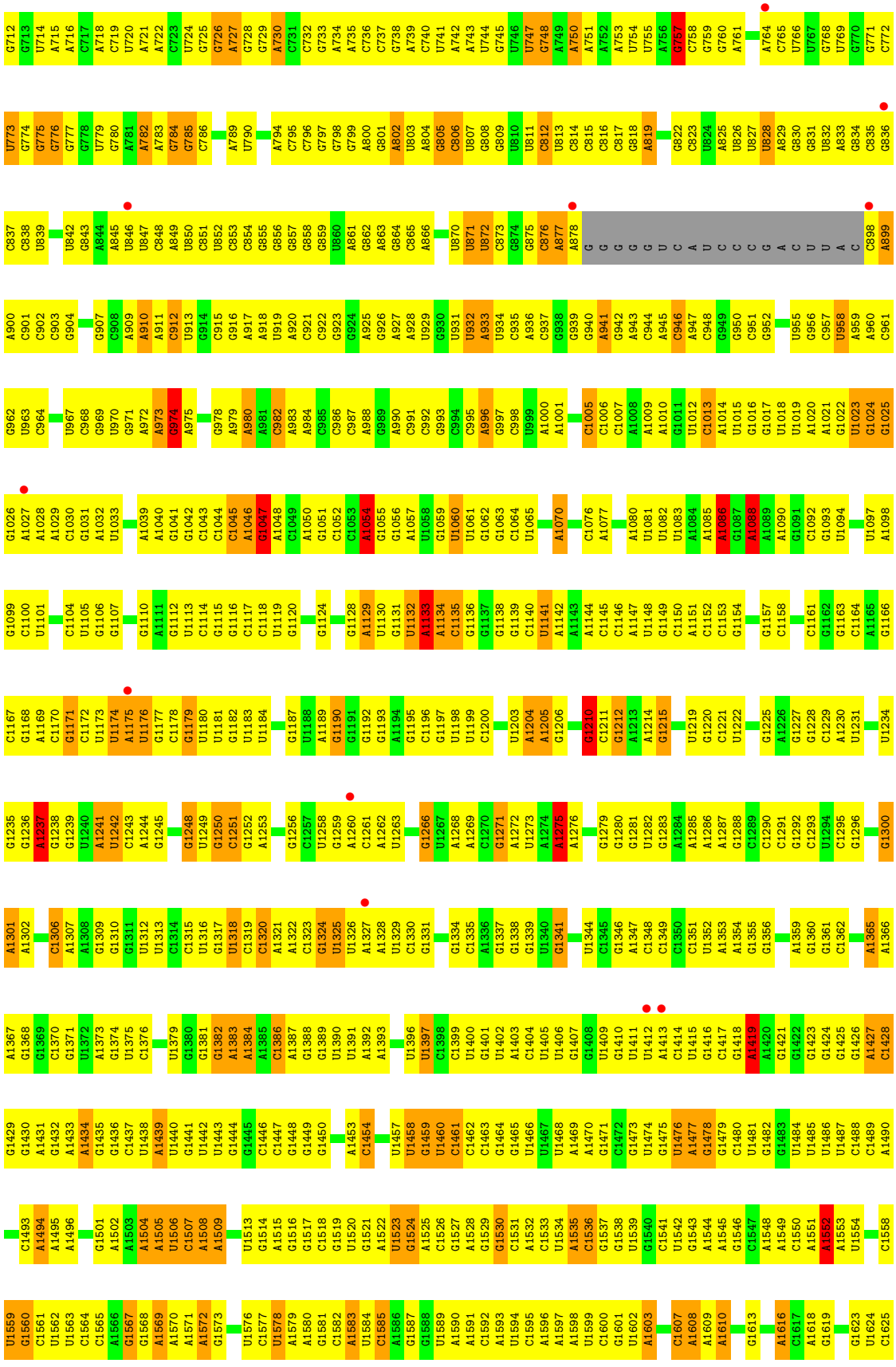


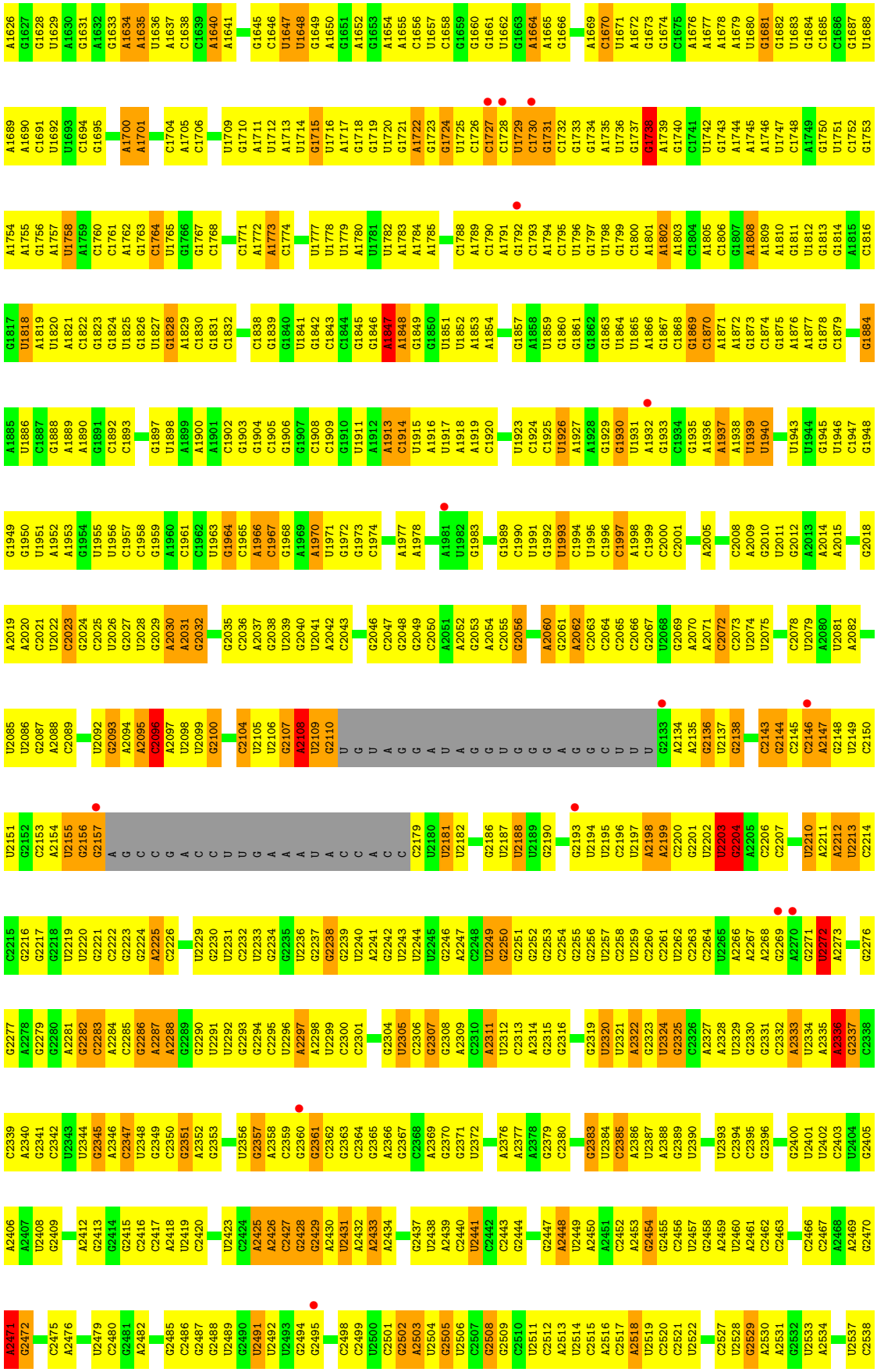
• Molecule 23: 23S rRNA

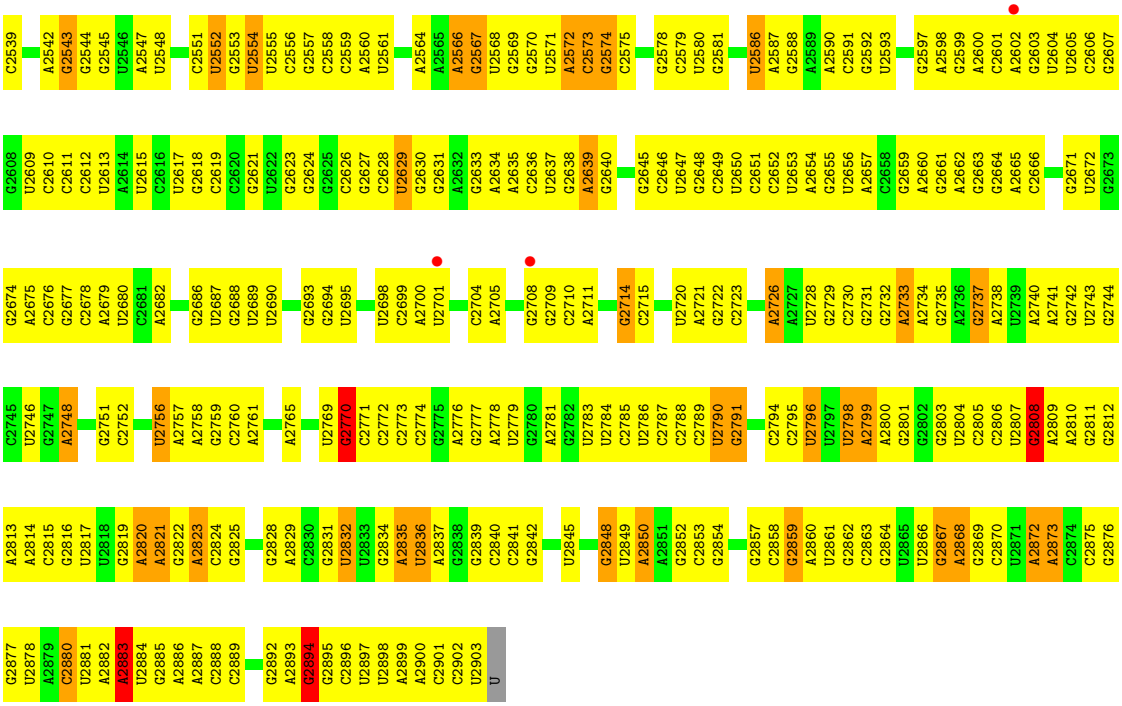
Chain DB:





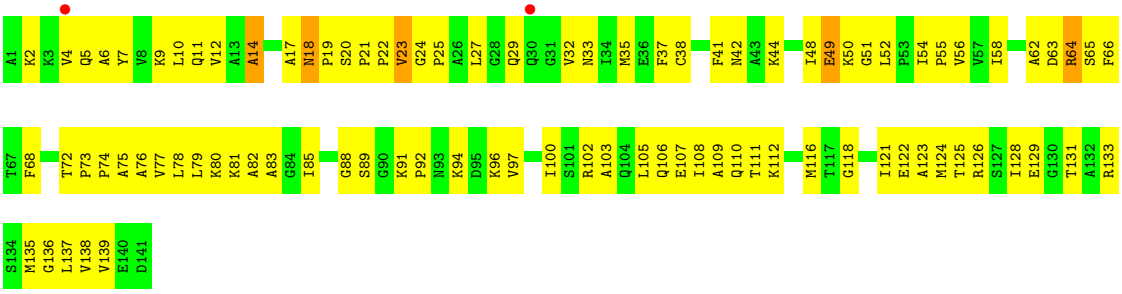






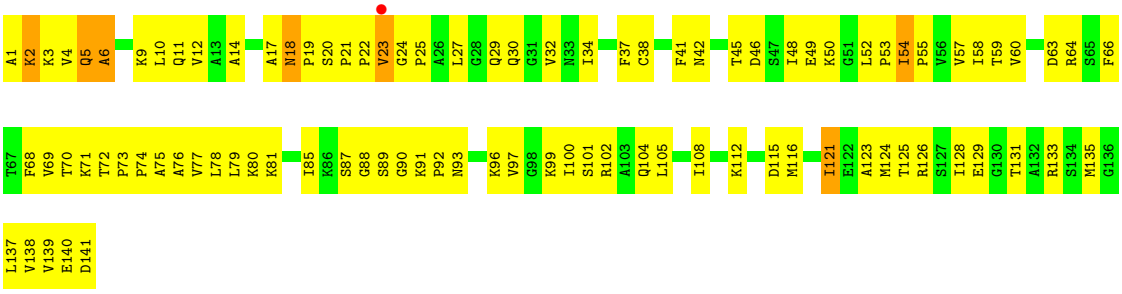
• Molecule 24: 50S ribosomal protein L11

Chain BI:



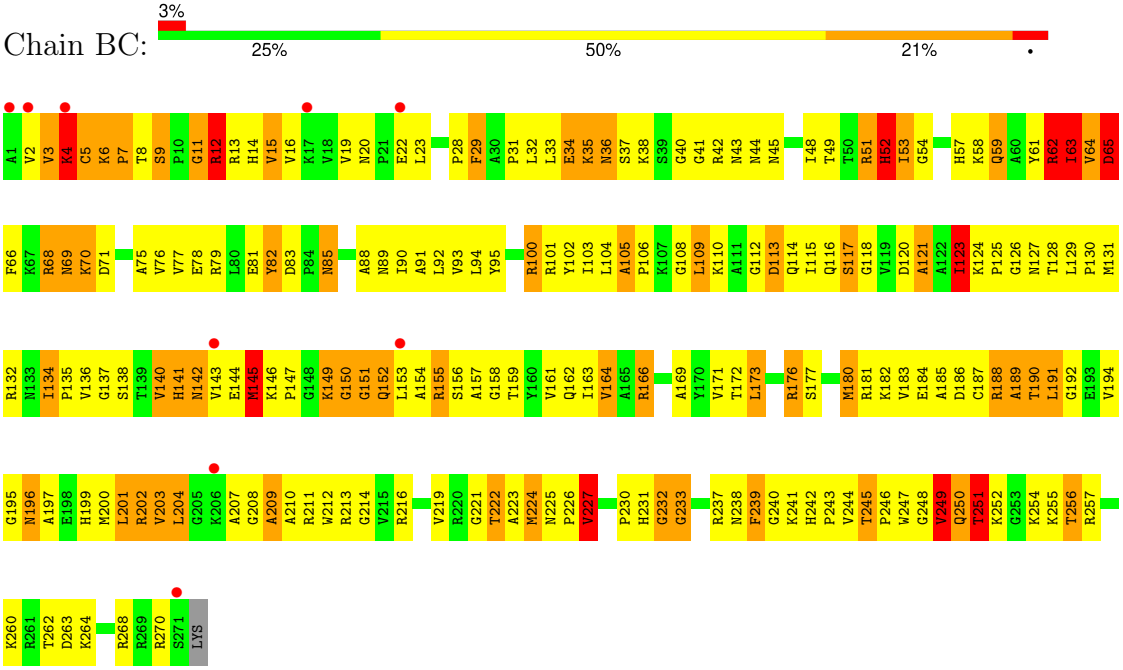
• Molecule 24: 50S ribosomal protein L11

Chain DI:



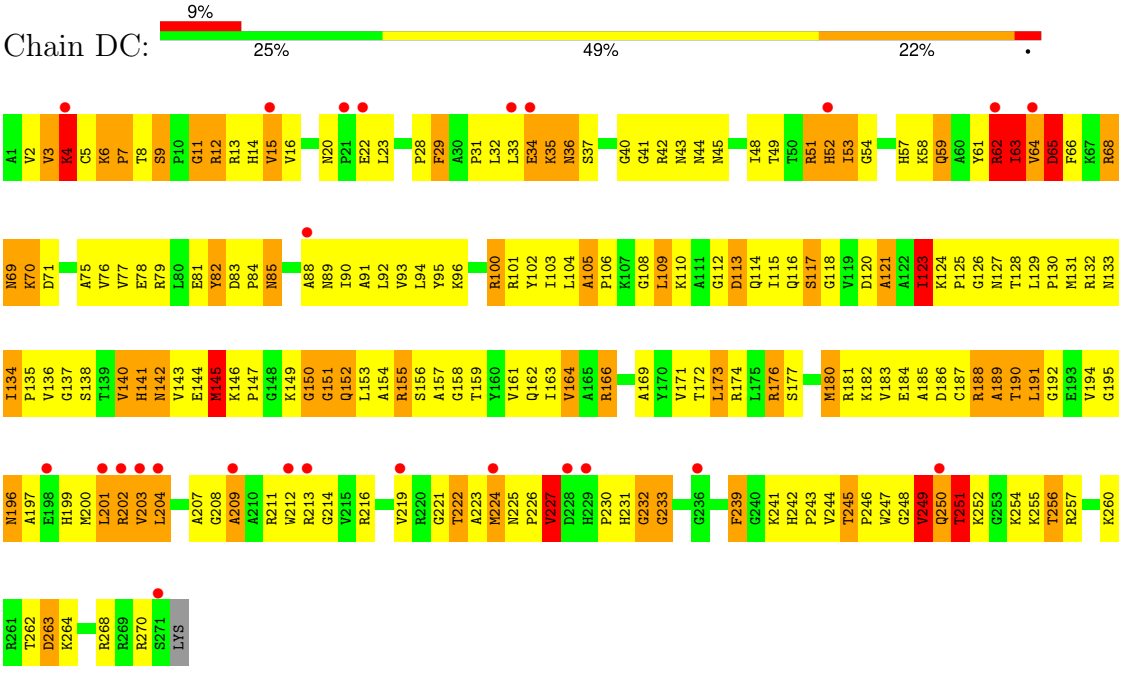
• Molecule 25: 50S ribosomal protein L2

Chain BC:



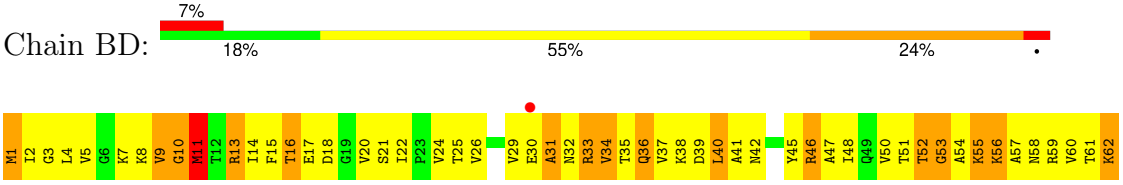
• Molecule 25: 50S ribosomal protein L2

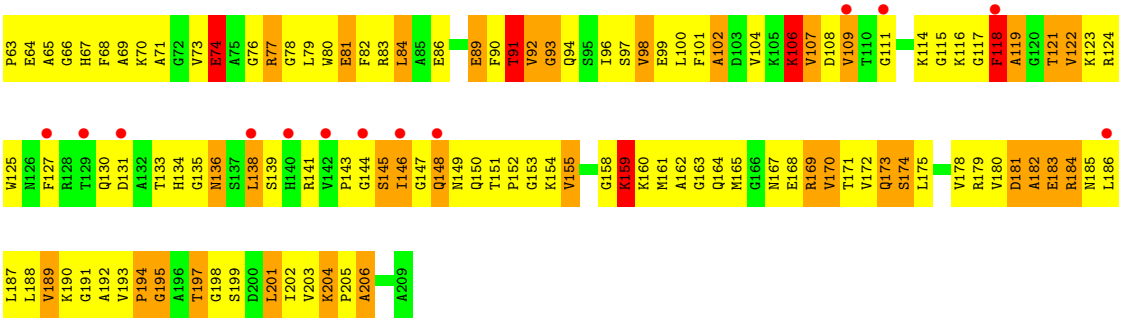
Chain DC:



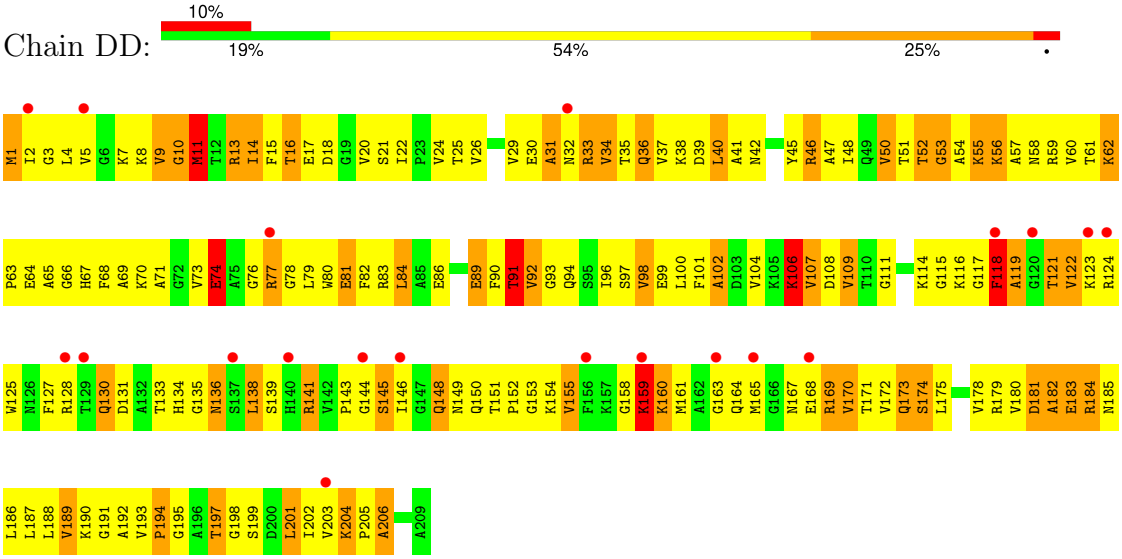
• Molecule 26: 50S ribosomal protein L3

Chain BD:

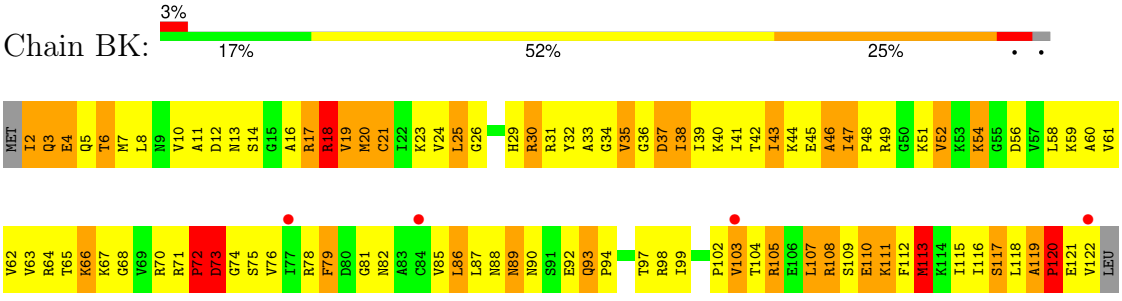




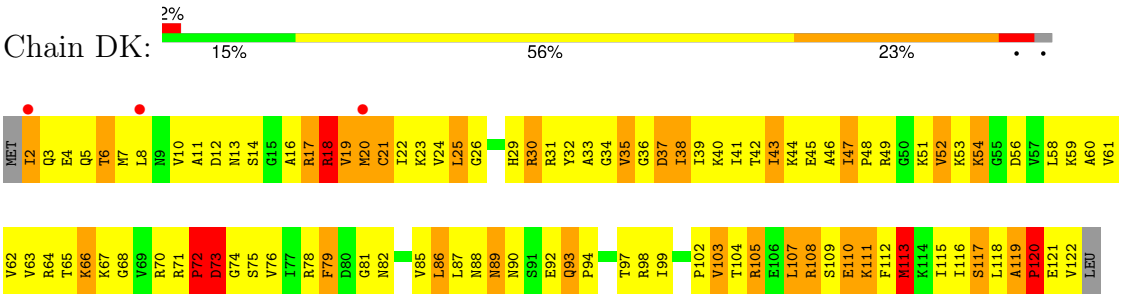
• Molecule 26: 50S ribosomal protein L3



• Molecule 27: 50S ribosomal protein L14

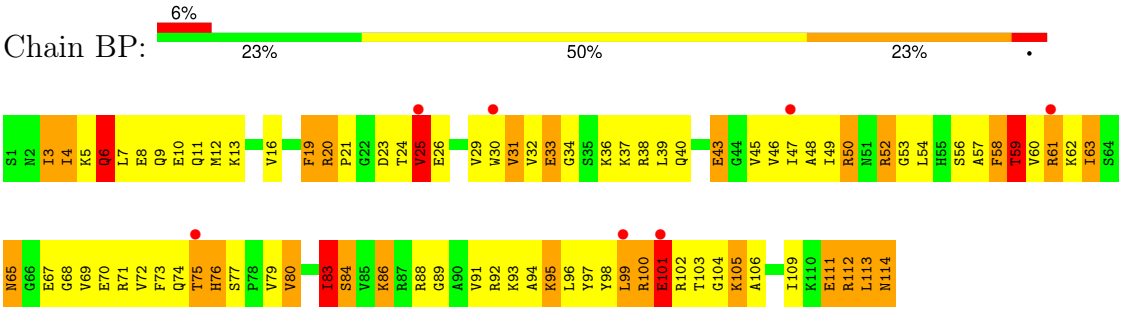


• Molecule 27: 50S ribosomal protein L14



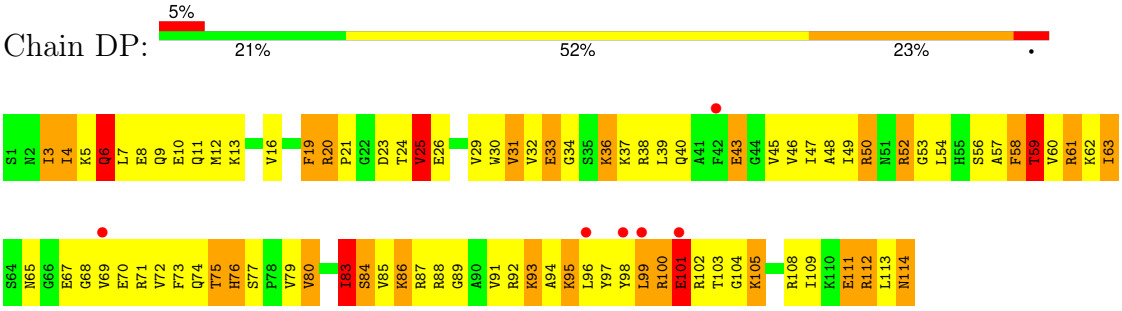
• Molecule 28: 50S ribosomal protein L19

Chain BP:



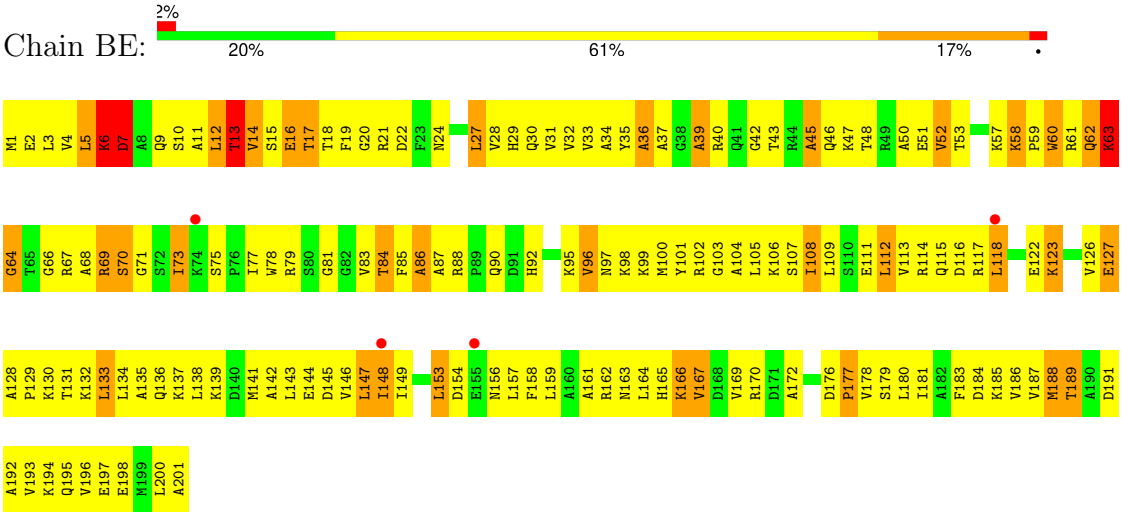
• Molecule 28: 50S ribosomal protein L19

Chain DP:



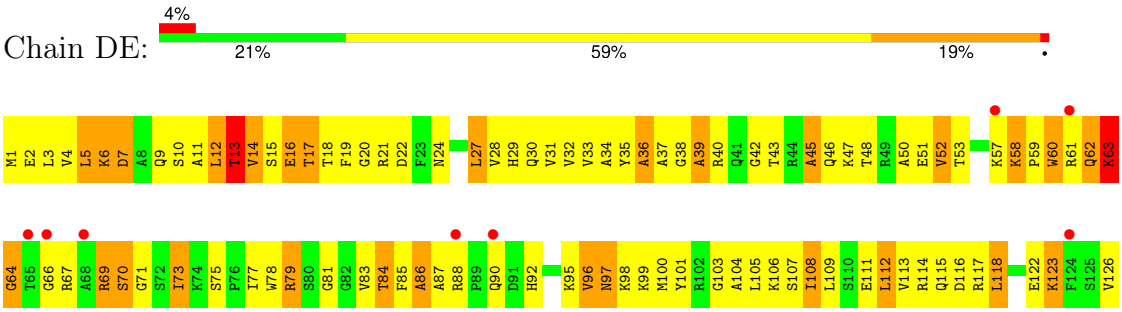
• Molecule 29: 50S ribosomal protein L4

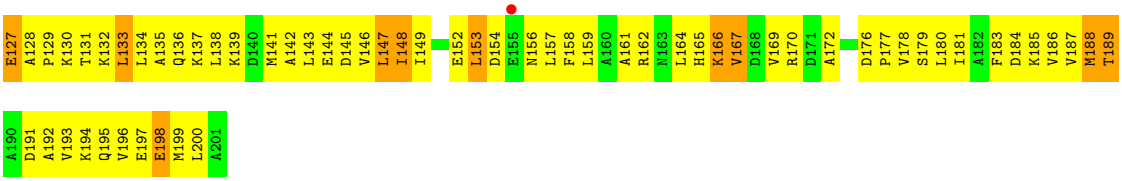
Chain BE:



• Molecule 29: 50S ribosomal protein L4

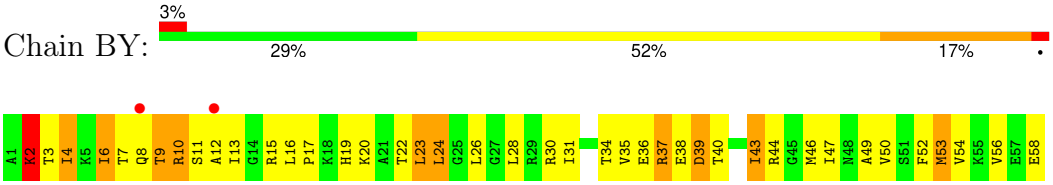
Chain DE:





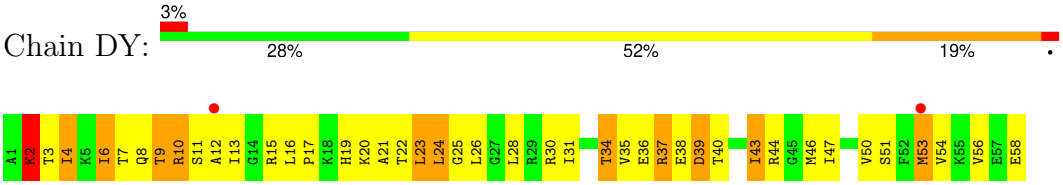
• Molecule 30: 50S ribosomal protein L30

Chain BY:



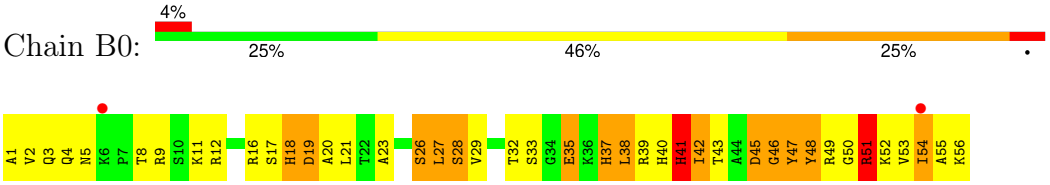
• Molecule 30: 50S ribosomal protein L30

Chain DY:



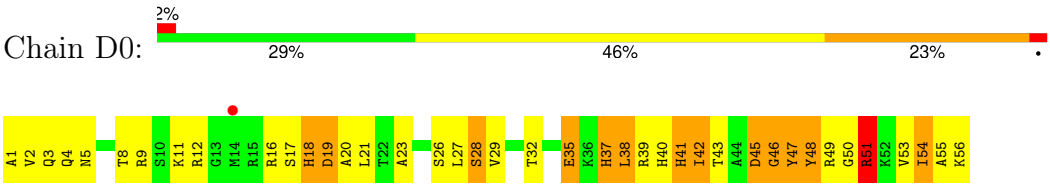
• Molecule 31: 50S ribosomal protein L32

Chain B0:



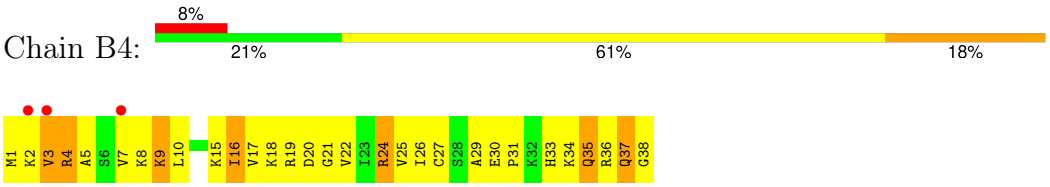
• Molecule 31: 50S ribosomal protein L32

Chain D0:



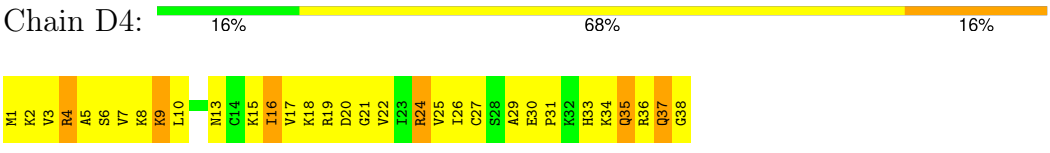
• Molecule 32: 50S ribosomal protein L36

Chain B4:



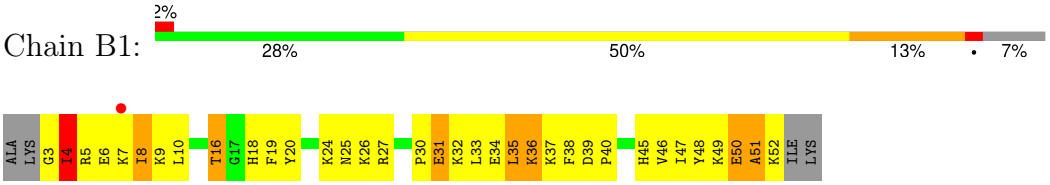
• Molecule 32: 50S ribosomal protein L36

Chain D4:



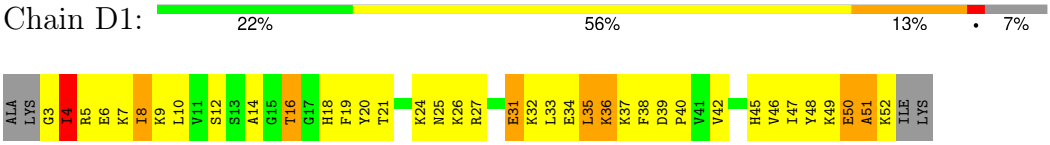
• Molecule 33: 50S ribosomal protein L33

Chain B1:



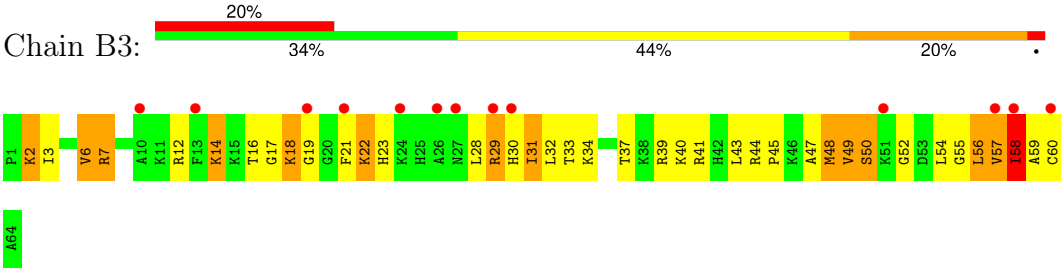
• Molecule 33: 50S ribosomal protein L33

Chain D1:



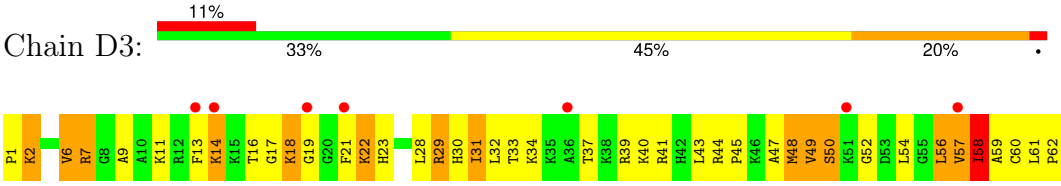
• Molecule 34: 50S ribosomal protein L35

Chain B3:



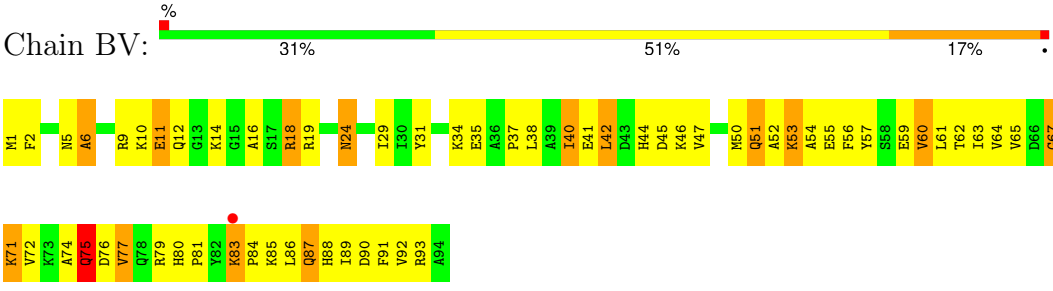
• Molecule 34: 50S ribosomal protein L35

Chain D3:



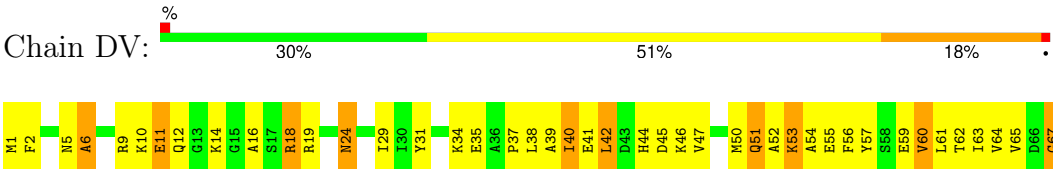
• Molecule 35: 50S ribosomal protein L25

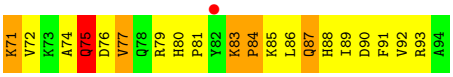
Chain BV:



• Molecule 35: 50S ribosomal protein L25

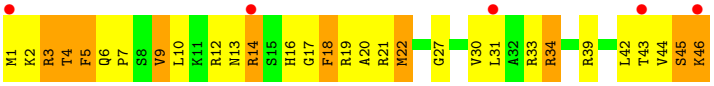
Chain DV:





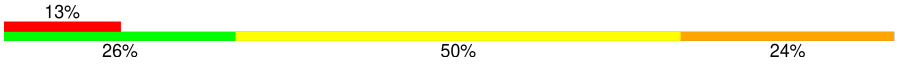
• Molecule 36: 50S ribosomal protein L34

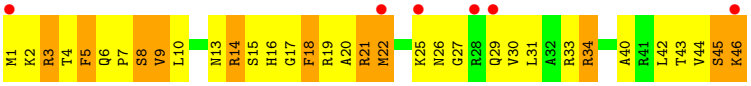
Chain B2:



• Molecule 36: 50S ribosomal protein L34

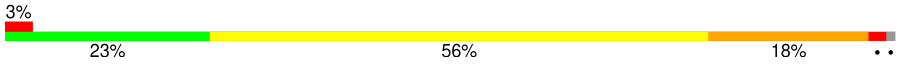
Chain D2:

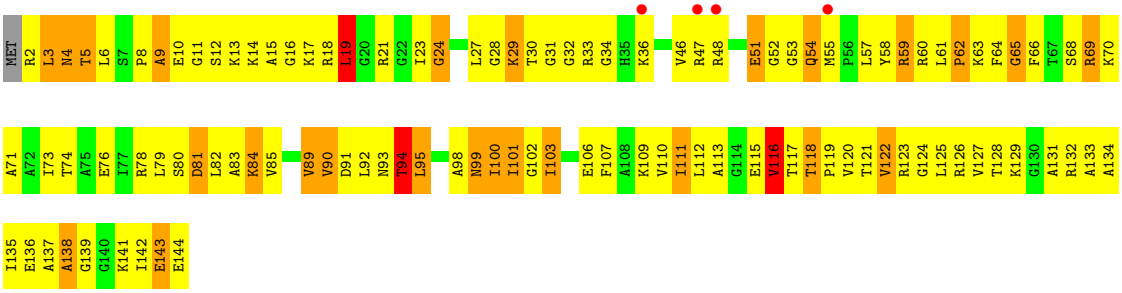




• Molecule 37: 50S ribosomal protein L15

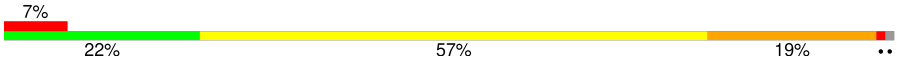
Chain BL:

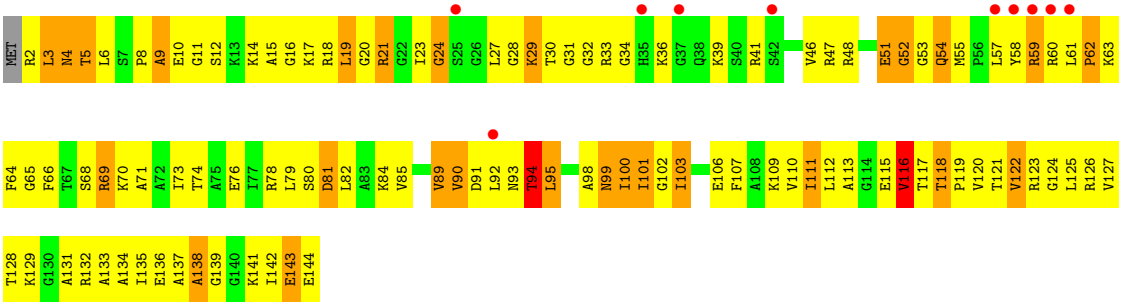




• Molecule 37: 50S ribosomal protein L15

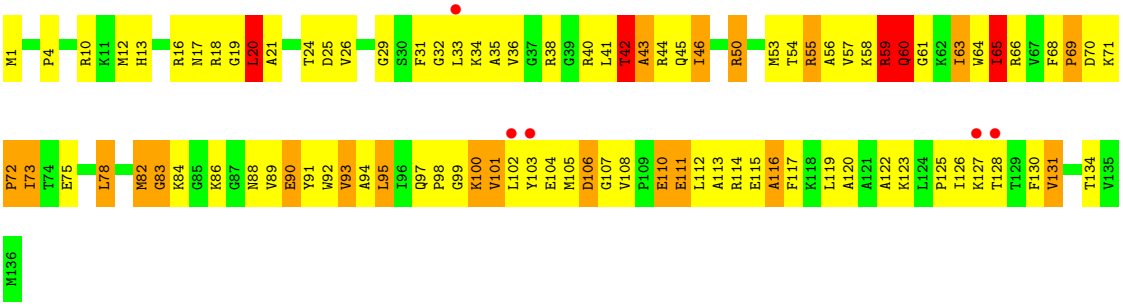
Chain DL:

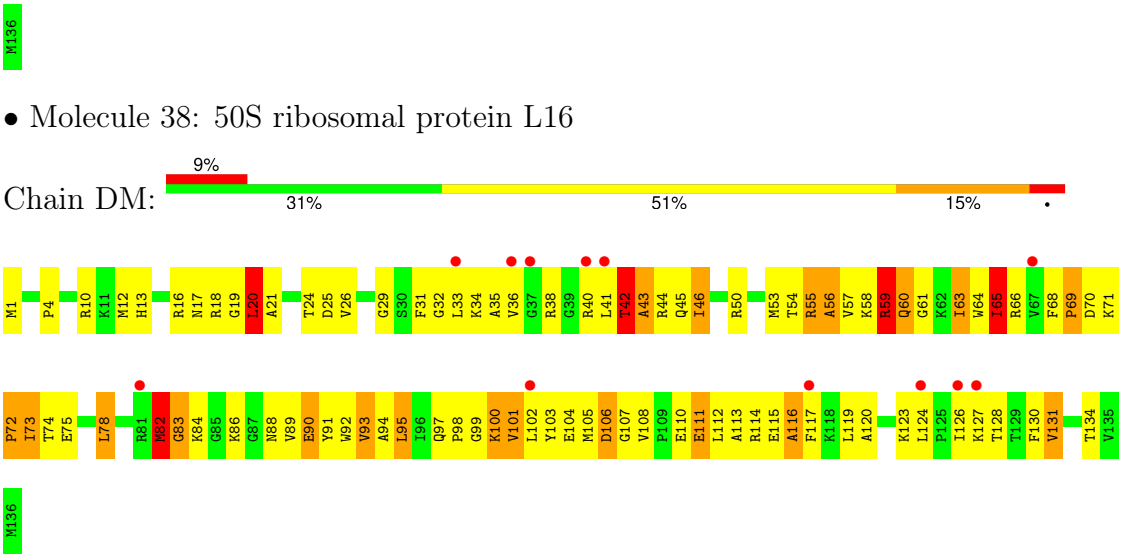




• Molecule 38: 50S ribosomal protein L16

Chain BM:



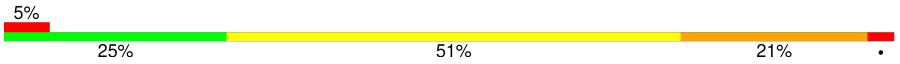


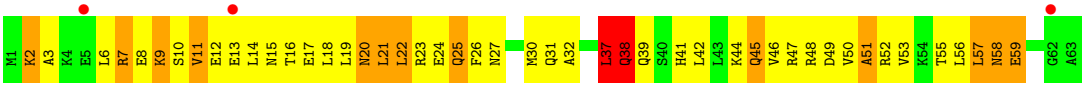
• Molecule 38: 50S ribosomal protein L16

Chain DM:

• Molecule 39: 50S ribosomal protein L29

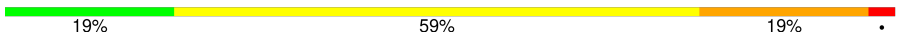
Chain BX:

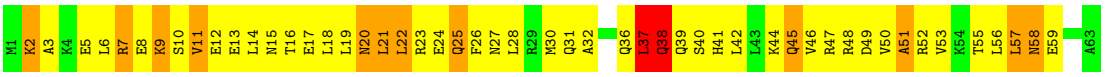




• Molecule 39: 50S ribosomal protein L29

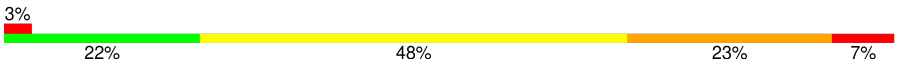
Chain DX:

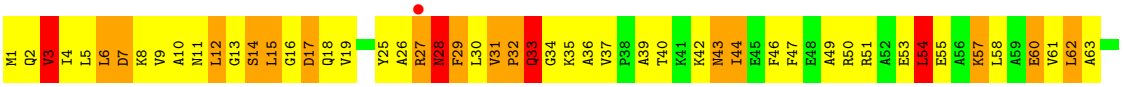


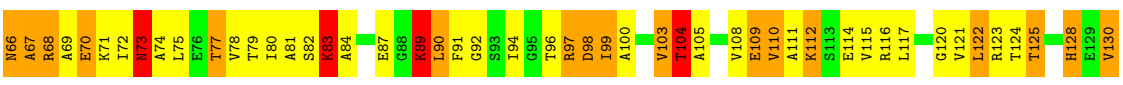


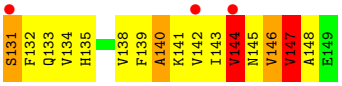
• Molecule 40: 50S ribosomal protein L9

Chain BH:

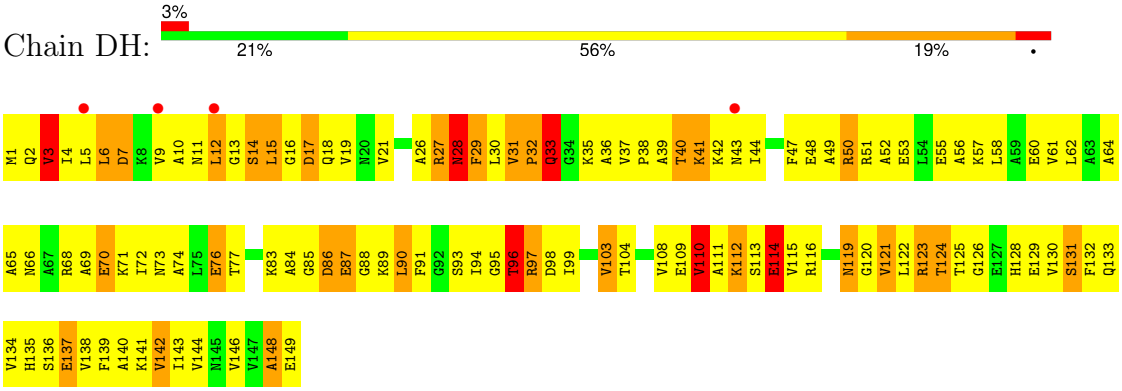




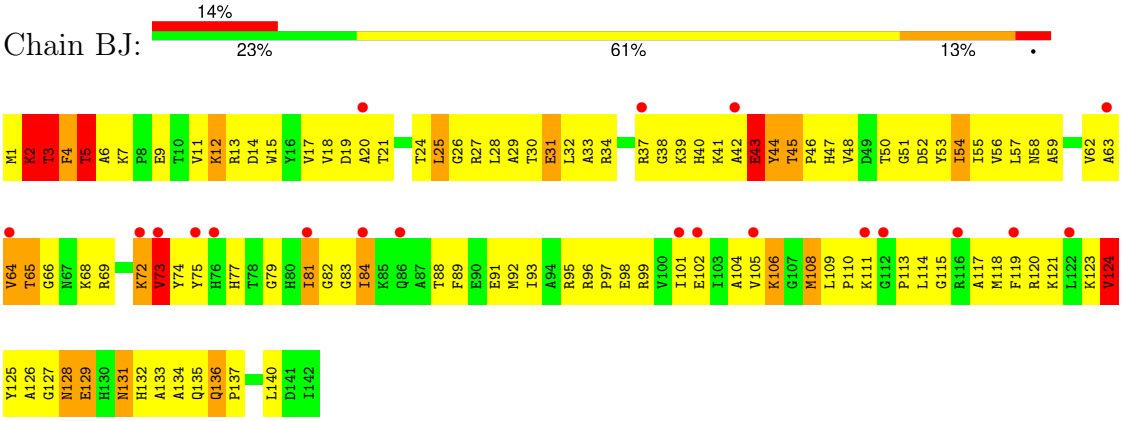




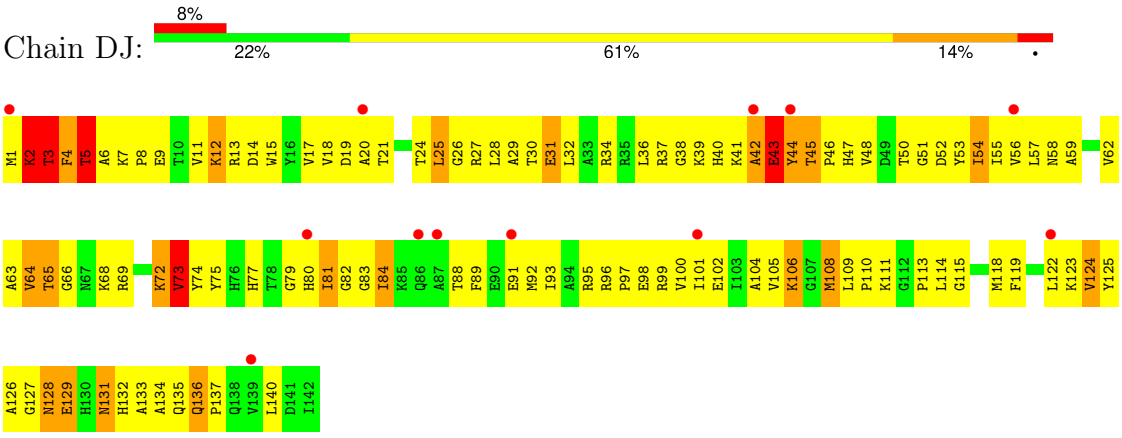
• Molecule 40: 50S ribosomal protein L9



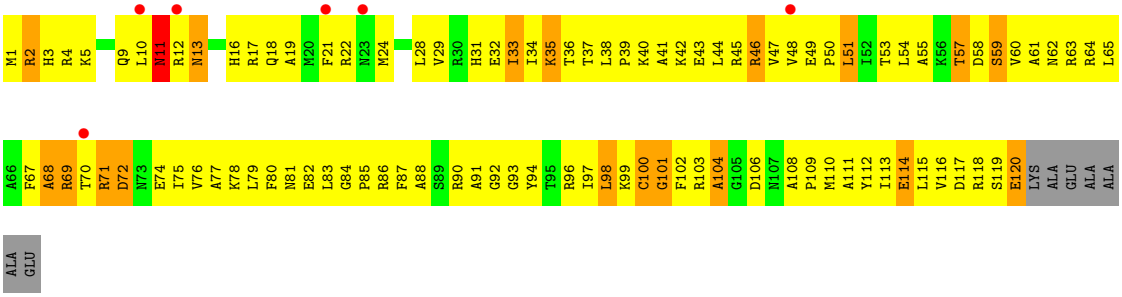
• Molecule 41: 50S ribosomal protein L13



• Molecule 41: 50S ribosomal protein L13

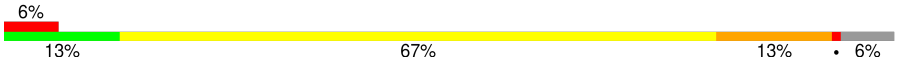


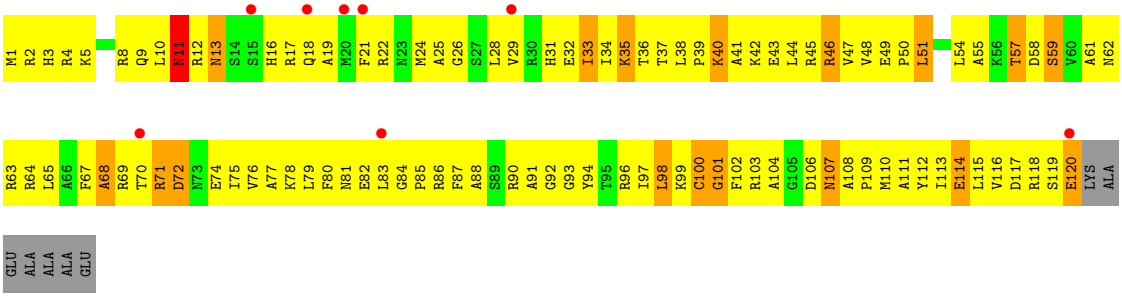
• Molecule 42: 50S ribosomal protein L17



• Molecule 42: 50S ribosomal protein L17

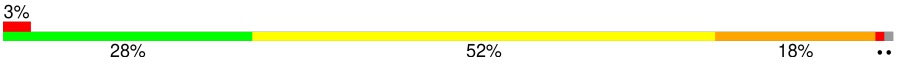
Chain DN:

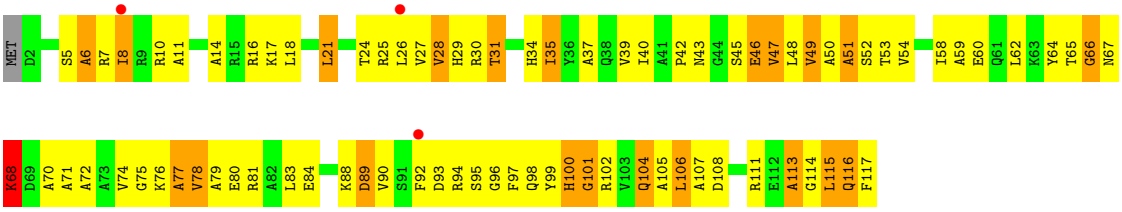




• Molecule 43: 50S ribosomal protein L18

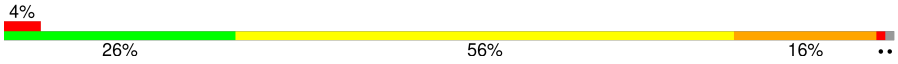
Chain BO:

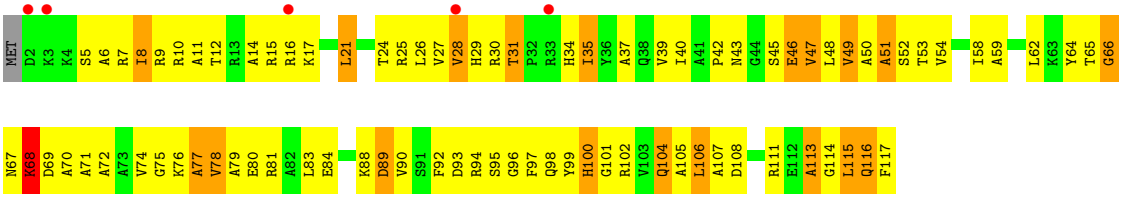




• Molecule 43: 50S ribosomal protein L18

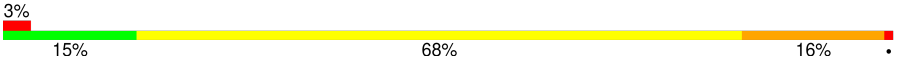
Chain DO:

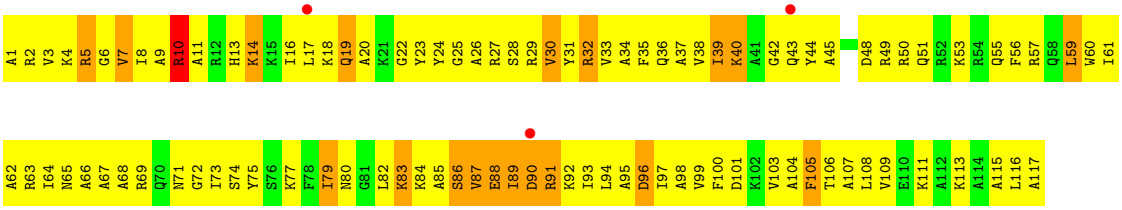


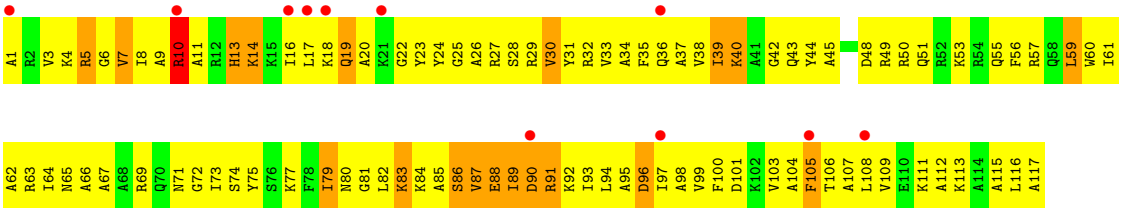


• Molecule 44: 50S ribosomal protein L20

Chain BQ:

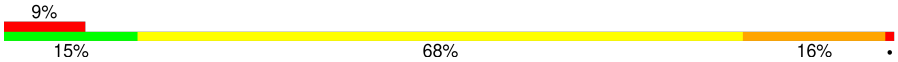






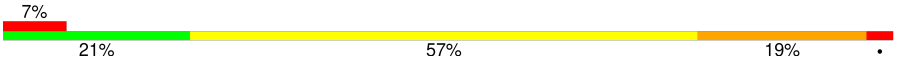
• Molecule 44: 50S ribosomal protein L20

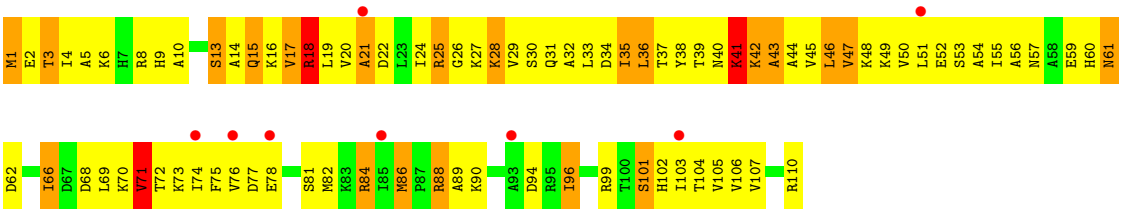
Chain DQ:



• Molecule 45: 50S ribosomal protein L22

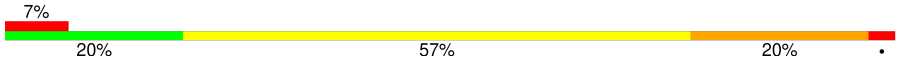
Chain BS:

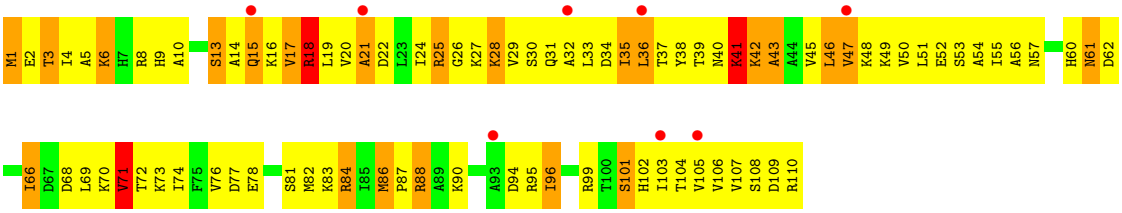




• Molecule 45: 50S ribosomal protein L22

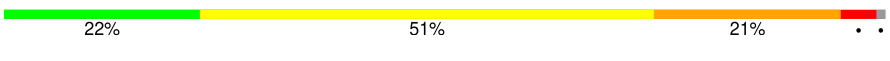
Chain DS:

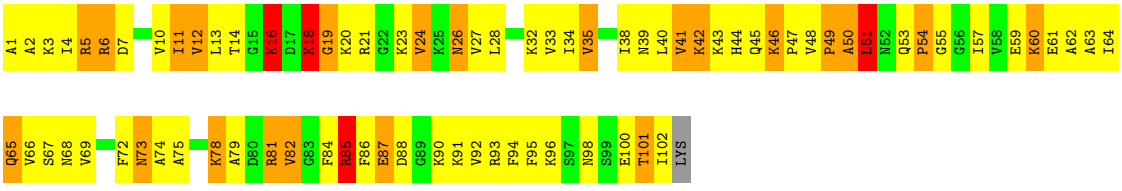




• Molecule 46: 50S ribosomal protein L24

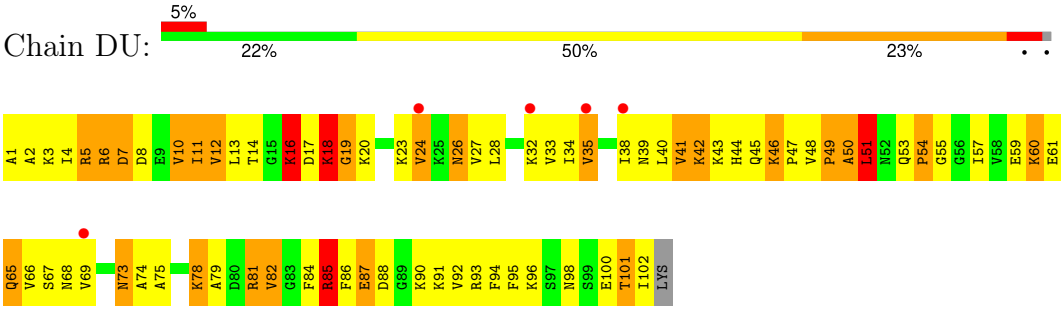
Chain BU:





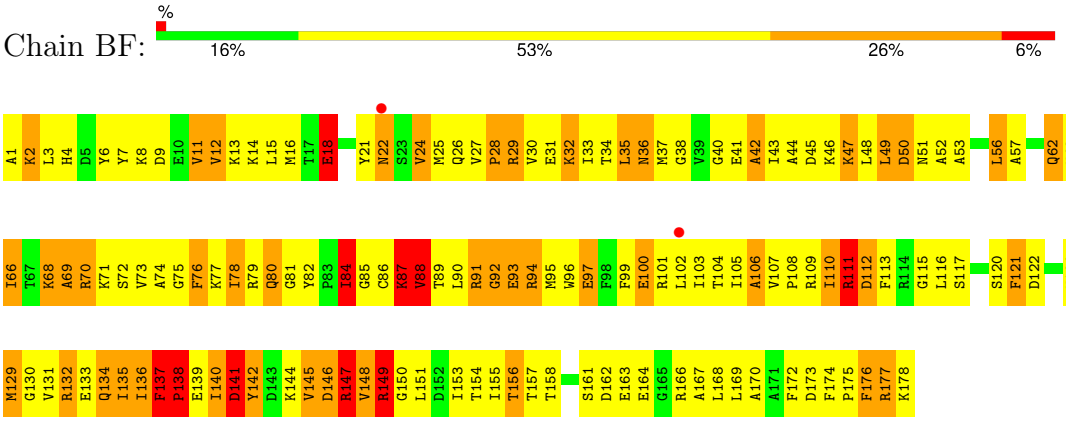
• Molecule 46: 50S ribosomal protein L24

Chain DU:



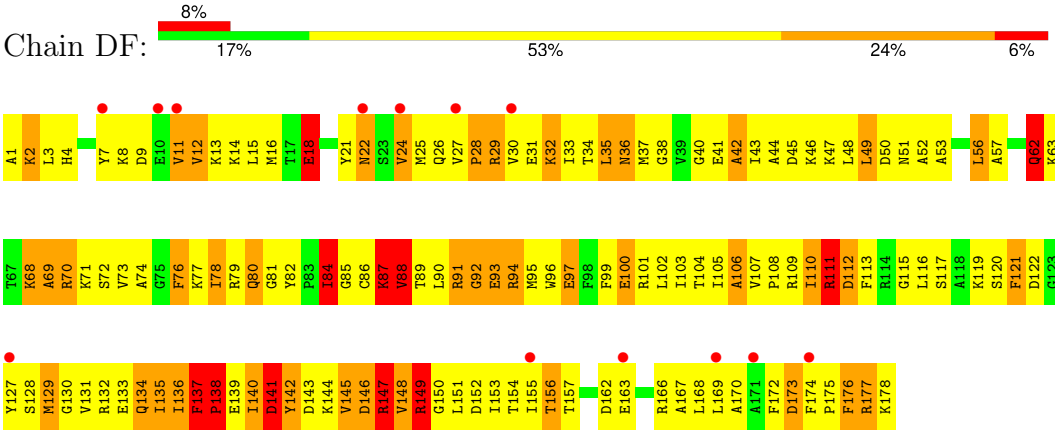
• Molecule 47: 50S ribosomal protein L5

Chain BF:



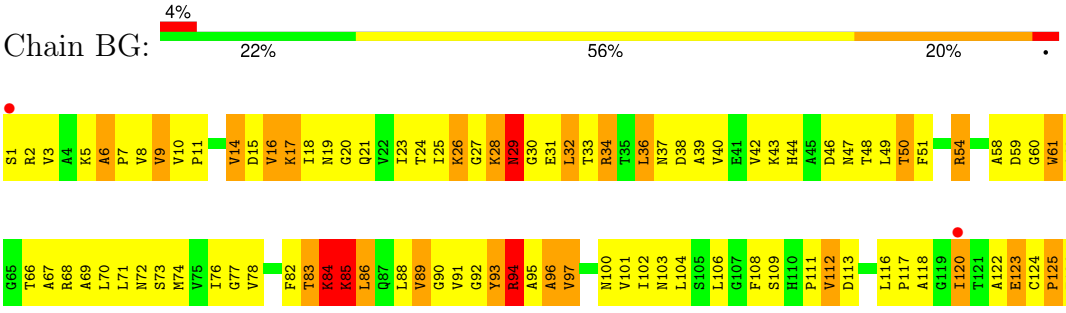
• Molecule 47: 50S ribosomal protein L5

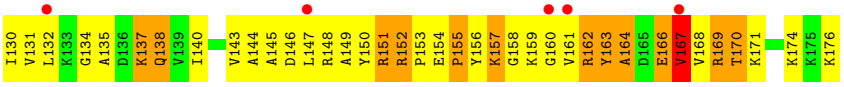
Chain DF:



• Molecule 48: 50S ribosomal protein L6

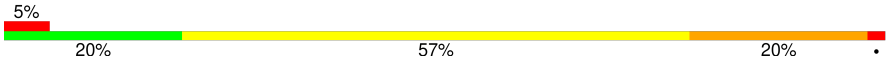
Chain BG:

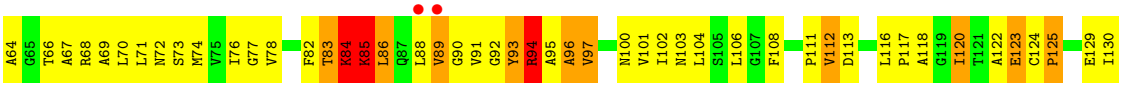


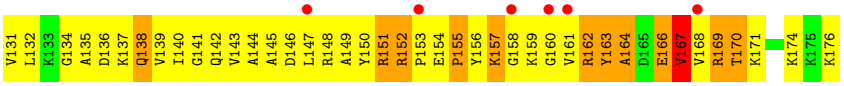


• Molecule 48: 50S ribosomal protein L6

Chain DG:

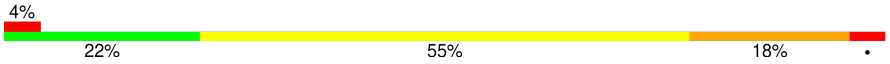


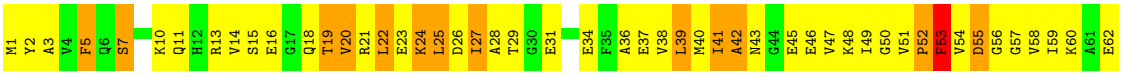


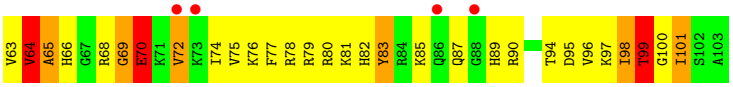


• Molecule 49: 50S ribosomal protein L21

Chain BR:

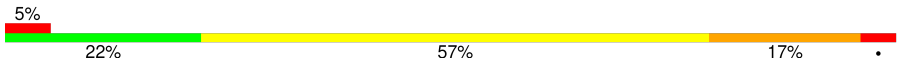


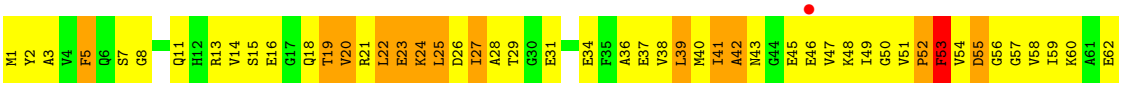


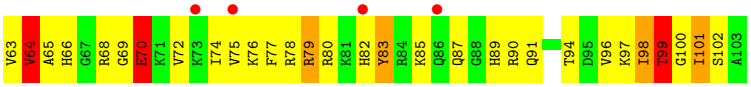


• Molecule 49: 50S ribosomal protein L21

Chain DR:

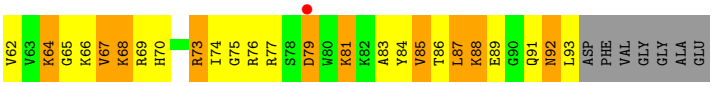






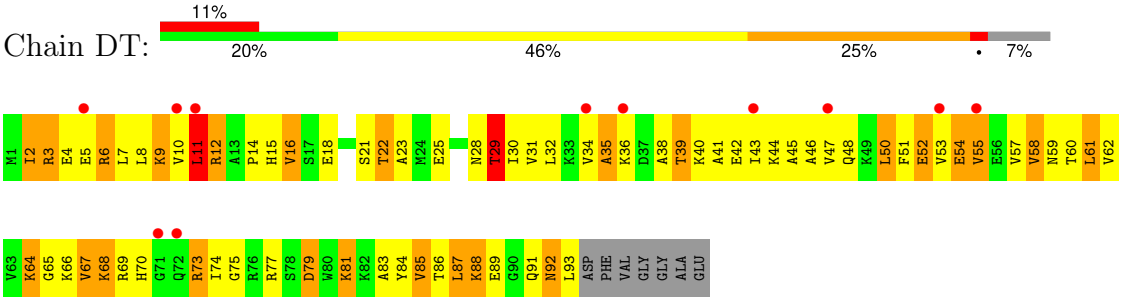
• Molecule 50: 50S ribosomal protein L23

Chain BT:



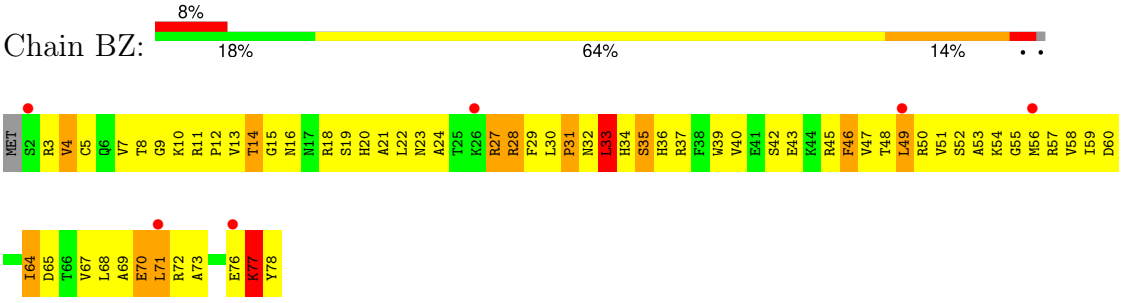
• Molecule 50: 50S ribosomal protein L23

Chain DT:



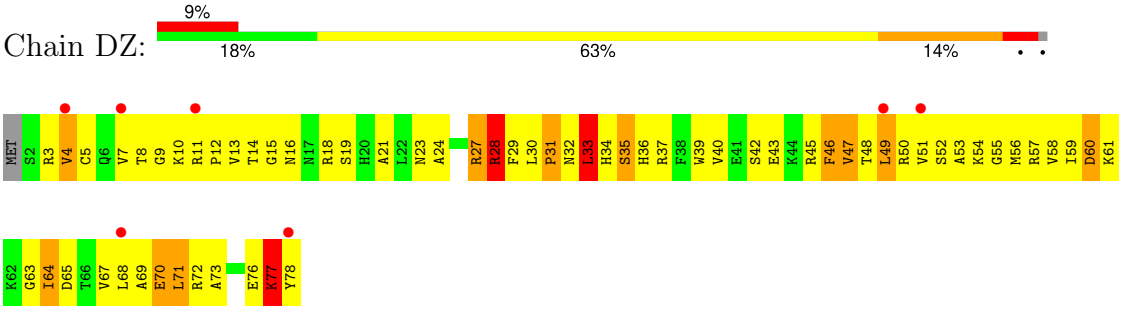
• Molecule 51: 50S ribosomal protein L28

Chain BZ:



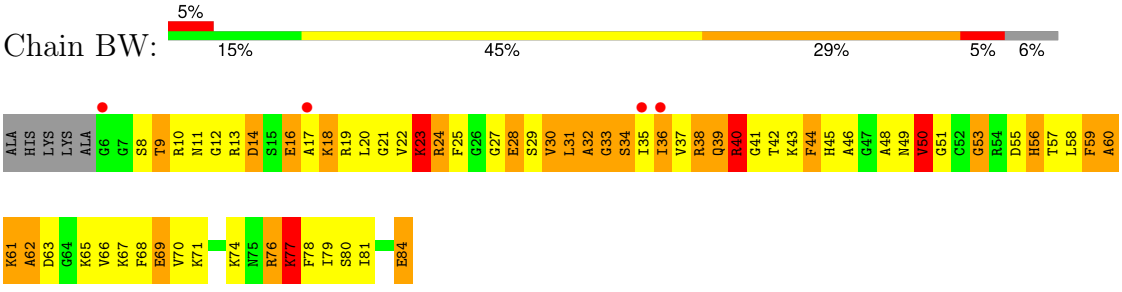
• Molecule 51: 50S ribosomal protein L28

Chain DZ:



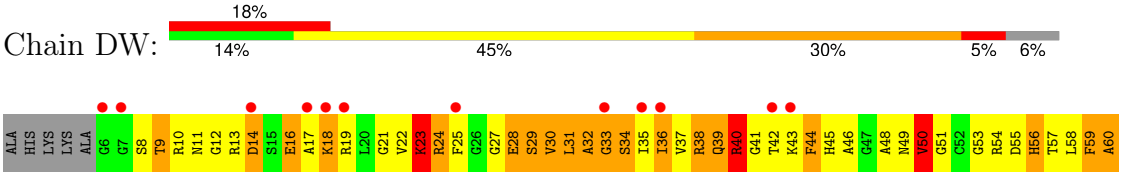
• Molecule 52: 50S ribosomal protein L27

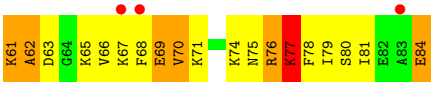
Chain BW:



• Molecule 52: 50S ribosomal protein L27

Chain DW:




K61
A62
D63
G64
K65
V66
K67
F68
E69
V70
K71
K74
N75
R76
K77
F78
I79
S80
I81
E82
A83
E84

4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	208.85Å 379.20Å 739.28Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	70.00 – 3.93 70.00 – 3.94	Depositor EDS
% Data completeness (in resolution range)	(Not available) (70.00-3.93) 76.0 (70.00-3.94)	Depositor EDS
R_{merge}	0.11	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.57 (at 3.89Å)	Xtriage
Refinement program	CNS	Depositor
R, R_{free}	0.258 , 0.311 0.223 , 0.270	Depositor DCC
R_{free} test set	19247 reflections (4.92%)	wwPDB-VP
Wilson B-factor (Å^2)	149.7	Xtriage
Anisotropy	0.209	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.25 , 37.2	EDS
L-test for twinning[2]	$< \|L\| > = 0.48$, $< L^2 > = 0.31$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.93	EDS
Total number of atoms	284033	wwPDB-VP
Average B, all atoms (Å^2)	69.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.50% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality (i)

5.1 Standard geometry (i)

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

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	0.27	0/36762	0.65	37/57350 (0.1%)
1	CA	0.29	0/36762	0.66	51/57350 (0.1%)
2	AC	0.29	0/1651	0.69	0/2225
2	CC	0.28	0/1651	0.70	0/2225
3	AD	0.26	0/1665	0.71	0/2227
3	CD	0.26	0/1665	0.71	0/2227
4	AE	0.28	0/1118	0.75	2/1504 (0.1%)
4	CE	0.28	0/1118	0.75	2/1504 (0.1%)
5	AF	0.29	0/835	0.73	0/1128
5	CF	0.29	0/835	0.73	0/1128
6	AG	0.27	0/1187	0.77	2/1591 (0.1%)
6	CG	0.28	0/1211	0.78	2/1624 (0.1%)
7	AH	0.28	0/989	0.70	0/1326
7	CH	0.28	0/989	0.69	0/1326
8	AI	0.27	0/1034	0.68	0/1375
8	CI	0.28	0/1034	0.70	0/1375
9	AJ	0.29	0/796	0.68	0/1077
9	CJ	0.28	0/796	0.69	0/1077
10	AK	0.31	0/893	0.75	0/1205
10	CK	0.31	0/893	0.74	0/1205
11	AL	0.27	0/969	0.75	0/1300
11	CL	0.27	0/969	0.76	0/1300
12	AM	0.27	0/892	0.73	1/1193 (0.1%)
12	CM	0.27	0/884	0.72	0/1181
13	AP	0.28	0/659	0.74	1/884 (0.1%)
13	CP	0.27	0/648	0.74	1/870 (0.1%)
14	AQ	0.26	0/657	0.71	0/881
14	CQ	0.27	0/666	0.71	0/892
15	AR	0.29	0/462	0.76	0/621
15	CR	0.29	0/462	0.75	0/621
16	AS	0.28	0/652	0.70	1/877 (0.1%)
16	CS	0.27	0/660	0.76	1/888 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
17	AT	0.28	0/671	0.72	1/888 (0.1%)
17	CT	0.28	0/671	0.71	1/888 (0.1%)
18	AB	0.29	0/1735	0.72	0/2338
18	CB	0.29	0/1735	0.72	0/2338
19	AU	0.28	0/430	0.79	0/570
19	CU	0.28	0/430	0.79	0/570
20	AO	0.25	0/722	0.68	0/964
20	CO	0.26	0/722	0.64	0/964
21	AN	0.27	0/785	0.72	0/1043
21	CN	0.28	0/785	0.77	1/1043 (0.1%)
22	BA	0.27	0/2803	0.63	2/4371 (0.0%)
22	DA	0.27	0/2803	0.64	2/4371 (0.0%)
23	BB	0.27	1/68314 (0.0%)	0.64	60/106569 (0.1%)
23	DB	0.27	1/68314 (0.0%)	0.65	62/106569 (0.1%)
24	BI	0.31	0/1046	0.80	0/1410
24	DI	0.35	0/1046	0.82	0/1410
25	BC	0.26	0/2121	0.75	3/2852 (0.1%)
25	DC	0.26	0/2121	0.74	1/2852 (0.0%)
26	BD	0.28	0/1586	0.72	1/2134 (0.0%)
26	DD	0.28	0/1586	0.73	1/2134 (0.0%)
27	BK	0.30	0/939	0.81	2/1258 (0.2%)
27	DK	0.30	0/939	0.81	2/1258 (0.2%)
28	BP	0.28	0/929	0.85	2/1242 (0.2%)
28	DP	0.29	0/929	0.86	2/1242 (0.2%)
29	BE	0.27	0/1571	0.81	4/2113 (0.2%)
29	DE	0.27	0/1571	0.82	4/2113 (0.2%)
30	BY	0.30	0/453	0.75	0/605
30	DY	0.30	0/453	0.76	0/605
31	B0	0.26	0/450	0.76	1/599 (0.2%)
31	D0	0.26	0/450	0.76	1/599 (0.2%)
32	B4	0.27	0/303	0.76	0/397
32	D4	0.27	0/303	0.75	0/397
33	B1	0.31	0/416	0.80	0/554
33	D1	0.31	0/416	0.80	0/554
34	B3	0.28	0/513	0.71	0/676
34	D3	0.27	0/513	0.71	0/676
35	BV	0.27	0/766	0.73	0/1025
35	DV	0.27	0/766	0.73	0/1025
36	B2	0.29	0/380	0.77	0/498
36	D2	0.29	0/380	0.78	0/498
37	BL	0.27	0/1054	0.76	2/1403 (0.1%)
37	DL	0.27	0/1054	0.76	2/1403 (0.1%)
38	BM	0.29	0/1093	0.75	0/1460

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
38	DM	0.29	0/1093	0.74	0/1460
39	BX	0.26	0/510	0.83	2/677 (0.3%)
39	DX	0.25	0/510	0.84	2/677 (0.3%)
40	BH	0.28	0/1122	0.75	1/1515 (0.1%)
40	DH	0.28	0/1122	0.76	1/1515 (0.1%)
41	BJ	0.28	0/1152	0.70	0/1551
41	DJ	0.28	0/1152	0.72	1/1551 (0.1%)
42	BN	0.29	0/973	0.81	0/1301
42	DN	0.29	0/973	0.82	0/1301
43	BO	0.26	0/902	0.76	1/1209 (0.1%)
43	DO	0.27	0/902	0.77	1/1209 (0.1%)
44	BQ	0.26	0/960	0.87	1/1278 (0.1%)
44	DQ	0.26	0/960	0.86	1/1278 (0.1%)
45	BS	0.27	0/864	0.80	1/1156 (0.1%)
45	DS	0.27	0/864	0.81	1/1156 (0.1%)
46	BU	0.27	0/787	0.71	1/1051 (0.1%)
46	DU	0.27	0/787	0.71	1/1051 (0.1%)
47	BF	0.28	0/1444	0.82	2/1937 (0.1%)
47	DF	0.27	0/1444	0.83	2/1937 (0.1%)
48	BG	0.27	0/1343	0.74	2/1816 (0.1%)
48	DG	0.27	0/1343	0.74	2/1816 (0.1%)
49	BR	0.27	0/829	0.67	0/1107
49	DR	0.27	0/829	0.68	0/1107
50	BT	0.26	0/744	0.80	1/994 (0.1%)
50	DT	0.26	0/744	0.80	1/994 (0.1%)
51	BZ	0.27	0/635	0.80	0/848
51	DZ	0.28	0/635	0.80	0/848
52	BW	0.28	0/603	0.70	0/797
52	DW	0.28	0/603	0.69	0/797
All	All	0.27	2/306360 (0.0%)	0.68	283/457969 (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	15
1	CA	0	19
23	BB	0	37
23	DB	0	37
All	All	0	108

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	DB	1086	A	C5-C6	-7.29	1.26	1.41
23	BB	1086	A	C5-C6	-7.24	1.26	1.41

All (283) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	DB	2204	G	O5'-P-OP1	-11.11	74.68	108.00
23	BB	2204	G	O5'-P-OP2	-10.49	76.52	108.00
23	DB	2791	G	O5'-P-OP2	-10.47	76.59	108.00
23	DB	2790	U	OP2-P-O3'	10.13	138.40	108.00
23	BB	2791	G	O5'-P-OP1	-10.07	77.80	108.00
23	DB	2203	U	OP1-P-O3'	9.55	136.65	108.00
23	BB	2203	U	OP2-P-O3'	9.30	135.91	108.00
23	DB	278	A	C5'-C4'-C3'	-9.23	102.15	116.00
23	BB	2790	U	OP1-P-O3'	9.19	135.56	108.00
23	BB	973	A	C5'-C4'-C3'	-8.71	102.13	115.20
22	BA	87	U	C4'-C3'-O3'	8.47	125.71	113.00
47	DF	111	ARG	N-CA-C	-8.29	102.19	113.30
47	BF	111	ARG	N-CA-C	-8.22	102.28	113.30
23	BB	241	A	C5'-C4'-C3'	-8.07	103.09	115.20
22	DA	87	U	C4'-C3'-O3'	8.05	125.08	113.00
23	DB	2204	G	O5'-P-OP2	7.96	131.88	108.00
1	CA	1534	A	C2'-C3'-O3'	-7.95	97.57	109.50
23	DB	2791	G	O5'-P-OP1	7.92	131.76	108.00
23	BB	2204	G	O5'-P-OP1	7.90	131.69	108.00
39	DX	55	THR	N-CA-C	-7.84	102.74	111.28
39	BX	55	THR	N-CA-C	-7.83	102.69	111.07
23	DB	2790	U	O3'-P-O5'	-7.82	92.27	104.00
23	BB	2791	G	O5'-P-OP2	7.76	131.27	108.00
21	CN	33	VAL	N-CA-C	7.61	114.35	106.21
29	DE	60	TRP	N-CA-C	7.38	119.85	108.12
1	CA	232	G	C5'-C4'-C3'	-7.37	104.95	116.00
29	BE	60	TRP	N-CA-C	7.36	119.83	108.12
1	CA	1201	A	C4'-C3'-O3'	7.32	120.37	109.40
1	AA	1225	A	C4'-C3'-O3'	-7.21	102.19	113.00
23	BB	1552	A	C4'-C3'-O3'	7.17	123.76	113.00
23	BB	479	A	C4'-C3'-O3'	-7.13	98.71	109.40
23	DB	2203	U	O3'-P-O5'	-7.08	93.39	104.00
23	BB	2808	G	C4'-C3'-O3'	-7.07	102.40	113.00
23	DB	1552	A	C4'-C3'-O3'	7.05	123.57	113.00
1	AA	87	C	C4'-C3'-O3'	7.01	123.51	113.00
1	AA	232	G	C5'-C4'-C3'	-7.00	105.49	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	BB	2104	C	C4'-C3'-O3'	6.98	123.48	113.00
23	DB	2808	G	C4'-C3'-O3'	-6.96	102.57	113.00
1	CA	1023	U	C4'-C3'-O3'	6.91	123.36	113.00
1	AA	1499	A	C5'-C4'-O4'	-6.83	99.55	109.80
23	BB	268	C	C5'-C4'-C3'	-6.81	105.78	116.00
23	DB	479	A	C4'-C3'-O3'	-6.81	99.19	109.40
1	AA	243	A	C4'-C3'-O3'	6.79	119.58	109.40
1	CA	1300	G	C4'-C3'-O3'	-6.78	102.83	113.00
1	CA	1285	A	C4'-C3'-O3'	-6.78	102.83	113.00
23	DB	2213	U	C4'-C3'-O3'	-6.73	102.90	113.00
23	DB	2832	U	C4'-C3'-O3'	6.73	119.50	109.40
23	DB	655	A	C4'-C3'-O3'	-6.73	99.31	109.40
26	BD	22	ILE	N-CA-C	6.71	114.20	107.55
6	CG	146	ALA	N-CA-C	-6.70	104.97	113.01
1	AA	1049	U	C2'-C3'-O3'	6.70	119.55	109.50
26	DD	22	ILE	N-CA-C	6.69	114.18	107.55
1	CA	938	A	C4'-C3'-O3'	-6.68	102.98	113.00
1	AA	1285	A	C4'-C3'-O3'	-6.65	99.42	109.40
23	DB	1419	A	C4'-C3'-O3'	-6.62	103.08	113.00
1	CA	960	U	C2'-C3'-O3'	6.60	119.40	109.50
1	AA	79	G	C4'-C3'-O3'	6.60	122.89	113.00
1	CA	95	C	C5'-C4'-C3'	-6.60	106.11	116.00
28	DP	49	ILE	N-CA-C	6.58	115.73	107.70
23	DB	508	A	C4'-C3'-O3'	-6.56	103.16	113.00
23	BB	2203	U	O3'-P-O5'	-6.55	94.17	104.00
28	BP	49	ILE	N-CA-C	6.54	115.67	107.70
23	DB	2336	A	C2'-C3'-O3'	6.51	119.26	109.50
23	BB	2213	U	C4'-C3'-O3'	-6.50	103.24	113.00
23	BB	2336	A	C2'-C3'-O3'	6.50	119.25	109.50
23	DB	2272	U	C5'-C4'-C3'	-6.39	106.42	116.00
28	BP	6	GLN	N-CA-C	-6.37	104.77	112.54
48	DG	6	ALA	CA-C-N	6.36	125.58	118.97
48	DG	6	ALA	C-N-CA	6.36	125.58	118.97
28	DP	6	GLN	N-CA-C	-6.36	104.78	112.54
1	CA	1029	U	C4'-C3'-O3'	6.33	122.49	113.00
1	AA	1126	U	C5'-C4'-C3'	-6.32	105.72	115.20
48	BG	6	ALA	CA-C-N	6.32	125.54	118.97
48	BG	6	ALA	C-N-CA	6.32	125.54	118.97
1	CA	328	C	C4'-C3'-O3'	6.32	118.87	109.40
1	CA	481	G	C4'-C3'-O3'	-6.29	103.56	113.00
23	DB	268	C	C5'-C4'-C3'	-6.29	106.56	116.00
22	DA	66	A	C4'-C3'-O3'	-6.26	103.60	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	CA	1078	U	C4'-C3'-O3'	-6.25	103.62	113.00
13	CP	45	GLU	N-CA-C	-6.25	105.23	112.86
50	BT	85	VAL	N-CA-C	6.22	116.85	110.82
13	AP	45	GLU	N-CA-C	-6.22	105.27	112.86
12	AM	65	GLU	CB-CA-C	-6.21	109.42	116.63
23	BB	508	A	C4'-C3'-O3'	-6.21	103.69	113.00
1	CA	1299	A	C4'-C3'-O3'	-6.20	103.70	113.00
50	DT	85	VAL	N-CA-C	6.20	116.83	110.82
1	CA	366	A	C2'-C3'-O3'	6.19	118.79	109.50
1	AA	366	A	C2'-C3'-O3'	6.19	118.79	109.50
23	BB	670	A	C2'-C3'-O3'	6.18	118.77	109.50
23	DB	670	A	C2'-C3'-O3'	6.18	118.77	109.50
1	AA	1183	U	C4'-C3'-O3'	-6.17	103.74	113.00
1	AA	481	G	C4'-C3'-O3'	-6.17	103.75	113.00
23	BB	2434	A	C4'-C3'-O3'	6.17	118.65	109.40
23	BB	1552	A	N9-C1'-C2'	-6.17	102.75	112.00
1	CA	243	A	C4'-C3'-O3'	6.17	118.65	109.40
23	DB	1552	A	N9-C1'-C2'	-6.16	102.76	112.00
23	BB	2191	A	C5'-C4'-C3'	-6.16	106.77	116.00
1	CA	85	U	C4'-C3'-O3'	-6.11	100.24	109.40
23	BB	2790	U	O3'-P-O5'	-6.10	94.85	104.00
23	BB	1847	A	C4'-C3'-O3'	-6.09	103.86	113.00
1	AA	1361	G	C4'-C3'-O3'	6.09	122.14	113.00
23	DB	1847	A	C4'-C3'-O3'	-6.09	103.86	113.00
1	CA	1183	U	C4'-C3'-O3'	-6.06	103.91	113.00
23	BB	750	A	C4'-C3'-O3'	-6.05	103.92	113.00
23	DB	704	G	C4'-C3'-O3'	-6.00	104.00	113.00
1	AA	328	C	C4'-C3'-O3'	6.00	118.40	109.40
23	DB	1664	A	C5'-C4'-C3'	-6.00	107.00	116.00
1	AA	243	A	C2'-C3'-O3'	5.99	118.48	109.50
1	CA	243	A	C2'-C3'-O3'	5.98	118.46	109.50
23	DB	750	A	C4'-C3'-O3'	-5.97	104.05	113.00
23	BB	2501	C	C4'-C3'-O3'	-5.96	104.06	113.00
1	CA	1248	A	C5'-C4'-C3'	-5.96	107.06	116.00
1	CA	1249	C	C5'-C4'-C3'	-5.96	107.07	116.00
23	BB	1419	A	C4'-C3'-O3'	-5.95	104.08	113.00
23	BB	1531	C	C4'-C3'-O3'	-5.93	104.10	113.00
23	DB	2433	A	C4'-C3'-O3'	-5.92	104.12	113.00
41	DJ	42	ALA	N-CA-C	-5.90	103.46	111.55
40	DH	10	ALA	CB-CA-C	-5.86	109.80	116.54
40	BH	10	ALA	CB-CA-C	-5.84	109.82	116.54
23	BB	2272	U	C5'-C4'-C3'	-5.84	107.25	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	CA	1300	G	C4'-C3'-C2'	5.84	108.44	102.60
23	BB	2832	U	C4'-C3'-O3'	5.83	118.15	109.40
1	CA	1065	U	C2'-C3'-O3'	5.83	118.24	109.50
23	DB	276	U	C4'-C3'-O3'	5.82	121.73	113.00
23	BB	655	A	C4'-C3'-O3'	-5.81	100.68	109.40
1	AA	1065	U	C2'-C3'-O3'	5.80	118.20	109.50
1	CA	1131	G	C4'-C3'-O3'	5.80	121.70	113.00
1	AA	438	U	N1-C1'-C2'	-5.79	105.32	114.00
1	CA	1088	G	C4'-C3'-O3'	-5.78	104.34	113.00
45	DS	53	SER	N-CA-C	-5.75	106.43	113.50
1	CA	438	U	N1-C1'-C2'	-5.74	105.39	114.00
1	CA	722	G	C4'-C3'-O3'	-5.74	104.39	113.00
23	BB	1340	U	C4'-C3'-O3'	-5.74	104.40	113.00
45	BS	53	SER	N-CA-C	-5.73	106.46	113.50
23	DB	456	C	C5'-C4'-C3'	-5.71	106.64	115.20
23	BB	1818	U	C4'-C3'-O3'	-5.70	104.45	113.00
23	DB	1531	C	C4'-C3'-O3'	-5.70	104.46	113.00
31	B0	41	HIS	N-CA-C	5.69	117.77	108.55
22	BA	66	A	C4'-C3'-O3'	-5.66	104.51	113.00
31	D0	41	HIS	N-CA-C	5.65	117.69	108.76
1	AA	722	G	C4'-C3'-O3'	-5.65	104.53	113.00
23	BB	560	C	C5'-C4'-C3'	-5.65	107.53	116.00
1	CA	328	C	C2'-C3'-O3'	5.63	117.94	109.50
23	BB	456	C	C5'-C4'-C3'	-5.62	106.76	115.20
23	DB	1818	U	C4'-C3'-O3'	-5.62	104.57	113.00
46	DU	81	ARG	CB-CA-C	-5.61	110.09	116.54
46	BU	81	ARG	CB-CA-C	-5.61	110.09	116.54
23	DB	2447	G	C4'-C3'-O3'	-5.60	101.00	109.40
1	AA	1328	C	C5'-C4'-C3'	5.59	124.38	116.00
27	DK	5	GLN	CB-CA-C	-5.58	110.13	116.54
1	AA	328	C	C2'-C3'-O3'	5.57	117.86	109.50
23	BB	2192	U	C5'-C4'-C3'	-5.56	107.65	116.00
23	DB	2351	G	C4'-C3'-O3'	-5.55	104.67	113.00
23	BB	27	G	C4'-C3'-O3'	-5.54	104.69	113.00
23	BB	2297	A	C4'-C3'-O3'	-5.54	104.69	113.00
6	AG	3	ARG	N-CA-C	-5.54	106.57	113.38
23	DB	2894	G	C5'-C4'-C3'	-5.54	107.70	116.00
23	DB	1802	A	C4'-C3'-O3'	-5.52	104.72	113.00
27	BK	5	GLN	CB-CA-C	-5.52	110.19	116.54
1	CA	975	A	C2'-C3'-O3'	5.52	117.78	109.50
1	CA	813	U	C4'-C3'-O3'	-5.52	104.72	113.00
23	DB	1210	G	C4'-C3'-O3'	5.52	117.67	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
16	AS	33	TRP	N-CA-C	-5.51	107.81	114.75
23	DB	2501	C	C4'-C3'-O3'	-5.50	104.75	113.00
23	BB	1210	G	C4'-C3'-O3'	5.50	117.65	109.40
37	DL	59	ARG	N-CA-C	-5.49	108.36	114.62
23	BB	143	C	C5'-C4'-C3'	-5.47	107.79	116.00
23	BB	1802	A	C4'-C3'-O3'	-5.46	104.80	113.00
23	BB	242	G	C4'-C3'-O3'	-5.46	101.20	109.40
29	DE	39	ALA	N-CA-C	-5.46	106.45	113.01
1	CA	960	U	C4'-C3'-O3'	5.46	117.58	109.40
47	BF	176	PHE	CB-CA-C	-5.45	109.30	115.79
47	DF	176	PHE	CB-CA-C	-5.45	109.30	115.79
29	BE	39	ALA	N-CA-C	-5.44	106.48	113.01
37	BL	59	ARG	N-CA-C	-5.44	108.42	114.62
1	AA	965	U	O4'-C4'-C3'	5.43	111.53	106.10
1	CA	1225	A	N9-C1'-C2'	5.43	120.15	112.00
4	CE	55	VAL	CB-CA-C	-5.43	108.54	113.70
4	AE	55	VAL	CB-CA-C	-5.42	108.55	113.70
1	CA	1133	G	C4'-C3'-O3'	5.41	121.11	113.00
23	BB	974	G	C4'-C3'-O3'	-5.40	101.30	109.40
1	CA	765	G	N9-C1'-C2'	-5.40	103.90	112.00
43	DO	108	ASP	N-CA-C	-5.40	105.40	111.28
29	DE	73	ILE	N-CA-C	-5.40	106.59	112.80
1	AA	765	G	N9-C1'-C2'	-5.39	103.91	112.00
1	AA	1065	U	C4'-C3'-O3'	5.39	117.48	109.40
43	BO	108	ASP	N-CA-C	-5.39	105.41	111.28
29	BE	73	ILE	N-CA-C	-5.38	106.61	112.80
1	CA	67	C	C4'-C3'-O3'	-5.38	104.92	113.00
1	CA	350	G	C4'-C3'-O3'	-5.38	104.92	113.00
1	AA	368	U	C4'-C3'-O3'	-5.38	104.93	113.00
23	DB	275	C	C4'-C3'-O3'	5.37	121.05	113.00
23	DB	2760	C	C5'-C4'-C3'	-5.36	107.96	116.00
23	DB	2619	C	C5'-C4'-C3'	-5.36	107.96	116.00
23	BB	1419	A	N9-C1'-C2'	5.35	120.02	112.00
1	CA	1049	U	C4'-C3'-O3'	5.34	117.42	109.40
23	BB	2282	G	C4'-C3'-O3'	5.34	117.40	109.40
1	CA	1358	U	C4'-C3'-O3'	-5.34	105.00	113.00
23	BB	2471	A	C5'-C4'-C3'	-5.33	107.20	115.20
1	CA	1065	U	C4'-C3'-O3'	5.33	117.40	109.40
1	CA	1474	U	C4'-C3'-O3'	-5.33	105.00	113.00
23	DB	1419	A	N9-C1'-C2'	5.32	119.97	112.00
23	DB	2434	A	C4'-C3'-O3'	5.32	117.38	109.40
1	CA	82	G	N9-C1'-C2'	5.31	119.97	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	484	G	C4'-C3'-O3'	5.31	117.36	109.40
25	BC	35	LYS	CB-CA-C	-5.30	109.49	115.79
23	DB	1382	G	C5'-C4'-C3'	5.29	123.94	116.00
23	DB	2770	G	C5'-C4'-C3'	-5.29	108.06	116.00
1	AA	166	U	C5'-C4'-C3'	-5.29	108.06	116.00
23	BB	704	G	C4'-C3'-O3'	-5.29	105.06	113.00
25	DC	35	LYS	CB-CA-C	-5.28	109.50	115.79
29	BE	36	ALA	N-CA-C	-5.27	105.43	111.07
23	DB	726	G	C4'-C3'-O3'	-5.27	105.09	113.00
1	AA	1534	A	C4'-C3'-O3'	5.26	120.89	113.00
29	DE	36	ALA	N-CA-C	-5.25	105.45	111.07
23	BB	1382	G	C5'-C4'-C3'	5.25	123.87	116.00
39	DX	38	GLN	N-CA-C	-5.24	106.73	113.02
23	BB	1133	A	C4'-C3'-O3'	-5.24	105.15	113.00
1	CA	368	U	C4'-C3'-O3'	-5.23	105.16	113.00
23	DB	2104	C	C4'-C3'-O3'	5.23	120.84	113.00
23	DB	131	A	C5'-C4'-C3'	5.22	123.84	116.00
23	DB	748	G	C4'-C3'-O3'	-5.22	105.17	113.00
39	BX	38	GLN	N-CA-C	-5.22	106.76	113.02
23	DB	1306	C	C5'-C4'-C3'	5.21	123.81	116.00
23	DB	2501	C	N1-C1'-C2'	5.21	119.81	112.00
25	BC	19	VAL	N-CA-C	5.20	115.86	108.42
37	BL	11	GLY	N-CA-C	-5.20	108.66	115.47
23	DB	1133	A	C4'-C3'-O3'	-5.20	105.20	113.00
1	CA	976	G	C4'-C3'-O3'	5.20	120.80	113.00
1	CA	166	U	C5'-C4'-C3'	-5.19	108.22	116.00
6	AG	146	ALA	N-CA-C	-5.19	106.79	113.01
23	BB	2447	G	C4'-C3'-O3'	-5.19	101.62	109.40
17	CT	67	HIS	CB-CA-C	-5.18	109.62	115.79
17	AT	67	HIS	CB-CA-C	-5.18	109.62	115.79
23	DB	549	G	N9-C1'-C2'	5.18	119.77	112.00
37	DL	11	GLY	N-CA-C	-5.17	108.70	115.47
1	CA	1091	U	C4'-C3'-O3'	-5.16	105.27	113.00
1	AA	1398	A	C5'-C4'-C3'	-5.15	108.27	116.00
44	BQ	99	VAL	N-CA-C	-5.15	107.13	111.56
44	DQ	99	VAL	N-CA-C	-5.14	107.14	111.56
23	BB	2501	C	N1-C1'-C2'	5.14	119.71	112.00
23	DB	1275	A	N9-C1'-C2'	5.14	119.70	112.00
1	AA	1144	G	C4'-C3'-O3'	-5.13	105.30	113.00
6	CG	147	ASN	N-CA-C	-5.13	107.69	114.31
23	BB	1237	A	N9-C1'-C2'	5.13	119.69	112.00
23	BB	2755	C	C4'-C3'-O3'	-5.13	105.31	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	DB	27	G	C4'-C3'-O3'	-5.13	105.31	113.00
23	DB	1054	A	C4'-C3'-O3'	5.12	120.68	113.00
1	AA	1397	C	C2'-C3'-O3'	5.12	117.18	109.50
23	DB	1237	A	N9-C1'-C2'	5.11	119.66	112.00
1	AA	813	U	C4'-C3'-O3'	-5.11	105.34	113.00
1	CA	434	U	C5'-C4'-C3'	-5.10	108.35	116.00
1	CA	1397	C	C2'-C3'-O3'	5.10	117.15	109.50
27	DK	20	MET	N-CA-C	5.09	117.03	108.73
1	AA	1052	U	C5'-C4'-C3'	-5.09	108.36	116.00
25	BC	12	ARG	N-CA-C	-5.09	107.58	112.97
23	BB	2199	A	C5'-C4'-C3'	-5.09	108.37	116.00
1	CA	1181	G	C5'-C4'-C3'	-5.08	107.58	115.20
1	AA	484	G	C2'-C3'-O3'	5.08	117.12	109.50
23	BB	773	U	C4'-C3'-O3'	-5.08	105.38	113.00
23	DB	560	C	C5'-C4'-C3'	-5.08	108.38	116.00
1	CA	484	G	C2'-C3'-O3'	5.08	117.12	109.50
23	BB	1275	A	N9-C1'-C2'	5.06	119.60	112.00
23	BB	2564	A	C4'-C3'-O3'	-5.06	105.42	113.00
4	CE	70	MET	CB-CA-C	-5.06	109.79	117.07
1	AA	434	U	C5'-C4'-C3'	-5.05	108.42	116.00
27	BK	20	MET	N-CA-C	5.05	116.97	108.73
1	AA	1294	G	C4'-C3'-O3'	5.05	120.58	113.00
23	BB	845	A	C4'-C3'-O3'	5.05	120.58	113.00
1	CA	844	G	C4'-C3'-O3'	5.05	120.58	113.00
23	DB	2272	U	N1-C1'-C2'	5.05	119.58	112.00
23	BB	2272	U	N1-C1'-C2'	5.04	119.56	112.00
23	BB	752	A	C4'-C3'-O3'	-5.04	101.85	109.40
23	DB	2096	C	C5'-C4'-C3'	-5.03	108.45	116.00
1	AA	1432	G	N9-C1'-C2'	-5.02	106.47	114.00
23	DB	2471	A	C5'-C4'-C3'	-5.02	107.67	115.20
23	DB	773	U	C5'-C4'-C3'	-5.02	108.47	116.00
1	AA	437	U	N1-C1'-C2'	5.02	119.53	112.00
23	DB	974	G	C4'-C3'-O3'	-5.02	101.87	109.40
1	CA	1279	G	C5'-C4'-C3'	-5.02	108.48	116.00
16	CS	4	LEU	N-CA-C	-5.01	106.09	113.61
23	BB	1537	G	C4'-C3'-O3'	5.01	120.52	113.00
4	AE	70	MET	CB-CA-C	-5.01	109.86	117.07

There are no chirality outliers.

All (108) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	AA	1002	G	Sidechain
1	AA	1306	A	Sidechain
1	AA	1331	G	Sidechain
1	AA	1337	G	Sidechain
1	AA	1361	G	Sidechain
1	AA	1432	G	Sidechain
1	AA	1441	A	Sidechain
1	AA	187	G	Sidechain
1	AA	281	G	Sidechain
1	AA	437	U	Sidechain
1	AA	438	U	Sidechain
1	AA	450	G	Sidechain
1	AA	496	A	Sidechain
1	AA	703	G	Sidechain
1	AA	992	U	Sidechain
23	BB	1047	G	Sidechain
23	BB	1060	U	Sidechain
23	BB	1086	A	Sidechain
23	BB	1088	A	Sidechain
23	BB	1190	G	Sidechain
23	BB	1215	G	Sidechain
23	BB	1419	A	Sidechain
23	BB	1439	A	Sidechain
23	BB	1572	A	Sidechain
23	BB	1738	G	Sidechain
23	BB	1828	G	Sidechain
23	BB	2062	A	Sidechain
23	BB	2185	U	Sidechain
23	BB	221	A	Sidechain
23	BB	222	A	Sidechain
23	BB	2272	U	Sidechain
23	BB	232	G	Sidechain
23	BB	2454	G	Sidechain
23	BB	2471	A	Sidechain
23	BB	2503	A	Sidechain
23	BB	2508	G	Sidechain
23	BB	2638	G	Sidechain
23	BB	2733	A	Sidechain
23	BB	2770	G	Sidechain
23	BB	2848	G	Sidechain
23	BB	2868	A	Sidechain
23	BB	2883	A	Sidechain
23	BB	299	A	Sidechain

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Mol	Chain	Res	Type	Group
23	BB	3	U	Sidechain
23	BB	361	G	Sidechain
23	BB	370	G	Sidechain
23	BB	500	G	Sidechain
23	BB	51	G	Sidechain
23	BB	630	G	Sidechain
23	BB	633	A	Sidechain
23	BB	727	A	Sidechain
23	BB	757	G	Sidechain
1	CA	1012	A	Sidechain
1	CA	1027	C	Sidechain
1	CA	1033	G	Sidechain
1	CA	1133	G	Sidechain
1	CA	1144	G	Sidechain
1	CA	1313	U	Sidechain
1	CA	1331	G	Sidechain
1	CA	1356	G	Sidechain
1	CA	1432	G	Sidechain
1	CA	1441	A	Sidechain
1	CA	187	G	Sidechain
1	CA	281	G	Sidechain
1	CA	437	U	Sidechain
1	CA	438	U	Sidechain
1	CA	450	G	Sidechain
1	CA	496	A	Sidechain
1	CA	703	G	Sidechain
1	CA	82	G	Sidechain
1	CA	935	A	Sidechain
23	DB	1047	G	Sidechain
23	DB	1054	A	Sidechain
23	DB	1060	U	Sidechain
23	DB	1086	A	Sidechain
23	DB	1088	A	Sidechain
23	DB	1190	G	Sidechain
23	DB	1215	G	Sidechain
23	DB	1419	A	Sidechain
23	DB	1439	A	Sidechain
23	DB	1572	A	Sidechain
23	DB	1738	G	Sidechain
23	DB	1814	G	Sidechain
23	DB	1828	G	Sidechain
23	DB	2062	A	Sidechain

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Mol	Chain	Res	Type	Group
23	DB	2108	A	Sidechain
23	DB	221	A	Sidechain
23	DB	222	A	Sidechain
23	DB	2272	U	Sidechain
23	DB	232	G	Sidechain
23	DB	2454	G	Sidechain
23	DB	2471	A	Sidechain
23	DB	2503	A	Sidechain
23	DB	2508	G	Sidechain
23	DB	2638	G	Sidechain
23	DB	2733	A	Sidechain
23	DB	2770	G	Sidechain
23	DB	2848	G	Sidechain
23	DB	2868	A	Sidechain
23	DB	2883	A	Sidechain
23	DB	299	A	Sidechain
23	DB	370	G	Sidechain
23	DB	500	G	Sidechain
23	DB	51	G	Sidechain
23	DB	630	G	Sidechain
23	DB	633	A	Sidechain
23	DB	727	A	Sidechain
23	DB	757	G	Sidechain

5.2 Too-close contacts (i)

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	1448	0
1	CA	32831	0	16521	1413	0
2	AC	1624	0	1699	214	0
2	CC	1624	0	1699	198	0
3	AD	1643	0	1710	186	0
3	CD	1643	0	1710	189	0
4	AE	1105	0	1148	133	0
4	CE	1105	0	1148	121	0
5	AF	817	0	808	96	0
5	CF	817	0	808	97	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
6	AG	1174	0	1230	157	0
6	CG	1196	0	1246	140	0
7	AH	979	0	1034	94	0
7	CH	979	0	1034	94	0
8	AI	1022	0	1070	188	0
8	CI	1022	0	1070	153	0
9	AJ	786	0	828	87	0
9	CJ	786	0	828	107	0
10	AK	877	0	887	116	0
10	CK	877	0	887	105	0
11	AL	955	0	1019	99	0
11	CL	955	0	1019	99	0
12	AM	883	0	944	144	0
12	CM	876	0	937	148	0
13	AP	649	0	666	71	0
13	CP	638	0	656	73	0
14	AQ	648	0	691	66	0
14	CQ	657	0	702	67	0
15	AR	455	0	478	38	0
15	CR	455	0	478	41	0
16	AS	637	0	665	102	0
16	CS	644	0	675	120	0
17	AT	665	0	714	64	0
17	CT	665	0	714	68	0
18	AB	1704	0	1732	228	0
18	CB	1704	0	1732	246	0
19	AU	425	0	449	62	0
19	CU	425	0	449	59	0
20	AO	714	0	734	68	0
20	CO	714	0	734	70	0
21	AN	774	0	827	111	0
21	CN	774	0	827	120	0
22	BA	2507	0	1270	119	0
22	DA	2507	0	1270	113	0
23	BB	60995	0	30679	2411	0
23	DB	60995	0	30678	2456	0
24	BI	1032	0	1088	120	0
24	DI	1032	0	1088	179	0
25	BC	2082	0	2157	251	0
25	DC	2082	0	2157	253	0
26	BD	1565	0	1616	253	0
26	DD	1565	0	1616	255	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
27	BK	930	0	1000	163	0
27	DK	930	0	1000	162	0
28	BP	917	0	965	129	0
28	DP	917	0	965	136	0
29	BE	1552	0	1619	215	0
29	DE	1552	0	1619	211	0
30	BY	449	0	491	61	0
30	DY	449	0	491	55	0
31	B0	444	0	461	50	0
31	D0	444	0	461	46	0
32	B4	302	0	340	44	0
32	D4	302	0	340	45	0
33	B1	409	0	440	54	0
33	D1	409	0	440	54	0
34	B3	504	0	574	53	0
34	D3	504	0	574	57	0
35	BV	753	0	780	88	0
35	DV	753	0	780	90	0
36	B2	377	0	418	41	0
36	D2	377	0	418	46	0
37	BL	1045	0	1117	147	0
37	DL	1045	0	1117	151	0
38	BM	1074	0	1157	128	0
38	DM	1074	0	1157	125	0
39	BX	509	0	543	54	0
39	DX	509	0	543	59	0
40	BH	1111	0	1148	184	0
40	DH	1111	0	1148	153	0
41	BJ	1129	0	1162	145	0
41	DJ	1129	0	1162	152	0
42	BN	960	0	1000	143	0
42	DN	960	0	1000	141	0
43	BO	892	0	923	99	0
43	DO	892	0	923	98	0
44	BQ	947	0	1022	161	0
44	DQ	947	0	1022	156	0
45	BS	857	0	922	107	0
45	DS	857	0	922	105	0
46	BU	779	0	834	123	0
46	DU	779	0	834	120	0
47	BF	1420	0	1460	277	0
47	DF	1420	0	1460	260	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
48	BG	1323	0	1374	193	0
48	DG	1323	0	1374	184	0
49	BR	816	0	839	114	0
49	DR	816	0	839	120	0
50	BT	738	0	807	120	0
50	DT	738	0	807	113	0
51	BZ	625	0	652	79	0
51	DZ	625	0	652	76	0
52	BW	596	0	610	125	0
52	DW	596	0	610	135	0
53	AA	60	0	0	0	0
53	BB	110	0	0	0	0
53	CA	58	0	0	0	0
53	CE	1	0	0	0	0
53	DB	110	0	0	0	0
53	DN	1	0	0	0	0
54	AA	23	0	24	2	0
54	CA	23	0	24	1	0
55	B4	1	0	0	0	0
55	D4	1	0	0	0	0
56	AA	288	0	0	6	0
56	AE	3	0	0	1	0
56	AK	1	0	0	0	0
56	AL	4	0	0	0	0
56	AN	2	0	0	0	0
56	AP	1	0	0	0	0
56	AT	1	0	0	0	0
56	BB	494	0	0	4	0
56	BC	4	0	0	0	0
56	BE	3	0	0	0	0
56	BH	1	0	0	0	0
56	BL	4	0	0	0	0
56	BT	1	0	0	0	0
56	CA	275	0	0	4	0
56	CE	4	0	0	0	0
56	CK	1	0	0	0	0
56	CL	5	0	0	0	0
56	CN	5	0	0	0	0
56	CP	1	0	0	0	0
56	CT	2	0	0	0	0
56	DB	500	0	0	9	0
56	DC	3	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
56	DD	1	0	0	0	0
56	DE	1	0	0	0	0
56	DJ	1	0	0	0	0
56	DL	3	0	0	0	0
56	DN	2	0	0	0	0
56	DP	1	0	0	0	0
56	DR	1	0	0	0	0
All	All	284033	0	190711	18514	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 (18514) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1099:G:H8	24:DI:3:LYS:N	1.36	1.21
23:BB:855:G:H21	52:BW:23:LYS:HG2	1.11	1.13
23:DB:322:A:H5'	23:DB:340:A:H1'	1.32	1.12
2:AC:70:ALA:HA	2:AC:105:VAL:HG21	1.26	1.11
23:BB:1205:A:H62	29:BE:165:HIS:HB2	1.11	1.10
23:BB:1244:A:H5"	37:BL:8:PRO:HD3	1.35	1.08
23:DB:1244:A:H5"	37:DL:8:PRO:HD3	1.32	1.08
2:CC:52:SER:HB3	2:CC:114:LEU:HG	1.37	1.07
23:BB:322:A:H5'	23:BB:340:A:H1'	1.28	1.07
23:DB:1099:G:C8	24:DI:3:LYS:N	2.25	1.05
13:AP:28:ARG:HD2	13:AP:29:ASN:H	1.21	1.04
40:DH:31:VAL:HB	40:DH:32:PRO:HD3	1.39	1.04
9:AJ:7:ARG:HB2	9:AJ:101:SER:H	1.23	1.03
38:BM:59:ARG:HE	38:BM:60:GLN:HG2	1.22	1.03
25:DC:144:GLU:HG3	25:DC:151:GLY:H	1.23	1.03
40:BH:84:ALA:HA	40:BH:90:LEU:HA	1.39	1.03
38:DM:41:LEU:HB2	38:DM:94:ALA:HB3	1.40	1.03
29:BE:61:ARG:HH12	29:BE:64:GLY:HA3	1.23	1.03
23:DB:1098:A:H3'	24:DI:3:LYS:HA	1.41	1.03
23:DB:1099:G:O5'	24:DI:4:VAL:N	1.92	1.03
40:BH:31:VAL:HB	40:BH:32:PRO:HD3	1.39	1.02
1:AA:71:A:H61	1:AA:99:C:H1'	1.23	1.02
18:CB:46:VAL:HG13	18:CB:47:PRO:HD3	1.42	1.02
13:CP:28:ARG:HD2	13:CP:29:ASN:H	1.21	1.01
1:AA:1313:U:H5"	16:AS:5:LYS:HB3	1.39	1.01
51:BZ:45:ARG:HE	51:BZ:47:VAL:HG12	1.18	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BW:17:ALA:HA	52:BW:35:ILE:HG23	1.39	1.00
38:DM:59:ARG:HE	38:DM:60:GLN:HG2	1.23	1.00
1:AA:1211:U:H4'	1:AA:1213:A:H1'	1.44	1.00
23:BB:674:G:H5"	29:BE:71:GLY:H	1.20	1.00
18:CB:40:ILE:HD13	18:CB:201:GLY:HA2	1.44	0.99
12:AM:47:LEU:HG	12:AM:52:ILE:HD13	1.44	0.99
50:DT:55:VAL:HA	50:DT:87:LEU:HA	1.44	0.99
9:AJ:36:VAL:HA	9:AJ:76:ILE:HG22	1.38	0.99
23:BB:674:G:H1'	29:BE:69:ARG:HE	1.26	0.99
50:BT:55:VAL:HA	50:BT:87:LEU:HA	1.44	0.99
38:BM:41:LEU:HB2	38:BM:94:ALA:HB3	1.43	0.99
21:CN:51:PRO:HB2	21:CN:54:SER:HB3	1.45	0.99
45:DS:70:LYS:HD3	45:DS:110:ARG:HA	1.45	0.99
1:AA:1048:G:H21	1:AA:1214:C:H5	1.10	0.98
6:AG:107:ALA:HB1	6:AG:119:LEU:HA	1.45	0.98
25:DC:244:VAL:HB	25:DC:249:VAL:H	1.26	0.98
26:DD:10:GLY:HA3	26:DD:26:VAL:H	1.27	0.98
40:DH:131:SER:HB2	40:DH:141:LYS:HA	1.45	0.98
21:AN:50:LEU:H	21:AN:51:PRO:HD2	1.28	0.98
1:CA:1493:A:HO2'	1:CA:1494:G:H8	1.02	0.98
52:DW:17:ALA:HA	52:DW:35:ILE:HG23	1.45	0.98
40:BH:47:PHE:HA	40:BH:50:ARG:HE	1.26	0.97
18:CB:53:LEU:HD13	18:CB:216:VAL:HG12	1.46	0.97
23:DB:1098:A:H3'	24:DI:3:LYS:CA	1.93	0.97
18:AB:202:ASN:HD22	18:AB:204:ASP:H	0.98	0.97
44:DQ:63:ARG:HH12	44:DQ:96:ASP:HB2	1.30	0.97
25:DC:144:GLU:HA	25:DC:151:GLY:HA2	1.45	0.97
25:BC:144:GLU:HG3	25:BC:151:GLY:H	1.26	0.97
26:BD:10:GLY:HA3	26:BD:26:VAL:H	1.29	0.96
2:CC:59:PRO:HG2	2:CC:62:SER:HB2	1.47	0.96
51:DZ:45:ARG:HE	51:DZ:47:VAL:HG12	1.26	0.96
45:BS:70:LYS:HD3	45:BS:110:ARG:HA	1.47	0.96
16:CS:39:ILE:HD13	16:CS:65:MET:HG2	1.46	0.96
15:AR:72:ARG:HH11	15:AR:72:ARG:H	1.04	0.96
52:BW:43:LYS:HD2	52:BW:79:ILE:HD11	1.46	0.96
23:DB:275:C:H2'	23:DB:276:U:H4'	1.45	0.96
27:DK:35:VAL:HG23	27:DK:36:GLY:H	1.29	0.96
15:CR:72:ARG:H	15:CR:72:ARG:HH11	1.02	0.95
51:BZ:71:LEU:HD13	51:BZ:76:GLU:HB3	1.48	0.95
40:BH:80:ILE:H	40:BH:144:VAL:HG22	1.32	0.95
2:CC:190:THR:HG23	2:CC:192:TYR:H	1.28	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DE:61:ARG:HH12	29:DE:64:GLY:HA3	1.29	0.95
25:BC:144:GLU:HA	25:BC:151:GLY:HA2	1.47	0.95
12:CM:21:ILE:HB	12:CM:24:VAL:HG22	1.48	0.95
51:DZ:71:LEU:HD13	51:DZ:76:GLU:HB3	1.49	0.95
9:AJ:53:ILE:HG22	9:AJ:61:ALA:HB1	1.47	0.95
8:CI:51:LEU:HA	8:CI:54:VAL:HG22	1.49	0.95
23:DB:1099:G:H8	24:DI:3:LYS:H	0.99	0.95
42:BN:103:ARG:HB2	42:BN:110:MET:HE3	1.49	0.95
25:BC:244:VAL:HB	25:BC:249:VAL:H	1.27	0.94
27:BK:35:VAL:HG23	27:BK:36:GLY:H	1.28	0.94
6:AG:14:ASP:HB3	6:AG:19:SER:H	1.29	0.94
18:AB:209:VAL:HG23	18:AB:210:THR:H	1.30	0.94
52:DW:37:VAL:HG12	52:DW:38:ARG:H	1.32	0.94
40:DH:125:THR:HA	40:DH:146:VAL:HB	1.46	0.94
19:AU:36:PHE:HB3	19:AU:40:PRO:HD3	1.50	0.94
8:AI:29:ILE:HA	8:AI:64:ILE:HB	1.49	0.94
1:AA:120:A:H2'	1:AA:121:U:H5"	1.50	0.94
1:CA:1221:G:H4'	16:CS:76:THR:HG21	1.50	0.94
6:CG:78:ARG:HG2	6:CG:83:THR:HG22	1.49	0.94
42:DN:37:THR:HG22	42:DN:39:PRO:HD2	1.48	0.94
42:BN:37:THR:HG22	42:BN:39:PRO:HD2	1.49	0.93
18:CB:56:LEU:HD22	18:CB:216:VAL:HB	1.48	0.93
42:DN:101:GLY:HA2	42:DN:110:MET:H	1.32	0.93
23:BB:2134:A:H62	23:BB:2157:G:H21	1.14	0.93
1:AA:1361:G:H2'	1:AA:1362:A:H5"	1.48	0.93
23:BB:1597:A:H5"	23:BB:1598:A:H5'	1.51	0.93
44:BQ:63:ARG:HH12	44:BQ:96:ASP:HB2	1.34	0.93
3:AD:22:SER:H	3:AD:109:THR:HG22	1.30	0.93
2:CC:155:ARG:H	2:CC:162:ALA:HA	1.31	0.93
23:DB:877:A:H61	23:DB:898:C:H2'	1.32	0.93
37:DL:23:ILE:H	37:DL:23:ILE:HD12	1.33	0.93
8:CI:117:LEU:HD22	8:CI:123:ARG:HB3	1.50	0.93
16:CS:18:VAL:HG21	16:CS:43:MET:HG2	1.49	0.93
23:DB:532:A:HO2'	23:DB:2021:C:H5	1.03	0.93
23:BB:876:C:H41	23:BB:901:C:N4	1.67	0.93
2:AC:133:MET:HE2	2:AC:152:VAL:HG21	1.48	0.92
23:DB:1597:A:H5"	23:DB:1598:A:H5'	1.50	0.92
2:AC:78:LYS:HG2	2:AC:81:GLU:HB2	1.51	0.92
3:CD:22:SER:H	3:CD:109:THR:HG22	1.31	0.92
19:CU:36:PHE:HB3	19:CU:40:PRO:HD3	1.51	0.92
23:BB:858:G:N3	23:BB:2268:A:H2'	1.82	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DN:103:ARG:HB2	42:DN:110:MET:HE3	1.49	0.92
23:DB:45:G:H5'	23:DB:46:G:H5'	1.51	0.92
42:BN:101:GLY:HA2	42:BN:110:MET:H	1.33	0.92
1:CA:120:A:H2'	1:CA:121:U:H5"	1.48	0.92
1:AA:812:G:HO2'	1:AA:813:U:H6	0.99	0.92
11:AL:23:LEU:HG	11:AL:24:GLU:HG3	1.49	0.92
1:CA:812:G:HO2'	1:CA:813:U:H6	0.93	0.92
13:AP:66:THR:HG22	13:AP:67:ILE:H	1.35	0.92
2:CC:26:LYS:HG3	2:CC:27:GLU:H	1.33	0.92
23:DB:704:G:H2'	23:DB:726:G:H22	1.34	0.92
26:BD:148:GLN:HB2	26:BD:152:PRO:HG2	1.52	0.92
43:DO:5:SER:HA	43:DO:8:ILE:HD12	1.52	0.92
25:BC:146:LYS:HB3	25:BC:147:PRO:HD2	1.51	0.92
37:DL:123:ARG:HA	37:DL:143:GLU:HB3	1.50	0.92
3:CD:152:SER:HA	3:CD:155:LYS:HD3	1.53	0.91
12:CM:79:LEU:HD22	12:CM:86:ARG:HE	1.34	0.91
43:DO:66:GLY:HA3	43:DO:102:ARG:HH21	1.34	0.91
9:AJ:8:ILE:HA	9:AJ:100:ILE:HG22	1.49	0.91
23:BB:45:G:H5'	23:BB:46:G:H5'	1.50	0.91
37:BL:123:ARG:HA	37:BL:143:GLU:HB3	1.50	0.91
40:BH:69:ALA:HA	40:BH:140:ALA:HA	1.50	0.91
2:AC:26:LYS:HG3	2:AC:27:GLU:H	1.36	0.91
11:CL:23:LEU:HG	11:CL:24:GLU:HG3	1.53	0.90
23:DB:27:G:H22	23:DB:512:G:H2'	1.35	0.90
43:BO:66:GLY:HA3	43:BO:102:ARG:HH21	1.37	0.90
23:DB:858:G:N3	23:DB:2268:A:H2'	1.86	0.90
23:DB:1205:A:H62	29:DE:165:HIS:HB2	1.31	0.90
3:AD:152:SER:HA	3:AD:155:LYS:HD3	1.53	0.90
8:CI:5:TYR:HB2	8:CI:20:ILE:HB	1.51	0.90
16:CS:39:ILE:HB	16:CS:66:VAL:HA	1.52	0.90
23:DB:276:U:H2'	23:DB:278:A:H62	1.36	0.90
23:DB:1652:A:H62	42:DN:11:ASN:HD21	1.19	0.90
33:D1:33:LEU:HB3	33:D1:51:ALA:HB3	1.51	0.90
32:B4:7:VAL:HG13	32:B4:8:LYS:H	1.35	0.90
23:BB:674:G:H5"	29:BE:71:GLY:N	1.85	0.90
18:CB:159:ALA:HB1	18:CB:183:PHE:HE1	1.33	0.90
6:CG:75:LYS:HZ2	6:CG:76:SER:H	1.16	0.90
5:AF:92:THR:HG22	5:AF:94:HIS:H	1.36	0.90
25:BC:117:SER:HB2	25:BC:128:THR:HB	1.52	0.90
43:BO:5:SER:HA	43:BO:8:ILE:HD12	1.54	0.90
6:CG:14:ASP:H	6:CG:19:SER:H	1.17	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BW:37:VAL:HG12	52:BW:38:ARG:H	1.35	0.90
13:CP:4:ILE:HB	13:CP:67:ILE:HD12	1.53	0.90
18:CB:156:LEU:HD23	18:CB:180:ILE:HD11	1.54	0.90
25:DC:93:VAL:HG13	25:DC:94:LEU:H	1.35	0.89
48:DG:85:LYS:HA	48:DG:131:VAL:HG12	1.54	0.89
32:D4:7:VAL:HG13	32:D4:8:LYS:H	1.36	0.89
1:AA:79:G:H2'	1:AA:80:A:H8	1.36	0.89
23:BB:1060:U:N3	23:BB:1088:A:N7	2.20	0.89
48:BG:85:LYS:HA	48:BG:131:VAL:HG12	1.54	0.89
1:AA:1086:U:H3	1:AA:1099:G:H22	1.17	0.89
50:DT:15:HIS:H	50:DT:32:LEU:HA	1.37	0.89
50:BT:57:VAL:HG22	50:BT:58:VAL:H	1.35	0.89
13:CP:66:THR:HG22	13:CP:67:ILE:H	1.37	0.89
23:DB:1060:U:N3	23:DB:1088:A:N7	2.21	0.89
37:DL:29:LYS:HG3	37:DL:30:THR:HG23	1.55	0.89
52:DW:43:LYS:HD2	52:DW:79:ILE:HD11	1.52	0.89
4:CE:93:VAL:HG13	4:CE:126:ALA:HB2	1.53	0.89
25:DC:41:GLY:HA3	25:DC:53:ILE:HG21	1.55	0.89
33:D1:49:LYS:HG2	33:D1:50:GLU:H	1.37	0.89
26:DD:148:GLN:HB2	26:DD:152:PRO:HG2	1.53	0.89
9:CJ:36:VAL:HG13	9:CJ:76:ILE:HA	1.54	0.89
41:DJ:24:THR:HA	41:DJ:63:ALA:HB3	1.55	0.89
1:AA:1057:G:H4'	2:AC:196:GLY:H	1.36	0.89
42:DN:41:ALA:HB1	42:DN:113:ILE:HD13	1.52	0.89
52:DW:51:GLY:HA3	52:DW:59:PHE:HB2	1.55	0.89
23:BB:855:G:N2	52:BW:23:LYS:HG2	1.87	0.88
52:BW:39:GLN:HG3	52:BW:42:THR:HB	1.55	0.88
25:BC:93:VAL:HG13	25:BC:94:LEU:H	1.37	0.88
4:CE:113:VAL:HG23	4:CE:114:LEU:H	1.37	0.88
5:CF:92:THR:HG22	5:CF:94:HIS:H	1.36	0.88
23:DB:845:A:H2'	23:DB:846:U:H5"	1.55	0.88
25:DC:117:SER:HB2	25:DC:128:THR:HB	1.55	0.88
29:DE:58:LYS:HE2	29:DE:60:TRP:HD1	1.35	0.88
33:D1:26:LYS:HD3	33:D1:52:LYS:HB3	1.55	0.88
1:AA:1057:G:H5"	2:AC:153:SER:HB2	1.53	0.88
40:BH:99:ILE:HG21	40:BH:130:VAL:HB	1.56	0.88
21:CN:50:LEU:H	21:CN:51:PRO:HD2	1.39	0.88
44:DQ:105:PHE:HA	44:DQ:108:LEU:HD12	1.54	0.88
24:BI:129:GLU:HB3	24:BI:133:ARG:HH12	1.36	0.88
37:BL:116:VAL:HG13	37:BL:117:THR:H	1.38	0.88
1:CA:981:U:H4'	21:CN:60:ARG:HD2	1.54	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:547:A:H2'	23:DB:547:A:N3	1.89	0.88
23:BB:704:G:H2'	23:BB:726:G:H22	1.38	0.88
24:DI:11:GLN:HG2	24:DI:55:PRO:HB3	1.56	0.88
1:AA:1328:C:H5"	12:AM:27:THR:HG21	1.55	0.88
21:AN:60:ARG:HG3	21:AN:62:ARG:HG2	1.55	0.88
42:DN:2:ARG:HG2	42:DN:5:LYS:HB2	1.55	0.88
1:AA:1060:U:H4'	9:AJ:54:SER:HB2	1.56	0.88
13:AP:4:ILE:HB	13:AP:67:ILE:HD12	1.54	0.88
37:BL:23:ILE:H	37:BL:23:ILE:HD12	1.38	0.88
13:CP:4:ILE:HG12	13:CP:21:VAL:HG22	1.54	0.88
25:DC:146:LYS:HB3	25:DC:147:PRO:HD2	1.52	0.88
12:AM:3:ILE:HA	12:AM:56:ARG:HD3	1.53	0.88
33:B1:26:LYS:HD3	33:B1:52:LYS:HB3	1.54	0.88
28:DP:56:SER:HB2	28:DP:75:THR:HB	1.56	0.88
1:AA:664:G:H22	1:AA:741:G:H1	1.22	0.88
41:BJ:24:THR:HA	41:BJ:63:ALA:HB3	1.54	0.88
44:BQ:111:LYS:HB2	49:BR:48:LYS:HZ2	1.38	0.88
23:BB:27:G:H22	23:BB:512:G:H2'	1.38	0.87
25:BC:41:GLY:HA3	25:BC:53:ILE:HG21	1.54	0.87
44:BQ:105:PHE:HA	44:BQ:108:LEU:HD12	1.55	0.87
50:BT:15:HIS:H	50:BT:32:LEU:HA	1.39	0.87
25:DC:64:VAL:O	25:DC:65:ASP:HB3	1.74	0.87
1:AA:79:G:H2'	1:AA:80:A:C8	2.08	0.87
6:AG:112:ASP:HB2	6:AG:118:ARG:HG2	1.55	0.87
38:DM:19:GLY:HA2	38:DM:98:PRO:HD2	1.54	0.87
33:B1:49:LYS:HG2	33:B1:50:GLU:H	1.38	0.87
43:BO:64:TYR:HB3	43:BO:67:ASN:HB2	1.55	0.87
6:CG:145:GLU:HA	6:CG:148:LYS:HB2	1.55	0.87
12:CM:28:ARG:HH21	12:CM:62:PHE:HB2	1.38	0.87
4:AE:14:LEU:HD23	4:AE:36:THR:HG22	1.55	0.87
6:AG:58:LEU:HD23	6:AG:58:LEU:H	1.40	0.87
19:AU:34:ARG:HD3	19:AU:39:LYS:HE3	1.57	0.87
23:DB:855:G:H21	52:DW:23:LYS:HG2	1.38	0.87
23:BB:1251:C:H2'	44:BQ:5:ARG:HH12	1.39	0.87
1:CA:1060:U:H4'	9:CJ:54:SER:HB2	1.55	0.87
37:DL:78:ARG:HB3	37:DL:113:ALA:HB2	1.57	0.87
50:DT:57:VAL:HG22	50:DT:58:VAL:H	1.36	0.87
23:BB:845:A:H2'	23:BB:846:U:H5"	1.57	0.87
22:DA:2:G:H2'	22:DA:3:C:C6	2.09	0.87
52:DW:39:GLN:HG3	52:DW:42:THR:HB	1.56	0.87
2:AC:149:LYS:HB3	2:AC:200:TRP:HB2	1.57	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AB:46:VAL:HG13	18:AB:47:PRO:HD3	1.57	0.87
21:AN:17:ASP:HA	21:AN:21:ALA:HB2	1.56	0.87
25:BC:64:VAL:O	25:BC:65:ASP:HB3	1.73	0.86
29:BE:52:VAL:HG12	29:BE:53:THR:H	1.40	0.86
33:B1:33:LEU:HB3	33:B1:51:ALA:HB3	1.53	0.86
2:AC:123:LEU:HA	2:AC:127:VAL:HG22	1.57	0.86
4:AE:113:VAL:HG23	4:AE:114:LEU:H	1.39	0.86
30:BY:12:ALA:HA	30:BY:15:ARG:HD3	1.57	0.86
23:DB:142:A:H2'	23:DB:143:C:C6	2.10	0.86
40:BH:116:ARG:HH12	40:BH:133:GLN:HB2	1.41	0.86
42:BN:41:ALA:HB1	42:BN:113:ILE:HD13	1.58	0.86
16:CS:39:ILE:HD11	16:CS:68:HIS:HB2	1.55	0.86
29:DE:52:VAL:HG12	29:DE:53:THR:H	1.39	0.86
50:DT:5:GLU:HA	50:DT:8:LEU:HB2	1.57	0.86
5:AF:38:ARG:HD3	5:AF:97:THR:HA	1.55	0.86
24:BI:27:LEU:HD23	24:BI:27:LEU:H	1.40	0.86
49:DR:39:LEU:HA	49:DR:53:PHE:HA	1.57	0.86
8:AI:20:ILE:HD13	8:AI:85:ALA:HB3	1.57	0.86
38:BM:19:GLY:HA2	38:BM:98:PRO:HD2	1.56	0.86
47:BF:134:GLN:H	47:BF:150:GLY:H	1.23	0.86
50:BT:11:LEU:H	50:BT:11:LEU:HD22	1.39	0.86
1:CA:279:A:H5"	1:CA:280:C:H3'	1.58	0.86
15:CR:72:ARG:H	15:CR:72:ARG:NH1	1.73	0.86
4:AE:93:VAL:HG13	4:AE:126:ALA:HB2	1.55	0.86
6:CG:26:VAL:HG12	6:CG:42:VAL:HG11	1.58	0.86
6:CG:87:PRO:HG3	6:CG:148:LYS:HA	1.55	0.86
27:DK:47:ILE:HG12	27:DK:48:PRO:HD2	1.56	0.86
1:AA:1187:G:H21	21:AN:99:SER:HB2	1.40	0.86
1:CA:560:A:H4'	1:CA:561:U:H5"	1.58	0.86
22:DA:98:G:H1	35:DV:14:LYS:HB2	1.40	0.86
28:DP:21:PRO:HG2	28:DP:91:VAL:HG21	1.58	0.86
47:DF:134:GLN:H	47:DF:150:GLY:H	1.24	0.86
8:AI:12:LYS:H	8:AI:105:ARG:HH21	1.23	0.86
29:BE:111:GLU:HA	29:BE:114:ARG:HG3	1.58	0.86
18:CB:163:ILE:HG23	18:CB:164:ASP:H	1.39	0.86
37:DL:116:VAL:HG13	37:DL:117:THR:H	1.40	0.86
42:DN:2:ARG:HA	42:DN:5:LYS:HD3	1.57	0.86
29:BE:58:LYS:H	29:BE:58:LYS:NZ	1.74	0.85
47:BF:84:ILE:HG23	47:BF:85:GLY:H	1.41	0.85
1:CA:664:G:H22	1:CA:741:G:H1	1.24	0.85
9:CJ:35:GLN:HG3	9:CJ:77:VAL:HB	1.55	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DQ:7:VAL:HA	44:DQ:10:ARG:HG2	1.56	0.85
23:BB:923:G:H1'	52:BW:23:LYS:HZ2	1.41	0.85
27:BK:47:ILE:HG12	27:BK:48:PRO:HD2	1.57	0.85
29:BE:5:LEU:HD12	29:BE:10:SER:HB2	1.56	0.85
29:BE:58:LYS:HE2	29:BE:60:TRP:HD1	1.41	0.85
16:CS:51:HIS:HA	16:CS:56:HIS:HA	1.58	0.85
38:DM:35:ALA:HB2	38:DM:100:LYS:HB2	1.57	0.85
2:AC:76:ILE:HA	2:AC:83:VAL:HG23	1.56	0.85
1:CA:1171:A:H2'	1:CA:1172:C:C6	2.11	0.85
5:CF:38:ARG:HD3	5:CF:97:THR:HA	1.56	0.85
37:DL:143:GLU:HG2	37:DL:144:GLU:H	1.38	0.85
48:DG:30:GLY:HA3	48:DG:78:VAL:HA	1.56	0.85
9:AJ:57:VAL:HG22	9:AJ:58:ASN:H	1.39	0.85
45:DS:26:GLY:H	45:DS:71:VAL:HG13	1.41	0.85
14:AQ:25:GLU:HA	14:AQ:40:THR:HA	1.57	0.85
2:CC:18:ASN:HA	2:CC:55:VAL:HG22	1.56	0.85
44:DQ:14:LYS:HA	44:DQ:17:LEU:HB3	1.57	0.85
46:DU:3:LYS:HB3	46:DU:82:VAL:HG21	1.57	0.85
49:BR:59:ILE:HG12	49:BR:101:ILE:HD13	1.57	0.85
23:BB:597:G:H21	37:BL:12:SER:HA	1.41	0.85
11:CL:24:GLU:HB2	11:CL:26:CYS:SG	2.17	0.85
9:CJ:52:LEU:HG	9:CJ:62:ARG:HE	1.42	0.85
27:DK:25:LEU:HD21	27:DK:40:LYS:HB2	1.58	0.85
1:AA:939:G:H5'	6:AG:101:ARG:HH12	1.41	0.85
3:AD:173:ASP:HB3	3:AD:178:GLU:HB2	1.57	0.85
9:CJ:6:ILE:HB	9:CJ:76:ILE:HG13	1.56	0.85
51:DZ:4:VAL:HG12	51:DZ:11:ARG:HG2	1.59	0.85
50:BT:29:THR:HA	50:BT:86:THR:HA	1.57	0.85
3:CD:173:ASP:HB3	3:CD:178:GLU:HB2	1.58	0.85
4:CE:14:LEU:HD23	4:CE:36:THR:HG22	1.58	0.85
29:DE:126:VAL:HG22	29:DE:127:GLU:H	1.41	0.85
37:BL:143:GLU:HG2	37:BL:144:GLU:H	1.40	0.84
7:CH:86:LYS:HB3	7:CH:90:GLU:HB3	1.59	0.84
23:DB:1579:A:H2'	23:DB:1580:A:C8	2.12	0.84
23:DB:2799:A:H4'	23:DB:2800:A:C8	2.12	0.84
50:DT:11:LEU:HD22	50:DT:11:LEU:H	1.39	0.84
21:AN:50:LEU:HD23	21:AN:51:PRO:HD3	1.58	0.84
42:BN:19:ALA:HA	42:BN:22:ARG:HB3	1.57	0.84
46:BU:3:LYS:HB3	46:BU:82:VAL:HG21	1.58	0.84
1:CA:1493:A:H3'	1:CA:1493:A:N3	1.92	0.84
8:CI:49:GLN:HA	8:CI:52:GLU:HG3	1.59	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DZ:7:VAL:HG13	51:DZ:8:THR:HG23	1.59	0.84
4:AE:71:ILE:HG12	4:AE:72:ASN:H	1.40	0.84
12:CM:3:ILE:HG12	12:CM:52:ILE:HD11	1.60	0.84
22:BA:32:U:H4'	22:BA:52:A:H62	1.41	0.84
27:BK:25:LEU:HD21	27:BK:40:LYS:HB2	1.57	0.84
37:BL:78:ARG:HB3	37:BL:113:ALA:HB2	1.57	0.84
11:CL:78:VAL:HG12	11:CL:101:LEU:HD13	1.58	0.84
23:DB:1099:G:H5"	24:DI:3:LYS:N	1.92	0.84
42:DN:19:ALA:HA	42:DN:22:ARG:HB3	1.59	0.84
1:AA:922:G:H2'	1:AA:923:A:C8	2.11	0.84
4:CE:71:ILE:HG12	4:CE:72:ASN:H	1.40	0.84
44:BQ:14:LYS:HA	44:BQ:17:LEU:HB3	1.58	0.84
1:CA:17:U:H2'	1:CA:18:C:C6	2.13	0.84
4:CE:132:PRO:HG2	4:CE:133:ILE:HD12	1.60	0.84
41:BJ:17:VAL:HG23	41:BJ:137:PRO:HB2	1.58	0.84
1:AA:560:A:H4'	1:AA:561:U:H5"	1.59	0.84
10:AK:105:ARG:HH21	19:AU:10:PRO:HB3	1.43	0.84
52:BW:51:GLY:HA3	52:BW:59:PHE:HB2	1.57	0.84
12:CM:28:ARG:HH12	12:CM:32:ILE:HD12	1.41	0.84
1:AA:1125:U:H2'	1:AA:1126:U:H5"	1.59	0.84
18:AB:202:ASN:ND2	18:AB:204:ASP:H	1.76	0.84
1:CA:920:U:H2'	1:CA:921:U:C6	2.13	0.84
15:AR:72:ARG:H	15:AR:72:ARG:NH1	1.75	0.84
23:BB:1310:G:H21	23:BB:1610:A:H8	1.26	0.84
1:CA:942:G:H21	8:CI:125:GLN:HE22	1.23	0.84
19:CU:34:ARG:HD3	19:CU:39:LYS:HE3	1.60	0.84
8:AI:20:ILE:HA	8:AI:62:LEU:HD12	1.59	0.83
48:BG:30:GLY:HA3	48:BG:78:VAL:HA	1.59	0.83
5:CF:3:HIS:HB2	5:CF:92:THR:HA	1.60	0.83
43:DO:64:TYR:HB3	43:DO:67:ASN:HB2	1.57	0.83
12:AM:14:ALA:HB2	12:AM:42:VAL:HG23	1.59	0.83
52:BW:39:GLN:HG2	52:BW:40:ARG:N	1.91	0.83
6:AG:71:THR:HA	6:AG:90:VAL:HG22	1.60	0.83
44:BQ:7:VAL:HA	44:BQ:10:ARG:HG2	1.58	0.83
23:DB:1310:G:H21	23:DB:1610:A:H8	1.25	0.83
30:DY:12:ALA:HA	30:DY:15:ARG:HD3	1.59	0.83
1:AA:973:G:H3'	1:AA:974:A:H5"	1.59	0.83
23:BB:364:C:H2'	23:BB:365:U:C6	2.14	0.83
27:BK:107:LEU:H	27:BK:107:LEU:HD12	1.43	0.83
14:CQ:25:GLU:HA	14:CQ:40:THR:HA	1.61	0.83
25:DC:94:LEU:HD13	25:DC:100:ARG:HD2	1.58	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DK:54:LYS:H	27:DK:54:LYS:HD2	1.42	0.83
27:DK:105:ARG:HD3	27:DK:105:ARG:H	1.43	0.83
8:AI:51:LEU:HB2	8:AI:56:MET:SD	2.17	0.83
10:CK:33:ILE:HB	10:CK:73:VAL:HG11	1.59	0.83
49:DR:59:ILE:HG12	49:DR:101:ILE:HD13	1.60	0.83
50:DT:29:THR:HA	50:DT:86:THR:HA	1.58	0.83
1:AA:1432:G:H5'	28:BP:105:LYS:HG2	1.59	0.83
28:BP:56:SER:HB2	28:BP:75:THR:HB	1.60	0.83
1:CA:1115:U:H5'	9:CJ:68:ARG:HH22	1.44	0.83
3:CD:2:ARG:HH11	3:CD:114:ARG:HD3	1.41	0.83
29:BE:126:VAL:HG22	29:BE:127:GLU:H	1.44	0.83
40:BH:115:VAL:HB	40:BH:130:VAL:HG12	1.58	0.83
22:DA:32:U:H4'	22:DA:52:A:H62	1.42	0.83
47:DF:28:PRO:HB2	47:DF:168:LEU:HD21	1.60	0.83
8:AI:117:LEU:HD22	8:AI:123:ARG:HB3	1.61	0.83
40:BH:5:LEU:HD12	40:BH:17:ASP:HB3	1.58	0.83
50:BT:5:GLU:HA	50:BT:8:LEU:HB2	1.58	0.83
2:CC:106:ARG:H	2:CC:106:ARG:NE	1.76	0.83
2:AC:61:LYS:HB3	2:AC:96:VAL:HG11	1.59	0.83
1:AA:1533:C:O2'	1:AA:1534:A:H4'	1.79	0.83
4:AE:132:PRO:HG2	4:AE:133:ILE:HD12	1.61	0.83
10:AK:108:ASN:HD21	19:AU:6:ARG:HD2	1.43	0.83
23:BB:1060:U:C2	23:BB:1088:A:N7	2.47	0.83
27:BK:54:LYS:HD2	27:BK:54:LYS:H	1.44	0.83
12:AM:90:HIS:HA	12:AM:108:ARG:HH22	1.44	0.82
40:BH:100:ALA:HB3	40:BH:112:LYS:HA	1.61	0.82
6:CG:120:ALA:HA	6:CG:123:LEU:HD12	1.58	0.82
23:BB:661:A:H1'	37:BL:12:SER:O	1.79	0.82
23:BB:1082:U:C4	23:BB:1086:A:C2	2.66	0.82
23:DB:2328:A:H2'	23:DB:2329:U:C6	2.14	0.82
24:DI:27:LEU:H	24:DI:27:LEU:HD23	1.44	0.82
29:DE:5:LEU:HD12	29:DE:10:SER:HB2	1.60	0.82
22:BA:89:U:O2	23:BB:958:U:H2'	1.79	0.82
29:BE:18:THR:HA	29:BE:106:LYS:HG3	1.62	0.82
29:BE:61:ARG:NH1	29:BE:64:GLY:HA3	1.93	0.82
51:BZ:7:VAL:HG13	51:BZ:8:THR:HG23	1.61	0.82
41:DJ:17:VAL:HG23	41:DJ:137:PRO:HB2	1.58	0.82
9:CJ:52:LEU:H	9:CJ:52:LEU:HD12	1.43	0.82
23:DB:1019:U:H2'	23:DB:1020:A:C8	2.15	0.82
1:AA:1063:C:H42	1:AA:1193:G:H1	1.23	0.82
23:BB:2328:A:H2'	23:BB:2329:U:C6	2.14	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2529:G:H4'	48:BG:174:LYS:HG3	1.61	0.82
23:DB:1024:G:H3'	23:DB:1025:G:H5"	1.59	0.82
28:DP:20:ARG:HG3	28:DP:21:PRO:HD2	1.61	0.82
48:DG:153:PRO:HG2	48:DG:162:ARG:HB3	1.62	0.82
48:BG:43:LYS:HB2	48:BG:50:THR:HB	1.61	0.82
23:DB:321:U:H1'	29:DE:162:ARG:HH11	1.44	0.82
40:DH:116:ARG:HB3	40:DH:131:SER:H	1.44	0.82
52:DW:39:GLN:HG2	52:DW:40:ARG:N	1.92	0.82
23:BB:1024:G:H3'	23:BB:1025:G:H5"	1.62	0.82
28:BP:21:PRO:HG2	28:BP:91:VAL:HG21	1.59	0.82
23:DB:1082:U:C4	23:DB:1086:A:C2	2.67	0.82
23:BB:1579:A:H2'	23:BB:1580:A:C8	2.15	0.82
38:BM:35:ALA:HB2	38:BM:100:LYS:HB2	1.61	0.82
5:CF:9:MET:HE1	15:CR:64:LEU:HG	1.61	0.82
23:DB:2674:G:H4'	27:DK:30:ARG:HG3	1.61	0.82
1:AA:922:G:H4'	4:AE:24:VAL:HA	1.62	0.82
23:DB:1099:G:H5"	24:DI:2:LYS:C	2.04	0.82
42:BN:2:ARG:HG2	42:BN:5:LYS:HB2	1.62	0.82
3:CD:29:THR:H	3:CD:33:ILE:HG22	1.44	0.82
11:CL:51:VAL:HG12	11:CL:52:CYS:H	1.45	0.82
23:DB:1060:U:C2	23:DB:1088:A:N7	2.48	0.82
24:DI:121:ILE:HD13	24:DI:121:ILE:H	1.45	0.82
49:DR:58:VAL:HG22	49:DR:59:ILE:H	1.44	0.82
52:DW:45:HIS:HB2	52:DW:50:VAL:HG12	1.62	0.82
23:BB:2531:A:H5'	48:BG:156:TYR:CZ	2.14	0.81
12:CM:104:ASN:H	12:CM:106:ARG:HH21	1.28	0.81
23:DB:196:A:H5"	37:DL:47:ARG:HH12	1.43	0.81
12:AM:38:ILE:HG13	12:AM:55:LEU:HD21	1.60	0.81
49:BR:39:LEU:HA	49:BR:53:PHE:HA	1.60	0.81
23:DB:448:U:H5	23:DB:583:G:H1'	1.45	0.81
29:DE:18:THR:HA	29:DE:106:LYS:HG3	1.61	0.81
37:DL:124:GLY:N	37:DL:143:GLU:HG3	1.94	0.81
43:DO:47:VAL:HG12	43:DO:48:LEU:H	1.45	0.81
1:AA:1289:A:H61	8:AI:71:ILE:HD11	1.45	0.81
5:AF:11:HIS:HB3	5:AF:14:GLN:HG3	1.61	0.81
7:AH:86:LYS:HB3	7:AH:90:GLU:HB3	1.60	0.81
8:AI:113:LYS:HG2	8:AI:120:ALA:H	1.46	0.81
10:AK:33:ILE:HB	10:AK:73:VAL:HG11	1.61	0.81
23:BB:2010:G:H5"	45:BS:42:LYS:HB2	1.63	0.81
32:B4:2:LYS:HG2	32:B4:4:ARG:HE	1.44	0.81
35:BV:9:ARG:HH21	35:BV:12:GLN:HA	1.45	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BL:29:LYS:HG3	37:BL:30:THR:HG23	1.62	0.81
13:CP:5:ARG:NH2	13:CP:24:SER:HA	1.95	0.81
17:AT:34:VAL:HG11	17:AT:78:LEU:HD22	1.63	0.81
40:DH:5:LEU:HD12	40:DH:17:ASP:HB3	1.59	0.81
23:BB:571:U:H3'	49:BR:80:ARG:HH12	1.46	0.81
27:BK:105:ARG:HD3	27:BK:105:ARG:H	1.42	0.81
1:CA:1288:A:N1	1:CA:1371:G:H1'	1.96	0.81
1:CA:1492:A:H3'	1:CA:1493:A:O4'	1.80	0.81
2:CC:133:MET:HE1	2:CC:165:GLU:HG3	1.61	0.81
23:DB:571:U:H3'	49:DR:80:ARG:HH12	1.44	0.81
1:CA:975:A:H4'	1:CA:976:G:O5'	1.78	0.81
29:DE:58:LYS:H	29:DE:58:LYS:NZ	1.78	0.81
29:DE:111:GLU:HA	29:DE:114:ARG:HG3	1.62	0.81
47:DF:84:ILE:HG23	47:DF:85:GLY:H	1.45	0.81
48:DG:8:VAL:HG11	48:DG:49:LEU:HB3	1.61	0.81
12:AM:33:LEU:HD22	12:AM:38:ILE:HB	1.61	0.81
47:BF:28:PRO:HB2	47:BF:168:LEU:HD21	1.63	0.81
48:BG:153:PRO:HG2	48:BG:162:ARG:HB3	1.63	0.81
12:CM:14:ALA:HB2	12:CM:42:VAL:HG23	1.63	0.81
29:DE:4:VAL:HG12	29:DE:5:LEU:H	1.46	0.81
48:DG:43:LYS:HB2	48:DG:50:THR:HB	1.61	0.81
48:DG:148:ARG:HD3	48:DG:152:ARG:HH11	1.45	0.81
1:AA:279:A:H5"	1:AA:280:C:H3'	1.61	0.81
26:BD:29:VAL:HB	26:BD:98:VAL:HG22	1.63	0.81
17:CT:75:LYS:HA	17:CT:78:LEU:HD12	1.61	0.81
9:AJ:17:LEU:HD12	9:AJ:96:VAL:HG13	1.61	0.81
23:BB:141:G:H5"	23:BB:142:A:O4'	1.82	0.81
36:B2:45:SER:O	36:B2:46:LYS:HB2	1.80	0.81
45:BS:26:GLY:H	45:BS:71:VAL:HG13	1.43	0.81
47:BF:137:PHE:HB2	47:BF:138:PRO:HD2	1.62	0.81
1:CA:21:G:H2'	1:CA:22:G:C8	2.16	0.81
1:CA:958:A:H61	16:CS:76:THR:HG22	1.44	0.81
29:DE:3:LEU:H	29:DE:13:THR:H	1.29	0.81
36:D2:45:SER:O	36:D2:46:LYS:HB2	1.80	0.81
42:DN:12:ARG:HG2	42:DN:16:HIS:ND1	1.96	0.81
4:AE:28:ARG:NH2	4:AE:30:PHE:HA	1.96	0.80
40:BH:31:VAL:HB	40:BH:32:PRO:CD	2.11	0.80
23:DB:674:G:H1'	29:DE:69:ARG:HE	1.45	0.80
3:AD:2:ARG:HH11	3:AD:114:ARG:HD3	1.44	0.80
23:BB:543:G:H2'	23:BB:544:C:H5"	1.63	0.80
23:BB:2133:G:H2'	23:BB:2133:G:N3	1.95	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:21:ILE:HG22	12:CM:23:GLY:H	1.44	0.80
11:AL:51:VAL:HG12	11:AL:52:CYS:H	1.45	0.80
12:AM:49:GLU:O	12:AM:52:ILE:HG22	1.80	0.80
18:AB:57:ASN:HB3	18:AB:219:THR:HG22	1.63	0.80
29:BE:4:VAL:HG12	29:BE:5:LEU:H	1.45	0.80
40:BH:6:LEU:HD11	40:BH:37:VAL:HG12	1.62	0.80
43:BO:39:VAL:HG12	43:BO:48:LEU:HD12	1.63	0.80
1:CA:676:A:H1'	10:CK:116:PRO:HB3	1.62	0.80
3:CD:160:LEU:HD13	3:CD:160:LEU:H	1.46	0.80
27:DK:71:ARG:HB3	27:DK:72:PRO:HD2	1.61	0.80
4:AE:71:ILE:HD11	4:AE:144:GLU:HG3	1.63	0.80
27:BK:38:ILE:H	27:BK:38:ILE:HD13	1.46	0.80
29:BE:149:ILE:HD11	29:BE:172:ALA:HA	1.62	0.80
4:CE:28:ARG:NH2	4:CE:30:PHE:HA	1.96	0.80
10:CK:105:ARG:HH21	19:CU:10:PRO:HB3	1.45	0.80
8:CI:16:ALA:HB2	8:CI:66:VAL:HG23	1.62	0.80
23:DB:2722:G:H4'	42:DN:4:ARG:HB2	1.63	0.80
40:DH:31:VAL:HB	40:DH:32:PRO:CD	2.11	0.80
12:AM:44:ILE:HA	12:AM:47:LEU:HD23	1.64	0.80
23:BB:718:A:H3'	23:BB:719:C:H6	1.45	0.80
49:BR:58:VAL:HG22	49:BR:59:ILE:H	1.46	0.80
27:DK:107:LEU:H	27:DK:107:LEU:HD12	1.47	0.80
1:AA:17:U:H2'	1:AA:18:C:C6	2.16	0.80
13:AP:5:ARG:NH2	13:AP:24:SER:HA	1.96	0.80
18:AB:125:PHE:HD2	18:AB:125:PHE:H	1.29	0.80
23:BB:1652:A:H62	42:BN:11:ASN:HD21	1.28	0.80
23:DB:876:C:H42	23:DB:901:C:N4	1.80	0.80
23:DB:1099:G:H8	24:DI:3:LYS:CA	1.95	0.80
23:DB:1168:G:H2'	23:DB:1169:A:C8	2.17	0.80
24:DI:21:PRO:HB2	24:DI:22:PRO:HD3	1.63	0.80
6:AG:145:GLU:HA	6:AG:148:LYS:HB2	1.64	0.80
21:CN:65:GLN:H	21:CN:65:GLN:NE2	1.79	0.80
47:DF:90:LEU:HD12	47:DF:94:ARG:HB3	1.62	0.80
9:AJ:7:ARG:HB2	9:AJ:101:SER:N	1.94	0.80
23:BB:2799:A:H4'	23:BB:2800:A:C8	2.17	0.80
40:BH:73:ASN:N	40:BH:73:ASN:HD22	1.78	0.80
23:DB:2472:G:H2'	23:DB:2475:C:H42	1.45	0.80
35:DV:9:ARG:HH21	35:DV:12:GLN:HA	1.47	0.80
23:BB:321:U:H1'	29:BE:162:ARG:HH11	1.47	0.80
23:BB:2472:G:H2'	23:BB:2475:C:H42	1.46	0.80
6:CG:19:SER:HB3	6:CG:22:LEU:HB2	1.62	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AU:34:ARG:HE	19:AU:35:GLU:C	1.89	0.80
44:BQ:8:ILE:H	44:BQ:8:ILE:HD12	1.45	0.80
1:CA:1313:U:OP2	16:CS:5:LYS:HA	1.82	0.80
1:CA:1499:A:H2'	1:CA:1500:A:H8	1.47	0.80
19:CU:34:ARG:HE	19:CU:35:GLU:C	1.89	0.80
22:DA:89:U:O2	23:DB:958:U:H2'	1.82	0.80
47:DF:137:PHE:HB2	47:DF:138:PRO:HD2	1.62	0.80
48:BG:8:VAL:HG11	48:BG:49:LEU:HB3	1.64	0.79
52:DW:48:ALA:HB3	52:DW:81:ILE:HG13	1.63	0.79
1:AA:1221:G:H4'	16:AS:76:THR:HG21	1.63	0.79
1:CA:1206:G:H4'	2:CC:192:TYR:HA	1.64	0.79
9:CJ:92:LEU:HD22	9:CJ:92:LEU:H	1.46	0.79
23:BB:670:A:H4'	23:BB:671:C:H5'	1.64	0.79
52:BW:48:ALA:HB3	52:BW:81:ILE:HG13	1.65	0.79
5:CF:11:HIS:HB3	5:CF:14:GLN:HG3	1.64	0.79
48:DG:6:ALA:HB3	48:DG:68:ARG:HG3	1.65	0.79
3:AD:160:LEU:H	3:AD:160:LEU:HD13	1.45	0.79
8:AI:12:LYS:H	8:AI:105:ARG:NH2	1.80	0.79
11:AL:24:GLU:HB2	11:AL:26:CYS:SG	2.22	0.79
17:AT:75:LYS:HA	17:AT:78:LEU:HD12	1.64	0.79
37:BL:124:GLY:N	37:BL:143:GLU:HG3	1.98	0.79
1:CA:13:U:H1'	1:CA:914:A:H5"	1.64	0.79
21:CN:30:ILE:HG22	21:CN:44:VAL:HG21	1.64	0.79
29:DE:117:ARG:HA	29:DE:185:LYS:HG2	1.65	0.79
11:AL:78:VAL:HG12	11:AL:101:LEU:HD13	1.65	0.79
22:BA:11:C:H5'	52:BW:71:LYS:HE3	1.64	0.79
48:BG:6:ALA:HB3	48:BG:68:ARG:HG3	1.64	0.79
51:BZ:4:VAL:HG12	51:BZ:11:ARG:HG2	1.62	0.79
21:CN:40:ARG:HB2	21:CN:40:ARG:HH11	1.47	0.79
32:D4:2:LYS:HG2	32:D4:4:ARG:HE	1.48	0.79
1:AA:21:G:H2'	1:AA:22:G:C8	2.17	0.79
2:AC:6:PRO:HG3	2:AC:200:TRP:HE1	1.48	0.79
9:AJ:26:VAL:HG12	9:AJ:30:LYS:HE2	1.63	0.79
9:AJ:42:LEU:HD23	9:AJ:71:LEU:HD11	1.64	0.79
48:BG:84:LYS:HG2	48:BG:85:LYS:H	1.47	0.79
44:DQ:57:ARG:HH11	44:DQ:61:ILE:HD11	1.47	0.79
47:DF:110:ILE:HA	47:DF:111:ARG:CZ	2.12	0.79
54:AA:1661:SCM:H2M1	4:AE:26:GLY:HA2	1.63	0.79
3:AD:29:THR:H	3:AD:33:ILE:HG22	1.47	0.79
10:AK:91:GLY:HA2	10:AK:94:SER:HB3	1.65	0.79
48:DG:84:LYS:HG2	48:DG:85:LYS:H	1.48	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AF:38:ARG:HB3	5:AF:63:ASN:HB2	1.65	0.79
41:BJ:81:ILE:HG23	41:BJ:82:GLY:H	1.48	0.79
41:DJ:81:ILE:HG23	41:DJ:82:GLY:H	1.47	0.79
24:BI:21:PRO:HB2	24:BI:22:PRO:HD3	1.62	0.79
47:BF:2:LYS:HD2	47:BF:100:GLU:HG2	1.63	0.79
47:BF:90:LEU:HD12	47:BF:94:ARG:HB3	1.64	0.79
4:CE:71:ILE:HD11	4:CE:144:GLU:HG3	1.65	0.79
5:AF:9:MET:HE1	15:AR:64:LEU:HG	1.64	0.79
16:AS:66:VAL:HG23	16:AS:67:GLY:H	1.47	0.79
42:BN:12:ARG:HG2	42:BN:16:HIS:ND1	1.98	0.79
1:CA:337:G:H2'	1:CA:338:A:H8	1.48	0.79
1:CA:462:G:H5'	1:CA:463:U:OP2	1.83	0.79
11:CL:29:LYS:HB3	11:CL:56:LEU:HD22	1.64	0.79
2:CC:120:THR:HG22	2:CC:188:ALA:HB2	1.65	0.79
23:DB:1099:G:O4'	24:DI:3:LYS:C	2.25	0.79
5:AF:3:HIS:HB2	5:AF:92:THR:HA	1.64	0.78
23:DB:670:A:H4'	23:DB:671:C:H5'	1.65	0.78
23:DB:1099:G:P	24:DI:4:VAL:H	2.06	0.78
1:AA:13:U:H1'	1:AA:914:A:H5"	1.64	0.78
23:BB:2376:A:H61	43:BO:94:ARG:HD2	1.48	0.78
15:CR:38:ILE:H	15:CR:38:ILE:HD13	1.48	0.78
25:DC:172:THR:HG22	25:DC:182:LYS:HG2	1.64	0.78
40:DH:77:THR:HG22	40:DH:143:ILE:HB	1.66	0.78
1:AA:676:A:H1'	10:AK:116:PRO:HB3	1.63	0.78
23:BB:1019:U:H2'	23:BB:1020:A:C8	2.18	0.78
25:BC:172:THR:HG22	25:BC:182:LYS:HG2	1.64	0.78
26:BD:34:VAL:CG1	26:BD:94:GLN:H	1.96	0.78
1:CA:1292:G:H2'	1:CA:1293:C:C6	2.19	0.78
8:CI:29:ILE:HG12	8:CI:64:ILE:HB	1.65	0.78
9:CJ:8:ILE:HA	9:CJ:100:ILE:HG22	1.64	0.78
13:AP:4:ILE:HG12	13:AP:21:VAL:HG22	1.65	0.78
41:BJ:30:THR:HG23	41:BJ:108:MET:HE1	1.65	0.78
18:CB:216:VAL:O	18:CB:220:VAL:HG23	1.84	0.78
26:DD:106:LYS:HB3	26:DD:206:ALA:H	1.48	0.78
27:DK:38:ILE:HD13	27:DK:38:ILE:H	1.47	0.78
1:AA:764:C:H3'	1:AA:765:G:H21	1.48	0.78
2:AC:126:ARG:HA	2:AC:126:ARG:HH11	1.49	0.78
18:AB:163:ILE:HG23	18:AB:164:ASP:H	1.49	0.78
21:AN:31:SER:H	21:AN:44:VAL:HG11	1.48	0.78
23:BB:2060:A:H2'	29:BE:63:LYS:HE2	1.63	0.78
24:BI:33:ASN:HD21	24:BI:64:ARG:HH11	1.31	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BK:19:VAL:HG13	27:BK:43:ILE:HA	1.66	0.78
27:BK:71:ARG:HB3	27:BK:72:PRO:HD2	1.64	0.78
5:CF:38:ARG:HB3	5:CF:63:ASN:HB2	1.65	0.78
32:D4:36:ARG:HG2	32:D4:37:GLN:H	1.48	0.78
44:DQ:8:ILE:HD12	44:DQ:8:ILE:H	1.46	0.78
1:AA:1101:A:H4'	1:AA:1102:A:O5'	1.84	0.78
40:BH:90:LEU:HD13	40:BH:123:ARG:HA	1.65	0.78
8:AI:118:ARG:HB2	8:AI:124:PRO:HD3	1.64	0.78
18:AB:120:SER:HA	18:AB:125:PHE:CB	2.14	0.78
23:BB:2306:C:H3'	23:BB:2307:G:C5'	2.13	0.78
44:BQ:30:VAL:HG22	44:BQ:31:TYR:H	1.48	0.78
2:CC:113:LYS:HD2	2:CC:184:ASN:HD21	1.46	0.78
25:DC:144:GLU:HG3	25:DC:151:GLY:N	1.98	0.78
43:DO:39:VAL:HG12	43:DO:48:LEU:HD12	1.65	0.78
48:DG:26:LYS:HA	48:DG:32:LEU:H	1.48	0.78
24:BI:55:PRO:HD3	24:BI:74:PRO:HD3	1.64	0.78
28:BP:20:ARG:HG3	28:BP:21:PRO:HD2	1.65	0.78
32:B4:36:ARG:HG2	32:B4:37:GLN:H	1.49	0.78
37:BL:6:LEU:HD23	37:BL:6:LEU:H	1.48	0.78
48:BG:15:ASP:HB2	48:BG:26:LYS:HD3	1.66	0.78
17:CT:34:VAL:HG11	17:CT:78:LEU:HD22	1.64	0.78
12:CM:54:THR:O	12:CM:58:GLU:HB2	1.83	0.78
1:AA:376:G:H5"	13:AP:5:ARG:HB2	1.66	0.78
6:AG:13:PRO:HA	6:AG:20:GLU:HA	1.65	0.78
6:AG:71:THR:H	6:AG:141:HIS:HE1	1.30	0.78
16:AS:29:PRO:HB3	16:AS:47:THR:HB	1.64	0.78
1:CA:1004:A:H5'	1:CA:1024:G:H22	1.47	0.78
1:CA:1483:A:H2'	1:CA:1484:C:O4'	1.84	0.78
25:DC:196:ASN:ND2	25:DC:199:HIS:HB2	1.99	0.78
1:CA:1238:A:H5'	1:CA:1336:C:N4	1.99	0.78
10:CK:108:ASN:HD21	19:CU:6:ARG:HD2	1.48	0.78
18:CB:14:HIS:HD2	18:CB:202:ASN:H	1.30	0.78
44:DQ:89:ILE:HG21	49:DR:11:GLN:HE22	1.47	0.78
51:DZ:40:VAL:HG21	51:DZ:43:GLU:HB3	1.65	0.78
1:AA:68:G:H5'	1:AA:171:A:H1'	1.66	0.77
19:AU:11:PHE:HD2	2:CC:108:PRO:HD2	1.49	0.77
1:CA:1236:A:H4'	1:CA:1304:G:H4'	1.66	0.77
26:DD:29:VAL:HB	26:DD:98:VAL:HG22	1.64	0.77
37:BL:57:LEU:HD12	37:BL:60:ARG:HH22	1.49	0.77
1:CA:83:C:O2'	1:CA:84:U:H2'	1.84	0.77
39:DX:3:ALA:HA	39:DX:6:LEU:HD23	1.64	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:62:GLN:HG3	47:DF:91:ARG:HH11	1.49	0.77
23:BB:979:A:H2'	23:BB:982:C:H41	1.50	0.77
1:CA:979:C:H1'	1:CA:1317:C:H41	1.48	0.77
23:DB:2306:C:H3'	23:DB:2307:G:C5'	2.13	0.77
23:DB:2742:G:OP1	32:D4:36:ARG:HD3	1.81	0.77
40:DH:4:ILE:HB	40:DH:37:VAL:HG12	1.67	0.77
18:AB:86:CYS:HB3	18:AB:88:GLN:NE2	1.99	0.77
18:AB:166:ASP:OD1	18:AB:190:SER:HA	1.85	0.77
23:BB:590:A:H2'	23:BB:591:U:C6	2.20	0.77
26:BD:55:LYS:HZ2	26:BD:55:LYS:HB3	1.50	0.77
48:BG:132:LEU:HD23	48:BG:132:LEU:H	1.48	0.77
23:DB:947:A:H2'	23:DB:948:C:C6	2.19	0.77
23:DB:1558:C:H4'	23:DB:1559:U:H5'	1.65	0.77
23:BB:1387:A:H5'	23:BB:1469:A:H1'	1.67	0.77
26:BD:118:PHE:CE2	42:BN:1:MET:HB3	2.20	0.77
37:BL:80:SER:HA	37:BL:115:GLU:HB2	1.67	0.77
1:CA:1342:C:O2'	8:CI:125:GLN:HB3	1.84	0.77
8:CI:50:PRO:HD3	8:CI:79:ARG:HG3	1.66	0.77
23:DB:1199:U:H5'	44:DQ:4:LYS:HD3	1.67	0.77
44:DQ:30:VAL:HG22	44:DQ:31:TYR:H	1.49	0.77
23:BB:1060:U:OP2	24:BI:74:PRO:HA	1.84	0.77
45:BS:24:ILE:HG22	45:BS:71:VAL:HG11	1.65	0.77
46:BU:47:PRO:HB2	46:BU:53:GLN:HB2	1.67	0.77
50:BT:73:ARG:HB3	50:BT:73:ARG:HH21	1.49	0.77
25:DC:2:VAL:HG23	25:DC:3:VAL:H	1.50	0.77
29:DE:61:ARG:NH1	29:DE:64:GLY:HA3	2.00	0.77
45:DS:24:ILE:HG22	45:DS:71:VAL:HG11	1.66	0.77
23:BB:1322:A:H4'	45:BS:82:MET:HE1	1.66	0.77
25:BC:94:LEU:HD13	25:BC:100:ARG:HD2	1.64	0.77
43:BO:47:VAL:HG12	43:BO:48:LEU:H	1.50	0.77
52:BW:51:GLY:CA	52:BW:59:PHE:HB2	2.15	0.77
12:CM:29:SER:HA	12:CM:32:ILE:HG22	1.65	0.77
23:DB:600:G:H1'	29:DE:100:MET:HG2	1.65	0.77
23:DB:899:A:H3'	23:DB:900:A:H8	1.48	0.77
24:DI:55:PRO:HD3	24:DI:74:PRO:HD3	1.66	0.77
1:AA:203:G:H1'	1:AA:465:A:C6	2.20	0.77
8:AI:55:ASP:HB2	8:AI:59:LYS:HD2	1.64	0.77
14:AQ:20:ILE:HD13	14:AQ:47:ASP:HB3	1.67	0.77
33:D1:34:GLU:HG2	33:D1:49:LYS:HG3	1.67	0.77
3:AD:90:LEU:HA	3:AD:93:LEU:HD12	1.66	0.77
12:AM:78:ARG:O	12:AM:82:LEU:HG	1.84	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AB:23:ASN:HD21	18:AB:25:LYS:HB2	1.49	0.77
23:BB:1558:C:H4'	23:BB:1559:U:H5'	1.65	0.77
23:BB:2901:C:H2'	23:BB:2902:C:H5'	1.67	0.77
41:BJ:29:ALA:HB3	41:BJ:108:MET:HE3	1.66	0.77
52:BW:45:HIS:HB2	52:BW:50:VAL:HG12	1.65	0.77
1:CA:176:C:H2'	1:CA:177:G:N3	2.00	0.77
1:CA:243:A:H4'	1:CA:244:U:H5'	1.67	0.77
20:CO:71:LYS:HG2	20:CO:75:VAL:HG22	1.67	0.77
23:DB:571:U:H3'	49:DR:80:ARG:NH1	2.00	0.77
23:DB:1097:U:H2'	23:DB:1098:A:O4'	1.84	0.77
23:DB:1322:A:H4'	45:DS:82:MET:HE1	1.66	0.77
26:DD:151:THR:HB	26:DD:152:PRO:HD3	1.67	0.77
29:DE:2:GLU:HA	29:DE:13:THR:HA	1.66	0.77
18:AB:13:VAL:HB	18:AB:207:ARG:HE	1.50	0.77
18:AB:61:SER:HB2	18:AB:62:ARG:NH1	2.00	0.77
23:BB:448:U:H5	23:BB:583:G:H1'	1.50	0.77
26:BD:106:LYS:HB3	26:BD:206:ALA:H	1.50	0.77
8:CI:19:PHE:HB2	8:CI:63:TYR:HB3	1.66	0.77
8:CI:51:LEU:HD13	8:CI:56:MET:HG2	1.67	0.77
23:DB:1387:A:H5'	23:DB:1469:A:H1'	1.66	0.77
24:DI:45:THR:HA	24:DI:48:ILE:HG22	1.66	0.77
49:DR:72:VAL:HG23	49:DR:89:HIS:HB3	1.67	0.77
2:AC:123:LEU:HA	2:AC:127:VAL:CG2	2.14	0.76
29:BE:147:LEU:HB3	29:BE:186:VAL:HG23	1.66	0.76
45:BS:4:ILE:HG22	45:BS:106:VAL:HA	1.65	0.76
47:BF:8:LYS:HA	47:BF:12:VAL:HG21	1.67	0.76
10:CK:22:ILE:HB	10:CK:85:VAL:HG22	1.67	0.76
23:DB:718:A:H3'	23:DB:719:C:H6	1.48	0.76
23:DB:1373:A:H2'	23:DB:1374:G:O4'	1.84	0.76
37:DL:6:LEU:H	37:DL:6:LEU:HD23	1.50	0.76
23:BB:2880:C:O4'	42:BN:91:ALA:HB3	1.85	0.76
30:BY:6:ILE:H	30:BY:6:ILE:HD13	1.50	0.76
44:BQ:57:ARG:HH11	44:BQ:61:ILE:HD11	1.51	0.76
48:BG:96:ALA:HB3	48:BG:103:ASN:HB3	1.66	0.76
23:DB:1099:G:OP2	24:DI:3:LYS:HA	1.84	0.76
52:DW:51:GLY:CA	52:DW:59:PHE:HB2	2.14	0.76
1:AA:1499:A:H2'	1:AA:1500:A:H8	1.50	0.76
29:BE:3:LEU:H	29:BE:13:THR:H	1.28	0.76
29:BE:117:ARG:HA	29:BE:185:LYS:HG2	1.65	0.76
46:BU:85:ARG:NE	46:BU:85:ARG:HA	2.00	0.76
23:DB:979:A:H2'	23:DB:982:C:H41	1.50	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2330:G:H1'	52:DW:38:ARG:HB2	1.68	0.76
32:D4:5:ALA:HA	32:D4:37:GLN:HE22	1.49	0.76
34:D3:31:ILE:HD11	34:D3:34:LYS:HD3	1.67	0.76
23:BB:2039:U:H2'	23:BB:2040:G:H8	1.51	0.76
25:BC:2:VAL:HG23	25:BC:3:VAL:H	1.51	0.76
32:B4:5:ALA:HA	32:B4:37:GLN:HE22	1.49	0.76
33:B1:5:ARG:HH11	33:B1:25:ASN:HB2	1.49	0.76
42:BN:2:ARG:HA	42:BN:5:LYS:HD3	1.65	0.76
47:BF:110:ILE:HA	47:BF:111:ARG:CZ	2.15	0.76
52:BW:27:GLY:O	52:BW:63:ASP:HA	1.85	0.76
1:CA:67:C:H2'	1:CA:68:G:H8	1.50	0.76
3:CD:26:ALA:HA	3:CD:30:LYS:HE3	1.67	0.76
10:CK:91:GLY:HA2	10:CK:94:SER:HB3	1.68	0.76
6:CG:30:MET:HE3	6:CG:33:GLY:HA2	1.66	0.76
18:CB:48:MET:O	18:CB:51:GLU:HB3	1.85	0.76
23:DB:1099:G:P	24:DI:3:LYS:HA	2.25	0.76
26:DD:34:VAL:CG1	26:DD:94:GLN:H	1.99	0.76
1:AA:269:C:H2'	1:AA:270:A:C8	2.20	0.76
18:AB:107:ARG:HH22	18:AB:111:LYS:HD3	1.49	0.76
33:B1:37:LYS:H	33:B1:48:TYR:HD2	1.34	0.76
39:BX:3:ALA:HA	39:BX:6:LEU:HD23	1.66	0.76
1:CA:67:C:H2'	1:CA:68:G:C8	2.20	0.76
16:CS:10:ILE:HG22	16:CS:14:LEU:HD21	1.67	0.76
29:DE:3:LEU:HB2	29:DE:12:LEU:HD12	1.68	0.76
52:DW:27:GLY:O	52:DW:63:ASP:HA	1.84	0.76
8:AI:51:LEU:HB3	8:AI:56:MET:HB3	1.65	0.76
3:CD:12:ARG:HH11	3:CD:12:ARG:HB3	1.51	0.76
8:CI:18:VAL:HG11	8:CI:82:ILE:HA	1.66	0.76
8:CI:66:VAL:HG21	8:CI:74:GLN:HG3	1.66	0.76
29:DE:149:ILE:HD11	29:DE:172:ALA:HA	1.65	0.76
16:AS:17:LYS:HD2	16:AS:30:LEU:HD22	1.66	0.76
20:AO:32:LEU:O	20:AO:36:ILE:HG12	1.86	0.76
23:BB:79:C:O2'	23:BB:346:A:H1'	1.85	0.76
23:BB:1046:A:C3'	23:BB:1047:G:H5"	2.15	0.76
23:BB:1723:G:H3'	23:BB:1724:G:H8	1.50	0.76
27:DK:118:LEU:C	27:DK:120:PRO:HD2	2.10	0.76
45:DS:4:ILE:HG22	45:DS:106:VAL:HA	1.66	0.76
1:AA:1213:A:H2'	1:AA:1215:G:N7	2.00	0.76
15:AR:38:ILE:HD13	15:AR:38:ILE:H	1.50	0.76
23:BB:1082:U:N3	23:BB:1086:A:C2	2.53	0.76
40:BH:99:ILE:HG13	40:BH:130:VAL:HG21	1.67	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:147:ARG:HG2	47:BF:148:VAL:HG22	1.68	0.76
51:BZ:5:CYS:HB2	51:BZ:10:LYS:HB2	1.66	0.76
12:CM:12:LYS:HB3	12:CM:16:ILE:HG23	1.67	0.76
21:CN:41:TRP:CE3	21:CN:41:TRP:HA	2.19	0.76
16:CS:62:THR:HG22	16:CS:63:ASP:H	1.49	0.76
20:CO:64:ARG:HE	20:CO:64:ARG:HA	1.50	0.76
23:DB:2039:U:H2'	23:DB:2040:G:H8	1.50	0.76
23:DB:2886:A:H62	31:D0:39:ARG:NE	1.83	0.76
33:D1:33:LEU:HB3	33:D1:51:ALA:CB	2.16	0.76
44:DQ:26:ALA:O	44:DQ:30:VAL:HG12	1.86	0.76
8:AI:9:GLY:HA2	8:AI:80:HIS:HB3	1.68	0.76
23:BB:580:U:H2'	23:BB:581:C:C6	2.20	0.76
29:BE:148:ILE:HG13	29:BE:167:VAL:HG23	1.68	0.76
1:CA:764:C:H3'	1:CA:765:G:H21	1.50	0.76
3:CD:90:LEU:HA	3:CD:93:LEU:HD12	1.68	0.76
12:CM:28:ARG:NH1	12:CM:32:ILE:HD12	2.00	0.76
23:DB:919:U:H2'	23:DB:920:A:C8	2.20	0.76
30:DY:6:ILE:HD13	30:DY:6:ILE:H	1.49	0.76
46:DU:85:ARG:HA	46:DU:85:ARG:NE	2.01	0.76
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.19	0.76
23:BB:2134:A:N6	23:BB:2157:G:H21	1.83	0.76
26:BD:116:LYS:HG3	26:BD:165:MET:SD	2.26	0.76
34:B3:31:ILE:HD11	34:B3:34:LYS:HD3	1.66	0.76
48:BG:26:LYS:HA	48:BG:32:LEU:H	1.50	0.76
1:CA:337:G:H2'	1:CA:338:A:C8	2.20	0.76
10:CK:28:ASN:ND2	10:CK:46:ALA:HB3	2.00	0.76
23:DB:2267:A:H3'	23:DB:2267:A:C8	2.21	0.76
48:DG:9:VAL:HA	48:DG:48:THR:HB	1.67	0.76
6:AG:47:GLU:HA	6:AG:57:GLU:HG2	1.68	0.75
12:AM:21:ILE:HG23	12:AM:65:GLU:OE2	1.86	0.75
14:AQ:13:SER:HB3	14:AQ:21:VAL:HB	1.65	0.75
16:AS:52:ASN:CG	16:AS:53:GLY:H	1.94	0.75
20:AO:35:GLN:HB2	20:AO:59:MET:HE1	1.68	0.75
23:BB:947:A:H2'	23:BB:948:C:C6	2.21	0.75
18:CB:212:TYR:HA	18:CB:215:ALA:HB3	1.66	0.75
23:DB:1251:C:H2'	44:DQ:5:ARG:HH12	1.51	0.75
25:DC:4:LYS:HD2	25:DC:5:CYS:H	1.50	0.75
26:DD:53:GLY:HA3	26:DD:77:ARG:HG3	1.68	0.75
1:AA:946:A:H2'	1:AA:947:G:C8	2.20	0.75
1:AA:1348:U:H4'	8:AI:121:ARG:HG3	1.65	0.75
10:AK:19:VAL:HG23	10:AK:34:THR:HG23	1.68	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AP:28:ARG:HD2	13:AP:29:ASN:N	2.00	0.75
20:AO:22:THR:HA	20:AO:27:VAL:HG11	1.68	0.75
40:BH:72:ILE:HG13	40:BH:75:LEU:HD21	1.68	0.75
1:CA:9:G:H5'	4:CE:107:GLY:HA3	1.68	0.75
18:CB:100:LEU:HG	18:CB:178:LEU:HD11	1.68	0.75
24:DI:9:LYS:HG2	24:DI:57:VAL:HG13	1.69	0.75
40:DH:6:LEU:HD11	40:DH:37:VAL:HG12	1.67	0.75
50:DT:73:ARG:HB3	50:DT:73:ARG:HH21	1.50	0.75
9:AJ:39:PRO:HA	9:AJ:74:VAL:HA	1.67	0.75
29:BE:63:LYS:HA	29:BE:63:LYS:HE3	1.68	0.75
1:CA:376:G:H5"	13:CP:5:ARG:HB2	1.66	0.75
16:CS:10:ILE:HG12	16:CS:40:PHE:CZ	2.20	0.75
23:DB:2008:C:H2'	23:DB:2009:A:H8	1.51	0.75
26:DD:9:VAL:HA	26:DD:197:THR:HG23	1.65	0.75
29:DE:147:LEU:HB3	29:DE:186:VAL:HG23	1.66	0.75
35:DV:44:HIS:HE1	35:DV:86:LEU:H	1.34	0.75
47:DF:2:LYS:HD2	47:DF:100:GLU:HG2	1.67	0.75
6:AG:138:GLU:HB3	6:AG:142:ARG:HH21	1.51	0.75
8:AI:11:ARG:HG2	8:AI:77:ALA:HB2	1.68	0.75
23:BB:2886:A:H62	31:B0:39:ARG:NE	1.83	0.75
11:CL:14:LYS:HG2	11:CL:16:ALA:H	1.51	0.75
23:DB:1141:U:H4'	23:DB:1142:A:O4'	1.85	0.75
48:DG:15:ASP:HB2	48:DG:26:LYS:HD3	1.68	0.75
1:AA:239:U:OP1	1:AA:239:U:H4'	1.86	0.75
25:BC:233:GLY:H	25:BC:241:LYS:HZ2	1.33	0.75
26:BD:53:GLY:HA3	26:BD:77:ARG:HG3	1.69	0.75
18:CB:9:LEU:HD23	18:CB:10:LYS:HG3	1.69	0.75
40:DH:135:HIS:HB3	40:DH:138:VAL:HB	1.67	0.75
23:BB:1203:U:H1'	37:BL:4:ASN:HD21	1.50	0.75
28:BP:4:ILE:HG22	28:BP:5:LYS:H	1.51	0.75
44:BQ:26:ALA:O	44:BQ:30:VAL:HG12	1.87	0.75
45:BS:24:ILE:HG23	45:BS:32:ALA:HB1	1.69	0.75
47:BF:62:GLN:HG3	47:BF:91:ARG:HH11	1.50	0.75
1:CA:269:C:H2'	1:CA:270:A:C8	2.21	0.75
2:CC:105:VAL:HA	2:CC:106:ARG:NH2	2.02	0.75
12:CM:47:LEU:HD13	12:CM:51:GLN:HB2	1.68	0.75
46:DU:47:PRO:HB2	46:DU:53:GLN:HB2	1.68	0.75
51:DZ:5:CYS:HB2	51:DZ:10:LYS:HB2	1.67	0.75
11:AL:29:LYS:HB3	11:AL:56:LEU:HD22	1.68	0.75
18:AB:112:ARG:HA	18:AB:115:ASP:OD2	1.87	0.75
23:BB:1373:A:H2'	23:BB:1374:G:O4'	1.87	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2092:U:H4'	23:BB:2093:G:O5'	1.86	0.75
1:CA:301:G:H2'	1:CA:302:G:H8	1.51	0.75
2:CC:106:ARG:O	2:CC:106:ARG:HD2	1.87	0.75
50:BT:69:ARG:HA	50:BT:69:ARG:HE	1.52	0.75
21:CN:41:TRP:HA	21:CN:41:TRP:HE3	1.51	0.75
23:DB:1723:G:H3'	23:DB:1724:G:H8	1.52	0.75
23:DB:2787:C:H5'	26:DD:66:GLY:HA3	1.68	0.75
44:DQ:90:ASP:O	44:DQ:94:LEU:HB2	1.87	0.75
1:AA:462:G:H5'	1:AA:463:U:OP2	1.87	0.75
1:AA:927:G:H4'	1:AA:1503:A:N7	2.02	0.75
1:AA:1225:A:H5"	1:AA:1226:C:H5	1.51	0.75
8:AI:19:PHE:HB2	8:AI:63:TYR:HB3	1.67	0.75
23:BB:1341:G:H5'	50:BT:61:LEU:HD13	1.69	0.75
35:BV:72:VAL:HG21	35:BV:91:PHE:HB3	1.68	0.75
2:CC:13:ILE:HD13	2:CC:13:ILE:H	1.52	0.75
23:DB:358:U:H2'	23:DB:359:G:C8	2.22	0.75
28:DP:4:ILE:HG22	28:DP:5:LYS:H	1.52	0.75
1:AA:373:A:H1'	1:AA:481:G:N3	2.02	0.74
2:AC:190:THR:HG22	2:AC:191:THR:H	1.50	0.74
7:AH:94:VAL:HG23	7:AH:101:ALA:HB2	1.69	0.74
23:BB:919:U:H2'	23:BB:920:A:C8	2.21	0.74
1:CA:1317:C:H2'	1:CA:1318:A:O4'	1.86	0.74
2:CC:116:ALA:O	2:CC:119:ILE:HG22	1.87	0.74
16:CS:32:THR:HG22	16:CS:33:TRP:H	1.52	0.74
47:DF:109:ARG:HG3	47:DF:137:PHE:HB3	1.69	0.74
48:DG:132:LEU:HD23	48:DG:132:LEU:H	1.50	0.74
52:DW:24:ARG:HA	52:DW:66:VAL:H	1.52	0.74
23:BB:1579:A:H2'	23:BB:1580:A:H8	1.53	0.74
41:BJ:72:LYS:HE2	41:BJ:72:LYS:HA	1.68	0.74
51:BZ:40:VAL:HG21	51:BZ:43:GLU:HB3	1.67	0.74
16:CS:10:ILE:HG12	16:CS:40:PHE:HZ	1.49	0.74
25:DC:191:LEU:HD23	25:DC:192:GLY:H	1.51	0.74
1:AA:1011:C:H2'	1:AA:1012:A:H8	1.52	0.74
8:AI:123:ARG:HB2	8:AI:123:ARG:HH11	1.50	0.74
23:BB:30:G:H2'	23:BB:31:C:C6	2.22	0.74
25:BC:4:LYS:HD2	25:BC:5:CYS:H	1.52	0.74
23:DB:873:C:H4'	38:DM:64:TRP:HE1	1.51	0.74
24:DI:105:LEU:HD13	24:DI:129:GLU:HG2	1.67	0.74
23:BB:300:A:H3'	46:BU:81:ARG:HH12	1.51	0.74
46:BU:51:LEU:H	46:BU:53:GLN:HE22	1.35	0.74
1:CA:373:A:H1'	1:CA:481:G:N3	2.02	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CF:62:MET:HG3	5:CF:64:VAL:HG23	1.69	0.74
14:CQ:13:SER:HB3	14:CQ:21:VAL:HB	1.68	0.74
24:DI:72:THR:HG21	24:DI:112:LYS:HA	1.69	0.74
23:BB:873:C:H4'	38:BM:64:TRP:HE1	1.53	0.74
23:BB:1205:A:N6	29:BE:165:HIS:HB2	1.95	0.74
29:BE:2:GLU:HA	29:BE:13:THR:HA	1.68	0.74
29:BE:3:LEU:HB2	29:BE:12:LEU:HD12	1.70	0.74
40:BH:31:VAL:O	40:BH:33:GLN:N	2.21	0.74
1:CA:406:G:H21	3:CD:115:GLN:NE2	1.86	0.74
13:CP:28:ARG:HD2	13:CP:29:ASN:N	2.00	0.74
40:DH:14:SER:HB2	40:DH:17:ASP:HB2	1.69	0.74
41:DJ:72:LYS:HE2	41:DJ:72:LYS:HA	1.69	0.74
1:AA:1367:C:H5"	8:AI:115:VAL:HG23	1.68	0.74
24:BI:27:LEU:HD12	24:BI:32:VAL:HG11	1.69	0.74
24:BI:77:VAL:HA	24:BI:80:LYS:HE2	1.70	0.74
47:BF:111:ARG:O	47:BF:112:ASP:HB2	1.87	0.74
4:CE:152:VAL:HG21	7:CH:98:LEU:HB3	1.70	0.74
5:CF:42:TRP:HB2	5:CF:59:TYR:HB2	1.68	0.74
10:CK:19:VAL:HG23	10:CK:34:THR:HG23	1.70	0.74
23:DB:2:G:H2'	23:DB:3:U:C6	2.22	0.74
23:DB:1082:U:N3	23:DB:1086:A:C2	2.55	0.74
23:DB:1796:U:H2'	23:DB:1797:G:H8	1.52	0.74
29:DE:103:GLY:HA2	29:DE:106:LYS:HB3	1.70	0.74
43:DO:66:GLY:HA3	43:DO:102:ARG:NH2	2.03	0.74
1:AA:243:A:H4'	1:AA:244:U:H5'	1.69	0.74
1:AA:662:U:H2'	1:AA:663:A:C8	2.21	0.74
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.23	0.74
9:AJ:52:LEU:H	9:AJ:52:LEU:HD12	1.53	0.74
22:BA:104:A:H2'	22:BA:105:G:O4'	1.88	0.74
25:BC:77:VAL:HG23	25:BC:112:GLY:N	2.03	0.74
19:CU:3:ILE:HB	19:CU:19:LYS:HE3	1.67	0.74
23:DB:593:U:H2'	23:DB:594:U:C6	2.23	0.74
23:DB:1579:A:H2'	23:DB:1580:A:H8	1.50	0.74
40:DH:48:GLU:HA	40:DH:51:ARG:HE	1.52	0.74
50:DT:69:ARG:HA	50:DT:69:ARG:HE	1.53	0.74
1:AA:1406:U:H2'	1:AA:1407:C:H5'	1.69	0.74
3:AD:84:ASN:ND2	4:AE:101:GLY:HA3	2.02	0.74
8:AI:18:VAL:HG11	8:AI:82:ILE:HA	1.70	0.74
26:BD:151:THR:HB	26:BD:152:PRO:HD3	1.68	0.74
44:BQ:16:ILE:HA	44:BQ:19:GLN:HB2	1.68	0.74
2:CC:149:LYS:HB3	2:CC:200:TRP:HB2	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CO:71:LYS:HZ3	20:CO:72:ARG:N	1.86	0.74
23:DB:30:G:H2'	23:DB:31:C:C6	2.22	0.74
23:DB:590:A:H2'	23:DB:591:U:C6	2.23	0.74
26:DD:186:LEU:HD11	28:DP:3:ILE:HG13	1.69	0.74
1:AA:310:G:H5"	13:AP:31:ARG:HB2	1.69	0.74
37:BL:93:ASN:ND2	37:BL:94:THR:H	1.86	0.74
1:CA:406:G:H21	3:CD:115:GLN:HE22	1.36	0.74
12:CM:15:VAL:HA	12:CM:29:SER:OG	1.88	0.74
18:CB:95:TRP:HH2	18:CB:100:LEU:HB2	1.52	0.74
23:DB:1141:U:H5"	41:DJ:27:ARG:HH21	1.53	0.74
25:DC:140:VAL:HG12	25:DC:141:HIS:H	1.52	0.74
3:AD:26:ALA:HA	3:AD:30:LYS:HE3	1.70	0.74
10:AK:91:GLY:O	10:AK:95:THR:HG22	1.88	0.74
11:AL:14:LYS:HG2	11:AL:16:ALA:H	1.53	0.74
16:AS:44:ILE:HG13	16:AS:62:THR:HA	1.69	0.74
23:BB:2848:G:H1	23:BB:2867:G:N2	1.85	0.74
1:CA:1241:G:H2'	1:CA:1242:G:H8	1.53	0.74
8:CI:61:ASP:C	8:CI:62:LEU:HD13	2.13	0.74
49:DR:49:ILE:HG12	49:DR:53:PHE:C	2.13	0.74
1:AA:337:G:H2'	1:AA:338:A:C8	2.22	0.73
23:BB:2147:A:H5'	23:BB:2148:G:O4'	1.88	0.73
26:BD:9:VAL:HA	26:BD:197:THR:HG23	1.70	0.73
40:BH:4:ILE:HB	40:BH:37:VAL:HG12	1.69	0.73
37:DL:80:SER:HA	37:DL:115:GLU:HB2	1.68	0.73
6:CG:145:GLU:CA	6:CG:148:LYS:HB2	2.18	0.73
23:DB:354:A:H2'	23:DB:355:U:C6	2.23	0.73
23:DB:580:U:H2'	23:DB:581:C:C6	2.23	0.73
23:DB:1729:U:H3'	23:DB:1730:C:O4'	1.87	0.73
23:DB:2386:A:H4'	52:DW:54:ARG:O	1.88	0.73
26:DD:116:LYS:HG3	26:DD:165:MET:SD	2.28	0.73
28:DP:103:THR:HG22	28:DP:104:GLY:H	1.52	0.73
47:DF:111:ARG:O	47:DF:112:ASP:HB2	1.88	0.73
47:DF:147:ARG:HG2	47:DF:148:VAL:HG22	1.69	0.73
8:AI:94:ARG:HH11	8:AI:94:ARG:HB3	1.53	0.73
12:AM:21:ILE:HG22	12:AM:23:GLY:H	1.53	0.73
33:B1:33:LEU:HB3	33:B1:51:ALA:CB	2.18	0.73
7:CH:94:VAL:HG23	7:CH:101:ALA:HB2	1.70	0.73
23:DB:101:A:O2'	23:DB:102:U:H5"	1.88	0.73
25:DC:77:VAL:HG23	25:DC:112:GLY:N	2.02	0.73
29:DE:148:ILE:HG13	29:DE:167:VAL:HG23	1.70	0.73
45:DS:24:ILE:HG23	45:DS:32:ALA:HB1	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:8:LYS:HA	47:DF:12:VAL:HG21	1.67	0.73
47:DF:41:GLU:HB3	47:DF:44:ALA:HB3	1.71	0.73
2:AC:63:ILE:HD12	2:AC:98:ALA:HB2	1.70	0.73
23:BB:184:C:H2'	23:BB:185:G:H8	1.52	0.73
23:BB:2512:C:H2'	23:BB:2513:A:O4'	1.88	0.73
47:BF:11:VAL:HG12	47:BF:12:VAL:H	1.52	0.73
47:BF:146:ASP:HB3	47:BF:147:ARG:HH12	1.51	0.73
2:CC:8:GLY:HA2	2:CC:11:LEU:HG	1.70	0.73
23:DB:2186:G:H2'	23:DB:2187:U:O4'	1.87	0.73
48:DG:96:ALA:HB3	48:DG:103:ASN:HB3	1.68	0.73
2:AC:120:THR:HG21	2:AC:186:SER:HB3	1.71	0.73
23:BB:1796:U:H2'	23:BB:1797:G:H8	1.53	0.73
23:BB:2305:U:H5"	47:BF:130:GLY:HA3	1.70	0.73
41:BJ:55:ILE:HG22	41:BJ:123:LYS:HB2	1.70	0.73
47:BF:111:ARG:NH2	47:BF:113:PHE:HB2	2.03	0.73
23:DB:2153:C:H2'	23:DB:2154:A:H8	1.52	0.73
38:DM:40:ARG:HD3	38:DM:93:VAL:HG21	1.70	0.73
9:AJ:36:VAL:HG12	9:AJ:38:GLY:H	1.53	0.73
10:AK:22:ILE:HB	10:AK:85:VAL:HG22	1.69	0.73
1:CA:859:G:H2'	1:CA:860:A:C8	2.24	0.73
1:CA:977:A:H2'	1:CA:978:A:H5"	1.69	0.73
21:CN:27:LYS:HG3	21:CN:28:ALA:H	1.54	0.73
18:CB:102:ASN:ND2	18:CB:105:THR:HB	2.02	0.73
23:DB:2872:A:O2'	23:DB:2873:A:H5'	1.88	0.73
34:D3:49:VAL:HG11	34:D3:54:LEU:HD13	1.71	0.73
1:AA:9:G:H5'	4:AE:107:GLY:HA3	1.70	0.73
1:AA:337:G:H2'	1:AA:338:A:H8	1.52	0.73
1:AA:699:C:H2'	1:AA:700:G:H5"	1.71	0.73
23:BB:593:U:H2'	23:BB:594:U:C6	2.24	0.73
40:BH:14:SER:HB2	40:BH:17:ASP:HB2	1.71	0.73
13:CP:67:ILE:HD11	13:CP:71:VAL:HG22	1.71	0.73
14:CQ:20:ILE:HD13	14:CQ:47:ASP:HB3	1.69	0.73
2:CC:113:LYS:HD2	2:CC:184:ASN:ND2	2.03	0.73
16:CS:15:LEU:HA	16:CS:18:VAL:HG12	1.70	0.73
23:DB:2776:A:H4'	23:DB:2777:G:H5"	1.71	0.73
27:DK:19:VAL:HG13	27:DK:43:ILE:HA	1.69	0.73
35:DV:77:VAL:HA	35:DV:89:ILE:HG22	1.69	0.73
1:AA:462:G:H2'	1:AA:462:G:N3	2.03	0.73
4:AE:73:VAL:HG21	4:AE:143:LEU:HB3	1.70	0.73
8:AI:61:ASP:O	8:AI:62:LEU:HD13	1.89	0.73
12:AM:21:ILE:HB	12:AM:24:VAL:HG22	1.71	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:158:PHE:HA	29:BE:169:VAL:HG21	1.71	0.73
40:BH:58:LEU:O	40:BH:62:LEU:HG	1.87	0.73
49:BR:28:ALA:O	49:BR:63:VAL:HG21	1.89	0.73
1:CA:662:U:H2'	1:CA:663:A:C8	2.23	0.73
2:CC:5:HIS:CD2	2:CC:8:GLY:H	2.06	0.73
9:CJ:66:GLU:N	21:CN:98:ALA:HB2	2.04	0.73
21:CN:65:GLN:HB2	21:CN:82:LYS:HE2	1.70	0.73
18:CB:122:ASP:OD1	18:CB:124:THR:HG22	1.89	0.73
35:DV:38:LEU:HG	35:DV:40:ILE:HD12	1.69	0.73
40:DH:86:ASP:HB2	40:DH:89:LYS:HB2	1.69	0.73
42:DN:97:ILE:HD12	42:DN:98:LEU:N	2.03	0.73
47:DF:92:GLY:N	47:DF:95:MET:HE3	2.04	0.73
1:AA:1317:C:OP1	21:AN:56:PRO:HD2	1.89	0.73
23:BB:191:A:H2'	23:BB:192:C:C6	2.24	0.73
49:BR:49:ILE:HG12	49:BR:53:PHE:C	2.14	0.73
11:CL:35:ARG:HH21	11:CL:36:VAL:HG22	1.53	0.73
6:CG:68:VAL:HG11	6:CG:103:ILE:HG13	1.70	0.73
9:CJ:57:VAL:HG22	9:CJ:58:ASN:H	1.52	0.73
35:DV:53:LYS:HZ3	35:DV:53:LYS:HA	1.53	0.73
37:DL:57:LEU:HD12	37:DL:60:ARG:HH22	1.53	0.73
1:AA:961:U:OP2	1:AA:1223:C:H1'	1.89	0.73
2:AC:147:GLY:HA3	2:AC:202:PHE:HB3	1.71	0.73
5:AF:19:PRO:HA	5:AF:22:ILE:HD12	1.70	0.73
7:AH:11:THR:HG22	7:AH:14:ARG:HH12	1.52	0.73
7:AH:103:VAL:HG22	7:AH:124:ILE:HA	1.70	0.73
13:AP:28:ARG:CD	13:AP:29:ASN:H	2.02	0.73
23:BB:1124:G:H1'	32:B4:38:GLY:OXT	1.87	0.73
50:BT:48:GLN:HE22	50:BT:55:VAL:HB	1.53	0.73
1:CA:859:G:H2'	1:CA:860:A:H8	1.54	0.73
25:DC:183:VAL:HG13	25:DC:185:ALA:H	1.54	0.73
26:DD:118:PHE:CE2	42:DN:1:MET:HB3	2.24	0.73
29:DE:105:LEU:HA	29:DE:108:ILE:HG22	1.71	0.73
5:AF:62:MET:HG3	5:AF:64:VAL:HG23	1.70	0.72
9:AJ:8:ILE:HD13	9:AJ:75:ASP:HA	1.71	0.72
21:AN:50:LEU:H	21:AN:51:PRO:CD	2.02	0.72
26:DD:91:THR:HG23	26:DD:92:VAL:H	1.54	0.72
29:DE:158:PHE:HA	29:DE:169:VAL:HG21	1.69	0.72
31:D0:29:VAL:HG23	31:D0:35:GLU:H	1.54	0.72
44:DQ:63:ARG:HH21	44:DQ:64:ILE:HD11	1.54	0.72
1:AA:1499:A:H5'	1:AA:1499:A:H8	1.52	0.72
18:AB:202:ASN:HD22	18:AB:204:ASP:N	1.82	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:877:A:H2'	23:BB:899:A:N1	2.04	0.72
23:BB:2267:A:C8	23:BB:2267:A:H3'	2.23	0.72
1:CA:390:U:H2'	1:CA:391:G:H8	1.54	0.72
1:CA:674:G:H2'	1:CA:675:A:H8	1.52	0.72
1:CA:1290:G:H2'	1:CA:1291:U:C6	2.22	0.72
23:DB:477:A:H2'	23:DB:478:A:C8	2.24	0.72
23:DB:532:A:N3	23:DB:532:A:H2'	2.04	0.72
23:DB:2346:A:H3'	23:DB:2347:C:H5"	1.70	0.72
23:DB:2800:A:H2'	23:DB:2801:G:O4'	1.89	0.72
4:AE:152:VAL:HG21	7:AH:98:LEU:HB3	1.69	0.72
22:BA:49:C:H2'	22:BA:50:A:H8	1.55	0.72
23:BB:858:G:H21	23:BB:2268:A:H3'	1.53	0.72
23:BB:1324:G:H1'	23:BB:1616:A:N6	2.04	0.72
23:BB:1729:U:H3'	23:BB:1730:C:O4'	1.89	0.72
35:BV:77:VAL:HA	35:BV:89:ILE:HG22	1.69	0.72
44:BQ:60:TRP:O	44:BQ:64:ILE:HG12	1.89	0.72
44:BQ:90:ASP:O	44:BQ:94:LEU:HB2	1.89	0.72
44:BQ:93:ILE:HG23	44:BQ:94:LEU:HD22	1.70	0.72
47:BF:128:SER:HB3	47:BF:154:THR:HG23	1.71	0.72
19:CU:24:LYS:HZ3	19:CU:25:ALA:H	1.37	0.72
21:CN:25:GLU:HB2	21:CN:29:ILE:HD11	1.70	0.72
23:DB:698:C:H4'	23:DB:734:A:H61	1.53	0.72
28:DP:50:ARG:HD3	28:DP:56:SER:HB3	1.71	0.72
41:DJ:6:ALA:HB3	41:DJ:45:THR:HG21	1.71	0.72
44:DQ:60:TRP:O	44:DQ:64:ILE:HG12	1.89	0.72
23:BB:135:U:H2'	23:BB:136:G:C8	2.24	0.72
23:BB:544:C:H2'	23:BB:545:U:O2	1.89	0.72
23:BB:1843:C:H5"	25:BC:250:GLN:NE2	2.04	0.72
23:BB:2064:C:H2'	23:BB:2065:C:C6	2.24	0.72
31:B0:29:VAL:HG23	31:B0:35:GLU:H	1.53	0.72
48:BG:84:LYS:HB3	48:BG:132:LEU:O	1.90	0.72
52:BW:24:ARG:HA	52:BW:66:VAL:H	1.52	0.72
18:CB:75:ALA:C	18:CB:79:VAL:HG23	2.15	0.72
22:DA:104:A:H2'	22:DA:105:G:O4'	1.89	0.72
24:DI:20:SER:HB3	24:DI:21:PRO:HD3	1.69	0.72
1:AA:238:A:H2'	1:AA:239:U:H5"	1.70	0.72
1:AA:269:C:H2'	1:AA:270:A:H8	1.52	0.72
2:AC:62:SER:HA	2:AC:97:PRO:HG2	1.71	0.72
5:AF:1:MET:SD	5:AF:67:PRO:HD3	2.29	0.72
8:AI:41:GLU:O	8:AI:44:ARG:HG2	1.89	0.72
23:BB:477:A:H2'	23:BB:478:A:C8	2.24	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2820:A:OP1	42:BN:4:ARG:HA	1.90	0.72
23:BB:2872:A:O2'	23:BB:2873:A:H5'	1.88	0.72
25:BC:140:VAL:HG12	25:BC:141:HIS:H	1.53	0.72
27:BK:118:LEU:C	27:BK:120:PRO:HD2	2.13	0.72
1:CA:203:G:H1'	1:CA:465:A:C6	2.25	0.72
1:CA:946:A:H2'	1:CA:947:G:H8	1.53	0.72
12:CM:3:ILE:HA	12:CM:56:ARG:HG3	1.72	0.72
22:DA:2:G:H2'	22:DA:3:C:H6	1.53	0.72
23:DB:773:U:H5'	23:DB:774:G:OP2	1.89	0.72
23:DB:1412:U:H2'	23:DB:1413:A:C8	2.24	0.72
25:DC:16:VAL:H	25:DC:203:VAL:HG11	1.53	0.72
44:DQ:16:ILE:HA	44:DQ:19:GLN:HB2	1.70	0.72
1:AA:176:C:H2'	1:AA:177:G:N3	2.04	0.72
1:AA:1342:C:H2'	1:AA:1343:G:H8	1.52	0.72
7:AH:49:LYS:HB3	7:AH:59:GLU:HB2	1.71	0.72
12:AM:90:HIS:HA	12:AM:108:ARG:NH2	2.05	0.72
33:B1:34:GLU:HG2	33:B1:49:LYS:HG3	1.70	0.72
42:BN:97:ILE:HD12	42:BN:98:LEU:N	2.04	0.72
47:BF:41:GLU:HB3	47:BF:44:ALA:HB3	1.71	0.72
1:CA:699:C:H2'	1:CA:700:G:H5"	1.72	0.72
18:CB:63:LYS:HA	18:CB:224:ARG:NH1	2.05	0.72
23:DB:1080:A:H4'	24:DI:126:ARG:HD3	1.71	0.72
1:AA:1048:G:N2	1:AA:1214:C:H5	1.86	0.72
23:BB:571:U:H3'	49:BR:80:ARG:NH1	2.04	0.72
23:BB:2346:A:H3'	23:BB:2347:C:H5"	1.71	0.72
1:CA:977:A:C2	1:CA:1223:C:H2'	2.25	0.72
1:CA:1101:A:H62	18:CB:173:LYS:HE3	1.54	0.72
5:CF:6:ILE:HD11	5:CF:8:PHE:HD2	1.54	0.72
17:CT:2:ASN:ND2	17:CT:3:ILE:HG13	2.05	0.72
23:DB:117:G:H5'	23:DB:126:A:H8	1.54	0.72
23:DB:1174:U:O2'	23:DB:1175:A:H3'	1.89	0.72
23:DB:1937:A:N7	23:DB:1939:U:H2'	2.05	0.72
23:DB:2092:U:H4'	23:DB:2093:G:O5'	1.88	0.72
25:DC:132:ARG:HH11	25:DC:186:ASP:HB2	1.55	0.72
26:DD:5:VAL:N	26:DD:32:ASN:HD21	1.86	0.72
29:DE:105:LEU:HD11	29:DE:177:PRO:HG3	1.72	0.72
35:DV:72:VAL:HG21	35:DV:91:PHE:HB3	1.69	0.72
1:AA:406:G:H21	3:AD:115:GLN:NE2	1.88	0.72
1:AA:1011:C:H2'	1:AA:1012:A:C8	2.24	0.72
1:AA:1432:G:C5'	28:BP:105:LYS:HG2	2.19	0.72
2:AC:87:ARG:HH21	2:AC:88:LYS:HA	1.55	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AP:67:ILE:HD11	13:AP:71:VAL:HG22	1.70	0.72
21:AN:64:ARG:HB2	21:AN:77:GLY:O	1.89	0.72
23:BB:674:G:O3'	29:BE:60:TRP:HZ2	1.72	0.72
23:BB:1287:A:H3'	23:BB:1288:G:N2	2.05	0.72
23:BB:2502:G:H5'	23:BB:2503:A:H5"	1.72	0.72
1:CA:1461:G:H2'	1:CA:1462:C:H6	1.54	0.72
18:CB:80:LYS:HG3	18:CB:81:ASP:H	1.55	0.72
40:DH:31:VAL:O	40:DH:33:GLN:N	2.22	0.72
44:DQ:42:GLY:HA3	49:DR:75:VAL:HG21	1.71	0.72
1:AA:1237:C:H3'	1:AA:1238:A:H5'	1.71	0.72
4:AE:156:ARG:NH1	7:AH:42:GLU:HB3	2.05	0.72
5:AF:6:ILE:HD11	5:AF:8:PHE:HD2	1.55	0.72
23:BB:1412:U:H2'	23:BB:1413:A:H8	1.55	0.72
23:BB:2307:G:O6	47:BF:84:ILE:HD11	1.89	0.72
23:BB:2758:A:H2'	23:BB:2759:G:O4'	1.90	0.72
27:BK:112:PHE:O	27:BK:115:ILE:HG22	1.90	0.72
1:CA:649:A:H2'	1:CA:650:G:O4'	1.89	0.72
1:CA:1316:G:N2	1:CA:1318:A:H3'	2.05	0.72
18:CB:31:PHE:HB2	18:CB:41:ASN:HA	1.72	0.72
42:DN:97:ILE:HD12	42:DN:98:LEU:H	1.55	0.72
47:DF:11:VAL:HG12	47:DF:12:VAL:H	1.53	0.72
18:AB:120:SER:HA	18:AB:125:PHE:HB3	1.72	0.72
23:BB:532:A:H2'	23:BB:532:A:N3	2.05	0.72
25:BC:191:LEU:HD23	25:BC:192:GLY:H	1.54	0.72
29:BE:103:GLY:HA2	29:BE:106:LYS:HB3	1.72	0.72
40:BH:121:VAL:HB	40:BH:128:HIS:NE2	2.05	0.72
48:BG:122:ALA:HA	48:BG:132:LEU:HA	1.72	0.72
2:CC:133:MET:HE3	2:CC:152:VAL:HG23	1.72	0.72
12:CM:90:HIS:HA	12:CM:108:ARG:NH2	2.04	0.72
18:CB:59:ILE:HG22	18:CB:62:ARG:HE	1.53	0.72
23:DB:2074:U:H1'	23:DB:2598:A:N3	2.05	0.72
43:DO:27:VAL:HG21	43:DO:40:ILE:HD12	1.71	0.72
47:DF:146:ASP:HB3	47:DF:147:ARG:HH12	1.53	0.72
50:DT:48:GLN:HE22	50:DT:55:VAL:HB	1.54	0.72
5:AF:42:TRP:HB2	5:AF:59:TYR:HB2	1.71	0.71
23:BB:2800:A:H2'	23:BB:2801:G:O4'	1.89	0.71
35:BV:44:HIS:HE1	35:BV:86:LEU:H	1.38	0.71
1:CA:1032:G:H2'	1:CA:1033:G:O4'	1.90	0.71
10:CK:75:GLU:CD	10:CK:75:GLU:H	1.97	0.71
10:CK:91:GLY:O	10:CK:95:THR:HG22	1.90	0.71
23:DB:899:A:H3'	23:DB:900:A:C8	2.25	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1060:U:C4	23:DB:1088:A:N6	2.58	0.71
23:DB:1871:A:H2'	23:DB:1872:A:C8	2.25	0.71
27:DK:19:VAL:HG12	27:DK:41:ILE:HG12	1.71	0.71
40:DH:65:ALA:HB1	40:DH:138:VAL:HG21	1.72	0.71
1:AA:649:A:H2'	1:AA:650:G:O4'	1.90	0.71
1:AA:1053:G:N7	1:AA:1199:U:H3'	2.04	0.71
11:AL:35:ARG:HH21	11:AL:36:VAL:HG22	1.55	0.71
16:AS:31:ARG:HG3	16:AS:56:HIS:NE2	2.05	0.71
20:AO:11:ILE:HG12	20:AO:30:ALA:HB1	1.70	0.71
23:BB:1412:U:H2'	23:BB:1413:A:C8	2.25	0.71
23:BB:1683:U:H2'	23:BB:1684:G:C8	2.25	0.71
33:B1:47:ILE:HD12	33:B1:47:ILE:H	1.54	0.71
40:BH:147:VAL:HG12	40:BH:148:ALA:H	1.54	0.71
42:BN:47:VAL:C	42:BN:50:PRO:HD2	2.14	0.71
42:BN:101:GLY:HA2	42:BN:109:PRO:HA	1.71	0.71
47:BF:92:GLY:N	47:BF:95:MET:HE3	2.05	0.71
47:BF:109:ARG:HG3	47:BF:137:PHE:HB3	1.71	0.71
37:DL:93:ASN:ND2	37:DL:94:THR:H	1.88	0.71
49:DR:28:ALA:O	49:DR:63:VAL:HG21	1.89	0.71
17:AT:2:ASN:ND2	17:AT:3:ILE:HG13	2.04	0.71
19:AU:3:ILE:HB	19:AU:19:LYS:HE3	1.71	0.71
23:BB:698:C:H4'	23:BB:734:A:H61	1.54	0.71
23:BB:1889:A:H2'	23:BB:1890:A:C8	2.25	0.71
24:BI:20:SER:HB3	24:BI:21:PRO:HD3	1.71	0.71
27:BK:71:ARG:CZ	27:BK:72:PRO:HD3	2.20	0.71
52:BW:39:GLN:HG3	52:BW:42:THR:CB	2.20	0.71
1:CA:988:G:H21	1:CA:1015:G:N2	1.87	0.71
23:DB:661:A:H1'	37:DL:12:SER:O	1.90	0.71
23:DB:1098:A:H2'	24:DI:4:VAL:N	2.04	0.71
23:DB:2291:U:H2'	23:DB:2292:U:C6	2.25	0.71
1:AA:190:A:H2'	1:AA:191:G:O4'	1.91	0.71
1:AA:394:G:H2'	1:AA:395:C:H6	1.55	0.71
1:AA:920:U:H2'	1:AA:921:U:C6	2.26	0.71
23:BB:1911:U:H2'	23:BB:1918:A:N1	2.05	0.71
29:BE:75:SER:O	29:BE:78:TRP:HB2	1.90	0.71
43:BO:66:GLY:HA3	43:BO:102:ARG:NH2	2.04	0.71
44:BQ:63:ARG:HH21	44:BQ:64:ILE:HD11	1.56	0.71
50:BT:69:ARG:HG2	50:BT:73:ARG:C	2.15	0.71
1:CA:462:G:H2'	1:CA:462:G:N3	2.04	0.71
3:CD:29:THR:HG22	3:CD:30:LYS:H	1.55	0.71
4:CE:73:VAL:HG21	4:CE:143:LEU:HB3	1.71	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:184:C:H2'	23:DB:185:G:H8	1.55	0.71
23:DB:2153:C:H2'	23:DB:2154:A:C8	2.25	0.71
26:DD:124:ARG:HE	26:DD:125:TRP:NE1	1.88	0.71
30:DY:3:THR:HB	30:DY:36:GLU:HG3	1.72	0.71
1:AA:1342:C:H5'	8:AI:127:SER:HA	1.73	0.71
23:BB:322:A:OP2	29:BE:163:ASN:HB2	1.90	0.71
1:CA:449:G:H2'	1:CA:450:G:C8	2.25	0.71
15:CR:26:ALA:HA	15:CR:29:LYS:HE2	1.73	0.71
22:DA:11:C:H3'	22:DA:12:C:H5"	1.73	0.71
22:DA:54:G:H21	47:DF:25:MET:HG2	1.55	0.71
23:DB:704:G:H2'	23:DB:726:G:N2	2.04	0.71
23:DB:1098:A:H2'	24:DI:4:VAL:CA	2.20	0.71
41:DJ:29:ALA:HB3	41:DJ:108:MET:HE3	1.71	0.71
51:DZ:56:MET:HA	51:DZ:59:ILE:HG12	1.73	0.71
9:AJ:40:ILE:HD13	9:AJ:73:LEU:HD12	1.72	0.71
23:BB:1141:U:H5"	41:BJ:27:ARG:HH21	1.53	0.71
24:BI:106:GLN:O	24:BI:110:GLN:HG3	1.90	0.71
29:BE:105:LEU:HA	29:BE:108:ILE:HG22	1.73	0.71
50:BT:60:THR:HB	50:BT:81:LYS:HD2	1.73	0.71
52:BW:35:ILE:HA	52:BW:57:THR:HG23	1.71	0.71
8:CI:24:ASN:HA	8:CI:58:GLU:HA	1.73	0.71
21:CN:5:MET:HA	21:CN:8:ARG:HG3	1.72	0.71
23:DB:1412:U:H2'	23:DB:1413:A:H8	1.56	0.71
23:DB:2548:U:H1'	27:DK:23:LYS:NZ	2.04	0.71
33:D1:37:LYS:H	33:D1:48:TYR:HD2	1.36	0.71
1:AA:390:U:H2'	1:AA:391:G:H8	1.55	0.71
3:AD:12:ARG:HH11	3:AD:12:ARG:HB3	1.55	0.71
12:AM:2:ARG:O	12:AM:7:ASN:HB2	1.89	0.71
22:BA:43:C:H1'	47:BF:91:ARG:HD2	1.71	0.71
23:BB:950:G:H2'	23:BB:951:C:C6	2.26	0.71
24:BI:122:GLU:O	24:BI:126:ARG:HG3	1.90	0.71
28:BP:103:THR:HG22	28:BP:104:GLY:H	1.54	0.71
48:BG:9:VAL:HA	48:BG:48:THR:HB	1.72	0.71
1:CA:269:C:H2'	1:CA:270:A:H8	1.53	0.71
9:CJ:6:ILE:HD12	9:CJ:76:ILE:HD11	1.73	0.71
23:DB:1459:G:H2'	23:DB:1461:C:C5	2.25	0.71
23:DB:1889:A:H2'	23:DB:1890:A:C8	2.26	0.71
33:D1:47:ILE:H	33:D1:47:ILE:HD12	1.54	0.71
1:AA:552:U:H5'	11:AL:82:ARG:HH11	1.55	0.71
4:AE:155:LYS:HG2	7:AH:70:VAL:HG13	1.73	0.71
23:BB:773:U:H5'	23:BB:774:G:OP2	1.91	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1812:U:H2'	23:BB:1813:G:H8	1.55	0.71
23:BB:1843:C:H5"	25:BC:250:GLN:HE21	1.55	0.71
23:BB:2008:C:H2'	23:BB:2009:A:H8	1.56	0.71
42:BN:38:LEU:HB3	42:BN:39:PRO:HD3	1.73	0.71
48:BG:148:ARG:HD3	48:BG:152:ARG:HH11	1.55	0.71
8:CI:66:VAL:CG2	8:CI:74:GLN:HG3	2.20	0.71
21:CN:68:ARG:NH1	21:CN:70:HIS:HB2	2.04	0.71
18:CB:98:GLY:C	18:CB:106:VAL:HG21	2.16	0.71
43:DO:83:LEU:HD11	43:DO:114:GLY:HA3	1.73	0.71
47:DF:111:ARG:NH2	47:DF:113:PHE:HB2	2.06	0.71
47:DF:128:SER:HB3	47:DF:154:THR:HG23	1.73	0.71
8:AI:11:ARG:H	8:AI:14:SER:HB3	1.56	0.71
23:BB:1060:U:C4	23:BB:1088:A:N6	2.58	0.71
33:B1:9:LYS:HD3	33:B1:9:LYS:H	1.56	0.71
49:BR:72:VAL:HG23	49:BR:89:HIS:HB3	1.72	0.71
1:CA:1144:G:N2	1:CA:1146:A:H62	1.89	0.71
1:CA:1521:C:H2'	1:CA:1522:U:C6	2.25	0.71
4:CE:133:ILE:HD12	4:CE:133:ILE:H	1.56	0.71
5:CF:19:PRO:HA	5:CF:22:ILE:HD12	1.71	0.71
20:CO:70:LEU:HD11	20:CO:77:ARG:HB2	1.72	0.71
23:DB:659:G:H21	29:DE:30:GLN:HE22	1.36	0.71
27:DK:71:ARG:CZ	27:DK:72:PRO:HD3	2.20	0.71
33:D1:5:ARG:HH11	33:D1:25:ASN:HB2	1.56	0.71
44:DQ:93:ILE:HG23	44:DQ:94:LEU:HD22	1.71	0.71
1:AA:1089:G:H2'	1:AA:1090:U:H5'	1.73	0.71
23:BB:28:A:H61	23:BB:512:G:H1'	1.56	0.71
23:BB:1141:U:H4'	23:BB:1142:A:O4'	1.89	0.71
25:BC:123:ILE:HD12	25:BC:191:LEU:HD11	1.71	0.71
41:BJ:3:THR:HG21	44:BQ:60:TRP:HE1	1.55	0.71
1:CA:552:U:H5'	11:CL:82:ARG:HH11	1.56	0.71
1:CA:946:A:H2'	1:CA:947:G:C8	2.26	0.71
13:CP:28:ARG:CD	13:CP:29:ASN:H	2.01	0.71
8:CI:56:MET:C	8:CI:58:GLU:H	1.99	0.71
23:DB:1287:A:OP1	42:DN:104:ALA:HB3	1.91	0.71
23:DB:1324:G:H1'	23:DB:1616:A:N6	2.04	0.71
32:D4:3:VAL:HG23	32:D4:4:ARG:H	1.56	0.71
41:DJ:30:THR:HG23	41:DJ:108:MET:HE1	1.73	0.71
47:DF:66:ILE:HD12	47:DF:85:GLY:O	1.91	0.71
15:AR:72:ARG:HH11	15:AR:72:ARG:N	1.86	0.70
40:BH:116:ARG:NH2	40:BH:139:PHE:HB3	2.06	0.70
1:CA:87:C:H2'	1:CA:88:U:H5'	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:394:G:H2'	1:CA:395:C:H6	1.55	0.70
1:CA:1347:G:N2	1:CA:1373:G:H2'	2.06	0.70
2:CC:6:PRO:HB3	2:CC:174:LEU:HD23	1.73	0.70
12:CM:21:ILE:HG23	12:CM:65:GLU:OE2	1.91	0.70
16:CS:10:ILE:HG23	16:CS:37:SER:HB3	1.73	0.70
23:DB:1548:A:H2'	23:DB:1549:A:C8	2.25	0.70
42:DN:101:GLY:HA2	42:DN:110:MET:N	2.05	0.70
52:DW:39:GLN:HG3	52:DW:42:THR:CB	2.21	0.70
1:AA:950:U:H2'	1:AA:951:G:H8	1.57	0.70
2:AC:63:ILE:HD11	2:AC:96:VAL:HG23	1.73	0.70
23:BB:2886:A:H62	31:B0:39:ARG:CZ	2.03	0.70
26:BD:111:GLY:H	26:BD:194:PRO:HG2	1.54	0.70
42:BN:101:GLY:HA2	42:BN:110:MET:N	2.05	0.70
1:CA:437:U:H2'	1:CA:438:U:O4'	1.91	0.70
18:CB:56:LEU:O	18:CB:60:ALA:HB2	1.91	0.70
23:DB:832:U:H2'	23:DB:833:A:C8	2.26	0.70
23:DB:1000:A:H2'	23:DB:1001:A:C8	2.25	0.70
23:DB:1138:G:H2'	23:DB:1139:G:O4'	1.92	0.70
24:DI:85:ILE:HD13	24:DI:137:LEU:HD21	1.73	0.70
11:AL:86:VAL:HG23	11:AL:89:LEU:HB2	1.72	0.70
23:BB:287:G:H2'	23:BB:288:U:H6	1.55	0.70
23:BB:2458:G:H8	23:BB:2459:A:H62	1.40	0.70
23:BB:2824:C:H3'	23:BB:2825:G:H21	1.56	0.70
37:BL:90:VAL:HB	37:BL:122:VAL:HG12	1.72	0.70
4:CE:155:LYS:HG2	7:CH:70:VAL:HG13	1.73	0.70
15:CR:40:PRO:HD2	15:CR:43:ILE:HD11	1.71	0.70
8:CI:105:ARG:HD3	8:CI:106:ASP:N	2.06	0.70
23:DB:264:C:H2'	23:DB:265:A:H5"	1.71	0.70
25:DC:68:ARG:HH21	25:DC:190:THR:HG22	1.56	0.70
46:DU:51:LEU:H	46:DU:53:GLN:HE22	1.38	0.70
50:DT:66:LYS:O	50:DT:77:ARG:HB2	1.91	0.70
1:AA:41:G:H2'	1:AA:42:G:H8	1.55	0.70
1:AA:301:G:H2'	1:AA:302:G:H8	1.54	0.70
1:AA:715:A:H2'	1:AA:716:A:C8	2.27	0.70
1:AA:967:C:H3'	1:AA:968:A:H5'	1.71	0.70
23:BB:1000:A:H2'	23:BB:1001:A:C8	2.25	0.70
23:BB:2748:A:H1'	48:BG:66:THR:HB	1.73	0.70
27:BK:10:VAL:HG13	27:BK:86:LEU:HD21	1.73	0.70
48:BG:84:LYS:HG3	48:BG:131:VAL:HB	1.73	0.70
1:CA:940:C:H2'	1:CA:941:G:C8	2.26	0.70
1:CA:1360:A:H2'	1:CA:1361:G:O4'	1.90	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1553:A:O2'	23:DB:1554:U:H2'	1.91	0.70
27:DK:88:ASN:HD22	27:DK:89:ASN:N	1.88	0.70
29:DE:63:LYS:HA	29:DE:63:LYS:HE3	1.73	0.70
42:DN:47:VAL:C	42:DN:50:PRO:HD2	2.15	0.70
48:DG:122:ALA:HA	48:DG:132:LEU:HA	1.71	0.70
1:AA:1057:G:H2'	1:AA:1058:G:O4'	1.91	0.70
1:AA:1369:C:H2'	1:AA:1370:G:C8	2.26	0.70
23:BB:1287:A:OP1	42:BN:104:ALA:HB3	1.91	0.70
23:BB:2776:A:H4'	23:BB:2777:G:H5"	1.73	0.70
27:BK:88:ASN:HD22	27:BK:89:ASN:N	1.89	0.70
28:BP:50:ARG:HD3	28:BP:56:SER:HB3	1.73	0.70
35:BV:51:GLN:HB2	35:BV:57:TYR:OH	1.90	0.70
38:BM:40:ARG:HD3	38:BM:93:VAL:HG21	1.74	0.70
50:BT:66:LYS:O	50:BT:77:ARG:HB2	1.91	0.70
1:CA:41:G:H2'	1:CA:42:G:H8	1.54	0.70
1:CA:238:A:H2'	1:CA:239:U:H5"	1.74	0.70
1:CA:310:G:H5"	13:CP:31:ARG:HB2	1.72	0.70
12:CM:28:ARG:NH2	12:CM:62:PHE:HB2	2.05	0.70
23:DB:1381:G:H2'	23:DB:1382:G:H5'	1.74	0.70
23:DB:1854:A:N6	23:DB:1888:G:H1'	2.06	0.70
43:DO:67:ASN:HB3	43:DO:70:ALA:HB2	1.73	0.70
51:DZ:64:ILE:H	51:DZ:64:ILE:HD12	1.55	0.70
1:AA:449:G:H2'	1:AA:450:G:C8	2.27	0.70
1:AA:674:G:H2'	1:AA:675:A:H8	1.54	0.70
13:AP:57:ILE:O	13:AP:61:VAL:HG23	1.91	0.70
14:AQ:74:LEU:HD22	14:AQ:75:VAL:N	2.07	0.70
15:AR:40:PRO:HD2	15:AR:43:ILE:HD11	1.72	0.70
22:BA:32:U:H4'	22:BA:52:A:N6	2.06	0.70
1:CA:239:U:H4'	1:CA:239:U:OP1	1.92	0.70
5:CF:2:ARG:HG3	5:CF:92:THR:OG1	1.92	0.70
19:CU:38:GLU:C	19:CU:40:PRO:HD2	2.16	0.70
23:DB:2098:U:H2'	23:DB:2099:U:O4'	1.90	0.70
26:DD:16:THR:HB	26:DD:18:ASP:OD1	1.91	0.70
29:DE:75:SER:O	29:DE:78:TRP:HB2	1.92	0.70
47:DF:102:LEU:HA	47:DF:106:ALA:HB2	1.74	0.70
49:DR:68:ARG:NH1	49:DR:90:ARG:HD3	2.06	0.70
1:AA:390:U:H2'	1:AA:391:G:C8	2.27	0.70
10:AK:23:HIS:HB3	10:AK:30:ILE:HG13	1.74	0.70
11:AL:49:ARG:HG2	11:AL:89:LEU:HD21	1.74	0.70
12:AM:102:LYS:HG3	12:AM:103:THR:H	1.55	0.70
23:BB:922:C:H1'	52:BW:22:VAL:HG21	1.72	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:16:VAL:H	25:BC:203:VAL:HG11	1.56	0.70
28:BP:23:ASP:HA	28:BP:88:ARG:HA	1.73	0.70
1:CA:1250:A:H4'	8:CI:69:GLY:H	1.56	0.70
23:DB:950:G:H2'	23:DB:951:C:C6	2.27	0.70
23:DB:2150:C:H2'	23:DB:2151:U:H6	1.55	0.70
23:DB:2848:G:H1	23:DB:2867:G:N2	1.89	0.70
3:AD:29:THR:HG22	3:AD:30:LYS:H	1.56	0.70
6:AG:150:PHE:HD1	10:AK:55:ARG:HH21	1.39	0.70
23:BB:600:G:H1'	29:BE:100:MET:HG2	1.74	0.70
23:BB:1854:A:N6	23:BB:1888:G:H1'	2.06	0.70
23:BB:2074:U:H1'	23:BB:2598:A:N3	2.06	0.70
25:BC:233:GLY:H	25:BC:241:LYS:NZ	1.90	0.70
26:BD:40:LEU:HA	26:BD:45:TYR:N	2.07	0.70
48:BG:155:PRO:HA	48:BG:170:THR:HG22	1.74	0.70
1:CA:1521:C:H2'	1:CA:1522:U:H6	1.56	0.70
13:CP:4:ILE:O	13:CP:71:VAL:HG11	1.91	0.70
8:CI:81:GLY:O	8:CI:84:ARG:HB2	1.92	0.70
23:DB:126:A:H5'	36:D2:19:ARG:HG3	1.74	0.70
23:DB:2366:A:H2'	23:DB:2367:G:O4'	1.92	0.70
27:DK:19:VAL:C	27:DK:41:ILE:HD11	2.16	0.70
34:D3:54:LEU:HG	34:D3:58:ILE:HD11	1.73	0.70
1:AA:1052:U:H5'	1:AA:1053:G:OP2	1.91	0.70
2:AC:179:ALA:HA	2:AC:205:GLU:HA	1.73	0.70
16:AS:27:LYS:NZ	16:AS:27:LYS:HB3	2.07	0.70
23:BB:85:G:OP2	46:BU:6:ARG:HD3	1.92	0.70
23:BB:751:A:H5'	45:BS:90:LYS:HA	1.74	0.70
34:B3:54:LEU:HG	34:B3:58:ILE:HD11	1.72	0.70
1:CA:312:C:H2'	1:CA:313:A:H8	1.56	0.70
1:CA:715:A:H2'	1:CA:716:A:C8	2.27	0.70
7:CH:11:THR:HG22	7:CH:14:ARG:HH12	1.57	0.70
11:CL:49:ARG:HG2	11:CL:89:LEU:HD21	1.74	0.70
8:CI:10:ARG:H	8:CI:80:HIS:CD2	2.10	0.70
23:DB:104:A:H2'	23:DB:105:C:H6	1.57	0.70
23:DB:165:A:H2'	23:DB:166:U:H6	1.56	0.70
23:DB:2070:A:H2'	23:DB:2071:A:C8	2.26	0.70
28:DP:23:ASP:HA	28:DP:88:ARG:HA	1.72	0.70
29:DE:34:ALA:HB2	29:DE:96:VAL:HG21	1.74	0.70
1:AA:272:C:H2'	1:AA:273:U:C6	2.26	0.70
4:AE:133:ILE:HD12	4:AE:133:ILE:H	1.57	0.70
8:AI:71:ILE:H	8:AI:71:ILE:HD12	1.55	0.70
16:AS:65:MET:O	16:AS:68:HIS:HB2	1.92	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2658:C:H5'	48:BG:159:LYS:HZ2	1.56	0.70
25:BC:104:LEU:H	25:BC:104:LEU:HD12	1.57	0.70
25:BC:196:ASN:ND2	25:BC:199:HIS:HB2	2.06	0.70
42:BN:97:ILE:HD12	42:BN:98:LEU:H	1.55	0.70
5:CF:67:PRO:O	5:CF:70:VAL:HG22	1.92	0.70
7:CH:11:THR:HA	7:CH:14:ARG:NH1	2.07	0.70
9:CJ:15:HIS:HA	9:CJ:18:ILE:HG22	1.73	0.70
28:DP:63:ILE:HA	28:DP:68:GLY:HA2	1.72	0.70
38:DM:36:VAL:HB	38:DM:127:LYS:O	1.92	0.70
48:DG:166:GLU:CD	48:DG:166:GLU:H	2.00	0.70
2:AC:82:ASP:O	2:AC:86:LEU:HG	1.92	0.69
2:AC:179:ALA:HB1	2:AC:202:PHE:HE1	1.57	0.69
7:AH:11:THR:HA	7:AH:14:ARG:NH1	2.07	0.69
9:AJ:77:VAL:HG12	9:AJ:78:GLU:H	1.56	0.69
25:BC:144:GLU:HG3	25:BC:151:GLY:N	2.04	0.69
26:BD:91:THR:HG23	26:BD:92:VAL:H	1.55	0.69
29:BE:60:TRP:O	29:BE:61:ARG:HB2	1.91	0.69
43:BO:27:VAL:HG21	43:BO:40:ILE:HD12	1.74	0.69
48:BG:166:GLU:CD	48:BG:166:GLU:H	1.99	0.69
49:BR:68:ARG:NH1	49:BR:90:ARG:HD3	2.06	0.69
1:CA:1003:G:H21	1:CA:1005:A:H5'	1.55	0.69
1:CA:1323:G:H2'	1:CA:1324:A:C8	2.27	0.69
23:DB:857:G:C2'	23:DB:858:G:H5'	2.22	0.69
23:DB:1515:A:H2'	23:DB:1516:G:O4'	1.92	0.69
41:DJ:69:ARG:HA	41:DJ:89:PHE:HD1	1.57	0.69
48:DG:42:VAL:HA	48:DG:51:PHE:HA	1.73	0.69
48:DG:84:LYS:HB3	48:DG:132:LEU:O	1.91	0.69
50:DT:92:ASN:HB3	50:DT:93:LEU:HD22	1.74	0.69
1:AA:1162:C:H2'	1:AA:1163:A:C8	2.27	0.69
6:AG:70:PRO:HG3	6:AG:102:TRP:CH2	2.27	0.69
10:AK:28:ASN:ND2	10:AK:46:ALA:HB3	2.06	0.69
12:AM:13:HIS:HB3	12:AM:41:ASP:HA	1.73	0.69
34:B3:49:VAL:HG11	34:B3:54:LEU:HD13	1.74	0.69
1:CA:87:C:C2'	1:CA:88:U:H5'	2.22	0.69
1:CA:1278:G:H4'	1:CA:1279:G:C5'	2.22	0.69
22:DA:43:C:H1'	47:DF:91:ARG:HD2	1.74	0.69
22:DA:49:C:H2'	22:DA:50:A:H8	1.57	0.69
24:DI:105:LEU:HD11	24:DI:139:VAL:HG21	1.72	0.69
39:DX:20:ASN:H	39:DX:20:ASN:HD22	1.40	0.69
1:AA:406:G:H21	3:AD:115:GLN:HE22	1.40	0.69
1:AA:437:U:H2'	1:AA:438:U:O4'	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AM:29:SER:O	12:AM:32:ILE:HG22	1.92	0.69
22:BA:11:C:H3'	22:BA:12:C:H5"	1.73	0.69
23:BB:627:A:H4'	23:BB:628:G:H5'	1.73	0.69
23:BB:1459:G:H2'	23:BB:1461:C:C5	2.26	0.69
23:BB:2591:C:H2'	23:BB:2592:G:C8	2.28	0.69
23:BB:2645:G:H5"	23:BB:2732:G:H8	1.57	0.69
41:BJ:69:ARG:HA	41:BJ:89:PHE:HD1	1.56	0.69
49:BR:49:ILE:HD13	49:BR:51:VAL:O	1.91	0.69
3:CD:84:ASN:ND2	4:CE:101:GLY:HA3	2.07	0.69
7:CH:103:VAL:HG22	7:CH:124:ILE:HA	1.73	0.69
8:CI:6:TYR:HA	8:CI:18:VAL:O	1.91	0.69
12:CM:44:ILE:HD12	12:CM:44:ILE:H	1.56	0.69
23:DB:1287:A:H3'	23:DB:1288:G:N2	2.07	0.69
25:DC:104:LEU:H	25:DC:104:LEU:HD12	1.57	0.69
26:DD:55:LYS:HB3	26:DD:55:LYS:HZ2	1.54	0.69
2:AC:72:PRO:O	2:AC:76:ILE:HG12	1.92	0.69
23:BB:131:A:H2'	23:BB:132:G:H8	1.56	0.69
23:BB:855:G:H21	52:BW:23:LYS:CG	1.99	0.69
29:BE:134:LEU:HA	29:BE:137:LYS:HB3	1.75	0.69
1:CA:390:U:H2'	1:CA:391:G:C8	2.27	0.69
23:DB:558:U:OP1	41:DJ:113:PRO:HG2	1.93	0.69
23:DB:1437:C:H2'	23:DB:1438:U:C6	2.27	0.69
1:AA:41:G:H2'	1:AA:42:G:C8	2.27	0.69
4:AE:46:GLY:HA3	4:AE:70:MET:HA	1.75	0.69
15:AR:42:ARG:HD2	15:AR:43:ILE:HG23	1.75	0.69
23:BB:1175:A:H3'	23:BB:1176:U:C4'	2.22	0.69
23:BB:2039:U:H2'	23:BB:2040:G:C8	2.27	0.69
29:BE:34:ALA:HB2	29:BE:96:VAL:HG21	1.73	0.69
35:BV:40:ILE:HD13	35:BV:40:ILE:H	1.57	0.69
40:BH:81:ALA:HB1	40:BH:147:VAL:H	1.56	0.69
47:BF:134:GLN:H	47:BF:150:GLY:N	1.91	0.69
1:CA:978:A:H5'	1:CA:1362:A:N6	2.07	0.69
11:CL:86:VAL:HG23	11:CL:89:LEU:HB2	1.74	0.69
14:CQ:74:LEU:HD22	14:CQ:75:VAL:N	2.08	0.69
23:DB:558:U:H5"	41:DJ:111:LYS:HD3	1.73	0.69
23:DB:858:G:H21	23:DB:2268:A:H3'	1.56	0.69
23:DB:1230:A:H2'	23:DB:1231:U:C6	2.27	0.69
27:DK:54:LYS:H	27:DK:54:LYS:CD	2.05	0.69
33:D1:24:LYS:HE2	33:D1:33:LEU:HB2	1.74	0.69
35:DV:44:HIS:CE1	35:DV:86:LEU:H	2.11	0.69
43:DO:24:THR:HA	43:DO:42:PRO:HG3	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DG:152:ARG:HD3	48:DG:153:PRO:HD2	1.74	0.69
51:DZ:77:LYS:HD3	51:DZ:77:LYS:H	1.58	0.69
1:AA:370:C:O2'	1:AA:371:A:H5'	1.92	0.69
2:AC:10:ARG:CZ	2:AC:181:ILE:HD13	2.22	0.69
16:AS:11:ASP:O	16:AS:15:LEU:HB2	1.91	0.69
23:BB:1119:U:OP1	35:BV:83:LYS:HE3	1.92	0.69
26:BD:10:GLY:HA3	26:BD:26:VAL:N	2.07	0.69
26:BD:124:ARG:HE	26:BD:125:TRP:NE1	1.90	0.69
32:B4:1:MET:HE2	32:B4:36:ARG:HB2	1.75	0.69
36:B2:9:VAL:HG13	36:B2:10:LEU:N	2.07	0.69
43:BO:83:LEU:HD11	43:BO:114:GLY:HA3	1.75	0.69
43:BO:100:HIS:O	43:BO:104:GLN:HB2	1.92	0.69
1:CA:182:A:O2'	1:CA:183:C:H3'	1.92	0.69
13:CP:57:ILE:O	13:CP:61:VAL:HG23	1.92	0.69
8:CI:11:ARG:CZ	8:CI:12:LYS:HB2	2.22	0.69
9:CJ:53:ILE:HG13	21:CN:84:ARG:CZ	2.22	0.69
23:DB:856:G:H1'	52:DW:23:LYS:HB3	1.74	0.69
23:DB:2645:G:H5"	23:DB:2732:G:H8	1.56	0.69
48:DG:84:LYS:HG3	48:DG:131:VAL:HB	1.73	0.69
50:DT:69:ARG:HG2	50:DT:73:ARG:C	2.18	0.69
2:AC:182:ASP:HB3	2:AC:201:ILE:HB	1.74	0.69
12:AM:73:SER:HA	12:AM:76:ILE:HD12	1.74	0.69
23:BB:1871:A:H2'	23:BB:1872:A:C8	2.27	0.69
29:BE:145:ASP:H	29:BE:166:LYS:HB3	1.58	0.69
3:CD:12:ARG:HB3	3:CD:12:ARG:NH1	2.08	0.69
3:CD:49:ASP:O	3:CD:53:GLN:HG3	1.92	0.69
2:CC:32:LEU:HD11	21:CN:92:ILE:HG12	1.74	0.69
18:CB:65:LYS:HB2	18:CB:158:ASP:CG	2.18	0.69
23:DB:448:U:C5	23:DB:583:G:H1'	2.27	0.69
23:DB:2147:A:H4'	23:DB:2148:G:C8	2.27	0.69
35:DV:51:GLN:HB2	35:DV:57:TYR:OH	1.91	0.69
1:AA:71:A:N6	1:AA:99:C:H1'	2.02	0.69
1:AA:1060:U:C4'	9:AJ:54:SER:HB2	2.22	0.69
18:AB:131:LYS:HZ3	18:AB:132:GLU:H	1.39	0.69
23:BB:90:U:H3'	23:BB:91:A:H5"	1.74	0.69
23:BB:118:A:H5'	23:BB:119:A:H8	1.56	0.69
23:BB:142:A:H2'	23:BB:143:C:C6	2.28	0.69
23:BB:942:G:H2'	23:BB:943:A:O4'	1.93	0.69
23:BB:1937:A:N7	23:BB:1939:U:H2'	2.07	0.69
26:BD:186:LEU:HD11	28:BP:3:ILE:HG13	1.75	0.69
29:BE:176:ASP:HB3	29:BE:179:SER:HB2	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BL:103:ILE:HD12	37:BL:103:ILE:H	1.57	0.69
38:BM:34:LYS:O	38:BM:36:VAL:HG23	1.91	0.69
41:BJ:6:ALA:HB3	41:BJ:45:THR:HG21	1.73	0.69
45:BS:35:ILE:HG22	45:BS:39:THR:HG21	1.74	0.69
47:BF:163:GLU:HA	47:BF:166:ARG:HD2	1.75	0.69
1:CA:1250:A:H4'	8:CI:69:GLY:N	2.07	0.69
1:CA:1296:C:H4'	1:CA:1302:C:H41	1.56	0.69
7:CH:32:LYS:HA	7:CH:35:ILE:HD12	1.75	0.69
17:CT:85:LEU:HD23	17:CT:86:ALA:H	1.57	0.69
2:CC:146:LYS:HB2	2:CC:202:PHE:CE2	2.28	0.69
6:CG:14:ASP:CG	6:CG:17:PHE:HB2	2.17	0.69
6:CG:75:LYS:HZ3	6:CG:75:LYS:HA	1.56	0.69
8:CI:27:ILE:HD13	8:CI:34:LEU:HB3	1.75	0.69
8:CI:98:ARG:HA	8:CI:103:VAL:HG22	1.74	0.69
16:CS:30:LEU:HG	16:CS:47:THR:O	1.93	0.69
23:DB:90:U:H3'	23:DB:91:A:H5"	1.73	0.69
23:DB:1080:A:H4'	24:DI:126:ARG:CD	2.22	0.69
23:DB:2502:G:H5'	23:DB:2503:A:H5"	1.74	0.69
23:DB:2512:C:H2'	23:DB:2513:A:O4'	1.93	0.69
33:D1:31:GLU:CD	33:D1:31:GLU:H	2.01	0.69
37:DL:90:VAL:HB	37:DL:122:VAL:HG12	1.75	0.69
38:DM:34:LYS:O	38:DM:36:VAL:HG23	1.93	0.69
40:DH:119:ASN:HD22	40:DH:119:ASN:N	1.90	0.69
41:DJ:45:THR:H	41:DJ:46:PRO:HD3	1.58	0.69
41:DJ:55:ILE:HG22	41:DJ:123:LYS:HB2	1.73	0.69
42:DN:38:LEU:HB3	42:DN:39:PRO:HD3	1.74	0.69
50:DT:60:THR:HB	50:DT:81:LYS:HD2	1.74	0.69
1:AA:1521:C:H2'	1:AA:1522:U:C6	2.28	0.69
5:AF:67:PRO:O	5:AF:70:VAL:HG22	1.93	0.69
18:AB:76:SER:HA	18:AB:92:ASN:HD22	1.58	0.69
18:AB:187:ASP:CG	18:AB:203:ASP:HB3	2.18	0.69
19:AU:38:GLU:C	19:AU:40:PRO:HD2	2.18	0.69
23:BB:1035:U:H2'	23:BB:1036:G:H8	1.58	0.69
23:BB:1947:C:H2'	23:BB:1948:G:H8	1.56	0.69
23:BB:2216:G:H2'	23:BB:2217:G:H8	1.58	0.69
26:BD:20:VAL:HG13	27:BK:72:PRO:HB3	1.75	0.69
29:BE:58:LYS:H	29:BE:58:LYS:HZ2	1.39	0.69
50:BT:7:LEU:C	50:BT:9:LYS:HD2	2.18	0.69
1:CA:41:G:H2'	1:CA:42:G:C8	2.28	0.69
1:CA:844:G:H2'	1:CA:845:A:H8	1.58	0.69
1:CA:1409:C:H1'	23:DB:1913:A:H62	1.58	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CJ:80:THR:HB	9:CJ:82:LYS:HD2	1.75	0.69
22:DA:32:U:H4'	22:DA:52:A:N6	2.08	0.69
35:DV:63:ILE:H	35:DV:63:ILE:HD12	1.58	0.69
49:DR:49:ILE:HD13	49:DR:51:VAL:O	1.92	0.69
1:AA:1060:U:H5"	9:AJ:53:ILE:HG12	1.73	0.69
9:AJ:40:ILE:HB	9:AJ:73:LEU:HB3	1.76	0.69
23:BB:2187:U:H2'	23:BB:2188:U:C6	2.28	0.69
25:BC:183:VAL:HG13	25:BC:185:ALA:H	1.57	0.69
1:CA:1326:U:H2'	1:CA:1327:C:C6	2.27	0.69
10:CK:80:ASN:HA	10:CK:105:ARG:HB3	1.74	0.69
19:CU:39:LYS:N	19:CU:40:PRO:HD2	2.08	0.69
6:CG:36:SER:HA	6:CG:39:GLU:OE2	1.92	0.69
23:DB:546:U:H4'	23:DB:548:G:OP2	1.93	0.69
25:DC:16:VAL:H	25:DC:203:VAL:CG1	2.06	0.69
15:AR:26:ALA:HA	15:AR:29:LYS:HE2	1.75	0.68
16:AS:49:ALA:HA	16:AS:57:VAL:O	1.92	0.68
23:BB:753:A:H2'	23:BB:754:U:C6	2.27	0.68
23:BB:1060:U:O2	23:BB:1088:A:N7	2.27	0.68
25:BC:132:ARG:HH11	25:BC:186:ASP:HB2	1.58	0.68
1:CA:8:A:H61	3:CD:53:GLN:HE22	1.41	0.68
1:CA:370:C:O2'	1:CA:371:A:H5'	1.93	0.68
3:CD:146:GLU:HA	3:CD:149:LYS:HG2	1.75	0.68
10:CK:23:HIS:HB3	10:CK:30:ILE:HG13	1.74	0.68
20:CO:78:TYR:O	20:CO:81:LEU:HB3	1.93	0.68
23:DB:1812:U:H2'	23:DB:1813:G:H8	1.58	0.68
29:DE:134:LEU:HA	29:DE:137:LYS:HB3	1.75	0.68
47:DF:121:PHE:HA	47:DF:127:TYR:HA	1.76	0.68
1:AA:1371:G:O3'	8:AI:70:GLY:HA3	1.92	0.68
2:AC:141:MET:HA	2:AC:141:MET:HE3	1.74	0.68
3:AD:49:ASP:O	3:AD:53:GLN:HG3	1.94	0.68
8:AI:14:SER:HA	8:AI:68:GLY:C	2.17	0.68
13:AP:4:ILE:O	13:AP:71:VAL:HG11	1.92	0.68
44:BQ:45:ALA:O	44:BQ:49:ARG:HB2	1.93	0.68
52:BW:19:ARG:HH21	52:BW:36:ILE:HD11	1.57	0.68
1:CA:73:C:O2'	1:CA:74:A:H5'	1.93	0.68
23:DB:597:G:H21	37:DL:12:SER:HA	1.57	0.68
23:DB:1437:C:H2'	23:DB:1438:U:H6	1.57	0.68
23:DB:1709:U:H2'	23:DB:1710:G:H8	1.58	0.68
23:DB:2039:U:H2'	23:DB:2040:G:C8	2.27	0.68
23:DB:2543:G:H2'	23:DB:2544:G:C8	2.27	0.68
38:DM:19:GLY:HA2	38:DM:97:GLN:HB2	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DS:66:ILE:HD13	45:DS:66:ILE:H	1.58	0.68
1:AA:1461:G:H2'	1:AA:1462:C:H6	1.57	0.68
2:AC:110:LEU:HD12	2:AC:203:LYS:HE2	1.76	0.68
12:AM:80:MET:HE2	12:AM:90:HIS:HB2	1.74	0.68
20:AO:67:LEU:HD13	20:AO:88:ARG:HH12	1.56	0.68
23:BB:264:C:H2'	23:BB:265:A:H5"	1.74	0.68
24:BI:10:LEU:HD13	24:BI:12:VAL:HG13	1.74	0.68
27:BK:54:LYS:H	27:BK:54:LYS:CD	2.05	0.68
27:BK:70:ARG:HB3	27:BK:76:VAL:HG22	1.75	0.68
41:BJ:45:THR:H	41:BJ:46:PRO:HD3	1.59	0.68
7:CH:49:LYS:HB3	7:CH:59:GLU:HB2	1.74	0.68
23:DB:28:A:H61	23:DB:512:G:H1'	1.57	0.68
23:DB:2458:G:H8	23:DB:2459:A:H62	1.42	0.68
35:DV:40:ILE:H	35:DV:40:ILE:HD13	1.58	0.68
40:DH:131:SER:CB	40:DH:141:LYS:HA	2.23	0.68
1:AA:272:C:H2'	1:AA:273:U:H6	1.59	0.68
1:AA:677:U:H2'	1:AA:678:U:H6	1.58	0.68
1:AA:958:A:H61	16:AS:53:GLY:HA3	1.58	0.68
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.27	0.68
10:AK:80:ASN:HA	10:AK:105:ARG:HB3	1.74	0.68
23:BB:857:G:C2'	23:BB:858:G:H5'	2.23	0.68
23:BB:2286:G:C8	23:BB:2286:G:H5'	2.28	0.68
23:BB:2543:G:H2'	23:BB:2544:G:C8	2.28	0.68
4:CE:143:LEU:O	4:CE:146:MET:HG2	1.93	0.68
11:CL:98:ARG:HA	11:CL:103:CYS:SG	2.32	0.68
13:CP:1:MET:HE3	13:CP:2:VAL:N	2.08	0.68
18:CB:57:ASN:CG	18:CB:219:THR:HB	2.18	0.68
23:DB:321:U:H1'	29:DE:162:ARG:NH1	2.08	0.68
23:DB:570:G:H2'	23:DB:2030:A:N7	2.09	0.68
23:DB:784:G:C6	25:DC:227:VAL:HG11	2.28	0.68
29:DE:60:TRP:O	29:DE:61:ARG:HB2	1.93	0.68
35:DV:61:LEU:HD11	35:DV:74:ALA:HB2	1.75	0.68
41:DJ:64:VAL:HG22	41:DJ:68:LYS:HD2	1.74	0.68
43:DO:89:ASP:N	43:DO:115:LEU:HD13	2.07	0.68
1:AA:8:A:H61	3:AD:53:GLN:HE22	1.40	0.68
1:AA:182:A:O2'	1:AA:183:C:H3'	1.94	0.68
1:AA:392:C:P	13:AP:8:ARG:HH12	2.16	0.68
1:AA:1521:C:H2'	1:AA:1522:U:H6	1.59	0.68
18:AB:198:VAL:HG12	18:AB:200:PRO:HD3	1.73	0.68
18:AB:218:ALA:HA	18:AB:221:ARG:HG2	1.75	0.68
23:BB:558:U:OP1	41:BJ:113:PRO:HG2	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1441:G:H2'	23:BB:1442:U:C6	2.28	0.68
23:BB:1548:A:H2'	23:BB:1549:A:C8	2.29	0.68
23:BB:1553:A:O2'	23:BB:1554:U:H2'	1.93	0.68
44:BQ:4:LYS:NZ	44:BQ:7:VAL:HG22	2.09	0.68
45:BS:17:VAL:C	45:BS:19:LEU:H	2.01	0.68
47:BF:34:THR:HA	47:BF:89:THR:HG22	1.75	0.68
1:CA:1328:C:H5"	12:CM:27:THR:HG21	1.76	0.68
23:DB:1917:U:H2'	23:DB:1918:A:H5'	1.75	0.68
29:DE:176:ASP:HB3	29:DE:179:SER:HB2	1.75	0.68
42:DN:101:GLY:HA2	42:DN:109:PRO:HA	1.74	0.68
1:AA:1349:A:H2'	1:AA:1350:A:O4'	1.93	0.68
8:AI:20:ILE:HG13	8:AI:62:LEU:HD12	1.75	0.68
8:AI:62:LEU:N	8:AI:62:LEU:HD22	2.08	0.68
12:AM:83:GLY:HA2	12:AM:88:LEU:HD21	1.74	0.68
18:AB:118:THR:HA	18:AB:121:GLN:HE21	1.58	0.68
19:AU:39:LYS:N	19:AU:40:PRO:HD2	2.08	0.68
23:BB:704:G:H2'	23:BB:726:G:N2	2.08	0.68
23:BB:1381:G:H2'	23:BB:1382:G:H5'	1.74	0.68
23:BB:2794:C:H2'	23:BB:2795:C:C6	2.28	0.68
27:BK:87:LEU:HD12	27:BK:93:GLN:N	2.08	0.68
38:BM:19:GLY:HA2	38:BM:97:GLN:HB2	1.75	0.68
40:BH:54:LEU:O	40:BH:58:LEU:HB3	1.94	0.68
47:BF:65:LEU:HD23	47:BF:87:LYS:HD2	1.75	0.68
51:BZ:64:ILE:HD12	51:BZ:64:ILE:H	1.58	0.68
23:DB:138:U:O3'	23:DB:139:U:H3'	1.92	0.68
23:DB:483:A:H5'	46:DU:44:HIS:O	1.94	0.68
26:DD:20:VAL:HG13	27:DK:72:PRO:HB3	1.75	0.68
27:DK:25:LEU:HG	27:DK:39:ILE:HA	1.75	0.68
50:DT:2:ILE:HD11	50:DT:3:ARG:CZ	2.24	0.68
1:AA:1179:A:H4'	8:AI:104:THR:HA	1.76	0.68
1:AA:1308:U:H3'	12:AM:97:ARG:NH1	2.08	0.68
5:AF:2:ARG:HG3	5:AF:92:THR:OG1	1.94	0.68
9:AJ:55:PRO:HA	21:AN:80:ARG:NH2	2.09	0.68
22:BA:91:C:H2'	22:BA:92:C:H6	1.59	0.68
23:BB:1041:G:H2'	23:BB:1042:G:H8	1.58	0.68
40:BH:131:SER:HB3	40:BH:140:ALA:O	1.94	0.68
47:BF:66:ILE:HD12	47:BF:85:GLY:O	1.94	0.68
52:BW:23:LYS:HD2	52:BW:24:ARG:H	1.58	0.68
1:CA:1448:C:H2'	1:CA:1449:C:H6	1.59	0.68
4:CE:156:ARG:NH1	7:CH:42:GLU:HB3	2.09	0.68
23:DB:855:G:N2	52:DW:23:LYS:HG2	2.07	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2328:A:H2'	23:DB:2329:U:H6	1.59	0.68
46:DU:40:LEU:H	46:DU:40:LEU:HD12	1.58	0.68
50:DT:54:GLU:HB3	50:DT:88:LYS:HB2	1.74	0.68
1:AA:16:A:O2'	1:AA:17:U:H5'	1.94	0.68
1:AA:764:C:H3'	1:AA:765:G:N2	2.08	0.68
1:AA:1308:U:OP1	12:AM:95:PRO:HA	1.93	0.68
2:AC:154:GLY:HA3	2:AC:162:ALA:HB1	1.74	0.68
4:AE:36:THR:HB	4:AE:63:MET:HE2	1.75	0.68
7:AH:32:LYS:HA	7:AH:35:ILE:HD12	1.75	0.68
12:AM:79:LEU:HA	12:AM:82:LEU:HD12	1.76	0.68
18:AB:185:ILE:HA	18:AB:199:ILE:O	1.94	0.68
19:AU:24:LYS:HZ3	19:AU:25:ALA:H	1.40	0.68
23:BB:2389:G:H5"	23:BB:2390:U:H5'	1.75	0.68
26:BD:54:ALA:HA	26:BD:76:GLY:HA2	1.76	0.68
26:BD:69:ALA:HA	26:BD:73:VAL:HB	1.76	0.68
43:BO:24:THR:HA	43:BO:42:PRO:HG3	1.75	0.68
48:BG:84:LYS:HG3	48:BG:131:VAL:C	2.19	0.68
48:BG:84:LYS:HB2	48:BG:132:LEU:HD23	1.75	0.68
3:CD:153:ARG:HG3	3:CD:154:VAL:H	1.58	0.68
7:CH:54:THR:HG23	7:CH:55:LYS:H	1.58	0.68
7:CH:63:LYS:HG2	7:CH:70:VAL:HG21	1.76	0.68
8:CI:11:ARG:HB2	8:CI:106:ASP:HB2	1.76	0.68
8:CI:87:MET:HB2	8:CI:94:ARG:NH2	2.09	0.68
23:DB:753:A:H2'	23:DB:754:U:C6	2.29	0.68
23:DB:946:C:H2'	23:DB:947:A:H8	1.59	0.68
23:DB:974:G:OP2	49:DR:78:ARG:HD3	1.94	0.68
24:DI:73:PRO:HG2	24:DI:78:LEU:HD21	1.75	0.68
26:DD:106:LYS:HB3	26:DD:206:ALA:N	2.08	0.68
41:DJ:3:THR:HG21	44:DQ:60:TRP:HE1	1.59	0.68
52:DW:19:ARG:HH21	52:DW:36:ILE:HD11	1.57	0.68
2:AC:52:SER:HB3	2:AC:114:LEU:HD21	1.75	0.68
23:BB:2070:A:H2'	23:BB:2071:A:C8	2.29	0.68
23:BB:2819:G:H2'	23:BB:2821:A:N7	2.08	0.68
35:BV:61:LEU:HD11	35:BV:74:ALA:HB2	1.76	0.68
43:BO:89:ASP:N	43:BO:115:LEU:HD13	2.08	0.68
2:CC:120:THR:HG23	2:CC:197:VAL:HG21	1.74	0.68
27:DK:10:VAL:HG13	27:DK:86:LEU:HD21	1.75	0.68
28:DP:97:TYR:O	28:DP:100:ARG:HB2	1.94	0.68
38:DM:126:ILE:H	38:DM:126:ILE:HD12	1.58	0.68
40:DH:87:GLU:OE2	40:DH:89:LYS:HD3	1.93	0.68
48:DG:84:LYS:HB2	48:DG:132:LEU:HD23	1.76	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DG:148:ARG:HD3	48:DG:152:ARG:NH1	2.09	0.68
1:AA:844:G:H2'	1:AA:845:A:H8	1.59	0.68
2:AC:179:ALA:HB3	2:AC:181:ILE:HD11	1.76	0.68
23:BB:1381:G:C2'	23:BB:1382:G:H5'	2.24	0.68
23:BB:1437:C:H2'	23:BB:1438:U:C6	2.29	0.68
23:BB:1515:A:H2'	23:BB:1516:G:O4'	1.94	0.68
1:CA:71:A:O2'	1:CA:72:A:H5'	1.94	0.68
10:CK:34:THR:HA	10:CK:41:LEU:HG	1.75	0.68
23:DB:414:C:H2'	23:DB:415:A:C8	2.28	0.68
47:DF:109:ARG:HB2	47:DF:135:ILE:HD12	1.76	0.68
50:DT:7:LEU:C	50:DT:9:LYS:HD2	2.18	0.68
1:AA:8:A:N6	3:AD:205:LYS:HB2	2.08	0.67
1:AA:1081:A:H2'	1:AA:1082:A:H8	1.59	0.67
17:AT:38:ILE:HD11	17:AT:82:ILE:HG22	1.77	0.67
23:BB:2737:G:H2'	23:BB:2738:A:C8	2.29	0.67
41:BJ:64:VAL:HG22	41:BJ:68:LYS:HD2	1.75	0.67
45:BS:66:ILE:H	45:BS:66:ILE:HD13	1.57	0.67
48:BG:42:VAL:HA	48:BG:51:PHE:HA	1.76	0.67
1:CA:543:U:H2'	1:CA:544:G:H8	1.58	0.67
1:CA:900:A:H2'	1:CA:901:A:C8	2.29	0.67
1:CA:973:G:H3'	1:CA:974:A:H5"	1.75	0.67
6:CG:97:ALA:HA	6:CG:100:MET:HE3	1.73	0.67
23:DB:1947:C:H2'	23:DB:1948:G:H8	1.58	0.67
23:DB:2187:U:H2'	23:DB:2188:U:C6	2.28	0.67
23:DB:2591:C:H2'	23:DB:2592:G:C8	2.29	0.67
23:DB:2841:C:H2'	23:DB:2842:G:H8	1.59	0.67
32:D4:1:MET:HE2	32:D4:36:ARG:HB2	1.77	0.67
1:AA:1118:U:H5'	8:AI:10:ARG:NH1	2.09	0.67
8:AI:78:ILE:HG22	8:AI:82:ILE:HD11	1.76	0.67
13:AP:1:MET:HE3	13:AP:2:VAL:N	2.08	0.67
23:BB:165:A:H2'	23:BB:166:U:H6	1.59	0.67
23:BB:1438:U:H2'	23:BB:1439:A:O4'	1.94	0.67
23:BB:2658:C:H5'	48:BG:159:LYS:NZ	2.08	0.67
26:BD:16:THR:HB	26:BD:18:ASP:OD1	1.93	0.67
36:B2:13:ASN:O	36:B2:17:GLY:N	2.27	0.67
39:BX:20:ASN:HD22	39:BX:20:ASN:H	1.43	0.67
50:BT:92:ASN:HB3	50:BT:93:LEU:HD22	1.75	0.67
1:CA:8:A:N6	3:CD:205:LYS:HB2	2.09	0.67
1:CA:392:C:P	13:CP:8:ARG:HH12	2.16	0.67
1:CA:658:C:O3'	20:CO:8:THR:HG21	1.94	0.67
16:CS:29:PRO:HA	16:CS:47:THR:HB	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1060:U:O2	23:DB:1088:A:N7	2.27	0.67
23:DB:1283:G:H22	23:DB:1286:A:H5'	1.59	0.67
23:DB:2841:C:H2'	23:DB:2842:G:C8	2.29	0.67
24:DI:1:ALA:HB1	24:DI:2:LYS:HD2	1.77	0.67
26:DD:40:LEU:HA	26:DD:45:TYR:N	2.09	0.67
36:D2:9:VAL:HG13	36:D2:10:LEU:N	2.08	0.67
37:DL:79:LEU:HB2	37:DL:113:ALA:H	1.59	0.67
43:DO:68:LYS:HA	43:DO:102:ARG:HG2	1.76	0.67
1:AA:524:G:H2'	1:AA:525:C:C6	2.29	0.67
1:AA:989:U:H2'	1:AA:990:C:O4'	1.94	0.67
17:AT:85:LEU:HD23	17:AT:86:ALA:H	1.59	0.67
23:BB:1230:A:H2'	23:BB:1231:U:C6	2.29	0.67
23:BB:1252:G:H1'	44:BQ:32:ARG:HH22	1.59	0.67
23:BB:1283:G:H22	23:BB:1286:A:H5'	1.59	0.67
35:BV:38:LEU:HG	35:BV:40:ILE:HD12	1.75	0.67
1:CA:250:A:H1'	1:CA:252:U:C6	2.29	0.67
1:CA:328:C:H4'	1:CA:329:A:H5"	1.76	0.67
1:CA:1268:G:H2'	1:CA:1269:A:C8	2.30	0.67
3:CD:197:HIS:O	3:CD:200:VAL:HG22	1.95	0.67
9:CJ:6:ILE:HB	9:CJ:76:ILE:CG1	2.24	0.67
23:DB:1487:U:H2'	23:DB:1488:C:C6	2.29	0.67
23:DB:2748:A:H4'	48:DG:3:VAL:HG21	1.76	0.67
37:DL:103:ILE:H	37:DL:103:ILE:HD12	1.57	0.67
52:DW:32:ALA:C	52:DW:34:SER:H	2.03	0.67
1:AA:86:G:H21	1:AA:87:C:N4	1.91	0.67
16:AS:35:ARG:HB2	16:AS:71:GLY:HA2	1.75	0.67
23:BB:67:U:H2'	23:BB:68:G:H8	1.58	0.67
23:BB:2867:G:H2'	23:BB:2867:G:N3	2.09	0.67
25:BC:68:ARG:HH21	25:BC:190:THR:HG22	1.59	0.67
26:BD:106:LYS:HB3	26:BD:206:ALA:N	2.09	0.67
35:BV:5:ASN:HA	35:BV:64:VAL:HB	1.77	0.67
1:CA:803:G:H2'	1:CA:804:U:C6	2.30	0.67
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.30	0.67
10:CK:17:ASP:HA	10:CK:80:ASN:O	1.94	0.67
2:CC:76:ILE:HD11	2:CC:102:ILE:HG21	1.76	0.67
21:CN:31:SER:HA	21:CN:44:VAL:HB	1.76	0.67
23:DB:67:U:H2'	23:DB:68:G:H8	1.57	0.67
23:DB:560:C:H3'	23:DB:561:G:C8	2.30	0.67
23:DB:1124:G:H1'	32:D4:38:GLY:OXT	1.94	0.67
23:DB:1729:U:H5"	23:DB:1730:C:O2	1.95	0.67
23:DB:2704:C:H2'	23:DB:2705:A:O4'	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DK:112:PHE:O	27:DK:115:ILE:HG22	1.93	0.67
44:DQ:57:ARG:NH1	44:DQ:61:ILE:HD11	2.09	0.67
49:DR:39:LEU:HB3	49:DR:49:ILE:HD11	1.75	0.67
52:DW:35:ILE:HA	52:DW:57:THR:HG23	1.74	0.67
1:AA:328:C:H4'	1:AA:329:A:H5"	1.76	0.67
1:AA:845:A:H5"	1:AA:846:G:C8	2.30	0.67
21:AN:50:LEU:N	21:AN:51:PRO:HD2	2.05	0.67
23:BB:184:C:H2'	23:BB:185:G:C8	2.29	0.67
23:BB:477:A:H2'	23:BB:478:A:H8	1.59	0.67
23:BB:1484:U:H2'	23:BB:1485:U:C6	2.29	0.67
23:BB:1760:C:H2'	23:BB:1761:C:O4'	1.95	0.67
23:BB:2086:U:H2'	23:BB:2087:G:C8	2.30	0.67
30:BY:3:THR:HB	30:BY:36:GLU:HG3	1.74	0.67
44:BQ:89:ILE:HG21	49:BR:11:GLN:HE22	1.59	0.67
1:CA:1086:U:H3	1:CA:1099:G:H22	1.42	0.67
17:CT:43:LYS:HD3	17:CT:43:LYS:H	1.59	0.67
2:CC:5:HIS:NE2	2:CC:7:ASN:HB3	2.10	0.67
8:CI:17:ARG:O	8:CI:64:ILE:HG23	1.94	0.67
18:CB:63:LYS:HA	18:CB:224:ARG:HH11	1.60	0.67
23:DB:1657:U:O2'	23:DB:1658:C:H5'	1.95	0.67
23:DB:2086:U:H2'	23:DB:2087:G:C8	2.30	0.67
23:DB:2094:A:H2'	23:DB:2095:A:C8	2.30	0.67
23:DB:2341:G:H2'	23:DB:2342:C:C6	2.30	0.67
23:DB:2789:C:H3'	23:DB:2893:A:H62	1.59	0.67
31:D0:9:ARG:O	31:D0:12:ARG:HB3	1.94	0.67
38:DM:33:LEU:HD22	38:DM:128:THR:HB	1.77	0.67
42:DN:48:VAL:HA	42:DN:51:LEU:HD22	1.77	0.67
1:AA:724:G:H2'	1:AA:725:G:H8	1.58	0.67
18:AB:117:GLU:O	18:AB:121:GLN:HB2	1.95	0.67
23:BB:27:G:N2	23:BB:512:G:H2'	2.08	0.67
23:BB:1076:C:H4'	24:BI:94:LYS:HE3	1.77	0.67
28:BP:97:TYR:O	28:BP:100:ARG:HB2	1.95	0.67
46:BU:82:VAL:H	46:BU:96:LYS:HZ2	1.42	0.67
1:CA:16:A:O2'	1:CA:17:U:H5'	1.95	0.67
1:CA:524:G:H2'	1:CA:525:C:C6	2.29	0.67
1:CA:1238:A:H5'	1:CA:1336:C:H41	1.56	0.67
1:CA:1461:G:H2'	1:CA:1462:C:C6	2.29	0.67
16:CS:18:VAL:O	16:CS:22:VAL:HG23	1.94	0.67
23:DB:165:A:H2'	23:DB:166:U:C6	2.30	0.67
23:DB:191:A:H2'	23:DB:192:C:C6	2.30	0.67
23:DB:974:G:H1'	23:DB:975:A:C8	2.30	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1047:G:H1'	23:DB:1110:G:N2	2.09	0.67
23:DB:2723:C:H5"	42:DN:1:MET:HE2	1.77	0.67
27:DK:70:ARG:HB3	27:DK:76:VAL:HG22	1.76	0.67
44:DQ:30:VAL:HG13	44:DQ:31:TYR:N	2.09	0.67
44:DQ:91:ARG:HD3	49:DR:11:GLN:HB2	1.76	0.67
1:AA:958:A:N6	16:AS:53:GLY:HA3	2.09	0.67
12:AM:106:ARG:HE	12:AM:112:ARG:HG2	1.58	0.67
23:BB:365:U:H2'	23:BB:366:C:C6	2.30	0.67
23:BB:2046:G:H1'	31:B0:18:HIS:CD2	2.30	0.67
23:BB:2291:U:H2'	23:BB:2292:U:C6	2.29	0.67
38:BM:36:VAL:HB	38:BM:127:LYS:O	1.95	0.67
48:BG:89:VAL:HG12	48:BG:90:GLY:H	1.60	0.67
48:BG:152:ARG:HD3	48:BG:153:PRO:HD2	1.76	0.67
48:BG:157:LYS:HG2	48:BG:159:LYS:HG3	1.77	0.67
23:DB:228:C:H4'	23:DB:229:C:H5"	1.76	0.67
23:DB:1080:A:H2'	23:DB:1081:U:H6	1.57	0.67
23:DB:1441:G:H2'	23:DB:1442:U:C6	2.30	0.67
29:DE:147:LEU:HD12	29:DE:149:ILE:HB	1.76	0.67
41:DJ:124:VAL:HG23	41:DJ:125:TYR:H	1.59	0.67
45:DS:35:ILE:HG22	45:DS:39:THR:HG21	1.76	0.67
47:DF:65:LEU:HD23	47:DF:87:LYS:HD2	1.75	0.67
2:AC:40:GLN:HG3	2:AC:41:TYR:N	2.09	0.67
4:AE:143:LEU:O	4:AE:146:MET:HG2	1.95	0.67
8:AI:41:GLU:N	8:AI:44:ARG:HH11	1.93	0.67
12:AM:53:ASP:HA	12:AM:56:ARG:NH2	2.10	0.67
29:BE:147:LEU:HD12	29:BE:149:ILE:HB	1.76	0.67
33:B1:24:LYS:HE2	33:B1:33:LEU:HB2	1.77	0.67
44:BQ:30:VAL:HG13	44:BQ:31:TYR:N	2.10	0.67
1:CA:17:U:H2'	1:CA:18:C:H6	1.57	0.67
1:CA:817:C:H1'	1:CA:819:A:H5'	1.77	0.67
4:CE:46:GLY:HA3	4:CE:70:MET:HA	1.77	0.67
9:CJ:12:ALA:HB2	9:CJ:96:VAL:HG12	1.76	0.67
16:CS:39:ILE:HG13	16:CS:68:HIS:O	1.95	0.67
23:DB:454:A:H3'	23:DB:455:C:H5"	1.76	0.67
23:DB:1139:G:O2'	23:DB:1140:C:H5'	1.95	0.67
23:DB:1176:U:H3'	23:DB:1177:G:C8	2.29	0.67
23:DB:1381:G:C2'	23:DB:1382:G:H5'	2.24	0.67
23:DB:1484:U:H2'	23:DB:1485:U:C6	2.28	0.67
23:DB:2143:C:H3'	23:DB:2144:G:O4'	1.94	0.67
23:DB:2307:G:O6	47:DF:84:ILE:HD11	1.95	0.67
52:DW:37:VAL:HG13	52:DW:55:ASP:O	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:532:A:N6	2:AC:191:THR:HB	2.10	0.67
6:AG:149:ALA:N	10:AK:55:ARG:HH22	1.92	0.67
11:AL:13:ARG:O	11:AL:14:LYS:HB3	1.94	0.67
18:AB:46:VAL:HA	18:AB:49:PHE:CD2	2.30	0.67
23:BB:215:G:H4'	23:BB:216:A:H4'	1.77	0.67
23:BB:832:U:H2'	23:BB:833:A:C8	2.29	0.67
38:BM:126:ILE:H	38:BM:126:ILE:HD12	1.60	0.67
47:BF:102:LEU:HA	47:BF:106:ALA:HB2	1.75	0.67
1:CA:190:A:H2'	1:CA:191:G:O4'	1.94	0.67
6:CG:57:GLU:HA	6:CG:60:ALA:HB3	1.76	0.67
23:DB:910:A:H2'	23:DB:911:A:C8	2.29	0.67
25:DC:93:VAL:HG13	25:DC:94:LEU:N	2.08	0.67
46:DU:85:ARG:HD3	46:DU:86:PHE:H	1.60	0.67
22:BA:60:C:H2'	22:BA:61:G:H8	1.59	0.67
23:BB:83:A:H61	23:BB:101:A:H5'	1.59	0.67
23:BB:547:A:H3'	23:BB:548:G:O4'	1.96	0.67
23:BB:1657:U:O2'	23:BB:1658:C:H5'	1.95	0.67
23:BB:2461:A:H2'	23:BB:2462:C:C6	2.30	0.67
23:BB:2674:G:H4'	27:BK:30:ARG:HG3	1.77	0.67
25:BC:75:ALA:HB2	25:BC:95:TYR:HA	1.76	0.67
25:BC:143:VAL:HB	25:BC:153:LEU:HB2	1.75	0.67
40:BH:116:ARG:NH1	40:BH:133:GLN:HB2	2.10	0.67
41:BJ:11:VAL:HG11	41:BJ:13:ARG:HE	1.59	0.67
44:BQ:77:LYS:HB3	44:BQ:116:LEU:HD21	1.77	0.67
45:BS:66:ILE:HA	45:BS:69:LEU:HD13	1.75	0.67
47:BF:141:ASP:O	47:BF:145:VAL:HG13	1.95	0.67
1:CA:301:G:H2'	1:CA:302:G:C8	2.29	0.67
1:CA:1071:C:H2'	1:CA:1072:G:H8	1.60	0.67
13:CP:6:LEU:HD11	13:CP:71:VAL:HB	1.77	0.67
20:CO:36:ILE:HD12	20:CO:60:VAL:HG23	1.75	0.67
23:DB:2021:C:OP1	31:D0:8:THR:HG21	1.95	0.67
27:DK:66:LYS:HA	27:DK:79:PHE:O	1.94	0.67
28:DP:89:GLY:HA2	28:DP:112:ARG:N	2.09	0.67
40:DH:27:ARG:NH1	51:DZ:60:ASP:HA	2.10	0.67
45:DS:26:GLY:N	45:DS:71:VAL:HG13	2.09	0.67
1:AA:202:G:H21	1:AA:465:A:H61	1.42	0.66
1:AA:859:G:H2'	1:AA:860:A:H8	1.61	0.66
23:BB:543:G:H2'	23:BB:544:C:C5'	2.25	0.66
23:BB:932:U:H5'	23:BB:933:A:OP1	1.95	0.66
44:BQ:89:ILE:HG22	44:BQ:91:ARG:H	1.60	0.66
1:CA:1244:G:H2'	1:CA:1245:C:C6	2.30	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:2:ARG:NH1	3:CD:114:ARG:HD3	2.09	0.66
14:CQ:58:VAL:HB	14:CQ:74:LEU:HD23	1.77	0.66
9:CJ:52:LEU:HB2	21:CN:80:ARG:HD3	1.77	0.66
12:CM:29:SER:O	12:CM:33:LEU:HG	1.95	0.66
23:DB:1438:U:H2'	23:DB:1439:A:O4'	1.95	0.66
23:DB:1480:C:H2'	23:DB:1481:U:O4'	1.95	0.66
23:DB:2819:G:H2'	23:DB:2821:A:N7	2.09	0.66
23:DB:2886:A:H62	31:D0:39:ARG:CZ	2.07	0.66
26:DD:40:LEU:HD23	26:DD:46:ARG:HG2	1.77	0.66
29:DE:33:VAL:O	29:DE:36:ALA:HB3	1.96	0.66
37:DL:143:GLU:CG	37:DL:144:GLU:H	2.07	0.66
41:DJ:64:VAL:O	41:DJ:65:THR:HG22	1.95	0.66
41:DJ:109:LEU:HD13	41:DJ:119:PHE:HB2	1.77	0.66
48:DG:91:VAL:HG23	48:DG:92:GLY:H	1.61	0.66
1:AA:1163:A:H2'	1:AA:1164:G:H8	1.61	0.66
3:AD:153:ARG:HG3	3:AD:154:VAL:H	1.59	0.66
5:AF:6:ILE:HG23	5:AF:62:MET:HB3	1.76	0.66
6:AG:67:ASN:ND2	6:AG:127:ALA:HA	2.11	0.66
9:AJ:65:TYR:C	21:AN:98:ALA:HB2	2.21	0.66
13:AP:6:LEU:HD11	13:AP:71:VAL:HB	1.77	0.66
23:BB:2704:C:H2'	23:BB:2705:A:O4'	1.95	0.66
25:BC:93:VAL:HG13	25:BC:94:LEU:N	2.10	0.66
27:BK:19:VAL:C	27:BK:41:ILE:HD11	2.20	0.66
40:BH:4:ILE:HB	40:BH:37:VAL:CG1	2.25	0.66
1:CA:272:C:H2'	1:CA:273:U:C6	2.30	0.66
1:CA:926:G:N2	1:CA:1505:G:H2'	2.10	0.66
3:CD:84:ASN:ND2	3:CD:86:GLY:H	1.93	0.66
11:CL:49:ARG:HB2	11:CL:89:LEU:HD11	1.76	0.66
15:CR:42:ARG:HD2	15:CR:43:ILE:HG23	1.77	0.66
9:CJ:52:LEU:HA	9:CJ:62:ARG:HA	1.76	0.66
22:DA:25:U:H4'	22:DA:26:C:H5"	1.77	0.66
23:DB:38:A:N3	29:DE:43:THR:HB	2.10	0.66
23:DB:1760:C:H2'	23:DB:1761:C:O4'	1.95	0.66
23:DB:2548:U:H1'	27:DK:23:LYS:HZ1	1.57	0.66
23:DB:2867:G:H2'	23:DB:2867:G:N3	2.10	0.66
35:DV:5:ASN:HA	35:DV:64:VAL:HB	1.77	0.66
44:DQ:77:LYS:HB3	44:DQ:116:LEU:HD21	1.76	0.66
45:DS:17:VAL:C	45:DS:19:LEU:H	2.00	0.66
45:DS:66:ILE:HA	45:DS:69:LEU:HD13	1.77	0.66
1:AA:859:G:H2'	1:AA:860:A:C8	2.31	0.66
1:AA:1125:U:C2'	1:AA:1126:U:H5"	2.25	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1194:U:H2'	1:AA:1195:C:C6	2.29	0.66
1:AA:1298:U:H4'	1:AA:1299:A:O5'	1.96	0.66
7:AH:63:LYS:HG2	7:AH:70:VAL:HG21	1.77	0.66
16:AS:5:LYS:C	16:AS:6:LYS:HD2	2.20	0.66
18:AB:30:ILE:HG23	18:AB:38:HIS:HB3	1.77	0.66
23:BB:454:A:H3'	23:BB:455:C:H5"	1.77	0.66
23:BB:1487:U:H2'	23:BB:1488:C:C6	2.30	0.66
24:BI:121:ILE:HA	24:BI:124:MET:HE3	1.76	0.66
50:BT:34:VAL:HG11	50:BT:43:ILE:HD11	1.77	0.66
1:CA:193:C:H2'	1:CA:194:C:C6	2.31	0.66
1:CA:764:C:H3'	1:CA:765:G:N2	2.10	0.66
5:CF:72:ASP:HA	5:CF:75:GLU:OE1	1.95	0.66
18:CB:186:VAL:O	18:CB:200:PRO:HA	1.95	0.66
23:DB:2:G:H2'	23:DB:3:U:H6	1.59	0.66
23:DB:1935:G:H1'	23:DB:1964:G:N2	2.10	0.66
23:DB:2286:G:C8	23:DB:2286:G:H5'	2.30	0.66
23:DB:2893:A:H5"	23:DB:2894:G:H5'	1.78	0.66
25:DC:75:ALA:HB2	25:DC:95:TYR:HA	1.76	0.66
27:DK:73:ASP:O	28:DP:74:GLN:HG3	1.95	0.66
7:AH:54:THR:HG23	7:AH:55:LYS:H	1.60	0.66
10:AK:75:GLU:CD	10:AK:75:GLU:H	2.01	0.66
12:AM:106:ARG:HH11	12:AM:109:LYS:HD2	1.60	0.66
23:BB:588:U:H1'	29:BE:85:PHE:CD2	2.31	0.66
23:BB:1594:U:H2'	23:BB:1595:C:C6	2.31	0.66
23:BB:1704:C:H2'	23:BB:1705:A:C8	2.30	0.66
23:BB:2586:U:H2'	23:BB:2587:A:C8	2.29	0.66
26:BD:148:GLN:CB	26:BD:152:PRO:HG2	2.26	0.66
27:BK:66:LYS:HA	27:BK:79:PHE:O	1.96	0.66
46:BU:13:LEU:HA	46:BU:18:LYS:HE3	1.78	0.66
47:BF:111:ARG:HH22	47:BF:113:PHE:HB2	1.59	0.66
1:CA:724:G:H2'	1:CA:725:G:H8	1.59	0.66
1:CA:1108:G:H5'	2:CC:175:HIS:ND1	2.10	0.66
20:CO:35:GLN:O	20:CO:39:LEU:HD13	1.94	0.66
23:DB:2389:G:H5"	23:DB:2390:U:H5'	1.77	0.66
26:DD:69:ALA:HA	26:DD:73:VAL:HB	1.76	0.66
29:DE:145:ASP:H	29:DE:166:LYS:HB3	1.59	0.66
32:D4:16:ILE:HA	32:D4:25:VAL:HG22	1.78	0.66
32:D4:22:VAL:HG11	32:D4:36:ARG:HD2	1.77	0.66
44:DQ:45:ALA:O	44:DQ:49:ARG:HB2	1.95	0.66
48:DG:30:GLY:CA	48:DG:78:VAL:HA	2.24	0.66
51:DZ:54:LYS:HA	51:DZ:57:ARG:HD3	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:880:C:H2'	1:AA:881:G:H8	1.60	0.66
1:AA:1118:U:H5'	8:AI:10:ARG:HH11	1.60	0.66
10:AK:16:SER:HA	10:AK:78:ILE:HA	1.78	0.66
14:AQ:58:VAL:HB	14:AQ:74:LEU:HD23	1.76	0.66
20:AO:26:GLU:HG2	20:AO:81:LEU:HD12	1.77	0.66
23:BB:878:A:H2'	23:BB:878:A:N3	2.10	0.66
23:BB:1935:G:H1'	23:BB:1964:G:N2	2.11	0.66
23:BB:2097:A:H2'	23:BB:2098:U:C6	2.30	0.66
23:BB:2267:A:C8	23:BB:2267:A:C3'	2.79	0.66
25:BC:16:VAL:H	25:BC:203:VAL:CG1	2.09	0.66
32:B4:5:ALA:HA	32:B4:37:GLN:NE2	2.10	0.66
35:BV:44:HIS:CE1	35:BV:86:LEU:H	2.14	0.66
35:BV:63:ILE:H	35:BV:63:ILE:HD12	1.61	0.66
41:BJ:64:VAL:O	41:BJ:65:THR:HG22	1.96	0.66
43:BO:68:LYS:HA	43:BO:102:ARG:HG2	1.77	0.66
44:BQ:105:PHE:HA	44:BQ:108:LEU:HB2	1.78	0.66
21:CN:65:GLN:H	21:CN:65:GLN:HE21	1.40	0.66
23:DB:2425:A:H5'	23:DB:2427:C:O4'	1.95	0.66
46:DU:13:LEU:HA	46:DU:18:LYS:HE3	1.77	0.66
47:DF:62:GLN:CD	47:DF:91:ARG:HE	2.03	0.66
48:DG:153:PRO:HB3	48:DG:158:GLY:HA2	1.77	0.66
6:AG:72:VAL:O	6:AG:140:VAL:HG12	1.96	0.66
10:AK:34:THR:HA	10:AK:41:LEU:HG	1.77	0.66
23:BB:28:A:N6	23:BB:512:G:H1'	2.11	0.66
23:BB:196:A:H5"	37:BL:47:ARG:HH12	1.59	0.66
23:BB:328:U:H4'	46:BU:65:GLN:NE2	2.10	0.66
26:BD:116:LYS:HB3	26:BD:118:PHE:CZ	2.31	0.66
36:B2:9:VAL:HG13	36:B2:10:LEU:H	1.59	0.66
50:BT:5:GLU:O	50:BT:9:LYS:HE3	1.96	0.66
1:CA:518:C:H2'	1:CA:530:G:C8	2.30	0.66
1:CA:958:A:N6	16:CS:76:THR:HG22	2.10	0.66
1:CA:1230:C:H2'	1:CA:1231:G:H8	1.61	0.66
4:CE:81:GLN:H	4:CE:146:MET:HE3	1.60	0.66
6:CG:14:ASP:HB3	6:CG:18:GLY:N	2.11	0.66
12:CM:95:PRO:N	12:CM:108:ARG:HG2	2.10	0.66
23:DB:27:G:N2	23:DB:512:G:H2'	2.08	0.66
23:DB:634:C:H2'	23:DB:635:C:H6	1.61	0.66
23:DB:1024:G:C3'	23:DB:1025:G:H5"	2.26	0.66
23:DB:2150:C:H2'	23:DB:2151:U:C6	2.30	0.66
23:DB:2469:A:H4'	38:DM:55:ARG:NE	2.10	0.66
1:AA:215:C:H2'	1:AA:216:U:C6	2.30	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:429:U:H1'	1:AA:430:A:H5"	1.78	0.66
1:AA:715:A:H2'	1:AA:716:A:H8	1.61	0.66
1:AA:1105:A:H2'	1:AA:1106:G:H8	1.60	0.66
1:AA:1169:A:H2'	1:AA:1170:A:C8	2.30	0.66
4:AE:113:VAL:HG23	4:AE:114:LEU:N	2.11	0.66
18:AB:13:VAL:O	18:AB:14:HIS:HB3	1.95	0.66
23:BB:674:G:O3'	29:BE:60:TRP:CZ2	2.49	0.66
26:BD:33:ARG:HE	26:BD:51:THR:HB	1.60	0.66
35:BV:72:VAL:HB	35:BV:92:VAL:O	1.95	0.66
37:BL:143:GLU:CG	37:BL:144:GLU:H	2.09	0.66
38:BM:78:LEU:H	38:BM:78:LEU:HD12	1.61	0.66
39:BX:13:GLU:HB2	39:BX:57:LEU:HD23	1.77	0.66
48:BG:17:LYS:HE2	48:BG:19:ASN:ND2	2.11	0.66
52:BW:23:LYS:HD2	52:BW:24:ARG:HB3	1.77	0.66
1:CA:423:G:H2'	1:CA:424:G:O4'	1.96	0.66
18:CB:137:THR:HA	18:CB:140:LEU:HD13	1.78	0.66
22:DA:60:C:H2'	22:DA:61:G:H8	1.61	0.66
23:DB:28:A:N6	23:DB:512:G:H1'	2.11	0.66
23:DB:96:C:H4'	39:DX:41:HIS:ND1	2.11	0.66
23:DB:455:C:N3	23:DB:472:A:H2'	2.11	0.66
23:DB:1821:A:H2'	23:DB:1822:C:C6	2.31	0.66
30:DY:7:THR:HG23	30:DY:34:THR:OG1	1.95	0.66
33:D1:9:LYS:HD3	33:D1:9:LYS:H	1.60	0.66
46:DU:78:LYS:HD3	46:DU:79:ALA:H	1.61	0.66
47:DF:111:ARG:HH22	47:DF:113:PHE:HB2	1.61	0.66
1:AA:312:C:H2'	1:AA:313:A:H8	1.59	0.66
1:AA:1057:G:H5"	2:AC:153:SER:CB	2.25	0.66
1:AA:1486:G:H2'	1:AA:1487:G:O4'	1.95	0.66
2:AC:129:PHE:CG	2:AC:130:ARG:N	2.63	0.66
2:AC:181:ILE:HD12	2:AC:181:ILE:N	2.09	0.66
10:AK:124:LYS:HA	19:AU:34:ARG:HB3	1.78	0.66
12:AM:2:ARG:HG3	12:AM:6:ILE:H	1.61	0.66
21:AN:58:ARG:H	21:AN:59:GLN:HE21	1.44	0.66
23:BB:2328:A:H2'	23:BB:2329:U:H6	1.58	0.66
50:BT:53:VAL:HG11	50:BT:87:LEU:HD13	1.78	0.66
1:CA:1004:A:H5'	1:CA:1024:G:N2	2.10	0.66
1:CA:1118:U:H1'	1:CA:1179:A:C5	2.31	0.66
1:CA:1206:G:H2'	1:CA:1207:G:O4'	1.95	0.66
2:CC:149:LYS:HG3	2:CC:168:ARG:HB2	1.77	0.66
23:DB:347:A:H2'	23:DB:348:A:H8	1.61	0.66
23:DB:1119:U:H2'	23:DB:1120:G:H8	1.61	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1189:A:H2'	23:DB:1190:G:O4'	1.96	0.66
23:DB:2387:U:H1'	52:DW:38:ARG:CZ	2.26	0.66
29:DE:58:LYS:H	29:DE:58:LYS:HZ2	1.42	0.66
36:D2:9:VAL:HG13	36:D2:10:LEU:H	1.60	0.66
43:DO:100:HIS:O	43:DO:104:GLN:HB2	1.96	0.66
45:DS:20:VAL:C	45:DS:22:ASP:H	2.03	0.66
45:DS:84:ARG:HB3	45:DS:96:ILE:HG23	1.78	0.66
47:DF:111:ARG:HE	47:DF:135:ILE:HG22	1.60	0.66
50:DT:5:GLU:O	50:DT:9:LYS:HE3	1.96	0.66
1:AA:518:C:H2'	1:AA:530:G:C8	2.31	0.66
4:AE:156:ARG:HD2	7:AH:42:GLU:O	1.95	0.66
23:BB:17:G:H2'	23:BB:18:U:C6	2.30	0.66
23:BB:70:G:H3'	23:BB:113:U:H4'	1.76	0.66
23:BB:974:G:H1'	23:BB:975:A:C8	2.31	0.66
23:BB:1437:C:H2'	23:BB:1438:U:H6	1.60	0.66
23:BB:2537:U:H2'	23:BB:2538:C:C6	2.31	0.66
29:BE:58:LYS:HB2	29:BE:60:TRP:CD1	2.31	0.66
1:CA:202:G:H21	1:CA:465:A:H61	1.44	0.66
1:CA:429:U:H1'	1:CA:430:A:H5"	1.77	0.66
1:CA:674:G:H2'	1:CA:675:A:C8	2.30	0.66
1:CA:923:A:H2'	1:CA:924:C:C6	2.31	0.66
1:CA:1225:A:H5'	12:CM:101:THR:OG1	1.95	0.66
3:CD:29:THR:H	3:CD:33:ILE:CG2	2.09	0.66
5:CF:1:MET:SD	5:CF:67:PRO:HD3	2.35	0.66
23:DB:1173:U:H1'	23:DB:1177:G:N1	2.11	0.66
23:DB:2010:G:H5"	45:DS:42:LYS:HB2	1.77	0.66
23:DB:2064:C:H2'	23:DB:2065:C:C6	2.31	0.66
26:DD:8:LYS:HB2	26:DD:201:LEU:HD11	1.77	0.66
39:DX:13:GLU:HB2	39:DX:57:LEU:HD23	1.78	0.66
1:AA:1226:C:N4	12:AM:102:LYS:HB3	2.11	0.66
21:AN:31:SER:N	21:AN:44:VAL:HG11	2.11	0.66
23:BB:979:A:H2'	23:BB:982:C:N4	2.10	0.66
23:BB:1138:G:H2'	23:BB:1139:G:O4'	1.95	0.66
23:BB:2841:C:H2'	23:BB:2842:G:H8	1.61	0.66
27:BK:20:MET:O	27:BK:41:ILE:HG13	1.95	0.66
40:BH:82:SER:N	40:BH:146:VAL:HG13	2.10	0.66
47:BF:62:GLN:CD	47:BF:91:ARG:HE	2.03	0.66
51:BZ:54:LYS:HA	51:BZ:57:ARG:HD3	1.78	0.66
6:CG:12:LEU:HD22	6:CG:13:PRO:HD2	1.78	0.66
9:CJ:86:ALA:HA	9:CJ:89:ARG:HD2	1.76	0.66
18:CB:107:ARG:HA	18:CB:110:ILE:HD12	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:71:A:H4'	23:DB:72:U:H5'	1.78	0.66
23:DB:584:C:OP1	44:DQ:5:ARG:HB3	1.96	0.66
23:DB:910:A:H2'	23:DB:911:A:H8	1.60	0.66
23:DB:1683:U:H2'	23:DB:1684:G:C8	2.31	0.66
48:DG:84:LYS:HG3	48:DG:131:VAL:C	2.20	0.66
1:AA:950:U:H2'	1:AA:951:G:C8	2.31	0.65
1:AA:1252:A:H2'	1:AA:1253:G:O4'	1.95	0.65
2:AC:99:GLN:O	2:AC:100:ILE:HB	1.95	0.65
10:AK:17:ASP:HA	10:AK:80:ASN:O	1.95	0.65
13:AP:67:ILE:HG12	13:AP:72:ALA:HB2	1.78	0.65
23:BB:466:A:N3	23:BB:683:U:H1'	2.11	0.65
23:BB:1709:U:H2'	23:BB:1710:G:H8	1.60	0.65
23:BB:2366:A:H2'	23:BB:2367:G:O4'	1.96	0.65
26:BD:33:ARG:NH1	26:BD:76:GLY:HA3	2.11	0.65
29:BE:105:LEU:HD11	29:BE:177:PRO:HG3	1.77	0.65
32:B4:3:VAL:HG23	32:B4:4:ARG:H	1.60	0.65
35:BV:9:ARG:NH2	35:BV:12:GLN:HA	2.10	0.65
40:BH:90:LEU:HB2	40:BH:123:ARG:HB3	1.77	0.65
46:BU:26:ASN:ND2	46:BU:34:ILE:HD12	2.11	0.65
48:BG:18:ILE:HA	48:BG:23:ILE:HG13	1.76	0.65
1:CA:736:C:H2'	1:CA:737:C:C6	2.31	0.65
1:CA:1432:G:H5'	28:DP:105:LYS:HG2	1.78	0.65
23:DB:358:U:H2'	23:DB:359:G:H8	1.61	0.65
23:DB:742:A:H2'	23:DB:743:A:H8	1.62	0.65
23:DB:2824:C:H3'	23:DB:2825:G:H21	1.61	0.65
26:DD:33:ARG:NH1	26:DD:76:GLY:HA3	2.11	0.65
35:DV:9:ARG:NH2	35:DV:12:GLN:HA	2.11	0.65
47:DF:134:GLN:C	47:DF:136:ILE:H	2.05	0.65
3:AD:25:ARG:NH1	3:AD:26:ALA:HB2	2.11	0.65
3:AD:96:ARG:NH1	3:AD:133:SER:HA	2.10	0.65
5:AF:29:ILE:HG21	5:AF:64:VAL:HG11	1.78	0.65
18:AB:42:LEU:HD23	18:AB:45:THR:HB	1.77	0.65
19:AU:40:PRO:HA	19:AU:44:ARG:HD2	1.78	0.65
20:AO:63:ARG:O	20:AO:67:LEU:HG	1.95	0.65
21:AN:60:ARG:HG2	21:AN:62:ARG:HE	1.61	0.65
23:BB:532:A:H4'	23:BB:533:G:C8	2.31	0.65
27:BK:35:VAL:HG23	27:BK:36:GLY:N	2.07	0.65
47:BF:1:ALA:HB1	47:BF:4:HIS:HB3	1.78	0.65
47:BF:37:MET:HE3	47:BF:151:LEU:HD23	1.77	0.65
48:BG:91:VAL:HG23	48:BG:92:GLY:H	1.62	0.65
1:CA:713:G:H2'	1:CA:714:G:C8	2.32	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:320:A:H4'	23:DB:322:A:N7	2.11	0.65
23:DB:1099:G:C5'	24:DI:3:LYS:N	2.59	0.65
23:DB:1704:C:H2'	23:DB:1705:A:C8	2.31	0.65
25:DC:123:ILE:HD12	25:DC:191:LEU:HD11	1.77	0.65
25:DC:233:GLY:H	25:DC:241:LYS:NZ	1.95	0.65
38:DM:18:ARG:C	38:DM:38:ARG:HH22	2.03	0.65
40:DH:26:ALA:HA	40:DH:30:LEU:HB2	1.77	0.65
48:DG:155:PRO:HA	48:DG:170:THR:HG22	1.77	0.65
1:AA:193:C:H2'	1:AA:194:C:C6	2.31	0.65
1:AA:677:U:H2'	1:AA:678:U:C6	2.31	0.65
1:AA:1063:C:H3'	1:AA:1064:G:H2'	1.78	0.65
2:AC:155:ARG:H	2:AC:162:ALA:HA	1.61	0.65
21:AN:26:LEU:HA	21:AN:29:ILE:HD12	1.77	0.65
22:BA:54:G:H21	47:BF:25:MET:HG2	1.60	0.65
23:BB:171:U:H2'	23:BB:172:A:C8	2.31	0.65
23:BB:2306:C:H3'	23:BB:2307:G:H5'	1.78	0.65
39:BX:23:ARG:O	39:BX:27:ASN:HB2	1.97	0.65
47:BF:121:PHE:HA	47:BF:127:TYR:HA	1.77	0.65
49:BR:23:GLU:O	49:BR:25:LEU:HD22	1.97	0.65
1:CA:469:C:H2'	1:CA:470:C:H6	1.61	0.65
1:CA:1006:G:H2'	1:CA:1007:U:H6	1.62	0.65
1:CA:1127:G:H2'	1:CA:1128:C:H6	1.61	0.65
8:CI:56:MET:SD	8:CI:57:VAL:N	2.70	0.65
8:CI:87:MET:HB2	8:CI:94:ARG:CZ	2.27	0.65
18:CB:16:GLY:HA2	18:CB:40:ILE:CD1	2.25	0.65
23:DB:146:A:H2'	23:DB:147:C:C6	2.31	0.65
23:DB:1845:G:O2'	23:DB:1846:G:H5'	1.96	0.65
26:DD:107:VAL:HG13	26:DD:203:VAL:HG23	1.79	0.65
37:DL:95:LEU:HB2	37:DL:101:ILE:CG1	2.26	0.65
44:DQ:89:ILE:HG22	44:DQ:91:ARG:H	1.60	0.65
47:DF:141:ASP:O	47:DF:145:VAL:HG13	1.95	0.65
12:AM:28:ARG:HH21	12:AM:62:PHE:HB2	1.60	0.65
16:AS:15:LEU:O	16:AS:18:VAL:HG12	1.97	0.65
23:BB:146:A:H2'	23:BB:147:C:C6	2.32	0.65
52:BW:39:GLN:NE2	52:BW:43:LYS:HB2	2.12	0.65
1:CA:834:U:H2'	1:CA:835:U:C6	2.31	0.65
1:CA:1359:C:H3'	21:CN:74:ARG:NH2	2.11	0.65
10:CK:124:LYS:HA	19:CU:34:ARG:HB3	1.77	0.65
17:CT:38:ILE:HD11	17:CT:82:ILE:HG22	1.77	0.65
12:CM:63:VAL:HG12	12:CM:68:LEU:HG	1.78	0.65
16:CS:31:ARG:HD2	16:CS:31:ARG:H	1.61	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CO:11:ILE:HD11	20:CO:31:LEU:HD23	1.78	0.65
33:D1:8:ILE:CD1	33:D1:51:ALA:HA	2.25	0.65
48:DG:36:LEU:H	48:DG:36:LEU:HD22	1.61	0.65
1:AA:1063:C:N4	1:AA:1193:G:H1	1.93	0.65
2:AC:77:GLY:HA3	2:AC:81:GLU:HB3	1.79	0.65
2:AC:111:ASP:HB3	2:AC:114:LEU:HD12	1.77	0.65
5:AF:72:ASP:HA	5:AF:75:GLU:OE1	1.95	0.65
6:AG:100:MET:HA	6:AG:103:ILE:HD12	1.76	0.65
8:AI:12:LYS:N	8:AI:105:ARG:HH21	1.93	0.65
18:AB:35:ASN:C	18:AB:36:LYS:HD2	2.21	0.65
23:BB:181:A:H2'	23:BB:182:A:C8	2.32	0.65
23:BB:1461:C:H2'	23:BB:1462:C:H6	1.62	0.65
23:BB:1480:C:H2'	23:BB:1481:U:O4'	1.95	0.65
23:BB:2591:C:H2'	23:BB:2592:G:H8	1.62	0.65
26:BD:107:VAL:HG13	26:BD:203:VAL:HG23	1.76	0.65
28:BP:89:GLY:HA2	28:BP:112:ARG:N	2.12	0.65
29:BE:46:GLN:HB3	29:BE:86:ALA:HA	1.79	0.65
36:B2:20:ALA:C	36:B2:22:MET:H	2.05	0.65
45:BS:20:VAL:C	45:BS:22:ASP:H	2.05	0.65
46:BU:40:LEU:H	46:BU:40:LEU:HD12	1.61	0.65
48:BG:166:GLU:HG2	48:BG:168:VAL:HG23	1.77	0.65
1:CA:620:C:C2	3:CD:131:ILE:HD13	2.31	0.65
1:CA:715:A:H2'	1:CA:716:A:H8	1.60	0.65
1:CA:1298:U:H4'	1:CA:1299:A:O4'	1.95	0.65
1:CA:1333:A:H2'	1:CA:1334:G:O4'	1.97	0.65
4:CE:113:VAL:HG23	4:CE:114:LEU:N	2.10	0.65
5:CF:6:ILE:HG23	5:CF:62:MET:HB3	1.78	0.65
10:CK:58:THR:HB	10:CK:59:PRO:HD2	1.79	0.65
21:CN:20:PHE:CA	21:CN:24:ALA:HB2	2.27	0.65
23:DB:171:U:H2'	23:DB:172:A:C8	2.32	0.65
23:DB:466:A:N3	23:DB:683:U:H1'	2.11	0.65
23:DB:851:C:O4'	30:DY:46:MET:HG2	1.97	0.65
23:DB:1173:U:H1'	23:DB:1177:G:H1	1.62	0.65
35:DV:72:VAL:HB	35:DV:92:VAL:O	1.96	0.65
1:AA:80:A:C4	1:AA:81:A:H1'	2.32	0.65
1:AA:1043:G:H2'	1:AA:1044:A:C8	2.32	0.65
4:AE:131:ASN:HD22	4:AE:134:ASN:H	1.44	0.65
5:AF:90:MET:HE1	15:AR:60:ARG:HD3	1.78	0.65
8:AI:25:GLY:HA2	8:AI:60:LEU:O	1.96	0.65
11:AL:64:SER:OG	11:AL:96:THR:HG23	1.97	0.65
23:BB:181:A:H2'	23:BB:182:A:H8	1.60	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:228:C:H4'	23:BB:229:C:H5"	1.78	0.65
23:BB:565:C:H2'	23:BB:566:U:C6	2.32	0.65
23:BB:910:A:H2'	23:BB:911:A:C8	2.32	0.65
23:BB:1551:A:H3'	23:BB:1552:A:H5"	1.78	0.65
23:BB:1724:G:H2'	23:BB:1725:U:C6	2.31	0.65
27:BK:38:ILE:HD13	27:BK:38:ILE:N	2.12	0.65
38:BM:10:ARG:HH11	38:BM:89:VAL:HG22	1.62	0.65
48:BG:30:GLY:CA	48:BG:78:VAL:HA	2.27	0.65
51:BZ:56:MET:HA	51:BZ:59:ILE:HG12	1.78	0.65
13:CP:54:LEU:HD13	13:CP:80:LYS:HE3	1.78	0.65
21:CN:20:PHE:HA	21:CN:24:ALA:HB2	1.78	0.65
23:DB:328:U:H4'	46:DU:65:GLN:NE2	2.10	0.65
23:DB:565:C:H2'	23:DB:566:U:C6	2.31	0.65
23:DB:784:G:O2'	23:DB:785:G:H5"	1.96	0.65
23:DB:845:A:C2	23:DB:847:U:H1'	2.31	0.65
25:DC:93:VAL:O	25:DC:94:LEU:HB3	1.97	0.65
10:AK:58:THR:HB	10:AK:59:PRO:HD2	1.78	0.65
18:AB:46:VAL:CG1	18:AB:47:PRO:HD3	2.25	0.65
22:BA:91:C:H2'	22:BA:92:C:C6	2.32	0.65
23:BB:1139:G:O2'	23:BB:1140:C:H5'	1.96	0.65
23:BB:1440:U:H2'	23:BB:1441:G:H8	1.62	0.65
23:BB:2776:A:H4'	23:BB:2777:G:C5'	2.26	0.65
23:DB:627:A:H4'	23:DB:628:G:H5'	1.78	0.65
23:DB:942:G:H2'	23:DB:943:A:O4'	1.96	0.65
23:DB:2678:C:H2'	23:DB:2679:A:H8	1.60	0.65
26:DD:1:MET:HE1	26:DD:100:LEU:HD11	1.78	0.65
41:DJ:11:VAL:HG11	41:DJ:13:ARG:HE	1.60	0.65
52:DW:76:ARG:NH2	52:DW:76:ARG:HA	2.11	0.65
1:AA:543:U:H2'	1:AA:544:G:H8	1.62	0.65
2:AC:52:SER:HA	2:AC:113:LYS:HG2	1.79	0.65
10:AK:52:ARG:HH11	10:AK:52:ARG:HB3	1.61	0.65
15:AR:60:ARG:HA	15:AR:63:TYR:HD2	1.62	0.65
17:AT:43:LYS:HB3	17:AT:86:ALA:HB1	1.79	0.65
18:AB:76:SER:HA	18:AB:92:ASN:ND2	2.12	0.65
18:AB:163:ILE:HG23	18:AB:164:ASP:N	2.11	0.65
23:BB:165:A:H2'	23:BB:166:U:C6	2.32	0.65
23:BB:1309:G:OP1	36:B2:9:VAL:HG12	1.97	0.65
23:BB:1429:G:H2'	23:BB:1430:G:H8	1.62	0.65
23:BB:2230:G:H2'	23:BB:2231:U:C6	2.31	0.65
37:BL:79:LEU:HB2	37:BL:113:ALA:H	1.60	0.65
41:BJ:43:GLU:O	41:BJ:45:THR:N	2.30	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:77:LYS:HD3	51:BZ:77:LYS:H	1.60	0.65
1:CA:880:C:H2'	1:CA:881:G:H8	1.60	0.65
10:CK:28:ASN:ND2	10:CK:29:THR:H	1.95	0.65
2:CC:41:TYR:HD1	2:CC:42:LEU:HD22	1.62	0.65
18:CB:151:LYS:HG3	18:CB:152:ASP:N	2.11	0.65
22:DA:91:C:H2'	22:DA:92:C:H6	1.62	0.65
35:DV:72:VAL:HG12	35:DV:93:ARG:HA	1.79	0.65
36:D2:13:ASN:O	36:D2:17:GLY:N	2.30	0.65
40:DH:4:ILE:HB	40:DH:37:VAL:CG1	2.26	0.65
47:DF:163:GLU:HA	47:DF:166:ARG:HD2	1.77	0.65
48:DG:154:GLU:HG2	48:DG:156:TYR:H	1.62	0.65
18:AB:49:PHE:HA	18:AB:212:TYR:OH	1.97	0.65
18:AB:61:SER:HB2	18:AB:62:ARG:HH11	1.62	0.65
18:AB:224:ARG:O	18:AB:225:SER:HB2	1.96	0.65
23:BB:1199:U:H5'	44:BQ:4:LYS:HD3	1.77	0.65
23:BB:2469:A:H4'	38:BM:55:ARG:NE	2.12	0.65
23:BB:2615:U:H1'	31:B0:3:GLN:HB3	1.79	0.65
26:BD:40:LEU:HD23	26:BD:46:ARG:HG2	1.78	0.65
26:BD:159:LYS:HZ2	26:BD:160:LYS:N	1.95	0.65
30:BY:8:GLN:HG2	30:BY:31:ILE:HA	1.78	0.65
47:BF:2:LYS:H	47:BF:2:LYS:CE	2.10	0.65
47:BF:141:ASP:HB3	47:BF:144:LYS:HB2	1.79	0.65
1:CA:1361:G:H2'	1:CA:1362:A:H5"	1.77	0.65
3:CD:144:ILE:HD12	3:CD:177:MET:HE3	1.78	0.65
2:CC:149:LYS:HB2	2:CC:168:ARG:HG3	1.79	0.65
6:CG:90:VAL:HB	6:CG:94:ARG:HD2	1.79	0.65
22:DA:42:C:H4'	47:DF:63:LYS:HB3	1.79	0.65
23:DB:215:G:H4'	23:DB:216:A:H4'	1.78	0.65
23:DB:1534:U:H2'	23:DB:1536:C:N3	2.12	0.65
23:DB:2471:A:O2'	23:DB:2472:G:H8	1.80	0.65
25:DC:244:VAL:HB	25:DC:249:VAL:N	2.06	0.65
27:DK:35:VAL:HG23	27:DK:36:GLY:N	2.08	0.65
29:DE:146:VAL:HA	29:DE:185:LYS:O	1.96	0.65
37:DL:129:LYS:HA	37:DL:132:ARG:HG2	1.79	0.65
43:DO:59:ALA:HA	43:DO:62:LEU:HG	1.77	0.65
4:AE:81:GLN:H	4:AE:146:MET:HE3	1.60	0.65
23:BB:1821:A:H2'	23:BB:1822:C:C6	2.32	0.65
23:BB:2071:A:H2'	23:BB:2072:C:C6	2.32	0.65
23:BB:2196:C:O2'	23:BB:2197:U:H5'	1.97	0.65
23:BB:2720:U:H5"	28:BP:52:ARG:NH2	2.12	0.65
39:BX:48:ARG:O	39:BX:51:ALA:HB3	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:153:PRO:HB3	48:BG:158:GLY:HA2	1.77	0.65
51:BZ:40:VAL:HG22	51:BZ:45:ARG:O	1.97	0.65
7:CH:86:LYS:HD2	7:CH:90:GLU:HG2	1.79	0.65
23:DB:362:A:H3'	23:DB:363:G:H8	1.61	0.65
23:DB:2861:U:H2'	23:DB:2862:G:H8	1.61	0.65
28:DP:20:ARG:HG3	28:DP:21:PRO:CD	2.27	0.65
29:DE:46:GLN:HB3	29:DE:86:ALA:HA	1.79	0.65
29:DE:67:ARG:HH11	29:DE:67:ARG:HG2	1.62	0.65
30:DY:9:THR:HB	30:DY:53:MET:O	1.96	0.65
36:D2:27:GLY:O	36:D2:30:VAL:HB	1.97	0.65
48:DG:166:GLU:HG2	48:DG:168:VAL:HG23	1.77	0.65
1:AA:620:C:C2	3:AD:131:ILE:HD13	2.32	0.64
11:AL:49:ARG:HB2	11:AL:89:LEU:HD11	1.79	0.64
23:BB:448:U:C5	23:BB:583:G:H1'	2.32	0.64
23:BB:1007:C:H4'	41:BJ:110:PRO:HB3	1.79	0.64
23:BB:2142:A:O2'	23:BB:2143:C:H5'	1.97	0.64
23:BB:2824:C:H3'	23:BB:2825:G:N2	2.13	0.64
27:BK:19:VAL:HG12	27:BK:41:ILE:HG12	1.79	0.64
35:BV:72:VAL:HG12	35:BV:93:ARG:HA	1.80	0.64
40:BH:26:ALA:HA	40:BH:30:LEU:HB2	1.78	0.64
40:BH:114:GLU:HB2	40:BH:132:PHE:CD1	2.32	0.64
48:BG:21:GLN:OE1	48:BG:37:ASN:HB2	1.96	0.64
52:BW:23:LYS:C	52:BW:66:VAL:HB	2.22	0.64
6:CG:75:LYS:HA	6:CG:75:LYS:NZ	2.12	0.64
8:CI:18:VAL:HG21	8:CI:81:GLY:C	2.22	0.64
12:CM:12:LYS:HD2	12:CM:16:ILE:HD13	1.78	0.64
23:DB:351:C:H2'	23:DB:352:A:C8	2.31	0.64
23:DB:1021:A:H62	23:DB:1141:U:H3	1.45	0.64
23:DB:1857:G:N2	23:DB:1884:G:H2'	2.12	0.64
23:DB:2776:A:H4'	23:DB:2777:G:C5'	2.26	0.64
27:DK:60:ALA:HB2	27:DK:86:LEU:HA	1.77	0.64
29:DE:132:LYS:O	29:DE:135:ALA:HB3	1.97	0.64
30:DY:8:GLN:HG2	30:DY:31:ILE:HA	1.77	0.64
36:D2:20:ALA:C	36:D2:22:MET:H	2.04	0.64
37:DL:111:ILE:HG22	37:DL:112:LEU:H	1.62	0.64
38:DM:105:MET:HB2	38:DM:117:PHE:HZ	1.61	0.64
52:DW:23:LYS:HD2	52:DW:24:ARG:H	1.61	0.64
1:AA:803:G:H2'	1:AA:804:U:C6	2.33	0.64
9:AJ:52:LEU:HB2	21:AN:80:ARG:HE	1.60	0.64
13:AP:1:MET:HE2	13:AP:3:THR:HG22	1.79	0.64
22:BA:25:U:H4'	22:BA:26:C:H5"	1.77	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:570:G:H2'	23:BB:2030:A:N7	2.11	0.64
23:BB:654:A:N3	23:BB:655:A:H5"	2.12	0.64
23:BB:2752:C:H2'	23:BB:2753:A:O4'	1.97	0.64
24:BI:129:GLU:HB3	24:BI:133:ARG:NH1	2.10	0.64
30:BY:23:LEU:HD13	30:BY:28:LEU:HB2	1.78	0.64
40:BH:89:LYS:NZ	40:BH:89:LYS:HA	2.11	0.64
49:BR:39:LEU:HB3	49:BR:49:ILE:HD11	1.78	0.64
50:BT:50:LEU:HD22	50:BT:50:LEU:H	1.61	0.64
52:BW:50:VAL:HG23	52:BW:61:LYS:HE3	1.78	0.64
19:CU:36:PHE:HB3	19:CU:40:PRO:CD	2.27	0.64
8:CI:11:ARG:HA	8:CI:105:ARG:CZ	2.27	0.64
18:CB:61:SER:HB2	18:CB:62:ARG:NH1	2.12	0.64
23:DB:17:G:H2'	23:DB:18:U:C6	2.31	0.64
23:DB:932:U:H5'	23:DB:933:A:OP1	1.97	0.64
23:DB:1440:U:H2'	23:DB:1441:G:H8	1.62	0.64
23:DB:1461:C:H2'	23:DB:1462:C:H6	1.62	0.64
23:DB:2230:G:H2'	23:DB:2231:U:C6	2.31	0.64
26:DD:111:GLY:H	26:DD:194:PRO:HG2	1.62	0.64
52:DW:23:LYS:C	52:DW:66:VAL:HB	2.22	0.64
1:AA:564:C:C2	14:AQ:32:ILE:HD11	2.32	0.64
23:BB:63:A:H2'	23:BB:64:A:N7	2.12	0.64
23:BB:1021:A:H62	23:BB:1141:U:H3	1.43	0.64
23:BB:1857:G:N2	23:BB:1884:G:H2'	2.12	0.64
23:BB:2841:C:H2'	23:BB:2842:G:C8	2.31	0.64
38:BM:12:MET:HB2	38:BM:72:PRO:HG2	1.78	0.64
52:BW:32:ALA:C	52:BW:34:SER:H	2.05	0.64
1:CA:83:C:HO2'	1:CA:84:U:H2'	1.59	0.64
1:CA:194:C:O2'	1:CA:195:A:H5'	1.96	0.64
1:CA:1041:G:H2'	1:CA:1042:A:C8	2.31	0.64
16:CS:51:HIS:HB2	16:CS:56:HIS:CD2	2.31	0.64
23:DB:2216:G:H2'	23:DB:2217:G:H8	1.62	0.64
23:DB:2469:A:H2'	23:DB:2470:G:O4'	1.98	0.64
26:DD:33:ARG:HE	26:DD:51:THR:HB	1.61	0.64
26:DD:54:ALA:HA	26:DD:76:GLY:HA2	1.78	0.64
27:DK:20:MET:O	27:DK:41:ILE:HG13	1.98	0.64
37:DL:121:THR:HB	37:DL:141:LYS:HB3	1.79	0.64
40:DH:114:GLU:HG3	40:DH:133:GLN:O	1.96	0.64
44:DQ:105:PHE:HA	44:DQ:108:LEU:HB2	1.78	0.64
1:AA:513:C:H2'	1:AA:514:C:H6	1.62	0.64
1:AA:1134:G:C2	1:AA:1135:U:H1'	2.33	0.64
1:AA:1226:C:H4'	1:AA:1227:A:OP1	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1461:G:H2'	1:AA:1462:C:C6	2.32	0.64
18:AB:112:ARG:HE	18:AB:116:LEU:HD11	1.63	0.64
22:BA:42:C:H4'	47:BF:63:LYS:HB3	1.80	0.64
23:BB:155:A:H2'	23:BB:156:A:C8	2.33	0.64
23:BB:634:C:H2'	23:BB:635:C:H6	1.61	0.64
23:BB:2892:G:H5"	23:BB:2894:G:N2	2.13	0.64
24:BI:25:PRO:O	24:BI:29:GLN:HG2	1.98	0.64
32:B4:16:ILE:HA	32:B4:25:VAL:HG22	1.79	0.64
33:B1:32:LYS:HA	33:B1:51:ALA:O	1.97	0.64
38:BM:33:LEU:HD22	38:BM:128:THR:HB	1.78	0.64
1:CA:382:A:H2'	1:CA:383:A:C8	2.32	0.64
1:CA:940:C:H2'	1:CA:941:G:H8	1.62	0.64
3:CD:172:VAL:HA	3:CD:179:GLY:HA2	1.78	0.64
11:CL:13:ARG:O	11:CL:14:LYS:HB3	1.96	0.64
15:CR:31:TYR:O	15:CR:39:VAL:HG22	1.97	0.64
8:CI:11:ARG:NH2	8:CI:12:LYS:HB2	2.12	0.64
23:DB:558:U:OP1	41:DJ:114:LEU:HB2	1.97	0.64
23:DB:1132:U:O2	41:DJ:75:TYR:HB2	1.98	0.64
23:DB:1485:U:H2'	23:DB:1486:U:C6	2.33	0.64
23:DB:1843:C:H5"	25:DC:250:GLN:HE21	1.61	0.64
35:DV:14:LYS:HE3	35:DV:18:ARG:HH21	1.62	0.64
38:DM:41:LEU:HB3	38:DM:46:ILE:CG2	2.27	0.64
40:DH:116:ARG:HB3	40:DH:131:SER:N	2.13	0.64
48:DG:89:VAL:HG12	48:DG:90:GLY:H	1.60	0.64
1:AA:17:U:H2'	1:AA:18:C:H6	1.62	0.64
1:AA:250:A:H1'	1:AA:252:U:C6	2.32	0.64
2:AC:19:SER:HB3	2:AC:21:TRP:HE1	1.62	0.64
3:AD:2:ARG:NH1	3:AD:114:ARG:HD3	2.12	0.64
6:AG:71:THR:H	6:AG:141:HIS:CE1	2.14	0.64
6:AG:149:ALA:H	10:AK:55:ARG:HH22	1.43	0.64
22:BA:87:U:H2'	22:BA:88:C:O5'	1.97	0.64
37:BL:129:LYS:HA	37:BL:132:ARG:HG2	1.80	0.64
46:BU:78:LYS:HD3	46:BU:79:ALA:H	1.63	0.64
1:CA:408:A:OP1	3:CD:111:ALA:HB3	1.97	0.64
1:CA:564:C:C2	14:CQ:32:ILE:HD11	2.33	0.64
4:CE:156:ARG:HD2	7:CH:42:GLU:O	1.98	0.64
2:CC:151:GLU:HB3	2:CC:198:LYS:HB2	1.79	0.64
6:CG:50:ALA:HB2	6:CG:57:GLU:HG3	1.80	0.64
21:CN:60:ARG:HD3	21:CN:62:ARG:NH2	2.12	0.64
18:CB:59:ILE:HG22	18:CB:62:ARG:NE	2.12	0.64
23:DB:289:G:H2'	23:DB:290:U:C6	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1406:U:H2'	23:DB:1407:G:H8	1.62	0.64
23:DB:2071:A:H2'	23:DB:2072:C:C6	2.33	0.64
23:DB:2336:A:H61	52:DW:40:ARG:HG3	1.60	0.64
18:AB:95:TRP:HZ2	18:AB:100:LEU:HD13	1.63	0.64
23:BB:287:G:H2'	23:BB:288:U:C6	2.33	0.64
23:BB:324:A:H2'	23:BB:325:G:O4'	1.97	0.64
23:BB:2356:U:H5"	52:BW:16:GLU:HG3	1.79	0.64
23:BB:2698:U:H2'	23:BB:2699:C:C6	2.32	0.64
48:BG:154:GLU:HG2	48:BG:156:TYR:H	1.62	0.64
23:DB:1098:A:OP2	24:DI:3:LYS:HG2	1.98	0.64
23:DB:1149:G:H2'	23:DB:1150:C:C6	2.32	0.64
23:DB:1778:U:H2'	23:DB:1784:A:H62	1.63	0.64
23:DB:2008:C:H2'	23:DB:2009:A:C8	2.30	0.64
26:DD:10:GLY:HA3	26:DD:26:VAL:N	2.06	0.64
47:DF:169:LEU:HA	47:DF:172:PHE:HD2	1.63	0.64
1:AA:91:U:H2'	1:AA:92:U:C6	2.32	0.64
1:AA:840:C:C5	1:AA:842:U:H4'	2.32	0.64
1:AA:1215:G:H5'	1:AA:1215:G:H8	1.61	0.64
2:AC:139:ASN:O	2:AC:143:LEU:HD23	1.97	0.64
10:AK:28:ASN:ND2	10:AK:29:THR:H	1.94	0.64
23:BB:322:A:C5'	23:BB:340:A:H1'	2.19	0.64
23:BB:946:C:H2'	23:BB:947:A:H8	1.62	0.64
23:BB:1683:U:H2'	23:BB:1684:G:H8	1.61	0.64
23:BB:2241:A:H2'	23:BB:2242:G:C8	2.33	0.64
27:BK:60:ALA:HB2	27:BK:86:LEU:HA	1.77	0.64
43:BO:67:ASN:HB3	43:BO:70:ALA:HB2	1.79	0.64
1:CA:522:C:H41	11:CL:49:ARG:HH22	1.46	0.64
1:CA:598:U:H2'	1:CA:599:C:C6	2.33	0.64
1:CA:1317:C:H4'	21:CN:48:GLN:OE1	1.97	0.64
15:CR:72:ARG:HH11	15:CR:72:ARG:N	1.84	0.64
23:DB:303:G:H2'	23:DB:304:U:C6	2.33	0.64
23:DB:718:A:H3'	23:DB:719:C:C6	2.33	0.64
23:DB:876:C:C4	23:DB:877:A:H1'	2.32	0.64
23:DB:2306:C:H3'	23:DB:2307:G:H5'	1.79	0.64
23:DB:2575:C:H5"	26:DD:149:ASN:HD22	1.63	0.64
23:DB:2678:C:H2'	23:DB:2679:A:C8	2.32	0.64
47:DF:141:ASP:HB3	47:DF:144:LYS:HB2	1.79	0.64
48:DG:144:ALA:HB1	48:DG:163:TYR:HE1	1.62	0.64
49:DR:39:LEU:CB	49:DR:49:ILE:HD11	2.28	0.64
52:DW:50:VAL:HG23	52:DW:61:LYS:HE3	1.80	0.64
1:AA:408:A:OP1	3:AD:111:ALA:HB3	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:642:A:H2'	1:AA:643:C:H6	1.63	0.64
1:AA:1314:C:N4	16:AS:3:SER:HB3	2.12	0.64
6:AG:74:VAL:HG21	6:AG:85:GLN:HE21	1.62	0.64
8:AI:20:ILE:HG12	8:AI:86:LEU:HD12	1.80	0.64
10:AK:88:PRO:HA	10:AK:92:ARG:HD2	1.80	0.64
11:AL:31:GLY:HA3	11:AL:54:VAL:CG1	2.28	0.64
18:AB:120:SER:HA	18:AB:125:PHE:HB2	1.77	0.64
21:AN:27:LYS:HG3	21:AN:28:ALA:H	1.61	0.64
23:BB:71:A:H4'	23:BB:72:U:H5'	1.79	0.64
23:BB:620:G:N3	23:BB:620:G:H5'	2.13	0.64
23:BB:2099:U:H2'	23:BB:2100:G:H8	1.63	0.64
41:BJ:93:ILE:HA	41:BJ:97:PRO:HG3	1.79	0.64
1:CA:335:C:H2'	1:CA:336:A:H8	1.63	0.64
1:CA:642:A:H2'	1:CA:643:C:H6	1.63	0.64
1:CA:1023:U:H2'	1:CA:1024:G:O4'	1.97	0.64
11:CL:14:LYS:HZ3	11:CL:16:ALA:HB3	1.62	0.64
13:CP:1:MET:HE2	13:CP:3:THR:HG22	1.79	0.64
18:CB:27:LYS:HB3	18:CB:28:PRO:HD3	1.80	0.64
18:CB:159:ALA:HB1	18:CB:183:PHE:CE1	2.26	0.64
23:DB:533:G:H2'	23:DB:534:U:C6	2.33	0.64
23:DB:947:A:H2'	23:DB:948:C:H6	1.62	0.64
23:DB:1429:G:H2'	23:DB:1430:G:H8	1.63	0.64
23:DB:2794:C:H2'	23:DB:2795:C:C6	2.33	0.64
25:DC:143:VAL:HB	25:DC:153:LEU:HB2	1.80	0.64
25:DC:233:GLY:H	25:DC:241:LYS:HZ2	1.42	0.64
32:D4:5:ALA:HA	32:D4:37:GLN:NE2	2.12	0.64
41:DJ:93:ILE:HA	41:DJ:97:PRO:HG3	1.79	0.64
47:DF:32:LYS:HA	47:DF:95:MET:HG3	1.80	0.64
50:DT:50:LEU:H	50:DT:50:LEU:HD22	1.62	0.64
1:AA:157:U:O2'	1:AA:158:G:H5'	1.98	0.64
1:AA:713:G:H2'	1:AA:714:G:C8	2.33	0.64
1:AA:1147:C:H2'	1:AA:1148:U:H6	1.62	0.64
20:AO:85:LEU:HB3	20:AO:87:LEU:HG	1.80	0.64
23:BB:857:G:O2'	23:BB:858:G:H5'	1.98	0.64
23:BB:2773:C:H5"	26:BD:169:ARG:HB2	1.79	0.64
23:BB:2898:U:H2'	23:BB:2899:A:C8	2.33	0.64
26:BD:1:MET:HE1	26:BD:100:LEU:HD11	1.80	0.64
26:BD:118:PHE:O	26:BD:119:ALA:HB3	1.97	0.64
26:BD:123:LYS:HD2	26:BD:165:MET:HE1	1.79	0.64
28:BP:59:THR:H	28:BP:72:VAL:HA	1.62	0.64
33:B1:3:GLY:C	33:B1:5:ARG:H	2.06	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:94:ILE:HB	40:BH:128:HIS:NE2	2.13	0.64
40:BH:100:ALA:CB	40:BH:112:LYS:HA	2.28	0.64
43:BO:59:ALA:HA	43:BO:62:LEU:HG	1.79	0.64
45:BS:26:GLY:N	45:BS:71:VAL:HG13	2.11	0.64
1:CA:18:C:H1'	1:CA:1079:G:H21	1.62	0.64
1:CA:840:C:C5	1:CA:842:U:H4'	2.33	0.64
1:CA:1032:G:H3'	1:CA:1032:G:N3	2.12	0.64
1:CA:1097:C:H2'	1:CA:1098:C:H6	1.63	0.64
1:CA:1512:U:H2'	1:CA:1513:A:H8	1.63	0.64
23:DB:184:C:H2'	23:DB:185:G:C8	2.32	0.64
23:DB:1724:G:H2'	23:DB:1725:U:C6	2.32	0.64
27:DK:70:ARG:HD3	27:DK:76:VAL:HG22	1.80	0.64
28:DP:88:ARG:HB2	28:DP:112:ARG:NH1	2.12	0.64
47:DF:134:GLN:H	47:DF:150:GLY:N	1.94	0.64
50:DT:34:VAL:HG11	50:DT:43:ILE:HD11	1.79	0.64
1:AA:301:G:H2'	1:AA:302:G:C8	2.32	0.64
1:AA:704:A:C2	1:AA:705:G:H1'	2.33	0.64
1:AA:923:A:OP1	4:AE:25:LYS:HB3	1.98	0.64
1:AA:1234:C:O2'	1:AA:1235:U:H5'	1.98	0.64
16:AS:49:ALA:O	16:AS:56:HIS:HB3	1.98	0.64
17:AT:74:HIS:O	17:AT:78:LEU:HG	1.98	0.64
23:BB:580:U:H2'	23:BB:581:C:H6	1.63	0.64
23:BB:1149:G:H2'	23:BB:1150:C:C6	2.33	0.64
23:BB:2469:A:H2'	23:BB:2470:G:O4'	1.98	0.64
26:BD:62:LYS:HB2	26:BD:63:PRO:HD3	1.80	0.64
40:BH:140:ALA:C	40:BH:141:LYS:HD3	2.23	0.64
41:BJ:109:LEU:HD13	41:BJ:119:PHE:HB2	1.79	0.64
47:BF:137:PHE:O	47:BF:139:GLU:N	2.31	0.64
1:CA:986:U:H2'	1:CA:987:G:O4'	1.97	0.64
1:CA:1216:A:H5"	21:CN:4:SER:HB2	1.79	0.64
2:CC:29:ALA:HB2	21:CN:75:LYS:O	1.98	0.64
21:CN:65:GLN:HE22	21:CN:78:LEU:HG	1.62	0.64
18:CB:102:ASN:HD21	18:CB:105:THR:HB	1.60	0.64
23:DB:1:G:H2'	23:DB:2:G:C8	2.33	0.64
23:DB:1993:U:H4'	26:DD:133:THR:CG2	2.28	0.64
27:DK:87:LEU:HD12	27:DK:93:GLN:N	2.12	0.64
27:DK:110:GLU:HA	27:DK:113:MET:HG3	1.80	0.64
33:D1:3:GLY:C	33:D1:5:ARG:H	2.06	0.64
40:DH:5:LEU:HB3	40:DH:13:GLY:HA2	1.80	0.64
49:DR:23:GLU:O	49:DR:25:LEU:HD22	1.98	0.64
1:AA:1019:A:H2'	1:AA:1020:G:O4'	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1342:C:H2'	1:AA:1343:G:C8	2.32	0.63
7:AH:23:ALA:HA	7:AH:62:LEU:H	1.62	0.63
16:AS:62:THR:HG22	16:AS:63:ASP:H	1.61	0.63
23:BB:705:A:N6	23:BB:726:G:H1'	2.14	0.63
23:BB:1485:U:H2'	23:BB:1486:U:C6	2.33	0.63
23:BB:2358:A:H61	37:BL:54:GLN:HE22	1.47	0.63
26:BD:5:VAL:N	26:BD:32:ASN:HD21	1.96	0.63
33:B1:7:LYS:HD3	34:B3:33:THR:HG21	1.81	0.63
37:BL:57:LEU:HD12	37:BL:60:ARG:NH2	2.13	0.63
43:BO:115:LEU:C	43:BO:116:GLN:HE21	2.05	0.63
4:CE:36:THR:HB	4:CE:63:MET:HE2	1.80	0.63
16:CS:45:GLY:HA2	16:CS:60:PHE:HB3	1.80	0.63
18:CB:218:ALA:HA	18:CB:221:ARG:NH1	2.12	0.63
23:DB:1100:C:OP2	24:DI:2:LYS:HB3	1.98	0.63
23:DB:2267:A:H3'	23:DB:2267:A:H8	1.63	0.63
25:DC:6:LYS:O	25:DC:8:THR:HG23	1.97	0.63
25:DC:16:VAL:HB	25:DC:203:VAL:HG11	1.81	0.63
26:DD:2:ILE:HG22	26:DD:82:PHE:HB3	1.79	0.63
41:DJ:4:PHE:HB3	41:DJ:44:TYR:CD1	2.33	0.63
41:DJ:56:VAL:HG12	41:DJ:57:LEU:H	1.63	0.63
46:DU:82:VAL:H	46:DU:96:LYS:HZ2	1.46	0.63
1:AA:860:A:H2'	1:AA:861:G:O4'	1.98	0.63
6:AG:17:PHE:HE2	6:AG:58:LEU:HD22	1.64	0.63
8:AI:61:ASP:C	8:AI:62:LEU:HD13	2.23	0.63
22:BA:49:C:H2'	22:BA:50:A:C8	2.32	0.63
23:BB:718:A:H3'	23:BB:719:C:C6	2.30	0.63
23:BB:764:A:H5"	25:BC:208:GLY:HA2	1.81	0.63
23:BB:1024:G:C3'	23:BB:1025:G:H5"	2.27	0.63
42:BN:33:ILE:HD11	42:BN:112:TYR:HD1	1.62	0.63
45:BS:66:ILE:HD13	45:BS:66:ILE:N	2.14	0.63
48:BG:104:LEU:HD22	48:BG:106:LEU:HD21	1.79	0.63
50:BT:54:GLU:HB3	50:BT:88:LYS:HB2	1.78	0.63
1:CA:394:G:H2'	1:CA:395:C:C6	2.32	0.63
1:CA:927:G:N2	1:CA:1391:U:H1'	2.13	0.63
1:CA:1091:U:H3'	6:CG:3:ARG:NH1	2.12	0.63
10:CK:28:ASN:CG	10:CK:56:LYS:HE3	2.23	0.63
12:CM:1:ALA:N	12:CM:8:ILE:HG22	2.13	0.63
18:CB:113:LEU:HD21	18:CB:151:LYS:HB2	1.78	0.63
23:DB:152:A:H2'	23:DB:153:U:C6	2.33	0.63
23:DB:1812:U:H2'	23:DB:1813:G:C8	2.33	0.63
25:DC:156:SER:O	25:DC:194:VAL:HG11	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:4:LEU:HG	26:DD:29:VAL:HG11	1.80	0.63
26:DD:10:GLY:O	26:DD:11:MET:HB2	1.98	0.63
26:DD:148:GLN:CB	26:DD:152:PRO:HG2	2.26	0.63
27:DK:38:ILE:HD13	27:DK:38:ILE:N	2.13	0.63
47:DF:22:ASN:ND2	47:DF:22:ASN:H	1.96	0.63
50:DT:53:VAL:HG11	50:DT:87:LEU:HD13	1.79	0.63
1:AA:98:A:H2'	1:AA:99:C:C6	2.34	0.63
1:AA:1324:A:H2'	1:AA:1325:C:H6	1.61	0.63
3:AD:12:ARG:HB3	3:AD:12:ARG:NH1	2.12	0.63
5:AF:71:ILE:HG13	5:AF:72:ASP:N	2.13	0.63
23:BB:150:U:H2'	23:BB:151:C:C6	2.33	0.63
23:BB:1796:U:H2'	23:BB:1797:G:C8	2.34	0.63
23:BB:2471:A:O2'	23:BB:2472:G:H8	1.80	0.63
23:BB:2757:A:H2	48:BG:63:GLN:HE22	1.46	0.63
26:BD:119:ALA:HB1	26:BD:163:GLY:H	1.61	0.63
27:BK:25:LEU:HG	27:BK:39:ILE:HA	1.78	0.63
29:BE:33:VAL:O	29:BE:36:ALA:HB3	1.99	0.63
44:BQ:108:LEU:HA	49:BR:48:LYS:HD3	1.78	0.63
44:BQ:111:LYS:HB2	49:BR:48:LYS:NZ	2.12	0.63
1:CA:858:G:O6	1:CA:869:G:H3'	1.99	0.63
1:CA:1036:A:H2'	1:CA:1037:C:C6	2.32	0.63
23:DB:20:C:H2'	23:DB:21:A:H8	1.64	0.63
23:DB:155:A:H2'	23:DB:156:A:C8	2.34	0.63
23:DB:811:U:H2'	37:DL:21:ARG:HA	1.79	0.63
23:DB:850:U:H2'	23:DB:851:C:C6	2.34	0.63
23:DB:946:C:H2'	23:DB:947:A:C8	2.33	0.63
23:DB:1709:U:H2'	23:DB:1710:G:C8	2.33	0.63
24:DI:27:LEU:HD12	24:DI:32:VAL:HG11	1.79	0.63
24:DI:41:PHE:O	24:DI:45:THR:HG23	1.98	0.63
41:DJ:98:GLU:HB3	41:DJ:124:VAL:HG21	1.79	0.63
45:DS:60:HIS:O	45:DS:61:ASN:HB2	1.98	0.63
49:DR:24:LYS:HA	49:DR:94:THR:OG1	1.97	0.63
52:DW:49:ASN:HB3	52:DW:60:ALA:HA	1.80	0.63
1:AA:26:A:H61	1:AA:558:G:H1'	1.64	0.63
1:AA:947:G:H2'	1:AA:948:C:C6	2.33	0.63
1:AA:1047:G:H21	1:AA:1215:G:H5"	1.63	0.63
1:AA:1409:C:H4'	23:BB:1914:C:N4	2.12	0.63
7:AH:58:LEU:HD22	7:AH:60:LEU:HB2	1.80	0.63
8:AI:17:ARG:HE	8:AI:65:THR:HG21	1.62	0.63
8:AI:98:ARG:HA	8:AI:103:VAL:HG22	1.80	0.63
13:AP:20:VAL:HG23	13:AP:35:ARG:HA	1.78	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AU:13:VAL:HG22	19:AU:15:LEU:HD23	1.81	0.63
19:AU:36:PHE:HB3	19:AU:40:PRO:CD	2.26	0.63
23:BB:3:U:O2'	23:BB:4:U:H6	1.81	0.63
23:BB:129:C:H2'	23:BB:130:C:C6	2.34	0.63
23:BB:1028:A:H2'	23:BB:1029:A:C8	2.34	0.63
25:BC:93:VAL:O	25:BC:94:LEU:HB3	1.98	0.63
25:BC:116:GLN:HG2	25:BC:117:SER:H	1.63	0.63
35:BV:68:LYS:HD3	35:BV:68:LYS:H	1.62	0.63
41:BJ:13:ARG:O	41:BJ:14:ASP:HB2	1.98	0.63
41:BJ:29:ALA:HA	41:BJ:32:LEU:HD12	1.80	0.63
44:BQ:57:ARG:NH1	44:BQ:61:ILE:HD11	2.13	0.63
50:BT:29:THR:CA	50:BT:86:THR:HA	2.26	0.63
4:CE:92:ARG:HH11	4:CE:92:ARG:HB3	1.63	0.63
5:CF:3:HIS:CE1	5:CF:95:ALA:H	2.17	0.63
8:CI:41:GLU:O	8:CI:44:ARG:HG2	1.98	0.63
9:CJ:53:ILE:HG13	21:CN:84:ARG:NE	2.12	0.63
23:DB:857:G:O2'	23:DB:858:G:H5'	1.98	0.63
23:DB:2734:A:H2'	23:DB:2735:G:H5'	1.81	0.63
26:DD:121:THR:C	26:DD:123:LYS:H	2.07	0.63
26:DD:178:VAL:HB	26:DD:188:LEU:HB2	1.81	0.63
28:DP:59:THR:H	28:DP:72:VAL:HA	1.63	0.63
42:DN:33:ILE:HD11	42:DN:112:TYR:HD1	1.62	0.63
45:DS:46:LEU:O	45:DS:50:VAL:HG23	1.98	0.63
1:AA:22:G:H2'	1:AA:23:C:C6	2.33	0.63
1:AA:423:G:H2'	1:AA:424:G:O4'	1.97	0.63
1:AA:430:A:OP1	3:AD:8:LEU:HB2	1.99	0.63
1:AA:674:G:H2'	1:AA:675:A:C8	2.32	0.63
1:AA:1095:U:H2'	1:AA:1096:C:C6	2.34	0.63
1:AA:1458:G:H2'	1:AA:1459:G:C8	2.33	0.63
13:AP:66:THR:HG22	13:AP:67:ILE:N	2.10	0.63
23:BB:609:A:H2'	23:BB:610:C:O4'	1.99	0.63
23:BB:1406:U:H2'	23:BB:1407:G:H8	1.63	0.63
26:BD:8:LYS:HB2	26:BD:201:LEU:HD11	1.79	0.63
26:BD:33:ARG:HH11	26:BD:51:THR:CG2	2.11	0.63
29:BE:146:VAL:HA	29:BE:185:LYS:O	1.97	0.63
33:B1:31:GLU:CD	33:B1:31:GLU:H	2.05	0.63
43:BO:90:VAL:HG22	43:BO:115:LEU:HD12	1.80	0.63
45:BS:15:GLN:HA	45:BS:18:ARG:HG2	1.81	0.63
1:CA:26:A:N6	1:CA:558:G:H1'	2.13	0.63
1:CA:1329:A:O2'	12:CM:23:GLY:HA2	1.98	0.63
2:CC:51:VAL:HA	2:CC:69:THR:HA	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CS:52:ASN:HD22	16:CS:76:THR:HA	1.62	0.63
23:DB:3:U:H2'	23:DB:4:U:C6	2.33	0.63
23:DB:2243:U:O2'	23:DB:2244:U:H5'	1.99	0.63
23:DB:2579:C:O2'	26:DD:136:ASN:HA	1.99	0.63
1:AA:26:A:N6	1:AA:558:G:H1'	2.13	0.63
1:AA:86:G:N2	1:AA:87:C:N4	2.47	0.63
1:AA:209:U:H5'	1:AA:210:C:H5	1.63	0.63
1:AA:270:A:H2'	1:AA:271:C:C6	2.33	0.63
1:AA:441:A:H61	1:AA:493:A:N6	1.97	0.63
1:AA:1324:A:H2'	1:AA:1325:C:C6	2.34	0.63
2:AC:153:SER:O	2:AC:164:THR:HA	1.98	0.63
11:AL:98:ARG:HA	11:AL:103:CYS:SG	2.39	0.63
12:AM:9:PRO:HG2	12:AM:44:ILE:HG21	1.81	0.63
21:AN:61:ASN:HB3	21:AN:72:PHE:CE2	2.33	0.63
22:BA:32:U:H1'	22:BA:52:A:N7	2.13	0.63
23:BB:1812:U:H2'	23:BB:1813:G:C8	2.32	0.63
23:BB:2313:C:H4'	47:BF:87:LYS:HB3	1.81	0.63
23:BB:2893:A:H5"	23:BB:2894:G:H5'	1.79	0.63
28:BP:20:ARG:HB3	28:BP:23:ASP:CG	2.24	0.63
38:BM:68:PHE:CD1	38:BM:69:PRO:HD2	2.33	0.63
44:BQ:87:VAL:HG21	49:BR:52:PRO:HG3	1.79	0.63
52:BW:49:ASN:OD1	52:BW:81:ILE:HG12	1.98	0.63
1:CA:845:A:H5"	1:CA:846:G:C8	2.33	0.63
1:CA:1014:A:H2'	1:CA:1015:G:O4'	1.99	0.63
1:CA:1320:C:OP2	16:CS:2:ARG:HG3	1.98	0.63
4:CE:131:ASN:HD22	4:CE:134:ASN:H	1.47	0.63
10:CK:62:ALA:HB1	10:CK:95:THR:HB	1.80	0.63
6:CG:68:VAL:O	6:CG:137:ARG:HG3	1.99	0.63
12:CM:65:GLU:H	12:CM:68:LEU:HD12	1.64	0.63
23:DB:5:A:H2'	23:DB:6:A:C8	2.33	0.63
23:DB:37:C:O2'	29:DE:45:ALA:HA	1.99	0.63
23:DB:62:U:H2'	23:DB:63:A:O4'	1.99	0.63
23:DB:137:U:H2'	23:DB:138:U:O4'	1.99	0.63
23:DB:1173:U:H2'	23:DB:1174:U:N1	2.13	0.63
23:DB:1248:G:OP1	44:DQ:1:ALA:HB3	1.99	0.63
23:DB:1487:U:H2'	23:DB:1488:C:H6	1.64	0.63
23:DB:1548:A:H2'	23:DB:1549:A:H8	1.63	0.63
23:DB:2461:A:H2'	23:DB:2462:C:C6	2.33	0.63
25:DC:116:GLN:HG2	25:DC:117:SER:H	1.63	0.63
26:DD:33:ARG:HD3	26:DD:74:GLU:OE1	1.99	0.63
28:DP:20:ARG:O	28:DP:46:VAL:HG21	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DL:124:GLY:H	37:DL:143:GLU:HG3	1.63	0.63
37:DL:143:GLU:HG2	37:DL:144:GLU:N	2.12	0.63
47:DF:34:THR:HA	47:DF:89:THR:HG22	1.79	0.63
52:DW:49:ASN:O	52:DW:50:VAL:HG13	1.99	0.63
1:AA:1137:C:O2'	1:AA:1138:G:H5"	1.99	0.63
1:AA:1162:C:H2'	1:AA:1163:A:H8	1.63	0.63
2:AC:35:ASP:O	2:AC:39:ARG:HG3	1.99	0.63
4:AE:132:PRO:O	4:AE:136:VAL:HG12	1.98	0.63
6:AG:50:ALA:CB	6:AG:57:GLU:HG3	2.29	0.63
7:AH:73:SER:O	7:AH:128:VAL:HA	1.99	0.63
8:AI:75:ALA:HA	8:AI:78:ILE:HD12	1.80	0.63
9:AJ:8:ILE:HG22	9:AJ:8:ILE:O	1.99	0.63
9:AJ:51:VAL:HG23	21:AN:80:ARG:HD2	1.80	0.63
23:BB:150:U:H2'	23:BB:151:C:H6	1.63	0.63
23:BB:1189:A:H2'	23:BB:1190:G:O4'	1.99	0.63
23:BB:1913:A:H1'	23:BB:1914:C:OP1	1.99	0.63
23:BB:2734:A:H2'	23:BB:2735:G:H5'	1.80	0.63
25:BC:244:VAL:HB	25:BC:249:VAL:N	2.08	0.63
26:BD:4:LEU:HG	26:BD:29:VAL:HG11	1.80	0.63
45:BS:60:HIS:O	45:BS:61:ASN:HB2	1.97	0.63
47:BF:36:ASN:HA	47:BF:87:LYS:HA	1.80	0.63
1:CA:677:U:H2'	1:CA:678:U:H6	1.62	0.63
1:CA:1078:U:H4'	4:CE:137:ARG:NH1	2.13	0.63
1:CA:1234:C:O2'	1:CA:1235:U:H5'	1.99	0.63
1:CA:1278:G:H4'	1:CA:1279:G:O5'	1.99	0.63
1:CA:1356:G:O2'	1:CA:1357:A:H5'	1.98	0.63
1:CA:1409:C:H1'	23:DB:1913:A:N6	2.14	0.63
5:CF:29:ILE:HG21	5:CF:64:VAL:HG11	1.81	0.63
10:CK:52:ARG:HH11	10:CK:52:ARG:HB3	1.62	0.63
2:CC:26:LYS:HG3	2:CC:27:GLU:N	2.10	0.63
22:DA:43:C:H2'	22:DA:44:G:H5"	1.80	0.63
23:DB:6:A:H2'	23:DB:7:G:H8	1.64	0.63
23:DB:1060:U:O4	23:DB:1088:A:N6	2.31	0.63
23:DB:1198:U:H2'	23:DB:1199:U:C6	2.34	0.63
23:DB:2516:A:O2'	23:DB:2517:C:H5'	1.98	0.63
23:DB:2592:G:H2'	23:DB:2593:U:O4'	1.99	0.63
24:DI:121:ILE:HD13	24:DI:121:ILE:N	2.13	0.63
26:DD:123:LYS:HD2	26:DD:165:MET:HE1	1.79	0.63
39:DX:23:ARG:O	39:DX:27:ASN:HB2	1.99	0.63
44:DQ:4:LYS:NZ	44:DQ:7:VAL:HG22	2.14	0.63
46:DU:27:VAL:HG23	46:DU:33:VAL:HG12	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:411:A:H2'	1:AA:412:A:N3	2.14	0.63
1:AA:414:A:H2'	1:AA:415:A:O4'	1.98	0.63
1:AA:1081:A:H2'	1:AA:1082:A:C8	2.34	0.63
8:AI:11:ARG:O	8:AI:14:SER:HB2	1.99	0.63
9:AJ:6:ILE:HB	9:AJ:76:ILE:HG13	1.79	0.63
11:AL:98:ARG:HH21	11:AL:104:SER:C	2.06	0.63
23:BB:1599:U:OP1	50:BT:40:LYS:HB3	1.99	0.63
23:BB:2008:C:H2'	23:BB:2009:A:C8	2.33	0.63
23:BB:2269:G:H4'	52:BW:19:ARG:HH11	1.64	0.63
23:BB:2341:G:H2'	23:BB:2342:C:C6	2.33	0.63
23:BB:2547:A:H2'	23:BB:2548:U:C6	2.34	0.63
28:BP:88:ARG:HB2	28:BP:112:ARG:NH1	2.13	0.63
38:BM:105:MET:HB2	38:BM:117:PHE:HZ	1.63	0.63
41:BJ:115:GLY:HA2	41:BJ:118:MET:HE3	1.79	0.63
1:CA:98:A:H2'	1:CA:99:C:C6	2.34	0.63
1:CA:312:C:H2'	1:CA:313:A:C8	2.32	0.63
1:CA:414:A:H2'	1:CA:415:A:O4'	1.99	0.63
11:CL:34:THR:HB	11:CL:53:ARG:HB3	1.80	0.63
15:CR:60:ARG:HA	15:CR:63:TYR:HD2	1.62	0.63
6:CG:2:ARG:NH1	6:CG:2:ARG:HB3	2.14	0.63
6:CG:19:SER:CB	6:CG:22:LEU:HB2	2.28	0.63
18:CB:127:LYS:HD2	18:CB:128:LEU:N	2.13	0.63
23:DB:705:A:N6	23:DB:726:G:H1'	2.14	0.63
23:DB:1725:U:H2'	23:DB:1726:C:C6	2.34	0.63
23:DB:2031:A:H8	23:DB:2031:A:H5'	1.62	0.63
23:DB:2195:U:O2'	23:DB:2196:C:H5'	1.99	0.63
37:DL:55:MET:HA	37:DL:55:MET:HE3	1.80	0.63
38:DM:66:ARG:NE	38:DM:101:VAL:HG11	2.14	0.63
40:DH:113:SER:O	40:DH:115:VAL:N	2.32	0.63
47:DF:131:VAL:C	47:DF:133:GLU:H	2.07	0.63
1:AA:1165:U:H2'	1:AA:1166:G:O4'	1.98	0.63
3:AD:84:ASN:ND2	3:AD:86:GLY:H	1.97	0.63
6:AG:149:ALA:HB1	10:AK:58:THR:HB	1.79	0.63
20:AO:57:LEU:O	20:AO:60:VAL:HB	1.98	0.63
23:BB:20:C:H2'	23:BB:21:A:H8	1.62	0.63
23:BB:560:C:H3'	23:BB:561:G:C8	2.34	0.63
23:BB:1060:U:O4	23:BB:1088:A:N6	2.32	0.63
23:BB:1251:C:H2'	44:BQ:5:ARG:NH1	2.11	0.63
23:BB:2021:C:OP1	31:B0:8:THR:HG21	1.98	0.63
24:BI:105:LEU:HD11	24:BI:139:VAL:HG11	1.80	0.63
26:BD:68:PHE:HB3	26:BD:73:VAL:HG23	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B3:61:LEU:N	34:B3:62:PRO:HD3	2.14	0.63
45:BS:84:ARG:HB3	45:BS:96:ILE:HG23	1.81	0.63
1:CA:979:C:H1'	1:CA:1317:C:N4	2.14	0.63
2:CC:72:PRO:O	2:CC:76:ILE:HG12	1.99	0.63
9:CJ:9:ARG:HB2	9:CJ:99:GLN:HB3	1.81	0.63
23:DB:324:A:H2'	23:DB:325:G:O4'	1.98	0.63
23:DB:674:G:H5"	29:DE:71:GLY:H	1.63	0.63
24:DI:72:THR:HG22	24:DI:115:ASP:OD2	1.98	0.63
29:DE:165:HIS:HD2	29:DE:166:LYS:HD3	1.62	0.63
32:D4:5:ALA:CA	32:D4:37:GLN:HE22	2.12	0.63
32:D4:10:LEU:HD12	32:D4:33:HIS:HA	1.80	0.63
38:DM:78:LEU:HD12	38:DM:78:LEU:H	1.64	0.63
40:DH:41:LYS:O	40:DH:44:ILE:HG12	1.98	0.63
52:DW:37:VAL:HG12	52:DW:38:ARG:N	2.10	0.63
1:AA:32:A:H2'	1:AA:33:A:C8	2.34	0.62
1:AA:676:A:O2'	1:AA:677:U:H5'	1.99	0.62
1:AA:1164:G:H2'	1:AA:1165:U:H6	1.64	0.62
3:AD:29:THR:HB	3:AD:30:LYS:NZ	2.14	0.62
16:AS:52:ASN:ND2	16:AS:53:GLY:H	1.97	0.62
22:BA:98:G:H1	35:BV:14:LYS:HB2	1.63	0.62
23:BB:143:C:O4'	50:BT:2:ILE:HB	1.99	0.62
23:BB:191:A:H2'	23:BB:192:C:H6	1.64	0.62
23:BB:275:C:C2'	23:BB:276:U:H5'	2.29	0.62
23:BB:876:C:H41	23:BB:901:C:H41	1.47	0.62
23:BB:974:G:OP2	49:BR:78:ARG:HD3	1.99	0.62
23:BB:1081:U:H4'	24:BI:123:ALA:HB1	1.80	0.62
23:BB:2425:A:H5'	23:BB:2427:C:O4'	1.99	0.62
25:BC:130:PRO:HA	25:BC:188:ARG:HA	1.81	0.62
33:B1:8:ILE:CD1	33:B1:51:ALA:HA	2.29	0.62
37:BL:111:ILE:HG22	37:BL:112:LEU:H	1.64	0.62
40:BH:82:SER:H	40:BH:146:VAL:HG13	1.63	0.62
1:CA:865:A:H2'	1:CA:866:C:C6	2.34	0.62
1:CA:1392:G:O2'	1:CA:1393:U:H5'	1.99	0.62
3:CD:25:ARG:NH1	3:CD:26:ALA:HB2	2.14	0.62
8:CI:22:PRO:HA	8:CI:60:LEU:HB3	1.81	0.62
8:CI:43:ALA:O	8:CI:46:VAL:HG22	1.99	0.62
21:CN:98:ALA:HB1	21:CN:100:TRP:HZ3	1.64	0.62
23:DB:150:U:H2'	23:DB:151:C:C6	2.34	0.62
23:DB:2537:U:H2'	23:DB:2538:C:C6	2.34	0.62
35:DV:80:HIS:CD2	35:DV:83:LYS:HB2	2.34	0.62
41:DJ:136:GLN:N	41:DJ:137:PRO:HD3	2.14	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DG:15:ASP:HB2	48:DG:26:LYS:CD	2.29	0.62
50:DT:29:THR:CA	50:DT:86:THR:HA	2.27	0.62
8:AI:43:ALA:HA	8:AI:46:VAL:HG13	1.79	0.62
17:AT:43:LYS:HD3	17:AT:43:LYS:H	1.62	0.62
21:AN:43:ALA:HA	21:AN:46:LYS:HG2	1.81	0.62
23:BB:414:C:H2'	23:BB:415:A:C8	2.34	0.62
23:BB:1725:U:H2'	23:BB:1726:C:C6	2.34	0.62
23:BB:2031:A:C6	23:BB:2498:C:H1'	2.34	0.62
23:BB:2049:G:N2	26:BD:161:MET:HE2	2.13	0.62
26:BD:168:GLU:HG3	26:BD:170:VAL:HG13	1.80	0.62
27:BK:110:GLU:HA	27:BK:113:MET:HG3	1.81	0.62
32:B4:5:ALA:CA	32:B4:37:GLN:HE22	2.12	0.62
35:BV:75:GLN:HG2	35:BV:92:VAL:HG23	1.81	0.62
40:BH:81:ALA:HA	40:BH:146:VAL:HA	1.81	0.62
1:CA:967:C:H1'	8:CI:129:ARG:NH1	2.14	0.62
1:CA:1320:C:N3	16:CS:35:ARG:HD3	2.14	0.62
21:CN:68:ARG:HH11	21:CN:70:HIS:HB2	1.63	0.62
23:DB:282:A:H2'	23:DB:283:G:O4'	1.98	0.62
23:DB:1640:A:H2'	23:DB:1641:A:C8	2.34	0.62
23:DB:1843:C:H5"	25:DC:250:GLN:NE2	2.15	0.62
23:DB:2241:A:H2'	23:DB:2242:G:C8	2.33	0.62
23:DB:2671:G:H2'	23:DB:2672:U:C6	2.35	0.62
23:DB:2898:U:H2'	23:DB:2899:A:C8	2.34	0.62
26:DD:15:PHE:N	28:DP:11:GLN:HE22	1.97	0.62
29:DE:52:VAL:HG12	29:DE:53:THR:N	2.13	0.62
44:DQ:89:ILE:HG21	49:DR:11:GLN:NE2	2.12	0.62
45:DS:10:ALA:HB3	45:DS:101:SER:OG	1.97	0.62
46:DU:26:ASN:ND2	46:DU:34:ILE:HD12	2.14	0.62
48:DG:24:THR:HA	48:DG:33:THR:O	1.99	0.62
48:DG:86:LEU:HD23	48:DG:162:ARG:O	1.99	0.62
52:DW:23:LYS:HD2	52:DW:24:ARG:HB3	1.81	0.62
1:AA:673:A:H2'	1:AA:674:G:C8	2.34	0.62
1:AA:817:C:H1'	1:AA:819:A:H5'	1.81	0.62
1:AA:1240:U:H4'	1:AA:1241:G:OP2	1.98	0.62
1:AA:1492:A:N7	1:AA:1493:A:H1'	2.14	0.62
8:AI:26:LYS:N	8:AI:61:ASP:HB3	2.13	0.62
23:BB:1470:A:H3'	23:BB:1471:G:H8	1.62	0.62
23:BB:1845:G:O2'	23:BB:1846:G:H5'	1.99	0.62
23:BB:2575:C:H5"	26:BD:149:ASN:HD22	1.63	0.62
23:BB:2678:C:H2'	23:BB:2679:A:H8	1.65	0.62
26:BD:121:THR:C	26:BD:123:LYS:H	2.07	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:165:HIS:HD2	29:BE:166:LYS:HD3	1.63	0.62
30:BY:7:THR:HG23	30:BY:34:THR:OG1	1.99	0.62
38:BM:19:GLY:N	38:BM:38:ARG:HH12	1.98	0.62
52:BW:37:VAL:HG13	52:BW:55:ASP:O	1.99	0.62
52:BW:76:ARG:NH2	52:BW:76:ARG:HA	2.14	0.62
1:CA:865:A:H5'	1:CA:1078:U:O4	1.99	0.62
1:CA:1060:U:H4'	9:CJ:54:SER:CB	2.27	0.62
1:CA:1365:G:H2'	1:CA:1366:C:H6	1.64	0.62
7:CH:44:PHE:HE2	7:CH:100:ILE:HG12	1.64	0.62
14:CQ:18:LYS:H	14:CQ:50:ASN:HD21	1.46	0.62
17:CT:43:LYS:HB3	17:CT:86:ALA:HB1	1.80	0.62
17:CT:74:HIS:O	17:CT:78:LEU:HG	1.99	0.62
23:DB:1196:C:H2'	23:DB:1197:G:C8	2.34	0.62
23:DB:1652:A:N6	42:DN:11:ASN:HD21	1.96	0.62
23:DB:1774:C:H2'	23:DB:1774:C:O2	1.97	0.62
23:DB:2031:A:C6	23:DB:2498:C:H1'	2.35	0.62
26:DD:62:LYS:HB2	26:DD:63:PRO:HD3	1.79	0.62
43:DO:90:VAL:HG22	43:DO:115:LEU:HD12	1.80	0.62
51:DZ:35:SER:HA	51:DZ:50:ARG:HA	1.80	0.62
5:AF:3:HIS:CE1	5:AF:95:ALA:H	2.17	0.62
21:AN:76:PHE:O	21:AN:78:LEU:HD13	1.99	0.62
23:BB:2615:U:C2	31:B0:3:GLN:HA	2.35	0.62
25:BC:141:HIS:HB3	25:BC:190:THR:OG1	2.00	0.62
32:B4:22:VAL:HG11	32:B4:36:ARG:HD2	1.81	0.62
47:BF:84:ILE:HG23	47:BF:85:GLY:N	2.12	0.62
47:BF:131:VAL:C	47:BF:133:GLU:H	2.08	0.62
51:BZ:45:ARG:NE	51:BZ:47:VAL:HG12	2.03	0.62
52:BW:17:ALA:CA	52:BW:35:ILE:HG23	2.22	0.62
1:CA:925:G:O2'	1:CA:926:G:H5"	1.98	0.62
1:CA:1492:A:H2'	1:CA:1492:A:N3	2.13	0.62
3:CD:121:ALA:O	3:CD:122:ILE:HD13	1.98	0.62
5:CF:90:MET:HE1	15:CR:60:ARG:HD3	1.82	0.62
19:CU:40:PRO:HA	19:CU:44:ARG:HD2	1.80	0.62
12:CM:33:LEU:HD13	12:CM:39:ALA:O	1.98	0.62
21:CN:50:LEU:HD23	21:CN:51:PRO:HD3	1.81	0.62
23:DB:347:A:H2'	23:DB:348:A:C8	2.35	0.62
23:DB:1080:A:O2'	24:DI:126:ARG:HD2	1.99	0.62
46:DU:26:ASN:HD22	46:DU:26:ASN:N	1.96	0.62
48:DG:95:ALA:HB2	48:DG:130:ILE:HD11	1.81	0.62
1:AA:918:A:H2'	1:AA:919:A:C8	2.34	0.62
1:AA:1182:G:H4'	1:AA:1183:U:H5'	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1218:C:H2'	1:AA:1219:A:C8	2.34	0.62
1:AA:1271:A:H5'	1:AA:1314:C:H5"	1.80	0.62
2:AC:152:VAL:O	2:AC:164:THR:HG23	1.99	0.62
6:AG:52:ARG:HH22	6:AG:120:ALA:HB1	1.65	0.62
8:AI:80:HIS:NE2	8:AI:84:ARG:HD3	2.14	0.62
10:AK:92:ARG:NH2	19:AU:19:LYS:HG2	2.15	0.62
16:AS:43:MET:O	16:AS:46:LEU:HB2	2.00	0.62
23:BB:6:A:H2'	23:BB:7:G:C8	2.35	0.62
23:BB:364:C:H2'	23:BB:365:U:H6	1.61	0.62
23:BB:1993:U:H4'	26:BD:133:THR:CG2	2.29	0.62
23:BB:2348:U:OP1	34:B3:37:THR:HG21	2.00	0.62
23:BB:2810:A:H2'	23:BB:2811:G:O4'	1.99	0.62
26:BD:149:ASN:O	26:BD:152:PRO:HD2	1.99	0.62
26:BD:178:VAL:HB	26:BD:188:LEU:HB2	1.81	0.62
30:BY:9:THR:HB	30:BY:53:MET:O	1.99	0.62
32:B4:10:LEU:HD12	32:B4:33:HIS:HA	1.80	0.62
32:B4:16:ILE:HA	32:B4:25:VAL:HA	1.80	0.62
39:BX:13:GLU:O	39:BX:17:GLU:HG3	1.99	0.62
47:BF:109:ARG:HB2	47:BF:135:ILE:HD12	1.82	0.62
48:BG:144:ALA:HB1	48:BG:163:TYR:HE1	1.65	0.62
7:CH:23:ALA:HA	7:CH:62:LEU:H	1.64	0.62
6:CG:26:VAL:HB	6:CG:42:VAL:HG21	1.81	0.62
16:CS:44:ILE:HA	16:CS:61:VAL:HB	1.81	0.62
22:DA:87:U:H2'	22:DA:88:C:O5'	1.98	0.62
23:DB:135:U:H2'	23:DB:136:G:C8	2.34	0.62
23:DB:2866:U:H4'	23:DB:2867:G:H4'	1.81	0.62
23:DB:2880:C:O4'	42:DN:91:ALA:HB3	2.00	0.62
25:DC:141:HIS:HB3	25:DC:190:THR:OG1	2.00	0.62
37:DL:80:SER:H	37:DL:113:ALA:HB3	1.63	0.62
41:DJ:13:ARG:O	41:DJ:14:ASP:HB2	1.99	0.62
47:DF:101:ARG:NH1	47:DF:138:PRO:HB2	2.15	0.62
1:AA:74:A:H3'	1:AA:75:G:H5"	1.81	0.62
1:AA:922:G:H2'	1:AA:923:A:H8	1.63	0.62
6:AG:57:GLU:CD	6:AG:57:GLU:H	2.07	0.62
9:AJ:7:ARG:HA	9:AJ:75:ASP:OD2	2.00	0.62
12:AM:9:PRO:O	12:AM:44:ILE:HB	1.99	0.62
12:AM:89:ARG:NH1	12:AM:94:LEU:HB3	2.15	0.62
15:AR:31:TYR:O	15:AR:39:VAL:HG22	1.98	0.62
18:AB:112:ARG:HH21	18:AB:116:LEU:HD11	1.64	0.62
23:BB:946:C:H2'	23:BB:947:A:C8	2.34	0.62
28:BP:63:ILE:HA	28:BP:68:GLY:HA2	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:136:GLN:O	29:BE:139:LYS:HG2	2.00	0.62
41:BJ:136:GLN:N	41:BJ:137:PRO:HD3	2.15	0.62
52:BW:37:VAL:HG12	52:BW:38:ARG:N	2.12	0.62
1:CA:451:A:H5'	13:CP:70:ARG:NH2	2.14	0.62
1:CA:812:G:H2'	1:CA:812:G:N3	2.14	0.62
10:CK:70:ALA:C	10:CK:72:ALA:H	2.07	0.62
11:CL:31:GLY:HA3	11:CL:54:VAL:CG1	2.30	0.62
13:CP:67:ILE:HG12	13:CP:72:ALA:HB2	1.82	0.62
22:DA:49:C:H2'	22:DA:50:A:C8	2.33	0.62
23:DB:608:A:H2'	23:DB:609:A:C8	2.34	0.62
23:DB:1577:C:H2'	23:DB:1578:U:C6	2.34	0.62
23:DB:1594:U:H2'	23:DB:1595:C:C6	2.34	0.62
23:DB:1796:U:H2'	23:DB:1797:G:C8	2.33	0.62
23:DB:2586:U:H2'	23:DB:2587:A:C8	2.34	0.62
23:DB:2626:C:H2'	23:DB:2627:G:C8	2.35	0.62
30:DY:26:LEU:HD12	30:DY:28:LEU:HD11	1.81	0.62
1:AA:57:G:H2'	1:AA:58:C:C6	2.34	0.62
1:AA:83:C:H4'	1:AA:84:U:C5	2.34	0.62
1:AA:194:C:O2'	1:AA:195:A:H5'	1.99	0.62
1:AA:1492:A:H2'	23:BB:1913:A:N6	2.14	0.62
4:AE:92:ARG:HH11	4:AE:92:ARG:HB3	1.63	0.62
8:AI:98:ARG:NE	8:AI:103:VAL:HG21	2.15	0.62
22:BA:43:C:H2'	22:BA:44:G:H5"	1.80	0.62
23:BB:1458:U:H5"	23:BB:1459:G:OP1	2.00	0.62
23:BB:2284:A:OP2	33:B1:5:ARG:HG3	2.00	0.62
23:BB:2286:G:H4'	23:BB:2287:A:O4'	2.00	0.62
23:BB:2743:U:H2'	23:BB:2744:G:O4'	2.00	0.62
26:BD:33:ARG:HH11	26:BD:51:THR:HG22	1.64	0.62
26:BD:56:LYS:HD2	26:BD:59:ARG:HG3	1.80	0.62
28:BP:20:ARG:O	28:BP:46:VAL:HG21	1.99	0.62
40:BH:116:ARG:H	40:BH:130:VAL:HG12	1.64	0.62
44:BQ:91:ARG:HB2	44:BQ:94:LEU:HD23	1.82	0.62
47:BF:77:LYS:HD2	47:BF:79:ARG:HD3	1.81	0.62
48:BG:145:ALA:O	48:BG:148:ARG:HG3	2.00	0.62
1:CA:270:A:H2'	1:CA:271:C:C6	2.34	0.62
1:CA:716:A:N3	10:CK:119:GLY:HA2	2.15	0.62
1:CA:1278:G:H4'	1:CA:1279:G:H5'	1.81	0.62
6:CG:14:ASP:N	6:CG:19:SER:H	1.93	0.62
22:DA:91:C:H2'	22:DA:92:C:C6	2.34	0.62
23:DB:1810:A:H2'	23:DB:1811:G:O4'	1.99	0.62
23:DB:2892:G:H5"	23:DB:2894:G:N2	2.15	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DM:68:PHE:CD1	38:DM:69:PRO:HD2	2.34	0.62
45:DS:15:GLN:HA	45:DS:18:ARG:HG2	1.81	0.62
1:AA:900:A:H2'	1:AA:901:A:C8	2.34	0.62
1:AA:1114:C:H2'	1:AA:1115:U:O4'	1.99	0.62
3:AD:172:VAL:HA	3:AD:179:GLY:HA2	1.80	0.62
8:AI:74:GLN:O	8:AI:78:ILE:HG13	1.99	0.62
23:BB:83:A:N6	23:BB:101:A:H5'	2.15	0.62
23:BB:303:G:H2'	23:BB:304:U:C6	2.35	0.62
23:BB:784:G:O2'	23:BB:785:G:H5"	2.00	0.62
23:BB:1551:A:C3'	23:BB:1552:A:H5"	2.29	0.62
23:BB:2592:G:H2'	23:BB:2593:U:O4'	2.00	0.62
23:BB:2677:G:H2'	23:BB:2678:C:C6	2.34	0.62
24:BI:85:ILE:HD13	24:BI:137:LEU:HD21	1.81	0.62
28:BP:94:ALA:C	28:BP:95:LYS:HD2	2.24	0.62
29:BE:132:LYS:O	29:BE:135:ALA:HB3	1.99	0.62
34:B3:39:ARG:O	34:B3:43:LEU:HG	2.00	0.62
47:BF:78:ILE:HA	47:BF:82:TYR:CG	2.34	0.62
48:BG:86:LEU:HD23	48:BG:162:ARG:O	1.99	0.62
1:CA:517:G:H22	1:CA:533:A:P	2.23	0.62
1:CA:729:A:H2'	1:CA:730:G:H8	1.65	0.62
1:CA:1262:C:N4	1:CA:1273:C:H42	1.98	0.62
13:CP:66:THR:HG22	13:CP:67:ILE:N	2.13	0.62
6:CG:23:ALA:O	6:CG:26:VAL:HG22	1.99	0.62
21:CN:50:LEU:H	21:CN:51:PRO:CD	2.11	0.62
21:CN:79:SER:OG	21:CN:82:LYS:HG2	2.00	0.62
23:DB:6:A:H2'	23:DB:7:G:C8	2.35	0.62
23:DB:140:C:H5'	23:DB:141:G:C6	2.34	0.62
23:DB:609:A:H2'	23:DB:610:C:O4'	1.99	0.62
26:DD:118:PHE:O	26:DD:119:ALA:HB3	1.98	0.62
29:DE:136:GLN:O	29:DE:139:LYS:HG2	1.99	0.62
50:DT:2:ILE:HG12	50:DT:3:ARG:HD3	1.82	0.62
52:DW:49:ASN:OD1	52:DW:81:ILE:HG12	1.98	0.62
1:AA:996:A:H2'	1:AA:997:U:C6	2.35	0.62
1:AA:1053:G:O6	1:AA:1200:C:H5"	1.99	0.62
1:AA:1448:C:H2'	1:AA:1449:C:H6	1.64	0.62
2:AC:133:MET:CE	2:AC:152:VAL:HG21	2.25	0.62
12:AM:84:CYS:O	12:AM:88:LEU:HG	1.98	0.62
18:AB:86:CYS:HB3	18:AB:88:GLN:CD	2.24	0.62
23:BB:116:C:O2'	23:BB:117:G:H5'	2.00	0.62
23:BB:320:A:H4'	23:BB:322:A:N7	2.14	0.62
23:BB:1196:C:H2'	23:BB:1197:G:C8	2.35	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2064:C:H2'	23:BB:2065:C:H6	1.64	0.62
23:BB:2455:G:H2'	23:BB:2456:C:C6	2.35	0.62
25:BC:16:VAL:HB	25:BC:203:VAL:HG11	1.82	0.62
29:BE:178:VAL:O	29:BE:181:ILE:HG22	2.00	0.62
31:B0:9:ARG:O	31:B0:12:ARG:HB3	1.99	0.62
32:B4:24:ARG:HG2	32:B4:36:ARG:HG3	1.82	0.62
50:BT:2:ILE:HD11	50:BT:3:ARG:CZ	2.30	0.62
1:CA:474:G:H2'	1:CA:475:C:C6	2.34	0.62
1:CA:624:C:H2'	1:CA:625:U:H6	1.64	0.62
1:CA:918:A:H2'	1:CA:919:A:C8	2.35	0.62
20:CO:11:ILE:HA	20:CO:14:GLU:OE1	1.99	0.62
23:DB:1115:G:H2'	23:DB:1116:G:C8	2.35	0.62
28:DP:21:PRO:O	28:DP:46:VAL:HG23	2.00	0.62
37:DL:95:LEU:HB2	37:DL:101:ILE:HG13	1.81	0.62
47:DF:177:ARG:HA	47:DF:177:ARG:NH1	2.14	0.62
1:AA:382:A:H2'	1:AA:383:A:C8	2.34	0.62
1:AA:451:A:H5'	13:AP:70:ARG:NH2	2.15	0.62
6:AG:4:ARG:HE	6:AG:6:ILE:HG23	1.65	0.62
11:AL:41:PRO:HB3	11:AL:49:ARG:NH1	2.15	0.62
16:AS:62:THR:OG1	16:AS:65:MET:HE3	2.00	0.62
18:AB:27:LYS:HA	18:AB:30:ILE:HD12	1.80	0.62
18:AB:45:THR:HG22	18:AB:49:PHE:CE1	2.35	0.62
18:AB:169:HIS:HA	18:AB:172:ILE:HD12	1.82	0.62
23:BB:533:G:H2'	23:BB:534:U:C6	2.34	0.62
23:BB:608:A:H2'	23:BB:609:A:C8	2.35	0.62
23:BB:1220:G:H2'	23:BB:1221:C:C6	2.35	0.62
23:BB:1354:A:H2'	23:BB:1355:G:O4'	2.00	0.62
23:BB:1406:U:H2'	23:BB:1407:G:C8	2.35	0.62
23:BB:1487:U:H2'	23:BB:1488:C:H6	1.64	0.62
23:BB:2866:U:H4'	23:BB:2867:G:H4'	1.81	0.62
25:BC:43:ASN:HB2	25:BC:49:THR:HG23	1.82	0.62
25:BC:92:LEU:HD12	25:BC:93:VAL:H	1.64	0.62
26:BD:55:LYS:NZ	26:BD:60:VAL:HG13	2.15	0.62
27:BK:87:LEU:HB2	27:BK:93:GLN:O	2.00	0.62
34:B3:54:LEU:O	34:B3:57:VAL:HG23	2.00	0.62
42:BN:19:ALA:C	42:BN:21:PHE:H	2.06	0.62
46:BU:42:LYS:HG3	46:BU:57:ILE:HG21	1.82	0.62
1:CA:57:G:H2'	1:CA:58:C:C6	2.35	0.62
1:CA:764:C:C2'	1:CA:765:G:H5'	2.30	0.62
1:CA:1097:C:H2'	1:CA:1098:C:C6	2.35	0.62
1:CA:1374:A:H4'	6:CG:27:ASN:OD1	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:75:VAL:O	2:CC:82:ASP:HB2	2.00	0.62
8:CI:20:ILE:HG13	8:CI:62:LEU:HD12	1.81	0.62
18:CB:40:ILE:HD13	18:CB:201:GLY:CA	2.26	0.62
23:DB:150:U:H2'	23:DB:151:C:H6	1.64	0.62
23:DB:532:A:H4'	23:DB:533:G:C8	2.35	0.62
23:DB:764:A:H5"	25:DC:208:GLY:HA2	1.82	0.62
23:DB:1821:A:H2'	23:DB:1822:C:H6	1.64	0.62
32:D4:16:ILE:HA	32:D4:25:VAL:HA	1.81	0.62
37:DL:68:SER:C	37:DL:70:LYS:H	2.07	0.62
38:DM:19:GLY:N	38:DM:38:ARG:HH12	1.97	0.62
40:DH:95:GLY:H	40:DH:98:ASP:HB2	1.64	0.62
41:DJ:29:ALA:HA	41:DJ:32:LEU:HD12	1.80	0.62
41:DJ:43:GLU:O	41:DJ:45:THR:N	2.32	0.62
47:DF:146:ASP:HB3	47:DF:147:ARG:NH1	2.14	0.62
1:AA:202:G:H21	1:AA:465:A:N6	1.97	0.61
1:AA:313:A:H2'	1:AA:314:C:C6	2.35	0.61
1:AA:474:G:H2'	1:AA:475:C:C6	2.35	0.61
1:AA:522:C:H41	11:AL:49:ARG:NH2	1.98	0.61
1:AA:736:C:H2'	1:AA:737:C:C6	2.34	0.61
1:AA:834:U:H2'	1:AA:835:U:C6	2.34	0.61
1:AA:1319:A:H3'	16:AS:2:ARG:HA	1.82	0.61
1:AA:1484:C:H2'	1:AA:1485:U:C6	2.35	0.61
8:AI:82:ILE:O	8:AI:86:LEU:HD13	2.00	0.61
18:AB:132:GLU:O	18:AB:136:ARG:HG2	2.00	0.61
19:AU:19:LYS:N	19:AU:19:LYS:HD2	2.15	0.61
20:AO:69:TYR:HA	20:AO:72:ARG:NH1	2.14	0.61
23:BB:155:A:H2'	23:BB:156:A:H8	1.65	0.61
23:BB:1889:A:H2'	23:BB:1890:A:H8	1.65	0.61
24:BI:18:ASN:N	24:BI:19:PRO:HD2	2.14	0.61
25:BC:156:SER:O	25:BC:194:VAL:HG11	2.00	0.61
27:BK:73:ASP:O	28:BP:74:GLN:HG3	2.00	0.61
29:BE:158:PHE:O	29:BE:162:ARG:HB2	2.00	0.61
35:BV:14:LYS:HE3	35:BV:18:ARG:HH21	1.65	0.61
37:BL:19:LEU:HD23	37:BL:27:LEU:HD23	1.82	0.61
37:BL:95:LEU:HB2	37:BL:101:ILE:CG1	2.30	0.61
47:BF:48:LEU:H	47:BF:48:LEU:HD23	1.65	0.61
48:BG:15:ASP:HB2	48:BG:26:LYS:CD	2.29	0.61
48:BG:36:LEU:HD22	48:BG:36:LEU:H	1.63	0.61
48:BG:120:ILE:HG13	48:BG:140:ILE:HG22	1.82	0.61
1:CA:621:A:H2'	1:CA:622:A:C8	2.35	0.61
1:CA:704:A:C2	1:CA:705:G:H1'	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:922:G:H2'	1:CA:923:A:C8	2.34	0.61
1:CA:1320:C:O2'	1:CA:1321:U:H5'	2.00	0.61
10:CK:70:ALA:HA	10:CK:73:VAL:HG22	1.81	0.61
19:CU:13:VAL:HG22	19:CU:15:LEU:HD23	1.81	0.61
6:CG:130:LYS:H	6:CG:134:VAL:HG21	1.65	0.61
8:CI:114:LYS:HE2	8:CI:120:ALA:HB1	1.82	0.61
18:CB:216:VAL:HG23	18:CB:217:ALA:N	2.13	0.61
23:DB:458:G:N2	23:DB:469:G:H2'	2.14	0.61
23:DB:968:C:H2'	23:DB:969:G:H8	1.65	0.61
23:DB:1028:A:H2'	23:DB:1029:A:C8	2.35	0.61
23:DB:1279:G:H4'	42:DN:31:HIS:CD2	2.35	0.61
23:DB:1739:A:H2'	23:DB:1740:G:O4'	2.00	0.61
23:DB:2108:A:H2'	23:DB:2108:A:N3	2.13	0.61
23:DB:2786:U:H4'	26:DD:67:HIS:HA	1.82	0.61
26:DD:55:LYS:NZ	26:DD:60:VAL:HG13	2.15	0.61
34:D3:14:LYS:HD3	34:D3:21:PHE:O	2.00	0.61
41:DJ:115:GLY:HA2	41:DJ:118:MET:HE3	1.81	0.61
42:DN:87:PHE:HB3	42:DN:90:ARG:HB2	1.83	0.61
48:DG:17:LYS:HE2	48:DG:19:ASN:ND2	2.14	0.61
48:DG:18:ILE:HA	48:DG:23:ILE:HG13	1.80	0.61
48:DG:21:GLN:OE1	48:DG:37:ASN:HB2	1.99	0.61
1:AA:628:G:H2'	1:AA:629:A:C8	2.35	0.61
1:AA:955:U:H2'	1:AA:956:U:O4'	1.99	0.61
1:AA:1231:G:H2'	1:AA:1232:U:C6	2.35	0.61
3:AD:197:HIS:O	3:AD:200:VAL:HG22	1.99	0.61
17:AT:4:LYS:HD2	17:AT:5:SER:N	2.15	0.61
23:BB:845:A:C2	23:BB:847:U:H1'	2.35	0.61
23:BB:2860:A:H8	23:BB:2860:A:O5'	1.84	0.61
35:BV:80:HIS:CD2	35:BV:83:LYS:HB2	2.34	0.61
41:BJ:58:ASN:HA	41:BJ:126:ALA:O	2.00	0.61
1:CA:22:G:H2'	1:CA:23:C:C6	2.35	0.61
1:CA:215:C:H2'	1:CA:216:U:C6	2.34	0.61
1:CA:272:C:H2'	1:CA:273:U:H6	1.63	0.61
1:CA:810:C:O2'	1:CA:811:C:H5'	1.99	0.61
1:CA:1352:C:H2'	1:CA:1353:G:C8	2.35	0.61
23:DB:181:A:H2'	23:DB:182:A:C8	2.35	0.61
23:DB:351:C:H2'	23:DB:352:A:H8	1.65	0.61
23:DB:1054:A:H2'	23:DB:1055:G:H8	1.63	0.61
23:DB:2741:A:H2'	23:DB:2742:G:O4'	2.00	0.61
25:DC:124:LYS:HE2	25:DC:127:ASN:HD21	1.64	0.61
28:DP:20:ARG:HB3	28:DP:23:ASP:CG	2.24	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DP:94:ALA:C	28:DP:95:LYS:HD2	2.24	0.61
30:DY:23:LEU:HD13	30:DY:28:LEU:HB2	1.81	0.61
41:DJ:58:ASN:HA	41:DJ:126:ALA:O	2.00	0.61
1:AA:394:G:H2'	1:AA:395:C:C6	2.33	0.61
1:AA:408:A:H3'	1:AA:409:U:H6	1.65	0.61
1:AA:764:C:C2'	1:AA:765:G:H5'	2.31	0.61
1:AA:1070:U:H2'	1:AA:1071:C:C6	2.36	0.61
1:AA:1366:C:H2'	1:AA:1367:C:H6	1.65	0.61
1:AA:1513:A:H2'	1:AA:1514:G:H8	1.63	0.61
3:AD:146:GLU:HA	3:AD:149:LYS:HG2	1.81	0.61
6:AG:94:ARG:HH11	6:AG:98:LEU:HD11	1.64	0.61
23:BB:551:G:H2'	23:BB:552:U:C6	2.35	0.61
23:BB:615:U:O4	29:BE:39:ALA:HB2	2.00	0.61
23:BB:1778:U:H2'	23:BB:1784:A:H62	1.65	0.61
23:BB:2065:C:H2'	23:BB:2066:C:C6	2.35	0.61
24:BI:75:ALA:HB2	24:BI:112:LYS:HE2	1.81	0.61
38:BM:41:LEU:HB3	38:BM:46:ILE:CG2	2.30	0.61
50:BT:34:VAL:HG21	50:BT:43:ILE:HD12	1.83	0.61
51:BZ:35:SER:HA	51:BZ:50:ARG:HA	1.81	0.61
11:CL:42:LYS:HD2	11:CL:43:LYS:HG2	1.82	0.61
17:CT:4:LYS:HD2	17:CT:5:SER:N	2.15	0.61
17:CT:8:LYS:HA	17:CT:11:ILE:HD12	1.82	0.61
2:CC:82:ASP:O	2:CC:86:LEU:HG	2.01	0.61
8:CI:43:ALA:O	8:CI:47:VAL:HG23	1.99	0.61
18:CB:56:LEU:HB3	18:CB:220:VAL:HG22	1.82	0.61
22:DA:75:G:H1	22:DA:102:G:H22	1.48	0.61
23:DB:2104:C:H3'	23:DB:2104:C:H6	1.65	0.61
24:DI:25:PRO:O	24:DI:29:GLN:HG3	2.00	0.61
25:DC:92:LEU:HD12	25:DC:93:VAL:H	1.65	0.61
25:DC:115:ILE:HG22	25:DC:124:LYS:HE3	1.82	0.61
25:DC:245:THR:C	25:DC:247:TRP:H	2.09	0.61
26:DD:116:LYS:HB3	26:DD:118:PHE:CZ	2.34	0.61
26:DD:159:LYS:HZ2	26:DD:160:LYS:N	1.98	0.61
27:DK:13:ASN:HD21	27:DK:98:ARG:HB2	1.65	0.61
29:DE:158:PHE:O	29:DE:162:ARG:HB2	2.00	0.61
37:DL:119:PRO:HA	37:DL:138:ALA:O	2.00	0.61
40:DH:96:THR:HG23	40:DH:97:ARG:H	1.66	0.61
42:DN:94:TYR:O	42:DN:115:LEU:HA	2.00	0.61
48:DG:145:ALA:O	48:DG:148:ARG:HG3	2.01	0.61
1:AA:478:A:H2'	1:AA:479:U:O4'	2.00	0.61
1:AA:1243:C:H2'	1:AA:1244:G:H8	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1492:A:H3'	1:AA:1493:A:H4'	1.83	0.61
6:AG:23:ALA:O	6:AG:26:VAL:HG22	2.00	0.61
6:AG:30:MET:HG2	6:AG:31:VAL:H	1.65	0.61
18:AB:80:LYS:O	18:AB:84:LEU:HB3	2.00	0.61
21:AN:60:ARG:HD2	21:AN:69:PRO:HG3	1.81	0.61
23:BB:82:U:H2'	23:BB:83:A:C8	2.35	0.61
23:BB:615:U:O2	29:BE:35:TYR:HA	2.00	0.61
23:BB:910:A:H2'	23:BB:911:A:H8	1.65	0.61
23:BB:1774:C:H2'	23:BB:1774:C:O2	1.98	0.61
23:BB:1983:G:H4'	23:BB:2606:C:H4'	1.82	0.61
23:BB:2760:C:O2'	23:BB:2761:A:H5'	1.99	0.61
28:BP:13:LYS:HG2	28:BP:76:HIS:ND1	2.15	0.61
34:B3:44:ARG:N	34:B3:45:PRO:HD2	2.15	0.61
40:BH:68:ARG:O	40:BH:72:ILE:HG22	1.99	0.61
41:BJ:82:GLY:O	41:BJ:84:ILE:HG22	2.01	0.61
45:BS:15:GLN:HA	45:BS:18:ARG:CG	2.30	0.61
47:BF:22:ASN:ND2	47:BF:22:ASN:H	1.97	0.61
1:CA:157:U:O2'	1:CA:158:G:H5'	2.00	0.61
1:CA:602:A:O2'	1:CA:603:U:H5'	2.00	0.61
1:CA:677:U:H2'	1:CA:678:U:C6	2.35	0.61
1:CA:1060:U:H5"	9:CJ:53:ILE:HG12	1.81	0.61
3:CD:29:THR:HB	3:CD:30:LYS:NZ	2.16	0.61
18:CB:67:LEU:HA	18:CB:89:PHE:O	1.99	0.61
23:DB:1443:U:H2'	23:DB:1444:G:C8	2.36	0.61
23:DB:2547:A:H2'	23:DB:2548:U:C6	2.35	0.61
36:D2:31:LEU:HD22	36:D2:42:LEU:HD12	1.83	0.61
40:DH:96:THR:OG1	40:DH:112:LYS:HB2	2.00	0.61
40:DH:121:VAL:HG23	40:DH:122:LEU:H	1.65	0.61
42:DN:38:LEU:HD11	42:DN:42:LYS:HD2	1.83	0.61
46:DU:34:ILE:HG12	46:DU:63:ALA:HB2	1.81	0.61
1:AA:501:C:H2'	1:AA:502:A:H8	1.65	0.61
1:AA:1138:G:H2'	1:AA:1139:G:H4'	1.82	0.61
7:AH:44:PHE:HE2	7:AH:100:ILE:HG12	1.66	0.61
7:AH:86:LYS:HD2	7:AH:90:GLU:HG2	1.80	0.61
19:AU:36:PHE:CB	19:AU:40:PRO:HD3	2.28	0.61
21:AN:60:ARG:CG	21:AN:62:ARG:HG2	2.28	0.61
23:BB:1681:G:N3	23:BB:1762:A:H2'	2.15	0.61
23:BB:1870:C:H2'	23:BB:1871:A:C8	2.36	0.61
23:BB:2789:C:H3'	23:BB:2893:A:H62	1.63	0.61
23:BB:2840:C:H2'	23:BB:2841:C:C6	2.35	0.61
23:BB:2861:U:H2'	23:BB:2862:G:H8	1.66	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:B1:3:GLY:O	33:B1:4:ILE:HG12	2.01	0.61
37:BL:121:THR:HB	37:BL:141:LYS:HB3	1.82	0.61
47:BF:169:LEU:HA	47:BF:172:PHE:HD2	1.65	0.61
52:BW:24:ARG:HD3	52:BW:65:LYS:HE3	1.80	0.61
1:CA:522:C:H41	11:CL:49:ARG:NH2	1.97	0.61
1:CA:1458:G:H2'	1:CA:1459:G:C8	2.34	0.61
7:CH:58:LEU:HD22	7:CH:60:LEU:HB2	1.81	0.61
7:CH:74:ILE:HG13	7:CH:128:VAL:HG22	1.83	0.61
10:CK:88:PRO:HD3	19:CU:28:LEU:HD11	1.83	0.61
2:CC:26:LYS:CG	2:CC:27:GLU:H	2.10	0.61
16:CS:35:ARG:HB2	16:CS:71:GLY:HA2	1.82	0.61
18:CB:130:LYS:HA	18:CB:133:ALA:HB3	1.83	0.61
23:DB:575:A:O2'	23:DB:576:U:H5'	2.00	0.61
23:DB:979:A:H2'	23:DB:982:C:N4	2.13	0.61
23:DB:1180:U:H2'	23:DB:1181:U:C6	2.36	0.61
23:DB:2078:C:H2'	23:DB:2079:U:C6	2.36	0.61
38:DM:50:ARG:O	38:DM:53:MET:HB3	2.00	0.61
42:DN:33:ILE:HB	42:DN:114:GLU:HB2	1.83	0.61
47:DF:84:ILE:HG23	47:DF:85:GLY:N	2.14	0.61
47:DF:94:ARG:HA	47:DF:97:GLU:HB3	1.82	0.61
49:DR:48:LYS:O	49:DR:48:LYS:HD2	2.01	0.61
1:AA:977:A:C2	1:AA:1223:C:H2'	2.36	0.61
2:AC:13:ILE:O	2:AC:14:VAL:HG22	2.00	0.61
5:AF:52:ASN:HA	5:AF:53:LYS:HZ3	1.66	0.61
6:AG:14:ASP:HB3	6:AG:18:GLY:H	1.64	0.61
6:AG:44:SER:OG	6:AG:116:ALA:HB1	2.01	0.61
14:AQ:46:HIS:HB2	14:AQ:70:LYS:HE2	1.81	0.61
23:BB:152:A:H2'	23:BB:153:U:C6	2.35	0.61
23:BB:172:A:O2'	23:BB:173:A:H5'	2.01	0.61
23:BB:1709:U:H2'	23:BB:1710:G:C8	2.35	0.61
23:BB:2626:C:H2'	23:BB:2627:G:C8	2.36	0.61
24:BI:20:SER:O	24:BI:25:PRO:HD2	2.01	0.61
25:BC:115:ILE:HG22	25:BC:124:LYS:HE3	1.83	0.61
27:BK:25:LEU:HD21	27:BK:40:LYS:H	1.66	0.61
28:BP:20:ARG:HG3	28:BP:21:PRO:CD	2.31	0.61
30:BY:15:ARG:O	30:BY:20:LYS:HE3	2.00	0.61
36:B2:27:GLY:O	36:B2:30:VAL:HB	2.00	0.61
40:BH:78:VAL:O	40:BH:143:ILE:HG13	1.98	0.61
44:BQ:91:ARG:HD3	49:BR:11:GLN:HB2	1.81	0.61
46:BU:85:ARG:HD3	46:BU:86:PHE:H	1.66	0.61
47:BF:32:LYS:HA	47:BF:95:MET:HG3	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:543:U:H2'	1:CA:544:G:C8	2.36	0.61
1:CA:593:U:H2'	1:CA:594:U:C6	2.36	0.61
1:CA:1221:G:C4'	16:CS:76:THR:HG21	2.28	0.61
1:CA:1448:C:H2'	1:CA:1449:C:C6	2.36	0.61
9:CJ:43:PRO:O	9:CJ:71:LEU:HD21	2.00	0.61
16:CS:4:LEU:HD13	16:CS:8:PRO:HA	1.81	0.61
23:DB:1142:A:H4'	41:DJ:27:ARG:HH22	1.64	0.61
23:DB:1889:A:H2'	23:DB:1890:A:H8	1.63	0.61
23:DB:2379:G:H4'	43:DO:21:LEU:HD11	1.81	0.61
29:DE:58:LYS:HB2	29:DE:60:TRP:CD1	2.35	0.61
46:DU:11:ILE:HD13	46:DU:11:ILE:O	2.01	0.61
47:DF:137:PHE:O	47:DF:139:GLU:N	2.33	0.61
48:DG:15:ASP:HB3	48:DG:26:LYS:H	1.66	0.61
48:DG:120:ILE:HG13	48:DG:140:ILE:HG22	1.82	0.61
2:AC:96:VAL:HB	2:AC:97:PRO:HD2	1.81	0.61
10:AK:28:ASN:CG	10:AK:56:LYS:HE3	2.26	0.61
10:AK:70:ALA:C	10:AK:72:ALA:H	2.08	0.61
11:AL:42:LYS:HD2	11:AL:43:LYS:HG2	1.83	0.61
23:BB:6:A:H2'	23:BB:7:G:H8	1.65	0.61
23:BB:1203:U:H3'	23:BB:1204:A:C5'	2.31	0.61
23:BB:1534:U:H2'	23:BB:1536:C:N3	2.15	0.61
23:BB:2678:C:H2'	23:BB:2679:A:C8	2.35	0.61
25:BC:6:LYS:O	25:BC:8:THR:HG23	2.00	0.61
35:BV:62:THR:HG22	35:BV:71:LYS:HG2	1.82	0.61
37:BL:68:SER:C	37:BL:70:LYS:H	2.07	0.61
40:BH:6:LEU:H	40:BH:6:LEU:HD12	1.65	0.61
40:BH:83:LYS:HB3	40:BH:91:PHE:CD1	2.35	0.61
41:BJ:4:PHE:HB3	41:BJ:44:TYR:CD1	2.35	0.61
47:BF:146:ASP:HB3	47:BF:147:ARG:NH1	2.15	0.61
52:BW:18:LYS:HG3	52:BW:19:ARG:CZ	2.31	0.61
1:CA:1132:C:H2'	1:CA:1133:G:C8	2.35	0.61
11:CL:35:ARG:NH2	11:CL:36:VAL:HG22	2.16	0.61
20:CO:32:LEU:O	20:CO:36:ILE:HG12	2.01	0.61
23:DB:18:U:H2'	23:DB:19:A:H8	1.66	0.61
23:DB:1098:A:H3'	24:DI:3:LYS:C	2.26	0.61
23:DB:1203:U:H1'	37:DL:4:ASN:HD21	1.64	0.61
23:DB:2046:G:H1'	31:D0:18:HIS:CD2	2.34	0.61
23:DB:2376:A:N1	43:DO:92:PHE:HD2	1.99	0.61
23:DB:2393:U:H5"	37:DL:62:PRO:HG3	1.82	0.61
23:DB:2737:G:H2'	23:DB:2738:A:C8	2.35	0.61
26:DD:119:ALA:HB1	26:DD:163:GLY:H	1.66	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:D3:61:LEU:N	34:D3:62:PRO:HD3	2.15	0.61
47:DF:78:ILE:HA	47:DF:82:TYR:CG	2.36	0.61
47:DF:108:PRO:C	47:DF:110:ILE:H	2.09	0.61
1:AA:624:C:H2'	1:AA:625:U:H6	1.64	0.61
1:AA:1508:A:H2'	1:AA:1509:C:C6	2.36	0.61
2:AC:137:VAL:HG22	2:AC:150:VAL:HG21	1.83	0.61
23:BB:5:A:H2'	23:BB:6:A:C8	2.35	0.61
23:BB:401:A:H2'	23:BB:402:A:C8	2.36	0.61
23:BB:811:U:H2'	37:BL:21:ARG:HA	1.81	0.61
23:BB:1198:U:H2'	23:BB:1199:U:C6	2.35	0.61
23:BB:1821:A:H2'	23:BB:1822:C:H6	1.64	0.61
23:BB:2352:A:H2'	23:BB:2353:G:O4'	2.01	0.61
24:BI:7:TYR:HB2	24:BI:58:ILE:O	2.00	0.61
26:BD:54:ALA:CA	26:BD:76:GLY:HA2	2.31	0.61
27:BK:59:LYS:HD2	27:BK:89:ASN:HD22	1.65	0.61
37:BL:80:SER:H	37:BL:113:ALA:HB3	1.65	0.61
38:BM:18:ARG:C	38:BM:38:ARG:HH22	2.09	0.61
48:BG:84:LYS:C	48:BG:85:LYS:HG2	2.26	0.61
1:CA:209:U:H5'	1:CA:210:C:H5	1.65	0.61
1:CA:764:C:H2'	1:CA:765:G:H5'	1.82	0.61
1:CA:806:C:H2'	1:CA:807:A:H8	1.66	0.61
1:CA:1347:G:H22	1:CA:1373:G:H2'	1.66	0.61
9:CJ:6:ILE:O	9:CJ:75:ASP:HA	2.00	0.61
18:CB:86:CYS:H	18:CB:88:GLN:NE2	1.99	0.61
23:DB:851:C:H4'	30:DY:46:MET:HA	1.83	0.61
23:DB:1105:U:H2'	23:DB:1106:G:C8	2.36	0.61
23:DB:1220:G:H2'	23:DB:1221:C:C6	2.36	0.61
38:DM:35:ALA:H	38:DM:100:LYS:H	1.48	0.61
45:DS:18:ARG:HB3	45:DS:76:VAL:HG22	1.83	0.61
51:DZ:4:VAL:O	51:DZ:33:LEU:HD23	2.00	0.61
51:DZ:67:VAL:O	51:DZ:70:GLU:HG2	2.01	0.61
1:AA:522:C:H41	11:AL:49:ARG:HH22	1.48	0.61
1:AA:593:U:H2'	1:AA:594:U:C6	2.36	0.61
1:AA:662:U:H2'	1:AA:663:A:H8	1.64	0.61
1:AA:764:C:H2'	1:AA:765:G:H5'	1.82	0.61
1:AA:781:A:H2'	1:AA:782:A:H5'	1.83	0.61
1:AA:1316:G:N2	1:AA:1318:A:H3'	2.15	0.61
3:AD:121:ALA:O	3:AD:122:ILE:HD13	2.00	0.61
13:AP:67:ILE:HG13	13:AP:71:VAL:HG13	1.83	0.61
17:AT:8:LYS:HA	17:AT:11:ILE:HD12	1.83	0.61
18:AB:14:HIS:HD2	18:AB:202:ASN:HB2	1.66	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:126:A:O5'	36:B2:19:ARG:HG3	2.01	0.61
23:BB:635:C:O2'	23:BB:639:U:H5"	2.01	0.61
23:BB:1788:C:O2'	23:BB:1789:A:H5'	2.01	0.61
25:BC:77:VAL:HG23	25:BC:112:GLY:H	1.66	0.61
27:BK:70:ARG:HD3	27:BK:76:VAL:HG22	1.83	0.61
27:BK:109:SER:HB2	27:BK:111:LYS:HE2	1.82	0.61
29:BE:67:ARG:HH11	29:BE:67:ARG:HG2	1.65	0.61
32:B4:7:VAL:HG13	32:B4:8:LYS:N	2.13	0.61
32:B4:16:ILE:HG12	32:B4:25:VAL:HG22	1.83	0.61
44:BQ:80:ASN:O	44:BQ:83:LYS:HB3	2.01	0.61
46:BU:11:ILE:HD13	46:BU:11:ILE:O	2.00	0.61
47:BF:34:THR:O	47:BF:89:THR:HA	2.01	0.61
50:BT:32:LEU:N	50:BT:83:ALA:HB3	2.16	0.61
1:CA:26:A:H61	1:CA:558:G:H1'	1.65	0.61
1:CA:1000:A:H2'	1:CA:1001:C:C6	2.35	0.61
1:CA:1061:G:H2'	1:CA:1062:U:C6	2.36	0.61
1:CA:1492:A:H5"	1:CA:1493:A:C8	2.36	0.61
9:CJ:7:ARG:HE	9:CJ:101:SER:HB3	1.65	0.61
21:CN:62:ARG:HG2	21:CN:67:GLY:O	2.01	0.61
18:CB:209:VAL:HG23	18:CB:210:THR:H	1.66	0.61
23:DB:1470:A:H3'	23:DB:1471:G:H8	1.66	0.61
23:DB:2573:C:H3'	56:DB:3628:HOH:O	2.01	0.61
24:DI:42:ASN:HA	24:DI:45:THR:OG1	1.99	0.61
26:DD:68:PHE:HB3	26:DD:73:VAL:HG23	1.81	0.61
28:DP:89:GLY:HA2	28:DP:111:GLU:C	2.26	0.61
34:D3:44:ARG:N	34:D3:45:PRO:HD2	2.15	0.61
37:DL:57:LEU:HD12	37:DL:60:ARG:NH2	2.16	0.61
1:AA:312:C:H2'	1:AA:313:A:C8	2.35	0.61
1:AA:1308:U:H2'	1:AA:1309:G:H8	1.66	0.61
3:AD:3:TYR:C	3:AD:4:LEU:HD12	2.26	0.61
14:AQ:16:MET:HB2	14:AQ:19:SER:HB2	1.81	0.61
23:BB:2073:C:O2'	23:BB:2074:U:H5'	2.00	0.61
23:BB:2741:A:H2'	23:BB:2742:G:O4'	2.01	0.61
23:BB:2747:G:O6	23:BB:2754:U:H2'	2.01	0.61
26:BD:8:LYS:HG2	26:BD:197:THR:H	1.66	0.61
28:BP:89:GLY:HA2	28:BP:111:GLU:C	2.26	0.61
40:BH:44:ILE:HA	40:BH:51:ARG:HH22	1.66	0.61
44:BQ:100:PHE:HB2	49:BR:13:ARG:HH12	1.65	0.61
45:BS:5:ALA:HB3	45:BS:54:ALA:HB2	1.83	0.61
47:BF:177:ARG:NH1	47:BF:177:ARG:HA	2.15	0.61
51:BZ:32:ASN:C	51:BZ:33:LEU:HD12	2.26	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:202:G:H21	1:CA:465:A:N6	1.99	0.61
1:CA:373:A:H2'	1:CA:374:A:H8	1.66	0.61
1:CA:1222:G:O2'	1:CA:1223:C:H5'	2.01	0.61
1:CA:1308:U:O2'	1:CA:1309:G:H5'	2.01	0.61
1:CA:1342:C:H2'	1:CA:1343:G:C8	2.36	0.61
23:DB:1054:A:H2'	23:DB:1055:G:C8	2.36	0.61
23:DB:1599:U:OP1	50:DT:40:LYS:HB3	2.01	0.61
23:DB:2352:A:H2'	23:DB:2353:G:O4'	2.01	0.61
24:DI:20:SER:O	24:DI:25:PRO:HD2	2.00	0.61
27:DK:85:VAL:HG21	27:DK:115:ILE:HD11	1.82	0.61
1:AA:464:U:H3'	1:AA:466:A:OP1	2.00	0.60
1:AA:946:A:H2'	1:AA:947:G:H8	1.65	0.60
1:AA:977:A:H2	1:AA:1223:C:H2'	1.66	0.60
4:AE:131:ASN:HD21	4:AE:133:ILE:HB	1.64	0.60
6:AG:138:GLU:HB3	6:AG:142:ARG:NH2	2.15	0.60
20:AO:67:LEU:HD12	20:AO:88:ARG:HH22	1.65	0.60
21:AN:11:LYS:O	21:AN:15:LEU:HG	2.00	0.60
23:BB:834:G:H2'	23:BB:835:C:O4'	2.01	0.60
23:BB:1220:G:H2'	23:BB:1221:C:H6	1.65	0.60
23:BB:1443:U:H2'	23:BB:1444:G:C8	2.35	0.60
23:BB:1739:A:H2'	23:BB:1740:G:O4'	2.00	0.60
23:BB:2216:G:H2'	23:BB:2217:G:C8	2.35	0.60
23:BB:2742:G:OP1	32:B4:36:ARG:HD3	2.01	0.60
24:BI:11:GLN:HA	24:BI:55:PRO:HA	1.82	0.60
25:BC:94:LEU:HA	25:BC:100:ARG:HA	1.83	0.60
25:BC:245:THR:C	25:BC:247:TRP:H	2.09	0.60
33:B1:36:LYS:HB2	33:B1:47:ILE:HA	1.83	0.60
35:BV:80:HIS:CD2	35:BV:83:LYS:H	2.19	0.60
37:BL:119:PRO:HA	37:BL:138:ALA:O	2.01	0.60
47:BF:108:PRO:C	47:BF:110:ILE:H	2.09	0.60
47:BF:111:ARG:HE	47:BF:135:ILE:HG22	1.66	0.60
1:CA:478:A:H2'	1:CA:479:U:O4'	2.01	0.60
1:CA:1226:C:O2'	1:CA:1227:A:H5'	2.01	0.60
5:CF:71:ILE:HG13	5:CF:72:ASP:N	2.14	0.60
11:CL:41:PRO:HB3	11:CL:49:ARG:NH1	2.16	0.60
14:CQ:16:MET:HB2	14:CQ:19:SER:HB2	1.82	0.60
12:CM:102:LYS:HG3	12:CM:103:THR:HG23	1.83	0.60
23:DB:263:G:H2'	23:DB:264:C:O4'	2.01	0.60
23:DB:277:G:H1'	23:DB:361:G:O6	2.01	0.60
23:DB:1175:A:C4	23:DB:1176:U:H1'	2.36	0.60
23:DB:1406:U:H2'	23:DB:1407:G:C8	2.35	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1782:U:H3'	56:DB:3606:HOH:O	2.01	0.60
23:DB:2677:G:H2'	23:DB:2678:C:C6	2.35	0.60
23:DB:2840:C:H2'	23:DB:2841:C:C6	2.34	0.60
26:DD:30:GLU:HB2	26:DD:52:THR:HG23	1.83	0.60
46:DU:42:LYS:HG3	46:DU:57:ILE:HG21	1.83	0.60
47:DF:120:SER:HG	47:DF:127:TYR:HD2	1.48	0.60
1:AA:462:G:H3'	1:AA:463:U:H6	1.66	0.60
1:AA:675:A:H2'	1:AA:676:A:C8	2.36	0.60
1:AA:797:C:O2'	1:AA:798:U:H5'	2.00	0.60
2:AC:8:GLY:HA2	2:AC:11:LEU:HD21	1.81	0.60
8:AI:96:GLU:HA	8:AI:99:LYS:NZ	2.16	0.60
18:AB:130:LYS:O	18:AB:134:LEU:HG	2.01	0.60
22:BA:6:G:H2'	22:BA:7:G:H8	1.64	0.60
23:BB:263:G:H2'	23:BB:264:C:O4'	2.01	0.60
23:BB:918:A:H2'	23:BB:919:U:H5'	1.82	0.60
23:BB:1631:G:N2	23:BB:1633:G:H3'	2.16	0.60
23:BB:1868:C:H2'	23:BB:1869:G:O4'	2.01	0.60
23:BB:2516:A:O2'	23:BB:2517:C:H5'	2.01	0.60
23:BB:2788:C:H2'	23:BB:2789:C:C6	2.35	0.60
26:BD:10:GLY:O	26:BD:11:MET:HB2	2.00	0.60
26:BD:39:ASP:HB3	26:BD:42:ASN:HB3	1.83	0.60
29:BE:145:ASP:HB3	29:BE:184:ASP:H	1.67	0.60
33:B1:52:LYS:HB2	33:B1:52:LYS:HZ2	1.65	0.60
35:BV:80:HIS:HD2	35:BV:83:LYS:H	1.46	0.60
40:BH:117:LEU:HD13	40:BH:120:GLY:HA2	1.83	0.60
41:BJ:96:ARG:O	41:BJ:99:ARG:HG3	2.01	0.60
41:BJ:124:VAL:HG23	41:BJ:125:TYR:H	1.64	0.60
43:BO:64:TYR:C	43:BO:66:GLY:H	2.09	0.60
44:BQ:91:ARG:HD3	49:BR:11:GLN:CD	2.26	0.60
52:BW:44:PHE:O	52:BW:78:PHE:HA	2.00	0.60
1:CA:188:C:H2'	1:CA:189:A:O4'	2.01	0.60
1:CA:279:A:H5'	1:CA:281:G:H5'	1.82	0.60
1:CA:860:A:H2'	1:CA:861:G:O4'	2.01	0.60
1:CA:1316:G:H22	1:CA:1318:A:H3'	1.65	0.60
2:CC:59:PRO:CG	2:CC:62:SER:HB2	2.28	0.60
21:CN:16:ALA:HB2	21:CN:54:SER:O	2.00	0.60
23:DB:438:G:H2'	23:DB:439:A:H8	1.66	0.60
23:DB:971:G:H2'	23:DB:972:A:O4'	2.00	0.60
23:DB:2078:C:O2'	23:DB:2079:U:H5'	2.01	0.60
23:DB:2264:C:H41	52:DW:11:ASN:ND2	1.99	0.60
23:DB:2569:G:O2'	23:DB:2570:G:H5'	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DI:78:LEU:HA	24:DI:81:LYS:HE2	1.82	0.60
25:DC:130:PRO:HA	25:DC:188:ARG:HA	1.83	0.60
25:DC:202:ARG:O	25:DC:203:VAL:HB	1.99	0.60
32:D4:22:VAL:O	32:D4:24:ARG:HG3	2.00	0.60
35:DV:75:GLN:HG2	35:DV:92:VAL:HG23	1.82	0.60
37:DL:2:ARG:HG2	37:DL:5:THR:HG21	1.82	0.60
1:AA:462:G:H3'	1:AA:463:U:C6	2.36	0.60
1:AA:923:A:H2'	1:AA:924:C:C6	2.36	0.60
1:AA:1047:G:N2	1:AA:1215:G:H5"	2.16	0.60
1:AA:1053:G:O6	1:AA:1199:U:H2'	2.01	0.60
1:AA:1163:A:H2'	1:AA:1164:G:C8	2.35	0.60
7:AH:55:LYS:HA	7:AH:55:LYS:HE3	1.83	0.60
20:AO:39:LEU:HD23	20:AO:56:LEU:HB2	1.82	0.60
23:BB:480:A:H3'	23:BB:481:G:H5"	1.83	0.60
23:BB:558:U:OP1	41:BJ:114:LEU:HB2	2.01	0.60
23:BB:633:A:H8	23:BB:633:A:O5'	1.84	0.60
23:BB:850:U:H2'	23:BB:851:C:C6	2.36	0.60
23:BB:1082:U:N3	23:BB:1086:A:C6	2.70	0.60
23:BB:1315:C:H2'	23:BB:1316:U:C6	2.36	0.60
23:BB:1485:U:H2'	23:BB:1486:U:H6	1.66	0.60
23:BB:2103:C:H2'	23:BB:2104:C:O4'	2.01	0.60
24:BI:89:SER:HA	24:BI:97:VAL:HG21	1.83	0.60
25:BC:255:LYS:C	25:BC:257:ARG:H	2.10	0.60
37:BL:57:LEU:C	37:BL:59:ARG:H	2.09	0.60
37:BL:68:SER:HB2	37:BL:71:ALA:HB3	1.83	0.60
1:CA:441:A:H61	1:CA:493:A:N6	2.00	0.60
1:CA:806:C:H2'	1:CA:807:A:C8	2.37	0.60
3:CD:169:TRP:O	3:CD:182:LYS:HB2	2.01	0.60
7:CH:94:VAL:HG12	7:CH:99:GLY:HA3	1.83	0.60
18:CB:46:VAL:CG1	18:CB:47:PRO:HD3	2.26	0.60
23:DB:155:A:H2'	23:DB:156:A:H8	1.65	0.60
23:DB:401:A:H2'	23:DB:402:A:C8	2.35	0.60
23:DB:1098:A:C8	24:DI:3:LYS:HB3	2.36	0.60
23:DB:2065:C:H2'	23:DB:2066:C:C6	2.36	0.60
24:DI:27:LEU:H	24:DI:27:LEU:CD2	2.14	0.60
25:DC:90:ILE:HD13	25:DC:104:LEU:HA	1.83	0.60
29:DE:60:TRP:CH2	29:DE:69:ARG:HA	2.36	0.60
43:DO:64:TYR:C	43:DO:66:GLY:H	2.10	0.60
45:DS:15:GLN:HA	45:DS:18:ARG:CG	2.32	0.60
1:AA:840:C:C4	1:AA:842:U:H4'	2.37	0.60
2:AC:87:ARG:NH2	2:AC:88:LYS:HA	2.16	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:29:THR:H	3:AD:33:ILE:CG2	2.13	0.60
14:AQ:18:LYS:H	14:AQ:50:ASN:HD21	1.47	0.60
23:BB:654:A:N3	23:BB:654:A:H2'	2.15	0.60
23:BB:1577:C:H2'	23:BB:1578:U:C6	2.37	0.60
23:BB:2261:C:H1'	23:BB:2388:A:N3	2.16	0.60
26:BD:3:GLY:C	26:BD:4:LEU:HD22	2.27	0.60
27:BK:38:ILE:H	27:BK:38:ILE:CD1	2.14	0.60
46:BU:26:ASN:N	46:BU:26:ASN:HD22	1.98	0.60
47:BF:177:ARG:HA	47:BF:177:ARG:CZ	2.32	0.60
49:BR:36:ALA:HB2	49:BR:58:VAL:HG23	1.83	0.60
49:BR:49:ILE:HD12	49:BR:49:ILE:O	2.02	0.60
51:BZ:67:VAL:O	51:BZ:70:GLU:HG2	2.02	0.60
6:CG:105:GLU:HB3	6:CG:136:LYS:NZ	2.16	0.60
6:CG:139:ASP:HA	6:CG:142:ARG:HH11	1.65	0.60
21:CN:27:LYS:CG	21:CN:28:ALA:H	2.13	0.60
21:CN:63:CYS:SG	21:CN:66:THR:N	2.74	0.60
16:CS:35:ARG:HA	16:CS:70:LEU:HB3	1.83	0.60
18:CB:60:ALA:HB1	18:CB:224:ARG:HG2	1.82	0.60
18:CB:172:ILE:HG22	18:CB:176:ASN:ND2	2.17	0.60
23:DB:6:A:H4'	41:DJ:131:ASN:O	2.01	0.60
23:DB:848:C:H2'	23:DB:849:A:C8	2.35	0.60
23:DB:1199:U:H2'	23:DB:1200:C:H6	1.66	0.60
23:DB:1551:A:H3'	23:DB:1552:A:H5"	1.81	0.60
23:DB:2469:A:H4'	38:DM:55:ARG:CZ	2.32	0.60
23:DB:2698:U:H2'	23:DB:2699:C:C6	2.35	0.60
23:DB:2824:C:H3'	23:DB:2825:G:N2	2.17	0.60
26:DD:202:ILE:HG22	26:DD:204:LYS:NZ	2.16	0.60
35:DV:80:HIS:HD2	35:DV:83:LYS:H	1.49	0.60
44:DQ:87:VAL:HG21	49:DR:52:PRO:HG3	1.81	0.60
45:DS:66:ILE:HD13	45:DS:66:ILE:N	2.16	0.60
50:DT:14:PRO:HA	50:DT:32:LEU:CB	2.32	0.60
50:DT:57:VAL:HG22	50:DT:58:VAL:N	2.14	0.60
1:AA:602:A:O2'	1:AA:603:U:H5'	2.02	0.60
1:AA:621:A:H2'	1:AA:622:A:C8	2.36	0.60
6:AG:45:ALA:HB1	6:AG:120:ALA:HA	1.83	0.60
8:AI:117:LEU:HD12	8:AI:120:ALA:O	2.01	0.60
23:BB:458:G:N2	23:BB:469:G:H2'	2.16	0.60
23:BB:968:C:H2'	23:BB:969:G:H8	1.65	0.60
23:BB:1117:C:H2'	23:BB:1118:C:C6	2.36	0.60
23:BB:1319:C:O2'	23:BB:1320:C:H5'	2.01	0.60
23:BB:2267:A:H3'	23:BB:2267:A:H8	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2292:U:H2'	23:BB:2293:G:H8	1.67	0.60
32:B4:27:CYS:SG	32:B4:29:ALA:HB3	2.41	0.60
41:BJ:58:ASN:N	41:BJ:127:GLY:HA2	2.16	0.60
1:CA:32:A:H2'	1:CA:33:A:C8	2.36	0.60
1:CA:784:A:H2'	1:CA:785:G:H8	1.67	0.60
17:CT:43:LYS:N	17:CT:43:LYS:HZ2	2.00	0.60
8:CI:90:ASP:C	8:CI:92:SER:H	2.09	0.60
9:CJ:29:ALA:O	9:CJ:32:THR:HG22	2.01	0.60
23:DB:264:C:C2'	23:DB:265:A:H5"	2.32	0.60
23:DB:477:A:H2'	23:DB:478:A:H8	1.63	0.60
23:DB:620:G:H5'	23:DB:620:G:N3	2.16	0.60
23:DB:870:U:H2'	23:DB:871:U:H5"	1.83	0.60
23:DB:912:C:O2'	23:DB:913:U:H5'	2.01	0.60
23:DB:1063:G:H4'	24:DI:135:MET:HG2	1.83	0.60
23:DB:1593:A:H2'	23:DB:1594:U:C6	2.37	0.60
23:DB:2136:G:O2'	23:DB:2137:U:H5'	2.01	0.60
23:DB:2341:G:H2'	23:DB:2342:C:H6	1.66	0.60
26:DD:108:ASP:OD2	26:DD:173:GLN:HA	2.02	0.60
39:DX:12:GLU:HA	39:DX:15:ASN:HD21	1.66	0.60
41:DJ:82:GLY:O	41:DJ:84:ILE:HG22	2.01	0.60
44:DQ:90:ASP:OD1	49:DR:39:LEU:HD12	2.00	0.60
47:DF:77:LYS:HD2	47:DF:79:ARG:HD3	1.82	0.60
48:DG:84:LYS:C	48:DG:85:LYS:HG2	2.25	0.60
1:AA:1148:U:H2'	1:AA:1149:C:H5'	1.83	0.60
2:AC:95:GLY:O	2:AC:96:VAL:HG13	2.00	0.60
2:AC:184:ASN:HD22	2:AC:185:THR:H	1.49	0.60
3:AD:29:THR:HG22	3:AD:30:LYS:N	2.16	0.60
3:AD:169:TRP:O	3:AD:182:LYS:HB2	2.02	0.60
5:AF:53:LYS:HB2	5:AF:54:LEU:HD22	1.82	0.60
18:AB:162:VAL:HG21	18:AB:168:GLU:HB2	1.82	0.60
21:AN:58:ARG:H	21:AN:59:GLN:NE2	2.00	0.60
23:BB:125:A:H5'	36:B2:19:ARG:HD3	1.82	0.60
23:BB:455:C:N3	23:BB:472:A:H2'	2.16	0.60
23:BB:648:G:H2'	23:BB:649:G:H8	1.66	0.60
23:BB:1794:A:H2'	23:BB:1795:C:H6	1.66	0.60
23:BB:2041:U:H2'	23:BB:2042:A:C8	2.37	0.60
23:BB:2747:G:H2'	23:BB:2748:A:C8	2.37	0.60
23:BB:2859:G:H2'	23:BB:2860:A:C8	2.36	0.60
26:BD:2:ILE:HG22	26:BD:82:PHE:HB3	1.81	0.60
36:B2:16:HIS:HB3	36:B2:21:ARG:NH1	2.17	0.60
42:BN:48:VAL:HA	42:BN:51:LEU:HD22	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BQ:84:LYS:HE2	44:BQ:84:LYS:HA	1.81	0.60
46:BU:51:LEU:H	46:BU:53:GLN:NE2	1.99	0.60
46:BU:85:ARG:NH1	46:BU:86:PHE:H	2.00	0.60
47:BF:62:GLN:NE2	47:BF:90:LEU:HD13	2.15	0.60
50:BT:43:ILE:O	50:BT:47:VAL:HG23	2.01	0.60
51:BZ:4:VAL:O	51:BZ:33:LEU:HD23	2.02	0.60
1:CA:135:C:C2	13:CP:1:MET:HB2	2.36	0.60
1:CA:279:A:C5'	1:CA:280:C:H3'	2.30	0.60
1:CA:628:G:H2'	1:CA:629:A:C8	2.36	0.60
1:CA:753:A:OP1	20:CO:73:LYS:HE3	2.01	0.60
2:CC:106:ARG:H	2:CC:106:ARG:CZ	2.14	0.60
6:CG:132:THR:HA	6:CG:135:LYS:HB3	1.84	0.60
16:CS:27:LYS:NZ	16:CS:27:LYS:HB3	2.15	0.60
22:DA:55:U:H2'	22:DA:56:G:C8	2.37	0.60
23:DB:759:G:H2'	23:DB:760:G:H8	1.67	0.60
23:DB:1082:U:N3	23:DB:1086:A:C6	2.69	0.60
23:DB:1722:A:H2'	23:DB:1723:G:H8	1.66	0.60
23:DB:2262:U:H2'	23:DB:2263:C:C6	2.36	0.60
23:DB:2860:A:H8	23:DB:2860:A:O5'	1.82	0.60
26:DD:104:VAL:HG12	26:DD:106:LYS:HE2	1.84	0.60
26:DD:168:GLU:O	26:DD:170:VAL:HG22	2.02	0.60
39:DX:14:LEU:HD22	39:DX:57:LEU:HD21	1.84	0.60
42:DN:85:PRO:HA	42:DN:88:ALA:HB2	1.84	0.60
47:DF:62:GLN:NE2	47:DF:90:LEU:HD13	2.17	0.60
47:DF:134:GLN:O	47:DF:136:ILE:N	2.35	0.60
48:DG:157:LYS:HG2	48:DG:159:LYS:HG3	1.82	0.60
50:DT:4:GLU:OE2	50:DT:5:GLU:HG2	2.01	0.60
1:AA:209:U:H5'	1:AA:210:C:C5	2.36	0.60
1:AA:1262:C:N4	1:AA:1273:C:H42	1.98	0.60
2:AC:133:MET:HE1	2:AC:156:LEU:HD22	1.82	0.60
3:AD:144:ILE:HD12	3:AD:177:MET:HE3	1.84	0.60
18:AB:107:ARG:HH21	18:AB:111:LYS:HB2	1.67	0.60
23:BB:479:A:N3	23:BB:481:G:H5"	2.17	0.60
23:BB:1061:U:H4'	23:BB:1070:A:O3'	2.02	0.60
23:BB:1142:A:H4'	41:BJ:27:ARG:HH22	1.66	0.60
23:BB:1229:C:H2'	23:BB:1230:A:H8	1.66	0.60
23:BB:1810:A:H2'	23:BB:1811:G:O4'	2.01	0.60
23:BB:2262:U:H2'	23:BB:2263:C:C6	2.35	0.60
26:BD:30:GLU:HB2	26:BD:52:THR:HG23	1.82	0.60
40:BH:78:VAL:HG12	40:BH:144:VAL:HG23	1.84	0.60
44:BQ:10:ARG:CZ	44:BQ:10:ARG:HB2	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:24:VAL:O	47:BF:27:VAL:HG22	2.01	0.60
47:BF:134:GLN:C	47:BF:136:ILE:H	2.08	0.60
48:BG:137:LYS:O	48:BG:140:ILE:HG13	2.02	0.60
52:BW:49:ASN:HB3	52:BW:60:ALA:HA	1.84	0.60
1:CA:235:C:H2'	1:CA:236:A:C8	2.37	0.60
1:CA:436:C:O2'	1:CA:437:U:H5'	2.02	0.60
1:CA:553:A:H2'	1:CA:554:A:C8	2.37	0.60
1:CA:713:G:H2'	1:CA:714:G:H8	1.65	0.60
1:CA:1492:A:H5'	1:CA:1493:A:OP2	2.02	0.60
19:CU:20:ARG:HD2	19:CU:20:ARG:H	1.66	0.60
6:CG:38:ALA:O	6:CG:42:VAL:HG23	2.00	0.60
23:DB:104:A:H2'	23:DB:105:C:C6	2.36	0.60
23:DB:558:U:P	41:DJ:113:PRO:HG2	2.41	0.60
23:DB:2336:A:N6	52:DW:40:ARG:HG3	2.17	0.60
23:DB:2394:C:OP1	37:DL:63:LYS:HG2	2.01	0.60
23:DB:2720:U:H5"	28:DP:52:ARG:NH2	2.15	0.60
26:DD:4:LEU:HD23	26:DD:101:PHE:CE1	2.37	0.60
27:DK:43:ILE:HD12	27:DK:56:ASP:HB2	1.84	0.60
31:D0:53:VAL:HG12	42:DN:118:ARG:HH12	1.67	0.60
33:D1:32:LYS:HA	33:D1:51:ALA:O	2.01	0.60
39:DX:13:GLU:O	39:DX:17:GLU:HG3	2.00	0.60
40:DH:6:LEU:H	40:DH:6:LEU:HD12	1.66	0.60
46:DU:54:PRO:HG2	46:DU:55:GLY:H	1.65	0.60
49:DR:36:ALA:HB2	49:DR:58:VAL:HG23	1.84	0.60
51:DZ:3:ARG:HG2	51:DZ:33:LEU:HD22	1.83	0.60
1:AA:215:C:H2'	1:AA:216:U:H6	1.66	0.60
1:AA:1147:C:H2'	1:AA:1148:U:C6	2.37	0.60
7:AH:74:ILE:HG13	7:AH:128:VAL:HG22	1.82	0.60
11:AL:17:LYS:HE3	11:AL:17:LYS:N	2.16	0.60
12:AM:72:ILE:O	12:AM:76:ILE:HG13	2.01	0.60
18:AB:109:SER:O	18:AB:112:ARG:HB3	2.02	0.60
23:BB:62:U:H2'	23:BB:63:A:O4'	2.02	0.60
23:BB:2247:A:H3'	56:BB:3268:HOH:O	2.02	0.60
23:BB:2751:G:O2'	23:BB:2752:C:H5'	2.02	0.60
25:BC:92:LEU:HD12	25:BC:93:VAL:N	2.16	0.60
33:B1:5:ARG:NH1	33:B1:25:ASN:HB2	2.17	0.60
42:BN:33:ILE:HA	42:BN:114:GLU:HB2	1.83	0.60
1:CA:313:A:H2'	1:CA:314:C:C6	2.37	0.60
1:CA:464:U:H3'	1:CA:466:A:OP1	2.02	0.60
1:CA:865:A:C2	1:CA:918:A:H4'	2.36	0.60
1:CA:984:C:O2'	1:CA:985:C:H5'	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1237:C:H3'	1:CA:1336:C:H41	1.66	0.60
1:CA:1292:G:H2'	1:CA:1293:C:H6	1.65	0.60
1:CA:1318:A:H4'	16:CS:9:PHE:CD1	2.36	0.60
1:CA:1350:A:H2'	1:CA:1351:U:C6	2.37	0.60
10:CK:16:SER:HA	10:CK:78:ILE:HA	1.82	0.60
13:CP:67:ILE:HG13	13:CP:71:VAL:HG13	1.84	0.60
21:CN:5:MET:HG2	21:CN:8:ARG:NE	2.16	0.60
23:DB:417:C:H2'	23:DB:418:C:C6	2.37	0.60
23:DB:560:C:H2'	23:DB:561:G:O4'	2.01	0.60
23:DB:580:U:H2'	23:DB:581:C:H6	1.67	0.60
23:DB:654:A:N3	23:DB:654:A:H2'	2.16	0.60
23:DB:1007:C:O3'	41:DJ:110:PRO:HB3	2.02	0.60
23:DB:1360:G:H2'	23:DB:1361:G:H5'	1.84	0.60
23:DB:1788:C:O2'	23:DB:1789:A:H5'	2.01	0.60
23:DB:2859:G:H2'	23:DB:2860:A:C8	2.37	0.60
26:DD:149:ASN:O	26:DD:152:PRO:HD2	2.01	0.60
43:DO:11:ALA:HB2	43:DO:96:GLY:N	2.17	0.60
1:AA:1513:A:H2'	1:AA:1514:G:C8	2.36	0.60
10:AK:124:LYS:O	19:AU:33:ARG:NE	2.34	0.60
16:AS:44:ILE:HA	16:AS:61:VAL:HB	1.84	0.60
21:AN:9:GLU:O	21:AN:13:VAL:HG23	2.01	0.60
23:BB:528:A:C2	23:BB:2042:A:H2'	2.37	0.60
23:BB:2229:U:H2'	23:BB:2230:G:C8	2.37	0.60
23:BB:2348:U:H5'	33:B1:20:TYR:OH	2.02	0.60
26:BD:136:ASN:HD21	26:BD:139:SER:C	2.10	0.60
26:BD:168:GLU:O	26:BD:170:VAL:HG22	2.02	0.60
27:BK:54:LYS:HD2	27:BK:54:LYS:N	2.16	0.60
28:BP:61:ARG:HH21	28:BP:61:ARG:HB3	1.67	0.60
29:BE:145:ASP:N	29:BE:166:LYS:HB3	2.17	0.60
41:BJ:56:VAL:HG12	41:BJ:57:LEU:H	1.66	0.60
1:CA:1013:G:N2	1:CA:1015:G:H3'	2.17	0.60
5:CF:52:ASN:HA	5:CF:53:LYS:HZ3	1.65	0.60
2:CC:26:LYS:HE2	2:CC:27:GLU:N	2.16	0.60
2:CC:109:GLU:HB3	2:CC:139:ASN:HB3	1.83	0.60
6:CG:63:VAL:C	6:CG:65:LEU:H	2.09	0.60
23:DB:181:A:H2'	23:DB:182:A:H8	1.65	0.60
23:DB:1551:A:C3'	23:DB:1552:A:H5"	2.31	0.60
23:DB:1897:G:O2'	23:DB:1898:U:H5'	2.01	0.60
23:DB:1914:C:H2'	23:DB:1915:U:C6	2.37	0.60
23:DB:2591:C:H2'	23:DB:2592:G:H8	1.66	0.60
25:DC:155:ARG:HH11	25:DC:155:ARG:CB	2.15	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:D1:7:LYS:HD3	34:D3:33:THR:HG21	1.82	0.60
35:DV:41:GLU:C	35:DV:42:LEU:HD23	2.27	0.60
38:DM:35:ALA:HB3	38:DM:99:GLY:N	2.16	0.60
45:DS:3:THR:HB	45:DS:62:ASP:HB2	1.84	0.60
47:DF:24:VAL:O	47:DF:27:VAL:HG22	2.02	0.60
48:DG:83:THR:HA	48:DG:84:LYS:NZ	2.17	0.60
51:DZ:40:VAL:HG22	51:DZ:45:ARG:O	2.00	0.60
1:AA:553:A:H2'	1:AA:554:A:C8	2.37	0.60
1:AA:806:C:H2'	1:AA:807:A:H8	1.67	0.60
1:AA:939:G:O2'	1:AA:1375:A:H1'	2.02	0.60
5:AF:86:ARG:NH1	15:AR:63:TYR:HB3	2.17	0.60
23:BB:870:U:H2'	23:BB:871:U:H5"	1.84	0.60
23:BB:910:A:H62	38:BM:12:MET:HA	1.66	0.60
23:BB:1440:U:H2'	23:BB:1441:G:C8	2.36	0.60
23:BB:2443:C:H2'	23:BB:2444:G:H8	1.66	0.60
25:BC:124:LYS:HE2	25:BC:127:ASN:HD21	1.65	0.60
26:BD:34:VAL:HG12	26:BD:94:GLN:H	1.64	0.60
27:BK:10:VAL:HG21	27:BK:16:ALA:HA	1.84	0.60
38:BM:41:LEU:HA	38:BM:45:GLN:OE1	2.02	0.60
38:BM:66:ARG:NE	38:BM:101:VAL:HG11	2.17	0.60
45:BS:88:ARG:HH21	45:BS:88:ARG:HG3	1.67	0.60
49:BR:48:LYS:O	49:BR:48:LYS:HD2	2.02	0.60
50:BT:4:GLU:OE2	50:BT:5:GLU:HG2	2.02	0.60
51:BZ:59:ILE:HD13	51:BZ:67:VAL:HG21	1.84	0.60
1:CA:408:A:H3'	1:CA:409:U:H6	1.67	0.60
10:CK:28:ASN:HD21	10:CK:46:ALA:HB3	1.65	0.60
10:CK:92:ARG:NH2	19:CU:19:LYS:HG2	2.17	0.60
9:CJ:53:ILE:CG2	9:CJ:61:ALA:HB1	2.31	0.60
12:CM:106:ARG:HB3	12:CM:111:PRO:HA	1.84	0.60
16:CS:9:PHE:C	16:CS:10:ILE:HG13	2.27	0.60
22:DA:6:G:H2'	22:DA:7:G:H8	1.66	0.60
23:DB:551:G:H2'	23:DB:552:U:C6	2.37	0.60
23:DB:659:G:H21	29:DE:30:GLN:NE2	2.00	0.60
23:DB:919:U:H2'	23:DB:920:A:H8	1.67	0.60
23:DB:2262:U:H2'	23:DB:2263:C:H6	1.67	0.60
23:DB:2286:G:H4'	23:DB:2287:A:O4'	2.01	0.60
26:DD:37:VAL:HG23	26:DD:91:THR:HA	1.84	0.60
29:DE:1:MET:HB3	29:DE:14:VAL:HG23	1.83	0.60
29:DE:145:ASP:HB3	29:DE:184:ASP:H	1.66	0.60
33:D1:3:GLY:O	33:D1:4:ILE:HG12	2.02	0.60
33:D1:52:LYS:HZ2	33:D1:52:LYS:HB2	1.67	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DQ:91:ARG:HB2	44:DQ:94:LEU:HD23	1.83	0.60
46:DU:85:ARG:NH1	46:DU:86:PHE:H	2.00	0.60
49:DR:49:ILE:HD12	49:DR:49:ILE:O	2.02	0.60
1:AA:373:A:H2'	1:AA:374:A:H8	1.67	0.59
1:AA:468:A:H3'	1:AA:469:C:C6	2.37	0.59
1:AA:944:G:H21	1:AA:1339:A:H62	1.50	0.59
3:AD:58:GLN:O	3:AD:62:ARG:HG2	2.02	0.59
9:AJ:10:LEU:O	9:AJ:71:LEU:HB2	2.02	0.59
18:AB:79:VAL:HG12	18:AB:90:PHE:HB2	1.83	0.59
23:BB:321:U:H1'	29:BE:162:ARG:NH1	2.14	0.59
23:BB:642:U:O2	23:BB:644:A:H3'	2.02	0.59
23:BB:1353:A:H2'	23:BB:1354:A:C8	2.36	0.59
23:BB:2229:U:H2'	23:BB:2230:G:H8	1.67	0.59
23:BB:2365:G:O2'	52:BW:59:PHE:HE1	1.85	0.59
26:BD:33:ARG:NH1	26:BD:51:THR:HG22	2.16	0.59
26:BD:170:VAL:O	26:BD:170:VAL:HG23	2.01	0.59
27:BK:86:LEU:HD23	27:BK:86:LEU:H	1.67	0.59
27:BK:102:PRO:HA	27:BK:120:PRO:HB3	1.84	0.59
29:BE:52:VAL:HG12	29:BE:53:THR:N	2.14	0.59
29:BE:60:TRP:CH2	29:BE:69:ARG:HA	2.37	0.59
36:B2:19:ARG:NH2	36:B2:19:ARG:HB3	2.17	0.59
37:BL:2:ARG:HG2	37:BL:5:THR:HG21	1.82	0.59
40:BH:63:ALA:HA	40:BH:66:ASN:CG	2.27	0.59
44:BQ:42:GLY:HA3	49:BR:75:VAL:HG21	1.82	0.59
46:BU:64:ILE:HD11	46:BU:68:ASN:HD22	1.67	0.59
52:BW:40:ARG:O	52:BW:44:PHE:HA	2.01	0.59
1:CA:844:G:N2	1:CA:845:A:H62	2.00	0.59
3:CD:29:THR:HG22	3:CD:30:LYS:N	2.17	0.59
5:CF:53:LYS:HB2	5:CF:54:LEU:HD22	1.82	0.59
19:CU:35:GLU:HB2	19:CU:37:TYR:CE2	2.36	0.59
9:CJ:36:VAL:HA	9:CJ:77:VAL:HG23	1.84	0.59
23:DB:290:U:O2'	23:DB:291:G:H5'	2.02	0.59
23:DB:581:C:H2'	23:DB:582:A:C8	2.37	0.59
23:DB:855:G:N3	52:DW:23:LYS:HE3	2.17	0.59
23:DB:928:A:O2'	30:DY:37:ARG:HD3	2.02	0.59
23:DB:2810:A:H2'	23:DB:2811:G:O4'	2.02	0.59
26:DD:39:ASP:HB3	26:DD:42:ASN:HB3	1.83	0.59
26:DD:168:GLU:HG3	26:DD:170:VAL:HG13	1.83	0.59
27:DK:10:VAL:HG21	27:DK:16:ALA:HA	1.83	0.59
27:DK:25:LEU:HB2	27:DK:38:ILE:HG12	1.84	0.59
29:DE:188:MET:HG3	29:DE:192:ALA:HB3	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DL:93:ASN:O	37:DL:95:LEU:N	2.35	0.59
46:DU:32:LYS:HA	46:DU:65:GLN:HA	1.84	0.59
51:DZ:21:ALA:HB3	51:DZ:23:ASN:ND2	2.17	0.59
1:AA:93:U:H6	1:AA:93:U:O5'	1.85	0.59
1:AA:713:G:H2'	1:AA:714:G:H8	1.66	0.59
1:AA:971:G:OP1	1:AA:971:G:H3'	2.02	0.59
7:AH:45:ILE:C	7:AH:63:LYS:HE3	2.26	0.59
8:AI:17:ARG:HH21	8:AI:65:THR:HG21	1.66	0.59
8:AI:27:ILE:HB	8:AI:34:LEU:HD22	1.84	0.59
10:AK:70:ALA:HA	10:AK:73:VAL:HG22	1.83	0.59
18:AB:209:VAL:O	18:AB:213:LEU:HB2	2.02	0.59
19:AU:35:GLU:HB2	19:AU:37:TYR:CE2	2.36	0.59
23:BB:208:C:H2'	23:BB:209:C:H6	1.67	0.59
23:BB:506:G:H5'	23:BB:509:C:H1'	1.84	0.59
23:BB:802:A:H2'	23:BB:803:U:C6	2.37	0.59
23:BB:1722:A:H2'	23:BB:1723:G:H8	1.68	0.59
23:BB:2186:G:H2'	23:BB:2187:U:O4'	2.02	0.59
23:BB:2787:C:H5'	26:BD:66:GLY:HA3	1.83	0.59
23:BB:2849:U:H4'	23:BB:2850:A:H5'	1.83	0.59
25:BC:202:ARG:O	25:BC:203:VAL:HB	2.01	0.59
26:BD:104:VAL:HG12	26:BD:106:LYS:HE2	1.84	0.59
26:BD:174:SER:O	26:BD:175:LEU:HB2	2.02	0.59
36:B2:31:LEU:HD22	36:B2:42:LEU:HD12	1.83	0.59
37:BL:55:MET:HE3	37:BL:55:MET:HA	1.82	0.59
46:BU:54:PRO:HG2	46:BU:55:GLY:H	1.65	0.59
49:BR:24:LYS:HA	49:BR:94:THR:OG1	2.01	0.59
50:BT:69:ARG:HG2	50:BT:74:ILE:N	2.17	0.59
1:CA:255:G:H4'	14:CQ:18:LYS:HD2	1.84	0.59
1:CA:1141:C:H2'	1:CA:1142:G:C8	2.37	0.59
1:CA:1170:A:H2'	1:CA:1171:A:O4'	2.01	0.59
1:CA:1412:C:H2'	1:CA:1413:A:H8	1.68	0.59
7:CH:73:SER:O	7:CH:128:VAL:HA	2.02	0.59
7:CH:125:ILE:HG22	7:CH:126:CYS:SG	2.42	0.59
6:CG:70:PRO:HB3	6:CG:102:TRP:CH2	2.38	0.59
18:CB:86:CYS:SG	18:CB:88:GLN:HG3	2.42	0.59
22:DA:32:U:H1'	22:DA:52:A:N7	2.17	0.59
23:DB:160:A:H2'	23:DB:161:A:C8	2.36	0.59
23:DB:797:G:OP2	29:DE:57:LYS:HB2	2.02	0.59
23:DB:1475:G:H4'	23:DB:1476:U:O5'	2.02	0.59
23:DB:2292:U:H2'	23:DB:2293:G:H8	1.67	0.59
23:DB:2334:U:H5'	43:DO:12:THR:HB	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:255:LYS:C	25:DC:257:ARG:H	2.10	0.59
27:DK:59:LYS:HD2	27:DK:89:ASN:HD22	1.68	0.59
37:DL:57:LEU:C	37:DL:59:ARG:H	2.09	0.59
38:DM:12:MET:HB2	38:DM:72:PRO:HG2	1.84	0.59
39:DX:23:ARG:H	39:DX:26:PHE:HB3	1.67	0.59
46:DU:47:PRO:HD3	46:DU:55:GLY:HA3	1.83	0.59
47:DF:134:GLN:NE2	47:DF:136:ILE:HD13	2.17	0.59
48:DG:25:ILE:O	48:DG:32:LEU:HA	2.02	0.59
1:AA:1180:A:P	8:AI:98:ARG:HH22	2.26	0.59
2:AC:127:VAL:HG23	2:AC:128:MET:N	2.17	0.59
4:AE:148:SER:HB2	4:AE:149:PRO:HD2	1.84	0.59
11:AL:34:THR:HB	11:AL:53:ARG:HB3	1.82	0.59
23:BB:20:C:H2'	23:BB:21:A:C8	2.36	0.59
23:BB:129:C:H2'	23:BB:130:C:H6	1.65	0.59
23:BB:1021:A:H2'	23:BB:1023:U:H5"	1.85	0.59
23:BB:1447:C:H2'	23:BB:1448:G:H8	1.67	0.59
23:BB:1580:A:H2'	23:BB:1581:G:O4'	2.01	0.59
23:BB:2243:U:O2'	23:BB:2244:U:H5'	2.00	0.59
29:BE:188:MET:HG3	29:BE:192:ALA:HB3	1.83	0.59
35:BV:72:VAL:CG1	35:BV:93:ARG:HA	2.33	0.59
40:BH:2:GLN:O	40:BH:3:VAL:HG22	2.02	0.59
40:BH:73:ASN:ND2	40:BH:74:ALA:H	2.01	0.59
45:BS:46:LEU:O	45:BS:50:VAL:HG23	2.02	0.59
47:BF:139:GLU:HG2	47:BF:140:ILE:H	1.67	0.59
48:BG:15:ASP:HB3	48:BG:26:LYS:H	1.66	0.59
48:BG:24:THR:HA	48:BG:33:THR:O	2.02	0.59
1:CA:60:A:H4'	1:CA:61:G:OP1	2.02	0.59
1:CA:135:C:N3	13:CP:1:MET:HB2	2.18	0.59
1:CA:1504:G:H4'	1:CA:1505:G:O4'	2.01	0.59
4:CE:148:SER:HB2	4:CE:149:PRO:HD2	1.82	0.59
2:CC:63:ILE:O	2:CC:98:ALA:HB1	2.02	0.59
2:CC:122:GLN:HB3	2:CC:127:VAL:HG21	1.83	0.59
6:CG:43:TYR:O	6:CG:47:GLU:HG2	2.02	0.59
18:CB:65:LYS:HB2	18:CB:158:ASP:OD1	2.01	0.59
22:DA:75:G:H2'	22:DA:76:G:H8	1.66	0.59
23:DB:834:G:H2'	23:DB:835:C:O4'	2.01	0.59
23:DB:1082:U:C2	23:DB:1086:A:C6	2.91	0.59
23:DB:1631:G:N2	23:DB:1633:G:H3'	2.17	0.59
23:DB:1635:A:C2'	23:DB:1636:U:H5'	2.32	0.59
23:DB:2784:U:H2'	23:DB:2785:C:H6	1.66	0.59
27:DK:17:ARG:HB2	27:DK:45:GLU:HB3	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:517:G:H22	1:AA:533:A:P	2.26	0.59
1:AA:810:C:O2'	1:AA:811:C:H5'	2.02	0.59
1:AA:1043:G:H2'	1:AA:1044:A:H8	1.67	0.59
5:AF:86:ARG:CZ	15:AR:63:TYR:HB3	2.32	0.59
17:AT:48:LYS:HG3	17:AT:49:ALA:N	2.18	0.59
18:AB:19:THR:HG23	18:AB:20:ARG:H	1.66	0.59
23:BB:558:U:H5"	41:BJ:111:LYS:HD3	1.84	0.59
23:BB:1166:G:H2'	23:BB:1167:C:C6	2.37	0.59
23:BB:2085:U:O2'	23:BB:2086:U:H5'	2.01	0.59
23:BB:2630:G:H2'	23:BB:2631:G:H8	1.67	0.59
25:BC:94:LEU:HB2	25:BC:100:ARG:HB3	1.85	0.59
26:BD:55:LYS:HZ3	26:BD:56:LYS:CG	2.15	0.59
42:BN:94:TYR:O	42:BN:115:LEU:HA	2.02	0.59
45:BS:10:ALA:HB3	45:BS:101:SER:OG	2.01	0.59
46:BU:27:VAL:HG23	46:BU:33:VAL:HG12	1.83	0.59
49:BR:39:LEU:CB	49:BR:49:ILE:HD11	2.32	0.59
1:CA:1306:A:H2'	1:CA:1307:U:O4'	2.02	0.59
10:CK:16:SER:HA	10:CK:77:GLY:O	2.03	0.59
8:CI:42:THR:HA	8:CI:45:MET:SD	2.42	0.59
23:DB:528:A:C2	23:DB:2042:A:H2'	2.37	0.59
23:DB:1100:C:H2'	23:DB:1101:U:H6	1.67	0.59
23:DB:1440:U:H2'	23:DB:1441:G:C8	2.37	0.59
23:DB:2041:U:H2'	23:DB:2042:A:C8	2.37	0.59
25:DC:43:ASN:HB2	25:DC:49:THR:HG23	1.84	0.59
26:DD:170:VAL:O	26:DD:170:VAL:HG23	2.01	0.59
28:DP:31:VAL:O	28:DP:32:VAL:HB	2.03	0.59
28:DP:31:VAL:HG12	28:DP:38:ARG:O	2.03	0.59
32:D4:24:ARG:HG2	32:D4:36:ARG:HG3	1.83	0.59
40:DH:2:GLN:O	40:DH:3:VAL:HG22	2.02	0.59
47:DF:36:ASN:HA	47:DF:87:LYS:HA	1.84	0.59
52:DW:44:PHE:O	52:DW:78:PHE:HA	2.02	0.59
52:DW:77:LYS:O	52:DW:78:PHE:HB2	2.00	0.59
1:AA:74:A:H2'	1:AA:75:G:O4'	2.01	0.59
1:AA:628:G:H2'	1:AA:629:A:H8	1.67	0.59
1:AA:812:G:N3	1:AA:812:G:H2'	2.15	0.59
1:AA:1175:G:O2'	1:AA:1176:A:H5'	2.02	0.59
2:AC:6:PRO:HG2	2:AC:183:TYR:CD2	2.37	0.59
7:AH:94:VAL:HG12	7:AH:99:GLY:HA3	1.84	0.59
10:AK:126:ARG:HB2	19:AU:33:ARG:HD2	1.82	0.59
12:AM:53:ASP:HA	12:AM:56:ARG:HH21	1.68	0.59
19:AU:48:LYS:HA	19:AU:51:ALA:HB3	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:41:G:O6	47:BF:68:LYS:HD3	2.03	0.59
22:BA:54:G:H21	47:BF:25:MET:HE3	1.66	0.59
23:BB:275:C:H2'	23:BB:276:U:H5'	1.83	0.59
23:BB:417:C:H2'	23:BB:418:C:C6	2.37	0.59
23:BB:2087:G:H2'	23:BB:2088:A:H8	1.67	0.59
30:BY:26:LEU:HD12	30:BY:28:LEU:HD11	1.85	0.59
45:BS:81:SER:HA	45:BS:99:ARG:HA	1.84	0.59
46:BU:34:ILE:HG12	46:BU:63:ALA:HB2	1.83	0.59
46:BU:47:PRO:HD3	46:BU:55:GLY:HA3	1.85	0.59
52:BW:77:LYS:O	52:BW:78:PHE:HB2	2.01	0.59
1:CA:98:A:H2'	1:CA:99:C:H6	1.67	0.59
1:CA:190:A:O5'	1:CA:190:A:H8	1.85	0.59
3:CD:187:ARG:NH1	3:CD:191:SER:HA	2.18	0.59
5:CF:86:ARG:NH1	15:CR:63:TYR:HB3	2.17	0.59
7:CH:55:LYS:HA	7:CH:55:LYS:HE3	1.84	0.59
23:DB:1021:A:H61	23:DB:1142:A:N6	2.00	0.59
23:DB:1549:A:H2'	23:DB:1550:C:C6	2.38	0.59
23:DB:2384:U:H5"	23:DB:2386:A:OP1	2.03	0.59
25:DC:89:ASN:O	25:DC:105:ALA:HB3	2.02	0.59
37:DL:109:LYS:HB2	37:DL:111:ILE:CD1	2.32	0.59
40:DH:2:GLN:HB3	40:DH:18:GLN:HG3	1.83	0.59
41:DJ:29:ALA:HA	41:DJ:32:LEU:HB2	1.83	0.59
44:DQ:77:LYS:HA	44:DQ:80:ASN:HB3	1.85	0.59
44:DQ:111:LYS:HB2	49:DR:48:LYS:NZ	2.17	0.59
50:DT:43:ILE:O	50:DT:47:VAL:HG23	2.03	0.59
1:AA:188:C:H2'	1:AA:189:A:O4'	2.03	0.59
1:AA:638:U:H2'	1:AA:639:G:O4'	2.02	0.59
3:AD:59:LYS:O	3:AD:63:ILE:HG13	2.02	0.59
4:AE:89:THR:HG21	4:AE:134:ASN:HD21	1.66	0.59
5:AF:73:GLU:O	5:AF:77:THR:HG23	2.03	0.59
6:AG:99:ALA:O	6:AG:103:ILE:HG13	2.03	0.59
12:AM:19:THR:HA	12:AM:24:VAL:HG23	1.83	0.59
23:BB:438:G:H2'	23:BB:439:A:H8	1.67	0.59
23:BB:547:A:H2'	23:BB:547:A:N3	2.18	0.59
23:BB:1046:A:C4'	23:BB:1047:G:H5"	2.31	0.59
23:BB:1552:A:H2'	23:BB:1553:A:H5'	1.85	0.59
1:CA:551:U:O2'	11:CL:82:ARG:HD2	2.02	0.59
1:CA:557:G:H2'	1:CA:558:G:O4'	2.02	0.59
1:CA:638:U:H2'	1:CA:639:G:O4'	2.02	0.59
1:CA:937:A:H1'	1:CA:1379:G:N2	2.18	0.59
1:CA:953:G:H2'	1:CA:954:G:O4'	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1266:G:N2	1:CA:1268:G:H3'	2.18	0.59
2:CC:18:ASN:CG	2:CC:53:ARG:HH21	2.10	0.59
8:CI:54:VAL:HG11	8:CI:86:LEU:HD23	1.85	0.59
21:CN:25:GLU:O	21:CN:29:ILE:HG13	2.03	0.59
18:CB:169:HIS:HA	18:CB:172:ILE:HD12	1.83	0.59
20:CO:32:LEU:HD13	20:CO:35:GLN:HE22	1.66	0.59
23:DB:136:G:H2'	23:DB:137:U:C6	2.37	0.59
23:DB:918:A:H2'	23:DB:919:U:H5'	1.83	0.59
23:DB:2019:A:H2	23:DB:2035:G:H22	1.51	0.59
24:DI:112:LYS:O	24:DI:116:MET:HG3	2.02	0.59
25:DC:94:LEU:HA	25:DC:100:ARG:HA	1.83	0.59
27:DK:87:LEU:HB2	27:DK:93:GLN:O	2.01	0.59
29:DE:58:LYS:HE2	29:DE:60:TRP:CD1	2.27	0.59
32:D4:16:ILE:HG12	32:D4:25:VAL:HG22	1.84	0.59
38:DM:41:LEU:HA	38:DM:45:GLN:OE1	2.02	0.59
38:DM:61:GLY:HA2	38:DM:107:GLY:HA3	1.84	0.59
43:DO:58:ILE:O	43:DO:62:LEU:HG	2.01	0.59
44:DQ:80:ASN:O	44:DQ:83:LYS:HB3	2.01	0.59
52:DW:59:PHE:O	52:DW:60:ALA:HB3	2.03	0.59
1:AA:71:A:H61	1:AA:99:C:C1'	2.08	0.59
1:AA:1458:G:H2'	1:AA:1459:G:H8	1.67	0.59
3:AD:151:GLN:HB3	3:AD:153:ARG:HG2	1.84	0.59
5:AF:79:ARG:NH2	5:AF:87:SER:HB3	2.17	0.59
10:AK:16:SER:HA	10:AK:77:GLY:O	2.02	0.59
16:AS:28:LYS:HD2	16:AS:28:LYS:H	1.67	0.59
22:BA:55:U:H2'	22:BA:56:G:C8	2.37	0.59
23:BB:971:G:H2'	23:BB:972:A:O4'	2.03	0.59
23:BB:1360:G:H2'	23:BB:1361:G:H5'	1.84	0.59
23:BB:1387:A:C5'	23:BB:1469:A:H1'	2.33	0.59
23:BB:1536:C:H4'	23:BB:1537:G:C4	2.37	0.59
23:BB:2462:C:H2'	23:BB:2463:C:C6	2.37	0.59
23:BB:2569:G:O2'	23:BB:2570:G:H5'	2.02	0.59
23:BB:2671:G:H2'	23:BB:2672:U:C6	2.38	0.59
25:BC:103:ILE:HG22	25:BC:105:ALA:H	1.67	0.59
26:BD:37:VAL:HG23	26:BD:91:THR:HA	1.83	0.59
28:BP:13:LYS:HD2	28:BP:76:HIS:HA	1.84	0.59
28:BP:26:GLU:HG3	28:BP:43:GLU:HB2	1.84	0.59
40:BH:89:LYS:HA	40:BH:89:LYS:HZ3	1.64	0.59
40:BH:122:LEU:H	40:BH:122:LEU:HD12	1.67	0.59
44:BQ:88:GLU:HG2	49:BR:49:ILE:O	2.03	0.59
47:BF:37:MET:HG3	47:BF:150:GLY:O	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:94:ARG:HA	47:BF:97:GLU:HB3	1.83	0.59
52:BW:17:ALA:HA	52:BW:35:ILE:CG2	2.26	0.59
1:CA:707:U:H4'	10:CK:21:HIS:CD2	2.38	0.59
5:CF:91:ARG:H	5:CF:93:LYS:HZ1	1.49	0.59
21:CN:11:LYS:O	21:CN:15:LEU:HG	2.02	0.59
23:DB:21:A:H2'	23:DB:22:C:C6	2.37	0.59
23:DB:654:A:N3	23:DB:655:A:H5"	2.17	0.59
23:DB:654:A:H2'	23:DB:655:A:H5"	1.84	0.59
23:DB:813:U:H2'	23:DB:814:C:H6	1.68	0.59
23:DB:2529:G:H4'	48:DG:174:LYS:HE2	1.85	0.59
25:DC:121:ALA:HB3	25:DC:129:LEU:HD21	1.84	0.59
25:DC:124:LYS:HE2	25:DC:127:ASN:ND2	2.17	0.59
26:DD:174:SER:O	26:DD:175:LEU:HB2	2.02	0.59
27:DK:54:LYS:HD2	27:DK:54:LYS:N	2.14	0.59
40:DH:72:ILE:HG23	40:DH:108:VAL:HG21	1.85	0.59
42:DN:19:ALA:C	42:DN:21:PHE:H	2.10	0.59
43:DO:7:ARG:HA	43:DO:10:ARG:NE	2.17	0.59
47:DF:2:LYS:H	47:DF:2:LYS:CE	2.15	0.59
47:DF:35:LEU:HD22	47:DF:56:LEU:HD11	1.85	0.59
47:DF:48:LEU:HD23	47:DF:48:LEU:H	1.67	0.59
48:DG:104:LEU:HD22	48:DG:106:LEU:HD21	1.84	0.59
50:DT:32:LEU:N	50:DT:83:ALA:HB3	2.18	0.59
50:DT:34:VAL:HG21	50:DT:43:ILE:HD12	1.84	0.59
1:AA:126:G:H4'	1:AA:634:C:H1'	1.85	0.59
1:AA:1409:C:N3	1:AA:1492:A:H2	2.00	0.59
1:AA:1512:U:H2'	1:AA:1513:A:H8	1.68	0.59
2:AC:111:ASP:OD2	2:AC:114:LEU:HG	2.03	0.59
2:AC:126:ARG:HH11	2:AC:126:ARG:CA	2.15	0.59
4:AE:37:VAL:HA	4:AE:47:PHE:HA	1.85	0.59
6:AG:94:ARG:O	6:AG:98:LEU:HG	2.02	0.59
12:AM:89:ARG:HD2	12:AM:95:PRO:O	2.01	0.59
22:BA:95:U:H2'	22:BA:96:G:C8	2.37	0.59
23:BB:2514:U:H5"	41:BJ:81:ILE:HD12	1.84	0.59
23:BB:2693:G:H2'	23:BB:2694:G:H8	1.68	0.59
27:BK:109:SER:C	27:BK:111:LYS:H	2.11	0.59
33:B1:10:LEU:O	33:B1:19:PHE:HB2	2.03	0.59
37:BL:143:GLU:HG2	37:BL:144:GLU:N	2.14	0.59
38:BM:42:THR:H	38:BM:45:GLN:CD	2.11	0.59
41:BJ:13:ARG:O	41:BJ:52:ASP:HA	2.03	0.59
47:BF:97:GLU:O	47:BF:100:GLU:HB2	2.01	0.59
50:BT:32:LEU:HG	50:BT:83:ALA:HB2	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BW:59:PHE:O	52:BW:60:ALA:HB3	2.02	0.59
1:CA:235:C:H2'	1:CA:236:A:H8	1.67	0.59
1:CA:411:A:H2'	1:CA:412:A:N3	2.17	0.59
1:CA:469:C:H2'	1:CA:470:C:C6	2.38	0.59
1:CA:513:C:H2'	1:CA:514:C:H6	1.67	0.59
1:CA:711:G:O2'	1:CA:712:A:H5'	2.02	0.59
1:CA:812:G:O2'	1:CA:813:U:H6	1.74	0.59
1:CA:900:A:H2'	1:CA:901:A:H8	1.64	0.59
1:CA:951:G:H1'	1:CA:970:C:O2'	2.02	0.59
1:CA:1382:C:H4'	6:CG:78:ARG:NH2	2.17	0.59
4:CE:71:ILE:HG12	4:CE:72:ASN:N	2.16	0.59
8:CI:35:GLU:O	8:CI:39:GLY:HA3	2.01	0.59
18:CB:135:MET:O	18:CB:138:ARG:HB3	2.03	0.59
22:DA:32:U:C4'	22:DA:52:A:H62	2.15	0.59
23:DB:63:A:H2'	23:DB:64:A:N7	2.17	0.59
23:DB:1177:G:H2'	23:DB:1178:C:H6	1.67	0.59
23:DB:1387:A:C5'	23:DB:1469:A:H1'	2.31	0.59
23:DB:1443:U:H2'	23:DB:1444:G:H8	1.68	0.59
23:DB:2261:C:H1'	23:DB:2388:A:N3	2.16	0.59
23:DB:2557:G:H2'	23:DB:2558:C:C6	2.37	0.59
26:DD:33:ARG:HH11	26:DD:51:THR:CG2	2.15	0.59
28:DP:19:PHE:HB2	28:DP:50:ARG:HH12	1.67	0.59
30:DY:10:ARG:HG3	30:DY:53:MET:HE2	1.85	0.59
44:DQ:103:VAL:O	44:DQ:106:THR:HB	2.03	0.59
1:AA:202:G:H2'	1:AA:203:G:H8	1.67	0.59
1:AA:328:C:H4'	1:AA:329:A:C5'	2.33	0.59
1:AA:920:U:H2'	1:AA:921:U:H6	1.68	0.59
1:AA:1075:U:H2'	1:AA:1076:U:C6	2.37	0.59
4:AE:106:ALA:HB1	4:AE:110:MET:HB3	1.85	0.59
7:AH:31:LEU:HG	7:AH:35:ILE:HD11	1.85	0.59
23:BB:532:A:N1	23:BB:2020:A:H1'	2.17	0.59
23:BB:1175:A:H3'	23:BB:1176:U:H4'	1.85	0.59
23:BB:1874:C:H2'	23:BB:1875:G:O4'	2.03	0.59
23:BB:2728:U:H2'	23:BB:2729:G:H8	1.67	0.59
26:BD:33:ARG:NE	26:BD:51:THR:HB	2.17	0.59
27:BK:43:ILE:HD12	27:BK:56:ASP:HB2	1.85	0.59
40:BH:99:ILE:HG21	40:BH:130:VAL:CB	2.32	0.59
46:BU:42:LYS:HD2	46:BU:59:GLU:HB2	1.83	0.59
48:BG:93:TYR:C	48:BG:94:ARG:HG3	2.27	0.59
1:CA:673:A:H2'	1:CA:674:G:C8	2.37	0.59
1:CA:1232:U:H5"	8:CI:125:GLN:O	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:58:GLN:O	3:CD:62:ARG:HG2	2.02	0.59
14:CQ:75:VAL:HG23	14:CQ:76:ARG:H	1.68	0.59
19:CU:48:LYS:HA	19:CU:51:ALA:HB3	1.84	0.59
21:CN:72:PHE:O	21:CN:73:LEU:HD23	2.03	0.59
18:CB:95:TRP:CZ3	18:CB:99:MET:HG3	2.38	0.59
18:CB:134:LEU:HD12	18:CB:135:MET:N	2.18	0.59
23:DB:480:A:H3'	23:DB:481:G:H5"	1.85	0.59
23:DB:642:U:O2	23:DB:644:A:H3'	2.03	0.59
23:DB:1354:A:H2'	23:DB:1355:G:O4'	2.03	0.59
23:DB:2400:G:O2'	23:DB:2401:U:H5'	2.02	0.59
25:DC:20:ASN:ND2	25:DC:23:LEU:HD13	2.18	0.59
25:DC:94:LEU:HB2	25:DC:100:ARG:HB3	1.85	0.59
28:DP:61:ARG:HB3	28:DP:61:ARG:HH21	1.68	0.59
30:DY:15:ARG:O	30:DY:20:LYS:HE3	2.03	0.59
35:DV:63:ILE:HD12	35:DV:63:ILE:N	2.18	0.59
40:DH:58:LEU:O	40:DH:61:VAL:HG12	2.02	0.59
48:DG:93:TYR:C	48:DG:94:ARG:HG3	2.27	0.59
50:DT:9:LYS:HB3	50:DT:9:LYS:NZ	2.18	0.59
52:DW:40:ARG:O	52:DW:44:PHE:HA	2.02	0.59
1:AA:1458:G:H4'	17:AT:22:SER:HB2	1.84	0.59
4:AE:71:ILE:HG12	4:AE:72:ASN:N	2.15	0.59
4:AE:95:MET:HA	4:AE:124:ALA:HB2	1.85	0.59
6:AG:71:THR:O	6:AG:89:GLU:HA	2.03	0.59
7:AH:45:ILE:HA	7:AH:63:LYS:HB2	1.84	0.59
7:AH:90:GLU:O	7:AH:91:LEU:C	2.46	0.59
10:AK:108:ASN:ND2	19:AU:6:ARG:HD2	2.17	0.59
11:AL:107:LYS:C	11:AL:109:ARG:H	2.11	0.59
18:AB:26:MET:HG3	18:AB:188:THR:O	2.03	0.59
18:AB:119:GLN:O	18:AB:125:PHE:HB3	2.01	0.59
22:BA:6:G:H2'	22:BA:7:G:C8	2.37	0.59
23:BB:131:A:O2'	23:BB:132:G:H5'	2.01	0.59
23:BB:1106:G:H2'	23:BB:1107:G:H8	1.67	0.59
23:BB:1549:A:H2'	23:BB:1550:C:C6	2.38	0.59
23:BB:2567:G:H2'	23:BB:2568:U:C6	2.37	0.59
23:BB:2784:U:H2'	23:BB:2785:C:H6	1.67	0.59
24:BI:96:LYS:N	24:BI:96:LYS:HD2	2.18	0.59
31:B0:21:LEU:HD12	45:BS:19:LEU:O	2.03	0.59
40:BH:131:SER:HB3	40:BH:140:ALA:C	2.28	0.59
44:BQ:103:VAL:O	44:BQ:106:THR:HB	2.03	0.59
44:BQ:104:ALA:HA	49:BR:46:GLU:CD	2.28	0.59
45:BS:3:THR:HB	45:BS:62:ASP:HB2	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:430:A:OP1	3:CD:8:LEU:HB2	2.03	0.59
1:CA:556:C:O2'	1:CA:557:G:H5'	2.03	0.59
14:CQ:16:MET:CB	14:CQ:19:SER:HB2	2.33	0.59
17:CT:79:THR:O	17:CT:82:ILE:HG13	2.03	0.59
8:CI:94:ARG:HE	8:CI:97:LEU:HD12	1.68	0.59
16:CS:10:ILE:CG2	16:CS:37:SER:HB3	2.32	0.59
16:CS:16:LYS:HD2	16:CS:17:LYS:HZ2	1.67	0.59
18:CB:69:VAL:HB	18:CB:162:VAL:CG2	2.33	0.59
22:DA:6:G:H2'	22:DA:7:G:C8	2.38	0.59
23:DB:710:U:H2'	23:DB:711:G:H8	1.67	0.59
23:DB:1537:G:H3'	23:DB:1537:G:N3	2.18	0.59
23:DB:1580:A:H2'	23:DB:1581:G:O4'	2.03	0.59
27:DK:3:GLN:HG2	27:DK:4:GLU:N	2.18	0.59
27:DK:109:SER:C	27:DK:111:LYS:H	2.11	0.59
31:D0:53:VAL:HB	42:DN:118:ARG:HH22	1.67	0.59
35:DV:62:THR:HG22	35:DV:71:LYS:HG2	1.85	0.59
37:DL:68:SER:HB2	37:DL:71:ALA:HB3	1.84	0.59
44:DQ:108:LEU:HA	49:DR:48:LYS:HD3	1.84	0.59
1:AA:716:A:N3	10:AK:119:GLY:HA2	2.18	0.58
1:AA:1168:U:H4'	1:AA:1169:A:OP2	2.03	0.58
2:AC:59:PRO:HG2	2:AC:62:SER:OG	2.02	0.58
12:AM:87:GLY:HA2	12:AM:90:HIS:HD2	1.67	0.58
16:AS:39:ILE:HB	16:AS:66:VAL:O	2.02	0.58
19:AU:42:THR:O	19:AU:46:ARG:HG3	2.03	0.58
23:BB:519:U:H2'	23:BB:520:G:H8	1.68	0.58
23:BB:856:G:H1'	52:BW:23:LYS:HB3	1.84	0.58
23:BB:912:C:O2'	23:BB:913:U:H5'	2.03	0.58
23:BB:947:A:H2'	23:BB:948:C:H6	1.67	0.58
23:BB:1443:U:H2'	23:BB:1444:G:H8	1.68	0.58
23:BB:2557:G:H2'	23:BB:2558:C:C6	2.38	0.58
25:BC:177:SER:O	25:BC:270:ARG:HG3	2.03	0.58
27:BK:2:ILE:HD12	27:BK:2:ILE:N	2.18	0.58
52:BW:49:ASN:C	52:BW:50:VAL:HG22	2.28	0.58
1:CA:205:A:H2'	1:CA:206:C:H6	1.67	0.58
1:CA:847:G:H2'	1:CA:848:C:C6	2.38	0.58
3:CD:3:TYR:C	3:CD:4:LEU:HD12	2.28	0.58
3:CD:89:LEU:HD22	3:CD:199:ILE:HD11	1.85	0.58
11:CL:98:ARG:HH21	11:CL:104:SER:C	2.10	0.58
2:CC:152:VAL:HB	2:CC:165:GLU:HB2	1.85	0.58
6:CG:112:ASP:HB2	6:CG:118:ARG:HG2	1.84	0.58
12:CM:79:LEU:HB2	12:CM:84:CYS:SG	2.42	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:471:A:H5”	29:DE:79:ARG:HH12	1.67	0.58
23:DB:532:A:N1	23:DB:2020:A:H1’	2.18	0.58
23:DB:1060:U:C5	24:DI:131:THR:HG22	2.38	0.58
23:DB:1166:G:H2’	23:DB:1167:C:C6	2.38	0.58
23:DB:1458:U:H5”	23:DB:1459:G:OP1	2.03	0.58
23:DB:1485:U:H2’	23:DB:1486:U:H6	1.68	0.58
23:DB:2773:C:H5”	26:DD:169:ARG:HB2	1.84	0.58
25:DC:221:GLY:O	25:DC:223:ALA:N	2.30	0.58
29:DE:21:ARG:HG3	29:DE:22:ASP:N	2.18	0.58
43:DO:58:ILE:HG22	43:DO:62:LEU:HD21	1.86	0.58
1:AA:190:A:H8	1:AA:190:A:O5’	1.84	0.58
1:AA:551:U:O2’	11:AL:82:ARG:HD2	2.03	0.58
1:AA:858:G:O6	1:AA:869:G:H3’	2.03	0.58
1:AA:1225:A:OP1	12:AM:100:ARG:HA	2.03	0.58
2:AC:179:ALA:HB1	2:AC:202:PHE:CE1	2.39	0.58
3:AD:187:ARG:NH1	3:AD:191:SER:HA	2.18	0.58
6:AG:108:ARG:HG2	6:AG:115:MET:SD	2.42	0.58
9:AJ:7:ARG:O	9:AJ:100:ILE:HB	2.03	0.58
23:BB:1414:C:H2’	23:BB:1415:U:C6	2.39	0.58
25:BC:89:ASN:O	25:BC:105:ALA:HB3	2.03	0.58
27:BK:25:LEU:HD21	27:BK:40:LYS:N	2.19	0.58
35:BV:61:LEU:O	35:BV:71:LYS:HA	2.03	0.58
42:BN:33:ILE:HB	42:BN:114:GLU:HB2	1.84	0.58
43:BO:28:VAL:HG11	43:BO:92:PHE:CZ	2.39	0.58
1:CA:209:U:H5’	1:CA:210:C:C5	2.37	0.58
1:CA:845:A:H2’	1:CA:845:A:N3	2.18	0.58
1:CA:1343:G:H2’	1:CA:1344:C:C6	2.38	0.58
9:CJ:12:ALA:HB1	9:CJ:17:LEU:HD12	1.84	0.58
9:CJ:40:ILE:O	9:CJ:72:ARG:HA	2.02	0.58
9:CJ:53:ILE:HG23	9:CJ:61:ALA:HB1	1.85	0.58
12:CM:104:ASN:H	12:CM:106:ARG:NH2	1.97	0.58
21:CN:81:ILE:HD12	21:CN:82:LYS:H	1.67	0.58
18:CB:62:ARG:HD2	18:CB:62:ARG:H	1.68	0.58
18:CB:83:ALA:HB3	18:CB:90:PHE:HB3	1.85	0.58
23:DB:20:C:H2’	23:DB:21:A:C8	2.38	0.58
23:DB:1092:C:H2’	23:DB:1093:G:H5’	1.85	0.58
23:DB:1149:G:H2’	23:DB:1150:C:H6	1.68	0.58
23:DB:1868:C:H2’	23:DB:1869:G:O4’	2.04	0.58
23:DB:2284:A:OP2	33:D1:5:ARG:HG3	2.02	0.58
23:DB:2598:A:OP1	25:DC:233:GLY:HA2	2.03	0.58
27:DK:38:ILE:H	27:DK:38:ILE:CD1	2.14	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DH:5:LEU:HD13	40:DH:13:GLY:N	2.18	0.58
44:DQ:40:LYS:HD2	44:DQ:44:TYR:CE1	2.38	0.58
44:DQ:101:ASP:OD1	44:DQ:104:ALA:HB2	2.02	0.58
50:DT:16:VAL:H	50:DT:31:VAL:HG23	1.67	0.58
50:DT:62:VAL:HB	50:DT:64:LYS:HZ1	1.69	0.58
52:DW:18:LYS:HG3	52:DW:19:ARG:CZ	2.33	0.58
52:DW:39:GLN:NE2	52:DW:43:LYS:HB2	2.18	0.58
3:AD:48:SER:O	3:AD:52:VAL:HG23	2.03	0.58
6:AG:70:PRO:HA	6:AG:141:HIS:CE1	2.37	0.58
8:AI:98:ARG:C	8:AI:100:ALA:H	2.11	0.58
12:AM:3:ILE:HG12	12:AM:56:ARG:NH1	2.18	0.58
18:AB:107:ARG:NH2	18:AB:111:LYS:HD3	2.17	0.58
23:BB:279:A:N6	23:BB:361:G:H1’	2.18	0.58
23:BB:654:A:H2’	23:BB:655:A:H5”	1.86	0.58
23:BB:848:C:H2’	23:BB:849:A:C8	2.38	0.58
23:BB:1021:A:H61	23:BB:1142:A:N6	2.01	0.58
23:BB:1041:G:H2’	23:BB:1042:G:C8	2.38	0.58
23:BB:1097:U:H2’	23:BB:1098:A:H5’	1.85	0.58
23:BB:1548:A:H2’	23:BB:1549:A:H8	1.67	0.58
25:BC:124:LYS:HE2	25:BC:127:ASN:ND2	2.18	0.58
35:BV:70:ILE:HD13	35:BV:70:ILE:N	2.18	0.58
40:BH:42:LYS:O	40:BH:46:PHE:HB3	2.03	0.58
51:BZ:70:GLU:HA	51:BZ:73:ALA:HB3	1.85	0.58
1:CA:231:U:H2’	1:CA:232:G:H8	1.66	0.58
1:CA:328:C:H4’	1:CA:329:A:C5’	2.33	0.58
1:CA:628:G:H2’	1:CA:629:A:H8	1.68	0.58
1:CA:1396:A:H4’	1:CA:1397:C:H5’	1.83	0.58
4:CE:18:ASN:HB2	4:CE:33:THR:OG1	2.03	0.58
10:CK:88:PRO:HA	10:CK:92:ARG:HD2	1.84	0.58
11:CL:107:LYS:C	11:CL:109:ARG:H	2.11	0.58
13:CP:20:VAL:HG23	13:CP:35:ARG:HA	1.85	0.58
15:CR:68:PRO:HB2	15:CR:70:THR:O	2.03	0.58
19:CU:36:PHE:CB	19:CU:40:PRO:HD3	2.28	0.58
23:DB:34:U:OP2	23:DB:34:U:H4’	2.03	0.58
23:DB:1681:G:N3	23:DB:1762:A:H2’	2.17	0.58
23:DB:2821:A:OP1	26:DD:115:GLY:HA3	2.03	0.58
24:DI:123:ALA:HA	24:DI:126:ARG:HH12	1.67	0.58
27:DK:7:MET:SD	27:DK:20:MET:HB2	2.42	0.58
38:DM:108:VAL:HG21	38:DM:112:LEU:HD12	1.85	0.58
39:DX:8:GLU:HB2	39:DX:13:GLU:OE1	2.02	0.58
40:DH:49:ALA:O	40:DH:53:GLU:HB2	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:46:LYS:HZ2	46:DU:47:PRO:HD2	1.67	0.58
1:AA:135:C:C2	13:AP:1:MET:HB2	2.38	0.58
1:AA:675:A:H2'	1:AA:676:A:H8	1.68	0.58
1:AA:784:A:H2'	1:AA:785:G:H8	1.68	0.58
1:AA:845:A:N3	1:AA:845:A:H2'	2.18	0.58
1:AA:1226:C:C4	12:AM:102:LYS:HB3	2.38	0.58
1:AA:1229:A:H2'	1:AA:1230:C:H6	1.68	0.58
3:AD:32:LYS:O	3:AD:35:GLN:HB2	2.04	0.58
10:AK:88:PRO:HD3	19:AU:28:LEU:HD11	1.83	0.58
16:AS:39:ILE:HB	16:AS:65:MET:O	2.04	0.58
18:AB:98:GLY:C	18:AB:100:LEU:H	2.11	0.58
20:AO:84:ARG:C	20:AO:85:LEU:HD12	2.28	0.58
23:BB:519:U:H2'	23:BB:520:G:C8	2.38	0.58
23:BB:675:A:H4'	29:BE:62:GLN:HE22	1.68	0.58
23:BB:1475:G:H4'	23:BB:1476:U:O5'	2.02	0.58
23:BB:1692:U:H2'	23:BB:1694:C:C5	2.38	0.58
23:BB:1790:C:O2'	25:BC:207:ALA:HB2	2.02	0.58
26:BD:106:LYS:O	26:BD:107:VAL:HB	2.03	0.58
28:BP:31:VAL:HG12	28:BP:38:ARG:O	2.04	0.58
37:BL:73:ILE:HD12	37:BL:106:GLU:HB2	1.84	0.58
38:BM:50:ARG:O	38:BM:53:MET:HB3	2.03	0.58
42:BN:34:ILE:O	42:BN:112:TYR:HA	2.04	0.58
43:BO:88:LYS:HG2	43:BO:116:GLN:HE22	1.67	0.58
44:BQ:90:ASP:H	49:BR:39:LEU:CD1	2.16	0.58
48:BG:26:LYS:HA	48:BG:32:LEU:N	2.18	0.58
48:BG:148:ARG:HD3	48:BG:152:ARG:NH1	2.18	0.58
50:BT:2:ILE:HG12	50:BT:3:ARG:HD3	1.85	0.58
1:CA:468:A:H3'	1:CA:469:C:C6	2.38	0.58
1:CA:956:U:O2'	1:CA:957:U:H5'	2.03	0.58
1:CA:1213:A:O2'	1:CA:1214:C:H5"	2.04	0.58
1:CA:1273:C:H2'	1:CA:1274:A:O4'	2.02	0.58
3:CD:32:LYS:O	3:CD:35:GLN:HB2	2.04	0.58
3:CD:96:ARG:NH1	3:CD:133:SER:HA	2.18	0.58
7:CH:31:LEU:HG	7:CH:35:ILE:HD11	1.84	0.58
6:CG:145:GLU:HA	6:CG:148:LYS:CB	2.32	0.58
21:CN:56:PRO:HG2	21:CN:57:SER:H	1.68	0.58
18:CB:187:ASP:HB3	18:CB:201:GLY:O	2.03	0.58
23:DB:635:C:O2'	23:DB:639:U:H5"	2.03	0.58
23:DB:759:G:H2'	23:DB:760:G:C8	2.38	0.58
23:DB:1347:A:H2'	23:DB:1348:C:O4'	2.04	0.58
23:DB:1656:C:H2'	23:DB:1657:U:H6	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DI:32:VAL:HG22	24:DI:60:VAL:HG21	1.86	0.58
27:DK:108:ARG:HH12	28:DP:34:GLY:HA2	1.68	0.58
28:DP:13:LYS:HD2	28:DP:76:HIS:HA	1.84	0.58
41:DJ:96:ARG:O	41:DJ:99:ARG:HG3	2.02	0.58
1:AA:543:U:H2'	1:AA:544:G:C8	2.39	0.58
1:AA:806:C:H2'	1:AA:807:A:C8	2.38	0.58
1:AA:865:A:H2'	1:AA:866:C:C6	2.38	0.58
1:AA:921:U:O2	4:AE:23:THR:HG23	2.03	0.58
2:AC:10:ARG:NE	2:AC:181:ILE:HD13	2.19	0.58
3:AD:54:LEU:HA	3:AD:202:LEU:HD22	1.85	0.58
5:AF:66:ALA:HB1	5:AF:67:PRO:HD2	1.85	0.58
6:AG:149:ALA:H	10:AK:55:ARG:NH2	2.02	0.58
22:BA:32:U:C4'	22:BA:52:A:H62	2.13	0.58
22:BA:54:G:N2	47:BF:25:MET:HE3	2.17	0.58
22:BA:75:G:H2'	22:BA:76:G:H8	1.67	0.58
23:BB:1082:U:C2	23:BB:1086:A:C6	2.91	0.58
27:BK:40:LYS:NZ	27:BK:59:LYS:HE3	2.19	0.58
38:BM:61:GLY:HA2	38:BM:107:GLY:HA3	1.85	0.58
40:BH:90:LEU:HD21	40:BH:146:VAL:HG11	1.84	0.58
48:BG:95:ALA:HB2	48:BG:130:ILE:HD11	1.85	0.58
1:CA:449:G:H2'	1:CA:450:G:H8	1.67	0.58
1:CA:738:C:H2'	1:CA:739:C:C6	2.37	0.58
1:CA:820:U:H4'	1:CA:821:G:OP2	2.04	0.58
1:CA:865:A:H2	1:CA:918:A:H4'	1.69	0.58
1:CA:1342:C:H2'	1:CA:1343:G:H8	1.69	0.58
1:CA:1370:G:O2'	1:CA:1371:G:H5'	2.04	0.58
4:CE:95:MET:HA	4:CE:124:ALA:HB2	1.84	0.58
4:CE:136:VAL:HG13	4:CE:137:ARG:H	1.69	0.58
23:DB:851:C:H2'	23:DB:852:U:H6	1.68	0.58
23:DB:1026:G:H2'	23:DB:1027:A:H8	1.68	0.58
23:DB:1584:U:O2	23:DB:1584:U:H2'	2.04	0.58
23:DB:2196:C:O2'	23:DB:2197:U:H5'	2.04	0.58
26:DD:97:SER:HB3	26:DD:99:GLU:HG3	1.85	0.58
35:DV:80:HIS:CD2	35:DV:83:LYS:H	2.22	0.58
40:DH:53:GLU:C	40:DH:55:GLU:H	2.12	0.58
41:DJ:72:LYS:HB2	41:DJ:89:PHE:HB2	1.85	0.58
47:DF:177:ARG:HA	47:DF:177:ARG:CZ	2.33	0.58
1:AA:239:U:H6	1:AA:239:U:C5'	2.17	0.58
1:AA:304:U:H2'	1:AA:305:G:C8	2.38	0.58
1:AA:436:C:O2'	1:AA:437:U:H5'	2.04	0.58
1:AA:707:U:H4'	10:AK:21:HIS:CD2	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:820:U:H4'	1:AA:821:G:OP2	2.04	0.58
1:AA:948:C:O2'	1:AA:949:A:H5'	2.04	0.58
1:AA:1200:C:O5'	1:AA:1201:A:H3'	2.04	0.58
6:AG:15:PRO:HG2	6:AG:43:TYR:OH	2.04	0.58
6:AG:50:ALA:O	6:AG:54:GLY:N	2.37	0.58
7:AH:81:GLY:O	14:AQ:35:LYS:HD3	2.02	0.58
9:AJ:82:LYS:O	9:AJ:86:ALA:HB2	2.04	0.58
17:AT:47:GLN:HG2	17:AT:82:ILE:HD13	1.84	0.58
17:AT:53:MET:HA	17:AT:56:ILE:HD12	1.85	0.58
17:AT:70:LYS:O	17:AT:73:ARG:HG2	2.03	0.58
23:BB:1593:A:H2'	23:BB:1594:U:C6	2.38	0.58
25:BC:159:THR:O	25:BC:194:VAL:HG12	2.04	0.58
26:BD:4:LEU:HD23	26:BD:101:PHE:CE1	2.39	0.58
26:BD:159:LYS:HZ3	26:BD:159:LYS:HA	1.68	0.58
27:BK:99:ILE:HD13	27:BK:118:LEU:HD22	1.85	0.58
31:B0:53:VAL:HG12	42:BN:118:ARG:HH12	1.68	0.58
32:B4:22:VAL:O	32:B4:24:ARG:HG3	2.03	0.58
37:BL:93:ASN:O	37:BL:95:LEU:N	2.36	0.58
38:BM:69:PRO:HB2	38:BM:92:TRP:HB3	1.85	0.58
48:BG:62:ALA:O	48:BG:66:THR:HG22	2.03	0.58
50:BT:39:THR:HG22	50:BT:42:GLU:HG2	1.86	0.58
52:BW:41:GLY:HA2	52:BW:44:PHE:CD2	2.38	0.58
1:CA:106:C:H2'	1:CA:107:G:O4'	2.04	0.58
1:CA:1027:C:H2'	1:CA:1028:C:H6	1.69	0.58
5:CF:6:ILE:HD12	5:CF:7:VAL:N	2.18	0.58
5:CF:86:ARG:CZ	15:CR:63:TYR:HB3	2.34	0.58
10:CK:124:LYS:O	19:CU:33:ARG:NE	2.36	0.58
2:CC:46:LEU:HB3	2:CC:49:ALA:HB3	1.86	0.58
12:CM:15:VAL:HG23	12:CM:16:ILE:H	1.69	0.58
12:CM:17:ALA:HB2	12:CM:44:ILE:HD11	1.86	0.58
18:CB:16:GLY:HA2	18:CB:40:ILE:HD12	1.85	0.58
18:CB:33:ALA:HB2	18:CB:38:HIS:HA	1.85	0.58
18:CB:132:GLU:HA	18:CB:135:MET:HE2	1.86	0.58
20:CO:45:GLU:O	20:CO:47:LYS:N	2.37	0.58
20:CO:47:LYS:C	20:CO:49:ASP:H	2.11	0.58
23:DB:479:A:N3	23:DB:481:G:H5"	2.17	0.58
23:DB:974:G:H1'	23:DB:975:A:H8	1.69	0.58
23:DB:1041:G:H2'	23:DB:1042:G:H8	1.67	0.58
23:DB:1647:U:H3'	23:DB:1647:U:P	2.43	0.58
23:DB:1683:U:H2'	23:DB:1684:G:H8	1.69	0.58
23:DB:1725:U:H2'	23:DB:1726:C:H6	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1794:A:H2'	23:DB:1795:C:H6	1.68	0.58
26:DD:3:GLY:C	26:DD:4:LEU:HD22	2.29	0.58
27:DK:109:SER:HB2	27:DK:111:LYS:HE2	1.84	0.58
29:DE:149:ILE:O	29:DE:188:MET:HA	2.04	0.58
39:DX:14:LEU:CD2	39:DX:57:LEU:HD21	2.34	0.58
40:DH:2:GLN:HB3	40:DH:18:GLN:CG	2.34	0.58
42:DN:57:THR:HG22	42:DN:58:ASP:H	1.69	0.58
50:DT:14:PRO:HA	50:DT:32:LEU:HB2	1.84	0.58
1:AA:501:C:H2'	1:AA:502:A:C8	2.38	0.58
2:AC:104:GLU:O	2:AC:105:VAL:HG13	2.04	0.58
5:AF:17:GLN:O	5:AF:21:MET:HG3	2.04	0.58
12:AM:2:ARG:HG3	12:AM:6:ILE:N	2.18	0.58
23:BB:806:C:O2'	23:BB:807:U:H5'	2.04	0.58
23:BB:1013:C:H2'	23:BB:1014:A:H8	1.69	0.58
24:BI:27:LEU:H	24:BI:27:LEU:CD2	2.15	0.58
26:BD:117:GLY:HA2	26:BD:164:GLN:NE2	2.19	0.58
40:BH:94:ILE:HG22	40:BH:99:ILE:HG12	1.84	0.58
41:BJ:72:LYS:HB2	41:BJ:89:PHE:HB2	1.86	0.58
43:BO:58:ILE:O	43:BO:62:LEU:HG	2.03	0.58
1:CA:537:G:H5"	11:CL:109:ARG:NH1	2.18	0.58
1:CA:631:C:H3'	1:CA:632:U:H5'	1.85	0.58
1:CA:662:U:H2'	1:CA:663:A:H8	1.69	0.58
1:CA:840:C:C4	1:CA:842:U:H4'	2.39	0.58
17:CT:61:ALA:HA	17:CT:66:ILE:HB	1.85	0.58
2:CC:39:ARG:NE	2:CC:56:ILE:HD11	2.19	0.58
12:CM:17:ALA:CB	12:CM:44:ILE:HD11	2.34	0.58
12:CM:19:THR:C	12:CM:21:ILE:H	2.12	0.58
16:CS:21:ALA:HA	16:CS:24:SER:OG	2.03	0.58
16:CS:58:PRO:O	16:CS:59:VAL:HG13	2.04	0.58
23:DB:996:A:O3'	44:DQ:91:ARG:HG2	2.04	0.58
23:DB:1061:U:O4'	23:DB:1070:A:H1'	2.03	0.58
23:DB:1220:G:H2'	23:DB:1221:C:H6	1.69	0.58
23:DB:2256:G:H2'	23:DB:2257:U:C6	2.38	0.58
26:DD:34:VAL:HB	26:DD:48:ILE:HD11	1.84	0.58
28:DP:13:LYS:HG2	28:DP:76:HIS:ND1	2.19	0.58
37:DL:4:ASN:ND2	37:DL:4:ASN:N	2.51	0.58
37:DL:73:ILE:HD12	37:DL:106:GLU:HB2	1.86	0.58
45:DS:68:ASP:C	45:DS:69:LEU:HD12	2.29	0.58
47:DF:34:THR:O	47:DF:89:THR:HA	2.04	0.58
52:DW:24:ARG:HD3	52:DW:65:LYS:HE3	1.85	0.58
1:AA:469:C:H2'	1:AA:470:C:H6	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:993:G:H2'	1:AA:993:G:N3	2.19	0.58
2:AC:111:ASP:O	2:AC:115:VAL:HG23	2.03	0.58
3:AD:90:LEU:HD21	3:AD:196:GLU:HB3	1.86	0.58
6:AG:53:SER:OG	6:AG:55:LYS:HG2	2.04	0.58
6:AG:78:ARG:NH1	6:AG:78:ARG:HB3	2.18	0.58
6:AG:149:ALA:HB3	10:AK:55:ARG:NH2	2.18	0.58
8:AI:22:PRO:HA	8:AI:60:LEU:HB2	1.86	0.58
23:BB:532:A:O2'	23:BB:2021:C:H5	1.87	0.58
23:BB:784:G:C6	25:BC:227:VAL:HG11	2.39	0.58
23:BB:901:C:H2'	23:BB:902:C:O4'	2.04	0.58
23:BB:1326:U:O2'	23:BB:1327:A:H5'	2.04	0.58
23:BB:1729:U:H5"	23:BB:1730:C:O2	2.03	0.58
23:BB:1819:A:OP1	25:BC:154:ALA:HA	2.03	0.58
23:BB:2078:C:O2'	23:BB:2079:U:H5'	2.02	0.58
23:BB:2598:A:OP1	25:BC:233:GLY:HA2	2.03	0.58
25:BC:145:MET:HE3	25:BC:153:LEU:HD21	1.85	0.58
26:BD:149:ASN:C	26:BD:152:PRO:HD2	2.29	0.58
41:BJ:29:ALA:HA	41:BJ:32:LEU:HB2	1.86	0.58
42:BN:87:PHE:HB3	42:BN:90:ARG:HB2	1.85	0.58
43:BO:72:ALA:HB2	43:BO:105:ALA:HB1	1.85	0.58
47:BF:2:LYS:H	47:BF:2:LYS:HE3	1.67	0.58
51:BZ:3:ARG:HG2	51:BZ:33:LEU:HD22	1.85	0.58
1:CA:1181:G:O2'	1:CA:1182:G:N7	2.36	0.58
23:DB:856:G:C1'	52:DW:23:LYS:HB3	2.33	0.58
23:DB:1458:U:H4'	23:DB:1459:G:O5'	2.04	0.58
23:DB:2671:G:H2'	23:DB:2672:U:H6	1.68	0.58
23:DB:2693:G:H2'	23:DB:2694:G:H8	1.69	0.58
23:DB:2788:C:H2'	23:DB:2789:C:C6	2.38	0.58
24:DI:2:LYS:C	24:DI:3:LYS:HD2	2.28	0.58
25:DC:132:ARG:HH22	25:DC:169:ALA:HA	1.68	0.58
26:DD:114:LYS:HD2	26:DD:116:LYS:NZ	2.18	0.58
35:DV:61:LEU:O	35:DV:71:LYS:HA	2.03	0.58
40:DH:50:ARG:C	40:DH:52:ALA:H	2.11	0.58
43:DO:111:ARG:HG2	43:DO:117:PHE:H	1.69	0.58
43:DO:115:LEU:C	43:DO:116:GLN:HE21	2.11	0.58
46:DU:86:PHE:HB3	46:DU:90:LYS:O	2.04	0.58
47:DF:97:GLU:O	47:DF:100:GLU:HB2	2.03	0.58
48:DG:83:THR:C	48:DG:84:LYS:HD3	2.29	0.58
52:DW:46:ALA:HB2	52:DW:78:PHE:HD1	1.68	0.58
52:DW:49:ASN:CB	52:DW:60:ALA:HA	2.33	0.58
1:AA:792:A:H1'	1:AA:794:A:N7	2.19	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:909:A:H2'	1:AA:910:C:O4'	2.04	0.58
2:AC:55:VAL:HG12	2:AC:56:ILE:H	1.66	0.58
2:AC:127:VAL:HA	2:AC:128:MET:HE3	1.85	0.58
8:AI:11:ARG:HA	8:AI:105:ARG:HE	1.69	0.58
12:AM:58:GLU:HA	12:AM:61:LYS:HE3	1.86	0.58
18:AB:22:TRP:HA	18:AB:189:ASN:HA	1.85	0.58
23:BB:160:A:H2'	23:BB:161:A:C8	2.39	0.58
23:BB:1115:G:H2'	23:BB:1116:G:H8	1.68	0.58
23:BB:1347:A:H2'	23:BB:1348:C:O4'	2.04	0.58
23:BB:1656:C:H2'	23:BB:1657:U:H6	1.68	0.58
27:BK:17:ARG:HB2	27:BK:45:GLU:HB3	1.85	0.58
29:BE:73:ILE:O	29:BE:73:ILE:HG12	2.04	0.58
31:B0:8:THR:HG23	31:B0:11:LYS:H	1.69	0.58
40:BH:2:GLN:HB3	40:BH:18:GLN:HG3	1.86	0.58
50:BT:59:ASN:O	50:BT:84:TYR:HB2	2.03	0.58
1:CA:1296:C:C4'	1:CA:1302:C:H41	2.17	0.58
7:CH:90:GLU:O	7:CH:91:LEU:C	2.46	0.58
11:CL:64:SER:OG	11:CL:96:THR:HG23	2.03	0.58
6:CG:62:GLU:O	6:CG:66:GLU:HG3	2.04	0.58
12:CM:104:ASN:N	12:CM:106:ARG:HH21	2.00	0.58
22:DA:11:C:H5'	52:DW:71:LYS:HE3	1.86	0.58
23:DB:132:G:H2'	23:DB:133:U:C6	2.38	0.58
23:DB:633:A:H8	23:DB:633:A:O5'	1.86	0.58
23:DB:801:G:H4'	23:DB:802:A:OP2	2.03	0.58
23:DB:988:A:P	30:DY:11:SER:HB3	2.44	0.58
23:DB:1099:G:C8	24:DI:3:LYS:CA	2.82	0.58
23:DB:1439:A:N7	23:DB:1440:U:C2	2.72	0.58
23:DB:1536:C:H4'	23:DB:1537:G:C4	2.39	0.58
23:DB:2087:G:H2'	23:DB:2088:A:H8	1.68	0.58
23:DB:2105:U:H2'	23:DB:2106:U:C6	2.39	0.58
23:DB:2229:U:H2'	23:DB:2230:G:C8	2.39	0.58
23:DB:2840:C:H2'	23:DB:2841:C:H6	1.67	0.58
26:DD:8:LYS:HG2	26:DD:197:THR:H	1.69	0.58
32:D4:27:CYS:SG	32:D4:29:ALA:HB3	2.43	0.58
34:D3:39:ARG:O	34:D3:43:LEU:HG	2.03	0.58
38:DM:42:THR:O	38:DM:44:ARG:N	2.37	0.58
41:DJ:58:ASN:N	41:DJ:127:GLY:HA2	2.19	0.58
1:AA:1288:A:H2'	1:AA:1289:A:C8	2.39	0.58
1:AA:1396:A:H4'	1:AA:1397:C:H5'	1.85	0.58
2:AC:87:ARG:C	2:AC:87:ARG:HE	2.11	0.58
2:AC:188:ALA:O	2:AC:194:VAL:HG13	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AJ:8:ILE:CD1	9:AJ:75:ASP:HA	2.33	0.58
13:AP:78:VAL:O	13:AP:80:LYS:N	2.37	0.58
23:BB:828:U:H4'	23:BB:831:G:N1	2.18	0.58
23:BB:2054:A:H2'	31:B0:4:GLN:OE1	2.04	0.58
23:BB:2312:U:H4'	47:BF:84:ILE:HG21	1.86	0.58
23:BB:2840:C:H2'	23:BB:2841:C:H6	1.69	0.58
23:BB:2898:U:H2'	23:BB:2899:A:H8	1.69	0.58
25:BC:90:ILE:HD13	25:BC:104:LEU:HA	1.85	0.58
25:BC:136:VAL:HG12	25:BC:137:GLY:N	2.19	0.58
29:BE:21:ARG:HG3	29:BE:22:ASP:N	2.17	0.58
37:BL:95:LEU:HB2	37:BL:101:ILE:HG13	1.85	0.58
41:BJ:57:LEU:HD23	41:BJ:128:ASN:HA	1.85	0.58
42:BN:2:ARG:HB3	42:BN:2:ARG:NH1	2.18	0.58
48:BG:84:LYS:CG	48:BG:131:VAL:HB	2.34	0.58
13:CP:7:ALA:O	13:CP:17:TYR:HA	2.04	0.58
17:CT:53:MET:HA	17:CT:56:ILE:HD12	1.85	0.58
18:CB:160:LEU:HB3	18:CB:181:PRO:O	2.04	0.58
23:DB:2615:U:H1'	31:D0:3:GLN:HB3	1.84	0.58
24:DI:99:LYS:HD3	24:DI:99:LYS:H	1.69	0.58
25:DC:152:GLN:C	25:DC:153:LEU:HD23	2.28	0.58
36:D2:19:ARG:NH2	36:D2:19:ARG:HB3	2.19	0.58
38:DM:42:THR:H	38:DM:45:GLN:CD	2.12	0.58
46:DU:3:LYS:HA	46:DU:82:VAL:HG11	1.85	0.58
47:DF:102:LEU:HD22	47:DF:106:ALA:CB	2.34	0.58
48:DG:30:GLY:O	48:DG:78:VAL:HG12	2.04	0.58
48:DG:84:LYS:CG	48:DG:131:VAL:HB	2.34	0.58
49:DR:29:THR:O	49:DR:63:VAL:HG23	2.04	0.58
1:AA:105:G:H2'	1:AA:106:C:C6	2.39	0.57
1:AA:237:G:H5"	14:AQ:26:ARG:HH21	1.69	0.57
1:AA:738:C:H2'	1:AA:739:C:C6	2.39	0.57
1:AA:1006:G:H2'	1:AA:1006:G:N3	2.18	0.57
3:AD:32:LYS:HA	3:AD:35:GLN:HE21	1.69	0.57
3:AD:78:ALA:HA	3:AD:81:LEU:HD12	1.86	0.57
3:AD:148:ALA:C	3:AD:150:LYS:H	2.12	0.57
6:AG:97:ALA:HA	6:AG:100:MET:HE3	1.86	0.57
9:AJ:102:LEU:H	9:AJ:102:LEU:HD12	1.68	0.57
12:AM:28:ARG:HH22	12:AM:61:LYS:HB2	1.69	0.57
16:AS:39:ILE:HD11	16:AS:73:PHE:CE1	2.38	0.57
18:AB:131:LYS:NZ	18:AB:131:LYS:HB3	2.18	0.57
23:BB:38:A:N3	29:BE:43:THR:HB	2.18	0.57
23:BB:392:U:O2'	23:BB:393:C:H5'	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1170:C:H2'	23:BB:1171:G:C8	2.39	0.57
23:BB:1794:A:H2'	23:BB:1795:C:C6	2.39	0.57
23:BB:1831:G:O2'	23:BB:1832:C:H5'	2.04	0.57
23:BB:2262:U:H2'	23:BB:2263:C:H6	1.69	0.57
25:BC:121:ALA:HB3	25:BC:129:LEU:HD21	1.86	0.57
26:BD:38:LYS:HD3	26:BD:45:TYR:OH	2.04	0.57
29:BE:58:LYS:HE2	29:BE:60:TRP:CD1	2.32	0.57
38:BM:71:LYS:HB3	38:BM:93:VAL:HG12	1.86	0.57
40:BH:5:LEU:HB3	40:BH:13:GLY:HA2	1.85	0.57
50:BT:57:VAL:HG22	50:BT:58:VAL:N	2.13	0.57
1:CA:409:U:H2'	1:CA:410:G:C8	2.39	0.57
7:CH:45:ILE:HA	7:CH:63:LYS:HB2	1.84	0.57
10:CK:75:GLU:CD	10:CK:75:GLU:N	2.62	0.57
14:CQ:46:HIS:HB2	14:CQ:70:LYS:HE2	1.86	0.57
18:CB:31:PHE:N	18:CB:41:ASN:HB2	2.19	0.57
23:DB:1251:C:H2'	44:DQ:5:ARG:NH1	2.19	0.57
23:DB:1846:G:O2'	23:DB:1847:A:H5'	2.04	0.57
23:DB:2187:U:H2'	23:DB:2188:U:H6	1.69	0.57
23:DB:2330:G:N3	52:DW:38:ARG:O	2.37	0.57
26:DD:34:VAL:HG12	26:DD:94:GLN:H	1.69	0.57
26:DD:38:LYS:HD3	26:DD:45:TYR:OH	2.04	0.57
27:DK:102:PRO:HA	27:DK:120:PRO:HB3	1.85	0.57
35:DV:72:VAL:CG1	35:DV:93:ARG:HA	2.33	0.57
40:DH:39:ALA:C	40:DH:41:LYS:H	2.12	0.57
45:DS:74:ILE:HD12	45:DS:104:THR:O	2.03	0.57
47:DF:14:LYS:O	47:DF:18:GLU:HB2	2.04	0.57
50:DT:59:ASN:O	50:DT:84:TYR:HB2	2.03	0.57
51:DZ:70:GLU:HA	51:DZ:73:ALA:HB3	1.86	0.57
1:AA:85:U:O3'	1:AA:86:G:H4'	2.04	0.57
1:AA:235:C:H2'	1:AA:236:A:C8	2.40	0.57
1:AA:847:G:H2'	1:AA:848:C:C6	2.40	0.57
1:AA:1313:U:H3'	16:AS:5:LYS:HG2	1.85	0.57
1:AA:1364:U:O2'	1:AA:1365:G:H5'	2.05	0.57
4:AE:18:ASN:HB2	4:AE:33:THR:OG1	2.04	0.57
6:AG:29:LEU:HD13	6:AG:42:VAL:HG22	1.86	0.57
11:AL:113:ARG:HG2	11:AL:118:VAL:HB	1.86	0.57
14:AQ:16:MET:CB	14:AQ:19:SER:HB2	2.34	0.57
16:AS:10:ILE:HG21	16:AS:40:PHE:HZ	1.69	0.57
23:BB:38:A:O2'	29:BE:43:THR:HA	2.04	0.57
23:BB:616:A:H4'	29:BE:101:TYR:OH	2.04	0.57
23:BB:942:G:O2'	23:BB:943:A:H5'	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:955:U:P	38:BM:86:LYS:HZ3	2.27	0.57
23:BB:1166:G:H2'	23:BB:1167:C:H6	1.69	0.57
23:BB:1640:A:H2'	23:BB:1641:A:C8	2.39	0.57
23:BB:1846:G:O2'	23:BB:1847:A:H5'	2.04	0.57
23:BB:2019:A:H2	23:BB:2035:G:H22	1.52	0.57
23:BB:2031:A:H5'	23:BB:2031:A:H8	1.68	0.57
23:BB:2875:C:H2'	23:BB:2876:G:H8	1.69	0.57
26:BD:46:ARG:NH1	26:BD:86:GLU:H	2.02	0.57
26:BD:97:SER:HB3	26:BD:99:GLU:HG3	1.86	0.57
28:BP:24:THR:O	28:BP:25:VAL:HG22	2.04	0.57
36:B2:30:VAL:HA	36:B2:33:ARG:HD3	1.86	0.57
39:BX:12:GLU:HA	39:BX:15:ASN:HD21	1.69	0.57
39:BX:23:ARG:H	39:BX:26:PHE:HB3	1.68	0.57
44:BQ:94:LEU:O	44:BQ:97:ILE:HG23	2.03	0.57
45:BS:15:GLN:O	45:BS:19:LEU:HB2	2.04	0.57
1:CA:501:C:H2'	1:CA:502:A:H8	1.68	0.57
1:CA:1359:C:H3'	21:CN:74:ARG:HH22	1.68	0.57
1:CA:1458:G:H2'	1:CA:1459:G:H8	1.69	0.57
1:CA:1487:G:O2'	1:CA:1488:G:H5'	2.04	0.57
1:CA:1493:A:N3	1:CA:1493:A:C3'	2.67	0.57
4:CE:37:VAL:HA	4:CE:47:PHE:HA	1.86	0.57
2:CC:46:LEU:HD11	2:CC:75:VAL:HG13	1.85	0.57
18:CB:22:TRP:CG	18:CB:23:ASN:N	2.69	0.57
23:DB:300:A:H3'	46:DU:81:ARG:HH12	1.69	0.57
23:DB:516:C:O2'	23:DB:517:C:H5'	2.04	0.57
23:DB:725:G:H2'	23:DB:726:G:O4'	2.05	0.57
23:DB:1042:G:H2'	23:DB:1043:C:C6	2.40	0.57
23:DB:1351:C:H2'	23:DB:1352:U:O4'	2.04	0.57
23:DB:1983:G:H4'	23:DB:2606:C:H4'	1.85	0.57
25:DC:77:VAL:HG23	25:DC:112:GLY:H	1.65	0.57
25:DC:103:ILE:HG22	25:DC:105:ALA:H	1.69	0.57
26:DD:178:VAL:HG12	26:DD:179:ARG:HG3	1.87	0.57
33:D1:10:LEU:O	33:D1:19:PHE:HB2	2.03	0.57
35:DV:68:LYS:HD3	35:DV:68:LYS:H	1.69	0.57
48:DG:26:LYS:HA	48:DG:32:LEU:N	2.16	0.57
52:DW:41:GLY:HA2	52:DW:44:PHE:CD2	2.39	0.57
1:AA:33:A:H2'	1:AA:34:C:C6	2.39	0.57
1:AA:45:G:H2'	1:AA:46:G:H8	1.68	0.57
1:AA:279:A:C5'	1:AA:280:C:H3'	2.34	0.57
1:AA:843:U:H6	1:AA:843:U:H5"	1.68	0.57
1:AA:960:U:H1'	1:AA:1222:G:O2'	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:976:G:H22	1:AA:1362:A:H3'	1.68	0.57
1:AA:1013:G:H2'	1:AA:1015:G:OP2	2.03	0.57
1:AA:1129:C:H5"	8:AI:17:ARG:NH2	2.20	0.57
1:AA:1338:G:H2'	1:AA:1339:A:C8	2.38	0.57
8:AI:40:ARG:CA	8:AI:44:ARG:HD3	2.33	0.57
8:AI:114:LYS:H	8:AI:120:ALA:HA	1.68	0.57
12:AM:77:LYS:HA	12:AM:80:MET:HB3	1.86	0.57
14:AQ:75:VAL:HG23	14:AQ:76:ARG:H	1.68	0.57
23:BB:309:A:N3	23:BB:329:G:O2'	2.37	0.57
23:BB:813:U:H2'	23:BB:814:C:H6	1.69	0.57
23:BB:974:G:H1'	23:BB:975:A:H8	1.69	0.57
23:BB:1414:C:H2'	23:BB:1415:U:H6	1.69	0.57
23:BB:2063:C:O2	23:BB:2450:A:N1	2.37	0.57
23:BB:2400:G:O2'	23:BB:2401:U:H5'	2.04	0.57
26:BD:5:VAL:HG23	26:BD:32:ASN:HD21	1.69	0.57
27:BK:71:ARG:NE	27:BK:71:ARG:HA	2.19	0.57
29:BE:1:MET:HB3	29:BE:14:VAL:HG23	1.85	0.57
30:BY:7:THR:HG22	30:BY:8:GLN:N	2.18	0.57
36:B2:21:ARG:HD3	36:B2:30:VAL:HG11	1.85	0.57
41:BJ:98:GLU:HB3	41:BJ:124:VAL:HG21	1.85	0.57
47:BF:64:PRO:HA	47:BF:88:VAL:CG2	2.34	0.57
1:CA:1499:A:H2'	1:CA:1500:A:C8	2.35	0.57
3:CD:22:SER:N	3:CD:109:THR:HG22	2.12	0.57
3:CD:148:ALA:C	3:CD:150:LYS:H	2.10	0.57
2:CC:5:HIS:CD2	21:CN:88:MET:HB3	2.38	0.57
16:CS:1:PRO:O	16:CS:2:ARG:HB2	2.03	0.57
18:CB:61:SER:HB2	18:CB:62:ARG:HH11	1.68	0.57
22:DA:98:G:N1	35:DV:14:LYS:HB2	2.13	0.57
23:DB:82:U:H2'	23:DB:83:A:C8	2.39	0.57
23:DB:771:G:O2'	23:DB:772:C:H5'	2.04	0.57
23:DB:1080:A:H2'	23:DB:1081:U:C6	2.38	0.57
23:DB:1315:C:H2'	23:DB:1316:U:C6	2.40	0.57
23:DB:1353:A:H2'	23:DB:1354:A:C8	2.39	0.57
23:DB:1599:U:H2'	23:DB:1600:C:C6	2.39	0.57
23:DB:1656:C:H2'	23:DB:1657:U:C6	2.39	0.57
23:DB:1724:G:H2'	23:DB:1725:U:H6	1.69	0.57
23:DB:2849:U:H4'	23:DB:2850:A:H5'	1.86	0.57
23:DB:2861:U:H2'	23:DB:2862:G:C8	2.40	0.57
25:DC:262:THR:O	25:DC:263:ASP:C	2.47	0.57
26:DD:31:ALA:HA	26:DD:97:SER:HA	1.87	0.57
28:DP:8:GLU:HB3	28:DP:54:LEU:HB2	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DE:145:ASP:N	29:DE:166:LYS:HB3	2.18	0.57
29:DE:178:VAL:O	29:DE:181:ILE:HG22	2.04	0.57
42:DN:54:LEU:HD11	42:DN:62:ASN:HB3	1.85	0.57
48:DG:34:ARG:HH11	48:DG:34:ARG:H	1.51	0.57
48:DG:97:VAL:HB	48:DG:124:CYS:HB2	1.86	0.57
52:DW:9:THR:C	52:DW:10:ARG:HD3	2.29	0.57
1:AA:537:G:H5"	11:AL:109:ARG:NH1	2.20	0.57
1:AA:952:U:H2'	1:AA:953:G:C8	2.39	0.57
6:AG:14:ASP:HB3	6:AG:19:SER:N	2.12	0.57
13:AP:40:ASN:HD21	13:AP:43:ALA:N	2.03	0.57
19:AU:20:ARG:H	19:AU:20:ARG:HD2	1.69	0.57
20:AO:53:ARG:HD2	23:BB:715:A:N6	2.20	0.57
23:BB:39:G:H2'	23:BB:40:U:H6	1.68	0.57
23:BB:224:U:O4	23:BB:420:C:H5'	2.05	0.57
23:BB:551:G:H2'	23:BB:552:U:H6	1.69	0.57
23:BB:586:A:H5'	29:BE:84:THR:OG1	2.04	0.57
23:BB:1312:U:H3'	56:BB:3321:HOH:O	2.04	0.57
23:BB:1458:U:H4'	23:BB:1459:G:O5'	2.04	0.57
23:BB:2155:U:H2'	23:BB:2156:G:O4'	2.04	0.57
23:BB:2341:G:H2'	23:BB:2342:C:H6	1.69	0.57
27:BK:64:ARG:O	27:BK:82:ASN:HA	2.04	0.57
29:BE:48:THR:C	29:BE:50:ALA:H	2.10	0.57
48:BG:34:ARG:H	48:BG:34:ARG:HH11	1.52	0.57
1:CA:285:C:H2'	1:CA:286:C:H6	1.69	0.57
2:CC:13:ILE:HD13	2:CC:13:ILE:N	2.19	0.57
8:CI:93:LEU:HD13	8:CI:97:LEU:HD11	1.87	0.57
16:CS:15:LEU:HA	16:CS:18:VAL:CG1	2.35	0.57
18:CB:44:LYS:O	18:CB:47:PRO:HD2	2.05	0.57
23:DB:634:C:H2'	23:DB:635:C:C6	2.38	0.57
23:DB:970:U:H2'	23:DB:971:G:C8	2.40	0.57
23:DB:1050:A:H2'	23:DB:1051:G:O4'	2.04	0.57
23:DB:2085:U:O2'	23:DB:2086:U:H5'	2.04	0.57
24:DI:125:THR:O	24:DI:129:GLU:HG3	2.05	0.57
27:DK:85:VAL:HG21	27:DK:115:ILE:CD1	2.35	0.57
27:DK:87:LEU:HB2	27:DK:93:GLN:C	2.29	0.57
29:DE:48:THR:HG22	29:DE:86:ALA:HB3	1.86	0.57
43:DO:28:VAL:HG11	43:DO:92:PHE:CZ	2.39	0.57
47:DF:139:GLU:HG2	47:DF:140:ILE:H	1.68	0.57
52:DW:37:VAL:HB	52:DW:38:ARG:HD3	1.86	0.57
1:AA:279:A:H5'	1:AA:281:G:H5'	1.85	0.57
1:AA:1020:G:H2'	1:AA:1021:A:H5'	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1173:U:H2'	1:AA:1174:G:C8	2.39	0.57
1:AA:1315:U:H3'	1:AA:1316:G:C8	2.40	0.57
1:AA:1448:C:H2'	1:AA:1449:C:C6	2.40	0.57
2:AC:13:ILE:C	2:AC:15:LYS:H	2.12	0.57
2:AC:66:THR:HG23	2:AC:101:ASN:ND2	2.19	0.57
4:AE:81:GLN:H	4:AE:146:MET:CE	2.18	0.57
9:AJ:6:ILE:HD12	9:AJ:76:ILE:HG13	1.87	0.57
13:AP:7:ALA:O	13:AP:17:TYR:HA	2.04	0.57
16:AS:27:LYS:HB3	16:AS:27:LYS:HZ2	1.67	0.57
17:AT:47:GLN:HE21	17:AT:82:ILE:HD11	1.70	0.57
18:AB:67:LEU:HD22	18:AB:89:PHE:O	2.03	0.57
18:AB:68:PHE:CE1	18:AB:88:GLN:HB3	2.39	0.57
23:BB:34:U:OP2	23:BB:34:U:H4'	2.05	0.57
23:BB:41:C:H2'	23:BB:42:A:O4'	2.04	0.57
23:BB:102:U:C4	39:BX:2:LYS:HD3	2.40	0.57
23:BB:419:U:H2'	23:BB:420:C:C6	2.39	0.57
23:BB:516:C:O2'	23:BB:517:C:H5'	2.03	0.57
23:BB:617:G:H5"	29:BE:102:ARG:HH11	1.70	0.57
23:BB:1082:U:O4	23:BB:1086:A:C2	2.57	0.57
23:BB:1687:G:O2'	23:BB:1688:U:H5'	2.04	0.57
23:BB:1999:C:H5"	23:BB:2723:C:O2'	2.03	0.57
23:BB:2134:A:H62	23:BB:2157:G:N2	1.94	0.57
23:BB:2828:G:O2'	23:BB:2829:A:H5'	2.05	0.57
27:BK:40:LYS:HZ3	27:BK:59:LYS:HE3	1.70	0.57
38:BM:21:ALA:HB1	38:BM:100:LYS:HE2	1.86	0.57
39:BX:14:LEU:HD22	39:BX:57:LEU:HD21	1.85	0.57
40:BH:80:ILE:HD12	40:BH:98:ASP:O	2.04	0.57
46:BU:3:LYS:HA	46:BU:82:VAL:HG11	1.85	0.57
47:BF:22:ASN:H	47:BF:22:ASN:HD22	1.52	0.57
47:BF:134:GLN:NE2	47:BF:136:ILE:HD13	2.19	0.57
1:CA:33:A:H2'	1:CA:34:C:C6	2.39	0.57
1:CA:335:C:H2'	1:CA:336:A:C8	2.39	0.57
4:CE:131:ASN:HD21	4:CE:133:ILE:HB	1.69	0.57
2:CC:20:THR:HG23	2:CC:57:GLU:HG2	1.85	0.57
2:CC:50:SER:HB2	2:CC:70:ALA:HB3	1.86	0.57
6:CG:42:VAL:O	6:CG:46:LEU:HB2	2.05	0.57
8:CI:54:VAL:HG11	8:CI:86:LEU:CD2	2.34	0.57
12:CM:43:LYS:H	12:CM:43:LYS:HD2	1.69	0.57
18:CB:107:ARG:HG3	18:CB:108:GLN:HE21	1.69	0.57
18:CB:113:LEU:HD23	18:CB:114:LYS:N	2.20	0.57
22:DA:75:G:H1	22:DA:102:G:N2	2.02	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:286:U:H2'	23:DB:287:G:H8	1.69	0.57
23:DB:302:C:H2'	23:DB:303:G:H8	1.69	0.57
23:DB:802:A:H2'	23:DB:803:U:C6	2.39	0.57
23:DB:832:U:H2'	23:DB:833:A:H8	1.65	0.57
23:DB:1319:C:O2'	23:DB:1320:C:H5'	2.04	0.57
23:DB:2662:A:H2'	23:DB:2663:G:O4'	2.03	0.57
24:DI:121:ILE:H	24:DI:121:ILE:CD1	2.14	0.57
25:DC:92:LEU:HD12	25:DC:93:VAL:N	2.18	0.57
26:DD:33:ARG:HH11	26:DD:51:THR:HG22	1.68	0.57
27:DK:2:ILE:HD12	27:DK:2:ILE:N	2.20	0.57
27:DK:41:ILE:HG13	27:DK:42:THR:H	1.69	0.57
29:DE:148:ILE:HA	29:DE:187:VAL:HB	1.86	0.57
40:DH:125:THR:HA	40:DH:146:VAL:CB	2.28	0.57
43:DO:88:LYS:HG2	43:DO:116:GLN:HE22	1.68	0.57
44:DQ:111:LYS:HE2	49:DR:50:GLY:HA3	1.86	0.57
1:AA:1050:G:O2'	1:AA:1051:C:H5'	2.05	0.57
1:AA:1195:C:H2'	1:AA:1197:A:O4'	2.05	0.57
1:AA:1343:G:H2'	1:AA:1344:C:H6	1.69	0.57
1:AA:1372:U:H2'	1:AA:1373:G:O4'	2.04	0.57
2:AC:101:ASN:OD1	2:AC:101:ASN:N	2.37	0.57
5:AF:71:ILE:O	5:AF:75:GLU:HG3	2.03	0.57
8:AI:19:PHE:HB2	8:AI:63:TYR:CB	2.33	0.57
12:AM:84:CYS:HA	16:AS:72:GLU:O	2.04	0.57
18:AB:114:LYS:O	18:AB:118:THR:HG23	2.04	0.57
23:BB:743:A:OP1	26:BD:135:GLY:HA2	2.04	0.57
23:BB:771:G:O2'	23:BB:772:C:H5'	2.04	0.57
23:BB:876:C:O4'	23:BB:876:C:O2	2.21	0.57
23:BB:1026:G:H2'	23:BB:1027:A:H8	1.69	0.57
23:BB:1046:A:H3'	23:BB:1047:G:H5"	1.85	0.57
23:BB:1537:G:H3'	23:BB:1537:G:N3	2.19	0.57
23:BB:1656:C:H2'	23:BB:1657:U:C6	2.39	0.57
23:BB:1725:U:H2'	23:BB:1726:C:H6	1.69	0.57
23:BB:2469:A:H4'	38:BM:55:ARG:CZ	2.35	0.57
23:BB:2555:U:H2'	23:BB:2556:C:O4'	2.05	0.57
23:BB:2875:C:H2'	23:BB:2876:G:C8	2.40	0.57
27:BK:24:VAL:HG13	27:BK:33:ALA:HB2	1.86	0.57
27:BK:87:LEU:HB2	27:BK:93:GLN:C	2.29	0.57
38:BM:4:PRO:HG2	38:BM:70:ASP:HA	1.86	0.57
38:BM:63:ILE:H	38:BM:63:ILE:HD12	1.69	0.57
44:BQ:40:LYS:HD2	44:BQ:44:TYR:CE1	2.39	0.57
45:BS:18:ARG:HB3	45:BS:76:VAL:HG22	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BR:62:GLU:O	49:BR:96:VAL:HA	2.03	0.57
50:BT:8:LEU:C	50:BT:9:LYS:HE2	2.29	0.57
51:BZ:68:LEU:O	51:BZ:72:ARG:HG2	2.04	0.57
1:CA:1081:A:O2'	1:CA:1082:A:H5'	2.04	0.57
1:CA:1396:A:C3'	1:CA:1397:C:H5'	2.34	0.57
1:CA:1508:A:H2'	1:CA:1509:C:C6	2.40	0.57
13:CP:48:GLU:CD	13:CP:49:GLY:H	2.13	0.57
2:CC:112:ALA:HA	2:CC:201:ILE:HD11	1.86	0.57
2:CC:155:ARG:N	2:CC:162:ALA:HA	2.11	0.57
23:DB:93:G:H2'	23:DB:94:A:C8	2.40	0.57
23:DB:322:A:C5'	23:DB:340:A:H1'	2.21	0.57
23:DB:1021:A:H2'	23:DB:1023:U:H5"	1.86	0.57
23:DB:2216:G:H2'	23:DB:2217:G:C8	2.38	0.57
23:DB:2730:C:H2'	23:DB:2731:G:H8	1.70	0.57
26:DD:106:LYS:O	26:DD:107:VAL:HB	2.03	0.57
26:DD:116:LYS:HB3	26:DD:118:PHE:CE1	2.40	0.57
28:DP:4:ILE:HG22	28:DP:5:LYS:N	2.17	0.57
35:DV:40:ILE:HD13	35:DV:40:ILE:N	2.19	0.57
39:DX:48:ARG:O	39:DX:51:ALA:HB3	2.04	0.57
41:DJ:1:MET:HG2	41:DJ:2:LYS:HG2	1.87	0.57
42:DN:33:ILE:HA	42:DN:114:GLU:HB2	1.84	0.57
52:DW:35:ILE:HG13	52:DW:57:THR:OG1	2.05	0.57
1:AA:335:C:H2'	1:AA:336:A:H8	1.69	0.57
1:AA:449:G:H2'	1:AA:450:G:H8	1.68	0.57
1:AA:557:G:H2'	1:AA:558:G:O4'	2.03	0.57
1:AA:1187:G:H21	21:AN:99:SER:CB	2.15	0.57
1:AA:1432:G:H1'	1:AA:1468:A:N6	2.19	0.57
1:AA:1492:A:C8	1:AA:1493:A:H1'	2.39	0.57
8:AI:56:MET:C	8:AI:58:GLU:H	2.12	0.57
8:AI:105:ARG:NH1	8:AI:107:ALA:HA	2.19	0.57
15:AR:68:PRO:HB2	15:AR:70:THR:O	2.04	0.57
19:AU:36:PHE:HA	19:AU:39:LYS:HD2	1.85	0.57
20:AO:36:ILE:C	20:AO:38:HIS:H	2.12	0.57
20:AO:60:VAL:HG11	23:BB:715:A:H5'	1.86	0.57
23:BB:705:A:H2'	23:BB:706:A:H8	1.68	0.57
27:BK:107:LEU:HD12	27:BK:107:LEU:N	2.18	0.57
29:BE:143:LEU:HB3	29:BE:146:VAL:HG21	1.85	0.57
38:BM:42:THR:O	38:BM:44:ARG:N	2.37	0.57
40:BH:115:VAL:HB	40:BH:130:VAL:CG1	2.30	0.57
48:BG:118:ALA:C	48:BG:120:ILE:H	2.13	0.57
51:BZ:32:ASN:HB2	51:BZ:53:ALA:H	1.68	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:105:G:H2'	1:CA:106:C:C6	2.40	0.57
1:CA:796:C:O2'	1:CA:797:C:H5'	2.04	0.57
1:CA:1240:U:OP1	6:CG:115:MET:HB2	2.05	0.57
3:CD:54:LEU:HA	3:CD:202:LEU:HD22	1.86	0.57
3:CD:56:GLU:O	3:CD:60:VAL:HG12	2.05	0.57
4:CE:136:VAL:HG13	4:CE:137:ARG:N	2.20	0.57
17:CT:48:LYS:HG3	17:CT:49:ALA:N	2.19	0.57
18:CB:46:VAL:HA	18:CB:49:PHE:CD2	2.39	0.57
23:DB:101:A:H4'	23:DB:101:A:OP1	2.05	0.57
23:DB:901:C:H2'	23:DB:902:C:O4'	2.04	0.57
23:DB:997:G:O2'	23:DB:998:C:H5'	2.05	0.57
23:DB:1082:U:O4	23:DB:1086:A:C2	2.57	0.57
23:DB:1727:C:H2'	23:DB:1728:C:C6	2.40	0.57
23:DB:1874:C:H2'	23:DB:1875:G:O4'	2.04	0.57
23:DB:2438:U:O2'	23:DB:2439:A:H5"	2.04	0.57
23:DB:2462:C:H2'	23:DB:2463:C:C6	2.40	0.57
33:D1:36:LYS:HB2	33:D1:47:ILE:HA	1.87	0.57
38:DM:69:PRO:HB2	38:DM:92:TRP:HB3	1.86	0.57
41:DJ:54:ILE:HD12	41:DJ:55:ILE:N	2.20	0.57
44:DQ:91:ARG:HB3	44:DQ:93:ILE:HG22	1.85	0.57
44:DQ:94:LEU:O	44:DQ:97:ILE:HG23	2.04	0.57
47:DF:22:ASN:H	47:DF:22:ASN:HD22	1.51	0.57
48:DG:148:ARG:CD	48:DG:152:ARG:HH11	2.14	0.57
51:DZ:68:LEU:O	51:DZ:72:ARG:HG2	2.04	0.57
1:AA:195:A:H2'	1:AA:196:A:C8	2.39	0.57
1:AA:598:U:H2'	1:AA:599:C:C6	2.39	0.57
1:AA:865:A:C2	1:AA:918:A:H4'	2.39	0.57
1:AA:1319:A:H4'	1:AA:1320:C:OP1	2.05	0.57
1:AA:1406:U:H2'	1:AA:1407:C:C5'	2.33	0.57
2:AC:91:ALA:HB2	2:AC:98:ALA:HB3	1.86	0.57
2:AC:149:LYS:O	2:AC:200:TRP:HE3	1.87	0.57
20:AO:37:ASN:HA	20:AO:40:GLN:HE22	1.70	0.57
23:BB:634:C:H2'	23:BB:635:C:C6	2.38	0.57
23:BB:742:A:H2'	23:BB:743:A:H8	1.70	0.57
23:BB:997:G:O2'	23:BB:998:C:H5'	2.05	0.57
23:BB:2324:U:H1'	23:BB:2337:G:H5'	1.85	0.57
23:BB:2769:U:H2'	23:BB:2770:G:H8	1.69	0.57
25:BC:262:THR:O	25:BC:263:ASP:C	2.48	0.57
26:BD:119:ALA:HB1	26:BD:163:GLY:N	2.20	0.57
28:BP:19:PHE:HB2	28:BP:50:ARG:HH12	1.69	0.57
47:BF:65:LEU:N	47:BF:88:VAL:HG22	2.20	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1142:G:C2	1:CA:1143:G:H1'	2.39	0.57
1:CA:1488:G:O2'	1:CA:1489:G:H5'	2.05	0.57
13:CP:28:ARG:HH11	13:CP:29:ASN:HD22	1.52	0.57
6:CG:109:LYS:HE2	6:CG:109:LYS:HA	1.87	0.57
12:CM:69:ARG:O	12:CM:70:ARG:C	2.48	0.57
18:CB:56:LEU:HB3	18:CB:220:VAL:CG2	2.35	0.57
23:DB:1150:C:H2'	23:DB:1151:A:H8	1.70	0.57
23:DB:1203:U:H3'	23:DB:1204:A:C5'	2.34	0.57
23:DB:1479:G:O2'	23:DB:1480:C:H5'	2.04	0.57
23:DB:1560:G:H2'	23:DB:1561:C:H6	1.68	0.57
23:DB:1571:A:H2'	23:DB:1572:A:C8	2.40	0.57
23:DB:1754:A:H2'	23:DB:1755:A:C8	2.40	0.57
23:DB:1999:C:H5"	23:DB:2723:C:O2'	2.05	0.57
23:DB:2324:U:H1'	23:DB:2337:G:H5'	1.87	0.57
23:DB:2547:A:H5'	23:DB:2566:A:C2	2.39	0.57
23:DB:2728:U:H2'	23:DB:2729:G:H8	1.68	0.57
23:DB:2852:G:H2'	23:DB:2853:C:C6	2.40	0.57
26:DD:55:LYS:HZ3	26:DD:56:LYS:CG	2.17	0.57
26:DD:117:GLY:HA2	26:DD:164:GLN:NE2	2.19	0.57
28:DP:60:VAL:O	28:DP:70:GLU:HA	2.05	0.57
31:D0:8:THR:HG23	31:D0:11:LYS:H	1.69	0.57
38:DM:4:PRO:HG2	38:DM:70:ASP:HA	1.87	0.57
42:DN:34:ILE:HG22	42:DN:35:LYS:N	2.19	0.57
49:DR:14:VAL:HG22	49:DR:15:SER:N	2.20	0.57
51:DZ:32:ASN:C	51:DZ:33:LEU:HD12	2.30	0.57
52:DW:49:ASN:C	52:DW:50:VAL:HG22	2.30	0.57
1:AA:205:A:H2'	1:AA:206:C:H6	1.70	0.57
2:AC:131:ARG:HB3	2:AC:135:ARG:CZ	2.35	0.57
6:AG:135:LYS:HD3	6:AG:135:LYS:C	2.29	0.57
12:AM:33:LEU:HB3	12:AM:38:ILE:O	2.05	0.57
18:AB:172:ILE:HG22	18:AB:176:ASN:HD21	1.70	0.57
19:AU:40:PRO:C	19:AU:42:THR:H	2.13	0.57
23:BB:8:C:O2'	23:BB:9:G:H5'	2.05	0.57
23:BB:84:A:OP1	46:BU:2:ALA:HB3	2.05	0.57
23:BB:919:U:H2'	23:BB:920:A:H8	1.69	0.57
23:BB:2438:U:O2'	23:BB:2439:A:H5"	2.04	0.57
26:BD:33:ARG:HD3	26:BD:74:GLU:OE1	2.05	0.57
26:BD:34:VAL:HB	26:BD:48:ILE:HD11	1.85	0.57
45:BS:68:ASP:C	45:BS:69:LEU:HD12	2.30	0.57
47:BF:14:LYS:O	47:BF:18:GLU:HB2	2.04	0.57
48:BG:51:PHE:CE2	48:BG:68:ARG:HA	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:39:TRP:HB2	51:BZ:46:PHE:CE2	2.40	0.57
1:CA:230:G:H5"	13:CP:31:ARG:NH2	2.20	0.57
5:CF:66:ALA:HB1	5:CF:67:PRO:HD2	1.87	0.57
11:CL:113:ARG:HG2	11:CL:118:VAL:HB	1.86	0.57
23:DB:639:U:H2'	23:DB:640:C:C6	2.39	0.57
23:DB:784:G:N1	25:DC:227:VAL:HG11	2.20	0.57
23:DB:814:C:O2'	23:DB:815:C:H5'	2.05	0.57
23:DB:1652:A:H62	42:DN:11:ASN:ND2	1.96	0.57
23:DB:2267:A:C8	23:DB:2267:A:C3'	2.77	0.57
26:DD:54:ALA:CA	26:DD:76:GLY:HA2	2.33	0.57
1:AA:631:C:H3'	1:AA:632:U:H5'	1.86	0.57
1:AA:1149:C:H2'	1:AA:1150:A:C8	2.39	0.57
1:AA:1382:C:H2'	1:AA:1383:C:C6	2.40	0.57
7:AH:95:MET:HB3	7:AH:99:GLY:H	1.68	0.57
20:AO:62:GLN:O	20:AO:66:LEU:HB2	2.05	0.57
20:AO:69:TYR:HA	20:AO:72:ARG:CZ	2.35	0.57
23:BB:18:U:H2'	23:BB:19:A:H8	1.69	0.57
23:BB:136:G:H2'	23:BB:137:U:C1'	2.35	0.57
23:BB:675:A:OP1	29:BE:60:TRP:NE1	2.38	0.57
23:BB:817:C:H2'	23:BB:818:G:O4'	2.05	0.57
23:BB:934:U:H2'	23:BB:935:C:C6	2.40	0.57
23:BB:1351:C:H2'	23:BB:1352:U:O4'	2.05	0.57
23:BB:1560:G:H2'	23:BB:1561:C:H6	1.68	0.57
23:BB:1584:U:H2'	23:BB:1584:U:O2	2.05	0.57
25:BC:146:LYS:HB2	25:BC:149:LYS:HB2	1.87	0.57
28:BP:31:VAL:O	28:BP:32:VAL:HB	2.03	0.57
28:BP:47:ILE:HD11	28:BP:59:THR:HG22	1.86	0.57
29:BE:200:LEU:O	29:BE:201:ALA:HB3	2.05	0.57
37:BL:110:VAL:HB	37:BL:127:VAL:HG23	1.85	0.57
39:BX:14:LEU:CD2	39:BX:57:LEU:HD21	2.35	0.57
46:BU:86:PHE:CG	46:BU:87:GLU:N	2.73	0.57
50:BT:32:LEU:O	50:BT:83:ALA:HB2	2.05	0.57
51:BZ:21:ALA:HB3	51:BZ:23:ASN:ND2	2.20	0.57
52:BW:46:ALA:HB2	52:BW:78:PHE:HD1	1.70	0.57
52:BW:49:ASN:O	52:BW:50:VAL:HG13	2.04	0.57
1:CA:205:A:H2'	1:CA:206:C:C6	2.39	0.57
1:CA:377:G:H2'	1:CA:378:G:H8	1.69	0.57
1:CA:499:A:H4'	1:CA:500:G:H5'	1.87	0.57
1:CA:624:C:H2'	1:CA:625:U:C6	2.40	0.57
1:CA:797:C:O2'	1:CA:798:U:H5'	2.04	0.57
1:CA:909:A:H2'	1:CA:910:C:O4'	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1308:U:OP2	12:CM:97:ARG:HD3	2.04	0.57
5:CF:73:GLU:O	5:CF:77:THR:HG23	2.05	0.57
10:CK:59:PRO:HB2	6:CG:149:ALA:HB1	1.86	0.57
19:CU:42:THR:O	19:CU:46:ARG:HG3	2.05	0.57
2:CC:119:ILE:O	2:CC:123:LEU:HG	2.05	0.57
2:CC:127:VAL:HA	2:CC:128:MET:HE3	1.87	0.57
8:CI:12:LYS:H	8:CI:105:ARG:HH12	1.53	0.57
12:CM:18:LEU:HD12	12:CM:29:SER:OG	2.05	0.57
20:CO:81:LEU:HD23	20:CO:82:ILE:N	2.20	0.57
23:DB:519:U:H2'	23:DB:520:G:C8	2.40	0.57
23:DB:584:C:OP2	44:DQ:5:ARG:HD3	2.05	0.57
23:DB:877:A:H61	23:DB:898:C:C2'	2.12	0.57
23:DB:1039:A:H2'	23:DB:1040:A:C8	2.40	0.57
23:DB:1199:U:H2'	23:DB:1200:C:C6	2.39	0.57
23:DB:1831:G:O2'	23:DB:1832:C:H5'	2.05	0.57
23:DB:2257:U:O2'	23:DB:2258:C:H5'	2.05	0.57
34:D3:22:LYS:HG3	34:D3:47:ALA:O	2.05	0.57
41:DJ:59:ALA:HB1	41:DJ:101:ILE:HD11	1.87	0.57
47:DF:87:LYS:CG	47:DF:88:VAL:H	2.18	0.57
50:DT:8:LEU:C	50:DT:9:LYS:HE2	2.29	0.57
1:AA:285:C:H2'	1:AA:286:C:H6	1.69	0.56
1:AA:332:G:O2'	1:AA:333:U:H5'	2.04	0.56
1:AA:711:G:O2'	1:AA:712:A:H5'	2.05	0.56
8:AI:87:MET:HB2	8:AI:94:ARG:HD3	1.87	0.56
9:AJ:40:ILE:H	9:AJ:74:VAL:H	1.51	0.56
23:BB:394:C:O2'	23:BB:395:U:H5'	2.05	0.56
23:BB:1897:G:O2'	23:BB:1898:U:H5'	2.05	0.56
23:BB:2052:A:H4'	26:BD:148:GLN:O	2.05	0.56
23:BB:2443:C:H2'	23:BB:2444:G:C8	2.40	0.56
41:BJ:45:THR:N	41:BJ:46:PRO:HD3	2.20	0.56
47:BF:72:SER:HA	47:BF:78:ILE:HG22	1.87	0.56
50:BT:9:LYS:NZ	50:BT:9:LYS:HB3	2.20	0.56
1:CA:838:G:H2'	1:CA:839:C:C6	2.39	0.56
1:CA:1218:C:H2'	1:CA:1219:A:C8	2.39	0.56
1:CA:1237:C:H2'	1:CA:1336:C:H5	1.69	0.56
4:CE:81:GLN:H	4:CE:146:MET:CE	2.17	0.56
10:CK:33:ILE:CB	10:CK:73:VAL:HG11	2.33	0.56
11:CL:17:LYS:HE3	11:CL:17:LYS:N	2.20	0.56
2:CC:51:VAL:C	2:CC:114:LEU:HD21	2.29	0.56
2:CC:149:LYS:HG2	2:CC:200:TRP:HE3	1.69	0.56
12:CM:13:HIS:CD2	12:CM:13:HIS:H	2.23	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:276:U:H2'	23:DB:278:A:N6	2.13	0.56
23:DB:598:U:H2'	23:DB:599:A:H8	1.69	0.56
23:DB:1177:G:H2'	23:DB:1178:C:C6	2.40	0.56
23:DB:2229:U:H2'	23:DB:2230:G:H8	1.68	0.56
23:DB:2898:U:H2'	23:DB:2899:A:H8	1.70	0.56
27:DK:86:LEU:H	27:DK:86:LEU:HD23	1.70	0.56
27:DK:103:VAL:HG23	27:DK:122:VAL:O	2.04	0.56
28:DP:24:THR:O	28:DP:25:VAL:HG22	2.04	0.56
29:DE:143:LEU:HB3	29:DE:146:VAL:HG21	1.85	0.56
40:DH:57:LYS:O	40:DH:61:VAL:HB	2.04	0.56
41:DJ:45:THR:N	41:DJ:46:PRO:HD3	2.20	0.56
42:DN:34:ILE:O	42:DN:112:TYR:HA	2.05	0.56
46:DU:51:LEU:H	46:DU:53:GLN:NE2	2.02	0.56
47:DF:37:MET:HG3	47:DF:150:GLY:O	2.05	0.56
47:DF:91:ARG:C	47:DF:95:MET:HB2	2.30	0.56
48:DG:9:VAL:HA	48:DG:48:THR:CB	2.35	0.56
50:DT:69:ARG:HG2	50:DT:74:ILE:N	2.20	0.56
1:AA:556:C:O2'	1:AA:557:G:H5'	2.04	0.56
1:AA:1095:U:H5"	1:AA:1109:C:O2	2.05	0.56
1:AA:1164:G:H2'	1:AA:1165:U:C6	2.40	0.56
1:AA:1208:C:H2'	1:AA:1209:C:O4'	2.05	0.56
1:AA:1308:U:H2'	1:AA:1309:G:C8	2.40	0.56
1:AA:1348:U:C4'	8:AI:121:ARG:HG3	2.35	0.56
1:AA:1394:A:H5'	56:AA:1962:HOH:O	2.05	0.56
2:AC:39:ARG:NE	2:AC:56:ILE:HD11	2.19	0.56
12:AM:14:ALA:HB3	12:AM:40:GLU:HA	1.86	0.56
23:BB:154:U:H2'	23:BB:155:A:H8	1.70	0.56
23:BB:216:A:H2'	23:BB:217:A:H8	1.70	0.56
23:BB:402:A:C2'	23:BB:403:U:H5'	2.35	0.56
23:BB:1590:A:H2'	23:BB:1591:A:H8	1.70	0.56
23:BB:2297:A:N1	23:BB:2320:U:H4'	2.20	0.56
23:BB:2835:A:N6	23:BB:2878:U:H2'	2.21	0.56
25:BC:83:ASP:HB2	25:BC:90:ILE:HG12	1.85	0.56
25:BC:136:VAL:HG12	25:BC:137:GLY:H	1.70	0.56
27:BK:3:GLN:HG2	27:BK:4:GLU:N	2.19	0.56
27:BK:71:ARG:HA	27:BK:71:ARG:HE	1.70	0.56
29:BE:165:HIS:C	29:BE:167:VAL:H	2.13	0.56
50:BT:62:VAL:HB	50:BT:64:LYS:HZ1	1.69	0.56
1:CA:577:G:O2'	1:CA:578:C:H5'	2.05	0.56
1:CA:691:G:H1'	1:CA:696:A:N6	2.20	0.56
1:CA:704:A:H2'	1:CA:705:G:O4'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1320:C:H1'	16:CS:72:GLU:N	2.19	0.56
13:CP:22:ALA:HA	13:CP:33:ILE:HG13	1.88	0.56
17:CT:70:LYS:O	17:CT:73:ARG:HG2	2.04	0.56
16:CS:60:PHE:N	16:CS:60:PHE:HD2	2.04	0.56
18:CB:187:ASP:H	18:CB:190:SER:HB2	1.69	0.56
23:DB:598:U:H2'	23:DB:599:A:C8	2.41	0.56
23:DB:648:G:H2'	23:DB:649:G:H8	1.68	0.56
23:DB:1166:G:H2'	23:DB:1167:C:H6	1.71	0.56
23:DB:2498:C:O2'	23:DB:2499:C:H5'	2.05	0.56
23:DB:2590:A:H2'	23:DB:2591:C:C6	2.41	0.56
25:DC:136:VAL:HG12	25:DC:137:GLY:H	1.70	0.56
25:DC:145:MET:HE3	25:DC:153:LEU:HD21	1.87	0.56
25:DC:146:LYS:HB2	25:DC:149:LYS:HB2	1.86	0.56
26:DD:136:ASN:HD21	26:DD:139:SER:C	2.12	0.56
26:DD:159:LYS:HZ3	26:DD:159:LYS:HA	1.70	0.56
27:DK:39:ILE:O	27:DK:59:LYS:HA	2.05	0.56
27:DK:99:ILE:HD13	27:DK:118:LEU:HD22	1.85	0.56
28:DP:3:ILE:HG23	28:DP:4:ILE:H	1.70	0.56
28:DP:20:ARG:HH22	28:DP:91:VAL:HG22	1.69	0.56
28:DP:63:ILE:HG12	28:DP:68:GLY:HA2	1.88	0.56
41:DJ:13:ARG:O	41:DJ:52:ASP:HA	2.05	0.56
45:DS:18:ARG:HB3	45:DS:76:VAL:CG2	2.35	0.56
45:DS:81:SER:HA	45:DS:99:ARG:HA	1.87	0.56
46:DU:12:VAL:HA	46:DU:69:VAL:HG12	1.86	0.56
47:DF:155:ILE:HG22	47:DF:157:THR:H	1.70	0.56
48:DG:137:LYS:O	48:DG:140:ILE:HG13	2.05	0.56
50:DT:32:LEU:HG	50:DT:83:ALA:HB2	1.88	0.56
1:AA:991:U:H3	1:AA:1212:U:H4'	1.69	0.56
1:AA:1072:G:H21	18:AB:105:THR:HG21	1.70	0.56
1:AA:1229:A:H2'	1:AA:1230:C:C6	2.39	0.56
2:AC:122:GLN:HG2	2:AC:127:VAL:HG11	1.86	0.56
4:AE:140:ILE:HG22	4:AE:144:GLU:OE1	2.05	0.56
8:AI:29:ILE:HA	8:AI:64:ILE:CB	2.32	0.56
12:AM:9:PRO:C	12:AM:44:ILE:HD13	2.30	0.56
14:AQ:59:GLU:HB3	14:AQ:75:VAL:CG2	2.35	0.56
23:BB:345:A:H1'	23:BB:346:A:C2	2.39	0.56
23:BB:370:G:O2'	23:BB:423:A:H3'	2.06	0.56
23:BB:670:A:H4'	23:BB:671:C:C5'	2.34	0.56
23:BB:876:C:H41	23:BB:901:C:H42	1.48	0.56
23:BB:922:C:H1'	52:BW:22:VAL:CG2	2.35	0.56
23:BB:1051:G:H2'	23:BB:1052:C:C6	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1346:G:O2'	23:BB:1347:A:H5'	2.05	0.56
23:BB:1439:A:N7	23:BB:1440:U:C2	2.73	0.56
23:BB:1442:U:H2'	23:BB:1443:U:H6	1.69	0.56
23:BB:1809:A:H2'	23:BB:1810:A:C8	2.41	0.56
23:BB:1842:G:H2'	23:BB:1843:C:H6	1.70	0.56
23:BB:1859:U:H2'	23:BB:1860:G:C8	2.41	0.56
23:BB:1869:G:H3'	23:BB:1870:C:C5'	2.35	0.56
23:BB:2097:A:H2'	23:BB:2098:U:H6	1.69	0.56
26:BD:55:LYS:HE2	26:BD:59:ARG:HB2	1.86	0.56
27:BK:87:LEU:HD12	27:BK:93:GLN:H	1.69	0.56
27:BK:113:MET:HE2	27:BK:116:ILE:HD11	1.88	0.56
29:BE:58:LYS:HB2	29:BE:60:TRP:HD1	1.71	0.56
29:BE:146:VAL:O	29:BE:167:VAL:HA	2.06	0.56
33:B1:9:LYS:HD3	33:B1:9:LYS:N	2.19	0.56
35:BV:40:ILE:HD13	35:BV:40:ILE:N	2.19	0.56
40:BH:2:GLN:HB3	40:BH:18:GLN:CG	2.35	0.56
41:BJ:18:VAL:O	41:BJ:56:VAL:HA	2.04	0.56
41:BJ:25:LEU:HD22	41:BJ:26:GLY:H	1.70	0.56
41:BJ:28:LEU:HG	41:BJ:29:ALA:N	2.21	0.56
47:BF:105:ILE:C	47:BF:108:PRO:HD2	2.30	0.56
48:BG:24:THR:C	48:BG:25:ILE:HD12	2.30	0.56
48:BG:94:ARG:HH21	48:BG:104:LEU:HA	1.71	0.56
50:BT:14:PRO:HA	50:BT:32:LEU:CB	2.35	0.56
50:BT:16:VAL:H	50:BT:31:VAL:HG23	1.71	0.56
1:CA:255:G:H2'	1:CA:256:U:C6	2.40	0.56
1:CA:266:G:O2'	1:CA:267:C:H3'	2.05	0.56
1:CA:462:G:H3'	1:CA:463:U:H6	1.70	0.56
1:CA:532:A:N6	2:CC:126:ARG:HH21	2.03	0.56
1:CA:821:G:H4'	56:CA:1750:HOH:O	2.03	0.56
1:CA:1128:C:H4'	1:CA:1148:U:O2	2.04	0.56
1:CA:1192:C:H2'	1:CA:1193:G:O4'	2.05	0.56
5:CF:17:GLN:O	5:CF:21:MET:HG3	2.05	0.56
8:CI:39:GLY:O	8:CI:40:ARG:HB2	2.06	0.56
9:CJ:8:ILE:HA	9:CJ:100:ILE:CG2	2.35	0.56
16:CS:40:PHE:HB2	16:CS:43:MET:SD	2.44	0.56
16:CS:60:PHE:N	16:CS:60:PHE:CD2	2.74	0.56
22:DA:41:G:O6	47:DF:68:LYS:HD3	2.04	0.56
23:DB:172:A:O2'	23:DB:173:A:H5'	2.05	0.56
23:DB:365:U:H2'	23:DB:366:C:C6	2.40	0.56
23:DB:414:C:H2'	23:DB:415:A:H8	1.67	0.56
23:DB:545:U:H2'	23:DB:548:G:OP2	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:705:A:H2'	23:DB:706:A:H8	1.70	0.56
23:DB:737:C:O2'	23:DB:738:G:H5'	2.06	0.56
23:DB:1268:A:H2'	23:DB:1269:A:O4'	2.05	0.56
23:DB:1326:U:O2'	23:DB:1327:A:H5'	2.05	0.56
23:DB:1590:A:H2'	23:DB:1591:A:H8	1.70	0.56
23:DB:1599:U:H2'	23:DB:1600:C:H6	1.71	0.56
23:DB:1640:A:H2'	23:DB:1641:A:H8	1.69	0.56
23:DB:2251:G:H2'	23:DB:2252:G:C8	2.40	0.56
23:DB:2611:C:O2'	23:DB:2612:C:H5'	2.04	0.56
23:DB:2748:A:H1'	48:DG:66:THR:HB	1.85	0.56
23:DB:2784:U:H2'	23:DB:2785:C:C6	2.41	0.56
24:DI:37:PHE:CZ	24:DI:58:ILE:HD11	2.40	0.56
24:DI:54:ILE:HD13	24:DI:54:ILE:C	2.29	0.56
24:DI:108:ILE:HG22	24:DI:128:ILE:HD13	1.87	0.56
25:DC:136:VAL:HG12	25:DC:137:GLY:N	2.20	0.56
25:DC:191:LEU:CD2	25:DC:192:GLY:H	2.17	0.56
25:DC:260:LYS:C	25:DC:262:THR:H	2.13	0.56
26:DD:33:ARG:HH11	26:DD:76:GLY:HA3	1.70	0.56
27:DK:24:VAL:HG13	27:DK:33:ALA:HB2	1.86	0.56
29:DE:60:TRP:C	29:DE:62:GLN:H	2.12	0.56
38:DM:71:LYS:HB3	38:DM:93:VAL:HG12	1.86	0.56
40:DH:27:ARG:CZ	51:DZ:60:ASP:HA	2.34	0.56
41:DJ:57:LEU:HD23	41:DJ:128:ASN:HA	1.87	0.56
43:DO:74:VAL:O	43:DO:77:ALA:HB3	2.05	0.56
44:DQ:111:LYS:HE2	49:DR:50:GLY:CA	2.36	0.56
46:DU:5:ARG:NH2	46:DU:93:ARG:HD3	2.21	0.56
46:DU:42:LYS:HD2	46:DU:59:GLU:HB2	1.87	0.56
47:DF:33:ILE:HB	47:DF:90:LEU:HB2	1.87	0.56
47:DF:102:LEU:HA	47:DF:106:ALA:CB	2.35	0.56
1:AA:135:C:N3	13:AP:1:MET:HB2	2.20	0.56
1:AA:202:G:H2'	1:AA:203:G:C8	2.39	0.56
1:AA:616:G:H2'	1:AA:616:G:N3	2.21	0.56
1:AA:861:G:H2'	1:AA:862:C:H6	1.70	0.56
1:AA:880:C:H2'	1:AA:881:G:C8	2.41	0.56
1:AA:919:A:O2'	1:AA:920:U:H5'	2.05	0.56
1:AA:987:G:H2'	1:AA:988:G:H8	1.70	0.56
1:AA:1360:A:H61	1:AA:1361:G:H21	1.53	0.56
1:AA:1486:G:H2'	1:AA:1487:G:C1'	2.36	0.56
1:AA:1504:G:H4'	1:AA:1505:G:O4'	2.06	0.56
3:AD:22:SER:N	3:AD:109:THR:HG22	2.12	0.56
3:AD:90:LEU:H	3:AD:90:LEU:HD22	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:126:PHE:O	8:AI:128:LYS:N	2.38	0.56
12:AM:87:GLY:HA2	12:AM:90:HIS:CD2	2.41	0.56
13:AP:53:ASP:O	13:AP:57:ILE:HG12	2.05	0.56
23:BB:1724:G:H2'	23:BB:1725:U:H6	1.69	0.56
23:BB:1914:C:O2	23:BB:1914:C:H3'	2.05	0.56
23:BB:2078:C:H2'	23:BB:2079:U:C6	2.39	0.56
23:BB:2548:U:H1'	27:BK:23:LYS:NZ	2.19	0.56
24:BI:58:ILE:HD12	24:BI:58:ILE:N	2.20	0.56
25:BC:20:ASN:ND2	25:BC:23:LEU:HD13	2.21	0.56
25:BC:204:LEU:HD23	25:BC:209:ALA:HB3	1.88	0.56
26:BD:101:PHE:O	26:BD:180:VAL:HG11	2.05	0.56
26:BD:107:VAL:HA	26:BD:204:LYS:O	2.06	0.56
28:BP:20:ARG:HH22	28:BP:91:VAL:HG22	1.70	0.56
30:BY:58:GLU:CD	30:BY:58:GLU:H	2.13	0.56
39:BX:8:GLU:HB2	39:BX:13:GLU:OE1	2.06	0.56
42:BN:54:LEU:HD11	42:BN:62:ASN:HB3	1.88	0.56
49:BR:37:GLU:O	49:BR:39:LEU:HD23	2.05	0.56
1:CA:675:A:H2'	1:CA:676:A:C8	2.41	0.56
1:CA:733:G:O2'	1:CA:734:G:H5'	2.05	0.56
1:CA:1223:C:O5'	1:CA:1224:U:H5"	2.05	0.56
1:CA:1396:A:C4'	1:CA:1397:C:H5'	2.35	0.56
1:CA:1463:U:OP1	28:DP:108:ARG:HD2	2.05	0.56
1:CA:1524:C:H2'	1:CA:1525:G:C8	2.41	0.56
3:CD:199:ILE:HG13	3:CD:200:VAL:N	2.21	0.56
9:CJ:42:LEU:HG	9:CJ:43:PRO:HD2	1.87	0.56
16:CS:32:THR:HG22	16:CS:33:TRP:N	2.20	0.56
16:CS:39:ILE:HD12	16:CS:68:HIS:H	1.70	0.56
20:CO:36:ILE:HD13	20:CO:59:MET:HE2	1.88	0.56
23:DB:362:A:H3'	23:DB:363:G:C8	2.40	0.56
23:DB:519:U:H2'	23:DB:520:G:H8	1.70	0.56
23:DB:584:C:P	44:DQ:5:ARG:HD3	2.46	0.56
23:DB:1952:A:OP1	27:DK:42:THR:HG21	2.06	0.56
26:DD:186:LEU:HD21	28:DP:3:ILE:HD11	1.88	0.56
37:DL:3:LEU:O	37:DL:5:THR:HG23	2.05	0.56
40:DH:70:GLU:HA	40:DH:73:ASN:HB2	1.87	0.56
41:DJ:93:ILE:O	41:DJ:97:PRO:HG3	2.05	0.56
44:DQ:10:ARG:CZ	44:DQ:10:ARG:HB2	2.34	0.56
46:DU:85:ARG:HD3	46:DU:86:PHE:N	2.20	0.56
47:DF:64:PRO:HA	47:DF:88:VAL:CG2	2.35	0.56
1:AA:513:C:H2'	1:AA:514:C:C6	2.39	0.56
1:AA:838:G:H2'	1:AA:839:C:C6	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:927:G:O2'	1:AA:928:G:H5'	2.06	0.56
1:AA:1488:G:O2'	1:AA:1489:G:H5'	2.05	0.56
9:AJ:12:ALA:HB3	9:AJ:18:ILE:HB	1.87	0.56
11:AL:14:LYS:HZ3	11:AL:16:ALA:HB3	1.69	0.56
22:BA:59:A:H2'	22:BA:60:C:C6	2.40	0.56
23:BB:264:C:C2'	23:BB:265:A:H5"	2.34	0.56
23:BB:417:C:H2'	23:BB:418:C:H6	1.71	0.56
23:BB:1061:U:O4'	23:BB:1070:A:H1'	2.06	0.56
23:BB:2015:A:C2	31:B0:2:VAL:HG22	2.40	0.56
23:BB:2292:U:H2'	23:BB:2293:G:C8	2.41	0.56
23:BB:2384:U:H5"	23:BB:2386:A:OP1	2.05	0.56
23:BB:2393:U:H2'	23:BB:2394:C:O4'	2.06	0.56
23:BB:2531:A:H5'	48:BG:156:TYR:CE2	2.41	0.56
23:BB:2845:U:O3'	28:BP:52:ARG:HD3	2.04	0.56
27:BK:85:VAL:HG21	27:BK:115:ILE:HD11	1.86	0.56
44:BQ:77:LYS:HA	44:BQ:80:ASN:HB3	1.87	0.56
46:BU:32:LYS:HA	46:BU:65:GLN:HA	1.86	0.56
46:BU:82:VAL:H	46:BU:96:LYS:NZ	2.04	0.56
48:BG:166:GLU:CD	48:BG:166:GLU:N	2.63	0.56
1:CA:285:C:H2'	1:CA:286:C:C6	2.41	0.56
1:CA:1221:G:H4'	16:CS:76:THR:CG2	2.28	0.56
1:CA:1458:G:H4'	17:CT:22:SER:HB2	1.86	0.56
7:CH:108:GLY:O	7:CH:110:MET:HG3	2.04	0.56
19:CU:19:LYS:N	19:CU:19:LYS:HD2	2.20	0.56
6:CG:100:MET:O	6:CG:104:VAL:HG23	2.06	0.56
8:CI:103:VAL:HG23	8:CI:104:THR:N	2.19	0.56
9:CJ:6:ILE:O	9:CJ:8:ILE:HD12	2.05	0.56
18:CB:67:LEU:HD22	18:CB:91:VAL:HG23	1.88	0.56
18:CB:116:LEU:HD11	18:CB:139:GLU:OE1	2.06	0.56
23:DB:224:U:O4	23:DB:420:C:H5'	2.06	0.56
23:DB:1552:A:H2'	23:DB:1553:A:H5'	1.87	0.56
23:DB:2231:U:H2'	23:DB:2232:C:C6	2.40	0.56
23:DB:2330:G:H1'	52:DW:38:ARG:CB	2.34	0.56
26:DD:56:LYS:HD2	26:DD:59:ARG:HG3	1.86	0.56
26:DD:107:VAL:HA	26:DD:204:LYS:O	2.05	0.56
28:DP:21:PRO:CG	28:DP:91:VAL:HG21	2.34	0.56
29:DE:21:ARG:HG3	29:DE:22:ASP:O	2.05	0.56
29:DE:48:THR:C	29:DE:50:ALA:H	2.11	0.56
47:DF:78:ILE:HD12	47:DF:78:ILE:N	2.20	0.56
51:DZ:59:ILE:HD13	51:DZ:67:VAL:HG21	1.88	0.56
1:AA:195:A:H1'	1:AA:222:C:O2'	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:255:G:H4'	14:AQ:18:LYS:HD2	1.87	0.56
1:AA:451:A:H5'	13:AP:70:ARG:HH22	1.70	0.56
1:AA:484:G:H5'	1:AA:486:U:H5'	1.88	0.56
1:AA:678:U:H2'	1:AA:679:C:C6	2.40	0.56
5:AF:80:PHE:CE1	25:BC:123:ILE:HG12	2.41	0.56
8:AI:49:GLN:N	8:AI:50:PRO:HD2	2.21	0.56
16:AS:39:ILE:HD13	16:AS:65:MET:HB3	1.87	0.56
23:BB:970:U:H2'	23:BB:971:G:C8	2.41	0.56
23:BB:1635:A:C2'	23:BB:1636:U:H5'	2.36	0.56
23:BB:1704:C:H2'	23:BB:1705:A:H8	1.71	0.56
23:BB:2748:A:H4'	48:BG:3:VAL:HG21	1.88	0.56
25:BC:202:ARG:NH1	25:BC:204:LEU:HD11	2.20	0.56
25:BC:260:LYS:C	25:BC:262:THR:H	2.13	0.56
26:BD:109:VAL:HG11	26:BD:193:VAL:CG1	2.35	0.56
26:BD:116:LYS:HB3	26:BD:118:PHE:CE1	2.41	0.56
27:BK:108:ARG:HH12	28:BP:34:GLY:HA2	1.70	0.56
29:BE:118:LEU:HD21	29:BE:188:MET:HE3	1.88	0.56
42:BN:85:PRO:HA	42:BN:88:ALA:HB2	1.86	0.56
43:BO:11:ALA:HB2	43:BO:96:GLY:N	2.20	0.56
47:BF:78:ILE:HD12	47:BF:78:ILE:N	2.21	0.56
1:CA:114:U:O2'	1:CA:115:G:H5'	2.06	0.56
1:CA:213:G:H3'	1:CA:214:C:H6	1.71	0.56
1:CA:1027:C:H2'	1:CA:1028:C:C6	2.41	0.56
1:CA:1289:A:H3'	1:CA:1290:G:H8	1.70	0.56
1:CA:1513:A:H2'	1:CA:1514:G:C8	2.40	0.56
2:CC:146:LYS:HB2	2:CC:202:PHE:CD2	2.41	0.56
9:CJ:65:TYR:HA	21:CN:98:ALA:H	1.71	0.56
18:CB:19:THR:HG23	18:CB:20:ARG:H	1.71	0.56
18:CB:80:LYS:HE2	18:CB:81:ASP:CG	2.31	0.56
20:CO:88:ARG:O	20:CO:88:ARG:HG3	2.05	0.56
23:DB:99:U:H5'	23:DB:100:U:OP1	2.05	0.56
23:DB:182:A:H1'	23:DB:434:U:H5'	1.86	0.56
23:DB:664:G:H2'	23:DB:665:U:H6	1.71	0.56
23:DB:691:C:H5'	25:DC:216:ARG:NH1	2.20	0.56
23:DB:692:C:H2'	23:DB:693:A:C8	2.41	0.56
23:DB:1025:G:OP1	23:DB:1025:G:H8	1.89	0.56
23:DB:1309:G:OP1	36:D2:9:VAL:HG12	2.05	0.56
23:DB:1447:C:H2'	23:DB:1448:G:H8	1.70	0.56
23:DB:1802:A:H2'	23:DB:1803:A:C8	2.41	0.56
24:DI:1:ALA:CB	24:DI:2:LYS:HD2	2.35	0.56
25:DC:159:THR:O	25:DC:194:VAL:HG12	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DE:146:VAL:O	29:DE:167:VAL:HA	2.06	0.56
30:DY:15:ARG:HD2	30:DY:15:ARG:N	2.20	0.56
34:D3:18:LYS:HD2	34:D3:19:GLY:N	2.21	0.56
34:D3:54:LEU:O	34:D3:57:VAL:HG23	2.06	0.56
40:DH:133:GLN:HG2	40:DH:139:PHE:HA	1.87	0.56
41:DJ:25:LEU:HD22	41:DJ:26:GLY:H	1.70	0.56
43:DO:11:ALA:HB2	43:DO:96:GLY:CA	2.35	0.56
47:DF:1:ALA:HB1	47:DF:4:HIS:HB3	1.87	0.56
47:DF:72:SER:HA	47:DF:78:ILE:HG22	1.87	0.56
51:DZ:39:TRP:HB2	51:DZ:46:PHE:CE2	2.40	0.56
51:DZ:70:GLU:O	51:DZ:72:ARG:N	2.38	0.56
1:AA:106:C:H2'	1:AA:107:G:O4'	2.05	0.56
1:AA:1100:C:O2'	1:AA:1101:A:H5'	2.05	0.56
4:AE:131:ASN:ND2	4:AE:134:ASN:H	2.03	0.56
8:AI:17:ARG:HB2	8:AI:65:THR:HB	1.87	0.56
8:AI:46:VAL:HA	8:AI:49:GLN:HG3	1.88	0.56
8:AI:103:VAL:HG23	8:AI:104:THR:N	2.20	0.56
9:AJ:73:LEU:CD1	9:AJ:75:ASP:HB2	2.36	0.56
10:AK:62:ALA:HB1	10:AK:95:THR:HB	1.88	0.56
22:BA:43:C:H4'	47:BF:91:ARG:HG3	1.88	0.56
23:BB:302:C:H2'	23:BB:303:G:H8	1.71	0.56
23:BB:1932:A:H2'	23:BB:1933:G:O4'	2.05	0.56
23:BB:2049:G:H21	26:BD:161:MET:HE2	1.70	0.56
23:BB:2073:C:H5"	25:BC:227:VAL:HG12	1.87	0.56
23:BB:2537:U:H2'	23:BB:2538:C:H6	1.69	0.56
23:BB:2852:G:H2'	23:BB:2853:C:C6	2.41	0.56
25:BC:20:ASN:HD21	25:BC:22:GLU:HG3	1.71	0.56
26:BD:21:SER:HB3	27:BK:72:PRO:O	2.06	0.56
27:BK:108:ARG:O	27:BK:113:MET:HE3	2.06	0.56
28:BP:3:ILE:O	28:BP:7:LEU:HD13	2.06	0.56
33:B1:34:GLU:CG	33:B1:49:LYS:HG3	2.35	0.56
40:BH:78:VAL:HG21	40:BH:142:VAL:HG13	1.88	0.56
43:BO:89:ASP:H	43:BO:115:LEU:HD13	1.69	0.56
48:BG:70:LEU:O	48:BG:73:SER:HB3	2.05	0.56
1:CA:55:A:H2'	1:CA:56:U:O4'	2.06	0.56
1:CA:72:A:H2'	1:CA:73:C:O4'	2.05	0.56
1:CA:124:C:O2'	1:CA:125:U:H5'	2.06	0.56
1:CA:462:G:H3'	1:CA:463:U:C6	2.40	0.56
1:CA:620:C:O2	3:CD:131:ILE:HG21	2.06	0.56
1:CA:676:A:O2'	1:CA:677:U:H5'	2.05	0.56
1:CA:1041:G:H2'	1:CA:1042:A:H8	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1402:C:H2'	1:CA:1403:C:O4'	2.06	0.56
3:CD:9:LYS:HA	3:CD:12:ARG:HG3	1.86	0.56
17:CT:81:GLN:O	17:CT:85:LEU:HD22	2.05	0.56
12:CM:95:PRO:CA	12:CM:108:ARG:HG2	2.35	0.56
22:DA:59:A:H2'	22:DA:60:C:C6	2.40	0.56
23:DB:41:C:H2'	23:DB:42:A:O4'	2.06	0.56
23:DB:1442:U:H2'	23:DB:1443:U:C6	2.41	0.56
23:DB:1851:U:H2'	23:DB:1852:U:H6	1.70	0.56
23:DB:1932:A:H2'	23:DB:1933:G:O4'	2.05	0.56
23:DB:2107:G:H2'	23:DB:2107:G:N3	2.19	0.56
23:DB:2157:G:N3	23:DB:2157:G:H2'	2.20	0.56
26:DD:101:PHE:O	26:DD:180:VAL:HG11	2.06	0.56
30:DY:47:ILE:HD12	30:DY:54:VAL:HG21	1.87	0.56
33:D1:34:GLU:CG	33:D1:49:LYS:HG3	2.34	0.56
38:DM:34:LYS:HA	38:DM:100:LYS:O	2.06	0.56
45:DS:5:ALA:HB3	45:DS:54:ALA:HB2	1.87	0.56
1:AA:1002:G:H8	1:AA:1002:G:OP2	1.89	0.56
1:AA:1126:U:O2'	1:AA:1280:A:H2'	2.06	0.56
1:AA:1402:C:H2'	1:AA:1403:C:O4'	2.06	0.56
6:AG:145:GLU:HA	6:AG:148:LYS:HE3	1.88	0.56
15:AR:33:THR:HG23	15:AR:37:LYS:O	2.05	0.56
18:AB:125:PHE:CD2	18:AB:125:PHE:N	2.73	0.56
23:BB:1060:U:O4	24:BI:131:THR:HG22	2.05	0.56
23:BB:2140:G:H2'	23:BB:2140:G:N3	2.20	0.56
23:BB:2405:G:H1'	23:BB:2412:A:H61	1.71	0.56
23:BB:2542:A:H4'	23:BB:2543:G:H5'	1.88	0.56
23:BB:2662:A:H2'	23:BB:2663:G:O4'	2.06	0.56
23:BB:2742:G:O2'	23:BB:2743:U:H5'	2.06	0.56
27:BK:13:ASN:HD21	27:BK:98:ARG:HB2	1.69	0.56
28:BP:21:PRO:O	28:BP:46:VAL:HG23	2.06	0.56
42:BN:24:MET:SD	42:BN:44:LEU:HD22	2.45	0.56
42:BN:86:ARG:HB3	42:BN:117:ASP:OD1	2.06	0.56
43:BO:111:ARG:HG2	43:BO:117:PHE:H	1.70	0.56
45:BS:29:VAL:O	45:BS:33:LEU:HG	2.05	0.56
52:BW:55:ASP:C	52:BW:57:THR:H	2.13	0.56
1:CA:1349:A:H2'	1:CA:1350:A:O4'	2.06	0.56
3:CD:36:ALA:HB2	3:CD:42:ALA:HB2	1.87	0.56
4:CE:158:LYS:NZ	7:CH:63:LYS:HD3	2.21	0.56
2:CC:154:GLY:HA3	2:CC:162:ALA:HB1	1.87	0.56
18:CB:86:CYS:H	18:CB:88:GLN:HE21	1.54	0.56
23:DB:594:U:H2'	23:DB:595:C:H6	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:633:A:H2'	23:DB:634:C:O4'	2.06	0.56
23:DB:1013:C:H2'	23:DB:1014:A:H8	1.70	0.56
23:DB:1818:U:N3	25:DC:152:GLN:HB3	2.21	0.56
23:DB:1911:U:H2'	23:DB:1918:A:N1	2.21	0.56
23:DB:2073:C:H5"	25:DC:227:VAL:HG12	1.88	0.56
23:DB:2243:U:H2'	23:DB:2244:U:C6	2.41	0.56
23:DB:2751:G:H3'	23:DB:2752:C:H6	1.71	0.56
24:DI:45:THR:CA	24:DI:48:ILE:HG22	2.35	0.56
28:DP:77:SER:OG	28:DP:79:VAL:HG22	2.06	0.56
29:DE:146:VAL:HG11	29:DE:187:VAL:HG23	1.88	0.56
30:DY:2:LYS:HD3	30:DY:2:LYS:H	1.70	0.56
35:DV:63:ILE:HD11	35:DV:72:VAL:HG22	1.87	0.56
40:DH:3:VAL:HA	40:DH:37:VAL:O	2.06	0.56
40:DH:77:THR:HA	40:DH:143:ILE:O	2.06	0.56
41:DJ:81:ILE:HG12	41:DJ:82:GLY:N	2.19	0.56
44:DQ:20:ALA:HB2	44:DQ:38:VAL:CG2	2.36	0.56
46:DU:81:ARG:HD3	46:DU:96:LYS:HD2	1.87	0.56
1:AA:236:A:H2'	1:AA:237:G:H8	1.71	0.56
1:AA:704:A:H2'	1:AA:705:G:O4'	2.06	0.56
1:AA:733:G:O2'	1:AA:734:G:H5'	2.05	0.56
1:AA:1071:C:O2'	1:AA:1072:G:H5'	2.05	0.56
1:AA:1110:A:H2'	1:AA:1111:A:H5'	1.88	0.56
3:AD:28:ASP:HB2	3:AD:33:ILE:HG21	1.88	0.56
3:AD:52:VAL:HG12	3:AD:198:LEU:HD11	1.88	0.56
5:AF:35:LYS:O	5:AF:64:VAL:HG13	2.06	0.56
6:AG:8:GLN:HG2	6:AG:9:ARG:N	2.20	0.56
6:AG:73:GLU:O	6:AG:87:PRO:HA	2.06	0.56
6:AG:100:MET:O	6:AG:104:VAL:HG23	2.06	0.56
9:AJ:42:LEU:HB3	9:AJ:71:LEU:HD21	1.88	0.56
9:AJ:53:ILE:HG13	21:AN:84:ARG:CZ	2.36	0.56
16:AS:29:PRO:CB	16:AS:47:THR:HB	2.35	0.56
17:AT:61:ALA:HA	17:AT:66:ILE:HB	1.87	0.56
17:AT:81:GLN:O	17:AT:85:LEU:HD22	2.06	0.56
18:AB:187:ASP:OD1	18:AB:203:ASP:HB3	2.04	0.56
22:BA:87:U:H2'	22:BA:88:C:C5'	2.36	0.56
23:BB:3:U:O2'	23:BB:4:U:C6	2.59	0.56
23:BB:560:C:H2'	23:BB:561:G:O4'	2.06	0.56
23:BB:719:C:O2'	23:BB:720:U:H5'	2.06	0.56
23:BB:1149:G:H2'	23:BB:1150:C:H6	1.69	0.56
23:BB:1442:U:H2'	23:BB:1443:U:C6	2.41	0.56
23:BB:2578:G:N7	26:BD:145:SER:HB2	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BI:76:ALA:O	24:BI:80:LYS:HG3	2.06	0.56
24:BI:116:MET:HE1	24:BI:124:MET:O	2.06	0.56
34:B3:14:LYS:HD3	34:B3:21:PHE:O	2.05	0.56
41:BJ:38:GLY:N	41:BJ:51:GLY:HA2	2.21	0.56
44:BQ:94:LEU:C	44:BQ:96:ASP:H	2.14	0.56
50:BT:32:LEU:H	50:BT:83:ALA:HB3	1.71	0.56
1:CA:251:G:N3	1:CA:266:G:O6	2.39	0.56
1:CA:1006:G:H2'	1:CA:1007:U:C6	2.40	0.56
11:CL:51:VAL:HG12	11:CL:52:CYS:N	2.19	0.56
21:CN:52:ARG:O	21:CN:55:SER:HB2	2.06	0.56
23:DB:309:A:N3	23:DB:329:G:O2'	2.39	0.56
23:DB:828:U:H2'	23:DB:829:A:C8	2.41	0.56
23:DB:828:U:H4'	23:DB:831:G:N1	2.20	0.56
23:DB:1442:U:H2'	23:DB:1443:U:H6	1.70	0.56
23:DB:1854:A:H2	23:DB:2087:G:N3	2.04	0.56
23:DB:2049:G:N2	26:DD:161:MET:HE2	2.21	0.56
23:DB:2359:C:H2'	23:DB:2360:G:C8	2.41	0.56
24:DI:17:ALA:O	24:DI:18:ASN:CB	2.53	0.56
27:DK:7:MET:HE1	27:DK:44:LYS:HG3	1.88	0.56
41:DJ:25:LEU:HA	41:DJ:28:LEU:HD22	1.87	0.56
42:DN:12:ARG:HG3	42:DN:13:ASN:H	1.70	0.56
42:DN:86:ARG:HB3	42:DN:117:ASP:OD1	2.06	0.56
43:DO:67:ASN:HB3	43:DO:70:ALA:CB	2.34	0.56
44:DQ:84:LYS:HE2	44:DQ:84:LYS:HA	1.86	0.56
46:DU:12:VAL:HG22	46:DU:69:VAL:HG12	1.88	0.56
47:DF:95:MET:O	47:DF:99:PHE:HB2	2.05	0.56
48:DG:70:LEU:O	48:DG:73:SER:HB3	2.06	0.56
49:DR:37:GLU:O	49:DR:39:LEU:HD23	2.06	0.56
52:DW:48:ALA:O	52:DW:61:LYS:HB2	2.06	0.56
1:AA:377:G:H2'	1:AA:378:G:H8	1.69	0.56
1:AA:772:U:H2'	1:AA:773:G:O4'	2.06	0.56
1:AA:844:G:N2	1:AA:845:A:H62	2.04	0.56
1:AA:1366:C:H2'	1:AA:1367:C:C6	2.41	0.56
3:AD:117:VAL:HA	3:AD:122:ILE:CG1	2.35	0.56
6:AG:129:ASN:HA	6:AG:134:VAL:HG11	1.87	0.56
8:AI:11:ARG:O	8:AI:11:ARG:HG3	2.06	0.56
18:AB:107:ARG:NH2	18:AB:111:LYS:HB2	2.21	0.56
23:BB:584:C:OP1	44:BQ:5:ARG:HB3	2.06	0.56
23:BB:633:A:H2'	23:BB:634:C:O4'	2.05	0.56
23:BB:842:U:H2'	23:BB:843:G:H8	1.70	0.56
23:BB:969:G:OP1	30:BY:17:PRO:HG3	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1025:G:OP1	23:BB:1025:G:H8	1.88	0.56
23:BB:1150:C:H2'	23:BB:1151:A:H8	1.71	0.56
23:BB:1301:A:O2'	23:BB:1302:A:H3'	2.06	0.56
23:BB:1313:U:O2	23:BB:1313:U:H2'	2.06	0.56
23:BB:2134:A:N6	23:BB:2157:G:N2	2.54	0.56
23:BB:2230:G:H2'	23:BB:2231:U:H6	1.71	0.56
26:BD:31:ALA:HA	26:BD:97:SER:HA	1.87	0.56
29:BE:21:ARG:HG3	29:BE:22:ASP:O	2.06	0.56
35:BV:53:LYS:HZ3	35:BV:53:LYS:HA	1.71	0.56
37:BL:61:LEU:HD12	37:BL:61:LEU:N	2.21	0.56
37:BL:110:VAL:HG23	37:BL:126:ARG:O	2.05	0.56
41:BJ:81:ILE:HG12	41:BJ:82:GLY:N	2.20	0.56
4:CE:14:LEU:HD22	4:CE:15:ILE:N	2.21	0.56
4:CE:101:GLY:H	4:CE:121:ASN:ND2	2.03	0.56
10:CK:126:ARG:HB2	19:CU:33:ARG:HD2	1.88	0.56
11:CL:43:LYS:HE3	11:CL:44:PRO:HD3	1.88	0.56
2:CC:18:ASN:ND2	2:CC:53:ARG:HH21	2.04	0.56
8:CI:32:ARG:HB3	8:CI:36:GLN:HE21	1.71	0.56
12:CM:38:ILE:HG22	12:CM:42:VAL:HG21	1.88	0.56
18:CB:61:SER:HA	18:CB:224:ARG:HA	1.88	0.56
22:DA:95:U:H2'	22:DA:96:G:C8	2.40	0.56
23:DB:806:C:O2'	23:DB:807:U:H5'	2.05	0.56
23:DB:1505:A:H2'	23:DB:1506:U:C6	2.41	0.56
23:DB:2869:G:H2'	23:DB:2870:C:C6	2.41	0.56
26:DD:55:LYS:HE2	26:DD:59:ARG:HB2	1.87	0.56
28:DP:6:GLN:O	28:DP:10:GLU:HB2	2.06	0.56
29:DE:116:ASP:O	29:DE:185:LYS:HE3	2.05	0.56
37:DL:80:SER:H	37:DL:113:ALA:CB	2.19	0.56
44:DQ:91:ARG:HD3	49:DR:11:GLN:CD	2.31	0.56
1:AA:285:C:H2'	1:AA:286:C:C6	2.41	0.55
1:AA:1072:G:N2	18:AB:105:THR:HG21	2.21	0.55
1:AA:1227:A:H1'	12:AM:113:LYS:NZ	2.20	0.55
4:AE:155:LYS:HD2	7:AH:70:VAL:O	2.05	0.55
10:AK:80:ASN:CB	10:AK:105:ARG:HB3	2.35	0.55
12:AM:79:LEU:HB2	12:AM:84:CYS:SG	2.47	0.55
13:AP:5:ARG:HH22	13:AP:24:SER:HA	1.72	0.55
18:AB:125:PHE:C	18:AB:127:LYS:H	2.14	0.55
23:BB:131:A:H2'	23:BB:132:G:C8	2.40	0.55
23:BB:664:G:H2'	23:BB:665:U:H6	1.71	0.55
23:BB:1873:G:O2'	23:BB:1874:C:H5'	2.07	0.55
23:BB:1994:C:O2'	23:BB:1995:U:H5'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2257:U:O2'	23:BB:2258:C:H5'	2.06	0.55
24:BI:105:LEU:HD11	24:BI:139:VAL:CG1	2.36	0.55
26:BD:40:LEU:HA	26:BD:45:TYR:H	1.70	0.55
27:BK:103:VAL:HG23	27:BK:122:VAL:O	2.06	0.55
28:BP:6:GLN:O	28:BP:10:GLU:HB2	2.06	0.55
30:BY:6:ILE:HG22	30:BY:56:VAL:HG22	1.88	0.55
41:BJ:25:LEU:HA	41:BJ:28:LEU:HD22	1.87	0.55
43:BO:7:ARG:HA	43:BO:10:ARG:NE	2.21	0.55
46:BU:46:LYS:HZ2	46:BU:47:PRO:HD2	1.71	0.55
48:BG:83:THR:HA	48:BG:84:LYS:NZ	2.21	0.55
52:BW:43:LYS:HD2	52:BW:79:ILE:CD1	2.30	0.55
1:CA:501:C:H2'	1:CA:502:A:C8	2.40	0.55
1:CA:663:A:O2'	1:CA:664:G:H5'	2.06	0.55
1:CA:908:A:O2'	1:CA:909:A:H5'	2.05	0.55
1:CA:1019:A:H2'	1:CA:1020:G:H8	1.71	0.55
1:CA:1060:U:OP1	9:CJ:53:ILE:HD11	2.06	0.55
1:CA:1408:A:O2'	1:CA:1409:C:H5'	2.06	0.55
1:CA:1507:A:H2'	1:CA:1508:A:C8	2.41	0.55
1:CA:1513:A:H2'	1:CA:1514:G:H8	1.69	0.55
5:CF:79:ARG:NH2	5:CF:87:SER:HB3	2.21	0.55
2:CC:23:ALA:HB1	2:CC:27:GLU:OE1	2.06	0.55
12:CM:93:GLY:HA2	12:CM:108:ARG:HH12	1.71	0.55
18:CB:18:GLN:HB2	18:CB:188:THR:OG1	2.07	0.55
23:DB:137:U:H3'	23:DB:138:U:C6	2.41	0.55
23:DB:154:U:H2'	23:DB:155:A:H8	1.70	0.55
23:DB:370:G:O2'	23:DB:423:A:H3'	2.06	0.55
23:DB:547:A:H3'	23:DB:548:G:O4'	2.06	0.55
23:DB:553:G:O2'	23:DB:554:U:H5'	2.06	0.55
23:DB:1081:U:H5'	24:DI:126:ARG:NH1	2.21	0.55
23:DB:1400:U:H2'	23:DB:1401:G:H8	1.71	0.55
23:DB:1869:G:H3'	23:DB:1870:C:C5'	2.37	0.55
23:DB:2393:U:H2'	23:DB:2394:C:O4'	2.05	0.55
24:DI:5:GLN:O	24:DI:6:ALA:HB3	2.05	0.55
41:DJ:38:GLY:N	41:DJ:51:GLY:HA2	2.20	0.55
44:DQ:100:PHE:HB2	49:DR:13:ARG:HH12	1.71	0.55
45:DS:29:VAL:O	45:DS:33:LEU:HG	2.06	0.55
45:DS:96:ILE:HG23	45:DS:96:ILE:O	2.05	0.55
1:AA:624:C:H2'	1:AA:625:U:C6	2.41	0.55
1:AA:691:G:H1'	1:AA:696:A:N6	2.20	0.55
1:AA:926:G:H2'	1:AA:1505:G:N3	2.22	0.55
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1507:A:H2'	1:AA:1508:A:C8	2.40	0.55
11:AL:66:ILE:HG21	11:AL:71:HIS:HB3	1.88	0.55
12:AM:74:MET:O	12:AM:78:ARG:HB2	2.06	0.55
18:AB:85:SER:O	18:AB:86:CYS:HB2	2.06	0.55
23:BB:674:G:H1'	29:BE:69:ARG:NE	2.09	0.55
23:BB:799:G:H3'	23:BB:800:A:H2'	1.87	0.55
23:BB:1353:A:H2'	23:BB:1354:A:H8	1.71	0.55
23:BB:1430:G:H2'	23:BB:1431:A:C8	2.42	0.55
23:BB:1505:A:H2'	23:BB:1506:U:C6	2.41	0.55
23:BB:2405:G:H1'	23:BB:2412:A:N6	2.21	0.55
23:BB:2817:U:O2'	23:BB:2837:A:H1'	2.07	0.55
24:BI:91:LYS:HB2	24:BI:94:LYS:HD2	1.86	0.55
25:BC:71:ASP:CB	25:BC:118:GLY:HA2	2.35	0.55
25:BC:189:ALA:O	25:BC:190:THR:C	2.49	0.55
26:BD:124:ARG:HD3	26:BD:163:GLY:O	2.05	0.55
28:BP:4:ILE:HG22	28:BP:5:LYS:N	2.18	0.55
29:BE:149:ILE:O	29:BE:188:MET:HA	2.05	0.55
37:BL:109:LYS:HB2	37:BL:111:ILE:CD1	2.36	0.55
38:BM:54:THR:C	38:BM:56:ALA:H	2.14	0.55
39:BX:21:LEU:HA	39:BX:25:GLN:HB3	1.88	0.55
45:BS:24:ILE:HD11	45:BS:36:LEU:HD21	1.89	0.55
49:BR:5:PHE:H	49:BR:5:PHE:HD1	1.54	0.55
51:BZ:70:GLU:O	51:BZ:72:ARG:N	2.39	0.55
1:CA:254:G:OP1	14:CQ:68:LYS:O	2.25	0.55
1:CA:461:A:H3'	1:CA:462:G:O4'	2.06	0.55
1:CA:1242:G:O2'	1:CA:1243:C:H5'	2.06	0.55
23:DB:39:G:H2'	23:DB:40:U:H6	1.71	0.55
23:DB:350:G:H2'	23:DB:351:C:O4'	2.06	0.55
23:DB:720:U:H2'	23:DB:721:A:C8	2.42	0.55
23:DB:817:C:H2'	23:DB:818:G:O4'	2.06	0.55
23:DB:987:C:H2'	23:DB:988:A:O4'	2.06	0.55
23:DB:1051:G:H2'	23:DB:1052:C:C6	2.40	0.55
23:DB:1252:G:H1'	44:DQ:32:ARG:HH22	1.70	0.55
23:DB:1258:U:H2'	23:DB:1259:G:H8	1.71	0.55
40:DH:121:VAL:HG12	40:DH:123:ARG:HH11	1.71	0.55
48:DG:24:THR:C	48:DG:25:ILE:HD12	2.32	0.55
49:DR:66:HIS:ND1	49:DR:94:THR:HG22	2.22	0.55
1:AA:97:G:H2'	1:AA:98:A:O4'	2.05	0.55
1:AA:251:G:N3	1:AA:266:G:O6	2.40	0.55
1:AA:1290:G:H2'	1:AA:1291:U:C6	2.41	0.55
1:AA:1329:A:OP1	12:AM:28:ARG:HB2	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:168:ARG:HE	2:AC:169:GLU:N	2.04	0.55
3:AD:192:ALA:HB3	3:AD:194:ILE:HG22	1.87	0.55
6:AG:149:ALA:N	10:AK:55:ARG:NH2	2.54	0.55
8:AI:56:MET:HG3	8:AI:57:VAL:HG23	1.87	0.55
9:AJ:92:LEU:N	9:AJ:92:LEU:HD13	2.20	0.55
18:AB:11:ALA:C	18:AB:13:VAL:H	2.13	0.55
18:AB:110:ILE:C	18:AB:112:ARG:H	2.14	0.55
20:AO:11:ILE:CG1	20:AO:30:ALA:HB1	2.37	0.55
23:BB:208:C:H2'	23:BB:209:C:C6	2.40	0.55
23:BB:348:A:H2'	23:BB:349:U:O4'	2.06	0.55
23:BB:737:C:O2'	23:BB:738:G:H5'	2.07	0.55
23:BB:784:G:N1	25:BC:227:VAL:HG11	2.21	0.55
23:BB:936:A:H2'	23:BB:937:C:C6	2.41	0.55
23:BB:1252:G:N2	44:BQ:32:ARG:HB3	2.22	0.55
23:BB:2498:C:O2'	23:BB:2499:C:H5'	2.07	0.55
23:BB:2646:C:H2'	23:BB:2647:U:O4'	2.07	0.55
25:BC:158:GLY:N	25:BC:194:VAL:HG13	2.21	0.55
25:BC:221:GLY:O	25:BC:223:ALA:N	2.33	0.55
26:BD:102:ALA:H	26:BD:104:VAL:HG22	1.70	0.55
26:BD:114:LYS:HD2	26:BD:116:LYS:NZ	2.22	0.55
37:BL:132:ARG:HA	37:BL:135:ILE:HG22	1.87	0.55
40:BH:90:LEU:HD11	40:BH:146:VAL:HG11	1.87	0.55
44:BQ:94:LEU:C	44:BQ:96:ASP:N	2.64	0.55
1:CA:195:A:H2'	1:CA:196:A:C8	2.41	0.55
1:CA:215:C:H2'	1:CA:216:U:H6	1.71	0.55
1:CA:242:G:H2'	1:CA:243:A:H5"	1.89	0.55
1:CA:304:U:H2'	1:CA:305:G:C8	2.41	0.55
1:CA:476:U:O2'	1:CA:477:C:H5'	2.07	0.55
1:CA:648:A:H2'	1:CA:649:A:H8	1.71	0.55
1:CA:781:A:H2'	1:CA:782:A:H5'	1.88	0.55
1:CA:1512:U:H2'	1:CA:1513:A:C8	2.41	0.55
4:CE:89:THR:HG21	4:CE:134:ASN:HD21	1.71	0.55
7:CH:24:VAL:HG12	7:CH:60:LEU:HB3	1.88	0.55
10:CK:60:PHE:O	10:CK:64:VAL:HG12	2.05	0.55
8:CI:19:PHE:O	8:CI:62:LEU:HA	2.06	0.55
9:CJ:15:HIS:H	9:CJ:70:HIS:CE1	2.24	0.55
12:CM:29:SER:HA	12:CM:32:ILE:CG2	2.35	0.55
18:CB:128:LEU:HD21	18:CB:132:GLU:HB3	1.88	0.55
20:CO:81:LEU:HD23	20:CO:81:LEU:C	2.32	0.55
23:DB:30:G:OP1	44:DQ:4:LYS:HG2	2.07	0.55
23:DB:191:A:H2'	23:DB:192:C:H6	1.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:319:G:H2'	23:DB:320:A:O4'	2.07	0.55
23:DB:842:U:H2'	23:DB:843:G:H8	1.70	0.55
23:DB:847:U:O4'	23:DB:847:U:O2	2.24	0.55
23:DB:1018:U:O2'	23:DB:1019:U:H5'	2.07	0.55
23:DB:1061:U:H4'	23:DB:1070:A:O3'	2.06	0.55
23:DB:1513:U:O2'	23:DB:1514:G:H5'	2.06	0.55
23:DB:1790:C:O2'	25:DC:207:ALA:HB2	2.06	0.55
23:DB:1859:U:H2'	23:DB:1860:G:C8	2.42	0.55
23:DB:2256:G:H2'	23:DB:2257:U:H6	1.72	0.55
23:DB:2297:A:N1	23:DB:2320:U:H4'	2.21	0.55
23:DB:2452:C:H2'	23:DB:2453:A:C8	2.42	0.55
26:DD:51:THR:HG22	26:DD:52:THR:H	1.71	0.55
26:DD:102:ALA:H	26:DD:104:VAL:HG22	1.70	0.55
30:DY:6:ILE:HG22	30:DY:56:VAL:HG22	1.89	0.55
37:DL:61:LEU:HD12	37:DL:61:LEU:N	2.21	0.55
37:DL:136:GLU:C	37:DL:138:ALA:H	2.15	0.55
40:DH:84:ALA:C	40:DH:91:PHE:HE1	2.14	0.55
40:DH:131:SER:HB2	40:DH:141:LYS:CA	2.29	0.55
41:DJ:18:VAL:O	41:DJ:56:VAL:HA	2.06	0.55
43:DO:89:ASP:H	43:DO:115:LEU:HD13	1.70	0.55
48:DG:153:PRO:CG	48:DG:162:ARG:HB3	2.35	0.55
50:DT:39:THR:HG23	50:DT:41:ALA:H	1.70	0.55
1:AA:151:A:H5'	1:AA:152:A:OP2	2.06	0.55
1:AA:242:G:H2'	1:AA:243:A:H5"	1.87	0.55
1:AA:499:A:H4'	1:AA:500:G:H5'	1.87	0.55
1:AA:842:U:H2'	1:AA:843:U:O3'	2.07	0.55
1:AA:1221:G:P	16:AS:36:ARG:HH22	2.28	0.55
3:AD:89:LEU:HD22	3:AD:199:ILE:HD11	1.87	0.55
4:AE:47:PHE:O	4:AE:66:ALA:HA	2.07	0.55
6:AG:14:ASP:CB	6:AG:19:SER:H	2.12	0.55
9:AJ:8:ILE:HD13	9:AJ:75:ASP:CA	2.36	0.55
10:AK:33:ILE:CB	10:AK:73:VAL:HG11	2.36	0.55
13:AP:48:GLU:CD	13:AP:49:GLY:H	2.14	0.55
18:AB:86:CYS:C	18:AB:88:GLN:H	2.13	0.55
20:AO:69:TYR:CZ	20:AO:73:LYS:HG3	2.41	0.55
23:BB:1728:C:H2'	23:BB:1730:C:O2	2.06	0.55
23:BB:2728:U:H2'	23:BB:2729:G:C8	2.42	0.55
24:BI:17:ALA:O	24:BI:18:ASN:HB3	2.06	0.55
24:BI:109:ALA:HB1	24:BI:124:MET:HG3	1.89	0.55
25:BC:132:ARG:HH22	25:BC:169:ALA:HA	1.71	0.55
25:BC:191:LEU:CD2	25:BC:192:GLY:H	2.18	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:117:GLY:HA2	26:BD:164:GLN:CD	2.32	0.55
29:BE:48:THR:HG22	29:BE:86:ALA:HB3	1.87	0.55
40:BH:117:LEU:HG	40:BH:130:VAL:HG13	1.89	0.55
44:BQ:20:ALA:HB2	44:BQ:38:VAL:CG2	2.36	0.55
44:BQ:91:ARG:HB3	44:BQ:93:ILE:HG22	1.87	0.55
47:BF:8:LYS:HA	47:BF:12:VAL:CG2	2.36	0.55
50:BT:14:PRO:HA	50:BT:32:LEU:HB2	1.88	0.55
50:BT:44:LYS:O	50:BT:48:GLN:HG2	2.06	0.55
1:CA:616:G:N3	1:CA:616:G:H2'	2.20	0.55
1:CA:980:C:H2'	1:CA:981:U:O4'	2.06	0.55
1:CA:1114:C:H2'	1:CA:1115:U:C6	2.41	0.55
1:CA:1228:C:OP1	12:CM:113:LYS:HB2	2.06	0.55
1:CA:1253:G:N1	1:CA:1285:A:N6	2.54	0.55
1:CA:1332:A:H2'	1:CA:1333:A:H8	1.72	0.55
1:CA:1492:A:H5"	1:CA:1493:A:C4	2.42	0.55
3:CD:117:VAL:HA	3:CD:122:ILE:CG1	2.37	0.55
3:CD:151:GLN:HB3	3:CD:153:ARG:HG2	1.87	0.55
5:CF:71:ILE:O	5:CF:75:GLU:HG3	2.06	0.55
2:CC:72:PRO:HG2	2:CC:73:GLY:H	1.70	0.55
21:CN:9:GLU:HB2	21:CN:62:ARG:NH2	2.21	0.55
21:CN:40:ARG:HB2	21:CN:40:ARG:NH1	2.17	0.55
18:CB:15:PHE:O	18:CB:40:ILE:HD12	2.07	0.55
23:DB:615:U:O4	29:DE:39:ALA:HB2	2.05	0.55
23:DB:637:A:OP2	37:DL:128:THR:HG21	2.06	0.55
23:DB:1584:U:H5"	23:DB:1585:C:C5	2.41	0.55
24:DI:129:GLU:HB3	24:DI:133:ARG:HH12	1.70	0.55
25:DC:4:LYS:CD	25:DC:5:CYS:H	2.19	0.55
29:DE:29:HIS:NE2	37:DL:8:PRO:HG3	2.21	0.55
37:DL:30:THR:O	37:DL:33:ARG:HG2	2.06	0.55
40:DH:119:ASN:N	40:DH:119:ASN:ND2	2.54	0.55
41:DJ:25:LEU:HD13	41:DJ:26:GLY:N	2.20	0.55
45:DS:15:GLN:O	45:DS:19:LEU:HB2	2.06	0.55
47:DF:128:SER:HB3	47:DF:154:THR:HA	1.88	0.55
50:DT:32:LEU:O	50:DT:83:ALA:HB2	2.05	0.55
1:AA:184:G:N1	1:AA:194:C:N4	2.54	0.55
1:AA:231:U:H2'	1:AA:232:G:H8	1.70	0.55
1:AA:437:U:H5"	3:AD:151:GLN:HE21	1.70	0.55
1:AA:560:A:H4'	1:AA:561:U:C5'	2.36	0.55
1:AA:1065:U:H1'	1:AA:1066:C:OP2	2.06	0.55
8:AI:83:THR:HA	8:AI:86:LEU:HD22	1.89	0.55
9:AJ:52:LEU:HB2	21:AN:80:ARG:NE	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AM:56:ARG:HH11	12:AM:56:ARG:HG3	1.72	0.55
12:AM:94:LEU:HB3	12:AM:95:PRO:HD2	1.89	0.55
13:AP:28:ARG:HH11	13:AP:29:ASN:HD22	1.53	0.55
18:AB:23:ASN:ND2	18:AB:25:LYS:HB2	2.19	0.55
22:BA:42:C:C5	47:BF:65:LEU:HD22	2.41	0.55
22:BA:54:G:O2'	22:BA:55:U:H5'	2.07	0.55
23:BB:1041:G:O2'	23:BB:1042:G:H5'	2.07	0.55
23:BB:1258:U:H2'	23:BB:1259:G:H8	1.71	0.55
23:BB:1727:C:H2'	23:BB:1728:C:C6	2.42	0.55
23:BB:1777:U:O2'	23:BB:1778:U:H5'	2.06	0.55
23:BB:2183:A:H2'	23:BB:2184:A:C8	2.41	0.55
27:BK:16:ALA:HB3	27:BK:47:ILE:HG13	1.89	0.55
30:BY:15:ARG:N	30:BY:15:ARG:HD2	2.22	0.55
30:BY:50:VAL:HB	30:BY:53:MET:CB	2.36	0.55
35:BV:41:GLU:C	35:BV:42:LEU:HD23	2.30	0.55
37:BL:124:GLY:H	37:BL:143:GLU:HG3	1.68	0.55
47:BF:15:LEU:HA	47:BF:18:GLU:HB2	1.88	0.55
48:BG:30:GLY:O	48:BG:78:VAL:HG12	2.07	0.55
49:BR:20:VAL:HG12	49:BR:21:ARG:H	1.71	0.55
1:CA:121:U:H4'	1:CA:122:G:N7	2.20	0.55
1:CA:253:A:H2'	1:CA:254:G:C8	2.42	0.55
1:CA:389:A:H3'	1:CA:390:U:H6	1.72	0.55
1:CA:843:U:H6	1:CA:843:U:H5"	1.71	0.55
1:CA:1258:G:H2'	1:CA:1259:C:C6	2.41	0.55
3:CD:8:LEU:O	3:CD:12:ARG:HG2	2.05	0.55
3:CD:60:VAL:HA	3:CD:63:ILE:HD12	1.89	0.55
5:CF:66:ALA:HB1	5:CF:70:VAL:HG21	1.89	0.55
5:CF:84:VAL:HG22	5:CF:85:ILE:N	2.21	0.55
7:CH:95:MET:HB3	7:CH:99:GLY:H	1.71	0.55
13:CP:40:ASN:HD21	13:CP:43:ALA:N	2.05	0.55
23:DB:392:U:O2'	23:DB:393:C:H5'	2.07	0.55
23:DB:1116:G:O2'	23:DB:1117:C:H5'	2.06	0.55
23:DB:1461:C:H2'	23:DB:1462:C:C6	2.42	0.55
23:DB:1687:G:O2'	23:DB:1688:U:H5'	2.07	0.55
23:DB:1751:U:H2'	23:DB:1752:C:C5	2.41	0.55
23:DB:2261:C:O2'	23:DB:2262:U:H5'	2.06	0.55
23:DB:2555:U:H2'	23:DB:2556:C:O4'	2.07	0.55
23:DB:2798:U:H5"	23:DB:2799:A:OP1	2.06	0.55
23:DB:2813:A:H2'	23:DB:2814:A:C8	2.42	0.55
23:DB:2828:G:H2'	23:DB:2829:A:H8	1.72	0.55
23:DB:2849:U:N3	23:DB:2867:G:C8	2.74	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DK:71:ARG:HA	27:DK:71:ARG:NE	2.22	0.55
29:DE:73:ILE:HG12	29:DE:73:ILE:O	2.06	0.55
31:D0:21:LEU:HD12	45:DS:19:LEU:O	2.06	0.55
35:DV:70:ILE:N	35:DV:70:ILE:HD13	2.21	0.55
44:DQ:111:LYS:HB2	49:DR:48:LYS:HZ3	1.71	0.55
46:DU:86:PHE:CG	46:DU:87:GLU:N	2.74	0.55
47:DF:120:SER:HB2	47:DF:129:MET:HG3	1.88	0.55
50:DT:32:LEU:H	50:DT:83:ALA:HB3	1.72	0.55
50:DT:85:VAL:C	50:DT:86:THR:HG23	2.32	0.55
1:AA:22:G:H2'	1:AA:23:C:H6	1.71	0.55
1:AA:162:A:H2'	1:AA:163:C:O4'	2.06	0.55
1:AA:613:C:H2'	1:AA:614:C:C6	2.42	0.55
1:AA:765:G:O6	1:AA:811:C:H5	1.90	0.55
1:AA:1116:U:O2'	1:AA:1117:A:H5'	2.07	0.55
1:AA:1320:C:N3	16:AS:35:ARG:HD3	2.22	0.55
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.42	0.55
1:AA:1463:U:H2'	1:AA:1464:U:C6	2.41	0.55
1:AA:1477:U:H2'	1:AA:1478:U:C6	2.41	0.55
3:AD:9:LYS:HA	3:AD:12:ARG:HG3	1.87	0.55
3:AD:29:THR:HG22	3:AD:30:LYS:HD3	1.88	0.55
11:AL:35:ARG:NH2	11:AL:36:VAL:HG22	2.19	0.55
18:AB:49:PHE:O	18:AB:53:LEU:HD13	2.06	0.55
20:AO:32:LEU:HD12	20:AO:63:ARG:HB2	1.88	0.55
23:BB:93:G:H2'	23:BB:94:A:C8	2.42	0.55
23:BB:319:G:H2'	23:BB:320:A:O4'	2.07	0.55
23:BB:851:C:H2'	23:BB:852:U:H6	1.71	0.55
23:BB:1115:G:H2'	23:BB:1116:G:C8	2.42	0.55
23:BB:1754:A:H2'	23:BB:1755:A:C8	2.41	0.55
24:BI:10:LEU:O	24:BI:10:LEU:HD12	2.06	0.55
25:BC:108:GLY:C	25:BC:110:LYS:H	2.15	0.55
26:BD:108:ASP:OD2	26:BD:173:GLN:HA	2.07	0.55
27:BK:25:LEU:CD2	27:BK:40:LYS:HB2	2.35	0.55
33:B1:49:LYS:HG2	33:B1:50:GLU:N	2.17	0.55
40:BH:128:HIS:O	40:BH:143:ILE:HG22	2.06	0.55
48:BG:36:LEU:HD22	48:BG:36:LEU:N	2.22	0.55
49:BR:98:ILE:O	49:BR:99:THR:HG23	2.06	0.55
50:BT:39:THR:CG2	50:BT:42:GLU:H	2.20	0.55
52:BW:23:LYS:HD2	52:BW:24:ARG:N	2.21	0.55
1:CA:978:A:H5'	1:CA:1362:A:H62	1.70	0.55
1:CA:1269:A:H2'	1:CA:1270:G:H5'	1.89	0.55
1:CA:1339:A:H2'	1:CA:1340:A:O4'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1366:C:O2'	1:CA:1367:C:H5'	2.06	0.55
1:CA:1389:C:H2'	1:CA:1390:U:H6	1.71	0.55
3:CD:54:LEU:HD22	3:CD:54:LEU:O	2.07	0.55
3:CD:90:LEU:HD21	3:CD:196:GLU:HB3	1.88	0.55
4:CE:47:PHE:O	4:CE:66:ALA:HA	2.06	0.55
4:CE:150:GLU:CD	4:CE:150:GLU:H	2.15	0.55
5:CF:70:VAL:HG23	5:CF:71:ILE:N	2.21	0.55
19:CU:36:PHE:HA	19:CU:39:LYS:HD2	1.89	0.55
20:CO:78:TYR:OH	20:CO:88:ARG:HG2	2.07	0.55
22:DA:42:C:C5	47:DF:65:LEU:HD22	2.42	0.55
22:DA:89:U:H5'	22:DA:90:C:C6	2.42	0.55
23:DB:256:A:H2'	23:DB:257:C:C6	2.41	0.55
23:DB:851:C:H2'	23:DB:852:U:C6	2.42	0.55
23:DB:915:C:H3'	23:DB:916:G:H8	1.71	0.55
23:DB:2676:C:H2'	23:DB:2677:G:H8	1.72	0.55
23:DB:2761:A:H1'	48:DG:142:GLN:NE2	2.21	0.55
23:DB:2787:C:H1'	26:DD:63:PRO:HG3	1.88	0.55
27:DK:76:VAL:H	28:DP:72:VAL:HG23	1.72	0.55
29:DE:161:ALA:HA	29:DE:164:LEU:HD12	1.88	0.55
29:DE:165:HIS:C	29:DE:167:VAL:H	2.13	0.55
35:DV:6:ALA:HB3	35:DV:65:VAL:HG12	1.88	0.55
43:DO:52:SER:O	43:DO:58:ILE:HD12	2.07	0.55
46:DU:14:THR:O	46:DU:18:LYS:HG2	2.05	0.55
47:DF:69:ALA:HB3	47:DF:80:GLN:O	2.07	0.55
1:AA:469:C:H2'	1:AA:470:C:C6	2.42	0.55
1:AA:620:C:O2	3:AD:131:ILE:HG21	2.07	0.55
1:AA:1121:U:H2'	1:AA:1122:U:O4'	2.06	0.55
2:AC:149:LYS:HA	2:AC:168:ARG:HG3	1.88	0.55
5:AF:3:HIS:CD2	5:AF:65:GLU:HG3	2.41	0.55
8:AI:44:ARG:O	8:AI:47:VAL:HG22	2.07	0.55
14:AQ:59:GLU:HB3	14:AQ:75:VAL:HG23	1.88	0.55
14:AQ:60:ILE:HG22	14:AQ:74:LEU:HA	1.89	0.55
18:AB:124:THR:OG1	18:AB:127:LYS:HE2	2.07	0.55
18:AB:214:GLY:O	18:AB:217:ALA:HB3	2.07	0.55
23:BB:176:A:O2'	23:BB:177:G:H5'	2.07	0.55
23:BB:1637:A:H2'	23:BB:1638:C:C6	2.41	0.55
23:BB:1997:C:H2'	23:BB:1998:A:H8	1.71	0.55
34:B3:50:SER:C	34:B3:52:GLY:H	2.15	0.55
40:BH:84:ALA:HA	40:BH:90:LEU:HG	1.88	0.55
47:BF:91:ARG:O	47:BF:92:GLY:C	2.50	0.55
47:BF:134:GLN:O	47:BF:136:ILE:N	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:270:A:H2'	1:CA:271:C:H6	1.71	0.55
1:CA:295:C:H2'	1:CA:296:U:C6	2.41	0.55
1:CA:499:A:H4'	1:CA:500:G:OP1	2.05	0.55
1:CA:1226:C:N4	12:CM:102:LYS:HB2	2.22	0.55
1:CA:1343:G:O3'	8:CI:123:ARG:HD3	2.07	0.55
3:CD:48:SER:O	3:CD:52:VAL:HG23	2.07	0.55
13:CP:53:ASP:O	13:CP:57:ILE:HG12	2.07	0.55
6:CG:68:VAL:HG11	6:CG:103:ILE:CG1	2.37	0.55
12:CM:1:ALA:O	12:CM:3:ILE:HG13	2.07	0.55
18:CB:116:LEU:HD22	18:CB:140:LEU:HD11	1.88	0.55
23:DB:154:U:H2'	23:DB:155:A:C8	2.42	0.55
23:DB:419:U:H2'	23:DB:420:C:C6	2.42	0.55
23:DB:431:U:O2'	23:DB:432:A:H5'	2.07	0.55
23:DB:899:A:C2	23:DB:900:A:H1'	2.41	0.55
23:DB:1006:C:H1'	41:DJ:108:MET:SD	2.47	0.55
23:DB:1229:C:H2'	23:DB:1230:A:H8	1.72	0.55
23:DB:2393:U:O2'	23:DB:2394:C:H5'	2.06	0.55
23:DB:2567:G:H2'	23:DB:2568:U:C6	2.41	0.55
23:DB:2769:U:H2'	23:DB:2770:G:H8	1.70	0.55
23:DB:2828:G:O2'	23:DB:2829:A:H5'	2.06	0.55
23:DB:2884:U:C6	31:D0:49:ARG:HG2	2.41	0.55
25:DC:20:ASN:HD22	25:DC:23:LEU:HD13	1.71	0.55
25:DC:71:ASP:CB	25:DC:118:GLY:HA2	2.35	0.55
25:DC:146:LYS:HB3	25:DC:147:PRO:CD	2.32	0.55
26:DD:33:ARG:NH1	26:DD:51:THR:HG22	2.22	0.55
26:DD:149:ASN:C	26:DD:152:PRO:HD2	2.31	0.55
38:DM:71:LYS:HG2	38:DM:93:VAL:HG12	1.89	0.55
40:DH:68:ARG:O	40:DH:72:ILE:HG12	2.07	0.55
47:DF:2:LYS:H	47:DF:2:LYS:HE3	1.72	0.55
48:DG:36:LEU:HD22	48:DG:36:LEU:N	2.21	0.55
49:DR:60:LYS:H	49:DR:100:GLY:HA3	1.70	0.55
51:DZ:32:ASN:HB2	51:DZ:53:ALA:H	1.70	0.55
1:AA:501:C:O2'	1:AA:502:A:H5'	2.06	0.55
1:AA:729:A:H2'	1:AA:730:G:H8	1.71	0.55
1:AA:991:U:H3	1:AA:1212:U:C4'	2.19	0.55
8:AI:26:LYS:O	8:AI:61:ASP:HB2	2.07	0.55
13:AP:22:ALA:HA	13:AP:33:ILE:HG13	1.88	0.55
18:AB:53:LEU:HA	18:AB:56:LEU:HB2	1.88	0.55
23:BB:45:G:C5'	23:BB:46:G:H5'	2.29	0.55
23:BB:256:A:H2'	23:BB:257:C:C6	2.41	0.55
23:BB:710:U:H2'	23:BB:711:G:H8	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1315:C:H2'	23:BB:1316:U:H6	1.70	0.55
23:BB:1751:U:H2'	23:BB:1752:C:C5	2.42	0.55
23:BB:1771:C:H2'	23:BB:1772:A:C8	2.42	0.55
23:BB:1925:C:H2'	23:BB:1926:U:H5"	1.88	0.55
26:BD:33:ARG:HH11	26:BD:76:GLY:HA3	1.71	0.55
27:BK:11:ALA:HB3	27:BK:85:VAL:HG22	1.87	0.55
33:B1:3:GLY:O	33:B1:5:ARG:N	2.40	0.55
35:BV:63:ILE:CD1	35:BV:72:VAL:HG22	2.36	0.55
40:BH:116:ARG:HH22	40:BH:133:GLN:CA	2.19	0.55
43:BO:58:ILE:HG22	43:BO:62:LEU:HD21	1.87	0.55
46:BU:86:PHE:CD1	46:BU:90:LYS:HB2	2.42	0.55
46:BU:86:PHE:HB3	46:BU:90:LYS:O	2.07	0.55
47:BF:69:ALA:HB3	47:BF:80:GLN:O	2.06	0.55
47:BF:87:LYS:CG	47:BF:88:VAL:H	2.19	0.55
48:BG:25:ILE:O	48:BG:32:LEU:HA	2.06	0.55
48:BG:89:VAL:HG23	48:BG:160:GLY:O	2.06	0.55
48:BG:106:LEU:C	48:BG:108:PHE:H	2.14	0.55
1:CA:239:U:H6	1:CA:239:U:C5'	2.20	0.55
1:CA:332:G:P	17:CT:2:ASN:HB3	2.47	0.55
1:CA:437:U:H5"	3:CD:151:GLN:HE21	1.72	0.55
1:CA:575:G:H4'	1:CA:576:C:O5'	2.07	0.55
1:CA:892:A:H2'	1:CA:893:C:C6	2.42	0.55
1:CA:1167:A:H2'	1:CA:1169:A:H62	1.72	0.55
1:CA:1271:A:H5'	1:CA:1314:C:H5'	1.89	0.55
1:CA:1411:C:O2'	1:CA:1412:C:H5'	2.07	0.55
1:CA:1478:U:H2'	1:CA:1479:C:C6	2.41	0.55
3:CD:90:LEU:HD22	3:CD:90:LEU:H	1.72	0.55
4:CE:131:ASN:ND2	4:CE:134:ASN:H	2.05	0.55
19:CU:24:LYS:HD2	19:CU:25:ALA:N	2.21	0.55
6:CG:94:ARG:O	6:CG:98:LEU:HB2	2.07	0.55
6:CG:139:ASP:HA	6:CG:142:ARG:NH1	2.21	0.55
8:CI:62:LEU:HD22	8:CI:62:LEU:N	2.21	0.55
8:CI:108:ARG:HB3	8:CI:108:ARG:NH1	2.21	0.55
12:CM:2:ARG:HA	12:CM:7:ASN:O	2.07	0.55
18:CB:8:MET:O	18:CB:10:LYS:N	2.39	0.55
22:DA:40:U:H1'	22:DA:43:C:C5	2.42	0.55
23:DB:37:C:O2'	23:DB:38:A:H5'	2.06	0.55
23:DB:292:U:O2'	23:DB:293:U:H5'	2.07	0.55
23:DB:397:U:OP1	51:DZ:31:PRO:HA	2.07	0.55
23:DB:402:A:C2'	23:DB:403:U:H5'	2.37	0.55
23:DB:670:A:H4'	23:DB:671:C:C5'	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:719:C:O2'	23:DB:720:U:H5'	2.06	0.55
23:DB:1825:U:H2'	23:DB:1826:G:H8	1.72	0.55
23:DB:2292:U:H2'	23:DB:2293:G:C8	2.41	0.55
25:DC:177:SER:O	25:DC:270:ARG:HG3	2.06	0.55
27:DK:40:LYS:NZ	27:DK:59:LYS:HE3	2.22	0.55
27:DK:115:ILE:HG23	27:DK:116:ILE:N	2.22	0.55
39:DX:21:LEU:HA	39:DX:25:GLN:HB3	1.89	0.55
40:DH:135:HIS:HB3	40:DH:138:VAL:CB	2.35	0.55
47:DF:15:LEU:HA	47:DF:18:GLU:HB2	1.89	0.55
48:DG:118:ALA:C	48:DG:120:ILE:H	2.14	0.55
1:AA:767:A:H2'	1:AA:768:A:H8	1.72	0.55
1:AA:1396:A:C3'	1:AA:1397:C:H5'	2.36	0.55
1:AA:1412:C:H2'	1:AA:1413:A:H8	1.70	0.55
2:AC:148:ILE:HA	2:AC:200:TRP:O	2.07	0.55
3:AD:36:ALA:HB2	3:AD:42:ALA:HB2	1.89	0.55
3:AD:156:ALA:O	3:AD:159:GLU:HB3	2.06	0.55
18:AB:79:VAL:HA	18:AB:213:LEU:HD21	1.88	0.55
18:AB:113:LEU:HD11	18:AB:144:GLU:HA	1.89	0.55
23:BB:154:U:H2'	23:BB:155:A:C8	2.41	0.55
23:BB:280:U:H2'	23:BB:281:C:C6	2.41	0.55
23:BB:480:A:H2'	23:BB:480:A:N3	2.22	0.55
23:BB:801:G:H4'	23:BB:802:A:OP2	2.07	0.55
23:BB:828:U:H2'	23:BB:829:A:C8	2.42	0.55
23:BB:909:A:H2'	23:BB:912:C:H5	1.72	0.55
25:BC:146:LYS:HB3	25:BC:147:PRO:CD	2.31	0.55
28:BP:3:ILE:HG23	28:BP:4:ILE:H	1.72	0.55
32:B4:8:LYS:HG2	32:B4:9:LYS:N	2.22	0.55
37:BL:30:THR:O	37:BL:33:ARG:HG2	2.05	0.55
40:BH:42:LYS:HA	40:BH:46:PHE:HB2	1.87	0.55
40:BH:100:ALA:O	40:BH:110:VAL:HG23	2.07	0.55
41:BJ:19:ASP:HB2	41:BJ:57:LEU:HB2	1.89	0.55
42:BN:2:ARG:HB3	42:BN:2:ARG:CZ	2.37	0.55
42:BN:34:ILE:HG22	42:BN:35:LYS:N	2.22	0.55
46:BU:5:ARG:NH2	46:BU:93:ARG:HD3	2.21	0.55
50:BT:30:ILE:HG23	50:BT:85:VAL:CG2	2.37	0.55
50:BT:50:LEU:C	50:BT:52:GLU:H	2.15	0.55
52:BW:37:VAL:HB	52:BW:38:ARG:HD3	1.88	0.55
1:CA:1355:G:O2'	1:CA:1356:G:H5'	2.07	0.55
10:CK:95:THR:HG23	10:CK:96:ILE:N	2.22	0.55
14:CQ:59:GLU:HB3	14:CQ:75:VAL:CG2	2.37	0.55
2:CC:106:ARG:O	2:CC:107:LYS:C	2.49	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:18:U:H2'	23:DB:19:A:C8	2.42	0.55
23:DB:103:A:H3'	23:DB:104:A:H8	1.72	0.55
23:DB:394:C:O2'	23:DB:395:U:H5'	2.07	0.55
23:DB:551:G:H2'	23:DB:552:U:H6	1.72	0.55
23:DB:1015:U:H2'	23:DB:1016:G:C8	2.42	0.55
23:DB:1794:A:H2'	23:DB:1795:C:C6	2.41	0.55
30:DY:58:GLU:CD	30:DY:58:GLU:H	2.15	0.55
43:DO:76:LYS:O	43:DO:79:ALA:HB3	2.06	0.55
47:DF:110:ILE:CG2	47:DF:113:PHE:HB3	2.37	0.55
47:DF:137:PHE:HB2	47:DF:138:PRO:CD	2.36	0.55
1:AA:55:A:H2'	1:AA:56:U:O4'	2.07	0.55
1:AA:203:G:H5'	1:AA:468:A:O2'	2.06	0.55
1:AA:749:A:O2'	1:AA:750:C:H5'	2.06	0.55
1:AA:802:A:H2'	1:AA:803:G:O4'	2.07	0.55
6:AG:147:ASN:HA	10:AK:55:ARG:CZ	2.37	0.55
18:AB:55:GLU:O	18:AB:59:ILE:HG12	2.07	0.55
18:AB:112:ARG:HE	18:AB:116:LEU:CD1	2.20	0.55
18:AB:131:LYS:HE2	18:AB:135:MET:HE2	1.89	0.55
18:AB:216:VAL:O	18:AB:220:VAL:HG23	2.07	0.55
23:BB:68:G:O2'	23:BB:69:C:H5'	2.06	0.55
23:BB:518:G:H4'	45:BS:18:ARG:NH2	2.22	0.55
23:BB:923:G:N3	52:BW:23:LYS:HE3	2.22	0.55
23:BB:1210:G:H5'	23:BB:1212:G:O4'	2.07	0.55
23:BB:1309:G:H4'	36:B2:7:PRO:HB2	1.89	0.55
23:BB:1818:U:N3	25:BC:152:GLN:HB3	2.20	0.55
23:BB:1967:C:H2'	23:BB:1968:G:O4'	2.07	0.55
26:BD:178:VAL:HG12	26:BD:179:ARG:HG3	1.89	0.55
29:BE:2:GLU:HA	29:BE:13:THR:CA	2.37	0.55
29:BE:148:ILE:HA	29:BE:187:VAL:HB	1.87	0.55
33:B1:36:LYS:CB	33:B1:47:ILE:HA	2.37	0.55
1:CA:13:U:O2	1:CA:914:A:H3'	2.07	0.55
1:CA:151:A:H5'	1:CA:152:A:OP2	2.06	0.55
1:CA:201:G:H2'	1:CA:202:G:O4'	2.07	0.55
1:CA:203:G:H5'	1:CA:468:A:O2'	2.06	0.55
1:CA:364:A:H2'	1:CA:365:U:O2	2.07	0.55
1:CA:1286:U:O4'	1:CA:1286:U:O2	2.25	0.55
1:CA:1329:A:H4'	12:CM:23:GLY:O	2.06	0.55
3:CD:32:LYS:HA	3:CD:35:GLN:HE21	1.72	0.55
3:CD:146:GLU:CD	3:CD:146:GLU:N	2.65	0.55
11:CL:49:ARG:HH12	11:CL:88:ASP:CB	2.20	0.55
2:CC:18:ASN:C	2:CC:55:VAL:HG13	2.32	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:63:VAL:HA	6:CG:66:GLU:OE2	2.07	0.55
18:CB:107:ARG:HA	18:CB:110:ILE:CD1	2.36	0.55
23:DB:45:G:C5'	23:DB:46:G:H5'	2.31	0.55
23:DB:237:C:O2'	23:DB:238:C:H5'	2.06	0.55
23:DB:854:C:O2'	23:DB:855:G:H5'	2.07	0.55
23:DB:863:A:H2'	23:DB:864:G:H8	1.71	0.55
23:DB:2322:A:H3'	23:DB:2323:G:H8	1.72	0.55
23:DB:2358:A:H61	37:DL:54:GLN:HE22	1.55	0.55
23:DB:2455:G:H2'	23:DB:2456:C:C6	2.41	0.55
23:DB:2885:G:H2'	23:DB:2886:A:O4'	2.06	0.55
24:DI:71:LYS:HB3	24:DI:115:ASP:OD2	2.06	0.55
25:DC:83:ASP:HB2	25:DC:90:ILE:HG12	1.88	0.55
30:DY:6:ILE:HD13	30:DY:6:ILE:N	2.20	0.55
36:D2:21:ARG:HD3	36:D2:30:VAL:HG11	1.89	0.55
47:DF:35:LEU:HA	47:DF:153:ILE:HG12	1.89	0.55
47:DF:147:ARG:O	47:DF:148:VAL:C	2.50	0.55
48:DG:8:VAL:CG1	48:DG:49:LEU:HB3	2.36	0.55
1:AA:213:G:H3'	1:AA:214:C:H6	1.72	0.54
1:AA:499:A:H4'	1:AA:500:G:OP1	2.07	0.54
1:AA:630:A:H2'	1:AA:631:C:C6	2.42	0.54
1:AA:1014:A:C5'	16:AS:13:HIS:HB3	2.37	0.54
5:AF:56:LYS:HE3	5:AF:56:LYS:N	2.22	0.54
6:AG:50:ALA:HB2	6:AG:57:GLU:HG3	1.89	0.54
8:AI:97:LEU:HA	8:AI:102:PHE:HD1	1.73	0.54
10:AK:35:ASP:OD2	10:AK:37:GLN:HG2	2.07	0.54
11:AL:3:VAL:O	11:AL:7:VAL:HG23	2.08	0.54
20:AO:85:LEU:HD12	20:AO:85:LEU:N	2.22	0.54
23:BB:441:U:H2'	23:BB:442:G:C8	2.42	0.54
23:BB:553:G:O2'	23:BB:554:U:H5'	2.06	0.54
23:BB:832:U:H2'	23:BB:833:A:H8	1.70	0.54
23:BB:1038:G:H2'	23:BB:1039:A:C8	2.42	0.54
23:BB:1400:U:H2'	23:BB:1401:G:H8	1.71	0.54
23:BB:1479:G:O2'	23:BB:1480:C:H5'	2.07	0.54
23:BB:2181:U:H2'	23:BB:2182:U:C6	2.42	0.54
23:BB:2730:C:H2'	23:BB:2731:G:H8	1.71	0.54
24:BI:14:ALA:HB1	24:BI:50:LYS:HA	1.88	0.54
25:BC:155:ARG:HH11	25:BC:155:ARG:CB	2.19	0.54
27:BK:85:VAL:HG21	27:BK:115:ILE:CD1	2.36	0.54
29:BE:34:ALA:CB	29:BE:96:VAL:HG21	2.35	0.54
29:BE:157:LEU:HG	29:BE:169:VAL:HG11	1.88	0.54
30:BY:10:ARG:HG3	30:BY:53:MET:HE2	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B3:7:ARG:HH11	34:B3:7:ARG:HG3	1.72	0.54
40:BH:53:GLU:C	40:BH:54:LEU:HD23	2.32	0.54
43:BO:76:LYS:O	43:BO:79:ALA:HB3	2.07	0.54
46:BU:12:VAL:HA	46:BU:69:VAL:HG12	1.87	0.54
46:BU:64:ILE:HG13	46:BU:65:GLN:N	2.22	0.54
1:CA:202:G:H2'	1:CA:203:G:H8	1.72	0.54
1:CA:237:G:H5"	14:CQ:26:ARG:HH21	1.72	0.54
1:CA:376:G:H4'	13:CP:5:ARG:HD3	1.89	0.54
1:CA:1122:U:H2'	1:CA:1123:U:C6	2.41	0.54
1:CA:1127:G:H2'	1:CA:1128:C:C6	2.41	0.54
1:CA:1340:A:H2'	1:CA:1341:U:O4'	2.07	0.54
1:CA:1389:C:H2'	1:CA:1390:U:C6	2.41	0.54
5:CF:3:HIS:CD2	5:CF:65:GLU:HG3	2.41	0.54
13:CP:6:LEU:CD1	13:CP:71:VAL:HB	2.37	0.54
2:CC:145:ALA:C	2:CC:147:GLY:H	2.15	0.54
12:CM:78:ARG:NH1	16:CS:64:GLU:HG2	2.22	0.54
22:DA:37:C:H2'	22:DA:38:C:O4'	2.06	0.54
23:DB:1144:A:O2'	23:DB:1145:C:H5'	2.07	0.54
23:DB:1666:G:O3'	27:DK:6:THR:HG23	2.07	0.54
23:DB:2231:U:H2'	23:DB:2232:C:H6	1.72	0.54
23:DB:2556:C:H2'	23:DB:2557:G:O4'	2.07	0.54
24:DI:2:LYS:HB3	24:DI:2:LYS:NZ	2.22	0.54
25:DC:189:ALA:O	25:DC:190:THR:C	2.49	0.54
27:DK:40:LYS:HZ2	27:DK:59:LYS:HE3	1.72	0.54
35:DV:63:ILE:CD1	35:DV:72:VAL:HG22	2.36	0.54
52:DW:17:ALA:O	52:DW:18:LYS:HD2	2.07	0.54
1:AA:409:U:H2'	1:AA:410:G:C8	2.42	0.54
1:AA:668:G:O2'	20:AO:46:HIS:HB3	2.07	0.54
1:AA:1305:G:H1'	1:AA:1332:A:N6	2.21	0.54
2:AC:13:ILE:HG12	2:AC:14:VAL:HG13	1.89	0.54
4:AE:103:GLY:O	4:AE:121:ASN:HA	2.08	0.54
7:AH:124:ILE:C	7:AH:125:ILE:HD12	2.31	0.54
9:AJ:18:ILE:HG12	9:AJ:72:ARG:HG2	1.89	0.54
18:AB:138:ARG:HA	18:AB:141:GLU:OE1	2.06	0.54
18:AB:160:LEU:HB3	18:AB:182:VAL:HG22	1.88	0.54
18:AB:221:ARG:HG3	18:AB:222:GLU:N	2.22	0.54
23:BB:182:A:H1'	23:BB:434:U:H5'	1.88	0.54
23:BB:431:U:O2'	23:BB:432:A:H5'	2.08	0.54
23:BB:594:U:H2'	23:BB:595:C:H6	1.73	0.54
23:BB:759:G:H2'	23:BB:760:G:C8	2.42	0.54
23:BB:955:U:H5"	38:BM:86:LYS:HZ2	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1042:G:O2'	23:BB:1043:C:H5'	2.07	0.54
23:BB:1400:U:H2'	23:BB:1401:G:C8	2.41	0.54
23:BB:1734:G:O2'	23:BB:1735:A:H5'	2.07	0.54
23:BB:2556:C:H2'	23:BB:2557:G:O4'	2.06	0.54
24:BI:5:GLN:HG2	24:BI:6:ALA:N	2.22	0.54
26:BD:107:VAL:H	26:BD:205:PRO:HA	1.71	0.54
27:BK:2:ILE:HG22	27:BK:32:TYR:HB3	1.90	0.54
35:BV:63:ILE:HD12	35:BV:63:ILE:N	2.21	0.54
42:BN:57:THR:HG22	42:BN:58:ASP:H	1.71	0.54
45:BS:42:LYS:O	45:BS:45:VAL:HG22	2.06	0.54
45:BS:96:ILE:HG23	45:BS:96:ILE:O	2.07	0.54
47:BF:147:ARG:O	47:BF:148:VAL:C	2.50	0.54
1:CA:1432:G:H1'	1:CA:1468:A:N6	2.22	0.54
19:CU:40:PRO:C	19:CU:42:THR:H	2.15	0.54
2:CC:71:ARG:HB2	2:CC:74:ILE:CG2	2.38	0.54
12:CM:69:ARG:HH11	12:CM:69:ARG:HA	1.73	0.54
18:CB:26:MET:HG3	18:CB:188:THR:O	2.06	0.54
18:CB:130:LYS:HA	18:CB:130:LYS:HE2	1.88	0.54
22:DA:55:U:H2'	22:DA:56:G:H8	1.71	0.54
23:DB:189:G:H2'	23:DB:205:G:H22	1.72	0.54
23:DB:417:C:H2'	23:DB:418:C:H6	1.72	0.54
23:DB:750:A:H2'	23:DB:751:A:H5"	1.89	0.54
23:DB:1244:A:O2'	23:DB:1245:G:H5'	2.07	0.54
23:DB:1558:C:H4'	23:DB:1559:U:C5'	2.35	0.54
23:DB:2405:G:H1'	23:DB:2412:A:N6	2.23	0.54
23:DB:2438:U:H2'	23:DB:2441:U:H5	1.71	0.54
23:DB:2816:G:O3'	42:DN:99:LYS:HE3	2.07	0.54
24:DI:49:GLU:CB	24:DI:52:LEU:HD12	2.38	0.54
26:DD:33:ARG:NE	26:DD:51:THR:HB	2.21	0.54
32:D4:8:LYS:HG2	32:D4:9:LYS:N	2.22	0.54
34:D3:57:VAL:C	34:D3:59:ALA:H	2.15	0.54
47:DF:79:ARG:H	47:DF:82:TYR:HB2	1.72	0.54
1:AA:50:A:H1'	1:AA:52:C:C6	2.42	0.54
1:AA:332:G:P	17:AT:2:ASN:HB3	2.47	0.54
1:AA:335:C:H2'	1:AA:336:A:C8	2.42	0.54
1:AA:865:A:H2	1:AA:918:A:H4'	1.71	0.54
1:AA:900:A:H2'	1:AA:901:A:H8	1.71	0.54
1:AA:1315:U:H5'	1:AA:1316:G:OP2	2.08	0.54
2:AC:26:LYS:HG3	2:AC:27:GLU:N	2.15	0.54
8:AI:11:ARG:HG2	8:AI:77:ALA:CB	2.38	0.54
10:AK:60:PHE:O	10:AK:64:VAL:HG12	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AM:105:ALA:O	12:AM:109:LYS:HG2	2.08	0.54
14:AQ:68:LYS:HG2	14:AQ:69:THR:HG23	1.88	0.54
18:AB:83:ALA:HA	18:AB:88:GLN:NE2	2.22	0.54
18:AB:131:LYS:HZ3	18:AB:132:GLU:N	2.05	0.54
21:AN:50:LEU:N	21:AN:51:PRO:CD	2.66	0.54
21:AN:87:ALA:C	21:AN:88:MET:HE2	2.32	0.54
22:BA:89:U:H5'	22:BA:90:C:C6	2.42	0.54
23:BB:39:G:H2'	23:BB:40:U:C6	2.42	0.54
23:BB:67:U:H2'	23:BB:68:G:C8	2.41	0.54
23:BB:141:G:H1	50:BT:1:MET:HA	1.72	0.54
23:BB:585:G:H2'	23:BB:1251:C:H42	1.71	0.54
23:BB:598:U:H2'	23:BB:599:A:H8	1.72	0.54
23:BB:639:U:H2'	23:BB:640:C:C6	2.42	0.54
23:BB:847:U:O4'	23:BB:847:U:O2	2.24	0.54
23:BB:1506:U:H2'	23:BB:1507:C:C6	2.42	0.54
23:BB:1645:G:H5"	23:BB:1646:C:H5'	1.90	0.54
26:BD:20:VAL:HA	27:BK:72:PRO:HB3	1.90	0.54
29:BE:161:ALA:HA	29:BE:164:LEU:HD12	1.90	0.54
39:BX:23:ARG:HD2	39:BX:27:ASN:ND2	2.22	0.54
42:BN:22:ARG:CZ	42:BN:70:THR:H	2.20	0.54
43:BO:11:ALA:HB2	43:BO:96:GLY:CA	2.36	0.54
43:BO:76:LYS:O	43:BO:80:GLU:HG2	2.07	0.54
46:BU:81:ARG:HD3	46:BU:96:LYS:HD2	1.87	0.54
47:BF:137:PHE:HB2	47:BF:138:PRO:CD	2.36	0.54
48:BG:3:VAL:O	48:BG:68:ARG:HG3	2.08	0.54
48:BG:83:THR:C	48:BG:84:LYS:HD3	2.32	0.54
1:CA:45:G:H2'	1:CA:46:G:H8	1.72	0.54
1:CA:161:A:H2'	1:CA:162:A:C8	2.42	0.54
1:CA:202:G:H2'	1:CA:203:G:C8	2.42	0.54
1:CA:1517:G:H1'	23:DB:1919:A:O3'	2.07	0.54
4:CE:95:MET:HA	4:CE:124:ALA:CB	2.38	0.54
10:CK:80:ASN:CB	10:CK:105:ARG:HB3	2.37	0.54
2:CC:63:ILE:HD12	2:CC:98:ALA:HB2	1.90	0.54
16:CS:59:VAL:C	16:CS:60:PHE:HD2	2.14	0.54
20:CO:48:LYS:C	20:CO:50:HIS:H	2.15	0.54
23:DB:106:C:H2'	23:DB:107:G:H8	1.72	0.54
23:DB:315:G:H2'	23:DB:316:C:C6	2.43	0.54
23:DB:876:C:H42	23:DB:901:C:H41	1.53	0.54
26:DD:5:VAL:HG23	26:DD:32:ASN:HD21	1.72	0.54
26:DD:117:GLY:HA2	26:DD:164:GLN:CD	2.32	0.54
34:D3:14:LYS:O	34:D3:21:PHE:HA	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:D2:3:ARG:HA	36:D2:3:ARG:NE	2.22	0.54
37:DL:3:LEU:O	37:DL:5:THR:N	2.39	0.54
38:DM:17:ASN:HD21	38:DM:95:LEU:CD1	2.20	0.54
46:DU:82:VAL:H	46:DU:96:LYS:NZ	2.04	0.54
47:DF:87:LYS:HG3	47:DF:88:VAL:H	1.72	0.54
47:DF:91:ARG:O	47:DF:92:GLY:C	2.50	0.54
48:DG:51:PHE:CE2	48:DG:68:ARG:HA	2.42	0.54
52:DW:17:ALA:CA	52:DW:35:ILE:HG23	2.27	0.54
1:AA:167:A:O2'	1:AA:168:G:H5'	2.07	0.54
1:AA:1221:G:H5"	1:AA:1321:U:O2	2.07	0.54
2:AC:48:LYS:HD3	2:AC:48:LYS:H	1.72	0.54
6:AG:30:MET:HG3	6:AG:38:ALA:HB2	1.90	0.54
9:AJ:8:ILE:HB	9:AJ:73:LEU:O	2.07	0.54
12:AM:72:ILE:HG22	12:AM:76:ILE:HD11	1.89	0.54
13:AP:6:LEU:CD1	13:AP:71:VAL:HB	2.38	0.54
18:AB:127:LYS:NZ	18:AB:127:LYS:HB3	2.22	0.54
21:AN:59:GLN:HE21	21:AN:59:GLN:N	2.04	0.54
22:BA:40:U:H1'	22:BA:43:C:C5	2.41	0.54
23:BB:607:U:O4	23:BB:620:G:H5"	2.08	0.54
23:BB:987:C:H2'	23:BB:988:A:O4'	2.08	0.54
23:BB:1180:U:H2'	23:BB:1181:U:C6	2.43	0.54
23:BB:2333:A:H5'	23:BB:2335:A:H1'	1.89	0.54
23:BB:2784:U:H2'	23:BB:2785:C:C6	2.41	0.54
25:BC:20:ASN:HD22	25:BC:23:LEU:HD13	1.73	0.54
39:BX:39:GLN:O	39:BX:42:LEU:HB2	2.07	0.54
1:CA:149:A:H1'	1:CA:1446:A:C2	2.42	0.54
1:CA:434:U:H3'	1:CA:435:A:H8	1.72	0.54
1:CA:880:C:H2'	1:CA:881:G:C8	2.41	0.54
1:CA:1356:G:H2'	1:CA:1357:A:H8	1.72	0.54
3:CD:28:ASP:HB2	3:CD:33:ILE:HG21	1.89	0.54
3:CD:78:ALA:HA	3:CD:81:LEU:HD12	1.90	0.54
4:CE:83:PRO:HB3	4:CE:96:GLN:HG3	1.90	0.54
4:CE:140:ILE:HG22	4:CE:144:GLU:OE1	2.07	0.54
7:CH:28:SER:HB2	7:CH:56:PRO:HB2	1.88	0.54
7:CH:45:ILE:C	7:CH:63:LYS:HE3	2.32	0.54
10:CK:35:ASP:OD2	10:CK:37:GLN:HG2	2.07	0.54
11:CL:66:ILE:HG21	11:CL:71:HIS:HB3	1.88	0.54
2:CC:34:SER:O	2:CC:38:VAL:HG22	2.07	0.54
6:CG:74:VAL:HA	6:CG:87:PRO:HA	1.89	0.54
22:DA:50:A:OP1	43:DO:68:LYS:HB2	2.08	0.54
23:DB:19:A:H2'	23:DB:20:C:C6	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:506:G:H5'	23:DB:509:C:H1'	1.89	0.54
23:DB:585:G:H2'	23:DB:1251:C:H42	1.72	0.54
23:DB:674:G:H5"	29:DE:71:GLY:N	2.22	0.54
23:DB:742:A:H2'	23:DB:743:A:C8	2.40	0.54
23:DB:1400:U:H2'	23:DB:1401:G:C8	2.41	0.54
23:DB:1414:C:H2'	23:DB:1415:U:C6	2.43	0.54
23:DB:1520:U:H2'	23:DB:1521:G:O4'	2.07	0.54
23:DB:2063:C:O2	23:DB:2450:A:N1	2.39	0.54
23:DB:2095:A:H3'	23:DB:2096:C:H6	1.71	0.54
23:DB:2458:G:H2'	23:DB:2458:G:N3	2.22	0.54
23:DB:2599:G:H2'	23:DB:2600:A:H8	1.72	0.54
23:DB:2645:G:C5'	23:DB:2732:G:H8	2.20	0.54
25:DC:28:PRO:HG2	25:DC:33:LEU:HD11	1.89	0.54
27:DK:25:LEU:HD21	27:DK:40:LYS:N	2.21	0.54
27:DK:99:ILE:HB	27:DK:118:LEU:HD22	1.90	0.54
40:DH:57:LYS:HG3	40:DH:58:LEU:HD23	1.90	0.54
46:DU:94:PHE:HA	46:DU:101:THR:HA	1.89	0.54
47:DF:109:ARG:HB3	47:DF:135:ILE:HB	1.90	0.54
49:DR:20:VAL:HG12	49:DR:21:ARG:H	1.72	0.54
1:AA:376:G:H4'	13:AP:5:ARG:HD3	1.89	0.54
1:AA:389:A:H3'	1:AA:390:U:H6	1.73	0.54
1:AA:489:C:H2'	1:AA:490:C:C6	2.43	0.54
1:AA:957:U:H2'	1:AA:959:A:OP2	2.07	0.54
3:AD:56:GLU:O	3:AD:60:VAL:HG12	2.06	0.54
4:AE:92:ARG:HB3	4:AE:92:ARG:NH1	2.23	0.54
7:AH:24:VAL:HG12	7:AH:60:LEU:HB3	1.88	0.54
9:AJ:57:VAL:HG22	9:AJ:58:ASN:N	2.18	0.54
23:BB:172:A:H2'	23:BB:173:A:H8	1.72	0.54
23:BB:720:U:H2'	23:BB:721:A:C8	2.41	0.54
23:BB:1723:G:H3'	23:BB:1724:G:C8	2.38	0.54
23:BB:1802:A:H2'	23:BB:1803:A:C8	2.42	0.54
23:BB:2471:A:O2'	23:BB:2472:G:C8	2.59	0.54
23:BB:2579:C:O2'	26:BD:136:ASN:HA	2.06	0.54
23:BB:2798:U:H5"	23:BB:2799:A:OP1	2.06	0.54
25:BC:78:GLU:HB2	25:BC:92:LEU:HG	1.89	0.54
27:BK:7:MET:SD	27:BK:20:MET:HB2	2.47	0.54
40:BH:73:ASN:CB	40:BH:141:LYS:HB2	2.38	0.54
40:BH:73:ASN:CB	40:BH:141:LYS:HE2	2.37	0.54
41:BJ:25:LEU:HD13	41:BJ:26:GLY:N	2.21	0.54
46:BU:14:THR:O	46:BU:18:LYS:HG2	2.07	0.54
46:BU:94:PHE:HA	46:BU:101:THR:HA	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:33:ILE:HB	47:BF:90:LEU:HB2	1.88	0.54
47:BF:79:ARG:H	47:BF:82:TYR:HB2	1.72	0.54
47:BF:102:LEU:HD22	47:BF:106:ALA:CB	2.37	0.54
50:BT:39:THR:HG23	50:BT:41:ALA:H	1.72	0.54
52:BW:49:ASN:CB	52:BW:60:ALA:HA	2.37	0.54
1:CA:91:U:H2'	1:CA:92:U:C6	2.43	0.54
1:CA:363:A:P	11:CL:57:THR:HG21	2.48	0.54
1:CA:484:G:H5'	1:CA:486:U:H5'	1.89	0.54
1:CA:539:A:H2'	1:CA:540:G:C8	2.43	0.54
1:CA:729:A:H2'	1:CA:730:G:C8	2.41	0.54
1:CA:1040:U:H2'	1:CA:1041:G:O4'	2.07	0.54
1:CA:1174:G:O2'	1:CA:1175:G:H5'	2.08	0.54
1:CA:1228:C:P	12:CM:113:LYS:HB2	2.47	0.54
3:CD:96:ARG:HB3	3:CD:98:ASP:OD2	2.07	0.54
3:CD:192:ALA:HB3	3:CD:194:ILE:HG22	1.90	0.54
17:CT:27:MET:O	17:CT:31:ILE:HG13	2.08	0.54
2:CC:42:LEU:O	2:CC:46:LEU:HB2	2.07	0.54
2:CC:137:VAL:HA	2:CC:148:ILE:HD13	1.90	0.54
9:CJ:49:PHE:HE1	9:CJ:67:ILE:HD12	1.72	0.54
21:CN:50:LEU:N	21:CN:51:PRO:HD2	2.16	0.54
18:CB:65:LYS:O	18:CB:66:ILE:HD13	2.08	0.54
18:CB:93:HIS:O	18:CB:94:ARG:HG2	2.07	0.54
22:DA:54:G:N2	47:DF:25:MET:HE3	2.23	0.54
23:DB:85:G:N2	23:DB:98:G:H1'	2.23	0.54
23:DB:1355:G:O2'	23:DB:1356:G:H5'	2.08	0.54
23:DB:1742:U:H2'	23:DB:1743:G:C8	2.43	0.54
23:DB:1917:U:C2'	23:DB:1918:A:H5'	2.37	0.54
23:DB:1946:U:H2'	23:DB:1947:C:H6	1.72	0.54
23:DB:2327:A:H2'	23:DB:2328:A:C8	2.43	0.54
23:DB:2630:G:H2'	23:DB:2631:G:H8	1.71	0.54
26:DD:107:VAL:H	26:DD:205:PRO:HA	1.71	0.54
27:DK:37:ASP:O	27:DK:61:VAL:HA	2.06	0.54
36:D2:30:VAL:HA	36:D2:33:ARG:HD3	1.90	0.54
38:DM:10:ARG:HH11	38:DM:89:VAL:HG22	1.72	0.54
38:DM:19:GLY:H	38:DM:38:ARG:HH12	1.54	0.54
40:DH:135:HIS:CG	40:DH:136:SER:N	2.76	0.54
43:DO:72:ALA:HB2	43:DO:105:ALA:HB1	1.90	0.54
46:DU:84:PHE:O	46:DU:85:ARG:HB2	2.07	0.54
46:DU:86:PHE:CD1	46:DU:90:LYS:HB2	2.42	0.54
47:DF:102:LEU:CD1	47:DF:103:ILE:HG13	2.37	0.54
49:DR:62:GLU:O	49:DR:96:VAL:HA	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DW:24:ARG:HD3	52:DW:65:LYS:HG2	1.89	0.54
1:AA:72:A:H2'	1:AA:73:C:C6	2.43	0.54
1:AA:266:G:O2'	1:AA:267:C:H3'	2.07	0.54
1:AA:284:C:O2'	1:AA:285:C:H5'	2.07	0.54
1:AA:384:G:H2'	1:AA:385:C:H6	1.73	0.54
1:AA:601:G:H2'	1:AA:602:A:C8	2.43	0.54
1:AA:878:A:H5"	7:AH:80:PRO:HG2	1.89	0.54
1:AA:1032:G:H3'	1:AA:1032:G:N3	2.23	0.54
1:AA:1186:G:H4'	8:AI:111:GLU:OE1	2.08	0.54
3:AD:129:VAL:HG12	3:AD:131:ILE:H	1.72	0.54
4:AE:87:VAL:HG23	4:AE:91:SER:O	2.07	0.54
6:AG:74:VAL:HG12	6:AG:87:PRO:HD3	1.90	0.54
6:AG:149:ALA:HB2	10:AK:60:PHE:CB	2.37	0.54
8:AI:94:ARG:HA	8:AI:97:LEU:HD12	1.90	0.54
22:BA:113:C:H2'	22:BA:114:C:C6	2.43	0.54
23:BB:143:C:H2'	23:BB:144:A:C8	2.43	0.54
23:BB:1013:C:H2'	23:BB:1014:A:C8	2.42	0.54
23:BB:1060:U:C5	24:BI:131:THR:HG22	2.43	0.54
23:BB:2087:G:H2'	23:BB:2088:A:C8	2.43	0.54
23:BB:2452:C:H2'	23:BB:2453:A:C8	2.43	0.54
23:BB:2457:U:O2'	23:BB:2458:G:H5'	2.07	0.54
23:BB:2462:C:H2'	23:BB:2463:C:H6	1.73	0.54
23:BB:2746:U:H4'	48:BG:137:LYS:HB2	1.90	0.54
23:BB:2813:A:H2'	23:BB:2814:A:C8	2.43	0.54
23:BB:2828:G:H2'	23:BB:2829:A:H8	1.73	0.54
23:BB:2893:A:H4'	23:BB:2894:G:O5'	2.08	0.54
27:BK:2:ILE:HG13	27:BK:33:ALA:O	2.08	0.54
28:BP:8:GLU:HB3	28:BP:54:LEU:HB2	1.88	0.54
40:BH:3:VAL:HA	40:BH:37:VAL:O	2.08	0.54
43:BO:52:SER:C	43:BO:54:VAL:H	2.15	0.54
44:BQ:59:LEU:HD13	44:BQ:59:LEU:C	2.32	0.54
47:BF:35:LEU:HA	47:BF:153:ILE:HG12	1.89	0.54
49:BR:19:THR:HB	49:BR:97:LYS:HG3	1.90	0.54
1:CA:167:A:O2'	1:CA:168:G:H5'	2.08	0.54
1:CA:476:U:H2'	1:CA:477:C:H6	1.72	0.54
1:CA:513:C:H2'	1:CA:514:C:C6	2.43	0.54
3:CD:41:GLY:C	3:CD:43:ARG:H	2.16	0.54
4:CE:96:GLN:HB3	4:CE:123:LEU:HD12	1.89	0.54
10:CK:111:ASP:HB3	19:CU:19:LYS:HE2	1.89	0.54
15:CR:33:THR:HG23	15:CR:37:LYS:O	2.08	0.54
16:CS:40:PHE:HD2	16:CS:42:ASN:HD21	1.55	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:54:G:H21	47:DF:25:MET:HE3	1.72	0.54
23:DB:3:U:H2'	23:DB:4:U:H6	1.69	0.54
23:DB:117:G:H5'	23:DB:126:A:C8	2.40	0.54
23:DB:277:G:N2	23:DB:360:U:H3	2.06	0.54
23:DB:643:A:C5	23:DB:644:A:N7	2.76	0.54
23:DB:672:C:O2'	23:DB:673:C:H5'	2.07	0.54
23:DB:862:G:H2'	23:DB:863:A:C8	2.43	0.54
23:DB:934:U:H2'	23:DB:935:C:C6	2.43	0.54
23:DB:2542:A:H4'	23:DB:2543:G:H5'	1.89	0.54
27:DK:2:ILE:HG13	27:DK:33:ALA:O	2.08	0.54
27:DK:19:VAL:HB	27:DK:41:ILE:HD11	1.90	0.54
30:DY:6:ILE:O	30:DY:34:THR:HA	2.08	0.54
42:DN:72:ASP:C	42:DN:74:GLU:H	2.16	0.54
47:DF:87:LYS:C	47:DF:88:VAL:HG23	2.32	0.54
52:DW:39:GLN:CG	52:DW:40:ARG:N	2.69	0.54
1:AA:1081:A:OP1	4:AE:22:LYS:HB2	2.08	0.54
5:AF:91:ARG:H	5:AF:93:LYS:HZ1	1.54	0.54
9:AJ:26:VAL:O	9:AJ:30:LYS:HG3	2.07	0.54
10:AK:28:ASN:HD21	10:AK:46:ALA:HB3	1.71	0.54
16:AS:10:ILE:HG22	16:AS:37:SER:CB	2.38	0.54
23:BB:141:G:N1	50:BT:1:MET:HA	2.23	0.54
23:BB:759:G:H2'	23:BB:760:G:H8	1.72	0.54
23:BB:917:A:H5"	23:BB:2268:A:H61	1.73	0.54
23:BB:1163:G:O2'	23:BB:1164:C:H5'	2.07	0.54
23:BB:1374:G:O2'	23:BB:1375:U:H5'	2.07	0.54
23:BB:1758:U:O2	23:BB:1758:U:O4'	2.24	0.54
23:BB:2231:U:H2'	23:BB:2232:C:C6	2.42	0.54
23:BB:2848:G:N7	28:BP:94:ALA:HB2	2.22	0.54
28:BP:24:THR:OG1	28:BP:86:LYS:HB3	2.07	0.54
29:BE:3:LEU:HB2	29:BE:12:LEU:HB3	1.89	0.54
29:BE:48:THR:O	29:BE:52:VAL:HG23	2.08	0.54
36:B2:18:PHE:O	36:B2:22:MET:HB2	2.08	0.54
37:BL:136:GLU:C	37:BL:138:ALA:H	2.15	0.54
39:BX:41:HIS:O	39:BX:44:LYS:HB3	2.08	0.54
41:BJ:93:ILE:O	41:BJ:97:PRO:HG3	2.07	0.54
1:CA:89:U:H2'	1:CA:90:C:H6	1.73	0.54
1:CA:268:U:H2'	1:CA:269:C:C6	2.41	0.54
1:CA:1124:G:H5'	9:CJ:37:ARG:HE	1.72	0.54
1:CA:1148:U:H2'	1:CA:1149:C:O4'	2.08	0.54
1:CA:1496:C:H4'	23:DB:1920:C:O2'	2.07	0.54
5:CF:18:VAL:O	5:CF:22:ILE:HG13	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:98:LEU:HD22	6:CG:102:TRP:NE1	2.23	0.54
16:CS:39:ILE:HD11	16:CS:68:HIS:CB	2.32	0.54
18:CB:71:THR:C	18:CB:76:SER:HB3	2.32	0.54
18:CB:75:ALA:O	18:CB:79:VAL:HG23	2.07	0.54
18:CB:163:ILE:HG23	18:CB:164:ASP:N	2.17	0.54
23:DB:423:A:H5"	23:DB:424:G:H5'	1.88	0.54
23:DB:441:U:H2'	23:DB:442:G:C8	2.43	0.54
23:DB:743:A:O2'	23:DB:744:U:H5'	2.08	0.54
23:DB:920:A:H2'	23:DB:921:C:H6	1.72	0.54
23:DB:967:U:H2'	23:DB:968:C:C6	2.43	0.54
23:DB:1130:U:C2	23:DB:2025:C:H5"	2.43	0.54
23:DB:1300:G:H4'	23:DB:1301:A:H5'	1.90	0.54
23:DB:1387:A:H2'	23:DB:1388:G:H8	1.73	0.54
23:DB:1692:U:H2'	23:DB:1694:C:C5	2.43	0.54
23:DB:1870:C:H2'	23:DB:1871:A:C8	2.41	0.54
23:DB:2269:G:H4'	52:DW:19:ARG:HH11	1.73	0.54
23:DB:2580:U:C5'	26:DD:136:ASN:H	2.21	0.54
23:DB:2646:C:H2'	23:DB:2647:U:O4'	2.07	0.54
25:DC:108:GLY:C	25:DC:110:LYS:H	2.15	0.54
25:DC:209:ALA:HA	25:DC:212:TRP:CE2	2.43	0.54
26:DD:125:TRP:CD2	26:DD:160:LYS:HB3	2.42	0.54
38:DM:54:THR:C	38:DM:56:ALA:H	2.15	0.54
40:DH:5:LEU:HD13	40:DH:12:LEU:C	2.33	0.54
40:DH:94:ILE:HG23	40:DH:98:ASP:HB3	1.89	0.54
44:DQ:4:LYS:HZ1	44:DQ:7:VAL:HG22	1.72	0.54
45:DS:42:LYS:O	45:DS:45:VAL:HG22	2.06	0.54
1:AA:255:G:H2'	1:AA:256:U:C6	2.42	0.54
1:AA:1226:C:H5"	12:AM:94:LEU:HD11	1.90	0.54
1:AA:1316:G:N1	1:AA:1318:A:H5"	2.23	0.54
1:AA:1332:A:H2'	1:AA:1333:A:C8	2.42	0.54
3:AD:96:ARG:HB3	3:AD:98:ASP:OD2	2.08	0.54
4:AE:83:PRO:HB3	4:AE:96:GLN:HG3	1.90	0.54
6:AG:94:ARG:NH1	6:AG:98:LEU:HD21	2.23	0.54
8:AI:40:ARG:HA	8:AI:44:ARG:HD3	1.89	0.54
11:AL:21:PRO:C	11:AL:23:LEU:H	2.16	0.54
22:BA:76:G:H2'	22:BA:77:U:H6	1.71	0.54
23:BB:598:U:H2'	23:BB:599:A:C8	2.43	0.54
23:BB:1038:G:H2'	23:BB:1039:A:H8	1.73	0.54
23:BB:1300:G:H4'	23:BB:1301:A:H5'	1.89	0.54
23:BB:1459:G:H3'	23:BB:1460:U:C5'	2.38	0.54
23:BB:1571:A:H2'	23:BB:1572:A:C8	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2649:C:H2'	23:BB:2650:U:H6	1.71	0.54
23:BB:2821:A:OP1	26:BD:115:GLY:HA3	2.07	0.54
24:BI:112:LYS:O	24:BI:116:MET:HG3	2.08	0.54
25:BC:138:SER:O	25:BC:162:GLN:HA	2.08	0.54
28:BP:50:ARG:CB	28:BP:56:SER:HB3	2.38	0.54
42:BN:19:ALA:C	42:BN:21:PHE:N	2.65	0.54
44:BQ:101:ASP:OD1	44:BQ:104:ALA:HB2	2.07	0.54
47:BF:57:ALA:HB2	47:BF:64:PRO:HG2	1.89	0.54
47:BF:95:MET:O	47:BF:99:PHE:HB2	2.08	0.54
47:BF:100:GLU:OE1	47:BF:100:GLU:HA	2.07	0.54
47:BF:102:LEU:HA	47:BF:106:ALA:CB	2.36	0.54
47:BF:110:ILE:CG2	47:BF:113:PHE:HB3	2.38	0.54
50:BT:35:ALA:O	50:BT:81:LYS:HB3	2.08	0.54
52:BW:9:THR:C	52:BW:10:ARG:HD3	2.32	0.54
1:CA:50:A:H1'	1:CA:52:C:C6	2.43	0.54
1:CA:1074:G:H2'	1:CA:1075:U:C6	2.43	0.54
1:CA:1250:A:H2'	1:CA:1251:A:H8	1.73	0.54
3:CD:13:ARG:HG3	3:CD:55:ARG:NH1	2.22	0.54
5:CF:69:GLU:O	5:CF:72:ASP:HB3	2.07	0.54
7:CH:94:VAL:HG21	7:CH:100:ILE:O	2.08	0.54
8:CI:109:GLN:CD	8:CI:110:VAL:H	2.16	0.54
18:CB:45:THR:HA	18:CB:48:MET:HG3	1.89	0.54
18:CB:88:GLN:HE22	18:CB:217:ALA:HB1	1.72	0.54
23:DB:30:G:H2'	23:DB:31:C:H6	1.69	0.54
23:DB:1789:A:H2'	23:DB:1790:C:O4'	2.08	0.54
23:DB:1830:C:H2'	23:DB:1831:G:H8	1.73	0.54
23:DB:2104:C:H3'	23:DB:2104:C:C6	2.43	0.54
23:DB:2617:U:O2'	23:DB:2618:G:H5'	2.08	0.54
23:DB:2649:C:H2'	23:DB:2650:U:H6	1.72	0.54
23:DB:2714:G:O2'	23:DB:2715:C:H5'	2.08	0.54
25:DC:9:SER:C	25:DC:11:GLY:H	2.16	0.54
26:DD:5:VAL:HG23	26:DD:32:ASN:ND2	2.23	0.54
27:DK:11:ALA:HB3	27:DK:85:VAL:HG22	1.88	0.54
29:DE:34:ALA:CB	29:DE:96:VAL:HG21	2.38	0.54
36:D2:16:HIS:HB3	36:D2:21:ARG:NH1	2.23	0.54
37:DL:110:VAL:HB	37:DL:127:VAL:HG23	1.90	0.54
39:DX:23:ARG:HD2	39:DX:27:ASN:ND2	2.22	0.54
40:DH:110:VAL:HG23	40:DH:132:PHE:CD2	2.43	0.54
43:DO:35:ILE:HG13	43:DO:71:ALA:HB1	1.90	0.54
44:DQ:59:LEU:C	44:DQ:59:LEU:HD13	2.33	0.54
46:DU:26:ASN:ND2	46:DU:26:ASN:N	2.55	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DR:49:ILE:HG12	49:DR:53:PHE:CA	2.38	0.54
1:AA:235:C:H2'	1:AA:236:A:H8	1.71	0.54
1:AA:468:A:H3'	1:AA:469:C:H6	1.72	0.54
1:AA:476:U:O2'	1:AA:477:C:H5'	2.07	0.54
1:AA:489:C:H2'	1:AA:490:C:H6	1.73	0.54
1:AA:1418:A:N6	1:AA:1482:G:H1'	2.23	0.54
1:AA:1511:G:O2'	1:AA:1512:U:H5'	2.07	0.54
2:AC:131:ARG:HH11	2:AC:135:ARG:HH12	1.55	0.54
6:AG:58:LEU:H	6:AG:58:LEU:CD2	2.18	0.54
7:AH:55:LYS:HE3	7:AH:56:PRO:HD2	1.90	0.54
16:AS:44:ILE:HG13	16:AS:62:THR:CA	2.36	0.54
23:BB:93:G:H2'	23:BB:94:A:O4'	2.07	0.54
23:BB:743:A:O2'	23:BB:744:U:H5'	2.08	0.54
23:BB:925:A:O2'	23:BB:926:G:H5'	2.08	0.54
23:BB:1007:C:O3'	41:BJ:110:PRO:HB3	2.07	0.54
23:BB:1340:U:O4	50:BT:64:LYS:HD2	2.08	0.54
23:BB:1447:C:H2'	23:BB:1448:G:C8	2.43	0.54
23:BB:1488:C:O2'	23:BB:1489:C:H5'	2.08	0.54
23:BB:1851:U:H2'	23:BB:1852:U:H6	1.72	0.54
23:BB:1854:A:H2	23:BB:2087:G:N3	2.05	0.54
23:BB:2298:A:H2'	23:BB:2299:U:O4'	2.07	0.54
23:BB:2438:U:H2'	23:BB:2441:U:H5	1.73	0.54
23:BB:2676:C:H2'	23:BB:2677:G:H8	1.73	0.54
23:BB:2680:U:OP2	26:BD:114:LYS:HB3	2.08	0.54
23:BB:2722:G:H4'	42:BN:4:ARG:HB2	1.89	0.54
23:BB:2880:C:O2'	23:BB:2881:U:H5'	2.08	0.54
35:BV:63:ILE:HD11	35:BV:72:VAL:HG22	1.88	0.54
37:BL:57:LEU:O	37:BL:61:LEU:HD13	2.08	0.54
43:BO:35:ILE:HG13	43:BO:71:ALA:HB1	1.90	0.54
46:BU:64:ILE:HD11	46:BU:68:ASN:ND2	2.23	0.54
46:BU:84:PHE:O	46:BU:85:ARG:HB2	2.08	0.54
50:BT:85:VAL:C	50:BT:86:THR:HG23	2.32	0.54
1:CA:618:C:N3	1:CA:622:A:N6	2.53	0.54
1:CA:772:U:H2'	1:CA:773:G:O4'	2.07	0.54
1:CA:1070:U:H2'	1:CA:1071:C:C6	2.43	0.54
1:CA:1493:A:N3	1:CA:1493:A:O5'	2.41	0.54
4:CE:155:LYS:HD2	7:CH:70:VAL:O	2.07	0.54
17:CT:64:GLY:C	17:CT:66:ILE:H	2.16	0.54
2:CC:111:ASP:O	2:CC:112:ALA:C	2.50	0.54
16:CS:43:MET:HB2	16:CS:61:VAL:HG21	1.90	0.54
18:CB:114:LYS:HE2	18:CB:151:LYS:HB2	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CB:130:LYS:O	18:CB:134:LEU:HD23	2.07	0.54
18:CB:218:ALA:HA	18:CB:221:ARG:CZ	2.38	0.54
20:CO:8:THR:O	20:CO:12:VAL:HG23	2.07	0.54
23:DB:692:C:H2'	23:DB:693:A:H8	1.73	0.54
23:DB:951:C:O2'	23:DB:952:G:H5'	2.08	0.54
23:DB:2199:A:H3'	23:DB:2200:C:H6	1.72	0.54
23:DB:2298:A:H2'	23:DB:2299:U:O4'	2.08	0.54
23:DB:2772:C:H4'	26:DD:171:THR:HG21	1.89	0.54
23:DB:2869:G:H2'	23:DB:2870:C:H6	1.72	0.54
27:DK:25:LEU:HD21	27:DK:40:LYS:H	1.71	0.54
37:DL:142:ILE:N	37:DL:142:ILE:HD12	2.23	0.54
42:DN:24:MET:SD	42:DN:44:LEU:HD22	2.48	0.54
48:DG:67:ALA:O	48:DG:71:LEU:HD23	2.08	0.54
52:DW:55:ASP:C	52:DW:57:THR:H	2.16	0.54
1:AA:413:G:O6	3:AD:32:LYS:HE2	2.07	0.54
1:AA:1225:A:H5"	1:AA:1226:C:C5	2.38	0.54
1:AA:1290:G:H2'	1:AA:1291:U:H6	1.72	0.54
1:AA:1396:A:C4'	1:AA:1397:C:H5'	2.38	0.54
1:AA:1484:C:H2'	1:AA:1485:U:H6	1.72	0.54
5:AF:84:VAL:HG22	5:AF:85:ILE:N	2.22	0.54
9:AJ:7:ARG:HG3	9:AJ:101:SER:HB2	1.90	0.54
12:AM:1:ALA:O	12:AM:3:ILE:HG13	2.07	0.54
12:AM:44:ILE:CA	12:AM:47:LEU:HD23	2.36	0.54
15:AR:41:SER:HB3	15:AR:51:GLN:CD	2.33	0.54
18:AB:213:LEU:O	18:AB:216:VAL:HG22	2.07	0.54
23:BB:581:C:H2'	23:BB:582:A:C8	2.43	0.54
23:BB:1584:U:H5"	23:BB:1585:C:C5	2.44	0.54
23:BB:1593:A:H2'	23:BB:1594:U:O4'	2.08	0.54
23:BB:2322:A:H3'	23:BB:2323:G:H8	1.73	0.54
23:BB:2547:A:H5'	23:BB:2566:A:C2	2.43	0.54
23:BB:2605:U:H2'	23:BB:2606:C:C6	2.42	0.54
23:BB:2861:U:H2'	23:BB:2862:G:C8	2.43	0.54
25:BC:66:PHE:HB2	25:BC:150:GLY:O	2.08	0.54
27:BK:115:ILE:HG23	27:BK:116:ILE:N	2.22	0.54
38:BM:34:LYS:HA	38:BM:100:LYS:O	2.08	0.54
40:BH:116:ARG:NE	40:BH:131:SER:HB2	2.22	0.54
43:BO:52:SER:O	43:BO:58:ILE:HD12	2.08	0.54
47:BF:102:LEU:CD1	47:BF:103:ILE:HG13	2.37	0.54
49:BR:60:LYS:H	49:BR:100:GLY:HA3	1.72	0.54
50:BT:36:LYS:O	50:BT:36:LYS:HD3	2.08	0.54
52:BW:38:ARG:N	52:BW:56:HIS:HD2	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1343:G:H2'	1:CA:1344:C:H6	1.72	0.54
10:CK:70:ALA:HA	10:CK:73:VAL:CG2	2.38	0.54
11:CL:14:LYS:HG2	11:CL:15:VAL:N	2.22	0.54
2:CC:146:LYS:HB2	2:CC:202:PHE:HE2	1.71	0.54
8:CI:11:ARG:HA	8:CI:105:ARG:NH1	2.23	0.54
22:DA:78:A:H2'	22:DA:79:G:O4'	2.07	0.54
23:DB:979:A:H3'	23:DB:980:A:C5'	2.38	0.54
23:DB:1099:G:H4'	24:DI:4:VAL:CG1	2.38	0.54
23:DB:1190:G:H5"	37:DL:32:GLY:O	2.07	0.54
23:DB:1470:A:H2'	23:DB:1471:G:O4'	2.08	0.54
23:DB:1704:C:H2'	23:DB:1705:A:H8	1.72	0.54
25:DC:245:THR:O	25:DC:247:TRP:N	2.41	0.54
26:DD:46:ARG:NH1	26:DD:86:GLU:H	2.06	0.54
37:DL:4:ASN:N	37:DL:4:ASN:HD22	2.06	0.54
37:DL:19:LEU:HD23	37:DL:27:LEU:HD23	1.88	0.54
37:DL:110:VAL:HG23	37:DL:126:ARG:O	2.08	0.54
37:DL:123:ARG:HA	37:DL:143:GLU:CB	2.31	0.54
40:DH:4:ILE:HG23	40:DH:16:GLY:HA2	1.90	0.54
40:DH:131:SER:HB2	40:DH:140:ALA:O	2.07	0.54
44:DQ:90:ASP:H	49:DR:39:LEU:CD1	2.21	0.54
44:DQ:94:LEU:C	44:DQ:96:ASP:N	2.66	0.54
47:DF:2:LYS:HB2	47:DF:100:GLU:OE2	2.07	0.54
51:DZ:27:ARG:HG3	51:DZ:28:ARG:H	1.72	0.54
1:AA:87:C:H2'	1:AA:88:U:C4'	2.37	0.53
1:AA:205:A:H2'	1:AA:206:C:C6	2.42	0.53
1:AA:253:A:H2'	1:AA:254:G:C8	2.44	0.53
1:AA:1238:A:H2'	1:AA:1239:A:H8	1.72	0.53
4:AE:95:MET:HA	4:AE:124:ALA:CB	2.38	0.53
5:AF:69:GLU:O	5:AF:73:GLU:HG2	2.09	0.53
6:AG:16:LYS:HB3	6:AG:43:TYR:CE1	2.42	0.53
6:AG:129:ASN:HA	6:AG:134:VAL:HG21	1.90	0.53
10:AK:80:ASN:CA	10:AK:105:ARG:HB3	2.38	0.53
17:AT:43:LYS:HZ2	17:AT:43:LYS:N	2.06	0.53
18:AB:22:TRP:CD1	18:AB:38:HIS:HE2	2.26	0.53
18:AB:68:PHE:HE1	18:AB:88:GLN:HB3	1.73	0.53
19:AU:39:LYS:N	19:AU:40:PRO:CD	2.71	0.53
20:AO:25:THR:HG21	20:AO:70:LEU:HD23	1.90	0.53
23:BB:397:U:OP1	51:BZ:31:PRO:HA	2.07	0.53
23:BB:423:A:H5"	23:BB:424:G:H5'	1.90	0.53
23:BB:526:A:N6	23:BB:2626:C:H4'	2.23	0.53
23:BB:736:C:H2'	23:BB:737:C:C6	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1015:U:H2'	23:BB:1016:G:C8	2.42	0.53
23:BB:1742:U:H2'	23:BB:1743:G:C8	2.43	0.53
23:BB:1771:C:H2'	23:BB:1772:A:H8	1.73	0.53
29:BE:47:LYS:HB3	29:BE:51:GLU:HB2	1.90	0.53
29:BE:146:VAL:HG11	29:BE:187:VAL:HG23	1.90	0.53
36:B2:3:ARG:CZ	36:B2:3:ARG:HA	2.38	0.53
36:B2:3:ARG:HA	36:B2:3:ARG:NE	2.22	0.53
1:CA:621:A:H2'	1:CA:622:A:H8	1.72	0.53
1:CA:882:C:O2'	1:CA:883:C:H5'	2.08	0.53
1:CA:923:A:H2'	1:CA:924:C:H6	1.73	0.53
1:CA:1164:G:H2'	1:CA:1165:U:C6	2.43	0.53
1:CA:1280:A:O4'	9:CJ:43:PRO:HG3	2.07	0.53
1:CA:1469:C:H2'	1:CA:1470:U:O4'	2.07	0.53
4:CE:92:ARG:HB3	4:CE:92:ARG:NH1	2.23	0.53
4:CE:98:ALA:HB2	4:CE:123:LEU:HG	1.91	0.53
8:CI:113:LYS:HA	8:CI:120:ALA:HB2	1.90	0.53
12:CM:33:LEU:CD1	12:CM:40:GLU:HA	2.38	0.53
12:CM:66:GLY:HA2	47:DF:143:ASP:HB3	1.88	0.53
21:CN:3:GLN:HA	21:CN:6:LYS:CG	2.38	0.53
18:CB:114:LYS:HZ1	18:CB:151:LYS:HG3	1.73	0.53
23:DB:67:U:H2'	23:DB:68:G:C8	2.41	0.53
23:DB:93:G:H2'	23:DB:94:A:O4'	2.08	0.53
23:DB:96:C:H4'	39:DX:41:HIS:CE1	2.43	0.53
23:DB:208:C:H2'	23:DB:209:C:H6	1.73	0.53
23:DB:2073:C:O2'	23:DB:2074:U:H5'	2.07	0.53
25:DC:138:SER:O	25:DC:162:GLN:HA	2.08	0.53
28:DP:20:ARG:NH2	28:DP:91:VAL:HG22	2.23	0.53
29:DE:2:GLU:HA	29:DE:13:THR:CA	2.35	0.53
29:DE:3:LEU:HB2	29:DE:12:LEU:HB3	1.90	0.53
29:DE:29:HIS:O	29:DE:33:VAL:HG23	2.09	0.53
38:DM:21:ALA:HB3	38:DM:99:GLY:O	2.09	0.53
39:DX:39:GLN:O	39:DX:42:LEU:HB2	2.08	0.53
44:DQ:43:GLN:NE2	49:DR:77:PHE:HB3	2.23	0.53
44:DQ:63:ARG:HH12	44:DQ:96:ASP:CB	2.13	0.53
50:DT:50:LEU:C	50:DT:52:GLU:H	2.16	0.53
1:AA:493:A:H3'	1:AA:494:G:C8	2.44	0.53
1:AA:570:G:H2'	1:AA:571:U:C6	2.43	0.53
1:AA:1118:U:H1'	1:AA:1179:A:C4	2.43	0.53
1:AA:1336:C:H4'	1:AA:1337:G:C4	2.43	0.53
1:AA:1439:G:H2'	1:AA:1440:U:O4'	2.07	0.53
4:AE:101:GLY:H	4:AE:121:ASN:ND2	2.05	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AG:94:ARG:HD3	6:AG:98:LEU:HD11	1.89	0.53
6:AG:125:ASP:HA	6:AG:128:GLU:OE1	2.08	0.53
8:AI:40:ARG:N	8:AI:44:ARG:HD3	2.23	0.53
18:AB:10:LYS:O	18:AB:13:VAL:HG22	2.07	0.53
23:BB:594:U:H2'	23:BB:595:C:C6	2.43	0.53
23:BB:814:C:O2'	23:BB:815:C:H5'	2.07	0.53
23:BB:1268:A:H2'	23:BB:1269:A:O4'	2.08	0.53
23:BB:1387:A:H2'	23:BB:1388:G:H8	1.73	0.53
23:BB:1923:U:H2'	23:BB:1924:C:C6	2.43	0.53
23:BB:2256:G:H2'	23:BB:2257:U:C6	2.43	0.53
23:BB:2857:G:N2	23:BB:2859:G:H3'	2.23	0.53
25:BC:75:ALA:CB	25:BC:95:TYR:HA	2.39	0.53
30:BY:2:LYS:HD3	30:BY:2:LYS:H	1.74	0.53
34:B3:18:LYS:HD2	34:B3:19:GLY:N	2.23	0.53
35:BV:6:ALA:HB3	35:BV:65:VAL:HG12	1.90	0.53
36:B2:44:VAL:O	36:B2:45:SER:C	2.51	0.53
37:BL:4:ASN:N	37:BL:4:ASN:ND2	2.54	0.53
38:BM:64:TRP:HB2	38:BM:104:GLU:HB2	1.90	0.53
40:BH:99:ILE:CD1	40:BH:144:VAL:HB	2.37	0.53
41:BJ:44:TYR:O	41:BJ:45:THR:HB	2.09	0.53
44:BQ:60:TRP:C	44:BQ:64:ILE:HG12	2.32	0.53
44:BQ:111:LYS:HE2	49:BR:50:GLY:HA3	1.89	0.53
47:BF:91:ARG:C	47:BF:95:MET:HB2	2.33	0.53
48:BG:76:ILE:HB	48:BG:82:PHE:CZ	2.44	0.53
49:BR:14:VAL:HG22	49:BR:15:SER:N	2.23	0.53
1:CA:126:G:H4'	1:CA:634:C:H1'	1.89	0.53
1:CA:648:A:H2'	1:CA:649:A:C8	2.43	0.53
1:CA:861:G:H2'	1:CA:862:C:H6	1.73	0.53
1:CA:1365:G:H2'	1:CA:1366:C:C6	2.42	0.53
3:CD:129:VAL:HG12	3:CD:131:ILE:H	1.73	0.53
5:CF:3:HIS:ND1	5:CF:95:ALA:N	2.56	0.53
11:CL:17:LYS:HD2	11:CL:18:SER:O	2.09	0.53
13:CP:23:ASP:CG	13:CP:25:ARG:HE	2.16	0.53
2:CC:71:ARG:HB2	2:CC:74:ILE:HG21	1.89	0.53
6:CG:134:VAL:HG12	6:CG:137:ARG:HH21	1.73	0.53
9:CJ:7:ARG:HG3	9:CJ:102:LEU:C	2.32	0.53
12:CM:65:GLU:N	12:CM:68:LEU:HD12	2.23	0.53
21:CN:19:TYR:C	21:CN:21:ALA:H	2.15	0.53
18:CB:53:LEU:HD11	18:CB:216:VAL:HA	1.90	0.53
18:CB:66:ILE:HD12	18:CB:159:ALA:HB3	1.88	0.53
20:CO:64:ARG:HE	20:CO:64:ARG:CA	2.19	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:54:G:O2'	22:DA:55:U:H5'	2.08	0.53
23:DB:480:A:H2'	23:DB:480:A:N3	2.24	0.53
23:DB:2028:U:H2'	23:DB:2029:G:C8	2.43	0.53
23:DB:2313:C:H4'	47:DF:87:LYS:HB3	1.90	0.53
27:DK:34:GLY:O	27:DK:36:GLY:N	2.42	0.53
28:DP:50:ARG:CB	28:DP:56:SER:HB3	2.38	0.53
30:DY:7:THR:HG22	30:DY:8:GLN:N	2.22	0.53
34:D3:40:LYS:O	34:D3:43:LEU:HB2	2.09	0.53
36:D2:18:PHE:O	36:D2:22:MET:HB2	2.08	0.53
42:DN:62:ASN:N	42:DN:62:ASN:HD22	2.07	0.53
43:DO:76:LYS:O	43:DO:80:GLU:HG2	2.08	0.53
43:DO:111:ARG:HA	43:DO:115:LEU:O	2.08	0.53
47:DF:41:GLU:HG3	47:DF:48:LEU:HD11	1.89	0.53
48:DG:84:LYS:CG	48:DG:85:LYS:H	2.20	0.53
50:DT:36:LYS:HD3	50:DT:36:LYS:O	2.08	0.53
1:AA:1237:C:C3'	1:AA:1238:A:H5'	2.37	0.53
2:AC:31:ASN:ND2	2:AC:58:ARG:HH22	2.06	0.53
4:AE:156:ARG:HH12	7:AH:42:GLU:HB3	1.70	0.53
7:AH:28:SER:HB2	7:AH:56:PRO:HB2	1.89	0.53
18:AB:177:ASN:O	18:AB:178:LEU:HD23	2.08	0.53
22:BA:78:A:H2'	22:BA:79:G:O4'	2.08	0.53
23:BB:528:A:N1	23:BB:2042:A:H2'	2.24	0.53
23:BB:1230:A:H2'	23:BB:1231:U:H6	1.74	0.53
23:BB:1461:C:H2'	23:BB:1462:C:C6	2.41	0.53
23:BB:1729:U:H5	23:BB:1731:G:N2	2.06	0.53
23:BB:2080:A:OP1	51:BZ:20:HIS:HB3	2.09	0.53
23:BB:2645:G:H4'	23:BB:2732:G:H2'	1.91	0.53
36:B2:3:ARG:HE	36:B2:4:THR:HG22	1.73	0.53
37:BL:100:ILE:O	37:BL:100:ILE:HG12	2.08	0.53
42:BN:49:GLU:HB2	42:BN:50:PRO:HD3	1.90	0.53
42:BN:77:ALA:O	42:BN:81:ASN:HB2	2.08	0.53
46:BU:98:ASN:OD1	46:BU:100:GLU:HB2	2.08	0.53
50:BT:50:LEU:HD22	50:BT:50:LEU:N	2.22	0.53
51:BZ:31:PRO:HB2	51:BZ:33:LEU:HG	1.90	0.53
1:CA:195:A:H1'	1:CA:222:C:O2'	2.08	0.53
1:CA:336:A:O2'	1:CA:337:G:H5'	2.08	0.53
1:CA:468:A:H3'	1:CA:469:C:H6	1.72	0.53
1:CA:600:A:H2'	1:CA:601:G:H8	1.72	0.53
1:CA:678:U:H2'	1:CA:679:C:C6	2.43	0.53
7:CH:124:ILE:C	7:CH:125:ILE:HD12	2.34	0.53
11:CL:3:VAL:O	11:CL:7:VAL:HG23	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CQ:80:LYS:HZ2	14:CQ:80:LYS:H	1.57	0.53
6:CG:98:LEU:HD22	6:CG:102:TRP:CE2	2.43	0.53
8:CI:83:THR:HG21	8:CI:102:PHE:O	2.08	0.53
9:CJ:51:VAL:HG22	21:CN:80:ARG:HG3	1.91	0.53
18:CB:75:ALA:O	18:CB:79:VAL:N	2.39	0.53
23:DB:1098:A:H2'	24:DI:4:VAL:C	2.34	0.53
23:DB:1315:C:H2'	23:DB:1316:U:H6	1.73	0.53
23:DB:1376:C:H3'	56:DB:3278:HOH:O	2.08	0.53
23:DB:1392:A:H2'	23:DB:1393:A:C8	2.44	0.53
23:DB:1414:C:H2'	23:DB:1415:U:H6	1.73	0.53
23:DB:1637:A:H2'	23:DB:1638:C:C6	2.43	0.53
23:DB:1758:U:O2	23:DB:1758:U:O4'	2.24	0.53
23:DB:2194:U:H2'	23:DB:2195:U:C6	2.43	0.53
23:DB:2728:U:H2'	23:DB:2729:G:C8	2.43	0.53
23:DB:2901:C:O2'	23:DB:2902:C:H5'	2.09	0.53
25:DC:20:ASN:O	25:DC:23:LEU:HB2	2.08	0.53
25:DC:202:ARG:HE	25:DC:213:ARG:NH2	2.06	0.53
26:DD:24:VAL:HG21	26:DD:188:LEU:HB3	1.90	0.53
27:DK:75:SER:HA	28:DP:72:VAL:O	2.08	0.53
42:DN:77:ALA:O	42:DN:81:ASN:HB2	2.09	0.53
43:DO:52:SER:C	43:DO:54:VAL:H	2.16	0.53
47:DF:65:LEU:N	47:DF:88:VAL:HG22	2.22	0.53
48:DG:34:ARG:HD3	48:DG:34:ARG:N	2.22	0.53
1:AA:8:A:C6	3:AD:205:LYS:HB2	2.43	0.53
1:AA:926:G:H3'	1:AA:1505:G:H21	1.73	0.53
1:AA:1453:G:H2'	1:AA:1454:G:O4'	2.09	0.53
5:AF:69:GLU:O	5:AF:72:ASP:HB3	2.09	0.53
17:AT:79:THR:O	17:AT:82:ILE:HG13	2.08	0.53
21:AN:20:PHE:O	21:AN:21:ALA:C	2.51	0.53
22:BA:37:C:H2'	22:BA:38:C:O4'	2.08	0.53
23:BB:279:A:C2	23:BB:362:A:H4'	2.44	0.53
23:BB:1425:G:H2'	23:BB:1426:G:C8	2.43	0.53
23:BB:2053:G:O2'	23:BB:2054:A:H5'	2.08	0.53
24:BI:18:ASN:N	24:BI:19:PRO:CD	2.71	0.53
25:BC:42:ARG:NH2	25:BC:48:ILE:HD11	2.24	0.53
26:BD:106:LYS:HD3	26:BD:106:LYS:H	1.73	0.53
27:BK:37:ASP:O	27:BK:61:VAL:HA	2.08	0.53
30:BY:37:ARG:HG3	30:BY:38:GLU:OE1	2.09	0.53
38:BM:17:ASN:HD21	38:BM:95:LEU:HD11	1.74	0.53
38:BM:19:GLY:H	38:BM:38:ARG:HH12	1.55	0.53
38:BM:35:ALA:H	38:BM:100:LYS:H	1.55	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BM:59:ARG:HH11	38:BM:60:GLN:HB3	1.73	0.53
45:BS:31:GLN:O	45:BS:34:ASP:HB2	2.08	0.53
47:BF:35:LEU:HD22	47:BF:56:LEU:HD11	1.89	0.53
47:BF:115:GLY:HA3	47:BF:177:ARG:HD2	1.89	0.53
48:BG:24:THR:HG22	48:BG:34:ARG:HA	1.90	0.53
1:CA:34:C:H2'	1:CA:35:G:C8	2.44	0.53
1:CA:77:A:H2'	1:CA:78:A:C8	2.43	0.53
1:CA:613:C:H2'	1:CA:614:C:C6	2.44	0.53
1:CA:842:U:OP1	1:CA:843:U:H4'	2.08	0.53
1:CA:1250:A:H2'	1:CA:1251:A:C8	2.43	0.53
14:CQ:24:ILE:HD13	14:CQ:43:LEU:HD13	1.89	0.53
2:CC:6:PRO:HG2	2:CC:183:TYR:CG	2.43	0.53
16:CS:33:TRP:C	16:CS:35:ARG:H	2.17	0.53
23:DB:90:U:H3'	23:DB:91:A:C5'	2.38	0.53
23:DB:198:C:O5'	23:DB:198:C:H6	1.92	0.53
23:DB:594:U:H2'	23:DB:595:C:C6	2.42	0.53
23:DB:799:G:H3'	23:DB:800:A:H2'	1.90	0.53
23:DB:1904:G:O2'	23:DB:1905:C:H5'	2.08	0.53
23:DB:2817:U:O2'	23:DB:2837:A:H1'	2.09	0.53
25:DC:75:ALA:CB	25:DC:95:TYR:HA	2.39	0.53
25:DC:91:ALA:HB2	25:DC:105:ALA:HB2	1.91	0.53
25:DC:129:LEU:HB3	25:DC:134:ILE:HG22	1.91	0.53
26:DD:125:TRP:CE2	26:DD:160:LYS:HB3	2.44	0.53
28:DP:99:LEU:HD13	28:DP:99:LEU:O	2.08	0.53
31:D0:38:LEU:HB3	31:D0:41:HIS:NE2	2.24	0.53
38:DM:41:LEU:HB3	38:DM:46:ILE:HG22	1.91	0.53
40:DH:116:ARG:O	40:DH:130:VAL:HG13	2.09	0.53
47:DF:8:LYS:HA	47:DF:12:VAL:CG2	2.36	0.53
47:DF:90:LEU:C	47:DF:91:ARG:HD3	2.33	0.53
49:DR:5:PHE:HD1	49:DR:5:PHE:H	1.55	0.53
49:DR:19:THR:HB	49:DR:97:LYS:HG3	1.90	0.53
50:DT:39:THR:HG22	50:DT:42:GLU:HG2	1.90	0.53
1:AA:121:U:H4'	1:AA:122:G:N7	2.23	0.53
1:AA:1292:G:H2'	1:AA:1293:C:C6	2.43	0.53
1:AA:1499:A:H5'	1:AA:1499:A:C8	2.38	0.53
2:AC:3:LYS:HB2	2:AC:3:LYS:NZ	2.24	0.53
5:AF:55:HIS:HB2	5:AF:56:LYS:HE2	1.91	0.53
5:AF:70:VAL:HG23	5:AF:71:ILE:N	2.22	0.53
5:AF:80:PHE:CZ	25:BC:123:ILE:HG12	2.43	0.53
7:AH:50:VAL:HG22	7:AH:50:VAL:O	2.08	0.53
11:AL:14:LYS:HG2	11:AL:15:VAL:N	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:55:U:H2'	22:BA:56:G:H8	1.74	0.53
23:BB:21:A:H2'	23:BB:22:C:C6	2.44	0.53
23:BB:237:C:O2'	23:BB:238:C:H5'	2.07	0.53
23:BB:915:C:H3'	23:BB:916:G:H8	1.72	0.53
23:BB:1470:A:H2'	23:BB:1471:G:O4'	2.07	0.53
23:BB:1599:U:H2'	23:BB:1600:C:C6	2.42	0.53
23:BB:2199:A:H3'	23:BB:2200:C:H6	1.73	0.53
23:BB:2408:U:O2'	23:BB:2409:G:H5'	2.09	0.53
23:BB:2757:A:H2'	23:BB:2758:A:H5'	1.91	0.53
23:BB:2772:C:H4'	26:BD:171:THR:HG21	1.89	0.53
25:BC:9:SER:C	25:BC:11:GLY:H	2.16	0.53
28:BP:20:ARG:NH2	28:BP:91:VAL:HG22	2.23	0.53
38:BM:108:VAL:HG21	38:BM:112:LEU:HD12	1.89	0.53
38:BM:114:ARG:HG3	38:BM:130:PHE:CG	2.44	0.53
47:BF:40:GLY:O	47:BF:41:GLU:HB2	2.08	0.53
1:CA:778:G:H2'	1:CA:779:C:C6	2.44	0.53
1:CA:784:A:H2'	1:CA:785:G:C8	2.44	0.53
1:CA:1070:U:H2'	1:CA:1071:C:H6	1.72	0.53
1:CA:1171:A:H2'	1:CA:1172:C:C5	2.44	0.53
4:CE:56:PRO:HG2	4:CE:57:ALA:H	1.73	0.53
4:CE:87:VAL:HG23	4:CE:91:SER:O	2.08	0.53
4:CE:106:ALA:HB1	4:CE:110:MET:HB3	1.89	0.53
5:CF:53:LYS:HZ3	5:CF:53:LYS:N	2.05	0.53
19:CU:42:THR:HB	19:CU:46:ARG:HE	1.73	0.53
23:DB:959:A:O2'	23:DB:960:A:H5'	2.08	0.53
23:DB:1098:A:C2'	24:DI:4:VAL:N	2.71	0.53
23:DB:1301:A:O2'	23:DB:1302:A:H3'	2.07	0.53
23:DB:1439:A:H1'	23:DB:1553:A:N6	2.23	0.53
23:DB:1560:G:H2'	23:DB:1561:C:C6	2.42	0.53
24:DI:57:VAL:HG23	24:DI:71:LYS:NZ	2.24	0.53
25:DC:202:ARG:HE	25:DC:213:ARG:HH21	1.56	0.53
27:DK:71:ARG:HA	27:DK:71:ARG:HE	1.74	0.53
33:D1:3:GLY:O	33:D1:5:ARG:N	2.42	0.53
33:D1:16:THR:HG21	33:D1:39:ASP:CG	2.33	0.53
41:DJ:28:LEU:HG	41:DJ:29:ALA:N	2.22	0.53
48:DG:3:VAL:O	48:DG:68:ARG:HG3	2.08	0.53
48:DG:94:ARG:HH21	48:DG:104:LEU:HA	1.73	0.53
51:DZ:31:PRO:HB2	51:DZ:33:LEU:HG	1.90	0.53
1:AA:377:G:H2'	1:AA:378:G:C8	2.44	0.53
1:AA:1000:A:H2'	1:AA:1001:C:C6	2.43	0.53
1:AA:1014:A:H5"	16:AS:13:HIS:HB3	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1524:C:H2'	1:AA:1525:G:C8	2.43	0.53
2:AC:52:SER:CA	2:AC:113:LYS:HG2	2.38	0.53
2:AC:137:VAL:HA	2:AC:148:ILE:HD13	1.90	0.53
3:AD:55:ARG:HA	3:AD:55:ARG:NE	2.24	0.53
6:AG:74:VAL:HA	6:AG:86:VAL:O	2.08	0.53
19:AU:24:LYS:HD2	19:AU:25:ALA:N	2.24	0.53
23:BB:143:C:N4	23:BB:144:A:N6	2.56	0.53
23:BB:871:U:H2'	23:BB:872:U:C6	2.44	0.53
23:BB:1441:G:H2'	23:BB:1442:U:H6	1.71	0.53
23:BB:1830:C:H2'	23:BB:1831:G:H8	1.73	0.53
25:BC:43:ASN:ND2	25:BC:44:ASN:H	2.05	0.53
26:BD:24:VAL:HG21	26:BD:188:LEU:HB3	1.91	0.53
27:BK:39:ILE:O	27:BK:59:LYS:HA	2.09	0.53
29:BE:29:HIS:O	29:BE:33:VAL:HG23	2.09	0.53
37:BL:80:SER:H	37:BL:113:ALA:CB	2.21	0.53
38:BM:41:LEU:HB3	38:BM:46:ILE:HG22	1.90	0.53
40:BH:26:ALA:O	40:BH:27:ARG:C	2.52	0.53
42:BN:72:ASP:C	42:BN:74:GLU:H	2.16	0.53
43:BO:116:GLN:HE21	43:BO:116:GLN:N	2.06	0.53
44:BQ:105:PHE:HA	44:BQ:108:LEU:CD1	2.35	0.53
47:BF:120:SER:HB2	47:BF:129:MET:HG3	1.90	0.53
47:BF:128:SER:HB3	47:BF:154:THR:HA	1.90	0.53
1:CA:958:A:P	16:CS:54:ARG:HH22	2.32	0.53
1:CA:961:U:O4'	1:CA:961:U:O2	2.24	0.53
1:CA:1074:G:H2'	1:CA:1075:U:H6	1.72	0.53
1:CA:1129:C:H5"	8:CI:17:ARG:HH12	1.74	0.53
1:CA:1348:U:H4'	8:CI:121:ARG:HG3	1.90	0.53
7:CH:124:ILE:HG22	7:CH:125:ILE:N	2.23	0.53
19:CU:39:LYS:N	19:CU:40:PRO:CD	2.71	0.53
2:CC:180:ASP:C	2:CC:181:ILE:HD12	2.34	0.53
6:CG:66:GLU:HA	6:CG:69:ARG:HD2	1.91	0.53
9:CJ:44:THR:HG21	9:CJ:70:HIS:HD2	1.73	0.53
20:CO:46:HIS:O	20:CO:48:LYS:N	2.41	0.53
23:DB:64:A:H2'	23:DB:65:U:C6	2.44	0.53
23:DB:118:A:OP2	23:DB:119:A:H5"	2.08	0.53
23:DB:216:A:H2'	23:DB:217:A:H8	1.74	0.53
23:DB:483:A:H5"	46:DU:46:LYS:CG	2.39	0.53
23:DB:608:A:H2'	23:DB:609:A:H8	1.74	0.53
23:DB:1967:C:H2'	23:DB:1968:G:O4'	2.09	0.53
23:DB:2087:G:H2'	23:DB:2088:A:C8	2.44	0.53
23:DB:2230:G:H2'	23:DB:2231:U:H6	1.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2700:A:H2	42:DN:71:ARG:HH12	1.56	0.53
23:DB:2857:G:N2	23:DB:2859:G:H3'	2.23	0.53
23:DB:2875:C:H2'	23:DB:2876:G:H8	1.73	0.53
24:DI:52:LEU:HD22	24:DI:81:LYS:HD3	1.89	0.53
24:DI:99:LYS:HD3	24:DI:99:LYS:N	2.24	0.53
25:DC:247:TRP:O	25:DC:249:VAL:HG22	2.08	0.53
27:DK:116:ILE:HG13	27:DK:117:SER:N	2.23	0.53
32:D4:24:ARG:HG2	32:D4:36:ARG:CG	2.39	0.53
44:DQ:60:TRP:C	44:DQ:64:ILE:HG12	2.33	0.53
48:DG:129:GLU:C	48:DG:130:ILE:HG13	2.34	0.53
49:DR:28:ALA:HB3	49:DR:31:GLU:HG3	1.90	0.53
50:DT:29:THR:HA	50:DT:86:THR:CA	2.34	0.53
1:AA:268:U:H2'	1:AA:269:C:C6	2.44	0.53
1:AA:621:A:H2'	1:AA:622:A:H8	1.72	0.53
1:AA:1044:A:C5	1:AA:1045:C:H1'	2.44	0.53
2:AC:25:THR:HG23	21:AN:75:LYS:HD2	1.90	0.53
2:AC:131:ARG:HB3	2:AC:135:ARG:NH1	2.24	0.53
4:AE:158:LYS:NZ	7:AH:63:LYS:HD3	2.24	0.53
6:AG:84:TYR:O	6:AG:86:VAL:HG23	2.09	0.53
9:AJ:77:VAL:HB	9:AJ:78:GLU:OE1	2.09	0.53
11:AL:43:LYS:HE3	11:AL:44:PRO:HD3	1.90	0.53
11:AL:52:CYS:SG	11:AL:66:ILE:HD11	2.49	0.53
12:AM:37:GLY:O	12:AM:38:ILE:HD13	2.09	0.53
23:BB:408:G:O2'	23:BB:409:G:H5'	2.09	0.53
23:BB:483:A:H5"	46:BU:46:LYS:CG	2.39	0.53
23:BB:644:A:H2'	23:BB:644:A:N3	2.24	0.53
23:BB:934:U:H2'	23:BB:935:C:H6	1.74	0.53
23:BB:951:C:O2'	23:BB:952:G:H5'	2.09	0.53
23:BB:1210:G:N3	23:BB:1212:G:N2	2.56	0.53
23:BB:1258:U:H2'	23:BB:1259:G:C8	2.43	0.53
23:BB:1789:A:H2'	23:BB:1790:C:O4'	2.09	0.53
23:BB:2651:C:O2'	23:BB:2652:C:H5'	2.09	0.53
23:BB:2674:G:H2'	23:BB:2675:A:C8	2.44	0.53
24:BI:81:LYS:HG3	24:BI:82:ALA:N	2.23	0.53
25:BC:4:LYS:CD	25:BC:5:CYS:H	2.22	0.53
26:BD:51:THR:HG22	26:BD:52:THR:H	1.73	0.53
26:BD:55:LYS:HZ3	26:BD:56:LYS:HG2	1.72	0.53
26:BD:63:PRO:C	26:BD:65:ALA:H	2.17	0.53
27:BK:99:ILE:HB	27:BK:118:LEU:HD22	1.90	0.53
29:BE:4:VAL:HG12	29:BE:5:LEU:N	2.21	0.53
30:BY:6:ILE:O	30:BY:34:THR:HA	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:B4:24:ARG:HG2	32:B4:36:ARG:CG	2.39	0.53
43:BO:28:VAL:O	43:BO:28:VAL:HG13	2.09	0.53
43:BO:111:ARG:HA	43:BO:115:LEU:O	2.08	0.53
44:BQ:33:VAL:HG23	44:BQ:34:ALA:N	2.24	0.53
44:BQ:57:ARG:HA	44:BQ:60:TRP:CE3	2.44	0.53
1:CA:236:A:H2'	1:CA:237:G:H8	1.74	0.53
1:CA:634:C:H2'	1:CA:635:A:H8	1.74	0.53
1:CA:842:U:H2'	1:CA:843:U:O3'	2.09	0.53
1:CA:1417:G:H1'	1:CA:1483:A:N6	2.24	0.53
1:CA:1453:G:H2'	1:CA:1454:G:O4'	2.09	0.53
4:CE:45:VAL:HG11	4:CE:117:ALA:HB2	1.90	0.53
10:CK:88:PRO:HD3	19:CU:28:LEU:CD1	2.39	0.53
9:CJ:37:ARG:CZ	9:CJ:37:ARG:HA	2.39	0.53
12:CM:108:ARG:HH11	12:CM:108:ARG:HG3	1.73	0.53
18:CB:14:HIS:O	18:CB:15:PHE:C	2.50	0.53
23:DB:279:A:H2'	23:DB:280:U:O4'	2.09	0.53
23:DB:1241:A:H2'	23:DB:1242:U:H5'	1.90	0.53
23:DB:1258:U:H2'	23:DB:1259:G:C8	2.44	0.53
23:DB:1819:A:OP1	25:DC:154:ALA:HA	2.08	0.53
23:DB:1994:C:O2'	23:DB:1995:U:H5'	2.08	0.53
23:DB:2331:G:H5'	52:DW:39:GLN:HB2	1.91	0.53
23:DB:2352:A:N1	52:DW:30:VAL:HG11	2.24	0.53
23:DB:2881:U:O2'	23:DB:2882:A:H5'	2.09	0.53
25:DC:90:ILE:HA	25:DC:103:ILE:O	2.09	0.53
28:DP:6:GLN:NE2	28:DP:7:LEU:HD12	2.24	0.53
41:DJ:44:TYR:O	41:DJ:45:THR:HB	2.08	0.53
42:DN:49:GLU:HB2	42:DN:50:PRO:HD3	1.89	0.53
44:DQ:38:VAL:O	44:DQ:39:ILE:C	2.52	0.53
49:DR:38:VAL:HG13	49:DR:54:VAL:HG12	1.91	0.53
1:AA:1487:G:O2'	1:AA:1488:G:H5'	2.09	0.53
2:AC:167:TYR:O	2:AC:168:ARG:HB2	2.08	0.53
3:AD:146:GLU:CD	3:AD:146:GLU:N	2.66	0.53
11:AL:79:ILE:HD12	11:AL:96:THR:CG2	2.38	0.53
11:AL:106:VAL:HA	11:AL:107:LYS:NZ	2.23	0.53
16:AS:34:SER:O	16:AS:37:SER:HB2	2.09	0.53
18:AB:37:VAL:HG22	18:AB:38:HIS:O	2.09	0.53
23:BB:37:C:O2'	23:BB:38:A:H5'	2.08	0.53
23:BB:315:G:H2'	23:BB:316:C:C6	2.44	0.53
23:BB:523:C:H4'	23:BB:540:C:O2	2.09	0.53
23:BB:813:U:H2'	23:BB:814:C:C6	2.44	0.53
23:BB:1018:U:O2'	23:BB:1019:U:H5'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1229:C:H2'	23:BB:1230:A:C8	2.43	0.53
23:BB:1647:U:P	23:BB:1647:U:H3'	2.49	0.53
23:BB:1672:A:H2'	23:BB:1673:G:C8	2.43	0.53
23:BB:1965:C:H5"	23:BB:1966:A:H2'	1.90	0.53
23:BB:2023:C:O2'	23:BB:2024:G:H5'	2.09	0.53
25:BC:152:GLN:C	25:BC:153:LEU:HD23	2.33	0.53
25:BC:245:THR:O	25:BC:247:TRP:N	2.41	0.53
27:BK:19:VAL:CG1	27:BK:43:ILE:HA	2.37	0.53
28:BP:77:SER:OG	28:BP:79:VAL:HG22	2.09	0.53
30:BY:47:ILE:HD12	30:BY:54:VAL:HG21	1.90	0.53
34:B3:57:VAL:C	34:B3:59:ALA:H	2.16	0.53
38:BM:17:ASN:HD21	38:BM:95:LEU:CD1	2.21	0.53
38:BM:71:LYS:HG2	38:BM:93:VAL:HG12	1.90	0.53
40:BH:73:ASN:HA	40:BH:141:LYS:O	2.08	0.53
42:BN:12:ARG:HG3	42:BN:13:ASN:H	1.73	0.53
46:BU:26:ASN:ND2	46:BU:26:ASN:N	2.56	0.53
47:BF:87:LYS:C	47:BF:88:VAL:HG23	2.34	0.53
47:BF:87:LYS:HG3	47:BF:88:VAL:H	1.73	0.53
48:BG:17:LYS:O	48:BG:23:ILE:HA	2.08	0.53
1:CA:162:A:H2'	1:CA:163:C:O4'	2.09	0.53
1:CA:542:G:O2'	1:CA:543:U:H5'	2.09	0.53
1:CA:1227:A:H2'	1:CA:1228:C:O4'	2.09	0.53
1:CA:1480:A:H2'	1:CA:1481:U:C6	2.44	0.53
11:CL:79:ILE:HD12	11:CL:96:THR:CG2	2.38	0.53
8:CI:11:ARG:NE	8:CI:12:LYS:HB2	2.24	0.53
18:CB:96:LEU:H	18:CB:99:MET:HE3	1.74	0.53
23:DB:596:U:H2'	23:DB:597:G:H8	1.73	0.53
23:DB:644:A:H2'	23:DB:644:A:N3	2.24	0.53
23:DB:753:A:H2'	23:DB:754:U:H6	1.72	0.53
23:DB:969:G:OP1	30:DY:17:PRO:HG3	2.09	0.53
23:DB:1425:G:H2'	23:DB:1426:G:C8	2.44	0.53
23:DB:1729:U:H5	23:DB:1731:G:N2	2.07	0.53
23:DB:1999:C:O2'	23:DB:2000:C:H5'	2.09	0.53
23:DB:2537:U:H2'	23:DB:2538:C:H6	1.71	0.53
29:DE:58:LYS:CD	29:DE:58:LYS:N	2.71	0.53
32:D4:36:ARG:HG2	32:D4:37:GLN:N	2.22	0.53
38:DM:17:ASN:HD21	38:DM:95:LEU:HD11	1.74	0.53
40:DH:14:SER:HB2	40:DH:17:ASP:CB	2.38	0.53
44:DQ:94:LEU:C	44:DQ:96:ASP:H	2.15	0.53
45:DS:17:VAL:C	45:DS:19:LEU:N	2.67	0.53
47:DF:105:ILE:C	47:DF:108:PRO:HD2	2.33	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:135:ILE:C	47:DF:137:PHE:H	2.15	0.53
47:DF:155:ILE:HG22	47:DF:157:THR:N	2.22	0.53
1:AA:124:C:O2'	1:AA:125:U:H5'	2.08	0.53
1:AA:229:U:H2'	1:AA:230:G:C8	2.44	0.53
1:AA:1089:G:C2'	1:AA:1090:U:H5'	2.37	0.53
1:AA:1110:A:N6	1:AA:1111:A:N6	2.57	0.53
1:AA:1270:G:H2'	1:AA:1271:A:H8	1.74	0.53
3:AD:60:VAL:HA	3:AD:63:ILE:HD12	1.90	0.53
4:AE:76:ASN:HB2	4:AE:81:GLN:NE2	2.24	0.53
5:AF:47:LEU:HG	5:AF:56:LYS:HA	1.90	0.53
6:AG:53:SER:C	6:AG:55:LYS:H	2.16	0.53
9:AJ:56:HIS:O	9:AJ:57:VAL:HG12	2.09	0.53
12:AM:10:ASP:C	12:AM:12:LYS:H	2.17	0.53
17:AT:64:GLY:C	17:AT:66:ILE:H	2.16	0.53
23:BB:4:U:H2'	23:BB:5:A:C8	2.44	0.53
23:BB:198:C:H6	23:BB:198:C:O5'	1.92	0.53
23:BB:483:A:H5'	46:BU:44:HIS:O	2.09	0.53
23:BB:496:G:C1'	45:BS:61:ASN:HD21	2.22	0.53
23:BB:549:G:H3'	23:BB:549:G:OP2	2.09	0.53
23:BB:1468:U:HO2'	23:BB:1469:A:H8	1.55	0.53
23:BB:2458:G:H2'	23:BB:2458:G:N3	2.22	0.53
23:BB:2529:G:H4'	48:BG:174:LYS:CG	2.38	0.53
23:BB:2553:G:H2'	23:BB:2554:U:O4'	2.09	0.53
23:BB:2630:G:O2'	23:BB:2631:G:H5'	2.08	0.53
38:BM:40:ARG:HB2	38:BM:93:VAL:CG2	2.39	0.53
38:BM:111:GLU:HA	38:BM:114:ARG:HH22	1.74	0.53
39:BX:39:GLN:HB3	39:BX:42:LEU:HD13	1.90	0.53
40:BH:4:ILE:HG23	40:BH:16:GLY:HA2	1.90	0.53
40:BH:4:ILE:O	40:BH:6:LEU:HD12	2.09	0.53
42:BN:17:ARG:C	42:BN:19:ALA:H	2.17	0.53
45:BS:73:LYS:HE3	45:BS:74:ILE:H	1.74	0.53
1:CA:878:A:H5"	7:CH:80:PRO:HG2	1.89	0.53
1:CA:1439:G:H2'	1:CA:1440:U:O4'	2.08	0.53
7:CH:50:VAL:HG22	7:CH:50:VAL:O	2.09	0.53
10:CK:53:GLY:O	10:CK:56:LYS:HB3	2.09	0.53
11:CL:81:ILE:HA	11:CL:95:HIS:O	2.09	0.53
15:CR:20:ILE:HG22	15:CR:53:GLN:CD	2.33	0.53
8:CI:61:ASP:O	8:CI:62:LEU:HD13	2.07	0.53
9:CJ:81:GLU:N	9:CJ:82:LYS:HZ2	2.07	0.53
21:CN:50:LEU:CD2	21:CN:51:PRO:HD3	2.38	0.53
16:CS:7:GLY:H	16:CS:8:PRO:HD3	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CB:125:PHE:CZ	18:CB:137:THR:HG23	2.44	0.53
22:DA:35:C:H2'	22:DA:36:C:O4'	2.09	0.53
23:DB:1313:U:H2'	23:DB:1313:U:O2	2.08	0.53
23:DB:1346:G:O2'	23:DB:1347:A:H5'	2.09	0.53
23:DB:1430:G:H2'	23:DB:1431:A:C8	2.44	0.53
23:DB:1734:G:O2'	23:DB:1735:A:H5'	2.09	0.53
23:DB:2106:U:H2'	23:DB:2107:G:O4'	2.09	0.53
23:DB:2564:A:OP1	23:DB:2648:G:H4'	2.09	0.53
23:DB:2893:A:H4'	23:DB:2894:G:O5'	2.08	0.53
25:DC:144:GLU:OE2	25:DC:188:ARG:HG3	2.09	0.53
26:DD:55:LYS:HZ3	26:DD:56:LYS:HG2	1.73	0.53
26:DD:56:LYS:HG3	26:DD:58:ASN:HB3	1.91	0.53
26:DD:119:ALA:HB1	26:DD:163:GLY:N	2.22	0.53
27:DK:113:MET:HE2	27:DK:116:ILE:HD11	1.91	0.53
30:DY:8:GLN:HB3	30:DY:31:ILE:O	2.08	0.53
41:DJ:7:LYS:C	41:DJ:9:GLU:H	2.17	0.53
42:DN:22:ARG:CZ	42:DN:70:THR:H	2.21	0.53
47:DF:29:ARG:H	47:DF:29:ARG:HE	1.57	0.53
47:DF:35:LEU:HD23	47:DF:36:ASN:H	1.73	0.53
48:DG:24:THR:HG22	48:DG:34:ARG:HA	1.90	0.53
52:DW:38:ARG:N	52:DW:56:HIS:HD2	2.07	0.53
1:AA:201:G:H2'	1:AA:202:G:O4'	2.09	0.53
1:AA:778:G:H2'	1:AA:779:C:C6	2.44	0.53
2:AC:149:LYS:HE3	2:AC:166:TRP:CH2	2.44	0.53
9:AJ:6:ILE:O	9:AJ:8:ILE:HD12	2.09	0.53
9:AJ:44:THR:HG23	9:AJ:69:THR:O	2.09	0.53
11:AL:110:LYS:O	11:AL:113:ARG:HG3	2.09	0.53
12:AM:21:ILE:HB	12:AM:24:VAL:CG2	2.37	0.53
17:AT:53:MET:HA	17:AT:56:ILE:CD1	2.39	0.53
23:BB:18:U:H2'	23:BB:19:A:C8	2.44	0.53
23:BB:734:A:H2'	23:BB:735:A:O4'	2.08	0.53
23:BB:742:A:H2'	23:BB:743:A:C8	2.44	0.53
23:BB:873:C:H4'	38:BM:64:TRP:NE1	2.22	0.53
23:BB:1060:U:O2	23:BB:1088:A:C8	2.62	0.53
23:BB:1640:A:H2'	23:BB:1641:A:H8	1.74	0.53
23:BB:2455:G:H2'	23:BB:2456:C:H6	1.74	0.53
23:BB:2645:G:C5'	23:BB:2732:G:H8	2.21	0.53
25:BC:199:HIS:C	25:BC:201:LEU:H	2.17	0.53
35:BV:38:LEU:HG	35:BV:40:ILE:HG23	1.90	0.53
37:BL:3:LEU:O	37:BL:5:THR:HG23	2.08	0.53
41:BJ:54:ILE:HD12	41:BJ:55:ILE:N	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BJ:56:VAL:C	41:BJ:57:LEU:HD12	2.34	0.53
41:BJ:59:ALA:HB1	41:BJ:101:ILE:HD11	1.90	0.53
47:BF:62:GLN:NE2	47:BF:91:ARG:HE	2.07	0.53
1:CA:6:G:H4'	1:CA:298:A:H4'	1.91	0.53
1:CA:802:A:H2'	1:CA:803:G:O4'	2.08	0.53
1:CA:1481:U:O2'	1:CA:1482:G:H5'	2.08	0.53
3:CD:59:LYS:O	3:CD:63:ILE:HG13	2.09	0.53
5:CF:68:GLN:HG2	5:CF:69:GLU:N	2.24	0.53
11:CL:21:PRO:C	11:CL:23:LEU:H	2.16	0.53
17:CT:53:MET:HE3	17:CT:54:GLN:HA	1.91	0.53
17:CT:67:HIS:CG	17:CT:68:LYS:H	2.27	0.53
2:CC:71:ARG:O	2:CC:74:ILE:HG22	2.09	0.53
18:CB:20:ARG:HA	18:CB:38:HIS:CE1	2.44	0.53
18:CB:209:VAL:HG23	18:CB:210:THR:N	2.23	0.53
18:CB:216:VAL:HG23	18:CB:217:ALA:H	1.74	0.53
23:DB:453:A:H5"	56:DB:3501:HOH:O	2.08	0.53
23:DB:579:G:H4'	23:DB:2018:G:H5"	1.90	0.53
23:DB:697:G:H2'	23:DB:698:C:C6	2.44	0.53
23:DB:1021:A:H61	23:DB:1142:A:H61	1.57	0.53
23:DB:1210:G:H5'	23:DB:1212:G:O4'	2.09	0.53
23:DB:1431:A:H2'	23:DB:1432:G:C8	2.43	0.53
23:DB:1872:A:H8	23:DB:1872:A:O5'	1.91	0.53
23:DB:1873:G:O2'	23:DB:1874:C:H5'	2.09	0.53
23:DB:2296:U:H4'	23:DB:2297:A:OP1	2.09	0.53
23:DB:2405:G:H1'	23:DB:2412:A:H61	1.73	0.53
23:DB:2651:C:O2'	23:DB:2652:C:H5'	2.09	0.53
23:DB:2875:C:H2'	23:DB:2876:G:C8	2.43	0.53
25:DC:77:VAL:HG22	25:DC:113:ASP:O	2.09	0.53
27:DK:109:SER:OG	27:DK:111:LYS:HG2	2.09	0.53
29:DE:48:THR:O	29:DE:52:VAL:HG23	2.07	0.53
34:D3:60:CYS:C	34:D3:62:PRO:HD3	2.34	0.53
38:DM:40:ARG:HB2	38:DM:93:VAL:CG2	2.39	0.53
42:DN:45:ARG:O	42:DN:49:GLU:HG3	2.09	0.53
46:DU:64:ILE:HG13	46:DU:65:GLN:N	2.23	0.53
49:DR:98:ILE:O	49:DR:99:THR:HG23	2.09	0.53
1:AA:50:A:N6	1:AA:361:G:H4'	2.24	0.52
1:AA:699:C:C2'	1:AA:700:G:H5"	2.39	0.52
1:AA:842:U:OP1	1:AA:843:U:H4'	2.09	0.52
1:AA:1085:U:H3'	1:AA:1086:U:C5	2.44	0.52
1:AA:1469:C:H2'	1:AA:1470:U:O4'	2.08	0.52
2:AC:102:ILE:H	2:AC:102:ILE:HD12	1.73	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:115:VAL:O	2:AC:119:ILE:HG22	2.09	0.52
4:AE:14:LEU:HD22	4:AE:15:ILE:N	2.24	0.52
7:AH:108:GLY:O	7:AH:110:MET:HG3	2.09	0.52
10:AK:95:THR:HG23	10:AK:96:ILE:N	2.23	0.52
18:AB:209:VAL:HG23	18:AB:210:THR:N	2.10	0.52
20:AO:77:ARG:HH11	20:AO:77:ARG:HB3	1.74	0.52
23:BB:30:G:H2'	23:BB:31:C:H6	1.70	0.52
23:BB:545:U:H1'	23:BB:548:G:O6	2.09	0.52
23:BB:571:U:N3	23:BB:575:A:N7	2.57	0.52
23:BB:584:C:OP2	44:BQ:5:ARG:HD3	2.09	0.52
23:BB:750:A:H2'	23:BB:751:A:H5"	1.91	0.52
23:BB:1199:U:H2'	23:BB:1200:C:H6	1.73	0.52
23:BB:1260:A:O2'	23:BB:1261:C:H5'	2.08	0.52
23:BB:1930:G:H2'	23:BB:1968:G:C6	2.44	0.52
23:BB:2290:G:H2'	23:BB:2291:U:C6	2.44	0.52
23:BB:2300:C:H2'	23:BB:2301:C:C6	2.43	0.52
26:BD:111:GLY:H	26:BD:194:PRO:CG	2.23	0.52
27:BK:34:GLY:O	27:BK:36:GLY:N	2.42	0.52
32:B4:33:HIS:O	32:B4:35:GLN:HG3	2.09	0.52
33:B1:16:THR:HG21	33:B1:39:ASP:CG	2.34	0.52
41:BJ:29:ALA:CB	41:BJ:108:MET:HE3	2.37	0.52
46:BU:12:VAL:HG22	46:BU:69:VAL:HG12	1.91	0.52
46:BU:33:VAL:HG13	46:BU:66:VAL:HB	1.91	0.52
47:BF:45:ASP:O	47:BF:47:LYS:N	2.41	0.52
47:BF:45:ASP:O	47:BF:46:LYS:HE2	2.10	0.52
1:CA:384:G:H2'	1:CA:385:C:H6	1.74	0.52
1:CA:562:U:H4'	1:CA:563:A:O5'	2.09	0.52
5:CF:47:LEU:HG	5:CF:56:LYS:HA	1.90	0.52
7:CH:37:ASN:O	7:CH:40:LYS:HB3	2.09	0.52
12:CM:10:ASP:HA	12:CM:44:ILE:HD13	1.90	0.52
16:CS:52:ASN:C	16:CS:76:THR:HG23	2.35	0.52
18:CB:86:CYS:N	18:CB:88:GLN:HE21	2.07	0.52
18:CB:172:ILE:HG22	18:CB:176:ASN:HD21	1.73	0.52
22:DA:28:C:H2'	22:DA:29:A:O4'	2.08	0.52
22:DA:87:U:H2'	22:DA:88:C:C5'	2.39	0.52
23:DB:39:G:H2'	23:DB:40:U:C6	2.44	0.52
23:DB:99:U:O4'	23:DB:99:U:O2	2.27	0.52
23:DB:372:G:OP2	51:DZ:61:LYS:HE2	2.09	0.52
23:DB:1623:G:O2'	23:DB:1624:U:H5'	2.09	0.52
23:DB:2530:A:H2'	23:DB:2531:A:H5"	1.91	0.52
23:DB:2605:U:H2'	23:DB:2606:C:C6	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2615:U:C2	31:D0:3:GLN:HA	2.44	0.52
24:DI:54:ILE:HD13	24:DI:55:PRO:N	2.23	0.52
29:DE:113:VAL:C	29:DE:115:GLN:H	2.16	0.52
46:DU:13:LEU:HA	46:DU:18:LYS:CE	2.39	0.52
47:DF:116:LEU:HG	47:DF:117:SER:H	1.73	0.52
50:DT:39:THR:CG2	50:DT:42:GLU:H	2.23	0.52
50:DT:44:LYS:O	50:DT:48:GLN:HG2	2.10	0.52
50:DT:50:LEU:HD22	50:DT:50:LEU:N	2.23	0.52
51:DZ:5:CYS:HB3	51:DZ:9:GLY:H	1.73	0.52
1:AA:218:U:H2'	1:AA:219:U:H6	1.74	0.52
1:AA:601:G:H2'	1:AA:602:A:H8	1.74	0.52
1:AA:1117:A:H4'	8:AI:105:ARG:NH1	2.24	0.52
1:AA:1125:U:H2'	1:AA:1126:U:C5'	2.36	0.52
1:AA:1148:U:H5'	8:AI:6:TYR:OH	2.08	0.52
3:AD:54:LEU:HD22	3:AD:54:LEU:O	2.09	0.52
5:AF:18:VAL:O	5:AF:22:ILE:HG13	2.09	0.52
6:AG:28:ILE:HG21	6:AG:101:ARG:HG2	1.90	0.52
12:AM:106:ARG:NE	12:AM:112:ARG:HG2	2.24	0.52
16:AS:52:ASN:CG	16:AS:53:GLY:N	2.63	0.52
17:AT:43:LYS:HB3	17:AT:86:ALA:CB	2.39	0.52
22:BA:50:A:OP1	43:BO:68:LYS:HB2	2.09	0.52
23:BB:4:U:H2'	23:BB:5:A:H8	1.74	0.52
23:BB:725:G:H2'	23:BB:726:G:O4'	2.09	0.52
23:BB:1241:A:H2'	23:BB:1242:U:H5'	1.91	0.52
23:BB:1904:G:O2'	23:BB:1905:C:H5'	2.09	0.52
23:BB:2485:G:H5"	38:BM:125:PRO:HG3	1.91	0.52
24:BI:2:LYS:HB3	24:BI:2:LYS:NZ	2.24	0.52
29:BE:60:TRP:C	29:BE:62:GLN:H	2.15	0.52
29:BE:105:LEU:HD21	29:BE:177:PRO:HA	1.90	0.52
34:B3:14:LYS:O	34:B3:21:PHE:HA	2.10	0.52
42:BN:38:LEU:HD11	42:BN:42:LYS:HD2	1.91	0.52
42:BN:45:ARG:O	42:BN:49:GLU:HG3	2.09	0.52
46:BU:43:LYS:HD3	46:BU:44:HIS:N	2.24	0.52
47:BF:133:GLU:HA	47:BF:150:GLY:CA	2.39	0.52
1:CA:135:C:O2	13:CP:1:MET:HB2	2.10	0.52
1:CA:539:A:H2'	1:CA:540:G:H8	1.75	0.52
1:CA:570:G:H2'	1:CA:571:U:C6	2.45	0.52
1:CA:1225:A:O2'	16:CS:77:ARG:HD3	2.08	0.52
1:CA:1240:U:O2'	6:CG:31:VAL:HG11	2.08	0.52
1:CA:1320:C:C2	16:CS:71:GLY:HA3	2.45	0.52
1:CA:1328:C:OP1	12:CM:27:THR:HG21	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1332:A:H2'	1:CA:1333:A:C8	2.44	0.52
6:CG:90:VAL:CG2	6:CG:95:ARG:HG3	2.40	0.52
8:CI:11:ARG:HD3	8:CI:73:GLY:HA2	1.89	0.52
12:CM:52:ILE:HG23	12:CM:53:ASP:N	2.23	0.52
21:CN:1:ALA:HB1	21:CN:6:LYS:HE3	1.91	0.52
16:CS:25:GLY:O	16:CS:27:LYS:HE2	2.09	0.52
23:DB:850:U:H2'	23:DB:851:C:H6	1.73	0.52
23:DB:1013:C:H2'	23:DB:1014:A:C8	2.43	0.52
23:DB:1099:G:C8	24:DI:3:LYS:HB2	2.44	0.52
23:DB:1210:G:N3	23:DB:1212:G:N2	2.57	0.52
23:DB:1281:G:H2'	23:DB:1282:U:C6	2.44	0.52
23:DB:1488:C:O2'	23:DB:1489:C:H5'	2.10	0.52
23:DB:1771:C:H2'	23:DB:1772:A:C8	2.44	0.52
23:DB:2104:C:C6	23:DB:2104:C:C3'	2.92	0.52
23:DB:2300:C:H2'	23:DB:2301:C:C6	2.44	0.52
23:DB:2471:A:O2'	23:DB:2472:G:C8	2.58	0.52
27:DK:64:ARG:HD2	27:DK:102:PRO:O	2.09	0.52
28:DP:19:PHE:CE2	28:DP:25:VAL:HG11	2.44	0.52
33:D1:5:ARG:NH1	33:D1:25:ASN:HB2	2.23	0.52
37:DL:51:GLU:OE1	37:DL:57:LEU:HB2	2.10	0.52
37:DL:65:GLY:O	37:DL:66:PHE:HB3	2.09	0.52
47:DF:12:VAL:O	47:DF:16:MET:HG2	2.09	0.52
47:DF:100:GLU:HA	47:DF:100:GLU:OE1	2.09	0.52
48:DG:17:LYS:O	48:DG:23:ILE:HA	2.09	0.52
50:DT:15:HIS:N	50:DT:32:LEU:HA	2.15	0.52
52:DW:37:VAL:CG1	52:DW:38:ARG:H	2.15	0.52
1:AA:143:A:H2	1:AA:220:G:H22	1.56	0.52
1:AA:191:G:H8	1:AA:191:G:OP2	1.92	0.52
1:AA:648:A:H2'	1:AA:649:A:H8	1.75	0.52
7:AH:124:ILE:HG22	7:AH:125:ILE:N	2.24	0.52
10:AK:88:PRO:HD3	19:AU:28:LEU:CD1	2.39	0.52
14:AQ:18:LYS:HE3	14:AQ:48:GLU:HG2	1.89	0.52
18:AB:102:ASN:O	18:AB:106:VAL:HG23	2.09	0.52
19:AU:34:ARG:HD3	19:AU:39:LYS:CE	2.35	0.52
22:BA:64:G:H2'	22:BA:65:U:C6	2.44	0.52
23:BB:85:G:N2	23:BB:98:G:H1'	2.24	0.52
23:BB:346:A:H5'	23:BB:346:A:N3	2.24	0.52
23:BB:643:A:C5	23:BB:644:A:N7	2.78	0.52
23:BB:851:C:H2'	23:BB:852:U:C6	2.45	0.52
23:BB:1021:A:H61	23:BB:1142:A:H61	1.56	0.52
23:BB:1199:U:H1'	44:BQ:2:ARG:O	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2671:G:H2'	23:BB:2672:U:H6	1.74	0.52
23:BB:2677:G:H2'	23:BB:2678:C:H6	1.74	0.52
23:BB:2769:U:H2'	23:BB:2770:G:C8	2.44	0.52
24:BI:122:GLU:CD	24:BI:122:GLU:H	2.17	0.52
25:BC:12:ARG:HA	25:BC:15:VAL:HG23	1.91	0.52
25:BC:188:ARG:HG2	25:BC:188:ARG:HH21	1.74	0.52
25:BC:209:ALA:HA	25:BC:212:TRP:CE2	2.45	0.52
27:BK:75:SER:HA	28:BP:72:VAL:O	2.09	0.52
29:BE:116:ASP:O	29:BE:185:LYS:HE3	2.08	0.52
32:B4:24:ARG:NH2	32:B4:36:ARG:HG3	2.23	0.52
34:B3:60:CYS:O	34:B3:61:LEU:HD23	2.08	0.52
35:BV:75:GLN:HB3	35:BV:90:ASP:HB2	1.91	0.52
38:BM:102:LEU:H	38:BM:102:LEU:HD22	1.72	0.52
40:BH:116:ARG:CZ	40:BH:131:SER:HB2	2.39	0.52
44:BQ:79:ILE:C	44:BQ:79:ILE:HD13	2.35	0.52
47:BF:62:GLN:NE2	47:BF:90:LEU:HA	2.24	0.52
52:BW:46:ALA:HB2	52:BW:78:PHE:CD1	2.45	0.52
1:CA:1320:C:OP2	16:CS:69:LYS:HE3	2.09	0.52
10:CK:51:PHE:HZ	10:CK:61:ALA:HA	1.74	0.52
14:CQ:76:ARG:HH12	14:CQ:78:VAL:HA	1.74	0.52
2:CC:81:GLU:O	2:CC:85:LYS:HB2	2.09	0.52
2:CC:107:LYS:C	2:CC:109:GLU:H	2.17	0.52
12:CM:55:LEU:O	12:CM:59:VAL:HG12	2.09	0.52
23:DB:137:U:H2'	23:DB:138:U:C1'	2.40	0.52
23:DB:523:C:H4'	23:DB:540:C:O2	2.09	0.52
23:DB:813:U:H2'	23:DB:814:C:C6	2.44	0.52
23:DB:825:A:O2'	37:DL:54:GLN:HB3	2.09	0.52
23:DB:871:U:H1'	23:DB:907:G:N1	2.25	0.52
23:DB:936:A:H2'	23:DB:937:C:C6	2.45	0.52
23:DB:1098:A:C3'	24:DI:4:VAL:N	2.72	0.52
23:DB:1439:A:N7	23:DB:1440:U:N1	2.57	0.52
23:DB:1777:U:O2'	23:DB:1778:U:H5'	2.09	0.52
23:DB:1812:U:H1'	25:DC:43:ASN:HD21	1.74	0.52
23:DB:2179:C:O2	23:DB:2179:C:H2'	2.08	0.52
23:DB:2769:U:H2'	23:DB:2770:G:C8	2.45	0.52
25:DC:132:ARG:NH2	25:DC:169:ALA:HA	2.24	0.52
27:DK:87:LEU:HD12	27:DK:93:GLN:H	1.73	0.52
30:DY:3:THR:HB	30:DY:36:GLU:CG	2.39	0.52
36:D2:44:VAL:O	36:D2:45:SER:C	2.51	0.52
41:DJ:44:TYR:CE2	44:DQ:59:LEU:HD11	2.45	0.52
41:DJ:104:ALA:O	41:DJ:108:MET:HG3	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:73:ASN:C	46:DU:75:ALA:H	2.17	0.52
48:DG:89:VAL:HG23	48:DG:160:GLY:O	2.10	0.52
1:AA:6:G:H4'	1:AA:298:A:H4'	1.91	0.52
1:AA:295:C:H2'	1:AA:296:U:C6	2.45	0.52
1:AA:555:U:H2'	1:AA:556:C:C6	2.43	0.52
1:AA:882:C:O2'	1:AA:883:C:H5'	2.09	0.52
1:AA:1451:U:H5"	1:AA:1452:C:H5	1.74	0.52
4:AE:85:LYS:HG3	4:AE:93:VAL:O	2.09	0.52
7:AH:37:ASN:O	7:AH:41:GLU:HG2	2.09	0.52
8:AI:18:VAL:HG21	8:AI:82:ILE:N	2.23	0.52
8:AI:80:HIS:O	8:AI:84:ARG:HG3	2.09	0.52
9:AJ:53:ILE:CG2	9:AJ:61:ALA:HB1	2.31	0.52
13:AP:75:ILE:HG22	13:AP:80:LYS:HD2	1.90	0.52
18:AB:93:HIS:O	18:AB:94:ARG:HG2	2.10	0.52
20:AO:3:LEU:HG	20:AO:8:THR:OG1	2.10	0.52
23:BB:90:U:H3'	23:BB:91:A:C5'	2.38	0.52
23:BB:878:A:OP1	23:BB:878:A:H3'	2.09	0.52
23:BB:1097:U:C2'	23:BB:1098:A:H5'	2.38	0.52
23:BB:1244:A:O2'	23:BB:1245:G:H5'	2.09	0.52
23:BB:1545:A:H2'	23:BB:1546:G:O4'	2.08	0.52
23:BB:1838:C:H4'	23:BB:1839:G:H8	1.73	0.52
23:BB:1997:C:H2'	23:BB:1998:A:C8	2.44	0.52
23:BB:2443:C:O2'	23:BB:2444:G:H5'	2.10	0.52
25:BC:52:HIS:N	25:BC:52:HIS:CD2	2.76	0.52
30:BY:3:THR:HB	30:BY:36:GLU:CG	2.40	0.52
30:BY:6:ILE:HD13	30:BY:6:ILE:N	2.22	0.52
38:BM:21:ALA:HB2	38:BM:100:LYS:HG2	1.92	0.52
40:BH:40:THR:O	40:BH:42:LYS:N	2.39	0.52
40:BH:58:LEU:HA	40:BH:61:VAL:HG12	1.91	0.52
43:BO:7:ARG:HG3	43:BO:96:GLY:C	2.34	0.52
47:BF:41:GLU:HG3	47:BF:48:LEU:HD11	1.91	0.52
48:BG:34:ARG:HD3	48:BG:34:ARG:N	2.24	0.52
1:CA:179:A:H2'	1:CA:180:U:O4'	2.08	0.52
1:CA:476:U:H2'	1:CA:477:C:C6	2.43	0.52
1:CA:642:A:H2'	1:CA:643:C:C6	2.44	0.52
1:CA:749:A:O2'	1:CA:750:C:H5'	2.09	0.52
1:CA:1115:U:H2'	1:CA:1116:U:C6	2.44	0.52
1:CA:1503:A:C8	1:CA:1531:A:H1'	2.44	0.52
1:CA:1527:U:O2'	1:CA:1528:U:H5'	2.09	0.52
7:CH:55:LYS:HE3	7:CH:56:PRO:HD2	1.91	0.52
14:CQ:60:ILE:HG22	14:CQ:74:LEU:HA	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CT:73:ARG:HG3	17:CT:74:HIS:N	2.24	0.52
2:CC:178:ARG:HG2	2:CC:178:ARG:O	2.08	0.52
12:CM:38:ILE:CG2	12:CM:42:VAL:HG21	2.40	0.52
18:CB:125:PHE:HZ	18:CB:137:THR:HG23	1.74	0.52
23:DB:736:C:H2'	23:DB:737:C:C6	2.44	0.52
23:DB:917:A:H5"	23:DB:2268:A:H61	1.75	0.52
23:DB:1064:C:H5'	24:DI:88:GLY:HA3	1.90	0.52
23:DB:1190:G:OP1	37:DL:32:GLY:HA2	2.08	0.52
23:DB:1629:U:O2	23:DB:2698:U:H5"	2.09	0.52
23:DB:1782:U:H2'	23:DB:1783:A:H5'	1.90	0.52
23:DB:1916:A:H2'	23:DB:1917:U:O4'	2.08	0.52
34:D3:50:SER:C	34:D3:52:GLY:H	2.15	0.52
36:D2:3:ARG:HA	36:D2:3:ARG:CZ	2.38	0.52
38:DM:21:ALA:HB2	38:DM:100:LYS:HG2	1.91	0.52
39:DX:41:HIS:O	39:DX:44:LYS:HB3	2.09	0.52
1:AA:137:U:H2'	1:AA:138:G:H8	1.74	0.52
1:AA:370:C:H2'	1:AA:371:A:H8	1.73	0.52
1:AA:461:A:H3'	1:AA:462:G:O4'	2.09	0.52
1:AA:577:G:O2'	1:AA:578:C:H5'	2.09	0.52
1:AA:755:G:O2'	1:AA:756:C:H5'	2.10	0.52
1:AA:1361:G:C2'	1:AA:1362:A:H5"	2.29	0.52
4:AE:96:GLN:HB3	4:AE:123:LEU:HD12	1.90	0.52
4:AE:98:ALA:HB2	4:AE:123:LEU:HG	1.90	0.52
6:AG:114:SER:O	6:AG:118:ARG:HG3	2.08	0.52
9:AJ:28:THR:HG21	9:AJ:90:LEU:HD23	1.90	0.52
18:AB:38:HIS:O	18:AB:39:ILE:HD13	2.09	0.52
21:AN:17:ASP:O	21:AN:21:ALA:HB3	2.09	0.52
22:BA:28:C:H2'	22:BA:29:A:O4'	2.10	0.52
23:BB:692:C:H2'	23:BB:693:A:C8	2.45	0.52
23:BB:833:A:H2'	23:BB:834:G:C8	2.45	0.52
23:BB:863:A:H2'	23:BB:864:G:H8	1.73	0.52
23:BB:1439:A:H1'	23:BB:1553:A:N6	2.25	0.52
23:BB:1661:G:O2'	23:BB:1662:U:H5'	2.10	0.52
23:BB:1820:U:OP1	25:BC:176:ARG:HD2	2.09	0.52
23:BB:1946:U:H2'	23:BB:1947:C:H6	1.74	0.52
23:BB:2052:A:OP1	26:BD:145:SER:HA	2.09	0.52
23:BB:2199:A:H5'	23:BB:2200:C:OP2	2.10	0.52
23:BB:2885:G:H2'	23:BB:2886:A:O4'	2.09	0.52
24:BI:48:ILE:HG22	24:BI:49:GLU:HG2	1.91	0.52
25:BC:28:PRO:HG2	25:BC:33:LEU:HD11	1.92	0.52
26:BD:106:LYS:HD3	26:BD:106:LYS:N	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BP:91:VAL:O	28:BP:92:ARG:HB3	2.10	0.52
34:B3:31:ILE:CD1	34:B3:34:LYS:HD3	2.39	0.52
35:BV:10:LYS:HG2	35:BV:11:GLU:HG3	1.90	0.52
46:BU:73:ASN:C	46:BU:75:ALA:H	2.17	0.52
52:BW:35:ILE:HG13	52:BW:57:THR:OG1	2.08	0.52
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.45	0.52
3:CD:145:ARG:HB3	3:CD:147:LYS:HG3	1.92	0.52
4:CE:156:ARG:HB2	7:CH:43:GLY:HA3	1.91	0.52
11:CL:5:GLN:HA	11:CL:8:ARG:NH2	2.24	0.52
13:CP:28:ARG:HD3	13:CP:29:ASN:ND2	2.25	0.52
2:CC:120:THR:HG23	2:CC:197:VAL:CG2	2.40	0.52
6:CG:112:ASP:H	6:CG:118:ARG:CZ	2.22	0.52
12:CM:3:ILE:HG22	12:CM:56:ARG:HA	1.92	0.52
12:CM:14:ALA:HB2	12:CM:42:VAL:CG2	2.38	0.52
12:CM:21:ILE:CB	12:CM:24:VAL:HG22	2.31	0.52
12:CM:82:LEU:HD21	16:CS:64:GLU:OE2	2.09	0.52
16:CS:47:THR:HG23	16:CS:60:PHE:CZ	2.44	0.52
18:CB:52:ALA:HB2	18:CB:197:PHE:HB3	1.92	0.52
18:CB:86:CYS:O	18:CB:88:GLN:N	2.41	0.52
23:DB:443:A:C4	29:DE:40:ARG:HD3	2.44	0.52
23:DB:734:A:H2'	23:DB:735:A:O4'	2.10	0.52
23:DB:742:A:O2'	23:DB:743:A:H5'	2.10	0.52
23:DB:1100:C:H2'	23:DB:1101:U:C6	2.45	0.52
23:DB:1353:A:H2'	23:DB:1354:A:H8	1.74	0.52
23:DB:1475:G:H1'	23:DB:1476:U:H5	1.75	0.52
23:DB:1582:C:H2'	23:DB:1583:A:O4'	2.09	0.52
23:DB:1593:A:H2'	23:DB:1594:U:O4'	2.09	0.52
23:DB:1676:A:H2'	23:DB:1677:A:O4'	2.10	0.52
23:DB:1711:A:H2'	23:DB:1712:U:C6	2.45	0.52
23:DB:2337:G:N3	23:DB:2337:G:H2'	2.24	0.52
23:DB:2674:G:H2'	23:DB:2675:A:C8	2.44	0.52
23:DB:2884:U:H2'	23:DB:2885:G:C8	2.44	0.52
27:DK:118:LEU:O	27:DK:120:PRO:HD2	2.10	0.52
35:DV:10:LYS:HG2	35:DV:11:GLU:HG3	1.91	0.52
40:DH:26:ALA:O	40:DH:27:ARG:C	2.52	0.52
40:DH:121:VAL:HG12	40:DH:123:ARG:HD2	1.90	0.52
40:DH:125:THR:CA	40:DH:146:VAL:HB	2.31	0.52
41:DJ:19:ASP:HB2	41:DJ:57:LEU:HB2	1.90	0.52
48:DG:104:LEU:HB2	48:DG:112:VAL:HB	1.92	0.52
1:AA:78:A:H2'	1:AA:79:G:C8	2.45	0.52
1:AA:364:A:H2'	1:AA:365:U:O2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:868:C:H2'	1:AA:869:G:O4'	2.09	0.52
1:AA:937:A:H3'	56:AA:1753:HOH:O	2.09	0.52
1:AA:1264:U:O2'	1:AA:1265:C:H5'	2.09	0.52
1:AA:1492:A:H2'	23:BB:1913:A:C6	2.45	0.52
4:AE:44:ARG:HA	4:AE:71:ILE:O	2.09	0.52
9:AJ:33:GLY:O	9:AJ:34:ALA:C	2.53	0.52
12:AM:18:LEU:O	12:AM:18:LEU:HD23	2.10	0.52
12:AM:92:ARG:HH11	16:AS:79:TYR:HE2	1.58	0.52
14:AQ:76:ARG:HH12	14:AQ:78:VAL:HA	1.75	0.52
17:AT:67:HIS:CG	17:AT:68:LYS:H	2.28	0.52
21:AN:5:MET:HE3	21:AN:60:ARG:NH1	2.24	0.52
23:BB:531:C:O2'	23:BB:563:A:H5"	2.10	0.52
23:BB:1028:A:N3	23:BB:2486:C:O2'	2.42	0.52
23:BB:1374:G:H2'	23:BB:1375:U:C6	2.44	0.52
23:BB:2432:A:O2'	23:BB:2433:A:H5'	2.09	0.52
23:BB:2621:G:P	26:BD:124:ARG:HH22	2.32	0.52
23:BB:2834:G:H1'	23:BB:2883:A:N6	2.25	0.52
23:BB:2884:U:H2'	23:BB:2885:G:C8	2.43	0.52
25:BC:12:ARG:HA	25:BC:15:VAL:CG2	2.40	0.52
27:BK:7:MET:HE1	27:BK:44:LYS:HG3	1.91	0.52
29:BE:60:TRP:HE1	29:BE:71:GLY:HA2	1.73	0.52
32:B4:1:MET:HE3	32:B4:34:LYS:HG2	1.91	0.52
41:BJ:17:VAL:CG2	41:BJ:137:PRO:HB2	2.34	0.52
41:BJ:44:TYR:CD2	44:BQ:59:LEU:HD21	2.44	0.52
42:BN:9:GLN:O	42:BN:11:ASN:N	2.41	0.52
43:BO:74:VAL:O	43:BO:77:ALA:HB3	2.10	0.52
48:BG:72:ASN:O	48:BG:76:ILE:HG12	2.09	0.52
51:BZ:33:LEU:H	51:BZ:52:SER:CB	2.23	0.52
52:BW:18:LYS:HA	52:BW:36:ILE:HG12	1.90	0.52
1:CA:218:U:H2'	1:CA:219:U:H6	1.75	0.52
1:CA:229:U:H2'	1:CA:230:G:C8	2.44	0.52
1:CA:683:G:O2'	1:CA:684:U:H5'	2.10	0.52
1:CA:735:C:O2'	1:CA:736:C:H5'	2.10	0.52
1:CA:803:G:H2'	1:CA:804:U:H6	1.73	0.52
1:CA:947:G:H2'	1:CA:948:C:C6	2.45	0.52
1:CA:959:A:N6	16:CS:77:ARG:HA	2.24	0.52
5:CF:6:ILE:HG13	5:CF:62:MET:HB2	1.92	0.52
11:CL:66:ILE:HD12	11:CL:66:ILE:N	2.25	0.52
14:CQ:59:GLU:HB3	14:CQ:75:VAL:HG23	1.92	0.52
6:CG:25:PHE:HD1	6:CG:100:MET:HG2	1.75	0.52
21:CN:40:ARG:NH2	16:CS:6:LYS:HB2	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:113:C:H2'	22:DA:114:C:C6	2.45	0.52
23:DB:125:A:H3'	23:DB:126:A:H5"	1.90	0.52
23:DB:627:A:H2'	23:DB:627:A:OP1	2.10	0.52
23:DB:1151:A:H2'	23:DB:1152:C:H6	1.74	0.52
23:DB:1260:A:O2'	23:DB:1261:C:H5'	2.10	0.52
23:DB:1361:G:H2'	23:DB:1362:C:C6	2.45	0.52
23:DB:1374:G:O2'	23:DB:1375:U:H5'	2.10	0.52
23:DB:2050:C:O2	26:DD:161:MET:HE1	2.10	0.52
23:DB:2408:U:O2'	23:DB:2409:G:H5'	2.09	0.52
23:DB:2454:G:C2'	23:DB:2455:G:H5'	2.40	0.52
26:DD:106:LYS:HD3	26:DD:106:LYS:H	1.75	0.52
30:DY:50:VAL:HB	30:DY:53:MET:CB	2.39	0.52
32:D4:24:ARG:NH2	32:D4:36:ARG:HG3	2.24	0.52
32:D4:33:HIS:O	32:D4:35:GLN:HG3	2.10	0.52
33:D1:9:LYS:HD3	33:D1:9:LYS:N	2.21	0.52
38:DM:114:ARG:HG3	38:DM:130:PHE:CG	2.45	0.52
40:DH:4:ILE:O	40:DH:6:LEU:HD12	2.09	0.52
40:DH:40:THR:O	40:DH:42:LYS:N	2.41	0.52
44:DQ:57:ARG:HA	44:DQ:60:TRP:CE3	2.44	0.52
47:DF:107:VAL:HG21	47:DF:175:PRO:HG3	1.91	0.52
47:DF:111:ARG:HH11	47:DF:135:ILE:HG21	1.73	0.52
50:DT:39:THR:O	50:DT:40:LYS:HB3	2.09	0.52
50:DT:57:VAL:HG13	50:DT:58:VAL:N	2.23	0.52
1:AA:61:G:H2'	1:AA:62:U:O4'	2.09	0.52
1:AA:179:A:H2'	1:AA:180:U:O4'	2.09	0.52
1:AA:254:G:OP1	14:AQ:68:LYS:O	2.26	0.52
1:AA:539:A:H2'	1:AA:540:G:C8	2.44	0.52
1:AA:821:G:H2'	1:AA:822:U:C6	2.45	0.52
1:AA:1031:C:H4'	1:AA:1032:G:O5'	2.09	0.52
2:AC:45:GLU:C	2:AC:46:LEU:HD22	2.35	0.52
2:AC:112:ALA:O	2:AC:113:LYS:C	2.52	0.52
6:AG:12:LEU:HD13	6:AG:13:PRO:HD2	1.92	0.52
11:AL:66:ILE:HD12	11:AL:66:ILE:N	2.25	0.52
12:AM:44:ILE:H	12:AM:44:ILE:HD12	1.75	0.52
16:AS:29:PRO:HB3	16:AS:47:THR:C	2.35	0.52
23:BB:231:A:H3'	23:BB:232:G:H8	1.75	0.52
23:BB:1100:C:H2'	23:BB:1101:U:H6	1.74	0.52
23:BB:1560:G:H2'	23:BB:1561:C:C6	2.43	0.52
23:BB:1720:U:O2'	23:BB:1721:G:H5'	2.10	0.52
23:BB:1838:C:H4'	23:BB:1839:G:C8	2.45	0.52
23:BB:2852:G:H2'	23:BB:2853:C:O4'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BI:129:GLU:CB	24:BI:133:ARG:HH12	2.17	0.52
25:BC:20:ASN:O	25:BC:23:LEU:HB2	2.10	0.52
25:BC:132:ARG:NH2	25:BC:169:ALA:HA	2.25	0.52
25:BC:239:PHE:C	25:BC:241:LYS:H	2.17	0.52
35:BV:80:HIS:HB3	35:BV:83:LYS:O	2.09	0.52
40:BH:5:LEU:HD13	40:BH:13:GLY:N	2.23	0.52
42:BN:58:ASP:O	42:BN:62:ASN:HB2	2.09	0.52
45:BS:24:ILE:CD1	45:BS:36:LEU:HD21	2.40	0.52
48:BG:84:LYS:O	48:BG:85:LYS:HG2	2.10	0.52
48:BG:97:VAL:HB	48:BG:124:CYS:HB2	1.91	0.52
49:BR:49:ILE:HG12	49:BR:53:PHE:CA	2.39	0.52
1:CA:10:A:OP2	4:CE:130:THR:HB	2.09	0.52
1:CA:50:A:N6	1:CA:361:G:H4'	2.25	0.52
1:CA:565:U:H3'	1:CA:566:G:H2'	1.92	0.52
1:CA:675:A:H2'	1:CA:676:A:H8	1.74	0.52
1:CA:757:U:O2'	1:CA:879:C:H1'	2.09	0.52
1:CA:824:G:O2'	1:CA:825:A:H5'	2.09	0.52
1:CA:1476:A:O2'	1:CA:1477:U:H5'	2.09	0.52
4:CE:55:VAL:N	4:CE:56:PRO:HD2	2.25	0.52
7:CH:17:GLN:OE1	7:CH:69:ALA:HB1	2.10	0.52
17:CT:73:ARG:HH11	17:CT:73:ARG:HB3	1.74	0.52
2:CC:149:LYS:HG2	2:CC:200:TRP:CE3	2.43	0.52
9:CJ:59:LYS:HG3	9:CJ:60:ASP:N	2.24	0.52
18:CB:16:GLY:HA2	18:CB:40:ILE:HG13	1.92	0.52
18:CB:118:THR:O	18:CB:119:GLN:C	2.51	0.52
18:CB:217:ALA:O	18:CB:220:VAL:HB	2.10	0.52
20:CO:29:VAL:HG11	20:CO:67:LEU:HD21	1.90	0.52
23:DB:871:U:H2'	23:DB:872:U:C6	2.45	0.52
23:DB:876:C:H3'	23:DB:877:A:H4'	1.91	0.52
23:DB:877:A:H2'	23:DB:877:A:N3	2.24	0.52
23:DB:942:G:O2'	23:DB:943:A:H5'	2.09	0.52
23:DB:1028:A:N3	23:DB:2486:C:O2'	2.43	0.52
23:DB:1533:C:O2'	23:DB:1534:U:H5'	2.10	0.52
23:DB:2617:U:C2'	23:DB:2618:G:H5'	2.39	0.52
23:DB:2621:G:P	26:DD:124:ARG:HH22	2.33	0.52
25:DC:43:ASN:ND2	25:DC:44:ASN:H	2.07	0.52
25:DC:202:ARG:NH1	25:DC:204:LEU:HD11	2.25	0.52
27:DK:64:ARG:O	27:DK:82:ASN:HA	2.10	0.52
42:DN:9:GLN:O	42:DN:11:ASN:N	2.43	0.52
42:DN:19:ALA:C	42:DN:21:PHE:N	2.68	0.52
42:DN:55:ALA:HA	42:DN:80:PHE:CD1	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DO:28:VAL:O	43:DO:28:VAL:HG13	2.10	0.52
43:DO:116:GLN:HE21	43:DO:116:GLN:N	2.08	0.52
44:DQ:105:PHE:O	44:DQ:108:LEU:HB2	2.10	0.52
47:DF:91:ARG:HD3	47:DF:91:ARG:N	2.25	0.52
50:DT:11:LEU:HD21	50:DT:46:ALA:HB1	1.92	0.52
1:AA:13:U:O2	1:AA:914:A:H3'	2.10	0.52
1:AA:241:G:O2'	1:AA:242:G:H5'	2.10	0.52
1:AA:399:G:H2'	1:AA:400:C:C6	2.45	0.52
1:AA:729:A:H2'	1:AA:730:G:C8	2.45	0.52
1:AA:784:A:H2'	1:AA:785:G:C8	2.45	0.52
1:AA:796:C:O2'	1:AA:797:C:H5'	2.10	0.52
1:AA:892:A:H2'	1:AA:893:C:C6	2.45	0.52
1:AA:1376:U:H2'	1:AA:1377:A:H8	1.75	0.52
3:AD:144:ILE:HD13	3:AD:154:VAL:HG11	1.91	0.52
4:AE:37:VAL:HG12	4:AE:47:PHE:HB2	1.91	0.52
4:AE:56:PRO:HG2	4:AE:57:ALA:H	1.75	0.52
4:AE:63:MET:O	4:AE:66:ALA:HB3	2.10	0.52
8:AI:25:GLY:HA3	8:AI:57:VAL:O	2.10	0.52
16:AS:64:GLU:CD	16:AS:64:GLU:N	2.68	0.52
18:AB:148:GLY:HA2	18:AB:151:LYS:HD2	1.92	0.52
18:AB:205:ALA:O	18:AB:209:VAL:HG22	2.10	0.52
20:AO:35:GLN:O	20:AO:39:LEU:N	2.42	0.52
20:AO:78:TYR:OH	20:AO:88:ARG:HD2	2.09	0.52
23:BB:693:A:O2'	23:BB:694:U:H5'	2.09	0.52
23:BB:962:G:H2'	23:BB:963:U:H6	1.74	0.52
23:BB:1151:A:H2'	23:BB:1152:C:H6	1.74	0.52
23:BB:1535:A:H2	23:BB:1538:G:H1'	1.75	0.52
23:BB:1947:C:H2'	23:BB:1948:G:C8	2.40	0.52
23:BB:2281:A:H4'	23:BB:2389:G:N2	2.25	0.52
23:BB:2369:A:H2'	23:BB:2370:G:H8	1.74	0.52
23:BB:2586:U:H2'	23:BB:2587:A:H8	1.74	0.52
23:BB:2636:C:O2'	23:BB:2637:U:H5'	2.10	0.52
23:BB:2636:C:H4'	26:BD:81:GLU:OE2	2.10	0.52
23:BB:2784:U:O2'	23:BB:2785:C:H5'	2.10	0.52
23:BB:2786:U:H4'	26:BD:67:HIS:HA	1.91	0.52
24:BI:17:ALA:O	24:BI:18:ASN:CB	2.58	0.52
25:BC:2:VAL:HG23	25:BC:3:VAL:N	2.20	0.52
25:BC:255:LYS:C	25:BC:256:THR:HG23	2.35	0.52
26:BD:154:LYS:HD3	26:BD:154:LYS:H	1.75	0.52
27:BK:25:LEU:HB2	27:BK:38:ILE:HG12	1.90	0.52
27:BK:64:ARG:HD2	27:BK:102:PRO:O	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:B2:45:SER:O	36:B2:46:LYS:CB	2.55	0.52
42:BN:51:LEU:O	42:BN:54:LEU:HB3	2.10	0.52
45:BS:55:ILE:HD12	45:BS:107:VAL:HG21	1.92	0.52
46:BU:35:VAL:CG2	46:BU:38:ILE:HG21	2.40	0.52
47:BF:116:LEU:HG	47:BF:117:SER:H	1.73	0.52
48:BG:153:PRO:CG	48:BG:162:ARG:HB3	2.36	0.52
50:BT:57:VAL:HG13	50:BT:58:VAL:N	2.24	0.52
50:BT:69:ARG:HE	50:BT:69:ARG:CA	2.21	0.52
1:CA:22:G:H2'	1:CA:23:C:H6	1.73	0.52
1:CA:386:C:C2'	1:CA:387:U:H5'	2.40	0.52
1:CA:1306:A:O2'	1:CA:1307:U:H5'	2.10	0.52
3:CD:55:ARG:NE	3:CD:55:ARG:HA	2.24	0.52
7:CH:29:SER:OG	7:CH:32:LYS:HG3	2.10	0.52
8:CI:59:LYS:HB3	8:CI:59:LYS:HZ2	1.75	0.52
9:CJ:32:THR:O	9:CJ:80:THR:HG21	2.10	0.52
18:CB:82:ALA:CB	18:CB:213:LEU:HD13	2.40	0.52
23:DB:4:U:H2'	23:DB:5:A:C8	2.45	0.52
23:DB:208:C:H2'	23:DB:209:C:C6	2.45	0.52
23:DB:234:U:H2'	23:DB:235:U:H6	1.74	0.52
23:DB:287:G:H2'	23:DB:288:U:O4'	2.10	0.52
23:DB:409:G:H2'	23:DB:410:G:C8	2.44	0.52
23:DB:909:A:H2'	23:DB:912:C:H5	1.73	0.52
23:DB:1544:A:H2'	23:DB:1545:A:C8	2.45	0.52
23:DB:1930:G:H2'	23:DB:1968:G:N1	2.25	0.52
23:DB:2015:A:C2	31:D0:2:VAL:HG22	2.45	0.52
23:DB:2037:A:H2'	23:DB:2038:G:C8	2.45	0.52
23:DB:2210:U:N3	23:DB:2212:A:N7	2.57	0.52
23:DB:2357:G:N2	23:DB:2359:C:H3'	2.25	0.52
23:DB:2466:C:O2'	23:DB:2467:C:H5'	2.09	0.52
23:DB:2529:G:H5'	48:DG:174:LYS:HG3	1.92	0.52
25:DC:71:ASP:HB3	25:DC:118:GLY:HA2	1.92	0.52
25:DC:255:LYS:C	25:DC:256:THR:HG23	2.33	0.52
26:DD:79:LEU:N	26:DD:79:LEU:HD22	2.24	0.52
28:DP:4:ILE:C	28:DP:6:GLN:H	2.18	0.52
38:DM:63:ILE:H	38:DM:63:ILE:HD12	1.75	0.52
40:DH:5:LEU:HD22	40:DH:12:LEU:O	2.10	0.52
44:DQ:17:LEU:HD13	44:DQ:30:VAL:O	2.09	0.52
47:DF:28:PRO:O	47:DF:168:LEU:HD11	2.10	0.52
47:DF:40:GLY:O	47:DF:41:GLU:HB2	2.10	0.52
47:DF:45:ASP:O	47:DF:46:LYS:HE2	2.10	0.52
47:DF:136:ILE:HG22	47:DF:142:TYR:HB3	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DG:26:LYS:HG2	48:DG:27:GLY:N	2.25	0.52
51:DZ:32:ASN:O	51:DZ:33:LEU:C	2.53	0.52
51:DZ:33:LEU:H	51:DZ:52:SER:CB	2.23	0.52
52:DW:81:ILE:HG13	52:DW:81:ILE:O	2.10	0.52
1:AA:384:G:H2'	1:AA:385:C:C6	2.44	0.52
1:AA:552:U:H4'	11:AL:82:ARG:HG2	1.92	0.52
1:AA:580:C:H2'	1:AA:581:G:C8	2.45	0.52
1:AA:895:G:H2'	1:AA:896:C:C6	2.44	0.52
1:AA:975:A:N6	1:AA:1366:C:O2'	2.42	0.52
1:AA:1343:G:O2'	1:AA:1344:C:H5'	2.09	0.52
1:AA:1527:U:O2'	1:AA:1528:U:H5'	2.09	0.52
3:AD:41:GLY:C	3:AD:43:ARG:H	2.18	0.52
4:AE:55:VAL:N	4:AE:56:PRO:HD2	2.25	0.52
4:AE:136:VAL:HG13	4:AE:137:ARG:H	1.74	0.52
11:AL:31:GLY:HA3	11:AL:54:VAL:HG13	1.90	0.52
15:AR:20:ILE:HG22	15:AR:53:GLN:CD	2.34	0.52
18:AB:24:PRO:C	18:AB:26:MET:H	2.18	0.52
21:AN:12:ARG:HG3	21:AN:53:ASP:OD2	2.09	0.52
23:BB:233:A:H61	23:BB:428:A:H61	1.58	0.52
23:BB:871:U:H1'	23:BB:907:G:N1	2.25	0.52
23:BB:920:A:H2'	23:BB:921:C:H6	1.74	0.52
23:BB:1103:A:H3'	23:BB:1104:C:H6	1.75	0.52
23:BB:1120:G:O2'	23:BB:1121:C:H5'	2.10	0.52
23:BB:1520:U:H2'	23:BB:1521:G:O4'	2.09	0.52
23:BB:1723:G:N7	23:BB:1737:G:N2	2.54	0.52
23:BB:1742:U:O2'	23:BB:1743:G:H5'	2.10	0.52
23:BB:1782:U:H2'	23:BB:1783:A:H5'	1.91	0.52
23:BB:1878:G:H2'	23:BB:1879:C:C6	2.45	0.52
23:BB:2251:G:H2'	23:BB:2252:G:C8	2.45	0.52
23:BB:2344:U:H4'	23:BB:2345:G:OP1	2.08	0.52
23:BB:2530:A:H3'	48:BG:156:TYR:OH	2.09	0.52
23:BB:2611:C:O2'	23:BB:2612:C:H5'	2.09	0.52
24:BI:23:VAL:HG23	24:BI:24:GLY:N	2.25	0.52
26:BD:117:GLY:HA2	26:BD:164:GLN:OE1	2.10	0.52
29:BE:29:HIS:NE2	37:BL:8:PRO:HG3	2.25	0.52
29:BE:148:ILE:HG13	29:BE:167:VAL:CG2	2.40	0.52
29:BE:192:ALA:O	29:BE:196:VAL:HG23	2.10	0.52
38:BM:35:ALA:HB3	38:BM:99:GLY:N	2.24	0.52
40:BH:4:ILE:O	40:BH:36:ALA:HA	2.10	0.52
40:BH:14:SER:HB2	40:BH:17:ASP:CB	2.39	0.52
40:BH:47:PHE:O	40:BH:50:ARG:HB2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:73:ASN:HB2	40:BH:141:LYS:HB2	1.92	0.52
40:BH:79:THR:HG22	40:BH:145:ASN:OD1	2.10	0.52
41:BJ:106:LYS:HE3	41:BJ:106:LYS:O	2.10	0.52
47:BF:90:LEU:C	47:BF:91:ARG:HD3	2.34	0.52
48:BG:58:ALA:C	48:BG:60:GLY:H	2.18	0.52
48:BG:154:GLU:C	48:BG:156:TYR:H	2.18	0.52
52:BW:24:ARG:HD3	52:BW:65:LYS:HG2	1.90	0.52
1:CA:216:U:H2'	1:CA:217:C:C6	2.45	0.52
1:CA:253:A:H2'	1:CA:254:G:H8	1.73	0.52
1:CA:746:A:H2'	1:CA:747:A:H8	1.75	0.52
1:CA:889:A:H5'	1:CA:891:U:H1'	1.90	0.52
17:CT:53:MET:HA	17:CT:56:ILE:CD1	2.39	0.52
8:CI:16:ALA:HB2	8:CI:66:VAL:CG2	2.35	0.52
8:CI:46:VAL:HA	8:CI:49:GLN:HG3	1.91	0.52
21:CN:3:GLN:OE1	21:CN:6:LYS:HG3	2.10	0.52
16:CS:16:LYS:HD2	16:CS:17:LYS:NZ	2.24	0.52
18:CB:50:ASN:O	18:CB:51:GLU:C	2.53	0.52
18:CB:101:THR:HG22	18:CB:174:GLU:OE1	2.09	0.52
18:CB:214:GLY:C	18:CB:216:VAL:H	2.17	0.52
22:DA:83:G:OP1	30:DY:16:LEU:HD23	2.10	0.52
23:DB:62:U:H3'	23:DB:63:A:C8	2.45	0.52
23:DB:235:U:H2'	23:DB:236:C:C6	2.44	0.52
23:DB:796:C:H2'	23:DB:797:G:H8	1.75	0.52
23:DB:1405:U:H2'	23:DB:1406:U:C6	2.45	0.52
23:DB:1506:U:H2'	23:DB:1507:C:C6	2.45	0.52
23:DB:1550:C:H2'	23:DB:1551:A:H8	1.75	0.52
23:DB:1825:U:H2'	23:DB:1826:G:C8	2.45	0.52
23:DB:1842:G:H2'	23:DB:1843:C:H6	1.73	0.52
23:DB:2305:U:H5"	47:DF:130:GLY:HA3	1.92	0.52
26:DD:10:GLY:HA2	28:DP:4:ILE:HD11	1.92	0.52
26:DD:40:LEU:HA	26:DD:45:TYR:H	1.74	0.52
28:DP:31:VAL:HG11	28:DP:38:ARG:HG2	1.91	0.52
29:DE:109:LEU:HA	29:DE:112:LEU:HB2	1.91	0.52
29:DE:192:ALA:O	29:DE:196:VAL:HG23	2.10	0.52
31:D0:18:HIS:C	31:D0:20:ALA:H	2.17	0.52
36:D2:3:ARG:HE	36:D2:4:THR:HG22	1.74	0.52
38:DM:102:LEU:HD22	38:DM:102:LEU:H	1.74	0.52
40:DH:116:ARG:N	40:DH:131:SER:O	2.38	0.52
41:DJ:34:ARG:NH1	41:DJ:39:LYS:HG2	2.25	0.52
43:DO:14:ALA:C	43:DO:16:ARG:H	2.17	0.52
46:DU:26:ASN:HD22	46:DU:26:ASN:H	1.57	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DG:154:GLU:C	48:DG:156:TYR:H	2.18	0.52
1:AA:731:G:OP1	1:AA:766:A:H1'	2.10	0.52
1:AA:1078:U:H4'	4:AE:137:ARG:NH1	2.24	0.52
1:AA:1144:G:N2	1:AA:1146:A:H62	2.08	0.52
1:AA:1243:C:H2'	1:AA:1244:G:C8	2.45	0.52
1:AA:1434:A:H2'	1:AA:1435:G:C8	2.44	0.52
6:AG:52:ARG:NH2	6:AG:120:ALA:HB1	2.23	0.52
6:AG:74:VAL:HG21	6:AG:85:GLN:NE2	2.24	0.52
10:AK:75:GLU:CD	10:AK:75:GLU:N	2.66	0.52
11:AL:51:VAL:HG12	11:AL:52:CYS:N	2.19	0.52
11:AL:79:ILE:HD12	11:AL:96:THR:HG22	1.91	0.52
16:AS:63:ASP:O	16:AS:66:VAL:HG13	2.10	0.52
23:BB:62:U:H3'	23:BB:63:A:C8	2.44	0.52
23:BB:267:C:H2'	23:BB:268:C:C6	2.44	0.52
23:BB:467:G:O2'	23:BB:468:G:H5'	2.10	0.52
23:BB:862:G:H2'	23:BB:863:A:C8	2.45	0.52
23:BB:1061:U:H5'	24:BI:9:LYS:NZ	2.25	0.52
23:BB:1141:U:H5"	41:BJ:27:ARG:NH2	2.25	0.52
23:BB:2264:C:H41	52:BW:11:ASN:ND2	2.08	0.52
23:BB:2345:G:H5'	23:BB:2347:C:O4'	2.10	0.52
25:BC:270:ARG:NH1	25:BC:270:ARG:HB3	2.25	0.52
27:BK:24:VAL:HA	27:BK:39:ILE:CD1	2.40	0.52
27:BK:76:VAL:H	28:BP:72:VAL:HG23	1.74	0.52
29:BE:58:LYS:N	29:BE:58:LYS:CD	2.72	0.52
42:BN:62:ASN:N	42:BN:62:ASN:HD22	2.06	0.52
50:BT:29:THR:HA	50:BT:86:THR:CA	2.33	0.52
1:CA:624:C:O2'	1:CA:625:U:H5'	2.10	0.52
1:CA:692:U:O2	1:CA:694:A:H5"	2.10	0.52
1:CA:1307:U:H2'	1:CA:1308:U:C6	2.45	0.52
1:CA:1480:A:H2'	1:CA:1481:U:H6	1.75	0.52
3:CD:197:HIS:ND1	3:CD:198:LEU:N	2.58	0.52
5:CF:3:HIS:CG	5:CF:92:THR:HG23	2.45	0.52
17:CT:47:GLN:HG2	17:CT:82:ILE:HD13	1.91	0.52
6:CG:55:LYS:HB2	6:CG:59:GLU:OE2	2.09	0.52
16:CS:35:ARG:HB2	16:CS:71:GLY:CA	2.40	0.52
23:DB:570:G:H2'	23:DB:2030:A:C8	2.45	0.52
23:DB:659:G:N2	29:DE:30:GLN:HE22	2.04	0.52
23:DB:666:A:H4'	37:DL:48:ARG:HD2	1.92	0.52
23:DB:721:A:H2'	23:DB:722:A:H8	1.75	0.52
23:DB:1178:C:H2'	23:DB:1179:G:C8	2.45	0.52
23:DB:1930:G:H2'	23:DB:1968:G:C6	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2590:A:H2'	23:DB:2591:C:H6	1.74	0.52
25:DC:158:GLY:N	25:DC:194:VAL:HG13	2.25	0.52
29:DE:157:LEU:HG	29:DE:169:VAL:HG11	1.92	0.52
47:DF:3:LEU:HD13	47:DF:3:LEU:O	2.09	0.52
48:DG:166:GLU:CD	48:DG:166:GLU:N	2.65	0.52
50:DT:40:LYS:C	50:DT:43:ILE:HG22	2.35	0.52
50:DT:40:LYS:HA	50:DT:43:ILE:CG2	2.40	0.52
52:DW:46:ALA:HB2	52:DW:78:PHE:CD1	2.43	0.52
1:AA:546:A:P	3:AD:68:GLU:HB3	2.50	0.51
1:AA:642:A:H2'	1:AA:643:C:C6	2.44	0.51
1:AA:645:G:H2'	1:AA:646:G:H8	1.75	0.51
1:AA:953:G:H2'	1:AA:954:G:O4'	2.10	0.51
1:AA:1463:U:H2'	1:AA:1464:U:H6	1.76	0.51
2:AC:9:ILE:HG23	2:AC:10:ARG:HG3	1.92	0.51
3:AD:123:MET:SD	3:AD:127:ARG:N	2.83	0.51
3:AD:153:ARG:HG3	3:AD:154:VAL:N	2.25	0.51
3:AD:157:ALA:C	3:AD:159:GLU:H	2.18	0.51
5:AF:3:HIS:ND1	5:AF:95:ALA:N	2.57	0.51
6:AG:50:ALA:HB1	6:AG:55:LYS:O	2.10	0.51
8:AI:38:PHE:O	8:AI:44:ARG:HB3	2.10	0.51
11:AL:54:VAL:O	11:AL:61:GLU:HA	2.10	0.51
12:AM:95:PRO:N	12:AM:108:ARG:HG2	2.26	0.51
13:AP:23:ASP:CG	13:AP:25:ARG:HE	2.18	0.51
18:AB:81:ASP:O	18:AB:84:LEU:HD23	2.11	0.51
19:AU:42:THR:HB	19:AU:46:ARG:HE	1.75	0.51
23:BB:108:G:H2'	23:BB:109:C:O4'	2.10	0.51
23:BB:721:A:H2'	23:BB:722:A:H8	1.75	0.51
23:BB:1010:A:H1'	23:BB:1153:C:O4'	2.10	0.51
23:BB:1151:A:H2'	23:BB:1152:C:C6	2.45	0.51
23:BB:1279:G:H4'	42:BN:31:HIS:CD2	2.44	0.51
23:BB:1439:A:N7	23:BB:1440:U:N1	2.59	0.51
23:BB:1599:U:H2'	23:BB:1600:C:H6	1.74	0.51
25:BC:71:ASP:HB3	25:BC:118:GLY:HA2	1.92	0.51
25:BC:91:ALA:HB2	25:BC:105:ALA:HB2	1.90	0.51
28:BP:60:VAL:O	28:BP:70:GLU:HA	2.10	0.51
29:BE:113:VAL:C	29:BE:115:GLN:H	2.17	0.51
35:BV:5:ASN:O	35:BV:6:ALA:HB2	2.10	0.51
35:BV:14:LYS:CE	35:BV:18:ARG:HH21	2.22	0.51
37:BL:125:LEU:HB2	37:BL:143:GLU:OE2	2.09	0.51
40:BH:5:LEU:HD13	40:BH:12:LEU:C	2.35	0.51
40:BH:79:THR:HA	40:BH:144:VAL:HA	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:121:VAL:HB	40:BH:128:HIS:CE1	2.44	0.51
44:BQ:79:ILE:HG23	44:BQ:80:ASN:N	2.25	0.51
44:BQ:89:ILE:HG21	49:BR:11:GLN:NE2	2.25	0.51
45:BS:36:LEU:HD11	45:BS:47:VAL:HB	1.91	0.51
45:BS:74:ILE:HD12	45:BS:104:THR:O	2.10	0.51
48:BG:43:LYS:HE2	48:BG:43:LYS:HA	1.92	0.51
48:BG:85:LYS:HB2	48:BG:164:ALA:HB2	1.91	0.51
50:BT:11:LEU:HD21	50:BT:46:ALA:HB1	1.91	0.51
1:CA:123:U:H5"	1:CA:311:C:O2'	2.10	0.51
1:CA:143:A:H2	1:CA:220:G:H22	1.57	0.51
1:CA:399:G:H2'	1:CA:400:C:C6	2.45	0.51
1:CA:1209:C:O2'	1:CA:1210:C:H5'	2.10	0.51
1:CA:1216:A:H5"	21:CN:4:SER:CB	2.39	0.51
4:CE:44:ARG:HA	4:CE:71:ILE:O	2.09	0.51
10:CK:80:ASN:CA	10:CK:105:ARG:HB3	2.38	0.51
11:CL:33:CYS:HA	11:CL:54:VAL:HA	1.92	0.51
13:CP:1:MET:HE2	13:CP:3:THR:CG2	2.40	0.51
14:CQ:68:LYS:HG2	14:CQ:69:THR:HG23	1.91	0.51
8:CI:44:ARG:HB2	8:CI:48:ARG:NH2	2.26	0.51
18:CB:114:LYS:HZ2	18:CB:152:ASP:CG	2.19	0.51
22:DA:26:C:H3'	22:DA:27:C:C6	2.44	0.51
22:DA:43:C:H4'	47:DF:91:ARG:HG3	1.92	0.51
23:DB:78:U:H2'	23:DB:79:C:C6	2.45	0.51
23:DB:471:A:H2'	23:DB:472:A:O4'	2.10	0.51
23:DB:571:U:N3	23:DB:575:A:N7	2.58	0.51
23:DB:680:C:H2'	23:DB:681:G:H8	1.76	0.51
23:DB:910:A:H62	38:DM:12:MET:HA	1.74	0.51
23:DB:1083:U:H2'	23:DB:1085:A:OP2	2.10	0.51
23:DB:1439:A:C6	23:DB:1552:A:N7	2.78	0.51
23:DB:1826:G:P	25:DC:221:GLY:H	2.34	0.51
23:DB:2322:A:H3'	23:DB:2323:G:C8	2.45	0.51
23:DB:2369:A:H2'	23:DB:2370:G:H8	1.74	0.51
24:DI:79:LEU:HD11	24:DI:131:THR:OG1	2.10	0.51
25:DC:52:HIS:CD2	25:DC:52:HIS:N	2.79	0.51
25:DC:92:LEU:HD11	25:DC:100:ARG:HB2	1.92	0.51
25:DC:244:VAL:HG12	25:DC:250:GLN:N	2.26	0.51
28:DP:63:ILE:HG22	28:DP:63:ILE:O	2.10	0.51
37:DL:9:ALA:HB3	37:DL:12:SER:OG	2.10	0.51
37:DL:132:ARG:HA	37:DL:135:ILE:HG22	1.90	0.51
40:DH:135:HIS:HB3	40:DH:138:VAL:CG2	2.41	0.51
41:DJ:44:TYR:CD2	44:DQ:59:LEU:HD21	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:135:ILE:HG13	47:DF:137:PHE:CD2	2.44	0.51
48:DG:84:LYS:O	48:DG:85:LYS:HG2	2.10	0.51
48:DG:106:LEU:C	48:DG:108:PHE:H	2.17	0.51
50:DT:30:ILE:HG23	50:DT:85:VAL:CG2	2.40	0.51
1:AA:81:A:H2'	1:AA:81:A:N3	2.24	0.51
1:AA:618:C:N3	1:AA:622:A:N6	2.58	0.51
1:AA:663:A:O2'	1:AA:664:G:H5'	2.10	0.51
1:AA:812:G:O2'	1:AA:813:U:H6	1.78	0.51
1:AA:1391:U:H2'	1:AA:1392:G:N7	2.26	0.51
1:AA:1432:G:H1'	1:AA:1468:A:H61	1.75	0.51
2:AC:155:ARG:HH12	2:AC:160:GLU:HA	1.75	0.51
3:AD:54:LEU:CD1	3:AD:55:ARG:HH21	2.24	0.51
3:AD:88:ASN:O	3:AD:92:LEU:HD23	2.09	0.51
3:AD:144:ILE:HG22	3:AD:145:ARG:N	2.24	0.51
9:AJ:7:ARG:C	9:AJ:8:ILE:HD12	2.35	0.51
16:AS:4:LEU:O	16:AS:5:LYS:C	2.52	0.51
18:AB:93:HIS:C	18:AB:94:ARG:HE	2.18	0.51
23:BB:393:C:O2'	23:BB:394:C:H5'	2.11	0.51
23:BB:575:A:O2'	23:BB:576:U:H5'	2.10	0.51
23:BB:736:C:H2'	23:BB:737:C:H6	1.75	0.51
23:BB:1133:A:N6	23:BB:2025:C:O2'	2.43	0.51
23:BB:1175:A:H3'	23:BB:1176:U:O4'	2.10	0.51
23:BB:1475:G:H1'	23:BB:1476:U:H5	1.75	0.51
23:BB:1533:C:O2'	23:BB:1534:U:H5'	2.11	0.51
23:BB:1677:A:H2'	23:BB:1678:A:C8	2.45	0.51
23:BB:1872:A:H8	23:BB:1872:A:O5'	1.92	0.51
23:BB:1999:C:O2'	23:BB:2000:C:H5'	2.10	0.51
23:BB:2047:C:H2'	23:BB:2048:G:C8	2.45	0.51
23:BB:2665:A:O2'	23:BB:2666:C:H5'	2.09	0.51
24:BI:52:LEU:HD21	24:BI:81:LYS:HZ2	1.75	0.51
35:BV:11:GLU:CD	35:BV:16:ALA:HB1	2.35	0.51
38:BM:90:GLU:HA	38:BM:90:GLU:OE1	2.11	0.51
41:BJ:4:PHE:CG	41:BJ:5:THR:N	2.78	0.51
41:BJ:114:LEU:O	41:BJ:118:MET:HG3	2.10	0.51
43:BO:67:ASN:HB3	43:BO:70:ALA:CB	2.40	0.51
45:BS:17:VAL:C	45:BS:19:LEU:N	2.68	0.51
47:BF:107:VAL:HG21	47:BF:175:PRO:HG3	1.93	0.51
47:BF:136:ILE:HG22	47:BF:142:TYR:HB3	1.93	0.51
48:BG:67:ALA:O	48:BG:71:LEU:HD23	2.10	0.51
50:BT:7:LEU:HD13	50:BT:7:LEU:O	2.11	0.51
52:BW:13:ARG:HG3	52:BW:14:ASP:H	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:977:A:H2'	1:CA:978:A:C5'	2.39	0.51
1:CA:1090:U:H2'	1:CA:1091:U:C6	2.45	0.51
1:CA:1434:A:H2'	1:CA:1435:G:C8	2.45	0.51
4:CE:85:LYS:HG3	4:CE:93:VAL:O	2.11	0.51
10:CK:20:ALA:O	10:CK:22:ILE:HG13	2.10	0.51
11:CL:49:ARG:CB	11:CL:89:LEU:HD11	2.39	0.51
11:CL:110:LYS:O	11:CL:113:ARG:HG3	2.10	0.51
13:CP:71:VAL:HG13	13:CP:72:ALA:N	2.25	0.51
14:CQ:32:ILE:HG23	14:CQ:33:TYR:CD2	2.45	0.51
17:CT:75:LYS:O	17:CT:78:LEU:HB2	2.10	0.51
2:CC:38:VAL:HG23	2:CC:39:ARG:N	2.24	0.51
2:CC:123:LEU:HA	2:CC:127:VAL:HG22	1.91	0.51
2:CC:143:LEU:O	2:CC:143:LEU:HD13	2.10	0.51
6:CG:48:THR:O	6:CG:52:ARG:HG3	2.11	0.51
9:CJ:56:HIS:O	9:CJ:57:VAL:HG12	2.10	0.51
9:CJ:93:ALA:HB3	9:CJ:96:VAL:HG22	1.90	0.51
9:CJ:98:VAL:C	9:CJ:100:ILE:H	2.18	0.51
23:DB:688:U:H2'	23:DB:689:A:H8	1.75	0.51
23:DB:693:A:H2'	23:DB:694:U:C6	2.45	0.51
23:DB:836:G:H2'	23:DB:837:C:C6	2.45	0.51
23:DB:1203:U:O4'	37:DL:3:LEU:HD12	2.10	0.51
23:DB:1275:A:O2'	23:DB:1276:A:H5'	2.09	0.51
23:DB:1723:G:H3'	23:DB:1724:G:C8	2.39	0.51
23:DB:2199:A:H5'	23:DB:2200:C:OP2	2.10	0.51
23:DB:2803:G:H2'	23:DB:2804:U:H6	1.76	0.51
24:DI:32:VAL:HG22	24:DI:60:VAL:CG2	2.40	0.51
25:DC:20:ASN:HD21	25:DC:22:GLU:HG3	1.74	0.51
44:DQ:63:ARG:HH22	44:DQ:96:ASP:CA	2.23	0.51
47:DF:115:GLY:HA3	47:DF:177:ARG:HD2	1.90	0.51
1:AA:10:A:OP2	4:AE:130:THR:HB	2.10	0.51
1:AA:251:G:H22	1:AA:272:C:N4	2.09	0.51
1:AA:651:C:H2'	1:AA:652:U:C6	2.44	0.51
1:AA:944:G:N1	1:AA:1338:G:OP2	2.44	0.51
1:AA:1003:G:N2	1:AA:1005:A:H5'	2.25	0.51
1:AA:1120:C:H2'	1:AA:1121:U:H6	1.76	0.51
1:AA:1241:G:H2'	1:AA:1242:G:H8	1.74	0.51
1:AA:1366:C:O2'	1:AA:1367:C:H5'	2.10	0.51
2:AC:69:THR:HG21	2:AC:75:VAL:HG21	1.92	0.51
5:AF:3:HIS:CD2	5:AF:3:HIS:N	2.78	0.51
6:AG:87:PRO:HG3	6:AG:144:ALA:HA	1.93	0.51
17:AT:49:ALA:O	17:AT:52:GLU:HB3	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AO:56:LEU:O	20:AO:59:MET:HG2	2.09	0.51
22:BA:43:C:C2'	22:BA:44:G:H5"	2.39	0.51
23:BB:140:C:C5'	23:BB:141:G:H21	2.23	0.51
23:BB:967:U:H2'	23:BB:968:C:C6	2.46	0.51
23:BB:1199:U:H2'	23:BB:1200:C:C6	2.45	0.51
23:BB:1355:G:O2'	23:BB:1356:G:H5'	2.09	0.51
23:BB:1405:U:H2'	23:BB:1406:U:C6	2.45	0.51
23:BB:1494:A:H2'	23:BB:1495:A:C8	2.45	0.51
23:BB:1689:A:H2'	23:BB:1690:A:C8	2.46	0.51
23:BB:2359:C:H2'	23:BB:2360:G:C8	2.44	0.51
23:BB:2869:G:H2'	23:BB:2870:C:C6	2.45	0.51
24:BI:100:ILE:O	24:BI:139:VAL:HA	2.10	0.51
30:BY:53:MET:HE2	30:BY:53:MET:HA	1.93	0.51
40:BH:5:LEU:HD22	40:BH:12:LEU:O	2.10	0.51
40:BH:96:THR:HG22	40:BH:115:VAL:HG11	1.91	0.51
44:BQ:96:ASP:C	44:BQ:98:ALA:N	2.69	0.51
47:BF:3:LEU:HD13	47:BF:3:LEU:O	2.10	0.51
47:BF:91:ARG:HD3	47:BF:91:ARG:N	2.25	0.51
1:CA:332:G:O2'	1:CA:333:U:H5'	2.10	0.51
1:CA:673:A:H1'	15:CR:63:TYR:HE1	1.75	0.51
1:CA:747:A:C4	1:CA:748:G:H1'	2.46	0.51
3:CD:144:ILE:HG22	3:CD:145:ARG:N	2.26	0.51
3:CD:169:TRP:CD2	3:CD:185:PRO:HB3	2.46	0.51
4:CE:146:MET:O	4:CE:146:MET:HG3	2.10	0.51
7:CH:81:GLY:O	14:CQ:35:LYS:HD3	2.09	0.51
17:CT:43:LYS:HB3	17:CT:86:ALA:CB	2.39	0.51
6:CG:26:VAL:CB	6:CG:42:VAL:HG21	2.41	0.51
20:CO:74:ASP:OD1	20:CO:76:ALA:HB3	2.11	0.51
23:DB:57:C:H2'	23:DB:58:G:H8	1.76	0.51
23:DB:64:A:H2'	23:DB:65:U:H6	1.75	0.51
23:DB:1309:G:H4'	36:D2:7:PRO:HB2	1.93	0.51
23:DB:1808:A:O2'	23:DB:1809:A:H5'	2.11	0.51
23:DB:1826:G:H2'	23:DB:1827:U:H6	1.75	0.51
23:DB:2835:A:N6	23:DB:2878:U:H2'	2.25	0.51
24:DI:63:ASP:O	24:DI:64:ARG:HB2	2.09	0.51
24:DI:126:ARG:HH11	24:DI:126:ARG:HB3	1.75	0.51
25:DC:199:HIS:C	25:DC:201:LEU:H	2.19	0.51
26:DD:63:PRO:C	26:DD:65:ALA:H	2.18	0.51
28:DP:98:TYR:C	28:DP:100:ARG:H	2.18	0.51
37:DL:109:LYS:HB2	37:DL:111:ILE:HD13	1.92	0.51
42:DN:101:GLY:CA	42:DN:110:MET:H	2.15	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:86:PHE:HE1	46:DU:88:ASP:HB2	1.75	0.51
48:DG:85:LYS:HB2	48:DG:164:ALA:HB2	1.92	0.51
1:AA:103:U:H2'	1:AA:104:G:O4'	2.10	0.51
1:AA:476:U:H2'	1:AA:477:C:C6	2.45	0.51
1:AA:555:U:H2'	1:AA:556:C:H6	1.76	0.51
1:AA:580:C:H2'	1:AA:581:G:O4'	2.10	0.51
1:AA:824:G:O2'	1:AA:825:A:H5'	2.11	0.51
1:AA:1102:A:H2'	1:AA:1103:C:C6	2.45	0.51
1:AA:1129:C:H5"	8:AI:17:ARG:HH22	1.76	0.51
2:AC:149:LYS:HG3	2:AC:168:ARG:HG3	1.92	0.51
3:AD:13:ARG:HG3	3:AD:55:ARG:NH1	2.26	0.51
4:AE:97:PRO:HA	4:AE:122:VAL:HG12	1.91	0.51
4:AE:136:VAL:HG13	4:AE:137:ARG:N	2.25	0.51
6:AG:78:ARG:HB3	6:AG:78:ARG:CZ	2.40	0.51
10:AK:51:PHE:HZ	10:AK:61:ALA:HA	1.75	0.51
10:AK:85:VAL:O	10:AK:111:ASP:HA	2.10	0.51
12:AM:89:ARG:HH22	12:AM:101:THR:HG21	1.74	0.51
17:AT:73:ARG:HH11	17:AT:73:ARG:HB3	1.76	0.51
23:BB:99:U:O4'	23:BB:99:U:O2	2.27	0.51
23:BB:144:A:H2'	23:BB:145:C:C6	2.46	0.51
23:BB:674:G:H5"	29:BE:71:GLY:CA	2.40	0.51
23:BB:693:A:H2'	23:BB:694:U:C6	2.45	0.51
23:BB:903:C:H2'	23:BB:904:G:H8	1.75	0.51
23:BB:1429:G:H2'	23:BB:1430:G:C8	2.45	0.51
23:BB:1513:U:O2'	23:BB:1514:G:H5'	2.10	0.51
23:BB:1680:U:O2	23:BB:1763:G:H3'	2.09	0.51
23:BB:1773:A:H2'	23:BB:1774:C:O4'	2.10	0.51
23:BB:1846:G:N2	23:BB:1848:A:N6	2.58	0.51
23:BB:1909:C:H2'	23:BB:1910:G:H8	1.75	0.51
23:BB:2250:G:N2	38:BM:82:MET:HB3	2.25	0.51
23:BB:2617:U:O2'	23:BB:2618:G:H5'	2.10	0.51
24:BI:125:THR:O	24:BI:129:GLU:HG3	2.10	0.51
25:BC:70:LYS:HD3	25:BC:95:TYR:CE1	2.46	0.51
27:BK:19:VAL:HB	27:BK:41:ILE:HD11	1.90	0.51
29:BE:148:ILE:HG22	29:BE:148:ILE:O	2.10	0.51
34:B3:31:ILE:HD11	34:B3:34:LYS:CD	2.39	0.51
46:BU:85:ARG:HD3	46:BU:86:PHE:N	2.26	0.51
47:BF:100:GLU:O	47:BF:104:THR:HB	2.11	0.51
52:BW:39:GLN:HG2	52:BW:40:ARG:H	1.75	0.51
52:BW:69:GLU:HG3	52:BW:80:SER:OG	2.10	0.51
1:CA:384:G:H2'	1:CA:385:C:C6	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:731:G:OP1	1:CA:766:A:H1'	2.11	0.51
1:CA:789:U:H2'	1:CA:791:G:OP2	2.11	0.51
1:CA:818:G:C3'	1:CA:819:A:H5"	2.40	0.51
1:CA:1299:A:C8	1:CA:1301:U:H1'	2.44	0.51
4:CE:113:VAL:O	4:CE:114:LEU:C	2.54	0.51
5:CF:53:LYS:N	5:CF:53:LYS:NZ	2.59	0.51
11:CL:7:VAL:HG22	14:CQ:33:TYR:HD1	1.76	0.51
6:CG:31:VAL:HG22	6:CG:32:ASP:CG	2.34	0.51
21:CN:24:ALA:O	21:CN:27:LYS:HG2	2.10	0.51
22:DA:16:G:O2'	22:DA:17:C:H5'	2.11	0.51
23:DB:176:A:O2'	23:DB:177:G:H5'	2.10	0.51
23:DB:360:U:H2'	23:DB:361:G:C8	2.45	0.51
23:DB:521:U:H2'	23:DB:522:A:C8	2.46	0.51
23:DB:1654:A:H2'	23:DB:1655:A:H8	1.76	0.51
23:DB:1714:U:H3'	23:DB:1715:G:C5'	2.40	0.51
23:DB:1773:A:H2'	23:DB:1774:C:O4'	2.11	0.51
23:DB:1830:C:H2'	23:DB:1831:G:C8	2.46	0.51
23:DB:1908:C:O2'	23:DB:1909:C:H5'	2.11	0.51
23:DB:1925:C:H2'	23:DB:1926:U:H5"	1.93	0.51
23:DB:1947:C:H2'	23:DB:1948:G:C8	2.42	0.51
23:DB:2773:C:H2'	23:DB:2774:C:H6	1.75	0.51
24:DI:78:LEU:HD13	24:DI:108:ILE:HG23	1.93	0.51
29:DE:14:VAL:HG12	29:DE:197:GLU:OE1	2.09	0.51
30:DY:10:ARG:NH2	30:DY:10:ARG:HB3	2.25	0.51
35:DV:5:ASN:O	35:DV:6:ALA:HB2	2.10	0.51
35:DV:51:GLN:NE2	35:DV:79:ARG:HH22	2.08	0.51
38:DM:57:VAL:HG12	38:DM:57:VAL:O	2.11	0.51
38:DM:64:TRP:C	38:DM:65:ILE:HG13	2.35	0.51
39:DX:23:ARG:HA	39:DX:27:ASN:H	1.76	0.51
42:DN:87:PHE:HB3	42:DN:90:ARG:CB	2.39	0.51
46:DU:78:LYS:CD	46:DU:79:ALA:H	2.23	0.51
48:DG:58:ALA:C	48:DG:60:GLY:H	2.18	0.51
49:DR:14:VAL:HG23	49:DR:18:GLN:HG3	1.92	0.51
1:AA:451:A:H1'	1:AA:452:A:C8	2.46	0.51
1:AA:861:G:H2'	1:AA:862:C:C6	2.44	0.51
1:AA:1151:A:O2'	1:AA:1152:A:H8	1.94	0.51
1:AA:1240:U:H3'	1:AA:1241:G:H5'	1.91	0.51
1:AA:1340:A:O2'	1:AA:1341:U:H5'	2.11	0.51
2:AC:51:VAL:HA	2:AC:69:THR:HA	1.92	0.51
3:AD:8:LEU:O	3:AD:12:ARG:HG2	2.10	0.51
13:AP:71:VAL:HG13	13:AP:72:ALA:N	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AB:186:VAL:HG21	18:AB:192:PRO:HB3	1.93	0.51
19:AU:16:ARG:HH12	19:AU:19:LYS:NZ	2.08	0.51
22:BA:43:C:C1'	47:BF:91:ARG:HD2	2.40	0.51
23:BB:978:G:O2'	23:BB:979:A:H5'	2.11	0.51
23:BB:1430:G:H2'	23:BB:1431:A:H8	1.76	0.51
23:BB:1825:U:H2'	23:BB:1826:G:H8	1.75	0.51
23:BB:1830:C:H2'	23:BB:1831:G:C8	2.46	0.51
23:BB:2261:C:O2'	23:BB:2262:U:H5'	2.09	0.51
23:BB:2322:A:H3'	23:BB:2323:G:C8	2.46	0.51
23:BB:2352:A:N1	52:BW:30:VAL:HG11	2.24	0.51
25:BC:166:ARG:HA	25:BC:171:VAL:HG22	1.92	0.51
25:BC:250:GLN:C	25:BC:252:LYS:H	2.18	0.51
26:BD:79:LEU:N	26:BD:79:LEU:HD22	2.25	0.51
29:BE:126:VAL:HG13	29:BE:127:GLU:N	2.26	0.51
31:B0:53:VAL:HB	42:BN:118:ARG:HH22	1.75	0.51
40:BH:72:ILE:HG23	40:BH:140:ALA:HB1	1.91	0.51
40:BH:96:THR:HA	40:BH:115:VAL:HG11	1.92	0.51
41:BJ:34:ARG:NH1	41:BJ:39:LYS:HG2	2.26	0.51
41:BJ:58:ASN:HA	41:BJ:127:GLY:CA	2.40	0.51
42:BN:47:VAL:O	42:BN:50:PRO:HD2	2.10	0.51
42:BN:87:PHE:HB3	42:BN:90:ARG:CB	2.41	0.51
43:BO:14:ALA:C	43:BO:16:ARG:H	2.18	0.51
43:BO:30:ARG:HG2	43:BO:31:THR:N	2.26	0.51
44:BQ:96:ASP:C	44:BQ:98:ALA:H	2.17	0.51
47:BF:2:LYS:HB2	47:BF:100:GLU:OE2	2.10	0.51
47:BF:24:VAL:C	47:BF:26:GLN:H	2.19	0.51
47:BF:155:ILE:HG22	47:BF:157:THR:H	1.75	0.51
1:CA:8:A:C6	3:CD:205:LYS:HB2	2.45	0.51
1:CA:811:C:O2'	1:CA:901:A:N1	2.42	0.51
1:CA:980:C:H4'	21:CN:12:ARG:NH2	2.25	0.51
4:CE:96:GLN:HB3	4:CE:123:LEU:CD1	2.41	0.51
5:CF:69:GLU:O	5:CF:73:GLU:HG2	2.10	0.51
11:CL:15:VAL:O	11:CL:16:ALA:C	2.53	0.51
13:CP:5:ARG:HH22	13:CP:24:SER:HA	1.70	0.51
14:CQ:80:LYS:C	14:CQ:80:LYS:HD2	2.35	0.51
2:CC:172:VAL:O	2:CC:174:LEU:HD12	2.11	0.51
12:CM:64:VAL:HA	12:CM:68:LEU:CD1	2.41	0.51
23:DB:1026:G:H2'	23:DB:1027:A:C8	2.46	0.51
23:DB:1060:U:O2	23:DB:1088:A:C8	2.64	0.51
23:DB:1771:C:H2'	23:DB:1772:A:H8	1.76	0.51
23:DB:2023:C:O2'	23:DB:2024:G:H5'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2417:C:O2'	23:DB:2418:A:H5'	2.11	0.51
23:DB:2656:U:H2'	23:DB:2657:A:H8	1.75	0.51
24:DI:85:ILE:CD1	24:DI:137:LEU:HD21	2.40	0.51
25:DC:12:ARG:HA	25:DC:15:VAL:HG23	1.93	0.51
25:DC:250:GLN:C	25:DC:252:LYS:H	2.18	0.51
26:DD:124:ARG:HD3	26:DD:163:GLY:O	2.10	0.51
30:DY:53:MET:HE2	30:DY:53:MET:HA	1.92	0.51
38:DM:40:ARG:HB2	38:DM:93:VAL:HG22	1.91	0.51
41:DJ:56:VAL:C	41:DJ:57:LEU:HD12	2.36	0.51
42:DN:90:ARG:HB3	42:DN:94:TYR:HE1	1.76	0.51
47:DF:57:ALA:HB2	47:DF:64:PRO:HG2	1.92	0.51
48:DG:33:THR:HA	48:DG:34:ARG:NH1	2.25	0.51
52:DW:23:LYS:O	52:DW:66:VAL:HB	2.11	0.51
1:AA:57:G:H2'	1:AA:58:C:H6	1.76	0.51
1:AA:62:U:H2'	1:AA:63:C:C6	2.46	0.51
1:AA:218:U:H2'	1:AA:219:U:C6	2.46	0.51
1:AA:434:U:H3'	1:AA:435:A:H8	1.75	0.51
1:AA:499:A:H1'	1:AA:500:G:C8	2.45	0.51
1:AA:714:G:H2'	1:AA:715:A:C8	2.46	0.51
1:AA:1010:U:O2'	1:AA:1011:C:H5'	2.10	0.51
1:AA:1070:U:H2'	1:AA:1071:C:H6	1.73	0.51
1:AA:1142:G:H3'	1:AA:1143:G:H8	1.76	0.51
2:AC:39:ARG:CZ	2:AC:56:ILE:HD11	2.40	0.51
4:AE:113:VAL:O	4:AE:116:VAL:HG22	2.11	0.51
11:AL:81:ILE:HA	11:AL:95:HIS:O	2.11	0.51
14:AQ:26:ARG:HG2	14:AQ:39:ARG:O	2.10	0.51
23:BB:138:U:H3'	23:BB:140:C:O2	2.11	0.51
23:BB:151:C:H2'	23:BB:152:A:C8	2.46	0.51
23:BB:500:G:N2	23:BB:502:A:H3'	2.25	0.51
23:BB:959:A:O2'	23:BB:960:A:H5'	2.11	0.51
23:BB:1275:A:O2'	23:BB:1276:A:H5'	2.11	0.51
23:BB:1714:U:H3'	23:BB:1715:G:C5'	2.40	0.51
23:BB:1917:U:H2'	23:BB:1918:A:C8	2.46	0.51
23:BB:1951:U:O2	23:BB:1953:A:H3'	2.11	0.51
23:BB:2337:G:H2'	23:BB:2337:G:N3	2.26	0.51
23:BB:2803:G:H2'	23:BB:2804:U:H6	1.75	0.51
25:BC:211:ARG:C	25:BC:213:ARG:H	2.19	0.51
27:BK:71:ARG:CB	27:BK:72:PRO:HD2	2.39	0.51
38:BM:40:ARG:HB2	38:BM:93:VAL:HG22	1.92	0.51
40:BH:68:ARG:HG3	40:BH:134:VAL:HB	1.93	0.51
40:BH:97:ARG:HA	40:BH:112:LYS:CB	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BQ:17:LEU:HD13	44:BQ:30:VAL:O	2.11	0.51
48:BG:89:VAL:HG12	48:BG:90:GLY:N	2.26	0.51
1:CA:148:G:H2'	1:CA:149:A:O4'	2.10	0.51
1:CA:184:G:N1	1:CA:194:C:N4	2.59	0.51
1:CA:279:A:H5'	1:CA:281:G:C5'	2.40	0.51
1:CA:1125:U:O2'	1:CA:1126:U:H2'	2.10	0.51
1:CA:1298:U:C3'	1:CA:1299:A:H5'	2.40	0.51
1:CA:1349:A:OP1	8:CI:121:ARG:HB2	2.09	0.51
1:CA:1409:C:O2	23:DB:1913:A:N6	2.44	0.51
1:CA:1451:U:H5"	1:CA:1452:C:H5	1.75	0.51
1:CA:1465:A:H2'	1:CA:1466:C:C6	2.45	0.51
3:CD:48:SER:O	3:CD:49:ASP:C	2.54	0.51
7:CH:25:THR:O	7:CH:26:MET:HB3	2.11	0.51
10:CK:83:VAL:CG2	10:CK:109:ILE:HG12	2.41	0.51
10:CK:126:ARG:HA	10:CK:126:ARG:HE	1.76	0.51
11:CL:106:VAL:HA	11:CL:107:LYS:NZ	2.25	0.51
2:CC:128:MET:HE3	2:CC:128:MET:H	1.76	0.51
9:CJ:59:LYS:HB2	9:CJ:62:ARG:HH22	1.74	0.51
22:DA:43:C:C2'	22:DA:44:G:H5"	2.40	0.51
22:DA:76:G:H2'	22:DA:77:U:H6	1.74	0.51
23:DB:267:C:H2'	23:DB:268:C:C6	2.45	0.51
23:DB:282:A:O2'	23:DB:283:G:H5'	2.10	0.51
23:DB:340:A:H2'	23:DB:341:C:H5'	1.92	0.51
23:DB:528:A:N1	23:DB:2042:A:H2'	2.25	0.51
23:DB:693:A:O2'	23:DB:694:U:H5'	2.10	0.51
23:DB:923:G:H1'	52:DW:23:LYS:HZ2	1.75	0.51
23:DB:1151:A:H2'	23:DB:1152:C:C6	2.45	0.51
23:DB:1447:C:H2'	23:DB:1448:G:C8	2.46	0.51
23:DB:2144:G:N3	23:DB:2146:C:H5'	2.26	0.51
23:DB:2443:C:H2'	23:DB:2444:G:H8	1.76	0.51
23:DB:2579:C:O5'	23:DB:2579:C:H6	1.94	0.51
23:DB:2852:G:H2'	23:DB:2853:C:O4'	2.10	0.51
27:DK:16:ALA:HB3	27:DK:47:ILE:HG13	1.92	0.51
28:DP:91:VAL:O	28:DP:92:ARG:HB3	2.10	0.51
29:DE:77:ILE:HG13	29:DE:78:TRP:HE3	1.76	0.51
31:D0:38:LEU:HB3	31:D0:41:HIS:CD2	2.45	0.51
34:D3:41:ARG:C	34:D3:43:LEU:H	2.17	0.51
37:DL:100:ILE:HG12	37:DL:100:ILE:O	2.10	0.51
39:DX:46:VAL:O	39:DX:50:VAL:HG23	2.11	0.51
44:DQ:79:ILE:HG23	44:DQ:80:ASN:N	2.25	0.51
45:DS:48:LYS:O	45:DS:51:LEU:HB3	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:43:LYS:HD3	46:DU:44:HIS:N	2.26	0.51
47:DF:3:LEU:HD11	47:DF:172:PHE:CE1	2.45	0.51
47:DF:26:GLN:O	47:DF:27:VAL:C	2.54	0.51
48:DG:17:LYS:HE2	48:DG:19:ASN:CG	2.36	0.51
48:DG:89:VAL:HG12	48:DG:90:GLY:N	2.26	0.51
50:DT:35:ALA:O	50:DT:81:LYS:HB3	2.10	0.51
52:DW:19:ARG:HD3	52:DW:36:ILE:HD11	1.93	0.51
1:AA:648:A:H2'	1:AA:649:A:C8	2.46	0.51
1:AA:658:C:O2'	1:AA:659:U:H5'	2.10	0.51
1:AA:735:C:H2'	1:AA:736:C:H6	1.76	0.51
1:AA:735:C:O2'	1:AA:736:C:H5'	2.10	0.51
1:AA:1015:G:H1'	1:AA:1218:C:O2'	2.11	0.51
1:AA:1120:C:H2'	1:AA:1121:U:C6	2.45	0.51
1:AA:1360:A:H2'	1:AA:1361:G:H5'	1.91	0.51
2:AC:38:VAL:HG23	2:AC:39:ARG:H	1.75	0.51
2:AC:126:ARG:HH22	2:AC:190:THR:HG22	1.75	0.51
3:AD:108:ALA:H	3:AD:112:GLU:CD	2.19	0.51
8:AI:54:VAL:O	8:AI:59:LYS:HD2	2.10	0.51
11:AL:37:TYR:O	11:AL:38:THR:HG23	2.11	0.51
12:AM:64:VAL:HB	12:AM:65:GLU:OE2	2.11	0.51
20:AO:83:GLU:C	20:AO:85:LEU:H	2.19	0.51
23:BB:37:C:H4'	23:BB:451:U:OP1	2.10	0.51
23:BB:64:A:H2'	23:BB:65:U:C6	2.45	0.51
23:BB:130:C:O2'	23:BB:131:A:H5'	2.11	0.51
23:BB:235:U:H2'	23:BB:236:C:C6	2.46	0.51
23:BB:252:G:O2'	23:BB:253:C:H5'	2.11	0.51
23:BB:599:A:O2'	23:BB:600:G:H5'	2.10	0.51
23:BB:939:G:O2'	23:BB:940:G:H5'	2.10	0.51
23:BB:2065:C:H2'	23:BB:2066:C:H6	1.76	0.51
23:BB:2590:A:H2'	23:BB:2591:C:C6	2.45	0.51
26:BD:5:VAL:HG23	26:BD:32:ASN:ND2	2.25	0.51
29:BE:14:VAL:HG12	29:BE:197:GLU:OE1	2.10	0.51
37:BL:19:LEU:CD2	37:BL:27:LEU:HD23	2.40	0.51
37:BL:132:ARG:HA	37:BL:135:ILE:CG2	2.41	0.51
40:BH:57:LYS:HG3	40:BH:58:LEU:N	2.25	0.51
44:BQ:105:PHE:O	44:BQ:108:LEU:HB2	2.11	0.51
45:BS:37:THR:HG22	45:BS:48:LYS:HE3	1.92	0.51
46:BU:49:PRO:HA	46:BU:53:GLN:HE21	1.74	0.51
47:BF:7:TYR:O	47:BF:12:VAL:HG23	2.11	0.51
47:BF:78:ILE:HA	47:BF:82:TYR:CD1	2.45	0.51
47:BF:107:VAL:N	47:BF:108:PRO:CD	2.74	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BR:66:HIS:ND1	49:BR:94:THR:HG22	2.26	0.51
1:CA:33:A:H2'	1:CA:34:C:H6	1.74	0.51
1:CA:493:A:H3'	1:CA:494:G:C8	2.45	0.51
1:CA:502:A:H4'	1:CA:550:G:H4'	1.92	0.51
1:CA:555:U:H2'	1:CA:556:C:C6	2.45	0.51
1:CA:868:C:H2'	1:CA:869:G:O4'	2.11	0.51
1:CA:1051:C:H2'	1:CA:1052:U:C6	2.46	0.51
1:CA:1118:U:H2'	1:CA:1119:C:C6	2.45	0.51
1:CA:1468:A:O2'	1:CA:1469:C:H5'	2.10	0.51
3:CD:156:ALA:O	3:CD:159:GLU:HB3	2.11	0.51
11:CL:54:VAL:O	11:CL:61:GLU:HA	2.10	0.51
17:CT:49:ALA:O	17:CT:52:GLU:HB3	2.10	0.51
2:CC:64:ARG:HG3	2:CC:101:ASN:HD21	1.75	0.51
8:CI:20:ILE:CG1	8:CI:62:LEU:HD12	2.41	0.51
9:CJ:42:LEU:HD22	9:CJ:73:LEU:HD23	1.93	0.51
12:CM:15:VAL:O	12:CM:19:THR:HG23	2.10	0.51
21:CN:5:MET:HB3	21:CN:62:ARG:HH12	1.76	0.51
23:DB:458:G:H22	23:DB:469:G:H2'	1.76	0.51
23:DB:607:U:O4	23:DB:620:G:H5"	2.11	0.51
23:DB:1169:A:O2'	23:DB:1170:C:H5'	2.11	0.51
23:DB:1672:A:H2'	23:DB:1673:G:C8	2.45	0.51
23:DB:1946:U:H2'	23:DB:1947:C:C6	2.45	0.51
23:DB:2052:A:H4'	26:DD:148:GLN:O	2.11	0.51
23:DB:2305:U:H2'	23:DB:2306:C:C6	2.46	0.51
23:DB:2800:A:H2'	23:DB:2801:G:C4'	2.41	0.51
23:DB:2834:G:H1'	23:DB:2883:A:N6	2.26	0.51
27:DK:107:LEU:HD12	27:DK:107:LEU:N	2.21	0.51
29:DE:46:GLN:HB3	29:DE:86:ALA:CA	2.41	0.51
29:DE:118:LEU:HD21	29:DE:188:MET:HE3	1.93	0.51
33:D1:36:LYS:CB	33:D1:47:ILE:HA	2.40	0.51
37:DL:14:LYS:O	37:DL:16:GLY:N	2.44	0.51
43:DO:100:HIS:C	43:DO:104:GLN:HB2	2.36	0.51
44:DQ:57:ARG:C	44:DQ:59:LEU:H	2.18	0.51
49:DR:1:MET:HA	49:DR:42:ALA:HB3	1.92	0.51
1:AA:33:A:H2'	1:AA:34:C:H6	1.74	0.51
1:AA:93:U:H3'	1:AA:94:G:H5"	1.93	0.51
1:AA:282:A:N3	1:AA:282:A:H2'	2.26	0.51
1:AA:403:C:O2'	1:AA:404:G:H5'	2.09	0.51
1:AA:531:U:H5'	1:AA:531:U:H6	1.75	0.51
1:AA:600:A:H2'	1:AA:601:G:H8	1.76	0.51
1:AA:624:C:O2'	1:AA:625:U:H5'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:987:G:H2'	1:AA:988:G:C8	2.44	0.51
1:AA:1007:U:H2'	1:AA:1008:U:C6	2.46	0.51
1:AA:1020:G:C2'	1:AA:1021:A:H5'	2.40	0.51
1:AA:1285:A:O2'	1:AA:1286:U:OP2	2.25	0.51
1:AA:1310:G:H2'	1:AA:1311:A:O4'	2.11	0.51
1:AA:1319:A:H3'	16:AS:2:ARG:CA	2.41	0.51
3:AD:145:ARG:HB3	3:AD:147:LYS:HG3	1.92	0.51
4:AE:45:VAL:HG11	4:AE:117:ALA:HB2	1.92	0.51
10:AK:70:ALA:HA	10:AK:73:VAL:CG2	2.41	0.51
11:AL:86:VAL:CG2	11:AL:89:LEU:HB2	2.40	0.51
12:AM:92:ARG:HA	12:AM:92:ARG:HE	1.75	0.51
13:AP:6:LEU:HB3	13:AP:17:TYR:HB3	1.93	0.51
18:AB:16:GLY:HA2	18:AB:40:ILE:HG13	1.92	0.51
23:BB:142:A:O2'	50:BT:2:ILE:HG21	2.11	0.51
23:BB:1178:C:H2'	23:BB:1179:G:C8	2.46	0.51
23:BB:1281:G:H2'	23:BB:1282:U:C6	2.46	0.51
23:BB:1287:A:H3'	23:BB:1288:G:H21	1.75	0.51
23:BB:1567:G:H1'	23:BB:1568:G:C6	2.46	0.51
23:BB:1841:U:H2'	23:BB:1842:G:H8	1.76	0.51
23:BB:2653:U:O2'	48:BG:109:SER:HB2	2.10	0.51
25:BC:91:ALA:CB	25:BC:105:ALA:HB2	2.41	0.51
34:B3:60:CYS:C	34:B3:62:PRO:HD3	2.36	0.51
38:BM:21:ALA:HB3	38:BM:99:GLY:O	2.11	0.51
40:BH:67:ALA:N	40:BH:138:VAL:HG21	2.26	0.51
44:BQ:90:ASP:OD1	49:BR:39:LEU:HD12	2.11	0.51
46:BU:11:ILE:O	46:BU:12:VAL:HB	2.10	0.51
48:BG:129:GLU:C	48:BG:130:ILE:HG13	2.34	0.51
50:BT:39:THR:O	50:BT:40:LYS:HB3	2.11	0.51
1:CA:82:G:H2'	1:CA:83:C:O4'	2.11	0.51
1:CA:137:U:H2'	1:CA:138:G:H8	1.74	0.51
1:CA:299:G:H2'	1:CA:300:A:C8	2.46	0.51
1:CA:692:U:C2	1:CA:694:A:H5"	2.46	0.51
1:CA:699:C:C2'	1:CA:700:G:H5"	2.40	0.51
1:CA:736:C:H2'	1:CA:737:C:H6	1.75	0.51
1:CA:981:U:C4'	21:CN:60:ARG:HD2	2.35	0.51
1:CA:1058:G:OP1	2:CC:198:LYS:HE2	2.11	0.51
3:CD:52:VAL:HG12	3:CD:198:LEU:HD11	1.93	0.51
3:CD:88:ASN:O	3:CD:92:LEU:HD23	2.11	0.51
5:CF:22:ILE:O	5:CF:26:THR:HG23	2.11	0.51
11:CL:37:TYR:O	11:CL:38:THR:HG23	2.11	0.51
21:CN:51:PRO:HG2	21:CN:52:ARG:H	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:108:G:O2'	23:DB:109:C:H5'	2.10	0.51
23:DB:135:U:H2'	23:DB:136:G:H8	1.75	0.51
23:DB:441:U:H2'	23:DB:442:G:H8	1.75	0.51
23:DB:500:G:N2	23:DB:502:A:H3'	2.25	0.51
23:DB:543:G:H2'	23:DB:545:U:H5'	1.93	0.51
23:DB:1655:A:H2'	23:DB:1656:C:O4'	2.10	0.51
23:DB:2419:U:H5"	33:D1:21:THR:HG21	1.93	0.51
23:DB:2457:U:O2'	23:DB:2458:G:H5'	2.11	0.51
23:DB:2880:C:O2'	23:DB:2881:U:H5'	2.11	0.51
27:DK:21:CYS:HB2	27:DK:39:ILE:HG21	1.93	0.51
28:DP:19:PHE:CE1	28:DP:46:VAL:HG11	2.46	0.51
28:DP:88:ARG:HB2	28:DP:112:ARG:CZ	2.41	0.51
29:DE:28:VAL:O	29:DE:32:VAL:HG22	2.11	0.51
29:DE:158:PHE:HA	29:DE:169:VAL:CG2	2.40	0.51
35:DV:38:LEU:HG	35:DV:40:ILE:HG23	1.93	0.51
35:DV:80:HIS:HB3	35:DV:83:LYS:O	2.10	0.51
38:DM:32:GLY:HA3	38:DM:103:TYR:O	2.11	0.51
41:DJ:20:ALA:HB2	41:DJ:28:LEU:HD13	1.93	0.51
45:DS:33:LEU:O	45:DS:37:THR:HG23	2.11	0.51
47:DF:62:GLN:NE2	47:DF:91:ARG:HE	2.08	0.51
48:DG:62:ALA:O	48:DG:66:THR:HG22	2.09	0.51
52:DW:13:ARG:HG3	52:DW:14:ASP:H	1.75	0.51
1:AA:187:G:N2	1:AA:189:A:H3'	2.25	0.51
1:AA:313:A:H2'	1:AA:314:C:H6	1.76	0.51
1:AA:476:U:H2'	1:AA:477:C:H6	1.76	0.51
1:AA:599:C:O2'	1:AA:600:A:H5'	2.10	0.51
1:AA:951:G:O2'	1:AA:952:U:H5'	2.11	0.51
1:AA:1090:U:H2'	1:AA:1091:U:C6	2.46	0.51
1:AA:1314:C:H2'	1:AA:1315:U:C6	2.46	0.51
1:AA:1508:A:H2'	1:AA:1509:C:H6	1.75	0.51
10:AK:22:ILE:HG21	10:AK:95:THR:HG21	1.92	0.51
11:AL:15:VAL:O	11:AL:16:ALA:C	2.53	0.51
18:AB:75:ALA:O	18:AB:76:SER:C	2.53	0.51
23:BB:19:A:H2'	23:BB:20:C:C6	2.46	0.51
23:BB:64:A:H2'	23:BB:65:U:H6	1.76	0.51
23:BB:100:U:O2'	23:BB:101:A:O5'	2.26	0.51
23:BB:721:A:H2'	23:BB:722:A:C8	2.46	0.51
23:BB:1458:U:O2'	23:BB:1459:G:H4'	2.09	0.51
23:BB:1595:C:O2'	23:BB:1596:A:H5'	2.10	0.51
23:BB:1676:A:H2'	23:BB:1677:A:O4'	2.11	0.51
23:BB:1825:U:H2'	23:BB:1826:G:C8	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1827:U:O2'	23:BB:1828:G:H5'	2.11	0.51
23:BB:2047:C:H2'	23:BB:2048:G:H8	1.75	0.51
24:BI:77:VAL:HA	24:BI:80:LYS:CE	2.38	0.51
26:BD:61:THR:OG1	26:BD:64:GLU:HB2	2.11	0.51
27:BK:41:ILE:HG13	27:BK:42:THR:H	1.75	0.51
31:B0:38:LEU:HB3	31:B0:41:HIS:CD2	2.46	0.51
34:B3:22:LYS:HG3	34:B3:47:ALA:O	2.11	0.51
37:BL:65:GLY:O	37:BL:66:PHE:HB3	2.11	0.51
44:BQ:93:ILE:HG23	44:BQ:94:LEU:H	1.76	0.51
48:BG:26:LYS:HG2	48:BG:27:GLY:N	2.24	0.51
49:BR:38:VAL:HG13	49:BR:54:VAL:HG12	1.93	0.51
1:CA:735:C:H2'	1:CA:736:C:H6	1.75	0.51
1:CA:821:G:H2'	1:CA:822:U:C6	2.46	0.51
1:CA:1207:G:O2'	1:CA:1208:C:H5'	2.11	0.51
3:CD:40:HIS:O	3:CD:43:ARG:HG2	2.11	0.51
11:CL:49:ARG:HH12	11:CL:88:ASP:HB3	1.76	0.51
11:CL:52:CYS:SG	11:CL:66:ILE:HD11	2.50	0.51
15:CR:41:SER:HB3	15:CR:51:GLN:CD	2.35	0.51
2:CC:172:VAL:HG11	2:CC:200:TRP:HB3	1.91	0.51
12:CM:74:MET:SD	12:CM:77:LYS:HD2	2.51	0.51
12:CM:78:ARG:HB3	12:CM:78:ARG:CZ	2.40	0.51
12:CM:89:ARG:HD3	12:CM:94:LEU:HB2	1.92	0.51
18:CB:27:LYS:C	18:CB:29:PHE:H	2.19	0.51
18:CB:223:GLY:C	18:CB:225:SER:H	2.19	0.51
23:DB:138:U:H5"	23:DB:139:U:OP1	2.11	0.51
23:DB:1205:A:N7	29:DE:165:HIS:CG	2.78	0.51
23:DB:1774:C:O2	23:DB:1774:C:C2'	2.59	0.51
23:DB:1973:G:O2'	23:DB:1974:C:H5'	2.11	0.51
23:DB:2037:A:H2'	23:DB:2038:G:H8	1.76	0.51
26:DD:32:ASN:HB3	26:DD:50:VAL:HG21	1.91	0.51
26:DD:106:LYS:HD3	26:DD:106:LYS:N	2.26	0.51
38:DM:82:MET:HE3	38:DM:83:GLY:H	1.74	0.51
40:DH:69:ALA:O	40:DH:72:ILE:HG13	2.11	0.51
40:DH:84:ALA:HB3	40:DH:148:ALA:HB1	1.92	0.51
40:DH:114:GLU:HG3	40:DH:133:GLN:HB2	1.93	0.51
41:DJ:4:PHE:CG	41:DJ:5:THR:N	2.78	0.51
41:DJ:65:THR:HG23	41:DJ:66:GLY:N	2.26	0.51
42:DN:58:ASP:O	42:DN:62:ASN:HB2	2.10	0.51
42:DN:92:GLY:O	42:DN:94:TYR:N	2.44	0.51
46:DU:28:LEU:HB2	46:DU:32:LYS:O	2.10	0.51
50:DT:29:THR:CG2	50:DT:86:THR:HG22	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DT:43:ILE:CG2	50:DT:58:VAL:HG21	2.41	0.51
1:AA:803:G:H2'	1:AA:804:U:H6	1.73	0.51
1:AA:929:G:O2'	1:AA:930:C:H5'	2.11	0.51
1:AA:976:G:N2	1:AA:1362:A:H3'	2.25	0.51
1:AA:1073:U:O2'	1:AA:1074:G:H5'	2.09	0.51
1:AA:1152:A:H4'	9:AJ:15:HIS:CD2	2.45	0.51
1:AA:1378:C:N3	1:AA:1379:G:H1'	2.26	0.51
2:AC:148:ILE:O	2:AC:168:ARG:HG2	2.10	0.51
3:AD:169:TRP:CD2	3:AD:185:PRO:HB3	2.45	0.51
3:AD:199:ILE:HG13	3:AD:200:VAL:N	2.25	0.51
5:AF:6:ILE:HD12	5:AF:7:VAL:N	2.25	0.51
8:AI:21:LYS:HG2	8:AI:22:PRO:HD2	1.92	0.51
8:AI:35:GLU:CD	8:AI:39:GLY:HA2	2.36	0.51
10:AK:126:ARG:HA	10:AK:126:ARG:HE	1.76	0.51
16:AS:38:THR:HG23	16:AS:69:LYS:HE2	1.92	0.51
18:AB:53:LEU:C	18:AB:55:GLU:H	2.19	0.51
18:AB:221:ARG:HH11	18:AB:221:ARG:CB	2.24	0.51
20:AO:33:THR:HG23	20:AO:63:ARG:NH1	2.24	0.51
23:BB:5:A:H2'	23:BB:6:A:H8	1.72	0.51
23:BB:39:G:O2'	23:BB:40:U:H5'	2.10	0.51
23:BB:570:G:H2'	23:BB:2030:A:C8	2.46	0.51
23:BB:593:U:H2'	23:BB:594:U:H6	1.76	0.51
23:BB:666:A:H2'	23:BB:667:U:C6	2.46	0.51
23:BB:866:A:H61	23:BB:913:U:C4'	2.24	0.51
23:BB:1106:G:H2'	23:BB:1107:G:C8	2.44	0.51
23:BB:1117:C:H2'	23:BB:1118:C:H6	1.75	0.51
23:BB:1558:C:H4'	23:BB:1559:U:C5'	2.36	0.51
23:BB:1710:G:O2'	23:BB:1711:A:H5'	2.10	0.51
23:BB:2394:C:H2'	23:BB:2395:C:C6	2.46	0.51
26:BD:51:THR:HG23	26:BD:78:GLY:O	2.11	0.51
29:BE:46:GLN:HB3	29:BE:86:ALA:CA	2.40	0.51
37:BL:51:GLU:OE1	37:BL:57:LEU:HB2	2.11	0.51
37:BL:142:ILE:HD12	37:BL:142:ILE:N	2.26	0.51
39:BX:20:ASN:O	39:BX:24:GLU:HB3	2.11	0.51
44:BQ:57:ARG:C	44:BQ:59:LEU:H	2.18	0.51
52:BW:17:ALA:O	52:BW:18:LYS:HD2	2.10	0.51
1:CA:475:C:O2'	1:CA:476:U:H5'	2.11	0.51
1:CA:1004:A:H2'	1:CA:1005:A:O4'	2.11	0.51
1:CA:1271:A:H5'	1:CA:1314:C:C5'	2.40	0.51
1:CA:1351:U:O4'	6:CG:32:ASP:HB3	2.11	0.51
5:CF:53:LYS:C	5:CF:54:LEU:HD22	2.36	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CF:84:VAL:HG22	5:CF:85:ILE:H	1.74	0.51
6:CG:12:LEU:HD13	6:CG:13:PRO:CD	2.41	0.51
6:CG:12:LEU:HD13	6:CG:13:PRO:HD2	1.92	0.51
8:CI:11:ARG:O	8:CI:11:ARG:HG3	2.11	0.51
8:CI:29:ILE:HG23	8:CI:64:ILE:HB	1.93	0.51
20:CO:36:ILE:HD11	20:CO:59:MET:HG3	1.93	0.51
23:DB:68:G:O2'	23:DB:69:C:H5'	2.11	0.51
23:DB:172:A:H2'	23:DB:173:A:H8	1.75	0.51
23:DB:222:A:N6	23:DB:232:G:H1'	2.26	0.51
23:DB:1000:A:H2'	23:DB:1001:A:H8	1.76	0.51
23:DB:1019:U:H2'	23:DB:1020:A:H8	1.73	0.51
23:DB:2531:A:H2'	23:DB:2531:A:N3	2.26	0.51
23:DB:2694:G:H2'	23:DB:2695:U:C6	2.46	0.51
25:DC:66:PHE:HB2	25:DC:150:GLY:O	2.11	0.51
25:DC:140:VAL:HG12	25:DC:141:HIS:N	2.22	0.51
25:DC:204:LEU:HD23	25:DC:209:ALA:HB3	1.91	0.51
27:DK:24:VAL:HA	27:DK:39:ILE:CD1	2.41	0.51
27:DK:108:ARG:O	27:DK:113:MET:HE3	2.11	0.51
28:DP:24:THR:OG1	28:DP:86:LYS:HB3	2.10	0.51
34:D3:31:ILE:CD1	34:D3:34:LYS:HD3	2.41	0.51
38:DM:33:LEU:HD22	38:DM:128:THR:CB	2.41	0.51
42:DN:9:GLN:HA	42:DN:17:ARG:HD3	1.92	0.51
44:DQ:93:ILE:HG23	44:DQ:94:LEU:H	1.76	0.51
45:DS:24:ILE:HD11	45:DS:36:LEU:HD21	1.91	0.51
47:DF:134:GLN:HB3	47:DF:149:ARG:CB	2.41	0.51
1:AA:91:U:H2'	1:AA:92:U:C5	2.46	0.50
1:AA:336:A:O2'	1:AA:337:G:H5'	2.10	0.50
1:AA:977:A:N1	1:AA:1224:U:OP1	2.45	0.50
1:AA:1299:A:H2'	1:AA:1301:U:C6	2.46	0.50
7:AH:37:ASN:O	7:AH:40:LYS:HB3	2.11	0.50
22:BA:26:C:H3'	22:BA:27:C:C6	2.45	0.50
23:BB:350:G:O2'	23:BB:351:C:H5'	2.11	0.50
23:BB:569:U:H2'	23:BB:570:G:O4'	2.10	0.50
23:BB:1431:A:H2'	23:BB:1432:G:C8	2.45	0.50
23:BB:1826:G:H2'	23:BB:1827:U:H6	1.76	0.50
23:BB:1826:G:P	25:BC:221:GLY:H	2.34	0.50
23:BB:2109:U:H2'	23:BB:2109:U:O2	2.10	0.50
23:BB:2352:A:C6	52:BW:30:VAL:HG11	2.47	0.50
23:BB:2355:G:H4'	52:BW:20:LEU:HD13	1.93	0.50
23:BB:2773:C:H2'	23:BB:2774:C:H6	1.76	0.50
24:BI:29:GLN:HE21	24:BI:29:GLN:HA	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:180:MET:HB2	25:BC:268:ARG:HB3	1.93	0.50
27:BK:116:ILE:HG13	27:BK:117:SER:N	2.26	0.50
28:BP:4:ILE:C	28:BP:6:GLN:H	2.18	0.50
31:B0:27:LEU:HD22	31:B0:38:LEU:HA	1.92	0.50
52:BW:50:VAL:HG23	52:BW:61:LYS:CE	2.41	0.50
1:CA:94:G:H4'	1:CA:95:C:O5'	2.11	0.50
1:CA:370:C:H2'	1:CA:371:A:H8	1.75	0.50
1:CA:470:C:H2'	1:CA:471:U:H6	1.77	0.50
1:CA:795:C:H5"	10:CK:127:ARG:HH21	1.76	0.50
1:CA:1078:U:H2'	1:CA:1079:G:O4'	2.10	0.50
17:CT:38:ILE:HD11	17:CT:82:ILE:HA	1.93	0.50
2:CC:105:VAL:HA	2:CC:106:ARG:CZ	2.42	0.50
2:CC:113:LYS:HA	2:CC:184:ASN:ND2	2.26	0.50
2:CC:153:SER:HG	2:CC:196:GLY:H	1.57	0.50
23:DB:4:U:H2'	23:DB:5:A:H8	1.76	0.50
23:DB:171:U:H2'	23:DB:172:A:H8	1.74	0.50
23:DB:666:A:H2'	23:DB:667:U:C6	2.46	0.50
23:DB:743:A:OP1	26:DD:135:GLY:HA2	2.11	0.50
23:DB:1050:A:O2'	23:DB:2752:C:H1'	2.11	0.50
23:DB:1431:A:H2'	23:DB:1432:G:H8	1.76	0.50
23:DB:1459:G:H3'	23:DB:1460:U:C5'	2.40	0.50
23:DB:1545:A:H2'	23:DB:1546:G:O4'	2.12	0.50
23:DB:1720:U:O2'	23:DB:1721:G:H5'	2.11	0.50
23:DB:2852:G:H2'	23:DB:2853:C:H6	1.76	0.50
29:DE:148:ILE:HG22	29:DE:148:ILE:O	2.11	0.50
35:DV:80:HIS:HA	35:DV:87:GLN:OE1	2.12	0.50
39:DX:20:ASN:O	39:DX:24:GLU:HB3	2.12	0.50
42:DN:59:SER:O	42:DN:63:ARG:HB2	2.11	0.50
52:DW:32:ALA:O	52:DW:34:SER:N	2.44	0.50
1:AA:634:C:H2'	1:AA:635:A:H8	1.76	0.50
1:AA:665:A:H2'	1:AA:725:G:N2	2.26	0.50
1:AA:789:U:H2'	1:AA:791:G:OP2	2.11	0.50
1:AA:853:C:C2'	1:AA:854:U:H5'	2.41	0.50
1:AA:1283:U:O2'	1:AA:1284:C:H5'	2.11	0.50
2:AC:185:THR:HG22	2:AC:198:LYS:HA	1.93	0.50
2:AC:194:VAL:HG12	2:AC:195:ILE:N	2.26	0.50
5:AF:84:VAL:HG22	5:AF:85:ILE:H	1.76	0.50
6:AG:74:VAL:HG22	6:AG:143:MET:HG3	1.94	0.50
11:AL:49:ARG:HH12	11:AL:88:ASP:CB	2.24	0.50
14:AQ:58:VAL:HB	14:AQ:74:LEU:CD2	2.41	0.50
23:BB:41:C:O2'	23:BB:42:A:H5'	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:663:G:OP1	37:BL:17:LYS:HG2	2.11	0.50
23:BB:979:A:H3'	23:BB:980:A:C5'	2.41	0.50
23:BB:1174:U:H4'	23:BB:1176:U:N3	2.26	0.50
23:BB:1203:U:H3'	23:BB:1204:A:H5"	1.93	0.50
23:BB:2133:G:H3'	23:BB:2134:A:H5"	1.93	0.50
23:BB:2714:G:O2'	23:BB:2715:C:H5'	2.12	0.50
24:BI:11:GLN:O	24:BI:11:GLN:HG3	2.10	0.50
25:BC:71:ASP:CA	25:BC:118:GLY:HA2	2.41	0.50
25:BC:90:ILE:HA	25:BC:103:ILE:O	2.11	0.50
25:BC:129:LEU:HB3	25:BC:134:ILE:HG22	1.94	0.50
26:BD:37:VAL:CG2	26:BD:91:THR:HA	2.41	0.50
28:BP:63:ILE:HG22	28:BP:63:ILE:O	2.10	0.50
29:BE:109:LEU:HA	29:BE:112:LEU:HB2	1.92	0.50
31:B0:18:HIS:C	31:B0:20:ALA:H	2.19	0.50
43:BO:24:THR:O	43:BO:90:VAL:HB	2.11	0.50
46:BU:86:PHE:HE1	46:BU:88:ASP:HB2	1.75	0.50
47:BF:28:PRO:O	47:BF:168:LEU:HD11	2.12	0.50
47:BF:135:ILE:HG13	47:BF:137:PHE:CD2	2.46	0.50
50:BT:39:THR:C	50:BT:41:ALA:H	2.20	0.50
50:BT:40:LYS:HA	50:BT:43:ILE:CG2	2.41	0.50
50:BT:67:VAL:HG23	50:BT:75:GLY:O	2.12	0.50
1:CA:204:G:N2	1:CA:466:A:N6	2.60	0.50
1:CA:240:G:H4'	1:CA:240:G:OP1	2.11	0.50
1:CA:489:C:H2'	1:CA:490:C:C6	2.46	0.50
1:CA:531:U:H5'	1:CA:531:U:H6	1.76	0.50
1:CA:546:A:P	3:CD:68:GLU:HB3	2.52	0.50
1:CA:765:G:O6	1:CA:811:C:H5	1.93	0.50
1:CA:1280:A:H3'	1:CA:1281:C:H5"	1.93	0.50
11:CL:31:GLY:HA3	11:CL:54:VAL:HG13	1.94	0.50
11:CL:120:ARG:HG2	11:CL:121:PRO:HD2	1.93	0.50
2:CC:41:TYR:CZ	2:CC:89:VAL:HG11	2.46	0.50
6:CG:43:TYR:O	6:CG:46:LEU:N	2.44	0.50
8:CI:93:LEU:O	8:CI:97:LEU:HG	2.11	0.50
16:CS:10:ILE:O	16:CS:11:ASP:C	2.54	0.50
20:CO:49:ASP:O	20:CO:50:HIS:C	2.53	0.50
23:DB:138:U:H2'	23:DB:140:C:O4'	2.12	0.50
23:DB:677:A:H2'	23:DB:678:C:H6	1.75	0.50
23:DB:704:G:H1'	23:DB:727:A:H61	1.77	0.50
23:DB:1099:G:H5"	24:DI:2:LYS:HB2	1.93	0.50
23:DB:1516:G:O2'	23:DB:1517:G:H5'	2.11	0.50
25:DC:71:ASP:CA	25:DC:118:GLY:HA2	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:93:VAL:CG1	25:DC:101:ARG:H	2.24	0.50
26:DD:51:THR:HG23	26:DD:78:GLY:O	2.11	0.50
27:DK:47:ILE:HG23	27:DK:49:ARG:H	1.76	0.50
32:D4:7:VAL:HG13	32:D4:8:LYS:N	2.14	0.50
36:D2:34:ARG:HG3	36:D2:34:ARG:HH11	1.75	0.50
41:DJ:17:VAL:CG2	41:DJ:137:PRO:HB2	2.36	0.50
42:DN:3:HIS:O	42:DN:4:ARG:HB2	2.11	0.50
43:DO:51:ALA:CB	43:DO:78:VAL:HG13	2.41	0.50
45:DS:14:ALA:C	45:DS:16:LYS:H	2.19	0.50
47:DF:33:ILE:HG22	47:DF:34:THR:N	2.25	0.50
49:DR:2:TYR:N	49:DR:42:ALA:HB2	2.26	0.50
1:AA:853:C:O2'	1:AA:854:U:H5'	2.11	0.50
1:AA:1095:U:H2'	1:AA:1096:C:H6	1.75	0.50
3:AD:40:HIS:O	3:AD:43:ARG:HG2	2.12	0.50
4:AE:150:GLU:CD	4:AE:150:GLU:H	2.19	0.50
6:AG:64:ALA:HA	6:AG:67:ASN:HD22	1.76	0.50
8:AI:5:TYR:HB3	8:AI:88:GLU:OE2	2.11	0.50
9:AJ:6:ILE:CD1	9:AJ:76:ILE:HG13	2.40	0.50
21:AN:28:ALA:HA	21:AN:32:ASP:HB2	1.92	0.50
23:BB:558:U:P	41:BJ:113:PRO:HG2	2.51	0.50
23:BB:2066:C:O2'	23:BB:2067:G:H5'	2.12	0.50
23:BB:2259:U:H2'	23:BB:2260:C:H6	1.76	0.50
23:BB:2886:A:N6	31:B0:39:ARG:CZ	2.72	0.50
24:BI:49:GLU:CG	24:BI:54:ILE:HD11	2.41	0.50
27:BK:12:ASP:OD2	27:BK:86:LEU:HG	2.11	0.50
27:BK:107:LEU:H	27:BK:107:LEU:CD1	2.18	0.50
28:BP:88:ARG:HB2	28:BP:112:ARG:CZ	2.41	0.50
35:BV:53:LYS:HZ2	35:BV:54:ALA:H	1.57	0.50
41:BJ:88:THR:HG22	41:BJ:91:GLU:OE1	2.10	0.50
46:BU:18:LYS:HE2	46:BU:19:GLY:N	2.27	0.50
47:BF:12:VAL:O	47:BF:16:MET:HG2	2.12	0.50
47:BF:35:LEU:HD23	47:BF:36:ASN:H	1.76	0.50
47:BF:109:ARG:HB3	47:BF:135:ILE:HB	1.94	0.50
50:BT:40:LYS:C	50:BT:43:ILE:HG22	2.36	0.50
51:BZ:15:GLY:O	51:BZ:27:ARG:HG3	2.11	0.50
52:BW:23:LYS:O	52:BW:66:VAL:HB	2.11	0.50
1:CA:451:A:H5'	13:CP:70:ARG:HH22	1.74	0.50
1:CA:580:C:H2'	1:CA:581:G:O4'	2.11	0.50
1:CA:1288:A:C2	1:CA:1371:G:H1'	2.45	0.50
1:CA:1400:C:H4'	1:CA:1401:G:OP2	2.10	0.50
1:CA:1434:A:H2'	1:CA:1435:G:O4'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:21:LYS:C	3:CD:23:GLY:H	2.20	0.50
3:CD:138:PRO:HA	3:CD:181:PHE:HD2	1.75	0.50
4:CE:132:PRO:O	4:CE:136:VAL:HG12	2.11	0.50
5:CF:11:HIS:HB3	5:CF:14:GLN:CG	2.38	0.50
10:CK:108:ASN:ND2	19:CU:6:ARG:HD2	2.21	0.50
19:CU:29:ALA:HA	19:CU:32:ARG:HG3	1.93	0.50
16:CS:64:GLU:CD	16:CS:64:GLU:H	2.17	0.50
18:CB:20:ARG:HH11	18:CB:20:ARG:HG3	1.77	0.50
23:DB:18:U:O3'	44:DQ:22:GLY:HA2	2.11	0.50
23:DB:445:C:H2'	23:DB:446:G:O4'	2.11	0.50
23:DB:962:G:H2'	23:DB:963:U:H6	1.76	0.50
23:DB:978:G:O2'	23:DB:979:A:H5'	2.11	0.50
23:DB:1266:G:N2	23:DB:2012:G:H2'	2.26	0.50
23:DB:1458:U:O2'	23:DB:1459:G:H4'	2.11	0.50
23:DB:1508:A:H2'	23:DB:1509:A:C2	2.47	0.50
23:DB:1681:G:H21	23:DB:1762:A:H3'	1.76	0.50
23:DB:1965:C:H5"	23:DB:1966:A:H2'	1.94	0.50
23:DB:2050:C:H1'	26:DD:161:MET:CE	2.41	0.50
23:DB:2333:A:H5'	23:DB:2335:A:H1'	1.93	0.50
24:DI:102:ARG:HG3	24:DI:141:ASP:HB2	1.93	0.50
29:DE:17:THR:C	29:DE:19:PHE:H	2.20	0.50
37:DL:81:ASP:HA	37:DL:84:LYS:HE2	1.93	0.50
43:DO:24:THR:O	43:DO:90:VAL:HB	2.11	0.50
46:DU:11:ILE:O	46:DU:12:VAL:HB	2.11	0.50
1:AA:148:G:H2'	1:AA:149:A:O4'	2.11	0.50
1:AA:807:A:H2'	1:AA:808:C:C6	2.47	0.50
1:AA:978:A:H5'	1:AA:1362:A:N6	2.26	0.50
2:AC:78:LYS:C	2:AC:80:GLY:H	2.20	0.50
6:AG:74:VAL:HA	6:AG:86:VAL:C	2.36	0.50
7:AH:48:PHE:HA	7:AH:59:GLU:O	2.12	0.50
11:AL:17:LYS:HD2	11:AL:18:SER:O	2.11	0.50
12:AM:28:ARG:NH2	12:AM:61:LYS:HB2	2.25	0.50
13:AP:41:PRO:O	13:AP:42:ILE:HD13	2.11	0.50
18:AB:13:VAL:HG11	18:AB:207:ARG:HH21	1.75	0.50
18:AB:42:LEU:HA	18:AB:45:THR:HB	1.93	0.50
20:AO:81:LEU:HD23	20:AO:82:ILE:N	2.26	0.50
23:BB:234:U:H2'	23:BB:235:U:H6	1.75	0.50
23:BB:441:U:H2'	23:BB:442:G:H8	1.75	0.50
23:BB:1930:G:H2'	23:BB:1968:G:N1	2.26	0.50
23:BB:2231:U:H2'	23:BB:2232:C:H6	1.76	0.50
23:BB:2519:U:C6	23:BB:2542:A:N6	2.79	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2633:G:H2'	23:BB:2634:A:O4'	2.11	0.50
23:BB:2835:A:H62	23:BB:2878:U:H2'	1.77	0.50
29:BE:28:VAL:O	29:BE:32:VAL:HG22	2.12	0.50
31:B0:38:LEU:HB3	31:B0:41:HIS:NE2	2.26	0.50
37:BL:10:GLU:C	37:BL:12:SER:H	2.19	0.50
37:BL:123:ARG:HA	37:BL:143:GLU:CB	2.32	0.50
40:BH:47:PHE:CA	40:BH:50:ARG:HE	2.11	0.50
41:BJ:24:THR:OG1	41:BJ:27:ARG:HD2	2.12	0.50
42:BN:9:GLN:HA	42:BN:17:ARG:HD3	1.92	0.50
44:BQ:108:LEU:HG	49:BR:48:LYS:HG2	1.92	0.50
47:BF:3:LEU:HD11	47:BF:172:PHE:CE1	2.46	0.50
47:BF:101:ARG:NH1	47:BF:138:PRO:HB2	2.26	0.50
47:BF:155:ILE:HG22	47:BF:157:THR:N	2.25	0.50
49:BR:1:MET:HA	49:BR:42:ALA:HB3	1.92	0.50
52:BW:65:LYS:NZ	52:BW:84:GLU:HB3	2.25	0.50
1:CA:187:G:N2	1:CA:189:A:H3'	2.27	0.50
1:CA:1463:U:H2'	1:CA:1464:U:C6	2.47	0.50
4:CE:104:ILE:HD11	4:CE:111:ARG:HA	1.94	0.50
7:CH:77:VAL:HG23	7:CH:126:CYS:HA	1.94	0.50
14:CQ:58:VAL:HB	14:CQ:74:LEU:CD2	2.41	0.50
2:CC:184:ASN:O	2:CC:199:VAL:HG22	2.10	0.50
6:CG:73:GLU:HG2	6:CG:90:VAL:HG12	1.92	0.50
8:CI:51:LEU:HA	8:CI:54:VAL:CG2	2.33	0.50
21:CN:28:ALA:O	21:CN:32:ASP:HB3	2.12	0.50
23:DB:8:C:O2'	23:DB:9:G:H5'	2.10	0.50
23:DB:547:A:N3	23:DB:547:A:C2'	2.66	0.50
23:DB:547:A:H5'	23:DB:548:G:C4	2.47	0.50
23:DB:1039:A:H2'	23:DB:1040:A:H8	1.75	0.50
23:DB:1271:G:OP2	23:DB:1648:U:OP1	2.28	0.50
23:DB:1567:G:H1'	23:DB:1568:G:C6	2.47	0.50
23:DB:1689:A:H2'	23:DB:1690:A:C8	2.47	0.50
23:DB:1838:C:H4'	23:DB:1839:G:H8	1.76	0.50
23:DB:2221:G:H2'	23:DB:2222:C:H6	1.75	0.50
23:DB:2789:C:H2'	23:DB:2893:A:N7	2.27	0.50
24:DI:75:ALA:O	24:DI:79:LEU:HG	2.12	0.50
26:DD:117:GLY:HA2	26:DD:164:GLN:OE1	2.11	0.50
26:DD:183:GLU:CD	26:DD:183:GLU:N	2.69	0.50
26:DD:202:ILE:HG22	26:DD:204:LYS:HZ2	1.75	0.50
27:DK:107:LEU:H	27:DK:107:LEU:CD1	2.21	0.50
29:DE:105:LEU:HD21	29:DE:177:PRO:HA	1.92	0.50
38:DM:111:GLU:HA	38:DM:114:ARG:HH22	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DH:94:ILE:HG23	40:DH:98:ASP:CB	2.42	0.50
45:DS:45:VAL:HG23	45:DS:46:LEU:N	2.26	0.50
47:DF:62:GLN:NE2	47:DF:90:LEU:HA	2.25	0.50
47:DF:64:PRO:HA	47:DF:88:VAL:CG1	2.41	0.50
52:DW:17:ALA:HA	52:DW:35:ILE:CG2	2.31	0.50
1:AA:56:U:H2'	1:AA:57:G:C8	2.45	0.50
1:AA:161:A:H2'	1:AA:162:A:C8	2.47	0.50
1:AA:1139:G:O4'	1:AA:1140:C:H5	1.95	0.50
1:AA:1182:G:H4'	1:AA:1183:U:C5'	2.40	0.50
1:AA:1381:U:O2	6:AG:78:ARG:HB2	2.12	0.50
1:AA:1499:A:H2'	1:AA:1500:A:C8	2.39	0.50
1:AA:1512:U:H2'	1:AA:1513:A:C8	2.46	0.50
2:AC:127:VAL:HG23	2:AC:128:MET:H	1.76	0.50
3:AD:2:ARG:H	3:AD:4:LEU:HD11	1.77	0.50
3:AD:146:GLU:CD	3:AD:146:GLU:H	2.19	0.50
3:AD:152:SER:CA	3:AD:155:LYS:HD3	2.36	0.50
5:AF:53:LYS:C	5:AF:54:LEU:HD22	2.37	0.50
8:AI:94:ARG:HH11	8:AI:94:ARG:CB	2.23	0.50
14:AQ:25:GLU:N	14:AQ:40:THR:HG23	2.27	0.50
15:AR:42:ARG:C	15:AR:44:THR:H	2.19	0.50
18:AB:71:THR:HG23	18:AB:92:ASN:O	2.10	0.50
21:AN:61:ASN:HB3	21:AN:72:PHE:CZ	2.47	0.50
22:BA:43:C:O2'	47:BF:91:ARG:HD2	2.11	0.50
23:BB:57:C:H2'	23:BB:58:G:H8	1.76	0.50
23:BB:471:A:H2'	23:BB:472:A:O4'	2.12	0.50
23:BB:850:U:H2'	23:BB:851:C:H6	1.75	0.50
23:BB:1083:U:H2'	23:BB:1085:A:OP2	2.11	0.50
23:BB:1158:C:H4'	30:BY:30:ARG:HH21	1.77	0.50
23:BB:1170:C:O5'	23:BB:1170:C:H6	1.95	0.50
23:BB:1629:U:O2	23:BB:2698:U:H5"	2.11	0.50
23:BB:1854:A:H62	23:BB:1888:G:H1'	1.75	0.50
23:BB:2040:G:H2'	23:BB:2041:U:O4'	2.11	0.50
23:BB:2221:G:H2'	23:BB:2222:C:H6	1.76	0.50
23:BB:2249:U:N3	23:BB:2253:G:OP2	2.41	0.50
23:BB:2339:C:H2'	23:BB:2340:A:C8	2.47	0.50
23:BB:2754:U:O5'	23:BB:2754:U:H6	1.94	0.50
23:BB:2787:C:H1'	26:BD:63:PRO:HG3	1.94	0.50
23:BB:2839:G:O2'	23:BB:2840:C:H5'	2.11	0.50
23:BB:2888:C:H2'	23:BB:2889:C:C6	2.47	0.50
24:BI:23:VAL:HG23	24:BI:24:GLY:H	1.76	0.50
24:BI:33:ASN:HD21	24:BI:64:ARG:NH1	2.03	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BI:62:ALA:C	24:BI:64:ARG:H	2.20	0.50
28:BP:6:GLN:NE2	28:BP:7:LEU:HD12	2.26	0.50
33:B1:32:LYS:HZ1	33:B1:52:LYS:HG2	1.76	0.50
38:BM:57:VAL:O	38:BM:57:VAL:HG12	2.11	0.50
42:BN:65:LEU:O	42:BN:68:ALA:HB3	2.12	0.50
42:BN:101:GLY:CA	42:BN:110:MET:H	2.15	0.50
44:BQ:115:ALA:C	44:BQ:117:ALA:H	2.20	0.50
45:BS:18:ARG:HB3	45:BS:76:VAL:CG2	2.42	0.50
47:BF:127:TYR:O	47:BF:155:ILE:HB	2.12	0.50
52:BW:59:PHE:O	52:BW:60:ALA:CB	2.59	0.50
1:CA:89:U:H2'	1:CA:90:C:C6	2.47	0.50
1:CA:236:A:O2'	1:CA:237:G:H5'	2.11	0.50
1:CA:251:G:H22	1:CA:272:C:N4	2.09	0.50
1:CA:377:G:H2'	1:CA:378:G:C8	2.45	0.50
1:CA:1157:A:H5'	1:CA:1158:C:C6	2.46	0.50
3:CD:129:VAL:HG12	3:CD:130:ASN:N	2.26	0.50
5:CF:53:LYS:NZ	5:CF:53:LYS:H	2.08	0.50
7:CH:10:LEU:HA	7:CH:74:ILE:HD11	1.94	0.50
13:CP:74:LEU:O	13:CP:78:VAL:HG12	2.12	0.50
6:CG:57:GLU:O	6:CG:61:PHE:N	2.44	0.50
18:CB:17:HIS:HB3	18:CB:187:ASP:OD2	2.12	0.50
18:CB:131:LYS:HG3	18:CB:132:GLU:N	2.27	0.50
22:DA:49:C:P	43:DO:30:ARG:HH12	2.34	0.50
23:DB:569:U:H2'	23:DB:570:G:O4'	2.12	0.50
23:DB:599:A:O2'	23:DB:600:G:H5'	2.12	0.50
23:DB:922:C:H1'	52:DW:22:VAL:HG21	1.94	0.50
23:DB:1007:C:H4'	41:DJ:110:PRO:HB3	1.92	0.50
23:DB:1113:U:H2'	23:DB:1114:C:C6	2.47	0.50
23:DB:1341:G:H5'	50:DT:61:LEU:HD13	1.94	0.50
23:DB:1790:C:H2'	23:DB:1791:A:C8	2.47	0.50
23:DB:1886:U:H6	23:DB:1886:U:O5'	1.95	0.50
23:DB:2009:A:O4'	42:DN:107:ASN:HB3	2.11	0.50
23:DB:2052:A:OP1	26:DD:145:SER:HA	2.11	0.50
23:DB:2356:U:H5"	52:DW:16:GLU:HG3	1.93	0.50
23:DB:2822:G:H2'	23:DB:2823:A:H5"	1.93	0.50
23:DB:2888:C:H2'	23:DB:2889:C:C6	2.47	0.50
25:DC:12:ARG:HA	25:DC:15:VAL:CG2	2.42	0.50
26:DD:61:THR:OG1	26:DD:64:GLU:HB2	2.11	0.50
37:DL:98:ALA:O	37:DL:99:ASN:C	2.53	0.50
40:DH:93:SER:C	40:DH:94:ILE:HD12	2.36	0.50
45:DS:49:LYS:C	45:DS:51:LEU:N	2.69	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:32:LYS:H	47:DF:95:MET:CE	2.25	0.50
50:DT:28:ASN:ND2	50:DT:29:THR:HG23	2.27	0.50
50:DT:40:LYS:O	50:DT:43:ILE:HG22	2.11	0.50
1:AA:404:G:O2'	1:AA:405:U:H5'	2.12	0.50
1:AA:531:U:H5'	1:AA:531:U:C6	2.47	0.50
1:AA:562:U:H4'	1:AA:563:A:O5'	2.11	0.50
1:AA:891:U:O2'	1:AA:892:A:H5'	2.11	0.50
1:AA:1073:U:H4'	18:AB:104:LYS:HE2	1.93	0.50
1:AA:1111:A:C2	2:AC:176:THR:HG23	2.47	0.50
1:AA:1338:G:H2'	1:AA:1339:A:H8	1.75	0.50
1:AA:1389:C:H2'	1:AA:1390:U:C6	2.46	0.50
2:AC:72:PRO:HB3	2:AC:102:ILE:HG21	1.94	0.50
3:AD:90:LEU:HD21	3:AD:196:GLU:CB	2.41	0.50
5:AF:3:HIS:CG	5:AF:92:THR:HG23	2.46	0.50
5:AF:92:THR:HG22	5:AF:94:HIS:N	2.16	0.50
8:AI:27:ILE:HG23	8:AI:64:ILE:HD11	1.92	0.50
8:AI:50:PRO:HG2	8:AI:51:LEU:H	1.76	0.50
10:AK:53:GLY:O	10:AK:56:LYS:HB3	2.11	0.50
12:AM:3:ILE:HD12	12:AM:7:ASN:O	2.12	0.50
12:AM:28:ARG:NH2	12:AM:62:PHE:HB2	2.24	0.50
12:AM:38:ILE:HG13	12:AM:55:LEU:CD2	2.38	0.50
13:AP:24:SER:C	13:AP:25:ARG:HD3	2.37	0.50
16:AS:48:ILE:HB	16:AS:59:VAL:HG23	1.92	0.50
17:AT:49:ALA:HA	17:AT:52:GLU:HB3	1.92	0.50
23:BB:18:U:O3'	44:BQ:22:GLY:HA2	2.11	0.50
23:BB:195:A:H1'	23:BB:250:G:N2	2.27	0.50
23:BB:974:G:P	49:BR:78:ARG:HD3	2.52	0.50
23:BB:1866:A:H2'	23:BB:1867:G:O4'	2.12	0.50
23:BB:1902:C:H2'	23:BB:1903:G:O4'	2.12	0.50
23:BB:1946:U:H2'	23:BB:1947:C:C6	2.46	0.50
23:BB:2466:C:O2'	23:BB:2467:C:H5'	2.11	0.50
27:BK:47:ILE:HG23	27:BK:49:ARG:H	1.76	0.50
28:BP:63:ILE:HG12	28:BP:68:GLY:HA2	1.94	0.50
28:BP:111:GLU:OE1	28:BP:113:LEU:HB2	2.10	0.50
32:B4:1:MET:CE	32:B4:36:ARG:HB2	2.42	0.50
34:B3:14:LYS:O	34:B3:14:LYS:HG2	2.11	0.50
37:BL:30:THR:HB	37:BL:34:GLY:O	2.10	0.50
44:BQ:30:VAL:HG22	44:BQ:31:TYR:N	2.23	0.50
45:BS:66:ILE:CA	45:BS:69:LEU:HD13	2.41	0.50
46:BU:5:ARG:HH22	46:BU:93:ARG:HD3	1.76	0.50
47:BF:32:LYS:H	47:BF:95:MET:CE	2.25	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:32:ASN:O	51:BZ:33:LEU:C	2.54	0.50
1:CA:356:A:H1'	1:CA:368:U:O2'	2.12	0.50
1:CA:601:G:H2'	1:CA:602:A:C8	2.46	0.50
1:CA:630:A:H2'	1:CA:631:C:C6	2.46	0.50
1:CA:645:G:H2'	1:CA:646:G:H8	1.76	0.50
1:CA:1285:A:HO2'	1:CA:1286:U:P	2.34	0.50
11:CL:24:GLU:C	11:CL:26:CYS:H	2.19	0.50
19:CU:16:ARG:HH12	19:CU:19:LYS:HZ3	1.59	0.50
12:CM:78:ARG:O	12:CM:82:LEU:HG	2.11	0.50
16:CS:11:ASP:O	16:CS:14:LEU:HG	2.12	0.50
18:CB:50:ASN:HA	18:CB:53:LEU:HB3	1.92	0.50
18:CB:83:ALA:O	18:CB:88:GLN:HB2	2.10	0.50
22:DA:100:G:H2'	22:DA:101:A:O4'	2.11	0.50
23:DB:90:U:H2'	23:DB:91:A:C2	2.46	0.50
23:DB:126:A:H5'	36:D2:19:ARG:CG	2.40	0.50
23:DB:572:A:H5"	49:DR:80:ARG:NH2	2.27	0.50
23:DB:803:U:O2'	23:DB:804:A:H5'	2.12	0.50
23:DB:1047:G:O3'	23:DB:1048:A:H8	1.94	0.50
23:DB:1312:U:H4'	23:DB:1313:U:O5'	2.12	0.50
23:DB:1403:A:O2'	23:DB:1404:C:H5'	2.11	0.50
23:DB:2290:G:H2'	23:DB:2291:U:C6	2.47	0.50
23:DB:2751:G:H3'	23:DB:2752:C:C6	2.47	0.50
25:DC:239:PHE:C	25:DC:241:LYS:H	2.18	0.50
41:DJ:58:ASN:HA	41:DJ:127:GLY:CA	2.42	0.50
43:DO:105:ALA:C	43:DO:107:ALA:H	2.19	0.50
44:DQ:30:VAL:HG22	44:DQ:31:TYR:N	2.23	0.50
44:DQ:42:GLY:HA3	49:DR:75:VAL:CG2	2.41	0.50
45:DS:82:MET:HE2	45:DS:84:ARG:NH1	2.27	0.50
46:DU:33:VAL:HG13	46:DU:66:VAL:HB	1.93	0.50
47:DF:133:GLU:HA	47:DF:150:GLY:CA	2.41	0.50
50:DT:7:LEU:HD13	50:DT:7:LEU:O	2.12	0.50
50:DT:31:VAL:HA	50:DT:83:ALA:HB3	1.93	0.50
52:DW:65:LYS:NZ	52:DW:84:GLU:HB3	2.26	0.50
1:AA:68:G:C5'	1:AA:171:A:H1'	2.40	0.50
1:AA:683:G:O2'	1:AA:684:U:H5'	2.10	0.50
1:AA:1100:C:C2	1:AA:1102:A:H5'	2.47	0.50
1:AA:1215:G:H5'	1:AA:1215:G:C8	2.45	0.50
1:AA:1392:G:H2'	1:AA:1393:U:C6	2.46	0.50
1:AA:1499:A:H3'	1:AA:1499:A:OP2	2.11	0.50
2:AC:68:HIS:HA	2:AC:103:ALA:HB3	1.94	0.50
6:AG:3:ARG:NH1	6:AG:3:ARG:HB3	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AG:110:ARG:HB3	6:AG:112:ASP:OD1	2.12	0.50
6:AG:149:ALA:HB2	10:AK:60:PHE:HB2	1.93	0.50
9:AJ:35:GLN:HG2	9:AJ:78:GLU:OE1	2.12	0.50
13:AP:38:PHE:O	13:AP:50:THR:HG23	2.11	0.50
17:AT:73:ARG:HG3	17:AT:74:HIS:N	2.25	0.50
19:AU:29:ALA:HA	19:AU:32:ARG:HG3	1.94	0.50
21:AN:77:GLY:O	21:AN:78:LEU:HD12	2.12	0.50
23:BB:6:A:H4'	41:BJ:131:ASN:O	2.12	0.50
23:BB:37:C:O2'	29:BE:45:ALA:HA	2.12	0.50
23:BB:708:G:H2'	23:BB:709:U:C6	2.46	0.50
23:BB:970:U:H2'	23:BB:971:G:H8	1.76	0.50
23:BB:1000:A:H2'	23:BB:1001:A:H8	1.76	0.50
23:BB:1080:A:H2'	23:BB:1081:U:H6	1.77	0.50
23:BB:1403:A:O2'	23:BB:1404:C:H5'	2.12	0.50
23:BB:1657:U:O2'	26:BD:138:LEU:HD12	2.12	0.50
23:BB:1818:U:C4	25:BC:152:GLN:HB3	2.47	0.50
23:BB:2102:G:H2'	23:BB:2103:C:C6	2.47	0.50
23:BB:2544:G:O2'	23:BB:2545:G:H5'	2.12	0.50
37:BL:89:VAL:O	37:BL:89:VAL:HG13	2.12	0.50
37:BL:98:ALA:O	37:BL:99:ASN:C	2.53	0.50
39:BX:20:ASN:HD22	39:BX:20:ASN:N	2.09	0.50
41:BJ:7:LYS:C	41:BJ:9:GLU:H	2.19	0.50
41:BJ:104:ALA:O	41:BJ:108:MET:HG3	2.12	0.50
42:BN:61:ALA:C	42:BN:63:ARG:N	2.69	0.50
44:BQ:31:TYR:O	44:BQ:32:ARG:C	2.54	0.50
45:BS:48:LYS:O	45:BS:51:LEU:HB3	2.11	0.50
47:BF:30:VAL:HG21	47:BF:96:TRP:HE1	1.76	0.50
47:BF:117:SER:HB3	47:BF:120:SER:HB3	1.93	0.50
47:BF:148:VAL:O	47:BF:149:ARG:HG2	2.11	0.50
48:BG:51:PHE:CD2	48:BG:68:ARG:HG2	2.47	0.50
50:BT:31:VAL:HA	50:BT:83:ALA:HB3	1.92	0.50
1:CA:14:U:H2'	1:CA:14:U:O2	2.11	0.50
1:CA:130:A:H1'	1:CA:263:A:O2'	2.11	0.50
1:CA:413:G:O6	3:CD:32:LYS:HE2	2.11	0.50
1:CA:489:C:H2'	1:CA:490:C:H6	1.77	0.50
1:CA:547:A:H4'	1:CA:548:G:O5'	2.11	0.50
1:CA:756:C:H2'	1:CA:757:U:O4'	2.12	0.50
1:CA:1175:G:O2'	1:CA:1176:A:H5'	2.12	0.50
1:CA:1511:G:O2'	1:CA:1512:U:H5'	2.12	0.50
4:CE:63:MET:O	4:CE:66:ALA:HB3	2.11	0.50
10:CK:22:ILE:HG21	10:CK:95:THR:HG21	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CK:30:ILE:HG22	10:CK:45:THR:CB	2.42	0.50
2:CC:26:LYS:HG3	2:CC:27:GLU:HG3	1.94	0.50
2:CC:88:LYS:HD3	2:CC:88:LYS:C	2.36	0.50
2:CC:128:MET:H	2:CC:128:MET:CE	2.24	0.50
6:CG:24:LYS:O	6:CG:28:ILE:HG12	2.12	0.50
6:CG:119:LEU:O	6:CG:123:LEU:HG	2.11	0.50
16:CS:38:THR:HG22	16:CS:39:ILE:O	2.12	0.50
22:DA:52:A:O2'	22:DA:53:A:H5'	2.11	0.50
23:DB:170:U:H2'	23:DB:171:U:H6	1.77	0.50
23:DB:1636:U:H2'	23:DB:1637:A:H8	1.76	0.50
23:DB:1664:A:H1'	23:DB:2726:A:N1	2.27	0.50
23:DB:2250:G:N2	38:DM:82:MET:HB3	2.27	0.50
23:DB:2369:A:H2'	23:DB:2370:G:C8	2.47	0.50
23:DB:2645:G:H4'	23:DB:2732:G:H2'	1.93	0.50
23:DB:2772:C:H4'	26:DD:171:THR:CG2	2.41	0.50
24:DI:21:PRO:CB	24:DI:22:PRO:HD3	2.38	0.50
24:DI:76:ALA:HA	24:DI:135:MET:SD	2.51	0.50
27:DK:71:ARG:CB	27:DK:72:PRO:HD2	2.37	0.50
37:DL:30:THR:HB	37:DL:34:GLY:O	2.12	0.50
38:DM:126:ILE:HD12	38:DM:126:ILE:N	2.25	0.50
41:DJ:25:LEU:O	41:DJ:27:ARG:N	2.43	0.50
47:DF:168:LEU:C	47:DF:170:ALA:H	2.19	0.50
49:DR:34:GLU:OE1	49:DR:60:LYS:HG2	2.11	0.50
1:AA:135:C:O2	13:AP:1:MET:HB2	2.11	0.50
1:AA:149:A:H1'	1:AA:1446:A:C2	2.46	0.50
1:AA:216:U:H2'	1:AA:217:C:C6	2.46	0.50
1:AA:356:A:H1'	1:AA:368:U:O2'	2.12	0.50
1:AA:737:C:H2'	1:AA:738:C:H6	1.76	0.50
1:AA:747:A:C4	1:AA:748:G:H1'	2.47	0.50
1:AA:1105:A:O2'	1:AA:1106:G:H5'	2.12	0.50
2:AC:38:VAL:HG23	2:AC:39:ARG:N	2.27	0.50
2:AC:122:GLN:OE1	2:AC:127:VAL:HG21	2.12	0.50
2:AC:149:LYS:CB	2:AC:200:TRP:HB2	2.35	0.50
7:AH:43:GLY:HA2	7:AH:63:LYS:NZ	2.27	0.50
11:AL:49:ARG:HH12	11:AL:88:ASP:HB3	1.77	0.50
23:BB:95:A:H4'	39:BX:38:GLN:O	2.12	0.50
23:BB:1237:A:N3	23:BB:1237:A:H2'	2.27	0.50
23:BB:1255:U:C6	29:BE:68:ALA:HB2	2.47	0.50
23:BB:1550:C:H2'	23:BB:1551:A:H8	1.77	0.50
23:BB:1655:A:H2'	23:BB:1656:C:O4'	2.12	0.50
23:BB:1666:G:O3'	27:BK:6:THR:HG23	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2259:U:H2'	23:BB:2260:C:C6	2.47	0.50
23:BB:2849:U:N3	23:BB:2867:G:C8	2.80	0.50
23:BB:2896:C:H2'	23:BB:2897:U:C6	2.47	0.50
25:BC:77:VAL:HG22	25:BC:113:ASP:O	2.11	0.50
29:BE:32:VAL:HG23	29:BE:33:VAL:N	2.26	0.50
29:BE:48:THR:C	29:BE:50:ALA:N	2.70	0.50
35:BV:29:ILE:HD13	35:BV:31:TYR:CE2	2.47	0.50
36:B2:3:ARG:HE	36:B2:4:THR:H	1.60	0.50
38:BM:66:ARG:CZ	38:BM:101:VAL:HG11	2.42	0.50
39:BX:31:GLN:O	39:BX:37:LEU:HB2	2.11	0.50
40:BH:58:LEU:C	40:BH:60:GLU:H	2.20	0.50
40:BH:116:ARG:HH21	40:BH:139:PHE:HB3	1.76	0.50
42:BN:92:GLY:O	42:BN:94:TYR:N	2.44	0.50
42:BN:103:ARG:HB3	42:BN:106:ASP:O	2.12	0.50
45:BS:49:LYS:C	45:BS:51:LEU:N	2.69	0.50
48:BG:9:VAL:HA	48:BG:48:THR:CB	2.39	0.50
48:BG:17:LYS:HG3	48:BG:19:ASN:OD1	2.12	0.50
48:BG:148:ARG:CD	48:BG:152:ARG:HH11	2.22	0.50
50:BT:23:ALA:C	50:BT:25:GLU:H	2.20	0.50
52:BW:19:ARG:HD3	52:BW:36:ILE:HD11	1.93	0.50
1:CA:8:A:N6	3:CD:53:GLN:HE22	2.10	0.50
1:CA:174:A:O2'	1:CA:175:C:H5'	2.12	0.50
1:CA:382:A:H2'	1:CA:383:A:H8	1.77	0.50
1:CA:408:A:H3'	1:CA:409:U:C6	2.47	0.50
1:CA:430:A:O2'	1:CA:431:A:H5'	2.12	0.50
1:CA:1020:G:C2'	1:CA:1021:A:H5'	2.42	0.50
1:CA:1049:U:H1'	1:CA:1201:A:C5	2.46	0.50
3:CD:146:GLU:CD	3:CD:146:GLU:H	2.19	0.50
3:CD:148:ALA:C	3:CD:150:LYS:N	2.70	0.50
4:CE:113:VAL:CG2	4:CE:114:LEU:H	2.18	0.50
5:CF:35:LYS:O	5:CF:64:VAL:HG13	2.12	0.50
6:CG:119:LEU:HG	6:CG:123:LEU:HD11	1.93	0.50
21:CN:56:PRO:O	21:CN:58:ARG:N	2.45	0.50
16:CS:38:THR:HA	16:CS:68:HIS:O	2.12	0.50
22:DA:106:G:H2'	22:DA:107:G:O4'	2.11	0.50
22:DA:117:G:O2'	22:DA:118:C:H5'	2.11	0.50
23:DB:182:A:O2'	23:DB:183:C:H5'	2.11	0.50
23:DB:231:A:H3'	23:DB:232:G:H8	1.75	0.50
23:DB:278:A:O3'	23:DB:279:A:H8	1.94	0.50
23:DB:335:C:O2'	23:DB:336:C:H5'	2.12	0.50
23:DB:831:G:O2'	23:DB:832:U:H5'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1098:A:P	24:DI:3:LYS:HG2	2.52	0.50
23:DB:1535:A:H2	23:DB:1538:G:H1'	1.76	0.50
23:DB:1561:C:H2'	23:DB:1562:U:C6	2.47	0.50
23:DB:1597:A:C5'	23:DB:1598:A:H5'	2.34	0.50
23:DB:1949:G:H2'	23:DB:1950:G:C8	2.47	0.50
23:DB:2040:G:H2'	23:DB:2041:U:O4'	2.10	0.50
23:DB:2081:U:H2'	23:DB:2082:A:C8	2.47	0.50
23:DB:2345:G:H5'	23:DB:2347:C:O4'	2.12	0.50
23:DB:2352:A:C6	52:DW:30:VAL:HG11	2.47	0.50
29:DE:60:TRP:CZ3	29:DE:69:ARG:HA	2.47	0.50
35:DV:11:GLU:CD	35:DV:16:ALA:HB1	2.37	0.50
46:DU:18:LYS:HE2	46:DU:19:GLY:N	2.27	0.50
47:DF:109:ARG:HG3	47:DF:137:PHE:CB	2.41	0.50
49:DR:83:TYR:HE2	49:DR:85:LYS:HE3	1.75	0.50
50:DT:69:ARG:HE	50:DT:69:ARG:CA	2.22	0.50
50:DT:69:ARG:HG3	50:DT:70:HIS:N	2.26	0.50
1:AA:8:A:H5"	4:AE:125:LYS:HB3	1.94	0.50
1:AA:270:A:H2'	1:AA:271:C:H6	1.73	0.50
1:AA:279:A:H5'	1:AA:281:G:C5'	2.41	0.50
1:AA:470:C:H2'	1:AA:471:U:H6	1.76	0.50
2:AC:205:GLU:O	2:AC:206:ILE:C	2.53	0.50
6:AG:74:VAL:HA	6:AG:87:PRO:HA	1.94	0.50
9:AJ:22:THR:OG1	9:AJ:72:ARG:HG3	2.11	0.50
23:BB:116:C:H2'	23:BB:117:G:O4'	2.11	0.50
23:BB:797:G:OP2	29:BE:57:LYS:HB2	2.12	0.50
23:BB:917:A:H5"	23:BB:2268:A:N6	2.27	0.50
23:BB:1516:G:O2'	23:BB:1517:G:H5'	2.11	0.50
23:BB:1774:C:O2	23:BB:1774:C:C2'	2.59	0.50
23:BB:1911:U:H2'	23:BB:1918:A:C2	2.46	0.50
23:BB:2050:C:O2	26:BD:161:MET:HE1	2.11	0.50
23:BB:2548:U:H1'	27:BK:23:LYS:HZ1	1.77	0.50
26:BD:32:ASN:HD22	26:BD:50:VAL:HG21	1.76	0.50
26:BD:116:LYS:HD3	42:BN:1:MET:HE1	1.93	0.50
27:BK:20:MET:C	27:BK:41:ILE:HG13	2.36	0.50
31:B0:53:VAL:O	31:B0:54:ILE:HB	2.12	0.50
31:B0:55:ALA:O	31:B0:56:LYS:C	2.55	0.50
40:BH:68:ARG:HB2	40:BH:134:VAL:CG1	2.41	0.50
40:BH:99:ILE:HD11	40:BH:128:HIS:CG	2.47	0.50
45:BS:49:LYS:C	45:BS:51:LEU:H	2.19	0.50
46:BU:62:ALA:O	46:BU:63:ALA:HB3	2.12	0.50
51:BZ:5:CYS:HB3	51:BZ:9:GLY:H	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BW:33:GLY:O	52:BW:34:SER:HB2	2.12	0.50
1:CA:57:G:H2'	1:CA:58:C:H6	1.76	0.50
1:CA:292:G:O2'	1:CA:609:A:N6	2.45	0.50
1:CA:462:G:H5'	1:CA:463:U:P	2.52	0.50
1:CA:691:G:H1'	1:CA:696:A:H61	1.77	0.50
1:CA:731:G:O2'	1:CA:732:C:H5'	2.12	0.50
1:CA:939:G:H4'	6:CG:101:ARG:NH2	2.26	0.50
1:CA:1291:U:O2'	1:CA:1292:G:H5'	2.10	0.50
13:CP:38:PHE:O	13:CP:50:THR:HG23	2.12	0.50
17:CT:24:ARG:CG	17:CT:65:LEU:HD11	2.42	0.50
2:CC:161:ILE:HD12	2:CC:161:ILE:N	2.26	0.50
8:CI:15:ALA:O	8:CI:67:LYS:HD2	2.12	0.50
9:CJ:57:VAL:O	9:CJ:58:ASN:HB2	2.12	0.50
18:CB:32:GLY:O	18:CB:39:ILE:HB	2.12	0.50
18:CB:101:THR:HG22	18:CB:174:GLU:CD	2.36	0.50
23:DB:496:G:C1'	45:DS:61:ASN:HD21	2.25	0.50
23:DB:920:A:H2'	23:DB:921:C:C6	2.47	0.50
23:DB:1099:G:H4'	24:DI:4:VAL:HG12	1.93	0.50
23:DB:1175:A:H2'	23:DB:1176:U:O4'	2.12	0.50
23:DB:1324:G:H1'	23:DB:1616:A:C6	2.47	0.50
23:DB:1365:A:H2'	23:DB:1365:A:N3	2.27	0.50
23:DB:1731:G:O2'	23:DB:1732:C:H5"	2.11	0.50
23:DB:1998:A:O2'	23:DB:1999:C:H5'	2.12	0.50
23:DB:2049:G:H21	26:DD:161:MET:HE2	1.77	0.50
23:DB:2104:C:H2'	23:DB:2105:U:H6	1.77	0.50
23:DB:2144:G:O2'	23:DB:2146:C:H5"	2.12	0.50
23:DB:2297:A:C2	23:DB:2320:U:H4'	2.47	0.50
23:DB:2415:G:H2'	23:DB:2416:C:H6	1.77	0.50
23:DB:2521:C:H2'	23:DB:2522:U:C6	2.47	0.50
23:DB:2676:C:H2'	23:DB:2677:G:C8	2.47	0.50
23:DB:2723:C:H4'	42:DN:1:MET:SD	2.51	0.50
37:DL:19:LEU:HD22	37:DL:31:GLY:O	2.12	0.50
37:DL:125:LEU:HB2	37:DL:143:GLU:OE2	2.12	0.50
52:DW:59:PHE:O	52:DW:60:ALA:CB	2.60	0.50
52:DW:69:GLU:HG3	52:DW:80:SER:OG	2.11	0.50
1:AA:131:A:H2'	1:AA:132:C:C6	2.46	0.49
1:AA:575:G:H4'	1:AA:576:C:O5'	2.12	0.49
1:AA:795:C:H5"	10:AK:127:ARG:HH21	1.77	0.49
1:AA:932:C:H4'	6:AG:3:ARG:NH2	2.26	0.49
1:AA:1314:C:H41	16:AS:3:SER:HB3	1.77	0.49
1:AA:1375:A:H2'	1:AA:1376:U:O4'	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1413:A:O2'	1:AA:1414:U:H5'	2.12	0.49
2:AC:102:ILE:HD12	2:AC:102:ILE:N	2.27	0.49
3:AD:197:HIS:O	3:AD:201:GLU:HG3	2.11	0.49
5:AF:68:GLN:HG2	5:AF:69:GLU:N	2.26	0.49
6:AG:110:ARG:HB2	6:AG:118:ARG:HB3	1.94	0.49
7:AH:25:THR:O	7:AH:26:MET:HB3	2.11	0.49
8:AI:40:ARG:H	8:AI:44:ARG:HD3	1.76	0.49
10:AK:30:ILE:HG22	10:AK:45:THR:CB	2.42	0.49
12:AM:21:ILE:CG2	12:AM:23:GLY:H	2.22	0.49
14:AQ:32:ILE:HG23	14:AQ:33:TYR:CD2	2.46	0.49
15:AR:28:LEU:C	15:AR:30:ASN:H	2.18	0.49
16:AS:28:LYS:HD2	16:AS:28:LYS:N	2.27	0.49
18:AB:19:THR:HG23	18:AB:20:ARG:N	2.26	0.49
18:AB:96:LEU:HD23	18:AB:99:MET:HE3	1.93	0.49
18:AB:119:GLN:C	18:AB:121:GLN:H	2.19	0.49
21:AN:43:ALA:HA	21:AN:46:LYS:CG	2.42	0.49
22:BA:60:C:H2'	22:BA:61:G:C8	2.44	0.49
23:BB:78:U:H2'	23:BB:79:C:C6	2.47	0.49
23:BB:836:G:H2'	23:BB:837:C:C6	2.47	0.49
23:BB:1886:U:O5'	23:BB:1886:U:H6	1.95	0.49
23:BB:2394:C:OP1	37:BL:63:LYS:HG2	2.12	0.49
25:BC:144:GLU:OE2	25:BC:188:ARG:HG3	2.11	0.49
25:BC:184:GLU:O	25:BC:186:ASP:N	2.40	0.49
26:BD:55:LYS:C	26:BD:57:ALA:H	2.19	0.49
29:BE:138:LEU:HD22	29:BE:143:LEU:HB2	1.94	0.49
29:BE:145:ASP:H	29:BE:166:LYS:CB	2.24	0.49
37:BL:14:LYS:O	37:BL:16:GLY:N	2.45	0.49
39:BX:17:GLU:CD	39:BX:18:LEU:N	2.70	0.49
43:BO:51:ALA:CB	43:BO:78:VAL:HG13	2.42	0.49
46:BU:13:LEU:HA	46:BU:18:LYS:CE	2.40	0.49
47:BF:135:ILE:C	47:BF:137:PHE:H	2.19	0.49
48:BG:148:ARG:HA	48:BG:161:VAL:HB	1.93	0.49
1:CA:24:U:O2'	1:CA:25:C:H5'	2.12	0.49
1:CA:103:U:H2'	1:CA:104:G:O4'	2.11	0.49
1:CA:891:U:O2'	1:CA:892:A:H5'	2.11	0.49
1:CA:911:U:H2'	1:CA:912:C:C6	2.47	0.49
1:CA:1386:G:O3'	54:CA:1659:SCM:H1M2	2.12	0.49
1:CA:1395:C:O2'	1:CA:1396:A:H5'	2.12	0.49
1:CA:1499:A:H3'	1:CA:1499:A:OP2	2.11	0.49
3:CD:25:ARG:O	3:CD:27:ILE:HG13	2.12	0.49
3:CD:123:MET:SD	3:CD:127:ARG:N	2.85	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CF:16:GLU:CD	5:CF:16:GLU:H	2.20	0.49
10:CK:36:ARG:HH11	10:CK:36:ARG:HG3	1.77	0.49
2:CC:116:ALA:O	2:CC:117:ASP:C	2.54	0.49
21:CN:86:ALA:HA	21:CN:89:ARG:HH21	1.75	0.49
16:CS:18:VAL:HG13	16:CS:19:GLU:N	2.26	0.49
22:DA:116:G:H4'	43:DO:54:VAL:HG22	1.94	0.49
23:DB:37:C:H4'	23:DB:451:U:OP1	2.12	0.49
23:DB:710:U:H2'	23:DB:711:G:C8	2.47	0.49
23:DB:1045:C:C3'	23:DB:1046:A:H5'	2.42	0.49
23:DB:1441:G:H2'	23:DB:1442:U:H6	1.73	0.49
23:DB:1809:A:H2'	23:DB:1810:A:C8	2.47	0.49
23:DB:1878:G:H2'	23:DB:1879:C:C6	2.47	0.49
24:DI:1:ALA:C	24:DI:2:LYS:HD2	2.36	0.49
25:DC:34:GLU:O	25:DC:34:GLU:HG3	2.12	0.49
26:DD:11:MET:H	26:DD:25:THR:HA	1.77	0.49
28:DP:111:GLU:OE1	28:DP:113:LEU:HB2	2.12	0.49
29:DE:126:VAL:HG22	29:DE:127:GLU:N	2.20	0.49
29:DE:189:THR:O	29:DE:193:VAL:HG23	2.11	0.49
30:DY:35:VAL:HG11	30:DY:37:ARG:HH12	1.77	0.49
37:DL:10:GLU:C	37:DL:12:SER:H	2.20	0.49
45:DS:36:LEU:HD11	45:DS:47:VAL:HB	1.94	0.49
47:DF:100:GLU:O	47:DF:104:THR:HB	2.12	0.49
48:DG:152:ARG:HD3	48:DG:153:PRO:CD	2.40	0.49
49:DR:97:LYS:C	49:DR:98:ILE:HD12	2.37	0.49
1:AA:123:U:H5"	1:AA:311:C:O2'	2.13	0.49
1:AA:542:G:O2'	1:AA:543:U:H5'	2.12	0.49
1:AA:962:C:H2'	1:AA:963:G:H8	1.76	0.49
1:AA:1113:C:O2'	1:AA:1114:C:H5'	2.11	0.49
1:AA:1340:A:H2'	1:AA:1341:U:O4'	2.12	0.49
2:AC:13:ILE:O	2:AC:15:LYS:N	2.38	0.49
2:AC:116:ALA:O	2:AC:120:THR:HG23	2.12	0.49
2:AC:153:SER:OG	2:AC:195:ILE:HG23	2.12	0.49
8:AI:29:ILE:HG23	8:AI:64:ILE:HG21	1.94	0.49
11:AL:85:ARG:CB	11:AL:93:ARG:HA	2.42	0.49
12:AM:33:LEU:HD13	12:AM:39:ALA:O	2.11	0.49
17:AT:19:HIS:O	17:AT:23:ARG:HG2	2.11	0.49
18:AB:57:ASN:HB3	18:AB:219:THR:CG2	2.39	0.49
21:AN:27:LYS:HA	21:AN:31:SER:HB2	1.92	0.49
23:BB:281:C:H2'	23:BB:282:A:C8	2.47	0.49
23:BB:1026:G:H2'	23:BB:1027:A:C8	2.48	0.49
23:BB:1203:U:O4'	37:BL:3:LEU:HD12	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1812:U:H1'	25:BC:43:ASN:HD21	1.77	0.49
23:BB:2720:U:H5"	28:BP:52:ARG:HH22	1.74	0.49
36:B2:9:VAL:CG1	36:B2:10:LEU:N	2.75	0.49
41:BJ:1:MET:HG2	41:BJ:2:LYS:HG2	1.94	0.49
41:BJ:15:TRP:HB3	41:BJ:137:PRO:HB3	1.93	0.49
47:BF:26:GLN:O	47:BF:27:VAL:C	2.54	0.49
47:BF:33:ILE:HG22	47:BF:34:THR:N	2.27	0.49
48:BG:122:ALA:CA	48:BG:132:LEU:HA	2.41	0.49
49:BR:1:MET:C	49:BR:2:TYR:HD1	2.19	0.49
49:BR:74:ILE:HB	49:BR:87:GLN:O	2.11	0.49
52:BW:81:ILE:HG13	52:BW:81:ILE:O	2.12	0.49
1:CA:83:C:H4'	1:CA:83:C:OP1	2.12	0.49
1:CA:568:G:O6	11:CL:1:ALA:HB2	2.12	0.49
1:CA:580:C:H2'	1:CA:581:G:C8	2.46	0.49
1:CA:665:A:H2'	1:CA:725:G:N2	2.27	0.49
1:CA:706:A:H4'	10:CK:30:ILE:CD1	2.42	0.49
1:CA:767:A:H2'	1:CA:768:A:H8	1.77	0.49
1:CA:1366:C:H2'	1:CA:1367:C:C6	2.47	0.49
5:CF:3:HIS:CD2	5:CF:3:HIS:N	2.80	0.49
21:CN:40:ARG:CZ	16:CS:6:LYS:HB2	2.41	0.49
18:CB:64:GLY:O	18:CB:66:ILE:N	2.45	0.49
18:CB:68:PHE:HA	18:CB:161:PHE:O	2.12	0.49
18:CB:124:THR:O	18:CB:127:LYS:HE3	2.11	0.49
18:CB:185:ILE:HA	18:CB:199:ILE:O	2.12	0.49
23:DB:123:G:H2'	23:DB:124:G:O4'	2.12	0.49
23:DB:189:G:H2'	23:DB:205:G:N2	2.26	0.49
23:DB:736:C:H2'	23:DB:737:C:H6	1.76	0.49
23:DB:757:G:H2'	23:DB:758:C:H5'	1.93	0.49
23:DB:1306:C:O2'	23:DB:1307:A:H5'	2.13	0.49
23:DB:1454:C:C5	42:DN:64:ARG:HG2	2.47	0.49
23:DB:1636:U:H2'	23:DB:1637:A:C8	2.47	0.49
23:DB:1728:C:H2'	23:DB:1730:C:O2	2.11	0.49
23:DB:2357:G:H22	23:DB:2359:C:H3'	1.77	0.49
23:DB:2443:C:H2'	23:DB:2444:G:C8	2.47	0.49
23:DB:2462:C:H2'	23:DB:2463:C:H6	1.77	0.49
23:DB:2636:C:H4'	26:DD:81:GLU:OE2	2.11	0.49
23:DB:2639:A:H2'	23:DB:2640:G:O4'	2.11	0.49
24:DI:116:MET:HE1	24:DI:128:ILE:HG13	1.94	0.49
26:DD:133:THR:HG23	26:DD:134:HIS:CD2	2.47	0.49
26:DD:202:ILE:HD12	26:DD:202:ILE:N	2.27	0.49
27:DK:12:ASP:OD2	27:DK:86:LEU:HG	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DE:47:LYS:HB3	29:DE:51:GLU:HB2	1.93	0.49
31:D0:53:VAL:O	31:D0:54:ILE:HB	2.12	0.49
36:D2:3:ARG:HE	36:D2:4:THR:H	1.60	0.49
38:DM:10:ARG:HH21	38:DM:10:ARG:HG3	1.77	0.49
38:DM:41:LEU:HB3	38:DM:46:ILE:HG21	1.94	0.49
39:DX:39:GLN:HB3	39:DX:41:HIS:NE2	2.27	0.49
39:DX:39:GLN:HB3	39:DX:42:LEU:HD13	1.94	0.49
40:DH:148:ALA:O	40:DH:149:GLU:HG2	2.12	0.49
41:DJ:24:THR:OG1	41:DJ:27:ARG:HD2	2.12	0.49
42:DN:47:VAL:O	42:DN:50:PRO:HD2	2.12	0.49
42:DN:58:ASP:O	42:DN:59:SER:HB3	2.11	0.49
42:DN:61:ALA:C	42:DN:63:ARG:N	2.67	0.49
42:DN:65:LEU:O	42:DN:68:ALA:HB3	2.13	0.49
45:DS:13:SER:OG	45:DS:14:ALA:N	2.45	0.49
46:DU:35:VAL:CG2	46:DU:38:ILE:HG21	2.41	0.49
46:DU:49:PRO:HA	46:DU:53:GLN:HE21	1.77	0.49
47:DF:37:MET:HA	47:DF:151:LEU:HA	1.94	0.49
47:DF:137:PHE:O	47:DF:138:PRO:C	2.55	0.49
52:DW:18:LYS:HA	52:DW:36:ILE:HG12	1.93	0.49
1:AA:202:G:HO2'	1:AA:468:A:H8	1.61	0.49
1:AA:590:U:H2'	1:AA:591:U:H6	1.78	0.49
1:AA:687:A:C2	1:AA:704:A:C5	3.00	0.49
1:AA:691:G:H1'	1:AA:696:A:H61	1.77	0.49
1:AA:706:A:H4'	10:AK:30:ILE:HD11	1.94	0.49
1:AA:706:A:H4'	10:AK:30:ILE:CD1	2.41	0.49
1:AA:1124:G:C5'	9:AJ:38:GLY:HA3	2.42	0.49
1:AA:1176:A:H2'	1:AA:1177:G:O4'	2.11	0.49
3:AD:48:SER:O	3:AD:49:ASP:C	2.55	0.49
3:AD:54:LEU:HD11	3:AD:55:ARG:HH21	1.78	0.49
6:AG:46:LEU:O	6:AG:57:GLU:HB3	2.13	0.49
8:AI:48:ARG:O	8:AI:52:GLU:HB2	2.13	0.49
11:AL:32:VAL:HB	11:AL:55:ARG:HB3	1.94	0.49
13:AP:1:MET:HE2	13:AP:3:THR:CG2	2.41	0.49
13:AP:5:ARG:HH21	13:AP:24:SER:HA	1.73	0.49
15:AR:32:ILE:HD11	15:AR:58:ILE:HG23	1.95	0.49
20:AO:43:PHE:CE2	20:AO:53:ARG:HA	2.47	0.49
23:BB:210:C:O2'	23:BB:211:C:H5'	2.13	0.49
23:BB:414:C:H2'	23:BB:415:A:H8	1.76	0.49
23:BB:579:G:H4'	23:BB:2018:G:H5"	1.95	0.49
23:BB:1060:U:C4	24:BI:131:THR:HG22	2.47	0.49
23:BB:1526:C:H2'	23:BB:1527:G:O4'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1973:G:O2'	23:BB:1974:C:H5'	2.13	0.49
23:BB:2369:A:H2'	23:BB:2370:G:C8	2.47	0.49
23:BB:2547:A:H4'	27:BK:29:HIS:NE2	2.27	0.49
23:BB:2694:G:H2'	23:BB:2695:U:C6	2.48	0.49
25:BC:41:GLY:HA3	25:BC:53:ILE:CG2	2.37	0.49
25:BC:140:VAL:HG12	25:BC:141:HIS:N	2.23	0.49
25:BC:145:MET:HG3	25:BC:152:GLN:OE1	2.12	0.49
29:BE:17:THR:C	29:BE:19:PHE:H	2.20	0.49
29:BE:136:GLN:HB2	29:BE:139:LYS:HE3	1.94	0.49
36:B2:34:ARG:HH11	36:B2:34:ARG:HG3	1.76	0.49
45:BS:76:VAL:HG12	45:BS:103:ILE:HA	1.94	0.49
47:BF:116:LEU:HD23	47:BF:174:PHE:CE2	2.48	0.49
48:BG:17:LYS:HE2	48:BG:19:ASN:CG	2.37	0.49
48:BG:102:ILE:O	48:BG:113:ASP:HA	2.12	0.49
48:BG:167:VAL:HG23	48:BG:168:VAL:H	1.77	0.49
1:CA:501:C:H1'	1:CA:549:C:H1'	1.94	0.49
1:CA:531:U:H5'	1:CA:531:U:C6	2.48	0.49
1:CA:590:U:H2'	1:CA:591:U:C6	2.47	0.49
1:CA:721:G:H4'	1:CA:722:G:O4'	2.12	0.49
1:CA:982:U:H5"	21:CN:5:MET:HE1	1.94	0.49
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.47	0.49
3:CD:138:PRO:HA	3:CD:181:PHE:CD2	2.47	0.49
4:CE:149:PRO:HG2	4:CE:150:GLU:H	1.78	0.49
11:CL:86:VAL:CG2	11:CL:89:LEU:HB2	2.41	0.49
11:CL:106:VAL:HG23	11:CL:116:TYR:HB3	1.95	0.49
14:CQ:18:LYS:HE3	14:CQ:48:GLU:HG2	1.93	0.49
6:CG:112:ASP:H	6:CG:118:ARG:NE	2.10	0.49
8:CI:70:GLY:O	8:CI:74:GLN:HB2	2.12	0.49
21:CN:44:VAL:C	21:CN:46:LYS:H	2.20	0.49
23:DB:230:G:H2'	23:DB:231:A:H8	1.77	0.49
23:DB:340:A:H2'	23:DB:341:C:C5'	2.42	0.49
23:DB:531:C:O2'	23:DB:563:A:H5"	2.13	0.49
23:DB:699:A:H4'	23:DB:1634:A:N7	2.27	0.49
23:DB:1370:C:H2'	23:DB:1371:G:O4'	2.12	0.49
23:DB:1386:C:H2'	23:DB:1387:A:C8	2.48	0.49
23:DB:1390:U:O2'	23:DB:1391:U:H5'	2.12	0.49
23:DB:1819:A:OP1	25:DC:159:THR:HG21	2.13	0.49
23:DB:1854:A:H62	23:DB:1888:G:H1'	1.76	0.49
23:DB:2054:A:H2'	31:D0:4:GLN:OE1	2.11	0.49
23:DB:2056:G:H21	31:D0:1:ALA:HA	1.76	0.49
23:DB:2075:U:H2'	23:DB:2238:G:N2	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2259:U:H2'	23:DB:2260:C:H6	1.78	0.49
23:DB:2740:A:H2'	23:DB:2741:A:C8	2.47	0.49
23:DB:2820:A:OP1	42:DN:4:ARG:HA	2.12	0.49
24:DI:17:ALA:C	24:DI:19:PRO:HD3	2.37	0.49
24:DI:85:ILE:HD12	24:DI:87:SER:O	2.12	0.49
27:DK:17:ARG:HB3	27:DK:45:GLU:HG3	1.95	0.49
27:DK:35:VAL:CG2	27:DK:36:GLY:H	2.13	0.49
38:DM:64:TRP:HB2	38:DM:104:GLU:HB2	1.94	0.49
42:DN:28:LEU:CA	42:DN:34:ILE:HD11	2.42	0.49
43:DO:76:LYS:HG3	43:DO:113:ALA:HB2	1.94	0.49
45:DS:26:GLY:O	45:DS:28:LYS:N	2.45	0.49
47:DF:7:TYR:O	47:DF:12:VAL:HG23	2.12	0.49
47:DF:147:ARG:O	47:DF:147:ARG:HD2	2.12	0.49
1:AA:14:U:O2	1:AA:14:U:H2'	2.13	0.49
1:AA:253:A:H2'	1:AA:254:G:H8	1.76	0.49
1:AA:398:U:H2'	1:AA:399:G:H8	1.76	0.49
1:AA:420:U:O2'	1:AA:421:U:H5"	2.13	0.49
1:AA:1077:G:H2'	1:AA:1079:G:OP2	2.12	0.49
2:AC:76:ILE:HA	2:AC:83:VAL:CG2	2.36	0.49
4:AE:156:ARG:HB2	7:AH:43:GLY:HA3	1.93	0.49
6:AG:14:ASP:CG	6:AG:17:PHE:HB2	2.36	0.49
11:AL:24:GLU:C	11:AL:26:CYS:N	2.70	0.49
18:AB:67:LEU:HA	18:AB:89:PHE:O	2.11	0.49
22:BA:49:C:P	43:BO:30:ARG:HH12	2.36	0.49
23:BB:256:A:H2'	23:BB:257:C:H6	1.78	0.49
23:BB:877:A:H5"	23:BB:877:A:H8	1.77	0.49
23:BB:1128:G:O2'	23:BB:1129:A:H5"	2.12	0.49
23:BB:1190:G:H5"	37:BL:32:GLY:O	2.12	0.49
23:BB:1569:A:H2'	23:BB:1570:A:C8	2.47	0.49
23:BB:1811:G:O2'	23:BB:1812:U:H5'	2.12	0.49
23:BB:2256:G:H2'	23:BB:2257:U:H6	1.77	0.49
23:BB:2547:A:H2'	23:BB:2548:U:H6	1.76	0.49
26:BD:125:TRP:CD2	26:BD:160:LYS:HB3	2.48	0.49
26:BD:202:ILE:HG22	26:BD:204:LYS:NZ	2.26	0.49
34:B3:7:ARG:HG3	34:B3:7:ARG:NH1	2.27	0.49
37:BL:3:LEU:O	37:BL:5:THR:N	2.44	0.49
38:BM:126:ILE:HD12	38:BM:126:ILE:N	2.27	0.49
44:BQ:38:VAL:O	44:BQ:39:ILE:C	2.53	0.49
45:BS:14:ALA:C	45:BS:16:LYS:H	2.19	0.49
46:BU:6:ARG:O	46:BU:24:VAL:HB	2.13	0.49
47:BF:57:ALA:HB2	47:BF:64:PRO:CG	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:139:GLU:CG	47:BF:140:ILE:H	2.25	0.49
50:BT:40:LYS:O	50:BT:43:ILE:HG22	2.13	0.49
1:CA:218:U:H2'	1:CA:219:U:C6	2.46	0.49
1:CA:241:G:O2'	1:CA:242:G:H5'	2.12	0.49
1:CA:403:C:O2'	1:CA:404:G:H5'	2.12	0.49
1:CA:502:A:H2'	1:CA:503:C:C6	2.47	0.49
1:CA:505:G:H4'	1:CA:534:U:C4	2.47	0.49
1:CA:687:A:C2	1:CA:704:A:C5	3.00	0.49
1:CA:692:U:H2'	1:CA:694:A:OP2	2.12	0.49
1:CA:1121:U:O2'	1:CA:1122:U:H5'	2.13	0.49
1:CA:1167:A:H2'	1:CA:1169:A:N6	2.27	0.49
10:CK:14:GLN:OE1	10:CK:77:GLY:HA3	2.13	0.49
14:CQ:24:ILE:HD12	14:CQ:24:ILE:N	2.27	0.49
19:CU:34:ARG:C	19:CU:34:ARG:NE	2.70	0.49
9:CJ:8:ILE:CD1	9:CJ:76:ILE:HG23	2.43	0.49
12:CM:64:VAL:HA	12:CM:68:LEU:HD12	1.94	0.49
16:CS:55:GLN:NE2	16:CS:55:GLN:HA	2.26	0.49
23:DB:38:A:O2'	29:DE:43:THR:HA	2.13	0.49
23:DB:151:C:H2'	23:DB:152:A:C8	2.48	0.49
23:DB:252:G:O2'	23:DB:253:C:H5'	2.12	0.49
23:DB:702:U:H2'	23:DB:703:U:C6	2.47	0.49
23:DB:899:A:H2'	23:DB:900:A:O4'	2.12	0.49
23:DB:1518:C:H2'	23:DB:1519:G:C8	2.48	0.49
23:DB:1661:G:O2'	23:DB:1662:U:H5'	2.12	0.49
23:DB:2221:G:O2'	23:DB:2222:C:H5'	2.12	0.49
25:DC:91:ALA:CB	25:DC:105:ALA:HB2	2.42	0.49
26:DD:15:PHE:CE2	28:DP:77:SER:HB2	2.48	0.49
26:DD:138:LEU:N	26:DD:138:LEU:HD22	2.28	0.49
29:DE:4:VAL:HG12	29:DE:5:LEU:N	2.22	0.49
34:D3:14:LYS:O	34:D3:14:LYS:HG2	2.12	0.49
35:DV:59:GLU:HG2	35:DV:60:VAL:N	2.28	0.49
36:D2:10:LEU:HD21	36:D2:14:ARG:CZ	2.42	0.49
41:DJ:114:LEU:O	41:DJ:118:MET:HG3	2.13	0.49
44:DQ:115:ALA:C	44:DQ:117:ALA:H	2.20	0.49
46:DU:48:VAL:O	46:DU:48:VAL:HG13	2.12	0.49
52:DW:23:LYS:HD2	52:DW:24:ARG:N	2.25	0.49
1:AA:34:C:H2'	1:AA:35:G:C8	2.47	0.49
1:AA:394:G:O2'	1:AA:395:C:H5'	2.12	0.49
1:AA:903:G:H2'	1:AA:904:U:C6	2.48	0.49
1:AA:996:A:H2'	1:AA:997:U:H6	1.75	0.49
1:AA:1048:G:O3'	1:AA:1049:U:H3'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1124:G:H5”	9:AJ:37:ARG:O	2.13	0.49
1:AA:1250:A:H4’	8:AI:69:GLY:O	2.12	0.49
1:AA:1275:A:H2’	1:AA:1276:G:O4’	2.12	0.49
1:AA:1400:C:H4’	1:AA:1401:G:OP2	2.13	0.49
1:AA:1435:G:H2’	1:AA:1436:U:C6	2.47	0.49
2:AC:94:ALA:O	2:AC:96:VAL:HG22	2.12	0.49
2:AC:108:PRO:C	2:AC:110:LEU:H	2.20	0.49
2:AC:134:LYS:HE3	2:AC:167:TYR:OH	2.12	0.49
3:AD:170:LEU:HD12	3:AD:170:LEU:O	2.13	0.49
5:AF:6:ILE:HG13	5:AF:62:MET:HB2	1.94	0.49
7:AH:99:GLY:HA2	7:AH:129:ALA:HA	1.95	0.49
7:AH:101:ALA:HB3	7:AH:112:ASP:HB3	1.95	0.49
9:AJ:73:LEU:HD13	9:AJ:75:ASP:HB2	1.95	0.49
10:AK:110:THR:CG2	19:AU:4:LYS:HA	2.42	0.49
12:AM:63:VAL:O	12:AM:68:LEU:HD21	2.11	0.49
21:AN:63:CYS:HB2	21:AN:79:SER:HB3	1.93	0.49
22:BA:112:G:O2’	22:BA:113:C:H5’	2.13	0.49
23:BB:189:G:H2’	23:BB:205:G:H22	1.77	0.49
23:BB:596:U:H2’	23:BB:597:G:H8	1.78	0.49
23:BB:693:A:H2’	23:BB:694:U:H6	1.78	0.49
23:BB:753:A:H2’	23:BB:754:U:H6	1.73	0.49
23:BB:1449:G:O2’	23:BB:1450:G:H5’	2.13	0.49
23:BB:1508:A:H2’	23:BB:1509:A:C2	2.47	0.49
23:BB:1731:G:O2’	23:BB:1732:C:H5”	2.12	0.49
23:BB:1842:G:H2’	23:BB:1843:C:C6	2.48	0.49
23:BB:2653:U:H3’	23:BB:2654:A:H2’	1.95	0.49
23:BB:2789:C:H2’	23:BB:2893:A:N7	2.27	0.49
24:BI:89:SER:HA	24:BI:97:VAL:CG2	2.42	0.49
25:BC:173:LEU:HD22	25:BC:173:LEU:H	1.77	0.49
25:BC:202:ARG:HE	25:BC:213:ARG:NH2	2.09	0.49
27:BK:64:ARG:HH21	28:BP:67:GLU:HG3	1.78	0.49
28:BP:25:VAL:HB	28:BP:84:SER:O	2.13	0.49
31:B0:41:HIS:HB2	42:BN:99:LYS:C	2.37	0.49
34:B3:21:PHE:HB2	34:B3:49:VAL:HG22	1.93	0.49
34:B3:41:ARG:C	34:B3:43:LEU:H	2.21	0.49
38:BM:100:LYS:CD	38:BM:101:VAL:H	2.26	0.49
40:BH:47:PHE:HA	40:BH:50:ARG:NE	2.09	0.49
41:BJ:124:VAL:O	41:BJ:125:TYR:HB2	2.13	0.49
46:BU:41:VAL:O	46:BU:42:LYS:HB2	2.11	0.49
46:BU:78:LYS:CD	46:BU:79:ALA:H	2.24	0.49
47:BF:29:ARG:H	47:BF:29:ARG:HE	1.59	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:104:THR:C	47:BF:108:PRO:HG2	2.37	0.49
47:BF:111:ARG:HH11	47:BF:135:ILE:HG21	1.77	0.49
48:BG:10:VAL:C	48:BG:14:VAL:HG21	2.37	0.49
49:BR:38:VAL:HG22	49:BR:40:MET:H	1.78	0.49
50:BT:15:HIS:N	50:BT:32:LEU:HA	2.17	0.49
51:BZ:53:ALA:C	51:BZ:55:GLY:H	2.21	0.49
1:CA:121:U:OP1	1:CA:121:U:H3'	2.12	0.49
1:CA:597:G:H2'	1:CA:598:U:H5'	1.94	0.49
1:CA:607:A:H2'	1:CA:608:A:C8	2.46	0.49
1:CA:861:G:H2'	1:CA:862:C:C6	2.46	0.49
1:CA:1118:U:H1'	1:CA:1179:A:C4	2.47	0.49
1:CA:1203:C:H4'	21:CN:66:THR:HG22	1.95	0.49
1:CA:1312:G:H2'	1:CA:1313:U:C6	2.47	0.49
1:CA:1347:G:H2'	8:CI:109:GLN:O	2.13	0.49
1:CA:1374:A:O2'	1:CA:1375:A:H5'	2.13	0.49
1:CA:1426:G:O2'	1:CA:1427:C:H5'	2.13	0.49
1:CA:1476:A:H2'	1:CA:1477:U:O4'	2.12	0.49
1:CA:1486:G:H2'	1:CA:1487:G:O4'	2.12	0.49
3:CD:2:ARG:H	3:CD:4:LEU:HD11	1.78	0.49
7:CH:17:GLN:HE21	7:CH:62:LEU:HG	1.78	0.49
14:CQ:45:VAL:HG12	14:CQ:46:HIS:N	2.27	0.49
2:CC:104:GLU:HG2	2:CC:105:VAL:N	2.27	0.49
8:CI:30:ASN:C	8:CI:32:ARG:H	2.20	0.49
8:CI:44:ARG:HB2	8:CI:48:ARG:CZ	2.43	0.49
8:CI:90:ASP:O	8:CI:92:SER:N	2.43	0.49
16:CS:14:LEU:HD22	16:CS:34:SER:HB2	1.94	0.49
16:CS:47:THR:HA	16:CS:60:PHE:CZ	2.47	0.49
23:DB:7:G:H5'	41:DJ:132:HIS:CD2	2.48	0.49
23:DB:11:C:N4	23:DB:2629:U:H3	2.10	0.49
23:DB:475:C:H4'	23:DB:509:C:H2'	1.94	0.49
23:DB:574:A:H4'	23:DB:575:A:C5'	2.43	0.49
23:DB:783:A:H4'	23:DB:1779:U:O2	2.11	0.49
23:DB:1459:G:H2'	23:DB:1461:C:C4	2.47	0.49
23:DB:1494:A:H2'	23:DB:1495:A:C8	2.48	0.49
23:DB:2047:C:H2'	23:DB:2048:G:C8	2.47	0.49
23:DB:2350:C:H2'	23:DB:2351:G:C8	2.48	0.49
23:DB:2677:G:H2'	23:DB:2678:C:H6	1.74	0.49
23:DB:2831:G:H1'	23:DB:2883:A:C2	2.47	0.49
25:DC:201:LEU:O	25:DC:202:ARG:O	2.29	0.49
26:DD:55:LYS:C	26:DD:57:ALA:H	2.20	0.49
27:DK:73:ASP:OD2	27:DK:75:SER:HB3	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DP:26:GLU:HG3	28:DP:43:GLU:HB2	1.93	0.49
28:DP:63:ILE:HA	28:DP:67:GLU:O	2.12	0.49
29:DE:32:VAL:HG23	29:DE:33:VAL:N	2.27	0.49
29:DE:105:LEU:HD21	29:DE:177:PRO:HB3	1.94	0.49
35:DV:63:ILE:HB	35:DV:70:ILE:HG12	1.94	0.49
37:DL:78:ARG:NH2	37:DL:113:ALA:HB1	2.27	0.49
40:DH:47:PHE:O	40:DH:51:ARG:HG3	2.13	0.49
45:DS:24:ILE:CD1	45:DS:36:LEU:HD21	2.41	0.49
45:DS:49:LYS:C	45:DS:51:LEU:H	2.19	0.49
46:DU:3:LYS:CB	46:DU:82:VAL:HG21	2.37	0.49
46:DU:5:ARG:HH22	46:DU:93:ARG:HD3	1.76	0.49
47:DF:78:ILE:HA	47:DF:82:TYR:CD1	2.47	0.49
47:DF:155:ILE:HG22	47:DF:156:THR:N	2.27	0.49
52:DW:35:ILE:O	52:DW:35:ILE:HG12	2.11	0.49
52:DW:43:LYS:HD2	52:DW:79:ILE:CD1	2.33	0.49
1:AA:130:A:H1'	1:AA:263:A:O2'	2.12	0.49
1:AA:721:G:H4'	1:AA:722:G:O4'	2.12	0.49
1:AA:908:A:O2'	1:AA:909:A:H5'	2.12	0.49
1:AA:922:G:N3	1:AA:1398:A:H2	2.10	0.49
1:AA:1053:G:C6	1:AA:1200:C:H5"	2.48	0.49
5:AF:66:ALA:HB1	5:AF:70:VAL:HG21	1.94	0.49
6:AG:4:ARG:NH1	6:AG:5:VAL:H	2.09	0.49
8:AI:90:ASP:HB3	8:AI:93:LEU:HG	1.93	0.49
10:AK:20:ALA:O	10:AK:22:ILE:HG13	2.12	0.49
10:AK:30:ILE:HG22	10:AK:45:THR:HB	1.94	0.49
14:AQ:45:VAL:HG12	14:AQ:46:HIS:N	2.27	0.49
17:AT:47:GLN:HE21	17:AT:82:ILE:CD1	2.25	0.49
18:AB:95:TRP:CZ3	18:AB:171:ALA:HA	2.47	0.49
21:AN:26:LEU:O	21:AN:30:ILE:N	2.43	0.49
22:BA:2:G:H2'	22:BA:3:C:C5	2.48	0.49
22:BA:16:G:O2'	22:BA:17:C:H5'	2.13	0.49
23:BB:222:A:N6	23:BB:232:G:H1'	2.27	0.49
23:BB:340:A:H2'	23:BB:341:C:C5'	2.43	0.49
23:BB:425:G:O2'	23:BB:426:C:H5'	2.13	0.49
23:BB:692:C:H2'	23:BB:693:A:H8	1.76	0.49
23:BB:1631:G:H22	23:BB:1633:G:H3'	1.76	0.49
23:BB:2081:U:H2'	23:BB:2082:A:C8	2.47	0.49
23:BB:2599:G:H2'	23:BB:2600:A:H8	1.77	0.49
23:BB:2800:A:H2'	23:BB:2801:G:C4'	2.42	0.49
24:BI:72:THR:HG21	24:BI:111:THR:O	2.13	0.49
25:BC:244:VAL:HG12	25:BC:250:GLN:N	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BP:99:LEU:HD13	28:BP:99:LEU:O	2.12	0.49
30:BY:2:LYS:HE2	30:BY:39:ASP:OD2	2.12	0.49
38:BM:64:TRP:C	38:BM:65:ILE:HG13	2.36	0.49
38:BM:110:GLU:CD	38:BM:110:GLU:N	2.71	0.49
44:BQ:59:LEU:HD13	44:BQ:60:TRP:N	2.28	0.49
47:BF:134:GLN:HB3	47:BF:149:ARG:CB	2.43	0.49
47:BF:168:LEU:C	47:BF:170:ALA:H	2.19	0.49
49:BR:55:ASP:CG	49:BR:56:GLY:H	2.21	0.49
1:CA:68:G:H2'	1:CA:69:G:O4'	2.13	0.49
1:CA:313:A:H2'	1:CA:314:C:H6	1.78	0.49
1:CA:555:U:H2'	1:CA:556:C:H6	1.78	0.49
1:CA:585:G:O2'	1:CA:586:C:H5'	2.13	0.49
1:CA:594:U:H2'	1:CA:595:A:O4'	2.13	0.49
1:CA:859:G:O2'	1:CA:860:A:H5'	2.13	0.49
1:CA:1037:C:O2'	1:CA:1038:C:H5'	2.13	0.49
1:CA:1118:U:H2'	1:CA:1119:C:H6	1.78	0.49
1:CA:1254:A:O4'	1:CA:1356:G:H5"	2.13	0.49
3:CD:72:ARG:HA	3:CD:203:TYR:HE1	1.77	0.49
11:CL:30:ARG:O	11:CL:57:THR:HG23	2.13	0.49
13:CP:5:ARG:HH21	13:CP:24:SER:HA	1.75	0.49
17:CT:49:ALA:C	17:CT:52:GLU:HB3	2.38	0.49
2:CC:18:ASN:CA	2:CC:55:VAL:HG22	2.38	0.49
2:CC:155:ARG:H	2:CC:162:ALA:CA	2.13	0.49
9:CJ:86:ALA:O	9:CJ:90:LEU:HG	2.13	0.49
18:CB:22:TRP:CG	18:CB:23:ASN:H	2.31	0.49
18:CB:51:GLU:HG2	18:CB:197:PHE:HD1	1.78	0.49
23:DB:5:A:H2'	23:DB:6:A:H8	1.72	0.49
23:DB:138:U:O2'	23:DB:140:C:H5'	2.13	0.49
23:DB:142:A:H2	50:DT:2:ILE:HG22	1.76	0.49
23:DB:876:C:H2'	23:DB:876:C:O2	2.11	0.49
23:DB:1163:G:O2'	23:DB:1164:C:H5'	2.12	0.49
23:DB:1259:G:H2'	23:DB:1260:A:C8	2.47	0.49
23:DB:1742:U:O2'	23:DB:1743:G:H5'	2.12	0.49
23:DB:1838:C:H4'	23:DB:1839:G:C8	2.47	0.49
23:DB:2394:C:H2'	23:DB:2395:C:C6	2.48	0.49
23:DB:2432:A:O2'	23:DB:2433:A:H5'	2.12	0.49
23:DB:2881:U:O3'	42:DN:96:ARG:HG3	2.13	0.49
23:DB:2884:U:C5	31:D0:49:ARG:HG2	2.47	0.49
23:DB:2886:A:N6	31:D0:39:ARG:CZ	2.76	0.49
24:DI:24:GLY:HA2	24:DI:34:ILE:HD12	1.95	0.49
25:DC:211:ARG:C	25:DC:213:ARG:H	2.20	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DK:108:ARG:O	27:DK:108:ARG:HG3	2.12	0.49
31:D0:53:VAL:CB	42:DN:118:ARG:HH22	2.25	0.49
31:D0:55:ALA:O	31:D0:56:LYS:C	2.55	0.49
34:D3:23:HIS:CG	37:DL:61:LEU:HD23	2.48	0.49
35:DV:75:GLN:HB3	35:DV:90:ASP:HB2	1.93	0.49
37:DL:18:ARG:O	37:DL:19:LEU:HD12	2.12	0.49
38:DM:66:ARG:CZ	38:DM:101:VAL:HG11	2.43	0.49
40:DH:115:VAL:HA	40:DH:132:PHE:HA	1.93	0.49
41:DJ:46:PRO:C	41:DJ:48:VAL:H	2.20	0.49
44:DQ:105:PHE:HA	44:DQ:108:LEU:CD1	2.34	0.49
45:DS:88:ARG:HH21	45:DS:88:ARG:HG3	1.77	0.49
46:DU:48:VAL:O	46:DU:50:ALA:N	2.45	0.49
46:DU:66:VAL:C	46:DU:68:ASN:H	2.19	0.49
46:DU:98:ASN:OD1	46:DU:100:GLU:HB2	2.13	0.49
47:DF:107:VAL:N	47:DF:108:PRO:CD	2.75	0.49
49:DR:1:MET:C	49:DR:2:TYR:HD1	2.21	0.49
1:AA:408:A:H3'	1:AA:409:U:C6	2.45	0.49
1:AA:505:G:H4'	1:AA:534:U:C4	2.46	0.49
1:AA:692:U:O2	1:AA:694:A:H5"	2.13	0.49
1:AA:746:A:H2'	1:AA:747:A:H8	1.76	0.49
1:AA:814:A:O2'	1:AA:815:A:H3'	2.12	0.49
1:AA:1005:A:H5'	1:AA:1037:C:O2	2.13	0.49
1:AA:1005:A:H2'	1:AA:1006:G:O4'	2.12	0.49
1:AA:1060:U:C5'	9:AJ:53:ILE:HG12	2.40	0.49
1:AA:1135:U:H5'	1:AA:1136:C:OP1	2.12	0.49
1:AA:1227:A:H1'	12:AM:113:LYS:HZ3	1.77	0.49
1:AA:1330:U:H5"	12:AM:22:TYR:O	2.12	0.49
6:AG:29:LEU:HD11	6:AG:119:LEU:HD21	1.94	0.49
6:AG:109:LYS:O	6:AG:109:LYS:HE3	2.12	0.49
6:AG:144:ALA:C	6:AG:146:ALA:H	2.20	0.49
10:AK:19:VAL:N	10:AK:34:THR:O	2.46	0.49
11:AL:120:ARG:HG2	11:AL:121:PRO:HD2	1.95	0.49
12:AM:10:ASP:HB3	12:AM:45:SER:HB3	1.94	0.49
12:AM:89:ARG:HH12	12:AM:101:THR:CG2	2.26	0.49
13:AP:28:ARG:HD3	13:AP:29:ASN:ND2	2.28	0.49
17:AT:27:MET:O	17:AT:31:ILE:HG13	2.12	0.49
17:AT:75:LYS:O	17:AT:78:LEU:HB2	2.13	0.49
18:AB:22:TRP:HA	18:AB:189:ASN:CA	2.42	0.49
18:AB:180:ILE:O	18:AB:182:VAL:HG23	2.13	0.49
21:AN:10:VAL:HB	21:AN:11:LYS:NZ	2.27	0.49
23:BB:171:U:H2'	23:BB:172:A:H8	1.73	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:548:G:H5”	23:BB:549:G:H5’	1.93	0.49
23:BB:921:C:H2’	23:BB:922:C:H6	1.78	0.49
23:BB:1054:A:H2’	23:BB:1055:G:O4’	2.11	0.49
23:BB:1157:G:O2’	30:BY:31:ILE:HD13	2.13	0.49
23:BB:1205:A:N7	29:BE:165:HIS:CG	2.81	0.49
23:BB:1327:A:H2’	23:BB:1328:A:H5’	1.94	0.49
23:BB:1392:A:H2’	23:BB:1393:A:C8	2.47	0.49
23:BB:1652:A:H62	42:BN:11:ASN:ND2	2.02	0.49
23:BB:1654:A:H61	23:BB:2049:G:P	2.36	0.49
23:BB:1654:A:H2’	23:BB:1655:A:H8	1.77	0.49
23:BB:1667:G:OP1	27:BK:6:THR:HA	2.12	0.49
23:BB:2100:G:C6	23:BB:2190:G:C6	3.00	0.49
23:BB:2639:A:H2’	23:BB:2640:G:O4’	2.12	0.49
23:BB:2722:G:H2’	23:BB:2723:C:C6	2.47	0.49
25:BC:79:ARG:HD2	25:BC:81:GLU:OE2	2.12	0.49
25:BC:102:TYR:C	25:BC:103:ILE:HG13	2.37	0.49
28:BP:4:ILE:O	28:BP:6:GLN:N	2.40	0.49
28:BP:98:TYR:C	28:BP:100:ARG:H	2.19	0.49
29:BE:62:GLN:CG	29:BE:63:LYS:H	2.25	0.49
31:B0:27:LEU:HD13	31:B0:37:HIS:O	2.13	0.49
31:B0:53:VAL:CB	42:BN:118:ARG:HH22	2.25	0.49
36:B2:18:PHE:CE1	36:B2:22:MET:HG3	2.48	0.49
37:BL:93:ASN:HD22	37:BL:94:THR:H	1.59	0.49
40:BH:5:LEU:CD1	40:BH:17:ASP:HB3	2.38	0.49
40:BH:111:ALA:O	40:BH:132:PHE:HE1	1.94	0.49
45:BS:81:SER:HB3	45:BS:99:ARG:HB3	1.94	0.49
48:BG:16:VAL:HG11	48:BG:44:HIS:NE2	2.28	0.49
48:BG:97:VAL:CG2	48:BG:124:CYS:HB2	2.42	0.49
1:CA:35:G:H2’	1:CA:36:C:H6	1.78	0.49
1:CA:44:A:O2’	1:CA:45:G:H5’	2.12	0.49
1:CA:315:A:H5”	1:CA:317:U:OP2	2.12	0.49
1:CA:429:U:C1’	1:CA:430:A:H5”	2.43	0.49
1:CA:590:U:H2’	1:CA:591:U:H6	1.77	0.49
1:CA:664:G:N2	1:CA:741:G:H1	2.03	0.49
1:CA:853:C:C2’	1:CA:854:U:H5’	2.42	0.49
1:CA:1355:G:H2’	1:CA:1356:G:H8	1.77	0.49
3:CD:110:ARG:HH11	3:CD:110:ARG:HG3	1.78	0.49
4:CE:92:ARG:O	4:CE:126:ALA:HB1	2.12	0.49
11:CL:41:PRO:HA	11:CL:88:ASP:O	2.12	0.49
6:CG:51:GLN:HG2	6:CG:51:GLN:O	2.12	0.49
12:CM:69:ARG:HH11	12:CM:69:ARG:CA	2.25	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:234:U:O2'	23:DB:235:U:H5'	2.13	0.49
23:DB:413:C:H2'	23:DB:414:C:C6	2.48	0.49
23:DB:564:C:H1'	44:DQ:36:GLN:OE1	2.13	0.49
23:DB:639:U:H2'	23:DB:640:C:H6	1.77	0.49
23:DB:660:C:H2'	23:DB:661:A:H8	1.77	0.49
23:DB:1229:C:H2'	23:DB:1230:A:C8	2.47	0.49
23:DB:1328:A:H2'	23:DB:1330:C:C4	2.47	0.49
23:DB:2031:A:H5'	23:DB:2031:A:C8	2.46	0.49
23:DB:2066:C:O2'	23:DB:2067:G:H5'	2.11	0.49
23:DB:2344:U:H4'	23:DB:2345:G:OP1	2.12	0.49
23:DB:2630:G:O2'	23:DB:2631:G:H5'	2.13	0.49
23:DB:2813:A:H2'	23:DB:2814:A:H8	1.77	0.49
24:DI:128:ILE:HA	24:DI:131:THR:HG23	1.94	0.49
25:DC:123:ILE:O	25:DC:123:ILE:HG13	2.13	0.49
26:DD:106:LYS:HB3	26:DD:206:ALA:CB	2.42	0.49
27:DK:105:ARG:HD3	27:DK:105:ARG:N	2.20	0.49
36:D2:45:SER:O	36:D2:46:LYS:CB	2.55	0.49
39:DX:6:LEU:C	39:DX:8:GLU:H	2.21	0.49
39:DX:24:GLU:O	39:DX:28:LEU:HG	2.12	0.49
41:DJ:96:ARG:N	41:DJ:97:PRO:HD3	2.28	0.49
42:DN:103:ARG:HB3	42:DN:106:ASP:O	2.12	0.49
44:DQ:79:ILE:HD13	44:DQ:79:ILE:C	2.38	0.49
45:DS:82:MET:HE2	45:DS:84:ARG:HH12	1.77	0.49
47:DF:30:VAL:HG21	47:DF:96:TRP:HE1	1.78	0.49
47:DF:167:ALA:O	47:DF:170:ALA:HB3	2.13	0.49
48:DG:10:VAL:C	48:DG:14:VAL:HG21	2.37	0.49
48:DG:145:ALA:O	48:DG:149:ALA:N	2.44	0.49
48:DG:167:VAL:HG23	48:DG:168:VAL:H	1.77	0.49
1:AA:82:G:N1	1:AA:88:U:H1'	2.28	0.49
1:AA:203:G:H1'	1:AA:465:A:N6	2.26	0.49
1:AA:236:A:O2'	1:AA:237:G:H5'	2.12	0.49
1:AA:284:C:H2'	1:AA:285:C:H6	1.77	0.49
1:AA:378:G:O2'	1:AA:379:C:H5'	2.13	0.49
1:AA:397:A:H3'	1:AA:397:A:N3	2.27	0.49
1:AA:462:G:H5'	1:AA:463:U:P	2.53	0.49
1:AA:673:A:H1'	15:AR:63:TYR:HE1	1.76	0.49
1:AA:1179:A:H2'	1:AA:1180:A:C8	2.47	0.49
4:AE:21:SER:HB3	4:AE:28:ARG:NH2	2.28	0.49
4:AE:92:ARG:O	4:AE:126:ALA:HB1	2.12	0.49
6:AG:69:ARG:HB3	6:AG:95:ARG:HD3	1.94	0.49
7:AH:77:VAL:HG23	7:AH:126:CYS:HA	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AK:95:THR:HG23	10:AK:96:ILE:H	1.78	0.49
16:AS:10:ILE:HG21	16:AS:40:PHE:CZ	2.46	0.49
21:AN:5:MET:SD	21:AN:8:ARG:HD3	2.53	0.49
23:BB:38:A:H1'	29:BE:43:THR:HB	1.93	0.49
23:BB:267:C:H2'	23:BB:268:C:H6	1.78	0.49
23:BB:458:G:H22	23:BB:469:G:H2'	1.78	0.49
23:BB:608:A:H2'	23:BB:609:A:H8	1.76	0.49
23:BB:768:G:H2'	23:BB:769:U:O4'	2.12	0.49
23:BB:1076:C:H4'	24:BI:94:LYS:CE	2.42	0.49
23:BB:1324:G:H1'	23:BB:1616:A:C6	2.48	0.49
23:BB:1778:U:H2'	23:BB:1784:A:N6	2.27	0.49
23:BB:1945:G:H2'	23:BB:1946:U:C6	2.48	0.49
23:BB:2201:G:H2'	23:BB:2202:U:C6	2.47	0.49
23:BB:2393:U:O2'	23:BB:2394:C:H5'	2.13	0.49
23:BB:2675:A:N1	23:BB:2732:G:O6	2.46	0.49
23:BB:2709:G:H2'	23:BB:2710:C:C6	2.48	0.49
24:BI:135:MET:HE2	24:BI:137:LEU:HD11	1.95	0.49
27:BK:61:VAL:HG11	27:BK:112:PHE:CZ	2.48	0.49
27:BK:66:LYS:HD2	27:BK:81:GLY:N	2.27	0.49
27:BK:70:ARG:CB	27:BK:76:VAL:HG22	2.42	0.49
29:BE:77:ILE:HG13	29:BE:78:TRP:HE3	1.78	0.49
33:B1:52:LYS:HZ2	33:B1:52:LYS:CB	2.26	0.49
37:BL:23:ILE:HG13	49:BR:82:HIS:ND1	2.28	0.49
41:BJ:96:ARG:N	41:BJ:97:PRO:HD3	2.27	0.49
42:BN:79:LEU:O	42:BN:80:PHE:HB2	2.11	0.49
42:BN:83:LEU:HD21	42:BN:115:LEU:HD11	1.95	0.49
44:BQ:48:ASP:C	44:BQ:50:ARG:N	2.70	0.49
44:BQ:63:ARG:HH22	44:BQ:96:ASP:CA	2.26	0.49
46:BU:53:GLN:O	46:BU:53:GLN:HG2	2.12	0.49
47:BF:105:ILE:HA	47:BF:108:PRO:HB2	1.94	0.49
49:BR:24:LYS:HD3	49:BR:24:LYS:O	2.13	0.49
50:BT:8:LEU:HD22	50:BT:46:ALA:HA	1.93	0.49
1:CA:405:U:C5	3:CD:4:LEU:HD21	2.47	0.49
1:CA:779:C:H2'	1:CA:780:A:O4'	2.12	0.49
1:CA:792:A:H1'	1:CA:794:A:N7	2.27	0.49
1:CA:920:U:H2'	1:CA:921:U:H6	1.72	0.49
1:CA:1033:G:H2'	1:CA:1034:G:O4'	2.13	0.49
1:CA:1319:A:OP1	16:CS:4:LEU:HD11	2.13	0.49
1:CA:1505:G:H5"	1:CA:1506:U:O5'	2.12	0.49
3:CD:29:THR:HG22	3:CD:30:LYS:HD3	1.95	0.49
4:CE:46:GLY:CA	4:CE:70:MET:HA	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:9:PRO:HB2	12:CM:17:ALA:HB1	1.95	0.49
18:CB:55:GLU:HA	18:CB:58:LYS:HB3	1.93	0.49
18:CB:205:ALA:O	18:CB:209:VAL:HG22	2.12	0.49
22:DA:43:C:O2'	47:DF:91:ARG:HD2	2.12	0.49
23:DB:341:C:H2'	23:DB:342:A:H8	1.77	0.49
23:DB:768:G:H2'	23:DB:769:U:O4'	2.12	0.49
23:DB:866:A:H61	23:DB:913:U:C4'	2.25	0.49
23:DB:925:A:O2'	23:DB:926:G:H5'	2.12	0.49
23:DB:1168:G:H2'	23:DB:1169:A:H8	1.73	0.49
23:DB:1196:C:H2'	23:DB:1197:G:H8	1.78	0.49
23:DB:1569:A:H2'	23:DB:1570:A:C8	2.47	0.49
23:DB:1958:C:O2'	23:DB:1959:G:H5'	2.13	0.49
23:DB:1997:C:H2'	23:DB:1998:A:H8	1.77	0.49
23:DB:2543:G:H2'	23:DB:2544:G:H8	1.76	0.49
23:DB:2543:G:H4'	23:DB:2645:G:N2	2.28	0.49
23:DB:2551:C:H2'	23:DB:2552:U:O4'	2.13	0.49
23:DB:2722:G:H2'	23:DB:2723:C:C6	2.48	0.49
24:DI:140:GLU:H	24:DI:140:GLU:CD	2.20	0.49
28:DP:4:ILE:O	28:DP:6:GLN:N	2.40	0.49
29:DE:134:LEU:HD23	29:DE:161:ALA:HB2	1.94	0.49
34:D3:16:THR:C	34:D3:18:LYS:H	2.21	0.49
40:DH:103:VAL:CG2	40:DH:108:VAL:HB	2.42	0.49
42:DN:12:ARG:HG3	42:DN:13:ASN:N	2.28	0.49
49:DR:24:LYS:O	49:DR:24:LYS:HD3	2.13	0.49
1:AA:426:U:H2'	1:AA:427:U:C6	2.48	0.49
1:AA:532:A:H62	2:AC:191:THR:HB	1.77	0.49
1:AA:911:U:H2'	1:AA:912:C:C6	2.48	0.49
1:AA:1123:U:O2'	1:AA:1124:G:H5'	2.13	0.49
1:AA:1289:A:H2'	1:AA:1290:G:H5'	1.93	0.49
1:AA:1303:C:H2'	1:AA:1304:G:O4'	2.13	0.49
1:AA:1468:A:O2'	1:AA:1469:C:H5'	2.13	0.49
3:AD:21:LYS:C	3:AD:23:GLY:H	2.20	0.49
6:AG:62:GLU:O	6:AG:66:GLU:HG3	2.13	0.49
9:AJ:34:ALA:HB1	9:AJ:76:ILE:HB	1.95	0.49
11:AL:33:CYS:HA	11:AL:54:VAL:HA	1.95	0.49
18:AB:125:PHE:CD2	18:AB:126:ASP:N	2.81	0.49
23:BB:433:C:O2'	23:BB:434:U:H5'	2.13	0.49
23:BB:849:A:H2'	23:BB:850:U:C6	2.48	0.49
23:BB:854:C:O2'	23:BB:855:G:H5'	2.12	0.49
23:BB:1439:A:H5"	23:BB:1440:U:OP2	2.12	0.49
23:BB:1805:A:O2'	23:BB:1806:C:H5'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1847:A:H4'	23:BB:1848:A:H8	1.78	0.49
23:BB:2327:A:H2'	23:BB:2328:A:C8	2.47	0.49
23:BB:2376:A:N6	43:BO:94:ARG:HD2	2.21	0.49
23:BB:2772:C:H4'	26:BD:171:THR:CG2	2.42	0.49
24:BI:56:VAL:CG2	24:BI:68:PHE:HB2	2.43	0.49
24:BI:74:PRO:O	24:BI:77:VAL:HG22	2.12	0.49
25:BC:242:HIS:O	25:BC:244:VAL:HG13	2.12	0.49
26:BD:186:LEU:HD21	28:BP:3:ILE:HD11	1.95	0.49
27:BK:64:ARG:NH2	28:BP:67:GLU:HG3	2.27	0.49
28:BP:63:ILE:HA	28:BP:67:GLU:O	2.13	0.49
29:BE:126:VAL:HG22	29:BE:127:GLU:N	2.22	0.49
29:BE:134:LEU:HD23	29:BE:161:ALA:HB2	1.93	0.49
30:BY:6:ILE:HG21	30:BY:47:ILE:HD11	1.94	0.49
30:BY:10:ARG:HB3	30:BY:10:ARG:NH2	2.27	0.49
30:BY:11:SER:OG	30:BY:13:ILE:HG13	2.12	0.49
39:BX:52:ARG:O	39:BX:56:LEU:HD23	2.13	0.49
40:BH:124:THR:HG22	40:BH:125:THR:H	1.78	0.49
45:BS:26:GLY:O	45:BS:28:LYS:N	2.46	0.49
48:BG:39:ALA:C	48:BG:54:ARG:HG3	2.38	0.49
48:BG:84:LYS:HG2	48:BG:85:LYS:N	2.23	0.49
49:BR:29:THR:O	49:BR:63:VAL:HG23	2.12	0.49
1:CA:397:A:H3'	1:CA:397:A:N3	2.27	0.49
1:CA:658:C:O2'	1:CA:659:U:H5'	2.12	0.49
1:CA:781:A:O2'	1:CA:1522:U:O2	2.30	0.49
1:CA:814:A:O2'	1:CA:815:A:H3'	2.13	0.49
1:CA:1432:G:H1'	1:CA:1468:A:H61	1.77	0.49
4:CE:97:PRO:HA	4:CE:122:VAL:HG12	1.93	0.49
4:CE:156:ARG:HH12	7:CH:42:GLU:HB3	1.76	0.49
5:CF:38:ARG:HE	5:CF:63:ASN:CG	2.21	0.49
5:CF:97:THR:HB	5:CF:98:GLU:OE1	2.13	0.49
11:CL:89:LEU:N	11:CL:89:LEU:HD22	2.28	0.49
2:CC:154:GLY:HA2	2:CC:163:ARG:O	2.13	0.49
6:CG:63:VAL:C	6:CG:65:LEU:N	2.71	0.49
8:CI:11:ARG:HA	8:CI:105:ARG:NH2	2.28	0.49
23:DB:41:C:O2'	23:DB:42:A:H5'	2.12	0.49
23:DB:492:A:H2'	23:DB:493:G:O4'	2.13	0.49
23:DB:526:A:N6	23:DB:2626:C:H4'	2.28	0.49
23:DB:593:U:H2'	23:DB:594:U:H6	1.74	0.49
23:DB:659:G:H4'	29:DE:95:LYS:HB3	1.95	0.49
23:DB:680:C:H2'	23:DB:681:G:C8	2.47	0.49
23:DB:863:A:H2'	23:DB:864:G:C8	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:955:U:P	38:DM:86:LYS:HZ3	2.34	0.49
23:DB:1026:G:OP2	23:DB:1134:A:H1'	2.13	0.49
23:DB:1119:U:H2'	23:DB:1120:G:C8	2.44	0.49
23:DB:1230:A:H2'	23:DB:1231:U:H6	1.73	0.49
23:DB:1237:A:H2'	23:DB:1237:A:N3	2.27	0.49
23:DB:1251:C:OP2	44:DQ:9:ALA:HB2	2.13	0.49
23:DB:1655:A:H5'	26:DD:118:PHE:HB2	1.95	0.49
23:DB:2291:U:H2'	23:DB:2292:U:H6	1.76	0.49
23:DB:2415:G:H2'	23:DB:2416:C:C6	2.48	0.49
23:DB:2665:A:O2'	23:DB:2666:C:H5'	2.12	0.49
25:DC:42:ARG:CZ	25:DC:48:ILE:HD11	2.43	0.49
26:DD:58:ASN:OD1	26:DD:59:ARG:HG3	2.13	0.49
26:DD:154:LYS:HG2	26:DD:155:VAL:N	2.26	0.49
40:DH:74:ALA:C	40:DH:76:GLU:H	2.20	0.49
40:DH:135:HIS:HD2	40:DH:138:VAL:HG23	1.77	0.49
41:DJ:88:THR:HG22	41:DJ:91:GLU:OE1	2.13	0.49
42:DN:35:LYS:HA	42:DN:111:ALA:O	2.12	0.49
42:DN:96:ARG:NE	42:DN:116:VAL:HA	2.28	0.49
44:DQ:9:ALA:C	44:DQ:11:ALA:N	2.70	0.49
44:DQ:88:GLU:HG2	49:DR:49:ILE:O	2.13	0.49
47:DF:102:LEU:O	47:DF:103:ILE:HB	2.13	0.49
47:DF:127:TYR:O	47:DF:155:ILE:HB	2.12	0.49
47:DF:169:LEU:HB3	47:DF:174:PHE:CD1	2.48	0.49
48:DG:17:LYS:HG3	48:DG:19:ASN:OD1	2.12	0.49
48:DG:72:ASN:O	48:DG:76:ILE:HG12	2.13	0.49
50:DT:23:ALA:C	50:DT:25:GLU:H	2.20	0.49
52:DW:9:THR:HG23	52:DW:10:ARG:HD3	1.95	0.49
1:AA:237:G:H5"	14:AQ:26:ARG:NH2	2.28	0.49
1:AA:255:G:H1'	14:AQ:17:GLU:OE2	2.13	0.49
1:AA:420:U:H2'	1:AA:422:C:C4	2.48	0.49
1:AA:524:G:H2'	1:AA:525:C:H6	1.77	0.49
1:AA:539:A:H2'	1:AA:540:G:H8	1.78	0.49
1:AA:821:G:H2'	1:AA:822:U:H6	1.77	0.49
1:AA:1053:G:C6	1:AA:1199:U:H2'	2.48	0.49
1:AA:1060:U:H2'	1:AA:1061:G:C8	2.47	0.49
1:AA:1132:C:H2'	1:AA:1133:G:C8	2.48	0.49
1:AA:1486:G:C2'	1:AA:1487:G:O4'	2.61	0.49
2:AC:96:VAL:CB	2:AC:97:PRO:HD2	2.41	0.49
4:AE:96:GLN:HB3	4:AE:123:LEU:CD1	2.42	0.49
6:AG:11:ILE:HG12	6:AG:24:LYS:HE2	1.94	0.49
8:AI:107:ALA:O	8:AI:108:ARG:C	2.55	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AJ:88:MET:HA	9:AJ:91:ASP:OD1	2.13	0.49
10:AK:36:ARG:HH11	10:AK:36:ARG:HG3	1.78	0.49
12:AM:92:ARG:NH1	16:AS:79:TYR:HE2	2.10	0.49
17:AT:49:ALA:C	17:AT:52:GLU:HB3	2.38	0.49
18:AB:52:ALA:O	18:AB:56:LEU:HD13	2.12	0.49
19:AU:40:PRO:C	19:AU:42:THR:N	2.71	0.49
23:BB:49:A:OP1	23:BB:51:G:H5'	2.13	0.49
23:BB:136:G:H8	23:BB:136:G:O5'	1.96	0.49
23:BB:409:G:H2'	23:BB:410:G:C8	2.48	0.49
23:BB:438:G:H2'	23:BB:439:A:C8	2.47	0.49
23:BB:445:C:H2'	23:BB:446:G:O4'	2.13	0.49
23:BB:627:A:H2'	23:BB:627:A:OP1	2.13	0.49
23:BB:1477:A:H2'	23:BB:1478:G:O4'	2.13	0.49
23:BB:1681:G:H21	23:BB:1762:A:H3'	1.78	0.49
23:BB:2340:A:H2'	23:BB:2341:G:H8	1.78	0.49
23:BB:2543:G:H2'	23:BB:2544:G:H8	1.75	0.49
23:BB:2579:C:O5'	23:BB:2579:C:H6	1.95	0.49
26:BD:38:LYS:HB2	26:BD:47:ALA:HB3	1.95	0.49
26:BD:148:GLN:CG	26:BD:152:PRO:HG2	2.43	0.49
26:BD:183:GLU:CD	26:BD:183:GLU:N	2.71	0.49
39:BX:23:ARG:HA	39:BX:27:ASN:H	1.77	0.49
40:BH:18:GLN:HE21	40:BH:39:ALA:CB	2.26	0.49
42:BN:58:ASP:O	42:BN:59:SER:HB3	2.12	0.49
52:BW:35:ILE:HG12	52:BW:35:ILE:O	2.12	0.49
1:CA:73:C:C2'	1:CA:74:A:H5'	2.43	0.49
1:CA:404:G:O2'	1:CA:405:U:H5'	2.12	0.49
1:CA:559:A:H4'	1:CA:560:A:H3'	1.95	0.49
1:CA:656:G:H2'	1:CA:657:U:H6	1.78	0.49
11:CL:106:VAL:HA	11:CL:107:LYS:HZ3	1.77	0.49
14:CQ:18:LYS:H	14:CQ:50:ASN:ND2	2.10	0.49
14:CQ:20:ILE:HG12	14:CQ:52:CYS:SG	2.52	0.49
15:CR:28:LEU:C	15:CR:30:ASN:H	2.19	0.49
17:CT:53:MET:HE3	17:CT:54:GLN:N	2.28	0.49
2:CC:106:ARG:NE	2:CC:106:ARG:N	2.54	0.49
12:CM:10:ASP:C	12:CM:12:LYS:H	2.21	0.49
21:CN:73:LEU:O	21:CN:74:ARG:C	2.56	0.49
16:CS:39:ILE:CD1	16:CS:68:HIS:H	2.25	0.49
18:CB:42:LEU:HA	18:CB:45:THR:OG1	2.13	0.49
18:CB:80:LYS:HG3	18:CB:81:ASP:N	2.27	0.49
23:DB:408:G:O2'	23:DB:409:G:H5'	2.13	0.49
23:DB:693:A:H2'	23:DB:694:U:H6	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:751:A:H5'	45:DS:90:LYS:HA	1.95	0.49
23:DB:917:A:H5"	23:DB:2268:A:N6	2.27	0.49
23:DB:992:C:H2'	23:DB:993:G:H8	1.77	0.49
23:DB:1526:C:H2'	23:DB:1527:G:O4'	2.12	0.49
23:DB:2094:A:H2'	23:DB:2095:A:H8	1.77	0.49
23:DB:2487:G:H2'	23:DB:2488:G:C8	2.48	0.49
23:DB:2488:G:H2'	23:DB:2489:U:C6	2.48	0.49
23:DB:2686:G:H2'	23:DB:2687:U:C6	2.48	0.49
25:DC:102:TYR:C	25:DC:103:ILE:HG13	2.37	0.49
29:DE:46:GLN:HG3	29:DE:87:ALA:HB3	1.95	0.49
29:DE:145:ASP:H	29:DE:166:LYS:CB	2.26	0.49
37:DL:109:LYS:HB2	37:DL:111:ILE:HD11	1.94	0.49
39:DX:49:ASP:O	39:DX:53:VAL:HG23	2.13	0.49
40:DH:5:LEU:C	40:DH:7:ASP:H	2.21	0.49
40:DH:135:HIS:CD2	40:DH:138:VAL:HG23	2.48	0.49
42:DN:17:ARG:C	42:DN:19:ALA:H	2.21	0.49
44:DQ:96:ASP:C	44:DQ:98:ALA:H	2.19	0.49
45:DS:55:ILE:HD12	45:DS:107:VAL:HG21	1.94	0.49
47:DF:24:VAL:C	47:DF:26:GLN:H	2.21	0.49
48:DG:59:ASP:O	48:DG:63:GLN:HB2	2.13	0.49
48:DG:91:VAL:C	48:DG:93:TYR:H	2.21	0.49
48:DG:149:ALA:C	48:DG:151:ARG:H	2.21	0.49
49:DR:31:GLU:H	49:DR:63:VAL:CG2	2.25	0.49
52:DW:43:LYS:HE3	52:DW:68:PHE:HE1	1.78	0.49
1:AA:370:C:H2'	1:AA:371:A:C8	2.47	0.48
1:AA:373:A:P	1:AA:373:A:H3'	2.53	0.48
1:AA:406:G:N2	3:AD:115:GLN:HE22	2.10	0.48
2:AC:155:ARG:NH1	2:AC:160:GLU:HA	2.28	0.48
3:AD:117:VAL:O	3:AD:130:ASN:HA	2.12	0.48
4:AE:39:GLY:HA3	4:AE:116:VAL:O	2.13	0.48
4:AE:113:VAL:O	4:AE:114:LEU:C	2.55	0.48
7:AH:10:LEU:HA	7:AH:74:ILE:HD11	1.95	0.48
8:AI:41:GLU:C	8:AI:43:ALA:H	2.21	0.48
17:AT:54:GLN:N	17:AT:55:PRO:HD2	2.27	0.48
18:AB:134:LEU:HA	18:AB:137:THR:OG1	2.12	0.48
18:AB:136:ARG:O	18:AB:139:GLU:HB3	2.13	0.48
22:BA:35:C:H2'	22:BA:36:C:O4'	2.13	0.48
23:BB:688:U:H2'	23:BB:689:A:H8	1.78	0.48
23:BB:1306:C:O2'	23:BB:1307:A:H5'	2.13	0.48
23:BB:1544:A:H2'	23:BB:1545:A:C8	2.48	0.48
23:BB:1593:A:H2'	23:BB:1594:U:H6	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1711:A:H2'	23:BB:1712:U:C6	2.48	0.48
23:BB:1993:U:H4'	26:BD:133:THR:HG21	1.95	0.48
24:BI:21:PRO:CB	24:BI:22:PRO:HD3	2.39	0.48
26:BD:1:MET:SD	26:BD:2:ILE:N	2.85	0.48
26:BD:106:LYS:HB3	26:BD:206:ALA:CB	2.43	0.48
26:BD:118:PHE:O	26:BD:119:ALA:CB	2.61	0.48
27:BK:17:ARG:HB3	27:BK:45:GLU:HG3	1.93	0.48
29:BE:131:THR:HG22	29:BE:161:ALA:H	1.78	0.48
31:B0:32:THR:OG1	31:B0:50:GLY:HA2	2.12	0.48
32:B4:15:LYS:O	32:B4:16:ILE:HB	2.13	0.48
41:BJ:20:ALA:HB2	41:BJ:28:LEU:HD13	1.94	0.48
41:BJ:46:PRO:C	41:BJ:48:VAL:H	2.21	0.48
43:BO:105:ALA:C	43:BO:107:ALA:H	2.19	0.48
44:BQ:75:TYR:O	44:BQ:79:ILE:HG22	2.13	0.48
45:BS:45:VAL:HG23	45:BS:46:LEU:N	2.28	0.48
46:BU:73:ASN:OD1	46:BU:75:ALA:HB3	2.13	0.48
47:BF:141:ASP:CB	47:BF:144:LYS:HB2	2.43	0.48
48:BG:145:ALA:O	48:BG:149:ALA:N	2.44	0.48
50:BT:4:GLU:C	50:BT:6:ARG:H	2.20	0.48
1:CA:160:A:H2'	1:CA:161:A:O4'	2.14	0.48
1:CA:755:G:O2'	1:CA:756:C:H5'	2.13	0.48
1:CA:922:G:H2'	1:CA:923:A:H8	1.78	0.48
1:CA:1237:C:H2'	1:CA:1336:C:C5	2.48	0.48
3:CD:117:VAL:O	3:CD:130:ASN:HA	2.13	0.48
4:CE:37:VAL:HG12	4:CE:47:PHE:HB2	1.94	0.48
7:CH:37:ASN:O	7:CH:41:GLU:HG2	2.13	0.48
10:CK:65:ALA:O	10:CK:68:ARG:HB3	2.12	0.48
8:CI:52:GLU:O	8:CI:53:LEU:HD22	2.12	0.48
9:CJ:7:ARG:HG2	9:CJ:75:ASP:OD2	2.13	0.48
9:CJ:9:ARG:HB2	9:CJ:99:GLN:CB	2.43	0.48
12:CM:13:HIS:HB3	12:CM:40:GLU:O	2.12	0.48
20:CO:25:THR:O	20:CO:26:GLU:C	2.56	0.48
22:DA:96:G:O2'	22:DA:97:C:H5'	2.13	0.48
23:DB:15:G:O2'	23:DB:16:C:H5'	2.13	0.48
23:DB:79:C:O2'	23:DB:346:A:H1'	2.13	0.48
23:DB:560:C:H3'	23:DB:561:G:H8	1.78	0.48
23:DB:714:U:O2	23:DB:716:A:H3'	2.13	0.48
23:DB:796:C:H2'	23:DB:797:G:C8	2.48	0.48
23:DB:1550:C:H2'	23:DB:1551:A:C8	2.48	0.48
23:DB:1947:C:O2'	23:DB:1948:G:H5'	2.12	0.48
23:DB:2312:U:H4'	47:DF:84:ILE:HG21	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2519:U:C6	23:DB:2542:A:N6	2.81	0.48
23:DB:2553:G:H2'	23:DB:2554:U:O4'	2.13	0.48
23:DB:2633:G:H2'	23:DB:2634:A:O4'	2.13	0.48
23:DB:2636:C:O2'	23:DB:2637:U:H5'	2.13	0.48
23:DB:2654:A:N1	23:DB:2665:A:H5"	2.28	0.48
23:DB:2897:U:H2'	23:DB:2898:U:C6	2.48	0.48
24:DI:79:LEU:HD12	24:DI:135:MET:SD	2.52	0.48
25:DC:155:ARG:HH11	25:DC:155:ARG:HB3	1.77	0.48
25:DC:209:ALA:HA	25:DC:212:TRP:NE1	2.28	0.48
25:DC:242:HIS:O	25:DC:244:VAL:HG13	2.13	0.48
25:DC:250:GLN:HG2	25:DC:250:GLN:O	2.13	0.48
27:DK:2:ILE:HG22	27:DK:32:TYR:HB3	1.94	0.48
29:DE:62:GLN:HE21	29:DE:62:GLN:HB2	1.52	0.48
33:D1:36:LYS:HG3	33:D1:46:VAL:O	2.13	0.48
33:D1:49:LYS:HG2	33:D1:50:GLU:N	2.16	0.48
35:DV:14:LYS:CE	35:DV:18:ARG:HH21	2.24	0.48
35:DV:65:VAL:O	35:DV:67:GLY:N	2.44	0.48
37:DL:134:ALA:O	37:DL:137:ALA:HB3	2.13	0.48
40:DH:60:GLU:C	40:DH:62:LEU:H	2.20	0.48
40:DH:70:GLU:OE1	40:DH:71:LYS:HD2	2.12	0.48
41:DJ:15:TRP:HB3	41:DJ:137:PRO:HB3	1.94	0.48
42:DN:72:ASP:OD2	42:DN:74:GLU:HB3	2.13	0.48
43:DO:47:VAL:HG12	43:DO:48:LEU:N	2.22	0.48
43:DO:105:ALA:O	43:DO:106:LEU:HG	2.13	0.48
45:DS:28:LYS:HB2	45:DS:31:GLN:HB2	1.95	0.48
46:DU:53:GLN:HG2	46:DU:53:GLN:O	2.13	0.48
49:DR:39:LEU:HD23	49:DR:39:LEU:N	2.28	0.48
50:DT:39:THR:C	50:DT:41:ALA:H	2.21	0.48
51:DZ:5:CYS:HB3	51:DZ:9:GLY:N	2.27	0.48
1:AA:363:A:P	11:AL:57:THR:HG21	2.54	0.48
1:AA:845:A:H3'	1:AA:846:G:H8	1.78	0.48
1:AA:985:C:H2'	1:AA:986:U:C6	2.49	0.48
1:AA:986:U:C1'	16:AS:54:ARG:HB3	2.43	0.48
1:AA:1039:G:H2'	1:AA:1040:U:C6	2.48	0.48
1:AA:1040:U:H2'	1:AA:1041:G:C8	2.47	0.48
1:AA:1067:A:H4'	1:AA:1068:G:O5'	2.13	0.48
1:AA:1273:C:H2'	1:AA:1274:A:O4'	2.13	0.48
1:AA:1355:G:H2'	1:AA:1356:G:C8	2.48	0.48
11:AL:30:ARG:O	11:AL:57:THR:HG23	2.13	0.48
11:AL:89:LEU:N	11:AL:89:LEU:HD22	2.28	0.48
12:AM:100:ARG:C	12:AM:102:LYS:H	2.20	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AQ:15:LYS:O	14:AQ:16:MET:C	2.56	0.48
22:BA:83:G:OP1	30:BY:16:LEU:HD23	2.14	0.48
23:BB:1312:U:H4'	23:BB:1313:U:O5'	2.13	0.48
23:BB:1623:G:O2'	23:BB:1624:U:H5'	2.13	0.48
23:BB:1747:U:H2'	23:BB:1748:C:H6	1.77	0.48
23:BB:1808:A:O2'	23:BB:1809:A:H5'	2.13	0.48
23:BB:2243:U:H2'	23:BB:2244:U:C6	2.48	0.48
23:BB:2355:G:H4'	52:BW:20:LEU:CD1	2.42	0.48
23:BB:2389:G:C5'	23:BB:2390:U:H5'	2.42	0.48
23:BB:2419:U:OP2	34:B3:32:LEU:HD13	2.13	0.48
23:BB:2551:C:H2'	23:BB:2552:U:O4'	2.14	0.48
23:BB:2853:C:H2'	23:BB:2854:G:H8	1.77	0.48
28:BP:16:VAL:O	28:BP:16:VAL:HG23	2.13	0.48
29:BE:115:GLN:C	29:BE:117:ARG:H	2.21	0.48
40:BH:29:PHE:O	40:BH:30:LEU:C	2.55	0.48
42:BN:49:GLU:HA	42:BN:94:TYR:HD2	1.78	0.48
42:BN:72:ASP:OD2	42:BN:74:GLU:HB3	2.14	0.48
44:BQ:57:ARG:C	44:BQ:59:LEU:N	2.71	0.48
46:BU:3:LYS:CB	46:BU:82:VAL:HG21	2.38	0.48
46:BU:48:VAL:O	46:BU:50:ALA:N	2.46	0.48
49:BR:49:ILE:HG12	49:BR:53:PHE:HA	1.95	0.48
1:CA:375:U:OP1	13:CP:70:ARG:HB2	2.13	0.48
1:CA:651:C:H2'	1:CA:652:U:C6	2.48	0.48
1:CA:853:C:O2'	1:CA:854:U:H5'	2.13	0.48
1:CA:1328:C:H5"	12:CM:27:THR:CG2	2.42	0.48
4:CE:81:GLN:HG2	4:CE:148:SER:HA	1.95	0.48
15:CR:22:TYR:C	15:CR:24:ASP:H	2.22	0.48
6:CG:130:LYS:HD3	6:CG:130:LYS:C	2.38	0.48
8:CI:48:ARG:O	8:CI:52:GLU:N	2.44	0.48
9:CJ:52:LEU:H	9:CJ:52:LEU:CD1	2.22	0.48
21:CN:10:VAL:HB	21:CN:11:LYS:NZ	2.28	0.48
18:CB:100:LEU:HD23	18:CB:174:GLU:C	2.38	0.48
23:DB:17:G:H2'	23:DB:18:U:H6	1.79	0.48
23:DB:195:A:H1'	23:DB:250:G:N2	2.28	0.48
23:DB:721:A:H2'	23:DB:722:A:C8	2.47	0.48
23:DB:942:G:H2'	23:DB:943:A:H8	1.78	0.48
23:DB:1099:G:O2'	23:DB:1100:C:H5'	2.13	0.48
23:DB:1259:G:H2'	23:DB:1260:A:H8	1.78	0.48
23:DB:1677:A:H2'	23:DB:1678:A:C8	2.48	0.48
23:DB:1952:A:H5'	27:DK:42:THR:HG21	1.95	0.48
23:DB:2428:G:H5"	23:DB:2429:G:OP1	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2645:G:H5"	23:DB:2732:G:C8	2.44	0.48
23:DB:2680:U:OP2	26:DD:114:LYS:HB3	2.12	0.48
26:DD:106:LYS:HB3	26:DD:206:ALA:HB3	1.95	0.48
27:DK:19:VAL:HB	27:DK:41:ILE:CD1	2.43	0.48
27:DK:92:GLU:HB2	27:DK:93:GLN:HE21	1.77	0.48
28:DP:3:ILE:HD13	28:DP:3:ILE:C	2.38	0.48
28:DP:47:ILE:HA	28:DP:96:LEU:HB2	1.94	0.48
29:DE:88:ARG:O	29:DE:90:GLN:HG3	2.13	0.48
42:DN:83:LEU:HD21	42:DN:115:LEU:HD11	1.95	0.48
43:DO:26:LEU:O	43:DO:26:LEU:HG	2.12	0.48
44:DQ:59:LEU:HD13	44:DQ:60:TRP:N	2.28	0.48
44:DQ:96:ASP:C	44:DQ:98:ALA:N	2.70	0.48
48:DG:106:LEU:HD13	48:DG:151:ARG:HB2	1.94	0.48
51:DZ:14:THR:HA	51:DZ:28:ARG:HA	1.95	0.48
1:AA:254:G:H4'	14:AQ:19:SER:OG	2.13	0.48
1:AA:502:A:H4'	1:AA:550:G:H4'	1.95	0.48
1:AA:613:C:H2'	1:AA:614:C:H6	1.78	0.48
1:AA:724:G:H2'	1:AA:725:G:C8	2.45	0.48
1:AA:1102:A:H8	1:AA:1102:A:OP2	1.95	0.48
1:AA:1231:G:H2'	1:AA:1232:U:H6	1.75	0.48
1:AA:1499:A:O2'	1:AA:1500:A:H5'	2.12	0.48
2:AC:57:GLU:CD	2:AC:64:ARG:HG2	2.38	0.48
6:AG:150:PHE:H	10:AK:55:ARG:NH2	2.11	0.48
14:AQ:46:HIS:HB2	14:AQ:66:LEU:HD13	1.95	0.48
21:AN:26:LEU:HD23	21:AN:27:LYS:H	1.78	0.48
21:AN:45:LEU:O	21:AN:45:LEU:HD23	2.14	0.48
21:AN:86:ALA:HB3	21:AN:92:ILE:HD11	1.94	0.48
23:BB:150:U:O2'	23:BB:151:C:H5'	2.12	0.48
23:BB:172:A:H2'	23:BB:173:A:C8	2.48	0.48
23:BB:328:U:H4'	46:BU:65:GLN:CD	2.37	0.48
23:BB:416:U:H2'	23:BB:417:C:C6	2.48	0.48
23:BB:1059:G:H2'	23:BB:1060:U:C5	2.48	0.48
23:BB:1361:G:H2'	23:BB:1362:C:C6	2.49	0.48
23:BB:1859:U:O5'	23:BB:1859:U:H6	1.97	0.48
23:BB:2530:A:H2'	23:BB:2531:A:H5"	1.95	0.48
23:BB:2656:U:H2'	23:BB:2657:A:H8	1.77	0.48
23:BB:2783:U:H2'	23:BB:2784:U:C6	2.48	0.48
26:BD:11:MET:H	26:BD:25:THR:HA	1.78	0.48
29:BE:28:VAL:HG23	29:BE:29:HIS:N	2.28	0.48
37:BL:76:GLU:HG3	37:BL:111:ILE:HG13	1.94	0.48
40:BH:90:LEU:HD23	40:BH:92:GLY:H	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BJ:83:GLY:O	41:BJ:84:ILE:C	2.57	0.48
42:BN:28:LEU:N	42:BN:34:ILE:HD11	2.28	0.48
42:BN:55:ALA:HA	42:BN:80:PHE:CD1	2.48	0.48
43:BO:100:HIS:C	43:BO:104:GLN:HB2	2.38	0.48
44:BQ:33:VAL:O	44:BQ:34:ALA:C	2.57	0.48
45:BS:28:LYS:HB2	45:BS:31:GLN:HB2	1.95	0.48
46:BU:35:VAL:HG23	46:BU:38:ILE:HG21	1.95	0.48
47:BF:111:ARG:HE	47:BF:135:ILE:CG2	2.26	0.48
48:BG:33:THR:HA	48:BG:34:ARG:NH1	2.28	0.48
48:BG:143:VAL:O	48:BG:147:LEU:HG	2.13	0.48
49:BR:2:TYR:N	49:BR:42:ALA:HB2	2.27	0.48
1:CA:22:G:H4'	1:CA:885:G:C8	2.49	0.48
1:CA:65:A:C2	1:CA:381:C:H2'	2.49	0.48
1:CA:83:C:H1'	1:CA:84:U:C5	2.48	0.48
1:CA:191:G:H8	1:CA:191:G:OP2	1.96	0.48
1:CA:706:A:H4'	10:CK:30:ILE:HD11	1.95	0.48
1:CA:895:G:H2'	1:CA:896:C:C6	2.48	0.48
1:CA:939:G:H4'	6:CG:101:ARG:HH22	1.78	0.48
1:CA:1053:G:H4'	1:CA:1054:C:H5'	1.95	0.48
7:CH:54:THR:HG23	7:CH:55:LYS:N	2.28	0.48
2:CC:34:SER:OG	2:CC:58:ARG:NH1	2.46	0.48
9:CJ:32:THR:OG1	9:CJ:82:LYS:HB2	2.14	0.48
18:CB:57:ASN:OD1	18:CB:57:ASN:N	2.47	0.48
18:CB:95:TRP:CD1	18:CB:171:ALA:HB2	2.47	0.48
18:CB:116:LEU:HD23	18:CB:119:GLN:HG3	1.95	0.48
23:DB:443:A:C5	29:DE:40:ARG:HD3	2.48	0.48
23:DB:467:G:O2'	23:DB:468:G:H5'	2.13	0.48
23:DB:1099:G:O5'	24:DI:4:VAL:HG12	2.13	0.48
23:DB:1118:C:H2'	23:DB:1119:U:O4'	2.12	0.48
23:DB:1212:G:H1'	23:DB:1236:G:N2	2.28	0.48
23:DB:1564:C:H2'	23:DB:1565:C:C6	2.48	0.48
23:DB:1842:G:H2'	23:DB:1843:C:C6	2.48	0.48
23:DB:2281:A:H4'	23:DB:2389:G:N2	2.28	0.48
23:DB:2784:U:O2'	23:DB:2785:C:H5'	2.14	0.48
23:DB:2809:A:H2'	23:DB:2810:A:C8	2.48	0.48
24:DI:19:PRO:HB2	24:DI:22:PRO:HD2	1.95	0.48
25:DC:70:LYS:HD3	25:DC:95:TYR:CE1	2.48	0.48
26:DD:62:LYS:HD2	26:DD:62:LYS:N	2.28	0.48
26:DD:148:GLN:CG	26:DD:152:PRO:HG2	2.42	0.48
42:DN:2:ARG:HB3	42:DN:2:ARG:NH1	2.27	0.48
44:DQ:33:VAL:HG23	44:DQ:34:ALA:N	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:64:ILE:HD11	46:DU:68:ASN:HD22	1.77	0.48
47:DF:76:PHE:HD2	47:DF:78:ILE:HD13	1.78	0.48
48:DG:39:ALA:C	48:DG:54:ARG:HG3	2.38	0.48
1:AA:811:C:O2'	1:AA:901:A:N1	2.46	0.48
1:AA:987:G:N2	1:AA:1015:G:N2	2.62	0.48
1:AA:1011:C:O2'	1:AA:1012:A:H5'	2.13	0.48
1:AA:1080:A:H5"	4:AE:20:VAL:HG11	1.96	0.48
1:AA:1228:C:H5'	1:AA:1229:A:OP2	2.14	0.48
1:AA:1351:U:O2'	1:AA:1352:C:H5'	2.13	0.48
2:AC:19:SER:HB3	2:AC:21:TRP:NE1	2.28	0.48
2:AC:39:ARG:CD	2:AC:56:ILE:HD11	2.42	0.48
4:AE:46:GLY:CA	4:AE:70:MET:HA	2.40	0.48
5:AF:51:ILE:O	5:AF:51:ILE:HG23	2.14	0.48
6:AG:71:THR:O	6:AG:72:VAL:HG13	2.12	0.48
8:AI:66:VAL:O	8:AI:66:VAL:HG13	2.14	0.48
18:AB:46:VAL:N	18:AB:47:PRO:CD	2.76	0.48
23:BB:233:A:N6	23:BB:428:A:H61	2.11	0.48
23:BB:483:A:H5"	46:BU:46:LYS:HG3	1.96	0.48
23:BB:510:C:H2'	23:BB:511:U:O4'	2.14	0.48
23:BB:795:C:H2'	23:BB:796:C:C6	2.49	0.48
23:BB:876:C:H2'	23:BB:877:A:OP1	2.14	0.48
23:BB:1501:G:O2'	23:BB:1502:A:H5'	2.12	0.48
23:BB:1535:A:O2'	23:BB:1536:C:H5'	2.14	0.48
23:BB:1589:U:H2'	23:BB:1590:A:C8	2.48	0.48
23:BB:1824:G:O2'	23:BB:1825:U:H5'	2.14	0.48
23:BB:2075:U:H2'	23:BB:2238:G:N2	2.29	0.48
23:BB:2276:G:O2'	23:BB:2277:G:H5'	2.12	0.48
23:BB:2353:G:N3	52:BW:30:VAL:HG13	2.29	0.48
23:BB:2531:A:H2'	23:BB:2531:A:N3	2.29	0.48
23:BB:2787:C:H4'	26:BD:62:LYS:HB3	1.96	0.48
25:BC:70:LYS:HG3	25:BC:101:ARG:NH1	2.29	0.48
26:BD:111:GLY:N	26:BD:194:PRO:HG2	2.26	0.48
38:BM:83:GLY:O	38:BM:84:LYS:HG2	2.13	0.48
38:BM:102:LEU:HD22	38:BM:102:LEU:N	2.28	0.48
41:BJ:25:LEU:O	41:BJ:27:ARG:N	2.45	0.48
42:BN:29:VAL:HG13	42:BN:83:LEU:HD22	1.95	0.48
44:BQ:104:ALA:C	44:BQ:106:THR:H	2.21	0.48
46:BU:66:VAL:C	46:BU:68:ASN:H	2.22	0.48
47:BF:2:LYS:HE3	47:BF:2:LYS:N	2.28	0.48
49:BR:39:LEU:HD23	49:BR:39:LEU:N	2.29	0.48
50:BT:43:ILE:CG2	50:BT:58:VAL:HG21	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:77:LYS:O	51:BZ:78:TYR:HB3	2.13	0.48
1:CA:472:U:H2'	1:CA:473:U:C6	2.48	0.48
1:CA:499:A:H1'	1:CA:500:G:C8	2.48	0.48
1:CA:842:U:OP1	1:CA:842:U:H6	1.96	0.48
1:CA:919:A:O2'	1:CA:920:U:H5'	2.12	0.48
3:CD:167:PRO:HG2	3:CD:170:LEU:HD11	1.94	0.48
5:CF:62:MET:HG3	5:CF:64:VAL:CG2	2.42	0.48
7:CH:43:GLY:HA2	7:CH:63:LYS:NZ	2.29	0.48
19:CU:35:GLU:HB2	19:CU:37:TYR:CZ	2.49	0.48
2:CC:39:ARG:CG	2:CC:56:ILE:HD11	2.43	0.48
12:CM:2:ARG:HB3	12:CM:6:ILE:N	2.28	0.48
12:CM:6:ILE:O	12:CM:7:ASN:C	2.57	0.48
12:CM:14:ALA:HB1	12:CM:33:LEU:CD2	2.43	0.48
12:CM:15:VAL:HG23	12:CM:16:ILE:N	2.28	0.48
12:CM:74:MET:HA	12:CM:77:LYS:HB3	1.95	0.48
12:CM:76:ILE:O	12:CM:79:LEU:HG	2.13	0.48
18:CB:16:GLY:HA2	18:CB:40:ILE:CG1	2.44	0.48
18:CB:118:THR:O	18:CB:122:ASP:N	2.45	0.48
23:DB:125:A:H3'	23:DB:126:A:C5'	2.44	0.48
23:DB:271:G:N2	23:DB:367:G:H1'	2.28	0.48
23:DB:341:C:H2'	23:DB:342:A:C8	2.49	0.48
23:DB:903:C:H2'	23:DB:904:G:H8	1.79	0.48
23:DB:945:A:OP2	23:DB:945:A:H4'	2.13	0.48
23:DB:1098:A:H3'	24:DI:3:LYS:CB	2.42	0.48
23:DB:1504:A:H2'	23:DB:1505:A:C8	2.48	0.48
23:DB:1645:G:H5"	23:DB:1646:C:H5'	1.95	0.48
23:DB:1778:U:H2'	23:DB:1784:A:N6	2.26	0.48
23:DB:1997:C:H2'	23:DB:1998:A:C8	2.48	0.48
23:DB:2010:G:H2'	23:DB:2011:U:C6	2.49	0.48
23:DB:2029:G:H2'	23:DB:2031:A:OP1	2.13	0.48
23:DB:2339:C:H2'	23:DB:2340:A:C8	2.48	0.48
23:DB:2710:C:H2'	23:DB:2711:A:H8	1.78	0.48
26:DD:89:GLU:HG3	26:DD:94:GLN:OE1	2.13	0.48
27:DK:112:PHE:O	27:DK:113:MET:C	2.56	0.48
29:DE:115:GLN:C	29:DE:117:ARG:H	2.20	0.48
30:DY:37:ARG:HG3	30:DY:38:GLU:OE1	2.13	0.48
35:DV:60:VAL:HG12	35:DV:61:LEU:H	1.78	0.48
39:DX:39:GLN:HB3	39:DX:41:HIS:HE2	1.78	0.48
40:DH:94:ILE:O	40:DH:122:LEU:HB2	2.13	0.48
44:DQ:104:ALA:HA	49:DR:46:GLU:CD	2.38	0.48
45:DS:24:ILE:O	45:DS:25:ARG:C	2.56	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:102:LEU:HD13	47:DF:103:ILE:N	2.28	0.48
47:DF:107:VAL:HB	47:DF:108:PRO:HD3	1.96	0.48
47:DF:111:ARG:HE	47:DF:135:ILE:CG2	2.24	0.48
48:DG:76:ILE:HB	48:DG:82:PHE:CZ	2.48	0.48
50:DT:4:GLU:C	50:DT:6:ARG:H	2.22	0.48
52:DW:23:LYS:NZ	52:DW:24:ARG:HG3	2.28	0.48
1:AA:51:A:H5"	1:AA:52:C:H5"	1.96	0.48
1:AA:186:C:H2'	1:AA:187:G:O4'	2.13	0.48
1:AA:240:G:OP1	1:AA:240:G:H4'	2.14	0.48
1:AA:565:U:H3'	1:AA:566:G:H2'	1.94	0.48
1:AA:682:G:O2'	1:AA:683:G:H5'	2.13	0.48
1:AA:696:A:O2'	1:AA:697:U:H5'	2.13	0.48
1:AA:779:C:H2'	1:AA:780:A:O4'	2.13	0.48
3:AD:18:LEU:HD23	3:AD:20:LEU:HD11	1.96	0.48
8:AI:11:ARG:H	8:AI:14:SER:CB	2.25	0.48
11:AL:106:VAL:HG23	11:AL:116:TYR:HB3	1.95	0.48
12:AM:2:ARG:HA	12:AM:8:ILE:HG23	1.93	0.48
14:AQ:17:GLU:O	14:AQ:18:LYS:HB2	2.14	0.48
18:AB:53:LEU:C	18:AB:55:GLU:N	2.72	0.48
19:AU:34:ARG:NE	19:AU:34:ARG:C	2.72	0.48
20:AO:26:GLU:HG3	20:AO:77:ARG:HH12	1.78	0.48
22:BA:113:C:H1'	43:BO:46:GLU:HA	1.96	0.48
23:BB:138:U:H2'	23:BB:140:C:O4'	2.13	0.48
23:BB:272:A:H2'	23:BB:273:G:C8	2.47	0.48
23:BB:292:U:H2'	23:BB:293:U:O4'	2.14	0.48
23:BB:350:G:H2'	23:BB:351:C:C6	2.48	0.48
23:BB:492:A:H2'	23:BB:493:G:O4'	2.13	0.48
23:BB:757:G:H2'	23:BB:758:C:H5'	1.95	0.48
23:BB:1039:A:H4'	35:BV:46:LYS:NZ	2.28	0.48
23:BB:1518:C:H2'	23:BB:1519:G:C8	2.48	0.48
23:BB:1561:C:H2'	23:BB:1562:U:C6	2.49	0.48
23:BB:2010:G:H2'	23:BB:2011:U:C6	2.48	0.48
23:BB:2305:U:O2'	47:BF:132:ARG:HA	2.12	0.48
23:BB:2417:C:O2'	23:BB:2418:A:H5'	2.13	0.48
23:BB:2676:C:H2'	23:BB:2677:G:C8	2.48	0.48
23:BB:2849:U:H4'	23:BB:2850:A:C5'	2.43	0.48
23:BB:2869:G:H2'	23:BB:2870:C:H6	1.78	0.48
25:BC:92:LEU:HD11	25:BC:100:ARG:HB2	1.95	0.48
28:BP:19:PHE:HE2	28:BP:83:ILE:HD11	1.77	0.48
30:BY:8:GLN:HB3	30:BY:31:ILE:O	2.13	0.48
39:BX:7:ARG:HE	39:BX:7:ARG:HA	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BS:13:SER:OG	45:BS:14:ALA:N	2.47	0.48
47:BF:71:LYS:O	47:BF:72:SER:HB3	2.13	0.48
47:BF:137:PHE:O	47:BF:138:PRO:C	2.55	0.48
52:BW:9:THR:HG23	52:BW:10:ARG:HD3	1.95	0.48
1:CA:300:A:H2'	1:CA:301:G:O4'	2.13	0.48
1:CA:321:A:O2'	1:CA:322:C:H5'	2.12	0.48
1:CA:714:G:H2'	1:CA:715:A:C8	2.49	0.48
1:CA:792:A:H4'	1:CA:793:U:O5'	2.13	0.48
1:CA:942:G:H21	8:CI:125:GLN:NE2	2.03	0.48
1:CA:958:A:N1	16:CS:53:GLY:HA3	2.27	0.48
1:CA:1237:C:O2'	1:CA:1300:G:N2	2.44	0.48
1:CA:1238:A:H2	1:CA:1241:G:N3	2.12	0.48
10:CK:23:HIS:HB3	10:CK:30:ILE:CG1	2.42	0.48
11:CL:80:LEU:HB3	11:CL:97:VAL:CG2	2.44	0.48
13:CP:6:LEU:HB3	13:CP:17:TYR:HB3	1.94	0.48
13:CP:41:PRO:O	13:CP:42:ILE:HD13	2.13	0.48
15:CR:42:ARG:C	15:CR:44:THR:H	2.20	0.48
6:CG:75:LYS:HZ2	6:CG:76:SER:N	1.96	0.48
12:CM:48:SER:O	12:CM:52:ILE:HG22	2.13	0.48
21:CN:60:ARG:O	21:CN:62:ARG:HG3	2.13	0.48
16:CS:10:ILE:HG22	16:CS:14:LEU:CD2	2.41	0.48
23:DB:663:G:OP1	37:DL:17:LYS:HG2	2.13	0.48
23:DB:1446:C:H2'	23:DB:1447:C:C6	2.49	0.48
23:DB:1464:G:H2'	23:DB:1465:G:H8	1.77	0.48
23:DB:2578:G:N7	26:DD:145:SER:HB2	2.28	0.48
23:DB:2623:G:O2'	23:DB:2624:G:H5'	2.13	0.48
25:DC:76:VAL:HA	25:DC:114:GLN:HA	1.96	0.48
26:DD:106:LYS:CB	26:DD:206:ALA:H	2.23	0.48
26:DD:154:LYS:HD3	26:DD:154:LYS:H	1.79	0.48
26:DD:168:GLU:O	26:DD:169:ARG:C	2.57	0.48
26:DD:187:LEU:HD12	26:DD:188:LEU:H	1.78	0.48
28:DP:19:PHE:CZ	28:DP:25:VAL:HG11	2.47	0.48
29:DE:131:THR:HG22	29:DE:161:ALA:H	1.79	0.48
29:DE:136:GLN:HB2	29:DE:139:LYS:HE3	1.94	0.48
32:D4:1:MET:HE3	32:D4:34:LYS:HG2	1.95	0.48
33:D1:8:ILE:CD1	33:D1:9:LYS:H	2.26	0.48
35:DV:42:LEU:HD23	35:DV:42:LEU:N	2.29	0.48
35:DV:63:ILE:HB	35:DV:70:ILE:CG1	2.43	0.48
41:DJ:20:ALA:HB2	41:DJ:28:LEU:CD1	2.43	0.48
47:DF:146:ASP:O	47:DF:147:ARG:C	2.56	0.48
50:DT:21:SER:O	50:DT:25:GLU:HB2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DZ:59:ILE:CD1	51:DZ:67:VAL:HG21	2.44	0.48
51:DZ:68:LEU:O	51:DZ:69:ALA:C	2.57	0.48
1:AA:315:A:H5"	1:AA:317:U:OP2	2.14	0.48
1:AA:585:G:O2'	1:AA:586:C:H5'	2.13	0.48
1:AA:756:C:H2'	1:AA:757:U:O4'	2.14	0.48
1:AA:757:U:O2'	1:AA:879:C:H1'	2.13	0.48
1:AA:895:G:H2'	1:AA:896:C:H6	1.79	0.48
1:AA:1217:C:H2'	1:AA:1218:C:C6	2.48	0.48
1:AA:1404:C:H2'	1:AA:1405:G:C8	2.48	0.48
2:AC:40:GLN:HG3	2:AC:41:TYR:H	1.77	0.48
2:AC:152:VAL:HG23	2:AC:165:GLU:HB3	1.96	0.48
3:AD:197:HIS:ND1	3:AD:198:LEU:N	2.61	0.48
4:AE:56:PRO:HA	4:AE:59:ILE:CD1	2.44	0.48
5:AF:22:ILE:O	5:AF:26:THR:HG23	2.13	0.48
7:AH:46:GLU:N	7:AH:63:LYS:HE3	2.29	0.48
7:AH:68:LYS:HD2	7:AH:69:ALA:H	1.79	0.48
8:AI:63:TYR:C	8:AI:64:ILE:HD12	2.39	0.48
9:AJ:44:THR:OG1	9:AJ:70:HIS:HA	2.14	0.48
10:AK:65:ALA:O	10:AK:68:ARG:HB3	2.13	0.48
17:AT:72:ALA:HA	17:AT:75:LYS:HD3	1.95	0.48
18:AB:18:GLN:O	18:AB:37:VAL:HG23	2.14	0.48
18:AB:44:LYS:C	18:AB:47:PRO:HD2	2.38	0.48
22:BA:116:G:H4'	43:BO:54:VAL:HG22	1.96	0.48
23:BB:170:U:H2'	23:BB:171:U:H6	1.77	0.48
23:BB:397:U:H5"	51:BZ:32:ASN:ND2	2.28	0.48
23:BB:996:A:O3'	44:BQ:91:ARG:HG2	2.14	0.48
23:BB:1005:C:H2'	23:BB:1006:C:C6	2.48	0.48
23:BB:1222:U:P	49:BR:90:ARG:HH12	2.37	0.48
23:BB:2246:G:H2'	23:BB:2247:A:C8	2.49	0.48
23:BB:2645:G:H5"	23:BB:2732:G:C8	2.45	0.48
23:BB:2789:C:H2'	23:BB:2790:U:H5'	1.96	0.48
23:BB:2881:U:O2'	23:BB:2882:A:H5'	2.14	0.48
24:BI:89:SER:HB2	24:BI:136:GLY:HA3	1.94	0.48
25:BC:250:GLN:HG2	25:BC:250:GLN:O	2.13	0.48
26:BD:107:VAL:N	26:BD:206:ALA:H	2.11	0.48
29:BE:126:VAL:HG13	29:BE:156:ASN:HD22	1.78	0.48
38:BM:110:GLU:CD	38:BM:110:GLU:H	2.21	0.48
43:BO:76:LYS:HG3	43:BO:113:ALA:HB2	1.95	0.48
44:BQ:111:LYS:HE2	49:BR:50:GLY:CA	2.44	0.48
50:BT:29:THR:CG2	50:BT:86:THR:HG22	2.43	0.48
1:CA:186:C:H2'	1:CA:187:G:O4'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:282:A:H2'	1:CA:282:A:N3	2.28	0.48
1:CA:345:C:H3'	28:DP:38:ARG:CZ	2.44	0.48
1:CA:370:C:H2'	1:CA:371:A:C8	2.49	0.48
1:CA:461:A:H3'	1:CA:462:G:C4'	2.43	0.48
1:CA:643:C:H2'	1:CA:644:U:H6	1.78	0.48
1:CA:821:G:H2'	1:CA:822:U:H6	1.78	0.48
1:CA:903:G:H2'	1:CA:904:U:C6	2.49	0.48
1:CA:963:G:H2'	1:CA:964:A:C8	2.49	0.48
1:CA:1095:U:H2'	1:CA:1096:C:C6	2.48	0.48
1:CA:1246:A:H2'	1:CA:1247:U:O4'	2.14	0.48
1:CA:1275:A:H2'	1:CA:1276:G:O4'	2.14	0.48
3:CD:66:VAL:HG12	3:CD:70:GLN:OE1	2.13	0.48
3:CD:138:PRO:C	3:CD:140:ASP:H	2.21	0.48
14:CQ:7:LEU:O	14:CQ:60:ILE:HD13	2.14	0.48
2:CC:26:LYS:CG	2:CC:27:GLU:N	2.75	0.48
2:CC:39:ARG:CZ	2:CC:56:ILE:HD11	2.43	0.48
2:CC:106:ARG:HD2	2:CC:106:ARG:C	2.38	0.48
8:CI:15:ALA:O	8:CI:66:VAL:HA	2.13	0.48
12:CM:21:ILE:HB	12:CM:24:VAL:CG2	2.31	0.48
21:CN:78:LEU:HD23	21:CN:82:LYS:O	2.13	0.48
16:CS:31:ARG:HD2	16:CS:31:ARG:N	2.28	0.48
22:DA:64:G:H2'	22:DA:65:U:C6	2.49	0.48
22:DA:111:U:H2'	22:DA:112:G:H8	1.78	0.48
23:DB:267:C:H2'	23:DB:268:C:H6	1.79	0.48
23:DB:438:G:H2'	23:DB:439:A:C8	2.46	0.48
23:DB:451:U:P	29:DE:47:LYS:HD2	2.53	0.48
23:DB:527:C:C5	23:DB:2779:U:H2'	2.48	0.48
23:DB:630:G:N2	23:DB:632:A:H3'	2.29	0.48
23:DB:838:C:O2'	23:DB:839:U:H5'	2.13	0.48
23:DB:873:C:H4'	38:DM:64:TRP:NE1	2.23	0.48
23:DB:921:C:H2'	23:DB:922:C:H6	1.78	0.48
23:DB:1010:A:H1'	23:DB:1153:C:O4'	2.13	0.48
23:DB:1060:U:H5	24:DI:131:THR:HG22	1.78	0.48
23:DB:1631:G:H22	23:DB:1633:G:H3'	1.78	0.48
23:DB:1847:A:H4'	23:DB:1848:A:H8	1.78	0.48
23:DB:2047:C:H2'	23:DB:2048:G:H8	1.78	0.48
23:DB:2259:U:H2'	23:DB:2260:C:C6	2.48	0.48
23:DB:2742:G:O2'	23:DB:2743:U:H5'	2.14	0.48
23:DB:2895:G:H2'	23:DB:2896:C:C6	2.49	0.48
24:DI:92:PRO:O	24:DI:93:ASN:HB2	2.12	0.48
24:DI:100:ILE:O	24:DI:139:VAL:HA	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:21:SER:HB3	27:DK:72:PRO:O	2.14	0.48
27:DK:20:MET:C	27:DK:41:ILE:HG13	2.39	0.48
27:DK:60:ALA:CB	27:DK:86:LEU:HA	2.44	0.48
28:DP:19:PHE:O	28:DP:20:ARG:HB2	2.14	0.48
28:DP:25:VAL:HB	28:DP:84:SER:O	2.14	0.48
29:DE:60:TRP:HE1	29:DE:71:GLY:HA2	1.79	0.48
34:D3:60:CYS:O	34:D3:61:LEU:HD23	2.14	0.48
37:DL:89:VAL:O	37:DL:89:VAL:HG13	2.13	0.48
37:DL:116:VAL:HG22	37:DL:117:THR:N	2.28	0.48
38:DM:90:GLU:HA	38:DM:90:GLU:OE1	2.12	0.48
40:DH:18:GLN:HE21	40:DH:39:ALA:CB	2.26	0.48
42:DN:9:GLN:HA	42:DN:17:ARG:CD	2.44	0.48
43:DO:115:LEU:CD2	43:DO:115:LEU:H	2.27	0.48
44:DQ:86:SER:HB3	49:DR:51:VAL:HA	1.94	0.48
46:DU:6:ARG:O	46:DU:24:VAL:HB	2.13	0.48
47:DF:134:GLN:OE1	47:DF:136:ILE:HA	2.14	0.48
48:DG:43:LYS:HE2	48:DG:43:LYS:HA	1.94	0.48
48:DG:122:ALA:CA	48:DG:132:LEU:HA	2.41	0.48
49:DR:49:ILE:HG12	49:DR:53:PHE:HA	1.94	0.48
50:DT:9:LYS:HB3	50:DT:9:LYS:HZ3	1.77	0.48
52:DW:30:VAL:O	52:DW:30:VAL:HG13	2.13	0.48
1:AA:98:A:H2'	1:AA:99:C:H6	1.78	0.48
1:AA:382:A:H2'	1:AA:383:A:O4'	2.13	0.48
1:AA:502:A:H2'	1:AA:503:C:C6	2.49	0.48
1:AA:1048:G:H5"	21:AN:2:LYS:HD2	1.96	0.48
1:AA:1326:U:H2'	1:AA:1327:C:H6	1.79	0.48
1:AA:1414:U:H2'	1:AA:1415:G:H8	1.79	0.48
3:AD:151:GLN:O	3:AD:154:VAL:HG22	2.12	0.48
10:AK:41:LEU:HD22	10:AK:76:TYR:CD2	2.48	0.48
13:AP:74:LEU:O	13:AP:78:VAL:HG12	2.12	0.48
14:AQ:18:LYS:H	14:AQ:50:ASN:ND2	2.12	0.48
18:AB:14:HIS:CD2	18:AB:202:ASN:HB2	2.49	0.48
21:AN:6:LYS:HA	21:AN:62:ARG:HH11	1.78	0.48
22:BA:76:G:H1	22:BA:101:A:H61	1.62	0.48
23:BB:30:G:OP1	44:BQ:4:LYS:HG2	2.14	0.48
23:BB:200:U:H4'	51:BZ:22:LEU:HB2	1.96	0.48
23:BB:308:G:O4'	23:BB:501:A:H5'	2.14	0.48
23:BB:406:G:H2'	23:BB:407:G:O4'	2.13	0.48
23:BB:527:C:C5	23:BB:2779:U:H2'	2.47	0.48
23:BB:697:G:H2'	23:BB:698:C:C6	2.49	0.48
23:BB:789:A:H4'	23:BB:790:U:OP2	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:831:G:O2'	23:BB:832:U:H5'	2.14	0.48
23:BB:958:U:O4	38:BM:16:ARG:HA	2.14	0.48
23:BB:968:C:H2'	23:BB:969:G:C8	2.48	0.48
23:BB:2487:G:H2'	23:BB:2488:G:C8	2.48	0.48
25:BC:115:ILE:HB	25:BC:126:GLY:O	2.13	0.48
26:BD:32:ASN:HB3	26:BD:50:VAL:HG21	1.94	0.48
27:BK:21:CYS:HB2	27:BK:39:ILE:HG21	1.96	0.48
30:BY:35:VAL:HG22	30:BY:36:GLU:N	2.28	0.48
30:BY:50:VAL:HB	30:BY:53:MET:HB2	1.94	0.48
33:B1:8:ILE:CD1	33:B1:9:LYS:H	2.27	0.48
34:B3:16:THR:C	34:B3:18:LYS:H	2.21	0.48
41:BJ:37:ARG:HE	41:BJ:110:PRO:HG3	1.79	0.48
43:BO:66:GLY:C	43:BO:68:LYS:H	2.21	0.48
44:BQ:16:ILE:C	44:BQ:18:LYS:N	2.71	0.48
45:BS:24:ILE:O	45:BS:25:ARG:C	2.56	0.48
47:BF:168:LEU:O	47:BF:169:LEU:HB2	2.14	0.48
51:BZ:5:CYS:SG	51:BZ:8:THR:HG23	2.53	0.48
51:BZ:59:ILE:CD1	51:BZ:67:VAL:HG21	2.42	0.48
52:BW:61:LYS:HB3	52:BW:62:ALA:H	1.48	0.48
1:CA:8:A:H5"	4:CE:125:LYS:HB3	1.94	0.48
1:CA:56:U:H2'	1:CA:57:G:C8	2.49	0.48
1:CA:211:G:H3'	1:CA:211:G:N3	2.29	0.48
1:CA:254:G:H4'	14:CQ:19:SER:OG	2.13	0.48
1:CA:1020:G:H2'	1:CA:1021:A:H5'	1.95	0.48
1:CA:1387:G:O2'	1:CA:1388:C:H5'	2.13	0.48
3:CD:35:GLN:O	3:CD:37:PRO:HD3	2.13	0.48
4:CE:76:ASN:HB2	4:CE:81:GLN:NE2	2.29	0.48
5:CF:9:MET:HA	5:CF:58:HIS:O	2.13	0.48
13:CP:54:LEU:HD22	13:CP:80:LYS:HE3	1.96	0.48
17:CT:54:GLN:N	17:CT:55:PRO:HD2	2.28	0.48
2:CC:51:VAL:HG21	2:CC:67:ILE:HG23	1.94	0.48
2:CC:180:ASP:OD2	2:CC:203:LYS:HB2	2.14	0.48
9:CJ:52:LEU:HG	9:CJ:62:ARG:NE	2.19	0.48
22:DA:29:A:OP1	43:DO:31:THR:HB	2.13	0.48
23:DB:499:U:H2'	23:DB:500:G:O4'	2.14	0.48
23:DB:811:U:O2	23:DB:1250:G:H2'	2.13	0.48
23:DB:1571:A:H2'	23:DB:1572:A:H8	1.78	0.48
23:DB:1747:U:H2'	23:DB:1748:C:H6	1.77	0.48
23:DB:1805:A:O2'	23:DB:1806:C:H5'	2.14	0.48
23:DB:1820:U:C4	25:DC:158:GLY:HA3	2.48	0.48
23:DB:2538:C:H2'	23:DB:2539:C:H6	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2544:G:O2'	23:DB:2545:G:H5'	2.13	0.48
24:DI:129:GLU:HB3	24:DI:133:ARG:NH1	2.28	0.48
25:DC:130:PRO:HA	25:DC:187:CYS:O	2.14	0.48
26:DD:37:VAL:CG2	26:DD:91:THR:HA	2.42	0.48
26:DD:116:LYS:HD3	42:DN:1:MET:HE1	1.94	0.48
28:DP:89:GLY:H	28:DP:112:ARG:NH1	2.11	0.48
37:DL:29:LYS:C	37:DL:31:GLY:H	2.21	0.48
40:DH:135:HIS:CD2	40:DH:137:GLU:H	2.32	0.48
46:DU:34:ILE:HG12	46:DU:63:ALA:CB	2.43	0.48
1:AA:68:G:H2'	1:AA:69:G:O4'	2.14	0.48
1:AA:590:U:H2'	1:AA:591:U:C6	2.48	0.48
1:AA:647:C:H2'	1:AA:648:A:H8	1.79	0.48
1:AA:947:G:H2'	1:AA:948:C:H6	1.76	0.48
1:AA:1107:C:C4	1:AA:1108:G:N7	2.82	0.48
1:AA:1198:G:H2'	1:AA:1199:U:C6	2.49	0.48
1:AA:1360:A:H61	1:AA:1361:G:N2	2.11	0.48
3:AD:90:LEU:HD22	3:AD:90:LEU:N	2.28	0.48
3:AD:110:ARG:HG3	3:AD:110:ARG:HH11	1.79	0.48
6:AG:132:THR:O	6:AG:135:LYS:HB3	2.14	0.48
7:AH:94:VAL:HG21	7:AH:100:ILE:O	2.13	0.48
8:AI:97:LEU:O	8:AI:102:PHE:HB2	2.13	0.48
11:AL:7:VAL:HG22	14:AQ:33:TYR:HD1	1.79	0.48
18:AB:110:ILE:HG12	18:AB:147:LEU:HD13	1.95	0.48
20:AO:56:LEU:O	20:AO:60:VAL:HG23	2.14	0.48
23:BB:90:U:H2'	23:BB:91:A:C2	2.49	0.48
23:BB:170:U:H2'	23:BB:171:U:C6	2.49	0.48
23:BB:182:A:O2'	23:BB:183:C:H5'	2.14	0.48
23:BB:796:C:H2'	23:BB:797:G:H8	1.78	0.48
23:BB:992:C:H2'	23:BB:993:G:H8	1.78	0.48
23:BB:1080:A:O2'	23:BB:1081:U:H5'	2.13	0.48
23:BB:1144:A:O2'	23:BB:1145:C:H5'	2.14	0.48
23:BB:1259:G:H2'	23:BB:1260:A:C8	2.49	0.48
23:BB:1530:G:H2'	23:BB:1530:G:N3	2.29	0.48
23:BB:1636:U:H2'	23:BB:1637:A:C8	2.48	0.48
23:BB:1797:G:O2'	23:BB:1798:U:H5'	2.13	0.48
23:BB:2037:A:H2'	23:BB:2038:G:C8	2.49	0.48
23:BB:2041:U:H2'	23:BB:2042:A:H8	1.78	0.48
23:BB:2428:G:H5"	23:BB:2429:G:OP1	2.14	0.48
24:BI:52:LEU:HD12	24:BI:52:LEU:N	2.29	0.48
25:BC:157:ALA:C	25:BC:159:THR:H	2.22	0.48
25:BC:183:VAL:HG22	25:BC:184:GLU:N	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:185:ALA:C	25:BC:187:CYS:H	2.22	0.48
26:BD:97:SER:OG	26:BD:98:VAL:N	2.47	0.48
27:BK:19:VAL:HB	27:BK:41:ILE:CD1	2.43	0.48
27:BK:92:GLU:HB2	27:BK:93:GLN:HE21	1.78	0.48
29:BE:3:LEU:CB	29:BE:12:LEU:HB3	2.44	0.48
29:BE:28:VAL:HG23	29:BE:29:HIS:H	1.78	0.48
34:B3:49:VAL:HG11	34:B3:54:LEU:CD1	2.42	0.48
36:B2:10:LEU:HD21	36:B2:14:ARG:CZ	2.43	0.48
37:BL:122:VAL:HB	37:BL:143:GLU:OE2	2.14	0.48
40:BH:44:ILE:HA	40:BH:51:ARG:NH2	2.27	0.48
40:BH:112:LYS:C	40:BH:112:LYS:HE3	2.39	0.48
44:BQ:105:PHE:O	44:BQ:109:VAL:HG23	2.13	0.48
45:BS:1:MET:HE2	45:BS:1:MET:HA	1.95	0.48
46:BU:95:PHE:HB2	46:BU:100:GLU:HB3	1.95	0.48
47:BF:3:LEU:HD12	47:BF:96:TRP:CD1	2.49	0.48
47:BF:76:PHE:HD2	47:BF:78:ILE:HD13	1.79	0.48
52:BW:48:ALA:O	52:BW:61:LYS:HB2	2.13	0.48
1:CA:284:C:H2'	1:CA:285:C:H6	1.79	0.48
1:CA:284:C:O2'	1:CA:285:C:H5'	2.14	0.48
1:CA:309:A:O2'	1:CA:310:G:H5'	2.13	0.48
1:CA:376:G:H2'	1:CA:377:G:H8	1.78	0.48
1:CA:438:U:H4'	3:CD:119:HIS:HD2	1.78	0.48
1:CA:601:G:H2'	1:CA:602:A:H8	1.78	0.48
1:CA:634:C:H2'	1:CA:635:A:C8	2.49	0.48
1:CA:1102:A:H2'	1:CA:1103:C:C6	2.49	0.48
1:CA:1213:A:H2'	1:CA:1215:G:N7	2.29	0.48
1:CA:1253:G:C6	1:CA:1285:A:N6	2.81	0.48
1:CA:1288:A:H2'	1:CA:1289:A:O4'	2.13	0.48
4:CE:74:ALA:O	4:CE:146:MET:HE2	2.13	0.48
5:CF:21:MET:HB3	5:CF:25:TYR:CE1	2.49	0.48
10:CK:110:THR:CG2	19:CU:4:LYS:HA	2.44	0.48
17:CT:19:HIS:O	17:CT:23:ARG:HG2	2.14	0.48
8:CI:6:TYR:CG	8:CI:7:GLY:N	2.81	0.48
8:CI:56:MET:C	8:CI:58:GLU:N	2.67	0.48
8:CI:114:LYS:HD3	8:CI:114:LYS:N	2.29	0.48
18:CB:44:LYS:C	18:CB:47:PRO:HD2	2.39	0.48
18:CB:127:LYS:HD2	18:CB:128:LEU:HB2	1.95	0.48
18:CB:131:LYS:O	18:CB:134:LEU:HG	2.13	0.48
20:CO:28:GLN:O	20:CO:32:LEU:HD23	2.12	0.48
23:DB:132:G:H2'	23:DB:133:U:H6	1.78	0.48
23:DB:464:U:H2'	23:DB:465:G:O4'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1080:A:H4'	24:DI:126:ARG:HD2	1.94	0.48
23:DB:1205:A:N6	29:DE:165:HIS:HB2	2.15	0.48
23:DB:1477:A:H2'	23:DB:1478:G:O4'	2.13	0.48
23:DB:1818:U:C4	25:DC:152:GLN:HB3	2.49	0.48
23:DB:2105:U:H2'	23:DB:2106:U:H6	1.79	0.48
27:DK:60:ALA:HA	27:DK:87:LEU:HD22	1.96	0.48
29:DE:28:VAL:HG23	29:DE:29:HIS:H	1.78	0.48
29:DE:28:VAL:HG23	29:DE:29:HIS:N	2.28	0.48
29:DE:62:GLN:CG	29:DE:63:LYS:H	2.27	0.48
30:DY:11:SER:OG	30:DY:13:ILE:HG13	2.13	0.48
37:DL:57:LEU:O	37:DL:61:LEU:HD13	2.13	0.48
41:DJ:106:LYS:HE3	41:DJ:106:LYS:O	2.13	0.48
42:DN:79:LEU:O	42:DN:80:PHE:HB2	2.12	0.48
42:DN:90:ARG:HG2	42:DN:94:TYR:HD1	1.78	0.48
43:DO:30:ARG:HG2	43:DO:31:THR:N	2.29	0.48
44:DQ:105:PHE:O	44:DQ:109:VAL:HG23	2.14	0.48
45:DS:1:MET:HE2	45:DS:1:MET:HA	1.95	0.48
46:DU:3:LYS:O	46:DU:4:ILE:HD13	2.14	0.48
46:DU:40:LEU:HA	46:DU:61:GLU:HA	1.95	0.48
47:DF:148:VAL:O	47:DF:149:ARG:HG2	2.13	0.48
49:DR:55:ASP:CG	49:DR:56:GLY:H	2.21	0.48
52:DW:33:GLY:O	52:DW:34:SER:HB2	2.13	0.48
1:AA:221:C:O2'	1:AA:222:C:H5'	2.14	0.48
1:AA:376:G:H2'	1:AA:377:G:H8	1.79	0.48
1:AA:453:G:H2'	1:AA:454:G:C8	2.48	0.48
1:AA:488:C:O2'	1:AA:489:C:H5'	2.14	0.48
1:AA:594:U:H2'	1:AA:595:A:O4'	2.14	0.48
1:AA:1047:G:H21	1:AA:1215:G:C5'	2.25	0.48
1:AA:1207:G:H2'	1:AA:1208:C:C6	2.49	0.48
1:AA:1232:U:OP1	8:AI:127:SER:HB3	2.14	0.48
1:AA:1308:U:H5"	12:AM:96:VAL:HG23	1.95	0.48
3:AD:66:VAL:HG12	3:AD:70:GLN:OE1	2.13	0.48
3:AD:129:VAL:HG12	3:AD:130:ASN:N	2.29	0.48
4:AE:81:GLN:HG2	4:AE:148:SER:HA	1.96	0.48
5:AF:16:GLU:CD	5:AF:16:GLU:H	2.20	0.48
5:AF:21:MET:HB3	5:AF:25:TYR:CE1	2.49	0.48
6:AG:73:GLU:C	6:AG:87:PRO:HA	2.38	0.48
10:AK:17:ASP:C	10:AK:36:ARG:HH12	2.20	0.48
12:AM:15:VAL:HG23	12:AM:33:LEU:HG	1.94	0.48
12:AM:89:ARG:HD3	12:AM:94:LEU:HB2	1.95	0.48
17:AT:38:ILE:HD11	17:AT:82:ILE:HA	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AB:120:SER:CA	18:AB:125:PHE:HB3	2.43	0.48
22:BA:22:U:H2'	22:BA:23:G:C8	2.49	0.48
23:BB:346:A:H3'	23:BB:347:A:H8	1.79	0.48
23:BB:557:C:H2'	23:BB:558:U:C6	2.49	0.48
23:BB:988:A:P	30:BY:11:SER:HB3	2.54	0.48
23:BB:1283:G:N2	23:BB:1285:A:H3'	2.29	0.48
23:BB:1469:A:H2'	23:BB:1470:A:C8	2.49	0.48
23:BB:1655:A:H5'	26:BD:118:PHE:HB2	1.96	0.48
23:BB:2311:A:H3'	23:BB:2312:U:C6	2.48	0.48
23:BB:2529:G:H5'	48:BG:174:LYS:HB2	1.95	0.48
23:BB:2649:C:H2'	23:BB:2650:U:C6	2.49	0.48
24:BI:124:MET:O	24:BI:128:ILE:HG12	2.14	0.48
25:BC:163:ILE:HG22	25:BC:164:VAL:N	2.29	0.48
26:BD:29:VAL:O	26:BD:185:ASN:HB3	2.14	0.48
26:BD:107:VAL:H	26:BD:206:ALA:H	1.62	0.48
26:BD:138:LEU:N	26:BD:138:LEU:HD22	2.29	0.48
27:BK:73:ASP:OD2	27:BK:75:SER:HB3	2.14	0.48
27:BK:105:ARG:HD3	27:BK:105:ARG:N	2.21	0.48
27:BK:109:SER:OG	27:BK:111:LYS:HG2	2.13	0.48
35:BV:59:GLU:HG2	35:BV:60:VAL:N	2.28	0.48
37:BL:109:LYS:HB2	37:BL:111:ILE:HD13	1.96	0.48
40:BH:99:ILE:HD13	40:BH:144:VAL:HB	1.95	0.48
41:BJ:13:ARG:HB3	41:BJ:53:TYR:CD2	2.49	0.48
44:BQ:56:PHE:O	44:BQ:59:LEU:HB3	2.13	0.48
45:BS:45:VAL:HG23	45:BS:46:LEU:HD23	1.95	0.48
47:BF:52:ALA:O	47:BF:56:LEU:HB2	2.14	0.48
51:BZ:3:ARG:HG3	51:BZ:50:ARG:HH11	1.77	0.48
1:CA:777:A:H2'	1:CA:778:G:C8	2.49	0.48
1:CA:1045:C:O2'	1:CA:1046:A:H5'	2.14	0.48
1:CA:1119:C:O2'	1:CA:1120:C:H5'	2.14	0.48
1:CA:1306:A:N6	1:CA:1331:G:H1'	2.29	0.48
1:CA:1368:A:O2'	1:CA:1369:C:H5'	2.14	0.48
3:CD:157:ALA:C	3:CD:159:GLU:H	2.20	0.48
7:CH:99:GLY:HA2	7:CH:129:ALA:HA	1.96	0.48
2:CC:18:ASN:HB2	21:CN:90:GLY:O	2.14	0.48
2:CC:21:TRP:CD2	2:CC:58:ARG:HD3	2.49	0.48
2:CC:46:LEU:N	2:CC:46:LEU:HD22	2.28	0.48
2:CC:152:VAL:HB	2:CC:165:GLU:CB	2.44	0.48
12:CM:79:LEU:C	12:CM:81:ASP:H	2.21	0.48
21:CN:73:LEU:HD12	21:CN:83:VAL:HG21	1.95	0.48
18:CB:86:CYS:SG	18:CB:87:ASP:N	2.87	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CO:33:THR:HG23	20:CO:63:ARG:NH1	2.29	0.48
23:DB:600:G:C1'	29:DE:100:MET:HG2	2.39	0.48
23:DB:1098:A:C2'	24:DI:4:VAL:C	2.87	0.48
23:DB:2014:A:H2'	23:DB:2015:A:C8	2.49	0.48
23:DB:2348:U:OP1	34:D3:37:THR:HG21	2.14	0.48
23:DB:2675:A:N1	23:DB:2732:G:O6	2.47	0.48
23:DB:2773:C:O2'	23:DB:2774:C:H5'	2.14	0.48
25:DC:68:ARG:HH21	25:DC:190:THR:CG2	2.27	0.48
27:DK:68:GLY:HA3	27:DK:78:ARG:HB3	1.96	0.48
28:DP:3:ILE:HD13	28:DP:4:ILE:N	2.29	0.48
31:D0:27:LEU:HD22	31:D0:37:HIS:C	2.39	0.48
32:D4:15:LYS:O	32:D4:16:ILE:HB	2.14	0.48
34:D3:28:LEU:O	34:D3:29:ARG:HB3	2.14	0.48
39:DX:45:GLN:O	39:DX:47:ARG:N	2.46	0.48
40:DH:62:LEU:HG	40:DH:66:ASN:HD21	1.77	0.48
43:DO:111:ARG:HD2	43:DO:117:PHE:CD1	2.48	0.48
47:DF:71:LYS:O	47:DF:72:SER:HB3	2.14	0.48
50:DT:8:LEU:HD22	50:DT:46:ALA:HA	1.95	0.48
1:AA:299:G:H2'	1:AA:300:A:C8	2.48	0.48
1:AA:643:C:H2'	1:AA:644:U:H6	1.79	0.48
1:AA:846:G:H2'	1:AA:846:G:N3	2.29	0.48
1:AA:1478:U:H2'	1:AA:1479:C:C6	2.49	0.48
1:AA:1515:G:O2'	1:AA:1516:G:H5'	2.13	0.48
2:AC:129:PHE:HD2	2:AC:133:MET:HE1	1.79	0.48
4:AE:146:MET:O	4:AE:146:MET:HG3	2.12	0.48
5:AF:53:LYS:HZ3	5:AF:53:LYS:N	2.11	0.48
6:AG:94:ARG:HH11	6:AG:98:LEU:HD21	1.77	0.48
12:AM:12:LYS:O	12:AM:43:LYS:HA	2.14	0.48
16:AS:31:ARG:HB3	16:AS:33:TRP:CZ2	2.49	0.48
18:AB:102:ASN:HD21	18:AB:105:THR:HB	1.77	0.48
18:AB:183:PHE:N	18:AB:183:PHE:CD1	2.82	0.48
23:BB:143:C:O5'	23:BB:143:C:H6	1.97	0.48
23:BB:163:C:H2'	23:BB:164:C:O4'	2.14	0.48
23:BB:702:U:H2'	23:BB:703:U:C6	2.49	0.48
23:BB:973:A:H8	23:BB:973:A:OP1	1.96	0.48
23:BB:1409:U:H2'	23:BB:1410:G:H8	1.79	0.48
23:BB:1607:C:H5"	23:BB:1608:A:H5'	1.96	0.48
23:BB:1779:U:C5	23:BB:1784:A:N7	2.82	0.48
23:BB:2305:U:H5"	47:BF:130:GLY:CA	2.43	0.48
23:BB:2305:U:H2'	23:BB:2306:C:C6	2.48	0.48
23:BB:2899:A:H2'	23:BB:2900:A:O4'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:34:GLU:HG3	25:BC:34:GLU:O	2.13	0.48
25:BC:42:ARG:CZ	25:BC:48:ILE:HD11	2.43	0.48
25:BC:270:ARG:HB3	25:BC:270:ARG:HH11	1.79	0.48
29:BE:88:ARG:O	29:BE:90:GLN:HG3	2.14	0.48
36:B2:20:ALA:C	36:B2:22:MET:N	2.72	0.48
36:B2:31:LEU:CD2	36:B2:42:LEU:HD12	2.44	0.48
37:BL:4:ASN:N	37:BL:4:ASN:HD22	2.11	0.48
41:BJ:72:LYS:HB2	41:BJ:89:PHE:H	1.77	0.48
43:BO:66:GLY:O	43:BO:102:ARG:HD3	2.14	0.48
44:BQ:24:TYR:CD1	44:BQ:25:GLY:N	2.82	0.48
47:BF:64:PRO:HA	47:BF:88:VAL:CG1	2.43	0.48
47:BF:102:LEU:HD13	47:BF:103:ILE:N	2.29	0.48
47:BF:134:GLN:OE1	47:BF:136:ILE:HA	2.13	0.48
47:BF:146:ASP:O	47:BF:147:ARG:C	2.56	0.48
48:BG:59:ASP:O	48:BG:63:GLN:HB2	2.14	0.48
48:BG:91:VAL:C	48:BG:93:TYR:H	2.21	0.48
50:BT:40:LYS:HA	50:BT:43:ILE:HG22	1.96	0.48
1:CA:299:G:C6	1:CA:300:A:C6	3.02	0.48
10:CK:30:ILE:HG22	10:CK:45:THR:HB	1.95	0.48
11:CL:13:ARG:HB2	11:CL:14:LYS:H	1.50	0.48
19:CU:16:ARG:HH12	19:CU:19:LYS:NZ	2.11	0.48
9:CJ:37:ARG:HA	9:CJ:37:ARG:NH1	2.28	0.48
21:CN:14:ALA:O	21:CN:18:LYS:HG3	2.13	0.48
18:CB:30:ILE:HG23	18:CB:39:ILE:O	2.14	0.48
18:CB:221:ARG:HH11	18:CB:221:ARG:HB3	1.79	0.48
22:DA:22:U:H2'	22:DA:23:G:C8	2.49	0.48
22:DA:113:C:H1'	43:DO:46:GLU:HA	1.96	0.48
23:DB:970:U:H2'	23:DB:971:G:H8	1.76	0.48
23:DB:1005:C:H2'	23:DB:1006:C:C6	2.49	0.48
23:DB:1099:G:H3'	24:DI:2:LYS:HA	1.94	0.48
23:DB:1290:C:O2'	23:DB:1291:C:H5'	2.13	0.48
23:DB:1866:A:H2'	23:DB:1867:G:O4'	2.13	0.48
23:DB:1871:A:H2'	23:DB:1872:A:H8	1.77	0.48
24:DI:2:LYS:HD2	24:DI:2:LYS:N	2.29	0.48
24:DI:126:ARG:NH1	24:DI:126:ARG:HB3	2.28	0.48
25:DC:79:ARG:HD2	25:DC:81:GLU:OE2	2.14	0.48
25:DC:180:MET:HB2	25:DC:268:ARG:HB3	1.96	0.48
25:DC:185:ALA:C	25:DC:187:CYS:H	2.21	0.48
25:DC:207:ALA:O	25:DC:208:GLY:C	2.56	0.48
26:DD:47:ALA:HB2	26:DD:83:ARG:HD2	1.95	0.48
26:DD:183:GLU:N	26:DD:183:GLU:OE1	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DK:25:LEU:CD2	27:DK:40:LYS:HB2	2.37	0.48
29:DE:48:THR:C	29:DE:50:ALA:N	2.71	0.48
34:D3:2:LYS:H	34:D3:2:LYS:HG2	1.44	0.48
38:DM:102:LEU:HD22	38:DM:102:LEU:N	2.28	0.48
40:DH:4:ILE:O	40:DH:36:ALA:HA	2.13	0.48
41:DJ:72:LYS:HB2	41:DJ:89:PHE:H	1.79	0.48
44:DQ:31:TYR:O	44:DQ:32:ARG:C	2.56	0.48
44:DQ:93:ILE:O	44:DQ:96:ASP:HB3	2.14	0.48
47:DF:49:LEU:HD21	47:DF:84:ILE:O	2.13	0.48
49:DR:22:LEU:HD23	49:DR:22:LEU:N	2.29	0.48
1:AA:174:A:O2'	1:AA:175:C:H5'	2.14	0.47
1:AA:857:C:H2'	1:AA:858:G:O4'	2.14	0.47
1:AA:933:G:N2	1:AA:935:A:O4'	2.47	0.47
3:AD:96:ARG:HH12	3:AD:133:SER:HA	1.76	0.47
4:AE:158:LYS:HZ3	7:AH:63:LYS:HD3	1.78	0.47
6:AG:106:ALA:HB1	6:AG:132:THR:OG1	2.13	0.47
8:AI:90:ASP:O	8:AI:93:LEU:HG	2.13	0.47
9:AJ:80:THR:O	9:AJ:84:VAL:HG23	2.14	0.47
12:AM:47:LEU:CG	12:AM:52:ILE:HD13	2.29	0.47
18:AB:13:VAL:O	18:AB:14:HIS:CB	2.62	0.47
23:BB:499:U:H2'	23:BB:500:G:O4'	2.14	0.47
23:BB:553:G:C2'	23:BB:554:U:H5'	2.44	0.47
23:BB:1173:U:H2'	23:BB:1174:U:H5'	1.96	0.47
23:BB:1234:U:H2'	23:BB:1235:G:O4'	2.13	0.47
23:BB:1365:A:N3	23:BB:1365:A:H2'	2.28	0.47
23:BB:2721:A:H2'	23:BB:2722:G:C8	2.49	0.47
25:BC:141:HIS:NE2	25:BC:194:VAL:HA	2.29	0.47
28:BP:3:ILE:C	28:BP:3:ILE:HD13	2.39	0.47
28:BP:19:PHE:CE2	28:BP:25:VAL:HG11	2.49	0.47
30:BY:35:VAL:HG11	30:BY:37:ARG:HH12	1.79	0.47
35:BV:75:GLN:HB3	35:BV:76:ASP:H	1.43	0.47
37:BL:116:VAL:HG22	37:BL:117:THR:N	2.30	0.47
38:BM:34:LYS:O	38:BM:128:THR:HG22	2.13	0.47
38:BM:101:VAL:HG22	38:BM:101:VAL:O	2.13	0.47
41:BJ:14:ASP:O	41:BJ:53:TYR:HB2	2.14	0.47
41:BJ:117:ALA:O	41:BJ:120:ARG:HG2	2.14	0.47
42:BN:59:SER:O	42:BN:63:ARG:HB2	2.13	0.47
44:BQ:4:LYS:HZ1	44:BQ:7:VAL:HG22	1.79	0.47
44:BQ:93:ILE:HG23	44:BQ:94:LEU:N	2.29	0.47
47:BF:41:GLU:CG	47:BF:48:LEU:HD11	2.44	0.47
48:BG:26:LYS:HB2	48:BG:32:LEU:HG	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BR:14:VAL:HG21	49:BR:98:ILE:HD13	1.96	0.47
49:BR:58:VAL:HG22	49:BR:59:ILE:N	2.24	0.47
49:BR:82:HIS:O	49:BR:83:TYR:C	2.58	0.47
1:CA:131:A:H2'	1:CA:132:C:C6	2.49	0.47
1:CA:238:A:C2'	1:CA:239:U:H5"	2.43	0.47
1:CA:424:G:O2'	1:CA:425:G:H5'	2.14	0.47
1:CA:738:C:H2'	1:CA:739:C:H6	1.79	0.47
1:CA:1219:A:H2'	1:CA:1220:G:H8	1.78	0.47
1:CA:1241:G:H2'	1:CA:1242:G:C8	2.41	0.47
3:CD:108:ALA:H	3:CD:112:GLU:CD	2.22	0.47
3:CD:181:PHE:O	3:CD:182:LYS:C	2.57	0.47
5:CF:93:LYS:O	5:CF:94:HIS:HB2	2.14	0.47
2:CC:111:ASP:O	2:CC:115:VAL:HG23	2.14	0.47
2:CC:139:ASN:N	2:CC:139:ASN:HD22	2.12	0.47
2:CC:188:ALA:O	2:CC:194:VAL:HA	2.14	0.47
6:CG:43:TYR:O	6:CG:44:SER:C	2.56	0.47
18:CB:48:MET:HA	18:CB:51:GLU:OE2	2.14	0.47
18:CB:80:LYS:HE2	18:CB:81:ASP:OD1	2.13	0.47
20:CO:40:GLN:O	20:CO:44:ALA:N	2.45	0.47
23:DB:118:A:P	23:DB:119:A:H5"	2.54	0.47
23:DB:170:U:H2'	23:DB:171:U:C6	2.48	0.47
23:DB:433:C:O2'	23:DB:434:U:H5'	2.14	0.47
23:DB:1017:G:O2'	23:DB:1018:U:H5'	2.14	0.47
23:DB:1133:A:N6	23:DB:2025:C:O2'	2.46	0.47
23:DB:1287:A:H3'	23:DB:1288:G:H21	1.76	0.47
23:DB:2300:C:H2'	23:DB:2301:C:H6	1.79	0.47
23:DB:2331:G:O4'	52:DW:39:GLN:HA	2.14	0.47
23:DB:2365:G:O2'	52:DW:59:PHE:HE1	1.97	0.47
23:DB:2514:U:H5"	41:DJ:81:ILE:HD12	1.96	0.47
26:DD:34:VAL:HA	26:DD:50:VAL:HG12	1.95	0.47
26:DD:107:VAL:H	26:DD:206:ALA:H	1.62	0.47
29:DE:67:ARG:HG2	29:DE:67:ARG:NH1	2.26	0.47
29:DE:126:VAL:HG13	29:DE:127:GLU:N	2.29	0.47
30:DY:6:ILE:H	30:DY:6:ILE:CD1	2.24	0.47
31:D0:2:VAL:HG12	31:D0:3:GLN:N	2.29	0.47
31:D0:27:LEU:HD13	31:D0:37:HIS:O	2.13	0.47
32:D4:1:MET:CE	32:D4:36:ARG:HB2	2.42	0.47
34:D3:18:LYS:HD2	34:D3:19:GLY:H	1.78	0.47
37:DL:80:SER:HB3	37:DL:115:GLU:CD	2.39	0.47
38:DM:21:ALA:HB1	38:DM:100:LYS:HE2	1.95	0.47
38:DM:73:ILE:HG21	38:DM:91:TYR:CZ	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DS:37:THR:HG22	45:DS:48:LYS:HE3	1.96	0.47
46:DU:18:LYS:HE2	46:DU:18:LYS:C	2.39	0.47
47:DF:41:GLU:CG	47:DF:48:LEU:HD11	2.44	0.47
47:DF:139:GLU:CG	47:DF:140:ILE:H	2.26	0.47
48:DG:84:LYS:HB2	48:DG:132:LEU:N	2.29	0.47
50:DT:50:LEU:O	50:DT:51:PHE:HB2	2.14	0.47
51:DZ:15:GLY:O	51:DZ:27:ARG:HG3	2.14	0.47
51:DZ:27:ARG:O	51:DZ:28:ARG:CB	2.62	0.47
51:DZ:33:LEU:H	51:DZ:52:SER:HB3	1.78	0.47
52:DW:9:THR:HG23	52:DW:10:ARG:CD	2.44	0.47
52:DW:9:THR:OG1	52:DW:10:ARG:N	2.44	0.47
52:DW:39:GLN:HG2	52:DW:40:ARG:H	1.77	0.47
1:AA:160:A:H2'	1:AA:161:A:O4'	2.14	0.47
1:AA:204:G:N2	1:AA:466:A:N6	2.62	0.47
1:AA:230:G:H5"	13:AP:31:ARG:NH2	2.29	0.47
1:AA:501:C:H1'	1:AA:549:C:H1'	1.95	0.47
1:AA:559:A:H4'	1:AA:560:A:H3'	1.97	0.47
1:AA:568:G:O6	11:AL:1:ALA:HB2	2.14	0.47
1:AA:664:G:N2	1:AA:741:G:H1	2.01	0.47
1:AA:767:A:H2'	1:AA:768:A:C8	2.49	0.47
1:AA:781:A:O2'	1:AA:1522:U:O2	2.30	0.47
1:AA:923:A:H2'	1:AA:924:C:H6	1.79	0.47
1:AA:1038:C:H2'	1:AA:1039:G:C8	2.49	0.47
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.49	0.47
1:AA:1085:U:H3'	1:AA:1086:U:H5	1.78	0.47
1:AA:1414:U:O2'	1:AA:1415:G:H5'	2.14	0.47
1:AA:1434:A:H2'	1:AA:1435:G:O4'	2.14	0.47
1:AA:1519:A:H3'	1:AA:1520:C:C5'	2.44	0.47
2:AC:37:LYS:O	2:AC:41:TYR:HB2	2.13	0.47
4:AE:149:PRO:HG2	4:AE:150:GLU:H	1.79	0.47
8:AI:5:TYR:HB2	8:AI:20:ILE:HB	1.96	0.47
9:AJ:70:HIS:HB3	9:AJ:72:ARG:HH21	1.79	0.47
11:AL:41:PRO:HA	11:AL:88:ASP:O	2.13	0.47
14:AQ:34:GLY:O	14:AQ:35:LYS:C	2.57	0.47
17:AT:25:SER:O	17:AT:29:THR:HG23	2.14	0.47
17:AT:53:MET:HE3	17:AT:54:GLN:HA	1.95	0.47
18:AB:40:ILE:O	18:AB:42:LEU:N	2.47	0.47
18:AB:95:TRP:CH2	18:AB:171:ALA:HA	2.49	0.47
18:AB:162:VAL:HG13	18:AB:184:ALA:HB2	1.96	0.47
22:BA:64:G:O2'	22:BA:65:U:H5'	2.14	0.47
23:BB:242:G:H5"	34:B3:63:TYR:CD2	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:704:G:H1'	23:BB:727:A:H61	1.79	0.47
23:BB:1250:G:OP2	37:BL:21:ARG:NH2	2.47	0.47
23:BB:1431:A:H2'	23:BB:1432:G:H8	1.78	0.47
23:BB:1439:A:C6	23:BB:1552:A:N7	2.82	0.47
23:BB:1550:C:H2'	23:BB:1551:A:C8	2.50	0.47
23:BB:1672:A:C6	23:BB:1673:G:C6	3.02	0.47
23:BB:2135:A:H61	23:BB:2156:G:C2'	2.27	0.47
23:BB:2254:C:H2'	23:BB:2255:G:O4'	2.13	0.47
23:BB:2350:C:H2'	23:BB:2351:G:C8	2.49	0.47
23:BB:2617:U:C2'	23:BB:2618:G:H5'	2.44	0.47
23:BB:2831:G:H1'	23:BB:2883:A:C2	2.48	0.47
28:BP:12:MET:HG2	28:BP:54:LEU:HA	1.96	0.47
29:BE:15:SER:HB3	29:BE:18:THR:OG1	2.15	0.47
40:BH:73:ASN:HB2	40:BH:141:LYS:HE2	1.96	0.47
40:BH:94:ILE:HG21	40:BH:144:VAL:HG11	1.94	0.47
42:BN:96:ARG:NE	42:BN:116:VAL:HA	2.28	0.47
44:BQ:23:TYR:CD2	44:BQ:23:TYR:N	2.81	0.47
47:BF:102:LEU:O	47:BF:103:ILE:HB	2.13	0.47
48:BG:8:VAL:CG1	48:BG:49:LEU:HB3	2.39	0.47
52:BW:32:ALA:C	52:BW:34:SER:N	2.71	0.47
1:CA:410:G:H8	1:CA:410:G:O5'	1.97	0.47
1:CA:921:U:O2	4:CE:23:THR:HG23	2.14	0.47
1:CA:1084:G:H5'	1:CA:1102:A:OP2	2.14	0.47
1:CA:1484:C:O2'	23:DB:1961:C:H5'	2.14	0.47
3:CD:107:GLY:C	3:CD:157:ALA:HB1	2.38	0.47
7:CH:101:ALA:HB3	7:CH:112:ASP:HB3	1.95	0.47
14:CQ:26:ARG:HG2	14:CQ:39:ARG:O	2.14	0.47
17:CT:49:ALA:HA	17:CT:52:GLU:HB3	1.96	0.47
2:CC:149:LYS:HA	2:CC:168:ARG:HB2	1.97	0.47
6:CG:144:ALA:O	6:CG:145:GLU:HB3	2.14	0.47
6:CG:144:ALA:O	6:CG:146:ALA:N	2.46	0.47
21:CN:98:ALA:HB1	21:CN:100:TRP:CZ3	2.48	0.47
20:CO:43:PHE:CD1	20:CO:56:LEU:HD22	2.49	0.47
22:DA:75:G:H2'	22:DA:76:G:C8	2.48	0.47
23:DB:111:A:O2'	23:DB:112:U:H5'	2.14	0.47
23:DB:163:C:H2'	23:DB:164:C:O4'	2.15	0.47
23:DB:170:U:O2'	23:DB:171:U:H5'	2.14	0.47
23:DB:256:A:H2'	23:DB:257:C:H6	1.79	0.47
23:DB:406:G:H2'	23:DB:407:G:O4'	2.13	0.47
23:DB:483:A:H4'	46:DU:46:LYS:HA	1.97	0.47
23:DB:572:A:H5"	49:DR:80:ARG:HH22	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:651:G:O5'	34:D3:17:GLY:HA3	2.14	0.47
23:DB:833:A:H2'	23:DB:834:G:C8	2.49	0.47
23:DB:864:G:O2'	23:DB:865:C:H5'	2.15	0.47
23:DB:1521:G:H3'	23:DB:1522:A:H2'	1.96	0.47
23:DB:1559:U:H3'	23:DB:1560:G:H5'	1.96	0.47
23:DB:1647:U:H3'	23:DB:1647:U:OP1	2.14	0.47
23:DB:1716:U:H2'	23:DB:1717:A:H8	1.79	0.47
23:DB:1820:U:OP1	25:DC:176:ARG:HD2	2.14	0.47
23:DB:2104:C:H2'	23:DB:2105:U:C6	2.49	0.47
23:DB:2559:C:O2'	23:DB:2560:A:H5'	2.13	0.47
23:DB:2655:G:H1'	23:DB:2656:U:H5	1.79	0.47
23:DB:2876:G:H2'	23:DB:2877:G:O4'	2.15	0.47
23:DB:2877:G:O2'	23:DB:2878:U:H5'	2.14	0.47
24:DI:17:ALA:O	24:DI:18:ASN:HB3	2.13	0.47
27:DK:71:ARG:HB3	27:DK:72:PRO:CD	2.38	0.47
28:DP:16:VAL:O	28:DP:16:VAL:HG23	2.14	0.47
36:D2:9:VAL:CG1	36:D2:10:LEU:H	2.27	0.47
37:DL:132:ARG:HA	37:DL:135:ILE:CG2	2.44	0.47
39:DX:31:GLN:O	39:DX:37:LEU:HB2	2.13	0.47
41:DJ:83:GLY:O	41:DJ:84:ILE:C	2.56	0.47
42:DN:101:GLY:O	42:DN:102:PHE:HB2	2.14	0.47
43:DO:66:GLY:O	43:DO:102:ARG:HD3	2.14	0.47
44:DQ:57:ARG:C	44:DQ:59:LEU:N	2.71	0.47
44:DQ:72:GLY:O	44:DQ:113:LYS:HE2	2.14	0.47
47:DF:141:ASP:CB	47:DF:144:LYS:HB2	2.42	0.47
48:DG:108:PHE:HE1	48:DG:151:ARG:HH11	1.62	0.47
1:AA:375:U:OP1	13:AP:70:ARG:HB2	2.13	0.47
1:AA:845:A:H5"	1:AA:846:G:H8	1.76	0.47
1:AA:1465:A:H2'	1:AA:1466:C:C6	2.49	0.47
2:AC:47:ALA:C	2:AC:49:ALA:H	2.21	0.47
2:AC:52:SER:C	2:AC:113:LYS:HG2	2.39	0.47
3:AD:25:ARG:O	3:AD:27:ILE:HG13	2.14	0.47
7:AH:17:GLN:OE1	7:AH:69:ALA:HB1	2.14	0.47
7:AH:29:SER:OG	7:AH:32:LYS:HG3	2.13	0.47
9:AJ:18:ILE:HG12	9:AJ:72:ARG:CG	2.44	0.47
10:AK:52:ARG:HB3	10:AK:52:ARG:NH1	2.29	0.47
14:AQ:24:ILE:HD13	14:AQ:43:LEU:HD13	1.95	0.47
19:AU:36:PHE:O	19:AU:39:LYS:HD2	2.14	0.47
21:AN:20:PHE:CD2	21:AN:55:SER:HA	2.49	0.47
21:AN:27:LYS:C	21:AN:29:ILE:H	2.22	0.47
23:BB:227:A:C2	23:BB:2407:A:H1'	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:404:A:H4'	23:BB:405:U:O5'	2.15	0.47
23:BB:552:U:O2'	23:BB:553:G:H5'	2.15	0.47
23:BB:677:A:H2'	23:BB:678:C:H6	1.78	0.47
23:BB:955:U:H5"	38:BM:86:LYS:NZ	2.30	0.47
23:BB:1182:G:H2'	23:BB:1183:U:O4'	2.14	0.47
23:BB:1242:U:H2'	23:BB:1243:C:C6	2.49	0.47
23:BB:1387:A:H2'	23:BB:1388:G:C8	2.49	0.47
23:BB:1459:G:H2'	23:BB:1461:C:C4	2.49	0.47
23:BB:1563:U:O2'	23:BB:1564:C:H5'	2.14	0.47
23:BB:2135:A:H3'	23:BB:2136:G:H8	1.79	0.47
23:BB:2836:U:H2'	23:BB:2837:A:C8	2.50	0.47
25:BC:202:ARG:HE	25:BC:213:ARG:HH21	1.61	0.47
25:BC:209:ALA:HA	25:BC:212:TRP:NE1	2.29	0.47
27:BK:35:VAL:CG2	27:BK:36:GLY:H	2.12	0.47
27:BK:51:LYS:O	27:BK:52:VAL:HG13	2.14	0.47
27:BK:58:LEU:HD11	27:BK:86:LEU:HB2	1.96	0.47
28:BP:3:ILE:HD13	28:BP:4:ILE:N	2.29	0.47
29:BE:16:GLU:O	29:BE:20:GLY:HA3	2.14	0.47
31:B0:41:HIS:CB	42:BN:99:LYS:HB2	2.44	0.47
32:B4:36:ARG:HG2	32:B4:37:GLN:N	2.23	0.47
35:BV:42:LEU:HB2	35:BV:47:VAL:HG21	1.95	0.47
38:BM:73:ILE:HG21	38:BM:91:TYR:CZ	2.50	0.47
42:BN:90:ARG:HB3	42:BN:94:TYR:HE1	1.79	0.47
43:BO:115:LEU:CD2	43:BO:115:LEU:H	2.26	0.47
46:BU:28:LEU:HB2	46:BU:32:LYS:O	2.15	0.47
47:BF:134:GLN:C	47:BF:136:ILE:N	2.71	0.47
51:BZ:14:THR:HA	51:BZ:28:ARG:HA	1.96	0.47
1:CA:76:G:H2'	1:CA:77:A:H8	1.79	0.47
1:CA:94:G:H4'	1:CA:95:C:C5'	2.45	0.47
1:CA:237:G:H5"	14:CQ:26:ARG:NH2	2.29	0.47
1:CA:451:A:H1'	1:CA:452:A:C8	2.49	0.47
1:CA:1053:G:C4'	1:CA:1054:C:H5'	2.44	0.47
1:CA:1155:A:O2'	1:CA:1156:G:H5'	2.14	0.47
4:CE:131:ASN:O	4:CE:135:VAL:HG23	2.14	0.47
10:CK:19:VAL:N	10:CK:34:THR:O	2.47	0.47
17:CT:70:LYS:HA	17:CT:73:ARG:CZ	2.45	0.47
19:CU:34:ARG:HD3	19:CU:39:LYS:CE	2.39	0.47
6:CG:30:MET:CE	6:CG:33:GLY:HA2	2.38	0.47
8:CI:20:ILE:HD13	8:CI:85:ALA:CB	2.44	0.47
18:CB:19:THR:O	18:CB:37:VAL:HA	2.14	0.47
18:CB:20:ARG:HD2	18:CB:38:HIS:CE1	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CB:213:LEU:HD23	18:CB:213:LEU:HA	1.79	0.47
23:DB:407:G:O2'	23:DB:408:G:H5'	2.15	0.47
23:DB:919:U:O5'	23:DB:919:U:H6	1.97	0.47
23:DB:996:A:H4'	44:DQ:91:ARG:HG2	1.96	0.47
23:DB:1283:G:N2	23:DB:1285:A:H3'	2.29	0.47
23:DB:1439:A:H5"	23:DB:1440:U:OP2	2.14	0.47
23:DB:1869:G:H2'	23:DB:1869:G:N3	2.30	0.47
23:DB:1977:A:H2'	23:DB:1978:A:C8	2.49	0.47
23:DB:1998:A:H2'	23:DB:1999:C:H6	1.79	0.47
23:DB:2027:G:O2'	23:DB:2028:U:H5'	2.14	0.47
23:DB:2348:U:O2'	23:DB:2349:G:H5'	2.15	0.47
23:DB:2389:G:C5'	23:DB:2390:U:H5'	2.44	0.47
24:DI:100:ILE:O	24:DI:139:VAL:HG13	2.14	0.47
26:DD:107:VAL:N	26:DD:206:ALA:H	2.12	0.47
28:DP:3:ILE:HG23	28:DP:4:ILE:N	2.30	0.47
29:DE:24:ASN:HD22	29:DE:24:ASN:C	2.22	0.47
31:D0:46:GLY:O	31:D0:53:VAL:N	2.48	0.47
35:DV:29:ILE:HD13	35:DV:31:TYR:CE2	2.50	0.47
39:DX:17:GLU:CD	39:DX:18:LEU:N	2.72	0.47
43:DO:83:LEU:CD1	43:DO:114:GLY:HA3	2.44	0.47
44:DQ:59:LEU:O	44:DQ:62:ALA:HB3	2.14	0.47
46:DU:41:VAL:O	46:DU:42:LYS:HB2	2.14	0.47
46:DU:46:LYS:HE3	46:DU:47:PRO:O	2.13	0.47
47:DF:106:ALA:HA	47:DF:135:ILE:CD1	2.45	0.47
50:DT:87:LEU:HB2	50:DT:91:GLN:HG2	1.95	0.47
51:DZ:40:VAL:O	51:DZ:42:SER:N	2.46	0.47
52:DW:13:ARG:HA	52:DW:13:ARG:HH11	1.79	0.47
52:DW:32:ALA:C	52:DW:34:SER:N	2.69	0.47
1:AA:751:U:H4'	20:AO:24:SER:HA	1.96	0.47
1:AA:1336:C:H4'	1:AA:1337:G:N3	2.30	0.47
1:AA:1532:U:H2'	1:AA:1533:C:H3'	1.95	0.47
3:AD:24:VAL:O	3:AD:27:ILE:HD11	2.14	0.47
3:AD:165:GLU:CD	3:AD:166:LYS:H	2.22	0.47
4:AE:17:VAL:HG23	4:AE:33:THR:O	2.14	0.47
8:AI:64:ILE:HD12	8:AI:64:ILE:N	2.30	0.47
10:AK:14:GLN:OE1	10:AK:77:GLY:HA3	2.14	0.47
12:AM:78:ARG:HH11	12:AM:78:ARG:HG2	1.79	0.47
16:AS:9:PHE:HE1	16:AS:36:ARG:HG3	1.79	0.47
18:AB:61:SER:HA	18:AB:224:ARG:HA	1.97	0.47
18:AB:68:PHE:HA	18:AB:161:PHE:O	2.13	0.47
22:BA:29:A:OP1	43:BO:31:THR:HB	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:27:G:H1'	23:BB:513:A:N6	2.29	0.47
23:BB:136:G:H2'	23:BB:137:U:O4'	2.14	0.47
23:BB:138:U:O2'	23:BB:141:G:N2	2.47	0.47
23:BB:457:A:N1	23:BB:470:A:H5"	2.30	0.47
23:BB:567:U:H2'	23:BB:568:U:O4'	2.14	0.47
23:BB:634:C:O2'	23:BB:635:C:H5'	2.14	0.47
23:BB:945:A:OP2	23:BB:945:A:H4'	2.14	0.47
23:BB:1026:G:OP2	23:BB:1134:A:H1'	2.13	0.47
23:BB:1158:C:H5'	30:BY:31:ILE:HG12	1.96	0.47
23:BB:1290:C:O2'	23:BB:1291:C:H5'	2.14	0.47
23:BB:1461:C:O2'	23:BB:1462:C:H5'	2.13	0.47
23:BB:1921:G:O2'	23:BB:1922:G:H5'	2.14	0.47
23:BB:2029:G:H2'	23:BB:2031:A:OP1	2.15	0.47
23:BB:2134:A:H2'	23:BB:2135:A:C8	2.50	0.47
23:BB:2252:G:O2'	23:BB:2253:G:H5'	2.13	0.47
23:BB:2504:U:O5'	23:BB:2504:U:H6	1.97	0.47
23:BB:2654:A:N1	23:BB:2665:A:H5"	2.30	0.47
23:BB:2723:C:H5"	42:BN:1:MET:HE2	1.96	0.47
23:BB:2807:U:H5'	23:BB:2808:G:OP2	2.14	0.47
25:BC:173:LEU:HD22	25:BC:181:ARG:O	2.14	0.47
26:BD:8:LYS:HG3	26:BD:9:VAL:N	2.30	0.47
26:BD:15:PHE:N	28:BP:11:GLN:HE22	2.12	0.47
26:BD:106:LYS:HB3	26:BD:206:ALA:HB3	1.95	0.47
27:BK:115:ILE:HG23	27:BK:116:ILE:H	1.80	0.47
33:B1:50:GLU:O	33:B1:51:ALA:HB2	2.15	0.47
35:BV:29:ILE:HG13	35:BV:88:HIS:CE1	2.49	0.47
35:BV:42:LEU:HD12	35:BV:47:VAL:HG21	1.96	0.47
35:BV:68:LYS:HD3	35:BV:68:LYS:N	2.28	0.47
40:BH:81:ALA:CB	40:BH:146:VAL:HA	2.44	0.47
40:BH:103:VAL:HB	40:BH:108:VAL:HB	1.96	0.47
43:BO:31:THR:HG23	43:BO:34:HIS:O	2.13	0.47
44:BQ:9:ALA:C	44:BQ:11:ALA:N	2.70	0.47
46:BU:47:PRO:HD3	46:BU:55:GLY:CA	2.45	0.47
47:BF:163:GLU:O	47:BF:166:ARG:HB2	2.14	0.47
48:BG:26:LYS:HA	48:BG:32:LEU:HA	1.96	0.47
48:BG:71:LEU:HA	48:BG:74:MET:SD	2.54	0.47
50:BT:31:VAL:C	50:BT:32:LEU:HD23	2.38	0.47
1:CA:18:C:C1'	1:CA:1079:G:H21	2.27	0.47
1:CA:599:C:O2'	1:CA:600:A:H5'	2.14	0.47
1:CA:1495:U:H2'	1:CA:1496:C:C6	2.49	0.47
7:CH:124:ILE:HG22	7:CH:125:ILE:H	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:104:GLU:HG2	2:CC:105:VAL:H	1.80	0.47
8:CI:42:THR:O	8:CI:46:VAL:HG13	2.13	0.47
9:CJ:80:THR:C	9:CJ:82:LYS:H	2.22	0.47
21:CN:77:GLY:O	21:CN:78:LEU:HD12	2.15	0.47
18:CB:107:ARG:HA	18:CB:110:ILE:CG1	2.44	0.47
18:CB:164:ASP:HB2	18:CB:203:ASP:HB2	1.97	0.47
20:CO:33:THR:HG23	20:CO:63:ARG:HH11	1.79	0.47
23:DB:754:U:H2'	23:DB:755:U:C6	2.50	0.47
23:DB:765:C:O2'	23:DB:766:U:H5'	2.14	0.47
23:DB:875:G:H2'	23:DB:876:C:O4'	2.14	0.47
23:DB:973:A:OP1	23:DB:973:A:H8	1.97	0.47
23:DB:1592:C:H2'	23:DB:1593:A:H8	1.80	0.47
23:DB:1664:A:H1'	23:DB:2726:A:C2	2.49	0.47
23:DB:1820:U:N3	25:DC:197:ALA:O	2.47	0.47
23:DB:2203:U:C2'	23:DB:2204:G:OP2	2.63	0.47
23:DB:2324:U:H5'	23:DB:2325:G:H5"	1.95	0.47
24:DI:18:ASN:HB2	24:DI:38:CYS:SG	2.54	0.47
25:DC:2:VAL:HG23	25:DC:3:VAL:N	2.22	0.47
25:DC:145:MET:HE2	25:DC:145:MET:HA	1.94	0.47
26:DD:7:LYS:HG3	26:DD:198:GLY:O	2.13	0.47
26:DD:117:GLY:O	26:DD:118:PHE:C	2.57	0.47
27:DK:119:ALA:O	27:DK:120:PRO:C	2.58	0.47
28:DP:3:ILE:O	28:DP:7:LEU:HD13	2.12	0.47
30:DY:2:LYS:HE2	30:DY:39:ASP:OD2	2.14	0.47
31:D0:12:ARG:HD2	31:D0:16:ARG:NH1	2.30	0.47
31:D0:27:LEU:HD22	31:D0:38:LEU:HA	1.95	0.47
37:DL:74:THR:HA	37:DL:107:PHE:O	2.15	0.47
37:DL:78:ARG:CB	37:DL:113:ALA:HB2	2.38	0.47
38:DM:34:LYS:O	38:DM:128:THR:HG22	2.14	0.47
38:DM:38:ARG:HG2	38:DM:98:PRO:HD3	1.96	0.47
39:DX:20:ASN:HD22	39:DX:20:ASN:N	2.09	0.47
41:DJ:6:ALA:HB3	41:DJ:45:THR:CG2	2.42	0.47
41:DJ:56:VAL:HG12	41:DJ:57:LEU:N	2.29	0.47
43:DO:66:GLY:C	43:DO:68:LYS:H	2.22	0.47
45:DS:31:GLN:O	45:DS:34:ASP:HB2	2.13	0.47
46:DU:78:LYS:HE3	46:DU:79:ALA:N	2.30	0.47
47:DF:105:ILE:HA	47:DF:108:PRO:HB2	1.95	0.47
48:DG:112:VAL:O	48:DG:113:ASP:HB2	2.14	0.47
1:AA:405:U:C5	3:AD:4:LEU:HD21	2.48	0.47
1:AA:438:U:H4'	3:AD:119:HIS:HD2	1.78	0.47
1:AA:525:C:H2'	1:AA:526:C:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:948:C:C2'	1:AA:949:A:H5'	2.45	0.47
1:AA:950:U:H3'	12:AM:100:ARG:NH2	2.30	0.47
1:AA:1293:C:H2'	1:AA:1294:G:C8	2.50	0.47
1:AA:1441:A:H2	28:BP:113:LEU:HD22	1.79	0.47
2:AC:52:SER:OG	2:AC:53:ARG:N	2.47	0.47
16:AS:39:ILE:HD12	16:AS:65:MET:O	2.15	0.47
17:AT:24:ARG:CG	17:AT:65:LEU:HD11	2.45	0.47
18:AB:77:GLU:HA	18:AB:80:LYS:HD3	1.96	0.47
20:AO:39:LEU:CD2	20:AO:56:LEU:HB2	2.44	0.47
22:BA:75:G:H1	22:BA:102:G:N2	2.12	0.47
23:BB:68:G:H2'	23:BB:69:C:H6	1.79	0.47
23:BB:234:U:O2'	23:BB:235:U:H5'	2.14	0.47
23:BB:400:G:N7	51:BZ:57:ARG:NH1	2.62	0.47
23:BB:659:G:H21	29:BE:30:GLN:HE22	1.61	0.47
23:BB:796:C:H2'	23:BB:797:G:C8	2.49	0.47
23:BB:802:A:H2'	23:BB:803:U:H6	1.79	0.47
23:BB:863:A:H2'	23:BB:864:G:C8	2.48	0.47
23:BB:1131:G:N2	23:BB:2024:G:H21	2.13	0.47
23:BB:1292:G:O2'	23:BB:1293:C:H5'	2.15	0.47
23:BB:1459:G:H3'	23:BB:1460:U:C4'	2.44	0.47
23:BB:1576:U:O2'	23:BB:1577:C:H5'	2.14	0.47
23:BB:1625:C:H3'	23:BB:1626:A:C8	2.50	0.47
23:BB:1744:A:H3'	23:BB:1745:A:C8	2.49	0.47
23:BB:1917:U:H2'	23:BB:1918:A:H8	1.79	0.47
23:BB:2210:U:N3	23:BB:2212:A:N7	2.62	0.47
23:BB:2365:G:O2'	52:BW:59:PHE:CE1	2.68	0.47
23:BB:2454:G:C2'	23:BB:2455:G:H5'	2.44	0.47
23:BB:2580:U:H5'	26:BD:136:ASN:H	1.79	0.47
23:BB:2634:A:H2'	23:BB:2635:A:C8	2.49	0.47
23:BB:2809:A:H2'	23:BB:2810:A:C8	2.49	0.47
23:BB:2821:A:OP2	23:BB:2821:A:H3'	2.14	0.47
24:BI:32:VAL:HG13	24:BI:66:PHE:CD2	2.49	0.47
26:BD:54:ALA:N	26:BD:76:GLY:HA2	2.30	0.47
27:BK:29:HIS:O	27:BK:30:ARG:C	2.57	0.47
29:BE:58:LYS:H	29:BE:58:LYS:HZ3	1.57	0.47
35:BV:51:GLN:NE2	35:BV:79:ARG:HH22	2.13	0.47
37:BL:19:LEU:HD22	37:BL:31:GLY:O	2.13	0.47
44:BQ:71:ASN:HD22	44:BQ:109:VAL:HG21	1.79	0.47
48:BG:152:ARG:HD3	48:BG:153:PRO:CD	2.42	0.47
1:CA:435:A:H2'	1:CA:435:A:N3	2.29	0.47
1:CA:552:U:H4'	11:CL:82:ARG:HG2	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:980:C:H4'	21:CN:12:ARG:HH22	1.80	0.47
1:CA:1234:C:H1'	1:CA:1364:U:O2	2.14	0.47
3:CD:146:GLU:HA	3:CD:149:LYS:CG	2.41	0.47
3:CD:170:LEU:O	3:CD:170:LEU:HD12	2.15	0.47
4:CE:82:HIS:HB2	4:CE:83:PRO:HD2	1.96	0.47
14:CQ:10:ARG:HA	14:CQ:56:ASP:O	2.14	0.47
14:CQ:37:ILE:HG22	14:CQ:38:LYS:N	2.29	0.47
14:CQ:80:LYS:H	14:CQ:80:LYS:NZ	2.13	0.47
17:CT:72:ALA:HA	17:CT:75:LYS:HD3	1.96	0.47
6:CG:106:ALA:O	6:CG:110:ARG:HG3	2.14	0.47
8:CI:74:GLN:O	8:CI:78:ILE:HG13	2.15	0.47
8:CI:108:ARG:HB3	8:CI:108:ARG:HH11	1.79	0.47
9:CJ:28:THR:O	9:CJ:31:ARG:HG2	2.13	0.47
22:DA:54:G:N2	47:DF:25:MET:HG2	2.28	0.47
23:DB:103:A:H3'	23:DB:104:A:C8	2.48	0.47
23:DB:115:C:O2'	23:DB:116:C:H5'	2.14	0.47
23:DB:264:C:H2'	23:DB:265:A:C5'	2.43	0.47
23:DB:418:C:H2'	23:DB:419:U:C6	2.49	0.47
23:DB:423:A:H5"	23:DB:424:G:C5'	2.44	0.47
23:DB:425:G:O2'	23:DB:426:C:H5'	2.14	0.47
23:DB:557:C:H2'	23:DB:558:U:C6	2.50	0.47
23:DB:596:U:O2'	23:DB:597:G:H5'	2.14	0.47
23:DB:784:G:H5"	25:DC:225:ASN:OD1	2.14	0.47
23:DB:855:G:H21	52:DW:23:LYS:CG	2.18	0.47
23:DB:1530:G:N3	23:DB:1530:G:H2'	2.29	0.47
23:DB:1563:U:O2'	23:DB:1564:C:H5'	2.15	0.47
23:DB:1690:A:H2'	23:DB:1691:C:O4'	2.15	0.47
23:DB:1864:U:O2'	23:DB:1865:U:H5'	2.14	0.47
23:DB:2455:G:H2'	23:DB:2456:C:H6	1.79	0.47
23:DB:2559:C:H2'	23:DB:2560:A:H8	1.80	0.47
24:DI:11:GLN:HA	24:DI:55:PRO:HA	1.95	0.47
24:DI:49:GLU:HB3	24:DI:52:LEU:HD12	1.97	0.47
24:DI:72:THR:CG2	24:DI:112:LYS:HD2	2.44	0.47
24:DI:129:GLU:CB	24:DI:133:ARG:HH12	2.27	0.47
25:DC:151:GLY:C	25:DC:152:GLN:HE21	2.23	0.47
25:DC:157:ALA:C	25:DC:159:THR:H	2.22	0.47
26:DD:46:ARG:NH1	26:DD:46:ARG:HG3	2.30	0.47
26:DD:90:PHE:O	26:DD:91:THR:C	2.57	0.47
30:DY:47:ILE:HG21	30:DY:56:VAL:CG2	2.45	0.47
34:D3:21:PHE:HB2	34:D3:49:VAL:HG22	1.97	0.47
37:DL:76:GLU:HG3	37:DL:111:ILE:HG13	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DL:78:ARG:HB3	37:DL:113:ALA:CB	2.37	0.47
40:DH:110:VAL:HG23	40:DH:132:PHE:CE2	2.49	0.47
41:DJ:13:ARG:HB3	41:DJ:53:TYR:CD2	2.49	0.47
41:DJ:34:ARG:HG3	41:DJ:39:LYS:HB3	1.96	0.47
42:DN:37:THR:CG2	42:DN:39:PRO:HD2	2.34	0.47
42:DN:61:ALA:C	42:DN:63:ARG:H	2.23	0.47
46:DU:47:PRO:HD3	46:DU:55:GLY:CA	2.45	0.47
46:DU:62:ALA:O	46:DU:63:ALA:HB3	2.13	0.47
47:DF:37:MET:HE3	47:DF:151:LEU:HD23	1.96	0.47
49:DR:38:VAL:HG22	49:DR:40:MET:H	1.78	0.47
51:DZ:3:ARG:HG3	51:DZ:50:ARG:HH11	1.78	0.47
51:DZ:21:ALA:HB3	51:DZ:23:ASN:HD21	1.79	0.47
1:AA:410:G:P	3:AD:25:ARG:HD2	2.54	0.47
1:AA:547:A:H4'	1:AA:548:G:O5'	2.15	0.47
1:AA:635:A:H2'	1:AA:636:U:C6	2.50	0.47
1:AA:818:G:C3'	1:AA:819:A:H5"	2.43	0.47
1:AA:842:U:OP1	1:AA:842:U:H6	1.97	0.47
1:AA:1027:C:H2'	1:AA:1028:C:C6	2.50	0.47
1:AA:1127:G:H5'	1:AA:1280:A:O2'	2.14	0.47
1:AA:1152:A:OP1	9:AJ:70:HIS:ND1	2.47	0.47
3:AD:137:SER:HB2	3:AD:138:PRO:HD2	1.96	0.47
5:AF:93:LYS:O	5:AF:94:HIS:HB2	2.14	0.47
7:AH:55:LYS:HA	7:AH:55:LYS:CE	2.43	0.47
11:AL:24:GLU:C	11:AL:26:CYS:H	2.19	0.47
12:AM:93:GLY:HA2	12:AM:108:ARG:HH12	1.80	0.47
14:AQ:7:LEU:O	14:AQ:60:ILE:HD13	2.14	0.47
18:AB:145:ASN:ND2	18:AB:145:ASN:N	2.62	0.47
23:BB:15:G:O2'	23:BB:16:C:H5'	2.14	0.47
23:BB:151:C:H2'	23:BB:152:A:H8	1.79	0.47
23:BB:189:G:H2'	23:BB:205:G:N2	2.30	0.47
23:BB:230:G:H2'	23:BB:231:A:H8	1.79	0.47
23:BB:638:G:H2'	23:BB:639:U:C6	2.50	0.47
23:BB:691:C:H5'	25:BC:216:ARG:NH1	2.30	0.47
23:BB:779:U:O2'	23:BB:780:G:H5'	2.15	0.47
23:BB:1197:G:O2'	23:BB:1198:U:H5'	2.15	0.47
23:BB:1390:U:O2'	23:BB:1391:U:H5'	2.15	0.47
23:BB:1523:U:H5"	23:BB:1524:G:C8	2.49	0.47
23:BB:1542:U:H2'	23:BB:1543:G:O4'	2.14	0.47
23:BB:1582:C:H2'	23:BB:1583:A:O4'	2.13	0.47
23:BB:1859:U:H2'	23:BB:1860:G:H8	1.77	0.47
23:BB:2362:C:O2'	23:BB:2363:G:H5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2722:G:H2'	23:BB:2723:C:O4'	2.14	0.47
25:BC:93:VAL:CG1	25:BC:101:ARG:H	2.28	0.47
25:BC:169:ALA:O	25:BC:185:ALA:HB3	2.15	0.47
26:BD:109:VAL:HG11	26:BD:193:VAL:HB	1.96	0.47
26:BD:117:GLY:O	26:BD:118:PHE:C	2.57	0.47
26:BD:154:LYS:HG2	26:BD:155:VAL:N	2.30	0.47
27:BK:60:ALA:HA	27:BK:87:LEU:HD22	1.95	0.47
29:BE:129:PRO:HB3	29:BE:159:LEU:HD23	1.97	0.47
31:B0:2:VAL:HG12	31:B0:3:GLN:N	2.30	0.47
35:BV:59:GLU:HG2	35:BV:60:VAL:H	1.79	0.47
37:BL:18:ARG:O	37:BL:19:LEU:HD12	2.14	0.47
37:BL:95:LEU:O	37:BL:100:ILE:HG22	2.14	0.47
41:BJ:38:GLY:O	41:BJ:43:GLU:HB2	2.14	0.47
41:BJ:44:TYR:CE2	44:BQ:59:LEU:HD11	2.50	0.47
42:BN:3:HIS:O	42:BN:4:ARG:HB2	2.13	0.47
43:BO:17:LYS:O	43:BO:21:LEU:HB2	2.14	0.47
48:BG:149:ALA:C	48:BG:151:ARG:H	2.23	0.47
51:BZ:68:LEU:O	51:BZ:69:ALA:C	2.57	0.47
52:BW:37:VAL:C	52:BW:38:ARG:HG2	2.40	0.47
1:CA:255:G:H1'	14:CQ:17:GLU:OE2	2.14	0.47
1:CA:518:C:H2'	1:CA:530:G:N7	2.30	0.47
1:CA:640:A:O2'	1:CA:641:U:H5'	2.15	0.47
1:CA:778:G:H21	10:CK:121:ARG:HD3	1.79	0.47
1:CA:994:A:C2	21:CN:4:SER:HA	2.49	0.47
1:CA:996:A:H2'	1:CA:997:U:C6	2.49	0.47
1:CA:1061:G:H2'	1:CA:1062:U:H6	1.80	0.47
1:CA:1110:A:H2'	1:CA:1111:A:H8	1.80	0.47
3:CD:90:LEU:HD21	3:CD:196:GLU:CB	2.45	0.47
3:CD:197:HIS:O	3:CD:201:GLU:HG3	2.15	0.47
4:CE:132:PRO:HG2	4:CE:133:ILE:H	1.79	0.47
14:CQ:82:VAL:C	14:CQ:83:LEU:HD22	2.40	0.47
15:CR:52:ARG:O	15:CR:56:ARG:HG3	2.14	0.47
6:CG:145:GLU:C	6:CG:147:ASN:N	2.72	0.47
18:CB:46:VAL:HA	18:CB:49:PHE:HD2	1.78	0.47
18:CB:150:ILE:O	18:CB:151:LYS:C	2.57	0.47
23:DB:21:A:H2'	23:DB:22:C:H6	1.78	0.47
23:DB:233:A:H61	23:DB:428:A:H61	1.62	0.47
23:DB:277:G:H2'	23:DB:278:A:OP2	2.14	0.47
23:DB:346:A:N3	23:DB:346:A:H5'	2.29	0.47
23:DB:543:G:C2'	23:DB:545:U:H5'	2.44	0.47
23:DB:558:U:H5'	41:DJ:114:LEU:HD22	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1092:C:C2'	23:DB:1093:G:H5'	2.44	0.47
23:DB:1150:C:H2'	23:DB:1151:A:C8	2.49	0.47
23:DB:1324:G:H3'	23:DB:1325:U:H4'	1.95	0.47
23:DB:1387:A:H2'	23:DB:1388:G:C8	2.49	0.47
23:DB:1808:A:H3'	23:DB:1809:A:H8	1.79	0.47
23:DB:2053:G:O2'	23:DB:2054:A:H5'	2.14	0.47
23:DB:2260:C:O2'	23:DB:2261:C:H5'	2.14	0.47
23:DB:2294:G:P	43:DO:94:ARG:HH12	2.37	0.47
23:DB:2471:A:O2'	23:DB:2472:G:O5'	2.33	0.47
25:DC:115:ILE:HB	25:DC:126:GLY:O	2.14	0.47
25:DC:270:ARG:HB3	25:DC:270:ARG:NH1	2.29	0.47
26:DD:5:VAL:H	26:DD:32:ASN:HD21	1.61	0.47
26:DD:29:VAL:O	26:DD:185:ASN:HB3	2.15	0.47
26:DD:204:LYS:NZ	26:DD:204:LYS:HB3	2.28	0.47
27:DK:88:ASN:HD22	27:DK:89:ASN:H	1.62	0.47
27:DK:109:SER:O	27:DK:111:LYS:N	2.47	0.47
29:DE:15:SER:C	29:DE:17:THR:H	2.23	0.47
38:DM:41:LEU:C	38:DM:43:ALA:H	2.22	0.47
38:DM:83:GLY:O	38:DM:84:LYS:HG2	2.14	0.47
40:DH:121:VAL:HG23	40:DH:122:LEU:N	2.29	0.47
41:DJ:124:VAL:O	41:DJ:125:TYR:HB2	2.15	0.47
42:DN:2:ARG:HG2	42:DN:5:LYS:CB	2.38	0.47
42:DN:49:GLU:HA	42:DN:94:TYR:HD2	1.80	0.47
42:DN:101:GLY:CA	42:DN:109:PRO:HA	2.44	0.47
43:DO:7:ARG:HG3	43:DO:96:GLY:C	2.39	0.47
44:DQ:48:ASP:C	44:DQ:50:ARG:N	2.69	0.47
45:DS:4:ILE:HG21	45:DS:106:VAL:HG22	1.96	0.47
45:DS:30:SER:HA	45:DS:33:LEU:HD12	1.96	0.47
46:DU:82:VAL:C	46:DU:96:LYS:HZ2	2.22	0.47
47:DF:40:GLY:HA2	47:DF:84:ILE:O	2.14	0.47
48:DG:7:PRO:O	48:DG:8:VAL:HB	2.14	0.47
49:DR:41:ILE:N	49:DR:41:ILE:HD13	2.29	0.47
1:AA:202:G:N2	1:AA:465:A:H61	2.10	0.47
1:AA:211:G:H3'	1:AA:211:G:N3	2.30	0.47
1:AA:244:U:O4	1:AA:906:A:H1'	2.14	0.47
1:AA:263:A:OP1	17:AT:73:ARG:NH1	2.48	0.47
1:AA:607:A:H2'	1:AA:608:A:C8	2.50	0.47
1:AA:889:A:H5'	1:AA:891:U:H1'	1.97	0.47
1:AA:1041:G:H8	1:AA:1041:G:O5'	1.97	0.47
1:AA:1152:A:H2'	1:AA:1153:G:H8	1.80	0.47
1:AA:1237:C:H5"	1:AA:1238:A:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1262:C:H42	1:AA:1273:C:H42	1.63	0.47
1:AA:1497:G:H2'	1:AA:1498:U:H5'	1.96	0.47
2:AC:55:VAL:HG12	2:AC:56:ILE:N	2.30	0.47
4:AE:14:LEU:HD13	4:AE:14:LEU:C	2.40	0.47
4:AE:104:ILE:HD11	4:AE:111:ARG:HA	1.96	0.47
5:AF:9:MET:HA	5:AF:58:HIS:O	2.14	0.47
5:AF:11:HIS:HB3	5:AF:14:GLN:CG	2.38	0.47
7:AH:14:ARG:HE	7:AH:75:GLN:NE2	2.13	0.47
7:AH:82:LEU:HD13	7:AH:82:LEU:O	2.15	0.47
7:AH:124:ILE:HG22	7:AH:125:ILE:H	1.78	0.47
10:AK:21:HIS:HA	10:AK:84:MET:O	2.15	0.47
11:AL:80:LEU:HB3	11:AL:97:VAL:CG2	2.45	0.47
11:AL:85:ARG:HA	11:AL:93:ARG:HA	1.96	0.47
12:AM:15:VAL:HG22	12:AM:29:SER:HB3	1.97	0.47
14:AQ:24:ILE:HD12	14:AQ:24:ILE:N	2.30	0.47
14:AQ:80:LYS:HD2	14:AQ:80:LYS:C	2.40	0.47
18:AB:17:HIS:CG	18:AB:18:GLN:N	2.83	0.47
20:AO:36:ILE:HD12	20:AO:60:VAL:CG2	2.45	0.47
21:AN:58:ARG:C	21:AN:59:GLN:HE21	2.22	0.47
23:BB:141:G:C6	50:BT:1:MET:HA	2.50	0.47
23:BB:213:A:O2'	23:BB:214:G:H5'	2.15	0.47
23:BB:241:A:H8	23:BB:241:A:OP1	1.97	0.47
23:BB:718:A:H5'	23:BB:719:C:OP2	2.15	0.47
23:BB:909:A:H2'	23:BB:912:C:C5	2.49	0.47
23:BB:998:C:H3'	56:BB:3247:HOH:O	2.15	0.47
23:BB:1266:G:N2	23:BB:2012:G:H2'	2.30	0.47
23:BB:1324:G:H3'	23:BB:1325:U:H4'	1.96	0.47
23:BB:1528:A:H2'	23:BB:1529:G:O4'	2.15	0.47
23:BB:1567:G:H2'	25:BC:82:TYR:HE1	1.79	0.47
23:BB:1636:U:H2'	23:BB:1637:A:H8	1.78	0.47
23:BB:1818:U:HO2'	23:BB:1819:A:P	2.37	0.47
23:BB:2010:G:H2'	23:BB:2011:U:H6	1.79	0.47
23:BB:2088:A:H2'	23:BB:2089:C:C6	2.50	0.47
23:BB:2284:A:OP1	33:B1:3:GLY:O	2.33	0.47
23:BB:2314:A:H4'	47:BF:34:THR:HG21	1.96	0.47
23:BB:2580:U:C5'	26:BD:136:ASN:H	2.27	0.47
23:BB:2634:A:H2'	23:BB:2635:A:H8	1.79	0.47
23:BB:2699:C:H2'	23:BB:2700:A:H8	1.78	0.47
23:BB:2757:A:H2	48:BG:63:GLN:NE2	2.12	0.47
23:BB:2813:A:H2'	23:BB:2814:A:H8	1.80	0.47
23:BB:2895:G:H2'	23:BB:2896:C:C6	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:202:ILE:HD12	26:BD:202:ILE:N	2.30	0.47
27:BK:47:ILE:CG1	27:BK:48:PRO:HD2	2.38	0.47
27:BK:109:SER:O	27:BK:111:LYS:N	2.48	0.47
27:BK:112:PHE:O	27:BK:113:MET:C	2.57	0.47
29:BE:67:ARG:HG2	29:BE:67:ARG:NH1	2.28	0.47
29:BE:111:GLU:HA	29:BE:114:ARG:CG	2.35	0.47
29:BE:158:PHE:HA	29:BE:169:VAL:CG2	2.41	0.47
30:BY:6:ILE:HG22	30:BY:56:VAL:HA	1.97	0.47
40:BH:18:GLN:HE21	40:BH:39:ALA:HB1	1.79	0.47
40:BH:116:ARG:HB2	40:BH:131:SER:HB2	1.96	0.47
41:BJ:65:THR:HG23	41:BJ:66:GLY:N	2.29	0.47
41:BJ:84:ILE:O	41:BJ:84:ILE:HG23	2.14	0.47
42:BN:35:LYS:HA	42:BN:111:ALA:O	2.15	0.47
42:BN:55:ALA:HB2	42:BN:79:LEU:HD22	1.96	0.47
43:BO:26:LEU:O	43:BO:26:LEU:HG	2.14	0.47
44:BQ:40:LYS:O	44:BQ:43:GLN:HB2	2.15	0.47
45:BS:32:ALA:O	45:BS:35:ILE:HG12	2.15	0.47
45:BS:35:ILE:HG22	45:BS:39:THR:CG2	2.44	0.47
46:BU:3:LYS:HD3	46:BU:82:VAL:HG21	1.96	0.47
46:BU:48:VAL:O	46:BU:48:VAL:HG13	2.15	0.47
46:BU:82:VAL:N	46:BU:96:LYS:HZ2	2.11	0.47
47:BF:31:GLU:HB3	47:BF:157:THR:HA	1.96	0.47
47:BF:41:GLU:CB	47:BF:48:LEU:HD11	2.44	0.47
47:BF:167:ALA:O	47:BF:170:ALA:HB3	2.15	0.47
48:BG:84:LYS:HG3	48:BG:131:VAL:CB	2.44	0.47
48:BG:84:LYS:HB2	48:BG:132:LEU:N	2.30	0.47
49:BR:28:ALA:HB3	49:BR:31:GLU:HG3	1.95	0.47
49:BR:58:VAL:C	49:BR:59:ILE:HG13	2.40	0.47
50:BT:39:THR:HG22	50:BT:42:GLU:CG	2.44	0.47
52:BW:43:LYS:O	52:BW:58:LEU:HD11	2.15	0.47
1:CA:68:G:C2	1:CA:69:G:H1'	2.50	0.47
1:CA:191:G:H2'	1:CA:192:A:C8	2.49	0.47
1:CA:373:A:P	1:CA:373:A:H3'	2.55	0.47
1:CA:382:A:H2'	1:CA:383:A:O4'	2.15	0.47
1:CA:412:A:H4'	1:CA:413:G:OP1	2.15	0.47
1:CA:420:U:O2'	1:CA:421:U:H5"	2.13	0.47
1:CA:425:G:O2'	1:CA:426:U:H5'	2.15	0.47
1:CA:488:C:O2'	1:CA:489:C:H5'	2.15	0.47
1:CA:780:A:O2'	1:CA:781:A:H5"	2.15	0.47
1:CA:960:U:O2'	1:CA:1223:C:H4'	2.14	0.47
1:CA:1053:G:N7	1:CA:1199:U:H2'	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1057:G:H5”	2:CC:153:SER:OG	2.14	0.47
1:CA:1137:C:O2	1:CA:1138:G:N1	2.47	0.47
1:CA:1240:U:OP1	6:CG:115:MET:HE2	2.15	0.47
1:CA:1270:G:H2’	1:CA:1271:A:C8	2.49	0.47
1:CA:1296:C:H4’	1:CA:1302:C:N4	2.27	0.47
1:CA:1329:A:O2’	1:CA:1330:U:H5’	2.15	0.47
1:CA:1509:C:H2’	1:CA:1510:C:H6	1.80	0.47
3:CD:24:VAL:O	3:CD:27:ILE:HD11	2.15	0.47
3:CD:137:SER:HB2	3:CD:138:PRO:HD2	1.96	0.47
4:CE:103:GLY:O	4:CE:121:ASN:HA	2.15	0.47
10:CK:41:LEU:HD22	10:CK:76:TYR:CD2	2.49	0.47
14:CQ:7:LEU:HD22	14:CQ:24:ILE:HG21	1.96	0.47
14:CQ:46:HIS:HB2	14:CQ:66:LEU:HD13	1.96	0.47
2:CC:70:ALA:HB2	2:CC:114:LEU:HD13	1.95	0.47
6:CG:46:LEU:HG	6:CG:57:GLU:HG2	1.97	0.47
6:CG:91:ARG:HB3	6:CG:92:PRO:HD2	1.97	0.47
6:CG:112:ASP:CB	6:CG:118:ARG:HG2	2.45	0.47
12:CM:38:ILE:HG22	12:CM:42:VAL:HG11	1.96	0.47
12:CM:64:VAL:C	12:CM:65:GLU:HG2	2.39	0.47
12:CM:68:LEU:O	12:CM:72:ILE:HG22	2.15	0.47
12:CM:100:ARG:O	12:CM:100:ARG:HG3	2.14	0.47
18:CB:40:ILE:HG22	18:CB:41:ASN:N	2.30	0.47
18:CB:58:LYS:C	18:CB:60:ALA:H	2.22	0.47
23:DB:19:A:H2’	23:DB:20:C:H6	1.79	0.47
23:DB:185:G:H2’	23:DB:186:G:O4’	2.14	0.47
23:DB:299:A:H2’	23:DB:300:A:C8	2.48	0.47
23:DB:634:C:O2’	23:DB:635:C:H5’	2.15	0.47
23:DB:738:G:H2’	23:DB:739:A:C8	2.49	0.47
23:DB:852:U:H2’	23:DB:853:C:C6	2.50	0.47
23:DB:876:C:H42	23:DB:901:C:H42	1.59	0.47
23:DB:962:G:H2’	23:DB:963:U:C6	2.50	0.47
23:DB:1128:G:O2’	23:DB:1129:A:H5”	2.14	0.47
23:DB:1182:G:H2’	23:DB:1183:U:O4’	2.14	0.47
23:DB:1234:U:H2’	23:DB:1235:G:O4’	2.15	0.47
23:DB:1238:G:O2’	23:DB:1239:G:H5’	2.14	0.47
23:DB:1361:G:C6	23:DB:1371:G:N2	2.83	0.47
23:DB:1432:G:O2’	23:DB:1433:A:H5’	2.15	0.47
23:DB:1459:G:H3’	23:DB:1460:U:C4’	2.45	0.47
23:DB:1576:U:O2’	23:DB:1577:C:H5’	2.14	0.47
23:DB:1665:A:H2’	23:DB:1666:G:O4’	2.14	0.47
23:DB:1672:A:C6	23:DB:1673:G:C6	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1680:U:O2	23:DB:1763:G:H3'	2.15	0.47
23:DB:1744:A:H3'	23:DB:1745:A:C8	2.49	0.47
23:DB:1779:U:C5	23:DB:1784:A:N7	2.83	0.47
23:DB:1793:C:H2'	23:DB:1794:A:C8	2.49	0.47
23:DB:1839:G:C8	23:DB:1927:A:H1'	2.50	0.47
23:DB:1945:G:H2'	23:DB:1946:U:C6	2.49	0.47
23:DB:2254:C:H2'	23:DB:2255:G:O4'	2.13	0.47
23:DB:2363:G:O2'	23:DB:2364:C:H5'	2.14	0.47
23:DB:2504:U:O5'	23:DB:2504:U:H6	1.98	0.47
23:DB:2580:U:H5'	26:DD:136:ASN:H	1.80	0.47
24:DI:18:ASN:N	24:DI:19:PRO:CD	2.77	0.47
24:DI:76:ALA:O	24:DI:135:MET:HE1	2.15	0.47
26:DD:1:MET:SD	26:DD:2:ILE:N	2.85	0.47
26:DD:97:SER:OG	26:DD:98:VAL:N	2.48	0.47
26:DD:121:THR:HG21	26:DD:127:PHE:CE1	2.50	0.47
28:DP:32:VAL:HG12	28:DP:33:GLU:O	2.15	0.47
33:D1:8:ILE:HD12	33:D1:9:LYS:H	1.80	0.47
35:DV:1:MET:O	35:DV:2:PHE:HB2	2.14	0.47
35:DV:59:GLU:HG2	35:DV:60:VAL:H	1.78	0.47
37:DL:61:LEU:N	37:DL:61:LEU:CD1	2.78	0.47
40:DH:42:LYS:HD3	40:DH:42:LYS:C	2.39	0.47
41:DJ:133:ALA:C	41:DJ:135:GLN:H	2.22	0.47
42:DN:28:LEU:N	42:DN:34:ILE:HD11	2.29	0.47
42:DN:37:THR:HG22	42:DN:39:PRO:CD	2.33	0.47
42:DN:51:LEU:O	42:DN:54:LEU:HB3	2.14	0.47
42:DN:55:ALA:HB2	42:DN:79:LEU:HD22	1.96	0.47
44:DQ:23:TYR:N	44:DQ:23:TYR:CD2	2.81	0.47
45:DS:69:LEU:HD23	45:DS:107:VAL:HG21	1.97	0.47
45:DS:73:LYS:HE3	45:DS:74:ILE:H	1.80	0.47
46:DU:95:PHE:HB2	46:DU:100:GLU:HB3	1.97	0.47
47:DF:57:ALA:HB2	47:DF:64:PRO:CG	2.45	0.47
47:DF:117:SER:HB3	47:DF:120:SER:HB3	1.95	0.47
47:DF:134:GLN:HB3	47:DF:149:ARG:HB3	1.97	0.47
47:DF:163:GLU:O	47:DF:166:ARG:HB2	2.14	0.47
48:DG:26:LYS:HA	48:DG:32:LEU:HA	1.96	0.47
48:DG:51:PHE:CD2	48:DG:68:ARG:HG2	2.50	0.47
50:DT:40:LYS:HA	50:DT:43:ILE:HG22	1.95	0.47
52:DW:50:VAL:HG23	52:DW:61:LYS:CE	2.44	0.47
1:AA:131:A:H2'	1:AA:132:C:H6	1.78	0.47
1:AA:597:G:H2'	1:AA:598:U:H5'	1.95	0.47
1:AA:832:G:O2'	1:AA:833:G:H5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1009:U:H2'	1:AA:1010:U:C6	2.50	0.47
1:AA:1179:A:H2'	1:AA:1180:A:O4'	2.14	0.47
1:AA:1358:U:H3'	1:AA:1359:C:C6	2.48	0.47
1:AA:1368:A:H5"	21:AN:100:TRP:CH2	2.50	0.47
2:AC:63:ILE:HB	2:AC:98:ALA:HB2	1.96	0.47
3:AD:78:ALA:C	3:AD:85:THR:HG23	2.39	0.47
3:AD:176:LYS:HD3	3:AD:176:LYS:H	1.80	0.47
3:AD:178:GLU:HB3	3:AD:179:GLY:H	1.57	0.47
3:AD:181:PHE:O	3:AD:182:LYS:C	2.57	0.47
8:AI:20:ILE:HD13	8:AI:85:ALA:CB	2.39	0.47
9:AJ:52:LEU:HA	9:AJ:62:ARG:H	1.79	0.47
10:AK:22:ILE:HD13	10:AK:95:THR:HG21	1.96	0.47
12:AM:44:ILE:O	12:AM:47:LEU:HB2	2.15	0.47
16:AS:18:VAL:O	16:AS:22:VAL:HG23	2.15	0.47
17:AT:8:LYS:HE3	17:AT:12:GLN:OE1	2.14	0.47
18:AB:15:PHE:HD1	18:AB:16:GLY:N	2.13	0.47
18:AB:166:ASP:CG	18:AB:190:SER:HA	2.40	0.47
18:AB:202:ASN:HB3	18:AB:208:ALA:HB3	1.96	0.47
20:AO:81:LEU:HD23	20:AO:81:LEU:C	2.40	0.47
21:AN:12:ARG:HD3	21:AN:58:ARG:O	2.15	0.47
22:BA:59:A:H2'	22:BA:60:C:H6	1.78	0.47
22:BA:106:G:H2'	22:BA:107:G:O4'	2.14	0.47
23:BB:70:G:H2'	23:BB:113:U:O2'	2.14	0.47
23:BB:242:G:H8	34:B3:3:ILE:O	1.97	0.47
23:BB:413:C:H2'	23:BB:414:C:C6	2.50	0.47
23:BB:661:A:O2'	37:BL:13:LYS:HA	2.15	0.47
23:BB:664:G:H2'	23:BB:665:U:C6	2.49	0.47
23:BB:920:A:H2'	23:BB:921:C:C6	2.49	0.47
23:BB:1081:U:O2'	24:BI:118:GLY:HA2	2.15	0.47
23:BB:1124:G:N3	32:B4:38:GLY:O	2.48	0.47
23:BB:1132:U:O2	41:BJ:75:TYR:HB2	2.15	0.47
23:BB:1404:C:H2'	23:BB:1405:U:C6	2.50	0.47
23:BB:1495:A:H2'	23:BB:1496:A:C8	2.49	0.47
23:BB:2026:U:H2'	23:BB:2027:G:C8	2.50	0.47
23:BB:2329:U:H2'	23:BB:2330:G:C8	2.50	0.47
24:BI:63:ASP:C	24:BI:65:SER:H	2.22	0.47
25:BC:123:ILE:O	25:BC:123:ILE:HG13	2.15	0.47
25:BC:149:LYS:HG2	25:BC:152:GLN:OE1	2.15	0.47
27:BK:108:ARG:O	27:BK:108:ARG:HG3	2.14	0.47
29:BE:101:TYR:O	29:BE:104:ALA:HB3	2.15	0.47
31:B0:42:ILE:HD11	42:BN:98:LEU:HD12	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BV:42:LEU:HD23	35:BV:42:LEU:N	2.30	0.47
35:BV:60:VAL:HG12	35:BV:61:LEU:H	1.78	0.47
37:BL:9:ALA:HB3	37:BL:12:SER:OG	2.14	0.47
37:BL:110:VAL:HB	37:BL:127:VAL:CG2	2.44	0.47
40:BH:73:ASN:N	40:BH:73:ASN:ND2	2.51	0.47
41:BJ:93:ILE:CA	41:BJ:97:PRO:HG3	2.45	0.47
43:BO:39:VAL:CG1	43:BO:48:LEU:HD12	2.40	0.47
46:BU:78:LYS:HE3	46:BU:79:ALA:N	2.29	0.47
47:BF:113:PHE:HZ	47:BF:175:PRO:HB2	1.79	0.47
50:BT:87:LEU:HB2	50:BT:91:GLN:HG2	1.97	0.47
52:BW:16:GLU:O	52:BW:17:ALA:C	2.58	0.47
1:CA:221:C:O2'	1:CA:222:C:H5'	2.14	0.47
1:CA:345:C:H5'	28:DP:38:ARG:NH2	2.29	0.47
1:CA:398:U:H2'	1:CA:399:G:H8	1.79	0.47
1:CA:783:C:O2'	1:CA:784:A:H5'	2.14	0.47
1:CA:796:C:O3'	10:CK:126:ARG:NH2	2.47	0.47
1:CA:857:C:H2'	1:CA:858:G:O4'	2.15	0.47
1:CA:1225:A:H5'	12:CM:101:THR:HG1	1.80	0.47
1:CA:1227:A:H4'	12:CM:113:LYS:HE2	1.97	0.47
1:CA:1244:G:H2'	1:CA:1245:C:H6	1.76	0.47
13:CP:68:SER:HB3	13:CP:71:VAL:HG12	1.96	0.47
19:CU:40:PRO:C	19:CU:42:THR:N	2.72	0.47
8:CI:79:ARG:O	8:CI:83:THR:HG22	2.15	0.47
21:CN:25:GLU:H	21:CN:25:GLU:CD	2.21	0.47
18:CB:30:ILE:HD11	18:CB:188:THR:HG22	1.96	0.47
18:CB:218:ALA:HA	18:CB:221:ARG:HH12	1.80	0.47
23:DB:159:G:O2'	23:DB:160:A:H5"	2.15	0.47
23:DB:231:A:H3'	23:DB:232:G:C8	2.49	0.47
23:DB:404:A:H4'	23:DB:405:U:O5'	2.15	0.47
23:DB:437:U:H2'	23:DB:438:G:C8	2.50	0.47
23:DB:811:U:OP2	37:DL:20:GLY:HA2	2.15	0.47
23:DB:825:A:H2'	23:DB:826:U:O4'	2.14	0.47
23:DB:833:A:H1'	37:DL:52:GLY:N	2.30	0.47
23:DB:939:G:O2'	23:DB:940:G:H5'	2.14	0.47
23:DB:1292:G:O2'	23:DB:1293:C:H5'	2.15	0.47
23:DB:1327:A:H2'	23:DB:1328:A:H5'	1.96	0.47
23:DB:1714:U:H3'	23:DB:1715:G:H5'	1.97	0.47
23:DB:2078:C:H2'	23:DB:2079:U:H6	1.80	0.47
23:DB:2225:A:H4'	23:DB:2226:C:H6	1.80	0.47
23:DB:2634:A:H2'	23:DB:2635:A:C8	2.50	0.47
23:DB:2649:C:H2'	23:DB:2650:U:C6	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2783:U:H2'	23:DB:2784:U:C6	2.50	0.47
24:DI:37:PHE:HB2	24:DI:66:PHE:CE2	2.50	0.47
29:DE:58:LYS:H	29:DE:58:LYS:HZ3	1.62	0.47
29:DE:58:LYS:N	29:DE:58:LYS:HD3	2.29	0.47
34:D3:56:LEU:O	34:D3:59:ALA:HB3	2.15	0.47
37:DL:81:ASP:HA	37:DL:84:LYS:CE	2.45	0.47
37:DL:118:THR:O	37:DL:120:VAL:HG23	2.14	0.47
44:DQ:26:ALA:C	44:DQ:28:SER:N	2.73	0.47
45:DS:81:SER:HB3	45:DS:99:ARG:HB3	1.96	0.47
48:DG:97:VAL:CG2	48:DG:124:CYS:HB2	2.44	0.47
48:DG:102:ILE:O	48:DG:113:ASP:HA	2.15	0.47
48:DG:148:ARG:HA	48:DG:161:VAL:HB	1.96	0.47
49:DR:2:TYR:HB2	49:DR:42:ALA:N	2.30	0.47
52:DW:28:GLU:O	52:DW:30:VAL:N	2.48	0.47
1:AA:67:C:H4'	1:AA:172:A:O4'	2.15	0.47
1:AA:425:G:O2'	1:AA:426:U:H5'	2.15	0.47
1:AA:552:U:H5'	11:AL:82:ARG:NH1	2.28	0.47
1:AA:634:C:H2'	1:AA:635:A:C8	2.50	0.47
1:AA:783:C:O2'	1:AA:784:A:H5'	2.14	0.47
1:AA:980:C:H2'	1:AA:981:U:H5'	1.97	0.47
1:AA:1009:U:H1'	1:AA:1021:A:C2	2.50	0.47
1:AA:1218:C:H2'	1:AA:1219:A:H8	1.77	0.47
1:AA:1304:G:N1	1:AA:1305:G:N2	2.63	0.47
1:AA:1347:G:OP2	8:AI:108:ARG:HB2	2.15	0.47
1:AA:1382:C:H2'	1:AA:1383:C:H6	1.80	0.47
2:AC:184:ASN:ND2	2:AC:185:THR:H	2.13	0.47
3:AD:117:VAL:HG12	3:AD:130:ASN:C	2.40	0.47
5:AF:85:ILE:HG22	5:AF:86:ARG:N	2.30	0.47
5:AF:97:THR:HB	5:AF:98:GLU:OE1	2.15	0.47
22:BA:17:C:O2'	22:BA:18:G:H5'	2.15	0.47
23:BB:231:A:H3'	23:BB:232:G:C8	2.49	0.47
23:BB:281:C:H2'	23:BB:282:A:H8	1.80	0.47
23:BB:296:U:H2'	23:BB:297:G:H8	1.79	0.47
23:BB:321:U:OP2	29:BE:130:LYS:HA	2.15	0.47
23:BB:476:G:H4'	23:BB:502:A:H61	1.80	0.47
23:BB:727:A:O2'	23:BB:728:G:H5'	2.15	0.47
23:BB:814:C:H1'	23:BB:1225:G:N2	2.29	0.47
23:BB:825:A:H2'	23:BB:826:U:O4'	2.15	0.47
23:BB:1102:C:H2'	23:BB:1103:A:H8	1.80	0.47
23:BB:1130:U:C2	23:BB:2025:C:H5"	2.50	0.47
23:BB:1145:C:O2'	23:BB:1146:C:H5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1248:G:OP1	44:BQ:1:ALA:HB3	2.15	0.47
23:BB:1313:U:O2	23:BB:1313:U:C2'	2.62	0.47
23:BB:1486:U:H2'	23:BB:1487:U:H6	1.80	0.47
23:BB:1494:A:H2'	23:BB:1495:A:H8	1.80	0.47
23:BB:1521:G:H3'	23:BB:1522:A:H2'	1.97	0.47
23:BB:1869:G:H2'	23:BB:1869:G:N3	2.30	0.47
23:BB:2260:C:O2'	23:BB:2261:C:H5'	2.15	0.47
23:BB:2300:C:H2'	23:BB:2301:C:H6	1.79	0.47
23:BB:2564:A:OP1	23:BB:2648:G:H4'	2.14	0.47
23:BB:2590:A:H2'	23:BB:2591:C:H6	1.79	0.47
23:BB:2821:A:OP2	42:BN:3:HIS:NE2	2.48	0.47
23:BB:2876:G:H2'	23:BB:2877:G:O4'	2.15	0.47
25:BC:110:LYS:O	25:BC:113:ASP:HB2	2.15	0.47
25:BC:131:MET:HE3	25:BC:187:CYS:O	2.15	0.47
26:BD:121:THR:HG21	26:BD:127:PHE:CE1	2.50	0.47
27:BK:68:GLY:HA3	27:BK:78:ARG:HB3	1.96	0.47
36:B2:9:VAL:CG1	36:B2:10:LEU:H	2.26	0.47
37:BL:69:ARG:HA	37:BL:69:ARG:HE	1.80	0.47
37:BL:118:THR:O	37:BL:120:VAL:HG23	2.15	0.47
38:BM:10:ARG:HH21	38:BM:10:ARG:HG3	1.79	0.47
40:BH:67:ALA:O	40:BH:70:GLU:HG2	2.15	0.47
42:BN:28:LEU:CA	42:BN:34:ILE:HD11	2.45	0.47
42:BN:37:THR:HG22	42:BN:39:PRO:CD	2.35	0.47
45:BS:33:LEU:HD23	45:BS:51:LEU:HD23	1.97	0.47
47:BF:105:ILE:HG22	47:BF:109:ARG:HG2	1.96	0.47
47:BF:107:VAL:HB	47:BF:108:PRO:HD3	1.97	0.47
48:BG:123:GLU:O	48:BG:125:PRO:HD3	2.15	0.47
50:BT:45:ALA:O	50:BT:48:GLN:HB2	2.15	0.47
1:CA:93:U:O5'	1:CA:93:U:H6	1.97	0.47
1:CA:524:G:H2'	1:CA:525:C:H6	1.75	0.47
1:CA:1006:G:O2'	1:CA:1007:U:H5'	2.14	0.47
1:CA:1121:U:H2'	1:CA:1122:U:C6	2.50	0.47
1:CA:1296:C:C4'	1:CA:1302:C:N4	2.77	0.47
1:CA:1369:C:H2'	1:CA:1370:G:C8	2.50	0.47
3:CD:57:LYS:O	3:CD:61:ARG:HB2	2.15	0.47
10:CK:21:HIS:HA	10:CK:84:MET:O	2.15	0.47
10:CK:52:ARG:HB3	10:CK:52:ARG:NH1	2.30	0.47
2:CC:174:LEU:HD12	2:CC:174:LEU:H	1.80	0.47
6:CG:129:ASN:O	6:CG:130:LYS:HB2	2.15	0.47
12:CM:89:ARG:HH11	12:CM:94:LEU:HB3	1.79	0.47
21:CN:29:ILE:HG22	21:CN:30:ILE:H	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CS:10:ILE:HG21	16:CS:40:PHE:CE1	2.50	0.47
23:DB:27:G:H1'	23:DB:513:A:N6	2.30	0.47
23:DB:81:G:H2'	23:DB:82:U:O4'	2.15	0.47
23:DB:85:G:OP2	46:DU:6:ARG:HD3	2.15	0.47
23:DB:393:C:O2'	23:DB:394:C:H5'	2.14	0.47
23:DB:494:G:O2'	23:DB:495:G:H5'	2.15	0.47
23:DB:527:C:O4'	23:DB:527:C:O2	2.31	0.47
23:DB:1141:U:H5"	41:DJ:27:ARG:NH2	2.25	0.47
23:DB:1192:G:O2'	23:DB:1193:G:H5'	2.15	0.47
23:DB:1374:G:H2'	23:DB:1375:U:C6	2.49	0.47
23:DB:1404:C:H2'	23:DB:1405:U:C6	2.50	0.47
23:DB:1469:A:H2'	23:DB:1470:A:C8	2.50	0.47
23:DB:1523:U:H5"	23:DB:1524:G:C8	2.50	0.47
23:DB:1682:G:H2'	23:DB:1683:U:C6	2.50	0.47
23:DB:1993:U:H4'	26:DD:133:THR:HG21	1.96	0.47
23:DB:2010:G:H2'	23:DB:2011:U:H6	1.80	0.47
23:DB:2018:G:O2'	23:DB:2019:A:H5'	2.15	0.47
23:DB:2264:C:H41	52:DW:11:ASN:HD22	1.63	0.47
23:DB:2774:C:OP1	26:DD:169:ARG:HG3	2.14	0.47
23:DB:2899:A:H2'	23:DB:2900:A:O4'	2.15	0.47
25:DC:145:MET:HG3	25:DC:152:GLN:OE1	2.14	0.47
29:DE:98:LYS:HE3	29:DE:99:LYS:HG2	1.97	0.47
36:D2:1:MET:HG2	36:D2:2:LYS:H	1.78	0.47
36:D2:31:LEU:CD2	36:D2:42:LEU:HD12	2.45	0.47
38:DM:19:GLY:CA	38:DM:98:PRO:HD2	2.35	0.47
40:DH:4:ILE:CG2	40:DH:16:GLY:HA2	2.44	0.47
40:DH:39:ALA:HA	40:DH:44:ILE:HG21	1.97	0.47
40:DH:128:HIS:O	40:DH:144:VAL:N	2.48	0.47
46:DU:13:LEU:CA	46:DU:18:LYS:HE3	2.44	0.47
48:DG:26:LYS:HB2	48:DG:32:LEU:HG	1.97	0.47
50:DT:45:ALA:O	50:DT:48:GLN:HB2	2.14	0.47
1:AA:178:C:H2'	1:AA:179:A:H8	1.80	0.47
1:AA:386:C:C2'	1:AA:387:U:H5'	2.45	0.47
1:AA:450:G:N7	1:AA:481:G:O6	2.47	0.47
1:AA:470:C:H2'	1:AA:471:U:C6	2.50	0.47
1:AA:598:U:H4'	7:AH:85:TYR:CG	2.50	0.47
1:AA:745:G:H5"	1:AA:851:G:O2'	2.15	0.47
1:AA:1144:G:H21	1:AA:1146:A:H62	1.61	0.47
1:AA:1314:C:H5	16:AS:5:LYS:HG3	1.80	0.47
1:AA:1392:G:H2'	1:AA:1393:U:O4'	2.14	0.47
3:AD:162:GLU:C	3:AD:164:ARG:H	2.23	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AF:64:VAL:HG12	5:AF:65:GLU:N	2.30	0.47
9:AJ:5:ARG:NH1	9:AJ:5:ARG:HB2	2.30	0.47
18:AB:98:GLY:HA2	18:AB:101:THR:HG22	1.97	0.47
18:AB:205:ALA:C	18:AB:207:ARG:H	2.23	0.47
18:AB:221:ARG:HH11	18:AB:221:ARG:HB3	1.79	0.47
22:BA:9:G:P	43:BO:25:ARG:HH12	2.38	0.47
23:BB:140:C:O5'	23:BB:141:G:N2	2.45	0.47
23:BB:463:G:N2	23:BB:466:A:OP2	2.44	0.47
23:BB:864:G:O2'	23:BB:865:C:H5'	2.15	0.47
23:BB:1082:U:C2	23:BB:1086:A:N1	2.83	0.47
23:BB:1192:G:O2'	23:BB:1193:G:H5'	2.14	0.47
23:BB:1401:G:H2'	23:BB:1402:U:C6	2.50	0.47
23:BB:1432:G:O2'	23:BB:1433:A:H5'	2.14	0.47
23:BB:1690:A:H2'	23:BB:1691:C:O4'	2.15	0.47
23:BB:2206:C:O2'	23:BB:2207:C:H5'	2.15	0.47
23:BB:2340:A:H2'	23:BB:2341:G:C8	2.49	0.47
23:BB:2467:C:H1'	38:BM:122:ALA:HB1	1.97	0.47
23:BB:2758:A:C2'	23:BB:2759:G:H5'	2.45	0.47
26:BD:125:TRP:CE2	26:BD:160:LYS:HB3	2.50	0.47
28:BP:31:VAL:HG11	28:BP:38:ARG:HG2	1.95	0.47
29:BE:128:ALA:O	29:BE:130:LYS:N	2.45	0.47
30:BY:6:ILE:H	30:BY:6:ILE:CD1	2.25	0.47
41:BJ:55:ILE:CG2	41:BJ:123:LYS:HB2	2.41	0.47
48:BG:106:LEU:HD13	48:BG:151:ARG:HB2	1.97	0.47
50:BT:51:PHE:C	50:BT:53:VAL:H	2.23	0.47
52:BW:35:ILE:O	52:BW:36:ILE:C	2.58	0.47
1:CA:105:G:H2'	1:CA:106:C:H6	1.78	0.47
1:CA:378:G:O2'	1:CA:379:C:H5'	2.15	0.47
1:CA:406:G:N2	3:CD:115:GLN:HE22	2.07	0.47
1:CA:470:C:H2'	1:CA:471:U:C6	2.50	0.47
1:CA:1479:C:H2'	1:CA:1480:A:H8	1.79	0.47
3:CD:28:ASP:CB	3:CD:33:ILE:HG21	2.45	0.47
13:CP:24:SER:C	13:CP:25:ARG:HD3	2.40	0.47
13:CP:44:SER:C	13:CP:46:LYS:N	2.73	0.47
15:CR:28:LEU:C	15:CR:30:ASN:N	2.72	0.47
6:CG:147:ASN:C	6:CG:149:ALA:H	2.22	0.47
8:CI:51:LEU:C	8:CI:53:LEU:H	2.23	0.47
18:CB:44:LYS:O	18:CB:48:MET:HG2	2.15	0.47
23:DB:225:C:H2'	23:DB:226:A:O4'	2.14	0.47
23:DB:944:C:H5'	23:DB:945:A:C5'	2.45	0.47
23:DB:1131:G:N2	23:DB:2024:G:H21	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1428:C:H2'	23:DB:1569:A:OP2	2.14	0.47
23:DB:1430:G:H2'	23:DB:1431:A:H8	1.79	0.47
23:DB:1495:A:H2'	23:DB:1496:A:C8	2.50	0.47
23:DB:1607:C:H5"	23:DB:1608:A:H5'	1.95	0.47
23:DB:1635:A:H2'	23:DB:1636:U:H5'	1.96	0.47
23:DB:1841:U:H2'	23:DB:1842:G:H8	1.78	0.47
23:DB:2147:A:H4'	23:DB:2148:G:H8	1.79	0.47
23:DB:2340:A:H2'	23:DB:2341:G:C8	2.50	0.47
23:DB:2722:G:H2'	23:DB:2723:C:O4'	2.14	0.47
23:DB:2805:C:O2'	23:DB:2806:C:H5'	2.15	0.47
23:DB:2867:G:N3	23:DB:2867:G:C2'	2.78	0.47
24:DI:69:VAL:O	24:DI:69:VAL:HG23	2.14	0.47
25:DC:222:THR:HA	25:DC:231:HIS:O	2.15	0.47
26:DD:55:LYS:HZ2	26:DD:60:VAL:HG13	1.79	0.47
28:DP:47:ILE:HD11	28:DP:59:THR:HG22	1.97	0.47
33:D1:4:ILE:HB	33:D1:27:ARG:NH1	2.30	0.47
35:DV:75:GLN:HB3	35:DV:76:ASP:H	1.43	0.47
38:DM:120:ALA:O	38:DM:123:LYS:HG2	2.15	0.47
40:DH:29:PHE:O	40:DH:30:LEU:C	2.57	0.47
44:DQ:16:ILE:C	44:DQ:18:LYS:N	2.73	0.47
44:DQ:93:ILE:HG23	44:DQ:94:LEU:N	2.30	0.47
46:DU:41:VAL:HG22	46:DU:60:LYS:O	2.15	0.47
46:DU:86:PHE:CE1	46:DU:90:LYS:HB2	2.50	0.47
47:DF:168:LEU:O	47:DF:169:LEU:HB2	2.15	0.47
48:DG:54:ARG:HE	48:DG:54:ARG:HA	1.80	0.47
50:DT:58:VAL:O	50:DT:58:VAL:HG13	2.15	0.47
51:DZ:55:GLY:O	51:DZ:58:VAL:HB	2.15	0.47
1:AA:45:G:O2'	1:AA:46:G:H5'	2.15	0.46
1:AA:191:G:H2'	1:AA:192:A:C8	2.49	0.46
1:AA:792:A:H4'	1:AA:793:U:O5'	2.15	0.46
1:AA:946:A:O2'	1:AA:1333:A:N3	2.46	0.46
1:AA:1390:U:H2'	1:AA:1391:U:O4'	2.15	0.46
2:AC:146:LYS:HE3	2:AC:202:PHE:HE2	1.80	0.46
5:AF:1:MET:HB3	5:AF:66:ALA:C	2.40	0.46
6:AG:71:THR:HG22	6:AG:141:HIS:HE1	1.79	0.46
7:AH:54:THR:HG23	7:AH:55:LYS:N	2.30	0.46
8:AI:6:TYR:CG	8:AI:7:GLY:N	2.83	0.46
14:AQ:7:LEU:HD22	14:AQ:24:ILE:HG21	1.97	0.46
16:AS:10:ILE:HD12	16:AS:10:ILE:N	2.30	0.46
17:AT:70:LYS:HA	17:AT:73:ARG:CZ	2.45	0.46
18:AB:46:VAL:HG13	18:AB:47:PRO:CD	2.39	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:85:G:H2'	22:BA:86:G:C8	2.51	0.46
23:BB:564:C:H1'	44:BQ:36:GLN:OE1	2.15	0.46
23:BB:630:G:N2	23:BB:632:A:H3'	2.30	0.46
23:BB:672:C:O2'	23:BB:673:C:H5'	2.14	0.46
23:BB:852:U:H2'	23:BB:853:C:C6	2.50	0.46
23:BB:1241:A:H5'	23:BB:1241:A:N3	2.30	0.46
23:BB:1446:C:H2'	23:BB:1447:C:C6	2.50	0.46
23:BB:1665:A:H2'	23:BB:1666:G:O4'	2.15	0.46
23:BB:1706:C:H2'	23:BB:1757:A:OP2	2.15	0.46
23:BB:1714:U:H3'	23:BB:1715:G:H5'	1.97	0.46
23:BB:2028:U:H2'	23:BB:2029:G:C8	2.50	0.46
23:BB:2600:A:O2'	23:BB:2601:C:H5'	2.15	0.46
23:BB:2803:G:H2'	23:BB:2804:U:C6	2.51	0.46
23:BB:2852:G:H2'	23:BB:2853:C:H6	1.78	0.46
26:BD:90:PHE:O	26:BD:91:THR:C	2.57	0.46
27:BK:60:ALA:CB	27:BK:86:LEU:HA	2.44	0.46
29:BE:67:ARG:NH1	29:BE:70:SER:OG	2.48	0.46
29:BE:189:THR:O	29:BE:193:VAL:HG23	2.15	0.46
31:B0:46:GLY:O	31:B0:53:VAL:N	2.48	0.46
37:BL:78:ARG:NH2	37:BL:113:ALA:HB1	2.30	0.46
37:BL:138:ALA:O	37:BL:139:GLY:C	2.58	0.46
39:BX:51:ALA:O	39:BX:52:ARG:C	2.58	0.46
41:BJ:74:TYR:HD2	41:BJ:92:MET:HE2	1.80	0.46
42:BN:90:ARG:HG2	42:BN:94:TYR:HD1	1.79	0.46
45:BS:4:ILE:HG21	45:BS:106:VAL:HG22	1.97	0.46
46:BU:10:VAL:HG22	46:BU:35:VAL:HG11	1.97	0.46
47:BF:169:LEU:HB3	47:BF:174:PHE:CD1	2.50	0.46
49:BR:22:LEU:N	49:BR:22:LEU:HD23	2.30	0.46
1:CA:177:G:P	17:CT:59:ARG:HE	2.39	0.46
1:CA:426:U:H2'	1:CA:427:U:C6	2.50	0.46
1:CA:469:C:O2'	1:CA:470:C:H5'	2.15	0.46
1:CA:560:A:H4'	1:CA:561:U:C5'	2.36	0.46
1:CA:778:G:H2'	1:CA:779:C:H6	1.79	0.46
1:CA:1021:A:H2'	1:CA:1022:A:H8	1.80	0.46
3:CD:90:LEU:HD22	3:CD:90:LEU:N	2.30	0.46
5:CF:56:LYS:HE3	5:CF:56:LYS:N	2.29	0.46
7:CH:55:LYS:HA	7:CH:55:LYS:CE	2.45	0.46
8:CI:94:ARG:NE	8:CI:97:LEU:HD12	2.29	0.46
8:CI:112:ARG:HH22	9:CJ:64:GLN:HE22	1.61	0.46
18:CB:127:LYS:HD2	18:CB:127:LYS:C	2.41	0.46
18:CB:211:LEU:O	18:CB:215:ALA:HB2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:381:G:H5”	51:DZ:16:ASN:ND2	2.30	0.46
23:DB:632:A:H1’	37:DL:66:PHE:HE2	1.81	0.46
23:DB:972:A:OP2	23:DB:974:G:H5”	2.15	0.46
23:DB:1056:G:H5”	23:DB:1057:A:H5’	1.97	0.46
23:DB:1279:G:H4’	42:DN:31:HIS:HD2	1.79	0.46
23:DB:1313:U:O2	23:DB:1313:U:C2’	2.63	0.46
23:DB:2097:A:H2’	23:DB:2098:U:C6	2.49	0.46
23:DB:2352:A:C2	52:DW:29:SER:HB3	2.50	0.46
24:DI:10:LEU:HD12	24:DI:10:LEU:O	2.14	0.46
24:DI:27:LEU:HD23	24:DI:27:LEU:N	2.22	0.46
25:DC:188:ARG:HG2	25:DC:188:ARG:HH21	1.79	0.46
27:DK:88:ASN:HD22	27:DK:88:ASN:C	2.21	0.46
28:DP:100:ARG:HB3	28:DP:101:GLU:H	1.44	0.46
29:DE:21:ARG:HG2	29:DE:107:SER:HB3	1.98	0.46
29:DE:148:ILE:HG13	29:DE:167:VAL:CG2	2.41	0.46
29:DE:172:ALA:HB3	29:DE:195:GLN:NE2	2.30	0.46
30:DY:6:ILE:HG21	30:DY:47:ILE:HD11	1.96	0.46
34:D3:7:ARG:HH11	34:D3:7:ARG:HG3	1.79	0.46
37:DL:95:LEU:O	37:DL:100:ILE:HG22	2.16	0.46
38:DM:100:LYS:CD	38:DM:101:VAL:H	2.27	0.46
40:DH:18:GLN:HE21	40:DH:39:ALA:HB1	1.80	0.46
40:DH:74:ALA:O	40:DH:76:GLU:HG3	2.14	0.46
43:DO:75:GLY:O	43:DO:78:VAL:HG23	2.15	0.46
45:DS:76:VAL:HG12	45:DS:103:ILE:HA	1.97	0.46
47:DF:7:TYR:OH	47:DF:29:ARG:HG3	2.16	0.46
47:DF:116:LEU:HD23	47:DF:174:PHE:CE2	2.50	0.46
48:DG:15:ASP:O	48:DG:16:VAL:HB	2.15	0.46
1:AA:177:G:P	17:AT:59:ARG:HE	2.38	0.46
1:AA:956:U:O2’	1:AA:957:U:H5’	2.15	0.46
1:AA:1142:G:C2	1:AA:1143:G:H1’	2.50	0.46
4:AE:40:ASP:OD2	4:AE:42:ASN:HB3	2.14	0.46
10:AK:86:LYS:HB2	10:AK:113:THR:HA	1.98	0.46
12:AM:12:LYS:O	12:AM:43:LYS:HG2	2.14	0.46
12:AM:67:ASP:O	12:AM:71:GLU:HG3	2.15	0.46
23:BB:17:G:H2’	23:BB:18:U:H6	1.80	0.46
23:BB:340:A:H2’	23:BB:341:C:H5’	1.96	0.46
23:BB:521:U:H2’	23:BB:522:A:C8	2.50	0.46
23:BB:574:A:H4’	23:BB:575:A:C5’	2.45	0.46
23:BB:660:C:H2’	23:BB:661:A:H8	1.80	0.46
23:BB:942:G:H2’	23:BB:943:A:H8	1.79	0.46
23:BB:962:G:H21	23:BB:2250:G:H22	1.62	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1100:C:H2'	23:BB:1101:U:C6	2.50	0.46
23:BB:1295:C:H2'	23:BB:1296:G:C8	2.50	0.46
23:BB:2060:A:C2'	29:BE:63:LYS:HE2	2.39	0.46
23:BB:2312:U:C4'	47:BF:84:ILE:HG21	2.44	0.46
23:BB:2415:G:H2'	23:BB:2416:C:H6	1.80	0.46
25:BC:68:ARG:HB3	25:BC:128:THR:OG1	2.15	0.46
28:BP:47:ILE:HA	28:BP:96:LEU:HB2	1.96	0.46
41:BJ:45:THR:O	41:BJ:45:THR:HG23	2.15	0.46
41:BJ:133:ALA:C	41:BJ:135:GLN:H	2.23	0.46
42:BN:12:ARG:HG3	42:BN:13:ASN:N	2.31	0.46
43:BO:93:ASP:C	43:BO:95:SER:H	2.24	0.46
46:BU:34:ILE:HG12	46:BU:63:ALA:CB	2.45	0.46
47:BF:21:TYR:CD2	47:BF:27:VAL:HG12	2.51	0.46
48:BG:134:GLY:HA3	48:BG:140:ILE:HG21	1.96	0.46
1:CA:176:C:H3'	1:CA:177:G:H21	1.80	0.46
1:CA:598:U:H4'	7:CH:85:TYR:CG	2.50	0.46
1:CA:635:A:H2'	1:CA:636:U:C6	2.50	0.46
1:CA:846:G:N3	1:CA:846:G:H2'	2.30	0.46
4:CE:21:SER:HB3	4:CE:28:ARG:NH2	2.30	0.46
4:CE:61:LYS:HG3	4:CE:62:ALA:N	2.29	0.46
10:CK:69:CYS:SG	10:CK:70:ALA:N	2.88	0.46
11:CL:24:GLU:C	11:CL:26:CYS:N	2.70	0.46
11:CL:32:VAL:HB	11:CL:55:ARG:HB3	1.97	0.46
6:CG:27:ASN:O	6:CG:30:MET:HB3	2.15	0.46
12:CM:15:VAL:HG13	12:CM:33:LEU:HD11	1.97	0.46
21:CN:67:GLY:O	21:CN:68:ARG:C	2.58	0.46
22:DA:109:A:H2'	22:DA:110:C:C6	2.50	0.46
23:DB:402:A:O2'	23:DB:403:U:H5'	2.15	0.46
23:DB:562:U:C4	23:DB:2036:C:O4'	2.68	0.46
23:DB:686:U:H1'	36:D2:6:GLN:O	2.16	0.46
23:DB:1242:U:H2'	23:DB:1243:C:C6	2.49	0.46
23:DB:1654:A:O2'	26:DD:118:PHE:HB3	2.15	0.46
23:DB:2026:U:H2'	23:DB:2027:G:C8	2.51	0.46
23:DB:2041:U:H2'	23:DB:2042:A:H8	1.79	0.46
23:DB:2109:U:H6	23:DB:2109:U:OP1	1.99	0.46
23:DB:2479:U:H2'	23:DB:2480:C:H5'	1.97	0.46
23:DB:2648:G:H2'	23:DB:2649:C:C6	2.50	0.46
23:DB:2803:G:H2'	23:DB:2804:U:C6	2.50	0.46
23:DB:2849:U:H4'	23:DB:2850:A:C5'	2.44	0.46
23:DB:2901:C:H2'	23:DB:2902:C:O4'	2.15	0.46
25:DC:163:ILE:HG22	25:DC:164:VAL:N	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DK:70:ARG:CB	27:DK:76:VAL:HG22	2.43	0.46
28:DP:19:PHE:HE2	28:DP:83:ILE:HD11	1.79	0.46
28:DP:103:THR:HG22	28:DP:104:GLY:N	2.26	0.46
29:DE:114:ARG:HG3	29:DE:114:ARG:HH11	1.80	0.46
29:DE:138:LEU:HD22	29:DE:143:LEU:HB2	1.97	0.46
34:D3:21:PHE:CE1	34:D3:58:ILE:HG23	2.50	0.46
40:DH:77:THR:HG22	40:DH:143:ILE:CB	2.42	0.46
41:DJ:19:ASP:CB	41:DJ:57:LEU:HB2	2.45	0.46
42:DN:29:VAL:HG13	42:DN:83:LEU:HD22	1.97	0.46
42:DN:32:GLU:HG2	42:DN:115:LEU:HD12	1.97	0.46
45:DS:52:GLU:HA	45:DS:55:ILE:HG22	1.97	0.46
46:DU:35:VAL:HB	46:DU:38:ILE:HG21	1.97	0.46
46:DU:73:ASN:OD1	46:DU:75:ALA:HB3	2.15	0.46
47:DF:4:HIS:O	47:DF:7:TYR:HB3	2.15	0.46
47:DF:105:ILE:HG22	47:DF:109:ARG:HG2	1.96	0.46
49:DR:19:THR:HA	49:DR:97:LYS:HA	1.97	0.46
51:DZ:56:MET:C	51:DZ:58:VAL:N	2.72	0.46
1:AA:24:U:O2'	1:AA:25:C:H5'	2.15	0.46
1:AA:45:G:H2'	1:AA:46:G:C8	2.48	0.46
1:AA:475:C:O2'	1:AA:476:U:H5'	2.16	0.46
1:AA:764:C:N4	1:AA:812:G:H1	2.13	0.46
1:AA:1081:A:O2'	1:AA:1082:A:H5'	2.16	0.46
1:AA:1308:U:H5"	12:AM:96:VAL:CG2	2.45	0.46
1:AA:1360:A:N6	1:AA:1361:G:N2	2.63	0.46
1:AA:1395:C:O2'	1:AA:1396:A:H5'	2.15	0.46
3:AD:111:ALA:O	3:AD:114:ARG:HB2	2.16	0.46
4:AE:24:VAL:HG23	4:AE:26:GLY:H	1.79	0.46
4:AE:89:THR:HB	4:AE:134:ASN:ND2	2.29	0.46
6:AG:22:LEU:O	6:AG:25:PHE:HB3	2.16	0.46
8:AI:21:LYS:O	8:AI:60:LEU:HB2	2.15	0.46
10:AK:91:GLY:C	10:AK:93:GLU:N	2.72	0.46
10:AK:111:ASP:HB3	19:AU:19:LYS:HE2	1.97	0.46
14:AQ:26:ARG:N	14:AQ:39:ARG:O	2.48	0.46
18:AB:160:LEU:O	18:AB:182:VAL:HG13	2.15	0.46
21:AN:1:ALA:O	21:AN:6:LYS:HG3	2.16	0.46
21:AN:27:LYS:C	21:AN:29:ILE:N	2.73	0.46
23:BB:81:G:H2'	23:BB:82:U:O4'	2.16	0.46
23:BB:286:U:O2'	23:BB:287:G:H5'	2.15	0.46
23:BB:475:C:H4'	23:BB:509:C:H2'	1.97	0.46
23:BB:1386:C:H2'	23:BB:1387:A:C8	2.51	0.46
23:BB:2559:C:O2'	23:BB:2560:A:H5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:232:GLY:N	25:BC:241:LYS:NZ	2.64	0.46
27:BK:79:PHE:HD2	28:BP:69:VAL:HG12	1.80	0.46
27:BK:119:ALA:O	27:BK:120:PRO:C	2.58	0.46
28:BP:19:PHE:O	28:BP:20:ARG:HB2	2.14	0.46
28:BP:47:ILE:HG13	28:BP:48:ALA:H	1.80	0.46
29:BE:15:SER:C	29:BE:17:THR:H	2.23	0.46
41:BJ:30:THR:CG2	41:BJ:108:MET:HE1	2.42	0.46
42:BN:9:GLN:HA	42:BN:17:ARG:CD	2.45	0.46
42:BN:62:ASN:N	42:BN:62:ASN:ND2	2.62	0.46
43:BO:105:ALA:O	43:BO:106:LEU:HG	2.15	0.46
44:BQ:59:LEU:O	44:BQ:62:ALA:HB3	2.14	0.46
44:BQ:86:SER:HB3	49:BR:50:GLY:O	2.16	0.46
46:BU:3:LYS:HD3	46:BU:82:VAL:CG2	2.46	0.46
46:BU:26:ASN:HD22	46:BU:26:ASN:H	1.61	0.46
49:BR:34:GLU:OE1	49:BR:60:LYS:HG2	2.15	0.46
52:BW:13:ARG:HA	52:BW:13:ARG:HH11	1.79	0.46
1:CA:59:A:H1'	1:CA:354:G:N2	2.31	0.46
1:CA:77:A:H2'	1:CA:78:A:H8	1.80	0.46
1:CA:94:G:H4'	1:CA:95:C:H5"	1.98	0.46
1:CA:112:G:O2'	1:CA:113:G:H5'	2.15	0.46
1:CA:525:C:H2'	1:CA:526:C:C6	2.49	0.46
1:CA:724:G:H2'	1:CA:725:G:C8	2.45	0.46
1:CA:745:G:H5"	1:CA:851:G:O2'	2.14	0.46
1:CA:1129:C:H5"	8:CI:17:ARG:NH1	2.29	0.46
1:CA:1320:C:C5	16:CS:36:ARG:HA	2.51	0.46
1:CA:1342:C:H1'	8:CI:125:GLN:CD	2.40	0.46
1:CA:1473:G:H2'	1:CA:1474:U:O4'	2.14	0.46
1:CA:1499:A:O2'	1:CA:1500:A:H5'	2.15	0.46
3:CD:153:ARG:HG3	3:CD:154:VAL:N	2.26	0.46
4:CE:14:LEU:C	4:CE:14:LEU:HD13	2.40	0.46
4:CE:17:VAL:HG23	4:CE:33:THR:O	2.16	0.46
4:CE:24:VAL:HG23	4:CE:26:GLY:H	1.80	0.46
5:CF:92:THR:HG22	5:CF:94:HIS:N	2.17	0.46
17:CT:47:GLN:HE21	17:CT:82:ILE:HD11	1.81	0.46
6:CG:14:ASP:OD1	6:CG:17:PHE:N	2.48	0.46
6:CG:78:ARG:HH11	6:CG:78:ARG:C	2.23	0.46
18:CB:17:HIS:HB2	18:CB:202:ASN:OD1	2.15	0.46
18:CB:53:LEU:HD22	18:CB:212:TYR:CZ	2.50	0.46
20:CO:7:ALA:HA	20:CO:10:LYS:HB3	1.97	0.46
20:CO:71:LYS:NZ	20:CO:72:ARG:N	2.60	0.46
23:DB:212:G:H2'	23:DB:213:A:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:275:C:H2'	23:DB:276:U:C4'	2.32	0.46
23:DB:416:U:H2'	23:DB:417:C:C6	2.50	0.46
23:DB:445:C:O2'	23:DB:446:G:H5'	2.15	0.46
23:DB:581:C:H5'	44:DQ:30:VAL:HG23	1.97	0.46
23:DB:586:A:H5'	29:DE:84:THR:OG1	2.15	0.46
23:DB:660:C:H2'	23:DB:661:A:C8	2.50	0.46
23:DB:969:G:H2'	23:DB:970:U:C6	2.50	0.46
23:DB:1542:U:H2'	23:DB:1543:G:O4'	2.15	0.46
23:DB:1700:A:H2'	23:DB:1701:A:H5'	1.97	0.46
23:DB:2295:C:OP2	43:DO:10:ARG:HD3	2.15	0.46
23:DB:2730:C:H2'	23:DB:2731:G:C8	2.49	0.46
23:DB:2835:A:H62	23:DB:2878:U:H2'	1.80	0.46
23:DB:2845:U:O3'	28:DP:52:ARG:HD3	2.15	0.46
25:DC:78:GLU:HB2	25:DC:92:LEU:HG	1.97	0.46
25:DC:141:HIS:NE2	25:DC:194:VAL:HA	2.30	0.46
25:DC:166:ARG:HA	25:DC:171:VAL:HG22	1.98	0.46
25:DC:169:ALA:O	25:DC:185:ALA:HB3	2.15	0.46
25:DC:232:GLY:N	25:DC:241:LYS:NZ	2.63	0.46
26:DD:14:ILE:HA	28:DP:11:GLN:OE1	2.15	0.46
26:DD:91:THR:O	26:DD:92:VAL:C	2.58	0.46
29:DE:3:LEU:CB	29:DE:12:LEU:HB3	2.44	0.46
31:D0:39:ARG:O	31:D0:40:HIS:HB2	2.15	0.46
33:D1:8:ILE:HG23	33:D1:9:LYS:N	2.31	0.46
33:D1:32:LYS:HZ1	33:D1:52:LYS:HG2	1.80	0.46
34:D3:31:ILE:HD11	34:D3:34:LYS:CD	2.41	0.46
41:DJ:42:ALA:O	41:DJ:44:TYR:N	2.49	0.46
44:DQ:24:TYR:CD1	44:DQ:25:GLY:N	2.84	0.46
46:DU:24:VAL:HA	46:DU:35:VAL:HA	1.97	0.46
47:DF:41:GLU:CB	47:DF:48:LEU:HD11	2.46	0.46
49:DR:34:GLU:HB3	49:DR:58:VAL:HG21	1.97	0.46
51:DZ:7:VAL:HG23	51:DZ:67:VAL:HG11	1.98	0.46
1:AA:86:G:C2	1:AA:87:C:N4	2.83	0.46
1:AA:430:A:O2'	1:AA:431:A:H5'	2.16	0.46
1:AA:659:U:H2'	1:AA:660:C:C6	2.50	0.46
1:AA:852:G:H2'	1:AA:853:C:H6	1.79	0.46
1:AA:1378:C:C4	1:AA:1379:G:H1'	2.50	0.46
2:AC:195:ILE:HG22	2:AC:195:ILE:O	2.16	0.46
6:AG:21:LEU:HD23	6:AG:21:LEU:N	2.30	0.46
8:AI:41:GLU:N	8:AI:44:ARG:NH1	2.63	0.46
10:AK:83:VAL:CG2	10:AK:109:ILE:HG12	2.45	0.46
11:AL:74:GLN:HB3	11:AL:75:GLU:H	1.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AB:23:ASN:HD21	18:AB:25:LYS:CD	2.28	0.46
18:AB:162:VAL:HG22	18:AB:163:ILE:N	2.29	0.46
19:AU:48:LYS:HG3	19:AU:49:ALA:N	2.29	0.46
20:AO:25:THR:HG21	20:AO:70:LEU:CD2	2.45	0.46
23:BB:55:G:H2'	23:BB:56:A:H8	1.81	0.46
23:BB:118:A:OP2	23:BB:119:A:H2'	2.15	0.46
23:BB:136:G:OP2	23:BB:137:U:H5	1.99	0.46
23:BB:296:U:O2'	23:BB:297:G:H5'	2.15	0.46
23:BB:680:C:H2'	23:BB:681:G:H8	1.79	0.46
23:BB:1174:U:O2	23:BB:1174:U:O4'	2.34	0.46
23:BB:1178:C:H2'	23:BB:1179:G:H8	1.80	0.46
23:BB:1559:U:H3'	23:BB:1560:G:H5'	1.97	0.46
23:BB:1799:G:N2	25:BC:153:LEU:HD22	2.31	0.46
23:BB:2080:A:H4'	51:BZ:19:SER:OG	2.16	0.46
23:BB:2282:G:H4'	23:BB:2283:C:O5'	2.15	0.46
23:BB:2526:G:H1'	32:B4:1:MET:N	2.31	0.46
23:BB:2538:C:H2'	23:BB:2539:C:H6	1.80	0.46
23:BB:2734:A:C2'	23:BB:2735:G:H5'	2.44	0.46
24:BI:19:PRO:HB2	24:BI:22:PRO:HD2	1.97	0.46
25:BC:51:ARG:O	25:BC:52:HIS:C	2.58	0.46
25:BC:68:ARG:HH21	25:BC:190:THR:CG2	2.28	0.46
25:BC:247:TRP:O	25:BC:249:VAL:HG22	2.15	0.46
26:BD:47:ALA:HB2	26:BD:83:ARG:HD2	1.96	0.46
26:BD:168:GLU:O	26:BD:169:ARG:C	2.57	0.46
27:BK:71:ARG:NE	27:BK:72:PRO:HD3	2.30	0.46
27:BK:99:ILE:HD13	27:BK:118:LEU:CD2	2.45	0.46
34:B3:28:LEU:O	34:B3:29:ARG:HB3	2.16	0.46
38:BM:59:ARG:HE	38:BM:60:GLN:CG	2.10	0.46
40:BH:5:LEU:C	40:BH:7:ASP:H	2.22	0.46
47:BF:21:TYR:HD2	47:BF:27:VAL:HG12	1.80	0.46
47:BF:78:ILE:C	47:BF:79:ARG:HG3	2.40	0.46
49:BR:14:VAL:HG23	49:BR:18:GLN:HG3	1.96	0.46
50:BT:28:ASN:ND2	50:BT:29:THR:HG23	2.30	0.46
52:BW:23:LYS:CG	52:BW:24:ARG:N	2.77	0.46
52:BW:30:VAL:HG13	52:BW:30:VAL:O	2.16	0.46
1:CA:415:A:OP1	1:CA:415:A:H4'	2.16	0.46
1:CA:1107:C:OP1	2:CC:171:ARG:HB2	2.16	0.46
1:CA:1508:A:H2'	1:CA:1509:C:H6	1.78	0.46
3:CD:18:LEU:HD23	3:CD:20:LEU:HD11	1.97	0.46
4:CE:152:VAL:O	4:CE:156:ARG:HG2	2.16	0.46
10:CK:121:ARG:HH12	19:CU:37:TYR:HE2	1.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:179:ALA:HB1	2:CC:202:PHE:HE1	1.80	0.46
6:CG:112:ASP:HB3	6:CG:113:LYS:H	1.48	0.46
9:CJ:46:LYS:O	9:CJ:48:ARG:HG3	2.16	0.46
9:CJ:92:LEU:N	9:CJ:92:LEU:HD13	2.30	0.46
12:CM:13:HIS:HB3	12:CM:41:ASP:HA	1.97	0.46
16:CS:68:HIS:HB3	16:CS:72:GLU:OE2	2.16	0.46
18:CB:24:PRO:C	18:CB:26:MET:H	2.23	0.46
18:CB:98:GLY:O	18:CB:100:LEU:N	2.42	0.46
23:DB:691:C:O2'	23:DB:692:C:H5'	2.15	0.46
23:DB:776:G:H4'	23:DB:777:G:O5'	2.16	0.46
23:DB:789:A:H4'	23:DB:790:U:OP2	2.15	0.46
23:DB:1351:C:O2'	23:DB:1571:A:H1'	2.15	0.46
23:DB:1635:A:O2'	23:DB:1636:U:H5'	2.15	0.46
23:DB:1727:C:H2'	23:DB:1728:C:H6	1.80	0.46
23:DB:2137:U:H2'	23:DB:2138:G:C8	2.50	0.46
23:DB:2252:G:O2'	23:DB:2253:G:H5'	2.15	0.46
23:DB:2897:U:H2'	23:DB:2898:U:H6	1.81	0.46
25:DC:42:ARG:NH2	25:DC:48:ILE:HD11	2.30	0.46
25:DC:103:ILE:HG22	25:DC:104:LEU:N	2.31	0.46
26:DD:109:VAL:HG11	26:DD:193:VAL:CG1	2.45	0.46
28:DP:47:ILE:HG22	28:DP:96:LEU:HB3	1.97	0.46
35:DV:42:LEU:HD12	35:DV:47:VAL:HG21	1.97	0.46
36:D2:13:ASN:N	36:D2:13:ASN:HD22	2.13	0.46
38:DM:19:GLY:C	38:DM:20:LEU:HD22	2.40	0.46
43:DO:17:LYS:O	43:DO:21:LEU:HB2	2.14	0.46
43:DO:37:ALA:HB1	43:DO:78:VAL:HG21	1.98	0.46
43:DO:93:ASP:C	43:DO:95:SER:H	2.24	0.46
44:DQ:104:ALA:C	44:DQ:106:THR:H	2.23	0.46
45:DS:57:ASN:N	45:DS:57:ASN:HD22	2.11	0.46
45:DS:86:MET:HE2	45:DS:87:PRO:HD2	1.97	0.46
47:DF:31:GLU:HG3	47:DF:32:LYS:HG2	1.96	0.46
47:DF:172:PHE:C	47:DF:174:PHE:H	2.24	0.46
48:DG:84:LYS:HG2	48:DG:85:LYS:N	2.25	0.46
48:DG:146:ASP:O	48:DG:150:TYR:HD1	1.98	0.46
51:DZ:70:GLU:O	51:DZ:71:LEU:C	2.57	0.46
52:DW:16:GLU:O	52:DW:17:ALA:C	2.58	0.46
52:DW:35:ILE:O	52:DW:36:ILE:C	2.59	0.46
1:AA:20:U:H2'	1:AA:21:G:O4'	2.14	0.46
1:AA:239:U:H5"	1:AA:239:U:H6	1.79	0.46
1:AA:1179:A:H2'	1:AA:1180:A:H8	1.80	0.46
2:AC:63:ILE:HG22	2:AC:65:VAL:CG2	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:157:ALA:C	3:AD:159:GLU:N	2.71	0.46
5:AF:3:HIS:CD2	5:AF:92:THR:HG23	2.51	0.46
6:AG:111:GLY:HA2	6:AG:118:ARG:NH1	2.30	0.46
8:AI:19:PHE:O	8:AI:62:LEU:HA	2.15	0.46
9:AJ:51:VAL:HG23	21:AN:80:ARG:HB2	1.98	0.46
12:AM:13:HIS:HB3	12:AM:40:GLU:O	2.15	0.46
14:AQ:10:ARG:HA	14:AQ:56:ASP:O	2.15	0.46
15:AR:27:THR:O	15:AR:28:LEU:HD23	2.16	0.46
18:AB:8:MET:HE3	18:AB:8:MET:O	2.15	0.46
18:AB:86:CYS:SG	18:AB:87:ASP:N	2.88	0.46
23:BB:274:C:O5'	23:BB:274:C:H6	1.98	0.46
23:BB:418:C:H2'	23:BB:419:U:C6	2.51	0.46
23:BB:564:C:O2'	23:BB:565:C:H5'	2.15	0.46
23:BB:625:G:O2'	23:BB:626:A:H5'	2.16	0.46
23:BB:1464:G:H2'	23:BB:1465:G:H8	1.80	0.46
23:BB:1717:A:H2'	23:BB:1718:G:O4'	2.15	0.46
23:BB:1867:G:O2'	23:BB:1868:C:H5'	2.16	0.46
23:BB:1914:C:H2'	23:BB:1915:U:H5"	1.96	0.46
23:BB:2105:U:H2'	23:BB:2106:U:C6	2.51	0.46
23:BB:2623:G:O2'	23:BB:2624:G:H5'	2.16	0.46
23:BB:2686:G:H2'	23:BB:2687:U:C6	2.51	0.46
25:BC:32:LEU:HD22	25:BC:63:ILE:HG21	1.97	0.46
25:BC:93:VAL:HG12	25:BC:101:ARG:C	2.41	0.46
25:BC:222:THR:HA	25:BC:231:HIS:O	2.15	0.46
25:BC:231:HIS:O	25:BC:232:GLY:C	2.58	0.46
29:BE:58:LYS:O	29:BE:60:TRP:N	2.49	0.46
29:BE:60:TRP:CE3	29:BE:62:GLN:HA	2.51	0.46
32:B4:27:CYS:HB3	32:B4:33:HIS:HB2	1.98	0.46
33:B1:8:ILE:HD12	33:B1:9:LYS:H	1.81	0.46
34:B3:40:LYS:O	34:B3:43:LEU:HB2	2.15	0.46
35:BV:69:GLU:C	35:BV:70:ILE:HD13	2.40	0.46
38:BM:130:PHE:O	38:BM:131:VAL:HG13	2.16	0.46
44:BQ:26:ALA:C	44:BQ:28:SER:N	2.73	0.46
45:BS:29:VAL:HG23	45:BS:70:LYS:HA	1.98	0.46
47:BF:131:VAL:C	47:BF:133:GLU:N	2.74	0.46
47:BF:147:ARG:HB3	47:BF:147:ARG:CZ	2.46	0.46
50:BT:68:LYS:HD3	50:BT:68:LYS:N	2.31	0.46
51:BZ:5:CYS:HB3	51:BZ:9:GLY:N	2.30	0.46
1:CA:57:G:N2	1:CA:388:G:C6	2.84	0.46
1:CA:263:A:OP1	17:CT:73:ARG:NH1	2.49	0.46
1:CA:295:C:H2'	1:CA:296:U:H6	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:737:C:H2'	1:CA:738:C:H6	1.79	0.46
1:CA:1459:G:O2'	1:CA:1460:C:H5'	2.15	0.46
5:CF:51:ILE:HG23	5:CF:51:ILE:O	2.15	0.46
9:CJ:5:ARG:N	9:CJ:77:VAL:HA	2.30	0.46
12:CM:78:ARG:HH12	16:CS:64:GLU:HG2	1.80	0.46
12:CM:90:HIS:HA	12:CM:108:ARG:HH22	1.78	0.46
22:DA:37:C:H3'	22:DA:38:C:H6	1.81	0.46
22:DA:112:G:O2'	22:DA:113:C:H5'	2.15	0.46
23:DB:406:G:O2'	23:DB:407:G:H5'	2.16	0.46
23:DB:457:A:N1	23:DB:470:A:H5"	2.30	0.46
23:DB:483:A:H5"	46:DU:46:LYS:HG3	1.96	0.46
23:DB:577:G:OP1	23:DB:2502:G:H2'	2.15	0.46
23:DB:1040:A:O2'	23:DB:1041:G:H5'	2.15	0.46
23:DB:1093:G:O2'	23:DB:1094:U:H5'	2.15	0.46
23:DB:1745:A:O2'	23:DB:1746:A:H5'	2.16	0.46
23:DB:1846:G:N2	23:DB:1848:A:N6	2.64	0.46
23:DB:1859:U:H2'	23:DB:1860:G:H8	1.78	0.46
23:DB:2756:U:O5'	23:DB:2756:U:H6	1.99	0.46
24:DI:52:LEU:HD13	24:DI:81:LYS:NZ	2.31	0.46
27:DK:72:PRO:O	27:DK:74:GLY:N	2.48	0.46
27:DK:99:ILE:HD13	27:DK:118:LEU:CD2	2.45	0.46
35:DV:42:LEU:HB2	35:DV:47:VAL:HG21	1.98	0.46
37:DL:138:ALA:O	37:DL:139:GLY:C	2.58	0.46
39:DX:7:ARG:HA	39:DX:7:ARG:HE	1.79	0.46
39:DX:22:LEU:HG	39:DX:23:ARG:HG2	1.98	0.46
43:DO:31:THR:HG23	43:DO:34:HIS:O	2.15	0.46
47:DF:3:LEU:HD12	47:DF:96:TRP:CD1	2.50	0.46
47:DF:134:GLN:C	47:DF:136:ILE:N	2.69	0.46
49:DR:58:VAL:C	49:DR:59:ILE:HG13	2.41	0.46
50:DT:74:ILE:HG13	50:DT:75:GLY:N	2.31	0.46
52:DW:23:LYS:HZ3	52:DW:24:ARG:HG3	1.81	0.46
1:AA:8:A:H1'	4:AE:107:GLY:HA2	1.97	0.46
1:AA:93:U:H2'	1:AA:94:G:H4'	1.97	0.46
1:AA:105:G:H2'	1:AA:106:C:H6	1.78	0.46
1:AA:518:C:H2'	1:AA:530:G:N7	2.31	0.46
1:AA:692:U:C2	1:AA:694:A:H5"	2.50	0.46
1:AA:897:C:O2'	1:AA:898:G:H5'	2.16	0.46
1:AA:1249:C:H4'	8:AI:37:TYR:OH	2.16	0.46
1:AA:1505:G:H5"	1:AA:1506:U:O5'	2.15	0.46
2:AC:119:ILE:HG23	2:AC:120:THR:N	2.30	0.46
3:AD:138:PRO:C	3:AD:140:ASP:H	2.23	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:146:GLU:HA	3:AD:149:LYS:CG	2.45	0.46
4:AE:132:PRO:HG2	4:AE:133:ILE:H	1.80	0.46
7:AH:44:PHE:CE2	7:AH:100:ILE:HG12	2.50	0.46
8:AI:27:ILE:HG21	8:AI:34:LEU:HD13	1.95	0.46
8:AI:39:GLY:O	8:AI:40:ARG:HB2	2.15	0.46
15:AR:28:LEU:C	15:AR:30:ASN:N	2.72	0.46
16:AS:38:THR:HG23	16:AS:69:LYS:CE	2.46	0.46
16:AS:39:ILE:HG22	16:AS:40:PHE:N	2.31	0.46
18:AB:160:LEU:O	18:AB:182:VAL:HA	2.16	0.46
20:AO:57:LEU:HD13	20:AO:57:LEU:C	2.40	0.46
20:AO:69:TYR:HA	20:AO:72:ARG:NH2	2.31	0.46
22:BA:109:A:H2'	22:BA:110:C:C6	2.51	0.46
23:BB:321:U:OP2	29:BE:130:LYS:HD3	2.15	0.46
23:BB:341:C:H2'	23:BB:342:A:C8	2.51	0.46
23:BB:969:G:H2'	23:BB:970:U:C6	2.50	0.46
23:BB:1635:A:O2'	23:BB:1636:U:H5'	2.14	0.46
23:BB:1654:A:H2'	23:BB:1655:A:C8	2.51	0.46
23:BB:1767:G:O2'	23:BB:1768:C:H5'	2.16	0.46
23:BB:1877:A:H2'	23:BB:1878:G:C8	2.50	0.46
23:BB:2471:A:O2'	23:BB:2472:G:O5'	2.34	0.46
23:BB:2488:G:H2'	23:BB:2489:U:C6	2.50	0.46
23:BB:2547:A:H4'	27:BK:29:HIS:CE1	2.50	0.46
26:BD:56:LYS:HG3	26:BD:58:ASN:HB3	1.97	0.46
27:BK:118:LEU:O	27:BK:120:PRO:HD2	2.15	0.46
28:BP:19:PHE:CE1	28:BP:46:VAL:HG11	2.50	0.46
29:BE:21:ARG:HG2	29:BE:107:SER:HB3	1.97	0.46
29:BE:108:ILE:HD13	29:BE:108:ILE:O	2.16	0.46
29:BE:188:MET:HG2	29:BE:193:VAL:CG2	2.46	0.46
40:BH:4:ILE:CG2	40:BH:16:GLY:HA2	2.45	0.46
41:BJ:64:VAL:CG2	41:BJ:68:LYS:HB2	2.45	0.46
42:BN:72:ASP:O	42:BN:76:VAL:HG13	2.14	0.46
42:BN:96:ARG:HD3	42:BN:96:ARG:N	2.31	0.46
45:BS:24:ILE:HG12	45:BS:36:LEU:HD21	1.98	0.46
49:BR:14:VAL:HG21	49:BR:98:ILE:CD1	2.46	0.46
50:BT:55:VAL:CA	50:BT:87:LEU:HA	2.30	0.46
50:BT:58:VAL:O	50:BT:58:VAL:HG13	2.16	0.46
51:BZ:19:SER:OG	51:BZ:23:ASN:HB2	2.16	0.46
52:BW:35:ILE:HG13	52:BW:57:THR:HG1	1.81	0.46
1:CA:13:U:C1'	1:CA:914:A:H5"	2.39	0.46
1:CA:465:A:O2'	1:CA:466:A:H2'	2.16	0.46
1:CA:845:A:H3'	1:CA:846:G:H8	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:864:A:H2'	1:CA:865:A:C8	2.50	0.46
1:CA:1326:U:H2'	1:CA:1327:C:H6	1.77	0.46
1:CA:1514:G:O2'	1:CA:1515:G:H5'	2.14	0.46
1:CA:1515:G:O2'	1:CA:1516:G:H5'	2.15	0.46
3:CD:154:VAL:HG23	3:CD:155:LYS:N	2.31	0.46
10:CK:31:VAL:O	10:CK:43:TRP:HA	2.16	0.46
10:CK:95:THR:HG23	10:CK:96:ILE:H	1.80	0.46
14:CQ:17:GLU:O	14:CQ:18:LYS:HB2	2.15	0.46
15:CR:32:ILE:HD11	15:CR:58:ILE:HG23	1.97	0.46
2:CC:6:PRO:HG2	2:CC:183:TYR:CD2	2.50	0.46
2:CC:13:ILE:O	2:CC:15:LYS:N	2.49	0.46
2:CC:116:ALA:HB1	2:CC:197:VAL:HG11	1.98	0.46
6:CG:134:VAL:CG1	6:CG:137:ARG:HH21	2.27	0.46
12:CM:2:ARG:CD	12:CM:2:ARG:H	2.28	0.46
18:CB:172:ILE:H	18:CB:172:ILE:HG13	1.47	0.46
23:DB:96:C:H4'	39:DX:41:HIS:CG	2.51	0.46
23:DB:235:U:H2'	23:DB:236:C:H6	1.81	0.46
23:DB:638:G:H2'	23:DB:639:U:C6	2.51	0.46
23:DB:685:A:H1'	23:DB:688:U:O4	2.15	0.46
23:DB:1082:U:C2	23:DB:1086:A:N1	2.83	0.46
23:DB:1250:G:OP2	37:DL:21:ARG:NH2	2.48	0.46
23:DB:1729:U:H5	23:DB:1731:G:H22	1.63	0.46
23:DB:1799:G:N2	23:DB:1818:U:O2'	2.49	0.46
23:DB:2511:U:H2'	23:DB:2512:C:C6	2.51	0.46
23:DB:2570:G:H2'	23:DB:2571:U:O4'	2.16	0.46
23:DB:2654:A:H61	23:DB:2665:A:H3'	1.80	0.46
24:DI:1:ALA:C	24:DI:2:LYS:HZ3	2.24	0.46
25:DC:171:VAL:HG23	25:DC:185:ALA:CB	2.46	0.46
25:DC:202:ARG:HH11	25:DC:213:ARG:NE	2.14	0.46
26:DD:102:ALA:C	26:DD:104:VAL:H	2.23	0.46
28:DP:30:TRP:HD1	28:DP:39:LEU:HG	1.79	0.46
30:DY:7:THR:HA	30:DY:34:THR:HA	1.98	0.46
30:DY:12:ALA:HB2	30:DY:53:MET:SD	2.55	0.46
33:D1:50:GLU:O	33:D1:51:ALA:HB2	2.15	0.46
40:DH:31:VAL:O	40:DH:32:PRO:C	2.58	0.46
40:DH:68:ARG:HA	40:DH:68:ARG:NE	2.31	0.46
44:DQ:56:PHE:O	44:DQ:59:LEU:HB3	2.15	0.46
49:DR:2:TYR:CD1	49:DR:42:ALA:HB2	2.50	0.46
49:DR:45:GLU:O	49:DR:46:GLU:C	2.59	0.46
51:DZ:70:GLU:HG3	51:DZ:71:LEU:H	1.81	0.46
1:AA:121:U:OP1	1:AA:121:U:H3'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:317:U:H2'	1:AA:318:G:H8	1.81	0.46
1:AA:692:U:H2'	1:AA:694:A:OP2	2.16	0.46
1:AA:947:G:H4'	12:AM:107:THR:OG1	2.16	0.46
1:AA:1012:A:H2'	1:AA:1013:G:O4'	2.16	0.46
1:AA:1050:G:C2'	1:AA:1051:C:H5'	2.45	0.46
2:AC:151:GLU:HB3	2:AC:198:LYS:HB2	1.98	0.46
3:AD:59:LYS:HG2	3:AD:63:ILE:HD11	1.97	0.46
3:AD:148:ALA:C	3:AD:150:LYS:N	2.71	0.46
5:AF:53:LYS:NZ	5:AF:53:LYS:H	2.14	0.46
6:AG:22:LEU:O	6:AG:22:LEU:HD23	2.15	0.46
6:AG:92:PRO:HG2	6:AG:93:VAL:H	1.80	0.46
7:AH:99:GLY:CA	7:AH:129:ALA:HA	2.45	0.46
10:AK:31:VAL:O	10:AK:43:TRP:HA	2.16	0.46
10:AK:69:CYS:SG	10:AK:70:ALA:N	2.89	0.46
11:AL:49:ARG:CB	11:AL:89:LEU:HD11	2.44	0.46
12:AM:89:ARG:HH11	12:AM:94:LEU:HB3	1.80	0.46
12:AM:96:VAL:C	12:AM:98:GLY:H	2.24	0.46
14:AQ:20:ILE:HG12	14:AQ:52:CYS:SG	2.56	0.46
18:AB:110:ILE:C	18:AB:112:ARG:N	2.73	0.46
18:AB:130:LYS:HD2	18:AB:130:LYS:N	2.30	0.46
18:AB:153:MET:HE1	18:AB:157:PRO:HB3	1.97	0.46
21:AN:9:GLU:OE1	21:AN:59:GLN:HB3	2.15	0.46
22:BA:37:C:H3'	22:BA:38:C:H6	1.81	0.46
23:BB:159:G:O2'	23:BB:160:A:H5"	2.16	0.46
23:BB:185:G:H2'	23:BB:186:G:O4'	2.16	0.46
23:BB:274:C:H2'	23:BB:275:C:C6	2.51	0.46
23:BB:359:G:H2'	23:BB:360:U:H5'	1.96	0.46
23:BB:437:U:H2'	23:BB:438:G:C8	2.50	0.46
23:BB:592:A:H2'	23:BB:593:U:C6	2.51	0.46
23:BB:902:C:H2'	23:BB:903:C:C6	2.51	0.46
23:BB:962:G:H2'	23:BB:963:U:C6	2.50	0.46
23:BB:1328:A:H2'	23:BB:1330:C:C4	2.51	0.46
23:BB:1739:A:H2'	23:BB:1740:G:C8	2.50	0.46
23:BB:1793:C:H2'	23:BB:1794:A:C8	2.51	0.46
23:BB:1977:A:H2'	23:BB:1978:A:C8	2.51	0.46
23:BB:2027:G:O2'	23:BB:2028:U:H5'	2.16	0.46
23:BB:2309:A:H61	47:BF:75:GLY:CA	2.28	0.46
23:BB:2570:G:H2'	23:BB:2571:U:O4'	2.15	0.46
24:BI:63:ASP:C	24:BI:65:SER:N	2.73	0.46
26:BD:62:LYS:N	26:BD:62:LYS:HD2	2.30	0.46
26:BD:183:GLU:N	26:BD:183:GLU:OE1	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BP:95:LYS:HG3	28:BP:97:TYR:HE1	1.80	0.46
29:BE:1:MET:O	29:BE:13:THR:HA	2.15	0.46
35:BV:83:LYS:O	35:BV:85:LYS:N	2.49	0.46
37:BL:124:GLY:N	37:BL:143:GLU:CG	2.75	0.46
38:BM:26:VAL:HB	38:BM:104:GLU:OE2	2.16	0.46
38:BM:120:ALA:O	38:BM:123:LYS:HG2	2.16	0.46
40:BH:5:LEU:HG	40:BH:17:ASP:O	2.16	0.46
41:BJ:20:ALA:HB2	41:BJ:28:LEU:CD1	2.45	0.46
41:BJ:34:ARG:HG3	41:BJ:39:LYS:HB3	1.96	0.46
43:BO:47:VAL:HG12	43:BO:48:LEU:N	2.26	0.46
43:BO:75:GLY:O	43:BO:78:VAL:HG23	2.16	0.46
44:BQ:64:ILE:HD12	44:BQ:95:ALA:CB	2.46	0.46
45:BS:30:SER:HA	45:BS:33:LEU:HD12	1.97	0.46
47:BF:155:ILE:HG22	47:BF:156:THR:N	2.30	0.46
48:BG:155:PRO:HA	48:BG:170:THR:HA	1.98	0.46
51:BZ:27:ARG:HG3	51:BZ:28:ARG:H	1.80	0.46
51:BZ:27:ARG:O	51:BZ:28:ARG:CB	2.64	0.46
52:BW:24:ARG:CD	52:BW:65:LYS:HG2	2.46	0.46
1:CA:20:U:H2'	1:CA:21:G:O4'	2.15	0.46
1:CA:95:C:H2'	1:CA:95:C:O2	2.14	0.46
1:CA:244:U:O4	1:CA:906:A:H1'	2.15	0.46
1:CA:456:A:H2'	1:CA:457:G:H5"	1.98	0.46
1:CA:679:C:O2'	1:CA:680:C:H5'	2.15	0.46
1:CA:897:C:O2'	1:CA:898:G:H5'	2.16	0.46
1:CA:1039:G:O2'	1:CA:1040:U:H5'	2.16	0.46
3:CD:59:LYS:HG2	3:CD:63:ILE:HD11	1.98	0.46
3:CD:160:LEU:H	3:CD:160:LEU:CD1	2.24	0.46
3:CD:162:GLU:C	3:CD:164:ARG:H	2.22	0.46
4:CE:56:PRO:HA	4:CE:59:ILE:HD12	1.98	0.46
7:CH:16:GLY:C	7:CH:18:ALA:N	2.74	0.46
11:CL:85:ARG:CB	11:CL:93:ARG:HA	2.46	0.46
2:CC:19:SER:N	2:CC:55:VAL:HG13	2.31	0.46
2:CC:56:ILE:O	2:CC:58:ARG:HG3	2.16	0.46
2:CC:112:ALA:N	2:CC:201:ILE:HD11	2.31	0.46
2:CC:138:GLN:O	2:CC:142:ARG:HB3	2.16	0.46
12:CM:108:ARG:HG3	12:CM:108:ARG:NH1	2.30	0.46
23:DB:150:U:O2'	23:DB:151:C:H5'	2.15	0.46
23:DB:574:A:H4'	23:DB:575:A:H5"	1.97	0.46
23:DB:636:G:C6	37:DL:111:ILE:HD12	2.51	0.46
23:DB:672:C:H2'	23:DB:673:C:C6	2.51	0.46
23:DB:675:A:N3	23:DB:2443:C:O2'	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1197:G:O2'	23:DB:1198:U:H5'	2.15	0.46
23:DB:1316:U:H2'	23:DB:1317:G:H8	1.81	0.46
23:DB:1338:G:H4'	50:DT:18:GLU:HG3	1.97	0.46
23:DB:1429:G:H2'	23:DB:1430:G:C8	2.45	0.46
23:DB:2331:G:C4'	52:DW:39:GLN:HA	2.46	0.46
23:DB:2800:A:H8	23:DB:2800:A:O5'	1.99	0.46
24:DI:23:VAL:HG12	24:DI:24:GLY:N	2.31	0.46
25:DC:93:VAL:HG12	25:DC:101:ARG:C	2.40	0.46
26:DD:5:VAL:HG11	26:DD:80:TRP:CE3	2.51	0.46
28:DP:29:VAL:HA	28:DP:79:VAL:O	2.16	0.46
28:DP:63:ILE:HG12	28:DP:68:GLY:CA	2.46	0.46
29:DE:58:LYS:O	29:DE:60:TRP:N	2.49	0.46
30:DY:35:VAL:HG22	30:DY:36:GLU:N	2.31	0.46
35:DV:56:PHE:O	35:DV:61:LEU:HD21	2.15	0.46
37:DL:80:SER:N	37:DL:113:ALA:HB3	2.30	0.46
42:DN:47:VAL:O	42:DN:51:LEU:HD22	2.15	0.46
43:DO:50:ALA:O	43:DO:51:ALA:HB2	2.15	0.46
45:DS:45:VAL:O	45:DS:48:LYS:HB3	2.16	0.46
45:DS:66:ILE:CA	45:DS:69:LEU:HD13	2.44	0.46
46:DU:10:VAL:HG22	46:DU:35:VAL:HG11	1.98	0.46
47:DF:45:ASP:O	47:DF:47:LYS:N	2.43	0.46
47:DF:52:ALA:O	47:DF:56:LEU:HB2	2.14	0.46
48:DG:17:LYS:HE3	48:DG:18:ILE:N	2.31	0.46
50:DT:53:VAL:HG11	50:DT:87:LEU:HD22	1.98	0.46
1:AA:1077:G:N2	1:AA:1080:A:OP2	2.48	0.46
1:AA:1333:A:C2	1:AA:1334:G:H1'	2.50	0.46
3:AD:107:GLY:C	3:AD:157:ALA:HB1	2.41	0.46
3:AD:155:LYS:HA	3:AD:158:LEU:HD12	1.98	0.46
4:AE:82:HIS:HB2	4:AE:83:PRO:HD2	1.97	0.46
4:AE:113:VAL:CG2	4:AE:114:LEU:H	2.20	0.46
5:AF:74:LEU:HG	5:AF:78:PHE:CE1	2.51	0.46
6:AG:13:PRO:HA	6:AG:23:ALA:HB2	1.97	0.46
8:AI:20:ILE:HA	8:AI:62:LEU:CD1	2.41	0.46
10:AK:14:GLN:HA	10:AK:76:TYR:O	2.16	0.46
12:AM:78:ARG:NH1	16:AS:64:GLU:HB2	2.31	0.46
20:AO:57:LEU:HD23	23:BB:715:A:C8	2.50	0.46
21:AN:87:ALA:O	21:AN:88:MET:HE2	2.16	0.46
23:BB:338:G:N2	23:BB:339:U:H1'	2.31	0.46
23:BB:969:G:H2'	23:BB:970:U:O4'	2.16	0.46
23:BB:1351:C:O2'	23:BB:1571:A:H1'	2.15	0.46
23:BB:1504:A:H2'	23:BB:1505:A:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1590:A:H2'	23:BB:1591:A:C8	2.50	0.46
23:BB:1716:U:H2'	23:BB:1717:A:H8	1.81	0.46
23:BB:1915:U:H3'	23:BB:1916:A:H8	1.81	0.46
23:BB:2745:C:H2'	23:BB:2746:U:C6	2.50	0.46
23:BB:2863:C:O2'	23:BB:2864:G:H5'	2.16	0.46
23:BB:2884:U:C6	31:B0:49:ARG:HG2	2.51	0.46
24:BI:135:MET:HG3	24:BI:137:LEU:HG	1.98	0.46
25:BC:76:VAL:HA	25:BC:114:GLN:HA	1.97	0.46
25:BC:116:GLN:O	25:BC:117:SER:HB3	2.15	0.46
26:BD:92:VAL:O	26:BD:94:GLN:N	2.49	0.46
28:BP:32:VAL:HG12	28:BP:33:GLU:O	2.16	0.46
28:BP:83:ILE:C	28:BP:83:ILE:HD13	2.41	0.46
30:BY:43:ILE:HG13	30:BY:44:ARG:N	2.26	0.46
33:B1:18:HIS:CE1	33:B1:40:PRO:HD2	2.51	0.46
35:BV:16:ALA:HA	35:BV:19:ARG:CZ	2.45	0.46
38:BM:114:ARG:HG3	38:BM:130:PHE:CD1	2.51	0.46
39:BX:6:LEU:C	39:BX:8:GLU:H	2.22	0.46
40:BH:31:VAL:O	40:BH:32:PRO:C	2.58	0.46
44:BQ:67:ALA:HB1	44:BQ:105:PHE:CZ	2.51	0.46
45:BS:57:ASN:N	45:BS:57:ASN:HD22	2.14	0.46
46:BU:11:ILE:HG21	46:BU:78:LYS:CE	2.46	0.46
47:BF:4:HIS:O	47:BF:7:TYR:HB3	2.15	0.46
47:BF:7:TYR:O	47:BF:11:VAL:HB	2.16	0.46
47:BF:37:MET:HA	47:BF:151:LEU:HA	1.97	0.46
47:BF:49:LEU:HD21	47:BF:84:ILE:O	2.15	0.46
48:BG:7:PRO:O	48:BG:8:VAL:HB	2.15	0.46
48:BG:17:LYS:HB3	48:BG:24:THR:O	2.16	0.46
49:BR:2:TYR:HB2	49:BR:42:ALA:N	2.31	0.46
50:BT:51:PHE:HB3	50:BT:53:VAL:HG23	1.97	0.46
52:BW:9:THR:HG23	52:BW:10:ARG:CD	2.45	0.46
1:CA:8:A:H1'	4:CE:107:GLY:HA2	1.97	0.46
1:CA:18:C:H1'	1:CA:1079:G:N2	2.28	0.46
1:CA:425:G:H2'	1:CA:426:U:C6	2.51	0.46
1:CA:509:A:C6	1:CA:510:A:N1	2.84	0.46
1:CA:662:U:O2'	1:CA:836:G:H5"	2.16	0.46
1:CA:1173:U:H2'	1:CA:1174:G:O4'	2.15	0.46
4:CE:33:THR:HB	4:CE:49:TYR:OH	2.16	0.46
10:CK:85:VAL:O	10:CK:111:ASP:HA	2.15	0.46
14:CQ:15:LYS:O	14:CQ:16:MET:C	2.57	0.46
14:CQ:34:GLY:O	14:CQ:35:LYS:C	2.58	0.46
2:CC:31:ASN:ND2	2:CC:58:ARG:HE	2.12	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:68:HIS:O	2:CC:105:VAL:HG21	2.16	0.46
9:CJ:81:GLU:N	9:CJ:82:LYS:NZ	2.64	0.46
16:CS:30:LEU:HD12	16:CS:48:ILE:HG12	1.96	0.46
23:DB:278:A:H5"	23:DB:279:A:OP1	2.16	0.46
23:DB:510:C:H2'	23:DB:511:U:O4'	2.16	0.46
23:DB:615:U:O2	29:DE:35:TYR:HA	2.15	0.46
23:DB:1099:G:C8	24:DI:3:LYS:CB	2.99	0.46
23:DB:1275:A:H2'	23:DB:1276:A:O4'	2.16	0.46
23:DB:1410:G:H2'	23:DB:1411:U:C6	2.51	0.46
23:DB:1590:A:H2'	23:DB:1591:A:C8	2.50	0.46
23:DB:1797:G:O2'	23:DB:1798:U:H5'	2.16	0.46
23:DB:2064:C:H2'	23:DB:2065:C:H6	1.76	0.46
23:DB:2267:A:H8	23:DB:2267:A:C3'	2.25	0.46
23:DB:2348:U:H5'	33:D1:20:TYR:OH	2.15	0.46
25:DC:16:VAL:CB	25:DC:203:VAL:HG11	2.45	0.46
25:DC:69:ASN:O	25:DC:70:LYS:C	2.59	0.46
25:DC:76:VAL:HG12	25:DC:114:GLN:HB2	1.97	0.46
27:DK:61:VAL:HG11	27:DK:112:PHE:CZ	2.50	0.46
27:DK:116:ILE:C	27:DK:118:LEU:H	2.24	0.46
30:DY:43:ILE:HG13	30:DY:44:ARG:N	2.30	0.46
32:D4:7:VAL:HG23	32:D4:35:GLN:CD	2.41	0.46
34:D3:49:VAL:HG11	34:D3:54:LEU:CD1	2.40	0.46
42:DN:62:ASN:N	42:DN:62:ASN:ND2	2.63	0.46
47:DF:7:TYR:O	47:DF:11:VAL:HB	2.16	0.46
48:DG:88:LEU:C	48:DG:88:LEU:HD12	2.41	0.46
51:DZ:32:ASN:HB3	51:DZ:34:HIS:NE2	2.31	0.46
1:AA:292:G:O2'	1:AA:609:A:N6	2.49	0.46
1:AA:415:A:H4'	1:AA:415:A:OP1	2.16	0.46
1:AA:520:A:N1	1:AA:536:C:H1'	2.31	0.46
1:AA:656:G:H2'	1:AA:657:U:H6	1.81	0.46
1:AA:796:C:O3'	10:AK:126:ARG:NH2	2.49	0.46
1:AA:1245:C:O2'	1:AA:1246:A:H5'	2.16	0.46
1:AA:1317:C:C2	1:AA:1318:A:H1'	2.51	0.46
2:AC:1:GLY:C	2:AC:2:GLN:HG3	2.41	0.46
3:AD:160:LEU:H	3:AD:160:LEU:CD1	2.23	0.46
6:AG:87:PRO:CG	6:AG:144:ALA:HA	2.46	0.46
7:AH:14:ARG:HG3	7:AH:15:ASN:N	2.31	0.46
10:AK:23:HIS:HB3	10:AK:30:ILE:CG1	2.42	0.46
11:AL:6:LEU:HB2	14:AQ:33:TYR:CE1	2.51	0.46
12:AM:84:CYS:C	12:AM:88:LEU:HG	2.40	0.46
13:AP:45:GLU:C	13:AP:47:GLU:H	2.23	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AB:117:GLU:HG3	18:AB:140:LEU:HD22	1.97	0.46
20:AO:61:SER:O	20:AO:64:ARG:HB3	2.15	0.46
23:BB:428:A:O2'	23:BB:429:A:H5'	2.15	0.46
23:BB:549:G:H5"	23:BB:550:C:C5	2.51	0.46
23:BB:1435:G:H2'	23:BB:1436:G:H8	1.80	0.46
23:BB:1688:U:O2	23:BB:1700:A:H5'	2.15	0.46
23:BB:1790:C:H2'	23:BB:1791:A:C8	2.51	0.46
23:BB:2050:C:H1'	26:BD:161:MET:CE	2.46	0.46
23:BB:2722:G:H2'	23:BB:2723:C:H6	1.79	0.46
23:BB:2815:C:H2'	23:BB:2816:G:H8	1.80	0.46
25:BC:62:ARG:HB3	25:BC:63:ILE:H	1.43	0.46
26:BD:91:THR:O	26:BD:92:VAL:C	2.59	0.46
26:BD:133:THR:HG23	26:BD:134:HIS:CD2	2.51	0.46
29:BE:170:ARG:NH2	29:BE:176:ASP:HB2	2.30	0.46
33:B1:38:PHE:HB2	33:B1:45:HIS:CE1	2.51	0.46
35:BV:1:MET:O	35:BV:2:PHE:HB2	2.16	0.46
37:BL:29:LYS:C	37:BL:31:GLY:H	2.23	0.46
38:BM:41:LEU:C	38:BM:43:ALA:H	2.23	0.46
40:BH:46:PHE:O	40:BH:47:PHE:HD2	1.99	0.46
40:BH:94:ILE:HB	40:BH:128:HIS:HE2	1.79	0.46
40:BH:117:LEU:CG	40:BH:130:VAL:HG13	2.45	0.46
41:BJ:44:TYR:CD2	41:BJ:44:TYR:C	2.93	0.46
47:BF:31:GLU:HG3	47:BF:32:LYS:HG2	1.97	0.46
48:BG:6:ALA:HB3	48:BG:68:ARG:CG	2.40	0.46
1:CA:62:U:H2'	1:CA:63:C:C6	2.51	0.46
1:CA:410:G:H1'	1:CA:432:A:H61	1.81	0.46
1:CA:628:G:O2'	1:CA:629:A:H5'	2.15	0.46
1:CA:636:U:OP1	14:CQ:5:ARG:HD2	2.15	0.46
1:CA:682:G:O2'	1:CA:683:G:H5'	2.16	0.46
1:CA:779:C:H5"	10:CK:123:PRO:HB3	1.97	0.46
1:CA:949:A:O2'	1:CA:950:U:H5'	2.16	0.46
1:CA:950:U:H2'	1:CA:951:G:C8	2.50	0.46
1:CA:1071:C:C2	1:CA:1072:G:C8	3.04	0.46
1:CA:1078:U:H4'	4:CE:137:ARG:CZ	2.46	0.46
1:CA:1390:U:H2'	1:CA:1391:U:C6	2.51	0.46
4:CE:56:PRO:O	4:CE:57:ALA:C	2.59	0.46
7:CH:34:ALA:HB1	7:CH:109:VAL:HB	1.98	0.46
10:CK:70:ALA:C	10:CK:72:ALA:N	2.74	0.46
2:CC:152:VAL:H	2:CC:165:GLU:HB3	1.81	0.46
16:CS:64:GLU:O	16:CS:66:VAL:HG22	2.16	0.46
20:CO:47:LYS:C	20:CO:49:ASP:N	2.74	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CO:85:LEU:HB3	20:CO:87:LEU:HG	1.97	0.46
23:DB:49:A:OP1	23:DB:51:G:H5'	2.16	0.46
23:DB:95:A:H4'	39:DX:38:GLN:O	2.14	0.46
23:DB:143:C:H2'	23:DB:144:A:C8	2.51	0.46
23:DB:553:G:C2'	23:DB:554:U:H5'	2.46	0.46
23:DB:708:G:H2'	23:DB:709:U:C6	2.50	0.46
23:DB:1098:A:C4	24:DI:3:LYS:O	2.68	0.46
23:DB:1710:G:O2'	23:DB:1711:A:H5'	2.15	0.46
23:DB:1859:U:H6	23:DB:1859:U:O5'	1.99	0.46
23:DB:2181:U:H2'	23:DB:2182:U:C6	2.51	0.46
23:DB:2353:G:N3	52:DW:30:VAL:HG13	2.31	0.46
23:DB:2418:A:H2'	23:DB:2419:U:O4'	2.16	0.46
23:DB:2588:G:H3'	56:DB:3587:HOH:O	2.14	0.46
23:DB:2599:G:H2'	23:DB:2600:A:C8	2.51	0.46
25:DC:41:GLY:HA3	25:DC:53:ILE:CG2	2.37	0.46
25:DC:68:ARG:HB3	25:DC:128:THR:OG1	2.16	0.46
25:DC:196:ASN:HD21	25:DC:199:HIS:HB2	1.78	0.46
26:DD:46:ARG:HG3	26:DD:46:ARG:HH11	1.80	0.46
26:DD:114:LYS:HD2	26:DD:116:LYS:CE	2.45	0.46
27:DK:29:HIS:O	27:DK:30:ARG:C	2.58	0.46
29:DE:97:ASN:ND2	29:DE:100:MET:HG3	2.30	0.46
32:D4:13:ASN:HB2	32:D4:27:CYS:SG	2.56	0.46
33:D1:32:LYS:NZ	33:D1:52:LYS:HG2	2.31	0.46
38:DM:113:ALA:O	38:DM:116:ALA:HB3	2.16	0.46
42:DN:2:ARG:HB3	42:DN:2:ARG:CZ	2.45	0.46
47:DF:116:LEU:O	47:DF:177:ARG:HB2	2.15	0.46
49:DR:14:VAL:HG21	49:DR:98:ILE:HD13	1.98	0.46
50:DT:10:VAL:O	50:DT:12:ARG:N	2.48	0.46
50:DT:55:VAL:CA	50:DT:87:LEU:HA	2.30	0.46
52:DW:25:PHE:C	52:DW:27:GLY:N	2.71	0.46
1:AA:56:U:H2'	1:AA:57:G:H8	1.81	0.46
1:AA:864:A:H2'	1:AA:865:A:C8	2.51	0.46
1:AA:986:U:H1'	16:AS:54:ARG:HB3	1.97	0.46
1:AA:1007:U:H2'	1:AA:1008:U:H6	1.79	0.46
1:AA:1102:A:O2'	1:AA:1103:C:H5'	2.16	0.46
1:AA:1308:U:OP1	12:AM:96:VAL:HG23	2.15	0.46
3:AD:155:LYS:HG2	3:AD:156:ALA:H	1.81	0.46
4:AE:129:SER:HA	56:AE:201:HOH:O	2.16	0.46
6:AG:136:LYS:O	6:AG:140:VAL:HG23	2.16	0.46
8:AI:53:LEU:O	8:AI:53:LEU:HD13	2.15	0.46
8:AI:66:VAL:O	8:AI:67:LYS:HG3	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AK:27:ASN:O	10:AK:56:LYS:HE2	2.16	0.46
10:AK:121:ARG:HH12	19:AU:37:TYR:HE2	1.64	0.46
11:AL:5:GLN:HA	11:AL:8:ARG:NH2	2.31	0.46
11:AL:23:LEU:HD22	11:AL:58:ASN:HB2	1.98	0.46
11:AL:35:ARG:CZ	11:AL:35:ARG:HA	2.46	0.46
13:AP:44:SER:C	13:AP:46:LYS:N	2.71	0.46
21:AN:25:GLU:O	21:AN:29:ILE:HG13	2.16	0.46
22:BA:111:U:H2'	22:BA:112:G:H8	1.80	0.46
23:BB:43:G:H2'	23:BB:44:A:O4'	2.16	0.46
23:BB:282:A:O2'	23:BB:283:G:H5'	2.16	0.46
23:BB:690:G:H2'	23:BB:691:C:O4'	2.16	0.46
23:BB:1119:U:H2'	23:BB:1120:G:H8	1.81	0.46
23:BB:1571:A:H2'	23:BB:1572:A:H8	1.81	0.46
23:BB:1863:G:H2'	23:BB:1864:U:O4'	2.16	0.46
23:BB:2056:G:H21	31:B0:1:ALA:HA	1.82	0.46
23:BB:2144:G:N2	23:BB:2146:C:H5'	2.31	0.46
23:BB:2201:G:H2'	23:BB:2202:U:H6	1.80	0.46
23:BB:2305:U:H2'	23:BB:2306:C:O4'	2.16	0.46
23:BB:2526:G:H1'	32:B4:1:MET:H3	1.80	0.46
24:BI:35:MET:SD	24:BI:35:MET:C	2.99	0.46
25:BC:145:MET:HE2	25:BC:145:MET:HA	1.98	0.46
25:BC:207:ALA:O	25:BC:208:GLY:C	2.59	0.46
26:BD:15:PHE:CE2	28:BP:77:SER:HB2	2.50	0.46
26:BD:24:VAL:HG23	26:BD:189:VAL:C	2.41	0.46
26:BD:34:VAL:HA	26:BD:50:VAL:HG12	1.98	0.46
26:BD:159:LYS:NZ	26:BD:160:LYS:N	2.64	0.46
26:BD:168:GLU:HG3	26:BD:170:VAL:CG1	2.46	0.46
28:BP:30:TRP:HD1	28:BP:39:LEU:HG	1.81	0.46
29:BE:46:GLN:HG3	29:BE:87:ALA:HB3	1.98	0.46
30:BY:7:THR:HA	30:BY:34:THR:HA	1.98	0.46
31:B0:41:HIS:HB3	42:BN:99:LYS:HB2	1.97	0.46
32:B4:7:VAL:HG23	32:B4:35:GLN:CD	2.41	0.46
34:B3:50:SER:C	34:B3:52:GLY:N	2.74	0.46
36:B2:13:ASN:HD22	36:B2:13:ASN:N	2.14	0.46
37:BL:61:LEU:N	37:BL:61:LEU:CD1	2.79	0.46
38:BM:71:LYS:O	38:BM:92:TRP:HA	2.16	0.46
39:BX:44:LYS:HD2	39:BX:48:ARG:HH12	1.80	0.46
39:BX:45:GLN:O	39:BX:47:ARG:N	2.45	0.46
40:BH:67:ALA:HA	40:BH:138:VAL:HG11	1.98	0.46
40:BH:104:THR:HG23	40:BH:105:ALA:H	1.79	0.46
41:BJ:64:VAL:HG22	41:BJ:68:LYS:HB2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:24:VAL:HA	46:BU:35:VAL:HA	1.97	0.46
47:BF:69:ALA:O	47:BF:70:ARG:HB2	2.16	0.46
48:BG:146:ASP:O	48:BG:150:TYR:HD1	1.99	0.46
1:CA:218:U:H2'	1:CA:219:U:O4'	2.16	0.46
1:CA:286:C:H2'	1:CA:287:U:C6	2.51	0.46
1:CA:306:A:H2'	1:CA:307:C:H5'	1.98	0.46
1:CA:502:A:H2'	1:CA:503:C:H6	1.81	0.46
1:CA:763:G:H2'	1:CA:764:C:H6	1.81	0.46
1:CA:1403:C:O2'	1:CA:1404:C:H5'	2.16	0.46
1:CA:1495:U:O2'	1:CA:1496:C:H5'	2.16	0.46
4:CE:54:GLU:HG2	4:CE:56:PRO:HD2	1.98	0.46
4:CE:56:PRO:HA	4:CE:59:ILE:CD1	2.46	0.46
11:CL:6:LEU:HB2	14:CQ:33:TYR:CE1	2.50	0.46
11:CL:23:LEU:HD22	11:CL:58:ASN:HB2	1.98	0.46
17:CT:25:SER:O	17:CT:29:THR:HG23	2.16	0.46
6:CG:91:ARG:N	6:CG:91:ARG:HD2	2.31	0.46
6:CG:147:ASN:C	6:CG:149:ALA:N	2.73	0.46
8:CI:64:ILE:HG21	8:CI:78:ILE:HG12	1.98	0.46
8:CI:122:ARG:HH11	8:CI:122:ARG:HG3	1.80	0.46
20:CO:70:LEU:CD1	20:CO:78:TYR:H	2.29	0.46
23:DB:57:C:H2'	23:DB:58:G:C8	2.50	0.46
23:DB:107:G:H1'	23:DB:294:A:H1'	1.98	0.46
23:DB:245:G:O2'	23:DB:246:C:H5'	2.16	0.46
23:DB:311:A:H2	23:DB:331:C:H5"	1.79	0.46
23:DB:349:U:O2	23:DB:349:U:H2'	2.15	0.46
23:DB:876:C:H3'	23:DB:877:A:C4'	2.46	0.46
23:DB:1092:C:H2'	23:DB:1093:G:C5'	2.45	0.46
23:DB:1174:U:O3'	23:DB:1175:A:H8	1.99	0.46
23:DB:1219:U:H2'	23:DB:1220:G:H8	1.80	0.46
23:DB:1241:A:N3	23:DB:1241:A:O4'	2.49	0.46
23:DB:1295:C:H2'	23:DB:1296:G:C8	2.51	0.46
23:DB:1383:A:H2	23:DB:1405:U:O2	1.99	0.46
23:DB:1439:A:N3	23:DB:1553:A:C6	2.84	0.46
23:DB:1469:A:H2'	23:DB:1470:A:H8	1.81	0.46
23:DB:1706:C:H2'	23:DB:1757:A:OP2	2.16	0.46
23:DB:1750:G:O2'	23:DB:2860:A:H2	1.99	0.46
23:DB:1751:U:H2'	23:DB:1752:C:C6	2.51	0.46
23:DB:2361:G:H2'	23:DB:2362:C:H6	1.80	0.46
23:DB:2443:C:O2'	23:DB:2444:G:H5'	2.16	0.46
23:DB:2527:C:O2'	23:DB:2528:U:H5'	2.16	0.46
23:DB:2636:C:H2'	23:DB:2637:U:H6	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2888:C:H2'	23:DB:2889:C:H6	1.81	0.46
25:DC:51:ARG:O	25:DC:52:HIS:C	2.58	0.46
25:DC:202:ARG:HB3	25:DC:203:VAL:H	1.67	0.46
25:DC:231:HIS:O	25:DC:232:GLY:C	2.59	0.46
26:DD:187:LEU:O	26:DD:188:LEU:HD23	2.16	0.46
28:DP:19:PHE:HB2	28:DP:50:ARG:NH1	2.30	0.46
35:DV:83:LYS:O	35:DV:85:LYS:N	2.49	0.46
41:DJ:74:TYR:HD2	41:DJ:92:MET:HE2	1.81	0.46
41:DJ:131:ASN:O	41:DJ:132:HIS:ND1	2.49	0.46
44:DQ:64:ILE:HD12	44:DQ:95:ALA:CB	2.45	0.46
46:DU:3:LYS:HD3	46:DU:82:VAL:HG21	1.98	0.46
49:DR:58:VAL:HG22	49:DR:59:ILE:N	2.22	0.46
1:AA:386:C:O2'	1:AA:387:U:H5'	2.16	0.45
1:AA:409:U:OP1	3:AD:21:LYS:HG3	2.15	0.45
1:AA:429:U:C1'	1:AA:430:A:H5"	2.45	0.45
1:AA:778:G:O2'	1:AA:779:C:H5'	2.16	0.45
1:AA:956:U:C2'	1:AA:957:U:H5'	2.47	0.45
1:AA:1114:C:O2'	1:AA:1115:U:H5'	2.16	0.45
1:AA:1217:C:H2'	1:AA:1218:C:H6	1.81	0.45
1:AA:1244:G:H2'	1:AA:1245:C:O4'	2.16	0.45
1:AA:1299:A:H2'	1:AA:1301:U:C1'	2.47	0.45
2:AC:61:LYS:O	2:AC:96:VAL:HB	2.16	0.45
2:AC:152:VAL:HG13	2:AC:197:VAL:HG22	1.98	0.45
4:AE:91:SER:OG	4:AE:135:VAL:HG22	2.15	0.45
6:AG:144:ALA:O	6:AG:145:GLU:HB3	2.16	0.45
8:AI:64:ILE:HG22	8:AI:66:VAL:H	1.81	0.45
12:AM:22:TYR:HB2	12:AM:65:GLU:HA	1.98	0.45
12:AM:105:ALA:C	12:AM:107:THR:H	2.25	0.45
15:AR:22:TYR:C	15:AR:24:ASP:H	2.23	0.45
15:AR:41:SER:HB3	15:AR:51:GLN:HB2	1.98	0.45
17:AT:2:ASN:CG	17:AT:3:ILE:H	2.23	0.45
19:AU:35:GLU:HB2	19:AU:37:TYR:CZ	2.51	0.45
20:AO:70:LEU:HD12	20:AO:78:TYR:HB2	1.98	0.45
21:AN:61:ASN:HB3	21:AN:72:PHE:CD2	2.51	0.45
22:BA:114:C:H1'	43:BO:47:VAL:HG21	1.98	0.45
23:BB:513:A:H8	23:BB:513:A:O5'	1.98	0.45
23:BB:527:C:O4'	23:BB:527:C:O2	2.30	0.45
23:BB:1006:C:H1'	41:BJ:108:MET:SD	2.57	0.45
23:BB:1389:G:O2'	23:BB:1390:U:H5'	2.16	0.45
23:BB:1468:U:H2'	23:BB:1522:A:N6	2.31	0.45
23:BB:1824:G:H2'	23:BB:1825:U:H6	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2269:G:H4'	52:BW:19:ARG:NH1	2.30	0.45
23:BB:2271:G:H2'	23:BB:2272:U:C6	2.51	0.45
23:BB:2297:A:N6	23:BB:2319:G:H1'	2.31	0.45
23:BB:2740:A:N7	23:BB:2764:A:N7	2.64	0.45
23:BB:2742:G:H2'	23:BB:2743:U:H6	1.80	0.45
23:BB:2805:C:O2'	23:BB:2806:C:H5'	2.16	0.45
23:BB:2840:C:H5"	42:BN:53:THR:CG2	2.46	0.45
25:BC:251:THR:O	25:BC:252:LYS:HD2	2.16	0.45
27:BK:76:VAL:O	28:BP:71:ARG:HA	2.16	0.45
28:BP:3:ILE:HG23	28:BP:4:ILE:N	2.31	0.45
28:BP:50:ARG:HB3	28:BP:57:ALA:N	2.31	0.45
34:B3:2:LYS:H	34:B3:2:LYS:HG2	1.45	0.45
37:BL:80:SER:HB3	37:BL:115:GLU:CD	2.41	0.45
38:BM:19:GLY:CA	38:BM:98:PRO:HD2	2.37	0.45
38:BM:53:MET:SD	38:BM:63:ILE:HG21	2.56	0.45
39:BX:39:GLN:HB3	39:BX:41:HIS:NE2	2.30	0.45
44:BQ:7:VAL:HG23	44:BQ:8:ILE:N	2.30	0.45
44:BQ:9:ALA:O	44:BQ:11:ALA:N	2.49	0.45
44:BQ:72:GLY:O	44:BQ:113:LYS:HE2	2.16	0.45
44:BQ:93:ILE:O	44:BQ:96:ASP:HB3	2.15	0.45
45:BS:14:ALA:C	45:BS:16:LYS:N	2.73	0.45
48:BG:90:GLY:HA3	48:BG:93:TYR:CZ	2.52	0.45
48:BG:108:PHE:HE1	48:BG:151:ARG:HH11	1.64	0.45
48:BG:112:VAL:O	48:BG:113:ASP:HB2	2.16	0.45
50:BT:45:ALA:HA	50:BT:48:GLN:HG2	1.98	0.45
50:BT:69:ARG:HG3	50:BT:70:HIS:N	2.30	0.45
1:CA:45:G:O2'	1:CA:46:G:H5'	2.16	0.45
1:CA:72:A:N6	1:CA:98:A:C2	2.83	0.45
1:CA:88:U:H2'	1:CA:89:U:C6	2.51	0.45
1:CA:411:A:H62	1:CA:413:G:H21	1.64	0.45
1:CA:473:U:H2'	1:CA:474:G:H8	1.81	0.45
1:CA:492:C:H2'	1:CA:493:A:N3	2.31	0.45
1:CA:813:U:H5"	1:CA:816:A:N6	2.31	0.45
1:CA:1463:U:H2'	1:CA:1464:U:H6	1.81	0.45
3:CD:58:GLN:OE1	3:CD:58:GLN:HA	2.16	0.45
4:CE:156:ARG:HB3	7:CH:43:GLY:O	2.16	0.45
5:CF:38:ARG:HH21	5:CF:63:ASN:HD21	1.64	0.45
5:CF:55:HIS:HB2	5:CF:56:LYS:HE2	1.98	0.45
5:CF:77:THR:O	5:CF:81:ASN:HB2	2.16	0.45
10:CK:45:THR:O	10:CK:46:ALA:C	2.59	0.45
11:CL:79:ILE:HD12	11:CL:96:THR:HG22	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:53:ARG:HB2	2:CC:68:HIS:CD2	2.52	0.45
6:CG:3:ARG:HB3	6:CG:4:ARG:H	1.53	0.45
6:CG:94:ARG:HD3	6:CG:98:LEU:HD12	1.98	0.45
8:CI:25:GLY:HA3	8:CI:57:VAL:CA	2.46	0.45
8:CI:49:GLN:N	8:CI:50:PRO:HD2	2.31	0.45
9:CJ:83:THR:HA	9:CJ:86:ALA:HB3	1.98	0.45
21:CN:8:ARG:O	21:CN:12:ARG:HG3	2.16	0.45
22:DA:59:A:H2'	22:DA:60:C:H6	1.78	0.45
23:DB:84:A:OP1	46:DU:2:ALA:HB3	2.16	0.45
23:DB:428:A:O2'	23:DB:429:A:H5'	2.16	0.45
23:DB:849:A:H2'	23:DB:850:U:C6	2.51	0.45
23:DB:957:C:N4	23:DB:2459:A:C8	2.84	0.45
23:DB:1177:G:H8	23:DB:1177:G:O5'	1.99	0.45
23:DB:1198:U:H2'	23:DB:1199:U:H6	1.79	0.45
23:DB:1501:G:O2'	23:DB:1502:A:H5'	2.15	0.45
23:DB:1654:A:O2'	26:DD:118:PHE:CB	2.64	0.45
23:DB:1654:A:H61	23:DB:2049:G:P	2.39	0.45
23:DB:2246:G:H2'	23:DB:2247:A:C8	2.51	0.45
23:DB:2514:U:H2'	23:DB:2515:C:C6	2.51	0.45
23:DB:2634:A:H2'	23:DB:2635:A:H8	1.80	0.45
23:DB:2836:U:H2'	23:DB:2837:A:C8	2.51	0.45
25:DC:62:ARG:HB3	25:DC:63:ILE:H	1.43	0.45
25:DC:143:VAL:HA	25:DC:189:ALA:CB	2.46	0.45
26:DD:33:ARG:HH12	26:DD:53:GLY:C	2.24	0.45
26:DD:36:GLN:O	26:DD:36:GLN:HG3	2.16	0.45
27:DK:62:VAL:HG12	27:DK:63:VAL:N	2.31	0.45
27:DK:115:ILE:HG23	27:DK:116:ILE:H	1.81	0.45
28:DP:83:ILE:HD13	28:DP:83:ILE:C	2.41	0.45
29:DE:128:ALA:O	29:DE:130:LYS:N	2.46	0.45
30:DY:6:ILE:HG22	30:DY:56:VAL:HA	1.98	0.45
38:DM:31:PHE:HA	38:DM:131:VAL:O	2.16	0.45
39:DX:51:ALA:O	39:DX:52:ARG:C	2.58	0.45
40:DH:90:LEU:HD22	40:DH:122:LEU:O	2.16	0.45
45:DS:24:ILE:HG12	45:DS:36:LEU:HD21	1.98	0.45
45:DS:50:VAL:HG12	45:DS:105:VAL:HG23	1.98	0.45
46:DU:35:VAL:HG23	46:DU:38:ILE:HG21	1.97	0.45
48:DG:155:PRO:CA	48:DG:170:THR:HA	2.46	0.45
49:DR:14:VAL:HG22	49:DR:15:SER:H	1.80	0.45
52:DW:43:LYS:O	52:DW:58:LEU:HD11	2.15	0.45
1:AA:55:A:OP2	1:AA:352:C:N4	2.49	0.45
1:AA:469:C:O2'	1:AA:470:C:H5'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:736:C:H2'	1:AA:737:C:H6	1.77	0.45
1:AA:738:C:H2'	1:AA:739:C:H6	1.81	0.45
1:AA:1111:A:H2	2:AC:176:THR:HG23	1.81	0.45
2:AC:100:ILE:O	2:AC:100:ILE:HG23	2.16	0.45
3:AD:117:VAL:HA	3:AD:122:ILE:HG13	1.96	0.45
4:AE:56:PRO:HA	4:AE:59:ILE:HD12	1.98	0.45
4:AE:61:LYS:HG3	4:AE:62:ALA:N	2.31	0.45
7:AH:125:ILE:HG22	7:AH:126:CYS:SG	2.56	0.45
8:AI:16:ALA:HB2	8:AI:66:VAL:HG23	1.98	0.45
8:AI:113:LYS:HA	8:AI:120:ALA:HB2	1.97	0.45
8:AI:119:LYS:O	8:AI:121:ARG:N	2.49	0.45
16:AS:17:LYS:HD2	16:AS:30:LEU:CD2	2.43	0.45
18:AB:78:ALA:HB1	18:AB:213:LEU:HD13	1.98	0.45
18:AB:185:ILE:HG22	18:AB:185:ILE:O	2.15	0.45
21:AN:41:TRP:NE1	21:AN:43:ALA:HB3	2.32	0.45
21:AN:73:LEU:O	21:AN:77:GLY:N	2.49	0.45
21:AN:79:SER:OG	21:AN:82:LYS:HG2	2.15	0.45
23:BB:250:G:H2'	23:BB:251:A:C8	2.52	0.45
23:BB:494:G:O2'	23:BB:495:G:H5'	2.16	0.45
23:BB:710:U:H2'	23:BB:711:G:C8	2.51	0.45
23:BB:715:A:H2'	23:BB:716:A:O4'	2.16	0.45
23:BB:808:G:H2'	23:BB:809:G:O4'	2.16	0.45
23:BB:861:A:H2'	23:BB:862:G:O4'	2.16	0.45
23:BB:1841:U:H2'	23:BB:1842:G:C8	2.51	0.45
23:BB:2221:G:O2'	23:BB:2222:C:H5'	2.16	0.45
23:BB:2514:U:H2'	23:BB:2515:C:C6	2.52	0.45
23:BB:2700:A:H2'	23:BB:2701:U:H6	1.80	0.45
24:BI:52:LEU:HD21	24:BI:81:LYS:NZ	2.31	0.45
26:BD:89:GLU:HG3	26:BD:94:GLN:OE1	2.16	0.45
35:BV:80:HIS:HA	35:BV:87:GLN:OE1	2.16	0.45
37:BL:132:ARG:CA	37:BL:135:ILE:HG22	2.46	0.45
38:BM:32:GLY:HA3	38:BM:103:TYR:O	2.16	0.45
38:BM:41:LEU:O	38:BM:93:VAL:HA	2.16	0.45
39:BX:22:LEU:HG	39:BX:23:ARG:HG2	1.98	0.45
39:BX:39:GLN:HB3	39:BX:41:HIS:HE2	1.80	0.45
40:BH:6:LEU:O	40:BH:15:LEU:HD22	2.15	0.45
40:BH:14:SER:O	40:BH:15:LEU:C	2.59	0.45
40:BH:30:LEU:O	40:BH:35:LYS:HB2	2.15	0.45
42:BN:48:VAL:HG23	42:BN:49:GLU:N	2.32	0.45
43:BO:50:ALA:O	43:BO:51:ALA:HB2	2.17	0.45
45:BS:69:LEU:HD23	45:BS:107:VAL:HG21	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BR:76:LYS:HB2	49:BR:85:LYS:HB2	1.99	0.45
50:BT:50:LEU:O	50:BT:51:PHE:HB2	2.15	0.45
51:BZ:5:CYS:C	51:BZ:7:VAL:H	2.24	0.45
51:BZ:18:ARG:HA	51:BZ:24:ALA:HA	1.98	0.45
1:CA:764:C:O2'	1:CA:765:G:H5'	2.17	0.45
1:CA:1390:U:H2'	1:CA:1391:U:H6	1.81	0.45
10:CK:22:ILE:HD13	10:CK:95:THR:HG21	1.97	0.45
14:CQ:82:VAL:O	14:CQ:83:LEU:HD13	2.17	0.45
19:CU:20:ARG:H	19:CU:20:ARG:CD	2.30	0.45
2:CC:35:ASP:OD2	2:CC:56:ILE:HD12	2.16	0.45
8:CI:40:ARG:N	8:CI:44:ARG:HD3	2.32	0.45
8:CI:60:LEU:O	8:CI:60:LEU:HD12	2.16	0.45
12:CM:49:GLU:HA	12:CM:52:ILE:CG2	2.45	0.45
16:CS:49:ALA:HB1	16:CS:56:HIS:HB2	1.97	0.45
18:CB:76:SER:OG	18:CB:77:GLU:N	2.49	0.45
18:CB:169:HIS:HD2	18:CB:170:ILE:H	1.63	0.45
20:CO:64:ARG:NH2	20:CO:88:ARG:HD2	2.31	0.45
23:DB:291:G:O2'	23:DB:292:U:H5'	2.16	0.45
23:DB:451:U:C2	23:DB:453:A:N7	2.84	0.45
23:DB:622:G:O2'	23:DB:623:C:H5'	2.16	0.45
23:DB:1040:A:H2	23:DB:1115:G:H22	1.65	0.45
23:DB:1334:G:O2'	23:DB:1335:C:H5'	2.15	0.45
23:DB:1583:A:H4'	23:DB:1585:C:N3	2.31	0.45
23:DB:1688:U:O2	23:DB:1700:A:H5'	2.17	0.45
23:DB:1735:A:H2'	23:DB:1736:U:C6	2.51	0.45
23:DB:1863:G:H2'	23:DB:1864:U:O4'	2.15	0.45
23:DB:2271:G:H2'	23:DB:2272:U:C6	2.51	0.45
23:DB:2340:A:H2'	23:DB:2341:G:H8	1.81	0.45
23:DB:2708:G:O2'	23:DB:2709:G:H5'	2.17	0.45
24:DI:46:ASP:HA	24:DI:50:LYS:HE2	1.97	0.45
25:DC:149:LYS:HG2	25:DC:152:GLN:OE1	2.16	0.45
26:DD:34:VAL:HG13	26:DD:94:GLN:H	1.77	0.45
26:DD:130:GLN:HE21	26:DD:130:GLN:HB3	1.56	0.45
29:DE:37:ALA:O	29:DE:39:ALA:N	2.43	0.45
36:D2:18:PHE:CE1	36:D2:22:MET:HG3	2.51	0.45
38:DM:17:ASN:HD21	38:DM:95:LEU:CG	2.29	0.45
38:DM:17:ASN:HD21	38:DM:95:LEU:HG	1.80	0.45
40:DH:2:GLN:HB2	40:DH:39:ALA:HB2	1.97	0.45
41:DJ:26:GLY:C	41:DJ:28:LEU:N	2.74	0.45
41:DJ:84:ILE:O	41:DJ:84:ILE:HG23	2.15	0.45
42:DN:70:THR:HB	42:DN:75:ILE:HD11	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DQ:63:ARG:NH2	44:DQ:96:ASP:HA	2.32	0.45
45:DS:14:ALA:C	45:DS:16:LYS:N	2.73	0.45
47:DF:89:THR:O	47:DF:91:ARG:CZ	2.65	0.45
47:DF:89:THR:OG1	47:DF:91:ARG:NH2	2.49	0.45
47:DF:151:LEU:CD1	47:DF:153:ILE:HG13	2.46	0.45
47:DF:151:LEU:C	47:DF:151:LEU:HD12	2.41	0.45
48:DG:84:LYS:HG3	48:DG:131:VAL:CB	2.44	0.45
48:DG:143:VAL:O	48:DG:147:LEU:HG	2.17	0.45
50:DT:68:LYS:HD3	50:DT:68:LYS:N	2.31	0.45
1:AA:8:A:N6	3:AD:53:GLN:HE22	2.08	0.45
1:AA:332:G:H2'	1:AA:333:U:H6	1.81	0.45
1:AA:502:A:H2'	1:AA:503:C:H6	1.82	0.45
1:AA:533:A:H5"	56:AA:1892:HOH:O	2.16	0.45
1:AA:791:G:C6	1:AA:792:A:N7	2.85	0.45
1:AA:1236:A:H4'	1:AA:1304:G:H4'	1.98	0.45
1:AA:1270:G:H2'	1:AA:1271:A:C8	2.51	0.45
2:AC:182:ASP:O	2:AC:201:ILE:HB	2.17	0.45
3:AD:57:LYS:O	3:AD:61:ARG:HB2	2.17	0.45
11:AL:28:GLN:HE21	11:AL:28:GLN:HB3	1.53	0.45
13:AP:23:ASP:OD1	13:AP:25:ARG:HB2	2.17	0.45
17:AT:66:ILE:HG23	17:AT:70:LYS:HD3	1.98	0.45
18:AB:8:MET:HB2	18:AB:11:ALA:HB3	1.97	0.45
21:AN:67:GLY:O	21:AN:69:PRO:HD3	2.15	0.45
22:BA:29:A:H3'	22:BA:30:C:H6	1.81	0.45
22:BA:74:U:O2'	22:BA:75:G:H5'	2.16	0.45
23:BB:419:U:H2'	23:BB:420:C:H6	1.80	0.45
23:BB:680:C:H2'	23:BB:681:G:C8	2.51	0.45
23:BB:858:G:H21	23:BB:2268:A:C3'	2.26	0.45
23:BB:903:C:H2'	23:BB:904:G:C8	2.51	0.45
23:BB:1035:U:H2'	23:BB:1036:G:C8	2.43	0.45
23:BB:1176:U:H2'	23:BB:1177:G:O4'	2.17	0.45
23:BB:1295:C:H2'	23:BB:1296:G:H8	1.81	0.45
23:BB:1340:U:H5"	50:BT:61:LEU:CD2	2.46	0.45
23:BB:1370:C:H2'	23:BB:1371:G:O4'	2.16	0.45
23:BB:1428:C:H2'	23:BB:1569:A:OP2	2.16	0.45
23:BB:1764:C:O2'	23:BB:1765:U:H5'	2.17	0.45
23:BB:1919:A:H3'	23:BB:1920:C:H6	1.81	0.45
23:BB:2000:C:O2'	23:BB:2001:C:H5'	2.17	0.45
23:BB:2142:A:H2'	23:BB:2143:C:O4'	2.16	0.45
23:BB:2415:G:H2'	23:BB:2416:C:C6	2.51	0.45
23:BB:2448:A:H4'	23:BB:2449:U:OP2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2655:G:N2	23:BB:2664:G:H2'	2.31	0.45
23:BB:2708:G:O2'	23:BB:2709:G:H5'	2.17	0.45
23:BB:2881:U:O3'	42:BN:96:ARG:HG3	2.16	0.45
24:BI:29:GLN:HA	24:BI:29:GLN:NE2	2.31	0.45
29:BE:17:THR:HG22	29:BE:106:LYS:HE2	1.99	0.45
38:BM:29:GLY:CA	38:BM:106:ASP:HB2	2.47	0.45
39:BX:18:LEU:C	39:BX:18:LEU:HD13	2.42	0.45
42:BN:28:LEU:HD23	42:BN:34:ILE:HG13	1.98	0.45
43:BO:30:ARG:H	43:BO:97:PHE:HE2	1.62	0.45
48:BG:104:LEU:HB2	48:BG:112:VAL:HB	1.97	0.45
49:BR:2:TYR:CD1	49:BR:42:ALA:HB2	2.51	0.45
49:BR:38:VAL:HB	49:BR:59:ILE:HD11	1.99	0.45
51:BZ:70:GLU:O	51:BZ:71:LEU:C	2.57	0.45
1:CA:35:G:O2'	1:CA:36:C:H5'	2.16	0.45
1:CA:510:A:N3	1:CA:543:U:H1'	2.31	0.45
1:CA:730:G:O2'	1:CA:766:A:H5'	2.15	0.45
1:CA:1122:U:H2'	1:CA:1123:U:H6	1.80	0.45
1:CA:1218:C:H2'	1:CA:1219:A:H8	1.79	0.45
1:CA:1492:A:H61	1:CA:1494:G:H1'	1.82	0.45
3:CD:54:LEU:CD1	3:CD:55:ARG:HH21	2.30	0.45
3:CD:144:ILE:HD13	3:CD:154:VAL:HG11	1.98	0.45
4:CE:114:LEU:HD13	4:CE:122:VAL:HG21	1.98	0.45
5:CF:17:GLN:HE21	5:CF:17:GLN:HB3	1.59	0.45
5:CF:64:VAL:HG12	5:CF:65:GLU:N	2.32	0.45
6:CG:26:VAL:HA	6:CG:42:VAL:HG21	1.98	0.45
8:CI:85:ALA:O	8:CI:88:GLU:HG2	2.16	0.45
22:DA:9:G:P	43:DO:25:ARG:HH12	2.39	0.45
23:DB:557:C:H2'	23:DB:558:U:H6	1.81	0.45
23:DB:740:C:O2'	23:DB:741:U:H5'	2.17	0.45
23:DB:1064:C:H2'	23:DB:1065:U:O4'	2.16	0.45
23:DB:2032:G:N2	26:DD:150:GLN:HB3	2.31	0.45
23:DB:2282:G:H4'	23:DB:2283:C:O5'	2.16	0.45
23:DB:2581:G:H2'	23:DB:2581:G:N3	2.30	0.45
27:DK:67:LYS:HD3	27:DK:67:LYS:C	2.40	0.45
28:DP:47:ILE:HG13	28:DP:48:ALA:H	1.82	0.45
29:DE:15:SER:HB3	29:DE:18:THR:OG1	2.16	0.45
29:DE:133:LEU:C	29:DE:135:ALA:H	2.25	0.45
31:D0:42:ILE:HG22	31:D0:43:THR:O	2.17	0.45
34:D3:30:HIS:HD2	34:D3:31:ILE:H	1.65	0.45
36:D2:9:VAL:CG1	36:D2:10:LEU:N	2.76	0.45
38:DM:101:VAL:O	38:DM:101:VAL:HG22	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DJ:93:ILE:CA	41:DJ:97:PRO:HG3	2.45	0.45
42:DN:48:VAL:HG23	42:DN:49:GLU:N	2.32	0.45
42:DN:55:ALA:HA	42:DN:80:PHE:CE1	2.50	0.45
42:DN:108:ALA:C	42:DN:110:MET:HE2	2.41	0.45
44:DQ:7:VAL:HG23	44:DQ:8:ILE:N	2.31	0.45
50:DT:31:VAL:C	50:DT:32:LEU:HD23	2.42	0.45
51:DZ:27:ARG:O	51:DZ:28:ARG:HB3	2.15	0.45
1:AA:51:A:H4'	1:AA:52:C:OP2	2.15	0.45
1:AA:309:A:O2'	1:AA:310:G:H5'	2.16	0.45
1:AA:473:U:OP1	13:AP:76:LYS:HE2	2.15	0.45
1:AA:486:U:H2'	1:AA:487:A:H8	1.81	0.45
1:AA:761:G:H2'	1:AA:762:U:C6	2.52	0.45
1:AA:981:U:O3'	21:AN:60:ARG:HD3	2.16	0.45
1:AA:1316:G:H22	1:AA:1318:A:H3'	1.79	0.45
2:AC:63:ILE:HB	2:AC:98:ALA:CB	2.46	0.45
4:AE:152:VAL:O	4:AE:156:ARG:HG2	2.16	0.45
8:AI:123:ARG:HH11	8:AI:123:ARG:CB	2.25	0.45
11:AL:13:ARG:HB2	11:AL:14:LYS:H	1.50	0.45
11:AL:106:VAL:HA	11:AL:107:LYS:HZ3	1.80	0.45
14:AQ:30:HIS:CG	14:AQ:33:TYR:HB2	2.51	0.45
16:AS:33:TRP:CD2	16:AS:33:TRP:N	2.83	0.45
18:AB:83:ALA:HA	18:AB:88:GLN:HE21	1.80	0.45
21:AN:26:LEU:O	21:AN:29:ILE:HB	2.16	0.45
22:BA:49:C:OP1	43:BO:101:GLY:HA3	2.17	0.45
23:BB:341:C:H2'	23:BB:342:A:H8	1.81	0.45
23:BB:359:G:C2'	23:BB:360:U:H5'	2.47	0.45
23:BB:464:U:H2'	23:BB:465:G:O4'	2.15	0.45
23:BB:944:C:H5'	23:BB:945:A:C5'	2.46	0.45
23:BB:945:A:H3'	23:BB:946:C:H5"	1.98	0.45
23:BB:1183:U:H2'	23:BB:1184:U:C6	2.50	0.45
23:BB:1212:G:H1'	23:BB:1236:G:N2	2.32	0.45
23:BB:1238:G:O2'	23:BB:1239:G:H5'	2.17	0.45
23:BB:1316:U:H2'	23:BB:1317:G:H8	1.81	0.45
23:BB:1864:U:O2'	23:BB:1865:U:H5'	2.16	0.45
23:BB:2330:G:H1'	52:BW:38:ARG:HB2	1.97	0.45
23:BB:2581:G:C8	23:BB:2610:C:N4	2.85	0.45
23:BB:2822:G:H2'	23:BB:2823:A:H5"	1.97	0.45
25:BC:5:CYS:HB2	25:BC:15:VAL:O	2.17	0.45
25:BC:103:ILE:HG22	25:BC:104:LEU:N	2.30	0.45
25:BC:201:LEU:O	25:BC:202:ARG:O	2.34	0.45
30:BY:47:ILE:HG21	30:BY:56:VAL:CG2	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BV:35:GLU:HB3	35:BV:93:ARG:CZ	2.47	0.45
35:BV:63:ILE:HB	35:BV:70:ILE:HG12	1.98	0.45
47:BF:108:PRO:C	47:BF:110:ILE:N	2.74	0.45
48:BG:156:TYR:O	48:BG:157:LYS:HB2	2.16	0.45
1:CA:286:C:H2'	1:CA:287:U:H6	1.81	0.45
1:CA:386:C:O2'	1:CA:387:U:H5'	2.16	0.45
1:CA:647:C:H2'	1:CA:648:A:H8	1.81	0.45
1:CA:884:U:H4'	1:CA:885:G:H5"	1.99	0.45
1:CA:976:G:N2	1:CA:1363:A:C2	2.81	0.45
1:CA:989:U:C2'	1:CA:990:C:H5'	2.46	0.45
1:CA:1001:C:H2'	1:CA:1002:G:C8	2.51	0.45
1:CA:1320:C:H1'	16:CS:72:GLU:HB3	1.99	0.45
5:CF:85:ILE:HG22	5:CF:86:ARG:N	2.31	0.45
14:CQ:47:ASP:C	14:CQ:49:ASN:H	2.24	0.45
19:CU:48:LYS:HG3	19:CU:49:ALA:N	2.28	0.45
8:CI:11:ARG:HH22	8:CI:108:ARG:HB2	1.80	0.45
8:CI:35:GLU:HA	8:CI:39:GLY:HA2	1.97	0.45
9:CJ:59:LYS:C	9:CJ:61:ALA:H	2.25	0.45
12:CM:36:ALA:HB2	12:CM:58:GLU:OE1	2.16	0.45
18:CB:161:PHE:HD2	18:CB:183:PHE:HB2	1.80	0.45
20:CO:84:ARG:C	20:CO:85:LEU:HD12	2.41	0.45
23:DB:101:A:C2'	23:DB:102:U:H5"	2.46	0.45
23:DB:1055:G:H2'	23:DB:1056:G:O4'	2.17	0.45
23:DB:1183:U:H2'	23:DB:1184:U:C6	2.51	0.45
23:DB:1745:A:H2'	23:DB:1746:A:O4'	2.17	0.45
23:DB:1820:U:H3	25:DC:197:ALA:HA	1.82	0.45
23:DB:1902:C:H2'	23:DB:1903:G:O4'	2.17	0.45
23:DB:2379:G:C5'	43:DO:21:LEU:HD11	2.47	0.45
23:DB:2699:C:H2'	23:DB:2700:A:H8	1.81	0.45
23:DB:2722:G:H2'	23:DB:2723:C:H6	1.81	0.45
23:DB:2742:G:H2'	23:DB:2743:U:H6	1.80	0.45
24:DI:10:LEU:HD12	24:DI:10:LEU:C	2.41	0.45
24:DI:91:LYS:N	24:DI:91:LYS:HD2	2.31	0.45
27:DK:41:ILE:HG13	27:DK:42:THR:N	2.31	0.45
27:DK:68:GLY:CA	27:DK:78:ARG:HB3	2.47	0.45
27:DK:79:PHE:HD2	28:DP:69:VAL:HG12	1.82	0.45
28:DP:4:ILE:C	28:DP:6:GLN:N	2.75	0.45
28:DP:53:GLY:O	28:DP:54:LEU:C	2.60	0.45
29:DE:112:LEU:HD11	29:DE:180:LEU:HB3	1.98	0.45
29:DE:161:ALA:HA	29:DE:164:LEU:HB2	1.99	0.45
37:DL:69:ARG:HE	37:DL:69:ARG:HA	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DM:71:LYS:O	38:DM:92:TRP:HA	2.15	0.45
38:DM:114:ARG:HG3	38:DM:130:PHE:CD1	2.51	0.45
39:DX:10:SER:O	39:DX:11:VAL:C	2.60	0.45
40:DH:124:THR:O	40:DH:128:HIS:HE1	1.98	0.45
44:DQ:75:TYR:O	44:DQ:79:ILE:HG22	2.17	0.45
47:DF:11:VAL:HG21	47:DF:172:PHE:CE1	2.52	0.45
47:DF:110:ILE:HG22	47:DF:113:PHE:HB3	1.99	0.45
48:DG:123:GLU:O	48:DG:125:PRO:HD3	2.16	0.45
49:DR:75:VAL:O	49:DR:76:LYS:HG3	2.16	0.45
49:DR:82:HIS:O	49:DR:83:TYR:C	2.58	0.45
1:AA:47:C:H4'	1:AA:48:C:O5'	2.16	0.45
1:AA:126:G:C4'	1:AA:634:C:H1'	2.47	0.45
1:AA:564:C:N1	14:AQ:32:ILE:HD11	2.31	0.45
1:AA:1026:G:H8	1:AA:1026:G:O5'	2.00	0.45
1:AA:1060:U:H2'	1:AA:1061:G:H8	1.80	0.45
1:AA:1113:C:H2'	1:AA:1114:C:H6	1.82	0.45
1:AA:1207:G:H2'	1:AA:1208:C:H6	1.82	0.45
1:AA:1306:A:N6	1:AA:1331:G:H1'	2.32	0.45
1:AA:1409:C:N3	1:AA:1492:A:C2	2.83	0.45
1:AA:1409:C:H2'	1:AA:1409:C:O2	2.16	0.45
1:AA:1448:C:O2'	1:AA:1449:C:H5'	2.16	0.45
2:AC:10:ARG:HG3	2:AC:10:ARG:HH11	1.81	0.45
2:AC:26:LYS:HG3	2:AC:27:GLU:HG3	1.98	0.45
3:AD:24:VAL:HG12	3:AD:160:LEU:HB3	1.98	0.45
3:AD:138:PRO:HA	3:AD:181:PHE:CD2	2.52	0.45
6:AG:50:ALA:HB2	6:AG:57:GLU:CB	2.46	0.45
6:AG:53:SER:C	6:AG:55:LYS:N	2.74	0.45
9:AJ:67:ILE:HG23	21:AN:94:GLY:O	2.17	0.45
12:AM:11:HIS:HA	12:AM:43:LYS:HD3	1.98	0.45
14:AQ:55:GLY:O	14:AQ:81:ALA:HB2	2.16	0.45
18:AB:65:LYS:HZ3	18:AB:89:PHE:HE1	1.64	0.45
21:AN:44:VAL:O	21:AN:48:GLN:HB3	2.17	0.45
23:BB:182:A:H2'	23:BB:183:C:H6	1.81	0.45
23:BB:662:G:O3'	37:BL:16:GLY:HA2	2.17	0.45
23:BB:728:G:O2'	23:BB:730:A:H8	1.99	0.45
23:BB:863:A:O2'	23:BB:864:G:H5'	2.17	0.45
23:BB:878:A:N3	23:BB:878:A:C2'	2.78	0.45
23:BB:1179:G:H2'	23:BB:1180:U:O4'	2.16	0.45
23:BB:1383:A:H2	23:BB:1405:U:O2	1.99	0.45
23:BB:1454:C:C5	42:BN:64:ARG:HG2	2.52	0.45
23:BB:1537:G:N3	23:BB:1537:G:H5"	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1664:A:H1'	23:BB:2726:A:N1	2.32	0.45
23:BB:1788:C:H2'	23:BB:1789:A:H8	1.80	0.45
23:BB:2037:A:H2'	23:BB:2038:G:H8	1.82	0.45
23:BB:2484:G:O2'	23:BB:2485:G:H5'	2.17	0.45
25:BC:14:HIS:O	25:BC:16:VAL:HG23	2.17	0.45
25:BC:226:PRO:HA	25:BC:232:GLY:HA3	1.99	0.45
27:BK:67:LYS:HD3	27:BK:67:LYS:C	2.41	0.45
28:BP:6:GLN:HA	28:BP:9:GLN:CD	2.41	0.45
28:BP:21:PRO:CG	28:BP:91:VAL:HG21	2.37	0.45
28:BP:89:GLY:H	28:BP:112:ARG:NH1	2.14	0.45
29:BE:58:LYS:N	29:BE:58:LYS:HD3	2.32	0.45
29:BE:98:LYS:HE3	29:BE:99:LYS:HG2	1.98	0.45
31:B0:27:LEU:HD21	45:BS:38:TYR:CE1	2.51	0.45
32:B4:1:MET:HE3	32:B4:34:LYS:CG	2.47	0.45
35:BV:14:LYS:O	35:BV:18:ARG:HB2	2.17	0.45
35:BV:65:VAL:O	35:BV:67:GLY:N	2.47	0.45
36:B2:22:MET:HG2	36:B2:31:LEU:HD12	1.99	0.45
37:BL:68:SER:CB	37:BL:71:ALA:HB3	2.45	0.45
42:BN:82:GLU:C	42:BN:84:GLY:N	2.74	0.45
42:BN:101:GLY:CA	42:BN:109:PRO:HA	2.44	0.45
46:BU:35:VAL:HB	46:BU:38:ILE:HG21	1.99	0.45
49:BR:75:VAL:O	49:BR:76:LYS:HG3	2.17	0.45
52:BW:30:VAL:HA	52:BW:60:ALA:O	2.16	0.45
1:CA:45:G:H2'	1:CA:46:G:C8	2.52	0.45
1:CA:168:G:O2'	1:CA:169:C:H5'	2.16	0.45
1:CA:178:C:H2'	1:CA:179:A:H8	1.81	0.45
1:CA:976:G:N1	1:CA:1362:A:H3'	2.32	0.45
1:CA:989:U:O2'	1:CA:990:C:H5'	2.16	0.45
1:CA:1010:U:O2'	1:CA:1011:C:H5'	2.17	0.45
1:CA:1128:C:H1'	1:CA:1148:U:O4	2.15	0.45
1:CA:1249:C:H2'	1:CA:1250:A:H5'	1.97	0.45
13:CP:67:ILE:CG1	13:CP:72:ALA:HB2	2.44	0.45
2:CC:72:PRO:C	2:CC:76:ILE:HG12	2.41	0.45
2:CC:106:ARG:HD3	2:CC:107:LYS:NZ	2.31	0.45
6:CG:19:SER:HB3	6:CG:22:LEU:CB	2.40	0.45
8:CI:30:ASN:O	8:CI:31:GLN:HB2	2.17	0.45
8:CI:51:LEU:C	8:CI:53:LEU:N	2.74	0.45
8:CI:90:ASP:C	8:CI:92:SER:N	2.75	0.45
12:CM:65:GLU:OE2	12:CM:65:GLU:N	2.49	0.45
18:CB:26:MET:HE2	18:CB:187:ASP:CA	2.47	0.45
18:CB:64:GLY:C	18:CB:87:ASP:O	2.60	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CB:116:LEU:C	18:CB:118:THR:N	2.73	0.45
18:CB:151:LYS:HG3	18:CB:152:ASP:H	1.80	0.45
18:CB:169:HIS:HA	18:CB:172:ILE:CD1	2.46	0.45
20:CO:10:LYS:HG3	20:CO:11:ILE:N	2.32	0.45
22:DA:94:A:H2'	22:DA:95:U:O4'	2.16	0.45
23:DB:55:G:H2'	23:DB:56:A:H8	1.82	0.45
23:DB:483:A:H2'	23:DB:484:C:O4'	2.17	0.45
23:DB:552:U:O2'	23:DB:553:G:H5'	2.17	0.45
23:DB:588:U:H1'	29:DE:85:PHE:CD2	2.51	0.45
23:DB:1169:A:H2'	23:DB:1170:C:C6	2.51	0.45
23:DB:1172:C:H2'	23:DB:1173:U:O4'	2.17	0.45
23:DB:1228:G:H2'	23:DB:1229:C:C6	2.52	0.45
23:DB:1418:G:H1'	23:DB:1580:A:H61	1.82	0.45
23:DB:1535:A:O2'	23:DB:1536:C:H5'	2.16	0.45
23:DB:1538:G:O2'	23:DB:1539:U:H5'	2.17	0.45
23:DB:1654:A:H2'	23:DB:1655:A:C8	2.51	0.45
23:DB:1745:A:H2'	23:DB:1746:A:H8	1.80	0.45
23:DB:1827:U:O2'	23:DB:1828:G:H5'	2.16	0.45
23:DB:2527:C:H2'	23:DB:2528:U:H6	1.81	0.45
23:DB:2533:U:H2'	23:DB:2534:A:O4'	2.15	0.45
23:DB:2732:G:H5'	23:DB:2733:A:O4'	2.16	0.45
25:DC:36:ASN:HD22	25:DC:59:GLN:C	2.24	0.45
25:DC:183:VAL:HG22	25:DC:184:GLU:N	2.31	0.45
25:DC:184:GLU:O	25:DC:186:ASP:N	2.42	0.45
25:DC:270:ARG:HB3	25:DC:270:ARG:HH11	1.82	0.45
27:DK:18:ARG:HB2	27:DK:45:GLU:HG2	1.97	0.45
27:DK:19:VAL:CG1	27:DK:41:ILE:HG12	2.42	0.45
27:DK:71:ARG:NE	27:DK:72:PRO:HD3	2.30	0.45
27:DK:79:PHE:CD1	27:DK:79:PHE:N	2.84	0.45
27:DK:108:ARG:NH1	28:DP:34:GLY:HA2	2.32	0.45
28:DP:62:LYS:HB3	28:DP:69:VAL:HG22	1.99	0.45
28:DP:74:GLN:O	28:DP:75:THR:C	2.59	0.45
29:DE:16:GLU:O	29:DE:20:GLY:HA3	2.17	0.45
34:D3:40:LYS:O	34:D3:43:LEU:N	2.47	0.45
35:DV:2:PHE:HD1	35:DV:50:MET:HE2	1.82	0.45
40:DH:30:LEU:O	40:DH:35:LYS:HB2	2.15	0.45
40:DH:133:GLN:HG2	40:DH:139:PHE:HB3	1.98	0.45
41:DJ:44:TYR:HB2	44:DQ:63:ARG:HG2	1.97	0.45
42:DN:24:MET:CG	42:DN:44:LEU:HD22	2.46	0.45
42:DN:96:ARG:HD3	42:DN:96:ARG:N	2.31	0.45
44:DQ:30:VAL:HG11	44:DQ:33:VAL:HG22	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:31:GLU:HB3	47:DF:157:THR:HA	1.98	0.45
47:DF:121:PHE:CE1	47:DF:162:ASP:HB2	2.51	0.45
1:AA:197:A:H4'	1:AA:198:G:O5'	2.17	0.45
1:AA:410:G:H1'	1:AA:432:A:H61	1.82	0.45
1:AA:410:G:H8	1:AA:410:G:O5'	1.99	0.45
1:AA:424:G:O2'	1:AA:425:G:H5'	2.16	0.45
1:AA:640:A:O2'	1:AA:641:U:H5'	2.17	0.45
1:AA:981:U:H2'	1:AA:982:U:C5	2.52	0.45
1:AA:986:U:H2'	1:AA:987:G:O4'	2.17	0.45
1:AA:1130:A:N6	1:AA:1143:G:N2	2.64	0.45
1:AA:1307:U:H2'	1:AA:1308:U:H6	1.81	0.45
2:AC:60:ALA:C	2:AC:62:SER:H	2.23	0.45
2:AC:131:ARG:HB3	2:AC:135:ARG:NH2	2.32	0.45
6:AG:129:ASN:C	6:AG:134:VAL:HG21	2.42	0.45
7:AH:118:ALA:HB3	7:AH:120:LEU:HD22	1.99	0.45
8:AI:33:SER:HB3	8:AI:36:GLN:HB2	1.99	0.45
8:AI:56:MET:C	8:AI:58:GLU:N	2.75	0.45
8:AI:112:ARG:NH2	8:AI:114:LYS:HA	2.32	0.45
8:AI:123:ARG:HB2	8:AI:123:ARG:NH1	2.24	0.45
10:AK:125:LYS:O	19:AU:33:ARG:NH1	2.50	0.45
11:AL:28:GLN:HB2	11:AL:80:LEU:HG	1.99	0.45
11:AL:36:VAL:O	11:AL:36:VAL:HG23	2.16	0.45
13:AP:72:ALA:HA	13:AP:75:ILE:HD12	1.97	0.45
15:AR:52:ARG:O	15:AR:56:ARG:HG3	2.17	0.45
17:AT:78:LEU:O	17:AT:82:ILE:HG23	2.17	0.45
22:BA:9:G:O2'	22:BA:10:G:H5'	2.17	0.45
23:BB:68:G:H2'	23:BB:69:C:C6	2.52	0.45
23:BB:919:U:O5'	23:BB:919:U:H6	1.99	0.45
23:BB:1105:U:H2'	23:BB:1106:G:C8	2.52	0.45
23:BB:1241:A:N3	23:BB:1241:A:O4'	2.49	0.45
23:BB:2032:G:N2	26:BD:150:GLN:HB3	2.32	0.45
23:BB:2897:U:H2'	23:BB:2898:U:C6	2.51	0.45
27:BK:72:PRO:O	27:BK:74:GLY:N	2.50	0.45
27:BK:93:GLN:HB3	27:BK:94:PRO:HD2	1.98	0.45
28:BP:4:ILE:C	28:BP:6:GLN:N	2.74	0.45
28:BP:109:ILE:O	28:BP:109:ILE:HG13	2.17	0.45
31:B0:39:ARG:O	31:B0:40:HIS:HB2	2.17	0.45
33:B1:32:LYS:NZ	33:B1:52:LYS:HG2	2.32	0.45
34:B3:56:LEU:O	34:B3:59:ALA:HB3	2.15	0.45
37:BL:132:ARG:O	37:BL:136:GLU:HB2	2.16	0.45
38:BM:33:LEU:HD22	38:BM:128:THR:CB	2.43	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BM:38:ARG:HG2	38:BM:98:PRO:HD3	1.99	0.45
40:BH:6:LEU:HD12	40:BH:6:LEU:N	2.32	0.45
41:BJ:26:GLY:C	41:BJ:28:LEU:N	2.75	0.45
41:BJ:102:GLU:HA	41:BJ:105:VAL:HG22	1.98	0.45
42:BN:59:SER:C	42:BN:61:ALA:H	2.25	0.45
43:BO:106:LEU:HG	43:BO:107:ALA:N	2.30	0.45
47:BF:1:ALA:N	47:BF:2:LYS:HE2	2.31	0.45
47:BF:11:VAL:HG21	47:BF:172:PHE:CE1	2.52	0.45
47:BF:51:ASN:C	47:BF:53:ALA:N	2.74	0.45
47:BF:127:TYR:CE2	47:BF:176:PHE:HE2	2.35	0.45
48:BG:17:LYS:O	48:BG:23:ILE:HG23	2.16	0.45
49:BR:31:GLU:H	49:BR:63:VAL:CG2	2.30	0.45
50:BT:30:ILE:O	50:BT:85:VAL:HG23	2.16	0.45
50:BT:32:LEU:N	50:BT:83:ALA:CB	2.79	0.45
50:BT:53:VAL:CG1	50:BT:87:LEU:HB3	2.46	0.45
1:CA:144:G:H2'	1:CA:145:G:O4'	2.17	0.45
1:CA:337:G:O2'	1:CA:338:A:H5'	2.17	0.45
1:CA:764:C:N4	1:CA:812:G:H1	2.15	0.45
1:CA:1001:C:H2'	1:CA:1002:G:H8	1.81	0.45
1:CA:1015:G:H2'	1:CA:1016:A:H8	1.82	0.45
1:CA:1486:G:H2'	1:CA:1487:G:C8	2.51	0.45
3:CD:155:LYS:HA	3:CD:158:LEU:HD12	1.98	0.45
2:CC:38:VAL:O	2:CC:41:TYR:HB3	2.17	0.45
2:CC:100:ILE:O	2:CC:100:ILE:HG23	2.17	0.45
2:CC:172:VAL:HG12	2:CC:174:LEU:CD1	2.47	0.45
9:CJ:65:TYR:C	21:CN:98:ALA:HB2	2.41	0.45
18:CB:103:TRP:CZ3	18:CB:107:ARG:HB3	2.52	0.45
18:CB:116:LEU:HD23	18:CB:119:GLN:CG	2.46	0.45
18:CB:214:GLY:C	18:CB:216:VAL:N	2.73	0.45
23:DB:172:A:H2'	23:DB:173:A:C8	2.51	0.45
23:DB:360:U:H2'	23:DB:361:G:N9	2.31	0.45
23:DB:988:A:OP1	30:DY:11:SER:HB3	2.16	0.45
23:DB:1117:C:H2'	23:DB:1118:C:C6	2.52	0.45
23:DB:1169:A:H2'	23:DB:1170:C:H6	1.82	0.45
23:DB:1322:A:C2'	23:DB:1323:C:H5'	2.47	0.45
23:DB:1461:C:O2'	23:DB:1462:C:H5'	2.16	0.45
23:DB:1684:G:H2'	23:DB:1685:C:H6	1.81	0.45
23:DB:1719:G:O2'	23:DB:1720:U:H5'	2.17	0.45
23:DB:1867:G:O2'	23:DB:1868:C:H5'	2.16	0.45
23:DB:1951:U:O2	23:DB:1953:A:H3'	2.17	0.45
23:DB:2201:G:H2'	23:DB:2202:U:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2361:G:O2'	23:DB:2362:C:H5'	2.17	0.45
23:DB:2448:A:H4'	23:DB:2449:U:OP2	2.16	0.45
23:DB:2599:G:O2'	23:DB:2600:A:H5'	2.16	0.45
23:DB:2721:A:H2'	23:DB:2722:G:C8	2.51	0.45
24:DI:2:LYS:HB3	24:DI:2:LYS:HZ2	1.82	0.45
24:DI:45:THR:HA	24:DI:48:ILE:CG2	2.40	0.45
24:DI:80:LYS:HG3	24:DI:135:MET:HE1	1.98	0.45
24:DI:90:GLY:C	24:DI:91:LYS:HD2	2.41	0.45
25:DC:63:ILE:HD13	25:DC:63:ILE:HA	1.84	0.45
25:DC:93:VAL:HG13	25:DC:101:ARG:H	1.80	0.45
25:DC:226:PRO:HA	25:DC:232:GLY:HA3	1.98	0.45
26:DD:8:LYS:HB2	26:DD:201:LEU:HD21	1.99	0.45
26:DD:56:LYS:C	26:DD:58:ASN:N	2.74	0.45
26:DD:68:PHE:CB	26:DD:73:VAL:HG23	2.47	0.45
26:DD:92:VAL:O	26:DD:94:GLN:N	2.50	0.45
27:DK:51:LYS:O	27:DK:52:VAL:HG13	2.16	0.45
29:DE:17:THR:HG22	29:DE:106:LYS:HE2	1.98	0.45
31:D0:16:ARG:HA	31:D0:19:ASP:HB2	1.98	0.45
31:D0:47:TYR:N	31:D0:47:TYR:CD1	2.85	0.45
34:D3:50:SER:C	34:D3:52:GLY:N	2.74	0.45
40:DH:50:ARG:C	40:DH:52:ALA:N	2.74	0.45
41:DJ:3:THR:HB	41:DJ:44:TYR:CE1	2.52	0.45
42:DN:82:GLU:C	42:DN:84:GLY:H	2.25	0.45
44:DQ:9:ALA:O	44:DQ:11:ALA:N	2.49	0.45
44:DQ:71:ASN:HD22	44:DQ:109:VAL:HG21	1.81	0.45
45:DS:3:THR:HB	45:DS:62:ASP:CB	2.47	0.45
46:DU:86:PHE:CE1	46:DU:88:ASP:HB2	2.51	0.45
47:DF:41:GLU:O	47:DF:43:ILE:N	2.49	0.45
47:DF:42:ALA:O	47:DF:46:LYS:HG3	2.16	0.45
47:DF:104:THR:C	47:DF:108:PRO:HG2	2.41	0.45
48:DG:77:GLY:HA3	48:DG:135:ALA:O	2.16	0.45
49:DR:74:ILE:HB	49:DR:87:GLN:O	2.16	0.45
51:DZ:77:LYS:O	51:DZ:78:TYR:HB3	2.15	0.45
52:DW:24:ARG:CD	52:DW:65:LYS:HG2	2.47	0.45
52:DW:76:ARG:HA	52:DW:76:ARG:HH21	1.79	0.45
1:AA:114:U:O2'	1:AA:115:G:H5'	2.17	0.45
1:AA:728:A:H2'	1:AA:729:A:C8	2.51	0.45
1:AA:1117:A:H4'	8:AI:105:ARG:HH12	1.82	0.45
1:AA:1203:C:H2'	1:AA:1204:A:H8	1.81	0.45
1:AA:1240:U:C3'	1:AA:1241:G:H5'	2.46	0.45
2:AC:139:ASN:HD22	2:AC:139:ASN:HA	1.55	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:142:ARG:C	2:AC:144:GLY:H	2.24	0.45
2:AC:185:THR:HB	2:AC:197:VAL:O	2.17	0.45
3:AD:35:GLN:O	3:AD:37:PRO:HD3	2.16	0.45
5:AF:38:ARG:O	5:AF:62:MET:O	2.35	0.45
6:AG:14:ASP:OD1	6:AG:17:PHE:HB2	2.17	0.45
6:AG:68:VAL:HA	6:AG:137:ARG:HG3	1.97	0.45
6:AG:103:ILE:HG21	6:AG:123:LEU:HD23	1.98	0.45
9:AJ:59:LYS:C	9:AJ:61:ALA:H	2.24	0.45
11:AL:17:LYS:HE3	11:AL:17:LYS:H	1.82	0.45
12:AM:86:ARG:HE	12:AM:86:ARG:HB3	1.56	0.45
14:AQ:8:GLN:HA	14:AQ:58:VAL:O	2.17	0.45
14:AQ:47:ASP:C	14:AQ:49:ASN:H	2.23	0.45
16:AS:14:LEU:HD13	16:AS:34:SER:OG	2.17	0.45
19:AU:13:VAL:O	19:AU:13:VAL:HG13	2.17	0.45
21:AN:14:ALA:HB1	21:AN:18:LYS:HE3	1.98	0.45
23:BB:264:C:H2'	23:BB:265:A:C5'	2.45	0.45
23:BB:302:C:H2'	23:BB:303:G:C8	2.50	0.45
23:BB:327:G:N2	46:BU:67:SER:HB2	2.31	0.45
23:BB:632:A:H1'	37:BL:66:PHE:HE2	1.82	0.45
23:BB:738:G:H2'	23:BB:739:A:C8	2.52	0.45
23:BB:875:G:H2'	23:BB:876:C:O2	2.17	0.45
23:BB:1064:C:H2'	23:BB:1065:U:O4'	2.17	0.45
23:BB:1952:A:OP1	27:BK:42:THR:HG21	2.16	0.45
23:BB:2266:A:H4'	23:BB:2267:A:O5'	2.17	0.45
23:BB:2331:G:O2'	23:BB:2332:C:H5'	2.16	0.45
23:BB:2521:C:H2'	23:BB:2522:U:C6	2.52	0.45
23:BB:2527:C:O2'	23:BB:2528:U:H5'	2.16	0.45
23:BB:2867:G:N3	23:BB:2867:G:C2'	2.78	0.45
24:BI:116:MET:SD	24:BI:124:MET:HB2	2.56	0.45
25:BC:69:ASN:O	25:BC:70:LYS:C	2.59	0.45
26:BD:35:THR:O	26:BD:71:ALA:HB1	2.17	0.45
26:BD:102:ALA:C	26:BD:104:VAL:H	2.24	0.45
28:BP:58:PHE:HD1	28:BP:73:PHE:HD2	1.65	0.45
29:BE:40:ARG:NH2	29:BE:92:HIS:NE2	2.65	0.45
30:BY:4:ILE:HG12	30:BY:38:GLU:O	2.17	0.45
31:B0:50:GLY:O	31:B0:51:ARG:C	2.60	0.45
41:BJ:44:TYR:HB2	44:BQ:63:ARG:HG2	1.97	0.45
42:BN:101:GLY:O	42:BN:102:PHE:HB2	2.16	0.45
44:BQ:60:TRP:HB3	44:BQ:92:LYS:O	2.17	0.45
47:BF:42:ALA:O	47:BF:46:LYS:HG3	2.17	0.45
47:BF:73:VAL:O	47:BF:74:ALA:HB2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:106:ALA:HA	47:BF:135:ILE:CD1	2.46	0.45
47:BF:134:GLN:HB3	47:BF:134:GLN:HE21	1.51	0.45
47:BF:147:ARG:O	47:BF:147:ARG:HD2	2.17	0.45
48:BG:15:ASP:O	48:BG:16:VAL:HB	2.16	0.45
48:BG:88:LEU:C	48:BG:88:LEU:HD12	2.42	0.45
48:BG:123:GLU:C	48:BG:125:PRO:HD3	2.42	0.45
1:CA:537:G:H2'	1:CA:538:G:C8	2.52	0.45
1:CA:761:G:H2'	1:CA:762:U:C6	2.52	0.45
1:CA:1157:A:H4'	1:CA:1158:C:O5'	2.17	0.45
3:CD:116:LEU:HD21	3:CD:153:ARG:HD3	1.97	0.45
3:CD:154:VAL:O	3:CD:157:ALA:HB3	2.16	0.45
3:CD:157:ALA:C	3:CD:159:GLU:N	2.73	0.45
4:CE:40:ASP:OD2	4:CE:42:ASN:HB3	2.17	0.45
4:CE:132:PRO:O	4:CE:133:ILE:C	2.60	0.45
7:CH:14:ARG:HE	7:CH:75:GLN:NE2	2.14	0.45
7:CH:82:LEU:HD13	7:CH:82:LEU:O	2.17	0.45
13:CP:19:VAL:H	13:CP:38:PHE:HA	1.81	0.45
14:CQ:8:GLN:HB3	14:CQ:59:GLU:HG3	1.98	0.45
17:CT:4:LYS:HE3	17:CT:6:ALA:HB2	1.98	0.45
6:CG:138:GLU:O	6:CG:139:ASP:C	2.60	0.45
12:CM:90:HIS:HA	12:CM:108:ARG:HH21	1.79	0.45
21:CN:70:HIS:O	21:CN:71:GLY:C	2.58	0.45
20:CO:7:ALA:C	20:CO:10:LYS:HB3	2.42	0.45
20:CO:8:THR:O	20:CO:11:ILE:HG13	2.16	0.45
20:CO:36:ILE:CD1	20:CO:59:MET:HG3	2.47	0.45
22:DA:17:C:O2'	22:DA:18:G:H5'	2.16	0.45
23:DB:233:A:N6	23:DB:428:A:H61	2.14	0.45
23:DB:241:A:OP1	23:DB:241:A:H8	2.00	0.45
23:DB:409:G:H2'	23:DB:410:G:H8	1.80	0.45
23:DB:625:G:O2'	23:DB:626:A:H5'	2.17	0.45
23:DB:802:A:H2'	23:DB:803:U:H6	1.79	0.45
23:DB:902:C:H2'	23:DB:903:C:C6	2.52	0.45
23:DB:915:C:H3'	23:DB:916:G:C8	2.50	0.45
23:DB:929:U:H1'	30:DY:25:GLY:O	2.17	0.45
23:DB:1312:U:O2	23:DB:1603:A:N1	2.50	0.45
23:DB:1435:G:H2'	23:DB:1436:G:H8	1.82	0.45
23:DB:1812:U:H4'	25:DC:44:ASN:OD1	2.16	0.45
23:DB:2223:G:C2'	23:DB:2224:G:H5'	2.47	0.45
23:DB:2236:U:O2'	23:DB:2237:G:H5'	2.17	0.45
23:DB:2336:A:H61	52:DW:40:ARG:CG	2.28	0.45
23:DB:2547:A:H2'	23:DB:2548:U:H6	1.79	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2720:U:H5"	28:DP:52:ARG:HH22	1.79	0.45
25:DC:142:ASN:O	25:DC:142:ASN:CG	2.59	0.45
28:DP:20:ARG:CG	28:DP:21:PRO:HD2	2.42	0.45
29:DE:114:ARG:HG3	29:DE:114:ARG:NH1	2.31	0.45
31:D0:28:SER:HB3	31:D0:37:HIS:HE1	1.81	0.45
33:D1:9:LYS:O	33:D1:50:GLU:HG3	2.17	0.45
34:D3:7:ARG:HG3	34:D3:7:ARG:NH1	2.32	0.45
35:DV:29:ILE:HG13	35:DV:88:HIS:CE1	2.52	0.45
36:D2:4:THR:O	36:D2:5:PHE:HB2	2.15	0.45
37:DL:116:VAL:HG13	37:DL:117:THR:N	2.19	0.45
37:DL:124:GLY:N	37:DL:143:GLU:CG	2.72	0.45
38:DM:105:MET:HB2	38:DM:117:PHE:CZ	2.47	0.45
40:DH:31:VAL:CB	40:DH:32:PRO:CD	2.88	0.45
40:DH:119:ASN:O	40:DH:121:VAL:HG22	2.16	0.45
41:DJ:37:ARG:HE	41:DJ:110:PRO:HG3	1.82	0.45
43:DO:14:ALA:C	43:DO:16:ARG:N	2.74	0.45
44:DQ:73:ILE:HG21	44:DQ:109:VAL:HG13	1.98	0.45
46:DU:11:ILE:HG21	46:DU:78:LYS:CE	2.46	0.45
46:DU:13:LEU:HD12	46:DU:13:LEU:N	2.31	0.45
47:DF:108:PRO:C	47:DF:110:ILE:N	2.74	0.45
47:DF:110:ILE:HA	47:DF:111:ARG:NH2	2.31	0.45
48:DG:16:VAL:HG11	48:DG:44:HIS:NE2	2.32	0.45
48:DG:40:VAL:HG13	48:DG:64:ALA:CB	2.46	0.45
49:DR:64:VAL:O	49:DR:65:ALA:HB3	2.17	0.45
1:AA:137:U:H2'	1:AA:138:G:C8	2.51	0.45
1:AA:473:U:H2'	1:AA:474:G:H8	1.81	0.45
1:AA:1049:U:H5"	1:AA:1201:A:OP2	2.17	0.45
1:AA:1191:A:H2'	1:AA:1192:C:C6	2.51	0.45
1:AA:1257:A:O4'	1:AA:1257:A:N3	2.49	0.45
1:AA:1270:G:H8	1:AA:1270:G:O5'	2.00	0.45
1:AA:1325:C:O2'	1:AA:1326:U:H5'	2.17	0.45
1:AA:1473:G:H2'	1:AA:1474:U:O4'	2.17	0.45
4:AE:45:VAL:O	4:AE:71:ILE:HG22	2.17	0.45
4:AE:56:PRO:O	4:AE:57:ALA:C	2.60	0.45
4:AE:114:LEU:HD13	4:AE:122:VAL:HG21	1.97	0.45
5:AF:53:LYS:N	5:AF:53:LYS:NZ	2.64	0.45
6:AG:12:LEU:HD22	6:AG:12:LEU:HA	1.88	0.45
6:AG:46:LEU:HG	6:AG:57:GLU:HB2	1.99	0.45
11:AL:82:ARG:NH2	11:AL:95:HIS:ND1	2.65	0.45
13:AP:72:ALA:HA	13:AP:75:ILE:CD1	2.46	0.45
15:AR:37:LYS:H	15:AR:37:LYS:HG2	1.61	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AR:70:THR:HB	15:AR:72:ARG:NH1	2.32	0.45
16:AS:18:VAL:HG13	16:AS:19:GLU:N	2.32	0.45
16:AS:43:MET:HE1	16:AS:70:LEU:HD11	1.97	0.45
18:AB:83:ALA:CB	18:AB:90:PHE:HB3	2.46	0.45
18:AB:101:THR:HG23	18:AB:102:ASN:N	2.32	0.45
18:AB:163:ILE:CG2	18:AB:164:ASP:H	2.25	0.45
20:AO:34:ALA:HB3	20:AO:35:GLN:OE1	2.16	0.45
22:BA:96:G:O2'	22:BA:97:C:H5'	2.15	0.45
23:BB:121:G:H1'	23:BB:148:U:N3	2.31	0.45
23:BB:383:C:N3	23:BB:391:A:N6	2.65	0.45
23:BB:596:U:O2'	23:BB:597:G:H5'	2.17	0.45
23:BB:657:U:H2'	23:BB:658:U:C6	2.52	0.45
23:BB:672:C:H2'	23:BB:673:C:C6	2.51	0.45
23:BB:735:A:N7	23:BB:761:A:H2	2.15	0.45
23:BB:811:U:O2	23:BB:1250:G:H2'	2.17	0.45
23:BB:838:C:O2'	23:BB:839:U:H5'	2.17	0.45
23:BB:1196:C:H2'	23:BB:1197:G:H8	1.79	0.45
23:BB:1219:U:H2'	23:BB:1220:G:H8	1.82	0.45
23:BB:1374:G:H2'	23:BB:1375:U:H6	1.82	0.45
23:BB:1439:A:N3	23:BB:1553:A:C6	2.85	0.45
23:BB:1469:A:H2'	23:BB:1470:A:H8	1.81	0.45
23:BB:1729:U:H5	23:BB:1731:G:H22	1.62	0.45
23:BB:1745:A:H2'	23:BB:1746:A:O4'	2.16	0.45
23:BB:2291:U:H2'	23:BB:2292:U:H6	1.81	0.45
23:BB:2511:U:H2'	23:BB:2512:C:C6	2.52	0.45
23:BB:2709:G:H2'	23:BB:2710:C:H6	1.82	0.45
23:BB:2732:G:H5'	23:BB:2733:A:O4'	2.16	0.45
23:BB:2888:C:H2'	23:BB:2889:C:H6	1.82	0.45
24:BI:107:GLU:HA	24:BI:110:GLN:OE1	2.17	0.45
26:BD:7:LYS:HG3	26:BD:198:GLY:O	2.16	0.45
26:BD:58:ASN:OD1	26:BD:59:ARG:HG3	2.16	0.45
26:BD:117:GLY:HA2	26:BD:164:GLN:HE22	1.82	0.45
26:BD:195:GLY:HA3	26:BD:199:SER:HB2	1.98	0.45
28:BP:62:LYS:HB3	28:BP:69:VAL:CG2	2.46	0.45
28:BP:74:GLN:O	28:BP:75:THR:C	2.60	0.45
29:BE:29:HIS:CD2	37:BL:8:PRO:HA	2.52	0.45
30:BY:16:LEU:O	30:BY:19:HIS:HB2	2.15	0.45
31:B0:41:HIS:HB2	42:BN:99:LYS:O	2.17	0.45
33:B1:34:GLU:CD	33:B1:49:LYS:HG3	2.41	0.45
37:BL:93:ASN:O	37:BL:95:LEU:HD12	2.17	0.45
38:BM:29:GLY:HA2	38:BM:106:ASP:HB2	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BX:10:SER:O	39:BX:11:VAL:C	2.59	0.45
39:BX:25:GLN:HB3	39:BX:25:GLN:HE21	1.54	0.45
41:BJ:42:ALA:O	41:BJ:44:TYR:N	2.50	0.45
42:BN:24:MET:CG	42:BN:44:LEU:HD22	2.47	0.45
42:BN:82:GLU:C	42:BN:84:GLY:H	2.25	0.45
47:BF:41:GLU:O	47:BF:43:ILE:N	2.50	0.45
47:BF:134:GLN:HB3	47:BF:149:ARG:HB3	1.99	0.45
48:BG:1:SER:H1	48:BG:61:TRP:HE3	1.63	0.45
48:BG:106:LEU:O	48:BG:108:PHE:HD1	1.99	0.45
48:BG:155:PRO:CA	48:BG:170:THR:HA	2.47	0.45
49:BR:41:ILE:HD13	49:BR:41:ILE:N	2.31	0.45
49:BR:58:VAL:HG13	49:BR:59:ILE:N	2.31	0.45
50:BT:18:GLU:O	50:BT:19:LYS:C	2.60	0.45
50:BT:74:ILE:HG13	50:BT:75:GLY:N	2.30	0.45
51:BZ:27:ARG:O	51:BZ:28:ARG:HB3	2.17	0.45
51:BZ:56:MET:C	51:BZ:58:VAL:N	2.72	0.45
1:CA:32:A:H2'	1:CA:33:A:H8	1.81	0.45
1:CA:51:A:H5"	1:CA:52:C:H5"	1.99	0.45
1:CA:55:A:OP2	1:CA:352:C:N4	2.49	0.45
1:CA:203:G:H1'	1:CA:465:A:N6	2.31	0.45
1:CA:486:U:H2'	1:CA:487:A:H8	1.81	0.45
1:CA:528:C:H41	11:CL:45:ASN:CG	2.25	0.45
1:CA:613:C:H2'	1:CA:614:C:H6	1.82	0.45
1:CA:746:A:H2'	1:CA:747:A:C8	2.52	0.45
1:CA:818:G:H3'	1:CA:819:A:H5"	1.97	0.45
1:CA:932:C:H2'	1:CA:933:G:H8	1.81	0.45
1:CA:988:G:H21	1:CA:1015:G:H22	1.60	0.45
1:CA:1251:A:N3	1:CA:1369:C:O2'	2.41	0.45
1:CA:1287:A:H2'	1:CA:1288:A:O4'	2.17	0.45
4:CE:158:LYS:HZ2	7:CH:63:LYS:HD3	1.82	0.45
5:CF:7:VAL:HA	5:CF:60:VAL:O	2.17	0.45
7:CH:63:LYS:CG	7:CH:70:VAL:HG21	2.46	0.45
11:CL:82:ARG:NH2	11:CL:95:HIS:ND1	2.64	0.45
13:CP:75:ILE:HG22	13:CP:80:LYS:HD2	1.98	0.45
15:CR:34:GLU:HB2	19:CU:18:PHE:CZ	2.52	0.45
12:CM:33:LEU:HD13	12:CM:40:GLU:HA	1.97	0.45
21:CN:19:TYR:O	21:CN:21:ALA:N	2.48	0.45
16:CS:43:MET:O	16:CS:46:LEU:HB2	2.17	0.45
22:DA:7:G:H5"	43:DO:29:HIS:CD2	2.52	0.45
23:DB:68:G:H2'	23:DB:69:C:H6	1.82	0.45
23:DB:592:A:H2'	23:DB:593:U:C6	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:909:A:H2'	23:DB:912:C:C5	2.51	0.45
23:DB:921:C:H2'	23:DB:922:C:C6	2.52	0.45
23:DB:934:U:H2'	23:DB:935:C:H6	1.80	0.45
23:DB:969:G:H2'	23:DB:970:U:O4'	2.16	0.45
23:DB:1219:U:H2'	23:DB:1220:G:C8	2.52	0.45
23:DB:1526:C:O2'	23:DB:1527:G:H5'	2.17	0.45
23:DB:1593:A:H2'	23:DB:1594:U:H6	1.79	0.45
23:DB:2028:U:O2'	23:DB:2029:G:H5'	2.16	0.45
23:DB:2065:C:H2'	23:DB:2066:C:H6	1.78	0.45
23:DB:2512:C:P	26:DD:128:ARG:HB2	2.57	0.45
23:DB:2600:A:O2'	23:DB:2601:C:H5'	2.17	0.45
24:DI:23:VAL:HG12	24:DI:27:LEU:HD21	1.97	0.45
25:DC:110:LYS:O	25:DC:113:ASP:HB2	2.16	0.45
28:DP:50:ARG:HB3	28:DP:57:ALA:N	2.32	0.45
28:DP:111:GLU:CD	28:DP:111:GLU:N	2.75	0.45
29:DE:137:LYS:O	29:DE:141:MET:HG3	2.16	0.45
37:DL:68:SER:C	37:DL:70:LYS:N	2.74	0.45
37:DL:122:VAL:HB	37:DL:143:GLU:OE2	2.16	0.45
40:DH:141:LYS:O	40:DH:142:VAL:HG23	2.17	0.45
43:DO:100:HIS:HA	43:DO:104:GLN:HG3	1.98	0.45
44:DQ:33:VAL:O	44:DQ:34:ALA:C	2.60	0.45
46:DU:82:VAL:N	46:DU:96:LYS:HZ2	2.14	0.45
47:DF:37:MET:SD	47:DF:52:ALA:HA	2.57	0.45
48:DG:169:ARG:HB3	48:DG:171:LYS:NZ	2.32	0.45
52:DW:23:LYS:CG	52:DW:24:ARG:N	2.78	0.45
52:DW:37:VAL:C	52:DW:38:ARG:HG2	2.42	0.45
1:AA:35:G:H2'	1:AA:36:C:H6	1.82	0.45
1:AA:437:U:C5'	3:AD:151:GLN:HE21	2.30	0.45
1:AA:605:U:H2'	1:AA:606:G:H8	1.82	0.45
1:AA:916:U:H2'	1:AA:917:G:H8	1.82	0.45
1:AA:975:A:H5"	1:AA:976:G:O5'	2.16	0.45
1:AA:1073:U:H4'	18:AB:104:LYS:CE	2.46	0.45
1:AA:1265:C:O2'	1:AA:1266:G:H5'	2.17	0.45
3:AD:187:ARG:O	3:AD:191:SER:N	2.50	0.45
5:AF:34:GLY:O	5:AF:35:LYS:HB2	2.16	0.45
6:AG:143:MET:HE2	6:AG:143:MET:HA	1.99	0.45
8:AI:22:PRO:HA	8:AI:60:LEU:CB	2.46	0.45
8:AI:78:ILE:O	8:AI:82:ILE:HG13	2.17	0.45
8:AI:80:HIS:CE1	8:AI:84:ARG:HD3	2.51	0.45
8:AI:96:GLU:HA	8:AI:99:LYS:CE	2.47	0.45
10:AK:75:GLU:C	10:AK:77:GLY:H	2.24	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AB:15:PHE:O	18:AB:40:ILE:HD12	2.17	0.45
23:BB:406:G:O2'	23:BB:407:G:H5'	2.17	0.45
23:BB:742:A:O2'	23:BB:743:A:H5'	2.17	0.45
23:BB:842:U:H2'	23:BB:843:G:C8	2.49	0.45
23:BB:1072:C:N3	23:BB:1092:C:N4	2.65	0.45
23:BB:1150:C:H2'	23:BB:1151:A:C8	2.50	0.45
23:BB:1564:C:H2'	23:BB:1565:C:C6	2.51	0.45
23:BB:1695:G:N7	25:BC:13:ARG:NH2	2.65	0.45
23:BB:1719:G:O2'	23:BB:1720:U:H5'	2.17	0.45
23:BB:1735:A:H2'	23:BB:1736:U:C6	2.52	0.45
23:BB:1784:A:H4'	23:BB:1785:A:O5'	2.16	0.45
23:BB:1948:G:O2'	23:BB:1949:G:H5'	2.17	0.45
23:BB:2064:C:H1'	23:BB:2450:A:C6	2.52	0.45
23:BB:2655:G:H1'	23:BB:2656:U:H5	1.82	0.45
23:BB:2730:C:H2'	23:BB:2731:G:C8	2.50	0.45
23:BB:2847:U:H5"	28:BP:94:ALA:HB3	1.99	0.45
23:BB:2893:A:H4'	23:BB:2894:G:C5'	2.47	0.45
25:BC:93:VAL:HG13	25:BC:101:ARG:H	1.81	0.45
26:BD:8:LYS:HB2	26:BD:201:LEU:HD21	1.99	0.45
26:BD:51:THR:HG22	26:BD:52:THR:N	2.32	0.45
26:BD:114:LYS:HD2	26:BD:116:LYS:CE	2.47	0.45
27:BK:60:ALA:HA	27:BK:87:LEU:CD2	2.47	0.45
34:B3:18:LYS:HD2	34:B3:19:GLY:H	1.80	0.45
34:B3:22:LYS:HA	34:B3:48:MET:HA	1.99	0.45
35:BV:77:VAL:CA	35:BV:89:ILE:HG22	2.43	0.45
38:BM:31:PHE:HA	38:BM:131:VAL:O	2.17	0.45
38:BM:105:MET:HB2	38:BM:117:PHE:CZ	2.48	0.45
44:BQ:73:ILE:HG21	44:BQ:109:VAL:HG13	1.98	0.45
45:BS:73:LYS:HD2	45:BS:73:LYS:HA	1.68	0.45
47:BF:7:TYR:OH	47:BF:29:ARG:HG3	2.17	0.45
47:BF:34:THR:OG1	47:BF:154:THR:HB	2.16	0.45
48:BG:15:ASP:CB	48:BG:26:LYS:H	2.29	0.45
50:BT:64:LYS:HE3	50:BT:64:LYS:N	2.32	0.45
1:CA:420:U:H2'	1:CA:422:C:C4	2.52	0.45
1:CA:453:G:H2'	1:CA:454:G:C8	2.52	0.45
1:CA:583:A:N6	1:CA:758:C:H1'	2.32	0.45
1:CA:1379:G:O6	6:CG:2:ARG:HD3	2.16	0.45
1:CA:1493:A:H2'	1:CA:1494:G:OP2	2.17	0.45
3:CD:107:GLY:O	3:CD:157:ALA:HB1	2.17	0.45
3:CD:123:MET:SD	3:CD:127:ARG:C	3.00	0.45
5:CF:91:ARG:N	5:CF:93:LYS:HZ1	2.13	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:129:PHE:O	2:CC:133:MET:HB3	2.17	0.45
6:CG:137:ARG:HD2	6:CG:137:ARG:C	2.41	0.45
8:CI:117:LEU:HD23	8:CI:117:LEU:N	2.32	0.45
12:CM:13:HIS:CD2	12:CM:13:HIS:N	2.84	0.45
18:CB:93:HIS:CD2	18:CB:94:ARG:HH22	2.34	0.45
18:CB:119:GLN:HA	18:CB:122:ASP:OD2	2.16	0.45
22:DA:60:C:H2'	22:DA:61:G:C8	2.45	0.45
23:DB:43:G:H2'	23:DB:44:A:O4'	2.17	0.45
23:DB:288:U:H2'	23:DB:289:G:C8	2.52	0.45
23:DB:664:G:H2'	23:DB:665:U:C6	2.50	0.45
23:DB:1359:A:H2'	23:DB:1360:G:O4'	2.17	0.45
23:DB:1409:U:H2'	23:DB:1410:G:H8	1.81	0.45
23:DB:1681:G:N2	23:DB:1762:A:H3'	2.32	0.45
23:DB:1799:G:OP1	25:DC:257:ARG:HG3	2.17	0.45
23:DB:2064:C:H1'	23:DB:2450:A:C6	2.51	0.45
23:DB:2210:U:C4	23:DB:2212:A:N7	2.85	0.45
23:DB:2581:G:C8	23:DB:2610:C:N4	2.84	0.45
23:DB:2653:U:H3'	23:DB:2654:A:H2'	1.99	0.45
23:DB:2720:U:H2'	23:DB:2721:A:C8	2.51	0.45
23:DB:2808:G:O2'	23:DB:2809:A:H8	2.00	0.45
23:DB:2853:C:H2'	23:DB:2854:G:H8	1.82	0.45
24:DI:90:GLY:C	24:DI:92:PRO:HD3	2.42	0.45
25:DC:161:VAL:HG12	25:DC:173:LEU:HB2	1.99	0.45
26:DD:38:LYS:HB2	26:DD:47:ALA:HB3	1.98	0.45
27:DK:109:SER:C	27:DK:111:LYS:N	2.75	0.45
28:DP:95:LYS:HG3	28:DP:97:TYR:HE1	1.82	0.45
29:DE:111:GLU:HA	29:DE:114:ARG:CG	2.39	0.45
30:DY:50:VAL:HB	30:DY:53:MET:HB2	1.99	0.45
37:DL:93:ASN:O	37:DL:95:LEU:HD12	2.17	0.45
38:DM:41:LEU:O	38:DM:93:VAL:HA	2.17	0.45
40:DH:84:ALA:HB3	40:DH:148:ALA:CB	2.47	0.45
41:DJ:73:VAL:HG23	41:DJ:74:TYR:H	1.81	0.45
42:DN:38:LEU:CB	42:DN:39:PRO:HD3	2.45	0.45
44:DQ:63:ARG:HH21	44:DQ:64:ILE:CD1	2.26	0.45
47:DF:116:LEU:CG	47:DF:117:SER:H	2.30	0.45
48:DG:15:ASP:CB	48:DG:26:LYS:H	2.29	0.45
49:DR:28:ALA:HB3	49:DR:31:GLU:CG	2.47	0.45
50:DT:53:VAL:CG1	50:DT:87:LEU:HB3	2.46	0.45
51:DZ:11:ARG:HB3	51:DZ:12:PRO:HD2	1.99	0.45
1:AA:32:A:H2'	1:AA:33:A:H8	1.79	0.45
1:AA:398:U:H2'	1:AA:399:G:C8	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:976:G:OP1	21:AN:70:HIS:HA	2.17	0.45
1:AA:983:A:H2	1:AA:1222:G:H22	1.65	0.45
1:AA:1365:G:H2'	1:AA:1366:C:C6	2.51	0.45
2:AC:95:GLY:C	2:AC:96:VAL:HG22	2.41	0.45
2:AC:155:ARG:H	2:AC:162:ALA:CA	2.30	0.45
3:AD:77:GLU:OE1	3:AD:80:ARG:HD3	2.17	0.45
3:AD:138:PRO:HA	3:AD:181:PHE:HD2	1.82	0.45
6:AG:149:ALA:HB2	10:AK:60:PHE:HB3	1.98	0.45
7:AH:86:LYS:HG2	7:AH:124:ILE:HD11	1.98	0.45
10:AK:126:ARG:HA	10:AK:126:ARG:NE	2.32	0.45
16:AS:20:LYS:O	16:AS:20:LYS:HD2	2.17	0.45
16:AS:38:THR:HG23	16:AS:69:LYS:HD3	1.99	0.45
22:BA:93:C:H2'	22:BA:94:A:H8	1.82	0.45
23:BB:493:G:O2'	23:BB:494:G:H5'	2.17	0.45
23:BB:577:G:OP1	23:BB:2502:G:H2'	2.17	0.45
23:BB:639:U:H2'	23:BB:640:C:H6	1.82	0.45
23:BB:783:A:H4'	23:BB:1779:U:O2	2.17	0.45
23:BB:1275:A:H2'	23:BB:1276:A:O4'	2.17	0.45
23:BB:1718:G:H2'	23:BB:1719:G:H8	1.82	0.45
23:BB:1750:G:O2'	23:BB:2860:A:H2	2.00	0.45
23:BB:1824:G:H2'	23:BB:1825:U:C6	2.52	0.45
23:BB:2018:G:O2'	23:BB:2019:A:H5'	2.17	0.45
23:BB:2145:C:H4'	23:BB:2145:C:OP2	2.17	0.45
24:BI:135:MET:HE2	24:BI:137:LEU:CD1	2.47	0.45
25:BC:109:LEU:CD2	25:BC:109:LEU:H	2.30	0.45
25:BC:124:LYS:HG3	25:BC:125:PRO:HD2	1.99	0.45
31:B0:16:ARG:HA	31:B0:19:ASP:HB2	1.99	0.45
31:B0:51:ARG:HB2	31:B0:52:LYS:H	1.62	0.45
37:BL:57:LEU:C	37:BL:59:ARG:N	2.75	0.45
37:BL:81:ASP:HA	37:BL:84:LYS:HE2	1.98	0.45
37:BL:127:VAL:HG22	37:BL:131:ALA:HB3	1.99	0.45
38:BM:41:LEU:O	38:BM:94:ALA:N	2.50	0.45
38:BM:65:ILE:HG23	38:BM:103:TYR:CD2	2.52	0.45
40:BH:46:PHE:C	40:BH:50:ARG:HH21	2.25	0.45
41:BJ:19:ASP:CB	41:BJ:57:LEU:HB2	2.47	0.45
41:BJ:58:ASN:HA	41:BJ:127:GLY:HA2	1.99	0.45
41:BJ:101:ILE:O	41:BJ:105:VAL:HG22	2.17	0.45
42:BN:108:ALA:C	42:BN:110:MET:HE2	2.42	0.45
43:BO:37:ALA:HB1	43:BO:78:VAL:HG21	1.99	0.45
45:BS:3:THR:HB	45:BS:62:ASP:CB	2.47	0.45
45:BS:82:MET:HE2	45:BS:84:ARG:NH1	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:5:LYS:HE3	48:BG:61:TRP:CZ3	2.51	0.45
48:BG:16:VAL:HG13	48:BG:49:LEU:HD13	1.98	0.45
49:BR:3:ALA:HB2	49:BR:101:ILE:HD12	1.99	0.45
1:CA:69:G:N2	1:CA:71:A:H62	2.15	0.45
1:CA:259:G:O2'	1:CA:260:G:H5'	2.17	0.45
1:CA:371:A:O2'	1:CA:372:C:H5'	2.17	0.45
1:CA:551:U:H2'	1:CA:552:U:H6	1.81	0.45
1:CA:895:G:H2'	1:CA:896:C:H6	1.82	0.45
1:CA:974:A:H4'	1:CA:975:A:H3'	1.98	0.45
1:CA:1008:U:H2'	1:CA:1009:U:C4'	2.47	0.45
1:CA:1430:A:H2'	1:CA:1431:A:O4'	2.17	0.45
1:CA:1492:A:H5"	1:CA:1493:A:N9	2.31	0.45
7:CH:17:GLN:HE21	7:CH:62:LEU:CG	2.28	0.45
11:CL:35:ARG:CZ	11:CL:35:ARG:HA	2.47	0.45
13:CP:23:ASP:OD1	13:CP:25:ARG:HB2	2.16	0.45
2:CC:67:ILE:O	2:CC:103:ALA:N	2.50	0.45
2:CC:152:VAL:HG11	2:CC:156:LEU:HG	1.99	0.45
8:CI:14:SER:HA	8:CI:68:GLY:O	2.17	0.45
8:CI:56:MET:HE3	8:CI:62:LEU:HD21	1.98	0.45
12:CM:9:PRO:C	12:CM:44:ILE:HD13	2.42	0.45
21:CN:3:GLN:O	21:CN:6:LYS:HB2	2.17	0.45
18:CB:165:ALA:O	18:CB:166:ASP:C	2.60	0.45
22:DA:43:C:H1'	47:DF:91:ARG:NH2	2.32	0.45
23:DB:302:C:H2'	23:DB:303:G:C8	2.50	0.45
23:DB:567:U:H2'	23:DB:568:U:O4'	2.17	0.45
23:DB:635:C:H2'	23:DB:636:G:C8	2.52	0.45
23:DB:657:U:H2'	23:DB:658:U:C6	2.52	0.45
23:DB:842:U:H2'	23:DB:843:G:C8	2.49	0.45
23:DB:993:G:H1'	49:DR:91:GLN:NE2	2.31	0.45
23:DB:1032:A:OP1	32:D4:8:LYS:HG3	2.16	0.45
23:DB:1106:G:O2'	23:DB:1107:G:H5'	2.17	0.45
23:DB:1203:U:H3'	23:DB:1204:A:H5"	1.97	0.45
23:DB:1449:G:O2'	23:DB:1450:G:H5'	2.17	0.45
23:DB:2365:G:O2'	52:DW:59:PHE:CE1	2.70	0.45
23:DB:2503:A:O2'	23:DB:2505:G:OP2	2.35	0.45
23:DB:2868:A:H2'	23:DB:2869:G:C8	2.52	0.45
23:DB:2896:C:H2'	23:DB:2897:U:C6	2.52	0.45
24:DI:131:THR:O	24:DI:135:MET:HG3	2.16	0.45
24:DI:138:VAL:HG12	24:DI:139:VAL:N	2.32	0.45
28:DP:12:MET:HG2	28:DP:54:LEU:HA	1.98	0.45
31:D0:50:GLY:O	31:D0:51:ARG:C	2.60	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:D4:9:LYS:C	32:D4:9:LYS:HD3	2.42	0.45
38:DM:71:LYS:CB	38:DM:93:VAL:HG12	2.46	0.45
39:DX:7:ARG:O	39:DX:9:LYS:HD3	2.17	0.45
39:DX:52:ARG:O	39:DX:56:LEU:HD23	2.17	0.45
40:DH:53:GLU:O	40:DH:57:LYS:HB3	2.17	0.45
44:DQ:85:ALA:O	44:DQ:86:SER:C	2.60	0.45
47:DF:32:LYS:N	47:DF:95:MET:SD	2.90	0.45
47:DF:128:SER:CB	47:DF:154:THR:HA	2.47	0.45
48:DG:17:LYS:O	48:DG:23:ILE:HG23	2.17	0.45
48:DG:156:TYR:O	48:DG:157:LYS:HB2	2.17	0.45
50:DT:43:ILE:HG23	50:DT:58:VAL:HG21	1.99	0.45
51:DZ:5:CYS:SG	51:DZ:8:THR:HG23	2.57	0.45
1:AA:261:U:H2'	1:AA:263:A:OP2	2.16	0.44
1:AA:300:A:H2'	1:AA:301:G:O4'	2.16	0.44
1:AA:411:A:H62	1:AA:413:G:H21	1.64	0.44
1:AA:551:U:H2'	1:AA:552:U:H6	1.81	0.44
1:AA:735:C:H2'	1:AA:736:C:C6	2.52	0.44
1:AA:780:A:O2'	1:AA:781:A:H5"	2.16	0.44
1:AA:852:G:H2'	1:AA:853:C:C6	2.52	0.44
1:AA:1025:U:H6	1:AA:1025:U:O5'	2.00	0.44
1:AA:1269:A:H2	1:AA:1312:G:N3	2.15	0.44
1:AA:1300:G:O6	1:AA:1334:G:H3'	2.17	0.44
1:AA:1326:U:O2'	1:AA:1327:C:H5'	2.17	0.44
2:AC:20:THR:O	2:AC:20:THR:HG23	2.17	0.44
3:AD:28:ASP:CB	3:AD:33:ILE:HG21	2.47	0.44
3:AD:61:ARG:HD2	3:AD:68:GLU:HA	1.99	0.44
5:AF:7:VAL:HA	5:AF:60:VAL:O	2.17	0.44
5:AF:21:MET:HB3	5:AF:25:TYR:CZ	2.52	0.44
5:AF:62:MET:HG3	5:AF:64:VAL:CG2	2.43	0.44
6:AG:49:LEU:HD12	6:AG:124:SER:OG	2.17	0.44
9:AJ:15:HIS:O	9:AJ:18:ILE:HG22	2.17	0.44
10:AK:16:SER:CA	10:AK:78:ILE:HA	2.46	0.44
13:AP:19:VAL:H	13:AP:38:PHE:HA	1.82	0.44
16:AS:14:LEU:CD1	16:AS:32:THR:HG23	2.47	0.44
18:AB:134:LEU:N	18:AB:134:LEU:HD23	2.33	0.44
19:AU:42:THR:O	19:AU:45:LYS:N	2.50	0.44
21:AN:19:TYR:C	21:AN:23:ARG:HB2	2.42	0.44
22:BA:52:A:H2'	22:BA:53:A:O4'	2.16	0.44
23:BB:136:G:H2'	23:BB:137:U:H1'	1.99	0.44
23:BB:170:U:O2'	23:BB:171:U:H5'	2.17	0.44
23:BB:195:A:H1'	23:BB:250:G:H21	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:335:C:O2'	23:BB:336:C:H5'	2.17	0.44
23:BB:611:C:H2'	23:BB:612:G:O4'	2.17	0.44
23:BB:812:C:H2'	23:BB:813:U:H6	1.81	0.44
23:BB:1061:U:H5'	24:BI:9:LYS:HZ1	1.82	0.44
23:BB:1227:G:O2'	23:BB:1228:G:H5'	2.17	0.44
23:BB:1591:A:H2'	23:BB:1592:C:O4'	2.17	0.44
23:BB:1820:U:C4	25:BC:158:GLY:HA3	2.52	0.44
24:BI:44:LYS:O	24:BI:48:ILE:HG13	2.16	0.44
25:BC:142:ASN:O	25:BC:142:ASN:CG	2.59	0.44
25:BC:197:ALA:C	25:BC:199:HIS:H	2.25	0.44
26:BD:106:LYS:CB	26:BD:206:ALA:H	2.24	0.44
27:BK:18:ARG:HB2	27:BK:45:GLU:HG2	1.99	0.44
29:BE:112:LEU:HD11	29:BE:180:LEU:HB3	1.99	0.44
32:B4:9:LYS:HD3	32:B4:9:LYS:C	2.42	0.44
37:BL:109:LYS:HB2	37:BL:111:ILE:HD11	1.98	0.44
38:BM:113:ALA:O	38:BM:116:ALA:HB3	2.16	0.44
41:BJ:58:ASN:CA	41:BJ:127:GLY:HA2	2.47	0.44
43:BO:111:ARG:HD2	43:BO:117:PHE:CD1	2.51	0.44
44:BQ:63:ARG:HH21	44:BQ:64:ILE:CD1	2.27	0.44
44:BQ:65:ASN:O	44:BQ:69:ARG:N	2.46	0.44
44:BQ:65:ASN:HA	44:BQ:75:TYR:HB2	1.99	0.44
45:BS:60:HIS:O	45:BS:60:HIS:ND1	2.50	0.44
47:BF:109:ARG:HG3	47:BF:137:PHE:CB	2.43	0.44
47:BF:116:LEU:CG	47:BF:117:SER:H	2.30	0.44
47:BF:151:LEU:C	47:BF:151:LEU:HD12	2.42	0.44
51:BZ:11:ARG:HB3	51:BZ:12:PRO:HD2	1.99	0.44
51:BZ:53:ALA:O	51:BZ:54:LYS:HB3	2.16	0.44
52:BW:28:GLU:H	52:BW:31:LEU:HD12	1.82	0.44
52:BW:53:GLY:O	52:BW:56:HIS:N	2.46	0.44
1:CA:83:C:H1'	1:CA:84:U:C6	2.51	0.44
1:CA:430:A:OP2	3:CD:6:PRO:HA	2.17	0.44
1:CA:511:C:O2'	1:CA:512:U:H6	2.00	0.44
1:CA:520:A:N1	1:CA:536:C:H1'	2.32	0.44
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.99	0.44
1:CA:1052:U:H2'	1:CA:1055:A:OP1	2.17	0.44
3:CD:61:ARG:HG3	3:CD:71:PHE:CD2	2.52	0.44
7:CH:48:PHE:HA	7:CH:59:GLU:O	2.17	0.44
10:CK:15:VAL:C	10:CK:17:ASP:H	2.25	0.44
15:CR:63:TYR:C	15:CR:64:LEU:HD12	2.42	0.44
2:CC:148:ILE:HG13	2:CC:201:ILE:HG23	1.98	0.44
6:CG:85:GLN:HA	6:CG:85:GLN:OE1	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CS:60:PHE:O	16:CS:61:VAL:C	2.60	0.44
22:DA:43:C:H5'	47:DF:62:GLN:HB3	1.98	0.44
23:DB:39:G:O2'	23:DB:40:U:H5'	2.17	0.44
23:DB:992:C:O2'	23:DB:993:G:H5'	2.18	0.44
23:DB:1291:C:O2'	23:DB:1292:G:H5'	2.17	0.44
23:DB:1292:G:H2'	23:DB:1293:C:C6	2.52	0.44
23:DB:1671:U:H2'	23:DB:1673:G:OP2	2.17	0.44
23:DB:1813:G:H1'	25:DC:49:THR:OG1	2.17	0.44
23:DB:1997:C:O2'	23:DB:1998:A:H5'	2.16	0.44
23:DB:2088:A:H2'	23:DB:2089:C:C6	2.51	0.44
23:DB:2221:G:H2'	23:DB:2222:C:C6	2.52	0.44
23:DB:2249:U:N3	23:DB:2253:G:OP2	2.43	0.44
23:DB:2485:G:O2'	23:DB:2486:C:H5'	2.17	0.44
23:DB:2693:G:H2'	23:DB:2694:G:C8	2.51	0.44
23:DB:2860:A:H2'	23:DB:2861:U:O4'	2.17	0.44
25:DC:173:LEU:H	25:DC:173:LEU:HD22	1.82	0.44
26:DD:62:LYS:HD2	26:DD:62:LYS:H	1.82	0.44
26:DD:118:PHE:O	26:DD:119:ALA:CB	2.62	0.44
32:D4:31:PRO:O	32:D4:34:LYS:HB3	2.17	0.44
42:DN:59:SER:C	42:DN:61:ALA:H	2.25	0.44
44:DQ:18:LYS:C	44:DQ:20:ALA:N	2.74	0.44
44:DQ:105:PHE:CA	44:DQ:108:LEU:HD12	2.37	0.44
45:DS:6:LYS:HZ3	45:DS:104:THR:HG23	1.82	0.44
46:DU:64:ILE:HD11	46:DU:68:ASN:ND2	2.33	0.44
46:DU:85:ARG:C	46:DU:91:LYS:O	2.60	0.44
49:DR:72:VAL:CG2	49:DR:89:HIS:HB3	2.44	0.44
51:DZ:5:CYS:CB	51:DZ:10:LYS:H	2.30	0.44
1:AA:1017:U:H2'	1:AA:1018:G:C8	2.52	0.44
3:AD:53:GLN:HG2	3:AD:198:LEU:CD2	2.47	0.44
3:AD:167:PRO:HG2	3:AD:170:LEU:HD11	1.99	0.44
4:AE:131:ASN:O	4:AE:135:VAL:HG23	2.16	0.44
6:AG:74:VAL:HG12	6:AG:87:PRO:CD	2.47	0.44
8:AI:109:GLN:CD	8:AI:110:VAL:N	2.75	0.44
9:AJ:64:GLN:C	21:AN:98:ALA:HB3	2.42	0.44
13:AP:67:ILE:CG1	13:AP:72:ALA:HB2	2.46	0.44
14:AQ:80:LYS:H	14:AQ:80:LYS:NZ	2.15	0.44
17:AT:7:LYS:O	17:AT:11:ILE:HG13	2.17	0.44
22:BA:102:G:H2'	22:BA:103:U:H6	1.82	0.44
23:BB:57:C:H2'	23:BB:58:G:C8	2.52	0.44
23:BB:714:U:O2	23:BB:716:A:H3'	2.18	0.44
23:BB:1745:A:O2'	23:BB:1746:A:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1877:A:H2'	23:BB:1878:G:H8	1.81	0.44
23:BB:2094:A:H4'	40:BH:25:TYR:CZ	2.53	0.44
23:BB:2357:G:N2	23:BB:2359:C:H3'	2.33	0.44
23:BB:2842:G:O2'	23:BB:2843:G:H5'	2.18	0.44
23:BB:2886:A:H2'	23:BB:2887:A:O4'	2.17	0.44
26:BD:182:ALA:C	26:BD:184:ARG:H	2.24	0.44
28:BP:19:PHE:HB2	28:BP:50:ARG:NH1	2.31	0.44
29:BE:58:LYS:NZ	29:BE:58:LYS:N	2.53	0.44
30:BY:4:ILE:HD12	30:BY:58:GLU:HG3	2.00	0.44
30:BY:40:THR:O	30:BY:43:ILE:HG23	2.17	0.44
33:B1:8:ILE:HG23	33:B1:9:LYS:N	2.32	0.44
34:B3:23:HIS:CG	37:BL:61:LEU:HD23	2.52	0.44
34:B3:30:HIS:HD2	34:B3:31:ILE:H	1.65	0.44
37:BL:23:ILE:H	37:BL:23:ILE:CD1	2.15	0.44
40:BH:61:VAL:C	40:BH:63:ALA:H	2.25	0.44
42:BN:38:LEU:CB	42:BN:39:PRO:HD3	2.45	0.44
44:BQ:68:ALA:HB1	44:BQ:73:ILE:HG23	1.99	0.44
46:BU:49:PRO:HA	46:BU:53:GLN:HG3	1.98	0.44
47:BF:116:LEU:O	47:BF:177:ARG:HB2	2.16	0.44
47:BF:121:PHE:CE1	47:BF:162:ASP:HB2	2.51	0.44
47:BF:126:ASN:HD22	47:BF:156:THR:HA	1.82	0.44
52:BW:65:LYS:HZ3	52:BW:84:GLU:HB3	1.82	0.44
52:BW:67:LYS:O	52:BW:68:PHE:HB2	2.17	0.44
1:CA:35:G:H2'	1:CA:36:C:C6	2.53	0.44
1:CA:343:U:O2'	1:CA:344:A:H8	2.00	0.44
1:CA:394:G:O2'	1:CA:395:C:H5'	2.17	0.44
1:CA:709:U:H2'	1:CA:710:G:H8	1.81	0.44
1:CA:728:A:H2'	1:CA:729:A:C8	2.51	0.44
1:CA:735:C:H2'	1:CA:736:C:C6	2.52	0.44
1:CA:1118:U:OP1	8:CI:10:ARG:HD2	2.18	0.44
1:CA:1124:G:H5'	9:CJ:37:ARG:NE	2.31	0.44
1:CA:1148:U:O2'	1:CA:1149:C:H5'	2.17	0.44
1:CA:1219:A:H2'	1:CA:1220:G:C8	2.52	0.44
1:CA:1230:C:O2'	1:CA:1231:G:H5'	2.17	0.44
1:CA:1255:G:O2'	1:CA:1258:G:H1'	2.16	0.44
1:CA:1362:A:H4'	1:CA:1363:A:OP1	2.17	0.44
4:CE:89:THR:HB	4:CE:134:ASN:ND2	2.32	0.44
5:CF:92:THR:HG22	5:CF:93:LYS:N	2.32	0.44
7:CH:99:GLY:CA	7:CH:129:ALA:HA	2.46	0.44
10:CK:14:GLN:HA	10:CK:76:TYR:O	2.17	0.44
10:CK:17:ASP:HB3	10:CK:80:ASN:OD1	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CL:28:GLN:HE21	11:CL:28:GLN:HB3	1.52	0.44
13:CP:71:VAL:HG13	13:CP:72:ALA:H	1.82	0.44
15:CR:37:LYS:H	15:CR:37:LYS:HG2	1.63	0.44
19:CU:42:THR:O	19:CU:45:LYS:N	2.50	0.44
8:CI:47:VAL:O	8:CI:50:PRO:HD2	2.17	0.44
12:CM:94:LEU:C	12:CM:108:ARG:HG2	2.42	0.44
16:CS:4:LEU:C	16:CS:5:LYS:HD2	2.43	0.44
16:CS:62:THR:HG22	16:CS:63:ASP:N	2.26	0.44
18:CB:64:GLY:O	18:CB:88:GLN:HA	2.18	0.44
20:CO:24:SER:HB3	20:CO:27:VAL:CG2	2.48	0.44
22:DA:73:A:H2'	22:DA:73:A:N3	2.32	0.44
22:DA:76:G:H2'	22:DA:77:U:C6	2.53	0.44
23:DB:81:G:O2'	23:DB:82:U:H5'	2.17	0.44
23:DB:182:A:H2'	23:DB:183:C:H6	1.82	0.44
23:DB:571:U:O2'	49:DR:80:ARG:NH2	2.50	0.44
23:DB:611:C:H2'	23:DB:612:G:O4'	2.17	0.44
23:DB:672:C:H2'	23:DB:673:C:H6	1.82	0.44
23:DB:779:U:O2'	23:DB:780:G:H5'	2.18	0.44
23:DB:819:A:OP2	23:DB:1187:G:N2	2.49	0.44
23:DB:834:G:O2'	23:DB:835:C:H5'	2.18	0.44
23:DB:1005:C:H2'	23:DB:1006:C:H6	1.82	0.44
23:DB:1031:G:H4'	32:D4:6:SER:HB3	1.98	0.44
23:DB:1098:A:C3'	24:DI:3:LYS:C	2.91	0.44
23:DB:1153:C:H2'	23:DB:1154:G:C8	2.52	0.44
23:DB:1392:A:C6	23:DB:1393:A:C6	3.06	0.44
23:DB:1739:A:H2'	23:DB:1740:G:C8	2.52	0.44
23:DB:2056:G:N2	31:D0:1:ALA:HA	2.32	0.44
23:DB:2070:A:H2'	23:DB:2071:A:H8	1.75	0.44
24:DI:100:ILE:HG23	24:DI:104:GLN:OE1	2.18	0.44
26:DD:54:ALA:N	26:DD:76:GLY:HA2	2.32	0.44
28:DP:62:LYS:HB3	28:DP:69:VAL:CG2	2.47	0.44
28:DP:89:GLY:N	28:DP:112:ARG:NH1	2.66	0.44
28:DP:114:ASN:HD22	28:DP:114:ASN:HA	1.59	0.44
29:DE:17:THR:C	29:DE:19:PHE:N	2.74	0.44
35:DV:77:VAL:CA	35:DV:89:ILE:HG22	2.42	0.44
40:DH:64:ALA:O	40:DH:68:ARG:HG2	2.18	0.44
41:DJ:101:ILE:O	41:DJ:104:ALA:HB3	2.17	0.44
41:DJ:102:GLU:HA	41:DJ:105:VAL:HG22	1.98	0.44
44:DQ:60:TRP:HB3	44:DQ:92:LYS:O	2.18	0.44
47:DF:135:ILE:C	47:DF:137:PHE:N	2.75	0.44
48:DG:34:ARG:HH11	48:DG:34:ARG:N	2.15	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DR:76:LYS:HB2	49:DR:85:LYS:HB2	1.99	0.44
50:DT:45:ALA:HA	50:DT:48:GLN:HG2	1.99	0.44
51:DZ:5:CYS:HB3	51:DZ:10:LYS:N	2.31	0.44
51:DZ:53:ALA:C	51:DZ:55:GLY:H	2.22	0.44
51:DZ:54:LYS:O	51:DZ:57:ARG:HB2	2.18	0.44
52:DW:28:GLU:H	52:DW:31:LEU:HD12	1.81	0.44
1:AA:814:A:N7	1:AA:816:A:C4	2.85	0.44
1:AA:1120:C:O2'	1:AA:1121:U:H5'	2.17	0.44
1:AA:1142:G:H3'	1:AA:1143:G:C8	2.53	0.44
1:AA:1293:C:H2'	1:AA:1294:G:O4'	2.17	0.44
1:AA:1326:U:H2'	1:AA:1327:C:C6	2.52	0.44
1:AA:1342:C:O2'	8:AI:125:GLN:HB3	2.18	0.44
2:AC:27:GLU:O	2:AC:28:PHE:C	2.61	0.44
2:AC:57:GLU:HB2	2:AC:64:ARG:HB2	1.98	0.44
3:AD:161:ALA:HA	3:AD:164:ARG:HB3	2.00	0.44
8:AI:12:LYS:C	8:AI:14:SER:H	2.25	0.44
8:AI:18:VAL:HG11	8:AI:82:ILE:CA	2.44	0.44
11:AL:65:TYR:HB3	11:AL:95:HIS:CD2	2.52	0.44
12:AM:14:ALA:HB1	12:AM:33:LEU:HD11	1.99	0.44
13:AP:34:GLU:CD	13:AP:60:TRP:HE1	2.25	0.44
16:AS:39:ILE:CD1	16:AS:65:MET:HB3	2.48	0.44
18:AB:93:HIS:C	18:AB:94:ARG:HG2	2.42	0.44
18:AB:114:LYS:O	18:AB:117:GLU:N	2.50	0.44
20:AO:31:LEU:O	20:AO:34:ALA:HB3	2.17	0.44
22:BA:43:C:H1'	47:BF:91:ARG:NH2	2.32	0.44
22:BA:113:C:H2'	22:BA:114:C:H6	1.81	0.44
23:BB:11:C:N4	23:BB:2629:U:H3	2.15	0.44
23:BB:481:G:O5'	46:BU:43:LYS:HE2	2.17	0.44
23:BB:577:G:O2'	23:BB:578:G:H5'	2.18	0.44
23:BB:590:A:H2'	23:BB:591:U:H6	1.74	0.44
23:BB:814:C:C2	23:BB:1194:A:C2	3.05	0.44
23:BB:1538:G:O2'	23:BB:1539:U:H5'	2.17	0.44
23:BB:1600:C:C2'	23:BB:1601:G:H5'	2.48	0.44
23:BB:2221:G:H2'	23:BB:2222:C:C6	2.53	0.44
23:BB:2240:U:O2'	23:BB:2241:A:H5'	2.17	0.44
23:BB:2679:A:H2'	23:BB:2680:U:C6	2.52	0.44
24:BI:64:ARG:C	24:BI:64:ARG:HD2	2.43	0.44
29:BE:17:THR:C	29:BE:19:PHE:N	2.74	0.44
32:B4:8:LYS:HG2	32:B4:9:LYS:H	1.81	0.44
40:BH:2:GLN:HB2	40:BH:39:ALA:HB2	1.99	0.44
40:BH:116:ARG:HH22	40:BH:133:GLN:N	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BJ:6:ALA:HB3	41:BJ:45:THR:CG2	2.44	0.44
46:BU:40:LEU:HA	46:BU:60:LYS:O	2.17	0.44
47:BF:111:ARG:O	47:BF:112:ASP:CB	2.62	0.44
49:BR:45:GLU:O	49:BR:46:GLU:C	2.60	0.44
50:BT:92:ASN:HD22	50:BT:92:ASN:HA	1.53	0.44
51:BZ:5:CYS:HB3	51:BZ:10:LYS:N	2.32	0.44
51:BZ:33:LEU:H	51:BZ:52:SER:HB3	1.82	0.44
1:CA:71:A:N6	1:CA:100:G:N7	2.66	0.44
1:CA:261:U:H2'	1:CA:263:A:OP2	2.17	0.44
1:CA:450:G:N7	1:CA:481:G:O6	2.50	0.44
1:CA:570:G:H1'	1:CA:820:U:C4	2.52	0.44
1:CA:932:C:H2'	1:CA:933:G:C8	2.52	0.44
1:CA:1062:U:H2'	1:CA:1063:C:C6	2.52	0.44
1:CA:1133:G:H2'	1:CA:1134:G:O4'	2.17	0.44
1:CA:1225:A:OP1	12:CM:100:ARG:HA	2.17	0.44
1:CA:1270:G:H2'	1:CA:1271:A:H8	1.81	0.44
1:CA:1355:G:H2'	1:CA:1356:G:C8	2.52	0.44
56:CA:1910:HOH:O	21:CN:3:GLN:HB2	2.16	0.44
3:CD:61:ARG:HD2	3:CD:68:GLU:HA	1.99	0.44
3:CD:78:ALA:C	3:CD:85:THR:HG23	2.42	0.44
3:CD:111:ALA:O	3:CD:114:ARG:HB2	2.17	0.44
3:CD:117:VAL:HG12	3:CD:130:ASN:C	2.41	0.44
4:CE:43:GLY:O	4:CE:72:ASN:HA	2.17	0.44
4:CE:45:VAL:H	4:CE:71:ILE:HG22	1.83	0.44
4:CE:45:VAL:O	4:CE:71:ILE:HG22	2.17	0.44
5:CF:6:ILE:HD11	5:CF:8:PHE:CD2	2.43	0.44
5:CF:74:LEU:HG	5:CF:78:PHE:CE1	2.52	0.44
7:CH:46:GLU:N	7:CH:63:LYS:HE3	2.32	0.44
7:CH:118:ALA:HB3	7:CH:120:LEU:HD22	1.99	0.44
10:CK:125:LYS:O	19:CU:33:ARG:NH1	2.50	0.44
11:CL:18:SER:OG	11:CL:19:ASN:N	2.51	0.44
6:CG:2:ARG:HH11	6:CG:2:ARG:CB	2.30	0.44
6:CG:70:PRO:HB3	6:CG:102:TRP:HH2	1.80	0.44
8:CI:14:SER:HA	8:CI:68:GLY:C	2.42	0.44
8:CI:29:ILE:HG12	8:CI:64:ILE:HD13	2.00	0.44
9:CJ:8:ILE:HD13	9:CJ:76:ILE:HG23	1.99	0.44
9:CJ:14:ASP:O	9:CJ:15:HIS:C	2.60	0.44
21:CN:27:LYS:HA	21:CN:31:SER:HB3	1.98	0.44
21:CN:42:ASN:C	21:CN:44:VAL:H	2.23	0.44
18:CB:24:PRO:C	18:CB:26:MET:N	2.75	0.44
23:DB:590:A:H2'	23:DB:591:U:H6	1.76	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:734:A:C2	23:DB:735:A:H1'	2.52	0.44
23:DB:830:G:H4'	23:DB:831:G:OP2	2.16	0.44
23:DB:857:G:H2'	23:DB:858:G:H5'	1.96	0.44
23:DB:1252:G:N2	44:DQ:32:ARG:HB3	2.32	0.44
23:DB:1723:G:N7	23:DB:1737:G:N2	2.58	0.44
23:DB:1752:C:O2'	23:DB:1753:G:H5'	2.18	0.44
23:DB:1796:U:O2'	23:DB:1797:G:H5'	2.18	0.44
23:DB:2454:G:O2'	23:DB:2455:G:H5'	2.18	0.44
24:DI:2:LYS:O	24:DI:3:LYS:HG3	2.16	0.44
24:DI:102:ARG:HG3	24:DI:141:ASP:CB	2.47	0.44
25:DC:16:VAL:N	25:DC:203:VAL:HG11	2.25	0.44
26:DD:8:LYS:HG3	26:DD:9:VAL:N	2.31	0.44
27:DK:58:LEU:HD11	27:DK:86:LEU:HB2	1.98	0.44
28:DP:6:GLN:HA	28:DP:9:GLN:CD	2.42	0.44
31:D0:38:LEU:HD13	31:D0:41:HIS:NE2	2.33	0.44
37:DL:68:SER:CB	37:DL:71:ALA:HB3	2.47	0.44
37:DL:121:THR:CB	37:DL:141:LYS:HB3	2.46	0.44
41:DJ:55:ILE:CG2	41:DJ:123:LYS:HB2	2.44	0.44
44:DQ:67:ALA:HB1	44:DQ:105:PHE:CZ	2.52	0.44
46:DU:73:ASN:ND2	46:DU:74:ALA:N	2.65	0.44
47:DF:102:LEU:C	47:DF:104:THR:H	2.25	0.44
47:DF:103:ILE:H	47:DF:106:ALA:HB3	1.81	0.44
48:DG:84:LYS:HB2	48:DG:132:LEU:H	1.81	0.44
48:DG:155:PRO:HA	48:DG:170:THR:HA	1.98	0.44
50:DT:25:GLU:OE1	50:DT:30:ILE:HA	2.17	0.44
51:DZ:48:THR:C	51:DZ:49:LEU:HD23	2.42	0.44
1:AA:153:C:H2'	1:AA:154:U:C6	2.53	0.44
1:AA:764:C:O2'	1:AA:765:G:H5'	2.18	0.44
1:AA:978:A:H5'	1:AA:1224:U:O4	2.17	0.44
1:AA:1354:U:O5'	1:AA:1354:U:H6	2.00	0.44
6:AG:109:LYS:C	6:AG:111:GLY:N	2.76	0.44
8:AI:6:TYR:HA	8:AI:18:VAL:O	2.17	0.44
13:AP:1:MET:HE3	13:AP:1:MET:C	2.42	0.44
15:AR:63:TYR:C	15:AR:64:LEU:HD12	2.42	0.44
18:AB:107:ARG:HA	18:AB:110:ILE:CD1	2.47	0.44
18:AB:119:GLN:C	18:AB:121:GLN:N	2.76	0.44
22:BA:94:A:OP1	35:BV:19:ARG:HD3	2.16	0.44
23:BB:123:G:H2'	23:BB:124:G:C8	2.52	0.44
23:BB:296:U:H2'	23:BB:297:G:C8	2.52	0.44
23:BB:322:A:H1'	23:BB:339:U:O2	2.16	0.44
23:BB:921:C:H2'	23:BB:922:C:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1151:A:H2'	23:BB:1152:C:O4'	2.18	0.44
23:BB:1664:A:H1'	23:BB:2726:A:C2	2.53	0.44
23:BB:2346:A:O4'	23:BB:2383:G:O4'	2.36	0.44
23:BB:2581:G:H2'	23:BB:2581:G:N3	2.33	0.44
23:BB:2710:C:H2'	23:BB:2711:A:H8	1.83	0.44
23:BB:2848:G:H22	23:BB:2867:G:N2	2.15	0.44
26:BD:144:GLY:O	26:BD:145:SER:C	2.60	0.44
29:BE:172:ALA:HB3	29:BE:195:GLN:NE2	2.33	0.44
31:B0:42:ILE:HG22	31:B0:43:THR:O	2.18	0.44
36:B2:18:PHE:O	36:B2:19:ARG:C	2.60	0.44
40:BH:124:THR:HG22	40:BH:125:THR:N	2.33	0.44
42:BN:70:THR:HB	42:BN:75:ILE:HD11	1.99	0.44
43:BO:115:LEU:H	43:BO:115:LEU:HD22	1.82	0.44
46:BU:86:PHE:CE1	46:BU:90:LYS:HB2	2.52	0.44
47:BF:128:SER:CB	47:BF:154:THR:HA	2.47	0.44
47:BF:172:PHE:C	47:BF:174:PHE:H	2.25	0.44
48:BG:84:LYS:O	48:BG:85:LYS:O	2.36	0.44
52:BW:23:LYS:NZ	52:BW:24:ARG:HG3	2.32	0.44
52:BW:46:ALA:HB3	52:BW:79:ILE:O	2.17	0.44
1:CA:515:G:H2'	1:CA:516:U:O4'	2.18	0.44
1:CA:807:A:H2'	1:CA:808:C:C6	2.53	0.44
1:CA:852:G:H2'	1:CA:853:C:C6	2.53	0.44
1:CA:963:G:H2'	1:CA:964:A:H8	1.83	0.44
1:CA:1009:U:H2'	1:CA:1010:U:C6	2.52	0.44
1:CA:1247:U:O2'	1:CA:1248:A:H5'	2.18	0.44
1:CA:1343:G:H2'	1:CA:1344:C:O4'	2.17	0.44
1:CA:1492:A:H5"	1:CA:1493:A:C5	2.53	0.44
1:CA:1519:A:H3'	1:CA:1520:C:C5'	2.47	0.44
3:CD:117:VAL:HA	3:CD:122:ILE:HG13	1.98	0.44
17:CT:2:ASN:CG	17:CT:3:ILE:H	2.24	0.44
19:CU:28:LEU:C	19:CU:30:GLU:H	2.26	0.44
6:CG:121:ASN:N	6:CG:121:ASN:ND2	2.66	0.44
21:CN:63:CYS:SG	21:CN:82:LYS:HG3	2.57	0.44
18:CB:150:ILE:O	18:CB:150:ILE:HG12	2.17	0.44
22:DA:29:A:H3'	22:DA:30:C:H6	1.82	0.44
23:DB:53:A:H2'	23:DB:54:G:O4'	2.17	0.44
23:DB:142:A:C2	50:DT:2:ILE:CG2	3.00	0.44
23:DB:305:C:O2'	23:DB:306:U:H5'	2.18	0.44
23:DB:338:G:N2	23:DB:339:U:H1'	2.32	0.44
23:DB:418:C:H2'	23:DB:419:U:H6	1.83	0.44
23:DB:554:U:H2'	23:DB:555:G:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:817:C:H2'	23:DB:818:G:C8	2.53	0.44
23:DB:917:A:H2'	23:DB:918:A:O4'	2.18	0.44
23:DB:1141:U:OP2	41:DJ:65:THR:HG21	2.17	0.44
23:DB:2454:G:H2'	23:DB:2455:G:H5'	1.98	0.44
23:DB:2798:U:H4'	23:DB:2800:A:C2	2.53	0.44
23:DB:2839:G:O2'	23:DB:2840:C:H5'	2.18	0.44
24:DI:101:SER:HG	24:DI:104:GLN:HG3	1.83	0.44
25:DC:61:TYR:HA	25:DC:85:ASN:HD21	1.82	0.44
26:DD:182:ALA:C	26:DD:184:ARG:H	2.25	0.44
29:DE:24:ASN:C	29:DE:24:ASN:ND2	2.75	0.44
29:DE:108:ILE:HD13	29:DE:108:ILE:O	2.16	0.44
32:D4:1:MET:HE3	32:D4:34:LYS:CG	2.48	0.44
34:D3:13:PHE:CZ	37:DL:61:LEU:HD22	2.53	0.44
35:DV:44:HIS:C	35:DV:46:LYS:N	2.76	0.44
35:DV:69:GLU:C	35:DV:70:ILE:HD13	2.43	0.44
37:DL:132:ARG:O	37:DL:136:GLU:HB2	2.17	0.44
38:DM:71:LYS:CG	38:DM:93:VAL:HG12	2.46	0.44
40:DH:48:GLU:CB	40:DH:51:ARG:HH21	2.30	0.44
40:DH:53:GLU:C	40:DH:55:GLU:N	2.76	0.44
41:DJ:38:GLY:O	41:DJ:43:GLU:HB2	2.18	0.44
44:DQ:65:ASN:O	44:DQ:69:ARG:HB2	2.18	0.44
47:DF:131:VAL:O	47:DF:133:GLU:N	2.50	0.44
47:DF:133:GLU:O	47:DF:134:GLN:C	2.61	0.44
48:DG:17:LYS:HB3	48:DG:24:THR:O	2.18	0.44
1:AA:286:C:H2'	1:AA:287:U:C6	2.52	0.44
1:AA:435:A:N3	1:AA:435:A:H2'	2.32	0.44
1:AA:510:A:N3	1:AA:543:U:H1'	2.32	0.44
1:AA:1117:A:H2	1:AA:1180:A:H1'	1.83	0.44
1:AA:1307:U:H2'	1:AA:1308:U:C6	2.52	0.44
8:AI:27:ILE:CD1	8:AI:34:LEU:HD22	2.48	0.44
8:AI:84:ARG:O	8:AI:87:MET:HB3	2.17	0.44
12:AM:2:ARG:O	12:AM:3:ILE:HB	2.18	0.44
14:AQ:8:GLN:HB3	14:AQ:59:GLU:HG3	1.99	0.44
16:AS:6:LYS:HB2	21:AN:40:ARG:HH12	1.83	0.44
17:AT:53:MET:HE3	17:AT:54:GLN:N	2.32	0.44
17:AT:63:LYS:HA	17:AT:63:LYS:HD3	1.85	0.44
18:AB:67:LEU:O	18:AB:160:LEU:HD23	2.18	0.44
19:AU:28:LEU:C	19:AU:30:GLU:H	2.26	0.44
20:AO:81:LEU:O	20:AO:85:LEU:HD13	2.16	0.44
21:AN:61:ASN:O	21:AN:62:ARG:O	2.36	0.44
23:BB:329:G:O6	46:BU:16:LYS:HB2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1080:A:O2'	24:BI:126:ARG:HB2	2.16	0.44
23:BB:1158:C:O3'	30:BY:30:ARG:NH2	2.51	0.44
23:BB:1249:U:O4'	44:BQ:3:VAL:HG21	2.18	0.44
23:BB:1474:U:H2'	23:BB:1475:G:H5'	1.99	0.44
23:BB:1681:G:N2	23:BB:1762:A:H3'	2.32	0.44
23:BB:1808:A:H3'	23:BB:1809:A:H8	1.81	0.44
23:BB:1920:C:H2'	23:BB:1921:G:C8	2.52	0.44
23:BB:2154:A:C2'	23:BB:2155:U:H5'	2.47	0.44
23:BB:2348:U:H4'	33:B1:40:PRO:HG2	2.00	0.44
23:BB:2391:G:P	34:B3:34:LYS:HZ1	2.40	0.44
23:BB:2666:C:O4'	23:BB:2666:C:O2	2.34	0.44
23:BB:2740:A:H2'	23:BB:2741:A:C8	2.52	0.44
23:BB:2798:U:H4'	23:BB:2800:A:C2	2.52	0.44
24:BI:79:LEU:HD11	24:BI:131:THR:OG1	2.16	0.44
25:BC:149:LYS:HG2	25:BC:152:GLN:NE2	2.32	0.44
25:BC:249:VAL:O	25:BC:250:GLN:C	2.60	0.44
27:BK:88:ASN:HD22	27:BK:88:ASN:C	2.21	0.44
28:BP:19:PHE:CZ	28:BP:25:VAL:HG11	2.52	0.44
40:BH:72:ILE:HG23	40:BH:72:ILE:O	2.15	0.44
46:BU:13:LEU:CA	46:BU:18:LYS:HE3	2.46	0.44
46:BU:46:LYS:HE3	46:BU:47:PRO:O	2.17	0.44
46:BU:82:VAL:C	46:BU:96:LYS:HZ2	2.25	0.44
47:BF:2:LYS:NZ	47:BF:97:GLU:HA	2.33	0.44
47:BF:100:GLU:C	47:BF:102:LEU:N	2.74	0.44
47:BF:133:GLU:O	47:BF:134:GLN:C	2.61	0.44
48:BG:84:LYS:HB2	48:BG:132:LEU:H	1.83	0.44
52:BW:43:LYS:HE3	52:BW:68:PHE:HE1	1.82	0.44
1:CA:137:U:H2'	1:CA:138:G:C8	2.51	0.44
1:CA:605:U:H2'	1:CA:606:G:H8	1.82	0.44
1:CA:656:G:H2'	1:CA:657:U:C6	2.52	0.44
1:CA:750:C:O2	20:CO:23:GLY:HA3	2.17	0.44
1:CA:1317:C:OP1	21:CN:56:PRO:HD2	2.17	0.44
1:CA:1411:C:H2'	1:CA:1412:C:C6	2.53	0.44
3:CD:12:ARG:HG2	3:CD:12:ARG:H	1.52	0.44
3:CD:161:ALA:HA	3:CD:164:ARG:HB3	1.99	0.44
7:CH:44:PHE:CE2	7:CH:100:ILE:HG12	2.49	0.44
10:CK:126:ARG:HA	10:CK:126:ARG:NE	2.32	0.44
11:CL:80:LEU:HB3	11:CL:97:VAL:HG23	1.99	0.44
13:CP:1:MET:HE3	13:CP:1:MET:C	2.41	0.44
13:CP:72:ALA:HA	13:CP:75:ILE:HD12	2.00	0.44
2:CC:17:TRP:C	2:CC:19:SER:H	2.26	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:112:ALA:CA	2:CC:201:ILE:HD11	2.48	0.44
6:CG:121:ASN:N	6:CG:121:ASN:HD22	2.15	0.44
6:CG:148:LYS:O	6:CG:151:ALA:N	2.50	0.44
12:CM:65:GLU:HB2	12:CM:66:GLY:H	1.58	0.44
16:CS:29:PRO:HA	16:CS:47:THR:CB	2.47	0.44
18:CB:59:ILE:H	18:CB:59:ILE:HG13	1.53	0.44
22:DA:19:C:H2'	22:DA:20:G:H8	1.82	0.44
23:DB:111:A:H2'	23:DB:112:U:O4'	2.18	0.44
23:DB:535:G:O2'	23:DB:536:G:H5'	2.18	0.44
23:DB:596:U:H2'	23:DB:597:G:C8	2.52	0.44
23:DB:711:G:O2'	23:DB:712:G:H5'	2.17	0.44
23:DB:1161:C:H4'	49:DR:8:GLY:O	2.17	0.44
23:DB:1241:A:H3'	23:DB:1242:U:H6	1.82	0.44
23:DB:1295:C:H2'	23:DB:1296:G:H8	1.83	0.44
23:DB:1591:A:H2'	23:DB:1592:C:O4'	2.17	0.44
23:DB:1595:C:O2'	23:DB:1596:A:H5'	2.18	0.44
23:DB:1718:G:H2'	23:DB:1719:G:H8	1.82	0.44
23:DB:1792:G:OP1	25:DC:204:LEU:HD13	2.17	0.44
23:DB:2331:G:O2'	23:DB:2332:C:H5'	2.18	0.44
25:DC:251:THR:O	25:DC:252:LYS:HD2	2.18	0.44
26:DD:4:LEU:HD12	26:DD:32:ASN:CG	2.43	0.44
27:DK:88:ASN:C	27:DK:88:ASN:ND2	2.75	0.44
27:DK:88:ASN:ND2	27:DK:89:ASN:N	2.62	0.44
28:DP:20:ARG:HB3	28:DP:23:ASP:OD2	2.17	0.44
34:D3:22:LYS:HA	34:D3:48:MET:HA	1.99	0.44
35:DV:38:LEU:CG	35:DV:40:ILE:HG23	2.48	0.44
38:DM:43:ALA:HB2	38:DM:92:TRP:O	2.18	0.44
45:DS:41:LYS:O	45:DS:43:ALA:N	2.50	0.44
48:DG:123:GLU:C	48:DG:125:PRO:HD3	2.42	0.44
49:DR:14:VAL:CG2	49:DR:18:GLN:HG3	2.47	0.44
51:DZ:5:CYS:CB	51:DZ:10:LYS:N	2.81	0.44
1:AA:465:A:O2'	1:AA:466:A:H2'	2.17	0.44
1:AA:583:A:N6	1:AA:758:C:H1'	2.33	0.44
1:AA:1101:A:O2'	1:AA:1102:A:OP2	2.34	0.44
1:AA:1360:A:C2'	1:AA:1361:G:H5'	2.47	0.44
1:AA:1441:A:C2	28:BP:113:LEU:HD13	2.53	0.44
2:AC:28:PHE:HD1	21:AN:75:LYS:HE3	1.82	0.44
2:AC:130:ARG:O	2:AC:131:ARG:C	2.61	0.44
2:AC:179:ALA:O	2:AC:180:ASP:C	2.60	0.44
4:AE:134:ASN:O	4:AE:135:VAL:C	2.60	0.44
8:AI:24:ASN:O	8:AI:60:LEU:N	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AK:63:GLN:HG3	10:AK:98:ALA:HB1	2.00	0.44
14:AQ:17:GLU:C	14:AQ:19:SER:H	2.25	0.44
15:AR:34:GLU:OE1	15:AR:34:GLU:N	2.48	0.44
16:AS:25:GLY:O	16:AS:27:LYS:HG2	2.17	0.44
17:AT:64:GLY:O	17:AT:65:LEU:HB3	2.17	0.44
20:AO:29:VAL:HG13	20:AO:67:LEU:HD21	2.00	0.44
20:AO:39:LEU:HD22	20:AO:56:LEU:HD13	2.00	0.44
21:AN:20:PHE:HA	21:AN:23:ARG:HB2	2.00	0.44
22:BA:67:G:O2'	22:BA:68:C:H5'	2.16	0.44
22:BA:76:G:H2'	22:BA:77:U:C6	2.51	0.44
23:BB:70:G:H3'	23:BB:113:U:C4'	2.44	0.44
23:BB:132:G:H2'	23:BB:133:U:C6	2.52	0.44
23:BB:274:C:H2'	23:BB:275:C:H6	1.82	0.44
23:BB:600:G:C1'	29:BE:100:MET:HG2	2.45	0.44
23:BB:711:G:O2'	23:BB:712:G:H5'	2.18	0.44
23:BB:1076:C:H2'	23:BB:1077:A:C8	2.52	0.44
23:BB:1418:G:H1'	23:BB:1580:A:H61	1.82	0.44
23:BB:1716:U:H2'	23:BB:1717:A:C8	2.53	0.44
23:BB:2197:U:O2'	23:BB:2198:A:H2'	2.17	0.44
23:BB:2361:G:H2'	23:BB:2362:C:H6	1.82	0.44
23:BB:2494:G:H2'	23:BB:2495:G:H8	1.82	0.44
23:BB:2543:G:H4'	23:BB:2645:G:N2	2.32	0.44
23:BB:2559:C:H2'	23:BB:2560:A:H8	1.82	0.44
23:BB:2635:A:H4'	26:BD:79:LEU:HB2	1.99	0.44
23:BB:2688:G:H1'	23:BB:2721:A:H61	1.82	0.44
23:BB:2811:G:O2'	23:BB:2812:G:H5'	2.18	0.44
24:BI:4:VAL:O	24:BI:4:VAL:HG13	2.17	0.44
24:BI:5:GLN:HG2	24:BI:6:ALA:H	1.81	0.44
26:BD:32:ASN:HA	26:BD:51:THR:O	2.18	0.44
27:BK:109:SER:C	27:BK:111:LYS:N	2.75	0.44
28:BP:53:GLY:O	28:BP:54:LEU:C	2.60	0.44
29:BE:148:ILE:HD13	29:BE:187:VAL:CG2	2.47	0.44
33:B1:36:LYS:HG3	33:B1:46:VAL:O	2.18	0.44
34:B3:40:LYS:O	34:B3:43:LEU:N	2.48	0.44
37:BL:81:ASP:HA	37:BL:84:LYS:CE	2.47	0.44
37:BL:116:VAL:HG13	37:BL:117:THR:N	2.18	0.44
37:BL:134:ALA:O	37:BL:137:ALA:HB3	2.17	0.44
38:BM:40:ARG:NH2	38:BM:73:ILE:HD12	2.33	0.44
38:BM:66:ARG:HE	38:BM:101:VAL:HG21	1.83	0.44
40:BH:28:ASN:HD22	40:BH:28:ASN:HA	1.60	0.44
40:BH:84:ALA:CA	40:BH:90:LEU:HG	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BN:36:THR:OG1	42:BN:37:THR:N	2.50	0.44
42:BN:55:ALA:HA	42:BN:80:PHE:CE1	2.53	0.44
42:BN:79:LEU:HD23	42:BN:83:LEU:HB3	1.98	0.44
44:BQ:85:ALA:O	44:BQ:86:SER:C	2.60	0.44
45:BS:20:VAL:HG13	45:BS:21:ALA:N	2.33	0.44
46:BU:3:LYS:O	46:BU:4:ILE:HD13	2.17	0.44
47:BF:103:ILE:H	47:BF:106:ALA:HB3	1.81	0.44
51:BZ:14:THR:HA	51:BZ:28:ARG:HB2	1.99	0.44
51:BZ:55:GLY:O	51:BZ:58:VAL:HB	2.18	0.44
1:CA:635:A:H2'	1:CA:636:U:H6	1.83	0.44
1:CA:672:U:H2'	1:CA:673:A:C8	2.52	0.44
1:CA:815:A:H4'	1:CA:817:C:C5	2.52	0.44
1:CA:1038:C:O2'	1:CA:1039:G:H5'	2.18	0.44
1:CA:1496:C:H2'	1:CA:1497:G:O4'	2.18	0.44
3:CD:61:ARG:NH1	3:CD:68:GLU:HB2	2.33	0.44
3:CD:160:LEU:C	3:CD:162:GLU:N	2.75	0.44
4:CE:113:VAL:O	4:CE:116:VAL:HG22	2.16	0.44
11:CL:23:LEU:O	11:CL:25:ALA:N	2.51	0.44
11:CL:36:VAL:HG23	11:CL:36:VAL:O	2.18	0.44
14:CQ:4:ILE:HD12	14:CQ:4:ILE:O	2.17	0.44
14:CQ:17:GLU:C	14:CQ:19:SER:H	2.25	0.44
15:CR:70:THR:HB	15:CR:72:ARG:NH1	2.32	0.44
6:CG:50:ALA:HB2	6:CG:57:GLU:N	2.32	0.44
9:CJ:36:VAL:HG22	9:CJ:76:ILE:HB	2.00	0.44
21:CN:60:ARG:NE	21:CN:62:ARG:NE	2.66	0.44
23:DB:125:A:C2	36:D2:10:LEU:HA	2.53	0.44
23:DB:202:U:H2'	23:DB:203:A:O4'	2.17	0.44
23:DB:829:A:H5'	23:DB:831:G:N7	2.32	0.44
23:DB:863:A:O2'	23:DB:864:G:H5'	2.18	0.44
23:DB:898:C:OP1	23:DB:899:A:H4'	2.16	0.44
23:DB:968:C:H2'	23:DB:969:G:C8	2.49	0.44
23:DB:1222:U:P	49:DR:90:ARG:HH22	2.40	0.44
23:DB:1459:G:H3'	23:DB:1460:U:H4'	1.99	0.44
23:DB:1549:A:H2'	23:DB:1550:C:H6	1.81	0.44
23:DB:1716:U:H2'	23:DB:1717:A:C8	2.52	0.44
23:DB:1948:G:O2'	23:DB:1949:G:H5'	2.18	0.44
23:DB:2267:A:OP2	23:DB:2268:A:H5"	2.18	0.44
23:DB:2637:U:OP1	26:DD:83:ARG:HD3	2.18	0.44
23:DB:2834:G:H1'	23:DB:2883:A:H61	1.83	0.44
23:DB:2863:C:O2'	23:DB:2864:G:H5'	2.17	0.44
24:DI:89:SER:HA	24:DI:97:VAL:HG11	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:11:GLY:C	25:DC:13:ARG:H	2.26	0.44
30:DY:16:LEU:O	30:DY:19:HIS:HB2	2.17	0.44
31:D0:27:LEU:HD21	45:DS:38:TYR:CE1	2.52	0.44
35:DV:16:ALA:HA	35:DV:19:ARG:CZ	2.48	0.44
35:DV:53:LYS:HZ2	35:DV:54:ALA:H	1.66	0.44
38:DM:40:ARG:NH2	38:DM:73:ILE:HD12	2.33	0.44
41:DJ:56:VAL:HG21	41:DJ:101:ILE:HG21	2.00	0.44
43:DO:51:ALA:HB3	43:DO:78:VAL:HG13	2.00	0.44
43:DO:64:TYR:C	43:DO:66:GLY:N	2.76	0.44
44:DQ:50:ARG:N	44:DQ:50:ARG:HD2	2.33	0.44
45:DS:20:VAL:HG13	45:DS:21:ALA:N	2.32	0.44
46:DU:49:PRO:HA	46:DU:53:GLN:HG3	1.99	0.44
47:DF:2:LYS:NZ	47:DF:97:GLU:HA	2.33	0.44
47:DF:73:VAL:O	47:DF:74:ALA:HB2	2.17	0.44
48:DG:1:SER:H1	48:DG:61:TRP:HE3	1.65	0.44
48:DG:16:VAL:HG13	48:DG:49:LEU:HD13	1.99	0.44
48:DG:71:LEU:HA	48:DG:74:MET:SD	2.58	0.44
50:DT:32:LEU:N	50:DT:83:ALA:CB	2.81	0.44
1:AA:515:G:H2'	1:AA:516:U:O4'	2.17	0.44
1:AA:586:C:H5"	7:AH:81:GLY:HA2	2.00	0.44
1:AA:635:A:H2'	1:AA:636:U:H6	1.82	0.44
1:AA:1173:U:H2'	1:AA:1174:G:O4'	2.18	0.44
1:AA:1444:U:H2'	1:AA:1445:U:C6	2.52	0.44
2:AC:11:LEU:HB2	21:AN:96:LYS:HB2	1.99	0.44
2:AC:67:ILE:O	2:AC:103:ALA:N	2.48	0.44
2:AC:173:PRO:HB2	2:AC:176:THR:OG1	2.18	0.44
3:AD:10:LEU:HD22	3:AD:62:ARG:NH1	2.33	0.44
3:AD:116:LEU:HD21	3:AD:153:ARG:HD3	1.99	0.44
5:AF:15:SER:HA	5:AF:18:VAL:HG23	1.99	0.44
5:AF:38:ARG:HE	5:AF:63:ASN:CG	2.26	0.44
10:AK:45:THR:O	10:AK:46:ALA:C	2.59	0.44
11:AL:23:LEU:O	11:AL:25:ALA:N	2.50	0.44
13:AP:38:PHE:CE2	13:AP:51:ARG:HD3	2.53	0.44
18:AB:80:LYS:HB3	18:AB:90:PHE:CE1	2.53	0.44
19:AU:42:THR:O	19:AU:43:GLU:C	2.61	0.44
22:BA:43:C:H5'	47:BF:62:GLN:HB3	1.98	0.44
23:BB:19:A:H2'	23:BB:20:C:H6	1.83	0.44
23:BB:100:U:H1'	23:BB:101:A:C4	2.52	0.44
23:BB:137:U:OP2	23:BB:137:U:H6	2.00	0.44
23:BB:337:C:OP1	46:BU:3:LYS:HG3	2.18	0.44
23:BB:554:U:H2'	23:BB:555:G:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:751:A:OP2	45:BS:90:LYS:N	2.48	0.44
23:BB:830:G:H4'	23:BB:831:G:OP2	2.17	0.44
23:BB:1183:U:H2'	23:BB:1184:U:H6	1.82	0.44
23:BB:1410:G:H2'	23:BB:1411:U:C6	2.52	0.44
23:BB:1792:G:O2'	23:BB:1793:C:H5'	2.18	0.44
23:BB:2056:G:N2	31:B0:1:ALA:HA	2.32	0.44
25:BC:36:ASN:HD22	25:BC:59:GLN:C	2.26	0.44
25:BC:40:GLY:O	25:BC:53:ILE:HG23	2.18	0.44
25:BC:76:VAL:HG12	25:BC:114:GLN:HB2	2.00	0.44
25:BC:109:LEU:N	25:BC:109:LEU:HD23	2.33	0.44
25:BC:230:PRO:O	25:BC:241:LYS:HD3	2.18	0.44
26:BD:121:THR:C	26:BD:123:LYS:N	2.71	0.44
26:BD:173:GLN:O	26:BD:174:SER:HB3	2.17	0.44
27:BK:71:ARG:HB3	27:BK:72:PRO:CD	2.41	0.44
28:BP:45:VAL:N	28:BP:60:VAL:HG13	2.32	0.44
30:BY:50:VAL:HG23	30:BY:54:VAL:HG22	2.00	0.44
36:B2:10:LEU:O	36:B2:14:ARG:HG2	2.18	0.44
37:BL:29:LYS:C	37:BL:31:GLY:N	2.75	0.44
37:BL:111:ILE:HA	37:BL:128:THR:HG23	1.98	0.44
38:BM:71:LYS:CB	38:BM:93:VAL:HG12	2.47	0.44
40:BH:81:ALA:CA	40:BH:146:VAL:HA	2.46	0.44
40:BH:147:VAL:HG12	40:BH:148:ALA:N	2.29	0.44
41:BJ:56:VAL:HG21	41:BJ:101:ILE:HG21	2.00	0.44
43:BO:14:ALA:C	43:BO:16:ARG:N	2.75	0.44
44:BQ:104:ALA:HA	49:BR:46:GLU:OE1	2.17	0.44
45:BS:50:VAL:HG12	45:BS:105:VAL:HG23	2.00	0.44
45:BS:61:ASN:HB3	45:BS:62:ASP:H	1.63	0.44
45:BS:71:VAL:O	45:BS:71:VAL:HG22	2.17	0.44
46:BU:51:LEU:N	46:BU:53:GLN:NE2	2.65	0.44
47:BF:107:VAL:HA	47:BF:111:ARG:HH12	1.82	0.44
49:BR:83:TYR:HE2	49:BR:85:LYS:HE3	1.82	0.44
1:CA:545:C:O2'	1:CA:546:A:H5'	2.18	0.44
1:CA:551:U:H2'	1:CA:552:U:C6	2.52	0.44
1:CA:754:C:H3'	1:CA:754:C:O2	2.18	0.44
3:CD:18:LEU:N	3:CD:18:LEU:HD22	2.33	0.44
3:CD:26:ALA:HA	3:CD:30:LYS:CE	2.44	0.44
3:CD:106:PHE:CD1	3:CD:144:ILE:HD11	2.53	0.44
4:CE:93:VAL:HG12	4:CE:94:PHE:N	2.33	0.44
10:CK:60:PHE:CE1	6:CG:146:ALA:HB1	2.52	0.44
10:CK:113:THR:HG23	10:CK:114:PRO:HD2	2.00	0.44
11:CL:85:ARG:HA	11:CL:93:ARG:HA	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:149:LYS:HD2	2:CC:166:TRP:CZ2	2.53	0.44
9:CJ:35:GLN:HG3	9:CJ:36:VAL:H	1.81	0.44
12:CM:63:VAL:HG13	12:CM:67:ASP:OD2	2.18	0.44
18:CB:64:GLY:H	18:CB:224:ARG:HH11	1.66	0.44
18:CB:69:VAL:HG23	18:CB:162:VAL:HB	2.00	0.44
18:CB:100:LEU:HD23	18:CB:174:GLU:O	2.18	0.44
20:CO:19:ALA:O	20:CO:20:ASN:HB3	2.18	0.44
23:DB:303:G:H2'	23:DB:304:U:H6	1.79	0.44
23:DB:460:A:H2'	23:DB:461:C:O4'	2.18	0.44
23:DB:805:G:N2	23:DB:829:A:OP1	2.51	0.44
23:DB:877:A:N6	23:DB:899:A:OP2	2.51	0.44
23:DB:1099:G:OP2	24:DI:2:LYS:O	2.35	0.44
23:DB:1173:U:H2'	23:DB:1174:U:C6	2.52	0.44
23:DB:1227:G:O2'	23:DB:1228:G:H5'	2.16	0.44
23:DB:1401:G:H2'	23:DB:1402:U:C6	2.53	0.44
23:DB:1528:A:H2'	23:DB:1529:G:O4'	2.18	0.44
23:DB:2376:A:H2'	23:DB:2377:A:O4'	2.17	0.44
25:DC:116:GLN:O	25:DC:117:SER:HB3	2.17	0.44
27:DK:72:PRO:C	27:DK:74:GLY:N	2.75	0.44
28:DP:8:GLU:HA	28:DP:54:LEU:HD22	2.00	0.44
29:DE:97:ASN:HD21	29:DE:100:MET:HG3	1.82	0.44
30:DY:50:VAL:HB	30:DY:53:MET:HB3	2.00	0.44
35:DV:50:MET:C	35:DV:52:ALA:N	2.76	0.44
37:DL:111:ILE:HA	37:DL:128:THR:HG23	2.00	0.44
38:DM:53:MET:SD	38:DM:63:ILE:HG21	2.57	0.44
39:DX:30:MET:C	39:DX:32:ALA:H	2.25	0.44
40:DH:60:GLU:C	40:DH:62:LEU:N	2.76	0.44
40:DH:72:ILE:CG2	40:DH:108:VAL:HG21	2.47	0.44
41:DJ:58:ASN:HA	41:DJ:127:GLY:HA2	2.00	0.44
41:DJ:64:VAL:CG2	41:DJ:68:LYS:HB2	2.48	0.44
43:DO:30:ARG:H	43:DO:97:PHE:HE2	1.64	0.44
43:DO:39:VAL:CG1	43:DO:48:LEU:HD12	2.42	0.44
47:DF:131:VAL:C	47:DF:133:GLU:N	2.73	0.44
48:DG:83:THR:HA	48:DG:84:LYS:HZ3	1.82	0.44
49:DR:37:GLU:CD	49:DR:37:GLU:N	2.75	0.44
50:DT:67:VAL:HG23	50:DT:75:GLY:O	2.17	0.44
1:AA:113:G:O4'	1:AA:354:G:H4'	2.17	0.44
1:AA:319:G:O2'	1:AA:320:A:H5'	2.18	0.44
1:AA:412:A:H4'	1:AA:413:G:OP1	2.17	0.44
1:AA:456:A:H2'	1:AA:457:G:H5"	2.00	0.44
1:AA:472:U:H2'	1:AA:473:U:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:541:G:O2'	3:AD:39:GLN:HB3	2.17	0.44
1:AA:551:U:H2'	1:AA:552:U:C6	2.52	0.44
1:AA:552:U:H4'	11:AL:82:ARG:O	2.18	0.44
1:AA:679:C:O2'	1:AA:680:C:H5'	2.18	0.44
1:AA:696:A:H2'	1:AA:697:U:H6	1.83	0.44
1:AA:754:C:H3'	1:AA:754:C:O2	2.17	0.44
1:AA:763:G:H2'	1:AA:764:C:H6	1.82	0.44
1:AA:844:G:C2'	1:AA:845:A:H8	2.30	0.44
1:AA:1041:G:O2'	1:AA:1042:A:H5'	2.18	0.44
1:AA:1426:G:O2'	1:AA:1427:C:H5'	2.17	0.44
3:AD:154:VAL:O	3:AD:157:ALA:HB3	2.18	0.44
8:AI:46:VAL:HA	8:AI:49:GLN:CG	2.48	0.44
10:AK:22:ILE:HD13	10:AK:95:THR:CG2	2.48	0.44
10:AK:113:THR:HG23	10:AK:114:PRO:HD2	2.00	0.44
11:AL:23:LEU:C	11:AL:25:ALA:N	2.75	0.44
12:AM:33:LEU:HD12	12:AM:40:GLU:HG2	2.00	0.44
14:AQ:3:LYS:N	14:AQ:3:LYS:HE2	2.32	0.44
15:AR:58:ILE:O	15:AR:61:ALA:HB3	2.18	0.44
16:AS:36:ARG:O	16:AS:69:LYS:HD2	2.17	0.44
19:AU:42:THR:C	19:AU:46:ARG:HG3	2.42	0.44
20:AO:77:ARG:HB3	20:AO:77:ARG:NH1	2.32	0.44
21:AN:5:MET:HE3	21:AN:60:ARG:HH12	1.83	0.44
22:BA:6:G:O2'	22:BA:7:G:H5'	2.18	0.44
22:BA:73:A:N3	22:BA:73:A:H2'	2.33	0.44
22:BA:106:G:H2'	22:BA:107:G:C8	2.52	0.44
23:BB:56:A:O2'	23:BB:57:C:H5'	2.18	0.44
23:BB:138:U:H1'	50:BT:1:MET:O	2.18	0.44
23:BB:265:A:O2'	23:BB:266:G:H4'	2.16	0.44
23:BB:402:A:O2'	23:BB:403:U:H5'	2.17	0.44
23:BB:745:G:O2'	23:BB:748:G:H1'	2.17	0.44
23:BB:841:G:O2'	23:BB:842:U:H5'	2.18	0.44
23:BB:1030:C:O2'	23:BB:1031:G:H5'	2.17	0.44
23:BB:1059:G:H2'	23:BB:1060:U:C6	2.53	0.44
23:BB:1219:U:H2'	23:BB:1220:G:C8	2.53	0.44
23:BB:1369:G:O2'	23:BB:1370:C:H5'	2.17	0.44
23:BB:1842:G:O2'	23:BB:1843:C:H5'	2.18	0.44
23:BB:2070:A:H2'	23:BB:2071:A:H8	1.80	0.44
23:BB:2153:C:H2'	23:BB:2154:A:C8	2.53	0.44
23:BB:2298:A:OP1	47:BF:70:ARG:HD3	2.18	0.44
23:BB:2648:G:H2'	23:BB:2649:C:C6	2.53	0.44
23:BB:2785:C:H2'	23:BB:2786:U:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BI:7:TYR:CD1	24:BI:7:TYR:C	2.96	0.44
27:BK:18:ARG:O	27:BK:45:GLU:HB2	2.17	0.44
28:BP:56:SER:O	28:BP:74:GLN:HA	2.17	0.44
29:BE:28:VAL:O	29:BE:29:HIS:C	2.60	0.44
29:BE:165:HIS:O	29:BE:167:VAL:N	2.47	0.44
31:B0:12:ARG:HD2	31:B0:16:ARG:NH1	2.33	0.44
37:BL:68:SER:C	37:BL:70:LYS:N	2.74	0.44
37:BL:121:THR:CB	37:BL:141:LYS:HB3	2.47	0.44
39:BX:46:VAL:O	39:BX:50:VAL:HG23	2.18	0.44
40:BH:53:GLU:C	40:BH:57:LYS:HG2	2.42	0.44
44:BQ:6:GLY:O	44:BQ:7:VAL:C	2.61	0.44
44:BQ:7:VAL:O	44:BQ:8:ILE:C	2.61	0.44
44:BQ:18:LYS:C	44:BQ:20:ALA:N	2.74	0.44
44:BQ:65:ASN:O	44:BQ:69:ARG:HB2	2.18	0.44
47:BF:176:PHE:HB3	47:BF:177:ARG:H	1.67	0.44
48:BG:18:ILE:HA	48:BG:23:ILE:CG1	2.47	0.44
51:BZ:32:ASN:HB3	51:BZ:34:HIS:NE2	2.33	0.44
52:BW:16:GLU:CD	52:BW:16:GLU:N	2.76	0.44
1:CA:131:A:H2'	1:CA:132:C:H6	1.82	0.44
1:CA:740:U:OP1	20:CO:38:HIS:HE1	2.00	0.44
1:CA:911:U:O2'	1:CA:912:C:H5'	2.17	0.44
1:CA:1005:A:O2'	1:CA:1037:C:H1'	2.18	0.44
1:CA:1091:U:H3'	6:CG:3:ARG:HH12	1.83	0.44
1:CA:1367:C:H4'	9:CJ:50:THR:HG21	1.99	0.44
5:CF:3:HIS:CD2	5:CF:92:THR:HG23	2.53	0.44
5:CF:38:ARG:HH21	5:CF:63:ASN:ND2	2.16	0.44
10:CK:17:ASP:C	10:CK:36:ARG:HH12	2.25	0.44
11:CL:42:LYS:HD2	11:CL:43:LYS:CG	2.48	0.44
14:CQ:30:HIS:CG	14:CQ:33:TYR:HB2	2.53	0.44
14:CQ:44:HIS:HB2	14:CQ:69:THR:O	2.18	0.44
14:CQ:74:LEU:C	14:CQ:74:LEU:HD13	2.43	0.44
17:CT:44:ALA:O	17:CT:48:LYS:HB3	2.18	0.44
19:CU:42:THR:O	19:CU:43:GLU:C	2.61	0.44
2:CC:99:GLN:O	2:CC:100:ILE:HB	2.18	0.44
6:CG:132:THR:O	6:CG:135:LYS:HB3	2.18	0.44
8:CI:20:ILE:CD1	8:CI:62:LEU:HD12	2.47	0.44
21:CN:27:LYS:HG3	21:CN:28:ALA:N	2.26	0.44
16:CS:51:HIS:HE1	16:CS:53:GLY:C	2.26	0.44
18:CB:33:ALA:CB	18:CB:38:HIS:HA	2.48	0.44
18:CB:55:GLU:OE1	18:CB:58:LYS:HD2	2.17	0.44
18:CB:177:ASN:OD1	18:CB:178:LEU:HD23	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'	2.17	0.44
23:DB:704:G:H1'	23:DB:727:A:N6	2.31	0.44
23:DB:963:U:H2'	23:DB:964:C:C6	2.53	0.44
23:DB:969:G:O2'	23:DB:970:U:H5'	2.16	0.44
23:DB:1145:C:O2'	23:DB:1146:C:H5'	2.16	0.44
23:DB:1457:U:H5"	23:DB:1458:U:OP1	2.18	0.44
23:DB:1465:G:H2'	23:DB:1466:U:C6	2.53	0.44
23:DB:2276:G:O2'	23:DB:2277:G:H5'	2.18	0.44
23:DB:2771:C:H2'	23:DB:2772:C:C6	2.52	0.44
24:DI:70:THR:O	24:DI:70:THR:HG23	2.17	0.44
24:DI:78:LEU:HD23	24:DI:81:LYS:HE2	2.00	0.44
26:DD:32:ASN:HA	26:DD:51:THR:O	2.17	0.44
30:DY:21:ALA:O	30:DY:24:LEU:HB3	2.17	0.44
35:DV:38:LEU:HG	35:DV:40:ILE:CD1	2.44	0.44
36:D2:29:GLN:HE21	36:D2:33:ARG:HD2	1.83	0.44
38:DM:43:ALA:O	38:DM:46:ILE:HG12	2.17	0.44
41:DJ:14:ASP:O	41:DJ:53:TYR:HB2	2.17	0.44
42:DN:82:GLU:C	42:DN:84:GLY:N	2.74	0.44
43:DO:106:LEU:HG	43:DO:107:ALA:N	2.32	0.44
44:DQ:6:GLY:O	44:DQ:7:VAL:C	2.61	0.44
45:DS:108:SER:OG	45:DS:109:ASP:N	2.50	0.44
47:DF:33:ILE:CG2	47:DF:34:THR:N	2.81	0.44
1:AA:13:U:C1'	1:AA:914:A:H5"	2.40	0.44
1:AA:33:A:OP2	1:AA:398:U:H5'	2.18	0.44
1:AA:216:U:H2'	1:AA:217:C:H6	1.83	0.44
1:AA:511:C:O2'	1:AA:512:U:H6	2.01	0.44
1:AA:737:C:H2'	1:AA:738:C:C6	2.53	0.44
1:AA:815:A:H4'	1:AA:817:C:C5	2.53	0.44
1:AA:996:A:N6	1:AA:1046:A:H1'	2.33	0.44
5:AF:18:VAL:HB	5:AF:19:PRO:CD	2.48	0.44
5:AF:92:THR:HG22	5:AF:93:LYS:N	2.31	0.44
7:AH:34:ALA:HB1	7:AH:109:VAL:HB	1.99	0.44
8:AI:85:ALA:O	8:AI:88:GLU:HB2	2.18	0.44
12:AM:25:GLY:O	12:AM:26:LYS:C	2.60	0.44
12:AM:84:CYS:O	12:AM:85:TYR:C	2.61	0.44
18:AB:187:ASP:O	18:AB:188:THR:C	2.60	0.44
21:AN:55:SER:HB2	21:AN:58:ARG:HD2	2.00	0.44
22:BA:87:U:H2'	22:BA:88:C:H5"	1.99	0.44
23:BB:299:A:H2'	23:BB:300:A:C8	2.53	0.44
23:BB:305:C:O2'	23:BB:306:U:H5'	2.17	0.44
23:BB:506:G:C5'	23:BB:509:C:H1'	2.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:930:G:H1'	30:BY:24:LEU:HD11	2.00	0.44
23:BB:972:A:OP2	23:BB:974:G:H5"	2.18	0.44
23:BB:1292:G:H2'	23:BB:1293:C:C6	2.52	0.44
23:BB:1423:G:H2'	23:BB:1424:G:H8	1.83	0.44
23:BB:1486:U:H2'	23:BB:1487:U:C6	2.53	0.44
23:BB:1516:G:H2'	23:BB:1517:G:H8	1.83	0.44
23:BB:1635:A:H2'	23:BB:1636:U:O4'	2.17	0.44
23:BB:1797:G:O3'	25:BC:255:LYS:O	2.36	0.44
23:BB:2273:A:H2'	23:BB:2274:A:C8	2.53	0.44
23:BB:2699:C:H2'	23:BB:2700:A:C8	2.53	0.44
26:BD:34:VAL:O	26:BD:93:GLY:HA2	2.18	0.44
27:BK:79:PHE:CD1	27:BK:79:PHE:N	2.83	0.44
28:BP:20:ARG:HB3	28:BP:23:ASP:OD2	2.17	0.44
28:BP:29:VAL:HA	28:BP:79:VAL:O	2.18	0.44
29:BE:6:LYS:HB3	29:BE:7:ASP:H	1.72	0.44
29:BE:133:LEU:C	29:BE:135:ALA:N	2.76	0.44
37:BL:10:GLU:C	37:BL:12:SER:N	2.75	0.44
37:BL:23:ILE:O	37:BL:24:GLY:C	2.60	0.44
37:BL:129:LYS:H	37:BL:129:LYS:HG2	1.56	0.44
45:BS:45:VAL:O	45:BS:48:LYS:HB3	2.18	0.44
48:BG:96:ALA:CB	48:BG:103:ASN:HB3	2.41	0.44
49:BR:19:THR:HA	49:BR:97:LYS:HA	2.00	0.44
49:BR:34:GLU:HB3	49:BR:58:VAL:HG21	1.98	0.44
50:BT:43:ILE:HG23	50:BT:58:VAL:HG21	1.99	0.44
52:BW:32:ALA:O	52:BW:34:SER:N	2.49	0.44
1:CA:51:A:H4'	1:CA:52:C:OP2	2.18	0.44
1:CA:153:C:H2'	1:CA:154:U:C6	2.53	0.44
1:CA:600:A:H2'	1:CA:601:G:C8	2.53	0.44
1:CA:1348:U:O3'	8:CI:121:ARG:HG3	2.17	0.44
11:CL:74:GLN:HB3	11:CL:75:GLU:H	1.48	0.44
13:CP:45:GLU:C	13:CP:47:GLU:H	2.25	0.44
13:CP:67:ILE:HG12	13:CP:72:ALA:CB	2.48	0.44
14:CQ:8:GLN:HA	14:CQ:58:VAL:O	2.17	0.44
2:CC:19:SER:O	21:CN:93:PRO:HB3	2.18	0.44
8:CI:16:ALA:HA	8:CI:66:VAL:HA	1.98	0.44
8:CI:28:VAL:C	8:CI:29:ILE:HG13	2.43	0.44
21:CN:52:ARG:HD3	21:CN:52:ARG:HA	1.79	0.44
18:CB:116:LEU:C	18:CB:118:THR:H	2.26	0.44
18:CB:169:HIS:CD2	18:CB:170:ILE:H	2.35	0.44
20:CO:7:ALA:O	20:CO:10:LYS:HB3	2.18	0.44
22:DA:85:G:H2'	22:DA:86:G:C8	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:114:C:H1'	43:DO:47:VAL:HG21	2.00	0.44
23:DB:1:G:H2'	23:DB:2:G:H8	1.79	0.44
23:DB:106:C:H2'	23:DB:107:G:C8	2.52	0.44
23:DB:230:G:H2'	23:DB:231:A:C8	2.53	0.44
23:DB:745:G:O2'	23:DB:748:G:H1'	2.17	0.44
23:DB:861:A:H2'	23:DB:862:G:O4'	2.18	0.44
23:DB:948:C:H1'	23:DB:984:A:N3	2.33	0.44
23:DB:1044:C:O3'	23:DB:1047:G:H5'	2.18	0.44
23:DB:1389:G:O2'	23:DB:1390:U:H5'	2.18	0.44
23:DB:1570:A:H2'	23:DB:1571:A:C8	2.52	0.44
23:DB:1684:G:H2'	23:DB:1685:C:C6	2.52	0.44
23:DB:1936:A:H2	23:DB:1943:U:O4	2.01	0.44
23:DB:2636:C:H2'	23:DB:2637:U:C6	2.52	0.44
23:DB:2666:C:O4'	23:DB:2666:C:O2	2.33	0.44
25:DC:143:VAL:HA	25:DC:189:ALA:HB1	2.00	0.44
26:DD:122:VAL:HA	26:DD:127:PHE:H	1.83	0.44
27:DK:18:ARG:O	27:DK:45:GLU:HB2	2.18	0.44
27:DK:66:LYS:HD2	27:DK:81:GLY:N	2.32	0.44
27:DK:93:GLN:HB3	27:DK:94:PRO:HD2	1.99	0.44
29:DE:129:PRO:HB3	29:DE:159:LEU:HD23	1.99	0.44
29:DE:134:LEU:O	29:DE:138:LEU:HG	2.17	0.44
29:DE:165:HIS:O	29:DE:167:VAL:N	2.47	0.44
40:DH:5:LEU:HG	40:DH:17:ASP:O	2.18	0.44
42:DN:79:LEU:HD23	42:DN:83:LEU:HB3	2.00	0.44
43:DO:67:ASN:O	43:DO:69:ASP:N	2.51	0.44
45:DS:46:LEU:O	45:DS:47:VAL:C	2.61	0.44
45:DS:61:ASN:HB3	45:DS:62:ASP:H	1.62	0.44
46:DU:51:LEU:N	46:DU:53:GLN:NE2	2.66	0.44
46:DU:96:LYS:C	46:DU:98:ASN:H	2.26	0.44
47:DF:11:VAL:HG12	47:DF:12:VAL:N	2.28	0.44
49:DR:58:VAL:HG13	49:DR:59:ILE:N	2.33	0.44
1:AA:218:U:H2'	1:AA:219:U:O4'	2.17	0.43
1:AA:778:G:H2'	1:AA:779:C:H6	1.80	0.43
1:AA:1238:A:H2	1:AA:1241:G:H21	1.63	0.43
1:AA:1390:U:O2'	1:AA:1391:U:H5'	2.18	0.43
2:AC:156:LEU:HD11	2:AC:165:GLU:HB2	1.99	0.43
3:AD:154:VAL:HG23	3:AD:155:LYS:N	2.33	0.43
8:AI:48:ARG:HA	8:AI:56:MET:SD	2.58	0.43
9:AJ:57:VAL:HG13	9:AJ:58:ASN:CG	2.43	0.43
12:AM:58:GLU:C	12:AM:61:LYS:HG2	2.44	0.43
13:AP:68:SER:HB3	13:AP:71:VAL:HG12	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AS:6:LYS:HD2	16:AS:6:LYS:N	2.32	0.43
17:AT:11:ILE:HG13	17:AT:11:ILE:H	1.66	0.43
23:BB:273:G:O2'	23:BB:274:C:H5'	2.18	0.43
23:BB:297:G:OP1	46:BU:1:ALA:HB2	2.18	0.43
23:BB:659:G:H21	29:BE:30:GLN:NE2	2.15	0.43
23:BB:714:U:H1'	23:BB:717:C:H5	1.82	0.43
23:BB:1076:C:H2'	23:BB:1077:A:H8	1.82	0.43
23:BB:1091:G:O2'	23:BB:1092:C:H5'	2.18	0.43
23:BB:1881:C:H2'	23:BB:1882:U:O4'	2.18	0.43
23:BB:2133:G:N3	23:BB:2133:G:C2'	2.74	0.43
23:BB:2336:A:O2'	23:BB:2337:G:P	2.76	0.43
23:BB:2336:A:H61	52:BW:40:ARG:HG3	1.82	0.43
23:BB:2533:U:H2'	23:BB:2534:A:O4'	2.17	0.43
23:BB:2821:A:H2'	23:BB:2822:G:C8	2.53	0.43
24:BI:12:VAL:HG23	24:BI:41:PHE:CE2	2.53	0.43
24:BI:102:ARG:HA	24:BI:105:LEU:HD12	2.00	0.43
25:BC:68:ARG:HE	25:BC:190:THR:HG22	1.83	0.43
26:BD:46:ARG:NH1	26:BD:46:ARG:HG3	2.33	0.43
26:BD:182:ALA:C	26:BD:184:ARG:N	2.75	0.43
26:BD:204:LYS:NZ	26:BD:204:LYS:HB3	2.33	0.43
27:BK:36:GLY:HA2	27:BK:62:VAL:O	2.18	0.43
31:B0:47:TYR:N	31:B0:47:TYR:CD1	2.86	0.43
32:B4:19:ARG:O	32:B4:21:GLY:N	2.51	0.43
35:BV:29:ILE:HD12	35:BV:90:ASP:HA	2.00	0.43
37:BL:74:THR:HA	37:BL:107:PHE:O	2.17	0.43
37:BL:83:ALA:O	37:BL:85:VAL:N	2.49	0.43
37:BL:125:LEU:H	37:BL:143:GLU:HG3	1.83	0.43
38:BM:43:ALA:O	38:BM:46:ILE:HG12	2.18	0.43
40:BH:66:ASN:O	40:BH:138:VAL:HG11	2.17	0.43
41:BJ:3:THR:HB	41:BJ:44:TYR:CE1	2.52	0.43
42:BN:33:ILE:HD12	42:BN:34:ILE:N	2.33	0.43
42:BN:61:ALA:C	42:BN:63:ARG:H	2.25	0.43
43:BO:7:ARG:HD3	43:BO:97:PHE:CE1	2.53	0.43
44:BQ:4:LYS:HE3	44:BQ:8:ILE:HD11	2.00	0.43
46:BU:23:LYS:N	46:BU:23:LYS:HD2	2.33	0.43
46:BU:86:PHE:CE1	46:BU:88:ASP:HB2	2.52	0.43
47:BF:148:VAL:O	47:BF:149:ARG:CB	2.65	0.43
47:BF:149:ARG:HD3	47:BF:149:ARG:HA	1.67	0.43
48:BG:93:TYR:O	48:BG:94:ARG:O	2.36	0.43
49:BR:59:ILE:HA	49:BR:101:ILE:H	1.83	0.43
49:BR:97:LYS:C	49:BR:98:ILE:HD12	2.42	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:184:G:H4'	1:CA:224:U:O3'	2.18	0.43
1:CA:214:C:H2'	1:CA:215:C:C6	2.53	0.43
1:CA:509:A:N3	1:CA:543:U:O2'	2.51	0.43
1:CA:791:G:C6	1:CA:792:A:N7	2.86	0.43
1:CA:832:G:O2'	1:CA:833:G:H5'	2.18	0.43
1:CA:861:G:O2'	1:CA:862:C:H5'	2.18	0.43
1:CA:1314:C:H2'	1:CA:1315:U:C6	2.53	0.43
1:CA:1388:C:H2'	1:CA:1389:C:C6	2.53	0.43
1:CA:1392:G:C2'	1:CA:1393:U:H5'	2.48	0.43
1:CA:1509:C:O2'	1:CA:1510:C:H5'	2.18	0.43
7:CH:74:ILE:O	7:CH:74:ILE:HG12	2.18	0.43
13:CP:34:GLU:CD	13:CP:60:TRP:HE1	2.25	0.43
2:CC:8:GLY:O	2:CC:11:LEU:HG	2.18	0.43
2:CC:22:PHE:HZ	9:CJ:11:LYS:HZ2	1.64	0.43
2:CC:75:VAL:O	2:CC:75:VAL:HG12	2.17	0.43
2:CC:110:LEU:HD11	2:CC:143:LEU:O	2.18	0.43
8:CI:32:ARG:CB	8:CI:36:GLN:HE21	2.29	0.43
18:CB:69:VAL:HB	18:CB:162:VAL:HG23	1.99	0.43
18:CB:69:VAL:CG2	18:CB:162:VAL:HB	2.48	0.43
18:CB:162:VAL:HG13	18:CB:184:ALA:HB2	1.99	0.43
22:DA:43:C:H5'	47:DF:62:GLN:CB	2.48	0.43
22:DA:43:C:C1'	47:DF:91:ARG:HD2	2.44	0.43
23:DB:142:A:H2	50:DT:2:ILE:CG2	2.31	0.43
23:DB:255:A:H2'	23:DB:256:A:O4'	2.18	0.43
23:DB:493:G:O2'	23:DB:494:G:H5'	2.17	0.43
23:DB:518:G:H4'	45:DS:18:ARG:NH2	2.33	0.43
23:DB:920:A:O2'	23:DB:921:C:H5'	2.18	0.43
23:DB:1386:C:H2'	23:DB:1387:A:H8	1.83	0.43
23:DB:1468:U:HO2'	23:DB:1469:A:H8	1.61	0.43
23:DB:2071:A:H2	23:DB:2440:C:N4	2.16	0.43
23:DB:2329:U:H2'	23:DB:2330:G:C8	2.53	0.43
23:DB:2425:A:H5"	23:DB:2426:A:H3'	1.99	0.43
23:DB:2604:U:O2'	23:DB:2605:U:H5'	2.18	0.43
23:DB:2734:A:C2'	23:DB:2735:G:H5'	2.45	0.43
23:DB:2746:U:H4'	48:DG:137:LYS:HB2	1.98	0.43
24:DI:21:PRO:HB2	24:DI:22:PRO:CD	2.43	0.43
25:DC:40:GLY:O	25:DC:53:ILE:HG23	2.17	0.43
26:DD:13:ARG:HH12	28:DP:74:GLN:NE2	2.16	0.43
26:DD:15:PHE:H	28:DP:11:GLN:HE22	1.63	0.43
26:DD:119:ALA:HB2	26:DD:163:GLY:C	2.43	0.43
29:DE:2:GLU:OE1	29:DE:13:THR:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DE:58:LYS:HB2	29:DE:60:TRP:HD1	1.78	0.43
29:DE:126:VAL:HG13	29:DE:156:ASN:HD22	1.83	0.43
29:DE:133:LEU:C	29:DE:135:ALA:N	2.75	0.43
30:DY:4:ILE:HG12	30:DY:38:GLU:O	2.18	0.43
30:DY:4:ILE:HD12	30:DY:58:GLU:HG3	1.99	0.43
37:DL:29:LYS:C	37:DL:31:GLY:N	2.74	0.43
37:DL:57:LEU:C	37:DL:59:ARG:N	2.75	0.43
38:DM:35:ALA:O	38:DM:36:VAL:HB	2.18	0.43
40:DH:62:LEU:HG	40:DH:66:ASN:ND2	2.32	0.43
40:DH:90:LEU:HB2	40:DH:123:ARG:O	2.17	0.43
43:DO:9:ARG:O	43:DO:12:THR:HB	2.17	0.43
47:DF:69:ALA:O	47:DF:70:ARG:HB2	2.17	0.43
48:DG:27:GLY:O	48:DG:28:LYS:C	2.60	0.43
52:DW:31:LEU:O	52:DW:32:ALA:HB2	2.18	0.43
1:AA:254:G:H2'	1:AA:255:G:H8	1.83	0.43
1:AA:306:A:H2'	1:AA:307:C:H5'	1.99	0.43
1:AA:764:C:H2'	1:AA:765:G:C5'	2.47	0.43
1:AA:874:G:O2'	1:AA:875:U:H5'	2.17	0.43
1:AA:937:A:C2'	1:AA:938:A:H5'	2.49	0.43
1:AA:975:A:H4'	1:AA:976:G:OP2	2.18	0.43
1:AA:1368:A:OP2	8:AI:113:LYS:HD3	2.18	0.43
1:AA:1514:G:O2'	1:AA:1515:G:H5'	2.18	0.43
2:AC:60:ALA:C	2:AC:62:SER:N	2.76	0.43
6:AG:104:VAL:O	6:AG:108:ARG:HG3	2.18	0.43
8:AI:8:THR:O	8:AI:81:GLY:HA3	2.18	0.43
8:AI:10:ARG:HB2	8:AI:14:SER:O	2.17	0.43
8:AI:95:SER:O	8:AI:99:LYS:HG3	2.17	0.43
22:BA:25:U:H4'	22:BA:26:C:OP1	2.17	0.43
22:BA:43:C:H5'	47:BF:62:GLN:CB	2.48	0.43
23:BB:104:A:H2'	23:BB:105:C:H6	1.83	0.43
23:BB:287:G:O2'	23:BB:288:U:H5'	2.18	0.43
23:BB:346:A:H2'	23:BB:347:A:O4'	2.18	0.43
23:BB:776:G:H4'	23:BB:777:G:O5'	2.18	0.43
23:BB:1170:C:H2'	23:BB:1171:G:H8	1.81	0.43
23:BB:1334:G:O2'	23:BB:1335:C:H5'	2.18	0.43
23:BB:1949:G:H2'	23:BB:1950:G:C8	2.52	0.43
23:BB:2060:A:H2'	29:BE:63:LYS:CE	2.42	0.43
23:BB:2297:A:C2	23:BB:2320:U:H4'	2.52	0.43
23:BB:2606:C:O2'	23:BB:2607:G:H5'	2.18	0.43
23:BB:2659:G:H1'	23:BB:2662:A:N6	2.32	0.43
23:BB:2700:A:O2'	23:BB:2701:U:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:16:VAL:N	25:BC:203:VAL:HG11	2.28	0.43
25:BC:161:VAL:HG12	25:BC:173:LEU:HB2	2.00	0.43
25:BC:204:LEU:HD23	25:BC:209:ALA:CB	2.48	0.43
26:BD:187:LEU:HD12	26:BD:188:LEU:H	1.82	0.43
29:BE:52:VAL:CG1	29:BE:53:THR:H	2.22	0.43
35:BV:56:PHE:O	35:BV:61:LEU:HD21	2.18	0.43
38:BM:31:PHE:CZ	38:BM:110:GLU:HB3	2.52	0.43
38:BM:43:ALA:HB2	38:BM:92:TRP:O	2.18	0.43
38:BM:116:ALA:HA	38:BM:119:LEU:HD12	2.00	0.43
42:BN:37:THR:CG2	42:BN:39:PRO:HD2	2.35	0.43
43:BO:64:TYR:C	43:BO:66:GLY:N	2.75	0.43
44:BQ:7:VAL:CG2	44:BQ:8:ILE:N	2.81	0.43
44:BQ:10:ARG:HB2	44:BQ:10:ARG:NH1	2.33	0.43
45:BS:41:LYS:O	45:BS:43:ALA:N	2.51	0.43
46:BU:40:LEU:HA	46:BU:61:GLU:HA	1.99	0.43
47:BF:89:THR:OG1	47:BF:91:ARG:NH2	2.51	0.43
47:BF:102:LEU:HD12	47:BF:103:ILE:HG13	2.00	0.43
47:BF:107:VAL:O	47:BF:110:ILE:HG22	2.17	0.43
47:BF:137:PHE:CD2	47:BF:137:PHE:N	2.87	0.43
48:BG:10:VAL:HG23	48:BG:48:THR:HA	2.00	0.43
48:BG:40:VAL:HG13	48:BG:64:ALA:CB	2.48	0.43
1:CA:586:C:H5”	7:CH:81:GLY:HA2	2.00	0.43
1:CA:618:C:H1’	13:CP:14:ARG:NH1	2.32	0.43
1:CA:845:A:H5”	1:CA:846:G:H8	1.80	0.43
1:CA:852:G:H2’	1:CA:853:C:H6	1.82	0.43
1:CA:991:U:C4	1:CA:1212:U:H4’	2.52	0.43
1:CA:1309:G:H2’	1:CA:1310:G:H8	1.84	0.43
5:CF:36:ILE:HG12	5:CF:64:VAL:HG22	2.00	0.43
2:CC:54:ILE:HG23	2:CC:54:ILE:O	2.18	0.43
6:CG:43:TYR:O	6:CG:46:LEU:HB3	2.18	0.43
12:CM:89:ARG:HD2	12:CM:95:PRO:O	2.18	0.43
12:CM:95:PRO:HA	12:CM:108:ARG:HG2	1.99	0.43
21:CN:25:GLU:O	21:CN:26:LEU:C	2.61	0.43
18:CB:212:TYR:HA	18:CB:215:ALA:CB	2.44	0.43
18:CB:216:VAL:CG2	18:CB:217:ALA:N	2.79	0.43
23:DB:151:C:H2’	23:DB:152:A:H8	1.81	0.43
23:DB:459:U:O2’	23:DB:460:A:H5’	2.18	0.43
23:DB:754:U:H2’	23:DB:755:U:H6	1.83	0.43
23:DB:798:G:O2’	23:DB:799:G:H5’	2.18	0.43
23:DB:1281:G:H2’	23:DB:1282:U:O4’	2.19	0.43
23:DB:1338:G:C2’	23:DB:1339:G:H5’	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1348:C:H5'	23:DB:1349:C:OP2	2.18	0.43
23:DB:2271:G:O2'	23:DB:2272:U:H5'	2.18	0.43
23:DB:2305:U:H2'	23:DB:2306:C:O4'	2.17	0.43
23:DB:2770:G:H8	23:DB:2770:G:O5'	2.02	0.43
25:DC:61:TYR:HA	25:DC:85:ASN:ND2	2.33	0.43
27:DK:76:VAL:O	28:DP:71:ARG:HA	2.18	0.43
31:D0:2:VAL:HG12	31:D0:3:GLN:H	1.83	0.43
33:D1:18:HIS:CE1	33:D1:40:PRO:HD2	2.53	0.43
33:D1:34:GLU:CD	33:D1:49:LYS:HG3	2.43	0.43
35:DV:12:GLN:O	35:DV:16:ALA:HB3	2.18	0.43
37:DL:10:GLU:C	37:DL:12:SER:N	2.76	0.43
37:DL:19:LEU:CD2	37:DL:27:LEU:HD23	2.48	0.43
38:DM:59:ARG:HH11	38:DM:60:GLN:HB3	1.82	0.43
38:DM:100:LYS:HD2	38:DM:101:VAL:H	1.83	0.43
40:DH:28:ASN:HD21	51:DZ:36:HIS:CE1	2.35	0.43
44:DQ:63:ARG:HH22	44:DQ:96:ASP:N	2.16	0.43
45:DS:29:VAL:HG23	45:DS:70:LYS:HA	1.99	0.43
47:DF:34:THR:OG1	47:DF:154:THR:HB	2.18	0.43
47:DF:78:ILE:C	47:DF:79:ARG:HG3	2.43	0.43
47:DF:126:ASN:HD22	47:DF:156:THR:HA	1.83	0.43
51:DZ:53:ALA:O	51:DZ:55:GLY:N	2.45	0.43
51:DZ:53:ALA:O	51:DZ:54:LYS:HB3	2.17	0.43
1:AA:5:U:H1'	1:AA:6:G:N1	2.33	0.43
1:AA:1471:U:O2'	1:AA:1472:U:H5'	2.18	0.43
1:AA:1473:G:H2'	1:AA:1474:U:C6	2.53	0.43
2:AC:181:ILE:N	2:AC:181:ILE:CD1	2.79	0.43
3:AD:58:GLN:HA	3:AD:58:GLN:OE1	2.18	0.43
6:AG:14:ASP:CG	6:AG:15:PRO:HD2	2.43	0.43
8:AI:16:ALA:HA	8:AI:66:VAL:HA	2.00	0.43
8:AI:126:PHE:H	8:AI:126:PHE:HD2	1.67	0.43
13:AP:71:VAL:HG13	13:AP:72:ALA:H	1.82	0.43
16:AS:9:PHE:C	16:AS:10:ILE:HG13	2.43	0.43
19:AU:28:LEU:C	19:AU:30:GLU:N	2.77	0.43
20:AO:43:PHE:HE2	20:AO:53:ARG:HD3	1.83	0.43
23:BB:483:A:H2'	23:BB:484:C:O4'	2.18	0.43
23:BB:574:A:H4'	23:BB:575:A:H5"	1.99	0.43
23:BB:685:A:H1'	23:BB:688:U:O4	2.18	0.43
23:BB:859:G:O2'	23:BB:860:U:OP2	2.35	0.43
23:BB:936:A:H2'	23:BB:937:C:H6	1.81	0.43
23:BB:1047:G:H1'	23:BB:1111:A:N6	2.32	0.43
23:BB:1190:G:OP1	37:BL:32:GLY:HA2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1459:G:H3'	23:BB:1460:U:H4'	2.00	0.43
23:BB:1682:G:H2'	23:BB:1683:U:C6	2.52	0.43
23:BB:2276:G:O3'	38:BM:86:LYS:HB2	2.19	0.43
23:BB:2285:C:OP2	33:B1:5:ARG:HD3	2.19	0.43
23:BB:2376:A:H2'	23:BB:2377:A:O4'	2.18	0.43
23:BB:2693:G:H2'	23:BB:2694:G:C8	2.51	0.43
23:BB:2834:G:H1'	23:BB:2883:A:H61	1.81	0.43
25:BC:263:ASP:O	25:BC:264:LYS:C	2.61	0.43
26:BD:38:LYS:CB	26:BD:47:ALA:HB3	2.49	0.43
26:BD:55:LYS:HZ3	26:BD:56:LYS:HG3	1.84	0.43
26:BD:109:VAL:HG11	26:BD:193:VAL:HG11	2.00	0.43
29:BE:114:ARG:HG3	29:BE:114:ARG:HH11	1.83	0.43
30:BY:50:VAL:HB	30:BY:53:MET:HB3	1.99	0.43
39:BX:19:LEU:O	39:BX:24:GLU:HB2	2.18	0.43
41:BJ:25:LEU:HB2	41:BJ:62:VAL:HG22	2.00	0.43
42:BN:29:VAL:O	42:BN:78:LYS:HG2	2.17	0.43
47:BF:151:LEU:CD1	47:BF:153:ILE:HG13	2.48	0.43
48:BG:10:VAL:HB	48:BG:47:ASN:O	2.18	0.43
49:BR:63:VAL:HA	49:BR:95:ASP:O	2.18	0.43
1:CA:1248:A:H2'	1:CA:1249:C:H6	1.83	0.43
1:CA:1342:C:H1'	8:CI:125:GLN:OE1	2.19	0.43
1:CA:1476:A:H2'	1:CA:1477:U:H6	1.83	0.43
4:CE:134:ASN:O	4:CE:135:VAL:C	2.60	0.43
5:CF:10:VAL:HA	5:CF:84:VAL:HA	2.00	0.43
7:CH:14:ARG:HG3	7:CH:15:ASN:N	2.33	0.43
10:CK:111:ASP:CB	19:CU:19:LYS:HE2	2.48	0.43
17:CT:38:ILE:CD1	17:CT:82:ILE:HA	2.48	0.43
17:CT:59:ARG:HB2	17:CT:59:ARG:HH11	1.83	0.43
2:CC:129:PHE:CG	2:CC:130:ARG:N	2.86	0.43
8:CI:25:GLY:HA3	8:CI:57:VAL:HA	2.00	0.43
9:CJ:66:GLU:HG2	21:CN:98:ALA:HA	2.00	0.43
9:CJ:71:LEU:N	9:CJ:71:LEU:HD23	2.32	0.43
12:CM:89:ARG:NH1	12:CM:101:THR:HG21	2.33	0.43
20:CO:5:THR:O	20:CO:8:THR:HB	2.18	0.43
22:DA:67:G:O2'	22:DA:68:C:H5'	2.17	0.43
23:DB:213:A:O2'	23:DB:214:G:H5'	2.18	0.43
23:DB:899:A:H5'	23:DB:900:A:OP2	2.18	0.43
23:DB:970:U:O2'	23:DB:984:A:H4'	2.18	0.43
23:DB:1692:U:H2'	23:DB:1694:C:C4	2.54	0.43
23:DB:1712:U:H3'	23:DB:1713:A:H2'	2.00	0.43
23:DB:2026:U:H2'	23:DB:2027:G:H8	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2527:C:H2'	23:DB:2528:U:C6	2.53	0.43
23:DB:2529:G:H4'	48:DG:174:LYS:HG3	1.98	0.43
23:DB:2630:G:H2'	23:DB:2631:G:C8	2.52	0.43
23:DB:2893:A:H4'	23:DB:2894:G:C5'	2.49	0.43
25:DC:219:VAL:CG1	25:DC:224:MET:HE2	2.49	0.43
26:DD:67:HIS:C	26:DD:67:HIS:ND1	2.76	0.43
26:DD:144:GLY:O	26:DD:145:SER:C	2.60	0.43
28:DP:50:ARG:HB3	28:DP:57:ALA:O	2.18	0.43
28:DP:77:SER:O	28:DP:80:VAL:HG12	2.18	0.43
31:D0:41:HIS:O	31:D0:42:ILE:O	2.37	0.43
37:DL:85:VAL:HG22	37:DL:85:VAL:O	2.18	0.43
40:DH:5:LEU:CD1	40:DH:17:ASP:HB3	2.39	0.43
40:DH:104:THR:HA	40:DH:108:VAL:O	2.19	0.43
43:DO:115:LEU:H	43:DO:115:LEU:HD22	1.83	0.43
44:DQ:7:VAL:CG2	44:DQ:8:ILE:N	2.81	0.43
45:DS:35:ILE:HG22	45:DS:39:THR:CG2	2.46	0.43
46:DU:16:LYS:HB3	46:DU:17:ASP:H	1.68	0.43
47:DF:129:MET:SD	47:DF:129:MET:N	2.92	0.43
48:DG:10:VAL:HG23	48:DG:48:THR:HA	2.00	0.43
48:DG:17:LYS:HE3	48:DG:17:LYS:C	2.43	0.43
48:DG:93:TYR:CD2	48:DG:93:TYR:N	2.87	0.43
48:DG:149:ALA:C	48:DG:151:ARG:N	2.76	0.43
1:AA:777:A:H2'	1:AA:778:G:C8	2.53	0.43
1:AA:840:C:H2'	1:AA:843:U:OP2	2.19	0.43
1:AA:1146:A:H2'	1:AA:1146:A:N3	2.33	0.43
1:AA:1152:A:H2'	1:AA:1153:G:C8	2.53	0.43
1:AA:1530:G:H2'	1:AA:1531:A:C8	2.54	0.43
2:AC:55:VAL:O	2:AC:65:VAL:HA	2.18	0.43
2:AC:62:SER:C	2:AC:63:ILE:HG13	2.44	0.43
3:AD:160:LEU:C	3:AD:162:GLU:N	2.73	0.43
4:AE:93:VAL:HG12	4:AE:94:PHE:N	2.33	0.43
7:AH:17:GLN:HE21	7:AH:62:LEU:HG	1.84	0.43
7:AH:63:LYS:CG	7:AH:70:VAL:HG21	2.47	0.43
12:AM:56:ARG:NH1	12:AM:56:ARG:HG3	2.31	0.43
14:AQ:40:THR:HG22	14:AQ:41:THR:N	2.32	0.43
14:AQ:67:SER:O	14:AQ:68:LYS:C	2.61	0.43
18:AB:22:TRP:HA	18:AB:189:ASN:N	2.33	0.43
21:AN:58:ARG:N	21:AN:59:GLN:HE21	2.14	0.43
23:BB:118:A:H5'	23:BB:119:A:C8	2.46	0.43
23:BB:546:U:H5"	23:BB:546:U:O2	2.18	0.43
23:BB:915:C:H3'	23:BB:916:G:C8	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1058:U:O2'	23:BB:1059:G:H5'	2.19	0.43
23:BB:1296:G:O2'	23:BB:1297:C:H5'	2.18	0.43
23:BB:1348:C:H5'	23:BB:1349:C:OP2	2.18	0.43
23:BB:1353:A:O2'	23:BB:1354:A:H5'	2.18	0.43
23:BB:1360:G:C2'	23:BB:1361:G:H5'	2.47	0.43
23:BB:1541:C:O2'	23:BB:1542:U:H5'	2.19	0.43
23:BB:1839:G:C8	23:BB:1927:A:H1'	2.53	0.43
23:BB:1920:C:H2'	23:BB:1921:G:H8	1.82	0.43
23:BB:2271:G:O2'	23:BB:2272:U:H5'	2.18	0.43
23:BB:2800:A:H8	23:BB:2800:A:O5'	2.01	0.43
24:BI:138:VAL:HG12	24:BI:139:VAL:N	2.33	0.43
25:BC:33:LEU:O	25:BC:34:GLU:HB3	2.18	0.43
25:BC:221:GLY:C	25:BC:223:ALA:H	2.23	0.43
26:BD:36:GLN:O	26:BD:36:GLN:HG3	2.17	0.43
26:BD:62:LYS:CB	26:BD:63:PRO:HD3	2.47	0.43
26:BD:187:LEU:O	26:BD:188:LEU:HD23	2.18	0.43
28:BP:111:GLU:CD	28:BP:111:GLU:N	2.76	0.43
29:BE:60:TRP:CZ3	29:BE:69:ARG:HA	2.53	0.43
34:B3:16:THR:C	34:B3:18:LYS:N	2.76	0.43
35:BV:38:LEU:CG	35:BV:40:ILE:HG23	2.47	0.43
38:BM:41:LEU:HB3	38:BM:46:ILE:HG21	1.99	0.43
41:BJ:73:VAL:HG23	41:BJ:74:TYR:H	1.83	0.43
41:BJ:133:ALA:C	41:BJ:135:GLN:N	2.77	0.43
45:BS:33:LEU:O	45:BS:37:THR:HG23	2.17	0.43
46:BU:41:VAL:HG22	46:BU:60:LYS:O	2.17	0.43
47:BF:99:PHE:O	47:BF:102:LEU:HB3	2.18	0.43
47:BF:110:ILE:HG22	47:BF:113:PHE:HB3	2.00	0.43
48:BG:6:ALA:HA	48:BG:7:PRO:HD3	1.82	0.43
48:BG:77:GLY:HA3	48:BG:135:ALA:O	2.18	0.43
49:BR:26:ASP:O	49:BR:27:ILE:HG12	2.18	0.43
50:BT:69:ARG:HA	50:BT:69:ARG:NE	2.26	0.43
1:CA:81:A:O2'	1:CA:82:G:H5'	2.18	0.43
1:CA:98:A:O2'	1:CA:99:C:H5'	2.19	0.43
1:CA:216:U:H2'	1:CA:217:C:H6	1.82	0.43
1:CA:878:A:C5'	7:CH:80:PRO:HG2	2.48	0.43
1:CA:1096:C:O2'	1:CA:1097:C:H5'	2.18	0.43
1:CA:1179:A:H2'	1:CA:1180:A:O4'	2.18	0.43
1:CA:1312:G:H2'	1:CA:1313:U:H6	1.83	0.43
3:CD:96:ARG:HH12	3:CD:133:SER:HA	1.83	0.43
5:CF:15:SER:HA	5:CF:18:VAL:HG23	1.99	0.43
10:CK:22:ILE:HD13	10:CK:95:THR:CG2	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CK:83:VAL:HB	10:CK:109:ILE:HG12	2.00	0.43
17:CT:8:LYS:HE3	17:CT:12:GLN:OE1	2.19	0.43
17:CT:26:MET:SD	17:CT:26:MET:C	3.01	0.43
2:CC:155:ARG:NE	2:CC:159:ALA:O	2.51	0.43
8:CI:7:GLY:HA3	8:CI:81:GLY:O	2.18	0.43
8:CI:113:LYS:C	8:CI:114:LYS:HD3	2.44	0.43
12:CM:10:ASP:CA	12:CM:44:ILE:HD13	2.48	0.43
12:CM:33:LEU:HB3	12:CM:38:ILE:O	2.18	0.43
22:DA:112:G:H2'	22:DA:113:C:H6	1.83	0.43
23:DB:192:C:H2'	23:DB:193:U:H5'	2.00	0.43
23:DB:662:G:O2'	23:DB:663:G:H5'	2.18	0.43
23:DB:870:U:C2'	23:DB:871:U:H5"	2.48	0.43
23:DB:1142:A:H4'	41:DJ:27:ARG:NH2	2.31	0.43
23:DB:1183:U:H2'	23:DB:1184:U:H6	1.83	0.43
23:DB:1316:U:O2'	23:DB:1317:G:H5'	2.18	0.43
23:DB:1473:G:O2'	23:DB:1474:U:H5'	2.18	0.43
23:DB:1516:G:H2'	23:DB:1517:G:H8	1.84	0.43
23:DB:1592:C:H2'	23:DB:1593:A:C8	2.54	0.43
23:DB:2418:A:OP1	34:D3:44:ARG:NH1	2.52	0.43
25:DC:33:LEU:O	25:DC:34:GLU:HB3	2.18	0.43
25:DC:54:GLY:O	25:DC:214:GLY:HA2	2.18	0.43
30:DY:47:ILE:HG21	30:DY:56:VAL:HG21	1.98	0.43
37:DL:23:ILE:H	37:DL:23:ILE:CD1	2.10	0.43
37:DL:23:ILE:O	37:DL:24:GLY:C	2.60	0.43
38:DM:41:LEU:O	38:DM:94:ALA:N	2.49	0.43
43:DO:100:HIS:HA	43:DO:104:GLN:CG	2.48	0.43
45:DS:57:ASN:N	45:DS:57:ASN:ND2	2.67	0.43
46:DU:3:LYS:HD3	46:DU:82:VAL:CG2	2.47	0.43
46:DU:13:LEU:HA	46:DU:18:LYS:NZ	2.34	0.43
48:DG:134:GLY:HA3	48:DG:140:ILE:HG21	1.99	0.43
50:DT:8:LEU:O	50:DT:9:LYS:HE2	2.19	0.43
1:AA:731:G:O2'	1:AA:732:C:H5'	2.18	0.43
1:AA:792:A:N3	1:AA:794:A:C5	2.86	0.43
1:AA:862:C:O2'	1:AA:863:U:H5'	2.18	0.43
2:AC:13:ILE:N	2:AC:13:ILE:HD13	2.34	0.43
3:AD:49:ASP:OD2	4:AE:111:ARG:HD2	2.18	0.43
3:AD:191:SER:O	3:AD:192:ALA:HB2	2.19	0.43
5:AF:47:LEU:HD12	5:AF:55:HIS:C	2.43	0.43
6:AG:31:VAL:HG13	6:AG:32:ASP:OD1	2.19	0.43
7:AH:105:THR:C	7:AH:107:LYS:H	2.26	0.43
10:AK:125:LYS:O	10:AK:126:ARG:C	2.61	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AU:13:VAL:CG2	19:AU:15:LEU:HD23	2.48	0.43
21:AN:20:PHE:HE1	21:AN:51:PRO:HG3	1.84	0.43
22:BA:69:G:H2'	22:BA:70:C:H5'	2.00	0.43
23:BB:100:U:O5'	23:BB:100:U:C6	2.71	0.43
23:BB:443:A:H2'	23:BB:443:A:N3	2.33	0.43
23:BB:538:A:H2'	23:BB:539:G:O4'	2.18	0.43
23:BB:664:G:O2'	23:BB:665:U:H5'	2.18	0.43
23:BB:803:U:O2'	23:BB:804:A:H5'	2.18	0.43
23:BB:917:A:H2'	23:BB:918:A:O4'	2.18	0.43
23:BB:1053:C:O5'	23:BB:1053:C:H6	2.02	0.43
23:BB:1281:G:H2'	23:BB:1282:U:O4'	2.18	0.43
23:BB:1359:A:H2'	23:BB:1360:G:O4'	2.17	0.43
23:BB:1465:G:H2'	23:BB:1466:U:C6	2.53	0.43
23:BB:1671:U:H2'	23:BB:1673:G:OP2	2.18	0.43
23:BB:1726:C:H2'	23:BB:1727:C:C6	2.53	0.43
23:BB:1747:U:H2'	23:BB:1748:C:C6	2.54	0.43
23:BB:1873:G:H2'	23:BB:1874:C:H6	1.83	0.43
23:BB:2264:C:H41	52:BW:11:ASN:HD22	1.67	0.43
23:BB:2626:C:H2'	23:BB:2627:G:H8	1.81	0.43
23:BB:2627:G:O2'	23:BB:2781:A:N1	2.46	0.43
23:BB:2771:C:H2'	23:BB:2772:C:C6	2.53	0.43
23:BB:2897:U:H2'	23:BB:2898:U:H6	1.84	0.43
24:BI:51:GLY:C	24:BI:52:LEU:HD12	2.43	0.43
24:BI:79:LEU:HD23	24:BI:108:ILE:CD1	2.49	0.43
24:BI:85:ILE:CD1	24:BI:137:LEU:HD21	2.47	0.43
25:BC:163:ILE:HG22	25:BC:164:VAL:H	1.83	0.43
27:BK:116:ILE:C	27:BK:118:LEU:H	2.26	0.43
28:BP:6:GLN:HE21	28:BP:7:LEU:HD12	1.84	0.43
30:BY:12:ALA:HB2	30:BY:53:MET:SD	2.58	0.43
30:BY:47:ILE:HG21	30:BY:56:VAL:HG21	2.00	0.43
40:BH:26:ALA:O	40:BH:28:ASN:N	2.51	0.43
40:BH:108:VAL:HG12	40:BH:109:GLU:H	1.83	0.43
42:BN:71:ARG:HG2	42:BN:71:ARG:HH21	1.83	0.43
44:BQ:82:LEU:HA	44:BQ:85:ALA:HB3	2.01	0.43
46:BU:34:ILE:HG23	46:BU:63:ALA:HB2	2.01	0.43
46:BU:39:ASN:H	46:BU:61:GLU:CD	2.27	0.43
46:BU:96:LYS:C	46:BU:98:ASN:H	2.26	0.43
47:BF:32:LYS:N	47:BF:95:MET:SD	2.92	0.43
48:BG:10:VAL:O	48:BG:10:VAL:HG12	2.19	0.43
49:BR:98:ILE:HG22	49:BR:99:THR:N	2.33	0.43
1:CA:33:A:OP2	1:CA:398:U:H5'	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:202:G:N2	1:CA:465:A:H61	2.12	0.43
1:CA:490:C:H2'	1:CA:491:G:O4'	2.18	0.43
1:CA:552:U:H4'	11:CL:82:ARG:O	2.17	0.43
1:CA:629:A:H2'	1:CA:630:A:O4'	2.18	0.43
1:CA:702:A:N6	23:DB:1848:A:N1	2.66	0.43
1:CA:865:A:H5'	1:CA:1078:U:C4	2.54	0.43
1:CA:1206:G:C4'	2:CC:192:TYR:HA	2.41	0.43
1:CA:1379:G:N7	6:CG:2:ARG:NH1	2.66	0.43
3:CD:29:THR:HB	3:CD:30:LYS:HZ2	1.82	0.43
3:CD:151:GLN:O	3:CD:154:VAL:HG22	2.18	0.43
4:CE:59:ILE:H	4:CE:59:ILE:HG13	1.56	0.43
5:CF:9:MET:H	5:CF:9:MET:HG2	1.73	0.43
7:CH:50:VAL:O	7:CH:50:VAL:HG13	2.18	0.43
7:CH:63:LYS:HG2	7:CH:70:VAL:CG2	2.47	0.43
14:CQ:67:SER:O	14:CQ:68:LYS:C	2.61	0.43
17:CT:53:MET:HE3	17:CT:54:GLN:CA	2.48	0.43
19:CU:47:ALA:O	19:CU:51:ALA:N	2.51	0.43
2:CC:87:ARG:O	2:CC:88:LYS:C	2.62	0.43
12:CM:87:GLY:O	12:CM:91:ARG:HG3	2.18	0.43
18:CB:204:ASP:O	18:CB:205:ALA:HB3	2.18	0.43
20:CO:36:ILE:HD12	20:CO:60:VAL:CG2	2.46	0.43
23:DB:195:A:H1'	23:DB:250:G:H21	1.84	0.43
23:DB:307:G:N2	23:DB:309:A:H3'	2.34	0.43
23:DB:308:G:O4'	23:DB:501:A:H5'	2.18	0.43
23:DB:528:A:H2'	23:DB:529:A:H5"	2.00	0.43
23:DB:826:U:O2'	37:DL:53:GLY:HA3	2.19	0.43
23:DB:1080:A:O2'	23:DB:1081:U:H5'	2.18	0.43
23:DB:1187:G:H5"	49:DR:83:TYR:CE2	2.52	0.43
23:DB:1330:C:H2'	23:DB:1331:G:C8	2.53	0.43
23:DB:1518:C:H2'	23:DB:1519:G:H8	1.84	0.43
23:DB:1568:G:O3'	25:DC:58:LYS:HD3	2.18	0.43
23:DB:1589:U:H2'	23:DB:1590:A:C8	2.54	0.43
23:DB:1625:C:H3'	23:DB:1626:A:C8	2.54	0.43
23:DB:2466:C:OP1	32:D4:4:ARG:HB3	2.19	0.43
23:DB:2660:A:H2'	23:DB:2661:G:O4'	2.19	0.43
23:DB:2756:U:OP2	32:D4:19:ARG:HG2	2.19	0.43
23:DB:2900:A:H2'	23:DB:2901:C:C6	2.53	0.43
24:DI:59:THR:O	24:DI:59:THR:HG23	2.19	0.43
25:DC:163:ILE:HG22	25:DC:164:VAL:H	1.84	0.43
25:DC:221:GLY:C	25:DC:223:ALA:H	2.23	0.43
27:DK:62:VAL:HG12	27:DK:63:VAL:H	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:D0:18:HIS:ND1	31:D0:18:HIS:N	2.67	0.43
35:DV:29:ILE:HD12	35:DV:90:ASP:HA	2.00	0.43
35:DV:75:GLN:HA	35:DV:75:GLN:OE1	2.17	0.43
39:DX:25:GLN:HB2	39:DX:46:VAL:HG11	2.00	0.43
40:DH:69:ALA:HA	40:DH:140:ALA:CB	2.48	0.43
41:DJ:19:ASP:OD2	41:DJ:58:ASN:N	2.52	0.43
41:DJ:93:ILE:C	41:DJ:97:PRO:HG3	2.43	0.43
45:DS:29:VAL:O	45:DS:32:ALA:HB3	2.18	0.43
45:DS:32:ALA:O	45:DS:35:ILE:HG12	2.19	0.43
47:DF:51:ASN:C	47:DF:53:ALA:N	2.74	0.43
52:DW:16:GLU:CD	52:DW:16:GLU:N	2.76	0.43
1:AA:112:G:O2'	1:AA:113:G:H5'	2.18	0.43
1:AA:286:C:H2'	1:AA:287:U:H6	1.83	0.43
1:AA:337:G:O2'	1:AA:338:A:H5'	2.19	0.43
1:AA:430:A:OP2	3:AD:6:PRO:HA	2.17	0.43
1:AA:537:G:H2'	1:AA:538:G:C8	2.53	0.43
1:AA:634:C:O5'	1:AA:634:C:H6	2.01	0.43
1:AA:709:U:H2'	1:AA:710:G:H8	1.83	0.43
1:AA:884:U:H4'	1:AA:885:G:H5"	2.01	0.43
1:AA:937:A:H2'	1:AA:938:A:H5'	2.00	0.43
1:AA:959:A:H2	1:AA:1221:G:N3	2.17	0.43
1:AA:1054:C:H1'	1:AA:1196:A:C5	2.54	0.43
1:AA:1057:G:O2'	1:AA:1058:G:H5'	2.19	0.43
1:AA:1358:U:H5"	21:AN:72:PHE:O	2.19	0.43
1:AA:1483:A:H1'	23:BB:1948:G:H1'	2.00	0.43
1:AA:1492:A:C4	23:BB:1913:A:N1	2.87	0.43
6:AG:71:THR:HG22	6:AG:141:HIS:CE1	2.53	0.43
7:AH:16:GLY:C	7:AH:18:ALA:N	2.75	0.43
7:AH:50:VAL:O	7:AH:50:VAL:HG13	2.19	0.43
8:AI:24:ASN:CG	8:AI:25:GLY:N	2.75	0.43
8:AI:71:ILE:H	8:AI:71:ILE:CD1	2.28	0.43
13:AP:3:THR:HG22	13:AP:66:THR:HB	2.00	0.43
14:AQ:74:LEU:C	14:AQ:74:LEU:HD13	2.44	0.43
16:AS:44:ILE:HA	16:AS:61:VAL:CB	2.48	0.43
18:AB:163:ILE:CG2	18:AB:164:ASP:N	2.81	0.43
22:BA:102:G:H2'	22:BA:103:U:C6	2.54	0.43
23:BB:372:G:O2'	23:BB:373:U:P	2.77	0.43
23:BB:451:U:C2	23:BB:453:A:N7	2.86	0.43
23:BB:560:C:H3'	23:BB:561:G:H8	1.82	0.43
23:BB:635:C:H2'	23:BB:636:G:C8	2.54	0.43
23:BB:870:U:C2'	23:BB:871:U:H5"	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:969:G:O2'	23:BB:970:U:H5'	2.19	0.43
23:BB:1271:G:OP2	23:BB:1648:U:OP1	2.37	0.43
23:BB:1526:C:O2'	23:BB:1527:G:H5'	2.17	0.43
23:BB:1695:G:H1'	25:BC:7:PRO:O	2.17	0.43
23:BB:1824:G:OP2	25:BC:52:HIS:CE1	2.72	0.43
23:BB:1914:C:O2	23:BB:1914:C:C3'	2.67	0.43
23:BB:2361:G:O2'	23:BB:2362:C:H5'	2.18	0.43
23:BB:2599:G:H2'	23:BB:2600:A:C8	2.54	0.43
23:BB:2774:C:OP1	26:BD:169:ARG:HG3	2.18	0.43
23:BB:2868:A:H2'	23:BB:2869:G:C8	2.53	0.43
24:BI:56:VAL:HG13	24:BI:58:ILE:HD11	2.01	0.43
25:BC:23:LEU:HD12	25:BC:23:LEU:HA	1.86	0.43
25:BC:140:VAL:CG1	25:BC:141:HIS:H	2.22	0.43
27:BK:59:LYS:HD2	27:BK:89:ASN:ND2	2.33	0.43
28:BP:62:LYS:HB3	28:BP:69:VAL:HG22	1.99	0.43
29:BE:62:GLN:CG	29:BE:63:LYS:N	2.81	0.43
35:BV:29:ILE:HG13	35:BV:88:HIS:HE1	1.83	0.43
35:BV:50:MET:C	35:BV:52:ALA:N	2.77	0.43
36:B2:1:MET:HG2	36:B2:2:LYS:H	1.83	0.43
37:BL:78:ARG:CB	37:BL:113:ALA:HB2	2.39	0.43
37:BL:120:VAL:HG12	37:BL:121:THR:N	2.34	0.43
39:BX:30:MET:C	39:BX:32:ALA:H	2.26	0.43
40:BH:89:LYS:HB3	40:BH:90:LEU:H	1.48	0.43
40:BH:130:VAL:O	40:BH:131:SER:C	2.61	0.43
41:BJ:131:ASN:O	41:BJ:132:HIS:ND1	2.52	0.43
48:BG:64:ALA:O	48:BG:67:ALA:HB3	2.18	0.43
48:BG:84:LYS:CG	48:BG:85:LYS:H	2.19	0.43
48:BG:88:LEU:HD13	48:BG:93:TYR:HB2	2.00	0.43
51:BZ:40:VAL:O	51:BZ:42:SER:N	2.47	0.43
1:CA:47:C:H4'	1:CA:48:C:O5'	2.18	0.43
1:CA:254:G:H2'	1:CA:255:G:H8	1.83	0.43
1:CA:501:C:O2'	1:CA:502:A:H5'	2.19	0.43
1:CA:631:C:H5"	1:CA:632:U:O4'	2.19	0.43
1:CA:696:A:H2'	1:CA:697:U:C6	2.54	0.43
1:CA:767:A:H2'	1:CA:768:A:C8	2.54	0.43
1:CA:1448:C:O2'	1:CA:1449:C:H5'	2.18	0.43
3:CD:176:LYS:HD3	3:CD:176:LYS:H	1.83	0.43
10:CK:48:GLY:C	10:CK:50:GLY:H	2.25	0.43
15:CR:55:ALA:O	15:CR:58:ILE:HB	2.18	0.43
2:CC:32:LEU:HD21	21:CN:92:ILE:HG12	2.00	0.43
18:CB:8:MET:O	18:CB:9:LEU:C	2.61	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CO:21:ASP:O	20:CO:21:ASP:CG	2.61	0.43
23:DB:175:G:O2'	23:DB:176:A:H5'	2.18	0.43
23:DB:301:G:O5'	46:DU:81:ARG:NH1	2.51	0.43
23:DB:572:A:H3'	23:DB:573:U:O4'	2.18	0.43
23:DB:795:C:H2'	23:DB:796:C:C6	2.54	0.43
23:DB:1009:A:OP1	41:DJ:39:LYS:NZ	2.52	0.43
23:DB:1085:A:H1'	23:DB:1105:U:H1'	1.99	0.43
23:DB:2722:G:O2'	42:DN:3:HIS:O	2.31	0.43
24:DI:72:THR:OG1	24:DI:73:PRO:HD2	2.18	0.43
26:DD:51:THR:HG22	26:DD:52:THR:N	2.32	0.43
27:DK:10:VAL:HG21	27:DK:16:ALA:CA	2.48	0.43
27:DK:36:GLY:HA2	27:DK:62:VAL:O	2.19	0.43
28:DP:26:GLU:HA	28:DP:43:GLU:HA	2.01	0.43
29:DE:62:GLN:CG	29:DE:63:LYS:N	2.81	0.43
29:DE:170:ARG:NH2	29:DE:176:ASP:HB2	2.33	0.43
30:DY:8:GLN:HB3	30:DY:31:ILE:C	2.44	0.43
32:D4:19:ARG:O	32:D4:21:GLY:N	2.51	0.43
37:DL:110:VAL:HB	37:DL:127:VAL:CG2	2.49	0.43
39:DX:6:LEU:N	39:DX:6:LEU:HD22	2.34	0.43
40:DH:14:SER:O	40:DH:15:LEU:C	2.60	0.43
41:DJ:3:THR:HB	41:DJ:44:TYR:HE1	1.83	0.43
41:DJ:34:ARG:HH11	41:DJ:39:LYS:HG2	1.84	0.43
41:DJ:64:VAL:HG22	41:DJ:68:LYS:HB2	2.01	0.43
42:DN:28:LEU:HD23	42:DN:34:ILE:HG13	2.00	0.43
44:DQ:82:LEU:HA	44:DQ:85:ALA:HB3	2.00	0.43
44:DQ:107:ALA:HB3	49:DR:46:GLU:CD	2.43	0.43
45:DS:54:ALA:C	45:DS:56:ALA:N	2.75	0.43
48:DG:5:LYS:HE3	48:DG:61:TRP:CZ3	2.54	0.43
48:DG:64:ALA:O	48:DG:67:ALA:HB3	2.19	0.43
48:DG:132:LEU:HD13	48:DG:143:VAL:HG23	2.00	0.43
50:DT:79:ASP:OD2	50:DT:79:ASP:N	2.51	0.43
1:AA:238:A:C2'	1:AA:239:U:H5"	2.42	0.43
1:AA:407:U:H2'	1:AA:408:A:C8	2.54	0.43
1:AA:509:A:N3	1:AA:543:U:O2'	2.51	0.43
1:AA:520:A:C2	1:AA:536:C:H1'	2.54	0.43
1:AA:1020:G:H2'	1:AA:1020:G:N3	2.34	0.43
1:AA:1032:G:H2'	1:AA:1033:G:O4'	2.18	0.43
1:AA:1294:G:O2'	1:AA:1295:U:H5'	2.19	0.43
1:AA:1449:C:H2'	1:AA:1450:U:O4'	2.19	0.43
2:AC:51:VAL:HG23	2:AC:68:HIS:O	2.18	0.43
3:AD:107:GLY:HA2	3:AD:112:GLU:OE2	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:154:VAL:O	3:AD:158:LEU:HG	2.19	0.43
3:AD:187:ARG:HH11	3:AD:191:SER:HA	1.84	0.43
4:AE:43:GLY:O	4:AE:72:ASN:HA	2.18	0.43
4:AE:156:ARG:HB3	7:AH:43:GLY:O	2.19	0.43
5:AF:10:VAL:HA	5:AF:84:VAL:HA	2.00	0.43
8:AI:12:LYS:HB2	8:AI:12:LYS:NZ	2.34	0.43
8:AI:55:ASP:HB2	8:AI:59:LYS:CD	2.42	0.43
10:AK:95:THR:HG23	10:AK:96:ILE:HG13	2.01	0.43
12:AM:21:ILE:HG22	12:AM:23:GLY:N	2.29	0.43
12:AM:79:LEU:HA	12:AM:82:LEU:CD1	2.47	0.43
16:AS:71:GLY:C	16:AS:73:PHE:H	2.27	0.43
18:AB:63:LYS:HA	18:AB:224:ARG:HH12	1.84	0.43
18:AB:115:ASP:OD1	18:AB:116:LEU:N	2.52	0.43
19:AU:8:ASN:O	19:AU:9:GLU:HB3	2.19	0.43
23:BB:200:U:O2'	51:BZ:22:LEU:HD12	2.19	0.43
23:BB:202:U:H2'	23:BB:203:A:O4'	2.18	0.43
23:BB:528:A:H2'	23:BB:529:A:H5"	2.01	0.43
23:BB:572:A:H3'	23:BB:573:U:O4'	2.18	0.43
23:BB:659:G:H4'	29:BE:95:LYS:HB3	2.00	0.43
23:BB:856:G:C1'	52:BW:23:LYS:HB3	2.48	0.43
23:BB:1061:U:O4	24:BI:10:LEU:HA	2.18	0.43
23:BB:1259:G:H2'	23:BB:1260:A:H8	1.82	0.43
23:BB:1819:A:OP1	25:BC:159:THR:HG21	2.18	0.43
23:BB:1850:G:H2'	23:BB:1851:U:C6	2.53	0.43
23:BB:2770:G:H8	23:BB:2770:G:O5'	2.02	0.43
23:BB:2853:C:H2'	23:BB:2854:G:C8	2.53	0.43
25:BC:65:ASP:O	25:BC:65:ASP:CG	2.61	0.43
25:BC:106:PRO:HA	25:BC:195:GLY:N	2.33	0.43
25:BC:120:ASP:CG	25:BC:121:ALA:H	2.26	0.43
27:BK:10:VAL:HG21	27:BK:16:ALA:CA	2.49	0.43
29:BE:62:GLN:HE21	29:BE:62:GLN:HB2	1.52	0.43
29:BE:161:ALA:HA	29:BE:164:LEU:HB2	2.01	0.43
34:B3:21:PHE:CE1	34:B3:58:ILE:HG23	2.53	0.43
38:BM:19:GLY:N	38:BM:38:ARG:NH1	2.66	0.43
41:BJ:12:LYS:O	41:BJ:13:ARG:HB2	2.19	0.43
43:BO:7:ARG:N	43:BO:10:ARG:HH11	2.17	0.43
45:BS:52:GLU:HA	45:BS:55:ILE:HG22	2.01	0.43
45:BS:86:MET:HB3	45:BS:94:ASP:HB2	2.00	0.43
47:BF:64:PRO:HA	47:BF:88:VAL:HG22	2.00	0.43
47:BF:74:ALA:C	47:BF:76:PHE:H	2.26	0.43
48:BG:54:ARG:HA	48:BG:54:ARG:HE	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:93:TYR:N	48:BG:93:TYR:CD2	2.86	0.43
49:BR:15:SER:H	49:BR:18:GLN:CG	2.32	0.43
51:BZ:33:LEU:HA	51:BZ:51:VAL:O	2.19	0.43
1:CA:332:G:H2'	1:CA:333:U:H6	1.84	0.43
1:CA:410:G:P	3:CD:25:ARG:HD2	2.58	0.43
1:CA:484:G:H3'	1:CA:484:G:OP2	2.17	0.43
1:CA:502:A:H2'	1:CA:503:C:O4'	2.19	0.43
1:CA:719:C:H2'	15:CR:38:ILE:CD1	2.49	0.43
1:CA:947:G:H4'	1:CA:1332:A:H2	1.83	0.43
1:CA:950:U:H2'	1:CA:951:G:H8	1.83	0.43
1:CA:955:U:H2'	1:CA:956:U:O4'	2.18	0.43
1:CA:1180:A:OP1	8:CI:104:THR:HG22	2.19	0.43
1:CA:1347:G:H5"	8:CI:109:GLN:O	2.18	0.43
3:CD:155:LYS:HG2	3:CD:156:ALA:H	1.83	0.43
3:CD:187:ARG:O	3:CD:191:SER:N	2.52	0.43
4:CE:141:ASP:HA	4:CE:144:GLU:OE1	2.19	0.43
10:CK:67:GLU:HG3	10:CK:68:ARG:N	2.33	0.43
11:CL:106:VAL:CG2	11:CL:116:TYR:HB3	2.48	0.43
11:CL:107:LYS:C	11:CL:109:ARG:N	2.76	0.43
13:CP:60:TRP:C	13:CP:65:ALA:HB3	2.44	0.43
14:CQ:26:ARG:N	14:CQ:39:ARG:O	2.52	0.43
14:CQ:58:VAL:HG12	14:CQ:77:VAL:HG13	2.00	0.43
2:CC:129:PHE:CZ	2:CC:130:ARG:HD2	2.54	0.43
12:CM:22:TYR:HD1	12:CM:65:GLU:HA	1.82	0.43
12:CM:85:TYR:HB2	16:CS:72:GLU:HB2	2.00	0.43
21:CN:60:ARG:NH2	21:CN:69:PRO:HB3	2.34	0.43
16:CS:29:PRO:HB3	16:CS:47:THR:HG22	2.00	0.43
18:CB:169:HIS:CD2	18:CB:169:HIS:N	2.85	0.43
20:CO:7:ALA:O	20:CO:11:ILE:HG23	2.19	0.43
20:CO:16:GLY:HA2	20:CO:27:VAL:CG2	2.48	0.43
20:CO:64:ARG:NH2	20:CO:88:ARG:HH11	2.17	0.43
22:DA:6:G:O2'	22:DA:7:G:H5'	2.19	0.43
22:DA:25:U:H4'	22:DA:26:C:OP1	2.17	0.43
22:DA:67:G:H2'	22:DA:68:C:H6	1.84	0.43
22:DA:109:A:H2'	22:DA:110:C:H6	1.84	0.43
22:DA:111:U:H2'	22:DA:112:G:C8	2.53	0.43
23:DB:163:C:H2'	23:DB:164:C:H6	1.84	0.43
23:DB:195:A:H5"	37:DL:47:ARG:NH2	2.34	0.43
23:DB:286:U:H2'	23:DB:287:G:C8	2.51	0.43
23:DB:690:G:H2'	23:DB:691:C:O4'	2.18	0.43
23:DB:735:A:N7	23:DB:761:A:H2	2.16	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:744:U:H2'	23:DB:745:G:C8	2.54	0.43
23:DB:958:U:O4	38:DM:16:ARG:HA	2.18	0.43
23:DB:1062:G:H2'	23:DB:1063:G:H8	1.83	0.43
23:DB:1463:C:H2'	23:DB:1464:G:H8	1.83	0.43
23:DB:1486:U:H2'	23:DB:1487:U:H6	1.83	0.43
23:DB:1541:C:O2'	23:DB:1542:U:H5'	2.19	0.43
23:DB:1600:C:C2'	23:DB:1601:G:H5'	2.48	0.43
23:DB:2222:C:H4'	25:DC:184:GLU:CD	2.44	0.43
23:DB:2376:A:C2	43:DO:92:PHE:HB3	2.54	0.43
23:DB:2869:G:H2'	23:DB:2870:C:O4'	2.19	0.43
24:DI:4:VAL:O	24:DI:5:GLN:O	2.36	0.43
24:DI:54:ILE:HD11	24:DI:71:LYS:N	2.33	0.43
26:DD:124:ARG:HE	26:DD:125:TRP:HE1	1.64	0.43
28:DP:58:PHE:HD1	28:DP:73:PHE:HD2	1.65	0.43
29:DE:1:MET:O	29:DE:13:THR:HA	2.18	0.43
32:D4:8:LYS:HG2	32:D4:9:LYS:H	1.83	0.43
35:DV:68:LYS:HG2	35:DV:69:GLU:N	2.33	0.43
38:DM:59:ARG:HE	38:DM:60:GLN:CG	2.11	0.43
41:DJ:11:VAL:HA	41:DJ:12:LYS:HZ2	1.83	0.43
43:DO:66:GLY:CA	43:DO:102:ARG:HH21	2.17	0.43
45:DS:2:GLU:O	45:DS:3:THR:C	2.62	0.43
45:DS:60:HIS:O	45:DS:60:HIS:ND1	2.51	0.43
45:DS:73:LYS:HD2	45:DS:73:LYS:HA	1.66	0.43
46:DU:41:VAL:O	46:DU:59:GLU:HG3	2.17	0.43
47:DF:100:GLU:C	47:DF:102:LEU:N	2.74	0.43
48:DG:93:TYR:O	48:DG:94:ARG:O	2.36	0.43
49:DR:49:ILE:HG21	49:DR:54:VAL:HA	2.01	0.43
1:AA:123:U:OP1	1:AA:312:C:H5'	2.18	0.43
1:AA:1308:U:H3'	12:AM:97:ARG:HH12	1.81	0.43
1:AA:1509:C:H2'	1:AA:1510:C:H6	1.84	0.43
3:AD:96:ARG:O	3:AD:100:VAL:HG23	2.18	0.43
6:AG:43:TYR:HA	6:AG:46:LEU:HB3	2.00	0.43
7:AH:9:MET:O	7:AH:13:ILE:HG13	2.19	0.43
9:AJ:18:ILE:HG23	9:AJ:19:ASP:N	2.33	0.43
16:AS:35:ARG:HB2	16:AS:71:GLY:CA	2.44	0.43
16:AS:38:THR:HA	16:AS:69:LYS:HD3	2.00	0.43
18:AB:45:THR:HG22	18:AB:49:PHE:CZ	2.54	0.43
18:AB:55:GLU:HG3	18:AB:197:PHE:CE1	2.54	0.43
20:AO:45:GLU:O	20:AO:47:LYS:N	2.47	0.43
21:AN:41:TRP:HB3	21:AN:44:VAL:CG2	2.49	0.43
22:BA:54:G:N2	47:BF:25:MET:HG2	2.31	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:75:G:H2'	22:BA:76:G:C8	2.50	0.43
23:BB:77:G:H5'	39:BX:52:ARG:HG2	2.00	0.43
23:BB:163:C:O2	23:BB:163:C:O4'	2.36	0.43
23:BB:182:A:H2'	23:BB:183:C:C6	2.53	0.43
23:BB:222:A:H61	23:BB:232:G:H1'	1.84	0.43
23:BB:225:C:H2'	23:BB:226:A:O4'	2.18	0.43
23:BB:233:A:H61	23:BB:428:A:N6	2.16	0.43
23:BB:644:A:O2'	23:BB:645:C:H2'	2.18	0.43
23:BB:816:C:O2'	23:BB:817:C:H5'	2.19	0.43
23:BB:850:U:O2'	30:BY:22:THR:HG22	2.18	0.43
23:BB:988:A:O5'	30:BY:11:SER:HB3	2.19	0.43
23:BB:1197:G:H5'	23:BB:1227:G:O2'	2.19	0.43
23:BB:1252:G:H1'	44:BQ:32:ARG:NH2	2.30	0.43
23:BB:1276:A:H1'	42:BN:16:HIS:HE2	1.83	0.43
23:BB:1535:A:O2'	23:BB:1537:G:N7	2.49	0.43
23:BB:1662:U:O2	23:BB:2687:U:H4'	2.19	0.43
23:BB:1751:U:H2'	23:BB:1752:C:C6	2.53	0.43
23:BB:1860:G:O2'	23:BB:1861:G:H5'	2.19	0.43
23:BB:2379:G:H2'	23:BB:2380:C:C6	2.53	0.43
23:BB:2437:G:H2'	23:BB:2438:U:C6	2.54	0.43
23:BB:2895:G:O2'	23:BB:2896:C:H5'	2.18	0.43
24:BI:49:GLU:HG3	24:BI:54:ILE:HD11	2.01	0.43
26:BD:13:ARG:HH12	28:BP:74:GLN:NE2	2.17	0.43
27:BK:62:VAL:HG12	27:BK:63:VAL:N	2.34	0.43
28:BP:77:SER:O	28:BP:80:VAL:HG12	2.19	0.43
28:BP:95:LYS:HG3	28:BP:97:TYR:CE1	2.52	0.43
29:BE:114:ARG:HG3	29:BE:114:ARG:NH1	2.33	0.43
29:BE:133:LEU:C	29:BE:135:ALA:H	2.26	0.43
29:BE:148:ILE:HD13	29:BE:187:VAL:HG23	2.00	0.43
35:BV:87:GLN:HE21	35:BV:87:GLN:HB2	1.65	0.43
39:BX:49:ASP:O	39:BX:53:VAL:HG23	2.18	0.43
40:BH:49:ALA:C	40:BH:51:ARG:H	2.25	0.43
40:BH:90:LEU:HD11	40:BH:146:VAL:CG1	2.49	0.43
41:BJ:88:THR:O	41:BJ:91:GLU:HB2	2.18	0.43
42:BN:31:HIS:O	42:BN:32:GLU:HB2	2.18	0.43
45:BS:82:MET:HE2	45:BS:84:ARG:HH12	1.82	0.43
47:BF:46:LYS:C	47:BF:48:LEU:H	2.27	0.43
47:BF:102:LEU:C	47:BF:104:THR:H	2.26	0.43
50:BT:87:LEU:O	50:BT:88:LYS:O	2.37	0.43
1:CA:197:A:H4'	1:CA:198:G:O5'	2.17	0.43
1:CA:213:G:C8	1:CA:214:C:C5	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:521:G:O2'	1:CA:522:C:H5'	2.19	0.43
1:CA:537:G:H2'	1:CA:538:G:H8	1.83	0.43
1:CA:564:C:N1	14:CQ:32:ILE:HD11	2.34	0.43
1:CA:708:C:O2'	1:CA:709:U:H5'	2.19	0.43
1:CA:1103:C:H2'	1:CA:1104:G:O4'	2.18	0.43
1:CA:1109:C:H2'	1:CA:1110:A:O4'	2.18	0.43
1:CA:1115:U:O5'	1:CA:1115:U:H6	2.01	0.43
1:CA:1254:A:OP1	9:CJ:47:GLU:HG3	2.19	0.43
1:CA:1382:C:O2'	1:CA:1383:C:H5'	2.18	0.43
1:CA:1426:G:H2'	1:CA:1427:C:O4'	2.19	0.43
3:CD:26:ALA:C	3:CD:27:ILE:HD12	2.44	0.43
3:CD:117:VAL:HA	3:CD:122:ILE:HG12	2.01	0.43
5:CF:47:LEU:HD12	5:CF:55:HIS:C	2.44	0.43
10:CK:86:LYS:HB2	10:CK:113:THR:HA	2.00	0.43
14:CQ:40:THR:HG22	14:CQ:41:THR:N	2.34	0.43
14:CQ:61:ARG:O	14:CQ:61:ARG:HG3	2.19	0.43
15:CR:27:THR:O	15:CR:28:LEU:HD23	2.18	0.43
2:CC:110:LEU:HD22	2:CC:145:ALA:HB2	2.00	0.43
2:CC:183:TYR:O	2:CC:184:ASN:HB2	2.17	0.43
9:CJ:7:ARG:HG3	9:CJ:102:LEU:O	2.17	0.43
9:CJ:10:LEU:HB2	9:CJ:72:ARG:HB2	2.01	0.43
9:CJ:85:ASP:C	9:CJ:87:LEU:H	2.26	0.43
16:CS:33:TRP:CD1	16:CS:51:HIS:HB3	2.53	0.43
18:CB:42:LEU:C	18:CB:44:LYS:H	2.26	0.43
20:CO:70:LEU:HD11	20:CO:77:ARG:CB	2.45	0.43
22:DA:52:A:C2'	22:DA:53:A:H5'	2.48	0.43
23:DB:121:G:H2'	23:DB:122:G:C8	2.53	0.43
23:DB:210:C:O2'	23:DB:211:C:H5'	2.18	0.43
23:DB:677:A:H2'	23:DB:678:C:C6	2.52	0.43
23:DB:729:G:H5"	23:DB:730:A:H5"	2.00	0.43
23:DB:1241:A:N3	23:DB:1241:A:H5'	2.34	0.43
23:DB:1328:A:H2'	23:DB:1330:C:C5	2.54	0.43
23:DB:1464:G:H2'	23:DB:1465:G:C8	2.53	0.43
23:DB:1784:A:H4'	23:DB:1785:A:O5'	2.18	0.43
23:DB:1841:U:C2	23:DB:1842:G:C8	3.07	0.43
23:DB:2011:U:O2'	23:DB:2012:G:H5'	2.19	0.43
23:DB:2785:C:H2'	23:DB:2786:U:O4'	2.19	0.43
23:DB:2806:C:H2'	23:DB:2807:U:O4'	2.19	0.43
23:DB:2815:C:H2'	23:DB:2816:G:H8	1.83	0.43
24:DI:68:PHE:N	24:DI:68:PHE:CD1	2.87	0.43
25:DC:124:LYS:HG3	25:DC:125:PRO:HD2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:40:LEU:HD12	26:DD:41:ALA:N	2.34	0.43
29:DE:24:ASN:OD1	29:DE:27:LEU:HB2	2.18	0.43
29:DE:40:ARG:NH2	29:DE:92:HIS:NE2	2.66	0.43
29:DE:58:LYS:NZ	29:DE:58:LYS:N	2.57	0.43
29:DE:67:ARG:NH1	29:DE:70:SER:OG	2.51	0.43
29:DE:148:ILE:HD13	29:DE:187:VAL:HG23	1.99	0.43
30:DY:40:THR:O	30:DY:43:ILE:HG23	2.19	0.43
33:D1:8:ILE:HD12	33:D1:51:ALA:HA	1.98	0.43
37:DL:111:ILE:HG22	37:DL:112:LEU:N	2.31	0.43
38:DM:110:GLU:CD	38:DM:110:GLU:N	2.76	0.43
40:DH:99:ILE:O	40:DH:103:VAL:HG12	2.19	0.43
41:DJ:4:PHE:HB3	41:DJ:44:TYR:CE1	2.53	0.43
41:DJ:40:HIS:O	44:DQ:66:ALA:HB1	2.18	0.43
42:DN:31:HIS:ND1	42:DN:31:HIS:N	2.67	0.43
44:DQ:91:ARG:HE	44:DQ:93:ILE:CG2	2.32	0.43
47:DF:137:PHE:CD2	47:DF:137:PHE:N	2.87	0.43
49:DR:69:GLY:O	49:DR:90:ARG:HG3	2.19	0.43
50:DT:22:THR:HA	50:DT:25:GLU:HB3	2.01	0.43
52:DW:58:LEU:N	52:DW:58:LEU:HD22	2.34	0.43
1:AA:229:U:H2'	1:AA:230:G:H8	1.82	0.43
1:AA:707:U:H4'	10:AK:21:HIS:CG	2.53	0.43
1:AA:920:U:O2'	1:AA:921:U:H5'	2.18	0.43
1:AA:1164:G:O2'	1:AA:1165:U:H5'	2.18	0.43
1:AA:1201:A:H1'	1:AA:1202:U:OP2	2.19	0.43
1:AA:1292:G:H2'	1:AA:1293:C:H6	1.84	0.43
1:AA:1316:G:C2	1:AA:1318:A:H5"	2.53	0.43
1:AA:1323:G:H2'	1:AA:1324:A:H8	1.81	0.43
1:AA:1342:C:O2'	1:AA:1343:G:H5'	2.18	0.43
1:AA:1509:C:O2'	1:AA:1510:C:H5'	2.19	0.43
2:AC:27:GLU:HB2	2:AC:31:ASN:OD1	2.19	0.43
2:AC:47:ALA:C	2:AC:49:ALA:N	2.77	0.43
2:AC:54:ILE:O	2:AC:54:ILE:HG12	2.19	0.43
2:AC:180:ASP:C	2:AC:181:ILE:HD12	2.44	0.43
7:AH:23:ALA:CB	7:AH:61:THR:HA	2.49	0.43
7:AH:23:ALA:C	7:AH:62:LEU:HD13	2.44	0.43
7:AH:25:THR:HG22	7:AH:26:MET:H	1.84	0.43
8:AI:11:ARG:HE	8:AI:12:LYS:CD	2.31	0.43
8:AI:51:LEU:CB	8:AI:56:MET:SD	2.99	0.43
8:AI:96:GLU:HA	8:AI:99:LYS:HE3	2.00	0.43
8:AI:119:LYS:O	8:AI:119:LYS:HD2	2.19	0.43
9:AJ:57:VAL:HG13	9:AJ:58:ASN:N	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AK:15:VAL:C	10:AK:17:ASP:H	2.27	0.43
12:AM:69:ARG:HA	12:AM:72:ILE:HD12	2.00	0.43
18:AB:19:THR:OG1	18:AB:20:ARG:N	2.51	0.43
18:AB:67:LEU:HD21	18:AB:91:VAL:HG23	2.00	0.43
18:AB:98:GLY:C	18:AB:100:LEU:N	2.77	0.43
18:AB:101:THR:HG22	18:AB:174:GLU:OE1	2.18	0.43
22:BA:76:G:H1	22:BA:101:A:N6	2.16	0.43
23:BB:441:U:O2'	23:BB:442:G:H5'	2.18	0.43
23:BB:479:A:H1'	23:BB:480:A:H5"	2.00	0.43
23:BB:481:G:C2	23:BB:507:A:C4	3.07	0.43
23:BB:559:G:H1'	44:BQ:55:GLN:NE2	2.34	0.43
23:BB:765:C:O2'	23:BB:766:U:H5'	2.18	0.43
23:BB:768:G:O2'	23:BB:769:U:H5'	2.18	0.43
23:BB:1570:A:H2'	23:BB:1571:A:C8	2.54	0.43
23:BB:1727:C:H2'	23:BB:1728:C:H6	1.82	0.43
23:BB:1989:G:H2'	23:BB:1990:C:O4'	2.19	0.43
23:BB:2626:C:O2'	23:BB:2627:G:H5'	2.19	0.43
23:BB:2721:A:H2'	23:BB:2722:G:H8	1.82	0.43
24:BI:19:PRO:HG2	24:BI:22:PRO:HB2	2.01	0.43
26:BD:2:ILE:HG23	26:BD:84:LEU:HB3	2.01	0.43
27:BK:88:ASN:C	27:BK:88:ASN:ND2	2.76	0.43
34:B3:61:LEU:N	34:B3:62:PRO:CD	2.82	0.43
35:BV:68:LYS:HG2	35:BV:69:GLU:N	2.33	0.43
37:BL:78:ARG:HB3	37:BL:113:ALA:CB	2.38	0.43
41:BJ:77:HIS:HD2	41:BJ:84:ILE:HB	1.83	0.43
42:BN:29:VAL:HG13	42:BN:83:LEU:CD2	2.49	0.43
42:BN:116:VAL:HG13	42:BN:117:ASP:N	2.33	0.43
42:BN:118:ARG:HE	42:BN:118:ARG:HB3	1.49	0.43
43:BO:7:ARG:HG3	43:BO:96:GLY:O	2.19	0.43
44:BQ:30:VAL:HG11	44:BQ:33:VAL:HG22	2.00	0.43
45:BS:46:LEU:O	45:BS:47:VAL:C	2.61	0.43
48:BG:27:GLY:O	48:BG:28:LYS:C	2.61	0.43
48:BG:137:LYS:O	48:BG:138:GLN:C	2.61	0.43
52:BW:8:SER:O	52:BW:9:THR:HB	2.18	0.43
1:CA:16:A:O2'	4:CE:20:VAL:HG22	2.19	0.43
1:CA:222:C:H2'	1:CA:223:A:C8	2.54	0.43
1:CA:634:C:H6	1:CA:634:C:O5'	2.02	0.43
1:CA:771:G:H2'	1:CA:772:U:C6	2.54	0.43
1:CA:1016:A:H4'	1:CA:1218:C:C4'	2.49	0.43
1:CA:1057:G:H2'	1:CA:1058:G:C8	2.54	0.43
1:CA:1253:G:OP1	9:CJ:46:LYS:HG2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:187:ARG:HH11	3:CD:191:SER:HA	1.83	0.43
4:CE:80:LEU:HG	4:CE:122:VAL:HG11	2.01	0.43
10:CK:75:GLU:C	10:CK:77:GLY:H	2.24	0.43
11:CL:54:VAL:HG12	11:CL:55:ARG:N	2.33	0.43
13:CP:36:VAL:O	13:CP:36:VAL:HG13	2.18	0.43
6:CG:46:LEU:HG	6:CG:57:GLU:HB3	2.00	0.43
9:CJ:10:LEU:O	9:CJ:71:LEU:HA	2.19	0.43
12:CM:52:ILE:HG23	12:CM:53:ASP:H	1.83	0.43
22:DA:9:G:O2'	22:DA:10:G:H5'	2.18	0.43
23:DB:52:A:C5	23:DB:118:A:C2	3.06	0.43
23:DB:682:G:O2'	23:DB:683:U:H5'	2.18	0.43
23:DB:1190:G:P	37:DL:32:GLY:HA2	2.58	0.43
23:DB:1310:G:N2	23:DB:1610:A:H8	2.04	0.43
23:DB:1360:G:C2'	23:DB:1361:G:H5'	2.48	0.43
23:DB:1400:U:O2'	23:DB:1401:G:H5'	2.19	0.43
23:DB:1726:C:H2'	23:DB:1727:C:C6	2.54	0.43
23:DB:1727:C:H2'	23:DB:1728:C:O4'	2.19	0.43
23:DB:1824:G:OP2	25:DC:52:HIS:CE1	2.72	0.43
23:DB:2348:U:H4'	33:D1:40:PRO:HG2	2.00	0.43
23:DB:2628:C:O2'	23:DB:2781:A:H2'	2.18	0.43
23:DB:2709:G:H2'	23:DB:2710:C:C6	2.53	0.43
23:DB:2852:G:O2'	23:DB:2853:C:H5'	2.19	0.43
25:DC:93:VAL:CG1	25:DC:94:LEU:H	2.17	0.43
26:DD:182:ALA:C	26:DD:184:ARG:N	2.76	0.43
28:DP:6:GLN:HE21	28:DP:7:LEU:HD12	1.84	0.43
29:DE:148:ILE:HD13	29:DE:187:VAL:CG2	2.49	0.43
33:D1:52:LYS:HZ2	33:D1:52:LYS:CB	2.30	0.43
34:D3:16:THR:HG21	34:D3:48:MET:HE1	2.00	0.43
37:DL:91:ASP:HB2	37:DL:94:THR:HG23	2.01	0.43
38:DM:73:ILE:HG21	38:DM:91:TYR:OH	2.19	0.43
38:DM:130:PHE:O	38:DM:131:VAL:HG13	2.19	0.43
40:DH:26:ALA:O	40:DH:28:ASN:N	2.52	0.43
45:DS:20:VAL:O	45:DS:22:ASP:N	2.52	0.43
45:DS:43:ALA:O	45:DS:47:VAL:HG23	2.18	0.43
46:DU:1:ALA:HB1	46:DU:84:PHE:CZ	2.54	0.43
47:DF:11:VAL:O	47:DF:13:LYS:N	2.52	0.43
52:DW:28:GLU:C	52:DW:30:VAL:N	2.77	0.43
1:AA:78:A:O2'	1:AA:79:G:H5'	2.19	0.43
1:AA:415:A:O4'	1:AA:415:A:N3	2.52	0.43
1:AA:656:G:H2'	1:AA:657:U:C6	2.54	0.43
1:AA:920:U:C2	1:AA:921:U:C5	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1084:G:H2'	1:AA:1085:U:C6	2.54	0.43
1:AA:1096:C:O2'	1:AA:1097:C:H5'	2.19	0.43
1:AA:1190:G:OP1	2:AC:4:VAL:N	2.44	0.43
2:AC:11:LEU:HD12	21:AN:96:LYS:HA	2.01	0.43
2:AC:152:VAL:HG13	2:AC:197:VAL:CG2	2.49	0.43
4:AE:33:THR:HB	4:AE:49:TYR:OH	2.19	0.43
7:AH:24:VAL:CG1	7:AH:26:MET:HE3	2.49	0.43
9:AJ:9:ARG:HB2	9:AJ:99:GLN:HB3	2.01	0.43
12:AM:56:ARG:O	12:AM:59:VAL:HG12	2.19	0.43
13:AP:60:TRP:C	13:AP:65:ALA:HB3	2.44	0.43
18:AB:100:LEU:HD21	18:AB:160:LEU:HD12	2.00	0.43
20:AO:81:LEU:O	20:AO:82:ILE:C	2.62	0.43
22:BA:64:G:H2'	22:BA:65:U:H6	1.82	0.43
23:BB:245:G:O2'	23:BB:246:C:H5'	2.19	0.43
23:BB:311:A:H2	23:BB:331:C:H5"	1.83	0.43
23:BB:325:G:H2'	23:BB:326:G:H8	1.83	0.43
23:BB:584:C:P	44:BQ:5:ARG:HD3	2.58	0.43
23:BB:666:A:H4'	37:BL:48:ARG:HD2	2.01	0.43
23:BB:704:G:H1'	23:BB:727:A:N6	2.33	0.43
23:BB:950:G:H2'	23:BB:951:C:H6	1.79	0.43
23:BB:969:G:H2'	23:BB:970:U:H6	1.83	0.43
23:BB:1057:A:H62	23:BB:1086:A:H2'	1.84	0.43
23:BB:1135:C:N4	23:BB:1139:G:C6	2.87	0.43
23:BB:1326:U:H2'	23:BB:1327:A:O4'	2.19	0.43
23:BB:1486:U:O2'	23:BB:1487:U:H5'	2.19	0.43
23:BB:2267:A:OP2	23:BB:2268:A:H5"	2.18	0.43
23:BB:2272:U:O2'	23:BB:2273:A:H8	2.02	0.43
23:BB:2602:A:OP1	23:BB:2602:A:H3'	2.19	0.43
23:BB:2604:U:O2'	23:BB:2605:U:H5'	2.19	0.43
26:BD:40:LEU:HD12	26:BD:41:ALA:N	2.34	0.43
26:BD:148:GLN:HB2	26:BD:149:ASN:H	1.62	0.43
26:BD:150:GLN:O	26:BD:151:THR:C	2.61	0.43
28:BP:19:PHE:CE2	28:BP:83:ILE:HD11	2.54	0.43
28:BP:98:TYR:C	28:BP:100:ARG:N	2.77	0.43
29:BE:105:LEU:HD21	29:BE:177:PRO:HB3	2.00	0.43
35:BV:75:GLN:CB	35:BV:90:ASP:HB2	2.49	0.43
38:BM:21:ALA:CB	38:BM:100:LYS:HG2	2.49	0.43
38:BM:111:GLU:HA	38:BM:114:ARG:NH2	2.34	0.43
38:BM:126:ILE:HG22	38:BM:127:LYS:N	2.34	0.43
40:BH:84:ALA:HA	40:BH:90:LEU:CA	2.29	0.43
44:BQ:49:ARG:O	44:BQ:53:LYS:HE2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:41:VAL:O	46:BU:59:GLU:HG3	2.19	0.43
47:BF:111:ARG:HD2	47:BF:111:ARG:H	1.84	0.43
50:BT:21:SER:O	50:BT:25:GLU:HB2	2.19	0.43
51:BZ:49:LEU:O	51:BZ:51:VAL:HG23	2.19	0.43
1:CA:1023:U:C2'	1:CA:1024:G:H5'	2.49	0.43
1:CA:1190:G:OP2	2:CC:4:VAL:HB	2.18	0.43
1:CA:1298:U:H1'	1:CA:1299:A:C2	2.53	0.43
1:CA:1298:U:H1'	1:CA:1299:A:N1	2.34	0.43
1:CA:1374:A:O3'	6:CG:27:ASN:ND2	2.51	0.43
3:CD:49:ASP:OD2	4:CE:111:ARG:HD2	2.18	0.43
7:CH:9:MET:O	7:CH:13:ILE:HG13	2.19	0.43
11:CL:27:PRO:O	11:CL:28:GLN:NE2	2.52	0.43
6:CG:145:GLU:C	6:CG:147:ASN:H	2.26	0.43
8:CI:35:GLU:HA	8:CI:39:GLY:CA	2.49	0.43
9:CJ:16:ARG:H	9:CJ:16:ARG:HG3	1.52	0.43
9:CJ:42:LEU:HB3	9:CJ:71:LEU:HD11	2.01	0.43
12:CM:28:ARG:O	12:CM:32:ILE:HB	2.19	0.43
21:CN:3:GLN:HA	21:CN:6:LYS:HG3	2.00	0.43
20:CO:14:GLU:CB	20:CO:84:ARG:HH22	2.32	0.43
22:DA:64:G:O2'	22:DA:65:U:H5'	2.19	0.43
23:DB:68:G:H2'	23:DB:69:C:C6	2.54	0.43
23:DB:322:A:H1'	23:DB:339:U:O2	2.19	0.43
23:DB:479:A:O2'	23:DB:481:G:H5'	2.18	0.43
23:DB:707:G:O2'	23:DB:708:G:H5'	2.18	0.43
23:DB:1099:G:C5'	24:DI:4:VAL:HG12	2.48	0.43
23:DB:1459:G:H8	23:DB:1461:C:H5	1.67	0.43
23:DB:1568:G:H4'	25:DC:58:LYS:HD3	2.00	0.43
23:DB:2272:U:O2'	23:DB:2273:A:H8	2.01	0.43
23:DB:2282:G:O2'	23:DB:2283:C:OP2	2.33	0.43
23:DB:2336:A:O2'	23:DB:2337:G:P	2.77	0.43
23:DB:2494:G:H2'	23:DB:2495:G:H8	1.83	0.43
23:DB:2552:U:H3'	23:DB:2554:U:OP2	2.19	0.43
24:DI:96:LYS:HD3	24:DI:138:VAL:HG21	2.00	0.43
24:DI:101:SER:OG	24:DI:104:GLN:HG3	2.19	0.43
26:DD:37:VAL:HG12	26:DD:38:LYS:N	2.33	0.43
27:DK:54:LYS:HB3	27:DK:54:LYS:HE3	1.87	0.43
28:DP:85:VAL:HG21	28:DP:88:ARG:NH1	2.33	0.43
28:DP:91:VAL:C	28:DP:93:LYS:H	2.27	0.43
33:D1:10:LEU:HD23	33:D1:35:LEU:HD21	2.00	0.43
33:D1:26:LYS:HG2	33:D1:52:LYS:HD2	2.01	0.43
34:D3:57:VAL:O	34:D3:59:ALA:N	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:D2:26:ASN:O	36:D2:30:VAL:HG23	2.18	0.43
37:DL:127:VAL:HG22	37:DL:131:ALA:HB3	2.00	0.43
40:DH:2:GLN:HB2	40:DH:39:ALA:CB	2.49	0.43
40:DH:114:GLU:CG	40:DH:133:GLN:HB2	2.49	0.43
40:DH:128:HIS:N	40:DH:144:VAL:O	2.52	0.43
41:DJ:12:LYS:O	41:DJ:13:ARG:HB2	2.19	0.43
41:DJ:13:ARG:HB3	41:DJ:53:TYR:HD2	1.83	0.43
41:DJ:15:TRP:CD2	41:DJ:53:TYR:HB3	2.54	0.43
42:DN:11:ASN:HD22	42:DN:11:ASN:HA	1.52	0.43
42:DN:36:THR:OG1	42:DN:40:LYS:HD2	2.19	0.43
45:DS:33:LEU:HD23	45:DS:51:LEU:HD23	2.00	0.43
45:DS:83:LYS:HB3	45:DS:95:ARG:NH1	2.34	0.43
47:DF:64:PRO:HA	47:DF:88:VAL:HG22	2.00	0.43
47:DF:99:PHE:O	47:DF:102:LEU:HB3	2.18	0.43
49:DR:14:VAL:HG21	49:DR:98:ILE:CD1	2.49	0.43
49:DR:31:GLU:O	49:DR:63:VAL:HG22	2.19	0.43
49:DR:98:ILE:HG22	49:DR:99:THR:N	2.34	0.43
50:DT:51:PHE:C	50:DT:53:VAL:H	2.25	0.43
51:DZ:40:VAL:CG2	51:DZ:43:GLU:HB3	2.44	0.43
1:AA:16:A:O2'	4:AE:20:VAL:HG22	2.19	0.42
1:AA:403:C:H5'	3:AD:131:ILE:HG23	2.00	0.42
1:AA:454:G:H2'	1:AA:455:G:H8	1.83	0.42
1:AA:631:C:H5"	1:AA:632:U:O4'	2.19	0.42
1:AA:861:G:O2'	1:AA:862:C:H5'	2.18	0.42
1:AA:878:A:C5'	7:AH:80:PRO:HG2	2.49	0.42
1:AA:939:G:C5'	6:AG:101:ARG:HH12	2.20	0.42
1:AA:986:U:H1'	16:AS:54:ARG:HA	2.00	0.42
1:AA:1117:A:C2	1:AA:1180:A:H1'	2.53	0.42
1:AA:1360:A:N6	1:AA:1361:G:C2	2.87	0.42
3:AD:4:LEU:HD12	3:AD:4:LEU:N	2.33	0.42
5:AF:51:ILE:HD11	5:AF:86:ARG:HG3	2.01	0.42
6:AG:128:GLU:HG2	6:AG:130:LYS:HB2	2.00	0.42
6:AG:130:LYS:C	6:AG:130:LYS:HD3	2.44	0.42
10:AK:125:LYS:O	19:AU:33:ARG:CZ	2.67	0.42
13:AP:74:LEU:HA	13:AP:77:GLU:OE2	2.19	0.42
14:AQ:4:ILE:O	14:AQ:4:ILE:HD12	2.19	0.42
16:AS:43:MET:O	16:AS:46:LEU:HD23	2.18	0.42
18:AB:83:ALA:O	18:AB:88:GLN:HB2	2.19	0.42
20:AO:27:VAL:O	20:AO:30:ALA:HB3	2.19	0.42
21:AN:51:PRO:HB2	21:AN:54:SER:HB3	2.01	0.42
23:BB:188:G:O2'	23:BB:189:G:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:235:U:H2'	23:BB:236:C:H6	1.83	0.42
23:BB:247:G:H4'	23:BB:386:G:C4	2.54	0.42
23:BB:527:C:C4	23:BB:2779:U:H2'	2.54	0.42
23:BB:533:G:H5'	44:BQ:23:TYR:CE2	2.54	0.42
23:BB:603:A:N6	23:BB:655:A:O4'	2.52	0.42
23:BB:1005:C:H2'	23:BB:1006:C:H6	1.84	0.42
23:BB:1312:U:O2	23:BB:1603:A:N1	2.52	0.42
23:BB:1317:G:H2'	23:BB:1318:U:O4'	2.19	0.42
23:BB:1457:U:H5"	23:BB:1458:U:OP1	2.19	0.42
23:BB:1572:A:O2'	23:BB:1573:G:H5'	2.19	0.42
23:BB:1660:G:H2'	23:BB:1661:G:H8	1.83	0.42
23:BB:2665:A:C2'	23:BB:2666:C:H5'	2.49	0.42
24:BI:63:ASP:O	24:BI:65:SER:N	2.52	0.42
26:BD:10:GLY:HA2	28:BP:4:ILE:HD11	2.01	0.42
26:BD:119:ALA:HB2	26:BD:163:GLY:C	2.44	0.42
28:BP:26:GLU:HA	28:BP:43:GLU:HA	2.01	0.42
29:BE:146:VAL:HG12	29:BE:147:LEU:N	2.34	0.42
33:B1:9:LYS:O	33:B1:50:GLU:HG3	2.18	0.42
35:BV:75:GLN:HA	35:BV:75:GLN:OE1	2.19	0.42
37:BL:95:LEU:H	37:BL:95:LEU:HG	1.60	0.42
37:BL:111:ILE:HG22	37:BL:112:LEU:N	2.33	0.42
41:BJ:7:LYS:C	41:BJ:9:GLU:N	2.77	0.42
41:BJ:93:ILE:C	41:BJ:97:PRO:HG3	2.44	0.42
44:BQ:26:ALA:O	44:BQ:28:SER:N	2.52	0.42
47:BF:40:GLY:HA2	47:BF:84:ILE:O	2.18	0.42
47:BF:89:THR:O	47:BF:91:ARG:CZ	2.66	0.42
49:BR:75:VAL:HG12	49:BR:76:LYS:N	2.33	0.42
50:BT:42:GLU:C	50:BT:44:LYS:N	2.77	0.42
51:BZ:70:GLU:HG3	51:BZ:71:LEU:H	1.83	0.42
1:CA:415:A:O4'	1:CA:415:A:N3	2.52	0.42
1:CA:473:U:OP1	13:CP:76:LYS:HE2	2.19	0.42
1:CA:659:U:H2'	1:CA:660:C:C6	2.54	0.42
1:CA:696:A:O2'	1:CA:697:U:H5'	2.18	0.42
1:CA:782:A:H2'	1:CA:783:C:O4'	2.18	0.42
1:CA:821:G:O2'	1:CA:822:U:H5'	2.19	0.42
1:CA:1069:C:H5"	4:CE:25:LYS:NZ	2.34	0.42
1:CA:1426:G:H2'	1:CA:1427:C:C6	2.54	0.42
3:CD:2:ARG:HD2	3:CD:114:ARG:HD3	2.00	0.42
3:CD:3:TYR:CE1	3:CD:10:LEU:HD21	2.54	0.42
5:CF:71:ILE:O	5:CF:74:LEU:HB3	2.19	0.42
7:CH:24:VAL:CG1	7:CH:26:MET:HE3	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CK:16:SER:CA	10:CK:78:ILE:HA	2.49	0.42
11:CL:28:GLN:HB2	11:CL:80:LEU:HG	2.01	0.42
14:CQ:43:LEU:N	14:CQ:43:LEU:HD12	2.34	0.42
17:CT:78:LEU:O	17:CT:82:ILE:HG23	2.19	0.42
19:CU:8:ASN:O	19:CU:9:GLU:HB3	2.20	0.42
6:CG:105:GLU:HB3	6:CG:136:LYS:HZ3	1.82	0.42
8:CI:115:VAL:HG22	8:CI:116:GLY:N	2.34	0.42
12:CM:2:ARG:HG3	12:CM:8:ILE:HG23	2.00	0.42
16:CS:39:ILE:HB	16:CS:66:VAL:CA	2.36	0.42
18:CB:48:MET:HB3	18:CB:199:ILE:HA	2.00	0.42
18:CB:74:ALA:CB	18:CB:206:ILE:HD13	2.49	0.42
18:CB:221:ARG:HA	18:CB:224:ARG:HG3	2.01	0.42
23:DB:163:C:O2	23:DB:163:C:O4'	2.36	0.42
23:DB:248:G:N3	23:DB:2431:U:H4'	2.34	0.42
23:DB:388:G:N7	23:DB:390:U:H2'	2.34	0.42
23:DB:545:U:C5	23:DB:546:U:H1'	2.54	0.42
23:DB:705:A:H61	23:DB:726:G:H1'	1.84	0.42
23:DB:832:U:OP1	37:DL:39:LYS:HG2	2.19	0.42
23:DB:1175:A:H2'	23:DB:1176:U:C4'	2.49	0.42
23:DB:1341:G:H3'	23:DB:1397:U:O2	2.18	0.42
23:DB:1344:U:H5'	23:DB:1384:A:N1	2.34	0.42
23:DB:1717:A:H2'	23:DB:1718:G:O4'	2.18	0.42
23:DB:2093:G:H1'	23:DB:2198:A:C2	2.54	0.42
23:DB:2655:G:N2	23:DB:2664:G:H2'	2.33	0.42
24:DI:52:LEU:HD13	24:DI:81:LYS:HZ3	1.82	0.42
24:DI:57:VAL:HG23	24:DI:71:LYS:HZ1	1.82	0.42
25:DC:109:LEU:CD2	25:DC:109:LEU:H	2.32	0.42
25:DC:263:ASP:O	25:DC:264:LYS:C	2.62	0.42
26:DD:38:LYS:HD3	26:DD:45:TYR:CZ	2.54	0.42
26:DD:148:GLN:HB2	26:DD:149:ASN:H	1.64	0.42
27:DK:64:ARG:NH2	28:DP:67:GLU:HG3	2.34	0.42
37:DL:79:LEU:N	37:DL:113:ALA:CB	2.82	0.42
40:DH:113:SER:H	40:DH:132:PHE:HZ	1.67	0.42
41:DJ:45:THR:O	41:DJ:45:THR:HG23	2.17	0.42
41:DJ:58:ASN:CA	41:DJ:127:GLY:HA2	2.49	0.42
43:DO:52:SER:OG	43:DO:54:VAL:HG12	2.18	0.42
44:DQ:7:VAL:O	44:DQ:8:ILE:C	2.62	0.42
45:DS:8:ARG:HA	45:DS:102:HIS:ND1	2.34	0.42
46:DU:34:ILE:HG23	46:DU:63:ALA:HB2	2.01	0.42
46:DU:40:LEU:HA	46:DU:60:LYS:O	2.18	0.42
46:DU:46:LYS:HG2	46:DU:47:PRO:HD2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:66:VAL:C	46:DU:68:ASN:N	2.76	0.42
48:DG:6:ALA:HB3	48:DG:68:ARG:CG	2.41	0.42
48:DG:93:TYR:HA	48:DG:106:LEU:HA	2.01	0.42
48:DG:137:LYS:O	48:DG:138:GLN:C	2.62	0.42
49:DR:15:SER:H	49:DR:18:GLN:CG	2.32	0.42
50:DT:54:GLU:O	50:DT:55:VAL:HB	2.18	0.42
50:DT:54:GLU:CB	50:DT:88:LYS:HB2	2.44	0.42
1:AA:139:A:O2'	1:AA:140:U:H5'	2.19	0.42
1:AA:528:C:H41	11:AL:45:ASN:CG	2.27	0.42
1:AA:696:A:H2'	1:AA:697:U:C6	2.54	0.42
1:AA:779:C:H4'	10:AK:123:PRO:HA	2.01	0.42
1:AA:835:U:O2'	1:AA:836:G:H5'	2.19	0.42
1:AA:967:C:H3'	1:AA:968:A:C5'	2.44	0.42
1:AA:1184:G:C2	1:AA:1185:G:C8	3.07	0.42
1:AA:1268:G:H2'	1:AA:1269:A:C8	2.53	0.42
1:AA:1329:A:O2'	1:AA:1330:U:H5'	2.20	0.42
1:AA:1385:G:H2'	1:AA:1386:G:O4'	2.19	0.42
3:AD:39:GLN:HG3	3:AD:40:HIS:N	2.34	0.42
5:AF:3:HIS:CE1	5:AF:94:HIS:HA	2.54	0.42
6:AG:119:LEU:HG	6:AG:123:LEU:HD11	2.01	0.42
7:AH:86:LYS:HB3	7:AH:90:GLU:CB	2.42	0.42
11:AL:2:THR:O	11:AL:3:VAL:C	2.62	0.42
11:AL:18:SER:OG	11:AL:19:ASN:N	2.52	0.42
16:AS:31:ARG:HG3	16:AS:56:HIS:CE1	2.54	0.42
23:BB:251:A:H2'	23:BB:252:G:O4'	2.19	0.42
23:BB:345:A:H1'	23:BB:346:A:H2	1.80	0.42
23:BB:389:G:C8	23:BB:2413:G:H4'	2.54	0.42
23:BB:543:G:C2'	23:BB:544:C:H5"	2.42	0.42
23:BB:660:C:H2'	23:BB:661:A:C8	2.54	0.42
23:BB:1017:G:O2'	23:BB:1018:U:H5'	2.18	0.42
23:BB:1273:U:H4'	23:BB:1275:A:OP2	2.20	0.42
23:BB:1432:G:H2'	23:BB:1433:A:C8	2.54	0.42
23:BB:1722:A:H2'	23:BB:1723:G:C8	2.53	0.42
23:BB:2021:C:P	31:B0:8:THR:HG21	2.59	0.42
23:BB:2603:G:O2'	23:BB:2604:U:H5'	2.19	0.42
23:BB:2734:A:H2'	23:BB:2735:G:C5'	2.48	0.42
23:BB:2815:C:O2'	23:BB:2816:G:H5'	2.20	0.42
23:BB:2877:G:O2'	23:BB:2878:U:H5'	2.19	0.42
24:BI:11:GLN:NE2	24:BI:74:PRO:HG2	2.34	0.42
24:BI:126:ARG:HA	24:BI:129:GLU:OE2	2.18	0.42
25:BC:16:VAL:CB	25:BC:203:VAL:HG11	2.46	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BK:72:PRO:C	27:BK:74:GLY:N	2.77	0.42
27:BK:88:ASN:HD22	27:BK:89:ASN:H	1.62	0.42
27:BK:119:ALA:O	27:BK:120:PRO:O	2.37	0.42
30:BY:47:ILE:CD1	30:BY:54:VAL:HG21	2.50	0.42
32:B4:30:GLU:HA	32:B4:31:PRO:HD3	1.89	0.42
37:BL:132:ARG:C	37:BL:135:ILE:HG22	2.44	0.42
39:BX:6:LEU:N	39:BX:6:LEU:HD22	2.34	0.42
40:BH:68:ARG:HH11	40:BH:72:ILE:HB	1.83	0.42
40:BH:75:LEU:C	40:BH:77:THR:H	2.27	0.42
41:BJ:13:ARG:HB3	41:BJ:53:TYR:HD2	1.83	0.42
41:BJ:14:ASP:O	41:BJ:53:TYR:N	2.51	0.42
41:BJ:74:TYR:CD2	41:BJ:92:MET:HE2	2.54	0.42
42:BN:31:HIS:ND1	42:BN:31:HIS:N	2.67	0.42
43:BO:51:ALA:HB3	43:BO:78:VAL:HG13	2.01	0.42
44:BQ:50:ARG:N	44:BQ:50:ARG:HD2	2.35	0.42
46:BU:13:LEU:HD12	46:BU:13:LEU:N	2.34	0.42
48:BG:26:LYS:CB	48:BG:32:LEU:HG	2.49	0.42
48:BG:89:VAL:HB	48:BG:160:GLY:H	1.83	0.42
48:BG:116:LEU:HD23	48:BG:120:ILE:HD13	2.01	0.42
51:BZ:7:VAL:HG11	51:BZ:51:VAL:HG13	2.01	0.42
51:BZ:32:ASN:O	51:BZ:33:LEU:O	2.37	0.42
51:BZ:67:VAL:C	51:BZ:69:ALA:N	2.76	0.42
52:BW:31:LEU:O	52:BW:32:ALA:HB2	2.19	0.42
52:BW:76:ARG:HA	52:BW:76:ARG:HH21	1.81	0.42
1:CA:113:G:O4'	1:CA:354:G:H4'	2.18	0.42
1:CA:153:C:H2'	1:CA:154:U:H6	1.84	0.42
1:CA:190:A:C4	1:CA:191:G:H1'	2.54	0.42
1:CA:1085:U:H3'	1:CA:1086:U:C6	2.53	0.42
1:CA:1350:A:OP2	8:CI:119:LYS:HD2	2.18	0.42
3:CD:165:GLU:CD	3:CD:166:LYS:H	2.26	0.42
3:CD:167:PRO:CG	3:CD:170:LEU:HD11	2.50	0.42
5:CF:21:MET:HB3	5:CF:25:TYR:CZ	2.54	0.42
10:CK:63:GLN:HG3	10:CK:98:ALA:HB1	2.00	0.42
11:CL:24:GLU:HB2	11:CL:26:CYS:HG	1.83	0.42
17:CT:64:GLY:O	17:CT:65:LEU:HB3	2.18	0.42
2:CC:10:ARG:HH21	2:CC:176:THR:C	2.27	0.42
2:CC:21:TRP:CH2	2:CC:31:ASN:HB3	2.55	0.42
2:CC:155:ARG:HA	2:CC:155:ARG:HD2	1.81	0.42
9:CJ:17:LEU:HD13	9:CJ:17:LEU:C	2.44	0.42
9:CJ:67:ILE:HA	21:CN:94:GLY:O	2.18	0.42
12:CM:1:ALA:C	12:CM:8:ILE:HG22	2.44	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:2:ARG:C	12:CM:3:ILE:HG13	2.44	0.42
16:CS:5:LYS:C	16:CS:6:LYS:HG2	2.44	0.42
16:CS:27:LYS:HB3	16:CS:27:LYS:HZ3	1.82	0.42
16:CS:28:LYS:H	16:CS:28:LYS:HD2	1.83	0.42
22:DA:94:A:OP1	35:DV:19:ARG:HD3	2.19	0.42
23:DB:327:G:O2'	23:DB:328:U:H5'	2.18	0.42
23:DB:336:C:O2'	23:DB:337:C:H5'	2.19	0.42
23:DB:481:G:C2	23:DB:507:A:C4	3.07	0.42
23:DB:560:C:H1'	44:DQ:51:GLN:HE22	1.83	0.42
23:DB:808:G:H2'	23:DB:809:G:O4'	2.18	0.42
23:DB:978:G:O4'	23:DB:1001:A:H2	2.02	0.42
23:DB:1429:G:O2'	23:DB:1430:G:H5'	2.18	0.42
23:DB:1824:G:H2'	23:DB:1825:U:C6	2.54	0.42
23:DB:1952:A:H5'	27:DK:42:THR:CG2	2.49	0.42
23:DB:2297:A:N6	23:DB:2319:G:H1'	2.34	0.42
23:DB:2603:G:O2'	23:DB:2604:U:H5'	2.19	0.42
23:DB:2626:C:H2'	23:DB:2627:G:H8	1.81	0.42
24:DI:5:GLN:HB2	24:DI:30:GLN:OE1	2.19	0.42
24:DI:27:LEU:HB2	24:DI:32:VAL:HG21	2.01	0.42
25:DC:68:ARG:HE	25:DC:190:THR:HG22	1.83	0.42
25:DC:149:LYS:HG2	25:DC:152:GLN:NE2	2.34	0.42
27:DK:19:VAL:CG1	27:DK:43:ILE:HA	2.43	0.42
29:DE:60:TRP:CE3	29:DE:62:GLN:HA	2.54	0.42
29:DE:66:GLY:O	29:DE:67:ARG:C	2.61	0.42
30:DY:47:ILE:CD1	30:DY:54:VAL:HG21	2.49	0.42
33:D1:38:PHE:HB2	33:D1:45:HIS:CE1	2.54	0.42
36:D2:22:MET:HG2	36:D2:31:LEU:HD12	2.00	0.42
38:DM:19:GLY:N	38:DM:38:ARG:HH22	2.17	0.42
38:DM:21:ALA:CB	38:DM:100:LYS:HG2	2.49	0.42
42:DN:21:PHE:C	42:DN:24:MET:HB3	2.43	0.42
43:DO:49:VAL:HG23	43:DO:78:VAL:HG12	2.00	0.42
43:DO:80:GLU:O	43:DO:81:ARG:C	2.62	0.42
45:DS:9:HIS:H	45:DS:102:HIS:CE1	2.37	0.42
45:DS:47:VAL:O	45:DS:48:LYS:C	2.62	0.42
46:DU:23:LYS:HD2	46:DU:23:LYS:N	2.34	0.42
47:DF:21:TYR:CD2	47:DF:27:VAL:HG12	2.54	0.42
47:DF:21:TYR:HD2	47:DF:27:VAL:HG12	1.84	0.42
48:DG:84:LYS:O	48:DG:85:LYS:O	2.37	0.42
48:DG:96:ALA:CB	48:DG:103:ASN:HB3	2.43	0.42
49:DR:38:VAL:HB	49:DR:59:ILE:HD11	2.01	0.42
52:DW:23:LYS:O	52:DW:24:ARG:C	2.62	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:223:A:O2'	1:AA:224:U:H5'	2.20	0.42
1:AA:401:C:H2'	1:AA:402:G:H8	1.84	0.42
1:AA:441:A:H61	1:AA:493:A:H62	1.67	0.42
1:AA:779:C:H5"	10:AK:123:PRO:HB3	2.01	0.42
1:AA:865:A:H5'	1:AA:1078:U:C5	2.54	0.42
1:AA:985:C:H2'	1:AA:986:U:H6	1.84	0.42
1:AA:1030:U:OP2	1:AA:1031:C:N4	2.52	0.42
1:AA:1347:G:N2	1:AA:1373:G:H2'	2.33	0.42
1:AA:1469:C:H3'	1:AA:1470:U:H6	1.82	0.42
1:AA:1482:G:H8	1:AA:1482:G:O5'	2.02	0.42
3:AD:18:LEU:HD22	3:AD:18:LEU:N	2.34	0.42
4:AE:132:PRO:O	4:AE:133:ILE:C	2.63	0.42
5:AF:61:LEU:HB3	5:AF:62:MET:H	1.70	0.42
12:AM:21:ILE:CB	12:AM:24:VAL:HG22	2.46	0.42
12:AM:22:TYR:HD1	12:AM:65:GLU:HA	1.84	0.42
12:AM:90:HIS:CE1	12:AM:96:VAL:HG21	2.54	0.42
13:AP:67:ILE:HG12	13:AP:72:ALA:CB	2.46	0.42
19:AU:47:ALA:O	19:AU:51:ALA:N	2.52	0.42
21:AN:70:HIS:O	21:AN:72:PHE:N	2.45	0.42
22:BA:7:G:H5"	43:BO:29:HIS:CD2	2.54	0.42
23:BB:622:G:O2'	23:BB:623:C:H5'	2.19	0.42
23:BB:705:A:N6	23:BB:726:G:O2'	2.52	0.42
23:BB:784:G:H5"	25:BC:225:ASN:OD1	2.18	0.42
23:BB:1050:A:N3	23:BB:1050:A:H2'	2.34	0.42
23:BB:1438:U:C4	23:BB:1552:A:N6	2.87	0.42
23:BB:1552:A:C2'	23:BB:1553:A:H5'	2.48	0.42
23:BB:1654:A:O2'	26:BD:118:PHE:HB3	2.19	0.42
23:BB:1669:A:H2'	23:BB:1669:A:N3	2.34	0.42
23:BB:1952:A:H5'	27:BK:42:THR:HG21	2.02	0.42
23:BB:2026:U:H2'	23:BB:2027:G:H8	1.83	0.42
23:BB:2180:U:O5'	23:BB:2180:U:H6	2.01	0.42
23:BB:2348:U:O2'	23:BB:2349:G:H5'	2.18	0.42
23:BB:2751:G:H2'	23:BB:2751:G:N3	2.34	0.42
23:BB:2848:G:N1	23:BB:2867:G:C2	2.87	0.42
24:BI:52:LEU:O	24:BI:54:ILE:HG13	2.19	0.42
24:BI:109:ALA:HB1	24:BI:124:MET:CG	2.49	0.42
25:BC:11:GLY:C	25:BC:13:ARG:H	2.27	0.42
25:BC:204:LEU:HD23	25:BC:210:ALA:N	2.34	0.42
26:BD:62:LYS:HD2	26:BD:62:LYS:H	1.85	0.42
26:BD:68:PHE:CB	26:BD:73:VAL:HG23	2.47	0.42
27:BK:19:VAL:CG1	27:BK:41:ILE:HG12	2.48	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BK:68:GLY:CA	27:BK:78:ARG:HB3	2.49	0.42
35:BV:29:ILE:HD13	35:BV:31:TYR:HE2	1.84	0.42
35:BV:60:VAL:O	35:BV:61:LEU:HD23	2.20	0.42
35:BV:63:ILE:HB	35:BV:70:ILE:CG1	2.49	0.42
40:BH:31:VAL:CB	40:BH:32:PRO:CD	2.88	0.42
40:BH:34:GLY:C	40:BH:36:ALA:H	2.27	0.42
44:BQ:18:LYS:C	44:BQ:18:LYS:HD2	2.44	0.42
44:BQ:91:ARG:HE	44:BQ:93:ILE:CG2	2.31	0.42
45:BS:47:VAL:O	45:BS:48:LYS:C	2.63	0.42
46:BU:50:ALA:H	46:BU:53:GLN:NE2	2.16	0.42
46:BU:73:ASN:ND2	46:BU:74:ALA:N	2.66	0.42
47:BF:9:ASP:N	47:BF:9:ASP:OD2	2.52	0.42
47:BF:131:VAL:O	47:BF:133:GLU:N	2.51	0.42
52:BW:55:ASP:O	52:BW:57:THR:N	2.50	0.42
52:BW:58:LEU:N	52:BW:58:LEU:HD22	2.33	0.42
52:BW:66:VAL:HA	52:BW:81:ILE:HG22	2.01	0.42
1:CA:274:A:H4'	1:CA:275:G:O5'	2.19	0.42
1:CA:398:U:H2'	1:CA:399:G:C8	2.54	0.42
1:CA:517:G:N2	1:CA:533:A:OP2	2.53	0.42
1:CA:912:C:O2'	1:CA:913:A:H5'	2.19	0.42
1:CA:947:G:H2'	1:CA:948:C:H6	1.83	0.42
1:CA:1240:U:H3'	1:CA:1241:G:C5'	2.50	0.42
1:CA:1283:U:H2'	1:CA:1284:C:C6	2.54	0.42
1:CA:1409:C:H2'	1:CA:1410:A:C8	2.54	0.42
1:CA:1438:G:O2'	1:CA:1439:G:H5'	2.19	0.42
1:CA:1469:C:H3'	1:CA:1470:U:H6	1.83	0.42
3:CD:145:ARG:O	3:CD:149:LYS:N	2.52	0.42
3:CD:178:GLU:HB3	3:CD:179:GLY:H	1.55	0.42
3:CD:191:SER:O	3:CD:192:ALA:HB2	2.18	0.42
5:CF:1:MET:HB3	5:CF:66:ALA:C	2.45	0.42
5:CF:18:VAL:HB	5:CF:19:PRO:CD	2.49	0.42
7:CH:86:LYS:CD	7:CH:90:GLU:HG2	2.49	0.42
10:CK:63:GLN:HG3	10:CK:98:ALA:CB	2.49	0.42
11:CL:2:THR:O	11:CL:3:VAL:C	2.62	0.42
2:CC:125:ARG:HG2	2:CC:125:ARG:O	2.19	0.42
2:CC:192:TYR:N	2:CC:192:TYR:CD1	2.86	0.42
6:CG:89:GLU:OE2	6:CG:89:GLU:N	2.53	0.42
12:CM:1:ALA:H3	12:CM:8:ILE:HG22	1.85	0.42
12:CM:43:LYS:HD2	12:CM:43:LYS:N	2.34	0.42
21:CN:68:ARG:HA	21:CN:69:PRO:HD2	1.90	0.42
20:CO:79:THR:C	20:CO:81:LEU:H	2.27	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:346:A:N3	23:DB:346:A:O4'	2.52	0.42
23:DB:564:C:O2'	23:DB:565:C:H5'	2.19	0.42
23:DB:581:C:H2'	23:DB:582:A:H8	1.79	0.42
23:DB:709:U:H6	23:DB:709:U:O5'	2.02	0.42
23:DB:718:A:H5'	23:DB:719:C:OP2	2.18	0.42
23:DB:903:C:H2'	23:DB:904:G:C8	2.54	0.42
23:DB:959:A:H2'	23:DB:960:A:C8	2.54	0.42
23:DB:1129:A:N6	23:DB:2491:U:H5"	2.34	0.42
23:DB:1427:A:H4'	23:DB:1428:C:O4'	2.19	0.42
23:DB:1729:U:H5'	23:DB:1730:C:OP2	2.19	0.42
23:DB:1827:U:C2'	23:DB:1828:G:H5'	2.49	0.42
23:DB:1873:G:H2'	23:DB:1874:C:H6	1.85	0.42
23:DB:1977:A:H2'	23:DB:1978:A:H8	1.84	0.42
23:DB:2155:U:H2'	23:DB:2156:G:O4'	2.19	0.42
23:DB:2320:U:O2	23:DB:2320:U:H2'	2.18	0.42
23:DB:2362:C:O2'	23:DB:2363:G:H5'	2.19	0.42
23:DB:2508:G:H2'	23:DB:2509:G:H8	1.84	0.42
23:DB:2547:A:H4'	27:DK:29:HIS:CE1	2.54	0.42
23:DB:2688:G:H1'	23:DB:2721:A:N6	2.34	0.42
23:DB:2700:A:O2'	23:DB:2701:U:H5'	2.19	0.42
23:DB:2895:G:H2'	23:DB:2896:C:H6	1.84	0.42
26:DD:173:GLN:O	26:DD:174:SER:HB3	2.18	0.42
29:DE:28:VAL:O	29:DE:29:HIS:C	2.60	0.42
34:D3:44:ARG:N	34:D3:45:PRO:CD	2.81	0.42
35:DV:38:LEU:HD11	35:DV:40:ILE:HG23	2.01	0.42
37:DL:143:GLU:CG	37:DL:144:GLU:N	2.77	0.42
38:DM:19:GLY:N	38:DM:38:ARG:NH1	2.65	0.42
38:DM:26:VAL:HB	38:DM:104:GLU:OE2	2.19	0.42
38:DM:126:ILE:HG22	38:DM:127:LYS:N	2.34	0.42
41:DJ:29:ALA:O	41:DJ:32:LEU:HB2	2.19	0.42
42:DN:71:ARG:HG2	42:DN:71:ARG:HH21	1.84	0.42
44:DQ:86:SER:HB3	49:DR:50:GLY:O	2.19	0.42
44:DQ:90:ASP:H	49:DR:39:LEU:HD11	1.83	0.42
45:DS:45:VAL:HG23	45:DS:46:LEU:HD23	2.00	0.42
47:DF:107:VAL:O	47:DF:110:ILE:HG22	2.19	0.42
49:DR:37:GLU:CD	49:DR:37:GLU:H	2.28	0.42
50:DT:51:PHE:HB3	50:DT:53:VAL:HG23	2.01	0.42
51:DZ:5:CYS:C	51:DZ:7:VAL:H	2.27	0.42
52:DW:77:LYS:HD3	52:DW:77:LYS:HA	1.81	0.42
1:AA:490:C:H2'	1:AA:491:G:O4'	2.19	0.42
1:AA:633:G:H2'	1:AA:634:C:C6	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:769:G:H4'	1:AA:1513:A:H4'	2.01	0.42
1:AA:904:U:H2'	1:AA:905:U:C6	2.54	0.42
1:AA:904:U:O5'	1:AA:904:U:H6	2.02	0.42
1:AA:1085:U:O4'	1:AA:1094:G:N1	2.52	0.42
1:AA:1342:C:O2'	8:AI:125:GLN:CB	2.68	0.42
1:AA:1453:G:H3'	1:AA:1453:G:N3	2.34	0.42
1:AA:1479:C:O2'	1:AA:1480:A:H5'	2.19	0.42
2:AC:127:VAL:CA	2:AC:128:MET:HE3	2.49	0.42
3:AD:145:ARG:O	3:AD:149:LYS:N	2.52	0.42
4:AE:93:VAL:HA	4:AE:126:ALA:CB	2.50	0.42
6:AG:74:VAL:HB	6:AG:85:GLN:HB3	2.01	0.42
6:AG:87:PRO:CB	6:AG:144:ALA:HA	2.49	0.42
7:AH:100:ILE:HD11	7:AH:102:VAL:HG22	2.01	0.42
8:AI:71:ILE:HD12	8:AI:71:ILE:N	2.28	0.42
10:AK:34:THR:HB	10:AK:40:ALA:HA	2.01	0.42
11:AL:32:VAL:O	11:AL:33:CYS:HB3	2.20	0.42
14:AQ:10:ARG:O	14:AQ:22:VAL:HG13	2.20	0.42
15:AR:61:ALA:HB3	15:AR:67:LEU:HD12	2.02	0.42
17:AT:44:ALA:O	17:AT:48:LYS:HB3	2.19	0.42
19:AU:20:ARG:H	19:AU:20:ARG:CD	2.32	0.42
20:AO:8:THR:O	20:AO:11:ILE:HG22	2.19	0.42
21:AN:52:ARG:HB3	21:AN:53:ASP:H	1.56	0.42
22:BA:67:G:H2'	22:BA:68:C:H6	1.84	0.42
23:BB:8:C:H5"	41:BJ:53:TYR:OH	2.19	0.42
23:BB:83:A:H61	23:BB:101:A:C5'	2.31	0.42
23:BB:97:C:H2'	23:BB:98:G:O4'	2.19	0.42
23:BB:255:A:H2'	23:BB:256:A:O4'	2.19	0.42
23:BB:271:G:N2	23:BB:367:G:H1'	2.35	0.42
23:BB:478:A:H5"	23:BB:479:A:OP2	2.19	0.42
23:BB:819:A:OP2	23:BB:1187:G:N2	2.53	0.42
23:BB:1799:G:OP1	25:BC:257:ARG:HG3	2.19	0.42
23:BB:1909:C:O2'	23:BB:1910:G:H5'	2.20	0.42
23:BB:2425:A:H4'	23:BB:2426:A:H5"	2.02	0.42
23:BB:2552:U:H3'	23:BB:2554:U:OP2	2.19	0.42
24:BI:103:ALA:O	24:BI:107:GLU:HG3	2.20	0.42
25:BC:183:VAL:HG22	25:BC:184:GLU:H	1.83	0.42
26:BD:38:LYS:HD3	26:BD:45:TYR:CZ	2.55	0.42
26:BD:180:VAL:O	26:BD:181:ASP:C	2.62	0.42
29:BE:69:ARG:O	29:BE:70:SER:CB	2.66	0.42
29:BE:109:LEU:O	29:BE:112:LEU:HB2	2.19	0.42
33:B1:4:ILE:HB	33:B1:27:ARG:NH1	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BL:79:LEU:HB2	37:BL:113:ALA:N	2.32	0.42
38:BM:56:ALA:C	38:BM:58:LYS:H	2.26	0.42
38:BM:69:PRO:HA	38:BM:93:VAL:O	2.20	0.42
41:BJ:40:HIS:O	44:BQ:66:ALA:HB1	2.19	0.42
44:BQ:63:ARG:HH22	44:BQ:96:ASP:N	2.18	0.42
45:BS:77:ASP:O	45:BS:78:GLU:C	2.62	0.42
47:BF:3:LEU:O	47:BF:6:TYR:HB3	2.19	0.42
48:BG:74:MET:H	48:BG:74:MET:HG3	1.59	0.42
50:BT:15:HIS:O	50:BT:16:VAL:C	2.63	0.42
50:BT:54:GLU:O	50:BT:55:VAL:HB	2.19	0.42
51:BZ:48:THR:C	51:BZ:49:LEU:HD23	2.44	0.42
52:BW:56:HIS:O	52:BW:57:THR:C	2.63	0.42
1:CA:28:A:N3	1:CA:296:U:H4'	2.34	0.42
1:CA:34:C:H2'	1:CA:35:G:H8	1.82	0.42
1:CA:79:G:O2'	1:CA:80:A:H5'	2.19	0.42
1:CA:667:G:H2'	1:CA:668:G:H8	1.84	0.42
1:CA:824:G:C6	1:CA:877:G:C6	3.08	0.42
1:CA:835:U:O2'	1:CA:836:G:H5'	2.20	0.42
1:CA:1026:G:H22	1:CA:1035:A:H2	1.65	0.42
1:CA:1387:G:H2'	1:CA:1388:C:H6	1.84	0.42
7:CH:94:VAL:HB	7:CH:99:GLY:C	2.45	0.42
7:CH:100:ILE:HD11	7:CH:102:VAL:HG22	2.02	0.42
10:CK:85:VAL:HG12	10:CK:86:LYS:N	2.34	0.42
11:CL:23:LEU:C	11:CL:25:ALA:N	2.75	0.42
13:CP:39:PHE:CG	13:CP:40:ASN:N	2.87	0.42
6:CG:31:VAL:HG22	6:CG:32:ASP:OD2	2.20	0.42
6:CG:90:VAL:HG23	6:CG:91:ARG:O	2.19	0.42
8:CI:29:ILE:HA	8:CI:64:ILE:O	2.19	0.42
9:CJ:5:ARG:N	9:CJ:76:ILE:O	2.52	0.42
9:CJ:49:PHE:O	9:CJ:64:GLN:HA	2.19	0.42
12:CM:2:ARG:H	12:CM:2:ARG:HD3	1.84	0.42
21:CN:50:LEU:N	21:CN:51:PRO:CD	2.75	0.42
18:CB:30:ILE:C	18:CB:41:ASN:HB2	2.44	0.42
20:CO:15:PHE:O	20:CO:16:GLY:C	2.61	0.42
23:DB:265:A:O2'	23:DB:266:G:H4'	2.18	0.42
23:DB:730:A:H3'	56:DB:3609:HOH:O	2.20	0.42
23:DB:1128:G:C6	23:DB:2518:A:N6	2.87	0.42
23:DB:1214:A:H2'	23:DB:1215:G:O4'	2.18	0.42
23:DB:1524:G:H2'	23:DB:1525:A:O4'	2.19	0.42
23:DB:1700:A:H2'	23:DB:1701:A:C5'	2.49	0.42
23:DB:1853:A:N1	23:DB:2087:G:H1'	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1877:A:H2'	23:DB:1878:G:C8	2.55	0.42
23:DB:1917:U:H2'	23:DB:1918:A:C5'	2.46	0.42
23:DB:2420:C:OP2	34:D3:32:LEU:N	2.52	0.42
23:DB:2795:C:H2'	23:DB:2796:U:C4'	2.50	0.42
25:DC:75:ALA:HA	25:DC:96:LYS:NZ	2.35	0.42
25:DC:120:ASP:CG	25:DC:121:ALA:H	2.27	0.42
26:DD:2:ILE:O	26:DD:2:ILE:HD12	2.20	0.42
26:DD:99:GLU:O	26:DD:100:LEU:C	2.63	0.42
26:DD:114:LYS:HD2	26:DD:116:LYS:HE3	2.01	0.42
27:DK:73:ASP:CG	27:DK:75:SER:H	2.27	0.42
36:D2:30:VAL:O	36:D2:33:ARG:HB2	2.20	0.42
40:DH:95:GLY:O	40:DH:99:ILE:HG12	2.19	0.42
41:DJ:7:LYS:C	41:DJ:9:GLU:N	2.77	0.42
41:DJ:44:TYR:CD2	41:DJ:44:TYR:C	2.95	0.42
44:DQ:111:LYS:HD3	49:DR:48:LYS:HZ2	1.84	0.42
47:DF:28:PRO:HB2	47:DF:168:LEU:CD2	2.40	0.42
47:DF:121:PHE:CA	47:DF:127:TYR:HA	2.48	0.42
48:DG:16:VAL:CG1	48:DG:49:LEU:HD13	2.49	0.42
48:DG:148:ARG:HH11	48:DG:152:ARG:NE	2.17	0.42
49:DR:2:TYR:HD2	49:DR:40:MET:HE3	1.84	0.42
49:DR:3:ALA:HB2	49:DR:101:ILE:HD12	2.00	0.42
50:DT:39:THR:HG22	50:DT:42:GLU:CG	2.48	0.42
52:DW:67:LYS:O	52:DW:68:PHE:HB2	2.19	0.42
1:AA:274:A:H4'	1:AA:275:G:O5'	2.19	0.42
1:AA:321:A:O2'	1:AA:322:C:H5'	2.20	0.42
1:AA:343:U:O2'	1:AA:344:A:H8	2.03	0.42
1:AA:382:A:H2'	1:AA:383:A:H8	1.82	0.42
1:AA:492:C:H2'	1:AA:493:A:N3	2.34	0.42
1:AA:509:A:C6	1:AA:510:A:N1	2.88	0.42
1:AA:532:A:H62	2:AC:191:THR:CB	2.32	0.42
1:AA:572:A:N3	1:AA:917:G:H1'	2.33	0.42
1:AA:725:G:H2'	1:AA:726:C:C6	2.55	0.42
1:AA:740:U:H4'	20:AO:42:HIS:CD2	2.54	0.42
1:AA:746:A:H2'	1:AA:747:A:C8	2.54	0.42
1:AA:1363:A:N3	1:AA:1363:A:H2'	2.35	0.42
1:AA:1381:U:H2'	1:AA:1382:C:C6	2.55	0.42
3:AD:53:GLN:HG2	3:AD:198:LEU:HD22	2.01	0.42
3:AD:61:ARG:HG3	3:AD:71:PHE:CD2	2.54	0.42
3:AD:123:MET:SD	3:AD:127:ARG:C	3.02	0.42
4:AE:20:VAL:O	4:AE:31:SER:HB2	2.19	0.42
4:AE:77:ASN:HD22	4:AE:77:ASN:HA	1.64	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AG:53:SER:O	6:AG:55:LYS:N	2.52	0.42
11:AL:27:PRO:O	11:AL:28:GLN:NE2	2.52	0.42
11:AL:85:ARG:HB2	11:AL:93:ARG:HA	2.01	0.42
12:AM:46:GLU:CD	12:AM:46:GLU:C	2.87	0.42
15:AR:34:GLU:HB2	19:AU:18:PHE:CZ	2.55	0.42
16:AS:35:ARG:CG	16:AS:36:ARG:HH21	2.32	0.42
18:AB:69:VAL:HG12	18:AB:70:GLY:N	2.34	0.42
18:AB:112:ARG:NH2	18:AB:116:LEU:HD11	2.31	0.42
21:AN:10:VAL:HB	21:AN:11:LYS:HZ2	1.83	0.42
22:BA:3:C:H2'	22:BA:4:C:C6	2.54	0.42
22:BA:52:A:O2'	22:BA:53:A:H5'	2.20	0.42
22:BA:112:G:H2'	22:BA:113:C:H6	1.85	0.42
23:BB:216:A:H2'	23:BB:217:A:C8	2.52	0.42
23:BB:230:G:H2'	23:BB:231:A:C8	2.55	0.42
23:BB:381:G:O2'	23:BB:382:A:H5'	2.20	0.42
23:BB:672:C:H2'	23:BB:673:C:H6	1.84	0.42
23:BB:705:A:H61	23:BB:726:G:H1'	1.81	0.42
23:BB:707:G:O2'	23:BB:708:G:H5'	2.20	0.42
23:BB:740:C:O2'	23:BB:741:U:H5'	2.20	0.42
23:BB:805:G:N2	23:BB:829:A:OP1	2.52	0.42
23:BB:1198:U:H2'	23:BB:1199:U:H6	1.83	0.42
23:BB:1407:G:O2'	23:BB:1408:G:H5'	2.20	0.42
23:BB:1649:G:O2'	23:BB:1650:A:H5'	2.20	0.42
23:BB:1727:C:H2'	23:BB:1728:C:O4'	2.19	0.42
23:BB:1930:G:H2'	23:BB:1968:G:H1	1.85	0.42
23:BB:2014:A:H2'	23:BB:2015:A:C8	2.53	0.42
23:BB:2358:A:H2'	23:BB:2359:C:O4'	2.20	0.42
23:BB:2688:G:H1'	23:BB:2721:A:N6	2.34	0.42
23:BB:2772:C:H2'	23:BB:2773:C:C6	2.55	0.42
25:BC:63:ILE:HD13	25:BC:63:ILE:HA	1.82	0.42
27:BK:88:ASN:ND2	27:BK:89:ASN:N	2.62	0.42
27:BK:89:ASN:ND2	27:BK:89:ASN:C	2.77	0.42
27:BK:99:ILE:HG12	27:BK:115:ILE:HG13	2.01	0.42
33:B1:35:LEU:O	33:B1:36:LYS:HB3	2.20	0.42
36:B2:30:VAL:O	36:B2:33:ARG:HB2	2.19	0.42
36:B2:43:THR:O	36:B2:44:VAL:C	2.62	0.42
37:BL:102:GLY:O	37:BL:103:ILE:C	2.62	0.42
38:BM:82:MET:HE3	38:BM:83:GLY:H	1.85	0.42
42:BN:35:LYS:HG2	42:BN:112:TYR:CE1	2.54	0.42
42:BN:59:SER:C	42:BN:61:ALA:N	2.77	0.42
43:BO:64:TYR:CB	43:BO:67:ASN:HB2	2.37	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BO:80:GLU:O	43:BO:81:ARG:C	2.62	0.42
44:BQ:101:ASP:HB2	49:BR:2:TYR:OH	2.20	0.42
46:BU:85:ARG:C	46:BU:91:LYS:O	2.62	0.42
48:BG:90:GLY:HA3	48:BG:93:TYR:CE1	2.55	0.42
48:BG:157:LYS:HG2	48:BG:159:LYS:CG	2.49	0.42
48:BG:169:ARG:HB3	48:BG:171:LYS:NZ	2.34	0.42
49:BR:51:VAL:O	49:BR:52:PRO:C	2.62	0.42
1:CA:16:A:C2'	1:CA:17:U:H5'	2.50	0.42
1:CA:193:C:H2'	1:CA:194:C:C5	2.54	0.42
1:CA:411:A:N6	1:CA:413:G:H21	2.17	0.42
1:CA:696:A:H2'	1:CA:697:U:H6	1.84	0.42
1:CA:707:U:H4'	10:CK:21:HIS:CG	2.54	0.42
1:CA:776:G:N2	1:CA:803:G:N7	2.67	0.42
1:CA:916:U:H2'	1:CA:917:G:H8	1.84	0.42
1:CA:1320:C:N4	16:CS:35:ARG:HG3	2.34	0.42
10:CK:91:GLY:C	10:CK:93:GLU:N	2.73	0.42
19:CU:36:PHE:O	19:CU:39:LYS:HD2	2.19	0.42
9:CJ:9:ARG:HH11	9:CJ:9:ARG:HG2	1.84	0.42
9:CJ:48:ARG:HA	9:CJ:66:GLU:HA	2.01	0.42
12:CM:2:ARG:HE	12:CM:2:ARG:HB2	1.51	0.42
12:CM:59:VAL:C	12:CM:61:LYS:N	2.77	0.42
12:CM:90:HIS:C	12:CM:92:ARG:H	2.27	0.42
16:CS:47:THR:HA	16:CS:60:PHE:CE2	2.55	0.42
18:CB:60:ALA:CB	18:CB:224:ARG:HG2	2.50	0.42
18:CB:132:GLU:CA	18:CB:135:MET:HE2	2.49	0.42
18:CB:137:THR:O	18:CB:140:LEU:HB2	2.19	0.42
23:DB:28:A:O2'	23:DB:583:G:H5'	2.20	0.42
23:DB:714:U:C2	23:DB:716:A:H3'	2.54	0.42
23:DB:950:G:H2'	23:DB:951:C:H6	1.79	0.42
23:DB:1099:G:N7	24:DI:3:LYS:CD	2.83	0.42
23:DB:1344:U:H5'	23:DB:1384:A:C6	2.54	0.42
23:DB:1417:C:C4'	23:DB:1587:G:H21	2.32	0.42
23:DB:1745:A:H2'	23:DB:1746:A:C8	2.55	0.42
23:DB:1767:G:O2'	23:DB:1768:C:H5'	2.20	0.42
23:DB:1940:U:O2	23:DB:1940:U:H5"	2.20	0.42
23:DB:2305:U:H6	47:DF:152:ASP:OD2	2.02	0.42
23:DB:2346:A:O4'	23:DB:2383:G:O4'	2.36	0.42
23:DB:2365:G:H4'	52:DW:59:PHE:CD1	2.54	0.42
23:DB:2648:G:H2'	23:DB:2649:C:H6	1.84	0.42
23:DB:2650:U:O2'	23:DB:2651:C:H5'	2.19	0.42
25:DC:109:LEU:HD23	25:DC:109:LEU:N	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:109:VAL:HG11	26:DD:193:VAL:HB	2.01	0.42
26:DD:180:VAL:O	26:DD:181:ASP:C	2.62	0.42
38:DM:29:GLY:CA	38:DM:106:ASP:HB2	2.49	0.42
39:DX:7:ARG:HA	39:DX:7:ARG:NE	2.35	0.42
40:DH:143:ILE:HG22	40:DH:144:VAL:N	2.34	0.42
41:DJ:25:LEU:HB2	41:DJ:62:VAL:HG22	2.00	0.42
43:DO:7:ARG:O	43:DO:10:ARG:HB2	2.19	0.42
44:DQ:18:LYS:C	44:DQ:18:LYS:HD2	2.44	0.42
46:DU:38:ILE:H	46:DU:61:GLU:CD	2.28	0.42
46:DU:39:ASN:H	46:DU:61:GLU:CD	2.25	0.42
47:DF:37:MET:HG2	47:DF:37:MET:O	2.19	0.42
47:DF:113:PHE:HZ	47:DF:175:PRO:HB2	1.83	0.42
48:DG:93:TYR:N	48:DG:93:TYR:HD2	2.18	0.42
48:DG:116:LEU:HD23	48:DG:120:ILE:HD13	2.02	0.42
49:DR:27:ILE:HA	49:DR:27:ILE:HD13	1.85	0.42
50:DT:15:HIS:H	50:DT:32:LEU:CA	2.21	0.42
51:DZ:32:ASN:HB3	51:DZ:34:HIS:HE2	1.84	0.42
52:DW:8:SER:O	52:DW:9:THR:HB	2.18	0.42
1:AA:140:U:H2'	1:AA:141:G:C8	2.55	0.42
1:AA:529:G:O6	11:AL:45:ASN:HA	2.20	0.42
1:AA:720:C:H5"	15:AR:40:PRO:HG3	2.01	0.42
1:AA:1048:G:N2	1:AA:1214:C:C5	2.75	0.42
1:AA:1286:U:H6	1:AA:1286:U:H2'	1.68	0.42
2:AC:40:GLN:O	2:AC:43:THR:HB	2.20	0.42
2:AC:130:ARG:O	2:AC:133:MET:HB2	2.19	0.42
2:AC:167:TYR:CD2	2:AC:168:ARG:N	2.87	0.42
3:AD:61:ARG:NH1	3:AD:68:GLU:HB2	2.34	0.42
5:AF:29:ILE:HG21	5:AF:64:VAL:CG1	2.47	0.42
7:AH:74:ILE:O	7:AH:74:ILE:HG12	2.20	0.42
10:AK:115:ILE:HG21	19:AU:23:GLU:OE1	2.20	0.42
13:AP:33:ILE:HG13	13:AP:33:ILE:H	1.69	0.42
21:AN:33:VAL:HA	21:AN:40:ARG:HB2	2.01	0.42
23:BB:175:G:O2'	23:BB:176:A:H5'	2.20	0.42
23:BB:460:A:H2'	23:BB:461:C:O4'	2.20	0.42
23:BB:488:G:N2	23:BB:493:G:O6	2.53	0.42
23:BB:560:C:H1'	44:BQ:51:GLN:HE22	1.84	0.42
23:BB:562:U:C4	23:BB:2036:C:O4'	2.72	0.42
23:BB:651:G:O5'	34:B3:17:GLY:HA3	2.19	0.42
23:BB:957:C:N4	23:BB:2459:A:C8	2.87	0.42
23:BB:986:C:O2'	23:BB:987:C:H5'	2.20	0.42
23:BB:1051:G:H2'	23:BB:1052:C:H6	1.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1125:G:C6	23:BB:1126:A:N6	2.88	0.42
23:BB:1153:C:H2'	23:BB:1154:G:C8	2.54	0.42
23:BB:1241:A:H3'	23:BB:1242:U:H6	1.84	0.42
23:BB:1319:C:C2'	23:BB:1320:C:H5'	2.49	0.42
23:BB:1400:U:O2'	23:BB:1401:G:H5'	2.19	0.42
23:BB:1684:G:H2'	23:BB:1685:C:H6	1.85	0.42
23:BB:1750:G:O2'	23:BB:1751:U:H5'	2.20	0.42
23:BB:1977:A:H2'	23:BB:1978:A:H8	1.85	0.42
23:BB:2386:A:H2'	23:BB:2387:U:C6	2.55	0.42
23:BB:2630:G:H2'	23:BB:2631:G:C8	2.49	0.42
23:BB:2650:U:O2'	23:BB:2651:C:H5'	2.20	0.42
24:BI:92:PRO:C	24:BI:94:LYS:H	2.27	0.42
25:BC:61:TYR:HA	25:BC:85:ASN:ND2	2.34	0.42
25:BC:202:ARG:HH11	25:BC:213:ARG:NE	2.18	0.42
25:BC:255:LYS:C	25:BC:257:ARG:N	2.76	0.42
26:BD:36:GLN:HE21	26:BD:36:GLN:HB2	1.62	0.42
26:BD:46:ARG:HG3	26:BD:46:ARG:HH11	1.84	0.42
26:BD:67:HIS:ND1	26:BD:67:HIS:C	2.77	0.42
26:BD:130:GLN:HE21	26:BD:130:GLN:HB3	1.57	0.42
28:BP:57:ALA:O	28:BP:58:PHE:HD2	2.02	0.42
31:B0:27:LEU:HD22	31:B0:37:HIS:C	2.44	0.42
33:B1:8:ILE:HD12	33:B1:51:ALA:HA	2.01	0.42
37:BL:85:VAL:HG22	37:BL:85:VAL:O	2.20	0.42
38:BM:71:LYS:CG	38:BM:93:VAL:HG12	2.49	0.42
38:BM:110:GLU:HG2	38:BM:114:ARG:HH12	1.84	0.42
42:BN:55:ALA:HB1	42:BN:84:GLY:HA2	2.01	0.42
43:BO:7:ARG:O	43:BO:10:ARG:HB2	2.20	0.42
46:BU:21:ARG:HD2	46:BU:72:PHE:CD2	2.55	0.42
48:BG:8:VAL:HB	48:BG:49:LEU:O	2.20	0.42
48:BG:16:VAL:CG1	48:BG:49:LEU:HD13	2.50	0.42
1:CA:91:U:C2	1:CA:92:U:C5	3.08	0.42
1:CA:126:G:C4'	1:CA:634:C:H1'	2.49	0.42
1:CA:229:U:H2'	1:CA:230:G:H8	1.83	0.42
1:CA:929:G:H2'	1:CA:930:C:O4'	2.20	0.42
1:CA:1411:C:H2'	1:CA:1412:C:H6	1.85	0.42
1:CA:1525:G:O2'	1:CA:1526:G:H5'	2.19	0.42
3:CD:4:LEU:HD12	3:CD:4:LEU:N	2.34	0.42
3:CD:24:VAL:HG12	3:CD:160:LEU:HB3	2.01	0.42
3:CD:53:GLN:HG2	3:CD:198:LEU:HD22	2.02	0.42
4:CE:77:ASN:HB3	4:CE:78:GLY:H	1.70	0.42
5:CF:34:GLY:O	5:CF:35:LYS:HB2	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CF:51:ILE:HD11	5:CF:86:ARG:HG3	2.01	0.42
7:CH:68:LYS:HD2	7:CH:69:ALA:H	1.84	0.42
13:CP:67:ILE:HD11	13:CP:71:VAL:CG2	2.46	0.42
13:CP:72:ALA:HA	13:CP:75:ILE:CD1	2.49	0.42
2:CC:52:SER:OG	2:CC:53:ARG:N	2.42	0.42
2:CC:62:SER:C	2:CC:63:ILE:HG13	2.43	0.42
6:CG:36:SER:HA	6:CG:39:GLU:CD	2.44	0.42
6:CG:72:VAL:HG12	6:CG:89:GLU:HA	2.01	0.42
12:CM:13:HIS:ND1	12:CM:41:ASP:HA	2.35	0.42
16:CS:52:ASN:CG	16:CS:53:GLY:N	2.78	0.42
18:CB:9:LEU:C	18:CB:11:ALA:N	2.77	0.42
18:CB:128:LEU:HD23	18:CB:133:ALA:HA	2.02	0.42
18:CB:134:LEU:HD12	18:CB:134:LEU:C	2.43	0.42
18:CB:206:ILE:C	18:CB:209:VAL:HG22	2.44	0.42
20:CO:27:VAL:O	20:CO:28:GLN:C	2.63	0.42
22:DA:8:C:O2'	43:DO:40:ILE:HD13	2.19	0.42
23:DB:250:G:H2'	23:DB:251:A:C8	2.55	0.42
23:DB:348:A:H2'	23:DB:349:U:O4'	2.19	0.42
23:DB:478:A:H5"	23:DB:479:A:OP2	2.20	0.42
23:DB:513:A:H8	23:DB:513:A:O5'	2.01	0.42
23:DB:814:C:H1'	23:DB:1225:G:N2	2.34	0.42
23:DB:1353:A:O2'	23:DB:1354:A:H5'	2.18	0.42
23:DB:1923:U:H2'	23:DB:1924:C:C6	2.54	0.42
23:DB:2011:U:H2'	23:DB:2012:G:O4'	2.20	0.42
23:DB:2060:A:H1'	56:DB:3297:HOH:O	2.19	0.42
24:DI:80:LYS:NZ	24:DI:135:MET:HE3	2.35	0.42
25:DC:14:HIS:O	25:DC:16:VAL:HG23	2.20	0.42
25:DC:57:HIS:ND1	25:DC:58:LYS:N	2.67	0.42
25:DC:244:VAL:HG12	25:DC:250:GLN:HA	2.01	0.42
26:DD:150:GLN:O	26:DD:153:GLY:N	2.52	0.42
27:DK:8:LEU:HD12	27:DK:8:LEU:N	2.34	0.42
27:DK:60:ALA:HA	27:DK:87:LEU:CD2	2.50	0.42
28:DP:109:ILE:O	28:DP:109:ILE:HG13	2.20	0.42
29:DE:152:GLU:O	29:DE:153:LEU:HB3	2.20	0.42
33:D1:8:ILE:HB	33:D1:24:LYS:HB2	2.01	0.42
35:DV:11:GLU:HB2	35:DV:12:GLN:H	1.58	0.42
37:DL:93:ASN:HD22	37:DL:94:THR:H	1.62	0.42
37:DL:95:LEU:HB2	37:DL:101:ILE:HG12	2.01	0.42
40:DH:74:ALA:C	40:DH:76:GLU:N	2.78	0.42
40:DH:90:LEU:HB2	40:DH:123:ARG:HA	2.01	0.42
42:DN:25:ALA:O	42:DN:26:GLY:C	2.62	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DN:29:VAL:O	42:DN:78:LYS:HG2	2.20	0.42
44:DQ:81:GLY:HA3	44:DQ:112:ALA:HB1	2.01	0.42
48:DG:26:LYS:HA	48:DG:32:LEU:CA	2.50	0.42
48:DG:88:LEU:HD13	48:DG:93:TYR:HB2	2.01	0.42
48:DG:97:VAL:CB	48:DG:124:CYS:HB2	2.49	0.42
48:DG:151:ARG:O	48:DG:152:ARG:HB3	2.20	0.42
49:DR:51:VAL:O	49:DR:52:PRO:C	2.62	0.42
51:DZ:49:LEU:O	51:DZ:51:VAL:HG23	2.19	0.42
1:AA:17:U:O4'	1:AA:1080:A:H1'	2.19	0.42
1:AA:399:G:H2'	1:AA:400:C:H6	1.84	0.42
1:AA:989:U:O2'	1:AA:990:C:H5'	2.19	0.42
1:AA:1047:G:H21	1:AA:1215:G:C4'	2.33	0.42
1:AA:1198:G:H5"	56:AA:1865:HOH:O	2.19	0.42
1:AA:1237:C:H5"	1:AA:1238:A:H5'	2.01	0.42
1:AA:1339:A:H2'	1:AA:1340:A:H5'	2.02	0.42
1:AA:1355:G:H2'	1:AA:1356:G:H8	1.85	0.42
1:AA:1392:G:O2'	1:AA:1393:U:H5'	2.20	0.42
1:AA:1495:U:H2'	1:AA:1496:C:C6	2.55	0.42
1:AA:1520:C:H2'	1:AA:1521:C:C6	2.55	0.42
1:AA:1525:G:O2'	1:AA:1526:G:H5'	2.19	0.42
2:AC:102:ILE:HG22	2:AC:103:ALA:N	2.33	0.42
2:AC:146:LYS:HE3	2:AC:202:PHE:CE2	2.54	0.42
4:AE:45:VAL:H	4:AE:71:ILE:HG22	1.83	0.42
9:AJ:14:ASP:HA	9:AJ:70:HIS:HD2	1.85	0.42
18:AB:169:HIS:HA	18:AB:172:ILE:CD1	2.48	0.42
18:AB:204:ASP:CG	18:AB:205:ALA:H	2.26	0.42
21:AN:30:ILE:HD12	21:AN:44:VAL:HG13	2.01	0.42
22:BA:19:C:H2'	22:BA:20:G:H8	1.85	0.42
23:BB:63:A:H8	23:BB:63:A:O5'	2.01	0.42
23:BB:244:A:OP2	34:B3:7:ARG:NH2	2.45	0.42
23:BB:381:G:H5"	51:BZ:16:ASN:ND2	2.35	0.42
23:BB:557:C:H2'	23:BB:558:U:H6	1.82	0.42
23:BB:754:U:H2'	23:BB:755:U:C6	2.54	0.42
23:BB:973:A:H5'	49:BR:81:LYS:HE3	2.00	0.42
23:BB:974:G:H2'	23:BB:974:G:N3	2.35	0.42
23:BB:1063:G:O2'	24:BI:88:GLY:HA3	2.19	0.42
23:BB:1291:C:O2'	23:BB:1292:G:H5'	2.20	0.42
23:BB:1399:C:H2'	23:BB:1400:U:C6	2.54	0.42
23:BB:1654:A:O2'	26:BD:118:PHE:CB	2.68	0.42
23:BB:1799:G:N2	23:BB:1818:U:O2'	2.53	0.42
23:BB:2233:U:H2'	23:BB:2234:G:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2527:C:H2'	23:BB:2528:U:H6	1.85	0.42
23:BB:2636:C:H2'	23:BB:2637:U:H6	1.85	0.42
23:BB:2808:G:O2'	23:BB:2809:A:H8	2.02	0.42
23:BB:2840:C:H5"	42:BN:53:THR:HG21	2.02	0.42
24:BI:78:LEU:HD13	24:BI:108:ILE:HG23	2.01	0.42
26:BD:5:VAL:HG11	26:BD:80:TRP:CE3	2.55	0.42
26:BD:33:ARG:HH12	26:BD:53:GLY:C	2.27	0.42
27:BK:3:GLN:CG	27:BK:4:GLU:N	2.82	0.42
28:BP:59:THR:OG1	28:BP:72:VAL:HG12	2.19	0.42
28:BP:79:VAL:HG23	28:BP:80:VAL:N	2.35	0.42
29:BE:24:ASN:C	29:BE:24:ASN:HD22	2.26	0.42
35:BV:44:HIS:C	35:BV:46:LYS:N	2.77	0.42
37:BL:143:GLU:CG	37:BL:144:GLU:N	2.79	0.42
38:BM:73:ILE:HG21	38:BM:91:TYR:OH	2.19	0.42
45:BS:2:GLU:O	45:BS:3:THR:C	2.62	0.42
45:BS:16:LYS:O	45:BS:19:LEU:HB3	2.19	0.42
45:BS:29:VAL:O	45:BS:32:ALA:HB3	2.19	0.42
45:BS:54:ALA:C	45:BS:56:ALA:N	2.77	0.42
46:BU:12:VAL:HG21	46:BU:38:ILE:HG12	2.02	0.42
46:BU:18:LYS:HE2	46:BU:18:LYS:C	2.44	0.42
46:BU:28:LEU:HG	46:BU:34:ILE:HD11	2.02	0.42
47:BF:1:ALA:O	47:BF:2:LYS:C	2.63	0.42
47:BF:11:VAL:HG12	47:BF:12:VAL:N	2.27	0.42
47:BF:110:ILE:HA	47:BF:111:ARG:NH2	2.35	0.42
49:BR:2:TYR:HD2	49:BR:40:MET:HE3	1.85	0.42
49:BR:64:VAL:O	49:BR:65:ALA:HB3	2.19	0.42
1:CA:72:A:N6	1:CA:98:A:H2	2.18	0.42
1:CA:134:G:H2'	1:CA:135:C:O4'	2.18	0.42
1:CA:160:A:H2'	1:CA:161:A:C8	2.55	0.42
1:CA:312:C:O2'	1:CA:313:A:H5'	2.19	0.42
1:CA:409:U:OP1	3:CD:21:LYS:HG3	2.20	0.42
1:CA:465:A:H2'	1:CA:467:U:OP1	2.20	0.42
1:CA:981:U:C5'	21:CN:60:ARG:HD2	2.50	0.42
1:CA:1226:C:H4'	1:CA:1227:A:OP1	2.20	0.42
1:CA:1248:A:H2'	1:CA:1249:C:C6	2.55	0.42
7:CH:17:GLN:HE21	7:CH:62:LEU:CD2	2.33	0.42
10:CK:27:ASN:O	10:CK:56:LYS:HE2	2.20	0.42
10:CK:125:LYS:O	10:CK:126:ARG:C	2.62	0.42
13:CP:3:THR:HG22	13:CP:66:THR:HB	2.02	0.42
2:CC:4:VAL:HG22	2:CC:5:HIS:N	2.34	0.42
2:CC:78:LYS:HD2	2:CC:78:LYS:C	2.44	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:172:VAL:HG12	2:CC:174:LEU:HD12	2.02	0.42
6:CG:78:ARG:C	6:CG:78:ARG:HD2	2.45	0.42
6:CG:87:PRO:HG3	6:CG:148:LYS:CA	2.37	0.42
6:CG:134:VAL:HG12	6:CG:137:ARG:NH2	2.35	0.42
8:CI:56:MET:O	8:CI:57:VAL:HB	2.20	0.42
21:CN:86:ALA:HA	21:CN:89:ARG:NH2	2.34	0.42
18:CB:21:TYR:O	18:CB:22:TRP:O	2.37	0.42
18:CB:47:PRO:O	18:CB:51:GLU:HB2	2.20	0.42
22:DA:63:C:H2'	22:DA:64:G:H8	1.84	0.42
23:DB:367:G:N2	23:DB:368:A:H1'	2.34	0.42
23:DB:527:C:C4	23:DB:2779:U:H2'	2.54	0.42
23:DB:527:C:N4	23:DB:2779:U:OP2	2.52	0.42
23:DB:850:U:H4'	30:DY:22:THR:HG22	2.02	0.42
23:DB:992:C:H4'	49:DR:74:ILE:HD13	2.02	0.42
23:DB:1399:C:H2'	23:DB:1400:U:C6	2.54	0.42
23:DB:1567:G:H1'	23:DB:1568:G:C5	2.55	0.42
23:DB:1930:G:C2'	23:DB:1931:U:OP2	2.67	0.42
23:DB:2219:U:O2'	23:DB:2220:U:H5'	2.20	0.42
23:DB:2232:C:P	51:DZ:27:ARG:HH22	2.43	0.42
23:DB:2271:G:H2'	23:DB:2272:U:C5	2.54	0.42
23:DB:2387:U:H1'	52:DW:38:ARG:NH2	2.34	0.42
23:DB:2723:C:H5"	42:DN:1:MET:CE	2.46	0.42
25:DC:209:ALA:O	25:DC:213:ARG:HB2	2.19	0.42
28:DP:48:ALA:HB3	28:DP:59:THR:OG1	2.20	0.42
28:DP:95:LYS:HG3	28:DP:97:TYR:CE1	2.54	0.42
28:DP:98:TYR:C	28:DP:100:ARG:N	2.76	0.42
29:DE:146:VAL:HG12	29:DE:147:LEU:N	2.35	0.42
34:D3:30:HIS:C	34:D3:31:ILE:HG22	2.45	0.42
36:D2:10:LEU:O	36:D2:14:ARG:HG2	2.19	0.42
38:DM:29:GLY:HA2	38:DM:106:ASP:HB2	2.00	0.42
38:DM:65:ILE:HG23	38:DM:103:TYR:CD2	2.55	0.42
41:DJ:81:ILE:HG23	41:DJ:82:GLY:N	2.25	0.42
41:DJ:100:VAL:O	41:DJ:104:ALA:HB2	2.19	0.42
42:DN:33:ILE:HD12	42:DN:34:ILE:N	2.35	0.42
42:DN:59:SER:C	42:DN:61:ALA:N	2.77	0.42
44:DQ:26:ALA:O	44:DQ:28:SER:N	2.52	0.42
44:DQ:36:GLN:O	44:DQ:37:ALA:C	2.62	0.42
44:DQ:40:LYS:O	44:DQ:43:GLN:HB2	2.19	0.42
45:DS:4:ILE:CG2	45:DS:106:VAL:HG22	2.49	0.42
48:DG:26:LYS:CB	48:DG:32:LEU:HG	2.49	0.42
48:DG:29:ASN:HD22	48:DG:30:GLY:N	2.17	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DR:79:ARG:O	49:DR:80:ARG:HB2	2.20	0.42
1:AA:28:A:N3	1:AA:296:U:H4'	2.34	0.42
1:AA:44:A:O2'	1:AA:45:G:H5'	2.19	0.42
1:AA:86:G:N2	1:AA:87:C:H42	2.18	0.42
1:AA:143:A:O3'	1:AA:144:G:H8	2.03	0.42
1:AA:144:G:H2'	1:AA:145:G:O4'	2.20	0.42
1:AA:493:A:H5'	1:AA:494:G:OP2	2.19	0.42
1:AA:537:G:H2'	1:AA:538:G:H8	1.85	0.42
1:AA:716:A:H2'	1:AA:717:U:C6	2.55	0.42
1:AA:982:U:H3	1:AA:1223:C:H42	1.68	0.42
1:AA:1114:C:H1'	21:AN:99:SER:O	2.20	0.42
1:AA:1212:U:H5'	1:AA:1213:A:O4'	2.20	0.42
1:AA:1267:C:H2'	1:AA:1268:G:C8	2.55	0.42
1:AA:1360:A:N6	1:AA:1361:G:N3	2.68	0.42
2:AC:25:THR:O	2:AC:28:PHE:HB3	2.20	0.42
3:AD:90:LEU:H	3:AD:90:LEU:CD2	2.32	0.42
4:AE:19:ARG:O	4:AE:20:VAL:HB	2.19	0.42
5:AF:13:ASP:C	5:AF:14:GLN:HG2	2.45	0.42
13:AP:67:ILE:HD11	13:AP:71:VAL:CG2	2.45	0.42
14:AQ:59:GLU:O	14:AQ:75:VAL:HG22	2.20	0.42
16:AS:29:PRO:HD3	16:AS:47:THR:HB	2.02	0.42
17:AT:2:ASN:HD22	17:AT:3:ILE:HG13	1.84	0.42
17:AT:26:MET:SD	17:AT:26:MET:C	3.03	0.42
20:AO:33:THR:HG23	20:AO:63:ARG:HH11	1.85	0.42
20:AO:36:ILE:HD11	20:AO:59:MET:HG3	2.02	0.42
22:BA:109:A:H2'	22:BA:110:C:H6	1.84	0.42
23:BB:532:A:N3	23:BB:532:A:C2'	2.80	0.42
23:BB:596:U:H2'	23:BB:597:G:C8	2.54	0.42
23:BB:686:U:H1'	36:B2:6:GLN:O	2.20	0.42
23:BB:724:U:H2'	23:BB:725:G:O4'	2.19	0.42
23:BB:740:C:H5"	23:BB:1784:A:OP1	2.19	0.42
23:BB:1279:G:H2'	23:BB:1280:G:O4'	2.19	0.42
23:BB:1710:G:H4'	23:BB:2858:C:O2	2.18	0.42
23:BB:1822:C:O2'	23:BB:1823:G:H5'	2.20	0.42
23:BB:2079:U:O2'	51:BZ:23:ASN:ND2	2.53	0.42
23:BB:2722:G:O2'	23:BB:2723:C:H5'	2.20	0.42
26:BD:73:VAL:O	26:BD:74:GLU:HB2	2.20	0.42
28:BP:114:ASN:HD22	28:BP:114:ASN:HA	1.60	0.42
29:BE:145:ASP:CA	29:BE:166:LYS:HB3	2.50	0.42
34:B3:12:ARG:HG2	37:BL:62:PRO:O	2.20	0.42
35:BV:42:LEU:CD1	35:BV:47:VAL:HG21	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BM:69:PRO:HG2	38:BM:70:ASP:H	1.85	0.42
41:BJ:3:THR:HB	41:BJ:44:TYR:HE1	1.83	0.42
44:BQ:63:ARG:NH2	44:BQ:96:ASP:HA	2.34	0.42
48:BG:100:ASN:OD1	48:BG:101:VAL:HG13	2.19	0.42
49:BR:34:GLU:HB3	49:BR:58:VAL:CG2	2.50	0.42
50:BT:10:VAL:O	50:BT:12:ARG:N	2.51	0.42
52:BW:25:PHE:C	52:BW:27:GLY:N	2.72	0.42
52:BW:28:GLU:O	52:BW:30:VAL:N	2.52	0.42
1:CA:456:A:H2'	1:CA:457:G:O4'	2.19	0.42
1:CA:779:C:H4'	10:CK:123:PRO:HA	2.01	0.42
1:CA:833:G:O2'	1:CA:834:U:H5'	2.20	0.42
1:CA:921:U:H2'	1:CA:922:G:O4'	2.20	0.42
1:CA:977:A:N1	1:CA:1223:C:H2'	2.33	0.42
1:CA:1019:A:H2'	1:CA:1020:G:C8	2.52	0.42
1:CA:1073:U:O2'	1:CA:1074:G:H5'	2.19	0.42
1:CA:1252:A:H2'	1:CA:1253:G:O4'	2.20	0.42
1:CA:1351:U:O2'	1:CA:1352:C:H5'	2.20	0.42
4:CE:32:PHE:O	4:CE:51:LYS:HA	2.19	0.42
7:CH:16:GLY:C	7:CH:18:ALA:H	2.28	0.42
13:CP:71:VAL:HA	13:CP:74:LEU:HG	2.01	0.42
2:CC:120:THR:HG21	2:CC:186:SER:HB2	2.02	0.42
8:CI:16:ALA:HA	8:CI:65:THR:O	2.19	0.42
9:CJ:85:ASP:C	9:CJ:87:LEU:N	2.76	0.42
21:CN:26:LEU:HD23	21:CN:31:SER:HB2	2.02	0.42
21:CN:78:LEU:HD23	21:CN:82:LYS:C	2.45	0.42
16:CS:39:ILE:HG13	16:CS:39:ILE:H	1.36	0.42
18:CB:184:ALA:O	18:CB:199:ILE:HG13	2.19	0.42
22:DA:28:C:H2'	22:DA:29:A:C1'	2.49	0.42
22:DA:42:C:C1'	47:DF:65:LEU:HB2	2.50	0.42
22:DA:52:A:H2'	22:DA:53:A:O4'	2.20	0.42
23:DB:182:A:H2'	23:DB:183:C:C6	2.54	0.42
23:DB:275:C:N3	23:DB:276:U:H1'	2.35	0.42
23:DB:728:G:O2'	23:DB:730:A:H8	2.02	0.42
23:DB:740:C:H5"	23:DB:1784:A:OP1	2.20	0.42
23:DB:898:C:O3'	23:DB:899:A:C4'	2.68	0.42
23:DB:974:G:H2'	23:DB:974:G:N3	2.35	0.42
23:DB:1098:A:O2'	24:DI:4:VAL:C	2.62	0.42
23:DB:1439:A:N7	23:DB:1440:U:C6	2.87	0.42
23:DB:1635:A:H2'	23:DB:1636:U:O4'	2.19	0.42
23:DB:1824:G:H2'	23:DB:1825:U:H6	1.85	0.42
23:DB:1841:U:H2'	23:DB:1842:G:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:75:ALA:HA	25:DC:96:LYS:HZ3	1.84	0.42
25:DC:174:ARG:HG3	25:DC:180:MET:SD	2.60	0.42
26:DD:168:GLU:HG3	26:DD:170:VAL:CG1	2.48	0.42
28:DP:31:VAL:CG1	28:DP:38:ARG:HG2	2.49	0.42
29:DE:101:TYR:O	29:DE:104:ALA:HB3	2.19	0.42
33:D1:7:LYS:HZ3	34:D3:34:LYS:HG2	1.84	0.42
34:D3:62:PRO:C	34:D3:64:ALA:H	2.28	0.42
35:DV:35:GLU:HB3	35:DV:93:ARG:CZ	2.49	0.42
35:DV:42:LEU:CD1	35:DV:47:VAL:HG21	2.50	0.42
35:DV:44:HIS:C	35:DV:46:LYS:H	2.28	0.42
35:DV:80:HIS:CD2	35:DV:81:PRO:HD2	2.54	0.42
36:D2:18:PHE:O	36:D2:19:ARG:C	2.60	0.42
37:DL:102:GLY:O	37:DL:103:ILE:C	2.62	0.42
39:DX:8:GLU:HB3	39:DX:12:GLU:HB2	2.02	0.42
40:DH:121:VAL:O	40:DH:122:LEU:HB2	2.19	0.42
42:DN:72:ASP:O	42:DN:76:VAL:HG13	2.19	0.42
47:DF:37:MET:HB2	47:DF:151:LEU:CB	2.50	0.42
47:DF:102:LEU:HD12	47:DF:103:ILE:HG13	2.01	0.42
48:DG:145:ALA:O	48:DG:146:ASP:C	2.62	0.42
49:DR:34:GLU:HB3	49:DR:58:VAL:CG2	2.50	0.42
1:AA:360:G:O2'	1:AA:361:G:H5'	2.20	0.42
1:AA:425:G:H2'	1:AA:426:U:C6	2.55	0.42
1:AA:467:U:O2	1:AA:467:U:H2'	2.20	0.42
1:AA:678:U:H2'	1:AA:679:C:H6	1.81	0.42
1:AA:934:C:H5"	56:AA:1724:HOH:O	2.20	0.42
1:AA:1082:A:O2'	1:AA:1083:U:H5'	2.20	0.42
1:AA:1225:A:H3'	1:AA:1226:C:C5	2.55	0.42
1:AA:1293:C:O2'	1:AA:1294:G:H5'	2.19	0.42
2:AC:156:LEU:HD12	2:AC:163:ARG:HG3	2.02	0.42
2:AC:183:TYR:HA	2:AC:199:VAL:O	2.20	0.42
3:AD:159:GLU:C	3:AD:161:ALA:H	2.28	0.42
4:AE:74:ALA:O	4:AE:146:MET:HE2	2.19	0.42
5:AF:77:THR:O	5:AF:81:ASN:HB2	2.20	0.42
8:AI:14:SER:HA	8:AI:69:GLY:N	2.34	0.42
11:AL:42:LYS:HD2	11:AL:43:LYS:CG	2.49	0.42
16:AS:28:LYS:HB2	16:AS:29:PRO:HD2	2.01	0.42
18:AB:63:LYS:O	18:AB:64:GLY:C	2.63	0.42
18:AB:64:GLY:HA2	18:AB:158:ASP:CG	2.45	0.42
18:AB:67:LEU:HD13	18:AB:68:PHE:N	2.35	0.42
18:AB:144:GLU:HG3	18:AB:148:GLY:HA3	2.02	0.42
19:AU:9:GLU:CG	2:CC:108:PRO:HG2	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AU:16:ARG:NH1	19:AU:19:LYS:NZ	2.68	0.42
21:AN:52:ARG:O	21:AN:53:ASP:C	2.63	0.42
23:BB:215:G:C4'	23:BB:216:A:H4'	2.47	0.42
23:BB:265:A:N6	23:BB:427:U:O2'	2.52	0.42
23:BB:691:C:O2'	23:BB:692:C:H5'	2.19	0.42
23:BB:1262:A:H2'	23:BB:1263:U:O4'	2.20	0.42
23:BB:1463:C:H2'	23:BB:1464:G:H8	1.84	0.42
23:BB:1559:U:H3'	23:BB:1560:G:C5'	2.49	0.42
23:BB:1567:G:H1'	23:BB:1568:G:C5	2.55	0.42
23:BB:1684:G:H2'	23:BB:1685:C:C6	2.55	0.42
23:BB:1692:U:H2'	23:BB:1694:C:C4	2.54	0.42
23:BB:1729:U:H5'	23:BB:1730:C:OP2	2.20	0.42
23:BB:1953:A:H2	23:BB:2549:G:N3	2.18	0.42
23:BB:1998:A:O2'	23:BB:1999:C:H5'	2.20	0.42
23:BB:2074:U:H2'	23:BB:2075:U:C6	2.55	0.42
23:BB:2353:G:H1'	52:BW:30:VAL:CG1	2.50	0.42
23:BB:2454:G:H2'	23:BB:2455:G:H5'	2.00	0.42
23:BB:2466:C:OP1	32:B4:4:ARG:HB3	2.20	0.42
23:BB:2845:U:O2'	23:BB:2846:G:H5'	2.19	0.42
26:BD:34:VAL:HG13	26:BD:94:GLN:H	1.78	0.42
31:B0:33:SER:O	31:B0:35:GLU:HG2	2.19	0.42
33:B1:8:ILE:HG13	33:B1:51:ALA:HA	2.02	0.42
38:BM:17:ASN:HD21	38:BM:95:LEU:CG	2.33	0.42
39:BX:8:GLU:HB3	39:BX:12:GLU:HB2	2.01	0.42
39:BX:25:GLN:HB2	39:BX:46:VAL:HG11	2.02	0.42
40:BH:73:ASN:CG	40:BH:74:ALA:H	2.27	0.42
40:BH:81:ALA:CB	40:BH:147:VAL:H	2.28	0.42
40:BH:92:GLY:O	40:BH:123:ARG:HG2	2.20	0.42
41:BJ:58:ASN:O	41:BJ:59:ALA:HB3	2.20	0.42
42:BN:119:SER:O	42:BN:120:GLU:HB2	2.19	0.42
47:BF:62:GLN:HE21	47:BF:90:LEU:HD13	1.84	0.42
48:BG:10:VAL:HG23	48:BG:49:LEU:N	2.35	0.42
50:BT:4:GLU:C	50:BT:6:ARG:N	2.78	0.42
50:BT:79:ASP:OD2	50:BT:79:ASP:N	2.53	0.42
52:BW:23:LYS:O	52:BW:24:ARG:C	2.63	0.42
1:CA:182:A:HO2'	1:CA:183:C:H3'	1.83	0.42
1:CA:222:C:H2'	1:CA:223:A:H8	1.85	0.42
1:CA:612:C:H2'	1:CA:613:C:C6	2.55	0.42
1:CA:833:G:H2'	1:CA:834:U:C6	2.54	0.42
1:CA:1110:A:O2'	1:CA:1111:A:H5'	2.19	0.42
1:CA:1163:A:O2'	1:CA:1164:G:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1220:G:H4'	16:CS:33:TRP:HB3	2.02	0.42
1:CA:1266:G:H22	1:CA:1268:G:H3'	1.85	0.42
1:CA:1288:A:H2	1:CA:1371:G:N3	2.18	0.42
1:CA:1332:A:O2'	1:CA:1333:A:H5'	2.19	0.42
1:CA:1372:U:C4	1:CA:1373:G:C5	3.08	0.42
3:CD:202:LEU:O	3:CD:202:LEU:HD12	2.19	0.42
5:CF:11:HIS:CG	5:CF:12:PRO:HD2	2.54	0.42
17:CT:7:LYS:O	17:CT:11:ILE:HG13	2.20	0.42
2:CC:19:SER:HA	2:CC:55:VAL:HG13	2.01	0.42
9:CJ:40:ILE:HD12	9:CJ:73:LEU:HB3	2.01	0.42
12:CM:43:LYS:C	12:CM:45:SER:H	2.27	0.42
16:CS:15:LEU:O	16:CS:19:GLU:HB2	2.19	0.42
16:CS:35:ARG:HG3	16:CS:36:ARG:N	2.35	0.42
16:CS:43:MET:C	16:CS:46:LEU:HD23	2.44	0.42
18:CB:124:THR:O	18:CB:124:THR:HG23	2.18	0.42
20:CO:14:GLU:C	20:CO:84:ARG:HH22	2.27	0.42
22:DA:13:G:O2'	22:DA:14:U:H3'	2.20	0.42
22:DA:80:U:H2'	22:DA:81:G:C8	2.55	0.42
23:DB:321:U:OP2	29:DE:130:LYS:HD3	2.19	0.42
23:DB:383:C:N3	23:DB:391:A:N6	2.68	0.42
23:DB:1392:A:N6	23:DB:1393:A:N6	2.68	0.42
23:DB:1404:C:H2'	23:DB:1405:U:H6	1.85	0.42
23:DB:1423:G:H2'	23:DB:1424:G:H8	1.84	0.42
23:DB:1535:A:O2'	23:DB:1537:G:N7	2.46	0.42
23:DB:1561:C:H2'	23:DB:1562:U:H6	1.84	0.42
23:DB:1695:G:H1'	25:DC:7:PRO:O	2.20	0.42
23:DB:1900:A:N1	23:DB:1970:A:C6	2.88	0.42
23:DB:2240:U:O2'	23:DB:2241:A:H5'	2.19	0.42
23:DB:2688:G:H1'	23:DB:2721:A:H61	1.84	0.42
24:DI:54:ILE:O	24:DI:54:ILE:HG23	2.19	0.42
25:DC:68:ARG:NH2	25:DC:190:THR:HG22	2.31	0.42
25:DC:197:ALA:C	25:DC:199:HIS:H	2.27	0.42
25:DC:230:PRO:O	25:DC:241:LYS:HD3	2.20	0.42
34:D3:61:LEU:N	34:D3:62:PRO:CD	2.82	0.42
36:D2:13:ASN:O	36:D2:15:SER:N	2.52	0.42
37:DL:79:LEU:HB2	37:DL:113:ALA:N	2.31	0.42
37:DL:90:VAL:HB	37:DL:122:VAL:HA	2.02	0.42
37:DL:132:ARG:CA	37:DL:135:ILE:HG22	2.49	0.42
40:DH:3:VAL:O	40:DH:18:GLN:HA	2.20	0.42
47:DF:127:TYR:CE2	47:DF:176:PHE:HE2	2.37	0.42
48:DG:8:VAL:HB	48:DG:49:LEU:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DR:75:VAL:HG12	49:DR:76:LYS:N	2.34	0.42
50:DT:69:ARG:HA	50:DT:69:ARG:NE	2.27	0.42
51:DZ:14:THR:HA	51:DZ:28:ARG:HB2	2.02	0.42
51:DZ:63:GLY:O	51:DZ:64:ILE:C	2.63	0.42
1:AA:153:C:H2'	1:AA:154:U:H6	1.84	0.42
1:AA:410:G:OP1	3:AD:25:ARG:HD2	2.20	0.42
1:AA:411:A:C4	1:AA:413:G:H1'	2.54	0.42
1:AA:818:G:H3'	1:AA:819:A:H5"	2.00	0.42
1:AA:1455:G:H2'	1:AA:1456:A:H8	1.84	0.42
3:AD:97:LEU:O	3:AD:101:VAL:HG23	2.20	0.42
3:AD:106:PHE:CD1	3:AD:144:ILE:HD11	2.55	0.42
4:AE:156:ARG:HB2	4:AE:157:GLY:H	1.66	0.42
6:AG:52:ARG:HH12	6:AG:121:ASN:HD22	1.66	0.42
7:AH:46:GLU:OE2	7:AH:63:LYS:HG3	2.20	0.42
7:AH:65:PHE:CG	7:AH:66:GLN:N	2.87	0.42
8:AI:5:TYR:O	8:AI:20:ILE:N	2.52	0.42
9:AJ:12:ALA:CB	9:AJ:18:ILE:HB	2.49	0.42
9:AJ:88:MET:SD	9:AJ:88:MET:N	2.92	0.42
10:AK:17:ASP:HB3	10:AK:80:ASN:OD1	2.20	0.42
10:AK:48:GLY:C	10:AK:50:GLY:H	2.27	0.42
12:AM:49:GLU:O	12:AM:50:GLY:C	2.63	0.42
16:AS:36:ARG:H	16:AS:36:ARG:HE	1.67	0.42
16:AS:66:VAL:HG23	16:AS:67:GLY:N	2.25	0.42
17:AT:4:LYS:HE3	17:AT:6:ALA:HB2	2.02	0.42
18:AB:32:GLY:O	18:AB:33:ALA:C	2.63	0.42
22:BA:8:C:O2'	43:BO:40:ILE:HD13	2.20	0.42
22:BA:42:C:C1'	47:BF:65:LEU:HB2	2.49	0.42
22:BA:75:G:N1	22:BA:102:G:N2	2.68	0.42
23:BB:318:C:O2'	23:BB:319:G:H5'	2.20	0.42
23:BB:402:A:H2'	23:BB:403:U:H5'	2.02	0.42
23:BB:423:A:H5"	23:BB:424:G:C5'	2.49	0.42
23:BB:681:G:H2'	23:BB:682:G:H8	1.84	0.42
23:BB:709:U:H2'	23:BB:710:U:C6	2.54	0.42
23:BB:741:U:H2'	23:BB:742:A:C8	2.55	0.42
23:BB:798:G:O2'	23:BB:799:G:H5'	2.19	0.42
23:BB:1330:C:H2'	23:BB:1331:G:C8	2.55	0.42
23:BB:1338:G:O6	50:BT:66:LYS:HE2	2.19	0.42
23:BB:1366:A:H2'	23:BB:1367:A:O4'	2.19	0.42
23:BB:1518:C:H2'	23:BB:1519:G:H8	1.85	0.42
23:BB:1549:A:H2'	23:BB:1550:C:H6	1.82	0.42
23:BB:1930:G:C2'	23:BB:1931:U:OP2	2.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2076:U:O2	23:BB:2076:U:O4'	2.38	0.42
23:BB:2100:G:H2'	23:BB:2100:G:N3	2.35	0.42
23:BB:2144:G:O2'	23:BB:2145:C:H4'	2.20	0.42
23:BB:2271:G:H2'	23:BB:2272:U:C5	2.55	0.42
23:BB:2322:A:H2'	23:BB:2323:G:O4'	2.20	0.42
23:BB:2636:C:H2'	23:BB:2637:U:C6	2.55	0.42
23:BB:2654:A:H61	23:BB:2665:A:H3'	1.84	0.42
23:BB:2679:A:OP1	26:BD:114:LYS:HE2	2.20	0.42
24:BI:37:PHE:HZ	24:BI:56:VAL:HG11	1.85	0.42
24:BI:38:CYS:O	24:BI:42:ASN:ND2	2.53	0.42
25:BC:159:THR:N	25:BC:194:VAL:CG1	2.83	0.42
26:BD:59:ARG:HB3	26:BD:59:ARG:NH2	2.35	0.42
28:BP:94:ALA:O	28:BP:95:LYS:HD2	2.19	0.42
29:BE:134:LEU:O	29:BE:138:LEU:HG	2.19	0.42
37:BL:80:SER:N	37:BL:113:ALA:HB3	2.32	0.42
38:BM:19:GLY:C	38:BM:20:LEU:HD22	2.44	0.42
38:BM:100:LYS:HD2	38:BM:101:VAL:H	1.85	0.42
40:BH:83:LYS:HZ2	40:BH:83:LYS:HA	1.85	0.42
42:BN:11:ASN:HD22	42:BN:11:ASN:HA	1.52	0.42
43:BO:49:VAL:HG23	43:BO:78:VAL:HG12	2.01	0.42
45:BS:4:ILE:CG2	45:BS:106:VAL:HG22	2.49	0.42
46:BU:81:ARG:CD	46:BU:96:LYS:HD2	2.50	0.42
47:BF:1:ALA:CB	47:BF:4:HIS:HB3	2.47	0.42
47:BF:33:ILE:CG2	47:BF:34:THR:N	2.82	0.42
48:BG:148:ARG:HG2	48:BG:163:TYR:CZ	2.55	0.42
1:CA:317:U:H2'	1:CA:318:G:H8	1.85	0.42
1:CA:373:A:O2'	1:CA:481:G:N2	2.52	0.42
1:CA:588:G:N3	1:CA:588:G:H2'	2.34	0.42
1:CA:862:C:O2'	1:CA:863:U:H5'	2.20	0.42
1:CA:1040:U:O2'	1:CA:1041:G:H5'	2.19	0.42
1:CA:1058:G:H2'	1:CA:1059:C:C6	2.55	0.42
1:CA:1112:C:N3	2:CC:177:LEU:HG	2.33	0.42
1:CA:1129:C:C5'	8:CI:17:ARG:HH12	2.32	0.42
1:CA:1455:G:H2'	1:CA:1456:A:H8	1.85	0.42
3:CD:1:ALA:O	3:CD:2:ARG:HG2	2.19	0.42
4:CE:39:GLY:HA3	4:CE:116:VAL:O	2.20	0.42
7:CH:86:LYS:HG2	7:CH:124:ILE:HD11	2.01	0.42
10:CK:125:LYS:O	19:CU:33:ARG:CZ	2.67	0.42
2:CC:46:LEU:CD1	2:CC:75:VAL:HG13	2.50	0.42
6:CG:90:VAL:HG21	6:CG:95:ARG:HG3	2.01	0.42
8:CI:113:LYS:HG2	8:CI:114:LYS:N	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:19:THR:C	12:CM:21:ILE:N	2.77	0.42
18:CB:53:LEU:HB2	18:CB:212:TYR:OH	2.20	0.42
18:CB:53:LEU:HA	18:CB:56:LEU:CD1	2.50	0.42
18:CB:107:ARG:HG3	18:CB:108:GLN:N	2.35	0.42
22:DA:87:U:C2'	22:DA:88:C:O5'	2.68	0.42
22:DA:106:G:H2'	22:DA:107:G:C8	2.55	0.42
23:DB:63:A:O5'	23:DB:63:A:H8	2.03	0.42
23:DB:195:A:H3'	23:DB:196:A:H4'	2.01	0.42
23:DB:251:A:H2'	23:DB:252:G:O4'	2.19	0.42
23:DB:318:C:O2'	23:DB:319:G:H5'	2.20	0.42
23:DB:354:A:H2'	23:DB:355:U:C5	2.54	0.42
23:DB:479:A:H1'	23:DB:480:A:H5"	2.02	0.42
23:DB:816:C:O2'	23:DB:817:C:H5'	2.20	0.42
23:DB:848:C:H2'	23:DB:849:A:H8	1.78	0.42
23:DB:1301:A:H2'	23:DB:1301:A:N3	2.35	0.42
23:DB:1316:U:H2'	23:DB:1317:G:C8	2.55	0.42
23:DB:1494:A:H2'	23:DB:1495:A:H8	1.85	0.42
23:DB:1657:U:O2'	26:DD:138:LEU:HD12	2.20	0.42
23:DB:1747:U:H2'	23:DB:1748:C:C6	2.54	0.42
23:DB:2708:G:H1'	42:DN:71:ARG:NH2	2.34	0.42
23:DB:2807:U:H5'	23:DB:2808:G:OP2	2.20	0.42
23:DB:2811:G:O2'	23:DB:2812:G:H5'	2.20	0.42
24:DI:5:GLN:O	24:DI:6:ALA:CB	2.68	0.42
27:DK:99:ILE:HG12	27:DK:115:ILE:HG13	2.01	0.42
29:DE:105:LEU:HD21	29:DE:177:PRO:CB	2.50	0.42
34:D3:57:VAL:C	34:D3:59:ALA:N	2.78	0.42
35:DV:14:LYS:O	35:DV:18:ARG:HB2	2.19	0.42
36:D2:13:ASN:C	36:D2:15:SER:N	2.78	0.42
36:D2:43:THR:O	36:D2:44:VAL:C	2.63	0.42
38:DM:57:VAL:O	38:DM:59:ARG:N	2.47	0.42
39:DX:31:GLN:O	39:DX:36:GLN:HB2	2.19	0.42
41:DJ:17:VAL:HG22	41:DJ:55:ILE:HD11	2.02	0.42
41:DJ:29:ALA:O	41:DJ:30:THR:C	2.63	0.42
42:DN:31:HIS:O	42:DN:32:GLU:HB2	2.20	0.42
46:DU:5:ARG:HG2	46:DU:93:ARG:NH2	2.35	0.42
47:DF:76:PHE:HD2	47:DF:78:ILE:CD1	2.33	0.42
47:DF:148:VAL:O	47:DF:149:ARG:CB	2.67	0.42
52:DW:30:VAL:HA	52:DW:60:ALA:O	2.19	0.42
1:AA:104:G:O2'	1:AA:105:G:H5'	2.20	0.41
1:AA:190:A:C4	1:AA:191:G:H1'	2.54	0.41
1:AA:456:A:H2'	1:AA:457:G:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:525:C:H2'	1:AA:526:C:H6	1.85	0.41
1:AA:600:A:H2'	1:AA:601:G:C8	2.55	0.41
1:AA:612:C:H2'	1:AA:613:C:C6	2.55	0.41
1:AA:875:U:H1'	7:AH:15:ASN:OD1	2.20	0.41
1:AA:926:G:H3'	1:AA:1505:G:N2	2.34	0.41
1:AA:982:U:OP2	21:AN:60:ARG:NH1	2.53	0.41
1:AA:1299:A:H5"	1:AA:1300:G:OP1	2.20	0.41
1:AA:1356:G:H3'	56:AA:1981:HOH:O	2.20	0.41
3:AD:1:ALA:O	3:AD:2:ARG:HG2	2.19	0.41
3:AD:33:ILE:HD12	3:AD:34:GLU:H	1.85	0.41
4:AE:80:LEU:HG	4:AE:122:VAL:HG11	2.01	0.41
6:AG:70:PRO:HG3	6:AG:102:TRP:HH2	1.82	0.41
6:AG:144:ALA:C	6:AG:146:ALA:N	2.78	0.41
7:AH:63:LYS:HG2	7:AH:70:VAL:CG2	2.49	0.41
8:AI:12:LYS:C	8:AI:14:SER:N	2.78	0.41
8:AI:79:ARG:O	8:AI:83:THR:HG22	2.20	0.41
8:AI:82:ILE:C	8:AI:86:LEU:HD13	2.44	0.41
11:AL:80:LEU:HB3	11:AL:97:VAL:HG23	2.01	0.41
12:AM:34:ALA:C	12:AM:36:ALA:H	2.28	0.41
12:AM:80:MET:HE2	12:AM:90:HIS:CB	2.48	0.41
16:AS:43:MET:HE3	16:AS:48:ILE:HD11	2.02	0.41
18:AB:11:ALA:C	18:AB:13:VAL:N	2.78	0.41
18:AB:17:HIS:CG	18:AB:18:GLN:H	2.38	0.41
18:AB:156:LEU:H	18:AB:156:LEU:HD12	1.85	0.41
21:AN:23:ARG:C	21:AN:25:GLU:H	2.28	0.41
22:BA:13:G:N2	22:BA:16:G:N3	2.68	0.41
23:BB:20:C:O2'	23:BB:21:A:H5'	2.19	0.41
23:BB:223:A:N1	23:BB:407:G:O2'	2.50	0.41
23:BB:443:A:C5	29:BE:40:ARG:HD3	2.54	0.41
23:BB:605:G:O2'	23:BB:606:U:H5'	2.20	0.41
23:BB:637:A:OP2	37:BL:128:THR:HG21	2.20	0.41
23:BB:817:C:O2'	23:BB:839:U:H5"	2.20	0.41
23:BB:826:U:O2'	37:BL:53:GLY:HA3	2.20	0.41
23:BB:829:A:H5'	23:BB:831:G:N7	2.35	0.41
23:BB:1228:G:H2'	23:BB:1229:C:C6	2.54	0.41
23:BB:1286:A:C6	23:BB:1329:U:C2	3.08	0.41
23:BB:1316:U:O2'	23:BB:1317:G:H5'	2.19	0.41
23:BB:1418:G:H1'	23:BB:1580:A:N6	2.35	0.41
23:BB:1427:A:H4'	23:BB:1428:C:O4'	2.20	0.41
23:BB:1435:G:H2'	23:BB:1436:G:C8	2.55	0.41
23:BB:1439:A:N7	23:BB:1440:U:C6	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1464:G:H2'	23:BB:1465:G:C8	2.55	0.41
23:BB:2324:U:H5'	23:BB:2325:G:H5"	2.01	0.41
23:BB:2479:U:H2'	23:BB:2480:C:H5'	2.02	0.41
23:BB:2860:A:H2'	23:BB:2861:U:O4'	2.20	0.41
25:BC:89:ASN:HD22	25:BC:89:ASN:HA	1.64	0.41
25:BC:180:MET:HB2	25:BC:268:ARG:CB	2.50	0.41
26:BD:39:ASP:CG	26:BD:42:ASN:H	2.29	0.41
26:BD:55:LYS:HZ2	26:BD:60:VAL:HG13	1.85	0.41
27:BK:108:ARG:NH1	28:BP:34:GLY:HA2	2.33	0.41
28:BP:50:ARG:HB3	28:BP:57:ALA:O	2.20	0.41
28:BP:61:ARG:HD3	28:BP:70:GLU:OE1	2.19	0.41
28:BP:99:LEU:HA	28:BP:102:ARG:HG3	2.02	0.41
38:BM:17:ASN:HD21	38:BM:95:LEU:HG	1.85	0.41
38:BM:35:ALA:O	38:BM:36:VAL:HB	2.19	0.41
39:BX:23:ARG:HD2	39:BX:27:ASN:CG	2.45	0.41
40:BH:116:ARG:HH22	40:BH:133:GLN:CB	2.33	0.41
41:BJ:29:ALA:O	41:BJ:33:ALA:N	2.46	0.41
41:BJ:45:THR:N	41:BJ:46:PRO:CD	2.83	0.41
41:BJ:77:HIS:ND1	41:BJ:79:GLY:N	2.67	0.41
41:BJ:119:PHE:C	41:BJ:121:LYS:N	2.78	0.41
42:BN:36:THR:OG1	42:BN:40:LYS:HD2	2.19	0.41
43:BO:6:ALA:O	43:BO:7:ARG:C	2.64	0.41
45:BS:8:ARG:HA	45:BS:102:HIS:ND1	2.35	0.41
46:BU:46:LYS:HG2	46:BU:47:PRO:HD2	2.02	0.41
48:BG:7:PRO:O	48:BG:8:VAL:CB	2.68	0.41
49:BR:49:ILE:H	49:BR:49:ILE:HG13	1.59	0.41
1:CA:230:G:O2'	1:CA:231:U:H5'	2.20	0.41
1:CA:705:G:H2'	1:CA:706:A:H5'	2.02	0.41
1:CA:729:A:H2	1:CA:764:C:O2	2.02	0.41
1:CA:1103:C:H6	1:CA:1103:C:O5'	2.02	0.41
1:CA:1151:A:C4'	9:CJ:41:PRO:HB2	2.50	0.41
1:CA:1325:C:O2'	1:CA:1326:U:H5'	2.19	0.41
7:CH:65:PHE:CG	7:CH:66:GLN:N	2.87	0.41
11:CL:19:ASN:HD22	11:CL:19:ASN:HA	1.61	0.41
14:CQ:74:LEU:HD22	14:CQ:74:LEU:C	2.45	0.41
15:CR:41:SER:HB3	15:CR:51:GLN:HB2	2.02	0.41
17:CT:66:ILE:HG23	17:CT:70:LYS:HD3	2.02	0.41
2:CC:39:ARG:NH1	2:CC:39:ARG:HG3	2.35	0.41
8:CI:103:VAL:CG2	8:CI:104:THR:N	2.82	0.41
18:CB:205:ALA:O	18:CB:209:VAL:HG13	2.20	0.41
23:DB:26:G:H1'	23:DB:515:A:N6	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:285:G:H3'	23:DB:286:U:H6	1.84	0.41
23:DB:591:U:H1'	34:D3:1:PRO:H2	1.85	0.41
23:DB:664:G:O2'	23:DB:665:U:H5'	2.20	0.41
23:DB:986:C:O2'	23:DB:987:C:H5'	2.20	0.41
23:DB:1098:A:H2'	24:DI:3:LYS:C	2.45	0.41
23:DB:1322:A:O2'	23:DB:1323:C:H5'	2.19	0.41
23:DB:1628:G:O2'	23:DB:1629:U:H5'	2.20	0.41
23:DB:1670:C:O2	23:DB:1670:C:H2'	2.20	0.41
23:DB:2311:A:H3'	23:DB:2312:U:C6	2.55	0.41
23:DB:2379:G:H2'	23:DB:2380:C:C6	2.54	0.41
23:DB:2700:A:H2'	23:DB:2701:U:H6	1.85	0.41
23:DB:2821:A:H2'	23:DB:2822:G:C8	2.55	0.41
23:DB:2853:C:H2'	23:DB:2854:G:C8	2.55	0.41
25:DC:89:ASN:HD22	25:DC:89:ASN:HA	1.64	0.41
26:DD:2:ILE:HG23	26:DD:84:LEU:HB3	2.02	0.41
26:DD:32:ASN:HD22	26:DD:50:VAL:HG21	1.85	0.41
26:DD:35:THR:O	26:DD:71:ALA:HB1	2.20	0.41
26:DD:118:PHE:CD2	26:DD:118:PHE:N	2.87	0.41
26:DD:158:GLY:O	26:DD:159:LYS:C	2.63	0.41
33:D1:39:ASP:OD1	33:D1:42:VAL:HG23	2.19	0.41
34:D3:16:THR:C	34:D3:18:LYS:N	2.77	0.41
34:D3:21:PHE:CZ	34:D3:58:ILE:HG23	2.55	0.41
38:DM:69:PRO:HG2	38:DM:70:ASP:H	1.84	0.41
38:DM:97:GLN:HB2	38:DM:98:PRO:HD2	2.01	0.41
42:DN:21:PHE:HA	42:DN:24:MET:HB3	2.02	0.41
43:DO:7:ARG:N	43:DO:10:ARG:HH11	2.18	0.41
47:DF:101:ARG:HH11	47:DF:138:PRO:HB2	1.85	0.41
47:DF:134:GLN:HB3	47:DF:134:GLN:HE21	1.51	0.41
47:DF:137:PHE:CB	47:DF:138:PRO:HD2	2.43	0.41
50:DT:55:VAL:HG13	50:DT:85:VAL:HG12	2.02	0.41
51:DZ:64:ILE:H	51:DZ:64:ILE:CD1	2.23	0.41
1:AA:16:A:C2'	1:AA:17:U:H5'	2.49	0.41
1:AA:160:A:H2'	1:AA:161:A:C8	2.55	0.41
1:AA:177:G:N3	1:AA:177:G:O4'	2.53	0.41
1:AA:181:A:N6	1:AA:195:A:OP2	2.53	0.41
1:AA:193:C:H2'	1:AA:194:C:C5	2.55	0.41
1:AA:295:C:H2'	1:AA:296:U:H6	1.85	0.41
1:AA:437:U:H4'	3:AD:151:GLN:HE21	1.85	0.41
1:AA:440:C:O2'	1:AA:441:A:H5'	2.20	0.41
1:AA:610:U:O2	1:AA:610:U:O4'	2.37	0.41
1:AA:647:C:H2'	1:AA:648:A:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:725:G:H2'	1:AA:726:C:H6	1.85	0.41
1:AA:764:C:N4	1:AA:812:G:N1	2.68	0.41
1:AA:1071:C:H2'	1:AA:1072:G:H8	1.85	0.41
1:AA:1175:G:H4'	9:CJ:31:ARG:O	2.20	0.41
1:AA:1430:A:H2'	1:AA:1431:A:O4'	2.19	0.41
2:AC:13:ILE:C	2:AC:15:LYS:N	2.78	0.41
3:AD:72:ARG:HA	3:AD:203:TYR:HE1	1.84	0.41
3:AD:157:ALA:O	3:AD:160:LEU:HD22	2.20	0.41
4:AE:84:VAL:HG11	4:AE:146:MET:HB3	2.00	0.41
6:AG:145:GLU:C	6:AG:147:ASN:H	2.29	0.41
6:AG:149:ALA:HB1	10:AK:58:THR:CB	2.46	0.41
10:AK:67:GLU:HG3	10:AK:68:ARG:N	2.34	0.41
12:AM:18:LEU:HD22	12:AM:32:ILE:HG21	2.02	0.41
12:AM:58:GLU:O	12:AM:61:LYS:HG2	2.20	0.41
12:AM:105:ALA:C	12:AM:107:THR:N	2.78	0.41
14:AQ:37:ILE:HG22	14:AQ:38:LYS:N	2.34	0.41
17:AT:38:ILE:CD1	17:AT:82:ILE:HA	2.49	0.41
18:AB:86:CYS:C	18:AB:88:GLN:N	2.78	0.41
18:AB:112:ARG:NE	18:AB:116:LEU:HD11	2.32	0.41
22:BA:28:C:H2'	22:BA:29:A:C1'	2.50	0.41
23:BB:27:G:H8	23:BB:27:G:O5'	2.04	0.41
23:BB:228:C:H4'	23:BB:229:C:C5'	2.49	0.41
23:BB:303:G:H2'	23:BB:304:U:H6	1.83	0.41
23:BB:407:G:O2'	23:BB:408:G:H5'	2.19	0.41
23:BB:674:G:H4'	29:BE:60:TRP:CZ2	2.55	0.41
23:BB:679:C:H2'	23:BB:680:C:C6	2.56	0.41
23:BB:747:U:C4	23:BB:2613:U:C4	3.08	0.41
23:BB:928:A:O2'	30:BY:37:ARG:HD3	2.20	0.41
23:BB:984:A:O2'	23:BB:985:C:H5'	2.21	0.41
23:BB:1597:A:C5'	23:BB:1598:A:H5'	2.35	0.41
23:BB:1668:A:O2'	23:BB:1674:G:N7	2.47	0.41
23:BB:2277:G:P	38:BM:86:LYS:HB2	2.61	0.41
23:BB:2350:C:O2'	23:BB:2351:G:H5'	2.19	0.41
23:BB:2353:G:H1'	52:BW:30:VAL:HG12	2.02	0.41
23:BB:2471:A:O2'	23:BB:2472:G:C5'	2.68	0.41
23:BB:2752:C:H2'	23:BB:2753:A:C8	2.55	0.41
25:BC:155:ARG:HH11	25:BC:155:ARG:HB3	1.85	0.41
25:BC:204:LEU:HD23	25:BC:210:ALA:H	1.85	0.41
25:BC:239:PHE:O	25:BC:241:LYS:N	2.50	0.41
26:BD:172:VAL:O	26:BD:173:GLN:HB2	2.20	0.41
33:B1:8:ILE:HB	33:B1:24:LYS:HB2	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BV:51:GLN:HA	35:BV:56:PHE:CD2	2.55	0.41
37:BL:79:LEU:N	37:BL:113:ALA:CB	2.83	0.41
40:BH:54:LEU:O	40:BH:58:LEU:N	2.50	0.41
42:BN:47:VAL:O	42:BN:51:LEU:HD22	2.20	0.41
42:BN:87:PHE:HZ	42:BN:115:LEU:HB3	1.86	0.41
43:BO:115:LEU:CA	43:BO:116:GLN:HE21	2.33	0.41
44:BQ:9:ALA:C	44:BQ:11:ALA:H	2.28	0.41
44:BQ:26:ALA:C	44:BQ:28:SER:H	2.28	0.41
44:BQ:60:TRP:CZ2	44:BQ:93:ILE:HB	2.55	0.41
45:BS:20:VAL:C	45:BS:22:ASP:N	2.72	0.41
47:BF:38:GLY:HA2	47:BF:85:GLY:HA3	2.02	0.41
47:BF:134:GLN:H	47:BF:150:GLY:CA	2.32	0.41
47:BF:137:PHE:N	47:BF:137:PHE:HD2	2.17	0.41
48:BG:17:LYS:HE3	48:BG:18:ILE:N	2.34	0.41
49:BR:69:GLY:O	49:BR:90:ARG:HG3	2.21	0.41
50:BT:21:SER:O	50:BT:22:THR:C	2.63	0.41
52:BW:17:ALA:O	52:BW:36:ILE:HA	2.21	0.41
1:CA:5:U:H1'	1:CA:6:G:N1	2.34	0.41
1:CA:411:A:C4	1:CA:413:G:H1'	2.55	0.41
1:CA:472:U:N3	1:CA:473:U:C4	2.88	0.41
1:CA:520:A:C2	1:CA:536:C:H1'	2.55	0.41
1:CA:764:C:H2'	1:CA:765:G:C5'	2.47	0.41
1:CA:938:A:H2'	1:CA:939:G:O4'	2.20	0.41
1:CA:968:A:H4'	1:CA:969:A:OP2	2.20	0.41
1:CA:1056:U:H4'	2:CC:155:ARG:HG2	2.02	0.41
1:CA:1179:A:H2'	1:CA:1180:A:C8	2.55	0.41
1:CA:1426:G:H2'	1:CA:1427:C:H6	1.84	0.41
1:CA:1449:C:H2'	1:CA:1450:U:O4'	2.20	0.41
3:CD:54:LEU:HD13	3:CD:54:LEU:C	2.45	0.41
4:CE:104:ILE:HG23	4:CE:104:ILE:O	2.20	0.41
10:CK:12:ARG:HG2	10:CK:76:TYR:CE1	2.56	0.41
10:CK:115:ILE:HG21	19:CU:23:GLU:OE1	2.20	0.41
11:CL:35:ARG:HA	11:CL:35:ARG:NH1	2.34	0.41
15:CR:19:GLU:HG3	15:CR:54:LEU:HD12	2.01	0.41
9:CJ:48:ARG:HG2	9:CJ:66:GLU:HB2	2.02	0.41
21:CN:2:LYS:O	21:CN:3:GLN:C	2.63	0.41
16:CS:4:LEU:O	16:CS:6:LYS:N	2.53	0.41
18:CB:48:MET:CG	18:CB:200:PRO:HD2	2.49	0.41
18:CB:111:LYS:HD3	18:CB:115:ASP:OD2	2.20	0.41
23:DB:66:C:O2'	23:DB:67:U:H5'	2.20	0.41
23:DB:222:A:H61	23:DB:232:G:H1'	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:265:A:N6	23:DB:427:U:O2'	2.53	0.41
23:DB:277:G:HO2'	23:DB:361:G:H1	1.66	0.41
23:DB:730:A:H5'	56:DB:3609:HOH:O	2.21	0.41
23:DB:786:C:H5"	23:DB:1780:A:N7	2.36	0.41
23:DB:941:A:H2	23:DB:1189:A:C2	2.37	0.41
23:DB:1030:C:O2'	23:DB:1031:G:H5'	2.20	0.41
23:DB:1059:G:H2'	23:DB:1060:U:C5	2.55	0.41
23:DB:1063:G:C4'	24:DI:135:MET:HG2	2.50	0.41
23:DB:1764:C:O2'	23:DB:1765:U:H5'	2.19	0.41
23:DB:2021:C:P	31:D0:8:THR:HG21	2.60	0.41
23:DB:2060:A:C2	23:DB:2502:G:C5	3.07	0.41
23:DB:2064:C:H1'	23:DB:2450:A:C5	2.55	0.41
23:DB:2352:A:N1	52:DW:30:VAL:CG1	2.83	0.41
23:DB:2385:C:H2'	23:DB:2386:A:C8	2.54	0.41
24:DI:12:VAL:HG13	24:DI:41:PHE:CE2	2.55	0.41
27:DK:89:ASN:ND2	27:DK:89:ASN:C	2.76	0.41
29:DE:165:HIS:C	29:DE:167:VAL:N	2.78	0.41
31:D0:32:THR:OG1	31:D0:50:GLY:HA2	2.20	0.41
31:D0:41:HIS:HB2	42:DN:99:LYS:O	2.20	0.41
35:DV:24:ASN:HB3	35:DV:44:HIS:HB3	2.01	0.41
35:DV:60:VAL:O	35:DV:61:LEU:HD23	2.19	0.41
38:DM:56:ALA:C	38:DM:58:LYS:H	2.26	0.41
38:DM:66:ARG:HE	38:DM:101:VAL:HG21	1.85	0.41
40:DH:38:PRO:HB2	40:DH:40:THR:HG23	2.02	0.41
41:DJ:97:PRO:O	41:DJ:98:GLU:C	2.64	0.41
41:DJ:133:ALA:C	41:DJ:135:GLN:N	2.77	0.41
42:DN:33:ILE:CA	42:DN:114:GLU:HB2	2.49	0.41
44:DQ:65:ASN:O	44:DQ:69:ARG:N	2.47	0.41
45:DS:16:LYS:O	45:DS:19:LEU:HB3	2.20	0.41
45:DS:29:VAL:HG11	45:DS:55:ILE:CD1	2.50	0.41
45:DS:71:VAL:HG22	45:DS:71:VAL:O	2.18	0.41
45:DS:86:MET:HB3	45:DS:94:ASP:HB2	2.02	0.41
46:DU:12:VAL:HG21	46:DU:38:ILE:HG12	2.02	0.41
48:DG:10:VAL:HG23	48:DG:49:LEU:N	2.35	0.41
48:DG:153:PRO:HB3	48:DG:158:GLY:CA	2.46	0.41
50:DT:31:VAL:HG12	50:DT:84:TYR:CD2	2.54	0.41
50:DT:64:LYS:HE3	50:DT:64:LYS:N	2.34	0.41
1:AA:14:U:N3	1:AA:17:U:OP2	2.54	0.41
1:AA:81:A:H3'	1:AA:83:C:C5	2.56	0.41
1:AA:134:G:H2'	1:AA:135:C:O4'	2.20	0.41
1:AA:512:U:O2'	1:AA:513:C:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:652:U:H1'	1:AA:653:U:C5	2.56	0.41
1:AA:929:G:H2'	1:AA:930:C:O4'	2.21	0.41
1:AA:1015:G:O2'	1:AA:1016:A:H5'	2.21	0.41
1:AA:1121:U:O2'	1:AA:1122:U:H5'	2.20	0.41
1:AA:1319:A:OP1	16:AS:9:PHE:HB3	2.21	0.41
1:AA:1368:A:H5"	21:AN:100:TRP:HH2	1.86	0.41
2:AC:19:SER:CB	2:AC:21:TRP:HE1	2.32	0.41
2:AC:57:GLU:OE2	2:AC:64:ARG:HG2	2.20	0.41
3:AD:94:GLU:HA	3:AD:99:ASN:HD22	1.85	0.41
3:AD:199:ILE:HD12	3:AD:199:ILE:C	2.45	0.41
5:AF:47:LEU:HD21	5:AF:57:ALA:HB3	2.02	0.41
6:AG:19:SER:C	6:AG:21:LEU:N	2.78	0.41
8:AI:113:LYS:HD3	8:AI:113:LYS:O	2.19	0.41
10:AK:63:GLN:HG3	10:AK:98:ALA:CB	2.50	0.41
11:AL:106:VAL:CG2	11:AL:116:TYR:HB3	2.49	0.41
14:AQ:30:HIS:HB3	14:AQ:34:GLY:N	2.35	0.41
14:AQ:74:LEU:HD22	14:AQ:74:LEU:C	2.46	0.41
16:AS:43:MET:HE1	16:AS:70:LEU:CD1	2.49	0.41
18:AB:18:GLN:HB2	18:AB:188:THR:OG1	2.20	0.41
18:AB:20:ARG:HG3	18:AB:20:ARG:HH11	1.85	0.41
20:AO:85:LEU:CB	20:AO:87:LEU:HG	2.49	0.41
23:BB:63:A:H8	23:BB:63:A:P	2.43	0.41
23:BB:83:A:H5"	46:BU:1:ALA:N	2.35	0.41
23:BB:201:C:H1'	23:BB:250:G:O6	2.20	0.41
23:BB:294:A:H2'	23:BB:295:G:O5'	2.20	0.41
23:BB:523:C:O2'	23:BB:524:G:H5'	2.20	0.41
23:BB:1417:C:C4'	23:BB:1587:G:H21	2.33	0.41
23:BB:1712:U:H3'	23:BB:1713:A:H2'	2.02	0.41
23:BB:1915:U:H2'	23:BB:1916:A:O4'	2.20	0.41
23:BB:2752:C:H2'	23:BB:2753:A:H8	1.85	0.41
23:BB:2806:C:H2'	23:BB:2807:U:O4'	2.19	0.41
26:BD:158:GLY:O	26:BD:159:LYS:C	2.62	0.41
27:BK:18:ARG:HD3	27:BK:45:GLU:HG3	2.02	0.41
29:BE:66:GLY:O	29:BE:67:ARG:C	2.63	0.41
29:BE:137:LYS:O	29:BE:141:MET:HG3	2.20	0.41
31:B0:28:SER:HB3	31:B0:37:HIS:HE1	1.85	0.41
32:B4:31:PRO:O	32:B4:34:LYS:HB3	2.20	0.41
34:B3:30:HIS:C	34:B3:31:ILE:HG22	2.45	0.41
37:BL:90:VAL:HB	37:BL:122:VAL:HA	2.02	0.41
38:BM:57:VAL:O	38:BM:59:ARG:N	2.46	0.41
41:BJ:26:GLY:N	41:BJ:28:LEU:HD23	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BJ:56:VAL:HG12	41:BJ:57:LEU:N	2.31	0.41
43:BO:83:LEU:CD1	43:BO:114:GLY:HA3	2.46	0.41
46:BU:12:VAL:HG21	46:BU:38:ILE:CG1	2.50	0.41
47:BF:84:ILE:CG2	47:BF:85:GLY:H	2.23	0.41
48:BG:93:TYR:N	48:BG:93:TYR:HD2	2.18	0.41
49:BR:14:VAL:HG22	49:BR:15:SER:H	1.85	0.41
1:CA:102:G:O2'	1:CA:103:U:H5'	2.20	0.41
1:CA:251:G:H22	1:CA:272:C:H41	1.69	0.41
1:CA:265:G:H2'	1:CA:267:C:H5	1.85	0.41
1:CA:467:U:H2'	1:CA:467:U:O2	2.20	0.41
1:CA:525:C:H2'	1:CA:526:C:H6	1.85	0.41
1:CA:694:A:C2	1:CA:695:A:H1'	2.55	0.41
1:CA:814:A:N7	1:CA:816:A:C4	2.88	0.41
1:CA:1032:G:H2'	1:CA:1033:G:C1'	2.51	0.41
1:CA:1178:G:H8	1:CA:1178:G:O5'	2.01	0.41
1:CA:1222:G:H2'	1:CA:1223:C:O4'	2.20	0.41
1:CA:1257:A:H3'	1:CA:1258:G:H5'	2.01	0.41
1:CA:1414:U:H2'	1:CA:1415:G:H8	1.84	0.41
3:CD:54:LEU:HD11	3:CD:55:ARG:HH21	1.83	0.41
3:CD:98:ASP:OD2	3:CD:99:ASN:N	2.53	0.41
3:CD:153:ARG:O	3:CD:154:VAL:C	2.64	0.41
5:CF:4:TYR:HA	5:CF:90:MET:O	2.20	0.41
5:CF:70:VAL:CG2	5:CF:71:ILE:N	2.83	0.41
15:CR:35:SER:O	15:CR:70:THR:HA	2.20	0.41
19:CU:13:VAL:O	19:CU:13:VAL:HG13	2.20	0.41
2:CC:42:LEU:O	2:CC:46:LEU:HD23	2.20	0.41
2:CC:139:ASN:O	2:CC:143:LEU:HB3	2.21	0.41
8:CI:27:ILE:H	8:CI:27:ILE:HD12	1.85	0.41
8:CI:56:MET:HE2	8:CI:56:MET:HB2	1.75	0.41
18:CB:166:ASP:OD2	18:CB:190:SER:HA	2.21	0.41
22:DA:30:C:O2	22:DA:30:C:H2'	2.20	0.41
23:DB:228:C:H4'	23:DB:229:C:C5'	2.48	0.41
23:DB:285:G:H3'	23:DB:286:U:C6	2.56	0.41
23:DB:632:A:H2'	23:DB:633:A:C8	2.55	0.41
23:DB:644:A:O2'	23:DB:645:C:H2'	2.19	0.41
23:DB:945:A:H3'	23:DB:946:C:H5"	2.02	0.41
23:DB:968:C:O2'	23:DB:969:G:H5'	2.20	0.41
23:DB:1151:A:H2'	23:DB:1152:C:O4'	2.19	0.41
23:DB:1262:A:H2'	23:DB:1263:U:O4'	2.20	0.41
23:DB:1559:U:H3'	23:DB:1560:G:C5'	2.49	0.41
23:DB:1711:A:H2'	23:DB:1712:U:O4'	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1722:A:N6	23:DB:1738:G:H1'	2.34	0.41
23:DB:1860:G:O2'	23:DB:1861:G:H5'	2.20	0.41
23:DB:1892:C:O2'	23:DB:1893:C:H5'	2.20	0.41
23:DB:2000:C:O2'	23:DB:2001:C:H5'	2.20	0.41
23:DB:2100:G:C6	23:DB:2190:G:C5	3.09	0.41
23:DB:2365:G:H4'	52:DW:59:PHE:CE1	2.55	0.41
23:DB:2420:C:OP1	34:D3:33:THR:HG22	2.20	0.41
23:DB:2659:G:H1'	23:DB:2662:A:N6	2.34	0.41
23:DB:2756:U:C4	23:DB:2759:G:O6	2.73	0.41
26:DD:150:GLN:O	26:DD:151:THR:C	2.61	0.41
26:DD:182:ALA:O	26:DD:184:ARG:HG2	2.20	0.41
29:DE:31:VAL:HG21	29:DE:104:ALA:CB	2.50	0.41
29:DE:198:GLU:H	29:DE:198:GLU:HG2	1.59	0.41
35:DV:29:ILE:HG13	35:DV:88:HIS:HE1	1.85	0.41
35:DV:44:HIS:O	35:DV:46:LYS:N	2.53	0.41
36:D2:1:MET:CG	36:D2:2:LYS:H	2.32	0.41
37:DL:115:GLU:N	37:DL:115:GLU:OE1	2.53	0.41
37:DL:120:VAL:HG12	37:DL:121:THR:N	2.34	0.41
38:DM:74:THR:HG21	38:DM:86:LYS:HE3	2.02	0.41
38:DM:110:GLU:CD	38:DM:110:GLU:H	2.27	0.41
38:DM:123:LYS:O	38:DM:124:LEU:C	2.64	0.41
40:DH:96:THR:HG1	40:DH:112:LYS:HB2	1.84	0.41
42:DN:67:PHE:O	42:DN:68:ALA:C	2.62	0.41
42:DN:116:VAL:HG13	42:DN:117:ASP:N	2.35	0.41
44:DQ:4:LYS:HE3	44:DQ:8:ILE:HD11	2.03	0.41
44:DQ:9:ALA:C	44:DQ:11:ALA:H	2.29	0.41
45:DS:73:LYS:O	45:DS:106:VAL:N	2.53	0.41
48:DG:1:SER:N	48:DG:4:ALA:HB3	2.36	0.41
48:DG:136:ASP:OD2	48:DG:139:VAL:HG23	2.20	0.41
1:AA:95:C:H2'	1:AA:96:U:H6	1.86	0.41
1:AA:220:G:O2'	1:AA:221:C:H5'	2.20	0.41
1:AA:317:U:H2'	1:AA:318:G:C8	2.55	0.41
1:AA:629:A:H2'	1:AA:630:A:O4'	2.20	0.41
1:AA:776:G:N2	1:AA:803:G:N7	2.68	0.41
1:AA:911:U:O2'	1:AA:912:C:H5'	2.20	0.41
1:AA:922:G:C6	1:AA:923:A:C6	3.09	0.41
1:AA:1228:C:P	12:AM:106:ARG:HH12	2.42	0.41
1:AA:1408:A:H61	1:AA:1492:A:N6	2.18	0.41
2:AC:112:ALA:HB1	2:AC:199:VAL:HG23	2.02	0.41
3:AD:26:ALA:C	3:AD:27:ILE:HD12	2.46	0.41
3:AD:117:VAL:HA	3:AD:122:ILE:HG12	2.00	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:175:GLY:C	3:AD:177:MET:H	2.28	0.41
5:AF:71:ILE:O	5:AF:74:LEU:HB3	2.21	0.41
5:AF:98:GLU:HG2	5:AF:99:ALA:N	2.35	0.41
6:AG:12:LEU:HD22	6:AG:13:PRO:HD2	2.02	0.41
8:AI:80:HIS:O	8:AI:81:GLY:C	2.64	0.41
10:AK:91:GLY:O	10:AK:93:GLU:N	2.53	0.41
10:AK:113:THR:CG2	10:AK:114:PRO:HD2	2.51	0.41
16:AS:65:MET:O	16:AS:66:VAL:C	2.63	0.41
21:AN:20:PHE:O	21:AN:22:LYS:N	2.53	0.41
21:AN:79:SER:O	21:AN:80:ARG:C	2.61	0.41
23:BB:128:C:C2	23:BB:129:C:C5	3.09	0.41
23:BB:379:G:N1	23:BB:396:G:C6	2.88	0.41
23:BB:780:G:H21	23:BB:783:A:H62	1.69	0.41
23:BB:1459:G:H8	23:BB:1461:C:H5	1.68	0.41
23:BB:1647:U:H3'	23:BB:1647:U:OP1	2.20	0.41
23:BB:2418:A:H2'	23:BB:2419:U:O4'	2.20	0.41
23:BB:2581:G:H4'	23:BB:2582:G:C8	2.55	0.41
23:BB:2708:G:H1'	42:BN:71:ARG:NH2	2.35	0.41
23:BB:2732:G:H3'	23:BB:2733:A:H5'	2.01	0.41
25:BC:29:PHE:CE2	25:BC:31:PRO:HG2	2.56	0.41
29:BE:107:SER:C	29:BE:109:LEU:N	2.77	0.41
29:BE:118:LEU:HA	29:BE:186:VAL:CG1	2.50	0.41
31:B0:18:HIS:ND1	31:B0:18:HIS:N	2.67	0.41
32:B4:17:VAL:HG12	32:B4:18:LYS:N	2.36	0.41
33:B1:10:LEU:HD23	33:B1:35:LEU:HD21	2.02	0.41
36:B2:30:VAL:O	36:B2:31:LEU:C	2.63	0.41
39:BX:7:ARG:O	39:BX:9:LYS:HD3	2.20	0.41
40:BH:58:LEU:HD12	40:BH:61:VAL:CG1	2.51	0.41
41:BJ:31:GLU:O	41:BJ:34:ARG:HB3	2.21	0.41
41:BJ:119:PHE:C	41:BJ:121:LYS:H	2.28	0.41
43:BO:14:ALA:O	43:BO:18:LEU:HD13	2.20	0.41
47:BF:89:THR:C	47:BF:90:LEU:HD22	2.46	0.41
47:BF:161:SER:HB3	47:BF:164:GLU:HG3	2.03	0.41
48:BG:34:ARG:HH11	48:BG:34:ARG:N	2.17	0.41
48:BG:126:THR:HB	48:BG:129:GLU:HB2	2.02	0.41
50:BT:30:ILE:HG22	50:BT:87:LEU:HD21	2.02	0.41
1:CA:401:C:H2'	1:CA:402:G:H8	1.85	0.41
1:CA:407:U:H2'	1:CA:408:A:C8	2.55	0.41
1:CA:493:A:H5'	1:CA:494:G:OP2	2.19	0.41
1:CA:631:C:C3'	1:CA:632:U:H5'	2.50	0.41
1:CA:1061:G:H2'	1:CA:1062:U:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1088:G:H2'	1:CA:1089:G:O4'	2.21	0.41
1:CA:1354:U:O2'	1:CA:1355:G:H5'	2.20	0.41
1:CA:1530:G:H2'	1:CA:1531:A:C8	2.55	0.41
14:CQ:25:GLU:N	14:CQ:40:THR:HG23	2.35	0.41
6:CG:94:ARG:O	6:CG:95:ARG:C	2.63	0.41
12:CM:24:VAL:O	12:CM:24:VAL:HG23	2.19	0.41
16:CS:51:HIS:ND1	16:CS:52:ASN:N	2.68	0.41
18:CB:85:SER:HB2	18:CB:88:GLN:HE22	1.85	0.41
23:DB:547:A:H5'	23:DB:548:G:C5	2.55	0.41
23:DB:707:G:H2'	23:DB:708:G:O4'	2.19	0.41
23:DB:775:G:C6	23:DB:794:A:C8	3.08	0.41
23:DB:822:G:H2'	23:DB:823:C:C6	2.56	0.41
23:DB:967:U:H2'	23:DB:968:C:H6	1.85	0.41
23:DB:1158:C:H4'	30:DY:30:ARG:HH21	1.84	0.41
23:DB:1366:A:H2'	23:DB:1367:A:O4'	2.20	0.41
23:DB:1474:U:H2'	23:DB:1475:G:H5'	2.01	0.41
23:DB:1552:A:C2'	23:DB:1553:A:H5'	2.50	0.41
23:DB:1822:C:O2'	23:DB:1823:G:H5'	2.21	0.41
23:DB:2109:U:H2'	23:DB:2110:G:O4'	2.21	0.41
23:DB:2206:C:O2'	23:DB:2207:C:H5'	2.21	0.41
23:DB:2437:G:H2'	23:DB:2438:U:C6	2.55	0.41
23:DB:2479:U:C2'	23:DB:2480:C:H5'	2.50	0.41
23:DB:2547:A:H4'	27:DK:29:HIS:NE2	2.34	0.41
25:DC:32:LEU:HD22	25:DC:63:ILE:HG21	2.01	0.41
25:DC:151:GLY:O	25:DC:152:GLN:HG3	2.20	0.41
25:DC:260:LYS:C	25:DC:262:THR:N	2.78	0.41
26:DD:102:ALA:H	26:DD:104:VAL:CG2	2.32	0.41
26:DD:107:VAL:HG12	26:DD:108:ASP:N	2.36	0.41
26:DD:178:VAL:HG23	26:DD:189:VAL:O	2.20	0.41
26:DD:191:GLY:O	26:DD:192:ALA:HB3	2.21	0.41
29:DE:37:ALA:C	29:DE:39:ALA:H	2.27	0.41
29:DE:113:VAL:C	29:DE:115:GLN:N	2.78	0.41
31:D0:48:TYR:CD2	31:D0:48:TYR:C	2.98	0.41
33:D1:8:ILE:HG13	33:D1:51:ALA:HA	2.02	0.41
37:DL:129:LYS:H	37:DL:129:LYS:HG2	1.57	0.41
40:DH:5:LEU:N	40:DH:17:ASP:O	2.53	0.41
41:DJ:14:ASP:O	41:DJ:53:TYR:N	2.53	0.41
41:DJ:28:LEU:CG	41:DJ:29:ALA:N	2.83	0.41
41:DJ:36:LEU:HD21	41:DJ:122:LEU:HD12	2.02	0.41
46:DU:73:ASN:O	46:DU:74:ALA:HB3	2.20	0.41
46:DU:81:ARG:CD	46:DU:96:LYS:HD2	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:92:GLY:O	47:DF:95:MET:HB3	2.21	0.41
49:DR:59:ILE:HA	49:DR:101:ILE:H	1.84	0.41
51:DZ:32:ASN:O	51:DZ:33:LEU:O	2.39	0.41
51:DZ:70:GLU:O	51:DZ:73:ALA:N	2.46	0.41
52:DW:46:ALA:HB3	52:DW:79:ILE:O	2.20	0.41
1:AA:82:G:C2	1:AA:88:U:H1'	2.55	0.41
1:AA:168:G:O2'	1:AA:169:C:H5'	2.20	0.41
1:AA:184:G:H4'	1:AA:224:U:O3'	2.21	0.41
1:AA:662:U:O2'	1:AA:836:G:H5"	2.20	0.41
1:AA:707:U:H2'	1:AA:708:C:C6	2.55	0.41
1:AA:1158:C:H3'	1:AA:1158:C:O2	2.21	0.41
1:AA:1320:C:C2	16:AS:35:ARG:HD3	2.56	0.41
1:AA:1441:A:C2	28:BP:113:LEU:HD22	2.56	0.41
2:AC:36:PHE:O	2:AC:37:LYS:C	2.63	0.41
4:AE:54:GLU:HG2	4:AE:56:PRO:HD2	2.03	0.41
4:AE:104:ILE:O	4:AE:104:ILE:HG23	2.20	0.41
5:AF:11:HIS:CG	5:AF:12:PRO:HD2	2.56	0.41
6:AG:71:THR:N	6:AG:141:HIS:HE1	2.09	0.41
7:AH:118:ALA:HB3	7:AH:120:LEU:CD2	2.50	0.41
18:AB:15:PHE:CD1	18:AB:16:GLY:N	2.89	0.41
18:AB:150:ILE:O	18:AB:153:MET:HB3	2.20	0.41
18:AB:221:ARG:HG3	18:AB:222:GLU:HG2	2.01	0.41
19:AU:9:GLU:HG2	2:CC:109:GLU:HG3	2.03	0.41
22:BA:46:A:H2'	22:BA:47:C:O4'	2.21	0.41
22:BA:111:U:H2'	22:BA:112:G:C8	2.55	0.41
23:BB:212:G:H2'	23:BB:213:A:C8	2.56	0.41
23:BB:418:C:H2'	23:BB:419:U:H6	1.85	0.41
23:BB:526:A:N6	23:BB:2626:C:C4'	2.83	0.41
23:BB:714:U:C2	23:BB:716:A:H3'	2.55	0.41
23:BB:877:A:H2'	23:BB:899:A:C2	2.55	0.41
23:BB:1060:U:C1'	23:BB:1062:G:H5'	2.50	0.41
23:BB:1092:C:OP1	23:BB:2475:C:H4'	2.21	0.41
23:BB:1210:G:H5"	23:BB:1211:C:H3'	2.02	0.41
23:BB:1214:A:H2'	23:BB:1215:G:O4'	2.20	0.41
23:BB:1327:A:N6	23:BB:1328:A:C2	2.89	0.41
23:BB:1794:A:O2'	23:BB:1795:C:H5'	2.21	0.41
23:BB:2011:U:H2'	23:BB:2012:G:O4'	2.20	0.41
23:BB:2393:U:H5"	37:BL:62:PRO:HG3	2.03	0.41
23:BB:2508:G:H2'	23:BB:2509:G:H8	1.84	0.41
23:BB:2869:G:H2'	23:BB:2870:C:O4'	2.20	0.41
24:BI:17:ALA:C	24:BI:19:PRO:HD2	2.46	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:57:HIS:ND1	25:BC:58:LYS:N	2.69	0.41
25:BC:61:TYR:HA	25:BC:85:ASN:HD21	1.85	0.41
26:BD:114:LYS:HD2	26:BD:116:LYS:HE3	2.01	0.41
26:BD:150:GLN:O	26:BD:153:GLY:N	2.53	0.41
29:BE:5:LEU:HD23	29:BE:5:LEU:HA	1.84	0.41
34:B3:16:THR:HG21	34:B3:48:MET:HE1	2.03	0.41
34:B3:54:LEU:O	34:B3:55:GLY:C	2.64	0.41
43:BO:52:SER:OG	43:BO:54:VAL:HG12	2.20	0.41
44:BQ:42:GLY:HA3	49:BR:75:VAL:CG2	2.48	0.41
44:BQ:43:GLN:NE2	49:BR:77:PHE:HB3	2.36	0.41
45:BS:43:ALA:O	45:BS:44:ALA:C	2.63	0.41
46:BU:82:VAL:O	46:BU:94:PHE:O	2.37	0.41
47:BF:28:PRO:HB2	47:BF:168:LEU:CD2	2.42	0.41
47:BF:133:GLU:HA	47:BF:150:GLY:HA2	2.01	0.41
47:BF:134:GLN:CD	47:BF:136:ILE:HA	2.46	0.41
48:BG:126:THR:HB	48:BG:129:GLU:CG	2.50	0.41
49:BR:37:GLU:CD	49:BR:37:GLU:N	2.79	0.41
1:CA:333:U:O2'	1:CA:334:C:H5'	2.21	0.41
1:CA:346:G:C2'	1:CA:347:G:H5'	2.51	0.41
1:CA:437:U:C5'	3:CD:151:GLN:HE21	2.33	0.41
1:CA:719:C:H2'	15:CR:38:ILE:HD11	2.02	0.41
1:CA:934:C:H5"	56:CA:1894:HOH:O	2.21	0.41
1:CA:1328:C:O2'	1:CA:1329:A:H5'	2.21	0.41
1:CA:1342:C:H4'	8:CI:125:GLN:HB2	2.03	0.41
1:CA:1451:U:H5"	1:CA:1452:C:C5	2.56	0.41
1:CA:1472:U:O2'	1:CA:1473:G:H5'	2.21	0.41
3:CD:25:ARG:HD3	3:CD:26:ALA:HB2	2.02	0.41
3:CD:71:PHE:O	3:CD:72:ARG:C	2.63	0.41
3:CD:97:LEU:O	3:CD:101:VAL:HG23	2.21	0.41
5:CF:38:ARG:O	5:CF:62:MET:O	2.39	0.41
19:CU:40:PRO:O	19:CU:44:ARG:HB2	2.20	0.41
8:CI:29:ILE:CG2	8:CI:66:VAL:HG12	2.51	0.41
8:CI:52:GLU:C	8:CI:53:LEU:HD22	2.45	0.41
12:CM:64:VAL:HB	12:CM:65:GLU:OE2	2.21	0.41
18:CB:212:TYR:O	18:CB:213:LEU:C	2.63	0.41
22:DA:87:U:H2'	22:DA:88:C:H5"	2.02	0.41
23:DB:23:G:C6	23:DB:518:G:C6	3.09	0.41
23:DB:63:A:H8	23:DB:63:A:P	2.43	0.41
23:DB:475:C:C5	23:DB:476:G:N7	2.88	0.41
23:DB:743:A:H2'	23:DB:744:U:C6	2.55	0.41
23:DB:747:U:P	45:DS:90:LYS:HZ2	2.44	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:833:A:H1'	37:DL:52:GLY:H	1.85	0.41
23:DB:1042:G:H2'	23:DB:1043:C:H6	1.84	0.41
23:DB:1228:G:H2'	23:DB:1229:C:H6	1.84	0.41
23:DB:1228:G:O2'	23:DB:1229:C:H5'	2.21	0.41
23:DB:1316:U:H2'	23:DB:1317:G:O4'	2.19	0.41
23:DB:1463:C:H2'	23:DB:1464:G:C8	2.55	0.41
23:DB:1486:U:H2'	23:DB:1487:U:C6	2.55	0.41
23:DB:1729:U:C5	23:DB:1731:G:N2	2.89	0.41
23:DB:1908:C:H2'	23:DB:1909:C:H6	1.85	0.41
23:DB:2135:A:H61	23:DB:2156:G:C2'	2.33	0.41
23:DB:2370:G:H2'	23:DB:2371:G:O4'	2.19	0.41
23:DB:2529:G:C5'	48:DG:174:LYS:HG3	2.50	0.41
23:DB:2848:G:N7	28:DP:94:ALA:HB2	2.36	0.41
25:DC:23:LEU:HD12	25:DC:23:LEU:HA	1.84	0.41
25:DC:183:VAL:C	25:DC:185:ALA:H	2.29	0.41
26:DD:62:LYS:CB	26:DD:63:PRO:HD3	2.46	0.41
27:DK:3:GLN:CG	27:DK:4:GLU:N	2.83	0.41
28:DP:29:VAL:O	28:DP:40:GLN:N	2.53	0.41
28:DP:36:LYS:H	28:DP:36:LYS:HG2	1.69	0.41
28:DP:91:VAL:HG23	28:DP:92:ARG:N	2.36	0.41
29:DE:131:THR:O	29:DE:135:ALA:N	2.54	0.41
29:DE:141:MET:O	29:DE:143:LEU:HG	2.20	0.41
29:DE:188:MET:HG2	29:DE:193:VAL:CG2	2.51	0.41
33:D1:35:LEU:O	33:D1:36:LYS:HB3	2.21	0.41
39:DX:30:MET:C	39:DX:32:ALA:N	2.78	0.41
40:DH:37:VAL:O	40:DH:37:VAL:HG13	2.19	0.41
41:DJ:31:GLU:O	41:DJ:34:ARG:HB3	2.20	0.41
44:DQ:63:ARG:NH1	44:DQ:96:ASP:HB2	2.14	0.41
44:DQ:65:ASN:HA	44:DQ:75:TYR:HB2	2.02	0.41
47:DF:9:ASP:OD2	47:DF:9:ASP:N	2.53	0.41
47:DF:46:LYS:C	47:DF:48:LEU:H	2.28	0.41
47:DF:86:CYS:O	47:DF:88:VAL:HG23	2.21	0.41
48:DG:22:VAL:C	48:DG:23:ILE:HD12	2.45	0.41
48:DG:100:ASN:OD1	48:DG:101:VAL:HG13	2.21	0.41
48:DG:151:ARG:HG2	48:DG:160:GLY:HA2	2.03	0.41
49:DR:14:VAL:HA	49:DR:18:GLN:CD	2.45	0.41
1:AA:284:C:H2'	1:AA:285:C:C6	2.56	0.41
1:AA:719:C:H2'	15:AR:38:ILE:CD1	2.51	0.41
1:AA:782:A:H2'	1:AA:783:C:O4'	2.20	0.41
1:AA:1014:A:H2'	1:AA:1015:G:O4'	2.20	0.41
1:AA:1077:G:N1	1:AA:1080:A:OP2	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1157:A:H4'	1:AA:1158:C:O5'	2.21	0.41
1:AA:1191:A:H61	54:AA:1661:SCM:H11	1.86	0.41
1:AA:1216:A:O2'	1:AA:1217:C:H5'	2.21	0.41
1:AA:1228:C:H5"	12:AM:106:ARG:HH22	1.86	0.41
2:AC:63:ILE:HD12	2:AC:91:ALA:HA	2.01	0.41
4:AE:32:PHE:O	4:AE:51:LYS:HA	2.21	0.41
4:AE:148:SER:O	4:AE:151:MET:HB2	2.20	0.41
6:AG:4:ARG:HG3	6:AG:5:VAL:N	2.36	0.41
6:AG:139:ASP:HA	6:AG:142:ARG:NH1	2.35	0.41
8:AI:98:ARG:C	8:AI:100:ALA:N	2.76	0.41
9:AJ:51:VAL:HG23	21:AN:80:ARG:CD	2.47	0.41
9:AJ:66:GLU:HB3	21:AN:98:ALA:HB2	2.02	0.41
9:AJ:92:LEU:HB2	9:AJ:93:ALA:H	1.64	0.41
11:AL:42:LYS:HB3	11:AL:43:LYS:H	1.45	0.41
12:AM:44:ILE:HD12	12:AM:44:ILE:N	2.35	0.41
15:AR:25:ILE:HD12	15:AR:26:ALA:N	2.35	0.41
18:AB:13:VAL:HB	18:AB:207:ARG:NE	2.27	0.41
18:AB:93:HIS:HA	18:AB:94:ARG:HH21	1.85	0.41
18:AB:94:ARG:HE	18:AB:94:ARG:N	2.18	0.41
22:BA:94:A:H2'	22:BA:95:U:O4'	2.20	0.41
23:BB:53:A:H2'	23:BB:54:G:O4'	2.20	0.41
23:BB:388:G:N7	23:BB:390:U:H2'	2.36	0.41
23:BB:409:G:H2'	23:BB:410:G:H8	1.85	0.41
23:BB:621:A:H2'	23:BB:622:G:O4'	2.21	0.41
23:BB:1109:C:H3'	23:BB:1110:G:C8	2.56	0.41
23:BB:1146:C:H2'	23:BB:1147:A:C8	2.56	0.41
23:BB:1740:G:H2'	23:BB:1741:C:H6	1.86	0.41
23:BB:1925:C:H2'	23:BB:1926:U:O4'	2.21	0.41
23:BB:1958:C:O2'	23:BB:1959:G:H5'	2.20	0.41
23:BB:2723:C:H4'	42:BN:1:MET:SD	2.60	0.41
24:BI:14:ALA:CB	24:BI:50:LYS:HA	2.50	0.41
25:BC:130:PRO:HA	25:BC:187:CYS:O	2.20	0.41
25:BC:239:PHE:HB3	25:BC:240:GLY:H	1.73	0.41
26:BD:97:SER:C	26:BD:99:GLU:N	2.78	0.41
28:BP:8:GLU:HA	28:BP:54:LEU:HD22	2.03	0.41
30:BY:52:PHE:CG	30:BY:53:MET:N	2.89	0.41
33:B1:26:LYS:HD2	33:B1:30:PRO:HA	2.01	0.41
33:B1:32:LYS:O	33:B1:34:GLU:HG3	2.21	0.41
36:B2:12:ARG:HG2	36:B2:44:VAL:HG11	2.03	0.41
38:BM:54:THR:C	38:BM:56:ALA:N	2.77	0.41
38:BM:97:GLN:HB2	38:BM:98:PRO:HD2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BX:9:LYS:O	39:BX:10:SER:C	2.64	0.41
39:BX:56:LEU:C	39:BX:58:ASN:H	2.28	0.41
40:BH:43:ASN:O	40:BH:47:PHE:HB2	2.21	0.41
41:BJ:4:PHE:HB3	41:BJ:44:TYR:CE1	2.54	0.41
42:BN:16:HIS:O	42:BN:19:ALA:N	2.53	0.41
42:BN:65:LEU:HD11	42:BN:69:ARG:NH2	2.36	0.41
43:BO:49:VAL:O	43:BO:50:ALA:HB2	2.21	0.41
43:BO:93:ASP:C	43:BO:95:SER:N	2.78	0.41
44:BQ:59:LEU:O	44:BQ:59:LEU:HD22	2.20	0.41
46:BU:64:ILE:CG1	46:BU:65:GLN:N	2.82	0.41
46:BU:73:ASN:O	46:BU:74:ALA:HB3	2.20	0.41
52:BW:55:ASP:C	52:BW:57:THR:N	2.79	0.41
1:CA:598:U:H2'	1:CA:599:C:H6	1.83	0.41
1:CA:633:G:H2'	1:CA:634:C:C6	2.54	0.41
1:CA:814:A:H5'	1:CA:1511:G:H4'	2.03	0.41
1:CA:952:U:O2'	1:CA:953:G:H5'	2.20	0.41
1:CA:1053:G:C3'	1:CA:1054:C:H5'	2.50	0.41
1:CA:1464:U:H2'	1:CA:1465:A:C8	2.55	0.41
1:CA:1505:G:H4'	1:CA:1506:U:H5"	2.02	0.41
1:CA:1509:C:H2'	1:CA:1510:C:C6	2.55	0.41
3:CD:53:GLN:HG2	3:CD:198:LEU:CD2	2.50	0.41
5:CF:61:LEU:HB3	5:CF:62:MET:H	1.71	0.41
7:CH:25:THR:HG22	7:CH:26:MET:H	1.86	0.41
7:CH:29:SER:O	7:CH:30:LYS:C	2.64	0.41
11:CL:107:LYS:HD2	11:CL:107:LYS:H	1.85	0.41
14:CQ:30:HIS:HB3	14:CQ:34:GLY:N	2.36	0.41
2:CC:122:GLN:O	2:CC:127:VAL:HG13	2.20	0.41
6:CG:92:PRO:HG2	6:CG:93:VAL:H	1.85	0.41
6:CG:145:GLU:N	6:CG:148:LYS:HB2	2.35	0.41
12:CM:62:PHE:O	12:CM:63:VAL:C	2.63	0.41
21:CN:65:GLN:HE21	21:CN:65:GLN:N	2.14	0.41
20:CO:70:LEU:CG	20:CO:78:TYR:HB2	2.50	0.41
23:DB:38:A:H1'	29:DE:43:THR:HB	2.02	0.41
23:DB:97:C:H2'	23:DB:98:G:O4'	2.20	0.41
23:DB:135:U:O2'	23:DB:136:G:H5'	2.21	0.41
23:DB:372:G:O2'	23:DB:373:U:P	2.79	0.41
23:DB:956:G:OP2	38:DM:86:LYS:NZ	2.53	0.41
23:DB:1060:U:C1'	23:DB:1062:G:H5'	2.50	0.41
23:DB:1076:C:H2'	23:DB:1077:A:C8	2.56	0.41
23:DB:1266:G:H22	23:DB:2012:G:H2'	1.85	0.41
23:DB:1316:U:C2	23:DB:1317:G:C8	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1351:C:H4'	23:DB:1572:A:O4'	2.21	0.41
23:DB:1567:G:H2'	25:DC:82:TYR:HE1	1.85	0.41
23:DB:1710:G:H4'	23:DB:2858:C:O2	2.20	0.41
23:DB:1952:A:C2	27:DK:22:ILE:HD12	2.56	0.41
23:DB:2710:C:H2'	23:DB:2711:A:C8	2.56	0.41
23:DB:2821:A:H3'	23:DB:2821:A:OP2	2.21	0.41
23:DB:2886:A:H2'	23:DB:2887:A:O4'	2.20	0.41
25:DC:5:CYS:HB2	25:DC:15:VAL:O	2.21	0.41
25:DC:52:HIS:O	25:DC:53:ILE:HB	2.21	0.41
25:DC:131:MET:C	25:DC:133:ASN:N	2.79	0.41
26:DD:69:ALA:CA	26:DD:73:VAL:HB	2.49	0.41
26:DD:121:THR:C	26:DD:123:LYS:N	2.71	0.41
29:DE:29:HIS:CE1	37:DL:8:PRO:HG3	2.56	0.41
33:D1:31:GLU:CD	33:D1:31:GLU:N	2.76	0.41
34:D3:54:LEU:HG	34:D3:58:ILE:CD1	2.46	0.41
37:DL:124:GLY:H	37:DL:143:GLU:CG	2.29	0.41
37:DL:131:ALA:C	37:DL:133:ALA:N	2.78	0.41
39:DX:19:LEU:O	39:DX:24:GLU:HB2	2.20	0.41
41:DJ:1:MET:C	41:DJ:2:LYS:HZ3	2.29	0.41
41:DJ:45:THR:H	41:DJ:46:PRO:CD	2.28	0.41
42:DN:35:LYS:HG2	42:DN:112:TYR:CE1	2.55	0.41
45:DS:99:ARG:H	45:DS:99:ARG:HG2	1.65	0.41
47:DF:137:PHE:N	47:DF:137:PHE:HD2	2.18	0.41
48:DG:10:VAL:O	48:DG:10:VAL:HG12	2.20	0.41
1:AA:81:A:N6	1:AA:86:G:C6	2.89	0.41
1:AA:384:G:O2'	1:AA:385:C:H5'	2.21	0.41
1:AA:626:G:H2'	1:AA:627:G:C8	2.56	0.41
1:AA:684:U:H2'	1:AA:685:G:O4'	2.21	0.41
1:AA:1473:G:O2'	1:AA:1474:U:H5'	2.21	0.41
1:AA:1492:A:N3	23:BB:1913:A:N1	2.69	0.41
2:AC:2:GLN:HE21	2:AC:2:GLN:HB2	1.57	0.41
6:AG:109:LYS:C	6:AG:111:GLY:H	2.29	0.41
6:AG:145:GLU:C	6:AG:147:ASN:N	2.78	0.41
8:AI:80:HIS:O	8:AI:83:THR:HG22	2.20	0.41
9:AJ:32:THR:CG2	9:AJ:83:THR:HG23	2.51	0.41
10:AK:92:ARG:HH22	19:AU:19:LYS:HG2	1.82	0.41
17:AT:53:MET:HA	17:AT:56:ILE:CG1	2.51	0.41
18:AB:212:TYR:O	18:AB:215:ALA:HB3	2.21	0.41
23:BB:26:G:H1'	23:BB:515:A:N6	2.35	0.41
23:BB:65:U:N3	23:BB:66:C:C5	2.89	0.41
23:BB:454:A:H3'	23:BB:455:C:C5'	2.48	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:632:A:H2'	23:BB:633:A:C8	2.56	0.41
23:BB:636:G:C6	37:BL:111:ILE:HD12	2.56	0.41
23:BB:707:G:H2'	23:BB:708:G:O4'	2.20	0.41
23:BB:715:A:H2'	23:BB:716:A:C8	2.56	0.41
23:BB:855:G:N3	52:BW:23:LYS:HE3	2.36	0.41
23:BB:857:G:H2'	23:BB:858:G:H5'	1.99	0.41
23:BB:926:G:H2'	23:BB:927:A:H8	1.86	0.41
23:BB:1129:A:N6	23:BB:2491:U:H5"	2.35	0.41
23:BB:1429:G:O2'	23:BB:1430:G:H5'	2.20	0.41
23:BB:1566:A:H5'	25:BC:213:ARG:NH1	2.35	0.41
23:BB:1609:A:O2'	23:BB:1610:A:H5"	2.21	0.41
23:BB:1657:U:C2'	23:BB:1658:C:H5'	2.49	0.41
23:BB:1670:C:O2	23:BB:1670:C:H2'	2.19	0.41
23:BB:1771:C:N4	23:BB:1772:A:H62	2.18	0.41
23:BB:1853:A:N1	23:BB:2087:G:H1'	2.36	0.41
23:BB:2146:C:H4'	23:BB:2148:G:C6	2.55	0.41
23:BB:2291:U:OP1	23:BB:2380:C:O2'	2.39	0.41
23:BB:2660:A:H2'	23:BB:2661:G:C8	2.56	0.41
23:BB:2700:A:H2'	23:BB:2701:U:C6	2.55	0.41
24:BI:89:SER:C	24:BI:91:LYS:H	2.29	0.41
24:BI:91:LYS:O	24:BI:94:LYS:HB2	2.21	0.41
25:BC:219:VAL:CG1	25:BC:224:MET:HE2	2.51	0.41
26:BD:202:ILE:HG22	26:BD:204:LYS:HZ2	1.85	0.41
29:BE:11:ALA:O	29:BE:12:LEU:HB2	2.19	0.41
35:BV:80:HIS:CD2	35:BV:81:PRO:HD2	2.55	0.41
39:BX:30:MET:C	39:BX:32:ALA:N	2.79	0.41
40:BH:58:LEU:C	40:BH:60:GLU:N	2.78	0.41
43:BO:68:LYS:C	43:BO:70:ALA:N	2.78	0.41
44:BQ:36:GLN:O	44:BQ:37:ALA:C	2.63	0.41
44:BQ:107:ALA:C	49:BR:48:LYS:HE2	2.45	0.41
45:BS:57:ASN:C	45:BS:59:GLU:N	2.79	0.41
45:BS:82:MET:HE2	45:BS:84:ARG:NH2	2.36	0.41
46:BU:64:ILE:HD12	46:BU:65:GLN:H	1.85	0.41
46:BU:66:VAL:C	46:BU:68:ASN:N	2.78	0.41
48:BG:84:LYS:HG3	48:BG:131:VAL:CA	2.50	0.41
49:BR:14:VAL:CG2	49:BR:18:GLN:HG3	2.51	0.41
49:BR:20:VAL:HG12	49:BR:21:ARG:N	2.36	0.41
50:BT:54:GLU:CB	50:BT:88:LYS:HB2	2.49	0.41
51:BZ:40:VAL:CG2	51:BZ:43:GLU:HB3	2.46	0.41
51:BZ:53:ALA:C	51:BZ:55:GLY:N	2.79	0.41
51:BZ:64:ILE:H	51:BZ:64:ILE:CD1	2.26	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:40:C:H2'	1:CA:41:G:O4'	2.21	0.41
1:CA:174:A:C2'	1:CA:175:C:H5'	2.51	0.41
1:CA:233:C:O2'	1:CA:234:C:H5'	2.20	0.41
1:CA:454:G:H2'	1:CA:455:G:H8	1.85	0.41
1:CA:652:U:H1'	1:CA:653:U:C5	2.55	0.41
1:CA:778:G:O2'	1:CA:779:C:H5'	2.21	0.41
1:CA:792:A:N3	1:CA:794:A:C5	2.89	0.41
1:CA:975:A:O2'	1:CA:976:G:OP2	2.32	0.41
3:CD:154:VAL:O	3:CD:158:LEU:HG	2.21	0.41
4:CE:20:VAL:O	4:CE:31:SER:HB2	2.21	0.41
4:CE:84:VAL:HG11	4:CE:146:MET:HB3	2.03	0.41
5:CF:79:ARG:HA	5:CF:79:ARG:HD3	1.89	0.41
11:CL:35:ARG:HH21	11:CL:36:VAL:CG2	2.29	0.41
2:CC:149:LYS:CG	2:CC:168:ARG:HB2	2.48	0.41
8:CI:40:ARG:H	8:CI:44:ARG:HD3	1.85	0.41
12:CM:43:LYS:H	12:CM:43:LYS:CD	2.34	0.41
16:CS:62:THR:HB	16:CS:65:MET:HB3	2.02	0.41
18:CB:162:VAL:O	18:CB:184:ALA:HA	2.21	0.41
23:DB:121:G:H2'	23:DB:122:G:H8	1.86	0.41
23:DB:250:G:C6	23:DB:251:A:C6	3.08	0.41
23:DB:445:C:H2'	23:DB:446:G:C8	2.56	0.41
23:DB:485:C:H2'	23:DB:486:C:H6	1.86	0.41
23:DB:825:A:O2'	37:DL:54:GLN:NE2	2.51	0.41
23:DB:940:G:H2'	23:DB:941:A:O4'	2.21	0.41
23:DB:1029:A:H8	23:DB:1029:A:O5'	2.04	0.41
23:DB:1249:U:O4'	44:DQ:3:VAL:HG21	2.21	0.41
23:DB:1326:U:H2'	23:DB:1327:A:O4'	2.20	0.41
23:DB:1439:A:C5	23:DB:1552:A:N6	2.88	0.41
23:DB:1468:U:H2'	23:DB:1522:A:N6	2.34	0.41
23:DB:1538:G:H8	23:DB:1538:G:OP2	2.04	0.41
23:DB:1572:A:O2'	23:DB:1573:G:H5'	2.20	0.41
23:DB:1669:A:H2'	23:DB:1669:A:N3	2.35	0.41
23:DB:1788:C:H2'	23:DB:1789:A:H8	1.86	0.41
23:DB:1829:A:H3'	23:DB:1830:C:H6	1.84	0.41
23:DB:1925:C:H2'	23:DB:1926:U:O4'	2.20	0.41
23:DB:1937:A:C8	23:DB:1939:U:H2'	2.55	0.41
23:DB:1989:G:H2'	23:DB:1990:C:O4'	2.21	0.41
23:DB:2179:C:O2	23:DB:2179:C:C2'	2.68	0.41
23:DB:2223:G:H2'	23:DB:2224:G:H5'	2.03	0.41
23:DB:2233:U:H2'	23:DB:2234:G:C8	2.55	0.41
23:DB:2458:G:H1'	23:DB:2460:U:O4	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2512:C:O2'	26:DD:159:LYS:HE2	2.21	0.41
23:DB:2597:G:C6	23:DB:2598:A:N6	2.89	0.41
23:DB:2721:A:H2'	23:DB:2722:G:H8	1.86	0.41
24:DI:53:PRO:CG	24:DI:77:VAL:HG11	2.50	0.41
24:DI:99:LYS:HB2	24:DI:140:GLU:OE1	2.20	0.41
25:DC:245:THR:C	25:DC:247:TRP:N	2.74	0.41
25:DC:249:VAL:O	25:DC:250:GLN:C	2.63	0.41
26:DD:48:ILE:HG22	26:DD:82:PHE:O	2.20	0.41
26:DD:106:LYS:O	26:DD:107:VAL:CB	2.69	0.41
26:DD:125:TRP:CH2	26:DD:160:LYS:HG2	2.56	0.41
26:DD:172:VAL:O	26:DD:173:GLN:HB2	2.21	0.41
27:DK:18:ARG:HD3	27:DK:45:GLU:HG3	2.02	0.41
27:DK:119:ALA:O	27:DK:120:PRO:O	2.38	0.41
28:DP:45:VAL:N	28:DP:60:VAL:HG13	2.35	0.41
28:DP:56:SER:O	28:DP:74:GLN:HA	2.20	0.41
29:DE:31:VAL:HG21	29:DE:104:ALA:HB2	2.02	0.41
29:DE:108:ILE:HD11	29:DE:181:ILE:HB	2.02	0.41
32:D4:36:ARG:O	32:D4:37:GLN:O	2.39	0.41
34:D3:9:ALA:C	34:D3:11:LYS:H	2.27	0.41
38:DM:73:ILE:HG21	38:DM:91:TYR:CE2	2.55	0.41
40:DH:14:SER:HB2	40:DH:17:ASP:CG	2.46	0.41
40:DH:21:VAL:HG21	40:DH:30:LEU:HD11	2.02	0.41
40:DH:27:ARG:HG3	51:DZ:60:ASP:OD1	2.20	0.41
41:DJ:29:ALA:CB	41:DJ:108:MET:HE3	2.44	0.41
41:DJ:58:ASN:O	41:DJ:59:ALA:HB3	2.21	0.41
41:DJ:77:HIS:HD2	41:DJ:84:ILE:HB	1.85	0.41
42:DN:114:GLU:HG2	42:DN:115:LEU:O	2.21	0.41
47:DF:33:ILE:HD12	47:DF:33:ILE:N	2.36	0.41
47:DF:38:GLY:HA2	47:DF:85:GLY:HA3	2.03	0.41
47:DF:76:PHE:HB2	47:DF:77:LYS:H	1.67	0.41
48:DG:140:ILE:HD12	48:DG:141:GLY:N	2.36	0.41
49:DR:26:ASP:O	49:DR:27:ILE:HG12	2.20	0.41
49:DR:31:GLU:H	49:DR:63:VAL:HG22	1.86	0.41
52:DW:56:HIS:O	52:DW:57:THR:C	2.63	0.41
1:AA:213:G:C8	1:AA:214:C:C5	3.09	0.41
1:AA:214:C:H2'	1:AA:215:C:C6	2.56	0.41
1:AA:389:A:H2'	1:AA:389:A:N3	2.36	0.41
1:AA:411:A:N6	1:AA:413:G:H21	2.18	0.41
1:AA:705:G:H2'	1:AA:706:A:H5'	2.02	0.41
1:AA:750:C:O2	20:AO:23:GLY:HA3	2.20	0.41
1:AA:796:C:H2'	1:AA:797:C:H6	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:821:G:O2'	1:AA:822:U:H5'	2.20	0.41
1:AA:825:A:H2'	1:AA:826:C:H6	1.85	0.41
1:AA:949:A:O2'	1:AA:950:U:H5'	2.20	0.41
1:AA:1009:U:H2'	1:AA:1010:U:C5	2.55	0.41
1:AA:1138:G:H3'	1:AA:1138:G:N3	2.36	0.41
1:AA:1228:C:H2'	1:AA:1229:A:C8	2.56	0.41
1:AA:1251:A:H2'	1:AA:1252:A:C8	2.56	0.41
2:AC:10:ARG:HG3	2:AC:10:ARG:NH1	2.36	0.41
3:AD:25:ARG:HE	3:AD:25:ARG:HB2	1.71	0.41
7:AH:14:ARG:CG	7:AH:15:ASN:N	2.84	0.41
8:AI:43:ALA:HA	8:AI:46:VAL:CG1	2.49	0.41
10:AK:35:ASP:OD1	10:AK:37:GLN:HB2	2.20	0.41
12:AM:13:HIS:HB2	12:AM:16:ILE:HB	2.01	0.41
14:AQ:58:VAL:HG12	14:AQ:77:VAL:HG13	2.03	0.41
16:AS:44:ILE:CA	16:AS:61:VAL:HB	2.48	0.41
16:AS:50:VAL:O	16:AS:56:HIS:HA	2.20	0.41
17:AT:3:ILE:O	17:AT:4:LYS:HB2	2.20	0.41
17:AT:53:MET:O	17:AT:54:GLN:C	2.64	0.41
21:AN:60:ARG:CG	21:AN:62:ARG:HE	2.30	0.41
23:BB:271:G:H1'	23:BB:272:A:C8	2.56	0.41
23:BB:353:C:O2	23:BB:353:C:H2'	2.21	0.41
23:BB:455:C:C3'	23:BB:456:C:H5'	2.51	0.41
23:BB:705:A:O2'	25:BC:6:LYS:HB2	2.20	0.41
23:BB:1147:A:O2'	23:BB:1148:U:H5'	2.20	0.41
23:BB:1635:A:H2'	23:BB:1636:U:H5'	2.02	0.41
23:BB:1692:U:O2'	23:BB:1693:U:H2'	2.21	0.41
23:BB:1711:A:H2'	23:BB:1712:U:O4'	2.21	0.41
23:BB:1848:A:H2'	23:BB:1849:G:C8	2.55	0.41
23:BB:2249:U:H1'	23:BB:2275:C:H41	1.85	0.41
23:BB:2363:G:O2'	23:BB:2364:C:H5'	2.20	0.41
23:BB:2370:G:H2'	23:BB:2371:G:O4'	2.21	0.41
23:BB:2387:U:H1'	52:BW:38:ARG:CZ	2.50	0.41
23:BB:2573:C:H3'	56:BB:3614:HOH:O	2.21	0.41
23:BB:2660:A:H2'	23:BB:2661:G:O4'	2.21	0.41
25:BC:149:LYS:HG2	25:BC:152:GLN:CD	2.46	0.41
25:BC:151:GLY:C	25:BC:152:GLN:HE21	2.27	0.41
26:BD:3:GLY:O	26:BD:4:LEU:HD13	2.20	0.41
26:BD:38:LYS:HG3	26:BD:47:ALA:HB3	2.02	0.41
26:BD:154:LYS:HD3	26:BD:154:LYS:N	2.35	0.41
27:BK:121:GLU:O	27:BK:122:VAL:C	2.63	0.41
29:BE:138:LEU:O	29:BE:142:ALA:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:B0:42:ILE:HG12	42:BN:99:LYS:O	2.21	0.41
35:BV:2:PHE:CE2	35:BV:55:GLU:HB3	2.56	0.41
35:BV:50:MET:C	35:BV:52:ALA:H	2.28	0.41
37:BL:111:ILE:CG2	37:BL:112:LEU:H	2.29	0.41
40:BH:3:VAL:O	40:BH:18:GLN:HA	2.20	0.41
41:BJ:34:ARG:HH11	41:BJ:39:LYS:HG2	1.84	0.41
42:BN:33:ILE:CB	42:BN:114:GLU:HB2	2.51	0.41
44:BQ:86:SER:HB3	49:BR:51:VAL:HA	2.02	0.41
44:BQ:91:ARG:NH1	49:BR:11:GLN:H	2.19	0.41
45:BS:1:MET:SD	45:BS:62:ASP:HB3	2.61	0.41
47:BF:92:GLY:O	47:BF:95:MET:HB3	2.20	0.41
47:BF:121:PHE:CA	47:BF:127:TYR:HA	2.49	0.41
48:BG:26:LYS:HA	48:BG:32:LEU:CA	2.51	0.41
48:BG:88:LEU:HD21	48:BG:94:ARG:C	2.45	0.41
48:BG:93:TYR:O	48:BG:94:ARG:HG3	2.21	0.41
48:BG:149:ALA:C	48:BG:151:ARG:N	2.78	0.41
50:BT:25:GLU:OE1	50:BT:30:ILE:HA	2.21	0.41
50:BT:40:LYS:CA	50:BT:43:ILE:HG22	2.51	0.41
1:CA:177:G:N3	1:CA:177:G:O4'	2.53	0.41
1:CA:239:U:H5"	1:CA:239:U:H6	1.85	0.41
1:CA:321:A:H2'	1:CA:322:C:H6	1.86	0.41
1:CA:332:G:OP2	17:CT:2:ASN:HB3	2.20	0.41
1:CA:341:C:O2'	1:CA:342:C:H5'	2.20	0.41
1:CA:625:U:H4'	13:CP:16:PHE:CZ	2.55	0.41
1:CA:810:C:H2'	1:CA:811:C:O4'	2.20	0.41
1:CA:838:G:H2'	1:CA:839:C:H6	1.82	0.41
1:CA:874:G:O2'	1:CA:875:U:H5'	2.21	0.41
1:CA:964:A:H5"	56:CA:1951:HOH:O	2.20	0.41
1:CA:1000:A:O2'	1:CA:1001:C:H5'	2.19	0.41
1:CA:1004:A:H2'	1:CA:1005:A:C8	2.56	0.41
1:CA:1320:C:P	16:CS:69:LYS:HG3	2.60	0.41
1:CA:1409:C:C1'	23:DB:1913:A:H62	2.31	0.41
4:CE:91:SER:OG	4:CE:135:VAL:HG22	2.19	0.41
4:CE:93:VAL:HA	4:CE:126:ALA:CB	2.50	0.41
4:CE:148:SER:HB2	4:CE:150:GLU:OE2	2.21	0.41
5:CF:39:LEU:C	5:CF:39:LEU:HD13	2.46	0.41
7:CH:76:ARG:HA	7:CH:76:ARG:HD2	1.91	0.41
7:CH:118:ALA:HB3	7:CH:120:LEU:CD2	2.51	0.41
15:CR:40:PRO:HB2	15:CR:43:ILE:HG12	2.03	0.41
17:CT:38:ILE:HD13	17:CT:38:ILE:HA	1.96	0.41
17:CT:53:MET:HA	17:CT:56:ILE:HG13	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CT:85:LEU:CD2	17:CT:86:ALA:H	2.31	0.41
17:CT:85:LEU:HG	17:CT:86:ALA:N	2.36	0.41
6:CG:43:TYR:HB3	6:CG:47:GLU:CD	2.45	0.41
6:CG:74:VAL:HA	6:CG:86:VAL:O	2.21	0.41
20:CO:45:GLU:HB2	20:CO:46:HIS:ND1	2.35	0.41
22:DA:113:C:H2'	22:DA:114:C:H6	1.84	0.41
23:DB:332:A:O2'	23:DB:334:C:OP2	2.39	0.41
23:DB:362:A:H5'	23:DB:363:G:OP2	2.21	0.41
23:DB:396:G:O2'	23:DB:397:U:H5'	2.20	0.41
23:DB:715:A:H2'	23:DB:716:A:O4'	2.20	0.41
23:DB:724:U:H2'	23:DB:725:G:O4'	2.21	0.41
23:DB:878:A:H1'	23:DB:899:A:H62	1.85	0.41
23:DB:927:A:H2'	23:DB:928:A:C8	2.56	0.41
23:DB:962:G:H21	23:DB:2250:G:H22	1.68	0.41
23:DB:1486:U:O2'	23:DB:1487:U:H5'	2.20	0.41
23:DB:1537:G:N3	23:DB:1537:G:H5"	2.36	0.41
23:DB:1609:A:O2'	23:DB:1610:A:H5"	2.20	0.41
23:DB:1936:A:N6	23:DB:1963:U:N3	2.66	0.41
23:DB:2201:G:H2'	23:DB:2202:U:H6	1.86	0.41
23:DB:2758:A:H2'	23:DB:2759:G:O4'	2.21	0.41
24:DI:129:GLU:O	24:DI:133:ARG:HG3	2.21	0.41
25:DC:196:ASN:O	25:DC:197:ALA:HB3	2.21	0.41
26:DD:16:THR:N	26:DD:20:VAL:O	2.54	0.41
27:DK:64:ARG:HA	27:DK:79:PHE:CE1	2.55	0.41
29:DE:31:VAL:O	29:DE:34:ALA:HB3	2.21	0.41
29:DE:38:GLY:C	29:DE:40:ARG:N	2.78	0.41
32:D4:17:VAL:HG12	32:D4:18:LYS:N	2.36	0.41
37:DL:2:ARG:CZ	37:DL:2:ARG:HB3	2.51	0.41
37:DL:79:LEU:HD23	37:DL:79:LEU:HA	1.87	0.41
42:DN:43:GLU:O	42:DN:46:ARG:HG2	2.21	0.41
42:DN:97:ILE:HG22	42:DN:113:ILE:HD12	2.02	0.41
46:DU:7:ASP:HA	46:DU:24:VAL:O	2.21	0.41
47:DF:8:LYS:HD3	47:DF:9:ASP:N	2.36	0.41
52:DW:19:ARG:CD	52:DW:36:ILE:HD11	2.50	0.41
1:AA:35:G:O2'	1:AA:36:C:H5'	2.21	0.41
1:AA:222:C:H2'	1:AA:223:A:C8	2.56	0.41
1:AA:246:A:C2	1:AA:282:A:C5	3.09	0.41
1:AA:259:G:O2'	1:AA:260:G:H5'	2.21	0.41
1:AA:265:G:H2'	1:AA:267:C:H5	1.86	0.41
1:AA:373:A:O2'	1:AA:481:G:N2	2.54	0.41
1:AA:439:U:H2'	1:AA:440:C:H6	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:461:A:H3'	1:AA:462:G:C4'	2.50	0.41
1:AA:471:U:H2'	1:AA:472:U:O4'	2.21	0.41
1:AA:729:A:H2	1:AA:764:C:O2	2.03	0.41
1:AA:778:G:H21	10:AK:121:ARG:HD3	1.86	0.41
1:AA:893:C:H2'	1:AA:894:G:H8	1.86	0.41
1:AA:1089:G:C6	1:AA:1090:U:C2	3.09	0.41
1:AA:1139:G:H4'	1:AA:1140:C:OP1	2.21	0.41
1:AA:1215:G:H3'	1:AA:1215:G:OP2	2.20	0.41
1:AA:1350:A:OP1	8:AI:122:ARG:HD2	2.21	0.41
1:AA:1392:G:H2'	1:AA:1393:U:H6	1.85	0.41
1:AA:1417:G:H22	1:AA:1482:G:H2'	1.85	0.41
1:AA:1451:U:H5"	1:AA:1452:C:C5	2.55	0.41
1:AA:1472:U:O2'	1:AA:1473:G:H5'	2.21	0.41
2:AC:46:LEU:HD22	2:AC:46:LEU:N	2.36	0.41
2:AC:163:ARG:HG3	2:AC:163:ARG:O	2.21	0.41
3:AD:144:ILE:HG22	3:AD:145:ARG:H	1.86	0.41
4:AE:45:VAL:CG1	4:AE:116:VAL:HG23	2.51	0.41
4:AE:56:PRO:O	4:AE:59:ILE:HG13	2.21	0.41
4:AE:80:LEU:HA	4:AE:146:MET:HE1	2.03	0.41
4:AE:155:LYS:O	4:AE:158:LYS:HE3	2.21	0.41
5:AF:70:VAL:CG2	5:AF:71:ILE:N	2.84	0.41
5:AF:97:THR:C	5:AF:98:GLU:CD	2.88	0.41
6:AG:35:LYS:O	6:AG:38:ALA:HB3	2.21	0.41
6:AG:71:THR:HA	6:AG:90:VAL:CG2	2.42	0.41
7:AH:35:ILE:O	7:AH:39:LEU:HG	2.21	0.41
7:AH:68:LYS:HG3	7:AH:69:ALA:O	2.20	0.41
8:AI:56:MET:O	8:AI:58:GLU:N	2.43	0.41
8:AI:103:VAL:HG23	8:AI:104:THR:H	1.85	0.41
8:AI:118:ARG:O	8:AI:118:ARG:HG2	2.21	0.41
11:AL:120:ARG:HG2	11:AL:120:ARG:HH11	1.86	0.41
12:AM:21:ILE:HG21	12:AM:24:VAL:HG13	2.03	0.41
16:AS:14:LEU:HD22	16:AS:34:SER:OG	2.21	0.41
18:AB:173:LYS:HD2	18:AB:173:LYS:C	2.45	0.41
19:AU:16:ARG:C	19:AU:18:PHE:N	2.79	0.41
20:AO:83:GLU:C	20:AO:85:LEU:N	2.79	0.41
21:AN:97:LYS:HD3	21:AN:97:LYS:HA	1.86	0.41
22:BA:42:C:C6	47:BF:65:LEU:HD22	2.56	0.41
22:BA:80:U:H2'	22:BA:81:G:C8	2.55	0.41
23:BB:2:G:H2'	23:BB:3:U:C6	2.56	0.41
23:BB:66:C:O2'	23:BB:67:U:H5'	2.21	0.41
23:BB:120:U:H4'	23:BB:121:G:H5'	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:120:U:H5”	23:BB:122:G:OP2	2.20	0.41
23:BB:275:C:H2’	23:BB:276:U:C5’	2.47	0.41
23:BB:391:A:H2’	23:BB:391:A:N3	2.36	0.41
23:BB:416:U:H2’	23:BB:417:C:H6	1.84	0.41
23:BB:443:A:C4	29:BE:40:ARG:HD3	2.56	0.41
23:BB:714:U:H3	23:BB:716:A:H3’	1.85	0.41
23:BB:727:A:H2	25:BC:8:THR:HG21	1.86	0.41
23:BB:812:C:H2’	23:BB:813:U:C6	2.55	0.41
23:BB:870:U:C3’	23:BB:871:U:H5”	2.51	0.41
23:BB:1079:C:H5	23:BB:1088:A:OP1	2.04	0.41
23:BB:1210:G:H5”	23:BB:1211:C:O5’	2.21	0.41
23:BB:1316:U:C2	23:BB:1317:G:C8	3.08	0.41
23:BB:1404:C:H2’	23:BB:1405:U:H6	1.86	0.41
23:BB:1458:U:H5’	23:BB:1460:U:OP2	2.19	0.41
23:BB:1700:A:H2’	23:BB:1701:A:H5’	2.01	0.41
23:BB:1914:C:H2’	23:BB:1915:U:C6	2.56	0.41
23:BB:1936:A:N6	23:BB:1963:U:N3	2.66	0.41
23:BB:2305:U:O2	47:BF:150:GLY:HA3	2.20	0.41
23:BB:2311:A:O2’	47:BF:84:ILE:HD13	2.20	0.41
23:BB:2388:A:H5’	23:BB:2389:G:OP2	2.21	0.41
23:BB:2503:A:O2’	23:BB:2505:G:OP2	2.36	0.41
23:BB:2597:G:C6	23:BB:2598:A:N6	2.88	0.41
23:BB:2776:A:H4’	23:BB:2777:G:O5’	2.21	0.41
23:BB:2861:U:O2’	23:BB:2862:G:H5’	2.21	0.41
24:BI:63:ASP:C	24:BI:64:ARG:HG3	2.46	0.41
24:BI:73:PRO:HA	24:BI:74:PRO:HD3	1.99	0.41
24:BI:83:ALA:N	24:BI:100:ILE:HD11	2.35	0.41
25:BC:54:GLY:O	25:BC:214:GLY:HA2	2.20	0.41
26:BD:8:LYS:HG2	26:BD:197:THR:N	2.34	0.41
26:BD:102:ALA:H	26:BD:104:VAL:CG2	2.34	0.41
26:BD:107:VAL:HG12	26:BD:108:ASP:N	2.35	0.41
26:BD:122:VAL:HA	26:BD:127:PHE:H	1.84	0.41
27:BK:19:VAL:O	27:BK:41:ILE:HD11	2.21	0.41
27:BK:39:ILE:HA	27:BK:39:ILE:HD13	1.90	0.41
27:BK:64:ARG:HA	27:BK:79:PHE:CE1	2.56	0.41
28:BP:91:VAL:HG23	28:BP:92:ARG:N	2.35	0.41
28:BP:101:GLU:CD	28:BP:101:GLU:H	2.26	0.41
29:BE:2:GLU:OE1	29:BE:13:THR:N	2.54	0.41
29:BE:12:LEU:CD1	29:BE:14:VAL:HG13	2.51	0.41
29:BE:31:VAL:O	29:BE:34:ALA:HB3	2.21	0.41
29:BE:32:VAL:O	29:BE:36:ALA:N	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:141:MET:O	29:BE:143:LEU:HG	2.21	0.41
31:B0:41:HIS:O	31:B0:42:ILE:O	2.39	0.41
32:B4:8:LYS:HB3	32:B4:8:LYS:HE2	1.91	0.41
33:B1:24:LYS:HG3	33:B1:25:ASN:H	1.86	0.41
35:BV:44:HIS:C	35:BV:46:LYS:H	2.29	0.41
35:BV:72:VAL:HB	35:BV:92:VAL:C	2.45	0.41
37:BL:31:GLY:C	37:BL:33:ARG:N	2.79	0.41
37:BL:131:ALA:C	37:BL:133:ALA:N	2.79	0.41
38:BM:19:GLY:CA	38:BM:97:GLN:HB2	2.48	0.41
38:BM:120:ALA:C	38:BM:122:ALA:N	2.78	0.41
39:BX:17:GLU:O	39:BX:20:ASN:HB2	2.21	0.41
39:BX:20:ASN:O	39:BX:25:GLN:N	2.54	0.41
39:BX:59:GLU:N	39:BX:59:GLU:OE2	2.54	0.41
40:BH:5:LEU:HD11	40:BH:19:VAL:HG21	2.02	0.41
40:BH:28:ASN:HD21	51:BZ:36:HIS:CE1	2.39	0.41
40:BH:94:ILE:HA	40:BH:98:ASP:OD1	2.20	0.41
40:BH:99:ILE:HG21	40:BH:130:VAL:CG2	2.50	0.41
40:BH:116:ARG:HB3	40:BH:131:SER:N	2.36	0.41
40:BH:117:LEU:CD1	40:BH:130:VAL:HG22	2.50	0.41
41:BJ:2:LYS:HB3	41:BJ:2:LYS:HZ3	1.85	0.41
41:BJ:15:TRP:CD2	41:BJ:53:TYR:HB3	2.56	0.41
42:BN:33:ILE:CA	42:BN:114:GLU:HB2	2.49	0.41
42:BN:37:THR:OG1	42:BN:40:LYS:HE2	2.20	0.41
42:BN:43:GLU:O	42:BN:46:ARG:HG2	2.21	0.41
43:BO:105:ALA:C	43:BO:107:ALA:N	2.79	0.41
44:BQ:63:ARG:HH12	44:BQ:96:ASP:CB	2.17	0.41
45:BS:24:ILE:CG1	45:BS:36:LEU:HD21	2.51	0.41
47:BF:33:ILE:HD12	47:BF:33:ILE:N	2.36	0.41
47:BF:129:MET:N	47:BF:129:MET:SD	2.94	0.41
49:BR:70:GLU:CD	49:BR:70:GLU:N	2.79	0.41
50:BT:32:LEU:H	50:BT:83:ALA:CB	2.34	0.41
50:BT:89:GLU:C	50:BT:91:GLN:H	2.27	0.41
1:CA:384:G:O2'	1:CA:385:C:H5'	2.20	0.41
1:CA:433:G:H2'	1:CA:434:U:O4'	2.21	0.41
1:CA:511:C:O2'	1:CA:512:U:H5"	2.21	0.41
1:CA:552:U:H5'	11:CL:82:ARG:NH1	2.29	0.41
1:CA:707:U:H2'	1:CA:708:C:C6	2.56	0.41
1:CA:724:G:O2'	1:CA:725:G:H5'	2.21	0.41
1:CA:737:C:H2'	1:CA:738:C:C6	2.55	0.41
1:CA:796:C:H2'	1:CA:797:C:H6	1.86	0.41
1:CA:818:G:C2'	1:CA:819:A:H5"	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:825:A:H2'	1:CA:826:C:H6	1.86	0.41
1:CA:842:U:OP1	1:CA:842:U:H3'	2.21	0.41
1:CA:1059:C:O2'	1:CA:1060:U:H5'	2.21	0.41
1:CA:1065:U:O4	1:CA:1190:G:O4'	2.38	0.41
1:CA:1132:C:H2'	1:CA:1133:G:H8	1.84	0.41
1:CA:1229:A:H62	12:CM:103:THR:HG22	1.85	0.41
1:CA:1340:A:C2	1:CA:1341:U:H1'	2.56	0.41
1:CA:1444:U:H2'	1:CA:1445:U:C6	2.55	0.41
3:CD:10:LEU:HD22	3:CD:62:ARG:NH1	2.35	0.41
3:CD:157:ALA:O	3:CD:160:LEU:HD22	2.20	0.41
3:CD:196:GLU:O	3:CD:197:HIS:C	2.63	0.41
4:CE:113:VAL:O	4:CE:116:VAL:N	2.53	0.41
5:CF:10:VAL:HG12	5:CF:11:HIS:N	2.36	0.41
5:CF:97:THR:C	5:CF:98:GLU:CD	2.88	0.41
10:CK:35:ASP:OD1	10:CK:37:GLN:HB2	2.20	0.41
14:CQ:3:LYS:HE2	14:CQ:3:LYS:N	2.36	0.41
15:CR:31:TYR:CE1	15:CR:54:LEU:HD11	2.55	0.41
15:CR:58:ILE:O	15:CR:61:ALA:HB3	2.21	0.41
17:CT:3:ILE:O	17:CT:4:LYS:HB2	2.21	0.41
17:CT:20:ASN:HA	17:CT:23:ARG:HG2	2.02	0.41
19:CU:28:LEU:C	19:CU:30:GLU:N	2.76	0.41
19:CU:29:ALA:HA	19:CU:32:ARG:CD	2.51	0.41
19:CU:42:THR:C	19:CU:46:ARG:HG3	2.44	0.41
8:CI:21:LYS:O	8:CI:61:ASP:N	2.54	0.41
8:CI:56:MET:HA	8:CI:59:LYS:HB2	2.01	0.41
9:CJ:36:VAL:CG1	9:CJ:76:ILE:HA	2.39	0.41
9:CJ:81:GLU:H	9:CJ:82:LYS:NZ	2.18	0.41
12:CM:30:LYS:NZ	12:CM:40:GLU:HG3	2.35	0.41
12:CM:59:VAL:HG22	12:CM:59:VAL:O	2.21	0.41
12:CM:79:LEU:C	12:CM:81:ASP:N	2.77	0.41
12:CM:95:PRO:CG	12:CM:101:THR:HG22	2.51	0.41
21:CN:79:SER:O	21:CN:83:VAL:HG23	2.21	0.41
16:CS:13:HIS:ND1	16:CS:13:HIS:N	2.69	0.41
16:CS:45:GLY:CA	16:CS:60:PHE:HB3	2.48	0.41
18:CB:17:HIS:CD2	18:CB:203:ASP:CG	2.99	0.41
18:CB:48:MET:HG3	18:CB:200:PRO:HD2	2.01	0.41
18:CB:53:LEU:CD1	18:CB:216:VAL:HA	2.51	0.41
18:CB:95:TRP:CH2	18:CB:99:MET:HG3	2.56	0.41
18:CB:107:ARG:HA	18:CB:110:ILE:HG13	2.02	0.41
20:CO:31:LEU:C	20:CO:31:LEU:HD13	2.46	0.41
20:CO:33:THR:CG2	20:CO:87:LEU:HD11	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CO:64:ARG:CZ	20:CO:88:ARG:HD2	2.51	0.41
22:DA:3:C:H2'	22:DA:4:C:C6	2.56	0.41
22:DA:7:G:O2'	22:DA:8:C:H5'	2.20	0.41
23:DB:215:G:C4'	23:DB:216:A:H4'	2.48	0.41
23:DB:272:A:H2'	23:DB:273:G:C8	2.56	0.41
23:DB:296:U:O2'	23:DB:297:G:H5'	2.20	0.41
23:DB:419:U:H2'	23:DB:420:C:H6	1.84	0.41
23:DB:629:G:H2'	23:DB:630:G:C8	2.55	0.41
23:DB:640:C:H2'	23:DB:641:U:C6	2.56	0.41
23:DB:826:U:H2'	23:DB:828:U:O4'	2.21	0.41
23:DB:870:U:C3'	23:DB:871:U:H5"	2.51	0.41
23:DB:936:A:H2'	23:DB:937:C:H6	1.86	0.41
23:DB:1051:G:H4'	23:DB:2752:C:O2'	2.21	0.41
23:DB:1063:G:O2'	23:DB:1064:C:H5'	2.20	0.41
23:DB:1171:G:H2'	23:DB:1172:C:C6	2.56	0.41
23:DB:1244:A:H4'	29:DE:29:HIS:HE1	1.86	0.41
23:DB:1317:G:H2'	23:DB:1318:U:O4'	2.21	0.41
23:DB:1392:A:C6	23:DB:1393:A:N6	2.89	0.41
23:DB:1418:G:H1'	23:DB:1580:A:N6	2.36	0.41
23:DB:1439:A:C8	23:DB:1440:U:C6	3.09	0.41
23:DB:1660:G:H2'	23:DB:1661:G:H8	1.86	0.41
23:DB:1842:G:O2'	23:DB:1843:C:H5'	2.20	0.41
23:DB:2005:A:O2'	23:DB:2049:G:OP1	2.36	0.41
23:DB:2144:G:O2'	23:DB:2146:C:C5'	2.69	0.41
23:DB:2291:U:OP1	23:DB:2380:C:O2'	2.38	0.41
23:DB:2312:U:C4'	47:DF:84:ILE:HG21	2.51	0.41
23:DB:2520:C:O2'	23:DB:2521:C:H5'	2.20	0.41
23:DB:2572:A:OP1	23:DB:2574:G:H4'	2.21	0.41
23:DB:2694:G:H2'	23:DB:2695:U:H6	1.85	0.41
23:DB:2772:C:H2'	23:DB:2773:C:C6	2.56	0.41
23:DB:2789:C:H2'	23:DB:2790:U:H5'	2.03	0.41
23:DB:2812:G:H2'	23:DB:2813:A:C8	2.56	0.41
25:DC:106:PRO:HA	25:DC:195:GLY:N	2.36	0.41
26:DD:58:ASN:C	26:DD:60:VAL:H	2.29	0.41
26:DD:73:VAL:O	26:DD:74:GLU:HB2	2.20	0.41
26:DD:73:VAL:HG22	26:DD:74:GLU:N	2.36	0.41
26:DD:117:GLY:HA2	26:DD:164:GLN:HE22	1.83	0.41
26:DD:154:LYS:HD3	26:DD:154:LYS:N	2.36	0.41
28:DP:52:ARG:HD2	28:DP:52:ARG:HA	1.87	0.41
28:DP:94:ALA:O	28:DP:95:LYS:HD2	2.21	0.41
28:DP:101:GLU:H	28:DP:101:GLU:CD	2.27	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DE:29:HIS:CD2	37:DL:8:PRO:HA	2.55	0.41
29:DE:69:ARG:O	29:DE:70:SER:CB	2.68	0.41
29:DE:199:MET:HB3	29:DE:200:LEU:HD22	2.03	0.41
35:DV:38:LEU:CD1	35:DV:40:ILE:HG23	2.51	0.41
35:DV:83:LYS:HA	35:DV:84:PRO:HD3	1.91	0.41
39:DX:12:GLU:O	39:DX:15:ASN:CG	2.64	0.41
39:DX:30:MET:N	39:DX:30:MET:SD	2.94	0.41
40:DH:4:ILE:HD13	40:DH:37:VAL:HG13	2.03	0.41
40:DH:41:LYS:HA	40:DH:44:ILE:HG12	2.02	0.41
40:DH:126:GLY:H	40:DH:146:VAL:HB	1.86	0.41
41:DJ:26:GLY:N	41:DJ:28:LEU:HD23	2.36	0.41
41:DJ:88:THR:O	41:DJ:91:GLU:HB2	2.20	0.41
42:DN:8:ARG:HG2	42:DN:10:LEU:HD22	2.02	0.41
42:DN:55:ALA:HB1	42:DN:84:GLY:HA2	2.01	0.41
42:DN:118:ARG:O	42:DN:118:ARG:HG2	2.21	0.41
43:DO:15:ARG:HH21	43:DO:95:SER:HA	1.86	0.41
43:DO:105:ALA:C	43:DO:107:ALA:N	2.79	0.41
43:DO:115:LEU:HD22	43:DO:115:LEU:N	2.36	0.41
44:DQ:11:ALA:C	44:DQ:13:HIS:N	2.78	0.41
44:DQ:48:ASP:OD2	44:DQ:48:ASP:N	2.53	0.41
44:DQ:74:SER:O	44:DQ:75:TYR:C	2.64	0.41
44:DQ:89:ILE:C	44:DQ:91:ARG:H	2.29	0.41
45:DS:1:MET:SD	45:DS:62:ASP:HB3	2.60	0.41
46:DU:5:ARG:HB2	46:DU:8:ASP:OD2	2.21	0.41
46:DU:64:ILE:CG1	46:DU:65:GLN:N	2.84	0.41
47:DF:103:ILE:CG2	47:DF:173:ASP:HB2	2.51	0.41
47:DF:134:GLN:CD	47:DF:136:ILE:HA	2.46	0.41
48:DG:69:ALA:O	48:DG:73:SER:N	2.52	0.41
49:DR:78:ARG:HG3	49:DR:78:ARG:HH21	1.86	0.41
50:DT:59:ASN:O	50:DT:83:ALA:O	2.38	0.41
51:DZ:5:CYS:HB3	51:DZ:10:LYS:H	1.85	0.41
52:DW:35:ILE:O	52:DW:35:ILE:CG1	2.69	0.41
52:DW:37:VAL:HG13	52:DW:55:ASP:C	2.45	0.41
1:AA:198:G:N7	1:AA:220:G:N2	2.68	0.41
1:AA:643:C:H2'	1:AA:644:U:C6	2.55	0.41
1:AA:708:C:O2'	1:AA:709:U:H5'	2.21	0.41
1:AA:730:G:O2'	1:AA:766:A:H5'	2.21	0.41
1:AA:796:C:H5'	10:AK:128:VAL:HG13	2.01	0.41
1:AA:814:A:H5'	1:AA:1511:G:H4'	2.02	0.41
1:AA:838:G:H2'	1:AA:839:C:H6	1.82	0.41
1:AA:968:A:H5'	1:AA:968:A:N3	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:971:G:N2	1:AA:1363:A:H8	2.19	0.41
1:AA:981:U:H4'	21:AN:60:ARG:HB3	2.03	0.41
1:AA:993:G:H2'	1:AA:995:C:H41	1.84	0.41
1:AA:1367:C:O2'	1:AA:1368:A:H5'	2.20	0.41
1:AA:1375:A:O2'	1:AA:1376:U:H5'	2.21	0.41
2:AC:9:ILE:HG23	2:AC:10:ARG:N	2.36	0.41
2:AC:52:SER:HB3	2:AC:114:LEU:CD2	2.49	0.41
2:AC:91:ALA:HB1	2:AC:96:VAL:O	2.20	0.41
2:AC:179:ALA:HA	2:AC:205:GLU:CA	2.47	0.41
4:AE:82:HIS:CE1	4:AE:146:MET:HA	2.55	0.41
4:AE:113:VAL:O	4:AE:116:VAL:N	2.54	0.41
6:AG:16:LYS:HD3	6:AG:17:PHE:CE1	2.56	0.41
6:AG:129:ASN:CA	6:AG:134:VAL:HG21	2.51	0.41
7:AH:43:GLY:HA2	7:AH:63:LYS:HZ1	1.86	0.41
9:AJ:37:ARG:HE	9:AJ:37:ARG:HA	1.86	0.41
11:AL:25:ALA:O	11:AL:26:CYS:C	2.64	0.41
11:AL:59:GLY:O	11:AL:60:PHE:HD1	2.04	0.41
12:AM:100:ARG:C	12:AM:102:LYS:N	2.78	0.41
14:AQ:43:LEU:HD12	14:AQ:43:LEU:N	2.35	0.41
17:AT:20:ASN:HA	17:AT:23:ARG:HG2	2.03	0.41
17:AT:59:ARG:HH11	17:AT:59:ARG:HB2	1.86	0.41
18:AB:60:ALA:C	18:AB:62:ARG:H	2.29	0.41
18:AB:204:ASP:O	18:AB:205:ALA:HB3	2.21	0.41
20:AO:28:GLN:O	20:AO:32:LEU:HD23	2.21	0.41
20:AO:36:ILE:HD12	20:AO:60:VAL:HG22	2.02	0.41
21:AN:60:ARG:NE	21:AN:62:ARG:HG2	2.36	0.41
21:AN:60:ARG:O	21:AN:61:ASN:HB2	2.20	0.41
22:BA:13:G:O2'	22:BA:14:U:H3'	2.21	0.41
22:BA:39:A:O2'	22:BA:40:U:H5'	2.20	0.41
23:BB:422:A:N3	23:BB:422:A:H2'	2.36	0.41
23:BB:734:A:C2	23:BB:735:A:H1'	2.55	0.41
23:BB:822:G:H2'	23:BB:823:C:C6	2.55	0.41
23:BB:1197:G:H2'	23:BB:1198:U:H6	1.85	0.41
23:BB:1526:C:H2'	23:BB:1527:G:C8	2.56	0.41
23:BB:1652:A:N6	42:BN:11:ASN:HD21	2.05	0.41
23:BB:1745:A:H2'	23:BB:1746:A:H8	1.85	0.41
23:BB:1841:U:C2	23:BB:1842:G:C8	3.09	0.41
23:BB:1936:A:H2	23:BB:1943:U:O4	2.04	0.41
23:BB:1956:U:O2	23:BB:1985:C:H4'	2.21	0.41
23:BB:2210:U:C4	23:BB:2212:A:N7	2.89	0.41
23:BB:2230:G:H4'	51:BZ:31:PRO:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2306:C:H6	23:BB:2306:C:O5'	2.04	0.41
23:BB:2428:G:H5"	23:BB:2429:G:H5'	2.03	0.41
23:BB:2804:U:H2'	23:BB:2805:C:H6	1.86	0.41
26:BD:182:ALA:O	26:BD:184:ARG:HG2	2.19	0.41
34:B3:30:HIS:CD2	34:B3:31:ILE:N	2.89	0.41
35:BV:53:LYS:HE3	35:BV:55:GLU:OE1	2.20	0.41
36:B2:4:THR:O	36:B2:5:PHE:HB2	2.20	0.41
40:BH:3:VAL:C	40:BH:4:ILE:HD12	2.46	0.41
40:BH:133:GLN:HG3	40:BH:139:PHE:HD2	1.85	0.41
43:BO:7:ARG:HA	43:BO:10:ARG:CZ	2.51	0.41
43:BO:30:ARG:HG2	43:BO:31:THR:H	1.85	0.41
43:BO:58:ILE:C	43:BO:60:GLU:H	2.28	0.41
47:BF:28:PRO:HA	47:BF:158:THR:OG1	2.20	0.41
47:BF:47:LYS:HA	47:BF:50:ASP:OD1	2.21	0.41
49:BR:60:LYS:O	49:BR:98:ILE:HA	2.20	0.41
50:BT:22:THR:HA	50:BT:25:GLU:HB3	2.03	0.41
1:CA:20:U:O2'	1:CA:21:G:H5'	2.21	0.41
1:CA:58:C:O2'	1:CA:59:A:H5'	2.21	0.41
1:CA:181:A:N6	1:CA:195:A:OP2	2.53	0.41
1:CA:202:G:HO2'	1:CA:468:A:H8	1.65	0.41
1:CA:250:A:H1'	1:CA:252:U:C5	2.56	0.41
1:CA:399:G:H2'	1:CA:400:C:H6	1.84	0.41
1:CA:518:C:OP2	1:CA:530:G:H1'	2.21	0.41
1:CA:643:C:H2'	1:CA:644:U:C6	2.55	0.41
1:CA:974:A:OP2	21:CN:80:ARG:NH1	2.53	0.41
1:CA:1321:U:H4'	12:CM:85:TYR:CE1	2.55	0.41
1:CA:1459:G:H2'	1:CA:1460:C:H6	1.85	0.41
3:CD:25:ARG:HE	3:CD:25:ARG:HB2	1.71	0.41
3:CD:144:ILE:CD1	3:CD:177:MET:HE3	2.48	0.41
7:CH:71:VAL:HG12	7:CH:72:GLU:N	2.36	0.41
7:CH:105:THR:C	7:CH:107:LYS:H	2.26	0.41
15:CR:45:GLY:O	15:CR:46:THR:C	2.63	0.41
15:CR:52:ARG:HH11	15:CR:52:ARG:HG3	1.86	0.41
17:CT:53:MET:HA	17:CT:56:ILE:CG1	2.50	0.41
2:CC:66:THR:HG22	2:CC:101:ASN:HD22	1.86	0.41
6:CG:77:ARG:O	6:CG:84:TYR:N	2.41	0.41
8:CI:42:THR:O	8:CI:43:ALA:C	2.63	0.41
21:CN:20:PHE:C	21:CN:24:ALA:HB2	2.46	0.41
18:CB:18:GLN:OE1	18:CB:189:ASN:OD1	2.39	0.41
18:CB:56:LEU:H	18:CB:56:LEU:HD12	1.85	0.41
23:DB:389:G:C8	23:DB:2413:G:H4'	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:636:G:N7	37:DL:109:LYS:NZ	2.67	0.41
23:DB:969:G:H2'	23:DB:970:U:H6	1.84	0.41
23:DB:1076:C:H2'	23:DB:1077:A:H8	1.85	0.41
23:DB:1176:U:H3'	23:DB:1177:G:O4'	2.20	0.41
23:DB:1361:G:H2'	23:DB:1362:C:H6	1.85	0.41
23:DB:1373:A:H4'	23:DB:2212:A:N3	2.36	0.41
23:DB:1649:G:O2'	23:DB:1650:A:H5'	2.21	0.41
23:DB:2266:A:H4'	23:DB:2267:A:O5'	2.21	0.41
23:DB:2314:A:H4'	47:DF:34:THR:HG21	2.02	0.41
23:DB:2315:G:H2'	23:DB:2316:G:H8	1.86	0.41
23:DB:2471:A:O2'	23:DB:2472:G:C5'	2.68	0.41
23:DB:2557:G:H2'	23:DB:2558:C:H6	1.84	0.41
23:DB:2569:G:C2	23:DB:2570:G:C8	3.09	0.41
23:DB:2734:A:H2'	23:DB:2735:G:C5'	2.49	0.41
23:DB:2742:G:P	32:D4:24:ARG:HH12	2.44	0.41
23:DB:2751:G:OP2	48:DG:2:ARG:HD2	2.21	0.41
24:DI:73:PRO:CG	24:DI:78:LEU:HD21	2.48	0.41
25:DC:65:ASP:O	25:DC:65:ASP:CG	2.62	0.41
25:DC:173:LEU:HD22	25:DC:181:ARG:O	2.20	0.41
25:DC:221:GLY:C	25:DC:223:ALA:N	2.79	0.41
26:DD:39:ASP:CG	26:DD:42:ASN:H	2.28	0.41
26:DD:61:THR:HG23	26:DD:64:GLU:OE2	2.21	0.41
29:DE:118:LEU:HA	29:DE:186:VAL:CG1	2.51	0.41
36:D2:3:ARG:HG2	36:D2:3:ARG:HH21	1.86	0.41
38:DM:31:PHE:HB3	38:DM:130:PHE:CE1	2.55	0.41
38:DM:31:PHE:CZ	38:DM:110:GLU:HB3	2.56	0.41
39:DX:56:LEU:C	39:DX:58:ASN:H	2.29	0.41
41:DJ:45:THR:N	41:DJ:46:PRO:CD	2.84	0.41
41:DJ:84:ILE:O	41:DJ:84:ILE:HG13	2.21	0.41
42:DN:31:HIS:C	42:DN:33:ILE:H	2.29	0.41
42:DN:43:GLU:C	42:DN:45:ARG:N	2.79	0.41
44:DQ:55:GLN:O	44:DQ:59:LEU:N	2.54	0.41
46:DU:50:ALA:H	46:DU:53:GLN:NE2	2.18	0.41
46:DU:73:ASN:HA	46:DU:95:PHE:CZ	2.56	0.41
47:DF:133:GLU:HA	47:DF:150:GLY:HA2	2.02	0.41
49:DR:70:GLU:N	49:DR:70:GLU:CD	2.78	0.41
51:DZ:18:ARG:HA	51:DZ:24:ALA:HA	2.03	0.41
51:DZ:19:SER:OG	51:DZ:23:ASN:HB2	2.20	0.41
1:AA:82:G:C6	1:AA:88:U:O2	2.74	0.40
1:AA:503:C:O2'	1:AA:504:C:H5'	2.20	0.40
1:AA:716:A:H2'	1:AA:717:U:H6	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:771:G:H2'	1:AA:772:U:C6	2.56	0.40
1:AA:815:A:H4'	1:AA:817:C:C4	2.56	0.40
1:AA:1237:C:C5'	1:AA:1238:A:H5'	2.51	0.40
1:AA:1239:A:H1'	1:AA:1241:G:C4	2.56	0.40
1:AA:1385:G:H5'	8:AI:129:ARG:NH2	2.36	0.40
5:AF:6:ILE:HD11	5:AF:8:PHE:CD2	2.45	0.40
5:AF:40:GLU:H	5:AF:61:LEU:HB2	1.86	0.40
6:AG:60:ALA:O	6:AG:63:VAL:HB	2.21	0.40
7:AH:9:MET:HA	7:AH:26:MET:HE1	2.03	0.40
11:AL:35:ARG:HA	11:AL:35:ARG:NH1	2.36	0.40
14:AQ:44:HIS:HB2	14:AQ:69:THR:O	2.21	0.40
14:AQ:65:PRO:HA	14:AQ:71:SER:OG	2.21	0.40
16:AS:14:LEU:HA	16:AS:17:LYS:NZ	2.36	0.40
17:AT:53:MET:HA	17:AT:56:ILE:HG13	2.03	0.40
18:AB:17:HIS:NE2	18:AB:18:GLN:NE2	2.69	0.40
18:AB:42:LEU:HA	18:AB:45:THR:CB	2.50	0.40
18:AB:184:ALA:O	18:AB:199:ILE:HB	2.21	0.40
20:AO:36:ILE:C	20:AO:38:HIS:N	2.76	0.40
20:AO:37:ASN:CA	20:AO:40:GLN:HE22	2.33	0.40
23:BB:195:A:H5"	37:BL:47:ARG:NH2	2.36	0.40
23:BB:321:U:H4'	29:BE:159:LEU:O	2.21	0.40
23:BB:527:C:N4	23:BB:2779:U:OP2	2.54	0.40
23:BB:705:A:O5'	23:BB:705:A:H8	2.03	0.40
23:BB:743:A:H2'	23:BB:744:U:C6	2.57	0.40
23:BB:769:U:H2'	23:BB:770:G:C8	2.56	0.40
23:BB:817:C:O2	23:BB:839:U:H4'	2.22	0.40
23:BB:845:A:H2'	23:BB:846:U:C5'	2.39	0.40
23:BB:1159:U:O2'	23:BB:1160:G:H5'	2.22	0.40
23:BB:1228:G:H2'	23:BB:1229:C:H6	1.86	0.40
23:BB:1829:A:H3'	23:BB:1830:C:H6	1.86	0.40
23:BB:2064:C:H1'	23:BB:2450:A:C5	2.56	0.40
23:BB:2219:U:O2'	23:BB:2220:U:H5'	2.21	0.40
23:BB:2329:U:H2'	23:BB:2330:G:H8	1.85	0.40
23:BB:2371:G:OP2	23:BB:2371:G:H8	2.04	0.40
23:BB:2383:G:H5'	23:BB:2383:G:H8	1.85	0.40
23:BB:2520:C:O2'	23:BB:2521:C:H5'	2.20	0.40
23:BB:2748:A:O2'	23:BB:2749:A:H5'	2.21	0.40
23:BB:2772:C:H2'	23:BB:2773:C:H6	1.85	0.40
23:BB:2896:C:H2'	23:BB:2897:U:H6	1.85	0.40
25:BC:93:VAL:CG1	25:BC:94:LEU:H	2.19	0.40
27:BK:111:LYS:N	27:BK:111:LYS:HD3	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BP:29:VAL:O	28:BP:40:GLN:N	2.51	0.40
29:BE:27:LEU:O	29:BE:28:VAL:C	2.64	0.40
29:BE:191:ASP:O	29:BE:194:LYS:HB3	2.21	0.40
30:BY:7:THR:CG2	30:BY:8:GLN:N	2.83	0.40
30:BY:46:MET:O	30:BY:49:ALA:HB3	2.21	0.40
37:BL:81:ASP:O	37:BL:82:LEU:HB2	2.21	0.40
39:BX:8:GLU:HB3	39:BX:12:GLU:CB	2.51	0.40
40:BH:7:ASP:CG	40:BH:8:LYS:H	2.29	0.40
40:BH:66:ASN:ND2	40:BH:66:ASN:C	2.77	0.40
40:BH:116:ARG:CZ	40:BH:116:ARG:HB2	2.50	0.40
40:BH:133:GLN:HE21	40:BH:139:PHE:HD2	1.67	0.40
42:BN:37:THR:HB	42:BN:40:LYS:HE2	2.03	0.40
43:BO:115:LEU:HD22	43:BO:115:LEU:N	2.35	0.40
44:BQ:91:ARG:HH12	49:BR:10:LYS:HB3	1.86	0.40
46:BU:1:ALA:HB1	46:BU:84:PHE:CZ	2.56	0.40
46:BU:18:LYS:O	46:BU:20:LYS:N	2.54	0.40
48:BG:17:LYS:HE3	48:BG:17:LYS:C	2.45	0.40
48:BG:69:ALA:O	48:BG:73:SER:N	2.52	0.40
48:BG:145:ALA:O	48:BG:146:ASP:C	2.64	0.40
49:BR:49:ILE:HG21	49:BR:54:VAL:HA	2.02	0.40
50:BT:69:ARG:HG2	50:BT:74:ILE:CA	2.51	0.40
51:BZ:32:ASN:HB3	51:BZ:34:HIS:HE2	1.86	0.40
1:CA:86:G:H1'	1:CA:87:C:C6	2.56	0.40
1:CA:279:A:H5"	1:CA:280:C:C3'	2.40	0.40
1:CA:684:U:H2'	1:CA:685:G:O4'	2.21	0.40
1:CA:769:G:O2'	1:CA:770:C:H5'	2.21	0.40
1:CA:1047:G:O3'	21:CN:3:GLN:HB3	2.21	0.40
1:CA:1315:U:H3'	1:CA:1316:G:H8	1.85	0.40
3:CD:110:ARG:HG3	3:CD:110:ARG:NH1	2.35	0.40
4:CE:148:SER:O	4:CE:151:MET:HB2	2.20	0.40
7:CH:66:GLN:C	7:CH:68:LYS:H	2.28	0.40
17:CT:50:PHE:HD2	17:CT:53:MET:HE2	1.86	0.40
19:CU:25:ALA:C	19:CU:27:VAL:H	2.29	0.40
2:CC:73:GLY:O	2:CC:77:GLY:N	2.51	0.40
9:CJ:7:ARG:NE	9:CJ:101:SER:HB3	2.34	0.40
16:CS:14:LEU:HD12	16:CS:15:LEU:N	2.36	0.40
23:DB:14:A:N6	23:DB:15:G:C2	2.90	0.40
23:DB:77:G:H5'	39:DX:52:ARG:HG2	2.03	0.40
23:DB:123:G:H4'	23:DB:1376:C:O5'	2.21	0.40
23:DB:146:A:H2'	23:DB:147:C:H6	1.84	0.40
23:DB:295:G:O2'	23:DB:296:U:H5'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:357:C:H2'	23:DB:358:U:H6	1.86	0.40
23:DB:454:A:H3'	23:DB:455:C:C5'	2.47	0.40
23:DB:523:C:O2'	23:DB:524:G:H5'	2.20	0.40
23:DB:812:C:H2'	23:DB:813:U:H6	1.85	0.40
23:DB:1098:A:O3'	24:DI:4:VAL:O	2.39	0.40
23:DB:1135:C:N4	23:DB:1139:G:C6	2.89	0.40
23:DB:1279:G:H2'	23:DB:1280:G:O4'	2.21	0.40
23:DB:1433:A:H2'	23:DB:1434:A:O4'	2.21	0.40
23:DB:2247:A:H3'	56:DB:3575:HOH:O	2.21	0.40
26:DD:202:ILE:HG22	26:DD:204:LYS:HZ1	1.86	0.40
29:DE:199:MET:C	29:DE:200:LEU:HD22	2.46	0.40
35:DV:2:PHE:CE2	35:DV:55:GLU:HB3	2.56	0.40
38:DM:31:PHE:O	38:DM:104:GLU:HA	2.21	0.40
38:DM:66:ARG:HB2	38:DM:101:VAL:HG13	2.04	0.40
39:DX:40:SER:C	39:DX:42:LEU:N	2.78	0.40
41:DJ:72:LYS:O	41:DJ:73:VAL:HG13	2.21	0.40
41:DJ:80:HIS:O	41:DJ:81:ILE:C	2.65	0.40
43:DO:89:ASP:H	43:DO:115:LEU:HA	1.86	0.40
48:DG:116:LEU:CD2	48:DG:122:ALA:H	2.34	0.40
48:DG:132:LEU:H	48:DG:132:LEU:CD2	2.27	0.40
50:DT:40:LYS:CA	50:DT:43:ILE:HG22	2.51	0.40
50:DT:89:GLU:C	50:DT:91:GLN:H	2.28	0.40
52:DW:75:ASN:O	52:DW:76:ARG:HB2	2.21	0.40
1:AA:17:U:H4'	1:AA:1080:A:O4'	2.20	0.40
1:AA:59:A:H1'	1:AA:354:G:N2	2.35	0.40
1:AA:279:A:H5"	1:AA:280:C:C3'	2.44	0.40
1:AA:366:A:H1'	1:AA:395:C:O2	2.21	0.40
1:AA:659:U:O2'	1:AA:660:C:H5'	2.21	0.40
1:AA:715:A:H8	1:AA:715:A:O5'	2.05	0.40
1:AA:1303:C:O2'	1:AA:1304:G:H5'	2.21	0.40
1:AA:1322:C:O2	1:AA:1322:C:O4'	2.36	0.40
1:AA:1426:G:H2'	1:AA:1427:C:O4'	2.21	0.40
2:AC:168:ARG:HE	2:AC:169:GLU:CA	2.34	0.40
2:AC:168:ARG:HG2	2:AC:169:GLU:H	1.86	0.40
3:AD:54:LEU:C	3:AD:54:LEU:HD13	2.46	0.40
3:AD:160:LEU:C	3:AD:162:GLU:H	2.27	0.40
4:AE:106:ALA:HB1	4:AE:110:MET:CB	2.50	0.40
5:AF:4:TYR:HA	5:AF:90:MET:O	2.21	0.40
6:AG:145:GLU:CA	6:AG:148:LYS:HB2	2.42	0.40
7:AH:10:LEU:O	7:AH:13:ILE:HB	2.21	0.40
8:AI:17:ARG:NH2	8:AI:65:THR:HG21	2.35	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:61:ASP:C	8:AI:62:LEU:HD22	2.47	0.40
8:AI:113:LYS:HD3	8:AI:113:LYS:C	2.45	0.40
8:AI:117:LEU:HD13	8:AI:121:ARG:O	2.21	0.40
12:AM:19:THR:HA	12:AM:24:VAL:CG2	2.48	0.40
18:AB:60:ALA:O	18:AB:224:ARG:HB3	2.21	0.40
18:AB:73:ARG:HB2	18:AB:73:ARG:CZ	2.51	0.40
18:AB:103:TRP:O	18:AB:104:LYS:C	2.63	0.40
18:AB:205:ALA:C	18:AB:207:ARG:N	2.79	0.40
19:AU:40:PRO:O	19:AU:44:ARG:HB2	2.21	0.40
21:AN:32:ASP:OD2	21:AN:33:VAL:N	2.54	0.40
21:AN:80:ARG:HG2	21:AN:80:ARG:HH11	1.86	0.40
22:BA:30:C:O2	22:BA:30:C:H2'	2.20	0.40
22:BA:63:C:H2'	22:BA:64:G:H8	1.87	0.40
23:BB:496:G:H4'	45:BS:61:ASN:OD1	2.20	0.40
23:BB:662:G:O2'	23:BB:663:G:H5'	2.20	0.40
23:BB:848:C:H2'	23:BB:849:A:H8	1.83	0.40
23:BB:853:C:H2'	23:BB:854:C:H6	1.86	0.40
23:BB:970:U:O2'	23:BB:984:A:H4'	2.21	0.40
23:BB:1019:U:H2'	23:BB:1020:A:H8	1.77	0.40
23:BB:1128:G:C6	23:BB:2518:A:N6	2.89	0.40
23:BB:1381:G:H1'	23:BB:1571:A:N1	2.36	0.40
23:BB:1463:C:H2'	23:BB:1464:G:C8	2.56	0.40
23:BB:1473:G:O2'	23:BB:1474:U:H5'	2.21	0.40
23:BB:1937:A:C8	23:BB:1939:U:H2'	2.55	0.40
23:BB:1997:C:O2'	23:BB:1998:A:H5'	2.20	0.40
23:BB:2155:U:H2'	23:BB:2156:G:C8	2.56	0.40
23:BB:2347:C:N3	23:BB:2371:G:N2	2.70	0.40
23:BB:2450:A:O2'	23:BB:2451:A:H5'	2.21	0.40
23:BB:2778:A:H4'	23:BB:2779:U:OP2	2.21	0.40
25:BC:93:VAL:HG12	25:BC:101:ARG:O	2.22	0.40
25:BC:171:VAL:HG23	25:BC:185:ALA:CB	2.52	0.40
26:BD:163:GLY:O	26:BD:164:GLN:C	2.63	0.40
27:BK:62:VAL:HG12	27:BK:63:VAL:H	1.86	0.40
28:BP:89:GLY:N	28:BP:112:ARG:NH1	2.68	0.40
29:BE:24:ASN:OD1	29:BE:27:LEU:HB2	2.21	0.40
29:BE:37:ALA:O	29:BE:39:ALA:N	2.47	0.40
34:B3:44:ARG:N	34:B3:45:PRO:CD	2.81	0.40
35:BV:35:GLU:HB2	35:BV:93:ARG:HD2	2.03	0.40
36:B2:22:MET:HG2	36:B2:31:LEU:CD1	2.51	0.40
37:BL:14:LYS:HB3	37:BL:14:LYS:HE3	1.96	0.40
38:BM:57:VAL:C	38:BM:58:LYS:HD2	2.46	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BM:63:ILE:HD12	38:BM:63:ILE:N	2.36	0.40
41:BJ:29:ALA:O	41:BJ:32:LEU:HB2	2.21	0.40
41:BJ:81:ILE:HG23	41:BJ:82:GLY:N	2.25	0.40
44:BQ:74:SER:O	44:BQ:75:TYR:C	2.64	0.40
45:BS:21:ALA:HB1	45:BS:74:ILE:HG12	2.03	0.40
47:BF:68:LYS:HD2	47:BF:68:LYS:N	2.36	0.40
47:BF:86:CYS:O	47:BF:88:VAL:HG23	2.22	0.40
47:BF:148:VAL:HG23	47:BF:149:ARG:N	2.36	0.40
48:BG:94:ARG:NH2	48:BG:104:LEU:HA	2.34	0.40
48:BG:153:PRO:HB3	48:BG:158:GLY:CA	2.46	0.40
49:BR:7:SER:HB2	49:BR:22:LEU:HD13	2.03	0.40
51:BZ:54:LYS:O	51:BZ:57:ARG:HB2	2.20	0.40
1:CA:123:U:H2'	1:CA:124:C:C6	2.56	0.40
1:CA:345:C:H3'	28:DP:38:ARG:NH1	2.36	0.40
1:CA:373:A:H2'	1:CA:374:A:C8	2.52	0.40
1:CA:505:G:C6	1:CA:535:A:C2	3.10	0.40
1:CA:647:C:H2'	1:CA:648:A:C8	2.57	0.40
1:CA:667:G:H2'	1:CA:668:G:C8	2.55	0.40
1:CA:909:A:H2	1:CA:1413:A:N3	2.20	0.40
1:CA:1011:C:H2'	1:CA:1012:A:H8	1.87	0.40
1:CA:1118:U:N3	1:CA:1156:G:N2	2.69	0.40
1:CA:1240:U:H3'	1:CA:1241:G:H5'	2.03	0.40
3:CD:144:ILE:HG22	3:CD:145:ARG:H	1.86	0.40
3:CD:171:GLU:HG3	3:CD:182:LYS:HD2	2.03	0.40
4:CE:152:VAL:CG1	4:CE:156:ARG:HE	2.35	0.40
7:CH:17:GLN:HE21	7:CH:62:LEU:HD23	1.86	0.40
11:CL:25:ALA:O	11:CL:26:CYS:C	2.63	0.40
11:CL:115:LYS:O	11:CL:116:TYR:HB2	2.21	0.40
13:CP:27:ALA:O	13:CP:28:ARG:C	2.65	0.40
2:CC:102:ILE:HD12	2:CC:102:ILE:N	2.37	0.40
2:CC:111:ASP:HA	2:CC:182:ASP:OD1	2.21	0.40
8:CI:100:ALA:C	8:CI:102:PHE:H	2.28	0.40
8:CI:108:ARG:H	8:CI:108:ARG:HG2	1.59	0.40
8:CI:117:LEU:HB3	8:CI:122:ARG:O	2.21	0.40
9:CJ:7:ARG:HH21	9:CJ:101:SER:CB	2.34	0.40
21:CN:80:ARG:HG2	21:CN:81:ILE:N	2.36	0.40
18:CB:58:LYS:HD3	18:CB:59:ILE:HG23	2.03	0.40
18:CB:218:ALA:HA	18:CB:221:ARG:NH2	2.35	0.40
23:DB:296:U:H2'	23:DB:297:G:H8	1.87	0.40
23:DB:724:U:O2'	23:DB:725:G:H5'	2.21	0.40
23:DB:732:C:H2'	23:DB:733:G:O4'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:780:G:H2'	23:DB:782:A:N7	2.36	0.40
23:DB:853:C:H2'	23:DB:854:C:H6	1.87	0.40
23:DB:1286:A:C6	23:DB:1329:U:C2	3.09	0.40
23:DB:1567:G:H5'	25:DC:84:PRO:HB3	2.04	0.40
23:DB:1848:A:H2'	23:DB:1849:G:C8	2.56	0.40
23:DB:2679:A:H2'	23:DB:2680:U:C6	2.57	0.40
23:DB:2850:A:O4'	23:DB:2868:A:H2	2.04	0.40
24:DI:63:ASP:O	24:DI:63:ASP:OD1	2.39	0.40
25:DC:29:PHE:CE2	25:DC:31:PRO:HG2	2.56	0.40
25:DC:100:ARG:H	25:DC:100:ARG:HG2	1.75	0.40
26:DD:8:LYS:HG2	26:DD:197:THR:N	2.36	0.40
26:DD:163:GLY:O	26:DD:164:GLN:C	2.64	0.40
27:DK:41:ILE:CG1	27:DK:42:THR:N	2.84	0.40
28:DP:19:PHE:CE2	28:DP:83:ILE:HD11	2.55	0.40
28:DP:99:LEU:HA	28:DP:102:ARG:HG3	2.02	0.40
29:DE:12:LEU:CD1	29:DE:14:VAL:HG13	2.51	0.40
29:DE:61:ARG:CZ	29:DE:61:ARG:HB3	2.51	0.40
29:DE:138:LEU:O	29:DE:142:ALA:N	2.54	0.40
29:DE:191:ASP:O	29:DE:194:LYS:HB3	2.22	0.40
33:D1:32:LYS:O	33:D1:34:GLU:HG3	2.21	0.40
35:DV:38:LEU:HD12	35:DV:39:ALA:N	2.36	0.40
35:DV:68:LYS:HD3	35:DV:68:LYS:N	2.34	0.40
36:D2:22:MET:HG2	36:D2:31:LEU:CD1	2.51	0.40
39:DX:6:LEU:HD22	39:DX:6:LEU:H	1.86	0.40
40:DH:2:GLN:O	40:DH:19:VAL:O	2.39	0.40
40:DH:6:LEU:O	40:DH:15:LEU:HD22	2.21	0.40
41:DJ:77:HIS:ND1	41:DJ:79:GLY:N	2.69	0.40
43:DO:93:ASP:C	43:DO:95:SER:N	2.78	0.40
48:DG:6:ALA:HA	48:DG:7:PRO:HD3	1.82	0.40
1:AA:230:G:O2'	1:AA:231:U:H5'	2.21	0.40
1:AA:238:A:H2'	1:AA:239:U:C5'	2.48	0.40
1:AA:277:C:H2'	1:AA:278:G:H8	1.86	0.40
1:AA:373:A:H2'	1:AA:374:A:C8	2.53	0.40
1:AA:1418:A:H61	1:AA:1482:G:H1'	1.85	0.40
3:AD:24:VAL:CG1	3:AD:160:LEU:HB3	2.51	0.40
8:AI:20:ILE:HG23	8:AI:60:LEU:HD12	2.04	0.40
8:AI:113:LYS:HA	8:AI:120:ALA:CA	2.51	0.40
10:AK:70:ALA:C	10:AK:72:ALA:N	2.74	0.40
11:AL:115:LYS:O	11:AL:116:TYR:HB2	2.21	0.40
12:AM:42:VAL:HB	12:AM:47:LEU:HD22	2.03	0.40
12:AM:61:LYS:HE2	12:AM:61:LYS:N	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:485:C:O2'	45:BS:60:HIS:NE2	2.53	0.40
23:BB:786:C:H5"	23:BB:1780:A:N7	2.36	0.40
23:BB:834:G:O2'	23:BB:835:C:H5'	2.20	0.40
23:BB:851:C:O4'	30:BY:46:MET:HG2	2.21	0.40
23:BB:860:U:O2'	23:BB:861:A:H5'	2.21	0.40
23:BB:866:A:H61	23:BB:913:U:C1'	2.34	0.40
23:BB:1029:A:O5'	23:BB:1029:A:H8	2.04	0.40
23:BB:1228:G:O2'	23:BB:1229:C:H5'	2.22	0.40
23:BB:1344:U:H5'	23:BB:1384:A:C6	2.57	0.40
23:BB:1729:U:C5	23:BB:1731:G:N2	2.88	0.40
23:BB:1827:U:C2'	23:BB:1828:G:H5'	2.52	0.40
23:BB:2032:G:N7	23:BB:2454:G:H1'	2.36	0.40
23:BB:2348:U:H1'	33:B1:38:PHE:HE2	1.86	0.40
23:BB:2410:G:H2'	23:BB:2411:A:C8	2.56	0.40
23:BB:2749:A:OP1	23:BB:2751:G:H5'	2.22	0.40
24:BI:27:LEU:HB2	24:BI:32:VAL:HG21	2.02	0.40
24:BI:49:GLU:OE1	24:BI:52:LEU:HD22	2.21	0.40
25:BC:38:LYS:HD2	25:BC:38:LYS:HA	1.95	0.40
25:BC:75:ALA:HB1	25:BC:93:VAL:HG22	2.03	0.40
25:BC:183:VAL:C	25:BC:185:ALA:H	2.29	0.40
26:BD:58:ASN:C	26:BD:60:VAL:H	2.29	0.40
27:BK:8:LEU:N	27:BK:8:LEU:HD12	2.36	0.40
29:BE:113:VAL:C	29:BE:115:GLN:N	2.79	0.40
29:BE:116:ASP:O	29:BE:117:ARG:C	2.65	0.40
33:B1:26:LYS:HG2	33:B1:52:LYS:HD2	2.04	0.40
35:BV:24:ASN:HB3	35:BV:44:HIS:HB3	2.03	0.40
35:BV:60:VAL:HG12	35:BV:61:LEU:N	2.36	0.40
39:BX:59:GLU:N	39:BX:59:GLU:CD	2.80	0.40
40:BH:2:GLN:O	40:BH:19:VAL:O	2.40	0.40
40:BH:96:THR:HB	40:BH:112:LYS:O	2.21	0.40
41:BJ:44:TYR:HB2	44:BQ:63:ARG:CD	2.52	0.40
42:BN:67:PHE:O	42:BN:68:ALA:C	2.64	0.40
43:BO:66:GLY:CA	43:BO:102:ARG:HH21	2.19	0.40
45:BS:9:HIS:H	45:BS:102:HIS:CE1	2.38	0.40
45:BS:35:ILE:O	45:BS:36:LEU:C	2.64	0.40
45:BS:49:LYS:HA	45:BS:52:GLU:HG2	2.02	0.40
45:BS:74:ILE:O	45:BS:75:PHE:HB3	2.22	0.40
47:BF:34:THR:OG1	47:BF:154:THR:N	2.53	0.40
47:BF:36:ASN:O	47:BF:86:CYS:O	2.38	0.40
47:BF:121:PHE:N	47:BF:121:PHE:CD2	2.89	0.40
48:BG:34:ARG:HH11	48:BG:34:ARG:HG2	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BR:47:VAL:O	49:BR:48:LYS:C	2.65	0.40
50:BT:31:VAL:O	50:BT:32:LEU:HB3	2.20	0.40
50:BT:74:ILE:HG13	50:BT:75:GLY:H	1.86	0.40
1:CA:123:U:OP1	1:CA:312:C:H5'	2.21	0.40
1:CA:620:C:C2	3:CD:131:ILE:HG21	2.57	0.40
1:CA:1096:C:H2'	1:CA:1097:C:H6	1.87	0.40
1:CA:1127:G:O2'	1:CA:1128:C:H5'	2.21	0.40
1:CA:1179:A:H2'	1:CA:1180:A:H8	1.87	0.40
1:CA:1238:A:N3	1:CA:1238:A:H2'	2.36	0.40
1:CA:1374:A:H1'	6:CG:30:MET:HE1	2.04	0.40
1:CA:1453:G:H3'	1:CA:1453:G:N3	2.37	0.40
3:CD:143:SER:OG	3:CD:144:ILE:N	2.54	0.40
3:CD:152:SER:CA	3:CD:155:LYS:HD3	2.36	0.40
4:CE:9:GLU:O	4:CE:40:ASP:HA	2.22	0.40
7:CH:68:LYS:HG3	7:CH:69:ALA:O	2.21	0.40
11:CL:49:ARG:CG	11:CL:89:LEU:HD21	2.49	0.40
13:CP:22:ALA:CB	13:CP:32:PHE:HA	2.51	0.40
13:CP:70:ARG:O	13:CP:73:ALA:HB3	2.22	0.40
2:CC:33:ASP:O	2:CC:36:PHE:HB3	2.21	0.40
6:CG:105:GLU:HB3	6:CG:136:LYS:HZ1	1.86	0.40
8:CI:44:ARG:O	8:CI:48:ARG:HG3	2.21	0.40
9:CJ:8:ILE:O	9:CJ:8:ILE:HG22	2.21	0.40
9:CJ:57:VAL:HG22	9:CJ:58:ASN:N	2.28	0.40
12:CM:3:ILE:C	12:CM:5:GLY:H	2.29	0.40
16:CS:39:ILE:HG21	16:CS:65:MET:O	2.21	0.40
18:CB:26:MET:HE1	18:CB:186:VAL:HG23	2.03	0.40
18:CB:150:ILE:HG13	18:CB:153:MET:HE3	2.03	0.40
20:CO:28:GLN:O	20:CO:29:VAL:C	2.64	0.40
20:CO:47:LYS:O	20:CO:49:ASP:N	2.54	0.40
23:DB:245:G:H2'	23:DB:246:C:H6	1.86	0.40
23:DB:296:U:H2'	23:DB:297:G:C8	2.57	0.40
23:DB:476:G:H4'	23:DB:502:A:H61	1.86	0.40
23:DB:621:A:H2'	23:DB:622:G:O4'	2.22	0.40
23:DB:636:G:H5'	23:DB:639:U:OP1	2.22	0.40
23:DB:674:G:O3'	29:DE:60:TRP:HZ2	2.04	0.40
23:DB:1146:C:H2'	23:DB:1147:A:C8	2.57	0.40
23:DB:1197:G:H5'	23:DB:1227:G:O2'	2.22	0.40
23:DB:1346:G:C6	23:DB:1601:G:C6	3.09	0.40
23:DB:1523:U:H5"	23:DB:1524:G:H8	1.87	0.40
23:DB:1657:U:C2'	23:DB:1658:C:H5'	2.51	0.40
23:DB:1678:A:H2'	23:DB:1679:A:H8	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2109:U:O2'	23:DB:2110:G:H5'	2.21	0.40
23:DB:2472:G:C8	23:DB:2475:C:N4	2.89	0.40
23:DB:2560:A:H2'	23:DB:2561:U:C6	2.56	0.40
23:DB:2699:C:H2'	23:DB:2700:A:C8	2.56	0.40
23:DB:2746:U:H5"	48:DG:137:LYS:HB3	2.04	0.40
23:DB:2800:A:N3	23:DB:2801:G:H1'	2.37	0.40
23:DB:2822:G:O5'	23:DB:2822:G:H8	2.05	0.40
24:DI:121:ILE:HA	24:DI:124:MET:HE3	2.03	0.40
26:DD:141:ARG:O	26:DD:141:ARG:HG3	2.21	0.40
27:DK:47:ILE:CG1	27:DK:48:PRO:HD2	2.36	0.40
27:DK:53:LYS:HB2	27:DK:54:LYS:HD2	2.03	0.40
29:DE:27:LEU:O	29:DE:28:VAL:C	2.65	0.40
29:DE:107:SER:C	29:DE:109:LEU:N	2.78	0.40
32:D4:15:LYS:O	32:D4:16:ILE:CB	2.69	0.40
36:D2:8:SER:O	36:D2:9:VAL:C	2.64	0.40
37:DL:81:ASP:O	37:DL:82:LEU:HB2	2.21	0.40
37:DL:89:VAL:O	37:DL:91:ASP:N	2.55	0.40
38:DM:10:ARG:HG3	38:DM:10:ARG:NH2	2.36	0.40
38:DM:53:MET:HE1	38:DM:103:TYR:CG	2.56	0.40
38:DM:111:GLU:HA	38:DM:114:ARG:NH2	2.35	0.40
38:DM:116:ALA:HA	38:DM:119:LEU:HD12	2.03	0.40
39:DX:2:LYS:O	39:DX:5:GLU:HG2	2.21	0.40
39:DX:18:LEU:C	39:DX:18:LEU:HD13	2.45	0.40
40:DH:28:ASN:HD22	40:DH:28:ASN:HA	1.61	0.40
41:DJ:28:LEU:HD23	41:DJ:29:ALA:H	1.86	0.40
50:DT:15:HIS:O	50:DT:16:VAL:C	2.63	0.40
50:DT:31:VAL:O	50:DT:32:LEU:HB3	2.21	0.40
52:DW:70:VAL:HG22	52:DW:70:VAL:O	2.21	0.40
1:AA:35:G:H2'	1:AA:36:C:C6	2.56	0.40
1:AA:57:G:N2	1:AA:388:G:C6	2.89	0.40
1:AA:419:C:O2'	1:AA:420:U:H5'	2.21	0.40
1:AA:570:G:H1'	1:AA:820:U:C4	2.56	0.40
1:AA:588:G:H2'	1:AA:588:G:N3	2.36	0.40
1:AA:923:A:H8	1:AA:923:A:O5'	2.05	0.40
1:AA:931:C:H2'	1:AA:932:C:C6	2.57	0.40
1:AA:957:U:H3	1:AA:960:U:H5"	1.87	0.40
1:AA:957:U:N3	1:AA:960:U:OP2	2.52	0.40
1:AA:1041:G:H2'	1:AA:1042:A:O4'	2.22	0.40
1:AA:1349:A:OP1	8:AI:121:ARG:HB2	2.22	0.40
2:AC:48:LYS:H	2:AC:48:LYS:CD	2.34	0.40
2:AC:109:GLU:O	2:AC:140:ALA:HA	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:137:VAL:HA	2:AC:148:ILE:CD1	2.51	0.40
2:AC:182:ASP:O	2:AC:201:ILE:N	2.54	0.40
2:AC:194:VAL:CG1	2:AC:195:ILE:N	2.84	0.40
3:AD:24:VAL:HG23	3:AD:25:ARG:N	2.36	0.40
4:AE:37:VAL:HG12	4:AE:47:PHE:CB	2.51	0.40
5:AF:85:ILE:HG22	5:AF:86:ARG:H	1.87	0.40
6:AG:138:GLU:C	6:AG:140:VAL:N	2.78	0.40
8:AI:5:TYR:O	8:AI:19:PHE:HA	2.21	0.40
8:AI:46:VAL:HA	8:AI:49:GLN:CD	2.46	0.40
12:AM:50:GLY:C	12:AM:52:ILE:H	2.29	0.40
13:AP:36:VAL:O	13:AP:36:VAL:HG13	2.19	0.40
13:AP:39:PHE:CG	13:AP:40:ASN:N	2.89	0.40
13:AP:71:VAL:HA	13:AP:74:LEU:HG	2.02	0.40
17:AT:24:ARG:HG3	17:AT:65:LEU:HD21	2.04	0.40
18:AB:45:THR:HG23	18:AB:200:PRO:O	2.21	0.40
18:AB:61:SER:C	18:AB:62:ARG:HD2	2.47	0.40
21:AN:92:ILE:HG21	21:AN:95:LEU:CD2	2.52	0.40
22:BA:65:U:C2'	22:BA:66:A:H5'	2.52	0.40
23:BB:479:A:O2'	23:BB:481:G:H5'	2.20	0.40
23:BB:744:U:H2'	23:BB:745:G:C8	2.56	0.40
23:BB:856:G:H2'	23:BB:857:G:C8	2.57	0.40
23:BB:1068:G:C6	23:BB:1069:A:N6	2.89	0.40
23:BB:1301:A:N3	23:BB:1301:A:H2'	2.35	0.40
23:BB:1759:A:N3	23:BB:1759:A:H2'	2.37	0.40
23:BB:1942:C:O5'	23:BB:1942:C:H6	2.04	0.40
23:BB:2025:C:H2'	23:BB:2026:U:C6	2.57	0.40
23:BB:2389:G:H5"	23:BB:2390:U:O4'	2.21	0.40
23:BB:2419:U:H2'	23:BB:2420:C:C6	2.57	0.40
23:BB:2651:C:H2'	23:BB:2652:C:H6	1.87	0.40
23:BB:2821:A:OP2	23:BB:2822:G:OP2	2.40	0.40
25:BC:129:LEU:HB3	25:BC:134:ILE:CG2	2.52	0.40
26:BD:56:LYS:C	26:BD:58:ASN:N	2.77	0.40
26:BD:90:PHE:N	26:BD:94:GLN:OE1	2.53	0.40
26:BD:191:GLY:O	26:BD:192:ALA:HB3	2.22	0.40
29:BE:61:ARG:CZ	29:BE:61:ARG:HB3	2.52	0.40
30:BY:8:GLN:HB3	30:BY:31:ILE:C	2.47	0.40
31:B0:48:TYR:C	31:B0:48:TYR:CD2	2.97	0.40
32:B4:15:LYS:O	32:B4:16:ILE:CB	2.69	0.40
32:B4:25:VAL:O	32:B4:26:ILE:HD13	2.21	0.40
34:B3:30:HIS:C	34:B3:31:ILE:CG2	2.94	0.40
34:B3:57:VAL:C	34:B3:59:ALA:N	2.79	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BN:60:VAL:O	42:BN:60:VAL:HG12	2.21	0.40
42:BN:114:GLU:HG2	42:BN:115:LEU:O	2.21	0.40
44:BQ:48:ASP:OD2	44:BQ:48:ASP:N	2.53	0.40
46:BU:38:ILE:H	46:BU:61:GLU:CD	2.28	0.40
48:BG:29:ASN:HD22	48:BG:30:GLY:N	2.19	0.40
49:BR:14:VAL:HA	49:BR:18:GLN:CD	2.46	0.40
51:BZ:5:CYS:CB	51:BZ:10:LYS:N	2.85	0.40
51:BZ:21:ALA:HB3	51:BZ:23:ASN:HD21	1.85	0.40
52:BW:77:LYS:HA	52:BW:77:LYS:HD3	1.84	0.40
1:CA:143:A:O3'	1:CA:144:G:H8	2.04	0.40
1:CA:479:U:O2'	1:CA:480:U:H5'	2.22	0.40
1:CA:592:G:O2'	1:CA:593:U:H5'	2.21	0.40
1:CA:723:U:H3'	1:CA:724:G:C5'	2.52	0.40
1:CA:808:C:O2'	1:CA:809:G:H5'	2.21	0.40
1:CA:844:G:H2'	1:CA:845:A:C8	2.47	0.40
1:CA:928:G:H2'	1:CA:929:G:C8	2.56	0.40
1:CA:1011:C:H2'	1:CA:1012:A:C8	2.56	0.40
1:CA:1085:U:H3'	1:CA:1086:U:C5	2.56	0.40
1:CA:1096:C:H2'	1:CA:1097:C:C6	2.56	0.40
1:CA:1098:C:H2'	1:CA:1099:G:O4'	2.22	0.40
1:CA:1128:C:H4'	1:CA:1148:U:C2	2.57	0.40
1:CA:1176:A:H2'	1:CA:1177:G:C8	2.56	0.40
1:CA:1332:A:H2'	1:CA:1333:A:O4'	2.21	0.40
1:CA:1518:A:H2'	1:CA:1519:A:C8	2.57	0.40
1:CA:1533:C:O2	1:CA:1533:C:H2'	2.22	0.40
3:CD:139:ASN:N	3:CD:181:PHE:O	2.53	0.40
5:CF:3:HIS:CE1	5:CF:94:HIS:HA	2.56	0.40
5:CF:29:ILE:HG21	5:CF:64:VAL:CG1	2.49	0.40
10:CK:60:PHE:CZ	6:CG:146:ALA:HB1	2.56	0.40
17:CT:2:ASN:HD22	17:CT:3:ILE:HG13	1.86	0.40
17:CT:50:PHE:O	17:CT:53:MET:HG3	2.22	0.40
17:CT:69:ASN:O	17:CT:70:LYS:C	2.64	0.40
2:CC:111:ASP:C	2:CC:115:VAL:HG23	2.45	0.40
2:CC:148:ILE:HA	2:CC:200:TRP:O	2.22	0.40
6:CG:15:PRO:HG2	6:CG:43:TYR:OH	2.21	0.40
12:CM:12:LYS:HD3	12:CM:12:LYS:HA	1.90	0.40
21:CN:66:THR:HG23	21:CN:82:LYS:NZ	2.37	0.40
21:CN:79:SER:O	21:CN:80:ARG:C	2.65	0.40
16:CS:51:HIS:CA	16:CS:56:HIS:HA	2.39	0.40
18:CB:17:HIS:CG	18:CB:18:GLN:N	2.89	0.40
20:CO:26:GLU:CD	20:CO:77:ARG:HD2	2.46	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:13:G:N2	22:DA:16:G:N3	2.69	0.40
22:DA:65:U:C2'	22:DA:66:A:H5'	2.52	0.40
23:DB:379:G:N1	23:DB:396:G:C6	2.90	0.40
23:DB:441:U:O2'	23:DB:442:G:H5'	2.22	0.40
23:DB:458:G:O2'	23:DB:459:U:P	2.79	0.40
23:DB:635:C:H2'	23:DB:636:G:H8	1.86	0.40
23:DB:727:A:O2'	23:DB:728:G:H5'	2.21	0.40
23:DB:817:C:O2'	23:DB:839:U:H5"	2.22	0.40
23:DB:1061:U:O4	24:DI:11:GLN:HG3	2.22	0.40
23:DB:1435:G:H2'	23:DB:1436:G:C8	2.56	0.40
23:DB:1794:A:O2'	23:DB:1795:C:H5'	2.22	0.40
23:DB:1869:G:N2	23:DB:1871:A:C8	2.90	0.40
23:DB:1956:U:O2'	23:DB:1957:C:H5'	2.22	0.40
23:DB:2285:C:H4'	23:DB:2288:A:N6	2.36	0.40
23:DB:2294:G:P	43:DO:94:ARG:NH1	2.94	0.40
23:DB:2320:U:O2'	23:DB:2322:A:N7	2.48	0.40
23:DB:2330:G:N3	52:DW:38:ARG:HB3	2.37	0.40
23:DB:2469:A:C2	23:DB:2482:A:H1'	2.57	0.40
25:DC:4:LYS:CG	25:DC:5:CYS:H	2.32	0.40
26:DD:97:SER:C	26:DD:99:GLU:N	2.78	0.40
28:DP:85:VAL:O	28:DP:87:ARG:N	2.55	0.40
29:DE:153:LEU:HD12	29:DE:154:ASP:N	2.37	0.40
32:D4:30:GLU:HA	32:D4:31:PRO:HD3	1.89	0.40
33:D1:12:SER:C	33:D1:14:ALA:N	2.79	0.40
34:D3:7:ARG:HA	34:D3:7:ARG:HD2	1.89	0.40
35:DV:51:GLN:HA	35:DV:56:PHE:CD2	2.56	0.40
37:DL:111:ILE:CG2	37:DL:112:LEU:H	2.28	0.40
39:DX:17:GLU:O	39:DX:20:ASN:HB2	2.22	0.40
39:DX:28:LEU:HD22	39:DX:37:LEU:HD11	2.02	0.40
40:DH:113:SER:HB3	40:DH:114:GLU:H	1.66	0.40
42:DN:87:PHE:HZ	42:DN:115:LEU:HB3	1.87	0.40
42:DN:119:SER:O	42:DN:120:GLU:HB2	2.21	0.40
44:DQ:35:PHE:O	44:DQ:36:GLN:C	2.64	0.40
44:DQ:49:ARG:O	44:DQ:53:LYS:HE2	2.21	0.40
44:DQ:59:LEU:O	44:DQ:59:LEU:HD22	2.21	0.40
46:DU:33:VAL:O	46:DU:63:ALA:HB1	2.22	0.40
49:DR:47:VAL:HG12	49:DR:47:VAL:O	2.22	0.40
1:AA:20:U:O2'	1:AA:21:G:H5'	2.21	0.40
1:AA:341:C:O2'	1:AA:342:C:H5'	2.22	0.40
1:AA:628:G:O2'	1:AA:629:A:H5'	2.21	0.40
1:AA:1171:A:O2'	1:AA:1172:C:H5'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1346:A:N7	6:AG:9:ARG:NH2	2.70	0.40
1:AA:1479:C:H2'	1:AA:1480:A:H8	1.87	0.40
4:AE:46:GLY:HA3	4:AE:70:MET:HG2	2.03	0.40
4:AE:61:LYS:O	4:AE:65:LYS:HG2	2.21	0.40
4:AE:148:SER:HB2	4:AE:150:GLU:OE2	2.21	0.40
4:AE:152:VAL:CG1	4:AE:156:ARG:HE	2.33	0.40
5:AF:39:LEU:C	5:AF:39:LEU:HD13	2.47	0.40
5:AF:81:ASN:O	5:AF:83:ALA:N	2.55	0.40
8:AI:20:ILE:HG13	8:AI:62:LEU:CD1	2.48	0.40
12:AM:13:HIS:H	12:AM:16:ILE:CG2	2.34	0.40
13:AP:54:LEU:O	13:AP:55:ASP:C	2.64	0.40
15:AR:19:GLU:HG3	15:AR:54:LEU:HD12	2.02	0.40
15:AR:55:ALA:O	15:AR:58:ILE:HB	2.21	0.40
16:AS:48:ILE:HG22	16:AS:49:ALA:N	2.36	0.40
18:AB:14:HIS:O	18:AB:15:PHE:C	2.64	0.40
20:AO:33:THR:O	20:AO:34:ALA:C	2.65	0.40
22:BA:54:G:C2	47:BF:25:MET:HE3	2.55	0.40
23:BB:104:A:H2'	23:BB:105:C:C6	2.56	0.40
23:BB:192:C:H2'	23:BB:193:U:H5'	2.04	0.40
23:BB:350:G:H2'	23:BB:351:C:O4'	2.22	0.40
23:BB:458:G:O2'	23:BB:459:U:P	2.80	0.40
23:BB:648:G:O2'	23:BB:649:G:H5'	2.22	0.40
23:BB:871:U:H4'	38:BM:68:PHE:CE2	2.57	0.40
23:BB:927:A:H2'	23:BB:928:A:O4'	2.22	0.40
23:BB:948:C:H1'	23:BB:984:A:N3	2.37	0.40
23:BB:1050:A:C2	23:BB:1051:G:H1'	2.56	0.40
23:BB:1062:G:H2'	23:BB:1063:G:H8	1.85	0.40
23:BB:1198:U:O2'	44:BQ:3:VAL:HG13	2.22	0.40
23:BB:1251:C:OP2	44:BQ:9:ALA:HB2	2.22	0.40
23:BB:1341:G:H3'	23:BB:1397:U:O2	2.22	0.40
23:BB:1589:U:H2'	23:BB:1590:A:H8	1.85	0.40
23:BB:1592:C:H2'	23:BB:1593:A:H8	1.87	0.40
23:BB:1900:A:N1	23:BB:1970:A:C6	2.90	0.40
23:BB:1987:A:H2'	23:BB:1988:G:C8	2.56	0.40
23:BB:2357:G:H22	23:BB:2359:C:H3'	1.86	0.40
23:BB:2773:C:H5"	26:BD:169:ARG:CB	2.49	0.40
23:BB:2850:A:O4'	23:BB:2868:A:H2	2.05	0.40
25:BC:237:ARG:O	25:BC:238:ASN:HB2	2.22	0.40
25:BC:251:THR:C	25:BC:252:LYS:HD2	2.47	0.40
26:BD:146:ILE:HG13	26:BD:147:GLY:H	1.86	0.40
27:BK:43:ILE:HG22	27:BK:46:ALA:HB2	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BP:104:GLY:O	28:BP:106:ALA:N	2.55	0.40
29:BE:31:VAL:HG21	29:BE:104:ALA:HB2	2.04	0.40
29:BE:98:LYS:CE	29:BE:99:LYS:HG2	2.51	0.40
29:BE:153:LEU:HD12	29:BE:154:ASP:N	2.36	0.40
30:BY:9:THR:HB	30:BY:10:ARG:H	1.78	0.40
32:B4:16:ILE:CG1	32:B4:25:VAL:HG22	2.51	0.40
37:BL:90:VAL:HB	37:BL:122:VAL:CG1	2.47	0.40
37:BL:91:ASP:HB2	37:BL:94:THR:HG23	2.03	0.40
37:BL:121:THR:CG2	37:BL:141:LYS:HB3	2.52	0.40
39:BX:27:ASN:HD22	39:BX:27:ASN:HA	1.68	0.40
40:BH:62:LEU:HD13	40:BH:66:ASN:HB3	2.04	0.40
41:BJ:88:THR:HG23	41:BJ:91:GLU:HB2	2.03	0.40
41:BJ:97:PRO:O	41:BJ:98:GLU:C	2.64	0.40
41:BJ:101:ILE:O	41:BJ:104:ALA:HB3	2.21	0.40
43:BO:100:HIS:HA	43:BO:104:GLN:HG3	2.03	0.40
44:BQ:35:PHE:O	44:BQ:36:GLN:C	2.63	0.40
44:BQ:87:VAL:HG12	44:BQ:88:GLU:N	2.36	0.40
45:BS:89:ALA:O	45:BS:90:LYS:HB2	2.22	0.40
47:BF:11:VAL:O	47:BF:13:LYS:N	2.54	0.40
48:BG:97:VAL:CB	48:BG:124:CYS:HB2	2.52	0.40
50:BT:2:ILE:N	50:BT:2:ILE:HD13	2.36	0.40
51:BZ:53:ALA:O	51:BZ:55:GLY:N	2.46	0.40
1:CA:54:C:H2'	1:CA:352:C:H41	1.86	0.40
1:CA:389:A:N3	1:CA:389:A:H2'	2.36	0.40
1:CA:529:G:O6	11:CL:45:ASN:HA	2.22	0.40
1:CA:573:A:H2'	1:CA:574:A:C8	2.57	0.40
1:CA:659:U:O2'	1:CA:660:C:H5'	2.22	0.40
1:CA:1015:G:H2'	1:CA:1016:A:C8	2.56	0.40
1:CA:1258:G:N3	1:CA:1278:G:N2	2.70	0.40
1:CA:1261:A:N7	1:CA:1274:A:H2	2.20	0.40
1:CA:1456:A:H2'	1:CA:1457:G:O4'	2.21	0.40
3:CD:24:VAL:CG1	3:CD:160:LEU:HB3	2.51	0.40
5:CF:89:VAL:O	5:CF:89:VAL:HG13	2.21	0.40
10:CK:126:ARG:HE	10:CK:126:ARG:CA	2.34	0.40
15:CR:34:GLU:OE1	15:CR:34:GLU:N	2.50	0.40
17:CT:61:ALA:CA	17:CT:67:HIS:H	2.34	0.40
8:CI:41:GLU:O	8:CI:42:THR:C	2.63	0.40
12:CM:29:SER:CA	12:CM:32:ILE:HG22	2.43	0.40
21:CN:63:CYS:SG	21:CN:64:ARG:N	2.95	0.40
16:CS:77:ARG:HB2	16:CS:78:THR:H	1.77	0.40
18:CB:67:LEU:HD23	18:CB:89:PHE:C	2.46	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CB:97:GLY:HA2	18:CB:174:GLU:OE2	2.22	0.40
23:DB:138:U:O2'	23:DB:140:C:C5'	2.70	0.40
23:DB:179:C:H2'	23:DB:180:G:O4'	2.22	0.40
23:DB:216:A:H2'	23:DB:217:A:C8	2.55	0.40
23:DB:616:A:H4'	29:DE:101:TYR:OH	2.21	0.40
23:DB:695:G:C6	23:DB:768:G:C6	3.10	0.40
23:DB:714:U:H3	23:DB:716:A:H3'	1.86	0.40
23:DB:876:C:H5'	23:DB:877:A:O5'	2.21	0.40
23:DB:1060:U:O4	24:DI:131:THR:HG22	2.20	0.40
23:DB:1104:C:H6	23:DB:1104:C:O5'	2.04	0.40
23:DB:1147:A:O2'	23:DB:1148:U:H5'	2.21	0.40
23:DB:1292:G:H2'	23:DB:1293:C:H6	1.86	0.40
23:DB:1662:U:O2	23:DB:2687:U:H4'	2.21	0.40
23:DB:2222:C:H4'	25:DC:184:GLU:OE2	2.22	0.40
23:DB:2606:C:O2'	23:DB:2607:G:H5'	2.21	0.40
23:DB:2758:A:O2'	23:DB:2759:G:H5'	2.22	0.40
23:DB:2772:C:H2'	23:DB:2773:C:H6	1.87	0.40
27:DK:25:LEU:HD12	27:DK:38:ILE:HB	2.03	0.40
29:DE:11:ALA:O	29:DE:12:LEU:HB2	2.21	0.40
32:D4:25:VAL:O	32:D4:26:ILE:HD13	2.22	0.40
32:D4:27:CYS:HB3	32:D4:33:HIS:HB2	2.03	0.40
34:D3:30:HIS:C	34:D3:31:ILE:CG2	2.94	0.40
35:DV:50:MET:C	35:DV:52:ALA:H	2.27	0.40
35:DV:75:GLN:CB	35:DV:90:ASP:HB2	2.52	0.40
38:DM:57:VAL:C	38:DM:58:LYS:HD2	2.47	0.40
39:DX:9:LYS:O	39:DX:10:SER:C	2.65	0.40
39:DX:22:LEU:HD23	39:DX:22:LEU:O	2.22	0.40
39:DX:23:ARG:HD2	39:DX:27:ASN:CG	2.46	0.40
44:DQ:108:LEU:HG	49:DR:48:LYS:HG2	2.02	0.40
45:DS:77:ASP:O	45:DS:78:GLU:C	2.63	0.40
46:DU:18:LYS:O	46:DU:20:LYS:N	2.54	0.40
47:DF:119:LYS:HA	47:DF:121:PHE:CE2	2.55	0.40
47:DF:121:PHE:CD2	47:DF:121:PHE:N	2.89	0.40
49:DR:60:LYS:O	49:DR:98:ILE:HA	2.21	0.40
50:DT:32:LEU:H	50:DT:83:ALA:CB	2.34	0.40
50:DT:74:ILE:HG13	50:DT:75:GLY:H	1.87	0.40
50:DT:87:LEU:O	50:DT:88:LYS:O	2.39	0.40
52:DW:61:LYS:HB3	52:DW:62:ALA:H	1.49	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%)	112 (55%)	56 (28%)	36 (18%)	0 2
2	CC	204/232 (88%)	134 (66%)	48 (24%)	22 (11%)	0 6
3	AD	203/205 (99%)	133 (66%)	58 (29%)	12 (6%)	1 16
3	CD	203/205 (99%)	132 (65%)	58 (29%)	13 (6%)	1 15
4	AE	148/166 (89%)	109 (74%)	30 (20%)	9 (6%)	1 16
4	CE	148/166 (89%)	108 (73%)	31 (21%)	9 (6%)	1 16
5	AF	98/135 (73%)	62 (63%)	27 (28%)	9 (9%)	0 10
5	CF	98/135 (73%)	64 (65%)	25 (26%)	9 (9%)	0 10
6	AG	148/178 (83%)	98 (66%)	44 (30%)	6 (4%)	2 21
6	CG	150/178 (84%)	101 (67%)	36 (24%)	13 (9%)	0 10
7	AH	127/129 (98%)	86 (68%)	35 (28%)	6 (5%)	2 19
7	CH	127/129 (98%)	85 (67%)	36 (28%)	6 (5%)	2 19
8	AI	125/129 (97%)	84 (67%)	25 (20%)	16 (13%)	0 4
8	CI	125/129 (97%)	89 (71%)	30 (24%)	6 (5%)	2 19
9	AJ	96/103 (93%)	61 (64%)	18 (19%)	17 (18%)	0 2
9	CJ	96/103 (93%)	62 (65%)	21 (22%)	13 (14%)	0 3
10	AK	115/128 (90%)	85 (74%)	26 (23%)	4 (4%)	3 23
10	CK	115/128 (90%)	84 (73%)	25 (22%)	6 (5%)	1 18
11	AL	121/123 (98%)	71 (59%)	34 (28%)	16 (13%)	0 3
11	CL	121/123 (98%)	72 (60%)	33 (27%)	16 (13%)	0 3
12	AM	112/117 (96%)	69 (62%)	36 (32%)	7 (6%)	1 15
12	CM	111/117 (95%)	77 (69%)	23 (21%)	11 (10%)	0 8
13	AP	80/82 (98%)	53 (66%)	18 (22%)	9 (11%)	0 5
13	CP	78/82 (95%)	53 (68%)	19 (24%)	6 (8%)	1 12
14	AQ	78/83 (94%)	61 (78%)	14 (18%)	3 (4%)	2 22

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
14	CQ	79/83 (95%)	62 (78%)	15 (19%)	2 (2%)	4 29
15	AR	53/74 (72%)	33 (62%)	17 (32%)	3 (6%)	1 17
15	CR	53/74 (72%)	33 (62%)	16 (30%)	4 (8%)	1 13
16	AS	77/91 (85%)	49 (64%)	21 (27%)	7 (9%)	0 10
16	CS	78/91 (86%)	51 (65%)	20 (26%)	7 (9%)	0 10
17	AT	83/86 (96%)	62 (75%)	16 (19%)	5 (6%)	1 16
17	CT	83/86 (96%)	63 (76%)	14 (17%)	6 (7%)	1 14
18	AB	216/240 (90%)	140 (65%)	53 (24%)	23 (11%)	0 6
18	CB	216/240 (90%)	135 (62%)	59 (27%)	22 (10%)	0 8
19	AU	49/70 (70%)	29 (59%)	13 (26%)	7 (14%)	0 3
19	CU	49/70 (70%)	29 (59%)	15 (31%)	5 (10%)	0 8
20	AO	86/89 (97%)	55 (64%)	24 (28%)	7 (8%)	1 11
20	CO	86/89 (97%)	50 (58%)	29 (34%)	7 (8%)	1 11
21	AN	92/100 (92%)	54 (59%)	29 (32%)	9 (10%)	0 8
21	CN	92/100 (92%)	45 (49%)	31 (34%)	16 (17%)	0 2
24	BI	139/141 (99%)	118 (85%)	16 (12%)	5 (4%)	2 23
24	DI	139/141 (99%)	115 (83%)	19 (14%)	5 (4%)	2 23
25	BC	269/272 (99%)	149 (55%)	68 (25%)	52 (19%)	0 1
25	DC	269/272 (99%)	147 (55%)	70 (26%)	52 (19%)	0 1
26	BD	207/209 (99%)	113 (55%)	58 (28%)	36 (17%)	0 2
26	DD	207/209 (99%)	114 (55%)	58 (28%)	35 (17%)	0 2
27	BK	119/123 (97%)	73 (61%)	24 (20%)	22 (18%)	0 2
27	DK	119/123 (97%)	73 (61%)	25 (21%)	21 (18%)	0 2
28	BP	112/114 (98%)	67 (60%)	28 (25%)	17 (15%)	0 3
28	DP	112/114 (98%)	66 (59%)	31 (28%)	15 (13%)	0 3
29	BE	199/201 (99%)	120 (60%)	49 (25%)	30 (15%)	0 3
29	DE	199/201 (99%)	123 (62%)	47 (24%)	29 (15%)	0 3
30	BY	56/58 (97%)	36 (64%)	16 (29%)	4 (7%)	1 14
30	DY	56/58 (97%)	36 (64%)	14 (25%)	6 (11%)	0 6
31	B0	54/56 (96%)	34 (63%)	10 (18%)	10 (18%)	0 2
31	D0	54/56 (96%)	35 (65%)	9 (17%)	10 (18%)	0 2

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
32	B4	36/38 (95%)	19 (53%)	13 (36%)	4 (11%)	0 6
32	D4	36/38 (95%)	19 (53%)	13 (36%)	4 (11%)	0 6
33	B1	48/54 (89%)	36 (75%)	8 (17%)	4 (8%)	0 11
33	D1	48/54 (89%)	35 (73%)	9 (19%)	4 (8%)	0 11
34	B3	62/64 (97%)	34 (55%)	20 (32%)	8 (13%)	0 4
34	D3	62/64 (97%)	35 (56%)	19 (31%)	8 (13%)	0 4
35	BV	92/94 (98%)	60 (65%)	25 (27%)	7 (8%)	1 13
35	DV	92/94 (98%)	61 (66%)	24 (26%)	7 (8%)	1 13
36	B2	44/46 (96%)	23 (52%)	16 (36%)	5 (11%)	0 5
36	D2	44/46 (96%)	23 (52%)	12 (27%)	9 (20%)	0 1
37	BL	141/144 (98%)	76 (54%)	37 (26%)	28 (20%)	0 1
37	DL	141/144 (98%)	76 (54%)	39 (28%)	26 (18%)	0 2
38	BM	134/136 (98%)	79 (59%)	39 (29%)	16 (12%)	0 4
38	DM	134/136 (98%)	82 (61%)	35 (26%)	17 (13%)	0 4
39	BX	61/63 (97%)	35 (57%)	20 (33%)	6 (10%)	0 8
39	DX	61/63 (97%)	35 (57%)	20 (33%)	6 (10%)	0 8
40	BH	147/149 (99%)	78 (53%)	42 (29%)	27 (18%)	0 2
40	DH	147/149 (99%)	91 (62%)	30 (20%)	26 (18%)	0 2
41	BJ	140/142 (99%)	85 (61%)	37 (26%)	18 (13%)	0 4
41	DJ	140/142 (99%)	85 (61%)	36 (26%)	19 (14%)	0 3
42	BN	118/127 (93%)	73 (62%)	33 (28%)	12 (10%)	0 8
42	DN	118/127 (93%)	74 (63%)	33 (28%)	11 (9%)	0 10
43	BO	114/117 (97%)	68 (60%)	28 (25%)	18 (16%)	0 3
43	DO	114/117 (97%)	66 (58%)	30 (26%)	18 (16%)	0 3
44	BQ	115/117 (98%)	76 (66%)	29 (25%)	10 (9%)	0 10
44	DQ	115/117 (98%)	76 (66%)	30 (26%)	9 (8%)	1 12
45	BS	108/110 (98%)	59 (55%)	34 (32%)	15 (14%)	0 3
45	DS	108/110 (98%)	60 (56%)	33 (31%)	15 (14%)	0 3
46	BU	100/103 (97%)	58 (58%)	25 (25%)	17 (17%)	0 2
46	DU	100/103 (97%)	57 (57%)	24 (24%)	19 (19%)	0 2
47	BF	176/178 (99%)	91 (52%)	51 (29%)	34 (19%)	0 1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
47	DF	176/178 (99%)	93 (53%)	49 (28%)	34 (19%)	0 1
48	BG	174/176 (99%)	100 (58%)	42 (24%)	32 (18%)	0 2
48	DG	174/176 (99%)	101 (58%)	42 (24%)	31 (18%)	0 2
49	BR	101/103 (98%)	57 (56%)	26 (26%)	18 (18%)	0 2
49	DR	101/103 (98%)	58 (57%)	26 (26%)	17 (17%)	0 3
50	BT	91/100 (91%)	40 (44%)	40 (44%)	11 (12%)	0 4
50	DT	91/100 (91%)	41 (45%)	39 (43%)	11 (12%)	0 4
51	BZ	75/78 (96%)	53 (71%)	16 (21%)	6 (8%)	1 12
51	DZ	75/78 (96%)	54 (72%)	14 (19%)	7 (9%)	0 10
52	BW	77/84 (92%)	29 (38%)	24 (31%)	24 (31%)	0 0
52	DW	77/84 (92%)	27 (35%)	26 (34%)	24 (31%)	0 0
All	All	11241/11914 (94%)	6932 (62%)	2908 (26%)	1401 (12%)	0 4

All (1401) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AC	14	VAL
2	AC	19	SER
2	AC	26	LYS
2	AC	47	ALA
2	AC	54	ILE
2	AC	81	GLU
2	AC	100	ILE
2	AC	127	VAL
2	AC	130	ARG
2	AC	205	GLU
4	AE	20	VAL
6	AG	15	PRO
6	AG	112	ASP
7	AH	66	GLN
8	AI	8	THR
8	AI	71	ILE
8	AI	127	SER
9	AJ	57	VAL
9	AJ	99	GLN
11	AL	42	LYS
12	AM	14	ALA
12	AM	49	GLU

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Mol	Chain	Res	Type
12	AM	105	ALA
13	AP	44	SER
16	AS	66	VAL
18	AB	14	HIS
18	AB	15	PHE
18	AB	19	THR
18	AB	22	TRP
18	AB	41	ASN
18	AB	76	SER
18	AB	81	ASP
18	AB	209	VAL
19	AU	35	GLU
20	AO	21	ASP
21	AN	50	LEU
24	BI	18	ASN
25	BC	4	LYS
25	BC	51	ARG
25	BC	65	ASP
25	BC	68	ARG
25	BC	117	SER
25	BC	123	ILE
25	BC	135	PRO
25	BC	141	HIS
25	BC	145	MET
25	BC	202	ARG
25	BC	203	VAL
25	BC	254	LYS
26	BD	9	VAL
26	BD	74	GLU
26	BD	91	THR
26	BD	107	VAL
26	BD	122	VAL
26	BD	143	PRO
26	BD	170	VAL
26	BD	184	ARG
26	BD	189	VAL
27	BK	18	ARG
27	BK	35	VAL
27	BK	43	ILE
27	BK	72	PRO
27	BK	89	ASN
27	BK	120	PRO

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Mol	Chain	Res	Type
28	BP	25	VAL
28	BP	37	LYS
28	BP	50	ARG
28	BP	75	THR
28	BP	100	ARG
29	BE	7	ASP
29	BE	14	VAL
29	BE	45	ALA
29	BE	70	SER
29	BE	79	ARG
30	BY	2	LYS
31	B0	23	ALA
31	B0	42	ILE
31	B0	51	ARG
32	B4	37	GLN
33	B1	4	ILE
34	B3	29	ARG
34	B3	49	VAL
35	BV	75	GLN
37	BL	9	ALA
37	BL	81	ASP
37	BL	89	VAL
37	BL	94	THR
37	BL	100	ILE
37	BL	116	VAL
37	BL	143	GLU
38	BM	24	THR
38	BM	59	ARG
40	BH	3	VAL
40	BH	14	SER
40	BH	28	ASN
40	BH	32	PRO
40	BH	33	GLN
40	BH	122	LEU
41	BJ	4	PHE
41	BJ	41	LYS
41	BJ	44	TYR
41	BJ	45	THR
41	BJ	64	VAL
41	BJ	73	VAL
41	BJ	81	ILE
42	BN	11	ASN

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Mol	Chain	Res	Type
42	BN	13	ASN
43	BO	6	ALA
43	BO	8	ILE
43	BO	113	ALA
44	BQ	30	VAL
44	BQ	86	SER
45	BS	13	SER
45	BS	27	LYS
45	BS	61	ASN
46	BU	18	LYS
46	BU	42	LYS
46	BU	49	PRO
47	BF	11	VAL
47	BF	32	LYS
47	BF	70	ARG
47	BF	112	ASP
47	BF	135	ILE
47	BF	138	PRO
47	BF	149	ARG
48	BG	11	PRO
48	BG	83	THR
48	BG	85	LYS
48	BG	94	ARG
48	BG	117	PRO
48	BG	157	LYS
48	BG	170	THR
49	BR	53	PHE
49	BR	98	ILE
49	BR	99	THR
50	BT	16	VAL
50	BT	58	VAL
50	BT	88	LYS
51	BZ	33	LEU
51	BZ	70	GLU
51	BZ	77	LYS
52	BW	9	THR
52	BW	30	VAL
52	BW	50	VAL
52	BW	60	ALA
52	BW	61	LYS
52	BW	62	ALA
52	BW	77	LYS

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Mol	Chain	Res	Type
4	CE	20	VAL
7	CH	66	GLN
11	CL	42	LYS
13	CP	44	SER
19	CU	35	GLU
2	CC	19	SER
2	CC	54	ILE
2	CC	83	VAL
2	CC	100	ILE
2	CC	205	GLU
6	CG	3	ARG
6	CG	71	THR
8	CI	8	THR
8	CI	57	VAL
9	CJ	37	ARG
9	CJ	57	VAL
12	CM	46	GLU
12	CM	105	ALA
12	CM	111	PRO
21	CN	29	ILE
21	CN	50	LEU
21	CN	61	ASN
21	CN	75	LYS
21	CN	80	ARG
18	CB	15	PHE
18	CB	22	TRP
18	CB	49	PHE
18	CB	94	ARG
18	CB	121	GLN
18	CB	141	GLU
20	CO	29	VAL
24	DI	5	GLN
24	DI	18	ASN
25	DC	4	LYS
25	DC	51	ARG
25	DC	65	ASP
25	DC	68	ARG
25	DC	117	SER
25	DC	123	ILE
25	DC	135	PRO
25	DC	141	HIS
25	DC	145	MET

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Mol	Chain	Res	Type
25	DC	202	ARG
25	DC	203	VAL
25	DC	254	LYS
26	DD	9	VAL
26	DD	74	GLU
26	DD	91	THR
26	DD	107	VAL
26	DD	122	VAL
26	DD	143	PRO
26	DD	170	VAL
26	DD	184	ARG
26	DD	189	VAL
27	DK	18	ARG
27	DK	35	VAL
27	DK	43	ILE
27	DK	72	PRO
27	DK	89	ASN
27	DK	120	PRO
28	DP	25	VAL
28	DP	37	LYS
28	DP	50	ARG
28	DP	75	THR
28	DP	100	ARG
29	DE	7	ASP
29	DE	14	VAL
29	DE	45	ALA
29	DE	70	SER
30	DY	2	LYS
31	D0	17	SER
31	D0	23	ALA
31	D0	42	ILE
31	D0	51	ARG
32	D4	37	GLN
33	D1	4	ILE
34	D3	29	ARG
34	D3	49	VAL
35	DV	75	GLN
37	DL	9	ALA
37	DL	81	ASP
37	DL	89	VAL
37	DL	94	THR
37	DL	100	ILE

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Mol	Chain	Res	Type
37	DL	116	VAL
37	DL	143	GLU
38	DM	24	THR
38	DM	59	ARG
40	DH	3	VAL
40	DH	14	SER
40	DH	28	ASN
40	DH	32	PRO
40	DH	33	GLN
40	DH	110	VAL
40	DH	114	GLU
40	DH	148	ALA
41	DJ	4	PHE
41	DJ	41	LYS
41	DJ	44	TYR
41	DJ	45	THR
41	DJ	64	VAL
41	DJ	73	VAL
41	DJ	81	ILE
42	DN	11	ASN
42	DN	13	ASN
43	DO	6	ALA
43	DO	8	ILE
43	DO	113	ALA
44	DQ	30	VAL
44	DQ	86	SER
45	DS	13	SER
45	DS	27	LYS
45	DS	42	LYS
45	DS	61	ASN
46	DU	18	LYS
46	DU	42	LYS
46	DU	49	PRO
47	DF	11	VAL
47	DF	32	LYS
47	DF	70	ARG
47	DF	112	ASP
47	DF	135	ILE
47	DF	138	PRO
47	DF	148	VAL
47	DF	149	ARG
48	DG	9	VAL

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Mol	Chain	Res	Type
48	DG	11	PRO
48	DG	85	LYS
48	DG	94	ARG
48	DG	117	PRO
48	DG	157	LYS
49	DR	53	PHE
49	DR	98	ILE
49	DR	99	THR
50	DT	16	VAL
50	DT	58	VAL
50	DT	88	LYS
51	DZ	33	LEU
51	DZ	70	GLU
51	DZ	77	LYS
52	DW	9	THR
52	DW	30	VAL
52	DW	32	ALA
52	DW	50	VAL
52	DW	60	ALA
52	DW	61	LYS
52	DW	62	ALA
52	DW	77	LYS
2	AC	25	THR
2	AC	59	PRO
2	AC	83	VAL
2	AC	105	VAL
2	AC	116	ALA
2	AC	167	TYR
2	AC	180	ASP
3	AD	22	SER
3	AD	175	GLY
3	AD	178	GLU
4	AE	71	ILE
5	AF	48	ALA
5	AF	54	LEU
5	AF	62	MET
5	AF	82	ASP
5	AF	92	THR
8	AI	55	ASP
8	AI	106	ASP
8	AI	120	ALA
9	AJ	34	ALA

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Mol	Chain	Res	Type
9	AJ	36	VAL
9	AJ	51	VAL
9	AJ	56	HIS
10	AK	88	PRO
11	AL	13	ARG
11	AL	14	LYS
11	AL	23	LEU
11	AL	24	GLU
11	AL	71	HIS
11	AL	117	GLY
11	AL	122	LYS
12	AM	70	ARG
13	AP	49	GLY
13	AP	79	ASN
15	AR	43	ILE
16	AS	5	LYS
16	AS	77	ARG
17	AT	42	ASP
17	AT	70	LYS
17	AT	85	LEU
18	AB	18	GLN
18	AB	64	GLY
18	AB	94	ARG
18	AB	188	THR
18	AB	204	ASP
19	AU	34	ARG
19	AU	36	PHE
20	AO	34	ALA
20	AO	37	ASN
20	AO	76	ALA
21	AN	62	ARG
24	BI	14	ALA
24	BI	23	VAL
24	BI	64	ARG
25	BC	3	VAL
25	BC	34	GLU
25	BC	36	ASN
25	BC	37	SER
25	BC	52	HIS
25	BC	59	GLN
25	BC	62	ARG
25	BC	63	ILE

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Mol	Chain	Res	Type
25	BC	64	VAL
25	BC	70	LYS
25	BC	121	ALA
25	BC	140	VAL
25	BC	151	GLY
25	BC	189	ALA
25	BC	190	THR
25	BC	222	THR
25	BC	239	PHE
26	BD	10	GLY
26	BD	11	MET
26	BD	53	GLY
26	BD	93	GLY
26	BD	102	ALA
26	BD	118	PHE
26	BD	119	ALA
26	BD	121	THR
26	BD	145	SER
26	BD	159	LYS
26	BD	169	ARG
26	BD	174	SER
26	BD	182	ALA
27	BK	31	ARG
27	BK	110	GLU
28	BP	101	GLU
29	BE	12	LEU
29	BE	27	LEU
29	BE	42	GLY
29	BE	63	LYS
29	BE	81	GLY
29	BE	86	ALA
29	BE	166	LYS
30	BY	39	ASP
31	B0	17	SER
31	B0	54	ILE
32	B4	4	ARG
33	B1	51	ALA
34	B3	31	ILE
34	B3	58	ILE
35	BV	71	LYS
36	B2	5	PHE
36	B2	45	SER

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Mol	Chain	Res	Type
37	BL	15	ALA
37	BL	24	GLY
37	BL	28	GLY
37	BL	51	GLU
37	BL	62	PRO
37	BL	99	ASN
37	BL	111	ILE
38	BM	20	LEU
38	BM	69	PRO
39	BX	58	ASN
40	BH	7	ASP
40	BH	27	ARG
40	BH	67	ALA
40	BH	73	ASN
40	BH	89	LYS
40	BH	97	ARG
40	BH	125	THR
40	BH	144	VAL
41	BJ	5	THR
41	BJ	43	GLU
41	BJ	84	ILE
41	BJ	124	VAL
42	BN	68	ALA
42	BN	93	GLY
42	BN	100	CYS
43	BO	99	TYR
44	BQ	87	VAL
44	BQ	89	ILE
45	BS	3	THR
45	BS	25	ARG
45	BS	28	LYS
45	BS	41	LYS
45	BS	42	LYS
45	BS	96	ILE
46	BU	12	VAL
46	BU	19	GLY
46	BU	50	ALA
46	BU	92	VAL
47	BF	80	GLN
47	BF	87	LYS
47	BF	92	GLY
47	BF	136	ILE

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Mol	Chain	Res	Type
47	BF	148	VAL
48	BG	9	VAL
48	BG	84	LYS
48	BG	163	TYR
49	BR	7	SER
49	BR	16	GLU
49	BR	55	ASP
49	BR	79	ARG
50	BT	38	ALA
50	BT	39	THR
51	BZ	71	LEU
52	BW	14	ASP
52	BW	32	ALA
52	BW	34	SER
52	BW	36	ILE
52	BW	59	PHE
3	CD	22	SER
3	CD	175	GLY
3	CD	178	GLU
3	CD	192	ALA
4	CE	71	ILE
5	CF	48	ALA
5	CF	54	LEU
5	CF	62	MET
5	CF	92	THR
5	CF	95	ALA
10	CK	88	PRO
11	CL	13	ARG
11	CL	14	LYS
11	CL	23	LEU
11	CL	24	GLU
11	CL	71	HIS
11	CL	117	GLY
11	CL	122	LYS
13	CP	28	ARG
13	CP	49	GLY
15	CR	43	ILE
17	CT	42	ASP
17	CT	70	LYS
17	CT	85	LEU
19	CU	34	ARG
19	CU	36	PHE

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Mol	Chain	Res	Type
2	CC	25	THR
2	CC	26	LYS
2	CC	59	PRO
2	CC	72	PRO
2	CC	80	GLY
2	CC	94	ALA
2	CC	112	ALA
2	CC	166	TRP
2	CC	180	ASP
2	CC	192	TYR
6	CG	30	MET
6	CG	130	LYS
8	CI	91	GLU
9	CJ	34	ALA
9	CJ	36	VAL
9	CJ	61	ALA
9	CJ	92	LEU
12	CM	3	ILE
12	CM	6	ILE
21	CN	20	PHE
21	CN	27	LYS
21	CN	57	SER
16	CS	65	MET
16	CS	77	ARG
18	CB	9	LEU
18	CB	65	LYS
18	CB	87	ASP
18	CB	100	LEU
18	CB	163	ILE
20	CO	8	THR
20	CO	48	LYS
25	DC	3	VAL
25	DC	34	GLU
25	DC	36	ASN
25	DC	37	SER
25	DC	52	HIS
25	DC	59	GLN
25	DC	62	ARG
25	DC	63	ILE
25	DC	64	VAL
25	DC	121	ALA
25	DC	140	VAL

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Mol	Chain	Res	Type
25	DC	151	GLY
25	DC	189	ALA
25	DC	190	THR
25	DC	222	THR
25	DC	239	PHE
26	DD	10	GLY
26	DD	11	MET
26	DD	53	GLY
26	DD	93	GLY
26	DD	102	ALA
26	DD	118	PHE
26	DD	119	ALA
26	DD	121	THR
26	DD	145	SER
26	DD	159	LYS
26	DD	169	ARG
26	DD	174	SER
26	DD	182	ALA
26	DD	197	THR
27	DK	31	ARG
27	DK	110	GLU
28	DP	86	LYS
28	DP	101	GLU
29	DE	12	LEU
29	DE	27	LEU
29	DE	42	GLY
29	DE	63	LYS
29	DE	79	ARG
29	DE	86	ALA
29	DE	166	LYS
30	DY	39	ASP
32	D4	4	ARG
33	D1	51	ALA
34	D3	31	ILE
34	D3	58	ILE
35	DV	71	LYS
36	D2	5	PHE
36	D2	45	SER
37	DL	15	ALA
37	DL	24	GLY
37	DL	51	GLU
37	DL	62	PRO

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Mol	Chain	Res	Type
37	DL	99	ASN
37	DL	111	ILE
37	DL	138	ALA
38	DM	20	LEU
38	DM	69	PRO
39	DX	58	ASN
40	DH	7	ASP
40	DH	27	ARG
40	DH	40	THR
40	DH	85	GLY
40	DH	96	THR
41	DJ	3	THR
41	DJ	5	THR
41	DJ	43	GLU
41	DJ	84	ILE
42	DN	68	ALA
42	DN	93	GLY
42	DN	100	CYS
42	DN	101	GLY
43	DO	45	SER
43	DO	68	LYS
43	DO	99	TYR
43	DO	115	LEU
44	DQ	87	VAL
44	DQ	89	ILE
45	DS	3	THR
45	DS	25	ARG
45	DS	28	LYS
45	DS	41	LYS
45	DS	96	ILE
46	DU	12	VAL
46	DU	19	GLY
46	DU	50	ALA
46	DU	92	VAL
47	DF	42	ALA
47	DF	80	GLN
47	DF	87	LYS
47	DF	92	GLY
47	DF	136	ILE
48	DG	83	THR
48	DG	84	LYS
48	DG	163	TYR

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Mol	Chain	Res	Type
48	DG	170	THR
49	DR	7	SER
49	DR	16	GLU
49	DR	55	ASP
49	DR	70	GLU
49	DR	79	ARG
50	DT	38	ALA
50	DT	39	THR
51	DZ	35	SER
51	DZ	71	LEU
52	DW	14	ASP
52	DW	23	LYS
52	DW	29	SER
52	DW	34	SER
52	DW	36	ILE
52	DW	59	PHE
2	AC	104	GLU
2	AC	107	LYS
2	AC	113	LYS
2	AC	166	TRP
2	AC	178	ARG
2	AC	190	THR
3	AD	26	ALA
3	AD	27	ILE
3	AD	192	ALA
4	AE	146	MET
5	AF	85	ILE
5	AF	95	ALA
5	AF	98	GLU
6	AG	23	ALA
7	AH	72	GLU
8	AI	50	PRO
8	AI	82	ILE
8	AI	99	LYS
9	AJ	62	ARG
9	AJ	93	ALA
10	AK	14	GLN
11	AL	56	LEU
11	AL	72	ASN
12	AM	68	LEU
12	AM	98	GLY
12	AM	104	ASN

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Mol	Chain	Res	Type
13	AP	28	ARG
13	AP	52	LEU
14	AQ	16	MET
18	AB	75	ALA
18	AB	86	CYS
18	AB	99	MET
18	AB	128	LEU
19	AU	9	GLU
19	AU	37	TYR
20	AO	20	ASN
20	AO	36	ILE
21	AN	2	LYS
21	AN	27	LYS
21	AN	70	HIS
25	BC	15	VAL
25	BC	88	ALA
25	BC	109	LEU
25	BC	200	MET
25	BC	233	GLY
26	BD	31	ALA
26	BD	77	ARG
26	BD	106	LYS
26	BD	136	ASN
26	BD	167	ASN
26	BD	181	ASP
26	BD	195	GLY
26	BD	197	THR
27	BK	14	SER
27	BK	17	ARG
27	BK	30	ARG
27	BK	73	ASP
27	BK	90	ASN
28	BP	36	LYS
28	BP	86	LYS
29	BE	52	VAL
29	BE	123	LYS
29	BE	153	LEU
29	BE	188	MET
31	B0	45	ASP
32	B4	20	ASP
33	B1	50	GLU
35	BV	6	ALA

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Mol	Chain	Res	Type
37	BL	5	THR
37	BL	29	LYS
37	BL	36	LYS
37	BL	58	TYR
37	BL	138	ALA
38	BM	13	HIS
38	BM	43	ALA
38	BM	83	GLY
38	BM	134	THR
39	BX	9	LYS
39	BX	37	LEU
39	BX	45	GLN
40	BH	6	LEU
40	BH	11	ASN
40	BH	29	PHE
40	BH	31	VAL
40	BH	54	LEU
40	BH	83	LYS
40	BH	99	ILE
40	BH	131	SER
40	BH	140	ALA
41	BJ	2	LYS
41	BJ	3	THR
42	BN	71	ARG
42	BN	72	ASP
42	BN	98	LEU
42	BN	101	GLY
43	BO	45	SER
43	BO	51	ALA
43	BO	53	THR
43	BO	66	GLY
43	BO	68	LYS
43	BO	100	HIS
43	BO	115	LEU
44	BQ	91	ARG
45	BS	21	ALA
45	BS	46	LEU
46	BU	6	ARG
46	BU	82	VAL
46	BU	85	ARG
46	BU	101	THR
47	BF	18	GLU

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Mol	Chain	Res	Type
47	BF	42	ALA
47	BF	78	ILE
47	BF	93	GLU
47	BF	106	ALA
47	BF	122	ASP
47	BF	141	ASP
48	BG	2	ARG
48	BG	32	LEU
48	BG	61	TRP
48	BG	152	ARG
48	BG	164	ALA
49	BR	24	LYS
49	BR	43	ASN
49	BR	70	GLU
49	BR	83	TYR
51	BZ	35	SER
52	BW	23	LYS
52	BW	29	SER
52	BW	53	GLY
52	BW	69	GLU
52	BW	70	VAL
3	CD	26	ALA
3	CD	27	ILE
3	CD	42	ALA
3	CD	191	SER
4	CE	146	MET
5	CF	82	ASP
5	CF	85	ILE
5	CF	98	GLU
7	CH	72	GLU
10	CK	14	GLN
11	CL	56	LEU
11	CL	70	GLY
11	CL	72	ASN
13	CP	52	LEU
17	CT	46	ALA
19	CU	9	GLU
19	CU	37	TYR
2	CC	145	ALA
2	CC	167	TYR
6	CG	70	PRO
6	CG	129	ASN

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Mol	Chain	Res	Type
8	CI	26	LYS
9	CJ	62	ARG
12	CM	69	ARG
12	CM	104	ASN
21	CN	8	ARG
21	CN	62	ARG
16	CS	5	LYS
18	CB	18	GLN
18	CB	59	ILE
18	CB	63	LYS
18	CB	127	LYS
18	CB	128	LEU
18	CB	188	THR
20	CO	25	THR
20	CO	47	LYS
20	CO	50	HIS
24	DI	23	VAL
25	DC	15	VAL
25	DC	70	LYS
25	DC	88	ALA
25	DC	109	LEU
25	DC	200	MET
26	DD	31	ALA
26	DD	77	ARG
26	DD	106	LYS
26	DD	136	ASN
26	DD	167	ASN
26	DD	181	ASP
26	DD	195	GLY
27	DK	14	SER
27	DK	17	ARG
27	DK	30	ARG
27	DK	73	ASP
27	DK	90	ASN
28	DP	36	LYS
29	DE	52	VAL
29	DE	81	GLY
29	DE	84	THR
29	DE	97	ASN
29	DE	123	LYS
29	DE	153	LEU
29	DE	188	MET

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Mol	Chain	Res	Type
31	D0	45	ASP
31	D0	54	ILE
32	D4	16	ILE
32	D4	20	ASP
33	D1	50	GLU
34	D3	18	LYS
35	DV	6	ALA
36	D2	14	ARG
37	DL	5	THR
37	DL	28	GLY
37	DL	29	LYS
37	DL	54	GLN
37	DL	58	TYR
38	DM	43	ALA
38	DM	83	GLY
39	DX	37	LEU
39	DX	45	GLN
40	DH	6	LEU
40	DH	29	PHE
40	DH	31	VAL
40	DH	56	ALA
40	DH	109	GLU
40	DH	111	ALA
40	DH	120	GLY
41	DJ	2	LYS
41	DJ	124	VAL
42	DN	72	ASP
42	DN	98	LEU
43	DO	51	ALA
43	DO	53	THR
43	DO	89	ASP
43	DO	100	HIS
44	DQ	91	ARG
45	DS	21	ALA
45	DS	43	ALA
45	DS	46	LEU
46	DU	6	ARG
46	DU	82	VAL
46	DU	85	ARG
46	DU	101	THR
47	DF	18	GLU
47	DF	78	ILE

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Mol	Chain	Res	Type
47	DF	93	GLU
47	DF	106	ALA
47	DF	110	ILE
47	DF	122	ASP
47	DF	141	ASP
48	DG	2	ARG
48	DG	32	LEU
48	DG	61	TRP
48	DG	152	ARG
48	DG	164	ALA
49	DR	24	LYS
49	DR	43	ASN
49	DR	83	TYR
50	DT	29	THR
52	DW	69	GLU
52	DW	70	VAL
2	AC	3	LYS
2	AC	17	TRP
2	AC	23	ALA
2	AC	50	SER
2	AC	64	ARG
2	AC	109	GLU
2	AC	145	ALA
2	AC	165	GLU
2	AC	179	ALA
3	AD	42	ALA
3	AD	68	GLU
3	AD	191	SER
4	AE	77	ASN
6	AG	10	LYS
6	AG	92	PRO
8	AI	24	ASN
8	AI	25	GLY
8	AI	26	LYS
8	AI	80	HIS
9	AJ	16	ARG
9	AJ	42	LEU
9	AJ	74	VAL
9	AJ	75	ASP
10	AK	71	ASP
11	AL	70	GLY
13	AP	42	ILE

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Mol	Chain	Res	Type
13	AP	81	ALA
16	AS	13	HIS
17	AT	46	ALA
18	AB	73	ARG
18	AB	87	ASP
18	AB	107	ARG
18	AB	126	ASP
18	AB	205	ALA
21	AN	11	LYS
25	BC	29	PHE
25	BC	105	ALA
25	BC	196	ASN
25	BC	204	LEU
25	BC	209	ALA
25	BC	246	PRO
25	BC	250	GLN
26	BD	92	VAL
26	BD	109	VAL
26	BD	206	ALA
27	BK	26	GLY
27	BK	119	ALA
28	BP	31	VAL
28	BP	59	THR
28	BP	65	ASN
28	BP	76	HIS
28	BP	105	LYS
29	BE	6	LYS
29	BE	13	THR
29	BE	84	THR
29	BE	97	ASN
29	BE	183	PHE
30	BY	4	ILE
30	BY	9	THR
31	B0	19	ASP
31	B0	26	SER
32	B4	16	ILE
33	B1	36	LYS
34	B3	18	LYS
34	B3	22	LYS
34	B3	50	SER
35	BV	45	ASP
35	BV	67	GLY

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Mol	Chain	Res	Type
37	BL	3	LEU
37	BL	54	GLN
38	BM	42	THR
38	BM	65	ILE
38	BM	106	ASP
38	BM	116	ALA
39	BX	51	ALA
40	BH	12	LEU
40	BH	77	THR
40	BH	104	THR
41	BJ	25	LEU
41	BJ	47	HIS
41	BJ	128	ASN
43	BO	65	THR
43	BO	89	ASP
44	BQ	10	ARG
44	BQ	27	ARG
45	BS	18	ARG
45	BS	43	ALA
46	BU	16	LYS
46	BU	41	VAL
46	BU	54	PRO
47	BF	28	PRO
47	BF	36	ASN
47	BF	69	ALA
47	BF	110	ILE
47	BF	147	ARG
48	BG	28	LYS
48	BG	29	ASN
48	BG	31	GLU
48	BG	38	ASP
48	BG	93	TYR
48	BG	125	PRO
48	BG	151	ARG
49	BR	42	ALA
49	BR	52	PRO
50	BT	18	GLU
50	BT	29	THR
51	BZ	31	PRO
52	BW	28	GLU
52	BW	40	ARG
52	BW	56	HIS

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Mol	Chain	Res	Type
3	CD	68	GLU
4	CE	77	ASN
10	CK	71	ASP
11	CL	47	ALA
11	CL	74	GLN
13	CP	42	ILE
14	CQ	16	MET
2	CC	146	LYS
8	CI	67	LYS
9	CJ	15	HIS
9	CJ	75	ASP
9	CJ	91	ASP
9	CJ	93	ALA
12	CM	7	ASN
12	CM	20	SER
12	CM	71	GLU
21	CN	63	CYS
21	CN	86	ALA
16	CS	27	LYS
16	CS	53	GLY
18	CB	97	GLY
18	CB	124	THR
20	CO	18	ASP
25	DC	29	PHE
25	DC	105	ALA
25	DC	196	ASN
25	DC	204	LEU
25	DC	233	GLY
25	DC	246	PRO
25	DC	250	GLN
26	DD	92	VAL
26	DD	109	VAL
27	DK	26	GLY
27	DK	113	MET
27	DK	117	SER
27	DK	119	ALA
29	DE	6	LYS
29	DE	83	VAL
29	DE	133	LEU
29	DE	183	PHE
30	DY	4	ILE
30	DY	9	THR

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Mol	Chain	Res	Type
31	D0	19	ASP
31	D0	26	SER
33	D1	36	LYS
34	D3	22	LYS
34	D3	50	SER
35	DV	45	ASP
35	DV	67	GLY
37	DL	3	LEU
37	DL	36	LYS
38	DM	13	HIS
38	DM	42	THR
38	DM	65	ILE
38	DM	106	ASP
38	DM	116	ALA
38	DM	134	THR
39	DX	9	LYS
40	DH	11	ASN
40	DH	86	ASP
41	DJ	25	LEU
41	DJ	47	HIS
42	DN	71	ARG
43	DO	65	THR
43	DO	66	GLY
43	DO	77	ALA
44	DQ	10	ARG
44	DQ	27	ARG
45	DS	18	ARG
46	DU	16	LYS
46	DU	41	VAL
46	DU	51	LEU
46	DU	54	PRO
47	DF	28	PRO
47	DF	36	ASN
47	DF	62	GLN
47	DF	147	ARG
48	DG	28	LYS
48	DG	29	ASN
48	DG	31	GLU
48	DG	38	ASP
48	DG	125	PRO
48	DG	151	ARG
49	DR	42	ALA

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Mol	Chain	Res	Type
50	DT	11	LEU
51	DZ	31	PRO
52	DW	28	GLU
52	DW	40	ARG
52	DW	53	GLY
3	AD	31	CYS
8	AI	108	ARG
11	AL	47	ALA
11	AL	74	GLN
13	AP	46	LYS
16	AS	4	LEU
16	AS	64	GLU
17	AT	66	ILE
19	AU	17	ARG
19	AU	41	THR
21	AN	21	ALA
21	AN	67	GLY
25	BC	11	GLY
27	BK	4	GLU
27	BK	46	ALA
27	BK	113	MET
27	BK	117	SER
28	BP	113	LEU
29	BE	83	VAL
29	BE	133	LEU
29	BE	189	THR
31	B0	48	TYR
34	B3	6	VAL
35	BV	84	PRO
36	B2	14	ARG
36	B2	18	PHE
37	BL	84	LYS
38	BM	60	GLN
38	BM	72	PRO
38	BM	73	ILE
38	BM	95	LEU
41	BJ	129	GLU
41	BJ	134	ALA
42	BN	59	SER
42	BN	104	ALA
43	BO	47	VAL
43	BO	77	ALA

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Mol	Chain	Res	Type
46	BU	51	LEU
47	BF	12	VAL
47	BF	47	LYS
47	BF	132	ARG
47	BF	173	ASP
48	BG	16	VAL
48	BG	96	ALA
48	BG	97	VAL
48	BG	111	PRO
49	BR	101	ILE
50	BT	35	ALA
50	BT	55	VAL
52	BW	74	LYS
3	CD	31	CYS
7	CH	70	VAL
10	CK	125	LYS
17	CT	50	PHE
17	CT	66	ILE
2	CC	3	LYS
2	CC	21	TRP
6	CG	20	GLU
6	CG	64	ALA
6	CG	66	GLU
6	CG	151	ALA
9	CJ	56	HIS
9	CJ	74	VAL
12	CM	47	LEU
21	CN	26	LEU
21	CN	87	ALA
18	CB	99	MET
24	DI	6	ALA
24	DI	14	ALA
25	DC	11	GLY
25	DC	53	ILE
25	DC	209	ALA
25	DC	263	ASP
26	DD	173	GLN
26	DD	206	ALA
27	DK	46	ALA
28	DP	31	VAL
28	DP	59	THR
28	DP	76	HIS

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Mol	Chain	Res	Type
28	DP	105	LYS
29	DE	13	THR
29	DE	69	ARG
29	DE	189	THR
30	DY	51	SER
34	D3	6	VAL
35	DV	84	PRO
36	D2	18	PHE
36	D2	40	ALA
37	DL	41	ARG
37	DL	52	GLY
37	DL	103	ILE
38	DM	72	PRO
38	DM	73	ILE
38	DM	95	LEU
39	DX	51	ALA
40	DH	12	LEU
40	DH	121	VAL
41	DJ	128	ASN
41	DJ	129	GLU
42	DN	59	SER
42	DN	107	ASN
43	DO	47	VAL
44	DQ	39	ILE
46	DU	67	SER
47	DF	12	VAL
47	DF	69	ALA
47	DF	132	ARG
47	DF	145	VAL
47	DF	173	ASP
48	DG	16	VAL
48	DG	93	TYR
48	DG	96	ALA
48	DG	97	VAL
48	DG	111	PRO
48	DG	155	PRO
49	DR	23	GLU
49	DR	52	PRO
49	DR	101	ILE
50	DT	35	ALA
50	DT	55	VAL
50	DT	65	GLY

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Mol	Chain	Res	Type
52	DW	56	HIS
52	DW	74	LYS
2	AC	112	ALA
2	AC	143	LEU
7	AH	70	VAL
7	AH	91	LEU
8	AI	74	GLN
11	AL	84	GLY
13	AP	31	ARG
14	AQ	35	LYS
14	AQ	48	GLU
24	BI	49	GLU
25	BC	53	ILE
25	BC	149	LYS
25	BC	249	VAL
25	BC	251	THR
26	BD	162	ALA
26	BD	173	GLN
27	BK	3	GLN
28	BP	83	ILE
29	BE	69	ARG
29	BE	96	VAL
31	B0	46	GLY
37	BL	19	LEU
37	BL	101	ILE
37	BL	103	ILE
42	BN	10	LEU
44	BQ	32	ARG
44	BQ	39	ILE
45	BS	15	GLN
46	BU	5	ARG
47	BF	81	GLY
47	BF	145	VAL
48	BG	89	VAL
48	BG	112	VAL
48	BG	137	LYS
48	BG	155	PRO
49	BR	65	ALA
50	BT	67	VAL
52	BW	12	GLY
3	CD	182	LYS
4	CE	132	PRO

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Mol	Chain	Res	Type
7	CH	91	LEU
10	CK	124	LYS
13	CP	31	ARG
14	CQ	48	GLU
15	CR	46	THR
2	CC	14	VAL
21	CN	56	PRO
21	CN	66	THR
16	CS	34	SER
25	DC	249	VAL
25	DC	251	THR
27	DK	121	GLU
30	DY	34	THR
31	D0	48	TYR
36	D2	8	SER
36	D2	21	ARG
36	D2	25	LYS
37	DL	101	ILE
38	DM	56	ALA
38	DM	82	MET
40	DH	41	LYS
41	DJ	134	ALA
45	DS	15	GLN
46	DU	5	ARG
47	DF	81	GLY
48	DG	89	VAL
48	DG	112	VAL
50	DT	67	VAL
51	DZ	28	ARG
52	DW	12	GLY
52	DW	33	GLY
3	AD	86	GLY
4	AE	43	GLY
6	AG	54	GLY
11	AL	3	VAL
11	AL	43	LYS
25	BC	232	GLY
29	BE	148	ILE
37	BL	52	GLY
39	BX	11	VAL
40	BH	147	VAL
43	BO	101	GLY

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Mol	Chain	Res	Type
47	BF	84	ILE
48	BG	167	VAL
50	BT	65	GLY
3	CD	86	GLY
4	CE	43	GLY
4	CE	56	PRO
5	CF	89	VAL
7	CH	33	VAL
11	CL	43	LYS
11	CL	84	GLY
8	CI	25	GLY
25	DC	248	GLY
27	DK	93	GLN
28	DP	63	ILE
28	DP	83	ILE
29	DE	96	VAL
36	D2	9	VAL
39	DX	11	VAL
40	DH	88	GLY
45	DS	71	VAL
46	DU	24	VAL
48	DG	167	VAL
2	AC	56	ILE
2	AC	80	GLY
3	AD	107	GLY
4	AE	56	PRO
4	AE	135	VAL
5	AF	89	VAL
7	AH	33	VAL
9	AJ	8	ILE
16	AS	10	ILE
20	AO	82	ILE
25	BC	150	GLY
25	BC	243	PRO
25	BC	248	GLY
27	BK	93	GLN
28	BP	63	ILE
36	B2	9	VAL
37	BL	65	GLY
45	BS	71	VAL
46	BU	24	VAL
47	BF	88	VAL

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Mol	Chain	Res	Type
48	BG	20	GLY
52	BW	33	GLY
4	CE	133	ILE
7	CH	26	MET
11	CL	3	VAL
6	CG	131	GLY
16	CS	10	ILE
18	CB	28	PRO
25	DC	150	GLY
29	DE	148	ILE
31	D0	46	GLY
37	DL	90	VAL
47	DF	84	ILE
47	DF	88	VAL
49	DR	57	GLY
49	DR	64	VAL
52	DW	21	GLY
4	AE	132	PRO
7	AH	26	MET
8	AI	57	VAL
9	AJ	38	GLY
25	BC	227	VAL
29	BE	64	GLY
35	BV	37	PRO
37	BL	90	VAL
43	BO	49	VAL
49	BR	57	GLY
52	BW	21	GLY
4	CE	135	VAL
10	CK	112	VAL
2	CC	108	PRO
6	CG	18	GLY
25	DC	232	GLY
25	DC	243	PRO
26	DD	194	PRO
29	DE	64	GLY
35	DV	37	PRO
43	DO	28	VAL
48	DG	20	GLY
9	AJ	33	GLY
9	AJ	78	GLU
10	AK	112	VAL

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Mol	Chain	Res	Type
15	AR	38	ILE
18	AB	66	ILE
21	AN	71	GLY
27	BK	103	VAL
29	BE	59	PRO
29	BE	177	PRO
44	BQ	7	VAL
49	BR	64	VAL
49	BR	69	GLY
3	CD	107	GLY
6	CG	92	PRO
25	DC	227	VAL
27	DK	103	VAL
29	DE	59	PRO
43	DO	49	VAL
43	DO	101	GLY
44	DQ	7	VAL
46	DU	10	VAL
4	AE	108	GLY
9	AJ	41	PRO
15	AR	25	ILE
25	BC	7	PRO
26	BD	194	PRO
28	BP	4	ILE
43	BO	28	VAL
47	BF	137	PHE
47	BF	140	ILE
15	CR	25	ILE
15	CR	38	ILE
18	CB	98	GLY
25	DC	7	PRO
28	DP	4	ILE
41	DJ	8	PRO
47	DF	137	PHE
47	DF	140	ILE

5.3.2 Protein sidechains (i)

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%)	129 (76%)	41 (24%)	1 5
2	CC	170/189 (90%)	135 (79%)	35 (21%)	1 8
3	AD	172/172 (100%)	142 (83%)	30 (17%)	2 12
3	CD	172/172 (100%)	143 (83%)	29 (17%)	2 13
4	AE	113/125 (90%)	90 (80%)	23 (20%)	1 8
4	CE	113/125 (90%)	93 (82%)	20 (18%)	2 12
5	AF	87/116 (75%)	74 (85%)	13 (15%)	3 16
5	CF	87/116 (75%)	76 (87%)	11 (13%)	4 20
6	AG	123/146 (84%)	100 (81%)	23 (19%)	1 10
6	CG	125/146 (86%)	95 (76%)	30 (24%)	1 5
7	AH	104/104 (100%)	92 (88%)	12 (12%)	5 22
7	CH	104/104 (100%)	91 (88%)	13 (12%)	4 20
8	AI	105/106 (99%)	85 (81%)	20 (19%)	1 10
8	CI	105/106 (99%)	79 (75%)	26 (25%)	1 4
9	AJ	86/90 (96%)	71 (83%)	15 (17%)	2 12
9	CJ	86/90 (96%)	68 (79%)	18 (21%)	1 7
10	AK	90/98 (92%)	77 (86%)	13 (14%)	3 17
10	CK	90/98 (92%)	77 (86%)	13 (14%)	3 17
11	AL	103/103 (100%)	88 (85%)	15 (15%)	3 16
11	CL	103/103 (100%)	88 (85%)	15 (15%)	3 16
12	AM	92/95 (97%)	75 (82%)	17 (18%)	1 11
12	CM	91/95 (96%)	74 (81%)	17 (19%)	1 10
13	AP	65/65 (100%)	62 (95%)	3 (5%)	24 48
13	CP	65/65 (100%)	61 (94%)	4 (6%)	16 42
14	AQ	74/77 (96%)	63 (85%)	11 (15%)	3 16
14	CQ	75/77 (97%)	63 (84%)	12 (16%)	2 14
15	AR	48/64 (75%)	40 (83%)	8 (17%)	2 13
15	CR	48/64 (75%)	39 (81%)	9 (19%)	1 10
16	AS	70/78 (90%)	51 (73%)	19 (27%)	0 3
16	CS	71/78 (91%)	50 (70%)	21 (30%)	0 2
17	AT	65/65 (100%)	54 (83%)	11 (17%)	2 13

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
17	CT	65/65 (100%)	54 (83%)	11 (17%)	2 13
18	AB	180/198 (91%)	140 (78%)	40 (22%)	1 6
18	CB	180/198 (91%)	135 (75%)	45 (25%)	0 4
19	AU	44/60 (73%)	33 (75%)	11 (25%)	0 4
19	CU	44/60 (73%)	33 (75%)	11 (25%)	0 4
20	AO	76/77 (99%)	66 (87%)	10 (13%)	4 19
20	CO	76/77 (99%)	63 (83%)	13 (17%)	2 13
21	AN	79/83 (95%)	63 (80%)	16 (20%)	1 8
21	CN	79/83 (95%)	63 (80%)	16 (20%)	1 8
24	BI	109/109 (100%)	109 (100%)	0	100 100
24	DI	109/109 (100%)	106 (97%)	3 (3%)	38 60
25	BC	216/217 (100%)	180 (83%)	36 (17%)	2 13
25	DC	216/217 (100%)	182 (84%)	34 (16%)	2 15
26	BD	164/164 (100%)	128 (78%)	36 (22%)	1 6
26	DD	164/164 (100%)	124 (76%)	40 (24%)	1 5
27	BK	102/104 (98%)	77 (76%)	25 (24%)	1 4
27	DK	102/104 (98%)	77 (76%)	25 (24%)	1 4
28	BP	99/99 (100%)	77 (78%)	22 (22%)	1 6
28	DP	99/99 (100%)	77 (78%)	22 (22%)	1 6
29	BE	165/165 (100%)	145 (88%)	20 (12%)	5 21
29	DE	165/165 (100%)	145 (88%)	20 (12%)	5 21
30	BY	48/48 (100%)	40 (83%)	8 (17%)	2 13
30	DY	48/48 (100%)	40 (83%)	8 (17%)	2 13
31	B0	47/47 (100%)	35 (74%)	12 (26%)	0 4
31	D0	47/47 (100%)	38 (81%)	9 (19%)	1 10
32	B4	34/34 (100%)	30 (88%)	4 (12%)	5 21
32	D4	34/34 (100%)	31 (91%)	3 (9%)	9 33
33	B1	45/48 (94%)	39 (87%)	6 (13%)	4 18
33	D1	45/48 (94%)	39 (87%)	6 (13%)	4 18
34	B3	51/51 (100%)	43 (84%)	8 (16%)	2 15
34	D3	51/51 (100%)	43 (84%)	8 (16%)	2 15

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
35	BV	78/78 (100%)	63 (81%)	15 (19%)	1 10
35	DV	78/78 (100%)	63 (81%)	15 (19%)	1 10
36	B2	38/38 (100%)	32 (84%)	6 (16%)	2 15
36	D2	38/38 (100%)	34 (90%)	4 (10%)	6 24
37	BL	102/103 (99%)	91 (89%)	11 (11%)	6 24
37	DL	102/103 (99%)	90 (88%)	12 (12%)	5 21
38	BM	109/109 (100%)	86 (79%)	23 (21%)	1 7
38	DM	109/109 (100%)	88 (81%)	21 (19%)	1 9
39	BX	55/55 (100%)	44 (80%)	11 (20%)	1 9
39	DX	55/55 (100%)	44 (80%)	11 (20%)	1 9
40	BH	114/114 (100%)	79 (69%)	35 (31%)	0 2
40	DH	114/114 (100%)	86 (75%)	28 (25%)	1 4
41	BJ	116/116 (100%)	96 (83%)	20 (17%)	2 13
41	DJ	116/116 (100%)	97 (84%)	19 (16%)	2 13
42	BN	100/103 (97%)	88 (88%)	12 (12%)	5 21
42	DN	100/103 (97%)	88 (88%)	12 (12%)	5 21
43	BO	86/87 (99%)	74 (86%)	12 (14%)	3 17
43	DO	86/87 (99%)	74 (86%)	12 (14%)	3 17
44	BQ	89/89 (100%)	75 (84%)	14 (16%)	2 15
44	DQ	89/89 (100%)	75 (84%)	14 (16%)	2 15
45	BS	93/93 (100%)	77 (83%)	16 (17%)	2 13
45	DS	93/93 (100%)	77 (83%)	16 (17%)	2 13
46	BU	83/84 (99%)	67 (81%)	16 (19%)	1 9
46	DU	83/84 (99%)	67 (81%)	16 (19%)	1 9
47	BF	149/149 (100%)	114 (76%)	35 (24%)	1 5
47	DF	149/149 (100%)	114 (76%)	35 (24%)	1 5
48	BG	137/137 (100%)	116 (85%)	21 (15%)	3 15
48	DG	137/137 (100%)	117 (85%)	20 (15%)	3 16
49	BR	84/84 (100%)	71 (84%)	13 (16%)	2 15
49	DR	84/84 (100%)	71 (84%)	13 (16%)	2 15
50	BT	80/84 (95%)	60 (75%)	20 (25%)	0 4

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
50	DT	80/84 (95%)	61 (76%)	19 (24%)	1 5
51	BZ	67/68 (98%)	52 (78%)	15 (22%)	1 6
51	DZ	67/68 (98%)	52 (78%)	15 (22%)	1 6
52	BW	59/62 (95%)	46 (78%)	13 (22%)	1 6
52	DW	59/62 (95%)	46 (78%)	13 (22%)	1 6
All	All	9333/9700 (96%)	7655 (82%)	1678 (18%)	2 12

All (1678) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AC	2	GLN
2	AC	3	LYS
2	AC	13	ILE
2	AC	14	VAL
2	AC	15	LYS
2	AC	17	TRP
2	AC	19	SER
2	AC	27	GLU
2	AC	40	GLN
2	AC	41	TYR
2	AC	48	LYS
2	AC	62	SER
2	AC	63	ILE
2	AC	66	THR
2	AC	69	THR
2	AC	74	ILE
2	AC	75	VAL
2	AC	78	LYS
2	AC	79	LYS
2	AC	87	ARG
2	AC	88	LYS
2	AC	96	VAL
2	AC	101	ASN
2	AC	105	VAL
2	AC	110	LEU
2	AC	113	LYS
2	AC	118	SER
2	AC	126	ARG
2	AC	128	MET
2	AC	135	ARG

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Mol	Chain	Res	Type
2	AC	137	VAL
2	AC	139	ASN
2	AC	152	VAL
2	AC	155	ARG
2	AC	161	ILE
2	AC	168	ARG
2	AC	171	ARG
2	AC	172	VAL
2	AC	181	ILE
2	AC	184	ASN
2	AC	197	VAL
3	AD	12	ARG
3	AD	18	LEU
3	AD	25	ARG
3	AD	27	ILE
3	AD	28	ASP
3	AD	34	GLU
3	AD	35	GLN
3	AD	46	ARG
3	AD	49	ASP
3	AD	54	LEU
3	AD	55	ARG
3	AD	84	ASN
3	AD	87	GLU
3	AD	104	MET
3	AD	106	PHE
3	AD	114	ARG
3	AD	146	GLU
3	AD	147	LYS
3	AD	158	LEU
3	AD	160	LEU
3	AD	176	LYS
3	AD	177	MET
3	AD	189	ASP
3	AD	190	LEU
3	AD	194	ILE
3	AD	196	GLU
3	AD	197	HIS
3	AD	198	LEU
3	AD	199	ILE
3	AD	200	VAL
4	AE	14	LEU

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Mol	Chain	Res	Type
4	AE	20	VAL
4	AE	23	THR
4	AE	30	PHE
4	AE	45	VAL
4	AE	51	LYS
4	AE	55	VAL
4	AE	59	ILE
4	AE	60	GLN
4	AE	61	LYS
4	AE	68	ARG
4	AE	72	ASN
4	AE	77	ASN
4	AE	81	GLN
4	AE	92	ARG
4	AE	95	MET
4	AE	115	GLU
4	AE	123	LEU
4	AE	125	LYS
4	AE	127	TYR
4	AE	144	GLU
4	AE	147	ASN
4	AE	156	ARG
5	AF	6	ILE
5	AF	16	GLU
5	AF	53	LYS
5	AF	54	LEU
5	AF	56	LYS
5	AF	62	MET
5	AF	69	GLU
5	AF	73	GLU
5	AF	86	ARG
5	AF	90	MET
5	AF	96	VAL
5	AF	97	THR
5	AF	100	SER
6	AG	5	VAL
6	AG	6	ILE
6	AG	8	GLN
6	AG	11	ILE
6	AG	12	LEU
6	AG	16	LYS
6	AG	21	LEU

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Mol	Chain	Res	Type
6	AG	29	LEU
6	AG	49	LEU
6	AG	55	LYS
6	AG	57	GLU
6	AG	58	LEU
6	AG	59	GLU
6	AG	68	VAL
6	AG	72	VAL
6	AG	89	GLU
6	AG	94	ARG
6	AG	96	ASN
6	AG	117	LEU
6	AG	124	SER
6	AG	138	GLU
6	AG	143	MET
6	AG	145	GLU
7	AH	24	VAL
7	AH	25	THR
7	AH	45	ILE
7	AH	51	GLU
7	AH	54	THR
7	AH	55	LYS
7	AH	72	GLU
7	AH	82	LEU
7	AH	87	ARG
7	AH	100	ILE
7	AH	105	THR
7	AH	113	ARG
8	AI	12	LYS
8	AI	13	SER
8	AI	14	SER
8	AI	26	LYS
8	AI	30	ASN
8	AI	31	GLN
8	AI	34	LEU
8	AI	36	GLN
8	AI	42	THR
8	AI	45	MET
8	AI	46	VAL
8	AI	62	LEU
8	AI	67	LYS
8	AI	87	MET

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Mol	Chain	Res	Type
8	AI	90	ASP
8	AI	94	ARG
8	AI	96	GLU
8	AI	112	ARG
8	AI	122	ARG
8	AI	123	ARG
9	AJ	15	HIS
9	AJ	17	LEU
9	AJ	32	THR
9	AJ	42	LEU
9	AJ	45	ARG
9	AJ	51	VAL
9	AJ	60	ASP
9	AJ	64	GLN
9	AJ	73	LEU
9	AJ	80	THR
9	AJ	81	GLU
9	AJ	83	THR
9	AJ	89	ARG
9	AJ	92	LEU
9	AJ	102	LEU
10	AK	34	THR
10	AK	35	ASP
10	AK	52	ARG
10	AK	75	GLU
10	AK	80	ASN
10	AK	84	MET
10	AK	100	ASN
10	AK	105	ARG
10	AK	106	ILE
10	AK	110	THR
10	AK	115	ILE
10	AK	117	HIS
10	AK	127	ARG
11	AL	14	LYS
11	AL	17	LYS
11	AL	28	GLN
11	AL	35	ARG
11	AL	43	LYS
11	AL	48	LEU
11	AL	73	LEU
11	AL	86	VAL

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Mol	Chain	Res	Type
11	AL	87	LYS
11	AL	95	HIS
11	AL	96	THR
11	AL	97	VAL
11	AL	107	LYS
11	AL	108	ASP
11	AL	122	LYS
12	AM	15	VAL
12	AM	16	ILE
12	AM	26	LYS
12	AM	42	VAL
12	AM	44	ILE
12	AM	45	SER
12	AM	46	GLU
12	AM	47	LEU
12	AM	65	GLU
12	AM	67	ASP
12	AM	71	GLU
12	AM	77	LYS
12	AM	92	ARG
12	AM	96	VAL
12	AM	99	GLN
12	AM	101	THR
12	AM	102	LYS
13	AP	2	VAL
13	AP	28	ARG
13	AP	35	ARG
14	AQ	3	LYS
14	AQ	5	ARG
14	AQ	6	THR
14	AQ	27	PHE
14	AQ	39	ARG
14	AQ	48	GLU
14	AQ	60	ILE
14	AQ	66	LEU
14	AQ	74	LEU
14	AQ	79	GLU
14	AQ	80	LYS
15	AR	20	ILE
15	AR	30	ASN
15	AR	38	ILE
15	AR	42	ARG

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Mol	Chain	Res	Type
15	AR	46	THR
15	AR	71	ASP
15	AR	72	ARG
15	AR	73	HIS
16	AS	2	ARG
16	AS	4	LEU
16	AS	5	LYS
16	AS	10	ILE
16	AS	11	ASP
16	AS	14	LEU
16	AS	27	LYS
16	AS	33	TRP
16	AS	34	SER
16	AS	36	ARG
16	AS	38	THR
16	AS	47	THR
16	AS	54	ARG
16	AS	55	GLN
16	AS	59	VAL
16	AS	62	THR
16	AS	64	GLU
16	AS	70	LEU
16	AS	76	THR
17	AT	13	SER
17	AT	14	GLU
17	AT	35	TYR
17	AT	43	LYS
17	AT	51	ASN
17	AT	52	GLU
17	AT	53	MET
17	AT	59	ARG
17	AT	69	ASN
17	AT	73	ARG
17	AT	79	THR
18	AB	8	MET
18	AB	14	HIS
18	AB	18	GLN
18	AB	23	ASN
18	AB	37	VAL
18	AB	38	HIS
18	AB	41	ASN
18	AB	42	LEU

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Mol	Chain	Res	Type
18	AB	43	GLU
18	AB	46	VAL
18	AB	48	MET
18	AB	61	SER
18	AB	62	ARG
18	AB	67	LEU
18	AB	80	LYS
18	AB	81	ASP
18	AB	84	LEU
18	AB	88	GLN
18	AB	94	ARG
18	AB	95	TRP
18	AB	100	LEU
18	AB	104	LYS
18	AB	107	ARG
18	AB	125	PHE
18	AB	127	LYS
18	AB	128	LEU
18	AB	131	LYS
18	AB	145	ASN
18	AB	146	SER
18	AB	160	LEU
18	AB	169	HIS
18	AB	183	PHE
18	AB	187	ASP
18	AB	188	THR
18	AB	196	ASP
18	AB	202	ASN
18	AB	203	ASP
18	AB	206	ILE
18	AB	213	LEU
18	AB	221	ARG
19	AU	7	GLU
19	AU	11	PHE
19	AU	15	LEU
19	AU	16	ARG
19	AU	20	ARG
19	AU	22	CYS
19	AU	24	LYS
19	AU	34	ARG
19	AU	36	PHE
19	AU	44	ARG

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Mol	Chain	Res	Type
19	AU	48	LYS
20	AO	20	ASN
20	AO	32	LEU
20	AO	33	THR
20	AO	39	LEU
20	AO	40	GLN
20	AO	42	HIS
20	AO	66	LEU
20	AO	70	LEU
20	AO	77	ARG
20	AO	88	ARG
21	AN	19	TYR
21	AN	20	PHE
21	AN	30	ILE
21	AN	44	VAL
21	AN	47	LEU
21	AN	48	GLN
21	AN	49	THR
21	AN	50	LEU
21	AN	52	ARG
21	AN	53	ASP
21	AN	59	GLN
21	AN	65	GLN
21	AN	73	LEU
21	AN	74	ARG
21	AN	80	ARG
21	AN	89	ARG
25	BC	4	LYS
25	BC	5	CYS
25	BC	6	LYS
25	BC	9	SER
25	BC	12	ARG
25	BC	35	LYS
25	BC	45	ASN
25	BC	52	HIS
25	BC	62	ARG
25	BC	63	ILE
25	BC	65	ASP
25	BC	69	ASN
25	BC	82	TYR
25	BC	85	ASN
25	BC	100	ARG

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Mol	Chain	Res	Type
25	BC	113	ASP
25	BC	123	ILE
25	BC	134	ILE
25	BC	142	ASN
25	BC	145	MET
25	BC	152	GLN
25	BC	155	ARG
25	BC	164	VAL
25	BC	166	ARG
25	BC	173	LEU
25	BC	176	ARG
25	BC	180	MET
25	BC	188	ARG
25	BC	191	LEU
25	BC	201	LEU
25	BC	224	MET
25	BC	227	VAL
25	BC	245	THR
25	BC	249	VAL
25	BC	251	THR
25	BC	256	THR
26	BD	1	MET
26	BD	11	MET
26	BD	13	ARG
26	BD	14	ILE
26	BD	16	THR
26	BD	17	GLU
26	BD	33	ARG
26	BD	34	VAL
26	BD	36	GLN
26	BD	40	LEU
26	BD	46	ARG
26	BD	52	THR
26	BD	55	LYS
26	BD	56	LYS
26	BD	62	LYS
26	BD	70	LYS
26	BD	74	GLU
26	BD	81	GLU
26	BD	84	LEU
26	BD	89	GLU
26	BD	91	THR

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Mol	Chain	Res	Type
26	BD	96	ILE
26	BD	98	VAL
26	BD	106	LYS
26	BD	118	PHE
26	BD	131	ASP
26	BD	138	LEU
26	BD	141	ARG
26	BD	146	ILE
26	BD	148	GLN
26	BD	155	VAL
26	BD	159	LYS
26	BD	183	GLU
26	BD	190	LYS
26	BD	201	LEU
26	BD	204	LYS
27	BK	2	ILE
27	BK	6	THR
27	BK	18	ARG
27	BK	19	VAL
27	BK	21	CYS
27	BK	25	LEU
27	BK	37	ASP
27	BK	38	ILE
27	BK	47	ILE
27	BK	52	VAL
27	BK	54	LYS
27	BK	65	THR
27	BK	66	LYS
27	BK	72	PRO
27	BK	73	ASP
27	BK	79	PHE
27	BK	86	LEU
27	BK	97	THR
27	BK	104	THR
27	BK	105	ARG
27	BK	107	LEU
27	BK	108	ARG
27	BK	111	LYS
27	BK	113	MET
27	BK	120	PRO
28	BP	3	ILE
28	BP	6	GLN

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Mol	Chain	Res	Type
28	BP	19	PHE
28	BP	20	ARG
28	BP	25	VAL
28	BP	33	GLU
28	BP	43	GLU
28	BP	52	ARG
28	BP	58	PHE
28	BP	59	THR
28	BP	61	ARG
28	BP	65	ASN
28	BP	80	VAL
28	BP	83	ILE
28	BP	84	SER
28	BP	93	LYS
28	BP	95	LYS
28	BP	99	LEU
28	BP	101	GLU
28	BP	111	GLU
28	BP	112	ARG
28	BP	114	ASN
29	BE	5	LEU
29	BE	6	LYS
29	BE	7	ASP
29	BE	9	GLN
29	BE	13	THR
29	BE	16	GLU
29	BE	17	THR
29	BE	58	LYS
29	BE	62	GLN
29	BE	63	LYS
29	BE	108	ILE
29	BE	112	LEU
29	BE	118	LEU
29	BE	122	GLU
29	BE	123	LYS
29	BE	127	GLU
29	BE	144	GLU
29	BE	147	LEU
29	BE	167	VAL
29	BE	198	GLU
30	BY	2	LYS
30	BY	6	ILE

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Mol	Chain	Res	Type
30	BY	10	ARG
30	BY	23	LEU
30	BY	24	LEU
30	BY	37	ARG
30	BY	43	ILE
30	BY	53	MET
31	B0	5	ASN
31	B0	18	HIS
31	B0	26	SER
31	B0	27	LEU
31	B0	28	SER
31	B0	35	GLU
31	B0	37	HIS
31	B0	38	LEU
31	B0	41	HIS
31	B0	45	ASP
31	B0	47	TYR
31	B0	51	ARG
32	B4	3	VAL
32	B4	9	LYS
32	B4	24	ARG
32	B4	35	GLN
33	B1	4	ILE
33	B1	6	GLU
33	B1	8	ILE
33	B1	16	THR
33	B1	31	GLU
33	B1	35	LEU
34	B3	2	LYS
34	B3	6	VAL
34	B3	7	ARG
34	B3	14	LYS
34	B3	48	MET
34	B3	56	LEU
34	B3	57	VAL
34	B3	58	ILE
35	BV	11	GLU
35	BV	18	ARG
35	BV	24	ASN
35	BV	34	LYS
35	BV	40	ILE
35	BV	42	LEU

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Mol	Chain	Res	Type
35	BV	51	GLN
35	BV	53	LYS
35	BV	60	VAL
35	BV	68	LYS
35	BV	70	ILE
35	BV	75	GLN
35	BV	77	VAL
35	BV	83	LYS
35	BV	87	GLN
36	B2	3	ARG
36	B2	4	THR
36	B2	22	MET
36	B2	34	ARG
36	B2	39	ARG
36	B2	46	LYS
37	BL	4	ASN
37	BL	19	LEU
37	BL	46	VAL
37	BL	64	PHE
37	BL	69	ARG
37	BL	92	LEU
37	BL	94	THR
37	BL	95	LEU
37	BL	116	VAL
37	BL	118	THR
37	BL	122	VAL
38	BM	1	MET
38	BM	20	LEU
38	BM	25	ASP
38	BM	42	THR
38	BM	46	ILE
38	BM	50	ARG
38	BM	55	ARG
38	BM	59	ARG
38	BM	60	GLN
38	BM	63	ILE
38	BM	65	ILE
38	BM	75	GLU
38	BM	78	LEU
38	BM	82	MET
38	BM	88	ASN
38	BM	90	GLU

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Mol	Chain	Res	Type
38	BM	93	VAL
38	BM	100	LYS
38	BM	101	VAL
38	BM	110	GLU
38	BM	111	GLU
38	BM	115	GLU
38	BM	131	VAL
39	BX	2	LYS
39	BX	7	ARG
39	BX	16	THR
39	BX	20	ASN
39	BX	21	LEU
39	BX	22	LEU
39	BX	25	GLN
39	BX	37	LEU
39	BX	38	GLN
39	BX	57	LEU
39	BX	59	GLU
40	BH	1	MET
40	BH	3	VAL
40	BH	9	VAL
40	BH	15	LEU
40	BH	17	ASP
40	BH	28	ASN
40	BH	33	GLN
40	BH	43	ASN
40	BH	44	ILE
40	BH	54	LEU
40	BH	55	GLU
40	BH	57	LYS
40	BH	60	GLU
40	BH	62	LEU
40	BH	66	ASN
40	BH	68	ARG
40	BH	70	GLU
40	BH	71	LYS
40	BH	73	ASN
40	BH	83	LYS
40	BH	87	GLU
40	BH	89	LYS
40	BH	90	LEU
40	BH	98	ASP

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Mol	Chain	Res	Type
40	BH	103	VAL
40	BH	104	THR
40	BH	109	GLU
40	BH	110	VAL
40	BH	112	LYS
40	BH	128	HIS
40	BH	130	VAL
40	BH	135	HIS
40	BH	144	VAL
40	BH	146	VAL
40	BH	147	VAL
41	BJ	2	LYS
41	BJ	3	THR
41	BJ	5	THR
41	BJ	12	LYS
41	BJ	21	THR
41	BJ	31	GLU
41	BJ	43	GLU
41	BJ	50	THR
41	BJ	54	ILE
41	BJ	65	THR
41	BJ	72	LYS
41	BJ	73	VAL
41	BJ	95	ARG
41	BJ	106	LYS
41	BJ	108	MET
41	BJ	124	VAL
41	BJ	129	GLU
41	BJ	131	ASN
41	BJ	136	GLN
41	BJ	140	LEU
42	BN	2	ARG
42	BN	11	ASN
42	BN	18	GLN
42	BN	33	ILE
42	BN	35	LYS
42	BN	46	ARG
42	BN	51	LEU
42	BN	57	THR
42	BN	69	ARG
42	BN	100	CYS
42	BN	114	GLU

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Mol	Chain	Res	Type
42	BN	120	GLU
43	BO	21	LEU
43	BO	31	THR
43	BO	35	ILE
43	BO	43	ASN
43	BO	46	GLU
43	BO	68	LYS
43	BO	78	VAL
43	BO	84	GLU
43	BO	98	GLN
43	BO	104	GLN
43	BO	106	LEU
43	BO	116	GLN
44	BQ	5	ARG
44	BQ	10	ARG
44	BQ	13	HIS
44	BQ	14	LYS
44	BQ	19	GLN
44	BQ	29	ARG
44	BQ	40	LYS
44	BQ	59	LEU
44	BQ	79	ILE
44	BQ	83	LYS
44	BQ	88	GLU
44	BQ	90	ASP
44	BQ	96	ASP
44	BQ	105	PHE
45	BS	1	MET
45	BS	6	LYS
45	BS	17	VAL
45	BS	18	ARG
45	BS	35	ILE
45	BS	36	LEU
45	BS	40	ASN
45	BS	41	LYS
45	BS	47	VAL
45	BS	66	ILE
45	BS	71	VAL
45	BS	72	THR
45	BS	84	ARG
45	BS	86	MET
45	BS	88	ARG

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Mol	Chain	Res	Type
45	BS	101	SER
46	BU	7	ASP
46	BU	11	ILE
46	BU	16	LYS
46	BU	18	LYS
46	BU	26	ASN
46	BU	35	VAL
46	BU	45	GLN
46	BU	46	LYS
46	BU	51	LEU
46	BU	60	LYS
46	BU	65	GLN
46	BU	73	ASN
46	BU	78	LYS
46	BU	85	ARG
46	BU	87	GLU
46	BU	102	ILE
47	BF	2	LYS
47	BF	18	GLU
47	BF	22	ASN
47	BF	24	VAL
47	BF	29	ARG
47	BF	35	LEU
47	BF	49	LEU
47	BF	50	ASP
47	BF	56	LEU
47	BF	62	GLN
47	BF	66	ILE
47	BF	68	LYS
47	BF	76	PHE
47	BF	84	ILE
47	BF	87	LYS
47	BF	88	VAL
47	BF	91	ARG
47	BF	93	GLU
47	BF	94	ARG
47	BF	97	GLU
47	BF	100	GLU
47	BF	111	ARG
47	BF	121	PHE
47	BF	129	MET
47	BF	134	GLN

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Mol	Chain	Res	Type
47	BF	137	PHE
47	BF	138	PRO
47	BF	141	ASP
47	BF	142	TYR
47	BF	146	ASP
47	BF	147	ARG
47	BF	149	ARG
47	BF	156	THR
47	BF	177	ARG
47	BF	178	LYS
48	BG	14	VAL
48	BG	17	LYS
48	BG	26	LYS
48	BG	29	ASN
48	BG	34	ARG
48	BG	36	LEU
48	BG	46	ASP
48	BG	50	THR
48	BG	54	ARG
48	BG	84	LYS
48	BG	85	LYS
48	BG	86	LEU
48	BG	94	ARG
48	BG	120	ILE
48	BG	123	GLU
48	BG	138	GLN
48	BG	162	ARG
48	BG	166	GLU
48	BG	167	VAL
48	BG	169	ARG
48	BG	176	LYS
49	BR	5	PHE
49	BR	19	THR
49	BR	20	VAL
49	BR	22	LEU
49	BR	25	LEU
49	BR	27	ILE
49	BR	39	LEU
49	BR	41	ILE
49	BR	53	PHE
49	BR	64	VAL
49	BR	70	GLU

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Mol	Chain	Res	Type
49	BR	72	VAL
49	BR	99	THR
50	BT	2	ILE
50	BT	3	ARG
50	BT	6	ARG
50	BT	9	LYS
50	BT	11	LEU
50	BT	12	ARG
50	BT	22	THR
50	BT	29	THR
50	BT	50	LEU
50	BT	52	GLU
50	BT	54	GLU
50	BT	61	LEU
50	BT	64	LYS
50	BT	68	LYS
50	BT	73	ARG
50	BT	76	ARG
50	BT	79	ASP
50	BT	81	LYS
50	BT	87	LEU
50	BT	92	ASN
51	BZ	4	VAL
51	BZ	13	VAL
51	BZ	14	THR
51	BZ	27	ARG
51	BZ	28	ARG
51	BZ	29	PHE
51	BZ	30	LEU
51	BZ	33	LEU
51	BZ	37	ARG
51	BZ	46	PHE
51	BZ	49	LEU
51	BZ	60	ASP
51	BZ	64	ILE
51	BZ	65	ASP
51	BZ	77	LYS
52	BW	16	GLU
52	BW	18	LYS
52	BW	23	LYS
52	BW	24	ARG
52	BW	31	LEU

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Mol	Chain	Res	Type
52	BW	38	ARG
52	BW	39	GLN
52	BW	40	ARG
52	BW	44	PHE
52	BW	50	VAL
52	BW	76	ARG
52	BW	77	LYS
52	BW	84	GLU
3	CD	12	ARG
3	CD	18	LEU
3	CD	25	ARG
3	CD	27	ILE
3	CD	28	ASP
3	CD	34	GLU
3	CD	35	GLN
3	CD	46	ARG
3	CD	49	ASP
3	CD	54	LEU
3	CD	55	ARG
3	CD	84	ASN
3	CD	87	GLU
3	CD	104	MET
3	CD	106	PHE
3	CD	114	ARG
3	CD	146	GLU
3	CD	147	LYS
3	CD	158	LEU
3	CD	160	LEU
3	CD	176	LYS
3	CD	177	MET
3	CD	189	ASP
3	CD	190	LEU
3	CD	196	GLU
3	CD	197	HIS
3	CD	198	LEU
3	CD	199	ILE
3	CD	200	VAL
4	CE	14	LEU
4	CE	20	VAL
4	CE	23	THR
4	CE	30	PHE
4	CE	45	VAL

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Mol	Chain	Res	Type
4	CE	51	LYS
4	CE	55	VAL
4	CE	59	ILE
4	CE	61	LYS
4	CE	68	ARG
4	CE	77	ASN
4	CE	81	GLN
4	CE	92	ARG
4	CE	115	GLU
4	CE	123	LEU
4	CE	125	LYS
4	CE	127	TYR
4	CE	144	GLU
4	CE	147	ASN
4	CE	156	ARG
5	CF	6	ILE
5	CF	16	GLU
5	CF	53	LYS
5	CF	54	LEU
5	CF	56	LYS
5	CF	69	GLU
5	CF	73	GLU
5	CF	86	ARG
5	CF	96	VAL
5	CF	97	THR
5	CF	100	SER
7	CH	24	VAL
7	CH	25	THR
7	CH	45	ILE
7	CH	51	GLU
7	CH	54	THR
7	CH	55	LYS
7	CH	72	GLU
7	CH	74	ILE
7	CH	82	LEU
7	CH	87	ARG
7	CH	100	ILE
7	CH	105	THR
7	CH	113	ARG
10	CK	34	THR
10	CK	35	ASP
10	CK	52	ARG

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Mol	Chain	Res	Type
10	CK	75	GLU
10	CK	80	ASN
10	CK	84	MET
10	CK	100	ASN
10	CK	105	ARG
10	CK	106	ILE
10	CK	110	THR
10	CK	115	ILE
10	CK	117	HIS
10	CK	127	ARG
11	CL	14	LYS
11	CL	17	LYS
11	CL	28	GLN
11	CL	35	ARG
11	CL	43	LYS
11	CL	48	LEU
11	CL	73	LEU
11	CL	86	VAL
11	CL	87	LYS
11	CL	95	HIS
11	CL	96	THR
11	CL	97	VAL
11	CL	107	LYS
11	CL	108	ASP
11	CL	122	LYS
13	CP	2	VAL
13	CP	28	ARG
13	CP	35	ARG
13	CP	50	THR
14	CQ	3	LYS
14	CQ	5	ARG
14	CQ	6	THR
14	CQ	27	PHE
14	CQ	39	ARG
14	CQ	48	GLU
14	CQ	60	ILE
14	CQ	66	LEU
14	CQ	74	LEU
14	CQ	79	GLU
14	CQ	80	LYS
14	CQ	83	LEU
15	CR	20	ILE

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Mol	Chain	Res	Type
15	CR	27	THR
15	CR	30	ASN
15	CR	38	ILE
15	CR	42	ARG
15	CR	46	THR
15	CR	71	ASP
15	CR	72	ARG
15	CR	73	HIS
17	CT	13	SER
17	CT	14	GLU
17	CT	35	TYR
17	CT	43	LYS
17	CT	51	ASN
17	CT	52	GLU
17	CT	53	MET
17	CT	59	ARG
17	CT	69	ASN
17	CT	73	ARG
17	CT	79	THR
19	CU	7	GLU
19	CU	11	PHE
19	CU	15	LEU
19	CU	16	ARG
19	CU	20	ARG
19	CU	22	CYS
19	CU	24	LYS
19	CU	34	ARG
19	CU	36	PHE
19	CU	44	ARG
19	CU	48	LYS
2	CC	2	GLN
2	CC	13	ILE
2	CC	17	TRP
2	CC	20	THR
2	CC	27	GLU
2	CC	31	ASN
2	CC	39	ARG
2	CC	44	LYS
2	CC	45	GLU
2	CC	50	SER
2	CC	56	ILE
2	CC	61	LYS

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Mol	Chain	Res	Type
2	CC	63	ILE
2	CC	86	LEU
2	CC	88	LYS
2	CC	89	VAL
2	CC	104	GLU
2	CC	106	ARG
2	CC	107	LYS
2	CC	109	GLU
2	CC	120	THR
2	CC	126	ARG
2	CC	128	MET
2	CC	130	ARG
2	CC	138	GLN
2	CC	143	LEU
2	CC	156	LEU
2	CC	165	GLU
2	CC	168	ARG
2	CC	175	HIS
2	CC	177	LEU
2	CC	186	SER
2	CC	192	TYR
2	CC	201	ILE
2	CC	205	GLU
6	CG	2	ARG
6	CG	6	ILE
6	CG	11	ILE
6	CG	12	LEU
6	CG	21	LEU
6	CG	26	VAL
6	CG	29	LEU
6	CG	32	ASP
6	CG	47	GLU
6	CG	55	LYS
6	CG	56	SER
6	CG	59	GLU
6	CG	62	GLU
6	CG	65	LEU
6	CG	67	ASN
6	CG	75	LYS
6	CG	78	ARG
6	CG	90	VAL
6	CG	93	VAL

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Mol	Chain	Res	Type
6	CG	94	ARG
6	CG	105	GLU
6	CG	108	ARG
6	CG	109	LYS
6	CG	112	ASP
6	CG	115	MET
6	CG	124	SER
6	CG	128	GLU
6	CG	134	VAL
6	CG	137	ARG
6	CG	152	HIS
8	CI	3	ASN
8	CI	11	ARG
8	CI	13	SER
8	CI	27	ILE
8	CI	30	ASN
8	CI	35	GLU
8	CI	42	THR
8	CI	44	ARG
8	CI	45	MET
8	CI	46	VAL
8	CI	56	MET
8	CI	58	GLU
8	CI	59	LYS
8	CI	60	LEU
8	CI	62	LEU
8	CI	65	THR
8	CI	67	LYS
8	CI	74	GLN
8	CI	80	HIS
8	CI	93	LEU
8	CI	96	GLU
8	CI	108	ARG
8	CI	109	GLN
8	CI	114	LYS
8	CI	117	LEU
8	CI	123	ARG
9	CJ	11	LYS
9	CJ	24	GLU
9	CJ	37	ARG
9	CJ	42	LEU
9	CJ	47	GLU

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Mol	Chain	Res	Type
9	CJ	53	ILE
9	CJ	64	GLN
9	CJ	72	ARG
9	CJ	73	LEU
9	CJ	78	GLU
9	CJ	80	THR
9	CJ	81	GLU
9	CJ	82	LYS
9	CJ	89	ARG
9	CJ	90	LEU
9	CJ	92	LEU
9	CJ	99	GLN
9	CJ	100	ILE
12	CM	2	ARG
12	CM	8	ILE
12	CM	38	ILE
12	CM	40	GLU
12	CM	41	ASP
12	CM	43	LYS
12	CM	47	LEU
12	CM	51	GLN
12	CM	54	THR
12	CM	55	LEU
12	CM	57	ASP
12	CM	64	VAL
12	CM	65	GLU
12	CM	69	ARG
12	CM	79	LEU
12	CM	91	ARG
12	CM	106	ARG
21	CN	15	LEU
21	CN	25	GLU
21	CN	41	TRP
21	CN	45	LEU
21	CN	47	LEU
21	CN	49	THR
21	CN	50	LEU
21	CN	52	ARG
21	CN	55	SER
21	CN	63	CYS
21	CN	64	ARG
21	CN	65	GLN

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Mol	Chain	Res	Type
21	CN	73	LEU
21	CN	76	PHE
21	CN	81	ILE
21	CN	97	LYS
16	CS	2	ARG
16	CS	4	LEU
16	CS	5	LYS
16	CS	10	ILE
16	CS	12	LEU
16	CS	13	HIS
16	CS	15	LEU
16	CS	19	GLU
16	CS	23	GLU
16	CS	26	ASP
16	CS	27	LYS
16	CS	28	LYS
16	CS	36	ARG
16	CS	38	THR
16	CS	39	ILE
16	CS	47	THR
16	CS	56	HIS
16	CS	59	VAL
16	CS	60	PHE
16	CS	64	GLU
16	CS	65	MET
18	CB	9	LEU
18	CB	19	THR
18	CB	23	ASN
18	CB	42	LEU
18	CB	43	GLU
18	CB	44	LYS
18	CB	46	VAL
18	CB	50	ASN
18	CB	57	ASN
18	CB	58	LYS
18	CB	59	ILE
18	CB	62	ARG
18	CB	69	VAL
18	CB	72	LYS
18	CB	79	VAL
18	CB	84	LEU
18	CB	86	CYS

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Mol	Chain	Res	Type
18	CB	92	ASN
18	CB	93	HIS
18	CB	95	TRP
18	CB	104	LYS
18	CB	113	LEU
18	CB	121	GLN
18	CB	122	ASP
18	CB	126	ASP
18	CB	127	LYS
18	CB	136	ARG
18	CB	137	THR
18	CB	144	GLU
18	CB	152	ASP
18	CB	160	LEU
18	CB	162	VAL
18	CB	163	ILE
18	CB	166	ASP
18	CB	169	HIS
18	CB	172	ILE
18	CB	176	ASN
18	CB	178	LEU
18	CB	187	ASP
18	CB	196	ASP
18	CB	198	VAL
18	CB	199	ILE
18	CB	210	THR
18	CB	211	LEU
18	CB	221	ARG
20	CO	4	SER
20	CO	6	GLU
20	CO	33	THR
20	CO	35	GLN
20	CO	37	ASN
20	CO	54	ARG
20	CO	57	LEU
20	CO	59	MET
20	CO	62	GLN
20	CO	66	LEU
20	CO	70	LEU
20	CO	71	LYS
20	CO	88	ARG
24	DI	2	LYS

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Mol	Chain	Res	Type
24	DI	54	ILE
24	DI	121	ILE
25	DC	4	LYS
25	DC	6	LYS
25	DC	9	SER
25	DC	12	ARG
25	DC	35	LYS
25	DC	45	ASN
25	DC	62	ARG
25	DC	63	ILE
25	DC	65	ASP
25	DC	69	ASN
25	DC	82	TYR
25	DC	85	ASN
25	DC	100	ARG
25	DC	113	ASP
25	DC	123	ILE
25	DC	134	ILE
25	DC	142	ASN
25	DC	145	MET
25	DC	152	GLN
25	DC	155	ARG
25	DC	164	VAL
25	DC	166	ARG
25	DC	173	LEU
25	DC	176	ARG
25	DC	180	MET
25	DC	188	ARG
25	DC	191	LEU
25	DC	201	LEU
25	DC	224	MET
25	DC	227	VAL
25	DC	245	THR
25	DC	249	VAL
25	DC	251	THR
25	DC	256	THR
26	DD	1	MET
26	DD	11	MET
26	DD	13	ARG
26	DD	14	ILE
26	DD	16	THR
26	DD	17	GLU

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Mol	Chain	Res	Type
26	DD	33	ARG
26	DD	34	VAL
26	DD	36	GLN
26	DD	40	LEU
26	DD	46	ARG
26	DD	50	VAL
26	DD	52	THR
26	DD	55	LYS
26	DD	56	LYS
26	DD	62	LYS
26	DD	70	LYS
26	DD	74	GLU
26	DD	81	GLU
26	DD	84	LEU
26	DD	89	GLU
26	DD	91	THR
26	DD	96	ILE
26	DD	98	VAL
26	DD	106	LYS
26	DD	118	PHE
26	DD	130	GLN
26	DD	131	ASP
26	DD	138	LEU
26	DD	141	ARG
26	DD	146	ILE
26	DD	148	GLN
26	DD	155	VAL
26	DD	159	LYS
26	DD	160	LYS
26	DD	183	GLU
26	DD	190	LYS
26	DD	199	SER
26	DD	201	LEU
26	DD	204	LYS
27	DK	2	ILE
27	DK	6	THR
27	DK	18	ARG
27	DK	19	VAL
27	DK	21	CYS
27	DK	25	LEU
27	DK	37	ASP
27	DK	38	ILE

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Mol	Chain	Res	Type
27	DK	47	ILE
27	DK	52	VAL
27	DK	54	LYS
27	DK	65	THR
27	DK	66	LYS
27	DK	72	PRO
27	DK	73	ASP
27	DK	79	PHE
27	DK	86	LEU
27	DK	97	THR
27	DK	104	THR
27	DK	105	ARG
27	DK	107	LEU
27	DK	108	ARG
27	DK	111	LYS
27	DK	113	MET
27	DK	120	PRO
28	DP	3	ILE
28	DP	6	GLN
28	DP	19	PHE
28	DP	20	ARG
28	DP	25	VAL
28	DP	33	GLU
28	DP	43	GLU
28	DP	52	ARG
28	DP	58	PHE
28	DP	59	THR
28	DP	61	ARG
28	DP	65	ASN
28	DP	80	VAL
28	DP	83	ILE
28	DP	84	SER
28	DP	93	LYS
28	DP	95	LYS
28	DP	99	LEU
28	DP	101	GLU
28	DP	111	GLU
28	DP	112	ARG
28	DP	114	ASN
29	DE	5	LEU
29	DE	6	LYS
29	DE	7	ASP

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Mol	Chain	Res	Type
29	DE	9	GLN
29	DE	13	THR
29	DE	16	GLU
29	DE	17	THR
29	DE	58	LYS
29	DE	62	GLN
29	DE	63	LYS
29	DE	108	ILE
29	DE	112	LEU
29	DE	118	LEU
29	DE	122	GLU
29	DE	123	LYS
29	DE	127	GLU
29	DE	144	GLU
29	DE	147	LEU
29	DE	167	VAL
29	DE	198	GLU
30	DY	2	LYS
30	DY	6	ILE
30	DY	10	ARG
30	DY	23	LEU
30	DY	24	LEU
30	DY	37	ARG
30	DY	43	ILE
30	DY	53	MET
31	D0	5	ASN
31	D0	18	HIS
31	D0	28	SER
31	D0	35	GLU
31	D0	37	HIS
31	D0	38	LEU
31	D0	45	ASP
31	D0	47	TYR
31	D0	51	ARG
32	D4	9	LYS
32	D4	24	ARG
32	D4	35	GLN
33	D1	4	ILE
33	D1	6	GLU
33	D1	8	ILE
33	D1	16	THR
33	D1	31	GLU

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Mol	Chain	Res	Type
33	D1	35	LEU
34	D3	2	LYS
34	D3	6	VAL
34	D3	7	ARG
34	D3	14	LYS
34	D3	48	MET
34	D3	56	LEU
34	D3	57	VAL
34	D3	58	ILE
35	DV	11	GLU
35	DV	18	ARG
35	DV	24	ASN
35	DV	34	LYS
35	DV	40	ILE
35	DV	42	LEU
35	DV	51	GLN
35	DV	53	LYS
35	DV	60	VAL
35	DV	68	LYS
35	DV	70	ILE
35	DV	75	GLN
35	DV	77	VAL
35	DV	83	LYS
35	DV	87	GLN
36	D2	3	ARG
36	D2	22	MET
36	D2	34	ARG
36	D2	46	LYS
37	DL	4	ASN
37	DL	19	LEU
37	DL	21	ARG
37	DL	46	VAL
37	DL	64	PHE
37	DL	69	ARG
37	DL	92	LEU
37	DL	94	THR
37	DL	95	LEU
37	DL	116	VAL
37	DL	118	THR
37	DL	122	VAL
38	DM	1	MET
38	DM	20	LEU

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Mol	Chain	Res	Type
38	DM	25	ASP
38	DM	42	THR
38	DM	46	ILE
38	DM	55	ARG
38	DM	59	ARG
38	DM	60	GLN
38	DM	63	ILE
38	DM	65	ILE
38	DM	75	GLU
38	DM	78	LEU
38	DM	82	MET
38	DM	88	ASN
38	DM	90	GLU
38	DM	93	VAL
38	DM	100	LYS
38	DM	101	VAL
38	DM	111	GLU
38	DM	115	GLU
38	DM	131	VAL
39	DX	2	LYS
39	DX	7	ARG
39	DX	16	THR
39	DX	20	ASN
39	DX	21	LEU
39	DX	22	LEU
39	DX	25	GLN
39	DX	37	LEU
39	DX	38	GLN
39	DX	57	LEU
39	DX	59	GLU
40	DH	1	MET
40	DH	3	VAL
40	DH	9	VAL
40	DH	15	LEU
40	DH	17	ASP
40	DH	28	ASN
40	DH	33	GLN
40	DH	43	ASN
40	DH	50	ARG
40	DH	70	GLU
40	DH	76	GLU
40	DH	83	LYS

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Mol	Chain	Res	Type
40	DH	87	GLU
40	DH	90	LEU
40	DH	96	THR
40	DH	97	ARG
40	DH	103	VAL
40	DH	110	VAL
40	DH	112	LYS
40	DH	114	GLU
40	DH	119	ASN
40	DH	123	ARG
40	DH	124	THR
40	DH	129	GLU
40	DH	131	SER
40	DH	134	VAL
40	DH	137	GLU
40	DH	142	VAL
41	DJ	2	LYS
41	DJ	3	THR
41	DJ	5	THR
41	DJ	12	LYS
41	DJ	21	THR
41	DJ	31	GLU
41	DJ	43	GLU
41	DJ	50	THR
41	DJ	54	ILE
41	DJ	65	THR
41	DJ	72	LYS
41	DJ	73	VAL
41	DJ	95	ARG
41	DJ	106	LYS
41	DJ	108	MET
41	DJ	129	GLU
41	DJ	131	ASN
41	DJ	136	GLN
41	DJ	140	LEU
42	DN	11	ASN
42	DN	18	GLN
42	DN	33	ILE
42	DN	35	LYS
42	DN	40	LYS
42	DN	46	ARG
42	DN	51	LEU

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Mol	Chain	Res	Type
42	DN	57	THR
42	DN	69	ARG
42	DN	100	CYS
42	DN	114	GLU
42	DN	120	GLU
43	DO	21	LEU
43	DO	31	THR
43	DO	35	ILE
43	DO	43	ASN
43	DO	46	GLU
43	DO	68	LYS
43	DO	78	VAL
43	DO	84	GLU
43	DO	98	GLN
43	DO	104	GLN
43	DO	106	LEU
43	DO	116	GLN
44	DQ	5	ARG
44	DQ	10	ARG
44	DQ	13	HIS
44	DQ	14	LYS
44	DQ	19	GLN
44	DQ	29	ARG
44	DQ	40	LYS
44	DQ	59	LEU
44	DQ	79	ILE
44	DQ	83	LYS
44	DQ	88	GLU
44	DQ	90	ASP
44	DQ	96	ASP
44	DQ	105	PHE
45	DS	1	MET
45	DS	6	LYS
45	DS	17	VAL
45	DS	18	ARG
45	DS	35	ILE
45	DS	36	LEU
45	DS	40	ASN
45	DS	41	LYS
45	DS	47	VAL
45	DS	66	ILE
45	DS	71	VAL

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Mol	Chain	Res	Type
45	DS	72	THR
45	DS	84	ARG
45	DS	86	MET
45	DS	88	ARG
45	DS	101	SER
46	DU	7	ASP
46	DU	11	ILE
46	DU	16	LYS
46	DU	18	LYS
46	DU	26	ASN
46	DU	35	VAL
46	DU	45	GLN
46	DU	46	LYS
46	DU	51	LEU
46	DU	60	LYS
46	DU	65	GLN
46	DU	73	ASN
46	DU	78	LYS
46	DU	85	ARG
46	DU	87	GLU
46	DU	102	ILE
47	DF	2	LYS
47	DF	18	GLU
47	DF	22	ASN
47	DF	24	VAL
47	DF	29	ARG
47	DF	35	LEU
47	DF	49	LEU
47	DF	50	ASP
47	DF	56	LEU
47	DF	62	GLN
47	DF	66	ILE
47	DF	68	LYS
47	DF	76	PHE
47	DF	84	ILE
47	DF	87	LYS
47	DF	88	VAL
47	DF	91	ARG
47	DF	93	GLU
47	DF	94	ARG
47	DF	97	GLU
47	DF	100	GLU

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Mol	Chain	Res	Type
47	DF	111	ARG
47	DF	121	PHE
47	DF	129	MET
47	DF	134	GLN
47	DF	137	PHE
47	DF	138	PRO
47	DF	141	ASP
47	DF	142	TYR
47	DF	146	ASP
47	DF	147	ARG
47	DF	149	ARG
47	DF	156	THR
47	DF	177	ARG
47	DF	178	LYS
48	DG	14	VAL
48	DG	17	LYS
48	DG	26	LYS
48	DG	34	ARG
48	DG	36	LEU
48	DG	46	ASP
48	DG	50	THR
48	DG	54	ARG
48	DG	84	LYS
48	DG	85	LYS
48	DG	86	LEU
48	DG	94	ARG
48	DG	120	ILE
48	DG	123	GLU
48	DG	138	GLN
48	DG	162	ARG
48	DG	166	GLU
48	DG	167	VAL
48	DG	169	ARG
48	DG	176	LYS
49	DR	5	PHE
49	DR	19	THR
49	DR	20	VAL
49	DR	22	LEU
49	DR	25	LEU
49	DR	27	ILE
49	DR	39	LEU
49	DR	41	ILE

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Mol	Chain	Res	Type
49	DR	53	PHE
49	DR	64	VAL
49	DR	70	GLU
49	DR	99	THR
49	DR	102	SER
50	DT	2	ILE
50	DT	3	ARG
50	DT	6	ARG
50	DT	9	LYS
50	DT	11	LEU
50	DT	12	ARG
50	DT	22	THR
50	DT	29	THR
50	DT	50	LEU
50	DT	52	GLU
50	DT	54	GLU
50	DT	61	LEU
50	DT	64	LYS
50	DT	68	LYS
50	DT	73	ARG
50	DT	79	ASP
50	DT	81	LYS
50	DT	87	LEU
50	DT	92	ASN
51	DZ	4	VAL
51	DZ	13	VAL
51	DZ	27	ARG
51	DZ	28	ARG
51	DZ	29	PHE
51	DZ	30	LEU
51	DZ	33	LEU
51	DZ	37	ARG
51	DZ	46	PHE
51	DZ	47	VAL
51	DZ	49	LEU
51	DZ	60	ASP
51	DZ	64	ILE
51	DZ	65	ASP
51	DZ	77	LYS
52	DW	16	GLU
52	DW	18	LYS
52	DW	23	LYS

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Mol	Chain	Res	Type
52	DW	24	ARG
52	DW	31	LEU
52	DW	38	ARG
52	DW	39	GLN
52	DW	40	ARG
52	DW	44	PHE
52	DW	50	VAL
52	DW	76	ARG
52	DW	77	LYS
52	DW	84	GLU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (338) such sidechains are listed below:

Mol	Chain	Res	Type
2	AC	2	GLN
2	AC	7	ASN
2	AC	18	ASN
2	AC	139	ASN
2	AC	184	ASN
3	AD	35	GLN
3	AD	53	GLN
3	AD	115	GLN
3	AD	119	HIS
3	AD	135	GLN
3	AD	151	GLN
3	AD	195	ASN
4	AE	18	ASN
4	AE	42	ASN
4	AE	72	ASN
4	AE	77	ASN
4	AE	81	GLN
4	AE	82	HIS
4	AE	131	ASN
5	AF	17	GLN
5	AF	46	GLN
5	AF	58	HIS
5	AF	81	ASN
6	AG	67	ASN
6	AG	85	GLN
6	AG	121	ASN
6	AG	129	ASN
6	AG	141	HIS

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Mol	Chain	Res	Type
6	AG	147	ASN
7	AH	3	GLN
7	AH	17	GLN
7	AH	75	GLN
7	AH	117	GLN
8	AI	30	ASN
8	AI	31	GLN
8	AI	36	GLN
8	AI	109	GLN
9	AJ	35	GLN
9	AJ	58	ASN
10	AK	23	HIS
10	AK	28	ASN
10	AK	39	ASN
10	AK	108	ASN
10	AK	118	ASN
11	AL	19	ASN
11	AL	28	GLN
11	AL	45	ASN
11	AL	111	GLN
12	AM	7	ASN
12	AM	90	HIS
13	AP	29	ASN
13	AP	40	ASN
13	AP	59	HIS
13	AP	63	GLN
14	AQ	8	GLN
17	AT	2	ASN
17	AT	20	ASN
17	AT	47	GLN
18	AB	14	HIS
18	AB	23	ASN
18	AB	35	ASN
18	AB	108	GLN
18	AB	119	GLN
18	AB	121	GLN
18	AB	145	ASN
18	AB	169	HIS
18	AB	177	ASN
18	AB	202	ASN
20	AO	37	ASN
20	AO	40	GLN

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Mol	Chain	Res	Type
21	AN	48	GLN
21	AN	59	GLN
21	AN	61	ASN
21	AN	65	GLN
21	AN	70	HIS
24	BI	11	GLN
24	BI	29	GLN
24	BI	33	ASN
24	BI	93	ASN
25	BC	20	ASN
25	BC	36	ASN
25	BC	43	ASN
25	BC	52	HIS
25	BC	59	GLN
25	BC	89	ASN
25	BC	162	GLN
26	BD	32	ASN
26	BD	36	GLN
26	BD	49	GLN
26	BD	126	ASN
26	BD	136	ASN
27	BK	5	GLN
27	BK	88	ASN
27	BK	89	ASN
27	BK	93	GLN
28	BP	6	GLN
28	BP	114	ASN
29	BE	24	ASN
29	BE	29	HIS
29	BE	30	GLN
29	BE	62	GLN
29	BE	90	GLN
29	BE	156	ASN
29	BE	163	ASN
29	BE	165	HIS
29	BE	195	GLN
30	BY	48	ASN
31	B0	3	GLN
32	B4	37	GLN
34	B3	30	HIS
35	BV	49	ASN
35	BV	80	HIS

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Mol	Chain	Res	Type
36	B2	6	GLN
36	B2	13	ASN
36	B2	26	ASN
36	B2	29	GLN
37	BL	4	ASN
37	BL	54	GLN
37	BL	93	ASN
38	BM	13	HIS
38	BM	17	ASN
38	BM	45	GLN
38	BM	88	ASN
39	BX	15	ASN
39	BX	20	ASN
39	BX	25	GLN
39	BX	27	ASN
39	BX	31	GLN
39	BX	36	GLN
39	BX	39	GLN
39	BX	58	ASN
40	BH	18	GLN
40	BH	28	ASN
40	BH	33	GLN
40	BH	66	ASN
40	BH	73	ASN
40	BH	135	HIS
41	BJ	67	ASN
41	BJ	130	HIS
42	BN	11	ASN
42	BN	23	ASN
42	BN	62	ASN
42	BN	107	ASN
43	BO	61	GLN
43	BO	116	GLN
44	BQ	55	GLN
44	BQ	71	ASN
44	BQ	80	ASN
45	BS	57	ASN
46	BU	26	ASN
46	BU	53	GLN
46	BU	68	ASN
46	BU	73	ASN
47	BF	22	ASN

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Mol	Chain	Res	Type
47	BF	36	ASN
47	BF	51	ASN
47	BF	126	ASN
47	BF	134	GLN
48	BG	29	ASN
48	BG	63	GLN
48	BG	127	GLN
48	BG	138	GLN
49	BR	6	GLN
49	BR	12	HIS
49	BR	86	GLN
50	BT	48	GLN
50	BT	59	ASN
50	BT	92	ASN
51	BZ	6	GLN
51	BZ	20	HIS
51	BZ	23	ASN
51	BZ	32	ASN
51	BZ	36	HIS
52	BW	56	HIS
52	BW	75	ASN
3	CD	35	GLN
3	CD	53	GLN
3	CD	115	GLN
3	CD	119	HIS
3	CD	135	GLN
3	CD	151	GLN
3	CD	195	ASN
4	CE	18	ASN
4	CE	42	ASN
4	CE	72	ASN
4	CE	77	ASN
4	CE	81	GLN
4	CE	82	HIS
4	CE	131	ASN
4	CE	134	ASN
5	CF	17	GLN
5	CF	46	GLN
5	CF	58	HIS
5	CF	81	ASN
7	CH	3	GLN
7	CH	17	GLN

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Mol	Chain	Res	Type
7	CH	75	GLN
7	CH	117	GLN
10	CK	23	HIS
10	CK	28	ASN
10	CK	39	ASN
10	CK	80	ASN
10	CK	108	ASN
10	CK	118	ASN
11	CL	5	GLN
11	CL	19	ASN
11	CL	28	GLN
11	CL	45	ASN
11	CL	111	GLN
13	CP	29	ASN
13	CP	40	ASN
13	CP	59	HIS
13	CP	63	GLN
14	CQ	8	GLN
17	CT	2	ASN
17	CT	20	ASN
17	CT	47	GLN
2	CC	2	GLN
2	CC	5	HIS
2	CC	31	ASN
2	CC	68	HIS
2	CC	101	ASN
2	CC	139	ASN
2	CC	184	ASN
6	CG	152	HIS
8	CI	30	ASN
8	CI	31	GLN
8	CI	36	GLN
8	CI	125	GLN
9	CJ	20	GLN
9	CJ	64	GLN
12	CM	13	HIS
21	CN	59	GLN
21	CN	65	GLN
16	CS	42	ASN
18	CB	14	HIS
18	CB	35	ASN
18	CB	88	GLN

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Mol	Chain	Res	Type
18	CB	108	GLN
18	CB	145	ASN
18	CB	169	HIS
18	CB	202	ASN
20	CO	35	GLN
20	CO	38	HIS
24	DI	5	GLN
24	DI	33	ASN
25	DC	20	ASN
25	DC	36	ASN
25	DC	43	ASN
25	DC	59	GLN
25	DC	89	ASN
25	DC	162	GLN
26	DD	32	ASN
26	DD	36	GLN
26	DD	49	GLN
26	DD	126	ASN
26	DD	136	ASN
26	DD	173	GLN
27	DK	3	GLN
27	DK	5	GLN
27	DK	88	ASN
27	DK	89	ASN
27	DK	93	GLN
28	DP	6	GLN
28	DP	114	ASN
29	DE	24	ASN
29	DE	29	HIS
29	DE	30	GLN
29	DE	62	GLN
29	DE	90	GLN
29	DE	165	HIS
29	DE	195	GLN
30	DY	48	ASN
31	D0	3	GLN
32	D4	37	GLN
34	D3	30	HIS
35	DV	44	HIS
35	DV	80	HIS
36	D2	6	GLN
36	D2	13	ASN

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Mol	Chain	Res	Type
36	D2	29	GLN
37	DL	4	ASN
37	DL	54	GLN
37	DL	93	ASN
38	DM	17	ASN
38	DM	45	GLN
38	DM	88	ASN
39	DX	15	ASN
39	DX	20	ASN
39	DX	25	GLN
39	DX	27	ASN
39	DX	31	GLN
39	DX	36	GLN
39	DX	39	GLN
39	DX	58	ASN
40	DH	18	GLN
40	DH	20	ASN
40	DH	28	ASN
40	DH	33	GLN
40	DH	66	ASN
40	DH	119	ASN
40	DH	133	GLN
40	DH	135	HIS
41	DJ	130	HIS
42	DN	11	ASN
42	DN	23	ASN
42	DN	62	ASN
42	DN	107	ASN
43	DO	61	GLN
43	DO	116	GLN
44	DQ	55	GLN
44	DQ	71	ASN
44	DQ	80	ASN
45	DS	57	ASN
46	DU	26	ASN
46	DU	53	GLN
46	DU	65	GLN
46	DU	68	ASN
46	DU	73	ASN
47	DF	22	ASN
47	DF	36	ASN
47	DF	51	ASN

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Mol	Chain	Res	Type
47	DF	126	ASN
47	DF	134	GLN
48	DG	29	ASN
48	DG	127	GLN
48	DG	138	GLN
48	DG	142	GLN
49	DR	6	GLN
49	DR	12	HIS
49	DR	86	GLN
50	DT	48	GLN
50	DT	92	ASN
51	DZ	20	HIS
51	DZ	23	ASN
52	DW	11	ASN
52	DW	56	HIS
52	DW	75	ASN

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1529/1542 (99%)	295 (19%)	25 (1%)
1	CA	1529/1542 (99%)	282 (18%)	21 (1%)
22	BA	116/120 (96%)	21 (18%)	1 (0%)
22	DA	116/120 (96%)	19 (16%)	1 (0%)
23	BB	2837/2904 (97%)	456 (16%)	18 (0%)
23	DB	2837/2904 (97%)	469 (16%)	20 (0%)
All	All	8964/9132 (98%)	1542 (17%)	86 (0%)

All (1542) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	7	A
1	AA	9	G
1	AA	14	U
1	AA	32	A
1	AA	39	G
1	AA	47	C
1	AA	48	C
1	AA	49	U
1	AA	52	C
1	AA	55	A

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Mol	Chain	Res	Type
1	AA	61	G
1	AA	65	A
1	AA	66	A
1	AA	72	A
1	AA	75	G
1	AA	78	A
1	AA	79	G
1	AA	80	A
1	AA	81	A
1	AA	82	G
1	AA	83	C
1	AA	84	U
1	AA	85	U
1	AA	86	G
1	AA	88	U
1	AA	89	U
1	AA	91	U
1	AA	92	U
1	AA	94	G
1	AA	95	C
1	AA	108	G
1	AA	120	A
1	AA	121	U
1	AA	122	G
1	AA	131	A
1	AA	149	A
1	AA	151	A
1	AA	164	G
1	AA	177	G
1	AA	180	U
1	AA	182	A
1	AA	196	A
1	AA	197	A
1	AA	209	U
1	AA	210	C
1	AA	213	G
1	AA	226	G
1	AA	233	C
1	AA	239	U
1	AA	240	G
1	AA	243	A
1	AA	244	U

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Mol	Chain	Res	Type
1	AA	245	U
1	AA	247	G
1	AA	250	A
1	AA	251	G
1	AA	253	A
1	AA	256	U
1	AA	257	G
1	AA	258	G
1	AA	266	G
1	AA	267	C
1	AA	280	C
1	AA	289	G
1	AA	301	G
1	AA	316	C
1	AA	321	A
1	AA	328	C
1	AA	329	A
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	409	U
1	AA	410	G
1	AA	411	A
1	AA	412	A
1	AA	413	G
1	AA	414	A
1	AA	415	A
1	AA	421	U
1	AA	422	C
1	AA	429	U
1	AA	430	A

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Mol	Chain	Res	Type
1	AA	435	A
1	AA	438	U
1	AA	457	G
1	AA	461	A
1	AA	462	G
1	AA	463	U
1	AA	464	U
1	AA	465	A
1	AA	466	A
1	AA	467	U
1	AA	468	A
1	AA	479	U
1	AA	484	G
1	AA	485	U
1	AA	486	U
1	AA	493	A
1	AA	500	G
1	AA	511	C
1	AA	518	C
1	AA	521	G
1	AA	524	G
1	AA	527	G
1	AA	532	A
1	AA	547	A
1	AA	559	A
1	AA	562	U
1	AA	566	G
1	AA	572	A
1	AA	573	A
1	AA	576	C
1	AA	577	G
1	AA	616	G
1	AA	633	G
1	AA	639	G
1	AA	653	U
1	AA	665	A
1	AA	688	G
1	AA	700	G
1	AA	703	G
1	AA	721	G
1	AA	724	G
1	AA	731	G

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Mol	Chain	Res	Type
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	813	U
1	AA	815	A
1	AA	817	C
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	847	G
1	AA	858	G
1	AA	914	A
1	AA	926	G
1	AA	927	G
1	AA	934	C
1	AA	935	A
1	AA	960	U
1	AA	968	A
1	AA	969	A
1	AA	971	G
1	AA	974	A
1	AA	976	G
1	AA	977	A
1	AA	991	U
1	AA	992	U
1	AA	993	G
1	AA	994	A
1	AA	995	C
1	AA	1000	A
1	AA	1002	G

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Mol	Chain	Res	Type
1	AA	1003	G
1	AA	1004	A
1	AA	1010	U
1	AA	1015	G
1	AA	1020	G
1	AA	1022	A
1	AA	1026	G
1	AA	1028	C
1	AA	1030	U
1	AA	1031	C
1	AA	1033	G
1	AA	1041	G
1	AA	1044	A
1	AA	1045	C
1	AA	1049	U
1	AA	1050	G
1	AA	1051	C
1	AA	1054	C
1	AA	1055	A
1	AA	1056	U
1	AA	1063	C
1	AA	1064	G
1	AA	1065	U
1	AA	1066	C
1	AA	1094	G
1	AA	1095	U
1	AA	1101	A
1	AA	1102	A
1	AA	1111	A
1	AA	1112	C
1	AA	1118	U
1	AA	1126	U
1	AA	1136	C
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1140	C
1	AA	1159	U
1	AA	1167	A
1	AA	1168	U
1	AA	1171	A
1	AA	1174	G

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Mol	Chain	Res	Type
1	AA	1181	G
1	AA	1182	G
1	AA	1183	U
1	AA	1196	A
1	AA	1197	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
1	AA	1233	G
1	AA	1239	A
1	AA	1240	U
1	AA	1241	G
1	AA	1256	A
1	AA	1278	G
1	AA	1279	G
1	AA	1280	A
1	AA	1281	C
1	AA	1286	U
1	AA	1287	A
1	AA	1294	G
1	AA	1297	G
1	AA	1298	U
1	AA	1300	G
1	AA	1301	U
1	AA	1302	C
1	AA	1303	C
1	AA	1305	G
1	AA	1316	G
1	AA	1317	C
1	AA	1318	A
1	AA	1319	A
1	AA	1320	C
1	AA	1323	G
1	AA	1324	A
1	AA	1334	G

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Mol	Chain	Res	Type
1	AA	1336	C
1	AA	1345	U
1	AA	1347	G
1	AA	1353	G
1	AA	1362	A
1	AA	1364	U
1	AA	1378	C
1	AA	1379	G
1	AA	1380	U
1	AA	1381	U
1	AA	1397	C
1	AA	1398	A
1	AA	1407	C
1	AA	1409	C
1	AA	1411	C
1	AA	1432	G
1	AA	1446	A
1	AA	1448	C
1	AA	1452	C
1	AA	1493	A
1	AA	1497	G
1	AA	1499	A
1	AA	1500	A
1	AA	1503	A
1	AA	1504	G
1	AA	1506	U
1	AA	1517	G
1	AA	1519	A
1	AA	1520	C
1	AA	1529	G
1	AA	1530	G
1	AA	1533	C
1	AA	1534	A
22	BA	4	C
22	BA	12	C
22	BA	13	G
22	BA	14	U
22	BA	15	A
22	BA	16	G
22	BA	24	G
22	BA	25	U
22	BA	26	C

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Mol	Chain	Res	Type
22	BA	29	A
22	BA	30	C
22	BA	44	G
22	BA	52	A
22	BA	55	U
22	BA	67	G
22	BA	74	U
22	BA	88	C
22	BA	89	U
22	BA	90	C
22	BA	99	A
22	BA	109	A
23	BB	4	U
23	BB	27	G
23	BB	34	U
23	BB	46	G
23	BB	49	A
23	BB	71	A
23	BB	72	U
23	BB	74	A
23	BB	75	G
23	BB	79	C
23	BB	96	C
23	BB	100	U
23	BB	101	A
23	BB	102	U
23	BB	109	C
23	BB	110	G
23	BB	118	A
23	BB	119	A
23	BB	120	U
23	BB	121	G
23	BB	125	A
23	BB	136	G
23	BB	137	U
23	BB	138	U
23	BB	139	U
23	BB	140	C
23	BB	141	G
23	BB	142	A
23	BB	144	A
23	BB	160	A

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Mol	Chain	Res	Type
23	BB	163	C
23	BB	180	G
23	BB	181	A
23	BB	196	A
23	BB	199	A
23	BB	215	G
23	BB	216	A
23	BB	221	A
23	BB	222	A
23	BB	223	A
23	BB	233	A
23	BB	241	A
23	BB	248	G
23	BB	249	C
23	BB	255	A
23	BB	264	C
23	BB	265	A
23	BB	266	G
23	BB	268	C
23	BB	271	G
23	BB	277	G
23	BB	279	A
23	BB	281	C
23	BB	294	A
23	BB	299	A
23	BB	311	A
23	BB	322	A
23	BB	323	C
23	BB	329	G
23	BB	330	A
23	BB	331	C
23	BB	333	G
23	BB	341	C
23	BB	343	C
23	BB	346	A
23	BB	349	U
23	BB	353	C
23	BB	355	U
23	BB	371	A
23	BB	372	G
23	BB	386	G
23	BB	387	U

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Mol	Chain	Res	Type
23	BB	396	G
23	BB	405	U
23	BB	406	G
23	BB	411	G
23	BB	424	G
23	BB	451	U
23	BB	455	C
23	BB	457	A
23	BB	479	A
23	BB	481	G
23	BB	483	A
23	BB	490	C
23	BB	491	G
23	BB	504	A
23	BB	505	A
23	BB	508	A
23	BB	509	C
23	BB	512	G
23	BB	527	C
23	BB	532	A
23	BB	533	G
23	BB	542	C
23	BB	544	C
23	BB	545	U
23	BB	546	U
23	BB	547	A
23	BB	548	G
23	BB	549	G
23	BB	550	C
23	BB	563	A
23	BB	568	U
23	BB	573	U
23	BB	574	A
23	BB	575	A
23	BB	603	A
23	BB	613	A
23	BB	614	A
23	BB	615	U
23	BB	627	A
23	BB	628	G
23	BB	637	A
23	BB	645	C

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Mol	Chain	Res	Type
23	BB	646	U
23	BB	653	U
23	BB	654	A
23	BB	655	A
23	BB	656	G
23	BB	671	C
23	BB	676	A
23	BB	686	U
23	BB	699	A
23	BB	730	A
23	BB	747	U
23	BB	757	G
23	BB	775	G
23	BB	776	G
23	BB	782	A
23	BB	784	G
23	BB	785	G
23	BB	802	A
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	859	G
23	BB	871	U
23	BB	872	U
23	BB	877	A
23	BB	899	A
23	BB	910	A
23	BB	912	C
23	BB	931	U
23	BB	932	U
23	BB	933	A
23	BB	941	A
23	BB	946	C
23	BB	958	U
23	BB	961	C
23	BB	973	A
23	BB	974	G
23	BB	980	A
23	BB	982	C

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Mol	Chain	Res	Type
23	BB	983	A
23	BB	990	A
23	BB	991	C
23	BB	995	C
23	BB	996	A
23	BB	1005	C
23	BB	1012	U
23	BB	1013	C
23	BB	1022	G
23	BB	1023	U
23	BB	1024	G
23	BB	1025	G
23	BB	1033	U
23	BB	1042	G
23	BB	1044	C
23	BB	1047	G
23	BB	1062	G
23	BB	1070	A
23	BB	1088	A
23	BB	1090	A
23	BB	1110	G
23	BB	1112	G
23	BB	1115	G
23	BB	1129	A
23	BB	1132	U
23	BB	1133	A
23	BB	1134	A
23	BB	1135	C
23	BB	1136	G
23	BB	1141	U
23	BB	1157	G
23	BB	1172	C
23	BB	1173	U
23	BB	1174	U
23	BB	1175	A
23	BB	1176	U
23	BB	1195	G
23	BB	1204	A
23	BB	1206	G
23	BB	1211	C
23	BB	1212	G
23	BB	1237	A

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Mol	Chain	Res	Type
23	BB	1241	A
23	BB	1242	U
23	BB	1248	G
23	BB	1250	G
23	BB	1251	C
23	BB	1253	A
23	BB	1256	G
23	BB	1266	G
23	BB	1271	G
23	BB	1272	A
23	BB	1273	U
23	BB	1275	A
23	BB	1300	G
23	BB	1301	A
23	BB	1318	U
23	BB	1321	A
23	BB	1324	G
23	BB	1325	U
23	BB	1337	G
23	BB	1341	G
23	BB	1365	A
23	BB	1368	G
23	BB	1379	U
23	BB	1383	A
23	BB	1384	A
23	BB	1386	C
23	BB	1396	U
23	BB	1397	U
23	BB	1416	G
23	BB	1419	A
23	BB	1421	G
23	BB	1427	A
23	BB	1428	C
23	BB	1434	A
23	BB	1453	A
23	BB	1454	C
23	BB	1458	U
23	BB	1459	G
23	BB	1460	U
23	BB	1461	C
23	BB	1476	U
23	BB	1477	A

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Mol	Chain	Res	Type
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	1505	A
23	BB	1506	U
23	BB	1507	C
23	BB	1508	A
23	BB	1509	A
23	BB	1523	U
23	BB	1524	G
23	BB	1530	G
23	BB	1532	A
23	BB	1535	A
23	BB	1536	C
23	BB	1552	A
23	BB	1559	U
23	BB	1560	G
23	BB	1567	G
23	BB	1569	A
23	BB	1578	U
23	BB	1583	A
23	BB	1585	C
23	BB	1602	U
23	BB	1603	A
23	BB	1607	C
23	BB	1608	A
23	BB	1610	A
23	BB	1613	G
23	BB	1616	A
23	BB	1618	A
23	BB	1619	G
23	BB	1634	A
23	BB	1635	A
23	BB	1640	A
23	BB	1647	U
23	BB	1648	U
23	BB	1670	C
23	BB	1674	G
23	BB	1681	G

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Mol	Chain	Res	Type
23	BB	1700	A
23	BB	1701	A
23	BB	1715	G
23	BB	1722	A
23	BB	1724	G
23	BB	1727	C
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
23	BB	1764	C
23	BB	1773	A
23	BB	1800	C
23	BB	1801	A
23	BB	1808	A
23	BB	1816	C
23	BB	1848	A
23	BB	1869	G
23	BB	1870	C
23	BB	1876	A
23	BB	1884	G
23	BB	1906	G
23	BB	1914	C
23	BB	1915	U
23	BB	1926	U
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	1964	G
23	BB	1966	A
23	BB	1967	C
23	BB	1970	A
23	BB	1971	U
23	BB	1972	G
23	BB	1991	U

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Mol	Chain	Res	Type
23	BB	1992	G
23	BB	1993	U
23	BB	1996	C
23	BB	1997	C
23	BB	2022	U
23	BB	2023	C
23	BB	2030	A
23	BB	2031	A
23	BB	2032	G
23	BB	2043	C
23	BB	2055	C
23	BB	2056	G
23	BB	2060	A
23	BB	2061	G
23	BB	2062	A
23	BB	2069	G
23	BB	2072	C
23	BB	2093	G
23	BB	2095	A
23	BB	2134	A
23	BB	2141	G
23	BB	2142	A
23	BB	2144	G
23	BB	2145	C
23	BB	2147	A
23	BB	2150	C
23	BB	2154	A
23	BB	2180	U
23	BB	2181	U
23	BB	2182	U
23	BB	2184	A
23	BB	2192	U
23	BB	2198	A
23	BB	2199	A
23	BB	2203	U
23	BB	2204	G
23	BB	2210	U
23	BB	2211	A
23	BB	2212	A
23	BB	2213	U
23	BB	2214	C
23	BB	2225	A

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Mol	Chain	Res	Type
23	BB	2238	G
23	BB	2239	G
23	BB	2249	U
23	BB	2250	G
23	BB	2279	G
23	BB	2283	C
23	BB	2287	A
23	BB	2288	A
23	BB	2304	G
23	BB	2305	U
23	BB	2307	G
23	BB	2308	G
23	BB	2309	A
23	BB	2310	C
23	BB	2311	A
23	BB	2321	U
23	BB	2322	A
23	BB	2324	U
23	BB	2325	G
23	BB	2333	A
23	BB	2336	A
23	BB	2337	G
23	BB	2345	G
23	BB	2347	C
23	BB	2357	G
23	BB	2361	G
23	BB	2372	U
23	BB	2383	G
23	BB	2385	C
23	BB	2396	G
23	BB	2402	U
23	BB	2403	C
23	BB	2406	A
23	BB	2423	U
23	BB	2426	A
23	BB	2429	G
23	BB	2430	A
23	BB	2431	U
23	BB	2441	U
23	BB	2448	A
23	BB	2472	G
23	BB	2476	A

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Mol	Chain	Res	Type
23	BB	2491	U
23	BB	2492	U
23	BB	2502	G
23	BB	2505	G
23	BB	2506	U
23	BB	2518	A
23	BB	2529	G
23	BB	2543	G
23	BB	2552	U
23	BB	2554	U
23	BB	2566	A
23	BB	2567	G
23	BB	2572	A
23	BB	2573	C
23	BB	2574	G
23	BB	2586	U
23	BB	2602	A
23	BB	2609	U
23	BB	2613	U
23	BB	2629	U
23	BB	2639	A
23	BB	2682	A
23	BB	2689	U
23	BB	2690	U
23	BB	2714	G
23	BB	2737	G
23	BB	2744	G
23	BB	2757	A
23	BB	2765	A
23	BB	2778	A
23	BB	2791	G
23	BB	2796	U
23	BB	2798	U
23	BB	2799	A
23	BB	2808	G
23	BB	2820	A
23	BB	2821	A
23	BB	2823	A
23	BB	2835	A
23	BB	2850	A
23	BB	2859	G
23	BB	2867	G

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Mol	Chain	Res	Type
23	BB	2872	A
23	BB	2873	A
23	BB	2880	C
23	BB	2883	A
23	BB	2894	G
23	BB	2903	U
1	CA	7	A
1	CA	9	G
1	CA	14	U
1	CA	32	A
1	CA	39	G
1	CA	47	C
1	CA	48	C
1	CA	49	U
1	CA	52	C
1	CA	54	C
1	CA	55	A
1	CA	61	G
1	CA	71	A
1	CA	72	A
1	CA	74	A
1	CA	76	G
1	CA	83	C
1	CA	85	U
1	CA	86	G
1	CA	87	C
1	CA	88	U
1	CA	92	U
1	CA	93	U
1	CA	94	G
1	CA	108	G
1	CA	120	A
1	CA	121	U
1	CA	122	G
1	CA	131	A
1	CA	149	A
1	CA	151	A
1	CA	164	G
1	CA	177	G
1	CA	180	U
1	CA	182	A
1	CA	196	A

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Mol	Chain	Res	Type
1	CA	197	A
1	CA	209	U
1	CA	210	C
1	CA	213	G
1	CA	226	G
1	CA	233	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	254	G
1	CA	256	U
1	CA	257	G
1	CA	258	G
1	CA	266	G
1	CA	267	C
1	CA	280	C
1	CA	289	G
1	CA	301	G
1	CA	316	C
1	CA	321	A
1	CA	328	C
1	CA	329	A
1	CA	330	C
1	CA	332	G
1	CA	345	C
1	CA	352	C
1	CA	354	G
1	CA	367	U
1	CA	372	C
1	CA	373	A
1	CA	381	C
1	CA	382	A
1	CA	397	A
1	CA	398	U
1	CA	406	G
1	CA	408	A

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Mol	Chain	Res	Type
1	CA	409	U
1	CA	410	G
1	CA	411	A
1	CA	412	A
1	CA	413	G
1	CA	414	A
1	CA	415	A
1	CA	421	U
1	CA	422	C
1	CA	429	U
1	CA	430	A
1	CA	435	A
1	CA	438	U
1	CA	457	G
1	CA	461	A
1	CA	462	G
1	CA	463	U
1	CA	464	U
1	CA	465	A
1	CA	466	A
1	CA	467	U
1	CA	468	A
1	CA	479	U
1	CA	482	A
1	CA	484	G
1	CA	485	U
1	CA	486	U
1	CA	493	A
1	CA	500	G
1	CA	511	C
1	CA	518	C
1	CA	521	G
1	CA	524	G
1	CA	527	G
1	CA	532	A
1	CA	547	A
1	CA	559	A
1	CA	562	U
1	CA	566	G
1	CA	572	A
1	CA	573	A
1	CA	576	C

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Mol	Chain	Res	Type
1	CA	577	G
1	CA	616	G
1	CA	633	G
1	CA	639	G
1	CA	653	U
1	CA	665	A
1	CA	688	G
1	CA	700	G
1	CA	703	G
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	777	A
1	CA	781	A
1	CA	782	A
1	CA	793	U
1	CA	794	A
1	CA	812	G
1	CA	813	U
1	CA	815	A
1	CA	817	C
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	847	G
1	CA	858	G
1	CA	914	A
1	CA	926	G
1	CA	934	C
1	CA	935	A
1	CA	958	A
1	CA	960	U
1	CA	961	U

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Mol	Chain	Res	Type
1	CA	966	G
1	CA	968	A
1	CA	969	A
1	CA	971	G
1	CA	972	C
1	CA	974	A
1	CA	975	A
1	CA	976	G
1	CA	977	A
1	CA	991	U
1	CA	992	U
1	CA	993	G
1	CA	1000	A
1	CA	1001	C
1	CA	1004	A
1	CA	1007	U
1	CA	1009	U
1	CA	1019	A
1	CA	1024	G
1	CA	1025	U
1	CA	1026	G
1	CA	1030	U
1	CA	1031	C
1	CA	1032	G
1	CA	1033	G
1	CA	1036	A
1	CA	1041	G
1	CA	1050	G
1	CA	1053	G
1	CA	1054	C
1	CA	1055	A
1	CA	1056	U
1	CA	1064	G
1	CA	1065	U
1	CA	1066	C
1	CA	1068	G
1	CA	1085	U
1	CA	1094	G
1	CA	1095	U
1	CA	1101	A
1	CA	1125	U
1	CA	1127	G

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Mol	Chain	Res	Type
1	CA	1128	C
1	CA	1135	U
1	CA	1136	C
1	CA	1137	C
1	CA	1138	G
1	CA	1139	G
1	CA	1140	C
1	CA	1145	A
1	CA	1158	C
1	CA	1159	U
1	CA	1160	G
1	CA	1167	A
1	CA	1168	U
1	CA	1174	G
1	CA	1183	U
1	CA	1184	G
1	CA	1196	A
1	CA	1198	G
1	CA	1201	A
1	CA	1202	U
1	CA	1212	U
1	CA	1213	A
1	CA	1214	C
1	CA	1215	G
1	CA	1225	A
1	CA	1226	C
1	CA	1227	A
1	CA	1230	C
1	CA	1240	U
1	CA	1241	G
1	CA	1252	A
1	CA	1256	A
1	CA	1257	A
1	CA	1258	G
1	CA	1280	A
1	CA	1281	C
1	CA	1285	A
1	CA	1286	U
1	CA	1287	A
1	CA	1289	A
1	CA	1290	G
1	CA	1299	A

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Mol	Chain	Res	Type
1	CA	1300	G
1	CA	1301	U
1	CA	1302	C
1	CA	1305	G
1	CA	1316	G
1	CA	1317	C
1	CA	1320	C
1	CA	1323	G
1	CA	1346	A
1	CA	1353	G
1	CA	1357	A
1	CA	1359	C
1	CA	1362	A
1	CA	1363	A
1	CA	1365	G
1	CA	1379	G
1	CA	1381	U
1	CA	1397	C
1	CA	1398	A
1	CA	1419	G
1	CA	1424	U
1	CA	1432	G
1	CA	1446	A
1	CA	1448	C
1	CA	1452	C
1	CA	1493	A
1	CA	1497	G
1	CA	1499	A
1	CA	1503	A
1	CA	1506	U
1	CA	1517	G
1	CA	1519	A
1	CA	1520	C
1	CA	1529	G
1	CA	1530	G
1	CA	1534	A
22	DA	4	C
22	DA	12	C
22	DA	13	G
22	DA	14	U
22	DA	15	A
22	DA	16	G

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Mol	Chain	Res	Type
22	DA	24	G
22	DA	25	U
22	DA	26	C
22	DA	29	A
22	DA	30	C
22	DA	44	G
22	DA	52	A
22	DA	55	U
22	DA	67	G
22	DA	88	C
22	DA	89	U
22	DA	99	A
22	DA	109	A
23	DB	10	A
23	DB	27	G
23	DB	34	U
23	DB	46	G
23	DB	49	A
23	DB	71	A
23	DB	72	U
23	DB	74	A
23	DB	75	G
23	DB	79	C
23	DB	96	C
23	DB	100	U
23	DB	101	A
23	DB	102	U
23	DB	103	A
23	DB	110	G
23	DB	118	A
23	DB	119	A
23	DB	120	U
23	DB	125	A
23	DB	126	A
23	DB	127	A
23	DB	139	U
23	DB	141	G
23	DB	142	A
23	DB	144	A
23	DB	160	A
23	DB	163	C
23	DB	180	G

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Mol	Chain	Res	Type
23	DB	181	A
23	DB	196	A
23	DB	199	A
23	DB	215	G
23	DB	216	A
23	DB	221	A
23	DB	222	A
23	DB	223	A
23	DB	233	A
23	DB	241	A
23	DB	242	G
23	DB	248	G
23	DB	249	C
23	DB	255	A
23	DB	264	C
23	DB	265	A
23	DB	266	G
23	DB	268	C
23	DB	271	G
23	DB	277	G
23	DB	278	A
23	DB	279	A
23	DB	281	C
23	DB	283	G
23	DB	284	U
23	DB	286	U
23	DB	288	U
23	DB	294	A
23	DB	299	A
23	DB	311	A
23	DB	322	A
23	DB	323	C
23	DB	329	G
23	DB	330	A
23	DB	331	C
23	DB	333	G
23	DB	341	C
23	DB	343	C
23	DB	346	A
23	DB	349	U
23	DB	353	C
23	DB	367	G

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Mol	Chain	Res	Type
23	DB	371	A
23	DB	372	G
23	DB	386	G
23	DB	387	U
23	DB	396	G
23	DB	405	U
23	DB	406	G
23	DB	411	G
23	DB	424	G
23	DB	455	C
23	DB	457	A
23	DB	479	A
23	DB	481	G
23	DB	483	A
23	DB	490	C
23	DB	491	G
23	DB	504	A
23	DB	505	A
23	DB	508	A
23	DB	509	C
23	DB	512	G
23	DB	527	C
23	DB	531	C
23	DB	532	A
23	DB	533	G
23	DB	542	C
23	DB	545	U
23	DB	546	U
23	DB	547	A
23	DB	548	G
23	DB	549	G
23	DB	550	C
23	DB	563	A
23	DB	568	U
23	DB	573	U
23	DB	575	A
23	DB	603	A
23	DB	613	A
23	DB	614	A
23	DB	615	U
23	DB	627	A
23	DB	628	G

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Mol	Chain	Res	Type
23	DB	637	A
23	DB	645	C
23	DB	646	U
23	DB	653	U
23	DB	654	A
23	DB	655	A
23	DB	656	G
23	DB	671	C
23	DB	676	A
23	DB	686	U
23	DB	699	A
23	DB	730	A
23	DB	747	U
23	DB	757	G
23	DB	775	G
23	DB	776	G
23	DB	782	A
23	DB	784	G
23	DB	785	G
23	DB	802	A
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	859	G
23	DB	871	U
23	DB	872	U
23	DB	876	C
23	DB	877	A
23	DB	899	A
23	DB	910	A
23	DB	912	C
23	DB	931	U
23	DB	932	U
23	DB	933	A
23	DB	941	A
23	DB	946	C
23	DB	958	U
23	DB	961	C
23	DB	973	A

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Mol	Chain	Res	Type
23	DB	974	G
23	DB	980	A
23	DB	982	C
23	DB	983	A
23	DB	990	A
23	DB	991	C
23	DB	995	C
23	DB	996	A
23	DB	1005	C
23	DB	1012	U
23	DB	1013	C
23	DB	1022	G
23	DB	1023	U
23	DB	1024	G
23	DB	1025	G
23	DB	1033	U
23	DB	1045	C
23	DB	1046	A
23	DB	1047	G
23	DB	1070	A
23	DB	1088	A
23	DB	1090	A
23	DB	1112	G
23	DB	1129	A
23	DB	1132	U
23	DB	1133	A
23	DB	1134	A
23	DB	1135	C
23	DB	1136	G
23	DB	1141	U
23	DB	1157	G
23	DB	1171	G
23	DB	1174	U
23	DB	1175	A
23	DB	1176	U
23	DB	1179	G
23	DB	1195	G
23	DB	1204	A
23	DB	1205	A
23	DB	1206	G
23	DB	1211	C
23	DB	1212	G

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Mol	Chain	Res	Type
23	DB	1237	A
23	DB	1241	A
23	DB	1242	U
23	DB	1248	G
23	DB	1250	G
23	DB	1251	C
23	DB	1253	A
23	DB	1256	G
23	DB	1266	G
23	DB	1271	G
23	DB	1272	A
23	DB	1273	U
23	DB	1275	A
23	DB	1300	G
23	DB	1301	A
23	DB	1318	U
23	DB	1321	A
23	DB	1324	G
23	DB	1325	U
23	DB	1337	G
23	DB	1341	G
23	DB	1365	A
23	DB	1368	G
23	DB	1379	U
23	DB	1383	A
23	DB	1384	A
23	DB	1386	C
23	DB	1396	U
23	DB	1397	U
23	DB	1416	G
23	DB	1419	A
23	DB	1421	G
23	DB	1427	A
23	DB	1428	C
23	DB	1434	A
23	DB	1453	A
23	DB	1454	C
23	DB	1458	U
23	DB	1459	G
23	DB	1460	U
23	DB	1461	C
23	DB	1476	U

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Mol	Chain	Res	Type
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	1505	A
23	DB	1506	U
23	DB	1507	C
23	DB	1508	A
23	DB	1509	A
23	DB	1523	U
23	DB	1524	G
23	DB	1530	G
23	DB	1532	A
23	DB	1535	A
23	DB	1536	C
23	DB	1552	A
23	DB	1559	U
23	DB	1560	G
23	DB	1567	G
23	DB	1569	A
23	DB	1578	U
23	DB	1583	A
23	DB	1585	C
23	DB	1602	U
23	DB	1603	A
23	DB	1607	C
23	DB	1608	A
23	DB	1610	A
23	DB	1613	G
23	DB	1616	A
23	DB	1618	A
23	DB	1619	G
23	DB	1634	A
23	DB	1635	A
23	DB	1640	A
23	DB	1647	U
23	DB	1648	U
23	DB	1670	C
23	DB	1674	G

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Mol	Chain	Res	Type
23	DB	1681	G
23	DB	1700	A
23	DB	1701	A
23	DB	1715	G
23	DB	1722	A
23	DB	1724	G
23	DB	1727	C
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	1800	C
23	DB	1801	A
23	DB	1808	A
23	DB	1816	C
23	DB	1848	A
23	DB	1869	G
23	DB	1870	C
23	DB	1876	A
23	DB	1884	G
23	DB	1906	G
23	DB	1913	A
23	DB	1914	C
23	DB	1926	U
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	1964	G
23	DB	1966	A
23	DB	1967	C
23	DB	1970	A
23	DB	1971	U
23	DB	1972	G

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Mol	Chain	Res	Type
23	DB	1991	U
23	DB	1992	G
23	DB	1993	U
23	DB	1996	C
23	DB	1997	C
23	DB	2022	U
23	DB	2023	C
23	DB	2030	A
23	DB	2031	A
23	DB	2032	G
23	DB	2043	C
23	DB	2055	C
23	DB	2056	G
23	DB	2060	A
23	DB	2061	G
23	DB	2062	A
23	DB	2069	G
23	DB	2072	C
23	DB	2093	G
23	DB	2095	A
23	DB	2096	C
23	DB	2100	G
23	DB	2107	G
23	DB	2108	A
23	DB	2109	U
23	DB	2110	G
23	DB	2134	A
23	DB	2136	G
23	DB	2138	G
23	DB	2143	C
23	DB	2144	G
23	DB	2145	C
23	DB	2146	C
23	DB	2147	A
23	DB	2149	U
23	DB	2155	U
23	DB	2156	G
23	DB	2157	G
23	DB	2181	U
23	DB	2188	U
23	DB	2193	G
23	DB	2198	A

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Mol	Chain	Res	Type
23	DB	2199	A
23	DB	2203	U
23	DB	2204	G
23	DB	2210	U
23	DB	2211	A
23	DB	2212	A
23	DB	2213	U
23	DB	2214	C
23	DB	2225	A
23	DB	2238	G
23	DB	2239	G
23	DB	2249	U
23	DB	2250	G
23	DB	2279	G
23	DB	2283	C
23	DB	2287	A
23	DB	2288	A
23	DB	2297	A
23	DB	2304	G
23	DB	2305	U
23	DB	2307	G
23	DB	2308	G
23	DB	2309	A
23	DB	2311	A
23	DB	2320	U
23	DB	2321	U
23	DB	2322	A
23	DB	2324	U
23	DB	2325	G
23	DB	2333	A
23	DB	2336	A
23	DB	2337	G
23	DB	2345	G
23	DB	2347	C
23	DB	2357	G
23	DB	2361	G
23	DB	2372	U
23	DB	2383	G
23	DB	2385	C
23	DB	2396	G
23	DB	2402	U
23	DB	2403	C

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Mol	Chain	Res	Type
23	DB	2406	A
23	DB	2423	U
23	DB	2426	A
23	DB	2427	C
23	DB	2429	G
23	DB	2430	A
23	DB	2431	U
23	DB	2441	U
23	DB	2448	A
23	DB	2472	G
23	DB	2476	A
23	DB	2491	U
23	DB	2492	U
23	DB	2502	G
23	DB	2505	G
23	DB	2506	U
23	DB	2518	A
23	DB	2529	G
23	DB	2543	G
23	DB	2552	U
23	DB	2554	U
23	DB	2566	A
23	DB	2567	G
23	DB	2572	A
23	DB	2573	C
23	DB	2574	G
23	DB	2586	U
23	DB	2602	A
23	DB	2609	U
23	DB	2613	U
23	DB	2629	U
23	DB	2639	A
23	DB	2682	A
23	DB	2689	U
23	DB	2690	U
23	DB	2714	G
23	DB	2726	A
23	DB	2737	G
23	DB	2744	G
23	DB	2748	A
23	DB	2757	A
23	DB	2765	A

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Mol	Chain	Res	Type
23	DB	2778	A
23	DB	2791	G
23	DB	2796	U
23	DB	2798	U
23	DB	2799	A
23	DB	2808	G
23	DB	2820	A
23	DB	2821	A
23	DB	2823	A
23	DB	2835	A
23	DB	2836	U
23	DB	2850	A
23	DB	2859	G
23	DB	2867	G
23	DB	2872	A
23	DB	2873	A
23	DB	2880	C
23	DB	2883	A
23	DB	2894	G
23	DB	2903	U

All (86) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	51	A
1	AA	60	A
1	AA	84	U
1	AA	239	U
1	AA	243	A
1	AA	279	A
1	AA	328	C
1	AA	366	A
1	AA	372	C
1	AA	429	U
1	AA	461	A
1	AA	484	G
1	AA	975	A
1	AA	1049	U
1	AA	1065	U
1	AA	1101	A
1	AA	1201	A
1	AA	1213	A

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Mol	Chain	Res	Type
1	AA	1226	C
1	AA	1302	C
1	AA	1319	A
1	AA	1378	C
1	AA	1397	C
1	AA	1451	U
1	AA	1499	A
22	BA	25	U
23	BB	33	C
23	BB	489	G
23	BB	670	A
23	BB	1210	G
23	BB	1458	U
23	BB	1583	A
23	BB	1847	A
23	BB	1913	A
23	BB	2211	A
23	BB	2282	G
23	BB	2286	G
23	BB	2336	A
23	BB	2425	A
23	BB	2428	G
23	BB	2430	A
23	BB	2756	U
23	BB	2832	U
23	BB	2894	G
1	CA	51	A
1	CA	60	A
1	CA	239	U
1	CA	243	A
1	CA	279	A
1	CA	328	C
1	CA	366	A
1	CA	372	C
1	CA	429	U
1	CA	461	A
1	CA	484	G
1	CA	960	U
1	CA	975	A
1	CA	1049	U
1	CA	1065	U
1	CA	1067	A

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Mol	Chain	Res	Type
1	CA	1201	A
1	CA	1226	C
1	CA	1362	A
1	CA	1397	C
1	CA	1451	U
22	DA	25	U
23	DB	33	C
23	DB	241	A
23	DB	489	G
23	DB	670	A
23	DB	973	A
23	DB	1210	G
23	DB	1320	C
23	DB	1458	U
23	DB	1583	A
23	DB	1847	A
23	DB	2211	A
23	DB	2282	G
23	DB	2286	G
23	DB	2336	A
23	DB	2425	A
23	DB	2428	G
23	DB	2430	A
23	DB	2756	U
23	DB	2832	U
23	DB	2894	G

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

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

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 344 ligands modelled in this entry, 342 are monoatomic - leaving 2 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and

the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
54	SCM	AA	1661	-	23,25,25	1.71	8 (34%)	27,39,39	1.57	4 (14%)
54	SCM	CA	1659	-	23,25,25	1.66	6 (26%)	27,39,39	1.59	4 (14%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
54	SCM	AA	1661	-	-	2/4/57/57	0/3/3/3
54	SCM	CA	1659	-	-	2/4/57/57	0/3/3/3

All (14) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
54	AA	1661	SCM	C3-C2	3.25	1.58	1.51
54	CA	1659	SCM	C9-C8	3.22	1.59	1.53
54	CA	1659	SCM	C3-C2	3.03	1.57	1.51
54	AA	1661	SCM	C9-C8	3.02	1.58	1.53
54	AA	1661	SCM	C3-C4	2.64	1.54	1.50
54	CA	1659	SCM	C3-C4	2.42	1.54	1.50
54	AA	1661	SCM	C12-C7	2.38	1.57	1.52
54	CA	1659	SCM	C12-C7	2.30	1.57	1.52
54	AA	1661	SCM	O2B-C12	2.29	1.47	1.44
54	AA	1661	SCM	O5-C5	2.26	1.43	1.39
54	CA	1659	SCM	O2B-C12	2.10	1.47	1.44
54	AA	1661	SCM	C8-N8	2.04	1.51	1.47
54	AA	1661	SCM	C10-N10	-2.04	1.44	1.47
54	CA	1659	SCM	C8-N8	2.03	1.51	1.47

All (8) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	AA	1661	SCM	C1M-N10-C10	-5.38	107.28	114.23
54	CA	1659	SCM	C1M-N10-C10	-5.01	107.76	114.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	CA	1659	SCM	O1-C2-C3	3.76	113.86	108.62
54	AA	1661	SCM	O1-C2-C3	3.67	113.73	108.62
54	CA	1659	SCM	C2M-C2-C3	-2.87	108.11	113.27
54	AA	1661	SCM	C2M-C2-C3	-2.66	108.49	113.27
54	CA	1659	SCM	O2B-C6-O1	2.44	109.34	107.40
54	AA	1661	SCM	O2B-C6-O1	2.15	109.12	107.40

There are no chirality outliers.

All (4) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
54	AA	1661	SCM	C9-C10-N10-C1M
54	AA	1661	SCM	C11-C10-N10-C1M
54	CA	1659	SCM	C11-C10-N10-C1M
54	CA	1659	SCM	C9-C10-N10-C1M

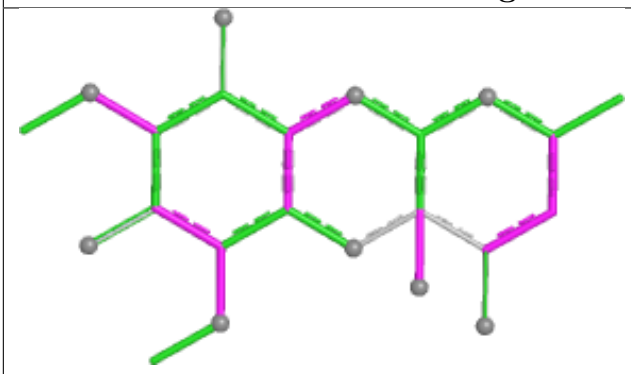
There are no ring outliers.

2 monomers are involved in 3 short contacts:

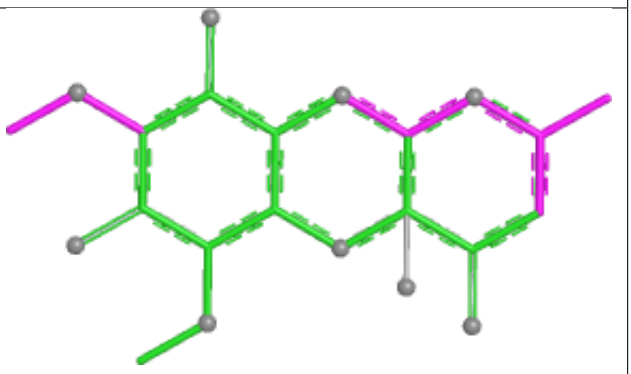
Mol	Chain	Res	Type	Clashes	Symm-Clashes
54	AA	1661	SCM	2	0
54	CA	1659	SCM	1	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less then 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

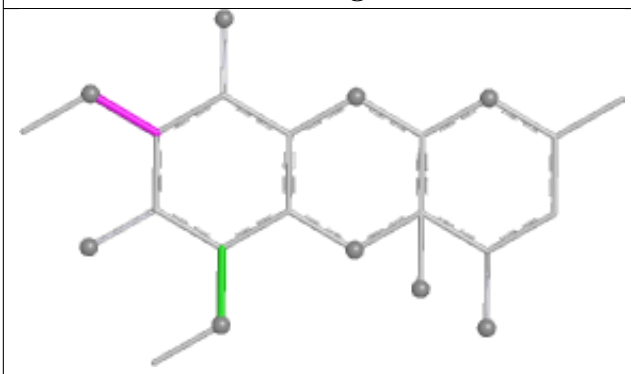
Ligand SCM AA 1661



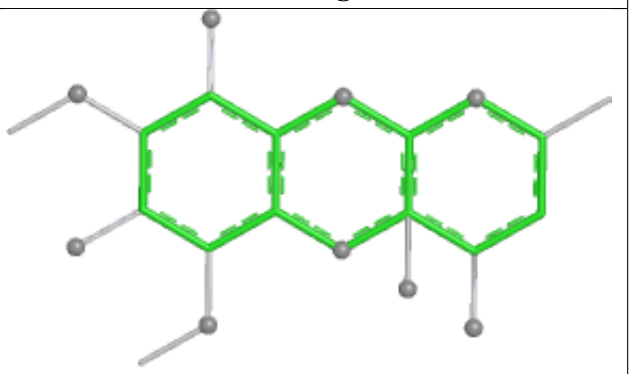
Bond lengths



Bond angles

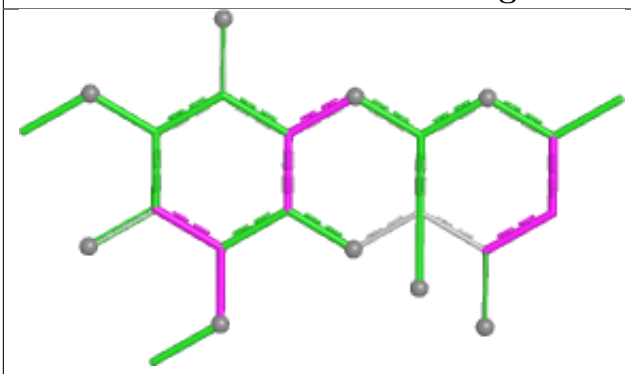


Torsions

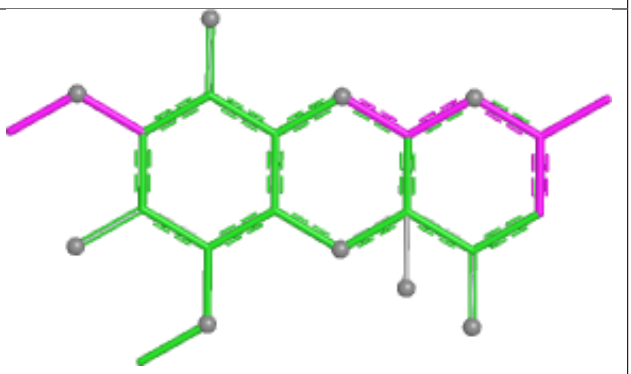


Rings

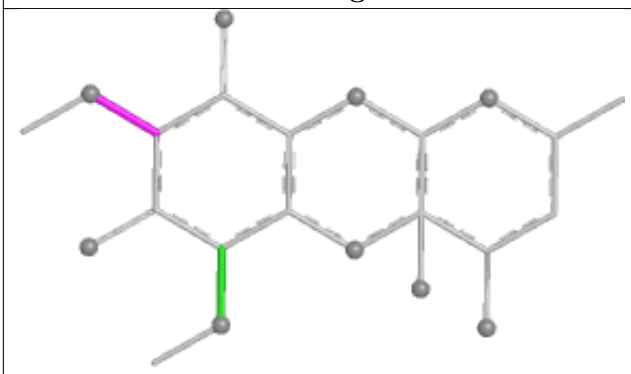
Ligand SCM CA 1659



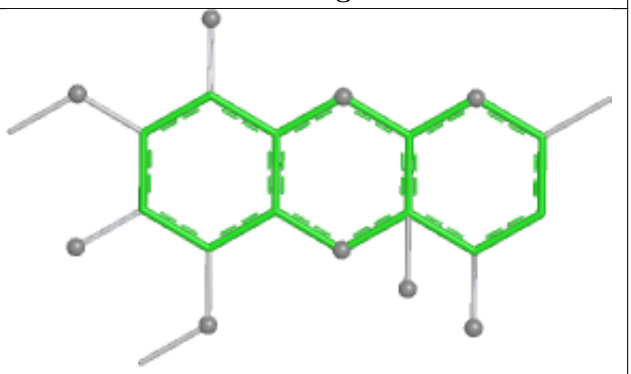
Bond lengths



Bond angles



Torsions



Rings

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95^{th} 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%)	-0.47	17 (1%) 78 58	12, 77, 142, 179	0
1	CA	1530/1542 (99%)	-0.51	27 (1%) 67 48	5, 57, 124, 180	0
2	AC	206/232 (88%)	-0.09	5 (2%) 59 43	5, 70, 115, 162	0
2	CC	206/232 (88%)	-0.32	4 (1%) 66 47	5, 71, 111, 150	0
3	AD	205/205 (100%)	0.03	4 (1%) 65 46	5, 79, 127, 173	0
3	CD	205/205 (100%)	-0.04	10 (4%) 35 27	5, 66, 125, 166	0
4	AE	150/166 (90%)	0.08	3 (2%) 65 46	5, 68, 122, 157	0
4	CE	150/166 (90%)	-0.03	4 (2%) 56 39	5, 67, 121, 180	0
5	AF	100/135 (74%)	-0.25	0 100 100	10, 81, 133, 147	0
5	CF	100/135 (74%)	-0.15	2 (2%) 65 46	5, 73, 131, 172	0
6	AG	150/178 (84%)	-0.21	4 (2%) 56 39	16, 89, 125, 143	0
6	CG	152/178 (85%)	-0.42	0 100 100	6, 79, 125, 172	0
7	AH	129/129 (100%)	0.02	9 (6%) 22 20	19, 77, 130, 158	0
7	CH	129/129 (100%)	0.04	5 (3%) 43 31	5, 62, 116, 158	0
8	AI	127/129 (98%)	-0.02	6 (4%) 36 28	6, 83, 117, 155	0
8	CI	127/129 (98%)	0.03	8 (6%) 26 22	5, 80, 122, 157	0
9	AJ	98/103 (95%)	0.10	8 (8%) 17 18	9, 79, 126, 147	0
9	CJ	98/103 (95%)	0.08	1 (1%) 79 59	16, 82, 113, 137	0
10	AK	117/128 (91%)	-0.25	3 (2%) 57 40	5, 72, 117, 155	0
10	CK	117/128 (91%)	-0.31	1 (0%) 81 62	5, 67, 123, 136	0
11	AL	123/123 (100%)	0.05	9 (7%) 21 19	6, 79, 123, 158	0
11	CL	123/123 (100%)	0.30	9 (7%) 21 19	5, 54, 103, 151	0
12	AM	114/117 (97%)	-0.19	1 (0%) 81 62	23, 96, 137, 169	0
12	CM	113/117 (96%)	-0.19	1 (0%) 81 62	22, 96, 142, 162	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
13	AP	82/82 (100%)	0.40	3 (3%) 45 32	15, 82, 130, 163	0
13	CP	80/82 (97%)	0.54	9 (11%) 10 13	5, 58, 126, 180	0
14	AQ	80/83 (96%)	-0.26	0 100 100	15, 92, 145, 154	0
14	CQ	81/83 (97%)	-0.27	2 (2%) 58 41	5, 72, 119, 149	0
15	AR	55/74 (74%)	-0.19	1 (1%) 67 48	5, 73, 129, 164	0
15	CR	55/74 (74%)	-0.25	2 (3%) 46 33	5, 66, 127, 143	0
16	AS	79/91 (86%)	-0.17	3 (3%) 44 32	52, 98, 142, 167	0
16	CS	80/91 (87%)	-0.18	1 (1%) 75 55	41, 95, 133, 159	0
17	AT	85/86 (98%)	-0.07	2 (2%) 59 43	19, 88, 126, 156	0
17	CT	85/86 (98%)	0.04	5 (5%) 28 24	5, 66, 113, 154	0
18	AB	218/240 (90%)	-0.34	5 (2%) 61 43	12, 81, 120, 160	0
18	CB	218/240 (90%)	-0.31	2 (0%) 81 62	5, 87, 133, 163	0
19	AU	51/70 (72%)	0.65	5 (9%) 13 15	20, 94, 139, 153	0
19	CU	51/70 (72%)	0.36	5 (9%) 13 15	57, 96, 137, 171	0
20	AO	88/89 (98%)	-0.24	3 (3%) 48 34	5, 73, 118, 177	0
20	CO	88/89 (98%)	0.01	7 (7%) 18 18	5, 56, 108, 135	0
21	AN	96/100 (96%)	0.17	3 (3%) 51 36	5, 84, 128, 155	0
21	CN	96/100 (96%)	0.22	5 (5%) 33 26	5, 75, 129, 145	0
22	BA	117/120 (97%)	-0.35	4 (3%) 48 34	35, 77, 125, 167	0
22	DA	117/120 (97%)	-0.03	6 (5%) 33 26	31, 87, 133, 176	0
23	BB	2841/2904 (97%)	-0.49	36 (1%) 75 55	5, 60, 136, 180	0
23	DB	2841/2904 (97%)	-0.49	43 (1%) 72 51	5, 51, 136, 180	0
24	BI	141/141 (100%)	0.13	2 (1%) 73 53	60, 135, 178, 180	0
24	DI	141/141 (100%)	-0.01	1 (0%) 84 68	66, 135, 180, 180	0
25	BC	271/272 (99%)	0.17	9 (3%) 49 35	5, 61, 109, 132	0
25	DC	271/272 (99%)	0.30	25 (9%) 14 16	5, 45, 99, 144	0
26	BD	209/209 (100%)	0.17	14 (6%) 24 21	5, 71, 118, 148	0
26	DD	209/209 (100%)	0.34	20 (9%) 13 15	5, 60, 110, 168	0
27	BK	121/123 (98%)	0.11	4 (3%) 49 35	5, 75, 125, 159	0
27	DK	121/123 (98%)	0.07	3 (2%) 58 41	5, 45, 112, 150	0
28	BP	114/114 (100%)	0.32	7 (6%) 27 23	7, 82, 125, 155	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
28	DP	114/114 (100%)	0.14	6 (5%) 32 26	5, 64, 118, 139	0
29	BE	201/201 (100%)	-0.09	4 (1%) 65 46	5, 65, 128, 164	0
29	DE	201/201 (100%)	-0.10	9 (4%) 38 29	5, 73, 123, 160	0
30	BY	58/58 (100%)	-0.13	2 (3%) 48 34	5, 75, 129, 160	0
30	DY	58/58 (100%)	-0.05	2 (3%) 48 34	5, 72, 116, 147	0
31	B0	56/56 (100%)	0.04	2 (3%) 46 33	5, 78, 118, 147	0
31	D0	56/56 (100%)	0.16	1 (1%) 67 48	5, 62, 129, 153	0
32	B4	38/38 (100%)	0.44	3 (7%) 18 18	27, 81, 131, 145	0
32	D4	38/38 (100%)	0.21	0 100 100	5, 67, 106, 117	0
33	B1	50/54 (92%)	-0.20	1 (2%) 65 46	17, 70, 120, 134	0
33	D1	50/54 (92%)	-0.42	0 100 100	17, 73, 116, 137	0
34	B3	64/64 (100%)	1.01	13 (20%) 3 5	5, 68, 103, 129	0
34	D3	64/64 (100%)	0.86	7 (10%) 10 13	5, 55, 86, 122	0
35	BV	94/94 (100%)	-0.43	1 (1%) 78 58	5, 81, 126, 152	0
35	DV	94/94 (100%)	-0.25	1 (1%) 78 58	5, 88, 120, 160	0
36	B2	46/46 (100%)	0.71	5 (10%) 10 13	5, 53, 104, 141	0
36	D2	46/46 (100%)	0.61	6 (13%) 7 10	9, 48, 110, 141	0
37	BL	143/144 (99%)	0.12	4 (2%) 55 39	5, 67, 121, 145	0
37	DL	143/144 (99%)	0.22	10 (6%) 22 20	5, 63, 111, 145	0
38	BM	136/136 (100%)	0.02	5 (3%) 45 32	7, 68, 121, 179	0
38	DM	136/136 (100%)	0.36	12 (8%) 15 16	5, 65, 117, 144	0
39	BX	63/63 (100%)	-0.09	3 (4%) 35 28	16, 79, 128, 159	0
39	DX	63/63 (100%)	-0.39	0 100 100	16, 91, 144, 169	0
40	BH	149/149 (100%)	0.19	4 (2%) 56 39	7, 104, 149, 180	0
40	DH	149/149 (100%)	-0.05	4 (2%) 56 39	5, 91, 131, 162	0
41	BJ	142/142 (100%)	0.46	20 (14%) 6 9	5, 77, 118, 140	0
41	DJ	142/142 (100%)	0.23	12 (8%) 16 17	5, 70, 119, 173	0
42	BN	120/127 (94%)	-0.01	6 (5%) 34 26	5, 69, 111, 154	0
42	DN	120/127 (94%)	0.29	8 (6%) 24 21	5, 51, 94, 163	0
43	BO	116/117 (99%)	0.09	3 (2%) 57 40	6, 80, 109, 172	0
43	DO	116/117 (99%)	0.06	5 (4%) 40 30	5, 83, 136, 158	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
44	BQ	117/117 (100%)	-0.11	3 (2%) 57 40	5, 62, 115, 144	0
44	DQ	117/117 (100%)	0.22	11 (9%) 14 16	5, 60, 111, 154	0
45	BS	110/110 (100%)	0.26	8 (7%) 21 19	5, 62, 121, 148	0
45	DS	110/110 (100%)	0.31	8 (7%) 21 19	5, 64, 127, 156	0
46	BU	102/103 (99%)	-0.29	0 100 100	12, 80, 125, 157	0
46	DU	102/103 (99%)	-0.09	5 (4%) 35 27	8, 94, 127, 149	0
47	BF	178/178 (100%)	-0.14	2 (1%) 78 58	29, 100, 146, 180	0
47	DF	178/178 (100%)	0.13	14 (7%) 18 18	12, 93, 142, 163	0
48	BG	176/176 (100%)	-0.18	7 (3%) 42 31	18, 94, 133, 171	0
48	DG	176/176 (100%)	0.00	9 (5%) 33 26	8, 90, 136, 166	0
49	BR	103/103 (100%)	-0.06	4 (3%) 43 31	5, 83, 123, 133	0
49	DR	103/103 (100%)	0.11	5 (4%) 35 27	10, 76, 135, 149	0
50	BT	93/100 (93%)	0.13	3 (3%) 50 36	8, 83, 130, 165	0
50	DT	93/100 (93%)	0.58	11 (11%) 9 12	5, 84, 144, 172	0
51	BZ	77/78 (98%)	0.38	6 (7%) 19 18	5, 63, 120, 142	0
51	DZ	77/78 (98%)	0.42	7 (9%) 15 16	5, 56, 106, 120	0
52	BW	79/84 (94%)	0.46	4 (5%) 33 26	5, 75, 124, 180	0
52	DW	79/84 (94%)	1.06	15 (18%) 3 6	5, 71, 121, 166	0
All	All	20417/21046 (97%)	-0.19	659 (3%) 50 36	5, 70, 134, 180	0

All (659) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
22	DA	88	C	23.0
8	CI	129	ARG	13.3
52	DW	18	LYS	9.0
22	BA	88	C	8.8
23	BB	140	C	8.7
11	CL	13	ARG	8.0
11	CL	14	LYS	7.9
34	B3	58	ILE	7.7
34	D3	19	GLY	7.5
52	DW	19	ARG	7.3
1	AA	1362	A	7.1
42	BN	21	PHE	7.0
26	BD	142	VAL	7.0

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Mol	Chain	Res	Type	RSRZ
34	B3	19	GLY	6.9
52	DW	36	ILE	6.1
26	DD	165	MET	5.9
34	D3	51	LYS	5.9
8	CI	114	LYS	5.9
7	AH	74	ILE	5.7
25	DC	213	ARG	5.7
19	AU	35	GLU	5.5
23	BB	715	A	5.5
38	DM	37	GLY	5.4
11	CL	24	GLU	5.4
52	DW	17	ALA	5.4
8	AI	118	ARG	5.4
13	CP	52	LEU	5.3
26	BD	140	HIS	5.3
23	DB	1730	C	5.3
45	BS	103	ILE	5.3
42	DN	83	LEU	5.3
36	B2	1	MET	5.2
21	CN	76	PHE	5.0
3	AD	24	VAL	5.0
8	CI	127	SER	5.0
43	DO	2	ASP	4.9
3	AD	159	GLU	4.9
29	DE	88	ARG	4.9
1	CA	307	C	4.8
9	AJ	63	ASP	4.8
23	BB	1537	G	4.7
37	DL	58	TYR	4.7
38	BM	103	TYR	4.7
50	DT	11	LEU	4.7
28	DP	99	LEU	4.7
41	BJ	64	VAL	4.6
50	DT	71	GLY	4.6
43	BO	8	ILE	4.6
45	BS	74	ILE	4.6
23	DB	2157	G	4.6
41	BJ	86	GLN	4.6
41	DJ	87	ALA	4.6
20	CO	56	LEU	4.5
25	DC	198	GLU	4.5
39	BX	62	GLY	4.5

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Mol	Chain	Res	Type	RSRZ
23	BB	1459	G	4.5
38	DM	124	LEU	4.5
45	BS	21	ALA	4.5
49	DR	73	LYS	4.5
9	AJ	62	ARG	4.5
23	BB	1731	G	4.5
45	DS	103	ILE	4.5
8	AI	51	LEU	4.4
35	DV	82	TYR	4.4
41	BJ	75	TYR	4.4
34	D3	21	PHE	4.4
11	CL	12	ALA	4.4
13	CP	28	ARG	4.4
52	DW	33	GLY	4.3
4	CE	114	LEU	4.3
42	DN	21	PHE	4.3
23	DB	140	C	4.3
22	DA	52	A	4.2
10	AK	128	VAL	4.2
49	DR	75	VAL	4.2
51	DZ	7	VAL	4.2
49	BR	73	LYS	4.1
52	DW	7	GLY	4.1
52	DW	43	LYS	4.1
50	DT	72	GLN	4.1
47	BF	102	LEU	4.1
34	D3	13	PHE	4.0
8	AI	129	ARG	4.0
25	BC	1	ALA	4.0
38	BM	33	LEU	4.0
45	DS	15	GLN	4.0
11	CL	16	ALA	4.0
23	BB	1730	C	4.0
36	D2	28	ARG	4.0
11	CL	15	VAL	4.0
28	BP	99	LEU	3.9
20	CO	48	LYS	3.9
36	D2	25	LYS	3.9
23	BB	62	U	3.8
37	BL	55	MET	3.8
45	DS	21	ALA	3.8
13	CP	19	VAL	3.8

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Mol	Chain	Res	Type	RSRZ
25	DC	34	GLU	3.8
49	DR	82	HIS	3.8
51	DZ	78	TYR	3.8
36	D2	1	MET	3.8
37	DL	37	GLY	3.8
9	AJ	59	LYS	3.8
41	BJ	105	VAL	3.8
20	CO	44	ALA	3.7
32	B4	3	VAL	3.7
41	DJ	44	TYR	3.7
51	BZ	76	GLU	3.7
6	AG	4	ARG	3.7
20	AO	56	LEU	3.7
38	BM	127	LYS	3.7
23	DB	645	C	3.7
42	BN	48	VAL	3.7
3	CD	72	ARG	3.7
25	DC	202	ARG	3.7
40	DH	5	LEU	3.7
3	AD	71	PHE	3.7
48	DG	88	LEU	3.7
26	DD	129	THR	3.6
25	BC	271	SER	3.6
26	DD	168	GLU	3.6
43	DO	3	LYS	3.6
45	BS	76	VAL	3.6
1	AA	86	G	3.6
1	AA	134	G	3.6
1	CA	966	G	3.6
36	B2	46	LYS	3.6
42	BN	12	ARG	3.6
34	B3	60	CYS	3.6
47	DF	10	GLU	3.6
40	DH	12	LEU	3.6
48	BG	161	VAL	3.6
12	CM	44	ILE	3.6
41	BJ	116	ARG	3.6
9	AJ	60	ASP	3.6
36	D2	29	GLN	3.5
22	BA	118	C	3.5
7	AH	128	VAL	3.5
28	DP	69	VAL	3.5

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Mol	Chain	Res	Type	RSRZ
49	BR	72	VAL	3.5
52	DW	25	PHE	3.5
45	BS	85	ILE	3.5
23	DB	2146	C	3.5
8	CI	126	PHE	3.5
1	AA	78	A	3.5
23	BB	136	G	3.5
7	AH	126	CYS	3.5
25	DC	4	LYS	3.5
41	BJ	63	ALA	3.5
13	AP	60	TRP	3.5
44	DQ	16	ILE	3.5
48	DG	153	PRO	3.5
23	DB	141	G	3.5
26	DD	146	ILE	3.4
2	CC	165	GLU	3.4
25	DC	236	GLY	3.4
52	DW	6	GLY	3.4
23	BB	139	U	3.4
7	AH	39	LEU	3.4
37	DL	35	HIS	3.4
48	DG	147	LEU	3.4
2	AC	90	VAL	3.4
25	DC	204	LEU	3.4
37	BL	47	ARG	3.4
23	BB	1538	G	3.4
15	AR	19	GLU	3.3
41	BJ	81	ILE	3.3
44	DQ	90	ASP	3.3
47	DF	27	VAL	3.3
37	DL	61	LEU	3.3
34	B3	10	ALA	3.3
1	CA	632	U	3.3
23	BB	1728	C	3.3
23	BB	1175	A	3.3
11	AL	14	LYS	3.3
26	DD	118	PHE	3.3
1	CA	1232	U	3.3
29	DE	90	GLN	3.3
44	DQ	108	LEU	3.3
41	BJ	37	ARG	3.2
40	DH	9	VAL	3.2

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Mol	Chain	Res	Type	RSRZ
23	BB	1607	C	3.2
1	CA	1362	A	3.2
34	B3	21	PHE	3.2
11	AL	11	ARG	3.2
23	DB	1413	A	3.2
26	DD	32	ASN	3.2
41	DJ	122	LEU	3.2
47	DF	22	ASN	3.2
11	AL	3	VAL	3.2
23	DB	139	U	3.2
43	BO	26	LEU	3.2
13	AP	71	VAL	3.2
18	CB	56	LEU	3.2
17	CT	3	ILE	3.2
29	BE	155	GLU	3.2
22	DA	89	U	3.2
48	DG	161	VAL	3.2
51	DZ	68	LEU	3.2
52	BW	6	GLY	3.1
22	DA	87	U	3.1
50	BT	79	ASP	3.1
44	BQ	17	LEU	3.1
52	DW	35	ILE	3.1
23	BB	190	A	3.1
23	DB	181	A	3.1
1	AA	135	C	3.1
23	DB	544	C	3.1
45	DS	105	VAL	3.1
26	DD	159	LYS	3.1
48	DG	158	GLY	3.1
25	DC	271	SER	3.1
42	DN	120	GLU	3.1
18	AB	192	PRO	3.1
1	CA	1349	A	3.1
4	AE	114	LEU	3.1
49	BR	88	GLY	3.1
50	DT	53	VAL	3.0
23	DB	898	C	3.0
19	AU	45	LYS	3.0
23	DB	546	U	3.0
4	AE	94	PHE	3.0
26	DD	140	HIS	3.0

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Mol	Chain	Res	Type	RSRZ
1	AA	79	G	3.0
23	DB	2360	G	3.0
23	DB	1175	A	3.0
42	DN	29	VAL	3.0
23	BB	1727	C	3.0
41	DJ	1	MET	3.0
14	CQ	32	ILE	3.0
43	DO	16	ARG	3.0
1	CA	240	G	3.0
34	B3	13	PHE	2.9
41	DJ	139	VAL	2.9
23	DB	2708	G	2.9
23	DB	1728	C	2.9
1	AA	209	U	2.9
23	BB	2320	U	2.9
3	CD	89	LEU	2.9
18	AB	195	VAL	2.9
48	BG	1	SER	2.9
43	DO	33	ARG	2.9
25	DC	219	VAL	2.9
52	DW	67	LYS	2.9
23	BB	878	A	2.8
7	CH	81	GLY	2.8
9	AJ	64	GLN	2.8
1	CA	555	U	2.8
23	DB	62	U	2.8
23	DB	1792	G	2.8
34	B3	27	ASN	2.8
45	BS	78	GLU	2.8
47	DF	169	LEU	2.8
19	AU	36	PHE	2.8
28	BP	61	ARG	2.8
1	AA	884	U	2.8
26	BD	131	ASP	2.8
41	DJ	20	ALA	2.8
1	CA	1384	C	2.8
17	CT	27	MET	2.8
26	DD	128	ARG	2.8
32	B4	2	LYS	2.8
51	DZ	4	VAL	2.8
26	DD	144	GLY	2.8
25	DC	52	HIS	2.8

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Mol	Chain	Res	Type	RSRZ
29	DE	124	PHE	2.8
12	AM	79	LEU	2.8
23	BB	137	U	2.8
51	BZ	2	SER	2.8
13	CP	37	GLY	2.8
49	DR	86	GLN	2.8
7	CH	129	ALA	2.8
41	BJ	42	ALA	2.8
44	DQ	1	ALA	2.8
13	CP	36	VAL	2.8
39	BX	5	GLU	2.8
8	CI	120	ALA	2.8
44	DQ	10	ARG	2.7
28	BP	47	ILE	2.7
48	BG	120	ILE	2.7
1	CA	564	C	2.7
23	BB	1639	C	2.7
48	DG	89	VAL	2.7
17	CT	60	GLN	2.7
8	CI	118	ARG	2.7
34	B3	29	ARG	2.7
23	BB	755	U	2.7
25	DC	15	VAL	2.7
7	CH	127	TYR	2.7
21	CN	47	LEU	2.7
28	BP	101	GLU	2.7
9	AJ	58	ASN	2.7
47	DF	24	VAL	2.7
50	BT	36	LYS	2.7
18	CB	161	PHE	2.7
23	DB	2602	A	2.7
41	DJ	86	GLN	2.7
19	CU	35	GLU	2.7
25	BC	17	LYS	2.7
3	CD	71	PHE	2.7
48	BG	147	LEU	2.7
25	DC	250	GLN	2.7
21	CN	98	ALA	2.7
34	B3	24	LYS	2.7
22	BA	52	A	2.7
47	DF	171	ALA	2.7
29	BE	118	LEU	2.7

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Mol	Chain	Res	Type	RSRZ
40	BH	131	SER	2.7
51	BZ	49	LEU	2.7
2	CC	152	VAL	2.6
45	DS	47	VAL	2.6
17	AT	12	GLN	2.6
25	DC	88	ALA	2.6
25	DC	209	ALA	2.6
25	BC	22	GLU	2.6
47	BF	22	ASN	2.6
2	AC	46	LEU	2.6
7	AH	44	PHE	2.6
23	DB	2193	G	2.6
7	CH	71	VAL	2.6
25	DC	64	VAL	2.6
40	BH	27	ARG	2.6
41	BJ	76	HIS	2.6
25	DC	228	ASP	2.6
23	BB	1298	C	2.6
42	DN	70	THR	2.6
7	CH	60	LEU	2.6
36	B2	31	LEU	2.6
23	BB	1641	A	2.6
44	DQ	18	LYS	2.6
1	CA	1233	G	2.6
23	DB	2269	G	2.6
18	AB	66	ILE	2.6
38	DM	36	VAL	2.6
38	DM	126	ILE	2.6
46	DU	38	ILE	2.6
34	B3	51	LYS	2.6
16	AS	13	HIS	2.6
21	CN	35	ALA	2.6
38	DM	41	LEU	2.6
23	BB	1640	A	2.6
3	CD	60	VAL	2.6
4	CE	37	VAL	2.6
6	AG	79	VAL	2.6
19	CU	45	LYS	2.6
41	DJ	80	HIS	2.6
28	BP	75	THR	2.6
52	DW	14	ASP	2.6
8	AI	128	LYS	2.6

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Mol	Chain	Res	Type	RSRZ
34	B3	57	VAL	2.6
20	CO	59	MET	2.6
45	DS	93	ALA	2.6
52	DW	83	ALA	2.6
23	DB	846	U	2.6
21	AN	41	TRP	2.5
52	BW	36	ILE	2.5
26	DD	124	ARG	2.5
40	BH	144	VAL	2.5
50	DT	10	VAL	2.5
50	DT	34	VAL	2.5
25	DC	33	LEU	2.5
48	BG	132	LEU	2.5
22	DA	54	G	2.5
28	BP	30	TRP	2.5
7	AH	71	VAL	2.5
23	BB	1396	U	2.5
25	DC	224	MET	2.5
44	BQ	90	ASP	2.5
16	AS	40	PHE	2.5
13	AP	9	HIS	2.5
23	DB	2133	G	2.5
1	AA	1230	C	2.5
20	AO	44	ALA	2.5
1	CA	287	U	2.5
23	DB	2270	A	2.5
38	DM	33	LEU	2.5
19	AU	39	LYS	2.5
19	CU	53	LYS	2.5
24	BI	30	GLN	2.5
29	DE	57	LYS	2.5
46	DU	32	LYS	2.5
38	DM	81	ARG	2.5
29	DE	155	GLU	2.5
23	BB	1023	U	2.5
23	DB	182	A	2.5
31	B0	6	LYS	2.5
41	BJ	20	ALA	2.5
51	DZ	11	ARG	2.5
25	BC	4	LYS	2.4
29	BE	74	LYS	2.4
27	BK	77	ILE	2.4

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Mol	Chain	Res	Type	RSRZ
3	CD	202	LEU	2.4
45	DS	36	LEU	2.4
36	B2	14	ARG	2.4
23	DB	1727	C	2.4
11	CL	2	THR	2.4
1	CA	242	G	2.4
24	DI	23	VAL	2.4
2	CC	37	LYS	2.4
2	AC	205	GLU	2.4
41	BJ	102	GLU	2.4
51	DZ	49	LEU	2.4
42	DN	20	MET	2.4
26	DD	5	VAL	2.4
34	D3	57	VAL	2.4
13	CP	57	ILE	2.4
44	DQ	17	LEU	2.4
45	BS	51	LEU	2.4
25	DC	62	ARG	2.4
29	DE	61	ARG	2.4
23	DB	359	G	2.4
23	DB	690	G	2.4
23	DB	2495	G	2.4
42	DN	15	SER	2.4
50	DT	36	LYS	2.4
31	B0	54	ILE	2.4
8	AI	49	GLN	2.4
31	D0	14	MET	2.4
17	CT	7	LYS	2.4
26	BD	118	PHE	2.4
38	DM	117	PHE	2.4
50	DT	55	VAL	2.4
23	DB	2701	U	2.4
2	CC	156	LEU	2.4
18	AB	100	LEU	2.4
1	CA	1230	C	2.4
1	CA	1383	C	2.4
23	DB	1027	A	2.4
11	AL	13	ARG	2.4
4	CE	117	ALA	2.4
34	B3	26	ALA	2.4
23	BB	2190	G	2.4
25	DC	21	PRO	2.4

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Mol	Chain	Res	Type	RSRZ
24	BI	4	VAL	2.4
25	DC	201	LEU	2.4
20	CO	53	ARG	2.4
47	DF	7	TYR	2.4
39	BX	13	GLU	2.4
34	D3	14	LYS	2.4
44	DQ	36	GLN	2.3
22	BA	87	U	2.3
23	BB	2713	U	2.3
8	CI	116	GLY	2.3
19	CU	36	PHE	2.3
1	CA	286	C	2.3
3	CD	33	ILE	2.3
22	DA	26	C	2.3
23	DB	878	A	2.3
23	DB	1981	A	2.3
50	DT	43	ILE	2.3
2	AC	75	VAL	2.3
10	CK	15	VAL	2.3
14	CQ	38	LYS	2.3
47	DF	163	GLU	2.3
10	AK	119	GLY	2.3
16	AS	41	PRO	2.3
26	BD	146	ILE	2.3
37	DL	57	LEU	2.3
48	DG	52	GLY	2.3
29	DE	65	THR	2.3
50	DT	47	VAL	2.3
1	AA	562	U	2.3
20	CO	58	ARG	2.3
26	DD	123	LYS	2.3
1	CA	1369	C	2.3
23	DB	1932	A	2.3
7	AH	60	LEU	2.3
41	BJ	84	ILE	2.3
44	DQ	105	PHE	2.3
20	CO	57	LEU	2.3
42	BN	10	LEU	2.3
23	BB	138	U	2.3
25	BC	2	VAL	2.3
42	BN	23	ASN	2.3
23	BB	756	A	2.3

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Mol	Chain	Res	Type	RSRZ
25	DC	212	TRP	2.3
35	BV	83	LYS	2.3
26	BD	138	LEU	2.3
45	DS	32	ALA	2.3
25	BC	143	VAL	2.3
46	DU	24	VAL	2.3
48	DG	160	GLY	2.3
34	B3	30	HIS	2.3
23	BB	2618	G	2.3
1	AA	88	U	2.3
1	CA	813	U	2.3
26	DD	156	PHE	2.3
15	CR	22	TYR	2.3
23	BB	52	A	2.3
23	BB	2309	A	2.3
19	CU	39	LYS	2.3
26	BD	144	GLY	2.3
26	DD	163	GLY	2.3
44	DQ	21	LYS	2.3
36	D2	22	MET	2.3
8	AI	120	ALA	2.2
41	DJ	42	ALA	2.2
29	DE	66	GLY	2.2
51	DZ	51	VAL	2.2
1	CA	1523	G	2.2
7	AH	10	LEU	2.2
13	CP	54	LEU	2.2
26	BD	186	LEU	2.2
27	DK	8	LEU	2.2
38	BM	102	LEU	2.2
4	AE	30	PHE	2.2
43	BO	92	PHE	2.2
34	D3	36	ALA	2.2
1	CA	1367	C	2.2
9	AJ	65	TYR	2.2
41	BJ	111	LYS	2.2
44	BQ	43	GLN	2.2
11	CL	3	VAL	2.2
15	CR	19	GLU	2.2
26	BD	30	GLU	2.2
6	AG	15	PRO	2.2
26	BD	111	GLY	2.2

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Mol	Chain	Res	Type	RSRZ
26	DD	77	ARG	2.2
38	DM	102	LEU	2.2
41	BJ	122	LEU	2.2
51	BZ	71	LEU	2.2
26	BD	129	THR	2.2
6	AG	14	ASP	2.2
29	BE	148	ILE	2.2
44	DQ	97	ILE	2.2
33	B1	7	LYS	2.2
30	BY	8	GLN	2.2
1	AA	481	G	2.2
27	BK	103	VAL	2.2
46	DU	69	VAL	2.2
47	DF	155	ILE	2.2
11	AL	16	ALA	2.2
11	AL	123	ALA	2.2
29	DE	68	ALA	2.2
51	BZ	56	MET	2.2
37	DL	92	LEU	2.2
11	AL	15	VAL	2.2
38	DM	67	VAL	2.2
41	DJ	101	ILE	2.2
52	DW	42	THR	2.2
20	AO	47	LYS	2.2
11	AL	25	ALA	2.2
27	DK	20	MET	2.2
37	BL	48	ARG	2.2
37	DL	60	ARG	2.2
5	CF	4	TYR	2.2
21	CN	83	VAL	2.2
28	BP	25	VAL	2.2
32	B4	7	VAL	2.2
41	DJ	56	VAL	2.2
46	DU	35	VAL	2.2
48	BG	167	VAL	2.2
1	CA	823	C	2.2
26	DD	120	GLY	2.2
27	DK	2	ILE	2.2
41	BJ	119	PHE	2.2
30	BY	12	ALA	2.1
30	DY	12	ALA	2.1
1	CA	904	U	2.1

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Mol	Chain	Res	Type	RSRZ
10	AK	121	ARG	2.1
27	BK	84	CYS	2.1
37	DL	42	SER	2.1
9	CJ	57	VAL	2.1
26	BD	109	VAL	2.1
26	DD	2	ILE	2.1
27	BK	122	VAL	2.1
43	DO	28	VAL	2.1
52	BW	35	ILE	2.1
52	DW	68	PHE	2.1
28	DP	101	GLU	2.1
49	DR	46	GLU	2.1
1	AA	1441	A	2.1
1	CA	412	A	2.1
1	CA	968	A	2.1
1	AA	318	G	2.1
5	CF	90	MET	2.1
11	CL	6	LEU	2.1
17	CT	65	LEU	2.1
23	BB	1695	G	2.1
21	AN	68	ARG	2.1
47	DF	124	ARG	2.1
1	CA	967	C	2.1
23	DB	183	C	2.1
26	DD	203	VAL	2.1
26	BD	127	PHE	2.1
3	CD	34	GLU	2.1
8	CI	41	GLU	2.1
1	AA	133	U	2.1
42	DN	18	GLN	2.1
13	CP	80	LYS	2.1
28	DP	42	PHE	2.1
41	BJ	73	VAL	2.1
51	BZ	26	LYS	2.1
23	DB	1327	A	2.1
50	DT	5	GLU	2.1
23	BB	2148	G	2.1
23	DB	836	G	2.1
36	B2	43	THR	2.1
1	AA	1397	C	2.1
1	CA	308	C	2.1
23	DB	691	C	2.1

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Mol	Chain	Res	Type	RSRZ
38	DM	40	ARG	2.1
26	DD	137	SER	2.1
3	CD	66	VAL	2.1
23	BB	2615	U	2.1
47	DF	11	VAL	2.1
47	DF	30	VAL	2.1
47	DF	174	PHE	2.1
48	DG	168	VAL	2.1
2	AC	151	GLU	2.1
9	AJ	47	GLU	2.1
21	AN	60	ARG	2.1
7	AH	129	ALA	2.1
16	CS	39	ILE	2.1
26	BD	148	GLN	2.1
40	DH	43	ASN	2.1
49	BR	86	GLN	2.1
25	DC	203	VAL	2.1
3	CD	203	TYR	2.1
3	AD	196	GLU	2.1
25	DC	22	GLU	2.1
41	DJ	91	GLU	2.1
36	D2	46	LYS	2.1
41	BJ	72	LYS	2.1
41	BJ	101	ILE	2.1
11	AL	12	ALA	2.1
1	CA	1368	A	2.0
23	DB	204	A	2.0
23	DB	1260	A	2.0
47	DF	127	TYR	2.0
19	AU	34	ARG	2.0
42	BN	70	THR	2.0
37	BL	36	LYS	2.0
38	DM	127	LYS	2.0
37	DL	25	SER	2.0
13	CP	6	LEU	2.0
23	BB	436	C	2.0
23	DB	435	C	2.0
25	BC	153	LEU	2.0
28	DP	96	LEU	2.0
40	BH	142	VAL	2.0
23	DB	1412	U	2.0
41	BJ	112	GLY	2.0

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Mol	Chain	Res	Type	RSRZ
28	DP	98	TYR	2.0
18	AB	193	ASP	2.0
4	CE	32	PHE	2.0
45	BS	93	ALA	2.0
23	DB	764	A	2.0
30	DY	53	MET	2.0
17	AT	17	ARG	2.0
25	BC	206	LYS	2.0
37	DL	59	ARG	2.0
48	BG	160	GLY	2.0
50	BT	9	LYS	2.0
25	DC	229	HIS	2.0
38	BM	128	THR	2.0
1	AA	87	C	2.0
3	CD	165	GLU	2.0
52	BW	17	ALA	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 oligosaccharides 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. The B-factors column lists the minimum, median, 95^{th} 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	B-factors(Å^2)	Q<0.9
53	MG	AA	1623	1/1	-0.58	0.41	33,33,33,33	1
53	MG	CA	1616	1/1	-0.02	0.23	58,58,58,58	1
53	MG	AA	1625	1/1	0.53	0.16	79,79,79,79	1
53	MG	AA	1622	1/1	0.56	0.16	130,130,130,130	0
53	MG	AA	1626	1/1	0.60	0.22	36,36,36,36	1
53	MG	CA	1649	1/1	0.73	0.18	123,123,123,123	0
53	MG	CA	1637	1/1	0.76	0.16	98,98,98,98	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
53	MG	AA	1659	1/1	0.76	0.27	108,108,108,108	0
53	MG	AA	1608	1/1	0.78	0.08	123,123,123,123	0
53	MG	AA	1624	1/1	0.79	0.24	83,83,83,83	0
53	MG	CA	1613	1/1	0.82	0.15	126,126,126,126	0
53	MG	AA	1614	1/1	0.82	0.07	119,119,119,119	0
53	MG	BB	3097	1/1	0.83	0.06	113,113,113,113	0
53	MG	BB	3051	1/1	0.84	0.09	107,107,107,107	0
53	MG	AA	1647	1/1	0.88	0.19	113,113,113,113	0
53	MG	CA	1646	1/1	0.90	0.04	139,139,139,139	0
53	MG	CA	1650	1/1	0.90	0.07	105,105,105,105	0
53	MG	DB	3029	1/1	0.90	0.07	87,87,87,87	0
53	MG	DB	3094	1/1	0.90	0.06	100,100,100,100	0
53	MG	AA	1652	1/1	0.91	0.08	84,84,84,84	0
53	MG	DB	3051	1/1	0.91	0.08	75,75,75,75	0
53	MG	DB	3058	1/1	0.91	0.05	139,139,139,139	0
53	MG	DB	3065	1/1	0.91	0.05	128,128,128,128	0
53	MG	CA	1606	1/1	0.91	0.08	106,106,106,106	0
53	MG	DB	3052	1/1	0.92	0.12	105,105,105,105	0
53	MG	BB	3093	1/1	0.92	0.05	108,108,108,108	0
53	MG	DB	3063	1/1	0.92	0.08	72,72,72,72	0
53	MG	DB	3034	1/1	0.92	0.14	57,57,57,57	0
53	MG	CA	1618	1/1	0.92	0.09	73,73,73,73	0
53	MG	DN	201	1/1	0.92	0.21	145,145,145,145	0
53	MG	BB	3049	1/1	0.93	0.06	67,67,67,67	0
53	MG	CA	1648	1/1	0.93	0.04	104,104,104,104	0
53	MG	DB	3110	1/1	0.93	0.15	84,84,84,84	0
53	MG	CA	1651	1/1	0.93	0.06	101,101,101,101	0
54	SCM	CA	1659	23/23	0.93	0.10	18,18,18,18	0
53	MG	AA	1615	1/1	0.94	0.13	96,96,96,96	0
53	MG	DB	3091	1/1	0.94	0.06	90,90,90,90	0
53	MG	AA	1602	1/1	0.94	0.06	85,85,85,85	0
53	MG	AA	1637	1/1	0.94	0.11	99,99,99,99	0
53	MG	BB	3100	1/1	0.94	0.11	116,116,116,116	0
53	MG	AA	1646	1/1	0.94	0.05	84,84,84,84	0
53	MG	BB	3090	1/1	0.95	0.10	88,88,88,88	0
53	MG	DB	3066	1/1	0.95	0.12	65,65,65,65	0
53	MG	DB	3045	1/1	0.95	0.07	110,110,110,110	0
53	MG	BB	3034	1/1	0.95	0.07	86,86,86,86	0
53	MG	BB	3042	1/1	0.95	0.08	92,92,92,92	0
53	MG	BB	3004	1/1	0.95	0.05	80,80,80,80	0
53	MG	BB	3033	1/1	0.95	0.16	102,102,102,102	0
53	MG	AA	1649	1/1	0.96	0.06	89,89,89,89	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
53	MG	AA	1619	1/1	0.96	0.04	111,111,111,111	0
53	MG	AA	1655	1/1	0.96	0.10	88,88,88,88	0
53	MG	BB	3046	1/1	0.96	0.04	89,89,89,89	0
53	MG	DB	3013	1/1	0.96	0.06	52,52,52,52	0
53	MG	DB	3028	1/1	0.96	0.13	70,70,70,70	0
53	MG	AA	1657	1/1	0.96	0.16	91,91,91,91	0
53	MG	AA	1617	1/1	0.96	0.04	112,112,112,112	0
53	MG	AA	1630	1/1	0.96	0.07	88,88,88,88	0
54	SCM	AA	1661	23/23	0.96	0.06	13,13,13,13	0
53	MG	BB	3009	1/1	0.96	0.05	98,98,98,98	0
55	ZN	B4	101	1/1	0.96	0.04	67,67,67,67	0
53	MG	BB	3043	1/1	0.97	0.06	107,107,107,107	0
53	MG	DB	3031	1/1	0.97	0.05	46,46,46,46	0
53	MG	DB	3032	1/1	0.97	0.04	73,73,73,73	0
53	MG	AA	1632	1/1	0.97	0.16	96,96,96,96	0
53	MG	DB	3035	1/1	0.97	0.04	79,79,79,79	0
53	MG	AA	1635	1/1	0.97	0.13	80,80,80,80	0
53	MG	CA	1621	1/1	0.97	0.11	80,80,80,80	0
53	MG	CA	1632	1/1	0.97	0.06	76,76,76,76	0
53	MG	AA	1628	1/1	0.97	0.07	70,70,70,70	0
53	MG	CA	1640	1/1	0.97	0.05	62,62,62,62	0
53	MG	CA	1644	1/1	0.97	0.06	57,57,57,57	0
53	MG	BB	3064	1/1	0.97	0.05	78,78,78,78	0
53	MG	DB	3088	1/1	0.97	0.10	87,87,87,87	0
53	MG	BB	3070	1/1	0.97	0.05	74,74,74,74	0
53	MG	BB	3010	1/1	0.97	0.06	53,53,53,53	0
53	MG	BB	3026	1/1	0.97	0.07	65,65,65,65	0
53	MG	AA	1645	1/1	0.97	0.06	70,70,70,70	0
53	MG	CA	1652	1/1	0.97	0.04	49,49,49,49	0
53	MG	AA	1656	1/1	0.97	0.05	87,87,87,87	0
53	MG	AA	1627	1/1	0.97	0.04	63,63,63,63	0
53	MG	BB	3081	1/1	0.98	0.06	30,30,30,30	0
53	MG	BB	3089	1/1	0.98	0.03	72,72,72,72	0
53	MG	BB	3037	1/1	0.98	0.04	45,45,45,45	0
53	MG	BB	3092	1/1	0.98	0.04	46,46,46,46	0
53	MG	BB	3038	1/1	0.98	0.04	92,92,92,92	0
53	MG	CA	1654	1/1	0.98	0.15	105,105,105,105	0
53	MG	CE	201	1/1	0.98	0.03	109,109,109,109	0
53	MG	AA	1621	1/1	0.98	0.12	36,36,36,36	0
53	MG	BB	3099	1/1	0.98	0.04	41,41,41,41	0
53	MG	AA	1650	1/1	0.98	0.04	94,94,94,94	0
53	MG	DB	3030	1/1	0.98	0.13	47,47,47,47	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
53	MG	BB	3102	1/1	0.98	0.04	43,43,43,43	0
53	MG	BB	3012	1/1	0.98	0.03	67,67,67,67	0
53	MG	CA	1608	1/1	0.98	0.04	76,76,76,76	0
53	MG	CA	1609	1/1	0.98	0.03	85,85,85,85	0
53	MG	DB	3036	1/1	0.98	0.04	87,87,87,87	0
53	MG	CA	1612	1/1	0.98	0.16	93,93,93,93	0
53	MG	DB	3050	1/1	0.98	0.10	80,80,80,80	0
53	MG	BB	3047	1/1	0.98	0.03	104,104,104,104	0
53	MG	CA	1614	1/1	0.98	0.04	83,83,83,83	0
53	MG	BB	3014	1/1	0.98	0.10	37,37,37,37	0
53	MG	DB	3059	1/1	0.98	0.08	99,99,99,99	0
53	MG	DB	3060	1/1	0.98	0.10	83,83,83,83	0
53	MG	DB	3061	1/1	0.98	0.03	66,66,66,66	0
53	MG	DB	3062	1/1	0.98	0.04	58,58,58,58	0
53	MG	CA	1617	1/1	0.98	0.05	88,88,88,88	0
53	MG	DB	3064	1/1	0.98	0.12	49,49,49,49	0
53	MG	AA	1658	1/1	0.98	0.04	120,120,120,120	0
53	MG	AA	1620	1/1	0.98	0.04	60,60,60,60	0
53	MG	CA	1628	1/1	0.98	0.13	52,52,52,52	0
53	MG	CA	1629	1/1	0.98	0.07	67,67,67,67	0
53	MG	BB	3068	1/1	0.98	0.14	13,13,13,13	0
53	MG	DB	3095	1/1	0.98	0.07	92,92,92,92	0
53	MG	DB	3099	1/1	0.98	0.09	58,58,58,58	0
53	MG	DB	3103	1/1	0.98	0.07	36,36,36,36	0
53	MG	DB	3104	1/1	0.98	0.09	29,29,29,29	0
53	MG	DB	3108	1/1	0.98	0.04	43,43,43,43	0
53	MG	AA	1642	1/1	0.98	0.09	49,49,49,49	0
53	MG	CA	1638	1/1	0.98	0.03	86,86,86,86	0
53	MG	BB	3071	1/1	0.98	0.06	68,68,68,68	0
53	MG	BB	3072	1/1	0.98	0.03	35,35,35,35	0
53	MG	BB	3077	1/1	0.98	0.04	53,53,53,53	0
55	ZN	D4	101	1/1	0.98	0.04	62,62,62,62	0
53	MG	CA	1634	1/1	0.99	0.03	74,74,74,74	0
53	MG	BB	3057	1/1	0.99	0.02	53,53,53,53	0
53	MG	BB	3063	1/1	0.99	0.03	33,33,33,33	0
53	MG	BB	3007	1/1	0.99	0.09	68,68,68,68	0
53	MG	CA	1641	1/1	0.99	0.03	42,42,42,42	0
53	MG	CA	1642	1/1	0.99	0.02	79,79,79,79	0
53	MG	BB	3067	1/1	0.99	0.03	63,63,63,63	0
53	MG	CA	1645	1/1	0.99	0.02	55,55,55,55	0
53	MG	BB	3008	1/1	0.99	0.04	82,82,82,82	0
53	MG	AA	1633	1/1	0.99	0.03	65,65,65,65	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
53	MG	AA	1634	1/1	0.99	0.03	72,72,72,72	0
53	MG	AA	1605	1/1	0.99	0.04	50,50,50,50	0
53	MG	BB	3075	1/1	0.99	0.04	40,40,40,40	0
53	MG	AA	1651	1/1	0.99	0.10	35,35,35,35	0
53	MG	CA	1653	1/1	0.99	0.03	48,48,48,48	0
53	MG	BB	3078	1/1	0.99	0.17	27,27,27,27	0
53	MG	BB	3080	1/1	0.99	0.04	53,53,53,53	0
53	MG	DB	3006	1/1	0.99	0.03	10,10,10,10	0
53	MG	DB	3007	1/1	0.99	0.06	62,62,62,62	0
53	MG	DB	3008	1/1	0.99	0.07	13,13,13,13	0
53	MG	DB	3010	1/1	0.99	0.03	5,5,5,5	0
53	MG	BB	3015	1/1	0.99	0.03	25,25,25,25	0
53	MG	DB	3015	1/1	0.99	0.04	42,42,42,42	0
53	MG	DB	3025	1/1	0.99	0.10	44,44,44,44	0
53	MG	DB	3026	1/1	0.99	0.06	45,45,45,45	0
53	MG	BB	3082	1/1	0.99	0.04	18,18,18,18	0
53	MG	BB	3084	1/1	0.99	0.03	32,32,32,32	0
53	MG	BB	3086	1/1	0.99	0.05	5,5,5,5	0
53	MG	BB	3087	1/1	0.99	0.09	80,80,80,80	0
53	MG	BB	3017	1/1	0.99	0.04	50,50,50,50	0
53	MG	BB	3022	1/1	0.99	0.04	32,32,32,32	0
53	MG	BB	3091	1/1	0.99	0.10	5,5,5,5	0
53	MG	BB	3024	1/1	0.99	0.03	55,55,55,55	0
53	MG	DB	3039	1/1	0.99	0.02	62,62,62,62	0
53	MG	AA	1606	1/1	0.99	0.05	82,82,82,82	0
53	MG	DB	3046	1/1	0.99	0.04	23,23,23,23	0
53	MG	DB	3047	1/1	0.99	0.08	43,43,43,43	0
53	MG	DB	3048	1/1	0.99	0.04	38,38,38,38	0
53	MG	BB	3095	1/1	0.99	0.02	62,62,62,62	0
53	MG	BB	3096	1/1	0.99	0.03	58,58,58,58	0
53	MG	BB	3027	1/1	0.99	0.03	50,50,50,50	0
53	MG	DB	3053	1/1	0.99	0.03	65,65,65,65	0
53	MG	BB	3031	1/1	0.99	0.04	60,60,60,60	0
53	MG	AA	1654	1/1	0.99	0.03	67,67,67,67	0
53	MG	AA	1638	1/1	0.99	0.05	51,51,51,51	0
53	MG	BB	3106	1/1	0.99	0.11	10,10,10,10	0
53	MG	BB	3107	1/1	0.99	0.03	46,46,46,46	0
53	MG	BB	3110	1/1	0.99	0.07	80,80,80,80	0
53	MG	CA	1604	1/1	0.99	0.12	20,20,20,20	0
53	MG	AA	1639	1/1	0.99	0.04	93,93,93,93	0
53	MG	AA	1601	1/1	0.99	0.09	36,36,36,36	0
53	MG	DB	3069	1/1	0.99	0.04	64,64,64,64	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
53	MG	DB	3071	1/1	0.99	0.04	57,57,57,57	0
53	MG	DB	3073	1/1	0.99	0.04	50,50,50,50	0
53	MG	DB	3075	1/1	0.99	0.03	44,44,44,44	0
53	MG	DB	3077	1/1	0.99	0.03	45,45,45,45	0
53	MG	DB	3081	1/1	0.99	0.08	41,41,41,41	0
53	MG	DB	3082	1/1	0.99	0.13	83,83,83,83	0
53	MG	DB	3083	1/1	0.99	0.03	27,27,27,27	0
53	MG	AA	1644	1/1	0.99	0.02	75,75,75,75	0
53	MG	DB	3089	1/1	0.99	0.03	79,79,79,79	0
53	MG	DB	3090	1/1	0.99	0.05	14,14,14,14	0
53	MG	AA	1610	1/1	0.99	0.02	78,78,78,78	0
53	MG	DB	3093	1/1	0.99	0.04	59,59,59,59	0
53	MG	BB	3044	1/1	0.99	0.05	45,45,45,45	0
53	MG	BB	3001	1/1	0.99	0.04	5,5,5,5	0
53	MG	DB	3096	1/1	0.99	0.04	26,26,26,26	0
53	MG	DB	3097	1/1	0.99	0.09	41,41,41,41	0
53	MG	BB	3003	1/1	0.99	0.03	53,53,53,53	0
53	MG	DB	3100	1/1	0.99	0.07	19,19,19,19	0
53	MG	AA	1613	1/1	0.99	0.03	58,58,58,58	0
53	MG	BB	3050	1/1	0.99	0.03	53,53,53,53	0
53	MG	DB	3105	1/1	0.99	0.06	40,40,40,40	0
53	MG	BB	3006	1/1	0.99	0.06	61,61,61,61	0
53	MG	CA	1625	1/1	0.99	0.02	70,70,70,70	0
53	MG	CA	1627	1/1	0.99	0.04	27,27,27,27	0
53	MG	BB	3052	1/1	0.99	0.03	71,71,71,71	0
53	MG	BB	3053	1/1	0.99	0.06	60,60,60,60	0
53	MG	CA	1631	1/1	0.99	0.05	41,41,41,41	0
53	MG	BB	3054	1/1	0.99	0.06	49,49,49,49	0
53	MG	BB	3018	1/1	1.00	0.04	39,39,39,39	0
53	MG	CA	1635	1/1	1.00	0.02	30,30,30,30	0
53	MG	CA	1636	1/1	1.00	0.04	5,5,5,5	0
53	MG	BB	3065	1/1	1.00	0.03	32,32,32,32	0
53	MG	BB	3066	1/1	1.00	0.01	5,5,5,5	0
53	MG	CA	1639	1/1	1.00	0.02	35,35,35,35	0
53	MG	BB	3019	1/1	1.00	0.01	21,21,21,21	0
53	MG	BB	3020	1/1	1.00	0.14	6,6,6,6	0
53	MG	BB	3069	1/1	1.00	0.04	5,5,5,5	0
53	MG	CA	1643	1/1	1.00	0.03	36,36,36,36	0
53	MG	BB	3021	1/1	1.00	0.03	52,52,52,52	0
53	MG	AA	1640	1/1	1.00	0.08	46,46,46,46	0
53	MG	BB	3023	1/1	1.00	0.02	5,5,5,5	0
53	MG	CA	1647	1/1	1.00	0.07	75,75,75,75	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
53	MG	BB	3073	1/1	1.00	0.04	44,44,44,44	0
53	MG	BB	3074	1/1	1.00	0.03	10,10,10,10	0
53	MG	AA	1641	1/1	1.00	0.02	32,32,32,32	0
53	MG	BB	3076	1/1	1.00	0.02	35,35,35,35	0
53	MG	BB	3025	1/1	1.00	0.03	30,30,30,30	0
53	MG	AA	1629	1/1	1.00	0.01	12,12,12,12	0
53	MG	BB	3079	1/1	1.00	0.02	38,38,38,38	0
53	MG	CA	1655	1/1	1.00	0.02	32,32,32,32	0
53	MG	CA	1656	1/1	1.00	0.05	38,38,38,38	0
53	MG	CA	1657	1/1	1.00	0.02	73,73,73,73	0
53	MG	CA	1658	1/1	1.00	0.02	37,37,37,37	0
53	MG	AA	1643	1/1	1.00	0.02	40,40,40,40	0
53	MG	DB	3001	1/1	1.00	0.01	5,5,5,5	0
53	MG	DB	3002	1/1	1.00	0.05	11,11,11,11	0
53	MG	DB	3003	1/1	1.00	0.07	30,30,30,30	0
53	MG	DB	3004	1/1	1.00	0.01	8,8,8,8	0
53	MG	DB	3005	1/1	1.00	0.08	25,25,25,25	0
53	MG	BB	3028	1/1	1.00	0.12	9,9,9,9	0
53	MG	BB	3029	1/1	1.00	0.01	5,5,5,5	0
53	MG	BB	3083	1/1	1.00	0.05	30,30,30,30	0
53	MG	DB	3009	1/1	1.00	0.02	9,9,9,9	0
53	MG	BB	3030	1/1	1.00	0.03	51,51,51,51	0
53	MG	DB	3011	1/1	1.00	0.03	5,5,5,5	0
53	MG	DB	3012	1/1	1.00	0.01	9,9,9,9	0
53	MG	BB	3085	1/1	1.00	0.01	34,34,34,34	0
53	MG	DB	3014	1/1	1.00	0.01	21,21,21,21	0
53	MG	AA	1660	1/1	1.00	0.04	56,56,56,56	0
53	MG	DB	3016	1/1	1.00	0.04	5,5,5,5	0
53	MG	DB	3017	1/1	1.00	0.11	5,5,5,5	0
53	MG	DB	3018	1/1	1.00	0.02	7,7,7,7	0
53	MG	DB	3019	1/1	1.00	0.07	5,5,5,5	0
53	MG	DB	3020	1/1	1.00	0.09	5,5,5,5	0
53	MG	DB	3021	1/1	1.00	0.02	16,16,16,16	0
53	MG	DB	3022	1/1	1.00	0.02	11,11,11,11	0
53	MG	DB	3023	1/1	1.00	0.08	69,69,69,69	0
53	MG	DB	3024	1/1	1.00	0.03	40,40,40,40	0
53	MG	BB	3032	1/1	1.00	0.03	22,22,22,22	0
53	MG	BB	3088	1/1	1.00	0.03	11,11,11,11	0
53	MG	DB	3027	1/1	1.00	0.05	13,13,13,13	0
53	MG	AA	1607	1/1	1.00	0.02	57,57,57,57	0
53	MG	BB	3002	1/1	1.00	0.01	23,23,23,23	0
53	MG	BB	3035	1/1	1.00	0.04	13,13,13,13	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
53	MG	BB	3036	1/1	1.00	0.07	51,51,51,51	0
53	MG	AA	1631	1/1	1.00	0.05	5,5,5,5	0
53	MG	DB	3033	1/1	1.00	0.06	11,11,11,11	0
53	MG	BB	3094	1/1	1.00	0.02	36,36,36,36	0
53	MG	AA	1603	1/1	1.00	0.07	57,57,57,57	0
53	MG	BB	3039	1/1	1.00	0.05	41,41,41,41	0
53	MG	DB	3037	1/1	1.00	0.10	8,8,8,8	0
53	MG	DB	3038	1/1	1.00	0.02	5,5,5,5	0
53	MG	BB	3040	1/1	1.00	0.01	12,12,12,12	0
53	MG	DB	3040	1/1	1.00	0.03	5,5,5,5	0
53	MG	DB	3041	1/1	1.00	0.07	40,40,40,40	0
53	MG	DB	3042	1/1	1.00	0.01	37,37,37,37	0
53	MG	DB	3043	1/1	1.00	0.06	7,7,7,7	0
53	MG	DB	3044	1/1	1.00	0.06	18,18,18,18	0
53	MG	BB	3098	1/1	1.00	0.02	14,14,14,14	0
53	MG	BB	3041	1/1	1.00	0.00	5,5,5,5	0
53	MG	BB	3005	1/1	1.00	0.02	5,5,5,5	0
53	MG	BB	3101	1/1	1.00	0.03	19,19,19,19	0
53	MG	DB	3049	1/1	1.00	0.05	42,42,42,42	0
53	MG	AA	1609	1/1	1.00	0.03	40,40,40,40	0
53	MG	BB	3103	1/1	1.00	0.06	11,11,11,11	0
53	MG	BB	3104	1/1	1.00	0.05	26,26,26,26	0
53	MG	BB	3105	1/1	1.00	0.06	5,5,5,5	0
53	MG	DB	3054	1/1	1.00	0.03	21,21,21,21	0
53	MG	DB	3055	1/1	1.00	0.02	44,44,44,44	0
53	MG	DB	3056	1/1	1.00	0.02	5,5,5,5	0
53	MG	DB	3057	1/1	1.00	0.05	48,48,48,48	0
53	MG	AA	1648	1/1	1.00	0.03	6,6,6,6	0
53	MG	BB	3045	1/1	1.00	0.02	72,72,72,72	0
53	MG	BB	3108	1/1	1.00	0.05	10,10,10,10	0
53	MG	BB	3109	1/1	1.00	0.02	11,11,11,11	0
53	MG	AA	1616	1/1	1.00	0.02	5,5,5,5	0
53	MG	CA	1601	1/1	1.00	0.05	5,5,5,5	0
53	MG	CA	1602	1/1	1.00	0.02	5,5,5,5	0
53	MG	CA	1603	1/1	1.00	0.03	56,56,56,56	0
53	MG	AA	1604	1/1	1.00	0.04	38,38,38,38	0
53	MG	DB	3067	1/1	1.00	0.01	5,5,5,5	0
53	MG	DB	3068	1/1	1.00	0.09	5,5,5,5	0
53	MG	CA	1605	1/1	1.00	0.04	12,12,12,12	0
53	MG	DB	3070	1/1	1.00	0.02	33,33,33,33	0
53	MG	BB	3048	1/1	1.00	0.06	12,12,12,12	0
53	MG	DB	3072	1/1	1.00	0.03	20,20,20,20	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
53	MG	CA	1607	1/1	1.00	0.02	5,5,5,5	0
53	MG	DB	3074	1/1	1.00	0.01	26,26,26,26	0
53	MG	AA	1636	1/1	1.00	0.04	64,64,64,64	0
53	MG	DB	3076	1/1	1.00	0.01	33,33,33,33	0
53	MG	BB	3011	1/1	1.00	0.05	5,5,5,5	0
53	MG	DB	3078	1/1	1.00	0.03	25,25,25,25	0
53	MG	DB	3079	1/1	1.00	0.03	7,7,7,7	0
53	MG	DB	3080	1/1	1.00	0.05	62,62,62,62	0
53	MG	CA	1610	1/1	1.00	0.02	5,5,5,5	0
53	MG	CA	1611	1/1	1.00	0.03	28,28,28,28	0
53	MG	AA	1618	1/1	1.00	0.04	38,38,38,38	0
53	MG	DB	3084	1/1	1.00	0.07	29,29,29,29	0
53	MG	DB	3085	1/1	1.00	0.02	38,38,38,38	0
53	MG	DB	3086	1/1	1.00	0.01	18,18,18,18	0
53	MG	DB	3087	1/1	1.00	0.01	5,5,5,5	0
53	MG	BB	3013	1/1	1.00	0.02	45,45,45,45	0
53	MG	AA	1653	1/1	1.00	0.04	21,21,21,21	0
53	MG	CA	1615	1/1	1.00	0.07	13,13,13,13	0
53	MG	AA	1611	1/1	1.00	0.01	43,43,43,43	0
53	MG	DB	3092	1/1	1.00	0.06	10,10,10,10	0
53	MG	BB	3055	1/1	1.00	0.07	6,6,6,6	0
53	MG	BB	3056	1/1	1.00	0.04	5,5,5,5	0
53	MG	CA	1619	1/1	1.00	0.02	36,36,36,36	0
53	MG	CA	1620	1/1	1.00	0.03	72,72,72,72	0
53	MG	BB	3016	1/1	1.00	0.02	55,55,55,55	0
53	MG	DB	3098	1/1	1.00	0.06	5,5,5,5	0
53	MG	CA	1622	1/1	1.00	0.09	5,5,5,5	0
53	MG	CA	1623	1/1	1.00	0.03	11,11,11,11	0
53	MG	DB	3101	1/1	1.00	0.04	26,26,26,26	0
53	MG	DB	3102	1/1	1.00	0.07	28,28,28,28	0
53	MG	CA	1624	1/1	1.00	0.02	38,38,38,38	0
53	MG	BB	3058	1/1	1.00	0.05	15,15,15,15	0
53	MG	CA	1626	1/1	1.00	0.02	8,8,8,8	0
53	MG	DB	3106	1/1	1.00	0.01	61,61,61,61	0
53	MG	DB	3107	1/1	1.00	0.01	5,5,5,5	0
53	MG	BB	3059	1/1	1.00	0.02	10,10,10,10	0
53	MG	DB	3109	1/1	1.00	0.05	9,9,9,9	0
53	MG	BB	3060	1/1	1.00	0.04	30,30,30,30	0
53	MG	BB	3061	1/1	1.00	0.07	24,24,24,24	0
53	MG	CA	1630	1/1	1.00	0.02	37,37,37,37	0
53	MG	BB	3062	1/1	1.00	0.01	7,7,7,7	0
53	MG	AA	1612	1/1	1.00	0.06	61,61,61,61	0

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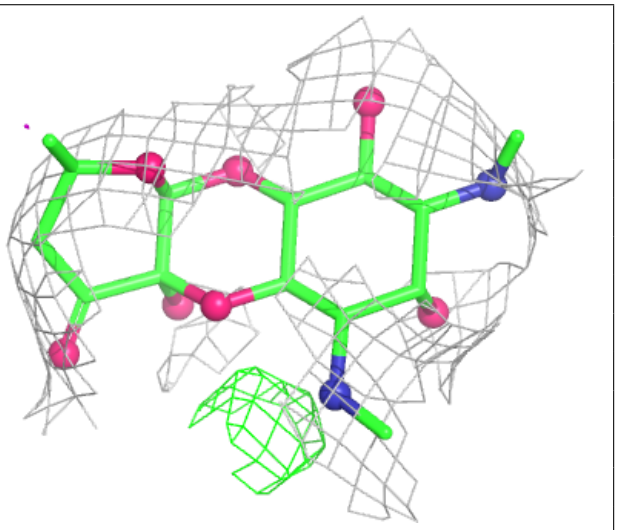
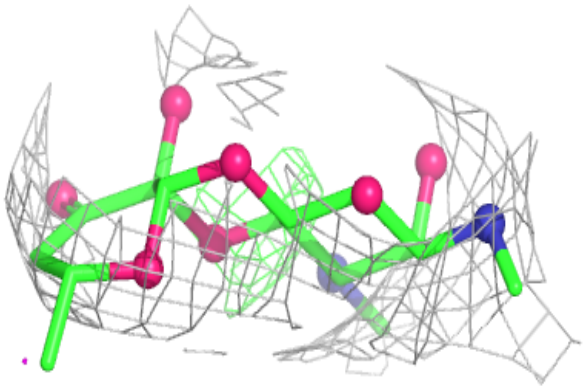
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
53	MG	CA	1633	1/1	1.00	0.01	23,23,23,23	0

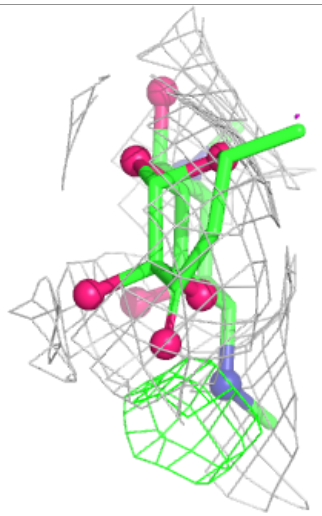
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

Electron density around SCM CA 1659:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

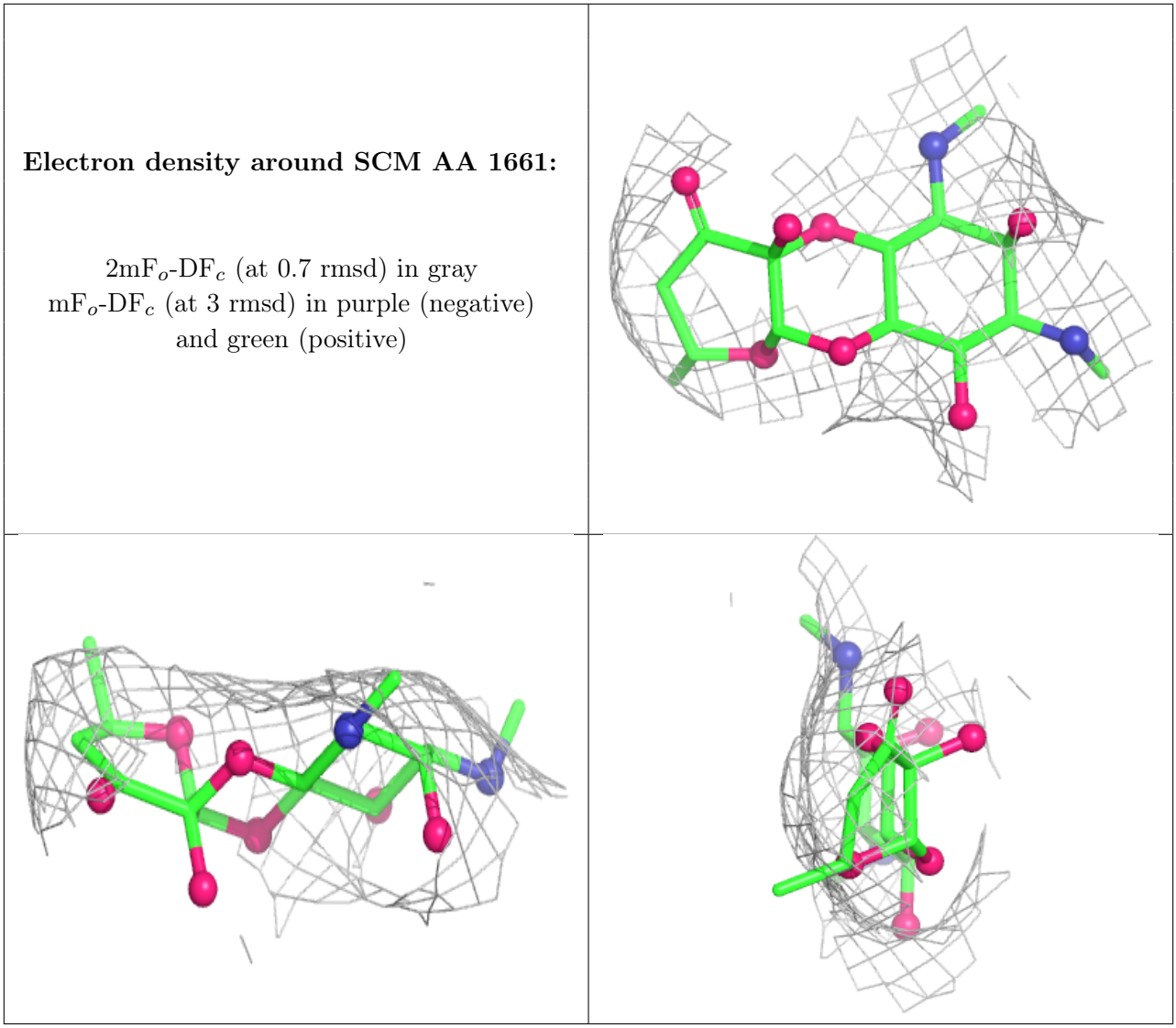






Electron density around SCM AA 1661:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



6.5 Other polymers (i)

There are no such residues in this entry.