Full wwPDB X-ray Structure Validation Report (i)

Sep 14, 2023 – 07:17 PM EDT

PDB ID	:	4V55
Title	:	Crystal structure of the bacterial ribosome from Escherichia coli in complex with gentamicin and ribosome recycling factor (RRF).
Authors	:	Borovinskaya, M.A.; Pai, R.D.; Zhang, W.; Schuwirth, B.-S.; Holton, J.M.; Hirokawa, G.; Kaji, H.; Kaji, A.; Cate, J.H.D.
Deposited on	:	2007-06-17
Resolution	:	4.00 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 (i) 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 (i)) were used in the production of this report:

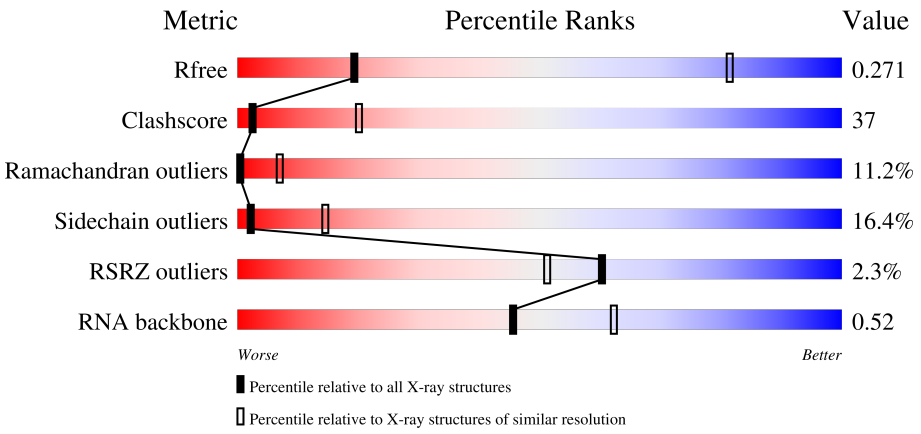
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.35.1
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.35.1

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 4.00 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}	130704	1087 (4.30-3.70)
Clashscore	141614	1148 (4.30-3.70)
Ramachandran outliers	138981	1108 (4.30-3.70)
Sidechain outliers	138945	1099 (4.30-3.70)
RSRZ outliers	127900	1028 (4.34-3.66)
RNA backbone	3102	1048 (5.00-3.00)

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	% 24% 62% 12% ••
1	CA	1542	22% 65% 12% ••
2	AC	232	% 29% 48% 11% 11%

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Mol	Chain	Length	Quality of chain
2	CC	232	28% 49% 12% 11%
3	AD	205	4% 27% 60% 12%
3	CD	205	26% 61% 12%
4	AE	166	2% 32% 51% 7% 10%
4	CE	166	2% 29% 54% 8% 10%
5	AF	135	4% 18% 43% 13% 26%
5	CF	135	% 21% 40% 13% 26%
6	AG	178	2% 26% 48% 10% 16%
6	CG	178	% 30% 44% 10% 15%
7	AH	129	6% 26% 67% 7%
7	CH	129	29% 65% 6%
8	AI	129	2% 25% 60% 13%
8	CI	129	2% 24% 60% 14%
9	AJ	103	2% 29% 52% 14% 5%
9	CJ	103	5% 30% 50% 16% 5%
10	AK	128	26% 55% 11% 9%
10	CK	128	2% 26% 53% 12% 9%
11	AL	123	2% 33% 52% 11% 5%
11	CL	123	33% 52% 11% 5%
12	AM	117	17% 63% 17%
12	CM	117	16% 62% 18%
13	AN	100	23% 54% 18%
13	CN	100	% 22% 54% 19%
14	AO	89	38% 53% 7%
14	CO	89	38% 53% 7%

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Mol	Chain	Length	Quality of chain
15	AP	82	4% 35% 55% 9%
15	CP	82	6% 35% 51% 10%
16	AQ	83	24% 54% 17%
16	CQ	83	33% 48% 16%
17	AR	74	% 26% 36% 11% 26%
17	CR	74	4% 24% 38% 11% 26%
18	AS	91	7% 19% 53% 14% 13%
18	CS	91	18% 55% 14% 12%
19	AT	86	30% 59% 7%
19	CT	86	30% 58% 8%
20	AB	240	3% 21% 54% 15% 9%
20	CB	240	2% 21% 53% 15% 9%
21	AU	70	% 19% 33% 19% 27%
21	CU	70	17% 36% 17% 27%
22	BA	120	22% 62% 12%
22	DA	120	2% 22% 64% 12%
23	BB	2904	22% 65% 11%
23	DB	2904	22% 64% 11%
24	BI	141	17% 35% 60% 5%
24	DI	141	9% 35% 57% 8%
25	BC	272	% 28% 50% 19%
25	DC	272	29% 47% 20%
26	BD	209	8% 26% 52% 21%
26	DD	209	24% 54% 22%
27	BK	123	4% 25% 50% 21%

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Mol	Chain	Length	Quality of chain
27	DK	123	25% 51% 20%
28	BP	114	16% 28% 48% 18% 6%
28	DP	114	28% 47% 19% 5%
29	BE	201	7% 24% 57% 19%
29	DE	201	2% 25% 57% 17%
30	BY	58	5% 29% 50% 19%
30	DY	58	2% 29% 50% 19%
31	B0	56	4% 39% 45% 14%
31	D0	56	36% 50% 12%
32	B4	38	3% 16% 53% 29%
32	D4	38	21% 47% 26% 5%
33	B1	54	6% 19% 57% 17% 7%
33	D1	54	4% 20% 57% 15% 7%
34	B3	64	6% 25% 64% 11%
34	D3	64	2% 28% 62% 9%
35	BV	94	% 30% 52% 17%
35	DV	94	27% 56% 16%
36	B2	46	33% 43% 22%
36	D2	46	28% 50% 20%
37	BL	144	% 27% 53% 18%
37	DL	144	26% 54% 18%
38	BM	136	3% 26% 53% 18%
38	DM	136	3% 28% 53% 17%
39	BX	63	3% 17% 67% 16%
39	DX	63	3% 14% 67% 19%

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Mol	Chain	Length	Quality of chain
40	BH	149	19% 20% 49% 26% 5%
40	DH	149	4% 23% 52% 19% 5%
41	BJ	142	% 26% 57% 14%
41	DJ	142	% 25% 57% 15%
42	BN	127	% 14% 64% 14% 6%
42	DN	127	15% 65% 13% 6%
43	BO	117	7% 25% 59% 15%
43	DO	117	2% 23% 62% 14%
44	BQ	117	21% 66% 13%
44	DQ	117	% 20% 65% 15%
45	BS	110	2% 22% 62% 15%
45	DS	110	25% 58% 15%
46	BU	103	6% 25% 46% 25%
46	DU	103	% 24% 47% 25%
47	BF	178	% 18% 55% 24%
47	DF	178	7% 18% 56% 24%
48	BG	176	% 25% 48% 23%
48	DG	176	2% 26% 51% 20%
49	BR	103	3% 24% 60% 15%
49	DR	103	4% 25% 59% 14%
50	BT	100	2% 16% 50% 25% 7%
50	DT	100	3% 19% 49% 23% 7%
51	BZ	78	4% 21% 51% 23%
51	DZ	78	% 22% 53% 21%
52	BW	84	8% 14% 39% 35% 6% 6%

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Mol	Chain	Length	Quality of chain
52	DW	84	4% 15% 38% 35% 6% 6%
53	B6	185	45% 24% 63% 12%
53	D6	185	26% 32% 57% 10%

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
54	MG	AA	1625	-	-	-	X
54	MG	AA	1637	-	-	-	X
54	MG	AA	1647	-	-	-	X
54	MG	AA	1656	-	-	-	X
54	MG	AA	1657	-	-	-	X
54	MG	AA	1659	-	-	-	X
54	MG	BB	3033	-	-	-	X

2 Entry composition (i)

There are 57 unique types of molecules in this entry. The entry contains 287083 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
			Total	C	N	O	P			
1	AA	1530	32831	14642	6024	10635	1530	0	0	0
1	CA	1530	32831	14642	6024	10635	1530	0	0	0

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

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
8	AI	127	1022	634	206	179	3	0	0	0
8	CI	127	1021	634	206	178	3	0	0	0

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

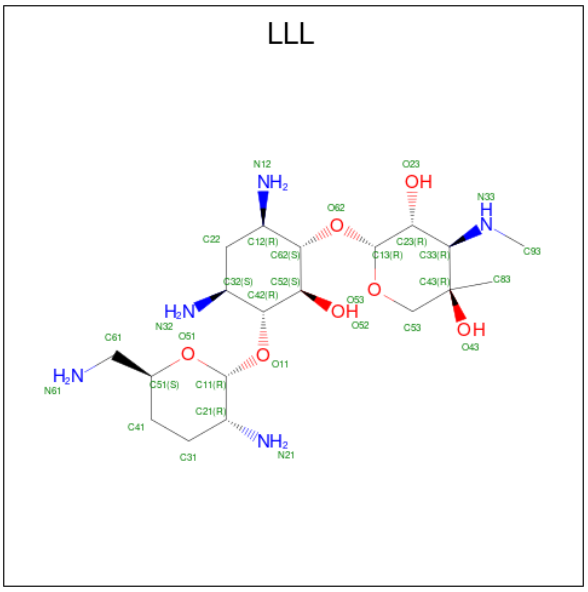
- Molecule 53 is a protein called 50S ribosomal protein RRF.

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

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

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

- Molecule 55 is (2R,3R,4R,5R)-2-((1S,2S,3R,4S,6R)-4,6-DIAMINO-3-((2R,3R,6S)-3-AMIN O-6-(AMINOMETHYL)-TETRAHYDRO-2H-PYRAN-2-YLOXY)-2-HYDR OXYCYCLO HEXYLOXY)-5-METHYL-4-(METHYLAMINO)-TETRAHYDRO-2H-PYRAN-3,5-DIOL (three-letter code: LLL) (formula: $C_{19}H_{39}N_5O_7$).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
			Total	C	N	O		
55	AA	1	31	19	5	7	0	0

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
			Total	C	N	O		
55	BB	1	31	19	5	7	0	0
			Total	C	N	O		
55	CA	1	31	19	5	7	0	0
			Total	C	N	O		
55	DB	1	31	19	5	7	0	0

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

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

- Molecule 57 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
			Total	O		
57	AA	287	287	287	0	0
			Total	O		
57	AE	3	3	3	0	0
			Total	O		
57	AK	1	1	1	0	0
			Total	O		
57	AL	3	3	3	0	0
			Total	O		
57	AN	4	4	4	0	0
			Total	O		
57	AT	2	2	2	0	0
			Total	O		
57	BB	492	492	492	0	0
			Total	O		
57	BC	6	6	6	0	0
			Total	O		
57	BD	1	1	1	0	0
			Total	O		
57	BE	3	3	3	0	0
			Total	O		
57	BL	3	3	3	0	0
			Total	O		
57	BT	1	1	1	0	0

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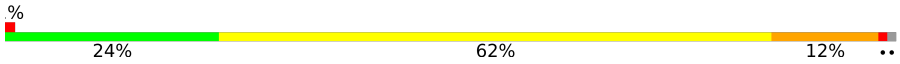
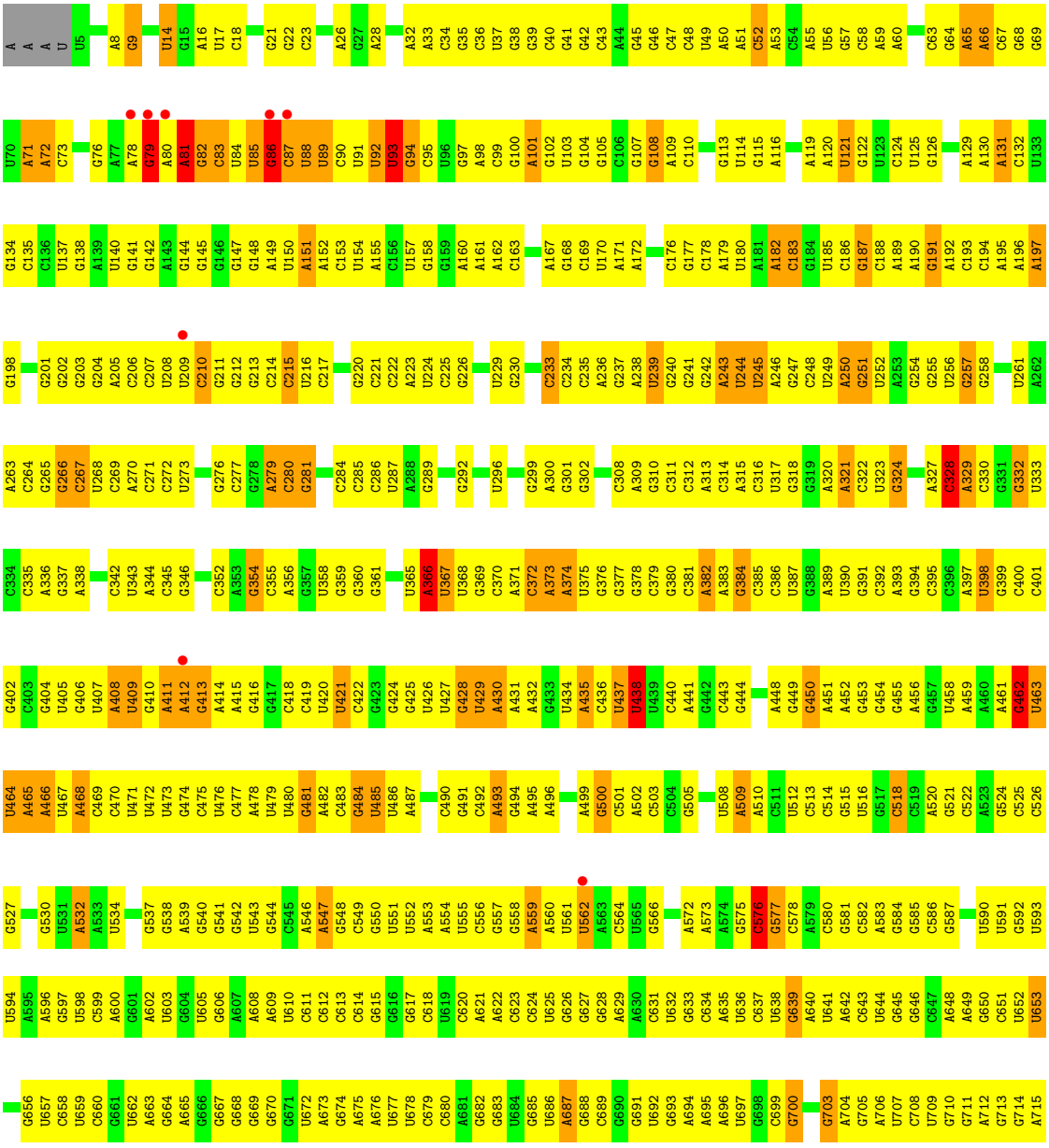
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	CA	296	Total O 296 296	0	0
57	CE	3	Total O 3 3	0	0
57	CK	1	Total O 1 1	0	0
57	CL	3	Total O 3 3	0	0
57	CN	4	Total O 4 4	0	0
57	CT	2	Total O 2 2	0	0
57	DB	500	Total O 500 500	0	0
57	DC	6	Total O 6 6	0	0
57	DE	2	Total O 2 2	0	0
57	DL	2	Total O 2 2	0	0
57	DR	1	Total O 1 1	0	0
57	DT	1	Total O 1 1	0	0

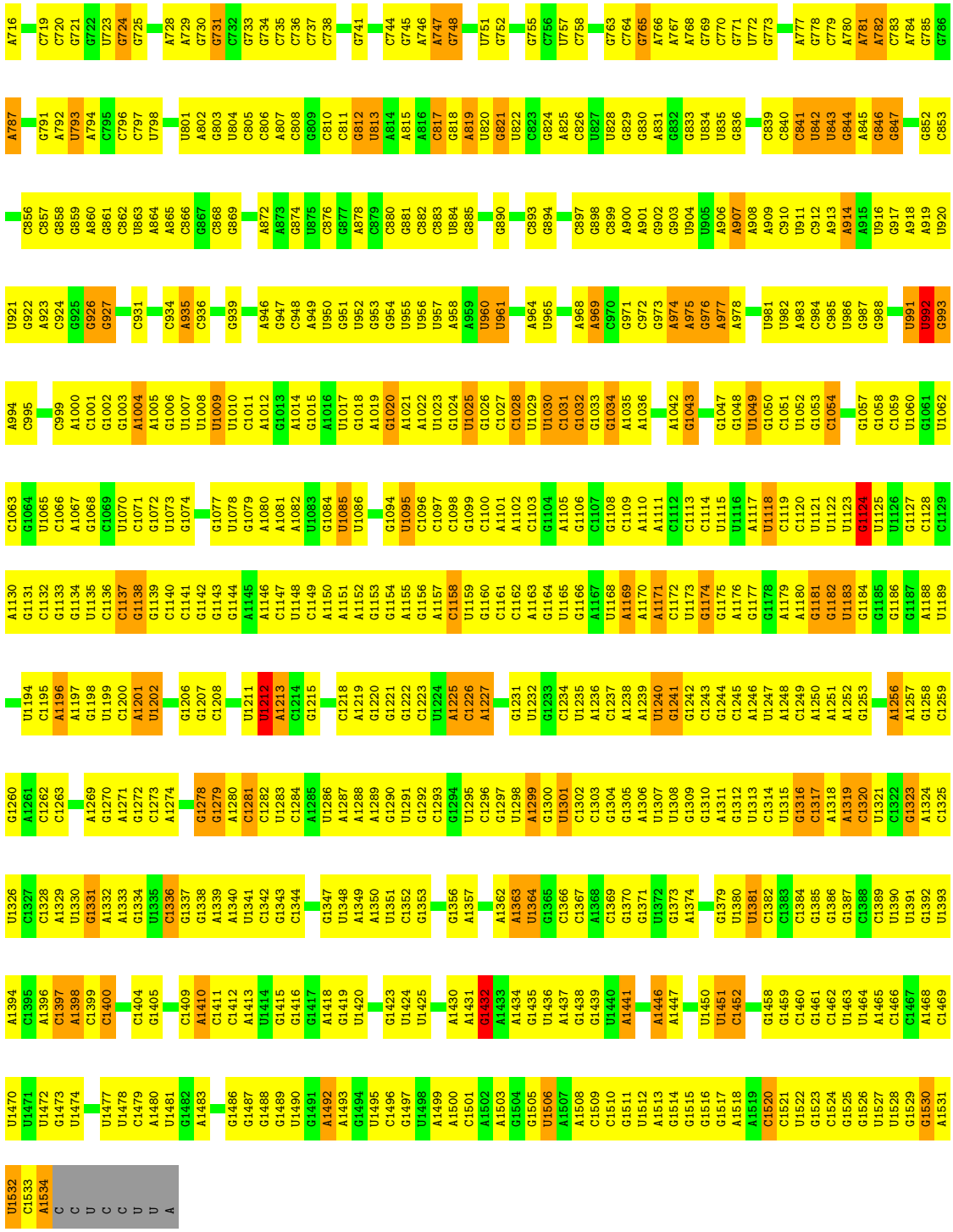
3 Residue-property plots (i)

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

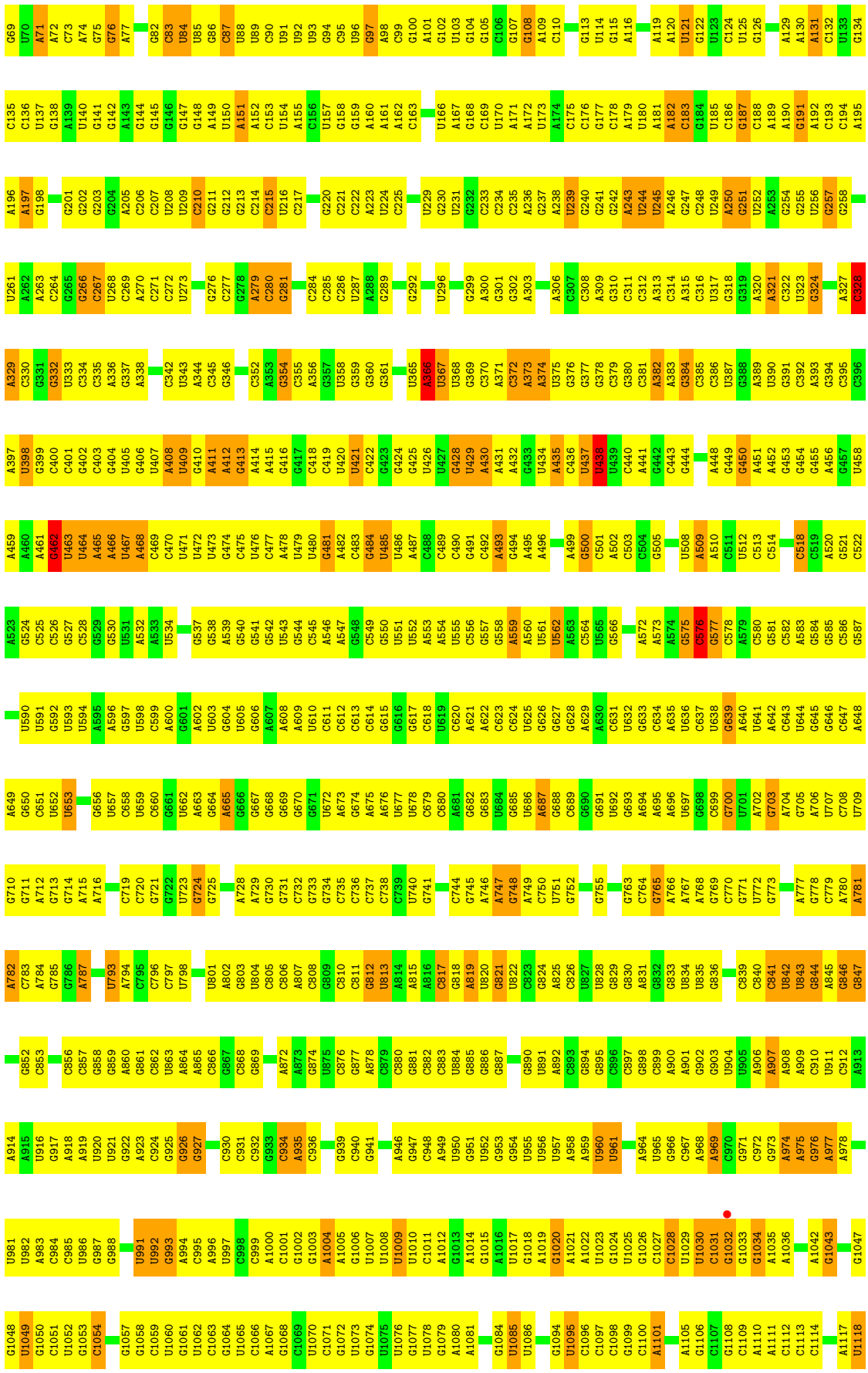
Chain AA: 

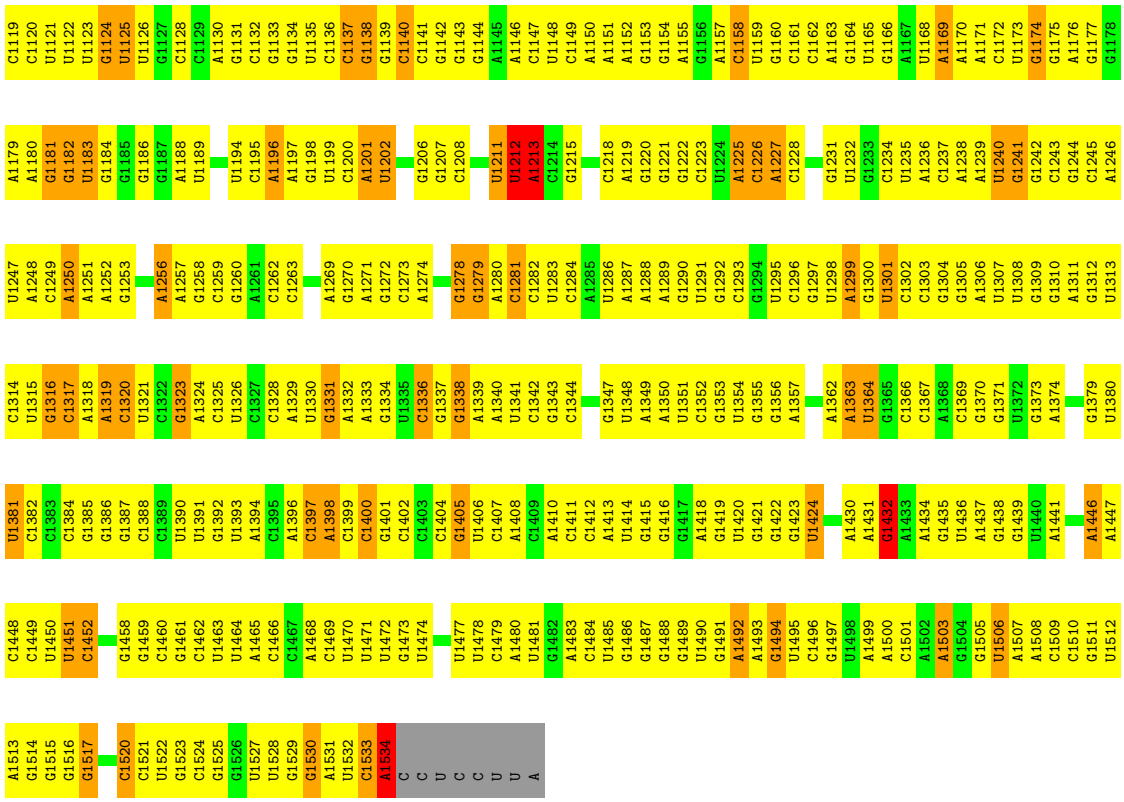




• Molecule 1: 16S rRNA

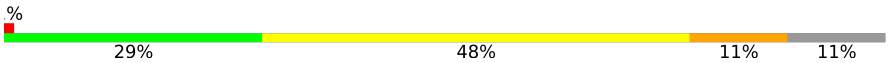
Chain CA: 22% 65% 12%

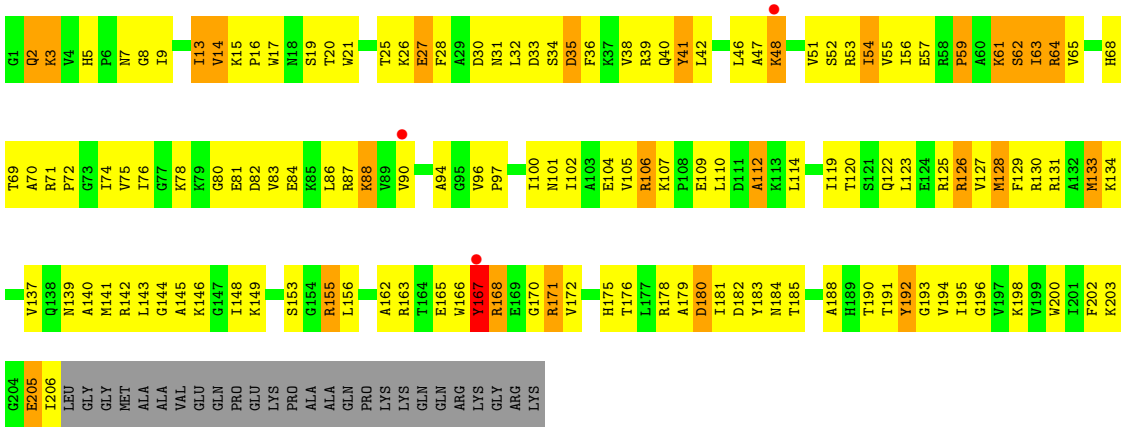

G1048 U1049 G1050 C1051 U1052 G1053 C1054 G1057 G1058 C1059 U1060 G1061 U1062 C1063 G1064 U1065 C1066 A1067 G1068 C1069 U1070 C1071 G1072 U1073 G1074 U1075 U1076 G1077 U1078 G1079 A1080 A1081 G1084 U1085 U1086 G1094 U1095 C1096 C1097 C1098 G1099 C1100 A1101 A1105 G1106 C1107 G1108 C1109 A1110 A1111 C1112 C1113 C1114 A1117 U1118
U981 U982 A983 C984 C985 U986 G987 G988 U991 U992 G993 A994 C995 A996 U997 C998 C999 A1000 C1001 G1002 G1003 A1004 A1005 G1006 U1007 U1008 U1009 U1010 C1011 A1012 G1013 A1014 G1015 A1016 U1017 G1018 A1019 G1020 A1021 A1022 U1023 G1024 U1025 G1026 C1027 C1028 U1029 U1030 C1031 G1032 G1033 G1034 A1035 A1036 A1042 G1043 G1047
A914 A915 U916 G917 A918 A919 U920 U921 G922 A923 C924 G925 G926 G927 C930 C931 C932 G933 C934 A935 C936 G939 C940 G941 A946 G947 C948 A949 U950 G951 U952 G953 C954 U955 U956 U957 A958 A959 U960 U961 A964 U965 G966 C967 A968 A969 C970 G971 C972 G973 A974 A975 G976 A977 A978
G852 C853 C856 C857 G858 C859 A860 G861 C862 U863 A864 A865 C866 G867 C868 G869 A872 A873 G874 U875 C876 G877 A878 C879 C880 G881 C882 C883 U884 G885 G886 G887 G890 U891 A892 C893 G894 G895 C896 C897 G898 C899 A900 A901 G902 G903 U904 U905 A906 C907 A908 A909 C910 U911 C912 A913
A782 C783 A784 G785 G786 A787 U793 A794 C795 C796 C797 U798 U801 A802 G803 U804 C805 C806 A807 C808 G809 U810 C811 G812 U813 A814 A815 A816 C817 G818 A819 U820 G821 U822 C823 G824 A825 C826 U827 U828 G829 G830 A831 G832 G833 U834 U835 G836 C839 C840 C841 U842 U843 G844 A845 G846 G847
G710 G711 A712 G713 G714 A715 A716 C719 C720 G721 G722 U723 G724 G725 A728 A729 G730 G731 C732 G733 G734 C735 C736 C737 C738 C739 U740 G741 C744 G745 A746 A747 G748 A749 C750 U751 G752 G755 G763 C764 G765 A766 A767 A768 G769 C770 G771 U772 G773 A777 G778 C779 A780 A781
A649 G650 C651 U652 U653 G656 U657 C658 U659 C660 G661 U662 A663 G664 A665 G666 C667 G668 G669 G670 G671 U672 A673 G674 A675 A676 U677 U678 C679 C680 A681 C682 G683 U684 C685 U686 A687 G688 C689 G690 G691 U692 G693 A694 A695 A696 U697 G698 C699 G700 U701 A702 G703 A704 G705 A706 U707 C708 U709
U590 U591 G592 U593 U594 A595 A596 G597 U598 C599 A600 G601 A602 U603 G604 U605 G606 A607 A608 A609 U610 C611 U612 C612 C613 C614 G615 G616 G617 C618 U619 C620 A621 A622 C623 C624 U625 U626 G627 G628 A629 A630 C631 U632 G633 C634 A635 U636 C637 U638 G639 A640 U641 A642 C643 U644 G645 G646 C647 A648
A523 G524 C525 G526 G527 C528 G529 G530 U531 A532 A533 U534 G537 G538 A539 G540 G541 G542 U543 G544 C545 A546 A547 G548 C549 G550 U551 U552 A553 A554 U555 C556 G557 G558 A559 A560 U561 U562 A563 C564 U565 G566 A572 A573 A574 G575 C576 G577 C578 A579 C580 G581 C582 A583 G584 G585 C586 G587
A459 A460 A461 G462 U463 U464 A465 A466 U467 A468 C469 C470 U471 U472 U473 G474 C475 U476 C477 A478 U479 U480 G481 A482 C483 G484 U485 U486 A487 C488 C489 C490 G491 G492 A493 G494 A495 A496 A499 G500 C501 A502 C503 C504 G505 U508 A509 A510 C511 U512 C513 C514 C518 C519 A520 G521 C522
A397 U398 G399 C400 C401 G402 C403 G404 U405 G406 U407 A408 U409 G410 A411 A412 G413 A414 A415 G416 G417 C418 C419 U420 U421 C422 G423 G424 G425 U426 U427 G428 G429 A430 A431 A432 G433 U434 A435 C436 U437 U438 U439 C440 A441 G442 C443 G444 A448 G449 G450 A451 A452 G453 G454 G455 A456 G457 U458
A329 C330 G331 G332 U333 C334 C335 A336 G337 A338 C342 U343 A344 C345 G346 C352 A353 G354 C355 A356 G357 U358 G359 G360 G361 U365 A366 U367 U368 G369 C370 A371 C372 A373 A374 U375 G376 G377 G378 C379 G380 C381 A382 A383 G384 C385 C386 U387 G388 A389 U390 G391 C392 A393 G394 C395 C396
U261 A262 A263 C264 G265 G266 C267 U268 C269 A270 C271 C272 U273 G276 C277 G278 A279 C280 G281 C284 C285 C286 U287 A288 G289 G292 U296 G299 A300 G301 U302 A303 A306 C307 C308 A309 G310 C311 C312 A313 C314 A315 C316 U317 G318 G319 A320 A321 C322 U323 G324 A327 C328
A196 A197 G198 G201 G202 G203 G204 A205 C206 C207 U208 U209 C210 G211 G212 G213 C214 C215 U216 C217 G220 C221 C222 A223 U224 C225 U229 G230 U231 G232 C233 C234 C235 A236 G237 A238 U239 G240 G241 G242 A243 U244 U245 A246 G247 C248 U249 A250 G251 U252 A253 G254 G255 U256 G257 G258
C135 C136 U137 G138 A139 U140 G141 G142 A143 G144 G145 G146 G147 G148 A149 G150 A151 A152 C153 U154 A155 C156 U157 G158 G159 A160 A161 G162 C163 U166 A167 G168 C169 U170 A171 A172 U173 A174 C175 C176 G177 C178 A179 U180 A181 A182 C183 G184 U185 C186 G187 C188 A189 A190 G191 A192 C193 C194 A195
G69 U70 A71 A72 C73 A74 G75 G76 A77 G82 C83 U84 U85 G86 C87 U88 U89 C90 U91 U92 U93 G94 C95 U96 G97 A98 C99 G100 A101 G102 U103 G104 G105 C106 G107 G108 A109 C110 G113 U114 G115 A116 A119 A120 U121 G122 U123 C124 U125 G126 A129 A130 A131 C132 U133 G134



• Molecule 2: 30S ribosomal protein S3

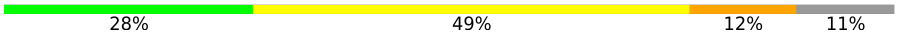
Chain AC:

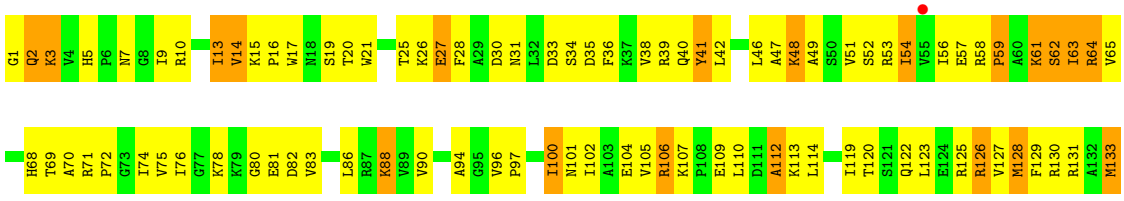


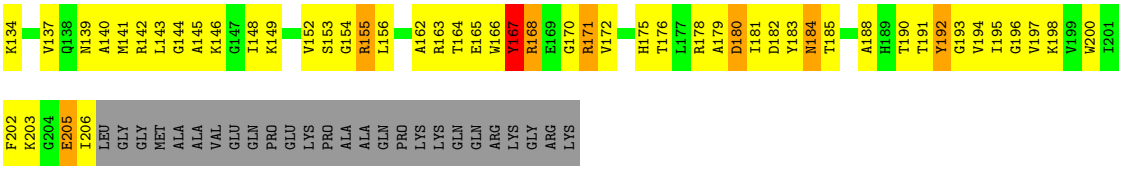


• Molecule 2: 30S ribosomal protein S3

Chain CC:

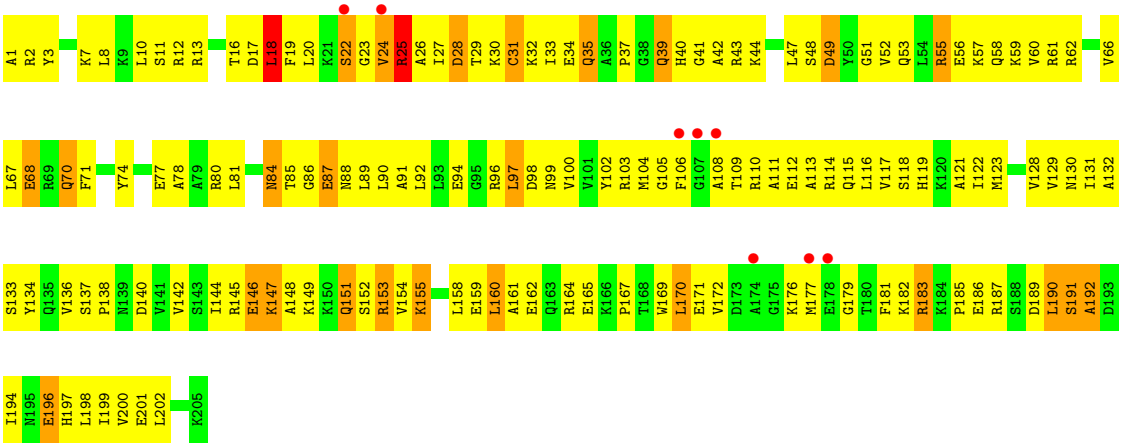






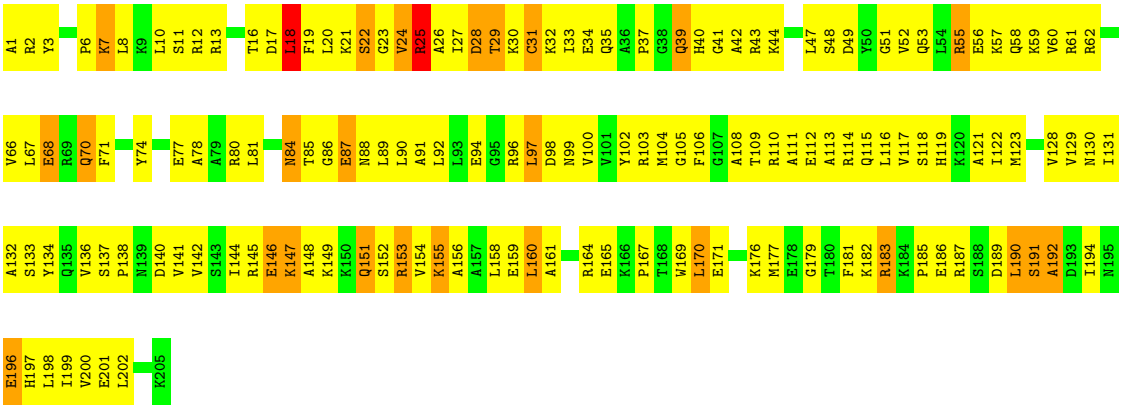
• Molecule 3: 30S ribosomal protein S4

Chain AD:



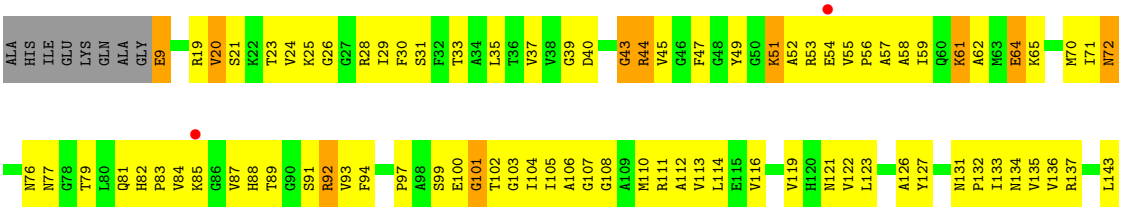
• Molecule 3: 30S ribosomal protein S4

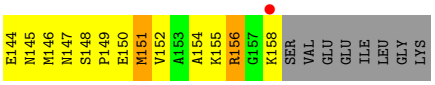
Chain CD:



• Molecule 4: 30S ribosomal protein S5

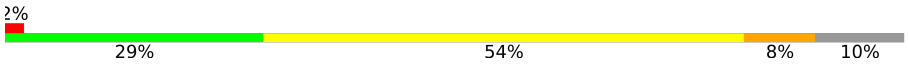
Chain AE:

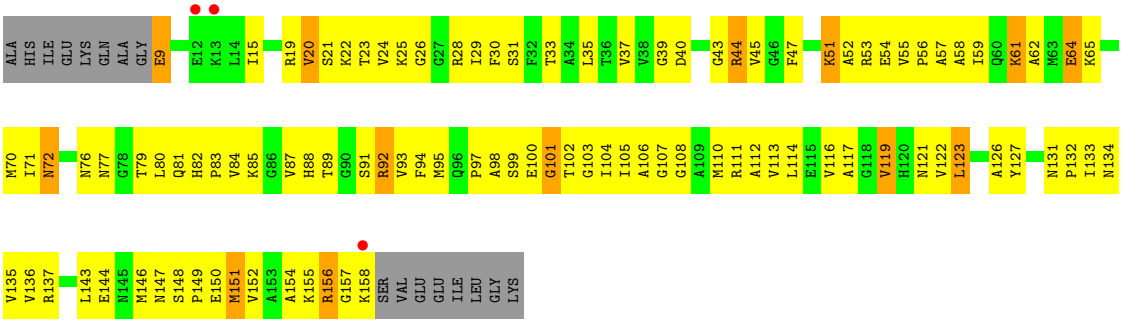




• Molecule 4: 30S ribosomal protein S5

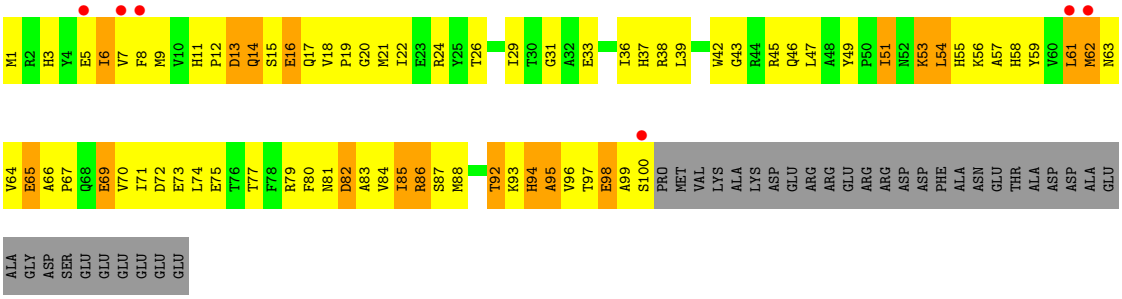
Chain CE:





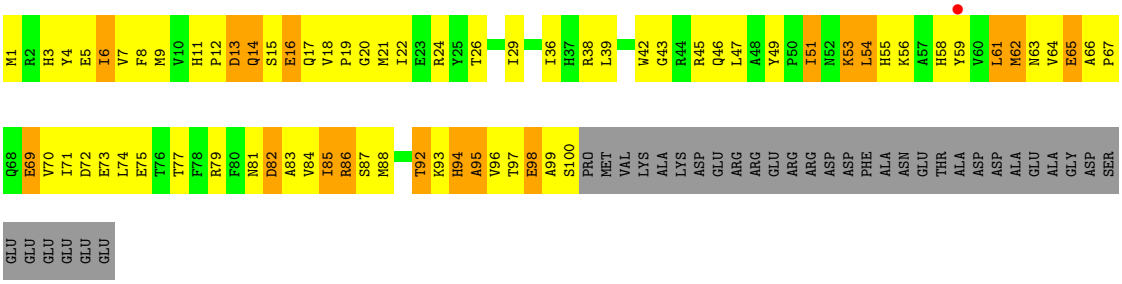
• Molecule 5: 30S ribosomal protein S6

Chain AF:



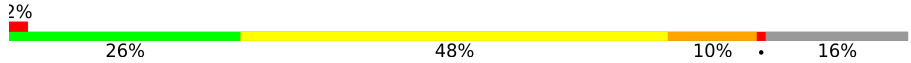
• Molecule 5: 30S ribosomal protein S6

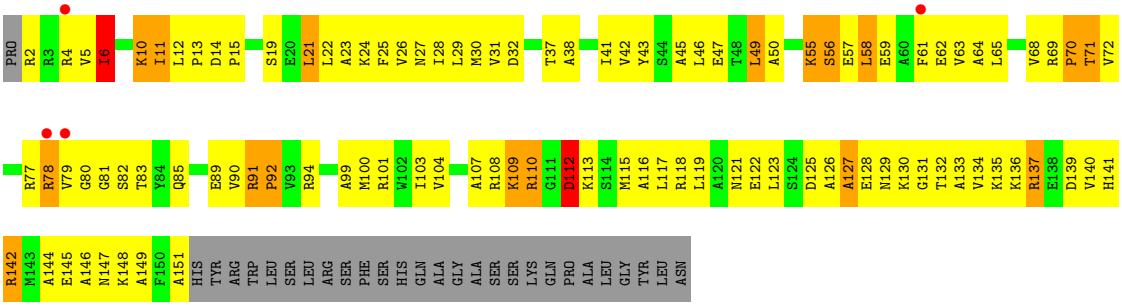
Chain CF:



• Molecule 6: 30S ribosomal protein S7

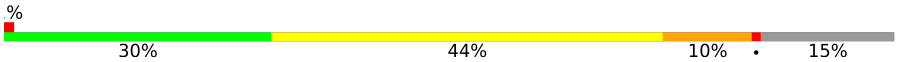
Chain AG:

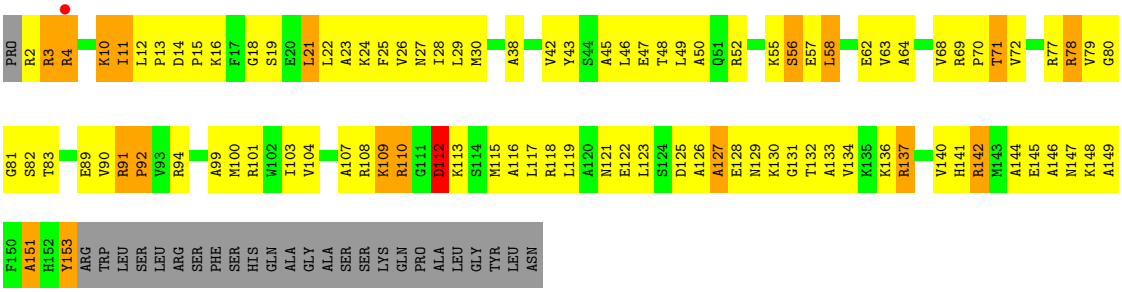




- Molecule 6: 30S ribosomal protein S7

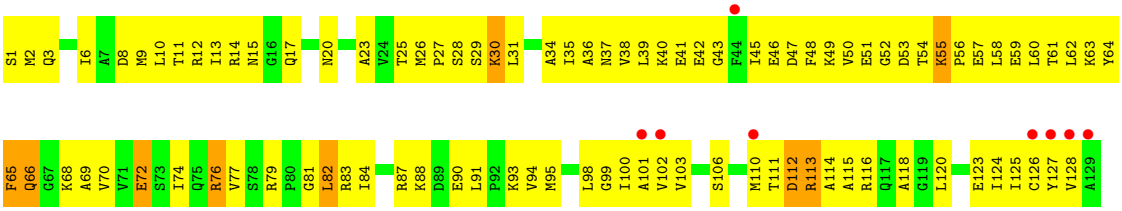
Chain CG:





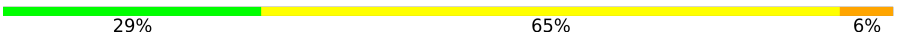
- Molecule 7: 30S ribosomal protein S8

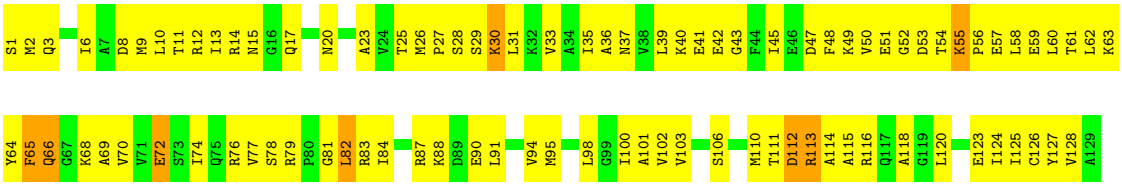
Chain AH:



- Molecule 7: 30S ribosomal protein S8

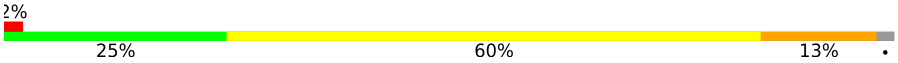
Chain CH:

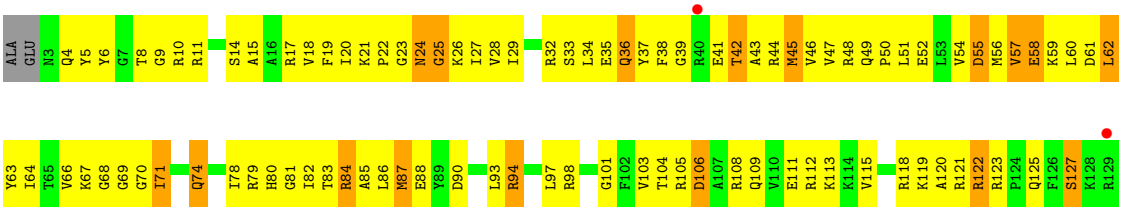




- Molecule 8: 30S ribosomal protein S9

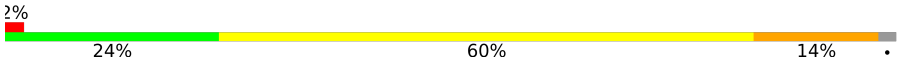
Chain AI:

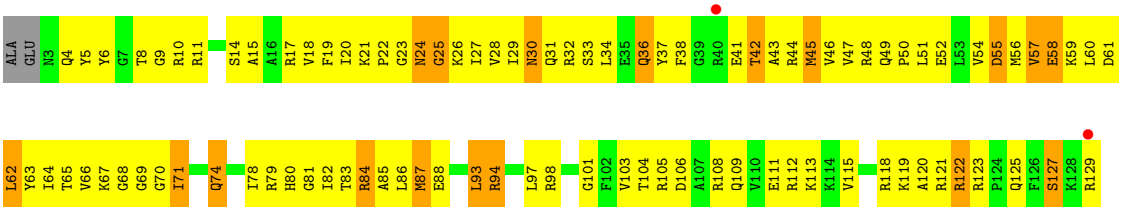




- Molecule 8: 30S ribosomal protein S9

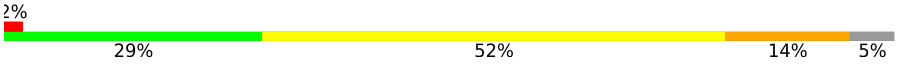
Chain CI:

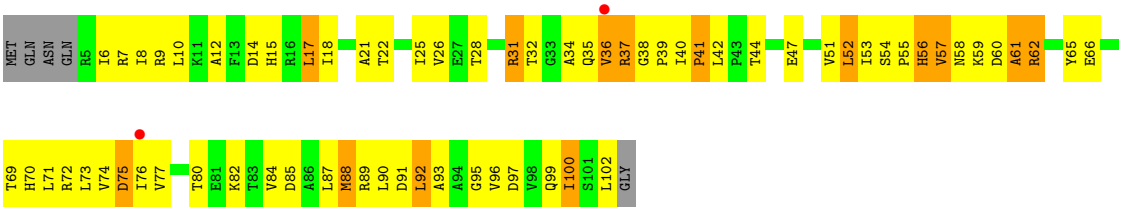




- Molecule 9: 30S ribosomal protein S10

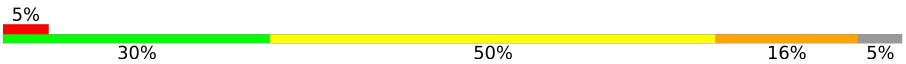
Chain AJ:

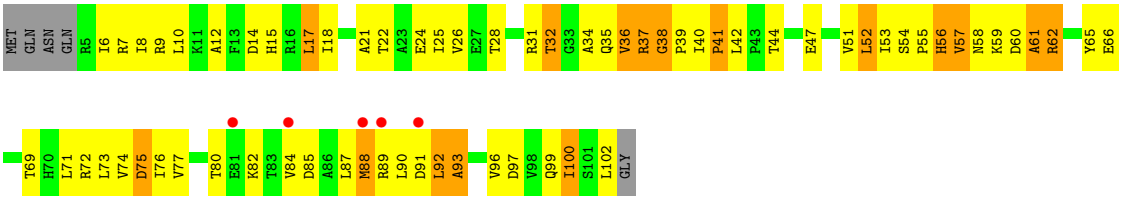




- Molecule 9: 30S ribosomal protein S10

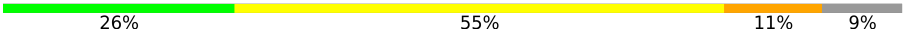
Chain CJ:





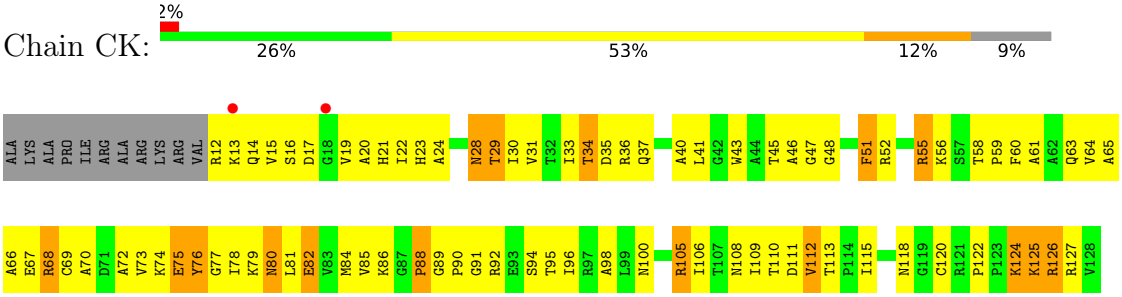
- Molecule 10: 30S ribosomal protein S11

Chain AK:



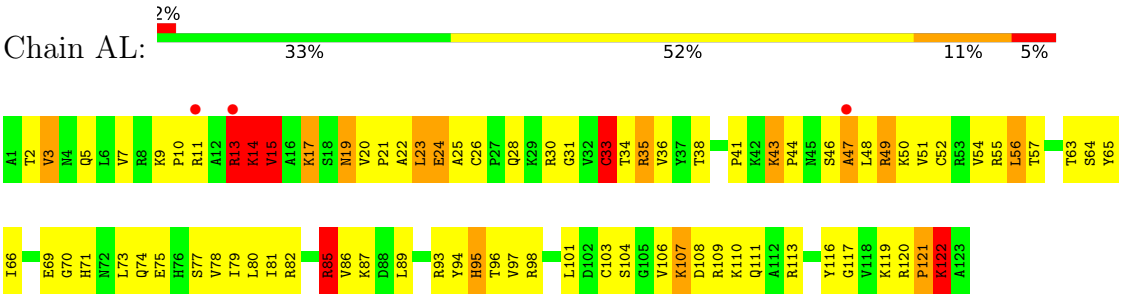
• Molecule 10: 30S ribosomal protein S11

Chain CK:



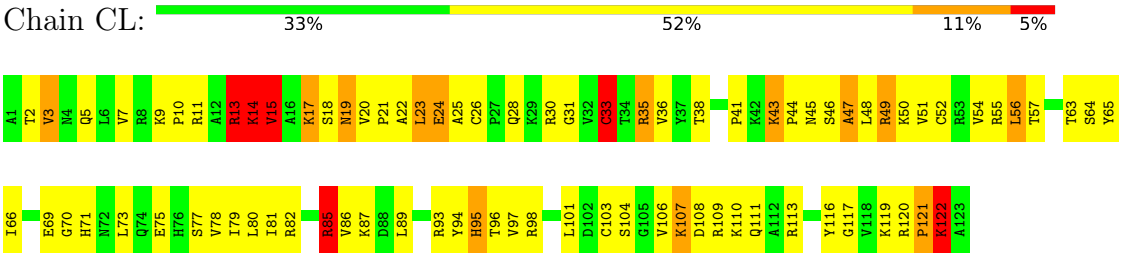
• Molecule 11: 30S ribosomal protein S12

Chain AL:



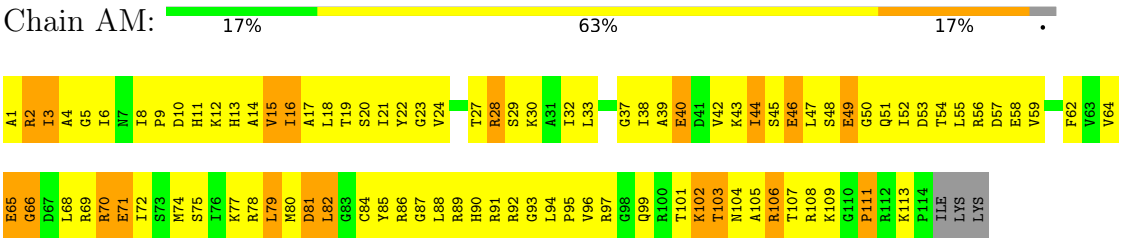
• Molecule 11: 30S ribosomal protein S12

Chain CL:



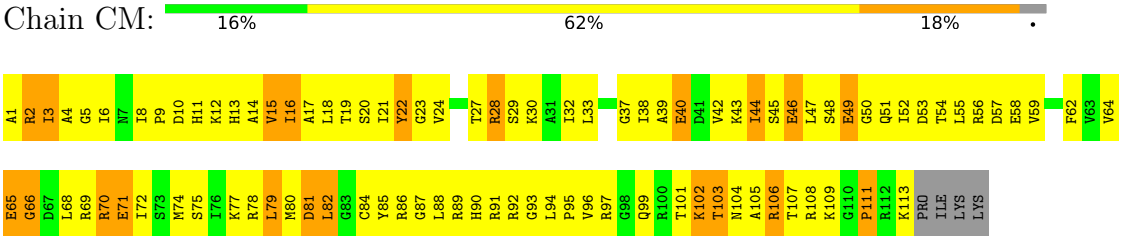
• Molecule 12: 30S ribosomal protein S13

Chain AM:



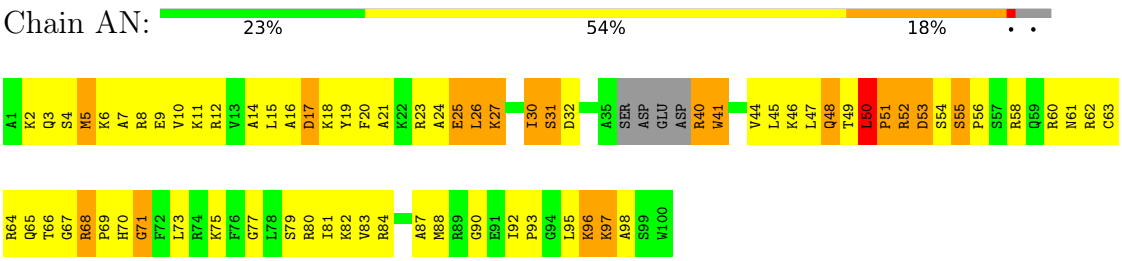
• Molecule 12: 30S ribosomal protein S13

Chain CM:



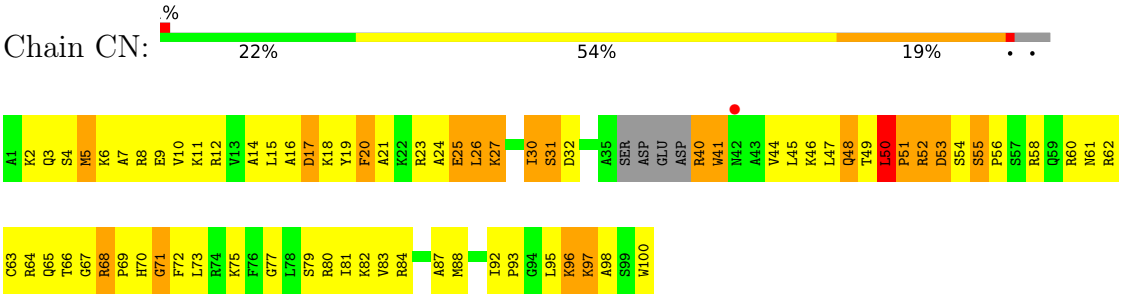
• Molecule 13: 30S ribosomal protein S14

Chain AN:



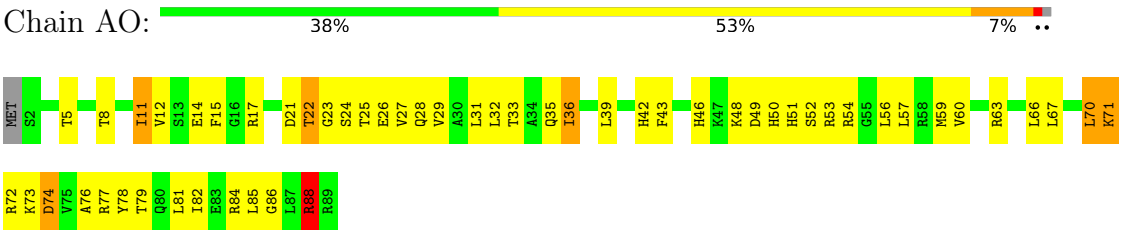
• Molecule 13: 30S ribosomal protein S14

Chain CN:



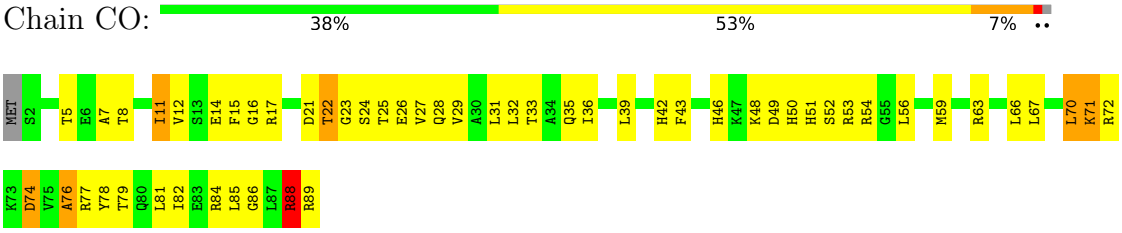
• Molecule 14: 30S ribosomal protein S15

Chain AO:



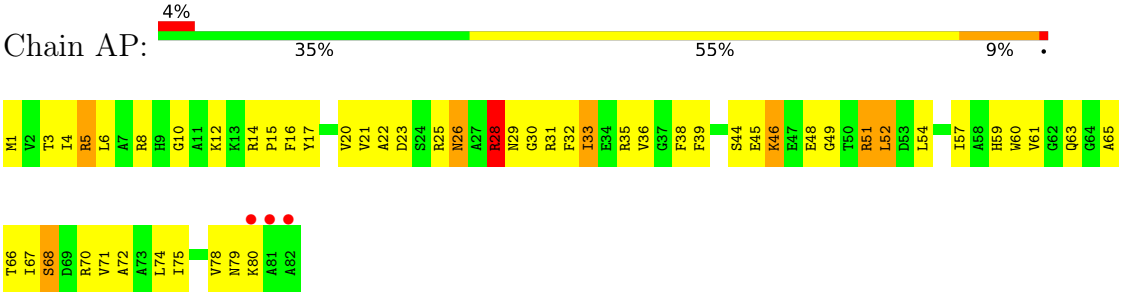
• Molecule 14: 30S ribosomal protein S15

Chain CO:



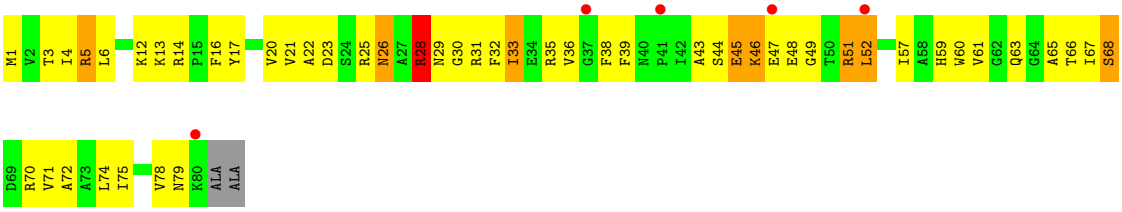
• Molecule 15: 30S ribosomal protein S16

Chain AP:



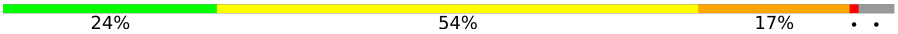
• Molecule 15: 30S ribosomal protein S16

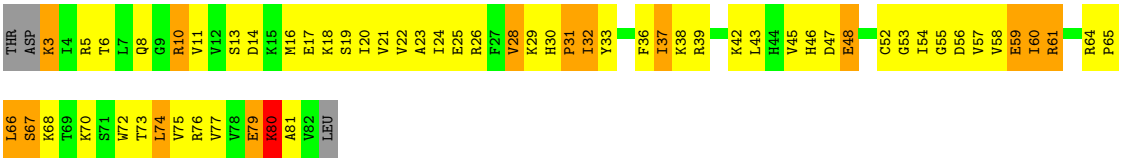
Chain CP:



• Molecule 16: 30S ribosomal protein S17

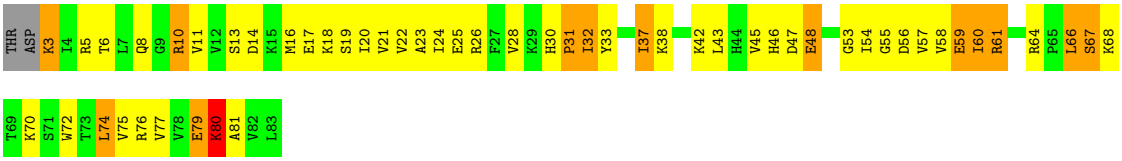
Chain AQ:





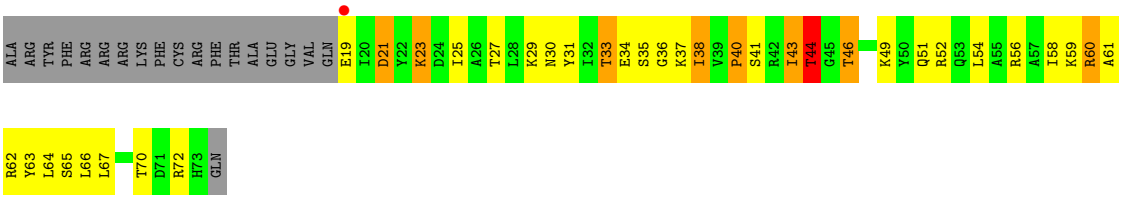
• Molecule 16: 30S ribosomal protein S17

Chain CQ:



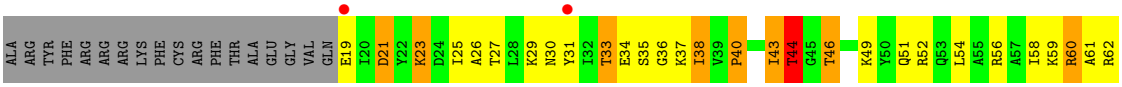
• Molecule 17: 30S ribosomal protein S18

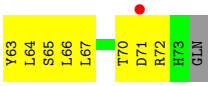
Chain AR:



• Molecule 17: 30S ribosomal protein S18

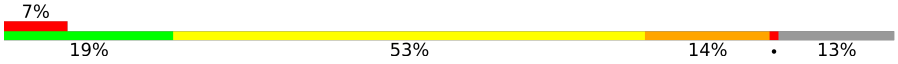
Chain CR:

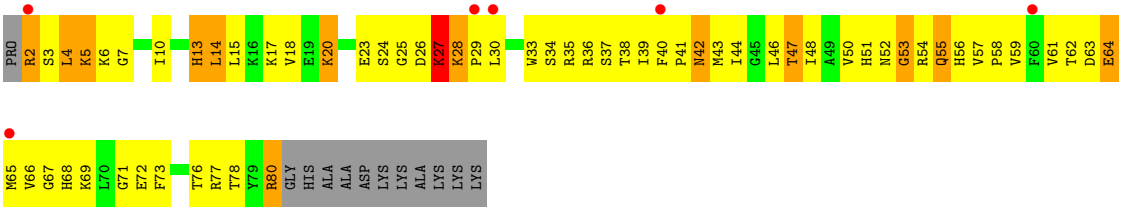




• Molecule 18: 30S ribosomal protein S19

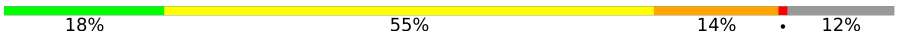
Chain AS:

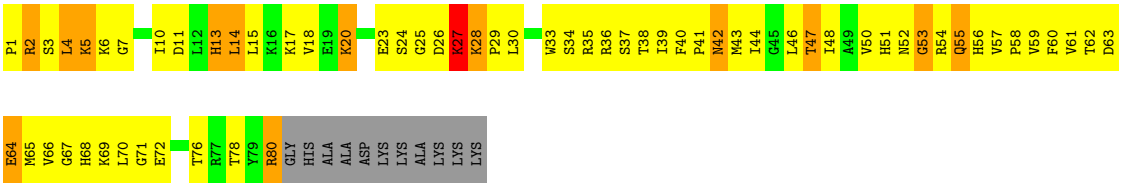




• Molecule 18: 30S ribosomal protein S19

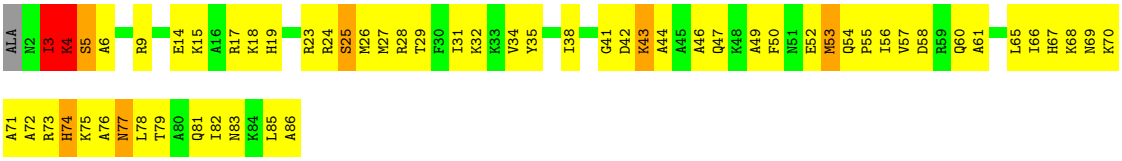
Chain CS:





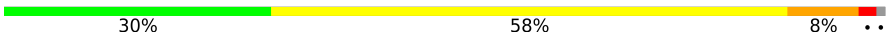
• Molecule 19: 30S ribosomal protein S20

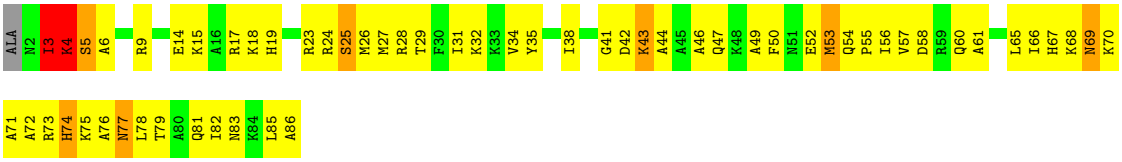
Chain AT:



• Molecule 19: 30S ribosomal protein S20

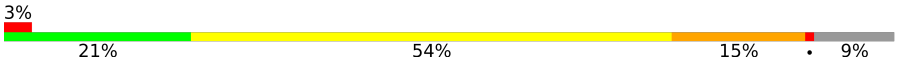
Chain CT:

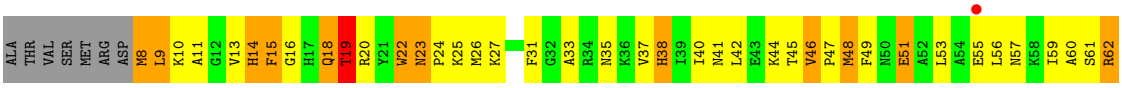


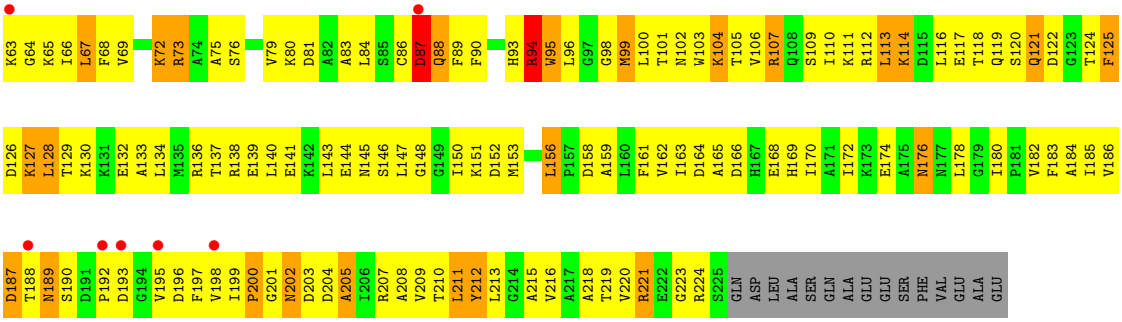


• Molecule 20: 30S ribosomal protein S2

Chain AB:

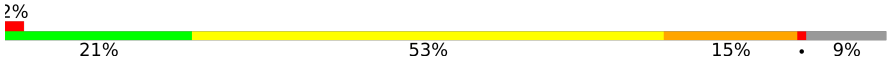


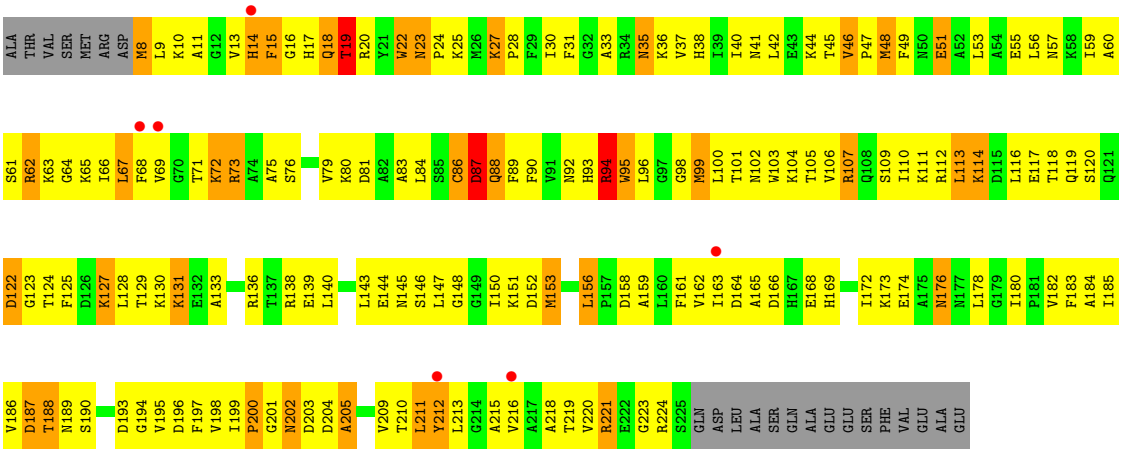




• Molecule 20: 30S ribosomal protein S2

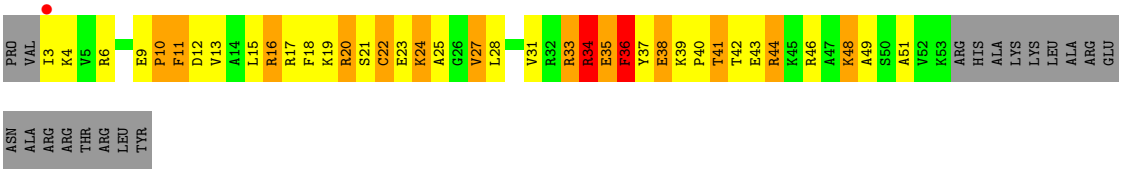
Chain CB:





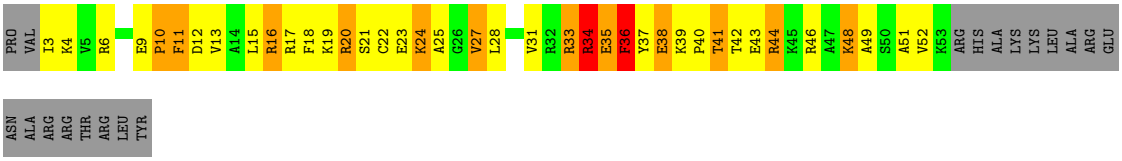
• Molecule 21: 30S ribosomal protein S21

Chain AU:



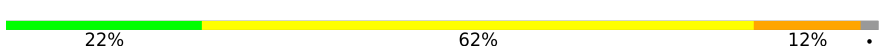
• Molecule 21: 30S ribosomal protein S21

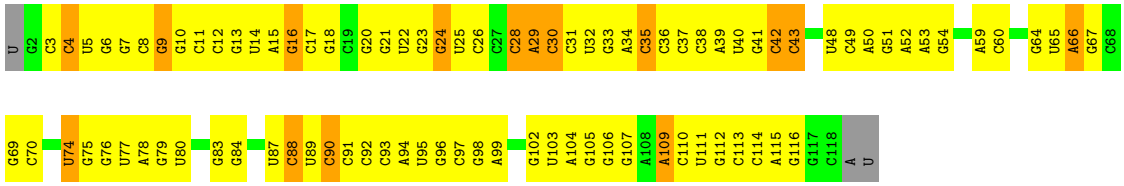
Chain CU:



• Molecule 22: 5S rRNA

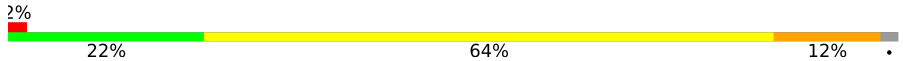
Chain BA:

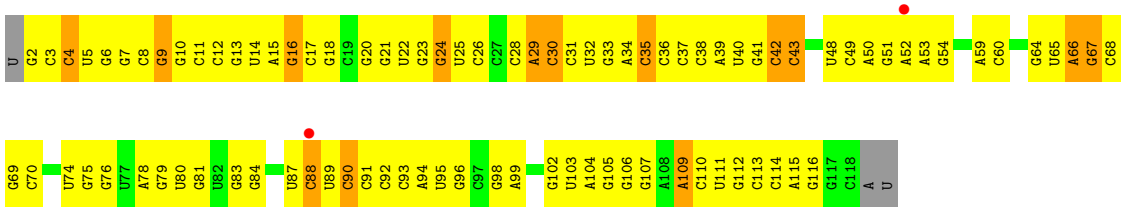




• Molecule 22: 5S rRNA

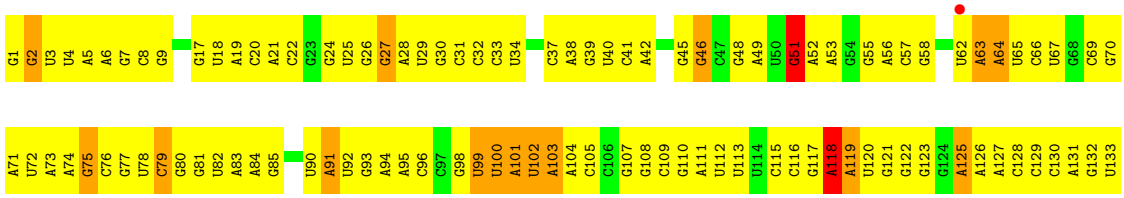
Chain DA:

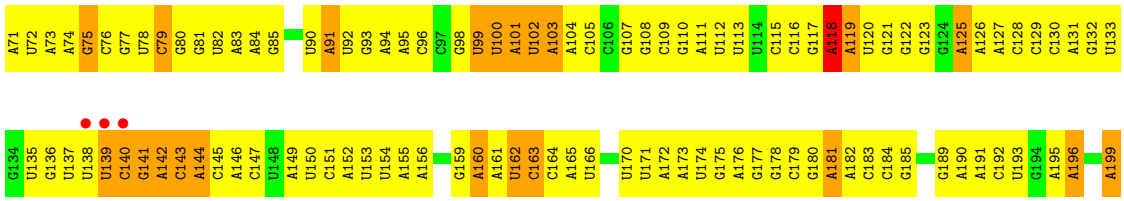


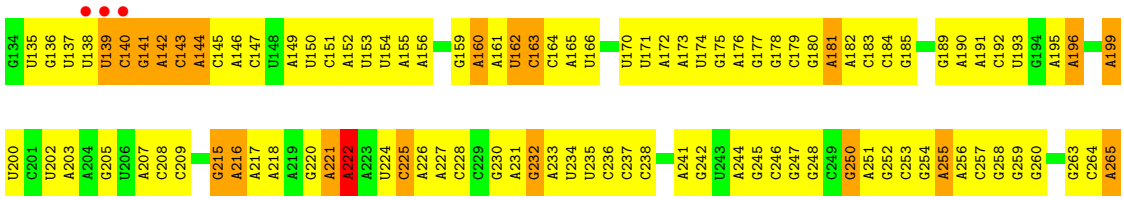


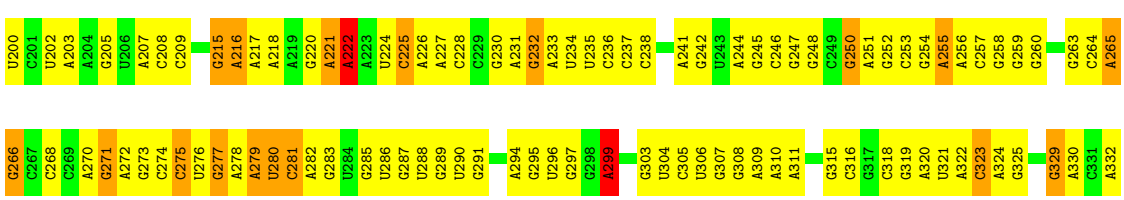
• Molecule 23: 23S rRNA

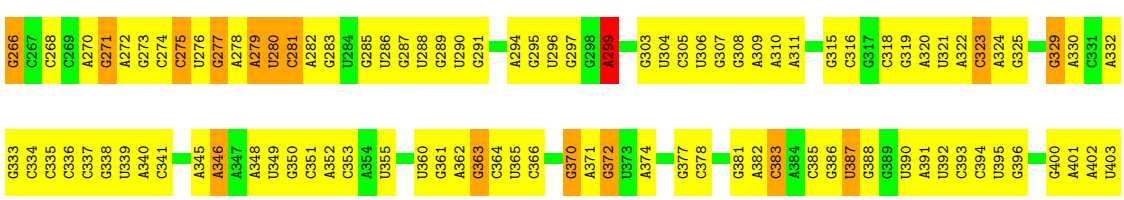
Chain BB:

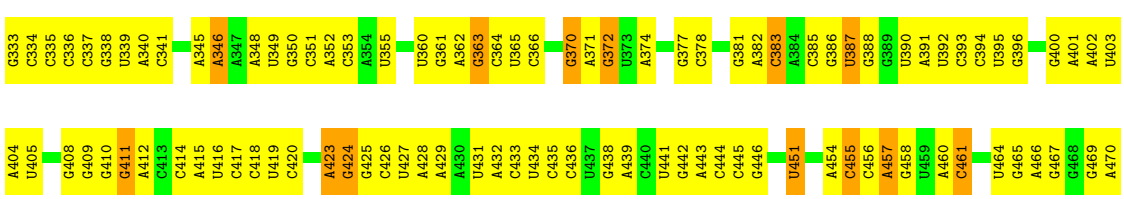


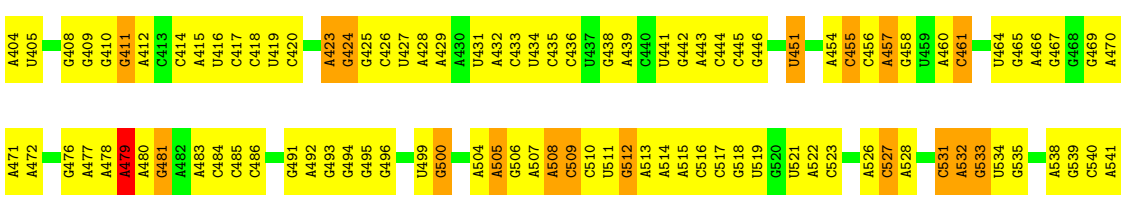


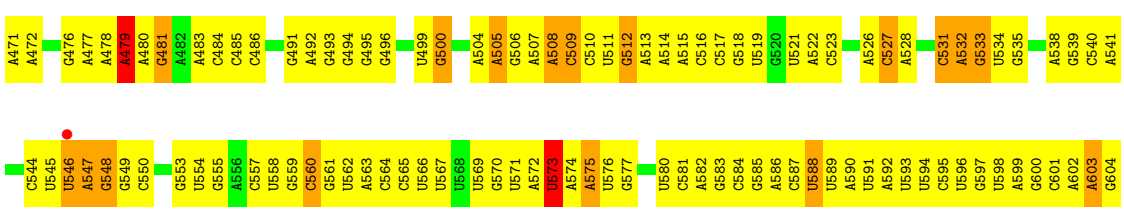


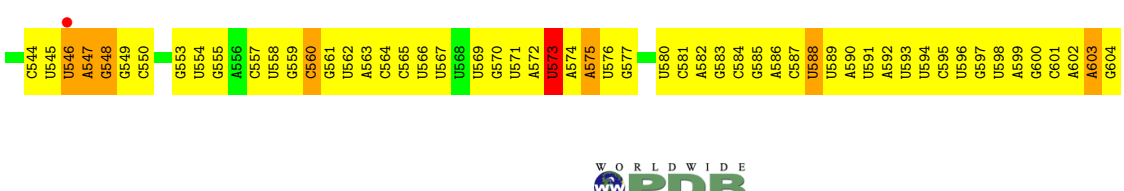












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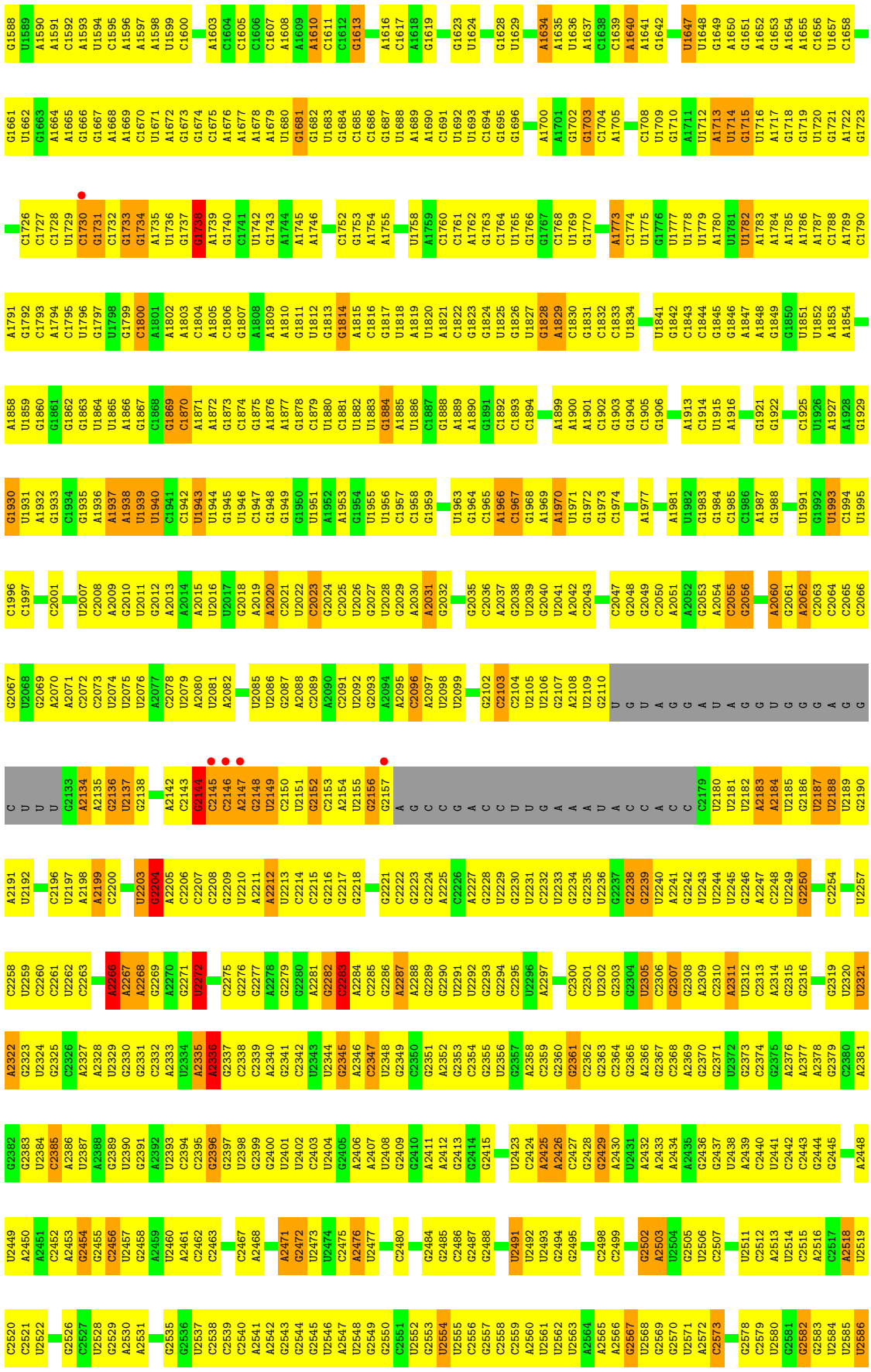
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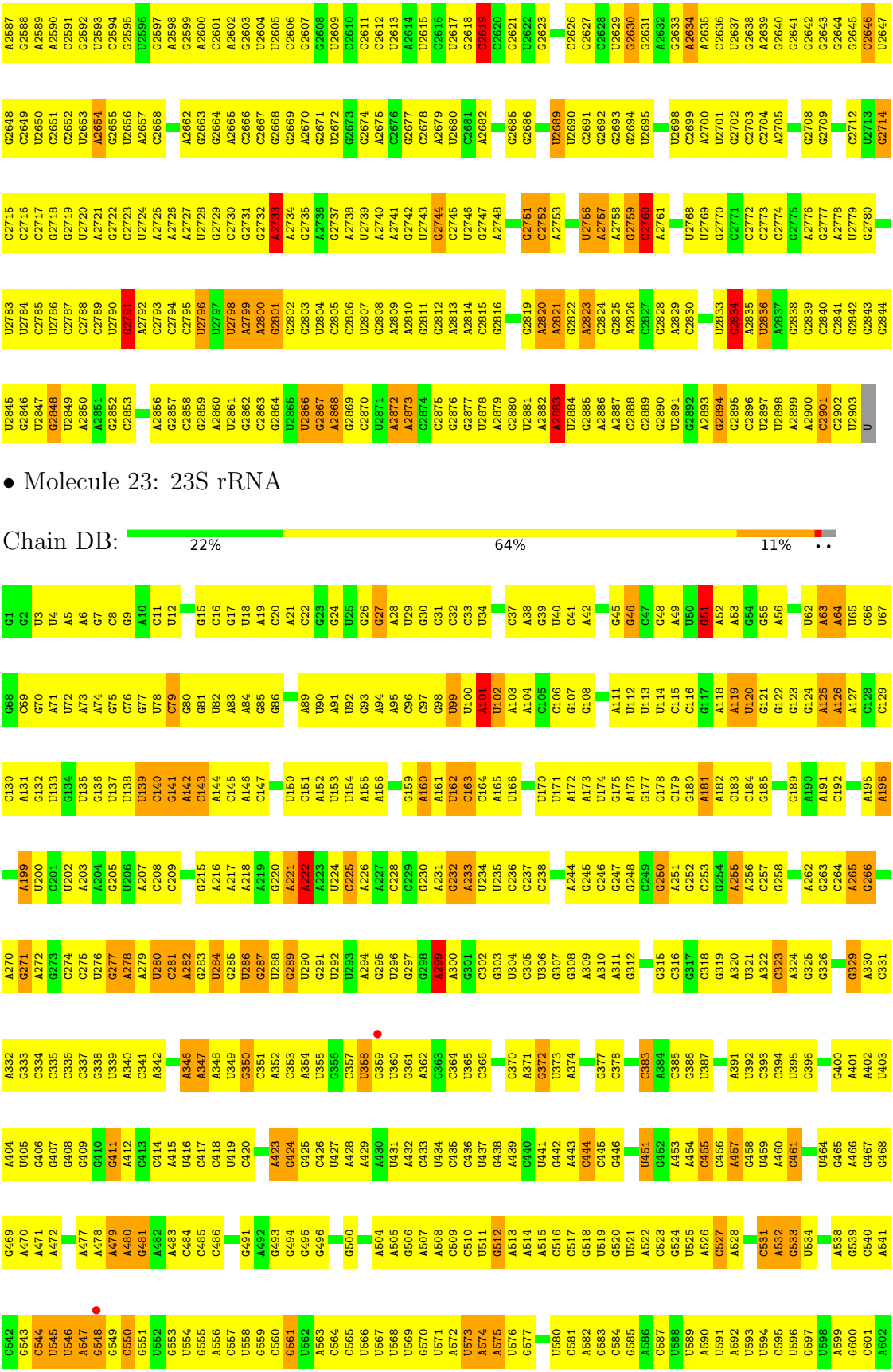

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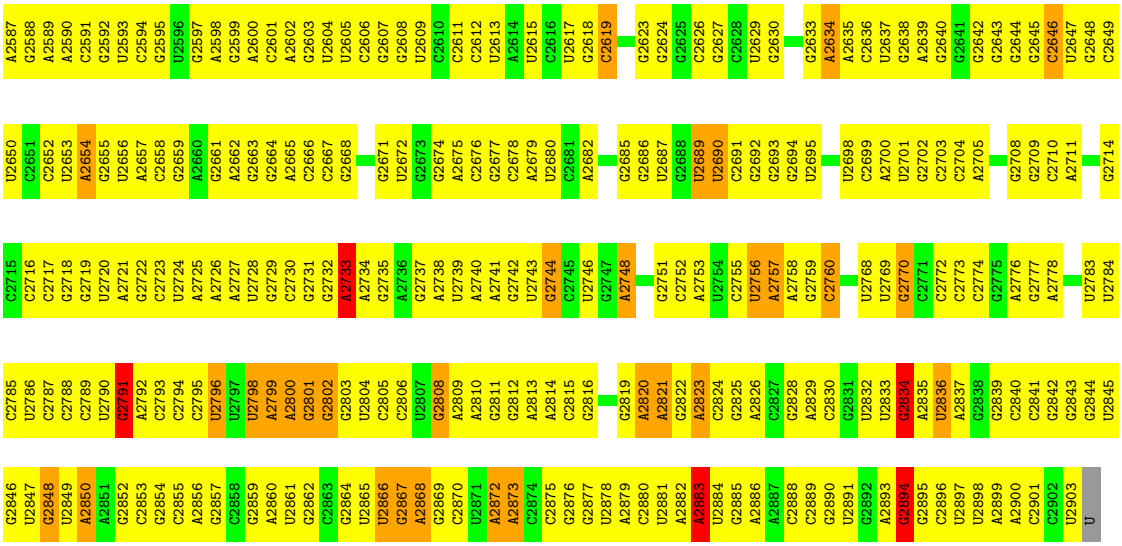

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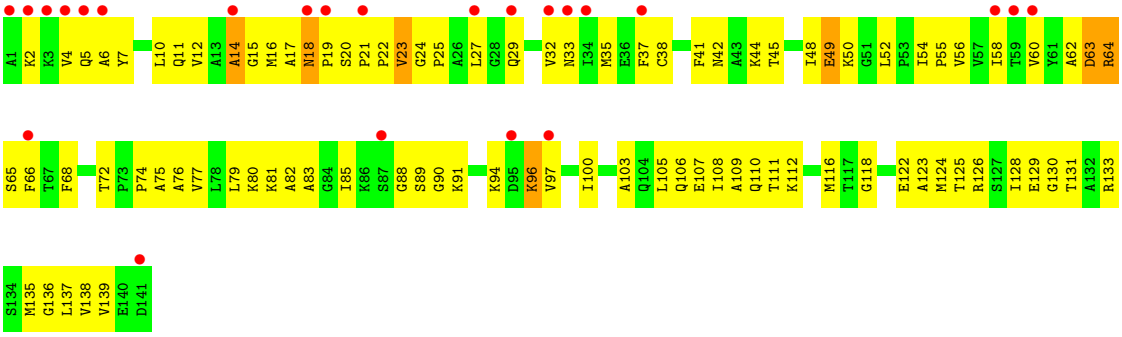

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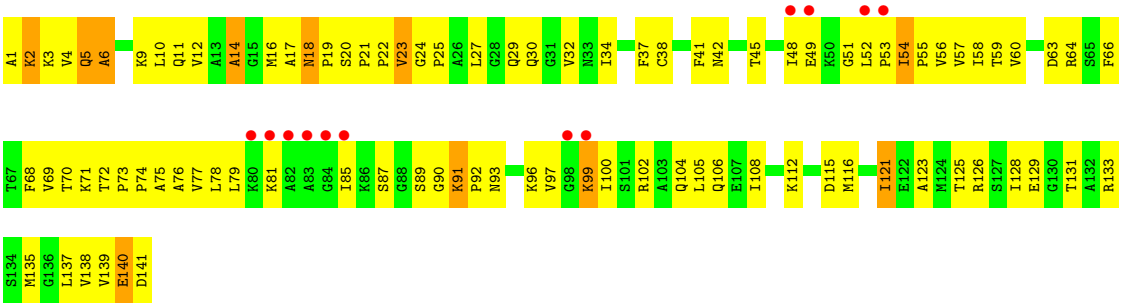

- Molecule 25: 50S ribosomal protein L2

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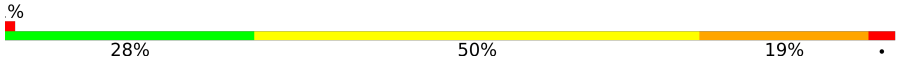
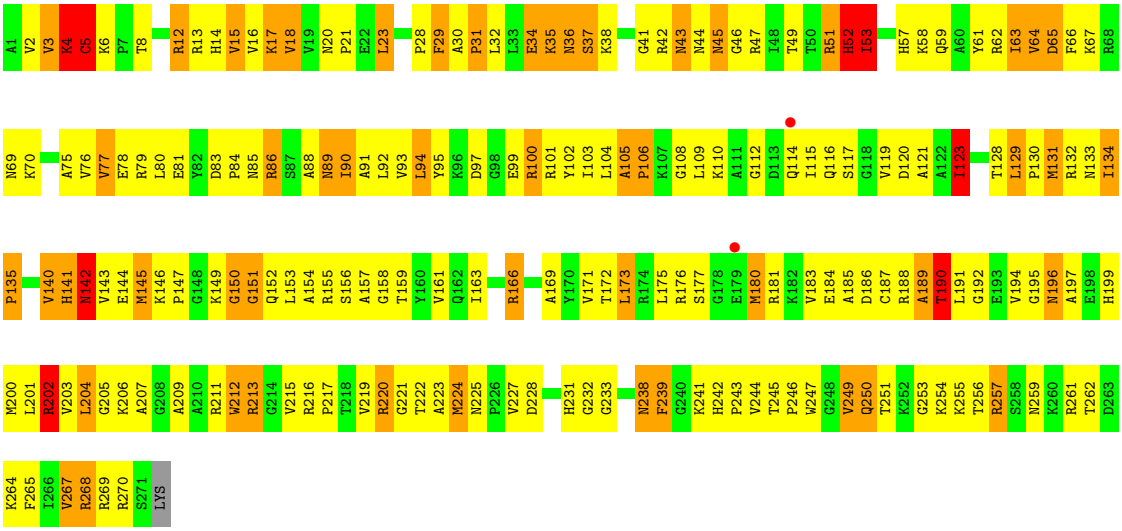
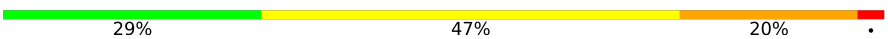
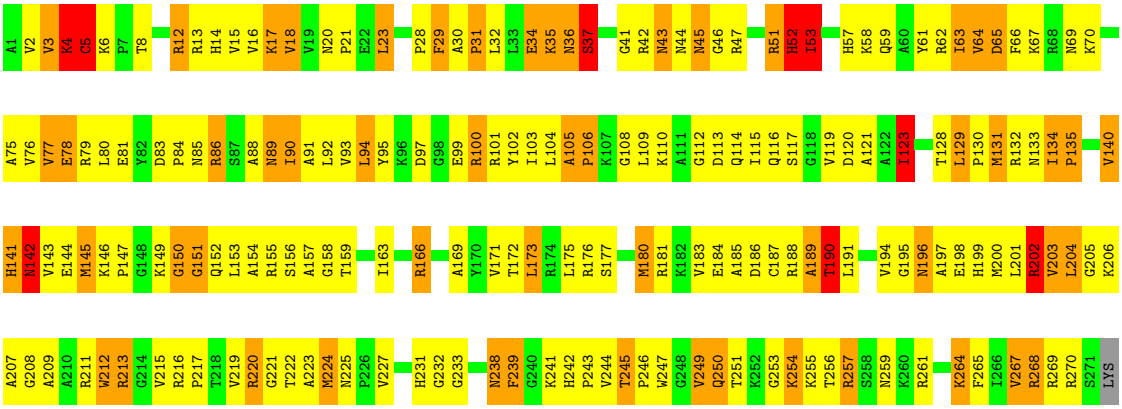




- Molecule 25: 50S ribosomal protein L2

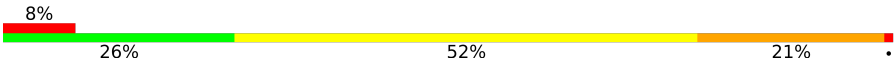
Chain DC:

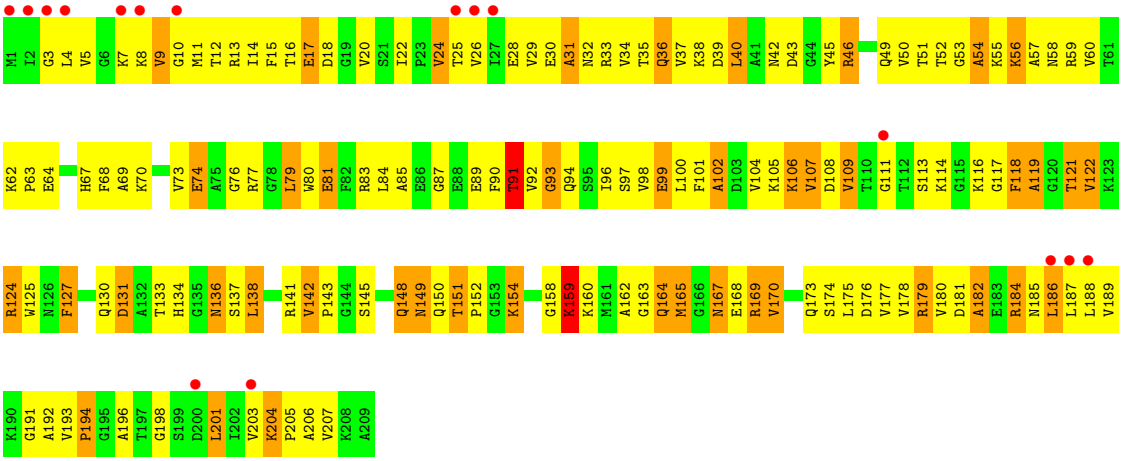




- Molecule 26: 50S ribosomal protein L3

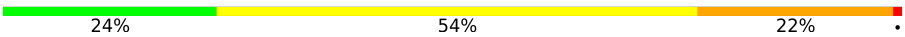
Chain BD:

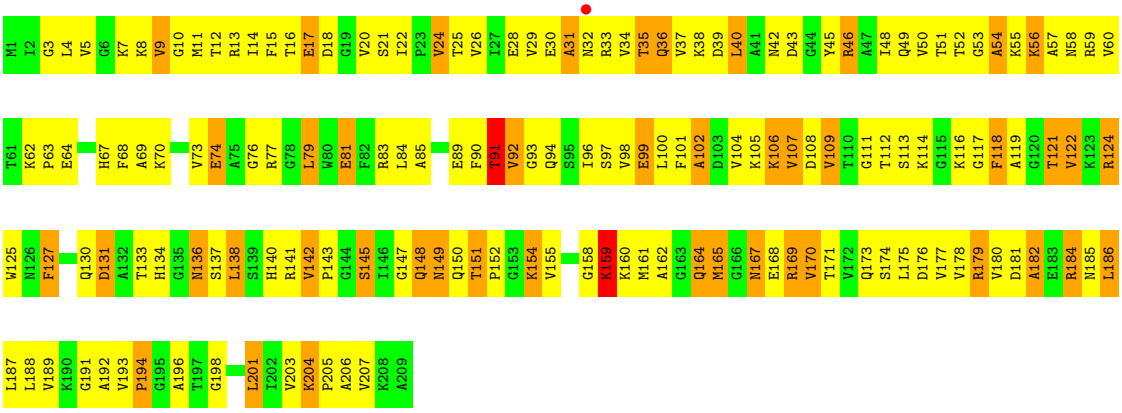




• Molecule 26: 50S ribosomal protein L3

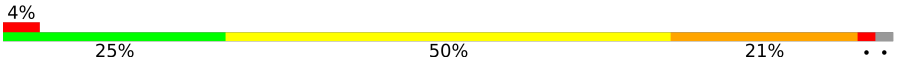
Chain DD:

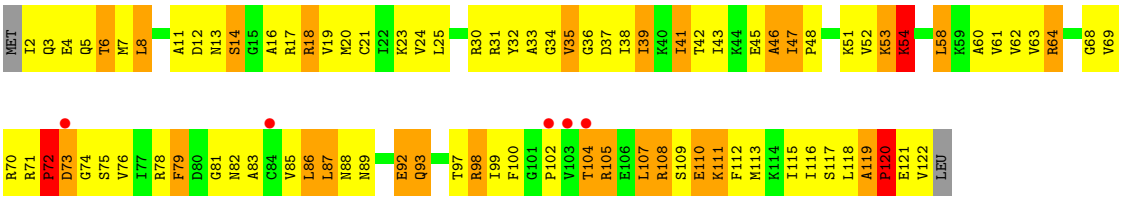




• Molecule 27: 50S ribosomal protein L14

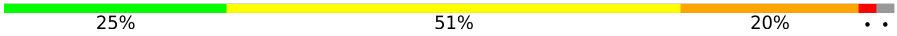
Chain BK:

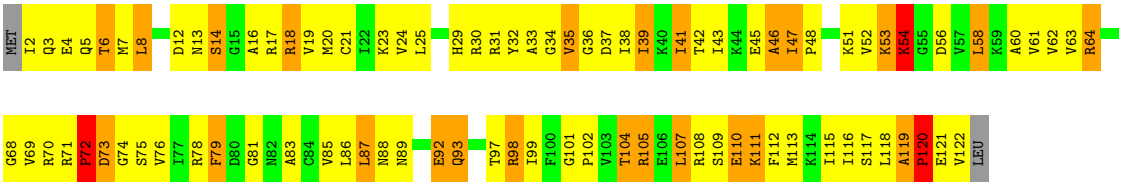




• Molecule 27: 50S ribosomal protein L14

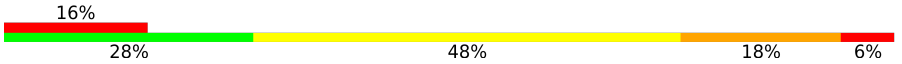
Chain DK:

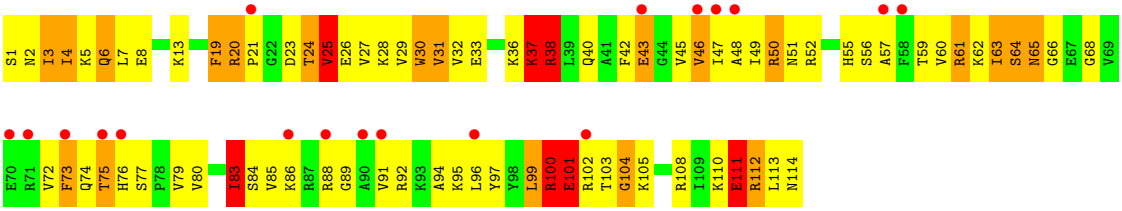




• Molecule 28: 50S ribosomal protein L19

Chain BP:





• Molecule 28: 50S ribosomal protein L19

Chain DP: 28% 47% 19% 5%

S1 N2 I3 I4 K5 Q6 L7 E8 Q11 M12 K13 F19 R20 P21 G22 D23 T24 V25 E26 V27 K28 V29 W30 V31 V32 E33 G34 S35 K36 K37 R38 F42 E43 G44 V45 V46 I47 A48 I49 R50 N51 R52 H55 S56 A57 F58 T59 V60 R61 K62 I63 S64 N65 G66 E67 G68

V72 F73 Q74 T75 H76 S77 P78 V79 V80 I83 S84 V85 K86 R87 R88 G89 A90 V91 R92 K93 A94 K95 L96 Y97 Y98 L99 R100 E101 R102 T103 G104 K105 R108 I109 K110 E111 R112 L113 N114

- Molecule 29: 50S ribosomal protein L4

Chain BE: 7% 24% 57% 19%

M1 E2 L3 V4 L5 K6 D7 S10 A11 L12 T13 V14 S15 E16 T17 T18 F19 G20 R21 D22 F23 N24 L27 V28 H29 Q30 V31 V32 V33 A36 A37 G38 A39 R40 Q41 G42 T43 R44 A45 Q46 K47 T48 R49 A50 E51 V52 K58 P59 W60 R61 Q62 K63 G64 R67 A68

R69 S70 G71 S72 I73 K74 S75 P76 I77 W78 R79 V83 A86 A87 R88 P89 Q90 D91 H92 K95 V96 N97 K98 Y101 R102 G103 A104 L105 K106 S107 I108 L109 S110 E111 L112 V113 R114 Q115 D116 R117 L118 I119 V120 V121 E122 K123 F124 S125 V126 P129 K130 T131 K132 L133 L134

A135 Q136 K137 L138 K139 D140 M141 A142 L143 E144 D145 V146 L147 I148 I149 T150 G151 E152 L153 D154 E155 N156 L157 F158 L159 A160 A161 R162 N163 L164 H165 K166 V167 D168 V169 R170 D171 A172 I175 D176 P177 V178 S179 L180 I181 A182 F183 D184 K185 V186 V187 M188 T189 A190 D191 A192 V193 K194 Q195

V196 E197 E198 M199 L200 A201

- Molecule 29: 50S ribosomal protein L4

Chain DE: 2% 25% 57% 17%

M1 E2 L3 V4 L5 K6 D7 S10 A11 L12 T13 V14 S15 E16 T17 T18 R21 D22 F23 N24 L27 V28 H29 Q30 V31 V32 V33 A36 A37 G38 A39 R40 Q41 G42 T43 R44 A45 Q46 K47 T48 R49 A50 E51 V52 S55 K58 P59 W60 R61 Q62 K63 G64 R67

A68 R69 S70 G71 S72 I73 K74 S75 P76 I77 W78 R79 V83 A86 A87 R88 P89 Q90 D91 H92 K95 V96 N97 K98 K99 M100 Y101 R102 G103 A104 L105 K106 S107 I108 L109 S110 E111 L112 V113 R114 Q115 D116 R117 L118 I119 V120 V121 E122 K123 F124 S125 V126 P129 K130 T131 K132

L133 L134 A135 Q136 K137 L138 K139 D140 M141 A142 L143 E144 D145 V146 L147 I148 I149 T150 G151 E152 L153 D154 E155 N156 L157 F158 L159 A160 A161 R162 N163 L164 H165 K166 V167 D168 V169 R170 D171 A172 I175 D176 P177 V178 S179 L180 I181 A182 F183 D184 K185 V186 V187 M188 T189 A190 D191 A192 V193

K194 Q195 V196 E197 E198 M199 L200 A201

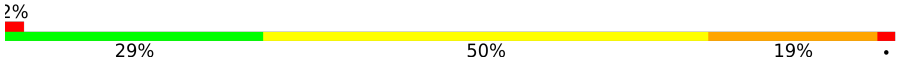
- Molecule 30: 50S ribosomal protein L30

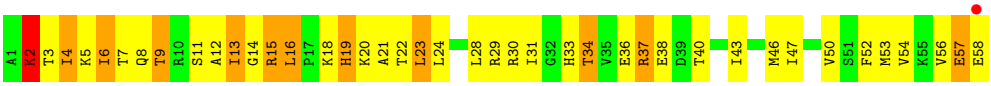
Chain BY: 5% 29% 50% 19%

A1 K2 T3 I4 K5 I6 T7 Q8 T9 R10 S11 A12 I13 G14 R15 L16 P17 K18 H19 K20 A21 T22 L23 L24 L28 R29 R30 I31 G32 H33 T34 V35 E36 R37 E38 D39 T40 I43 M46 I47 V50 M53 V54 K55 V56 E57 E58

• Molecule 30: 50S ribosomal protein L30

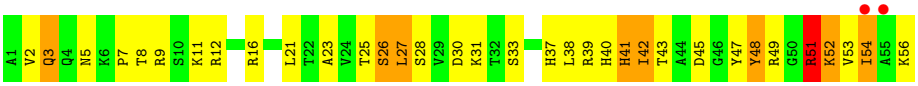
Chain DY:





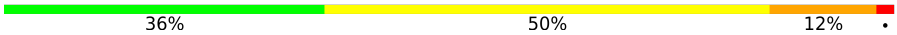
• Molecule 31: 50S ribosomal protein L32

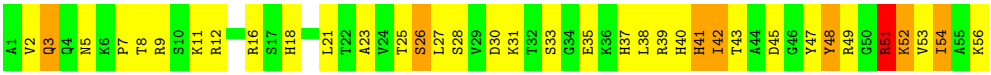
Chain B0:



• Molecule 31: 50S ribosomal protein L32

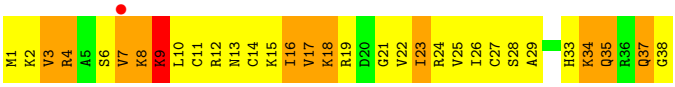
Chain D0:





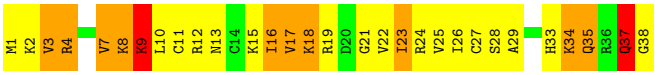
• Molecule 32: 50S ribosomal protein L36

Chain B4:



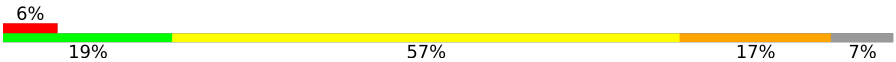
• Molecule 32: 50S ribosomal protein L36

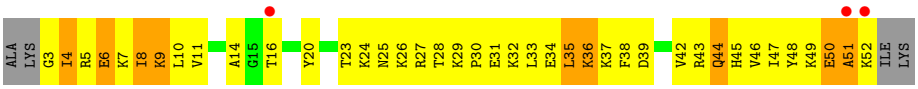
Chain D4:



• Molecule 33: 50S ribosomal protein L33

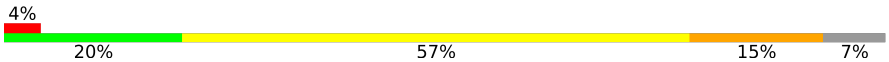
Chain B1:

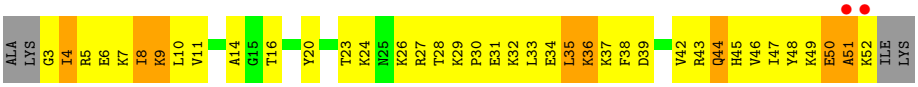




• Molecule 33: 50S ribosomal protein L33

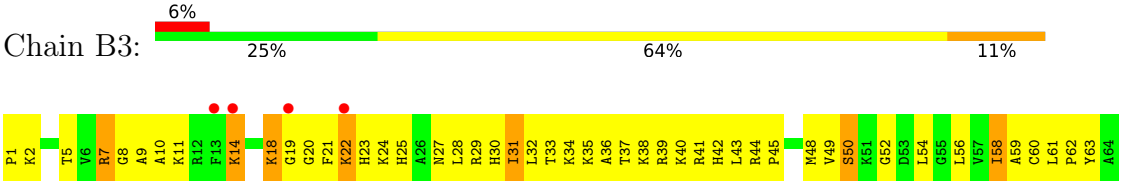
Chain D1:





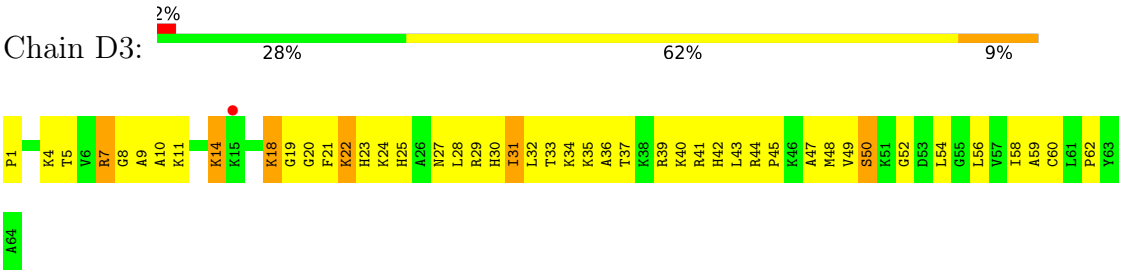
• Molecule 34: 50S ribosomal protein L35

Chain B3:



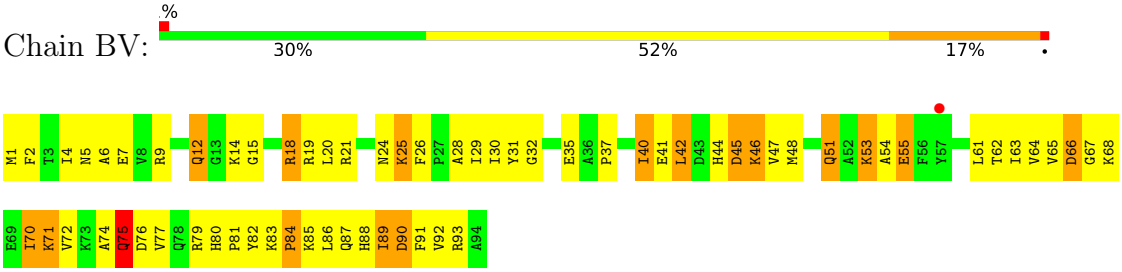
• Molecule 34: 50S ribosomal protein L35

Chain D3:



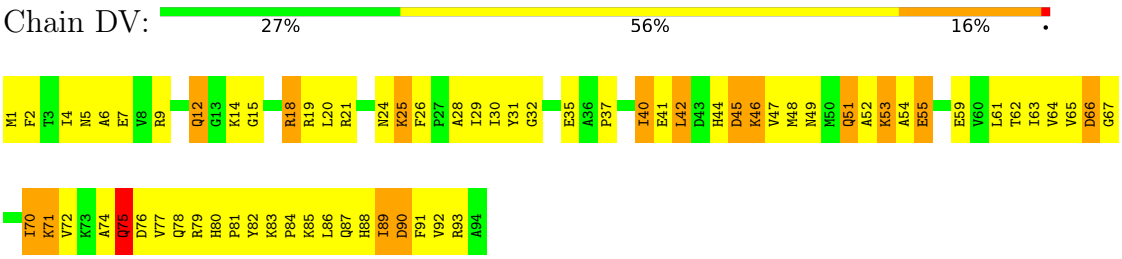
• Molecule 35: 50S ribosomal protein L25

Chain BV:



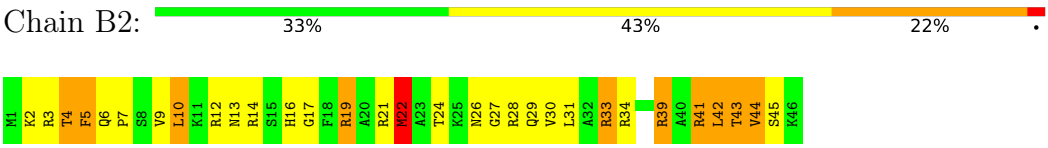
• Molecule 35: 50S ribosomal protein L25

Chain DV:



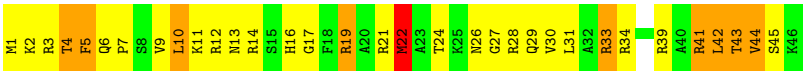
• Molecule 36: 50S ribosomal protein L34

Chain B2:



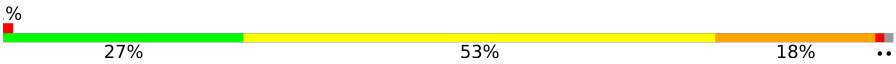
• Molecule 36: 50S ribosomal protein L34

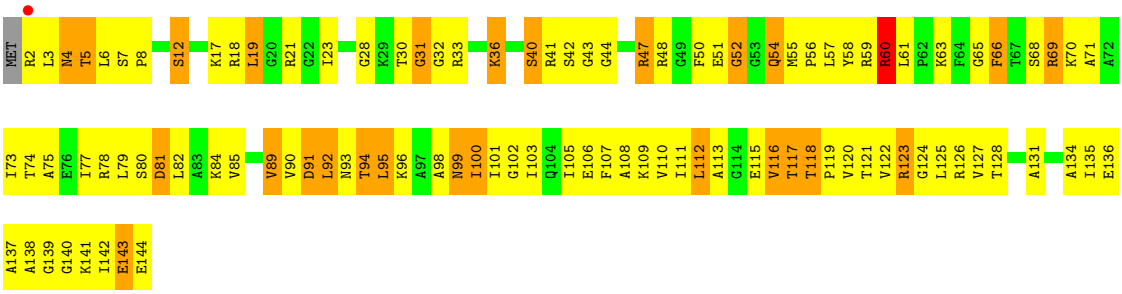
Chain D2:



• Molecule 37: 50S ribosomal protein L15

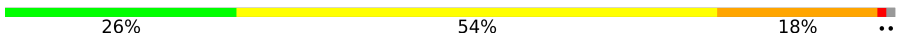
Chain BL:

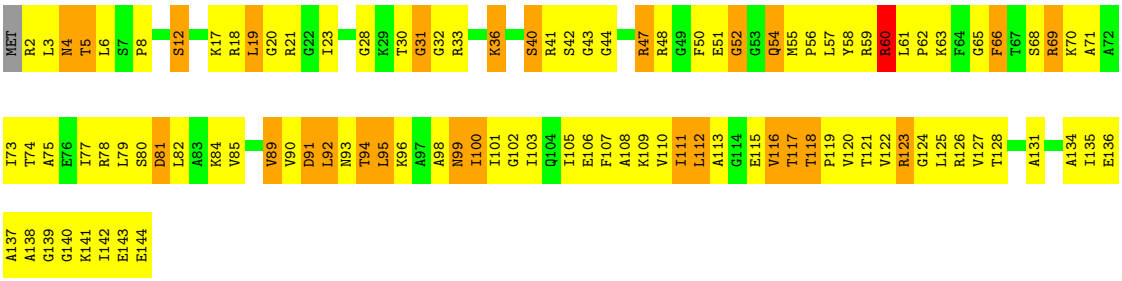




• Molecule 37: 50S ribosomal protein L15

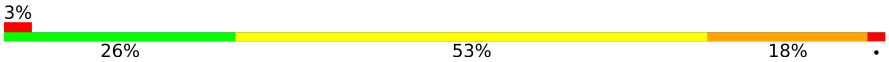
Chain DL:

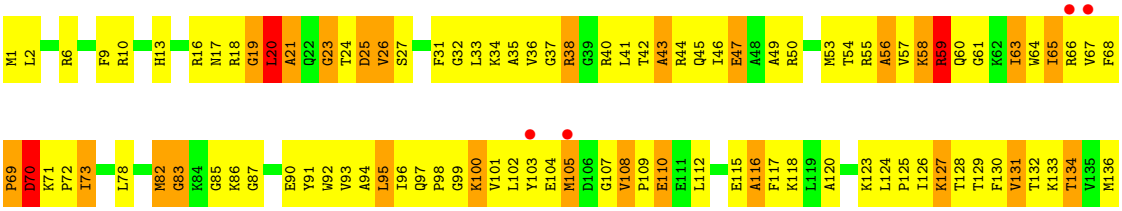




• Molecule 38: 50S ribosomal protein L16

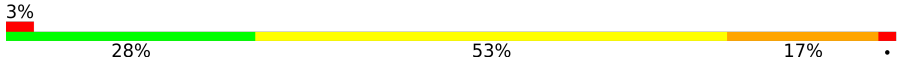
Chain BM:

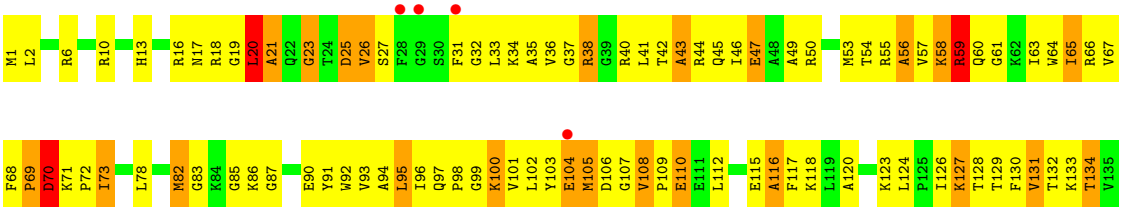




• Molecule 38: 50S ribosomal protein L16

Chain DM:





M136

• Molecule 39: 50S ribosomal protein L29

Chain BX: 3% 17% 67% 16%

M1 K2 A3 K4 E5 L6 R7 E8 K9 S10 V11 E12 E13 L14 N15 T16 E17 L18 L19 N20 L21 L22 R23 E24 Q25 F26 N27 L28 R29 M30 Q31 S34 G35 Q36 L37 Q38 Q39 S40 H41 L42 L43 K44 Q45 V46 R47 R48 D49 V50 A51 R52 V53 K54 T55 L56 L57 N58 E59 K60 A61

G62 A63

• Molecule 39: 50S ribosomal protein L29

Chain DX: 3% 14% 67% 19%

M1 K2 A3 K4 E5 L6 R7 E8 K9 S10 V11 E12 E13 L14 N15 T16 E17 L18 L19 N20 L21 L22 R23 E24 Q25 F26 N27 L28 R29 M30 Q31 S34 G35 Q36 L37 Q38 Q39 S40 H41 L42 L43 K44 Q45 V46 R47 R48 D49 V50 A51 R52 V53 K54 T55 L56 L57 N58 E59 K60 A61

G62 A63

• Molecule 40: 50S ribosomal protein L9

Chain BH: 19% 20% 49% 26% 5%

M1 Q2 V3 I4 L5 L6 D7 K8 V9 A10 N11 L12 G13 S14 L15 G16 D17 Q18 V19 N20 G24 Y25 A26 R27 N28 F29 L30 V31 P32 Q33 V37 P38 A39 T40 K41 K42 N43 I44 E45 F46 F47 E48 A49 R50 R51 A52 E53 L54 E55 A56 K57 L58 A59 E60 V61 L62 A63 A64

A65 N66 A67 R68 A69 E70 K71 I72 N73 A74 L75 E76 T77 V78 T79 I80 A81 S82 K83 A84 G85 D86 E87 G88 K89 L90 F91 G92 S93 I94 D98 I99 A100 D101 A102 V103 T104 A105 A106 G107 V108 E109 V110 A111 K112 S113 E114 V115 R116 L117 V121 L122 R123 T124 T125 G126 E127 H128

E129 V130 S131 F132 Q133 V134 H135 S136 E137 V138 F139 A140 K141 V142 I143 V144 N145 V146 V147 A148 E149

• Molecule 40: 50S ribosomal protein L9

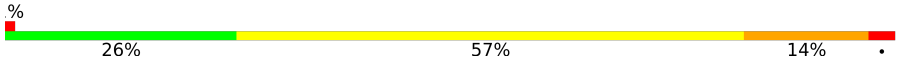
Chain DH: 4% 23% 52% 19% 5%

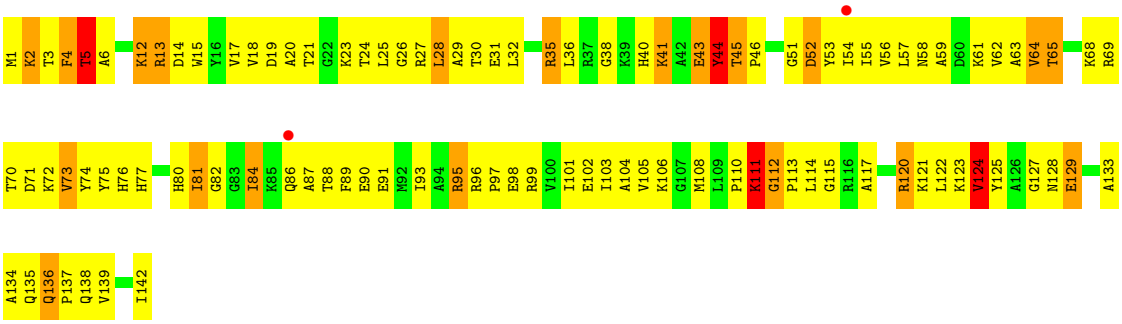
M1 Q2 V3 I4 L5 L6 D7 K8 V9 A10 N11 L12 G13 S14 L15 G16 D17 Q18 V19 N20 V21 K22 A23 G24 Y25 A26 R27 N28 F29 L30 V31 P32 Q33 V37 P38 A39 T40 K41 K42 N43 I44 E45 F46 F47 E48 A49 R50 R51 A52 E53 L54 K57 L58 L62 A65 N66

A67 R68 A69 E70 K71 I72 N73 A74 L75 E76 T77 V78 T79 I80 K83 A84 G85 D86 E87 G88 K89 L90 I94 G95 T96 R97 D98 I99 V103 T104 V108 E109 V110 A111 K112 S113 E114 V115 R116 L117 P118 N119 G120 V121 L122 R123 T124 T125 G126 E127 H128 E129 V130 S131 F132 Q133

• Molecule 41: 50S ribosomal protein L13

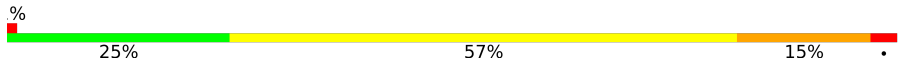
Chain BJ:

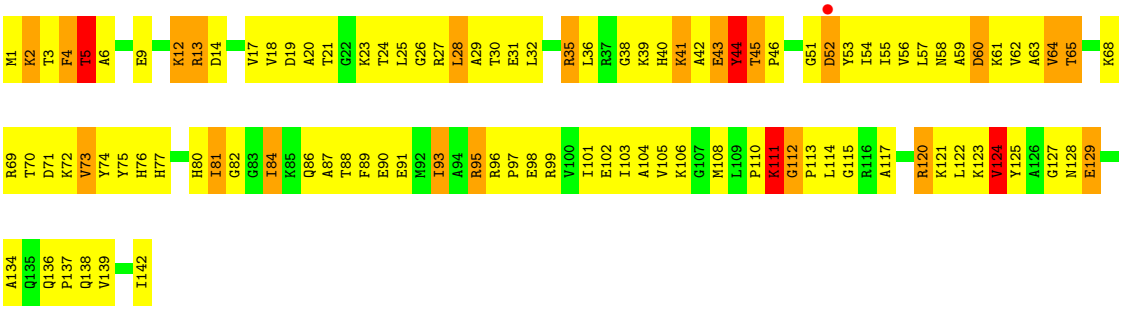




• Molecule 41: 50S ribosomal protein L13

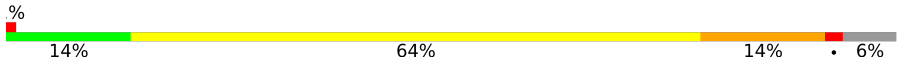
Chain DJ:

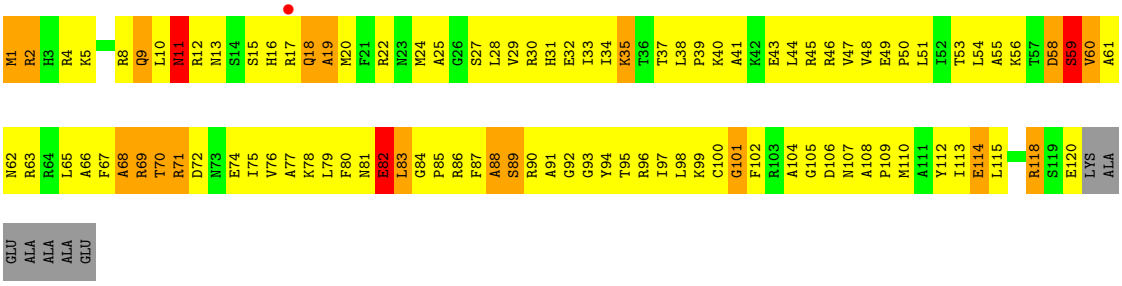




• Molecule 42: 50S ribosomal protein L17

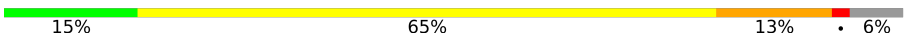
Chain BN:

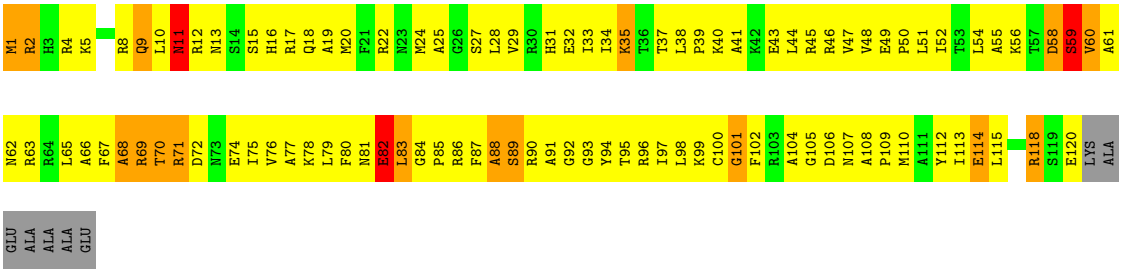




• Molecule 42: 50S ribosomal protein L17

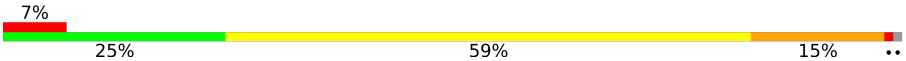
Chain DN:

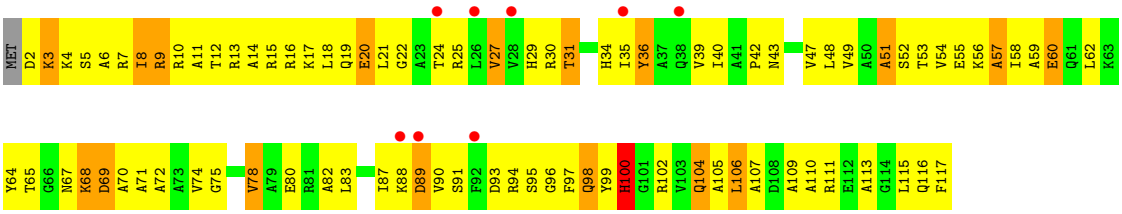




• Molecule 43: 50S ribosomal protein L18

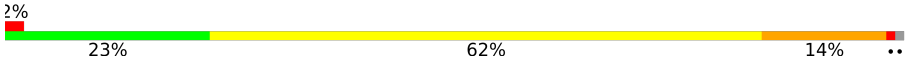
Chain BO:

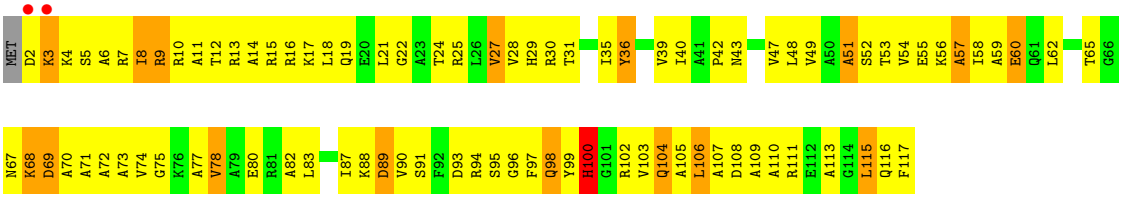




• Molecule 43: 50S ribosomal protein L18

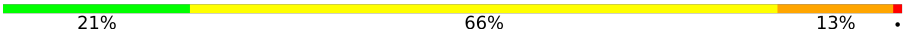
Chain DO:





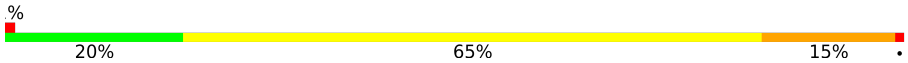
• Molecule 44: 50S ribosomal protein L20

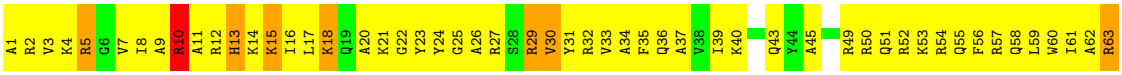
Chain BQ:

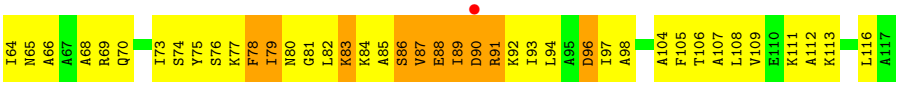


• Molecule 44: 50S ribosomal protein L20

Chain DQ:

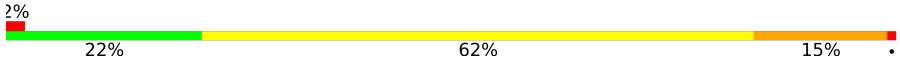


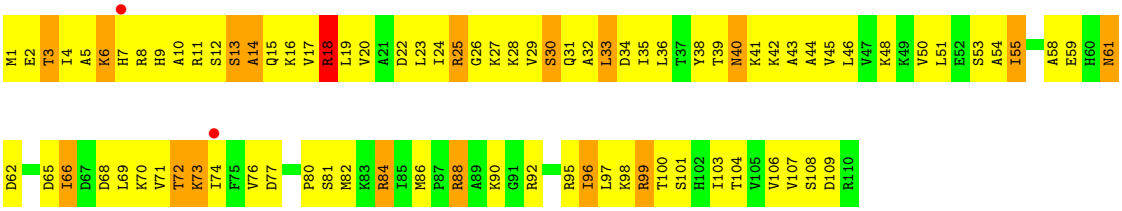




• Molecule 45: 50S ribosomal protein L22

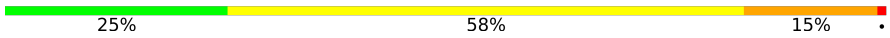
Chain BS:

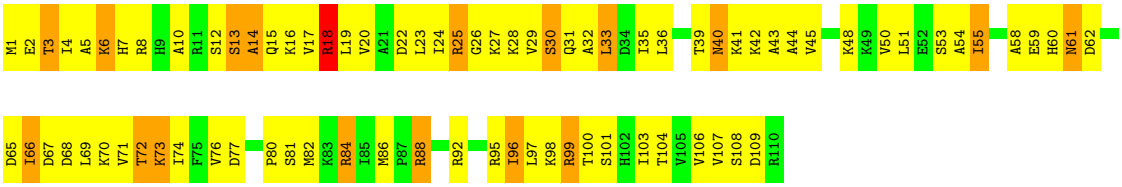




• Molecule 45: 50S ribosomal protein L22

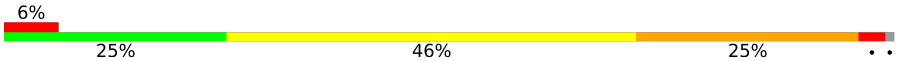
Chain DS:

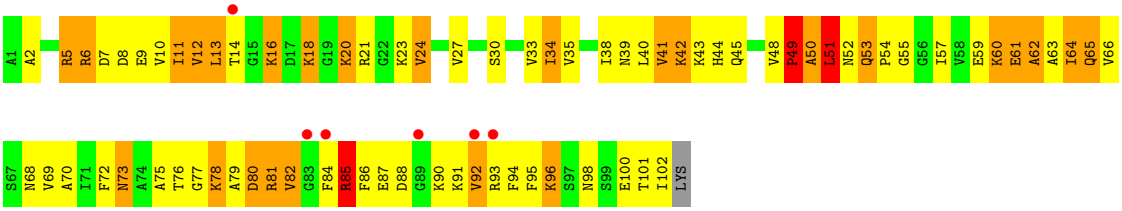




• Molecule 46: 50S ribosomal protein L24

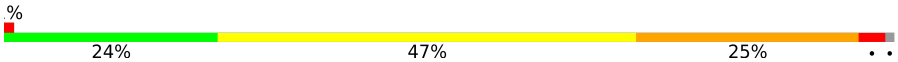
Chain BU:

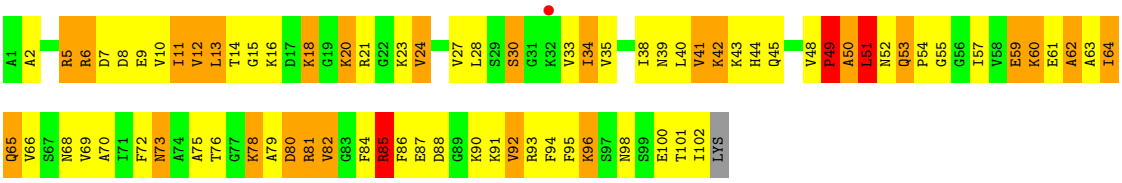




• Molecule 46: 50S ribosomal protein L24

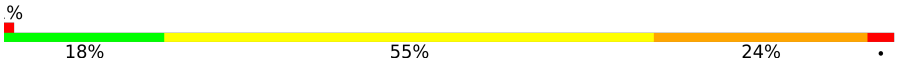
Chain DU:

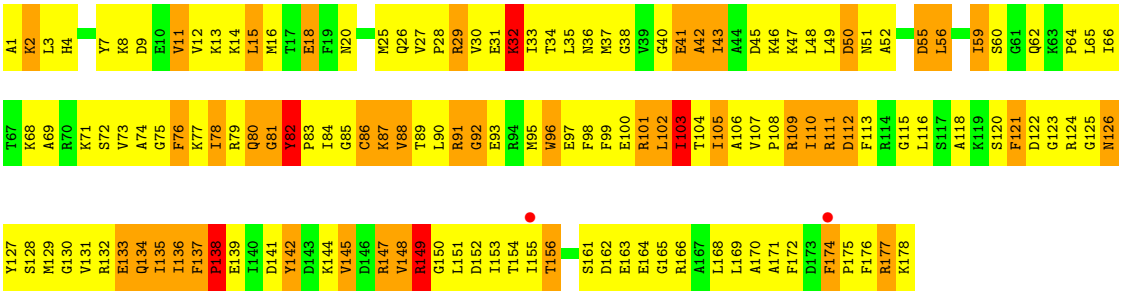




• Molecule 47: 50S ribosomal protein L5

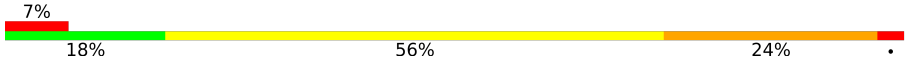
Chain BF:

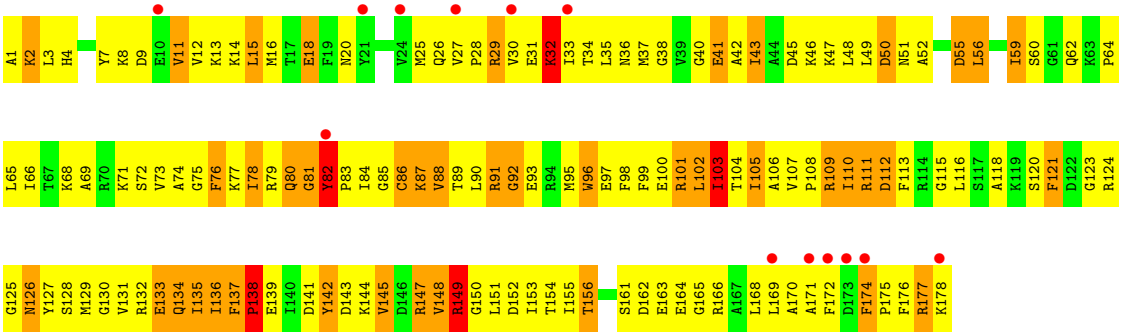




- Molecule 47: 50S ribosomal protein L5

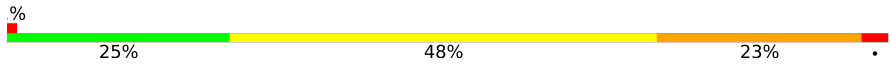
Chain DF:

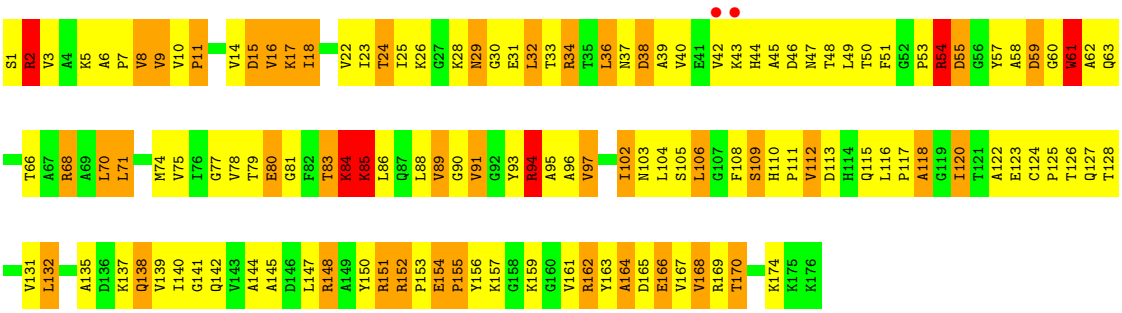




- Molecule 48: 50S ribosomal protein L6

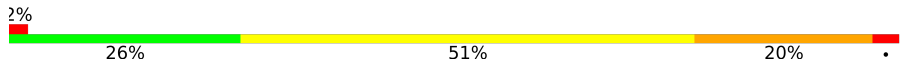
Chain BG:

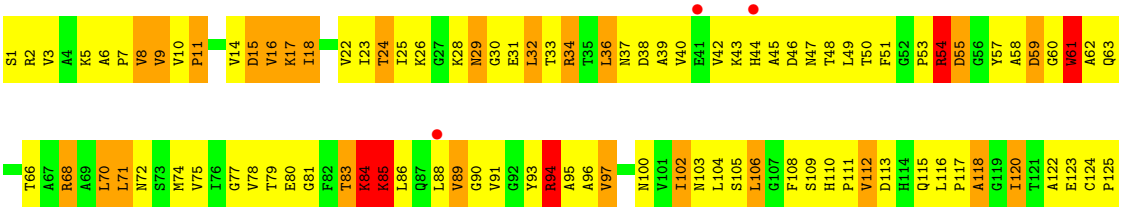




- Molecule 48: 50S ribosomal protein L6

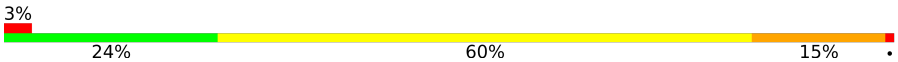
Chain DG:

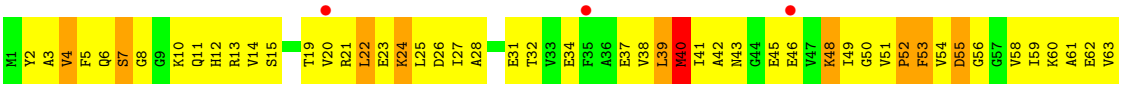




• Molecule 49: 50S ribosomal protein L21

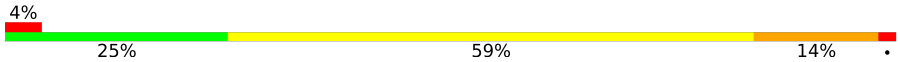
Chain BR:

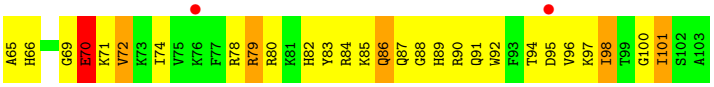




• Molecule 49: 50S ribosomal protein L21

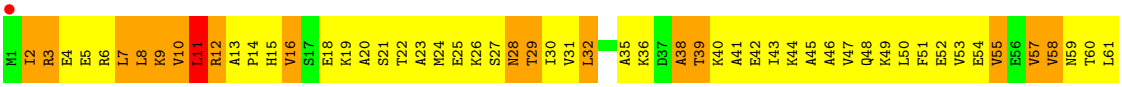
Chain DR:

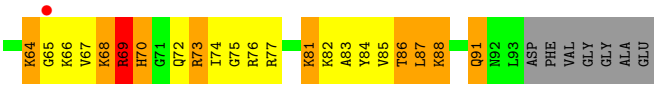




• Molecule 50: 50S ribosomal protein L23

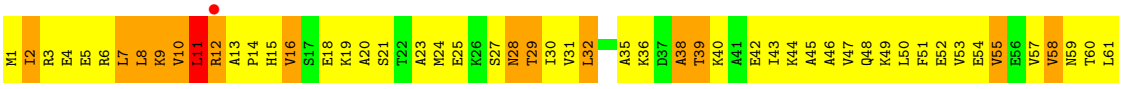
Chain BT:

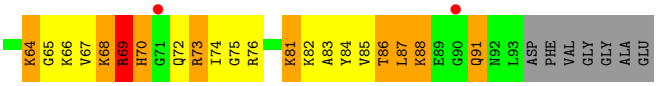




• Molecule 50: 50S ribosomal protein L23

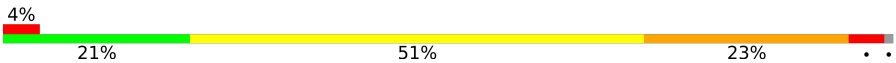
Chain DT:

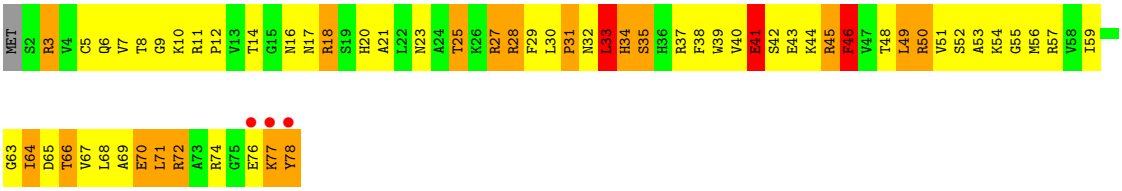




• Molecule 51: 50S ribosomal protein L28

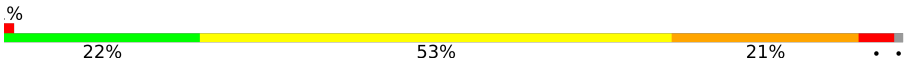
Chain BZ:

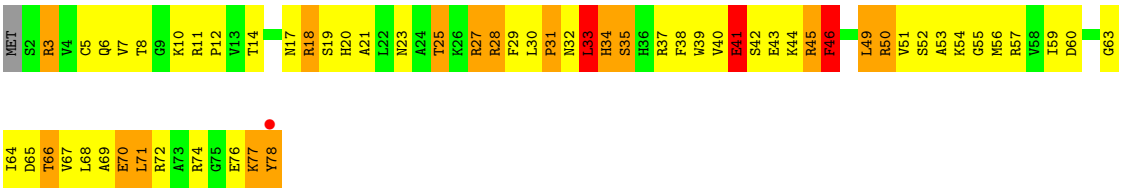




• Molecule 51: 50S ribosomal protein L28

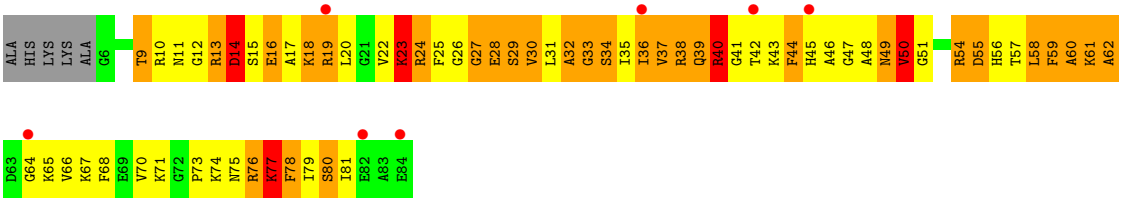
Chain DZ:





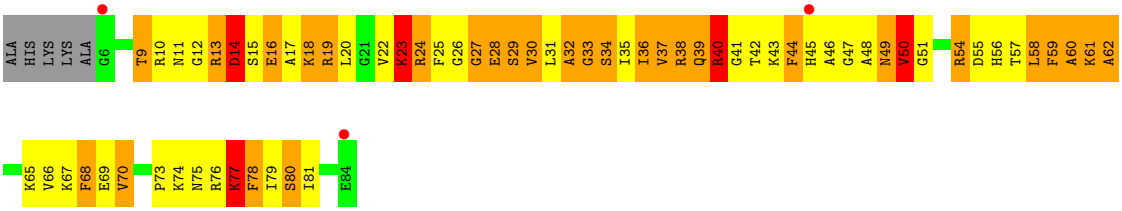
• Molecule 52: 50S ribosomal protein L27

Chain BW:



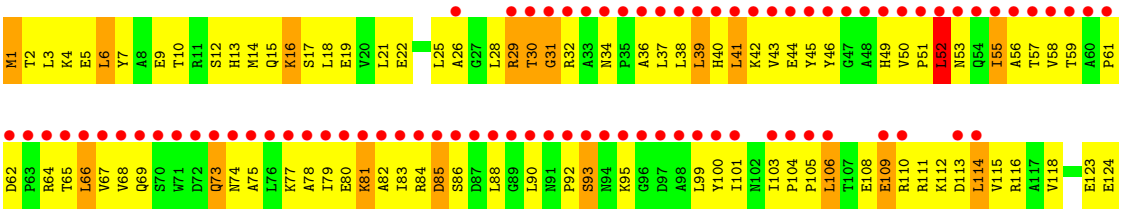
• Molecule 52: 50S ribosomal protein L27

Chain DW:



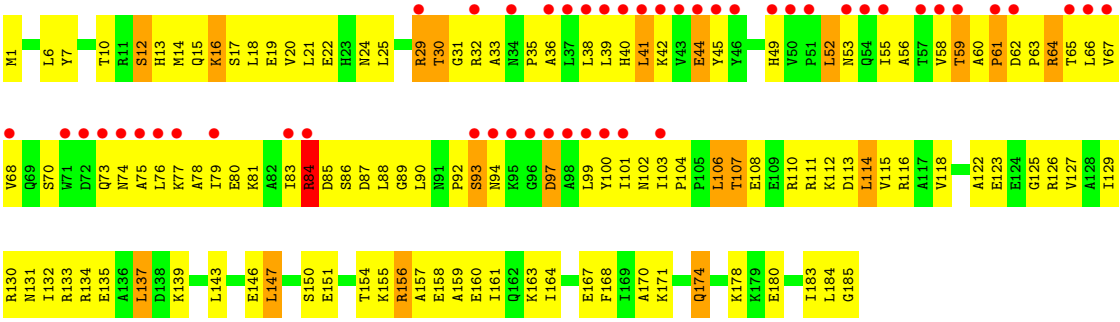
• Molecule 53: 50S ribosomal protein RRF

Chain B6:



- Molecule 53: 50S ribosomal protein RRF

Chain D6:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	208.54Å 378.89Å 736.90Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	40.00 – 4.00 138.07 – 4.15	Depositor EDS
% Data completeness (in resolution range)	87.4 (40.00-4.00) 87.4 (138.07-4.15)	Depositor EDS
R_{merge}	0.08	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.14 (at 4.15Å)	Xtriage
Refinement program	CNS	Depositor
R, R_{free}	0.261 , 0.305 0.232 , 0.271	Depositor DCC
R_{free} test set	18876 reflections (4.93%)	wwPDB-VP
Wilson B-factor (Å^2)	133.1	Xtriage
Anisotropy	0.323	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.22 , 74.2	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	0.92	EDS
Total number of atoms	287083	wwPDB-VP
Average B, all atoms (Å^2)	72.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.69% 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: LLL, MG, 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	0.29	3/36762 (0.0%)	0.78	21/57350 (0.0%)
1	CA	0.29	4/36762 (0.0%)	0.78	22/57350 (0.0%)
2	AC	0.23	0/1651	0.44	0/2225
2	CC	0.23	0/1651	0.44	0/2225
3	AD	0.23	0/1665	0.44	0/2227
3	CD	0.23	0/1665	0.44	0/2227
4	AE	0.23	0/1118	0.46	0/1504
4	CE	0.23	0/1118	0.46	0/1504
5	AF	0.24	0/835	0.45	0/1128
5	CF	0.24	0/835	0.45	0/1128
6	AG	0.23	0/1187	0.46	0/1591
6	CG	0.23	0/1211	0.46	0/1624
7	AH	0.23	0/989	0.44	0/1326
7	CH	0.23	0/989	0.44	0/1326
8	AI	0.24	0/1034	0.46	0/1375
8	CI	0.24	0/1033	0.46	0/1375
9	AJ	0.22	0/796	0.48	0/1077
9	CJ	0.22	0/796	0.48	0/1077
10	AK	0.24	0/893	0.46	0/1205
10	CK	0.24	0/893	0.46	0/1205
11	AL	0.22	0/969	0.50	0/1300
11	CL	0.22	0/969	0.50	0/1300
12	AM	0.21	0/892	0.46	0/1193
12	CM	0.21	0/884	0.46	0/1181
13	AN	0.24	0/785	0.45	0/1043
13	CN	0.24	0/785	0.45	0/1043
14	AO	0.23	0/722	0.47	0/964
14	CO	0.23	0/722	0.47	0/964
15	AP	0.25	0/659	0.46	0/884
15	CP	0.25	0/648	0.47	0/870
16	AQ	0.24	0/657	0.47	0/881
16	CQ	0.24	0/666	0.47	0/892

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
17	AR	0.23	0/462	0.46	0/621
17	CR	0.23	0/462	0.46	0/621
18	AS	0.25	0/652	0.47	0/877
18	CS	0.25	0/660	0.48	0/888
19	AT	0.23	0/671	0.39	0/888
19	CT	0.23	0/671	0.39	0/888
20	AB	0.25	0/1735	0.45	0/2338
20	CB	0.25	0/1735	0.45	0/2338
21	AU	0.26	0/430	0.48	0/570
21	CU	0.26	0/430	0.48	0/570
22	BA	0.28	0/2803	0.76	1/4371 (0.0%)
22	DA	0.28	0/2803	0.76	0/4371
23	BB	0.28	6/68314 (0.0%)	0.78	48/106569 (0.0%)
23	DB	0.30	6/68314 (0.0%)	0.79	48/106569 (0.0%)
24	BI	0.24	0/1046	0.47	0/1410
24	DI	0.25	0/1046	0.48	0/1410
25	BC	0.22	0/2121	0.48	0/2852
25	DC	0.22	0/2121	0.48	0/2852
26	BD	0.24	0/1586	0.49	0/2134
26	DD	0.24	0/1586	0.49	0/2134
27	BK	0.24	0/939	0.55	0/1258
27	DK	0.24	0/939	0.55	0/1258
28	BP	0.24	0/929	0.51	0/1242
28	DP	0.24	0/929	0.51	0/1242
29	BE	0.24	0/1571	0.51	0/2113
29	DE	0.24	0/1571	0.51	0/2113
30	BY	0.23	0/453	0.49	0/605
30	DY	0.23	0/453	0.49	0/605
31	B0	0.22	0/450	0.55	0/599
31	D0	0.23	0/450	0.55	0/599
32	B4	0.23	0/303	0.47	0/397
32	D4	0.23	0/303	0.47	0/397
33	B1	0.27	0/416	0.49	0/554
33	D1	0.27	0/416	0.49	0/554
34	B3	0.24	0/513	0.48	0/676
34	D3	0.24	0/513	0.48	0/676
35	BV	0.25	0/766	0.43	0/1025
35	DV	0.25	0/766	0.43	0/1025
36	B2	0.25	0/380	0.48	0/498
36	D2	0.25	0/380	0.48	0/498
37	BL	0.23	0/1054	0.48	0/1403
37	DL	0.23	0/1054	0.48	0/1403
38	BM	0.25	0/1093	0.48	0/1460

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
38	DM	0.25	0/1093	0.48	0/1460
39	BX	0.24	0/510	0.53	0/677
39	DX	0.24	0/510	0.53	0/677
40	BH	0.25	0/1122	0.48	0/1515
40	DH	0.25	0/1122	0.48	0/1515
41	BJ	0.24	0/1152	0.48	0/1551
41	DJ	0.23	0/1152	0.48	0/1551
42	BN	0.24	0/973	0.51	0/1301
42	DN	0.24	0/973	0.51	0/1301
43	BO	0.23	0/902	0.49	0/1209
43	DO	0.23	0/902	0.49	0/1209
44	BQ	0.25	0/960	0.49	0/1278
44	DQ	0.26	0/960	0.49	0/1278
45	BS	0.22	0/864	0.52	0/1156
45	DS	0.22	0/864	0.52	0/1156
46	BU	0.25	0/787	0.47	0/1051
46	DU	0.25	0/787	0.47	0/1051
47	BF	0.26	0/1444	0.52	0/1937
47	DF	0.26	0/1444	0.52	0/1937
48	BG	0.23	0/1343	0.47	0/1816
48	DG	0.23	0/1343	0.47	0/1816
49	BR	0.25	0/829	0.50	0/1107
49	DR	0.25	0/829	0.50	0/1107
50	BT	0.23	0/744	0.55	0/994
50	DT	0.22	0/744	0.55	0/994
51	BZ	0.25	0/635	0.51	0/848
51	DZ	0.25	0/635	0.52	0/848
52	BW	0.28	0/603	0.51	0/797
52	DW	0.28	0/603	0.51	0/797
53	B6	0.23	0/1497	0.52	1/2017 (0.0%)
53	D6	0.30	0/1497	0.58	1/2017 (0.0%)
All	All	0.28	19/309353 (0.0%)	0.71	142/462003 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	AA	0	16
1	CA	0	17
23	BB	0	35

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Mol	Chain	#Chirality outliers	#Planarity outliers
23	DB	0	47
All	All	0	115

All (19) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	BB	1086	A	C5-C6	-16.56	1.26	1.41
23	DB	1086	A	C5-C6	-16.53	1.26	1.41
23	DB	1088	A	C6-N1	-10.57	1.28	1.35
23	BB	1088	A	C6-N1	-10.52	1.28	1.35
1	CA	1213	A	P-OP1	-9.61	1.32	1.49
1	AA	1213	A	P-OP2	-9.47	1.32	1.49
23	BB	1060	U	C2-N3	7.84	1.43	1.37
23	DB	1060	U	C2-N3	7.78	1.43	1.37
1	CA	1125	U	P-OP1	-7.16	1.36	1.49
1	AA	93	U	C4'-C3'	-7.06	1.45	1.53
23	DB	1086	A	N7-C5	-6.75	1.35	1.39
23	BB	1086	A	N7-C5	-6.61	1.35	1.39
23	BB	1086	A	N3-C4	-6.44	1.30	1.34
23	DB	2318	G	O3'-P	-6.33	1.53	1.61
23	DB	1086	A	N3-C4	-5.95	1.31	1.34
1	CA	462	G	C4'-C3'	-5.46	1.47	1.52
1	AA	495	A	N3-C4	-5.07	1.31	1.34
1	CA	495	A	N3-C4	-5.06	1.31	1.34
23	BB	2144	G	C4'-C3'	-5.04	1.47	1.52

All (142) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	CA	1213	A	O5'-P-OP1	-31.90	72.42	110.70
1	AA	1213	A	O5'-P-OP2	-30.12	74.56	110.70
23	DB	2204	G	O5'-P-OP1	-29.74	75.02	110.70
23	BB	2204	G	O5'-P-OP2	-28.90	76.02	110.70
23	BB	2791	G	O5'-P-OP1	-28.07	77.02	110.70
23	DB	2791	G	O5'-P-OP2	-27.84	77.29	110.70
1	CA	1124	G	OP1-P-O3'	-20.02	61.16	105.20
23	BB	2204	G	O5'-P-OP1	18.05	132.37	110.70
23	BB	2791	G	O5'-P-OP2	17.97	132.26	110.70
23	DB	2791	G	O5'-P-OP1	17.87	132.15	110.70
23	DB	2204	G	O5'-P-OP2	17.66	131.89	110.70
1	CA	1125	U	O5'-P-OP1	-16.83	90.51	110.70
23	BB	2790	U	OP1-P-O3'	14.57	137.26	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	DB	2790	U	OP2-P-O3'	14.53	137.17	105.20
23	DB	2203	U	OP1-P-O3'	14.37	136.82	105.20
23	BB	2203	U	OP2-P-O3'	14.20	136.44	105.20
1	AA	1124	G	OP1-P-O3'	-11.49	79.92	105.20
1	CA	1213	A	O5'-P-OP2	9.80	122.46	110.70
1	CA	1125	U	O5'-P-OP2	9.67	122.31	110.70
1	AA	1213	A	O5'-P-OP1	9.42	122.00	110.70
23	DB	2272	U	C5-C4-O4	-9.11	120.43	125.90
23	BB	1552	A	N9-C1'-C2'	-9.02	102.08	112.00
23	DB	1552	A	N9-C1'-C2'	-8.70	102.43	112.00
1	CA	366	A	C2'-C3'-O3'	8.62	128.47	109.50
1	AA	366	A	C2'-C3'-O3'	8.60	128.41	109.50
23	BB	2272	U	C5-C4-O4	-8.59	120.74	125.90
23	DB	1088	A	N1-C6-N6	-8.31	113.61	118.60
23	BB	1088	A	N1-C6-N6	-8.22	113.67	118.60
1	CA	765	G	N9-C1'-C2'	-7.94	103.26	112.00
1	AA	1124	G	OP2-P-O3'	7.94	122.66	105.20
1	AA	765	G	N9-C1'-C2'	-7.91	103.30	112.00
1	CA	576	C	O5'-P-OP1	-7.83	98.65	105.70
1	CA	1124	G	OP2-P-O3'	7.54	121.78	105.20
1	CA	1212	U	OP2-P-O3'	7.43	121.56	105.20
23	BB	1439	A	N9-C1'-C2'	-7.36	103.90	112.00
1	AA	1212	U	OP1-P-O3'	7.34	121.35	105.20
23	DB	1060	U	C5-C4-O4	-7.32	121.51	125.90
23	DB	1350	C	C5'-C4'-C3'	-7.24	104.42	116.00
23	BB	1060	U	C5-C4-O4	-7.17	121.60	125.90
23	BB	1086	A	C4-C5-C6	7.09	120.54	117.00
23	DB	2733	A	N9-C1'-C2'	-7.02	104.28	112.00
23	DB	1086	A	C4-C5-C6	6.93	120.47	117.00
23	DB	1439	A	N9-C1'-C2'	-6.91	104.39	112.00
23	BB	1126	A	C5'-C4'-C3'	-6.52	105.56	116.00
1	AA	1409	C	C5'-C4'-C3'	-6.52	105.58	116.00
23	BB	2283	C	O5'-P-OP2	-6.43	99.91	105.70
23	BB	2733	A	N9-C1'-C2'	-6.43	104.93	112.00
23	BB	1088	A	C5-C6-N6	6.42	128.84	123.70
23	DB	1088	A	C5-C6-N6	6.41	128.83	123.70
23	BB	1086	A	C6-C5-N7	-6.30	127.89	132.30
1	CA	1424	U	C5'-C4'-C3'	-6.30	105.92	116.00
23	DB	1086	A	C6-C5-N7	-6.30	127.89	132.30
53	D6	29	ARG	NE-CZ-NH2	-6.26	117.17	120.30
1	CA	1124	G	O3'-P-O5'	6.15	115.68	104.00
23	BB	1552	A	C4'-C3'-O3'	6.14	125.29	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	BB	2790	U	O3'-P-O5'	-6.11	92.38	104.00
23	DB	1109	C	C5'-C4'-C3'	-6.08	106.28	116.00
23	DB	1126	A	C5'-C4'-O4'	6.04	116.34	109.10
23	DB	2619	C	C5'-C4'-C3'	-6.02	106.36	116.00
23	BB	2480	C	C5'-C4'-C3'	5.99	125.59	116.00
23	DB	1552	A	C4'-C3'-O3'	5.95	124.90	113.00
1	AA	328	C	C2'-C3'-O3'	5.94	123.21	113.70
1	CA	328	C	C2'-C3'-O3'	5.94	123.21	113.70
1	AA	1124	G	O3'-P-O5'	5.94	115.28	104.00
23	DB	2480	C	C5'-C4'-C3'	5.92	125.47	116.00
23	BB	2336	A	C4'-C3'-O3'	-5.88	97.05	109.40
23	DB	2790	U	O3'-P-O5'	-5.85	92.89	104.00
23	DB	2203	U	O3'-P-O5'	-5.84	92.89	104.00
1	AA	79	G	C4'-C3'-O3'	5.84	124.68	113.00
53	B6	31	GLY	N-CA-C	-5.83	98.51	113.10
23	DB	2322	A	OP2-P-O3'	5.83	118.03	105.20
1	CA	1032	G	C5'-C4'-C3'	-5.82	106.69	116.00
1	CA	40	C	C5'-C4'-C3'	-5.79	106.74	116.00
23	BB	690	G	C5'-C4'-C3'	-5.77	106.76	116.00
23	DB	101	A	C4'-C3'-O3'	-5.77	97.28	109.40
1	CA	1432	G	N9-C1'-C2'	-5.74	105.69	112.00
23	DB	1060	U	N1-C2-O2	-5.74	118.78	122.80
1	AA	1301	U	N1-C1'-C2'	5.73	121.45	114.00
1	CA	1301	U	N1-C1'-C2'	5.71	121.43	114.00
1	AA	1432	G	N9-C1'-C2'	-5.71	105.72	112.00
23	DB	2894	G	N9-C1'-C2'	-5.70	105.73	112.00
23	DB	745	G	C5'-C4'-C3'	-5.68	106.91	116.00
23	BB	1060	U	N1-C2-O2	-5.68	118.82	122.80
23	DB	353	C	C5'-C4'-C3'	-5.67	106.93	116.00
1	AA	438	U	N1-C1'-C2'	-5.66	105.77	112.00
1	CA	438	U	N1-C1'-C2'	-5.65	105.78	112.00
23	DB	2267	A	O4'-C1'-N9	-5.62	103.70	108.20
23	DB	461	C	C5'-C4'-C3'	-5.55	107.12	116.00
23	BB	2266	A	C5'-C4'-C3'	5.55	124.88	116.00
23	BB	2267	A	O4'-C1'-N9	-5.53	103.77	108.20
23	DB	2267	A	C5-C6-N6	-5.53	119.28	123.70
23	BB	1350	C	C5'-C4'-C3'	-5.51	107.18	116.00
23	DB	2267	A	C4-N9-C1'	5.50	136.20	126.30
23	DB	2272	U	N1-C1'-C2'	-5.50	105.95	112.00
23	BB	2203	U	O3'-P-O5'	-5.49	93.57	104.00
23	BB	573	U	C4'-C3'-O3'	-5.48	97.89	109.40
1	CA	166	U	C5'-C4'-C3'	-5.48	107.23	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	28	C	C5'-C4'-C3'	-5.46	107.26	116.00
23	DB	1086	A	C2-N3-C4	-5.46	107.87	110.60
23	BB	1086	A	C2-N3-C4	-5.44	107.88	110.60
23	DB	2267	A	C8-N9-C1'	-5.43	117.92	127.70
23	DB	1519	G	C5'-C4'-C3'	-5.41	107.34	116.00
23	DB	690	G	C5'-C4'-C3'	-5.40	107.37	116.00
1	CA	1534	A	C2'-C3'-O3'	-5.39	97.65	109.50
23	BB	560	C	C5'-C4'-C3'	-5.38	107.38	116.00
23	DB	1060	U	N3-C2-O2	5.37	125.96	122.20
23	BB	2894	G	N9-C1'-C2'	-5.36	106.11	112.00
23	BB	1060	U	N3-C2-O2	5.36	125.95	122.20
23	DB	1047	G	C5'-C4'-C3'	-5.34	107.45	116.00
23	BB	2267	A	C4-N9-C1'	5.34	135.91	126.30
1	AA	101	A	C5'-C4'-C3'	-5.33	107.47	116.00
23	BB	2267	A	C8-N9-C1'	-5.30	118.16	127.70
23	BB	2760	C	C5'-C4'-C3'	-5.30	107.52	116.00
23	BB	2585	U	C4'-C3'-O3'	-5.29	98.29	109.40
1	CA	1250	A	C5'-C4'-C3'	5.24	124.39	116.00
23	DB	2096	C	C5'-C4'-C3'	-5.24	107.62	116.00
23	DB	1170	C	C5'-C4'-C3'	-5.22	107.64	116.00
23	DB	1592	C	C5'-C4'-C3'	5.21	124.34	116.00
1	AA	40	C	C5'-C4'-C3'	-5.21	107.66	116.00
23	BB	2272	U	N1-C1'-C2'	-5.21	106.27	112.00
23	DB	2585	U	C4'-C3'-O3'	-5.20	98.48	109.40
23	DB	1397	U	C5'-C4'-C3'	-5.18	107.71	116.00
23	DB	2272	U	N3-C4-O4	-5.16	115.79	119.40
23	BB	1584	U	C4'-C3'-O3'	5.15	123.30	113.00
23	BB	1869	G	N9-C1'-C2'	-5.14	106.35	112.00
1	AA	81	A	C1'-O4'-C4'	-5.12	105.81	109.90
1	AA	576	C	C5'-C4'-O4'	5.11	115.23	109.10
23	BB	1054	A	N9-C1'-C2'	-5.11	106.38	112.00
1	CA	1043	G	N9-C1'-C2'	5.10	120.63	114.00
23	BB	1337	G	C5'-C4'-C3'	-5.10	107.85	116.00
23	DB	1869	G	N9-C1'-C2'	-5.07	106.42	112.00
1	AA	1043	G	N9-C1'-C2'	5.07	120.58	114.00
23	BB	2267	A	C5-C6-N6	-5.06	119.65	123.70
23	BB	479	A	C4'-C3'-O3'	-5.06	98.78	109.40
1	AA	81	A	C5'-C4'-C3'	5.06	124.09	116.00
23	BB	461	C	C5'-C4'-C3'	-5.06	107.91	116.00
1	AA	1032	G	C5'-C4'-C3'	-5.04	107.93	116.00
23	BB	745	G	C5'-C4'-C3'	-5.04	107.93	116.00
23	BB	2619	C	C5'-C4'-C3'	-5.03	107.96	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	BB	1314	C	C5'-C4'-C3'	-5.02	107.96	116.00
23	BB	2456	C	C5'-C4'-C3'	-5.02	107.97	116.00
23	DB	2336	A	C4'-C3'-O3'	-5.01	98.88	109.40

There are no chirality outliers.

All (115) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	AA	1048	G	Sidechain
1	AA	1331	G	Sidechain
1	AA	1432	G	Sidechain
1	AA	1441	A	Sidechain
1	AA	187	G	Sidechain
1	AA	281	G	Sidechain
1	AA	324	G	Sidechain
1	AA	437	U	Sidechain
1	AA	438	U	Sidechain
1	AA	450	G	Sidechain
1	AA	462	G	Sidechain
1	AA	481	G	Sidechain
1	AA	496	A	Sidechain
1	AA	703	G	Sidechain
1	AA	86	G	Sidechain
1	AA	992	U	Sidechain
23	BB	1047	G	Sidechain
23	BB	1054	A	Sidechain
23	BB	1060	U	Sidechain
23	BB	1086	A	Sidechain
23	BB	1088	A	Sidechain
23	BB	118	A	Sidechain
23	BB	1347	A	Sidechain
23	BB	1439	A	Sidechain
23	BB	1734	G	Sidechain
23	BB	1738	G	Sidechain
23	BB	1814	G	Sidechain
23	BB	1828	G	Sidechain
23	BB	1869	G	Sidechain
23	BB	2062	A	Sidechain
23	BB	221	A	Sidechain
23	BB	222	A	Sidechain
23	BB	2266	A	Sidechain
23	BB	2272	U	Sidechain

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Mol	Chain	Res	Type	Group
23	BB	232	G	Sidechain
23	BB	2454	G	Sidechain
23	BB	2471	A	Sidechain
23	BB	2503	A	Sidechain
23	BB	2638	G	Sidechain
23	BB	2733	A	Sidechain
23	BB	2834	G	Sidechain
23	BB	2848	G	Sidechain
23	BB	2868	A	Sidechain
23	BB	2883	A	Sidechain
23	BB	299	A	Sidechain
23	BB	370	G	Sidechain
23	BB	500	G	Sidechain
23	BB	51	G	Sidechain
23	BB	630	G	Sidechain
23	BB	727	A	Sidechain
23	BB	757	G	Sidechain
1	CA	1048	G	Sidechain
1	CA	1331	G	Sidechain
1	CA	1405	G	Sidechain
1	CA	1432	G	Sidechain
1	CA	1441	A	Sidechain
1	CA	187	G	Sidechain
1	CA	281	G	Sidechain
1	CA	324	G	Sidechain
1	CA	437	U	Sidechain
1	CA	438	U	Sidechain
1	CA	450	G	Sidechain
1	CA	462	G	Sidechain
1	CA	481	G	Sidechain
1	CA	496	A	Sidechain
1	CA	575	G	Sidechain
1	CA	703	G	Sidechain
1	CA	992	U	Sidechain
23	DB	1047	G	Sidechain
23	DB	1060	U	Sidechain
23	DB	1086	A	Sidechain
23	DB	1088	A	Sidechain
23	DB	1377	G	Sidechain
23	DB	1426	G	Sidechain
23	DB	1432	G	Sidechain
23	DB	1439	A	Sidechain

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Mol	Chain	Res	Type	Group
23	DB	1533	C	Sidechain
23	DB	1546	G	Sidechain
23	DB	1572	A	Sidechain
23	DB	1721	G	Sidechain
23	DB	1734	G	Sidechain
23	DB	1774	C	Sidechain
23	DB	1814	G	Sidechain
23	DB	1828	G	Sidechain
23	DB	1869	G	Sidechain
23	DB	2062	A	Sidechain
23	DB	2135	A	Sidechain
23	DB	221	A	Sidechain
23	DB	222	A	Sidechain
23	DB	2266	A	Sidechain
23	DB	2267	A	Sidechain
23	DB	2272	U	Sidechain
23	DB	2279	G	Sidechain
23	DB	232	G	Sidechain
23	DB	2454	G	Sidechain
23	DB	2471	A	Sidechain
23	DB	2503	A	Sidechain
23	DB	2508	G	Sidechain
23	DB	2587	A	Sidechain
23	DB	2638	G	Sidechain
23	DB	2733	A	Sidechain
23	DB	2770	G	Sidechain
23	DB	2834	G	Sidechain
23	DB	2848	G	Sidechain
23	DB	2857	G	Sidechain
23	DB	2868	A	Sidechain
23	DB	2883	A	Sidechain
23	DB	299	A	Sidechain
23	DB	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	729	G	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	1290	0
1	CA	32831	0	16521	1350	0
2	AC	1624	0	1699	140	0
2	CC	1624	0	1699	146	0
3	AD	1643	0	1710	174	0
3	CD	1643	0	1710	170	0
4	AE	1105	0	1148	95	0
4	CE	1105	0	1148	96	0
5	AF	817	0	808	96	0
5	CF	817	0	808	94	0
6	AG	1174	0	1230	112	0
6	CG	1196	0	1246	106	0
7	AH	979	0	1034	95	0
7	CH	979	0	1034	96	0
8	AI	1022	0	1070	149	0
8	CI	1021	0	1070	149	0
9	AJ	786	0	828	77	0
9	CJ	786	0	828	80	0
10	AK	877	0	887	111	0
10	CK	877	0	887	114	0
11	AL	955	0	1019	92	0
11	CL	955	0	1019	91	0
12	AM	883	0	944	119	0
12	CM	876	0	937	120	0
13	AN	774	0	827	121	0
13	CN	774	0	827	131	0
14	AO	714	0	734	60	0
14	CO	714	0	734	54	0
15	AP	649	0	666	56	0
15	CP	638	0	656	57	0
16	AQ	648	0	691	71	0
16	CQ	657	0	702	67	0
17	AR	455	0	478	51	0
17	CR	455	0	478	56	0
18	AS	637	0	665	85	0
18	CS	644	0	675	87	0
19	AT	665	0	714	68	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
19	CT	665	0	714	70	0
20	AB	1704	0	1732	220	0
20	CB	1704	0	1732	211	0
21	AU	425	0	449	79	0
21	CU	425	0	449	89	0
22	BA	2507	0	1270	106	0
22	DA	2507	0	1270	108	0
23	BB	60995	0	30678	2536	0
23	DB	60995	0	30678	2543	0
24	BI	1032	0	1088	119	0
24	DI	1032	0	1088	181	0
25	BC	2082	0	2157	239	0
25	DC	2082	0	2157	241	0
26	BD	1565	0	1616	206	0
26	DD	1565	0	1616	216	0
27	BK	930	0	1000	122	0
27	DK	930	0	1000	122	0
28	BP	917	0	965	102	0
28	DP	917	0	965	108	0
29	BE	1552	0	1619	194	0
29	DE	1552	0	1619	181	0
30	BY	449	0	491	49	0
30	DY	449	0	491	55	0
31	B0	444	0	461	49	0
31	D0	444	0	461	47	0
32	B4	302	0	340	38	0
32	D4	302	0	340	44	0
33	B1	409	0	440	58	0
33	D1	409	0	440	54	0
34	B3	504	0	574	51	0
34	D3	504	0	574	48	0
35	BV	753	0	780	97	0
35	DV	753	0	780	102	0
36	B2	377	0	418	38	0
36	D2	377	0	418	38	0
37	BL	1045	0	1117	148	0
37	DL	1045	0	1117	153	0
38	BM	1074	0	1157	129	0
38	DM	1074	0	1157	121	0
39	BX	509	0	543	55	0
39	DX	509	0	543	60	0
40	BH	1111	0	1148	186	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
40	DH	1111	0	1148	158	0
41	BJ	1129	0	1162	136	0
41	DJ	1129	0	1162	137	0
42	BN	960	0	1000	130	0
42	DN	960	0	1000	129	0
43	BO	892	0	923	94	0
43	DO	892	0	923	96	0
44	BQ	947	0	1022	171	0
44	DQ	947	0	1022	178	0
45	BS	857	0	922	101	0
45	DS	857	0	922	101	0
46	BU	779	0	834	114	0
46	DU	779	0	834	109	0
47	BF	1420	0	1460	223	0
47	DF	1420	0	1460	216	0
48	BG	1323	0	1374	218	0
48	DG	1323	0	1374	195	0
49	BR	816	0	839	113	0
49	DR	816	0	839	128	0
50	BT	738	0	807	125	0
50	DT	738	0	807	121	0
51	BZ	625	0	652	82	0
51	DZ	625	0	652	82	0
52	BW	596	0	610	120	0
52	DW	596	0	610	126	0
53	B6	1478	0	1526	192	0
53	D6	1478	0	1526	150	0
54	AA	60	0	0	0	0
54	BB	110	0	0	0	0
54	CA	61	0	0	0	0
54	CE	1	0	0	0	0
54	DB	111	0	0	0	0
55	AA	31	0	39	0	0
55	BB	31	0	39	2	0
55	CA	31	0	39	3	0
55	DB	31	0	39	0	0
56	B4	1	0	0	0	0
56	D4	1	0	0	0	0
57	AA	287	0	0	1	0
57	AE	3	0	0	0	0
57	AK	1	0	0	0	0
57	AL	3	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
57	AN	4	0	0	0	0
57	AT	2	0	0	0	0
57	BB	492	0	0	8	0
57	BC	6	0	0	0	0
57	BD	1	0	0	0	0
57	BE	3	0	0	0	0
57	BL	3	0	0	0	0
57	BT	1	0	0	0	0
57	CA	296	0	0	2	0
57	CE	3	0	0	0	0
57	CK	1	0	0	0	0
57	CL	3	0	0	0	0
57	CN	4	0	0	0	0
57	CT	2	0	0	0	0
57	DB	500	0	0	7	0
57	DC	6	0	0	0	0
57	DE	2	0	0	0	0
57	DL	2	0	0	0	0
57	DR	1	0	0	0	0
57	DT	1	0	0	0	0
All	All	287083	0	193870	17818	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 37.

All (17818) 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	1.20
40:BH:31:VAL:HB	40:BH:32:PRO:HD2	1.23	1.17
21:CU:36:PHE:HB3	21:CU:40:PRO:HD3	1.28	1.14
21:AU:36:PHE:HB3	21:AU:40:PRO:HD3	1.29	1.11
25:DC:144:GLU:HA	25:DC:151:GLY:HA2	1.33	1.11
37:DL:143:GLU:HG2	37:DL:144:GLU:H	1.10	1.10
37:BL:143:GLU:HG2	37:BL:144:GLU:H	1.09	1.10
23:BB:322:A:H2'	29:BE:163:ASN:HD21	1.02	1.10
40:DH:31:VAL:HB	40:DH:32:PRO:HD2	1.23	1.10
9:CJ:9:ARG:HB2	9:CJ:99:GLN:HB2	1.27	1.09
10:CK:111:ASP:HB2	21:CU:19:LYS:HE3	1.35	1.09
23:DB:1099:G:C8	24:DI:3:LYS:N	2.20	1.09
23:BB:855:G:H21	52:BW:23:LYS:HG2	1.17	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AJ:9:ARG:HB2	9:AJ:99:GLN:HB2	1.29	1.08
13:AN:63:CYS:HB3	13:AN:67:GLY:H	1.16	1.07
23:BB:1203:U:H1'	37:BL:4:ASN:HD21	1.12	1.07
5:AF:3:HIS:HB2	5:AF:92:THR:HA	1.39	1.05
47:DF:126:ASN:HB3	47:DF:156:THR:HA	1.34	1.05
25:BC:144:GLU:HA	25:BC:151:GLY:HA2	1.36	1.05
23:DB:1098:A:H3'	24:DI:3:LYS:CA	1.86	1.05
23:DB:1098:A:H3'	24:DI:3:LYS:HA	1.36	1.04
9:CJ:17:LEU:HD22	9:CJ:96:VAL:HG13	1.40	1.04
13:CN:63:CYS:HB3	13:CN:67:GLY:H	1.21	1.04
53:D6:33:ALA:HA	53:D6:103:ILE:HD13	1.36	1.04
29:BE:5:LEU:HD12	29:BE:10:SER:HB2	1.38	1.03
1:AA:1125:U:OP1	9:AJ:37:ARG:NH1	1.92	1.03
21:CU:16:ARG:HA	21:CU:16:ARG:HE	1.23	1.03
23:BB:2305:U:H5"	47:BF:130:GLY:HA3	1.41	1.03
5:CF:3:HIS:HB2	5:CF:92:THR:HA	1.40	1.03
29:DE:155:GLU:HA	29:DE:158:PHE:HB3	1.40	1.03
43:DO:67:ASN:H	43:DO:70:ALA:HB3	1.22	1.03
9:AJ:17:LEU:HD22	9:AJ:96:VAL:HG13	1.41	1.02
43:BO:67:ASN:H	43:BO:70:ALA:HB3	1.24	1.02
23:DB:1099:G:O5'	24:DI:4:VAL:N	1.92	1.02
10:AK:111:ASP:HB2	21:AU:19:LYS:HE3	1.41	1.02
47:BF:126:ASN:HB3	47:BF:156:THR:HA	1.37	1.02
1:CA:1532:U:H2'	1:CA:1533:C:H5"	1.42	1.02
27:DK:71:ARG:HB3	27:DK:72:PRO:HD2	1.41	1.02
10:AK:33:ILE:HB	10:AK:73:VAL:HG11	1.42	1.01
27:DK:35:VAL:HG23	27:DK:36:GLY:H	1.22	1.01
1:CA:202:G:HO2'	1:CA:468:A:H8	1.01	1.01
5:CF:92:THR:HG22	5:CF:94:HIS:H	1.26	1.01
27:BK:35:VAL:HG23	27:BK:36:GLY:H	1.24	1.01
25:BC:129:LEU:HD23	25:BC:130:PRO:HD2	1.42	1.00
45:DS:73:LYS:HE3	45:DS:74:ILE:H	1.26	1.00
40:BH:2:GLN:HA	40:BH:20:ASN:HA	1.41	1.00
23:DB:2379:G:H4'	43:DO:21:LEU:HD11	1.43	1.00
5:AF:92:THR:HG22	5:AF:94:HIS:H	1.26	1.00
40:DH:2:GLN:HA	40:DH:20:ASN:HA	1.41	1.00
52:BW:39:GLN:HE21	52:BW:42:THR:HB	1.27	1.00
29:BE:155:GLU:HA	29:BE:158:PHE:HB3	1.40	1.00
40:DH:31:VAL:HB	40:DH:32:PRO:CD	1.92	0.99
26:DD:148:GLN:HB2	26:DD:152:PRO:HG2	1.43	0.99
2:AC:76:ILE:HA	2:AC:83:VAL:HG23	1.40	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BL:124:GLY:N	37:BL:143:GLU:HG3	1.76	0.99
29:DE:5:LEU:HD12	29:DE:10:SER:HB2	1.42	0.99
45:BS:73:LYS:HE3	45:BS:74:ILE:H	1.27	0.99
2:CC:76:ILE:HA	2:CC:83:VAL:HG23	1.42	0.99
1:AA:202:G:HO2'	1:AA:468:A:H8	1.04	0.98
10:CK:33:ILE:HB	10:CK:73:VAL:HG11	1.42	0.98
21:AU:16:ARG:HA	21:AU:16:ARG:HE	1.25	0.98
37:DL:124:GLY:N	37:DL:143:GLU:HG3	1.76	0.98
52:DW:39:GLN:HE21	52:DW:42:THR:HB	1.24	0.98
27:BK:71:ARG:HB3	27:BK:72:PRO:HD2	1.44	0.98
13:CN:68:ARG:HH12	13:CN:70:HIS:HB2	1.28	0.98
26:DD:29:VAL:HB	26:DD:98:VAL:HG22	1.42	0.98
13:AN:68:ARG:HH12	13:AN:70:HIS:HB2	1.28	0.98
40:BH:31:VAL:HB	40:BH:32:PRO:CD	1.93	0.98
39:DX:28:LEU:HD13	39:DX:37:LEU:HD11	1.46	0.97
8:AI:51:LEU:HB3	8:AI:56:MET:HG2	1.46	0.97
13:CN:51:PRO:HB2	13:CN:54:SER:HB3	1.46	0.97
23:BB:877:A:H2'	23:BB:899:A:N1	1.80	0.97
23:DB:45:G:H5"	23:DB:46:G:H5'	1.46	0.97
23:DB:898:C:H2'	23:DB:899:A:H5"	1.46	0.97
13:AN:51:PRO:HB2	13:AN:54:SER:HB3	1.47	0.97
23:DB:855:G:H21	52:DW:23:LYS:HG2	1.28	0.96
23:DB:704:G:H2'	23:DB:726:G:H22	1.30	0.96
1:CA:812:G:HO2'	1:CA:813:U:H6	0.98	0.96
35:DV:62:THR:HG22	35:DV:71:LYS:HG2	1.47	0.96
18:CS:18:VAL:HG21	18:CS:43:MET:HG2	1.45	0.96
40:DH:62:LEU:HG	40:DH:66:ASN:HD21	1.31	0.95
40:DH:65:ALA:HB1	40:DH:138:VAL:HG21	1.48	0.95
18:AS:51:HIS:HA	18:AS:56:HIS:HA	1.48	0.95
25:DC:129:LEU:HD23	25:DC:130:PRO:HD2	1.45	0.95
48:DG:8:VAL:HG11	48:DG:49:LEU:HB2	1.47	0.95
46:BU:70:ALA:HB1	46:BU:79:ALA:HB3	1.47	0.95
46:DU:70:ALA:HB1	46:DU:79:ALA:HB3	1.45	0.95
26:DD:5:VAL:H	26:DD:32:ASN:ND2	1.62	0.95
10:AK:110:THR:HG22	21:AU:4:LYS:HA	1.45	0.95
28:BP:4:ILE:HG22	28:BP:5:LYS:H	1.31	0.95
40:DH:80:ILE:HD11	40:DH:147:VAL:H	1.32	0.95
53:B6:32:ARG:HB2	53:B6:103:ILE:HG12	1.47	0.95
22:DA:98:G:H1	35:DV:14:LYS:HB2	1.29	0.95
35:BV:62:THR:HG22	35:BV:71:LYS:HG2	1.48	0.95
48:BG:8:VAL:HG11	48:BG:49:LEU:HB2	1.47	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:148:GLN:HB2	26:BD:152:PRO:HG2	1.45	0.95
23:DB:138:U:H4'	23:DB:139:U:H2'	1.45	0.95
40:DH:7:ASP:HA	40:DH:15:LEU:HD22	1.49	0.95
53:B6:29:ARG:HH22	53:B6:110:ARG:HD3	1.32	0.94
20:CB:46:VAL:HG13	20:CB:47:PRO:HD3	1.49	0.94
45:DS:66:ILE:HD13	45:DS:66:ILE:H	1.32	0.94
48:BG:84:LYS:HG2	48:BG:85:LYS:H	1.31	0.94
48:DG:34:ARG:HH11	48:DG:34:ARG:H	1.16	0.94
18:AS:18:VAL:HG21	18:AS:43:MET:HG2	1.45	0.94
53:B6:30:THR:C	53:B6:32:ARG:H	1.69	0.94
1:CA:981:U:H4'	13:CN:60:ARG:HD2	1.50	0.94
39:BX:28:LEU:HD13	39:BX:37:LEU:HD11	1.49	0.94
18:CS:51:HIS:HA	18:CS:56:HIS:HA	1.47	0.94
44:DQ:111:LYS:HB2	49:DR:48:LYS:HZ2	1.33	0.94
50:BT:53:VAL:HG11	50:BT:87:LEU:HD13	1.48	0.94
8:CI:51:LEU:HB3	8:CI:56:MET:HG2	1.48	0.94
50:DT:53:VAL:HG11	50:DT:87:LEU:HD13	1.47	0.94
41:DJ:3:THR:HG21	44:DQ:60:TRP:HE1	1.32	0.93
44:BQ:54:ARG:HB3	44:BQ:58:GLN:HE22	1.33	0.93
41:BJ:3:THR:HG21	44:BQ:60:TRP:HE1	1.32	0.93
11:CL:120:ARG:HG2	11:CL:121:PRO:HD2	1.50	0.93
47:BF:163:GLU:HA	47:BF:166:ARG:HD2	1.49	0.93
20:AB:202:ASN:HD22	20:AB:204:ASP:H	1.14	0.93
30:BY:16:LEU:HD22	30:BY:16:LEU:H	1.34	0.93
45:BS:66:ILE:H	45:BS:66:ILE:HD13	1.33	0.93
23:BB:322:A:C2'	29:BE:163:ASN:HD21	1.82	0.93
20:CB:202:ASN:HD22	20:CB:204:ASP:H	1.17	0.93
1:AA:1086:U:H3	1:AA:1099:G:H22	1.17	0.93
47:BF:36:ASN:HA	47:BF:87:LYS:HA	1.50	0.93
26:DD:5:VAL:H	26:DD:32:ASN:HD21	0.93	0.93
40:DH:72:ILE:HG12	40:DH:108:VAL:HG11	1.51	0.93
23:BB:460:A:H4'	50:BT:72:GLN:HB2	1.51	0.92
23:BB:2471:A:HO2'	23:BB:2472:G:H8	0.93	0.92
48:BG:34:ARG:H	48:BG:34:ARG:HH11	1.17	0.92
44:DQ:54:ARG:HB3	44:DQ:58:GLN:HE22	1.34	0.92
47:DF:109:ARG:HB3	47:DF:135:ILE:HD13	1.51	0.92
12:CM:70:ARG:HH21	47:DF:136:ILE:HB	1.30	0.92
48:DG:84:LYS:HG2	48:DG:85:LYS:H	1.31	0.92
26:BD:5:VAL:H	26:BD:32:ASN:ND2	1.65	0.92
28:BP:91:VAL:HG11	28:BP:96:LEU:HD11	1.52	0.92
23:DB:161:A:H3'	23:DB:162:U:H5"	1.50	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BT:38:ALA:HB1	50:BT:43:ILE:HD11	1.52	0.92
28:DP:4:ILE:HG22	28:DP:5:LYS:H	1.34	0.92
23:BB:322:A:H2'	29:BE:163:ASN:ND2	1.84	0.92
10:AK:34:THR:HB	10:AK:40:ALA:HA	1.52	0.92
23:BB:2751:G:H5'	48:BG:2:ARG:HD3	1.52	0.92
25:BC:76:VAL:HG12	25:BC:114:GLN:HG2	1.50	0.92
1:CA:600:A:H5"	7:CH:88:LYS:HD2	1.52	0.92
40:BH:116:ARG:HG2	40:BH:131:SER:HB2	1.52	0.91
1:AA:532:A:H62	2:AC:191:THR:HB	1.34	0.91
30:DY:16:LEU:H	30:DY:16:LEU:HD22	1.34	0.91
1:AA:981:U:H4'	13:AN:60:ARG:HD2	1.51	0.91
6:AG:145:GLU:HA	6:AG:148:LYS:HB2	1.52	0.91
45:BS:24:ILE:HG22	45:BS:71:VAL:HG11	1.50	0.91
8:CI:25:GLY:HA3	8:CI:57:VAL:HA	1.49	0.91
12:CM:3:ILE:HG12	12:CM:52:ILE:HD11	1.49	0.91
47:BF:109:ARG:HB3	47:BF:135:ILE:HD13	1.52	0.91
23:BB:704:G:H2'	23:BB:726:G:H22	1.33	0.91
6:CG:145:GLU:HA	6:CG:148:LYS:HB2	1.52	0.91
10:CK:110:THR:HG22	21:CU:4:LYS:HA	1.50	0.91
23:DB:1099:G:H8	24:DI:3:LYS:H	1.04	0.91
12:AM:3:ILE:HG12	12:AM:52:ILE:HD11	1.51	0.91
3:CD:160:LEU:HD13	3:CD:160:LEU:H	1.35	0.91
23:DB:281:C:H2'	23:DB:282:A:C8	2.06	0.91
26:BD:5:VAL:H	26:BD:32:ASN:HD21	0.95	0.91
32:B4:2:LYS:HD3	32:B4:4:ARG:HE	1.34	0.91
19:AT:38:ILE:HD11	19:AT:82:ILE:HG22	1.53	0.91
23:BB:161:A:H3'	23:BB:162:U:H5"	1.51	0.91
23:DB:2266:A:H4'	23:DB:2267:A:N7	1.85	0.91
41:DJ:81:ILE:HG23	41:DJ:82:GLY:H	1.36	0.91
8:AI:25:GLY:HA3	8:AI:57:VAL:HA	1.50	0.90
26:BD:29:VAL:HB	26:BD:98:VAL:HG22	1.49	0.90
33:B1:33:LEU:HB3	33:B1:51:ALA:HB3	1.52	0.90
52:BW:50:VAL:HG23	52:BW:61:LYS:HD3	1.52	0.90
25:DC:76:VAL:HG12	25:DC:114:GLN:HG2	1.51	0.90
32:D4:2:LYS:HD3	32:D4:4:ARG:HE	1.34	0.90
33:D1:33:LEU:HB3	33:D1:51:ALA:HB3	1.51	0.90
50:DT:38:ALA:HB1	50:DT:43:ILE:HD11	1.52	0.90
47:DF:36:ASN:HA	47:DF:87:LYS:HA	1.54	0.90
3:AD:160:LEU:H	3:AD:160:LEU:HD13	1.36	0.90
23:DB:972:A:H3'	23:DB:973:A:H5"	1.54	0.90
26:DD:106:LYS:HB3	26:DD:206:ALA:H	1.37	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DW:50:VAL:HG23	52:DW:61:LYS:HD3	1.53	0.90
1:AA:812:G:HO2'	1:AA:813:U:H6	0.98	0.90
1:CA:974:A:H4'	1:CA:975:A:H5'	1.54	0.90
20:AB:46:VAL:HG13	20:AB:47:PRO:HD3	1.52	0.90
23:BB:2355:G:H4'	52:BW:20:LEU:HD13	1.50	0.90
26:BD:24:VAL:HG21	26:BD:188:LEU:HB3	1.54	0.90
42:BN:101:GLY:HA2	42:BN:110:MET:H	1.35	0.90
42:DN:37:THR:HG22	42:DN:39:PRO:HD2	1.52	0.90
1:AA:600:A:H5"	7:AH:88:LYS:HD2	1.54	0.89
45:DS:24:ILE:HG22	45:DS:71:VAL:HG11	1.50	0.89
48:DG:79:THR:HG22	48:DG:80:GLU:HG2	1.55	0.89
23:BB:423:A:H5'	23:BB:424:G:H5'	1.51	0.89
23:BB:858:G:N3	23:BB:2268:A:H2'	1.86	0.89
25:BC:103:ILE:HG22	25:BC:105:ALA:H	1.37	0.89
25:DC:183:VAL:HG13	25:DC:185:ALA:H	1.37	0.89
10:CK:124:LYS:HA	21:CU:34:ARG:HB3	1.54	0.89
11:AL:120:ARG:HG2	11:AL:121:PRO:HD2	1.52	0.89
35:BV:42:LEU:HD12	35:BV:47:VAL:HG21	1.55	0.89
1:CA:1533:C:H2'	1:CA:1534:A:H3'	1.55	0.89
23:DB:1060:U:N3	23:DB:1088:A:N7	2.21	0.89
23:DB:2798:U:H1'	23:DB:2800:A:N6	1.87	0.89
47:DF:163:GLU:HA	47:DF:166:ARG:HD2	1.50	0.89
25:BC:183:VAL:HG13	25:BC:185:ALA:H	1.37	0.89
48:BG:15:ASP:HB3	48:BG:26:LYS:H	1.33	0.89
47:DF:35:LEU:HD23	47:DF:153:ILE:HG12	1.55	0.89
26:BD:106:LYS:HB3	26:BD:206:ALA:H	1.37	0.89
25:DC:103:ILE:HG22	25:DC:105:ALA:H	1.37	0.89
23:BB:1060:U:N3	23:BB:1088:A:N7	2.20	0.89
19:AT:4:LYS:HD2	19:AT:5:SER:H	1.38	0.89
23:BB:1076:C:H4'	24:BI:94:LYS:HE3	1.55	0.89
23:DB:1024:G:H3'	23:DB:1025:G:H5"	1.53	0.88
49:DR:8:GLY:HA3	49:DR:23:GLU:HB2	1.55	0.88
23:BB:45:G:H5"	23:BB:46:G:H5'	1.55	0.88
40:BH:7:ASP:HA	40:BH:15:LEU:HD22	1.53	0.88
42:BN:101:GLY:HA2	42:BN:110:MET:N	1.87	0.88
52:BW:43:LYS:HD2	52:BW:79:ILE:HD11	1.54	0.88
22:DA:2:G:H2'	22:DA:3:C:C6	2.08	0.88
23:DB:1099:G:H8	24:DI:3:LYS:CA	1.86	0.88
23:DB:2109:U:H3	23:DB:2180:U:H2'	1.37	0.88
4:AE:156:ARG:HA	4:AE:158:LYS:HZ3	1.34	0.88
43:BO:3:LYS:HD3	43:BO:3:LYS:H	1.38	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:76:GLU:HG3	51:BZ:77:LYS:H	1.38	0.88
23:DB:1124:G:H1'	32:D4:38:GLY:OXT	1.73	0.88
23:BB:972:A:H3'	23:BB:973:A:H5"	1.55	0.88
37:DL:143:GLU:HG2	37:DL:144:GLU:N	1.89	0.88
48:DG:15:ASP:HB3	48:DG:26:LYS:H	1.36	0.88
4:AE:106:ALA:HB1	4:AE:110:MET:HB3	1.55	0.88
1:CA:699:C:H2'	1:CA:700:G:H5"	1.53	0.88
4:CE:37:VAL:HG11	4:CE:113:VAL:HG12	1.56	0.88
9:CJ:52:LEU:H	9:CJ:52:LEU:HD12	1.38	0.88
26:BD:105:LYS:HD2	26:BD:177:VAL:HG22	1.54	0.88
1:CA:60:A:H4'	1:CA:61:G:H5'	1.52	0.88
1:AA:840:C:H2'	1:AA:842:U:H5"	1.54	0.88
8:AI:27:ILE:HG21	8:AI:34:LEU:HD13	1.55	0.88
53:D6:38:LEU:HD12	53:D6:58:VAL:HG11	1.53	0.88
23:DB:2355:G:H4'	52:DW:20:LEU:HD13	1.54	0.88
10:CK:34:THR:HB	10:CK:40:ALA:HA	1.51	0.88
23:BB:1244:A:H5"	37:BL:8:PRO:HD3	1.56	0.87
28:DP:91:VAL:HG11	28:DP:96:LEU:HD11	1.54	0.87
47:DF:135:ILE:HD11	47:DF:137:PHE:HB3	1.55	0.87
53:B6:38:LEU:HA	53:B6:41:LEU:HD13	1.56	0.87
23:DB:1019:U:H2'	23:DB:1020:A:H8	1.39	0.87
26:DD:5:VAL:N	26:DD:32:ASN:HD21	1.73	0.87
1:AA:974:A:H4'	1:AA:975:A:H5'	1.53	0.87
41:BJ:81:ILE:HG23	41:BJ:82:GLY:H	1.37	0.87
48:BG:79:THR:HG22	48:BG:80:GLU:HG2	1.56	0.87
41:DJ:29:ALA:HA	41:DJ:32:LEU:HD12	1.55	0.87
1:AA:1144:G:N2	1:AA:1146:A:H62	1.72	0.87
23:BB:855:G:N2	52:BW:23:LYS:HG2	1.89	0.87
53:D6:32:ARG:HB2	53:D6:103:ILE:HG23	1.56	0.87
19:CT:4:LYS:HD2	19:CT:5:SER:H	1.39	0.87
23:DB:962:G:H21	23:DB:2250:G:H22	1.22	0.87
10:AK:124:LYS:HA	21:AU:34:ARG:HB3	1.57	0.87
13:AN:30:ILE:HG21	13:AN:44:VAL:HG21	1.57	0.87
13:CN:30:ILE:HG21	13:CN:44:VAL:HG21	1.56	0.87
23:BB:75:G:H4'	39:BX:48:ARG:HH22	1.40	0.87
23:BB:1024:G:H3'	23:BB:1025:G:H5"	1.56	0.87
24:BI:27:LEU:HD23	24:BI:27:LEU:H	1.39	0.87
53:B6:112:LYS:HB3	53:B6:116:ARG:NH2	1.90	0.87
23:BB:141:G:H1	50:BT:2:ILE:HD12	1.39	0.86
26:BD:178:VAL:HB	26:BD:188:LEU:HB2	1.57	0.86
44:DQ:111:LYS:HB2	49:DR:48:LYS:NZ	1.88	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DW:43:LYS:HD2	52:DW:79:ILE:HD11	1.57	0.86
53:D6:92:PRO:HA	53:D6:101:ILE:HG12	1.56	0.86
4:AE:37:VAL:HG11	4:AE:113:VAL:HG12	1.54	0.86
42:BN:37:THR:HG22	42:BN:39:PRO:HD2	1.57	0.86
50:DT:57:VAL:HG22	50:DT:58:VAL:H	1.39	0.86
1:AA:865:A:H5'	1:AA:1078:U:O4	1.75	0.86
47:BF:125:GLY:HA2	47:BF:162:ASP:HA	1.56	0.86
50:BT:57:VAL:HG22	50:BT:58:VAL:H	1.39	0.86
52:BW:37:VAL:HG12	52:BW:38:ARG:H	1.40	0.86
1:CA:840:C:H2'	1:CA:842:U:H5"	1.55	0.86
1:CA:1144:G:N2	1:CA:1146:A:H62	1.73	0.86
1:AA:93:U:H5"	1:AA:94:G:OP2	1.76	0.86
9:AJ:52:LEU:H	9:AJ:52:LEU:HD12	1.40	0.86
44:BQ:63:ARG:HH22	44:BQ:96:ASP:HA	1.38	0.86
1:CA:1493:A:H2'	23:DB:1913:A:N6	1.89	0.86
23:BB:2134:A:H2'	23:BB:2135:A:H8	1.38	0.86
44:BQ:111:LYS:HB2	49:BR:48:LYS:HZ2	1.40	0.86
53:B6:78:ALA:HA	53:B6:81:LYS:HD2	1.57	0.86
4:CE:106:ALA:HB1	4:CE:110:MET:HB3	1.56	0.86
26:DD:105:LYS:HD2	26:DD:177:VAL:HG22	1.57	0.86
41:BJ:29:ALA:HA	41:BJ:32:LEU:HD12	1.57	0.86
49:BR:2:TYR:HB2	49:BR:42:ALA:HB2	1.57	0.86
26:DD:24:VAL:HG21	26:DD:188:LEU:HB3	1.56	0.86
42:DN:101:GLY:HA2	42:DN:110:MET:N	1.91	0.86
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.09	0.86
26:BD:10:GLY:HA3	26:BD:26:VAL:H	1.39	0.86
47:BF:33:ILE:HD12	47:BF:95:MET:HG2	1.54	0.86
47:BF:62:GLN:HG3	47:BF:91:ARG:HH11	1.40	0.86
49:BR:8:GLY:HA3	49:BR:23:GLU:HB2	1.57	0.86
3:CD:60:VAL:HB	3:CD:194:ILE:HD11	1.58	0.86
23:DB:558:U:OP1	41:DJ:113:PRO:HG2	1.75	0.86
20:AB:163:ILE:HG23	20:AB:164:ASP:H	1.41	0.86
23:BB:558:U:OP1	41:BJ:113:PRO:HG2	1.75	0.86
47:BF:135:ILE:HD11	47:BF:137:PHE:HB3	1.57	0.86
29:DE:119:ILE:HD11	29:DE:185:LYS:HE3	1.56	0.86
42:DN:101:GLY:HA2	42:DN:110:MET:H	1.41	0.86
51:DZ:71:LEU:HD13	51:DZ:76:GLU:HB3	1.57	0.86
38:BM:19:GLY:H	38:BM:38:ARG:HH12	1.23	0.86
49:DR:60:LYS:H	49:DR:100:GLY:HA3	1.41	0.86
23:BB:181:A:H2'	23:BB:182:A:C8	2.11	0.85
50:DT:67:VAL:HB	50:DT:76:ARG:HG3	1.57	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:102:ARG:HD3	29:BE:201:ALA:H	1.41	0.85
26:DD:178:VAL:HB	26:DD:188:LEU:HB2	1.56	0.85
49:DR:2:TYR:HB2	49:DR:42:ALA:HB2	1.56	0.85
43:BO:53:THR:HB	43:BO:65:THR:HG22	1.58	0.85
1:CA:1151:A:HO2'	1:CA:1152:A:H8	1.24	0.85
35:DV:42:LEU:HD12	35:DV:47:VAL:HG21	1.57	0.85
14:AO:36:ILE:HD11	14:AO:59:MET:HB2	1.57	0.85
23:BB:2266:A:H4'	23:BB:2267:A:N7	1.90	0.85
50:BT:67:VAL:HB	50:BT:76:ARG:HG3	1.55	0.85
41:BJ:58:ASN:HA	41:BJ:127:GLY:HA2	1.59	0.85
47:BF:35:LEU:HD23	47:BF:153:ILE:HG12	1.56	0.85
14:CO:36:ILE:HD11	14:CO:59:MET:HB2	1.58	0.85
23:DB:2502:G:H5'	23:DB:2503:A:H5"	1.58	0.85
12:AM:52:ILE:HD12	12:AM:55:LEU:HD12	1.59	0.85
23:BB:38:A:O2'	29:BE:43:THR:HA	1.75	0.85
46:BU:85:ARG:HD3	46:BU:86:PHE:H	1.42	0.85
46:DU:85:ARG:HD3	46:DU:86:PHE:H	1.42	0.85
36:B2:21:ARG:HD2	36:B2:43:THR:HG21	1.58	0.85
1:CA:1086:U:H3	1:CA:1099:G:H22	1.19	0.85
23:DB:1412:U:H2'	23:DB:1413:A:C8	2.11	0.85
26:DD:10:GLY:HA3	26:DD:26:VAL:H	1.39	0.85
47:DF:62:GLN:HG3	47:DF:91:ARG:HH11	1.41	0.85
53:D6:35:PRO:HD3	53:D6:60:ALA:HB2	1.59	0.85
23:BB:1283:G:H22	23:BB:1286:A:H5'	1.39	0.85
10:CK:24:ALA:HA	10:CK:29:THR:HG22	1.59	0.85
23:DB:1244:A:H5"	37:DL:8:PRO:HD3	1.57	0.85
4:CE:156:ARG:HA	4:CE:158:LYS:HZ2	1.39	0.85
26:DD:68:PHE:HB3	26:DD:73:VAL:HG23	1.56	0.85
16:AQ:75:VAL:HG23	16:AQ:76:ARG:H	1.42	0.85
23:BB:962:G:H21	23:BB:2250:G:H22	1.25	0.85
23:BB:1141:U:H4'	23:BB:1142:A:O4'	1.77	0.85
26:BD:68:PHE:HB3	26:BD:73:VAL:HG23	1.57	0.85
35:BV:70:ILE:HD13	35:BV:71:LYS:H	1.42	0.85
45:BS:66:ILE:HA	45:BS:69:LEU:HD22	1.59	0.85
9:CJ:12:ALA:HB2	9:CJ:96:VAL:HG12	1.56	0.85
23:DB:1141:U:H4'	23:DB:1142:A:O4'	1.77	0.85
44:DQ:63:ARG:HH22	44:DQ:96:ASP:HA	1.41	0.85
47:DF:45:ASP:HB3	47:DF:48:LEU:HD22	1.57	0.85
51:DZ:76:GLU:HG3	51:DZ:77:LYS:H	1.42	0.85
10:AK:86:LYS:HB3	10:AK:112:VAL:HG23	1.58	0.84
23:BB:1804:C:OP1	25:BC:256:THR:HB	1.76	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:27:ILE:HG21	8:CI:34:LEU:HD13	1.59	0.84
29:DE:110:SER:HB3	29:DE:114:ARG:HH12	1.41	0.84
23:BB:1019:U:H2'	23:BB:1020:A:H8	1.41	0.84
2:CC:137:VAL:HA	2:CC:148:ILE:HD13	1.59	0.84
23:BB:1287:A:OP1	42:BN:104:ALA:HB3	1.76	0.84
45:BS:24:ILE:HD11	45:BS:36:LEU:HD11	1.57	0.84
47:BF:45:ASP:HB3	47:BF:48:LEU:HD22	1.58	0.84
35:DV:70:ILE:HD13	35:DV:71:LYS:H	1.43	0.84
43:DO:53:THR:HB	43:DO:65:THR:HG22	1.60	0.84
23:BB:873:C:H4'	38:BM:64:TRP:HE1	1.42	0.84
49:BR:60:LYS:H	49:BR:100:GLY:HA3	1.43	0.84
15:CP:52:LEU:HD21	15:CP:75:ILE:HG12	1.57	0.84
51:DZ:38:PHE:HE2	51:DZ:51:VAL:HG21	1.42	0.84
2:AC:137:VAL:HA	2:AC:148:ILE:HD13	1.60	0.84
23:BB:2769:U:H2'	23:BB:2770:G:H8	1.43	0.84
51:BZ:71:LEU:HD13	51:BZ:76:GLU:HB3	1.60	0.84
10:CK:86:LYS:HB3	10:CK:112:VAL:HG23	1.60	0.84
20:CB:163:ILE:HG23	20:CB:164:ASP:H	1.41	0.84
26:BD:5:VAL:N	26:BD:32:ASN:HD21	1.75	0.84
47:BF:11:VAL:HG12	47:BF:12:VAL:H	1.42	0.84
37:DL:116:VAL:HG13	37:DL:117:THR:H	1.43	0.84
38:DM:19:GLY:H	38:DM:38:ARG:HH12	1.24	0.84
1:AA:79:G:H2'	1:AA:80:A:C8	2.11	0.84
23:DB:1203:U:H1'	37:DL:4:ASN:HD21	1.43	0.84
24:DI:27:LEU:H	24:DI:27:LEU:HD23	1.42	0.84
36:D2:21:ARG:HD2	36:D2:43:THR:HG21	1.59	0.84
1:AA:699:C:H2'	1:AA:700:G:H5"	1.58	0.84
23:DB:1019:U:H2'	23:DB:1020:A:C8	2.12	0.84
23:DB:2109:U:N3	23:DB:2180:U:H2'	1.93	0.84
44:DQ:63:ARG:HH12	44:DQ:96:ASP:HB2	1.42	0.84
45:DS:66:ILE:HA	45:DS:69:LEU:HD22	1.59	0.84
52:DW:17:ALA:HA	52:DW:35:ILE:HG23	1.59	0.84
1:AA:1206:G:H4'	2:AC:192:TYR:HA	1.60	0.83
29:BE:119:ILE:HD11	29:BE:185:LYS:HE3	1.60	0.83
40:BH:68:ARG:HB2	40:BH:134:VAL:HG11	1.58	0.83
40:BH:121:VAL:HG21	40:BH:128:HIS:NE2	1.93	0.83
28:DP:56:SER:HB2	28:DP:75:THR:HG21	1.60	0.83
48:DG:94:ARG:HB2	48:DG:127:GLN:HG2	1.60	0.83
9:AJ:12:ALA:HB2	9:AJ:96:VAL:HG12	1.58	0.83
46:DU:95:PHE:HE1	46:DU:102:ILE:HB	1.42	0.83
3:AD:60:VAL:HB	3:AD:194:ILE:HD11	1.59	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BI:129:GLU:HB3	24:BI:133:ARG:HH12	1.40	0.83
20:CB:118:THR:O	20:CB:122:ASP:HB3	1.79	0.83
37:BL:116:VAL:HG13	37:BL:117:THR:H	1.41	0.83
16:CQ:75:VAL:HG23	16:CQ:76:ARG:H	1.43	0.83
23:DB:1080:A:H4'	24:DI:126:ARG:HD3	1.61	0.83
45:DS:36:LEU:H	45:DS:36:LEU:HD22	1.43	0.83
52:DW:37:VAL:HG12	52:DW:38:ARG:H	1.43	0.83
29:BE:110:SER:HB3	29:BE:114:ARG:HH12	1.43	0.83
45:BS:36:LEU:HD22	45:BS:36:LEU:H	1.43	0.83
19:CT:38:ILE:HD11	19:CT:82:ILE:HG22	1.59	0.83
22:DA:98:G:N1	35:DV:14:LYS:HB2	1.94	0.83
23:DB:2039:U:H2'	23:DB:2040:G:H8	1.41	0.83
23:DB:2769:U:H2'	23:DB:2770:G:H8	1.43	0.83
47:DF:33:ILE:HD12	47:DF:95:MET:HG2	1.58	0.83
53:D6:38:LEU:HA	53:D6:41:LEU:HD13	1.59	0.83
46:BU:95:PHE:HE1	46:BU:102:ILE:HB	1.44	0.83
48:BG:94:ARG:HB2	48:BG:127:GLN:HG2	1.61	0.83
51:BZ:38:PHE:HE2	51:BZ:51:VAL:HG21	1.41	0.83
23:DB:2720:U:H5"	28:DP:52:ARG:NH2	1.94	0.83
52:BW:17:ALA:HA	52:BW:35:ILE:HG23	1.60	0.83
23:BB:189:G:H2'	23:BB:205:G:H22	1.44	0.83
23:BB:2144:G:N2	23:BB:2147:A:H4'	1.94	0.83
23:DB:181:A:H2'	23:DB:182:A:C8	2.13	0.83
47:DF:11:VAL:HG12	47:DF:12:VAL:H	1.43	0.83
47:DF:65:LEU:HD23	47:DF:87:LYS:HD2	1.61	0.83
23:BB:1060:U:C2	23:BB:1088:A:N7	2.47	0.83
40:BH:90:LEU:HD21	40:BH:146:VAL:HG21	1.59	0.83
8:CI:38:PHE:HZ	8:CI:74:GLN:HB3	1.43	0.83
12:CM:21:ILE:HB	12:CM:24:VAL:HG22	1.60	0.83
23:DB:96:C:H4'	39:DX:41:HIS:ND1	1.91	0.83
25:DC:144:GLU:HG3	25:DC:151:GLY:H	1.41	0.83
28:DP:75:THR:HG23	28:DP:76:HIS:H	1.43	0.83
43:DO:3:LYS:HD3	43:DO:3:LYS:H	1.43	0.83
32:B4:17:VAL:HG12	32:B4:18:LYS:H	1.44	0.83
4:CE:52:ALA:HB2	4:CE:61:LYS:HE2	1.61	0.83
26:BD:34:VAL:HG12	26:BD:94:GLN:H	1.42	0.82
29:BE:188:MET:HG2	29:BE:193:VAL:HG22	1.59	0.82
40:BH:121:VAL:HG21	40:BH:128:HIS:HE2	1.44	0.82
2:CC:57:GLU:HB2	2:CC:64:ARG:HB2	1.58	0.82
45:DS:24:ILE:HD11	45:DS:36:LEU:HD11	1.61	0.82
1:AA:79:G:H2'	1:AA:80:A:H8	1.43	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AP:52:LEU:HD21	15:AP:75:ILE:HG12	1.61	0.82
29:DE:188:MET:HG2	29:DE:193:VAL:HG22	1.61	0.82
2:AC:57:GLU:HB2	2:AC:64:ARG:HB2	1.62	0.82
37:BL:143:GLU:HG2	37:BL:144:GLU:N	1.89	0.82
5:CF:62:MET:HG3	5:CF:64:VAL:HG23	1.61	0.82
23:DB:1287:A:OP1	42:DN:104:ALA:HB3	1.79	0.82
46:DU:12:VAL:HG22	46:DU:69:VAL:HG12	1.60	0.82
1:CA:522:C:H41	11:CL:49:ARG:HH22	1.27	0.82
23:DB:1060:U:C2	23:DB:1088:A:N7	2.48	0.82
20:CB:198:VAL:HG12	20:CB:200:PRO:HD3	1.60	0.82
23:DB:1412:U:H2'	23:DB:1413:A:H8	1.44	0.82
23:DB:2548:U:H1'	27:DK:23:LYS:NZ	1.93	0.82
24:DI:121:ILE:HD13	24:DI:121:ILE:H	1.44	0.82
44:DQ:87:VAL:HB	49:DR:52:PRO:HG3	1.61	0.82
32:D4:17:VAL:HG12	32:D4:18:LYS:H	1.42	0.82
37:DL:6:LEU:H	37:DL:6:LEU:HD23	1.44	0.82
40:DH:46:PHE:HA	40:DH:50:ARG:HH21	1.44	0.82
1:AA:97:G:H2'	1:AA:98:A:O4'	1.80	0.82
1:CA:269:C:H2'	1:CA:270:A:C8	2.15	0.82
20:AB:94:ARG:HE	20:AB:94:ARG:N	1.77	0.82
23:BB:2502:G:H5'	23:BB:2503:A:H5"	1.58	0.82
47:DF:125:GLY:HA2	47:DF:162:ASP:HA	1.61	0.82
23:DB:1098:A:H2'	24:DI:4:VAL:N	1.95	0.82
27:DK:41:ILE:HG13	27:DK:42:THR:N	1.95	0.82
33:D1:49:LYS:HG3	33:D1:50:GLU:H	1.44	0.82
3:CD:77:GLU:HA	3:CD:80:ARG:HG2	1.62	0.81
23:DB:322:A:H2'	29:DE:163:ASN:HD21	1.45	0.81
23:DB:1099:G:P	24:DI:3:LYS:HA	2.20	0.81
33:D1:47:ILE:H	33:D1:47:ILE:HD12	1.45	0.81
51:DZ:30:LEU:H	51:DZ:30:LEU:HD23	1.44	0.81
39:BX:12:GLU:HA	39:BX:15:ASN:HD21	1.44	0.81
14:CO:70:LEU:HD11	14:CO:77:ARG:HB2	1.62	0.81
23:DB:2366:A:H4'	52:DW:61:LYS:HE2	1.62	0.81
35:DV:77:VAL:HG23	35:DV:89:ILE:HG23	1.62	0.81
45:DS:10:ALA:HB3	45:DS:101:SER:HB2	1.61	0.81
1:AA:973:G:H3'	1:AA:974:A:H5"	1.62	0.81
10:AK:28:ASN:HD21	10:AK:47:GLY:H	1.28	0.81
23:BB:616:A:H3'	23:BB:617:G:H8	1.43	0.81
25:BC:156:SER:O	25:BC:194:VAL:HG11	1.80	0.81
23:DB:126:A:H5'	36:D2:19:ARG:HG3	1.62	0.81
23:DB:460:A:H4'	50:DT:72:GLN:HB2	1.60	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1099:G:P	24:DI:4:VAL:H	2.02	0.81
26:DD:34:VAL:HG12	26:DD:94:GLN:H	1.45	0.81
39:DX:3:ALA:HA	39:DX:6:LEU:HD23	1.61	0.81
49:DR:34:GLU:HG2	49:DR:60:LYS:HG2	1.62	0.81
20:CB:94:ARG:HE	20:CB:94:ARG:N	1.78	0.81
23:DB:404:A:H4'	23:DB:405:U:H5'	1.63	0.81
23:DB:2179:C:O2	23:DB:2179:C:H2'	1.80	0.81
5:AF:62:MET:HG3	5:AF:64:VAL:HG23	1.62	0.81
20:AB:60:ALA:HA	20:AB:64:GLY:HA3	1.63	0.81
40:BH:73:ASN:HD22	40:BH:74:ALA:H	1.25	0.81
52:BW:39:GLN:HG2	52:BW:40:ARG:N	1.95	0.81
53:B6:58:VAL:HG22	53:B6:68:VAL:HG22	1.63	0.81
10:CK:22:ILE:HG21	10:CK:95:THR:HG21	1.63	0.81
40:DH:132:PHE:O	40:DH:139:PHE:HA	1.80	0.81
42:BN:2:ARG:HG2	42:BN:5:LYS:HB2	1.62	0.81
6:CG:104:VAL:HG12	6:CG:108:ARG:HD2	1.61	0.81
14:AO:70:LEU:HD11	14:AO:77:ARG:HB2	1.61	0.81
23:BB:2443:C:H2'	23:BB:2444:G:H8	1.45	0.81
20:CB:60:ALA:HA	20:CB:64:GLY:HA3	1.61	0.81
23:BB:1019:U:H2'	23:BB:1020:A:C8	2.16	0.81
50:DT:15:HIS:H	50:DT:32:LEU:HA	1.46	0.81
8:AI:38:PHE:HZ	8:AI:74:GLN:HB3	1.46	0.81
18:AS:30:LEU:H	18:AS:48:ILE:HA	1.45	0.81
28:BP:56:SER:HB2	28:BP:75:THR:HG21	1.63	0.81
51:BZ:35:SER:HA	51:BZ:50:ARG:HA	1.63	0.81
53:B6:143:LEU:O	53:B6:147:LEU:HG	1.80	0.81
23:DB:616:A:H3'	23:DB:617:G:H8	1.45	0.81
1:AA:269:C:H2'	1:AA:270:A:C8	2.15	0.81
8:AI:48:ARG:HA	8:AI:51:LEU:HD12	1.63	0.81
1:CA:505:G:H5'	1:CA:534:U:H2'	1.62	0.81
1:CA:1170:A:H5'	20:CB:138:ARG:HH12	1.46	0.81
16:CQ:79:GLU:HG3	16:CQ:80:LYS:HZ1	1.46	0.81
1:AA:505:G:H5'	1:AA:534:U:H2'	1.63	0.80
11:CL:24:GLU:HB2	11:CL:26:CYS:SG	2.21	0.80
35:BV:61:LEU:HD11	35:BV:74:ALA:HB2	1.64	0.80
36:B2:30:VAL:HA	36:B2:33:ARG:NH2	1.96	0.80
46:BU:12:VAL:HG22	46:BU:69:VAL:HG12	1.62	0.80
12:CM:52:ILE:HD12	12:CM:55:LEU:HD12	1.61	0.80
41:DJ:25:LEU:HD22	41:DJ:26:GLY:H	1.44	0.80
23:BB:129:C:H2'	23:BB:130:C:C6	2.17	0.80
23:BB:858:G:H21	23:BB:2268:A:H3'	1.45	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BI:55:PRO:HD3	24:BI:74:PRO:HD3	1.63	0.80
29:DE:47:LYS:HB3	29:DE:51:GLU:HB2	1.61	0.80
12:AM:21:ILE:HB	12:AM:24:VAL:HG22	1.62	0.80
25:BC:144:GLU:HG3	25:BC:151:GLY:H	1.46	0.80
23:DB:1437:C:H2'	23:DB:1438:U:C6	2.16	0.80
34:D3:49:VAL:HG21	34:D3:54:LEU:HD13	1.63	0.80
1:AA:764:C:H2'	1:AA:765:G:H5'	1.63	0.80
5:AF:29:ILE:HG21	5:AF:64:VAL:HG11	1.62	0.80
34:B3:49:VAL:HG21	34:B3:54:LEU:HD13	1.64	0.80
44:BQ:63:ARG:HH12	44:BQ:96:ASP:HB2	1.46	0.80
25:DC:156:SER:O	25:DC:194:VAL:HG11	1.81	0.80
43:DO:27:VAL:HG21	43:DO:40:ILE:HD12	1.63	0.80
47:DF:110:ILE:HA	47:DF:111:ARG:CZ	2.12	0.80
33:B1:47:ILE:HD12	33:B1:47:ILE:H	1.45	0.80
33:B1:49:LYS:HG3	33:B1:50:GLU:H	1.44	0.80
38:BM:19:GLY:HA2	38:BM:97:GLN:HB2	1.62	0.80
1:CA:1206:G:H4'	2:CC:192:TYR:HA	1.62	0.80
42:DN:33:ILE:HG22	42:DN:114:GLU:HB2	1.62	0.80
9:AJ:12:ALA:HB3	9:AJ:18:ILE:HB	1.64	0.80
40:BH:72:ILE:HD12	40:BH:110:VAL:HG11	1.64	0.80
5:CF:29:ILE:HG21	5:CF:64:VAL:HG11	1.63	0.80
24:DI:21:PRO:HB2	24:DI:22:PRO:HD3	1.64	0.80
38:DM:134:THR:HG22	38:DM:136:MET:H	1.45	0.80
42:DN:80:PHE:O	42:DN:85:PRO:HD3	1.81	0.80
3:AD:77:GLU:HA	3:AD:80:ARG:HG2	1.62	0.80
6:AG:104:VAL:HG12	6:AG:108:ARG:HD2	1.64	0.80
23:BB:1060:U:OP2	24:BI:74:PRO:HA	1.80	0.80
23:BB:1993:U:H4'	26:BD:133:THR:HG21	1.64	0.80
48:BG:17:LYS:HZ2	48:BG:18:ILE:H	1.29	0.80
23:DB:2579:C:H1'	26:DD:130:GLN:HE22	1.46	0.80
27:DK:47:ILE:HG12	27:DK:48:PRO:HD2	1.64	0.80
45:BS:10:ALA:HB3	45:BS:101:SER:HB2	1.64	0.80
23:BB:1459:G:H4'	23:BB:1461:C:N4	1.96	0.80
40:BH:116:ARG:NH1	40:BH:133:GLN:HB2	1.97	0.80
43:BO:27:VAL:HG21	43:BO:40:ILE:HD12	1.64	0.80
8:AI:34:LEU:HD21	8:AI:48:ARG:HE	1.48	0.79
47:BF:110:ILE:HA	47:BF:111:ARG:CZ	2.13	0.79
50:BT:11:LEU:H	50:BT:11:LEU:HD22	1.47	0.79
20:AB:202:ASN:ND2	20:AB:204:ASP:H	1.79	0.79
24:DI:11:GLN:HG2	24:DI:55:PRO:HB3	1.64	0.79
42:DN:2:ARG:HG2	42:DN:5:LYS:HB2	1.65	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AK:24:ALA:HA	10:AK:29:THR:HG22	1.64	0.79
23:BB:181:A:H2'	23:BB:182:A:H8	1.45	0.79
23:BB:287:G:H2'	23:BB:288:U:C6	2.17	0.79
28:BP:75:THR:HG23	28:BP:76:HIS:H	1.44	0.79
11:CL:33:CYS:HA	11:CL:54:VAL:HA	1.64	0.79
23:DB:1099:G:H5"	24:DI:3:LYS:N	1.98	0.79
1:AA:842:U:H2'	1:AA:843:U:O3'	1.83	0.79
38:BM:37:GLY:HA3	38:BM:127:LYS:NZ	1.97	0.79
8:CI:48:ARG:HA	8:CI:51:LEU:HD12	1.63	0.79
23:BB:1412:U:H2'	23:BB:1413:A:H8	1.46	0.79
34:B3:18:LYS:HD2	34:B3:20:GLY:H	1.47	0.79
50:BT:15:HIS:H	50:BT:32:LEU:HA	1.46	0.79
3:CD:149:LYS:HD3	3:CD:177:MET:HG3	1.65	0.79
23:DB:858:G:N3	23:DB:2268:A:H2'	1.97	0.79
23:DB:1796:U:H2'	23:DB:1797:G:H8	1.48	0.79
36:D2:30:VAL:HA	36:D2:33:ARG:NH2	1.96	0.79
6:AG:142:ARG:HH11	6:AG:142:ARG:HB2	1.47	0.79
20:AB:198:VAL:HG12	20:AB:200:PRO:HD3	1.63	0.79
50:BT:69:ARG:HB3	50:BT:74:ILE:HA	1.65	0.79
1:CA:764:C:H2'	1:CA:765:G:H5'	1.65	0.79
23:DB:2741:A:H2'	23:DB:2742:G:O4'	1.82	0.79
43:DO:5:SER:HA	43:DO:8:ILE:HD12	1.65	0.79
51:DZ:35:SER:HA	51:DZ:50:ARG:HA	1.62	0.79
5:AF:1:MET:SD	5:AF:67:PRO:HD3	2.22	0.79
20:AB:156:LEU:H	20:AB:156:LEU:HD12	1.48	0.79
51:BZ:30:LEU:HD23	51:BZ:30:LEU:H	1.46	0.79
53:B6:134:ARG:NH2	53:B6:135:GLU:HG2	1.98	0.79
23:DB:1199:U:H2'	23:DB:1200:C:H6	1.48	0.79
2:AC:149:LYS:HB3	2:AC:200:TRP:HB2	1.65	0.79
6:AG:112:ASP:HB2	6:AG:118:ARG:HG2	1.65	0.79
23:BB:1082:U:C4	23:BB:1086:A:C2	2.71	0.79
23:BB:1437:C:H2'	23:BB:1438:U:C6	2.18	0.79
23:BB:2039:U:H2'	23:BB:2040:G:C8	2.16	0.79
42:BN:33:ILE:HG22	42:BN:114:GLU:HB2	1.62	0.79
22:DA:2:G:H2'	22:DA:3:C:H6	1.47	0.79
23:DB:1283:G:H22	23:DB:1286:A:H5'	1.45	0.79
40:DH:86:ASP:HB2	40:DH:89:LYS:HD3	1.65	0.79
41:DJ:58:ASN:HA	41:DJ:127:GLY:HA2	1.62	0.79
52:BW:9:THR:HG23	52:BW:10:ARG:HD3	1.65	0.79
1:AA:376:G:H5"	15:AP:5:ARG:HB2	1.65	0.79
12:AM:19:THR:HA	12:AM:24:VAL:HG23	1.65	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:135:U:H2'	23:BB:136:G:C8	2.18	0.79
48:BG:157:LYS:HB3	48:BG:159:LYS:HG3	1.63	0.79
1:CA:1399:C:H4'	1:CA:1400:C:C5'	2.12	0.79
11:CL:48:LEU:HD22	53:D6:84:ARG:HH12	1.47	0.79
23:DB:1916:A:H2'	23:DB:1917:U:O4'	1.83	0.79
29:DE:29:HIS:NE2	37:DL:8:PRO:HG3	1.98	0.79
35:DV:61:LEU:HD11	35:DV:74:ALA:HB2	1.64	0.79
1:AA:116:A:H61	1:AA:313:A:H1'	1.48	0.78
6:AG:148:LYS:HG3	6:AG:151:ALA:HB3	1.63	0.78
23:BB:364:C:H2'	23:BB:365:U:C6	2.18	0.78
24:BI:21:PRO:HB2	24:BI:22:PRO:HD3	1.63	0.78
29:BE:29:HIS:NE2	37:BL:8:PRO:HG3	1.99	0.78
48:BG:167:VAL:HG23	48:BG:168:VAL:H	1.48	0.78
23:DB:90:U:H3'	23:DB:91:A:H5"	1.64	0.78
23:BB:163:C:H2'	23:BB:164:C:O4'	1.83	0.78
35:BV:31:TYR:HB3	35:BV:37:PRO:HG3	1.66	0.78
51:BZ:76:GLU:HG3	51:BZ:77:LYS:N	1.98	0.78
9:CJ:12:ALA:HB3	9:CJ:18:ILE:HB	1.63	0.78
12:CM:19:THR:HA	12:CM:24:VAL:HG23	1.63	0.78
17:CR:34:GLU:HB2	21:CU:18:PHE:HZ	1.46	0.78
25:DC:41:GLY:HA3	25:DC:53:ILE:HG21	1.66	0.78
28:DP:20:ARG:HG3	28:DP:21:PRO:HD2	1.65	0.78
28:DP:63:ILE:HA	28:DP:68:GLY:HA2	1.66	0.78
41:BJ:112:GLY:H	41:BJ:113:PRO:HD2	1.47	0.78
23:DB:1804:C:OP1	25:DC:256:THR:HB	1.82	0.78
23:DB:2144:G:O2'	23:DB:2146:C:H5"	1.83	0.78
23:DB:2346:A:H3'	23:DB:2347:C:H5"	1.63	0.78
35:DV:31:TYR:HB3	35:DV:37:PRO:HG3	1.65	0.78
48:DG:84:LYS:HB3	48:DG:132:LEU:O	1.83	0.78
10:AK:22:ILE:HG21	10:AK:95:THR:HG21	1.63	0.78
13:AN:63:CYS:HB3	13:AN:67:GLY:N	1.95	0.78
23:BB:2798:U:H1'	23:BB:2800:A:N6	1.99	0.78
24:BI:106:GLN:O	24:BI:110:GLN:HG3	1.84	0.78
41:BJ:25:LEU:HD22	41:BJ:26:GLY:H	1.48	0.78
49:BR:34:GLU:HG2	49:BR:60:LYS:HG2	1.65	0.78
8:CI:34:LEU:HD21	8:CI:48:ARG:HE	1.47	0.78
41:DJ:112:GLY:H	41:DJ:113:PRO:HD2	1.47	0.78
4:AE:81:GLN:H	4:AE:146:MET:HE3	1.44	0.78
23:BB:2886:A:H62	31:B0:39:ARG:NE	1.81	0.78
23:DB:1324:G:H1'	23:DB:1616:A:N6	1.97	0.78
38:DM:43:ALA:O	38:DM:46:ILE:HG12	1.84	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:33:ILE:HD13	47:DF:98:PHE:HD2	1.46	0.78
1:AA:781:A:H2'	1:AA:782:A:H5'	1.66	0.78
16:AQ:13:SER:HB3	16:AQ:21:VAL:HB	1.66	0.78
48:BG:36:LEU:HD22	48:BG:36:LEU:H	1.48	0.78
1:CA:946:A:H2'	1:CA:947:G:C8	2.19	0.78
10:CK:28:ASN:HD21	10:CK:47:GLY:H	1.29	0.78
23:DB:163:C:H2'	23:DB:164:C:O4'	1.84	0.78
23:DB:1097:U:H2'	23:DB:1098:A:O4'	1.82	0.78
42:DN:85:PRO:HA	42:DN:88:ALA:HB2	1.66	0.78
52:DW:49:ASN:HB2	52:DW:60:ALA:HA	1.64	0.78
4:AE:52:ALA:HB2	4:AE:61:LYS:HE2	1.66	0.78
17:AR:34:GLU:HB2	21:AU:18:PHE:HZ	1.47	0.78
1:CA:1404:C:H2'	1:CA:1405:G:C8	2.18	0.78
23:DB:38:A:O2'	29:DE:43:THR:HA	1.84	0.78
22:BA:66:A:H61	22:BA:107:G:H2'	1.49	0.78
23:BB:1199:U:H2'	23:BB:1200:C:H6	1.48	0.78
44:BQ:111:LYS:HB2	49:BR:48:LYS:NZ	1.99	0.78
2:CC:156:LEU:HD11	2:CC:165:GLU:HB2	1.65	0.78
23:DB:1175:A:H3'	23:DB:1176:U:H5'	1.64	0.78
23:DB:1447:C:H2'	23:DB:1448:G:H8	1.49	0.78
24:DI:45:THR:HA	24:DI:48:ILE:HG22	1.66	0.78
35:DV:72:VAL:HG21	35:DV:91:PHE:HB3	1.66	0.78
1:AA:946:A:H2'	1:AA:947:G:C8	2.19	0.78
35:BV:70:ILE:HG12	35:BV:72:VAL:HG13	1.66	0.78
39:BX:3:ALA:HA	39:BX:6:LEU:HD23	1.66	0.78
48:BG:84:LYS:HB3	48:BG:132:LEU:O	1.83	0.78
52:BW:49:ASN:HB2	52:BW:60:ALA:HA	1.66	0.78
1:CA:781:A:H2'	1:CA:782:A:H5'	1.66	0.78
29:DE:145:ASP:HA	29:DE:166:LYS:HB3	1.66	0.78
21:AU:43:GLU:HA	21:AU:46:ARG:HD2	1.64	0.78
23:BB:129:C:H2'	23:BB:130:C:H6	1.48	0.78
48:BG:71:LEU:HA	48:BG:74:MET:SD	2.24	0.78
10:CK:17:ASP:HB3	10:CK:80:ASN:ND2	1.98	0.78
18:CS:61:VAL:HA	18:CS:65:MET:SD	2.23	0.78
23:DB:281:C:H2'	23:DB:282:A:H8	1.47	0.78
52:DW:39:GLN:HG2	52:DW:40:ARG:N	1.99	0.78
23:BB:1412:U:H2'	23:BB:1413:A:C8	2.18	0.77
23:BB:2769:U:H2'	23:BB:2770:G:C8	2.18	0.77
21:CU:43:GLU:HA	21:CU:46:ARG:HD2	1.66	0.77
11:AL:24:GLU:HB2	11:AL:26:CYS:SG	2.24	0.77
23:BB:2039:U:H2'	23:BB:2040:G:H8	1.46	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BK:41:ILE:HG13	27:BK:42:THR:N	1.98	0.77
27:BK:47:ILE:HG12	27:BK:48:PRO:HD2	1.66	0.77
35:BV:44:HIS:HE1	35:BV:86:LEU:H	1.31	0.77
41:BJ:57:LEU:HG	41:BJ:128:ASN:H	1.49	0.77
1:CA:1078:U:H4'	4:CE:137:ARG:NH1	1.98	0.77
23:DB:181:A:H2'	23:DB:182:A:H8	1.46	0.77
23:DB:547:A:H5'	23:DB:548:G:H21	1.48	0.77
52:DW:9:THR:HG23	52:DW:10:ARG:HD3	1.66	0.77
1:AA:522:C:H41	11:AL:49:ARG:HH22	1.29	0.77
1:AA:1238:A:H5'	1:AA:1336:C:H41	1.49	0.77
46:BU:81:ARG:HH21	46:BU:81:ARG:H	1.33	0.77
13:CN:63:CYS:HB3	13:CN:67:GLY:N	1.99	0.77
32:D4:7:VAL:HG13	32:D4:8:LYS:H	1.48	0.77
38:DM:71:LYS:HE3	38:DM:73:ILE:HD11	1.65	0.77
19:AT:66:ILE:HG23	19:AT:70:LYS:HB3	1.67	0.77
33:B1:9:LYS:HD3	33:B1:9:LYS:H	1.48	0.77
44:BQ:87:VAL:HB	49:BR:52:PRO:HG3	1.64	0.77
1:CA:376:G:H5"	15:CP:5:ARG:HB2	1.66	0.77
1:CA:973:G:H3'	1:CA:974:A:H5"	1.64	0.77
1:CA:1078:U:H4'	4:CE:137:ARG:HH12	1.49	0.77
1:CA:1534:A:H62	21:CU:44:ARG:HH12	1.29	0.77
6:CG:142:ARG:HB2	6:CG:142:ARG:HH11	1.50	0.77
34:D3:18:LYS:HD2	34:D3:20:GLY:H	1.50	0.77
38:DM:19:GLY:HA2	38:DM:97:GLN:HB2	1.64	0.77
23:BB:942:G:H2'	23:BB:943:A:O4'	1.84	0.77
32:B4:7:VAL:HG13	32:B4:8:LYS:H	1.48	0.77
40:BH:90:LEU:HD11	40:BH:146:VAL:HG11	1.66	0.77
41:BJ:36:LEU:HD12	41:BJ:121:LYS:HE3	1.66	0.77
1:CA:842:U:H2'	1:CA:843:U:O3'	1.84	0.77
23:DB:142:A:H2'	23:DB:143:C:C6	2.19	0.77
28:DP:26:GLU:HB3	28:DP:84:SER:HB3	1.67	0.77
3:AD:10:LEU:HB3	3:AD:62:ARG:HD3	1.66	0.77
11:AL:33:CYS:HA	11:AL:54:VAL:HA	1.64	0.77
23:BB:98:G:H22	46:BU:6:ARG:NH1	1.82	0.77
42:BN:45:ARG:HG3	42:BN:95:THR:HG21	1.66	0.77
46:BU:27:VAL:HG23	46:BU:33:VAL:HG12	1.67	0.77
53:B6:106:LEU:HD23	53:B6:106:LEU:H	1.50	0.77
3:CD:70:GLN:HE22	3:CD:96:ARG:HH12	1.32	0.77
23:DB:1080:A:H2'	23:DB:1081:U:H6	1.48	0.77
23:DB:2039:U:H2'	23:DB:2040:G:C8	2.19	0.77
24:DI:72:THR:HG21	24:DI:112:LYS:HA	1.67	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DX:12:GLU:HA	39:DX:15:ASN:HD21	1.48	0.77
22:BA:104:A:H2'	22:BA:105:G:O4'	1.85	0.77
24:BI:27:LEU:HD12	24:BI:32:VAL:HG11	1.66	0.77
39:BX:37:LEU:HD23	39:BX:39:GLN:H	1.49	0.77
42:DN:107:ASN:HD21	45:DS:40:ASN:HD22	1.32	0.77
1:AA:993:G:H2'	1:AA:995:C:H41	1.50	0.77
23:BB:773:U:H5'	23:BB:774:G:OP2	1.85	0.77
23:BB:1551:A:H3'	23:BB:1552:A:H5"	1.67	0.77
29:BE:47:LYS:HB3	29:BE:51:GLU:HB2	1.65	0.77
3:CD:25:ARG:HD3	3:CD:26:ALA:N	2.00	0.77
6:CG:23:ALA:O	6:CG:26:VAL:HG22	1.85	0.77
23:DB:102:U:H2'	39:DX:2:LYS:HE3	1.66	0.77
23:DB:1911:U:H2'	23:DB:1918:A:N1	1.99	0.77
1:AA:239:U:OP1	1:AA:239:U:H4'	1.83	0.77
5:AF:6:ILE:HG23	5:AF:62:MET:HB3	1.66	0.77
23:BB:1203:U:H1'	37:BL:4:ASN:ND2	1.95	0.77
23:BB:2563:U:H2'	23:BB:2565:A:OP2	1.85	0.77
23:BB:2720:U:H5"	28:BP:52:ARG:NH2	2.00	0.77
37:BL:6:LEU:HD23	37:BL:6:LEU:H	1.46	0.77
1:CA:1328:C:H5"	12:CM:27:THR:HG21	1.65	0.77
9:CJ:51:VAL:HG23	13:CN:80:ARG:HB2	1.67	0.77
9:CJ:52:LEU:HG	9:CJ:62:ARG:HE	1.50	0.77
10:CK:55:ARG:HH12	10:CK:60:PHE:HD1	1.32	0.77
23:DB:547:A:H5'	23:DB:548:G:N2	1.99	0.77
23:DB:1082:U:C4	23:DB:1086:A:C2	2.73	0.77
23:DB:1551:A:H3'	23:DB:1552:A:H5"	1.67	0.77
23:DB:2800:A:H2'	23:DB:2801:G:O4'	1.85	0.77
42:DN:45:ARG:HG3	42:DN:95:THR:HG21	1.66	0.77
1:AA:1399:C:H4'	1:AA:1400:C:C5'	2.15	0.77
28:BP:7:LEU:HD12	28:BP:7:LEU:H	1.49	0.77
37:BL:121:THR:HB	37:BL:141:LYS:HD2	1.66	0.77
38:BM:43:ALA:O	38:BM:46:ILE:HG12	1.84	0.77
48:DG:36:LEU:H	48:DG:36:LEU:HD22	1.50	0.77
1:AA:1458:G:H5"	19:AT:25:SER:HB2	1.67	0.76
23:BB:1199:U:H2'	23:BB:1200:C:C6	2.20	0.76
27:BK:112:PHE:O	27:BK:115:ILE:HG22	1.84	0.76
38:BM:2:LEU:HD23	38:BM:46:ILE:HD11	1.65	0.76
42:BN:80:PHE:O	42:BN:85:PRO:HD3	1.83	0.76
1:CA:116:A:H61	1:CA:313:A:H1'	1.49	0.76
1:CA:269:C:H2'	1:CA:270:A:H8	1.50	0.76
23:DB:856:G:H1'	52:DW:23:LYS:HB3	1.66	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DH:54:LEU:HD22	40:DH:58:LEU:HD11	1.65	0.76
49:DR:28:ALA:O	49:DR:63:VAL:HG21	1.84	0.76
50:DT:29:THR:H	50:DT:91:GLN:HE22	1.32	0.76
1:AA:1328:C:H5"	12:AM:27:THR:HG21	1.68	0.76
23:BB:1076:C:H4'	24:BI:94:LYS:CE	2.14	0.76
23:BB:2732:G:H3'	23:BB:2733:A:H5'	1.66	0.76
49:BR:28:ALA:O	49:BR:63:VAL:HG21	1.85	0.76
1:CA:408:A:OP1	3:CD:111:ALA:HB3	1.85	0.76
1:CA:706:A:H4'	10:CK:30:ILE:HD11	1.68	0.76
1:CA:993:G:H2'	1:CA:995:C:H41	1.49	0.76
18:CS:30:LEU:H	18:CS:48:ILE:HA	1.48	0.76
23:DB:2103:C:H3'	23:DB:2104:C:C2	2.21	0.76
28:DP:7:LEU:H	28:DP:7:LEU:HD12	1.51	0.76
39:DX:37:LEU:HD23	39:DX:39:GLN:H	1.50	0.76
3:AD:149:LYS:HD3	3:AD:177:MET:HG3	1.67	0.76
23:BB:2795:C:H2'	23:BB:2796:U:O4'	1.85	0.76
28:BP:26:GLU:HB3	28:BP:84:SER:HB3	1.67	0.76
44:BQ:105:PHE:HA	44:BQ:108:LEU:HD12	1.66	0.76
1:CA:1226:C:H4'	1:CA:1227:A:OP1	1.84	0.76
1:CA:1238:A:H5'	1:CA:1336:C:H41	1.49	0.76
51:DZ:7:VAL:HG13	51:DZ:8:THR:HG23	1.66	0.76
23:BB:90:U:H3'	23:BB:91:A:H5"	1.67	0.76
26:BD:106:LYS:HB3	26:BD:206:ALA:N	2.00	0.76
2:CC:26:LYS:HG3	2:CC:27:GLU:H	1.50	0.76
23:DB:2732:G:H3'	23:DB:2733:A:H5'	1.68	0.76
51:DZ:54:LYS:HA	51:DZ:57:ARG:HD3	1.67	0.76
1:AA:1238:A:H5'	1:AA:1336:C:N4	2.00	0.76
2:AC:26:LYS:HG3	2:AC:27:GLU:H	1.49	0.76
38:BM:134:THR:HG22	38:BM:136:MET:H	1.48	0.76
1:CA:674:G:H2'	1:CA:675:A:H8	1.49	0.76
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.21	0.76
23:DB:1099:G:OP2	24:DI:3:LYS:HA	1.85	0.76
23:DB:2674:G:H4'	27:DK:30:ARG:HG3	1.67	0.76
24:DI:105:LEU:HD13	24:DI:129:GLU:HG2	1.65	0.76
35:DV:70:ILE:HG12	35:DV:72:VAL:HG13	1.68	0.76
40:DH:96:THR:HG23	40:DH:97:ARG:H	1.50	0.76
2:AC:69:THR:HG21	2:AC:75:VAL:HG21	1.66	0.76
10:AK:17:ASP:HB3	10:AK:80:ASN:ND2	2.01	0.76
23:BB:1447:C:H2'	23:BB:1448:G:H8	1.50	0.76
23:BB:2306:C:H3'	23:BB:2307:G:H5'	1.68	0.76
23:BB:2591:C:H2'	23:BB:2592:G:C8	2.21	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BM:19:GLY:HA2	38:BM:98:PRO:HD2	1.67	0.76
1:CA:1238:A:H5'	1:CA:1336:C:N4	2.00	0.76
40:DH:127:GLU:HA	40:DH:145:ASN:HA	1.66	0.76
53:D6:137:LEU:HD13	53:D6:161:ILE:HG21	1.68	0.76
1:AA:674:G:H2'	1:AA:675:A:H8	1.51	0.76
2:AC:156:LEU:HD11	2:AC:165:GLU:HB2	1.65	0.76
10:AK:55:ARG:HH12	10:AK:60:PHE:HD1	1.31	0.76
23:BB:590:A:H2'	23:BB:591:U:C6	2.21	0.76
25:BC:132:ARG:HD3	25:BC:166:ARG:HH12	1.51	0.76
1:CA:1534:A:N6	21:CU:44:ARG:HH22	1.84	0.76
22:DA:66:A:H61	22:DA:107:G:H2'	1.51	0.76
23:DB:2813:A:H2'	23:DB:2814:A:H8	1.51	0.76
1:AA:532:A:N6	2:AC:191:THR:HB	2.01	0.76
41:BJ:17:VAL:HG23	41:BJ:137:PRO:HB2	1.66	0.76
24:DI:55:PRO:HD3	24:DI:74:PRO:HD3	1.67	0.76
26:DD:91:THR:HG23	26:DD:92:VAL:H	1.51	0.76
41:DJ:57:LEU:HG	41:DJ:128:ASN:H	1.50	0.76
1:AA:1226:C:H4'	1:AA:1227:A:OP1	1.86	0.76
40:BH:130:VAL:HG23	40:BH:142:VAL:HB	1.67	0.76
49:BR:7:SER:HB2	49:BR:22:LEU:HB3	1.68	0.76
1:CA:575:G:H4'	1:CA:576:C:O5'	1.85	0.76
3:CD:10:LEU:HB3	3:CD:62:ARG:HD3	1.67	0.76
23:DB:590:A:H2'	23:DB:591:U:C6	2.21	0.76
27:DK:102:PRO:HA	27:DK:120:PRO:HB3	1.67	0.76
41:DJ:17:VAL:HG23	41:DJ:137:PRO:HB2	1.67	0.76
46:DU:78:LYS:HD3	46:DU:79:ALA:H	1.48	0.76
50:DT:11:LEU:HD22	50:DT:11:LEU:H	1.51	0.76
53:D6:30:THR:C	53:D6:32:ARG:H	1.86	0.76
4:AE:93:VAL:HG13	4:AE:126:ALA:HB2	1.68	0.76
6:AG:21:LEU:HD23	6:AG:21:LEU:H	1.51	0.76
23:BB:274:C:H2'	23:BB:275:C:O4'	1.85	0.76
28:BP:20:ARG:HG3	28:BP:21:PRO:HD2	1.67	0.76
1:CA:1534:A:N6	21:CU:44:ARG:HH12	1.83	0.76
3:CD:155:LYS:HA	3:CD:158:LEU:HD12	1.66	0.76
26:DD:106:LYS:HB3	26:DD:206:ALA:N	2.00	0.76
48:DG:157:LYS:HB3	48:DG:159:LYS:HG3	1.67	0.76
23:BB:79:C:HO2'	23:BB:346:A:H1'	1.48	0.75
47:BF:65:LEU:HD23	47:BF:87:LYS:HD2	1.68	0.75
51:BZ:7:VAL:HG13	51:BZ:8:THR:HG23	1.68	0.75
11:CL:51:VAL:HG12	11:CL:52:CYS:H	1.51	0.75
23:DB:1535:A:H3'	23:DB:1536:C:H6	1.51	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1993:U:H4'	26:DD:133:THR:HG21	1.68	0.75
38:DM:19:GLY:HA2	38:DM:98:PRO:HD2	1.67	0.75
1:AA:373:A:H1'	1:AA:481:G:N3	2.01	0.75
6:AG:23:ALA:O	6:AG:26:VAL:HG22	1.87	0.75
23:BB:137:U:H2'	23:BB:138:U:O4'	1.87	0.75
23:BB:404:A:H4'	23:BB:405:U:H5'	1.69	0.75
23:BB:2144:G:H2'	23:BB:2146:C:H5'	1.67	0.75
1:CA:1170:A:H5'	20:CB:138:ARG:NH1	2.00	0.75
12:CM:10:ASP:HA	12:CM:44:ILE:HD13	1.68	0.75
23:DB:1080:A:H4'	24:DI:126:ARG:CD	2.15	0.75
23:DB:2305:U:H5"	47:DF:130:GLY:HA3	1.67	0.75
34:D3:37:THR:HA	34:D3:40:LYS:HE2	1.68	0.75
46:DU:27:VAL:HG23	46:DU:33:VAL:HG12	1.67	0.75
48:DG:71:LEU:HA	48:DG:74:MET:SD	2.26	0.75
8:AI:94:ARG:HH11	8:AI:94:ARG:HB3	1.51	0.75
9:AJ:8:ILE:HG13	9:AJ:100:ILE:HG22	1.67	0.75
21:AU:36:PHE:HB3	21:AU:40:PRO:CD	2.14	0.75
22:BA:49:C:H2'	22:BA:50:A:H8	1.51	0.75
23:BB:2078:C:H2'	23:BB:2079:U:C6	2.21	0.75
23:BB:2813:A:H2'	23:BB:2814:A:H8	1.51	0.75
35:BV:72:VAL:HG12	35:BV:93:ARG:HA	1.69	0.75
48:BG:17:LYS:HZ3	48:BG:17:LYS:HA	1.50	0.75
8:CI:19:PHE:HB2	8:CI:63:TYR:HB3	1.68	0.75
13:CN:26:LEU:HD23	13:CN:27:LYS:H	1.51	0.75
19:CT:66:ILE:HG23	19:CT:70:LYS:HB3	1.68	0.75
23:DB:1099:G:O4'	24:DI:3:LYS:C	2.24	0.75
23:DB:1406:U:H2'	23:DB:1407:G:C8	2.22	0.75
23:DB:1597:A:H5"	23:DB:1598:A:H5'	1.67	0.75
51:DZ:76:GLU:HG3	51:DZ:77:LYS:N	1.99	0.75
52:DW:39:GLN:NE2	52:DW:42:THR:HB	2.00	0.75
53:D6:61:PRO:HG2	53:D6:67:VAL:HG13	1.65	0.75
11:AL:51:VAL:HG12	11:AL:52:CYS:H	1.52	0.75
23:BB:1790:C:O2'	25:BC:207:ALA:HB2	1.86	0.75
34:B3:37:THR:HA	34:B3:40:LYS:HE2	1.68	0.75
48:DG:115:GLN:CD	48:DG:115:GLN:H	1.89	0.75
3:AD:25:ARG:HD3	3:AD:26:ALA:N	2.02	0.75
3:AD:70:GLN:HE22	3:AD:96:ARG:HH12	1.34	0.75
3:AD:155:LYS:HA	3:AD:158:LEU:HD12	1.67	0.75
10:AK:22:ILE:HD12	10:AK:85:VAL:HG22	1.69	0.75
23:BB:423:A:H5'	23:BB:424:G:C5'	2.16	0.75
26:BD:34:VAL:CG1	26:BD:94:GLN:H	1.99	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:148:ILE:HA	29:BE:187:VAL:HB	1.68	0.75
42:BN:107:ASN:HD21	45:BS:40:ASN:HD22	1.33	0.75
23:DB:1230:A:H2'	23:DB:1231:U:C6	2.22	0.75
25:DC:132:ARG:HD3	25:DC:166:ARG:HH12	1.48	0.75
3:AD:138:PRO:HA	3:AD:181:PHE:HD2	1.50	0.75
23:BB:2346:A:H3'	23:BB:2347:C:H5"	1.68	0.75
47:BF:33:ILE:HD13	47:BF:98:PHE:HD2	1.50	0.75
51:BZ:49:LEU:H	51:BZ:49:LEU:HD12	1.51	0.75
53:B6:50:VAL:HG21	53:B6:55:ILE:HD13	1.68	0.75
1:CA:1534:A:H62	21:CU:44:ARG:HH22	1.35	0.75
2:CC:69:THR:HG21	2:CC:75:VAL:HG21	1.68	0.75
3:CD:138:PRO:HA	3:CD:181:PHE:HD2	1.52	0.75
3:CD:146:GLU:HA	3:CD:149:LYS:HG2	1.67	0.75
23:DB:878:A:H1'	23:DB:899:A:H62	1.52	0.75
23:DB:1098:A:H2'	24:DI:4:VAL:CA	2.17	0.75
35:DV:44:HIS:HE1	35:DV:86:LEU:H	1.32	0.75
1:AA:1032:G:H5"	1:AA:1032:G:N3	2.02	0.75
9:AJ:51:VAL:HG23	13:AN:80:ARG:HB2	1.68	0.75
23:BB:728:G:HO2'	23:BB:730:A:H8	1.33	0.75
23:BB:1230:A:H2'	23:BB:1231:U:C6	2.22	0.75
35:BV:77:VAL:HG23	35:BV:89:ILE:HG23	1.68	0.75
40:BH:68:ARG:HG3	40:BH:134:VAL:HG21	1.68	0.75
50:BT:55:VAL:HA	50:BT:87:LEU:HA	1.69	0.75
20:CB:202:ASN:ND2	20:CB:204:ASP:H	1.85	0.75
23:DB:1338:G:H4'	50:DT:18:GLU:HG3	1.69	0.75
23:DB:1550:C:H2'	23:DB:1551:A:H8	1.51	0.75
23:DB:2471:A:O2'	23:DB:2472:G:H8	1.69	0.75
33:D1:33:LEU:HB3	33:D1:51:ALA:CB	2.17	0.75
38:DM:108:VAL:HG13	38:DM:112:LEU:HB3	1.69	0.75
44:DQ:29:ARG:HH11	44:DQ:29:ARG:HB3	1.52	0.75
48:DG:30:GLY:HA3	48:DG:78:VAL:HA	1.69	0.75
48:DG:37:ASN:HD21	48:DG:40:VAL:HB	1.52	0.75
1:AA:484:G:H4'	1:AA:485:U:O5'	1.87	0.75
23:BB:79:C:O2'	23:BB:346:A:H1'	1.86	0.75
38:BM:71:LYS:HE3	38:BM:73:ILE:HD11	1.69	0.75
50:BT:29:THR:H	50:BT:91:GLN:HE22	1.33	0.75
50:BT:39:THR:HG22	50:BT:42:GLU:HG2	1.67	0.75
52:BW:18:LYS:HE2	52:BW:19:ARG:NH2	2.01	0.75
11:CL:48:LEU:HD22	53:D6:84:ARG:NH1	2.02	0.75
19:CT:85:LEU:HD23	19:CT:86:ALA:H	1.51	0.75
49:DR:4:VAL:O	49:DR:38:VAL:HA	1.87	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DT:39:THR:HG22	50:DT:42:GLU:HG2	1.67	0.75
26:BD:91:THR:HG23	26:BD:92:VAL:H	1.51	0.75
14:CO:36:ILE:HD13	14:CO:59:MET:HE3	1.67	0.75
23:DB:106:C:H2'	23:DB:107:G:H8	1.52	0.75
37:DL:82:LEU:HD23	37:DL:90:VAL:HG21	1.69	0.75
23:BB:1258:U:H4'	29:BE:79:ARG:HD2	1.69	0.74
23:BB:1942:C:O4'	53:B6:133:ARG:NH1	2.15	0.74
23:BB:2800:A:H2'	23:BB:2801:G:O4'	1.86	0.74
20:CB:96:LEU:HD21	20:CB:146:SER:HB2	1.66	0.74
20:CB:156:LEU:H	20:CB:156:LEU:HD12	1.51	0.74
23:DB:580:U:H2'	23:DB:581:C:C6	2.22	0.74
38:DM:37:GLY:HA3	38:DM:127:LYS:NZ	2.02	0.74
43:DO:35:ILE:HG13	43:DO:71:ALA:HB2	1.69	0.74
44:DQ:26:ALA:HA	44:DQ:29:ARG:HG3	1.69	0.74
20:AB:96:LEU:HD21	20:AB:146:SER:HB2	1.68	0.74
35:BV:72:VAL:HG21	35:BV:91:PHE:HB3	1.67	0.74
17:CR:34:GLU:CD	17:CR:34:GLU:H	1.90	0.74
45:DS:26:GLY:H	45:DS:71:VAL:HG13	1.52	0.74
47:DF:41:GLU:HB2	47:DF:48:LEU:HD11	1.67	0.74
9:AJ:52:LEU:HG	9:AJ:62:ARG:HE	1.52	0.74
23:BB:1729:U:H3'	23:BB:1730:C:H4'	1.69	0.74
37:BL:79:LEU:HG	37:BL:112:LEU:HA	1.68	0.74
37:BL:124:GLY:H	37:BL:143:GLU:HG3	1.51	0.74
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.22	0.74
2:CC:48:LYS:HD3	2:CC:48:LYS:H	1.51	0.74
23:DB:1169:A:H2'	23:DB:1170:C:C6	2.22	0.74
37:DL:121:THR:HB	37:DL:141:LYS:HD2	1.70	0.74
12:AM:10:ASP:HA	12:AM:44:ILE:HD13	1.68	0.74
23:BB:1024:G:C3'	23:BB:1025:G:H5"	2.17	0.74
25:BC:41:GLY:HA3	25:BC:53:ILE:HG21	1.68	0.74
33:B1:33:LEU:HB3	33:B1:51:ALA:CB	2.18	0.74
23:DB:1178:C:H2'	23:DB:1179:G:H8	1.51	0.74
23:DB:2795:C:H2'	23:DB:2796:U:O4'	1.87	0.74
53:D6:107:THR:O	53:D6:111:ARG:HB2	1.87	0.74
1:AA:269:C:H2'	1:AA:270:A:H8	1.51	0.74
3:AD:88:ASN:O	3:AD:92:LEU:HD23	1.88	0.74
8:AI:21:LYS:HG2	8:AI:22:PRO:HD2	1.69	0.74
12:AM:70:ARG:HH22	47:BF:112:ASP:HB3	1.52	0.74
24:BI:33:ASN:HD21	24:BI:64:ARG:HH11	1.36	0.74
26:BD:113:SER:HB2	26:BD:168:GLU:H	1.52	0.74
29:BE:145:ASP:HA	29:BE:166:LYS:HB3	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:115:GLN:CD	48:BG:115:GLN:H	1.90	0.74
1:CA:1060:U:H4'	9:CJ:54:SER:HB2	1.68	0.74
28:DP:50:ARG:HB2	28:DP:56:SER:HB3	1.67	0.74
33:D1:9:LYS:HD3	33:D1:9:LYS:H	1.51	0.74
35:DV:77:VAL:HG12	38:DM:136:MET:HG2	1.68	0.74
40:DH:84:ALA:HA	40:DH:90:LEU:HA	1.69	0.74
45:DS:27:LYS:O	45:DS:32:ALA:HB2	1.88	0.74
2:AC:48:LYS:HD3	2:AC:48:LYS:H	1.52	0.74
23:BB:280:U:H2'	23:BB:281:C:C6	2.21	0.74
23:BB:784:G:C6	25:BC:227:VAL:HG11	2.23	0.74
1:CA:1311:A:N7	18:CS:1:PRO:HG3	2.02	0.74
8:CI:94:ARG:HH11	8:CI:94:ARG:HB3	1.52	0.74
23:DB:721:A:H2'	23:DB:722:A:H8	1.53	0.74
23:DB:2814:A:H4'	31:D0:25:THR:HG21	1.69	0.74
40:DH:54:LEU:HA	40:DH:58:LEU:HG	1.70	0.74
47:DF:49:LEU:HD11	47:DF:66:ILE:HD12	1.68	0.74
19:AT:85:LEU:HD23	19:AT:86:ALA:H	1.53	0.74
37:BL:135:ILE:HG12	37:BL:140:GLY:HA3	1.69	0.74
42:BN:85:PRO:HA	42:BN:88:ALA:HB2	1.68	0.74
47:BF:41:GLU:HB2	47:BF:48:LEU:HD11	1.69	0.74
1:CA:1080:A:H5"	4:CE:20:VAL:HG11	1.70	0.74
23:DB:1654:A:O2'	26:DD:118:PHE:HB2	1.88	0.74
26:DD:37:VAL:HG23	26:DD:91:THR:HA	1.69	0.74
35:DV:9:ARG:NH2	35:DV:12:GLN:HA	2.03	0.74
35:DV:42:LEU:HD23	35:DV:42:LEU:H	1.51	0.74
23:BB:580:U:H2'	23:BB:581:C:C6	2.23	0.74
25:BC:77:VAL:HG23	25:BC:112:GLY:H	1.53	0.74
28:BP:50:ARG:HB2	28:BP:56:SER:HB3	1.69	0.74
36:B2:26:ASN:HA	36:B2:29:GLN:HB3	1.69	0.74
48:BG:30:GLY:HA3	48:BG:78:VAL:HA	1.68	0.74
51:BZ:54:LYS:HA	51:BZ:57:ARG:HD3	1.68	0.74
53:B6:108:GLU:O	53:B6:112:LYS:HG3	1.87	0.74
1:CA:373:A:H1'	1:CA:481:G:N3	2.02	0.74
1:CA:484:G:H4'	1:CA:485:U:O5'	1.87	0.74
2:CC:149:LYS:HB3	2:CC:200:TRP:HB2	1.70	0.74
19:CT:43:LYS:HA	19:CT:85:LEU:HD11	1.70	0.74
23:DB:1168:G:H2'	23:DB:1169:A:C8	2.23	0.74
50:DT:69:ARG:HB3	50:DT:74:ILE:HA	1.68	0.74
1:AA:408:A:OP1	3:AD:111:ALA:HB3	1.87	0.74
23:BB:922:C:H1'	52:BW:22:VAL:HG21	1.70	0.74
23:BB:1241:A:H2'	23:BB:1242:U:H5'	1.70	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2866:U:H4'	23:BB:2867:G:H4'	1.70	0.74
26:BD:148:GLN:HG3	26:BD:152:PRO:HB3	1.69	0.74
37:BL:121:THR:HG22	37:BL:141:LYS:HB3	1.70	0.74
5:CF:1:MET:SD	5:CF:67:PRO:HD3	2.27	0.74
23:DB:138:U:O3'	23:DB:139:U:H3'	1.87	0.74
23:DB:1199:U:H2'	23:DB:1200:C:C6	2.21	0.74
27:DK:107:LEU:H	27:DK:107:LEU:HD12	1.52	0.74
37:DL:79:LEU:HB3	37:DL:115:GLU:O	1.88	0.74
42:DN:49:GLU:HB2	42:DN:50:PRO:HD3	1.70	0.74
44:DQ:89:ILE:HB	49:DR:11:GLN:HE22	1.51	0.74
50:DT:55:VAL:HA	50:DT:87:LEU:HA	1.70	0.74
1:AA:21:G:H2'	1:AA:22:G:C8	2.23	0.74
3:AD:94:GLU:HG2	3:AD:185:PRO:HG3	1.69	0.74
20:AB:128:LEU:HD13	20:AB:129:THR:H	1.53	0.74
23:BB:532:A:H4'	23:BB:533:G:C8	2.22	0.74
23:BB:2243:U:H2'	23:BB:2244:U:C6	2.23	0.74
23:BB:2471:A:O2'	23:BB:2472:G:H8	1.70	0.74
27:BK:102:PRO:HA	27:BK:120:PRO:HB3	1.70	0.74
32:B4:7:VAL:HG23	32:B4:35:GLN:HB2	1.70	0.74
4:CE:143:LEU:O	4:CE:146:MET:HG2	1.88	0.74
26:DD:34:VAL:CG1	26:DD:94:GLN:H	2.01	0.74
40:DH:117:LEU:HD12	40:DH:118:PRO:HD2	1.69	0.74
46:DU:14:THR:HB	46:DU:68:ASN:HB3	1.70	0.74
49:DR:7:SER:HB2	49:DR:22:LEU:HB3	1.69	0.74
1:AA:91:U:O5'	1:AA:91:U:H6	1.69	0.73
4:AE:143:LEU:O	4:AE:146:MET:HG2	1.88	0.73
23:BB:140:C:H4'	23:BB:141:G:H21	1.52	0.73
25:BC:140:VAL:HG12	25:BC:141:HIS:H	1.53	0.73
29:BE:60:TRP:O	29:BE:61:ARG:HB2	1.88	0.73
29:BE:108:ILE:HD11	29:BE:181:ILE:HB	1.69	0.73
39:BX:39:GLN:HB3	39:BX:42:LEU:HD13	1.68	0.73
16:CQ:13:SER:HB3	16:CQ:21:VAL:HB	1.70	0.73
23:DB:2443:C:H2'	23:DB:2444:G:H8	1.51	0.73
23:DB:2728:U:H5'	27:DK:70:ARG:NH2	2.03	0.73
30:DY:6:ILE:HG22	30:DY:56:VAL:HA	1.69	0.73
37:DL:135:ILE:HG12	37:DL:140:GLY:HA3	1.68	0.73
46:DU:11:ILE:HG22	46:DU:70:ALA:HB3	1.70	0.73
1:AA:617:G:H4'	15:AP:46:LYS:HE2	1.70	0.73
20:AB:184:ALA:HB3	20:AB:195:VAL:HG21	1.70	0.73
23:BB:152:A:H2'	23:BB:153:U:C6	2.23	0.73
23:BB:1406:U:H2'	23:BB:1407:G:C8	2.22	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BQ:63:ARG:NH2	44:BQ:96:ASP:HA	2.03	0.73
47:BF:115:GLY:HA2	47:BF:177:ARG:HH11	1.52	0.73
48:BG:89:VAL:HB	48:BG:159:LYS:HA	1.70	0.73
1:CA:841:C:H3'	1:CA:843:U:OP2	1.88	0.73
23:DB:1024:G:C3'	23:DB:1025:G:H5"	2.18	0.73
23:DB:2425:A:H5'	23:DB:2427:C:O4'	1.88	0.73
28:DP:75:THR:HG23	28:DP:76:HIS:N	2.02	0.73
29:DE:148:ILE:HD13	29:DE:187:VAL:HG21	1.70	0.73
29:DE:148:ILE:HA	29:DE:187:VAL:HB	1.68	0.73
6:AG:43:TYR:O	6:AG:47:GLU:HG2	1.88	0.73
1:CA:21:G:H2'	1:CA:22:G:C8	2.23	0.73
1:CA:518:C:H2'	1:CA:530:G:C8	2.24	0.73
6:CG:21:LEU:HD23	6:CG:21:LEU:H	1.51	0.73
22:DA:104:A:H2'	22:DA:105:G:O4'	1.87	0.73
23:DB:2471:A:HO2'	23:DB:2472:G:H8	1.35	0.73
41:DJ:45:THR:H	41:DJ:46:PRO:HD3	1.53	0.73
1:AA:1007:U:H2'	1:AA:1008:U:C6	2.23	0.73
1:AA:1060:U:H4'	9:AJ:54:SER:HB2	1.69	0.73
3:AD:70:GLN:HE22	3:AD:96:ARG:NH1	1.85	0.73
5:AF:88:MET:SD	17:AR:64:LEU:HD11	2.28	0.73
11:AL:17:LYS:HE3	11:AL:17:LYS:N	2.03	0.73
13:AN:26:LEU:HD23	13:AN:27:LYS:H	1.53	0.73
22:BA:83:G:OP1	30:BY:16:LEU:HD21	1.88	0.73
23:BB:1338:G:H4'	50:BT:18:GLU:HG3	1.70	0.73
23:BB:2188:U:H2'	23:BB:2189:U:C6	2.24	0.73
29:BE:148:ILE:HD13	29:BE:187:VAL:HG21	1.70	0.73
35:BV:9:ARG:NH2	35:BV:12:GLN:HA	2.02	0.73
38:BM:67:VAL:HG11	38:BM:102:LEU:HD13	1.69	0.73
47:BF:102:LEU:HD22	47:BF:103:ILE:N	2.04	0.73
1:CA:1412:C:H2'	1:CA:1413:A:H8	1.52	0.73
6:CG:112:ASP:HB2	6:CG:118:ARG:HG2	1.69	0.73
23:DB:137:U:H2'	23:DB:138:U:O4'	1.89	0.73
23:DB:423:A:H5'	23:DB:424:G:H5'	1.71	0.73
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.23	0.73
5:AF:98:GLU:HG2	5:AF:99:ALA:N	2.03	0.73
24:BI:20:SER:HB3	24:BI:21:PRO:HD3	1.69	0.73
42:BN:38:LEU:HB3	42:BN:39:PRO:HD3	1.71	0.73
42:BN:49:GLU:HB2	42:BN:50:PRO:HD3	1.69	0.73
43:BO:24:THR:HG22	43:BO:42:PRO:HD3	1.70	0.73
44:BQ:29:ARG:HH11	44:BQ:29:ARG:HB3	1.53	0.73
48:BG:51:PHE:HD2	48:BG:68:ARG:HG2	1.53	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1162:C:H2'	1:CA:1163:A:C8	2.23	0.73
3:CD:70:GLN:HE22	3:CD:96:ARG:NH1	1.86	0.73
23:DB:359:G:H2'	23:DB:360:U:H5'	1.70	0.73
37:DL:79:LEU:HG	37:DL:112:LEU:HA	1.69	0.73
40:DH:115:VAL:HB	40:DH:132:PHE:CD1	2.22	0.73
40:DH:133:GLN:HA	40:DH:138:VAL:O	1.89	0.73
43:DO:24:THR:HG22	43:DO:42:PRO:HD3	1.71	0.73
48:DG:167:VAL:HG23	48:DG:168:VAL:H	1.52	0.73
18:AS:30:LEU:HD12	18:AS:48:ILE:HG12	1.70	0.73
18:AS:43:MET:O	18:AS:46:LEU:HB2	1.88	0.73
19:AT:43:LYS:HA	19:AT:85:LEU:HD11	1.70	0.73
38:BM:108:VAL:HG13	38:BM:112:LEU:HB3	1.68	0.73
41:BJ:45:THR:H	41:BJ:46:PRO:HD3	1.54	0.73
18:CS:43:MET:O	18:CS:46:LEU:HB2	1.89	0.73
21:CU:38:GLU:C	21:CU:40:PRO:HD2	2.09	0.73
23:DB:495:G:N2	45:DS:61:ASN:HD21	1.85	0.73
25:DC:140:VAL:HG12	25:DC:141:HIS:H	1.54	0.73
41:DJ:6:ALA:HB3	41:DJ:45:THR:HG21	1.69	0.73
47:DF:102:LEU:HD22	47:DF:103:ILE:N	2.04	0.73
51:DZ:49:LEU:H	51:DZ:49:LEU:HD12	1.53	0.73
10:AK:63:GLN:HG3	10:AK:98:ALA:HB2	1.70	0.73
23:BB:287:G:H2'	23:BB:288:U:H6	1.51	0.73
48:BG:51:PHE:CD2	48:BG:68:ARG:HG2	2.23	0.73
9:CJ:8:ILE:HG13	9:CJ:100:ILE:HG22	1.69	0.73
23:DB:1172:C:H2'	23:DB:1173:U:O4'	1.88	0.73
35:DV:72:VAL:HG12	35:DV:93:ARG:HA	1.70	0.73
36:D2:26:ASN:HA	36:D2:29:GLN:HB3	1.71	0.73
50:DT:73:ARG:HB3	50:DT:73:ARG:HH21	1.53	0.73
2:AC:65:VAL:HG21	2:AC:90:VAL:HG11	1.71	0.73
28:BP:63:ILE:HA	28:BP:68:GLY:HA2	1.69	0.73
28:BP:75:THR:HG23	28:BP:76:HIS:N	2.02	0.73
46:BU:14:THR:HB	46:BU:68:ASN:HB3	1.70	0.73
2:CC:72:PRO:O	2:CC:76:ILE:HG12	1.89	0.73
23:DB:2078:C:H2'	23:DB:2079:U:C6	2.24	0.73
24:DI:20:SER:HB3	24:DI:21:PRO:HD3	1.68	0.73
48:DG:89:VAL:HB	48:DG:159:LYS:HA	1.70	0.73
37:BL:79:LEU:HB3	37:BL:115:GLU:O	1.89	0.73
46:BU:11:ILE:HG22	46:BU:70:ALA:HB3	1.71	0.73
49:BR:4:VAL:O	49:BR:38:VAL:HA	1.88	0.73
18:CS:30:LEU:HD12	18:CS:48:ILE:HG12	1.71	0.73
23:DB:286:U:H2'	23:DB:287:G:C8	2.24	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:560:A:H4'	1:AA:561:U:H5"	1.69	0.73
8:AI:25:GLY:HA2	8:AI:60:LEU:O	1.89	0.73
11:AL:78:VAL:HG12	11:AL:101:LEU:HD13	1.70	0.73
21:AU:24:LYS:HZ3	21:AU:25:ALA:H	1.33	0.73
23:BB:856:G:H1'	52:BW:23:LYS:HB3	1.71	0.73
23:BB:1993:U:H4'	26:BD:133:THR:CG2	2.19	0.73
23:BB:2591:C:H2'	23:BB:2592:G:H8	1.54	0.73
53:B6:32:ARG:HH22	53:B6:88:LEU:HA	1.54	0.73
22:DA:49:C:H2'	22:DA:50:A:H8	1.53	0.73
23:DB:898:C:C2'	23:DB:899:A:H5"	2.19	0.73
23:DB:2748:A:H4'	48:DG:3:VAL:HG21	1.71	0.73
46:DU:81:ARG:H	46:DU:81:ARG:HH21	1.37	0.73
50:DT:54:GLU:HB3	50:DT:88:LYS:HB2	1.71	0.73
53:D6:106:LEU:HG	53:D6:111:ARG:HD2	1.68	0.73
1:AA:1390:U:H2'	1:AA:1391:U:C6	2.24	0.72
8:AI:46:VAL:HA	8:AI:49:GLN:HG3	1.71	0.72
23:BB:321:U:H5"	29:BE:131:THR:HG23	1.71	0.72
23:BB:1550:C:H2'	23:BB:1551:A:H8	1.53	0.72
4:CE:81:GLN:H	4:CE:146:MET:HE3	1.54	0.72
7:CH:17:GLN:HE21	7:CH:62:LEU:HD23	1.54	0.72
24:DI:105:LEU:HD11	24:DI:139:VAL:HG21	1.69	0.72
27:DK:112:PHE:O	27:DK:115:ILE:HG22	1.88	0.72
34:D3:5:THR:HG22	34:D3:62:PRO:HD2	1.69	0.72
1:AA:1296:C:H4'	1:AA:1302:C:H41	1.55	0.72
23:BB:2075:U:H2'	23:BB:2238:G:N2	2.04	0.72
23:BB:2333:A:H5'	23:BB:2335:A:H1'	1.71	0.72
25:BC:102:TYR:O	25:BC:103:ILE:HG13	1.90	0.72
1:CA:1296:C:H4'	1:CA:1302:C:H41	1.54	0.72
14:CO:26:GLU:HG3	14:CO:81:LEU:HD12	1.71	0.72
23:DB:2895:G:H2'	23:DB:2896:C:C6	2.24	0.72
37:DL:103:ILE:H	37:DL:103:ILE:HD12	1.52	0.72
37:DL:124:GLY:H	37:DL:143:GLU:HG3	1.53	0.72
38:DM:67:VAL:HG11	38:DM:102:LEU:HD13	1.70	0.72
42:DN:83:LEU:HA	42:DN:86:ARG:HG3	1.70	0.72
1:AA:337:G:H2'	1:AA:338:A:C8	2.25	0.72
13:AN:50:LEU:H	13:AN:51:PRO:HD2	1.53	0.72
21:AU:38:GLU:C	21:AU:40:PRO:HD2	2.10	0.72
23:BB:98:G:H22	46:BU:6:ARG:HH12	1.36	0.72
23:BB:2147:A:OP1	23:BB:2148:G:H1'	1.90	0.72
23:BB:2787:C:H1'	26:BD:63:PRO:HG3	1.71	0.72
2:CC:65:VAL:HG21	2:CC:90:VAL:HG11	1.71	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:190:THR:HG22	2:CC:191:THR:H	1.52	0.72
6:CG:43:TYR:O	6:CG:47:GLU:HG2	1.89	0.72
6:CG:57:GLU:CD	6:CG:57:GLU:H	1.93	0.72
23:DB:773:U:H5'	23:DB:774:G:OP2	1.88	0.72
23:DB:873:C:H4'	38:DM:64:TRP:HE1	1.55	0.72
23:BB:1597:A:H5"	23:BB:1598:A:H5'	1.69	0.72
28:BP:4:ILE:C	28:BP:6:GLN:H	1.92	0.72
46:BU:85:ARG:HD3	46:BU:86:PHE:N	2.04	0.72
1:CA:337:G:H2'	1:CA:338:A:C8	2.24	0.72
8:CI:21:LYS:HG2	8:CI:22:PRO:HD2	1.72	0.72
23:DB:423:A:H5'	23:DB:424:G:C5'	2.19	0.72
23:DB:742:A:H2'	23:DB:743:A:H8	1.55	0.72
23:DB:1459:G:H4'	23:DB:1461:C:N4	2.03	0.72
23:DB:2105:U:H2'	23:DB:2106:U:O4'	1.89	0.72
23:DB:2769:U:H2'	23:DB:2770:G:C8	2.22	0.72
37:DL:121:THR:HG22	37:DL:141:LYS:HB3	1.71	0.72
40:DH:27:ARG:NH1	51:DZ:60:ASP:HA	2.05	0.72
23:BB:141:G:H5"	23:BB:142:A:C8	2.23	0.72
23:BB:988:A:P	30:BY:11:SER:HB3	2.29	0.72
23:DB:455:C:N3	23:DB:472:A:H2'	2.04	0.72
29:DE:108:ILE:HD11	29:DE:181:ILE:HB	1.72	0.72
2:AC:190:THR:HG22	2:AC:191:THR:H	1.54	0.72
23:BB:709:U:H2'	23:BB:710:U:C6	2.24	0.72
23:BB:1138:G:H2'	23:BB:1139:G:O4'	1.90	0.72
23:BB:1459:G:H4'	23:BB:1461:C:H42	1.54	0.72
24:BI:77:VAL:HA	24:BI:80:LYS:HE2	1.72	0.72
27:BK:35:VAL:HG23	27:BK:36:GLY:N	2.04	0.72
36:B2:30:VAL:HA	36:B2:33:ARG:HH22	1.53	0.72
42:BN:107:ASN:HD21	45:BS:40:ASN:ND2	1.88	0.72
47:BF:11:VAL:HG21	47:BF:172:PHE:CE1	2.25	0.72
51:BZ:17:ASN:HB2	51:BZ:25:THR:HB	1.72	0.72
16:CQ:20:ILE:HD13	16:CQ:47:ASP:HB3	1.70	0.72
20:CB:185:ILE:HA	20:CB:199:ILE:HB	1.70	0.72
23:DB:918:A:H2'	23:DB:919:U:H5'	1.69	0.72
23:DB:1459:G:H4'	23:DB:1461:C:H42	1.52	0.72
25:DC:116:GLN:HG2	25:DC:117:SER:H	1.55	0.72
38:DM:36:VAL:HB	38:DM:127:LYS:O	1.89	0.72
48:DG:61:TRP:HA	48:DG:61:TRP:CE3	2.24	0.72
51:DZ:7:VAL:HG21	51:DZ:59:ILE:HD11	1.70	0.72
1:AA:706:A:H4'	10:AK:30:ILE:HD11	1.71	0.72
10:AK:105:ARG:HH21	21:AU:10:PRO:HB3	1.55	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:321:U:OP2	29:BE:130:LYS:HA	1.89	0.72
7:CH:51:GLU:HG2	7:CH:52:GLY:H	1.54	0.72
10:CK:28:ASN:ND2	10:CK:46:ALA:HB3	2.04	0.72
10:CK:63:GLN:HG3	10:CK:98:ALA:HB2	1.70	0.72
23:DB:2722:G:H4'	42:DN:4:ARG:HB2	1.71	0.72
35:DV:53:LYS:HD3	35:DV:55:GLU:H	1.53	0.72
42:DN:38:LEU:HB3	42:DN:39:PRO:HD3	1.71	0.72
49:DR:66:HIS:ND1	49:DR:94:THR:HG22	2.04	0.72
4:AE:35:LEU:HD21	4:AE:136:VAL:HG11	1.72	0.72
20:AB:121:GLN:HE21	20:AB:122:ASP:H	1.38	0.72
23:BB:1796:U:H2'	23:BB:1797:G:H8	1.54	0.72
23:BB:2073:C:H5"	25:BC:227:VAL:HG12	1.70	0.72
23:BB:2674:G:H4'	27:BK:30:ARG:HG3	1.71	0.72
23:DB:95:A:H4'	39:DX:38:GLN:O	1.90	0.72
23:DB:721:A:H2'	23:DB:722:A:C8	2.25	0.72
23:DB:1266:G:N2	23:DB:2012:G:H2'	2.03	0.72
23:DB:2531:A:OP2	48:DG:174:LYS:HB3	1.90	0.72
48:DG:51:PHE:CD2	48:DG:68:ARG:HG2	2.24	0.72
1:AA:518:C:H2'	1:AA:530:G:C8	2.23	0.72
12:AM:70:ARG:HH22	47:BF:112:ASP:CB	2.03	0.72
25:BC:116:GLN:HG2	25:BC:117:SER:H	1.55	0.72
37:BL:103:ILE:HD12	37:BL:103:ILE:H	1.55	0.72
45:BS:26:GLY:H	45:BS:71:VAL:HG13	1.54	0.72
47:BF:35:LEU:HD13	47:BF:56:LEU:HD11	1.72	0.72
1:CA:812:G:O2'	1:CA:813:U:H6	1.73	0.72
8:CI:46:VAL:HA	8:CI:49:GLN:HG3	1.71	0.72
9:CJ:35:GLN:HG2	9:CJ:77:VAL:HB	1.70	0.72
20:CB:96:LEU:HB2	20:CB:99:MET:HE3	1.71	0.72
23:DB:165:A:H2'	23:DB:166:U:H6	1.55	0.72
23:DB:1993:U:H4'	26:DD:133:THR:CG2	2.20	0.72
41:DJ:36:LEU:HD12	41:DJ:121:LYS:HE3	1.71	0.72
2:AC:72:PRO:O	2:AC:76:ILE:HG12	1.90	0.72
23:BB:142:A:H2'	23:BB:143:C:C6	2.25	0.72
23:BB:2741:A:H2'	23:BB:2742:G:O4'	1.89	0.72
1:CA:120:A:H2'	1:CA:121:U:H5"	1.72	0.72
13:CN:50:LEU:H	13:CN:51:PRO:HD2	1.55	0.72
20:CB:162:VAL:HG13	20:CB:184:ALA:HB2	1.72	0.72
34:D3:22:LYS:HA	34:D3:48:MET:HA	1.72	0.72
47:DF:137:PHE:HB2	47:DF:138:PRO:HD2	1.72	0.72
1:AA:1250:A:H2'	1:AA:1251:A:C8	2.24	0.71
33:B1:7:LYS:HD2	34:B3:33:THR:HG21	1.70	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:37:ASN:HD21	48:BG:40:VAL:HB	1.52	0.71
23:DB:140:C:H4'	23:DB:141:G:C6	2.25	0.71
23:DB:1454:C:H1'	42:DN:60:VAL:HG13	1.72	0.71
23:DB:2591:C:H2'	23:DB:2592:G:C8	2.25	0.71
3:AD:105:GLY:HA3	3:AD:158:LEU:HD23	1.72	0.71
47:BF:168:LEU:HD13	47:BF:169:LEU:H	1.55	0.71
53:B6:113:ASP:HA	53:B6:116:ARG:HD2	1.72	0.71
1:CA:1296:C:H4'	1:CA:1302:C:N4	2.04	0.71
9:CJ:36:VAL:HG22	9:CJ:76:ILE:HG22	1.70	0.71
23:DB:2866:U:H4'	23:DB:2867:G:H4'	1.72	0.71
44:DQ:63:ARG:NH2	44:DQ:96:ASP:HA	2.04	0.71
46:DU:49:PRO:HA	46:DU:53:GLN:HG3	1.73	0.71
8:AI:19:PHE:HB2	8:AI:63:TYR:HB3	1.71	0.71
12:AM:106:ARG:HD3	12:AM:111:PRO:HA	1.71	0.71
20:AB:67:LEU:HD11	20:AB:150:ILE:HD12	1.71	0.71
20:AB:185:ILE:HA	20:AB:199:ILE:HB	1.71	0.71
23:BB:320:A:H2'	29:BE:131:THR:OG1	1.91	0.71
23:BB:1119:U:OP1	35:BV:83:LYS:HE3	1.89	0.71
23:BB:1654:A:O2'	26:BD:118:PHE:HB2	1.90	0.71
23:BB:1942:C:C4'	53:B6:133:ARG:HH12	2.03	0.71
27:BK:36:GLY:HA2	27:BK:62:VAL:O	1.90	0.71
34:B3:22:LYS:HA	34:B3:48:MET:HA	1.73	0.71
1:CA:239:U:H4'	1:CA:239:U:OP1	1.88	0.71
23:DB:709:U:H2'	23:DB:710:U:C6	2.25	0.71
23:DB:1287:A:H3'	23:DB:1288:G:N2	2.05	0.71
23:DB:1796:U:H2'	23:DB:1797:G:C8	2.25	0.71
23:DB:2461:A:H2'	23:DB:2462:C:C6	2.25	0.71
23:DB:2787:C:H1'	26:DD:63:PRO:HG3	1.73	0.71
32:D4:15:LYS:O	32:D4:16:ILE:HB	1.88	0.71
39:DX:39:GLN:HB3	39:DX:42:LEU:HD13	1.71	0.71
48:DG:51:PHE:HD2	48:DG:68:ARG:HG2	1.56	0.71
23:BB:783:A:H8	23:BB:784:G:H4'	1.53	0.71
29:BE:131:THR:HG22	29:BE:160:ALA:HA	1.72	0.71
1:CA:1007:U:H2'	1:CA:1008:U:C6	2.25	0.71
1:CA:1532:U:C2'	1:CA:1533:C:H5"	2.18	0.71
23:DB:1060:U:C4	23:DB:1088:A:N6	2.58	0.71
23:DB:2306:C:H3'	23:DB:2307:G:H5'	1.70	0.71
27:DK:13:ASN:HD21	27:DK:98:ARG:H	1.37	0.71
29:DE:60:TRP:O	29:DE:61:ARG:HB2	1.89	0.71
39:DX:31:GLN:HG2	39:DX:37:LEU:HB2	1.73	0.71
40:DH:14:SER:HB3	40:DH:17:ASP:HB2	1.71	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DZ:33:LEU:HA	51:DZ:52:SER:HA	1.72	0.71
16:AQ:20:ILE:HD13	16:AQ:47:ASP:HB3	1.73	0.71
23:BB:608:A:H2'	23:BB:609:A:C8	2.25	0.71
37:BL:93:ASN:HD22	37:BL:94:THR:H	1.36	0.71
37:BL:123:ARG:HA	37:BL:143:GLU:HB3	1.72	0.71
52:BW:18:LYS:HE3	52:BW:18:LYS:HA	1.72	0.71
1:CA:560:A:H4'	1:CA:561:U:H5"	1.73	0.71
15:CP:74:LEU:O	15:CP:78:VAL:HG12	1.90	0.71
23:DB:165:A:H2'	23:DB:166:U:C6	2.25	0.71
23:DB:2365:G:H4'	52:DW:59:PHE:CD1	2.25	0.71
26:DD:113:SER:HB2	26:DD:168:GLU:H	1.56	0.71
44:DQ:105:PHE:HA	44:DQ:108:LEU:HD12	1.70	0.71
2:AC:59:PRO:HG2	2:AC:62:SER:OG	1.91	0.71
9:AJ:36:VAL:HG22	9:AJ:76:ILE:HG22	1.71	0.71
19:AT:4:LYS:HD2	19:AT:5:SER:N	2.04	0.71
23:BB:721:A:H2'	23:BB:722:A:H8	1.55	0.71
23:BB:1283:G:N2	23:BB:1286:A:H5'	2.04	0.71
23:BB:2579:C:H1'	26:BD:130:GLN:HE22	1.55	0.71
29:BE:153:LEU:HG	29:BE:154:ASP:N	2.05	0.71
32:B4:15:LYS:O	32:B4:16:ILE:HB	1.88	0.71
35:BV:53:LYS:HD3	35:BV:55:GLU:H	1.54	0.71
37:BL:82:LEU:HD23	37:BL:90:VAL:HG21	1.71	0.71
42:BN:83:LEU:HA	42:BN:86:ARG:HG3	1.73	0.71
42:BN:102:PHE:H	42:BN:109:PRO:HA	1.55	0.71
45:BS:27:LYS:O	45:BS:32:ALA:HB2	1.89	0.71
47:BF:115:GLY:HA3	47:BF:177:ARG:HD2	1.72	0.71
23:DB:1548:A:H2'	23:DB:1549:A:C8	2.25	0.71
24:DI:85:ILE:HD13	24:DI:137:LEU:HD21	1.73	0.71
27:DK:19:VAL:HG12	27:DK:43:ILE:HA	1.72	0.71
37:DL:123:ARG:HA	37:DL:143:GLU:HB3	1.71	0.71
38:DM:2:LEU:HD23	38:DM:46:ILE:HD11	1.70	0.71
44:DQ:30:VAL:CG1	44:DQ:33:VAL:HG22	2.21	0.71
1:AA:1296:C:H4'	1:AA:1302:C:N4	2.06	0.71
3:AD:146:GLU:HA	3:AD:149:LYS:HG2	1.71	0.71
23:BB:2548:U:H1'	27:BK:23:LYS:NZ	2.04	0.71
53:B6:123:GLU:HA	53:B6:126:ARG:HH11	1.56	0.71
5:CF:98:GLU:HG2	5:CF:99:ALA:N	2.05	0.71
23:DB:608:A:H2'	23:DB:609:A:C8	2.26	0.71
29:DE:150:THR:HG21	29:DE:153:LEU:HA	1.72	0.71
40:DH:131:SER:HB2	40:DH:141:LYS:HA	1.73	0.71
49:DR:31:GLU:H	49:DR:63:VAL:HG22	1.55	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DT:11:LEU:HD21	50:DT:46:ALA:HB1	1.72	0.71
17:AR:34:GLU:CD	17:AR:34:GLU:H	1.94	0.71
22:BA:49:C:H2'	22:BA:50:A:C8	2.25	0.71
23:BB:2728:U:H2'	23:BB:2729:G:H8	1.56	0.71
48:BG:61:TRP:HA	48:BG:61:TRP:CE3	2.25	0.71
52:BW:39:GLN:NE2	52:BW:42:THR:HB	2.03	0.71
7:CH:94:VAL:HG23	7:CH:101:ALA:HB2	1.72	0.71
23:DB:289:G:H2'	23:DB:290:U:C6	2.25	0.71
23:DB:1729:U:H3'	23:DB:1730:C:H4'	1.72	0.71
23:DB:2144:G:N3	23:DB:2146:C:H5'	2.06	0.71
1:AA:1404:C:H2'	1:AA:1405:G:C8	2.26	0.71
10:AK:52:ARG:HH12	10:AK:56:LYS:HE3	1.56	0.71
23:BB:1287:A:H3'	23:BB:1288:G:N2	2.05	0.71
23:BB:2443:C:H2'	23:BB:2444:G:C8	2.26	0.71
3:CD:94:GLU:HG2	3:CD:185:PRO:HG3	1.73	0.71
17:CR:52:ARG:HB3	17:CR:56:ARG:HH21	1.56	0.71
23:DB:118:A:OP2	23:DB:119:A:H5"	1.91	0.71
47:DF:35:LEU:HD13	47:DF:56:LEU:HD11	1.71	0.71
47:DF:168:LEU:HD13	47:DF:169:LEU:H	1.55	0.71
53:D6:81:LYS:C	53:D6:84:ARG:HH21	1.94	0.71
15:AP:74:LEU:O	15:AP:78:VAL:HG12	1.90	0.71
23:BB:2425:A:H5'	23:BB:2427:C:O4'	1.91	0.71
40:BH:53:GLU:HA	40:BH:57:LYS:HG2	1.73	0.71
2:CC:59:PRO:HG2	2:CC:62:SER:OG	1.91	0.71
19:CT:68:LYS:HE2	19:CT:68:LYS:HA	1.71	0.71
22:DA:49:C:H2'	22:DA:50:A:C8	2.26	0.71
23:DB:152:A:H2'	23:DB:153:U:C6	2.26	0.71
23:DB:2886:A:H62	31:D0:39:ARG:NE	1.88	0.71
37:DL:93:ASN:HD22	37:DL:94:THR:H	1.36	0.71
46:DU:85:ARG:HD3	46:DU:86:PHE:N	2.04	0.71
1:AA:1313:U:OP2	18:AS:5:LYS:HA	1.91	0.70
17:AR:52:ARG:HB3	17:AR:56:ARG:HH21	1.56	0.70
23:BB:17:G:H2'	23:BB:18:U:C6	2.25	0.70
23:BB:743:A:O2'	23:BB:744:U:H5'	1.90	0.70
23:BB:2071:A:H2'	23:BB:2072:C:C6	2.25	0.70
23:BB:2814:A:H4'	31:B0:25:THR:HG21	1.73	0.70
39:BX:31:GLN:HG2	39:BX:37:LEU:HB2	1.71	0.70
1:CA:664:G:H22	1:CA:741:G:H1	1.38	0.70
20:CB:184:ALA:HB3	20:CB:195:VAL:HG21	1.73	0.70
25:DC:143:VAL:HB	25:DC:153:LEU:HB2	1.72	0.70
3:AD:84:ASN:HD22	4:AE:101:GLY:CA	2.04	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AF:42:TRP:NE1	5:AF:61:LEU:HD23	2.06	0.70
20:AB:187:ASP:OD1	20:AB:203:ASP:HB3	1.92	0.70
23:BB:1060:U:C4	23:BB:1088:A:N6	2.59	0.70
23:BB:2340:A:H2'	23:BB:2341:G:H8	1.56	0.70
23:BB:2356:U:H5"	52:BW:16:GLU:HG3	1.72	0.70
50:BT:54:GLU:HB3	50:BT:88:LYS:HB2	1.70	0.70
1:CA:1390:U:H2'	1:CA:1391:U:C6	2.25	0.70
3:CD:43:ARG:NH1	3:CD:44:LYS:H	1.86	0.70
8:CI:94:ARG:HA	8:CI:97:LEU:HG	1.72	0.70
20:CB:16:GLY:HA2	20:CB:40:ILE:HG13	1.73	0.70
23:DB:30:G:H2'	23:DB:31:C:C6	2.25	0.70
41:DJ:73:VAL:HG23	41:DJ:74:TYR:H	1.56	0.70
47:DF:62:GLN:HG3	47:DF:91:ARG:NH1	2.06	0.70
51:DZ:18:ARG:HA	51:DZ:23:ASN:O	1.91	0.70
9:AJ:35:GLN:HG2	9:AJ:77:VAL:HB	1.72	0.70
14:AO:35:GLN:O	14:AO:39:LEU:HB2	1.90	0.70
26:BD:53:GLY:HA3	26:BD:77:ARG:HG3	1.70	0.70
1:CA:1032:G:N3	1:CA:1032:G:H5"	2.05	0.70
3:CD:105:GLY:HA3	3:CD:158:LEU:HD23	1.73	0.70
13:CN:27:LYS:HA	13:CN:31:SER:HB2	1.73	0.70
23:DB:1935:G:H1'	23:DB:1964:G:N2	2.06	0.70
28:DP:56:SER:HB2	28:DP:75:THR:CG2	2.20	0.70
53:D6:25:LEU:HD21	53:D6:118:VAL:HG13	1.72	0.70
23:BB:919:U:H2'	23:BB:920:A:C8	2.27	0.70
23:BB:2895:G:H2'	23:BB:2896:C:C6	2.25	0.70
27:BK:13:ASN:HD21	27:BK:98:ARG:H	1.37	0.70
1:CA:1534:A:H62	21:CU:44:ARG:NH1	1.87	0.70
19:CT:4:LYS:HD2	19:CT:5:SER:N	2.05	0.70
21:CU:24:LYS:HZ3	21:CU:25:ALA:H	1.39	0.70
23:DB:1099:G:H5"	24:DI:2:LYS:C	2.11	0.70
28:DP:4:ILE:C	28:DP:6:GLN:H	1.93	0.70
15:AP:25:ARG:HD3	15:AP:25:ARG:H	1.57	0.70
19:AT:68:LYS:HE2	19:AT:68:LYS:HA	1.73	0.70
23:BB:329:G:H1	46:BU:16:LYS:HG2	1.56	0.70
25:BC:143:VAL:HB	25:BC:153:LEU:HB2	1.73	0.70
26:BD:8:LYS:HB2	26:BD:201:LEU:HD11	1.74	0.70
40:BH:116:ARG:HH12	40:BH:133:GLN:HB2	1.56	0.70
46:BU:78:LYS:HD3	46:BU:79:ALA:H	1.55	0.70
1:CA:927:G:H4'	1:CA:1503:A:N7	2.06	0.70
1:CA:1250:A:H2'	1:CA:1251:A:C8	2.27	0.70
23:DB:626:A:H2'	37:DL:78:ARG:NH1	2.05	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1709:U:H2'	23:DB:1710:G:H8	1.56	0.70
25:DC:144:GLU:HG3	25:DC:151:GLY:N	2.07	0.70
36:D2:30:VAL:HA	36:D2:33:ARG:HH22	1.53	0.70
39:DX:1:MET:O	39:DX:5:GLU:HG2	1.92	0.70
40:DH:62:LEU:HG	40:DH:66:ASN:ND2	2.05	0.70
47:DF:11:VAL:HG21	47:DF:172:PHE:CE1	2.26	0.70
1:AA:179:A:H2'	1:AA:180:U:O4'	1.91	0.70
23:BB:118:A:H5'	23:BB:119:A:H8	1.57	0.70
23:BB:1324:G:H1'	23:BB:1616:A:N6	2.06	0.70
30:BY:6:ILE:HG22	30:BY:56:VAL:HA	1.71	0.70
39:BX:1:MET:O	39:BX:5:GLU:HG2	1.91	0.70
50:BT:11:LEU:HD21	50:BT:46:ALA:HB1	1.74	0.70
50:BT:29:THR:H	50:BT:91:GLN:NE2	1.89	0.70
51:BZ:33:LEU:HA	51:BZ:52:SER:HA	1.72	0.70
3:CD:197:HIS:O	3:CD:200:VAL:HG22	1.92	0.70
9:CJ:53:ILE:HG22	9:CJ:61:ALA:HB1	1.74	0.70
11:CL:78:VAL:HG12	11:CL:101:LEU:HD13	1.73	0.70
13:CN:5:MET:O	13:CN:8:ARG:HB2	1.91	0.70
20:CB:61:SER:HA	20:CB:224:ARG:HA	1.74	0.70
41:DJ:1:MET:HG2	41:DJ:2:LYS:HG2	1.72	0.70
1:AA:562:U:H1'	11:AL:11:ARG:HB3	1.73	0.70
23:BB:1535:A:H3'	23:BB:1536:C:H6	1.56	0.70
26:BD:37:VAL:HG23	26:BD:91:THR:HA	1.71	0.70
1:CA:9:G:H5'	4:CE:107:GLY:HA3	1.74	0.70
23:DB:1812:U:H1'	25:DC:43:ASN:HD21	1.57	0.70
33:D1:7:LYS:HD2	34:D3:33:THR:HG21	1.74	0.70
9:AJ:53:ILE:HG22	9:AJ:61:ALA:HB1	1.73	0.70
20:AB:61:SER:HA	20:AB:224:ARG:HA	1.74	0.70
23:BB:62:U:H3'	23:BB:63:A:C8	2.27	0.70
23:BB:626:A:H2'	37:BL:78:ARG:NH1	2.06	0.70
25:BC:158:GLY:N	25:BC:194:VAL:HG13	2.07	0.70
48:BG:152:ARG:NH2	48:BG:162:ARG:HA	2.06	0.70
1:CA:562:U:H1'	11:CL:11:ARG:HB3	1.74	0.70
3:CD:97:LEU:HB2	3:CD:134:TYR:HB3	1.73	0.70
21:CU:34:ARG:HD3	21:CU:39:LYS:HZ2	1.57	0.70
21:CU:36:PHE:HB3	21:CU:40:PRO:CD	2.14	0.70
23:DB:278:A:H2'	23:DB:278:A:N3	2.06	0.70
23:DB:1583:A:H4'	23:DB:1585:C:C4	2.27	0.70
23:DB:2813:A:H2'	23:DB:2814:A:C8	2.27	0.70
26:DD:105:LYS:HE3	26:DD:176:ASP:HB3	1.72	0.70
42:DN:107:ASN:HD21	45:DS:40:ASN:ND2	1.89	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AM:21:ILE:HG22	12:AM:23:GLY:H	1.55	0.70
20:AB:162:VAL:HG13	20:AB:184:ALA:HB2	1.72	0.70
23:BB:581:C:H2'	23:BB:582:A:C8	2.26	0.70
40:BH:14:SER:HB3	40:BH:17:ASP:HB2	1.73	0.70
41:BJ:6:ALA:HB3	41:BJ:45:THR:HG21	1.73	0.70
5:CF:6:ILE:HG23	5:CF:62:MET:HB3	1.74	0.70
13:CN:53:ASP:HA	13:CN:58:ARG:HD3	1.73	0.70
14:CO:35:GLN:O	14:CO:39:LEU:HB2	1.91	0.70
23:DB:458:G:N2	23:DB:469:G:H2'	2.06	0.70
23:DB:2867:G:H2'	23:DB:2867:G:N3	2.07	0.70
32:D4:7:VAL:HG23	32:D4:35:GLN:HB2	1.73	0.70
37:DL:90:VAL:HB	37:DL:122:VAL:HA	1.74	0.70
41:DJ:13:ARG:O	41:DJ:52:ASP:HA	1.91	0.70
52:DW:51:GLY:HA3	52:DW:59:PHE:CB	2.22	0.70
53:D6:131:ASN:O	53:D6:135:GLU:HG3	1.92	0.70
1:AA:926:G:H3'	1:AA:1505:G:H21	1.56	0.70
7:AH:17:GLN:HE21	7:AH:62:LEU:HD23	1.57	0.70
23:BB:784:G:N1	25:BC:227:VAL:HG11	2.07	0.70
23:BB:1843:C:H4'	25:BC:253:GLY:HA3	1.74	0.70
23:BB:2134:A:H2'	23:BB:2135:A:C8	2.24	0.70
37:BL:70:LYS:O	37:BL:73:ILE:HG12	1.92	0.70
41:BJ:13:ARG:O	41:BJ:52:ASP:HA	1.92	0.70
47:BF:64:PRO:HA	47:BF:88:VAL:HG22	1.74	0.70
1:CA:617:G:H4'	15:CP:46:LYS:HE2	1.73	0.70
1:CA:1477:U:H2'	1:CA:1478:U:C6	2.26	0.70
3:CD:11:SER:HA	3:CD:18:LEU:HD22	1.74	0.70
3:CD:88:ASN:O	3:CD:92:LEU:HD23	1.92	0.70
10:CK:52:ARG:HH12	10:CK:56:LYS:HE3	1.57	0.70
23:DB:162:U:H4'	23:DB:163:C:OP1	1.92	0.70
23:DB:2266:A:C4'	23:DB:2267:A:N7	2.55	0.70
29:DE:153:LEU:HG	29:DE:154:ASP:N	2.05	0.70
45:DS:26:GLY:N	45:DS:71:VAL:HG13	2.07	0.70
47:DF:64:PRO:HA	47:DF:88:VAL:HG22	1.73	0.70
52:DW:18:LYS:HE2	52:DW:19:ARG:NH2	2.06	0.70
1:AA:1423:G:H2'	1:AA:1424:U:C6	2.27	0.69
6:AG:57:GLU:CD	6:AG:57:GLU:H	1.94	0.69
16:AQ:66:LEU:HD12	16:AQ:66:LEU:H	1.57	0.69
27:BK:107:LEU:H	27:BK:107:LEU:HD12	1.55	0.69
28:BP:56:SER:HB2	28:BP:75:THR:CG2	2.22	0.69
28:BP:112:ARG:HH11	28:BP:112:ARG:HB2	1.57	0.69
1:CA:932:C:H5"	6:CG:3:ARG:HG2	1.73	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CE:35:LEU:HD21	4:CE:136:VAL:HG11	1.74	0.69
20:CB:209:VAL:HG23	20:CB:210:THR:H	1.57	0.69
23:DB:855:G:N2	52:DW:23:LYS:HG2	2.04	0.69
23:DB:1080:A:O2'	24:DI:126:ARG:HD2	1.92	0.69
23:DB:1416:G:HO2'	23:DB:1417:C:H6	1.40	0.69
23:DB:1593:A:H2'	23:DB:1594:U:C6	2.27	0.69
35:DV:40:ILE:H	35:DV:40:ILE:HD13	1.57	0.69
1:AA:715:A:H2'	1:AA:716:A:H8	1.56	0.69
1:AA:780:A:O2'	1:AA:781:A:H5"	1.91	0.69
1:AA:1338:G:H2'	1:AA:1339:A:C8	2.26	0.69
8:AI:27:ILE:HB	8:AI:34:LEU:HB2	1.74	0.69
13:AN:48:GLN:O	13:AN:51:PRO:HD2	1.92	0.69
16:AQ:79:GLU:HG3	16:AQ:80:LYS:HZ1	1.55	0.69
18:AS:35:ARG:NH2	18:AS:52:ASN:HA	2.07	0.69
23:BB:30:G:H2'	23:BB:31:C:C6	2.27	0.69
40:BH:122:LEU:H	40:BH:122:LEU:HD12	1.57	0.69
23:DB:27:G:H22	23:DB:512:G:H2'	1.55	0.69
23:DB:2354:C:H4'	52:DW:31:LEU:HD22	1.73	0.69
12:AM:48:SER:HB2	12:AM:51:GLN:HG3	1.74	0.69
23:BB:1082:U:N3	23:BB:1086:A:C2	2.60	0.69
23:BB:2867:G:H2'	23:BB:2867:G:N3	2.07	0.69
23:BB:2875:C:H2'	23:BB:2876:G:H8	1.56	0.69
25:BC:209:ALA:O	25:BC:213:ARG:HB2	1.92	0.69
35:BV:4:ILE:HB	35:BV:63:ILE:HG13	1.74	0.69
4:CE:93:VAL:HG13	4:CE:126:ALA:HB2	1.72	0.69
7:CH:11:THR:HG22	7:CH:14:ARG:HH12	1.56	0.69
8:CI:21:LYS:O	8:CI:60:LEU:HB2	1.92	0.69
10:CK:80:ASN:HB3	10:CK:105:ARG:HB3	1.74	0.69
11:CL:54:VAL:HG12	11:CL:55:ARG:H	1.57	0.69
16:CQ:3:LYS:HE2	16:CQ:3:LYS:HA	1.74	0.69
16:CQ:8:GLN:HA	16:CQ:59:GLU:HA	1.74	0.69
17:CR:37:LYS:HZ3	21:CU:22:CYS:HB2	1.57	0.69
48:DG:84:LYS:HG2	48:DG:85:LYS:N	2.07	0.69
8:AI:33:SER:HB3	8:AI:36:GLN:HB2	1.74	0.69
23:BB:162:U:H4'	23:BB:163:C:OP1	1.93	0.69
23:BB:918:A:H2'	23:BB:919:U:H5'	1.73	0.69
29:BE:58:LYS:N	29:BE:58:LYS:HD3	2.07	0.69
34:B3:5:THR:HG22	34:B3:62:PRO:HD2	1.74	0.69
35:BV:40:ILE:HD13	35:BV:40:ILE:H	1.56	0.69
1:CA:1313:U:OP2	18:CS:5:LYS:HA	1.92	0.69
15:CP:25:ARG:HD3	15:CP:25:ARG:H	1.57	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:360:U:H2'	23:DB:361:G:C8	2.28	0.69
23:DB:877:A:H2'	23:DB:900:A:H61	1.58	0.69
23:DB:1241:A:H2'	23:DB:1242:U:H5'	1.74	0.69
23:DB:2484:G:OP1	38:DM:44:ARG:HD3	1.91	0.69
42:DN:34:ILE:O	42:DN:112:TYR:HA	1.93	0.69
48:DG:17:LYS:HZ2	48:DG:17:LYS:HA	1.58	0.69
1:AA:35:G:H2'	1:AA:36:C:C6	2.28	0.69
8:AI:26:LYS:H	8:AI:61:ASP:CB	2.06	0.69
10:AK:115:ILE:HD11	17:AR:72:ARG:NH1	2.07	0.69
23:BB:680:C:H2'	23:BB:681:G:H8	1.57	0.69
23:BB:1657:U:H4'	26:BD:138:LEU:HB3	1.74	0.69
25:BC:81:GLU:HB2	25:BC:90:ILE:HG22	1.75	0.69
29:BE:150:THR:HG21	29:BE:153:LEU:HA	1.72	0.69
32:B4:10:LEU:HD12	32:B4:33:HIS:HA	1.74	0.69
50:BT:73:ARG:HB3	50:BT:73:ARG:HH21	1.56	0.69
51:BZ:18:ARG:HA	51:BZ:23:ASN:O	1.93	0.69
52:BW:33:GLY:O	52:BW:34:SER:HB2	1.92	0.69
1:CA:179:A:H2'	1:CA:180:U:O4'	1.93	0.69
1:CA:763:G:H2'	1:CA:764:C:H6	1.57	0.69
23:DB:729:G:C8	25:DC:206:LYS:HE3	2.28	0.69
25:DC:102:TYR:O	25:DC:103:ILE:HG13	1.93	0.69
37:DL:93:ASN:O	37:DL:95:LEU:HD12	1.92	0.69
47:DF:115:GLY:HA2	47:DF:177:ARG:HH11	1.56	0.69
52:DW:49:ASN:HB3	52:DW:81:ILE:HG12	1.74	0.69
12:AM:95:PRO:N	12:AM:108:ARG:HG2	2.08	0.69
13:AN:53:ASP:HA	13:AN:58:ARG:HD3	1.74	0.69
22:BA:35:C:H2'	22:BA:36:C:H5'	1.75	0.69
23:BB:642:U:O2	23:BB:644:A:H3'	1.92	0.69
23:BB:721:A:H2'	23:BB:722:A:C8	2.26	0.69
23:BB:1406:U:H2'	23:BB:1407:G:H8	1.57	0.69
23:BB:1548:A:H2'	23:BB:1549:A:C8	2.28	0.69
23:BB:2216:G:H2'	23:BB:2217:G:C8	2.28	0.69
23:BB:2746:U:H5'	48:BG:138:GLN:HA	1.73	0.69
24:BI:105:LEU:HD11	24:BI:139:VAL:HG11	1.74	0.69
43:BO:5:SER:HA	43:BO:8:ILE:HD12	1.72	0.69
1:CA:764:C:C2'	1:CA:765:G:H5'	2.22	0.69
1:CA:1019:A:H2'	1:CA:1020:G:C8	2.27	0.69
1:CA:1338:G:H2'	1:CA:1339:A:C8	2.28	0.69
23:DB:2073:C:H5"	25:DC:227:VAL:HG12	1.73	0.69
23:DB:2108:A:H2'	23:DB:2108:A:N3	2.07	0.69
23:DB:2109:U:H2'	23:DB:2180:U:H3	1.58	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DG:17:LYS:HZ2	48:DG:18:ILE:H	1.38	0.69
1:AA:1348:U:H4'	8:AI:121:ARG:HG3	1.74	0.69
3:AD:43:ARG:NH1	3:AD:44:LYS:H	1.89	0.69
8:AI:21:LYS:O	8:AI:60:LEU:HB2	1.92	0.69
20:AB:65:LYS:HA	20:AB:89:PHE:HE1	1.58	0.69
23:BB:1552:A:H2'	23:BB:1553:A:H5'	1.74	0.69
23:BB:1709:U:H2'	23:BB:1710:G:H8	1.57	0.69
23:BB:2366:A:H2'	23:BB:2367:G:O4'	1.93	0.69
23:BB:2461:A:H2'	23:BB:2462:C:C6	2.27	0.69
35:BV:42:LEU:HD23	35:BV:42:LEU:H	1.55	0.69
42:BN:34:ILE:O	42:BN:112:TYR:HA	1.92	0.69
48:BG:10:VAL:CG2	48:BG:48:THR:HA	2.22	0.69
49:BR:31:GLU:H	49:BR:63:VAL:HG22	1.57	0.69
6:CG:12:LEU:HD22	6:CG:13:PRO:HD2	1.75	0.69
23:DB:79:C:HO2'	23:DB:346:A:H1'	1.57	0.69
27:DK:54:LYS:H	27:DK:54:LYS:HD2	1.58	0.69
47:DF:161:SER:OG	47:DF:164:GLU:HG3	1.92	0.69
1:AA:1019:A:H2'	1:AA:1020:G:C8	2.28	0.69
1:AA:1162:C:H2'	1:AA:1163:A:C8	2.28	0.69
3:AD:97:LEU:HB2	3:AD:134:TYR:HB3	1.74	0.69
11:AL:35:ARG:NH1	11:AL:35:ARG:HA	2.08	0.69
12:AM:38:ILE:HG13	12:AM:55:LEU:HD21	1.75	0.69
17:AR:21:ASP:OD1	17:AR:23:LYS:HG3	1.93	0.69
23:BB:2309:A:H61	47:BF:75:GLY:HA3	1.58	0.69
25:BC:128:THR:HG23	25:BC:190:THR:HG22	1.74	0.69
37:BL:90:VAL:HB	37:BL:122:VAL:HA	1.74	0.69
51:BZ:7:VAL:HG21	51:BZ:59:ILE:HD11	1.73	0.69
51:BZ:64:ILE:HD12	51:BZ:64:ILE:H	1.58	0.69
53:B6:30:THR:HG22	53:B6:183:ILE:HG12	1.73	0.69
53:B6:177:GLU:OE2	53:B6:178:LYS:HG2	1.91	0.69
1:CA:135:C:O2	15:CP:1:MET:HB2	1.92	0.69
1:CA:522:C:H41	11:CL:49:ARG:NH2	1.91	0.69
1:CA:1399:C:H4'	1:CA:1400:C:H5'	1.73	0.69
1:CA:1483:A:H2'	1:CA:1484:C:O4'	1.93	0.69
3:CD:116:LEU:HB3	3:CD:122:ILE:HD11	1.75	0.69
8:CI:25:GLY:HA3	8:CI:57:VAL:CA	2.23	0.69
8:CI:25:GLY:HA2	8:CI:60:LEU:O	1.92	0.69
8:CI:42:THR:O	8:CI:45:MET:HG2	1.93	0.69
12:CM:106:ARG:HD3	12:CM:111:PRO:HA	1.74	0.69
18:CS:35:ARG:NH2	18:CS:52:ASN:HA	2.07	0.69
19:CT:57:VAL:HB	19:CT:71:ALA:HB1	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:119:GLN:HG3	20:CB:136:ARG:HH11	1.58	0.69
23:DB:543:G:C6	23:DB:544:C:H1'	2.27	0.69
23:DB:571:U:H3'	49:DR:80:ARG:HH12	1.56	0.69
23:DB:878:A:C1'	23:DB:899:A:H62	2.06	0.69
23:DB:1047:G:H1'	23:DB:1110:G:N2	2.08	0.69
23:DB:2415:G:H4'	37:DL:66:PHE:HB2	1.74	0.69
25:DC:209:ALA:O	25:DC:213:ARG:HB2	1.93	0.69
35:DV:4:ILE:HB	35:DV:63:ILE:HG13	1.73	0.69
40:DH:68:ARG:HH12	40:DH:134:VAL:HG11	1.57	0.69
41:DJ:93:ILE:O	41:DJ:97:PRO:HG3	1.92	0.69
53:D6:86:SER:HB3	53:D6:88:LEU:HD13	1.74	0.69
53:D6:93:SER:HB3	53:D6:100:TYR:O	1.92	0.69
1:AA:764:C:C2'	1:AA:765:G:H5'	2.22	0.69
12:AM:44:ILE:HA	12:AM:47:LEU:HG	1.74	0.69
23:BB:1060:U:O2	23:BB:1088:A:N7	2.26	0.69
27:BK:43:ILE:HG21	27:BK:46:ALA:HB2	1.75	0.69
40:BH:66:ASN:N	40:BH:66:ASN:HD22	1.90	0.69
43:BO:35:ILE:HG13	43:BO:71:ALA:HB2	1.75	0.69
47:BF:147:ARG:HD2	47:BF:148:VAL:HG22	1.74	0.69
7:CH:45:ILE:HG21	7:CH:60:LEU:HD21	1.75	0.69
23:DB:1138:G:H2'	23:DB:1139:G:O4'	1.93	0.69
23:DB:1309:G:H4'	36:D2:7:PRO:HB2	1.74	0.69
23:DB:2653:U:H3'	23:DB:2654:A:H2'	1.75	0.69
1:AA:93:U:H6	1:AA:93:U:O5'	1.75	0.69
10:AK:28:ASN:ND2	10:AK:46:ALA:HB3	2.08	0.69
11:AL:17:LYS:HE3	11:AL:17:LYS:H	1.58	0.69
18:AS:30:LEU:HB2	18:AS:48:ILE:HG23	1.73	0.69
23:BB:345:A:H1'	23:BB:346:A:H2	1.57	0.69
23:BB:495:G:N2	45:BS:61:ASN:HD21	1.90	0.69
24:BI:122:GLU:O	24:BI:126:ARG:HG3	1.91	0.69
40:BH:73:ASN:HD22	40:BH:74:ALA:N	1.90	0.69
42:BN:114:GLU:HG2	42:BN:115:LEU:N	2.07	0.69
5:CF:42:TRP:NE1	5:CF:61:LEU:HD23	2.08	0.69
23:DB:858:G:H21	23:DB:2268:A:H3'	1.58	0.69
23:DB:2340:A:H2'	23:DB:2341:G:H8	1.56	0.69
25:DC:91:ALA:HB2	25:DC:105:ALA:HB2	1.73	0.69
29:DE:131:THR:HG22	29:DE:160:ALA:HA	1.73	0.69
40:DH:41:LYS:O	40:DH:44:ILE:HG12	1.92	0.69
40:DH:49:ALA:HB3	40:DH:50:ARG:NH2	2.06	0.69
42:DN:102:PHE:H	42:DN:109:PRO:HA	1.56	0.69
45:DS:73:LYS:HB3	45:DS:106:VAL:HB	1.73	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DW:18:LYS:HA	52:DW:18:LYS:HE3	1.74	0.69
3:AD:11:SER:HA	3:AD:18:LEU:HD22	1.75	0.68
20:AB:63:LYS:HG2	20:AB:224:ARG:HH12	1.58	0.68
23:BB:1812:U:H1'	25:BC:43:ASN:HD21	1.56	0.68
53:B6:29:ARG:NH2	53:B6:110:ARG:HH11	1.91	0.68
1:CA:1323:G:H2'	1:CA:1324:A:C8	2.27	0.68
1:CA:1432:G:H1'	1:CA:1468:A:N6	2.09	0.68
23:DB:1161:C:H4'	49:DR:8:GLY:O	1.93	0.68
23:DB:1550:C:H2'	23:DB:1551:A:C8	2.28	0.68
48:DG:10:VAL:CG2	48:DG:48:THR:HA	2.22	0.68
1:AA:1369:C:H2'	1:AA:1370:G:C8	2.29	0.68
15:AP:57:ILE:O	15:AP:61:VAL:HG23	1.94	0.68
20:AB:202:ASN:HD22	20:AB:204:ASP:N	1.90	0.68
23:BB:102:U:H4'	23:BB:103:A:OP2	1.91	0.68
44:BQ:104:ALA:HA	49:BR:46:GLU:OE1	1.92	0.68
48:BG:166:GLU:HG2	48:BG:168:VAL:HG23	1.75	0.68
1:CA:1009:U:H2'	1:CA:1010:U:C6	2.28	0.68
12:CM:38:ILE:HG13	12:CM:55:LEU:HD21	1.76	0.68
23:DB:171:U:H2'	23:DB:172:A:C8	2.28	0.68
23:DB:532:A:H4'	23:DB:533:G:C8	2.28	0.68
23:DB:580:U:H2'	23:DB:581:C:H6	1.58	0.68
23:DB:845:A:C2	23:DB:847:U:H1'	2.28	0.68
23:DB:852:U:H2'	23:DB:853:C:C6	2.29	0.68
23:DB:2443:C:H2'	23:DB:2444:G:C8	2.28	0.68
23:DB:2804:U:H2'	23:DB:2805:C:C6	2.29	0.68
26:DD:53:GLY:HA3	26:DD:77:ARG:HG3	1.74	0.68
32:D4:10:LEU:HD12	32:D4:33:HIS:HA	1.74	0.68
23:BB:90:U:H3'	23:BB:91:A:C5'	2.21	0.68
23:BB:1266:G:N2	23:BB:2012:G:H2'	2.09	0.68
23:BB:2751:G:H2'	23:BB:2751:G:N3	2.08	0.68
30:BY:40:THR:O	30:BY:43:ILE:HG22	1.94	0.68
42:BN:34:ILE:HB	42:BN:113:ILE:HG22	1.74	0.68
1:CA:1458:G:H5"	19:CT:25:SER:HB2	1.74	0.68
12:CM:95:PRO:N	12:CM:108:ARG:HG2	2.09	0.68
23:DB:784:G:O2'	23:DB:785:G:H5"	1.94	0.68
23:DB:833:A:H2'	23:DB:834:G:C8	2.28	0.68
23:DB:1181:U:H2'	23:DB:1182:G:H8	1.58	0.68
27:DK:43:ILE:HG21	27:DK:46:ALA:HB2	1.75	0.68
41:DJ:4:PHE:HB3	41:DJ:44:TYR:CD1	2.28	0.68
50:DT:29:THR:H	50:DT:91:GLN:NE2	1.89	0.68
1:AA:147:G:H2'	1:AA:148:G:C8	2.28	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AH:51:GLU:HG2	7:AH:52:GLY:H	1.58	0.68
9:AJ:57:VAL:HG22	9:AJ:58:ASN:H	1.59	0.68
23:BB:848:C:H2'	23:BB:849:A:H8	1.59	0.68
23:BB:1309:G:H4'	36:B2:7:PRO:HB2	1.74	0.68
23:BB:2799:A:H4'	23:BB:2800:A:O4'	1.94	0.68
43:BO:47:VAL:HG12	43:BO:48:LEU:H	1.59	0.68
44:BQ:30:VAL:CG1	44:BQ:33:VAL:HG22	2.24	0.68
53:B6:32:ARG:NH2	53:B6:88:LEU:HA	2.08	0.68
2:CC:26:LYS:HG3	2:CC:27:GLU:HG3	1.74	0.68
12:CM:21:ILE:HG22	12:CM:23:GLY:H	1.57	0.68
15:CP:3:THR:HG22	15:CP:66:THR:HB	1.76	0.68
23:DB:742:A:H2'	23:DB:743:A:C8	2.28	0.68
23:DB:1406:U:H2'	23:DB:1407:G:H8	1.56	0.68
23:DB:1709:U:H2'	23:DB:1710:G:C8	2.29	0.68
48:DG:102:ILE:HG13	48:DG:116:LEU:HD11	1.75	0.68
6:AG:12:LEU:HD22	6:AG:13:PRO:HD2	1.75	0.68
10:AK:80:ASN:HB3	10:AK:105:ARG:HB3	1.74	0.68
12:AM:2:ARG:HD3	12:AM:2:ARG:H	1.58	0.68
18:AS:61:VAL:HA	18:AS:65:MET:SD	2.33	0.68
23:BB:782:A:N3	25:BC:224:MET:HB3	2.08	0.68
23:BB:1260:A:H2'	23:BB:1261:C:C6	2.28	0.68
23:BB:2143:C:H2'	23:BB:2144:G:O4'	1.92	0.68
23:BB:2728:U:H5'	27:BK:70:ARG:NH2	2.09	0.68
26:BD:105:LYS:HE3	26:BD:176:ASP:HB3	1.76	0.68
40:BH:90:LEU:HB2	40:BH:123:ARG:HB3	1.76	0.68
43:BO:49:VAL:HG11	43:BO:82:ALA:HA	1.76	0.68
44:BQ:26:ALA:HA	44:BQ:29:ARG:HG3	1.76	0.68
48:BG:84:LYS:CB	48:BG:132:LEU:H	2.06	0.68
49:BR:19:THR:HG22	49:BR:97:LYS:HG3	1.75	0.68
52:BW:49:ASN:HB3	52:BW:81:ILE:HG12	1.74	0.68
1:CA:1534:A:H62	21:CU:44:ARG:NH2	1.91	0.68
9:CJ:57:VAL:HG22	9:CJ:58:ASN:H	1.57	0.68
20:CB:130:LYS:HA	20:CB:133:ALA:HB3	1.75	0.68
23:DB:2384:U:H5"	23:DB:2386:A:OP1	1.93	0.68
23:DB:2529:G:H4'	48:DG:174:LYS:HG3	1.75	0.68
25:DC:81:GLU:HB2	25:DC:90:ILE:HG22	1.75	0.68
42:DN:34:ILE:HB	42:DN:113:ILE:HG22	1.76	0.68
51:DZ:17:ASN:HB2	51:DZ:25:THR:HB	1.73	0.68
1:AA:539:A:H2'	1:AA:540:G:C8	2.28	0.68
1:AA:677:U:H1'	10:AK:120:CYS:SG	2.33	0.68
1:AA:1399:C:H4'	1:AA:1400:C:H5"	1.74	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AH:11:THR:HG22	7:AH:14:ARG:HH12	1.59	0.68
20:AB:139:GLU:HG2	20:AB:143:LEU:HD11	1.75	0.68
23:BB:364:C:H2'	23:BB:365:U:H6	1.56	0.68
23:BB:1242:U:H2'	23:BB:1243:C:C6	2.29	0.68
23:BB:2384:U:H5"	23:BB:2386:A:OP1	1.94	0.68
23:BB:2748:A:H4'	48:BG:3:VAL:HG21	1.76	0.68
30:BY:6:ILE:HG21	30:BY:47:ILE:HD12	1.75	0.68
37:BL:93:ASN:O	37:BL:95:LEU:HD12	1.93	0.68
47:BF:62:GLN:HG3	47:BF:91:ARG:NH1	2.08	0.68
47:BF:137:PHE:HB2	47:BF:138:PRO:HD2	1.75	0.68
53:B6:14:MET:HE2	53:B6:165:THR:HG23	1.76	0.68
53:B6:114:LEU:HB3	53:B6:183:ILE:HG21	1.76	0.68
15:CP:4:ILE:HG12	15:CP:21:VAL:HG22	1.76	0.68
23:DB:141:G:H3'	23:DB:141:G:N3	2.09	0.68
23:DB:189:G:H2'	23:DB:205:G:H22	1.58	0.68
26:DD:148:GLN:HG3	26:DD:152:PRO:HB3	1.74	0.68
44:DQ:57:ARG:NH1	44:DQ:61:ILE:HD11	2.08	0.68
44:DQ:78:PHE:CZ	44:DQ:82:LEU:HD11	2.28	0.68
16:AQ:3:LYS:HE2	16:AQ:3:LYS:HA	1.75	0.68
23:BB:592:A:H2'	23:BB:593:U:C6	2.28	0.68
23:BB:833:A:H2'	23:BB:834:G:C8	2.28	0.68
26:BD:149:ASN:C	26:BD:152:PRO:HD2	2.14	0.68
38:BM:36:VAL:HB	38:BM:127:LYS:O	1.93	0.68
45:BS:17:VAL:C	45:BS:19:LEU:H	1.97	0.68
48:BG:10:VAL:HG23	48:BG:48:THR:HA	1.75	0.68
52:BW:37:VAL:HG12	52:BW:38:ARG:N	2.09	0.68
1:CA:35:G:H2'	1:CA:36:C:C6	2.29	0.68
1:CA:715:A:H2'	1:CA:716:A:H8	1.57	0.68
11:CL:17:LYS:HE3	11:CL:17:LYS:N	2.09	0.68
13:CN:48:GLN:O	13:CN:51:PRO:HD2	1.94	0.68
24:DI:9:LYS:HG2	24:DI:57:VAL:HG13	1.76	0.68
25:DC:2:VAL:HG23	25:DC:3:VAL:H	1.59	0.68
27:DK:36:GLY:HA2	27:DK:62:VAL:O	1.93	0.68
53:D6:52:LEU:HD21	53:D6:58:VAL:HG23	1.74	0.68
3:AD:197:HIS:O	3:AD:200:VAL:HG22	1.93	0.68
22:BA:75:G:H1'	35:BV:29:ILE:HG12	1.75	0.68
23:BB:1176:U:H2'	23:BB:1177:G:O4'	1.94	0.68
23:BB:1515:A:H2'	23:BB:1516:G:O4'	1.94	0.68
23:BB:1657:U:O2'	26:BD:138:LEU:HD12	1.93	0.68
47:BF:31:GLU:O	47:BF:32:LYS:HD3	1.94	0.68
20:CB:67:LEU:HD11	20:CB:150:ILE:HD12	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1387:A:H2'	23:DB:1388:G:H8	1.59	0.68
23:DB:1872:A:H2'	23:DB:1873:G:O4'	1.92	0.68
28:DP:112:ARG:HB2	28:DP:112:ARG:HH11	1.58	0.68
44:DQ:30:VAL:HG13	44:DQ:31:TYR:N	2.07	0.68
7:AH:94:VAL:HG23	7:AH:101:ALA:HB2	1.74	0.68
8:AI:25:GLY:HA3	8:AI:57:VAL:CA	2.23	0.68
8:AI:94:ARG:HA	8:AI:97:LEU:HG	1.75	0.68
14:AO:24:SER:HB3	14:AO:27:VAL:HG23	1.76	0.68
24:BI:25:PRO:O	24:BI:29:GLN:HG2	1.94	0.68
25:BC:91:ALA:HB2	25:BC:105:ALA:HB2	1.76	0.68
40:BH:80:ILE:HB	40:BH:144:VAL:HG13	1.76	0.68
44:BQ:30:VAL:HG13	44:BQ:31:TYR:N	2.08	0.68
46:BU:49:PRO:HA	46:BU:53:GLN:HG3	1.74	0.68
53:B6:111:ARG:O	53:B6:115:VAL:HG23	1.94	0.68
1:CA:1137:C:H1'	1:CA:1138:G:C2	2.29	0.68
16:CQ:74:LEU:HD22	16:CQ:75:VAL:N	2.08	0.68
23:DB:90:U:H3'	23:DB:91:A:C5'	2.24	0.68
23:DB:571:U:H3'	49:DR:80:ARG:NH1	2.08	0.68
23:DB:1260:A:H2'	23:DB:1261:C:C6	2.29	0.68
23:DB:1684:G:H2'	23:DB:1685:C:H6	1.59	0.68
29:DE:118:LEU:HA	29:DE:186:VAL:HG13	1.76	0.68
48:DG:166:GLU:HG2	48:DG:168:VAL:HG23	1.74	0.68
1:AA:120:A:H2'	1:AA:121:U:H5"	1.75	0.68
16:AQ:74:LEU:HD22	16:AQ:75:VAL:N	2.08	0.68
17:AR:37:LYS:HZ3	21:AU:22:CYS:HB2	1.58	0.68
23:BB:1437:C:H2'	23:BB:1438:U:H6	1.59	0.68
27:BK:54:LYS:HD2	27:BK:54:LYS:H	1.59	0.68
53:B6:95:LYS:HB3	53:B6:100:TYR:CE2	2.29	0.68
1:CA:215:C:H2'	1:CA:216:U:C6	2.29	0.68
1:CA:817:C:H1'	1:CA:819:A:H5'	1.75	0.68
17:CR:21:ASP:OD1	17:CR:23:LYS:HG3	1.94	0.68
23:DB:224:U:O4	23:DB:420:C:H5'	1.94	0.68
23:DB:2243:U:H2'	23:DB:2244:U:C6	2.29	0.68
45:DS:6:LYS:HB2	45:DS:103:ILE:O	1.94	0.68
45:DS:17:VAL:C	45:DS:19:LEU:H	1.97	0.68
47:DF:16:MET:O	47:DF:20:ASN:HA	1.94	0.68
48:DG:10:VAL:HG23	48:DG:48:THR:HA	1.74	0.68
6:AG:4:ARG:HE	6:AG:6:ILE:HG23	1.57	0.67
8:AI:55:ASP:HB2	8:AI:59:LYS:HE3	1.74	0.67
8:AI:56:MET:C	8:AI:58:GLU:H	1.97	0.67
14:AO:26:GLU:OE2	14:AO:77:ARG:HD2	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:28:A:H61	23:BB:512:G:H1'	1.59	0.67
23:BB:224:U:O4	23:BB:420:C:H5'	1.94	0.67
23:BB:2657:A:H4'	48:BG:91:VAL:HG21	1.76	0.67
26:BD:148:GLN:HB2	26:BD:152:PRO:CG	2.23	0.67
29:BE:118:LEU:HA	29:BE:186:VAL:HG13	1.76	0.67
1:CA:780:A:O2'	1:CA:781:A:H5"	1.93	0.67
1:CA:1348:U:H4'	8:CI:121:ARG:HG3	1.75	0.67
14:CO:26:GLU:OE2	14:CO:77:ARG:HD2	1.93	0.67
16:CQ:58:VAL:HG12	16:CQ:77:VAL:HG13	1.76	0.67
20:CB:122:ASP:OD1	20:CB:124:THR:HG22	1.95	0.67
21:CU:42:THR:HB	21:CU:46:ARG:CZ	2.24	0.67
23:DB:1913:A:H4'	23:DB:1914:C:H5"	1.77	0.67
23:DB:2075:U:H2'	23:DB:2238:G:N2	2.09	0.67
26:DD:8:LYS:HB2	26:DD:201:LEU:HD11	1.77	0.67
26:DD:124:ARG:HA	26:DD:165:MET:SD	2.34	0.67
40:DH:68:ARG:NH1	40:DH:134:VAL:HG11	2.08	0.67
44:DQ:94:LEU:HD12	49:DR:13:ARG:HB2	1.76	0.67
16:AQ:8:GLN:HA	16:AQ:59:GLU:HA	1.76	0.67
23:BB:2241:A:H2'	23:BB:2242:G:C8	2.29	0.67
4:CE:37:VAL:HA	4:CE:47:PHE:HA	1.76	0.67
23:DB:286:U:H2'	23:DB:287:G:H8	1.57	0.67
23:DB:1104:C:H2'	23:DB:1105:U:C6	2.30	0.67
38:DM:40:ARG:HD3	38:DM:93:VAL:HG21	1.76	0.67
1:AA:270:A:H2'	1:AA:271:C:C6	2.28	0.67
1:AA:1137:C:H1'	1:AA:1138:G:C2	2.29	0.67
14:AO:26:GLU:HG3	14:AO:81:LEU:HD12	1.75	0.67
19:AT:57:VAL:HB	19:AT:71:ALA:HB1	1.76	0.67
23:BB:139:U:H3'	23:BB:140:C:H5"	1.75	0.67
23:BB:917:A:H5"	23:BB:2268:A:H61	1.58	0.67
29:BE:46:GLN:HG3	29:BE:87:ALA:HB3	1.76	0.67
22:DA:111:U:H2'	22:DA:112:G:C8	2.30	0.67
23:DB:848:C:H2'	23:DB:849:A:H8	1.58	0.67
23:DB:1437:C:H2'	23:DB:1438:U:H6	1.57	0.67
23:DB:2213:U:O2	23:DB:2213:U:H2'	1.93	0.67
23:DB:2728:U:H2'	23:DB:2729:G:H8	1.58	0.67
25:DC:239:PHE:O	25:DC:241:LYS:HG3	1.93	0.67
29:DE:58:LYS:HD3	29:DE:58:LYS:N	2.09	0.67
47:DF:115:GLY:HA3	47:DF:177:ARG:HD2	1.75	0.67
1:AA:812:G:O2'	1:AA:813:U:H6	1.74	0.67
8:AI:20:ILE:HA	8:AI:62:LEU:HB3	1.76	0.67
12:AM:14:ALA:HB3	12:AM:40:GLU:HA	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2557:G:H2'	23:BB:2558:C:C6	2.30	0.67
27:BK:19:VAL:HG12	27:BK:43:ILE:HA	1.75	0.67
41:BJ:73:VAL:HG23	41:BJ:74:TYR:H	1.58	0.67
41:BJ:93:ILE:O	41:BJ:97:PRO:HG3	1.94	0.67
52:BW:51:GLY:HA3	52:BW:59:PHE:CB	2.24	0.67
53:B6:42:LYS:HA	53:B6:51:PRO:HA	1.76	0.67
1:CA:1071:C:H2'	1:CA:1072:G:H8	1.59	0.67
16:CQ:66:LEU:H	16:CQ:66:LEU:HD12	1.59	0.67
20:CB:22:TRP:HB3	20:CB:38:HIS:CE1	2.30	0.67
30:DY:40:THR:O	30:DY:43:ILE:HG22	1.94	0.67
47:DF:101:ARG:NH1	47:DF:138:PRO:HB2	2.10	0.67
1:AA:1432:G:H1'	1:AA:1468:A:N6	2.08	0.67
11:AL:20:VAL:HG12	11:AL:93:ARG:HB3	1.76	0.67
23:BB:528:A:C2	23:BB:2042:A:H2'	2.30	0.67
23:BB:717:C:H3'	23:BB:718:A:H5"	1.76	0.67
29:BE:21:ARG:HH11	29:BE:106:LYS:HD2	1.60	0.67
29:BE:58:LYS:HD3	29:BE:58:LYS:H	1.59	0.67
47:BF:49:LEU:HD11	47:BF:66:ILE:HD12	1.75	0.67
47:BF:107:VAL:HG11	47:BF:175:PRO:HG3	1.76	0.67
53:B6:30:THR:C	53:B6:32:ARG:N	2.40	0.67
14:CO:24:SER:HB3	14:CO:27:VAL:HG23	1.76	0.67
18:CS:30:LEU:HB2	18:CS:48:ILE:HG23	1.75	0.67
20:CB:65:LYS:HA	20:CB:89:PHE:HE1	1.58	0.67
23:DB:1535:A:H3'	23:DB:1536:C:C6	2.29	0.67
23:DB:1655:A:H5'	26:DD:118:PHE:HB2	1.74	0.67
23:DB:2216:G:H2'	23:DB:2217:G:C8	2.29	0.67
25:DC:77:VAL:HG23	25:DC:112:GLY:H	1.58	0.67
47:DF:41:GLU:O	47:DF:43:ILE:HG22	1.94	0.67
48:DG:84:LYS:CB	48:DG:132:LEU:H	2.06	0.67
52:DW:33:GLY:O	52:DW:34:SER:HB2	1.92	0.67
1:AA:836:G:OP2	17:AR:49:LYS:HE2	1.95	0.67
1:AA:1009:U:H2'	1:AA:1010:U:C6	2.30	0.67
1:AA:1142:G:H2'	1:AA:1143:G:O4'	1.95	0.67
16:AQ:60:ILE:HG22	16:AQ:74:LEU:HA	1.77	0.67
19:AT:56:ILE:O	19:AT:60:GLN:HG2	1.94	0.67
23:BB:580:U:H2'	23:BB:581:C:H6	1.60	0.67
23:BB:1727:C:H2'	23:BB:1728:C:C6	2.30	0.67
45:BS:73:LYS:HB3	45:BS:106:VAL:HB	1.75	0.67
1:CA:235:C:H2'	1:CA:236:A:H8	1.59	0.67
18:CS:42:ASN:N	18:CS:42:ASN:HD22	1.93	0.67
23:DB:150:U:H2'	23:DB:151:C:C6	2.30	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:2591:C:H2'	23:DB:2592:G:H8	1.58	0.67
26:DD:20:VAL:HA	27:DK:72:PRO:HB3	1.77	0.67
27:DK:35:VAL:HG23	27:DK:36:GLY:N	2.02	0.67
1:AA:484:G:H4'	1:AA:485:U:C5'	2.24	0.67
1:AA:1410:A:H2'	1:AA:1411:C:C6	2.30	0.67
8:AI:62:LEU:N	8:AI:62:LEU:HD22	2.10	0.67
21:AU:16:ARG:HA	21:AU:16:ARG:NE	2.06	0.67
23:BB:189:G:H2'	23:BB:205:G:N2	2.10	0.67
23:BB:1790:C:H2'	23:BB:1791:A:C8	2.30	0.67
23:BB:2875:C:H2'	23:BB:2876:G:C8	2.30	0.67
40:BH:139:PHE:O	40:BH:140:ALA:HB2	1.95	0.67
43:BO:11:ALA:HB2	43:BO:96:GLY:N	2.09	0.67
49:BR:66:HIS:ND1	49:BR:94:THR:HG22	2.10	0.67
53:B6:38:LEU:HD13	53:B6:83:ILE:HD12	1.76	0.67
1:CA:1343:G:H1'	8:CI:122:ARG:HH12	1.59	0.67
23:DB:718:A:H3'	23:DB:719:C:H6	1.58	0.67
23:DB:2306:C:C5	23:DB:2307:G:H2'	2.30	0.67
52:DW:37:VAL:HG12	52:DW:38:ARG:N	2.10	0.67
1:AA:1288:A:N1	1:AA:1371:G:H1'	2.10	0.67
2:AC:126:ARG:HH21	2:AC:191:THR:HG23	1.60	0.67
23:BB:27:G:H1'	23:BB:513:A:N6	2.10	0.67
23:BB:78:U:H2'	23:BB:79:C:C6	2.29	0.67
23:BB:718:A:H3'	23:BB:719:C:H6	1.59	0.67
29:BE:176:ASP:HB3	29:BE:179:SER:HB2	1.75	0.67
40:BH:73:ASN:HB3	40:BH:141:LYS:NZ	2.09	0.67
41:BJ:4:PHE:HB3	41:BJ:44:TYR:CD1	2.30	0.67
48:BG:17:LYS:NZ	48:BG:18:ILE:H	1.93	0.67
3:CD:18:LEU:HB2	3:CD:20:LEU:HG	1.77	0.67
25:DC:204:LEU:HD22	25:DC:209:ALA:HB1	1.76	0.67
28:DP:89:GLY:HA2	28:DP:112:ARG:N	2.10	0.67
30:DY:6:ILE:O	30:DY:34:THR:HA	1.95	0.67
39:DX:10:SER:H	39:DX:60:LYS:HE2	1.60	0.67
41:DJ:64:VAL:O	41:DJ:65:THR:HG22	1.95	0.67
47:DF:147:ARG:HD2	47:DF:148:VAL:HG22	1.75	0.67
48:DG:17:LYS:NZ	48:DG:18:ILE:H	1.92	0.67
1:AA:719:C:H1'	17:AR:37:LYS:HB2	1.77	0.67
14:AO:29:VAL:HG11	14:AO:67:LEU:HD21	1.77	0.67
20:AB:18:GLN:O	20:AB:37:VAL:HG23	1.95	0.67
23:BB:950:G:H2'	23:BB:951:C:C6	2.30	0.67
23:BB:1447:C:H2'	23:BB:1448:G:C8	2.29	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1655:A:H5'	26:BD:118:PHE:HB2	1.76	0.67
23:BB:2266:A:C4'	23:BB:2267:A:N7	2.57	0.67
23:BB:2529:G:H4'	48:BG:174:LYS:HG3	1.76	0.67
33:B1:26:LYS:HD3	33:B1:52:LYS:HB3	1.76	0.67
41:BJ:58:ASN:HA	41:BJ:127:GLY:CA	2.24	0.67
44:BQ:78:PHE:CZ	44:BQ:82:LEU:HD11	2.30	0.67
49:BR:3:ALA:O	49:BR:13:ARG:HA	1.95	0.67
53:B6:30:THR:HG22	53:B6:179:LYS:HD3	1.77	0.67
1:CA:1369:C:H2'	1:CA:1370:G:C8	2.30	0.67
2:CC:26:LYS:HG3	2:CC:27:GLU:N	2.10	0.67
12:CM:33:LEU:HD13	12:CM:39:ALA:O	1.95	0.67
20:CB:187:ASP:OD1	20:CB:203:ASP:HB3	1.95	0.67
23:DB:62:U:H3'	23:DB:63:A:C8	2.29	0.67
23:DB:120:U:H4'	23:DB:121:G:H5"	1.76	0.67
23:DB:1125:G:H5'	32:D4:37:GLN:HE21	1.59	0.67
23:DB:2485:G:O2'	23:DB:2486:C:H5'	1.95	0.67
23:DB:2799:A:H4'	23:DB:2800:A:O4'	1.94	0.67
25:DC:158:GLY:N	25:DC:194:VAL:HG13	2.09	0.67
39:DX:48:ARG:O	39:DX:51:ALA:HB3	1.95	0.67
48:DG:83:THR:HA	48:DG:84:LYS:NZ	2.10	0.67
49:DR:34:GLU:HA	49:DR:59:ILE:O	1.95	0.67
1:AA:1081:A:OP2	4:AE:51:LYS:HE2	1.94	0.67
1:AA:1144:G:H21	1:AA:1146:A:H62	1.41	0.67
11:AL:54:VAL:HG12	11:AL:55:ARG:H	1.60	0.67
13:AN:20:PHE:HD1	13:AN:24:ALA:HB2	1.59	0.67
15:AP:20:VAL:HG23	15:AP:35:ARG:HA	1.76	0.67
23:BB:95:A:H4'	39:BX:38:GLN:O	1.95	0.67
23:BB:849:A:H2'	23:BB:850:U:C6	2.29	0.67
23:BB:2813:A:H2'	23:BB:2814:A:C8	2.30	0.67
24:BI:10:LEU:HD13	24:BI:12:VAL:HG13	1.76	0.67
37:BL:110:VAL:HB	37:BL:127:VAL:HG23	1.75	0.67
41:BJ:36:LEU:HD21	41:BJ:122:LEU:HB2	1.76	0.67
1:CA:154:U:H2'	1:CA:155:A:C8	2.30	0.67
1:CA:975:A:H4'	1:CA:976:G:O5'	1.95	0.67
15:CP:20:VAL:HG23	15:CP:35:ARG:HA	1.76	0.67
22:DA:35:C:H2'	22:DA:36:C:H5'	1.75	0.67
23:DB:19:A:H2'	23:DB:20:C:C6	2.30	0.67
23:DB:28:A:N6	23:DB:512:G:H1'	2.10	0.67
23:DB:704:G:H1'	23:DB:727:A:H61	1.60	0.67
23:DB:1082:U:N3	23:DB:1086:A:C2	2.63	0.67
23:DB:1727:C:H2'	23:DB:1728:C:C6	2.30	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2366:A:H2'	23:DB:2367:G:O4'	1.94	0.67
43:DO:51:ALA:HB3	43:DO:78:VAL:HG22	1.75	0.67
48:DG:84:LYS:HB2	48:DG:132:LEU:H	1.60	0.67
1:AA:215:C:H2'	1:AA:216:U:C6	2.30	0.66
1:AA:664:G:H22	1:AA:741:G:H1	1.40	0.66
1:AA:1071:C:H2'	1:AA:1072:G:H8	1.60	0.66
5:AF:100:SER:HA	17:AR:23:LYS:CE	2.25	0.66
13:AN:27:LYS:HA	13:AN:31:SER:HB2	1.76	0.66
18:AS:28:LYS:HD2	18:AS:28:LYS:H	1.60	0.66
21:AU:34:ARG:HD3	21:AU:39:LYS:HZ2	1.59	0.66
23:BB:2144:G:H5"	23:BB:2146:C:OP2	1.96	0.66
45:BS:6:LYS:HB2	45:BS:103:ILE:O	1.95	0.66
1:CA:454:G:H2'	1:CA:455:G:H8	1.61	0.66
1:CA:836:G:OP2	17:CR:49:LYS:HE2	1.95	0.66
11:CL:35:ARG:HA	11:CL:35:ARG:NH1	2.10	0.66
12:CM:89:ARG:NH2	12:CM:94:LEU:HD12	2.10	0.66
13:CN:20:PHE:HD1	13:CN:24:ALA:HB2	1.59	0.66
20:CB:18:GLN:O	20:CB:37:VAL:HG23	1.94	0.66
23:DB:173:A:H2'	23:DB:174:U:C6	2.30	0.66
23:DB:479:A:N3	23:DB:481:G:H5"	2.09	0.66
23:DB:1684:G:H2'	23:DB:1685:C:C6	2.28	0.66
25:DC:128:THR:HG23	25:DC:190:THR:HG22	1.75	0.66
40:DH:69:ALA:HA	40:DH:140:ALA:HB2	1.78	0.66
43:DO:47:VAL:HG12	43:DO:48:LEU:H	1.58	0.66
1:AA:978:A:H5'	1:AA:1362:A:N6	2.10	0.66
3:AD:116:LEU:HB3	3:AD:122:ILE:HD11	1.76	0.66
9:AJ:10:LEU:HB2	9:AJ:72:ARG:HB2	1.78	0.66
23:BB:2144:G:H3'	23:BB:2145:C:H3'	1.78	0.66
23:BB:2276:G:OP2	38:BM:85:GLY:N	2.28	0.66
23:BB:2639:A:H2'	23:BB:2640:G:O4'	1.95	0.66
34:B3:31:ILE:HD11	34:B3:34:LYS:HD3	1.77	0.66
45:BS:76:VAL:HG12	45:BS:103:ILE:HA	1.77	0.66
53:B6:42:LYS:HB3	53:B6:49:HIS:O	1.93	0.66
3:CD:84:ASN:HD22	4:CE:101:GLY:CA	2.08	0.66
7:CH:77:VAL:HG23	7:CH:126:CYS:HA	1.77	0.66
10:CK:22:ILE:HD12	10:CK:85:VAL:HG22	1.78	0.66
19:CT:61:ALA:HA	19:CT:67:HIS:H	1.60	0.66
23:DB:172:A:H2'	23:DB:173:A:C8	2.30	0.66
23:DB:1178:C:H2'	23:DB:1179:G:C8	2.29	0.66
29:DE:18:THR:HG22	29:DE:106:LYS:NZ	2.10	0.66
29:DE:58:LYS:HD3	29:DE:58:LYS:H	1.60	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DY:6:ILE:HG21	30:DY:47:ILE:HD12	1.77	0.66
47:DF:107:VAL:HG11	47:DF:175:PRO:HG3	1.75	0.66
1:AA:454:G:H2'	1:AA:455:G:H8	1.61	0.66
1:AA:1278:G:H4'	1:AA:1279:G:H5'	1.77	0.66
12:AM:89:ARG:NH2	12:AM:94:LEU:HD12	2.10	0.66
23:BB:458:G:N2	23:BB:469:G:H2'	2.10	0.66
23:BB:1826:G:H2'	23:BB:1827:U:H6	1.60	0.66
41:BJ:117:ALA:HA	41:BJ:120:ARG:HD2	1.76	0.66
1:CA:147:G:H2'	1:CA:148:G:C8	2.30	0.66
1:CA:1142:G:H2'	1:CA:1143:G:O4'	1.95	0.66
1:CA:1236:A:H4'	1:CA:1304:G:H4'	1.78	0.66
1:CA:1288:A:N1	1:CA:1371:G:H1'	2.10	0.66
11:CL:20:VAL:HG12	11:CL:93:ARG:HB3	1.76	0.66
12:CM:48:SER:HB2	12:CM:51:GLN:HG3	1.75	0.66
23:DB:1177:G:H2'	23:DB:1178:C:C6	2.31	0.66
24:DI:25:PRO:O	24:DI:29:GLN:HG3	1.94	0.66
40:DH:125:THR:HA	40:DH:146:VAL:HB	1.76	0.66
48:DG:152:ARG:NH2	48:DG:162:ARG:HA	2.11	0.66
1:AA:56:U:H2'	1:AA:57:G:H8	1.60	0.66
3:AD:18:LEU:HB2	3:AD:20:LEU:HG	1.76	0.66
20:AB:209:VAL:HG23	20:AB:210:THR:H	1.59	0.66
23:BB:594:U:H2'	23:BB:595:C:C6	2.30	0.66
23:BB:2286:G:H3'	33:B1:29:LYS:NZ	2.11	0.66
23:BB:2286:G:H3'	33:B1:29:LYS:HZ1	1.60	0.66
23:BB:2720:U:H5"	28:BP:52:ARG:HH22	1.61	0.66
26:BD:20:VAL:HA	27:BK:72:PRO:HB3	1.76	0.66
40:BH:83:LYS:HB3	40:BH:91:PHE:HB2	1.75	0.66
45:BS:26:GLY:N	45:BS:71:VAL:HG13	2.10	0.66
47:BF:16:MET:O	47:BF:20:ASN:HA	1.96	0.66
47:BF:30:VAL:HG21	47:BF:96:TRP:HE1	1.61	0.66
1:CA:920:U:H2'	1:CA:921:U:C6	2.31	0.66
23:DB:365:U:H2'	23:DB:366:C:C6	2.29	0.66
23:DB:593:U:H2'	23:DB:594:U:C6	2.30	0.66
23:DB:1535:A:H5"	23:DB:1536:C:H5	1.61	0.66
23:DB:1657:U:O2'	23:DB:1658:C:H5'	1.96	0.66
24:DI:73:PRO:HG2	24:DI:78:LEU:HD21	1.75	0.66
26:DD:148:GLN:HB2	26:DD:152:PRO:CG	2.22	0.66
26:DD:149:ASN:C	26:DD:152:PRO:HD2	2.16	0.66
49:DR:3:ALA:O	49:DR:13:ARG:HA	1.95	0.66
1:AA:817:C:H1'	1:AA:819:A:H5'	1.78	0.66
4:AE:25:LYS:HG3	4:AE:26:GLY:H	1.61	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AB:16:GLY:HA2	20:AB:40:ILE:HG13	1.77	0.66
23:BB:1681:G:N3	23:BB:1762:A:H2'	2.10	0.66
23:BB:1796:U:H2'	23:BB:1797:G:C8	2.31	0.66
1:CA:17:U:H2'	1:CA:18:C:H6	1.61	0.66
4:CE:25:LYS:HG3	4:CE:26:GLY:H	1.61	0.66
10:CK:115:ILE:HD11	17:CR:72:ARG:NH1	2.11	0.66
12:CM:15:VAL:HG23	12:CM:40:GLU:HB3	1.77	0.66
23:DB:704:G:H1'	23:DB:727:A:N6	2.11	0.66
23:DB:743:A:O2'	23:DB:744:U:H5'	1.96	0.66
23:DB:1080:A:H2'	23:DB:1081:U:C6	2.28	0.66
23:DB:1166:G:H2'	23:DB:1167:C:C6	2.30	0.66
23:DB:2331:G:H4'	52:DW:39:GLN:HA	1.76	0.66
24:DI:27:LEU:HD12	24:DI:32:VAL:HG11	1.76	0.66
25:DC:91:ALA:CB	25:DC:105:ALA:HB2	2.24	0.66
29:DE:176:ASP:HB3	29:DE:179:SER:HB2	1.76	0.66
44:DQ:91:ARG:NH1	49:DR:11:GLN:H	1.92	0.66
1:AA:9:G:H5'	4:AE:107:GLY:HA3	1.76	0.66
1:AA:394:G:H2'	1:AA:395:C:H6	1.61	0.66
1:AA:981:U:H4'	13:AN:60:ARG:CD	2.25	0.66
18:AS:42:ASN:N	18:AS:42:ASN:HD22	1.92	0.66
22:BA:14:U:H4'	22:BA:70:C:O2	1.96	0.66
23:BB:2064:C:H2'	23:BB:2065:C:C6	2.30	0.66
23:BB:2213:U:H2'	23:BB:2213:U:O2	1.94	0.66
23:BB:2653:U:O2'	48:BG:109:SER:HB2	1.95	0.66
25:BC:2:VAL:HG23	25:BC:3:VAL:H	1.59	0.66
47:BF:161:SER:OG	47:BF:164:GLU:HG3	1.96	0.66
1:CA:33:A:H2'	1:CA:34:C:H6	1.59	0.66
1:CA:394:G:H2'	1:CA:395:C:H6	1.61	0.66
15:CP:57:ILE:O	15:CP:61:VAL:HG23	1.96	0.66
23:DB:135:U:H2'	23:DB:136:G:C8	2.31	0.66
23:DB:850:U:O2'	30:DY:22:THR:HG22	1.96	0.66
23:DB:2557:G:H2'	23:DB:2558:C:C6	2.30	0.66
38:DM:96:ILE:HD11	38:DM:126:ILE:HD13	1.78	0.66
1:AA:841:C:H3'	1:AA:843:U:OP2	1.95	0.66
13:AN:5:MET:O	13:AN:8:ARG:HB2	1.95	0.66
18:AS:69:LYS:O	18:AS:72:GLU:HG2	1.96	0.66
21:AU:40:PRO:HA	21:AU:44:ARG:HD2	1.78	0.66
23:BB:477:A:H2'	23:BB:478:A:C8	2.31	0.66
23:BB:2144:G:C2'	23:BB:2146:C:H5'	2.24	0.66
23:BB:2444:G:OP2	29:BE:63:LYS:HD2	1.95	0.66
48:BG:7:PRO:O	48:BG:8:VAL:HB	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:978:A:H5'	1:CA:1362:A:N6	2.11	0.66
23:DB:581:C:H2'	23:DB:582:A:C8	2.30	0.66
23:DB:1192:G:O2'	23:DB:1193:G:H5'	1.95	0.66
42:DN:114:GLU:HG2	42:DN:115:LEU:N	2.08	0.66
53:D6:42:LYS:HB3	53:D6:49:HIS:HB3	1.78	0.66
1:AA:154:U:H2'	1:AA:155:A:C8	2.31	0.66
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.30	0.66
10:AK:115:ILE:HD11	17:AR:72:ARG:HH12	1.61	0.66
20:AB:20:ARG:HA	20:AB:38:HIS:CE1	2.31	0.66
23:BB:28:A:N6	23:BB:512:G:H1'	2.11	0.66
23:BB:655:A:H4'	23:BB:656:G:H5'	1.78	0.66
23:BB:1258:U:C4'	29:BE:79:ARG:HD2	2.25	0.66
23:BB:2472:G:H2'	23:BB:2475:C:H42	1.59	0.66
25:BC:57:HIS:CG	25:BC:58:LYS:H	2.14	0.66
39:BX:48:ARG:O	39:BX:51:ALA:HB3	1.95	0.66
40:BH:8:LYS:O	40:BH:13:GLY:HA3	1.96	0.66
44:BQ:63:ARG:HH22	44:BQ:96:ASP:CA	2.08	0.66
47:BF:41:GLU:O	47:BF:43:ILE:HG22	1.95	0.66
1:CA:17:U:H2'	1:CA:18:C:C6	2.31	0.66
1:CA:238:A:H2'	1:CA:239:U:H5"	1.77	0.66
1:CA:1132:C:H2'	1:CA:1133:G:H8	1.59	0.66
8:CI:20:ILE:HD13	8:CI:85:ALA:HB3	1.78	0.66
9:CJ:10:LEU:HB2	9:CJ:72:ARG:HB2	1.76	0.66
23:DB:27:G:HO2'	23:DB:28:A:H8	1.44	0.66
23:DB:784:G:N1	25:DC:227:VAL:HG11	2.11	0.66
23:DB:1469:A:H2'	23:DB:1470:A:C8	2.31	0.66
23:DB:2639:A:H2'	23:DB:2640:G:O4'	1.96	0.66
24:DI:72:THR:HG22	24:DI:115:ASP:OD2	1.95	0.66
27:DK:76:VAL:H	28:DP:72:VAL:HG23	1.60	0.66
36:D2:26:ASN:O	36:D2:30:VAL:HG23	1.96	0.66
43:DO:49:VAL:HG11	43:DO:82:ALA:HA	1.77	0.66
50:DT:38:ALA:O	50:DT:39:THR:HB	1.95	0.66
1:AA:522:C:H41	11:AL:49:ARG:NH2	1.93	0.66
1:AA:662:U:H2'	1:AA:663:A:C8	2.31	0.66
4:AE:84:VAL:HG11	4:AE:146:MET:HB3	1.77	0.66
18:AS:10:ILE:HB	18:AS:14:LEU:HD11	1.78	0.66
20:AB:98:GLY:HA2	20:AB:101:THR:HG22	1.78	0.66
25:BC:91:ALA:CB	25:BC:105:ALA:HB2	2.26	0.66
38:BM:17:ASN:HD21	38:BM:95:LEU:HG	1.58	0.66
50:BT:38:ALA:O	50:BT:39:THR:HB	1.95	0.66
1:CA:279:A:H5"	1:CA:280:C:H3'	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:539:A:H2'	1:CA:540:G:C8	2.31	0.66
8:CI:27:ILE:HB	8:CI:34:LEU:HB2	1.76	0.66
15:CP:61:VAL:HA	15:CP:65:ALA:HB3	1.78	0.66
23:DB:2267:A:H5"	23:DB:2268:A:H5'	1.78	0.66
23:DB:2333:A:H5'	23:DB:2335:A:H1'	1.77	0.66
23:DB:2646:C:H2'	23:DB:2647:U:O4'	1.95	0.66
28:DP:50:ARG:CB	28:DP:56:SER:HB3	2.25	0.66
42:DN:79:LEU:HA	42:DN:83:LEU:HD12	1.77	0.66
44:DQ:104:ALA:HA	49:DR:46:GLU:OE1	1.96	0.66
1:AA:22:G:H2'	1:AA:23:C:H6	1.60	0.66
13:AN:11:LYS:O	13:AN:15:LEU:HG	1.95	0.66
23:BB:1350:C:H5'	23:BB:1351:C:OP2	1.95	0.66
23:BB:1550:C:H2'	23:BB:1551:A:C8	2.31	0.66
50:BT:69:ARG:CZ	50:BT:69:ARG:HA	2.26	0.66
1:CA:1278:G:H4'	1:CA:1279:G:H5'	1.75	0.66
2:CC:14:VAL:HG11	2:CC:178:ARG:HA	1.76	0.66
8:CI:9:GLY:HA2	8:CI:80:HIS:CD2	2.31	0.66
8:CI:20:ILE:HA	8:CI:62:LEU:HB3	1.77	0.66
10:CK:33:ILE:HG12	10:CK:69:CYS:SG	2.36	0.66
12:CM:14:ALA:HB3	12:CM:40:GLU:HA	1.76	0.66
12:CM:28:ARG:NH2	12:CM:62:PHE:HB2	2.11	0.66
22:DA:90:C:OP1	38:DM:16:ARG:HB2	1.96	0.66
23:DB:782:A:N3	25:DC:224:MET:HB3	2.10	0.66
23:DB:2098:U:H2'	23:DB:2099:U:C1'	2.26	0.66
23:DB:2728:U:H5'	27:DK:70:ARG:HH21	1.61	0.66
26:DD:51:THR:HG21	26:DD:76:GLY:HA3	1.78	0.66
41:DJ:117:ALA:HA	41:DJ:120:ARG:HD2	1.78	0.66
47:DF:31:GLU:O	47:DF:32:LYS:HD3	1.96	0.66
47:DF:72:SER:HB2	47:DF:80:GLN:H	1.60	0.66
1:AA:72:A:H2'	1:AA:73:C:C6	2.30	0.65
4:AE:37:VAL:HA	4:AE:47:PHE:HA	1.77	0.65
5:AF:53:LYS:HB2	5:AF:54:LEU:HD22	1.78	0.65
15:AP:54:LEU:HD22	15:AP:80:LYS:HE2	1.77	0.65
23:BB:72:U:O2'	23:BB:73:A:H5'	1.96	0.65
23:BB:572:A:OP2	49:BR:80:ARG:NH2	2.30	0.65
23:BB:1442:U:H2'	23:BB:1443:U:C6	2.31	0.65
23:BB:1684:G:H2'	23:BB:1685:C:C6	2.30	0.65
27:BK:70:ARG:HB3	27:BK:76:VAL:HG22	1.77	0.65
28:BP:89:GLY:HA2	28:BP:112:ARG:N	2.10	0.65
48:BG:84:LYS:HB2	48:BG:132:LEU:H	1.60	0.65
49:BR:24:LYS:HA	49:BR:94:THR:HG23	1.77	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:55:ASP:HB2	8:CI:59:LYS:HE3	1.76	0.65
12:CM:44:ILE:HA	12:CM:47:LEU:HG	1.78	0.65
23:DB:702:U:H2'	23:DB:703:U:C6	2.31	0.65
23:DB:1283:G:N2	23:DB:1286:A:H5'	2.10	0.65
23:DB:2834:G:H1'	23:DB:2883:A:N6	2.11	0.65
24:DI:42:ASN:HA	24:DI:45:THR:OG1	1.96	0.65
29:DE:110:SER:HB3	29:DE:114:ARG:NH1	2.10	0.65
43:DO:67:ASN:N	43:DO:70:ALA:HB3	2.05	0.65
46:DU:12:VAL:HA	46:DU:69:VAL:HA	1.78	0.65
49:DR:66:HIS:CG	49:DR:94:THR:HG22	2.31	0.65
1:AA:950:U:H2'	1:AA:951:G:H8	1.61	0.65
2:AC:26:LYS:HG3	2:AC:27:GLU:N	2.10	0.65
8:AI:42:THR:O	8:AI:45:MET:HG2	1.95	0.65
23:BB:1324:G:H1'	23:BB:1616:A:C6	2.32	0.65
23:BB:2269:G:H4'	52:BW:19:ARG:NH1	2.11	0.65
26:BD:124:ARG:HA	26:BD:165:MET:SD	2.36	0.65
50:BT:5:GLU:HA	50:BT:8:LEU:HB2	1.78	0.65
1:CA:484:G:H4'	1:CA:485:U:C5'	2.26	0.65
8:CI:26:LYS:H	8:CI:61:ASP:CB	2.08	0.65
19:CT:66:ILE:HG22	19:CT:67:HIS:N	2.11	0.65
20:CB:151:LYS:HG3	20:CB:152:ASP:N	2.12	0.65
21:CU:3:ILE:HG21	21:CU:19:LYS:HD2	1.78	0.65
23:DB:947:A:H2'	23:DB:948:C:C6	2.31	0.65
23:DB:1826:G:H2'	23:DB:1827:U:H6	1.61	0.65
23:DB:2637:U:OP1	26:DD:83:ARG:HD3	1.97	0.65
40:DH:2:GLN:O	40:DH:3:VAL:HG22	1.97	0.65
44:DQ:63:ARG:HH12	44:DQ:96:ASP:CB	2.07	0.65
47:DF:32:LYS:HB2	47:DF:90:LEU:O	1.96	0.65
49:DR:19:THR:HG22	49:DR:97:LYS:HG3	1.77	0.65
1:AA:382:A:H2'	1:AA:383:A:C8	2.31	0.65
1:AA:473:U:H2'	1:AA:474:G:H8	1.61	0.65
2:AC:14:VAL:HG11	2:AC:178:ARG:HA	1.77	0.65
3:AD:160:LEU:HD22	3:AD:161:ALA:N	2.11	0.65
12:AM:15:VAL:HG23	12:AM:40:GLU:HB3	1.78	0.65
20:AB:63:LYS:HA	20:AB:224:ARG:HH11	1.62	0.65
23:BB:171:U:H2'	23:BB:172:A:C8	2.31	0.65
23:BB:1260:A:H2'	23:BB:1261:C:H6	1.61	0.65
23:BB:1709:U:H2'	23:BB:1710:G:C8	2.31	0.65
23:BB:1870:C:H3'	23:BB:1871:A:C8	2.31	0.65
23:BB:2512:C:H2'	23:BB:2513:A:O4'	1.95	0.65
25:BC:128:THR:HA	25:BC:190:THR:HA	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:161:ALA:HA	29:BE:164:LEU:HB2	1.78	0.65
1:CA:89:U:H2'	1:CA:90:C:O4'	1.95	0.65
1:CA:235:C:H2'	1:CA:236:A:C8	2.31	0.65
1:CA:371:A:O2'	1:CA:372:C:H5'	1.96	0.65
1:CA:1144:G:H21	1:CA:1146:A:H62	1.44	0.65
4:CE:35:LEU:HD22	4:CE:133:ILE:HA	1.78	0.65
23:DB:1012:U:O4	41:DJ:30:THR:HG21	1.97	0.65
23:DB:1117:C:O2'	23:DB:1118:C:H5'	1.96	0.65
23:DB:2722:G:H2'	23:DB:2723:C:C6	2.31	0.65
45:DS:76:VAL:HG12	45:DS:103:ILE:HA	1.76	0.65
53:D6:67:VAL:HG12	53:D6:100:TYR:CE1	2.31	0.65
1:AA:135:C:O2	15:AP:1:MET:HB2	1.97	0.65
12:AM:33:LEU:HD13	12:AM:39:ALA:O	1.96	0.65
23:BB:27:G:H22	23:BB:512:G:H2'	1.62	0.65
23:BB:1842:G:H2'	23:BB:1843:C:C6	2.30	0.65
24:BI:129:GLU:HB3	24:BI:133:ARG:NH1	2.10	0.65
28:BP:4:ILE:HG22	28:BP:5:LYS:N	2.10	0.65
29:BE:46:GLN:HB2	29:BE:87:ALA:O	1.96	0.65
38:BM:37:GLY:HA3	38:BM:127:LYS:HZ2	1.59	0.65
39:BX:29:ARG:HH12	50:BT:12:ARG:HG2	1.62	0.65
48:BG:89:VAL:HG12	48:BG:90:GLY:H	1.60	0.65
2:CC:179:ALA:HB3	2:CC:181:ILE:HD11	1.79	0.65
8:CI:62:LEU:HD22	8:CI:62:LEU:N	2.11	0.65
16:CQ:60:ILE:HG22	16:CQ:74:LEU:HA	1.79	0.65
23:DB:28:A:H61	23:DB:512:G:H1'	1.60	0.65
23:DB:1013:C:H2'	23:DB:1014:A:H8	1.59	0.65
23:DB:1515:A:H2'	23:DB:1516:G:O4'	1.96	0.65
23:DB:2875:C:H2'	23:DB:2876:G:H8	1.62	0.65
23:DB:2895:G:H2'	23:DB:2896:C:H6	1.62	0.65
29:DE:46:GLN:HG3	29:DE:87:ALA:HB3	1.78	0.65
37:DL:70:LYS:O	37:DL:73:ILE:HG12	1.96	0.65
38:DM:19:GLY:N	38:DM:38:ARG:HH12	1.93	0.65
9:AJ:53:ILE:CG2	9:AJ:61:ALA:HB1	2.26	0.65
9:AJ:56:HIS:H	13:AN:80:ARG:NH2	1.94	0.65
20:AB:151:LYS:HG3	20:AB:152:ASP:N	2.12	0.65
22:BA:5:U:H2'	22:BA:6:G:H8	1.62	0.65
23:BB:1853:A:N1	23:BB:2087:G:H1'	2.11	0.65
40:BH:134:VAL:HG13	40:BH:135:HIS:H	1.61	0.65
44:BQ:10:ARG:HA	44:BQ:13:HIS:HB2	1.76	0.65
46:BU:65:GLN:HB2	46:BU:68:ASN:ND2	2.11	0.65
5:CF:20:GLY:O	5:CF:24:ARG:HD3	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CK:24:ALA:HA	10:CK:29:THR:CG2	2.26	0.65
23:DB:2216:G:H2'	23:DB:2217:G:H8	1.60	0.65
43:DO:11:ALA:HB2	43:DO:96:GLY:N	2.10	0.65
47:DF:30:VAL:HG21	47:DF:96:TRP:HE1	1.62	0.65
47:DF:101:ARG:CZ	47:DF:138:PRO:HB2	2.27	0.65
1:AA:22:G:H2'	1:AA:23:C:C6	2.32	0.65
1:AA:736:C:H2'	1:AA:737:C:C6	2.32	0.65
1:AA:1343:G:H1'	8:AI:122:ARG:HH12	1.60	0.65
6:AG:71:THR:HG23	6:AG:72:VAL:HG22	1.77	0.65
9:AJ:85:ASP:HA	9:AJ:88:MET:SD	2.36	0.65
23:BB:571:U:H3'	49:BR:80:ARG:NH1	2.12	0.65
23:BB:704:G:H1'	23:BB:727:A:H61	1.61	0.65
23:BB:873:C:H2'	23:BB:874:G:C8	2.32	0.65
23:BB:1131:G:H1'	23:BB:1133:A:H62	1.60	0.65
23:BB:1439:A:H1'	23:BB:1553:A:N6	2.11	0.65
24:BI:7:TYR:HB2	24:BI:58:ILE:O	1.96	0.65
26:BD:28:GLU:HG3	26:BD:185:ASN:O	1.96	0.65
27:BK:76:VAL:H	28:BP:72:VAL:HG23	1.61	0.65
38:BM:42:THR:OG1	38:BM:45:GLN:HG3	1.97	0.65
42:BN:83:LEU:HA	42:BN:86:ARG:HB2	1.77	0.65
1:CA:719:C:H1'	17:CR:37:LYS:HB2	1.78	0.65
8:CI:33:SER:HB3	8:CI:36:GLN:HB2	1.77	0.65
8:CI:56:MET:C	8:CI:58:GLU:H	1.98	0.65
12:CM:78:ARG:O	12:CM:82:LEU:HB2	1.97	0.65
21:CU:40:PRO:HA	21:CU:44:ARG:HD2	1.79	0.65
23:DB:78:U:H2'	23:DB:79:C:C6	2.32	0.65
44:DQ:27:ARG:HA	44:DQ:33:VAL:HG23	1.78	0.65
47:DF:8:LYS:HA	47:DF:12:VAL:HG21	1.78	0.65
49:DR:72:VAL:HG23	49:DR:89:HIS:HB3	1.78	0.65
53:D6:58:VAL:HG22	53:D6:68:VAL:HG13	1.79	0.65
1:AA:401:C:H2'	1:AA:402:G:H8	1.60	0.65
1:AA:1132:C:H2'	1:AA:1133:G:H8	1.62	0.65
3:AD:96:ARG:HB3	3:AD:98:ASP:OD2	1.97	0.65
4:AE:156:ARG:HA	4:AE:158:LYS:NZ	2.11	0.65
8:AI:20:ILE:HG13	8:AI:62:LEU:HD12	1.78	0.65
15:AP:4:ILE:HG12	15:AP:21:VAL:HG22	1.79	0.65
16:AQ:46:HIS:HB2	16:AQ:70:LYS:HE2	1.79	0.65
20:AB:80:LYS:HG3	20:AB:81:ASP:H	1.62	0.65
23:BB:324:A:H2'	23:BB:325:G:O4'	1.96	0.65
23:BB:855:G:H21	52:BW:23:LYS:CG	2.04	0.65
23:BB:1219:U:H2'	23:BB:1220:G:C8	2.32	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2498:C:O2'	23:BB:2499:C:H5'	1.96	0.65
38:BM:19:GLY:N	38:BM:38:ARG:HH12	1.92	0.65
1:CA:56:U:H2'	1:CA:57:G:H8	1.61	0.65
1:CA:1162:C:H2'	1:CA:1163:A:H8	1.59	0.65
1:CA:1432:G:H1'	1:CA:1468:A:H61	1.62	0.65
20:CB:20:ARG:HA	20:CB:38:HIS:CE1	2.32	0.65
23:DB:532:A:N3	23:DB:532:A:H2'	2.11	0.65
23:DB:849:A:H2'	23:DB:850:U:C6	2.32	0.65
23:DB:1099:G:C8	24:DI:3:LYS:CA	2.75	0.65
23:DB:2734:A:H2'	23:DB:2735:G:H5'	1.79	0.65
26:DD:182:ALA:O	26:DD:184:ARG:HG2	1.97	0.65
45:DS:81:SER:HA	45:DS:99:ARG:HA	1.79	0.65
48:DG:43:LYS:HB2	48:DG:50:THR:HB	1.77	0.65
1:AA:763:G:H2'	1:AA:764:C:H6	1.61	0.65
1:AA:1011:C:H2'	1:AA:1012:A:C8	2.32	0.65
7:AH:77:VAL:HG23	7:AH:126:CYS:HA	1.78	0.65
22:BA:111:U:H2'	22:BA:112:G:C8	2.31	0.65
23:BB:150:U:H2'	23:BB:151:C:C6	2.32	0.65
23:BB:1268:A:H2'	23:BB:1269:A:O4'	1.96	0.65
23:BB:1580:A:H2'	23:BB:1581:G:O4'	1.96	0.65
23:BB:2391:G:H1'	23:BB:2424:C:N4	2.12	0.65
40:BH:78:VAL:HG12	40:BH:143:ILE:O	1.97	0.65
41:BJ:124:VAL:HG23	41:BJ:125:TYR:H	1.61	0.65
1:CA:736:C:H2'	1:CA:737:C:C6	2.32	0.65
1:CA:1278:G:H4'	1:CA:1279:G:C5'	2.26	0.65
1:CA:1391:U:H2'	1:CA:1392:G:H8	1.61	0.65
3:CD:148:ALA:O	3:CD:151:GLN:HB2	1.95	0.65
10:CK:19:VAL:HG12	10:CK:82:GLU:HB2	1.79	0.65
14:CO:29:VAL:HG11	14:CO:67:LEU:HD21	1.79	0.65
22:DA:14:U:H4'	22:DA:70:C:O2	1.96	0.65
23:DB:280:U:H2'	23:DB:281:C:C6	2.31	0.65
23:DB:458:G:H22	23:DB:469:G:H2'	1.61	0.65
23:DB:919:U:H2'	23:DB:920:A:C8	2.31	0.65
23:DB:968:C:H2'	23:DB:969:G:H8	1.61	0.65
27:DK:24:VAL:HG13	27:DK:33:ALA:HB2	1.79	0.65
38:DM:59:ARG:NH1	38:DM:60:GLN:HB3	2.12	0.65
41:DJ:17:VAL:HG22	41:DJ:55:ILE:HD11	1.77	0.65
48:DG:7:PRO:O	48:DG:8:VAL:HB	1.95	0.65
7:AH:37:ASN:O	7:AH:41:GLU:HG2	1.97	0.65
13:AN:63:CYS:CB	13:AN:67:GLY:H	2.03	0.65
23:BB:176:A:H3'	23:BB:177:G:N2	2.12	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1230:A:H2'	23:BB:1231:U:H6	1.62	0.65
23:BB:2216:G:H2'	23:BB:2217:G:H8	1.59	0.65
28:BP:50:ARG:CB	28:BP:56:SER:HB3	2.26	0.65
30:BY:6:ILE:O	30:BY:34:THR:HA	1.97	0.65
41:BJ:17:VAL:HG22	41:BJ:55:ILE:HD11	1.79	0.65
41:BJ:64:VAL:O	41:BJ:65:THR:HG22	1.97	0.65
47:BF:141:ASP:O	47:BF:145:VAL:HG13	1.96	0.65
47:BF:177:ARG:CZ	47:BF:177:ARG:HA	2.27	0.65
48:BG:122:ALA:HB2	48:BG:132:LEU:HB3	1.79	0.65
1:CA:677:U:H1'	10:CK:120:CYS:SG	2.36	0.65
5:CF:53:LYS:H	5:CF:53:LYS:NZ	1.94	0.65
9:CJ:53:ILE:CG2	9:CJ:61:ALA:HB1	2.27	0.65
11:CL:85:ARG:HA	11:CL:93:ARG:HA	1.78	0.65
19:CT:27:MET:O	19:CT:31:ILE:HG13	1.97	0.65
21:CU:16:ARG:HA	21:CU:16:ARG:NE	2.05	0.65
23:DB:170:U:H2'	23:DB:171:U:C6	2.32	0.65
23:DB:1440:U:H2'	23:DB:1441:G:C8	2.32	0.65
29:DE:21:ARG:HH11	29:DE:106:LYS:HD2	1.62	0.65
37:DL:90:VAL:HB	37:DL:122:VAL:HG12	1.79	0.65
39:DX:1:MET:HG2	39:DX:4:LYS:NZ	2.11	0.65
47:DF:141:ASP:O	47:DF:145:VAL:HG13	1.97	0.65
1:AA:1278:G:H4'	1:AA:1279:G:C5'	2.27	0.65
6:AG:109:LYS:HE2	6:AG:109:LYS:HA	1.79	0.65
20:AB:86:CYS:HB2	20:AB:221:ARG:NH1	2.12	0.65
23:BB:162:U:H2'	23:BB:162:U:O2	1.96	0.65
23:BB:532:A:H2'	23:BB:532:A:N3	2.12	0.65
23:BB:1092:C:OP1	23:BB:2475:C:H4'	1.97	0.65
23:BB:2230:G:H2'	23:BB:2231:U:C6	2.31	0.65
37:BL:95:LEU:HA	37:BL:98:ALA:HB3	1.78	0.65
40:BH:80:ILE:HD11	40:BH:102:ALA:HB2	1.77	0.65
47:BF:7:TYR:O	47:BF:11:VAL:HB	1.97	0.65
1:CA:17:U:O2'	1:CA:18:C:H5'	1.95	0.65
1:CA:87:C:H2'	1:CA:88:U:C6	2.32	0.65
1:CA:673:A:H2'	1:CA:674:G:C8	2.32	0.65
7:CH:37:ASN:O	7:CH:41:GLU:HG2	1.97	0.65
16:CQ:79:GLU:HG3	16:CQ:80:LYS:NZ	2.11	0.65
20:CB:119:GLN:HG3	20:CB:136:ARG:NH1	2.12	0.65
23:DB:176:A:O2'	23:DB:177:G:H5'	1.97	0.65
23:DB:1923:U:H2'	23:DB:1924:C:C6	2.31	0.65
23:DB:2548:U:H1'	27:DK:23:LYS:HZ1	1.62	0.65
27:DK:8:LEU:HD12	27:DK:8:LEU:N	2.11	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DN:83:LEU:HA	42:DN:86:ARG:HB2	1.79	0.65
43:DO:89:ASP:HA	43:DO:116:GLN:O	1.96	0.65
47:DF:7:TYR:O	47:DF:11:VAL:HB	1.97	0.65
53:D6:92:PRO:CA	53:D6:101:ILE:HG12	2.27	0.65
1:AA:268:U:H2'	1:AA:269:C:C6	2.32	0.64
1:AA:845:A:N3	1:AA:845:A:H2'	2.10	0.64
1:AA:1432:G:H1'	1:AA:1468:A:H61	1.62	0.64
3:AD:28:ASP:HA	3:AD:33:ILE:HG21	1.79	0.64
3:AD:137:SER:HB3	3:AD:138:PRO:HD2	1.79	0.64
23:BB:1060:U:C5	24:BI:131:THR:HG22	2.31	0.64
23:BB:1942:C:C1'	53:B6:133:ARG:HH12	2.09	0.64
23:BB:2834:G:H1'	23:BB:2883:A:N6	2.12	0.64
25:BC:144:GLU:HG3	25:BC:151:GLY:N	2.12	0.64
44:BQ:27:ARG:HA	44:BQ:33:VAL:HG23	1.79	0.64
45:BS:17:VAL:HG13	45:BS:43:ALA:HB1	1.79	0.64
1:CA:719:C:H2'	17:CR:38:ILE:CD1	2.26	0.64
2:CC:48:LYS:HD3	2:CC:48:LYS:N	2.13	0.64
3:CD:160:LEU:HD22	3:CD:161:ALA:N	2.12	0.64
20:CB:31:PHE:HB2	20:CB:41:ASN:HA	1.79	0.64
22:DA:43:C:O2'	47:DF:91:ARG:HD2	1.97	0.64
23:DB:2108:A:H4'	23:DB:2150:C:H4'	1.79	0.64
24:DI:41:PHE:O	24:DI:45:THR:HG23	1.98	0.64
37:DL:93:ASN:ND2	37:DL:94:THR:H	1.94	0.64
38:DM:59:ARG:HH11	38:DM:60:GLN:HB3	1.61	0.64
40:DH:8:LYS:O	40:DH:13:GLY:HA3	1.96	0.64
40:DH:31:VAL:O	40:DH:32:PRO:C	2.34	0.64
41:DJ:18:VAL:HG12	41:DJ:54:ILE:HD11	1.78	0.64
50:DT:69:ARG:CZ	50:DT:69:ARG:HA	2.26	0.64
1:AA:238:A:H2'	1:AA:239:U:H5"	1.79	0.64
4:AE:113:VAL:HG11	4:AE:136:VAL:HG23	1.79	0.64
7:AH:45:ILE:HG21	7:AH:60:LEU:HD21	1.78	0.64
15:AP:22:ALA:HA	15:AP:33:ILE:HG13	1.80	0.64
23:BB:64:A:H2'	23:BB:65:U:C6	2.32	0.64
23:BB:136:G:H2'	23:BB:137:U:C6	2.32	0.64
23:BB:704:G:H1'	23:BB:727:A:N6	2.12	0.64
23:BB:2292:U:H2'	23:BB:2293:G:C8	2.32	0.64
23:BB:2331:G:H4'	52:BW:39:GLN:HA	1.80	0.64
37:BL:90:VAL:HB	37:BL:122:VAL:HG12	1.78	0.64
39:BX:29:ARG:NH1	50:BT:12:ARG:HG2	2.12	0.64
40:BH:31:VAL:CB	40:BH:32:PRO:CD	2.73	0.64
48:BG:84:LYS:HG2	48:BG:85:LYS:N	2.08	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BW:24:ARG:HB2	52:BW:65:LYS:HB3	1.78	0.64
10:CK:31:VAL:HG21	10:CK:66:ALA:HA	1.79	0.64
12:CM:2:ARG:HG3	12:CM:6:ILE:HA	1.79	0.64
23:DB:544:C:H2'	23:DB:545:U:C5	2.32	0.64
23:DB:1350:C:H5'	23:DB:1351:C:OP2	1.97	0.64
23:DB:2784:U:H2'	23:DB:2785:C:H6	1.63	0.64
25:DC:131:MET:HA	25:DC:134:ILE:HG23	1.79	0.64
41:DJ:124:VAL:HG23	41:DJ:125:TYR:H	1.63	0.64
47:DF:168:LEU:HD13	47:DF:169:LEU:N	2.12	0.64
50:DT:5:GLU:HA	50:DT:8:LEU:HB2	1.79	0.64
1:AA:1151:A:HO2'	1:AA:1152:A:H8	1.45	0.64
1:AA:1273:C:H2'	1:AA:1274:A:O4'	1.97	0.64
4:AE:156:ARG:HD2	7:AH:42:GLU:O	1.98	0.64
11:AL:106:VAL:HA	11:AL:107:LYS:NZ	2.12	0.64
20:AB:33:ALA:HA	20:AB:38:HIS:HA	1.78	0.64
23:BB:172:A:H2'	23:BB:173:A:C8	2.31	0.64
23:BB:570:G:H2'	23:BB:2030:A:N7	2.12	0.64
23:BB:664:G:H2'	23:BB:665:U:C6	2.33	0.64
23:BB:1012:U:O4	41:BJ:30:THR:HG21	1.96	0.64
23:BB:1203:U:H4'	37:BL:3:LEU:HD12	1.79	0.64
24:BI:89:SER:HA	24:BI:97:VAL:HG21	1.79	0.64
25:BC:239:PHE:O	25:BC:241:LYS:HG3	1.98	0.64
43:BO:67:ASN:N	43:BO:70:ALA:HB3	2.06	0.64
49:BR:34:GLU:HA	49:BR:59:ILE:O	1.97	0.64
1:CA:382:A:H2'	1:CA:383:A:C8	2.32	0.64
1:CA:389:A:H3'	1:CA:390:U:H6	1.61	0.64
2:CC:25:THR:HG23	13:CN:75:LYS:HD3	1.80	0.64
5:CF:53:LYS:HB2	5:CF:54:LEU:HD22	1.78	0.64
8:CI:20:ILE:HG13	8:CI:62:LEU:HD12	1.78	0.64
8:CI:61:ASP:C	8:CI:62:LEU:HD13	2.18	0.64
20:CB:148:GLY:O	20:CB:151:LYS:HG2	1.98	0.64
23:DB:659:G:H21	29:DE:30:GLN:NE2	1.95	0.64
23:DB:680:C:H2'	23:DB:681:G:H8	1.62	0.64
23:DB:1203:U:H3'	23:DB:1204:A:C5'	2.28	0.64
23:DB:1458:U:H5"	23:DB:1459:G:OP1	1.97	0.64
23:DB:2071:A:H2'	23:DB:2072:C:C6	2.33	0.64
23:DB:2537:U:H2'	23:DB:2538:C:C6	2.32	0.64
29:DE:130:LYS:C	29:DE:132:LYS:H	2.01	0.64
44:DQ:63:ARG:HH22	44:DQ:96:ASP:CA	2.10	0.64
53:D6:93:SER:OG	53:D6:100:TYR:HB2	1.97	0.64
1:AA:370:C:O2'	1:AA:371:A:H5'	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AF:20:GLY:O	5:AF:24:ARG:HD3	1.96	0.64
13:AN:46:LYS:HZ2	18:AS:10:ILE:H	1.44	0.64
15:AP:61:VAL:HA	15:AP:65:ALA:HB3	1.78	0.64
23:BB:138:U:O3'	23:BB:139:U:H2'	1.98	0.64
23:BB:142:A:C2	50:BT:2:ILE:HG22	2.32	0.64
23:BB:417:C:H2'	23:BB:418:C:C6	2.32	0.64
23:BB:609:A:H2'	23:BB:610:C:O4'	1.97	0.64
23:BB:729:G:C8	25:BC:206:LYS:HE3	2.33	0.64
23:BB:904:G:H2'	23:BB:905:A:H8	1.61	0.64
23:BB:2537:U:H2'	23:BB:2538:C:C6	2.32	0.64
23:BB:2772:C:H2'	23:BB:2773:C:H6	1.62	0.64
25:BC:43:ASN:ND2	25:BC:44:ASN:H	1.95	0.64
26:BD:51:THR:HG21	26:BD:76:GLY:HA3	1.80	0.64
27:BK:71:ARG:NE	27:BK:71:ARG:HA	2.11	0.64
38:BM:59:ARG:HH11	38:BM:60:GLN:HB3	1.63	0.64
53:B6:29:ARG:NH2	53:B6:110:ARG:HD3	2.07	0.64
2:CC:52:SER:HB3	2:CC:114:LEU:HG	1.78	0.64
3:CD:22:SER:HB2	3:CD:109:THR:HG22	1.80	0.64
6:CG:71:THR:HG23	6:CG:72:VAL:HG22	1.78	0.64
10:CK:80:ASN:HD22	10:CK:80:ASN:H	1.46	0.64
11:CL:17:LYS:HE3	11:CL:17:LYS:H	1.62	0.64
18:CS:10:ILE:HB	18:CS:14:LEU:HD11	1.79	0.64
23:DB:155:A:H2'	23:DB:156:A:C8	2.32	0.64
23:DB:1098:A:OP2	24:DI:3:LYS:HG2	1.97	0.64
23:DB:1742:U:H2'	23:DB:1743:G:C8	2.33	0.64
23:DB:2103:C:H5"	23:DB:2104:C:OP2	1.98	0.64
24:DI:1:ALA:HB1	24:DI:2:LYS:HD2	1.79	0.64
27:DK:99:ILE:HD13	27:DK:118:LEU:HD22	1.79	0.64
1:AA:224:U:H2'	1:AA:225:C:C6	2.32	0.64
1:AA:441:A:H61	1:AA:493:A:N6	1.96	0.64
1:AA:1391:U:H2'	1:AA:1392:G:H8	1.61	0.64
2:AC:26:LYS:HG3	2:AC:27:GLU:HG3	1.78	0.64
3:AD:24:VAL:HG23	3:AD:25:ARG:H	1.61	0.64
10:AK:92:ARG:HH11	10:AK:92:ARG:HG2	1.62	0.64
11:AL:85:ARG:HA	11:AL:93:ARG:HA	1.78	0.64
22:BA:90:C:OP1	38:BM:16:ARG:HB2	1.98	0.64
25:BC:86:ARG:NH1	25:BC:86:ARG:HB3	2.13	0.64
44:BQ:93:ILE:HG23	44:BQ:94:LEU:HD22	1.78	0.64
48:BG:43:LYS:HB2	48:BG:50:THR:HB	1.78	0.64
1:CA:33:A:H2'	1:CA:34:C:C6	2.33	0.64
1:CA:358:U:H2'	1:CA:359:G:C8	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CF:88:MET:SD	17:CR:64:LEU:HD11	2.38	0.64
13:CN:46:LYS:HZ2	18:CS:10:ILE:H	1.43	0.64
15:CP:3:THR:HB	15:CP:66:THR:O	1.98	0.64
20:CB:98:GLY:HA2	20:CB:101:THR:HG22	1.77	0.64
23:DB:784:G:C6	25:DC:227:VAL:HG11	2.32	0.64
23:DB:904:G:H2'	23:DB:905:A:H8	1.62	0.64
23:DB:1081:U:H5'	24:DI:126:ARG:NH1	2.13	0.64
23:DB:1523:U:H5"	23:DB:1524:G:C8	2.33	0.64
23:DB:2849:U:H4'	23:DB:2850:A:H5'	1.80	0.64
25:DC:128:THR:HA	25:DC:190:THR:HA	1.79	0.64
29:DE:58:LYS:HE2	29:DE:60:TRP:HD1	1.62	0.64
37:DL:110:VAL:HB	37:DL:127:VAL:HG23	1.80	0.64
41:DJ:25:LEU:HD22	41:DJ:26:GLY:N	2.13	0.64
46:DU:78:LYS:CD	46:DU:79:ALA:H	2.10	0.64
1:AA:33:A:H2'	1:AA:34:C:H6	1.62	0.64
3:AD:192:ALA:HB3	3:AD:194:ILE:HG22	1.80	0.64
8:AI:43:ALA:O	8:AI:46:VAL:HG22	1.97	0.64
18:AS:10:ILE:HG22	18:AS:38:THR:H	1.63	0.64
23:BB:1432:G:H2'	23:BB:1433:A:C8	2.33	0.64
23:BB:1657:U:O2'	23:BB:1658:C:H5'	1.97	0.64
23:BB:2400:G:O2'	23:BB:2401:U:H5'	1.97	0.64
26:BD:51:THR:CG2	26:BD:76:GLY:HA3	2.28	0.64
40:BH:31:VAL:O	40:BH:32:PRO:C	2.34	0.64
40:BH:103:VAL:HG21	40:BH:110:VAL:HG22	1.78	0.64
44:BQ:57:ARG:NH1	44:BQ:61:ILE:HD11	2.12	0.64
1:CA:1011:C:H2'	1:CA:1012:A:C8	2.33	0.64
5:CF:16:GLU:CD	5:CF:16:GLU:H	1.98	0.64
5:CF:86:ARG:CZ	17:CR:63:TYR:HB3	2.28	0.64
7:CH:113:ARG:HH21	7:CH:114:ALA:HA	1.62	0.64
23:DB:464:U:H2'	23:DB:465:G:O4'	1.98	0.64
23:DB:528:A:C2	23:DB:2042:A:H2'	2.32	0.64
23:DB:934:U:H2'	23:DB:935:C:C6	2.33	0.64
23:DB:2859:G:H2'	23:DB:2860:A:C8	2.32	0.64
46:DU:82:VAL:HG13	46:DU:93:ARG:HB3	1.80	0.64
47:DF:7:TYR:O	47:DF:12:VAL:HG23	1.98	0.64
53:D6:93:SER:O	53:D6:99:LEU:HA	1.98	0.64
1:AA:224:U:H2'	1:AA:225:C:H6	1.63	0.64
1:AA:390:U:H2'	1:AA:391:G:H8	1.63	0.64
1:AA:1347:G:N2	1:AA:1373:G:H2'	2.12	0.64
8:AI:44:ARG:O	8:AI:47:VAL:HG22	1.98	0.64
23:BB:730:A:H3'	57:BB:3595:HOH:O	1.96	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:917:A:H5"	23:BB:2268:A:N6	2.13	0.64
23:BB:2086:U:H2'	23:BB:2087:G:C8	2.33	0.64
23:BB:2700:A:H2'	23:BB:2701:U:H6	1.63	0.64
35:BV:15:GLY:O	35:BV:19:ARG:HG3	1.98	0.64
53:B6:44:GLU:HG2	53:B6:49:HIS:CE1	2.33	0.64
1:CA:430:A:OP1	3:CD:8:LEU:HB2	1.97	0.64
1:CA:520:A:O2'	11:CL:69:GLU:HG2	1.97	0.64
1:CA:678:U:H2'	1:CA:679:C:C6	2.32	0.64
1:CA:981:U:H4'	13:CN:60:ARG:CD	2.25	0.64
9:CJ:51:VAL:CG2	13:CN:80:ARG:HB2	2.27	0.64
23:DB:19:A:H2'	23:DB:20:C:H6	1.62	0.64
23:DB:72:U:O2'	23:DB:73:A:H5'	1.98	0.64
23:DB:279:A:H2'	23:DB:280:U:H5'	1.79	0.64
23:DB:942:G:H2'	23:DB:943:A:O4'	1.98	0.64
23:DB:1301:A:O2'	23:DB:1302:A:H2'	1.97	0.64
23:DB:1812:U:H2'	23:DB:1813:G:H8	1.63	0.64
29:DE:189:THR:O	29:DE:193:VAL:HG23	1.98	0.64
47:DF:31:GLU:HB3	47:DF:156:THR:O	1.97	0.64
8:AI:26:LYS:H	8:AI:61:ASP:HB3	1.62	0.64
14:AO:81:LEU:HD23	14:AO:85:LEU:HD13	1.78	0.64
16:AQ:25:GLU:HB3	16:AQ:38:LYS:HD3	1.79	0.64
19:AT:61:ALA:HA	19:AT:67:HIS:H	1.63	0.64
21:AU:42:THR:HB	21:AU:46:ARG:CZ	2.27	0.64
23:BB:19:A:H2'	23:BB:20:C:C6	2.32	0.64
23:BB:479:A:N3	23:BB:481:G:H5"	2.12	0.64
23:BB:784:G:O2'	23:BB:785:G:H5"	1.98	0.64
23:BB:1438:U:H2'	23:BB:1439:A:O4'	1.98	0.64
23:BB:1872:A:H2'	23:BB:1873:G:O4'	1.98	0.64
23:BB:2485:G:O2'	23:BB:2486:C:H5'	1.98	0.64
23:BB:2675:A:N1	23:BB:2732:G:O6	2.31	0.64
27:BK:99:ILE:HG12	27:BK:115:ILE:HG13	1.78	0.64
43:BO:51:ALA:HB3	43:BO:78:VAL:HG22	1.78	0.64
50:BT:32:LEU:H	50:BT:83:ALA:HB3	1.63	0.64
52:BW:23:LYS:HD2	52:BW:24:ARG:N	2.13	0.64
52:BW:47:GLY:HA3	52:BW:80:SER:HB3	1.78	0.64
1:CA:16:A:O2'	1:CA:1080:A:H4'	1.98	0.64
1:CA:320:A:H2'	1:CA:321:A:C8	2.33	0.64
1:CA:845:A:H2'	1:CA:845:A:N3	2.11	0.64
3:CD:24:VAL:HG23	3:CD:25:ARG:H	1.63	0.64
4:CE:33:THR:HG22	4:CE:51:LYS:HB3	1.79	0.64
13:CN:11:LYS:O	13:CN:15:LEU:HG	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CP:1:MET:HA	15:CP:1:MET:HE3	1.78	0.64
18:CS:27:LYS:NZ	18:CS:27:LYS:HB3	2.13	0.64
23:DB:95:A:H1'	39:DX:40:SER:OG	1.98	0.64
25:DC:57:HIS:CG	25:DC:58:LYS:H	2.15	0.64
47:DF:62:GLN:HE22	47:DF:90:LEU:HD13	1.61	0.64
47:DF:177:ARG:CZ	47:DF:177:ARG:HA	2.27	0.64
48:DG:89:VAL:HG12	48:DG:90:GLY:H	1.61	0.64
51:DZ:5:CYS:HB3	51:DZ:10:LYS:N	2.12	0.64
21:AU:39:LYS:N	21:AU:40:PRO:HD2	2.13	0.64
23:BB:1139:G:O2'	23:BB:1140:C:H5'	1.97	0.64
23:BB:1166:G:H2'	23:BB:1167:C:C6	2.32	0.64
23:BB:2282:G:OP1	23:BB:2283:C:H1'	1.98	0.64
23:BB:2537:U:H2'	23:BB:2538:C:H6	1.63	0.64
23:BB:2804:U:H2'	23:BB:2805:C:C6	2.33	0.64
27:BK:99:ILE:HD13	27:BK:118:LEU:HD22	1.78	0.64
40:BH:2:GLN:O	40:BH:3:VAL:HG22	1.97	0.64
40:BH:135:HIS:HB2	40:BH:138:VAL:HG23	1.80	0.64
41:BJ:1:MET:HG2	41:BJ:2:LYS:HG2	1.80	0.64
47:BF:111:ARG:HH11	47:BF:135:ILE:HG21	1.63	0.64
50:BT:68:LYS:O	50:BT:69:ARG:HB2	1.98	0.64
1:CA:441:A:H61	1:CA:493:A:N6	1.96	0.64
1:CA:859:G:H2'	1:CA:860:A:C8	2.33	0.64
1:CA:1399:C:H4'	1:CA:1400:C:H5"	1.79	0.64
2:CC:126:ARG:HH21	2:CC:191:THR:HG23	1.63	0.64
4:CE:84:VAL:HG11	4:CE:146:MET:HB3	1.80	0.64
20:CB:195:VAL:HG12	20:CB:197:PHE:H	1.61	0.64
23:DB:27:G:H1'	23:DB:513:A:N6	2.13	0.64
23:DB:69:C:O2'	23:DB:70:G:H5'	1.98	0.64
23:DB:1082:U:N3	23:DB:1086:A:C6	2.65	0.64
23:DB:2776:A:H4'	23:DB:2777:G:H5"	1.79	0.64
28:DP:52:ARG:HH11	28:DP:52:ARG:HG2	1.63	0.64
44:DQ:10:ARG:HA	44:DQ:13:HIS:HB2	1.78	0.64
46:DU:84:PHE:O	46:DU:85:ARG:HB2	1.98	0.64
51:DZ:64:ILE:H	51:DZ:64:ILE:HD12	1.61	0.64
1:AA:1236:A:H4'	1:AA:1304:G:H4'	1.79	0.64
23:BB:64:A:H2'	23:BB:65:U:H6	1.62	0.64
23:BB:143:C:H2'	23:BB:144:A:C8	2.33	0.64
23:BB:852:U:H2'	23:BB:853:C:C6	2.33	0.64
23:BB:2880:C:O4'	42:BN:91:ALA:HB3	1.98	0.64
25:BC:66:PHE:HB2	25:BC:150:GLY:O	1.98	0.64
26:BD:113:SER:CB	26:BD:168:GLU:H	2.10	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BQ:54:ARG:HB3	44:BQ:58:GLN:NE2	2.10	0.64
49:BR:66:HIS:CG	49:BR:94:THR:HG22	2.33	0.64
49:BR:72:VAL:HG23	49:BR:89:HIS:HB3	1.80	0.64
50:BT:55:VAL:HG13	50:BT:85:VAL:HG12	1.80	0.64
1:CA:473:U:H2'	1:CA:474:G:H8	1.63	0.64
4:CE:113:VAL:HG11	4:CE:136:VAL:HG23	1.79	0.64
7:CH:48:PHE:HA	7:CH:59:GLU:O	1.97	0.64
11:CL:23:LEU:HG	11:CL:24:GLU:HG3	1.80	0.64
23:DB:125:A:O2'	36:D2:13:ASN:HB3	1.97	0.64
23:DB:958:U:H3	38:DM:16:ARG:HB3	1.63	0.64
23:DB:2010:G:H5"	45:DS:42:LYS:HB2	1.80	0.64
23:DB:2563:U:H2'	23:DB:2565:A:OP2	1.98	0.64
40:DH:4:ILE:HG13	40:DH:18:GLN:HB2	1.80	0.64
41:DJ:36:LEU:HD21	41:DJ:122:LEU:HB2	1.80	0.64
49:DR:14:VAL:HG22	49:DR:15:SER:N	2.12	0.64
51:DZ:66:THR:O	51:DZ:69:ALA:HB3	1.99	0.64
1:AA:389:A:H3'	1:AA:390:U:H6	1.63	0.63
5:AF:16:GLU:CD	5:AF:16:GLU:H	2.01	0.63
11:AL:23:LEU:HG	11:AL:24:GLU:HG3	1.80	0.63
23:BB:1240:U:O2'	23:BB:1241:A:H5"	1.98	0.63
23:BB:1535:A:H3'	23:BB:1536:C:C6	2.33	0.63
23:BB:1932:A:H2'	23:BB:1933:G:O4'	1.97	0.63
23:BB:2228:G:H2'	23:BB:2229:U:C6	2.34	0.63
23:BB:2303:G:H4'	47:BF:121:PHE:O	1.98	0.63
23:BB:2366:A:H4'	52:BW:61:LYS:HE2	1.80	0.63
23:BB:2819:G:H2'	23:BB:2821:A:N7	2.12	0.63
25:BC:180:MET:O	25:BC:267:VAL:HG23	1.98	0.63
27:BK:8:LEU:HD12	27:BK:8:LEU:N	2.13	0.63
48:BG:10:VAL:O	48:BG:10:VAL:HG12	1.98	0.63
48:BG:83:THR:HA	48:BG:84:LYS:NZ	2.13	0.63
53:B6:90:LEU:HB3	53:B6:101:ILE:CG2	2.29	0.63
1:CA:22:G:H2'	1:CA:23:C:H6	1.62	0.63
1:CA:1054:C:H1'	1:CA:1196:A:C5	2.33	0.63
1:CA:1347:G:N2	1:CA:1373:G:H2'	2.13	0.63
3:CD:28:ASP:HA	3:CD:33:ILE:HG21	1.80	0.63
3:CD:137:SER:HB3	3:CD:138:PRO:HD2	1.80	0.63
8:CI:43:ALA:O	8:CI:46:VAL:HG22	1.98	0.63
11:CL:106:VAL:HA	11:CL:107:LYS:NZ	2.13	0.63
15:CP:48:GLU:HG3	15:CP:49:GLY:H	1.63	0.63
20:CB:187:ASP:HB3	20:CB:201:GLY:O	1.98	0.63
23:DB:1224:U:H4'	49:DR:88:GLY:O	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1475:G:H1'	23:DB:1476:U:H5	1.62	0.63
23:DB:1681:G:N3	23:DB:1762:A:H2'	2.12	0.63
26:DD:36:GLN:O	26:DD:36:GLN:HG3	1.98	0.63
37:DL:110:VAL:HG23	37:DL:126:ARG:O	1.98	0.63
46:DU:70:ALA:HB1	46:DU:79:ALA:CB	2.25	0.63
50:DT:32:LEU:H	50:DT:83:ALA:HB3	1.62	0.63
1:AA:235:C:H2'	1:AA:236:A:H8	1.62	0.63
23:BB:155:A:H2'	23:BB:156:A:C8	2.33	0.63
23:BB:1192:G:O2'	23:BB:1193:G:H5'	1.98	0.63
23:BB:2615:U:C2	31:B0:3:GLN:HA	2.34	0.63
23:BB:2784:U:H2'	23:BB:2785:C:H6	1.63	0.63
25:BC:123:ILE:HD13	25:BC:135:PRO:HG2	1.80	0.63
28:BP:52:ARG:HG2	28:BP:52:ARG:HH11	1.63	0.63
37:BL:110:VAL:HG23	37:BL:126:ARG:O	1.98	0.63
42:BN:37:THR:HB	42:BN:40:LYS:HG3	1.80	0.63
44:BQ:65:ASN:HB2	44:BQ:75:TYR:HB2	1.81	0.63
46:BU:85:ARG:NE	46:BU:85:ARG:HA	2.14	0.63
47:BF:8:LYS:HA	47:BF:12:VAL:HG21	1.79	0.63
48:BG:26:LYS:HB2	48:BG:32:LEU:HG	1.80	0.63
48:BG:148:ARG:HA	48:BG:161:VAL:HB	1.78	0.63
1:CA:301:G:H2'	1:CA:302:G:H8	1.62	0.63
1:CA:699:C:C2'	1:CA:700:G:H5"	2.26	0.63
1:CA:1352:C:H2'	1:CA:1353:G:C8	2.32	0.63
1:CA:1387:G:H2'	1:CA:1388:C:C6	2.34	0.63
23:DB:730:A:H3'	57:DB:3609:HOH:O	1.98	0.63
23:DB:969:G:H2'	23:DB:970:U:C6	2.33	0.63
23:DB:1552:A:H2'	23:DB:1553:A:H5'	1.80	0.63
23:DB:2645:G:H3'	23:DB:2646:C:H5'	1.81	0.63
48:DG:148:ARG:HA	48:DG:161:VAL:HB	1.80	0.63
53:D6:10:THR:O	53:D6:14:MET:HG3	1.96	0.63
1:AA:301:G:H2'	1:AA:302:G:H8	1.63	0.63
1:AA:437:U:H2'	1:AA:438:U:O4'	1.98	0.63
1:AA:678:U:H2'	1:AA:679:C:C6	2.33	0.63
1:AA:920:U:H2'	1:AA:921:U:C6	2.33	0.63
2:AC:52:SER:HB3	2:AC:114:LEU:HG	1.80	0.63
10:AK:80:ASN:CB	10:AK:105:ARG:HB3	2.28	0.63
20:AB:22:TRP:HB3	20:AB:38:HIS:CE1	2.33	0.63
23:BB:81:G:H2'	23:BB:82:U:O4'	1.98	0.63
23:BB:742:A:H2'	23:BB:743:A:H8	1.63	0.63
23:BB:968:C:H2'	23:BB:969:G:H8	1.63	0.63
23:BB:1082:U:N3	23:BB:1086:A:C6	2.67	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2788:C:H2'	23:BB:2789:C:C6	2.33	0.63
37:BL:93:ASN:ND2	37:BL:94:THR:H	1.96	0.63
38:BM:96:ILE:HD11	38:BM:126:ILE:HD13	1.79	0.63
44:BQ:97:ILE:HD11	44:BQ:108:LEU:HD11	1.79	0.63
1:CA:950:U:H2'	1:CA:951:G:H8	1.63	0.63
4:CE:21:SER:HB2	4:CE:28:ARG:HE	1.64	0.63
4:CE:156:ARG:HA	4:CE:158:LYS:NZ	2.11	0.63
10:CK:91:GLY:HA2	10:CK:94:SER:HB3	1.80	0.63
15:CP:6:LEU:HB3	15:CP:17:TYR:HB3	1.81	0.63
23:DB:609:A:H2'	23:DB:610:C:O4'	1.98	0.63
23:DB:655:A:H4'	23:DB:656:G:H5'	1.79	0.63
23:DB:1060:U:C5	24:DI:131:THR:HG22	2.34	0.63
23:DB:2341:G:H2'	23:DB:2342:C:C6	2.33	0.63
23:DB:2359:C:O3'	34:D3:50:SER:HB3	1.98	0.63
40:DH:70:GLU:OE1	40:DH:71:LYS:HG3	1.98	0.63
50:DT:68:LYS:O	50:DT:69:ARG:CB	2.46	0.63
51:DZ:64:ILE:O	51:DZ:68:LEU:HG	1.99	0.63
53:D6:61:PRO:HG2	53:D6:67:VAL:CG1	2.29	0.63
1:AA:429:U:H3'	3:AD:8:LEU:HD23	1.80	0.63
1:AA:918:A:H2'	1:AA:919:A:C8	2.33	0.63
19:AT:27:MET:O	19:AT:31:ILE:HG13	1.99	0.63
20:AB:172:ILE:H	20:AB:172:ILE:HD12	1.64	0.63
23:BB:1847:A:H4'	23:BB:1848:A:C8	2.33	0.63
23:BB:2284:A:OP2	33:B1:5:ARG:HG3	1.99	0.63
25:BC:70:LYS:NZ	25:BC:99:GLU:HB3	2.13	0.63
27:BK:7:MET:SD	27:BK:20:MET:HB2	2.38	0.63
46:BU:84:PHE:O	46:BU:85:ARG:HB2	1.98	0.63
48:BG:15:ASP:HB2	48:BG:26:LYS:HB3	1.79	0.63
1:CA:193:C:H2'	1:CA:194:C:C6	2.34	0.63
1:CA:268:U:H2'	1:CA:269:C:C6	2.34	0.63
1:CA:865:A:H2'	1:CA:866:C:C6	2.34	0.63
1:CA:1218:C:H2'	1:CA:1219:A:C8	2.34	0.63
2:CC:70:ALA:HA	2:CC:105:VAL:HG21	1.80	0.63
16:CQ:46:HIS:HB2	16:CQ:70:LYS:HE2	1.80	0.63
23:DB:969:G:H2'	23:DB:970:U:H6	1.63	0.63
23:DB:2636:C:H4'	26:DD:81:GLU:OE2	1.99	0.63
37:DL:95:LEU:HA	37:DL:98:ALA:HB3	1.78	0.63
45:DS:82:MET:HB2	45:DS:98:LYS:HB2	1.81	0.63
47:DF:128:SER:HB3	47:DF:154:THR:HG23	1.80	0.63
48:DG:26:LYS:HB2	48:DG:32:LEU:HG	1.79	0.63
1:AA:320:A:H2'	1:AA:321:A:C8	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:719:C:H2'	17:AR:38:ILE:CD1	2.28	0.63
3:AD:53:GLN:HB3	3:AD:202:LEU:HB2	1.81	0.63
5:AF:42:TRP:HE1	5:AF:61:LEU:HD23	1.63	0.63
12:AM:2:ARG:HG3	12:AM:6:ILE:HA	1.79	0.63
15:AP:3:THR:HG22	15:AP:66:THR:HB	1.81	0.63
20:AB:163:ILE:HG23	20:AB:164:ASP:N	2.13	0.63
23:BB:557:C:H2'	23:BB:558:U:C6	2.34	0.63
23:BB:1562:U:H2'	23:BB:1563:U:C6	2.32	0.63
23:BB:1726:C:H2'	23:BB:1727:C:C6	2.33	0.63
23:BB:2886:A:H62	31:B0:39:ARG:CD	2.11	0.63
26:BD:36:GLN:O	26:BD:36:GLN:HG3	1.98	0.63
41:BJ:19:ASP:HA	41:BJ:57:LEU:HB3	1.81	0.63
46:BU:42:LYS:HG3	46:BU:57:ILE:HG21	1.80	0.63
47:BF:168:LEU:HD13	47:BF:169:LEU:N	2.12	0.63
50:BT:68:LYS:O	50:BT:69:ARG:CB	2.46	0.63
53:B6:163:LYS:O	53:B6:167:GLU:HG3	1.99	0.63
1:CA:224:U:H2'	1:CA:225:C:C6	2.33	0.63
1:CA:270:A:H2'	1:CA:271:C:C6	2.32	0.63
1:CA:411:A:C4	1:CA:413:G:H1'	2.33	0.63
1:CA:1316:G:N2	1:CA:1318:A:H3'	2.13	0.63
10:CK:92:ARG:HH11	10:CK:92:ARG:HG2	1.64	0.63
12:CM:2:ARG:HD3	12:CM:2:ARG:H	1.62	0.63
23:DB:357:C:H2'	23:DB:358:U:C6	2.33	0.63
23:DB:1098:A:C8	24:DI:3:LYS:HB3	2.33	0.63
23:DB:1242:U:H2'	23:DB:1243:C:C6	2.33	0.63
23:DB:1268:A:H2'	23:DB:1269:A:O4'	1.98	0.63
23:DB:1273:U:H4'	23:DB:1275:A:OP2	1.98	0.63
23:DB:2786:U:H5'	26:DD:70:LYS:HG3	1.80	0.63
38:DM:42:THR:O	38:DM:44:ARG:N	2.32	0.63
40:DH:94:ILE:HG22	40:DH:122:LEU:CB	2.29	0.63
44:DQ:93:ILE:HG23	44:DQ:94:LEU:HD22	1.79	0.63
48:DG:122:ALA:HB2	48:DG:132:LEU:HB3	1.80	0.63
52:DW:59:PHE:CE2	52:DW:61:LYS:HD2	2.34	0.63
1:AA:411:A:C4	1:AA:413:G:H1'	2.33	0.63
1:AA:678:U:H2'	1:AA:679:C:H6	1.63	0.63
1:AA:975:A:H4'	1:AA:976:G:O5'	1.97	0.63
1:AA:1218:C:H2'	1:AA:1219:A:C8	2.34	0.63
1:AA:1301:U:O2	1:AA:1301:U:H2'	1.97	0.63
8:AI:20:ILE:HD13	8:AI:85:ALA:HB3	1.80	0.63
19:AT:29:THR:HA	19:AT:32:LYS:HE3	1.79	0.63
23:BB:1395:A:H4'	23:BB:1397:U:C5	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2376:A:H2'	23:BB:2377:A:O4'	1.98	0.63
24:BI:20:SER:O	24:BI:25:PRO:HD2	1.99	0.63
38:BM:40:ARG:HD3	38:BM:93:VAL:HG21	1.80	0.63
40:BH:67:ALA:O	40:BH:71:LYS:HB2	1.99	0.63
1:CA:41:G:H2'	1:CA:42:G:H8	1.64	0.63
1:CA:577:G:O2'	1:CA:578:C:H5'	1.99	0.63
1:CA:678:U:H2'	1:CA:679:C:H6	1.63	0.63
1:CA:918:A:H2'	1:CA:919:A:C8	2.34	0.63
3:CD:192:ALA:HB3	3:CD:194:ILE:HG22	1.81	0.63
4:CE:21:SER:CB	4:CE:28:ARG:HE	2.10	0.63
4:CE:52:ALA:H	4:CE:58:ALA:HB2	1.64	0.63
7:CH:101:ALA:HB3	7:CH:112:ASP:HB3	1.80	0.63
8:CI:5:TYR:HB2	8:CI:20:ILE:HB	1.81	0.63
8:CI:26:LYS:H	8:CI:61:ASP:HB3	1.62	0.63
10:CK:105:ARG:HH21	21:CU:10:PRO:HB3	1.64	0.63
18:CS:5:LYS:C	18:CS:6:LYS:HD2	2.18	0.63
20:CB:33:ALA:HA	20:CB:38:HIS:HA	1.80	0.63
23:DB:495:G:H21	45:DS:61:ASN:HD21	1.45	0.63
23:DB:1790:C:O2'	25:DC:207:ALA:HB2	1.98	0.63
23:DB:2102:G:H2'	23:DB:2103:C:O4'	1.98	0.63
23:DB:2241:A:H2'	23:DB:2242:G:C8	2.33	0.63
23:DB:2377:A:H2'	23:DB:2378:A:C8	2.33	0.63
25:DC:32:LEU:HD22	25:DC:63:ILE:HG13	1.80	0.63
40:DH:31:VAL:CB	40:DH:32:PRO:CD	2.73	0.63
52:DW:24:ARG:HB2	52:DW:65:LYS:HB3	1.79	0.63
1:AA:499:A:H4'	1:AA:500:G:H5'	1.79	0.63
1:AA:577:G:O2'	1:AA:578:C:H5'	1.99	0.63
1:AA:1480:A:H2'	1:AA:1481:U:O4'	1.99	0.63
8:AI:18:VAL:HG21	8:AI:82:ILE:N	2.14	0.63
17:AR:19:GLU:HG3	17:AR:54:LEU:HD12	1.81	0.63
23:BB:680:C:H2'	23:BB:681:G:C8	2.34	0.63
23:BB:1060:U:O4	23:BB:1088:A:N6	2.32	0.63
23:BB:1812:U:H2'	23:BB:1813:G:C8	2.34	0.63
23:BB:2645:G:H3'	23:BB:2646:C:C5'	2.28	0.63
45:BS:82:MET:HB2	45:BS:98:LYS:HB2	1.81	0.63
48:BG:102:ILE:HG13	48:BG:116:LEU:HD11	1.79	0.63
1:CA:1099:G:OP1	20:CB:94:ARG:HD3	1.98	0.63
6:CG:78:ARG:HG2	6:CG:83:THR:HG22	1.81	0.63
22:DA:8:C:O2'	43:DO:40:ILE:HD13	1.99	0.63
23:DB:5:A:H2'	23:DB:6:A:C8	2.34	0.63
23:DB:79:C:O2'	23:DB:346:A:H1'	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:642:U:O2	23:DB:644:A:H3'	1.99	0.63
23:DB:1099:G:C5'	24:DI:3:LYS:N	2.62	0.63
23:DB:2142:A:H2'	23:DB:2143:C:O4'	1.99	0.63
25:DC:180:MET:O	25:DC:267:VAL:HG23	1.98	0.63
28:DP:3:ILE:HD13	28:DP:7:LEU:HD11	1.79	0.63
49:DR:3:ALA:HB2	49:DR:101:ILE:HD11	1.80	0.63
3:AD:84:ASN:HD22	4:AE:101:GLY:HA3	1.64	0.63
10:AK:19:VAL:HG12	10:AK:82:GLU:HB2	1.79	0.63
10:AK:106:ILE:HD11	10:AK:109:ILE:HD11	1.80	0.63
20:AB:195:VAL:HG12	20:AB:197:PHE:H	1.64	0.63
22:BA:10:G:H2'	22:BA:11:C:O4'	1.98	0.63
23:BB:2553:G:H2'	23:BB:2554:U:H4'	1.81	0.63
43:BO:89:ASP:HA	43:BO:116:GLN:O	1.98	0.63
44:BQ:63:ARG:HH12	44:BQ:96:ASP:CB	2.11	0.63
45:BS:20:VAL:O	45:BS:23:LEU:HB2	1.99	0.63
45:BS:81:SER:HA	45:BS:99:ARG:HA	1.80	0.63
46:BU:12:VAL:HA	46:BU:69:VAL:HA	1.79	0.63
46:BU:82:VAL:HG13	46:BU:93:ARG:HB3	1.79	0.63
47:BF:72:SER:HA	47:BF:78:ILE:HG22	1.81	0.63
51:BZ:71:LEU:HD12	51:BZ:78:TYR:HD2	1.64	0.63
53:B6:29:ARG:HH22	53:B6:110:ARG:CD	2.08	0.63
13:CN:51:PRO:HG2	13:CN:52:ARG:H	1.64	0.63
21:CU:39:LYS:N	21:CU:40:PRO:HD2	2.13	0.63
23:DB:1440:U:H2'	23:DB:1441:G:H8	1.64	0.63
23:DB:2387:U:H1'	52:DW:38:ARG:CZ	2.29	0.63
23:DB:2394:C:OP1	37:DL:63:LYS:HG2	1.99	0.63
23:DB:2537:U:H2'	23:DB:2538:C:H6	1.64	0.63
24:DI:20:SER:O	24:DI:25:PRO:HD2	1.98	0.63
32:D4:22:VAL:HB	32:D4:24:ARG:HE	1.64	0.63
45:DS:31:GLN:O	45:DS:35:ILE:HG12	1.99	0.63
47:DF:111:ARG:HH11	47:DF:135:ILE:HG21	1.63	0.63
1:AA:235:C:H2'	1:AA:236:A:C8	2.33	0.63
1:AA:285:C:H2'	1:AA:286:C:H6	1.63	0.63
1:AA:999:C:H2'	1:AA:1000:A:C8	2.34	0.63
6:AG:50:ALA:HB2	6:AG:57:GLU:HG3	1.80	0.63
12:AM:78:ARG:O	12:AM:82:LEU:HB2	1.98	0.63
15:AP:3:THR:HB	15:AP:66:THR:O	1.99	0.63
23:BB:139:U:H3'	23:BB:140:C:C5'	2.28	0.63
23:BB:1914:C:H2'	23:BB:1915:U:O4'	1.98	0.63
23:BB:2023:C:O2'	23:BB:2024:G:H5'	1.99	0.63
24:BI:11:GLN:HA	24:BI:55:PRO:HA	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:109:LEU:HD13	29:BE:180:LEU:HD13	1.81	0.63
44:BQ:30:VAL:HG22	44:BQ:31:TYR:H	1.63	0.63
47:BF:7:TYR:O	47:BF:12:VAL:HG23	1.99	0.63
1:CA:431:A:H2'	1:CA:432:A:O4'	1.98	0.63
2:CC:149:LYS:HA	2:CC:168:ARG:HB2	1.81	0.63
3:CD:169:TRP:HB2	3:CD:183:ARG:HD2	1.79	0.63
15:CP:22:ALA:HA	15:CP:33:ILE:HG13	1.80	0.63
23:DB:64:A:H2'	23:DB:65:U:H6	1.63	0.63
24:DI:121:ILE:HD13	24:DI:121:ILE:N	2.13	0.63
25:DC:80:LEU:HD11	25:DC:109:LEU:HG	1.80	0.63
27:DK:71:ARG:CB	27:DK:72:PRO:HD2	2.23	0.63
30:DY:50:VAL:O	30:DY:54:VAL:HG22	1.99	0.63
35:DV:4:ILE:HB	35:DV:63:ILE:HA	1.81	0.63
44:DQ:18:LYS:C	44:DQ:20:ALA:H	2.02	0.63
1:AA:90:C:H2'	1:AA:91:U:C5	2.34	0.62
1:AA:285:C:H2'	1:AA:286:C:C6	2.34	0.62
1:AA:390:U:H2'	1:AA:391:G:C8	2.33	0.62
1:AA:430:A:OP1	3:AD:8:LEU:HB2	1.98	0.62
21:AU:3:ILE:HG21	21:AU:19:LYS:HD2	1.81	0.62
21:AU:16:ARG:CZ	21:AU:19:LYS:HE2	2.29	0.62
21:AU:36:PHE:CB	21:AU:40:PRO:HD3	2.18	0.62
23:BB:173:A:H2'	23:BB:174:U:C6	2.34	0.62
23:BB:365:U:H2'	23:BB:366:C:C6	2.34	0.62
23:BB:479:A:O2'	23:BB:481:G:H5'	1.98	0.62
23:BB:969:G:H2'	23:BB:970:U:C6	2.34	0.62
23:BB:1013:C:H2'	23:BB:1014:A:H8	1.62	0.62
23:BB:1939:U:H5'	23:BB:1939:U:H6	1.64	0.62
23:BB:2185:U:H2'	23:BB:2186:G:C8	2.34	0.62
23:BB:2185:U:H2'	23:BB:2186:G:H8	1.64	0.62
23:BB:2658:C:H5'	48:BG:159:LYS:NZ	2.13	0.62
42:BN:79:LEU:HA	42:BN:83:LEU:HD12	1.79	0.62
46:BU:10:VAL:O	46:BU:21:ARG:HA	1.99	0.62
47:BF:31:GLU:HB3	47:BF:156:THR:O	1.98	0.62
1:CA:285:C:H2'	1:CA:286:C:C6	2.34	0.62
2:CC:182:ASP:HB2	2:CC:203:LYS:HE2	1.80	0.62
5:CF:100:SER:HA	17:CR:23:LYS:CE	2.28	0.62
9:CJ:56:HIS:H	13:CN:80:ARG:NH2	1.97	0.62
19:CT:56:ILE:O	19:CT:60:GLN:HG2	1.99	0.62
23:DB:62:U:H2'	23:DB:63:A:O4'	1.99	0.62
23:DB:559:G:H21	44:DQ:51:GLN:NE2	1.96	0.62
23:DB:1266:G:H22	23:DB:2012:G:H2'	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1439:A:H1'	23:DB:1553:A:N6	2.14	0.62
23:DB:1501:G:O2'	23:DB:1502:A:H5'	1.99	0.62
23:DB:2064:C:H2'	23:DB:2065:C:C6	2.33	0.62
23:DB:2455:G:H2'	23:DB:2456:C:C6	2.33	0.62
23:DB:2803:G:H2'	23:DB:2804:U:H6	1.64	0.62
26:DD:114:LYS:HD2	26:DD:116:LYS:NZ	2.13	0.62
29:DE:161:ALA:HA	29:DE:164:LEU:HB2	1.80	0.62
33:D1:3:GLY:O	33:D1:4:ILE:HG12	1.98	0.62
47:DF:72:SER:HA	47:DF:78:ILE:HG22	1.80	0.62
1:AA:41:G:H2'	1:AA:42:G:H8	1.65	0.62
1:AA:216:U:H2'	1:AA:217:C:C6	2.34	0.62
1:AA:1173:U:H2'	1:AA:1174:G:C8	2.34	0.62
1:AA:1316:G:N2	1:AA:1318:A:H3'	2.13	0.62
10:AK:31:VAL:HG21	10:AK:66:ALA:HA	1.81	0.62
13:AN:10:VAL:HB	13:AN:11:LYS:NZ	2.15	0.62
15:AP:26:ASN:ND2	15:AP:31:ARG:HB3	2.14	0.62
19:AT:19:HIS:O	19:AT:23:ARG:HG2	1.99	0.62
20:AB:148:GLY:O	20:AB:151:LYS:HG2	2.00	0.62
22:BA:39:A:O2'	22:BA:40:U:H5'	1.99	0.62
23:BB:705:A:N6	23:BB:726:G:O2'	2.32	0.62
23:BB:979:A:H2'	23:BB:982:C:N4	2.14	0.62
23:BB:2187:U:H2'	23:BB:2188:U:C6	2.34	0.62
23:BB:2605:U:H2'	23:BB:2606:C:C6	2.34	0.62
26:BD:154:LYS:HD3	26:BD:154:LYS:H	1.64	0.62
26:BD:186:LEU:HD21	28:BP:3:ILE:HD11	1.80	0.62
29:BE:134:LEU:HD21	29:BE:161:ALA:HB2	1.80	0.62
29:BE:161:ALA:HA	29:BE:164:LEU:HD12	1.81	0.62
38:BM:59:ARG:NH1	38:BM:60:GLN:HB3	2.13	0.62
41:BJ:57:LEU:HD21	41:BJ:128:ASN:HA	1.80	0.62
53:B6:55:ILE:HG23	53:B6:79:ILE:HD11	1.81	0.62
1:CA:285:C:H2'	1:CA:286:C:H6	1.65	0.62
1:CA:390:U:H2'	1:CA:391:G:C8	2.34	0.62
1:CA:1306:A:N6	1:CA:1331:G:H1'	2.14	0.62
6:CG:58:LEU:H	6:CG:58:LEU:HD23	1.63	0.62
18:CS:69:LYS:O	18:CS:72:GLU:HG2	1.98	0.62
20:CB:139:GLU:HG2	20:CB:143:LEU:HD11	1.79	0.62
23:DB:717:C:H3'	23:DB:718:A:H5"	1.79	0.62
23:DB:2439:A:N7	23:DB:2586:U:H4'	2.14	0.62
25:DC:43:ASN:ND2	25:DC:44:ASN:H	1.96	0.62
27:DK:71:ARG:HA	27:DK:71:ARG:NE	2.13	0.62
29:DE:161:ALA:HA	29:DE:164:LEU:HD12	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DH:88:GLY:O	40:DH:124:THR:HA	2.00	0.62
43:DO:18:LEU:HD23	43:DO:25:ARG:HD3	1.80	0.62
47:DF:37:MET:SD	47:DF:52:ALA:HB1	2.39	0.62
49:DR:24:LYS:HA	49:DR:94:THR:HG23	1.80	0.62
49:DR:38:VAL:O	49:DR:53:PHE:HB3	1.99	0.62
1:AA:358:U:H2'	1:AA:359:G:C8	2.34	0.62
4:AE:35:LEU:HD22	4:AE:133:ILE:HA	1.80	0.62
7:AH:48:PHE:HA	7:AH:59:GLU:O	1.98	0.62
9:AJ:52:LEU:HA	9:AJ:62:ARG:HA	1.80	0.62
12:AM:43:LYS:O	12:AM:46:GLU:HG3	1.99	0.62
15:AP:6:LEU:HB3	15:AP:17:TYR:HB3	1.81	0.62
20:AB:31:PHE:HB2	20:AB:41:ASN:HA	1.80	0.62
23:BB:464:U:H2'	23:BB:465:G:O4'	1.98	0.62
23:BB:2880:C:H1'	42:BN:93:GLY:H	1.63	0.62
40:BH:89:LYS:O	40:BH:90:LEU:HD12	2.00	0.62
41:BJ:18:VAL:HG12	41:BJ:54:ILE:HD11	1.80	0.62
1:CA:437:U:H2'	1:CA:438:U:O4'	1.98	0.62
1:CA:1343:G:H2'	1:CA:1344:C:C6	2.34	0.62
7:CH:113:ARG:NH2	7:CH:114:ALA:HA	2.14	0.62
20:CB:55:GLU:HG3	20:CB:197:PHE:CZ	2.34	0.62
23:DB:27:G:N2	23:DB:512:G:H2'	2.14	0.62
23:DB:1098:A:C2'	24:DI:4:VAL:N	2.62	0.62
23:DB:1179:G:H2'	23:DB:1180:U:O4'	1.99	0.62
23:DB:1260:A:H2'	23:DB:1261:C:H6	1.63	0.62
23:DB:2086:U:H2'	23:DB:2087:G:C8	2.33	0.62
25:DC:86:ARG:HB3	25:DC:86:ARG:NH1	2.14	0.62
28:DP:56:SER:O	28:DP:75:THR:HG22	1.99	0.62
34:D3:31:ILE:HD11	34:D3:34:LYS:HD3	1.79	0.62
35:DV:61:LEU:O	35:DV:71:LYS:HA	1.99	0.62
37:DL:23:ILE:HD12	49:DR:84:ARG:HE	1.65	0.62
41:DJ:58:ASN:HA	41:DJ:127:GLY:CA	2.28	0.62
1:AA:394:G:H2'	1:AA:395:C:C6	2.34	0.62
1:AA:950:U:H2'	1:AA:951:G:C8	2.34	0.62
1:AA:1423:G:H2'	1:AA:1424:U:H6	1.62	0.62
7:AH:113:ARG:HH21	7:AH:114:ALA:HA	1.63	0.62
19:AT:66:ILE:HG22	19:AT:67:HIS:N	2.15	0.62
20:AB:55:GLU:HG3	20:AB:197:PHE:CZ	2.34	0.62
20:AB:102:ASN:OD1	20:AB:105:THR:HB	1.99	0.62
23:BB:647:G:H2'	23:BB:648:G:C8	2.35	0.62
23:BB:1871:A:H2'	23:BB:1872:A:C8	2.35	0.62
29:BE:200:LEU:O	29:BE:201:ALA:HB3	1.97	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BW:74:LYS:HE2	52:BW:74:LYS:HA	1.81	0.62
1:CA:429:U:H3'	3:CD:8:LEU:HD23	1.80	0.62
3:CD:187:ARG:O	3:CD:191:SER:HB3	2.00	0.62
18:CS:20:LYS:O	18:CS:23:GLU:HG3	1.99	0.62
23:DB:17:G:H2'	23:DB:18:U:C6	2.34	0.62
23:DB:594:U:H2'	23:DB:595:C:C6	2.35	0.62
23:DB:947:A:H2'	23:DB:948:C:H6	1.63	0.62
23:DB:1060:U:O4	23:DB:1088:A:N6	2.31	0.62
24:DI:27:LEU:H	24:DI:27:LEU:CD2	2.11	0.62
26:DD:51:THR:CG2	26:DD:76:GLY:HA3	2.28	0.62
41:DJ:57:LEU:HD21	41:DJ:128:ASN:HA	1.80	0.62
42:DN:9:GLN:O	42:DN:17:ARG:HD3	1.99	0.62
44:DQ:77:LYS:HA	44:DQ:80:ASN:HB3	1.81	0.62
48:DG:102:ILE:HD12	48:DG:147:LEU:HD21	1.80	0.62
1:AA:371:A:O2'	1:AA:372:C:H5'	1.99	0.62
1:AA:520:A:O2'	11:AL:69:GLU:HG2	2.00	0.62
7:AH:28:SER:OG	7:AH:56:PRO:HB2	2.00	0.62
10:AK:91:GLY:HA2	10:AK:94:SER:HB3	1.79	0.62
11:AL:106:VAL:HG23	11:AL:116:TYR:HB3	1.81	0.62
13:AN:14:ALA:HB1	13:AN:18:LYS:HE3	1.81	0.62
20:AB:187:ASP:HB3	20:AB:201:GLY:O	1.99	0.62
23:BB:1405:U:H2'	23:BB:1406:U:C6	2.34	0.62
23:BB:2328:A:H2'	23:BB:2329:U:C6	2.34	0.62
37:BL:56:PRO:HD2	37:BL:59:ARG:HG3	1.82	0.62
45:BS:66:ILE:H	45:BS:66:ILE:CD1	2.10	0.62
46:BU:86:PHE:HB3	46:BU:90:LYS:O	2.00	0.62
51:BZ:69:ALA:HA	51:BZ:72:ARG:HH12	1.65	0.62
53:B6:2:THR:OG1	53:B6:5:GLU:HG3	1.98	0.62
1:CA:62:U:H4'	1:CA:378:G:N2	2.14	0.62
1:CA:216:U:H2'	1:CA:217:C:C6	2.34	0.62
1:CA:254:G:OP1	16:CQ:68:LYS:O	2.17	0.62
1:CA:394:G:H2'	1:CA:395:C:C6	2.34	0.62
1:CA:434:U:H3'	1:CA:435:A:H8	1.63	0.62
23:DB:81:G:H2'	23:DB:82:U:O4'	1.99	0.62
23:DB:441:U:H2'	23:DB:442:G:H8	1.65	0.62
23:DB:836:G:H2'	23:DB:837:C:C6	2.34	0.62
23:DB:863:A:H2'	23:DB:864:G:C8	2.34	0.62
23:DB:1013:C:H2'	23:DB:1014:A:C8	2.33	0.62
23:DB:1174:U:H4'	23:DB:1176:U:H1'	1.80	0.62
23:DB:1373:A:H2'	23:DB:1374:G:O4'	2.00	0.62
23:DB:1847:A:H4'	23:DB:1848:A:C8	2.35	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:86:PHE:HB3	46:DU:90:LYS:O	1.98	0.62
51:DZ:71:LEU:HD12	51:DZ:78:TYR:HD2	1.65	0.62
1:AA:266:G:O2'	1:AA:267:C:H3'	1.99	0.62
18:AS:20:LYS:O	18:AS:23:GLU:HG3	2.00	0.62
20:AB:93:HIS:CD2	20:AB:145:ASN:HB3	2.34	0.62
23:BB:62:U:H2'	23:BB:63:A:O4'	2.00	0.62
23:BB:315:G:H2'	23:BB:316:C:C6	2.34	0.62
23:BB:863:A:H2'	23:BB:864:G:C8	2.35	0.62
23:BB:1355:G:O2'	23:BB:1356:G:H5'	2.00	0.62
23:BB:1788:C:O2'	23:BB:1789:A:H5'	1.98	0.62
23:BB:2291:U:O2'	23:BB:2374:C:H1'	1.99	0.62
23:BB:2306:C:C5	23:BB:2307:G:H2'	2.34	0.62
23:BB:2353:G:H1'	52:BW:30:VAL:CG1	2.29	0.62
23:BB:2746:U:OP1	48:BG:141:GLY:HA3	1.99	0.62
39:BX:1:MET:HG2	39:BX:4:LYS:NZ	2.15	0.62
40:BH:32:PRO:HG3	51:BZ:39:TRP:HB3	1.82	0.62
53:B6:32:ARG:HH22	53:B6:88:LEU:CA	2.12	0.62
1:CA:22:G:H2'	1:CA:23:C:C6	2.34	0.62
1:CA:859:G:H2'	1:CA:860:A:H8	1.62	0.62
1:CA:1404:C:H2'	1:CA:1405:G:H8	1.61	0.62
8:CI:71:ILE:H	8:CI:71:ILE:HD12	1.64	0.62
17:CR:37:LYS:NZ	21:CU:22:CYS:HB2	2.15	0.62
19:CT:29:THR:HA	19:CT:32:LYS:HE3	1.81	0.62
21:CU:42:THR:HB	21:CU:46:ARG:NE	2.14	0.62
22:DA:10:G:H2'	22:DA:11:C:O4'	1.99	0.62
23:DB:1913:A:H4'	23:DB:1914:C:C5'	2.30	0.62
23:DB:2615:U:C2	31:D0:3:GLN:HA	2.34	0.62
27:DK:58:LEU:HD23	27:DK:58:LEU:N	2.15	0.62
35:DV:28:ALA:HA	35:DV:88:HIS:ND1	2.15	0.62
38:DM:42:THR:OG1	38:DM:45:GLN:HG3	2.00	0.62
43:DO:94:ARG:HD2	43:DO:97:PHE:O	1.98	0.62
44:DQ:97:ILE:HD11	44:DQ:108:LEU:HD11	1.80	0.62
45:DS:20:VAL:O	45:DS:23:LEU:HB2	1.99	0.62
48:DG:61:TRP:HA	48:DG:61:TRP:HE3	1.64	0.62
50:DT:32:LEU:N	50:DT:83:ALA:HB3	2.14	0.62
1:AA:17:U:H2'	1:AA:18:C:C6	2.35	0.62
1:AA:1314:C:H41	18:AS:3:SER:HB3	1.65	0.62
1:AA:1319:A:H4'	1:AA:1320:C:OP1	1.98	0.62
7:AH:113:ARG:NH2	7:AH:114:ALA:HA	2.15	0.62
9:AJ:66:GLU:HB3	13:AN:98:ALA:HB2	1.82	0.62
16:AQ:58:VAL:HG12	16:AQ:77:VAL:HG13	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AR:27:THR:HG22	17:AR:31:TYR:HE1	1.65	0.62
23:BB:176:A:O2'	23:BB:177:G:H5'	1.99	0.62
23:BB:455:C:N3	23:BB:472:A:H2'	2.15	0.62
23:BB:1535:A:O2'	23:BB:1536:C:H5'	2.00	0.62
23:BB:1778:U:H2'	23:BB:1784:A:H62	1.65	0.62
23:BB:2267:A:H5"	23:BB:2268:A:H5'	1.80	0.62
26:BD:114:LYS:HD2	26:BD:116:LYS:NZ	2.15	0.62
38:BM:42:THR:O	38:BM:44:ARG:N	2.33	0.62
40:BH:117:LEU:HD21	40:BH:128:HIS:CE1	2.34	0.62
47:BF:155:ILE:HD12	47:BF:155:ILE:H	1.65	0.62
50:BT:2:ILE:N	50:BT:2:ILE:HD13	2.15	0.62
50:BT:32:LEU:N	50:BT:83:ALA:HB3	2.15	0.62
1:CA:1149:C:H2'	1:CA:1150:A:C8	2.35	0.62
8:CI:18:VAL:HG21	8:CI:82:ILE:N	2.15	0.62
10:CK:115:ILE:HD11	17:CR:72:ARG:HH12	1.65	0.62
11:CL:85:ARG:HG3	11:CL:86:VAL:N	2.15	0.62
23:DB:64:A:H2'	23:DB:65:U:C6	2.35	0.62
23:DB:257:C:H2'	23:DB:258:G:O4'	2.00	0.62
23:DB:851:C:O4'	30:DY:46:MET:HG2	2.00	0.62
23:DB:1175:A:C3'	23:DB:1176:U:H5'	2.29	0.62
23:DB:1654:A:H2'	23:DB:1655:A:H8	1.65	0.62
23:DB:2376:A:H2'	23:DB:2377:A:O4'	2.00	0.62
31:D0:21:LEU:HD12	45:DS:19:LEU:O	1.99	0.62
37:DL:56:PRO:HD2	37:DL:59:ARG:HG3	1.82	0.62
47:DF:33:ILE:HD13	47:DF:98:PHE:CD2	2.34	0.62
51:DZ:35:SER:HB3	51:DZ:50:ARG:HG3	1.80	0.62
53:D6:33:ALA:CB	53:D6:63:PRO:HA	2.29	0.62
1:AA:193:C:H2'	1:AA:194:C:C6	2.34	0.62
1:AA:524:G:H2'	1:AA:525:C:C6	2.35	0.62
1:AA:634:C:H2'	1:AA:635:A:H8	1.65	0.62
1:AA:673:A:H2'	1:AA:674:G:C8	2.34	0.62
1:AA:859:G:H2'	1:AA:860:A:H8	1.65	0.62
1:AA:1011:C:H2'	1:AA:1012:A:H8	1.65	0.62
7:AH:87:ARG:H	7:AH:90:GLU:HB2	1.65	0.62
13:AN:40:ARG:NH1	18:AS:6:LYS:HB2	2.15	0.62
23:BB:2027:G:O2'	23:BB:2028:U:H5'	2.00	0.62
23:BB:2183:A:H2'	23:BB:2184:A:C8	2.35	0.62
23:BB:2285:C:OP2	33:B1:5:ARG:HD3	1.99	0.62
23:BB:2439:A:N7	23:BB:2586:U:H4'	2.14	0.62
23:BB:2732:G:H5'	23:BB:2733:A:O4'	1.99	0.62
26:BD:68:PHE:C	26:BD:73:VAL:HB	2.20	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BK:24:VAL:HG13	27:BK:33:ALA:HB2	1.81	0.62
30:BY:12:ALA:HA	30:BY:15:ARG:HD3	1.80	0.62
49:BR:49:ILE:HD13	49:BR:51:VAL:O	2.00	0.62
1:CA:880:C:H2'	1:CA:881:G:H8	1.65	0.62
3:CD:53:GLN:HB3	3:CD:202:LEU:HB2	1.79	0.62
13:CN:5:MET:HG2	13:CN:8:ARG:HH11	1.64	0.62
20:CB:172:ILE:HD12	20:CB:172:ILE:H	1.63	0.62
23:DB:394:C:O2'	23:DB:395:U:H5'	2.00	0.62
23:DB:1745:A:H2'	23:DB:1746:A:O4'	2.00	0.62
35:DV:15:GLY:O	35:DV:19:ARG:HG3	1.99	0.62
1:AA:868:C:H2'	1:AA:869:G:O4'	2.00	0.62
2:AC:179:ALA:HB3	2:AC:181:ILE:HD11	1.81	0.62
4:AE:81:GLN:N	4:AE:146:MET:HE3	2.15	0.62
13:AN:5:MET:HG2	13:AN:8:ARG:HH11	1.65	0.62
23:BB:1203:U:H3'	23:BB:1204:A:C5'	2.30	0.62
23:BB:1429:G:H2'	23:BB:1430:G:H8	1.64	0.62
23:BB:2728:U:H2'	23:BB:2729:G:C8	2.35	0.62
24:BI:85:ILE:HD13	24:BI:137:LEU:HD21	1.80	0.62
28:BP:31:VAL:HG12	28:BP:38:ARG:O	2.00	0.62
29:BE:130:LYS:C	29:BE:132:LYS:H	2.03	0.62
53:B6:77:LYS:O	53:B6:81:LYS:HG3	2.00	0.62
2:CC:126:ARG:HH22	2:CC:190:THR:HG23	1.65	0.62
18:CS:29:PRO:HA	18:CS:47:THR:O	2.00	0.62
20:CB:40:ILE:HD13	20:CB:201:GLY:HA2	1.80	0.62
23:DB:347:A:H2'	23:DB:348:A:H8	1.64	0.62
23:DB:364:C:H2'	23:DB:365:U:C6	2.35	0.62
23:DB:624:C:O2'	23:DB:657:U:H5"	2.00	0.62
23:DB:921:C:H2'	23:DB:922:C:H6	1.65	0.62
23:DB:1258:U:H4'	29:DE:79:ARG:HD2	1.82	0.62
23:DB:2352:A:C6	52:DW:30:VAL:HG11	2.35	0.62
36:D2:33:ARG:HH21	36:D2:33:ARG:HB2	1.65	0.62
44:DQ:30:VAL:HG12	44:DQ:33:VAL:HG22	1.82	0.62
46:DU:65:GLN:HB2	46:DU:68:ASN:ND2	2.15	0.62
47:DF:60:SER:HB2	47:DF:62:GLN:OE1	2.00	0.62
1:AA:636:U:H2'	1:AA:637:C:C6	2.34	0.62
2:AC:149:LYS:HA	2:AC:168:ARG:HB2	1.82	0.62
23:BB:2700:A:H2'	23:BB:2701:U:C6	2.34	0.62
26:BD:33:ARG:NE	26:BD:74:GLU:HB3	2.15	0.62
28:BP:3:ILE:HD13	28:BP:7:LEU:HD11	1.82	0.62
32:B4:22:VAL:HB	32:B4:24:ARG:HE	1.65	0.62
35:BV:28:ALA:HA	35:BV:88:HIS:ND1	2.15	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BQ:18:LYS:C	44:BQ:20:ALA:H	2.02	0.62
52:BW:23:LYS:NZ	52:BW:24:ARG:HG3	2.14	0.62
1:CA:1301:U:H2'	1:CA:1301:U:O2	1.97	0.62
3:CD:2:ARG:HB3	3:CD:114:ARG:NH2	2.15	0.62
3:CD:96:ARG:HB3	3:CD:98:ASP:OD2	1.99	0.62
20:CB:80:LYS:HG3	20:CB:81:ASP:H	1.64	0.62
23:DB:171:U:H2'	23:DB:172:A:H8	1.65	0.62
23:DB:324:A:H2'	23:DB:325:G:O4'	2.00	0.62
23:DB:1562:U:H2'	23:DB:1563:U:C6	2.34	0.62
23:DB:1571:A:H2'	23:DB:1572:A:C8	2.35	0.62
23:DB:2645:G:H3'	23:DB:2646:C:C5'	2.30	0.62
48:DG:15:ASP:HB2	48:DG:26:LYS:HB3	1.81	0.62
53:D6:19:GLU:HA	53:D6:22:GLU:CD	2.20	0.62
53:D6:52:LEU:HD23	53:D6:53:ASN:N	2.15	0.62
1:AA:431:A:H2'	1:AA:432:A:O4'	2.00	0.61
1:AA:958:A:H61	18:AS:53:GLY:HA3	1.65	0.61
3:AD:169:TRP:HB2	3:AD:183:ARG:HD2	1.81	0.61
7:AH:76:ARG:HG3	7:AH:77:VAL:N	2.15	0.61
20:AB:120:SER:HA	20:AB:125:PHE:HB3	1.82	0.61
20:AB:128:LEU:HG	20:AB:132:GLU:HG2	1.82	0.61
23:BB:140:C:H4'	23:BB:141:G:N2	2.14	0.61
23:BB:165:A:H2'	23:BB:166:U:H6	1.64	0.61
23:BB:321:U:H1'	29:BE:162:ARG:HH11	1.64	0.61
23:BB:826:U:H2'	23:BB:828:U:O4'	2.00	0.61
23:BB:828:U:H4'	23:BB:831:G:N1	2.15	0.61
23:BB:1442:U:H2'	23:BB:1443:U:H6	1.63	0.61
23:BB:1551:A:C3'	23:BB:1552:A:H5"	2.30	0.61
23:BB:1684:G:H2'	23:BB:1685:C:H6	1.62	0.61
23:BB:1716:U:H2'	23:BB:1717:A:H8	1.65	0.61
23:BB:2728:U:H5'	27:BK:70:ARG:HH21	1.63	0.61
23:BB:2859:G:H2'	23:BB:2860:A:C8	2.34	0.61
25:BC:32:LEU:HD22	25:BC:63:ILE:HG13	1.82	0.61
25:BC:204:LEU:HD22	25:BC:209:ALA:HB1	1.81	0.61
29:BE:110:SER:HB3	29:BE:114:ARG:NH1	2.11	0.61
40:BH:134:VAL:HG13	40:BH:135:HIS:N	2.14	0.61
41:BJ:43:GLU:O	41:BJ:45:THR:N	2.33	0.61
47:BF:32:LYS:HB2	47:BF:90:LEU:O	1.99	0.61
48:BG:102:ILE:HD12	48:BG:147:LEU:HD21	1.81	0.61
1:CA:108:G:C6	19:CT:9:ARG:HG2	2.34	0.61
1:CA:436:C:O2'	1:CA:437:U:H5'	2.00	0.61
9:CJ:52:LEU:HA	9:CJ:62:ARG:HA	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1790:C:H2'	23:DB:1791:A:C8	2.35	0.61
23:DB:2835:A:H61	23:DB:2878:U:H2'	1.64	0.61
23:DB:2841:C:H2'	23:DB:2842:G:C8	2.34	0.61
29:DE:134:LEU:O	29:DE:138:LEU:HG	2.00	0.61
44:DQ:63:ARG:HH21	44:DQ:64:ILE:CD1	2.12	0.61
47:DF:103:ILE:HD11	47:DF:174:PHE:HA	1.82	0.61
48:DG:120:ILE:HD11	48:DG:132:LEU:HB2	1.82	0.61
52:DW:74:LYS:HE2	52:DW:74:LYS:HA	1.82	0.61
1:AA:279:A:H5"	1:AA:280:C:H3'	1.82	0.61
1:AA:859:G:H2'	1:AA:860:A:C8	2.35	0.61
1:AA:1054:C:H1'	1:AA:1196:A:C5	2.35	0.61
1:AA:1319:A:H3'	18:AS:2:ARG:HA	1.81	0.61
4:AE:33:THR:HG22	4:AE:51:LYS:HB3	1.81	0.61
6:AG:78:ARG:HG2	6:AG:83:THR:HG22	1.82	0.61
23:BB:111:A:H2'	23:BB:112:U:O4'	1.99	0.61
23:BB:1947:C:H2'	23:BB:1948:G:H8	1.65	0.61
23:BB:2026:U:H2'	23:BB:2027:G:H8	1.65	0.61
23:BB:2722:G:H4'	42:BN:4:ARG:HB2	1.82	0.61
24:BI:18:ASN:N	24:BI:19:PRO:HD2	2.14	0.61
27:BK:71:ARG:CB	27:BK:72:PRO:HD2	2.25	0.61
28:BP:56:SER:O	28:BP:75:THR:HG22	2.01	0.61
43:BO:18:LEU:HD23	43:BO:25:ARG:HD3	1.81	0.61
1:CA:41:G:H2'	1:CA:42:G:C8	2.34	0.61
1:CA:194:C:O2'	1:CA:195:A:H5'	2.00	0.61
1:CA:1273:C:H2'	1:CA:1274:A:O4'	1.99	0.61
6:CG:50:ALA:HB2	6:CG:57:GLU:HG3	1.82	0.61
10:CK:106:ILE:HD11	10:CK:109:ILE:HD11	1.80	0.61
10:CK:108:ASN:HD21	21:CU:6:ARG:HD2	1.65	0.61
20:CB:163:ILE:HG23	20:CB:164:ASP:N	2.13	0.61
23:DB:1169:A:H2'	23:DB:1170:C:H6	1.64	0.61
23:DB:1381:G:C2'	23:DB:1382:G:H5'	2.30	0.61
26:DD:29:VAL:O	26:DD:185:ASN:HB3	1.99	0.61
38:DM:127:LYS:H	38:DM:127:LYS:HD2	1.64	0.61
40:DH:135:HIS:H	40:DH:138:VAL:HB	1.64	0.61
44:DQ:63:ARG:HH21	44:DQ:64:ILE:HD13	1.66	0.61
45:DS:66:ILE:H	45:DS:66:ILE:CD1	2.10	0.61
45:DS:72:THR:CG2	45:DS:108:SER:HB3	2.30	0.61
50:DT:18:GLU:C	50:DT:20:ALA:H	2.04	0.61
50:DT:55:VAL:HG13	50:DT:85:VAL:HG12	1.81	0.61
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.36	0.61
2:AC:48:LYS:HD3	2:AC:48:LYS:N	2.14	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AE:89:THR:HG21	4:AE:134:ASN:ND2	2.15	0.61
8:AI:5:TYR:HB2	8:AI:20:ILE:HB	1.82	0.61
8:AI:9:GLY:HA2	8:AI:80:HIS:CD2	2.34	0.61
11:AL:107:LYS:NZ	11:AL:107:LYS:H	1.97	0.61
14:AO:39:LEU:HD22	14:AO:59:MET:HE1	1.83	0.61
23:BB:165:A:H2'	23:BB:166:U:C6	2.35	0.61
23:BB:171:U:H2'	23:BB:172:A:H8	1.66	0.61
23:BB:184:C:H2'	23:BB:185:G:H8	1.64	0.61
23:BB:220:G:H1	23:BB:427:U:H2'	1.65	0.61
23:BB:257:C:H2'	23:BB:258:G:O4'	2.00	0.61
23:BB:934:U:H2'	23:BB:935:C:C6	2.35	0.61
36:B2:3:ARG:NE	36:B2:3:ARG:HA	2.16	0.61
44:BQ:4:LYS:NZ	44:BQ:7:VAL:HG22	2.15	0.61
44:BQ:89:ILE:HB	49:BR:11:GLN:HE22	1.63	0.61
47:BF:104:THR:C	47:BF:108:PRO:HG2	2.21	0.61
49:BR:3:ALA:HB2	49:BR:101:ILE:HD11	1.81	0.61
50:BT:18:GLU:C	50:BT:20:ALA:H	2.04	0.61
50:BT:39:THR:CG2	50:BT:42:GLU:H	2.14	0.61
1:CA:707:U:H4'	10:CK:21:HIS:CD2	2.36	0.61
1:CA:950:U:H2'	1:CA:951:G:C8	2.35	0.61
5:CF:38:ARG:HH21	5:CF:63:ASN:HD21	1.47	0.61
14:CO:81:LEU:HD23	14:CO:85:LEU:HD13	1.81	0.61
18:CS:28:LYS:H	18:CS:28:LYS:HD2	1.64	0.61
20:CB:49:PHE:O	20:CB:53:LEU:HD13	1.99	0.61
22:DA:39:A:O2'	22:DA:40:U:H5'	2.00	0.61
23:DB:1447:C:H2'	23:DB:1448:G:C8	2.33	0.61
23:DB:1505:A:H2'	23:DB:1506:U:C6	2.35	0.61
23:DB:1551:A:C3'	23:DB:1552:A:H5"	2.30	0.61
23:DB:1716:U:H2'	23:DB:1717:A:H8	1.66	0.61
23:DB:2144:G:O2'	23:DB:2145:C:H5'	2.00	0.61
23:DB:2800:A:H2'	23:DB:2801:G:C1'	2.30	0.61
24:DI:126:ARG:HH11	24:DI:126:ARG:HB3	1.65	0.61
25:DC:75:ALA:HB2	25:DC:95:TYR:HA	1.81	0.61
27:DK:60:ALA:HA	27:DK:87:LEU:HD23	1.82	0.61
29:DE:148:ILE:HD13	29:DE:187:VAL:CG2	2.29	0.61
46:DU:10:VAL:O	46:DU:21:ARG:HA	2.01	0.61
47:DF:87:LYS:HG3	47:DF:88:VAL:H	1.66	0.61
50:DT:39:THR:CG2	50:DT:42:GLU:H	2.13	0.61
1:AA:68:G:H5'	1:AA:171:A:H1'	1.81	0.61
1:AA:68:G:H5'	1:AA:171:A:O2'	1.99	0.61
1:AA:1074:G:C4'	20:AB:102:ASN:HB2	2.30	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:48:ARG:O	8:AI:52:GLU:HG2	2.00	0.61
23:BB:742:A:H2'	23:BB:743:A:C8	2.35	0.61
23:BB:1742:U:H2'	23:BB:1743:G:C8	2.34	0.61
23:BB:2092:U:H4'	23:BB:2093:G:O5'	2.00	0.61
23:BB:2800:A:H2'	23:BB:2801:G:C1'	2.30	0.61
41:BJ:64:VAL:HG22	41:BJ:68:LYS:HD2	1.83	0.61
3:CD:58:GLN:O	3:CD:62:ARG:HG2	1.99	0.61
9:CJ:85:ASP:HA	9:CJ:88:MET:SD	2.40	0.61
13:CN:40:ARG:NH1	18:CS:6:LYS:HB2	2.16	0.61
20:CB:128:LEU:HD12	20:CB:129:THR:H	1.65	0.61
23:DB:582:A:H2'	23:DB:583:G:H8	1.65	0.61
23:DB:1164:C:H2'	23:DB:1165:A:H8	1.64	0.61
23:DB:2137:U:O2'	23:DB:2138:G:H5'	2.00	0.61
25:DC:16:VAL:N	25:DC:203:VAL:HG12	2.15	0.61
25:DC:221:GLY:C	25:DC:223:ALA:H	2.04	0.61
26:DD:106:LYS:O	26:DD:107:VAL:HB	2.00	0.61
29:DE:126:VAL:HG22	29:DE:133:LEU:HD12	1.82	0.61
44:DQ:54:ARG:HB3	44:DQ:58:GLN:NE2	2.12	0.61
45:DS:17:VAL:HG13	45:DS:43:ALA:HB1	1.82	0.61
1:AA:33:A:H2'	1:AA:34:C:C6	2.35	0.61
1:AA:108:G:C6	19:AT:9:ARG:HG2	2.35	0.61
1:AA:1307:U:H2'	1:AA:1308:U:C6	2.35	0.61
6:AG:110:ARG:HD2	6:AG:122:GLU:HB2	1.83	0.61
13:AN:51:PRO:HG2	13:AN:52:ARG:H	1.63	0.61
23:BB:599:A:O2'	23:BB:600:G:H5'	2.00	0.61
23:BB:1935:G:H1'	23:BB:1964:G:N2	2.14	0.61
26:BD:29:VAL:O	26:BD:185:ASN:HB3	2.01	0.61
27:BK:72:PRO:O	27:BK:74:GLY:N	2.34	0.61
36:B2:33:ARG:HB2	36:B2:33:ARG:HH21	1.65	0.61
39:BX:10:SER:H	39:BX:60:LYS:HE2	1.64	0.61
44:BQ:57:ARG:HH22	44:BQ:92:LYS:HE2	1.66	0.61
44:BQ:91:ARG:NH1	49:BR:11:GLN:H	1.98	0.61
48:BG:120:ILE:HD11	48:BG:132:LEU:HB2	1.83	0.61
53:B6:14:MET:SD	53:B6:129:ILE:HG23	2.41	0.61
53:B6:29:ARG:HH22	53:B6:110:ARG:HH11	1.48	0.61
1:CA:499:A:H4'	1:CA:500:G:H5'	1.82	0.61
1:CA:1234:C:O2'	1:CA:1235:U:H5'	2.01	0.61
1:CA:1314:C:H2'	1:CA:1315:U:C6	2.35	0.61
1:CA:1347:G:C8	8:CI:108:ARG:HB3	2.35	0.61
5:CF:17:GLN:O	5:CF:21:MET:HG3	2.01	0.61
11:CL:107:LYS:NZ	11:CL:107:LYS:H	1.97	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CT:78:LEU:O	19:CT:82:ILE:HG23	2.01	0.61
23:DB:79:C:HO2'	23:DB:346:A:C1'	2.13	0.61
23:DB:126:A:H5'	36:D2:19:ARG:CG	2.29	0.61
23:DB:323:C:H2'	29:DE:163:ASN:OD1	2.01	0.61
23:DB:543:G:H21	23:DB:545:U:H5'	1.66	0.61
23:DB:592:A:H2'	23:DB:593:U:C6	2.35	0.61
23:DB:1149:G:H2'	23:DB:1150:C:C6	2.36	0.61
23:DB:1164:C:H2'	23:DB:1165:A:C8	2.36	0.61
23:DB:1222:U:P	49:DR:90:ARG:HH22	2.23	0.61
23:DB:1636:U:H2'	23:DB:1637:A:H8	1.65	0.61
23:DB:2472:G:H2'	23:DB:2475:C:H42	1.65	0.61
26:DD:28:GLU:HG3	26:DD:185:ASN:O	2.00	0.61
33:D1:26:LYS:HD3	33:D1:52:LYS:HB3	1.83	0.61
40:DH:115:VAL:HG22	40:DH:117:LEU:H	1.64	0.61
44:DQ:30:VAL:HG22	44:DQ:31:TYR:H	1.64	0.61
44:DQ:83:LYS:HA	44:DQ:83:LYS:NZ	2.16	0.61
53:D6:52:LEU:O	53:D6:55:ILE:HG22	2.00	0.61
53:D6:70:SER:HB3	53:D6:76:LEU:HD12	1.81	0.61
1:AA:541:G:O2'	3:AD:39:GLN:HB3	2.00	0.61
5:AF:15:SER:HA	5:AF:18:VAL:HG23	1.82	0.61
13:AN:12:ARG:HD3	13:AN:58:ARG:HB3	1.82	0.61
22:BA:5:U:H2'	22:BA:6:G:C8	2.36	0.61
23:BB:1164:C:H2'	23:BB:1165:A:H8	1.66	0.61
23:BB:1485:U:H2'	23:BB:1486:U:C6	2.35	0.61
23:BB:2758:A:H2'	23:BB:2759:G:O4'	2.01	0.61
25:BC:75:ALA:HB2	25:BC:95:TYR:HA	1.83	0.61
25:BC:131:MET:HA	25:BC:134:ILE:HG23	1.82	0.61
40:BH:5:LEU:HD12	40:BH:17:ASP:HB2	1.83	0.61
43:BO:94:ARG:HD2	43:BO:97:PHE:O	1.99	0.61
51:BZ:66:THR:O	51:BZ:69:ALA:HB3	2.01	0.61
1:CA:923:A:H2'	1:CA:924:C:C6	2.36	0.61
5:CF:15:SER:HA	5:CF:18:VAL:HG23	1.82	0.61
9:CJ:44:THR:HG23	9:CJ:69:THR:O	2.01	0.61
10:CK:95:THR:HG23	10:CK:96:ILE:N	2.15	0.61
20:CB:63:LYS:HA	20:CB:224:ARG:HH11	1.64	0.61
23:DB:417:C:H2'	23:DB:418:C:C6	2.36	0.61
23:DB:873:C:H2'	23:DB:874:G:C8	2.36	0.61
23:DB:1175:A:N3	23:DB:1175:A:H2'	2.13	0.61
23:DB:1400:U:H2'	23:DB:1401:G:C8	2.35	0.61
24:DI:32:VAL:HG22	24:DI:60:VAL:HG21	1.83	0.61
26:DD:68:PHE:C	26:DD:73:VAL:HB	2.19	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DK:115:ILE:HG23	27:DK:116:ILE:N	2.16	0.61
41:DJ:128:ASN:C	41:DJ:129:GLU:HG3	2.21	0.61
53:D6:156:ARG:O	53:D6:159:ALA:HB3	2.00	0.61
1:AA:41:G:H2'	1:AA:42:G:C8	2.35	0.61
1:AA:919:A:O2'	1:AA:920:U:H5'	2.00	0.61
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.36	0.61
1:AA:1399:C:H4'	1:AA:1400:C:H5'	1.81	0.61
3:AD:187:ARG:O	3:AD:191:SER:HB3	1.99	0.61
4:AE:21:SER:CB	4:AE:28:ARG:HE	2.13	0.61
7:AH:101:ALA:HB3	7:AH:112:ASP:HB3	1.82	0.61
16:AQ:45:VAL:HG11	16:AQ:60:ILE:HG21	1.82	0.61
23:BB:116:C:H2'	23:BB:117:G:O4'	2.00	0.61
23:BB:571:U:H3'	49:BR:80:ARG:HH12	1.66	0.61
23:BB:1505:A:H2'	23:BB:1506:U:C6	2.35	0.61
23:BB:1654:A:H2'	23:BB:1655:A:H8	1.66	0.61
23:BB:2095:A:H2'	23:BB:2096:C:C6	2.35	0.61
23:BB:2212:A:H1'	23:BB:2213:U:H3	1.65	0.61
23:BB:2257:U:O2'	23:BB:2258:C:H5'	2.01	0.61
23:BB:2385:C:H2'	23:BB:2386:A:C8	2.35	0.61
23:BB:2646:C:H2'	23:BB:2647:U:O4'	1.99	0.61
23:BB:2704:C:H2'	23:BB:2705:A:O4'	1.99	0.61
23:BB:2840:C:OP1	42:BN:50:PRO:HA	2.01	0.61
23:BB:2895:G:H2'	23:BB:2896:C:H6	1.65	0.61
25:BC:77:VAL:HG23	25:BC:112:GLY:N	2.14	0.61
29:BE:18:THR:HG22	29:BE:106:LYS:NZ	2.15	0.61
35:BV:29:ILE:HG13	35:BV:88:HIS:HE1	1.64	0.61
40:BH:75:LEU:HB3	40:BH:78:VAL:CG2	2.30	0.61
46:BU:35:VAL:HB	46:BU:38:ILE:CG2	2.30	0.61
52:BW:39:GLN:HG3	52:BW:42:THR:HB	1.82	0.61
1:CA:370:C:O2'	1:CA:371:A:H5'	2.00	0.61
1:CA:634:C:H2'	1:CA:635:A:H8	1.64	0.61
1:CA:662:U:O2'	1:CA:836:G:H5"	2.01	0.61
1:CA:1134:G:C2	1:CA:1135:U:H1'	2.35	0.61
4:CE:156:ARG:HD2	7:CH:42:GLU:O	2.01	0.61
15:CP:26:ASN:ND2	15:CP:31:ARG:HB3	2.15	0.61
23:DB:654:A:C2'	23:DB:655:A:H5"	2.31	0.61
23:DB:1240:U:O2'	23:DB:1241:A:H5"	2.01	0.61
23:DB:2149:U:H2'	23:DB:2150:C:C6	2.36	0.61
23:DB:2229:U:H2'	23:DB:2230:G:H8	1.66	0.61
23:DB:2810:A:H2'	23:DB:2811:G:O4'	1.99	0.61
29:DE:46:GLN:HB2	29:DE:87:ALA:O	1.99	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DH:24:GLY:O	40:DH:28:ASN:HB2	2.01	0.61
44:DQ:65:ASN:HB2	44:DQ:75:TYR:HB2	1.81	0.61
1:AA:243:A:H4'	1:AA:244:U:H5'	1.82	0.61
1:AA:1000:A:H2'	1:AA:1001:C:C6	2.36	0.61
3:AD:58:GLN:O	3:AD:62:ARG:HG2	2.01	0.61
3:AD:104:MET:SD	3:AD:179:GLY:HA3	2.41	0.61
21:AU:42:THR:HB	21:AU:46:ARG:NE	2.15	0.61
23:BB:806:C:O2'	23:BB:807:U:H5'	2.00	0.61
23:BB:1219:U:H2'	23:BB:1220:G:H8	1.65	0.61
23:BB:1276:A:O2'	23:BB:1277:G:H5'	2.00	0.61
23:BB:2722:G:H2'	23:BB:2723:C:C6	2.35	0.61
37:BL:95:LEU:HB2	37:BL:101:ILE:HG13	1.82	0.61
41:BJ:64:VAL:O	41:BJ:68:LYS:HD2	1.99	0.61
41:BJ:72:LYS:HG3	41:BJ:89:PHE:HB2	1.83	0.61
48:BG:9:VAL:HG12	48:BG:11:PRO:HD3	1.81	0.61
1:CA:474:G:H2'	1:CA:475:C:C6	2.35	0.61
1:CA:493:A:H5'	1:CA:494:G:OP2	2.00	0.61
23:DB:144:A:H2'	23:DB:145:C:C6	2.35	0.61
23:DB:570:G:H2'	23:DB:2030:A:N7	2.16	0.61
23:DB:1405:U:H2'	23:DB:1406:U:C6	2.36	0.61
29:DE:102:ARG:HD3	29:DE:201:ALA:H	1.66	0.61
31:D0:38:LEU:HD13	31:D0:41:HIS:NE2	2.16	0.61
52:DW:23:LYS:NZ	52:DW:24:ARG:HG3	2.16	0.61
53:D6:7:TYR:CZ	53:D6:160:GLU:HG2	2.36	0.61
10:AK:80:ASN:H	10:AK:80:ASN:HD22	1.49	0.61
13:AN:60:ARG:HE	13:AN:62:ARG:HG2	1.66	0.61
15:AP:59:HIS:O	15:AP:63:GLN:HG3	2.01	0.61
23:BB:593:U:H2'	23:BB:594:U:C6	2.35	0.61
23:BB:1046:A:H4'	23:BB:1047:G:H5"	1.83	0.61
28:BP:50:ARG:HB2	28:BP:56:SER:CB	2.30	0.61
28:BP:88:ARG:HB2	28:BP:112:ARG:NH1	2.16	0.61
35:BV:4:ILE:HB	35:BV:63:ILE:HA	1.82	0.61
42:BN:9:GLN:O	42:BN:17:ARG:HD3	2.00	0.61
47:BF:72:SER:HB2	47:BF:80:GLN:H	1.65	0.61
50:BT:40:LYS:HG2	50:BT:60:THR:HG23	1.83	0.61
52:BW:59:PHE:CE2	52:BW:61:LYS:HD2	2.34	0.61
53:B6:90:LEU:HB3	53:B6:101:ILE:HG21	1.83	0.61
1:CA:266:G:O2'	1:CA:267:C:H3'	2.01	0.61
1:CA:999:C:H2'	1:CA:1000:A:C8	2.35	0.61
1:CA:1132:C:H2'	1:CA:1133:G:C8	2.36	0.61
7:CH:8:ASP:O	7:CH:12:ARG:HB2	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:627:A:H62	37:DL:112:LEU:HD23	1.65	0.61
23:DB:1812:U:H2'	23:DB:1813:G:C8	2.36	0.61
23:DB:1947:C:H2'	23:DB:1948:G:H8	1.66	0.61
26:DD:154:LYS:HD3	26:DD:154:LYS:H	1.65	0.61
27:DK:71:ARG:HB3	27:DK:72:PRO:CD	2.26	0.61
38:DM:58:LYS:N	38:DM:58:LYS:HD2	2.16	0.61
42:DN:37:THR:HB	42:DN:40:LYS:HG3	1.82	0.61
46:DU:24:VAL:HA	46:DU:35:VAL:HA	1.83	0.61
49:DR:31:GLU:H	49:DR:63:VAL:CG2	2.12	0.61
1:AA:272:C:H2'	1:AA:273:U:H6	1.66	0.61
1:AA:434:U:H3'	1:AA:435:A:H8	1.66	0.61
1:AA:707:U:H4'	10:AK:21:HIS:CD2	2.36	0.61
1:AA:1521:C:H2'	1:AA:1522:U:C6	2.36	0.61
2:AC:25:THR:HG23	13:AN:75:LYS:HD3	1.83	0.61
8:AI:61:ASP:C	8:AI:62:LEU:HD13	2.21	0.61
16:AQ:79:GLU:HG3	16:AQ:80:LYS:NZ	2.15	0.61
23:BB:458:G:H22	23:BB:469:G:H2'	1.65	0.61
23:BB:581:C:H2'	23:BB:582:A:H8	1.64	0.61
23:BB:836:G:H2'	23:BB:837:C:C6	2.35	0.61
23:BB:873:C:H2'	23:BB:874:G:H8	1.66	0.61
23:BB:947:A:H2'	23:BB:948:C:C6	2.35	0.61
23:BB:967:U:H2'	23:BB:968:C:C6	2.36	0.61
23:BB:2341:G:H2'	23:BB:2342:C:C6	2.35	0.61
27:BK:99:ILE:H	27:BK:118:LEU:HD23	1.66	0.61
35:BV:70:ILE:HD13	35:BV:71:LYS:N	2.15	0.61
1:CA:524:G:H2'	1:CA:525:C:C6	2.36	0.61
1:CA:672:U:H2'	1:CA:673:A:C8	2.36	0.61
8:CI:49:GLN:NE2	8:CI:79:ARG:HH11	1.98	0.61
12:CM:30:LYS:HG3	12:CM:40:GLU:OE2	2.01	0.61
13:CN:12:ARG:HD3	13:CN:58:ARG:HB3	1.82	0.61
18:CS:14:LEU:HD22	18:CS:34:SER:OG	2.01	0.61
19:CT:79:THR:O	19:CT:82:ILE:HG13	2.01	0.61
22:DA:5:U:H2'	22:DA:6:G:H8	1.66	0.61
23:DB:139:U:C2	50:DT:1:MET:HB3	2.36	0.61
23:DB:184:C:H2'	23:DB:185:G:H8	1.66	0.61
23:DB:878:A:H5'	23:DB:900:A:H61	1.65	0.61
23:DB:1387:A:H2'	23:DB:1388:G:C8	2.36	0.61
23:DB:2415:G:C4'	37:DL:66:PHE:HB2	2.31	0.61
23:DB:2728:U:H2'	23:DB:2729:G:C8	2.36	0.61
45:DS:18:ARG:HB3	45:DS:76:VAL:CG2	2.31	0.61
48:DG:15:ASP:HB3	48:DG:26:LYS:N	2.13	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DR:49:ILE:HD13	49:DR:51:VAL:O	2.01	0.61
50:DT:25:GLU:OE1	50:DT:30:ILE:HA	2.01	0.61
51:DZ:70:GLU:O	51:DZ:72:ARG:N	2.33	0.61
53:D6:30:THR:C	53:D6:32:ARG:N	2.54	0.61
1:AA:17:U:O2'	1:AA:18:C:H5'	2.01	0.60
1:AA:1460:C:H2'	1:AA:1461:G:C8	2.36	0.60
1:AA:1527:U:H2'	1:AA:1528:U:C6	2.36	0.60
2:AC:40:GLN:HG3	2:AC:41:TYR:H	1.66	0.60
10:AK:95:THR:HG23	10:AK:96:ILE:N	2.15	0.60
12:AM:22:TYR:HB3	12:AM:69:ARG:CZ	2.31	0.60
23:BB:131:A:H2'	23:BB:132:G:H8	1.66	0.60
23:BB:871:U:H2'	23:BB:872:U:H6	1.66	0.60
23:BB:1131:G:N2	23:BB:2024:G:H21	1.99	0.60
23:BB:1523:U:H5"	23:BB:1524:G:C8	2.36	0.60
23:BB:2292:U:H2'	23:BB:2293:G:H8	1.66	0.60
23:BB:2730:C:H2'	23:BB:2731:G:H8	1.66	0.60
23:BB:2734:A:H2'	23:BB:2735:G:H5'	1.81	0.60
27:BK:58:LEU:N	27:BK:58:LEU:HD23	2.16	0.60
29:BE:37:ALA:C	29:BE:39:ALA:H	2.04	0.60
37:BL:56:PRO:O	37:BL:59:ARG:HB2	2.01	0.60
40:BH:4:ILE:HG13	40:BH:18:GLN:HB2	1.82	0.60
40:BH:24:GLY:O	40:BH:28:ASN:HB2	2.01	0.60
53:B6:93:SER:OG	53:B6:100:TYR:HB2	2.01	0.60
1:CA:719:C:H2'	17:CR:38:ILE:HD11	1.83	0.60
1:CA:1169:A:H2'	1:CA:1170:A:C8	2.36	0.60
1:CA:1241:G:H2'	1:CA:1242:G:H8	1.66	0.60
1:CA:1521:C:H2'	1:CA:1522:U:C6	2.36	0.60
10:CK:80:ASN:CB	10:CK:105:ARG:HB3	2.30	0.60
12:CM:43:LYS:O	12:CM:46:GLU:HG3	2.01	0.60
14:CO:77:ARG:O	14:CO:81:LEU:HB2	2.01	0.60
20:CB:93:HIS:CD2	20:CB:145:ASN:HB3	2.36	0.60
23:DB:506:G:H1'	23:DB:507:A:C8	2.36	0.60
23:DB:828:U:H4'	23:DB:831:G:N1	2.16	0.60
23:DB:1125:G:C5'	32:D4:37:GLN:HE21	2.14	0.60
23:DB:1381:G:H2'	23:DB:1382:G:H5'	1.83	0.60
23:DB:1599:U:H2'	23:DB:1600:C:C6	2.34	0.60
23:DB:1657:U:H4'	26:DD:138:LEU:HB3	1.83	0.60
26:DD:79:LEU:N	26:DD:79:LEU:HD22	2.16	0.60
26:DD:113:SER:CB	26:DD:168:GLU:H	2.13	0.60
27:DK:41:ILE:HG13	27:DK:42:THR:H	1.65	0.60
34:D3:49:VAL:CG2	34:D3:54:LEU:HD13	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DJ:72:LYS:HG3	41:DJ:89:PHE:HB2	1.83	0.60
50:DT:68:LYS:O	50:DT:69:ARG:HB2	1.98	0.60
10:AK:33:ILE:HG12	10:AK:69:CYS:SG	2.41	0.60
13:AN:50:LEU:N	13:AN:51:PRO:HD2	2.16	0.60
23:BB:664:G:H2'	23:BB:665:U:H6	1.66	0.60
23:BB:670:A:H5"	37:BL:42:SER:HB2	1.82	0.60
23:BB:1097:U:H2'	23:BB:1098:A:H5'	1.83	0.60
25:BC:221:GLY:C	25:BC:223:ALA:H	2.03	0.60
26:BD:133:THR:HG23	26:BD:134:HIS:N	2.15	0.60
27:BK:113:MET:HE1	27:BK:116:ILE:HD11	1.84	0.60
29:BE:148:ILE:HD13	29:BE:187:VAL:CG2	2.31	0.60
47:BF:12:VAL:O	47:BF:16:MET:HG2	2.01	0.60
51:BZ:70:GLU:O	51:BZ:72:ARG:N	2.34	0.60
53:B6:28:LEU:O	53:B6:37:LEU:HD13	2.01	0.60
53:B6:57:THR:N	53:B6:69:GLN:O	2.34	0.60
53:B6:131:ASN:O	53:B6:135:GLU:HG3	2.00	0.60
1:CA:243:A:H4'	1:CA:244:U:H5'	1.82	0.60
1:CA:462:G:H2'	1:CA:463:U:C6	2.36	0.60
1:CA:919:A:O2'	1:CA:920:U:H5'	2.01	0.60
6:CG:77:ARG:HG3	6:CG:79:VAL:HG23	1.82	0.60
12:CM:22:TYR:HB3	12:CM:69:ARG:NH2	2.16	0.60
13:CN:50:LEU:N	13:CN:51:PRO:HD2	2.16	0.60
15:CP:60:TRP:HB3	15:CP:65:ALA:HB2	1.83	0.60
23:DB:477:A:H2'	23:DB:478:A:C8	2.36	0.60
23:DB:1100:C:H2'	23:DB:1101:U:H6	1.65	0.60
23:DB:1442:U:H2'	23:DB:1443:U:C6	2.35	0.60
23:DB:2814:A:H2'	23:DB:2815:C:H6	1.66	0.60
26:DD:124:ARG:HA	26:DD:165:MET:CE	2.31	0.60
27:DK:7:MET:SD	27:DK:20:MET:HB2	2.40	0.60
35:DV:1:MET:CE	35:DV:2:PHE:H	2.13	0.60
38:DM:37:GLY:HA3	38:DM:127:LYS:HZ2	1.63	0.60
41:DJ:64:VAL:HG22	41:DJ:68:LYS:HD2	1.82	0.60
42:DN:72:ASP:O	42:DN:75:ILE:HG13	2.01	0.60
46:DU:60:LYS:HE2	46:DU:60:LYS:HA	1.83	0.60
53:D6:134:ARG:HH22	53:D6:135:GLU:HG2	1.66	0.60
1:AA:16:A:O2'	1:AA:17:U:H5'	2.00	0.60
1:AA:493:A:H5'	1:AA:494:G:OP2	2.01	0.60
2:AC:61:LYS:O	2:AC:96:VAL:HB	2.01	0.60
6:AG:147:ASN:CA	10:AK:55:ARG:HH21	2.12	0.60
8:AI:26:LYS:N	8:AI:61:ASP:HB2	2.15	0.60
11:AL:81:ILE:HG23	11:AL:94:TYR:HB3	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:172:A:H2'	23:BB:173:A:H8	1.66	0.60
23:BB:616:A:H4'	29:BE:101:TYR:CE2	2.37	0.60
23:BB:654:A:H2'	23:BB:655:A:H5"	1.83	0.60
23:BB:962:G:N2	23:BB:2250:G:H22	1.99	0.60
23:BB:1873:G:O2'	23:BB:1874:C:H5'	2.01	0.60
23:BB:2787:C:C1'	26:BD:63:PRO:HG3	2.31	0.60
26:BD:10:GLY:HA2	28:BP:4:ILE:HD11	1.83	0.60
26:BD:182:ALA:O	26:BD:184:ARG:HG2	2.01	0.60
45:BS:72:THR:CG2	45:BS:108:SER:HB3	2.31	0.60
47:BF:62:GLN:HE22	47:BF:90:LEU:HD13	1.66	0.60
1:CA:390:U:H2'	1:CA:391:G:H8	1.65	0.60
1:CA:636:U:H2'	1:CA:637:C:C6	2.35	0.60
2:CC:61:LYS:O	2:CC:96:VAL:HB	2.01	0.60
3:CD:171:GLU:O	3:CD:179:GLY:HA2	2.01	0.60
11:CL:81:ILE:HG23	11:CL:94:TYR:HB3	1.83	0.60
27:DK:72:PRO:O	27:DK:74:GLY:N	2.34	0.60
27:DK:118:LEU:O	27:DK:120:PRO:HD2	2.00	0.60
52:DW:23:LYS:O	52:DW:66:VAL:HB	2.00	0.60
13:AN:60:ARG:O	13:AN:62:ARG:N	2.35	0.60
23:BB:374:A:N6	23:BB:400:G:H1'	2.16	0.60
23:BB:1440:U:H2'	23:BB:1441:G:C8	2.37	0.60
23:BB:1593:A:H2'	23:BB:1594:U:C6	2.36	0.60
23:BB:2415:G:H4'	37:BL:66:PHE:HB2	1.83	0.60
23:BB:2553:G:H2'	23:BB:2554:U:C4'	2.32	0.60
23:BB:2633:G:H2'	23:BB:2634:A:O4'	2.01	0.60
23:BB:2841:C:H2'	23:BB:2842:G:C8	2.36	0.60
29:BE:30:GLN:HG2	29:BE:30:GLN:O	2.01	0.60
30:BY:37:ARG:HA	30:BY:37:ARG:HE	1.66	0.60
45:BS:31:GLN:O	45:BS:35:ILE:HG12	2.02	0.60
45:BS:33:LEU:HG	45:BS:51:LEU:HD23	1.82	0.60
49:BR:14:VAL:HG22	49:BR:15:SER:N	2.16	0.60
1:CA:1313:U:OP1	18:CS:6:LYS:HD3	2.01	0.60
5:CF:81:ASN:OD1	5:CF:83:ALA:HB3	2.00	0.60
6:CG:110:ARG:HD2	6:CG:122:GLU:HB2	1.82	0.60
8:CI:48:ARG:O	8:CI:52:GLU:HG2	2.01	0.60
16:CQ:31:PRO:O	16:CQ:32:ILE:HB	2.01	0.60
19:CT:19:HIS:O	19:CT:23:ARG:HG2	1.99	0.60
22:DA:42:C:C5	47:DF:65:LEU:HD22	2.36	0.60
23:DB:30:G:H4'	23:DB:1215:G:H5'	1.84	0.60
23:DB:968:C:H2'	23:DB:969:G:C8	2.36	0.60
23:DB:1433:A:H2'	23:DB:1434:A:O4'	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1866:A:H2'	23:DB:1867:G:O4'	2.01	0.60
23:DB:1889:A:H2'	23:DB:1890:A:C8	2.35	0.60
23:DB:2819:G:H2'	23:DB:2821:A:N7	2.15	0.60
25:DC:77:VAL:HG23	25:DC:112:GLY:N	2.16	0.60
25:DC:245:THR:O	25:DC:247:TRP:N	2.35	0.60
27:DK:99:ILE:HG12	27:DK:115:ILE:HG13	1.82	0.60
35:DV:44:HIS:CE1	35:DV:85:LYS:HB2	2.36	0.60
39:DX:24:GLU:O	39:DX:28:LEU:HG	2.01	0.60
44:DQ:108:LEU:HA	49:DR:48:LYS:HD3	1.82	0.60
53:D6:73:GLN:HG3	53:D6:74:ASN:H	1.67	0.60
1:AA:412:A:H1'	1:AA:413:G:H8	1.67	0.60
1:AA:1302:C:OP2	12:AM:16:ILE:HD11	2.01	0.60
5:AF:17:GLN:O	5:AF:21:MET:HG3	2.02	0.60
5:AF:81:ASN:OD1	5:AF:83:ALA:HB3	2.02	0.60
6:AG:77:ARG:HG3	6:AG:79:VAL:HG23	1.83	0.60
9:AJ:51:VAL:CG2	13:AN:80:ARG:HB2	2.31	0.60
9:AJ:55:PRO:HA	13:AN:80:ARG:HH21	1.66	0.60
12:AM:78:ARG:CZ	12:AM:78:ARG:HB3	2.31	0.60
14:AO:8:THR:O	14:AO:12:VAL:HG23	2.01	0.60
19:AT:67:HIS:ND1	19:AT:68:LYS:HG2	2.16	0.60
23:BB:141:G:N1	50:BT:2:ILE:HD12	2.13	0.60
23:BB:184:C:H2'	23:BB:185:G:C8	2.36	0.60
23:BB:673:C:H5"	29:BE:76:PRO:HD2	1.84	0.60
23:BB:1076:C:H4'	24:BI:94:LYS:NZ	2.17	0.60
23:BB:1501:G:O2'	23:BB:1502:A:H5'	2.02	0.60
23:BB:2135:A:H3'	23:BB:2136:G:H8	1.66	0.60
31:B0:21:LEU:HD12	45:BS:19:LEU:O	2.01	0.60
44:BQ:91:ARG:HB2	49:BR:11:GLN:OE1	2.01	0.60
51:BZ:64:ILE:O	51:BZ:68:LEU:HG	2.02	0.60
1:CA:662:U:H2'	1:CA:663:A:C8	2.36	0.60
1:CA:806:C:H2'	1:CA:807:A:C8	2.36	0.60
1:CA:1461:G:H2'	1:CA:1462:C:H6	1.65	0.60
1:CA:1530:G:HO2'	1:CA:1531:A:H8	1.49	0.60
18:CS:10:ILE:HG22	18:CS:38:THR:H	1.65	0.60
23:DB:443:A:H1'	23:DB:1201:U:O4'	2.02	0.60
23:DB:2253:G:H22	53:D6:151:GLU:CD	2.03	0.60
23:DB:2386:A:C2	52:DW:38:ARG:HB3	2.35	0.60
23:DB:2788:C:H2'	23:DB:2789:C:C6	2.36	0.60
26:DD:31:ALA:HA	26:DD:97:SER:HA	1.83	0.60
26:DD:133:THR:HG23	26:DD:134:HIS:N	2.16	0.60
27:DK:99:ILE:H	27:DK:118:LEU:HD23	1.65	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:D2:22:MET:SD	36:D2:28:ARG:HG2	2.42	0.60
44:DQ:91:ARG:CZ	49:DR:11:GLN:H	2.15	0.60
53:D6:35:PRO:HB2	53:D6:58:VAL:O	2.01	0.60
53:D6:45:TYR:CZ	53:D6:75:ALA:HB2	2.36	0.60
1:AA:401:C:H2'	1:AA:402:G:C8	2.35	0.60
1:AA:404:G:OP1	3:AD:114:ARG:HD3	2.01	0.60
1:AA:1162:C:H2'	1:AA:1163:A:H8	1.65	0.60
1:AA:1347:G:C8	8:AI:108:ARG:HB3	2.36	0.60
1:AA:1464:U:P	28:BP:108:ARG:HH22	2.24	0.60
1:AA:1513:A:H2'	1:AA:1514:G:C8	2.36	0.60
11:AL:98:ARG:HH21	11:AL:104:SER:C	2.04	0.60
20:AB:65:LYS:HB2	20:AB:158:ASP:H	1.66	0.60
20:AB:101:THR:HG22	20:AB:174:GLU:OE1	2.01	0.60
23:BB:170:U:H2'	23:BB:171:U:C6	2.36	0.60
23:BB:441:U:H2'	23:BB:442:G:H8	1.65	0.60
23:BB:776:G:H4'	23:BB:777:G:O5'	2.02	0.60
23:BB:2147:A:H5'	23:BB:2148:G:H4'	1.82	0.60
23:BB:2151:U:H2'	23:BB:2152:G:H8	1.66	0.60
23:BB:2693:G:H2'	23:BB:2694:G:H8	1.65	0.60
25:BC:245:THR:O	25:BC:247:TRP:N	2.35	0.60
26:BD:79:LEU:N	26:BD:79:LEU:HD22	2.16	0.60
36:B2:26:ASN:O	36:B2:30:VAL:HG23	2.01	0.60
41:BJ:63:ALA:HA	41:BJ:69:ARG:HH12	1.67	0.60
44:BQ:83:LYS:HA	44:BQ:83:LYS:NZ	2.17	0.60
44:BQ:104:ALA:HA	49:BR:46:GLU:CD	2.22	0.60
46:BU:35:VAL:HB	46:BU:38:ILE:HB	1.83	0.60
46:BU:35:VAL:HB	46:BU:38:ILE:HG21	1.83	0.60
53:B6:15:GLN:HB3	53:B6:16:LYS:NZ	2.16	0.60
53:B6:38:LEU:O	53:B6:41:LEU:HB2	2.01	0.60
1:CA:833:G:H2'	1:CA:834:U:C6	2.36	0.60
1:CA:1302:C:OP2	12:CM:16:ILE:HD11	2.00	0.60
1:CA:1513:A:H2'	1:CA:1514:G:C8	2.36	0.60
12:CM:22:TYR:HB3	12:CM:69:ARG:CZ	2.31	0.60
23:DB:558:U:O3'	41:DJ:111:LYS:HE2	2.01	0.60
23:DB:2283:C:H5"	23:DB:2389:G:O2'	2.02	0.60
27:DK:70:ARG:HB3	27:DK:76:VAL:HG22	1.84	0.60
29:DE:149:ILE:HG23	29:DE:188:MET:HA	1.83	0.60
30:DY:12:ALA:HA	30:DY:15:ARG:HD3	1.82	0.60
36:D2:3:ARG:HA	36:D2:3:ARG:NE	2.15	0.60
48:DG:84:LYS:HG3	48:DG:132:LEU:N	2.16	0.60
49:DR:58:VAL:HG22	49:DR:59:ILE:H	1.67	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DW:51:GLY:HA3	52:DW:59:PHE:HB2	1.84	0.60
1:AA:190:A:H2'	1:AA:191:G:O4'	2.02	0.60
1:AA:844:G:C2'	1:AA:845:A:H8	2.14	0.60
5:AF:86:ARG:CZ	17:AR:63:TYR:HB3	2.31	0.60
20:AB:40:ILE:HD13	20:AB:201:GLY:HA2	1.84	0.60
23:BB:27:G:H1'	23:BB:513:A:H61	1.66	0.60
23:BB:845:A:C2	23:BB:847:U:H1'	2.37	0.60
23:BB:1778:U:H2'	23:BB:1784:A:N6	2.17	0.60
23:BB:2666:C:O4'	23:BB:2666:C:O2	2.20	0.60
48:BG:61:TRP:HA	48:BG:61:TRP:HE3	1.67	0.60
52:BW:23:LYS:O	52:BW:66:VAL:HB	2.02	0.60
53:B6:167:GLU:O	53:B6:170:ALA:HB3	2.01	0.60
1:CA:313:A:H2'	1:CA:314:C:C6	2.37	0.60
1:CA:763:G:H2'	1:CA:764:C:C6	2.37	0.60
3:CD:77:GLU:HG3	3:CD:81:LEU:HG	1.84	0.60
9:CJ:6:ILE:HB	9:CJ:76:ILE:HD11	1.83	0.60
21:CU:3:ILE:CD1	21:CU:19:LYS:HA	2.31	0.60
22:DA:75:G:H1'	35:DV:29:ILE:HG12	1.83	0.60
23:DB:878:A:H1'	23:DB:899:A:N6	2.17	0.60
23:DB:1395:A:H4'	23:DB:1397:U:C5	2.37	0.60
23:DB:1853:A:N1	23:DB:2087:G:H1'	2.16	0.60
45:DS:33:LEU:HG	45:DS:51:LEU:HD23	1.83	0.60
48:DG:10:VAL:HG12	48:DG:10:VAL:O	2.00	0.60
49:DR:2:TYR:CB	49:DR:42:ALA:HB2	2.32	0.60
1:AA:1057:G:H4'	2:AC:196:GLY:H	1.66	0.60
1:AA:1306:A:N6	1:AA:1331:G:H1'	2.16	0.60
3:AD:16:THR:HG22	3:AD:17:ASP:N	2.17	0.60
3:AD:22:SER:H	3:AD:109:THR:HG22	1.67	0.60
6:AG:58:LEU:HD23	6:AG:58:LEU:H	1.66	0.60
10:AK:126:ARG:HB2	21:AU:33:ARG:HD2	1.84	0.60
13:AN:26:LEU:O	13:AN:30:ILE:N	2.34	0.60
22:BA:91:C:H2'	22:BA:92:C:H6	1.66	0.60
23:BB:594:U:H2'	23:BB:595:C:H6	1.66	0.60
23:BB:855:G:O2'	52:BW:23:LYS:HD3	2.02	0.60
23:BB:2066:C:O2'	23:BB:2067:G:H5'	2.01	0.60
23:BB:2339:C:H2'	23:BB:2340:A:C8	2.36	0.60
23:BB:2502:G:H5'	23:BB:2503:A:C5'	2.31	0.60
23:BB:2528:U:HO2'	23:BB:2529:G:H3'	1.66	0.60
25:BC:16:VAL:N	25:BC:203:VAL:HG12	2.17	0.60
30:BY:8:GLN:HG2	30:BY:31:ILE:HA	1.83	0.60
34:B3:49:VAL:CG2	34:B3:54:LEU:HD13	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:21:ARG:HD3	46:BU:72:PHE:CD2	2.37	0.60
46:BU:60:LYS:HA	46:BU:60:LYS:HE2	1.84	0.60
1:CA:1000:A:H2'	1:CA:1001:C:C6	2.36	0.60
1:CA:1480:A:H2'	1:CA:1481:U:C6	2.37	0.60
3:CD:89:LEU:CD2	3:CD:199:ILE:HD11	2.31	0.60
7:CH:87:ARG:H	7:CH:90:GLU:HB2	1.65	0.60
8:CI:26:LYS:N	8:CI:61:ASP:HB2	2.17	0.60
20:CB:124:THR:O	20:CB:124:THR:HG23	2.00	0.60
23:DB:141:G:O6	50:DT:2:ILE:HD12	2.01	0.60
23:DB:1098:A:H3'	24:DI:3:LYS:CB	2.30	0.60
23:DB:2292:U:H2'	23:DB:2293:G:C8	2.37	0.60
25:DC:16:VAL:H	25:DC:203:VAL:HG12	1.67	0.60
25:DC:123:ILE:HD13	25:DC:135:PRO:HG2	1.83	0.60
33:D1:8:ILE:CD1	33:D1:51:ALA:HA	2.31	0.60
39:DX:3:ALA:O	39:DX:6:LEU:HB2	2.02	0.60
46:DU:41:VAL:HG22	46:DU:60:LYS:O	2.02	0.60
52:DW:39:GLN:HG3	52:DW:42:THR:HB	1.82	0.60
1:AA:17:U:H2'	1:AA:18:C:H6	1.66	0.60
1:AA:880:C:H2'	1:AA:881:G:H8	1.65	0.60
3:AD:171:GLU:O	3:AD:179:GLY:HA2	2.02	0.60
4:AE:156:ARG:CA	4:AE:158:LYS:HZ3	2.09	0.60
7:AH:47:ASP:CG	7:AH:48:PHE:H	2.05	0.60
12:AM:22:TYR:HB3	12:AM:69:ARG:NH2	2.17	0.60
23:BB:1104:C:H2'	23:BB:1105:U:H6	1.67	0.60
23:BB:1274:A:N3	23:BB:1297:C:H1'	2.16	0.60
23:BB:1922:G:N7	55:BB:3111:LLL:H221	2.16	0.60
23:BB:2060:A:H3'	29:BE:63:LYS:HZ1	1.67	0.60
23:BB:2269:G:H4'	52:BW:19:ARG:HH12	1.67	0.60
23:BB:2514:U:H2'	23:BB:2515:C:C6	2.37	0.60
41:BJ:38:GLY:O	41:BJ:43:GLU:HB2	2.02	0.60
45:BS:5:ALA:HB3	45:BS:54:ALA:HB2	1.81	0.60
46:BU:65:GLN:HB2	46:BU:68:ASN:HD22	1.67	0.60
47:BF:109:ARG:HB3	47:BF:135:ILE:CD1	2.30	0.60
1:CA:272:C:H2'	1:CA:273:U:H6	1.67	0.60
1:CA:1057:G:H4'	2:CC:196:GLY:H	1.67	0.60
23:DB:967:U:H2'	23:DB:968:C:C6	2.37	0.60
23:DB:1098:A:P	24:DI:3:LYS:HG2	2.41	0.60
23:DB:1139:G:O2'	23:DB:1140:C:H5'	2.02	0.60
23:DB:1219:U:H2'	23:DB:1220:G:C8	2.36	0.60
23:DB:1324:G:H1'	23:DB:1616:A:C6	2.37	0.60
23:DB:1505:A:H2'	23:DB:1506:U:H6	1.67	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2332:C:H1'	23:DB:2336:A:N7	2.16	0.60
23:DB:2514:U:H2'	23:DB:2515:C:C6	2.37	0.60
31:D0:43:THR:HG23	31:D0:47:TYR:O	2.01	0.60
38:DM:17:ASN:HD21	38:DM:95:LEU:HG	1.65	0.60
41:DJ:19:ASP:HA	41:DJ:57:LEU:HB3	1.82	0.60
41:DJ:59:ALA:C	41:DJ:61:LYS:H	2.05	0.60
47:DF:110:ILE:CG2	47:DF:113:PHE:HB3	2.31	0.60
53:D6:154:THR:O	53:D6:157:ALA:HB3	2.02	0.60
1:AA:1432:G:H5'	28:BP:105:LYS:HG2	1.82	0.60
14:AO:77:ARG:O	14:AO:81:LEU:HB2	2.01	0.60
15:AP:60:TRP:HB3	15:AP:65:ALA:HB2	1.84	0.60
23:BB:1270:C:H5"	23:BB:1271:G:H5'	1.84	0.60
23:BB:1387:A:H2'	23:BB:1388:G:H8	1.66	0.60
23:BB:2637:U:OP1	26:BD:83:ARG:HD3	2.00	0.60
38:BM:37:GLY:HA3	38:BM:127:LYS:HZ3	1.66	0.60
44:BQ:79:ILE:HA	44:BQ:82:LEU:HD12	1.84	0.60
49:BR:63:VAL:HA	49:BR:95:ASP:O	2.02	0.60
51:BZ:71:LEU:O	51:BZ:74:ARG:HG2	2.01	0.60
53:B6:15:GLN:HB3	53:B6:16:LYS:HZ2	1.66	0.60
1:CA:73:C:H2'	1:CA:74:A:H8	1.67	0.60
1:CA:215:C:H2'	1:CA:216:U:H6	1.67	0.60
1:CA:410:G:P	3:CD:25:ARG:HE	2.24	0.60
1:CA:1001:C:H2'	1:CA:1002:G:C8	2.37	0.60
3:CD:25:ARG:HH11	3:CD:26:ALA:H	1.50	0.60
7:CH:23:ALA:CB	7:CH:61:THR:HA	2.32	0.60
9:CJ:40:ILE:HD12	9:CJ:73:LEU:HB3	1.84	0.60
17:CR:27:THR:HG22	17:CR:31:TYR:HE1	1.67	0.60
23:DB:37:C:O2'	29:DE:45:ALA:HA	2.02	0.60
23:DB:144:A:H2'	23:DB:145:C:H6	1.67	0.60
37:DL:56:PRO:O	37:DL:59:ARG:HB2	2.01	0.60
38:DM:50:ARG:O	38:DM:53:MET:HB3	2.01	0.60
40:DH:113:SER:H	40:DH:132:PHE:HE1	1.48	0.60
43:DO:68:LYS:H	43:DO:102:ARG:HD2	1.67	0.60
45:DS:72:THR:HG21	45:DS:108:SER:HB3	1.84	0.60
2:AC:126:ARG:HA	2:AC:126:ARG:HH11	1.67	0.59
3:AD:52:VAL:HG12	3:AD:198:LEU:HD21	1.84	0.59
3:AD:89:LEU:CD2	3:AD:199:ILE:HD11	2.32	0.59
7:AH:8:ASP:O	7:AH:12:ARG:HB2	2.02	0.59
7:AH:102:VAL:HG12	7:AH:125:ILE:HD12	1.84	0.59
8:AI:5:TYR:CD2	8:AI:88:GLU:HB2	2.37	0.59
18:AS:5:LYS:C	18:AS:6:LYS:HD2	2.22	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:278:A:N3	23:BB:278:A:H2'	2.17	0.59
23:BB:572:A:P	49:BR:80:ARG:HH22	2.24	0.59
23:BB:1041:G:H2'	23:BB:1042:G:H8	1.67	0.59
23:BB:1722:A:H2'	23:BB:1723:G:H8	1.67	0.59
25:BC:64:VAL:O	25:BC:65:ASP:HB3	2.01	0.59
35:BV:44:HIS:CE1	35:BV:85:LYS:HB2	2.37	0.59
38:BM:34:LYS:HB3	38:BM:129:THR:HG22	1.84	0.59
48:BG:10:VAL:HG21	48:BG:47:ASN:O	2.02	0.59
53:B6:45:TYR:O	53:B6:46:TYR:HB2	2.01	0.59
1:CA:1030:U:H5'	1:CA:1031:C:N3	2.17	0.59
2:CC:126:ARG:HH11	2:CC:126:ARG:HA	1.67	0.59
10:CK:17:ASP:HA	10:CK:80:ASN:O	2.02	0.59
17:CR:19:GLU:HG3	17:CR:54:LEU:HD12	1.82	0.59
20:CB:213:LEU:O	20:CB:216:VAL:HG22	2.02	0.59
23:DB:526:A:N6	23:DB:2626:C:H4'	2.17	0.59
23:DB:854:C:O2'	23:DB:855:G:H5'	2.01	0.59
23:DB:1788:C:O2'	23:DB:1789:A:H5'	2.02	0.59
23:DB:2400:G:O2'	23:DB:2401:U:H5'	2.02	0.59
23:DB:2875:C:H2'	23:DB:2876:G:C8	2.36	0.59
30:DY:6:ILE:HD13	30:DY:6:ILE:N	2.17	0.59
44:DQ:57:ARG:HH22	44:DQ:92:LYS:HE2	1.67	0.59
1:AA:191:G:H2'	1:AA:192:A:H8	1.67	0.59
1:AA:1465:A:H2'	1:AA:1466:C:C6	2.38	0.59
10:AK:58:THR:HB	10:AK:59:PRO:HD2	1.84	0.59
23:BB:5:A:H2'	23:BB:6:A:C8	2.37	0.59
23:BB:441:U:H2'	23:BB:442:G:C8	2.37	0.59
23:BB:495:G:H21	45:BS:61:ASN:HD21	1.49	0.59
23:BB:1652:A:OP1	42:BN:8:ARG:HD3	2.02	0.59
23:BB:2377:A:H2'	23:BB:2378:A:C8	2.37	0.59
23:BB:2772:C:H2'	23:BB:2773:C:C6	2.38	0.59
23:BB:2776:A:H4'	23:BB:2777:G:H5"	1.84	0.59
27:BK:60:ALA:HA	27:BK:87:LEU:HD23	1.82	0.59
35:BV:61:LEU:O	35:BV:71:LYS:HA	2.01	0.59
40:BH:83:LYS:HD2	40:BH:91:PHE:CD1	2.37	0.59
47:BF:103:ILE:HD11	47:BF:174:PHE:HA	1.83	0.59
48:BG:24:THR:HG22	48:BG:34:ARG:HB3	1.83	0.59
53:B6:32:ARG:HD3	53:B6:103:ILE:HG23	1.84	0.59
53:B6:177:GLU:O	53:B6:181:GLN:HG3	2.01	0.59
1:CA:224:U:H2'	1:CA:225:C:H6	1.66	0.59
1:CA:1314:C:H41	18:CS:3:SER:HB3	1.67	0.59
3:CD:113:ALA:O	3:CD:117:VAL:HG23	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CE:53:ARG:HH21	4:CE:54:GLU:HG3	1.67	0.59
21:CU:11:PHE:HD1	21:CU:11:PHE:O	1.85	0.59
21:CU:36:PHE:CD2	21:CU:39:LYS:HB2	2.37	0.59
23:DB:285:G:H2'	23:DB:286:U:O4'	2.03	0.59
23:DB:496:G:H1'	45:DS:61:ASN:ND2	2.17	0.59
23:DB:664:G:H2'	23:DB:665:U:H6	1.67	0.59
23:DB:1842:G:H2'	23:DB:1843:C:C6	2.37	0.59
23:DB:2292:U:H2'	23:DB:2293:G:H8	1.67	0.59
24:DI:112:LYS:O	24:DI:116:MET:HG3	2.02	0.59
24:DI:125:THR:O	24:DI:129:GLU:HG3	2.02	0.59
26:DD:25:THR:HG21	26:DD:193:VAL:CG2	2.32	0.59
28:DP:89:GLY:HA2	28:DP:111:GLU:C	2.23	0.59
30:DY:37:ARG:HE	30:DY:37:ARG:HA	1.68	0.59
32:D4:19:ARG:C	32:D4:21:GLY:H	2.06	0.59
32:D4:25:VAL:O	32:D4:26:ILE:HD13	2.02	0.59
34:D3:24:LYS:NZ	34:D3:28:LEU:HB3	2.17	0.59
44:DQ:4:LYS:NZ	44:DQ:7:VAL:HG22	2.16	0.59
44:DQ:9:ALA:C	44:DQ:11:ALA:H	2.05	0.59
49:DR:4:VAL:HG23	49:DR:39:LEU:H	1.66	0.59
50:DT:40:LYS:HG2	50:DT:60:THR:HG23	1.84	0.59
53:D6:18:LEU:O	53:D6:21:LEU:HB3	2.01	0.59
1:AA:939:G:H5"	6:AG:101:ARG:NH1	2.16	0.59
3:AD:77:GLU:HG3	3:AD:81:LEU:HG	1.84	0.59
8:AI:71:ILE:H	8:AI:71:ILE:HD12	1.67	0.59
12:AM:44:ILE:O	12:AM:47:LEU:HB2	2.02	0.59
18:AS:14:LEU:HD22	18:AS:34:SER:OG	2.02	0.59
19:AT:79:THR:O	19:AT:82:ILE:HG13	2.02	0.59
20:AB:49:PHE:O	20:AB:53:LEU:HD13	2.02	0.59
22:BA:98:G:H1	35:BV:14:LYS:HB2	1.67	0.59
23:BB:69:C:O2'	23:BB:70:G:H5'	2.03	0.59
23:BB:374:A:H61	23:BB:400:G:H1'	1.67	0.59
23:BB:1441:G:H4'	23:BB:1628:G:OP1	2.03	0.59
23:BB:1518:C:H2'	23:BB:1519:G:H8	1.66	0.59
23:BB:2653:U:H3'	23:BB:2654:A:H2'	1.83	0.59
24:BI:109:ALA:HB1	24:BI:124:MET:HG3	1.84	0.59
26:BD:31:ALA:HA	26:BD:97:SER:HA	1.85	0.59
27:BK:118:LEU:O	27:BK:120:PRO:HD2	2.01	0.59
44:BQ:63:ARG:HH21	44:BQ:64:ILE:CD1	2.15	0.59
47:BF:7:TYR:HA	47:BF:11:VAL:CG2	2.33	0.59
1:CA:541:G:O2'	3:CD:39:GLN:HB3	2.02	0.59
2:CC:181:ILE:HD12	2:CC:181:ILE:N	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:22:SER:H	3:CD:109:THR:HG22	1.67	0.59
3:CD:84:ASN:HD22	4:CE:101:GLY:HA3	1.65	0.59
8:CI:82:ILE:O	8:CI:86:LEU:HD13	2.02	0.59
12:CM:44:ILE:O	12:CM:47:LEU:HB2	2.02	0.59
20:CB:120:SER:HA	20:CB:125:PHE:CD2	2.37	0.59
23:DB:564:C:H1'	44:DQ:36:GLN:OE1	2.01	0.59
23:DB:2340:A:H2'	23:DB:2341:G:C8	2.37	0.59
25:DC:64:VAL:O	25:DC:65:ASP:HB3	2.02	0.59
30:DY:6:ILE:HD13	30:DY:6:ILE:H	1.66	0.59
31:D0:12:ARG:HD2	31:D0:16:ARG:NH1	2.17	0.59
36:D2:3:ARG:HA	36:D2:3:ARG:CZ	2.32	0.59
40:DH:18:GLN:HE21	40:DH:39:ALA:HB1	1.67	0.59
46:DU:42:LYS:HG3	46:DU:57:ILE:HG21	1.82	0.59
50:DT:81:LYS:HG3	50:DT:82:LYS:H	1.67	0.59
53:D6:126:ARG:O	53:D6:130:ARG:HG3	2.02	0.59
53:D6:134:ARG:NH2	53:D6:135:GLU:HG2	2.16	0.59
1:AA:1149:C:H2'	1:AA:1150:A:C8	2.36	0.59
1:AA:1389:C:H2'	1:AA:1390:U:C6	2.38	0.59
4:AE:52:ALA:H	4:AE:58:ALA:HB2	1.66	0.59
22:BA:8:C:O2'	43:BO:40:ILE:HD13	2.02	0.59
23:BB:19:A:H2'	23:BB:20:C:H6	1.65	0.59
23:BB:350:G:H2'	23:BB:351:C:O4'	2.02	0.59
23:BB:419:U:H2'	23:BB:420:C:C6	2.37	0.59
23:BB:550:C:OP1	41:BJ:2:LYS:HE3	2.03	0.59
23:BB:921:C:H2'	23:BB:922:C:H6	1.67	0.59
23:BB:1812:U:H2'	23:BB:1813:G:H8	1.66	0.59
23:BB:2032:G:N2	26:BD:150:GLN:HB3	2.17	0.59
23:BB:2718:G:H4'	28:BP:95:LYS:HB2	1.83	0.59
26:BD:46:ARG:NH1	26:BD:85:ALA:HA	2.17	0.59
26:BD:124:ARG:HA	26:BD:165:MET:CE	2.32	0.59
35:BV:1:MET:CE	35:BV:2:PHE:H	2.15	0.59
50:BT:50:LEU:HD22	50:BT:50:LEU:H	1.67	0.59
53:B6:88:LEU:HD23	53:B6:90:LEU:HD12	1.85	0.59
1:CA:205:A:H2'	1:CA:206:C:C6	2.37	0.59
1:CA:1011:C:H2'	1:CA:1012:A:H8	1.66	0.59
1:CA:1287:A:H2'	1:CA:1288:A:C8	2.37	0.59
1:CA:1463:U:OP1	28:DP:108:ARG:HD2	2.01	0.59
1:CA:1521:C:H2'	1:CA:1522:U:H6	1.68	0.59
3:CD:104:MET:SD	3:CD:179:GLY:HA3	2.43	0.59
7:CH:28:SER:OG	7:CH:56:PRO:HB2	2.02	0.59
7:CH:47:ASP:CG	7:CH:48:PHE:H	2.06	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CQ:16:MET:HB3	16:CQ:19:SER:HB2	1.83	0.59
19:CT:67:HIS:ND1	19:CT:68:LYS:HG2	2.17	0.59
20:CB:94:ARG:HE	20:CB:94:ARG:H	1.50	0.59
23:DB:1018:U:O2'	23:DB:1019:U:H5'	2.03	0.59
23:DB:1082:U:O4	23:DB:1086:A:C2	2.56	0.59
23:DB:1726:C:H2'	23:DB:1727:C:C6	2.37	0.59
23:DB:1758:U:O4	23:DB:2695:U:H4'	2.02	0.59
23:DB:2328:A:H2'	23:DB:2329:U:C6	2.37	0.59
25:DC:70:LYS:NZ	25:DC:99:GLU:HB3	2.18	0.59
28:DP:50:ARG:HB2	28:DP:56:SER:CB	2.30	0.59
35:DV:29:ILE:HG13	35:DV:88:HIS:HE1	1.65	0.59
40:DH:118:PRO:O	40:DH:119:ASN:HB3	2.02	0.59
47:DF:169:LEU:HB3	47:DF:174:PHE:CD1	2.38	0.59
1:AA:462:G:H2'	1:AA:463:U:C6	2.37	0.59
2:AC:126:ARG:NH2	2:AC:191:THR:HG23	2.16	0.59
15:AP:48:GLU:HG3	15:AP:49:GLY:H	1.66	0.59
21:AU:11:PHE:HD1	21:AU:11:PHE:O	1.86	0.59
23:BB:27:G:N2	23:BB:512:G:H2'	2.17	0.59
23:BB:275:C:H2'	23:BB:276:U:O4'	2.02	0.59
23:BB:1015:U:H2'	23:BB:1016:G:C8	2.37	0.59
23:BB:1387:A:C4'	23:BB:1469:A:H1'	2.32	0.59
23:BB:2810:A:H2'	23:BB:2811:G:O4'	2.03	0.59
24:BI:27:LEU:H	24:BI:27:LEU:CD2	2.14	0.59
41:BJ:57:LEU:CG	41:BJ:128:ASN:H	2.16	0.59
44:BQ:51:GLN:HA	44:BQ:54:ARG:HD2	1.85	0.59
44:BQ:63:ARG:HH21	44:BQ:64:ILE:HD13	1.68	0.59
46:BU:2:ALA:HB3	46:BU:5:ARG:NH2	2.17	0.59
49:BR:5:PHE:O	49:BR:11:GLN:HA	2.01	0.59
49:BR:58:VAL:HG22	49:BR:59:ILE:H	1.66	0.59
52:BW:59:PHE:CD2	52:BW:61:LYS:HD2	2.38	0.59
15:CP:23:ASP:O	15:CP:26:ASN:HB2	2.03	0.59
17:CR:33:THR:HG23	17:CR:37:LYS:O	2.02	0.59
20:CB:86:CYS:HB2	20:CB:221:ARG:NH1	2.17	0.59
23:DB:141:G:C6	50:DT:2:ILE:HG21	2.38	0.59
23:DB:370:G:O2'	23:DB:423:A:H3'	2.03	0.59
23:DB:401:A:H2'	23:DB:402:A:C8	2.37	0.59
23:DB:559:G:H21	44:DQ:51:GLN:HE22	1.49	0.59
23:DB:664:G:H2'	23:DB:665:U:C6	2.37	0.59
23:DB:1652:A:OP1	42:DN:8:ARG:HD3	2.03	0.59
23:DB:1718:G:H2'	23:DB:1719:G:H8	1.67	0.59
23:DB:2179:C:O2	23:DB:2179:C:C2'	2.51	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DP:88:ARG:HB2	28:DP:112:ARG:NH1	2.18	0.59
29:DE:30:GLN:HG2	29:DE:30:GLN:O	2.02	0.59
41:DJ:43:GLU:O	41:DJ:45:THR:N	2.34	0.59
47:DF:92:GLY:HA2	47:DF:95:MET:HE3	1.83	0.59
1:AA:104:G:O2'	1:AA:105:G:H5'	2.01	0.59
1:AA:833:G:H2'	1:AA:834:U:C6	2.36	0.59
2:AC:70:ALA:HA	2:AC:105:VAL:HG21	1.84	0.59
2:AC:180:ASP:OD1	2:AC:203:LYS:HB2	2.02	0.59
3:AD:148:ALA:O	3:AD:151:GLN:HB2	2.02	0.59
8:AI:6:TYR:HA	8:AI:18:VAL:O	2.03	0.59
16:AQ:6:THR:HG22	16:AQ:61:ARG:HB3	1.84	0.59
23:BB:1164:C:H2'	23:BB:1165:A:C8	2.38	0.59
23:BB:1716:U:H2'	23:BB:1717:A:C8	2.37	0.59
23:BB:1866:A:H2'	23:BB:1867:G:O4'	2.02	0.59
23:BB:1893:C:H2'	23:BB:1894:C:O4'	2.01	0.59
23:BB:2462:C:H2'	23:BB:2463:C:C6	2.38	0.59
23:BB:2881:U:O3'	42:BN:96:ARG:HD3	2.03	0.59
26:BD:16:THR:HB	26:BD:18:ASP:OD1	2.03	0.59
26:BD:106:LYS:O	26:BD:107:VAL:HB	2.03	0.59
28:BP:89:GLY:HA2	28:BP:111:GLU:C	2.22	0.59
38:BM:127:LYS:HD2	38:BM:127:LYS:H	1.67	0.59
47:BF:1:ALA:O	47:BF:4:HIS:HB3	2.03	0.59
48:BG:84:LYS:HG3	48:BG:132:LEU:N	2.18	0.59
53:B6:18:LEU:O	53:B6:21:LEU:HB3	2.03	0.59
1:CA:191:G:H2'	1:CA:192:A:H8	1.66	0.59
1:CA:207:C:H3'	1:CA:208:U:C6	2.38	0.59
1:CA:844:G:C2'	1:CA:845:A:H8	2.15	0.59
1:CA:1319:A:H4'	1:CA:1320:C:OP1	2.03	0.59
3:CD:52:VAL:HG12	3:CD:198:LEU:HD21	1.85	0.59
4:CE:89:THR:HG21	4:CE:134:ASN:ND2	2.18	0.59
7:CH:76:ARG:HG3	7:CH:77:VAL:N	2.16	0.59
8:CI:6:TYR:HA	8:CI:18:VAL:O	2.03	0.59
23:DB:6:A:H2'	23:DB:7:G:H8	1.68	0.59
23:DB:189:G:H2'	23:DB:205:G:N2	2.16	0.59
23:DB:639:U:H2'	23:DB:640:C:C6	2.37	0.59
23:DB:863:A:H2'	23:DB:864:G:H8	1.67	0.59
23:DB:1339:G:N2	23:DB:1603:A:H1'	2.17	0.59
29:DE:134:LEU:HD21	29:DE:161:ALA:HB2	1.83	0.59
37:DL:95:LEU:HB2	37:DL:101:ILE:HG13	1.83	0.59
45:DS:7:HIS:HB3	45:DS:103:ILE:HB	1.85	0.59
48:DG:38:ASP:CG	48:DG:39:ALA:H	2.06	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DW:47:GLY:HA3	52:DW:80:SER:HB3	1.84	0.59
1:AA:72:A:H2'	1:AA:73:C:H6	1.68	0.59
1:AA:251:G:N3	1:AA:266:G:O6	2.36	0.59
1:AA:1241:G:H2'	1:AA:1242:G:H8	1.66	0.59
11:AL:52:CYS:SG	11:AL:66:ILE:HD11	2.43	0.59
18:AS:62:THR:HB	18:AS:64:GLU:OE1	2.02	0.59
20:AB:63:LYS:HG2	20:AB:224:ARG:NH1	2.18	0.59
21:AU:36:PHE:HD2	21:AU:39:LYS:HD2	1.68	0.59
23:BB:675:A:H4'	29:BE:60:TRP:CZ2	2.38	0.59
23:BB:823:C:H2'	23:BB:824:U:C6	2.38	0.59
23:BB:969:G:H2'	23:BB:970:U:H6	1.67	0.59
23:BB:1381:G:C2'	23:BB:1382:G:H5'	2.33	0.59
23:BB:1475:G:H1'	23:BB:1476:U:H5	1.68	0.59
23:BB:1769:U:O2'	23:BB:1770:G:H5'	2.03	0.59
23:BB:2309:A:N6	47:BF:75:GLY:HA3	2.17	0.59
23:BB:2455:G:H2'	23:BB:2456:C:C6	2.38	0.59
23:BB:2484:G:OP1	38:BM:44:ARG:HD3	2.03	0.59
23:BB:2881:U:H2'	23:BB:2882:A:O4'	2.03	0.59
24:BI:5:GLN:HG2	24:BI:6:ALA:N	2.17	0.59
25:BC:159:THR:O	25:BC:194:VAL:HG12	2.02	0.59
27:BK:115:ILE:HG23	27:BK:116:ILE:N	2.17	0.59
29:BE:149:ILE:HG23	29:BE:188:MET:HA	1.85	0.59
29:BE:194:LYS:O	29:BE:197:GLU:HB3	2.03	0.59
40:BH:75:LEU:HB3	40:BH:78:VAL:HG21	1.84	0.59
43:BO:47:VAL:HG12	43:BO:48:LEU:N	2.18	0.59
44:BQ:60:TRP:O	44:BQ:64:ILE:HG12	2.01	0.59
49:BR:40:MET:O	49:BR:41:ILE:HD13	2.03	0.59
51:BZ:35:SER:CA	51:BZ:50:ARG:HA	2.32	0.59
1:CA:840:C:C2	1:CA:842:U:H4'	2.37	0.59
1:CA:1070:U:H2'	1:CA:1071:C:C6	2.37	0.59
2:CC:126:ARG:NH2	2:CC:191:THR:HG23	2.18	0.59
23:DB:581:C:H2'	23:DB:582:A:H8	1.67	0.59
23:DB:636:G:H3'	37:DL:128:THR:HG21	1.83	0.59
23:DB:904:G:H2'	23:DB:905:A:C8	2.37	0.59
23:DB:928:A:O2'	30:DY:37:ARG:HD3	2.03	0.59
23:DB:1043:C:H2'	23:DB:1044:C:O4'	2.02	0.59
23:DB:1099:G:C8	24:DI:3:LYS:HB2	2.37	0.59
23:DB:1387:A:C4'	23:DB:1469:A:H1'	2.33	0.59
28:DP:31:VAL:O	28:DP:32:VAL:HB	2.02	0.59
30:DY:16:LEU:H	30:DY:16:LEU:CD2	2.12	0.59
35:DV:80:HIS:HB3	35:DV:83:LYS:O	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DH:119:ASN:OD1	40:DH:121:VAL:HG13	2.03	0.59
46:DU:98:ASN:OD1	46:DU:100:GLU:HB2	2.02	0.59
48:DG:6:ALA:HB3	48:DG:68:ARG:HG3	1.85	0.59
1:AA:93:U:C3'	1:AA:94:G:H4'	2.33	0.59
1:AA:1074:G:H4'	20:AB:102:ASN:HB2	1.85	0.59
23:BB:121:G:H2'	23:BB:122:G:H8	1.67	0.59
23:BB:394:C:O2'	23:BB:395:U:H5'	2.03	0.59
23:BB:661:A:H1'	37:BL:12:SER:O	2.01	0.59
23:BB:848:C:H2'	23:BB:849:A:C8	2.37	0.59
23:BB:1013:C:H2'	23:BB:1014:A:C8	2.37	0.59
27:BK:41:ILE:HG13	27:BK:42:THR:H	1.68	0.59
43:BO:70:ALA:O	43:BO:74:VAL:HG23	2.02	0.59
44:BQ:35:PHE:C	44:BQ:37:ALA:H	2.06	0.59
47:BF:101:ARG:CZ	47:BF:138:PRO:HB2	2.33	0.59
51:BZ:35:SER:HB3	51:BZ:50:ARG:HG3	1.84	0.59
53:B6:25:LEU:HD22	53:B6:179:LYS:HG2	1.85	0.59
1:CA:376:G:H2'	1:CA:377:G:H8	1.68	0.59
1:CA:401:C:H2'	1:CA:402:G:H8	1.67	0.59
1:CA:713:G:H2'	1:CA:714:G:C8	2.38	0.59
1:CA:939:G:H5"	6:CG:101:ARG:NH1	2.17	0.59
2:CC:86:LEU:O	2:CC:90:VAL:HG23	2.02	0.59
8:CI:56:MET:SD	8:CI:57:VAL:N	2.76	0.59
16:CQ:45:VAL:HG11	16:CQ:60:ILE:HG21	1.84	0.59
16:CQ:66:LEU:HD13	16:CQ:70:LYS:HG2	1.84	0.59
23:DB:30:G:H2'	23:DB:31:C:H6	1.67	0.59
23:DB:950:G:H2'	23:DB:951:C:C6	2.38	0.59
23:DB:1015:U:H2'	23:DB:1016:G:C8	2.38	0.59
25:DC:66:PHE:HB2	25:DC:150:GLY:O	2.02	0.59
30:DY:8:GLN:HG2	30:DY:31:ILE:HA	1.84	0.59
43:DO:15:ARG:HH21	43:DO:95:SER:CB	2.15	0.59
44:DQ:26:ALA:HB1	44:DQ:30:VAL:HB	1.84	0.59
50:DT:50:LEU:H	50:DT:50:LEU:HD22	1.68	0.59
8:AI:29:ILE:HA	8:AI:64:ILE:HB	1.85	0.59
13:AN:23:ARG:O	13:AN:26:LEU:HD22	2.02	0.59
20:AB:57:ASN:HB2	20:AB:223:GLY:HA3	1.85	0.59
23:BB:321:U:H4'	29:BE:159:LEU:O	2.03	0.59
23:BB:780:G:H21	23:BB:783:A:H62	1.49	0.59
23:BB:950:G:H2'	23:BB:951:C:H6	1.67	0.59
23:BB:1082:U:C2	23:BB:1086:A:C6	2.91	0.59
23:BB:1842:G:H2'	23:BB:1843:C:H6	1.66	0.59
23:BB:2010:G:H5"	45:BS:42:LYS:HB2	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2657:A:O2'	48:BG:159:LYS:NZ	2.36	0.59
25:BC:80:LEU:HD11	25:BC:109:LEU:HG	1.84	0.59
25:BC:149:LYS:HG2	25:BC:152:GLN:NE2	2.18	0.59
29:BE:134:LEU:O	29:BE:138:LEU:HG	2.03	0.59
39:BX:29:ARG:HG2	50:BT:12:ARG:HH21	1.67	0.59
40:BH:128:HIS:HE1	40:BH:130:VAL:HG13	1.68	0.59
42:BN:12:ARG:HG3	42:BN:13:ASN:H	1.67	0.59
48:BG:6:ALA:HB3	48:BG:68:ARG:HG3	1.85	0.59
53:B6:43:VAL:O	53:B6:49:HIS:HA	2.03	0.59
1:CA:191:G:H2'	1:CA:192:A:C8	2.38	0.59
1:CA:549:C:H2'	1:CA:550:G:C8	2.37	0.59
6:CG:109:LYS:HE2	6:CG:109:LYS:HA	1.83	0.59
10:CK:75:GLU:CD	10:CK:75:GLU:H	2.06	0.59
13:CN:23:ARG:O	13:CN:26:LEU:HD22	2.02	0.59
16:CQ:8:GLN:HB3	16:CQ:59:GLU:HB2	1.84	0.59
18:CS:27:LYS:HG3	18:CS:28:LYS:HD2	1.84	0.59
20:CB:63:LYS:HG2	20:CB:224:ARG:HH12	1.67	0.59
23:DB:315:G:H2'	23:DB:316:C:C6	2.38	0.59
23:DB:321:U:H1'	29:DE:162:ARG:NH1	2.18	0.59
23:DB:575:A:O2'	23:DB:576:U:H5'	2.02	0.59
23:DB:1654:A:H2'	23:DB:1655:A:C8	2.38	0.59
23:DB:1656:C:H2'	23:DB:1657:U:H6	1.67	0.59
23:DB:1826:G:H2'	23:DB:1827:U:C6	2.37	0.59
23:DB:2016:U:H1'	31:D0:2:VAL:HG11	1.85	0.59
23:DB:2019:A:H2	23:DB:2035:G:H22	1.48	0.59
23:DB:2512:C:H2'	23:DB:2513:A:O4'	2.02	0.59
25:DC:173:LEU:HD13	25:DC:173:LEU:H	1.67	0.59
28:DP:31:VAL:HG12	28:DP:38:ARG:O	2.02	0.59
44:DQ:109:VAL:HG12	44:DQ:113:LYS:HE3	1.83	0.59
46:DU:85:ARG:HA	46:DU:85:ARG:NE	2.16	0.59
47:DF:7:TYR:HA	47:DF:11:VAL:CG2	2.32	0.59
1:AA:865:A:H2'	1:AA:866:C:C6	2.38	0.59
1:AA:1001:C:H2'	1:AA:1002:G:C8	2.38	0.59
23:BB:322:A:OP1	29:BE:162:ARG:HB3	2.02	0.59
23:BB:1469:A:H2'	23:BB:1470:A:C8	2.37	0.59
23:BB:1505:A:H2'	23:BB:1506:U:H6	1.68	0.59
23:BB:2547:A:H2'	23:BB:2548:U:C6	2.38	0.59
29:BE:108:ILE:HD13	29:BE:108:ILE:O	2.03	0.59
33:B1:3:GLY:O	33:B1:4:ILE:HG12	2.03	0.59
42:BN:12:ARG:HG2	42:BN:16:HIS:ND1	2.18	0.59
44:BQ:9:ALA:C	44:BQ:11:ALA:H	2.06	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BQ:30:VAL:HG12	44:BQ:33:VAL:HG22	1.84	0.59
46:BU:21:ARG:HD3	46:BU:72:PHE:CG	2.37	0.59
46:BU:72:PHE:HA	46:BU:78:LYS:O	2.03	0.59
47:BF:71:LYS:O	47:BF:72:SER:HB3	2.01	0.59
47:BF:102:LEU:C	47:BF:102:LEU:HD13	2.23	0.59
53:B6:57:THR:O	53:B6:68:VAL:HA	2.03	0.59
53:B6:75:ALA:O	53:B6:79:ILE:HG13	2.03	0.59
1:CA:706:A:C4'	10:CK:30:ILE:HD11	2.33	0.59
1:CA:1343:G:H2'	1:CA:1344:C:H6	1.68	0.59
11:CL:106:VAL:HG23	11:CL:116:TYR:HB3	1.85	0.59
21:CU:24:LYS:HD2	21:CU:25:ALA:N	2.18	0.59
23:DB:587:C:N3	37:DL:33:ARG:NH2	2.50	0.59
23:DB:599:A:O2'	23:DB:600:G:H5'	2.03	0.59
23:DB:1716:U:H2'	23:DB:1717:A:C8	2.38	0.59
23:DB:1871:A:H2'	23:DB:1872:A:C8	2.38	0.59
23:DB:2070:A:H2'	23:DB:2071:A:C8	2.37	0.59
37:DL:93:ASN:O	37:DL:95:LEU:N	2.36	0.59
41:DJ:30:THR:HG23	41:DJ:31:GLU:H	1.68	0.59
41:DJ:64:VAL:O	41:DJ:68:LYS:HD2	2.03	0.59
47:DF:102:LEU:HD13	47:DF:102:LEU:C	2.23	0.59
1:AA:410:G:P	3:AD:25:ARG:HE	2.26	0.58
1:AA:1314:C:H2'	1:AA:1315:U:C6	2.38	0.58
2:AC:126:ARG:HH22	2:AC:190:THR:HG23	1.67	0.58
2:AC:182:ASP:HB2	2:AC:203:LYS:HE2	1.85	0.58
3:AD:152:SER:O	3:AD:155:LYS:HG2	2.03	0.58
10:AK:24:ALA:HA	10:AK:29:THR:CG2	2.31	0.58
15:AP:75:ILE:HG22	15:AP:80:LYS:HG3	1.84	0.58
23:BB:3:U:H2'	23:BB:4:U:C6	2.38	0.58
23:BB:93:G:H2'	23:BB:94:A:O4'	2.01	0.58
23:BB:494:G:OP1	45:BS:8:ARG:HD3	2.03	0.58
23:BB:1327:A:H2'	23:BB:1328:A:O4'	2.03	0.58
23:BB:1930:G:H22	23:BB:1969:A:P	2.26	0.58
26:BD:107:VAL:H	26:BD:205:PRO:HA	1.68	0.58
28:BP:31:VAL:O	28:BP:32:VAL:HB	2.03	0.58
39:BX:52:ARG:O	39:BX:55:THR:HB	2.02	0.58
40:BH:31:VAL:O	40:BH:33:GLN:N	2.36	0.58
40:BH:125:THR:HB	40:BH:146:VAL:HB	1.84	0.58
47:BF:90:LEU:C	47:BF:91:ARG:HD3	2.24	0.58
1:CA:437:U:H1'	3:CD:115:GLN:NE2	2.17	0.58
1:CA:709:U:H2'	1:CA:710:G:H8	1.68	0.58
11:CL:86:VAL:HB	11:CL:89:LEU:HB2	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CN:52:ARG:HH11	13:CN:58:ARG:HH21	1.51	0.58
13:CN:71:GLY:O	13:CN:79:SER:HA	2.04	0.58
18:CS:62:THR:HB	18:CS:64:GLU:OE1	2.03	0.58
20:CB:101:THR:HG22	20:CB:174:GLU:OE1	2.03	0.58
21:CU:16:ARG:CZ	21:CU:19:LYS:HE2	2.33	0.58
23:DB:419:U:H2'	23:DB:420:C:C6	2.38	0.58
23:DB:783:A:H8	23:DB:784:G:H4'	1.67	0.58
23:DB:1491:G:H5'	25:DC:97:ASP:OD1	2.03	0.58
23:DB:2027:G:O2'	23:DB:2028:U:H5'	2.03	0.58
23:DB:2144:G:C2	23:DB:2146:C:H5'	2.38	0.58
23:DB:2228:G:H2'	23:DB:2229:U:C6	2.37	0.58
26:DD:141:ARG:O	26:DD:141:ARG:HG3	2.03	0.58
28:DP:24:THR:O	28:DP:25:VAL:HG22	2.03	0.58
29:DE:175:ILE:HD11	29:DE:180:LEU:HD11	1.85	0.58
31:D0:8:THR:HG23	31:D0:11:LYS:H	1.67	0.58
38:DM:19:GLY:N	38:DM:38:ARG:HH22	2.01	0.58
41:DJ:38:GLY:O	41:DJ:43:GLU:HB2	2.03	0.58
41:DJ:44:TYR:O	41:DJ:45:THR:HB	2.03	0.58
42:DN:12:ARG:HG3	42:DN:13:ASN:H	1.67	0.58
48:DG:10:VAL:HG21	48:DG:47:ASN:O	2.03	0.58
50:DT:2:ILE:HD13	50:DT:2:ILE:N	2.18	0.58
1:AA:194:C:O2'	1:AA:195:A:H5'	2.03	0.58
8:AI:82:ILE:O	8:AI:86:LEU:HD13	2.03	0.58
23:BB:921:C:H2'	23:BB:922:C:C6	2.38	0.58
23:BB:1291:C:O2'	23:BB:1292:G:H5'	2.02	0.58
23:BB:2007:U:O2'	23:BB:2008:C:H5'	2.03	0.58
23:BB:2329:U:H2'	23:BB:2330:G:C8	2.39	0.58
43:BO:58:ILE:O	43:BO:62:LEU:HD23	2.03	0.58
47:BF:87:LYS:HG3	47:BF:88:VAL:H	1.67	0.58
50:BT:15:HIS:O	50:BT:16:VAL:C	2.42	0.58
50:BT:81:LYS:HG3	50:BT:82:LYS:H	1.67	0.58
52:BW:46:ALA:HB2	52:BW:78:PHE:HD1	1.66	0.58
1:CA:236:A:H2'	1:CA:237:G:H8	1.68	0.58
1:CA:452:A:H2'	1:CA:453:G:O4'	2.02	0.58
1:CA:1234:C:H1'	1:CA:1364:U:O2	2.03	0.58
1:CA:1250:A:H2'	1:CA:1251:A:H8	1.68	0.58
1:CA:1420:U:H2'	1:CA:1421:G:C8	2.39	0.58
1:CA:1527:U:H2'	1:CA:1528:U:C6	2.37	0.58
12:CM:78:ARG:HH22	18:CS:64:GLU:HB2	1.67	0.58
13:CN:60:ARG:HE	13:CN:62:ARG:HG2	1.68	0.58
16:CQ:25:GLU:HB3	16:CQ:38:LYS:HD3	1.83	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CQ:80:LYS:H	16:CQ:80:LYS:CE	2.14	0.58
23:DB:135:U:H2'	23:DB:136:G:H8	1.65	0.58
23:DB:848:C:H2'	23:DB:849:A:C8	2.37	0.58
23:DB:1317:G:H2'	23:DB:1318:U:O4'	2.03	0.58
23:DB:2187:U:H2'	23:DB:2188:U:C5	2.39	0.58
23:DB:2353:G:N3	52:DW:30:VAL:HG13	2.18	0.58
23:DB:2572:A:OP2	26:DD:151:THR:HB	2.03	0.58
23:DB:2772:C:H2'	23:DB:2773:C:H6	1.68	0.58
23:DB:2881:U:H2'	23:DB:2882:A:O4'	2.02	0.58
25:DC:94:LEU:HD13	25:DC:100:ARG:HD2	1.85	0.58
44:DQ:10:ARG:CZ	44:DQ:10:ARG:HB2	2.31	0.58
47:DF:64:PRO:HA	47:DF:88:VAL:CG2	2.33	0.58
49:DR:63:VAL:HA	49:DR:95:ASP:O	2.03	0.58
3:AD:22:SER:HB2	3:AD:109:THR:HG22	1.86	0.58
10:AK:45:THR:HG23	10:AK:48:GLY:HA3	1.84	0.58
11:AL:35:ARG:HA	11:AL:35:ARG:HH11	1.69	0.58
12:AM:30:LYS:HG3	12:AM:40:GLU:OE2	2.04	0.58
23:BB:131:A:H2'	23:BB:132:G:C8	2.38	0.58
23:BB:182:A:O2'	23:BB:183:C:H5'	2.03	0.58
23:BB:1061:U:H4'	23:BB:1070:A:O3'	2.03	0.58
23:BB:1354:A:H2'	23:BB:1355:G:O4'	2.03	0.58
23:BB:1387:A:H2'	23:BB:1388:G:C8	2.37	0.58
23:BB:1683:U:H2'	23:BB:1684:G:C8	2.38	0.58
23:BB:2369:A:O2'	23:BB:2370:G:H5'	2.02	0.58
23:BB:2528:U:O2'	23:BB:2529:G:H3'	2.03	0.58
24:BI:91:LYS:HB2	24:BI:94:LYS:HD2	1.84	0.58
26:BD:25:THR:HG21	26:BD:193:VAL:CG2	2.34	0.58
26:BD:141:ARG:O	26:BD:142:VAL:HG13	2.04	0.58
32:B4:25:VAL:O	32:B4:26:ILE:HD13	2.03	0.58
38:BM:19:GLY:N	38:BM:38:ARG:HH22	2.02	0.58
40:BH:116:ARG:CG	40:BH:131:SER:HB2	2.30	0.58
44:BQ:10:ARG:CZ	44:BQ:10:ARG:HB2	2.32	0.58
45:BS:18:ARG:HB3	45:BS:76:VAL:CG2	2.33	0.58
49:BR:4:VAL:HG23	49:BR:39:LEU:H	1.68	0.58
1:CA:18:C:H4'	1:CA:1078:U:O2	2.03	0.58
1:CA:73:C:H2'	1:CA:74:A:C8	2.38	0.58
1:CA:236:A:H2'	1:CA:237:G:C8	2.38	0.58
1:CA:501:C:H2'	1:CA:502:A:H8	1.66	0.58
1:CA:812:G:H2'	1:CA:812:G:N3	2.18	0.58
1:CA:1239:A:H4'	1:CA:1240:U:H5'	1.85	0.58
5:CF:42:TRP:HE1	5:CF:61:LEU:HD23	1.66	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CT:43:LYS:HD3	19:CT:43:LYS:N	2.19	0.58
23:DB:5:A:H2'	23:DB:6:A:H8	1.69	0.58
23:DB:632:A:H2'	23:DB:633:A:C8	2.38	0.58
23:DB:987:C:H2'	23:DB:988:A:O4'	2.04	0.58
23:DB:2028:U:H2'	23:DB:2029:G:C8	2.38	0.58
26:DD:33:ARG:NE	26:DD:74:GLU:HB3	2.17	0.58
27:DK:19:VAL:HB	27:DK:41:ILE:HD11	1.85	0.58
29:DE:109:LEU:HD13	29:DE:180:LEU:HD13	1.85	0.58
45:DS:5:ALA:HB3	45:DS:54:ALA:HB2	1.83	0.58
46:DU:21:ARG:HD3	46:DU:72:PHE:CG	2.38	0.58
46:DU:65:GLN:HB2	46:DU:68:ASN:HD22	1.68	0.58
47:DF:134:GLN:NE2	47:DF:136:ILE:HD13	2.18	0.58
53:D6:33:ALA:HA	53:D6:103:ILE:CD1	2.23	0.58
53:D6:110:ARG:O	53:D6:114:LEU:HD13	2.04	0.58
1:AA:237:G:H2'	1:AA:238:A:H8	1.68	0.58
1:AA:237:G:H5"	16:AQ:26:ARG:NH2	2.18	0.58
1:AA:1250:A:H2'	1:AA:1251:A:H8	1.65	0.58
3:AD:160:LEU:H	3:AD:160:LEU:CD1	2.13	0.58
4:AE:53:ARG:HH21	4:AE:54:GLU:HG3	1.66	0.58
12:AM:3:ILE:HA	12:AM:56:ARG:HH11	1.68	0.58
13:AN:20:PHE:CD1	13:AN:24:ALA:HB2	2.38	0.58
23:BB:297:G:OP1	46:BU:91:LYS:HD3	2.02	0.58
23:BB:966:G:HO2'	23:BB:2267:A:H2	1.52	0.58
23:BB:1041:G:H2'	23:BB:1042:G:C8	2.38	0.58
23:BB:1210:G:H5'	23:BB:1212:G:H5'	1.85	0.58
23:BB:1571:A:H2'	23:BB:1572:A:C8	2.39	0.58
23:BB:1599:U:H2'	23:BB:1600:C:C6	2.37	0.58
23:BB:2569:G:O2'	23:BB:2570:G:H5'	2.03	0.58
23:BB:2835:A:H61	23:BB:2878:U:H2'	1.68	0.58
26:BD:175:LEU:HD21	26:BD:191:GLY:O	2.03	0.58
31:B0:43:THR:HG23	31:B0:47:TYR:O	2.03	0.58
38:BM:58:LYS:HD2	38:BM:58:LYS:N	2.17	0.58
42:BN:37:THR:OG1	42:BN:40:LYS:HE2	2.02	0.58
1:CA:1307:U:H2'	1:CA:1308:U:C6	2.39	0.58
3:CD:152:SER:O	3:CD:155:LYS:HG2	2.03	0.58
4:CE:52:ALA:N	4:CE:58:ALA:HB2	2.17	0.58
14:CO:8:THR:O	14:CO:12:VAL:HG23	2.03	0.58
14:CO:70:LEU:HD12	14:CO:78:TYR:HB2	1.85	0.58
21:CU:16:ARG:NH1	21:CU:19:LYS:HE2	2.18	0.58
23:DB:161:A:C3'	23:DB:162:U:H5"	2.29	0.58
23:DB:693:A:H2'	23:DB:694:U:C6	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:857:G:O2'	23:DB:858:G:H5'	2.03	0.58
23:DB:1001:A:H2'	23:DB:1002:G:O4'	2.04	0.58
23:DB:2602:A:OP1	23:DB:2602:A:H3'	2.03	0.58
23:DB:2834:G:H1'	23:DB:2883:A:H61	1.68	0.58
23:DB:2872:A:O2'	23:DB:2873:A:H5"	2.03	0.58
23:DB:2899:A:H2'	23:DB:2900:A:C8	2.37	0.58
24:DI:2:LYS:NZ	24:DI:2:LYS:HB3	2.19	0.58
53:D6:44:GLU:HG2	53:D6:49:HIS:CE1	2.38	0.58
53:D6:115:VAL:HG13	53:D6:180:GLU:HG2	1.84	0.58
1:AA:658:C:O2'	1:AA:659:U:H5'	2.03	0.58
1:AA:1298:U:H2'	6:AG:113:LYS:NZ	2.18	0.58
9:AJ:44:THR:HG23	9:AJ:69:THR:O	2.03	0.58
17:AR:37:LYS:NZ	21:AU:22:CYS:HB2	2.18	0.58
17:AR:52:ARG:HB3	17:AR:56:ARG:NH2	2.18	0.58
20:AB:47:PRO:O	20:AB:51:GLU:HB2	2.03	0.58
20:AB:221:ARG:HH11	20:AB:221:ARG:HB3	1.68	0.58
22:BA:42:C:C5	47:BF:65:LEU:HD22	2.37	0.58
23:BB:179:C:H2'	23:BB:180:G:O4'	2.03	0.58
23:BB:460:A:H4'	50:BT:72:GLN:CB	2.31	0.58
23:BB:506:G:H5"	23:BB:509:C:O2'	2.04	0.58
23:BB:624:C:O2'	23:BB:657:U:H5"	2.03	0.58
25:BC:173:LEU:H	25:BC:173:LEU:HD13	1.68	0.58
29:BE:126:VAL:HG22	29:BE:133:LEU:HD12	1.84	0.58
35:BV:80:HIS:HB3	35:BV:83:LYS:O	2.03	0.58
41:BJ:59:ALA:C	41:BJ:61:LYS:H	2.06	0.58
41:BJ:98:GLU:CD	41:BJ:98:GLU:H	2.06	0.58
44:BQ:65:ASN:O	44:BQ:69:ARG:HB2	2.04	0.58
44:BQ:107:ALA:HB1	49:BR:48:LYS:HE2	1.85	0.58
48:BG:38:ASP:CG	48:BG:39:ALA:H	2.07	0.58
53:B6:4:LYS:O	53:B6:7:TYR:HB2	2.03	0.58
1:CA:16:A:O2'	1:CA:17:U:H5'	2.04	0.58
1:CA:358:U:H2'	1:CA:359:G:H8	1.68	0.58
1:CA:412:A:H1'	1:CA:413:G:H8	1.68	0.58
1:CA:1384:C:H2'	1:CA:1385:G:H8	1.68	0.58
12:CM:78:ARG:HB3	12:CM:78:ARG:CZ	2.33	0.58
13:CN:60:ARG:O	13:CN:62:ARG:N	2.37	0.58
14:CO:14:GLU:HB3	14:CO:84:ARG:HH22	1.68	0.58
23:DB:1085:A:H1'	23:DB:1105:U:H1'	1.86	0.58
23:DB:1438:U:H2'	23:DB:1439:A:O4'	2.04	0.58
23:DB:1594:U:H2'	23:DB:1595:C:C6	2.39	0.58
23:DB:2153:C:H2'	23:DB:2154:A:H8	1.67	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2732:G:H5'	23:DB:2733:A:O4'	2.02	0.58
24:DI:108:ILE:HG22	24:DI:128:ILE:HD13	1.85	0.58
32:D4:15:LYS:O	32:D4:16:ILE:CB	2.50	0.58
40:DH:27:ARG:H	40:DH:31:VAL:CG2	2.16	0.58
44:DQ:79:ILE:O	44:DQ:79:ILE:HD13	2.03	0.58
48:DG:120:ILE:HG13	48:DG:140:ILE:HG22	1.85	0.58
1:AA:355:C:O2'	1:AA:356:A:H5'	2.03	0.58
1:AA:599:C:O2'	1:AA:600:A:H5'	2.02	0.58
1:AA:602:A:O2'	1:AA:603:U:H5'	2.04	0.58
1:AA:923:A:H2'	1:AA:924:C:C6	2.37	0.58
1:AA:1287:A:H2'	1:AA:1288:A:C8	2.38	0.58
1:AA:1390:U:H2'	1:AA:1391:U:H6	1.69	0.58
12:AM:85:TYR:HA	12:AM:88:LEU:HD12	1.86	0.58
23:BB:251:A:H2'	23:BB:252:G:O4'	2.04	0.58
23:BB:1678:A:H2'	23:BB:1679:A:O4'	2.03	0.58
23:BB:2531:A:H5"	48:BG:156:TYR:CZ	2.38	0.58
25:BC:94:LEU:HA	25:BC:100:ARG:HA	1.86	0.58
29:BE:189:THR:O	29:BE:193:VAL:HG23	2.03	0.58
32:B4:15:LYS:O	32:B4:16:ILE:CB	2.51	0.58
37:BL:93:ASN:O	37:BL:95:LEU:N	2.36	0.58
38:BM:68:PHE:CG	38:BM:69:PRO:HD2	2.38	0.58
40:BH:130:VAL:O	40:BH:131:SER:C	2.42	0.58
44:BQ:91:ARG:HH22	49:BR:10:LYS:HB3	1.68	0.58
47:BF:163:GLU:HA	47:BF:166:ARG:HH11	1.69	0.58
49:BR:38:VAL:O	49:BR:53:PHE:HB3	2.03	0.58
53:B6:123:GLU:HA	53:B6:126:ARG:NH1	2.17	0.58
1:CA:251:G:N3	1:CA:266:G:O6	2.36	0.58
1:CA:714:G:H2'	1:CA:715:A:C8	2.39	0.58
1:CA:920:U:H2'	1:CA:921:U:H6	1.68	0.58
3:CD:16:THR:HG22	3:CD:17:ASP:N	2.19	0.58
11:CL:49:ARG:HG2	11:CL:89:LEU:HD21	1.85	0.58
23:DB:145:C:H2'	23:DB:146:A:H8	1.68	0.58
23:DB:383:C:H5"	23:DB:385:C:OP2	2.03	0.58
23:DB:704:G:H2'	23:DB:726:G:N2	2.12	0.58
23:DB:1082:U:C2	23:DB:1086:A:C6	2.91	0.58
23:DB:1219:U:H2'	23:DB:1220:G:H8	1.69	0.58
23:DB:2283:C:H2'	23:DB:2284:A:H5'	1.85	0.58
23:DB:2860:A:H8	23:DB:2860:A:O5'	1.87	0.58
27:DK:116:ILE:HD12	27:DK:117:SER:N	2.18	0.58
40:DH:96:THR:HG23	40:DH:97:ARG:N	2.18	0.58
40:DH:124:THR:HG23	40:DH:128:HIS:CE1	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DQ:79:ILE:HA	44:DQ:82:LEU:HD12	1.84	0.58
47:DF:71:LYS:O	47:DF:72:SER:HB3	2.02	0.58
48:DG:9:VAL:HG12	48:DG:11:PRO:HD3	1.85	0.58
53:D6:60:ALA:HA	53:D6:66:LEU:HD12	1.85	0.58
53:D6:73:GLN:HG3	53:D6:74:ASN:N	2.18	0.58
1:AA:272:C:H2'	1:AA:273:U:C6	2.38	0.58
1:AA:376:G:OP1	15:AP:5:ARG:HB2	2.04	0.58
1:AA:470:C:H2'	1:AA:471:U:C6	2.39	0.58
1:AA:672:U:H2'	1:AA:673:A:C8	2.38	0.58
1:AA:793:U:O2	1:AA:1516:G:H4'	2.04	0.58
1:AA:1239:A:H4'	1:AA:1240:U:H5'	1.84	0.58
1:AA:1382:C:H4'	6:AG:78:ARG:HH21	1.68	0.58
1:AA:1521:C:H2'	1:AA:1522:U:H6	1.67	0.58
2:AC:139:ASN:O	2:AC:143:LEU:HD23	2.04	0.58
4:AE:132:PRO:O	4:AE:136:VAL:HG12	2.03	0.58
11:AL:14:LYS:HG2	11:AL:15:VAL:N	2.19	0.58
17:AR:38:ILE:HG22	17:AR:58:ILE:HG21	1.86	0.58
23:BB:477:A:H2'	23:BB:478:A:H8	1.66	0.58
23:BB:633:A:H8	23:BB:633:A:O5'	1.87	0.58
23:BB:904:G:H2'	23:BB:905:A:C8	2.38	0.58
23:BB:922:C:H1'	52:BW:22:VAL:CG2	2.33	0.58
23:BB:1407:G:H2'	23:BB:1408:G:H8	1.69	0.58
23:BB:2354:C:H4'	52:BW:31:LEU:HD22	1.85	0.58
23:BB:2680:U:OP2	26:BD:114:LYS:HD3	2.03	0.58
25:BC:18:VAL:HG11	25:BC:202:ARG:HD2	1.84	0.58
25:BC:75:ALA:HB1	25:BC:93:VAL:HG22	1.85	0.58
31:B0:38:LEU:HD13	31:B0:41:HIS:NE2	2.18	0.58
34:B3:41:ARG:HG3	34:B3:44:ARG:HH22	1.68	0.58
43:BO:68:LYS:H	43:BO:102:ARG:HD2	1.67	0.58
44:BQ:15:LYS:HD2	44:BQ:16:ILE:HD12	1.84	0.58
44:BQ:91:ARG:CZ	49:BR:11:GLN:H	2.16	0.58
47:BF:101:ARG:NH1	47:BF:138:PRO:HB2	2.18	0.58
1:CA:425:G:H2'	1:CA:426:U:C6	2.38	0.58
1:CA:715:A:H2'	1:CA:716:A:C8	2.38	0.58
1:CA:922:G:H2'	1:CA:923:A:C8	2.38	0.58
1:CA:1314:C:H3'	18:CS:5:LYS:NZ	2.18	0.58
10:CK:91:GLY:O	10:CK:95:THR:HG22	2.03	0.58
17:CR:38:ILE:HG22	17:CR:58:ILE:HG21	1.86	0.58
23:DB:594:U:H2'	23:DB:595:C:H6	1.68	0.58
23:DB:958:U:N3	38:DM:16:ARG:HB3	2.17	0.58
23:DB:1295:C:H2'	23:DB:1296:G:C8	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2699:C:H2'	23:DB:2700:A:H8	1.69	0.58
23:DB:2843:G:O2'	23:DB:2844:G:H5'	2.04	0.58
25:DC:104:LEU:H	25:DC:104:LEU:HD12	1.68	0.58
34:D3:41:ARG:HG3	34:D3:44:ARG:HH22	1.68	0.58
40:DH:31:VAL:O	40:DH:33:GLN:N	2.36	0.58
40:DH:77:THR:HA	40:DH:143:ILE:O	2.03	0.58
42:DN:12:ARG:HG2	42:DN:16:HIS:ND1	2.19	0.58
43:DO:47:VAL:HG12	43:DO:48:LEU:N	2.18	0.58
48:DG:37:ASN:HD21	48:DG:40:VAL:CB	2.16	0.58
48:DG:46:ASP:CG	48:DG:47:ASN:H	2.07	0.58
51:DZ:71:LEU:O	51:DZ:74:ARG:HG2	2.03	0.58
52:DW:28:GLU:HG3	52:DW:29:SER:H	1.69	0.58
53:D6:143:LEU:O	53:D6:147:LEU:HG	2.04	0.58
1:AA:35:G:H2'	1:AA:36:C:H6	1.67	0.58
1:AA:806:C:H2'	1:AA:807:A:C8	2.39	0.58
1:AA:1095:U:H2'	1:AA:1096:C:C6	2.39	0.58
1:AA:1132:C:H2'	1:AA:1133:G:C8	2.38	0.58
2:AC:181:ILE:HD12	2:AC:181:ILE:N	2.19	0.58
3:AD:25:ARG:HH11	3:AD:26:ALA:H	1.52	0.58
4:AE:28:ARG:CZ	4:AE:30:PHE:HB3	2.33	0.58
11:AL:85:ARG:HG3	11:AL:86:VAL:N	2.17	0.58
13:AN:60:ARG:HG3	13:AN:62:ARG:HG3	1.86	0.58
19:AT:53:MET:HA	19:AT:56:ILE:HD12	1.86	0.58
21:AU:36:PHE:CD2	21:AU:39:LYS:HB2	2.38	0.58
23:BB:273:G:O2'	23:BB:274:C:H5'	2.04	0.58
23:BB:1339:G:N2	23:BB:1603:A:H1'	2.19	0.58
27:BK:37:ASP:O	27:BK:62:VAL:HG23	2.04	0.58
39:BX:17:GLU:HB3	39:BX:53:VAL:HG11	1.84	0.58
40:BH:79:THR:CG2	40:BH:145:ASN:HB2	2.33	0.58
40:BH:79:THR:HB	40:BH:145:ASN:HB2	1.85	0.58
49:BR:31:GLU:H	49:BR:63:VAL:CG2	2.16	0.58
53:B6:155:LYS:HD3	53:B6:158:GLU:OE2	2.04	0.58
1:CA:129:A:H1'	1:CA:130:A:C8	2.38	0.58
1:CA:328:C:H4'	1:CA:329:A:H5"	1.85	0.58
1:CA:512:U:O2'	1:CA:513:C:H5'	2.04	0.58
1:CA:1008:U:H2'	1:CA:1009:U:H5"	1.86	0.58
1:CA:1071:C:H2'	1:CA:1072:G:C8	2.37	0.58
1:CA:1095:U:H2'	1:CA:1096:C:C6	2.39	0.58
2:CC:190:THR:HG22	2:CC:191:THR:N	2.18	0.58
11:CL:98:ARG:HH21	11:CL:104:SER:C	2.07	0.58
15:CP:68:SER:OG	15:CP:71:VAL:HG12	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:65:LYS:HB2	20:CB:158:ASP:H	1.68	0.58
23:DB:374:A:N6	23:DB:400:G:H1'	2.17	0.58
23:DB:705:A:N6	23:DB:726:G:H1'	2.19	0.58
23:DB:864:G:O2'	23:DB:865:C:H5'	2.04	0.58
23:DB:1386:C:H2'	23:DB:1387:A:C8	2.39	0.58
23:DB:2825:G:H2'	23:DB:2826:A:H5'	1.86	0.58
32:D4:13:ASN:O	32:D4:27:CYS:HA	2.04	0.58
44:DQ:96:ASP:C	44:DQ:98:ALA:H	2.07	0.58
46:DU:11:ILE:HD13	46:DU:11:ILE:O	2.04	0.58
47:DF:109:ARG:HB3	47:DF:135:ILE:CD1	2.30	0.58
51:DZ:11:ARG:HB3	51:DZ:12:PRO:HD2	1.86	0.58
52:DW:23:LYS:HD2	52:DW:24:ARG:N	2.18	0.58
52:DW:59:PHE:CD2	52:DW:61:LYS:HD2	2.39	0.58
53:D6:25:LEU:CD2	53:D6:118:VAL:HG13	2.33	0.58
53:D6:32:ARG:HB2	53:D6:103:ILE:CG2	2.33	0.58
1:AA:452:A:H2'	1:AA:453:G:O4'	2.04	0.58
1:AA:714:G:H2'	1:AA:715:A:C8	2.39	0.58
1:AA:953:G:H2'	1:AA:954:G:O4'	2.03	0.58
2:AC:86:LEU:O	2:AC:90:VAL:HG23	2.04	0.58
4:AE:52:ALA:N	4:AE:58:ALA:HB2	2.18	0.58
15:AP:1:MET:HA	15:AP:1:MET:HE3	1.84	0.58
23:BB:1018:U:O2'	23:BB:1019:U:H5'	2.04	0.58
23:BB:1172:C:H2'	23:BB:1173:U:O4'	2.03	0.58
23:BB:1295:C:H2'	23:BB:1296:G:C8	2.39	0.58
30:BY:16:LEU:H	30:BY:16:LEU:CD2	2.12	0.58
33:B1:6:GLU:HB2	33:B1:52:LYS:NZ	2.18	0.58
35:BV:80:HIS:HD2	35:BV:82:TYR:H	1.52	0.58
38:BM:50:ARG:O	38:BM:53:MET:HB3	2.03	0.58
40:BH:84:ALA:HB2	40:BH:146:VAL:HG12	1.86	0.58
40:BH:103:VAL:HG11	40:BH:110:VAL:HG22	1.86	0.58
41:BJ:45:THR:N	41:BJ:46:PRO:HD3	2.18	0.58
44:BQ:91:ARG:HG2	44:BQ:93:ILE:HG22	1.85	0.58
46:BU:35:VAL:HB	46:BU:38:ILE:CB	2.34	0.58
46:BU:80:ASP:HB2	46:BU:96:LYS:N	2.19	0.58
47:BF:64:PRO:HA	47:BF:88:VAL:CG2	2.33	0.58
1:CA:520:A:OP1	11:CL:48:LEU:HD12	2.04	0.58
2:CC:40:GLN:HG3	2:CC:41:TYR:H	1.67	0.58
2:CC:180:ASP:OD1	2:CC:203:LYS:HB2	2.03	0.58
20:CB:57:ASN:HB2	20:CB:223:GLY:HA3	1.84	0.58
20:CB:120:SER:HA	20:CB:125:PHE:CE2	2.38	0.58
23:DB:1365:A:OP2	51:DZ:3:ARG:HB2	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1390:U:O2'	23:DB:1391:U:H5'	2.04	0.58
23:DB:1508:A:H3'	23:DB:1509:A:C4	2.38	0.58
23:DB:2605:U:H2'	23:DB:2606:C:C6	2.39	0.58
23:DB:2700:A:H2'	23:DB:2701:U:H6	1.69	0.58
24:DI:71:LYS:HB3	24:DI:115:ASP:OD2	2.04	0.58
33:D1:6:GLU:HB2	33:D1:52:LYS:NZ	2.19	0.58
44:DQ:60:TRP:O	44:DQ:64:ILE:HG12	2.03	0.58
48:DG:58:ALA:C	48:DG:60:GLY:H	2.07	0.58
5:AF:53:LYS:NZ	5:AF:53:LYS:H	2.02	0.58
10:AK:105:ARG:NH2	21:AU:10:PRO:HB3	2.18	0.58
19:AT:43:LYS:N	19:AT:43:LYS:HD3	2.18	0.58
20:AB:65:LYS:H	20:AB:158:ASP:CG	2.07	0.58
22:BA:43:C:O2'	47:BF:91:ARG:HD2	2.03	0.58
23:BB:115:C:H2'	23:BB:116:C:H6	1.68	0.58
23:BB:944:C:H2'	57:BB:3321:HOH:O	2.04	0.58
23:BB:987:C:H2'	23:BB:988:A:O4'	2.04	0.58
23:BB:1082:U:O4	23:BB:1086:A:C2	2.56	0.58
23:BB:1458:U:H5"	23:BB:1459:G:OP1	2.01	0.58
23:BB:1577:C:H2'	23:BB:1578:U:O4'	2.04	0.58
23:BB:1594:U:H2'	23:BB:1595:C:C6	2.39	0.58
24:BI:89:SER:HB2	24:BI:136:GLY:HA3	1.85	0.58
25:BC:16:VAL:H	25:BC:203:VAL:HG12	1.68	0.58
31:B0:8:THR:HG23	31:B0:11:LYS:H	1.67	0.58
42:BN:62:ASN:O	42:BN:66:ALA:HB2	2.04	0.58
42:BN:72:ASP:O	42:BN:75:ILE:HG13	2.04	0.58
47:BF:33:ILE:HD13	47:BF:98:PHE:CD2	2.37	0.58
48:BG:17:LYS:HB3	48:BG:24:THR:H	1.68	0.58
49:BR:69:GLY:O	49:BR:90:ARG:HG2	2.04	0.58
1:CA:448:A:H2'	1:CA:449:G:C8	2.38	0.58
1:CA:734:G:O2'	17:CR:59:LYS:HD3	2.04	0.58
1:CA:906:A:O2'	1:CA:907:A:H5"	2.04	0.58
1:CA:1081:A:OP1	4:CE:22:LYS:HB2	2.03	0.58
2:CC:34:SER:O	2:CC:38:VAL:HG22	2.03	0.58
23:DB:245:G:H2'	23:DB:246:C:H6	1.68	0.58
23:DB:547:A:N1	23:DB:548:G:H1'	2.19	0.58
23:DB:1099:G:O5'	24:DI:4:VAL:HG12	2.04	0.58
23:DB:1485:U:H2'	23:DB:1486:U:C6	2.39	0.58
23:DB:2633:G:H2'	23:DB:2634:A:O4'	2.03	0.58
26:DD:108:ASP:OD2	26:DD:173:GLN:HA	2.04	0.58
49:DR:69:GLY:O	49:DR:90:ARG:HG2	2.03	0.58
52:DW:13:ARG:HG3	52:DW:14:ASP:H	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:49:U:O2'	1:AA:50:A:H2'	2.04	0.57
1:AA:254:G:OP1	16:AQ:68:LYS:O	2.23	0.57
7:AH:23:ALA:CB	7:AH:61:THR:HA	2.33	0.57
8:AI:28:VAL:HA	8:AI:32:ARG:O	2.04	0.57
16:AQ:31:PRO:O	16:AQ:32:ILE:HB	2.04	0.57
18:AS:27:LYS:NZ	18:AS:27:LYS:HB3	2.17	0.57
19:AT:15:LYS:HA	19:AT:18:LYS:CE	2.33	0.57
22:BA:29:A:H3'	22:BA:30:C:H6	1.69	0.57
23:BB:30:G:H2'	23:BB:31:C:H6	1.68	0.57
23:BB:30:G:OP1	44:BQ:4:LYS:HG2	2.04	0.57
23:BB:1171:G:C3'	23:BB:1172:C:H4'	2.34	0.57
23:BB:1722:A:H2'	23:BB:1723:G:C8	2.39	0.57
23:BB:1745:A:H2'	23:BB:1746:A:O4'	2.04	0.57
23:BB:1812:U:H4'	25:BC:44:ASN:OD1	2.03	0.57
23:BB:2144:G:H1'	23:BB:2148:G:C2	2.39	0.57
23:BB:2297:A:N6	23:BB:2319:G:H1'	2.18	0.57
45:BS:72:THR:HG21	45:BS:108:SER:HB3	1.86	0.57
46:BU:98:ASN:OD1	46:BU:100:GLU:HB2	2.04	0.57
48:BG:84:LYS:HG3	48:BG:131:VAL:CA	2.34	0.57
1:CA:793:U:O2	1:CA:1516:G:H4'	2.04	0.57
1:CA:1323:G:H2'	1:CA:1324:A:H8	1.67	0.57
3:CD:151:GLN:HE21	3:CD:153:ARG:HD2	1.69	0.57
3:CD:160:LEU:H	3:CD:160:LEU:CD1	2.12	0.57
23:DB:494:G:OP1	45:DS:8:ARG:HD3	2.04	0.57
23:DB:716:A:H2'	23:DB:717:C:H5"	1.86	0.57
23:DB:921:C:H2'	23:DB:922:C:C6	2.39	0.57
23:DB:1893:C:H2'	23:DB:1894:C:O4'	2.04	0.57
23:DB:1915:U:H2'	23:DB:1916:A:C8	2.39	0.57
23:DB:1939:U:O2	23:DB:1967:C:H4'	2.03	0.57
23:DB:2007:U:O2'	23:DB:2008:C:H5'	2.04	0.57
23:DB:2190:G:H2'	23:DB:2191:A:O4'	2.04	0.57
23:DB:2257:U:O2'	23:DB:2258:C:H5'	2.04	0.57
23:DB:2579:C:H1'	26:DD:130:GLN:NE2	2.18	0.57
23:DB:2693:G:H2'	23:DB:2694:G:H8	1.67	0.57
23:DB:2868:A:H2'	23:DB:2869:G:C8	2.39	0.57
25:DC:75:ALA:HB1	25:DC:93:VAL:HG22	1.86	0.57
26:DD:107:VAL:H	26:DD:205:PRO:HA	1.69	0.57
37:DL:131:ALA:HA	37:DL:134:ALA:HB3	1.85	0.57
41:DJ:88:THR:HG22	41:DJ:91:GLU:HG3	1.86	0.57
44:DQ:86:SER:CB	49:DR:51:VAL:HA	2.34	0.57
47:DF:101:ARG:NH2	47:DF:138:PRO:HB2	2.18	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:104:THR:C	47:DF:108:PRO:HG2	2.24	0.57
50:DT:57:VAL:HG12	50:DT:86:THR:OG1	2.04	0.57
53:D6:90:LEU:HB3	53:D6:101:ILE:HG21	1.85	0.57
1:AA:191:G:H2'	1:AA:192:A:C8	2.38	0.57
1:AA:358:U:H2'	1:AA:359:G:H8	1.69	0.57
1:AA:939:G:H5"	6:AG:101:ARG:CZ	2.34	0.57
1:AA:1392:G:O2'	1:AA:1393:U:H5'	2.04	0.57
1:AA:1410:A:H2'	1:AA:1411:C:H6	1.69	0.57
16:AQ:8:GLN:HB3	16:AQ:59:GLU:HB2	1.85	0.57
19:AT:82:ILE:C	19:AT:85:LEU:HD22	2.24	0.57
22:BA:35:C:C2'	22:BA:36:C:H5'	2.34	0.57
23:BB:693:A:H2'	23:BB:694:U:C6	2.39	0.57
23:BB:1440:U:H2'	23:BB:1441:G:H8	1.69	0.57
23:BB:1889:A:H2'	23:BB:1890:A:C8	2.40	0.57
23:BB:2286:G:H4'	23:BB:2287:A:O4'	2.04	0.57
29:BE:58:LYS:HE2	29:BE:60:TRP:HD1	1.68	0.57
30:BY:4:ILE:CD1	30:BY:58:GLU:HG3	2.34	0.57
41:BJ:44:TYR:O	41:BJ:45:THR:HB	2.04	0.57
46:BU:41:VAL:HG22	46:BU:60:LYS:O	2.03	0.57
48:BG:37:ASN:HD21	48:BG:40:VAL:CB	2.15	0.57
51:BZ:5:CYS:HB3	51:BZ:10:LYS:N	2.18	0.57
1:CA:56:U:H2'	1:CA:57:G:C8	2.39	0.57
4:CE:76:ASN:HB2	4:CE:81:GLN:NE2	2.18	0.57
9:CJ:12:ALA:N	9:CJ:18:ILE:HD12	2.20	0.57
20:CB:19:THR:O	20:CB:37:VAL:HA	2.04	0.57
23:DB:172:A:H2'	23:DB:173:A:H8	1.67	0.57
23:DB:277:G:H4'	23:DB:278:A:N7	2.19	0.57
23:DB:877:A:H2'	23:DB:900:A:N6	2.20	0.57
23:DB:1230:A:H2'	23:DB:1231:U:H6	1.67	0.57
23:DB:1720:U:O2'	23:DB:1721:G:H5'	2.04	0.57
23:DB:2491:U:H5"	23:DB:2570:G:H5"	1.87	0.57
23:DB:2722:G:H2'	23:DB:2723:C:H6	1.67	0.57
24:DI:121:ILE:H	24:DI:121:ILE:CD1	2.14	0.57
25:DC:159:THR:O	25:DC:194:VAL:HG12	2.04	0.57
29:DE:5:LEU:HG	29:DE:12:LEU:HD22	1.86	0.57
35:DV:1:MET:HE3	35:DV:2:PHE:H	1.68	0.57
35:DV:63:ILE:O	35:DV:70:ILE:HD12	2.03	0.57
37:DL:23:ILE:HD12	49:DR:84:ARG:NE	2.19	0.57
37:DL:119:PRO:HA	37:DL:138:ALA:O	2.04	0.57
47:DF:163:GLU:HA	47:DF:166:ARG:HH11	1.68	0.57
53:D6:38:LEU:HD11	53:D6:66:LEU:HD23	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:436:C:O2'	1:AA:437:U:H5'	2.05	0.57
1:AA:532:A:C8	2:AC:192:TYR:HD2	2.21	0.57
1:AA:632:U:H5"	1:AA:633:G:C8	2.39	0.57
1:AA:797:C:O2'	1:AA:798:U:H5'	2.04	0.57
1:AA:840:C:C2	1:AA:842:U:H4'	2.40	0.57
1:AA:1078:U:H2'	1:AA:1079:G:O4'	2.05	0.57
1:AA:1105:A:H2'	1:AA:1106:G:H8	1.68	0.57
10:AK:91:GLY:O	10:AK:95:THR:HG22	2.04	0.57
14:AO:70:LEU:HD12	14:AO:78:TYR:HB2	1.86	0.57
16:AQ:45:VAL:HG12	16:AQ:46:HIS:N	2.19	0.57
20:AB:19:THR:HG23	20:AB:20:ARG:H	1.69	0.57
21:AU:3:ILE:CD1	21:AU:19:LYS:HA	2.33	0.57
23:BB:118:A:N3	23:BB:178:G:H1'	2.20	0.57
23:BB:125:A:H5'	36:B2:19:ARG:HD3	1.85	0.57
23:BB:716:A:H2'	23:BB:717:C:H5"	1.85	0.57
23:BB:2457:U:C2'	23:BB:2458:G:H5'	2.35	0.57
23:BB:2645:G:H3'	23:BB:2646:C:H5'	1.84	0.57
25:BC:14:HIS:O	25:BC:16:VAL:HG23	2.04	0.57
28:BP:77:SER:O	28:BP:80:VAL:HG12	2.05	0.57
29:BE:188:MET:HG2	29:BE:193:VAL:CG2	2.32	0.57
50:BT:27:SER:O	50:BT:28:ASN:HB3	2.04	0.57
50:BT:57:VAL:HG13	50:BT:58:VAL:N	2.19	0.57
52:BW:39:GLN:CG	52:BW:40:ARG:N	2.67	0.57
1:CA:404:G:OP1	3:CD:114:ARG:HD3	2.03	0.57
1:CA:502:A:H2'	1:CA:503:C:H6	1.68	0.57
1:CA:953:G:H2'	1:CA:954:G:O4'	2.04	0.57
1:CA:1478:U:H2'	1:CA:1479:C:C6	2.39	0.57
2:CC:76:ILE:HG22	2:CC:80:GLY:HA2	1.86	0.57
11:CL:7:VAL:HG22	16:CQ:33:TYR:HD1	1.70	0.57
17:CR:52:ARG:HB3	17:CR:56:ARG:NH2	2.18	0.57
23:DB:364:C:H2'	23:DB:365:U:H6	1.69	0.57
23:DB:1354:A:H2'	23:DB:1355:G:O4'	2.03	0.57
23:DB:2885:G:H2'	23:DB:2886:A:O4'	2.05	0.57
24:DI:37:PHE:CZ	24:DI:58:ILE:HD11	2.39	0.57
24:DI:45:THR:CA	24:DI:48:ILE:HG22	2.33	0.57
25:DC:94:LEU:HA	25:DC:100:ARG:HA	1.86	0.57
25:DC:244:VAL:HB	25:DC:249:VAL:H	1.69	0.57
41:DJ:45:THR:N	41:DJ:46:PRO:HD3	2.19	0.57
1:AA:586:C:H5"	7:AH:81:GLY:HA2	1.84	0.57
3:AD:113:ALA:O	3:AD:117:VAL:HG23	2.04	0.57
5:AF:71:ILE:HG13	5:AF:72:ASP:N	2.18	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AG:24:LYS:O	6:AG:28:ILE:HG12	2.04	0.57
13:AN:41:TRP:HD1	13:AN:44:VAL:HG23	1.69	0.57
13:AN:71:GLY:O	13:AN:79:SER:HA	2.04	0.57
14:AO:14:GLU:HB3	14:AO:84:ARG:HH22	1.69	0.57
23:BB:151:C:H2'	23:BB:152:A:H8	1.69	0.57
23:BB:702:U:H2'	23:BB:703:U:C6	2.39	0.57
23:BB:1045:C:H4'	23:BB:1047:G:O4'	2.04	0.57
23:BB:1590:A:H2'	23:BB:1591:A:H8	1.68	0.57
23:BB:1758:U:O4	23:BB:2695:U:H4'	2.04	0.57
24:BI:105:LEU:HD11	24:BI:139:VAL:CG1	2.34	0.57
26:BD:33:ARG:HE	26:BD:74:GLU:HB3	1.69	0.57
38:BM:131:VAL:HG12	38:BM:132:THR:H	1.70	0.57
39:BX:39:GLN:O	39:BX:42:LEU:HB2	2.04	0.57
40:BH:103:VAL:HG21	40:BH:110:VAL:H	1.69	0.57
41:BJ:124:VAL:O	41:BJ:125:TYR:HB2	2.04	0.57
44:BQ:77:LYS:HA	44:BQ:80:ASN:HB3	1.86	0.57
44:BQ:96:ASP:C	44:BQ:98:ALA:H	2.07	0.57
46:BU:11:ILE:CG2	46:BU:70:ALA:HB3	2.34	0.57
48:BG:30:GLY:CA	48:BG:78:VAL:HA	2.34	0.57
51:BZ:11:ARG:HB3	51:BZ:12:PRO:HD2	1.85	0.57
1:CA:237:G:H2'	1:CA:238:A:H8	1.69	0.57
1:CA:355:C:O2'	1:CA:356:A:H5'	2.04	0.57
1:CA:470:C:H2'	1:CA:471:U:C6	2.40	0.57
1:CA:1105:A:H2'	1:CA:1106:G:H8	1.69	0.57
1:CA:1298:U:H2'	6:CG:113:LYS:NZ	2.20	0.57
2:CC:185:THR:HG22	2:CC:198:LYS:HA	1.85	0.57
4:CE:156:ARG:CA	4:CE:158:LYS:HZ2	2.13	0.57
10:CK:80:ASN:HD22	10:CK:80:ASN:N	2.01	0.57
12:CM:80:MET:C	12:CM:82:LEU:H	2.06	0.57
17:CR:44:THR:HB	17:CR:46:THR:HG22	1.87	0.57
23:DB:106:C:H2'	23:DB:107:G:C8	2.37	0.57
23:DB:982:C:O2	23:DB:982:C:H5'	2.03	0.57
23:DB:1098:A:O5'	24:DI:3:LYS:HG2	2.04	0.57
23:DB:1098:A:C3'	24:DI:4:VAL:N	2.67	0.57
23:DB:1593:A:H2'	23:DB:1594:U:H6	1.70	0.57
23:DB:2590:A:H2'	23:DB:2591:C:C6	2.39	0.57
23:DB:2680:U:OP2	26:DD:114:LYS:HD3	2.04	0.57
26:DD:141:ARG:O	26:DD:142:VAL:HG13	2.03	0.57
28:DP:77:SER:OG	28:DP:79:VAL:HG22	2.04	0.57
29:DE:37:ALA:C	29:DE:39:ALA:H	2.07	0.57
46:DU:8:ASP:O	46:DU:23:LYS:HA	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:11:ILE:CG2	46:DU:70:ALA:HB3	2.33	0.57
49:DR:19:THR:HB	49:DR:96:VAL:O	2.05	0.57
1:AA:734:G:O2'	17:AR:59:LYS:HD3	2.03	0.57
1:AA:906:A:O2'	1:AA:907:A:H5"	2.03	0.57
1:AA:922:G:H2'	1:AA:923:A:C8	2.39	0.57
1:AA:1169:A:H2'	1:AA:1170:A:C8	2.39	0.57
2:AC:34:SER:O	2:AC:38:VAL:HG22	2.04	0.57
2:AC:120:THR:HG22	2:AC:188:ALA:HB2	1.85	0.57
6:AG:149:ALA:HB2	10:AK:55:ARG:CZ	2.35	0.57
23:BB:582:A:H2'	23:BB:583:G:H8	1.69	0.57
23:BB:585:G:H2'	23:BB:1251:C:H42	1.69	0.57
23:BB:962:G:H21	23:BB:2250:G:N2	1.99	0.57
23:BB:1080:A:O2'	24:BI:126:ARG:HB2	2.04	0.57
23:BB:2291:U:H2'	23:BB:2292:U:C6	2.39	0.57
23:BB:2312:U:O2	47:BF:38:GLY:HA3	2.03	0.57
23:BB:2602:A:OP1	23:BB:2602:A:H3'	2.04	0.57
46:BU:8:ASP:O	46:BU:23:LYS:HA	2.04	0.57
46:BU:9:GLU:HG3	46:BU:21:ARG:HD2	1.85	0.57
1:CA:104:G:O2'	1:CA:105:G:H5'	2.04	0.57
20:CB:45:THR:HA	20:CB:48:MET:HG3	1.86	0.57
23:DB:1278:C:O3'	42:DN:34:ILE:HG23	2.05	0.57
23:DB:1623:G:O2'	23:DB:1624:U:H5'	2.04	0.57
23:DB:2704:C:H2'	23:DB:2705:A:O4'	2.05	0.57
24:DI:1:ALA:C	24:DI:2:LYS:HD2	2.25	0.57
25:DC:119:VAL:HG13	25:DC:133:ASN:HD21	1.69	0.57
29:DE:194:LYS:O	29:DE:197:GLU:HB3	2.03	0.57
40:DH:119:ASN:HD21	40:DH:121:VAL:CG1	2.18	0.57
41:DJ:63:ALA:HA	41:DJ:69:ARG:HH12	1.70	0.57
46:DU:9:GLU:HG3	46:DU:21:ARG:HD2	1.86	0.57
48:DG:24:THR:HG22	48:DG:34:ARG:HB3	1.87	0.57
50:DT:15:HIS:O	50:DT:16:VAL:C	2.42	0.57
51:DZ:35:SER:CA	51:DZ:50:ARG:HA	2.32	0.57
1:AA:715:A:H2'	1:AA:716:A:C8	2.37	0.57
1:AA:796:C:OP1	10:AK:127:ARG:HB3	2.04	0.57
1:AA:1134:G:C2	1:AA:1135:U:H1'	2.39	0.57
12:AM:92:ARG:HA	12:AM:92:ARG:NE	2.20	0.57
16:AQ:75:VAL:HG23	16:AQ:76:ARG:N	2.16	0.57
20:AB:94:ARG:HE	20:AB:94:ARG:H	1.51	0.57
20:AB:212:TYR:O	20:AB:216:VAL:HG13	2.04	0.57
23:BB:674:G:H4'	29:BE:69:ARG:HB3	1.84	0.57
23:BB:753:A:H2'	23:BB:754:U:C6	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1061:U:O4'	23:BB:1070:A:H1'	2.04	0.57
23:BB:1076:C:H5"	24:BI:94:LYS:HZ1	1.70	0.57
23:BB:1171:G:H3'	23:BB:1172:C:H4'	1.87	0.57
33:B1:7:LYS:HD3	33:B1:23:THR:HG22	1.87	0.57
39:BX:24:GLU:O	39:BX:28:LEU:HG	2.05	0.57
39:BX:51:ALA:O	39:BX:55:THR:N	2.38	0.57
40:BH:66:ASN:HD22	40:BH:66:ASN:H	1.51	0.57
40:BH:90:LEU:CD1	40:BH:146:VAL:HG11	2.34	0.57
42:BN:54:LEU:HD11	42:BN:62:ASN:HB3	1.86	0.57
47:BF:105:ILE:C	47:BF:108:PRO:HD2	2.25	0.57
48:BG:34:ARG:HD3	48:BG:34:ARG:N	2.20	0.57
1:CA:272:C:H2'	1:CA:273:U:C6	2.39	0.57
6:CG:24:LYS:O	6:CG:28:ILE:HG12	2.04	0.57
9:CJ:55:PRO:HA	13:CN:80:ARG:HH21	1.69	0.57
13:CN:26:LEU:O	13:CN:30:ILE:N	2.37	0.57
23:DB:27:G:H1'	23:DB:513:A:H61	1.69	0.57
23:DB:124:G:O2'	23:DB:125:A:H5"	2.04	0.57
23:DB:647:G:H2'	23:DB:648:G:C8	2.39	0.57
23:DB:1028:A:N6	23:DB:1125:G:H2'	2.20	0.57
23:DB:1060:U:H5	24:DI:131:THR:HG22	1.69	0.57
23:DB:1276:A:O2'	23:DB:1277:G:H5'	2.04	0.57
23:DB:1470:A:H3'	23:DB:1471:G:H8	1.69	0.57
23:DB:1657:U:O2'	26:DD:138:LEU:HD12	2.04	0.57
23:DB:1843:C:H4'	25:DC:253:GLY:HA3	1.85	0.57
23:DB:1923:U:H2'	23:DB:1924:C:H6	1.69	0.57
23:DB:1946:U:H5'	53:D6:123:GLU:OE1	2.04	0.57
23:DB:2081:U:OP1	51:DZ:19:SER:HB3	2.05	0.57
23:DB:2212:A:H1'	23:DB:2213:U:H3	1.69	0.57
23:DB:2369:A:O2'	23:DB:2370:G:H5'	2.04	0.57
44:DQ:65:ASN:O	44:DQ:69:ARG:HB2	2.04	0.57
45:DS:36:LEU:H	45:DS:36:LEU:CD2	2.15	0.57
52:DW:23:LYS:C	52:DW:66:VAL:HB	2.25	0.57
53:D6:36:ALA:HA	53:D6:39:LEU:HD23	1.87	0.57
1:AA:641:U:H4'	7:AH:106:SER:O	2.05	0.57
1:AA:699:C:C2'	1:AA:700:G:H5"	2.31	0.57
1:AA:713:G:H2'	1:AA:714:G:C8	2.40	0.57
1:AA:719:C:H2'	17:AR:38:ILE:HD11	1.85	0.57
1:AA:1237:C:H3'	1:AA:1336:C:H41	1.69	0.57
1:AA:1283:U:H2'	1:AA:1284:C:C6	2.40	0.57
2:AC:76:ILE:HG22	2:AC:80:GLY:HA2	1.87	0.57
8:AI:56:MET:SD	8:AI:57:VAL:N	2.77	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:8:C:O2'	23:BB:9:G:H5'	2.04	0.57
23:BB:104:A:H2'	23:BB:105:C:O4'	2.04	0.57
23:BB:138:U:H2'	23:BB:140:C:H4'	1.86	0.57
23:BB:425:G:O2'	23:BB:426:C:H5'	2.05	0.57
23:BB:587:C:O2'	37:BL:19:LEU:HD13	2.03	0.57
23:BB:947:A:H2'	23:BB:948:C:H6	1.70	0.57
23:BB:1636:U:H2'	23:BB:1637:A:H8	1.69	0.57
23:BB:1655:A:H2'	23:BB:1656:C:O4'	2.05	0.57
23:BB:2283:C:H2'	23:BB:2284:A:H5'	1.85	0.57
23:BB:2556:C:H2'	23:BB:2557:G:O4'	2.05	0.57
24:BI:76:ALA:O	24:BI:80:LYS:HG3	2.05	0.57
27:BK:87:LEU:HB2	27:BK:93:GLN:O	2.04	0.57
27:BK:116:ILE:HD12	27:BK:117:SER:N	2.19	0.57
30:BY:29:ARG:H	30:BY:33:HIS:CD2	2.23	0.57
47:BF:92:GLY:HA2	47:BF:95:MET:HE3	1.86	0.57
47:BF:110:ILE:CG2	47:BF:113:PHE:HB3	2.34	0.57
48:BG:120:ILE:HG13	48:BG:140:ILE:HG22	1.85	0.57
50:BT:25:GLU:OE1	50:BT:30:ILE:HA	2.04	0.57
52:BW:35:ILE:HG12	52:BW:35:ILE:O	2.04	0.57
53:B6:42:LYS:HA	53:B6:50:VAL:O	2.05	0.57
53:B6:157:ALA:O	53:B6:161:ILE:HG12	2.05	0.57
1:CA:49:U:O2'	1:CA:50:A:H2'	2.04	0.57
1:CA:1460:C:H2'	1:CA:1461:G:C8	2.38	0.57
1:CA:1534:A:H62	21:CU:44:ARG:CZ	2.17	0.57
5:CF:71:ILE:HG13	5:CF:72:ASP:N	2.20	0.57
8:CI:5:TYR:CD2	8:CI:88:GLU:HB2	2.40	0.57
8:CI:94:ARG:HH11	8:CI:94:ARG:CB	2.16	0.57
10:CK:16:SER:HA	10:CK:79:LYS:HE3	1.87	0.57
21:CU:36:PHE:CB	21:CU:40:PRO:HD3	2.18	0.57
23:DB:170:U:H2'	23:DB:171:U:H6	1.69	0.57
23:DB:251:A:H2'	23:DB:252:G:O4'	2.05	0.57
23:DB:657:U:H2'	23:DB:658:U:C6	2.39	0.57
23:DB:1590:A:H2'	23:DB:1591:A:H8	1.69	0.57
23:DB:1870:C:H3'	23:DB:1871:A:C8	2.38	0.57
23:DB:2041:U:H2'	23:DB:2042:A:C8	2.40	0.57
23:DB:2502:G:H5'	23:DB:2503:A:C5'	2.32	0.57
23:DB:2720:U:H5"	28:DP:52:ARG:HH22	1.65	0.57
23:DB:2849:U:N3	23:DB:2867:G:C8	2.73	0.57
29:DE:29:HIS:HA	29:DE:32:VAL:HG22	1.87	0.57
35:DV:53:LYS:NZ	35:DV:54:ALA:HB3	2.18	0.57
38:DM:68:PHE:CG	38:DM:69:PRO:HD2	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DH:135:HIS:CG	40:DH:136:SER:H	2.22	0.57
42:DN:33:ILE:HD12	42:DN:33:ILE:O	2.04	0.57
42:DN:97:ILE:HD12	42:DN:98:LEU:H	1.68	0.57
45:DS:29:VAL:HA	45:DS:32:ALA:HB3	1.85	0.57
46:DU:35:VAL:HB	46:DU:38:ILE:HB	1.85	0.57
1:AA:706:A:C4'	10:AK:30:ILE:HD11	2.35	0.57
1:AA:1313:U:OP1	18:AS:6:LYS:HD3	2.05	0.57
12:AM:21:ILE:HB	12:AM:24:VAL:CG2	2.34	0.57
23:BB:417:C:H2'	23:BB:418:C:H6	1.69	0.57
23:BB:639:U:H2'	23:BB:640:C:C6	2.40	0.57
23:BB:688:U:O2'	23:BB:689:A:H5'	2.05	0.57
23:BB:854:C:O2'	23:BB:855:G:H5'	2.05	0.57
23:BB:2088:A:H2'	23:BB:2089:C:C6	2.40	0.57
23:BB:2254:C:O2	53:B6:150:SER:HB2	2.04	0.57
23:BB:2472:G:C2'	23:BB:2475:C:H42	2.17	0.57
23:BB:2652:C:O2'	23:BB:2653:U:H5'	2.04	0.57
23:BB:2698:U:H2'	23:BB:2699:C:C6	2.39	0.57
26:BD:12:THR:HG22	26:BD:13:ARG:H	1.70	0.57
28:BP:24:THR:O	28:BP:25:VAL:HG22	2.04	0.57
31:B0:41:HIS:HB3	42:BN:99:LYS:HB2	1.85	0.57
31:B0:41:HIS:HB2	42:BN:99:LYS:O	2.04	0.57
33:B1:8:ILE:CD1	33:B1:51:ALA:HA	2.35	0.57
37:BL:57:LEU:HD13	37:BL:60:ARG:NH1	2.20	0.57
44:BQ:80:ASN:O	44:BQ:83:LYS:HB3	2.04	0.57
45:BS:29:VAL:HA	45:BS:32:ALA:HB3	1.86	0.57
45:BS:36:LEU:H	45:BS:36:LEU:CD2	2.16	0.57
47:BF:34:THR:O	47:BF:89:THR:HA	2.03	0.57
48:BG:15:ASP:HB3	48:BG:26:LYS:N	2.11	0.57
48:BG:24:THR:C	48:BG:25:ILE:HD12	2.25	0.57
48:BG:53:PRO:HG3	48:BG:61:TRP:CD2	2.40	0.57
48:BG:58:ALA:C	48:BG:60:GLY:H	2.07	0.57
49:BR:2:TYR:CB	49:BR:42:ALA:HB2	2.33	0.57
52:BW:41:GLY:HA2	52:BW:44:PHE:CD2	2.40	0.57
53:B6:114:LEU:O	53:B6:118:VAL:HG23	2.05	0.57
53:B6:151:GLU:O	53:B6:155:LYS:HG2	2.05	0.57
1:CA:312:C:H2'	1:CA:313:A:C8	2.40	0.57
1:CA:707:U:H2'	1:CA:708:C:C6	2.40	0.57
1:CA:1352:C:H2'	1:CA:1353:G:H8	1.69	0.57
1:CA:1521:C:O2'	1:CA:1522:U:H5'	2.05	0.57
4:CE:81:GLN:HG2	4:CE:148:SER:HA	1.87	0.57
12:CM:11:HIS:H	12:CM:45:SER:HB3	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CN:10:VAL:HB	13:CN:11:LYS:NZ	2.20	0.57
20:CB:49:PHE:HA	20:CB:212:TYR:OH	2.05	0.57
20:CB:221:ARG:HH11	20:CB:221:ARG:HB3	1.69	0.57
21:CU:36:PHE:HD2	21:CU:39:LYS:HD2	1.69	0.57
23:DB:265:A:O2'	23:DB:266:G:H4'	2.05	0.57
23:DB:1727:C:H2'	23:DB:1728:C:H6	1.67	0.57
23:DB:1739:A:H2'	23:DB:1740:G:O4'	2.04	0.57
23:DB:2884:U:H2'	23:DB:2885:G:C8	2.40	0.57
23:DB:2897:U:H2'	23:DB:2898:U:C6	2.40	0.57
24:DI:123:ALA:HA	24:DI:126:ARG:HH12	1.68	0.57
26:DD:46:ARG:NH1	26:DD:85:ALA:HA	2.18	0.57
35:DV:29:ILE:HD13	35:DV:31:TYR:HE2	1.70	0.57
36:D2:31:LEU:HD22	36:D2:42:LEU:HD12	1.86	0.57
39:DX:52:ARG:O	39:DX:55:THR:HB	2.05	0.57
44:DQ:91:ARG:HB2	49:DR:11:GLN:OE1	2.05	0.57
47:DF:134:GLN:C	47:DF:136:ILE:H	2.06	0.57
1:AA:376:G:H2'	1:AA:377:G:H8	1.70	0.57
1:AA:474:G:H2'	1:AA:475:C:C6	2.39	0.57
1:AA:1080:A:OP1	4:AE:51:LYS:HD2	2.05	0.57
2:AC:122:GLN:HB3	2:AC:127:VAL:HG21	1.87	0.57
13:AN:52:ARG:HH11	13:AN:58:ARG:HH21	1.53	0.57
15:AP:68:SER:OG	15:AP:71:VAL:HG12	2.05	0.57
20:AB:213:LEU:O	20:AB:216:VAL:HG22	2.04	0.57
21:AU:16:ARG:NH1	21:AU:19:LYS:HE2	2.19	0.57
23:BB:96:C:H4'	39:BX:41:HIS:ND1	2.20	0.57
23:BB:170:U:H2'	23:BB:171:U:H6	1.69	0.57
23:BB:654:A:C2'	23:BB:655:A:H5"	2.34	0.57
23:BB:2070:A:H2'	23:BB:2071:A:C8	2.39	0.57
25:BC:177:SER:O	25:BC:270:ARG:HG3	2.05	0.57
32:B4:19:ARG:C	32:B4:21:GLY:H	2.07	0.57
42:BN:97:ILE:HD12	42:BN:98:LEU:H	1.69	0.57
45:BS:73:LYS:HE3	45:BS:74:ILE:N	2.10	0.57
47:BF:134:GLN:C	47:BF:136:ILE:H	2.08	0.57
47:BF:169:LEU:HB3	47:BF:174:PHE:CD1	2.39	0.57
48:BG:36:LEU:HD22	48:BG:36:LEU:N	2.19	0.57
48:BG:153:PRO:HA	48:BG:159:LYS:O	2.05	0.57
53:B6:14:MET:HB3	53:B6:168:PHE:CD2	2.40	0.57
1:CA:796:C:OP1	10:CK:127:ARG:HB3	2.05	0.57
1:CA:882:C:O2'	1:CA:883:C:H5'	2.05	0.57
1:CA:1078:U:H2'	1:CA:1079:G:O4'	2.05	0.57
1:CA:1387:G:H2'	1:CA:1388:C:H6	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CJ:56:HIS:O	9:CJ:57:VAL:HG12	2.04	0.57
10:CK:58:THR:HB	10:CK:59:PRO:HD2	1.86	0.57
13:CN:20:PHE:CD1	13:CN:24:ALA:HB2	2.38	0.57
15:CP:59:HIS:O	15:CP:63:GLN:HG3	2.03	0.57
22:DA:5:U:H2'	22:DA:6:G:C8	2.39	0.57
23:DB:582:A:H2'	23:DB:583:G:C8	2.39	0.57
23:DB:616:A:H3'	23:DB:617:G:C8	2.35	0.57
23:DB:813:U:H2'	23:DB:814:C:C6	2.39	0.57
23:DB:996:A:H4'	44:DQ:91:ARG:CD	2.35	0.57
23:DB:1061:U:O4'	23:DB:1070:A:H1'	2.04	0.57
23:DB:1274:A:N3	23:DB:1297:C:H1'	2.19	0.57
23:DB:1486:U:H2'	23:DB:1487:U:H6	1.69	0.57
23:DB:1568:G:H4'	25:DC:58:LYS:HB3	1.85	0.57
24:DI:99:LYS:HD3	24:DI:99:LYS:H	1.69	0.57
29:DE:141:MET:O	29:DE:143:LEU:HG	2.05	0.57
47:DF:155:ILE:H	47:DF:155:ILE:HD12	1.70	0.57
50:DT:57:VAL:HG13	50:DT:58:VAL:N	2.20	0.57
53:D6:67:VAL:HG12	53:D6:100:TYR:HE1	1.70	0.57
1:AA:812:G:N3	1:AA:812:G:H2'	2.19	0.57
1:AA:1225:A:H3'	1:AA:1226:C:H6	1.70	0.57
1:AA:1234:C:H1'	1:AA:1364:U:O2	2.04	0.57
1:AA:1450:U:H2'	1:AA:1452:C:C4	2.40	0.57
1:AA:1511:G:O2'	1:AA:1512:U:H5'	2.05	0.57
5:AF:3:HIS:CD2	5:AF:65:GLU:HG3	2.40	0.57
17:AR:33:THR:HG23	17:AR:37:LYS:O	2.05	0.57
20:AB:45:THR:HA	20:AB:48:MET:HG3	1.86	0.57
20:AB:126:ASP:C	20:AB:127:LYS:HD2	2.26	0.57
22:BA:22:U:H2'	22:BA:23:G:C8	2.40	0.57
23:BB:17:G:H2'	23:BB:18:U:H6	1.69	0.57
23:BB:107:G:O2'	23:BB:108:G:H5'	2.05	0.57
23:BB:154:U:H2'	23:BB:155:A:C8	2.40	0.57
23:BB:526:A:N6	23:BB:2626:C:H4'	2.20	0.57
23:BB:736:C:H2'	23:BB:737:C:C6	2.40	0.57
23:BB:813:U:H2'	23:BB:814:C:C6	2.39	0.57
23:BB:909:A:H2'	23:BB:912:C:H5	1.69	0.57
23:BB:1400:U:H2'	23:BB:1401:G:C8	2.40	0.57
23:BB:1507:C:H2'	23:BB:1508:A:H4'	1.86	0.57
23:BB:1533:C:H2'	23:BB:1534:U:C6	2.40	0.57
23:BB:1872:A:H8	23:BB:1872:A:O5'	1.87	0.57
23:BB:2041:U:H2'	23:BB:2042:A:C8	2.40	0.57
23:BB:2229:U:H2'	23:BB:2230:G:H8	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2820:A:OP1	42:BN:4:ARG:HA	2.05	0.57
24:BI:96:LYS:N	24:BI:96:LYS:HD2	2.20	0.57
25:BC:18:VAL:O	25:BC:18:VAL:HG13	2.05	0.57
37:BL:131:ALA:HA	37:BL:134:ALA:HB3	1.85	0.57
41:BJ:128:ASN:C	41:BJ:129:GLU:HG3	2.24	0.57
1:CA:60:A:H4'	1:CA:61:G:OP1	2.05	0.57
1:CA:552:U:H2'	1:CA:553:A:C8	2.40	0.57
1:CA:1029:U:O5'	1:CA:1029:U:H6	1.88	0.57
1:CA:1149:C:H2'	1:CA:1150:A:H8	1.68	0.57
1:CA:1492:A:H2'	1:CA:1493:A:C8	2.40	0.57
20:CB:10:LYS:HB3	20:CB:211:LEU:HD21	1.87	0.57
23:DB:550:C:H2'	23:DB:551:G:H8	1.70	0.57
23:DB:654:A:H2'	23:DB:655:A:H5"	1.86	0.57
23:DB:730:A:O2'	23:DB:731:C:H5'	2.05	0.57
23:DB:782:A:N7	25:DC:219:VAL:HG21	2.20	0.57
23:DB:871:U:H2'	23:DB:872:U:H6	1.70	0.57
23:DB:1149:G:H2'	23:DB:1150:C:H6	1.68	0.57
23:DB:1210:G:H5'	23:DB:1212:G:O4'	2.05	0.57
23:DB:1291:C:O2'	23:DB:1292:G:H5'	2.04	0.57
23:DB:1487:U:H2'	23:DB:1488:C:H6	1.70	0.57
23:DB:1636:U:H2'	23:DB:1637:A:C8	2.40	0.57
23:DB:2329:U:H2'	23:DB:2330:G:C8	2.40	0.57
24:DI:78:LEU:HA	24:DI:81:LYS:HE2	1.87	0.57
27:DK:47:ILE:HG23	27:DK:48:PRO:CD	2.35	0.57
34:D3:22:LYS:HB2	34:D3:48:MET:SD	2.44	0.57
38:DM:35:ALA:CB	38:DM:100:LYS:H	2.18	0.57
45:DS:42:LYS:O	45:DS:45:VAL:HG22	2.04	0.57
46:DU:84:PHE:HD2	46:DU:91:LYS:HG2	1.70	0.57
50:DT:14:PRO:HA	50:DT:32:LEU:CB	2.35	0.57
50:DT:43:ILE:O	50:DT:47:VAL:HG23	2.05	0.57
50:DT:57:VAL:HG22	50:DT:58:VAL:N	2.16	0.57
1:AA:93:U:OP1	1:AA:94:G:H5"	2.05	0.56
1:AA:313:A:H2'	1:AA:314:C:C6	2.40	0.56
1:AA:575:G:H4'	1:AA:576:C:O5'	2.05	0.56
1:AA:636:U:H2'	1:AA:637:C:H6	1.70	0.56
3:AD:84:ASN:HD22	4:AE:101:GLY:HA2	1.68	0.56
8:AI:5:TYR:HD2	8:AI:88:GLU:HB2	1.68	0.56
11:AL:81:ILE:CG2	11:AL:94:TYR:HB3	2.35	0.56
18:AS:35:ARG:HH21	18:AS:52:ASN:HA	1.69	0.56
23:BB:383:C:H5"	23:BB:385:C:OP2	2.05	0.56
23:BB:418:C:H2'	23:BB:419:U:C6	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:510:C:H2'	23:BB:511:U:O4'	2.04	0.56
23:BB:1345:C:H5'	23:BB:1396:U:H5	1.70	0.56
23:BB:1826:G:H2'	23:BB:1827:U:C6	2.40	0.56
25:BC:104:LEU:H	25:BC:104:LEU:HD12	1.70	0.56
28:BP:61:ARG:NH1	28:BP:100:ARG:HA	2.20	0.56
29:BE:29:HIS:HA	29:BE:32:VAL:HG22	1.87	0.56
32:B4:7:VAL:HG23	32:B4:35:GLN:CB	2.33	0.56
36:B2:22:MET:SD	36:B2:28:ARG:HG2	2.44	0.56
46:BU:81:ARG:HH21	46:BU:81:ARG:N	2.00	0.56
47:BF:134:GLN:NE2	47:BF:136:ILE:HD13	2.20	0.56
1:CA:441:A:H61	1:CA:493:A:H61	1.53	0.56
1:CA:1020:G:N3	1:CA:1020:G:H2'	2.19	0.56
1:CA:1392:G:O2'	1:CA:1393:U:H5'	2.05	0.56
1:CA:1422:G:O2'	1:CA:1423:G:H5'	2.04	0.56
1:CA:1450:U:H2'	1:CA:1452:C:C4	2.40	0.56
8:CI:5:TYR:HD2	8:CI:88:GLU:HB2	1.70	0.56
8:CI:56:MET:HG3	8:CI:57:VAL:HG23	1.85	0.56
16:CQ:45:VAL:HG12	16:CQ:46:HIS:N	2.19	0.56
18:CS:35:ARG:HH21	18:CS:52:ASN:HA	1.68	0.56
22:DA:12:C:H4'	22:DA:13:G:OP1	2.05	0.56
22:DA:35:C:C2'	22:DA:36:C:H5'	2.35	0.56
23:DB:591:U:H1'	34:D3:1:PRO:N	2.20	0.56
23:DB:636:G:O5'	37:DL:128:THR:HG22	2.05	0.56
23:DB:670:A:H5"	37:DL:42:SER:HB2	1.88	0.56
23:DB:1487:U:H2'	23:DB:1488:C:C6	2.39	0.56
23:DB:1564:C:H2'	23:DB:1565:C:C6	2.40	0.56
23:DB:2598:A:OP1	25:DC:233:GLY:HA2	2.03	0.56
23:DB:2900:A:O2'	23:DB:2901:C:H5'	2.05	0.56
27:DK:70:ARG:HB3	27:DK:76:VAL:HG13	1.87	0.56
38:DM:131:VAL:HG12	38:DM:132:THR:H	1.69	0.56
46:DU:66:VAL:O	46:DU:69:VAL:HG22	2.05	0.56
53:D6:14:MET:SD	53:D6:164:ILE:HG22	2.45	0.56
1:AA:1342:C:H2'	1:AA:1343:G:C8	2.40	0.56
10:AK:17:ASP:HB3	10:AK:80:ASN:HD21	1.67	0.56
20:AB:86:CYS:HB3	20:AB:88:GLN:NE2	2.19	0.56
22:BA:12:C:H4'	22:BA:13:G:OP1	2.06	0.56
23:BB:1149:G:H2'	23:BB:1150:C:C6	2.39	0.56
23:BB:1351:C:H2'	23:BB:1352:U:O4'	2.05	0.56
23:BB:1353:A:H2'	23:BB:1354:A:C8	2.40	0.56
23:BB:1564:C:H2'	23:BB:1565:C:C6	2.40	0.56
27:BK:120:PRO:HA	28:BP:65:ASN:ND2	2.19	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:107:VAL:O	47:BF:110:ILE:HG22	2.04	0.56
50:BT:5:GLU:HA	50:BT:8:LEU:HD12	1.87	0.56
1:CA:509:A:O2'	1:CA:510:A:H5'	2.06	0.56
1:CA:1018:G:H2'	1:CA:1019:A:H8	1.70	0.56
16:CQ:75:VAL:HG23	16:CQ:76:ARG:N	2.16	0.56
23:DB:234:U:H2'	23:DB:235:U:H6	1.71	0.56
23:DB:414:C:H2'	23:DB:415:A:C8	2.40	0.56
23:DB:441:U:H2'	23:DB:442:G:C8	2.39	0.56
23:DB:611:C:H2'	23:DB:612:G:O4'	2.04	0.56
23:DB:992:C:H4'	49:DR:74:ILE:HD13	1.87	0.56
23:DB:1843:C:H5"	25:DC:250:GLN:HE21	1.71	0.56
23:DB:2385:C:H2'	23:DB:2386:A:C8	2.39	0.56
23:DB:2391:G:H1'	23:DB:2424:C:N4	2.20	0.56
23:DB:2529:G:H5"	48:DG:174:LYS:HB2	1.87	0.56
23:DB:2685:G:O2'	23:DB:2686:G:H5'	2.04	0.56
23:DB:2784:U:O2'	23:DB:2785:C:H5'	2.05	0.56
41:DJ:59:ALA:O	41:DJ:62:VAL:HG12	2.04	0.56
46:DU:2:ALA:HB3	46:DU:5:ARG:NH2	2.20	0.56
46:DU:80:ASP:HB2	46:DU:96:LYS:N	2.19	0.56
48:DG:17:LYS:HB3	48:DG:24:THR:H	1.69	0.56
48:DG:66:THR:O	48:DG:70:LEU:HB2	2.06	0.56
51:DZ:69:ALA:HA	51:DZ:72:ARG:HH12	1.71	0.56
1:AA:56:U:H2'	1:AA:57:G:C8	2.38	0.56
1:AA:502:A:H2'	1:AA:503:C:H6	1.69	0.56
1:AA:512:U:O2'	1:AA:513:C:H5'	2.06	0.56
1:AA:549:C:H2'	1:AA:550:G:C8	2.40	0.56
1:AA:763:G:H2'	1:AA:764:C:C6	2.40	0.56
1:AA:1180:A:P	8:AI:98:ARG:HH22	2.28	0.56
1:AA:1339:A:H2'	1:AA:1340:A:O4'	2.05	0.56
1:AA:1463:U:H2'	1:AA:1464:U:C6	2.40	0.56
2:AC:2:GLN:HE22	2:AC:3:LYS:NZ	2.04	0.56
5:AF:47:LEU:HD12	5:AF:54:LEU:O	2.04	0.56
11:AL:30:ARG:O	11:AL:57:THR:HG23	2.05	0.56
15:AP:23:ASP:O	15:AP:26:ASN:HB2	2.05	0.56
16:AQ:45:VAL:HG12	16:AQ:46:HIS:H	1.71	0.56
16:AQ:68:LYS:C	16:AQ:70:LYS:H	2.09	0.56
20:AB:45:THR:HG23	20:AB:200:PRO:HG2	1.87	0.56
20:AB:124:THR:HA	20:AB:127:LYS:NZ	2.20	0.56
23:BB:27:G:HO2'	23:BB:28:A:H8	1.50	0.56
23:BB:392:U:O2'	23:BB:393:C:H5'	2.06	0.56
23:BB:485:C:O2'	23:BB:486:C:H5'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:564:C:H1'	44:BQ:36:GLN:OE1	2.06	0.56
23:BB:828:U:H2'	23:BB:829:A:C8	2.40	0.56
23:BB:1000:A:H2'	23:BB:1001:A:C8	2.40	0.56
23:BB:1056:G:H8	23:BB:1056:G:O5'	1.88	0.56
23:BB:1141:U:H5"	41:BJ:27:ARG:HH21	1.71	0.56
23:BB:1386:C:H2'	23:BB:1387:A:C8	2.41	0.56
23:BB:1433:A:H2'	23:BB:1434:A:O4'	2.05	0.56
23:BB:1553:A:O2'	23:BB:1554:U:H2'	2.05	0.56
23:BB:2212:A:H1'	23:BB:2213:U:N3	2.19	0.56
26:BD:38:LYS:HE2	26:BD:43:ASP:OD2	2.05	0.56
30:BY:6:ILE:N	30:BY:6:ILE:HD13	2.21	0.56
31:B0:12:ARG:HD2	31:B0:16:ARG:NH1	2.21	0.56
31:B0:54:ILE:H	42:BN:118:ARG:HH12	1.52	0.56
40:BH:41:LYS:HA	40:BH:44:ILE:HG13	1.87	0.56
42:BN:58:ASP:O	42:BN:59:SER:HB3	2.05	0.56
43:BO:82:ALA:O	43:BO:87:ILE:HB	2.04	0.56
44:BQ:26:ALA:HB1	44:BQ:30:VAL:CG1	2.35	0.56
44:BQ:93:ILE:O	44:BQ:96:ASP:HB3	2.05	0.56
48:BG:17:LYS:O	48:BG:23:ILE:HG23	2.05	0.56
50:BT:7:LEU:HA	50:BT:9:LYS:HE3	1.86	0.56
52:BW:51:GLY:HA3	52:BW:59:PHE:HB2	1.87	0.56
1:CA:401:C:H2'	1:CA:402:G:C8	2.40	0.56
1:CA:415:A:H3'	1:CA:416:G:H8	1.69	0.56
1:CA:868:C:H2'	1:CA:869:G:O4'	2.06	0.56
1:CA:958:A:H61	18:CS:53:GLY:HA3	1.69	0.56
1:CA:991:U:H2'	1:CA:1212:U:C2	2.40	0.56
1:CA:1010:U:O2'	1:CA:1011:C:H5'	2.05	0.56
1:CA:1212:U:H5'	1:CA:1213:A:OP1	2.06	0.56
1:CA:1339:A:H2'	1:CA:1340:A:O4'	2.05	0.56
2:CC:82:ASP:O	2:CC:86:LEU:HG	2.05	0.56
6:CG:30:MET:HA	6:CG:38:ALA:HB2	1.87	0.56
8:CI:29:ILE:HA	8:CI:64:ILE:HB	1.87	0.56
11:CL:81:ILE:CG2	11:CL:94:TYR:HB3	2.36	0.56
12:CM:10:ASP:HB3	12:CM:45:SER:HB3	1.88	0.56
12:CM:21:ILE:HB	12:CM:24:VAL:CG2	2.31	0.56
12:CM:94:LEU:HB3	12:CM:95:PRO:HD2	1.86	0.56
12:CM:102:LYS:HG3	12:CM:103:THR:OG1	2.06	0.56
19:CT:79:THR:HA	19:CT:82:ILE:HG12	1.87	0.56
20:CB:96:LEU:CD2	20:CB:146:SER:HB2	2.36	0.56
20:CB:119:GLN:HB3	20:CB:125:PHE:HB2	1.87	0.56
23:DB:76:C:O2'	23:DB:77:G:H5'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:91:A:H1'	23:DB:92:U:C6	2.41	0.56
23:DB:184:C:H2'	23:DB:185:G:C8	2.40	0.56
23:DB:374:A:H61	23:DB:400:G:H1'	1.71	0.56
23:DB:538:A:H2'	23:DB:539:G:O4'	2.04	0.56
23:DB:557:C:H2'	23:DB:558:U:C6	2.40	0.56
23:DB:666:A:H4'	37:DL:48:ARG:HD3	1.87	0.56
23:DB:680:C:H2'	23:DB:681:G:C8	2.39	0.56
23:DB:776:G:H4'	23:DB:777:G:O5'	2.05	0.56
23:DB:823:C:H2'	23:DB:824:U:C6	2.40	0.56
23:DB:850:U:H2'	23:DB:851:C:C6	2.40	0.56
23:DB:873:C:H2'	23:DB:874:G:H8	1.68	0.56
23:DB:1061:U:H4'	23:DB:1070:A:O3'	2.05	0.56
23:DB:1098:A:C4	24:DI:3:LYS:O	2.59	0.56
23:DB:1131:G:N2	23:DB:2024:G:H21	2.03	0.56
23:DB:1161:C:H1'	49:DR:9:GLY:HA3	1.86	0.56
23:DB:1316:U:O2'	23:DB:1317:G:H5'	2.04	0.56
23:DB:1442:U:H2'	23:DB:1443:U:H6	1.68	0.56
23:DB:2066:C:O2'	23:DB:2067:G:H5'	2.05	0.56
23:DB:2318:G:C6	23:DB:2319:G:N1	2.73	0.56
23:DB:2352:A:N1	52:DW:30:VAL:HG11	2.21	0.56
23:DB:2520:C:O2'	23:DB:2521:C:H5'	2.06	0.56
23:DB:2757:A:H2'	23:DB:2757:A:N3	2.19	0.56
23:DB:2784:U:H2'	23:DB:2785:C:C6	2.41	0.56
23:DB:2785:C:H2'	23:DB:2786:U:H6	1.70	0.56
26:DD:12:THR:HG22	26:DD:13:ARG:H	1.70	0.56
27:DK:43:ILE:CG2	27:DK:46:ALA:HB2	2.35	0.56
28:DP:4:ILE:HG22	28:DP:5:LYS:N	2.12	0.56
30:DY:4:ILE:CD1	30:DY:58:GLU:HG3	2.35	0.56
35:DV:70:ILE:HD13	35:DV:71:LYS:N	2.16	0.56
37:DL:57:LEU:C	37:DL:59:ARG:H	2.07	0.56
39:DX:39:GLN:O	39:DX:42:LEU:HB2	2.05	0.56
40:DH:40:THR:O	40:DH:42:LYS:N	2.38	0.56
43:DO:70:ALA:O	43:DO:74:VAL:HG23	2.04	0.56
43:DO:82:ALA:O	43:DO:87:ILE:HB	2.05	0.56
50:DT:27:SER:O	50:DT:28:ASN:HB3	2.06	0.56
52:DW:41:GLY:HA2	52:DW:44:PHE:CD2	2.40	0.56
1:AA:312:C:H2'	1:AA:313:A:H8	1.71	0.56
1:AA:484:G:H4'	1:AA:485:U:H5'	1.88	0.56
1:AA:709:U:H2'	1:AA:710:G:H8	1.70	0.56
1:AA:736:C:H2'	1:AA:737:C:H6	1.70	0.56
1:AA:1018:G:H2'	1:AA:1019:A:H8	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.40	0.56
1:AA:1461:G:H2'	1:AA:1462:C:H6	1.70	0.56
3:AD:98:ASP:HB3	3:AD:132:ALA:HB1	1.88	0.56
10:AK:43:TRP:HA	10:AK:69:CYS:SG	2.45	0.56
11:AL:43:LYS:HE3	11:AL:44:PRO:HD3	1.88	0.56
12:AM:28:ARG:NH2	12:AM:62:PHE:HB2	2.20	0.56
20:AB:10:LYS:HB3	20:AB:211:LEU:HD21	1.88	0.56
20:AB:19:THR:O	20:AB:37:VAL:HA	2.05	0.56
22:BA:91:C:H2'	22:BA:92:C:C6	2.41	0.56
23:BB:493:G:H2'	23:BB:494:G:O4'	2.05	0.56
23:BB:667:U:H2'	23:BB:668:A:O4'	2.06	0.56
23:BB:1028:A:H2'	23:BB:1029:A:C8	2.40	0.56
23:BB:1654:A:H2'	23:BB:1655:A:C8	2.40	0.56
23:BB:2019:A:H4'	44:BQ:33:VAL:HG11	1.87	0.56
23:BB:2250:G:H8	23:BB:2250:G:O5'	1.89	0.56
23:BB:2828:G:O2'	23:BB:2829:A:H5'	2.05	0.56
23:BB:2898:U:H2'	23:BB:2899:A:H8	1.70	0.56
41:BJ:88:THR:HG22	41:BJ:91:GLU:HG3	1.87	0.56
48:BG:85:LYS:HB2	48:BG:164:ALA:HB3	1.88	0.56
49:BR:19:THR:HB	49:BR:96:VAL:O	2.05	0.56
10:CK:77:GLY:O	10:CK:79:LYS:HE3	2.05	0.56
11:CL:80:LEU:HD13	11:CL:101:LEU:HD11	1.87	0.56
13:CN:79:SER:OG	13:CN:82:LYS:HG2	2.06	0.56
23:DB:115:C:O2'	23:DB:116:C:H5'	2.06	0.56
23:DB:285:G:H2'	23:DB:286:U:C6	2.41	0.56
23:DB:639:U:H2'	23:DB:640:C:H6	1.71	0.56
23:DB:813:U:H2'	23:DB:814:C:H6	1.69	0.56
23:DB:1210:G:H5'	23:DB:1212:G:H5'	1.86	0.56
23:DB:1429:G:H2'	23:DB:1430:G:H8	1.71	0.56
23:DB:1439:A:C6	23:DB:1552:A:N7	2.74	0.56
23:DB:1486:U:H2'	23:DB:1487:U:C6	2.39	0.56
23:DB:1553:A:O2'	23:DB:1554:U:H2'	2.06	0.56
23:DB:1939:U:H5'	23:DB:1939:U:H6	1.71	0.56
23:DB:2436:G:O2'	23:DB:2437:G:H5'	2.05	0.56
23:DB:2547:A:H2'	23:DB:2548:U:C6	2.41	0.56
25:DC:18:VAL:O	25:DC:18:VAL:HG13	2.04	0.56
26:DD:4:LEU:HD21	26:DD:100:LEU:HB3	1.87	0.56
26:DD:12:THR:HG22	26:DD:13:ARG:N	2.20	0.56
26:DD:122:VAL:H	26:DD:127:PHE:HB2	1.70	0.56
29:DE:61:ARG:NH1	29:DE:64:GLY:HA3	2.20	0.56
35:DV:30:ILE:HA	35:DV:91:PHE:O	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DM:37:GLY:HA3	38:DM:127:LYS:HZ3	1.71	0.56
40:DH:57:LYS:HG3	40:DH:58:LEU:HD23	1.86	0.56
41:DJ:23:LYS:HZ2	41:DJ:142:ILE:HG12	1.70	0.56
42:DN:58:ASP:O	42:DN:59:SER:HB3	2.04	0.56
47:DF:12:VAL:O	47:DF:16:MET:HG2	2.04	0.56
1:AA:178:C:O2'	1:AA:179:A:H5'	2.06	0.56
1:AA:714:G:N2	1:AA:777:A:H1'	2.20	0.56
1:AA:920:U:H2'	1:AA:921:U:H6	1.70	0.56
10:AK:75:GLU:CD	10:AK:75:GLU:H	2.08	0.56
12:AM:94:LEU:HB3	12:AM:95:PRO:HD2	1.88	0.56
13:AN:79:SER:OG	13:AN:82:LYS:HG2	2.05	0.56
16:AQ:66:LEU:HD13	16:AQ:70:LYS:HG2	1.87	0.56
20:AB:205:ALA:O	20:AB:209:VAL:HG22	2.06	0.56
22:BA:32:U:H1'	22:BA:52:A:N7	2.21	0.56
23:BB:118:A:OP2	23:BB:119:A:H2'	2.06	0.56
23:BB:252:G:O2'	23:BB:253:C:H5'	2.05	0.56
23:BB:611:C:H2'	23:BB:612:G:O4'	2.05	0.56
23:BB:1032:A:H1'	32:B4:23:ILE:HD13	1.87	0.56
23:BB:1177:G:H2'	23:BB:1178:C:C6	2.40	0.56
23:BB:1454:C:H1'	42:BN:60:VAL:HG13	1.87	0.56
23:BB:1675:C:H2'	23:BB:1676:A:O4'	2.06	0.56
23:BB:2026:U:H2'	23:BB:2027:G:C8	2.39	0.56
23:BB:2147:A:H5'	23:BB:2148:G:C4'	2.36	0.56
23:BB:2297:A:H61	23:BB:2319:G:H1'	1.71	0.56
24:BI:10:LEU:O	24:BI:10:LEU:HD12	2.05	0.56
24:BI:75:ALA:HB2	24:BI:112:LYS:HE2	1.86	0.56
25:BC:202:ARG:NH1	25:BC:213:ARG:HE	2.03	0.56
27:BK:43:ILE:CG2	27:BK:46:ALA:HB2	2.35	0.56
38:BM:61:GLY:HA2	38:BM:107:GLY:HA3	1.88	0.56
40:BH:27:ARG:H	40:BH:31:VAL:CG2	2.19	0.56
41:BJ:25:LEU:HD22	41:BJ:26:GLY:N	2.16	0.56
44:BQ:109:VAL:HG12	44:BQ:113:LYS:HE3	1.88	0.56
46:BU:78:LYS:CD	46:BU:79:ALA:H	2.17	0.56
1:CA:237:G:H5"	16:CQ:26:ARG:NH2	2.21	0.56
1:CA:658:C:O2'	1:CA:659:U:H5'	2.06	0.56
3:CD:47:LEU:HD23	3:CD:51:GLY:C	2.25	0.56
3:CD:106:PHE:CD1	3:CD:144:ILE:HD11	2.40	0.56
5:CF:71:ILE:O	5:CF:75:GLU:HG3	2.06	0.56
12:CM:3:ILE:HA	12:CM:56:ARG:HH11	1.69	0.56
23:DB:178:G:O2'	23:DB:179:C:H5'	2.06	0.56
23:DB:283:G:H3'	23:DB:284:U:H5"	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:521:U:H2'	23:DB:522:A:C8	2.41	0.56
23:DB:1932:A:H2'	23:DB:1933:G:O4'	2.06	0.56
23:DB:2144:G:H2'	23:DB:2145:C:O3'	2.05	0.56
23:DB:2189:U:H2'	23:DB:2190:G:H5'	1.86	0.56
23:DB:2876:G:H5"	28:DP:2:ASN:HB2	1.87	0.56
30:DY:15:ARG:O	30:DY:20:LYS:HE3	2.05	0.56
35:DV:80:HIS:HD2	35:DV:82:TYR:H	1.54	0.56
40:DH:65:ALA:CB	40:DH:138:VAL:HG21	2.29	0.56
41:DJ:81:ILE:HG23	41:DJ:82:GLY:N	2.15	0.56
42:DN:54:LEU:HD11	42:DN:62:ASN:HB3	1.87	0.56
44:DQ:93:ILE:O	44:DQ:96:ASP:HB3	2.06	0.56
48:DG:30:GLY:CA	48:DG:78:VAL:HA	2.34	0.56
53:D6:135:GLU:O	53:D6:139:LYS:HG3	2.06	0.56
1:AA:129:A:H1'	1:AA:130:A:C8	2.40	0.56
1:AA:501:C:H2'	1:AA:502:A:H8	1.69	0.56
1:AA:1123:U:O2'	1:AA:1124:G:H5'	2.06	0.56
1:AA:1149:C:H2'	1:AA:1150:A:H8	1.70	0.56
2:AC:185:THR:HG22	2:AC:198:LYS:HA	1.87	0.56
6:AG:134:VAL:HB	6:AG:137:ARG:NH2	2.20	0.56
8:AI:62:LEU:HD22	8:AI:62:LEU:H	1.70	0.56
8:AI:94:ARG:HH11	8:AI:94:ARG:CB	2.16	0.56
23:BB:1283:G:N2	23:BB:1285:A:H3'	2.21	0.56
23:BB:1373:A:H2'	23:BB:1374:G:O4'	2.06	0.56
23:BB:2491:U:H5"	23:BB:2570:G:H5"	1.88	0.56
25:BC:244:VAL:HB	25:BC:249:VAL:H	1.71	0.56
28:BP:77:SER:OG	28:BP:79:VAL:HG22	2.04	0.56
41:BJ:44:TYR:C	41:BJ:44:TYR:CD2	2.79	0.56
47:BF:128:SER:HB3	47:BF:154:THR:HG23	1.85	0.56
50:BT:69:ARG:HB3	50:BT:74:ILE:HD12	1.87	0.56
1:CA:634:C:H2'	1:CA:635:A:C8	2.41	0.56
1:CA:1062:U:H2'	1:CA:1063:C:C6	2.39	0.56
1:CA:1524:C:H2'	1:CA:1525:G:C8	2.41	0.56
2:CC:39:ARG:NH1	2:CC:56:ILE:HD12	2.21	0.56
6:CG:56:SER:OG	6:CG:58:LEU:HG	2.06	0.56
8:CI:28:VAL:HA	8:CI:32:ARG:O	2.05	0.56
8:CI:44:ARG:O	8:CI:47:VAL:HG22	2.05	0.56
19:CT:82:ILE:C	19:CT:85:LEU:HD22	2.26	0.56
20:CB:47:PRO:O	20:CB:51:GLU:HB2	2.05	0.56
20:CB:68:PHE:O	20:CB:90:PHE:HA	2.06	0.56
20:CB:205:ALA:O	20:CB:209:VAL:HG22	2.05	0.56
21:CU:3:ILE:HD13	21:CU:19:LYS:HA	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:479:A:O2'	23:DB:481:G:H5'	2.05	0.56
23:DB:1010:A:N3	23:DB:1153:C:H1'	2.21	0.56
23:DB:1745:A:H2'	23:DB:1746:A:C8	2.41	0.56
23:DB:1792:G:O2'	23:DB:1793:C:H5'	2.06	0.56
23:DB:2742:G:O2'	23:DB:2743:U:H5'	2.05	0.56
23:DB:2794:C:H2'	23:DB:2795:C:C6	2.41	0.56
1:AA:621:A:H2'	1:AA:622:A:C8	2.40	0.56
1:AA:1086:U:H3	1:AA:1099:G:N2	1.95	0.56
1:AA:1472:U:H2'	1:AA:1473:G:H8	1.70	0.56
8:AI:56:MET:HG3	8:AI:57:VAL:HG23	1.87	0.56
12:AM:11:HIS:H	12:AM:45:SER:HB3	1.69	0.56
13:AN:73:LEU:HD12	13:AN:83:VAL:HG21	1.86	0.56
17:AR:44:THR:HB	17:AR:46:THR:HG22	1.88	0.56
23:BB:538:A:H2'	23:BB:539:G:O4'	2.05	0.56
23:BB:569:U:H2'	23:BB:570:G:O4'	2.05	0.56
23:BB:1649:G:O2'	23:BB:1650:A:H5'	2.05	0.56
23:BB:1946:U:O2'	23:BB:1947:C:H5'	2.06	0.56
23:BB:2019:A:H2	23:BB:2035:G:H22	1.54	0.56
23:BB:2339:C:H2'	23:BB:2340:A:H8	1.71	0.56
23:BB:2340:A:H2'	23:BB:2341:G:C8	2.38	0.56
23:BB:2391:G:H1'	23:BB:2424:C:H41	1.70	0.56
37:BL:89:VAL:HA	37:BL:121:THR:O	2.05	0.56
37:BL:119:PRO:HA	37:BL:138:ALA:O	2.05	0.56
41:BJ:30:THR:HG23	41:BJ:31:GLU:H	1.70	0.56
44:BQ:108:LEU:HA	49:BR:48:LYS:HD3	1.86	0.56
46:BU:73:ASN:HD21	46:BU:76:THR:H	1.53	0.56
46:BU:81:ARG:H	46:BU:81:ARG:NH2	2.04	0.56
50:BT:57:VAL:HG22	50:BT:58:VAL:N	2.15	0.56
51:BZ:32:ASN:C	51:BZ:33:LEU:HD12	2.26	0.56
1:CA:373:A:H3'	1:CA:373:A:OP2	2.05	0.56
1:CA:413:G:N1	3:CD:32:LYS:HE2	2.20	0.56
1:CA:478:A:H2'	1:CA:479:U:O4'	2.05	0.56
1:CA:1014:A:H4'	18:CS:13:HIS:CD2	2.40	0.56
1:CA:1342:C:H2'	1:CA:1343:G:C8	2.41	0.56
2:CC:19:SER:O	13:CN:93:PRO:HB3	2.06	0.56
3:CD:116:LEU:O	3:CD:121:ALA:HB3	2.05	0.56
3:CD:123:MET:HB2	3:CD:128:VAL:HA	1.88	0.56
5:CF:47:LEU:HD12	5:CF:54:LEU:O	2.05	0.56
5:CF:53:LYS:H	5:CF:53:LYS:HZ2	1.53	0.56
5:CF:93:LYS:O	5:CF:94:HIS:HB2	2.04	0.56
10:CK:17:ASP:HB3	10:CK:80:ASN:HD21	1.67	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CK:95:THR:HG23	10:CK:96:ILE:H	1.71	0.56
12:CM:78:ARG:NH2	18:CS:64:GLU:HB2	2.21	0.56
13:CN:63:CYS:CB	13:CN:67:GLY:H	2.06	0.56
14:CO:79:THR:HA	14:CO:82:ILE:HD12	1.87	0.56
19:CT:3:ILE:O	19:CT:4:LYS:HB2	2.05	0.56
20:CB:202:ASN:HD22	20:CB:204:ASP:N	1.94	0.56
23:DB:154:U:H2'	23:DB:155:A:C8	2.40	0.56
23:DB:347:A:H2'	23:DB:348:A:C8	2.40	0.56
23:DB:822:G:O2'	23:DB:823:C:H5'	2.05	0.56
23:DB:922:C:H1'	52:DW:22:VAL:HG21	1.85	0.56
23:DB:1585:C:H2'	23:DB:1586:A:O4'	2.05	0.56
23:DB:2358:A:H61	37:DL:54:GLN:HE22	1.53	0.56
23:DB:2389:G:H5"	23:DB:2390:U:H5'	1.87	0.56
23:DB:2785:C:H2'	23:DB:2786:U:C6	2.40	0.56
28:DP:77:SER:O	28:DP:80:VAL:HG12	2.06	0.56
34:D3:41:ARG:HG3	34:D3:44:ARG:NH2	2.21	0.56
40:DH:5:LEU:HD12	40:DH:17:ASP:HB2	1.88	0.56
45:DS:18:ARG:HB3	45:DS:76:VAL:HG22	1.88	0.56
49:DR:19:THR:HG22	49:DR:97:LYS:HA	1.88	0.56
1:AA:85:U:H4'	1:AA:86:G:H4'	1.88	0.56
1:AA:270:A:H2'	1:AA:271:C:H6	1.70	0.56
1:AA:413:G:N1	3:AD:32:LYS:HE2	2.21	0.56
1:AA:662:U:O2'	1:AA:836:G:H5"	2.05	0.56
1:AA:1314:C:H3'	18:AS:5:LYS:NZ	2.21	0.56
3:AD:26:ALA:HA	3:AD:30:LYS:HE3	1.88	0.56
5:AF:43:GLY:HA2	5:AF:58:HIS:CE1	2.41	0.56
6:AG:45:ALA:HB3	6:AG:119:LEU:HD23	1.86	0.56
6:AG:56:SER:OG	6:AG:58:LEU:HG	2.05	0.56
10:AK:108:ASN:HD21	21:AU:6:ARG:HD2	1.70	0.56
12:AM:10:ASP:HB3	12:AM:45:SER:HB3	1.86	0.56
14:AO:60:VAL:HG11	23:BB:715:A:O4'	2.05	0.56
20:AB:186:VAL:O	20:AB:200:PRO:HA	2.06	0.56
23:BB:687:C:H2'	23:BB:688:U:O4'	2.06	0.56
23:BB:1484:U:H2'	23:BB:1485:U:C6	2.41	0.56
23:BB:2135:A:H61	23:BB:2156:G:C2'	2.19	0.56
23:BB:2462:C:H2'	23:BB:2463:C:H6	1.69	0.56
26:BD:4:LEU:HD21	26:BD:100:LEU:HB3	1.87	0.56
28:BP:4:ILE:HA	28:BP:7:LEU:HD13	1.88	0.56
29:BE:5:LEU:CD1	29:BE:10:SER:HB2	2.25	0.56
29:BE:175:ILE:HD11	29:BE:180:LEU:HD11	1.86	0.56
44:BQ:26:ALA:HB1	44:BQ:30:VAL:HB	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:31:PRO:HB2	51:BZ:33:LEU:HD11	1.87	0.56
52:BW:28:GLU:HG3	52:BW:29:SER:H	1.71	0.56
1:CA:69:G:N2	1:CA:71:A:H62	2.04	0.56
1:CA:635:A:H2'	1:CA:636:U:C6	2.41	0.56
1:CA:672:U:H2'	1:CA:673:A:H8	1.69	0.56
2:CC:19:SER:HB3	2:CC:21:TRP:HE1	1.70	0.56
10:CK:12:ARG:N	10:CK:76:TYR:HA	2.21	0.56
10:CK:92:ARG:NH1	21:CU:20:ARG:HH21	2.02	0.56
11:CL:80:LEU:HB3	11:CL:97:VAL:CG2	2.36	0.56
13:CN:14:ALA:HB1	13:CN:18:LYS:HE3	1.87	0.56
16:CQ:6:THR:HG22	16:CQ:61:ARG:HB3	1.88	0.56
23:DB:141:G:H2'	23:DB:142:A:O4'	2.06	0.56
23:DB:1028:A:H2'	23:DB:1029:A:C8	2.41	0.56
23:DB:1098:A:H3'	24:DI:3:LYS:C	2.26	0.56
23:DB:2001:C:H4'	23:DB:2689:U:O2'	2.06	0.56
23:DB:2026:U:H2'	23:DB:2027:G:H8	1.70	0.56
23:DB:2210:U:N3	23:DB:2212:A:N7	2.54	0.56
23:DB:2269:G:H4'	52:DW:19:ARG:NH1	2.20	0.56
23:DB:2393:U:H5"	37:DL:62:PRO:HG3	1.87	0.56
25:DC:14:HIS:O	25:DC:16:VAL:HG23	2.04	0.56
26:DD:9:VAL:O	28:DP:4:ILE:HD11	2.06	0.56
26:DD:38:LYS:HD3	26:DD:45:TYR:OH	2.06	0.56
38:DM:21:ALA:CB	38:DM:100:LYS:HG2	2.36	0.56
42:DN:78:LYS:HG3	42:DN:83:LEU:HG	1.88	0.56
44:DQ:26:ALA:O	44:DQ:30:VAL:HG12	2.05	0.56
47:DF:34:THR:O	47:DF:89:THR:HA	2.06	0.56
47:DF:105:ILE:C	47:DF:108:PRO:HD2	2.26	0.56
1:AA:71:A:H61	1:AA:99:C:H1'	1.70	0.56
1:AA:236:A:H2'	1:AA:237:G:C8	2.41	0.56
1:AA:328:C:H4'	1:AA:329:A:H5"	1.88	0.56
1:AA:394:G:O2'	1:AA:395:C:H5'	2.06	0.56
1:AA:861:G:O2'	1:AA:862:C:H5'	2.05	0.56
1:AA:1071:C:H2'	1:AA:1072:G:C8	2.39	0.56
1:AA:1137:C:O2'	1:AA:1138:G:H5"	2.06	0.56
1:AA:1342:C:H2'	1:AA:1343:G:H8	1.69	0.56
2:AC:82:ASP:O	2:AC:86:LEU:HG	2.04	0.56
20:AB:49:PHE:HA	20:AB:212:TYR:OH	2.05	0.56
23:BB:234:U:H2'	23:BB:235:U:H6	1.71	0.56
23:BB:657:U:H2'	23:BB:658:U:C6	2.41	0.56
23:BB:697:G:H2'	23:BB:698:C:C6	2.41	0.56
23:BB:1263:U:O2'	31:B0:7:PRO:HD2	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1317:G:H2'	23:BB:1318:U:O4'	2.06	0.56
23:BB:1390:U:O2'	23:BB:1391:U:H5'	2.06	0.56
23:BB:2822:G:H2'	23:BB:2823:A:H5"	1.88	0.56
23:BB:2852:G:H2'	23:BB:2853:C:C6	2.40	0.56
31:B0:38:LEU:HD22	31:B0:41:HIS:NE2	2.21	0.56
43:BO:15:ARG:HH21	43:BO:95:SER:CB	2.19	0.56
46:BU:24:VAL:HA	46:BU:35:VAL:HA	1.86	0.56
50:BT:57:VAL:HG12	50:BT:86:THR:OG1	2.06	0.56
50:BT:74:ILE:HG13	50:BT:75:GLY:H	1.70	0.56
1:CA:376:G:OP1	15:CP:5:ARG:HB2	2.05	0.56
1:CA:599:C:O2'	1:CA:600:A:H5'	2.05	0.56
1:CA:783:C:O2'	1:CA:784:A:H5'	2.06	0.56
1:CA:1370:G:O2'	1:CA:1371:G:H5'	2.06	0.56
12:CM:85:TYR:HA	12:CM:88:LEU:HD12	1.88	0.56
16:CQ:16:MET:CB	16:CQ:19:SER:HB2	2.36	0.56
20:CB:101:THR:HG23	20:CB:102:ASN:N	2.21	0.56
23:DB:654:A:O2'	23:DB:655:A:H5"	2.06	0.56
23:DB:2730:C:H2'	23:DB:2731:G:H8	1.71	0.56
29:DE:58:LYS:HE2	29:DE:60:TRP:CD1	2.41	0.56
29:DE:108:ILE:HD13	29:DE:108:ILE:O	2.06	0.56
43:DO:58:ILE:O	43:DO:62:LEU:HD23	2.06	0.56
44:DQ:35:PHE:C	44:DQ:37:ALA:H	2.07	0.56
46:DU:72:PHE:HA	46:DU:78:LYS:O	2.06	0.56
47:DF:107:VAL:O	47:DF:110:ILE:HG22	2.05	0.56
49:DR:5:PHE:O	49:DR:11:GLN:HA	2.06	0.56
50:DT:5:GLU:HA	50:DT:8:LEU:HD12	1.88	0.56
1:AA:373:A:H3'	1:AA:373:A:OP2	2.06	0.56
1:AA:415:A:H3'	1:AA:416:G:H8	1.70	0.56
3:AD:169:TRP:CE2	3:AD:185:PRO:HB3	2.41	0.56
12:AM:80:MET:C	12:AM:82:LEU:H	2.06	0.56
23:BB:79:C:HO2'	23:BB:346:A:C1'	2.19	0.56
23:BB:125:A:H3'	23:BB:126:A:H5'	1.88	0.56
23:BB:282:A:H2'	23:BB:283:G:C8	2.41	0.56
23:BB:864:G:O2'	23:BB:865:C:H5'	2.06	0.56
23:BB:873:C:H4'	38:BM:64:TRP:NE1	2.15	0.56
23:BB:1080:A:H2'	23:BB:1081:U:H6	1.71	0.56
23:BB:1487:U:H2'	23:BB:1488:C:H6	1.71	0.56
23:BB:1590:A:H2'	23:BB:1591:A:C8	2.40	0.56
23:BB:2803:G:H2'	23:BB:2804:U:H6	1.71	0.56
37:BL:74:THR:HA	37:BL:107:PHE:O	2.06	0.56
40:BH:139:PHE:O	40:BH:140:ALA:CB	2.54	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BJ:18:VAL:CG1	41:BJ:54:ILE:HD11	2.36	0.56
45:BS:7:HIS:HB3	45:BS:103:ILE:HB	1.88	0.56
46:BU:40:LEU:HA	46:BU:60:LYS:O	2.06	0.56
52:BW:59:PHE:O	52:BW:60:ALA:HB3	2.06	0.56
1:CA:797:C:O2'	1:CA:798:U:H5'	2.06	0.56
1:CA:861:G:O2'	1:CA:862:C:H5'	2.05	0.56
1:CA:939:G:H5"	6:CG:101:ARG:CZ	2.36	0.56
1:CA:1035:A:H2'	1:CA:1036:A:C8	2.40	0.56
1:CA:1465:A:H2'	1:CA:1466:C:C6	2.41	0.56
1:CA:1491:G:C5	55:CA:1662:LLL:H21	2.41	0.56
2:CC:30:ASP:HA	13:CN:64:ARG:HH12	1.70	0.56
2:CC:139:ASN:O	2:CC:143:LEU:HD23	2.06	0.56
5:CF:38:ARG:HD3	5:CF:97:THR:HA	1.87	0.56
6:CG:100:MET:O	6:CG:104:VAL:HG23	2.06	0.56
6:CG:121:ASN:N	6:CG:121:ASN:HD22	2.03	0.56
13:CN:79:SER:O	13:CN:83:VAL:HG23	2.06	0.56
16:CQ:56:ASP:N	16:CQ:81:ALA:HB2	2.21	0.56
20:CB:16:GLY:HA2	20:CB:40:ILE:CG1	2.35	0.56
23:DB:38:A:N3	29:DE:43:THR:HB	2.20	0.56
23:DB:966:G:HO2'	23:DB:2267:A:H2	1.54	0.56
23:DB:1559:U:H3'	23:DB:1560:G:H5'	1.88	0.56
23:DB:1873:G:O2'	23:DB:1874:C:H5'	2.05	0.56
23:DB:2078:C:H2'	23:DB:2079:U:H6	1.70	0.56
23:DB:2291:U:H2'	23:DB:2292:U:C6	2.41	0.56
23:DB:2652:C:O2'	23:DB:2653:U:H5'	2.06	0.56
25:DC:149:LYS:HG2	25:DC:152:GLN:NE2	2.22	0.56
26:DD:69:ALA:N	26:DD:73:VAL:HB	2.21	0.56
37:DL:89:VAL:HA	37:DL:121:THR:O	2.06	0.56
41:DJ:55:ILE:O	41:DJ:55:ILE:HG13	2.05	0.56
46:DU:35:VAL:HB	46:DU:38:ILE:CG2	2.36	0.56
47:DF:163:GLU:HA	47:DF:166:ARG:CD	2.30	0.56
52:DW:39:GLN:HG3	52:DW:42:THR:CB	2.36	0.56
1:AA:66:A:O2'	1:AA:67:C:H5'	2.06	0.55
1:AA:211:G:H2'	1:AA:212:G:O4'	2.06	0.55
1:AA:336:A:O2'	1:AA:337:G:H5'	2.06	0.55
1:AA:407:U:O2'	3:AD:112:GLU:HG3	2.06	0.55
1:AA:1008:U:H2'	1:AA:1009:U:H5"	1.87	0.55
1:AA:1033:G:H2'	1:AA:1034:G:O4'	2.06	0.55
1:AA:1070:U:H2'	1:AA:1071:C:C6	2.40	0.55
1:AA:1077:G:N2	1:AA:1080:A:OP2	2.31	0.55
1:AA:1234:C:O2'	1:AA:1235:U:H5'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:190:THR:HG22	2:AC:191:THR:N	2.20	0.55
22:BA:106:G:H2'	22:BA:107:G:C8	2.41	0.55
23:BB:5:A:H2'	23:BB:6:A:H8	1.70	0.55
23:BB:443:A:H1'	23:BB:1201:U:O4'	2.07	0.55
23:BB:518:G:H4'	45:BS:18:ARG:NH2	2.21	0.55
23:BB:575:A:O2'	23:BB:576:U:H5'	2.06	0.55
23:BB:1987:A:H2'	23:BB:1988:G:C8	2.41	0.55
23:BB:2560:A:H2'	23:BB:2561:U:C6	2.41	0.55
23:BB:2834:G:H1'	23:BB:2883:A:H61	1.70	0.55
23:BB:2869:G:H2'	23:BB:2870:C:C6	2.41	0.55
24:BI:14:ALA:HB1	24:BI:50:LYS:HA	1.87	0.55
29:BE:155:GLU:O	29:BE:159:LEU:HB2	2.06	0.55
43:BO:49:VAL:HG11	43:BO:82:ALA:CA	2.36	0.55
44:BQ:34:ALA:O	44:BQ:37:ALA:HB3	2.06	0.55
44:BQ:68:ALA:HB1	44:BQ:73:ILE:HG23	1.88	0.55
46:BU:70:ALA:HB1	46:BU:79:ALA:CB	2.28	0.55
48:BG:46:ASP:CG	48:BG:47:ASN:H	2.10	0.55
1:CA:476:U:H2'	1:CA:477:C:C6	2.41	0.55
1:CA:586:C:H5"	7:CH:81:GLY:HA2	1.88	0.55
1:CA:676:A:H2'	1:CA:677:U:C6	2.41	0.55
1:CA:737:C:H2'	1:CA:738:C:H6	1.71	0.55
5:CF:38:ARG:HH21	5:CF:63:ASN:ND2	2.03	0.55
5:CF:43:GLY:HA2	5:CF:58:HIS:CE1	2.41	0.55
5:CF:66:ALA:HB1	5:CF:67:PRO:HD2	1.88	0.55
10:CK:45:THR:HG23	10:CK:48:GLY:HA3	1.87	0.55
11:CL:54:VAL:HG12	11:CL:55:ARG:N	2.20	0.55
13:CN:73:LEU:HD12	13:CN:83:VAL:HG21	1.87	0.55
18:CS:6:LYS:HD2	18:CS:6:LYS:N	2.20	0.55
22:DA:22:U:H2'	22:DA:23:G:C8	2.40	0.55
22:DA:91:C:H2'	22:DA:92:C:H6	1.71	0.55
23:DB:425:G:O2'	23:DB:426:C:H5'	2.07	0.55
23:DB:674:G:H4'	29:DE:69:ARG:HB3	1.88	0.55
23:DB:1327:A:H2'	23:DB:1328:A:O4'	2.06	0.55
23:DB:1580:A:H2'	23:DB:1581:G:O4'	2.05	0.55
23:DB:1590:A:H2'	23:DB:1591:A:C8	2.41	0.55
23:DB:2182:U:H2'	23:DB:2183:A:C8	2.41	0.55
23:DB:2286:G:H4'	23:DB:2287:A:O4'	2.06	0.55
23:DB:2386:A:N3	52:DW:38:ARG:HD2	2.21	0.55
23:DB:2386:A:H2'	23:DB:2387:U:C6	2.41	0.55
23:DB:2498:C:O2'	23:DB:2499:C:H5'	2.05	0.55
24:DI:49:GLU:CB	24:DI:52:LEU:HD12	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DI:54:ILE:HD13	24:DI:55:PRO:N	2.21	0.55
28:DP:4:ILE:HA	28:DP:7:LEU:HD13	1.88	0.55
28:DP:103:THR:HG22	28:DP:104:GLY:H	1.71	0.55
35:DV:24:ASN:HB3	35:DV:44:HIS:HB3	1.88	0.55
35:DV:63:ILE:HD12	35:DV:63:ILE:N	2.21	0.55
39:DX:51:ALA:O	39:DX:55:THR:N	2.36	0.55
41:DJ:44:TYR:CD2	41:DJ:44:TYR:C	2.79	0.55
48:DG:84:LYS:HG3	48:DG:131:VAL:CA	2.36	0.55
52:DW:35:ILE:O	52:DW:35:ILE:HG12	2.06	0.55
1:AA:323:U:H2'	1:AA:324:G:O4'	2.06	0.55
1:AA:478:A:H2'	1:AA:479:U:O4'	2.06	0.55
5:AF:42:TRP:HB2	5:AF:59:TYR:HB2	1.88	0.55
5:AF:51:ILE:O	5:AF:51:ILE:HG23	2.06	0.55
5:AF:66:ALA:HB1	5:AF:67:PRO:HD2	1.89	0.55
5:AF:93:LYS:O	5:AF:94:HIS:HB2	2.05	0.55
10:AK:80:ASN:HD22	10:AK:80:ASN:N	2.04	0.55
13:AN:30:ILE:HG21	13:AN:44:VAL:CG2	2.35	0.55
16:AQ:16:MET:HB3	16:AQ:19:SER:HB2	1.86	0.55
18:AS:29:PRO:HA	18:AS:47:THR:O	2.06	0.55
19:AT:54:GLN:N	19:AT:55:PRO:HD2	2.22	0.55
23:BB:559:G:H1'	44:BQ:55:GLN:HE21	1.71	0.55
23:BB:1372:U:H1'	23:BB:2214:C:C4	2.41	0.55
23:BB:2884:U:H2'	23:BB:2885:G:C8	2.41	0.55
24:BI:77:VAL:HA	24:BI:80:LYS:CE	2.36	0.55
25:BC:90:ILE:CD1	25:BC:102:TYR:HB3	2.37	0.55
25:BC:121:ALA:HB3	25:BC:129:LEU:HD11	1.88	0.55
26:BD:141:ARG:O	26:BD:141:ARG:HG3	2.06	0.55
37:BL:57:LEU:HA	37:BL:60:ARG:NE	2.21	0.55
37:BL:59:ARG:C	37:BL:61:LEU:H	2.09	0.55
40:BH:18:GLN:HE21	40:BH:39:ALA:HB1	1.71	0.55
46:BU:64:ILE:HG13	46:BU:65:GLN:H	1.71	0.55
53:B6:39:LEU:HG	53:B6:40:HIS:H	1.70	0.55
1:CA:633:G:H2'	1:CA:634:C:C6	2.42	0.55
1:CA:821:G:O2'	1:CA:822:U:H5'	2.06	0.55
1:CA:1173:U:H2'	1:CA:1174:G:C8	2.41	0.55
1:CA:1198:G:H2'	1:CA:1199:U:C6	2.41	0.55
5:CF:72:ASP:HA	5:CF:75:GLU:OE1	2.07	0.55
10:CK:36:ARG:HH11	10:CK:36:ARG:HG3	1.70	0.55
12:CM:15:VAL:HG22	12:CM:33:LEU:HD12	1.88	0.55
19:CT:79:THR:HA	19:CT:82:ILE:CG1	2.36	0.55
23:DB:1534:U:H2'	23:DB:1536:C:C5	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1649:G:O2'	23:DB:1650:A:H5'	2.06	0.55
23:DB:1722:A:H2'	23:DB:1723:G:C8	2.40	0.55
23:DB:2363:G:O2'	23:DB:2364:C:H5'	2.06	0.55
23:DB:2680:U:H5'	26:DD:194:PRO:HA	1.88	0.55
26:DD:16:THR:HB	26:DD:18:ASP:OD1	2.07	0.55
26:DD:148:GLN:O	26:DD:149:ASN:HB2	2.05	0.55
35:DV:31:TYR:CB	35:DV:37:PRO:HG3	2.36	0.55
43:DO:25:ARG:O	43:DO:39:VAL:HA	2.06	0.55
43:DO:49:VAL:HG11	43:DO:82:ALA:CA	2.36	0.55
44:DQ:26:ALA:HB1	44:DQ:30:VAL:CG1	2.36	0.55
48:DG:17:LYS:HZ2	48:DG:18:ILE:N	2.03	0.55
48:DG:53:PRO:HG3	48:DG:61:TRP:CD2	2.40	0.55
49:DR:62:GLU:O	49:DR:96:VAL:HA	2.05	0.55
51:DZ:40:VAL:O	51:DZ:42:SER:N	2.39	0.55
1:AA:168:G:O2'	1:AA:169:C:H5'	2.06	0.55
4:AE:21:SER:HB2	4:AE:28:ARG:HE	1.70	0.55
6:AG:30:MET:HA	6:AG:38:ALA:HB2	1.87	0.55
11:AL:7:VAL:HG22	16:AQ:33:TYR:HD1	1.70	0.55
12:AM:71:GLU:HA	12:AM:74:MET:HG2	1.89	0.55
20:AB:95:TRP:HZ2	20:AB:100:LEU:HD22	1.71	0.55
23:BB:151:C:H2'	23:BB:152:A:C8	2.41	0.55
23:BB:870:U:O2'	23:BB:871:U:H5'	2.06	0.55
23:BB:1434:A:H62	23:BB:1558:C:H42	1.55	0.55
23:BB:1878:G:H2'	23:BB:1879:C:C6	2.41	0.55
23:BB:2685:G:O2'	23:BB:2686:G:H5'	2.07	0.55
23:BB:2743:U:H2'	23:BB:2744:G:O4'	2.05	0.55
23:BB:2745:C:H1'	48:BG:142:GLN:OE1	2.06	0.55
23:BB:2860:A:H8	23:BB:2860:A:O5'	1.89	0.55
26:BD:117:GLY:HA2	26:BD:164:GLN:NE2	2.21	0.55
27:BK:47:ILE:HG23	27:BK:48:PRO:CD	2.36	0.55
43:BO:25:ARG:HG3	43:BO:27:VAL:HG23	1.89	0.55
46:BU:40:LEU:H	46:BU:40:LEU:HD12	1.70	0.55
46:BU:66:VAL:O	46:BU:69:VAL:HG22	2.06	0.55
50:BT:30:ILE:HG12	50:BT:31:VAL:N	2.20	0.55
53:B6:141:LYS:HE3	53:B6:142:LYS:CE	2.36	0.55
1:CA:61:G:H4'	1:CA:386:C:O2'	2.06	0.55
1:CA:336:A:O2'	1:CA:337:G:H5'	2.06	0.55
1:CA:1200:C:C3'	1:CA:1201:A:H5'	2.36	0.55
1:CA:1493:A:H2'	23:DB:1913:A:H61	1.71	0.55
2:CC:57:GLU:O	2:CC:63:ILE:HA	2.06	0.55
5:CF:6:ILE:HD11	5:CF:8:PHE:HD2	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:145:C:H2'	23:DB:146:A:C8	2.40	0.55
23:DB:637:A:H5"	37:DL:112:LEU:HD22	1.89	0.55
23:DB:1522:A:OP1	23:DB:1522:A:H8	1.90	0.55
23:DB:2339:C:H2'	23:DB:2340:A:C8	2.41	0.55
23:DB:2675:A:N1	23:DB:2732:G:O6	2.39	0.55
23:DB:2893:A:H5"	23:DB:2894:G:H5'	1.88	0.55
25:DC:93:VAL:HG13	25:DC:94:LEU:N	2.22	0.55
39:DX:1:MET:HB3	39:DX:5:GLU:OE1	2.05	0.55
40:DH:27:ARG:H	40:DH:31:VAL:HG23	1.70	0.55
42:DN:87:PHE:C	42:DN:89:SER:H	2.10	0.55
45:DS:73:LYS:HE3	45:DS:74:ILE:N	2.09	0.55
47:DF:104:THR:C	47:DF:105:ILE:HG13	2.27	0.55
51:DZ:31:PRO:HB2	51:DZ:33:LEU:HD11	1.88	0.55
1:AA:312:C:H2'	1:AA:313:A:C8	2.41	0.55
1:AA:520:A:OP1	11:AL:48:LEU:HD12	2.07	0.55
1:AA:634:C:H2'	1:AA:635:A:C8	2.41	0.55
1:AA:883:C:O2'	1:AA:884:U:H5'	2.06	0.55
1:AA:1035:A:H2'	1:AA:1036:A:C8	2.42	0.55
1:AA:1226:C:H5"	12:AM:101:THR:HB	1.88	0.55
1:AA:1524:C:H2'	1:AA:1525:G:C8	2.41	0.55
2:AC:133:MET:O	2:AC:137:VAL:HG23	2.06	0.55
6:AG:99:ALA:O	6:AG:103:ILE:HG13	2.06	0.55
9:AJ:40:ILE:HD12	9:AJ:73:LEU:HB3	1.88	0.55
11:AL:49:ARG:HG2	11:AL:89:LEU:HD21	1.87	0.55
13:AN:16:ALA:HA	13:AN:54:SER:O	2.07	0.55
14:AO:79:THR:HA	14:AO:82:ILE:HD12	1.88	0.55
23:BB:994:C:H3'	44:BQ:53:LYS:NZ	2.21	0.55
23:BB:1381:G:H2'	23:BB:1382:G:H5'	1.89	0.55
23:BB:1843:C:O2'	23:BB:1844:C:H5'	2.07	0.55
23:BB:1947:C:H2'	23:BB:1948:G:C8	2.41	0.55
26:BD:114:LYS:HD2	26:BD:116:LYS:HZ1	1.70	0.55
29:BE:48:THR:HG23	29:BE:88:ARG:HH12	1.71	0.55
30:BY:28:LEU:HA	30:BY:33:HIS:HD2	1.71	0.55
38:BM:17:ASN:ND2	38:BM:95:LEU:HG	2.20	0.55
41:BJ:55:ILE:O	41:BJ:55:ILE:HG13	2.06	0.55
53:B6:30:THR:CG2	53:B6:179:LYS:HD3	2.36	0.55
1:CA:95:C:H2'	1:CA:95:C:O2	2.05	0.55
1:CA:674:G:H2'	1:CA:675:A:C8	2.38	0.55
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.88	0.55
1:CA:1163:A:H2'	1:CA:1164:G:C8	2.41	0.55
1:CA:1463:U:H2'	1:CA:1464:U:C6	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:56:GLU:O	3:CD:60:VAL:HG12	2.06	0.55
11:CL:35:ARG:HA	11:CL:35:ARG:HH11	1.69	0.55
20:CB:212:TYR:O	20:CB:216:VAL:HG13	2.06	0.55
23:DB:1032:A:H1'	32:D4:23:ILE:HD13	1.88	0.55
23:DB:1760:C:H2'	23:DB:1761:C:O4'	2.05	0.55
25:DC:185:ALA:C	25:DC:187:CYS:H	2.10	0.55
26:DD:33:ARG:HE	26:DD:74:GLU:HB3	1.71	0.55
26:DD:121:THR:HB	26:DD:127:PHE:CD1	2.41	0.55
35:DV:53:LYS:HZ3	35:DV:54:ALA:HB3	1.71	0.55
38:DM:61:GLY:HA2	38:DM:107:GLY:HA3	1.89	0.55
44:DQ:91:ARG:HG2	44:DQ:93:ILE:HG22	1.87	0.55
46:DU:21:ARG:HD3	46:DU:72:PHE:CD2	2.40	0.55
47:DF:87:LYS:C	47:DF:88:VAL:HG23	2.26	0.55
48:DG:24:THR:C	48:DG:25:ILE:HD12	2.26	0.55
48:DG:96:ALA:HB3	48:DG:103:ASN:HB3	1.89	0.55
50:DT:30:ILE:HG12	50:DT:31:VAL:N	2.20	0.55
53:D6:33:ALA:HB2	53:D6:63:PRO:HA	1.87	0.55
1:AA:441:A:H61	1:AA:493:A:H61	1.53	0.55
1:AA:1014:A:H4'	18:AS:13:HIS:CD2	2.42	0.55
1:AA:1219:A:H2'	1:AA:1220:G:C8	2.42	0.55
1:AA:1508:A:H2'	1:AA:1509:C:H6	1.71	0.55
6:AG:100:MET:O	6:AG:104:VAL:HG23	2.06	0.55
12:AM:15:VAL:HG22	12:AM:33:LEU:HD12	1.87	0.55
23:BB:454:A:H3'	23:BB:455:C:H5'	1.89	0.55
23:BB:785:G:H2'	23:BB:786:C:C6	2.41	0.55
23:BB:863:A:H2'	23:BB:864:G:H8	1.71	0.55
23:BB:1779:U:C5	23:BB:1784:A:N7	2.75	0.55
26:BD:121:THR:HB	26:BD:127:PHE:CD1	2.41	0.55
37:BL:57:LEU:C	37:BL:59:ARG:H	2.07	0.55
40:BH:9:VAL:HG12	40:BH:12:LEU:HG	1.87	0.55
40:BH:54:LEU:HD12	40:BH:55:GLU:H	1.71	0.55
42:BN:33:ILE:O	42:BN:33:ILE:HD12	2.07	0.55
42:BN:65:LEU:O	42:BN:68:ALA:HB3	2.06	0.55
45:BS:42:LYS:O	45:BS:45:VAL:HG22	2.06	0.55
48:BG:153:PRO:CG	48:BG:162:ARG:HB3	2.35	0.55
53:B6:12:SER:O	53:B6:16:LYS:HD2	2.06	0.55
53:B6:84:ARG:HG3	53:B6:85:ASP:OD1	2.07	0.55
1:CA:35:G:H2'	1:CA:36:C:H6	1.69	0.55
1:CA:140:U:H2'	1:CA:141:G:H8	1.71	0.55
1:CA:501:C:H2'	1:CA:502:A:C8	2.41	0.55
1:CA:692:U:C2	1:CA:694:A:H5"	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:845:A:H5”	1:CA:846:G:C8	2.42	0.55
1:CA:880:C:O2’	1:CA:881:G:H5’	2.07	0.55
1:CA:986:U:H2’	1:CA:987:G:O4’	2.06	0.55
1:CA:1179:A:H4’	8:CI:104:THR:HA	1.87	0.55
1:CA:1260:G:H4’	1:CA:1283:U:O2’	2.07	0.55
4:CE:28:ARG:CZ	4:CE:30:PHE:HB3	2.37	0.55
12:CM:77:LYS:HG2	12:CM:81:ASP:OD1	2.06	0.55
13:CN:60:ARG:NH2	13:CN:69:PRO:HB3	2.21	0.55
18:CS:10:ILE:HG22	18:CS:37:SER:HB3	1.88	0.55
20:CB:19:THR:HG23	20:CB:20:ARG:H	1.69	0.55
21:CU:40:PRO:C	21:CU:42:THR:H	2.10	0.55
23:DB:354:A:H2’	23:DB:355:U:C6	2.42	0.55
23:DB:718:A:H2’	23:DB:719:C:H5’	1.88	0.55
23:DB:917:A:H5”	23:DB:2268:A:N6	2.22	0.55
23:DB:1203:U:H4’	37:DL:3:LEU:HD12	1.87	0.55
23:DB:1429:G:O2’	23:DB:1430:G:H5’	2.06	0.55
23:DB:1656:C:H2’	23:DB:1657:U:C6	2.41	0.55
23:DB:2341:G:H2’	23:DB:2342:C:H6	1.72	0.55
27:DK:87:LEU:HB2	27:DK:93:GLN:O	2.06	0.55
27:DK:120:PRO:HA	28:DP:65:ASN:ND2	2.22	0.55
37:DL:81:ASP:HA	37:DL:84:LYS:HE3	1.89	0.55
38:DM:34:LYS:HB3	38:DM:129:THR:HG22	1.87	0.55
41:DJ:124:VAL:O	41:DJ:125:TYR:HB2	2.06	0.55
44:DQ:65:ASN:CB	44:DQ:75:TYR:HB2	2.37	0.55
52:DW:39:GLN:CG	52:DW:40:ARG:N	2.69	0.55
53:D6:33:ALA:HB2	53:D6:63:PRO:O	2.06	0.55
1:AA:81:A:O2’	1:AA:82:G:N7	2.40	0.55
1:AA:860:A:H2’	1:AA:861:G:O4’	2.06	0.55
1:AA:1179:A:H4’	8:AI:104:THR:HA	1.88	0.55
4:AE:55:VAL:N	4:AE:56:PRO:HD2	2.21	0.55
18:AS:6:LYS:HD2	18:AS:6:LYS:N	2.22	0.55
19:AT:78:LEU:O	19:AT:82:ILE:HG23	2.06	0.55
22:BA:32:U:H2’	22:BA:33:G:O4’	2.07	0.55
23:BB:850:U:H2’	23:BB:851:C:C6	2.41	0.55
23:BB:1486:U:H2’	23:BB:1487:U:H6	1.72	0.55
23:BB:1656:C:H2’	23:BB:1657:U:C6	2.42	0.55
23:BB:2438:U:O2’	23:BB:2439:A:H5”	2.06	0.55
23:BB:2843:G:O2’	23:BB:2844:G:H5’	2.06	0.55
26:BD:69:ALA:N	26:BD:73:VAL:HB	2.21	0.55
30:BY:50:VAL:O	30:BY:54:VAL:HG22	2.07	0.55
40:BH:57:LYS:NZ	40:BH:58:LEU:HB2	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:34:ILE:HG12	46:BU:63:ALA:HB2	1.88	0.55
1:CA:1137:C:H1'	1:CA:1138:G:N1	2.22	0.55
1:CA:1513:A:H2'	1:CA:1514:G:H8	1.71	0.55
4:CE:55:VAL:N	4:CE:56:PRO:HD2	2.21	0.55
10:CK:16:SER:HA	10:CK:79:LYS:HG2	1.88	0.55
10:CK:92:ARG:HH11	21:CU:20:ARG:HH21	1.53	0.55
23:DB:807:U:H2'	23:DB:808:G:H8	1.71	0.55
23:DB:934:U:H2'	23:DB:935:C:H6	1.69	0.55
23:DB:1138:G:H21	41:DJ:108:MET:CE	2.18	0.55
23:DB:1400:U:H2'	23:DB:1401:G:H8	1.70	0.55
23:DB:2098:U:H2'	23:DB:2099:U:H1'	1.89	0.55
23:DB:2365:G:O2'	52:DW:59:PHE:HE1	1.89	0.55
23:DB:2666:C:O4'	23:DB:2666:C:O2	2.22	0.55
29:DE:49:ARG:O	29:DE:74:LYS:HD3	2.07	0.55
30:DY:29:ARG:H	30:DY:33:HIS:CD2	2.24	0.55
37:DL:59:ARG:C	37:DL:61:LEU:H	2.09	0.55
40:DH:7:ASP:CG	40:DH:8:LYS:H	2.08	0.55
47:DF:34:THR:HA	47:DF:89:THR:HA	1.88	0.55
52:DW:37:VAL:HG13	52:DW:55:ASP:O	2.06	0.55
1:AA:261:U:H2'	1:AA:263:A:OP2	2.06	0.55
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.87	0.55
1:AA:991:U:H2'	1:AA:1212:U:C2	2.42	0.55
1:AA:1030:U:H4'	1:AA:1031:C:C4	2.41	0.55
2:AC:19:SER:HB3	2:AC:21:TRP:HE1	1.71	0.55
10:AK:17:ASP:HA	10:AK:80:ASN:O	2.06	0.55
12:AM:102:LYS:HG3	12:AM:103:THR:OG1	2.07	0.55
23:BB:38:A:N3	29:BE:43:THR:HB	2.22	0.55
23:BB:281:C:H2'	23:BB:282:A:H8	1.70	0.55
23:BB:320:A:H4'	23:BB:322:A:N7	2.22	0.55
23:BB:350:G:H2'	23:BB:351:C:C6	2.41	0.55
23:BB:528:A:N1	23:BB:2042:A:H2'	2.22	0.55
23:BB:632:A:H2'	23:BB:633:A:C8	2.42	0.55
23:BB:1203:U:H3'	23:BB:1204:A:H5"	1.89	0.55
24:BI:100:ILE:O	24:BI:139:VAL:HA	2.07	0.55
25:BC:20:ASN:HD22	25:BC:23:LEU:HD13	1.72	0.55
27:BK:64:ARG:HB2	27:BK:83:ALA:HB3	1.88	0.55
34:B3:39:ARG:O	34:B3:43:LEU:HG	2.07	0.55
35:BV:14:LYS:HE2	35:BV:18:ARG:HH21	1.72	0.55
35:BV:31:TYR:CB	35:BV:37:PRO:HG3	2.36	0.55
39:BX:45:GLN:O	39:BX:47:ARG:N	2.40	0.55
44:BQ:50:ARG:N	44:BQ:50:ARG:HD2	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:190:A:H2'	1:CA:191:G:O4'	2.07	0.55
1:CA:502:A:H2'	1:CA:503:C:C6	2.42	0.55
1:CA:636:U:H2'	1:CA:637:C:H6	1.71	0.55
1:CA:1030:U:H4'	1:CA:1031:C:C4	2.42	0.55
1:CA:1225:A:H3'	1:CA:1226:C:H6	1.71	0.55
1:CA:1413:A:O2'	1:CA:1414:U:H5'	2.07	0.55
20:CB:57:ASN:HB3	20:CB:219:THR:O	2.07	0.55
20:CB:186:VAL:O	20:CB:200:PRO:HA	2.07	0.55
23:DB:340:A:H2'	23:DB:341:C:O4'	2.06	0.55
23:DB:506:G:H5"	23:DB:509:C:O2'	2.07	0.55
23:DB:705:A:N6	23:DB:726:G:O2'	2.40	0.55
23:DB:719:C:O2'	23:DB:720:U:H5'	2.06	0.55
23:DB:857:G:C2'	23:DB:858:G:H5'	2.36	0.55
23:DB:1454:C:H5'	42:DN:63:ARG:NE	2.22	0.55
23:DB:2511:U:H2'	23:DB:2512:C:C6	2.42	0.55
23:DB:2758:A:O2'	23:DB:2759:G:H5'	2.07	0.55
31:D0:38:LEU:HD22	31:D0:41:HIS:NE2	2.22	0.55
41:DJ:72:LYS:CG	41:DJ:89:PHE:HB2	2.37	0.55
42:DN:65:LEU:O	42:DN:68:ALA:HB3	2.06	0.55
43:DO:25:ARG:HG3	43:DO:27:VAL:HG23	1.88	0.55
45:DS:50:VAL:HA	45:DS:53:SER:HB2	1.87	0.55
46:DU:34:ILE:HG12	46:DU:63:ALA:HB2	1.89	0.55
50:DT:69:ARG:HB3	50:DT:74:ILE:HD12	1.89	0.55
52:DW:59:PHE:O	52:DW:60:ALA:HB3	2.06	0.55
1:AA:45:G:H2'	1:AA:46:G:H8	1.70	0.55
1:AA:384:G:H2'	1:AA:385:C:C6	2.42	0.55
1:AA:986:U:H2'	1:AA:987:G:O4'	2.07	0.55
3:AD:81:LEU:HB2	3:AD:88:ASN:ND2	2.22	0.55
3:AD:116:LEU:O	3:AD:121:ALA:HB3	2.06	0.55
4:AE:81:GLN:HG2	4:AE:148:SER:HA	1.89	0.55
4:AE:156:ARG:HB3	7:AH:43:GLY:HA3	1.89	0.55
6:AG:136:LYS:O	6:AG:140:VAL:HG23	2.07	0.55
17:AR:61:ALA:HB3	17:AR:67:LEU:HD12	1.89	0.55
23:BB:3:U:H2'	23:BB:4:U:H6	1.71	0.55
23:BB:559:G:H21	44:BQ:51:GLN:NE2	2.04	0.55
23:BB:584:C:OP1	44:BQ:5:ARG:HB3	2.07	0.55
23:BB:855:G:C2	52:BW:23:LYS:HG2	2.41	0.55
23:BB:1086:A:H4'	23:BB:1103:A:N1	2.21	0.55
23:BB:1848:A:H2'	23:BB:1849:G:C8	2.41	0.55
23:BB:2144:G:H22	23:BB:2147:A:H4'	1.71	0.55
23:BB:2199:A:H5'	23:BB:2200:C:OP2	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BI:89:SER:HA	24:BI:97:VAL:CG2	2.36	0.55
25:BC:20:ASN:ND2	25:BC:23:LEU:HD13	2.21	0.55
26:BD:148:GLN:O	26:BD:149:ASN:HB2	2.07	0.55
27:BK:102:PRO:HD3	28:BP:65:ASN:HB2	1.89	0.55
40:BH:72:ILE:O	40:BH:72:ILE:HG23	2.07	0.55
44:BQ:91:ARG:HD3	49:BR:11:GLN:OE1	2.07	0.55
47:BF:131:VAL:HG22	47:BF:151:LEU:O	2.06	0.55
53:B6:106:LEU:HD23	53:B6:106:LEU:N	2.22	0.55
1:CA:590:U:H2'	1:CA:591:U:C6	2.42	0.55
1:CA:1033:G:H2'	1:CA:1034:G:O4'	2.06	0.55
1:CA:1163:A:H2'	1:CA:1164:G:H8	1.71	0.55
3:CD:197:HIS:O	3:CD:201:GLU:HG3	2.06	0.55
7:CH:17:GLN:NE2	7:CH:62:LEU:HB3	2.22	0.55
7:CH:40:LYS:HD2	7:CH:47:ASP:HA	1.88	0.55
7:CH:124:ILE:HG22	7:CH:125:ILE:H	1.72	0.55
23:DB:150:U:H2'	23:DB:151:C:H6	1.68	0.55
23:DB:176:A:H3'	23:DB:177:G:N2	2.20	0.55
23:DB:256:A:O2'	23:DB:257:C:H5'	2.07	0.55
23:DB:709:U:H2'	23:DB:710:U:H6	1.70	0.55
23:DB:852:U:H2'	23:DB:853:C:H6	1.71	0.55
23:DB:1535:A:O2'	23:DB:1536:C:H5'	2.07	0.55
23:DB:1676:A:H2'	23:DB:1677:A:O4'	2.06	0.55
23:DB:2025:C:H2'	23:DB:2026:U:C6	2.41	0.55
23:DB:2135:A:H2'	23:DB:2135:A:N3	2.21	0.55
23:DB:2365:G:H4'	52:DW:59:PHE:HD1	1.70	0.55
23:DB:2776:A:H4'	23:DB:2777:G:C5'	2.36	0.55
38:DM:105:MET:HB2	38:DM:117:PHE:CZ	2.42	0.55
41:DJ:29:ALA:O	41:DJ:32:LEU:HB2	2.07	0.55
44:DQ:91:ARG:HD3	49:DR:11:GLN:OE1	2.07	0.55
45:DS:58:ALA:HB1	45:DS:69:LEU:HD21	1.88	0.55
46:DU:35:VAL:HB	46:DU:38:ILE:CB	2.37	0.55
46:DU:40:LEU:H	46:DU:40:LEU:HD12	1.71	0.55
47:DF:65:LEU:H	47:DF:88:VAL:HG22	1.72	0.55
48:DG:83:THR:HA	48:DG:84:LYS:HZ3	1.71	0.55
48:DG:94:ARG:C	48:DG:94:ARG:HE	2.10	0.55
48:DG:153:PRO:HA	48:DG:159:LYS:O	2.07	0.55
1:AA:369:G:O2'	1:AA:370:C:H5'	2.07	0.55
1:AA:880:C:O2'	1:AA:881:G:H5'	2.07	0.55
1:AA:1029:U:O5'	1:AA:1029:U:H6	1.89	0.55
1:AA:1110:A:H2'	1:AA:1111:A:H8	1.72	0.55
1:AA:1157:A:H4'	1:AA:1158:C:O5'	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:13:ILE:O	2:AC:14:VAL:HG22	2.06	0.55
4:AE:76:ASN:HB2	4:AE:81:GLN:NE2	2.22	0.55
5:AF:72:ASP:HA	5:AF:75:GLU:OE1	2.06	0.55
6:AG:22:LEU:O	6:AG:26:VAL:HG13	2.06	0.55
8:AI:49:GLN:NE2	8:AI:79:ARG:HH11	2.04	0.55
9:AJ:7:ARG:O	9:AJ:100:ILE:HA	2.06	0.55
11:AL:54:VAL:HG21	11:AL:79:ILE:HD11	1.89	0.55
16:AQ:22:VAL:HG12	16:AQ:23:ALA:N	2.21	0.55
23:BB:152:A:H2'	23:BB:153:U:H6	1.71	0.55
23:BB:363:G:H2'	23:BB:364:C:C6	2.41	0.55
23:BB:647:G:H2'	23:BB:648:G:H8	1.71	0.55
23:BB:693:A:H2'	23:BB:694:U:H6	1.71	0.55
23:BB:753:A:H2'	23:BB:754:U:H6	1.72	0.55
23:BB:807:U:H2'	23:BB:808:G:H8	1.72	0.55
23:BB:982:C:H5'	23:BB:982:C:O2	2.06	0.55
23:BB:1252:G:N2	44:BQ:32:ARG:HB3	2.20	0.55
23:BB:1583:A:H4'	23:BB:1585:C:C4	2.42	0.55
23:BB:1760:C:H2'	23:BB:1761:C:O4'	2.06	0.55
23:BB:1939:U:O2	23:BB:1967:C:H4'	2.07	0.55
23:BB:2328:A:H2'	23:BB:2329:U:H6	1.71	0.55
23:BB:2460:U:H2'	23:BB:2461:A:H8	1.71	0.55
25:BC:2:VAL:HG23	25:BC:3:VAL:N	2.22	0.55
25:BC:18:VAL:CG1	25:BC:202:ARG:HD2	2.37	0.55
30:BY:2:LYS:HD3	30:BY:2:LYS:H	1.72	0.55
35:BV:29:ILE:HD13	35:BV:31:TYR:HE2	1.70	0.55
45:BS:29:VAL:HG23	45:BS:70:LYS:HA	1.89	0.55
46:BU:11:ILE:HD13	46:BU:11:ILE:O	2.07	0.55
46:BU:85:ARG:NH1	46:BU:86:PHE:H	2.05	0.55
51:BZ:27:ARG:HD2	51:BZ:29:PHE:CE1	2.41	0.55
52:BW:13:ARG:HG3	52:BW:14:ASP:H	1.71	0.55
1:CA:923:A:H2'	1:CA:924:C:H6	1.72	0.55
2:CC:13:ILE:C	2:CC:15:LYS:H	2.10	0.55
3:CD:77:GLU:OE1	3:CD:80:ARG:HD3	2.07	0.55
10:CK:111:ASP:CB	21:CU:19:LYS:HE3	2.23	0.55
23:DB:460:A:P	36:D2:41:ARG:HH12	2.29	0.55
23:DB:950:G:H2'	23:DB:951:C:H6	1.71	0.55
23:DB:1109:C:O5'	23:DB:1109:C:H6	1.90	0.55
23:DB:1396:U:O4'	23:DB:1396:U:O2	2.22	0.55
23:DB:2098:U:H2'	23:DB:2099:U:O4'	2.07	0.55
23:DB:2458:G:HO2'	23:DB:2490:G:H1	1.54	0.55
23:DB:2814:A:H2'	23:DB:2815:C:C6	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:78:GLU:OE1	25:DC:94:LEU:HD22	2.07	0.55
30:DY:4:ILE:HD13	30:DY:58:GLU:HG3	1.89	0.55
30:DY:7:THR:HG23	30:DY:34:THR:OG1	2.07	0.55
34:D3:24:LYS:HZ3	34:D3:28:LEU:HB3	1.70	0.55
40:DH:49:ALA:HB3	40:DH:50:ARG:CZ	2.37	0.55
42:DN:92:GLY:HA2	42:DN:94:TYR:CZ	2.42	0.55
46:DU:40:LEU:HA	46:DU:60:LYS:O	2.06	0.55
49:DR:40:MET:O	49:DR:41:ILE:HD13	2.06	0.55
53:D6:55:ILE:CG2	53:D6:56:ALA:N	2.69	0.55
1:AA:437:U:H1'	3:AD:115:GLN:NE2	2.22	0.55
1:AA:521:G:O2'	1:AA:522:C:H5'	2.07	0.55
1:AA:580:C:H2'	1:AA:581:G:O4'	2.07	0.55
1:AA:737:C:H2'	1:AA:738:C:H6	1.72	0.55
2:AC:40:GLN:HG3	2:AC:41:TYR:N	2.22	0.55
2:AC:57:GLU:O	2:AC:63:ILE:HA	2.07	0.55
5:AF:80:PHE:CE1	25:BC:123:ILE:HD13	2.42	0.55
7:AH:124:ILE:HG22	7:AH:125:ILE:H	1.72	0.55
10:AK:35:ASP:OD1	10:AK:37:GLN:HB2	2.07	0.55
20:AB:101:THR:HG23	20:AB:102:ASN:N	2.22	0.55
20:AB:125:PHE:HD2	20:AB:125:PHE:H	1.55	0.55
20:AB:172:ILE:HG22	20:AB:176:ASN:HD21	1.72	0.55
22:BA:113:C:H2'	22:BA:114:C:H6	1.72	0.55
23:BB:755:U:H2'	23:BB:756:A:H8	1.72	0.55
23:BB:1829:A:HO2'	25:BC:14:HIS:CD2	2.25	0.55
23:BB:1848:A:H2'	23:BB:1849:G:H8	1.72	0.55
23:BB:2872:A:O2'	23:BB:2873:A:H5"	2.06	0.55
24:BI:17:ALA:O	24:BI:18:ASN:HB3	2.07	0.55
29:BE:27:LEU:O	29:BE:31:VAL:HG23	2.06	0.55
35:BV:63:ILE:O	35:BV:70:ILE:HD12	2.07	0.55
40:BH:80:ILE:HD13	40:BH:98:ASP:HB2	1.87	0.55
42:BN:87:PHE:C	42:BN:89:SER:H	2.10	0.55
44:BQ:24:TYR:CG	44:BQ:25:GLY:N	2.75	0.55
44:BQ:79:ILE:HD13	44:BQ:79:ILE:O	2.07	0.55
44:BQ:94:LEU:HD21	49:BR:11:GLN:HB2	1.89	0.55
45:BS:50:VAL:HA	45:BS:53:SER:HB2	1.89	0.55
47:BF:87:LYS:C	47:BF:88:VAL:HG23	2.27	0.55
48:BG:25:ILE:HG22	48:BG:78:VAL:HG11	1.88	0.55
48:BG:66:THR:O	48:BG:70:LEU:HB2	2.07	0.55
48:BG:94:ARG:CB	48:BG:127:GLN:HG2	2.35	0.55
48:BG:108:PHE:HE1	48:BG:151:ARG:HD3	1.72	0.55
52:BW:37:VAL:HG13	52:BW:55:ASP:C	2.27	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BW:50:VAL:HG23	52:BW:61:LYS:CD	2.32	0.55
53:B6:134:ARG:CZ	53:B6:135:GLU:HG2	2.37	0.55
1:CA:190:A:O5'	1:CA:190:A:H8	1.90	0.55
1:CA:502:A:H4'	1:CA:550:G:H4'	1.89	0.55
1:CA:575:G:O2'	1:CA:821:G:H5'	2.07	0.55
1:CA:736:C:H2'	1:CA:737:C:H6	1.69	0.55
1:CA:1237:C:H3'	1:CA:1336:C:H41	1.71	0.55
1:CA:1382:C:H4'	6:CG:78:ARG:HH21	1.72	0.55
2:CC:122:GLN:HB3	2:CC:127:VAL:HG21	1.88	0.55
19:CT:54:GLN:N	19:CT:55:PRO:HD2	2.22	0.55
20:CB:102:ASN:OD1	20:CB:105:THR:HB	2.06	0.55
22:DA:103:U:O2'	22:DA:104:A:H5'	2.07	0.55
23:DB:351:C:H2'	23:DB:352:A:C8	2.41	0.55
23:DB:1349:C:H2'	23:DB:1350:C:H6	1.72	0.55
23:DB:1958:C:O2'	23:DB:1959:G:H5'	2.07	0.55
23:DB:2230:G:H2'	23:DB:2231:U:C6	2.41	0.55
23:DB:2246:G:H2'	23:DB:2247:A:C8	2.42	0.55
23:DB:2282:G:H5"	23:DB:2283:C:O4'	2.06	0.55
24:DI:5:GLN:O	24:DI:6:ALA:HB3	2.06	0.55
27:DK:109:SER:HB2	27:DK:111:LYS:HE2	1.89	0.55
36:D2:27:GLY:O	36:D2:30:VAL:HB	2.06	0.55
37:DL:74:THR:HA	37:DL:107:PHE:O	2.06	0.55
39:DX:8:GLU:O	39:DX:12:GLU:HB2	2.07	0.55
40:DH:94:ILE:HG22	40:DH:122:LEU:HB2	1.88	0.55
41:DJ:18:VAL:CG1	41:DJ:54:ILE:HD11	2.37	0.55
41:DJ:98:GLU:CD	41:DJ:98:GLU:H	2.10	0.55
44:DQ:104:ALA:HA	49:DR:46:GLU:CD	2.27	0.55
47:DF:131:VAL:HG22	47:DF:151:LEU:O	2.07	0.55
48:DG:97:VAL:CG2	48:DG:124:CYS:HB2	2.36	0.55
51:DZ:6:GLN:HE22	51:DZ:50:ARG:H	1.55	0.55
1:AA:490:C:H2'	1:AA:491:G:C8	2.42	0.54
1:AA:676:A:H2'	1:AA:677:U:C6	2.42	0.54
1:AA:783:C:O2'	1:AA:784:A:H5'	2.07	0.54
1:AA:882:C:O2'	1:AA:883:C:H5'	2.06	0.54
1:AA:923:A:H2'	1:AA:924:C:H6	1.72	0.54
1:AA:961:U:H3	1:AA:983:A:N6	2.06	0.54
1:AA:1020:G:H2'	1:AA:1020:G:N3	2.21	0.54
1:AA:1121:U:O2'	1:AA:1122:U:H5'	2.07	0.54
1:AA:1194:U:H2'	1:AA:1195:C:C6	2.42	0.54
1:AA:1323:G:H2'	1:AA:1324:A:H8	1.71	0.54
1:AA:1513:A:H2'	1:AA:1514:G:H8	1.69	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AL:79:ILE:HD12	11:AL:96:THR:HG22	1.90	0.54
12:AM:77:LYS:HG2	12:AM:81:ASP:OD1	2.08	0.54
19:AT:3:ILE:O	19:AT:4:LYS:HB2	2.08	0.54
23:BB:49:A:H5"	23:BB:51:G:O4'	2.07	0.54
23:BB:277:G:H1'	23:BB:361:G:O6	2.06	0.54
23:BB:972:A:C3'	23:BB:973:A:H5"	2.33	0.54
23:BB:1639:C:H2'	23:BB:1640:A:H5'	1.89	0.54
23:BB:2085:U:O2'	23:BB:2086:U:H5'	2.07	0.54
23:BB:2344:U:H4'	23:BB:2345:G:OP1	2.05	0.54
23:BB:2412:A:H2'	23:BB:2413:G:O4'	2.07	0.54
23:BB:2662:A:H2'	23:BB:2663:G:O4'	2.06	0.54
23:BB:2899:A:H2'	23:BB:2900:A:C8	2.43	0.54
35:BV:30:ILE:HA	35:BV:91:PHE:O	2.07	0.54
35:BV:63:ILE:HD12	35:BV:63:ILE:N	2.22	0.54
37:BL:19:LEU:O	37:BL:21:ARG:HG2	2.07	0.54
38:BM:21:ALA:CB	38:BM:100:LYS:HG2	2.36	0.54
39:BX:8:GLU:O	39:BX:12:GLU:HB2	2.07	0.54
40:BH:89:LYS:HZ3	40:BH:89:LYS:HA	1.72	0.54
42:BN:62:ASN:N	42:BN:62:ASN:HD22	2.05	0.54
47:BF:7:TYR:OH	47:BF:29:ARG:HG3	2.07	0.54
47:BF:104:THR:C	47:BF:105:ILE:HG13	2.27	0.54
50:BT:14:PRO:HA	50:BT:32:LEU:CB	2.37	0.54
50:BT:67:VAL:HG23	50:BT:75:GLY:O	2.07	0.54
1:CA:168:G:O2'	1:CA:169:C:H5'	2.06	0.54
1:CA:384:G:H2'	1:CA:385:C:C6	2.42	0.54
1:CA:472:U:H2'	1:CA:473:U:C6	2.43	0.54
1:CA:1219:A:H2'	1:CA:1220:G:C8	2.41	0.54
1:CA:1226:C:H5"	12:CM:101:THR:HB	1.89	0.54
2:CC:70:ALA:HA	2:CC:105:VAL:CG2	2.37	0.54
2:CC:120:THR:HG22	2:CC:188:ALA:HB2	1.87	0.54
3:CD:61:ARG:HH21	3:CD:67:LEU:HD23	1.71	0.54
5:CF:92:THR:HG22	5:CF:93:LYS:N	2.22	0.54
7:CH:17:GLN:OE1	7:CH:69:ALA:HB1	2.06	0.54
19:CT:15:LYS:HA	19:CT:18:LYS:CE	2.37	0.54
20:CB:16:GLY:HA2	20:CB:40:ILE:CD1	2.37	0.54
22:DA:64:G:O2'	22:DA:65:U:H5'	2.07	0.54
23:DB:37:C:O2'	23:DB:38:A:H5'	2.06	0.54
23:DB:573:U:O2'	23:DB:574:A:H3'	2.07	0.54
23:DB:587:C:O2'	37:DL:19:LEU:HD13	2.08	0.54
23:DB:870:U:O2'	23:DB:871:U:H5'	2.06	0.54
23:DB:899:A:OP1	23:DB:899:A:H4'	2.05	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1407:G:H2'	23:DB:1408:G:H8	1.71	0.54
23:DB:1667:G:OP1	27:DK:6:THR:HA	2.07	0.54
23:DB:1693:U:H1'	25:DC:13:ARG:HH21	1.72	0.54
23:DB:2579:C:O2'	26:DD:136:ASN:HA	2.06	0.54
23:DB:2882:A:H3'	23:DB:2883:A:H5"	1.88	0.54
25:DC:132:ARG:HD3	25:DC:166:ARG:NH1	2.21	0.54
25:DC:202:ARG:NH1	25:DC:213:ARG:HE	2.05	0.54
26:DD:36:GLN:OE1	26:DD:38:LYS:HE3	2.08	0.54
33:D1:14:ALA:HB3	33:D1:16:THR:HG22	1.89	0.54
37:DL:134:ALA:O	37:DL:137:ALA:HB3	2.06	0.54
40:DH:69:ALA:O	40:DH:73:ASN:HB2	2.07	0.54
41:DJ:136:GLN:N	41:DJ:137:PRO:HD3	2.22	0.54
42:DN:37:THR:OG1	42:DN:40:LYS:HE2	2.07	0.54
47:DF:134:GLN:O	47:DF:136:ILE:N	2.40	0.54
48:DG:94:ARG:CB	48:DG:127:GLN:HG2	2.35	0.54
52:DW:46:ALA:HB2	52:DW:78:PHE:HD1	1.70	0.54
53:D6:134:ARG:NH1	53:D6:134:ARG:HB3	2.21	0.54
1:AA:8:A:H61	3:AD:53:GLN:HE22	1.55	0.54
1:AA:335:C:H2'	1:AA:336:A:C8	2.42	0.54
1:AA:575:G:O2'	1:AA:821:G:H5'	2.07	0.54
1:AA:1527:U:O2'	1:AA:1528:U:H5'	2.07	0.54
6:AG:134:VAL:HB	6:AG:137:ARG:HH21	1.72	0.54
8:AI:21:LYS:CG	8:AI:22:PRO:HD2	2.37	0.54
11:AL:86:VAL:HB	11:AL:89:LEU:HB2	1.87	0.54
12:AM:1:ALA:C	12:AM:8:ILE:HG22	2.28	0.54
20:AB:42:LEU:HA	20:AB:45:THR:OG1	2.08	0.54
21:AU:3:ILE:HD13	21:AU:19:LYS:HA	1.89	0.54
23:BB:228:C:O2	23:BB:418:C:H4'	2.07	0.54
23:BB:634:C:H2'	23:BB:635:C:H6	1.72	0.54
23:BB:968:C:H2'	23:BB:969:G:C8	2.41	0.54
23:BB:2266:A:C4	23:BB:2272:U:H5	2.24	0.54
23:BB:2590:A:H2'	23:BB:2591:C:C6	2.41	0.54
23:BB:2784:U:H2'	23:BB:2785:C:C6	2.42	0.54
23:BB:2846:G:H2'	23:BB:2847:U:C6	2.42	0.54
23:BB:2849:U:N3	23:BB:2867:G:C8	2.76	0.54
23:BB:2898:U:H2'	23:BB:2899:A:C8	2.42	0.54
24:BI:58:ILE:HD12	24:BI:58:ILE:N	2.22	0.54
27:BK:70:ARG:HB3	27:BK:76:VAL:HG13	1.89	0.54
32:B4:13:ASN:O	32:B4:27:CYS:HA	2.07	0.54
40:BH:7:ASP:CG	40:BH:8:LYS:H	2.10	0.54
43:BO:71:ALA:O	43:BO:106:LEU:HB3	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BQ:65:ASN:CB	44:BQ:75:TYR:HB2	2.38	0.54
47:BF:11:VAL:HG21	47:BF:172:PHE:HE1	1.72	0.54
48:BG:162:ARG:NH2	48:BG:168:VAL:HG21	2.22	0.54
52:BW:18:LYS:HG3	52:BW:19:ARG:CZ	2.37	0.54
52:BW:39:GLN:HG3	52:BW:42:THR:CB	2.37	0.54
1:CA:62:U:H2'	1:CA:63:C:C6	2.42	0.54
1:CA:76:G:H2'	1:CA:77:A:C8	2.42	0.54
1:CA:367:U:OP1	1:CA:395:C:H1'	2.07	0.54
1:CA:598:U:H2'	1:CA:599:C:C6	2.42	0.54
1:CA:965:U:OP1	1:CA:1198:G:H5"	2.08	0.54
1:CA:1249:C:H4'	8:CI:37:TYR:OH	2.07	0.54
2:CC:13:ILE:O	2:CC:14:VAL:HG22	2.07	0.54
11:CL:35:ARG:NH2	11:CL:36:VAL:HG22	2.23	0.54
12:CM:92:ARG:HA	12:CM:92:ARG:NE	2.21	0.54
13:CN:30:ILE:O	13:CN:40:ARG:HA	2.07	0.54
16:CQ:68:LYS:C	16:CQ:70:LYS:H	2.10	0.54
22:DA:29:A:H3'	22:DA:30:C:H6	1.72	0.54
23:DB:99:U:H5	46:DU:6:ARG:HH22	1.53	0.54
23:DB:321:U:H1'	29:DE:162:ARG:HH11	1.70	0.54
23:DB:634:C:H2'	23:DB:635:C:H6	1.72	0.54
23:DB:1292:G:H2'	23:DB:1293:C:C6	2.42	0.54
23:DB:2514:U:H2'	23:DB:2515:C:H6	1.72	0.54
23:DB:2868:A:H2'	23:DB:2869:G:H8	1.72	0.54
23:DB:2881:U:O3'	42:DN:96:ARG:HD3	2.07	0.54
23:DB:2886:A:H62	31:D0:39:ARG:CZ	2.20	0.54
26:DD:117:GLY:HA2	26:DD:164:GLN:NE2	2.21	0.54
26:DD:169:ARG:O	26:DD:170:VAL:HG22	2.07	0.54
26:DD:175:LEU:HD21	26:DD:191:GLY:O	2.07	0.54
29:DE:138:LEU:HB3	29:DE:143:LEU:O	2.08	0.54
33:D1:7:LYS:HD3	33:D1:23:THR:HG22	1.90	0.54
35:DV:28:ALA:HB2	35:DV:89:ILE:HD12	1.88	0.54
37:DL:75:ALA:HB2	37:DL:105:ILE:HG21	1.89	0.54
42:DN:11:ASN:O	42:DN:12:ARG:HB2	2.07	0.54
44:DQ:68:ALA:HB1	44:DQ:73:ILE:HG23	1.88	0.54
45:DS:28:LYS:HD2	45:DS:29:VAL:H	1.73	0.54
46:DU:35:VAL:HB	46:DU:38:ILE:HG21	1.89	0.54
46:DU:73:ASN:HD21	46:DU:76:THR:H	1.54	0.54
47:DF:110:ILE:HG21	47:DF:113:PHE:HB3	1.89	0.54
48:DG:25:ILE:HG22	48:DG:78:VAL:HG11	1.90	0.54
1:AA:723:U:O4'	21:AU:48:LYS:HD3	2.08	0.54
1:AA:1258:G:O2'	1:AA:1259:C:H5'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1320:C:O2'	1:AA:1321:U:H5'	2.07	0.54
3:AD:151:GLN:HE21	3:AD:153:ARG:HD2	1.72	0.54
5:AF:6:ILE:HD11	5:AF:8:PHE:HD2	1.73	0.54
8:AI:5:TYR:CD1	8:AI:20:ILE:HG22	2.42	0.54
16:AQ:16:MET:CB	16:AQ:19:SER:HB2	2.38	0.54
18:AS:10:ILE:HG22	18:AS:37:SER:HB3	1.89	0.54
20:AB:57:ASN:HB3	20:AB:219:THR:O	2.07	0.54
20:AB:95:TRP:CZ2	20:AB:100:LEU:HD13	2.41	0.54
20:AB:118:THR:O	20:AB:121:GLN:HB3	2.08	0.54
23:BB:26:G:H1'	23:BB:514:A:N6	2.22	0.54
23:BB:736:C:H2'	23:BB:737:C:H6	1.73	0.54
23:BB:1149:G:H2'	23:BB:1150:C:H6	1.71	0.54
23:BB:1439:A:C6	23:BB:1552:A:N7	2.75	0.54
23:BB:1513:U:O2'	23:BB:1514:G:H5'	2.07	0.54
23:BB:2037:A:H2'	23:BB:2038:G:H8	1.71	0.54
23:BB:2271:G:H2'	23:BB:2272:U:O4'	2.07	0.54
23:BB:2312:U:H5'	47:BF:84:ILE:HD12	1.89	0.54
26:BD:108:ASP:OD2	26:BD:173:GLN:HA	2.07	0.54
27:BK:71:ARG:HB3	27:BK:72:PRO:CD	2.28	0.54
33:B1:14:ALA:HB3	33:B1:16:THR:HG22	1.89	0.54
35:BV:24:ASN:HB3	35:BV:44:HIS:HB3	1.89	0.54
36:B2:3:ARG:HA	36:B2:3:ARG:CZ	2.37	0.54
39:BX:20:ASN:N	39:BX:20:ASN:HD22	2.06	0.54
45:BS:55:ILE:O	45:BS:58:ALA:HB3	2.08	0.54
48:BG:5:LYS:HE3	48:BG:61:TRP:CZ2	2.41	0.54
48:BG:96:ALA:HB3	48:BG:103:ASN:HB3	1.89	0.54
1:CA:160:A:H2'	1:CA:161:A:O4'	2.07	0.54
1:CA:211:G:H2'	1:CA:212:G:O4'	2.07	0.54
1:CA:335:C:H2'	1:CA:336:A:C8	2.42	0.54
1:CA:709:U:H2'	1:CA:710:G:C8	2.41	0.54
1:CA:764:C:H2'	1:CA:765:G:C5'	2.37	0.54
1:CA:1508:A:H2'	1:CA:1509:C:H6	1.72	0.54
6:CG:134:VAL:HB	6:CG:137:ARG:NH2	2.22	0.54
23:DB:460:A:H2'	23:DB:461:C:O4'	2.07	0.54
23:DB:547:A:C6	23:DB:548:G:H1'	2.42	0.54
23:DB:909:A:H2'	23:DB:912:C:H5	1.70	0.54
23:DB:1000:A:H2'	23:DB:1001:A:C8	2.42	0.54
23:DB:1098:A:C3'	24:DI:3:LYS:HA	2.26	0.54
23:DB:1848:A:H2'	23:DB:1849:G:C8	2.41	0.54
23:DB:1987:A:H2'	23:DB:1988:G:C8	2.42	0.54
23:DB:2271:G:H2'	23:DB:2272:U:O4'	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2572:A:OP2	26:DD:152:PRO:HD3	2.08	0.54
29:DE:27:LEU:O	29:DE:31:VAL:HG23	2.08	0.54
41:DJ:84:ILE:O	41:DJ:84:ILE:HG23	2.07	0.54
43:DO:6:ALA:O	43:DO:10:ARG:HG3	2.07	0.54
47:DF:120:SER:HG	47:DF:127:TYR:HD2	1.54	0.54
50:DT:13:ALA:O	50:DT:32:LEU:HB2	2.07	0.54
1:AA:107:G:O6	19:AT:9:ARG:HD3	2.08	0.54
1:AA:208:U:H2'	1:AA:210:C:C4	2.43	0.54
1:AA:502:A:H2'	1:AA:503:C:C6	2.42	0.54
1:AA:672:U:H2'	1:AA:673:A:H8	1.73	0.54
1:AA:1030:U:H5'	1:AA:1031:C:N3	2.22	0.54
1:AA:1163:A:H2'	1:AA:1164:G:H8	1.73	0.54
2:AC:19:SER:O	13:AN:93:PRO:HB3	2.08	0.54
7:AH:94:VAL:HG21	7:AH:100:ILE:O	2.07	0.54
10:AK:52:ARG:HH12	10:AK:56:LYS:CE	2.19	0.54
11:AL:106:VAL:CG2	11:AL:116:TYR:HB3	2.38	0.54
23:BB:141:G:C2	50:BT:2:ILE:HG21	2.41	0.54
23:BB:285:G:H2'	23:BB:286:U:C6	2.43	0.54
23:BB:1443:U:H2'	23:BB:1444:G:H8	1.72	0.54
23:BB:1718:G:H2'	23:BB:1719:G:H8	1.72	0.54
23:BB:1794:A:H2'	23:BB:1795:C:H6	1.73	0.54
23:BB:2358:A:H61	37:BL:54:GLN:HE22	1.55	0.54
36:B2:16:HIS:HB3	36:B2:21:ARG:NH1	2.23	0.54
38:BM:105:MET:HB2	38:BM:117:PHE:CZ	2.43	0.54
39:BX:56:LEU:O	39:BX:57:LEU:HB2	2.08	0.54
43:BO:15:ARG:HH21	43:BO:95:SER:HB3	1.72	0.54
46:BU:84:PHE:HD2	46:BU:91:LYS:HG2	1.72	0.54
53:B6:140:LEU:HD21	53:B6:157:ALA:HB3	1.88	0.54
1:CA:157:U:O2'	1:CA:158:G:H5'	2.06	0.54
1:CA:676:A:H2'	1:CA:677:U:H6	1.72	0.54
1:CA:714:G:N2	1:CA:777:A:H1'	2.22	0.54
4:CE:113:VAL:CG1	4:CE:136:VAL:HG23	2.37	0.54
5:CF:99:ALA:O	5:CF:100:SER:HB2	2.07	0.54
11:CL:54:VAL:HG21	11:CL:79:ILE:HD11	1.90	0.54
20:CB:94:ARG:N	20:CB:94:ARG:NE	2.53	0.54
20:CB:95:TRP:HZ2	20:CB:100:LEU:HD22	1.72	0.54
20:CB:117:GLU:HA	20:CB:140:LEU:HD21	1.89	0.54
23:DB:1517:G:O2'	23:DB:1518:C:H5'	2.07	0.54
23:DB:1678:A:H2'	23:DB:1679:A:O4'	2.07	0.54
23:DB:2365:G:H4'	52:DW:59:PHE:CE1	2.42	0.54
23:DB:2662:A:H2'	23:DB:2663:G:O4'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2841:C:H2'	23:DB:2842:G:H8	1.71	0.54
24:DI:63:ASP:O	24:DI:64:ARG:HB2	2.06	0.54
25:DC:264:LYS:HG3	25:DC:265:PHE:CD2	2.43	0.54
44:DQ:24:TYR:CG	44:DQ:25:GLY:N	2.75	0.54
44:DQ:34:ALA:O	44:DQ:37:ALA:HB3	2.07	0.54
46:DU:54:PRO:HG2	46:DU:55:GLY:H	1.72	0.54
46:DU:81:ARG:HH21	46:DU:81:ARG:N	2.04	0.54
48:DG:5:LYS:HE3	48:DG:61:TRP:CZ2	2.42	0.54
49:DR:49:ILE:HD12	49:DR:49:ILE:O	2.08	0.54
1:AA:1200:C:C3'	1:AA:1201:A:H5'	2.38	0.54
5:AF:92:THR:HG22	5:AF:93:LYS:N	2.23	0.54
9:AJ:55:PRO:HA	13:AN:80:ARG:NH2	2.21	0.54
23:BB:91:A:H1'	23:BB:92:U:C6	2.43	0.54
23:BB:121:G:H2'	23:BB:122:G:C8	2.43	0.54
23:BB:1936:A:H2	23:BB:1943:U:O4	1.90	0.54
23:BB:2144:G:H21	23:BB:2147:A:H4'	1.66	0.54
26:BD:169:ARG:O	26:BD:170:VAL:HG22	2.08	0.54
29:BE:61:ARG:NH1	29:BE:64:GLY:HA3	2.22	0.54
34:B3:41:ARG:HG3	34:B3:44:ARG:NH2	2.22	0.54
41:BJ:72:LYS:CG	41:BJ:89:PHE:HB2	2.38	0.54
46:BU:13:LEU:H	46:BU:13:LEU:HD12	1.73	0.54
49:BR:39:LEU:HB3	49:BR:53:PHE:HA	1.89	0.54
1:CA:668:G:O2'	1:CA:669:G:H5'	2.08	0.54
1:CA:961:U:H3	1:CA:983:A:N6	2.05	0.54
1:CA:1314:C:OP2	18:CS:5:LYS:HG2	2.08	0.54
6:CG:104:VAL:O	6:CG:108:ARG:HG3	2.08	0.54
11:CL:43:LYS:HE3	11:CL:44:PRO:HD3	1.89	0.54
13:CN:80:ARG:HG3	13:CN:81:ILE:N	2.23	0.54
20:CB:65:LYS:H	20:CB:158:ASP:CG	2.11	0.54
21:CU:36:PHE:O	21:CU:39:LYS:HG3	2.06	0.54
23:DB:320:A:H4'	23:DB:322:A:N7	2.23	0.54
23:DB:806:C:O2'	23:DB:807:U:H5'	2.06	0.54
23:DB:807:U:H2'	23:DB:808:G:C8	2.43	0.54
23:DB:877:A:C2'	23:DB:900:A:H61	2.18	0.54
23:DB:1878:G:H2'	23:DB:1879:C:C6	2.43	0.54
23:DB:2153:C:H2'	23:DB:2154:A:C8	2.42	0.54
23:DB:2746:U:O3'	48:DG:137:LYS:HD3	2.08	0.54
24:DI:17:ALA:O	24:DI:18:ASN:CB	2.55	0.54
24:DI:85:ILE:CD1	24:DI:137:LEU:HD21	2.37	0.54
35:DV:2:PHE:O	35:DV:4:ILE:HG13	2.07	0.54
37:DL:57:LEU:HA	37:DL:60:ARG:NE	2.23	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DL:92:LEU:CD2	37:DL:124:GLY:HA3	2.38	0.54
41:DJ:72:LYS:CB	41:DJ:89:PHE:H	2.21	0.54
43:DO:5:SER:HA	43:DO:8:ILE:CD1	2.35	0.54
53:D6:80:GLU:CD	53:D6:92:PRO:HB2	2.26	0.54
53:D6:122:ALA:O	53:D6:126:ARG:HG3	2.08	0.54
1:AA:620:C:N1	3:AD:131:ILE:HD13	2.23	0.54
1:AA:1329:A:OP1	12:AM:28:ARG:HB2	2.07	0.54
9:AJ:56:HIS:O	9:AJ:57:VAL:HG12	2.07	0.54
13:AN:14:ALA:O	13:AN:18:LYS:HG3	2.07	0.54
13:AN:79:SER:O	13:AN:83:VAL:HG23	2.07	0.54
16:AQ:24:ILE:HD12	16:AQ:24:ILE:N	2.23	0.54
20:AB:86:CYS:HB3	20:AB:88:GLN:CD	2.28	0.54
20:AB:128:LEU:HB3	20:AB:132:GLU:HB3	1.88	0.54
21:AU:31:VAL:HG12	21:AU:31:VAL:O	2.08	0.54
23:BB:20:C:O2'	23:BB:21:A:H5'	2.08	0.54
23:BB:107:G:H2'	23:BB:108:G:H8	1.73	0.54
23:BB:405:U:OP2	23:BB:405:U:H4'	2.08	0.54
23:BB:1485:U:H2'	23:BB:1486:U:H6	1.70	0.54
23:BB:1566:A:H5'	25:BC:213:ARG:NH1	2.22	0.54
23:BB:1579:A:H2'	23:BB:1580:A:C8	2.43	0.54
23:BB:1739:A:H2'	23:BB:1740:G:O4'	2.08	0.54
25:BC:119:VAL:HG13	25:BC:133:ASN:HD21	1.72	0.54
30:BY:6:ILE:HD13	30:BY:6:ILE:H	1.72	0.54
35:BV:4:ILE:CD1	35:BV:61:LEU:HB3	2.37	0.54
41:BJ:136:GLN:N	41:BJ:137:PRO:HD3	2.22	0.54
48:BG:15:ASP:CB	48:BG:26:LYS:HB3	2.38	0.54
53:B6:84:ARG:O	53:B6:85:ASP:C	2.45	0.54
1:CA:148:G:N3	1:CA:1446:A:H2	2.05	0.54
13:CN:41:TRP:HD1	13:CN:44:VAL:HG23	1.72	0.54
14:CO:71:LYS:HB2	14:CO:78:TYR:CD2	2.43	0.54
16:CQ:10:ARG:NH2	16:CQ:55:GLY:HA2	2.23	0.54
19:CT:15:LYS:HD3	19:CT:18:LYS:HE3	1.89	0.54
20:CB:45:THR:HG23	20:CB:200:PRO:HG2	1.88	0.54
23:DB:335:C:O2'	23:DB:336:C:H5'	2.07	0.54
23:DB:855:G:O2'	52:DW:23:LYS:HD3	2.06	0.54
23:DB:1351:C:O2'	23:DB:1571:A:H1'	2.07	0.54
23:DB:1376:C:H3'	57:DB:3278:HOH:O	2.07	0.54
23:DB:2846:G:H2'	23:DB:2847:U:C6	2.42	0.54
25:DC:121:ALA:HB3	25:DC:129:LEU:HD11	1.90	0.54
29:DE:47:LYS:HA	29:DE:51:GLU:HG3	1.90	0.54
30:DY:18:LYS:O	30:DY:22:THR:HG23	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DV:63:ILE:H	35:DV:70:ILE:HD11	1.71	0.54
38:DM:40:ARG:HB2	38:DM:93:VAL:CG2	2.38	0.54
40:DH:88:GLY:O	40:DH:90:LEU:HD12	2.08	0.54
41:DJ:4:PHE:HB3	41:DJ:44:TYR:CE1	2.42	0.54
41:DJ:4:PHE:CG	41:DJ:5:THR:N	2.75	0.54
48:DG:7:PRO:O	48:DG:8:VAL:CB	2.56	0.54
1:AA:301:G:H2'	1:AA:302:G:C8	2.43	0.54
1:AA:472:U:H2'	1:AA:473:U:C6	2.43	0.54
1:AA:590:U:H2'	1:AA:591:U:C6	2.43	0.54
1:AA:1477:U:H2'	1:AA:1478:U:C6	2.43	0.54
3:AD:90:LEU:H	3:AD:90:LEU:HD22	1.72	0.54
12:AM:38:ILE:HG13	12:AM:55:LEU:CD2	2.38	0.54
13:AN:80:ARG:HG3	13:AN:81:ILE:N	2.22	0.54
19:AT:81:GLN:C	19:AT:83:ASN:H	2.10	0.54
23:BB:7:G:H2'	23:BB:8:C:C6	2.43	0.54
23:BB:142:A:H2'	23:BB:143:C:C5	2.42	0.54
23:BB:340:A:H2'	23:BB:341:C:O4'	2.08	0.54
23:BB:418:C:H2'	23:BB:419:U:H6	1.73	0.54
23:BB:496:G:H1'	45:BS:61:ASN:ND2	2.22	0.54
23:BB:630:G:H4'	23:BB:640:C:O2'	2.08	0.54
23:BB:809:G:H2'	23:BB:810:U:C6	2.43	0.54
23:BB:1273:U:H4'	23:BB:1275:A:OP2	2.07	0.54
23:BB:1401:G:H2'	23:BB:1402:U:C6	2.43	0.54
23:BB:2020:A:O2'	23:BB:2021:C:H5'	2.07	0.54
23:BB:2103:C:OP1	23:BB:2103:C:H4'	2.07	0.54
23:BB:2285:C:OP1	33:B1:25:ASN:ND2	2.40	0.54
23:BB:2368:C:H2'	23:BB:2369:A:H8	1.72	0.54
24:BI:11:GLN:O	24:BI:11:GLN:HG3	2.07	0.54
24:BI:112:LYS:O	24:BI:116:MET:HG3	2.08	0.54
26:BD:25:THR:HG21	26:BD:193:VAL:HG22	1.90	0.54
34:B3:24:LYS:NZ	34:B3:28:LEU:HB3	2.23	0.54
38:BM:41:LEU:HD13	38:BM:46:ILE:HG22	1.89	0.54
44:BQ:90:ASP:O	44:BQ:94:LEU:HB2	2.08	0.54
48:BG:34:ARG:HH11	48:BG:34:ARG:N	1.97	0.54
1:CA:1438:G:O2'	1:CA:1439:G:H5'	2.07	0.54
11:CL:14:LYS:HG2	11:CL:15:VAL:N	2.23	0.54
13:CN:63:CYS:HB2	13:CN:79:SER:HB3	1.89	0.54
14:CO:21:ASP:C	14:CO:23:GLY:H	2.11	0.54
14:CO:81:LEU:O	14:CO:85:LEU:HD13	2.07	0.54
19:CT:81:GLN:C	19:CT:83:ASN:H	2.09	0.54
23:DB:26:G:H1'	23:DB:514:A:N6	2.21	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:102:U:H2'	39:DX:2:LYS:CE	2.36	0.54
23:DB:208:C:H2'	23:DB:209:C:H6	1.73	0.54
23:DB:585:G:H2'	23:DB:1251:C:H42	1.72	0.54
23:DB:974:G:OP2	49:DR:78:ARG:HD3	2.07	0.54
23:DB:1179:G:O2'	23:DB:1180:U:H5'	2.08	0.54
23:DB:1222:U:O2'	23:DB:1223:G:H5'	2.07	0.54
23:DB:1419:A:H2'	23:DB:1421:G:N7	2.23	0.54
23:DB:1443:U:H2'	23:DB:1444:G:H8	1.73	0.54
23:DB:2822:G:H2'	23:DB:2823:A:H5"	1.89	0.54
25:DC:90:ILE:CD1	25:DC:102:TYR:HB3	2.37	0.54
33:D1:7:LYS:HA	33:D1:23:THR:HG22	1.89	0.54
35:DV:9:ARG:HA	35:DV:41:GLU:OE2	2.08	0.54
43:DO:71:ALA:O	43:DO:106:LEU:HB3	2.07	0.54
44:DQ:86:SER:HB3	49:DR:52:PRO:HD3	1.89	0.54
46:DU:13:LEU:H	46:DU:13:LEU:HD12	1.72	0.54
47:DF:1:ALA:O	47:DF:4:HIS:HB3	2.07	0.54
49:DR:39:LEU:HA	49:DR:53:PHE:HA	1.89	0.54
49:DR:58:VAL:HG22	49:DR:59:ILE:N	2.23	0.54
52:DW:23:LYS:HZ2	52:DW:24:ARG:HG3	1.72	0.54
52:DW:37:VAL:HG13	52:DW:55:ASP:C	2.27	0.54
1:AA:157:U:O2'	1:AA:158:G:H5'	2.07	0.54
1:AA:205:A:H2'	1:AA:206:C:C6	2.43	0.54
1:AA:409:U:OP1	3:AD:23:GLY:HA3	2.08	0.54
1:AA:425:G:H2'	1:AA:426:U:C6	2.43	0.54
1:AA:692:U:C2	1:AA:694:A:H5"	2.42	0.54
1:AA:1249:C:H4'	8:AI:37:TYR:OH	2.07	0.54
3:AD:187:ARG:NH1	3:AD:191:SER:HA	2.23	0.54
6:AG:121:ASN:N	6:AG:121:ASN:HD22	2.04	0.54
14:AO:81:LEU:O	14:AO:85:LEU:HD13	2.08	0.54
20:AB:68:PHE:O	20:AB:90:PHE:HA	2.07	0.54
22:BA:40:U:H1'	22:BA:43:C:C5	2.43	0.54
23:BB:150:U:H2'	23:BB:151:C:H6	1.71	0.54
23:BB:350:G:H2'	23:BB:351:C:H6	1.73	0.54
23:BB:719:C:O2'	23:BB:720:U:H5'	2.08	0.54
23:BB:1349:C:H2'	23:BB:1350:C:H6	1.73	0.54
23:BB:1465:G:H2'	23:BB:1466:U:O4'	2.08	0.54
23:BB:1785:A:H2'	23:BB:1787:A:N7	2.23	0.54
23:BB:2636:C:H4'	26:BD:81:GLU:OE2	2.07	0.54
38:BM:35:ALA:CB	38:BM:100:LYS:H	2.20	0.54
39:BX:34:SER:HB2	39:BX:36:GLN:OE1	2.08	0.54
42:BN:83:LEU:HA	42:BN:86:ARG:CG	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:16:VAL:HG11	48:BG:44:HIS:CE1	2.43	0.54
51:BZ:68:LEU:HD22	51:BZ:78:TYR:CD1	2.42	0.54
53:B6:30:THR:HA	53:B6:183:ILE:HG12	1.89	0.54
1:CA:312:C:H2'	1:CA:313:A:H8	1.70	0.54
1:CA:1110:A:H2'	1:CA:1111:A:H8	1.73	0.54
2:CC:26:LYS:HE2	2:CC:27:GLU:HG3	1.88	0.54
6:CG:22:LEU:O	6:CG:26:VAL:HG13	2.08	0.54
6:CG:99:ALA:O	6:CG:103:ILE:HG13	2.08	0.54
9:CJ:7:ARG:O	9:CJ:100:ILE:HA	2.08	0.54
11:CL:30:ARG:O	11:CL:57:THR:HG23	2.08	0.54
13:CN:16:ALA:HA	13:CN:54:SER:O	2.07	0.54
20:CB:130:LYS:HA	20:CB:130:LYS:HE2	1.88	0.54
22:DA:32:U:H2'	22:DA:33:G:O4'	2.07	0.54
23:DB:1479:G:O2'	23:DB:1480:C:H5'	2.08	0.54
23:DB:1727:C:H2'	23:DB:1728:C:O4'	2.08	0.54
23:DB:2142:A:H2'	23:DB:2143:C:C1'	2.38	0.54
23:DB:2149:U:H2'	23:DB:2150:C:H6	1.73	0.54
23:DB:2700:A:H2'	23:DB:2701:U:C6	2.42	0.54
23:DB:2849:U:H4'	23:DB:2850:A:C5'	2.38	0.54
25:DC:177:SER:O	25:DC:270:ARG:HG3	2.08	0.54
29:DE:149:ILE:HG23	29:DE:188:MET:CA	2.38	0.54
40:DH:124:THR:HG23	40:DH:128:HIS:HE1	1.72	0.54
41:DJ:57:LEU:CG	41:DJ:128:ASN:H	2.17	0.54
43:DO:69:ASP:O	43:DO:72:ALA:HB3	2.08	0.54
43:DO:89:ASP:HA	43:DO:116:GLN:HB3	1.90	0.54
48:DG:15:ASP:CB	48:DG:26:LYS:HB3	2.38	0.54
48:DG:123:GLU:HG2	48:DG:124:CYS:H	1.71	0.54
49:DR:4:VAL:CG2	49:DR:39:LEU:HG	2.37	0.54
49:DR:39:LEU:HB3	49:DR:53:PHE:HA	1.90	0.54
1:AA:215:C:H2'	1:AA:216:U:H6	1.70	0.54
1:AA:532:A:H62	2:AC:191:THR:CB	2.15	0.54
1:AA:586:C:O2'	1:AA:587:G:H5'	2.07	0.54
1:AA:1352:C:H2'	1:AA:1353:G:H8	1.72	0.54
5:AF:99:ALA:O	5:AF:100:SER:HB2	2.08	0.54
20:AB:93:HIS:HB2	20:AB:145:ASN:O	2.08	0.54
21:AU:24:LYS:HD2	21:AU:25:ALA:N	2.23	0.54
22:BA:113:C:H2'	22:BA:114:C:C6	2.43	0.54
23:BB:591:U:H1'	34:B3:1:PRO:N	2.23	0.54
23:BB:1396:U:O4'	23:BB:1396:U:O2	2.23	0.54
23:BB:1841:U:H2'	23:BB:1842:G:H8	1.71	0.54
23:BB:2674:G:H2'	23:BB:2675:A:C8	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2699:C:H2'	23:BB:2700:A:H8	1.71	0.54
26:BD:60:VAL:HA	26:BD:64:GLU:OE2	2.08	0.54
28:BP:75:THR:CG2	28:BP:76:HIS:H	2.18	0.54
29:BE:108:ILE:HG12	37:BL:2:ARG:HH22	1.72	0.54
29:BE:149:ILE:HG23	29:BE:188:MET:CA	2.38	0.54
34:B3:20:GLY:HA3	34:B3:48:MET:HE1	1.89	0.54
35:BV:63:ILE:HB	35:BV:70:ILE:HD11	1.90	0.54
39:BX:1:MET:HB3	39:BX:5:GLU:OE1	2.07	0.54
40:BH:54:LEU:O	40:BH:58:LEU:N	2.34	0.54
41:BJ:4:PHE:HB3	41:BJ:44:TYR:CE1	2.43	0.54
41:BJ:29:ALA:O	41:BJ:32:LEU:HB2	2.08	0.54
44:BQ:57:ARG:HH12	44:BQ:61:ILE:HD11	1.72	0.54
48:BG:37:ASN:ND2	48:BG:38:ASP:H	2.05	0.54
52:BW:23:LYS:C	52:BW:66:VAL:HB	2.28	0.54
53:B6:39:LEU:HG	53:B6:40:HIS:N	2.23	0.54
1:CA:107:G:O6	19:CT:9:ARG:HD3	2.07	0.54
1:CA:317:U:H2'	1:CA:318:G:H8	1.71	0.54
1:CA:484:G:H4'	1:CA:485:U:H5'	1.89	0.54
1:CA:806:C:H2'	1:CA:807:A:H8	1.73	0.54
1:CA:999:C:H2'	1:CA:1000:A:H8	1.72	0.54
1:CA:1314:C:H2'	1:CA:1315:U:H6	1.72	0.54
3:CD:22:SER:N	3:CD:109:THR:HG22	2.22	0.54
3:CD:169:TRP:CE2	3:CD:185:PRO:HB3	2.43	0.54
4:CE:156:ARG:HB3	7:CH:43:GLY:HA3	1.90	0.54
11:CL:79:ILE:HD12	11:CL:96:THR:HG22	1.90	0.54
12:CM:71:GLU:HA	12:CM:74:MET:HG2	1.90	0.54
18:CS:48:ILE:HB	18:CS:59:VAL:HG23	1.90	0.54
20:CB:69:VAL:HB	20:CB:162:VAL:HB	1.90	0.54
23:DB:283:G:H2'	23:DB:284:U:O4'	2.07	0.54
23:DB:297:G:OP1	46:DU:91:LYS:HD3	2.07	0.54
23:DB:320:A:C2	29:DE:163:ASN:HB3	2.43	0.54
23:DB:633:A:H8	23:DB:633:A:O5'	1.90	0.54
23:DB:1054:A:H2'	23:DB:1055:G:O4'	2.08	0.54
23:DB:1508:A:H2'	23:DB:1509:A:C2	2.43	0.54
23:DB:2100:G:H2'	23:DB:2101:A:O4'	2.08	0.54
23:DB:2306:C:C3'	23:DB:2307:G:H5'	2.38	0.54
23:DB:2364:C:O2'	23:DB:2365:G:H5'	2.08	0.54
23:DB:2539:C:O2'	23:DB:2540:C:H5'	2.08	0.54
23:DB:2680:U:OP2	26:DD:114:LYS:HB3	2.08	0.54
25:DC:2:VAL:HG23	25:DC:3:VAL:N	2.23	0.54
25:DC:145:MET:SD	25:DC:153:LEU:HD21	2.48	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DK:2:ILE:HD12	27:DK:2:ILE:N	2.23	0.54
29:DE:143:LEU:HB3	29:DE:146:VAL:HG21	1.89	0.54
35:DV:63:ILE:HB	35:DV:70:ILE:HD11	1.90	0.54
43:DO:30:ARG:HH11	43:DO:30:ARG:HG3	1.71	0.54
44:DQ:89:ILE:HB	49:DR:11:GLN:NE2	2.21	0.54
44:DQ:91:ARG:HH12	49:DR:10:LYS:HB3	1.73	0.54
47:DF:78:ILE:C	47:DF:79:ARG:HG3	2.27	0.54
48:DG:153:PRO:CG	48:DG:162:ARG:HB3	2.38	0.54
50:DT:45:ALA:HA	50:DT:48:GLN:CG	2.38	0.54
50:DT:74:ILE:HG13	50:DT:75:GLY:H	1.73	0.54
53:D6:90:LEU:HB3	53:D6:101:ILE:CG2	2.38	0.54
53:D6:123:GLU:HA	53:D6:126:ARG:NH1	2.22	0.54
1:AA:448:A:H2'	1:AA:449:G:C8	2.43	0.54
1:AA:1003:G:N2	1:AA:1005:A:H5'	2.23	0.54
1:AA:1172:C:O2'	1:AA:1173:U:H5'	2.08	0.54
1:AA:1260:G:H4'	1:AA:1283:U:O2'	2.07	0.54
9:AJ:53:ILE:HG23	9:AJ:54:SER:N	2.23	0.54
13:AN:14:ALA:HA	13:AN:17:ASP:OD2	2.08	0.54
20:AB:22:TRP:CZ3	20:AB:24:PRO:HA	2.43	0.54
20:AB:96:LEU:CD2	20:AB:146:SER:HB2	2.37	0.54
23:BB:202:U:H2'	23:BB:203:A:C8	2.43	0.54
23:BB:338:G:N2	23:BB:339:U:H1'	2.23	0.54
23:BB:1656:C:H2'	23:BB:1657:U:H6	1.72	0.54
23:BB:2386:A:H2'	23:BB:2387:U:C6	2.42	0.54
25:BC:93:VAL:HG13	25:BC:94:LEU:N	2.22	0.54
26:BD:7:LYS:HE2	26:BD:198:GLY:HA2	1.89	0.54
26:BD:12:THR:HG22	26:BD:13:ARG:N	2.22	0.54
38:BM:65:ILE:HG23	38:BM:103:TYR:CE2	2.43	0.54
39:BX:3:ALA:O	39:BX:6:LEU:HB2	2.08	0.54
40:BH:69:ALA:HA	40:BH:140:ALA:HB2	1.90	0.54
41:BJ:36:LEU:O	41:BJ:51:GLY:HA3	2.08	0.54
41:BJ:59:ALA:O	41:BJ:62:VAL:HG12	2.08	0.54
47:BF:65:LEU:H	47:BF:88:VAL:HG22	1.72	0.54
48:BG:16:VAL:HG11	48:BG:44:HIS:NE2	2.23	0.54
52:BW:18:LYS:O	52:BW:34:SER:HA	2.08	0.54
53:B6:6:LEU:O	53:B6:9:GLU:HB3	2.07	0.54
53:B6:73:GLN:HG3	53:B6:74:ASN:H	1.73	0.54
1:CA:113:G:H2'	1:CA:114:U:C6	2.43	0.54
1:CA:628:G:O2'	1:CA:629:A:H5'	2.08	0.54
1:CA:720:C:H5"	17:CR:40:PRO:HA	1.90	0.54
1:CA:934:C:H5"	57:CA:1748:HOH:O	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1180:A:P	8:CI:98:ARG:HH22	2.31	0.54
2:CC:2:GLN:HE22	2:CC:3:LYS:NZ	2.05	0.54
3:CD:117:VAL:O	3:CD:130:ASN:HA	2.08	0.54
3:CD:147:LYS:HD3	3:CD:148:ALA:N	2.22	0.54
4:CE:132:PRO:O	4:CE:136:VAL:HG12	2.07	0.54
6:CG:45:ALA:HB3	6:CG:119:LEU:HD23	1.89	0.54
7:CH:103:VAL:HG22	7:CH:124:ILE:HA	1.90	0.54
8:CI:22:PRO:HA	8:CI:60:LEU:HB2	1.90	0.54
12:CM:70:ARG:NE	47:DF:136:ILE:HG21	2.23	0.54
20:CB:31:PHE:N	20:CB:41:ASN:HB2	2.23	0.54
23:DB:3:U:H2'	23:DB:4:U:C6	2.42	0.54
23:DB:217:A:H2'	23:DB:218:A:O4'	2.08	0.54
23:DB:418:C:H2'	23:DB:419:U:C6	2.42	0.54
23:DB:590:A:H2'	23:DB:591:U:H6	1.71	0.54
23:DB:850:U:H5"	30:DY:18:LYS:HD3	1.90	0.54
23:DB:956:G:N2	23:DB:959:A:H3'	2.23	0.54
23:DB:1100:C:OP2	24:DI:2:LYS:HB3	2.07	0.54
23:DB:1203:U:H3'	23:DB:1204:A:H5"	1.89	0.54
23:DB:1579:A:H2'	23:DB:1580:A:C8	2.42	0.54
23:DB:1842:G:H2'	23:DB:1843:C:H6	1.73	0.54
23:DB:1842:G:H1'	25:DC:242:HIS:NE2	2.23	0.54
23:DB:2093:G:H5'	40:DH:22:LYS:HD2	1.90	0.54
23:DB:2820:A:OP1	42:DN:4:ARG:HA	2.08	0.54
40:DH:94:ILE:O	40:DH:122:LEU:HD23	2.07	0.54
43:DO:68:LYS:H	43:DO:102:ARG:CD	2.21	0.54
44:DQ:91:ARG:HH22	49:DR:10:LYS:HB3	1.73	0.54
50:DT:14:PRO:HA	50:DT:32:LEU:HB3	1.90	0.54
50:DT:67:VAL:HG23	50:DT:75:GLY:O	2.08	0.54
52:DW:77:LYS:O	52:DW:78:PHE:HB2	2.07	0.54
1:AA:190:A:H8	1:AA:190:A:O5'	1.91	0.53
1:AA:590:U:H2'	1:AA:591:U:H6	1.72	0.53
1:AA:1298:U:H2'	6:AG:113:LYS:HZ2	1.72	0.53
3:AD:77:GLU:OE1	3:AD:80:ARG:HD3	2.08	0.53
3:AD:123:MET:HB2	3:AD:128:VAL:HA	1.90	0.53
7:AH:17:GLN:NE2	7:AH:62:LEU:HB3	2.23	0.53
8:AI:5:TYR:HD1	8:AI:20:ILE:HG22	1.72	0.53
11:AL:35:ARG:NH2	11:AL:36:VAL:HG22	2.23	0.53
16:AQ:80:LYS:CE	16:AQ:80:LYS:H	2.21	0.53
18:AS:10:ILE:HG22	18:AS:38:THR:N	2.23	0.53
20:AB:96:LEU:HB2	20:AB:99:MET:HE3	1.89	0.53
20:AB:112:ARG:HE	20:AB:116:LEU:HD11	1.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:145:C:H2'	23:BB:146:A:H8	1.73	0.53
23:BB:175:G:O2'	23:BB:176:A:H5'	2.08	0.53
23:BB:362:A:H3'	23:BB:363:G:H8	1.72	0.53
23:BB:534:U:H5'	44:BQ:41:ALA:HB1	1.91	0.53
23:BB:909:A:H2'	23:BB:912:C:C5	2.43	0.53
23:BB:1130:U:C2	23:BB:2025:C:H5"	2.43	0.53
23:BB:1248:G:O2'	44:BQ:2:ARG:HA	2.08	0.53
23:BB:1351:C:O2'	23:BB:1571:A:H1'	2.08	0.53
23:BB:1669:A:O3'	23:BB:2549:G:H5'	2.08	0.53
23:BB:1878:G:H2'	23:BB:1879:C:H6	1.72	0.53
23:BB:2262:U:H1'	23:BB:2328:A:H1'	1.90	0.53
23:BB:2436:G:O2'	23:BB:2437:G:H5'	2.08	0.53
25:BC:78:GLU:OE1	25:BC:94:LEU:HD22	2.09	0.53
35:BV:30:ILE:O	35:BV:37:PRO:HA	2.09	0.53
41:BJ:4:PHE:CG	41:BJ:5:THR:N	2.76	0.53
45:BS:13:SER:OG	45:BS:14:ALA:N	2.41	0.53
46:BU:9:GLU:O	46:BU:72:PHE:N	2.41	0.53
47:BF:60:SER:HB2	47:BF:62:GLN:OE1	2.08	0.53
53:B6:83:ILE:HG22	53:B6:90:LEU:HB2	1.89	0.53
1:CA:499:A:H4'	1:CA:500:G:OP1	2.08	0.53
1:CA:590:U:H2'	1:CA:591:U:H6	1.73	0.53
1:CA:724:G:O2'	1:CA:725:G:H5'	2.07	0.53
1:CA:1005:A:H2'	1:CA:1006:G:O4'	2.08	0.53
1:CA:1221:G:O3'	18:CS:76:THR:HG21	2.08	0.53
1:CA:1386:G:O2'	1:CA:1387:G:H5'	2.08	0.53
1:CA:1396:A:H4'	1:CA:1397:C:H5"	1.90	0.53
1:CA:1511:G:O2'	1:CA:1512:U:H5'	2.08	0.53
3:CD:146:GLU:HB3	3:CD:149:LYS:HE3	1.88	0.53
8:CI:50:PRO:HD3	8:CI:79:ARG:HG3	1.90	0.53
8:CI:62:LEU:HD22	8:CI:62:LEU:H	1.72	0.53
10:CK:105:ARG:NH2	21:CU:10:PRO:HB3	2.23	0.53
12:CM:38:ILE:HG13	12:CM:55:LEU:CD2	2.37	0.53
18:CS:10:ILE:HG22	18:CS:38:THR:N	2.23	0.53
22:DA:48:U:H2'	22:DA:49:C:C6	2.43	0.53
22:DA:94:A:H2'	22:DA:95:U:O4'	2.08	0.53
23:DB:136:G:H2'	23:DB:137:U:C6	2.43	0.53
23:DB:1258:U:C4'	29:DE:79:ARG:HD2	2.37	0.53
23:DB:1526:C:H2'	23:DB:1527:G:O4'	2.09	0.53
23:DB:2560:A:H2'	23:DB:2561:U:C6	2.43	0.53
23:DB:2746:U:H5"	48:DG:137:LYS:HG2	1.89	0.53
24:DI:24:GLY:HA2	24:DI:34:ILE:HD12	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DI:45:THR:HA	24:DI:48:ILE:CG2	2.38	0.53
26:DD:68:PHE:HB3	26:DD:73:VAL:CG2	2.33	0.53
30:DY:2:LYS:HD3	30:DY:2:LYS:H	1.73	0.53
33:D1:36:LYS:HG2	33:D1:47:ILE:HG13	1.90	0.53
41:DJ:3:THR:HB	41:DJ:44:TYR:OH	2.08	0.53
41:DJ:30:THR:HG23	41:DJ:31:GLU:N	2.23	0.53
43:DO:100:HIS:C	43:DO:104:GLN:HB2	2.29	0.53
44:DQ:57:ARG:HH12	44:DQ:61:ILE:HD11	1.70	0.53
46:DU:73:ASN:C	46:DU:75:ALA:H	2.11	0.53
52:DW:50:VAL:O	52:DW:59:PHE:HB3	2.08	0.53
1:AA:378:G:O2'	1:AA:379:C:H5'	2.07	0.53
1:AA:920:U:O2'	1:AA:921:U:H5'	2.09	0.53
1:AA:921:U:H2'	1:AA:922:G:C8	2.43	0.53
3:AD:2:ARG:HB3	3:AD:114:ARG:NH2	2.24	0.53
3:AD:146:GLU:HB3	3:AD:149:LYS:HE3	1.90	0.53
4:AE:113:VAL:CG1	4:AE:136:VAL:HG23	2.38	0.53
5:AF:3:HIS:NE2	5:AF:65:GLU:HG3	2.23	0.53
5:AF:38:ARG:HD3	5:AF:97:THR:HA	1.89	0.53
23:BB:76:C:O2'	23:BB:77:G:H5'	2.08	0.53
23:BB:547:A:C3'	23:BB:548:G:H5'	2.38	0.53
23:BB:674:G:HO2'	29:BE:60:TRP:HH2	1.56	0.53
23:BB:962:G:H2'	23:BB:963:U:C6	2.43	0.53
23:BB:2530:A:H3'	48:BG:156:TYR:OH	2.08	0.53
23:BB:2617:U:O2'	23:BB:2618:G:H5'	2.08	0.53
23:BB:2758:A:C2'	23:BB:2759:G:H5'	2.39	0.53
25:BC:166:ARG:HB3	25:BC:171:VAL:HG22	1.90	0.53
29:BE:5:LEU:HG	29:BE:12:LEU:HD22	1.90	0.53
34:B3:22:LYS:HB2	34:B3:48:MET:SD	2.48	0.53
36:B2:31:LEU:HD22	36:B2:42:LEU:HD12	1.90	0.53
38:BM:126:ILE:H	38:BM:126:ILE:HD12	1.73	0.53
39:BX:29:ARG:HH21	39:BX:29:ARG:CB	2.21	0.53
40:BH:73:ASN:HD22	40:BH:73:ASN:N	2.06	0.53
40:BH:124:THR:HG22	40:BH:125:THR:N	2.23	0.53
41:BJ:45:THR:O	41:BJ:45:THR:HG23	2.08	0.53
42:BN:32:GLU:HB3	42:BN:115:LEU:HG	1.90	0.53
42:BN:71:ARG:HG2	42:BN:71:ARG:HH21	1.73	0.53
44:BQ:91:ARG:HB2	44:BQ:94:LEU:HD23	1.89	0.53
45:BS:18:ARG:HB3	45:BS:76:VAL:HG22	1.89	0.53
45:BS:36:LEU:HD22	45:BS:36:LEU:N	2.19	0.53
46:BU:80:ASP:OD1	46:BU:95:PHE:HB3	2.08	0.53
47:BF:101:ARG:NH2	47:BF:138:PRO:HB2	2.22	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BT:29:THR:HA	50:BT:86:THR:HA	1.89	0.53
1:CA:369:G:O2'	1:CA:370:C:H5'	2.08	0.53
1:CA:632:U:H5"	1:CA:633:G:C8	2.43	0.53
1:CA:707:U:H2'	1:CA:708:C:H6	1.73	0.53
1:CA:955:U:H1'	1:CA:1227:A:H62	1.73	0.53
4:CE:82:HIS:HB2	4:CE:83:PRO:HD2	1.90	0.53
12:CM:21:ILE:HG23	12:CM:65:GLU:OE2	2.09	0.53
16:CQ:60:ILE:HG12	16:CQ:72:TRP:HE3	1.73	0.53
21:CU:42:THR:O	21:CU:46:ARG:HG3	2.09	0.53
22:DA:87:U:H2'	22:DA:88:C:O5'	2.09	0.53
23:DB:691:C:O2'	23:DB:692:C:H5'	2.08	0.53
23:DB:973:A:H1'	23:DB:1188:U:C5	2.43	0.53
23:DB:1722:A:H2'	23:DB:1723:G:H8	1.70	0.53
23:DB:1899:A:O2'	23:DB:1900:A:H5"	2.07	0.53
23:DB:2282:G:OP1	23:DB:2283:C:H1'	2.07	0.53
23:DB:2528:U:O2'	23:DB:2529:G:H3'	2.08	0.53
24:DI:32:VAL:HG22	24:DI:60:VAL:CG2	2.38	0.53
26:DD:102:ALA:HA	26:DD:180:VAL:HG21	1.89	0.53
28:DP:59:THR:OG1	28:DP:72:VAL:HG12	2.08	0.53
44:DQ:52:ARG:C	44:DQ:54:ARG:H	2.10	0.53
44:DQ:91:ARG:HB2	44:DQ:94:LEU:HD23	1.89	0.53
47:DF:3:LEU:HD21	47:DF:172:PHE:HB3	1.90	0.53
48:DG:37:ASN:ND2	48:DG:38:ASP:H	2.05	0.53
53:D6:64:ARG:N	53:D6:64:ARG:HD2	2.24	0.53
1:AA:668:G:O2'	1:AA:669:G:H5'	2.08	0.53
1:AA:678:U:O2'	1:AA:679:C:H5'	2.08	0.53
1:AA:1053:G:H4'	1:AA:1054:C:H5'	1.90	0.53
1:AA:1206:G:C4'	2:AC:192:TYR:HA	2.36	0.53
1:AA:1521:C:O2'	1:AA:1522:U:H5'	2.08	0.53
3:AD:22:SER:N	3:AD:109:THR:HG22	2.24	0.53
3:AD:55:ARG:HH11	3:AD:55:ARG:HG3	1.72	0.53
6:AG:72:VAL:HG12	6:AG:89:GLU:HA	1.91	0.53
8:AI:26:LYS:H	8:AI:61:ASP:HB2	1.72	0.53
23:BB:217:A:H2'	23:BB:218:A:O4'	2.09	0.53
23:BB:1464:G:H2'	23:BB:1465:G:H8	1.73	0.53
23:BB:1552:A:H2'	23:BB:1553:A:C5'	2.39	0.53
23:BB:1799:G:N2	23:BB:1818:U:O2'	2.41	0.53
23:BB:2109:U:H2'	23:BB:2110:G:C8	2.44	0.53
23:BB:2259:U:H2'	23:BB:2260:C:H6	1.73	0.53
23:BB:2543:G:H5'	23:BB:2543:G:H8	1.74	0.53
23:BB:2572:A:OP2	26:BD:152:PRO:HD3	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BK:2:ILE:HD12	27:BK:2:ILE:N	2.24	0.53
28:BP:59:THR:OG1	28:BP:72:VAL:HG12	2.08	0.53
36:B2:10:LEU:HD22	36:B2:14:ARG:NE	2.23	0.53
37:BL:19:LEU:HD23	37:BL:31:GLY:HA3	1.89	0.53
39:BX:39:GLN:HB2	39:BX:42:LEU:HD22	1.90	0.53
43:BO:25:ARG:O	43:BO:39:VAL:HA	2.08	0.53
46:BU:95:PHE:CE1	46:BU:102:ILE:HB	2.34	0.53
47:BF:124:ARG:HB3	47:BF:126:ASN:OD1	2.08	0.53
49:BR:4:VAL:CG2	49:BR:39:LEU:HG	2.37	0.53
53:B6:80:GLU:C	53:B6:82:ALA:H	2.11	0.53
1:CA:641:U:H4'	7:CH:106:SER:O	2.07	0.53
1:CA:1225:A:H3'	1:CA:1226:C:C6	2.43	0.53
1:CA:1283:U:H2'	1:CA:1284:C:C6	2.43	0.53
5:CF:3:HIS:CD2	5:CF:65:GLU:HG3	2.43	0.53
8:CI:41:GLU:C	8:CI:43:ALA:H	2.12	0.53
10:CK:52:ARG:HH12	10:CK:56:LYS:CE	2.21	0.53
13:CN:14:ALA:HA	13:CN:17:ASP:OD2	2.07	0.53
23:DB:222:A:N6	23:DB:232:G:H1'	2.24	0.53
23:DB:1423:G:H2'	23:DB:1424:G:H8	1.72	0.53
23:DB:1712:U:H2'	23:DB:1713:A:N7	2.23	0.53
23:DB:2259:U:H2'	23:DB:2260:C:H6	1.73	0.53
23:DB:2330:G:H1'	52:DW:38:ARG:HB2	1.90	0.53
23:DB:2438:U:O2'	23:DB:2439:A:H5"	2.08	0.53
23:DB:2553:G:H2'	23:DB:2554:U:C4'	2.38	0.53
27:DK:105:ARG:HB3	27:DK:122:VAL:HG12	1.91	0.53
40:DH:68:ARG:O	40:DH:72:ILE:HG13	2.08	0.53
44:DQ:80:ASN:O	44:DQ:83:LYS:HB3	2.08	0.53
48:DG:108:PHE:H	48:DG:108:PHE:HD1	1.56	0.53
51:DZ:27:ARG:HD2	51:DZ:29:PHE:CE1	2.43	0.53
1:AA:16:A:O2'	4:AE:20:VAL:HG13	2.08	0.53
1:AA:244:U:O4	1:AA:906:A:H1'	2.08	0.53
1:AA:552:U:H2'	1:AA:553:A:C8	2.43	0.53
1:AA:676:A:H2'	1:AA:677:U:H6	1.73	0.53
1:AA:724:G:H2'	1:AA:725:G:H8	1.74	0.53
1:AA:845:A:H5"	1:AA:846:G:C8	2.44	0.53
1:AA:1053:G:N7	1:AA:1200:C:H5"	2.23	0.53
1:AA:1297:G:H1'	1:AA:1298:U:H5	1.73	0.53
1:AA:1320:C:N3	18:AS:35:ARG:HD3	2.24	0.53
20:AB:83:ALA:O	20:AB:88:GLN:HB2	2.09	0.53
20:AB:162:VAL:CG1	20:AB:184:ALA:HB2	2.38	0.53
23:BB:116:C:H1'	23:BB:127:A:N3	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:813:U:H2'	23:BB:814:C:H6	1.72	0.53
23:BB:839:U:H1'	23:BB:1191:G:H1'	1.90	0.53
23:BB:857:G:C2'	23:BB:858:G:H5'	2.38	0.53
23:BB:934:U:H2'	23:BB:935:C:H6	1.73	0.53
23:BB:1097:U:C2'	23:BB:1098:A:H5'	2.37	0.53
23:BB:1636:U:H2'	23:BB:1637:A:C8	2.43	0.53
23:BB:1712:U:H2'	23:BB:1713:A:N7	2.23	0.53
23:BB:1883:U:H2'	23:BB:1884:G:H1'	1.90	0.53
23:BB:2579:C:O2'	26:BD:136:ASN:HA	2.08	0.53
28:BP:4:ILE:C	28:BP:6:GLN:N	2.61	0.53
30:BY:15:ARG:O	30:BY:20:LYS:HE3	2.09	0.53
35:BV:31:TYR:HA	35:BV:93:ARG:NH2	2.24	0.53
40:BH:64:ALA:H	40:BH:66:ASN:ND2	2.07	0.53
42:BN:11:ASN:O	42:BN:12:ARG:HB2	2.08	0.53
42:BN:92:GLY:HA2	42:BN:94:TYR:CZ	2.43	0.53
43:BO:111:ARG:HB2	43:BO:117:PHE:CZ	2.43	0.53
45:BS:58:ALA:HB1	45:BS:69:LEU:HD21	1.89	0.53
50:BT:44:LYS:O	50:BT:48:GLN:HG2	2.08	0.53
53:B6:4:LYS:HA	53:B6:7:TYR:CD2	2.43	0.53
53:B6:133:ARG:O	53:B6:134:ARG:C	2.47	0.53
1:CA:586:C:O2'	1:CA:587:G:H5'	2.08	0.53
1:CA:890:G:O2'	1:CA:906:A:N6	2.42	0.53
1:CA:977:A:H1'	1:CA:982:U:O4	2.08	0.53
1:CA:1147:C:O2'	8:CI:17:ARG:HD2	2.09	0.53
1:CA:1170:A:C5'	20:CB:138:ARG:HH12	2.20	0.53
1:CA:1414:U:H2'	1:CA:1415:G:H8	1.73	0.53
2:CC:106:ARG:HD2	2:CC:106:ARG:H	1.74	0.53
8:CI:51:LEU:HB3	8:CI:56:MET:CG	2.31	0.53
23:DB:179:C:H2'	23:DB:180:G:O4'	2.07	0.53
23:DB:228:C:O2	23:DB:418:C:H4'	2.09	0.53
23:DB:322:A:C2'	29:DE:163:ASN:HD21	2.20	0.53
23:DB:417:C:H2'	23:DB:418:C:H6	1.72	0.53
23:DB:981:A:H2'	23:DB:982:C:H5"	1.90	0.53
23:DB:1166:G:H2'	23:DB:1167:C:H6	1.71	0.53
23:DB:2195:U:O2'	23:DB:2196:C:H5'	2.09	0.53
23:DB:2212:A:H1'	23:DB:2213:U:N3	2.24	0.53
23:DB:2772:C:H2'	23:DB:2773:C:C6	2.43	0.53
24:DI:92:PRO:O	24:DI:93:ASN:HB2	2.09	0.53
37:DL:6:LEU:H	37:DL:6:LEU:CD2	2.18	0.53
45:DS:36:LEU:HD22	45:DS:36:LEU:N	2.19	0.53
46:DU:9:GLU:O	46:DU:72:PHE:N	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DG:36:LEU:HD22	48:DG:36:LEU:N	2.21	0.53
48:DG:132:LEU:N	48:DG:132:LEU:HD23	2.24	0.53
48:DG:155:PRO:HA	48:DG:170:THR:HA	1.90	0.53
53:D6:150:SER:O	53:D6:154:THR:HG22	2.08	0.53
1:AA:182:A:O2'	1:AA:183:C:H3'	2.08	0.53
1:AA:539:A:H2'	1:AA:540:G:H8	1.71	0.53
1:AA:1225:A:H3'	1:AA:1226:C:C6	2.43	0.53
3:AD:138:PRO:HA	3:AD:181:PHE:CD2	2.38	0.53
6:AG:19:SER:HB2	6:AG:21:LEU:HD21	1.91	0.53
9:AJ:91:ASP:C	9:AJ:92:LEU:HD13	2.29	0.53
10:AK:92:ARG:NH1	21:AU:20:ARG:HH21	2.07	0.53
20:AB:16:GLY:HA2	20:AB:40:ILE:CD1	2.38	0.53
20:AB:46:VAL:HA	20:AB:49:PHE:CD2	2.43	0.53
23:BB:126:A:O2'	23:BB:127:A:H5'	2.08	0.53
23:BB:460:A:P	36:B2:41:ARG:HH12	2.31	0.53
23:BB:819:A:N6	23:BB:1189:A:H1'	2.24	0.53
23:BB:1460:U:H5"	23:BB:1461:C:O4'	2.08	0.53
23:BB:1695:G:H2'	23:BB:1696:G:O4'	2.08	0.53
23:BB:2105:U:H2'	23:BB:2106:U:C6	2.43	0.53
23:BB:2267:A:N6	23:BB:2272:U:C4	2.76	0.53
23:BB:2722:G:H2'	23:BB:2723:C:H6	1.72	0.53
24:BI:18:ASN:N	24:BI:19:PRO:CD	2.71	0.53
24:BI:81:LYS:HG3	24:BI:82:ALA:N	2.23	0.53
26:BD:37:VAL:CG2	26:BD:91:THR:HA	2.39	0.53
29:BE:138:LEU:HB3	29:BE:143:LEU:O	2.09	0.53
30:BY:18:LYS:O	30:BY:22:THR:HG23	2.08	0.53
35:BV:77:VAL:HG12	38:BM:136:MET:HG2	1.90	0.53
41:BJ:23:LYS:HZ2	41:BJ:142:ILE:HG12	1.72	0.53
41:BJ:30:THR:HG23	41:BJ:31:GLU:N	2.23	0.53
43:BO:100:HIS:C	43:BO:104:GLN:HB2	2.29	0.53
43:BO:106:LEU:CA	43:BO:109:ALA:HB3	2.38	0.53
1:CA:686:U:O4	1:CA:703:G:H1'	2.09	0.53
1:CA:724:G:H2'	1:CA:725:G:H8	1.72	0.53
1:CA:860:A:H2'	1:CA:861:G:O4'	2.08	0.53
1:CA:1128:C:H4'	1:CA:1148:U:O2	2.09	0.53
1:CA:1310:G:O2'	1:CA:1311:A:H5'	2.09	0.53
1:CA:1390:U:H2'	1:CA:1391:U:H6	1.73	0.53
2:CC:148:ILE:HA	2:CC:200:TRP:O	2.09	0.53
5:CF:51:ILE:HG23	5:CF:51:ILE:O	2.08	0.53
9:CJ:53:ILE:HG23	9:CJ:54:SER:N	2.24	0.53
9:CJ:92:LEU:HD22	9:CJ:92:LEU:H	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CT:42:ASP:OD1	19:CT:44:ALA:HB3	2.08	0.53
23:DB:18:U:H2'	23:DB:19:A:C8	2.43	0.53
23:DB:20:C:O2'	23:DB:21:A:H5'	2.07	0.53
23:DB:138:U:H2'	23:DB:140:C:N1	2.24	0.53
23:DB:321:U:OP2	29:DE:130:LYS:HA	2.07	0.53
23:DB:1295:C:H2'	23:DB:1296:G:H8	1.72	0.53
23:DB:1577:C:H2'	23:DB:1578:U:O4'	2.09	0.53
23:DB:1847:A:H4'	23:DB:1848:A:H8	1.72	0.53
23:DB:1930:G:H2'	23:DB:1968:G:C6	2.43	0.53
23:DB:2023:C:O2'	23:DB:2024:G:H5'	2.08	0.53
23:DB:2293:G:H2'	23:DB:2294:G:H8	1.72	0.53
23:DB:2458:G:H2'	23:DB:2458:G:N3	2.24	0.53
23:DB:2804:U:H2'	23:DB:2805:C:H6	1.71	0.53
26:DD:25:THR:HG21	26:DD:193:VAL:HG22	1.89	0.53
26:DD:37:VAL:CG2	26:DD:91:THR:HA	2.37	0.53
27:DK:118:LEU:C	27:DK:120:PRO:HD2	2.29	0.53
34:D3:30:HIS:HD2	34:D3:31:ILE:H	1.57	0.53
36:D2:2:LYS:HD2	36:D2:6:GLN:NE2	2.23	0.53
42:DN:106:ASP:OD1	42:DN:108:ALA:HB3	2.09	0.53
43:DO:35:ILE:HG13	43:DO:71:ALA:CB	2.36	0.53
45:DS:13:SER:OG	45:DS:14:ALA:N	2.41	0.53
51:DZ:71:LEU:HD12	51:DZ:78:TYR:CD2	2.43	0.53
1:AA:148:G:N3	1:AA:1446:A:H2	2.06	0.53
1:AA:335:C:H2'	1:AA:336:A:H8	1.74	0.53
1:AA:686:U:O4	1:AA:703:G:H1'	2.08	0.53
1:AA:955:U:H1'	1:AA:1227:A:H62	1.74	0.53
1:AA:1005:A:H2'	1:AA:1006:G:O4'	2.07	0.53
1:AA:1143:G:O2'	1:AA:1144:G:H5'	2.09	0.53
1:AA:1370:G:O2'	1:AA:1371:G:H5'	2.08	0.53
5:AF:3:HIS:CG	5:AF:92:THR:HG23	2.43	0.53
10:AK:124:LYS:O	21:AU:33:ARG:NE	2.29	0.53
12:AM:10:ASP:HB2	12:AM:11:HIS:ND1	2.24	0.53
13:AN:17:ASP:HA	13:AN:21:ALA:HB2	1.90	0.53
18:AS:48:ILE:HB	18:AS:59:VAL:HG23	1.90	0.53
18:AS:68:HIS:HB3	18:AS:72:GLU:CD	2.28	0.53
23:BB:37:C:H4'	23:BB:451:U:OP1	2.07	0.53
23:BB:296:U:H2'	23:BB:297:G:H8	1.73	0.53
23:BB:321:U:H1'	29:BE:162:ARG:NH1	2.24	0.53
23:BB:513:A:H8	23:BB:513:A:O5'	1.91	0.53
23:BB:1060:U:O2	23:BB:1088:A:C8	2.62	0.53
23:BB:2511:U:H2'	23:BB:2512:C:C6	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2737:G:H2'	23:BB:2738:A:C8	2.44	0.53
24:BI:49:GLU:CG	24:BI:54:ILE:HD11	2.39	0.53
24:BI:52:LEU:HD21	24:BI:81:LYS:HZ2	1.74	0.53
25:BC:94:LEU:HD13	25:BC:100:ARG:HD2	1.91	0.53
26:BD:39:ASP:HB3	26:BD:42:ASN:HB3	1.89	0.53
29:BE:143:LEU:HB3	29:BE:146:VAL:HG21	1.89	0.53
35:BV:28:ALA:HB2	35:BV:89:ILE:HD12	1.89	0.53
37:BL:136:GLU:HA	37:BL:140:GLY:H	1.74	0.53
38:BM:41:LEU:O	38:BM:94:ALA:N	2.42	0.53
40:BH:82:SER:HB2	40:BH:94:ILE:HG12	1.90	0.53
41:BJ:44:TYR:C	41:BJ:44:TYR:HD2	2.12	0.53
48:BG:97:VAL:CG2	48:BG:124:CYS:HB2	2.39	0.53
49:BR:6:GLN:HE21	49:BR:7:SER:C	2.12	0.53
51:BZ:5:CYS:SG	51:BZ:8:THR:HG23	2.49	0.53
52:BW:37:VAL:HG13	52:BW:55:ASP:O	2.07	0.53
1:CA:74:A:H2'	1:CA:75:G:C8	2.43	0.53
1:CA:386:C:C2'	1:CA:387:U:H5'	2.38	0.53
1:CA:580:C:H2'	1:CA:581:G:O4'	2.09	0.53
1:CA:1060:U:C4'	9:CJ:54:SER:HB2	2.39	0.53
1:CA:1108:G:H2'	1:CA:1109:C:H5'	1.90	0.53
1:CA:1472:U:H2'	1:CA:1473:G:H8	1.74	0.53
1:CA:1499:A:O2'	1:CA:1500:A:H5'	2.09	0.53
5:CF:42:TRP:HB2	5:CF:59:TYR:HB2	1.91	0.53
7:CH:124:ILE:HG22	7:CH:125:ILE:N	2.24	0.53
9:CJ:53:ILE:HG23	9:CJ:54:SER:H	1.74	0.53
13:CN:60:ARG:HG3	13:CN:62:ARG:HG3	1.91	0.53
22:DA:91:C:H2'	22:DA:92:C:C6	2.43	0.53
23:DB:277:G:H2'	23:DB:277:G:N3	2.24	0.53
23:DB:1007:C:O3'	41:DJ:110:PRO:HB3	2.09	0.53
23:DB:1145:C:O2'	23:DB:1146:C:H5'	2.09	0.53
23:DB:1220:G:H2'	23:DB:1221:C:H6	1.73	0.53
23:DB:1495:A:O2'	23:DB:1496:A:H5'	2.09	0.53
23:DB:1571:A:H2'	23:DB:1572:A:H8	1.73	0.53
23:DB:2327:A:H2'	23:DB:2328:A:C8	2.44	0.53
23:DB:2412:A:H2'	23:DB:2413:G:O4'	2.08	0.53
25:DC:245:THR:C	25:DC:247:TRP:H	2.12	0.53
37:DL:136:GLU:HA	37:DL:140:GLY:H	1.74	0.53
39:DX:20:ASN:N	39:DX:20:ASN:HD22	2.06	0.53
41:DJ:23:LYS:NZ	41:DJ:142:ILE:HG12	2.23	0.53
42:DN:13:ASN:C	42:DN:15:SER:H	2.10	0.53
44:DQ:15:LYS:HD2	44:DQ:16:ILE:HD12	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DQ:50:ARG:HD2	44:DQ:50:ARG:N	2.24	0.53
46:DU:64:ILE:HG13	46:DU:65:GLN:H	1.72	0.53
48:DG:16:VAL:HG11	48:DG:44:HIS:CE1	2.44	0.53
48:DG:23:ILE:HG21	48:DG:71:LEU:HD11	1.90	0.53
53:D6:15:GLN:HA	53:D6:168:PHE:HE2	1.74	0.53
53:D6:35:PRO:HA	53:D6:66:LEU:HD21	1.91	0.53
1:AA:764:C:N4	1:AA:812:G:H1	2.06	0.53
1:AA:939:G:H5"	6:AG:101:ARG:NH2	2.24	0.53
2:AC:13:ILE:C	2:AC:15:LYS:H	2.12	0.53
2:AC:30:ASP:HA	13:AN:64:ARG:HH12	1.73	0.53
3:AD:47:LEU:HD23	3:AD:51:GLY:C	2.29	0.53
3:AD:61:ARG:HH21	3:AD:67:LEU:HD23	1.74	0.53
9:AJ:53:ILE:HG23	9:AJ:54:SER:H	1.73	0.53
10:AK:16:SER:HA	10:AK:79:LYS:HE3	1.91	0.53
11:AL:54:VAL:HG12	11:AL:55:ARG:N	2.22	0.53
22:BA:74:U:H2'	22:BA:75:G:O4'	2.08	0.53
23:BB:245:G:H2'	23:BB:246:C:H6	1.72	0.53
23:BB:582:A:H2'	23:BB:583:G:C8	2.44	0.53
23:BB:1381:G:H1'	23:BB:1571:A:N1	2.23	0.53
23:BB:1623:G:O2'	23:BB:1624:U:H5'	2.09	0.53
23:BB:1794:A:H2'	23:BB:1795:C:C6	2.43	0.53
23:BB:1987:A:H2'	23:BB:1988:G:H8	1.73	0.53
23:BB:2243:U:O2'	23:BB:2244:U:H5'	2.09	0.53
23:BB:2361:G:O2'	23:BB:2362:C:H5'	2.09	0.53
23:BB:2768:U:H2'	23:BB:2769:U:O4'	2.09	0.53
24:BI:122:GLU:CD	24:BI:122:GLU:H	2.12	0.53
47:BF:69:ALA:HB2	47:BF:82:TYR:HB3	1.91	0.53
47:BF:163:GLU:HA	47:BF:166:ARG:CD	2.32	0.53
48:BG:7:PRO:O	48:BG:8:VAL:CB	2.57	0.53
1:CA:188:C:H2'	1:CA:189:A:O4'	2.09	0.53
1:CA:229:U:H2'	1:CA:230:G:H8	1.74	0.53
1:CA:711:G:O2'	1:CA:712:A:H5'	2.07	0.53
1:CA:839:C:H2'	1:CA:840:C:O4'	2.09	0.53
1:CA:1461:G:H2'	1:CA:1462:C:C6	2.43	0.53
5:CF:3:HIS:NE2	5:CF:65:GLU:HG3	2.23	0.53
8:CI:26:LYS:N	8:CI:61:ASP:CB	2.71	0.53
10:CK:34:THR:HA	10:CK:41:LEU:HG	1.91	0.53
11:CL:20:VAL:HG23	11:CL:20:VAL:O	2.08	0.53
23:DB:755:U:H2'	23:DB:756:A:H8	1.74	0.53
23:DB:1878:G:H2'	23:DB:1879:C:H6	1.73	0.53
23:DB:2391:G:H1'	23:DB:2424:C:H41	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:12:ARG:HA	25:DC:15:VAL:HG23	1.90	0.53
27:DK:3:GLN:HG2	27:DK:4:GLU:N	2.24	0.53
29:DE:124:PHE:HD1	29:DE:125:SER:N	2.07	0.53
29:DE:176:ASP:OD1	29:DE:178:VAL:HG12	2.08	0.53
35:DV:14:LYS:HE2	35:DV:18:ARG:HH21	1.74	0.53
37:DL:19:LEU:O	37:DL:21:ARG:HG2	2.07	0.53
44:DQ:51:GLN:HA	44:DQ:54:ARG:HD2	1.91	0.53
45:DS:6:LYS:HB3	45:DS:104:THR:HG23	1.90	0.53
46:DU:95:PHE:CE1	46:DU:102:ILE:HB	2.33	0.53
53:D6:154:THR:HG23	53:D6:155:LYS:N	2.23	0.53
1:AA:142:G:N3	1:AA:196:A:H2	2.07	0.53
1:AA:476:U:H2'	1:AA:477:C:C6	2.44	0.53
1:AA:1163:A:H2'	1:AA:1164:G:C8	2.43	0.53
6:AG:10:LYS:HB2	6:AG:10:LYS:NZ	2.24	0.53
7:AH:47:ASP:CG	7:AH:48:PHE:N	2.62	0.53
8:AI:22:PRO:HA	8:AI:60:LEU:HB2	1.91	0.53
8:AI:50:PRO:HD3	8:AI:79:ARG:HG3	1.90	0.53
18:AS:27:LYS:HG3	18:AS:28:LYS:HD2	1.90	0.53
20:AB:40:ILE:HG21	20:AB:200:PRO:O	2.09	0.53
20:AB:133:ALA:O	20:AB:137:THR:HG23	2.09	0.53
23:BB:560:C:H2'	23:BB:561:G:O4'	2.09	0.53
23:BB:817:C:H2'	23:BB:818:G:O4'	2.08	0.53
23:BB:1028:A:N6	23:BB:1125:G:H2'	2.23	0.53
23:BB:2144:G:H5'	23:BB:2145:C:H5"	1.90	0.53
23:BB:2742:G:O2'	23:BB:2743:U:H5'	2.09	0.53
23:BB:2880:C:C1'	42:BN:91:ALA:HB3	2.39	0.53
26:BD:125:TRP:CG	26:BD:160:LYS:HB3	2.44	0.53
27:BK:73:ASP:O	28:BP:74:GLN:HG3	2.09	0.53
40:BH:27:ARG:H	40:BH:31:VAL:HG23	1.74	0.53
40:BH:48:GLU:HA	40:BH:51:ARG:NH2	2.23	0.53
48:BG:122:ALA:HA	48:BG:132:LEU:HA	1.89	0.53
49:BR:49:ILE:HD12	49:BR:49:ILE:O	2.09	0.53
50:BT:59:ASN:O	50:BT:84:TYR:HB2	2.09	0.53
51:BZ:33:LEU:HA	51:BZ:51:VAL:O	2.08	0.53
1:CA:244:U:O4	1:CA:906:A:H1'	2.08	0.53
1:CA:270:A:H2'	1:CA:271:C:H6	1.74	0.53
1:CA:337:G:H2'	1:CA:338:A:H8	1.73	0.53
1:CA:394:G:O2'	1:CA:395:C:H5'	2.09	0.53
1:CA:818:G:C3'	1:CA:819:A:H5"	2.39	0.53
1:CA:930:C:H2'	1:CA:931:C:H6	1.74	0.53
1:CA:1270:G:H2'	1:CA:1271:A:H8	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1320:C:O2'	1:CA:1321:U:H5'	2.09	0.53
2:CC:40:GLN:HG3	2:CC:41:TYR:N	2.23	0.53
3:CD:98:ASP:HB3	3:CD:132:ALA:HB1	1.89	0.53
9:CJ:91:ASP:C	9:CJ:92:LEU:HD13	2.29	0.53
21:CU:31:VAL:O	21:CU:31:VAL:HG12	2.09	0.53
23:DB:6:A:H2'	23:DB:7:G:C8	2.44	0.53
23:DB:547:A:H2'	23:DB:547:A:N3	2.24	0.53
23:DB:634:C:H2'	23:DB:635:C:C6	2.44	0.53
23:DB:660:C:H2'	23:DB:661:A:H8	1.74	0.53
23:DB:771:G:O2'	23:DB:772:C:H5'	2.08	0.53
23:DB:965:C:O2'	23:DB:966:G:H5'	2.09	0.53
23:DB:1647:U:H3'	23:DB:1647:U:P	2.49	0.53
23:DB:1774:C:H2'	23:DB:1774:C:O2	2.09	0.53
23:DB:2109:U:H2'	23:DB:2180:U:N3	2.22	0.53
23:DB:2150:C:H2'	23:DB:2151:U:C6	2.44	0.53
23:DB:2189:U:C2'	23:DB:2190:G:H5'	2.39	0.53
26:DD:15:PHE:H	26:DD:15:PHE:HD1	1.56	0.53
37:DL:99:ASN:O	37:DL:100:ILE:HB	2.09	0.53
51:DZ:41:GLU:O	51:DZ:44:LYS:HD2	2.09	0.53
53:D6:55:ILE:HG23	53:D6:56:ALA:N	2.24	0.53
53:D6:167:GLU:O	53:D6:170:ALA:HB3	2.09	0.53
1:AA:82:G:H8	1:AA:82:G:O5'	1.92	0.53
1:AA:229:U:H2'	1:AA:230:G:C8	2.43	0.53
1:AA:1343:G:H2'	1:AA:1344:C:H6	1.72	0.53
2:AC:21:TRP:CH2	2:AC:31:ASN:HB3	2.43	0.53
2:AC:70:ALA:HA	2:AC:105:VAL:CG2	2.39	0.53
9:AJ:76:ILE:HD12	9:AJ:76:ILE:O	2.09	0.53
11:AL:65:TYR:HB3	11:AL:95:HIS:CD2	2.44	0.53
14:AO:33:THR:HG23	14:AO:63:ARG:NH1	2.24	0.53
19:AT:43:LYS:HD3	19:AT:43:LYS:H	1.74	0.53
22:BA:11:C:OP1	52:BW:71:LYS:HG2	2.09	0.53
23:BB:41:C:H2'	23:BB:42:A:O4'	2.09	0.53
23:BB:264:C:O2'	23:BB:265:A:H5"	2.09	0.53
23:BB:616:A:H3'	23:BB:617:G:C8	2.34	0.53
23:BB:730:A:O2'	23:BB:731:C:H5'	2.08	0.53
23:BB:962:G:N2	38:BM:82:MET:HE2	2.24	0.53
23:BB:1244:A:H5"	37:BL:8:PRO:CD	2.35	0.53
23:BB:1445:G:H2'	23:BB:1446:C:C6	2.44	0.53
23:BB:1777:U:O2'	23:BB:1778:U:H5'	2.08	0.53
23:BB:2025:C:H2'	23:BB:2026:U:C6	2.44	0.53
23:BB:2595:G:O6	25:BC:238:ASN:ND2	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2814:A:H2'	23:BB:2815:C:H6	1.74	0.53
25:BC:86:ARG:HB3	25:BC:86:ARG:CZ	2.38	0.53
27:BK:109:SER:HB2	27:BK:111:LYS:HE2	1.91	0.53
28:BP:20:ARG:HD3	28:BP:112:ARG:NH2	2.24	0.53
33:B1:9:LYS:HD3	33:B1:9:LYS:N	2.21	0.53
35:BV:53:LYS:NZ	35:BV:54:ALA:HB3	2.24	0.53
36:B2:10:LEU:HD21	36:B2:14:ARG:HH11	1.73	0.53
40:BH:47:PHE:HA	40:BH:50:ARG:HH21	1.73	0.53
40:BH:90:LEU:HD21	40:BH:146:VAL:CG2	2.34	0.53
45:BS:20:VAL:HG23	45:BS:23:LEU:HD12	1.90	0.53
47:BF:37:MET:SD	47:BF:52:ALA:HB1	2.48	0.53
48:BG:123:GLU:HG2	48:BG:124:CYS:H	1.73	0.53
49:BR:58:VAL:HG22	49:BR:59:ILE:N	2.23	0.53
53:B6:2:THR:HG23	53:B6:5:GLU:OE1	2.09	0.53
53:B6:61:PRO:HD3	53:B6:67:VAL:HG22	1.91	0.53
53:B6:64:ARG:HD2	53:B6:64:ARG:N	2.23	0.53
1:CA:96:U:H2'	1:CA:97:G:C8	2.43	0.53
1:CA:212:G:H2'	1:CA:213:G:H8	1.74	0.53
1:CA:770:C:O2'	1:CA:771:G:H5'	2.08	0.53
2:CC:133:MET:O	2:CC:137:VAL:HG23	2.08	0.53
4:CE:25:LYS:HG3	4:CE:26:GLY:N	2.24	0.53
8:CI:49:GLN:N	8:CI:50:PRO:HD2	2.24	0.53
8:CI:50:PRO:O	8:CI:54:VAL:HG22	2.08	0.53
20:CB:64:GLY:O	20:CB:66:ILE:HG12	2.08	0.53
20:CB:159:ALA:HB1	20:CB:183:PHE:HE1	1.74	0.53
23:DB:393:C:O2'	23:DB:394:C:H5'	2.08	0.53
23:DB:466:A:N3	23:DB:683:U:H1'	2.24	0.53
23:DB:1351:C:H2'	23:DB:1352:U:O4'	2.09	0.53
23:DB:1381:G:H1'	23:DB:1571:A:N1	2.24	0.53
23:DB:2267:A:N6	23:DB:2272:U:C4	2.76	0.53
23:DB:2530:A:H5'	48:DG:174:LYS:HD2	1.90	0.53
23:DB:2590:A:H2'	23:DB:2591:C:H6	1.73	0.53
24:DI:52:LEU:HD22	24:DI:81:LYS:HD3	1.91	0.53
24:DI:76:ALA:HA	24:DI:135:MET:SD	2.48	0.53
28:DP:19:PHE:CE2	28:DP:25:VAL:HG11	2.44	0.53
35:DV:77:VAL:HG11	38:DM:136:MET:O	2.09	0.53
37:DL:19:LEU:HD23	37:DL:31:GLY:HA3	1.90	0.53
40:DH:9:VAL:HG12	40:DH:12:LEU:HG	1.90	0.53
49:DR:6:GLN:HE21	49:DR:7:SER:C	2.11	0.53
50:DT:7:LEU:HA	50:DT:9:LYS:HE3	1.89	0.53
1:AA:366:A:H2	1:AA:394:G:H1	1.57	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1343:G:H1'	8:AI:122:ARG:NH1	2.23	0.53
2:AC:71:ARG:O	2:AC:75:VAL:HG23	2.09	0.53
3:AD:147:LYS:HD3	3:AD:148:ALA:N	2.24	0.53
5:AF:45:ARG:HG2	5:AF:46:GLN:N	2.24	0.53
7:AH:40:LYS:HD2	7:AH:47:ASP:HA	1.90	0.53
8:AI:56:MET:HA	8:AI:59:LYS:HB2	1.91	0.53
16:AQ:60:ILE:HG12	16:AQ:72:TRP:HE3	1.73	0.53
23:BB:63:A:H8	23:BB:63:A:OP2	1.92	0.53
23:BB:1046:A:C4'	23:BB:1047:G:H5"	2.39	0.53
23:BB:1083:U:H2'	23:BB:1085:A:OP2	2.09	0.53
23:BB:1346:G:O2'	23:BB:1347:A:H5'	2.09	0.53
23:BB:1479:G:O2'	23:BB:1480:C:H5'	2.08	0.53
23:BB:1640:A:H2'	23:BB:1641:A:C8	2.44	0.53
23:BB:2248:C:H2'	23:BB:2249:U:O4'	2.09	0.53
23:BB:2332:C:H1'	23:BB:2336:A:N7	2.23	0.53
23:BB:2539:C:O2'	23:BB:2540:C:H5'	2.09	0.53
23:BB:2543:G:H2'	23:BB:2544:G:O4'	2.08	0.53
23:BB:2671:G:H2'	23:BB:2672:U:C6	2.43	0.53
25:BC:128:THR:HA	25:BC:190:THR:CA	2.38	0.53
27:BK:71:ARG:HA	27:BK:71:ARG:HE	1.73	0.53
30:BY:23:LEU:HD13	30:BY:28:LEU:HB2	1.91	0.53
34:B3:50:SER:C	34:B3:52:GLY:H	2.12	0.53
38:BM:127:LYS:H	38:BM:127:LYS:CD	2.19	0.53
42:BN:97:ILE:HD12	42:BN:98:LEU:N	2.24	0.53
48:BG:94:ARG:NH2	48:BG:104:LEU:HA	2.24	0.53
49:BR:39:LEU:HA	49:BR:53:PHE:HA	1.91	0.53
50:BT:13:ALA:O	50:BT:32:LEU:HB2	2.08	0.53
53:B6:43:VAL:N	53:B6:50:VAL:O	2.37	0.53
53:B6:56:ALA:HB2	53:B6:79:ILE:CD1	2.38	0.53
1:CA:764:C:N4	1:CA:812:G:H1	2.07	0.53
1:CA:1342:C:H5'	8:CI:127:SER:HA	1.91	0.53
1:CA:1374:A:H4'	6:CG:27:ASN:OD1	2.10	0.53
1:CA:1398:A:H8	1:CA:1398:A:H5'	1.74	0.53
3:CD:26:ALA:HA	3:CD:30:LYS:HE3	1.91	0.53
8:CI:21:LYS:CG	8:CI:22:PRO:HD2	2.37	0.53
8:CI:37:TYR:HE2	8:CI:74:GLN:HG2	1.73	0.53
16:CQ:22:VAL:HG12	16:CQ:23:ALA:N	2.24	0.53
22:DA:54:G:H21	47:DF:25:MET:HE3	1.74	0.53
23:DB:6:A:O2'	23:DB:7:G:H5'	2.09	0.53
23:DB:252:G:O2'	23:DB:253:C:H5'	2.09	0.53
23:DB:361:G:O2'	23:DB:362:A:H5'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:483:A:H2'	23:DB:484:C:O4'	2.09	0.53
23:DB:679:C:H2'	23:DB:680:C:H6	1.74	0.53
23:DB:1099:G:C8	24:DI:3:LYS:CB	2.92	0.53
26:DD:125:TRP:CG	26:DD:160:LYS:HB3	2.44	0.53
31:D0:47:TYR:CZ	31:D0:52:LYS:HG3	2.44	0.53
35:DV:4:ILE:CD1	35:DV:61:LEU:HB3	2.39	0.53
37:DL:82:LEU:O	37:DL:85:VAL:HG12	2.09	0.53
43:DO:111:ARG:HB2	43:DO:117:PHE:CZ	2.44	0.53
47:DF:90:LEU:C	47:DF:91:ARG:HD3	2.28	0.53
47:DF:121:PHE:HB3	47:DF:127:TYR:CE1	2.44	0.53
48:DG:33:THR:HA	48:DG:34:ARG:NH1	2.24	0.53
48:DG:59:ASP:O	48:DG:63:GLN:HB2	2.09	0.53
53:D6:84:ARG:CZ	53:D6:84:ARG:HB2	2.39	0.53
1:AA:696:A:H2'	1:AA:697:U:C6	2.44	0.52
1:AA:1017:U:H2'	1:AA:1018:G:C8	2.44	0.52
1:AA:1049:U:H2'	13:AN:2:LYS:HD3	1.91	0.52
1:AA:1060:U:H5"	9:AJ:53:ILE:HG12	1.90	0.52
2:AC:39:ARG:NH1	2:AC:56:ILE:HD12	2.23	0.52
2:AC:126:ARG:HH22	2:AC:190:THR:CG2	2.21	0.52
3:AD:197:HIS:O	3:AD:201:GLU:HG3	2.09	0.52
4:AE:82:HIS:HB2	4:AE:83:PRO:HD2	1.91	0.52
6:AG:50:ALA:CB	6:AG:57:GLU:HG3	2.39	0.52
8:AI:51:LEU:HB3	8:AI:56:MET:CG	2.30	0.52
10:AK:34:THR:HA	10:AK:41:LEU:HG	1.91	0.52
10:AK:95:THR:HG23	10:AK:96:ILE:H	1.73	0.52
18:AS:54:ARG:HB3	18:AS:55:GLN:HE21	1.74	0.52
18:AS:80:ARG:HA	18:AS:80:ARG:HE	1.74	0.52
19:AT:79:THR:HA	19:AT:82:ILE:CG1	2.39	0.52
23:BB:83:A:N1	23:BB:101:A:H5'	2.24	0.52
23:BB:138:U:H2'	23:BB:140:C:C4'	2.39	0.52
23:BB:738:G:H2'	23:BB:739:A:C8	2.44	0.52
23:BB:1117:C:H2'	23:BB:1118:C:C6	2.44	0.52
23:BB:1145:C:O2'	23:BB:1146:C:H5'	2.09	0.52
23:BB:1341:G:H3'	23:BB:1397:U:O2	2.09	0.52
23:BB:1516:G:O2'	23:BB:1517:G:H5'	2.09	0.52
23:BB:1720:U:O2'	23:BB:1721:G:H5'	2.09	0.52
23:BB:1936:A:OP1	23:BB:1937:A:H5'	2.08	0.52
23:BB:1945:G:H2'	23:BB:1946:U:C6	2.44	0.52
23:BB:2830:C:H1'	23:BB:2836:U:O4'	2.08	0.52
23:BB:2841:C:H2'	23:BB:2842:G:H8	1.74	0.52
23:BB:2867:G:N3	23:BB:2867:G:C2'	2.71	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2896:C:H2'	23:BB:2897:U:C6	2.44	0.52
24:BI:23:VAL:HG23	24:BI:24:GLY:H	1.74	0.52
27:BK:19:VAL:HB	27:BK:41:ILE:HD11	1.92	0.52
35:BV:9:ARG:HA	35:BV:41:GLU:OE2	2.09	0.52
40:BH:73:ASN:N	40:BH:73:ASN:ND2	2.56	0.52
40:BH:81:ALA:HA	40:BH:146:VAL:HA	1.91	0.52
42:BN:78:LYS:HG3	42:BN:83:LEU:HG	1.90	0.52
45:BS:31:GLN:C	45:BS:33:LEU:H	2.13	0.52
47:BF:78:ILE:C	47:BF:79:ARG:HG3	2.28	0.52
48:BG:155:PRO:HA	48:BG:170:THR:HA	1.90	0.52
52:BW:35:ILE:HG13	52:BW:57:THR:OG1	2.08	0.52
52:BW:77:LYS:O	52:BW:78:PHE:HB2	2.08	0.52
1:CA:74:A:H2'	1:CA:75:G:H8	1.74	0.52
1:CA:264:C:H4'	16:CQ:64:ARG:HD2	1.90	0.52
1:CA:409:U:OP1	3:CD:23:GLY:HA3	2.09	0.52
1:CA:1310:G:H2'	1:CA:1311:A:O4'	2.09	0.52
1:CA:1356:G:O2'	1:CA:1357:A:H5'	2.09	0.52
3:CD:90:LEU:HD22	3:CD:90:LEU:H	1.74	0.52
9:CJ:66:GLU:HB3	13:CN:98:ALA:HB2	1.90	0.52
11:CL:98:ARG:HB2	11:CL:116:TYR:HA	1.90	0.52
20:CB:22:TRP:CZ3	20:CB:24:PRO:HA	2.43	0.52
23:DB:1204:A:H1'	23:DB:1206:G:N7	2.24	0.52
23:DB:1401:G:H2'	23:DB:1402:U:C6	2.44	0.52
23:DB:1475:G:H4'	23:DB:1476:U:O5'	2.08	0.52
23:DB:2064:C:H2'	23:DB:2065:C:H6	1.74	0.52
23:DB:2266:A:C4	23:DB:2272:U:H5	2.26	0.52
23:DB:2284:A:OP2	33:D1:5:ARG:HG3	2.09	0.52
23:DB:2461:A:H2'	23:DB:2462:C:H6	1.73	0.52
23:DB:2698:U:H2'	23:DB:2699:C:C6	2.44	0.52
29:DE:18:THR:HG22	29:DE:106:LYS:HZ1	1.74	0.52
35:DV:79:ARG:NH1	38:DM:134:THR:HG21	2.24	0.52
44:DQ:90:ASP:O	44:DQ:94:LEU:HB2	2.08	0.52
45:DS:28:LYS:HD3	45:DS:69:LEU:O	2.09	0.52
47:DF:7:TYR:OH	47:DF:29:ARG:HG3	2.09	0.52
48:DG:17:LYS:O	48:DG:23:ILE:HG23	2.10	0.52
48:DG:25:ILE:HD13	48:DG:74:MET:HE2	1.90	0.52
48:DG:34:ARG:HH11	48:DG:34:ARG:N	1.96	0.52
49:DR:49:ILE:HG21	49:DR:54:VAL:CA	2.39	0.52
1:AA:140:U:H2'	1:AA:141:G:H8	1.74	0.52
1:AA:343:U:O2'	1:AA:344:A:H2'	2.08	0.52
1:AA:501:C:H2'	1:AA:502:A:C8	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1367:C:H5"	8:AI:115:VAL:HG23	1.91	0.52
1:AA:1404:C:H2'	1:AA:1405:G:H8	1.73	0.52
4:AE:25:LYS:HG3	4:AE:26:GLY:N	2.24	0.52
8:AI:93:LEU:HD13	8:AI:97:LEU:HD11	1.91	0.52
11:AL:80:LEU:HB3	11:AL:97:VAL:CG2	2.39	0.52
22:BA:94:A:H2'	22:BA:95:U:O4'	2.09	0.52
22:BA:116:G:H4'	43:BO:54:VAL:HG22	1.91	0.52
23:BB:242:G:H5"	34:B3:63:TYR:CE2	2.44	0.52
23:BB:401:A:H2'	23:BB:402:A:C8	2.43	0.52
23:BB:675:A:H4'	29:BE:62:GLN:HE22	1.75	0.52
23:BB:1475:G:H4'	23:BB:1476:U:O5'	2.09	0.52
23:BB:1654:A:H61	23:BB:2049:G:P	2.32	0.52
23:BB:1841:U:H2'	23:BB:1842:G:C8	2.43	0.52
23:BB:1930:G:H2'	23:BB:1968:G:C6	2.44	0.52
23:BB:1965:C:H5"	23:BB:1966:A:H2'	1.91	0.52
23:BB:2060:A:C3'	29:BE:63:LYS:HZ1	2.23	0.52
23:BB:2385:C:H2'	23:BB:2386:A:H8	1.74	0.52
23:BB:2794:C:H2'	23:BB:2795:C:C6	2.45	0.52
24:BI:23:VAL:HG23	24:BI:24:GLY:N	2.24	0.52
25:BC:132:ARG:HD3	25:BC:166:ARG:NH1	2.22	0.52
27:BK:3:GLN:HG2	27:BK:4:GLU:N	2.23	0.52
33:B1:36:LYS:HG2	33:B1:47:ILE:HG13	1.91	0.52
35:BV:2:PHE:O	35:BV:4:ILE:HG13	2.09	0.52
37:BL:79:LEU:HB2	37:BL:113:ALA:HB3	1.91	0.52
37:BL:81:ASP:HA	37:BL:84:LYS:HE3	1.89	0.52
38:BM:40:ARG:HB2	38:BM:93:VAL:CG2	2.39	0.52
45:BS:25:ARG:HE	45:BS:74:ILE:HG23	1.74	0.52
46:BU:54:PRO:HG2	46:BU:55:GLY:H	1.73	0.52
47:BF:32:LYS:H	47:BF:95:MET:HE1	1.74	0.52
1:CA:90:C:H2'	1:CA:91:U:C6	2.44	0.52
1:CA:142:G:N3	1:CA:196:A:H2	2.07	0.52
1:CA:229:U:H2'	1:CA:230:G:C8	2.45	0.52
1:CA:327:A:O2'	1:CA:328:C:O4'	2.25	0.52
1:CA:1458:G:H5'	19:CT:26:MET:HB2	1.91	0.52
2:CC:13:ILE:O	2:CC:15:LYS:N	2.42	0.52
4:CE:19:ARG:O	4:CE:20:VAL:HB	2.08	0.52
6:CG:136:LYS:O	6:CG:140:VAL:HG23	2.10	0.52
10:CK:43:TRP:HA	10:CK:69:CYS:SG	2.49	0.52
16:CQ:45:VAL:HG12	16:CQ:46:HIS:H	1.74	0.52
20:CB:46:VAL:HA	20:CB:49:PHE:CD2	2.44	0.52
20:CB:95:TRP:CZ2	20:CB:100:LEU:HD13	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:162:VAL:CG1	20:CB:184:ALA:HB2	2.39	0.52
22:DA:74:U:H2'	22:DA:75:G:C8	2.44	0.52
22:DA:106:G:H2'	22:DA:107:G:C8	2.43	0.52
23:DB:93:G:H2'	23:DB:94:A:O4'	2.09	0.52
23:DB:231:A:H3'	23:DB:232:G:H8	1.75	0.52
23:DB:431:U:O2'	23:DB:432:A:H5'	2.09	0.52
23:DB:899:A:H2'	23:DB:900:A:O4'	2.09	0.52
23:DB:1464:G:H2'	23:DB:1465:G:H8	1.72	0.52
23:DB:1779:U:C5	23:DB:1784:A:N7	2.78	0.52
23:DB:1930:G:H2'	23:DB:1968:G:O6	2.08	0.52
23:DB:1930:G:H22	23:DB:1969:A:P	2.32	0.52
23:DB:2309:A:H61	47:DF:75:GLY:HA3	1.75	0.52
23:DB:2472:G:C2'	23:DB:2475:C:H42	2.22	0.52
23:DB:2667:C:H2'	23:DB:2668:G:O4'	2.09	0.52
23:DB:2852:G:O2'	23:DB:2853:C:H5'	2.10	0.52
25:DC:15:VAL:HG22	25:DC:205:GLY:HA3	1.91	0.52
29:DE:155:GLU:O	29:DE:159:LEU:HB2	2.08	0.52
41:DJ:24:THR:O	41:DJ:25:LEU:HB3	2.09	0.52
42:DN:62:ASN:O	42:DN:66:ALA:HB2	2.08	0.52
43:DO:7:ARG:HA	43:DO:10:ARG:NE	2.23	0.52
45:DS:55:ILE:O	45:DS:58:ALA:HB3	2.09	0.52
1:AA:81:A:H2'	1:AA:83:C:C5	2.44	0.52
9:AJ:52:LEU:HG	9:AJ:62:ARG:NE	2.24	0.52
11:AL:3:VAL:CG1	16:AQ:33:TYR:HB3	2.39	0.52
12:AM:78:ARG:HH22	18:AS:64:GLU:HB2	1.73	0.52
14:AO:21:ASP:C	14:AO:23:GLY:H	2.12	0.52
16:AQ:59:GLU:O	16:AQ:75:VAL:HG22	2.08	0.52
20:AB:139:GLU:HG2	20:AB:143:LEU:CD1	2.39	0.52
23:BB:765:C:O2'	23:BB:766:U:H5'	2.10	0.52
23:BB:1443:U:H2'	23:BB:1444:G:C8	2.45	0.52
23:BB:1657:U:C2'	23:BB:1658:C:H5'	2.40	0.52
23:BB:2730:C:H2'	23:BB:2731:G:C8	2.45	0.52
23:BB:2757:A:H2	48:BG:63:GLN:HE22	1.56	0.52
25:BC:185:ALA:C	25:BC:187:CYS:H	2.12	0.52
27:BK:105:ARG:HB3	27:BK:122:VAL:HG12	1.91	0.52
29:BE:108:ILE:HG12	37:BL:2:ARG:NH2	2.24	0.52
30:BY:7:THR:HG23	30:BY:34:THR:OG1	2.09	0.52
37:BL:92:LEU:CD2	37:BL:124:GLY:HA3	2.39	0.52
40:BH:112:LYS:C	40:BH:114:GLU:H	2.13	0.52
41:BJ:58:ASN:CA	41:BJ:127:GLY:HA2	2.35	0.52
42:BN:2:ARG:HA	42:BN:5:LYS:HD3	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BO:47:VAL:O	43:BO:48:LEU:HD23	2.09	0.52
44:BQ:63:ARG:HH12	44:BQ:96:ASP:HA	1.75	0.52
48:BG:3:VAL:O	48:BG:68:ARG:HG3	2.09	0.52
1:CA:98:A:H2'	1:CA:99:C:C6	2.44	0.52
1:CA:208:U:H2'	1:CA:210:C:C4	2.44	0.52
1:CA:299:G:H2'	1:CA:300:A:C8	2.44	0.52
1:CA:342:C:O2'	1:CA:343:U:H5'	2.09	0.52
1:CA:621:A:H2'	1:CA:622:A:C8	2.45	0.52
1:CA:1308:U:H3'	12:CM:97:ARG:NH1	2.24	0.52
1:CA:1351:U:O2'	1:CA:1352:C:H5'	2.09	0.52
17:CR:61:ALA:HB3	17:CR:67:LEU:HD12	1.89	0.52
20:CB:212:TYR:HA	20:CB:215:ALA:HB3	1.91	0.52
22:DA:32:U:H1'	22:DA:52:A:N7	2.23	0.52
23:DB:101:A:OP1	23:DB:101:A:O4'	2.26	0.52
23:DB:338:G:N2	23:DB:339:U:H1'	2.23	0.52
23:DB:738:G:H1'	23:DB:759:G:N2	2.24	0.52
23:DB:856:G:C1'	52:DW:23:LYS:HB3	2.36	0.52
23:DB:876:C:H2'	23:DB:877:A:O4'	2.09	0.52
23:DB:1033:U:C5	32:D4:15:LYS:HE3	2.45	0.52
23:DB:1513:U:O2'	23:DB:1514:G:H5'	2.09	0.52
23:DB:2250:G:H8	23:DB:2250:G:O5'	1.93	0.52
23:DB:2368:C:H2'	23:DB:2369:A:H8	1.73	0.52
23:DB:2679:A:H2'	23:DB:2680:U:C6	2.45	0.52
24:DI:1:ALA:CB	24:DI:2:LYS:HD2	2.39	0.52
24:DI:126:ARG:NH1	24:DI:126:ARG:HB3	2.24	0.52
25:DC:28:PRO:HB3	25:DC:81:GLU:OE1	2.09	0.52
28:DP:75:THR:CG2	28:DP:76:HIS:H	2.17	0.52
29:DE:31:VAL:HG21	29:DE:104:ALA:HB2	1.91	0.52
29:DE:200:LEU:O	29:DE:201:ALA:HB3	2.09	0.52
38:DM:41:LEU:HD13	38:DM:46:ILE:HG22	1.91	0.52
38:DM:65:ILE:HG23	38:DM:103:TYR:CE2	2.45	0.52
40:DH:119:ASN:HD21	40:DH:121:VAL:HG13	1.74	0.52
42:DN:83:LEU:HA	42:DN:86:ARG:CG	2.36	0.52
43:DO:106:LEU:CA	43:DO:109:ALA:HB3	2.39	0.52
50:DT:40:LYS:HE2	50:DT:58:VAL:O	2.09	0.52
50:DT:47:VAL:HG13	50:DT:51:PHE:CD1	2.44	0.52
51:DZ:33:LEU:HA	51:DZ:51:VAL:O	2.10	0.52
53:D6:80:GLU:HB2	53:D6:99:LEU:CD1	2.40	0.52
1:AA:499:A:H4'	1:AA:500:G:OP1	2.09	0.52
1:AA:707:U:H2'	1:AA:708:C:C6	2.45	0.52
1:AA:709:U:H2'	1:AA:710:G:C8	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1226:C:H5"	12:AM:101:THR:CB	2.40	0.52
1:AA:1480:A:O2'	1:AA:1481:U:H5'	2.10	0.52
3:AD:34:GLU:O	3:AD:34:GLU:HG3	2.09	0.52
11:AL:49:ARG:HD2	11:AL:49:ARG:H	1.75	0.52
13:AN:9:GLU:OE2	13:AN:60:ARG:HG2	2.10	0.52
19:AT:60:GLN:HB3	19:AT:65:LEU:HD23	1.91	0.52
20:AB:65:LYS:HB2	20:AB:158:ASP:OD2	2.09	0.52
21:AU:36:PHE:O	21:AU:39:LYS:HG3	2.08	0.52
23:BB:279:A:N1	23:BB:362:A:H4'	2.25	0.52
23:BB:1441:G:H2'	23:BB:1442:U:C6	2.45	0.52
23:BB:1827:U:O2'	23:BB:1828:G:H5'	2.09	0.52
23:BB:1831:G:O2'	23:BB:1832:C:H5'	2.08	0.52
23:BB:2243:U:H2'	23:BB:2244:U:H6	1.71	0.52
23:BB:2286:G:C8	23:BB:2286:G:H5'	2.44	0.52
23:BB:2757:A:H2	48:BG:63:GLN:NE2	2.07	0.52
26:BD:101:PHE:O	26:BD:180:VAL:HG11	2.09	0.52
27:BK:118:LEU:C	27:BK:120:PRO:HD2	2.30	0.52
29:BE:176:ASP:OD1	29:BE:178:VAL:HG12	2.09	0.52
37:BL:82:LEU:O	37:BL:85:VAL:HG12	2.09	0.52
41:BJ:72:LYS:CB	41:BJ:89:PHE:H	2.22	0.52
44:BQ:26:ALA:O	44:BQ:30:VAL:HG12	2.09	0.52
47:BF:125:GLY:HA2	47:BF:162:ASP:CA	2.36	0.52
1:CA:98:A:H2'	1:CA:99:C:H6	1.75	0.52
1:CA:473:U:H2'	1:CA:474:G:C8	2.44	0.52
1:CA:818:G:C2'	1:CA:819:A:H5"	2.39	0.52
1:CA:1512:U:H2'	1:CA:1513:A:C8	2.44	0.52
2:CC:13:ILE:HD13	2:CC:13:ILE:N	2.24	0.52
2:CC:21:TRP:CH2	2:CC:31:ASN:HB3	2.44	0.52
4:CE:131:ASN:O	4:CE:135:VAL:HG23	2.10	0.52
5:CF:3:HIS:CD2	5:CF:3:HIS:N	2.77	0.52
20:CB:40:ILE:HG21	20:CB:200:PRO:O	2.09	0.52
21:CU:11:PHE:O	21:CU:13:VAL:N	2.42	0.52
23:DB:289:G:H2'	23:DB:290:U:H6	1.71	0.52
23:DB:995:C:O4'	44:DQ:56:PHE:HD1	1.93	0.52
23:DB:1228:G:O2'	23:DB:1229:C:H5'	2.10	0.52
23:DB:1548:A:H2'	23:DB:1549:A:H8	1.70	0.52
23:DB:1640:A:H5'	23:DB:1640:A:H8	1.74	0.52
23:DB:1843:C:O2'	23:DB:1844:C:H5'	2.10	0.52
23:DB:2360:G:P	34:D3:50:SER:HB3	2.49	0.52
23:DB:2594:C:O2'	23:DB:2595:G:H5'	2.10	0.52
23:DB:2880:C:C1'	42:DN:91:ALA:HB3	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DI:102:ARG:HG3	24:DI:141:ASP:HB2	1.92	0.52
27:DK:73:ASP:O	28:DP:74:GLN:HG3	2.09	0.52
28:DP:4:ILE:C	28:DP:6:GLN:N	2.61	0.52
30:DY:28:LEU:HA	30:DY:33:HIS:HD2	1.74	0.52
35:DV:44:HIS:NE2	35:DV:85:LYS:HB2	2.25	0.52
36:D2:16:HIS:HB3	36:D2:21:ARG:NH1	2.24	0.52
37:DL:135:ILE:HG23	37:DL:136:GLU:N	2.24	0.52
39:DX:29:ARG:CB	39:DX:29:ARG:HH21	2.22	0.52
41:DJ:36:LEU:O	41:DJ:51:GLY:HA3	2.10	0.52
43:DO:83:LEU:HD12	43:DO:87:ILE:O	2.09	0.52
47:DF:137:PHE:O	47:DF:139:GLU:N	2.43	0.52
49:DR:40:MET:HG3	49:DR:48:LYS:HA	1.92	0.52
51:DZ:32:ASN:C	51:DZ:33:LEU:HD12	2.30	0.52
53:D6:102:ASN:O	53:D6:104:PRO:HD3	2.09	0.52
1:AA:229:U:H2'	1:AA:230:G:H8	1.73	0.52
1:AA:236:A:H2'	1:AA:237:G:H8	1.73	0.52
1:AA:1499:A:O2'	1:AA:1500:A:H5'	2.09	0.52
7:AH:55:LYS:HA	7:AH:55:LYS:HE3	1.90	0.52
7:AH:77:VAL:HG21	7:AH:127:TYR:CE1	2.45	0.52
9:AJ:37:ARG:HA	9:AJ:37:ARG:NE	2.25	0.52
11:AL:20:VAL:O	11:AL:20:VAL:HG23	2.09	0.52
12:AM:28:ARG:NH1	12:AM:32:ILE:HD12	2.24	0.52
16:AQ:10:ARG:NH2	16:AQ:55:GLY:HA2	2.25	0.52
20:AB:23:ASN:HD22	20:AB:24:PRO:HD2	1.74	0.52
23:BB:6:A:H2'	23:BB:7:G:H8	1.75	0.52
23:BB:110:G:O2'	23:BB:111:A:H5'	2.10	0.52
23:BB:483:A:H2'	23:BB:484:C:O4'	2.09	0.52
23:BB:755:U:H2'	23:BB:756:A:C8	2.44	0.52
23:BB:1210:G:H5'	23:BB:1212:G:O4'	2.10	0.52
23:BB:1266:G:H22	23:BB:2012:G:H2'	1.73	0.52
23:BB:1563:U:H2'	23:BB:1564:C:C6	2.44	0.52
23:BB:2594:C:O2'	23:BB:2595:G:H5'	2.09	0.52
25:BC:245:THR:C	25:BC:247:TRP:H	2.13	0.52
26:BD:9:VAL:O	28:BP:4:ILE:HD11	2.10	0.52
26:BD:122:VAL:H	26:BD:127:PHE:HB2	1.74	0.52
29:BE:49:ARG:O	29:BE:74:LYS:HD3	2.09	0.52
33:B1:6:GLU:HB2	33:B1:52:LYS:HZ3	1.73	0.52
33:B1:7:LYS:HA	33:B1:23:THR:HG22	1.91	0.52
33:B1:39:ASP:OD1	33:B1:42:VAL:HG23	2.10	0.52
34:B3:32:LEU:HA	34:B3:35:LYS:HD2	1.92	0.52
40:BH:41:LYS:C	40:BH:43:ASN:H	2.11	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BN:106:ASP:OD1	42:BN:108:ALA:HB3	2.10	0.52
43:BO:69:ASP:O	43:BO:72:ALA:HB3	2.09	0.52
48:BG:94:ARG:C	48:BG:94:ARG:HE	2.13	0.52
50:BT:14:PRO:HA	50:BT:32:LEU:HB3	1.92	0.52
50:BT:40:LYS:HE2	50:BT:58:VAL:O	2.09	0.52
53:B6:58:VAL:HA	53:B6:67:VAL:O	2.09	0.52
1:CA:16:A:O2'	4:CE:20:VAL:HG13	2.10	0.52
1:CA:972:C:P	9:CJ:59:LYS:HD3	2.50	0.52
1:CA:991:U:H2'	1:CA:1212:U:O2	2.09	0.52
1:CA:1240:U:O4	6:CG:29:LEU:HG	2.09	0.52
1:CA:1269:A:H2	1:CA:1312:G:N3	2.07	0.52
3:CD:55:ARG:HH11	3:CD:55:ARG:HG3	1.75	0.52
3:CD:187:ARG:NH1	3:CD:191:SER:HA	2.25	0.52
5:CF:61:LEU:HD12	5:CF:63:ASN:OD1	2.10	0.52
5:CF:81:ASN:O	5:CF:83:ALA:N	2.43	0.52
6:CG:50:ALA:CB	6:CG:57:GLU:HG3	2.39	0.52
18:CS:50:VAL:O	18:CS:57:VAL:HG22	2.09	0.52
18:CS:68:HIS:HB3	18:CS:72:GLU:CD	2.30	0.52
19:CT:38:ILE:HD11	19:CT:82:ILE:CG2	2.36	0.52
20:CB:23:ASN:HD22	20:CB:24:PRO:HD2	1.74	0.52
23:DB:925:A:O2'	23:DB:926:G:H5'	2.09	0.52
23:DB:1031:G:N3	32:D4:38:GLY:O	2.43	0.52
23:DB:1100:C:H2'	23:DB:1101:U:C6	2.45	0.52
23:DB:1941:C:O2	53:D6:133:ARG:NH2	2.42	0.52
23:DB:1947:C:H2'	23:DB:1948:G:C8	2.44	0.52
23:DB:2487:G:H2'	23:DB:2488:G:C8	2.44	0.52
24:DI:100:ILE:O	24:DI:139:VAL:HA	2.09	0.52
26:DD:101:PHE:O	26:DD:102:ALA:HB2	2.10	0.52
26:DD:186:LEU:HD21	28:DP:3:ILE:HD11	1.91	0.52
38:DM:31:PHE:HD1	38:DM:105:MET:HB3	1.75	0.52
39:DX:39:GLN:HB2	39:DX:42:LEU:HD22	1.90	0.52
42:DN:62:ASN:N	42:DN:62:ASN:HD22	2.07	0.52
47:DF:102:LEU:HD13	47:DF:102:LEU:O	2.10	0.52
48:DG:3:VAL:O	48:DG:68:ARG:HG3	2.10	0.52
1:AA:109:A:H4'	1:AA:110:C:OP2	2.09	0.52
1:AA:113:G:H2'	1:AA:114:U:C6	2.45	0.52
1:AA:160:A:H2'	1:AA:161:A:O4'	2.08	0.52
1:AA:367:U:OP1	1:AA:395:C:H1'	2.10	0.52
1:AA:453:G:H2'	1:AA:454:G:C8	2.44	0.52
1:AA:720:C:H5"	17:AR:40:PRO:HA	1.92	0.52
1:AA:770:C:O2'	1:AA:771:G:H5'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:807:A:H2'	1:AA:808:C:C6	2.44	0.52
1:AA:1310:G:H2'	1:AA:1311:A:O4'	2.09	0.52
4:AE:19:ARG:O	4:AE:20:VAL:HB	2.09	0.52
4:AE:131:ASN:O	4:AE:135:VAL:HG23	2.09	0.52
5:AF:79:ARG:NH2	5:AF:87:SER:HB3	2.25	0.52
11:AL:113:ARG:NH2	11:AL:120:ARG:HA	2.24	0.52
12:AM:2:ARG:HD3	12:AM:2:ARG:N	2.24	0.52
13:AN:24:ALA:O	13:AN:27:LYS:HD2	2.09	0.52
17:AR:63:TYR:N	17:AR:63:TYR:CD2	2.77	0.52
20:AB:16:GLY:HA2	20:AB:40:ILE:CG1	2.39	0.52
20:AB:102:ASN:O	20:AB:106:VAL:HG23	2.10	0.52
22:BA:20:G:H2'	22:BA:21:G:H8	1.75	0.52
23:BB:850:U:H5"	30:BY:18:LYS:HD3	1.91	0.52
23:BB:912:C:H2'	23:BB:913:U:C6	2.45	0.52
23:BB:1201:U:H2'	23:BB:1202:G:H8	1.73	0.52
23:BB:1316:U:H2'	23:BB:1317:G:H8	1.74	0.52
23:BB:1429:G:H2'	23:BB:1430:G:C8	2.44	0.52
23:BB:2259:U:H2'	23:BB:2260:C:C6	2.45	0.52
23:BB:2364:C:O2'	23:BB:2365:G:H5'	2.10	0.52
23:BB:2677:G:H2'	23:BB:2678:C:C6	2.45	0.52
23:BB:2835:A:N6	23:BB:2878:U:H2'	2.24	0.52
25:BC:116:GLN:HG2	25:BC:117:SER:N	2.25	0.52
29:BE:188:MET:HG3	29:BE:192:ALA:HB3	1.92	0.52
32:B4:17:VAL:HG11	32:B4:19:ARG:HE	1.74	0.52
38:BM:19:GLY:CA	38:BM:97:GLN:HB2	2.37	0.52
49:BR:49:ILE:HG21	49:BR:54:VAL:CA	2.39	0.52
50:BT:45:ALA:HA	50:BT:48:GLN:CG	2.39	0.52
52:BW:10:ARG:O	52:BW:11:ASN:HB2	2.09	0.52
53:B6:73:GLN:HG3	53:B6:74:ASN:N	2.25	0.52
1:CA:301:G:H2'	1:CA:302:G:C8	2.43	0.52
1:CA:323:U:H2'	1:CA:324:G:O4'	2.09	0.52
1:CA:490:C:H2'	1:CA:491:G:C8	2.44	0.52
1:CA:1172:C:O2'	1:CA:1173:U:H5'	2.10	0.52
1:CA:1436:U:H2'	1:CA:1437:A:H8	1.75	0.52
2:CC:71:ARG:O	2:CC:75:VAL:HG23	2.10	0.52
2:CC:81:GLU:HG3	2:CC:82:ASP:N	2.24	0.52
6:CG:91:ARG:CB	6:CG:92:PRO:HD2	2.40	0.52
9:CJ:9:ARG:CB	9:CJ:99:GLN:HB2	2.18	0.52
9:CJ:37:ARG:HA	9:CJ:37:ARG:NE	2.25	0.52
9:CJ:52:LEU:HG	9:CJ:62:ARG:NE	2.21	0.52
17:CR:63:TYR:CD2	17:CR:63:TYR:N	2.77	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CT:34:VAL:HG11	19:CT:78:LEU:HD13	1.92	0.52
20:CB:42:LEU:HA	20:CB:45:THR:OG1	2.09	0.52
23:DB:493:G:H2'	23:DB:494:G:O4'	2.09	0.52
23:DB:899:A:H2'	23:DB:900:A:C8	2.44	0.52
23:DB:1411:U:H2'	23:DB:1412:U:C6	2.44	0.52
23:DB:1473:G:O2'	23:DB:1474:U:H5'	2.10	0.52
23:DB:1549:A:H2'	23:DB:1550:C:C6	2.45	0.52
23:DB:1592:C:H2'	23:DB:1593:A:H8	1.74	0.52
23:DB:1958:C:H2'	23:DB:1959:G:H8	1.74	0.52
23:DB:1987:A:H2'	23:DB:1988:G:H8	1.75	0.52
23:DB:2377:A:H2'	23:DB:2378:A:H8	1.73	0.52
26:DD:10:GLY:HA3	26:DD:26:VAL:N	2.18	0.52
35:DV:28:ALA:CB	35:DV:89:ILE:HD12	2.40	0.52
39:DX:56:LEU:O	39:DX:57:LEU:HB2	2.09	0.52
53:D6:80:GLU:HB2	53:D6:99:LEU:HD13	1.92	0.52
1:AA:412:A:H1'	1:AA:413:G:C8	2.45	0.52
1:AA:483:C:H2'	1:AA:484:G:C8	2.45	0.52
1:AA:999:C:H2'	1:AA:1000:A:H8	1.72	0.52
1:AA:1225:A:H2'	1:AA:1225:A:N3	2.24	0.52
2:AC:13:ILE:N	2:AC:13:ILE:HD13	2.25	0.52
5:AF:61:LEU:HD12	5:AF:63:ASN:OD1	2.10	0.52
19:AT:42:ASP:OD1	19:AT:44:ALA:HB3	2.10	0.52
22:BA:13:G:H2'	22:BA:14:U:H5"	1.92	0.52
23:BB:84:A:H4'	23:BB:85:G:O5'	2.10	0.52
23:BB:370:G:O2'	23:BB:423:A:H3'	2.09	0.52
23:BB:1376:C:H3'	57:BB:3500:HOH:O	2.09	0.52
23:BB:2015:A:C2	31:B0:2:VAL:HG22	2.45	0.52
23:BB:2322:A:H3'	23:BB:2323:G:H8	1.74	0.52
23:BB:2680:U:P	26:BD:114:LYS:HB3	2.50	0.52
25:BC:28:PRO:HB3	25:BC:81:GLU:OE1	2.09	0.52
29:BE:115:GLN:O	29:BE:117:ARG:HG3	2.09	0.52
29:BE:141:MET:O	29:BE:143:LEU:HG	2.09	0.52
34:B3:24:LYS:HZ2	34:B3:28:LEU:HB3	1.74	0.52
35:BV:79:ARG:HA	35:BV:86:LEU:HA	1.91	0.52
41:BJ:99:ARG:HA	41:BJ:102:GLU:HB2	1.91	0.52
45:BS:28:LYS:HD3	45:BS:69:LEU:O	2.10	0.52
47:BF:134:GLN:OE1	47:BF:136:ILE:HA	2.09	0.52
48:BG:23:ILE:HD11	48:BG:42:VAL:HG11	1.92	0.52
48:BG:59:ASP:O	48:BG:63:GLN:HB2	2.09	0.52
49:BR:54:VAL:HG13	49:BR:56:GLY:O	2.09	0.52
51:BZ:40:VAL:O	51:BZ:42:SER:N	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:41:GLU:O	51:BZ:44:LYS:HD2	2.09	0.52
53:B6:30:THR:HB	53:B6:183:ILE:N	2.24	0.52
1:CA:109:A:H4'	1:CA:110:C:OP2	2.10	0.52
1:CA:178:C:O2'	1:CA:179:A:H5'	2.10	0.52
1:CA:1329:A:OP1	12:CM:28:ARG:HB2	2.08	0.52
1:CA:1384:C:H2'	1:CA:1385:G:C8	2.45	0.52
3:CD:60:VAL:CB	3:CD:194:ILE:HD11	2.35	0.52
5:CF:45:ARG:HG2	5:CF:46:GLN:N	2.25	0.52
7:CH:63:LYS:HD2	7:CH:70:VAL:HG21	1.90	0.52
7:CH:94:VAL:HG21	7:CH:100:ILE:O	2.09	0.52
20:CB:10:LYS:HD3	20:CB:211:LEU:HD21	1.91	0.52
20:CB:96:LEU:HB2	20:CB:99:MET:CE	2.39	0.52
21:CU:36:PHE:HD2	21:CU:39:LYS:HB2	1.75	0.52
23:DB:659:G:H4'	29:DE:95:LYS:HB3	1.92	0.52
23:DB:944:C:H2'	57:DB:3331:HOH:O	2.09	0.52
23:DB:1339:G:H21	23:DB:1603:A:H1'	1.75	0.52
23:DB:1735:A:H2'	23:DB:1736:U:C6	2.45	0.52
23:DB:1965:C:H5"	23:DB:1966:A:H2'	1.91	0.52
23:DB:2013:A:N3	45:DS:88:ARG:NH1	2.58	0.52
23:DB:2246:G:H2'	23:DB:2247:A:H8	1.74	0.52
23:DB:2649:C:H2'	23:DB:2650:U:H6	1.74	0.52
23:DB:2758:A:H2'	23:DB:2759:G:O4'	2.09	0.52
23:DB:2812:G:H2'	23:DB:2813:A:C8	2.45	0.52
23:DB:2867:G:N3	23:DB:2867:G:C2'	2.73	0.52
24:DI:99:LYS:HD3	24:DI:99:LYS:N	2.25	0.52
25:DC:20:ASN:ND2	25:DC:23:LEU:HD13	2.25	0.52
26:DD:90:PHE:HD2	26:DD:94:GLN:HG3	1.75	0.52
27:DK:47:ILE:CG1	27:DK:48:PRO:HD2	2.37	0.52
27:DK:64:ARG:HB2	27:DK:83:ALA:HB3	1.92	0.52
29:DE:48:THR:HG23	29:DE:88:ARG:HH12	1.74	0.52
38:DM:41:LEU:O	38:DM:94:ALA:N	2.42	0.52
39:DX:45:GLN:O	39:DX:47:ARG:N	2.42	0.52
40:DH:44:ILE:O	40:DH:48:GLU:HB2	2.10	0.52
41:DJ:6:ALA:HB3	41:DJ:45:THR:CG2	2.40	0.52
41:DJ:45:THR:O	41:DJ:45:THR:HG23	2.09	0.52
42:DN:81:ASN:O	42:DN:85:PRO:HD2	2.09	0.52
42:DN:97:ILE:HD12	42:DN:98:LEU:N	2.24	0.52
43:DO:70:ALA:C	43:DO:72:ALA:H	2.13	0.52
48:DG:34:ARG:N	48:DG:34:ARG:HD3	2.24	0.52
50:DT:25:GLU:HA	50:DT:28:ASN:O	2.10	0.52
1:AA:620:C:O2	3:AD:131:ILE:HG21	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1110:A:H2'	1:AA:1111:A:C8	2.45	0.52
1:AA:1137:C:H1'	1:AA:1138:G:N1	2.24	0.52
1:AA:1269:A:H2	1:AA:1312:G:N3	2.08	0.52
1:AA:1310:G:O2'	1:AA:1311:A:H5'	2.10	0.52
1:AA:1316:G:H5'	1:AA:1317:C:OP2	2.09	0.52
7:AH:79:ARG:NH1	7:AH:82:LEU:HB3	2.25	0.52
10:AK:16:SER:HA	10:AK:79:LYS:HG2	1.91	0.52
10:AK:55:ARG:NH1	10:AK:60:PHE:HD1	2.05	0.52
11:AL:98:ARG:HB2	11:AL:116:TYR:HA	1.91	0.52
12:AM:29:SER:O	12:AM:32:ILE:HG22	2.10	0.52
13:AN:46:LYS:NZ	18:AS:10:ILE:H	2.06	0.52
19:AT:79:THR:HA	19:AT:82:ILE:HG12	1.91	0.52
20:AB:130:LYS:O	20:AB:134:LEU:HG	2.09	0.52
20:AB:212:TYR:HA	20:AB:215:ALA:HB3	1.92	0.52
22:BA:103:U:O2'	22:BA:104:A:H5'	2.09	0.52
23:BB:263:G:H2'	23:BB:264:C:O4'	2.10	0.52
23:BB:433:C:H2'	23:BB:434:U:C6	2.45	0.52
23:BB:548:G:H5"	23:BB:549:G:C4	2.44	0.52
23:BB:1038:G:H2'	23:BB:1039:A:C8	2.44	0.52
23:BB:1176:U:H6	23:BB:1176:U:O5'	1.93	0.52
23:BB:1178:C:H2'	23:BB:1179:G:C8	2.45	0.52
23:BB:1418:G:H1'	23:BB:1580:A:H61	1.75	0.52
23:BB:2311:A:O2'	47:BF:84:ILE:HG21	2.10	0.52
23:BB:2353:G:H1'	52:BW:30:VAL:HG13	1.91	0.52
23:BB:2712:C:H2'	23:BB:2714:G:O3'	2.10	0.52
23:BB:2804:U:H2'	23:BB:2805:C:H6	1.74	0.52
25:BC:93:VAL:HG21	25:BC:115:ILE:HD11	1.92	0.52
25:BC:264:LYS:HG3	25:BC:265:PHE:CD2	2.45	0.52
26:BD:113:SER:HB3	26:BD:167:ASN:HA	1.92	0.52
26:BD:178:VAL:HB	26:BD:188:LEU:CB	2.36	0.52
30:BY:4:ILE:HD13	30:BY:58:GLU:HG3	1.90	0.52
35:BV:4:ILE:HD11	35:BV:61:LEU:HB3	1.92	0.52
37:BL:23:ILE:HD12	49:BR:84:ARG:HE	1.74	0.52
38:BM:31:PHE:HD1	38:BM:105:MET:HB3	1.74	0.52
43:BO:110:ALA:O	43:BO:115:LEU:HB2	2.10	0.52
47:BF:137:PHE:O	47:BF:139:GLU:N	2.42	0.52
52:BW:50:VAL:O	52:BW:59:PHE:HB3	2.09	0.52
53:B6:38:LEU:HD22	53:B6:83:ILE:HD12	1.92	0.52
1:CA:378:G:O2'	1:CA:379:C:H5'	2.09	0.52
1:CA:620:C:N1	3:CD:131:ILE:HD13	2.24	0.52
1:CA:960:U:H4'	1:CA:961:U:C5'	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1003:G:N2	1:CA:1005:A:H5'	2.23	0.52
1:CA:1018:G:H2'	1:CA:1019:A:C8	2.45	0.52
1:CA:1176:A:H2'	1:CA:1177:G:O4'	2.09	0.52
3:CD:84:ASN:HD22	4:CE:101:GLY:HA2	1.73	0.52
6:CG:21:LEU:HG	6:CG:22:LEU:H	1.75	0.52
6:CG:130:LYS:N	6:CG:134:VAL:HG21	2.25	0.52
7:CH:102:VAL:HG12	7:CH:125:ILE:HD12	1.92	0.52
12:CM:19:THR:HG22	12:CM:29:SER:CB	2.40	0.52
13:CN:9:GLU:OE2	13:CN:60:ARG:HG2	2.09	0.52
13:CN:24:ALA:O	13:CN:27:LYS:HD2	2.09	0.52
20:CB:172:ILE:HG22	20:CB:176:ASN:HD21	1.74	0.52
23:DB:454:A:H3'	23:DB:455:C:H5'	1.92	0.52
23:DB:603:A:H4'	23:DB:604:G:O5'	2.10	0.52
23:DB:936:A:H2'	23:DB:937:C:C6	2.45	0.52
23:DB:1060:U:O2	23:DB:1088:A:C8	2.63	0.52
23:DB:1509:A:H5'	23:DB:1510:G:H5'	1.91	0.52
23:DB:1719:G:O2'	23:DB:1720:U:H5'	2.10	0.52
23:DB:1829:A:H2'	23:DB:1830:C:H5'	1.92	0.52
23:DB:1984:G:O2'	23:DB:1985:C:H5'	2.09	0.52
23:DB:2141:G:H2'	23:DB:2142:A:C8	2.45	0.52
27:DK:39:ILE:H	27:DK:39:ILE:HD13	1.75	0.52
27:DK:71:ARG:HA	27:DK:71:ARG:HE	1.75	0.52
29:DE:18:THR:HG22	29:DE:106:LYS:CE	2.40	0.52
29:DE:40:ARG:NH2	29:DE:92:HIS:NE2	2.57	0.52
29:DE:188:MET:HG2	29:DE:193:VAL:CG2	2.36	0.52
32:D4:7:VAL:HG23	32:D4:35:GLN:CB	2.38	0.52
38:DM:33:LEU:HD22	38:DM:128:THR:HB	1.92	0.52
40:DH:131:SER:HB2	40:DH:141:LYS:CA	2.40	0.52
44:DQ:77:LYS:O	44:DQ:80:ASN:HB3	2.09	0.52
44:DQ:94:LEU:CD1	49:DR:13:ARG:HB2	2.40	0.52
48:DG:17:LYS:HZ2	48:DG:17:LYS:CA	2.22	0.52
50:DT:64:LYS:HD2	50:DT:64:LYS:H	1.75	0.52
53:D6:76:LEU:HD11	53:D6:97:ASP:C	2.30	0.52
1:AA:956:U:O2'	1:AA:957:U:H5'	2.09	0.52
1:AA:1464:U:H2'	1:AA:1465:A:C8	2.45	0.52
2:AC:148:ILE:HA	2:AC:200:TRP:O	2.09	0.52
3:AD:151:GLN:HB3	3:AD:154:VAL:HG23	1.92	0.52
9:AJ:9:ARG:CB	9:AJ:99:GLN:HB2	2.20	0.52
20:AB:69:VAL:HB	20:AB:162:VAL:HB	1.91	0.52
22:BA:64:G:O2'	22:BA:65:U:H5'	2.10	0.52
23:BB:21:A:H2'	23:BB:22:C:C6	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:639:U:H2'	23:BB:640:C:H6	1.74	0.52
23:BB:1486:U:H2'	23:BB:1487:U:C6	2.45	0.52
23:BB:1487:U:H2'	23:BB:1488:C:C6	2.44	0.52
23:BB:1843:C:H5"	25:BC:250:GLN:HE21	1.73	0.52
23:BB:1847:A:H4'	23:BB:1848:A:H8	1.75	0.52
23:BB:2520:C:O2'	23:BB:2521:C:H5'	2.10	0.52
30:BY:56:VAL:HG12	30:BY:57:GLU:N	2.25	0.52
35:BV:63:ILE:HD12	35:BV:63:ILE:H	1.75	0.52
40:BH:73:ASN:ND2	40:BH:74:ALA:H	2.03	0.52
40:BH:131:SER:O	40:BH:133:GLN:N	2.41	0.52
47:BF:107:VAL:N	47:BF:108:PRO:CD	2.73	0.52
47:BF:115:GLY:CA	47:BF:177:ARG:HH11	2.21	0.52
48:BG:84:LYS:H	48:BG:85:LYS:HD2	1.74	0.52
48:BG:88:LEU:HD11	48:BG:94:ARG:N	2.25	0.52
53:B6:36:ALA:O	53:B6:39:LEU:HD23	2.10	0.52
1:CA:97:G:H5'	1:CA:98:A:OP2	2.10	0.52
1:CA:723:U:O4'	21:CU:48:LYS:HD3	2.10	0.52
1:CA:1225:A:H2'	1:CA:1225:A:N3	2.25	0.52
1:CA:1250:A:H4'	8:CI:69:GLY:O	2.10	0.52
1:CA:1320:C:H1'	18:CS:72:GLU:N	2.25	0.52
2:CC:155:ARG:H	2:CC:162:ALA:CB	2.23	0.52
3:CD:81:LEU:HB2	3:CD:88:ASN:ND2	2.24	0.52
7:CH:47:ASP:CG	7:CH:48:PHE:N	2.63	0.52
12:CM:28:ARG:HH12	12:CM:59:VAL:HA	1.75	0.52
13:CN:26:LEU:HD12	13:CN:44:VAL:HG13	1.92	0.52
13:CN:63:CYS:HB3	13:CN:68:ARG:H	1.75	0.52
17:CR:44:THR:C	17:CR:46:THR:H	2.12	0.52
19:CT:85:LEU:HD23	19:CT:86:ALA:N	2.22	0.52
20:CB:14:HIS:CD2	20:CB:202:ASN:H	2.27	0.52
20:CB:83:ALA:O	20:CB:88:GLN:HB2	2.09	0.52
22:DA:40:U:H1'	22:DA:43:C:C5	2.44	0.52
23:DB:138:U:O5'	23:DB:138:U:H6	1.92	0.52
23:DB:445:C:O2'	23:DB:446:G:H5'	2.09	0.52
23:DB:1080:A:H4'	24:DI:126:ARG:HD2	1.91	0.52
23:DB:1197:G:H2'	23:DB:1198:U:H6	1.75	0.52
23:DB:1256:G:H21	29:DE:77:ILE:CG2	2.23	0.52
23:DB:1335:C:H2'	23:DB:1336:A:H8	1.74	0.52
23:DB:1484:U:H2'	23:DB:1485:U:C6	2.45	0.52
23:DB:1874:C:H2'	23:DB:1875:G:O4'	2.10	0.52
23:DB:2740:A:H2'	23:DB:2741:A:C8	2.44	0.52
25:DC:6:LYS:O	25:DC:8:THR:HG23	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:18:VAL:CG1	25:DC:202:ARG:HD2	2.40	0.52
30:DY:23:LEU:HD13	30:DY:28:LEU:HB2	1.92	0.52
32:D4:17:VAL:HG11	32:D4:19:ARG:HE	1.75	0.52
35:DV:31:TYR:HA	35:DV:93:ARG:NH2	2.25	0.52
41:DJ:58:ASN:HD22	41:DJ:61:LYS:HD2	1.74	0.52
44:DQ:51:GLN:O	44:DQ:54:ARG:HB2	2.10	0.52
46:DU:85:ARG:NH1	46:DU:86:PHE:H	2.07	0.52
47:DF:78:ILE:HA	47:DF:82:TYR:CD1	2.45	0.52
48:DG:54:ARG:HD3	48:DG:54:ARG:C	2.31	0.52
48:DG:144:ALA:HB1	48:DG:163:TYR:HE1	1.75	0.52
48:DG:162:ARG:NH2	48:DG:168:VAL:HG21	2.24	0.52
1:AA:64:G:H4'	1:AA:65:A:H3'	1.91	0.52
1:AA:635:A:H2'	1:AA:636:U:C6	2.44	0.52
1:AA:821:G:O2'	1:AA:822:U:H5'	2.09	0.52
1:AA:987:G:H2'	1:AA:988:G:H8	1.74	0.52
1:AA:993:G:C2'	1:AA:995:C:H41	2.22	0.52
1:AA:1099:G:H2'	1:AA:1100:C:O4'	2.09	0.52
1:AA:1328:C:O2'	1:AA:1329:A:H5'	2.10	0.52
1:AA:1389:C:H2'	1:AA:1390:U:H6	1.75	0.52
1:AA:1512:U:H2'	1:AA:1513:A:H8	1.75	0.52
2:AC:81:GLU:HG3	2:AC:82:ASP:N	2.24	0.52
5:AF:1:MET:HG2	5:AF:67:PRO:HB3	1.92	0.52
6:AG:104:VAL:O	6:AG:108:ARG:HG3	2.09	0.52
7:AH:63:LYS:HD2	7:AH:70:VAL:HG21	1.92	0.52
9:AJ:92:LEU:H	9:AJ:92:LEU:HD22	1.74	0.52
13:AN:50:LEU:HG	13:AN:51:PRO:HD3	1.91	0.52
16:AQ:32:ILE:HG23	16:AQ:33:TYR:CD2	2.45	0.52
20:AB:14:HIS:CD2	20:AB:202:ASN:H	2.28	0.52
20:AB:166:ASP:OD2	20:AB:190:SER:HA	2.10	0.52
22:BA:32:U:H4'	22:BA:52:A:H62	1.75	0.52
23:BB:30:G:H4'	23:BB:1215:G:H5'	1.92	0.52
23:BB:62:U:O2'	23:BB:63:A:H5'	2.10	0.52
23:BB:141:G:H3'	23:BB:142:A:O4'	2.10	0.52
23:BB:337:C:H2'	23:BB:338:G:O4'	2.10	0.52
23:BB:587:C:N3	37:BL:33:ARG:NH2	2.57	0.52
23:BB:773:U:H4'	25:BC:45:ASN:O	2.09	0.52
23:BB:945:A:H3'	23:BB:946:C:H5"	1.92	0.52
23:BB:1667:G:OP1	27:BK:6:THR:HA	2.09	0.52
23:BB:1789:A:P	25:BC:220:ARG:HD3	2.50	0.52
23:BB:2719:G:O2'	23:BB:2720:U:H5'	2.11	0.52
23:BB:2849:U:H4'	23:BB:2850:A:H5'	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2868:A:H2'	23:BB:2869:G:C8	2.44	0.52
25:BC:209:ALA:HA	25:BC:212:TRP:NE1	2.25	0.52
27:BK:75:SER:HA	28:BP:72:VAL:O	2.09	0.52
36:B2:27:GLY:O	36:B2:30:VAL:HB	2.10	0.52
41:BJ:56:VAL:HG12	41:BJ:57:LEU:N	2.25	0.52
42:BN:72:ASP:C	42:BN:74:GLU:H	2.13	0.52
44:BQ:20:ALA:HA	44:BQ:23:TYR:CE1	2.45	0.52
44:BQ:60:TRP:HB3	44:BQ:92:LYS:O	2.10	0.52
47:BF:34:THR:HA	47:BF:89:THR:HA	1.91	0.52
48:BG:25:ILE:HD13	48:BG:74:MET:HE2	1.92	0.52
48:BG:106:LEU:O	48:BG:108:PHE:HD1	1.92	0.52
50:BT:2:ILE:HD13	50:BT:2:ILE:H	1.75	0.52
51:BZ:39:TRP:HA	51:BZ:46:PHE:CD2	2.45	0.52
1:CA:1047:G:H21	1:CA:1215:G:C4'	2.22	0.52
1:CA:1495:U:O2'	1:CA:1496:C:H5'	2.10	0.52
1:CA:1512:U:H2'	1:CA:1513:A:H8	1.72	0.52
2:CC:183:TYR:HE1	2:CC:198:LYS:HB3	1.75	0.52
3:CD:138:PRO:HA	3:CD:181:PHE:CD2	2.39	0.52
4:CE:149:PRO:HG2	4:CE:150:GLU:OE1	2.10	0.52
9:CJ:55:PRO:HA	13:CN:80:ARG:NH2	2.25	0.52
13:CN:70:HIS:O	13:CN:71:GLY:C	2.48	0.52
14:CO:71:LYS:NZ	14:CO:72:ARG:HA	2.25	0.52
16:CQ:32:ILE:HG23	16:CQ:33:TYR:CD2	2.45	0.52
21:CU:40:PRO:O	21:CU:42:THR:N	2.43	0.52
23:DB:2635:A:C5'	26:DD:79:LEU:HB2	2.40	0.52
25:DC:18:VAL:HG11	25:DC:202:ARG:HD2	1.92	0.52
29:DE:129:PRO:HD3	29:DE:156:ASN:OD1	2.10	0.52
30:DY:16:LEU:O	30:DY:19:HIS:HB2	2.10	0.52
35:DV:4:ILE:O	35:DV:63:ILE:HG23	2.10	0.52
35:DV:80:HIS:CD2	35:DV:83:LYS:H	2.28	0.52
38:DM:35:ALA:HB3	38:DM:99:GLY:H	1.73	0.52
41:DJ:6:ALA:CB	41:DJ:45:THR:HG21	2.39	0.52
45:DS:41:LYS:HB3	45:DS:41:LYS:NZ	2.25	0.52
52:DW:49:ASN:HA	52:DW:61:LYS:H	1.75	0.52
53:D6:78:ALA:HA	53:D6:81:LYS:HD2	1.91	0.52
1:AA:337:G:H2'	1:AA:338:A:H8	1.75	0.51
1:AA:560:A:H5'	1:AA:566:G:N2	2.25	0.51
1:AA:613:C:P	3:AD:80:ARG:HH21	2.33	0.51
1:AA:628:G:O2'	1:AA:629:A:H5'	2.10	0.51
1:AA:900:A:O2'	1:AA:901:A:H5'	2.11	0.51
1:AA:1165:U:H2'	1:AA:1166:G:O4'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1374:A:H4'	6:AG:27:ASN:OD1	2.10	0.51
1:AA:1396:A:H4'	1:AA:1397:C:H5"	1.93	0.51
7:AH:72:GLU:CD	7:AH:72:GLU:H	2.13	0.51
10:AK:15:VAL:HB	10:AK:78:ILE:CD1	2.40	0.51
11:AL:49:ARG:HD2	11:AL:49:ARG:N	2.24	0.51
12:AM:2:ARG:HA	12:AM:6:ILE:O	2.09	0.51
13:AN:17:ASP:HA	13:AN:21:ALA:CB	2.40	0.51
18:AS:66:VAL:HG23	18:AS:67:GLY:H	1.73	0.51
19:AT:38:ILE:HD11	19:AT:82:ILE:CG2	2.31	0.51
20:AB:10:LYS:HD3	20:AB:211:LEU:HD21	1.92	0.51
21:AU:40:PRO:C	21:AU:42:THR:H	2.12	0.51
23:BB:195:A:H1'	23:BB:250:G:N2	2.26	0.51
23:BB:445:C:O2'	23:BB:446:G:H5'	2.10	0.51
23:BB:466:A:N3	23:BB:683:U:H1'	2.25	0.51
23:BB:704:G:H2'	23:BB:726:G:N2	2.13	0.51
23:BB:956:G:N2	23:BB:959:A:H3'	2.25	0.51
23:BB:1429:G:O2'	23:BB:1430:G:H5'	2.10	0.51
23:BB:1735:A:H2'	23:BB:1736:U:C6	2.45	0.51
23:BB:2097:A:H2'	23:BB:2098:U:C6	2.45	0.51
23:BB:2109:U:O2'	23:BB:2110:G:H5'	2.10	0.51
23:BB:2776:A:H4'	23:BB:2777:G:C5'	2.40	0.51
24:BI:74:PRO:O	24:BI:77:VAL:HG22	2.10	0.51
34:B3:7:ARG:HH11	34:B3:7:ARG:HG3	1.75	0.51
37:BL:42:SER:C	37:BL:44:GLY:H	2.12	0.51
41:BJ:40:HIS:CE1	41:BJ:41:LYS:HG3	2.45	0.51
41:BJ:84:ILE:O	41:BJ:84:ILE:HG23	2.09	0.51
43:BO:89:ASP:HA	43:BO:116:GLN:HB3	1.92	0.51
47:BF:78:ILE:HA	47:BF:82:TYR:CD1	2.44	0.51
1:CA:8:A:H61	3:CD:53:GLN:HE22	1.58	0.51
1:CA:182:A:O2'	1:CA:183:C:H3'	2.10	0.51
1:CA:420:U:O2'	1:CA:421:U:H5"	2.10	0.51
1:CA:620:C:O2	3:CD:131:ILE:HG21	2.10	0.51
1:CA:805:C:O2'	1:CA:806:C:H5'	2.10	0.51
1:CA:1110:A:H2'	1:CA:1111:A:C8	2.45	0.51
1:CA:1118:U:H5"	8:CI:105:ARG:HG3	1.91	0.51
6:CG:72:VAL:HG12	6:CG:89:GLU:HA	1.93	0.51
6:CG:115:MET:HA	6:CG:118:ARG:HD2	1.92	0.51
10:CK:15:VAL:HB	10:CK:78:ILE:CD1	2.39	0.51
15:CP:22:ALA:HB2	15:CP:32:PHE:HA	1.92	0.51
16:CQ:24:ILE:HD12	16:CQ:24:ILE:N	2.24	0.51
18:CS:54:ARG:HB3	18:CS:55:GLN:HE21	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:584:C:OP1	44:DQ:5:ARG:HB3	2.10	0.51
23:DB:809:G:H2'	23:DB:810:U:C6	2.45	0.51
23:DB:820:A:H2'	23:DB:821:A:O4'	2.10	0.51
23:DB:1083:U:H2'	23:DB:1085:A:OP2	2.10	0.51
23:DB:1441:G:H4'	23:DB:1628:G:OP1	2.10	0.51
23:DB:1454:C:C1'	42:DN:60:VAL:HG13	2.40	0.51
23:DB:2460:U:H2'	23:DB:2461:A:H8	1.75	0.51
23:DB:2529:G:O3'	48:DG:174:LYS:HE2	2.09	0.51
23:DB:2823:A:O2'	23:DB:2824:C:H5'	2.11	0.51
23:DB:2852:G:H2'	23:DB:2853:C:C6	2.45	0.51
25:DC:173:LEU:HD13	25:DC:173:LEU:N	2.25	0.51
25:DC:255:LYS:C	25:DC:257:ARG:H	2.14	0.51
34:D3:30:HIS:HD2	34:D3:31:ILE:N	2.08	0.51
35:DV:63:ILE:HD12	35:DV:63:ILE:H	1.76	0.51
42:DN:71:ARG:HG2	42:DN:71:ARG:HH21	1.75	0.51
44:DQ:108:LEU:HD23	49:DR:48:LYS:HD3	1.91	0.51
47:DF:71:LYS:HE2	47:DF:73:VAL:HB	1.92	0.51
47:DF:107:VAL:N	47:DF:108:PRO:CD	2.73	0.51
47:DF:124:ARG:HB3	47:DF:126:ASN:OD1	2.10	0.51
49:DR:4:VAL:HG21	49:DR:40:MET:HB2	1.92	0.51
52:DW:18:LYS:O	52:DW:34:SER:HA	2.10	0.51
53:D6:65:THR:CA	53:D6:103:ILE:HD12	2.40	0.51
53:D6:70:SER:HB3	53:D6:76:LEU:CG	2.40	0.51
53:D6:70:SER:HB3	53:D6:76:LEU:CD1	2.39	0.51
1:AA:965:U:OP1	1:AA:1198:G:H5"	2.10	0.51
1:AA:1250:A:H4'	8:AI:69:GLY:O	2.10	0.51
1:AA:1460:C:H2'	1:AA:1461:G:H8	1.75	0.51
1:AA:1508:A:H2'	1:AA:1509:C:C6	2.44	0.51
1:AA:1509:C:O2'	1:AA:1510:C:H5'	2.11	0.51
2:AC:165:GLU:OE2	2:AC:165:GLU:HA	2.09	0.51
5:AF:3:HIS:CD2	5:AF:3:HIS:N	2.78	0.51
20:AB:122:ASP:C	20:AB:124:THR:H	2.14	0.51
22:BA:54:G:H21	47:BF:25:MET:CE	2.24	0.51
23:BB:143:C:H5'	50:BT:3:ARG:NH1	2.26	0.51
23:BB:265:A:O2'	23:BB:266:G:H4'	2.10	0.51
23:BB:279:A:H2'	23:BB:280:U:H5'	1.93	0.51
23:BB:841:G:O2'	23:BB:842:U:H5'	2.11	0.51
23:BB:2078:C:H2'	23:BB:2079:U:H6	1.70	0.51
23:BB:2679:A:H2'	23:BB:2680:U:C6	2.46	0.51
25:BC:145:MET:SD	25:BC:153:LEU:HD21	2.50	0.51
25:BC:239:PHE:HD1	25:BC:241:LYS:H	1.57	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:10:GLY:HA3	26:BD:26:VAL:N	2.19	0.51
27:BK:14:SER:HB2	27:BK:51:LYS:H	1.75	0.51
37:BL:40:SER:OG	37:BL:41:ARG:HG3	2.10	0.51
38:BM:40:ARG:HB3	38:BM:95:LEU:HD12	1.92	0.51
41:BJ:87:ALA:HA	41:BJ:91:GLU:OE1	2.10	0.51
43:BO:83:LEU:HD12	43:BO:87:ILE:O	2.09	0.51
45:BS:28:LYS:HD2	45:BS:29:VAL:H	1.75	0.51
47:BF:34:THR:OG1	47:BF:154:THR:HB	2.10	0.51
48:BG:33:THR:HA	48:BG:34:ARG:NH1	2.25	0.51
50:BT:68:LYS:HD3	50:BT:68:LYS:N	2.25	0.51
52:BW:9:THR:OG1	52:BW:10:ARG:N	2.43	0.51
52:BW:46:ALA:HB2	52:BW:78:PHE:CD1	2.44	0.51
52:BW:66:VAL:HA	52:BW:81:ILE:HG22	1.91	0.51
53:B6:7:TYR:OH	53:B6:157:ALA:HA	2.10	0.51
53:B6:150:SER:O	53:B6:154:THR:HG22	2.09	0.51
1:CA:58:C:O2'	1:CA:59:A:H5'	2.10	0.51
1:CA:1099:G:H2'	1:CA:1100:C:O4'	2.10	0.51
1:CA:1494:G:N7	55:CA:1662:LLL:N32	2.58	0.51
3:CD:94:GLU:CD	3:CD:99:ASN:HD21	2.14	0.51
13:CN:17:ASP:HA	13:CN:21:ALA:HB2	1.92	0.51
23:DB:144:A:O2'	23:DB:145:C:H5'	2.11	0.51
23:DB:264:C:O2'	23:DB:265:A:H5"	2.09	0.51
23:DB:850:U:O2'	30:DY:22:THR:HA	2.10	0.51
23:DB:970:U:H1'	23:DB:985:C:P	2.50	0.51
23:DB:1794:A:H2'	23:DB:1795:C:H6	1.75	0.51
23:DB:1889:A:H2'	23:DB:1890:A:H8	1.75	0.51
27:DK:37:ASP:O	27:DK:62:VAL:HG23	2.09	0.51
28:DP:23:ASP:HA	28:DP:88:ARG:HA	1.92	0.51
38:DM:17:ASN:ND2	38:DM:95:LEU:HG	2.25	0.51
39:DX:23:ARG:O	39:DX:27:ASN:HB2	2.10	0.51
47:DF:65:LEU:O	47:DF:86:CYS:HA	2.10	0.51
48:DG:71:LEU:HD13	48:DG:74:MET:SD	2.50	0.51
10:AK:111:ASP:CB	21:AU:19:LYS:HE3	2.28	0.51
13:AN:60:ARG:NH2	13:AN:69:PRO:HB3	2.25	0.51
20:AB:218:ALA:HA	20:AB:221:ARG:HG2	1.92	0.51
23:BB:18:U:H2'	23:BB:19:A:H8	1.76	0.51
23:BB:506:G:H1'	23:BB:507:A:C8	2.45	0.51
23:BB:548:G:H5"	23:BB:549:G:O4'	2.10	0.51
23:BB:576:U:H2'	23:BB:577:G:C8	2.45	0.51
23:BB:782:A:N7	25:BC:219:VAL:HG21	2.25	0.51
23:BB:1275:A:H2'	23:BB:1276:A:O4'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1301:A:O2'	23:BB:1302:A:H2'	2.10	0.51
23:BB:1559:U:H3'	23:BB:1560:G:H5'	1.91	0.51
23:BB:1722:A:N6	23:BB:1738:G:H1'	2.26	0.51
23:BB:1753:G:N2	23:BB:1755:A:H3'	2.26	0.51
23:BB:2825:G:H2'	23:BB:2826:A:H5'	1.93	0.51
31:B0:47:TYR:CZ	31:B0:52:LYS:HG3	2.45	0.51
37:BL:99:ASN:O	37:BL:100:ILE:HB	2.10	0.51
43:BO:68:LYS:H	43:BO:102:ARG:CD	2.22	0.51
47:BF:65:LEU:O	47:BF:86:CYS:HA	2.09	0.51
47:BF:134:GLN:O	47:BF:136:ILE:N	2.43	0.51
1:CA:984:C:O2'	1:CA:985:C:H5'	2.11	0.51
1:CA:1017:U:H2'	1:CA:1018:G:C8	2.45	0.51
1:CA:1034:G:H2'	1:CA:1035:A:H5'	1.93	0.51
1:CA:1308:U:H3'	12:CM:97:ARG:HH11	1.76	0.51
1:CA:1385:G:H2'	1:CA:1386:G:O4'	2.10	0.51
7:CH:72:GLU:CD	7:CH:72:GLU:H	2.12	0.51
10:CK:70:ALA:C	10:CK:72:ALA:H	2.13	0.51
16:CQ:68:LYS:O	16:CQ:70:LYS:N	2.44	0.51
23:DB:154:U:H2'	23:DB:155:A:H8	1.75	0.51
23:DB:693:A:H2'	23:DB:694:U:H6	1.74	0.51
23:DB:871:U:H2'	23:DB:872:U:C6	2.44	0.51
23:DB:898:C:H2'	23:DB:898:C:O2	2.10	0.51
23:DB:1141:U:H4'	23:DB:1142:A:C1'	2.41	0.51
23:DB:1718:G:H2'	23:DB:1719:G:C8	2.46	0.51
23:DB:2291:U:O2'	23:DB:2374:C:H1'	2.09	0.51
23:DB:2457:U:O2'	23:DB:2458:G:H5'	2.11	0.51
25:DC:86:ARG:HB3	25:DC:86:ARG:CZ	2.40	0.51
25:DC:239:PHE:HD1	25:DC:241:LYS:H	1.58	0.51
26:DD:38:LYS:HE2	26:DD:43:ASP:OD2	2.10	0.51
27:DK:75:SER:HA	28:DP:72:VAL:O	2.11	0.51
28:DP:61:ARG:NH1	28:DP:100:ARG:HA	2.25	0.51
28:DP:74:GLN:O	28:DP:76:HIS:N	2.44	0.51
29:DE:58:LYS:O	29:DE:60:TRP:N	2.44	0.51
30:DY:8:GLN:HB3	30:DY:31:ILE:C	2.31	0.51
33:D1:6:GLU:HB2	33:D1:52:LYS:HZ3	1.75	0.51
34:D3:60:CYS:C	34:D3:62:PRO:HD3	2.31	0.51
38:DM:126:ILE:H	38:DM:126:ILE:HD12	1.75	0.51
44:DQ:7:VAL:HG23	44:DQ:8:ILE:N	2.26	0.51
44:DQ:104:ALA:O	44:DQ:106:THR:N	2.40	0.51
45:DS:97:LEU:HD22	45:DS:97:LEU:N	2.25	0.51
48:DG:84:LYS:H	48:DG:85:LYS:HD2	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:D6:7:TYR:CE2	53:D6:160:GLU:HG2	2.44	0.51
53:D6:12:SER:O	53:D6:16:LYS:HD2	2.10	0.51
53:D6:123:GLU:HA	53:D6:126:ARG:HH11	1.74	0.51
1:AA:960:U:H4'	1:AA:961:U:C5'	2.40	0.51
1:AA:964:A:H2'	1:AA:965:U:H5"	1.91	0.51
1:AA:1118:U:H5"	8:AI:105:ARG:HG3	1.92	0.51
1:AA:1221:G:O3'	18:AS:76:THR:HG21	2.09	0.51
5:AF:92:THR:O	5:AF:93:LYS:HB2	2.09	0.51
13:AN:70:HIS:O	13:AN:71:GLY:C	2.49	0.51
16:AQ:68:LYS:O	16:AQ:70:LYS:N	2.42	0.51
20:AB:80:LYS:O	20:AB:84:LEU:HB2	2.11	0.51
21:AU:11:PHE:O	21:AU:13:VAL:N	2.43	0.51
22:BA:111:U:H2'	22:BA:112:G:H8	1.75	0.51
23:BB:1042:G:H2'	23:BB:1043:C:C6	2.46	0.51
23:BB:1188:U:O2'	23:BB:1189:A:H5'	2.10	0.51
23:BB:2074:U:O2'	23:BB:2075:U:H5'	2.09	0.51
23:BB:2472:G:H2'	23:BB:2529:G:N2	2.25	0.51
39:BX:23:ARG:O	39:BX:27:ASN:HB2	2.10	0.51
40:BH:111:ALA:N	40:BH:132:PHE:HZ	2.08	0.51
41:BJ:23:LYS:NZ	41:BJ:142:ILE:HG12	2.25	0.51
42:BN:45:ARG:O	42:BN:49:GLU:HG3	2.10	0.51
44:BQ:7:VAL:HG23	44:BQ:8:ILE:N	2.26	0.51
50:BT:55:VAL:CA	50:BT:87:LEU:HA	2.39	0.51
51:BZ:68:LEU:HD13	51:BZ:78:TYR:CE1	2.46	0.51
1:CA:696:A:H2'	1:CA:697:U:C6	2.44	0.51
1:CA:956:U:O2'	1:CA:957:U:H5'	2.10	0.51
1:CA:1085:U:H3'	1:CA:1086:U:C6	2.45	0.51
1:CA:1464:U:H2'	1:CA:1465:A:C8	2.45	0.51
5:CF:67:PRO:O	5:CF:70:VAL:HG22	2.09	0.51
8:CI:5:TYR:CD1	8:CI:20:ILE:HG22	2.46	0.51
8:CI:56:MET:HA	8:CI:59:LYS:HB2	1.92	0.51
12:CM:2:ARG:HA	12:CM:6:ILE:O	2.11	0.51
12:CM:106:ARG:HH12	12:CM:109:LYS:HE3	1.74	0.51
13:CN:50:LEU:HG	13:CN:51:PRO:HD3	1.92	0.51
14:CO:49:ASP:CG	14:CO:52:SER:HB2	2.30	0.51
19:CT:53:MET:O	19:CT:57:VAL:HG22	2.10	0.51
19:CT:57:VAL:HG23	19:CT:58:ASP:H	1.75	0.51
22:DA:33:G:O2'	22:DA:34:A:H5'	2.11	0.51
23:DB:26:G:H1'	23:DB:514:A:H61	1.76	0.51
23:DB:558:U:O2'	23:DB:559:G:H5'	2.11	0.51
23:DB:814:C:O2'	23:DB:815:C:H5'	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1862:G:O2'	23:DB:1863:G:H5'	2.10	0.51
23:DB:2349:G:OP2	34:D3:41:ARG:HD3	2.10	0.51
23:DB:2487:G:H2'	23:DB:2488:G:H8	1.75	0.51
23:DB:2529:G:H4'	48:DG:174:LYS:HE2	1.92	0.51
23:DB:2617:U:O2'	23:DB:2618:G:H5'	2.11	0.51
25:DC:171:VAL:HG23	25:DC:185:ALA:HB2	1.92	0.51
29:DE:29:HIS:C	29:DE:31:VAL:H	2.14	0.51
31:D0:38:LEU:HB3	31:D0:41:HIS:CD2	2.46	0.51
34:D3:39:ARG:O	34:D3:43:LEU:HG	2.10	0.51
46:DU:6:ARG:HH21	46:DU:6:ARG:HG2	1.76	0.51
48:DG:10:VAL:HG13	48:DG:14:VAL:HG21	1.92	0.51
49:DR:54:VAL:HG13	49:DR:56:GLY:O	2.11	0.51
50:DT:31:VAL:HA	50:DT:84:TYR:H	1.75	0.51
1:AA:207:C:H3'	1:AA:208:U:C6	2.45	0.51
1:AA:256:U:H3'	1:AA:257:G:H8	1.74	0.51
1:AA:767:A:H2'	1:AA:768:A:C8	2.45	0.51
1:AA:767:A:H2'	1:AA:768:A:H8	1.75	0.51
1:AA:1314:C:H2'	1:AA:1315:U:H6	1.74	0.51
1:AA:1351:U:O2'	1:AA:1352:C:H5'	2.10	0.51
3:AD:116:LEU:O	3:AD:122:ILE:HG12	2.11	0.51
5:AF:100:SER:HA	17:AR:23:LYS:NZ	2.26	0.51
6:AG:91:ARG:CB	6:AG:92:PRO:HD2	2.40	0.51
7:AH:76:ARG:HG2	7:AH:79:ARG:HB3	1.93	0.51
9:AJ:6:ILE:HA	9:AJ:102:LEU:O	2.10	0.51
15:AP:26:ASN:OD1	15:AP:31:ARG:HD3	2.10	0.51
20:AB:86:CYS:O	20:AB:88:GLN:N	2.41	0.51
23:BB:159:G:O2'	23:BB:160:A:H5"	2.11	0.51
23:BB:1316:U:O2'	23:BB:1317:G:H5'	2.09	0.51
23:BB:2358:A:H2'	23:BB:2359:C:O4'	2.11	0.51
23:BB:2443:C:O2'	23:BB:2444:G:H5'	2.11	0.51
26:BD:15:PHE:H	26:BD:15:PHE:HD1	1.54	0.51
28:BP:29:VAL:HG12	28:BP:80:VAL:HA	1.93	0.51
35:BV:28:ALA:CB	35:BV:89:ILE:HD12	2.40	0.51
40:BH:4:ILE:HA	40:BH:18:GLN:HA	1.93	0.51
40:BH:63:ALA:O	40:BH:64:ALA:HB2	2.10	0.51
40:BH:81:ALA:CB	40:BH:147:VAL:H	2.24	0.51
42:BN:49:GLU:OE2	42:BN:95:THR:HG22	2.10	0.51
44:BQ:105:PHE:HA	44:BQ:108:LEU:CD1	2.38	0.51
45:BS:6:LYS:HB3	45:BS:104:THR:HG23	1.91	0.51
49:BR:4:VAL:HG21	49:BR:40:MET:HB2	1.92	0.51
52:BW:37:VAL:CG1	52:BW:38:ARG:H	2.18	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:974:A:C4'	1:CA:975:A:H5'	2.34	0.51
1:CA:1509:C:O2'	1:CA:1510:C:H5'	2.11	0.51
16:CQ:59:GLU:O	16:CQ:75:VAL:HG22	2.11	0.51
20:CB:65:LYS:HA	20:CB:89:PHE:CE1	2.43	0.51
23:DB:18:U:H2'	23:DB:19:A:H8	1.76	0.51
23:DB:661:A:H1'	37:DL:12:SER:O	2.10	0.51
23:DB:736:C:H2'	23:DB:737:C:C6	2.46	0.51
23:DB:1041:G:H2'	23:DB:1042:G:H8	1.75	0.51
23:DB:2289:G:O2'	23:DB:2290:G:H5'	2.11	0.51
24:DI:2:LYS:O	24:DI:3:LYS:HG3	2.09	0.51
24:DI:18:ASN:HB2	24:DI:38:CYS:SG	2.51	0.51
27:DK:102:PRO:HD3	28:DP:65:ASN:HB2	1.93	0.51
35:DV:80:HIS:CD2	35:DV:83:LYS:HB2	2.45	0.51
40:DH:5:LEU:HD22	40:DH:9:VAL:HG21	1.93	0.51
41:DJ:44:TYR:C	41:DJ:44:TYR:HD2	2.13	0.51
41:DJ:87:ALA:HA	41:DJ:91:GLU:OE1	2.10	0.51
41:DJ:99:ARG:HA	41:DJ:102:GLU:HB2	1.93	0.51
43:DO:14:ALA:O	43:DO:18:LEU:HB2	2.09	0.51
43:DO:47:VAL:O	43:DO:48:LEU:HD23	2.09	0.51
44:DQ:20:ALA:HA	44:DQ:23:TYR:CE1	2.45	0.51
48:DG:85:LYS:HB2	48:DG:164:ALA:HB3	1.91	0.51
49:DR:83:TYR:HE2	49:DR:85:LYS:HE3	1.75	0.51
50:DT:39:THR:HG22	50:DT:42:GLU:CG	2.39	0.51
50:DT:59:ASN:O	50:DT:84:TYR:HB2	2.10	0.51
1:AA:317:U:H2'	1:AA:318:G:H8	1.75	0.51
1:AA:1047:G:H21	1:AA:1215:G:C4'	2.24	0.51
1:AA:1067:A:H4'	1:AA:1068:G:O5'	2.11	0.51
1:AA:1073:U:H4'	20:AB:104:LYS:HE3	1.91	0.51
1:AA:1512:U:H2'	1:AA:1513:A:C8	2.46	0.51
3:AD:80:ARG:NH1	3:AD:81:LEU:HD23	2.26	0.51
5:AF:64:VAL:HG12	5:AF:65:GLU:N	2.26	0.51
5:AF:71:ILE:O	5:AF:75:GLU:HG3	2.10	0.51
8:AI:41:GLU:C	8:AI:43:ALA:H	2.14	0.51
8:AI:49:GLN:N	8:AI:50:PRO:HD2	2.25	0.51
8:AI:84:ARG:O	8:AI:87:MET:HB3	2.10	0.51
12:AM:84:CYS:SG	12:AM:86:ARG:HB2	2.51	0.51
14:AO:22:THR:HA	14:AO:27:VAL:HG11	1.92	0.51
15:AP:38:PHE:CD2	15:AP:51:ARG:HB2	2.45	0.51
18:AS:43:MET:O	18:AS:61:VAL:HB	2.10	0.51
19:AT:85:LEU:HD23	19:AT:86:ALA:N	2.24	0.51
20:AB:117:GLU:HA	20:AB:140:LEU:HD21	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AU:42:THR:O	21:AU:46:ARG:HG3	2.10	0.51
23:BB:143:C:O5'	23:BB:143:C:H6	1.94	0.51
23:BB:145:C:H2'	23:BB:146:A:C8	2.46	0.51
23:BB:377:G:O2'	23:BB:378:C:H5'	2.11	0.51
23:BB:870:U:C2'	23:BB:871:U:H5'	2.41	0.51
23:BB:939:G:O2'	23:BB:940:G:H5'	2.10	0.51
23:BB:986:C:O2'	23:BB:987:C:H5'	2.10	0.51
23:BB:996:A:H4'	44:BQ:91:ARG:CD	2.41	0.51
23:BB:1001:A:H2'	23:BB:1002:G:O4'	2.10	0.51
23:BB:1103:A:H3'	23:BB:1104:C:H6	1.76	0.51
23:BB:1395:A:H4'	23:BB:1397:U:H5	1.74	0.51
23:BB:1470:A:H3'	23:BB:1471:G:H8	1.75	0.51
23:BB:1773:A:H2'	23:BB:1774:C:O4'	2.11	0.51
23:BB:1930:G:H2'	23:BB:1968:G:O6	2.10	0.51
23:BB:2190:G:H2'	23:BB:2191:A:H8	1.75	0.51
23:BB:2323:G:O2'	23:BB:2324:U:H5'	2.11	0.51
23:BB:2351:G:H2'	23:BB:2365:G:H22	1.75	0.51
23:BB:2897:U:H2'	23:BB:2898:U:C6	2.46	0.51
26:BD:90:PHE:CD2	26:BD:94:GLN:HG3	2.46	0.51
27:BK:63:VAL:HG21	27:BK:85:VAL:HG23	1.92	0.51
27:BK:97:THR:C	27:BK:98:ARG:HE	2.14	0.51
29:BE:47:LYS:HA	29:BE:51:GLU:HG3	1.93	0.51
29:BE:150:THR:OG1	29:BE:151:GLY:N	2.44	0.51
35:BV:4:ILE:O	35:BV:63:ILE:HG23	2.10	0.51
35:BV:80:HIS:CD2	35:BV:83:LYS:HB2	2.45	0.51
40:BH:68:ARG:NH2	40:BH:71:LYS:HB3	2.26	0.51
40:BH:124:THR:HG22	40:BH:125:THR:H	1.76	0.51
43:BO:52:SER:O	43:BO:58:ILE:HD12	2.10	0.51
48:BG:23:ILE:HG21	48:BG:71:LEU:HD11	1.92	0.51
53:B6:144:ALA:HA	53:B6:149:LEU:HG	1.92	0.51
1:CA:678:U:O2'	1:CA:679:C:H5'	2.10	0.51
1:CA:883:C:O2'	1:CA:884:U:H5'	2.10	0.51
1:CA:1161:C:O2'	1:CA:1162:C:H5'	2.10	0.51
1:CA:1316:G:H5'	1:CA:1317:C:OP2	2.09	0.51
1:CA:1325:C:O2'	1:CA:1326:U:H5'	2.09	0.51
1:CA:1405:G:O2'	1:CA:1406:U:H5'	2.10	0.51
1:CA:1415:G:O2'	1:CA:1416:G:H5'	2.10	0.51
3:CD:151:GLN:HB3	3:CD:154:VAL:HG23	1.93	0.51
10:CK:65:ALA:O	10:CK:68:ARG:HB3	2.10	0.51
15:CP:26:ASN:OD1	15:CP:31:ARG:HD3	2.10	0.51
19:CT:53:MET:HA	19:CT:56:ILE:HD12	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:218:ALA:HA	20:CB:221:ARG:HG2	1.92	0.51
23:DB:962:G:H2'	23:DB:963:U:H6	1.75	0.51
23:DB:1015:U:H2'	23:DB:1016:G:H8	1.76	0.51
23:DB:1355:G:O2'	23:DB:1356:G:H5'	2.10	0.51
23:DB:1690:A:H2'	23:DB:1691:C:O4'	2.10	0.51
23:DB:2344:U:H4'	23:DB:2345:G:OP1	2.10	0.51
23:DB:2462:C:H2'	23:DB:2463:C:C6	2.44	0.51
23:DB:2828:G:O2'	23:DB:2829:A:H5'	2.10	0.51
23:DB:2835:A:N6	23:DB:2878:U:H2'	2.25	0.51
26:DD:178:VAL:HB	26:DD:188:LEU:CB	2.35	0.51
33:D1:24:LYS:NZ	33:D1:33:LEU:HB2	2.25	0.51
35:DV:30:ILE:O	35:DV:37:PRO:HA	2.10	0.51
38:DM:127:LYS:H	38:DM:127:LYS:CD	2.18	0.51
39:DX:7:ARG:HA	39:DX:7:ARG:NE	2.25	0.51
40:DH:3:VAL:HA	40:DH:39:ALA:HB2	1.92	0.51
40:DH:90:LEU:HB2	40:DH:123:ARG:HA	1.93	0.51
41:DJ:44:TYR:CE2	44:DQ:59:LEU:HD11	2.45	0.51
46:DU:80:ASP:OD1	46:DU:95:PHE:HB3	2.09	0.51
48:DG:122:ALA:HA	48:DG:132:LEU:HA	1.93	0.51
1:AA:45:G:H2'	1:AA:46:G:C8	2.46	0.51
1:AA:151:A:H2'	1:AA:152:A:H5'	1.93	0.51
1:AA:454:G:O2'	1:AA:455:G:H5'	2.11	0.51
1:AA:714:G:C2	1:AA:777:A:H1'	2.46	0.51
1:AA:818:G:C2'	1:AA:819:A:H5"	2.41	0.51
1:AA:1010:U:O2'	1:AA:1011:C:H5'	2.10	0.51
1:AA:1018:G:H2'	1:AA:1019:A:C8	2.45	0.51
1:AA:1151:A:O2'	1:AA:1152:A:H8	1.94	0.51
3:AD:56:GLU:O	3:AD:60:VAL:HG12	2.11	0.51
3:AD:117:VAL:O	3:AD:130:ASN:HA	2.10	0.51
5:AF:67:PRO:O	5:AF:70:VAL:HG22	2.11	0.51
7:AH:103:VAL:HG22	7:AH:124:ILE:HA	1.92	0.51
8:AI:23:GLY:HA3	8:AI:61:ASP:OD1	2.10	0.51
9:AJ:12:ALA:N	9:AJ:18:ILE:HD12	2.25	0.51
9:AJ:41:PRO:O	9:AJ:42:LEU:HB2	2.11	0.51
22:BA:95:U:H2'	22:BA:96:G:C8	2.46	0.51
23:BB:37:C:O2'	23:BB:38:A:H5'	2.11	0.51
23:BB:712:G:H2'	23:BB:713:G:O4'	2.11	0.51
23:BB:809:G:H2'	23:BB:810:U:H6	1.75	0.51
23:BB:857:G:O2'	23:BB:858:G:H5'	2.11	0.51
23:BB:1050:A:H2'	23:BB:1051:G:C8	2.46	0.51
23:BB:1792:G:O2'	23:BB:1793:C:H5'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2246:G:H2'	23:BB:2247:A:C8	2.46	0.51
23:BB:2290:G:H2'	23:BB:2291:U:C6	2.45	0.51
23:BB:2352:A:H2'	23:BB:2353:G:O4'	2.10	0.51
23:BB:2415:G:C4'	37:BL:66:PHE:HB2	2.40	0.51
23:BB:2458:G:H2'	23:BB:2458:G:N3	2.25	0.51
23:BB:2567:G:H2'	23:BB:2568:U:C6	2.45	0.51
23:BB:2588:G:H2'	23:BB:2589:A:O4'	2.10	0.51
24:BI:17:ALA:O	24:BI:18:ASN:CB	2.59	0.51
26:BD:49:GLN:HE21	26:BD:79:LEU:HD12	1.75	0.51
26:BD:174:SER:O	26:BD:175:LEU:HB2	2.11	0.51
27:BK:39:ILE:HD13	27:BK:39:ILE:H	1.76	0.51
27:BK:88:ASN:ND2	27:BK:89:ASN:N	2.59	0.51
28:BP:36:LYS:C	28:BP:37:LYS:HD3	2.30	0.51
29:BE:29:HIS:C	29:BE:31:VAL:H	2.14	0.51
38:BM:21:ALA:HB1	38:BM:100:LYS:HG2	1.93	0.51
38:BM:117:PHE:HA	38:BM:120:ALA:HB3	1.93	0.51
43:BO:53:THR:O	43:BO:59:ALA:HB2	2.11	0.51
45:BS:97:LEU:N	45:BS:97:LEU:HD22	2.25	0.51
47:BF:99:PHE:HA	47:BF:102:LEU:HD12	1.93	0.51
49:BR:7:SER:HB2	49:BR:22:LEU:HD22	1.93	0.51
49:BR:74:ILE:HB	49:BR:87:GLN:O	2.11	0.51
1:CA:335:C:H2'	1:CA:336:A:H8	1.75	0.51
1:CA:598:U:H2'	1:CA:599:C:H6	1.76	0.51
1:CA:637:C:O2'	1:CA:638:U:H5'	2.11	0.51
1:CA:1200:C:H3'	1:CA:1201:A:H5'	1.92	0.51
1:CA:1328:C:O2'	1:CA:1329:A:H5'	2.11	0.51
2:CC:165:GLU:HA	2:CC:165:GLU:OE2	2.10	0.51
4:CE:99:SER:C	4:CE:101:GLY:H	2.14	0.51
5:CF:92:THR:O	5:CF:93:LYS:HB2	2.11	0.51
7:CH:31:LEU:O	7:CH:35:ILE:HG13	2.11	0.51
8:CI:19:PHE:O	8:CI:62:LEU:HA	2.11	0.51
9:CJ:12:ALA:CB	9:CJ:96:VAL:HG12	2.35	0.51
11:CL:106:VAL:CG2	11:CL:116:TYR:HB3	2.41	0.51
12:CM:16:ILE:HG23	12:CM:17:ALA:N	2.26	0.51
22:DA:59:A:H2'	22:DA:60:C:O4'	2.11	0.51
23:DB:151:C:H2'	23:DB:152:A:H8	1.76	0.51
23:DB:225:C:O2'	23:DB:226:A:H5'	2.10	0.51
23:DB:988:A:P	30:DY:11:SER:HB3	2.50	0.51
23:DB:1287:A:N7	42:DN:105:GLY:HA3	2.26	0.51
23:DB:2037:A:H2'	23:DB:2038:G:H8	1.75	0.51
23:DB:2472:G:H2'	23:DB:2529:G:N2	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2732:G:C3'	23:DB:2733:A:H5'	2.39	0.51
24:DI:10:LEU:HD12	24:DI:10:LEU:O	2.10	0.51
25:DC:116:GLN:HG2	25:DC:117:SER:N	2.24	0.51
25:DC:140:VAL:HG12	25:DC:141:HIS:N	2.25	0.51
26:DD:179:ARG:HH11	26:DD:179:ARG:CB	2.24	0.51
27:DK:14:SER:HB2	27:DK:51:LYS:H	1.76	0.51
27:DK:88:ASN:ND2	27:DK:89:ASN:N	2.59	0.51
38:DM:21:ALA:HB1	38:DM:100:LYS:HG2	1.93	0.51
47:DF:3:LEU:HD11	47:DF:172:PHE:CD1	2.45	0.51
49:DR:24:LYS:HA	49:DR:94:THR:CG2	2.40	0.51
1:AA:552:U:H4'	11:AL:82:ARG:HG2	1.93	0.51
1:AA:1176:A:H2'	1:AA:1177:G:O4'	2.10	0.51
1:AA:1198:G:H2'	1:AA:1199:U:C6	2.45	0.51
1:AA:1314:C:OP2	18:AS:5:LYS:HG2	2.11	0.51
1:AA:1492:A:H2'	1:AA:1493:A:O4'	2.11	0.51
1:AA:1530:G:HO2'	1:AA:1531:A:H8	1.56	0.51
2:AC:26:LYS:HE2	2:AC:27:GLU:HG3	1.91	0.51
2:AC:129:PHE:CD2	2:AC:156:LEU:HD22	2.45	0.51
3:AD:94:GLU:CD	3:AD:99:ASN:HD21	2.14	0.51
7:AH:124:ILE:HG22	7:AH:125:ILE:N	2.26	0.51
11:AL:23:LEU:HG	11:AL:24:GLU:N	2.25	0.51
13:AN:92:ILE:HG21	13:AN:95:LEU:HD22	1.93	0.51
16:AQ:11:VAL:HG23	16:AQ:56:ASP:O	2.10	0.51
17:AR:52:ARG:HG3	17:AR:52:ARG:HH11	1.76	0.51
23:BB:1319:C:O2'	23:BB:1320:C:H5'	2.11	0.51
23:BB:1653:G:O6	42:BN:11:ASN:ND2	2.44	0.51
23:BB:2188:U:H2'	23:BB:2189:U:H6	1.76	0.51
23:BB:2282:G:H5"	23:BB:2283:C:O4'	2.11	0.51
23:BB:2365:G:O2'	52:BW:59:PHE:HE1	1.94	0.51
23:BB:2618:G:H2'	23:BB:2619:C:H6	1.76	0.51
23:BB:2884:U:O2	31:B0:49:ARG:HG2	2.11	0.51
25:BC:140:VAL:HG12	25:BC:141:HIS:N	2.24	0.51
28:BP:103:THR:HG22	28:BP:104:GLY:H	1.76	0.51
31:B0:42:ILE:HG22	31:B0:43:THR:O	2.11	0.51
33:B1:3:GLY:C	33:B1:5:ARG:H	2.14	0.51
39:BX:28:LEU:HB3	39:BX:43:LEU:HD21	1.93	0.51
42:BN:83:LEU:HA	42:BN:86:ARG:CB	2.40	0.51
42:BN:108:ALA:O	42:BN:110:MET:HE3	2.10	0.51
47:BF:168:LEU:O	47:BF:170:ALA:N	2.43	0.51
51:BZ:30:LEU:H	51:BZ:30:LEU:CD2	2.21	0.51
1:CA:61:G:O2'	1:CA:62:U:H5'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:343:U:O2'	1:CA:344:A:H2'	2.10	0.51
1:CA:649:A:H2'	1:CA:650:G:O4'	2.11	0.51
1:CA:939:G:H5"	6:CG:101:ARG:NH2	2.26	0.51
7:CH:83:ARG:C	7:CH:84:ILE:HG13	2.31	0.51
10:CK:33:ILE:HG13	10:CK:73:VAL:HG21	1.92	0.51
10:CK:80:ASN:ND2	10:CK:80:ASN:H	2.09	0.51
11:CL:23:LEU:HG	11:CL:24:GLU:N	2.25	0.51
11:CL:49:ARG:N	11:CL:49:ARG:HD2	2.25	0.51
13:CN:50:LEU:HD23	13:CN:51:PRO:HD3	1.92	0.51
14:CO:5:THR:O	14:CO:8:THR:HB	2.10	0.51
20:CB:63:LYS:HG2	20:CB:224:ARG:NH1	2.25	0.51
22:DA:116:G:H4'	43:DO:54:VAL:HG22	1.92	0.51
23:DB:237:C:O2'	23:DB:238:C:H5'	2.11	0.51
23:DB:418:C:H2'	23:DB:419:U:H6	1.76	0.51
23:DB:720:U:H2'	23:DB:721:A:C8	2.45	0.51
23:DB:994:C:H3'	44:DQ:53:LYS:NZ	2.26	0.51
23:DB:1495:A:H2'	23:DB:1496:A:C8	2.45	0.51
23:DB:2052:A:O4'	26:DD:147:GLY:HA3	2.10	0.51
23:DB:2187:U:H2'	23:DB:2188:U:C6	2.44	0.51
23:DB:2354:C:H4'	52:DW:31:LEU:CD2	2.40	0.51
23:DB:2359:C:O2'	23:DB:2360:G:H5'	2.10	0.51
23:DB:2403:C:O2'	23:DB:2404:U:H5'	2.10	0.51
23:DB:2455:G:H2'	23:DB:2456:C:H6	1.74	0.51
25:DC:75:ALA:CB	25:DC:95:TYR:HA	2.41	0.51
26:DD:60:VAL:HA	26:DD:64:GLU:OE2	2.11	0.51
39:DX:34:SER:HB2	39:DX:36:GLN:OE1	2.11	0.51
43:DO:7:ARG:HA	43:DO:10:ARG:CD	2.41	0.51
44:DQ:107:ALA:HB1	49:DR:48:LYS:HE2	1.93	0.51
45:DS:29:VAL:HG23	45:DS:70:LYS:HA	1.91	0.51
48:DG:23:ILE:HD11	48:DG:42:VAL:HG11	1.91	0.51
51:DZ:5:CYS:SG	51:DZ:8:THR:HG23	2.51	0.51
51:DZ:68:LEU:HD22	51:DZ:78:TYR:CD1	2.45	0.51
1:AA:212:G:H2'	1:AA:213:G:H8	1.76	0.51
1:AA:473:U:H2'	1:AA:474:G:C8	2.42	0.51
1:AA:764:C:H2'	1:AA:765:G:C5'	2.37	0.51
1:AA:820:U:H4'	1:AA:821:G:OP2	2.11	0.51
1:AA:1123:U:H4'	9:AJ:39:PRO:HD2	1.93	0.51
1:AA:1147:C:O2'	8:AI:17:ARG:HD2	2.11	0.51
1:AA:1270:G:H2'	1:AA:1271:A:H8	1.75	0.51
1:AA:1366:C:H2'	1:AA:1367:C:H6	1.76	0.51
2:AC:106:ARG:HD2	2:AC:106:ARG:H	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:60:VAL:CB	3:AD:194:ILE:HD11	2.37	0.51
3:AD:110:ARG:HG3	3:AD:110:ARG:HH11	1.76	0.51
6:AG:144:ALA:O	6:AG:145:GLU:HB3	2.10	0.51
10:AK:12:ARG:N	10:AK:76:TYR:HA	2.26	0.51
14:AO:78:TYR:CZ	14:AO:82:ILE:HD11	2.46	0.51
22:BA:48:U:H2'	22:BA:49:C:C6	2.46	0.51
23:BB:256:A:O2'	23:BB:257:C:H5'	2.11	0.51
23:BB:1229:C:H2'	23:BB:1230:A:C8	2.46	0.51
23:BB:2037:A:H2'	23:BB:2038:G:C8	2.45	0.51
23:BB:2313:C:H5"	47:BF:87:LYS:HE2	1.93	0.51
23:BB:2314:A:H2'	23:BB:2315:G:H8	1.76	0.51
23:BB:2786:U:H5'	26:BD:70:LYS:HG3	1.92	0.51
23:BB:2852:G:H2'	23:BB:2853:C:H6	1.75	0.51
28:BP:91:VAL:O	28:BP:92:ARG:HB3	2.11	0.51
40:BH:49:ALA:HB3	40:BH:50:ARG:NH2	2.25	0.51
40:BH:83:LYS:O	40:BH:91:PHE:HD1	1.93	0.51
42:BN:9:GLN:O	42:BN:11:ASN:N	2.43	0.51
43:BO:6:ALA:O	43:BO:10:ARG:HG3	2.11	0.51
44:BQ:104:ALA:O	44:BQ:106:THR:N	2.41	0.51
45:BS:33:LEU:HA	45:BS:36:LEU:HD23	1.92	0.51
50:BT:32:LEU:HG	50:BT:83:ALA:HB2	1.92	0.51
1:CA:549:C:H2'	1:CA:550:G:H8	1.74	0.51
1:CA:1342:C:H2'	1:CA:1343:G:H8	1.74	0.51
1:CA:1458:G:H2'	1:CA:1459:G:H8	1.76	0.51
7:CH:87:ARG:N	7:CH:90:GLU:HB2	2.26	0.51
8:CI:94:ARG:HA	8:CI:97:LEU:CG	2.40	0.51
12:CM:29:SER:O	12:CM:32:ILE:HG22	2.11	0.51
18:CS:68:HIS:HB3	18:CS:72:GLU:OE2	2.11	0.51
20:CB:65:LYS:HB2	20:CB:158:ASP:OD2	2.10	0.51
23:DB:175:G:O2'	23:DB:176:A:H5'	2.11	0.51
23:DB:437:U:H2'	23:DB:438:G:C8	2.45	0.51
23:DB:718:A:H5'	23:DB:719:C:C5	2.45	0.51
23:DB:753:A:H2'	23:DB:754:U:C6	2.45	0.51
23:DB:1220:G:H2'	23:DB:1221:C:C6	2.45	0.51
23:DB:1432:G:H2'	23:DB:1433:A:C8	2.45	0.51
23:DB:1785:A:O2'	23:DB:1786:A:H2'	2.11	0.51
23:DB:2088:A:H2'	23:DB:2089:C:C6	2.45	0.51
23:DB:2138:G:H2'	23:DB:2139:U:C6	2.46	0.51
23:DB:2708:G:O2'	23:DB:2709:G:H5'	2.11	0.51
24:DI:79:LEU:HD11	24:DI:131:THR:OG1	2.11	0.51
25:DC:34:GLU:O	25:DC:34:GLU:HG3	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:11:MET:HA	26:DD:24:VAL:O	2.11	0.51
36:D2:19:ARG:O	36:D2:22:MET:HB2	2.11	0.51
40:DH:87:GLU:N	40:DH:87:GLU:CD	2.64	0.51
40:DH:121:VAL:HA	40:DH:123:ARG:HD3	1.93	0.51
47:DF:11:VAL:HG21	47:DF:172:PHE:HE1	1.74	0.51
51:DZ:39:TRP:HA	51:DZ:46:PHE:CD2	2.45	0.51
51:DZ:39:TRP:HE1	51:DZ:41:GLU:HG2	1.76	0.51
1:AA:58:C:O2'	1:AA:59:A:H5'	2.10	0.51
1:AA:113:G:O4'	1:AA:354:G:H4'	2.11	0.51
1:AA:342:C:O2'	1:AA:343:U:H5'	2.11	0.51
1:AA:420:U:O2'	1:AA:421:U:H5"	2.11	0.51
1:AA:1060:U:C4'	9:AJ:54:SER:HB2	2.39	0.51
3:AD:103:ARG:NH2	3:AD:110:ARG:HH21	2.09	0.51
3:AD:147:LYS:HZ2	3:AD:147:LYS:C	2.13	0.51
8:AI:37:TYR:HE2	8:AI:74:GLN:HG2	1.76	0.51
18:AS:20:LYS:O	18:AS:20:LYS:HD2	2.11	0.51
19:AT:54:GLN:HG3	19:AT:75:LYS:HE3	1.93	0.51
22:BA:54:G:H21	47:BF:25:MET:HE3	1.75	0.51
23:BB:154:U:H2'	23:BB:155:A:H8	1.76	0.51
23:BB:584:C:H2'	23:BB:585:G:C8	2.45	0.51
23:BB:858:G:H21	23:BB:2268:A:C3'	2.19	0.51
23:BB:936:A:H2'	23:BB:937:C:C6	2.46	0.51
23:BB:1204:A:H1'	23:BB:1206:G:N7	2.26	0.51
23:BB:1316:U:H2'	23:BB:1317:G:C8	2.46	0.51
23:BB:1387:A:H4'	23:BB:1469:A:H1'	1.93	0.51
23:BB:1445:G:H2'	23:BB:1446:C:H6	1.76	0.51
23:BB:1765:U:H2'	23:BB:1766:G:H8	1.76	0.51
23:BB:2289:G:O2'	23:BB:2290:G:H5'	2.11	0.51
23:BB:2321:U:H3'	23:BB:2321:U:O2	2.10	0.51
23:BB:2847:U:H5"	28:BP:94:ALA:CB	2.41	0.51
25:BC:144:GLU:HB3	25:BC:187:CYS:HB3	1.92	0.51
28:BP:74:GLN:O	28:BP:76:HIS:N	2.44	0.51
35:BV:80:HIS:CD2	35:BV:83:LYS:H	2.29	0.51
40:BH:125:THR:CB	40:BH:146:VAL:HB	2.40	0.51
41:BJ:58:ASN:HD22	41:BJ:61:LYS:HD2	1.76	0.51
42:BN:13:ASN:C	42:BN:15:SER:H	2.13	0.51
43:BO:6:ALA:CB	43:BO:10:ARG:HH11	2.24	0.51
44:BQ:57:ARG:HG2	44:BQ:57:ARG:HH11	1.76	0.51
47:BF:3:LEU:HD21	47:BF:172:PHE:HB3	1.92	0.51
49:BR:19:THR:HG22	49:BR:97:LYS:HA	1.93	0.51
50:BT:50:LEU:C	50:BT:52:GLU:H	2.14	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:57:G:H2'	1:CA:58:C:C6	2.46	0.51
1:CA:465:A:H2'	1:CA:466:A:H3'	1.92	0.51
1:CA:521:G:O2'	1:CA:522:C:H5'	2.10	0.51
1:CA:577:G:C6	1:CA:812:G:N2	2.79	0.51
1:CA:602:A:O2'	1:CA:603:U:H5'	2.11	0.51
1:CA:612:C:H2'	1:CA:613:C:C6	2.45	0.51
1:CA:1154:G:O2'	1:CA:1155:A:H5'	2.11	0.51
1:CA:1186:G:H4'	8:CI:111:GLU:OE1	2.11	0.51
1:CA:1226:C:H5"	12:CM:101:THR:CB	2.41	0.51
1:CA:1297:G:H1'	1:CA:1298:U:H5	1.74	0.51
3:CD:191:SER:O	3:CD:192:ALA:HB2	2.11	0.51
8:CI:20:ILE:HD13	8:CI:85:ALA:CB	2.41	0.51
10:CK:126:ARG:HB2	21:CU:33:ARG:HD2	1.91	0.51
12:CM:15:VAL:CG2	12:CM:40:GLU:HB3	2.41	0.51
22:DA:95:U:H2'	22:DA:96:G:C8	2.46	0.51
23:DB:834:G:O2'	23:DB:835:C:H5'	2.11	0.51
23:DB:927:A:H2'	23:DB:928:A:C8	2.46	0.51
23:DB:1044:C:O3'	23:DB:1047:G:H5'	2.11	0.51
23:DB:1248:G:OP1	29:DE:44:ARG:NH1	2.44	0.51
23:DB:1357:C:O2'	23:DB:1358:G:H5'	2.11	0.51
23:DB:1425:G:H2'	23:DB:1426:G:C8	2.46	0.51
23:DB:2305:U:H2'	23:DB:2306:C:O4'	2.11	0.51
23:DB:2314:A:H2'	23:DB:2315:G:H8	1.75	0.51
25:DC:171:VAL:HG23	25:DC:185:ALA:CB	2.41	0.51
26:DD:7:LYS:HE2	26:DD:198:GLY:HA2	1.92	0.51
26:DD:90:PHE:CD2	26:DD:94:GLN:HG3	2.46	0.51
28:DP:20:ARG:HH21	28:DP:20:ARG:HG2	1.76	0.51
28:DP:103:THR:HG22	28:DP:104:GLY:N	2.26	0.51
34:D3:20:GLY:HA3	34:D3:48:MET:HE1	1.92	0.51
37:DL:57:LEU:HD13	37:DL:60:ARG:NH1	2.26	0.51
38:DM:117:PHE:HA	38:DM:120:ALA:HB3	1.93	0.51
47:DF:78:ILE:HA	47:DF:82:TYR:CG	2.46	0.51
48:DG:155:PRO:CA	48:DG:170:THR:HA	2.41	0.51
50:DT:29:THR:HA	50:DT:86:THR:HA	1.92	0.51
50:DT:50:LEU:C	50:DT:52:GLU:H	2.14	0.51
1:AA:188:C:H2'	1:AA:189:A:O4'	2.11	0.50
1:AA:213:G:H5"	1:AA:214:C:H5	1.76	0.50
1:AA:332:G:O2'	1:AA:333:U:H5'	2.11	0.50
1:AA:429:U:H4'	1:AA:430:A:O5'	2.11	0.50
1:AA:513:C:H2'	1:AA:514:C:H6	1.76	0.50
1:AA:1021:A:H2'	1:AA:1022:A:O4'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1152:A:H2'	1:AA:1153:G:H8	1.75	0.50
1:AA:1333:A:H3'	1:AA:1334:G:H8	1.77	0.50
20:AB:96:LEU:HB2	20:AB:99:MET:CE	2.41	0.50
23:BB:244:A:H1'	23:BB:255:A:N6	2.27	0.50
23:BB:431:U:O2'	23:BB:432:A:H5'	2.12	0.50
23:BB:779:U:O2'	23:BB:780:G:H5'	2.10	0.50
23:BB:1218:G:H2'	23:BB:1219:U:O4'	2.10	0.50
23:BB:1229:C:H2'	23:BB:1230:A:H8	1.76	0.50
23:BB:1277:G:H2'	23:BB:1278:C:O4'	2.11	0.50
23:BB:1515:A:H4'	23:BB:1556:C:O2'	2.10	0.50
23:BB:1829:A:N6	23:BB:1977:A:N6	2.59	0.50
23:BB:1942:C:C1'	53:B6:133:ARG:NH1	2.73	0.50
23:BB:2425:A:H5"	23:BB:2426:A:H3'	1.93	0.50
23:BB:2757:A:H2'	23:BB:2757:A:N3	2.26	0.50
24:BI:79:LEU:HD11	24:BI:131:THR:OG1	2.11	0.50
25:BC:255:LYS:C	25:BC:257:ARG:H	2.13	0.50
29:BE:29:HIS:O	29:BE:32:VAL:HG22	2.11	0.50
39:BX:7:ARG:NE	39:BX:7:ARG:HA	2.25	0.50
41:BJ:28:LEU:HD23	41:BJ:29:ALA:N	2.25	0.50
46:BU:27:VAL:CG2	46:BU:33:VAL:HG12	2.39	0.50
46:BU:73:ASN:C	46:BU:75:ALA:H	2.14	0.50
47:BF:79:ARG:O	47:BF:82:TYR:HB2	2.11	0.50
48:BG:108:PHE:HD1	48:BG:108:PHE:H	1.57	0.50
48:BG:132:LEU:N	48:BG:132:LEU:HD23	2.26	0.50
48:BG:155:PRO:CA	48:BG:170:THR:HA	2.41	0.50
49:BR:24:LYS:HA	49:BR:94:THR:CG2	2.40	0.50
53:B6:133:ARG:NH1	53:B6:162:GLN:OE1	2.42	0.50
1:CA:151:A:H2'	1:CA:152:A:H5'	1.93	0.50
1:CA:697:U:O2	1:CA:798:U:H1'	2.11	0.50
1:CA:921:U:H2'	1:CA:922:G:C8	2.45	0.50
1:CA:1343:G:H1'	8:CI:122:ARG:NH1	2.24	0.50
1:CA:1410:A:C6	1:CA:1491:G:C6	2.99	0.50
1:CA:1508:A:H2'	1:CA:1509:C:C6	2.46	0.50
3:CD:110:ARG:HH11	3:CD:110:ARG:HG3	1.76	0.50
4:CE:44:ARG:HD2	4:CE:72:ASN:ND2	2.26	0.50
4:CE:87:VAL:HG23	4:CE:91:SER:O	2.10	0.50
8:CI:118:ARG:HG2	8:CI:118:ARG:O	2.12	0.50
12:CM:70:ARG:HH21	47:DF:136:ILE:CB	2.13	0.50
13:CN:40:ARG:NH1	18:CS:6:LYS:O	2.44	0.50
18:CS:48:ILE:HB	18:CS:59:VAL:CG2	2.41	0.50
18:CS:66:VAL:HG23	18:CS:67:GLY:H	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:152:A:H2'	23:DB:153:U:H6	1.73	0.50
23:DB:414:C:H2'	23:DB:415:A:H8	1.76	0.50
23:DB:755:U:H2'	23:DB:756:A:C8	2.47	0.50
23:DB:2085:U:O2'	23:DB:2086:U:H5'	2.12	0.50
23:DB:2671:G:H2'	23:DB:2672:U:C6	2.46	0.50
29:DE:191:ASP:O	29:DE:194:LYS:HB3	2.11	0.50
32:D4:17:VAL:HG12	32:D4:18:LYS:N	2.20	0.50
34:D3:4:LYS:O	37:DL:48:ARG:NH2	2.41	0.50
37:DL:42:SER:C	37:DL:44:GLY:H	2.14	0.50
44:DQ:4:LYS:HZ3	44:DQ:7:VAL:HG22	1.74	0.50
48:DG:18:ILE:HA	48:DG:22:VAL:O	2.11	0.50
50:DT:55:VAL:CA	50:DT:87:LEU:HA	2.39	0.50
50:DT:81:LYS:HG3	50:DT:82:LYS:N	2.25	0.50
52:DW:24:ARG:HA	52:DW:66:VAL:N	2.26	0.50
53:D6:12:SER:OG	53:D6:13:HIS:N	2.44	0.50
1:AA:1001:C:H2'	1:AA:1002:G:H8	1.76	0.50
1:AA:1034:G:H2'	1:AA:1035:A:H5'	1.92	0.50
3:AD:100:VAL:HG21	3:AD:136:VAL:HG21	1.93	0.50
3:AD:164:ARG:HG3	3:AD:165:GLU:N	2.27	0.50
7:AH:26:MET:HB2	7:AH:27:PRO:HD2	1.93	0.50
8:AI:50:PRO:O	8:AI:54:VAL:HG22	2.10	0.50
8:AI:70:GLY:O	8:AI:74:GLN:HB2	2.11	0.50
10:AK:65:ALA:O	10:AK:68:ARG:HB3	2.11	0.50
10:AK:109:ILE:CG2	21:AU:16:ARG:HH12	2.24	0.50
11:AL:3:VAL:O	11:AL:7:VAL:HG23	2.11	0.50
13:AN:26:LEU:HD12	13:AN:44:VAL:HG13	1.92	0.50
14:AO:49:ASP:CG	14:AO:52:SER:HB2	2.31	0.50
22:BA:59:A:H2'	22:BA:60:C:O4'	2.11	0.50
23:BB:285:G:H2'	23:BB:286:U:H6	1.76	0.50
23:BB:506:G:H4'	23:BB:509:C:O2	2.11	0.50
23:BB:1495:A:H2'	23:BB:1496:A:C8	2.47	0.50
23:BB:1640:A:H2'	23:BB:1641:A:H8	1.76	0.50
23:BB:2341:G:H2'	23:BB:2342:C:H6	1.76	0.50
25:BC:6:LYS:O	25:BC:8:THR:HG23	2.10	0.50
25:BC:181:ARG:NH2	25:BC:265:PHE:HB3	2.26	0.50
27:BK:119:ALA:HB3	27:BK:120:PRO:HD3	1.94	0.50
29:BE:191:ASP:O	29:BE:194:LYS:HB3	2.11	0.50
34:B3:9:ALA:C	34:B3:11:LYS:H	2.13	0.50
41:BJ:41:LYS:O	44:BQ:66:ALA:HB1	2.10	0.50
43:BO:16:ARG:HD3	43:BO:19:GLN:NE2	2.26	0.50
47:BF:102:LEU:HD13	47:BF:102:LEU:O	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:25:ILE:CG2	48:BG:78:VAL:HG21	2.42	0.50
51:BZ:71:LEU:HD12	51:BZ:78:TYR:CD2	2.44	0.50
1:CA:46:G:O2'	1:CA:365:U:H1'	2.12	0.50
1:CA:256:U:H3'	1:CA:257:G:H8	1.76	0.50
1:CA:412:A:H1'	1:CA:413:G:C8	2.46	0.50
1:CA:429:U:H4'	1:CA:430:A:O5'	2.10	0.50
1:CA:864:A:H2'	1:CA:865:A:C8	2.47	0.50
1:CA:1366:C:H2'	1:CA:1367:C:H6	1.76	0.50
1:CA:1486:G:H2'	1:CA:1487:G:O4'	2.11	0.50
3:CD:116:LEU:O	3:CD:122:ILE:HG12	2.11	0.50
5:CF:1:MET:HG2	5:CF:67:PRO:HB3	1.93	0.50
6:CG:26:VAL:HG12	6:CG:42:VAL:HG11	1.94	0.50
8:CI:22:PRO:HA	8:CI:60:LEU:CB	2.41	0.50
9:CJ:44:THR:HG23	9:CJ:69:THR:C	2.32	0.50
12:CM:10:ASP:HB2	12:CM:11:HIS:ND1	2.25	0.50
13:CN:50:LEU:CD2	13:CN:51:PRO:HD3	2.41	0.50
14:CO:71:LYS:HD3	14:CO:72:ARG:N	2.26	0.50
23:DB:24:G:H1'	45:DS:77:ASP:HB3	1.92	0.50
23:DB:337:C:H2'	23:DB:338:G:O4'	2.12	0.50
23:DB:359:G:H2'	23:DB:360:U:C5'	2.39	0.50
23:DB:679:C:H2'	23:DB:680:C:C6	2.46	0.50
23:DB:1021:A:H61	23:DB:1142:A:H61	1.59	0.50
23:DB:1188:U:O2'	23:DB:1189:A:H5'	2.11	0.50
23:DB:1405:U:H2'	23:DB:1406:U:H6	1.75	0.50
23:DB:1418:G:H1'	23:DB:1580:A:H61	1.76	0.50
23:DB:1534:U:H6	23:DB:1534:U:O5'	1.94	0.50
23:DB:1577:C:H2'	23:DB:1578:U:C6	2.46	0.50
23:DB:1883:U:H2'	23:DB:1884:G:C1'	2.41	0.50
23:DB:1924:C:O2'	23:DB:1925:C:H5'	2.11	0.50
23:DB:1938:A:O2'	23:DB:1939:U:H5"	2.11	0.50
23:DB:1946:U:O2'	23:DB:1947:C:H5'	2.11	0.50
23:DB:2074:U:O2'	23:DB:2075:U:H5'	2.11	0.50
23:DB:2298:A:N1	23:DB:2321:U:C5	2.79	0.50
23:DB:2328:A:H2'	23:DB:2329:U:H6	1.77	0.50
23:DB:2367:G:O2'	23:DB:2368:C:H5'	2.11	0.50
23:DB:2580:U:H5'	26:DD:136:ASN:H	1.75	0.50
23:DB:2598:A:H5"	25:DC:233:GLY:HA2	1.93	0.50
24:DI:27:LEU:HD23	24:DI:27:LEU:N	2.20	0.50
25:DC:132:ARG:HA	25:DC:166:ARG:NH1	2.27	0.50
25:DC:180:MET:HB3	25:DC:267:VAL:HG23	1.93	0.50
25:DC:209:ALA:HA	25:DC:212:TRP:NE1	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DP:36:LYS:C	28:DP:37:LYS:HD3	2.32	0.50
29:DE:115:GLN:O	29:DE:117:ARG:HG3	2.11	0.50
29:DE:196:VAL:O	29:DE:200:LEU:HD23	2.10	0.50
30:DY:56:VAL:HG12	30:DY:57:GLU:N	2.25	0.50
35:DV:20:LEU:HB3	35:DV:25:LYS:O	2.11	0.50
40:DH:115:VAL:HB	40:DH:132:PHE:HD1	1.76	0.50
41:DJ:41:LYS:O	44:DQ:66:ALA:HB1	2.11	0.50
42:DN:49:GLU:OE2	42:DN:95:THR:HG22	2.11	0.50
42:DN:72:ASP:HB3	42:DN:75:ILE:CG1	2.41	0.50
44:DQ:57:ARG:NH2	44:DQ:92:LYS:HE2	2.26	0.50
52:DW:9:THR:OG1	52:DW:10:ARG:N	2.43	0.50
1:AA:171:A:H2'	1:AA:172:A:C8	2.46	0.50
1:AA:418:C:H2'	1:AA:419:C:H6	1.75	0.50
1:AA:682:G:O2'	1:AA:683:G:H5'	2.11	0.50
1:AA:991:U:H2'	1:AA:1212:U:O2	2.11	0.50
1:AA:1023:U:O2'	1:AA:1024:G:H5'	2.12	0.50
1:AA:1343:G:C1'	8:AI:122:ARG:HH12	2.25	0.50
4:AE:155:LYS:HA	7:AH:65:PHE:CG	2.46	0.50
8:AI:118:ARG:HG2	8:AI:118:ARG:O	2.10	0.50
10:AK:36:ARG:HH11	10:AK:36:ARG:HG3	1.75	0.50
14:AO:71:LYS:NZ	14:AO:72:ARG:HA	2.26	0.50
20:AB:64:GLY:O	20:AB:66:ILE:HG12	2.10	0.50
22:BA:114:C:H1'	43:BO:47:VAL:HG21	1.94	0.50
23:BB:1248:G:OP1	29:BE:44:ARG:NH1	2.44	0.50
23:BB:1370:C:H2'	23:BB:1371:G:C8	2.47	0.50
23:BB:1520:U:H2'	23:BB:1521:G:O4'	2.11	0.50
23:BB:2626:C:H2'	23:BB:2627:G:C8	2.47	0.50
23:BB:2760:C:C2'	23:BB:2761:A:H5'	2.42	0.50
23:BB:2840:C:H5"	42:BN:53:THR:HG21	1.93	0.50
25:BC:4:LYS:HE2	25:BC:5:CYS:H	1.76	0.50
26:BD:62:LYS:HB2	26:BD:63:PRO:HD3	1.93	0.50
26:BD:114:LYS:HD2	26:BD:116:LYS:HE3	1.92	0.50
28:BP:3:ILE:HG23	28:BP:4:ILE:N	2.27	0.50
29:BE:31:VAL:HG21	29:BE:104:ALA:HB2	1.93	0.50
42:BN:81:ASN:O	42:BN:85:PRO:HD2	2.11	0.50
47:BF:59:ILE:HG12	47:BF:137:PHE:CE2	2.46	0.50
52:BW:49:ASN:C	52:BW:50:VAL:HG22	2.32	0.50
53:B6:31:GLY:HA2	53:B6:106:LEU:HD21	1.94	0.50
1:CA:144:G:H2'	1:CA:145:G:O4'	2.12	0.50
1:CA:454:G:O2'	1:CA:455:G:H5'	2.11	0.50
1:CA:1157:A:H4'	1:CA:1158:C:O5'	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1303:C:H2'	1:CA:1304:G:O4'	2.12	0.50
1:CA:1333:A:H3'	1:CA:1334:G:H8	1.75	0.50
5:CF:13:ASP:O	5:CF:14:GLN:HG2	2.12	0.50
6:CG:144:ALA:O	6:CG:145:GLU:HB3	2.12	0.50
8:CI:5:TYR:HD1	8:CI:20:ILE:HG22	1.76	0.50
12:CM:12:LYS:O	12:CM:43:LYS:HA	2.12	0.50
13:CN:92:ILE:HG21	13:CN:95:LEU:HD22	1.94	0.50
15:CP:4:ILE:O	15:CP:71:VAL:HG11	2.10	0.50
19:CT:60:GLN:HB3	19:CT:65:LEU:HD23	1.93	0.50
22:DA:13:G:H2'	22:DA:14:U:H5"	1.92	0.50
22:DA:48:U:H2'	22:DA:49:C:H6	1.77	0.50
22:DA:52:A:C2'	22:DA:53:A:H5'	2.41	0.50
23:DB:309:A:H4'	46:DU:15:GLY:HA3	1.93	0.50
23:DB:528:A:N1	23:DB:2042:A:H2'	2.26	0.50
23:DB:531:C:H5"	23:DB:532:A:C5	2.46	0.50
23:DB:1720:U:C2'	23:DB:1721:G:H5'	2.41	0.50
23:DB:1778:U:H2'	23:DB:1784:A:H62	1.77	0.50
23:DB:1848:A:H2'	23:DB:1849:G:H8	1.76	0.50
23:DB:2026:U:H2'	23:DB:2027:G:C8	2.46	0.50
23:DB:2351:G:H2'	23:DB:2365:G:H22	1.76	0.50
24:DI:23:VAL:HG12	24:DI:27:LEU:HD21	1.93	0.50
25:DC:20:ASN:HD22	25:DC:23:LEU:HD13	1.76	0.50
25:DC:129:LEU:HB3	25:DC:134:ILE:HG22	1.92	0.50
26:DD:34:VAL:HA	26:DD:50:VAL:HG12	1.92	0.50
26:DD:125:TRP:CD2	26:DD:160:LYS:HB3	2.47	0.50
28:DP:29:VAL:HG12	28:DP:80:VAL:HA	1.93	0.50
29:DE:193:VAL:O	29:DE:197:GLU:HB2	2.11	0.50
33:D1:9:LYS:HD3	33:D1:9:LYS:N	2.24	0.50
38:DM:19:GLY:C	38:DM:20:LEU:HD22	2.32	0.50
40:DH:4:ILE:HA	40:DH:18:GLN:HA	1.92	0.50
52:DW:46:ALA:HB2	52:DW:78:PHE:CD1	2.47	0.50
52:DW:66:VAL:HA	52:DW:81:ILE:HG22	1.93	0.50
1:AA:57:G:H2'	1:AA:58:C:C6	2.46	0.50
1:AA:95:C:O2	1:AA:95:C:H2'	2.11	0.50
1:AA:169:C:O2'	1:AA:170:U:H5'	2.11	0.50
1:AA:284:C:O2'	1:AA:285:C:H5'	2.12	0.50
1:AA:651:C:H2'	1:AA:652:U:C6	2.46	0.50
1:AA:711:G:O2'	1:AA:712:A:H5'	2.12	0.50
1:AA:806:C:H2'	1:AA:807:A:H8	1.76	0.50
1:AA:1009:U:H1'	1:AA:1021:A:C2	2.47	0.50
1:AA:1202:U:O2	13:AN:66:THR:HG21	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:19:PHE:O	8:AI:62:LEU:HA	2.12	0.50
12:AM:21:ILE:HG23	12:AM:65:GLU:OE2	2.11	0.50
14:AO:5:THR:O	14:AO:8:THR:HB	2.11	0.50
15:AP:22:ALA:HB2	15:AP:32:PHE:HA	1.94	0.50
20:AB:120:SER:HA	20:AB:125:PHE:CD1	2.46	0.50
20:AB:159:ALA:HB1	20:AB:183:PHE:HE1	1.76	0.50
23:BB:6:A:O2'	23:BB:7:G:H5'	2.11	0.50
23:BB:225:C:O2'	23:BB:226:A:H5'	2.11	0.50
23:BB:608:A:H2'	23:BB:609:A:H8	1.76	0.50
23:BB:634:C:H2'	23:BB:635:C:C6	2.46	0.50
23:BB:920:A:H2'	23:BB:921:C:O4'	2.11	0.50
23:BB:988:A:O5'	30:BY:11:SER:HB3	2.11	0.50
23:BB:1258:U:H2'	23:BB:1259:G:C8	2.46	0.50
23:BB:1829:A:H2'	23:BB:1830:C:H5'	1.93	0.50
23:BB:2135:A:N6	23:BB:2156:G:O2'	2.39	0.50
23:BB:2590:A:H2'	23:BB:2591:C:H6	1.76	0.50
23:BB:2814:A:C4'	31:B0:25:THR:HG21	2.40	0.50
25:BC:12:ARG:HA	25:BC:15:VAL:HG23	1.93	0.50
25:BC:221:GLY:O	25:BC:223:ALA:N	2.45	0.50
26:BD:114:LYS:HE3	26:BD:116:LYS:HG2	1.93	0.50
33:B1:8:ILE:HG13	33:B1:51:ALA:HA	1.94	0.50
34:B3:7:ARG:HG3	34:B3:7:ARG:NH1	2.25	0.50
43:BO:5:SER:HA	43:BO:8:ILE:CD1	2.41	0.50
46:BU:11:ILE:HD13	46:BU:20:LYS:H	1.76	0.50
47:BF:92:GLY:O	47:BF:95:MET:HB3	2.11	0.50
47:BF:99:PHE:HA	47:BF:102:LEU:CD1	2.42	0.50
50:BT:81:LYS:HG3	50:BT:82:LYS:N	2.26	0.50
53:B6:32:ARG:HH22	53:B6:88:LEU:C	2.14	0.50
1:CA:169:C:O2'	1:CA:170:U:H5'	2.11	0.50
1:CA:415:A:N1	1:CA:428:G:O6	2.44	0.50
1:CA:1320:C:N3	18:CS:35:ARG:HD3	2.25	0.50
2:CC:53:ARG:HG2	2:CC:54:ILE:H	1.76	0.50
3:CD:71:PHE:O	3:CD:74:TYR:HB2	2.11	0.50
4:CE:114:LEU:HD13	4:CE:122:VAL:HG21	1.93	0.50
10:CK:43:TRP:HZ3	10:CK:45:THR:HG22	1.75	0.50
12:CM:28:ARG:NH1	12:CM:32:ILE:HD12	2.27	0.50
12:CM:49:GLU:HG3	12:CM:53:ASP:OD1	2.11	0.50
13:CN:17:ASP:HA	13:CN:21:ALA:CB	2.41	0.50
13:CN:30:ILE:HG21	13:CN:44:VAL:CG2	2.34	0.50
22:DA:88:C:H2'	22:DA:89:U:C6	2.46	0.50
23:DB:622:G:OP1	37:DL:103:ILE:HD13	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:687:C:H2'	23:DB:688:U:O4'	2.11	0.50
23:DB:811:U:OP2	37:DL:20:GLY:HA2	2.12	0.50
23:DB:1257:C:H5'	29:DE:78:TRP:CZ3	2.46	0.50
23:DB:1443:U:H2'	23:DB:1444:G:C8	2.47	0.50
23:DB:1445:G:H2'	23:DB:1446:C:C6	2.47	0.50
23:DB:1830:C:H2'	23:DB:1831:G:H8	1.75	0.50
23:DB:2041:U:H2'	23:DB:2042:A:H8	1.76	0.50
23:DB:2385:C:H2'	23:DB:2386:A:H8	1.77	0.50
23:DB:2699:C:H2'	23:DB:2700:A:C8	2.46	0.50
24:DI:129:GLU:HB3	24:DI:133:ARG:HH12	1.76	0.50
25:DC:64:VAL:HG11	25:DC:66:PHE:CE2	2.47	0.50
31:D0:39:ARG:O	31:D0:40:HIS:HB2	2.11	0.50
33:D1:8:ILE:HG13	33:D1:51:ALA:HA	1.93	0.50
35:DV:76:ASP:C	38:DM:136:MET:HE3	2.31	0.50
35:DV:79:ARG:HA	35:DV:86:LEU:HA	1.91	0.50
42:DN:2:ARG:HA	42:DN:5:LYS:HD3	1.93	0.50
42:DN:101:GLY:O	42:DN:102:PHE:HB2	2.11	0.50
47:DF:78:ILE:HD12	47:DF:78:ILE:N	2.26	0.50
47:DF:102:LEU:HA	47:DF:106:ALA:HB3	1.93	0.50
52:DW:35:ILE:HG13	52:DW:57:THR:OG1	2.11	0.50
1:AA:575:G:HO2'	1:AA:821:G:H5'	1.77	0.50
1:AA:598:U:H2'	1:AA:599:C:C6	2.47	0.50
1:AA:1479:C:H2'	1:AA:1480:A:H8	1.77	0.50
2:AC:171:ARG:HB2	2:AC:171:ARG:HH11	1.76	0.50
4:AE:99:SER:C	4:AE:101:GLY:H	2.15	0.50
7:AH:87:ARG:N	7:AH:90:GLU:HB2	2.26	0.50
13:AN:30:ILE:O	13:AN:40:ARG:HA	2.12	0.50
13:AN:63:CYS:HB2	13:AN:79:SER:HB3	1.92	0.50
15:AP:71:VAL:HG13	15:AP:72:ALA:N	2.26	0.50
19:AT:15:LYS:HD3	19:AT:18:LYS:HE3	1.94	0.50
20:AB:128:LEU:CD1	20:AB:129:THR:H	2.23	0.50
22:BA:28:C:H5'	22:BA:29:A:OP2	2.11	0.50
23:BB:784:G:H5"	25:BC:225:ASN:OD1	2.11	0.50
23:BB:1599:U:H2'	23:BB:1600:C:H6	1.77	0.50
23:BB:1813:G:H1'	25:BC:49:THR:OG1	2.12	0.50
23:BB:1900:A:N1	23:BB:1970:A:C6	2.80	0.50
23:BB:2306:C:C3'	23:BB:2307:G:H5'	2.38	0.50
25:BC:64:VAL:HG11	25:BC:66:PHE:CE2	2.47	0.50
26:BD:40:LEU:HA	26:BD:45:TYR:H	1.77	0.50
26:BD:102:ALA:HA	26:BD:180:VAL:HG21	1.93	0.50
29:BE:106:LYS:HE2	29:BE:200:LEU:HB3	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BM:49:ALA:HA	38:BM:123:LYS:HG3	1.94	0.50
43:BO:14:ALA:O	43:BO:18:LEU:HB2	2.12	0.50
45:BS:96:ILE:O	45:BS:96:ILE:HG23	2.11	0.50
50:BT:39:THR:HG22	50:BT:42:GLU:CG	2.39	0.50
1:CA:140:U:H2'	1:CA:141:G:C8	2.45	0.50
1:CA:538:G:OP2	11:CL:111:GLN:HB2	2.11	0.50
1:CA:767:A:H2'	1:CA:768:A:H8	1.77	0.50
1:CA:1001:C:H2'	1:CA:1002:G:H8	1.75	0.50
1:CA:1527:U:O2'	1:CA:1528:U:H5'	2.11	0.50
3:CD:12:ARG:HG2	3:CD:33:ILE:HA	1.93	0.50
3:CD:34:GLU:O	3:CD:34:GLU:HG3	2.10	0.50
4:CE:9:GLU:O	4:CE:40:ASP:HA	2.12	0.50
5:CF:3:HIS:CE1	5:CF:65:GLU:HG3	2.46	0.50
5:CF:64:VAL:HG12	5:CF:65:GLU:N	2.26	0.50
6:CG:19:SER:HB2	6:CG:21:LEU:HD21	1.94	0.50
15:CP:23:ASP:CG	15:CP:25:ARG:HE	2.14	0.50
16:CQ:45:VAL:HG21	16:CQ:60:ILE:HG21	1.92	0.50
23:DB:30:G:OP1	44:DQ:4:LYS:HG2	2.12	0.50
23:DB:41:C:H2'	23:DB:42:A:O4'	2.10	0.50
23:DB:765:C:O2'	23:DB:766:U:H5'	2.11	0.50
23:DB:817:C:H2'	23:DB:818:G:O4'	2.11	0.50
23:DB:962:G:H2'	23:DB:963:U:C6	2.46	0.50
23:DB:1047:G:H1'	23:DB:1111:A:N6	2.26	0.50
23:DB:1495:A:H2'	23:DB:1496:A:H8	1.77	0.50
23:DB:2106:U:H2'	23:DB:2107:G:H8	1.76	0.50
23:DB:2497:A:H5"	57:DB:3696:HOH:O	2.10	0.50
23:DB:2720:U:H5"	28:DP:52:ARG:HH21	1.73	0.50
25:DC:90:ILE:HD13	25:DC:103:ILE:O	2.11	0.50
25:DC:93:VAL:HG21	25:DC:115:ILE:HD11	1.92	0.50
26:DD:10:GLY:HA2	28:DP:4:ILE:HD11	1.94	0.50
26:DD:107:VAL:HA	26:DD:204:LYS:O	2.12	0.50
29:DE:29:HIS:O	29:DE:32:VAL:HG22	2.11	0.50
40:DH:131:SER:OG	40:DH:132:PHE:N	2.45	0.50
43:DO:6:ALA:HB3	43:DO:10:ARG:HH11	1.76	0.50
43:DO:15:ARG:HH21	43:DO:95:SER:HB3	1.75	0.50
43:DO:16:ARG:HD3	43:DO:19:GLN:NE2	2.27	0.50
43:DO:52:SER:OG	43:DO:54:VAL:HG12	2.10	0.50
48:DG:108:PHE:HE1	48:DG:151:ARG:HD3	1.75	0.50
48:DG:140:ILE:HD12	48:DG:141:GLY:N	2.27	0.50
49:DR:32:THR:HA	49:DR:61:ALA:O	2.11	0.50
1:AA:502:A:H4'	1:AA:550:G:H4'	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:559:A:H4'	1:AA:560:A:H3'	1.93	0.50
1:AA:649:A:H2'	1:AA:650:G:O4'	2.12	0.50
3:AD:191:SER:O	3:AD:192:ALA:HB2	2.11	0.50
8:AI:122:ARG:NH1	8:AI:122:ARG:HG3	2.26	0.50
10:AK:70:ALA:C	10:AK:72:ALA:H	2.15	0.50
12:AM:12:LYS:O	12:AM:43:LYS:HA	2.11	0.50
12:AM:19:THR:HG22	12:AM:29:SER:CB	2.42	0.50
12:AM:79:LEU:HB3	12:AM:84:CYS:SG	2.51	0.50
15:AP:4:ILE:O	15:AP:71:VAL:HG11	2.11	0.50
15:AP:23:ASP:CG	15:AP:25:ARG:HE	2.15	0.50
19:AT:53:MET:O	19:AT:57:VAL:HG22	2.11	0.50
23:BB:146:A:H2'	23:BB:147:C:C6	2.46	0.50
23:BB:181:A:H1'	23:BB:435:C:H5'	1.92	0.50
23:BB:523:C:H4'	23:BB:540:C:O2	2.11	0.50
23:BB:955:U:H5'	38:BM:86:LYS:HE2	1.93	0.50
23:BB:1768:C:O2'	23:BB:1958:C:H4'	2.12	0.50
23:BB:2518:A:N3	23:BB:2518:A:H2'	2.27	0.50
23:BB:2592:G:H2'	23:BB:2593:U:O4'	2.12	0.50
24:BI:29:GLN:HE21	24:BI:29:GLN:HA	1.76	0.50
26:BD:38:LYS:HD3	26:BD:45:TYR:OH	2.12	0.50
35:BV:14:LYS:CE	35:BV:18:ARG:HH21	2.24	0.50
37:BL:77:ILE:HB	37:BL:109:LYS:O	2.11	0.50
41:BJ:98:GLU:HB3	41:BJ:124:VAL:HG21	1.93	0.50
44:BQ:57:ARG:NH2	44:BQ:92:LYS:HE2	2.25	0.50
47:BF:3:LEU:HD11	47:BF:172:PHE:CD1	2.47	0.50
47:BF:131:VAL:HG23	47:BF:133:GLU:H	1.77	0.50
47:BF:177:ARG:HA	47:BF:177:ARG:NE	2.26	0.50
48:BG:84:LYS:HG3	48:BG:131:VAL:HB	1.94	0.50
50:BT:31:VAL:HA	50:BT:84:TYR:H	1.76	0.50
50:BT:38:ALA:HB3	50:BT:81:LYS:NZ	2.26	0.50
1:CA:279:A:H5'	1:CA:281:G:C5'	2.41	0.50
1:CA:987:G:H2'	1:CA:988:G:H8	1.76	0.50
1:CA:1367:C:H5"	8:CI:115:VAL:HG23	1.93	0.50
5:CF:3:HIS:CG	5:CF:92:THR:HG23	2.46	0.50
6:CG:15:PRO:HG2	6:CG:43:TYR:OH	2.12	0.50
12:CM:90:HIS:HA	12:CM:108:ARG:NH2	2.26	0.50
14:CO:22:THR:HA	14:CO:27:VAL:HG11	1.94	0.50
14:CO:33:THR:HG23	14:CO:63:ARG:NH1	2.27	0.50
15:CP:71:VAL:HG13	15:CP:72:ALA:N	2.27	0.50
17:CR:34:GLU:CD	17:CR:34:GLU:N	2.63	0.50
18:CS:80:ARG:HA	18:CS:80:ARG:HE	1.74	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:159:G:O2'	23:DB:160:A:H5"	2.12	0.50
23:DB:622:G:H2'	23:DB:623:C:H6	1.77	0.50
23:DB:1777:U:O2'	23:DB:1778:U:H5'	2.11	0.50
23:DB:1883:U:H2'	23:DB:1884:G:H1'	1.93	0.50
23:DB:2408:U:O2'	23:DB:2409:G:H5'	2.12	0.50
25:DC:166:ARG:HB3	25:DC:171:VAL:HG22	1.92	0.50
26:DD:39:ASP:HB3	26:DD:42:ASN:HB3	1.93	0.50
29:DE:126:VAL:CG2	29:DE:133:LEU:HB2	2.42	0.50
34:D3:50:SER:C	34:D3:52:GLY:H	2.14	0.50
38:DM:40:ARG:HB3	38:DM:95:LEU:HD12	1.93	0.50
47:DF:107:VAL:HB	47:DF:108:PRO:HD3	1.93	0.50
52:DW:37:VAL:CG1	52:DW:38:ARG:H	2.21	0.50
1:AA:977:A:H1'	1:AA:982:U:O4	2.12	0.50
1:AA:1240:U:O4	6:AG:29:LEU:HG	2.12	0.50
1:AA:1325:C:O2'	1:AA:1326:U:H5'	2.12	0.50
2:AC:140:ALA:HB3	2:AC:148:ILE:HD12	1.93	0.50
3:AD:12:ARG:HG2	3:AD:33:ILE:HA	1.93	0.50
4:AE:82:HIS:CD2	7:AH:95:MET:HG3	2.47	0.50
6:AG:115:MET:HA	6:AG:118:ARG:HD2	1.94	0.50
10:AK:33:ILE:CB	10:AK:73:VAL:HG11	2.30	0.50
12:AM:12:LYS:H	12:AM:44:ILE:CD1	2.25	0.50
12:AM:78:ARG:NH2	18:AS:64:GLU:HB2	2.26	0.50
13:AN:7:ALA:O	13:AN:11:LYS:HG2	2.11	0.50
19:AT:57:VAL:HG23	19:AT:58:ASP:H	1.76	0.50
20:AB:65:LYS:HA	20:AB:89:PHE:CE1	2.43	0.50
20:AB:94:ARG:N	20:AB:94:ARG:NE	2.54	0.50
23:BB:18:U:H2'	23:BB:19:A:C8	2.45	0.50
23:BB:63:A:OP2	23:BB:63:A:H2'	2.12	0.50
23:BB:80:G:N3	23:BB:294:A:C2	2.79	0.50
23:BB:549:G:H4'	23:BB:550:C:C6	2.47	0.50
23:BB:871:U:H2'	23:BB:872:U:C6	2.45	0.50
23:BB:958:U:N3	38:BM:16:ARG:HB3	2.27	0.50
23:BB:1113:U:H2'	23:BB:1114:C:C6	2.47	0.50
23:BB:1244:A:O2'	23:BB:1245:G:H5'	2.12	0.50
23:BB:1405:U:H2'	23:BB:1406:U:H6	1.74	0.50
23:BB:1641:A:H2'	23:BB:1642:G:O4'	2.12	0.50
23:BB:2457:U:O2'	23:BB:2458:G:H5'	2.11	0.50
23:BB:2458:G:H1'	23:BB:2460:U:O4	2.12	0.50
25:BC:75:ALA:CB	25:BC:95:TYR:HA	2.42	0.50
27:BK:47:ILE:HG23	27:BK:48:PRO:HD2	1.94	0.50
27:BK:107:LEU:C	27:BK:109:SER:H	2.15	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:75:SER:O	29:BE:78:TRP:N	2.45	0.50
31:B0:39:ARG:O	31:B0:40:HIS:HB2	2.11	0.50
33:B1:44:GLN:HA	33:B1:44:GLN:OE1	2.12	0.50
37:BL:89:VAL:HG23	37:BL:123:ARG:HB2	1.94	0.50
40:BH:3:VAL:HA	40:BH:39:ALA:HB2	1.94	0.50
41:BJ:3:THR:HB	41:BJ:44:TYR:OH	2.12	0.50
44:BQ:96:ASP:C	44:BQ:98:ALA:N	2.65	0.50
47:BF:69:ALA:HB3	47:BF:80:GLN:O	2.11	0.50
47:BF:102:LEU:HA	47:BF:106:ALA:HB3	1.93	0.50
52:BW:24:ARG:HA	52:BW:66:VAL:N	2.27	0.50
1:CA:91:U:O5'	1:CA:91:U:H6	1.95	0.50
1:CA:453:G:H2'	1:CA:454:G:C8	2.47	0.50
1:CA:640:A:O2'	1:CA:641:U:H5'	2.12	0.50
1:CA:1423:G:H2'	1:CA:1424:U:C6	2.46	0.50
2:CC:129:PHE:CD2	2:CC:156:LEU:HD22	2.45	0.50
6:CG:68:VAL:HG13	6:CG:133:ALA:HB1	1.94	0.50
9:CJ:52:LEU:H	9:CJ:52:LEU:CD1	2.17	0.50
19:CT:43:LYS:HD3	19:CT:43:LYS:H	1.76	0.50
21:CU:42:THR:HB	21:CU:46:ARG:NH2	2.26	0.50
22:DA:16:G:O2'	22:DA:17:C:H5'	2.11	0.50
23:DB:141:G:O6	50:DT:2:ILE:HG21	2.10	0.50
23:DB:408:G:O2'	23:DB:409:G:H5'	2.12	0.50
23:DB:522:A:H2'	23:DB:523:C:C6	2.47	0.50
23:DB:576:U:H2'	23:DB:577:G:C8	2.46	0.50
23:DB:679:C:O2'	23:DB:680:C:H5'	2.11	0.50
23:DB:1330:C:O2'	23:DB:1331:G:H5'	2.12	0.50
23:DB:1551:A:H5"	23:DB:1552:A:OP2	2.12	0.50
23:DB:1827:U:O2'	23:DB:1828:G:H5'	2.11	0.50
23:DB:1915:U:H2'	23:DB:1916:A:H8	1.74	0.50
23:DB:2361:G:OP1	34:D3:25:HIS:HA	2.12	0.50
23:DB:2543:G:H2'	23:DB:2544:G:C8	2.47	0.50
23:DB:2729:G:H2'	23:DB:2730:C:C6	2.47	0.50
23:DB:2840:C:H2'	23:DB:2841:C:H6	1.75	0.50
23:DB:2840:C:O2'	23:DB:2841:C:H5'	2.12	0.50
24:DI:17:ALA:C	24:DI:19:PRO:HD3	2.31	0.50
26:DD:114:LYS:HD2	26:DD:116:LYS:HZ1	1.76	0.50
28:DP:4:ILE:O	28:DP:6:GLN:N	2.44	0.50
29:DE:23:PHE:HA	29:DE:107:SER:OG	2.11	0.50
33:D1:49:LYS:HG3	33:D1:50:GLU:N	2.22	0.50
37:DL:142:ILE:N	37:DL:142:ILE:HD12	2.27	0.50
42:DN:72:ASP:C	42:DN:74:GLU:H	2.14	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DO:105:ALA:C	43:DO:107:ALA:H	2.14	0.50
52:DW:51:GLY:HA3	52:DW:59:PHE:HB3	1.93	0.50
53:D6:80:GLU:HG3	53:D6:92:PRO:HG2	1.92	0.50
1:AA:818:G:C3'	1:AA:819:A:H5"	2.42	0.50
6:AG:91:ARG:HB3	6:AG:92:PRO:HD2	1.94	0.50
12:AM:1:ALA:CA	12:AM:8:ILE:HG22	2.42	0.50
16:AQ:56:ASP:N	16:AQ:81:ALA:HB2	2.26	0.50
21:AU:39:LYS:N	21:AU:40:PRO:CD	2.75	0.50
23:BB:572:A:H3'	23:BB:573:U:O4'	2.11	0.50
23:BB:852:U:H2'	23:BB:853:C:H6	1.75	0.50
23:BB:1060:U:O4	24:BI:131:THR:HG22	2.12	0.50
23:BB:1080:A:O2'	23:BB:1081:U:H5'	2.11	0.50
23:BB:1439:A:N7	23:BB:1440:U:C2	2.79	0.50
23:BB:1461:C:H2'	23:BB:1462:C:H6	1.77	0.50
23:BB:1683:U:H2'	23:BB:1684:G:H8	1.77	0.50
23:BB:1692:U:H2'	23:BB:1694:C:C4	2.47	0.50
23:BB:1793:C:H2'	23:BB:1794:A:C8	2.47	0.50
23:BB:2247:A:H3'	57:BB:3266:HOH:O	2.11	0.50
23:BB:2529:G:H4'	48:BG:174:LYS:CG	2.39	0.50
23:BB:2732:G:C3'	23:BB:2733:A:H5'	2.39	0.50
25:BC:15:VAL:HG22	25:BC:205:GLY:HA3	1.93	0.50
26:BD:148:GLN:HG3	26:BD:152:PRO:CB	2.39	0.50
30:BY:16:LEU:O	30:BY:19:HIS:HB2	2.11	0.50
34:B3:44:ARG:N	34:B3:45:PRO:HD2	2.27	0.50
39:BX:15:ASN:O	39:BX:19:LEU:HD13	2.12	0.50
40:BH:64:ALA:H	40:BH:66:ASN:HD21	1.58	0.50
40:BH:128:HIS:HB3	40:BH:144:VAL:HB	1.92	0.50
41:BJ:25:LEU:HD13	41:BJ:26:GLY:N	2.26	0.50
43:BO:35:ILE:HG13	43:BO:71:ALA:CB	2.41	0.50
47:BF:11:VAL:O	47:BF:12:VAL:HB	2.11	0.50
47:BF:110:ILE:HG21	47:BF:113:PHE:HB3	1.93	0.50
48:BG:18:ILE:HA	48:BG:22:VAL:O	2.12	0.50
48:BG:144:ALA:HB1	48:BG:163:TYR:HE1	1.77	0.50
50:BT:40:LYS:HA	50:BT:43:ILE:HD12	1.94	0.50
53:B6:113:ASP:HA	53:B6:116:ARG:CD	2.39	0.50
1:CA:440:C:O2'	1:CA:441:A:H5'	2.12	0.50
1:CA:448:A:H2'	1:CA:449:G:H8	1.77	0.50
1:CA:1363:A:H2'	1:CA:1363:A:N3	2.27	0.50
1:CA:1489:G:H2'	1:CA:1490:U:C6	2.46	0.50
2:CC:128:MET:H	2:CC:128:MET:CE	2.25	0.50
4:CE:136:VAL:HG13	4:CE:137:ARG:N	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CJ:59:LYS:HG3	9:CJ:60:ASP:N	2.27	0.50
13:CN:12:ARG:HE	13:CN:58:ARG:NH1	2.10	0.50
13:CN:14:ALA:O	13:CN:18:LYS:HG3	2.12	0.50
13:CN:47:LEU:C	13:CN:49:THR:H	2.15	0.50
20:CB:80:LYS:O	20:CB:84:LEU:HB2	2.12	0.50
22:DA:20:G:H2'	22:DA:21:G:H8	1.77	0.50
23:DB:348:A:H2'	23:DB:349:U:O4'	2.11	0.50
23:DB:377:G:O2'	23:DB:378:C:H5'	2.12	0.50
23:DB:521:U:H2'	23:DB:522:A:H8	1.75	0.50
23:DB:1372:U:H1'	23:DB:2214:C:C4	2.47	0.50
24:DI:19:PRO:HB2	24:DI:22:PRO:HD2	1.94	0.50
24:DI:54:ILE:HD13	24:DI:54:ILE:C	2.31	0.50
24:DI:85:ILE:HD12	24:DI:87:SER:O	2.12	0.50
26:DD:40:LEU:HA	26:DD:45:TYR:H	1.76	0.50
27:DK:47:ILE:HG23	27:DK:48:PRO:HD2	1.94	0.50
37:DL:40:SER:OG	37:DL:41:ARG:HG3	2.11	0.50
39:DX:17:GLU:HB3	39:DX:53:VAL:HG11	1.94	0.50
40:DH:131:SER:HA	40:DH:140:ALA:O	2.12	0.50
41:DJ:26:GLY:O	41:DJ:30:THR:HG22	2.12	0.50
41:DJ:81:ILE:HG12	41:DJ:82:GLY:N	2.27	0.50
42:DN:9:GLN:O	42:DN:11:ASN:N	2.45	0.50
46:DU:11:ILE:HD13	46:DU:20:LYS:H	1.75	0.50
47:DF:99:PHE:HA	47:DF:102:LEU:HD12	1.93	0.50
48:DG:84:LYS:HG3	48:DG:131:VAL:HB	1.94	0.50
48:DG:106:LEU:O	48:DG:108:PHE:HD1	1.95	0.50
50:DT:32:LEU:O	50:DT:83:ALA:HB2	2.12	0.50
50:DT:38:ALA:HB3	50:DT:81:LYS:NZ	2.27	0.50
50:DT:40:LYS:HA	50:DT:43:ILE:HD12	1.93	0.50
50:DT:44:LYS:O	50:DT:48:GLN:HG2	2.12	0.50
1:AA:392:C:H2'	1:AA:393:A:H8	1.77	0.50
1:AA:948:C:O2'	1:AA:949:A:H5'	2.12	0.50
1:AA:1469:C:H2'	1:AA:1470:U:O4'	2.11	0.50
8:AI:15:ALA:O	8:AI:66:VAL:HG23	2.12	0.50
8:AI:41:GLU:H	8:AI:44:ARG:NH1	2.10	0.50
8:AI:93:LEU:HD12	8:AI:94:ARG:N	2.26	0.50
9:AJ:28:THR:HG21	9:AJ:90:LEU:HD22	1.93	0.50
16:AQ:17:GLU:O	16:AQ:18:LYS:HB2	2.11	0.50
17:AR:44:THR:C	17:AR:46:THR:H	2.15	0.50
18:AS:48:ILE:HB	18:AS:59:VAL:CG2	2.41	0.50
20:AB:121:GLN:HE21	20:AB:122:ASP:N	2.07	0.50
22:BA:16:G:O2'	22:BA:17:C:H5'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:87:U:H2'	22:BA:88:C:O5'	2.12	0.50
23:BB:460:A:H2'	23:BB:461:C:O4'	2.12	0.50
23:BB:514:A:N6	23:BB:515:A:N6	2.59	0.50
23:BB:1166:G:H2'	23:BB:1167:C:H6	1.75	0.50
23:BB:1488:C:O2'	23:BB:1489:C:H5'	2.12	0.50
23:BB:1874:C:H2'	23:BB:1875:G:O4'	2.12	0.50
23:BB:2302:U:O2'	23:BB:2303:G:H5'	2.11	0.50
23:BB:2557:G:H2'	23:BB:2558:C:H6	1.76	0.50
23:BB:2649:C:H2'	23:BB:2650:U:H6	1.76	0.50
26:BD:107:VAL:HA	26:BD:204:LYS:O	2.12	0.50
29:BE:58:LYS:O	29:BE:60:TRP:N	2.45	0.50
29:BE:73:ILE:O	29:BE:73:ILE:HG12	2.11	0.50
29:BE:124:PHE:HD1	29:BE:125:SER:N	2.09	0.50
30:BY:7:THR:HG22	30:BY:8:GLN:N	2.27	0.50
35:BV:29:ILE:HD13	35:BV:31:TYR:CE2	2.46	0.50
41:BJ:24:THR:O	41:BJ:25:LEU:HB3	2.12	0.50
44:BQ:52:ARG:C	44:BQ:54:ARG:H	2.14	0.50
44:BQ:108:LEU:HD23	49:BR:48:LYS:HD3	1.94	0.50
48:BG:10:VAL:HG13	48:BG:14:VAL:HG21	1.93	0.50
53:B6:59:THR:O	53:B6:61:PRO:HD3	2.11	0.50
1:CA:418:C:H2'	1:CA:419:C:H6	1.76	0.50
1:CA:483:C:H2'	1:CA:484:G:C8	2.47	0.50
1:CA:925:G:O2'	1:CA:926:G:H5"	2.11	0.50
1:CA:1049:U:H2'	13:CN:2:LYS:HD3	1.93	0.50
1:CA:1121:U:O2'	1:CA:1122:U:H5'	2.11	0.50
1:CA:1123:U:H4'	9:CJ:39:PRO:HD2	1.93	0.50
1:CA:1132:C:O2'	1:CA:1133:G:H5'	2.12	0.50
1:CA:1137:C:O2'	1:CA:1138:G:H5"	2.11	0.50
6:CG:2:ARG:HH11	6:CG:2:ARG:HB2	1.77	0.50
7:CH:23:ALA:HB1	7:CH:61:THR:HA	1.94	0.50
22:DA:54:G:H21	47:DF:25:MET:CE	2.25	0.50
23:DB:296:U:H2'	23:DB:297:G:H8	1.77	0.50
23:DB:704:G:C2'	23:DB:726:G:H22	2.15	0.50
23:DB:945:A:H3'	23:DB:946:C:H5"	1.93	0.50
23:DB:991:C:H5"	23:DB:1185:G:H2'	1.94	0.50
23:DB:1439:A:N7	23:DB:1440:U:C2	2.80	0.50
23:DB:1441:G:O2'	23:DB:1442:U:H5'	2.12	0.50
23:DB:1854:A:H2	23:DB:2087:G:N3	2.10	0.50
23:DB:1936:A:H2	23:DB:1943:U:O4	1.95	0.50
23:DB:2260:C:O2'	23:DB:2261:C:H5'	2.12	0.50
23:DB:2309:A:H2'	23:DB:2310:C:C6	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DI:11:GLN:HA	24:DI:55:PRO:HA	1.93	0.50
24:DI:21:PRO:CB	24:DI:22:PRO:HD3	2.38	0.50
25:DC:41:GLY:CA	25:DC:53:ILE:HG21	2.40	0.50
25:DC:145:MET:HB2	25:DC:152:GLN:NE2	2.27	0.50
29:DE:129:PRO:HG3	29:DE:156:ASN:HA	1.93	0.50
33:D1:29:LYS:N	33:D1:30:PRO:HD3	2.26	0.50
36:D2:4:THR:O	36:D2:5:PHE:HB2	2.12	0.50
37:DL:79:LEU:HB2	37:DL:113:ALA:HB3	1.92	0.50
39:DX:42:LEU:O	39:DX:46:VAL:HG23	2.12	0.50
43:DO:6:ALA:CB	43:DO:10:ARG:HH11	2.25	0.50
44:DQ:85:ALA:O	44:DQ:86:SER:C	2.50	0.50
46:DU:21:ARG:HH11	46:DU:21:ARG:HG3	1.77	0.50
48:DG:30:GLY:HA3	48:DG:78:VAL:HG12	1.92	0.50
48:DG:88:LEU:HD11	48:DG:94:ARG:N	2.27	0.50
1:AA:91:U:O5'	1:AA:91:U:C6	2.59	0.49
1:AA:890:G:O2'	1:AA:906:A:N6	2.45	0.49
2:AC:110:LEU:HD22	2:AC:145:ALA:HB2	1.94	0.49
2:AC:134:LYS:HG3	2:AC:167:TYR:HE2	1.77	0.49
2:AC:183:TYR:HE1	2:AC:198:LYS:HB3	1.76	0.49
3:AD:96:ARG:NH1	3:AD:133:SER:HA	2.27	0.49
4:AE:28:ARG:NH1	4:AE:30:PHE:HB3	2.27	0.49
6:AG:149:ALA:H	10:AK:55:ARG:NH2	2.10	0.49
7:AH:17:GLN:OE1	7:AH:69:ALA:HB1	2.12	0.49
9:AJ:92:LEU:HD13	9:AJ:92:LEU:N	2.27	0.49
10:AK:77:GLY:O	10:AK:79:LYS:HE3	2.11	0.49
16:AQ:11:VAL:O	16:AQ:54:ILE:HG13	2.12	0.49
18:AS:68:HIS:HB3	18:AS:72:GLU:OE2	2.11	0.49
23:BB:208:C:H2'	23:BB:209:C:H6	1.76	0.49
23:BB:516:C:O2'	23:BB:517:C:H5'	2.12	0.49
23:BB:856:G:C1'	52:BW:23:LYS:HB3	2.40	0.49
23:BB:1425:G:H2'	23:BB:1426:G:C8	2.47	0.49
23:BB:2144:G:H2'	23:BB:2146:C:C5'	2.39	0.49
23:BB:2311:A:O2'	47:BF:84:ILE:HD13	2.12	0.49
23:BB:2834:G:O6	23:BB:2879:A:H2'	2.12	0.49
25:BC:129:LEU:HB3	25:BC:134:ILE:HG22	1.93	0.49
26:BD:53:GLY:C	26:BD:76:GLY:HA2	2.32	0.49
26:BD:114:LYS:HD2	26:BD:116:LYS:CE	2.42	0.49
27:BK:88:ASN:HD22	27:BK:89:ASN:N	2.09	0.49
29:BE:134:LEU:CD2	29:BE:161:ALA:HB2	2.42	0.49
29:BE:136:GLN:HE22	29:BE:139:LYS:HD3	1.77	0.49
37:BL:123:ARG:HA	37:BL:143:GLU:CB	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BJ:110:PRO:O	41:BJ:115:GLY:HA3	2.12	0.49
43:BO:106:LEU:HA	43:BO:109:ALA:HB3	1.94	0.49
47:BF:78:ILE:HA	47:BF:82:TYR:CG	2.46	0.49
47:BF:121:PHE:HB3	47:BF:127:TYR:CE1	2.47	0.49
49:BR:32:THR:HA	49:BR:61:ALA:O	2.11	0.49
1:CA:1423:G:H2'	1:CA:1424:U:H6	1.78	0.49
1:CA:1484:C:O2'	1:CA:1485:U:H5'	2.13	0.49
7:CH:14:ARG:HG3	7:CH:15:ASN:N	2.27	0.49
14:CO:24:SER:HB3	14:CO:27:VAL:CG2	2.41	0.49
16:CQ:17:GLU:O	16:CQ:18:LYS:HB2	2.12	0.49
19:CT:77:ASN:O	19:CT:81:GLN:HG3	2.11	0.49
21:CU:39:LYS:N	21:CU:40:PRO:CD	2.75	0.49
22:DA:50:A:OP1	43:DO:68:LYS:HB2	2.12	0.49
23:DB:606:U:OP2	29:DE:99:LYS:HD2	2.11	0.49
23:DB:1141:U:OP2	41:DJ:65:THR:HG21	2.12	0.49
23:DB:1275:A:H2'	23:DB:1275:A:N3	2.27	0.49
23:DB:1562:U:H2'	23:DB:1563:U:H6	1.74	0.49
23:DB:1793:C:H2'	23:DB:1794:A:H8	1.77	0.49
23:DB:2471:A:O2'	23:DB:2472:G:O5'	2.30	0.49
29:DE:5:LEU:CD1	29:DE:10:SER:HB2	2.30	0.49
35:DV:29:ILE:HD13	35:DV:31:TYR:CE2	2.47	0.49
40:DH:5:LEU:O	40:DH:6:LEU:HB2	2.12	0.49
40:DH:117:LEU:HD13	40:DH:130:VAL:HG13	1.94	0.49
41:DJ:25:LEU:HD13	41:DJ:26:GLY:N	2.27	0.49
41:DJ:56:VAL:HG12	41:DJ:57:LEU:N	2.27	0.49
42:DN:83:LEU:HA	42:DN:86:ARG:CB	2.41	0.49
42:DN:102:PHE:N	42:DN:102:PHE:HD1	2.10	0.49
50:DT:23:ALA:C	50:DT:25:GLU:H	2.15	0.49
51:DZ:32:ASN:O	51:DZ:33:LEU:O	2.29	0.49
52:DW:18:LYS:HG3	52:DW:19:ARG:CZ	2.42	0.49
53:D6:65:THR:N	53:D6:103:ILE:HD12	2.26	0.49
1:AA:465:A:H2'	1:AA:466:A:H3'	1.94	0.49
1:AA:724:G:O2'	1:AA:725:G:H5'	2.12	0.49
1:AA:974:A:C4'	1:AA:975:A:H5'	2.34	0.49
1:AA:1308:U:H3'	12:AM:97:ARG:NH1	2.27	0.49
1:AA:1316:G:H22	1:AA:1318:A:H3'	1.76	0.49
1:AA:1356:G:O2'	1:AA:1357:A:H5'	2.11	0.49
2:AC:13:ILE:O	2:AC:15:LYS:N	2.44	0.49
14:AO:24:SER:HB3	14:AO:27:VAL:CG2	2.41	0.49
14:AO:53:ARG:HD2	23:BB:715:A:N6	2.27	0.49
20:AB:23:ASN:HD22	20:AB:24:PRO:CD	2.26	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:277:G:H5"	23:BB:278:A:N7	2.28	0.49
23:BB:414:C:H2'	23:BB:415:A:C8	2.47	0.49
23:BB:622:G:H2'	23:BB:623:C:C6	2.47	0.49
23:BB:1582:C:H2'	23:BB:1583:A:O4'	2.11	0.49
23:BB:2362:C:OP1	34:B3:39:ARG:NE	2.42	0.49
25:BC:202:ARG:HH11	25:BC:213:ARG:HH21	1.60	0.49
26:BD:9:VAL:O	26:BD:9:VAL:HG22	2.12	0.49
26:BD:68:PHE:HB3	26:BD:73:VAL:CG2	2.34	0.49
26:BD:90:PHE:HD2	26:BD:94:GLN:HG3	1.77	0.49
26:BD:97:SER:HB3	26:BD:99:GLU:HG3	1.93	0.49
27:BK:39:ILE:HD13	27:BK:39:ILE:N	2.27	0.49
27:BK:60:ALA:HA	27:BK:87:LEU:CD2	2.42	0.49
29:BE:47:LYS:HA	29:BE:88:ARG:HH11	1.77	0.49
29:BE:48:THR:C	29:BE:50:ALA:H	2.15	0.49
33:B1:49:LYS:HG3	33:B1:50:GLU:N	2.22	0.49
37:BL:134:ALA:O	37:BL:137:ALA:HB3	2.12	0.49
38:BM:35:ALA:HB3	38:BM:99:GLY:H	1.77	0.49
40:BH:84:ALA:HA	40:BH:90:LEU:HD12	1.94	0.49
42:BN:24:MET:O	42:BN:27:SER:HB3	2.13	0.49
42:BN:72:ASP:HB3	42:BN:75:ILE:HG13	1.94	0.49
42:BN:102:PHE:N	42:BN:102:PHE:HD1	2.11	0.49
43:BO:70:ALA:C	43:BO:72:ALA:H	2.15	0.49
44:BQ:23:TYR:CD2	44:BQ:23:TYR:N	2.80	0.49
49:BR:62:GLU:O	49:BR:96:VAL:HA	2.11	0.49
50:BT:43:ILE:O	50:BT:47:VAL:HG23	2.12	0.49
53:B6:16:LYS:HA	53:B6:19:GLU:OE2	2.11	0.49
1:CA:399:G:H2'	1:CA:400:C:C6	2.47	0.49
1:CA:638:U:H2'	1:CA:639:G:O4'	2.12	0.49
1:CA:946:A:H2'	1:CA:947:G:H8	1.73	0.49
1:CA:1009:U:H1'	1:CA:1021:A:C2	2.47	0.49
1:CA:1202:U:O2	13:CN:66:THR:HG21	2.12	0.49
1:CA:1350:A:OP2	8:CI:119:LYS:HE3	2.12	0.49
1:CA:1379:G:O2'	1:CA:1380:U:H5'	2.11	0.49
11:CL:113:ARG:NH2	11:CL:120:ARG:HA	2.27	0.49
13:CN:7:ALA:O	13:CN:11:LYS:HG2	2.12	0.49
13:CN:50:LEU:H	13:CN:51:PRO:CD	2.25	0.49
14:CO:14:GLU:HB3	14:CO:84:ARG:NH2	2.26	0.49
17:CR:52:ARG:HH11	17:CR:52:ARG:HG3	1.77	0.49
18:CS:43:MET:O	18:CS:61:VAL:HB	2.12	0.49
20:CB:93:HIS:HB2	20:CB:145:ASN:O	2.12	0.49
20:CB:93:HIS:O	20:CB:94:ARG:C	2.51	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:118:A:N3	23:DB:178:G:H1'	2.28	0.49
23:DB:146:A:H2'	23:DB:147:C:C6	2.47	0.49
23:DB:878:A:H5'	23:DB:900:A:N1	2.27	0.49
23:DB:981:A:H2'	23:DB:982:C:C5'	2.42	0.49
23:DB:1033:U:H5	32:D4:15:LYS:HE3	1.76	0.49
23:DB:1165:A:H2'	23:DB:1166:G:H8	1.77	0.49
23:DB:1640:A:O2'	23:DB:1641:A:H5'	2.13	0.49
23:DB:1994:C:O2'	23:DB:1995:U:H5'	2.13	0.49
23:DB:2281:A:O2'	23:DB:2282:G:H5'	2.12	0.49
23:DB:2590:A:O2'	23:DB:2591:C:H5'	2.13	0.49
23:DB:2710:C:H2'	23:DB:2711:A:H8	1.77	0.49
24:DI:17:ALA:O	24:DI:18:ASN:HB3	2.12	0.49
24:DI:78:LEU:HD13	24:DI:108:ILE:HG23	1.95	0.49
28:DP:91:VAL:O	28:DP:92:ARG:HB3	2.12	0.49
32:D4:2:LYS:CD	32:D4:4:ARG:HE	2.15	0.49
40:DH:75:LEU:HD23	40:DH:75:LEU:N	2.27	0.49
40:DH:113:SER:N	40:DH:132:PHE:HE1	2.09	0.49
48:DG:16:VAL:HG11	48:DG:44:HIS:NE2	2.27	0.49
48:DG:139:VAL:O	48:DG:142:GLN:HB3	2.12	0.49
50:DT:7:LEU:C	50:DT:9:LYS:H	2.16	0.49
52:DW:10:ARG:O	52:DW:11:ASN:HB2	2.11	0.49
52:DW:32:ALA:C	52:DW:34:SER:H	2.15	0.49
53:D6:58:VAL:HG12	53:D6:66:LEU:HG	1.94	0.49
1:AA:299:G:H2'	1:AA:300:A:C8	2.46	0.49
1:AA:437:U:H5"	3:AD:151:GLN:NE2	2.26	0.49
1:AA:450:G:N7	1:AA:481:G:O6	2.46	0.49
1:AA:674:G:H2'	1:AA:675:A:C8	2.40	0.49
1:AA:833:G:H2'	1:AA:834:U:H6	1.77	0.49
1:AA:839:C:H2'	1:AA:840:C:O4'	2.11	0.49
1:AA:1458:G:H5'	19:AT:26:MET:HB2	1.94	0.49
2:AC:155:ARG:H	2:AC:162:ALA:CB	2.25	0.49
5:AF:5:GLU:HA	5:AF:63:ASN:HA	1.94	0.49
10:AK:113:THR:HG21	21:AU:28:LEU:HD11	1.94	0.49
11:AL:21:PRO:HG2	11:AL:94:TYR:OH	2.12	0.49
11:AL:113:ARG:HH21	11:AL:120:ARG:HA	1.77	0.49
12:AM:28:ARG:HH12	12:AM:59:VAL:HA	1.76	0.49
14:AO:85:LEU:HD12	14:AO:85:LEU:N	2.27	0.49
21:AU:36:PHE:HD2	21:AU:39:LYS:HB2	1.78	0.49
23:BB:593:U:H2'	23:BB:594:U:C5	2.47	0.49
23:BB:665:U:H2'	23:BB:666:A:H8	1.77	0.49
23:BB:707:G:O2'	23:BB:708:G:H5'	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:850:U:O2'	30:BY:22:THR:HG22	2.11	0.49
23:BB:870:U:H5"	38:BM:6:ARG:O	2.12	0.49
23:BB:1015:U:H2'	23:BB:1016:G:H8	1.76	0.49
23:BB:1523:U:H5"	23:BB:1524:G:H8	1.78	0.49
23:BB:2246:G:H2'	23:BB:2247:A:H8	1.77	0.49
23:BB:2468:A:H2'	23:BB:2476:A:C6	2.48	0.49
23:BB:2514:U:H2'	23:BB:2515:C:H6	1.77	0.49
23:BB:2716:C:O2'	23:BB:2717:C:H5'	2.12	0.49
23:BB:2812:G:H2'	23:BB:2813:A:C8	2.47	0.49
23:BB:2856:A:H2'	23:BB:2857:G:C8	2.48	0.49
24:BI:126:ARG:HA	24:BI:129:GLU:OE2	2.12	0.49
25:BC:141:HIS:CG	25:BC:142:ASN:H	2.31	0.49
26:BD:169:ARG:O	26:BD:170:VAL:O	2.30	0.49
28:BP:3:ILE:HD13	28:BP:3:ILE:C	2.32	0.49
32:B4:1:MET:HG3	32:B4:34:LYS:HG2	1.95	0.49
35:BV:63:ILE:H	35:BV:70:ILE:HD11	1.76	0.49
36:B2:19:ARG:O	36:B2:22:MET:HB2	2.11	0.49
40:BH:54:LEU:HA	40:BH:57:LYS:NZ	2.27	0.49
48:BG:30:GLY:HA3	48:BG:78:VAL:HG12	1.93	0.49
48:BG:104:LEU:HD22	48:BG:106:LEU:HD22	1.93	0.49
49:BR:20:VAL:HG12	49:BR:21:ARG:N	2.27	0.49
53:B6:95:LYS:HB3	53:B6:100:TYR:HE2	1.76	0.49
53:B6:110:ARG:O	53:B6:114:LEU:HD13	2.12	0.49
1:CA:45:G:H2'	1:CA:46:G:H8	1.76	0.49
1:CA:153:C:O2'	1:CA:154:U:H5'	2.12	0.49
1:CA:379:C:O2'	1:CA:380:G:H5'	2.12	0.49
1:CA:409:U:H2'	1:CA:410:G:C8	2.46	0.49
1:CA:455:G:H2'	1:CA:456:A:C8	2.47	0.49
1:CA:551:U:H2'	1:CA:552:U:C6	2.47	0.49
1:CA:862:C:O2'	1:CA:863:U:H5'	2.12	0.49
1:CA:964:A:H2'	1:CA:965:U:H5"	1.94	0.49
1:CA:1053:G:C3'	1:CA:1054:C:H5'	2.42	0.49
1:CA:1067:A:H4'	1:CA:1068:G:O5'	2.11	0.49
1:CA:1298:U:H2'	6:CG:113:LYS:HZ2	1.76	0.49
1:CA:1349:A:H2'	1:CA:1350:A:O4'	2.12	0.49
6:CG:134:VAL:HB	6:CG:137:ARG:HH21	1.76	0.49
8:CI:93:LEU:HD13	8:CI:97:LEU:HD11	1.94	0.49
11:CL:65:TYR:HB3	11:CL:95:HIS:CD2	2.47	0.49
13:CN:9:GLU:HB2	13:CN:62:ARG:CZ	2.41	0.49
14:CO:28:GLN:O	14:CO:32:LEU:HD23	2.12	0.49
22:DA:32:U:H4'	22:DA:52:A:H62	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:485:C:O2'	23:DB:486:C:H5'	2.12	0.49
23:DB:584:C:P	44:DQ:5:ARG:HD3	2.52	0.49
23:DB:616:A:H4'	29:DE:101:TYR:CE2	2.48	0.49
23:DB:912:C:H2'	23:DB:913:U:C6	2.47	0.49
23:DB:958:U:O4	38:DM:16:ARG:HA	2.13	0.49
23:DB:1196:C:H2'	23:DB:1197:G:C8	2.46	0.49
23:DB:1244:A:O2'	23:DB:1245:G:H5'	2.12	0.49
23:DB:1442:U:O2'	23:DB:1443:U:H5'	2.12	0.49
23:DB:1463:C:H2'	23:DB:1464:G:C8	2.47	0.49
23:DB:2037:A:H2'	23:DB:2038:G:C8	2.48	0.49
23:DB:2588:G:H2'	23:DB:2589:A:O4'	2.12	0.49
23:DB:2791:G:H2'	23:DB:2792:A:O4'	2.12	0.49
25:DC:128:THR:HA	25:DC:190:THR:CA	2.40	0.49
26:DD:101:PHE:O	26:DD:180:VAL:HG11	2.11	0.49
26:DD:118:PHE:HE2	42:DN:1:MET:HB3	1.78	0.49
29:DE:47:LYS:HA	29:DE:88:ARG:HH11	1.76	0.49
29:DE:109:LEU:O	29:DE:112:LEU:HB2	2.12	0.49
34:D3:9:ALA:C	34:D3:11:LYS:H	2.15	0.49
34:D3:32:LEU:HA	34:D3:35:LYS:HD2	1.94	0.49
37:DL:41:ARG:HG2	37:DL:41:ARG:HH21	1.78	0.49
37:DL:123:ARG:HA	37:DL:143:GLU:CB	2.40	0.49
42:DN:24:MET:O	42:DN:27:SER:HB3	2.12	0.49
43:DO:29:HIS:HB3	43:DO:36:TYR:HB2	1.95	0.49
50:DT:40:LYS:O	50:DT:43:ILE:HB	2.13	0.49
51:DZ:17:ASN:O	51:DZ:18:ARG:C	2.51	0.49
52:DW:39:GLN:CG	52:DW:42:THR:HB	2.42	0.49
53:D6:15:GLN:HA	53:D6:168:PHE:CE2	2.47	0.49
1:AA:981:U:OP1	13:AN:5:MET:HE1	2.12	0.49
1:AA:1154:G:O2'	1:AA:1155:A:H5'	2.11	0.49
1:AA:1337:G:H5"	1:AA:1338:G:OP1	2.13	0.49
1:AA:1349:A:H2'	1:AA:1350:A:O4'	2.13	0.49
2:AC:53:ARG:HG2	2:AC:54:ILE:H	1.77	0.49
3:AD:71:PHE:O	3:AD:74:TYR:HB2	2.13	0.49
3:AD:106:PHE:CD1	3:AD:144:ILE:HD11	2.46	0.49
4:AE:156:ARG:HB3	7:AH:43:GLY:O	2.12	0.49
6:AG:130:LYS:N	6:AG:134:VAL:HG21	2.27	0.49
8:AI:44:ARG:HH11	8:AI:44:ARG:HG2	1.77	0.49
9:AJ:12:ALA:CB	9:AJ:96:VAL:HG12	2.37	0.49
10:AK:90:PRO:C	10:AK:92:ARG:H	2.14	0.49
10:AK:92:ARG:HH11	21:AU:20:ARG:HH21	1.59	0.49
22:BA:93:C:O2'	22:BA:94:A:H5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:246:C:H2'	23:BB:247:G:H5'	1.94	0.49
23:BB:1548:A:H2'	23:BB:1549:A:H8	1.75	0.49
23:BB:1654:A:O2'	26:BD:118:PHE:CB	2.61	0.49
23:BB:1858:A:H2'	23:BB:1859:U:O4'	2.13	0.49
23:BB:2886:A:N6	31:B0:39:ARG:CZ	2.75	0.49
28:BP:20:ARG:HG2	28:BP:20:ARG:HH21	1.76	0.49
28:BP:110:LYS:N	28:BP:110:LYS:HD2	2.27	0.49
33:B1:29:LYS:N	33:B1:30:PRO:HD3	2.27	0.49
40:BH:57:LYS:HZ2	40:BH:58:LEU:HB2	1.76	0.49
48:BG:139:VAL:O	48:BG:142:GLN:HB3	2.12	0.49
53:B6:7:TYR:CE1	53:B6:160:GLU:HG2	2.47	0.49
1:CA:284:C:O2'	1:CA:285:C:H5'	2.12	0.49
1:CA:302:G:O2'	1:CA:303:A:H5'	2.12	0.49
1:CA:820:U:H4'	1:CA:821:G:OP2	2.13	0.49
1:CA:1421:G:O2'	1:CA:1422:G:H5'	2.13	0.49
1:CA:1460:C:H2'	1:CA:1461:G:H8	1.78	0.49
3:CD:100:VAL:HG21	3:CD:136:VAL:HG21	1.93	0.49
4:CE:155:LYS:HA	7:CH:65:PHE:CG	2.48	0.49
6:CG:68:VAL:CG1	6:CG:133:ALA:HB1	2.43	0.49
10:CK:33:ILE:CB	10:CK:73:VAL:HG11	2.30	0.49
13:CN:50:LEU:N	13:CN:51:PRO:CD	2.76	0.49
20:CB:15:PHE:O	20:CB:40:ILE:HD12	2.12	0.49
23:DB:207:A:H2'	23:DB:208:C:O4'	2.12	0.49
23:DB:513:A:H8	23:DB:513:A:O5'	1.95	0.49
23:DB:1021:A:H61	23:DB:1142:A:N6	2.10	0.49
23:DB:1518:C:H2'	23:DB:1519:G:H8	1.78	0.49
23:DB:1526:C:O2'	23:DB:1527:G:H5'	2.11	0.49
23:DB:1789:A:P	25:DC:220:ARG:HD3	2.52	0.49
23:DB:2134:A:H5'	23:DB:2135:A:OP2	2.13	0.49
23:DB:2148:G:O3'	23:DB:2149:U:H6	1.95	0.49
23:DB:2466:C:OP1	32:D4:4:ARG:HD2	2.12	0.49
23:DB:2677:G:H2'	23:DB:2678:C:C6	2.48	0.49
25:DC:144:GLU:HB3	25:DC:187:CYS:HB3	1.94	0.49
25:DC:189:ALA:C	25:DC:190:THR:HG23	2.32	0.49
29:DE:150:THR:OG1	29:DE:151:GLY:N	2.45	0.49
37:DL:77:ILE:HB	37:DL:109:LYS:O	2.13	0.49
40:DH:113:SER:N	40:DH:132:PHE:CE1	2.81	0.49
41:DJ:98:GLU:HB3	41:DJ:124:VAL:HG21	1.93	0.49
44:DQ:77:LYS:HE2	44:DQ:116:LEU:HD13	1.93	0.49
47:DF:127:TYR:HB2	47:DF:155:ILE:HD13	1.94	0.49
48:DG:104:LEU:HD22	48:DG:106:LEU:HD22	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DT:32:LEU:HG	50:DT:83:ALA:HB2	1.93	0.49
51:DZ:7:VAL:HG11	51:DZ:51:VAL:HG13	1.93	0.49
1:AA:140:U:H2'	1:AA:141:G:C8	2.47	0.49
1:AA:264:C:H4'	16:AQ:64:ARG:HD2	1.93	0.49
1:AA:430:A:OP1	3:AD:8:LEU:HD23	2.12	0.49
1:AA:509:A:O2'	1:AA:510:A:H5'	2.12	0.49
1:AA:642:A:H2'	1:AA:643:C:H6	1.77	0.49
1:AA:862:C:O2'	1:AA:863:U:H5'	2.11	0.49
1:AA:957:U:H4'	18:AS:78:THR:HB	1.94	0.49
1:AA:1308:U:H3'	12:AM:97:ARG:HH11	1.78	0.49
1:AA:1363:A:N3	1:AA:1363:A:H2'	2.27	0.49
2:AC:109:GLU:OE2	2:AC:143:LEU:HG	2.13	0.49
3:AD:26:ALA:HA	3:AD:30:LYS:CE	2.42	0.49
6:AG:46:LEU:HG	6:AG:57:GLU:HB3	1.94	0.49
7:AH:94:VAL:CG2	7:AH:101:ALA:HB2	2.43	0.49
8:AI:34:LEU:HD11	8:AI:47:VAL:HG21	1.95	0.49
9:AJ:10:LEU:O	9:AJ:71:LEU:HA	2.12	0.49
10:AK:30:ILE:HG22	10:AK:45:THR:CB	2.42	0.49
15:AP:78:VAL:O	15:AP:79:ASN:C	2.49	0.49
20:AB:8:MET:HA	20:AB:11:ALA:HB3	1.94	0.49
23:BB:571:U:O2'	23:BB:573:U:O5'	2.30	0.49
23:BB:1059:G:N2	24:BI:130:GLY:HA3	2.28	0.49
23:BB:1220:G:H2'	23:BB:1221:C:H6	1.77	0.49
23:BB:1745:A:H2'	23:BB:1746:A:C8	2.47	0.49
23:BB:2751:G:H2'	23:BB:2751:G:OP1	2.12	0.49
26:BD:15:PHE:CD1	26:BD:15:PHE:N	2.80	0.49
29:BE:129:PRO:HG3	29:BE:156:ASN:HA	1.95	0.49
32:B4:17:VAL:HG12	32:B4:18:LYS:N	2.22	0.49
33:B1:24:LYS:NZ	33:B1:33:LEU:HB2	2.26	0.49
34:B3:60:CYS:C	34:B3:62:PRO:HD3	2.32	0.49
35:BV:5:ASN:HA	35:BV:64:VAL:O	2.12	0.49
36:B2:4:THR:O	36:B2:5:PHE:HB2	2.11	0.49
37:BL:75:ALA:HB2	37:BL:105:ILE:HG21	1.94	0.49
38:BM:69:PRO:HG2	38:BM:70:ASP:H	1.78	0.49
40:BH:65:ALA:HB1	40:BH:134:VAL:HG21	1.94	0.49
42:BN:47:VAL:O	42:BN:51:LEU:HD13	2.12	0.49
42:BN:72:ASP:HB3	42:BN:75:ILE:CG1	2.42	0.49
42:BN:106:ASP:C	42:BN:108:ALA:H	2.16	0.49
44:BQ:85:ALA:O	44:BQ:86:SER:C	2.50	0.49
46:BU:87:GLU:OE2	46:BU:88:ASP:HB2	2.12	0.49
48:BG:93:TYR:O	48:BG:94:ARG:HG3	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BT:40:LYS:O	50:BT:43:ILE:HB	2.12	0.49
51:BZ:7:VAL:HG11	51:BZ:51:VAL:HG13	1.95	0.49
53:B6:30:THR:CG2	53:B6:183:ILE:HG12	2.42	0.49
1:CA:254:G:H4'	16:CQ:19:SER:OG	2.13	0.49
1:CA:313:A:H2'	1:CA:314:C:H6	1.77	0.49
1:CA:682:G:O2'	1:CA:683:G:H5'	2.12	0.49
1:CA:1123:U:O2'	1:CA:1124:G:H5'	2.13	0.49
2:CC:76:ILE:CG2	2:CC:80:GLY:HA2	2.43	0.49
3:CD:41:GLY:C	3:CD:43:ARG:H	2.15	0.49
4:CE:152:VAL:HG21	7:CH:98:LEU:HB3	1.95	0.49
9:CJ:10:LEU:O	9:CJ:71:LEU:HA	2.11	0.49
9:CJ:76:ILE:O	9:CJ:76:ILE:HD12	2.13	0.49
14:CO:82:ILE:O	14:CO:86:GLY:N	2.45	0.49
23:DB:96:C:H4'	39:DX:41:HIS:CG	2.46	0.49
23:DB:477:A:H2'	23:DB:478:A:H8	1.78	0.49
23:DB:707:G:O2'	23:DB:708:G:H5'	2.12	0.49
23:DB:1275:A:H2'	23:DB:1276:A:O4'	2.12	0.49
23:DB:1592:C:H2'	23:DB:1593:A:C8	2.46	0.49
23:DB:1680:U:H2'	23:DB:1681:G:O4'	2.12	0.49
23:DB:2015:A:C2	31:D0:2:VAL:HG22	2.47	0.49
23:DB:2491:U:H5"	23:DB:2570:G:C5'	2.41	0.49
23:DB:2505:G:O2'	23:DB:2506:U:H5'	2.12	0.49
23:DB:2626:C:H2'	23:DB:2627:G:C8	2.48	0.49
23:DB:2718:G:H4'	28:DP:95:LYS:HB2	1.94	0.49
23:DB:2898:U:H2'	23:DB:2899:A:H8	1.77	0.49
25:DC:43:ASN:HD22	25:DC:44:ASN:H	1.61	0.49
27:DK:119:ALA:HB3	27:DK:120:PRO:HD3	1.94	0.49
28:DP:3:ILE:HG23	28:DP:4:ILE:N	2.27	0.49
40:DH:125:THR:HA	40:DH:146:VAL:CB	2.42	0.49
46:DU:87:GLU:OE2	46:DU:88:ASP:HB2	2.12	0.49
48:DG:93:TYR:O	48:DG:94:ARG:HG3	2.13	0.49
50:DT:21:SER:HB3	50:DT:31:VAL:CG2	2.43	0.49
50:DT:68:LYS:HD3	50:DT:68:LYS:N	2.27	0.49
52:DW:49:ASN:C	52:DW:50:VAL:HG22	2.32	0.49
1:AA:153:C:O2'	1:AA:154:U:H5'	2.13	0.49
1:AA:192:A:O2'	1:AA:193:C:H5'	2.13	0.49
1:AA:984:C:O2'	1:AA:985:C:H5'	2.12	0.49
1:AA:1483:A:H2	23:BB:1959:G:HO2'	1.60	0.49
2:AC:54:ILE:HG12	2:AC:54:ILE:O	2.12	0.49
2:AC:129:PHE:CG	2:AC:130:ARG:N	2.81	0.49
5:AF:81:ASN:O	5:AF:84:VAL:HG12	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AF:81:ASN:O	5:AF:83:ALA:N	2.45	0.49
6:AG:21:LEU:HG	6:AG:22:LEU:H	1.76	0.49
7:AH:23:ALA:HB1	7:AH:61:THR:HA	1.94	0.49
9:AJ:6:ILE:HB	9:AJ:76:ILE:HD11	1.94	0.49
13:AN:41:TRP:CD1	13:AN:44:VAL:HG23	2.47	0.49
15:AP:28:ARG:CD	15:AP:29:ASN:H	2.25	0.49
22:BA:94:A:OP1	35:BV:19:ARG:HD3	2.13	0.49
23:BB:52:A:N7	23:BB:117:G:N2	2.60	0.49
23:BB:129:C:H4'	23:BB:1348:C:O2'	2.12	0.49
23:BB:521:U:H2'	23:BB:522:A:C8	2.47	0.49
23:BB:607:U:O4	23:BB:619:G:H2'	2.12	0.49
23:BB:741:U:H2'	23:BB:742:A:C8	2.47	0.49
23:BB:1251:C:H2'	44:BQ:5:ARG:HH12	1.77	0.49
23:BB:1404:C:O2'	23:BB:1405:U:H5'	2.12	0.49
23:BB:1562:U:H2'	23:BB:1563:U:H6	1.77	0.49
23:BB:2015:A:H2'	23:BB:2016:U:O4'	2.11	0.49
23:BB:2580:U:H5'	26:BD:136:ASN:H	1.77	0.49
23:BB:2893:A:H5"	23:BB:2894:G:H5'	1.94	0.49
24:BI:124:MET:O	24:BI:128:ILE:HG12	2.13	0.49
26:BD:101:PHE:O	26:BD:102:ALA:HB2	2.13	0.49
28:BP:103:THR:HG22	28:BP:104:GLY:N	2.27	0.49
29:BE:23:PHE:HA	29:BE:107:SER:OG	2.12	0.49
34:B3:30:HIS:HD2	34:B3:31:ILE:N	2.10	0.49
35:BV:80:HIS:CD2	35:BV:81:PRO:HD2	2.48	0.49
37:BL:65:GLY:O	37:BL:66:PHE:HB3	2.13	0.49
40:BH:44:ILE:C	40:BH:46:PHE:H	2.16	0.49
41:BJ:40:HIS:ND1	41:BJ:41:LYS:HG3	2.28	0.49
41:BJ:44:TYR:CE2	44:BQ:59:LEU:HD11	2.48	0.49
43:BO:105:ALA:C	43:BO:107:ALA:H	2.15	0.49
47:BF:37:MET:HG2	47:BF:52:ALA:HB1	1.95	0.49
49:BR:40:MET:HG3	49:BR:48:LYS:HA	1.95	0.49
52:BW:30:VAL:HG21	52:BW:59:PHE:CE1	2.47	0.49
1:CA:1270:G:H2'	1:CA:1271:A:C8	2.47	0.49
2:CC:38:VAL:O	2:CC:42:LEU:HD23	2.12	0.49
2:CC:126:ARG:HH22	2:CC:190:THR:CG2	2.24	0.49
3:CD:26:ALA:HA	3:CD:30:LYS:CE	2.42	0.49
8:CI:56:MET:C	8:CI:58:GLU:N	2.66	0.49
8:CI:93:LEU:HD12	8:CI:94:ARG:N	2.28	0.49
10:CK:64:VAL:O	10:CK:67:GLU:HG2	2.13	0.49
10:CK:109:ILE:CG2	21:CU:16:ARG:HH12	2.26	0.49
11:CL:3:VAL:O	11:CL:7:VAL:HG23	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CL:107:LYS:H	11:CL:107:LYS:HZ2	1.61	0.49
13:CN:19:TYR:HA	13:CN:23:ARG:HG3	1.94	0.49
20:CB:42:LEU:O	20:CB:46:VAL:HG12	2.12	0.49
20:CB:86:CYS:O	20:CB:88:GLN:N	2.44	0.49
20:CB:139:GLU:HG2	20:CB:143:LEU:CD1	2.42	0.49
22:DA:115:A:O2'	22:DA:116:G:H5'	2.12	0.49
23:DB:49:A:H5"	23:DB:51:G:O4'	2.13	0.49
23:DB:659:G:N2	29:DE:30:GLN:NE2	2.60	0.49
23:DB:1822:C:O2'	23:DB:1823:G:H5'	2.12	0.49
23:DB:1824:G:O2'	23:DB:1825:U:H5'	2.12	0.49
23:DB:1824:G:OP1	25:DC:51:ARG:HD3	2.12	0.49
23:DB:1942:C:C4'	53:D6:133:ARG:HH12	2.24	0.49
23:DB:2896:C:H2'	23:DB:2897:U:C6	2.47	0.49
25:DC:221:GLY:O	25:DC:223:ALA:N	2.45	0.49
26:DD:53:GLY:C	26:DD:76:GLY:HA2	2.32	0.49
38:DM:19:GLY:CA	38:DM:97:GLN:HB2	2.39	0.49
40:DH:131:SER:HB2	40:DH:141:LYS:HG3	1.95	0.49
44:DQ:65:ASN:HD21	44:DQ:69:ARG:HH11	1.59	0.49
44:DQ:91:ARG:HH12	49:DR:10:LYS:CB	2.24	0.49
47:DF:69:ALA:HB3	47:DF:80:GLN:O	2.13	0.49
48:DG:25:ILE:CG2	48:DG:78:VAL:HG21	2.43	0.49
48:DG:94:ARG:NH2	48:DG:104:LEU:HA	2.27	0.49
49:DR:20:VAL:HG12	49:DR:21:ARG:N	2.28	0.49
1:AA:608:A:H2'	1:AA:609:A:O4'	2.13	0.49
1:AA:677:U:H2'	1:AA:678:U:H6	1.77	0.49
1:AA:1008:U:H2'	1:AA:1009:U:C5'	2.42	0.49
1:AA:1119:C:O2'	1:AA:1120:C:H5'	2.12	0.49
1:AA:1226:C:H5'	12:AM:94:LEU:HD13	1.93	0.49
1:AA:1314:C:N4	18:AS:3:SER:HB3	2.26	0.49
4:AE:82:HIS:HE1	4:AE:146:MET:HA	1.78	0.49
6:AG:11:ILE:H	6:AG:11:ILE:HD12	1.77	0.49
7:AH:31:LEU:O	7:AH:35:ILE:HG13	2.11	0.49
10:AK:82:GLU:HG2	10:AK:108:ASN:HB2	1.95	0.49
14:AO:53:ARG:HD2	23:BB:715:A:H61	1.77	0.49
20:AB:10:LYS:O	20:AB:13:VAL:HG23	2.13	0.49
21:AU:40:PRO:O	21:AU:42:THR:N	2.46	0.49
23:BB:26:G:H1'	23:BB:514:A:H61	1.77	0.49
23:BB:100:U:H2'	23:BB:100:U:OP1	2.13	0.49
23:BB:518:G:H4'	45:BS:18:ARG:CZ	2.43	0.49
23:BB:600:G:H2'	23:BB:601:C:C6	2.48	0.49
23:BB:1023:U:H2'	23:BB:1024:G:C5'	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1150:C:H2'	23:BB:1151:A:H8	1.77	0.49
23:BB:1647:U:P	23:BB:1647:U:H3'	2.52	0.49
23:BB:1676:A:H2'	23:BB:1677:A:O4'	2.13	0.49
23:BB:2454:G:H1'	57:BB:3366:HOH:O	2.13	0.49
23:BB:2691:C:H2'	23:BB:2692:G:H8	1.78	0.49
23:BB:2830:C:O4'	23:BB:2836:U:H5'	2.13	0.49
24:BI:79:LEU:HD23	24:BI:108:ILE:CD1	2.43	0.49
24:BI:135:MET:HG3	24:BI:137:LEU:HG	1.95	0.49
27:BK:110:GLU:HA	27:BK:113:MET:CG	2.42	0.49
28:BP:4:ILE:O	28:BP:6:GLN:N	2.44	0.49
29:BE:88:ARG:O	29:BE:90:GLN:HG3	2.13	0.49
32:B4:11:CYS:HB3	32:B4:33:HIS:CE1	2.47	0.49
37:BL:135:ILE:HG23	37:BL:136:GLU:N	2.27	0.49
44:BQ:65:ASN:HD21	44:BQ:69:ARG:HH11	1.61	0.49
46:BU:82:VAL:CG1	46:BU:93:ARG:HB3	2.43	0.49
47:BF:71:LYS:HE2	47:BF:73:VAL:HB	1.95	0.49
48:BG:71:LEU:HD13	48:BG:74:MET:SD	2.52	0.49
52:BW:32:ALA:C	52:BW:34:SER:H	2.16	0.49
52:BW:39:GLN:CG	52:BW:42:THR:HB	2.43	0.49
1:CA:592:G:O2'	1:CA:593:U:H5'	2.12	0.49
1:CA:708:C:O2'	1:CA:709:U:H5'	2.12	0.49
1:CA:729:A:H2'	1:CA:730:G:H8	1.78	0.49
1:CA:957:U:H4'	18:CS:78:THR:HB	1.94	0.49
1:CA:1053:G:N7	1:CA:1199:U:H3'	2.27	0.49
1:CA:1170:A:P	20:CB:138:ARG:HH12	2.35	0.49
1:CA:1493:A:OP1	55:CA:1662:LLL:H51	2.13	0.49
7:CH:26:MET:HB2	7:CH:27:PRO:HD2	1.95	0.49
13:CN:64:ARG:HB2	13:CN:77:GLY:O	2.12	0.49
20:CB:59:ILE:HD12	20:CB:60:ALA:N	2.28	0.49
22:DA:102:G:O2'	22:DA:103:U:H5'	2.13	0.49
23:DB:138:U:H2'	23:DB:140:C:C1'	2.42	0.49
23:DB:305:C:O2'	23:DB:306:U:H5'	2.13	0.49
23:DB:729:G:C5	25:DC:206:LYS:HB2	2.47	0.49
23:DB:994:C:O2	49:DR:10:LYS:HE3	2.13	0.49
23:DB:1256:G:H21	29:DE:77:ILE:HG22	1.76	0.49
23:DB:1488:C:O2'	23:DB:1489:C:H5'	2.12	0.49
27:DK:35:VAL:HG12	27:DK:69:VAL:CG2	2.42	0.49
27:DK:39:ILE:HD13	27:DK:60:ALA:O	2.13	0.49
33:D1:44:GLN:HA	33:D1:44:GLN:OE1	2.12	0.49
34:D3:56:LEU:O	34:D3:59:ALA:HB3	2.13	0.49
37:DL:30:THR:O	37:DL:32:GLY:N	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DL:65:GLY:O	37:DL:66:PHE:HB3	2.13	0.49
37:DL:95:LEU:HB2	37:DL:101:ILE:CG1	2.42	0.49
38:DM:69:PRO:HG2	38:DM:70:ASP:H	1.77	0.49
44:DQ:57:ARG:HH11	44:DQ:57:ARG:HG2	1.77	0.49
44:DQ:86:SER:HB3	49:DR:51:VAL:HA	1.94	0.49
47:DF:4:HIS:O	47:DF:7:TYR:HB3	2.12	0.49
48:DG:123:GLU:HG2	48:DG:124:CYS:N	2.28	0.49
53:D6:29:ARG:NH2	53:D6:87:ASP:O	2.46	0.49
53:D6:67:VAL:O	53:D6:67:VAL:HG23	2.12	0.49
1:AA:241:G:O2'	1:AA:242:G:H5'	2.13	0.49
1:AA:415:A:N1	1:AA:428:G:O6	2.46	0.49
1:AA:624:C:H2'	1:AA:625:U:H6	1.77	0.49
1:AA:1182:G:H4'	1:AA:1183:U:H5'	1.95	0.49
1:AA:1458:G:H2'	1:AA:1459:G:H8	1.77	0.49
2:AC:148:ILE:O	2:AC:168:ARG:HG2	2.13	0.49
5:AF:62:MET:HG3	5:AF:64:VAL:CG2	2.39	0.49
6:AG:125:ASP:HB3	6:AG:130:LYS:HB3	1.94	0.49
8:AI:22:PRO:HA	8:AI:60:LEU:CB	2.43	0.49
13:AN:50:LEU:N	13:AN:51:PRO:CD	2.75	0.49
16:AQ:46:HIS:CE1	16:AQ:48:GLU:HG2	2.47	0.49
16:AQ:66:LEU:O	16:AQ:67:SER:HB2	2.13	0.49
20:AB:83:ALA:CB	20:AB:90:PHE:HB3	2.43	0.49
23:BB:666:A:H4'	37:BL:48:ARG:HD3	1.94	0.49
23:BB:1411:U:H2'	23:BB:1412:U:C6	2.48	0.49
23:BB:1806:C:C2'	23:BB:1807:G:H5'	2.42	0.49
23:BB:2015:A:N3	31:B0:2:VAL:HG22	2.27	0.49
23:BB:2136:G:H2'	23:BB:2137:U:C6	2.47	0.49
23:BB:2149:U:H2'	23:BB:2150:C:C6	2.47	0.49
23:BB:2244:U:H2'	23:BB:2245:U:C6	2.48	0.49
23:BB:2363:G:O2'	23:BB:2364:C:H5'	2.12	0.49
23:BB:2457:U:H2'	23:BB:2458:G:H5'	1.93	0.49
23:BB:2519:U:C6	23:BB:2542:A:N6	2.81	0.49
23:BB:2680:U:OP2	26:BD:114:LYS:HB3	2.13	0.49
23:BB:2849:U:H4'	23:BB:2850:A:C5'	2.42	0.49
25:BC:159:THR:N	25:BC:194:VAL:CG1	2.75	0.49
26:BD:36:GLN:OE1	26:BD:38:LYS:HE3	2.13	0.49
35:BV:44:HIS:NE2	35:BV:85:LYS:HB2	2.27	0.49
37:BL:30:THR:O	37:BL:31:GLY:C	2.51	0.49
38:BM:38:ARG:HB3	38:BM:98:PRO:HD3	1.95	0.49
40:BH:73:ASN:HB3	40:BH:141:LYS:HZ1	1.75	0.49
44:BQ:105:PHE:O	44:BQ:109:VAL:HG23	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:34:THR:O	47:BF:35:LEU:HB2	2.12	0.49
47:BF:98:PHE:O	47:BF:102:LEU:HD12	2.12	0.49
47:BF:107:VAL:HB	47:BF:108:PRO:HD3	1.93	0.49
48:BG:54:ARG:O	48:BG:57:TYR:HD1	1.96	0.49
50:BT:23:ALA:C	50:BT:25:GLU:H	2.15	0.49
50:BT:47:VAL:HG13	50:BT:51:PHE:CD1	2.48	0.49
53:B6:129:ILE:O	53:B6:132:ILE:HB	2.12	0.49
1:CA:248:C:O2'	1:CA:249:U:H5'	2.12	0.49
1:CA:844:G:H8	1:CA:844:G:OP2	1.96	0.49
1:CA:920:U:O2'	1:CA:921:U:H5'	2.11	0.49
1:CA:1130:A:H2'	1:CA:1131:G:C8	2.48	0.49
1:CA:1490:U:C2'	1:CA:1491:G:H5'	2.42	0.49
2:CC:170:GLY:O	2:CC:172:VAL:HG23	2.13	0.49
6:CG:149:ALA:HB1	10:CK:59:PRO:HB2	1.94	0.49
11:CL:3:VAL:CG1	16:CQ:33:TYR:HB3	2.43	0.49
13:CN:2:LYS:O	13:CN:6:LYS:HG3	2.13	0.49
14:CO:8:THR:O	14:CO:11:ILE:HG22	2.13	0.49
20:CB:182:VAL:O	20:CB:195:VAL:HG13	2.13	0.49
22:DA:52:A:H2'	22:DA:53:A:H5'	1.94	0.49
22:DA:113:C:H2'	22:DA:114:C:C6	2.47	0.49
23:DB:533:G:H2'	23:DB:534:U:C6	2.48	0.49
23:DB:600:G:H2'	23:DB:601:C:C6	2.48	0.49
23:DB:667:U:H2'	23:DB:668:A:O4'	2.13	0.49
23:DB:697:G:H2'	23:DB:698:C:C6	2.47	0.49
23:DB:796:C:H2'	23:DB:797:G:H8	1.78	0.49
23:DB:960:A:H61	38:DM:82:MET:CE	2.25	0.49
23:DB:1683:U:H2'	23:DB:1684:G:C8	2.48	0.49
23:DB:1785:A:H2'	23:DB:1787:A:N7	2.27	0.49
23:DB:1829:A:HO2'	25:DC:14:HIS:CD2	2.31	0.49
23:DB:2339:C:H2'	23:DB:2340:A:H8	1.76	0.49
23:DB:2361:G:O2'	23:DB:2362:C:H5'	2.13	0.49
23:DB:2439:A:C8	23:DB:2586:U:H4'	2.48	0.49
23:DB:2825:G:H5"	23:DB:2825:G:N3	2.27	0.49
23:DB:2830:C:H1'	23:DB:2836:U:O4'	2.13	0.49
25:DC:153:LEU:HD13	25:DC:175:LEU:CD2	2.43	0.49
26:DD:174:SER:O	26:DD:175:LEU:HB2	2.13	0.49
27:DK:19:VAL:CB	27:DK:41:ILE:HD11	2.43	0.49
27:DK:39:ILE:HD13	27:DK:39:ILE:N	2.27	0.49
29:DE:172:ALA:O	29:DE:199:MET:HE3	2.13	0.49
31:D0:42:ILE:HG22	31:D0:43:THR:O	2.12	0.49
34:D3:44:ARG:N	34:D3:45:PRO:HD2	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DL:92:LEU:HD23	37:DL:92:LEU:H	1.77	0.49
42:DN:65:LEU:HD11	42:DN:69:ARG:CZ	2.43	0.49
47:DF:79:ARG:O	47:DF:82:TYR:HB2	2.13	0.49
52:DW:77:LYS:HZ3	52:DW:77:LYS:HB2	1.78	0.49
1:AA:82:G:C6	1:AA:88:U:O2	2.65	0.49
1:AA:248:C:O2'	1:AA:249:U:H5'	2.13	0.49
1:AA:254:G:H4'	16:AQ:19:SER:OG	2.13	0.49
1:AA:386:C:C2'	1:AA:387:U:H5'	2.43	0.49
1:AA:584:G:O2'	1:AA:585:G:H5'	2.12	0.49
1:AA:638:U:H2'	1:AA:639:G:O4'	2.13	0.49
1:AA:697:U:O2	1:AA:798:U:H1'	2.12	0.49
1:AA:1303:C:H2'	1:AA:1304:G:O4'	2.12	0.49
1:AA:1379:G:O2'	1:AA:1380:U:H5'	2.13	0.49
1:AA:1499:A:H1'	1:AA:1520:C:H5'	1.94	0.49
8:AI:56:MET:C	8:AI:58:GLU:N	2.66	0.49
9:AJ:44:THR:HG23	9:AJ:69:THR:C	2.33	0.49
16:AQ:10:ARG:HH21	16:AQ:55:GLY:H	1.60	0.49
18:AS:42:ASN:N	18:AS:42:ASN:ND2	2.61	0.49
19:AT:15:LYS:HA	19:AT:18:LYS:HE3	1.95	0.49
19:AT:34:VAL:HG11	19:AT:78:LEU:HD13	1.94	0.49
20:AB:31:PHE:N	20:AB:41:ASN:HB2	2.28	0.49
20:AB:42:LEU:O	20:AB:46:VAL:HG12	2.13	0.49
20:AB:116:LEU:HA	20:AB:119:GLN:HG2	1.95	0.49
23:BB:246:C:N4	34:B3:7:ARG:HG2	2.27	0.49
23:BB:296:U:H2'	23:BB:297:G:C8	2.47	0.49
23:BB:416:U:H2'	23:BB:417:C:C6	2.48	0.49
23:BB:840:C:H2'	23:BB:841:G:H8	1.78	0.49
23:BB:919:U:O5'	23:BB:919:U:H6	1.95	0.49
23:BB:992:C:H2'	23:BB:993:G:H8	1.78	0.49
23:BB:1100:C:H2'	23:BB:1101:U:H6	1.77	0.49
23:BB:1714:U:H3'	23:BB:1715:G:C5'	2.43	0.49
23:BB:1901:A:H2'	23:BB:1902:C:C6	2.48	0.49
23:BB:2397:G:H2'	23:BB:2398:U:H6	1.78	0.49
23:BB:2442:C:O2'	23:BB:2443:C:H5'	2.13	0.49
23:BB:2598:A:OP1	25:BC:233:GLY:HA2	2.12	0.49
23:BB:2886:A:H3'	23:BB:2887:A:H8	1.78	0.49
24:BI:2:LYS:HB3	24:BI:2:LYS:NZ	2.27	0.49
25:BC:171:VAL:HG23	25:BC:185:ALA:HB2	1.95	0.49
27:BK:34:GLY:O	27:BK:36:GLY:N	2.46	0.49
29:BE:196:VAL:O	29:BE:200:LEU:HD23	2.12	0.49
30:BY:11:SER:OG	30:BY:13:ILE:HG13	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BV:21:ARG:HE	35:BV:87:GLN:HB3	1.78	0.49
38:BM:97:GLN:N	38:BM:97:GLN:OE1	2.46	0.49
44:BQ:35:PHE:O	44:BQ:39:ILE:HG12	2.13	0.49
44:BQ:56:PHE:HA	44:BQ:59:LEU:HB3	1.95	0.49
47:BF:64:PRO:HB3	47:BF:88:VAL:HG21	1.95	0.49
47:BF:102:LEU:C	47:BF:104:THR:H	2.15	0.49
48:BG:38:ASP:CG	48:BG:39:ALA:N	2.66	0.49
1:CA:167:A:O2'	1:CA:168:G:H5'	2.12	0.49
1:CA:692:U:O2	1:CA:694:A:H5"	2.12	0.49
1:CA:692:U:H2'	1:CA:694:A:OP2	2.12	0.49
1:CA:1053:G:H4'	1:CA:1054:C:H5'	1.94	0.49
1:CA:1430:A:H2'	1:CA:1431:A:O4'	2.12	0.49
3:CD:28:ASP:HA	3:CD:33:ILE:CG2	2.43	0.49
3:CD:80:ARG:NH1	3:CD:81:LEU:HD23	2.28	0.49
6:CG:80:GLY:C	6:CG:82:SER:H	2.15	0.49
7:CH:112:ASP:CG	7:CH:113:ARG:H	2.16	0.49
8:CI:122:ARG:NH1	8:CI:122:ARG:HG3	2.28	0.49
17:CR:34:GLU:HB2	21:CU:18:PHE:CZ	2.38	0.49
20:CB:109:SER:O	20:CB:112:ARG:HB3	2.13	0.49
22:DA:87:U:C2'	22:DA:88:C:O5'	2.61	0.49
23:DB:351:C:H2'	23:DB:352:A:H8	1.78	0.49
23:DB:433:C:H2'	23:DB:434:U:C6	2.48	0.49
23:DB:878:A:H5'	23:DB:900:A:N6	2.26	0.49
23:DB:1161:C:C1'	49:DR:9:GLY:HA3	2.43	0.49
23:DB:2025:C:H2'	23:DB:2026:U:H6	1.78	0.49
23:DB:2107:G:H2'	23:DB:2108:A:C8	2.48	0.49
29:DE:61:ARG:O	29:DE:62:GLN:C	2.50	0.49
30:DY:13:ILE:HG22	30:DY:14:GLY:N	2.28	0.49
33:D1:3:GLY:C	33:D1:5:ARG:H	2.14	0.49
37:DL:116:VAL:HG22	37:DL:117:THR:N	2.28	0.49
38:DM:55:ARG:HG3	38:DM:55:ARG:NH2	2.27	0.49
39:DX:29:ARG:NH1	50:DT:12:ARG:HG2	2.28	0.49
42:DN:47:VAL:O	42:DN:51:LEU:HD13	2.13	0.49
42:DN:56:LYS:HD2	42:DN:88:ALA:HA	1.94	0.49
44:DQ:96:ASP:C	44:DQ:98:ALA:N	2.66	0.49
47:DF:92:GLY:O	47:DF:95:MET:HB3	2.12	0.49
51:DZ:30:LEU:H	51:DZ:30:LEU:CD2	2.19	0.49
1:AA:72:A:H61	1:AA:98:A:H2	1.59	0.49
1:AA:692:U:O2	1:AA:694:A:H5"	2.13	0.49
1:AA:745:G:H2'	1:AA:746:A:C8	2.48	0.49
4:AE:131:ASN:ND2	4:AE:133:ILE:HB	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AT:72:ALA:HA	19:AT:75:LYS:HD3	1.93	0.49
20:AB:103:TRP:CZ3	20:AB:107:ARG:HD2	2.47	0.49
20:AB:216:VAL:O	20:AB:220:VAL:HG23	2.13	0.49
21:AU:10:PRO:HB2	2:CC:71:ARG:CD	2.43	0.49
23:BB:162:U:O2	23:BB:162:U:C2'	2.61	0.49
23:BB:207:A:H2'	23:BB:208:C:O4'	2.13	0.49
23:BB:299:A:N6	23:BB:322:A:O2'	2.45	0.49
23:BB:572:A:H5"	23:BB:573:U:OP2	2.13	0.49
23:BB:692:C:H5"	25:BC:38:LYS:HB2	1.95	0.49
23:BB:705:A:N6	23:BB:726:G:H1'	2.27	0.49
23:BB:718:A:H2'	23:BB:719:C:H5'	1.95	0.49
23:BB:720:U:H2'	23:BB:721:A:C8	2.47	0.49
23:BB:807:U:H2'	23:BB:808:G:C8	2.48	0.49
23:BB:981:A:H2'	23:BB:982:C:C5'	2.43	0.49
23:BB:1196:C:H2'	23:BB:1197:G:C8	2.48	0.49
23:BB:1353:A:H2'	23:BB:1354:A:H8	1.78	0.49
23:BB:1937:A:N7	23:BB:1939:U:H2'	2.28	0.49
23:BB:2449:U:H4'	23:BB:2450:A:OP1	2.13	0.49
23:BB:2548:U:H1'	27:BK:23:LYS:HZ1	1.74	0.49
23:BB:2658:C:H5'	48:BG:159:LYS:HZ1	1.76	0.49
23:BB:2751:G:H5"	48:BG:3:VAL:HG13	1.95	0.49
25:BC:180:MET:HB3	25:BC:267:VAL:HG23	1.95	0.49
41:BJ:77:HIS:CD2	41:BJ:84:ILE:H	2.30	0.49
45:BS:24:ILE:CG2	45:BS:71:VAL:HG11	2.34	0.49
47:BF:55:ASP:OD2	47:BF:149:ARG:HG3	2.13	0.49
53:B6:3:LEU:HD11	53:B6:149:LEU:HD11	1.95	0.49
53:B6:106:LEU:HD12	53:B6:111:ARG:HD2	1.93	0.49
1:CA:100:G:H2'	1:CA:101:A:O4'	2.13	0.49
1:CA:430:A:OP1	3:CD:8:LEU:HD23	2.13	0.49
1:CA:443:C:H2'	1:CA:444:G:C8	2.48	0.49
1:CA:745:G:H2'	1:CA:746:A:C8	2.47	0.49
1:CA:922:G:H4'	4:CE:24:VAL:HA	1.95	0.49
1:CA:1021:A:H2'	1:CA:1022:A:O4'	2.13	0.49
6:CG:71:THR:HG22	6:CG:141:HIS:CE1	2.47	0.49
9:CJ:12:ALA:H	9:CJ:18:ILE:HD12	1.76	0.49
23:DB:7:G:H2'	23:DB:8:C:C6	2.48	0.49
23:DB:84:A:H4'	23:DB:85:G:O5'	2.13	0.49
23:DB:191:A:H2'	23:DB:192:C:C6	2.48	0.49
23:DB:565:C:O2'	23:DB:566:U:H5'	2.13	0.49
23:DB:622:G:H2'	23:DB:623:C:C6	2.48	0.49
23:DB:782:A:C2	25:DC:224:MET:HB3	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1485:U:H2'	23:DB:1486:U:H6	1.77	0.49
23:DB:1845:G:O2'	23:DB:1846:G:H5'	2.12	0.49
23:DB:2015:A:H2'	23:DB:2016:U:O4'	2.13	0.49
25:DC:4:LYS:HE2	25:DC:5:CYS:H	1.77	0.49
28:DP:3:ILE:HD13	28:DP:3:ILE:C	2.33	0.49
31:D0:41:HIS:HB2	42:DN:99:LYS:O	2.13	0.49
35:DV:4:ILE:HD11	35:DV:61:LEU:HB3	1.95	0.49
38:DM:32:GLY:HA3	38:DM:103:TYR:O	2.13	0.49
39:DX:1:MET:HG2	39:DX:4:LYS:HZ3	1.77	0.49
41:DJ:28:LEU:HD23	41:DJ:29:ALA:N	2.28	0.49
41:DJ:114:LEU:O	41:DJ:117:ALA:HB3	2.13	0.49
45:DS:96:ILE:HG23	45:DS:96:ILE:O	2.12	0.49
46:DU:24:VAL:HG22	46:DU:35:VAL:HG22	1.95	0.49
49:DR:40:MET:CG	49:DR:48:LYS:HA	2.43	0.49
51:DZ:49:LEU:HD13	51:DZ:51:VAL:CG2	2.43	0.49
53:D6:93:SER:N	53:D6:100:TYR:O	2.45	0.49
53:D6:151:GLU:HA	53:D6:154:THR:HG22	1.95	0.49
1:AA:409:U:H2'	1:AA:410:G:C8	2.48	0.48
1:AA:643:C:H5'	7:AH:31:LEU:HD13	1.95	0.48
1:AA:1330:U:C2'	1:AA:1331:G:H5'	2.43	0.48
5:AF:70:VAL:HG23	5:AF:71:ILE:N	2.28	0.48
7:AH:112:ASP:CG	7:AH:113:ARG:H	2.17	0.48
14:AO:71:LYS:HB2	14:AO:78:TYR:CD2	2.48	0.48
22:BA:53:A:C2'	22:BA:54:G:H5'	2.43	0.48
23:BB:573:U:O2'	23:BB:574:A:H3'	2.13	0.48
23:BB:635:C:H2'	23:BB:636:G:C8	2.47	0.48
23:BB:753:A:O2'	23:BB:754:U:H5'	2.13	0.48
23:BB:796:C:H2'	23:BB:797:G:C8	2.47	0.48
23:BB:946:C:H2'	23:BB:947:A:H8	1.78	0.48
23:BB:1010:A:N3	23:BB:1153:C:H1'	2.28	0.48
23:BB:1023:U:H2'	23:BB:1024:G:H5'	1.94	0.48
23:BB:1463:C:H2'	23:BB:1464:G:C8	2.48	0.48
23:BB:1640:A:O2'	23:BB:1641:A:H5'	2.12	0.48
23:BB:1730:C:O2'	23:BB:1731:G:N2	2.45	0.48
23:BB:2699:C:H2'	23:BB:2700:A:C8	2.48	0.48
23:BB:2861:U:H2'	23:BB:2862:G:H8	1.77	0.48
25:BC:79:ARG:HD2	25:BC:81:GLU:CG	2.44	0.48
25:BC:243:PRO:O	25:BC:250:GLN:HA	2.12	0.48
28:BP:23:ASP:HA	28:BP:88:ARG:HA	1.95	0.48
41:BJ:23:LYS:HZ1	41:BJ:142:ILE:HA	1.79	0.48
41:BJ:81:ILE:HG12	41:BJ:82:GLY:N	2.27	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BS:41:LYS:NZ	45:BS:41:LYS:HB3	2.28	0.48
46:BU:43:LYS:HD3	46:BU:44:HIS:N	2.28	0.48
48:BG:112:VAL:HG12	48:BG:113:ASP:N	2.28	0.48
52:BW:49:ASN:HA	52:BW:61:LYS:H	1.78	0.48
1:CA:171:A:H2'	1:CA:172:A:C8	2.48	0.48
1:CA:642:A:H2'	1:CA:643:C:H6	1.77	0.48
1:CA:767:A:H2'	1:CA:768:A:C8	2.47	0.48
1:CA:833:G:H2'	1:CA:834:U:H6	1.77	0.48
1:CA:911:U:H2'	1:CA:912:C:C6	2.48	0.48
1:CA:968:A:H4'	1:CA:969:A:OP2	2.13	0.48
1:CA:1143:G:O2'	1:CA:1144:G:H5'	2.13	0.48
1:CA:1333:A:H2'	1:CA:1334:G:O4'	2.13	0.48
3:CD:145:ARG:HB3	3:CD:147:LYS:HD2	1.95	0.48
3:CD:164:ARG:HG3	3:CD:165:GLU:N	2.28	0.48
3:CD:169:TRP:C	3:CD:182:LYS:HB2	2.33	0.48
4:CE:81:GLN:N	4:CE:146:MET:HE3	2.25	0.48
7:CH:123:GLU:HG2	7:CH:124:ILE:O	2.13	0.48
11:CL:73:LEU:HD21	11:CL:103:CYS:SG	2.53	0.48
14:CO:85:LEU:HD12	14:CO:85:LEU:N	2.28	0.48
20:CB:42:LEU:HA	20:CB:45:THR:CB	2.43	0.48
21:CU:3:ILE:HD11	21:CU:22:CYS:SG	2.53	0.48
22:DA:23:G:H2'	22:DA:24:G:C8	2.48	0.48
22:DA:75:G:H2'	22:DA:76:G:C8	2.48	0.48
22:DA:88:C:H2'	22:DA:89:U:C5	2.48	0.48
23:DB:271:G:HO2'	23:DB:272:A:H8	1.61	0.48
23:DB:299:A:N6	23:DB:322:A:O2'	2.44	0.48
23:DB:307:G:N2	23:DB:309:A:H3'	2.28	0.48
23:DB:451:U:OP1	29:DE:47:LYS:HD2	2.14	0.48
23:DB:545:U:C5	23:DB:546:U:H1'	2.48	0.48
23:DB:909:A:H2'	23:DB:912:C:C5	2.48	0.48
23:DB:1439:A:N7	23:DB:1440:U:N1	2.61	0.48
23:DB:1812:U:H4'	25:DC:44:ASN:OD1	2.12	0.48
23:DB:1854:A:N6	23:DB:1888:G:H1'	2.27	0.48
23:DB:2047:C:H2'	23:DB:2048:G:H8	1.77	0.48
23:DB:2213:U:O2	23:DB:2213:U:C2'	2.59	0.48
23:DB:2276:G:OP2	38:DM:85:GLY:N	2.46	0.48
23:DB:2323:G:O2'	23:DB:2324:U:H5'	2.13	0.48
23:DB:2352:A:H2'	23:DB:2353:G:O4'	2.13	0.48
23:DB:2471:A:O2'	23:DB:2472:G:C8	2.54	0.48
23:DB:2869:G:H2'	23:DB:2870:C:C6	2.47	0.48
24:DI:57:VAL:HG23	24:DI:71:LYS:NZ	2.27	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:15:VAL:HG13	25:DC:204:LEU:O	2.13	0.48
27:DK:107:LEU:C	27:DK:109:SER:H	2.17	0.48
29:DE:88:ARG:O	29:DE:90:GLN:HG3	2.13	0.48
30:DY:5:LYS:O	30:DY:57:GLU:HB2	2.12	0.48
38:DM:31:PHE:HB3	38:DM:130:PHE:CZ	2.47	0.48
38:DM:35:ALA:HB3	38:DM:99:GLY:N	2.26	0.48
38:DM:49:ALA:HA	38:DM:123:LYS:HG3	1.95	0.48
42:DN:102:PHE:N	42:DN:102:PHE:CD1	2.80	0.48
43:DO:110:ALA:O	43:DO:115:LEU:HB2	2.13	0.48
44:DQ:86:SER:HB2	49:DR:51:VAL:HA	1.93	0.48
44:DQ:105:PHE:O	44:DQ:109:VAL:HG23	2.13	0.48
44:DQ:108:LEU:CA	49:DR:48:LYS:HD3	2.43	0.48
46:DU:27:VAL:CG2	46:DU:33:VAL:HG12	2.40	0.48
49:DR:14:VAL:HG22	49:DR:15:SER:H	1.76	0.48
50:DT:11:LEU:CD2	50:DT:46:ALA:HB1	2.43	0.48
53:D6:59:THR:O	53:D6:61:PRO:HD3	2.12	0.48
1:AA:399:G:H2'	1:AA:400:C:C6	2.48	0.48
1:AA:440:C:O2'	1:AA:441:A:H5'	2.13	0.48
1:AA:1053:G:C3'	1:AA:1054:C:H5'	2.43	0.48
3:AD:29:THR:HG22	3:AD:30:LYS:HD3	1.95	0.48
4:AE:44:ARG:HD2	4:AE:72:ASN:ND2	2.28	0.48
10:AK:33:ILE:HG13	10:AK:73:VAL:HG21	1.94	0.48
20:AB:59:ILE:HD12	20:AB:60:ALA:N	2.29	0.48
20:AB:69:VAL:HB	20:AB:162:VAL:CB	2.43	0.48
23:BB:178:G:O2'	23:BB:179:C:H5'	2.13	0.48
23:BB:561:G:O2'	44:BQ:44:TYR:OH	2.30	0.48
23:BB:603:A:H4'	23:BB:604:G:O5'	2.13	0.48
23:BB:672:C:H2'	23:BB:673:C:C6	2.48	0.48
23:BB:820:A:H2'	23:BB:821:A:O4'	2.12	0.48
23:BB:1165:A:H2'	23:BB:1166:G:H8	1.78	0.48
23:BB:1400:U:H2'	23:BB:1401:G:H8	1.76	0.48
23:BB:1727:C:H2'	23:BB:1728:C:O4'	2.13	0.48
23:BB:2047:C:H2'	23:BB:2048:G:H8	1.78	0.48
23:BB:2060:A:C2'	29:BE:63:LYS:HZ1	2.25	0.48
23:BB:2323:G:C2'	23:BB:2324:U:H5'	2.42	0.48
23:BB:2367:G:O2'	23:BB:2368:C:H5'	2.13	0.48
23:BB:2394:C:OP1	37:BL:63:LYS:HG2	2.13	0.48
23:BB:2560:A:H2'	23:BB:2561:U:H6	1.77	0.48
23:BB:2839:G:O2'	23:BB:2840:C:H5'	2.13	0.48
24:BI:52:LEU:HD12	24:BI:52:LEU:N	2.28	0.48
24:BI:125:THR:O	24:BI:129:GLU:HG3	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:173:LEU:HD13	25:BC:173:LEU:N	2.27	0.48
29:BE:61:ARG:O	29:BE:62:GLN:C	2.50	0.48
29:BE:193:VAL:O	29:BE:197:GLU:HB2	2.12	0.48
34:B3:30:HIS:HD2	34:B3:31:ILE:H	1.61	0.48
35:BV:28:ALA:HA	35:BV:88:HIS:CE1	2.48	0.48
37:BL:89:VAL:O	37:BL:89:VAL:HG13	2.13	0.48
41:BJ:114:LEU:O	41:BJ:117:ALA:HB3	2.14	0.48
44:BQ:60:TRP:CZ2	44:BQ:93:ILE:HB	2.47	0.48
47:BF:78:ILE:HD12	47:BF:78:ILE:N	2.27	0.48
51:BZ:63:GLY:O	51:BZ:66:THR:N	2.46	0.48
52:BW:65:LYS:O	52:BW:81:ILE:HA	2.14	0.48
1:CA:176:C:H2'	1:CA:177:G:N3	2.28	0.48
1:CA:233:C:H2'	1:CA:234:C:H6	1.78	0.48
1:CA:613:C:P	3:CD:80:ARG:HH21	2.36	0.48
1:CA:810:C:O2'	1:CA:811:C:H5'	2.13	0.48
1:CA:903:G:O2'	1:CA:904:U:H5'	2.13	0.48
10:CK:51:PHE:HB2	10:CK:55:ARG:HB3	1.95	0.48
12:CM:106:ARG:HH12	12:CM:109:LYS:CE	2.26	0.48
20:CB:216:VAL:O	20:CB:220:VAL:HG23	2.13	0.48
21:CU:40:PRO:C	21:CU:42:THR:N	2.66	0.48
23:DB:608:A:H2'	23:DB:609:A:H8	1.76	0.48
23:DB:1050:A:H2'	23:DB:1051:G:H8	1.79	0.48
23:DB:1099:G:N7	24:DI:3:LYS:CD	2.76	0.48
23:DB:2229:U:H2'	23:DB:2230:G:C8	2.45	0.48
23:DB:2457:U:C2'	23:DB:2458:G:H5'	2.43	0.48
23:DB:2557:G:H2'	23:DB:2558:C:H6	1.74	0.48
23:DB:2886:A:H62	31:D0:39:ARG:CD	2.26	0.48
26:DD:97:SER:HB3	26:DD:99:GLU:HG3	1.94	0.48
27:DK:35:VAL:HG12	27:DK:69:VAL:HG22	1.95	0.48
38:DM:55:ARG:HG3	38:DM:55:ARG:HH21	1.77	0.48
40:DH:47:PHE:O	40:DH:51:ARG:N	2.45	0.48
45:DS:31:GLN:C	45:DS:33:LEU:H	2.15	0.48
46:DU:48:VAL:H	46:DU:53:GLN:HB2	1.78	0.48
47:DF:33:ILE:HB	47:DF:90:LEU:HB2	1.95	0.48
47:DF:163:GLU:CA	47:DF:166:ARG:HD2	2.35	0.48
49:DR:74:ILE:HB	49:DR:87:GLN:O	2.12	0.48
53:D6:16:LYS:O	53:D6:20:VAL:HG23	2.13	0.48
1:AA:233:C:H2'	1:AA:234:C:H6	1.79	0.48
1:AA:960:U:O3'	1:AA:1223:C:H4'	2.13	0.48
1:AA:1227:A:O2'	12:AM:113:LYS:HE2	2.13	0.48
1:AA:1342:C:H5'	8:AI:127:SER:HA	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1430:A:H2'	1:AA:1431:A:O4'	2.12	0.48
2:AC:51:VAL:HA	2:AC:69:THR:HA	1.94	0.48
5:AF:3:HIS:CE1	5:AF:95:ALA:HB2	2.49	0.48
6:AG:15:PRO:HG2	6:AG:43:TYR:OH	2.13	0.48
6:AG:71:THR:HG22	6:AG:141:HIS:CE1	2.48	0.48
6:AG:129:ASN:HA	6:AG:134:VAL:HG21	1.95	0.48
14:AO:14:GLU:HB3	14:AO:84:ARG:NH2	2.27	0.48
23:BB:522:A:H2'	23:BB:523:C:C6	2.47	0.48
23:BB:729:G:H2'	23:BB:1775:U:H1'	1.95	0.48
23:BB:1353:A:O2'	23:BB:1354:A:H5'	2.13	0.48
23:BB:1439:A:N7	23:BB:1440:U:N1	2.62	0.48
23:BB:1526:C:H2'	23:BB:1527:G:O4'	2.14	0.48
23:BB:1733:G:H2'	23:BB:1734:G:C8	2.48	0.48
23:BB:2247:A:H2'	23:BB:2248:C:C6	2.47	0.48
23:BB:2543:G:H2'	23:BB:2544:G:C8	2.48	0.48
23:BB:2667:C:H2'	23:BB:2668:G:O4'	2.13	0.48
24:BI:21:PRO:CB	24:BI:22:PRO:HD3	2.40	0.48
24:BI:85:ILE:CD1	24:BI:137:LEU:HD21	2.43	0.48
30:BY:8:GLN:HB3	30:BY:31:ILE:C	2.33	0.48
32:B4:7:VAL:HG13	32:B4:8:LYS:N	2.24	0.48
42:BN:63:ARG:HD2	42:BN:80:PHE:CD2	2.48	0.48
43:BO:3:LYS:HD3	43:BO:3:LYS:N	2.18	0.48
43:BO:6:ALA:HB3	43:BO:10:ARG:HH11	1.78	0.48
44:BQ:94:LEU:HD12	49:BR:13:ARG:HB2	1.94	0.48
46:BU:38:ILE:HG23	46:BU:39:ASN:N	2.29	0.48
47:BF:4:HIS:O	47:BF:7:TYR:HB3	2.12	0.48
53:B6:85:ASP:O	53:B6:86:SER:HB2	2.12	0.48
53:B6:134:ARG:HH22	53:B6:135:GLU:HG2	1.75	0.48
1:CA:76:G:H2'	1:CA:77:A:H8	1.78	0.48
1:CA:131:A:H2'	1:CA:132:C:C6	2.48	0.48
1:CA:254:G:O2'	1:CA:255:G:H5'	2.13	0.48
1:CA:389:A:H3'	1:CA:390:U:C6	2.46	0.48
1:CA:1165:U:H2'	1:CA:1166:G:O4'	2.12	0.48
1:CA:1514:G:H2'	1:CA:1515:G:H8	1.79	0.48
4:CE:82:HIS:CD2	7:CH:95:MET:HG3	2.48	0.48
7:CH:9:MET:O	7:CH:13:ILE:HG13	2.13	0.48
8:CI:23:GLY:HA3	8:CI:61:ASP:OD1	2.13	0.48
9:CJ:73:LEU:CD1	9:CJ:75:ASP:HB2	2.43	0.48
15:CP:38:PHE:CD2	15:CP:51:ARG:HB2	2.49	0.48
16:CQ:10:ARG:HH21	16:CQ:55:GLY:H	1.61	0.48
18:CS:20:LYS:O	18:CS:20:LYS:HD2	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CT:71:ALA:O	19:CT:74:HIS:HB2	2.13	0.48
20:CB:23:ASN:HD22	20:CB:24:PRO:CD	2.25	0.48
20:CB:69:VAL:HB	20:CB:162:VAL:CB	2.44	0.48
23:DB:62:U:H3'	23:DB:63:A:H8	1.77	0.48
23:DB:138:U:H2'	23:DB:140:C:O4'	2.13	0.48
23:DB:636:G:H3'	37:DL:128:THR:CG2	2.44	0.48
23:DB:839:U:H2'	23:DB:840:C:C6	2.48	0.48
23:DB:917:A:H5"	23:DB:2268:A:H61	1.78	0.48
23:DB:1335:C:H2'	23:DB:1336:A:C8	2.49	0.48
23:DB:1346:G:O2'	23:DB:1347:A:H5'	2.13	0.48
23:DB:1515:A:H4'	23:DB:1556:C:O2'	2.12	0.48
23:DB:2091:C:H1'	51:DZ:34:HIS:CD2	2.48	0.48
23:DB:2309:A:N6	47:DF:75:GLY:HA3	2.29	0.48
23:DB:2720:U:H2'	23:DB:2721:A:C8	2.48	0.48
23:DB:2814:A:C4'	31:D0:25:THR:HG21	2.41	0.48
25:DC:243:PRO:O	25:DC:250:GLN:HA	2.12	0.48
26:DD:62:LYS:HB2	26:DD:63:PRO:HD3	1.95	0.48
27:DK:63:VAL:HG21	27:DK:85:VAL:HG23	1.94	0.48
29:DE:73:ILE:HG12	29:DE:73:ILE:O	2.12	0.48
35:DV:5:ASN:HA	35:DV:64:VAL:O	2.12	0.48
37:DL:30:THR:O	37:DL:31:GLY:C	2.51	0.48
42:DN:59:SER:C	42:DN:61:ALA:H	2.17	0.48
44:DQ:35:PHE:O	44:DQ:39:ILE:HG12	2.13	0.48
44:DQ:60:TRP:HB3	44:DQ:92:LYS:O	2.13	0.48
44:DQ:63:ARG:HH12	44:DQ:96:ASP:HA	1.77	0.48
46:DU:38:ILE:HG23	46:DU:39:ASN:N	2.27	0.48
47:DF:2:LYS:HD2	47:DF:100:GLU:HG2	1.95	0.48
47:DF:102:LEU:C	47:DF:104:THR:H	2.16	0.48
48:DG:29:ASN:HD21	48:DG:81:GLY:HA2	1.77	0.48
49:DR:7:SER:HB2	49:DR:22:LEU:HD22	1.93	0.48
53:D6:36:ALA:CA	53:D6:39:LEU:HD23	2.43	0.48
1:AA:33:A:O2'	1:AA:34:C:H5'	2.13	0.48
1:AA:189:A:H2'	1:AA:190:A:C8	2.47	0.48
1:AA:633:G:H2'	1:AA:634:C:C6	2.48	0.48
1:AA:658:C:H2'	1:AA:659:U:H6	1.78	0.48
1:AA:972:C:P	9:AJ:59:LYS:HD3	2.53	0.48
1:AA:1182:G:H4'	1:AA:1183:U:C5'	2.44	0.48
1:AA:1186:G:H4'	8:AI:111:GLU:OE1	2.12	0.48
1:AA:1270:G:H2'	1:AA:1271:A:C8	2.48	0.48
1:AA:1366:C:H2'	1:AA:1367:C:C6	2.48	0.48
2:AC:38:VAL:HG23	2:AC:39:ARG:N	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:25:ARG:HD3	3:AD:25:ARG:C	2.33	0.48
7:AH:83:ARG:C	7:AH:84:ILE:HG13	2.32	0.48
8:AI:71:ILE:HD12	8:AI:71:ILE:N	2.28	0.48
12:AM:78:ARG:NH2	12:AM:82:LEU:HD11	2.28	0.48
12:AM:90:HIS:HA	12:AM:108:ARG:NH2	2.27	0.48
18:AS:50:VAL:O	18:AS:57:VAL:HG22	2.13	0.48
20:AB:25:LYS:HD3	20:AB:193:ASP:OD2	2.14	0.48
20:AB:93:HIS:O	20:AB:94:ARG:C	2.51	0.48
20:AB:109:SER:O	20:AB:112:ARG:HB3	2.13	0.48
23:BB:559:G:H21	44:BQ:51:GLN:HE22	1.60	0.48
23:BB:584:C:OP2	44:BQ:5:ARG:HD3	2.14	0.48
23:BB:1172:C:H2'	23:BB:1173:U:C1'	2.43	0.48
23:BB:1339:G:H21	23:BB:1603:A:H1'	1.78	0.48
23:BB:1456:G:O2'	23:BB:1457:U:H5'	2.13	0.48
23:BB:1672:A:O4'	23:BB:2553:G:H4'	2.13	0.48
23:BB:1708:C:O2'	23:BB:1709:U:H5'	2.14	0.48
23:BB:1785:A:O2'	23:BB:1786:A:H2'	2.12	0.48
23:BB:1983:G:H4'	23:BB:2606:C:H4'	1.95	0.48
23:BB:2795:C:O5'	23:BB:2795:C:H6	1.96	0.48
24:BI:62:ALA:C	24:BI:64:ARG:H	2.16	0.48
27:BK:35:VAL:HG12	27:BK:69:VAL:CG2	2.43	0.48
29:BE:126:VAL:CG2	29:BE:133:LEU:HB2	2.43	0.48
37:BL:143:GLU:CG	37:BL:144:GLU:H	1.98	0.48
40:BH:89:LYS:HZ1	40:BH:123:ARG:CB	2.27	0.48
43:BO:30:ARG:HG3	43:BO:30:ARG:HH11	1.78	0.48
43:BO:56:LYS:O	43:BO:60:GLU:HG2	2.13	0.48
44:BQ:91:ARG:CB	44:BQ:94:LEU:HD23	2.44	0.48
48:BG:83:THR:HA	48:BG:84:LYS:HZ3	1.76	0.48
1:CA:83:C:H1'	1:CA:84:U:C6	2.48	0.48
1:CA:551:U:H2'	1:CA:552:U:H6	1.77	0.48
1:CA:737:C:H2'	1:CA:738:C:C6	2.48	0.48
1:CA:897:C:C2'	1:CA:898:G:H5'	2.43	0.48
1:CA:1175:G:O2'	1:CA:1176:A:H5'	2.13	0.48
1:CA:1292:G:H2'	1:CA:1293:C:C6	2.48	0.48
1:CA:1349:A:P	8:CI:119:LYS:HD2	2.53	0.48
5:CF:53:LYS:NZ	5:CF:53:LYS:N	2.61	0.48
8:CI:70:GLY:O	8:CI:74:GLN:HB2	2.14	0.48
9:CJ:80:THR:HG21	9:CJ:82:LYS:HE2	1.96	0.48
12:CM:1:ALA:C	12:CM:8:ILE:HG22	2.33	0.48
15:CP:28:ARG:CD	15:CP:29:ASN:H	2.26	0.48
20:CB:57:ASN:HB2	20:CB:223:GLY:CA	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:112:ARG:HE	20:CB:116:LEU:HD11	1.77	0.48
23:DB:357:C:H2'	23:DB:358:U:C5	2.48	0.48
23:DB:1180:U:H2'	23:DB:1181:U:C6	2.47	0.48
23:DB:1372:U:O2'	23:DB:1373:A:H5'	2.12	0.48
23:DB:2020:A:O2'	23:DB:2021:C:H5'	2.13	0.48
23:DB:2092:U:H4'	23:DB:2093:G:O5'	2.14	0.48
23:DB:2352:A:H8	23:DB:2352:A:O5'	1.96	0.48
23:DB:2700:A:O2'	23:DB:2701:U:H5'	2.13	0.48
27:DK:97:THR:C	27:DK:98:ARG:HE	2.15	0.48
35:DV:28:ALA:HA	35:DV:88:HIS:CE1	2.48	0.48
40:DH:7:ASP:CA	40:DH:15:LEU:HD22	2.33	0.48
45:DS:29:VAL:CA	45:DS:32:ALA:HB3	2.43	0.48
47:DF:11:VAL:O	47:DF:12:VAL:HB	2.12	0.48
47:DF:32:LYS:H	47:DF:95:MET:HE1	1.77	0.48
47:DF:34:THR:O	47:DF:35:LEU:HB2	2.13	0.48
47:DF:121:PHE:HB3	47:DF:127:TYR:CZ	2.47	0.48
53:D6:18:LEU:HD21	53:D6:171:LYS:HB3	1.95	0.48
53:D6:41:LEU:HD23	53:D6:83:ILE:HD13	1.94	0.48
1:AA:398:U:H2'	1:AA:399:G:H8	1.78	0.48
1:AA:610:U:O2	1:AA:610:U:O4'	2.31	0.48
1:AA:612:C:H2'	1:AA:613:C:C6	2.47	0.48
1:AA:677:U:H2'	1:AA:678:U:C6	2.48	0.48
1:AA:906:A:C2'	1:AA:907:A:H5"	2.44	0.48
2:AC:2:GLN:HE22	2:AC:3:LYS:HZ2	1.60	0.48
2:AC:38:VAL:O	2:AC:42:LEU:HD23	2.13	0.48
8:AI:26:LYS:N	8:AI:61:ASP:CB	2.70	0.48
9:AJ:88:MET:SD	9:AJ:88:MET:N	2.87	0.48
13:AN:50:LEU:HD23	13:AN:51:PRO:HD3	1.95	0.48
15:AP:12:LYS:C	15:AP:14:ARG:H	2.16	0.48
17:AR:60:ARG:O	17:AR:64:LEU:HD13	2.13	0.48
23:BB:191:A:H2'	23:BB:192:C:C6	2.48	0.48
23:BB:391:A:H1'	23:BB:411:G:O4'	2.13	0.48
23:BB:393:C:O2'	23:BB:394:C:H5'	2.13	0.48
23:BB:836:G:H2'	23:BB:837:C:H6	1.78	0.48
23:BB:1076:C:C5'	24:BI:94:LYS:NZ	2.76	0.48
23:BB:1286:A:H1'	23:BB:1288:G:OP2	2.13	0.48
23:BB:1365:A:OP2	51:BZ:3:ARG:HB2	2.13	0.48
23:BB:1693:U:H4'	23:BB:1694:C:OP2	2.14	0.48
23:BB:1865:U:HO2'	23:BB:1866:A:H8	1.61	0.48
23:BB:1951:U:H2'	23:BB:1953:A:OP2	2.14	0.48
23:BB:1984:G:O2'	23:BB:1985:C:H5'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2015:A:C2	31:B0:2:VAL:HG13	2.47	0.48
23:BB:2305:U:H2'	23:BB:2306:C:O4'	2.13	0.48
23:BB:2359:C:O2'	23:BB:2360:G:H5'	2.13	0.48
25:BC:153:LEU:HD13	25:BC:175:LEU:CD2	2.43	0.48
26:BD:125:TRP:CD2	26:BD:160:LYS:HB3	2.48	0.48
26:BD:151:THR:N	26:BD:152:PRO:CD	2.77	0.48
26:BD:204:LYS:HB2	26:BD:205:PRO:HD2	1.95	0.48
30:BY:13:ILE:HG22	30:BY:14:GLY:N	2.28	0.48
35:BV:20:LEU:HB3	35:BV:25:LYS:O	2.13	0.48
39:BX:23:ARG:O	39:BX:27:ASN:N	2.46	0.48
40:BH:99:ILE:HG13	40:BH:115:VAL:HG12	1.95	0.48
42:BN:59:SER:C	42:BN:61:ALA:H	2.17	0.48
45:BS:59:GLU:OE2	45:BS:66:ILE:HG23	2.13	0.48
50:BT:32:LEU:O	50:BT:83:ALA:HB2	2.13	0.48
53:B6:129:ILE:HA	53:B6:132:ILE:HD12	1.94	0.48
1:CA:492:C:H2'	1:CA:493:A:N3	2.29	0.48
1:CA:539:A:H2'	1:CA:540:G:H8	1.74	0.48
1:CA:735:C:O2'	1:CA:736:C:H5'	2.12	0.48
1:CA:859:G:O2'	1:CA:860:A:H5'	2.13	0.48
1:CA:1008:U:H2'	1:CA:1009:U:C5'	2.42	0.48
1:CA:1133:G:H2'	1:CA:1134:G:O4'	2.13	0.48
1:CA:1246:A:H2'	1:CA:1247:U:O4'	2.14	0.48
2:CC:102:ILE:HD12	2:CC:102:ILE:N	2.29	0.48
4:CE:99:SER:HB3	4:CE:102:THR:OG1	2.14	0.48
6:CG:125:ASP:HB3	6:CG:130:LYS:HB3	1.96	0.48
7:CH:77:VAL:HG21	7:CH:127:TYR:CE1	2.47	0.48
8:CI:84:ARG:O	8:CI:87:MET:HB3	2.13	0.48
10:CK:51:PHE:CZ	10:CK:61:ALA:HA	2.48	0.48
12:CM:84:CYS:SG	12:CM:86:ARG:HB2	2.53	0.48
12:CM:95:PRO:HB2	12:CM:99:GLN:OE1	2.12	0.48
15:CP:52:LEU:CD2	15:CP:75:ILE:HA	2.43	0.48
20:CB:99:MET:HA	20:CB:106:VAL:HG21	1.95	0.48
23:DB:729:G:H2'	23:DB:1775:U:H1'	1.94	0.48
23:DB:787:C:H5"	23:DB:788:A:H5'	1.96	0.48
23:DB:1252:G:N2	44:DQ:32:ARG:HB3	2.28	0.48
23:DB:1439:A:N7	23:DB:1440:U:C6	2.82	0.48
23:DB:1576:U:O2'	23:DB:1577:C:H5'	2.13	0.48
23:DB:1904:G:O2'	23:DB:1905:C:H5'	2.13	0.48
24:DI:72:THR:CG2	24:DI:112:LYS:HD2	2.43	0.48
29:DE:58:LYS:HB2	29:DE:60:TRP:CD1	2.48	0.48
29:DE:75:SER:O	29:DE:78:TRP:N	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DV:65:VAL:C	35:DV:67:GLY:H	2.17	0.48
35:DV:70:ILE:CD1	35:DV:71:LYS:H	2.22	0.48
38:DM:18:ARG:HD2	38:DM:18:ARG:HA	1.66	0.48
42:DN:79:LEU:O	42:DN:80:PHE:HB2	2.14	0.48
46:DU:14:THR:O	46:DU:18:LYS:HG2	2.12	0.48
46:DU:86:PHE:HE1	46:DU:88:ASP:HB3	1.78	0.48
46:DU:94:PHE:HB3	46:DU:101:THR:HA	1.96	0.48
47:DF:34:THR:OG1	47:DF:154:THR:HB	2.14	0.48
49:DR:2:TYR:HB2	49:DR:42:ALA:CB	2.37	0.48
52:DW:30:VAL:HG21	52:DW:59:PHE:CE1	2.48	0.48
1:AA:100:G:H2'	1:AA:101:A:O4'	2.13	0.48
1:AA:844:G:H8	1:AA:844:G:OP2	1.97	0.48
1:AA:1200:C:H3'	1:AA:1201:A:H5'	1.95	0.48
2:AC:46:LEU:HD12	2:AC:75:VAL:HG22	1.95	0.48
6:AG:46:LEU:HG	6:AG:57:GLU:CB	2.44	0.48
7:AH:6:ILE:O	7:AH:10:LEU:HG	2.13	0.48
7:AH:40:LYS:HE3	7:AH:47:ASP:OD1	2.12	0.48
8:AI:20:ILE:HG12	8:AI:86:LEU:HD12	1.95	0.48
9:AJ:73:LEU:CD1	9:AJ:75:ASP:HB2	2.43	0.48
11:AL:66:ILE:HG21	11:AL:71:HIS:HB3	1.95	0.48
18:AS:39:ILE:HB	18:AS:66:VAL:HA	1.94	0.48
22:BA:50:A:OP1	43:BO:68:LYS:HB2	2.14	0.48
22:BA:88:C:H2'	22:BA:89:U:C6	2.48	0.48
23:BB:176:A:H3'	23:BB:177:G:H21	1.78	0.48
23:BB:322:A:P	29:BE:163:ASN:HD22	2.36	0.48
23:BB:1287:A:N7	42:BN:105:GLY:HA3	2.28	0.48
23:BB:1549:A:H2'	23:BB:1550:C:C6	2.48	0.48
23:BB:1690:A:H2'	23:BB:1691:C:O4'	2.13	0.48
23:BB:2752:C:H3'	23:BB:2753:A:H8	1.77	0.48
26:BD:111:GLY:H	26:BD:194:PRO:HG2	1.79	0.48
29:BE:103:GLY:O	29:BE:106:LYS:HB2	2.13	0.48
29:BE:118:LEU:HD23	29:BE:186:VAL:HG13	1.95	0.48
30:BY:21:ALA:O	30:BY:24:LEU:HB3	2.14	0.48
33:B1:51:ALA:O	33:B1:52:LYS:C	2.51	0.48
34:B3:50:SER:O	34:B3:52:GLY:N	2.46	0.48
36:B2:28:ARG:C	36:B2:30:VAL:H	2.16	0.48
37:BL:68:SER:HB2	37:BL:71:ALA:H	1.78	0.48
38:BM:33:LEU:HD22	38:BM:128:THR:HB	1.96	0.48
40:BH:5:LEU:HD22	40:BH:9:VAL:HG21	1.96	0.48
40:BH:132:PHE:HB2	40:BH:142:VAL:CG2	2.43	0.48
42:BN:101:GLY:O	42:BN:102:PHE:HB2	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BT:7:LEU:C	50:BT:9:LYS:H	2.17	0.48
51:BZ:6:GLN:HE22	51:BZ:50:ARG:H	1.61	0.48
1:CA:82:G:H2'	1:CA:83:C:C6	2.49	0.48
1:CA:261:U:H2'	1:CA:263:A:OP2	2.13	0.48
1:CA:332:G:O2'	1:CA:333:U:H5'	2.13	0.48
1:CA:652:U:H1'	1:CA:653:U:C5	2.48	0.48
1:CA:932:C:OP1	6:CG:3:ARG:HD3	2.14	0.48
1:CA:993:G:C2'	1:CA:995:C:H41	2.22	0.48
1:CA:1244:G:H2'	1:CA:1245:C:C6	2.49	0.48
3:CD:25:ARG:NH1	3:CD:30:LYS:HE3	2.29	0.48
4:CE:154:ALA:HB1	7:CH:65:PHE:CZ	2.48	0.48
4:CE:156:ARG:HB3	7:CH:43:GLY:O	2.14	0.48
6:CG:110:ARG:HH11	6:CG:110:ARG:HB3	1.79	0.48
20:CB:44:LYS:C	20:CB:47:PRO:HD2	2.34	0.48
23:DB:318:C:O2'	23:DB:319:G:H5'	2.14	0.48
23:DB:419:U:H2'	23:DB:420:C:H6	1.77	0.48
23:DB:514:A:N6	23:DB:515:A:N6	2.61	0.48
23:DB:736:C:H2'	23:DB:737:C:H6	1.79	0.48
23:DB:991:C:H5'	23:DB:991:C:H6	1.77	0.48
23:DB:1460:U:H5"	23:DB:1461:C:O4'	2.13	0.48
23:DB:1793:C:H2'	23:DB:1794:A:C8	2.47	0.48
23:DB:1973:G:O2'	23:DB:1974:C:H5'	2.13	0.48
23:DB:2330:G:O2'	23:DB:2331:G:H5'	2.14	0.48
23:DB:2649:C:H2'	23:DB:2650:U:C6	2.49	0.48
23:DB:2886:A:N6	31:D0:39:ARG:CZ	2.76	0.48
24:DI:2:LYS:C	24:DI:3:LYS:HD2	2.33	0.48
26:DD:114:LYS:HE3	26:DD:116:LYS:HG2	1.96	0.48
35:DV:63:ILE:HB	35:DV:70:ILE:CD1	2.44	0.48
35:DV:80:HIS:CD2	35:DV:81:PRO:HD2	2.49	0.48
36:D2:10:LEU:HD22	36:D2:14:ARG:NE	2.28	0.48
39:DX:23:ARG:HA	39:DX:27:ASN:H	1.78	0.48
40:DH:125:THR:HA	40:DH:146:VAL:CG1	2.44	0.48
47:DF:169:LEU:O	47:DF:174:PHE:HB2	2.14	0.48
48:DG:75:VAL:O	48:DG:78:VAL:HG22	2.14	0.48
52:DW:48:ALA:O	52:DW:61:LYS:HB2	2.13	0.48
53:D6:114:LEU:HB3	53:D6:183:ILE:HG21	1.95	0.48
1:AA:737:C:H2'	1:AA:738:C:C6	2.49	0.48
1:AA:830:G:H2'	1:AA:831:A:H8	1.79	0.48
1:AA:1113:C:O2'	1:AA:1114:C:H5'	2.14	0.48
1:AA:1132:C:O2'	1:AA:1133:G:H5'	2.14	0.48
1:AA:1278:G:H4'	1:AA:1279:G:O5'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:39:ARG:CZ	2:AC:56:ILE:HD12	2.44	0.48
3:AD:201:GLU:OE1	4:AE:104:ILE:HG22	2.14	0.48
4:AE:114:LEU:HD13	4:AE:122:VAL:HG21	1.95	0.48
5:AF:38:ARG:HH21	5:AF:63:ASN:HD21	1.60	0.48
9:AJ:59:LYS:HG3	9:AJ:60:ASP:N	2.28	0.48
10:AK:64:VAL:O	10:AK:67:GLU:HG2	2.12	0.48
10:AK:88:PRO:HD3	21:AU:28:LEU:HD13	1.96	0.48
14:AO:56:LEU:HD12	14:AO:59:MET:HE2	1.94	0.48
20:AB:80:LYS:HG3	20:AB:81:ASP:N	2.28	0.48
23:BB:98:G:H2'	23:BB:99:U:H5'	1.95	0.48
23:BB:621:A:H2'	23:BB:622:G:O4'	2.13	0.48
23:BB:685:A:H1'	23:BB:688:U:O4	2.13	0.48
23:BB:781:A:OP1	25:BC:216:ARG:NH2	2.46	0.48
23:BB:1050:A:H2'	23:BB:1051:G:H8	1.79	0.48
23:BB:1220:G:H2'	23:BB:1221:C:C6	2.49	0.48
23:BB:1737:G:H5'	23:BB:1738:G:OP2	2.14	0.48
23:BB:1833:C:O2'	23:BB:1834:U:H5'	2.13	0.48
23:BB:2215:C:H2'	23:BB:2216:G:H8	1.78	0.48
23:BB:2314:A:H4'	47:BF:34:THR:HG21	1.94	0.48
24:BI:52:LEU:HD21	24:BI:81:LYS:NZ	2.29	0.48
29:BE:109:LEU:O	29:BE:112:LEU:HB2	2.12	0.48
29:BE:196:VAL:HA	29:BE:199:MET:HB3	1.96	0.48
33:B1:7:LYS:CD	34:B3:33:THR:HG21	2.42	0.48
33:B1:10:LEU:HD23	33:B1:35:LEU:HD21	1.96	0.48
37:BL:101:ILE:HG22	37:BL:105:ILE:HG13	1.96	0.48
38:BM:18:ARG:HA	38:BM:18:ARG:HD2	1.66	0.48
40:BH:90:LEU:CG	40:BH:146:VAL:HG11	2.43	0.48
40:BH:108:VAL:HG12	40:BH:109:GLU:N	2.28	0.48
42:BN:63:ARG:O	42:BN:66:ALA:HB3	2.14	0.48
43:BO:14:ALA:C	43:BO:16:ARG:H	2.17	0.48
44:BQ:108:LEU:CA	49:BR:48:LYS:HD3	2.44	0.48
48:BG:94:ARG:NH2	48:BG:105:SER:N	2.62	0.48
51:BZ:17:ASN:O	51:BZ:18:ARG:C	2.51	0.48
53:B6:109:GLU:HA	53:B6:112:LYS:HD2	1.95	0.48
1:CA:189:A:H2'	1:CA:190:A:C8	2.49	0.48
1:CA:747:A:H2'	1:CA:748:G:O4'	2.13	0.48
1:CA:807:A:H2'	1:CA:808:C:C6	2.49	0.48
2:CC:110:LEU:HD22	2:CC:145:ALA:HB2	1.96	0.48
3:CD:2:ARG:NH1	3:CD:114:ARG:HG3	2.28	0.48
6:CG:91:ARG:HB3	6:CG:92:PRO:HD2	1.94	0.48
9:CJ:92:LEU:HD13	9:CJ:92:LEU:N	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CL:49:ARG:HD2	11:CL:49:ARG:H	1.77	0.48
11:CL:66:ILE:HG21	11:CL:71:HIS:HB3	1.96	0.48
13:CN:46:LYS:NZ	18:CS:10:ILE:H	2.10	0.48
14:CO:71:LYS:HB2	14:CO:78:TYR:CG	2.49	0.48
20:CB:83:ALA:CB	20:CB:90:PHE:HB3	2.43	0.48
20:CB:103:TRP:CZ3	20:CB:107:ARG:HD2	2.49	0.48
22:DA:53:A:C2'	22:DA:54:G:H5'	2.43	0.48
23:DB:191:A:O2'	23:DB:192:C:H5'	2.14	0.48
23:DB:712:G:H2'	23:DB:713:G:O4'	2.14	0.48
23:DB:930:G:H1'	30:DY:24:LEU:HD11	1.96	0.48
23:DB:1099:G:H5"	24:DI:2:LYS:HB2	1.96	0.48
23:DB:1455:G:H5'	42:DN:60:VAL:HG21	1.95	0.48
23:DB:1794:A:H2'	23:DB:1795:C:C6	2.48	0.48
23:DB:2143:C:C4	23:DB:2144:G:H1'	2.48	0.48
23:DB:2290:G:H2'	23:DB:2291:U:C6	2.49	0.48
25:DC:264:LYS:HG3	25:DC:265:PHE:HD2	1.79	0.48
26:DD:30:GLU:HB2	26:DD:52:THR:CG2	2.44	0.48
26:DD:125:TRP:CE3	26:DD:160:LYS:HD3	2.49	0.48
36:D2:34:ARG:HG2	36:D2:34:ARG:NH1	2.28	0.48
40:DH:49:ALA:O	40:DH:53:GLU:HB2	2.13	0.48
42:DN:69:ARG:HD3	42:DN:69:ARG:H	1.79	0.48
45:DS:24:ILE:CG2	45:DS:71:VAL:HG11	2.34	0.48
47:DF:41:GLU:CB	47:DF:48:LEU:HD11	2.40	0.48
47:DF:113:PHE:HZ	47:DF:175:PRO:HB2	1.77	0.48
47:DF:115:GLY:CA	47:DF:177:ARG:HH11	2.26	0.48
47:DF:131:VAL:HG23	47:DF:133:GLU:H	1.79	0.48
48:DG:54:ARG:O	48:DG:57:TYR:HD1	1.97	0.48
48:DG:115:GLN:CD	48:DG:115:GLN:N	2.65	0.48
48:DG:163:TYR:O	48:DG:165:ASP:N	2.47	0.48
52:DW:65:LYS:O	52:DW:81:ILE:HA	2.14	0.48
1:AA:131:A:H2'	1:AA:132:C:C6	2.49	0.48
1:AA:182:A:H1'	1:AA:183:C:C5	2.49	0.48
1:AA:314:C:O2'	1:AA:315:A:H5'	2.14	0.48
1:AA:549:C:H2'	1:AA:550:G:H8	1.76	0.48
1:AA:624:C:H2'	1:AA:625:U:C6	2.48	0.48
1:AA:1461:G:H2'	1:AA:1462:C:C6	2.48	0.48
3:AD:25:ARG:HH11	3:AD:25:ARG:HB2	1.79	0.48
3:AD:94:GLU:HB2	3:AD:190:LEU:HD11	1.96	0.48
12:AM:49:GLU:HG3	12:AM:53:ASP:OD1	2.13	0.48
20:AB:15:PHE:O	20:AB:40:ILE:HD12	2.14	0.48
23:BB:31:C:O2'	23:BB:32:C:H5'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:37:C:O2'	29:BE:45:ALA:HA	2.14	0.48
23:BB:48:G:O3'	23:BB:51:G:H5'	2.12	0.48
23:BB:349:U:H2'	23:BB:350:G:C8	2.48	0.48
23:BB:435:C:H2'	23:BB:436:C:H5'	1.96	0.48
23:BB:713:G:H21	23:BB:718:A:H2	1.62	0.48
23:BB:780:G:H1	25:BC:228:ASP:CG	2.17	0.48
23:BB:965:C:C2'	23:BB:966:G:H5'	2.43	0.48
23:BB:1535:A:H5"	23:BB:1536:C:H5	1.79	0.48
23:BB:2207:C:H2'	23:BB:2208:C:C6	2.48	0.48
23:BB:2365:G:H4'	52:BW:59:PHE:CD1	2.49	0.48
23:BB:2387:U:H1'	52:BW:38:ARG:CZ	2.44	0.48
23:BB:2471:A:O2'	23:BB:2472:G:O5'	2.31	0.48
23:BB:2635:A:C5'	26:BD:79:LEU:HB2	2.43	0.48
23:BB:2740:A:H2'	23:BB:2741:A:C8	2.49	0.48
23:BB:2751:G:OP2	48:BG:2:ARG:HD2	2.13	0.48
25:BC:128:THR:CG2	25:BC:190:THR:HG22	2.43	0.48
25:BC:189:ALA:C	25:BC:190:THR:HG23	2.33	0.48
29:BE:51:GLU:O	29:BE:52:VAL:C	2.52	0.48
30:BY:16:LEU:HD23	30:BY:19:HIS:CD2	2.48	0.48
31:B0:48:TYR:CG	31:B0:49:ARG:N	2.82	0.48
37:BL:116:VAL:HG22	37:BL:117:THR:N	2.29	0.48
38:BM:32:GLY:HA3	38:BM:103:TYR:O	2.14	0.48
39:BX:5:GLU:O	39:BX:8:GLU:HB2	2.13	0.48
42:BN:90:ARG:HB3	42:BN:94:TYR:HE1	1.79	0.48
42:BN:102:PHE:N	42:BN:102:PHE:CD1	2.81	0.48
43:BO:29:HIS:HB3	43:BO:36:TYR:HB2	1.95	0.48
47:BF:15:LEU:HD12	47:BF:27:VAL:HB	1.95	0.48
47:BF:148:VAL:O	47:BF:149:ARG:HG2	2.14	0.48
49:BR:49:ILE:HG21	49:BR:53:PHE:C	2.34	0.48
52:BW:18:LYS:HA	52:BW:36:ILE:HG12	1.94	0.48
52:BW:49:ASN:CB	52:BW:81:ILE:HG12	2.41	0.48
53:B6:110:ARG:O	53:B6:114:LEU:HD22	2.12	0.48
1:CA:33:A:O2'	1:CA:34:C:H5'	2.14	0.48
1:CA:182:A:H1'	1:CA:183:C:C5	2.48	0.48
1:CA:543:U:O2'	1:CA:544:G:H5'	2.14	0.48
1:CA:622:A:H2'	1:CA:623:C:H5'	1.95	0.48
1:CA:797:C:OP1	10:CK:125:LYS:HG2	2.13	0.48
1:CA:1252:A:H2'	1:CA:1253:G:O4'	2.13	0.48
1:CA:1258:G:O2'	1:CA:1259:C:H5'	2.14	0.48
2:CC:59:PRO:HG3	2:CC:64:ARG:HH21	1.78	0.48
3:CD:196:GLU:CD	3:CD:196:GLU:H	2.16	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CF:6:ILE:HD11	5:CF:8:PHE:CD2	2.49	0.48
9:CJ:41:PRO:O	9:CJ:42:LEU:HB2	2.14	0.48
16:CQ:14:ASP:OD1	16:CQ:53:GLY:HA2	2.13	0.48
19:CT:43:LYS:CA	19:CT:85:LEU:HD11	2.41	0.48
22:DA:28:C:H2'	22:DA:29:A:O4'	2.14	0.48
22:DA:37:C:H2'	22:DA:38:C:O4'	2.14	0.48
23:DB:285:G:H2'	23:DB:286:U:H6	1.78	0.48
23:DB:465:G:N2	23:DB:684:G:H1'	2.29	0.48
23:DB:550:C:H2'	23:DB:551:G:C8	2.49	0.48
23:DB:560:C:H2'	23:DB:561:G:O4'	2.14	0.48
23:DB:649:G:H2'	23:DB:650:C:C6	2.49	0.48
23:DB:785:G:H2'	23:DB:786:C:C6	2.49	0.48
23:DB:1173:U:O5'	23:DB:1173:U:H6	1.97	0.48
23:DB:1432:G:O2'	23:DB:1433:A:H5'	2.13	0.48
23:DB:1563:U:H2'	23:DB:1564:C:C6	2.48	0.48
23:DB:1783:A:H5'	23:DB:2608:G:H4'	1.95	0.48
23:DB:1858:A:H2'	23:DB:1859:U:O4'	2.13	0.48
23:DB:2188:U:H2'	23:DB:2189:U:O4'	2.14	0.48
23:DB:2243:U:O2'	23:DB:2244:U:H5'	2.14	0.48
23:DB:2265:U:H3'	23:DB:2266:A:H5"	1.95	0.48
24:DI:5:GLN:HB2	24:DI:30:GLN:OE1	2.14	0.48
24:DI:27:LEU:HB2	24:DI:32:VAL:HG21	1.95	0.48
24:DI:102:ARG:HG3	24:DI:141:ASP:CB	2.43	0.48
30:DY:9:THR:HB	30:DY:53:MET:O	2.14	0.48
36:D2:34:ARG:HG2	36:D2:34:ARG:HH11	1.78	0.48
39:DX:23:ARG:O	39:DX:27:ASN:N	2.47	0.48
41:DJ:74:TYR:HE2	41:DJ:103:ILE:HD11	1.78	0.48
41:DJ:77:HIS:CD2	41:DJ:84:ILE:H	2.32	0.48
42:DN:63:ARG:HD2	42:DN:80:PHE:CD2	2.48	0.48
42:DN:106:ASP:C	42:DN:108:ALA:H	2.16	0.48
45:DS:33:LEU:HA	45:DS:36:LEU:HD23	1.96	0.48
47:DF:111:ARG:HH11	47:DF:135:ILE:CG2	2.27	0.48
47:DF:135:ILE:C	47:DF:136:ILE:HG12	2.34	0.48
52:DW:37:VAL:C	52:DW:38:ARG:HG2	2.34	0.48
1:AA:652:U:H1'	1:AA:653:U:C5	2.49	0.48
1:AA:1472:U:H2'	1:AA:1473:G:C8	2.47	0.48
2:AC:170:GLY:O	2:AC:172:VAL:HG23	2.14	0.48
9:AJ:8:ILE:HD12	9:AJ:75:ASP:HA	1.96	0.48
13:AN:53:ASP:HA	13:AN:58:ARG:CD	2.42	0.48
14:AO:50:HIS:O	14:AO:53:ARG:HB3	2.14	0.48
19:AT:49:ALA:O	19:AT:52:GLU:HG2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AB:128:LEU:HD12	20:AB:132:GLU:HB2	1.96	0.48
20:AB:162:VAL:O	20:AB:184:ALA:HA	2.13	0.48
23:BB:279:A:C2	23:BB:362:A:H4'	2.48	0.48
23:BB:318:C:O2'	23:BB:319:G:H5'	2.14	0.48
23:BB:1064:C:C1'	24:BI:90:GLY:HA2	2.44	0.48
23:BB:1292:G:H2'	23:BB:1293:C:C6	2.49	0.48
23:BB:1403:A:O2'	23:BB:1404:C:H5'	2.14	0.48
23:BB:1508:A:H3'	23:BB:1509:A:C4	2.49	0.48
23:BB:1616:A:H4'	23:BB:1617:C:OP2	2.14	0.48
23:BB:1899:A:O2'	23:BB:1900:A:H5"	2.14	0.48
23:BB:2330:G:O2'	23:BB:2331:G:H5'	2.13	0.48
23:BB:2621:G:OP1	26:BD:124:ARG:NH2	2.47	0.48
24:BI:116:MET:SD	24:BI:124:MET:HB2	2.53	0.48
29:BE:18:THR:HG22	29:BE:106:LYS:CE	2.44	0.48
40:BH:5:LEU:O	40:BH:6:LEU:HB2	2.12	0.48
40:BH:10:ALA:O	40:BH:12:LEU:N	2.43	0.48
41:BJ:20:ALA:HA	41:BJ:23:LYS:HG3	1.96	0.48
41:BJ:26:GLY:O	41:BJ:30:THR:HG22	2.13	0.48
42:BN:79:LEU:O	42:BN:80:PHE:HB2	2.13	0.48
46:BU:35:VAL:O	46:BU:38:ILE:HG22	2.14	0.48
46:BU:48:VAL:HG22	46:BU:48:VAL:O	2.12	0.48
47:BF:45:ASP:O	47:BF:46:LYS:HB2	2.13	0.48
48:BG:54:ARG:HD3	48:BG:54:ARG:C	2.34	0.48
50:BT:55:VAL:HG22	50:BT:87:LEU:CD2	2.44	0.48
50:BT:64:LYS:H	50:BT:64:LYS:HD2	1.78	0.48
53:B6:32:ARG:CD	53:B6:103:ILE:HG23	2.44	0.48
53:B6:56:ALA:HB1	53:B6:68:VAL:CG1	2.44	0.48
1:CA:559:A:H4'	1:CA:560:A:H3'	1.96	0.48
1:CA:685:G:O2'	1:CA:686:U:H5'	2.13	0.48
1:CA:961:U:H3	1:CA:983:A:H62	1.62	0.48
1:CA:1098:C:O2'	1:CA:1099:G:H5'	2.14	0.48
1:CA:1152:A:H2'	1:CA:1153:G:H8	1.79	0.48
1:CA:1194:U:H2'	1:CA:1195:C:C6	2.48	0.48
1:CA:1287:A:H2'	1:CA:1288:A:H8	1.78	0.48
6:CG:145:GLU:CA	6:CG:148:LYS:HB2	2.33	0.48
7:CH:55:LYS:HA	7:CH:55:LYS:HE3	1.95	0.48
10:CK:73:VAL:O	10:CK:76:TYR:HB2	2.14	0.48
13:CN:53:ASP:HA	13:CN:58:ARG:CD	2.42	0.48
20:CB:68:PHE:HA	20:CB:161:PHE:O	2.14	0.48
20:CB:110:ILE:HA	20:CB:147:LEU:HD13	1.96	0.48
20:CB:166:ASP:OD2	20:CB:190:SER:HA	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:8:C:O2'	23:DB:9:G:H5'	2.14	0.48
23:DB:98:G:H22	46:DU:6:ARG:NH1	2.12	0.48
23:DB:121:G:H2'	23:DB:122:G:C8	2.48	0.48
23:DB:151:C:O2'	23:DB:152:A:H5'	2.14	0.48
23:DB:877:A:N6	23:DB:898:C:N3	2.62	0.48
23:DB:986:C:O2'	23:DB:987:C:H5'	2.14	0.48
23:DB:1104:C:H2'	23:DB:1105:U:H6	1.75	0.48
23:DB:1258:U:H2'	23:DB:1259:G:C8	2.48	0.48
23:DB:1404:C:O2'	23:DB:1405:U:H5'	2.14	0.48
23:DB:1799:G:N2	23:DB:1818:U:O2'	2.47	0.48
23:DB:2259:U:H2'	23:DB:2260:C:C6	2.49	0.48
23:DB:2301:C:O2'	23:DB:2302:U:H5'	2.14	0.48
23:DB:2331:G:C4'	52:DW:39:GLN:HA	2.43	0.48
23:DB:2543:G:H8	23:DB:2543:G:H5'	1.79	0.48
23:DB:2855:C:O2'	23:DB:2856:A:H5'	2.13	0.48
24:DI:100:ILE:O	24:DI:139:VAL:HG13	2.14	0.48
26:DD:18:ASP:O	28:DP:30:TRP:HZ3	1.96	0.48
27:DK:60:ALA:HA	27:DK:87:LEU:CD2	2.42	0.48
29:DE:103:GLY:O	29:DE:106:LYS:HB2	2.14	0.48
29:DE:188:MET:HG3	29:DE:192:ALA:HB3	1.95	0.48
36:D2:31:LEU:HD22	36:D2:42:LEU:CD1	2.43	0.48
42:DN:32:GLU:HB3	42:DN:115:LEU:HG	1.95	0.48
42:DN:72:ASP:HB3	42:DN:75:ILE:HG13	1.95	0.48
43:DO:24:THR:O	43:DO:90:VAL:HB	2.13	0.48
45:DS:20:VAL:HG23	45:DS:23:LEU:HD12	1.96	0.48
47:DF:69:ALA:HB2	47:DF:82:TYR:HB3	1.94	0.48
47:DF:151:LEU:HD12	47:DF:152:ASP:N	2.29	0.48
1:AA:28:A:N3	1:AA:296:U:H4'	2.29	0.48
1:AA:233:C:O2'	1:AA:234:C:H5'	2.14	0.48
1:AA:685:G:O2'	1:AA:686:U:H5'	2.14	0.48
1:AA:805:C:O2'	1:AA:806:C:H5'	2.14	0.48
1:AA:1252:A:H2'	1:AA:1253:G:O4'	2.13	0.48
2:AC:59:PRO:HG3	2:AC:64:ARG:HH21	1.79	0.48
4:AE:87:VAL:HG23	4:AE:91:SER:O	2.13	0.48
6:AG:64:ALA:HA	6:AG:127:ALA:HA	1.95	0.48
12:AM:16:ILE:HG23	12:AM:17:ALA:N	2.27	0.48
12:AM:84:CYS:O	12:AM:88:LEU:HG	2.14	0.48
13:AN:50:LEU:H	13:AN:51:PRO:CD	2.24	0.48
13:AN:60:ARG:HG3	13:AN:62:ARG:CG	2.43	0.48
20:AB:64:GLY:HA2	20:AB:158:ASP:OD1	2.14	0.48
23:BB:281:C:H2'	23:BB:282:A:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:670:A:H4'	23:BB:671:C:H5'	1.96	0.48
23:BB:1300:G:H4'	23:BB:1301:A:O5'	2.13	0.48
23:BB:1495:A:O2'	23:BB:1496:A:H5'	2.13	0.48
23:BB:1509:A:H5'	23:BB:1510:G:H5'	1.95	0.48
23:BB:1585:C:H2'	23:BB:1586:A:O4'	2.14	0.48
23:BB:1793:C:H2'	23:BB:1794:A:H8	1.79	0.48
23:BB:1859:U:H2'	23:BB:1860:G:C8	2.48	0.48
23:BB:2529:G:H5"	48:BG:174:LYS:HB2	1.96	0.48
23:BB:2603:G:O2'	23:BB:2604:U:H5'	2.13	0.48
25:BC:83:ASP:HB2	25:BC:90:ILE:HB	1.96	0.48
25:BC:94:LEU:HA	25:BC:100:ARG:HB3	1.96	0.48
28:BP:5:LYS:H	28:BP:8:GLU:HG3	1.79	0.48
28:BP:13:LYS:HD2	28:BP:76:HIS:HA	1.96	0.48
36:B2:34:ARG:HH11	36:B2:34:ARG:HG2	1.78	0.48
41:BJ:81:ILE:HG23	41:BJ:82:GLY:N	2.16	0.48
42:BN:8:ARG:HB3	42:BN:43:GLU:OE2	2.13	0.48
47:BF:102:LEU:O	47:BF:103:ILE:HG22	2.13	0.48
50:BT:53:VAL:HG12	50:BT:54:GLU:N	2.28	0.48
51:BZ:20:HIS:O	51:BZ:21:ALA:HB3	2.14	0.48
1:CA:207:C:H3'	1:CA:208:U:C5	2.49	0.48
1:CA:412:A:H4'	1:CA:413:G:OP1	2.14	0.48
1:CA:556:C:O2'	1:CA:557:G:H5'	2.13	0.48
1:CA:714:G:C2	1:CA:777:A:H1'	2.49	0.48
2:CC:149:LYS:HB2	2:CC:168:ARG:HG3	1.95	0.48
4:CE:131:ASN:HD21	4:CE:133:ILE:HB	1.79	0.48
5:CF:38:ARG:NH2	5:CF:63:ASN:HD21	2.09	0.48
7:CH:40:LYS:HE3	7:CH:47:ASP:OD1	2.13	0.48
19:CT:15:LYS:HA	19:CT:18:LYS:HE3	1.96	0.48
22:DA:113:C:H2'	22:DA:114:C:H6	1.78	0.48
23:DB:37:C:H4'	23:DB:451:U:OP1	2.13	0.48
23:DB:79:C:HO2'	23:DB:346:A:H8	1.56	0.48
23:DB:544:C:H2'	23:DB:545:U:C4	2.49	0.48
23:DB:546:U:H5'	23:DB:547:A:OP1	2.14	0.48
23:DB:1201:U:H2'	23:DB:1202:G:H8	1.79	0.48
23:DB:1319:C:O2'	23:DB:1320:C:H5'	2.13	0.48
23:DB:1456:G:O2'	23:DB:1457:U:H5'	2.14	0.48
23:DB:1664:A:H1'	23:DB:2726:A:C2	2.49	0.48
23:DB:1730:C:O2'	23:DB:1731:G:N2	2.46	0.48
23:DB:2047:C:H2'	23:DB:2048:G:C8	2.49	0.48
23:DB:2150:C:H2'	23:DB:2151:U:H6	1.77	0.48
23:DB:2803:G:H2'	23:DB:2804:U:C6	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:9:VAL:O	26:DD:9:VAL:HG22	2.14	0.48
26:DD:15:PHE:CD1	26:DD:15:PHE:N	2.81	0.48
27:DK:34:GLY:O	27:DK:36:GLY:N	2.47	0.48
28:DP:6:GLN:HE22	28:DP:7:LEU:HG	1.79	0.48
28:DP:75:THR:O	28:DP:80:VAL:HG11	2.13	0.48
29:DE:137:LYS:O	29:DE:141:MET:HG3	2.13	0.48
33:D1:37:LYS:O	33:D1:45:HIS:HA	2.14	0.48
35:DV:21:ARG:HE	35:DV:87:GLN:HB3	1.78	0.48
37:DL:89:VAL:HG23	37:DL:123:ARG:HB2	1.95	0.48
40:DH:10:ALA:O	40:DH:12:LEU:N	2.44	0.48
42:DN:90:ARG:HB3	42:DN:94:TYR:HE1	1.79	0.48
43:DO:52:SER:O	43:DO:58:ILE:HD12	2.14	0.48
43:DO:53:THR:O	43:DO:59:ALA:HB2	2.14	0.48
47:DF:102:LEU:HB2	47:DF:106:ALA:HB3	1.95	0.48
48:DG:38:ASP:CG	48:DG:39:ALA:N	2.67	0.48
50:DT:53:VAL:HG12	50:DT:54:GLU:N	2.28	0.48
1:AA:82:G:N2	1:AA:88:U:O3'	2.47	0.47
1:AA:327:A:H1'	1:AA:329:A:O4'	2.13	0.47
1:AA:373:A:C1'	1:AA:481:G:H1'	2.44	0.47
1:AA:379:C:O2'	1:AA:380:G:H5'	2.14	0.47
1:AA:443:C:H2'	1:AA:444:G:C8	2.48	0.47
1:AA:669:G:O2'	1:AA:670:G:H5'	2.13	0.47
1:AA:897:C:C2'	1:AA:898:G:H5'	2.44	0.47
4:AE:84:VAL:CG1	4:AE:146:MET:HB3	2.41	0.47
5:AF:6:ILE:HD11	5:AF:8:PHE:CD2	2.49	0.47
7:AH:36:ALA:HA	7:AH:39:LEU:HD12	1.96	0.47
10:AK:30:ILE:HG22	10:AK:45:THR:OG1	2.14	0.47
10:AK:51:PHE:CZ	10:AK:61:ALA:HA	2.49	0.47
11:AL:107:LYS:C	11:AL:109:ARG:H	2.17	0.47
13:AN:19:TYR:HA	13:AN:23:ARG:HG3	1.96	0.47
13:AN:40:ARG:NH1	18:AS:6:LYS:O	2.47	0.47
13:AN:50:LEU:CD2	13:AN:51:PRO:HD3	2.43	0.47
13:AN:60:ARG:CZ	13:AN:69:PRO:HB3	2.44	0.47
18:AS:10:ILE:O	18:AS:10:ILE:HG13	2.13	0.47
20:AB:57:ASN:HB2	20:AB:223:GLY:CA	2.44	0.47
20:AB:68:PHE:HA	20:AB:161:PHE:O	2.14	0.47
20:AB:99:MET:HA	20:AB:106:VAL:HG21	1.96	0.47
21:AU:40:PRO:C	21:AU:42:THR:N	2.68	0.47
22:BA:33:G:O2'	22:BA:34:A:H5'	2.14	0.47
23:BB:454:A:H3'	23:BB:455:C:C5'	2.44	0.47
23:BB:718:A:H3'	23:BB:719:C:C6	2.46	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:718:A:H5'	23:BB:719:C:C5	2.48	0.47
23:BB:1060:U:H5	24:BI:131:THR:HG22	1.74	0.47
23:BB:1571:A:H2'	23:BB:1572:A:H8	1.77	0.47
23:BB:1720:U:C2'	23:BB:1721:G:H5'	2.44	0.47
23:BB:2868:A:H2'	23:BB:2869:G:H8	1.79	0.47
23:BB:2896:C:H2'	23:BB:2897:U:H6	1.78	0.47
24:BI:33:ASN:HD21	24:BI:64:ARG:NH1	2.08	0.47
28:BP:52:ARG:HB2	28:BP:55:HIS:O	2.14	0.47
29:BE:192:ALA:O	29:BE:196:VAL:HG23	2.13	0.47
34:B3:18:LYS:HD2	34:B3:19:GLY:N	2.29	0.47
40:BH:52:ALA:HA	40:BH:56:ALA:HB3	1.96	0.47
40:BH:140:ALA:C	40:BH:141:LYS:HD3	2.35	0.47
47:BF:27:VAL:O	47:BF:29:ARG:HD2	2.14	0.47
47:BF:113:PHE:HZ	47:BF:175:PRO:HB2	1.79	0.47
48:BG:29:ASN:HD21	48:BG:81:GLY:HA2	1.79	0.47
52:BW:51:GLY:HA3	52:BW:59:PHE:HB3	1.94	0.47
53:B6:38:LEU:HB3	53:B6:41:LEU:HD22	1.95	0.47
53:B6:42:LYS:HA	53:B6:51:PRO:CA	2.43	0.47
1:CA:192:A:O2'	1:CA:193:C:H5'	2.13	0.47
1:CA:830:G:H2'	1:CA:831:A:H8	1.79	0.47
1:CA:906:A:C2'	1:CA:907:A:H5"	2.44	0.47
1:CA:1060:U:H5"	9:CJ:53:ILE:HG12	1.95	0.47
1:CA:1113:C:O2'	1:CA:1114:C:H5'	2.14	0.47
1:CA:1228:C:OP1	12:CM:113:LYS:HB2	2.14	0.47
1:CA:1237:C:H3'	1:CA:1238:A:H5'	1.96	0.47
2:CC:129:PHE:CG	2:CC:130:ARG:N	2.82	0.47
3:CD:199:ILE:HG13	3:CD:200:VAL:N	2.29	0.47
7:CH:76:ARG:HG2	7:CH:79:ARG:HB3	1.95	0.47
8:CI:78:ILE:O	8:CI:82:ILE:HG13	2.14	0.47
10:CK:88:PRO:HD3	21:CU:28:LEU:HD13	1.96	0.47
12:CM:70:ARG:O	12:CM:74:MET:HE3	2.14	0.47
12:CM:79:LEU:HB3	12:CM:84:CYS:SG	2.54	0.47
14:CO:21:ASP:O	14:CO:23:GLY:N	2.45	0.47
16:CQ:80:LYS:H	16:CQ:80:LYS:HE3	1.79	0.47
17:CR:59:LYS:O	17:CR:62:ARG:HB2	2.13	0.47
20:CB:127:LYS:C	20:CB:127:LYS:HD2	2.33	0.47
23:DB:270:A:OP1	23:DB:271:G:H5'	2.13	0.47
23:DB:296:U:H2'	23:DB:297:G:C8	2.49	0.47
23:DB:303:G:H2'	23:DB:304:U:C6	2.49	0.47
23:DB:710:U:H2'	23:DB:711:G:H8	1.78	0.47
23:DB:725:G:H2'	23:DB:726:G:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:767:U:O2'	23:DB:768:G:H5'	2.14	0.47
23:DB:1263:U:O2'	31:D0:7:PRO:HD2	2.14	0.47
23:DB:1349:C:H2'	23:DB:1350:C:C6	2.49	0.47
23:DB:1669:A:O3'	23:DB:2549:G:H5'	2.13	0.47
23:DB:1877:A:H2'	23:DB:1878:G:C8	2.49	0.47
23:DB:2144:G:C3'	23:DB:2145:C:H5'	2.44	0.47
23:DB:2898:U:H2'	23:DB:2899:A:C8	2.49	0.47
28:DP:5:LYS:H	28:DP:8:GLU:HG3	1.79	0.47
29:DE:47:LYS:CA	29:DE:51:GLU:HG3	2.44	0.47
32:D4:19:ARG:C	32:D4:21:GLY:N	2.67	0.47
33:D1:10:LEU:HB2	33:D1:20:TYR:HB2	1.95	0.47
33:D1:39:ASP:OD1	33:D1:42:VAL:HG23	2.14	0.47
39:DX:5:GLU:O	39:DX:8:GLU:HB2	2.15	0.47
43:DO:35:ILE:CG1	43:DO:102:ARG:HE	2.27	0.47
45:DS:59:GLU:OE2	45:DS:66:ILE:HG23	2.15	0.47
45:DS:99:ARG:H	45:DS:99:ARG:HG2	1.45	0.47
46:DU:92:VAL:HG11	46:DU:101:THR:HG23	1.95	0.47
47:DF:15:LEU:HD12	47:DF:27:VAL:HB	1.94	0.47
47:DF:102:LEU:O	47:DF:103:ILE:HG22	2.13	0.47
47:DF:168:LEU:O	47:DF:170:ALA:N	2.45	0.47
51:DZ:5:CYS:HB3	51:DZ:10:LYS:H	1.77	0.47
53:D6:78:ALA:HA	53:D6:81:LYS:HB2	1.96	0.47
1:AA:747:A:H2'	1:AA:748:G:O4'	2.14	0.47
1:AA:810:C:O2'	1:AA:811:C:H5'	2.13	0.47
1:AA:864:A:H2'	1:AA:865:A:C8	2.50	0.47
1:AA:911:U:H2'	1:AA:912:C:C6	2.49	0.47
1:AA:1175:G:O2'	1:AA:1176:A:H5'	2.14	0.47
3:AD:16:THR:HG22	3:AD:17:ASP:H	1.78	0.47
3:AD:28:ASP:HA	3:AD:33:ILE:CG2	2.43	0.47
3:AD:55:ARG:HG3	3:AD:55:ARG:NH1	2.27	0.47
6:AG:80:GLY:C	6:AG:82:SER:H	2.17	0.47
13:AN:47:LEU:C	13:AN:49:THR:H	2.16	0.47
14:AO:82:ILE:O	14:AO:86:GLY:N	2.47	0.47
23:BB:309:A:H1'	23:BB:329:G:N3	2.29	0.47
23:BB:782:A:C2	25:BC:224:MET:HB3	2.48	0.47
23:BB:796:C:H2'	23:BB:797:G:H8	1.79	0.47
23:BB:855:G:N3	52:BW:23:LYS:HG2	2.28	0.47
23:BB:1558:C:H4'	23:BB:1559:U:C5'	2.44	0.47
23:BB:2354:C:H4'	52:BW:31:LEU:CD2	2.43	0.47
23:BB:2600:A:O2'	23:BB:2601:C:H5'	2.14	0.47
26:BD:34:VAL:HA	26:BD:50:VAL:HG12	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BY:5:LYS:O	30:BY:57:GLU:HB2	2.13	0.47
34:B3:56:LEU:O	34:B3:59:ALA:HB3	2.14	0.47
35:BV:65:VAL:C	35:BV:67:GLY:H	2.18	0.47
37:BL:30:THR:O	37:BL:32:GLY:N	2.47	0.47
37:BL:57:LEU:HA	37:BL:60:ARG:HE	1.79	0.47
44:BQ:63:ARG:NH1	44:BQ:96:ASP:HA	2.29	0.47
49:BR:26:ASP:O	49:BR:27:ILE:HD13	2.14	0.47
49:BR:53:PHE:N	49:BR:53:PHE:CD1	2.80	0.47
50:BT:50:LEU:HD22	50:BT:50:LEU:N	2.28	0.47
51:BZ:69:ALA:HA	51:BZ:72:ARG:NH1	2.29	0.47
52:BW:67:LYS:O	52:BW:68:PHE:HB2	2.13	0.47
53:B6:137:LEU:CD1	53:B6:161:ILE:HG21	2.43	0.47
1:CA:238:A:C2'	1:CA:239:U:H5"	2.42	0.47
1:CA:308:C:H2'	1:CA:309:A:H8	1.79	0.47
1:CA:327:A:H1'	1:CA:329:A:O4'	2.14	0.47
1:CA:1226:C:H5'	12:CM:94:LEU:HD13	1.95	0.47
1:CA:1281:C:H5'	1:CA:1282:C:H5	1.78	0.47
1:CA:1406:U:H2'	1:CA:1407:C:O4'	2.14	0.47
1:CA:1477:U:H2'	1:CA:1478:U:H6	1.74	0.47
1:CA:1480:A:H2'	1:CA:1481:U:H6	1.78	0.47
3:CD:197:HIS:ND1	3:CD:198:LEU:N	2.62	0.47
10:CK:124:LYS:O	21:CU:33:ARG:NE	2.33	0.47
10:CK:125:LYS:O	21:CU:33:ARG:NH2	2.46	0.47
13:CN:41:TRP:CD1	13:CN:44:VAL:HG23	2.49	0.47
14:CO:89:ARG:HH22	23:DB:715:A:H5"	1.79	0.47
19:CT:49:ALA:O	19:CT:52:GLU:HG2	2.13	0.47
20:CB:86:CYS:HB3	20:CB:88:GLN:NE2	2.29	0.47
23:DB:181:A:H1'	23:DB:435:C:H5'	1.97	0.47
23:DB:584:C:OP2	44:DQ:5:ARG:HD3	2.14	0.47
23:DB:1187:G:H5"	49:DR:83:TYR:CZ	2.48	0.47
23:DB:1516:G:O2'	23:DB:1517:G:H5'	2.14	0.47
23:DB:1708:C:O2'	23:DB:1709:U:H5'	2.13	0.47
23:DB:2248:C:H2'	23:DB:2249:U:O4'	2.14	0.47
23:DB:2710:C:H2'	23:DB:2711:A:C8	2.49	0.47
23:DB:2722:G:O2'	23:DB:2723:C:H5'	2.14	0.47
23:DB:2889:C:H2'	23:DB:2890:G:C8	2.49	0.47
25:DC:35:LYS:O	25:DC:36:ASN:HB2	2.14	0.47
26:DD:49:GLN:HE21	26:DD:79:LEU:HD12	1.79	0.47
27:DK:88:ASN:HD22	27:DK:89:ASN:N	2.11	0.47
28:DP:110:LYS:N	28:DP:110:LYS:HD2	2.29	0.47
31:D0:41:HIS:HB3	42:DN:99:LYS:HB2	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DL:89:VAL:O	37:DL:89:VAL:HG13	2.14	0.47
37:DL:135:ILE:HG12	37:DL:140:GLY:CA	2.40	0.47
40:DH:135:HIS:HB3	40:DH:138:VAL:HG23	1.96	0.47
41:DJ:25:LEU:O	41:DJ:27:ARG:N	2.43	0.47
43:DO:2:ASP:OD2	43:DO:4:LYS:HB3	2.13	0.47
43:DO:6:ALA:O	43:DO:9:ARG:HG3	2.14	0.47
43:DO:30:ARG:NH1	43:DO:102:ARG:HB2	2.28	0.47
43:DO:106:LEU:HA	43:DO:109:ALA:HB3	1.94	0.47
50:DT:6:ARG:HB3	50:DT:6:ARG:NH1	2.28	0.47
50:DT:61:LEU:O	50:DT:81:LYS:HA	2.13	0.47
53:D6:151:GLU:O	53:D6:154:THR:HG22	2.14	0.47
1:AA:93:U:O5'	1:AA:93:U:C6	2.62	0.47
1:AA:94:G:H1'	1:AA:95:C:C5	2.50	0.47
1:AA:538:G:OP2	11:AL:111:GLN:HB2	2.14	0.47
1:AA:708:C:O2'	1:AA:709:U:H5'	2.14	0.47
1:AA:1117:A:H5"	8:AI:105:ARG:NH2	2.29	0.47
1:AA:1287:A:H2'	1:AA:1288:A:H8	1.80	0.47
2:AC:76:ILE:CG2	2:AC:80:GLY:HA2	2.43	0.47
2:AC:149:LYS:HB2	2:AC:168:ARG:HG3	1.95	0.47
3:AD:18:LEU:HD11	3:AD:59:LYS:HG3	1.96	0.47
4:AE:136:VAL:HG13	4:AE:137:ARG:N	2.29	0.47
10:AK:125:LYS:O	21:AU:33:ARG:NH2	2.47	0.47
15:AP:38:PHE:CD1	15:AP:39:PHE:N	2.82	0.47
20:AB:121:GLN:NE2	20:AB:122:ASP:HB2	2.30	0.47
20:AB:132:GLU:CD	20:AB:136:ARG:HE	2.18	0.47
23:BB:271:G:HO2'	23:BB:272:A:H8	1.62	0.47
23:BB:465:G:N2	23:BB:684:G:H1'	2.29	0.47
23:BB:1545:A:H2'	23:BB:1546:G:O4'	2.14	0.47
23:BB:2008:C:H2'	23:BB:2009:A:H8	1.79	0.47
23:BB:2145:C:H3'	23:BB:2146:C:C5'	2.44	0.47
23:BB:2571:U:H4'	26:BD:151:THR:HG21	1.96	0.47
23:BB:2809:A:H2'	23:BB:2810:A:C8	2.50	0.47
23:BB:2885:G:H2'	23:BB:2886:A:O4'	2.13	0.47
25:BC:141:HIS:NE2	25:BC:194:VAL:HA	2.29	0.47
25:BC:264:LYS:HG3	25:BC:265:PHE:HD2	1.79	0.47
29:BE:171:ASP:CG	29:BE:172:ALA:H	2.17	0.47
30:BY:47:ILE:HG23	30:BY:54:VAL:HG21	1.95	0.47
35:BV:53:LYS:HZ3	35:BV:54:ALA:HB3	1.78	0.47
35:BV:63:ILE:HB	35:BV:70:ILE:CD1	2.44	0.47
36:B2:34:ARG:HG2	36:B2:34:ARG:NH1	2.29	0.47
37:BL:81:ASP:HA	37:BL:84:LYS:CE	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BM:19:GLY:C	38:BM:20:LEU:HD22	2.34	0.47
38:BM:26:VAL:CG2	38:BM:133:LYS:HA	2.45	0.47
45:BS:17:VAL:C	45:BS:19:LEU:N	2.66	0.47
47:BF:169:LEU:O	47:BF:174:PHE:HB2	2.14	0.47
50:BT:6:ARG:HB3	50:BT:6:ARG:NH1	2.30	0.47
53:B6:52:LEU:HD11	53:B6:83:ILE:HD11	1.95	0.47
53:B6:126:ARG:HG2	53:B6:169:ILE:HD12	1.96	0.47
53:B6:141:LYS:HE3	53:B6:142:LYS:HE3	1.96	0.47
1:CA:222:C:H2'	1:CA:223:A:H8	1.78	0.47
1:CA:279:A:C5'	1:CA:280:C:H3'	2.43	0.47
1:CA:366:A:H2	1:CA:394:G:H1	1.57	0.47
1:CA:1023:U:O2'	1:CA:1024:G:H5'	2.15	0.47
1:CA:1053:G:N7	1:CA:1200:C:H5"	2.30	0.47
1:CA:1166:G:N1	1:CA:1169:A:OP2	2.47	0.47
1:CA:1256:A:H4'	1:CA:1258:G:C8	2.49	0.47
1:CA:1291:U:O2'	1:CA:1292:G:H5'	2.14	0.47
1:CA:1332:A:H2'	1:CA:1333:A:H8	1.80	0.47
1:CA:1343:G:C1'	8:CI:122:ARG:HH12	2.24	0.47
1:CA:1499:A:H1'	1:CA:1520:C:H5'	1.95	0.47
3:CD:146:GLU:HA	3:CD:149:LYS:CG	2.40	0.47
5:CF:5:GLU:HA	5:CF:63:ASN:HA	1.96	0.47
11:CL:21:PRO:HG2	11:CL:94:TYR:OH	2.13	0.47
14:CO:50:HIS:O	14:CO:53:ARG:HB3	2.14	0.47
15:CP:67:ILE:HD11	15:CP:71:VAL:HG22	1.96	0.47
19:CT:72:ALA:HA	19:CT:75:LYS:HD3	1.95	0.47
20:CB:165:ALA:HB3	20:CB:186:VAL:HG12	1.96	0.47
22:DA:95:U:H2'	22:DA:96:G:H8	1.79	0.47
23:DB:516:C:O2'	23:DB:517:C:H5'	2.14	0.47
23:DB:920:A:H2'	23:DB:921:C:O4'	2.14	0.47
23:DB:1218:G:H2'	23:DB:1219:U:O4'	2.14	0.47
23:DB:1416:G:O2'	23:DB:1417:C:H6	1.95	0.47
23:DB:1841:U:H2'	23:DB:1842:G:H8	1.79	0.47
23:DB:2303:G:H4'	47:DF:121:PHE:O	2.14	0.47
23:DB:2314:A:H2'	23:DB:2315:G:C8	2.48	0.47
23:DB:2600:A:O2'	23:DB:2601:C:H5'	2.14	0.47
23:DB:2787:C:C1'	26:DD:63:PRO:HG3	2.42	0.47
27:DK:54:LYS:HD2	27:DK:54:LYS:N	2.27	0.47
29:DE:11:ALA:O	29:DE:12:LEU:HD22	2.14	0.47
30:DY:21:ALA:O	30:DY:24:LEU:HB3	2.14	0.47
31:D0:48:TYR:CG	31:D0:49:ARG:N	2.82	0.47
33:D1:51:ALA:O	33:D1:52:LYS:C	2.53	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DV:31:TYR:O	35:DV:92:VAL:HG13	2.15	0.47
35:DV:48:MET:SD	35:DV:85:LYS:HA	2.54	0.47
37:DL:81:ASP:HA	37:DL:84:LYS:CE	2.45	0.47
42:DN:28:LEU:HD23	42:DN:113:ILE:HG23	1.95	0.47
43:DO:83:LEU:HD13	43:DO:115:LEU:HD22	1.95	0.47
44:DQ:56:PHE:HA	44:DQ:59:LEU:HB3	1.95	0.47
46:DU:43:LYS:HD3	46:DU:44:HIS:N	2.29	0.47
47:DF:55:ASP:OD2	47:DF:149:ARG:HG3	2.14	0.47
49:DR:53:PHE:N	49:DR:53:PHE:CD1	2.81	0.47
52:DW:18:LYS:HA	52:DW:36:ILE:HG12	1.94	0.47
1:AA:1098:C:O2'	1:AA:1099:G:H5'	2.14	0.47
1:AA:1246:A:H2'	1:AA:1247:U:O4'	2.14	0.47
1:AA:1292:G:H2'	1:AA:1293:C:C6	2.50	0.47
1:AA:1298:U:H4'	1:AA:1299:A:C4	2.50	0.47
1:AA:1333:A:H2'	1:AA:1334:G:O4'	2.15	0.47
6:AG:148:LYS:HG3	6:AG:151:ALA:CB	2.40	0.47
9:AJ:80:THR:O	9:AJ:84:VAL:HG23	2.14	0.47
11:AL:80:LEU:HD13	11:AL:101:LEU:HD11	1.95	0.47
20:AB:125:PHE:HD2	20:AB:126:ASP:N	2.13	0.47
23:BB:231:A:H3'	23:BB:232:G:H8	1.79	0.47
23:BB:580:U:O2'	23:BB:581:C:H5'	2.15	0.47
23:BB:679:C:O2'	23:BB:680:C:H5'	2.14	0.47
23:BB:923:G:N2	52:BW:23:LYS:HE3	2.29	0.47
23:BB:958:U:H3	38:BM:16:ARG:HB3	1.79	0.47
23:BB:991:C:H5"	23:BB:1185:G:H2'	1.97	0.47
23:BB:1171:G:H3'	23:BB:1172:C:C4'	2.44	0.47
23:BB:1222:U:P	49:BR:90:ARG:HH22	2.37	0.47
23:BB:1862:G:O2'	23:BB:1863:G:H5'	2.13	0.47
23:BB:2349:G:OP2	34:B3:41:ARG:HD3	2.15	0.47
23:BB:2390:U:O5'	34:B3:34:LYS:NZ	2.46	0.47
23:BB:2663:G:H2'	23:BB:2664:G:H8	1.79	0.47
23:BB:2840:C:H5"	42:BN:53:THR:CG2	2.44	0.47
23:BB:2901:C:O2	23:BB:2901:C:H2'	2.14	0.47
25:BC:35:LYS:HD2	25:BC:37:SER:OG	2.14	0.47
25:BC:143:VAL:HG12	25:BC:144:GLU:N	2.29	0.47
25:BC:245:THR:HG23	25:BC:249:VAL:O	2.14	0.47
27:BK:35:VAL:HG12	27:BK:69:VAL:HG22	1.97	0.47
28:BP:6:GLN:HE22	28:BP:7:LEU:HG	1.80	0.47
28:BP:83:ILE:HD13	28:BP:83:ILE:O	2.14	0.47
34:B3:14:LYS:O	34:B3:21:PHE:O	2.32	0.47
34:B3:36:ALA:O	34:B3:40:LYS:HG3	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BL:41:ARG:HH21	37:BL:41:ARG:HG2	1.78	0.47
43:BO:83:LEU:HD13	43:BO:115:LEU:HD22	1.96	0.47
44:BQ:27:ARG:HG3	44:BQ:27:ARG:HH11	1.80	0.47
44:BQ:51:GLN:O	44:BQ:54:ARG:HB2	2.14	0.47
45:BS:29:VAL:CA	45:BS:32:ALA:HB3	2.44	0.47
46:BU:9:GLU:OE2	46:BU:21:ARG:HD2	2.15	0.47
46:BU:92:VAL:HG11	46:BU:101:THR:HG23	1.95	0.47
48:BG:95:ALA:HA	48:BG:104:LEU:HD23	1.97	0.47
50:BT:69:ARG:NE	50:BT:70:HIS:H	2.12	0.47
1:CA:663:A:H5'	1:CA:836:G:OP1	2.14	0.47
1:CA:922:G:H2'	1:CA:923:A:H8	1.78	0.47
1:CA:1314:C:H3'	18:CS:5:LYS:HZ3	1.78	0.47
1:CA:1330:U:C2'	1:CA:1331:G:H5'	2.45	0.47
2:CC:38:VAL:HG23	2:CC:39:ARG:N	2.29	0.47
4:CE:131:ASN:ND2	4:CE:133:ILE:HB	2.29	0.47
6:CG:46:LEU:HG	6:CG:57:GLU:HB3	1.96	0.47
9:CJ:92:LEU:HD22	9:CJ:92:LEU:N	2.29	0.47
10:CK:90:PRO:C	10:CK:92:ARG:H	2.18	0.47
13:CN:51:PRO:HB2	13:CN:54:SER:CB	2.33	0.47
20:CB:75:ALA:O	20:CB:79:VAL:HG23	2.14	0.47
20:CB:162:VAL:O	20:CB:184:ALA:HA	2.15	0.47
23:DB:688:U:O2'	23:DB:689:A:H5'	2.14	0.47
23:DB:770:G:O2'	23:DB:771:G:H5'	2.13	0.47
23:DB:773:U:H4'	25:DC:45:ASN:O	2.14	0.47
23:DB:958:U:H3	38:DM:16:ARG:CB	2.27	0.47
23:DB:1055:G:HO2'	23:DB:1085:A:H2	1.62	0.47
23:DB:1655:A:H2'	23:DB:1656:C:O4'	2.14	0.47
23:DB:1841:U:H2'	23:DB:1842:G:C8	2.50	0.47
23:DB:1872:A:H8	23:DB:1872:A:O5'	1.96	0.47
23:DB:1897:G:O2'	23:DB:1898:U:H5'	2.14	0.47
23:DB:2148:G:H3'	23:DB:2148:G:OP2	2.14	0.47
23:DB:2567:G:H2'	23:DB:2568:U:C6	2.49	0.47
23:DB:2618:G:H2'	23:DB:2619:C:H6	1.79	0.47
23:DB:2724:U:H2'	23:DB:2725:A:C8	2.50	0.47
23:DB:2845:U:O2'	23:DB:2846:G:H5'	2.13	0.47
25:DC:244:VAL:HB	25:DC:249:VAL:N	2.29	0.47
29:DE:192:ALA:O	29:DE:196:VAL:HG23	2.14	0.47
34:D3:7:ARG:NH1	34:D3:7:ARG:HG3	2.29	0.47
39:DX:15:ASN:O	39:DX:19:LEU:HD13	2.14	0.47
42:DN:75:ILE:HD12	42:DN:76:VAL:N	2.29	0.47
47:DF:108:PRO:O	47:DF:110:ILE:HG23	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DR:49:ILE:HG21	49:DR:53:PHE:C	2.34	0.47
52:DW:30:VAL:HG13	52:DW:30:VAL:O	2.14	0.47
52:DW:50:VAL:HB	52:DW:51:GLY:H	1.52	0.47
1:AA:46:G:O2'	1:AA:365:U:H1'	2.15	0.47
1:AA:300:A:H2'	1:AA:301:G:O4'	2.15	0.47
1:AA:591:U:H2'	1:AA:592:G:H8	1.78	0.47
1:AA:631:C:H5"	1:AA:632:U:O4'	2.14	0.47
1:AA:1244:G:H2'	1:AA:1245:C:C6	2.49	0.47
1:AA:1308:U:OP1	12:AM:95:PRO:HA	2.13	0.47
1:AA:1320:C:H1'	18:AS:72:GLU:N	2.30	0.47
4:AE:154:ALA:HB1	7:AH:65:PHE:CZ	2.49	0.47
13:AN:63:CYS:HB3	13:AN:68:ARG:H	1.80	0.47
22:BA:6:G:H2'	22:BA:7:G:C8	2.50	0.47
22:BA:13:G:O2'	22:BA:15:A:H5'	2.13	0.47
22:BA:28:C:H2'	22:BA:29:A:O4'	2.15	0.47
23:BB:24:G:H2'	23:BB:25:U:O4'	2.14	0.47
23:BB:199:A:O2'	23:BB:200:U:H5'	2.15	0.47
23:BB:392:U:H2'	23:BB:393:C:H6	1.79	0.47
23:BB:484:C:H2'	23:BB:485:C:H6	1.79	0.47
23:BB:1021:A:H61	23:BB:1142:A:N6	2.12	0.47
23:BB:2040:G:H2'	23:BB:2041:U:O4'	2.15	0.47
23:BB:2050:C:H2'	23:BB:2051:A:O4'	2.14	0.47
23:BB:2091:C:H1'	51:BZ:34:HIS:CD2	2.49	0.47
23:BB:2187:U:H2'	23:BB:2188:U:H6	1.76	0.47
23:BB:2300:C:O2'	23:BB:2301:C:H5'	2.15	0.47
24:BI:56:VAL:CG2	24:BI:68:PHE:HB2	2.44	0.47
25:BC:245:THR:HG23	25:BC:249:VAL:HB	1.95	0.47
31:B0:38:LEU:HB3	31:B0:41:HIS:CD2	2.49	0.47
39:BX:23:ARG:HA	39:BX:27:ASN:H	1.79	0.47
39:BX:59:GLU:N	39:BX:59:GLU:OE2	2.47	0.47
44:BQ:59:LEU:HD13	44:BQ:59:LEU:C	2.35	0.47
46:BU:6:ARG:HG2	46:BU:6:ARG:HH21	1.80	0.47
47:BF:77:LYS:HD2	47:BF:79:ARG:HE	1.79	0.47
50:BT:25:GLU:HA	50:BT:28:ASN:O	2.14	0.47
52:BW:43:LYS:HB2	52:BW:58:LEU:HD21	1.96	0.47
53:B6:10:THR:HG23	53:B6:14:MET:HE3	1.97	0.47
1:CA:201:G:H2'	1:CA:202:G:C8	2.49	0.47
1:CA:276:G:O2'	1:CA:277:C:H5'	2.15	0.47
1:CA:373:A:H2'	1:CA:374:A:H8	1.80	0.47
1:CA:608:A:H2'	1:CA:609:A:O4'	2.14	0.47
1:CA:930:C:H2'	1:CA:931:C:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:51:VAL:HA	2:CC:69:THR:HA	1.97	0.47
3:CD:94:GLU:HB2	3:CD:190:LEU:HD11	1.95	0.47
6:CG:68:VAL:CG2	6:CG:126:ALA:HB1	2.44	0.47
6:CG:78:ARG:HH12	6:CG:79:VAL:C	2.18	0.47
7:CH:94:VAL:CG2	7:CH:101:ALA:HB2	2.41	0.47
7:CH:110:MET:HG3	7:CH:115:ALA:HB2	1.96	0.47
9:CJ:8:ILE:HD12	9:CJ:75:ASP:HA	1.96	0.47
11:CL:107:LYS:C	11:CL:109:ARG:H	2.17	0.47
14:CO:17:ARG:HG2	14:CO:24:SER:HB2	1.96	0.47
18:CS:42:ASN:N	18:CS:42:ASN:ND2	2.62	0.47
22:DA:93:C:O2'	22:DA:94:A:H5'	2.15	0.47
23:DB:3:U:H2'	23:DB:4:U:H6	1.80	0.47
23:DB:17:G:H2'	23:DB:18:U:H6	1.79	0.47
23:DB:1014:A:O2'	23:DB:1015:U:H5'	2.13	0.47
23:DB:1181:U:O2'	23:DB:1182:G:H5'	2.15	0.47
23:DB:1704:C:O2'	23:DB:1705:A:H5'	2.15	0.47
23:DB:1737:G:H5'	23:DB:1738:G:OP2	2.14	0.47
23:DB:1773:A:H2'	23:DB:1774:C:O4'	2.14	0.47
23:DB:1773:A:N7	23:DB:1829:A:H1'	2.30	0.47
23:DB:2425:A:H5"	23:DB:2426:A:H3'	1.96	0.47
23:DB:2515:C:H2'	23:DB:2516:A:H8	1.80	0.47
23:DB:2569:G:O2'	23:DB:2570:G:H5'	2.15	0.47
23:DB:2719:G:O2'	23:DB:2720:U:H5'	2.14	0.47
23:DB:2801:G:H3'	23:DB:2802:G:H8	1.80	0.47
24:DI:129:GLU:HB3	24:DI:133:ARG:NH1	2.30	0.47
26:DD:10:GLY:O	26:DD:11:MET:HB2	2.14	0.47
26:DD:106:LYS:HD3	26:DD:106:LYS:N	2.29	0.47
30:DY:5:LYS:HG2	30:DY:36:GLU:HB2	1.96	0.47
39:DX:59:GLU:N	39:DX:59:GLU:OE2	2.47	0.47
40:DH:141:LYS:HD2	40:DH:141:LYS:N	2.30	0.47
47:DF:45:ASP:O	47:DF:46:LYS:HB2	2.15	0.47
47:DF:106:ALA:N	47:DF:108:PRO:HD2	2.30	0.47
49:DR:60:LYS:N	49:DR:100:GLY:HA3	2.22	0.47
50:DT:50:LEU:O	50:DT:52:GLU:N	2.42	0.47
1:AA:279:A:C5'	1:AA:280:C:H3'	2.43	0.47
1:AA:618:C:H1'	15:AP:14:ARG:NH1	2.30	0.47
1:AA:797:C:OP1	10:AK:125:LYS:HG2	2.15	0.47
1:AA:1148:U:O4'	8:AI:17:ARG:HD3	2.13	0.47
1:AA:1272:G:H2'	1:AA:1273:C:C6	2.50	0.47
5:AF:13:ASP:O	5:AF:14:GLN:HG2	2.15	0.47
12:AM:15:VAL:CG2	12:AM:40:GLU:HB3	2.43	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AR:34:GLU:CD	17:AR:34:GLU:N	2.65	0.47
22:BA:95:U:H2'	22:BA:96:G:H8	1.79	0.47
23:BB:349:U:H2'	23:BB:350:G:H8	1.79	0.47
23:BB:622:G:H2'	23:BB:623:C:H6	1.79	0.47
23:BB:1138:G:H21	41:BJ:108:MET:CE	2.27	0.47
23:BB:1241:A:H2'	23:BB:1242:U:C5'	2.43	0.47
23:BB:1275:A:H2'	23:BB:1275:A:N3	2.30	0.47
23:BB:1334:G:O2'	23:BB:1335:C:H5'	2.15	0.47
23:BB:1591:A:H2'	23:BB:1592:C:O4'	2.15	0.47
23:BB:1843:C:H2'	23:BB:1844:C:H6	1.79	0.47
23:BB:1854:A:N6	23:BB:1888:G:H1'	2.29	0.47
23:BB:2028:U:H2'	23:BB:2029:G:O4'	2.15	0.47
23:BB:2103:C:H3'	23:BB:2104:C:C2	2.50	0.47
23:BB:2473:U:O2	23:BB:2473:U:H2'	2.15	0.47
23:BB:2515:C:P	41:BJ:81:ILE:HD11	2.55	0.47
25:BC:90:ILE:HD12	25:BC:102:TYR:HB3	1.96	0.47
26:BD:54:ALA:N	26:BD:76:GLY:HA2	2.29	0.47
26:BD:179:ARG:HH11	26:BD:179:ARG:CB	2.28	0.47
28:BP:50:ARG:HB3	28:BP:57:ALA:N	2.30	0.47
29:BE:58:LYS:HE2	29:BE:60:TRP:CD1	2.46	0.47
33:B1:11:VAL:HG23	33:B1:50:GLU:HB3	1.97	0.47
40:BH:79:THR:CB	40:BH:145:ASN:HB2	2.44	0.47
43:BO:52:SER:OG	43:BO:54:VAL:HG12	2.15	0.47
45:BS:66:ILE:HD13	45:BS:66:ILE:N	2.16	0.47
46:BU:94:PHE:HB3	46:BU:101:THR:HA	1.97	0.47
47:BF:40:GLY:HA2	47:BF:84:ILE:HG23	1.96	0.47
47:BF:74:ALA:CB	47:BF:78:ILE:HD13	2.44	0.47
47:BF:121:PHE:HB3	47:BF:127:TYR:CZ	2.50	0.47
1:CA:222:C:H2'	1:CA:223:A:C8	2.49	0.47
1:CA:237:G:O2'	1:CA:238:A:H5'	2.15	0.47
1:CA:300:A:H2'	1:CA:301:G:O4'	2.14	0.47
1:CA:429:U:H1'	1:CA:430:A:H5"	1.95	0.47
1:CA:542:G:O2'	1:CA:543:U:H5'	2.14	0.47
1:CA:584:G:O2'	1:CA:585:G:H5'	2.14	0.47
1:CA:591:U:H2'	1:CA:592:G:H8	1.79	0.47
1:CA:610:U:O2	1:CA:610:U:O4'	2.31	0.47
1:CA:1309:G:H2'	1:CA:1310:G:H8	1.80	0.47
3:CD:25:ARG:HD3	3:CD:25:ARG:C	2.34	0.47
8:CI:83:THR:OG1	8:CI:97:LEU:HD13	2.14	0.47
10:CK:35:ASP:OD1	10:CK:37:GLN:HB2	2.13	0.47
10:CK:85:VAL:HG21	10:CK:96:ILE:HD11	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:78:ARG:NH2	12:CM:82:LEU:HD11	2.29	0.47
15:CP:12:LYS:C	15:CP:14:ARG:H	2.18	0.47
20:CB:195:VAL:HG12	20:CB:197:PHE:N	2.28	0.47
23:DB:819:A:N6	23:DB:1189:A:H1'	2.30	0.47
23:DB:870:U:C2'	23:DB:871:U:H5'	2.45	0.47
23:DB:948:C:H2'	23:DB:949:G:C8	2.50	0.47
23:DB:1223:G:OP2	49:DR:90:ARG:NH1	2.47	0.47
23:DB:1345:C:H5'	23:DB:1396:U:H5	1.80	0.47
23:DB:1475:G:H1'	23:DB:1476:U:C5	2.47	0.47
23:DB:1654:A:O2'	26:DD:118:PHE:CB	2.60	0.47
23:DB:1796:U:O2'	23:DB:1797:G:H5'	2.15	0.47
23:DB:2008:C:H2'	23:DB:2009:A:H8	1.79	0.47
23:DB:2193:G:H2'	23:DB:2194:U:C6	2.49	0.47
23:DB:2235:G:H2'	23:DB:2236:U:C6	2.50	0.47
23:DB:2462:C:H2'	23:DB:2463:C:H6	1.78	0.47
23:DB:2680:U:P	26:DD:114:LYS:HB3	2.54	0.47
23:DB:2886:A:N7	31:D0:39:ARG:NH2	2.62	0.47
24:DI:18:ASN:N	24:DI:19:PRO:CD	2.77	0.47
24:DI:37:PHE:HB2	24:DI:66:PHE:CE2	2.49	0.47
25:DC:89:ASN:O	25:DC:105:ALA:HB3	2.15	0.47
25:DC:141:HIS:CG	25:DC:142:ASN:H	2.30	0.47
25:DC:158:GLY:H	25:DC:194:VAL:HG13	1.80	0.47
26:DD:169:ARG:O	26:DD:170:VAL:O	2.31	0.47
33:D1:11:VAL:HG23	33:D1:50:GLU:HB3	1.95	0.47
37:DL:68:SER:HB2	37:DL:71:ALA:H	1.79	0.47
38:DM:66:ARG:CZ	38:DM:101:VAL:HG11	2.44	0.47
38:DM:108:VAL:HG21	38:DM:112:LEU:HD12	1.97	0.47
39:DX:29:ARG:HH12	50:DT:12:ARG:HG2	1.79	0.47
40:DH:70:GLU:H	40:DH:70:GLU:HG3	1.57	0.47
46:DU:48:VAL:HG22	46:DU:48:VAL:O	2.13	0.47
48:DG:25:ILE:O	48:DG:32:LEU:HA	2.14	0.47
51:DZ:27:ARG:HD3	51:DZ:28:ARG:H	1.80	0.47
1:AA:68:G:C5'	1:AA:171:A:H1'	2.44	0.47
1:AA:68:G:H2'	1:AA:69:G:O4'	2.14	0.47
1:AA:78:A:H8	1:AA:78:A:O5'	1.97	0.47
1:AA:245:U:H2'	1:AA:246:A:H5'	1.97	0.47
1:AA:276:G:O2'	1:AA:277:C:H5'	2.15	0.47
1:AA:279:A:H5'	1:AA:281:G:C5'	2.44	0.47
1:AA:327:A:O2'	1:AA:328:C:O4'	2.28	0.47
1:AA:376:G:H5"	15:AP:5:ARG:CB	2.41	0.47
1:AA:614:C:O2'	1:AA:615:G:H5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1085:U:H3'	1:AA:1086:U:C6	2.49	0.47
1:AA:1258:G:C6	1:AA:1278:G:N1	2.82	0.47
1:AA:1289:A:H2'	1:AA:1290:G:H5'	1.97	0.47
1:AA:1314:C:H3'	18:AS:5:LYS:HZ1	1.80	0.47
1:AA:1332:A:H2'	1:AA:1333:A:H8	1.79	0.47
1:AA:1514:G:H2'	1:AA:1515:G:H8	1.79	0.47
3:AD:57:LYS:HD3	3:AD:57:LYS:C	2.35	0.47
4:AE:99:SER:HB3	4:AE:102:THR:OG1	2.14	0.47
8:AI:94:ARG:HA	8:AI:97:LEU:CG	2.41	0.47
9:AJ:92:LEU:HD22	9:AJ:92:LEU:N	2.30	0.47
12:AM:22:TYR:HB2	12:AM:65:GLU:HA	1.96	0.47
13:AN:64:ARG:HB2	13:AN:77:GLY:O	2.14	0.47
20:AB:42:LEU:HA	20:AB:45:THR:CB	2.44	0.47
20:AB:44:LYS:C	20:AB:47:PRO:HD2	2.35	0.47
20:AB:75:ALA:O	20:AB:79:VAL:HG23	2.14	0.47
20:AB:84:LEU:C	20:AB:86:CYS:H	2.18	0.47
20:AB:162:VAL:HG13	20:AB:184:ALA:CB	2.43	0.47
21:AU:48:LYS:HG3	21:AU:49:ALA:N	2.30	0.47
22:BA:115:A:O2'	22:BA:116:G:H5'	2.14	0.47
23:BB:244:A:H2'	23:BB:245:G:O4'	2.15	0.47
23:BB:534:U:H1'	44:BQ:44:TYR:HB3	1.95	0.47
23:BB:819:A:OP2	23:BB:1187:G:N2	2.47	0.47
23:BB:1021:A:H61	23:BB:1142:A:H61	1.61	0.47
23:BB:1150:C:O2'	23:BB:1151:A:H5'	2.15	0.47
23:BB:1376:C:O2'	23:BB:1377:G:H5'	2.15	0.47
23:BB:1541:C:H2'	23:BB:1542:U:C6	2.49	0.47
23:BB:1593:A:H2'	23:BB:1594:U:H6	1.76	0.47
23:BB:1754:A:H2'	23:BB:1755:A:O4'	2.13	0.47
23:BB:1790:C:O2'	25:BC:207:ALA:CB	2.61	0.47
23:BB:1942:C:C1'	53:B6:133:ARG:HH22	2.28	0.47
23:BB:1948:G:O2'	23:BB:1949:G:H5'	2.14	0.47
23:BB:2313:C:H4'	47:BF:87:LYS:HB3	1.96	0.47
23:BB:2411:A:H2'	23:BB:2412:A:C8	2.50	0.47
23:BB:2572:A:OP2	26:BD:151:THR:HB	2.13	0.47
23:BB:2663:G:H2'	23:BB:2664:G:C8	2.49	0.47
23:BB:2784:U:O2'	23:BB:2785:C:H5'	2.13	0.47
25:BC:61:TYR:HA	25:BC:85:ASN:ND2	2.29	0.47
25:BC:106:PRO:O	25:BC:109:LEU:HB3	2.15	0.47
25:BC:157:ALA:HB1	25:BC:196:ASN:HB3	1.97	0.47
25:BC:171:VAL:HG23	25:BC:185:ALA:CB	2.44	0.47
26:BD:106:LYS:HD3	26:BD:106:LYS:N	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BK:47:ILE:CG1	27:BK:48:PRO:HD2	2.39	0.47
29:BE:40:ARG:NH2	29:BE:92:HIS:NE2	2.62	0.47
29:BE:75:SER:O	29:BE:78:TRP:HB2	2.15	0.47
29:BE:130:LYS:HB2	29:BE:133:LEU:HG	1.96	0.47
30:BY:9:THR:HB	30:BY:53:MET:O	2.14	0.47
32:B4:11:CYS:HB3	32:B4:33:HIS:HE1	1.79	0.47
40:BH:5:LEU:HD12	40:BH:17:ASP:CB	2.43	0.47
42:BN:12:ARG:HG2	42:BN:16:HIS:CG	2.49	0.47
42:BN:65:LEU:HD11	42:BN:69:ARG:CZ	2.44	0.47
42:BN:67:PHE:O	42:BN:68:ALA:C	2.52	0.47
45:BS:4:ILE:HG22	45:BS:106:VAL:HG13	1.96	0.47
47:BF:33:ILE:HB	47:BF:90:LEU:HB2	1.97	0.47
47:BF:66:ILE:HD11	47:BF:83:PRO:HB3	1.97	0.47
47:BF:102:LEU:HB2	47:BF:106:ALA:HB3	1.95	0.47
47:BF:106:ALA:N	47:BF:108:PRO:HD2	2.30	0.47
47:BF:135:ILE:C	47:BF:136:ILE:HG12	2.35	0.47
48:BG:75:VAL:O	48:BG:78:VAL:HG22	2.15	0.47
48:BG:163:TYR:O	48:BG:165:ASP:N	2.47	0.47
50:BT:82:LYS:HD3	50:BT:84:TYR:HE1	1.79	0.47
51:BZ:32:ASN:O	51:BZ:33:LEU:O	2.32	0.47
53:B6:9:GLU:HG3	53:B6:13:HIS:NE2	2.30	0.47
1:CA:203:G:H1'	1:CA:465:A:N6	2.30	0.47
1:CA:213:G:H5"	1:CA:214:C:H5	1.80	0.47
1:CA:385:C:O2'	1:CA:386:C:H5'	2.15	0.47
1:CA:449:G:H2'	1:CA:450:G:C8	2.50	0.47
1:CA:469:C:H2'	1:CA:470:C:O4'	2.15	0.47
1:CA:482:A:H2'	1:CA:483:C:O4'	2.15	0.47
1:CA:576:C:OP2	1:CA:576:C:H3'	2.14	0.47
1:CA:618:C:H1'	15:CP:14:ARG:NH1	2.29	0.47
1:CA:643:C:H5'	7:CH:31:LEU:HD13	1.96	0.47
1:CA:658:C:H2'	1:CA:659:U:H6	1.79	0.47
1:CA:825:A:H2'	1:CA:826:C:H6	1.80	0.47
1:CA:925:G:C2	1:CA:927:G:C8	3.02	0.47
1:CA:1182:G:H4'	1:CA:1183:U:H5'	1.96	0.47
2:CC:140:ALA:HB3	2:CC:148:ILE:HD12	1.95	0.47
2:CC:202:PHE:HZ	2:CC:205:GLU:HG2	1.79	0.47
3:CD:16:THR:HG22	3:CD:17:ASP:H	1.78	0.47
3:CD:29:THR:HG22	3:CD:30:LYS:HD3	1.95	0.47
3:CD:55:ARG:HG3	3:CD:55:ARG:NH1	2.29	0.47
3:CD:149:LYS:HD3	3:CD:177:MET:CG	2.42	0.47
5:CF:62:MET:HG3	5:CF:64:VAL:CG2	2.39	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:58:LEU:HD23	6:CG:58:LEU:N	2.30	0.47
8:CI:113:LYS:HA	8:CI:120:ALA:HB2	1.96	0.47
10:CK:30:ILE:HG22	10:CK:45:THR:CB	2.44	0.47
12:CM:84:CYS:O	12:CM:88:LEU:HG	2.15	0.47
18:CS:27:LYS:HB3	18:CS:27:LYS:HZ3	1.79	0.47
21:CU:33:ARG:CZ	21:CU:34:ARG:HG2	2.44	0.47
23:DB:360:U:H2'	23:DB:361:G:N9	2.29	0.47
23:DB:526:A:N6	23:DB:2626:C:C4'	2.77	0.47
23:DB:566:U:H2'	23:DB:567:U:O4'	2.15	0.47
23:DB:1052:C:H2'	23:DB:1053:C:C6	2.50	0.47
23:DB:1150:C:H2'	23:DB:1151:A:H8	1.79	0.47
23:DB:1279:G:H2'	23:DB:1280:G:O4'	2.13	0.47
23:DB:1316:U:H2'	23:DB:1317:G:H8	1.79	0.47
23:DB:1429:G:H2'	23:DB:1430:G:C8	2.50	0.47
23:DB:1533:C:H2'	23:DB:1534:U:C6	2.49	0.47
23:DB:1826:G:P	25:DC:221:GLY:H	2.38	0.47
23:DB:1844:C:OP1	25:DC:254:LYS:HA	2.15	0.47
23:DB:1868:C:H2'	23:DB:1869:G:O4'	2.14	0.47
23:DB:2065:C:H2'	23:DB:2066:C:H6	1.80	0.47
23:DB:2240:U:O2'	23:DB:2241:A:H5'	2.14	0.47
23:DB:2540:C:H2'	23:DB:2541:A:C8	2.50	0.47
23:DB:2708:G:H2'	23:DB:2709:G:H8	1.79	0.47
23:DB:2716:C:O2'	23:DB:2717:C:H5'	2.15	0.47
23:DB:2774:C:OP1	26:DD:169:ARG:HG3	2.15	0.47
23:DB:2805:C:H2'	23:DB:2806:C:H6	1.79	0.47
24:DI:89:SER:HA	24:DI:97:VAL:HG11	1.97	0.47
25:DC:64:VAL:HG21	25:DC:86:ARG:CZ	2.45	0.47
28:DP:52:ARG:HB2	28:DP:55:HIS:O	2.14	0.47
29:DE:122:GLU:OE1	29:DE:122:GLU:N	2.46	0.47
29:DE:171:ASP:CG	29:DE:172:ALA:H	2.18	0.47
29:DE:196:VAL:HA	29:DE:199:MET:HB3	1.96	0.47
30:DY:8:GLN:CG	30:DY:31:ILE:HA	2.44	0.47
30:DY:37:ARG:HG3	30:DY:38:GLU:OE2	2.14	0.47
31:D0:54:ILE:H	42:DN:118:ARG:HH12	1.62	0.47
34:D3:18:LYS:HD2	34:D3:19:GLY:N	2.30	0.47
38:DM:26:VAL:CG2	38:DM:133:LYS:HA	2.44	0.47
40:DH:89:LYS:N	40:DH:89:LYS:HD2	2.30	0.47
42:DN:12:ARG:HG2	42:DN:16:HIS:CG	2.50	0.47
42:DN:93:GLY:C	42:DN:95:THR:H	2.18	0.47
45:DS:17:VAL:C	45:DS:19:LEU:N	2.66	0.47
46:DU:14:THR:O	46:DU:18:LYS:HA	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:2:LYS:H	47:DF:2:LYS:HG2	1.52	0.47
50:DT:21:SER:HB3	50:DT:31:VAL:HG22	1.96	0.47
50:DT:50:LEU:HD22	50:DT:50:LEU:N	2.29	0.47
51:DZ:7:VAL:HG21	51:DZ:59:ILE:CD1	2.42	0.47
52:DW:37:VAL:O	52:DW:38:ARG:HG2	2.14	0.47
52:DW:43:LYS:HB2	52:DW:58:LEU:HD21	1.96	0.47
53:D6:38:LEU:HB3	53:D6:41:LEU:HD22	1.96	0.47
53:D6:63:PRO:HD2	53:D6:64:ARG:NH1	2.30	0.47
53:D6:113:ASP:HA	53:D6:116:ARG:HD2	1.95	0.47
1:AA:801:U:H2'	1:AA:802:A:C8	2.49	0.47
1:AA:812:G:OP2	1:AA:902:G:N2	2.46	0.47
1:AA:946:A:H2'	1:AA:947:G:H8	1.73	0.47
1:AA:1237:C:H3'	1:AA:1238:A:H5'	1.97	0.47
3:AD:96:ARG:HH12	3:AD:133:SER:HB3	1.80	0.47
3:AD:169:TRP:C	3:AD:182:LYS:HB2	2.35	0.47
3:AD:196:GLU:CD	3:AD:196:GLU:H	2.18	0.47
8:AI:21:LYS:N	8:AI:61:ASP:O	2.48	0.47
8:AI:83:THR:OG1	8:AI:97:LEU:HD13	2.14	0.47
9:AJ:55:PRO:O	9:AJ:56:HIS:HB3	2.15	0.47
10:AK:85:VAL:HG21	10:AK:96:ILE:HD11	1.96	0.47
12:AM:106:ARG:HH12	12:AM:109:LYS:HE3	1.80	0.47
13:AN:17:ASP:O	13:AN:21:ALA:HB3	2.15	0.47
13:AN:55:SER:HB2	13:AN:58:ARG:HD2	1.97	0.47
22:BA:48:U:H2'	22:BA:49:C:H6	1.80	0.47
23:BB:329:G:H1	46:BU:16:LYS:CG	2.24	0.47
23:BB:438:G:O2'	23:BB:439:A:H5'	2.14	0.47
23:BB:540:C:O2'	23:BB:541:A:H5'	2.15	0.47
23:BB:1060:U:C4	24:BI:131:THR:HG22	2.49	0.47
23:BB:1468:U:H2'	23:BB:1522:A:H61	1.80	0.47
23:BB:1576:U:O2'	23:BB:1577:C:H5'	2.13	0.47
23:BB:1599:U:OP1	50:BT:40:LYS:HG3	2.15	0.47
23:BB:2064:C:H2'	23:BB:2065:C:H6	1.80	0.47
23:BB:2262:U:H2'	23:BB:2263:C:H6	1.80	0.47
23:BB:2515:C:H2'	23:BB:2516:A:H8	1.80	0.47
25:BC:57:HIS:CG	25:BC:58:LYS:N	2.81	0.47
25:BC:183:VAL:HG22	25:BC:184:GLU:H	1.80	0.47
26:BD:3:GLY:O	26:BD:4:LEU:HD13	2.15	0.47
26:BD:31:ALA:HA	26:BD:96:ILE:O	2.15	0.47
26:BD:90:PHE:N	26:BD:94:GLN:OE1	2.44	0.47
33:B1:34:GLU:HG2	33:B1:49:LYS:HD3	1.97	0.47
35:BV:93:ARG:H	35:BV:93:ARG:HG3	1.51	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BM:69:PRO:HA	38:BM:94:ALA:HB2	1.96	0.47
40:BH:27:ARG:O	40:BH:28:ASN:ND2	2.47	0.47
40:BH:62:LEU:HD12	40:BH:62:LEU:N	2.29	0.47
43:BO:24:THR:O	43:BO:90:VAL:HB	2.15	0.47
44:BQ:18:LYS:C	44:BQ:20:ALA:N	2.67	0.47
45:BS:84:ARG:HB3	45:BS:96:ILE:HG23	1.97	0.47
51:BZ:63:GLY:O	51:BZ:67:VAL:N	2.41	0.47
52:BW:44:PHE:HE2	52:BW:76:ARG:CZ	2.27	0.47
1:CA:250:A:H1'	1:CA:252:U:C5	2.49	0.47
1:CA:1148:U:O4'	8:CI:17:ARG:HD3	2.15	0.47
1:CA:1242:G:H2'	1:CA:1243:C:C6	2.50	0.47
1:CA:1472:U:H2'	1:CA:1473:G:C8	2.50	0.47
2:CC:13:ILE:HD13	2:CC:13:ILE:H	1.79	0.47
20:CB:187:ASP:O	20:CB:189:ASN:N	2.48	0.47
23:DB:283:G:H3'	23:DB:284:U:C5'	2.45	0.47
23:DB:305:C:H2'	23:DB:306:U:C6	2.50	0.47
23:DB:812:C:H4'	44:DQ:12:ARG:HH22	1.79	0.47
23:DB:861:A:H2'	23:DB:862:G:O4'	2.15	0.47
23:DB:1098:A:H2'	24:DI:3:LYS:C	2.36	0.47
23:DB:1100:C:C5	24:DI:1:ALA:O	2.68	0.47
23:DB:1535:A:H5"	23:DB:1536:C:C5	2.44	0.47
23:DB:1726:C:O5'	23:DB:1726:C:H6	1.97	0.47
23:DB:2060:A:H3'	29:DE:63:LYS:HZ1	1.80	0.47
23:DB:2811:G:OP1	26:DD:62:LYS:HD2	2.15	0.47
24:DI:23:VAL:HG12	24:DI:24:GLY:N	2.30	0.47
24:DI:78:LEU:HD23	24:DI:81:LYS:HE2	1.96	0.47
29:DE:48:THR:C	29:DE:50:ALA:H	2.16	0.47
32:D4:22:VAL:HB	32:D4:24:ARG:NE	2.28	0.47
32:D4:35:GLN:HB2	32:D4:35:GLN:HE21	1.54	0.47
34:D3:22:LYS:CA	34:D3:48:MET:HA	2.42	0.47
35:DV:30:ILE:HG12	35:DV:91:PHE:HB2	1.97	0.47
40:DH:135:HIS:CD2	40:DH:136:SER:H	2.32	0.47
44:DQ:73:ILE:HG13	44:DQ:74:SER:N	2.30	0.47
47:DF:40:GLY:HA2	47:DF:84:ILE:HG23	1.96	0.47
49:DR:91:GLN:HG3	49:DR:92:TRP:H	1.80	0.47
50:DT:51:PHE:HB3	50:DT:53:VAL:HG23	1.96	0.47
51:DZ:20:HIS:O	51:DZ:21:ALA:HB3	2.15	0.47
52:DW:35:ILE:O	52:DW:37:VAL:N	2.48	0.47
53:D6:174:GLN:O	53:D6:178:LYS:HG3	2.14	0.47
1:AA:108:G:H5'	1:AA:109:A:H5"	1.97	0.47
1:AA:429:U:H1'	1:AA:430:A:H5"	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:626:G:O2'	1:AA:627:G:H5'	2.15	0.47
1:AA:637:C:O2'	1:AA:638:U:H5'	2.15	0.47
1:AA:719:C:H2'	17:AR:38:ILE:HD13	1.97	0.47
1:AA:968:A:H4'	1:AA:969:A:OP2	2.13	0.47
1:AA:1332:A:H2'	1:AA:1333:A:C8	2.50	0.47
5:AF:38:ARG:NH1	5:AF:96:VAL:HG12	2.30	0.47
8:AI:122:ARG:HG3	8:AI:122:ARG:HH11	1.80	0.47
9:AJ:12:ALA:H	9:AJ:18:ILE:HD12	1.80	0.47
9:AJ:56:HIS:H	13:AN:80:ARG:HH22	1.62	0.47
11:AL:43:LYS:CE	11:AL:44:PRO:HD3	2.45	0.47
19:AT:57:VAL:HG23	19:AT:58:ASP:N	2.29	0.47
20:AB:33:ALA:CA	20:AB:38:HIS:HA	2.42	0.47
20:AB:182:VAL:O	20:AB:195:VAL:HG13	2.14	0.47
22:BA:102:G:O2'	22:BA:103:U:H5'	2.14	0.47
23:BB:226:A:H2'	23:BB:227:A:C8	2.49	0.47
23:BB:322:A:C2	23:BB:340:A:C6	3.03	0.47
23:BB:564:C:OP2	49:BR:79:ARG:NH2	2.48	0.47
23:BB:668:A:H2'	23:BB:670:A:H62	1.78	0.47
23:BB:692:C:H2'	23:BB:693:A:H8	1.80	0.47
23:BB:962:G:H2'	23:BB:963:U:H6	1.78	0.47
23:BB:979:A:H3'	23:BB:980:A:C5'	2.45	0.47
23:BB:1201:U:H2'	23:BB:1202:G:C8	2.49	0.47
23:BB:1215:G:H2'	23:BB:1216:G:H8	1.80	0.47
23:BB:1336:A:H3'	23:BB:1337:G:H8	1.80	0.47
23:BB:1824:G:O2'	23:BB:1825:U:H5'	2.15	0.47
23:BB:1845:G:O2'	23:BB:1846:G:H5'	2.14	0.47
23:BB:2060:A:H1'	57:BB:3545:HOH:O	2.15	0.47
23:BB:2353:G:N3	52:BW:30:VAL:HG13	2.30	0.47
23:BB:2636:C:O2'	23:BB:2637:U:H5'	2.15	0.47
23:BB:2747:G:H8	23:BB:2747:G:O5'	1.98	0.47
23:BB:2882:A:H3'	23:BB:2883:A:H5"	1.97	0.47
25:BC:90:ILE:HD13	25:BC:103:ILE:O	2.14	0.47
28:BP:75:THR:O	28:BP:80:VAL:HG11	2.14	0.47
37:BL:60:ARG:C	37:BL:61:LEU:HD12	2.35	0.47
37:BL:135:ILE:HG12	37:BL:140:GLY:CA	2.40	0.47
38:BM:108:VAL:HG21	38:BM:112:LEU:HD12	1.96	0.47
40:BH:132:PHE:HB3	40:BH:140:ALA:HB3	1.97	0.47
43:BO:7:ARG:HA	43:BO:10:ARG:NE	2.29	0.47
44:BQ:108:LEU:CD2	49:BR:48:LYS:HB2	2.45	0.47
46:BU:62:ALA:O	46:BU:63:ALA:HB3	2.14	0.47
47:BF:45:ASP:O	47:BF:47:LYS:HD3	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:101:ARG:O	47:BF:105:ILE:HB	2.14	0.47
53:B6:18:LEU:HD11	53:B6:175:LEU:HD22	1.96	0.47
53:B6:32:ARG:CB	53:B6:103:ILE:HG12	2.32	0.47
1:CA:92:U:H2'	1:CA:93:U:C6	2.49	0.47
1:CA:102:G:H2'	1:CA:103:U:H6	1.79	0.47
1:CA:113:G:H2'	1:CA:114:U:H6	1.79	0.47
1:CA:309:A:H2'	1:CA:310:G:H8	1.79	0.47
1:CA:449:G:H2'	1:CA:450:G:H8	1.78	0.47
1:CA:451:A:H4'	1:CA:452:A:O4'	2.14	0.47
1:CA:451:A:H5'	15:CP:70:ARG:HH22	1.79	0.47
1:CA:521:G:OP1	11:CL:50:LYS:HE2	2.15	0.47
1:CA:632:U:O2	1:CA:632:U:H3'	2.15	0.47
2:CC:133:MET:CE	2:CC:165:GLU:HG2	2.45	0.47
4:CE:93:VAL:HG12	4:CE:94:PHE:N	2.30	0.47
5:CF:18:VAL:O	5:CF:22:ILE:HG13	2.15	0.47
5:CF:81:ASN:O	5:CF:84:VAL:HG12	2.14	0.47
6:CG:2:ARG:NH1	6:CG:2:ARG:CB	2.78	0.47
6:CG:26:VAL:HA	6:CG:42:VAL:HG21	1.97	0.47
10:CK:113:THR:HG21	21:CU:28:LEU:HD11	1.95	0.47
11:CL:47:ALA:O	11:CL:48:LEU:HD23	2.15	0.47
13:CN:45:LEU:HD23	13:CN:46:LYS:HD3	1.97	0.47
13:CN:55:SER:HB2	13:CN:58:ARG:HD2	1.97	0.47
13:CN:60:ARG:CZ	13:CN:69:PRO:HB3	2.45	0.47
13:CN:63:CYS:HB2	13:CN:79:SER:CB	2.44	0.47
20:CB:151:LYS:HG3	20:CB:152:ASP:H	1.79	0.47
23:DB:151:C:H2'	23:DB:152:A:C8	2.50	0.47
23:DB:635:C:H2'	23:DB:636:G:C8	2.50	0.47
23:DB:836:G:H2'	23:DB:837:C:H6	1.78	0.47
23:DB:1936:A:OP1	23:DB:1937:A:H5'	2.15	0.47
23:DB:2053:G:O2'	23:DB:2054:A:H5'	2.14	0.47
23:DB:2266:A:H4'	23:DB:2267:A:C8	2.49	0.47
23:DB:2529:G:H4'	48:DG:174:LYS:CG	2.45	0.47
25:DC:57:HIS:CG	25:DC:58:LYS:N	2.82	0.47
26:DD:114:LYS:HD2	26:DD:116:LYS:HE3	1.96	0.47
26:DD:204:LYS:HB2	26:DD:205:PRO:HD2	1.96	0.47
28:DP:20:ARG:HD3	28:DP:112:ARG:NH2	2.30	0.47
29:DE:1:MET:HB2	29:DE:16:GLU:CA	2.45	0.47
29:DE:130:LYS:HB2	29:DE:133:LEU:HG	1.96	0.47
30:DY:7:THR:HG22	30:DY:8:GLN:N	2.30	0.47
31:D0:38:LEU:HB3	31:D0:41:HIS:NE2	2.30	0.47
32:D4:7:VAL:HG13	32:D4:8:LYS:N	2.25	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DV:46:LYS:N	35:DV:46:LYS:HD2	2.30	0.47
37:DL:79:LEU:CG	37:DL:113:ALA:H	2.28	0.47
37:DL:91:ASP:HA	37:DL:123:ARG:HB3	1.97	0.47
38:DM:31:PHE:CE2	38:DM:110:GLU:HA	2.50	0.47
42:DN:59:SER:O	42:DN:61:ALA:N	2.38	0.47
42:DN:82:GLU:C	42:DN:84:GLY:H	2.18	0.47
44:DQ:18:LYS:C	44:DQ:20:ALA:N	2.68	0.47
44:DQ:24:TYR:CD1	44:DQ:25:GLY:N	2.82	0.47
48:DG:104:LEU:HD22	48:DG:106:LEU:CD2	2.45	0.47
1:AA:93:U:P	1:AA:94:G:H5"	2.55	0.47
1:AA:144:G:H2'	1:AA:145:G:O4'	2.14	0.47
1:AA:167:A:O2'	1:AA:168:G:H5'	2.15	0.47
1:AA:195:A:H1'	1:AA:222:C:O2'	2.15	0.47
1:AA:418:C:H2'	1:AA:419:C:C6	2.50	0.47
1:AA:451:A:H5'	15:AP:70:ARG:HH22	1.78	0.47
1:AA:556:C:O2'	1:AA:557:G:H5'	2.15	0.47
1:AA:869:G:H4'	1:AA:872:A:C8	2.50	0.47
1:AA:951:G:O2'	1:AA:952:U:H5'	2.15	0.47
7:AH:14:ARG:HG3	7:AH:15:ASN:N	2.30	0.47
10:AK:92:ARG:HH11	10:AK:92:ARG:CG	2.27	0.47
14:AO:46:HIS:O	14:AO:48:LYS:N	2.46	0.47
22:BA:52:A:OP1	22:BA:52:A:H4'	2.14	0.47
23:BB:24:G:H1'	45:BS:77:ASP:HB3	1.96	0.47
23:BB:547:A:C2'	23:BB:548:G:H5'	2.45	0.47
23:BB:1349:C:H2'	23:BB:1350:C:C6	2.49	0.47
23:BB:1522:A:H8	23:BB:1522:A:OP1	1.98	0.47
23:BB:1710:G:H4'	23:BB:2858:C:O2	2.15	0.47
23:BB:2028:U:H2'	23:BB:2029:G:C8	2.50	0.47
23:BB:2041:U:H2'	23:BB:2042:A:H8	1.79	0.47
23:BB:2540:C:H2'	23:BB:2541:A:C8	2.50	0.47
32:B4:19:ARG:C	32:B4:21:GLY:N	2.68	0.47
35:BV:48:MET:SD	35:BV:85:LYS:HA	2.55	0.47
37:BL:95:LEU:HB2	37:BL:101:ILE:CG1	2.45	0.47
38:BM:20:LEU:HD13	38:BM:20:LEU:N	2.30	0.47
41:BJ:74:TYR:HE2	41:BJ:103:ILE:HD11	1.80	0.47
42:BN:93:GLY:C	42:BN:95:THR:H	2.18	0.47
43:BO:7:ARG:HA	43:BO:10:ARG:CD	2.45	0.47
44:BQ:35:PHE:C	44:BQ:37:ALA:N	2.68	0.47
45:BS:41:LYS:O	45:BS:44:ALA:HB3	2.15	0.47
48:BG:25:ILE:O	48:BG:32:LEU:HA	2.15	0.47
48:BG:93:TYR:C	48:BG:94:ARG:HG3	2.35	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:39:TRP:HE1	51:BZ:41:GLU:HG2	1.80	0.47
1:CA:645:G:O2'	1:CA:646:G:H5'	2.15	0.47
1:CA:1033:G:H5"	1:CA:1034:G:OP2	2.15	0.47
1:CA:1366:C:H2'	1:CA:1367:C:C6	2.48	0.47
1:CA:1436:U:H2'	1:CA:1437:A:C8	2.50	0.47
1:CA:1533:C:C2'	1:CA:1534:A:H3'	2.36	0.47
3:CD:129:VAL:HG12	3:CD:131:ILE:H	1.80	0.47
4:CE:52:ALA:HB3	4:CE:58:ALA:N	2.30	0.47
5:CF:100:SER:HA	17:CR:23:LYS:NZ	2.30	0.47
6:CG:130:LYS:H	6:CG:134:VAL:HG21	1.80	0.47
7:CH:17:GLN:HG2	7:CH:62:LEU:HD23	1.96	0.47
13:CN:52:ARG:C	13:CN:54:SER:H	2.18	0.47
14:CO:39:LEU:HD23	14:CO:43:PHE:HE1	1.80	0.47
15:CP:38:PHE:CD1	15:CP:39:PHE:N	2.83	0.47
18:CS:64:GLU:OE1	18:CS:64:GLU:N	2.48	0.47
19:CT:38:ILE:HD13	19:CT:85:LEU:HD13	1.96	0.47
22:DA:13:G:O2'	22:DA:15:A:H5'	2.14	0.47
22:DA:28:C:H5'	22:DA:29:A:OP2	2.15	0.47
23:DB:702:U:H2'	23:DB:703:U:H6	1.79	0.47
23:DB:796:C:H2'	23:DB:797:G:C8	2.50	0.47
23:DB:947:A:HO2'	23:DB:984:A:H2	1.58	0.47
23:DB:956:G:H1'	38:DM:82:MET:HE1	1.97	0.47
23:DB:1464:G:H2'	23:DB:1465:G:C8	2.50	0.47
23:DB:1802:A:H2'	23:DB:1803:A:C8	2.50	0.47
23:DB:1864:U:O2'	23:DB:1865:U:H5'	2.14	0.47
23:DB:2052:A:OP1	26:DD:145:SER:HA	2.15	0.47
23:DB:2052:A:O3'	26:DD:149:ASN:HA	2.15	0.47
23:DB:2663:G:H2'	23:DB:2664:G:H8	1.80	0.47
23:DB:2896:C:H2'	23:DB:2897:U:H6	1.80	0.47
25:DC:90:ILE:HD12	25:DC:102:TYR:HB3	1.98	0.47
25:DC:141:HIS:NE2	25:DC:194:VAL:HA	2.29	0.47
26:DD:151:THR:N	26:DD:152:PRO:CD	2.78	0.47
32:D4:12:ARG:HG3	32:D4:13:ASN:ND2	2.30	0.47
34:D3:7:ARG:HG3	34:D3:7:ARG:HH11	1.80	0.47
37:DL:119:PRO:HB3	37:DL:139:GLY:O	2.15	0.47
39:DX:41:HIS:O	39:DX:44:LYS:HB3	2.15	0.47
40:DH:27:ARG:O	40:DH:28:ASN:ND2	2.47	0.47
40:DH:127:GLU:HB2	40:DH:143:ILE:HG21	1.97	0.47
40:DH:140:ALA:O	40:DH:142:VAL:HG23	2.15	0.47
41:DJ:13:ARG:HB3	41:DJ:53:TYR:HD2	1.80	0.47
44:DQ:63:ARG:NH1	44:DQ:96:ASP:HA	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DS:2:GLU:O	45:DS:3:THR:O	2.33	0.47
46:DU:9:GLU:OE2	46:DU:21:ARG:HD2	2.14	0.47
46:DU:86:PHE:CE1	46:DU:88:ASP:HB3	2.49	0.47
46:DU:86:PHE:HB2	46:DU:92:VAL:HB	1.97	0.47
47:DF:138:PRO:HA	47:DF:142:TYR:CE2	2.50	0.47
1:AA:398:U:H2'	1:AA:399:G:C8	2.50	0.46
1:AA:1080:A:O3'	4:AE:20:VAL:HG11	2.15	0.46
2:AC:96:VAL:HB	2:AC:97:PRO:HD2	1.97	0.46
3:AD:2:ARG:NH1	3:AD:114:ARG:HG3	2.30	0.46
4:AE:44:ARG:HD2	4:AE:72:ASN:HD22	1.79	0.46
4:AE:144:GLU:O	4:AE:144:GLU:HG2	2.15	0.46
10:AK:80:ASN:ND2	10:AK:80:ASN:H	2.12	0.46
11:AL:121:PRO:O	11:AL:122:LYS:HB3	2.15	0.46
13:AN:9:GLU:HB2	13:AN:62:ARG:CZ	2.45	0.46
15:AP:67:ILE:HD11	15:AP:71:VAL:HG22	1.97	0.46
16:AQ:37:ILE:H	16:AQ:37:ILE:HG13	1.41	0.46
18:AS:40:PHE:HB3	18:AS:41:PRO:HD2	1.97	0.46
23:BB:135:U:H2'	23:BB:136:G:H8	1.77	0.46
23:BB:190:A:N6	23:BB:207:A:H1'	2.30	0.46
23:BB:564:C:O2'	23:BB:565:C:H5'	2.15	0.46
23:BB:654:A:O2'	23:BB:655:A:H5"	2.15	0.46
23:BB:682:G:O2'	23:BB:683:U:H5'	2.15	0.46
23:BB:1025:G:OP1	23:BB:1025:G:H8	1.98	0.46
23:BB:1279:G:H2'	23:BB:1280:G:O4'	2.15	0.46
23:BB:2623:G:H4'	23:BB:2825:G:C8	2.51	0.46
23:BB:2680:U:H5'	26:BD:194:PRO:HA	1.97	0.46
23:BB:2805:C:H2'	23:BB:2806:C:C6	2.51	0.46
25:BC:76:VAL:HG12	25:BC:114:GLN:CG	2.34	0.46
33:B1:36:LYS:HG2	33:B1:47:ILE:HA	1.97	0.46
37:BL:116:VAL:HG13	37:BL:117:THR:N	2.20	0.46
40:BH:12:LEU:HD21	40:BH:25:TYR:HE2	1.79	0.46
41:BJ:6:ALA:HB3	41:BJ:45:THR:CG2	2.44	0.46
41:BJ:72:LYS:HB2	41:BJ:89:PHE:H	1.80	0.46
44:BQ:77:LYS:O	44:BQ:80:ASN:HB3	2.15	0.46
46:BU:11:ILE:O	46:BU:12:VAL:HB	2.15	0.46
46:BU:14:THR:O	46:BU:18:LYS:HG2	2.15	0.46
47:BF:11:VAL:HG13	47:BF:171:ALA:HB1	1.97	0.46
48:BG:54:ARG:O	48:BG:55:ASP:C	2.54	0.46
1:CA:113:G:O4'	1:CA:354:G:H4'	2.14	0.46
1:CA:162:A:H2'	1:CA:163:C:O4'	2.15	0.46
1:CA:213:G:H3'	1:CA:214:C:H6	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:546:A:P	3:CD:68:GLU:HB3	2.55	0.46
1:CA:653:U:C4	7:CH:55:LYS:HE2	2.50	0.46
1:CA:1118:U:H2'	1:CA:1119:C:H6	1.80	0.46
2:CC:171:ARG:HH11	2:CC:171:ARG:HB2	1.80	0.46
6:CG:126:ALA:C	6:CG:128:GLU:H	2.18	0.46
8:CI:5:TYR:O	8:CI:20:ILE:N	2.48	0.46
8:CI:41:GLU:H	8:CI:44:ARG:NH1	2.13	0.46
8:CI:46:VAL:HG23	8:CI:47:VAL:N	2.30	0.46
12:CM:37:GLY:O	12:CM:38:ILE:HD13	2.15	0.46
13:CN:30:ILE:HG22	13:CN:31:SER:N	2.30	0.46
20:CB:42:LEU:HA	20:CB:45:THR:HB	1.97	0.46
21:CU:49:ALA:O	21:CU:52:VAL:HG12	2.15	0.46
22:DA:111:U:H2'	22:DA:112:G:H8	1.74	0.46
23:DB:65:U:H2'	23:DB:66:C:H6	1.79	0.46
23:DB:235:U:H2'	23:DB:236:C:C6	2.50	0.46
23:DB:244:A:H2'	23:DB:245:G:O4'	2.15	0.46
23:DB:584:C:H2'	23:DB:585:G:C8	2.49	0.46
23:DB:633:A:OP1	37:DL:71:ALA:HB2	2.15	0.46
23:DB:705:A:H2'	23:DB:706:A:H8	1.80	0.46
23:DB:718:A:H3'	23:DB:719:C:C6	2.44	0.46
23:DB:992:C:H2'	23:DB:993:G:H8	1.81	0.46
23:DB:1190:G:O5'	37:DL:32:GLY:HA2	2.15	0.46
23:DB:1309:G:H4'	36:D2:7:PRO:CB	2.44	0.46
23:DB:1434:A:H62	23:DB:1558:C:H42	1.61	0.46
23:DB:1553:A:H2'	23:DB:1555:G:N7	2.31	0.46
23:DB:1566:A:H5'	25:DC:213:ARG:NH1	2.30	0.46
23:DB:1859:U:H2'	23:DB:1860:G:C8	2.50	0.46
23:DB:2103:C:H3'	23:DB:2104:C:O2	2.14	0.46
23:DB:2243:U:H2'	23:DB:2244:U:H6	1.80	0.46
23:DB:2365:G:O2'	52:DW:59:PHE:CE1	2.66	0.46
26:DD:114:LYS:HD2	26:DD:116:LYS:CE	2.44	0.46
37:DL:85:VAL:HG22	37:DL:94:THR:HG21	1.97	0.46
40:DH:115:VAL:HG22	40:DH:117:LEU:N	2.28	0.46
41:DJ:72:LYS:HB2	41:DJ:89:PHE:H	1.79	0.46
41:DJ:80:HIS:O	41:DJ:81:ILE:C	2.53	0.46
44:DQ:105:PHE:HA	44:DQ:108:LEU:CD1	2.40	0.46
44:DQ:108:LEU:HD23	49:DR:48:LYS:CD	2.45	0.46
44:DQ:109:VAL:O	44:DQ:113:LYS:HG3	2.15	0.46
47:DF:131:VAL:C	47:DF:133:GLU:H	2.19	0.46
47:DF:132:ARG:O	47:DF:133:GLU:HB2	2.15	0.46
49:DR:14:VAL:CG2	49:DR:15:SER:N	2.78	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DR:61:ALA:HB2	49:DR:98:ILE:HA	1.96	0.46
51:DZ:39:TRP:CE2	51:DZ:41:GLU:HA	2.50	0.46
51:DZ:40:VAL:CG2	51:DZ:43:GLU:HB3	2.44	0.46
52:DW:67:LYS:O	52:DW:68:PHE:HB2	2.14	0.46
1:AA:26:A:N6	1:AA:558:G:H1'	2.30	0.46
1:AA:707:U:H2'	1:AA:708:C:H6	1.80	0.46
3:AD:12:ARG:HA	3:AD:33:ILE:HD12	1.98	0.46
5:AF:49:TYR:CE1	17:AR:65:SER:HA	2.49	0.46
6:AG:26:VAL:HG12	6:AG:42:VAL:HG11	1.96	0.46
8:AI:38:PHE:CZ	8:AI:74:GLN:HB3	2.38	0.46
16:AQ:45:VAL:HG21	16:AQ:60:ILE:HG21	1.97	0.46
19:AT:53:MET:HA	19:AT:56:ILE:CD1	2.44	0.46
19:AT:71:ALA:O	19:AT:74:HIS:HB2	2.16	0.46
23:BB:1117:C:H2'	23:BB:1118:C:H6	1.79	0.46
23:BB:1473:G:O2'	23:BB:1474:U:H5'	2.15	0.46
23:BB:1539:U:H2'	23:BB:1539:U:O2	2.15	0.46
23:BB:1883:U:H2'	23:BB:1884:G:C1'	2.45	0.46
23:BB:1925:C:H42	55:BB:3111:LLL:H412	1.79	0.46
23:BB:2266:A:H1'	23:BB:2272:U:O4	2.15	0.46
23:BB:2327:A:H2'	23:BB:2328:A:C8	2.50	0.46
23:BB:2883:A:OP1	31:B0:48:TYR:HE1	1.98	0.46
25:BC:35:LYS:O	25:BC:36:ASN:HB2	2.15	0.46
29:BE:1:MET:HB2	29:BE:16:GLU:CA	2.45	0.46
32:B4:16:ILE:HA	32:B4:24:ARG:O	2.14	0.46
37:BL:92:LEU:HD23	37:BL:92:LEU:H	1.80	0.46
38:BM:55:ARG:HG3	38:BM:55:ARG:NH2	2.30	0.46
40:BH:68:ARG:HB2	40:BH:134:VAL:CG1	2.38	0.46
42:BN:82:GLU:C	42:BN:84:GLY:H	2.18	0.46
45:BS:95:ARG:HA	45:BS:95:ARG:NE	2.31	0.46
46:BU:86:PHE:CE1	46:BU:88:ASP:HB3	2.50	0.46
47:BF:116:LEU:HD21	47:BF:174:PHE:HE2	1.81	0.46
48:BG:93:TYR:CD1	48:BG:106:LEU:HB2	2.50	0.46
51:BZ:45:ARG:O	51:BZ:46:PHE:HB2	2.15	0.46
52:BW:61:LYS:HB3	52:BW:62:ALA:H	1.43	0.46
53:B6:16:LYS:HE3	53:B6:16:LYS:N	2.31	0.46
53:B6:30:THR:HA	53:B6:183:ILE:CG1	2.45	0.46
53:B6:30:THR:HG23	53:B6:179:LYS:NZ	2.31	0.46
53:B6:104:PRO:O	53:B6:105:PRO:C	2.52	0.46
53:B6:150:SER:OG	53:B6:153:GLU:HG3	2.15	0.46
1:CA:26:A:H61	1:CA:558:G:H1'	1.80	0.46
1:CA:677:U:H2'	1:CA:678:U:H6	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1488:G:O2'	1:CA:1489:G:H5'	2.15	0.46
3:CD:12:ARG:HA	3:CD:33:ILE:HD12	1.98	0.46
5:CF:38:ARG:NH2	5:CF:63:ASN:ND2	2.64	0.46
13:CN:46:LYS:HE3	18:CS:15:LEU:HD12	1.96	0.46
20:CB:161:PHE:CE2	20:CB:216:VAL:HG11	2.50	0.46
23:DB:494:G:O2'	23:DB:495:G:H5'	2.15	0.46
23:DB:558:U:P	41:DJ:113:PRO:HG2	2.55	0.46
23:DB:668:A:H2'	23:DB:670:A:H62	1.80	0.46
23:DB:851:C:O2'	23:DB:852:U:H5'	2.15	0.46
23:DB:939:G:O2'	23:DB:940:G:H5'	2.15	0.46
23:DB:1085:A:C1'	23:DB:1105:U:H1'	2.44	0.46
23:DB:1098:A:H3'	24:DI:3:LYS:HB3	1.96	0.46
23:DB:1102:C:O2'	23:DB:1103:A:H5'	2.16	0.46
23:DB:1174:U:H4'	23:DB:1176:U:C1'	2.44	0.46
23:DB:1229:C:H2'	23:DB:1230:A:C8	2.51	0.46
23:DB:1438:U:O2'	23:DB:1439:A:H5'	2.15	0.46
23:DB:1523:U:H5"	23:DB:1524:G:H8	1.76	0.46
23:DB:2221:G:O2'	23:DB:2222:C:H5'	2.15	0.46
23:DB:2228:G:H2'	23:DB:2229:U:H6	1.79	0.46
23:DB:2294:G:P	43:DO:94:ARG:HH11	2.38	0.46
23:DB:2648:G:H2'	23:DB:2649:C:C6	2.50	0.46
23:DB:2730:C:H2'	23:DB:2731:G:C8	2.49	0.46
23:DB:2880:C:O4'	42:DN:91:ALA:HB3	2.14	0.46
24:DI:96:LYS:HD3	24:DI:138:VAL:HG21	1.97	0.46
25:DC:35:LYS:HD2	25:DC:37:SER:OG	2.16	0.46
25:DC:157:ALA:HB1	25:DC:196:ASN:HB3	1.96	0.46
35:DV:80:HIS:HD2	35:DV:83:LYS:H	1.63	0.46
36:D2:10:LEU:HD21	36:D2:14:ARG:HH11	1.78	0.46
38:DM:38:ARG:HB3	38:DM:98:PRO:HD3	1.97	0.46
38:DM:69:PRO:HA	38:DM:94:ALA:HB2	1.97	0.46
43:DO:58:ILE:HG22	43:DO:62:LEU:CD2	2.45	0.46
45:DS:4:ILE:HG22	45:DS:106:VAL:HG13	1.97	0.46
47:DF:77:LYS:HD2	47:DF:79:ARG:HE	1.80	0.46
48:DG:79:THR:CG2	48:DG:80:GLU:HG2	2.37	0.46
53:D6:70:SER:HB3	53:D6:76:LEU:HG	1.98	0.46
1:AA:311:C:O2'	1:AA:312:C:H5'	2.15	0.46
1:AA:482:A:H2'	1:AA:483:C:O4'	2.16	0.46
1:AA:521:G:OP1	11:AL:50:LYS:HE2	2.15	0.46
1:AA:1451:U:H5"	1:AA:1452:C:OP2	2.16	0.46
1:AA:1489:G:H2'	1:AA:1490:U:C6	2.51	0.46
2:AC:146:LYS:HB2	2:AC:202:PHE:O	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:202:PHE:HZ	2:AC:205:GLU:HG2	1.79	0.46
3:AD:129:VAL:HG12	3:AD:131:ILE:H	1.79	0.46
4:AE:149:PRO:HG2	4:AE:150:GLU:OE1	2.16	0.46
8:AI:78:ILE:O	8:AI:82:ILE:HG13	2.16	0.46
12:AM:75:SER:O	12:AM:78:ARG:HB2	2.15	0.46
12:AM:87:GLY:HA2	12:AM:90:HIS:HD2	1.79	0.46
13:AN:10:VAL:HB	13:AN:11:LYS:HZ3	1.81	0.46
13:AN:30:ILE:HG22	13:AN:31:SER:N	2.29	0.46
15:AP:38:PHE:CE2	15:AP:51:ARG:HD3	2.50	0.46
19:AT:14:GLU:O	19:AT:17:ARG:HB3	2.15	0.46
23:BB:225:C:H2'	23:BB:226:A:O4'	2.15	0.46
23:BB:345:A:H1'	23:BB:346:A:C2	2.43	0.46
23:BB:660:C:H2'	23:BB:661:A:H8	1.79	0.46
23:BB:760:G:H2'	23:BB:761:A:O4'	2.14	0.46
23:BB:1270:C:H5"	23:BB:1271:G:C5'	2.45	0.46
23:BB:1441:G:H2'	23:BB:1442:U:H6	1.80	0.46
23:BB:1485:U:O2'	23:BB:1486:U:H5'	2.15	0.46
23:BB:1973:G:O2'	23:BB:1974:C:H5'	2.14	0.46
23:BB:2649:C:H2'	23:BB:2650:U:C6	2.49	0.46
25:BC:211:ARG:C	25:BC:213:ARG:H	2.18	0.46
26:BD:11:MET:HA	26:BD:24:VAL:O	2.15	0.46
29:BE:129:PRO:HD3	29:BE:156:ASN:OD1	2.15	0.46
29:BE:137:LYS:O	29:BE:141:MET:HG3	2.16	0.46
30:BY:37:ARG:HG3	30:BY:38:GLU:OE2	2.15	0.46
37:BL:6:LEU:H	37:BL:6:LEU:CD2	2.20	0.46
44:BQ:108:LEU:HD23	49:BR:48:LYS:CD	2.46	0.46
47:BF:11:VAL:HG12	47:BF:12:VAL:N	2.19	0.46
1:CA:108:G:H5'	1:CA:109:A:H5"	1.97	0.46
1:CA:292:G:O2'	1:CA:609:A:N6	2.48	0.46
1:CA:360:G:O2'	1:CA:361:G:H5'	2.15	0.46
1:CA:635:A:H2'	1:CA:636:U:H6	1.80	0.46
1:CA:1072:G:H2'	1:CA:1073:U:C6	2.51	0.46
1:CA:1316:G:H22	1:CA:1318:A:H3'	1.77	0.46
1:CA:1337:G:H5"	1:CA:1338:G:OP1	2.15	0.46
6:CG:46:LEU:HG	6:CG:57:GLU:CB	2.45	0.46
7:CH:1:SER:O	7:CH:3:GLN:HG3	2.14	0.46
8:CI:15:ALA:O	8:CI:66:VAL:HG23	2.14	0.46
8:CI:71:ILE:HD12	8:CI:71:ILE:N	2.28	0.46
11:CL:19:ASN:HD22	11:CL:19:ASN:HA	1.52	0.46
12:CM:2:ARG:HD3	12:CM:2:ARG:N	2.28	0.46
13:CN:30:ILE:C	13:CN:32:ASP:H	2.18	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CP:17:TYR:HB2	15:CP:39:PHE:HD2	1.81	0.46
18:CS:10:ILE:O	18:CS:10:ILE:HG13	2.15	0.46
20:CB:84:LEU:C	20:CB:86:CYS:H	2.18	0.46
20:CB:102:ASN:O	20:CB:106:VAL:HG23	2.15	0.46
21:CU:3:ILE:CG2	21:CU:19:LYS:HD2	2.45	0.46
23:DB:510:C:H2'	23:DB:511:U:O4'	2.15	0.46
23:DB:572:A:H5"	23:DB:573:U:OP2	2.15	0.46
23:DB:937:C:H2'	23:DB:938:G:H8	1.80	0.46
23:DB:962:G:H21	23:DB:2250:G:N2	2.02	0.46
23:DB:979:A:H2'	23:DB:982:C:N4	2.30	0.46
23:DB:1117:C:C2'	23:DB:1118:C:H5'	2.46	0.46
23:DB:1229:C:H2'	23:DB:1230:A:H8	1.79	0.46
23:DB:1300:G:H4'	23:DB:1301:A:O5'	2.16	0.46
23:DB:1463:C:H2'	23:DB:1464:G:H8	1.81	0.46
23:DB:1465:G:H2'	23:DB:1466:U:O4'	2.15	0.46
23:DB:2021:C:OP1	31:D0:8:THR:HG21	2.15	0.46
23:DB:2149:U:O2'	23:DB:2150:C:H5'	2.15	0.46
23:DB:2376:A:H1'	43:DO:111:ARG:HH12	1.81	0.46
23:DB:2468:A:H2'	23:DB:2476:A:C6	2.51	0.46
23:DB:2553:G:H2'	23:DB:2554:U:O4'	2.15	0.46
23:DB:2553:G:H2'	23:DB:2554:U:H4'	1.97	0.46
23:DB:2635:A:H5'	26:DD:79:LEU:HB2	1.97	0.46
23:DB:2737:G:H2'	23:DB:2738:A:C8	2.50	0.46
23:DB:2768:U:H2'	23:DB:2769:U:O4'	2.14	0.46
25:DC:83:ASP:HB2	25:DC:90:ILE:HB	1.97	0.46
25:DC:140:VAL:CG2	25:DC:163:ILE:HG12	2.45	0.46
25:DC:143:VAL:HG12	25:DC:144:GLU:N	2.31	0.46
33:D1:10:LEU:HD23	33:D1:35:LEU:HD21	1.98	0.46
34:D3:36:ALA:O	34:D3:40:LYS:HG3	2.15	0.46
35:DV:32:GLY:O	35:DV:93:ARG:HD2	2.15	0.46
37:DL:125:LEU:HB2	37:DL:143:GLU:OE2	2.16	0.46
38:DM:31:PHE:CD1	38:DM:105:MET:HB3	2.50	0.46
40:DH:3:VAL:HA	40:DH:39:ALA:N	2.31	0.46
42:DN:63:ARG:HA	42:DN:80:PHE:CE2	2.50	0.46
44:DQ:10:ARG:HB2	44:DQ:10:ARG:NH1	2.29	0.46
44:DQ:55:GLN:O	44:DQ:59:LEU:HB2	2.15	0.46
47:DF:101:ARG:O	47:DF:105:ILE:HB	2.14	0.46
47:DF:102:LEU:HA	47:DF:106:ALA:CB	2.45	0.46
47:DF:134:GLN:OE1	47:DF:136:ILE:HA	2.14	0.46
48:DG:22:VAL:HG22	48:DG:36:LEU:HD12	1.97	0.46
1:AA:147:G:H2'	1:AA:148:G:H8	1.78	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:301:G:O2'	1:AA:302:G:H5'	2.16	0.46
1:AA:455:G:H2'	1:AA:456:A:C8	2.51	0.46
1:AA:469:C:H2'	1:AA:470:C:O4'	2.16	0.46
1:AA:640:A:O2'	1:AA:641:U:H5'	2.15	0.46
1:AA:961:U:H3	1:AA:983:A:H62	1.63	0.46
2:AC:128:MET:H	2:AC:128:MET:CE	2.28	0.46
4:AE:152:VAL:HG21	7:AH:98:LEU:HB3	1.98	0.46
5:AF:98:GLU:CG	5:AF:99:ALA:N	2.78	0.46
11:AL:49:ARG:H	11:AL:49:ARG:CD	2.29	0.46
14:AO:8:THR:O	14:AO:11:ILE:HG22	2.15	0.46
14:AO:17:ARG:HG2	14:AO:24:SER:HB2	1.98	0.46
14:AO:25:THR:CG2	14:AO:70:LEU:HD23	2.45	0.46
18:AS:64:GLU:OE1	18:AS:64:GLU:N	2.48	0.46
21:AU:34:ARG:NH1	21:AU:39:LYS:HZ2	2.14	0.46
22:BA:40:U:O2'	22:BA:41:G:H5'	2.16	0.46
23:BB:29:U:H2'	23:BB:30:G:C8	2.50	0.46
23:BB:65:U:H2'	23:BB:66:C:H6	1.80	0.46
23:BB:82:U:H2'	23:BB:83:A:C8	2.51	0.46
23:BB:481:G:C2	23:BB:507:A:C4	3.03	0.46
23:BB:927:A:H2'	23:BB:928:A:C8	2.51	0.46
23:BB:1517:G:O2'	23:BB:1518:C:H5'	2.16	0.46
23:BB:2407:A:H2'	23:BB:2408:U:C6	2.51	0.46
23:BB:2563:U:O2	23:BB:2565:A:H8	1.99	0.46
23:BB:2756:U:OP2	32:B4:19:ARG:HG2	2.15	0.46
25:BC:89:ASN:O	25:BC:105:ALA:HB3	2.16	0.46
27:BK:68:GLY:HA3	27:BK:78:ARG:HB3	1.97	0.46
37:BL:79:LEU:CG	37:BL:113:ALA:H	2.29	0.46
41:BJ:80:HIS:O	41:BJ:81:ILE:C	2.53	0.46
42:BN:29:VAL:HG13	42:BN:83:LEU:HD21	1.96	0.46
43:BO:30:ARG:NH1	43:BO:102:ARG:HB2	2.31	0.46
47:BF:108:PRO:O	47:BF:110:ILE:HG23	2.16	0.46
48:BG:10:VAL:H	48:BG:48:THR:HG22	1.80	0.46
50:BT:10:VAL:HG21	50:BT:42:GLU:HG3	1.96	0.46
53:B6:32:ARG:HB2	53:B6:103:ILE:CG2	2.46	0.46
53:B6:78:ALA:HA	53:B6:81:LYS:CD	2.38	0.46
1:CA:840:C:N3	1:CA:842:U:H4'	2.31	0.46
1:CA:1130:A:H5'	8:CI:19:PHE:CE2	2.50	0.46
4:CE:84:VAL:CG1	4:CE:146:MET:HB3	2.45	0.46
5:CF:43:GLY:HA2	5:CF:58:HIS:NE2	2.31	0.46
8:CI:44:ARG:HH11	8:CI:44:ARG:HG2	1.79	0.46
9:CJ:6:ILE:HA	9:CJ:102:LEU:O	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CL:23:LEU:O	11:CL:25:ALA:N	2.49	0.46
15:CP:20:VAL:CG2	15:CP:32:PHE:HB2	2.46	0.46
19:CT:54:GLN:HG3	19:CT:75:LYS:HE3	1.97	0.46
19:CT:57:VAL:HG23	19:CT:58:ASP:N	2.30	0.46
23:DB:31:C:O2'	23:DB:32:C:H5'	2.16	0.46
23:DB:794:A:H2'	23:DB:795:C:C6	2.50	0.46
23:DB:870:U:H5"	38:DM:6:ARG:O	2.16	0.46
23:DB:873:C:H4'	38:DM:64:TRP:NE1	2.26	0.46
23:DB:1050:A:H2'	23:DB:1051:G:O4'	2.15	0.46
23:DB:1685:C:H2'	23:DB:1686:C:H6	1.81	0.46
23:DB:1742:U:H2'	23:DB:1743:G:H8	1.80	0.46
23:DB:2420:C:OP1	34:D3:33:THR:HB	2.15	0.46
23:DB:2784:U:H4'	26:DD:42:ASN:O	2.15	0.46
24:DI:69:VAL:O	24:DI:69:VAL:HG23	2.14	0.46
24:DI:79:LEU:HD12	24:DI:135:MET:SD	2.54	0.46
25:DC:28:PRO:O	25:DC:30:ALA:N	2.48	0.46
28:DP:112:ARG:HB2	28:DP:112:ARG:NH1	2.27	0.46
38:DM:40:ARG:HB2	38:DM:93:VAL:HG21	1.98	0.46
39:DX:10:SER:N	39:DX:60:LYS:HE2	2.27	0.46
40:DH:5:LEU:HD11	40:DH:12:LEU:O	2.15	0.46
40:DH:78:VAL:HG12	40:DH:79:THR:N	2.31	0.46
44:DQ:108:LEU:CD2	49:DR:48:LYS:HB2	2.45	0.46
47:DF:11:VAL:HG13	47:DF:171:ALA:HB1	1.96	0.46
47:DF:148:VAL:O	47:DF:149:ARG:HG2	2.15	0.46
50:DT:45:ALA:HA	50:DT:48:GLN:HB2	1.97	0.46
50:DT:55:VAL:HG22	50:DT:87:LEU:CD2	2.45	0.46
53:D6:113:ASP:HA	53:D6:116:ARG:HG2	1.98	0.46
1:AA:66:A:C2'	1:AA:67:C:H5'	2.44	0.46
1:AA:90:C:H2'	1:AA:91:U:C6	2.50	0.46
1:AA:286:C:H2'	1:AA:287:U:C6	2.50	0.46
1:AA:292:G:O2'	1:AA:609:A:N6	2.49	0.46
1:AA:551:U:H2'	1:AA:552:U:C6	2.50	0.46
1:AA:1053:G:N7	1:AA:1199:U:H3'	2.30	0.46
1:AA:1117:A:H4'	8:AI:105:ARG:NH1	2.30	0.46
1:AA:1218:C:H2'	1:AA:1219:A:H8	1.79	0.46
3:AD:2:ARG:O	3:AD:3:TYR:HB3	2.15	0.46
3:AD:55:ARG:HA	3:AD:55:ARG:NE	2.30	0.46
7:AH:9:MET:O	7:AH:13:ILE:HG13	2.15	0.46
7:AH:29:SER:O	7:AH:30:LYS:C	2.54	0.46
7:AH:110:MET:HG3	7:AH:115:ALA:HB2	1.97	0.46
8:AI:55:ASP:O	8:AI:59:LYS:HE3	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:56:MET:O	8:AI:58:GLU:HG2	2.16	0.46
8:AI:74:GLN:O	8:AI:78:ILE:HG13	2.16	0.46
10:AK:70:ALA:O	10:AK:74:LYS:HB2	2.15	0.46
11:AL:23:LEU:O	11:AL:25:ALA:N	2.48	0.46
12:AM:95:PRO:HB2	12:AM:99:GLN:OE1	2.16	0.46
13:AN:12:ARG:HE	13:AN:58:ARG:NH1	2.13	0.46
19:AT:77:ASN:O	19:AT:81:GLN:HG3	2.15	0.46
20:AB:147:LEU:O	20:AB:151:LYS:N	2.47	0.46
22:BA:78:A:H2'	22:BA:79:G:O4'	2.16	0.46
23:BB:419:U:H2'	23:BB:420:C:H6	1.78	0.46
23:BB:532:A:O2'	23:BB:2021:C:H5	1.97	0.46
23:BB:671:C:O2'	23:BB:672:C:H5'	2.15	0.46
23:BB:699:A:H4'	23:BB:1634:A:C5	2.50	0.46
23:BB:1056:G:H4'	23:BB:1086:A:H8	1.80	0.46
23:BB:2281:A:O2'	23:BB:2282:G:H5'	2.16	0.46
23:BB:2461:A:H2'	23:BB:2462:C:H6	1.78	0.46
23:BB:2844:G:H2'	23:BB:2845:U:O4'	2.16	0.46
25:BC:64:VAL:HG21	25:BC:86:ARG:CZ	2.45	0.46
29:BE:60:TRP:HB3	29:BE:61:ARG:H	1.33	0.46
35:BV:65:VAL:O	35:BV:66:ASP:HB3	2.16	0.46
40:BH:68:ARG:O	40:BH:72:ILE:HG22	2.15	0.46
40:BH:89:LYS:HA	40:BH:89:LYS:NZ	2.31	0.46
40:BH:128:HIS:O	40:BH:143:ILE:HA	2.15	0.46
40:BH:128:HIS:CG	40:BH:144:VAL:HB	2.50	0.46
41:BJ:13:ARG:HB3	41:BJ:53:TYR:CD2	2.50	0.46
41:BJ:70:THR:HG22	41:BJ:90:GLU:OE2	2.16	0.46
42:BN:2:ARG:HG2	42:BN:5:LYS:CB	2.40	0.46
42:BN:75:ILE:HD12	42:BN:76:VAL:N	2.30	0.46
51:BZ:33:LEU:O	51:BZ:34:HIS:CG	2.69	0.46
1:CA:317:U:H2'	1:CA:318:G:C8	2.50	0.46
1:CA:651:C:H2'	1:CA:652:U:C6	2.50	0.46
1:CA:1320:C:H1'	18:CS:72:GLU:CA	2.45	0.46
1:CA:1517:G:H1'	23:DB:1919:A:O3'	2.15	0.46
2:CC:5:HIS:HD2	2:CC:7:ASN:H	1.62	0.46
2:CC:46:LEU:HD12	2:CC:75:VAL:HG22	1.97	0.46
7:CH:6:ILE:O	7:CH:10:LEU:HG	2.15	0.46
7:CH:45:ILE:HG21	7:CH:60:LEU:CD2	2.44	0.46
7:CH:91:LEU:HD12	7:CH:116:ARG:HB2	1.97	0.46
8:CI:74:GLN:O	8:CI:78:ILE:HG13	2.16	0.46
13:CN:20:PHE:HD2	13:CN:54:SER:O	1.99	0.46
16:CQ:11:VAL:O	16:CQ:54:ILE:HG13	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CR:38:ILE:HG23	17:CR:62:ARG:NH2	2.30	0.46
18:CS:41:PRO:O	18:CS:44:ILE:HG22	2.16	0.46
22:DA:17:C:O2'	22:DA:18:G:H5'	2.16	0.46
23:DB:121:G:H2'	23:DB:122:G:H8	1.80	0.46
23:DB:742:A:O2'	23:DB:743:A:H5'	2.15	0.46
23:DB:794:A:H2'	23:DB:795:C:H6	1.80	0.46
23:DB:833:A:H2'	23:DB:834:G:H8	1.78	0.46
23:DB:960:A:C4'	23:DB:2457:U:H4'	2.46	0.46
23:DB:979:A:H3'	23:DB:980:A:C5'	2.45	0.46
23:DB:1099:G:O4'	24:DI:3:LYS:O	2.33	0.46
23:DB:1914:C:H2'	23:DB:1915:U:H5'	1.98	0.46
23:DB:2560:A:H2'	23:DB:2561:U:H6	1.79	0.46
23:DB:2603:G:O2'	23:DB:2604:U:H5'	2.15	0.46
23:DB:2861:U:H2'	23:DB:2862:G:H8	1.79	0.46
25:DC:204:LEU:CD2	25:DC:209:ALA:HB1	2.45	0.46
26:DD:94:GLN:HG2	26:DD:94:GLN:O	2.15	0.46
27:DK:47:ILE:HG23	27:DK:48:PRO:N	2.31	0.46
29:DE:88:ARG:HB3	29:DE:89:PRO:HD2	1.98	0.46
29:DE:134:LEU:CD2	29:DE:161:ALA:HB2	2.45	0.46
33:D1:32:LYS:NZ	33:D1:52:LYS:HA	2.31	0.46
33:D1:46:VAL:HG22	33:D1:47:ILE:H	1.80	0.46
37:DL:17:LYS:HD2	37:DL:19:LEU:HD11	1.98	0.46
42:DN:24:MET:CE	42:DN:44:LEU:HB2	2.45	0.46
43:DO:56:LYS:HG2	43:DO:60:GLU:OE1	2.15	0.46
44:DQ:91:ARG:CB	44:DQ:94:LEU:HD23	2.44	0.46
45:DS:15:GLN:O	45:DS:19:LEU:HB2	2.15	0.46
45:DS:51:LEU:C	45:DS:53:SER:H	2.19	0.46
46:DU:78:LYS:HE3	46:DU:79:ALA:N	2.30	0.46
49:DR:39:LEU:HB2	49:DR:49:ILE:HD11	1.97	0.46
50:DT:60:THR:HB	50:DT:81:LYS:HD2	1.98	0.46
50:DT:69:ARG:NE	50:DT:70:HIS:H	2.13	0.46
53:D6:183:ILE:C	53:D6:185:GLY:H	2.19	0.46
1:AA:26:A:H61	1:AA:558:G:H1'	1.80	0.46
1:AA:36:C:OP1	11:AL:119:LYS:HD2	2.16	0.46
1:AA:132:C:H5"	19:AT:68:LYS:NZ	2.29	0.46
1:AA:213:G:H3'	1:AA:214:C:H6	1.79	0.46
1:AA:239:U:H6	1:AA:239:U:C5'	2.28	0.46
1:AA:486:U:H2'	1:AA:487:A:H8	1.80	0.46
1:AA:512:U:H2'	1:AA:513:C:C6	2.51	0.46
1:AA:593:U:H2'	1:AA:594:U:C6	2.51	0.46
1:AA:617:G:C4'	15:AP:46:LYS:HE2	2.42	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:824:G:O2'	1:AA:825:A:H5'	2.15	0.46
1:AA:884:U:H4'	1:AA:885:G:H5"	1.96	0.46
1:AA:922:G:H2'	1:AA:923:A:H8	1.80	0.46
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.51	0.46
1:AA:1170:A:H2'	1:AA:1171:A:O4'	2.16	0.46
3:AD:185:PRO:HB2	3:AD:190:LEU:HG	1.98	0.46
4:AE:52:ALA:HB3	4:AE:58:ALA:N	2.30	0.46
10:AK:43:TRP:HZ3	10:AK:45:THR:HG22	1.79	0.46
13:AN:23:ARG:C	13:AN:25:GLU:H	2.18	0.46
14:AO:71:LYS:HD3	14:AO:72:ARG:N	2.31	0.46
20:AB:98:GLY:O	20:AB:102:ASN:N	2.48	0.46
23:BB:414:C:H2'	23:BB:415:A:H8	1.80	0.46
23:BB:470:A:H2'	23:BB:471:A:C8	2.51	0.46
23:BB:548:G:H5"	23:BB:549:G:N3	2.31	0.46
23:BB:584:C:H2'	23:BB:585:G:H8	1.79	0.46
23:BB:698:C:H4'	23:BB:734:A:H61	1.80	0.46
23:BB:814:C:O2'	23:BB:815:C:H5'	2.16	0.46
23:BB:822:G:O2'	23:BB:823:C:H5'	2.16	0.46
23:BB:1335:C:H2'	23:BB:1336:A:H8	1.80	0.46
23:BB:1418:G:H1'	23:BB:1580:A:N6	2.30	0.46
23:BB:1689:A:H2'	23:BB:1690:A:H8	1.80	0.46
23:BB:2314:A:H2'	23:BB:2315:G:C8	2.49	0.46
23:BB:2352:A:N1	52:BW:30:VAL:HG11	2.31	0.46
23:BB:2491:U:H5"	23:BB:2570:G:C5'	2.45	0.46
23:BB:2555:U:H2'	23:BB:2556:C:O4'	2.15	0.46
23:BB:2712:C:H3'	23:BB:2714:G:H5"	1.98	0.46
23:BB:2888:C:H2'	23:BB:2889:C:H6	1.80	0.46
26:BD:55:LYS:C	26:BD:57:ALA:H	2.19	0.46
28:BP:19:PHE:CE2	28:BP:25:VAL:HG11	2.51	0.46
36:B2:13:ASN:O	36:B2:17:GLY:HA3	2.16	0.46
38:BM:40:ARG:HB2	38:BM:93:VAL:HG21	1.98	0.46
38:BM:55:ARG:HG3	38:BM:55:ARG:HH21	1.81	0.46
40:BH:114:GLU:HB3	40:BH:133:GLN:C	2.36	0.46
42:BN:31:HIS:O	42:BN:33:ILE:HG13	2.16	0.46
42:BN:72:ASP:C	42:BN:74:GLU:N	2.68	0.46
44:BQ:77:LYS:HE2	44:BQ:116:LEU:HD13	1.95	0.46
47:BF:79:ARG:O	47:BF:80:GLN:C	2.54	0.46
47:BF:118:ALA:HA	47:BF:176:PHE:CE2	2.51	0.46
48:BG:9:VAL:O	48:BG:11:PRO:HD3	2.16	0.46
50:BT:61:LEU:O	50:BT:81:LYS:HA	2.16	0.46
53:B6:30:THR:HB	53:B6:182:GLU:C	2.36	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B6:55:ILE:CG2	53:B6:79:ILE:HD11	2.44	0.46
53:B6:61:PRO:HD2	53:B6:65:THR:O	2.16	0.46
1:CA:26:A:N6	1:CA:558:G:H1'	2.30	0.46
1:CA:45:G:H2'	1:CA:46:G:C8	2.50	0.46
1:CA:513:C:H2'	1:CA:514:C:H6	1.80	0.46
1:CA:626:G:O2'	1:CA:627:G:H5'	2.15	0.46
1:CA:1289:A:H2'	1:CA:1290:G:H5'	1.97	0.46
1:CA:1298:U:H4'	1:CA:1299:A:C4	2.51	0.46
2:CC:155:ARG:H	2:CC:162:ALA:HB1	1.81	0.46
3:CD:55:ARG:NE	3:CD:55:ARG:HA	2.30	0.46
5:CF:70:VAL:HG23	5:CF:71:ILE:N	2.30	0.46
6:CG:11:ILE:H	6:CG:11:ILE:HD12	1.79	0.46
6:CG:129:ASN:HA	6:CG:134:VAL:HG21	1.98	0.46
8:CI:20:ILE:HG12	8:CI:86:LEU:HD12	1.96	0.46
9:CJ:28:THR:HG21	9:CJ:90:LEU:HD22	1.97	0.46
10:CK:20:ALA:HB2	10:CK:81:LEU:HD12	1.97	0.46
10:CK:70:ALA:O	10:CK:74:LYS:HB2	2.16	0.46
11:CL:43:LYS:CE	11:CL:44:PRO:HD3	2.45	0.46
12:CM:16:ILE:HG23	12:CM:17:ALA:H	1.81	0.46
15:CP:22:ALA:CB	15:CP:32:PHE:HA	2.45	0.46
15:CP:67:ILE:HG13	15:CP:71:VAL:HG13	1.98	0.46
18:CS:39:ILE:HB	18:CS:66:VAL:HA	1.96	0.46
20:CB:33:ALA:CA	20:CB:38:HIS:HA	2.44	0.46
20:CB:86:CYS:HB3	20:CB:88:GLN:CD	2.36	0.46
23:DB:523:C:H4'	23:DB:540:C:O2	2.16	0.46
23:DB:647:G:H2'	23:DB:648:G:H8	1.81	0.46
23:DB:671:C:O2'	23:DB:672:C:H5'	2.16	0.46
23:DB:755:U:O2'	23:DB:756:A:H5'	2.16	0.46
23:DB:839:U:H1'	23:DB:1191:G:H1'	1.97	0.46
23:DB:965:C:C2'	23:DB:966:G:H5'	2.46	0.46
23:DB:998:C:H3'	57:DB:3273:HOH:O	2.15	0.46
23:DB:1092:C:H2'	23:DB:1093:G:H5'	1.98	0.46
23:DB:1403:A:O2'	23:DB:1404:C:H5'	2.15	0.46
23:DB:1804:C:P	25:DC:256:THR:HB	2.56	0.46
23:DB:2076:U:O4'	23:DB:2076:U:O2	2.32	0.46
23:DB:2152:G:H2'	23:DB:2153:C:O4'	2.15	0.46
23:DB:2204:G:O2'	23:DB:2205:A:H5'	2.15	0.46
23:DB:2223:G:C2'	23:DB:2224:G:H5'	2.46	0.46
23:DB:2300:C:H2'	23:DB:2301:C:H6	1.80	0.46
23:DB:2397:G:H2'	23:DB:2398:U:H6	1.81	0.46
23:DB:2674:G:H2'	23:DB:2675:A:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:79:ARG:HD2	25:DC:81:GLU:CG	2.45	0.46
25:DC:106:PRO:O	25:DC:109:LEU:HB3	2.15	0.46
25:DC:245:THR:HG23	25:DC:249:VAL:O	2.16	0.46
26:DD:111:GLY:H	26:DD:194:PRO:HG2	1.81	0.46
26:DD:117:GLY:O	26:DD:118:PHE:C	2.54	0.46
29:DE:106:LYS:CE	29:DE:200:LEU:HB3	2.46	0.46
38:DM:35:ALA:HB2	38:DM:100:LYS:H	1.79	0.46
38:DM:97:GLN:N	38:DM:97:GLN:OE1	2.48	0.46
40:DH:53:GLU:OE1	40:DH:54:LEU:HD23	2.15	0.46
40:DH:68:ARG:NH1	40:DH:68:ARG:HG3	2.29	0.46
41:DJ:13:ARG:HB3	41:DJ:53:TYR:CD2	2.51	0.46
41:DJ:110:PRO:O	41:DJ:115:GLY:HA3	2.15	0.46
45:DS:41:LYS:O	45:DS:44:ALA:HB3	2.16	0.46
48:DG:148:ARG:HB2	48:DG:161:VAL:O	2.16	0.46
48:DG:152:ARG:HD2	48:DG:152:ARG:HA	1.68	0.46
50:DT:10:VAL:HG21	50:DT:42:GLU:HG3	1.98	0.46
51:DZ:63:GLY:O	51:DZ:67:VAL:HG23	2.15	0.46
53:D6:163:LYS:HE3	53:D6:167:GLU:OE1	2.15	0.46
1:AA:72:A:N6	1:AA:98:A:H2	2.13	0.46
1:AA:162:A:H2'	1:AA:163:C:O4'	2.16	0.46
1:AA:309:A:H2'	1:AA:310:G:H8	1.80	0.46
1:AA:546:A:P	3:AD:68:GLU:HB3	2.56	0.46
1:AA:1118:U:H2'	1:AA:1119:C:H6	1.81	0.46
1:AA:1130:A:H2'	1:AA:1131:G:C8	2.51	0.46
1:AA:1317:C:H2'	1:AA:1318:A:O4'	2.15	0.46
2:AC:64:ARG:HD3	2:AC:64:ARG:HA	1.70	0.46
4:AE:47:PHE:HZ	4:AE:137:ARG:HH21	1.62	0.46
5:AF:38:ARG:HH21	5:AF:63:ASN:ND2	2.14	0.46
5:AF:43:GLY:HA2	5:AF:58:HIS:NE2	2.31	0.46
8:AI:20:ILE:HD13	8:AI:85:ALA:CB	2.44	0.46
10:AK:108:ASN:ND2	21:AU:6:ARG:HB2	2.31	0.46
20:AB:110:ILE:HA	20:AB:147:LEU:HD13	1.97	0.46
20:AB:165:ALA:HB3	20:AB:186:VAL:HG12	1.97	0.46
23:BB:118:A:H5'	23:BB:119:A:C8	2.44	0.46
23:BB:242:G:OP2	34:B3:2:LYS:NZ	2.38	0.46
23:BB:670:A:H3'	37:BL:43:GLY:H	1.81	0.46
23:BB:856:G:H2'	23:BB:857:G:C8	2.51	0.46
23:BB:1161:C:H2'	23:BB:1162:G:H8	1.80	0.46
23:BB:1714:U:H3'	23:BB:1715:G:H5'	1.96	0.46
23:BB:1956:U:H2'	23:BB:1957:C:H5'	1.97	0.46
23:BB:2352:A:C6	52:BW:30:VAL:HG11	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2377:A:H2'	23:BB:2378:A:H8	1.76	0.46
23:BB:2643:G:H2'	23:BB:2644:G:O4'	2.15	0.46
24:BI:5:GLN:HG2	24:BI:6:ALA:H	1.78	0.46
25:BC:158:GLY:H	25:BC:194:VAL:HG13	1.80	0.46
26:BD:14:ILE:HG23	26:BD:22:ILE:HB	1.96	0.46
26:BD:30:GLU:HB2	26:BD:52:THR:CG2	2.46	0.46
26:BD:85:ALA:C	26:BD:87:GLY:H	2.19	0.46
29:BE:48:THR:HG22	29:BE:86:ALA:HB3	1.97	0.46
33:B1:37:LYS:O	33:B1:45:HIS:HA	2.15	0.46
34:B3:33:THR:HG23	34:B3:34:LYS:N	2.31	0.46
35:BV:30:ILE:HG12	35:BV:91:PHE:HB2	1.98	0.46
38:BM:35:ALA:HB3	38:BM:99:GLY:N	2.31	0.46
42:BN:28:LEU:HD23	42:BN:113:ILE:HG23	1.96	0.46
44:BQ:104:ALA:O	44:BQ:105:PHE:HB3	2.16	0.46
45:BS:15:GLN:O	45:BS:19:LEU:HB2	2.16	0.46
46:BU:14:THR:O	46:BU:18:LYS:HA	2.16	0.46
46:BU:40:LEU:HD12	46:BU:40:LEU:N	2.31	0.46
47:BF:138:PRO:HA	47:BF:142:TYR:CE2	2.50	0.46
48:BG:118:ALA:C	48:BG:120:ILE:H	2.19	0.46
50:BT:51:PHE:HB3	50:BT:53:VAL:HG23	1.97	0.46
52:BW:37:VAL:HG22	52:BW:55:ASP:O	2.16	0.46
53:B6:43:VAL:O	53:B6:50:VAL:N	2.48	0.46
53:B6:128:ALA:O	53:B6:132:ILE:HG13	2.15	0.46
1:CA:28:A:N3	1:CA:296:U:H4'	2.31	0.46
1:CA:241:G:O2'	1:CA:242:G:H5'	2.14	0.46
1:CA:255:G:H1'	16:CQ:17:GLU:OE2	2.16	0.46
1:CA:614:C:O2'	1:CA:615:G:H5'	2.15	0.46
1:CA:624:C:H2'	1:CA:625:U:C6	2.51	0.46
1:CA:947:G:H2'	1:CA:948:C:C6	2.50	0.46
1:CA:1119:C:O2'	1:CA:1120:C:H5'	2.15	0.46
1:CA:1182:G:H4'	1:CA:1183:U:C5'	2.46	0.46
1:CA:1332:A:H2'	1:CA:1333:A:C8	2.50	0.46
3:CD:48:SER:O	3:CD:49:ASP:C	2.54	0.46
8:CI:20:ILE:HG23	8:CI:60:LEU:HD12	1.98	0.46
11:CL:121:PRO:O	11:CL:122:LYS:HB3	2.16	0.46
15:CP:28:ARG:C	15:CP:30:GLY:H	2.19	0.46
23:DB:264:C:C2'	23:DB:265:A:H5"	2.46	0.46
23:DB:457:A:N1	23:DB:470:A:H5"	2.31	0.46
23:DB:465:G:H2'	23:DB:466:A:C8	2.51	0.46
23:DB:571:U:O2'	23:DB:573:U:O5'	2.34	0.46
23:DB:642:U:H2'	23:DB:644:A:OP2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1795:C:O2'	23:DB:1796:U:H5'	2.15	0.46
23:DB:1900:A:N1	23:DB:1970:A:C6	2.84	0.46
23:DB:2897:U:H2'	23:DB:2898:U:H6	1.80	0.46
26:DD:90:PHE:N	26:DD:94:GLN:OE1	2.49	0.46
26:DD:113:SER:HB3	26:DD:167:ASN:HA	1.97	0.46
29:DE:118:LEU:HD21	29:DE:188:MET:CE	2.46	0.46
30:DY:7:THR:HA	30:DY:34:THR:HA	1.97	0.46
40:DH:80:ILE:HD11	40:DH:147:VAL:N	2.14	0.46
40:DH:129:GLU:HA	40:DH:143:ILE:HA	1.97	0.46
40:DH:144:VAL:O	40:DH:144:VAL:HG23	2.16	0.46
41:DJ:21:THR:O	41:DJ:62:VAL:HA	2.15	0.46
47:DF:79:ARG:O	47:DF:80:GLN:C	2.54	0.46
48:DG:10:VAL:CG1	48:DG:14:VAL:HG21	2.46	0.46
50:DT:29:THR:CB	50:DT:86:THR:HA	2.46	0.46
50:DT:45:ALA:O	50:DT:48:GLN:HB2	2.16	0.46
53:D6:41:LEU:CD2	53:D6:83:ILE:HD13	2.45	0.46
1:AA:78:A:H2'	1:AA:79:G:C8	2.51	0.46
1:AA:176:C:H2'	1:AA:177:G:N3	2.31	0.46
1:AA:449:G:H2'	1:AA:450:G:H8	1.80	0.46
1:AA:1340:A:H2'	1:AA:1341:U:O4'	2.16	0.46
2:AC:102:ILE:HD12	2:AC:102:ILE:N	2.31	0.46
2:AC:112:ALA:HB2	2:AC:182:ASP:O	2.16	0.46
3:AD:41:GLY:C	3:AD:43:ARG:H	2.17	0.46
3:AD:199:ILE:HG13	3:AD:200:VAL:N	2.31	0.46
6:AG:47:GLU:OE1	6:AG:57:GLU:HG2	2.16	0.46
9:AJ:80:THR:HG21	9:AJ:82:LYS:HE2	1.98	0.46
12:AM:106:ARG:HH12	12:AM:109:LYS:CE	2.29	0.46
14:AO:74:ASP:OD1	14:AO:77:ARG:HG3	2.16	0.46
15:AP:67:ILE:HG13	15:AP:71:VAL:HG13	1.98	0.46
18:AS:65:MET:HG3	18:AS:73:PHE:CZ	2.51	0.46
20:AB:95:TRP:CZ2	20:AB:100:LEU:HD22	2.50	0.46
21:AU:11:PHE:O	21:AU:11:PHE:CD1	2.69	0.46
23:BB:222:A:N6	23:BB:232:G:H1'	2.30	0.46
23:BB:320:A:OP1	29:BE:130:LYS:HE3	2.16	0.46
23:BB:402:A:H2'	23:BB:403:U:O4'	2.15	0.46
23:BB:834:G:O2'	23:BB:835:C:H5'	2.15	0.46
23:BB:866:A:H61	23:BB:913:U:C1'	2.29	0.46
23:BB:960:A:C4'	23:BB:2457:U:H4'	2.46	0.46
23:BB:971:G:H2'	23:BB:972:A:O4'	2.15	0.46
23:BB:1428:C:H2'	23:BB:1569:A:OP2	2.16	0.46
23:BB:1438:U:O2'	23:BB:1439:A:H5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1442:U:O2'	23:BB:1443:U:H5'	2.16	0.46
23:BB:1506:U:H2'	23:BB:1507:C:C6	2.50	0.46
23:BB:1547:C:H2'	23:BB:1548:A:C8	2.51	0.46
23:BB:1553:A:H2'	23:BB:1555:G:N7	2.31	0.46
23:BB:1804:C:P	25:BC:256:THR:HB	2.56	0.46
23:BB:1854:A:H2	23:BB:2087:G:N3	2.14	0.46
23:BB:2206:C:O2'	23:BB:2207:C:H5'	2.16	0.46
23:BB:2320:U:H4'	23:BB:2321:U:C2	2.51	0.46
23:BB:2453:A:H4'	23:BB:2573:C:OP2	2.16	0.46
23:BB:2487:G:H2'	23:BB:2488:G:C8	2.51	0.46
23:BB:2791:G:H2'	23:BB:2792:A:O4'	2.15	0.46
23:BB:2848:G:H1'	23:BB:2868:A:N6	2.31	0.46
23:BB:2889:C:H2'	23:BB:2890:G:C8	2.50	0.46
24:BI:63:ASP:C	24:BI:65:SER:H	2.19	0.46
24:BI:129:GLU:CB	24:BI:133:ARG:HH12	2.21	0.46
25:BC:169:ALA:O	25:BC:185:ALA:HB3	2.16	0.46
26:BD:117:GLY:O	26:BD:118:PHE:C	2.54	0.46
26:BD:122:VAL:O	26:BD:122:VAL:HG12	2.16	0.46
29:BE:147:LEU:O	29:BE:168:ASP:O	2.34	0.46
37:BL:79:LEU:CG	37:BL:112:LEU:HA	2.43	0.46
41:BJ:96:ARG:N	41:BJ:97:PRO:HD3	2.31	0.46
42:BN:56:LYS:HD2	42:BN:88:ALA:HA	1.98	0.46
47:BF:31:GLU:O	47:BF:32:LYS:O	2.34	0.46
47:BF:47:LYS:HA	47:BF:50:ASP:OD1	2.16	0.46
47:BF:134:GLN:HE21	47:BF:134:GLN:HB3	1.53	0.46
48:BG:79:THR:CG2	48:BG:80:GLU:HG2	2.38	0.46
50:BT:55:VAL:HG22	50:BT:87:LEU:HD23	1.98	0.46
51:BZ:49:LEU:HD13	51:BZ:51:VAL:CG2	2.46	0.46
52:BW:26:GLY:O	52:BW:27:GLY:C	2.54	0.46
1:CA:8:A:H5'	4:CE:105:ILE:HG22	1.98	0.46
1:CA:149:A:O2'	1:CA:150:U:H5'	2.16	0.46
1:CA:458:U:H2'	1:CA:459:A:H8	1.81	0.46
1:CA:878:A:H1'	7:CH:3:GLN:OE1	2.15	0.46
1:CA:1014:A:H5"	18:CS:13:HIS:HB3	1.98	0.46
1:CA:1258:G:C6	1:CA:1278:G:N1	2.83	0.46
2:CC:33:ASP:O	2:CC:36:PHE:HB3	2.16	0.46
2:CC:88:LYS:C	2:CC:88:LYS:HD2	2.36	0.46
4:CE:82:HIS:HE1	4:CE:146:MET:HA	1.79	0.46
5:CF:11:HIS:CG	5:CF:12:PRO:HD2	2.51	0.46
10:CK:92:ARG:HH11	10:CK:92:ARG:CG	2.28	0.46
14:CO:78:TYR:CZ	14:CO:82:ILE:HD11	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CQ:66:LEU:O	16:CQ:67:SER:HB2	2.16	0.46
23:DB:21:A:H2'	23:DB:22:C:C6	2.50	0.46
23:DB:231:A:H3'	23:DB:232:G:C8	2.51	0.46
23:DB:246:C:H2'	23:DB:247:G:H5'	1.98	0.46
23:DB:438:G:O2'	23:DB:439:A:H5'	2.16	0.46
23:DB:570:G:N7	23:DB:2030:A:N6	2.63	0.46
23:DB:876:C:H3'	23:DB:877:A:C8	2.50	0.46
23:DB:920:A:H2'	23:DB:921:C:C6	2.50	0.46
23:DB:2073:C:C5'	25:DC:227:VAL:HG12	2.42	0.46
23:DB:2104:C:HO2'	23:DB:2105:U:H5	1.64	0.46
23:DB:2293:G:H2'	23:DB:2294:G:C8	2.49	0.46
23:DB:2543:G:H2'	23:DB:2544:G:O4'	2.16	0.46
23:DB:2636:C:O5'	26:DD:81:GLU:HB2	2.16	0.46
24:DI:100:ILE:HG23	24:DI:104:GLN:OE1	2.16	0.46
27:DK:64:ARG:HD2	27:DK:102:PRO:O	2.16	0.46
28:DP:45:VAL:O	28:DP:47:ILE:HG23	2.16	0.46
31:D0:30:ASP:HB3	31:D0:33:SER:O	2.16	0.46
37:DL:60:ARG:C	37:DL:61:LEU:HD12	2.36	0.46
38:DM:66:ARG:HB2	38:DM:101:VAL:HG13	1.97	0.46
42:DN:24:MET:HG2	42:DN:44:LEU:HD13	1.97	0.46
44:DQ:86:SER:HB2	49:DR:51:VAL:HG12	1.97	0.46
47:DF:74:ALA:CB	47:DF:78:ILE:HD13	2.45	0.46
50:DT:11:LEU:HD22	50:DT:11:LEU:N	2.26	0.46
51:DZ:45:ARG:O	51:DZ:46:PHE:HB2	2.15	0.46
52:DW:26:GLY:O	52:DW:27:GLY:C	2.54	0.46
52:DW:49:ASN:O	52:DW:50:VAL:HG13	2.16	0.46
53:D6:180:GLU:O	53:D6:184:LEU:HG	2.16	0.46
1:AA:237:G:H2'	1:AA:238:A:C8	2.48	0.46
1:AA:254:G:O2'	1:AA:255:G:H5'	2.16	0.46
1:AA:551:U:H2'	1:AA:552:U:H6	1.81	0.46
1:AA:859:G:O2'	1:AA:860:A:H5'	2.16	0.46
1:AA:1058:G:H2'	1:AA:1059:C:C6	2.51	0.46
1:AA:1248:A:C2	8:AI:71:ILE:HD11	2.51	0.46
1:AA:1438:G:O2'	1:AA:1439:G:H5'	2.15	0.46
2:AC:142:ARG:NH2	2:AC:143:LEU:HD21	2.31	0.46
6:AG:26:VAL:HA	6:AG:42:VAL:HG21	1.98	0.46
6:AG:71:THR:C	6:AG:90:VAL:HG22	2.37	0.46
6:AG:137:ARG:HE	6:AG:137:ARG:HB3	1.39	0.46
13:AN:60:ARG:CG	13:AN:62:ARG:HE	2.29	0.46
14:AO:28:GLN:O	14:AO:32:LEU:HD23	2.16	0.46
17:AR:63:TYR:N	17:AR:63:TYR:HD2	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:88:C:H2'	22:BA:89:U:C5	2.51	0.46
22:BA:104:A:H5'	35:BV:75:GLN:HE21	1.81	0.46
23:BB:289:G:H2'	23:BB:290:U:O4'	2.15	0.46
23:BB:408:G:O2'	23:BB:409:G:H5'	2.16	0.46
23:BB:649:G:H2'	23:BB:650:C:C6	2.50	0.46
23:BB:1007:C:O3'	41:BJ:110:PRO:HB3	2.15	0.46
23:BB:1484:U:H2'	23:BB:1485:U:H6	1.78	0.46
23:BB:2025:C:H2'	23:BB:2026:U:H6	1.80	0.46
23:BB:2150:C:H2'	23:BB:2151:U:O4'	2.16	0.46
23:BB:2213:U:O2	23:BB:2213:U:C2'	2.61	0.46
23:BB:2845:U:O2'	23:BB:2846:G:H5'	2.15	0.46
23:BB:2876:G:H2'	23:BB:2877:G:O4'	2.16	0.46
24:BI:44:LYS:O	24:BI:48:ILE:HG13	2.15	0.46
25:BC:43:ASN:HD22	25:BC:44:ASN:N	2.13	0.46
28:BP:99:LEU:HD22	28:BP:99:LEU:HA	1.81	0.46
29:BE:111:GLU:HG2	29:BE:114:ARG:HH21	1.81	0.46
29:BE:148:ILE:HA	29:BE:187:VAL:CB	2.43	0.46
33:B1:10:LEU:HB2	33:B1:20:TYR:HB2	1.97	0.46
39:BX:10:SER:N	39:BX:60:LYS:HE2	2.31	0.46
42:BN:69:ARG:HD3	42:BN:69:ARG:H	1.81	0.46
46:BU:20:LYS:HZ3	46:BU:20:LYS:HB2	1.81	0.46
52:BW:48:ALA:O	52:BW:61:LYS:HB2	2.16	0.46
53:B6:133:ARG:O	53:B6:136:ALA:N	2.49	0.46
1:CA:560:A:H5'	1:CA:566:G:N2	2.29	0.46
1:CA:593:U:H2'	1:CA:594:U:C6	2.51	0.46
1:CA:631:C:H5"	1:CA:632:U:O4'	2.16	0.46
1:CA:876:C:H1'	7:CH:11:THR:HG21	1.98	0.46
1:CA:884:U:H4'	1:CA:885:G:H5"	1.98	0.46
1:CA:1151:A:O2'	1:CA:1152:A:H8	1.94	0.46
1:CA:1222:G:O2'	1:CA:1223:C:H5'	2.16	0.46
1:CA:1278:G:H4'	1:CA:1279:G:O5'	2.14	0.46
1:CA:1340:A:H2'	1:CA:1341:U:O4'	2.15	0.46
2:CC:112:ALA:HB2	2:CC:182:ASP:O	2.16	0.46
2:CC:142:ARG:NH2	2:CC:143:LEU:HD21	2.31	0.46
3:CD:57:LYS:HD3	3:CD:57:LYS:C	2.35	0.46
4:CE:87:VAL:HG23	4:CE:92:ARG:HA	1.98	0.46
20:CB:86:CYS:SG	20:CB:87:ASP:N	2.89	0.46
20:CB:116:LEU:HA	20:CB:119:GLN:HG2	1.96	0.46
22:DA:40:U:O2'	22:DA:41:G:H5'	2.16	0.46
23:DB:96:C:H4'	39:DX:41:HIS:HD1	1.78	0.46
23:DB:302:C:H2'	23:DB:303:G:H8	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:435:C:H2'	23:DB:436:C:H5'	1.98	0.46
23:DB:544:C:H2'	23:DB:545:U:C6	2.50	0.46
23:DB:580:U:O2'	23:DB:581:C:H5'	2.15	0.46
23:DB:699:A:H4'	23:DB:1634:A:N7	2.31	0.46
23:DB:1210:G:C5'	23:DB:1212:G:H5'	2.46	0.46
23:DB:1316:U:H2'	23:DB:1317:G:C8	2.50	0.46
23:DB:1552:A:H2'	23:DB:1553:A:C5'	2.44	0.46
23:DB:1789:A:H2'	23:DB:1790:C:O4'	2.16	0.46
23:DB:2207:C:H2'	23:DB:2208:C:C6	2.51	0.46
25:DC:181:ARG:NH2	25:DC:265:PHE:HB3	2.31	0.46
26:DD:4:LEU:N	26:DD:4:LEU:HD22	2.31	0.46
26:DD:56:LYS:HD3	26:DD:58:ASN:HB3	1.97	0.46
26:DD:70:LYS:HD3	26:DD:70:LYS:C	2.35	0.46
27:DK:12:ASP:HB3	27:DK:85:VAL:HG13	1.98	0.46
27:DK:115:ILE:HG23	27:DK:116:ILE:H	1.81	0.46
38:DM:33:LEU:HD22	38:DM:128:THR:CB	2.46	0.46
39:DX:28:LEU:HB3	39:DX:43:LEU:HD21	1.98	0.46
40:DH:48:GLU:HA	40:DH:51:ARG:CZ	2.46	0.46
41:DJ:40:HIS:CE1	41:DJ:41:LYS:HG3	2.51	0.46
41:DJ:96:ARG:N	41:DJ:97:PRO:HD3	2.31	0.46
42:DN:63:ARG:O	42:DN:66:ALA:HB3	2.16	0.46
42:DN:72:ASP:C	42:DN:74:GLU:N	2.69	0.46
43:DO:58:ILE:H	43:DO:58:ILE:HG13	1.61	0.46
48:DG:54:ARG:O	48:DG:55:ASP:C	2.54	0.46
48:DG:112:VAL:HG12	48:DG:113:ASP:N	2.29	0.46
1:AA:149:A:O2'	1:AA:150:U:H5'	2.16	0.46
1:AA:210:C:H1'	1:AA:211:G:N1	2.30	0.46
1:AA:411:A:H62	1:AA:413:G:H21	1.64	0.46
1:AA:663:A:H5'	1:AA:836:G:OP1	2.16	0.46
1:AA:993:G:H2'	1:AA:993:G:N3	2.31	0.46
1:AA:1133:G:H2'	1:AA:1134:G:O4'	2.15	0.46
1:AA:1161:C:O2'	1:AA:1162:C:H5'	2.15	0.46
1:AA:1320:C:H41	18:AS:36:ARG:HB3	1.81	0.46
3:AD:106:PHE:CD1	3:AD:158:LEU:HD21	2.51	0.46
5:AF:18:VAL:O	5:AF:22:ILE:HG13	2.16	0.46
8:AI:5:TYR:O	8:AI:20:ILE:N	2.48	0.46
11:AL:13:ARG:HB2	11:AL:14:LYS:H	1.46	0.46
12:AM:3:ILE:HA	12:AM:56:ARG:NH1	2.31	0.46
12:AM:64:VAL:HA	12:AM:68:LEU:CD1	2.46	0.46
19:AT:43:LYS:CA	19:AT:85:LEU:HD11	2.42	0.46
20:AB:15:PHE:HD1	20:AB:16:GLY:N	2.13	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AB:124:THR:HA	20:AB:127:LYS:HZ3	1.80	0.46
23:BB:19:A:OP1	44:BQ:22:GLY:N	2.49	0.46
23:BB:39:G:O2'	23:BB:40:U:H5'	2.16	0.46
23:BB:170:U:O2'	23:BB:171:U:H5'	2.15	0.46
23:BB:533:G:H2'	23:BB:534:U:C6	2.50	0.46
23:BB:559:G:H1'	44:BQ:55:GLN:NE2	2.30	0.46
23:BB:732:C:H2'	23:BB:733:G:O4'	2.16	0.46
23:BB:1228:G:O2'	23:BB:1229:C:H5'	2.16	0.46
23:BB:1244:A:C5'	37:BL:7:SER:HA	2.45	0.46
23:BB:1597:A:C5'	23:BB:1598:A:H5'	2.43	0.46
23:BB:1864:U:O2'	23:BB:1865:U:H5'	2.16	0.46
23:BB:2147:A:C5'	23:BB:2148:G:H4'	2.46	0.46
23:BB:2322:A:H2'	23:BB:2323:G:O4'	2.16	0.46
23:BB:2658:C:H5'	48:BG:159:LYS:HZ2	1.78	0.46
23:BB:2886:A:N6	31:B0:39:ARG:NE	2.58	0.46
24:BI:32:VAL:HG13	24:BI:66:PHE:CD2	2.51	0.46
24:BI:109:ALA:HB1	24:BI:124:MET:CG	2.46	0.46
26:BD:111:GLY:H	26:BD:194:PRO:CG	2.29	0.46
27:BK:5:GLN:HA	27:BK:20:MET:SD	2.57	0.46
27:BK:18:ARG:O	27:BK:45:GLU:HB2	2.16	0.46
27:BK:25:LEU:HD12	27:BK:39:ILE:HA	1.98	0.46
27:BK:71:ARG:O	27:BK:72:PRO:C	2.55	0.46
29:BE:106:LYS:CE	29:BE:200:LEU:HB3	2.46	0.46
33:B1:3:GLY:O	33:B1:5:ARG:N	2.49	0.46
33:B1:4:ILE:HB	33:B1:27:ARG:HG3	1.98	0.46
40:BH:3:VAL:HA	40:BH:39:ALA:N	2.30	0.46
43:BO:2:ASP:OD2	43:BO:4:LYS:HB3	2.15	0.46
43:BO:6:ALA:O	43:BO:9:ARG:HG3	2.15	0.46
44:BQ:94:LEU:CD2	49:BR:11:GLN:HB2	2.46	0.46
47:BF:41:GLU:CB	47:BF:48:LEU:HD11	2.43	0.46
47:BF:102:LEU:HA	47:BF:106:ALA:CB	2.46	0.46
48:BG:22:VAL:HG22	48:BG:36:LEU:HD12	1.97	0.46
48:BG:77:GLY:HA3	48:BG:135:ALA:O	2.16	0.46
51:BZ:39:TRP:CE2	51:BZ:41:GLU:HA	2.51	0.46
52:BW:35:ILE:O	52:BW:37:VAL:N	2.49	0.46
52:BW:43:LYS:O	52:BW:58:LEU:HD11	2.15	0.46
1:CA:398:U:H2'	1:CA:399:G:H8	1.80	0.46
1:CA:677:U:H2'	1:CA:678:U:C6	2.51	0.46
1:CA:947:G:H5"	12:CM:106:ARG:HB2	1.98	0.46
1:CA:1076:U:O2'	1:CA:1077:G:H5'	2.16	0.46
1:CA:1448:C:H2'	1:CA:1449:C:H6	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1490:U:H2'	1:CA:1491:G:H5'	1.97	0.46
1:CA:1520:C:H2'	1:CA:1521:C:C6	2.51	0.46
2:CC:142:ARG:C	2:CC:144:GLY:H	2.19	0.46
3:CD:18:LEU:HD11	3:CD:59:LYS:HG3	1.97	0.46
5:CF:3:HIS:CE1	5:CF:95:ALA:HB2	2.51	0.46
5:CF:49:TYR:CE1	17:CR:65:SER:HA	2.51	0.46
7:CH:1:SER:O	7:CH:3:GLN:N	2.49	0.46
9:CJ:88:MET:SD	9:CJ:88:MET:N	2.89	0.46
10:CK:80:ASN:ND2	10:CK:80:ASN:N	2.64	0.46
10:CK:82:GLU:HG2	10:CK:108:ASN:HB2	1.98	0.46
10:CK:124:LYS:HA	21:CU:34:ARG:CB	2.37	0.46
11:CL:36:VAL:HG23	11:CL:36:VAL:O	2.16	0.46
11:CL:52:CYS:SG	11:CL:66:ILE:HD11	2.56	0.46
11:CL:113:ARG:HH21	11:CL:120:ARG:HA	1.80	0.46
16:CQ:46:HIS:CE1	16:CQ:48:GLU:HG2	2.50	0.46
23:DB:246:C:N4	34:D3:7:ARG:HG2	2.31	0.46
23:DB:738:G:H2'	23:DB:739:A:C8	2.51	0.46
23:DB:838:C:C2	23:DB:941:A:C6	3.04	0.46
23:DB:1179:G:C2'	23:DB:1180:U:H5'	2.46	0.46
23:DB:1387:A:H4'	23:DB:1469:A:H1'	1.98	0.46
23:DB:1733:G:H2'	23:DB:1734:G:C8	2.51	0.46
23:DB:1806:C:C2'	23:DB:1807:G:H5'	2.46	0.46
23:DB:2137:U:C2'	23:DB:2138:G:H5'	2.46	0.46
23:DB:2247:A:H2'	23:DB:2248:C:C6	2.51	0.46
23:DB:2571:U:H4'	26:DD:151:THR:HG21	1.97	0.46
28:DP:25:VAL:HA	28:DP:85:VAL:C	2.36	0.46
34:D3:23:HIS:ND1	34:D3:24:LYS:N	2.64	0.46
35:DV:24:ASN:O	35:DV:26:PHE:N	2.49	0.46
35:DV:65:VAL:O	35:DV:66:ASP:HB3	2.16	0.46
39:DX:20:ASN:N	39:DX:20:ASN:ND2	2.64	0.46
40:DH:109:GLU:OE2	40:DH:111:ALA:HB2	2.16	0.46
40:DH:119:ASN:ND2	40:DH:121:VAL:HG13	2.31	0.46
41:DJ:58:ASN:CA	41:DJ:127:GLY:HA2	2.39	0.46
44:DQ:86:SER:CB	49:DR:51:VAL:HG12	2.46	0.46
47:DF:62:GLN:NE2	47:DF:90:LEU:HD13	2.30	0.46
51:DZ:43:GLU:C	51:DZ:45:ARG:H	2.19	0.46
53:D6:67:VAL:HG12	53:D6:100:TYR:CD1	2.51	0.46
1:AA:451:A:H4'	1:AA:452:A:O4'	2.15	0.45
1:AA:605:U:H2'	1:AA:606:G:C8	2.51	0.45
1:AA:667:G:H4'	14:AO:51:HIS:ND1	2.31	0.45
1:AA:876:C:H1'	7:AH:11:THR:HG21	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1324:A:H2'	1:AA:1325:C:C6	2.51	0.45
2:AC:133:MET:HE2	2:AC:133:MET:HB2	1.76	0.45
4:AE:131:ASN:HD21	4:AE:133:ILE:HB	1.81	0.45
6:AG:126:ALA:C	6:AG:128:GLU:H	2.19	0.45
8:AI:29:ILE:HG12	8:AI:64:ILE:HB	1.98	0.45
11:AL:31:GLY:HA2	11:AL:56:LEU:HA	1.97	0.45
14:AO:39:LEU:HD23	14:AO:43:PHE:HE1	1.79	0.45
15:AP:22:ALA:CB	15:AP:32:PHE:HA	2.46	0.45
20:AB:178:LEU:HB2	20:AB:180:ILE:HG12	1.98	0.45
21:AU:36:PHE:CD2	21:AU:39:LYS:HD2	2.51	0.45
23:BB:674:G:O2'	29:BE:60:TRP:HH2	1.98	0.45
23:BB:1124:G:H1'	32:B4:38:GLY:OXT	2.15	0.45
23:BB:1208:C:O2'	23:BB:1209:U:H5'	2.16	0.45
23:BB:1210:G:H5'	23:BB:1212:G:C5'	2.45	0.45
23:BB:1439:A:N7	23:BB:1440:U:C6	2.84	0.45
23:BB:1812:U:C4'	25:BC:44:ASN:HD21	2.29	0.45
23:BB:2215:C:O2'	23:BB:2216:G:H5'	2.16	0.45
23:BB:2428:G:N2	37:BL:54:GLN:OE1	2.49	0.45
23:BB:2691:C:O2'	23:BB:2692:G:H5'	2.16	0.45
23:BB:2840:C:H2'	23:BB:2841:C:H6	1.81	0.45
23:BB:2872:A:H1'	23:BB:2873:A:C8	2.51	0.45
24:BI:27:LEU:HB2	24:BI:32:VAL:HG21	1.97	0.45
26:BD:69:ALA:HA	26:BD:73:VAL:HB	1.98	0.45
26:BD:94:GLN:HG2	26:BD:94:GLN:O	2.15	0.45
28:BP:45:VAL:O	28:BP:47:ILE:HG23	2.16	0.45
29:BE:134:LEU:HD23	29:BE:161:ALA:N	2.31	0.45
29:BE:146:VAL:HA	29:BE:185:LYS:O	2.15	0.45
34:B3:23:HIS:ND1	34:B3:24:LYS:N	2.64	0.45
36:B2:2:LYS:HD2	36:B2:6:GLN:NE2	2.31	0.45
36:B2:10:LEU:HD21	36:B2:14:ARG:NH1	2.30	0.45
37:BL:17:LYS:HD2	37:BL:19:LEU:HD11	1.97	0.45
37:BL:96:LYS:HE2	37:BL:103:ILE:HA	1.97	0.45
40:BH:65:ALA:HB3	40:BH:135:HIS:HE1	1.81	0.45
40:BH:110:VAL:HB	40:BH:132:PHE:CZ	2.51	0.45
43:BO:58:ILE:HG22	43:BO:62:LEU:CD2	2.46	0.45
44:BQ:56:PHE:O	44:BQ:59:LEU:HB3	2.16	0.45
50:BT:9:LYS:O	50:BT:9:LYS:HG2	2.15	0.45
50:BT:85:VAL:C	50:BT:86:THR:HG23	2.37	0.45
51:BZ:38:PHE:CE2	51:BZ:51:VAL:HG21	2.33	0.45
51:BZ:71:LEU:HD11	51:BZ:78:TYR:HB3	1.98	0.45
53:B6:18:LEU:HD21	53:B6:171:LYS:HD2	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B6:32:ARG:NH2	53:B6:88:LEU:O	2.45	0.45
53:B6:112:LYS:O	53:B6:116:ARG:HG2	2.16	0.45
1:CA:564:C:C5	16:CQ:32:ILE:HD11	2.51	0.45
1:CA:1004:A:H2'	1:CA:1005:A:O4'	2.16	0.45
6:CG:64:ALA:HA	6:CG:127:ALA:HA	1.98	0.45
10:CK:108:ASN:ND2	21:CU:6:ARG:HD2	2.30	0.45
11:CL:46:SER:O	11:CL:47:ALA:HB2	2.16	0.45
13:CN:23:ARG:C	13:CN:25:GLU:H	2.18	0.45
19:CT:43:LYS:CB	19:CT:85:LEU:HD21	2.46	0.45
20:CB:10:LYS:O	20:CB:13:VAL:HG23	2.16	0.45
20:CB:46:VAL:O	20:CB:49:PHE:HB2	2.15	0.45
20:CB:68:PHE:CE1	20:CB:88:GLN:HB3	2.51	0.45
22:DA:83:G:H4'	30:DY:52:PHE:CD2	2.51	0.45
23:DB:78:U:H2'	23:DB:79:C:H6	1.76	0.45
23:DB:402:A:H2'	23:DB:403:U:O4'	2.16	0.45
23:DB:518:G:H4'	45:DS:18:ARG:CZ	2.47	0.45
23:DB:522:A:H2'	23:DB:523:C:H6	1.80	0.45
23:DB:655:A:H4'	23:DB:656:G:OP1	2.16	0.45
23:DB:946:C:H2'	23:DB:947:A:H8	1.81	0.45
23:DB:1161:C:H2'	23:DB:1162:G:H8	1.81	0.45
23:DB:1695:G:H2'	23:DB:1696:G:O4'	2.15	0.45
23:DB:1765:U:H2'	23:DB:1766:G:H8	1.82	0.45
23:DB:1956:U:H2'	23:DB:1957:C:H5'	1.97	0.45
23:DB:2215:C:O2'	23:DB:2216:G:H5'	2.16	0.45
23:DB:2223:G:H2'	23:DB:2224:G:H5'	1.99	0.45
23:DB:2461:A:H1'	23:DB:2492:U:C2	2.51	0.45
23:DB:2691:C:O2'	23:DB:2692:G:H5'	2.16	0.45
24:DI:70:THR:O	24:DI:70:THR:HG23	2.15	0.45
26:DD:54:ALA:N	26:DD:76:GLY:HA2	2.30	0.45
26:DD:122:VAL:HG12	26:DD:122:VAL:O	2.16	0.45
29:DE:18:THR:HG22	29:DE:106:LYS:HE2	1.96	0.45
29:DE:106:LYS:HE2	29:DE:200:LEU:HB3	1.97	0.45
32:D4:25:VAL:HG11	32:D4:35:GLN:NE2	2.31	0.45
34:D3:33:THR:HG23	34:D3:34:LYS:N	2.30	0.45
42:DN:67:PHE:O	42:DN:68:ALA:C	2.55	0.45
43:DO:56:LYS:O	43:DO:60:GLU:HG2	2.16	0.45
44:DQ:87:VAL:CB	49:DR:52:PRO:HG3	2.40	0.45
45:DS:107:VAL:HG22	45:DS:108:SER:N	2.31	0.45
47:DF:99:PHE:HA	47:DF:102:LEU:CD1	2.45	0.45
47:DF:116:LEU:HD21	47:DF:174:PHE:HE2	1.81	0.45
48:DG:154:GLU:O	48:DG:156:TYR:N	2.42	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DR:55:ASP:OD2	49:DR:55:ASP:N	2.50	0.45
1:AA:486:U:H2'	1:AA:487:A:C8	2.51	0.45
1:AA:582:C:O2'	1:AA:583:A:H5'	2.16	0.45
1:AA:688:G:O2'	1:AA:689:C:H5'	2.16	0.45
1:AA:766:A:H2'	1:AA:767:A:O4'	2.16	0.45
1:AA:899:C:H2'	1:AA:900:A:O4'	2.16	0.45
1:AA:903:G:O2'	1:AA:904:U:H5'	2.16	0.45
1:AA:1152:A:H2'	1:AA:1153:G:C8	2.50	0.45
3:AD:48:SER:O	3:AD:49:ASP:C	2.55	0.45
6:AG:145:GLU:CA	6:AG:148:LYS:HB2	2.34	0.45
7:AH:1:SER:O	7:AH:3:GLN:HG3	2.16	0.45
7:AH:91:LEU:HD12	7:AH:116:ARG:HB2	1.98	0.45
12:AM:9:PRO:HB3	12:AM:20:SER:CB	2.46	0.45
15:AP:52:LEU:HD23	15:AP:54:LEU:HG	1.98	0.45
17:AR:62:ARG:C	17:AR:63:TYR:HD2	2.19	0.45
20:AB:8:MET:O	20:AB:9:LEU:O	2.33	0.45
20:AB:164:ASP:OD1	20:AB:203:ASP:HB2	2.17	0.45
20:AB:209:VAL:HG23	20:AB:210:THR:N	2.29	0.45
21:AU:10:PRO:HB2	2:CC:71:ARG:HD3	1.97	0.45
23:BB:572:A:H5"	49:BR:80:ARG:NH2	2.31	0.45
23:BB:981:A:H2'	23:BB:982:C:H5"	1.98	0.45
23:BB:1774:C:O2	23:BB:1774:C:H2'	2.16	0.45
23:BB:2144:G:H5'	23:BB:2145:C:O3'	2.15	0.45
25:BC:34:GLU:HG3	25:BC:34:GLU:O	2.15	0.45
25:BC:69:ASN:O	25:BC:70:LYS:C	2.55	0.45
26:BD:24:VAL:HG23	26:BD:189:VAL:O	2.17	0.45
26:BD:118:PHE:O	26:BD:119:ALA:HB3	2.16	0.45
30:BY:57:GLU:OE1	30:BY:57:GLU:HA	2.16	0.45
32:B4:3:VAL:HG23	32:B4:4:ARG:H	1.80	0.45
37:BL:119:PRO:HB3	37:BL:139:GLY:O	2.16	0.45
38:BM:31:PHE:CD1	38:BM:105:MET:HB3	2.51	0.45
45:BS:36:LEU:HB3	45:BS:48:LYS:HB2	1.98	0.45
47:BF:111:ARG:HH11	47:BF:135:ILE:CG2	2.28	0.45
47:BF:137:PHE:CD2	47:BF:137:PHE:N	2.84	0.45
53:B6:1:MET:N	53:B6:5:GLU:OE2	2.48	0.45
1:CA:237:G:H2'	1:CA:238:A:C8	2.48	0.45
1:CA:407:U:O2'	3:CD:112:GLU:HG3	2.16	0.45
1:CA:947:G:H2'	1:CA:948:C:H6	1.81	0.45
1:CA:1064:G:P	1:CA:1386:G:H4'	2.56	0.45
1:CA:1081:A:OP1	4:CE:21:SER:O	2.35	0.45
1:CA:1086:U:H3	1:CA:1099:G:N2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:96:VAL:HB	2:CC:97:PRO:HD2	1.98	0.45
3:CD:106:PHE:CD1	3:CD:158:LEU:HD21	2.51	0.45
7:CH:6:ILE:HB	7:CH:76:ARG:NH1	2.32	0.45
8:CI:41:GLU:O	8:CI:43:ALA:N	2.49	0.45
8:CI:56:MET:O	8:CI:58:GLU:HG2	2.15	0.45
10:CK:13:LYS:HD2	10:CK:76:TYR:CE2	2.50	0.45
10:CK:17:ASP:HB3	10:CK:80:ASN:CG	2.36	0.45
12:CM:75:SER:O	12:CM:78:ARG:HB2	2.16	0.45
14:CO:25:THR:O	14:CO:29:VAL:HG23	2.16	0.45
16:CQ:42:LYS:O	16:CQ:43:LEU:HD12	2.16	0.45
18:CS:40:PHE:HB3	18:CS:41:PRO:HD2	1.98	0.45
20:CB:33:ALA:CB	20:CB:38:HIS:HA	2.46	0.45
22:DA:78:A:H2'	22:DA:79:G:O4'	2.16	0.45
23:DB:16:C:O2'	23:DB:17:G:H5'	2.16	0.45
23:DB:182:A:O2'	23:DB:183:C:H5'	2.16	0.45
23:DB:519:U:O2'	23:DB:520:G:H5'	2.17	0.45
23:DB:677:A:O2'	23:DB:2071:A:H5'	2.16	0.45
23:DB:811:U:H2'	37:DL:21:ARG:HA	1.99	0.45
23:DB:826:U:H2'	23:DB:828:U:O4'	2.15	0.45
23:DB:866:A:H61	23:DB:913:U:C1'	2.29	0.45
23:DB:899:A:H2'	23:DB:900:A:H8	1.81	0.45
23:DB:1197:G:O2'	23:DB:1198:U:H5'	2.16	0.45
23:DB:1290:C:O2'	23:DB:1291:C:H5'	2.17	0.45
23:DB:1520:U:H2'	23:DB:1521:G:O4'	2.17	0.45
23:DB:1937:A:N7	23:DB:1939:U:H2'	2.32	0.45
23:DB:1998:A:OP2	26:DD:141:ARG:NH2	2.48	0.45
23:DB:2364:C:C2'	23:DB:2365:G:H5'	2.46	0.45
23:DB:2663:G:H2'	23:DB:2664:G:C8	2.51	0.45
25:DC:141:HIS:HB3	25:DC:190:THR:OG1	2.16	0.45
25:DC:211:ARG:C	25:DC:213:ARG:H	2.19	0.45
27:DK:110:GLU:HA	27:DK:113:MET:CG	2.46	0.45
28:DP:4:ILE:HA	28:DP:7:LEU:CD1	2.46	0.45
38:DM:20:LEU:N	38:DM:20:LEU:HD13	2.32	0.45
40:DH:40:THR:OG1	40:DH:43:ASN:ND2	2.49	0.45
49:DR:78:ARG:HG3	49:DR:78:ARG:HH21	1.81	0.45
50:DT:39:THR:HG22	50:DT:42:GLU:H	1.81	0.45
50:DT:69:ARG:HA	50:DT:69:ARG:NE	2.31	0.45
52:DW:43:LYS:O	52:DW:58:LEU:HD11	2.16	0.45
52:DW:44:PHE:O	52:DW:78:PHE:HA	2.17	0.45
52:DW:75:ASN:O	52:DW:76:ARG:HB2	2.16	0.45
53:D6:58:VAL:HG22	53:D6:68:VAL:HG22	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:D6:65:THR:C	53:D6:103:ILE:HD12	2.37	0.45
1:AA:238:A:C2'	1:AA:239:U:H5"	2.45	0.45
1:AA:611:C:H2'	1:AA:612:C:H6	1.81	0.45
1:AA:714:G:H21	1:AA:777:A:H1'	1.81	0.45
3:AD:197:HIS:ND1	3:AD:198:LEU:N	2.63	0.45
6:AG:72:VAL:HA	6:AG:89:GLU:HA	1.99	0.45
8:AI:103:VAL:HG23	8:AI:104:THR:N	2.30	0.45
20:AB:119:GLN:O	20:AB:125:PHE:HB3	2.17	0.45
20:AB:161:PHE:CE2	20:AB:216:VAL:HG11	2.50	0.45
22:BA:49:C:O2'	22:BA:50:A:H5'	2.17	0.45
23:BB:155:A:H2'	23:BB:156:A:H8	1.77	0.45
23:BB:548:G:H3'	23:BB:548:G:N3	2.31	0.45
23:BB:630:G:N2	23:BB:632:A:H3'	2.32	0.45
23:BB:635:C:O2'	23:BB:639:U:H5"	2.15	0.45
23:BB:675:A:O2'	29:BE:62:GLN:NE2	2.49	0.45
23:BB:720:U:H2'	23:BB:721:A:H8	1.80	0.45
23:BB:979:A:H2'	23:BB:982:C:H42	1.79	0.45
23:BB:1287:A:O2'	23:BB:1288:G:H5'	2.15	0.45
23:BB:1526:C:O2'	23:BB:1527:G:H5'	2.15	0.45
23:BB:1704:C:O2'	23:BB:1705:A:H5'	2.16	0.45
23:BB:2143:C:N3	23:BB:2148:G:O6	2.49	0.45
23:BB:2229:U:H2'	23:BB:2230:G:C8	2.51	0.45
23:BB:2693:G:H2'	23:BB:2694:G:C8	2.47	0.45
24:BI:138:VAL:HG12	24:BI:139:VAL:N	2.31	0.45
25:BC:146:LYS:HG2	25:BC:147:PRO:HD2	1.97	0.45
26:BD:38:LYS:HD2	26:BD:81:GLU:OE1	2.17	0.45
29:BE:5:LEU:HD22	29:BE:122:GLU:HG3	1.98	0.45
35:BV:24:ASN:O	35:BV:26:PHE:N	2.49	0.45
37:BL:92:LEU:HD23	37:BL:124:GLY:HA3	1.98	0.45
39:BX:5:GLU:HA	39:BX:5:GLU:OE2	2.16	0.45
44:BQ:30:VAL:CG1	44:BQ:31:TYR:N	2.78	0.45
45:BS:107:VAL:HG22	45:BS:108:SER:N	2.31	0.45
46:BU:86:PHE:HE1	46:BU:88:ASP:HB3	1.79	0.45
47:BF:120:SER:HG	47:BF:127:TYR:HD2	1.63	0.45
48:BG:94:ARG:HB2	48:BG:127:GLN:O	2.17	0.45
50:BT:21:SER:HB3	50:BT:31:VAL:CG2	2.46	0.45
50:BT:36:LYS:O	50:BT:36:LYS:HD3	2.16	0.45
50:BT:50:LEU:O	50:BT:52:GLU:N	2.43	0.45
53:B6:56:ALA:HB2	53:B6:79:ILE:HD13	1.97	0.45
53:B6:109:GLU:HA	53:B6:112:LYS:CD	2.47	0.45
1:CA:114:U:H2'	1:CA:115:G:C8	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:193:C:H2'	1:CA:194:C:C5	2.52	0.45
1:CA:418:C:H2'	1:CA:419:C:C6	2.51	0.45
1:CA:617:G:C4'	15:CP:46:LYS:HE2	2.45	0.45
1:CA:801:U:H2'	1:CA:802:A:C8	2.50	0.45
1:CA:865:A:H2'	1:CA:866:C:H6	1.76	0.45
1:CA:935:A:O2'	1:CA:936:C:H5'	2.17	0.45
1:CA:1064:G:OP1	1:CA:1386:G:H4'	2.16	0.45
1:CA:1206:G:C4'	2:CC:192:TYR:HA	2.37	0.45
1:CA:1317:C:H2'	1:CA:1318:A:O4'	2.16	0.45
1:CA:1479:C:H2'	1:CA:1480:A:H8	1.80	0.45
10:CK:60:PHE:O	10:CK:63:GLN:HB3	2.15	0.45
12:CM:1:ALA:CA	12:CM:8:ILE:HG22	2.47	0.45
16:CQ:16:MET:HB2	16:CQ:19:SER:O	2.16	0.45
18:CS:39:ILE:HG13	18:CS:68:HIS:O	2.15	0.45
20:CB:95:TRP:CZ2	20:CB:100:LEU:HD22	2.52	0.45
21:CU:40:PRO:HG2	21:CU:41:THR:H	1.81	0.45
22:DA:106:G:H2'	22:DA:107:G:O4'	2.15	0.45
23:DB:129:C:H2'	23:DB:130:C:C6	2.52	0.45
23:DB:245:G:H2'	23:DB:246:C:C6	2.49	0.45
23:DB:728:G:O2'	23:DB:730:A:H8	1.99	0.45
23:DB:1099:G:C5'	24:DI:4:VAL:HG12	2.47	0.45
23:DB:1136:G:H2'	23:DB:1137:G:H8	1.81	0.45
23:DB:1464:G:O2'	23:DB:1465:G:H5'	2.16	0.45
23:DB:1641:A:H2'	23:DB:1642:G:O4'	2.17	0.45
23:DB:1993:U:H4'	26:DD:133:THR:HG22	1.97	0.45
23:DB:2356:U:H5"	52:DW:16:GLU:HG3	1.97	0.45
23:DB:2362:C:OP2	34:D3:43:LEU:HD21	2.16	0.45
23:DB:2611:C:O2'	23:DB:2612:C:H5'	2.16	0.45
25:DC:67:LYS:O	25:DC:188:ARG:HD3	2.16	0.45
25:DC:183:VAL:HG22	25:DC:184:GLU:H	1.80	0.45
25:DC:209:ALA:HA	25:DC:212:TRP:CE2	2.52	0.45
26:DD:16:THR:HG22	26:DD:17:GLU:H	1.81	0.45
26:DD:69:ALA:HA	26:DD:73:VAL:HB	1.98	0.45
27:DK:88:ASN:HD22	27:DK:89:ASN:H	1.65	0.45
28:DP:13:LYS:HD2	28:DP:76:HIS:HA	1.98	0.45
29:DE:75:SER:O	29:DE:78:TRP:HB2	2.16	0.45
29:DE:130:LYS:C	29:DE:132:LYS:N	2.69	0.45
36:D2:28:ARG:C	36:D2:30:VAL:H	2.18	0.45
38:DM:71:LYS:HD3	38:DM:95:LEU:HD13	1.97	0.45
38:DM:108:VAL:HG22	38:DM:109:PRO:HD2	1.99	0.45
40:DH:68:ARG:HG3	40:DH:68:ARG:HH11	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DJ:44:TYR:CD2	44:DQ:59:LEU:HD11	2.52	0.45
41:DJ:95:ARG:O	41:DJ:95:ARG:HD3	2.17	0.45
44:DQ:35:PHE:C	44:DQ:37:ALA:N	2.70	0.45
44:DQ:60:TRP:CZ2	44:DQ:93:ILE:HB	2.52	0.45
47:DF:141:ASP:HB3	47:DF:144:LYS:HB2	1.98	0.45
47:DF:174:PHE:HB3	47:DF:176:PHE:CD1	2.51	0.45
47:DF:177:ARG:HA	47:DF:177:ARG:NE	2.31	0.45
50:DT:9:LYS:O	50:DT:9:LYS:HG2	2.16	0.45
51:DZ:63:GLY:HA3	51:DZ:66:THR:OG1	2.17	0.45
53:D6:84:ARG:C	53:D6:86:SER:N	2.68	0.45
1:AA:151:A:C2'	1:AA:152:A:H5'	2.47	0.45
1:AA:449:G:H2'	1:AA:450:G:C8	2.52	0.45
1:AA:577:G:C6	1:AA:812:G:N2	2.85	0.45
1:AA:645:G:O2'	1:AA:646:G:H5'	2.16	0.45
1:AA:696:A:H2'	1:AA:697:U:H6	1.80	0.45
1:AA:903:G:H2'	1:AA:904:U:C6	2.51	0.45
1:AA:1053:G:C4'	1:AA:1054:C:H5'	2.47	0.45
1:AA:1060:U:OP1	9:AJ:53:ILE:HD11	2.17	0.45
1:AA:1347:G:H8	8:AI:108:ARG:HB3	1.80	0.45
1:AA:1520:C:H2'	1:AA:1521:C:C6	2.51	0.45
2:AC:14:VAL:O	2:AC:15:LYS:HD2	2.17	0.45
2:AC:46:LEU:HD11	2:AC:75:VAL:HG13	1.98	0.45
4:AE:103:GLY:O	4:AE:121:ASN:HA	2.15	0.45
6:AG:147:ASN:N	10:AK:55:ARG:HH21	2.14	0.45
9:AJ:15:HIS:HA	9:AJ:18:ILE:HG22	1.98	0.45
13:AN:30:ILE:C	13:AN:32:ASP:H	2.18	0.45
15:AP:28:ARG:C	15:AP:30:GLY:H	2.19	0.45
22:BA:87:U:C2'	22:BA:88:C:O5'	2.64	0.45
23:BB:130:C:O2'	23:BB:131:A:H5'	2.17	0.45
23:BB:315:G:H2'	23:BB:316:C:H6	1.82	0.45
23:BB:832:U:H2'	23:BB:833:A:C8	2.51	0.45
23:BB:973:A:H1'	23:BB:1188:U:C5	2.52	0.45
23:BB:2282:G:H5'	23:BB:2389:G:H1'	1.98	0.45
23:BB:2373:G:H2'	23:BB:2374:C:C6	2.51	0.45
23:BB:2601:C:C2	23:BB:2603:G:N7	2.85	0.45
23:BB:2734:A:C2'	23:BB:2735:G:H5'	2.46	0.45
23:BB:2849:U:H5'	23:BB:2868:A:N1	2.31	0.45
29:BE:51:GLU:H	29:BE:51:GLU:HG2	1.54	0.45
31:B0:5:ASN:O	31:B0:7:PRO:HD3	2.16	0.45
31:B0:42:ILE:HD11	42:BN:98:LEU:HD12	1.97	0.45
35:BV:31:TYR:O	35:BV:92:VAL:HG13	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:3:VAL:HB	40:BH:37:VAL:O	2.17	0.45
41:BJ:13:ARG:HB3	41:BJ:53:TYR:HD2	1.80	0.45
41:BJ:127:GLY:O	41:BJ:128:ASN:HB2	2.16	0.45
44:BQ:86:SER:HB3	49:BR:52:PRO:HD3	1.97	0.45
48:BG:84:LYS:HG3	48:BG:131:VAL:CB	2.46	0.45
48:BG:123:GLU:HG2	48:BG:124:CYS:N	2.31	0.45
48:BG:152:ARG:HD2	48:BG:152:ARG:HA	1.68	0.45
50:BT:45:ALA:HA	50:BT:48:GLN:HB2	1.99	0.45
51:BZ:27:ARG:HD3	51:BZ:28:ARG:H	1.81	0.45
1:CA:57:G:H2'	1:CA:58:C:H6	1.81	0.45
1:CA:221:C:O2'	1:CA:222:C:H5'	2.17	0.45
1:CA:405:U:O4	3:CD:1:ALA:HA	2.16	0.45
1:CA:435:A:H2'	1:CA:435:A:N3	2.32	0.45
1:CA:824:G:O2'	1:CA:825:A:H5'	2.15	0.45
1:CA:843:U:H5'	1:CA:844:G:N7	2.31	0.45
1:CA:993:G:H2'	1:CA:993:G:N3	2.32	0.45
1:CA:1058:G:H2'	1:CA:1059:C:C6	2.52	0.45
1:CA:1483:A:H3'	1:CA:1484:C:H6	1.81	0.45
6:CG:144:ALA:O	6:CG:146:ALA:N	2.41	0.45
7:CH:29:SER:O	7:CH:30:LYS:C	2.55	0.45
7:CH:118:ALA:HB3	7:CH:120:LEU:HD22	1.98	0.45
16:CQ:11:VAL:HG23	16:CQ:56:ASP:O	2.16	0.45
17:CR:27:THR:O	17:CR:30:ASN:HB2	2.17	0.45
23:DB:729:G:H2'	23:DB:729:G:N3	2.30	0.45
23:DB:1023:U:H2'	23:DB:1024:G:C5'	2.46	0.45
23:DB:1047:G:H1'	23:DB:1110:G:H22	1.80	0.45
23:DB:1050:A:H2'	23:DB:1051:G:C8	2.51	0.45
23:DB:1270:C:H5"	23:DB:1271:G:H5'	1.98	0.45
23:DB:1341:G:N2	23:DB:1398:C:H4'	2.31	0.45
23:DB:1418:G:H1'	23:DB:1580:A:N6	2.31	0.45
23:DB:1547:C:H2'	23:DB:1548:A:C8	2.52	0.45
23:DB:1865:U:HO2'	23:DB:1866:A:H8	1.63	0.45
23:DB:2081:U:C5'	51:DZ:25:THR:HG21	2.46	0.45
23:DB:2432:A:O2'	23:DB:2433:A:H5'	2.16	0.45
24:DI:59:THR:O	24:DI:59:THR:HG23	2.17	0.45
40:DH:86:ASP:HB3	40:DH:87:GLU:OE2	2.16	0.45
42:DN:2:ARG:HG2	42:DN:5:LYS:CB	2.42	0.45
44:DQ:26:ALA:HB1	44:DQ:30:VAL:CB	2.46	0.45
44:DQ:94:LEU:HD21	49:DR:11:GLN:HB2	1.97	0.45
45:DS:28:LYS:O	45:DS:71:VAL:HG12	2.17	0.45
46:DU:73:ASN:HB3	46:DU:95:PHE:CE2	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DG:10:VAL:H	48:DG:48:THR:HG22	1.81	0.45
50:DT:8:LEU:HD22	50:DT:46:ALA:HA	1.98	0.45
52:DW:40:ARG:HE	52:DW:45:HIS:HE1	1.64	0.45
1:AA:52:C:H2'	1:AA:53:A:C8	2.51	0.45
1:AA:585:G:O2'	1:AA:586:C:H5'	2.17	0.45
1:AA:592:G:O2'	1:AA:593:U:H5'	2.16	0.45
1:AA:735:C:O2'	1:AA:736:C:H5'	2.16	0.45
1:AA:843:U:H5'	1:AA:844:G:N7	2.32	0.45
2:AC:33:ASP:O	2:AC:36:PHE:HB3	2.17	0.45
6:AG:145:GLU:C	6:AG:147:ASN:H	2.18	0.45
7:AH:68:LYS:HG3	7:AH:69:ALA:H	1.80	0.45
10:AK:51:PHE:HB2	10:AK:55:ARG:HB3	1.97	0.45
10:AK:73:VAL:O	10:AK:76:TYR:HB2	2.16	0.45
12:AM:10:ASP:CA	12:AM:44:ILE:HD13	2.42	0.45
16:AQ:60:ILE:HB	16:AQ:73:THR:O	2.16	0.45
17:AR:51:GLN:HA	17:AR:51:GLN:HE21	1.82	0.45
18:AS:65:MET:HG3	18:AS:73:PHE:CE2	2.51	0.45
19:AT:79:THR:HG22	19:AT:83:ASN:HD21	1.82	0.45
20:AB:98:GLY:HA2	20:AB:101:THR:CG2	2.45	0.45
23:BB:237:C:O2'	23:BB:238:C:H5'	2.17	0.45
23:BB:245:G:H2'	23:BB:246:C:C6	2.52	0.45
23:BB:246:C:C2'	23:BB:247:G:H5'	2.46	0.45
23:BB:329:G:O6	46:BU:16:LYS:HB2	2.16	0.45
23:BB:539:G:H2'	23:BB:540:C:C6	2.52	0.45
23:BB:699:A:H4'	23:BB:1634:A:N7	2.32	0.45
23:BB:755:U:O2'	23:BB:756:A:H5'	2.16	0.45
23:BB:1091:G:O2'	23:BB:1092:C:H5'	2.16	0.45
23:BB:1460:U:H3'	23:BB:1461:C:H5'	1.98	0.45
23:BB:1870:C:OP2	23:BB:1870:C:H4'	2.16	0.45
23:BB:1958:C:O2'	23:BB:1959:G:H5'	2.16	0.45
23:BB:2751:G:N3	23:BB:2751:G:C2'	2.77	0.45
23:BB:2814:A:O2'	23:BB:2815:C:H5'	2.17	0.45
23:BB:2883:A:OP1	31:B0:48:TYR:CE1	2.70	0.45
24:BI:19:PRO:HG2	24:BI:22:PRO:HB2	1.99	0.45
26:BD:10:GLY:O	26:BD:11:MET:HB2	2.16	0.45
35:BV:80:HIS:CG	35:BV:83:LYS:HB2	2.52	0.45
37:BL:57:LEU:O	37:BL:61:LEU:HD13	2.16	0.45
37:BL:122:VAL:HG23	37:BL:143:GLU:OE1	2.17	0.45
40:BH:62:LEU:HD12	40:BH:62:LEU:H	1.82	0.45
41:BJ:55:ILE:HG22	41:BJ:123:LYS:HB2	1.98	0.45
45:BS:2:GLU:O	45:BS:3:THR:O	2.34	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:151:LEU:HD12	47:BF:152:ASP:N	2.32	0.45
48:BG:36:LEU:H	48:BG:36:LEU:CD2	2.24	0.45
48:BG:58:ALA:C	48:BG:60:GLY:N	2.70	0.45
48:BG:60:GLY:O	48:BG:62:ALA:N	2.50	0.45
48:BG:112:VAL:HG13	48:BG:150:TYR:CE2	2.52	0.45
52:BW:37:VAL:C	52:BW:38:ARG:HG2	2.37	0.45
1:CA:372:C:H4'	1:CA:373:A:H5'	1.99	0.45
1:CA:502:A:H2'	1:CA:503:C:O4'	2.17	0.45
1:CA:526:C:OP2	11:CL:87:LYS:HE3	2.16	0.45
1:CA:802:A:H2'	1:CA:803:G:O4'	2.16	0.45
1:CA:857:C:H2'	1:CA:858:G:O4'	2.16	0.45
1:CA:858:G:O6	1:CA:869:G:H3'	2.17	0.45
1:CA:1218:C:H2'	1:CA:1219:A:H8	1.78	0.45
2:CC:194:VAL:HG12	2:CC:195:ILE:N	2.31	0.45
3:CD:77:GLU:CA	3:CD:80:ARG:HG2	2.41	0.45
8:CI:21:LYS:N	8:CI:61:ASP:O	2.48	0.45
9:CJ:55:PRO:O	9:CJ:56:HIS:HB3	2.17	0.45
9:CJ:92:LEU:HB2	9:CJ:93:ALA:H	1.55	0.45
11:CL:49:ARG:H	11:CL:49:ARG:CD	2.29	0.45
12:CM:9:PRO:HB3	12:CM:20:SER:CB	2.46	0.45
12:CM:52:ILE:CD1	12:CM:55:LEU:HD12	2.41	0.45
14:CO:26:GLU:HG3	14:CO:81:LEU:CD1	2.43	0.45
20:CB:184:ALA:O	20:CB:199:ILE:HB	2.17	0.45
23:DB:225:C:H2'	23:DB:226:A:O4'	2.15	0.45
23:DB:506:G:H4'	23:DB:509:C:O2	2.17	0.45
23:DB:518:G:H4'	45:DS:18:ARG:NH2	2.31	0.45
23:DB:2678:C:H2'	23:DB:2679:A:C8	2.51	0.45
23:DB:2758:A:C2	23:DB:2759:G:H1'	2.51	0.45
24:DI:75:ALA:O	24:DI:79:LEU:HG	2.16	0.45
25:DC:15:VAL:HG22	25:DC:204:LEU:O	2.16	0.45
26:DD:191:GLY:O	26:DD:192:ALA:HB3	2.17	0.45
27:DK:75:SER:HB2	28:DP:73:PHE:HA	1.99	0.45
27:DK:111:LYS:N	27:DK:111:LYS:HD3	2.32	0.45
33:D1:8:ILE:HD12	33:D1:51:ALA:HA	1.98	0.45
36:D2:9:VAL:HG13	36:D2:10:LEU:N	2.31	0.45
37:DL:81:ASP:O	37:DL:82:LEU:HB2	2.17	0.45
37:DL:115:GLU:N	37:DL:115:GLU:OE1	2.49	0.45
40:DH:117:LEU:HD12	40:DH:118:PRO:CD	2.40	0.45
44:DQ:108:LEU:HD23	49:DR:48:LYS:HB2	1.98	0.45
47:DF:98:PHE:O	47:DF:102:LEU:HD12	2.17	0.45
47:DF:101:ARG:HH12	47:DF:138:PRO:HB2	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DG:93:TYR:C	48:DG:94:ARG:HG3	2.37	0.45
1:AA:803:G:H2'	1:AA:804:U:O4'	2.16	0.45
1:AA:857:C:H2'	1:AA:858:G:O4'	2.16	0.45
1:AA:1152:A:OP1	9:AJ:70:HIS:ND1	2.49	0.45
1:AA:1385:G:H2'	1:AA:1386:G:H8	1.81	0.45
1:AA:1415:G:O2'	1:AA:1416:G:H5'	2.16	0.45
2:AC:166:TRP:O	2:AC:167:TYR:CB	2.65	0.45
4:AE:93:VAL:HG12	4:AE:94:PHE:N	2.32	0.45
6:AG:59:GLU:O	6:AG:63:VAL:HG23	2.16	0.45
7:AH:35:ILE:O	7:AH:39:LEU:HG	2.16	0.45
7:AH:123:GLU:HG2	7:AH:124:ILE:O	2.15	0.45
8:AI:119:LYS:C	8:AI:121:ARG:H	2.20	0.45
10:AK:20:ALA:HB2	10:AK:81:LEU:HD12	1.99	0.45
12:AM:50:GLY:O	12:AM:54:THR:HG23	2.17	0.45
14:AO:43:PHE:CD1	14:AO:56:LEU:HD22	2.51	0.45
15:AP:17:TYR:HB2	15:AP:39:PHE:HD2	1.81	0.45
18:AS:41:PRO:O	18:AS:44:ILE:HG22	2.16	0.45
20:AB:33:ALA:CB	20:AB:38:HIS:HA	2.47	0.45
21:AU:42:THR:HB	21:AU:46:ARG:NH2	2.30	0.45
23:BB:52:A:H2'	23:BB:53:A:C8	2.51	0.45
23:BB:336:C:O2'	23:BB:337:C:H5'	2.17	0.45
23:BB:438:G:H2'	23:BB:439:A:H8	1.80	0.45
23:BB:531:C:H5"	23:BB:532:A:C5	2.51	0.45
23:BB:558:U:O2'	23:BB:559:G:H5'	2.17	0.45
23:BB:670:A:H4'	23:BB:671:C:C5'	2.46	0.45
23:BB:786:C:H5"	23:BB:1780:A:N7	2.31	0.45
23:BB:965:C:O2'	23:BB:966:G:H5'	2.16	0.45
23:BB:1297:C:H2'	23:BB:1298:C:H6	1.81	0.45
23:BB:1374:G:H2'	23:BB:1375:U:C6	2.52	0.45
23:BB:2053:G:O2'	23:BB:2054:A:H5'	2.16	0.45
23:BB:2103:C:H5'	23:BB:2104:C:OP2	2.17	0.45
23:BB:2199:A:H3'	23:BB:2200:C:H6	1.82	0.45
23:BB:2204:G:O2'	23:BB:2205:A:H5'	2.16	0.45
23:BB:2227:A:H2'	23:BB:2228:G:O4'	2.16	0.45
23:BB:2250:G:C6	38:BM:83:GLY:HA3	2.52	0.45
23:BB:2582:G:O2'	23:BB:2583:G:H5'	2.16	0.45
25:BC:67:LYS:O	25:BC:188:ARG:HD3	2.16	0.45
25:BC:145:MET:HB2	25:BC:152:GLN:NE2	2.31	0.45
27:BK:88:ASN:HD22	27:BK:89:ASN:H	1.64	0.45
29:BE:113:VAL:HG22	29:BE:118:LEU:HD12	1.98	0.45
39:BX:21:LEU:HD21	39:BX:50:VAL:HG11	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:13:GLY:O	40:BH:14:SER:HB2	2.17	0.45
42:BN:55:ALA:HA	42:BN:80:PHE:CE1	2.51	0.45
47:BF:132:ARG:O	47:BF:133:GLU:HB2	2.16	0.45
1:CA:60:A:O2'	19:CT:4:LYS:HD3	2.17	0.45
1:CA:245:U:H2'	1:CA:246:A:H5'	1.98	0.45
1:CA:301:G:O2'	1:CA:302:G:H5'	2.16	0.45
1:CA:425:G:H2'	1:CA:426:U:H6	1.81	0.45
1:CA:1308:U:OP1	12:CM:95:PRO:HA	2.16	0.45
2:CC:5:HIS:ND1	13:CN:88:MET:HB3	2.32	0.45
4:CE:29:ILE:O	4:CE:29:ILE:HG22	2.17	0.45
5:CF:86:ARG:NH2	17:CR:63:TYR:HB3	2.31	0.45
6:CG:69:ARG:HA	6:CG:99:ALA:HB2	1.98	0.45
6:CG:72:VAL:HA	6:CG:89:GLU:HA	1.99	0.45
7:CH:36:ALA:HA	7:CH:39:LEU:HD12	1.98	0.45
10:CK:55:ARG:NH1	10:CK:60:PHE:HD1	2.05	0.45
13:CN:17:ASP:O	13:CN:21:ALA:HB3	2.17	0.45
20:CB:62:ARG:HD2	20:CB:62:ARG:H	1.82	0.45
20:CB:178:LEU:HB2	20:CB:180:ILE:HG12	1.99	0.45
21:CU:48:LYS:HG3	21:CU:49:ALA:N	2.32	0.45
22:DA:114:C:H1'	43:DO:47:VAL:HG21	1.98	0.45
23:DB:160:A:H2'	23:DB:161:A:C8	2.51	0.45
23:DB:349:U:O2'	23:DB:350:G:H5'	2.17	0.45
23:DB:428:A:O2'	23:DB:429:A:H5'	2.15	0.45
23:DB:675:A:H4'	29:DE:62:GLN:HE22	1.81	0.45
23:DB:720:U:H2'	23:DB:721:A:H8	1.80	0.45
23:DB:851:C:H2'	23:DB:852:U:H6	1.81	0.45
23:DB:937:C:H2'	23:DB:938:G:C8	2.52	0.45
23:DB:979:A:H2'	23:DB:982:C:H42	1.82	0.45
23:DB:1045:C:P	23:DB:1047:G:H5'	2.57	0.45
23:DB:1048:A:H2'	23:DB:1049:C:C6	2.51	0.45
23:DB:1210:G:H5'	23:DB:1212:G:C5'	2.45	0.45
23:DB:1210:G:H1'	23:DB:1212:G:C2	2.52	0.45
23:DB:1258:U:H2'	23:DB:1259:G:H8	1.80	0.45
23:DB:1353:A:H2'	23:DB:1354:A:C8	2.51	0.45
23:DB:1582:C:H2'	23:DB:1583:A:O4'	2.17	0.45
23:DB:2106:U:H2'	23:DB:2107:G:C8	2.51	0.45
23:DB:2135:A:H61	23:DB:2156:G:C2'	2.30	0.45
23:DB:2209:G:H2'	23:DB:2210:U:C5	2.51	0.45
23:DB:2356:U:C5'	52:DW:16:GLU:HG3	2.47	0.45
23:DB:2549:G:O2'	23:DB:2550:G:H5'	2.17	0.45
27:DK:18:ARG:O	27:DK:45:GLU:HB2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DK:38:ILE:HD11	27:DK:112:PHE:HZ	1.82	0.45
29:DE:113:VAL:HG22	29:DE:118:LEU:HD12	1.99	0.45
29:DE:149:ILE:HD11	29:DE:172:ALA:HA	1.99	0.45
30:DY:47:ILE:HG23	30:DY:54:VAL:HG21	1.99	0.45
37:DL:96:LYS:HE2	37:DL:103:ILE:HA	1.99	0.45
40:DH:7:ASP:CG	40:DH:8:LYS:N	2.70	0.45
41:DJ:128:ASN:O	41:DJ:129:GLU:HG3	2.17	0.45
42:DN:29:VAL:HG13	42:DN:83:LEU:HD21	1.98	0.45
42:DN:31:HIS:O	42:DN:33:ILE:HG13	2.17	0.45
44:DQ:7:VAL:O	44:DQ:11:ALA:HB2	2.17	0.45
44:DQ:23:TYR:N	44:DQ:23:TYR:CD2	2.82	0.45
44:DQ:111:LYS:HE3	49:DR:48:LYS:HZ1	1.82	0.45
46:DU:11:ILE:O	46:DU:12:VAL:HB	2.17	0.45
46:DU:35:VAL:O	46:DU:38:ILE:HG22	2.17	0.45
46:DU:81:ARG:H	46:DU:81:ARG:NH2	2.09	0.45
47:DF:14:LYS:O	47:DF:18:GLU:HB2	2.16	0.45
47:DF:165:GLY:O	47:DF:169:LEU:HD12	2.17	0.45
48:DG:95:ALA:HA	48:DG:104:LEU:HD23	1.98	0.45
50:DT:85:VAL:C	50:DT:86:THR:HG23	2.37	0.45
1:AA:193:C:H2'	1:AA:194:C:C5	2.51	0.45
1:AA:201:G:H2'	1:AA:202:G:C8	2.51	0.45
1:AA:372:C:H4'	1:AA:373:A:H5'	1.99	0.45
1:AA:373:A:H1'	1:AA:481:G:H1'	1.98	0.45
1:AA:404:G:O2'	1:AA:405:U:H5'	2.16	0.45
1:AA:1097:C:H2'	1:AA:1098:C:C6	2.51	0.45
1:AA:1241:G:H2'	1:AA:1242:G:C8	2.50	0.45
1:AA:1446:A:H2'	1:AA:1447:A:H8	1.82	0.45
2:AC:5:HIS:HD2	2:AC:7:ASN:H	1.63	0.45
3:AD:122:ILE:O	3:AD:128:VAL:HG23	2.17	0.45
5:AF:54:LEU:C	5:AF:56:LYS:H	2.20	0.45
6:AG:68:VAL:HG13	6:AG:133:ALA:HB1	1.98	0.45
10:AK:126:ARG:HB2	21:AU:33:ARG:CD	2.44	0.45
11:AL:41:PRO:HB3	11:AL:49:ARG:NH1	2.32	0.45
14:AO:78:TYR:CE1	14:AO:82:ILE:HD11	2.52	0.45
20:AB:46:VAL:O	20:AB:49:PHE:HB2	2.17	0.45
20:AB:187:ASP:O	20:AB:189:ASN:N	2.50	0.45
23:BB:460:A:C4'	50:BT:72:GLN:HB2	2.36	0.45
23:BB:553:G:H2'	23:BB:554:U:O4'	2.15	0.45
23:BB:1173:U:H2'	23:BB:1174:U:H4'	1.99	0.45
23:BB:1189:A:H2'	23:BB:1190:G:O4'	2.16	0.45
23:BB:1241:A:O4'	23:BB:1241:A:N3	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1357:C:O2'	23:BB:1358:G:H5'	2.17	0.45
23:BB:2626:C:H2'	23:BB:2627:G:H8	1.82	0.45
23:BB:2793:C:H2'	23:BB:2794:C:C6	2.51	0.45
23:BB:2886:A:H62	31:B0:39:ARG:CZ	2.29	0.45
25:BC:90:ILE:HD11	25:BC:102:TYR:HB3	1.99	0.45
25:BC:199:HIS:C	25:BC:201:LEU:H	2.20	0.45
26:BD:125:TRP:CE3	26:BD:160:LYS:HD3	2.52	0.45
27:BK:113:MET:HE1	27:BK:116:ILE:CD1	2.46	0.45
33:B1:35:LEU:N	33:B1:35:LEU:CD2	2.80	0.45
35:BV:75:GLN:HB2	35:BV:90:ASP:O	2.17	0.45
37:BL:80:SER:HA	37:BL:115:GLU:HB2	1.98	0.45
37:BL:105:ILE:HG22	37:BL:106:GLU:N	2.31	0.45
37:BL:125:LEU:HB2	37:BL:143:GLU:OE2	2.17	0.45
38:BM:19:GLY:H	38:BM:38:ARG:NH1	2.04	0.45
40:BH:44:ILE:C	40:BH:46:PHE:N	2.70	0.45
42:BN:61:ALA:C	42:BN:63:ARG:N	2.70	0.45
43:BO:35:ILE:CG1	43:BO:102:ARG:HE	2.29	0.45
46:BU:23:LYS:N	46:BU:23:LYS:HD2	2.31	0.45
46:BU:64:ILE:HG13	46:BU:65:GLN:N	2.32	0.45
46:BU:85:ARG:HH11	46:BU:86:PHE:H	1.64	0.45
49:BR:61:ALA:HB2	49:BR:98:ILE:HA	1.98	0.45
50:BT:11:LEU:HD22	50:BT:11:LEU:N	2.23	0.45
50:BT:47:VAL:HG12	50:BT:47:VAL:O	2.17	0.45
53:B6:59:THR:O	53:B6:67:VAL:HG22	2.16	0.45
1:CA:308:C:H2'	1:CA:309:A:C8	2.52	0.45
1:CA:886:G:O2'	1:CA:887:G:H5'	2.17	0.45
1:CA:932:C:H5"	6:CG:3:ARG:CG	2.43	0.45
1:CA:1121:U:H2'	1:CA:1122:U:O4'	2.16	0.45
1:CA:1125:U:O2'	1:CA:1126:U:H2'	2.17	0.45
1:CA:1432:G:H5'	28:DP:105:LYS:HG2	1.98	0.45
2:CC:78:LYS:O	2:CC:78:LYS:HG3	2.16	0.45
2:CC:119:ILE:O	2:CC:123:LEU:HG	2.17	0.45
3:CD:201:GLU:OE1	4:CE:104:ILE:HG22	2.17	0.45
4:CE:85:LYS:HG3	4:CE:93:VAL:O	2.16	0.45
5:CF:16:GLU:CD	5:CF:16:GLU:N	2.68	0.45
6:CG:80:GLY:O	6:CG:82:SER:N	2.50	0.45
6:CG:145:GLU:C	6:CG:147:ASN:H	2.19	0.45
11:CL:31:GLY:HA2	11:CL:56:LEU:HA	1.97	0.45
12:CM:12:LYS:O	12:CM:43:LYS:HG3	2.17	0.45
16:CQ:74:LEU:HD22	16:CQ:75:VAL:H	1.79	0.45
16:CQ:80:LYS:NZ	16:CQ:80:LYS:N	2.64	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CT:53:MET:HA	19:CT:56:ILE:CD1	2.45	0.45
20:CB:98:GLY:HA2	20:CB:101:THR:CG2	2.44	0.45
23:DB:263:G:H2'	23:DB:264:C:O4'	2.16	0.45
23:DB:361:G:HO2'	23:DB:362:A:C4'	2.30	0.45
23:DB:394:C:C2'	23:DB:395:U:H5'	2.46	0.45
23:DB:540:C:O2'	23:DB:541:A:H5'	2.16	0.45
23:DB:626:A:OP1	23:DB:654:A:N6	2.49	0.45
23:DB:814:C:H2'	23:DB:815:C:H6	1.82	0.45
23:DB:1144:A:O2'	23:DB:1145:C:H5'	2.16	0.45
23:DB:1439:A:N3	23:DB:1553:A:C6	2.85	0.45
23:DB:2513:A:H2'	23:DB:2514:U:C6	2.52	0.45
23:DB:2515:C:O2'	23:DB:2516:A:H5'	2.17	0.45
23:DB:2888:C:H2'	23:DB:2889:C:H6	1.82	0.45
24:DI:90:GLY:C	24:DI:92:PRO:HD3	2.37	0.45
24:DI:138:VAL:HG12	24:DI:139:VAL:N	2.31	0.45
25:DC:216:ARG:HE	25:DC:217:PRO:HD2	1.82	0.45
25:DC:245:THR:HG23	25:DC:249:VAL:HB	1.98	0.45
29:DE:48:THR:HG22	29:DE:86:ALA:HB3	1.98	0.45
29:DE:51:GLU:O	29:DE:52:VAL:C	2.53	0.45
30:DY:57:GLU:HA	30:DY:57:GLU:OE1	2.16	0.45
33:D1:26:LYS:HB3	33:D1:52:LYS:HZ2	1.81	0.45
36:D2:13:ASN:O	36:D2:17:GLY:HA3	2.17	0.45
37:DL:79:LEU:CG	37:DL:112:LEU:HA	2.43	0.45
43:DO:14:ALA:C	43:DO:16:ARG:H	2.20	0.45
47:DF:31:GLU:O	47:DF:32:LYS:O	2.34	0.45
48:DG:8:VAL:HG22	48:DG:51:PHE:HE2	1.82	0.45
48:DG:54:ARG:HD2	48:DG:57:TYR:CE1	2.51	0.45
50:DT:36:LYS:HD3	50:DT:36:LYS:O	2.17	0.45
50:DT:49:LYS:HB2	50:DT:50:LEU:HD22	1.99	0.45
1:AA:202:G:O2'	1:AA:468:A:H8	1.83	0.45
1:AA:222:C:H2'	1:AA:223:A:H8	1.81	0.45
1:AA:255:G:H2'	1:AA:256:U:C6	2.52	0.45
1:AA:265:G:H5'	16:AQ:65:PRO:O	2.17	0.45
1:AA:286:C:H2'	1:AA:287:U:H6	1.82	0.45
1:AA:688:G:H5'	10:AK:48:GLY:HA2	1.99	0.45
1:AA:1127:G:O2'	1:AA:1128:C:H5'	2.17	0.45
1:AA:1283:U:H2'	1:AA:1284:C:H6	1.81	0.45
2:AC:149:LYS:HE2	2:AC:200:TRP:CZ3	2.52	0.45
3:AD:29:THR:HB	3:AD:30:LYS:HD3	1.97	0.45
5:AF:79:ARG:HH21	5:AF:87:SER:HB3	1.81	0.45
6:AG:68:VAL:CG2	6:AG:126:ALA:HB1	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AH:118:ALA:HB3	7:AH:120:LEU:HD22	1.99	0.45
10:AK:75:GLU:CD	10:AK:75:GLU:N	2.70	0.45
12:AM:5:GLY:O	12:AM:6:ILE:HB	2.16	0.45
23:BB:6:A:H2'	23:BB:7:G:C8	2.52	0.45
23:BB:62:U:H3'	23:BB:63:A:H8	1.76	0.45
23:BB:215:G:H4'	23:BB:216:A:OP1	2.16	0.45
23:BB:539:G:H2'	23:BB:540:C:H6	1.82	0.45
23:BB:636:G:H3'	37:BL:128:THR:HG21	1.99	0.45
23:BB:674:G:C4'	29:BE:69:ARG:HB3	2.45	0.45
23:BB:920:A:H2'	23:BB:921:C:C6	2.52	0.45
23:BB:1119:U:H2'	23:BB:1120:G:H8	1.82	0.45
23:BB:1338:G:O2'	23:BB:1339:G:H5'	2.17	0.45
23:BB:1350:C:N4	23:BB:1382:G:O6	2.49	0.45
23:BB:1423:G:H2'	23:BB:1424:G:H8	1.82	0.45
23:BB:1449:G:O2'	23:BB:1450:G:H5'	2.17	0.45
23:BB:1463:C:H2'	23:BB:1464:G:H8	1.81	0.45
23:BB:1495:A:H2'	23:BB:1496:A:H8	1.81	0.45
23:BB:1765:U:H2'	23:BB:1766:G:C8	2.52	0.45
23:BB:2238:G:H4'	23:BB:2239:G:OP1	2.17	0.45
23:BB:2293:G:H2'	23:BB:2294:G:H8	1.81	0.45
23:BB:2849:U:H4'	23:BB:2850:A:O5'	2.17	0.45
24:BI:72:THR:HG21	24:BI:111:THR:O	2.17	0.45
25:BC:209:ALA:HA	25:BC:212:TRP:CE2	2.52	0.45
26:BD:13:ARG:HH12	28:BP:74:GLN:NE2	2.14	0.45
26:BD:191:GLY:O	26:BD:192:ALA:HB3	2.16	0.45
27:BK:11:ALA:O	27:BK:100:PHE:N	2.47	0.45
27:BK:19:VAL:CB	27:BK:41:ILE:HD11	2.46	0.45
27:BK:53:LYS:HD3	27:BK:53:LYS:H	1.82	0.45
28:BP:101:GLU:OE2	28:BP:101:GLU:N	2.50	0.45
29:BE:37:ALA:C	29:BE:39:ALA:N	2.69	0.45
37:BL:123:ARG:HD2	37:BL:124:GLY:N	2.31	0.45
38:BM:66:ARG:HB2	38:BM:101:VAL:HG13	1.97	0.45
39:BX:20:ASN:N	39:BX:20:ASN:ND2	2.65	0.45
39:BX:41:HIS:O	39:BX:44:LYS:HB3	2.16	0.45
40:BH:7:ASP:CA	40:BH:15:LEU:HD22	2.36	0.45
41:BJ:59:ALA:C	41:BJ:61:LYS:N	2.70	0.45
41:BJ:95:ARG:O	41:BJ:95:ARG:HD3	2.17	0.45
42:BN:77:ALA:O	42:BN:81:ASN:HB2	2.17	0.45
44:BQ:60:TRP:CE2	44:BQ:93:ILE:HB	2.52	0.45
44:BQ:91:ARG:HH12	49:BR:10:LYS:HA	1.81	0.45
47:BF:127:TYR:HB2	47:BF:155:ILE:HD13	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BR:40:MET:CG	49:BR:48:LYS:HA	2.47	0.45
49:BR:83:TYR:HE2	49:BR:85:LYS:HE3	1.81	0.45
1:CA:42:G:H2'	1:CA:43:C:C6	2.52	0.45
1:CA:398:U:H2'	1:CA:399:G:C8	2.52	0.45
1:CA:602:A:H2'	1:CA:603:U:C6	2.51	0.45
1:CA:624:C:H2'	1:CA:625:U:H6	1.80	0.45
1:CA:719:C:H2'	17:CR:38:ILE:HD13	1.97	0.45
1:CA:960:U:O3'	1:CA:1223:C:H4'	2.16	0.45
1:CA:1340:A:O2'	1:CA:1341:U:H5'	2.16	0.45
2:CC:156:LEU:HG	2:CC:163:ARG:O	2.17	0.45
3:CD:2:ARG:O	3:CD:3:TYR:HB3	2.17	0.45
6:CG:50:ALA:HB2	6:CG:57:GLU:CA	2.47	0.45
7:CH:17:GLN:HE21	7:CH:62:LEU:HB3	1.81	0.45
8:CI:119:LYS:C	8:CI:121:ARG:H	2.20	0.45
10:CK:75:GLU:CD	10:CK:75:GLU:N	2.69	0.45
11:CL:2:THR:O	11:CL:5:GLN:HB2	2.17	0.45
12:CM:78:ARG:HA	12:CM:81:ASP:OD2	2.17	0.45
13:CN:92:ILE:HD12	13:CN:92:ILE:N	2.32	0.45
17:CR:62:ARG:C	17:CR:63:TYR:HD2	2.20	0.45
23:DB:112:U:H2'	23:DB:113:U:H5'	1.99	0.45
23:DB:131:A:H2'	23:DB:132:G:H8	1.81	0.45
23:DB:309:A:H1'	23:DB:329:G:N3	2.31	0.45
23:DB:325:G:O2'	23:DB:326:G:H5'	2.15	0.45
23:DB:1048:A:H8	23:DB:1048:A:P	2.40	0.45
23:DB:1150:C:O2'	23:DB:1151:A:H5'	2.16	0.45
23:DB:1176:U:O5'	23:DB:1176:U:H6	2.00	0.45
23:DB:1434:A:H4'	23:DB:1434:A:OP1	2.17	0.45
23:DB:1439:A:C5	23:DB:1552:A:N6	2.84	0.45
23:DB:1640:A:H2'	23:DB:1641:A:C8	2.51	0.45
23:DB:1649:G:HO2'	23:DB:1650:A:H5'	1.80	0.45
23:DB:1797:G:C6	23:DB:1823:G:C6	3.05	0.45
23:DB:1811:G:O2'	23:DB:1812:U:H5'	2.16	0.45
23:DB:2789:C:H2'	23:DB:2893:A:N7	2.32	0.45
24:DI:45:THR:O	24:DI:48:ILE:HG22	2.16	0.45
25:DC:43:ASN:HD22	25:DC:44:ASN:N	2.15	0.45
25:DC:159:THR:N	25:DC:194:VAL:CG1	2.80	0.45
26:DD:55:LYS:C	26:DD:57:ALA:H	2.20	0.45
27:DK:35:VAL:CG2	27:DK:36:GLY:H	2.06	0.45
29:DE:60:TRP:HB3	29:DE:61:ARG:H	1.33	0.45
30:DY:11:SER:OG	30:DY:13:ILE:HG13	2.16	0.45
34:D3:30:HIS:CD2	34:D3:31:ILE:N	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DL:127:VAL:HG22	37:DL:128:THR:N	2.31	0.45
38:DM:35:ALA:HB3	38:DM:100:LYS:H	1.82	0.45
41:DJ:44:TYR:O	41:DJ:45:THR:CB	2.65	0.45
43:DO:93:ASP:C	43:DO:95:SER:H	2.21	0.45
44:DQ:106:THR:O	44:DQ:109:VAL:HB	2.16	0.45
46:DU:64:ILE:HG13	46:DU:65:GLN:N	2.32	0.45
48:DG:58:ALA:C	48:DG:60:GLY:N	2.70	0.45
51:DZ:69:ALA:HA	51:DZ:72:ARG:NH1	2.32	0.45
52:DW:59:PHE:HE2	52:DW:61:LYS:HA	1.81	0.45
53:D6:65:THR:HG23	53:D6:101:ILE:O	2.17	0.45
1:AA:221:C:O2'	1:AA:222:C:H5'	2.17	0.45
1:AA:384:G:H2'	1:AA:385:C:H6	1.82	0.45
1:AA:468:A:H3'	1:AA:469:C:C6	2.52	0.45
1:AA:502:A:H2'	1:AA:503:C:O4'	2.16	0.45
1:AA:1060:U:C5'	9:AJ:53:ILE:HG12	2.47	0.45
1:AA:1073:U:O2'	20:AB:102:ASN:OD1	2.33	0.45
1:AA:1437:A:H2'	1:AA:1438:G:H8	1.81	0.45
1:AA:1463:U:OP1	28:BP:108:ARG:HD2	2.16	0.45
1:AA:1473:G:H2'	1:AA:1474:U:C6	2.51	0.45
5:AF:3:HIS:CE1	5:AF:65:GLU:HG3	2.52	0.45
6:AG:146:ALA:C	10:AK:55:ARG:HH21	2.20	0.45
7:AH:17:GLN:HG2	7:AH:62:LEU:HD23	1.99	0.45
9:AJ:41:PRO:HG2	9:AJ:42:LEU:H	1.81	0.45
11:AL:19:ASN:HD22	11:AL:19:ASN:HA	1.52	0.45
13:AN:2:LYS:O	13:AN:6:LYS:HG3	2.17	0.45
14:AO:21:ASP:O	14:AO:23:GLY:N	2.47	0.45
23:BB:161:A:C3'	23:BB:162:U:H5"	2.35	0.45
23:BB:664:G:O2'	23:BB:665:U:H5'	2.17	0.45
23:BB:693:A:O2'	23:BB:694:U:H5'	2.16	0.45
23:BB:780:G:N2	23:BB:783:A:H62	2.15	0.45
23:BB:806:C:O2'	23:BB:2445:G:H4'	2.16	0.45
23:BB:838:C:C2	23:BB:941:A:C6	3.05	0.45
23:BB:1491:G:H5'	25:BC:97:ASP:OD1	2.17	0.45
23:BB:1680:U:O2	23:BB:1763:G:H3'	2.16	0.45
23:BB:1915:U:H3'	23:BB:1916:A:C8	2.52	0.45
23:BB:2047:C:H2'	23:BB:2048:G:C8	2.51	0.45
23:BB:2586:U:H2'	23:BB:2587:A:H8	1.82	0.45
23:BB:2702:G:H2'	23:BB:2703:C:H6	1.82	0.45
23:BB:2861:U:H2'	23:BB:2862:G:C8	2.50	0.45
24:BI:14:ALA:HA	24:BI:45:THR:HG21	1.97	0.45
25:BC:43:ASN:HD22	25:BC:44:ASN:H	1.60	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:140:VAL:CG2	25:BC:163:ILE:HG12	2.47	0.45
26:BD:159:LYS:HZ2	26:BD:160:LYS:N	2.14	0.45
27:BK:39:ILE:HD13	27:BK:60:ALA:O	2.16	0.45
29:BE:1:MET:HB3	29:BE:14:VAL:HG23	1.99	0.45
30:BY:56:VAL:HG12	30:BY:57:GLU:H	1.82	0.45
32:B4:25:VAL:HG11	32:B4:35:GLN:NE2	2.32	0.45
37:BL:91:ASP:HA	37:BL:123:ARG:HB3	1.97	0.45
37:BL:142:ILE:HD12	37:BL:142:ILE:N	2.32	0.45
38:BM:23:GLY:O	38:BM:101:VAL:HG12	2.17	0.45
42:BN:24:MET:CE	42:BN:44:LEU:HB2	2.47	0.45
47:BF:131:VAL:C	47:BF:133:GLU:H	2.19	0.45
48:BG:15:ASP:CB	48:BG:26:LYS:H	2.16	0.45
48:BG:44:HIS:O	48:BG:46:ASP:N	2.49	0.45
48:BG:154:GLU:CG	48:BG:156:TYR:HB2	2.47	0.45
52:BW:23:LYS:HD2	52:BW:24:ARG:H	1.79	0.45
1:CA:82:G:O2'	1:CA:83:C:H5'	2.16	0.45
1:CA:215:C:O2'	1:CA:216:U:H5'	2.17	0.45
1:CA:389:A:N3	1:CA:389:A:H2'	2.32	0.45
1:CA:669:G:O2'	1:CA:670:G:H5'	2.17	0.45
1:CA:778:G:H2'	1:CA:779:C:H6	1.80	0.45
1:CA:778:G:H2'	1:CA:779:C:C6	2.52	0.45
1:CA:1054:C:H1'	1:CA:1196:A:C4	2.51	0.45
1:CA:1408:A:H5'	23:DB:1912:A:N6	2.32	0.45
2:CC:125:ARG:O	2:CC:126:ARG:HB2	2.17	0.45
3:CD:29:THR:HB	3:CD:30:LYS:HD3	1.98	0.45
8:CI:24:ASN:CG	8:CI:25:GLY:N	2.69	0.45
8:CI:41:GLU:C	8:CI:43:ALA:N	2.70	0.45
10:CK:13:LYS:HD2	10:CK:76:TYR:HE2	1.81	0.45
10:CK:28:ASN:ND2	10:CK:56:LYS:HD2	2.32	0.45
11:CL:54:VAL:CG2	11:CL:79:ILE:HD11	2.47	0.45
13:CN:52:ARG:C	13:CN:54:SER:N	2.70	0.45
23:DB:208:C:H2'	23:DB:209:C:C6	2.51	0.45
23:DB:320:A:OP1	29:DE:130:LYS:HE3	2.17	0.45
23:DB:468:G:H5"	29:DE:55:SER:HB2	1.98	0.45
23:DB:850:U:O3'	30:DY:22:THR:HG22	2.17	0.45
23:DB:928:A:H2'	23:DB:929:U:C6	2.51	0.45
23:DB:1201:U:H2'	23:DB:1202:G:C8	2.52	0.45
23:DB:1257:C:H5'	29:DE:78:TRP:CH2	2.51	0.45
23:DB:1281:G:O2'	23:DB:1282:U:H5'	2.17	0.45
23:DB:1468:U:H2'	23:DB:1522:A:H61	1.81	0.45
23:DB:1731:G:O2'	23:DB:1732:C:H5"	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2019:A:H4'	44:DQ:33:VAL:HG11	1.98	0.45
23:DB:2428:G:H5"	23:DB:2429:G:OP1	2.17	0.45
23:DB:2515:C:P	41:DJ:81:ILE:HD11	2.57	0.45
23:DB:2702:G:H2'	23:DB:2703:C:H6	1.81	0.45
23:DB:2846:G:OP1	28:DP:51:ASN:HB2	2.17	0.45
25:DC:94:LEU:HA	25:DC:100:ARG:HB3	1.98	0.45
26:DD:16:THR:HG22	26:DD:17:GLU:N	2.32	0.45
27:DK:5:GLN:HA	27:DK:20:MET:SD	2.57	0.45
35:DV:51:GLN:NE2	35:DV:79:ARG:HH22	2.14	0.45
37:DL:57:LEU:HA	37:DL:60:ARG:HE	1.82	0.45
40:DH:4:ILE:CD1	40:DH:44:ILE:HG22	2.47	0.45
41:DJ:59:ALA:C	41:DJ:61:LYS:N	2.70	0.45
43:DO:30:ARG:HG3	43:DO:30:ARG:NH1	2.32	0.45
45:DS:74:ILE:HD12	45:DS:104:THR:O	2.16	0.45
48:DG:43:LYS:O	48:DG:50:THR:N	2.49	0.45
49:DR:72:VAL:CG2	49:DR:89:HIS:HB3	2.46	0.45
49:DR:91:GLN:HG3	49:DR:92:TRP:N	2.32	0.45
50:DT:18:GLU:O	50:DT:20:ALA:N	2.48	0.45
50:DT:55:VAL:HG22	50:DT:87:LEU:HD23	1.99	0.45
51:DZ:33:LEU:O	51:DZ:34:HIS:CG	2.70	0.45
51:DZ:63:GLY:O	51:DZ:66:THR:N	2.50	0.45
1:AA:113:G:H2'	1:AA:114:U:H6	1.81	0.45
1:AA:203:G:H1'	1:AA:465:A:N6	2.31	0.45
1:AA:508:U:H1'	1:AA:509:A:N7	2.32	0.45
1:AA:737:C:O2'	1:AA:738:C:H5'	2.17	0.45
1:AA:947:G:H2'	1:AA:948:C:C6	2.52	0.45
1:AA:958:A:N6	18:AS:53:GLY:HA3	2.29	0.45
1:AA:1242:G:H2'	1:AA:1243:C:C6	2.53	0.45
1:AA:1317:C:OP1	13:AN:56:PRO:HD2	2.16	0.45
1:AA:1350:A:H2'	1:AA:1351:U:C6	2.51	0.45
1:AA:1441:A:C2	28:BP:113:LEU:HD22	2.51	0.45
1:AA:1515:G:O2'	1:AA:1516:G:H5'	2.16	0.45
2:AC:142:ARG:C	2:AC:144:GLY:H	2.20	0.45
2:AC:171:ARG:HB2	2:AC:171:ARG:NH1	2.32	0.45
3:AD:29:THR:CG2	3:AD:30:LYS:HD3	2.48	0.45
4:AE:57:ALA:O	4:AE:61:LYS:HG2	2.17	0.45
5:AF:80:PHE:HE1	25:BC:123:ILE:HD13	1.82	0.45
5:AF:97:THR:O	5:AF:98:GLU:CD	2.55	0.45
8:AI:24:ASN:CG	8:AI:25:GLY:N	2.70	0.45
12:AM:70:ARG:HH12	47:BF:112:ASP:CG	2.21	0.45
16:AQ:45:VAL:HA	16:AQ:72:TRP:O	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AR:59:LYS:O	17:AR:62:ARG:HB2	2.16	0.45
18:AS:58:PRO:O	18:AS:59:VAL:HG13	2.17	0.45
19:AT:38:ILE:HD13	19:AT:85:LEU:HD13	1.99	0.45
20:AB:48:MET:H	20:AB:48:MET:HG2	1.36	0.45
21:AU:13:VAL:O	21:AU:13:VAL:HG13	2.17	0.45
22:BA:9:G:OP1	43:BO:25:ARG:NH1	2.50	0.45
22:BA:37:C:H2'	22:BA:38:C:O4'	2.17	0.45
23:BB:39:G:H2'	23:BB:40:U:C6	2.52	0.45
23:BB:90:U:H2'	23:BB:91:A:C2	2.52	0.45
23:BB:250:G:H2'	23:BB:251:A:C8	2.52	0.45
23:BB:259:G:H2'	23:BB:260:G:H8	1.82	0.45
23:BB:264:C:C2'	23:BB:265:A:H5"	2.47	0.45
23:BB:651:G:OP1	34:B3:18:LYS:HG3	2.16	0.45
23:BB:833:A:H1'	37:BL:52:GLY:N	2.31	0.45
23:BB:970:U:H1'	23:BB:985:C:P	2.57	0.45
23:BB:1249:U:O4'	44:BQ:3:VAL:HG21	2.16	0.45
23:BB:1719:G:O2'	23:BB:1720:U:H5'	2.17	0.45
23:BB:2013:A:N3	45:BS:88:ARG:NH1	2.65	0.45
23:BB:2399:G:H2'	23:BB:2400:G:H8	1.82	0.45
23:BB:2708:G:O2'	23:BB:2709:G:H5'	2.17	0.45
23:BB:2708:G:H2'	23:BB:2709:G:H8	1.82	0.45
23:BB:2720:U:H2'	23:BB:2721:A:C8	2.51	0.45
24:BI:19:PRO:HB2	24:BI:22:PRO:HD2	1.99	0.45
25:BC:15:VAL:HG22	25:BC:204:LEU:O	2.16	0.45
26:BD:4:LEU:N	26:BD:4:LEU:HD22	2.32	0.45
26:BD:158:GLY:O	26:BD:160:LYS:N	2.50	0.45
27:BK:87:LEU:HD12	27:BK:92:GLU:HA	1.99	0.45
29:BE:150:THR:HG21	29:BE:153:LEU:CA	2.44	0.45
30:BY:23:LEU:CD1	30:BY:28:LEU:HB2	2.47	0.45
31:B0:30:ASP:HB3	31:B0:33:SER:O	2.17	0.45
35:BV:42:LEU:HD11	35:BV:89:ILE:HD11	1.99	0.45
38:BM:57:VAL:O	38:BM:59:ARG:N	2.45	0.45
40:BH:25:TYR:CD2	40:BH:30:LEU:HD11	2.52	0.45
40:BH:49:ALA:O	40:BH:53:GLU:HB2	2.17	0.45
40:BH:50:ARG:O	40:BH:54:LEU:HD21	2.17	0.45
41:BJ:25:LEU:O	41:BJ:27:ARG:N	2.46	0.45
44:BQ:63:ARG:CZ	44:BQ:96:ASP:HA	2.47	0.45
45:BS:13:SER:HB3	45:BS:16:LYS:HE3	1.99	0.45
46:BU:73:ASN:HB3	46:BU:95:PHE:CE2	2.52	0.45
47:BF:59:ILE:H	47:BF:59:ILE:HG13	1.51	0.45
47:BF:131:VAL:O	47:BF:132:ARG:HB2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BW:16:GLU:CD	52:BW:16:GLU:N	2.70	0.45
52:BW:75:ASN:O	52:BW:76:ARG:HB2	2.17	0.45
1:CA:186:C:H2'	1:CA:187:G:O4'	2.17	0.45
1:CA:213:G:C8	1:CA:214:C:C5	3.05	0.45
1:CA:784:A:H2'	1:CA:785:G:H8	1.82	0.45
1:CA:900:A:O2'	1:CA:901:A:H5'	2.15	0.45
5:CF:3:HIS:CD2	5:CF:92:THR:HG23	2.52	0.45
5:CF:81:ASN:O	5:CF:82:ASP:C	2.55	0.45
6:CG:145:GLU:C	6:CG:148:LYS:H	2.20	0.45
8:CI:11:ARG:HA	8:CI:105:ARG:CZ	2.46	0.45
8:CI:29:ILE:HG12	8:CI:64:ILE:HB	1.97	0.45
8:CI:103:VAL:HG23	8:CI:104:THR:N	2.32	0.45
12:CM:90:HIS:CE1	12:CM:96:VAL:HG21	2.52	0.45
20:CB:40:ILE:HD13	20:CB:201:GLY:CA	2.46	0.45
20:CB:57:ASN:HA	20:CB:60:ALA:HB3	1.98	0.45
21:CU:24:LYS:HE2	21:CU:25:ALA:HB2	1.99	0.45
23:DB:173:A:H2'	23:DB:174:U:H6	1.82	0.45
23:DB:220:G:H1	23:DB:427:U:H2'	1.81	0.45
23:DB:244:A:H1'	23:DB:255:A:N6	2.32	0.45
23:DB:274:C:H6	23:DB:274:C:O5'	2.00	0.45
23:DB:282:A:H2'	23:DB:283:G:O4'	2.17	0.45
23:DB:416:U:H2'	23:DB:417:C:C6	2.52	0.45
23:DB:596:U:H2'	23:DB:597:G:H8	1.82	0.45
23:DB:713:G:O2'	23:DB:714:U:H5'	2.18	0.45
23:DB:841:G:O2'	23:DB:842:U:H5'	2.16	0.45
23:DB:931:U:C4	23:DB:1167:C:H1'	2.52	0.45
23:DB:972:A:C3'	23:DB:973:A:H5"	2.36	0.45
23:DB:1098:A:O5'	24:DI:3:LYS:CG	2.64	0.45
23:DB:1111:A:H3'	23:DB:1111:A:OP2	2.17	0.45
23:DB:1210:G:N3	23:DB:1212:G:N2	2.65	0.45
23:DB:1322:A:C2'	23:DB:1323:C:H5'	2.47	0.45
23:DB:1568:G:H4'	25:DC:58:LYS:CB	2.47	0.45
23:DB:1877:A:H2'	23:DB:1878:G:O4'	2.17	0.45
23:DB:2693:G:H2'	23:DB:2694:G:C8	2.50	0.45
23:DB:2836:U:H2'	23:DB:2837:A:C8	2.52	0.45
24:DI:57:VAL:HG23	24:DI:71:LYS:HZ1	1.82	0.45
26:DD:56:LYS:CD	26:DD:58:ASN:HB3	2.47	0.45
27:DK:112:PHE:O	27:DK:113:MET:C	2.55	0.45
30:DY:37:ARG:HG2	30:DY:43:ILE:HD11	1.97	0.45
30:DY:56:VAL:HG12	30:DY:57:GLU:H	1.81	0.45
35:DV:80:HIS:CG	35:DV:83:LYS:HB2	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DL:3:LEU:O	37:DL:5:THR:HG23	2.17	0.45
40:DH:99:ILE:O	40:DH:103:VAL:HG12	2.16	0.45
41:DJ:40:HIS:ND1	41:DJ:41:LYS:HG3	2.32	0.45
41:DJ:45:THR:H	41:DJ:46:PRO:CD	2.25	0.45
42:DN:8:ARG:HB3	42:DN:43:GLU:OE2	2.17	0.45
42:DN:90:ARG:HB3	42:DN:94:TYR:CE1	2.52	0.45
46:DU:23:LYS:HD2	46:DU:23:LYS:N	2.32	0.45
47:DF:147:ARG:CZ	47:DF:147:ARG:HB3	2.46	0.45
1:AA:222:C:H2'	1:AA:223:A:C8	2.52	0.44
1:AA:596:A:H2'	1:AA:597:G:H8	1.82	0.44
1:AA:947:G:H4'	12:AM:107:THR:OG1	2.17	0.44
1:AA:1014:A:H5"	18:AS:13:HIS:HB3	1.98	0.44
1:AA:1166:G:N1	1:AA:1169:A:OP2	2.50	0.44
1:AA:1291:U:O2'	1:AA:1292:G:H5'	2.17	0.44
1:AA:1309:G:H2'	1:AA:1310:G:H8	1.81	0.44
4:AE:93:VAL:HG22	4:AE:126:ALA:CB	2.47	0.44
5:AF:3:HIS:CD2	5:AF:92:THR:HG23	2.52	0.44
5:AF:11:HIS:CG	5:AF:12:PRO:HD2	2.52	0.44
6:AG:68:VAL:CG1	6:AG:133:ALA:HB1	2.47	0.44
7:AH:17:GLN:HE21	7:AH:62:LEU:HB3	1.82	0.44
7:AH:110:MET:SD	7:AH:115:ALA:HB2	2.57	0.44
8:AI:83:THR:HA	8:AI:86:LEU:HD22	1.99	0.44
17:AR:38:ILE:HG23	17:AR:62:ARG:NH2	2.32	0.44
22:BA:17:C:O2'	22:BA:18:G:H5'	2.17	0.44
22:BA:98:G:N1	35:BV:14:LYS:HB2	2.32	0.44
23:BB:78:U:H2'	23:BB:79:C:H6	1.79	0.44
23:BB:82:U:H2'	23:BB:83:A:O4'	2.17	0.44
23:BB:202:U:H2'	23:BB:203:A:O4'	2.16	0.44
23:BB:627:A:H4'	23:BB:628:G:OP1	2.17	0.44
23:BB:642:U:H2'	23:BB:644:A:OP2	2.17	0.44
23:BB:655:A:H4'	23:BB:656:G:OP1	2.16	0.44
23:BB:840:C:H2'	23:BB:841:G:C8	2.52	0.44
23:BB:973:A:H8	23:BB:973:A:OP1	2.00	0.44
23:BB:1510:G:O2'	23:BB:1511:G:H5'	2.18	0.44
23:BB:1553:A:HO2'	23:BB:1554:U:H2'	1.81	0.44
23:BB:1584:U:H6	23:BB:1584:U:O5'	2.00	0.44
23:BB:1689:A:O2'	23:BB:1690:A:H5'	2.18	0.44
23:BB:2097:A:H2'	23:BB:2098:U:H6	1.82	0.44
23:BB:2630:G:H2'	23:BB:2631:G:H8	1.82	0.44
26:BD:4:LEU:HD21	26:BD:100:LEU:CB	2.47	0.44
26:BD:16:THR:HG22	26:BD:17:GLU:H	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:88:ARG:HB3	29:BE:89:PRO:HD2	1.99	0.44
32:B4:22:VAL:HB	32:B4:24:ARG:NE	2.31	0.44
38:BM:35:ALA:HB3	38:BM:100:LYS:H	1.82	0.44
40:BH:105:ALA:C	40:BH:107:GLY:H	2.21	0.44
42:BN:12:ARG:HG3	42:BN:13:ASN:N	2.30	0.44
46:BU:53:GLN:N	46:BU:54:PRO:CD	2.80	0.44
47:BF:74:ALA:HB3	47:BF:78:ILE:HD13	1.99	0.44
49:BR:25:LEU:H	49:BR:94:THR:HG21	1.82	0.44
50:BT:49:LYS:HB2	50:BT:50:LEU:HD22	1.98	0.44
1:CA:205:A:H2'	1:CA:206:C:H6	1.81	0.44
1:CA:693:G:P	10:CK:126:ARG:HH12	2.38	0.44
1:CA:696:A:H2'	1:CA:697:U:H6	1.81	0.44
1:CA:1034:G:C2'	1:CA:1035:A:H5'	2.47	0.44
1:CA:1306:A:H61	1:CA:1331:G:H1'	1.82	0.44
1:CA:1320:C:H41	18:CS:36:ARG:HB3	1.82	0.44
1:CA:1503:A:C8	1:CA:1531:A:H1'	2.52	0.44
2:CC:148:ILE:O	2:CC:168:ARG:HG2	2.17	0.44
3:CD:10:LEU:HD12	3:CD:20:LEU:CD1	2.47	0.44
3:CD:106:PHE:CG	3:CD:144:ILE:HD11	2.52	0.44
7:CH:65:PHE:CG	7:CH:66:GLN:N	2.85	0.44
7:CH:113:ARG:C	7:CH:113:ARG:HE	2.21	0.44
10:CK:108:ASN:ND2	21:CU:6:ARG:HB2	2.32	0.44
13:CN:60:ARG:CG	13:CN:62:ARG:HE	2.29	0.44
19:CT:49:ALA:HA	19:CT:52:GLU:OE2	2.17	0.44
23:DB:485:C:HO2'	45:DS:60:HIS:HE2	1.65	0.44
23:DB:593:U:H2'	23:DB:594:U:H6	1.80	0.44
23:DB:850:U:H2'	23:DB:851:C:H6	1.82	0.44
23:DB:951:C:O2'	23:DB:952:G:H5'	2.17	0.44
23:DB:1083:U:H1'	23:DB:1086:A:H61	1.81	0.44
23:DB:1190:G:O2'	23:DB:1191:G:H5'	2.17	0.44
23:DB:1507:C:H2'	23:DB:1508:A:H4'	1.99	0.44
23:DB:1599:U:H2'	23:DB:1600:C:H6	1.78	0.44
23:DB:1713:A:H4'	23:DB:1714:U:OP2	2.17	0.44
23:DB:1722:A:N6	23:DB:1738:G:H1'	2.32	0.44
23:DB:2232:C:O2'	23:DB:2233:U:H5'	2.17	0.44
23:DB:2330:G:H21	52:DW:38:ARG:HA	1.80	0.44
23:DB:2545:G:O2'	23:DB:2546:U:H5'	2.17	0.44
23:DB:2798:U:H4'	23:DB:2800:A:N1	2.32	0.44
23:DB:2899:A:H2'	23:DB:2900:A:H8	1.82	0.44
25:DC:80:LEU:HD22	25:DC:109:LEU:HD12	1.98	0.44
25:DC:146:LYS:HG2	25:DC:147:PRO:HD2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:149:LYS:HD3	25:DC:152:GLN:HE22	1.82	0.44
27:DK:71:ARG:O	27:DK:72:PRO:C	2.55	0.44
27:DK:85:VAL:HG21	27:DK:115:ILE:HD11	2.00	0.44
29:DE:4:VAL:C	29:DE:6:LYS:H	2.20	0.44
35:DV:14:LYS:CE	35:DV:18:ARG:HH21	2.31	0.44
38:DM:38:ARG:CA	38:DM:98:PRO:HD3	2.47	0.44
39:DX:49:ASP:O	39:DX:50:VAL:C	2.54	0.44
42:DN:45:ARG:O	42:DN:49:GLU:HG3	2.17	0.44
44:DQ:59:LEU:O	44:DQ:62:ALA:HB3	2.17	0.44
44:DQ:83:LYS:HA	44:DQ:83:LYS:HZ2	1.82	0.44
45:DS:25:ARG:HE	45:DS:74:ILE:HG23	1.82	0.44
48:DG:112:VAL:HG13	48:DG:150:TYR:CE2	2.52	0.44
49:DR:26:ASP:O	49:DR:27:ILE:HD13	2.17	0.44
52:DW:59:PHE:O	52:DW:60:ALA:CB	2.65	0.44
53:D6:45:TYR:CE2	53:D6:75:ALA:HB2	2.52	0.44
53:D6:65:THR:HG22	53:D6:66:LEU:N	2.31	0.44
1:AA:125:U:H2'	1:AA:126:G:C8	2.52	0.44
1:AA:154:U:H2'	1:AA:155:A:H8	1.80	0.44
1:AA:458:U:H2'	1:AA:459:A:H8	1.82	0.44
1:AA:483:C:H2'	1:AA:484:G:N7	2.32	0.44
1:AA:861:G:H2'	1:AA:862:C:H6	1.82	0.44
1:AA:878:A:H1'	7:AH:3:GLN:OE1	2.17	0.44
2:AC:76:ILE:HA	2:AC:83:VAL:CG2	2.29	0.44
3:AD:78:ALA:O	3:AD:85:THR:HA	2.18	0.44
14:AO:71:LYS:HB2	14:AO:78:TYR:CG	2.52	0.44
20:AB:119:GLN:C	20:AB:125:PHE:HB3	2.37	0.44
21:AU:33:ARG:CZ	21:AU:34:ARG:HG2	2.47	0.44
23:BB:125:A:H3'	23:BB:126:A:C5'	2.47	0.44
23:BB:151:C:O2'	23:BB:152:A:H5'	2.18	0.44
23:BB:270:A:OP1	23:BB:271:G:H5'	2.17	0.44
23:BB:626:A:OP1	23:BB:654:A:N6	2.49	0.44
23:BB:672:C:O2'	23:BB:673:C:H5'	2.16	0.44
23:BB:828:U:H4'	23:BB:831:G:H1	1.80	0.44
23:BB:975:A:H1'	23:BB:990:A:C2	2.53	0.44
23:BB:1109:C:H3'	23:BB:1110:G:C8	2.52	0.44
23:BB:1203:U:C4'	37:BL:3:LEU:HD12	2.44	0.44
23:BB:1258:U:H2'	23:BB:1259:G:H8	1.81	0.44
23:BB:1444:G:H2'	23:BB:1445:G:H8	1.82	0.44
23:BB:1476:U:HO2'	23:BB:1477:A:H8	1.64	0.44
23:BB:1528:A:H2'	23:BB:1529:G:O4'	2.17	0.44
23:BB:1993:U:H4'	26:BD:133:THR:HG22	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2030:A:H4'	23:BB:2031:A:H5'	2.00	0.44
23:BB:2135:A:H3'	23:BB:2136:G:C8	2.49	0.44
23:BB:2149:U:O2'	23:BB:2150:C:H5'	2.17	0.44
23:BB:2217:G:O2'	23:BB:2218:G:H5'	2.16	0.44
23:BB:2467:C:O2'	23:BB:2468:A:H5'	2.17	0.44
23:BB:2636:C:O5'	26:BD:81:GLU:HB2	2.17	0.44
23:BB:2812:G:H2'	23:BB:2813:A:O4'	2.17	0.44
24:BI:12:VAL:HG23	24:BI:41:PHE:CE2	2.53	0.44
25:BC:43:ASN:N	25:BC:47:ARG:O	2.50	0.44
25:BC:141:HIS:HB2	25:BC:192:GLY:O	2.17	0.44
26:BD:107:VAL:CG1	26:BD:108:ASP:N	2.80	0.44
26:BD:108:ASP:OD2	26:BD:206:ALA:HA	2.17	0.44
33:B1:26:LYS:HB2	33:B1:52:LYS:HD2	1.99	0.44
43:BO:93:ASP:C	43:BO:95:SER:H	2.20	0.44
46:BU:85:ARG:CD	46:BU:86:PHE:H	2.20	0.44
47:BF:14:LYS:O	47:BF:18:GLU:HB2	2.17	0.44
48:BG:46:ASP:N	48:BG:46:ASP:OD2	2.50	0.44
48:BG:90:GLY:HA2	48:BG:159:LYS:HE2	1.98	0.44
52:BW:59:PHE:HE2	52:BW:61:LYS:HA	1.81	0.44
53:B6:30:THR:CB	53:B6:183:ILE:HG12	2.47	0.44
53:B6:39:LEU:O	53:B6:53:ASN:ND2	2.50	0.44
53:B6:123:GLU:O	53:B6:124:GLU:C	2.54	0.44
1:CA:552:U:H4'	11:CL:82:ARG:HG2	1.99	0.44
1:CA:1469:C:H2'	1:CA:1470:U:O4'	2.16	0.44
1:CA:1473:G:H2'	1:CA:1474:U:C6	2.52	0.44
4:CE:144:GLU:O	4:CE:144:GLU:HG2	2.16	0.44
8:CI:10:ARG:HB3	8:CI:15:ALA:HA	1.99	0.44
9:CJ:22:THR:O	9:CJ:26:VAL:HG23	2.17	0.44
12:CM:87:GLY:HA2	12:CM:90:HIS:HD2	1.82	0.44
15:CP:61:VAL:CA	15:CP:65:ALA:HB3	2.47	0.44
16:CQ:61:ARG:HH11	16:CQ:61:ARG:HG2	1.82	0.44
17:CR:63:TYR:N	17:CR:63:TYR:HD2	2.15	0.44
20:CB:15:PHE:HD1	20:CB:16:GLY:N	2.16	0.44
23:DB:98:G:H22	46:DU:6:ARG:HH12	1.64	0.44
23:DB:280:U:H2'	23:DB:281:C:C5	2.52	0.44
23:DB:753:A:H2'	23:DB:754:U:H6	1.81	0.44
23:DB:819:A:OP2	23:DB:1187:G:N2	2.47	0.44
23:DB:1039:A:H2'	23:DB:1040:A:H8	1.81	0.44
23:DB:1099:G:O2'	23:DB:1100:C:H5'	2.18	0.44
23:DB:1159:U:O2'	23:DB:1160:G:H5'	2.17	0.44
23:DB:1241:A:H2'	23:DB:1242:U:C5'	2.44	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1252:G:H1	44:DQ:36:GLN:CD	2.21	0.44
23:DB:1484:U:H2'	23:DB:1485:U:H6	1.82	0.44
23:DB:1661:G:O2'	23:DB:1662:U:H5'	2.17	0.44
23:DB:1820:U:H4'	23:DB:1821:A:OP2	2.18	0.44
23:DB:1863:G:H2'	23:DB:1864:U:O4'	2.17	0.44
23:DB:2065:C:H2'	23:DB:2066:C:C6	2.52	0.44
23:DB:2188:U:H3'	23:DB:2189:U:H6	1.83	0.44
23:DB:2286:G:C8	23:DB:2286:G:H5'	2.52	0.44
23:DB:2360:G:OP1	34:D3:50:SER:HB3	2.17	0.44
23:DB:2808:G:O2'	23:DB:2809:A:H8	2.01	0.44
23:DB:2852:G:H2'	23:DB:2853:C:H6	1.80	0.44
25:DC:90:ILE:HD11	25:DC:102:TYR:HB3	1.99	0.44
26:DD:116:LYS:HA	26:DD:116:LYS:HD3	1.87	0.44
27:DK:25:LEU:HD12	27:DK:39:ILE:HA	1.99	0.44
29:DE:1:MET:HB2	29:DE:16:GLU:HA	1.99	0.44
29:DE:109:LEU:HD12	29:DE:112:LEU:HD12	1.98	0.44
30:DY:16:LEU:HD22	30:DY:16:LEU:N	2.16	0.44
33:D1:4:ILE:HB	33:D1:27:ARG:HG3	1.98	0.44
37:DL:92:LEU:HD22	37:DL:124:GLY:HA3	1.97	0.44
38:DM:26:VAL:HG22	38:DM:133:LYS:HA	1.99	0.44
44:DQ:109:VAL:CG1	44:DQ:113:LYS:HE3	2.47	0.44
45:DS:36:LEU:HB3	45:DS:48:LYS:HB2	1.99	0.44
46:DU:41:VAL:N	46:DU:60:LYS:O	2.50	0.44
47:DF:45:ASP:O	47:DF:47:LYS:HD3	2.17	0.44
48:DG:83:THR:C	48:DG:84:LYS:HD3	2.37	0.44
48:DG:118:ALA:C	48:DG:120:ILE:H	2.19	0.44
51:DZ:39:TRP:HA	51:DZ:46:PHE:HD2	1.82	0.44
53:D6:31:GLY:HA2	53:D6:106:LEU:HD22	2.00	0.44
1:AA:63:C:H2'	1:AA:64:G:H5'	2.00	0.44
1:AA:137:U:H2'	1:AA:138:G:H8	1.82	0.44
1:AA:237:G:O2'	1:AA:238:A:H5'	2.18	0.44
1:AA:825:A:H2'	1:AA:826:C:H6	1.81	0.44
1:AA:1121:U:H2'	1:AA:1122:U:O4'	2.17	0.44
10:AK:125:LYS:O	21:AU:33:ARG:CZ	2.65	0.44
13:AN:26:LEU:HD12	13:AN:44:VAL:CG1	2.48	0.44
20:AB:68:PHE:CE1	20:AB:88:GLN:HB3	2.51	0.44
20:AB:126:ASP:O	20:AB:127:LYS:HD2	2.17	0.44
22:BA:42:C:O2'	47:BF:91:ARG:NH1	2.51	0.44
23:BB:31:C:C2'	23:BB:32:C:H5'	2.47	0.44
23:BB:55:G:H2'	23:BB:56:A:H8	1.82	0.44
23:BB:142:A:O2'	50:BT:3:ARG:NH1	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:285:G:O2'	23:BB:286:U:H5'	2.17	0.44
23:BB:532:A:N3	23:BB:532:A:C2'	2.80	0.44
23:BB:729:G:C5	25:BC:206:LYS:HB2	2.52	0.44
23:BB:741:U:H2'	23:BB:742:A:H8	1.82	0.44
23:BB:1081:U:C5'	24:BI:126:ARG:HD2	2.47	0.44
23:BB:1210:G:N3	23:BB:1212:G:N2	2.65	0.44
23:BB:1439:A:N3	23:BB:1553:A:C6	2.86	0.44
23:BB:1795:C:O2'	23:BB:1796:U:H5'	2.18	0.44
23:BB:1885:A:H2'	23:BB:1886:U:O4'	2.18	0.44
23:BB:2210:U:N3	23:BB:2212:A:N7	2.65	0.44
23:BB:2370:G:H2'	23:BB:2371:G:O4'	2.17	0.44
23:BB:2795:C:H2'	23:BB:2796:U:C1'	2.47	0.44
23:BB:2803:G:O2'	23:BB:2804:U:H5'	2.17	0.44
23:BB:2856:A:H2'	23:BB:2857:G:H8	1.83	0.44
25:BC:28:PRO:O	25:BC:30:ALA:N	2.50	0.44
25:BC:245:THR:OG1	25:BC:249:VAL:HG23	2.17	0.44
26:BD:55:LYS:H	26:BD:76:GLY:H	1.65	0.44
26:BD:83:ARG:HH21	26:BD:83:ARG:HG3	1.83	0.44
27:BK:47:ILE:HG23	27:BK:48:PRO:N	2.31	0.44
28:BP:62:LYS:O	28:BP:63:ILE:HB	2.18	0.44
30:BY:7:THR:HA	30:BY:34:THR:HA	1.98	0.44
33:B1:35:LEU:N	33:B1:35:LEU:HD23	2.32	0.44
33:B1:39:ASP:O	33:B1:43:ARG:N	2.51	0.44
35:BV:80:HIS:HD2	35:BV:83:LYS:H	1.66	0.44
38:BM:31:PHE:HB3	38:BM:130:PHE:CZ	2.52	0.44
38:BM:66:ARG:HB2	38:BM:101:VAL:O	2.17	0.44
41:BJ:12:LYS:H	41:BJ:12:LYS:HG2	1.68	0.44
44:BQ:40:LYS:HA	44:BQ:43:GLN:OE1	2.17	0.44
44:BQ:55:GLN:O	44:BQ:59:LEU:HB2	2.17	0.44
45:BS:71:VAL:HG22	45:BS:71:VAL:O	2.17	0.44
50:BT:69:ARG:HA	50:BT:69:ARG:NE	2.31	0.44
1:CA:36:C:O2'	1:CA:37:U:H5'	2.17	0.44
1:CA:239:U:H6	1:CA:239:U:C5'	2.30	0.44
1:CA:392:C:H2'	1:CA:393:A:H8	1.82	0.44
1:CA:512:U:H2'	1:CA:513:C:C6	2.52	0.44
1:CA:958:A:N6	18:CS:53:GLY:HA3	2.32	0.44
1:CA:1347:G:H22	1:CA:1373:G:H2'	1.79	0.44
2:CC:54:ILE:HG12	2:CC:54:ILE:O	2.17	0.44
5:CF:97:THR:O	5:CF:98:GLU:CD	2.56	0.44
6:CG:121:ASN:N	6:CG:121:ASN:ND2	2.64	0.44
8:CI:27:ILE:HD13	8:CI:34:LEU:HD22	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CJ:56:HIS:H	13:CN:80:ARG:HH22	1.66	0.44
11:CL:33:CYS:O	11:CL:75:GLU:O	2.35	0.44
20:CB:147:LEU:O	20:CB:151:LYS:N	2.48	0.44
23:DB:550:C:OP1	41:DJ:2:LYS:HE3	2.17	0.44
23:DB:1277:G:H2'	23:DB:1278:C:O4'	2.17	0.44
23:DB:1510:G:O2'	23:DB:1511:G:H5'	2.18	0.44
23:DB:1870:C:OP2	23:DB:1870:C:H4'	2.16	0.44
23:DB:2032:G:N2	26:DD:150:GLN:HB3	2.32	0.44
23:DB:2144:G:N2	23:DB:2146:C:O4'	2.49	0.44
23:DB:2183:A:H2'	23:DB:2184:A:C8	2.52	0.44
23:DB:2472:G:H3'	23:DB:2475:C:N4	2.32	0.44
23:DB:2519:U:C6	23:DB:2542:A:N6	2.86	0.44
23:DB:2834:G:O6	23:DB:2879:A:H2'	2.18	0.44
25:DC:70:LYS:HD2	25:DC:101:ARG:NH2	2.32	0.44
25:DC:199:HIS:C	25:DC:201:LEU:H	2.20	0.44
26:DD:117:GLY:O	26:DD:164:GLN:HA	2.18	0.44
26:DD:118:PHE:O	26:DD:119:ALA:HB3	2.17	0.44
27:DK:113:MET:HE1	27:DK:116:ILE:HD11	1.97	0.44
37:DL:103:ILE:H	37:DL:103:ILE:CD1	2.26	0.44
40:DH:3:VAL:HB	40:DH:37:VAL:O	2.16	0.44
46:DU:73:ASN:HB3	46:DU:95:PHE:CD2	2.52	0.44
48:DG:37:ASN:ND2	48:DG:40:VAL:HB	2.26	0.44
48:DG:60:GLY:O	48:DG:62:ALA:N	2.50	0.44
52:DW:23:LYS:O	52:DW:24:ARG:C	2.56	0.44
1:AA:208:U:H2'	1:AA:210:C:N3	2.33	0.44
1:AA:787:A:C2	1:AA:796:C:N3	2.86	0.44
1:AA:811:C:H4'	1:AA:900:A:N6	2.32	0.44
1:AA:1155:A:O2'	1:AA:1156:G:H5'	2.18	0.44
1:AA:1405:G:H21	1:AA:1518:A:H1'	1.82	0.44
5:AF:64:VAL:CG1	5:AF:65:GLU:N	2.80	0.44
6:AG:71:THR:O	6:AG:89:GLU:HA	2.17	0.44
9:AJ:22:THR:O	9:AJ:26:VAL:HG23	2.17	0.44
11:AL:64:SER:HA	11:AL:94:TYR:O	2.17	0.44
11:AL:119:LYS:H	11:AL:119:LYS:HG2	1.51	0.44
12:AM:53:ASP:HA	12:AM:56:ARG:NH2	2.31	0.44
13:AN:30:ILE:H	13:AN:30:ILE:HD12	1.83	0.44
13:AN:50:LEU:HG	13:AN:51:PRO:CD	2.48	0.44
13:AN:52:ARG:C	13:AN:54:SER:H	2.21	0.44
23:BB:220:G:N1	23:BB:427:U:H2'	2.29	0.44
23:BB:394:C:C2'	23:BB:395:U:H5'	2.48	0.44
23:BB:494:G:O2'	23:BB:495:G:H5'	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:532:A:N1	23:BB:2020:A:H1'	2.32	0.44
23:BB:584:C:P	44:BQ:5:ARG:HD3	2.57	0.44
23:BB:588:U:OP2	37:BL:17:LYS:HE2	2.16	0.44
23:BB:589:U:H2'	23:BB:590:A:C8	2.53	0.44
23:BB:1064:C:H2'	23:BB:1065:U:O4'	2.18	0.44
23:BB:1454:C:C1'	42:BN:60:VAL:HG13	2.48	0.44
23:BB:1802:A:H2'	23:BB:1803:A:C8	2.52	0.44
23:BB:2186:G:H2'	23:BB:2187:U:O4'	2.18	0.44
23:BB:2215:C:H2'	23:BB:2216:G:C8	2.53	0.44
23:BB:2240:U:O2'	23:BB:2241:A:H5'	2.17	0.44
23:BB:2432:A:O2'	23:BB:2433:A:H5'	2.17	0.44
23:BB:2650:U:H2'	23:BB:2651:C:C6	2.52	0.44
23:BB:2719:G:H4'	23:BB:2846:G:O3'	2.18	0.44
23:BB:2783:U:H2'	23:BB:2784:U:C6	2.52	0.44
23:BB:2838:G:H2'	23:BB:2839:G:H8	1.82	0.44
26:BD:25:THR:HG21	26:BD:193:VAL:HG21	2.00	0.44
26:BD:113:SER:HB3	26:BD:167:ASN:CA	2.47	0.44
32:B4:11:CYS:N	32:B4:14:CYS:SG	2.91	0.44
39:BX:39:GLN:CB	39:BX:42:LEU:HD22	2.48	0.44
41:BJ:28:LEU:HD23	41:BJ:29:ALA:H	1.83	0.44
46:BU:20:LYS:HB2	46:BU:20:LYS:NZ	2.32	0.44
47:BF:174:PHE:HB3	47:BF:176:PHE:CD1	2.53	0.44
48:BG:43:LYS:O	48:BG:50:THR:N	2.51	0.44
52:BW:49:ASN:O	52:BW:50:VAL:HG13	2.18	0.44
53:B6:34:ASN:O	53:B6:66:LEU:HD21	2.16	0.44
53:B6:174:GLN:CG	53:B6:178:LYS:HE2	2.47	0.44
1:CA:154:U:H2'	1:CA:155:A:H8	1.80	0.44
1:CA:201:G:O2'	1:CA:202:G:H5'	2.18	0.44
1:CA:411:A:H62	1:CA:413:G:H21	1.66	0.44
1:CA:899:C:H2'	1:CA:900:A:O4'	2.17	0.44
1:CA:903:G:H2'	1:CA:904:U:C6	2.52	0.44
1:CA:1250:A:O3'	8:CI:68:GLY:HA2	2.17	0.44
1:CA:1342:C:O2'	8:CI:125:GLN:CB	2.66	0.44
2:CC:141:MET:HE2	2:CC:141:MET:HA	1.98	0.44
3:CD:102:TYR:HE1	3:CD:109:THR:HA	1.82	0.44
6:CG:14:ASP:H	6:CG:19:SER:H	1.66	0.44
11:CL:41:PRO:HB3	11:CL:49:ARG:NH1	2.33	0.44
12:CM:14:ALA:HB2	12:CM:42:VAL:HG23	1.99	0.44
12:CM:89:ARG:HD3	12:CM:95:PRO:O	2.18	0.44
13:CN:47:LEU:O	13:CN:49:THR:N	2.50	0.44
19:CT:24:ARG:HD3	19:CT:28:ARG:NH2	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CT:67:HIS:CE1	19:CT:68:LYS:HE3	2.53	0.44
19:CT:79:THR:HG22	19:CT:83:ASN:HD21	1.83	0.44
21:CU:36:PHE:CD2	21:CU:39:LYS:HD2	2.51	0.44
23:DB:275:C:H2'	23:DB:276:U:O4'	2.16	0.44
23:DB:291:G:H2'	23:DB:292:U:H6	1.81	0.44
23:DB:322:A:C2	23:DB:340:A:C6	3.04	0.44
23:DB:332:A:O2'	23:DB:334:C:OP2	2.35	0.44
23:DB:392:U:O2'	23:DB:393:C:H5'	2.18	0.44
23:DB:484:C:H2'	23:DB:485:C:H6	1.82	0.44
23:DB:696:G:O2'	23:DB:697:G:H5'	2.17	0.44
23:DB:973:A:OP1	23:DB:973:A:H8	2.01	0.44
23:DB:1000:A:H2'	23:DB:1001:A:H8	1.83	0.44
23:DB:1310:G:H1'	23:DB:1611:C:H5'	1.99	0.44
23:DB:1423:G:H2'	23:DB:1424:G:C8	2.53	0.44
23:DB:1445:G:H2'	23:DB:1446:C:H6	1.83	0.44
23:DB:1633:G:O2'	23:DB:1634:A:H5"	2.18	0.44
23:DB:2194:U:H2'	23:DB:2195:U:H6	1.82	0.44
23:DB:2407:A:H2'	23:DB:2408:U:C6	2.51	0.44
23:DB:2455:G:O2'	23:DB:2456:C:H5'	2.17	0.44
23:DB:2636:C:O2'	23:DB:2637:U:H5'	2.18	0.44
23:DB:2805:C:H2'	23:DB:2806:C:C6	2.52	0.44
25:DC:76:VAL:O	25:DC:93:VAL:O	2.36	0.44
25:DC:92:LEU:HD12	25:DC:101:ARG:O	2.17	0.44
25:DC:120:ASP:CG	25:DC:121:ALA:H	2.21	0.44
25:DC:204:LEU:HB3	25:DC:209:ALA:CB	2.47	0.44
26:DD:4:LEU:HD21	26:DD:100:LEU:CB	2.47	0.44
26:DD:83:ARG:HH21	26:DD:83:ARG:HG3	1.82	0.44
27:DK:99:ILE:HB	27:DK:118:LEU:HD22	1.99	0.44
28:DP:26:GLU:HG3	28:DP:43:GLU:HG2	1.99	0.44
29:DE:146:VAL:HA	29:DE:185:LYS:O	2.17	0.44
32:D4:3:VAL:HG23	32:D4:4:ARG:H	1.83	0.44
32:D4:11:CYS:HB3	32:D4:33:HIS:CE1	2.52	0.44
35:DV:44:HIS:O	35:DV:45:ASP:C	2.55	0.44
38:DM:26:VAL:HB	38:DM:104:GLU:OE2	2.17	0.44
39:DX:21:LEU:HD21	39:DX:50:VAL:HG11	1.98	0.44
41:DJ:57:LEU:HD11	41:DJ:129:GLU:H	1.83	0.44
41:DJ:75:TYR:CD1	41:DJ:86:GLN:HB3	2.53	0.44
42:DN:61:ALA:C	42:DN:63:ARG:N	2.70	0.44
44:DQ:40:LYS:HA	44:DQ:43:GLN:OE1	2.17	0.44
47:DF:27:VAL:O	47:DF:29:ARG:HD2	2.16	0.44
47:DF:31:GLU:O	47:DF:31:GLU:HG3	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:42:G:H2'	1:AA:43:C:C6	2.53	0.44
1:AA:79:G:H8	1:AA:79:G:OP2	2.01	0.44
1:AA:85:U:H4'	1:AA:86:G:C4'	2.48	0.44
1:AA:179:A:O2'	1:AA:180:U:H5'	2.18	0.44
1:AA:729:A:H2'	1:AA:730:G:H8	1.82	0.44
1:AA:958:A:N1	18:AS:53:GLY:C	2.71	0.44
1:AA:1034:G:C2'	1:AA:1035:A:H5'	2.47	0.44
1:AA:1108:G:H2'	1:AA:1109:C:H5'	2.00	0.44
1:AA:1110:A:H3'	57:AA:1896:HOH:O	2.16	0.44
1:AA:1250:A:O3'	8:AI:68:GLY:HA2	2.17	0.44
1:AA:1347:G:H22	1:AA:1373:G:H2'	1.80	0.44
1:AA:1499:A:H2'	1:AA:1500:A:H8	1.83	0.44
2:AC:133:MET:CE	2:AC:165:GLU:HG2	2.48	0.44
6:AG:55:LYS:H	6:AG:55:LYS:HG2	1.53	0.44
7:AH:20:ASN:HA	7:AH:64:TYR:OH	2.17	0.44
9:AJ:53:ILE:HG13	13:AN:84:ARG:CZ	2.47	0.44
10:AK:60:PHE:O	10:AK:63:GLN:HB3	2.18	0.44
10:AK:72:ALA:O	10:AK:75:GLU:HG2	2.18	0.44
12:AM:90:HIS:CE1	12:AM:96:VAL:HG21	2.53	0.44
17:AR:27:THR:O	17:AR:30:ASN:HB2	2.16	0.44
18:AS:33:TRP:CE3	18:AS:33:TRP:N	2.86	0.44
19:AT:3:ILE:H	19:AT:3:ILE:HG13	1.31	0.44
20:AB:68:PHE:N	20:AB:68:PHE:CD1	2.85	0.44
22:BA:75:G:H1	22:BA:102:G:N2	2.15	0.44
23:BB:305:C:H2'	23:BB:306:U:C6	2.52	0.44
23:BB:547:A:H2'	23:BB:548:G:H5'	1.99	0.44
23:BB:767:U:O2'	23:BB:768:G:H5'	2.18	0.44
23:BB:974:G:OP2	49:BR:78:ARG:HD3	2.18	0.44
23:BB:1047:G:O2'	23:BB:1110:G:N2	2.44	0.44
23:BB:1080:A:H2'	23:BB:1081:U:C6	2.52	0.44
23:BB:1295:C:H2'	23:BB:1296:G:H8	1.80	0.44
23:BB:1322:A:OP1	45:BS:11:ARG:HD2	2.16	0.44
23:BB:1416:G:O2'	23:BB:1417:C:H6	2.00	0.44
23:BB:1921:G:H2'	23:BB:1922:G:O4'	2.17	0.44
23:BB:1958:C:H2'	23:BB:1959:G:H8	1.82	0.44
23:BB:2211:A:OP2	23:BB:2211:A:H4'	2.18	0.44
23:BB:2249:U:H4'	23:BB:2275:C:C5	2.52	0.44
23:BB:2309:A:H2'	23:BB:2310:C:C6	2.53	0.44
23:BB:2461:A:H1'	23:BB:2492:U:C2	2.52	0.44
25:BC:221:GLY:C	25:BC:223:ALA:N	2.70	0.44
26:BD:18:ASP:O	28:BP:30:TRP:HZ3	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BK:54:LYS:HD2	27:BK:54:LYS:N	2.29	0.44
27:BK:99:ILE:HB	27:BK:118:LEU:HD22	1.99	0.44
29:BE:47:LYS:CA	29:BE:51:GLU:HG3	2.47	0.44
29:BE:122:GLU:OE1	29:BE:122:GLU:N	2.51	0.44
33:B1:32:LYS:NZ	33:B1:52:LYS:HA	2.33	0.44
41:BJ:44:TYR:CD2	44:BQ:59:LEU:HD11	2.53	0.44
42:BN:63:ARG:HA	42:BN:80:PHE:CE2	2.53	0.44
44:BQ:63:ARG:HH12	44:BQ:96:ASP:CA	2.30	0.44
45:BS:28:LYS:O	45:BS:71:VAL:HG12	2.17	0.44
46:BU:5:ARG:HG2	46:BU:5:ARG:HH21	1.82	0.44
47:BF:66:ILE:HA	47:BF:85:GLY:O	2.18	0.44
48:BG:30:GLY:H	48:BG:78:VAL:HA	1.82	0.44
49:BR:37:GLU:O	49:BR:39:LEU:HD23	2.17	0.44
50:BT:21:SER:HB3	50:BT:31:VAL:HG22	1.98	0.44
52:BW:23:LYS:O	52:BW:24:ARG:C	2.56	0.44
53:B6:67:VAL:HA	53:B6:99:LEU:O	2.18	0.44
53:B6:109:GLU:O	53:B6:112:LYS:HB2	2.17	0.44
1:CA:36:C:OP1	11:CL:119:LYS:HD2	2.18	0.44
1:CA:575:G:HO2'	1:CA:821:G:H5'	1.82	0.44
1:CA:1315:U:H5	18:CS:5:LYS:HE2	1.82	0.44
1:CA:1448:C:H2'	1:CA:1449:C:C6	2.52	0.44
2:CC:39:ARG:CZ	2:CC:56:ILE:HD12	2.48	0.44
2:CC:76:ILE:HA	2:CC:83:VAL:CG2	2.31	0.44
3:CD:197:HIS:HA	3:CD:200:VAL:HG13	2.00	0.44
6:CG:4:ARG:HB2	6:CG:4:ARG:HH11	1.82	0.44
8:CI:14:SER:HB2	8:CI:69:GLY:HA3	1.99	0.44
9:CJ:53:ILE:HG13	13:CN:84:ARG:NE	2.33	0.44
11:CL:48:LEU:O	11:CL:49:ARG:C	2.56	0.44
13:CN:60:ARG:HG3	13:CN:62:ARG:CG	2.47	0.44
14:CO:88:ARG:NH1	14:CO:88:ARG:HB2	2.33	0.44
17:CR:66:LEU:O	17:CR:67:LEU:HG	2.17	0.44
21:CU:13:VAL:O	21:CU:13:VAL:HG13	2.17	0.44
22:DA:42:C:O2'	47:DF:91:ARG:NH1	2.50	0.44
23:DB:19:A:OP1	44:DQ:22:GLY:N	2.50	0.44
23:DB:89:A:O2'	23:DB:90:U:H5'	2.16	0.44
23:DB:283:G:H2'	23:DB:284:U:C1'	2.48	0.44
23:DB:283:G:H5"	23:DB:284:U:OP2	2.18	0.44
23:DB:524:G:O2'	23:DB:525:U:H5'	2.17	0.44
23:DB:1173:U:H2'	23:DB:1174:U:O4'	2.17	0.44
23:DB:1654:A:H61	23:DB:2049:G:P	2.41	0.44
23:DB:1657:U:C2'	23:DB:1658:C:H5'	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1869:G:H2'	23:DB:1871:A:N7	2.32	0.44
23:DB:1914:C:C2'	23:DB:1915:U:H5'	2.48	0.44
23:DB:2359:C:H2'	23:DB:2360:G:C8	2.53	0.44
23:DB:2383:G:H2'	23:DB:2384:U:C6	2.52	0.44
23:DB:2518:A:H2'	23:DB:2518:A:N3	2.32	0.44
23:DB:2884:U:O2	31:D0:49:ARG:HG2	2.18	0.44
25:DC:69:ASN:O	25:DC:70:LYS:C	2.56	0.44
25:DC:221:GLY:C	25:DC:223:ALA:N	2.70	0.44
26:DD:107:VAL:CG1	26:DD:108:ASP:N	2.80	0.44
31:D0:5:ASN:O	31:D0:7:PRO:HD3	2.16	0.44
35:DV:42:LEU:HD23	35:DV:42:LEU:N	2.25	0.44
37:DL:75:ALA:HB3	37:DL:108:ALA:HB2	1.98	0.44
38:DM:60:GLN:H	38:DM:60:GLN:HG2	1.50	0.44
44:DQ:91:ARG:HE	44:DQ:94:LEU:CD2	2.31	0.44
47:DF:118:ALA:HA	47:DF:176:PHE:CE2	2.53	0.44
48:DG:84:LYS:HG3	48:DG:131:VAL:CB	2.48	0.44
50:DT:6:ARG:HB3	50:DT:6:ARG:CZ	2.46	0.44
1:AA:114:U:H2'	1:AA:115:G:C8	2.53	0.44
1:AA:121:U:OP1	1:AA:121:U:H3'	2.17	0.44
1:AA:185:U:H2'	1:AA:186:C:C6	2.53	0.44
1:AA:317:U:H2'	1:AA:318:G:C8	2.52	0.44
1:AA:373:A:H2'	1:AA:374:A:H8	1.82	0.44
1:AA:389:A:H2'	1:AA:389:A:N3	2.32	0.44
1:AA:708:C:H2'	1:AA:709:U:H6	1.83	0.44
3:AD:10:LEU:HD12	3:AD:20:LEU:CD1	2.48	0.44
4:AE:64:GLU:HG3	4:AE:65:LYS:N	2.32	0.44
7:AH:58:LEU:HD22	7:AH:60:LEU:HB2	2.00	0.44
8:AI:113:LYS:HA	8:AI:120:ALA:HB2	1.99	0.44
12:AM:89:ARG:HD3	12:AM:95:PRO:O	2.17	0.44
13:AN:26:LEU:HD23	13:AN:27:LYS:N	2.28	0.44
13:AN:50:LEU:CG	13:AN:51:PRO:HD3	2.48	0.44
19:AT:4:LYS:HE3	19:AT:6:ALA:H	1.82	0.44
20:AB:62:ARG:HD2	20:AB:62:ARG:H	1.82	0.44
21:AU:3:ILE:HD11	21:AU:22:CYS:SG	2.57	0.44
22:BA:30:C:H2'	22:BA:31:C:H5'	2.00	0.44
23:BB:526:A:N6	23:BB:2626:C:C4'	2.80	0.44
23:BB:596:U:H2'	23:BB:597:G:C8	2.53	0.44
23:BB:757:G:H2'	23:BB:758:C:H5'	2.00	0.44
23:BB:928:A:H2'	23:BB:929:U:O4'	2.18	0.44
23:BB:1518:C:H2'	23:BB:1519:G:C8	2.49	0.44
23:BB:1661:G:O2'	23:BB:1662:U:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1668:A:H1'	23:BB:1670:C:C5	2.52	0.44
23:BB:1830:C:H2'	23:BB:1831:G:H8	1.80	0.44
23:BB:2408:U:O2'	23:BB:2409:G:H5'	2.17	0.44
23:BB:2485:G:H5"	38:BM:125:PRO:HG3	1.99	0.44
25:BC:132:ARG:HA	25:BC:166:ARG:NH1	2.32	0.44
25:BC:212:TRP:C	25:BC:212:TRP:CD1	2.91	0.44
26:BD:49:GLN:NE2	26:BD:79:LEU:HD12	2.33	0.44
27:BK:85:VAL:HG21	27:BK:115:ILE:HD11	2.00	0.44
28:BP:25:VAL:HA	28:BP:85:VAL:C	2.37	0.44
29:BE:58:LYS:HB2	29:BE:60:TRP:CD1	2.52	0.44
34:B3:22:LYS:CA	34:B3:48:MET:HA	2.44	0.44
39:BX:49:ASP:O	39:BX:50:VAL:C	2.56	0.44
40:BH:7:ASP:CG	40:BH:8:LYS:N	2.71	0.44
40:BH:128:HIS:CE1	40:BH:130:VAL:HG22	2.52	0.44
44:BQ:83:LYS:HA	44:BQ:83:LYS:HZ2	1.83	0.44
46:BU:24:VAL:HG22	46:BU:35:VAL:HG22	1.99	0.44
47:BF:33:ILE:HG22	47:BF:34:THR:N	2.32	0.44
48:BG:140:ILE:HD12	48:BG:141:GLY:N	2.33	0.44
49:BR:39:LEU:CB	49:BR:53:PHE:HA	2.47	0.44
50:BT:29:THR:CB	50:BT:86:THR:HA	2.48	0.44
50:BT:74:ILE:HG13	50:BT:75:GLY:N	2.31	0.44
52:BW:30:VAL:HG13	52:BW:30:VAL:O	2.18	0.44
53:B6:80:GLU:CD	53:B6:92:PRO:HB2	2.38	0.44
53:B6:80:GLU:HB2	53:B6:92:PRO:HB2	1.99	0.44
1:CA:151:A:C2'	1:CA:152:A:H5'	2.47	0.44
1:CA:233:C:O2'	1:CA:234:C:H5'	2.17	0.44
1:CA:255:G:H2'	1:CA:256:U:C6	2.53	0.44
1:CA:375:U:OP1	15:CP:70:ARG:NH1	2.51	0.44
1:CA:386:C:H2'	1:CA:387:U:H5'	1.99	0.44
1:CA:663:A:O3'	17:CR:52:ARG:NH2	2.48	0.44
1:CA:787:A:C2	1:CA:796:C:N3	2.86	0.44
1:CA:818:G:H3'	1:CA:819:A:H5"	1.99	0.44
1:CA:909:A:H2'	1:CA:910:C:O4'	2.18	0.44
1:CA:921:U:H2'	1:CA:922:G:O4'	2.18	0.44
1:CA:1096:C:O2'	1:CA:1097:C:H5'	2.18	0.44
2:CC:126:ARG:HA	2:CC:126:ARG:NH1	2.32	0.44
3:CD:41:GLY:O	3:CD:43:ARG:N	2.51	0.44
5:CF:54:LEU:C	5:CF:56:LYS:H	2.21	0.44
5:CF:79:ARG:NH2	5:CF:87:SER:HB3	2.32	0.44
5:CF:100:SER:HA	17:CR:23:LYS:HD3	2.00	0.44
13:CN:50:LEU:CG	13:CN:51:PRO:HD3	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:150:ILE:HG12	20:CB:150:ILE:O	2.17	0.44
22:DA:6:G:H2'	22:DA:7:G:C8	2.52	0.44
23:DB:544:C:O2'	23:DB:545:U:O5'	2.36	0.44
23:DB:1444:G:H2'	23:DB:1445:G:H8	1.83	0.44
23:DB:1528:A:H2'	23:DB:1529:G:O4'	2.17	0.44
23:DB:1858:A:C2	23:DB:1859:U:H1'	2.53	0.44
23:DB:2100:G:H2'	23:DB:2101:A:C8	2.53	0.44
23:DB:2300:C:H2'	23:DB:2301:C:C6	2.53	0.44
23:DB:2636:C:H2'	23:DB:2637:U:C6	2.52	0.44
23:DB:2678:C:H2'	23:DB:2679:A:H8	1.82	0.44
23:DB:2893:A:H4'	23:DB:2894:G:H5'	2.00	0.44
24:DI:2:LYS:HD2	24:DI:2:LYS:N	2.32	0.44
25:DC:61:TYR:HA	25:DC:85:ASN:OD1	2.18	0.44
25:DC:212:TRP:C	25:DC:212:TRP:CD1	2.90	0.44
26:DD:148:GLN:HG3	26:DD:152:PRO:CB	2.44	0.44
31:D0:33:SER:OG	31:D0:35:GLU:HG2	2.17	0.44
33:D1:36:LYS:HG2	33:D1:47:ILE:HA	1.99	0.44
37:DL:123:ARG:HD2	37:DL:124:GLY:N	2.32	0.44
37:DL:143:GLU:CG	37:DL:144:GLU:H	1.99	0.44
38:DM:69:PRO:C	38:DM:71:LYS:H	2.21	0.44
40:DH:27:ARG:CZ	51:DZ:60:ASP:HA	2.46	0.44
41:DJ:20:ALA:HA	41:DJ:23:LYS:HG3	1.99	0.44
42:DN:34:ILE:HG22	42:DN:35:LYS:N	2.32	0.44
42:DN:55:ALA:HB1	42:DN:80:PHE:H	1.82	0.44
42:DN:108:ALA:O	42:DN:110:MET:HE3	2.16	0.44
44:DQ:17:LEU:O	44:DQ:17:LEU:HG	2.18	0.44
45:DS:95:ARG:NE	45:DS:95:ARG:HA	2.33	0.44
46:DU:10:VAL:HA	46:DU:70:ALA:O	2.17	0.44
46:DU:53:GLN:N	46:DU:54:PRO:CD	2.80	0.44
48:DG:34:ARG:H	48:DG:34:ARG:CD	2.31	0.44
48:DG:34:ARG:NH1	48:DG:34:ARG:HG2	2.32	0.44
48:DG:94:ARG:NH2	48:DG:105:SER:N	2.66	0.44
50:DT:74:ILE:HG13	50:DT:75:GLY:N	2.32	0.44
1:AA:16:A:N1	1:AA:919:A:H2	2.16	0.44
1:AA:602:A:H2'	1:AA:603:U:C6	2.53	0.44
1:AA:635:A:H2'	1:AA:636:U:H6	1.83	0.44
1:AA:801:U:H2'	1:AA:802:A:H8	1.82	0.44
1:AA:1074:G:O4'	20:AB:102:ASN:HB2	2.17	0.44
1:AA:1147:C:H2'	1:AA:1148:U:H6	1.83	0.44
1:AA:1436:U:H2'	1:AA:1437:A:H8	1.82	0.44
1:AA:1488:G:O2'	1:AA:1489:G:H5'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:78:LYS:O	2:AC:78:LYS:HG3	2.18	0.44
7:AH:65:PHE:CG	7:AH:66:GLN:N	2.85	0.44
9:AJ:10:LEU:HD11	9:AJ:25:ILE:HD12	2.00	0.44
10:AK:70:ALA:C	10:AK:72:ALA:N	2.71	0.44
17:AR:34:GLU:HB2	21:AU:18:PHE:CZ	2.38	0.44
20:AB:19:THR:O	20:AB:20:ARG:HD2	2.17	0.44
20:AB:69:VAL:HG12	20:AB:168:GLU:HG3	2.00	0.44
21:AU:40:PRO:HG2	21:AU:41:THR:H	1.82	0.44
23:BB:265:A:O2'	23:BB:266:G:C4'	2.65	0.44
23:BB:335:C:O2'	23:BB:336:C:H5'	2.17	0.44
23:BB:400:G:N7	51:BZ:57:ARG:NH1	2.65	0.44
23:BB:704:G:O2'	23:BB:727:A:N6	2.51	0.44
23:BB:811:U:H2'	37:BL:21:ARG:HA	2.00	0.44
23:BB:991:C:H5'	23:BB:991:C:H6	1.83	0.44
23:BB:1072:C:N3	23:BB:1092:C:N4	2.64	0.44
23:BB:1568:G:H4'	25:BC:58:LYS:HB3	1.99	0.44
23:BB:1782:U:H2'	23:BB:1783:A:H5'	1.98	0.44
23:BB:2294:G:O2'	23:BB:2295:C:H5'	2.18	0.44
23:BB:2303:G:H1'	47:BF:122:ASP:OD2	2.17	0.44
23:BB:2365:G:N7	34:B3:38:LYS:NZ	2.61	0.44
23:BB:2650:U:H2'	23:BB:2651:C:H6	1.81	0.44
57:BB:3453:HOH:O	29:BE:98:LYS:HD3	2.17	0.44
24:BI:32:VAL:HG22	24:BI:60:VAL:CG2	2.48	0.44
24:BI:63:ASP:O	24:BI:65:SER:N	2.50	0.44
25:BC:4:LYS:HB3	25:BC:5:CYS:H	1.57	0.44
25:BC:204:LEU:HB3	25:BC:209:ALA:CB	2.48	0.44
27:BK:43:ILE:HG22	27:BK:54:LYS:HA	2.00	0.44
29:BE:4:VAL:C	29:BE:6:LYS:H	2.21	0.44
29:BE:11:ALA:O	29:BE:12:LEU:HD22	2.18	0.44
31:B0:43:THR:HG23	31:B0:47:TYR:C	2.38	0.44
35:BV:46:LYS:HD2	35:BV:46:LYS:N	2.33	0.44
37:BL:96:LYS:HE3	37:BL:102:GLY:O	2.17	0.44
38:BM:38:ARG:CA	38:BM:98:PRO:HD3	2.47	0.44
38:BM:42:THR:HA	38:BM:93:VAL:HA	2.00	0.44
38:BM:100:LYS:HD3	38:BM:101:VAL:H	1.83	0.44
40:BH:58:LEU:HG	40:BH:62:LEU:HD23	1.99	0.44
41:BJ:6:ALA:CB	41:BJ:45:THR:HG21	2.44	0.44
41:BJ:21:THR:O	41:BJ:62:VAL:HA	2.18	0.44
43:BO:75:GLY:O	43:BO:78:VAL:HG23	2.18	0.44
45:BS:13:SER:CB	45:BS:16:LYS:HE3	2.47	0.44
48:BG:37:ASN:ND2	48:BG:40:VAL:HB	2.26	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:104:LEU:HD22	48:BG:106:LEU:CD2	2.47	0.44
48:BG:167:VAL:O	48:BG:168:VAL:HB	2.17	0.44
50:BT:6:ARG:HB3	50:BT:6:ARG:CZ	2.47	0.44
51:BZ:68:LEU:HD22	51:BZ:78:TYR:CE1	2.52	0.44
1:CA:195:A:H1'	1:CA:222:C:O2'	2.18	0.44
1:CA:402:G:O2'	1:CA:403:C:H5'	2.17	0.44
1:CA:846:G:H2'	1:CA:847:G:C8	2.53	0.44
1:CA:902:G:O2'	1:CA:903:G:H5'	2.18	0.44
1:CA:981:U:OP1	13:CN:5:MET:HE1	2.17	0.44
1:CA:1207:G:H2'	1:CA:1208:C:C6	2.53	0.44
2:CC:155:ARG:H	2:CC:162:ALA:HA	1.82	0.44
3:CD:122:ILE:O	3:CD:128:VAL:HG23	2.18	0.44
3:CD:197:HIS:CG	3:CD:198:LEU:N	2.86	0.44
4:CE:79:THR:OG1	4:CE:97:PRO:HA	2.18	0.44
5:CF:92:THR:HG22	5:CF:94:HIS:N	2.10	0.44
5:CF:99:ALA:O	5:CF:100:SER:CB	2.65	0.44
7:CH:17:GLN:HG2	7:CH:62:LEU:CD2	2.47	0.44
8:CI:55:ASP:O	8:CI:59:LYS:HE3	2.17	0.44
9:CJ:15:HIS:HA	9:CJ:18:ILE:HG22	2.00	0.44
10:CK:70:ALA:C	10:CK:72:ALA:N	2.70	0.44
10:CK:125:LYS:O	21:CU:33:ARG:CZ	2.66	0.44
14:CO:15:PHE:CD1	14:CO:15:PHE:N	2.85	0.44
20:CB:44:LYS:O	20:CB:47:PRO:HD2	2.17	0.44
20:CB:53:LEU:HA	20:CB:56:LEU:HD13	2.00	0.44
20:CB:71:THR:HG23	20:CB:92:ASN:O	2.18	0.44
23:DB:39:G:O2'	23:DB:40:U:H5'	2.18	0.44
23:DB:526:A:H62	23:DB:2626:C:H4'	1.82	0.44
23:DB:612:G:H2'	23:DB:614:A:H5"	1.99	0.44
23:DB:858:G:N2	23:DB:2269:G:OP2	2.50	0.44
23:DB:1023:U:H2'	23:DB:1024:G:H5'	1.99	0.44
23:DB:1054:A:H2'	23:DB:1055:G:C8	2.53	0.44
23:DB:1093:G:O2'	23:DB:1094:U:H5'	2.18	0.44
23:DB:1098:A:C8	24:DI:3:LYS:CB	3.00	0.44
23:DB:1452:G:C4	23:DB:2702:G:C6	3.06	0.44
23:DB:1904:G:N3	23:DB:1928:A:H2	2.16	0.44
23:DB:2623:G:H4'	23:DB:2825:G:C8	2.52	0.44
24:DI:21:PRO:HB2	24:DI:22:PRO:CD	2.43	0.44
24:DI:53:PRO:CG	24:DI:77:VAL:HG11	2.47	0.44
25:DC:106:PRO:HB3	25:DC:141:HIS:CE1	2.52	0.44
25:DC:202:ARG:HH11	25:DC:213:ARG:HH21	1.66	0.44
26:DD:24:VAL:HG23	26:DD:189:VAL:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:122:VAL:N	26:DD:127:PHE:HB2	2.33	0.44
27:DK:61:VAL:HG13	27:DK:87:LEU:CD2	2.47	0.44
28:DP:49:ILE:HG12	28:DP:50:ARG:N	2.33	0.44
28:DP:62:LYS:O	28:DP:63:ILE:HB	2.17	0.44
29:DE:136:GLN:HE22	29:DE:139:LYS:HD3	1.81	0.44
35:DV:63:ILE:HG22	35:DV:65:VAL:HG13	2.00	0.44
38:DM:37:GLY:O	38:DM:126:ILE:HG21	2.18	0.44
41:DJ:55:ILE:HG22	41:DJ:123:LYS:HB2	2.00	0.44
43:DO:18:LEU:HD11	43:DO:91:SER:HB3	1.99	0.44
45:DS:59:GLU:HA	45:DS:59:GLU:OE1	2.17	0.44
47:DF:127:TYR:CB	47:DF:155:ILE:HD13	2.48	0.44
47:DF:137:PHE:N	47:DF:137:PHE:CD2	2.82	0.44
48:DG:6:ALA:HB3	48:DG:68:ARG:CD	2.48	0.44
52:DW:29:SER:O	52:DW:30:VAL:HB	2.18	0.44
1:AA:675:A:H2'	1:AA:676:A:H8	1.83	0.44
1:AA:714:G:N3	1:AA:777:A:H1'	2.33	0.44
1:AA:764:C:N4	1:AA:812:G:N1	2.66	0.44
1:AA:1073:U:H2'	1:AA:1074:G:H8	1.83	0.44
1:AA:1099:G:H2'	1:AA:1100:C:C6	2.52	0.44
1:AA:1128:C:H4'	1:AA:1148:U:O2	2.17	0.44
1:AA:1171:A:H2'	1:AA:1172:C:C6	2.53	0.44
2:AC:119:ILE:O	2:AC:123:LEU:HG	2.18	0.44
3:AD:145:ARG:HB3	3:AD:147:LYS:HD2	2.00	0.44
5:AF:36:ILE:HG12	5:AF:64:VAL:HG22	2.00	0.44
5:AF:81:ASN:O	5:AF:82:ASP:C	2.56	0.44
8:AI:78:ILE:HG22	8:AI:82:ILE:HD11	2.00	0.44
11:AL:54:VAL:CG2	11:AL:79:ILE:HD11	2.47	0.44
12:AM:12:LYS:O	12:AM:43:LYS:HG3	2.18	0.44
16:AQ:80:LYS:H	16:AQ:80:LYS:HE3	1.83	0.44
19:AT:49:ALA:HA	19:AT:52:GLU:CD	2.38	0.44
22:BA:6:G:H2'	22:BA:7:G:H8	1.82	0.44
22:BA:49:C:OP1	43:BO:102:ARG:N	2.48	0.44
23:BB:99:U:H5	46:BU:6:ARG:HH22	1.63	0.44
23:BB:360:U:O2'	23:BB:361:G:H5'	2.18	0.44
23:BB:590:A:H2'	23:BB:591:U:H6	1.75	0.44
23:BB:851:C:H2'	23:BB:852:U:H6	1.82	0.44
23:BB:1222:U:O2'	23:BB:1223:G:H5'	2.18	0.44
23:BB:1318:U:H2'	23:BB:1319:C:C6	2.53	0.44
23:BB:1419:A:H2'	23:BB:1421:G:C8	2.52	0.44
23:BB:1752:C:H2'	23:BB:1753:G:C8	2.53	0.44
23:BB:2230:G:H4'	51:BZ:31:PRO:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2244:U:H2'	23:BB:2245:U:O4'	2.18	0.44
23:BB:2526:G:O2'	32:B4:1:MET:HB2	2.18	0.44
23:BB:2815:C:H2'	23:BB:2816:G:H8	1.83	0.44
25:BC:244:VAL:HB	25:BC:249:VAL:N	2.31	0.44
28:BP:110:LYS:HD2	28:BP:110:LYS:H	1.83	0.44
29:BE:149:ILE:HD11	29:BE:172:ALA:HA	1.99	0.44
30:BY:37:ARG:HG2	30:BY:43:ILE:HD11	2.00	0.44
32:B4:13:ASN:OD1	32:B4:29:ALA:HB2	2.17	0.44
35:BV:32:GLY:O	35:BV:93:ARG:HD2	2.16	0.44
36:B2:31:LEU:HD22	36:B2:42:LEU:CD1	2.48	0.44
38:BM:47:GLU:CD	38:BM:50:ARG:HH11	2.20	0.44
38:BM:108:VAL:HG22	38:BM:109:PRO:HD2	1.99	0.44
40:BH:27:ARG:HG2	40:BH:27:ARG:HH21	1.81	0.44
40:BH:80:ILE:HD11	40:BH:102:ALA:CB	2.47	0.44
48:BG:34:ARG:H	48:BG:34:ARG:CD	2.29	0.44
49:BR:55:ASP:OD2	49:BR:55:ASP:N	2.50	0.44
49:BR:59:ILE:HA	49:BR:101:ILE:H	1.83	0.44
49:BR:91:GLN:HG3	49:BR:92:TRP:N	2.33	0.44
50:BT:58:VAL:O	50:BT:58:VAL:HG13	2.18	0.44
52:BW:79:ILE:HG22	52:BW:80:SER:N	2.33	0.44
53:B6:88:LEU:HD23	53:B6:90:LEU:CD1	2.47	0.44
1:CA:136:C:O2'	1:CA:137:U:H5'	2.18	0.44
1:CA:286:C:H2'	1:CA:287:U:C6	2.52	0.44
1:CA:551:U:O2'	11:CL:82:ARG:HD2	2.18	0.44
1:CA:691:G:H1'	1:CA:696:A:N6	2.33	0.44
1:CA:1262:C:H2'	1:CA:1263:C:C6	2.53	0.44
1:CA:1347:G:H8	8:CI:108:ARG:HB3	1.80	0.44
1:CA:1437:A:H2'	1:CA:1438:G:H8	1.83	0.44
1:CA:1479:C:O2'	1:CA:1480:A:H5'	2.18	0.44
1:CA:1522:U:O2'	1:CA:1523:G:H5'	2.18	0.44
2:CC:166:TRP:O	2:CC:167:TYR:CB	2.65	0.44
4:CE:59:ILE:H	4:CE:59:ILE:HG13	1.64	0.44
7:CH:79:ARG:NH1	7:CH:82:LEU:HB3	2.32	0.44
8:CI:38:PHE:CZ	8:CI:74:GLN:HB3	2.34	0.44
8:CI:71:ILE:H	8:CI:71:ILE:CD1	2.30	0.44
12:CM:1:ALA:O	12:CM:3:ILE:HG13	2.17	0.44
12:CM:5:GLY:O	12:CM:6:ILE:HB	2.17	0.44
13:CN:80:ARG:HH11	13:CN:80:ARG:HG2	1.82	0.44
23:DB:139:U:O2'	50:DT:1:MET:HA	2.18	0.44
23:DB:155:A:H2'	23:DB:156:A:H8	1.79	0.44
23:DB:246:C:C2'	23:DB:247:G:H5'	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:372:G:HO2'	23:DB:373:U:P	2.40	0.44
23:DB:438:G:H2'	23:DB:439:A:H8	1.82	0.44
23:DB:453:A:N3	23:DB:457:A:O2'	2.51	0.44
23:DB:518:G:H2'	23:DB:519:U:C6	2.53	0.44
23:DB:564:C:O2'	23:DB:565:C:H5'	2.18	0.44
23:DB:878:A:N3	23:DB:899:A:N7	2.66	0.44
23:DB:994:C:H3'	44:DQ:53:LYS:HZ2	1.82	0.44
23:DB:1395:A:H4'	23:DB:1397:U:H5	1.80	0.44
23:DB:1823:G:O2'	23:DB:1824:G:H5'	2.18	0.44
23:DB:1830:C:H2'	23:DB:1831:G:C8	2.52	0.44
23:DB:1831:G:O2'	23:DB:1832:C:H5'	2.18	0.44
23:DB:2081:U:H4'	51:DZ:25:THR:HG21	1.99	0.44
23:DB:2839:G:O2'	23:DB:2840:C:H5'	2.18	0.44
25:DC:12:ARG:HA	25:DC:15:VAL:CG2	2.48	0.44
25:DC:76:VAL:HG12	25:DC:114:GLN:CG	2.36	0.44
27:DK:99:ILE:HD13	27:DK:118:LEU:CD2	2.47	0.44
33:D1:16:THR:HG21	33:D1:39:ASP:OD2	2.18	0.44
38:DM:93:VAL:HG22	38:DM:94:ALA:H	1.82	0.44
39:DX:27:ASN:HD22	39:DX:27:ASN:HA	1.61	0.44
40:DH:135:HIS:HB3	40:DH:138:VAL:CG2	2.48	0.44
43:DO:106:LEU:HG	43:DO:107:ALA:N	2.33	0.44
43:DO:109:ALA:O	43:DO:113:ALA:N	2.49	0.44
44:DQ:27:ARG:HH11	44:DQ:27:ARG:HG3	1.83	0.44
44:DQ:59:LEU:C	44:DQ:59:LEU:HD13	2.37	0.44
46:DU:48:VAL:O	46:DU:48:VAL:HG13	2.18	0.44
47:DF:64:PRO:HB3	47:DF:88:VAL:HG21	1.99	0.44
47:DF:74:ALA:HB1	47:DF:76:PHE:CD2	2.53	0.44
48:DG:34:ARG:HH11	48:DG:34:ARG:HG2	1.82	0.44
49:DR:39:LEU:CB	49:DR:53:PHE:HA	2.48	0.44
52:DW:16:GLU:CD	52:DW:16:GLU:N	2.71	0.44
52:DW:49:ASN:CB	52:DW:81:ILE:HG12	2.43	0.44
53:D6:39:LEU:HG	53:D6:40:HIS:H	1.81	0.44
53:D6:79:ILE:HG22	53:D6:80:GLU:N	2.32	0.44
53:D6:155:LYS:HA	53:D6:158:GLU:OE2	2.18	0.44
1:AA:412:A:H4'	1:AA:413:G:OP1	2.18	0.44
1:AA:551:U:O2'	11:AL:82:ARG:HD2	2.17	0.44
1:AA:598:U:H2'	1:AA:599:C:H6	1.81	0.44
1:AA:835:U:O2'	1:AA:836:G:H5'	2.17	0.44
1:AA:845:A:H3'	1:AA:846:G:H8	1.83	0.44
2:AC:137:VAL:HA	2:AC:148:ILE:CD1	2.40	0.44
3:AD:77:GLU:CA	3:AD:80:ARG:HG2	2.41	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:138:PRO:C	3:AD:140:ASP:H	2.22	0.44
6:AG:121:ASN:N	6:AG:121:ASN:ND2	2.65	0.44
9:AJ:52:LEU:HA	9:AJ:62:ARG:H	1.83	0.44
11:AL:48:LEU:O	11:AL:49:ARG:C	2.56	0.44
13:AN:63:CYS:HB2	13:AN:79:SER:CB	2.48	0.44
15:AP:6:LEU:HD23	15:AP:17:TYR:CB	2.48	0.44
16:AQ:74:LEU:HD22	16:AQ:75:VAL:H	1.80	0.44
22:BA:20:G:H2'	22:BA:21:G:C8	2.52	0.44
23:BB:668:A:C2	23:BB:670:A:C6	3.06	0.44
23:BB:717:C:C3'	23:BB:718:A:H5"	2.46	0.44
23:BB:1082:U:C2	23:BB:1086:A:N1	2.86	0.44
23:BB:1141:U:H4'	23:BB:1142:A:C1'	2.47	0.44
23:BB:1330:C:O2'	23:BB:1331:G:H5'	2.17	0.44
23:BB:1809:A:H2'	23:BB:1810:A:C8	2.53	0.44
23:BB:1938:A:O2'	23:BB:1939:U:H5"	2.16	0.44
23:BB:2549:G:O2'	23:BB:2550:G:H5'	2.17	0.44
23:BB:2562:U:H2'	23:BB:2563:U:H5'	1.99	0.44
23:BB:2840:C:O2'	23:BB:2841:C:H5'	2.18	0.44
24:BI:29:GLN:HA	24:BI:29:GLN:NE2	2.32	0.44
24:BI:38:CYS:O	24:BI:42:ASN:ND2	2.51	0.44
25:BC:42:ARG:HG3	25:BC:46:GLY:O	2.18	0.44
25:BC:43:ASN:ND2	25:BC:44:ASN:N	2.66	0.44
25:BC:76:VAL:HG23	25:BC:76:VAL:O	2.17	0.44
25:BC:80:LEU:HD22	25:BC:109:LEU:HD12	1.99	0.44
26:BD:56:LYS:HD3	26:BD:58:ASN:HB3	1.99	0.44
28:BP:112:ARG:HB2	28:BP:112:ARG:NH1	2.27	0.44
29:BE:2:GLU:OE1	29:BE:13:THR:N	2.51	0.44
29:BE:160:ALA:O	29:BE:161:ALA:HB3	2.18	0.44
38:BM:26:VAL:HG22	38:BM:133:LYS:HA	2.00	0.44
38:BM:69:PRO:C	38:BM:71:LYS:H	2.21	0.44
39:BX:42:LEU:O	39:BX:46:VAL:HG23	2.18	0.44
40:BH:104:THR:HA	40:BH:109:GLU:OE2	2.18	0.44
41:BJ:55:ILE:CG2	41:BJ:123:LYS:HB2	2.48	0.44
42:BN:90:ARG:HB3	42:BN:94:TYR:CE1	2.53	0.44
44:BQ:86:SER:CB	49:BR:51:VAL:HA	2.48	0.44
46:BU:86:PHE:HB2	46:BU:92:VAL:HB	2.00	0.44
47:BF:147:ARG:CZ	47:BF:147:ARG:HB3	2.48	0.44
48:BG:10:VAL:CG1	48:BG:14:VAL:HG21	2.48	0.44
49:BR:91:GLN:HG3	49:BR:92:TRP:H	1.81	0.44
53:B6:14:MET:CE	53:B6:165:THR:HG23	2.47	0.44
1:CA:92:U:O2'	1:CA:93:U:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:455:G:H2'	1:CA:456:A:H8	1.82	0.44
1:CA:586:C:O2'	7:CH:3:GLN:NE2	2.51	0.44
1:CA:702:A:C8	23:DB:1848:A:H1'	2.53	0.44
1:CA:720:C:C5'	17:CR:40:PRO:HA	2.48	0.44
1:CA:996:A:H2'	1:CA:997:U:C6	2.52	0.44
1:CA:1158:C:O2'	20:CB:131:LYS:HB2	2.18	0.44
1:CA:1171:A:H2'	1:CA:1172:C:C6	2.53	0.44
1:CA:1212:U:C5'	1:CA:1213:A:OP1	2.66	0.44
4:CE:82:HIS:CE1	4:CE:146:MET:HA	2.53	0.44
9:CJ:52:LEU:HA	9:CJ:62:ARG:H	1.82	0.44
10:CK:109:ILE:HG22	21:CU:16:ARG:HH12	1.83	0.44
12:CM:28:ARG:CZ	12:CM:62:PHE:HB2	2.48	0.44
12:CM:64:VAL:HA	12:CM:68:LEU:CD1	2.48	0.44
13:CN:97:LYS:NZ	13:CN:97:LYS:HB3	2.31	0.44
17:CR:36:GLY:HA3	17:CR:70:THR:HA	1.99	0.44
20:CB:8:MET:HB2	20:CB:9:LEU:H	1.59	0.44
20:CB:86:CYS:HB2	20:CB:221:ARG:HH11	1.83	0.44
23:DB:31:C:C2'	23:DB:32:C:H5'	2.47	0.44
23:DB:361:G:H2'	23:DB:362:A:H8	1.82	0.44
23:DB:635:C:H2'	23:DB:636:G:H8	1.83	0.44
23:DB:753:A:O2'	23:DB:754:U:H5'	2.17	0.44
23:DB:948:C:H2'	23:DB:949:G:H8	1.83	0.44
23:DB:1064:C:H2'	23:DB:1065:U:O4'	2.18	0.44
23:DB:1082:U:H2'	23:DB:1083:U:O4'	2.18	0.44
23:DB:1095:A:N6	24:DI:29:GLN:HE22	2.16	0.44
23:DB:1237:A:HO2'	23:DB:1238:G:C4'	2.30	0.44
23:DB:1248:G:O2'	44:DQ:2:ARG:HA	2.18	0.44
23:DB:1411:U:H2'	23:DB:1412:U:H6	1.82	0.44
23:DB:1639:C:C2'	23:DB:1640:A:H5"	2.48	0.44
23:DB:1729:U:C5'	23:DB:1730:C:H4'	2.48	0.44
23:DB:1829:A:N6	23:DB:1977:A:N6	2.66	0.44
23:DB:1942:C:H4'	53:D6:133:ARG:HH12	1.83	0.44
23:DB:2095:A:H3'	23:DB:2096:C:H6	1.82	0.44
23:DB:2109:U:C4	23:DB:2181:U:C5	3.06	0.44
23:DB:2458:G:H1'	23:DB:2460:U:O4	2.18	0.44
23:DB:2751:G:H2'	23:DB:2751:G:N3	2.32	0.44
23:DB:2884:U:H4'	31:D0:49:ARG:NH2	2.33	0.44
25:DC:99:GLU:HG2	25:DC:100:ARG:N	2.33	0.44
26:DD:3:GLY:O	26:DD:4:LEU:HD13	2.17	0.44
27:DK:104:THR:OG1	27:DK:107:LEU:HD11	2.17	0.44
29:DE:134:LEU:HD23	29:DE:161:ALA:N	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DV:75:GLN:HB2	35:DV:90:ASP:O	2.17	0.44
38:DM:46:ILE:CG1	38:DM:47:GLU:N	2.81	0.44
39:DX:39:GLN:CB	39:DX:42:LEU:HD22	2.47	0.44
40:DH:32:PRO:O	40:DH:33:GLN:HB2	2.18	0.44
40:DH:80:ILE:HD12	40:DH:80:ILE:O	2.18	0.44
40:DH:104:THR:HA	40:DH:108:VAL:O	2.18	0.44
40:DH:110:VAL:HG22	40:DH:110:VAL:O	2.17	0.44
41:DJ:120:ARG:HE	41:DJ:120:ARG:HB3	1.50	0.44
44:DQ:87:VAL:HG12	44:DQ:88:GLU:N	2.33	0.44
48:DG:30:GLY:H	48:DG:78:VAL:HA	1.83	0.44
51:DZ:53:ALA:C	51:DZ:55:GLY:H	2.20	0.44
52:DW:23:LYS:HD2	52:DW:24:ARG:H	1.82	0.44
1:AA:14:U:O2	1:AA:17:U:H5	2.00	0.43
1:AA:564:C:H1'	16:AQ:32:ILE:O	2.18	0.43
1:AA:985:C:H2'	1:AA:986:U:C6	2.53	0.43
1:AA:1003:G:H21	1:AA:1005:A:C5'	2.31	0.43
1:AA:1102:A:H2'	1:AA:1103:C:C6	2.52	0.43
1:AA:1222:G:O2'	1:AA:1223:C:H5'	2.17	0.43
1:AA:1272:G:H2'	1:AA:1273:C:H6	1.83	0.43
1:AA:1342:C:O2'	8:AI:125:GLN:CB	2.66	0.43
3:AD:39:GLN:HG3	3:AD:40:HIS:N	2.33	0.43
8:AI:10:ARG:HB3	8:AI:15:ALA:HA	1.98	0.43
8:AI:48:ARG:O	8:AI:52:GLU:N	2.42	0.43
8:AI:112:ARG:O	8:AI:112:ARG:HG3	2.17	0.43
11:AL:36:VAL:O	11:AL:36:VAL:HG23	2.16	0.43
20:AB:103:TRP:O	20:AB:107:ARG:HG2	2.17	0.43
23:BB:241:A:O2'	34:B3:2:LYS:NZ	2.50	0.43
23:BB:428:A:O2'	23:BB:429:A:H5'	2.18	0.43
23:BB:1021:A:H2	23:BB:1122:G:H4'	1.83	0.43
23:BB:1081:U:H5'	24:BI:126:ARG:HD2	1.99	0.43
23:BB:1104:C:H2'	23:BB:1105:U:C6	2.48	0.43
23:BB:1262:A:H2'	23:BB:1263:U:O4'	2.17	0.43
23:BB:1347:A:H2'	23:BB:1348:C:O4'	2.18	0.43
23:BB:1461:C:H2'	23:BB:1462:C:C6	2.53	0.43
23:BB:1665:A:O2'	23:BB:1666:G:H5'	2.17	0.43
23:BB:1788:C:C2'	23:BB:1789:A:H5'	2.48	0.43
23:BB:2065:C:H2'	23:BB:2066:C:H6	1.83	0.43
23:BB:2221:G:O2'	23:BB:2222:C:H5'	2.17	0.43
23:BB:2230:G:H2'	23:BB:2231:U:H6	1.78	0.43
23:BB:2428:G:H5"	23:BB:2429:G:OP1	2.18	0.43
23:BB:2545:G:O2'	23:BB:2546:U:H5'	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2723:C:H5"	42:BN:1:MET:HE2	1.98	0.43
23:BB:2729:G:H2'	23:BB:2730:C:C6	2.53	0.43
26:BD:149:ASN:N	26:BD:152:PRO:HG2	2.33	0.43
27:BK:64:ARG:HG2	27:BK:79:PHE:CD2	2.53	0.43
27:BK:79:PHE:O	27:BK:81:GLY:N	2.51	0.43
27:BK:99:ILE:HD13	27:BK:118:LEU:CD2	2.46	0.43
29:BE:46:GLN:HB3	29:BE:86:ALA:CA	2.48	0.43
29:BE:109:LEU:HD12	29:BE:112:LEU:HD12	1.98	0.43
35:BV:44:HIS:O	35:BV:45:ASP:C	2.56	0.43
37:BL:92:LEU:HD22	37:BL:124:GLY:HA3	2.00	0.43
37:BL:102:GLY:O	37:BL:105:ILE:HG12	2.18	0.43
44:BQ:7:VAL:O	44:BQ:11:ALA:HB2	2.18	0.43
44:BQ:10:ARG:HB2	44:BQ:10:ARG:NH1	2.33	0.43
46:BU:48:VAL:H	46:BU:53:GLN:HB2	1.81	0.43
46:BU:73:ASN:HB3	46:BU:95:PHE:CD2	2.52	0.43
47:BF:115:GLY:HA2	47:BF:177:ARG:NH1	2.25	0.43
47:BF:165:GLY:O	47:BF:169:LEU:HD12	2.17	0.43
48:BG:167:VAL:HG21	48:BG:169:ARG:HH12	1.83	0.43
48:BG:168:VAL:HG12	48:BG:170:THR:HG23	1.99	0.43
49:BR:39:LEU:HB2	49:BR:49:ILE:HD11	1.99	0.43
51:BZ:59:ILE:HG23	51:BZ:67:VAL:HG21	2.00	0.43
53:B6:56:ALA:HB1	53:B6:68:VAL:HG12	2.00	0.43
53:B6:112:LYS:HB3	53:B6:116:ARG:HH22	1.77	0.43
1:CA:85:U:O2	1:CA:85:U:O4'	2.33	0.43
1:CA:508:U:H1'	1:CA:509:A:N7	2.33	0.43
1:CA:604:G:H2'	1:CA:605:U:O4'	2.18	0.43
1:CA:613:C:H2'	1:CA:614:C:C6	2.53	0.43
1:CA:679:C:O2'	1:CA:680:C:H5'	2.18	0.43
1:CA:1097:C:H2'	1:CA:1098:C:C6	2.53	0.43
1:CA:1160:G:O2'	1:CA:1161:C:H5'	2.17	0.43
1:CA:1461:G:O2'	1:CA:1462:C:H5'	2.17	0.43
2:CC:113:LYS:HB2	2:CC:184:ASN:OD1	2.18	0.43
3:CD:39:GLN:HG3	3:CD:40:HIS:N	2.32	0.43
3:CD:98:ASP:OD2	3:CD:99:ASN:N	2.49	0.43
3:CD:167:PRO:HB2	3:CD:170:LEU:HD21	2.00	0.43
4:CE:57:ALA:O	4:CE:61:LYS:HG2	2.18	0.43
4:CE:64:GLU:HG3	4:CE:65:LYS:N	2.31	0.43
6:CG:145:GLU:C	6:CG:147:ASN:N	2.72	0.43
7:CH:54:THR:HG23	7:CH:55:LYS:N	2.33	0.43
8:CI:5:TYR:HD2	8:CI:88:GLU:CB	2.30	0.43
8:CI:9:GLY:HA3	8:CI:81:GLY:N	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CJ:36:VAL:HG12	9:CJ:38:GLY:H	1.83	0.43
11:CL:82:ARG:HG2	11:CL:82:ARG:HH11	1.83	0.43
13:CN:50:LEU:HG	13:CN:51:PRO:CD	2.48	0.43
20:CB:46:VAL:CG1	20:CB:47:PRO:HD3	2.36	0.43
21:CU:3:ILE:HG22	21:CU:19:LYS:NZ	2.33	0.43
22:DA:20:G:H2'	22:DA:21:G:C8	2.52	0.43
23:DB:131:A:H2'	23:DB:132:G:C8	2.53	0.43
23:DB:467:G:O2'	23:DB:468:G:H5'	2.18	0.43
23:DB:690:G:H2'	23:DB:691:C:O4'	2.17	0.43
23:DB:780:G:H21	23:DB:783:A:H62	1.64	0.43
23:DB:784:G:H5"	25:DC:225:ASN:OD1	2.18	0.43
23:DB:823:C:H2'	23:DB:824:U:H6	1.83	0.43
23:DB:1052:C:H2'	23:DB:1053:C:H6	1.83	0.43
23:DB:1098:A:H2'	24:DI:4:VAL:C	2.37	0.43
23:DB:1106:G:H2'	23:DB:1107:G:C8	2.53	0.43
23:DB:1400:U:H6	23:DB:1400:U:O5'	2.01	0.43
23:DB:1509:A:H4'	23:DB:1510:G:O4'	2.18	0.43
23:DB:1778:U:H2'	23:DB:1784:A:N6	2.31	0.43
23:DB:1818:U:C4	25:DC:152:GLN:HB3	2.53	0.43
23:DB:2145:C:O4'	23:DB:2145:C:O2	2.35	0.43
23:DB:2235:G:H2'	23:DB:2236:U:H6	1.81	0.43
23:DB:2309:A:H2'	23:DB:2310:C:H6	1.83	0.43
24:DI:41:PHE:CE2	24:DI:45:THR:HG21	2.53	0.43
25:DC:21:PRO:C	25:DC:23:LEU:H	2.22	0.43
26:DD:158:GLY:O	26:DD:160:LYS:N	2.51	0.43
26:DD:187:LEU:HD12	26:DD:188:LEU:N	2.33	0.43
28:DP:64:SER:O	28:DP:66:GLY:N	2.45	0.43
30:DY:16:LEU:HD23	30:DY:19:HIS:CD2	2.53	0.43
33:D1:31:GLU:CD	33:D1:31:GLU:H	2.21	0.43
37:DL:3:LEU:HA	37:DL:6:LEU:HD21	2.00	0.43
37:DL:93:ASN:ND2	37:DL:94:THR:N	2.65	0.43
37:DL:105:ILE:HG22	37:DL:106:GLU:N	2.33	0.43
38:DM:40:ARG:HB2	38:DM:93:VAL:HG22	1.99	0.43
38:DM:42:THR:HA	38:DM:93:VAL:HA	1.99	0.43
43:DO:56:LYS:O	43:DO:57:ALA:C	2.55	0.43
43:DO:75:GLY:O	43:DO:78:VAL:HG23	2.18	0.43
44:DQ:63:ARG:CZ	44:DQ:96:ASP:HA	2.47	0.43
48:DG:154:GLU:CG	48:DG:156:TYR:HB2	2.47	0.43
52:DW:37:VAL:HG22	52:DW:55:ASP:O	2.18	0.43
1:AA:37:U:H2'	1:AA:38:G:H8	1.83	0.43
1:AA:57:G:H2'	1:AA:58:C:H6	1.81	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:585:G:H2'	1:AA:586:C:O4'	2.19	0.43
1:AA:693:G:P	10:AK:126:ARG:HH12	2.41	0.43
1:AA:1003:G:N2	1:AA:1005:A:C5'	2.81	0.43
1:AA:1014:A:H2'	1:AA:1015:G:C8	2.53	0.43
1:AA:1114:C:H2'	1:AA:1115:U:C6	2.54	0.43
1:AA:1309:G:H2'	1:AA:1310:G:C8	2.54	0.43
2:AC:8:GLY:HA3	13:AN:88:MET:SD	2.58	0.43
3:AD:167:PRO:HB2	3:AD:170:LEU:HD21	2.00	0.43
4:AE:71:ILE:HD11	4:AE:144:GLU:HG3	2.00	0.43
6:AG:14:ASP:H	6:AG:19:SER:H	1.64	0.43
8:AI:5:TYR:HD2	8:AI:88:GLU:CB	2.31	0.43
10:AK:80:ASN:ND2	10:AK:80:ASN:N	2.67	0.43
12:AM:2:ARG:O	12:AM:4:ALA:N	2.51	0.43
15:AP:1:MET:HE3	15:AP:1:MET:CA	2.48	0.43
15:AP:20:VAL:CG2	15:AP:32:PHE:HB2	2.48	0.43
15:AP:52:LEU:CD2	15:AP:75:ILE:HA	2.48	0.43
20:AB:53:LEU:HA	20:AB:56:LEU:HD13	2.00	0.43
20:AB:151:LYS:HG3	20:AB:152:ASP:H	1.79	0.43
22:BA:23:G:H2'	22:BA:24:G:C8	2.54	0.43
22:BA:75:G:H2'	22:BA:76:G:C8	2.53	0.43
22:BA:79:G:O2'	22:BA:80:U:H5'	2.18	0.43
23:BB:550:C:O2	23:BB:550:C:H2'	2.18	0.43
23:BB:732:C:O2'	23:BB:733:G:H5'	2.18	0.43
23:BB:1063:G:O3'	24:BI:88:GLY:HA3	2.18	0.43
23:BB:1076:C:C4'	24:BI:94:LYS:HE3	2.39	0.43
23:BB:1197:G:H2'	23:BB:1198:U:H6	1.83	0.43
23:BB:1210:G:H1'	23:BB:1212:G:C2	2.53	0.43
23:BB:1332:G:N3	23:BB:1332:G:H5'	2.33	0.43
23:BB:1419:A:H2'	23:BB:1421:G:N7	2.32	0.43
23:BB:1430:G:H2'	23:BB:1431:A:C8	2.54	0.43
23:BB:1541:C:H2'	23:BB:1542:U:H6	1.83	0.43
23:BB:1613:G:O2'	36:B2:3:ARG:HD2	2.18	0.43
23:BB:1718:G:H2'	23:BB:1719:G:C8	2.51	0.43
23:BB:1870:C:H5'	23:BB:1871:A:N7	2.33	0.43
23:BB:1903:G:H2'	23:BB:1904:G:H8	1.83	0.43
23:BB:1904:G:O2'	23:BB:1905:C:H5'	2.19	0.43
23:BB:2365:G:O2'	52:BW:59:PHE:CE1	2.70	0.43
23:BB:2814:A:H2'	23:BB:2815:C:C6	2.53	0.43
24:BI:63:ASP:C	24:BI:65:SER:N	2.71	0.43
24:BI:103:ALA:O	24:BI:107:GLU:HG3	2.18	0.43
26:BD:117:GLY:O	26:BD:164:GLN:HA	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BP:27:VAL:O	28:BP:42:PHE:N	2.51	0.43
30:BY:8:GLN:CG	30:BY:31:ILE:HA	2.46	0.43
41:BJ:96:ARG:CZ	41:BJ:99:ARG:HD2	2.49	0.43
42:BN:34:ILE:HG22	42:BN:35:LYS:N	2.33	0.43
44:BQ:59:LEU:O	44:BQ:62:ALA:HB3	2.18	0.43
53:B6:84:ARG:O	53:B6:86:SER:N	2.51	0.43
1:CA:384:G:H2'	1:CA:385:C:H6	1.82	0.43
1:CA:728:A:O2'	1:CA:729:A:H5'	2.18	0.43
1:CA:830:G:H2'	1:CA:831:A:C8	2.53	0.43
1:CA:1057:G:H2'	1:CA:1058:G:O4'	2.18	0.43
1:CA:1117:A:H5"	8:CI:105:ARG:NH2	2.33	0.43
1:CA:1152:A:H2'	1:CA:1153:G:C8	2.53	0.43
1:CA:1237:C:H4'	1:CA:1334:G:N2	2.33	0.43
1:CA:1451:U:H5"	1:CA:1452:C:OP2	2.18	0.43
1:CA:1459:G:O2'	1:CA:1460:C:H5'	2.17	0.43
3:CD:29:THR:CG2	3:CD:30:LYS:HD3	2.48	0.43
9:CJ:41:PRO:HG2	9:CJ:42:LEU:H	1.83	0.43
12:CM:15:VAL:HG22	12:CM:33:LEU:CD1	2.48	0.43
14:CO:74:ASP:OD1	14:CO:77:ARG:HG3	2.18	0.43
19:CT:14:GLU:O	19:CT:17:ARG:HB3	2.18	0.43
23:DB:308:G:H2'	23:DB:309:A:O4'	2.19	0.43
23:DB:405:U:OP2	23:DB:405:U:H4'	2.18	0.43
23:DB:539:G:H2'	23:DB:540:C:C6	2.53	0.43
23:DB:584:C:H2'	23:DB:585:G:H8	1.83	0.43
23:DB:781:A:OP1	25:DC:216:ARG:NH2	2.51	0.43
23:DB:840:C:H2'	23:DB:841:G:H8	1.82	0.43
23:DB:1025:G:OP1	23:DB:1025:G:H8	2.01	0.43
23:DB:1508:A:H3'	23:DB:1509:A:C5	2.53	0.43
23:DB:2010:G:O2'	23:DB:2011:U:H5'	2.19	0.43
23:DB:2509:G:N2	23:DB:2510:C:H1'	2.33	0.43
23:DB:2888:C:H2'	23:DB:2889:C:C6	2.53	0.43
25:DC:14:HIS:O	25:DC:203:VAL:HG11	2.18	0.43
25:DC:132:ARG:HA	25:DC:166:ARG:HH11	1.83	0.43
28:DP:50:ARG:HB3	28:DP:57:ALA:N	2.32	0.43
29:DE:1:MET:HB3	29:DE:14:VAL:HG23	2.00	0.43
33:D1:32:LYS:HZ2	33:D1:52:LYS:HA	1.83	0.43
33:D1:35:LEU:HD23	33:D1:35:LEU:N	2.33	0.43
37:DL:42:SER:C	37:DL:44:GLY:N	2.72	0.43
40:DH:87:GLU:CD	40:DH:87:GLU:H	2.21	0.43
41:DJ:58:ASN:O	41:DJ:60:ASP:N	2.44	0.43
45:DS:28:LYS:HD2	45:DS:30:SER:H	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DG:15:ASP:CB	48:DG:26:LYS:H	2.19	0.43
50:DT:1:MET:H3	50:DT:1:MET:HG2	1.70	0.43
53:D6:143:LEU:HG	53:D6:147:LEU:HD11	1.99	0.43
1:AA:64:G:O3'	1:AA:65:A:H3'	2.18	0.43
1:AA:313:A:H2'	1:AA:314:C:H6	1.83	0.43
1:AA:490:C:H2'	1:AA:491:G:H8	1.83	0.43
1:AA:626:G:H2'	1:AA:627:G:C8	2.53	0.43
1:AA:830:G:H2'	1:AA:831:A:C8	2.53	0.43
1:AA:1084:G:H2'	1:AA:1085:U:C6	2.53	0.43
1:AA:1105:A:O2'	1:AA:1106:G:H5'	2.19	0.43
1:AA:1463:U:H2'	1:AA:1464:U:H6	1.82	0.43
2:AC:53:ARG:HB3	2:AC:68:HIS:CD2	2.53	0.43
6:AG:110:ARG:HB2	6:AG:118:ARG:HB3	2.01	0.43
8:AI:14:SER:HB2	8:AI:69:GLY:HA3	1.99	0.43
20:AB:20:ARG:HA	20:AB:38:HIS:HE1	1.83	0.43
20:AB:134:LEU:HA	20:AB:137:THR:OG1	2.17	0.43
20:AB:150:ILE:HG12	20:AB:150:ILE:O	2.18	0.43
23:BB:307:G:N1	23:BB:310:A:OP2	2.50	0.43
23:BB:596:U:H2'	23:BB:597:G:H8	1.83	0.43
23:BB:671:C:H2'	23:BB:672:C:C6	2.53	0.43
23:BB:1726:C:H2'	23:BB:1727:C:H6	1.82	0.43
23:BB:1731:G:O2'	23:BB:1732:C:H5"	2.18	0.43
23:BB:1799:G:H4'	23:BB:1800:C:O5'	2.18	0.43
23:BB:2277:G:OP1	38:BM:86:LYS:N	2.51	0.43
23:BB:2455:G:H2'	23:BB:2456:C:H6	1.81	0.43
23:BB:2513:A:H2'	23:BB:2514:U:C6	2.54	0.43
23:BB:2852:G:O2'	23:BB:2853:C:H5'	2.17	0.43
23:BB:2888:C:H2'	23:BB:2889:C:C6	2.53	0.43
24:BI:4:VAL:O	24:BI:4:VAL:HG13	2.18	0.43
29:BE:18:THR:HG22	29:BE:106:LYS:HE2	2.00	0.43
29:BE:18:THR:HG22	29:BE:106:LYS:HZ1	1.83	0.43
29:BE:130:LYS:C	29:BE:132:LYS:N	2.71	0.43
37:BL:42:SER:C	37:BL:44:GLY:N	2.71	0.43
37:BL:101:ILE:CG2	37:BL:105:ILE:HG13	2.48	0.43
40:BH:66:ASN:N	40:BH:66:ASN:ND2	2.61	0.43
45:BS:10:ALA:C	45:BS:12:SER:H	2.22	0.43
48:BG:29:ASN:ND2	48:BG:77:GLY:O	2.51	0.43
48:BG:94:ARG:HH21	48:BG:105:SER:H	1.67	0.43
48:BG:148:ARG:HB2	48:BG:161:VAL:O	2.18	0.43
1:CA:9:G:N7	1:CA:558:G:O2'	2.49	0.43
1:CA:238:A:C3'	1:CA:239:U:H5"	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:555:U:H2'	1:CA:556:C:H6	1.83	0.43
1:CA:585:G:O2'	1:CA:586:C:H5'	2.18	0.43
1:CA:667:G:H4'	14:CO:51:HIS:ND1	2.33	0.43
1:CA:772:U:O2'	1:CA:773:G:H5'	2.18	0.43
1:CA:1473:G:O2'	1:CA:1474:U:H5'	2.19	0.43
2:CC:58:ARG:HG2	2:CC:63:ILE:HG23	2.01	0.43
2:CC:109:GLU:OE2	2:CC:143:LEU:HG	2.19	0.43
3:CD:138:PRO:C	3:CD:140:ASP:H	2.21	0.43
4:CE:98:ALA:HB2	4:CE:123:LEU:HG	1.99	0.43
4:CE:103:GLY:O	4:CE:121:ASN:HA	2.18	0.43
6:CG:45:ALA:HB2	6:CG:116:ALA:O	2.18	0.43
8:CI:34:LEU:HD11	8:CI:47:VAL:HG21	2.00	0.43
8:CI:83:THR:HA	8:CI:86:LEU:HD22	1.99	0.43
9:CJ:6:ILE:O	9:CJ:75:ASP:HA	2.18	0.43
9:CJ:53:ILE:HG13	13:CN:84:ARG:CZ	2.49	0.43
14:CO:78:TYR:CE1	14:CO:82:ILE:HD11	2.53	0.43
20:CB:25:LYS:HD3	20:CB:193:ASP:OD2	2.18	0.43
22:DA:15:A:O2'	22:DA:16:G:H5'	2.19	0.43
22:DA:43:C:H4'	47:DF:91:ARG:NE	2.33	0.43
22:DA:66:A:N6	22:DA:107:G:H2'	2.28	0.43
23:DB:222:A:H61	23:DB:232:G:H1'	1.83	0.43
23:DB:309:A:N3	23:DB:329:G:O2'	2.46	0.43
23:DB:341:C:O2'	23:DB:342:A:H5'	2.17	0.43
23:DB:544:C:H4'	23:DB:545:U:OP1	2.18	0.43
23:DB:589:U:H2'	23:DB:590:A:C8	2.54	0.43
23:DB:671:C:H2'	23:DB:672:C:C6	2.53	0.43
23:DB:812:C:O2'	23:DB:813:U:H5'	2.18	0.43
23:DB:919:U:O5'	23:DB:919:U:H6	2.01	0.43
23:DB:996:A:H4'	44:DQ:91:ARG:NE	2.33	0.43
23:DB:1092:C:C2'	23:DB:1093:G:H5'	2.48	0.43
23:DB:1098:A:C3'	24:DI:3:LYS:C	2.87	0.43
23:DB:1108:U:H2'	23:DB:1109:C:H5'	2.00	0.43
23:DB:1124:G:O2'	32:D4:37:GLN:HG2	2.18	0.43
23:DB:1506:U:H2'	23:DB:1507:C:C6	2.53	0.43
23:DB:1790:C:H2'	23:DB:1791:A:N7	2.32	0.43
23:DB:1843:C:H2'	23:DB:1844:C:H6	1.83	0.43
23:DB:2691:C:H2'	23:DB:2692:G:H8	1.83	0.43
23:DB:2694:G:O2'	23:DB:2695:U:H5'	2.18	0.43
24:DI:72:THR:OG1	24:DI:73:PRO:HD2	2.18	0.43
26:DD:32:ASN:HB3	26:DD:50:VAL:HG21	2.00	0.43
28:DP:29:VAL:HB	28:DP:79:VAL:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:D0:2:VAL:HG12	31:D0:3:GLN:H	1.83	0.43
31:D0:30:ASP:OD2	31:D0:31:LYS:N	2.50	0.43
33:D1:26:LYS:HB2	33:D1:52:LYS:HD2	1.99	0.43
37:DL:4:ASN:O	37:DL:6:LEU:N	2.50	0.43
38:DM:19:GLY:N	38:DM:38:ARG:NH1	2.65	0.43
38:DM:23:GLY:O	38:DM:101:VAL:HG12	2.17	0.43
38:DM:57:VAL:O	38:DM:59:ARG:N	2.46	0.43
41:DJ:3:THR:HG21	44:DQ:60:TRP:NE1	2.15	0.43
41:DJ:19:ASP:OD2	41:DJ:58:ASN:HB2	2.18	0.43
41:DJ:96:ARG:CZ	41:DJ:99:ARG:HD2	2.48	0.43
44:DQ:30:VAL:CG1	44:DQ:31:TYR:N	2.78	0.43
44:DQ:63:ARG:HH12	44:DQ:96:ASP:CA	2.31	0.43
47:DF:11:VAL:HG12	47:DF:12:VAL:N	2.20	0.43
47:DF:134:GLN:C	47:DF:136:ILE:N	2.71	0.43
47:DF:141:ASP:CB	47:DF:144:LYS:HB2	2.48	0.43
48:DG:168:VAL:HG12	48:DG:170:THR:HG23	2.00	0.43
49:DR:59:ILE:HA	49:DR:101:ILE:H	1.83	0.43
50:DT:57:VAL:CG2	50:DT:58:VAL:H	2.17	0.43
52:DW:44:PHE:HE2	52:DW:76:ARG:CZ	2.30	0.43
52:DW:77:LYS:HD3	52:DW:77:LYS:HA	1.85	0.43
1:AA:186:C:H2'	1:AA:187:G:O4'	2.18	0.43
1:AA:250:A:H1'	1:AA:252:U:C5	2.54	0.43
1:AA:543:U:O2'	1:AA:544:G:H5'	2.19	0.43
1:AA:625:U:H4'	15:AP:16:PHE:CZ	2.53	0.43
1:AA:935:A:O2'	1:AA:936:C:H5'	2.18	0.43
1:AA:1141:C:H2'	1:AA:1142:G:H8	1.84	0.43
1:AA:1231:G:O2'	1:AA:1232:U:H5'	2.19	0.43
1:AA:1340:A:O2'	1:AA:1341:U:H5'	2.17	0.43
1:AA:1381:U:O2'	1:AA:1382:C:H5'	2.18	0.43
2:AC:194:VAL:HG12	2:AC:195:ILE:N	2.34	0.43
3:AD:81:LEU:HB2	3:AD:88:ASN:HD22	1.82	0.43
3:AD:197:HIS:CG	3:AD:198:LEU:N	2.87	0.43
4:AE:82:HIS:CE1	4:AE:146:MET:HA	2.53	0.43
5:AF:81:ASN:HB3	5:AF:84:VAL:HG12	2.00	0.43
8:AI:21:LYS:O	8:AI:61:ASP:N	2.48	0.43
8:AI:41:GLU:C	8:AI:43:ALA:N	2.72	0.43
8:AI:46:VAL:HG23	8:AI:47:VAL:N	2.32	0.43
12:AM:15:VAL:HG22	12:AM:33:LEU:CD1	2.49	0.43
13:AN:46:LYS:HE3	18:AS:15:LEU:HD12	1.99	0.43
23:BB:39:G:H2'	23:BB:40:U:H6	1.83	0.43
23:BB:123:G:H4'	23:BB:1376:C:O5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:598:U:H2'	23:BB:599:A:C8	2.53	0.43
23:BB:656:G:H2'	23:BB:657:U:O4'	2.18	0.43
23:BB:739:A:H5"	23:BB:1784:A:C2	2.54	0.43
23:BB:794:A:H2'	23:BB:795:C:C6	2.53	0.43
23:BB:920:A:H2'	23:BB:921:C:H6	1.83	0.43
23:BB:1076:C:H4'	24:BI:94:LYS:HZ2	1.82	0.43
23:BB:1351:C:H2'	23:BB:1352:U:C1'	2.48	0.43
23:BB:1822:C:O2'	23:BB:1823:G:H5'	2.19	0.43
23:BB:2300:C:H2'	23:BB:2301:C:C6	2.53	0.43
23:BB:2635:A:H5'	26:BD:79:LEU:HB2	2.00	0.43
23:BB:2774:C:OP1	26:BD:169:ARG:HG3	2.19	0.43
23:BB:2805:C:H2'	23:BB:2806:C:H6	1.81	0.43
23:BB:2877:G:O2'	23:BB:2878:U:H5'	2.18	0.43
23:BB:2897:U:H2'	23:BB:2898:U:H6	1.82	0.43
24:BI:11:GLN:NE2	24:BI:74:PRO:HG2	2.33	0.43
25:BC:70:LYS:HD2	25:BC:101:ARG:NH2	2.33	0.43
26:BD:32:ASN:HB3	26:BD:50:VAL:CG2	2.48	0.43
29:BE:118:LEU:HD21	29:BE:188:MET:CE	2.48	0.43
29:BE:145:ASP:OD1	29:BE:183:PHE:HA	2.18	0.43
33:B1:26:LYS:HB3	33:B1:52:LYS:HZ2	1.84	0.43
36:B2:33:ARG:HH21	36:B2:33:ARG:CB	2.31	0.43
37:BL:85:VAL:HG22	37:BL:94:THR:HG21	1.99	0.43
38:BM:63:ILE:HD12	38:BM:63:ILE:N	2.32	0.43
40:BH:57:LYS:O	40:BH:61:VAL:HG12	2.18	0.43
40:BH:72:ILE:O	40:BH:141:LYS:NZ	2.52	0.43
40:BH:79:THR:HG22	40:BH:145:ASN:HB2	1.99	0.43
42:BN:28:LEU:O	42:BN:32:GLU:HA	2.19	0.43
42:BN:32:GLU:O	42:BN:114:GLU:HA	2.18	0.43
44:BQ:24:TYR:CD1	44:BQ:25:GLY:N	2.83	0.43
44:BQ:81:GLY:HA3	44:BQ:112:ALA:HB1	2.00	0.43
44:BQ:108:LEU:HD23	49:BR:48:LYS:HB2	2.00	0.43
49:BR:81:LYS:HA	49:BR:81:LYS:HD3	1.89	0.43
1:CA:37:U:H2'	1:CA:38:G:H8	1.84	0.43
1:CA:125:U:H2'	1:CA:126:G:C8	2.54	0.43
1:CA:286:C:H2'	1:CA:287:U:H6	1.83	0.43
1:CA:636:U:O2'	1:CA:637:C:H5'	2.18	0.43
1:CA:926:G:H3'	1:CA:1505:G:H21	1.84	0.43
1:CA:948:C:O2'	1:CA:949:A:H5'	2.17	0.43
1:CA:958:A:N6	1:CA:959:A:N1	2.66	0.43
1:CA:958:A:P	18:CS:54:ARG:HH22	2.41	0.43
1:CA:1206:G:H2'	1:CA:1207:G:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:46:LEU:HD11	2:CC:75:VAL:HG13	1.98	0.43
6:CG:125:ASP:HB3	6:CG:131:GLY:N	2.34	0.43
7:CH:58:LEU:HD22	7:CH:60:LEU:HB2	2.00	0.43
7:CH:110:MET:SD	7:CH:115:ALA:HB2	2.59	0.43
10:CK:92:ARG:HH11	21:CU:20:ARG:NH2	2.16	0.43
12:CM:3:ILE:HA	12:CM:56:ARG:NH1	2.32	0.43
17:CR:51:GLN:HE21	17:CR:51:GLN:HA	1.82	0.43
20:CB:114:LYS:NZ	20:CB:152:ASP:OD1	2.52	0.43
22:DA:4:C:H2'	22:DA:5:U:C6	2.54	0.43
23:DB:471:A:OP1	29:DE:79:ARG:NH1	2.51	0.43
23:DB:596:U:H2'	23:DB:597:G:C8	2.54	0.43
23:DB:622:G:O2'	23:DB:623:C:H5'	2.18	0.43
23:DB:664:G:O2'	23:DB:665:U:H5'	2.19	0.43
23:DB:847:U:H2'	23:DB:848:C:C6	2.53	0.43
23:DB:920:A:H2'	23:DB:921:C:H6	1.83	0.43
23:DB:1099:G:N7	24:DI:3:LYS:HD3	2.33	0.43
23:DB:1213:A:N1	23:DB:1237:A:H1'	2.34	0.43
23:DB:1374:G:H2'	23:DB:1375:U:C6	2.54	0.43
23:DB:1591:A:H2'	23:DB:1592:C:O4'	2.18	0.43
23:DB:1845:G:C6	23:DB:1896:G:C6	3.07	0.43
23:DB:2643:G:H2'	23:DB:2644:G:O4'	2.18	0.43
23:DB:2648:G:H2'	23:DB:2649:C:H6	1.82	0.43
23:DB:2834:G:H2'	23:DB:2879:A:H61	1.84	0.43
24:DI:54:ILE:O	24:DI:54:ILE:HG23	2.18	0.43
26:DD:55:LYS:H	26:DD:76:GLY:H	1.67	0.43
27:DK:64:ARG:HG2	27:DK:79:PHE:CD2	2.53	0.43
32:D4:13:ASN:OD1	32:D4:29:ALA:HB2	2.18	0.43
37:DL:131:ALA:HA	37:DL:134:ALA:CB	2.48	0.43
38:DM:105:MET:HB2	38:DM:117:PHE:CE2	2.53	0.43
40:DH:135:HIS:CG	40:DH:136:SER:N	2.86	0.43
41:DJ:72:LYS:HB3	41:DJ:89:PHE:H	1.84	0.43
42:DN:52:ILE:O	42:DN:55:ALA:HB3	2.18	0.43
44:DQ:9:ALA:O	44:DQ:11:ALA:N	2.52	0.43
44:DQ:52:ARG:C	44:DQ:54:ARG:N	2.72	0.43
46:DU:73:ASN:ND2	46:DU:76:THR:H	2.15	0.43
49:DR:63:VAL:O	49:DR:63:VAL:HG23	2.18	0.43
51:DZ:68:LEU:HD13	51:DZ:78:TYR:CE1	2.53	0.43
1:AA:590:U:OP1	7:AH:29:SER:HA	2.18	0.43
1:AA:704:A:C2	1:AA:705:G:H1'	2.53	0.43
1:AA:757:U:O2'	1:AA:758:C:H5'	2.18	0.43
1:AA:772:U:O2'	1:AA:773:G:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:856:C:O2'	1:AA:857:C:H5'	2.18	0.43
1:AA:999:C:O5'	1:AA:999:C:H6	2.00	0.43
1:AA:1054:C:H1'	1:AA:1196:A:C4	2.53	0.43
1:AA:1207:G:H2'	1:AA:1208:C:C6	2.53	0.43
1:AA:1479:C:O2'	1:AA:1480:A:H5'	2.18	0.43
4:AE:85:LYS:HG3	4:AE:93:VAL:O	2.18	0.43
5:AF:92:THR:HG22	5:AF:94:HIS:N	2.11	0.43
5:AF:99:ALA:O	5:AF:100:SER:CB	2.66	0.43
5:AF:100:SER:HA	17:AR:23:LYS:CD	2.48	0.43
8:AI:17:ARG:O	8:AI:64:ILE:HA	2.19	0.43
8:AI:64:ILE:HD12	8:AI:64:ILE:N	2.34	0.43
14:AO:43:PHE:CE1	14:AO:56:LEU:HD22	2.54	0.43
16:AQ:16:MET:HB2	16:AQ:19:SER:O	2.19	0.43
20:AB:195:VAL:HG12	20:AB:197:PHE:N	2.30	0.43
22:BA:106:G:H2'	22:BA:107:G:O4'	2.18	0.43
23:BB:165:A:H2'	23:BB:166:U:O4'	2.18	0.43
23:BB:332:A:O2'	23:BB:334:C:OP2	2.36	0.43
23:BB:622:G:O2'	23:BB:623:C:H5'	2.18	0.43
23:BB:691:C:O2'	23:BB:692:C:H5'	2.17	0.43
23:BB:971:G:O2'	23:BB:972:A:H5'	2.19	0.43
23:BB:1076:C:H2'	23:BB:1077:A:H8	1.83	0.43
23:BB:1173:U:H2'	23:BB:1174:U:C4'	2.47	0.43
23:BB:1464:G:O2'	23:BB:1465:G:H5'	2.18	0.43
23:BB:1573:G:H2'	23:BB:1574:C:H5'	2.01	0.43
23:BB:2019:A:C4'	44:BQ:33:VAL:HG11	2.48	0.43
23:BB:2081:U:C5'	51:BZ:25:THR:HG21	2.49	0.43
23:BB:2282:G:O2'	23:BB:2283:C:OP2	2.28	0.43
23:BB:2472:G:H1	23:BB:2477:U:P	2.42	0.43
23:BB:2785:C:H2'	23:BB:2786:U:C6	2.53	0.43
24:BI:91:LYS:O	24:BI:94:LYS:HB2	2.18	0.43
26:BD:16:THR:HG22	26:BD:17:GLU:N	2.33	0.43
26:BD:70:LYS:HD3	26:BD:70:LYS:C	2.38	0.43
27:BK:58:LEU:HD23	27:BK:58:LEU:H	1.80	0.43
28:BP:45:VAL:H	28:BP:60:VAL:HB	1.83	0.43
29:BE:72:SER:C	29:BE:74:LYS:H	2.21	0.43
29:BE:146:VAL:CG1	29:BE:187:VAL:HG23	2.48	0.43
33:B1:24:LYS:HZ2	33:B1:33:LEU:HB2	1.83	0.43
34:B3:31:ILE:HD11	34:B3:34:LYS:CD	2.47	0.43
35:BV:72:VAL:HG12	35:BV:93:ARG:CA	2.44	0.43
36:B2:12:ARG:HG2	36:B2:44:VAL:HG11	1.99	0.43
37:BL:79:LEU:HB2	37:BL:113:ALA:H	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:41:LYS:C	40:BH:43:ASN:N	2.71	0.43
40:BH:111:ALA:HB3	40:BH:114:GLU:CG	2.48	0.43
40:BH:116:ARG:H	40:BH:130:VAL:HG12	1.82	0.43
41:BJ:44:TYR:O	41:BJ:45:THR:CB	2.66	0.43
41:BJ:75:TYR:CD1	41:BJ:86:GLN:HB3	2.52	0.43
43:BO:56:LYS:O	43:BO:57:ALA:C	2.57	0.43
47:BF:35:LEU:HD13	47:BF:56:LEU:CD1	2.46	0.43
47:BF:111:ARG:HD2	47:BF:111:ARG:N	2.33	0.43
50:BT:8:LEU:HD22	50:BT:46:ALA:HA	1.99	0.43
51:BZ:56:MET:HA	51:BZ:59:ILE:HG12	1.99	0.43
53:B6:42:LYS:HA	53:B6:50:VAL:C	2.38	0.43
53:B6:80:GLU:CG	53:B6:92:PRO:HB2	2.48	0.43
1:CA:208:U:H2'	1:CA:210:C:N3	2.33	0.43
1:CA:314:C:O2'	1:CA:315:A:H5'	2.19	0.43
1:CA:450:G:N7	1:CA:481:G:O6	2.51	0.43
1:CA:614:C:C2'	1:CA:615:G:H5'	2.49	0.43
1:CA:657:U:H1'	14:CO:22:THR:O	2.18	0.43
1:CA:744:C:O2'	1:CA:745:G:H5'	2.18	0.43
1:CA:768:A:O2'	1:CA:769:G:H5'	2.19	0.43
2:CC:134:LYS:HG3	2:CC:167:TYR:HE2	1.83	0.43
3:CD:169:TRP:HB2	3:CD:183:ARG:O	2.19	0.43
8:CI:30:ASN:O	8:CI:31:GLN:HB2	2.19	0.43
8:CI:45:MET:SD	8:CI:45:MET:N	2.92	0.43
12:CM:10:ASP:CA	12:CM:44:ILE:HD13	2.42	0.43
13:CN:30:ILE:H	13:CN:30:ILE:HD12	1.83	0.43
13:CN:68:ARG:HH12	13:CN:70:HIS:CB	2.14	0.43
13:CN:87:ALA:CA	13:CN:92:ILE:HD13	2.47	0.43
20:CB:162:VAL:HG13	20:CB:184:ALA:CB	2.44	0.43
20:CB:164:ASP:OD1	20:CB:203:ASP:HB2	2.18	0.43
22:DA:65:U:C2'	22:DA:66:A:H5'	2.49	0.43
23:DB:28:A:O2'	23:DB:29:U:H5'	2.17	0.43
23:DB:39:G:H2'	23:DB:40:U:C6	2.54	0.43
23:DB:287:G:H2'	23:DB:287:G:N3	2.33	0.43
23:DB:444:C:O2'	23:DB:445:C:H5'	2.18	0.43
23:DB:699:A:H2'	23:DB:700:G:O4'	2.18	0.43
23:DB:819:A:H5'	23:DB:973:A:N1	2.34	0.43
23:DB:840:C:H2'	23:DB:841:G:C8	2.53	0.43
23:DB:1099:G:OP2	24:DI:2:LYS:O	2.36	0.43
23:DB:1259:G:H2'	23:DB:1260:A:C8	2.53	0.43
23:DB:1259:G:H2'	23:DB:1260:A:H8	1.83	0.43
23:DB:1387:A:H5'	23:DB:1469:A:H1'	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1445:G:O2'	23:DB:1446:C:H5'	2.19	0.43
23:DB:1556:C:H2'	23:DB:1557:C:C6	2.54	0.43
23:DB:1767:G:O2'	23:DB:1768:C:H5'	2.19	0.43
23:DB:1789:A:OP2	25:DC:220:ARG:HD3	2.18	0.43
23:DB:1818:U:HO2'	23:DB:1819:A:P	2.42	0.43
23:DB:1854:A:H2'	23:DB:1855:U:H5'	2.00	0.43
23:DB:1905:C:O2'	23:DB:1929:G:H1'	2.18	0.43
23:DB:2015:A:N3	31:D0:2:VAL:HG22	2.33	0.43
23:DB:2265:U:H3'	23:DB:2266:A:C5'	2.49	0.43
23:DB:2395:C:H2'	23:DB:2396:G:O4'	2.19	0.43
23:DB:2774:C:P	26:DD:169:ARG:HG3	2.58	0.43
25:DC:52:HIS:O	25:DC:53:ILE:HB	2.19	0.43
25:DC:89:ASN:HD22	25:DC:89:ASN:HA	1.52	0.43
26:DD:35:THR:O	26:DD:36:GLN:HB3	2.17	0.43
28:DP:45:VAL:H	28:DP:60:VAL:HB	1.83	0.43
29:DE:72:SER:C	29:DE:74:LYS:H	2.22	0.43
33:D1:3:GLY:O	33:D1:5:ARG:N	2.52	0.43
35:DV:35:GLU:HG3	35:DV:93:ARG:CZ	2.48	0.43
40:DH:5:LEU:HD12	40:DH:17:ASP:CB	2.47	0.43
40:DH:110:VAL:O	40:DH:110:VAL:HG13	2.18	0.43
41:DJ:55:ILE:CG2	41:DJ:123:LYS:HB2	2.49	0.43
44:DQ:81:GLY:HA3	44:DQ:112:ALA:HB1	2.01	0.43
45:DS:66:ILE:O	45:DS:69:LEU:HB2	2.19	0.43
47:DF:68:LYS:HG3	47:DF:81:GLY:O	2.18	0.43
47:DF:74:ALA:HB3	47:DF:78:ILE:HD13	2.01	0.43
51:DZ:71:LEU:HD11	51:DZ:78:TYR:HB3	1.99	0.43
52:DW:37:VAL:HB	52:DW:38:ARG:HD3	2.00	0.43
1:AA:85:U:O2	1:AA:85:U:O4'	2.35	0.43
1:AA:591:U:H2'	1:AA:592:G:C8	2.53	0.43
1:AA:1206:G:H2'	1:AA:1207:G:O4'	2.19	0.43
1:AA:1270:G:H4'	1:AA:1313:U:O2'	2.19	0.43
2:AC:88:LYS:HD2	2:AC:88:LYS:C	2.39	0.43
2:AC:156:LEU:HG	2:AC:163:ARG:O	2.18	0.43
3:AD:146:GLU:HA	3:AD:149:LYS:CG	2.43	0.43
4:AE:93:VAL:HG22	4:AE:126:ALA:HB1	2.00	0.43
5:AF:86:ARG:HD2	17:AR:63:TYR:O	2.19	0.43
6:AG:69:ARG:HA	6:AG:99:ALA:HB2	2.01	0.43
6:AG:144:ALA:O	6:AG:146:ALA:N	2.43	0.43
7:AH:113:ARG:C	7:AH:113:ARG:HE	2.22	0.43
8:AI:50:PRO:HD3	8:AI:79:ARG:CG	2.47	0.43
12:AM:18:LEU:HD23	12:AM:21:ILE:HD12	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AQ:14:ASP:OD1	16:AQ:53:GLY:HA2	2.17	0.43
16:AQ:42:LYS:O	16:AQ:43:LEU:HD12	2.19	0.43
17:AR:36:GLY:HA3	17:AR:70:THR:HA	2.00	0.43
18:AS:25:GLY:O	18:AS:27:LYS:HE2	2.18	0.43
22:BA:65:U:C2'	22:BA:66:A:H5'	2.48	0.43
23:BB:322:A:H1'	23:BB:339:U:O2	2.18	0.43
23:BB:557:C:H2'	23:BB:558:U:H6	1.81	0.43
23:BB:758:C:O2	23:BB:1981:A:H2	2.02	0.43
23:BB:771:G:O2'	23:BB:772:C:H5'	2.19	0.43
23:BB:1100:C:H2'	23:BB:1101:U:C6	2.53	0.43
23:BB:1183:U:O2'	23:BB:1184:U:H5'	2.18	0.43
23:BB:1444:G:H2'	23:BB:1445:G:C8	2.53	0.43
23:BB:1671:U:H2'	23:BB:1673:G:OP2	2.18	0.43
23:BB:1783:A:N1	23:BB:2587:A:H2'	2.34	0.43
23:BB:1811:G:O2'	23:BB:1812:U:H5'	2.19	0.43
23:BB:1846:G:N2	23:BB:1848:A:N6	2.67	0.43
23:BB:1900:A:N1	23:BB:1970:A:C5	2.86	0.43
23:BB:2190:G:H2'	23:BB:2191:A:C8	2.53	0.43
23:BB:2223:G:C2'	23:BB:2224:G:H5'	2.48	0.43
23:BB:2269:G:O3'	52:BW:18:LYS:HG2	2.18	0.43
23:BB:2671:G:H2'	23:BB:2672:U:H6	1.82	0.43
23:BB:2848:G:N2	23:BB:2867:G:C2	2.85	0.43
25:BC:80:LEU:HD21	25:BC:109:LEU:HB2	2.00	0.43
26:BD:67:HIS:O	26:BD:70:LYS:HB3	2.19	0.43
27:BK:75:SER:HB2	28:BP:73:PHE:HA	1.99	0.43
37:BL:115:GLU:N	37:BL:115:GLU:OE1	2.52	0.43
38:BM:46:ILE:HG13	38:BM:47:GLU:N	2.32	0.43
38:BM:66:ARG:CZ	38:BM:101:VAL:HG11	2.47	0.43
40:BH:137:GLU:HG3	40:BH:138:VAL:N	2.33	0.43
41:BJ:73:VAL:O	41:BJ:74:TYR:HB2	2.18	0.43
42:BN:24:MET:CG	42:BN:44:LEU:HD22	2.49	0.43
44:BQ:26:ALA:HB1	44:BQ:30:VAL:CB	2.49	0.43
45:BS:88:ARG:N	45:BS:92:ARG:O	2.49	0.43
46:BU:86:PHE:CG	46:BU:87:GLU:N	2.86	0.43
47:BF:79:ARG:H	47:BF:82:TYR:HB2	1.84	0.43
48:BG:54:ARG:HD2	48:BG:57:TYR:CE1	2.54	0.43
48:BG:148:ARG:HB2	48:BG:152:ARG:HH21	1.84	0.43
49:BR:63:VAL:HG23	49:BR:63:VAL:O	2.18	0.43
50:BT:18:GLU:O	50:BT:20:ALA:N	2.48	0.43
50:BT:45:ALA:O	50:BT:48:GLN:HB2	2.19	0.43
52:BW:44:PHE:O	52:BW:78:PHE:HA	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B6:142:LYS:HE2	53:B6:142:LYS:HA	2.00	0.43
1:CA:476:U:H2'	1:CA:477:C:O4'	2.18	0.43
1:CA:596:A:H2'	1:CA:597:G:H8	1.83	0.43
1:CA:605:U:H2'	1:CA:606:G:C8	2.53	0.43
1:CA:714:G:H21	1:CA:777:A:H1'	1.83	0.43
1:CA:872:A:C4	1:CA:874:G:N7	2.87	0.43
1:CA:1015:G:N2	1:CA:1218:C:O2	2.51	0.43
1:CA:1247:U:O2'	1:CA:1248:A:H5'	2.19	0.43
1:CA:1366:C:O2'	1:CA:1367:C:H5'	2.19	0.43
4:CE:44:ARG:HD2	4:CE:72:ASN:HD22	1.82	0.43
8:CI:50:PRO:HD3	8:CI:79:ARG:CG	2.49	0.43
10:CK:30:ILE:HG22	10:CK:45:THR:OG1	2.18	0.43
12:CM:2:ARG:O	12:CM:4:ALA:N	2.52	0.43
12:CM:53:ASP:HA	12:CM:56:ARG:NH2	2.34	0.43
13:CN:64:ARG:HD3	13:CN:64:ARG:HA	1.79	0.43
14:CO:36:ILE:CD1	14:CO:59:MET:HE3	2.43	0.43
17:CR:60:ARG:O	17:CR:64:LEU:HD13	2.17	0.43
20:CB:83:ALA:O	20:CB:88:GLN:NE2	2.52	0.43
20:CB:84:LEU:HD23	20:CB:84:LEU:O	2.18	0.43
22:DA:4:C:H2'	22:DA:5:U:H6	1.84	0.43
23:DB:233:A:H61	23:DB:428:A:H61	1.65	0.43
23:DB:620:G:O6	29:DE:98:LYS:HE2	2.18	0.43
23:DB:630:G:H4'	23:DB:640:C:O2'	2.18	0.43
23:DB:638:G:H2'	23:DB:639:U:C6	2.53	0.43
23:DB:672:C:H2'	23:DB:673:C:C6	2.53	0.43
23:DB:832:U:H2'	23:DB:833:A:C8	2.53	0.43
23:DB:1241:A:O4'	23:DB:1241:A:N3	2.50	0.43
23:DB:1292:G:H2'	23:DB:1293:C:H6	1.81	0.43
23:DB:1563:U:O2'	23:DB:1564:C:H5'	2.19	0.43
23:DB:2199:A:H5'	23:DB:2200:C:OP2	2.17	0.43
23:DB:2262:U:H1'	23:DB:2328:A:H1'	2.01	0.43
23:DB:2298:A:C2	23:DB:2321:U:C5	3.06	0.43
23:DB:2734:A:H2'	23:DB:2735:G:C5'	2.46	0.43
25:DC:4:LYS:HB3	25:DC:5:CYS:H	1.56	0.43
27:DK:24:VAL:CG1	27:DK:33:ALA:HB2	2.47	0.43
29:DE:161:ALA:HB1	29:DE:167:VAL:HG22	2.00	0.43
30:DY:46:MET:HB3	30:DY:46:MET:HE2	1.79	0.43
39:DX:22:LEU:HG	39:DX:23:ARG:HG2	2.01	0.43
40:DH:96:THR:CG2	40:DH:97:ARG:H	2.18	0.43
40:DH:131:SER:HB2	40:DH:141:LYS:CG	2.49	0.43
41:DJ:38:GLY:CA	41:DJ:51:GLY:HA2	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DO:73:ALA:O	43:DO:77:ALA:N	2.52	0.43
44:DQ:56:PHE:O	44:DQ:59:LEU:HB3	2.19	0.43
44:DQ:104:ALA:O	44:DQ:105:PHE:HB3	2.17	0.43
46:DU:20:LYS:HB2	46:DU:20:LYS:NZ	2.33	0.43
46:DU:82:VAL:CG1	46:DU:93:ARG:HB3	2.46	0.43
47:DF:37:MET:HG2	47:DF:52:ALA:HB1	2.00	0.43
47:DF:59:ILE:HG12	47:DF:137:PHE:CE2	2.53	0.43
47:DF:125:GLY:HA2	47:DF:162:ASP:CA	2.40	0.43
48:DG:9:VAL:O	48:DG:11:PRO:HD3	2.18	0.43
48:DG:100:ASN:O	48:DG:116:LEU:HD13	2.19	0.43
50:DT:48:GLN:HA	50:DT:48:GLN:NE2	2.33	0.43
1:AA:597:G:H2'	1:AA:598:U:H5'	2.01	0.43
1:AA:656:G:O2'	1:AA:657:U:H5'	2.17	0.43
1:AA:865:A:H2'	1:AA:866:C:H6	1.80	0.43
1:AA:978:A:H5'	1:AA:1362:A:H61	1.84	0.43
1:AA:1133:G:O2'	1:AA:1134:G:H5'	2.19	0.43
1:AA:1147:C:H2'	1:AA:1148:U:C6	2.54	0.43
1:AA:1237:C:H4'	1:AA:1334:G:N2	2.34	0.43
1:AA:1258:G:C4	1:AA:1278:G:N2	2.86	0.43
2:AC:55:VAL:HG12	2:AC:56:ILE:N	2.34	0.43
2:AC:125:ARG:O	2:AC:126:ARG:HB2	2.18	0.43
4:AE:79:THR:OG1	4:AE:97:PRO:HA	2.19	0.43
6:AG:125:ASP:HB3	6:AG:131:GLY:N	2.34	0.43
10:AK:22:ILE:HD13	10:AK:95:THR:CG2	2.49	0.43
17:AR:66:LEU:O	17:AR:67:LEU:HG	2.18	0.43
18:AS:39:ILE:HG13	18:AS:68:HIS:O	2.19	0.43
20:AB:42:LEU:HA	20:AB:45:THR:HB	2.00	0.43
20:AB:86:CYS:HB2	20:AB:221:ARG:HH11	1.83	0.43
23:BB:193:U:H4'	23:BB:803:U:H5'	2.01	0.43
23:BB:518:G:H2'	23:BB:519:U:C6	2.54	0.43
23:BB:1063:G:O2'	24:BI:88:GLY:HA3	2.18	0.43
23:BB:1251:C:OP2	44:BQ:5:ARG:NE	2.50	0.43
23:BB:1399:C:H2'	23:BB:1400:U:C6	2.54	0.43
23:BB:1592:C:H2'	23:BB:1593:A:H8	1.84	0.43
23:BB:1685:C:H2'	23:BB:1686:C:H6	1.83	0.43
23:BB:1930:G:C2'	23:BB:1931:U:OP2	2.67	0.43
23:BB:2065:C:H2'	23:BB:2066:C:C6	2.53	0.43
23:BB:2103:C:H3'	23:BB:2104:C:O2	2.19	0.43
23:BB:2189:U:O2'	23:BB:2190:G:H5'	2.18	0.43
23:BB:2282:G:O3'	23:BB:2283:C:H4'	2.19	0.43
23:BB:2348:U:OP1	34:B3:37:THR:HG21	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2636:C:H2'	23:BB:2637:U:C6	2.53	0.43
23:BB:2641:G:H2'	23:BB:2642:G:H8	1.82	0.43
24:BI:32:VAL:HG22	24:BI:60:VAL:HG21	2.01	0.43
24:BI:83:ALA:N	24:BI:100:ILE:HD11	2.33	0.43
25:BC:245:THR:C	25:BC:247:TRP:N	2.72	0.43
26:BD:13:ARG:HG3	26:BD:15:PHE:CE1	2.53	0.43
26:BD:125:TRP:CD1	26:BD:160:LYS:HB3	2.53	0.43
29:BE:37:ALA:O	29:BE:39:ALA:N	2.50	0.43
29:BE:176:ASP:O	29:BE:180:LEU:HG	2.19	0.43
30:BY:46:MET:HB3	30:BY:46:MET:HE2	1.76	0.43
33:B1:31:GLU:CD	33:B1:31:GLU:H	2.21	0.43
40:BH:9:VAL:CG1	40:BH:12:LEU:HG	2.48	0.43
41:BJ:23:LYS:HZ2	41:BJ:142:ILE:HG23	1.84	0.43
41:BJ:101:ILE:O	41:BJ:105:VAL:HG22	2.19	0.43
43:BO:56:LYS:HG2	43:BO:60:GLU:OE1	2.19	0.43
44:BQ:87:VAL:HG12	44:BQ:88:GLU:N	2.33	0.43
45:BS:24:ILE:HG23	45:BS:32:ALA:HB1	2.01	0.43
46:BU:49:PRO:O	46:BU:50:ALA:HB2	2.17	0.43
52:BW:40:ARG:HE	52:BW:45:HIS:HE1	1.66	0.43
52:BW:59:PHE:O	52:BW:60:ALA:CB	2.66	0.43
53:B6:26:ALA:C	53:B6:28:LEU:H	2.21	0.43
1:CA:177:G:N3	1:CA:177:G:O4'	2.51	0.43
1:CA:687:A:C2	1:CA:704:A:C5	3.07	0.43
1:CA:1446:A:H2'	1:CA:1447:A:H8	1.84	0.43
2:CC:122:GLN:O	2:CC:127:VAL:HG22	2.19	0.43
2:CC:137:VAL:HA	2:CC:148:ILE:CD1	2.39	0.43
3:CD:115:GLN:HG3	3:CD:119:HIS:CE1	2.53	0.43
6:CG:110:ARG:HB2	6:CG:118:ARG:HB3	2.00	0.43
10:CK:70:ALA:HA	10:CK:73:VAL:CG2	2.49	0.43
11:CL:108:ASP:O	11:CL:110:LYS:HG2	2.18	0.43
12:CM:52:ILE:HA	12:CM:55:LEU:HG	2.00	0.43
14:CO:31:LEU:HD23	14:CO:31:LEU:HA	1.87	0.43
14:CO:43:PHE:CD1	14:CO:56:LEU:HD22	2.53	0.43
19:CT:83:ASN:C	19:CT:85:LEU:H	2.22	0.43
23:DB:126:A:O2'	23:DB:127:A:H5'	2.18	0.43
23:DB:235:U:H2'	23:DB:236:C:H6	1.83	0.43
23:DB:263:G:H2'	23:DB:264:C:C6	2.53	0.43
23:DB:372:G:N7	51:DZ:57:ARG:HB3	2.33	0.43
23:DB:670:A:H3'	37:DL:43:GLY:H	1.83	0.43
23:DB:1076:C:O2'	23:DB:1077:A:H5'	2.19	0.43
23:DB:1387:A:C5'	23:DB:1469:A:H1'	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1460:U:H3'	23:DB:1461:C:H5'	2.01	0.43
23:DB:1794:A:O2'	23:DB:1795:C:H5'	2.18	0.43
23:DB:2315:G:H2'	23:DB:2316:G:H8	1.84	0.43
25:DC:90:ILE:HG23	25:DC:91:ALA:N	2.32	0.43
25:DC:169:ALA:O	25:DC:185:ALA:HB3	2.18	0.43
25:DC:196:ASN:O	25:DC:197:ALA:HB3	2.18	0.43
26:DD:15:PHE:CD2	28:DP:77:SER:HA	2.53	0.43
29:DE:3:LEU:O	29:DE:12:LEU:HB2	2.19	0.43
31:D0:2:VAL:HG12	31:D0:3:GLN:N	2.33	0.43
32:D4:22:VAL:O	32:D4:24:ARG:N	2.52	0.43
35:DV:29:ILE:HG13	35:DV:88:HIS:CE1	2.51	0.43
37:DL:60:ARG:O	37:DL:61:LEU:HD12	2.19	0.43
40:DH:2:GLN:O	40:DH:3:VAL:O	2.37	0.43
42:DN:12:ARG:HG3	42:DN:13:ASN:N	2.30	0.43
42:DN:77:ALA:O	42:DN:81:ASN:HB2	2.18	0.43
42:DN:96:ARG:HG2	42:DN:98:LEU:HD22	2.01	0.43
44:DQ:9:ALA:C	44:DQ:11:ALA:N	2.70	0.43
45:DS:10:ALA:C	45:DS:12:SER:H	2.21	0.43
47:DF:33:ILE:HG22	47:DF:34:THR:N	2.33	0.43
47:DF:41:GLU:O	47:DF:43:ILE:N	2.52	0.43
47:DF:45:ASP:C	47:DF:47:LYS:H	2.22	0.43
47:DF:174:PHE:HA	47:DF:175:PRO:HD2	1.87	0.43
48:DG:77:GLY:HA3	48:DG:135:ALA:O	2.19	0.43
48:DG:167:VAL:O	48:DG:168:VAL:HB	2.19	0.43
53:D6:38:LEU:O	53:D6:41:LEU:HB2	2.18	0.43
1:AA:8:A:H5'	4:AE:105:ILE:HG22	2.01	0.43
1:AA:385:C:O2'	1:AA:386:C:H5'	2.19	0.43
1:AA:389:A:H3'	1:AA:390:U:C6	2.48	0.43
1:AA:411:A:O2'	1:AA:412:A:O4'	2.33	0.43
1:AA:492:C:H2'	1:AA:493:A:N3	2.34	0.43
1:AA:524:G:H2'	1:AA:525:C:H6	1.82	0.43
1:AA:552:U:H4'	11:AL:82:ARG:CG	2.48	0.43
1:AA:613:C:H2'	1:AA:614:C:C6	2.53	0.43
1:AA:751:U:C2'	1:AA:752:G:H5'	2.48	0.43
1:AA:872:A:C4	1:AA:874:G:N7	2.87	0.43
1:AA:921:U:H2'	1:AA:922:G:O4'	2.19	0.43
1:AA:1042:A:H2'	1:AA:1043:G:O4'	2.19	0.43
1:AA:1057:G:H2'	1:AA:1058:G:O4'	2.17	0.43
1:AA:1262:C:H2'	1:AA:1263:C:C6	2.54	0.43
1:AA:1297:G:H1'	1:AA:1298:U:C5	2.52	0.43
1:AA:1522:U:O2'	1:AA:1523:G:H5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:126:ARG:HA	2:AC:126:ARG:NH1	2.32	0.43
3:AD:160:LEU:HD23	3:AD:164:ARG:HH21	1.83	0.43
4:AE:55:VAL:O	4:AE:59:ILE:HG13	2.19	0.43
5:AF:74:LEU:HA	5:AF:77:THR:OG1	2.19	0.43
6:AG:58:LEU:HD23	6:AG:58:LEU:N	2.32	0.43
6:AG:135:LYS:HD3	6:AG:139:ASP:OD2	2.19	0.43
7:AH:6:ILE:HB	7:AH:76:ARG:NH1	2.34	0.43
7:AH:25:THR:O	7:AH:26:MET:HB3	2.19	0.43
12:AM:78:ARG:HH22	12:AM:82:LEU:HD11	1.83	0.43
19:AT:83:ASN:C	19:AT:85:LEU:H	2.21	0.43
20:AB:57:ASN:HA	20:AB:60:ALA:HB3	2.01	0.43
23:BB:363:G:H2'	23:BB:364:C:C5	2.53	0.43
23:BB:377:G:H2'	23:BB:378:C:H6	1.84	0.43
23:BB:499:U:H2'	23:BB:500:G:O4'	2.19	0.43
23:BB:545:U:H2'	23:BB:547:A:OP2	2.19	0.43
23:BB:686:U:O2'	36:B2:5:PHE:HA	2.19	0.43
23:BB:823:C:H2'	23:BB:824:U:H6	1.79	0.43
23:BB:910:A:H2'	23:BB:911:A:C8	2.53	0.43
23:BB:1197:G:O2'	23:BB:1198:U:H5'	2.19	0.43
23:BB:1294:U:C2'	23:BB:1295:C:H5'	2.48	0.43
23:BB:1315:C:H2'	23:BB:1316:U:C6	2.54	0.43
23:BB:1680:U:H2'	23:BB:1681:G:O4'	2.18	0.43
23:BB:1720:U:H2'	23:BB:1721:G:O4'	2.19	0.43
23:BB:1742:U:H2'	23:BB:1743:G:H8	1.82	0.43
23:BB:1797:G:C6	23:BB:1823:G:C6	3.07	0.43
23:BB:1863:G:H2'	23:BB:1864:U:O4'	2.18	0.43
23:BB:2098:U:H2'	23:BB:2099:U:C6	2.53	0.43
23:BB:2209:G:H2'	23:BB:2210:U:C5	2.52	0.43
23:BB:2313:C:H5"	47:BF:87:LYS:CE	2.49	0.43
23:BB:2322:A:H3'	23:BB:2323:G:C8	2.52	0.43
23:BB:2397:G:H2'	23:BB:2398:U:C6	2.53	0.43
23:BB:2439:A:H4'	23:BB:2440:C:O5'	2.19	0.43
23:BB:2492:U:O2'	23:BB:2493:U:H5'	2.19	0.43
23:BB:2570:G:H2'	23:BB:2571:U:O4'	2.19	0.43
23:BB:2606:C:O2'	23:BB:2607:G:H5'	2.18	0.43
23:BB:2694:G:H2'	23:BB:2695:U:C6	2.53	0.43
27:BK:64:ARG:HD2	27:BK:102:PRO:O	2.19	0.43
31:B0:27:LEU:HB2	31:B0:28:SER:H	1.65	0.43
35:BV:29:ILE:HG13	35:BV:88:HIS:CE1	2.50	0.43
38:BM:46:ILE:CG1	38:BM:47:GLU:N	2.81	0.43
38:BM:105:MET:HB2	38:BM:117:PHE:HZ	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:10:ALA:C	40:BH:12:LEU:H	2.22	0.43
40:BH:80:ILE:CD1	40:BH:102:ALA:HB2	2.44	0.43
40:BH:104:THR:HG23	40:BH:104:THR:O	2.19	0.43
42:BN:61:ALA:C	42:BN:63:ARG:H	2.22	0.43
45:BS:2:GLU:O	45:BS:3:THR:C	2.57	0.43
47:BF:45:ASP:C	47:BF:47:LYS:H	2.22	0.43
48:BG:10:VAL:N	48:BG:48:THR:HG22	2.34	0.43
48:BG:34:ARG:HH11	48:BG:34:ARG:HG2	1.84	0.43
48:BG:37:ASN:HD22	48:BG:38:ASP:H	1.67	0.43
51:BZ:49:LEU:HD12	51:BZ:49:LEU:N	2.28	0.43
52:BW:58:LEU:N	52:BW:58:LEU:HD22	2.34	0.43
1:CA:207:C:H2'	1:CA:208:U:O4'	2.19	0.43
1:CA:333:U:H2'	1:CA:334:C:C6	2.54	0.43
1:CA:431:A:C2	1:CA:432:A:H1'	2.54	0.43
1:CA:982:U:OP2	13:CN:60:ARG:NH1	2.52	0.43
1:CA:985:C:H2'	1:CA:986:U:C6	2.53	0.43
1:CA:1060:U:OP1	9:CJ:53:ILE:HD11	2.18	0.43
1:CA:1241:G:H2'	1:CA:1242:G:C8	2.51	0.43
1:CA:1342:C:O2'	8:CI:125:GLN:HB2	2.19	0.43
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.54	0.43
3:CD:17:ASP:C	3:CD:19:PHE:H	2.22	0.43
4:CE:47:PHE:HZ	4:CE:137:ARG:HH21	1.66	0.43
7:CH:35:ILE:O	7:CH:39:LEU:HG	2.19	0.43
8:CI:30:ASN:HD22	8:CI:30:ASN:HA	1.67	0.43
8:CI:122:ARG:HG3	8:CI:122:ARG:HH11	1.82	0.43
10:CK:22:ILE:HD13	10:CK:95:THR:CG2	2.49	0.43
10:CK:23:HIS:O	10:CK:29:THR:HA	2.19	0.43
11:CL:120:ARG:CG	11:CL:121:PRO:HD2	2.36	0.43
12:CM:12:LYS:H	12:CM:44:ILE:CD1	2.31	0.43
23:DB:40:U:O2'	23:DB:41:C:H5'	2.19	0.43
23:DB:627:A:N6	37:DL:112:LEU:HD23	2.32	0.43
23:DB:682:G:O2'	23:DB:683:U:H5'	2.19	0.43
23:DB:1063:G:O2'	23:DB:1064:C:H5'	2.18	0.43
23:DB:1161:C:H2'	23:DB:1162:G:C8	2.54	0.43
23:DB:1260:A:O2'	23:DB:1261:C:H5'	2.19	0.43
23:DB:1287:A:O2'	23:DB:1288:G:H5'	2.18	0.43
23:DB:1534:U:O2'	23:DB:1535:A:H2'	2.19	0.43
23:DB:1671:U:N3	23:DB:1674:G:OP2	2.48	0.43
23:DB:2516:A:O2'	23:DB:2517:C:H5'	2.18	0.43
23:DB:2547:A:H5"	27:DK:29:HIS:NE2	2.34	0.43
23:DB:2676:C:O2'	23:DB:2677:G:H5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2787:C:H2'	23:DB:2788:C:C6	2.53	0.43
23:DB:2809:A:N6	23:DB:2891:U:H4'	2.34	0.43
27:DK:87:LEU:HD12	27:DK:92:GLU:HA	2.00	0.43
29:DE:146:VAL:CG1	29:DE:187:VAL:HG23	2.48	0.43
29:DE:176:ASP:O	29:DE:180:LEU:HG	2.18	0.43
37:DL:124:GLY:CA	37:DL:143:GLU:HG3	2.49	0.43
40:DH:12:LEU:HD21	40:DH:25:TYR:HE2	1.83	0.43
40:DH:122:LEU:C	40:DH:124:THR:H	2.21	0.43
41:DJ:3:THR:CB	41:DJ:44:TYR:OH	2.67	0.43
43:DO:36:TYR:N	43:DO:36:TYR:CD2	2.87	0.43
47:DF:131:VAL:O	47:DF:132:ARG:HB2	2.17	0.43
48:DG:168:VAL:HG12	48:DG:170:THR:CG2	2.48	0.43
49:DR:25:LEU:H	49:DR:94:THR:HG21	1.83	0.43
49:DR:86:GLN:HE21	49:DR:86:GLN:HB2	1.55	0.43
52:DW:79:ILE:HG22	52:DW:80:SER:N	2.33	0.43
53:D6:62:ASP:OD1	53:D6:65:THR:HB	2.18	0.43
1:AA:52:C:H2'	1:AA:53:A:H8	1.84	0.43
1:AA:80:A:C5	1:AA:81:A:H1'	2.53	0.43
1:AA:177:G:N3	1:AA:177:G:O4'	2.51	0.43
1:AA:355:C:C2'	1:AA:356:A:H5'	2.48	0.43
1:AA:622:A:H2'	1:AA:623:C:H5'	1.99	0.43
1:AA:643:C:H2'	1:AA:644:U:H6	1.84	0.43
1:AA:692:U:H2'	1:AA:694:A:OP2	2.19	0.43
1:AA:1130:A:H5'	8:AI:19:PHE:CE2	2.54	0.43
1:AA:1281:C:H5'	1:AA:1282:C:H5	1.84	0.43
1:AA:1320:C:H1'	18:AS:72:GLU:CA	2.49	0.43
2:AC:106:ARG:HG2	2:AC:106:ARG:O	2.19	0.43
3:AD:97:LEU:HD12	3:AD:136:VAL:HG22	2.01	0.43
3:AD:164:ARG:HG3	3:AD:165:GLU:H	1.84	0.43
6:AG:63:VAL:HG12	6:AG:127:ALA:HB1	2.01	0.43
7:AH:45:ILE:C	7:AH:63:LYS:HE3	2.39	0.43
8:AI:56:MET:O	8:AI:58:GLU:N	2.51	0.43
10:AK:82:GLU:HG3	10:AK:107:THR:OG1	2.19	0.43
12:AM:16:ILE:HG23	12:AM:17:ALA:H	1.83	0.43
14:AO:15:PHE:N	14:AO:15:PHE:CD1	2.87	0.43
14:AO:31:LEU:HD23	14:AO:31:LEU:HA	1.89	0.43
14:AO:71:LYS:HZ2	14:AO:72:ARG:HA	1.82	0.43
20:AB:118:THR:HA	20:AB:121:GLN:HB3	2.00	0.43
23:BB:28:A:O2'	23:BB:29:U:H5'	2.17	0.43
23:BB:275:C:N3	23:BB:276:U:H1'	2.34	0.43
23:BB:1144:A:O2'	23:BB:1145:C:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1455:G:H5'	42:BN:60:VAL:HG21	2.00	0.43
23:BB:1468:U:H2'	23:BB:1522:A:N6	2.34	0.43
23:BB:1561:C:H2'	23:BB:1562:U:H6	1.84	0.43
23:BB:1844:C:O3'	25:BC:255:LYS:HE2	2.18	0.43
23:BB:2031:A:C6	23:BB:2498:C:H1'	2.53	0.43
23:BB:2109:U:H2'	23:BB:2110:G:O4'	2.19	0.43
23:BB:2702:G:H2'	23:BB:2703:C:C6	2.53	0.43
23:BB:2727:A:O3'	27:BK:70:ARG:NH2	2.51	0.43
23:BB:2752:C:O2	23:BB:2752:C:H2'	2.18	0.43
24:BI:37:PHE:HB2	24:BI:66:PHE:CZ	2.54	0.43
25:BC:15:VAL:HG13	25:BC:204:LEU:O	2.19	0.43
25:BC:196:ASN:O	25:BC:197:ALA:HB3	2.19	0.43
28:BP:64:SER:O	28:BP:66:GLY:N	2.47	0.43
32:B4:9:LYS:O	32:B4:10:LEU:HD23	2.19	0.43
33:B1:46:VAL:HG22	33:B1:47:ILE:H	1.84	0.43
37:BL:18:ARG:C	37:BL:19:LEU:HD12	2.39	0.43
37:BL:118:THR:O	37:BL:120:VAL:HG23	2.19	0.43
38:BM:127:LYS:HD2	38:BM:127:LYS:N	2.32	0.43
40:BH:2:GLN:O	40:BH:3:VAL:O	2.37	0.43
40:BH:144:VAL:HG12	40:BH:145:ASN:N	2.34	0.43
44:BQ:106:THR:O	44:BQ:109:VAL:HB	2.19	0.43
45:BS:51:LEU:C	45:BS:53:SER:H	2.20	0.43
47:BF:29:ARG:CD	47:BF:29:ARG:H	2.31	0.43
48:BG:97:VAL:HA	48:BG:102:ILE:HA	2.01	0.43
48:BG:162:ARG:CZ	48:BG:168:VAL:HG21	2.49	0.43
50:BT:11:LEU:CD2	50:BT:46:ALA:HB1	2.44	0.43
51:BZ:7:VAL:HG21	51:BZ:59:ILE:CD1	2.44	0.43
52:BW:54:ARG:C	52:BW:56:HIS:H	2.22	0.43
53:B6:29:ARG:O	53:B6:30:THR:O	2.37	0.43
53:B6:90:LEU:O	53:B6:92:PRO:HD3	2.19	0.43
1:CA:62:U:H2'	1:CA:63:C:H6	1.80	0.43
1:CA:159:G:H5'	1:CA:160:A:OP2	2.18	0.43
1:CA:560:A:C6	1:CA:566:G:O4'	2.71	0.43
1:CA:611:C:H2'	1:CA:612:C:H6	1.82	0.43
1:CA:704:A:C2	1:CA:705:G:H1'	2.53	0.43
1:CA:803:G:H2'	1:CA:804:U:O4'	2.18	0.43
1:CA:812:G:OP2	1:CA:902:G:N2	2.50	0.43
1:CA:1053:G:C4'	1:CA:1054:C:H5'	2.49	0.43
1:CA:1206:G:O4'	2:CC:193:GLY:N	2.52	0.43
1:CA:1297:G:H1'	1:CA:1298:U:C5	2.53	0.43
1:CA:1324:A:H2'	1:CA:1325:C:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1379:G:N7	6:CG:2:ARG:CZ	2.81	0.43
2:CC:5:HIS:O	2:CC:9:ILE:HG22	2.19	0.43
2:CC:106:ARG:HG2	2:CC:106:ARG:O	2.19	0.43
3:CD:100:VAL:HG11	3:CD:142:VAL:HG21	2.01	0.43
3:CD:202:LEU:O	3:CD:202:LEU:HD12	2.19	0.43
5:CF:64:VAL:CG1	5:CF:65:GLU:N	2.81	0.43
6:CG:43:TYR:HA	6:CG:46:LEU:HB3	2.01	0.43
8:CI:17:ARG:O	8:CI:64:ILE:HA	2.18	0.43
8:CI:66:VAL:CG1	8:CI:74:GLN:HG3	2.49	0.43
9:CJ:14:ASP:OD1	9:CJ:17:LEU:HB2	2.18	0.43
16:CQ:30:HIS:HD2	16:CQ:37:ILE:HD11	1.84	0.43
16:CQ:60:ILE:HD13	16:CQ:60:ILE:H	1.84	0.43
18:CS:14:LEU:O	18:CS:18:VAL:HG12	2.18	0.43
18:CS:52:ASN:CG	18:CS:53:GLY:N	2.72	0.43
20:CB:19:THR:O	20:CB:20:ARG:HD2	2.19	0.43
20:CB:48:MET:H	20:CB:48:MET:HG2	1.36	0.43
21:CU:24:LYS:NZ	21:CU:25:ALA:H	2.11	0.43
22:DA:9:G:OP1	43:DO:25:ARG:NH1	2.52	0.43
22:DA:52:A:OP1	22:DA:52:A:H4'	2.18	0.43
23:DB:132:G:H2'	23:DB:133:U:C6	2.53	0.43
23:DB:202:U:H2'	23:DB:203:A:O4'	2.19	0.43
23:DB:739:A:H5"	23:DB:1784:A:C2	2.54	0.43
23:DB:760:G:C2'	23:DB:761:A:H5'	2.49	0.43
23:DB:809:G:H2'	23:DB:810:U:H6	1.82	0.43
23:DB:1545:A:H2'	23:DB:1546:G:O4'	2.19	0.43
23:DB:1693:U:H4'	23:DB:1694:C:OP2	2.18	0.43
23:DB:1908:C:O2'	23:DB:1909:C:H5'	2.19	0.43
23:DB:2269:G:H4'	52:DW:19:ARG:HH12	1.83	0.43
23:DB:2332:C:C1'	23:DB:2336:A:N7	2.82	0.43
23:DB:2734:A:C2'	23:DB:2735:G:H5'	2.45	0.43
23:DB:2864:G:H2'	23:DB:2865:U:C6	2.54	0.43
24:DI:12:VAL:HG13	24:DI:41:PHE:CE2	2.54	0.43
29:DE:118:LEU:HD23	29:DE:186:VAL:HG13	2.00	0.43
32:D4:25:VAL:HB	32:D4:35:GLN:HE21	1.84	0.43
33:D1:35:LEU:N	33:D1:35:LEU:CD2	2.82	0.43
34:D3:20:GLY:HA3	34:D3:48:MET:CE	2.49	0.43
35:DV:72:VAL:HG12	35:DV:93:ARG:CA	2.46	0.43
37:DL:92:LEU:HD23	37:DL:124:GLY:HA3	2.00	0.43
38:DM:18:ARG:C	38:DM:38:ARG:HH22	2.22	0.43
42:DN:55:ALA:HA	42:DN:80:PHE:CE1	2.54	0.43
43:DO:28:VAL:HG21	43:DO:103:VAL:HG13	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DS:2:GLU:O	45:DS:107:VAL:O	2.37	0.43
48:DG:10:VAL:HG13	48:DG:14:VAL:CG2	2.49	0.43
48:DG:145:ALA:O	48:DG:148:ARG:HD2	2.18	0.43
1:AA:88:U:O2'	1:AA:89:U:C6	2.72	0.43
1:AA:152:A:H2'	1:AA:153:C:O4'	2.18	0.43
1:AA:392:C:H2'	1:AA:393:A:C8	2.54	0.43
1:AA:410:G:H2'	1:AA:429:U:C5	2.54	0.43
1:AA:490:C:H2'	1:AA:491:G:O4'	2.19	0.43
1:AA:537:G:H5"	11:AL:109:ARG:NH1	2.34	0.43
1:AA:555:U:H2'	1:AA:556:C:H6	1.83	0.43
1:AA:587:G:H4'	7:AH:3:GLN:HA	2.01	0.43
1:AA:691:G:H1'	1:AA:696:A:N6	2.33	0.43
1:AA:947:G:H2'	1:AA:948:C:H6	1.83	0.43
1:AA:1114:C:H2'	1:AA:1115:U:H6	1.84	0.43
10:AK:16:SER:N	10:AK:77:GLY:O	2.43	0.43
12:AM:77:LYS:O	12:AM:80:MET:HB2	2.19	0.43
16:AQ:10:ARG:O	16:AQ:10:ARG:HG3	2.19	0.43
18:AS:39:ILE:HB	18:AS:66:VAL:O	2.19	0.43
19:AT:24:ARG:HD3	19:AT:28:ARG:NH2	2.34	0.43
20:AB:121:GLN:NE2	20:AB:122:ASP:H	2.12	0.43
22:BA:42:C:C6	47:BF:65:LEU:HD22	2.54	0.43
23:BB:57:C:H2'	23:BB:58:G:H8	1.84	0.43
23:BB:116:C:O2'	23:BB:117:G:H5'	2.19	0.43
23:BB:208:C:H2'	23:BB:209:C:C6	2.53	0.43
23:BB:960:A:H61	38:BM:82:MET:CE	2.32	0.43
23:BB:1064:C:O4'	24:BI:90:GLY:HA2	2.18	0.43
23:BB:1064:C:O2'	23:BB:1065:U:H5'	2.19	0.43
23:BB:1081:U:H4'	24:BI:123:ALA:HB1	2.00	0.43
23:BB:1350:C:H2'	23:BB:1350:C:O2	2.19	0.43
23:BB:1561:C:H2'	23:BB:1562:U:C6	2.53	0.43
23:BB:1628:G:O2'	23:BB:1629:U:H5'	2.18	0.43
23:BB:1824:G:OP1	25:BC:51:ARG:HD3	2.19	0.43
23:BB:1880:U:H2'	23:BB:1881:C:C6	2.54	0.43
23:BB:1902:C:H2'	23:BB:1903:G:O4'	2.18	0.43
23:BB:1902:C:H4'	25:BC:241:LYS:O	2.19	0.43
23:BB:1994:C:O2'	23:BB:1995:U:H5'	2.18	0.43
23:BB:2064:C:H1'	23:BB:2450:A:C5	2.54	0.43
23:BB:2444:G:P	29:BE:63:LYS:HD2	2.59	0.43
23:BB:2521:C:H2'	23:BB:2522:U:C6	2.54	0.43
23:BB:2779:U:H5"	23:BB:2780:G:H3'	2.01	0.43
25:BC:41:GLY:CA	25:BC:53:ILE:HG21	2.42	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:90:ILE:HG23	25:BC:91:ALA:N	2.33	0.43
26:BD:187:LEU:HD12	26:BD:188:LEU:N	2.34	0.43
31:B0:2:VAL:HG12	31:B0:3:GLN:H	1.84	0.43
31:B0:41:HIS:O	31:B0:42:ILE:O	2.37	0.43
33:B1:3:GLY:C	33:B1:5:ARG:N	2.72	0.43
37:BL:75:ALA:HB3	37:BL:108:ALA:HB2	2.01	0.43
38:BM:93:VAL:HG22	38:BM:94:ALA:H	1.83	0.43
42:BN:70:THR:O	42:BN:70:THR:OG1	2.37	0.43
42:BN:107:ASN:ND2	45:BS:40:ASN:ND2	2.62	0.43
43:BO:64:TYR:HD2	43:BO:67:ASN:HB2	1.84	0.43
43:BO:106:LEU:HG	43:BO:107:ALA:N	2.34	0.43
46:BU:48:VAL:O	46:BU:48:VAL:HG13	2.19	0.43
48:BG:34:ARG:N	48:BG:34:ARG:CD	2.81	0.43
48:BG:91:VAL:O	48:BG:93:TYR:N	2.49	0.43
48:BG:106:LEU:N	48:BG:106:LEU:HD23	2.34	0.43
53:B6:41:LEU:CD2	53:B6:83:ILE:HD13	2.49	0.43
1:CA:52:C:H2'	1:CA:53:A:C8	2.53	0.43
1:CA:137:U:H2'	1:CA:138:G:H8	1.84	0.43
1:CA:197:A:H1'	1:CA:198:G:C1'	2.49	0.43
1:CA:220:G:O2'	1:CA:221:C:H5'	2.18	0.43
1:CA:356:A:H1'	1:CA:368:U:O2'	2.18	0.43
1:CA:373:A:C1'	1:CA:481:G:H1'	2.48	0.43
1:CA:483:C:H2'	1:CA:484:G:N7	2.34	0.43
1:CA:766:A:H2'	1:CA:767:A:O4'	2.18	0.43
1:CA:947:G:H4'	12:CM:107:THR:OG1	2.18	0.43
1:CA:1101:A:H62	20:CB:173:LYS:HE3	1.83	0.43
1:CA:1160:G:H4'	20:CB:130:LYS:HB2	2.01	0.43
1:CA:1272:G:H2'	1:CA:1273:C:C6	2.54	0.43
1:CA:1434:A:H2'	1:CA:1435:G:C8	2.53	0.43
1:CA:1492:A:H2'	1:CA:1493:A:H8	1.84	0.43
3:CD:7:LYS:HB3	3:CD:20:LEU:HB3	2.01	0.43
3:CD:24:VAL:HG23	3:CD:25:ARG:N	2.32	0.43
3:CD:103:ARG:NH2	3:CD:110:ARG:HH21	2.16	0.43
5:CF:38:ARG:NH1	5:CF:96:VAL:HG12	2.34	0.43
6:CG:118:ARG:H	6:CG:118:ARG:HG3	1.65	0.43
8:CI:19:PHE:HB2	8:CI:63:TYR:CB	2.45	0.43
9:CJ:8:ILE:HD12	9:CJ:8:ILE:N	2.34	0.43
13:CN:47:LEU:C	13:CN:49:THR:N	2.71	0.43
19:CT:49:ALA:HA	19:CT:52:GLU:CD	2.39	0.43
20:CB:101:THR:HG23	20:CB:102:ASN:H	1.83	0.43
22:DA:24:G:O2'	22:DA:25:U:H5"	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:63:A:H8	23:DB:63:A:OP2	2.02	0.43
23:DB:90:U:H2'	23:DB:91:A:C2	2.54	0.43
23:DB:660:C:H2'	23:DB:661:A:C8	2.54	0.43
23:DB:672:C:O2'	23:DB:673:C:H5'	2.18	0.43
23:DB:745:G:O2'	23:DB:748:G:H1'	2.19	0.43
23:DB:958:U:H5"	23:DB:959:A:O5'	2.18	0.43
23:DB:1171:G:H2'	23:DB:1172:C:C6	2.53	0.43
23:DB:1467:U:O2'	23:DB:1468:U:H5'	2.19	0.43
23:DB:1544:A:H2'	23:DB:1545:A:C8	2.54	0.43
23:DB:1613:G:O4'	36:D2:3:ARG:HG3	2.18	0.43
23:DB:2206:C:O2'	23:DB:2207:C:H5'	2.19	0.43
23:DB:2231:U:H2'	23:DB:2232:C:O4'	2.18	0.43
23:DB:2556:C:H2'	23:DB:2557:G:O4'	2.18	0.43
23:DB:2559:C:O2'	23:DB:2560:A:H5'	2.19	0.43
23:DB:2760:C:O2	23:DB:2760:C:H2'	2.19	0.43
23:DB:2793:C:H2'	23:DB:2794:C:C6	2.54	0.43
27:DK:43:ILE:HD12	27:DK:56:ASP:HB2	2.01	0.43
28:DP:83:ILE:HD13	28:DP:83:ILE:O	2.18	0.43
29:DE:111:GLU:HG2	29:DE:114:ARG:HH21	1.84	0.43
29:DE:148:ILE:HA	29:DE:187:VAL:CB	2.43	0.43
33:D1:36:LYS:HA	33:D1:46:VAL:O	2.19	0.43
34:D3:22:LYS:HA	34:D3:47:ALA:O	2.19	0.43
38:DM:25:ASP:OD2	38:DM:25:ASP:N	2.52	0.43
38:DM:38:ARG:HA	38:DM:98:PRO:HD3	2.01	0.43
44:DQ:63:ARG:H	44:DQ:63:ARG:HG3	1.57	0.43
46:DU:40:LEU:HD12	46:DU:40:LEU:N	2.32	0.43
46:DU:73:ASN:OD1	46:DU:75:ALA:HB3	2.17	0.43
47:DF:135:ILE:HD12	47:DF:135:ILE:O	2.19	0.43
48:DG:30:GLY:N	48:DG:78:VAL:HA	2.34	0.43
52:DW:50:VAL:HG23	52:DW:61:LYS:CD	2.35	0.43
52:DW:61:LYS:HB3	52:DW:62:ALA:H	1.46	0.43
53:D6:123:GLU:O	53:D6:127:VAL:HG23	2.19	0.43
1:AA:36:C:O2'	1:AA:37:U:H5'	2.19	0.42
1:AA:170:U:O2'	1:AA:171:A:H5'	2.18	0.42
1:AA:185:U:H2'	1:AA:186:C:H6	1.84	0.42
1:AA:308:C:H2'	1:AA:309:A:H8	1.84	0.42
1:AA:648:A:O2'	1:AA:649:A:H5'	2.19	0.42
1:AA:728:A:O2'	1:AA:729:A:H5'	2.19	0.42
1:AA:747:A:N6	1:AA:748:G:C6	2.87	0.42
1:AA:802:A:H2'	1:AA:803:G:O4'	2.18	0.42
1:AA:948:C:H2'	1:AA:949:A:H8	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:961:U:N3	1:AA:983:A:N6	2.67	0.42
1:AA:1004:A:H2'	1:AA:1005:A:O4'	2.19	0.42
1:AA:1350:A:OP2	8:AI:119:LYS:HE3	2.19	0.42
1:AA:1532:U:C2	1:AA:1534:A:H5"	2.54	0.42
4:AE:53:ARG:NH2	4:AE:54:GLU:HG3	2.33	0.42
6:AG:145:GLU:C	6:AG:148:LYS:H	2.22	0.42
7:AH:54:THR:HG23	7:AH:55:LYS:N	2.34	0.42
9:AJ:14:ASP:OD1	9:AJ:17:LEU:HB2	2.19	0.42
9:AJ:53:ILE:HG13	13:AN:84:ARG:NE	2.34	0.42
10:AK:70:ALA:HA	10:AK:73:VAL:CG2	2.49	0.42
10:AK:109:ILE:HG22	21:AU:16:ARG:HH12	1.84	0.42
13:AN:52:ARG:C	13:AN:54:SER:N	2.72	0.42
13:AN:92:ILE:HD12	13:AN:92:ILE:N	2.34	0.42
16:AQ:30:HIS:HD2	16:AQ:37:ILE:HD11	1.84	0.42
18:AS:17:LYS:HB3	18:AS:30:LEU:HD22	2.00	0.42
18:AS:66:VAL:C	18:AS:68:HIS:H	2.22	0.42
19:AT:81:GLN:C	19:AT:83:ASN:N	2.72	0.42
20:AB:125:PHE:CD2	20:AB:126:ASP:N	2.87	0.42
21:AU:3:ILE:CG2	21:AU:19:LYS:HD2	2.49	0.42
23:BB:305:C:O2'	23:BB:306:U:H5'	2.19	0.42
23:BB:689:A:H2'	23:BB:690:G:H8	1.84	0.42
23:BB:956:G:H1'	38:BM:82:MET:HE1	2.00	0.42
23:BB:1592:C:H2'	23:BB:1593:A:C8	2.53	0.42
23:BB:2020:A:H5'	31:B0:8:THR:HB	2.01	0.42
23:BB:2051:A:H5'	23:BB:2578:G:O4'	2.19	0.42
23:BB:2199:A:H3'	23:BB:2200:C:C6	2.54	0.42
23:BB:2223:G:H2'	23:BB:2224:G:H5'	2.01	0.42
23:BB:2373:G:O2'	23:BB:2374:C:H5'	2.19	0.42
23:BB:2485:G:C2'	23:BB:2486:C:H5'	2.48	0.42
23:BB:2526:G:N3	32:B4:1:MET:N	2.62	0.42
29:BE:136:GLN:NE2	29:BE:139:LYS:HD3	2.34	0.42
29:BE:161:ALA:HB1	29:BE:167:VAL:HG22	2.01	0.42
33:B1:50:GLU:O	33:B1:51:ALA:HB2	2.19	0.42
37:BL:81:ASP:O	37:BL:82:LEU:HB2	2.19	0.42
40:BH:147:VAL:HG12	40:BH:148:ALA:H	1.84	0.42
41:BJ:45:THR:H	41:BJ:46:PRO:CD	2.25	0.42
42:BN:41:ALA:C	42:BN:43:GLU:N	2.72	0.42
44:BQ:9:ALA:C	44:BQ:11:ALA:N	2.71	0.42
44:BQ:9:ALA:O	44:BQ:11:ALA:N	2.52	0.42
44:BQ:73:ILE:HG13	44:BQ:74:SER:N	2.34	0.42
47:BF:68:LYS:HG3	47:BF:81:GLY:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:111:ARG:NH2	47:BF:113:PHE:HB2	2.34	0.42
48:BG:8:VAL:HG22	48:BG:51:PHE:HE2	1.84	0.42
48:BG:34:ARG:NH1	48:BG:34:ARG:HG2	2.33	0.42
48:BG:90:GLY:HA2	48:BG:159:LYS:HB3	2.01	0.42
51:BZ:63:GLY:O	51:BZ:67:VAL:HG23	2.19	0.42
52:BW:29:SER:O	52:BW:30:VAL:HB	2.19	0.42
53:B6:30:THR:HG21	53:B6:182:GLU:OE2	2.19	0.42
1:CA:17:U:O4'	1:CA:1080:A:O4'	2.37	0.42
1:CA:63:C:H5'	1:CA:64:G:OP2	2.18	0.42
1:CA:66:A:H4'	1:CA:173:U:C4	2.54	0.42
1:CA:230:G:O2'	1:CA:231:U:H5'	2.18	0.42
1:CA:404:G:O2'	1:CA:405:U:H5'	2.19	0.42
1:CA:481:G:O2'	1:CA:482:A:H8	2.02	0.42
1:CA:545:C:O2'	1:CA:546:A:H5'	2.19	0.42
1:CA:734:G:H2'	1:CA:735:C:H6	1.84	0.42
1:CA:1026:G:H2'	1:CA:1026:G:N3	2.34	0.42
1:CA:1060:U:C5'	9:CJ:53:ILE:HG12	2.49	0.42
1:CA:1314:C:N4	18:CS:3:SER:HB3	2.32	0.42
2:CC:26:LYS:CG	2:CC:27:GLU:HG3	2.47	0.42
2:CC:155:ARG:H	2:CC:162:ALA:CA	2.32	0.42
4:CE:30:PHE:CD2	4:CE:30:PHE:N	2.87	0.42
4:CE:55:VAL:O	4:CE:59:ILE:HG13	2.19	0.42
5:CF:46:GLN:CD	5:CF:47:LEU:H	2.22	0.42
7:CH:25:THR:O	7:CH:26:MET:HB3	2.19	0.42
7:CH:51:GLU:HG2	7:CH:52:GLY:N	2.29	0.42
12:CM:77:LYS:O	12:CM:80:MET:HB2	2.19	0.42
16:CQ:74:LEU:C	16:CQ:74:LEU:HD13	2.40	0.42
18:CS:58:PRO:O	18:CS:59:VAL:HG13	2.18	0.42
20:CB:64:GLY:HA2	20:CB:158:ASP:OD1	2.19	0.42
20:CB:113:LEU:HD23	20:CB:114:LYS:N	2.34	0.42
21:CU:25:ALA:C	21:CU:27:VAL:H	2.22	0.42
23:DB:265:A:O2'	23:DB:266:G:C4'	2.67	0.42
23:DB:699:A:H4'	23:DB:1634:A:C5	2.54	0.42
23:DB:851:C:H2'	23:DB:852:U:C6	2.54	0.42
23:DB:1168:G:C6	23:DB:1182:G:C6	3.07	0.42
23:DB:1347:A:H2'	23:DB:1348:C:O4'	2.18	0.42
23:DB:1392:A:C5	23:DB:1393:A:C6	3.07	0.42
23:DB:1486:U:O2'	23:DB:1487:U:H5'	2.19	0.42
23:DB:1754:A:OP1	28:DP:93:LYS:HD3	2.19	0.42
23:DB:2151:U:O2'	23:DB:2152:G:H5'	2.19	0.42
23:DB:2359:C:O3'	34:D3:50:SER:CB	2.64	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2479:U:OP1	23:DB:2537:U:H1'	2.18	0.42
23:DB:2572:A:P	26:DD:152:PRO:HD3	2.59	0.42
23:DB:2752:C:H2'	23:DB:2753:A:O4'	2.19	0.42
23:DB:2756:U:C1'	23:DB:2757:A:H5"	2.48	0.42
24:DI:129:GLU:CB	24:DI:133:ARG:HH12	2.32	0.42
25:DC:140:VAL:O	25:DC:141:HIS:HB2	2.19	0.42
25:DC:202:ARG:HH21	25:DC:202:ARG:CB	2.31	0.42
25:DC:202:ARG:HH21	25:DC:202:ARG:HB2	1.83	0.42
25:DC:245:THR:C	25:DC:247:TRP:N	2.71	0.42
26:DD:8:LYS:O	26:DD:9:VAL:HB	2.19	0.42
26:DD:67:HIS:O	26:DD:70:LYS:HB3	2.19	0.42
26:DD:177:VAL:O	26:DD:177:VAL:HG23	2.19	0.42
28:DP:97:TYR:O	28:DP:100:ARG:HD3	2.20	0.42
29:DE:33:VAL:O	29:DE:36:ALA:HB3	2.19	0.42
37:DL:3:LEU:O	37:DL:5:THR:N	2.51	0.42
42:DN:96:ARG:HG2	42:DN:98:LEU:CD2	2.49	0.42
46:DU:11:ILE:HA	46:DU:20:LYS:O	2.19	0.42
47:DF:133:GLU:HA	47:DF:150:GLY:HA2	2.01	0.42
48:DG:43:LYS:N	48:DG:50:THR:O	2.47	0.42
48:DG:97:VAL:HA	48:DG:102:ILE:HA	2.01	0.42
51:DZ:39:TRP:NE1	51:DZ:41:GLU:HG2	2.34	0.42
53:D6:38:LEU:CD1	53:D6:66:LEU:HD23	2.47	0.42
1:AA:9:G:N7	1:AA:558:G:O2'	2.50	0.42
1:AA:102:G:H2'	1:AA:103:U:H6	1.84	0.42
1:AA:134:G:H2'	1:AA:135:C:O4'	2.19	0.42
1:AA:542:G:O2'	1:AA:543:U:H5'	2.19	0.42
1:AA:642:A:H2'	1:AA:643:C:C6	2.54	0.42
1:AA:676:A:O2'	1:AA:677:U:H5'	2.18	0.42
1:AA:708:C:H2'	1:AA:709:U:C6	2.54	0.42
1:AA:916:U:H2'	1:AA:917:G:H8	1.84	0.42
1:AA:1332:A:H2'	1:AA:1333:A:O4'	2.19	0.42
1:AA:1398:A:H5'	1:AA:1398:A:H8	1.83	0.42
1:AA:1434:A:H2'	1:AA:1435:G:C8	2.54	0.42
3:AD:31:CYS:O	3:AD:32:LYS:HB2	2.19	0.42
4:AE:29:ILE:O	4:AE:29:ILE:HG22	2.17	0.42
5:AF:9:MET:HA	5:AF:58:HIS:O	2.19	0.42
5:AF:16:GLU:CD	5:AF:16:GLU:N	2.71	0.42
6:AG:146:ALA:C	10:AK:55:ARG:NH2	2.73	0.42
13:AN:97:LYS:NZ	13:AN:97:LYS:HB3	2.34	0.42
21:AU:3:ILE:HG22	21:AU:19:LYS:NZ	2.34	0.42
23:BB:527:C:H5'	57:BB:3416:HOH:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:527:C:O2	23:BB:527:C:O4'	2.34	0.42
23:BB:699:A:H2'	23:BB:700:G:O4'	2.19	0.42
23:BB:851:C:O2'	23:BB:852:U:H5'	2.18	0.42
23:BB:1281:G:O2'	23:BB:1282:U:H5'	2.18	0.42
23:BB:1713:A:H4'	23:BB:1714:U:OP2	2.19	0.42
23:BB:2234:G:O2'	23:BB:2235:G:H5'	2.18	0.42
23:BB:2301:C:O2'	23:BB:2302:U:H5'	2.18	0.42
23:BB:2748:A:H1'	48:BG:66:THR:HB	2.01	0.42
23:BB:2845:U:O3'	28:BP:52:ARG:NH1	2.51	0.42
25:BC:66:PHE:CD2	25:BC:104:LEU:HD11	2.54	0.42
25:BC:204:LEU:CD2	25:BC:209:ALA:HB1	2.49	0.42
26:BD:14:ILE:HG23	26:BD:14:ILE:O	2.18	0.42
26:BD:32:ASN:HB3	26:BD:50:VAL:HG21	2.00	0.42
26:BD:56:LYS:CD	26:BD:58:ASN:HB3	2.49	0.42
28:BP:52:ARG:HG2	28:BP:52:ARG:NH1	2.32	0.42
29:BE:46:GLN:HB3	29:BE:86:ALA:HA	2.01	0.42
31:B0:28:SER:HB2	31:B0:39:ARG:HG2	2.01	0.42
32:B4:25:VAL:HB	32:B4:35:GLN:HE21	1.84	0.42
35:BV:35:GLU:HG3	35:BV:93:ARG:CZ	2.49	0.42
38:BM:31:PHE:CE2	38:BM:110:GLU:HA	2.53	0.42
38:BM:35:ALA:HB2	38:BM:100:LYS:H	1.84	0.42
38:BM:66:ARG:CB	38:BM:101:VAL:HG13	2.49	0.42
38:BM:66:ARG:HD2	38:BM:101:VAL:HG11	2.00	0.42
40:BH:80:ILE:HB	40:BH:144:VAL:CG1	2.48	0.42
42:BN:22:ARG:HG3	42:BN:70:THR:HA	2.02	0.42
43:BO:39:VAL:HB	43:BO:49:VAL:HG22	2.00	0.42
45:BS:25:ARG:NE	45:BS:74:ILE:HG23	2.35	0.42
45:BS:28:LYS:HD2	45:BS:30:SER:H	1.85	0.42
46:BU:10:VAL:HA	46:BU:70:ALA:O	2.19	0.42
46:BU:21:ARG:HG3	46:BU:21:ARG:HH11	1.83	0.42
47:BF:141:ASP:HB3	47:BF:144:LYS:HB2	2.01	0.42
48:BG:43:LYS:O	48:BG:49:LEU:HA	2.20	0.42
50:BT:43:ILE:O	50:BT:46:ALA:HB3	2.18	0.42
1:CA:121:U:OP1	1:CA:121:U:H3'	2.18	0.42
1:CA:537:G:H5"	11:CL:109:ARG:NH1	2.34	0.42
1:CA:591:U:H2'	1:CA:592:G:C8	2.53	0.42
1:CA:801:U:H2'	1:CA:802:A:H8	1.84	0.42
1:CA:908:A:H2'	1:CA:909:A:H8	1.84	0.42
1:CA:1030:U:H5'	1:CA:1031:C:C2	2.54	0.42
1:CA:1117:A:H4'	8:CI:105:ARG:NH1	2.34	0.42
1:CA:1292:G:H2'	1:CA:1293:C:H6	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1347:G:C8	8:CI:108:ARG:HD2	2.54	0.42
1:CA:1350:A:H2'	1:CA:1351:U:C6	2.55	0.42
1:CA:1534:A:N6	21:CU:44:ARG:NH2	2.56	0.42
3:CD:96:ARG:NH1	3:CD:133:SER:HA	2.34	0.42
6:CG:22:LEU:O	6:CG:25:PHE:HB3	2.19	0.42
9:CJ:10:LEU:HD11	9:CJ:25:ILE:HD12	2.01	0.42
10:CK:126:ARG:HB2	21:CU:33:ARG:CD	2.49	0.42
11:CL:13:ARG:O	11:CL:14:LYS:HB3	2.20	0.42
11:CL:64:SER:HA	11:CL:94:TYR:O	2.19	0.42
16:CQ:30:HIS:CG	16:CQ:33:TYR:HB2	2.54	0.42
17:CR:25:ILE:O	17:CR:29:LYS:HG3	2.19	0.42
20:CB:16:GLY:O	20:CB:17:HIS:HB2	2.18	0.42
23:DB:26:G:H1'	23:DB:515:A:H61	1.84	0.42
23:DB:315:G:H2'	23:DB:316:C:H6	1.84	0.42
23:DB:358:U:H2'	23:DB:359:G:O4'	2.19	0.42
23:DB:506:G:H1'	23:DB:507:A:H8	1.82	0.42
23:DB:692:C:H2'	23:DB:693:A:H8	1.84	0.42
23:DB:1341:G:H3'	23:DB:1397:U:O2	2.19	0.42
23:DB:1833:C:H2'	23:DB:1834:U:H6	1.83	0.42
23:DB:1902:C:H4'	25:DC:241:LYS:O	2.19	0.42
23:DB:2109:U:O2'	23:DB:2110:G:H5'	2.18	0.42
23:DB:2215:C:H2'	23:DB:2216:G:H8	1.84	0.42
23:DB:2269:G:O3'	52:DW:18:LYS:HG2	2.19	0.42
23:DB:2756:U:H4'	23:DB:2757:A:O5'	2.18	0.42
23:DB:2840:C:H2'	23:DB:2841:C:C6	2.53	0.42
25:DC:131:MET:HE2	25:DC:187:CYS:O	2.18	0.42
26:DD:25:THR:HG21	26:DD:193:VAL:HG21	1.99	0.42
26:DD:193:VAL:O	26:DD:194:PRO:O	2.37	0.42
27:DK:115:ILE:CG2	27:DK:116:ILE:N	2.81	0.42
29:DE:7:ASP:N	29:DE:7:ASP:OD2	2.52	0.42
29:DE:146:VAL:HG12	29:DE:147:LEU:N	2.34	0.42
30:DY:23:LEU:CD1	30:DY:28:LEU:HB2	2.49	0.42
32:D4:11:CYS:HB3	32:D4:33:HIS:HE1	1.84	0.42
33:D1:39:ASP:O	33:D1:43:ARG:N	2.51	0.42
35:DV:77:VAL:CG2	35:DV:89:ILE:HG23	2.43	0.42
37:DL:96:LYS:HE3	37:DL:102:GLY:O	2.19	0.42
39:DX:2:LYS:HB2	39:DX:3:ALA:H	1.62	0.42
40:DH:125:THR:CA	40:DH:146:VAL:HB	2.48	0.42
40:DH:128:HIS:C	40:DH:143:ILE:HG23	2.39	0.42
41:DJ:35:ARG:HG3	41:DJ:52:ASP:OD1	2.19	0.42
41:DJ:127:GLY:O	41:DJ:128:ASN:HB2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DN:25:ALA:HB1	42:DN:48:VAL:CG1	2.49	0.42
42:DN:41:ALA:C	42:DN:43:GLU:N	2.72	0.42
44:DQ:14:LYS:HA	44:DQ:17:LEU:HB3	2.01	0.42
44:DQ:70:GLN:HA	44:DQ:70:GLN:NE2	2.34	0.42
45:DS:84:ARG:HB3	45:DS:96:ILE:HG23	2.01	0.42
46:DU:10:VAL:O	46:DU:21:ARG:HG2	2.18	0.42
46:DU:41:VAL:O	46:DU:59:GLU:HG3	2.18	0.42
46:DU:85:ARG:HH11	46:DU:86:PHE:H	1.65	0.42
47:DF:79:ARG:H	47:DF:82:TYR:HB2	1.84	0.42
48:DG:6:ALA:HB3	48:DG:68:ARG:CG	2.49	0.42
48:DG:10:VAL:N	48:DG:48:THR:HG22	2.35	0.42
1:AA:220:G:O2'	1:AA:221:C:H5'	2.20	0.42
1:AA:435:A:N3	1:AA:435:A:H2'	2.32	0.42
1:AA:731:G:OP1	1:AA:766:A:H1'	2.20	0.42
1:AA:1256:A:H4'	1:AA:1258:G:C8	2.53	0.42
1:AA:1258:G:C2	1:AA:1278:G:N2	2.88	0.42
2:AC:155:ARG:H	2:AC:162:ALA:HB1	1.83	0.42
3:AD:61:ARG:HG2	3:AD:66:VAL:O	2.20	0.42
6:AG:148:LYS:O	6:AG:151:ALA:HB3	2.19	0.42
8:AI:20:ILE:HG23	8:AI:60:LEU:HD12	2.00	0.42
10:AK:122:PRO:HD2	21:AU:35:GLU:HG2	2.00	0.42
11:AL:2:THR:O	11:AL:5:GLN:HB2	2.18	0.42
12:AM:68:LEU:O	12:AM:72:ILE:HB	2.19	0.42
12:AM:80:MET:C	12:AM:82:LEU:N	2.72	0.42
13:AN:47:LEU:C	13:AN:49:THR:N	2.72	0.42
20:AB:118:THR:O	20:AB:124:THR:OG1	2.38	0.42
22:BA:66:A:N6	22:BA:107:G:H2'	2.27	0.42
23:BB:388:G:N7	23:BB:390:U:H2'	2.35	0.42
23:BB:643:A:C5	23:BB:644:A:N7	2.87	0.42
23:BB:728:G:O2'	23:BB:730:A:H8	1.96	0.42
23:BB:1079:C:O2'	24:BI:133:ARG:NH2	2.52	0.42
23:BB:1103:A:H2'	23:BB:1104:C:O4'	2.19	0.42
23:BB:1192:G:C2'	23:BB:1193:G:H5'	2.49	0.42
23:BB:1387:A:H5'	23:BB:1469:A:O2'	2.19	0.42
23:BB:2403:C:O2'	23:BB:2404:U:H5'	2.19	0.42
23:BB:2599:G:O2'	23:BB:2600:A:H5'	2.20	0.42
23:BB:2875:C:O2'	23:BB:2876:G:H5'	2.19	0.42
24:BI:14:ALA:CB	24:BI:50:LYS:HA	2.49	0.42
24:BI:15:GLY:O	24:BI:16:MET:HB2	2.19	0.42
25:BC:21:PRO:C	25:BC:23:LEU:H	2.23	0.42
25:BC:180:MET:HB2	25:BC:268:ARG:CB	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:211:ARG:HD2	25:BC:215:VAL:O	2.19	0.42
25:BC:231:HIS:HA	25:BC:241:LYS:HE3	2.01	0.42
26:BD:193:VAL:O	26:BD:194:PRO:O	2.37	0.42
29:BE:67:ARG:NH1	29:BE:70:SER:OG	2.52	0.42
29:BE:187:VAL:HG12	29:BE:188:MET:N	2.34	0.42
35:BV:5:ASN:N	35:BV:5:ASN:OD1	2.53	0.42
35:BV:76:ASP:O	35:BV:89:ILE:HG22	2.19	0.42
38:BM:40:ARG:HB2	38:BM:93:VAL:HG22	2.01	0.42
38:BM:57:VAL:O	38:BM:60:GLN:HG2	2.19	0.42
40:BH:32:PRO:O	40:BH:33:GLN:HB2	2.18	0.42
40:BH:90:LEU:HD22	40:BH:123:ARG:HA	2.01	0.42
40:BH:104:THR:O	40:BH:105:ALA:HB2	2.18	0.42
41:BJ:72:LYS:HB3	41:BJ:89:PHE:H	1.85	0.42
42:BN:24:MET:HG2	42:BN:44:LEU:HD13	2.00	0.42
45:BS:66:ILE:O	45:BS:69:LEU:HB2	2.19	0.42
46:BU:11:ILE:HA	46:BU:20:LYS:O	2.19	0.42
47:BF:111:ARG:O	47:BF:112:ASP:HB2	2.19	0.42
48:BG:116:LEU:HD23	48:BG:120:ILE:HD13	2.00	0.42
49:BR:7:SER:HB3	49:BR:12:HIS:ND1	2.35	0.42
51:BZ:40:VAL:CG2	51:BZ:43:GLU:HB3	2.50	0.42
51:BZ:63:GLY:HA3	51:BZ:66:THR:OG1	2.20	0.42
53:B6:38:LEU:HD22	53:B6:83:ILE:CD1	2.49	0.42
53:B6:77:LYS:C	53:B6:81:LYS:HE3	2.40	0.42
1:CA:486:U:H2'	1:CA:487:A:H8	1.85	0.42
1:CA:490:C:H2'	1:CA:491:G:O4'	2.19	0.42
1:CA:528:C:H41	11:CL:45:ASN:CG	2.22	0.42
1:CA:553:A:N6	1:CA:554:A:N6	2.67	0.42
1:CA:620:C:H2'	1:CA:621:A:C8	2.55	0.42
1:CA:656:G:O2'	1:CA:657:U:H5'	2.20	0.42
1:CA:688:G:H5'	10:CK:48:GLY:HA2	2.01	0.42
1:CA:844:G:OP2	1:CA:844:G:H3'	2.20	0.42
1:CA:1332:A:H2'	1:CA:1333:A:O4'	2.18	0.42
3:CD:78:ALA:O	3:CD:85:THR:HA	2.19	0.42
5:CF:46:GLN:CG	5:CF:47:LEU:N	2.81	0.42
5:CF:69:GLU:O	5:CF:73:GLU:HG2	2.18	0.42
6:CG:14:ASP:HB3	6:CG:18:GLY:N	2.35	0.42
9:CJ:65:TYR:HB3	13:CN:95:LEU:HD11	2.00	0.42
21:CU:34:ARG:HD2	21:CU:35:GLU:N	2.35	0.42
22:DA:51:G:H2'	22:DA:52:A:O5'	2.20	0.42
22:DA:83:G:H4'	30:DY:52:PHE:CE2	2.54	0.42
23:DB:11:C:H2'	23:DB:12:U:H5'	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:55:G:H2'	23:DB:56:A:H8	1.84	0.42
23:DB:66:C:O2'	23:DB:67:U:H5'	2.19	0.42
23:DB:279:A:N6	23:DB:361:G:O2'	2.52	0.42
23:DB:336:C:O2'	23:DB:337:C:H5'	2.19	0.42
23:DB:433:C:O2'	23:DB:434:U:H5'	2.19	0.42
23:DB:580:U:O3'	44:DQ:30:VAL:CG2	2.67	0.42
23:DB:1199:U:H5'	44:DQ:4:LYS:HD3	2.02	0.42
23:DB:1351:C:H2'	23:DB:1352:U:C1'	2.49	0.42
23:DB:1461:C:H2'	23:DB:1462:C:H6	1.83	0.42
23:DB:1665:A:O2'	23:DB:1666:G:H5'	2.20	0.42
23:DB:1682:G:H2'	23:DB:1683:U:C6	2.54	0.42
23:DB:1714:U:H3'	23:DB:1715:G:C5'	2.49	0.42
23:DB:1887:C:C2'	23:DB:1888:G:H5'	2.48	0.42
23:DB:1983:G:H4'	23:DB:2606:C:H4'	1.99	0.42
23:DB:2012:G:OP1	45:DS:98:LYS:HG2	2.18	0.42
23:DB:2040:G:H2'	23:DB:2041:U:O4'	2.19	0.42
23:DB:2234:G:O2'	23:DB:2235:G:H5'	2.19	0.42
23:DB:2434:A:H8	23:DB:2434:A:H2'	1.70	0.42
23:DB:2472:G:C3'	23:DB:2475:C:H42	2.32	0.42
23:DB:2521:C:H2'	23:DB:2522:U:C6	2.54	0.42
23:DB:2836:U:H2'	23:DB:2837:A:H8	1.85	0.42
26:DD:111:GLY:H	26:DD:194:PRO:CG	2.32	0.42
27:DK:79:PHE:HZ	27:DK:104:THR:HG23	1.84	0.42
28:DP:50:ARG:HB3	28:DP:57:ALA:O	2.19	0.42
29:DE:88:ARG:HA	29:DE:88:ARG:HD3	1.93	0.42
38:DM:116:ALA:C	38:DM:118:LYS:N	2.72	0.42
41:DJ:40:HIS:HE1	41:DJ:41:LYS:HE3	1.84	0.42
41:DJ:110:PRO:HB2	41:DJ:111:LYS:HE3	2.01	0.42
42:DN:70:THR:O	42:DN:70:THR:OG1	2.35	0.42
43:DO:51:ALA:CB	43:DO:78:VAL:HG22	2.45	0.42
44:DQ:91:ARG:HH12	49:DR:10:LYS:CA	2.32	0.42
48:DG:94:ARG:C	48:DG:94:ARG:NE	2.72	0.42
48:DG:166:GLU:HG2	48:DG:167:VAL:N	2.34	0.42
52:DW:49:ASN:OD1	52:DW:80:SER:HA	2.19	0.42
1:AA:92:U:C2'	1:AA:93:U:O5'	2.67	0.42
1:AA:481:G:O2'	1:AA:482:A:H8	2.02	0.42
1:AA:501:C:H1'	1:AA:549:C:H1'	2.00	0.42
1:AA:532:A:C8	2:AC:192:TYR:CD2	3.06	0.42
1:AA:693:G:H2'	1:AA:694:A:O4'	2.19	0.42
1:AA:784:A:H2'	1:AA:785:G:H8	1.84	0.42
1:AA:981:U:P	13:AN:5:MET:HE1	2.59	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1349:A:OP1	8:AI:121:ARG:HB2	2.19	0.42
1:AA:1525:G:O2'	1:AA:1526:G:H5'	2.20	0.42
2:AC:13:ILE:HD13	2:AC:13:ILE:H	1.82	0.42
2:AC:140:ALA:CB	2:AC:148:ILE:HD12	2.50	0.42
3:AD:17:ASP:C	3:AD:19:PHE:H	2.23	0.42
3:AD:25:ARG:O	3:AD:26:ALA:HB3	2.19	0.42
3:AD:29:THR:CB	3:AD:30:LYS:HD3	2.50	0.42
9:AJ:22:THR:OG1	9:AJ:72:ARG:HG3	2.19	0.42
9:AJ:65:TYR:HA	13:AN:96:LYS:O	2.20	0.42
11:AL:73:LEU:HD21	11:AL:103:CYS:SG	2.59	0.42
11:AL:86:VAL:HG11	11:AL:89:LEU:HD23	2.02	0.42
14:AO:17:ARG:HG2	14:AO:24:SER:CB	2.50	0.42
18:AS:52:ASN:CG	18:AS:53:GLY:N	2.71	0.42
20:AB:40:ILE:HD13	20:AB:201:GLY:CA	2.49	0.42
20:AB:72:LYS:O	20:AB:73:ARG:C	2.58	0.42
22:BA:8:C:H2'	22:BA:9:G:O4'	2.20	0.42
23:BB:196:A:H2'	23:BB:196:A:N3	2.35	0.42
23:BB:387:U:H4'	23:BB:388:G:O4'	2.19	0.42
23:BB:484:C:H2'	23:BB:485:C:C6	2.54	0.42
23:BB:735:A:H2'	23:BB:736:C:O4'	2.19	0.42
23:BB:839:U:H2'	23:BB:840:C:C6	2.54	0.42
23:BB:1076:C:H2'	23:BB:1077:A:C8	2.54	0.42
23:BB:1107:G:H2'	23:BB:1108:U:H6	1.85	0.42
23:BB:1131:G:N2	23:BB:2024:G:N2	2.65	0.42
23:BB:1392:A:H2'	23:BB:1393:A:C8	2.54	0.42
23:BB:1547:C:H2'	23:BB:1548:A:H8	1.84	0.42
23:BB:1796:U:O2'	23:BB:1797:G:H5'	2.19	0.42
23:BB:1851:U:H2'	23:BB:1852:U:C6	2.54	0.42
23:BB:1877:A:H2'	23:BB:1878:G:O4'	2.20	0.42
23:BB:2028:U:O2'	23:BB:2029:G:H5'	2.19	0.42
23:BB:2081:U:H2'	23:BB:2082:A:C8	2.54	0.42
23:BB:2106:U:H2'	23:BB:2107:G:H8	1.85	0.42
23:BB:2648:G:H2'	23:BB:2649:C:C6	2.54	0.42
23:BB:2834:G:H2'	23:BB:2879:A:H61	1.85	0.42
23:BB:2876:G:H5"	28:BP:2:ASN:HB2	2.01	0.42
25:BC:141:HIS:HB3	25:BC:190:THR:OG1	2.20	0.42
26:BD:177:VAL:O	26:BD:177:VAL:HG23	2.18	0.42
27:BK:121:GLU:O	27:BK:122:VAL:C	2.57	0.42
30:BY:9:THR:HB	30:BY:10:ARG:H	1.71	0.42
35:BV:42:LEU:H	35:BV:42:LEU:CD2	2.23	0.42
37:BL:3:LEU:HA	37:BL:6:LEU:HD21	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BL:103:ILE:H	37:BL:103:ILE:CD1	2.29	0.42
40:BH:114:GLU:HB3	40:BH:133:GLN:O	2.20	0.42
41:BJ:103:ILE:HG13	41:BJ:104:ALA:N	2.35	0.42
42:BN:41:ALA:C	42:BN:43:GLU:H	2.23	0.42
44:BQ:14:LYS:HA	44:BQ:17:LEU:HB3	2.01	0.42
44:BQ:111:LYS:HZ3	49:BR:50:GLY:HA2	1.85	0.42
46:BU:41:VAL:N	46:BU:60:LYS:O	2.53	0.42
47:BF:163:GLU:O	47:BF:166:ARG:HB2	2.19	0.42
48:BG:30:GLY:N	48:BG:78:VAL:HA	2.34	0.42
49:BR:2:TYR:HB2	49:BR:42:ALA:CB	2.38	0.42
50:BT:41:ALA:C	50:BT:43:ILE:H	2.23	0.42
53:B6:10:THR:HG22	53:B6:164:ILE:HG21	2.01	0.42
53:B6:114:LEU:HB3	53:B6:183:ILE:CG2	2.46	0.42
1:CA:16:A:N1	1:CA:919:A:H2	2.16	0.42
1:CA:83:C:O2'	1:CA:84:U:H2'	2.19	0.42
1:CA:263:A:OP1	19:CT:73:ARG:NH1	2.52	0.42
1:CA:582:C:O2'	1:CA:583:A:H5'	2.18	0.42
1:CA:811:C:H4'	1:CA:900:A:N6	2.34	0.42
1:CA:894:G:O2'	1:CA:895:G:H5'	2.18	0.42
1:CA:1180:A:H5"	1:CA:1181:G:OP2	2.18	0.42
1:CA:1515:G:O2'	1:CA:1516:G:H5'	2.19	0.42
3:CD:61:ARG:HG2	3:CD:66:VAL:O	2.19	0.42
3:CD:160:LEU:HD23	3:CD:164:ARG:HH21	1.84	0.42
6:CG:10:LYS:HB2	6:CG:10:LYS:NZ	2.35	0.42
6:CG:71:THR:O	6:CG:89:GLU:HA	2.19	0.42
12:CM:13:HIS:HB2	12:CM:16:ILE:CG2	2.50	0.42
12:CM:22:TYR:HB2	12:CM:65:GLU:HA	2.00	0.42
15:CP:6:LEU:HD23	15:CP:17:TYR:CB	2.50	0.42
16:CQ:45:VAL:HA	16:CQ:72:TRP:O	2.19	0.42
22:DA:98:G:O6	35:DV:14:LYS:N	2.41	0.42
23:DB:52:A:H2'	23:DB:53:A:C8	2.54	0.42
23:DB:391:A:H1'	23:DB:411:G:O4'	2.20	0.42
23:DB:484:C:H2'	23:DB:485:C:C6	2.54	0.42
23:DB:621:A:H2'	23:DB:622:G:O4'	2.19	0.42
23:DB:996:A:O2'	44:DQ:91:ARG:HD2	2.19	0.42
23:DB:1082:U:C2	23:DB:1086:A:N1	2.87	0.42
23:DB:1098:A:O2'	24:DI:4:VAL:C	2.58	0.42
23:DB:1336:A:H3'	23:DB:1337:G:H8	1.83	0.42
23:DB:1361:G:H2'	23:DB:1362:C:C6	2.55	0.42
23:DB:1422:G:O2'	23:DB:1423:G:H5'	2.19	0.42
23:DB:2093:G:O2'	23:DB:2094:A:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2211:A:H4'	23:DB:2211:A:OP2	2.19	0.42
23:DB:2861:U:H2'	23:DB:2862:G:C8	2.54	0.42
24:DI:99:LYS:HB2	24:DI:140:GLU:OE1	2.19	0.42
25:DC:242:HIS:O	25:DC:244:VAL:HG13	2.20	0.42
26:DD:107:VAL:N	26:DD:206:ALA:H	2.17	0.42
31:D0:43:THR:HG23	31:D0:47:TYR:C	2.39	0.42
33:D1:50:GLU:O	33:D1:51:ALA:HB2	2.19	0.42
37:DL:57:LEU:O	37:DL:61:LEU:HD13	2.19	0.42
37:DL:102:GLY:O	37:DL:105:ILE:HG12	2.19	0.42
40:DH:24:GLY:C	40:DH:26:ALA:N	2.72	0.42
40:DH:124:THR:O	40:DH:146:VAL:HG11	2.19	0.42
40:DH:127:GLU:HB2	40:DH:143:ILE:CG2	2.49	0.42
47:DF:47:LYS:HA	47:DF:50:ASP:OD1	2.19	0.42
47:DF:111:ARG:N	47:DF:111:ARG:HD2	2.34	0.42
48:DG:72:ASN:O	48:DG:75:VAL:HB	2.18	0.42
1:AA:586:C:C5'	7:AH:81:GLY:HA2	2.49	0.42
1:AA:1160:G:O2'	1:AA:1161:C:H5'	2.20	0.42
1:AA:1349:A:P	8:AI:119:LYS:HD2	2.59	0.42
2:AC:16:PRO:HG2	2:AC:53:ARG:NH2	2.35	0.42
4:AE:39:GLY:HA3	4:AE:116:VAL:HB	2.01	0.42
6:AG:145:GLU:C	6:AG:147:ASN:N	2.72	0.42
8:AI:9:GLY:HA3	8:AI:81:GLY:N	2.35	0.42
8:AI:27:ILE:HD13	8:AI:34:LEU:HD22	2.02	0.42
8:AI:41:GLU:O	8:AI:43:ALA:N	2.53	0.42
11:AL:46:SER:O	11:AL:47:ALA:HB2	2.20	0.42
15:AP:1:MET:O	15:AP:1:MET:HG3	2.19	0.42
20:AB:204:ASP:O	20:AB:205:ALA:HB3	2.19	0.42
21:AU:20:ARG:H	21:AU:20:ARG:HD2	1.84	0.42
22:BA:15:A:O2'	22:BA:16:G:H5'	2.20	0.42
23:BB:115:C:O2'	23:BB:116:C:H5'	2.20	0.42
23:BB:253:C:H2'	23:BB:254:G:O4'	2.19	0.42
23:BB:308:G:H2'	23:BB:309:A:O4'	2.20	0.42
23:BB:598:U:H2'	23:BB:599:A:H8	1.84	0.42
23:BB:725:G:H2'	23:BB:726:G:O4'	2.19	0.42
23:BB:960:A:H61	38:BM:82:MET:HE1	1.83	0.42
23:BB:960:A:H4'	23:BB:2457:U:H4'	2.01	0.42
23:BB:1130:U:O2'	23:BB:1131:G:H2'	2.18	0.42
23:BB:1309:G:H4'	36:B2:7:PRO:CB	2.48	0.42
23:BB:1322:A:C2'	23:BB:1323:C:H5'	2.49	0.42
23:BB:1544:A:H2'	23:BB:1545:A:C8	2.54	0.42
23:BB:1779:U:H5	23:BB:1784:A:N7	2.17	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1789:A:OP2	25:BC:220:ARG:HD3	2.18	0.42
23:BB:2228:G:N2	51:BZ:34:HIS:CE1	2.87	0.42
23:BB:2393:U:H2'	23:BB:2394:C:C6	2.54	0.42
23:BB:2654:A:N1	23:BB:2665:A:H5"	2.34	0.42
23:BB:2724:U:H2'	23:BB:2725:A:C8	2.54	0.42
25:BC:52:HIS:O	25:BC:53:ILE:HB	2.20	0.42
25:BC:76:VAL:O	25:BC:93:VAL:O	2.37	0.42
28:BP:29:VAL:O	28:BP:40:GLN:N	2.53	0.42
34:B3:7:ARG:O	34:B3:8:GLY:C	2.58	0.42
34:B3:30:HIS:CD2	34:B3:31:ILE:N	2.88	0.42
36:B2:6:GLN:HA	36:B2:7:PRO:HD2	1.89	0.42
38:BM:19:GLY:N	38:BM:38:ARG:NH1	2.64	0.42
39:BX:27:ASN:HD22	39:BX:27:ASN:HA	1.62	0.42
44:BQ:91:ARG:HH12	49:BR:10:LYS:CB	2.32	0.42
48:BG:112:VAL:HG13	48:BG:150:TYR:HE2	1.84	0.42
49:BR:7:SER:CB	49:BR:22:LEU:HD22	2.50	0.42
49:BR:14:VAL:CG2	49:BR:15:SER:N	2.82	0.42
50:BT:39:THR:O	50:BT:40:LYS:HB2	2.20	0.42
51:BZ:53:ALA:O	51:BZ:55:GLY:N	2.44	0.42
53:B6:53:ASN:C	53:B6:55:ILE:H	2.21	0.42
53:B6:176:ALA:O	53:B6:180:GLU:HB2	2.19	0.42
1:CA:87:C:H2'	1:CA:88:U:H6	1.81	0.42
1:CA:430:A:OP2	3:CD:6:PRO:HA	2.19	0.42
1:CA:625:U:H4'	15:CP:16:PHE:CZ	2.55	0.42
2:CC:146:LYS:HB2	2:CC:202:PHE:O	2.19	0.42
3:CD:90:LEU:HD21	3:CD:196:GLU:HB3	2.01	0.42
6:CG:48:THR:O	6:CG:52:ARG:HG3	2.19	0.42
9:CJ:80:THR:O	9:CJ:84:VAL:HG23	2.19	0.42
12:CM:49:GLU:O	12:CM:52:ILE:HG22	2.19	0.42
13:CN:5:MET:HA	13:CN:8:ARG:HD2	2.01	0.42
13:CN:52:ARG:NH1	13:CN:58:ARG:HH21	2.17	0.42
17:CR:54:LEU:HD23	17:CR:58:ILE:HD11	2.02	0.42
19:CT:3:ILE:H	19:CT:3:ILE:HG13	1.30	0.42
19:CT:66:ILE:HG13	19:CT:70:LYS:HE3	2.01	0.42
19:CT:69:ASN:O	19:CT:72:ALA:HB3	2.19	0.42
20:CB:98:GLY:N	20:CB:174:GLU:OE2	2.53	0.42
22:DA:42:C:C6	47:DF:65:LEU:HD22	2.54	0.42
23:DB:79:C:O2'	23:DB:346:A:C1'	2.66	0.42
23:DB:234:U:H2'	23:DB:235:U:O4'	2.19	0.42
23:DB:300:A:H2'	23:DB:334:C:H1'	2.02	0.42
23:DB:481:G:C2	23:DB:507:A:C4	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:547:A:C2	23:DB:548:G:H1'	2.54	0.42
23:DB:918:A:C2'	23:DB:919:U:H5'	2.44	0.42
23:DB:1597:A:C5'	23:DB:1598:A:H5'	2.43	0.42
23:DB:2081:U:H2'	23:DB:2082:A:C8	2.54	0.42
23:DB:2143:C:H3'	23:DB:2144:G:H8	1.84	0.42
23:DB:2212:A:O3'	23:DB:2213:U:C4	2.73	0.42
24:DI:54:ILE:HD11	24:DI:71:LYS:N	2.34	0.42
25:DC:76:VAL:O	25:DC:78:GLU:N	2.52	0.42
26:DD:107:VAL:HG13	26:DD:203:VAL:HG23	2.01	0.42
27:DK:121:GLU:O	27:DK:122:VAL:C	2.57	0.42
28:DP:86:LYS:HB3	28:DP:87:ARG:H	1.58	0.42
36:D2:9:VAL:CG1	36:D2:10:LEU:N	2.81	0.42
40:DH:113:SER:HB2	40:DH:132:PHE:CZ	2.53	0.42
41:DJ:12:LYS:H	41:DJ:12:LYS:HG2	1.66	0.42
41:DJ:103:ILE:HG13	41:DJ:104:ALA:N	2.35	0.42
42:DN:28:LEU:O	42:DN:32:GLU:HA	2.19	0.42
46:DU:86:PHE:CG	46:DU:87:GLU:N	2.87	0.42
47:DF:163:GLU:O	47:DF:166:ARG:HB2	2.19	0.42
48:DG:28:LYS:O	48:DG:30:GLY:N	2.53	0.42
48:DG:43:LYS:O	48:DG:49:LEU:HA	2.20	0.42
48:DG:44:HIS:O	48:DG:46:ASP:N	2.52	0.42
49:DR:21:ARG:C	49:DR:22:LEU:HD23	2.40	0.42
53:D6:64:ARG:C	53:D6:103:ILE:HB	2.39	0.42
53:D6:125:GLY:O	53:D6:129:ILE:HG13	2.19	0.42
1:AA:213:G:N3	1:AA:213:G:H2'	2.35	0.42
1:AA:255:G:H1'	16:AQ:17:GLU:OE2	2.20	0.42
1:AA:614:C:C2'	1:AA:615:G:H5'	2.50	0.42
1:AA:880:C:H2'	1:AA:881:G:C8	2.51	0.42
1:AA:1315:U:H5	18:AS:5:LYS:HE2	1.84	0.42
2:AC:122:GLN:O	2:AC:127:VAL:HG22	2.20	0.42
3:AD:172:VAL:O	3:AD:172:VAL:HG13	2.20	0.42
4:AE:62:ALA:O	4:AE:65:LYS:HB2	2.19	0.42
18:AS:66:VAL:HG23	18:AS:67:GLY:N	2.35	0.42
19:AT:49:ALA:HA	19:AT:52:GLU:OE2	2.18	0.42
20:AB:60:ALA:HB1	20:AB:220:VAL:HG13	2.02	0.42
21:AU:34:ARG:NH1	21:AU:39:LYS:NZ	2.67	0.42
22:BA:13:G:C5	22:BA:70:C:H4'	2.54	0.42
23:BB:372:G:N7	51:BZ:57:ARG:HB3	2.34	0.42
23:BB:415:A:H2'	23:BB:416:U:C6	2.55	0.42
23:BB:522:A:H2'	23:BB:523:C:H6	1.84	0.42
23:BB:546:U:H5'	23:BB:548:G:O6	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:816:C:O2'	23:BB:817:C:H5'	2.19	0.42
23:BB:826:U:H5"	23:BB:2428:G:O3'	2.19	0.42
23:BB:877:A:H2'	23:BB:899:A:C6	2.51	0.42
23:BB:1027:A:N3	23:BB:2488:G:H5"	2.34	0.42
23:BB:1439:A:C5	23:BB:1552:A:N6	2.86	0.42
23:BB:1516:G:H2'	23:BB:1517:G:H8	1.85	0.42
23:BB:1702:G:H2'	23:BB:1703:G:O4'	2.19	0.42
23:BB:1734:G:O2'	23:BB:1735:A:H5'	2.20	0.42
23:BB:2032:G:N7	23:BB:2454:G:H1'	2.33	0.42
23:BB:2745:C:O2'	48:BG:142:GLN:HB2	2.20	0.42
25:BC:149:LYS:HD3	25:BC:152:GLN:HE22	1.83	0.42
25:BC:216:ARG:HE	25:BC:217:PRO:HD2	1.83	0.42
25:BC:262:THR:O	25:BC:265:PHE:N	2.49	0.42
27:BK:71:ARG:CZ	27:BK:72:PRO:HD3	2.50	0.42
27:BK:104:THR:OG1	27:BK:107:LEU:HD11	2.18	0.42
35:BV:70:ILE:CD1	35:BV:71:LYS:N	2.82	0.42
37:BL:47:ARG:CB	37:BL:47:ARG:HH21	2.32	0.42
37:BL:127:VAL:HG22	37:BL:128:THR:N	2.34	0.42
38:BM:18:ARG:C	38:BM:38:ARG:HH22	2.23	0.42
38:BM:63:ILE:HD12	38:BM:63:ILE:H	1.85	0.42
40:BH:85:GLY:HA3	40:BH:91:PHE:CE1	2.54	0.42
42:BN:55:ALA:HB1	42:BN:80:PHE:H	1.83	0.42
43:BO:36:TYR:CD2	43:BO:36:TYR:N	2.87	0.42
45:BS:95:ARG:HG3	45:BS:97:LEU:HD21	2.02	0.42
45:BS:99:ARG:H	45:BS:99:ARG:HG2	1.44	0.42
45:BS:108:SER:OG	45:BS:109:ASP:N	2.52	0.42
46:BU:73:ASN:ND2	46:BU:76:THR:H	2.16	0.42
47:BF:74:ALA:HB1	47:BF:76:PHE:CD2	2.54	0.42
48:BG:154:GLU:O	48:BG:156:TYR:N	2.42	0.42
50:BT:31:VAL:C	50:BT:32:LEU:HD23	2.40	0.42
50:BT:50:LEU:O	50:BT:51:PHE:HB2	2.19	0.42
51:BZ:5:CYS:HB3	51:BZ:10:LYS:H	1.84	0.42
52:BW:44:PHE:HE2	52:BW:76:ARG:NE	2.17	0.42
52:BW:77:LYS:HZ3	52:BW:77:LYS:HB2	1.85	0.42
1:CA:152:A:H2'	1:CA:153:C:O4'	2.19	0.42
1:CA:321:A:O2'	1:CA:322:C:H5'	2.20	0.42
1:CA:373:A:H1'	1:CA:481:G:H1'	2.02	0.42
1:CA:479:U:O2'	1:CA:480:U:H5'	2.19	0.42
1:CA:643:C:H5"	7:CH:31:LEU:HD22	2.01	0.42
1:CA:728:A:H2'	1:CA:729:A:C8	2.55	0.42
1:CA:856:C:O2'	1:CA:857:C:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1099:G:H2'	1:CA:1100:C:C6	2.55	0.42
1:CA:1149:C:OP2	8:CI:10:ARG:NH1	2.52	0.42
1:CA:1309:G:H2'	1:CA:1310:G:C8	2.54	0.42
1:CA:1421:G:N2	1:CA:1479:C:O2	2.52	0.42
3:CD:164:ARG:HG3	3:CD:165:GLU:H	1.85	0.42
6:CG:71:THR:C	6:CG:90:VAL:HG22	2.40	0.42
7:CH:68:LYS:HG3	7:CH:69:ALA:H	1.84	0.42
13:CN:27:LYS:H	13:CN:27:LYS:HG3	1.67	0.42
13:CN:72:PHE:CZ	13:CN:77:GLY:HA2	2.54	0.42
15:CP:36:VAL:O	15:CP:36:VAL:HG13	2.19	0.42
15:CP:43:ALA:HA	15:CP:46:LYS:HE3	2.01	0.42
18:CS:33:TRP:N	18:CS:33:TRP:CE3	2.87	0.42
19:CT:81:GLN:C	19:CT:83:ASN:N	2.72	0.42
20:CB:72:LYS:O	20:CB:73:ARG:C	2.58	0.42
20:CB:123:GLY:O	20:CB:125:PHE:N	2.52	0.42
22:DA:49:C:O2'	22:DA:50:A:H5'	2.19	0.42
23:DB:233:A:N6	23:DB:428:A:H61	2.17	0.42
23:DB:1062:G:H2'	23:DB:1063:G:H8	1.85	0.42
23:DB:1099:G:H3'	24:DI:2:LYS:HA	2.01	0.42
23:DB:1131:G:H1'	23:DB:1133:A:H62	1.85	0.42
23:DB:1183:U:O2'	23:DB:1184:U:H5'	2.19	0.42
23:DB:1880:U:H2'	23:DB:1881:C:C6	2.55	0.42
23:DB:2097:A:H2'	23:DB:2098:U:C6	2.54	0.42
23:DB:2443:C:O2'	23:DB:2444:G:H5'	2.20	0.42
23:DB:2473:U:O2	23:DB:2473:U:H2'	2.19	0.42
23:DB:2544:G:H2'	23:DB:2545:G:H8	1.84	0.42
23:DB:2601:C:C2	23:DB:2603:G:N7	2.88	0.42
23:DB:2652:C:C2'	23:DB:2653:U:H5'	2.49	0.42
23:DB:2840:C:OP1	42:DN:50:PRO:HA	2.20	0.42
25:DC:231:HIS:HA	25:DC:241:LYS:HE3	2.02	0.42
26:DD:31:ALA:HA	26:DD:96:ILE:O	2.19	0.42
26:DD:125:TRP:CD1	26:DD:160:LYS:HB3	2.54	0.42
27:DK:38:ILE:HD13	27:DK:61:VAL:HG12	2.01	0.42
28:DP:61:ARG:HB3	28:DP:61:ARG:HH21	1.85	0.42
29:DE:46:GLN:HB3	29:DE:86:ALA:CA	2.50	0.42
29:DE:171:ASP:CG	29:DE:172:ALA:N	2.73	0.42
32:D4:2:LYS:HD3	32:D4:4:ARG:NE	2.18	0.42
37:DL:80:SER:HA	37:DL:115:GLU:HB2	2.02	0.42
38:DM:123:LYS:O	38:DM:124:LEU:C	2.58	0.42
40:DH:135:HIS:N	40:DH:138:VAL:HB	2.30	0.42
40:DH:143:ILE:HG22	40:DH:144:VAL:N	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DN:41:ALA:C	42:DN:43:GLU:H	2.23	0.42
45:DS:2:GLU:O	45:DS:3:THR:C	2.58	0.42
47:DF:141:ASP:O	47:DF:143:ASP:N	2.53	0.42
48:DG:106:LEU:HD23	48:DG:106:LEU:N	2.35	0.42
49:DR:39:LEU:CA	49:DR:53:PHE:HA	2.49	0.42
50:DT:50:LEU:O	50:DT:51:PHE:HB2	2.20	0.42
51:DZ:14:THR:HA	51:DZ:28:ARG:HA	2.02	0.42
52:DW:69:GLU:HB3	52:DW:70:VAL:H	1.65	0.42
1:AA:197:A:H1'	1:AA:198:G:C1'	2.50	0.42
1:AA:564:C:C5	16:AQ:32:ILE:HD11	2.54	0.42
1:AA:653:U:C4	7:AH:55:LYS:HE2	2.54	0.42
1:AA:687:A:C2	1:AA:704:A:C5	3.08	0.42
1:AA:720:C:H6	1:AA:720:C:O5'	2.03	0.42
1:AA:974:A:OP2	13:AN:80:ARG:NH1	2.53	0.42
1:AA:1067:A:H1'	1:AA:1068:G:C8	2.55	0.42
1:AA:1386:G:O2'	1:AA:1387:G:H5'	2.19	0.42
1:AA:1446:A:H2'	1:AA:1447:A:C8	2.55	0.42
3:AD:100:VAL:HG11	3:AD:142:VAL:HG21	2.00	0.42
3:AD:169:TRP:HB2	3:AD:183:ARG:O	2.20	0.42
4:AE:87:VAL:HG22	4:AE:88:HIS:N	2.35	0.42
6:AG:22:LEU:O	6:AG:25:PHE:HB3	2.20	0.42
6:AG:80:GLY:O	6:AG:82:SER:N	2.52	0.42
6:AG:110:ARG:HH11	6:AG:110:ARG:HB3	1.84	0.42
7:AH:17:GLN:HG2	7:AH:62:LEU:CD2	2.49	0.42
12:AM:14:ALA:HB2	12:AM:42:VAL:HG23	2.02	0.42
12:AM:33:LEU:HD22	12:AM:38:ILE:HB	2.01	0.42
13:AN:30:ILE:O	13:AN:32:ASP:N	2.45	0.42
20:AB:63:LYS:HA	20:AB:224:ARG:NH1	2.31	0.42
20:AB:86:CYS:SG	20:AB:87:ASP:N	2.93	0.42
20:AB:113:LEU:HD23	20:AB:114:LYS:N	2.34	0.42
20:AB:207:ARG:O	20:AB:211:LEU:HB2	2.19	0.42
22:BA:83:G:O2'	22:BA:84:G:H5'	2.20	0.42
23:BB:143:C:H1'	50:BT:2:ILE:O	2.19	0.42
23:BB:629:G:H2'	23:BB:630:G:C8	2.55	0.42
23:BB:711:G:O2'	23:BB:712:G:H5'	2.20	0.42
23:BB:820:A:H1'	23:BB:943:A:O2'	2.19	0.42
23:BB:1060:U:C1'	23:BB:1062:G:H5'	2.50	0.42
23:BB:1245:G:OP1	37:BL:8:PRO:HG2	2.19	0.42
23:BB:1348:C:H2'	23:BB:1349:C:H5'	2.00	0.42
23:BB:1521:G:O5'	23:BB:1522:A:H2'	2.20	0.42
23:BB:1639:C:C2'	23:BB:1640:A:H5'	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1651:G:H2'	23:BB:1652:A:O4'	2.19	0.42
23:BB:1820:U:H4'	23:BB:1821:A:OP2	2.20	0.42
23:BB:1833:C:H2'	23:BB:1834:U:H6	1.85	0.42
23:BB:1847:A:H1'	23:BB:1848:A:N7	2.35	0.42
23:BB:1882:U:O2'	23:BB:1883:U:H5'	2.19	0.42
23:BB:2001:C:H4'	23:BB:2689:U:O2'	2.20	0.42
23:BB:2018:G:O2'	23:BB:2019:A:H5'	2.19	0.42
23:BB:2155:U:H3'	23:BB:2156:G:C8	2.55	0.42
23:BB:2300:C:H2'	23:BB:2301:C:H6	1.84	0.42
23:BB:2315:G:H2'	23:BB:2316:G:H8	1.85	0.42
23:BB:2886:A:N7	31:B0:39:ARG:NE	2.67	0.42
27:BK:109:SER:C	27:BK:111:LYS:H	2.23	0.42
29:BE:149:ILE:O	29:BE:188:MET:HA	2.20	0.42
31:B0:38:LEU:HD23	31:B0:39:ARG:N	2.35	0.42
33:B1:34:GLU:HA	33:B1:48:TYR:O	2.19	0.42
35:BV:1:MET:HE2	35:BV:2:PHE:H	1.84	0.42
35:BV:66:ASP:CG	35:BV:68:LYS:HE2	2.40	0.42
38:BM:126:ILE:HD12	38:BM:126:ILE:N	2.35	0.42
40:BH:49:ALA:O	40:BH:53:GLU:N	2.53	0.42
40:BH:114:GLU:O	40:BH:132:PHE:HA	2.19	0.42
44:BQ:17:LEU:O	44:BQ:17:LEU:HG	2.19	0.42
44:BQ:91:ARG:HH12	49:BR:10:LYS:HB3	1.84	0.42
46:BU:72:PHE:CZ	46:BU:77:GLY:HA2	2.55	0.42
46:BU:73:ASN:OD1	46:BU:75:ALA:HB3	2.20	0.42
47:BF:91:ARG:HD3	47:BF:91:ARG:N	2.35	0.42
48:BG:145:ALA:O	48:BG:148:ARG:HD2	2.20	0.42
48:BG:154:GLU:C	48:BG:156:TYR:H	2.21	0.42
48:BG:166:GLU:HG2	48:BG:167:VAL:N	2.35	0.42
48:BG:167:VAL:HG23	48:BG:168:VAL:N	2.26	0.42
1:CA:212:G:H2'	1:CA:213:G:C8	2.54	0.42
1:CA:311:C:O2'	1:CA:312:C:H5'	2.19	0.42
1:CA:751:U:C2'	1:CA:752:G:H5'	2.50	0.42
1:CA:764:C:N4	1:CA:812:G:N1	2.67	0.42
1:CA:939:G:H2'	1:CA:940:C:C6	2.54	0.42
1:CA:1070:U:H2'	1:CA:1071:C:H6	1.81	0.42
1:CA:1231:G:O2'	1:CA:1232:U:H5'	2.20	0.42
3:CD:81:LEU:HB2	3:CD:88:ASN:HD22	1.84	0.42
5:CF:36:ILE:HG12	5:CF:64:VAL:HG22	2.01	0.42
8:CI:112:ARG:O	8:CI:112:ARG:HG3	2.19	0.42
10:CK:126:ARG:HA	10:CK:126:ARG:HE	1.85	0.42
11:CL:98:ARG:NH2	11:CL:104:SER:OG	2.51	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:18:LEU:HD23	12:CM:21:ILE:HD12	2.01	0.42
17:CR:43:ILE:O	17:CR:44:THR:HG23	2.20	0.42
18:CS:17:LYS:HB3	18:CS:30:LEU:HD22	2.00	0.42
18:CS:66:VAL:C	18:CS:68:HIS:H	2.23	0.42
20:CB:69:VAL:HG12	20:CB:168:GLU:HG3	2.02	0.42
20:CB:89:PHE:HE2	20:CB:152:ASP:O	2.03	0.42
22:DA:76:G:H21	35:DV:78:GLN:HE22	1.67	0.42
23:DB:1434:A:N6	23:DB:1558:C:H42	2.18	0.42
23:DB:1441:G:H2'	23:DB:1442:U:C6	2.54	0.42
23:DB:1605:C:H1'	23:DB:1610:A:C8	2.55	0.42
23:DB:2188:U:H3'	23:DB:2189:U:C6	2.55	0.42
23:DB:2285:C:OP2	33:D1:5:ARG:HD3	2.19	0.42
23:DB:2794:C:H2'	23:DB:2795:C:H6	1.83	0.42
23:DB:2800:A:H2'	23:DB:2801:G:H1'	2.02	0.42
23:DB:2812:G:H2'	23:DB:2813:A:O4'	2.20	0.42
25:DC:76:VAL:O	25:DC:76:VAL:HG23	2.20	0.42
25:DC:211:ARG:HD2	25:DC:215:VAL:O	2.20	0.42
27:DK:53:LYS:HD3	27:DK:53:LYS:H	1.83	0.42
27:DK:68:GLY:HA3	27:DK:78:ARG:HB3	2.01	0.42
29:DE:2:GLU:OE1	29:DE:13:THR:N	2.53	0.42
29:DE:145:ASP:OD1	29:DE:183:PHE:HA	2.19	0.42
34:D3:14:LYS:O	34:D3:21:PHE:O	2.36	0.42
37:DL:101:ILE:HG22	37:DL:105:ILE:HG13	2.02	0.42
38:DM:43:ALA:C	38:DM:45:GLN:N	2.73	0.42
40:DH:27:ARG:HG2	40:DH:27:ARG:HH21	1.83	0.42
40:DH:119:ASN:ND2	40:DH:121:VAL:HG22	2.35	0.42
41:DJ:73:VAL:O	41:DJ:74:TYR:HB2	2.19	0.42
42:DN:24:MET:CG	42:DN:44:LEU:HD22	2.50	0.42
43:DO:7:ARG:HA	43:DO:10:ARG:CZ	2.49	0.42
45:DS:4:ILE:HG22	45:DS:106:VAL:HA	2.01	0.42
47:DF:66:ILE:HD11	47:DF:83:PRO:HB3	2.01	0.42
48:DG:8:VAL:CG1	48:DG:49:LEU:HB2	2.35	0.42
48:DG:29:ASN:ND2	48:DG:77:GLY:O	2.52	0.42
48:DG:37:ASN:HD22	48:DG:38:ASP:H	1.68	0.42
49:DR:37:GLU:O	49:DR:39:LEU:HD23	2.20	0.42
53:D6:29:ARG:O	53:D6:30:THR:O	2.37	0.42
1:AA:87:C:N3	1:AA:88:U:H1'	2.35	0.42
1:AA:360:G:O2'	1:AA:361:G:H5'	2.20	0.42
1:AA:401:C:O2'	1:AA:402:G:H5'	2.19	0.42
1:AA:420:U:C2'	1:AA:421:U:H5"	2.50	0.42
1:AA:479:U:O2'	1:AA:480:U:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:547:A:H4'	1:AA:548:G:O5'	2.20	0.42
1:AA:922:G:H4'	4:AE:24:VAL:HA	2.01	0.42
1:AA:1206:G:O4'	2:AC:193:GLY:N	2.53	0.42
3:AD:29:THR:HG22	3:AD:30:LYS:N	2.35	0.42
3:AD:104:MET:HG2	3:AD:170:LEU:CD1	2.50	0.42
3:AD:147:LYS:HB2	3:AD:147:LYS:NZ	2.35	0.42
3:AD:159:GLU:O	3:AD:162:GLU:HB3	2.20	0.42
6:AG:50:ALA:HB2	6:AG:57:GLU:CA	2.50	0.42
6:AG:130:LYS:H	6:AG:134:VAL:HG21	1.85	0.42
8:AI:24:ASN:ND2	8:AI:57:VAL:O	2.53	0.42
11:AL:13:ARG:O	11:AL:14:LYS:HB3	2.20	0.42
11:AL:74:GLN:HB3	11:AL:75:GLU:H	1.57	0.42
11:AL:108:ASP:O	11:AL:110:LYS:HG2	2.19	0.42
13:AN:68:ARG:HH12	13:AN:70:HIS:CB	2.16	0.42
14:AO:73:LYS:O	14:AO:74:ASP:HB2	2.20	0.42
15:AP:10:GLY:HA3	15:AP:15:PRO:HA	2.01	0.42
20:AB:95:TRP:HZ3	20:AB:174:GLU:OE2	2.03	0.42
20:AB:204:ASP:O	20:AB:208:ALA:HB3	2.20	0.42
21:AU:48:LYS:HA	21:AU:51:ALA:HB3	2.01	0.42
23:BB:7:G:H4'	41:BJ:15:TRP:CZ2	2.55	0.42
23:BB:559:G:H22	44:BQ:48:ASP:CG	2.23	0.42
23:BB:659:G:H4'	29:BE:95:LYS:HB3	2.01	0.42
23:BB:984:A:HO2'	23:BB:985:C:C5'	2.33	0.42
23:BB:1178:C:H2'	23:BB:1179:G:H8	1.84	0.42
23:BB:1292:G:O2'	23:BB:1293:C:H5'	2.20	0.42
23:BB:1401:G:H2'	23:BB:1402:U:H6	1.81	0.42
23:BB:1541:C:H2'	23:BB:1542:U:O4'	2.20	0.42
23:BB:1666:G:OP1	27:BK:82:ASN:ND2	2.50	0.42
23:BB:1668:A:N3	23:BB:1670:C:C4	2.87	0.42
23:BB:1714:U:O5'	23:BB:1714:U:H6	2.03	0.42
23:BB:1773:A:N7	23:BB:1829:A:H1'	2.34	0.42
23:BB:2038:G:H2'	23:BB:2039:U:O4'	2.20	0.42
23:BB:2142:A:H2'	23:BB:2143:C:N1	2.34	0.42
23:BB:2293:G:H2'	23:BB:2294:G:C8	2.55	0.42
23:BB:2352:A:H8	23:BB:2352:A:O5'	2.03	0.42
23:BB:2352:A:N6	23:BB:2365:G:O2'	2.51	0.42
23:BB:2511:U:O5'	23:BB:2511:U:H6	2.02	0.42
23:BB:2544:G:H1'	23:BB:2646:C:H5'	2.01	0.42
23:BB:2677:G:H2'	23:BB:2678:C:H6	1.83	0.42
23:BB:2809:A:N6	23:BB:2891:U:H4'	2.35	0.42
24:BI:48:ILE:HG22	24:BI:49:GLU:HG2	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:140:VAL:O	25:BC:141:HIS:HB2	2.19	0.42
26:BD:186:LEU:CD2	28:BP:3:ILE:HD11	2.46	0.42
27:BK:19:VAL:HG23	27:BK:41:ILE:HD11	2.01	0.42
27:BK:79:PHE:HZ	27:BK:104:THR:HG23	1.85	0.42
27:BK:115:ILE:CG2	27:BK:116:ILE:N	2.82	0.42
28:BP:4:ILE:HA	28:BP:7:LEU:CD1	2.48	0.42
29:BE:20:GLY:O	29:BE:21:ARG:C	2.58	0.42
29:BE:165:HIS:CD2	29:BE:166:LYS:HG2	2.55	0.42
29:BE:171:ASP:CG	29:BE:172:ALA:N	2.73	0.42
31:B0:38:LEU:HB3	31:B0:41:HIS:NE2	2.35	0.42
35:BV:63:ILE:HG22	35:BV:65:VAL:HG13	2.00	0.42
35:BV:83:LYS:HA	35:BV:84:PRO:HD3	1.95	0.42
36:B2:9:VAL:HG13	36:B2:10:LEU:N	2.34	0.42
39:BX:36:GLN:HB2	39:BX:37:LEU:H	1.65	0.42
39:BX:46:VAL:O	39:BX:49:ASP:HB2	2.20	0.42
40:BH:28:ASN:HD22	40:BH:28:ASN:HA	1.62	0.42
40:BH:76:GLU:O	40:BH:77:THR:C	2.57	0.42
40:BH:134:VAL:CG1	40:BH:135:HIS:H	2.31	0.42
41:BJ:75:TYR:HD1	41:BJ:86:GLN:HB3	1.85	0.42
46:BU:10:VAL:O	46:BU:21:ARG:HG2	2.20	0.42
46:BU:65:GLN:HE21	46:BU:65:GLN:HB3	1.52	0.42
47:BF:134:GLN:C	47:BF:136:ILE:N	2.72	0.42
48:BG:42:VAL:HA	48:BG:50:THR:O	2.20	0.42
48:BG:94:ARG:C	48:BG:94:ARG:NE	2.72	0.42
48:BG:137:LYS:O	48:BG:140:ILE:HG13	2.20	0.42
49:BR:60:LYS:N	49:BR:100:GLY:HA3	2.22	0.42
1:CA:91:U:H2'	1:CA:92:U:H6	1.84	0.42
1:CA:182:A:H1'	1:CA:183:C:H5	1.84	0.42
1:CA:279:A:OP1	1:CA:281:G:H5'	2.20	0.42
1:CA:376:G:H5"	15:CP:5:ARG:CB	2.43	0.42
1:CA:592:G:H2'	1:CA:593:U:O4'	2.20	0.42
1:CA:961:U:N3	1:CA:983:A:N6	2.66	0.42
1:CA:1186:G:H21	13:CN:100:TRP:C	2.23	0.42
1:CA:1242:G:H2'	1:CA:1243:C:H6	1.84	0.42
1:CA:1258:G:C4	1:CA:1278:G:N2	2.87	0.42
1:CA:1386:G:H2'	1:CA:1387:G:H8	1.85	0.42
5:CF:61:LEU:HD12	5:CF:62:MET:H	1.85	0.42
7:CH:74:ILE:O	7:CH:74:ILE:HG23	2.20	0.42
8:CI:56:MET:O	8:CI:58:GLU:N	2.52	0.42
10:CK:72:ALA:O	10:CK:75:GLU:HG2	2.19	0.42
10:CK:95:THR:CG2	10:CK:96:ILE:N	2.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CL:86:VAL:CG1	11:CL:89:LEU:HB2	2.50	0.42
12:CM:32:ILE:HD11	12:CM:58:GLU:HB3	2.02	0.42
14:CO:74:ASP:OD1	14:CO:76:ALA:HB3	2.19	0.42
16:CQ:46:HIS:CB	16:CQ:70:LYS:HE2	2.48	0.42
18:CS:33:TRP:C	18:CS:35:ARG:H	2.22	0.42
20:CB:23:ASN:HD22	20:CB:24:PRO:N	2.18	0.42
20:CB:53:LEU:HD12	20:CB:53:LEU:N	2.34	0.42
20:CB:98:GLY:O	20:CB:102:ASN:N	2.52	0.42
22:DA:8:C:H2'	22:DA:9:G:O4'	2.20	0.42
23:DB:141:G:N3	23:DB:141:G:C3'	2.80	0.42
23:DB:312:G:H5'	23:DB:331:C:O2'	2.20	0.42
23:DB:458:G:O2'	23:DB:459:U:P	2.78	0.42
23:DB:564:C:OP2	49:DR:79:ARG:NH2	2.52	0.42
23:DB:917:A:H2'	23:DB:918:A:O4'	2.19	0.42
23:DB:932:U:O2	23:DB:932:U:O4'	2.38	0.42
23:DB:1139:G:O2'	23:DB:1143:A:N1	2.47	0.42
23:DB:1265:A:H5'	57:DB:3659:HOH:O	2.19	0.42
23:DB:1620:G:H4'	36:D2:1:MET:HG2	2.02	0.42
23:DB:2031:A:C6	23:DB:2498:C:H1'	2.53	0.42
23:DB:2186:G:H2'	23:DB:2187:U:O4'	2.19	0.42
23:DB:2655:G:O2'	23:DB:2656:U:P	2.77	0.42
23:DB:2671:G:H2'	23:DB:2672:U:H6	1.84	0.42
23:DB:2755:C:O2'	23:DB:2756:U:H2'	2.20	0.42
23:DB:2783:U:H2'	23:DB:2784:U:C6	2.54	0.42
23:DB:2813:A:O2'	23:DB:2814:A:H5'	2.19	0.42
23:DB:2876:G:H2'	23:DB:2877:G:O4'	2.20	0.42
23:DB:2877:G:O2'	23:DB:2878:U:H5'	2.20	0.42
24:DI:72:THR:HG23	24:DI:112:LYS:HD2	2.01	0.42
24:DI:126:ARG:NH1	24:DI:126:ARG:CB	2.83	0.42
25:DC:43:ASN:ND2	25:DC:44:ASN:N	2.67	0.42
25:DC:80:LEU:HD21	25:DC:109:LEU:HB2	2.02	0.42
25:DC:80:LEU:HD23	25:DC:91:ALA:HB2	2.00	0.42
25:DC:198:GLU:O	25:DC:201:LEU:HB2	2.19	0.42
26:DD:96:ILE:N	26:DD:96:ILE:HD12	2.34	0.42
26:DD:109:VAL:HG11	26:DD:193:VAL:HG11	2.02	0.42
27:DK:99:ILE:N	27:DK:118:LEU:HD23	2.34	0.42
29:DE:47:LYS:HB3	29:DE:51:GLU:CB	2.42	0.42
29:DE:187:VAL:HG12	29:DE:188:MET:N	2.35	0.42
33:D1:8:ILE:CG1	33:D1:51:ALA:HA	2.49	0.42
35:DV:26:PHE:CE1	35:DV:89:ILE:HD11	2.55	0.42
38:DM:127:LYS:HD2	38:DM:127:LYS:N	2.31	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DX:27:ASN:HA	39:DX:30:MET:HG2	2.00	0.42
40:DH:25:TYR:CD2	40:DH:30:LEU:HD11	2.54	0.42
46:DU:62:ALA:O	46:DU:63:ALA:HB3	2.19	0.42
47:DF:111:ARG:O	47:DF:112:ASP:HB2	2.20	0.42
47:DF:161:SER:HG	47:DF:164:GLU:HG3	1.81	0.42
50:DT:58:VAL:O	50:DT:58:VAL:HG13	2.20	0.42
51:DZ:6:GLN:NE2	51:DZ:50:ARG:H	2.18	0.42
51:DZ:72:ARG:HB3	51:DZ:78:TYR:HE2	1.84	0.42
52:DW:47:GLY:HA3	52:DW:80:SER:CB	2.49	0.42
1:AA:60:A:O2'	19:AT:4:LYS:HD3	2.20	0.42
1:AA:85:U:H4'	1:AA:86:G:H5"	2.02	0.42
1:AA:611:C:H2'	1:AA:612:C:C6	2.55	0.42
1:AA:632:U:H3'	1:AA:632:U:O2	2.18	0.42
1:AA:636:U:O2'	1:AA:637:C:H5'	2.19	0.42
1:AA:1219:A:H2'	1:AA:1220:G:H8	1.83	0.42
1:AA:1380:U:O4	6:AG:2:ARG:HA	2.20	0.42
1:AA:1462:C:H2'	1:AA:1463:U:C6	2.55	0.42
2:AC:134:LYS:HG3	2:AC:167:TYR:CE2	2.54	0.42
3:AD:57:LYS:HE2	3:AD:61:ARG:HH11	1.85	0.42
5:AF:38:ARG:NH2	5:AF:63:ASN:HD21	2.18	0.42
5:AF:100:SER:HA	17:AR:23:LYS:HD3	2.01	0.42
6:AG:118:ARG:H	6:AG:118:ARG:HG3	1.66	0.42
12:AM:70:ARG:O	12:AM:74:MET:HE3	2.20	0.42
17:AR:41:SER:HA	17:AR:51:GLN:OE1	2.20	0.42
19:AT:43:LYS:CB	19:AT:85:LEU:HD21	2.49	0.42
20:AB:53:LEU:HD12	20:AB:53:LEU:N	2.35	0.42
22:BA:75:G:N1	22:BA:102:G:N2	2.68	0.42
22:BA:94:A:O2'	22:BA:95:U:H5'	2.20	0.42
23:BB:143:C:H2'	23:BB:144:A:H8	1.81	0.42
23:BB:679:C:H2'	23:BB:680:C:H6	1.85	0.42
23:BB:705:A:H2'	23:BB:706:A:H8	1.85	0.42
23:BB:810:U:O4	37:BL:30:THR:HG22	2.20	0.42
23:BB:840:C:O2'	23:BB:841:G:H5'	2.20	0.42
23:BB:922:C:H2'	23:BB:923:G:H8	1.85	0.42
23:BB:954:G:H5'	23:BB:955:U:OP2	2.19	0.42
23:BB:963:U:O2'	23:BB:964:C:H5'	2.20	0.42
23:BB:994:C:H3'	44:BQ:53:LYS:HZ2	1.84	0.42
23:BB:1141:U:P	41:BJ:27:ARG:HE	2.42	0.42
23:BB:1366:A:H2'	23:BB:1367:A:O4'	2.20	0.42
23:BB:1598:A:H2'	23:BB:1599:U:O4'	2.19	0.42
23:BB:1726:C:O5'	23:BB:1726:C:H6	2.03	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1728:C:O2	23:BB:1728:C:H2'	2.19	0.42
23:BB:1754:A:N1	23:BB:2716:C:O2'	2.53	0.42
23:BB:1789:A:H2'	23:BB:1790:C:O4'	2.19	0.42
23:BB:2197:U:O4	23:BB:2224:G:H2'	2.20	0.42
23:BB:2266:A:H4'	23:BB:2267:A:C8	2.52	0.42
23:BB:2583:G:H2'	23:BB:2584:U:O4'	2.20	0.42
23:BB:2597:G:C6	23:BB:2598:A:N6	2.87	0.42
23:BB:2721:A:H2'	23:BB:2722:G:H8	1.84	0.42
26:BD:163:GLY:O	26:BD:164:GLN:C	2.59	0.42
27:BK:3:GLN:CG	27:BK:4:GLU:N	2.83	0.42
27:BK:38:ILE:HD11	27:BK:112:PHE:HZ	1.84	0.42
27:BK:61:VAL:HG13	27:BK:87:LEU:CD2	2.50	0.42
28:BP:49:ILE:HG12	28:BP:50:ARG:N	2.34	0.42
29:BE:154:ASP:OD2	29:BE:157:LEU:HB3	2.19	0.42
31:B0:9:ARG:O	31:B0:12:ARG:HB3	2.20	0.42
33:B1:8:ILE:HD12	33:B1:51:ALA:HA	2.01	0.42
33:B1:28:THR:C	33:B1:30:PRO:HD3	2.40	0.42
33:B1:38:PHE:HB2	33:B1:45:HIS:CE1	2.55	0.42
35:BV:31:TYR:O	35:BV:92:VAL:HA	2.20	0.42
35:BV:79:ARG:H	35:BV:79:ARG:HG2	1.63	0.42
37:BL:60:ARG:O	37:BL:61:LEU:HD12	2.20	0.42
40:BH:116:ARG:HB2	40:BH:131:SER:N	2.35	0.42
42:BN:18:GLN:O	42:BN:19:ALA:HB2	2.20	0.42
42:BN:30:ARG:HH11	42:BN:30:ARG:HG2	1.85	0.42
47:BF:2:LYS:HD2	47:BF:100:GLU:HG2	2.01	0.42
48:BG:9:VAL:C	48:BG:11:PRO:HD3	2.40	0.42
48:BG:28:LYS:O	48:BG:30:GLY:N	2.53	0.42
49:BR:23:GLU:O	49:BR:24:LYS:C	2.58	0.42
51:BZ:59:ILE:HG22	51:BZ:64:ILE:HG13	2.02	0.42
52:BW:73:PRO:O	52:BW:74:LYS:HB2	2.20	0.42
53:B6:88:LEU:HB3	53:B6:90:LEU:HG	2.01	0.42
1:CA:279:A:H5'	1:CA:281:G:H5'	2.02	0.42
1:CA:489:C:O2'	1:CA:490:C:H5'	2.20	0.42
1:CA:587:G:H4'	7:CH:3:GLN:HA	2.02	0.42
1:CA:766:A:H2'	1:CA:767:A:C8	2.55	0.42
1:CA:958:A:N1	18:CS:53:GLY:C	2.73	0.42
1:CA:1051:C:H2'	1:CA:1052:U:C6	2.54	0.42
1:CA:1072:G:H2'	1:CA:1073:U:H6	1.85	0.42
1:CA:1085:U:H3'	1:CA:1086:U:C5	2.55	0.42
2:CC:71:ARG:O	2:CC:74:ILE:HG22	2.20	0.42
3:CD:146:GLU:CD	3:CD:147:LYS:H	2.22	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CE:44:ARG:HA	4:CE:71:ILE:O	2.20	0.42
5:CF:74:LEU:HA	5:CF:77:THR:OG1	2.20	0.42
6:CG:42:VAL:O	6:CG:46:LEU:HB2	2.19	0.42
7:CH:20:ASN:HA	7:CH:64:TYR:OH	2.19	0.42
8:CI:51:LEU:CB	8:CI:56:MET:HG2	2.34	0.42
11:CL:13:ARG:HB2	11:CL:14:LYS:H	1.46	0.42
12:CM:80:MET:C	12:CM:82:LEU:N	2.71	0.42
16:CQ:75:VAL:CG2	16:CQ:76:ARG:H	2.24	0.42
20:CB:164:ASP:CG	20:CB:203:ASP:HB2	2.40	0.42
21:CU:20:ARG:HD2	21:CU:20:ARG:H	1.85	0.42
22:DA:30:C:H2'	22:DA:31:C:H5'	2.01	0.42
22:DA:79:G:O2'	22:DA:80:U:H5'	2.20	0.42
23:DB:808:G:OP2	37:DL:36:LYS:HE2	2.20	0.42
23:DB:1098:A:C2'	24:DI:4:VAL:C	2.88	0.42
23:DB:1297:C:H2'	23:DB:1298:C:H6	1.85	0.42
23:DB:1324:G:C6	23:DB:1331:G:C6	3.07	0.42
23:DB:1444:G:H2'	23:DB:1445:G:C8	2.54	0.42
23:DB:2329:U:H2'	23:DB:2330:G:H8	1.82	0.42
23:DB:2466:C:N4	23:DB:2467:C:N4	2.68	0.42
23:DB:2593:U:H2'	23:DB:2594:C:C6	2.55	0.42
24:DI:49:GLU:HB3	24:DI:52:LEU:HD12	2.01	0.42
26:DD:14:ILE:O	26:DD:14:ILE:HG23	2.20	0.42
26:DD:32:ASN:HB3	26:DD:50:VAL:CG2	2.50	0.42
26:DD:90:PHE:O	26:DD:91:THR:C	2.58	0.42
26:DD:108:ASP:OD2	26:DD:206:ALA:HA	2.20	0.42
26:DD:108:ASP:N	26:DD:204:LYS:O	2.53	0.42
27:DK:61:VAL:O	27:DK:61:VAL:HG23	2.20	0.42
29:DE:118:LEU:HD21	29:DE:188:MET:HE2	2.01	0.42
32:D4:16:ILE:HA	32:D4:24:ARG:O	2.20	0.42
35:DV:49:ASN:O	35:DV:52:ALA:HB3	2.19	0.42
35:DV:76:ASP:O	35:DV:89:ILE:HG22	2.20	0.42
35:DV:83:LYS:O	35:DV:85:LYS:N	2.53	0.42
37:DL:120:VAL:HG12	37:DL:121:THR:N	2.35	0.42
42:DN:74:GLU:O	42:DN:77:ALA:HB3	2.20	0.42
43:DO:67:ASN:HB3	43:DO:70:ALA:HB2	2.00	0.42
43:DO:74:VAL:O	43:DO:78:VAL:HG22	2.20	0.42
46:DU:49:PRO:O	46:DU:50:ALA:HB2	2.20	0.42
48:DG:94:ARG:HB2	48:DG:127:GLN:O	2.20	0.42
51:DZ:35:SER:HA	51:DZ:49:LEU:O	2.19	0.42
51:DZ:56:MET:HA	51:DZ:59:ILE:HG12	2.02	0.42
53:D6:7:TYR:CE1	53:D6:160:GLU:HG2	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:356:A:H1'	1:AA:368:U:O2'	2.20	0.42
1:AA:679:C:O2'	1:AA:680:C:H5'	2.19	0.42
1:AA:907:A:O2'	1:AA:908:A:H5'	2.20	0.42
1:AA:1125:U:OP1	9:AJ:37:ARG:HG3	2.19	0.42
1:AA:1486:G:H2'	1:AA:1487:G:O4'	2.20	0.42
3:AD:30:LYS:HE2	3:AD:30:LYS:HB2	1.92	0.42
5:AF:53:LYS:H	5:AF:53:LYS:HZ2	1.67	0.42
6:AG:42:VAL:O	6:AG:46:LEU:HB2	2.20	0.42
10:AK:90:PRO:C	10:AK:92:ARG:N	2.74	0.42
13:AN:7:ALA:O	13:AN:8:ARG:C	2.59	0.42
16:AQ:29:LYS:HE3	16:AQ:36:PHE:CZ	2.54	0.42
16:AQ:74:LEU:HD13	16:AQ:74:LEU:C	2.40	0.42
19:AT:47:GLN:O	19:AT:50:PHE:HB3	2.19	0.42
20:AB:121:GLN:NE2	20:AB:122:ASP:N	2.68	0.42
22:BA:24:G:O2'	22:BA:25:U:H5"	2.20	0.42
23:BB:142:A:HO2'	50:BT:3:ARG:NH1	2.17	0.42
23:BB:562:U:C4	23:BB:2036:C:O4'	2.73	0.42
23:BB:703:U:H2'	23:BB:704:G:O4'	2.20	0.42
23:BB:745:G:O2'	23:BB:748:G:H1'	2.20	0.42
23:BB:807:U:P	37:BL:36:LYS:HD3	2.60	0.42
23:BB:917:A:H3'	23:BB:918:A:H8	1.84	0.42
23:BB:1045:C:O5'	23:BB:1046:A:H5"	2.19	0.42
23:BB:1236:G:H2'	23:BB:1237:A:H8	1.85	0.42
23:BB:1310:G:H1'	23:BB:1611:C:H5'	2.02	0.42
23:BB:1435:G:H2'	23:BB:1436:G:C8	2.54	0.42
23:BB:1476:U:O2'	23:BB:1477:A:P	2.78	0.42
23:BB:1664:A:H1'	23:BB:2726:A:C2	2.54	0.42
23:BB:1682:G:H2'	23:BB:1683:U:C6	2.54	0.42
23:BB:1789:A:H2'	23:BB:1790:C:C6	2.55	0.42
23:BB:1814:G:H2'	23:BB:1815:A:C8	2.55	0.42
23:BB:1818:U:HO2'	23:BB:1819:A:P	2.43	0.42
23:BB:2346:A:C3'	23:BB:2347:C:H5"	2.43	0.42
23:BB:2714:G:O2'	23:BB:2715:C:H5'	2.20	0.42
23:BB:2834:G:H2'	23:BB:2879:A:N6	2.35	0.42
27:BK:12:ASP:HB3	27:BK:85:VAL:HG13	2.01	0.42
28:BP:1:SER:H2	28:BP:4:ILE:HG13	1.84	0.42
29:BE:69:ARG:HH11	29:BE:69:ARG:HG2	1.85	0.42
32:B4:12:ARG:HG3	32:B4:13:ASN:ND2	2.35	0.42
37:BL:101:ILE:HG22	37:BL:102:GLY:N	2.35	0.42
37:BL:118:THR:HA	37:BL:119:PRO:HD3	1.90	0.42
37:BL:131:ALA:HA	37:BL:134:ALA:CB	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BM:71:LYS:HD3	38:BM:95:LEU:HD13	2.02	0.42
40:BH:14:SER:HB3	40:BH:17:ASP:CB	2.48	0.42
41:BJ:57:LEU:HD11	41:BJ:129:GLU:H	1.85	0.42
41:BJ:102:GLU:O	41:BJ:106:LYS:HB2	2.20	0.42
44:BQ:4:LYS:HZ3	44:BQ:7:VAL:HG22	1.82	0.42
44:BQ:20:ALA:O	44:BQ:21:LYS:C	2.58	0.42
44:BQ:89:ILE:C	44:BQ:91:ARG:H	2.24	0.42
46:BU:42:LYS:O	46:BU:57:ILE:HG23	2.20	0.42
46:BU:73:ASN:N	46:BU:73:ASN:HD22	2.17	0.42
47:BF:26:GLN:O	47:BF:27:VAL:C	2.57	0.42
47:BF:51:ASN:O	47:BF:55:ASP:HB2	2.20	0.42
48:BG:88:LEU:HD11	48:BG:94:ARG:H	1.83	0.42
50:BT:10:VAL:O	50:BT:12:ARG:N	2.53	0.42
50:BT:29:THR:N	50:BT:91:GLN:HE22	2.10	0.42
50:BT:48:GLN:HA	50:BT:48:GLN:NE2	2.35	0.42
51:BZ:65:ASP:O	51:BZ:69:ALA:HB2	2.20	0.42
1:CA:86:G:H1'	1:CA:87:C:O4'	2.19	0.42
1:CA:585:G:H2'	1:CA:586:C:O4'	2.19	0.42
1:CA:586:C:C5'	7:CH:81:GLY:HA2	2.49	0.42
1:CA:648:A:O2'	1:CA:649:A:H5'	2.20	0.42
1:CA:659:U:H2'	1:CA:660:C:C6	2.55	0.42
1:CA:1085:U:H3'	1:CA:1086:U:H6	1.84	0.42
1:CA:1181:G:O2'	1:CA:1182:G:C8	2.73	0.42
2:CC:14:VAL:O	2:CC:15:LYS:HD2	2.20	0.42
3:CD:29:THR:CB	3:CD:30:LYS:HD3	2.50	0.42
8:CI:26:LYS:H	8:CI:61:ASP:HB2	1.76	0.42
9:CJ:22:THR:OG1	9:CJ:72:ARG:HG3	2.19	0.42
9:CJ:24:GLU:CD	9:CJ:90:LEU:HD11	2.40	0.42
9:CJ:65:TYR:HA	13:CN:96:LYS:O	2.20	0.42
10:CK:61:ALA:O	10:CK:64:VAL:HG12	2.20	0.42
11:CL:79:ILE:C	11:CL:101:LEU:HD12	2.40	0.42
13:CN:5:MET:SD	13:CN:60:ARG:NH1	2.93	0.42
14:CO:17:ARG:HG2	14:CO:24:SER:CB	2.49	0.42
16:CQ:10:ARG:O	16:CQ:22:VAL:HG13	2.20	0.42
20:CB:80:LYS:HG3	20:CB:81:ASP:N	2.31	0.42
21:CU:11:PHE:O	21:CU:11:PHE:CD1	2.67	0.42
21:CU:48:LYS:HA	21:CU:51:ALA:HB3	2.00	0.42
22:DA:16:G:C5	22:DA:69:G:C2	3.08	0.42
23:DB:69:C:H2'	23:DB:70:G:C8	2.55	0.42
23:DB:170:U:O2'	23:DB:171:U:H5'	2.19	0.42
23:DB:416:U:O2'	23:DB:417:C:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:593:U:H2'	23:DB:594:U:C5	2.54	0.42
23:DB:1068:G:C6	23:DB:1069:A:N6	2.88	0.42
23:DB:1099:G:P	24:DI:4:VAL:N	2.83	0.42
23:DB:1146:C:H2'	23:DB:1147:A:C8	2.55	0.42
23:DB:1181:U:H2'	23:DB:1182:G:C8	2.47	0.42
23:DB:1199:U:C5'	44:DQ:4:LYS:HD3	2.50	0.42
23:DB:1286:A:H1'	23:DB:1288:G:OP2	2.20	0.42
23:DB:1468:U:H2'	23:DB:1522:A:N6	2.35	0.42
23:DB:1565:C:H5"	25:DC:17:LYS:NZ	2.35	0.42
23:DB:1948:G:O2'	23:DB:1949:G:H5'	2.20	0.42
23:DB:1956:U:C2'	23:DB:1957:C:H5'	2.49	0.42
23:DB:2049:G:O2'	23:DB:2050:C:H5'	2.19	0.42
23:DB:2143:C:H2'	23:DB:2144:G:O4'	2.20	0.42
23:DB:2336:A:O2'	23:DB:2337:G:P	2.78	0.42
23:DB:2727:A:O3'	27:DK:70:ARG:NH2	2.49	0.42
23:DB:2815:C:H2'	23:DB:2816:G:H8	1.84	0.42
23:DB:2823:A:C2'	23:DB:2824:C:H5'	2.50	0.42
24:DI:73:PRO:CG	24:DI:78:LEU:HD21	2.47	0.42
24:DI:131:THR:O	24:DI:135:MET:HG3	2.19	0.42
25:DC:23:LEU:HA	25:DC:23:LEU:HD12	1.86	0.42
25:DC:90:ILE:HD13	25:DC:90:ILE:HA	1.89	0.42
28:DP:1:SER:H2	28:DP:4:ILE:HG13	1.85	0.42
28:DP:101:GLU:N	28:DP:101:GLU:OE2	2.52	0.42
32:D4:1:MET:HG3	32:D4:34:LYS:HG2	2.02	0.42
33:D1:38:PHE:HB2	33:D1:45:HIS:CE1	2.55	0.42
35:DV:53:LYS:HE2	35:DV:53:LYS:HA	2.01	0.42
35:DV:72:VAL:CG2	35:DV:91:PHE:HB3	2.45	0.42
41:DJ:40:HIS:ND1	41:DJ:41:LYS:N	2.68	0.42
42:DN:62:ASN:O	42:DN:80:PHE:HZ	2.03	0.42
45:DS:68:ASP:OD1	45:DS:68:ASP:N	2.51	0.42
46:DU:73:ASN:N	46:DU:73:ASN:HD22	2.17	0.42
50:DT:69:ARG:HE	50:DT:70:HIS:H	1.67	0.42
53:D6:183:ILE:C	53:D6:185:GLY:N	2.73	0.42
1:AA:605:U:H2'	1:AA:606:G:H8	1.84	0.41
1:AA:843:U:OP2	1:AA:843:U:H4'	2.19	0.41
1:AA:903:G:H2'	1:AA:904:U:H6	1.85	0.41
1:AA:1180:A:H5"	1:AA:1181:G:OP2	2.19	0.41
1:AA:1201:A:H5"	1:AA:1201:A:H8	1.85	0.41
2:AC:53:ARG:HB3	2:AC:68:HIS:HB2	2.02	0.41
2:AC:71:ARG:O	2:AC:74:ILE:HG22	2.20	0.41
3:AD:102:TYR:HE1	3:AD:109:THR:HA	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:106:PHE:CG	3:AD:144:ILE:HD11	2.55	0.41
4:AE:44:ARG:HA	4:AE:71:ILE:O	2.20	0.41
6:AG:37:THR:O	6:AG:41:ILE:HG13	2.20	0.41
6:AG:85:GLN:HA	6:AG:85:GLN:OE1	2.20	0.41
8:AI:60:LEU:HD23	8:AI:60:LEU:N	2.35	0.41
12:AM:93:GLY:O	12:AM:108:ARG:HG3	2.20	0.41
13:AN:12:ARG:NE	13:AN:58:ARG:NH1	2.68	0.41
14:AO:25:THR:O	14:AO:29:VAL:HG23	2.20	0.41
14:AO:84:ARG:C	14:AO:85:LEU:HD12	2.41	0.41
19:AT:28:ARG:HA	19:AT:31:ILE:HD12	2.02	0.41
20:AB:163:ILE:CG2	20:AB:164:ASP:H	2.22	0.41
22:BA:15:A:N3	22:BA:15:A:O4'	2.53	0.41
23:BB:303:G:H2'	23:BB:304:U:C6	2.55	0.41
23:BB:457:A:N1	23:BB:470:A:H5"	2.35	0.41
23:BB:673:C:C2'	23:BB:674:G:H5'	2.49	0.41
23:BB:727:A:OP1	23:BB:1431:A:O2'	2.34	0.41
23:BB:1058:U:O2'	23:BB:1059:G:H5'	2.20	0.41
23:BB:1256:G:H21	29:BE:77:ILE:HG22	1.85	0.41
23:BB:1260:A:O2'	23:BB:1261:C:H5'	2.20	0.41
23:BB:1441:G:O2'	23:BB:1442:U:H5'	2.19	0.41
23:BB:1877:A:H2'	23:BB:1878:G:C8	2.55	0.41
23:BB:2076:U:O2	23:BB:2076:U:O4'	2.38	0.41
23:BB:2863:C:O2'	23:BB:2864:G:H5'	2.19	0.41
24:BI:48:ILE:O	24:BI:49:GLU:HB3	2.20	0.41
25:BC:75:ALA:CB	25:BC:93:VAL:HG22	2.50	0.41
26:BD:107:VAL:HG13	26:BD:203:VAL:HG23	2.02	0.41
26:BD:109:VAL:HG11	26:BD:193:VAL:HG11	2.02	0.41
27:BK:38:ILE:HD13	27:BK:61:VAL:HG12	2.02	0.41
27:BK:88:ASN:HB3	27:BK:92:GLU:O	2.20	0.41
28:BP:47:ILE:HG13	28:BP:48:ALA:N	2.35	0.41
28:BP:97:TYR:O	28:BP:100:ARG:HD3	2.20	0.41
37:BL:101:ILE:HG22	37:BL:105:ILE:CG1	2.50	0.41
37:BL:120:VAL:HG12	37:BL:121:THR:N	2.35	0.41
38:BM:105:MET:HB2	38:BM:117:PHE:CE2	2.56	0.41
38:BM:108:VAL:CG1	38:BM:112:LEU:HB3	2.45	0.41
40:BH:40:THR:O	40:BH:41:LYS:HB2	2.20	0.41
42:BN:25:ALA:HB1	42:BN:48:VAL:CG1	2.50	0.41
43:BO:109:ALA:O	43:BO:113:ALA:N	2.52	0.41
44:BQ:70:GLN:NE2	44:BQ:70:GLN:HA	2.34	0.41
48:BG:10:VAL:HG13	48:BG:14:VAL:CG2	2.50	0.41
49:BR:39:LEU:CA	49:BR:53:PHE:HA	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BW:28:GLU:O	52:BW:30:VAL:N	2.53	0.41
1:CA:464:U:H2'	1:CA:466:A:OP2	2.20	0.41
1:CA:467:U:O2	1:CA:467:U:H2'	2.19	0.41
1:CA:643:C:H2'	1:CA:644:U:H6	1.84	0.41
1:CA:852:G:H2'	1:CA:853:C:H6	1.85	0.41
1:CA:1028:C:H3'	1:CA:1029:U:C6	2.54	0.41
1:CA:1108:G:H5'	2:CC:175:HIS:ND1	2.34	0.41
1:CA:1201:A:O2'	1:CA:1202:U:OP2	2.29	0.41
2:CC:10:ARG:CZ	2:CC:181:ILE:HD13	2.50	0.41
3:CD:47:LEU:HD21	3:CD:55:ARG:HD2	2.01	0.41
5:CF:100:SER:HA	17:CR:23:LYS:CD	2.49	0.41
6:CG:47:GLU:OE1	6:CG:57:GLU:HG2	2.19	0.41
8:CI:46:VAL:CG2	8:CI:47:VAL:N	2.83	0.41
9:CJ:21:ALA:O	9:CJ:25:ILE:HG13	2.20	0.41
12:CM:33:LEU:HD22	12:CM:38:ILE:HB	2.02	0.41
20:CB:68:PHE:N	20:CB:68:PHE:CD1	2.87	0.41
23:DB:80:G:HO2'	23:DB:294:A:H2	1.60	0.41
23:DB:307:G:N1	23:DB:310:A:OP2	2.51	0.41
23:DB:470:A:H2'	23:DB:471:A:C8	2.55	0.41
23:DB:810:U:O4	37:DL:30:THR:HG22	2.20	0.41
23:DB:827:U:H5'	23:DB:828:U:O5'	2.21	0.41
23:DB:1397:U:H5"	23:DB:1398:C:H5	1.85	0.41
23:DB:1539:U:O2	23:DB:1539:U:H2'	2.21	0.41
23:DB:1769:U:O2'	23:DB:1770:G:H5'	2.20	0.41
23:DB:2467:C:O2'	23:DB:2468:A:H5'	2.20	0.41
23:DB:2592:G:H2'	23:DB:2593:U:O4'	2.19	0.41
23:DB:2758:A:C2'	23:DB:2759:G:H5'	2.50	0.41
23:DB:2848:G:H22	23:DB:2867:G:N2	2.16	0.41
25:DC:6:LYS:O	25:DC:8:THR:N	2.48	0.41
26:DD:13:ARG:HG3	26:DD:15:PHE:CE1	2.54	0.41
29:DE:170:ARG:HH12	29:DE:176:ASP:CB	2.33	0.41
31:D0:38:LEU:HD13	31:D0:41:HIS:CE1	2.54	0.41
37:DL:81:ASP:CG	37:DL:100:ILE:HD11	2.41	0.41
40:DH:42:LYS:O	40:DH:45:GLU:HB2	2.20	0.41
41:DJ:70:THR:HG22	41:DJ:90:GLU:OE2	2.19	0.41
45:DS:4:ILE:CG2	45:DS:106:VAL:HG13	2.50	0.41
47:DF:29:ARG:CD	47:DF:29:ARG:H	2.33	0.41
48:DG:46:ASP:N	48:DG:46:ASP:OD2	2.53	0.41
49:DR:49:ILE:HD13	49:DR:53:PHE:N	2.35	0.41
51:DZ:38:PHE:CE2	51:DZ:51:VAL:HG21	2.34	0.41
51:DZ:59:ILE:HG22	51:DZ:64:ILE:HG13	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:182:A:H1'	1:AA:183:C:H5	1.85	0.41
1:AA:212:G:H2'	1:AA:213:G:C8	2.55	0.41
1:AA:215:C:O2'	1:AA:216:U:H5'	2.20	0.41
1:AA:239:U:H6	1:AA:239:U:H5'	1.85	0.41
1:AA:626:G:H2'	1:AA:627:G:H8	1.85	0.41
1:AA:657:U:H1'	14:AO:22:THR:O	2.19	0.41
1:AA:728:A:H2'	1:AA:729:A:C8	2.55	0.41
1:AA:734:G:H2'	1:AA:735:C:H6	1.85	0.41
1:AA:766:A:H2'	1:AA:767:A:C8	2.55	0.41
1:AA:812:G:O2'	1:AA:813:U:C6	2.61	0.41
1:AA:846:G:N3	1:AA:846:G:H2'	2.35	0.41
1:AA:852:G:H2'	1:AA:853:C:H6	1.85	0.41
1:AA:909:A:H2'	1:AA:910:C:O4'	2.19	0.41
1:AA:982:U:OP2	13:AN:60:ARG:NH1	2.53	0.41
1:AA:1226:C:H5'	12:AM:94:LEU:CD1	2.49	0.41
1:AA:1505:G:H5"	1:AA:1506:U:O5'	2.20	0.41
3:AD:1:ALA:O	3:AD:2:ARG:HG2	2.19	0.41
3:AD:194:ILE:O	3:AD:194:ILE:HG23	2.19	0.41
4:AE:111:ARG:HG3	4:AE:112:ALA:N	2.35	0.41
4:AE:151:MET:O	4:AE:154:ALA:HB3	2.20	0.41
11:AL:23:LEU:HG	11:AL:24:GLU:CG	2.49	0.41
16:AQ:52:CYS:HB2	16:AQ:58:VAL:HG11	2.02	0.41
20:AB:68:PHE:N	20:AB:68:PHE:HD1	2.18	0.41
20:AB:125:PHE:HD2	20:AB:126:ASP:H	1.66	0.41
20:AB:164:ASP:CG	20:AB:203:ASP:HB2	2.40	0.41
22:BA:109:A:H2'	22:BA:110:C:O4'	2.20	0.41
23:BB:26:G:H1'	23:BB:515:A:N6	2.35	0.41
23:BB:534:U:H5'	44:BQ:41:ALA:CB	2.50	0.41
23:BB:709:U:H2'	23:BB:710:U:H6	1.77	0.41
23:BB:936:A:H2'	23:BB:937:C:H6	1.84	0.41
23:BB:1059:G:H2'	23:BB:1060:U:C5	2.55	0.41
23:BB:1081:U:O2'	24:BI:118:GLY:HA2	2.21	0.41
23:BB:1241:A:N3	23:BB:1241:A:H5'	2.35	0.41
23:BB:1508:A:H2'	23:BB:1509:A:C2	2.55	0.41
23:BB:2142:A:H2'	23:BB:2143:C:C1'	2.49	0.41
23:BB:2456:C:H2'	23:BB:2457:U:O4'	2.20	0.41
23:BB:2472:G:H3'	23:BB:2475:C:N4	2.35	0.41
23:BB:2698:U:H2'	23:BB:2699:C:H6	1.83	0.41
23:BB:2733:A:O2'	23:BB:2734:A:H5'	2.19	0.41
25:BC:23:LEU:HD12	25:BC:23:LEU:HA	1.86	0.41
25:BC:32:LEU:CD2	25:BC:63:ILE:HG13	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:69:ASN:HB3	25:BC:70:LYS:H	1.58	0.41
25:BC:76:VAL:O	25:BC:78:GLU:N	2.53	0.41
25:BC:106:PRO:HB3	25:BC:141:HIS:CE1	2.56	0.41
25:BC:156:SER:HB3	25:BC:159:THR:HG21	2.02	0.41
27:BK:115:ILE:HG23	27:BK:116:ILE:H	1.83	0.41
32:B4:7:VAL:O	32:B4:8:LYS:O	2.38	0.41
37:BL:3:LEU:O	37:BL:5:THR:HG23	2.21	0.41
38:BM:31:PHE:CZ	38:BM:110:GLU:HA	2.55	0.41
39:BX:27:ASN:HA	39:BX:30:MET:HG2	2.02	0.41
40:BH:9:VAL:O	40:BH:10:ALA:O	2.38	0.41
40:BH:24:GLY:C	40:BH:26:ALA:N	2.73	0.41
40:BH:73:ASN:ND2	40:BH:74:ALA:N	2.62	0.41
40:BH:124:THR:O	40:BH:125:THR:HB	2.20	0.41
46:BU:51:LEU:N	46:BU:53:GLN:NE2	2.68	0.41
47:BF:76:PHE:HD2	47:BF:78:ILE:HD13	1.84	0.41
47:BF:133:GLU:HA	47:BF:150:GLY:HA2	2.02	0.41
48:BG:84:LYS:HG3	48:BG:131:VAL:C	2.40	0.41
48:BG:96:ALA:HB3	48:BG:103:ASN:O	2.20	0.41
53:B6:31:GLY:N	53:B6:183:ILE:HA	2.35	0.41
53:B6:142:LYS:O	53:B6:146:GLU:HB2	2.20	0.41
1:CA:27:G:H2'	1:CA:28:A:H8	1.85	0.41
1:CA:370:C:H2'	1:CA:371:A:H8	1.85	0.41
1:CA:411:A:O2'	1:CA:412:A:O4'	2.34	0.41
1:CA:768:A:H5'	1:CA:1524:C:H1'	2.01	0.41
1:CA:781:A:C2'	1:CA:782:A:H5'	2.45	0.41
1:CA:835:U:O2'	1:CA:836:G:H5'	2.20	0.41
1:CA:903:G:H2'	1:CA:904:U:H6	1.85	0.41
1:CA:1003:G:H21	1:CA:1005:A:C5'	2.32	0.41
1:CA:1019:A:H2'	1:CA:1020:G:H8	1.81	0.41
1:CA:1170:A:H5"	20:CB:138:ARG:HH22	1.84	0.41
1:CA:1380:U:O4	6:CG:2:ARG:HB2	2.20	0.41
1:CA:1505:G:H5"	1:CA:1506:U:O5'	2.20	0.41
2:CC:141:MET:HA	2:CC:141:MET:CE	2.51	0.41
5:CF:6:ILE:HD12	5:CF:7:VAL:N	2.36	0.41
5:CF:46:GLN:HG3	5:CF:47:LEU:N	2.35	0.41
7:CH:63:LYS:CD	7:CH:70:VAL:HG21	2.50	0.41
10:CK:16:SER:N	10:CK:77:GLY:O	2.45	0.41
12:CM:65:GLU:O	12:CM:66:GLY:C	2.59	0.41
13:CN:30:ILE:O	13:CN:32:ASP:N	2.47	0.41
15:CP:67:ILE:HG23	15:CP:67:ILE:O	2.21	0.41
19:CT:50:PHE:O	19:CT:53:MET:HG3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:53:LEU:H	20:CB:53:LEU:CD1	2.34	0.41
20:CB:204:ASP:O	20:CB:205:ALA:HB3	2.20	0.41
23:DB:195:A:H1'	23:DB:250:G:N2	2.35	0.41
23:DB:199:A:O2'	23:DB:200:U:H5'	2.20	0.41
23:DB:262:A:H2'	23:DB:263:G:O4'	2.19	0.41
23:DB:685:A:H1'	23:DB:688:U:O4	2.20	0.41
23:DB:1131:G:N2	23:DB:2024:G:N2	2.67	0.41
23:DB:1813:G:H4'	25:DC:42:ARG:O	2.20	0.41
23:DB:1822:C:H2'	23:DB:1823:G:H8	1.84	0.41
23:DB:2143:C:H3'	23:DB:2144:G:C8	2.54	0.41
23:DB:2262:U:H2'	23:DB:2263:C:H6	1.86	0.41
23:DB:2302:U:O2'	23:DB:2303:G:H5'	2.19	0.41
23:DB:2334:U:H5'	43:DO:12:THR:HB	2.03	0.41
23:DB:2583:G:O2'	23:DB:2584:U:H5'	2.20	0.41
23:DB:2727:A:O2'	27:DK:70:ARG:NH2	2.53	0.41
23:DB:2798:U:H1'	23:DB:2800:A:C6	2.53	0.41
24:DI:52:LEU:HD13	24:DI:81:LYS:NZ	2.35	0.41
24:DI:108:ILE:CG2	24:DI:128:ILE:HD13	2.50	0.41
25:DC:208:GLY:O	25:DC:209:ALA:C	2.58	0.41
26:DD:21:SER:HB2	27:DK:73:ASP:HA	2.02	0.41
27:DK:3:GLN:CG	27:DK:4:GLU:N	2.83	0.41
28:DP:3:ILE:CD1	28:DP:7:LEU:HD11	2.49	0.41
29:DE:3:LEU:HD23	29:DE:14:VAL:CG2	2.50	0.41
29:DE:108:ILE:HG12	37:DL:2:ARG:NH2	2.35	0.41
35:DV:70:ILE:CG1	35:DV:71:LYS:N	2.84	0.41
36:D2:11:LYS:O	36:D2:12:ARG:C	2.59	0.41
37:DL:55:MET:HG3	37:DL:59:ARG:CB	2.50	0.41
38:DM:66:ARG:CB	38:DM:101:VAL:HG13	2.50	0.41
39:DX:36:GLN:HB2	39:DX:37:LEU:H	1.65	0.41
40:DH:83:LYS:HG2	40:DH:149:GLU:CG	2.51	0.41
43:DO:39:VAL:HB	43:DO:49:VAL:HG22	2.02	0.41
45:DS:25:ARG:HH21	45:DS:74:ILE:HG23	1.85	0.41
46:DU:90:LYS:HB3	46:DU:90:LYS:HE2	1.90	0.41
47:DF:3:LEU:HD13	47:DF:3:LEU:O	2.20	0.41
47:DF:26:GLN:O	47:DF:27:VAL:C	2.58	0.41
50:DT:18:GLU:C	50:DT:20:ALA:N	2.71	0.41
52:DW:39:GLN:NE2	52:DW:43:LYS:HG2	2.35	0.41
53:D6:61:PRO:HD3	53:D6:67:VAL:HG22	2.02	0.41
1:AA:85:U:H4'	1:AA:86:G:C5'	2.50	0.41
1:AA:204:G:H2'	1:AA:205:A:C8	2.55	0.41
1:AA:263:A:OP1	19:AT:73:ARG:NH1	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:464:U:H2'	1:AA:466:A:OP2	2.20	0.41
1:AA:476:U:H2'	1:AA:477:C:O4'	2.21	0.41
1:AA:526:C:OP2	11:AL:87:LYS:HE3	2.19	0.41
1:AA:768:A:H5'	1:AA:1524:C:H1'	2.03	0.41
1:AA:782:A:H2'	1:AA:783:C:O4'	2.20	0.41
1:AA:812:G:OP1	1:AA:812:G:H4'	2.20	0.41
1:AA:846:G:H2'	1:AA:847:G:C8	2.55	0.41
1:AA:1032:G:H2'	1:AA:1033:G:H5'	2.02	0.41
2:AC:155:ARG:H	2:AC:162:ALA:HA	1.84	0.41
3:AD:117:VAL:HA	3:AD:122:ILE:HG12	2.01	0.41
3:AD:197:HIS:HA	3:AD:200:VAL:HG13	2.03	0.41
4:AE:30:PHE:CD2	4:AE:30:PHE:N	2.88	0.41
4:AE:148:SER:HB2	4:AE:149:PRO:HD2	2.02	0.41
5:AF:7:VAL:O	5:AF:7:VAL:HG13	2.20	0.41
6:AG:107:ALA:HA	6:AG:110:ARG:HD2	2.00	0.41
9:AJ:17:LEU:HD11	9:AJ:95:GLY:HA3	2.03	0.41
10:AK:13:LYS:HD2	10:AK:76:TYR:CE2	2.56	0.41
12:AM:78:ARG:HH11	12:AM:78:ARG:HG2	1.86	0.41
14:AO:57:LEU:HD11	23:BB:715:A:N6	2.35	0.41
15:AP:8:ARG:HH11	15:AP:8:ARG:HG2	1.86	0.41
16:AQ:30:HIS:CG	16:AQ:33:TYR:HB2	2.55	0.41
20:AB:103:TRP:CH2	20:AB:107:ARG:HD2	2.54	0.41
23:BB:109:C:C5'	23:BB:348:A:H4'	2.50	0.41
23:BB:308:G:O2'	46:BU:16:LYS:NZ	2.45	0.41
23:BB:465:G:H2'	23:BB:466:A:C8	2.55	0.41
23:BB:812:C:O2'	23:BB:813:U:H5'	2.20	0.41
23:BB:911:A:N6	38:BM:9:PHE:HB3	2.35	0.41
23:BB:1139:G:H2'	23:BB:1140:C:H6	1.86	0.41
23:BB:1146:C:H2'	23:BB:1147:A:C8	2.56	0.41
23:BB:1220:G:O2'	23:BB:1221:C:H5'	2.21	0.41
23:BB:1314:C:O2'	23:BB:1315:C:H5'	2.20	0.41
23:BB:1404:C:H2'	23:BB:1405:U:H6	1.85	0.41
23:BB:1805:A:H2'	23:BB:1806:C:C6	2.55	0.41
23:BB:2021:C:OP1	31:B0:8:THR:HG21	2.20	0.41
23:BB:2456:C:H6	23:BB:2456:C:O5'	2.03	0.41
23:BB:2472:G:C3'	23:BB:2475:C:H42	2.33	0.41
23:BB:2806:C:H2'	23:BB:2807:U:O4'	2.20	0.41
25:BC:12:ARG:HA	25:BC:15:VAL:CG2	2.50	0.41
25:BC:14:HIS:O	25:BC:203:VAL:HG11	2.20	0.41
27:BK:70:ARG:CB	27:BK:76:VAL:HG22	2.45	0.41
28:BP:26:GLU:HG3	28:BP:43:GLU:HG2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BP:31:VAL:HG13	28:BP:32:VAL:N	2.35	0.41
28:BP:50:ARG:HB3	28:BP:57:ALA:O	2.19	0.41
29:BE:3:LEU:O	29:BE:12:LEU:HB2	2.20	0.41
30:BY:7:THR:O	30:BY:54:VAL:HA	2.20	0.41
38:BM:69:PRO:HB2	38:BM:92:TRP:HB3	2.02	0.41
38:BM:123:LYS:O	38:BM:124:LEU:C	2.58	0.41
40:BH:133:GLN:HA	40:BH:139:PHE:HA	2.01	0.41
42:BN:62:ASN:N	42:BN:62:ASN:ND2	2.68	0.41
43:BO:25:ARG:HG2	43:BO:25:ARG:HH21	1.84	0.41
46:BU:23:LYS:HD2	46:BU:23:LYS:H	1.85	0.41
47:BF:31:GLU:O	47:BF:31:GLU:HG3	2.19	0.41
47:BF:42:ALA:O	47:BF:43:ILE:C	2.59	0.41
1:CA:27:G:H2'	1:CA:28:A:C8	2.55	0.41
1:CA:370:C:H2'	1:CA:371:A:C8	2.55	0.41
1:CA:1147:C:H2'	1:CA:1148:U:C6	2.54	0.41
1:CA:1401:G:H2'	1:CA:1402:C:O4'	2.20	0.41
1:CA:1470:U:O2'	1:CA:1471:U:H5'	2.20	0.41
1:CA:1499:A:H2'	1:CA:1500:A:H8	1.84	0.41
2:CC:16:PRO:HG2	2:CC:53:ARG:NH2	2.35	0.41
6:CG:107:ALA:HA	6:CG:110:ARG:HD2	2.02	0.41
7:CH:11:THR:HG22	7:CH:14:ARG:NH1	2.30	0.41
8:CI:56:MET:CG	8:CI:57:VAL:N	2.83	0.41
12:CM:22:TYR:HB3	12:CM:69:ARG:NH1	2.35	0.41
12:CM:93:GLY:O	12:CM:108:ARG:HG3	2.20	0.41
13:CN:26:LEU:HD23	13:CN:27:LYS:N	2.27	0.41
14:CO:7:ALA:O	14:CO:11:ILE:HG22	2.20	0.41
20:CB:152:ASP:O	20:CB:153:MET:HB2	2.19	0.41
20:CB:209:VAL:HG23	20:CB:210:THR:N	2.28	0.41
21:CU:16:ARG:O	21:CU:17:ARG:C	2.58	0.41
23:DB:495:G:H21	45:DS:61:ASN:ND2	2.16	0.41
23:DB:900:A:O2'	23:DB:901:C:H5'	2.21	0.41
23:DB:936:A:H2'	23:DB:937:C:H6	1.83	0.41
23:DB:1036:G:C5	23:DB:1120:G:C6	3.09	0.41
23:DB:1137:G:O2'	23:DB:1138:G:H5'	2.20	0.41
23:DB:1353:A:C8	23:DB:1378:A:N6	2.88	0.41
23:DB:1559:U:H3'	23:DB:1560:G:C5'	2.49	0.41
23:DB:1687:G:O2'	23:DB:1688:U:H5'	2.20	0.41
23:DB:1928:A:H2'	23:DB:1929:G:O4'	2.20	0.41
23:DB:2008:C:H2'	23:DB:2009:A:C8	2.55	0.41
23:DB:2026:U:C2	23:DB:2027:G:C8	3.09	0.41
23:DB:2526:G:H2'	23:DB:2527:C:H6	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2598:A:OP1	25:DC:233:GLY:CA	2.67	0.41
23:DB:2606:C:O2'	23:DB:2607:G:H5'	2.20	0.41
23:DB:2624:G:H1'	31:D0:18:HIS:CE1	2.55	0.41
23:DB:2642:G:O2'	23:DB:2643:G:H5'	2.20	0.41
23:DB:2677:G:H2'	23:DB:2678:C:H6	1.85	0.41
23:DB:2702:G:H2'	23:DB:2703:C:C6	2.55	0.41
23:DB:2772:C:H4'	26:DD:171:THR:HG22	2.01	0.41
23:DB:2883:A:OP1	31:D0:48:TYR:HE1	2.03	0.41
24:DI:105:LEU:HD11	24:DI:139:VAL:CG2	2.44	0.41
25:DC:180:MET:HB2	25:DC:268:ARG:CB	2.50	0.41
26:DD:12:THR:O	26:DD:24:VAL:HG12	2.19	0.41
28:DP:52:ARG:HG2	28:DP:52:ARG:NH1	2.31	0.41
28:DP:110:LYS:HD2	28:DP:110:LYS:H	1.86	0.41
29:DE:150:THR:HG21	29:DE:153:LEU:CA	2.43	0.41
29:DE:160:ALA:C	29:DE:162:ARG:H	2.24	0.41
31:D0:51:ARG:O	31:D0:52:LYS:HB2	2.20	0.41
32:D4:9:LYS:O	32:D4:10:LEU:HD23	2.21	0.41
34:D3:22:LYS:HA	34:D3:48:MET:CA	2.47	0.41
40:DH:41:LYS:HA	40:DH:44:ILE:CD1	2.49	0.41
41:DJ:25:LEU:HA	41:DJ:28:LEU:HD22	2.01	0.41
44:DQ:20:ALA:O	44:DQ:21:LYS:C	2.58	0.41
44:DQ:94:LEU:CD2	49:DR:11:GLN:HB2	2.50	0.41
47:DF:141:ASP:O	47:DF:144:LYS:N	2.54	0.41
48:DG:93:TYR:CD1	48:DG:106:LEU:HB2	2.55	0.41
49:DR:7:SER:OG	49:DR:8:GLY:N	2.53	0.41
52:DW:58:LEU:N	52:DW:58:LEU:HD22	2.35	0.41
1:AA:191:G:H8	1:AA:191:G:OP2	2.03	0.41
1:AA:513:C:H2'	1:AA:514:C:C6	2.55	0.41
1:AA:659:U:H2'	1:AA:660:C:C6	2.54	0.41
1:AA:663:A:H2'	1:AA:664:G:C8	2.54	0.41
1:AA:978:A:H5'	1:AA:1362:A:H62	1.85	0.41
1:AA:1342:C:O2'	8:AI:125:GLN:HB2	2.20	0.41
3:AD:24:VAL:HG23	3:AD:25:ARG:N	2.31	0.41
5:AF:46:GLN:CG	5:AF:47:LEU:N	2.83	0.41
5:AF:69:GLU:O	5:AF:73:GLU:HG2	2.20	0.41
7:AH:1:SER:O	7:AH:3:GLN:N	2.53	0.41
7:AH:11:THR:HG22	7:AH:14:ARG:NH1	2.32	0.41
7:AH:46:GLU:N	7:AH:63:LYS:HB2	2.36	0.41
11:AL:33:CYS:O	11:AL:75:GLU:O	2.37	0.41
11:AL:51:VAL:HG12	11:AL:52:CYS:N	2.29	0.41
14:AO:25:THR:HG21	14:AO:70:LEU:HD23	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AT:82:ILE:O	19:AT:85:LEU:HD22	2.20	0.41
20:AB:138:ARG:HA	20:AB:141:GLU:OE1	2.21	0.41
21:AU:23:GLU:HA	21:AU:27:VAL:HG21	2.02	0.41
22:BA:3:C:H2'	22:BA:4:C:O4'	2.20	0.41
22:BA:51:G:H2'	22:BA:52:A:O5'	2.21	0.41
22:BA:64:G:H2'	22:BA:65:U:H6	1.85	0.41
23:BB:273:G:C2'	23:BB:274:C:H5'	2.50	0.41
23:BB:307:G:N2	23:BB:309:A:H3'	2.34	0.41
23:BB:323:C:H6	23:BB:1205:A:N1	2.18	0.41
23:BB:381:G:H5"	51:BZ:16:ASN:ND2	2.35	0.41
23:BB:638:G:H2'	23:BB:639:U:C6	2.55	0.41
23:BB:665:U:H2'	23:BB:666:A:C8	2.53	0.41
23:BB:851:C:H2'	23:BB:852:U:C6	2.55	0.41
23:BB:972:A:OP2	23:BB:974:G:H5"	2.20	0.41
23:BB:1559:U:H3'	23:BB:1560:G:C5'	2.50	0.41
23:BB:1930:G:N2	23:BB:1969:A:O5'	2.53	0.41
23:BB:1940:U:H5"	23:BB:1940:U:O2	2.20	0.41
23:BB:2395:C:H2'	23:BB:2396:G:O4'	2.21	0.41
23:BB:2882:A:OP1	42:BN:96:ARG:HD2	2.21	0.41
24:BI:35:MET:SD	24:BI:35:MET:C	2.98	0.41
25:BC:5:CYS:HB2	25:BC:15:VAL:O	2.21	0.41
26:BD:108:ASP:N	26:BD:204:LYS:O	2.53	0.41
26:BD:116:LYS:HB2	26:BD:165:MET:HB3	2.02	0.41
26:BD:122:VAL:N	26:BD:127:PHE:HB2	2.35	0.41
29:BE:3:LEU:HD23	29:BE:14:VAL:CG2	2.50	0.41
31:B0:41:HIS:CD2	31:B0:41:HIS:N	2.86	0.41
35:BV:83:LYS:O	35:BV:85:LYS:N	2.53	0.41
37:BL:78:ARG:NH2	37:BL:78:ARG:HB3	2.35	0.41
38:BM:25:ASP:OD2	38:BM:25:ASP:N	2.53	0.41
40:BH:65:ALA:HB3	40:BH:135:HIS:CE1	2.54	0.41
40:BH:89:LYS:HB3	40:BH:90:LEU:H	1.58	0.41
40:BH:124:THR:CG2	40:BH:125:THR:H	2.32	0.41
41:BJ:35:ARG:HG3	41:BJ:52:ASP:OD1	2.21	0.41
41:BJ:43:GLU:O	41:BJ:44:TYR:C	2.57	0.41
41:BJ:133:ALA:C	41:BJ:135:GLN:H	2.23	0.41
42:BN:96:ARG:HG2	42:BN:98:LEU:HD22	2.02	0.41
44:BQ:91:ARG:HH12	49:BR:10:LYS:CA	2.34	0.41
47:BF:41:GLU:O	47:BF:43:ILE:N	2.53	0.41
51:BZ:43:GLU:C	51:BZ:45:ARG:H	2.22	0.41
51:BZ:64:ILE:H	51:BZ:64:ILE:CD1	2.24	0.41
51:BZ:72:ARG:HB3	51:BZ:78:TYR:HE2	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:124:C:O2'	1:CA:125:U:H5'	2.20	0.41
1:CA:410:G:H2'	1:CA:429:U:C5	2.55	0.41
1:CA:940:C:H2'	1:CA:941:G:C8	2.56	0.41
1:CA:951:G:O2'	1:CA:952:U:H5'	2.20	0.41
1:CA:1057:G:O2'	1:CA:1058:G:H5'	2.19	0.41
1:CA:1060:U:H5"	9:CJ:53:ILE:CD1	2.50	0.41
1:CA:1354:U:O2'	1:CA:1355:G:H5'	2.21	0.41
1:CA:1446:A:H2'	1:CA:1447:A:C8	2.55	0.41
3:CD:25:ARG:HH11	3:CD:25:ARG:HB2	1.84	0.41
4:CE:87:VAL:HG22	4:CE:88:HIS:N	2.35	0.41
12:CM:12:LYS:HB3	12:CM:13:HIS:H	1.69	0.41
13:CN:5:MET:SD	13:CN:8:ARG:HD3	2.60	0.41
13:CN:72:PHE:O	13:CN:73:LEU:HD23	2.19	0.41
22:DA:15:A:N3	22:DA:15:A:O4'	2.53	0.41
22:DA:109:A:H2'	22:DA:110:C:O4'	2.20	0.41
23:DB:76:C:HO2'	39:DX:55:THR:CB	2.33	0.41
23:DB:82:U:H2'	23:DB:83:A:C8	2.55	0.41
23:DB:532:A:N3	23:DB:532:A:C2'	2.82	0.41
23:DB:543:G:H2'	23:DB:544:C:H4'	2.02	0.41
23:DB:553:G:H2'	23:DB:554:U:O4'	2.20	0.41
23:DB:833:A:H1'	37:DL:52:GLY:N	2.35	0.41
23:DB:1029:A:H2'	23:DB:1030:C:O4'	2.20	0.41
23:DB:1059:G:H4'	24:DI:116:MET:HE2	2.02	0.41
23:DB:1250:G:OP2	37:DL:21:ARG:NH2	2.53	0.41
23:DB:1289:C:O2'	23:DB:1290:C:H5'	2.20	0.41
23:DB:2144:G:C2'	23:DB:2145:C:H5'	2.51	0.41
23:DB:2182:U:H2'	23:DB:2183:A:H8	1.84	0.41
23:DB:2217:G:H2'	23:DB:2218:G:H8	1.84	0.41
23:DB:2300:C:O2'	23:DB:2301:C:H5'	2.19	0.41
23:DB:2645:G:H4'	23:DB:2732:G:H2'	2.03	0.41
23:DB:2654:A:N1	23:DB:2665:A:H5"	2.36	0.41
23:DB:2689:U:H4'	23:DB:2690:U:OP2	2.20	0.41
23:DB:2880:C:H1'	42:DN:93:GLY:H	1.85	0.41
25:DC:43:ASN:N	25:DC:47:ARG:O	2.53	0.41
26:DD:32:ASN:N	26:DD:96:ILE:O	2.52	0.41
29:DE:46:GLN:HB3	29:DE:86:ALA:HA	2.02	0.41
30:DY:7:THR:O	30:DY:54:VAL:HA	2.21	0.41
33:D1:37:LYS:HB2	33:D1:48:TYR:CD2	2.56	0.41
37:DL:101:ILE:HG22	37:DL:102:GLY:N	2.34	0.41
37:DL:118:THR:O	37:DL:120:VAL:HG23	2.19	0.41
38:DM:46:ILE:HG13	38:DM:47:GLU:N	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DM:66:ARG:HB2	38:DM:101:VAL:O	2.20	0.41
41:DJ:75:TYR:HD1	41:DJ:86:GLN:HB3	1.85	0.41
42:DN:24:MET:HE2	42:DN:44:LEU:HB2	2.02	0.41
45:DS:71:VAL:HG13	45:DS:71:VAL:O	2.21	0.41
47:DF:134:GLN:HE21	47:DF:134:GLN:HB3	1.54	0.41
53:D6:147:LEU:HD23	53:D6:147:LEU:N	2.34	0.41
53:D6:174:GLN:HE21	53:D6:174:GLN:HB3	1.58	0.41
1:AA:79:G:C8	1:AA:79:G:OP2	2.73	0.41
1:AA:124:C:O2'	1:AA:125:U:H5'	2.21	0.41
1:AA:138:G:C6	1:AA:226:G:C6	3.09	0.41
1:AA:308:C:H2'	1:AA:309:A:C8	2.56	0.41
1:AA:818:G:H3'	1:AA:819:A:H5"	2.02	0.41
1:AA:840:C:N3	1:AA:842:U:H4'	2.35	0.41
1:AA:1096:C:O2'	1:AA:1097:C:H5'	2.21	0.41
1:AA:1260:G:O5'	1:AA:1284:C:H4'	2.21	0.41
3:AD:47:LEU:HD21	3:AD:55:ARG:HD2	2.02	0.41
4:AE:43:GLY:O	4:AE:72:ASN:HA	2.20	0.41
5:AF:47:LEU:HD21	5:AF:57:ALA:HB3	2.02	0.41
5:AF:86:ARG:NH2	17:AR:63:TYR:HB3	2.35	0.41
6:AG:2:ARG:C	6:AG:4:ARG:N	2.74	0.41
9:AJ:31:ARG:H	9:AJ:31:ARG:HG3	1.60	0.41
12:AM:90:HIS:HA	12:AM:108:ARG:HH22	1.85	0.41
13:AN:47:LEU:O	13:AN:49:THR:N	2.53	0.41
14:AO:88:ARG:NH1	14:AO:88:ARG:HB2	2.36	0.41
17:AR:43:ILE:O	17:AR:44:THR:HG23	2.20	0.41
20:AB:23:ASN:ND2	20:AB:23:ASN:C	2.72	0.41
22:BA:3:C:H6	22:BA:3:C:O5'	2.04	0.41
22:BA:76:G:O2'	22:BA:77:U:H5'	2.21	0.41
23:BB:612:G:H2'	23:BB:614:A:H5"	2.02	0.41
23:BB:635:C:H2'	23:BB:636:G:H8	1.86	0.41
23:BB:765:C:H2'	23:BB:766:U:H6	1.85	0.41
23:BB:1309:G:OP1	36:B2:9:VAL:N	2.48	0.41
23:BB:1348:C:C3'	23:BB:1349:C:H5'	2.50	0.41
23:BB:1434:A:N6	23:BB:1558:C:H42	2.18	0.41
23:BB:1535:A:H5"	23:BB:1536:C:C5	2.55	0.41
23:BB:1577:C:H2'	23:BB:1578:U:C6	2.55	0.41
23:BB:2049:G:O2'	23:BB:2050:C:H5'	2.21	0.41
23:BB:2055:C:H5'	23:BB:2056:G:O5'	2.20	0.41
23:BB:2144:G:H3'	23:BB:2145:C:C3'	2.48	0.41
23:BB:2263:C:H4'	23:BB:2329:U:H4'	2.02	0.41
23:BB:2352:A:C2'	23:BB:2353:G:H5'	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2667:C:O2	48:BG:110:HIS:CE1	2.74	0.41
23:BB:2785:C:H2'	23:BB:2786:U:H6	1.86	0.41
23:BB:2848:G:N3	23:BB:2849:U:H5	2.19	0.41
26:BD:8:LYS:O	26:BD:9:VAL:HB	2.20	0.41
28:BP:50:ARG:CD	28:BP:56:SER:HB3	2.51	0.41
28:BP:99:LEU:HA	28:BP:102:ARG:HG3	2.03	0.41
29:BE:7:ASP:N	29:BE:7:ASP:OD2	2.54	0.41
29:BE:29:HIS:C	29:BE:31:VAL:N	2.74	0.41
29:BE:41:GLN:O	29:BE:42:GLY:O	2.39	0.41
29:BE:146:VAL:HG12	29:BE:147:LEU:N	2.35	0.41
30:BY:5:LYS:HG2	30:BY:36:GLU:HB2	2.03	0.41
35:BV:1:MET:O	35:BV:62:THR:HG23	2.20	0.41
37:BL:93:ASN:ND2	37:BL:94:THR:N	2.66	0.41
39:BX:22:LEU:HG	39:BX:23:ARG:HG2	2.03	0.41
40:BH:54:LEU:HA	40:BH:57:LYS:HZ2	1.84	0.41
40:BH:89:LYS:NZ	40:BH:123:ARG:HB3	2.35	0.41
48:BG:51:PHE:CE2	48:BG:68:ARG:HA	2.55	0.41
50:BT:39:THR:HG22	50:BT:42:GLU:H	1.83	0.41
51:BZ:9:GLY:O	51:BZ:11:ARG:HG3	2.19	0.41
52:BW:64:GLY:C	52:BW:65:LYS:HG3	2.41	0.41
52:BW:77:LYS:HA	52:BW:77:LYS:HD3	1.88	0.41
53:B6:29:ARG:HE	53:B6:32:ARG:NH2	2.18	0.41
1:CA:108:G:N3	1:CA:108:G:O4'	2.53	0.41
1:CA:407:U:H3'	1:CA:408:A:H8	1.86	0.41
1:CA:468:A:H3'	1:CA:469:C:C6	2.56	0.41
1:CA:558:G:H8	1:CA:559:A:H2'	1.86	0.41
1:CA:659:U:O2'	1:CA:660:C:H5'	2.20	0.41
1:CA:894:G:H2'	1:CA:895:G:H8	1.85	0.41
1:CA:1042:A:H2'	1:CA:1043:G:O4'	2.21	0.41
1:CA:1061:G:OP2	2:CC:1:GLY:O	2.38	0.41
1:CA:1148:U:H5'	8:CI:6:TYR:OH	2.21	0.41
1:CA:1188:A:H2'	1:CA:1189:U:O4'	2.19	0.41
1:CA:1219:A:H2'	1:CA:1220:G:H8	1.82	0.41
2:CC:58:ARG:HA	2:CC:62:SER:O	2.21	0.41
3:CD:115:GLN:HG3	3:CD:119:HIS:ND1	2.35	0.41
3:CD:141:VAL:HA	3:CD:179:GLY:O	2.21	0.41
5:CF:4:TYR:CD2	5:CF:71:ILE:HD13	2.56	0.41
12:CM:50:GLY:O	12:CM:54:THR:HG23	2.20	0.41
13:CN:5:MET:HE3	13:CN:60:ARG:NH1	2.36	0.41
13:CN:12:ARG:CD	13:CN:58:ARG:HB3	2.49	0.41
14:CO:71:LYS:HZ2	14:CO:72:ARG:HA	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CP:1:MET:HE3	15:CP:1:MET:CA	2.45	0.41
16:CQ:57:VAL:HB	16:CQ:79:GLU:CB	2.50	0.41
17:CR:44:THR:CB	17:CR:46:THR:HG22	2.50	0.41
20:CB:169:HIS:HA	20:CB:172:ILE:HD13	2.02	0.41
21:CU:3:ILE:HD12	21:CU:19:LYS:HA	2.01	0.41
23:DB:137:U:P	23:DB:137:U:H6	2.43	0.41
23:DB:406:G:O2'	23:DB:407:G:H5'	2.21	0.41
23:DB:1092:C:H2'	23:DB:1093:G:C5'	2.51	0.41
23:DB:1120:G:O2'	23:DB:1121:C:H5'	2.21	0.41
23:DB:1353:A:O2'	23:DB:1354:A:H5'	2.21	0.41
23:DB:1376:C:O2'	23:DB:1377:G:H5'	2.21	0.41
23:DB:1689:A:O2'	23:DB:1690:A:H5'	2.20	0.41
23:DB:1903:G:H2'	23:DB:1904:G:H8	1.85	0.41
23:DB:1940:U:O2	23:DB:1940:U:H5"	2.21	0.41
23:DB:2230:G:H4'	51:DZ:31:PRO:O	2.19	0.41
23:DB:2262:U:O2'	23:DB:2263:C:H5'	2.21	0.41
23:DB:2397:G:H2'	23:DB:2398:U:C6	2.56	0.41
23:DB:2686:G:H2'	23:DB:2687:U:C6	2.56	0.41
57:DB:3693:HOH:O	41:DJ:39:LYS:HE3	2.21	0.41
25:DC:75:ALA:CB	25:DC:93:VAL:HG22	2.50	0.41
25:DC:91:ALA:HB3	25:DC:105:ALA:HB2	1.99	0.41
26:DD:8:LYS:HB2	26:DD:201:LEU:HD21	2.02	0.41
26:DD:124:ARG:HG3	26:DD:125:TRP:CD1	2.55	0.41
27:DK:72:PRO:C	27:DK:74:GLY:N	2.73	0.41
27:DK:87:LEU:O	27:DK:88:ASN:C	2.59	0.41
28:DP:27:VAL:HG21	28:DP:73:PHE:CE2	2.56	0.41
28:DP:47:ILE:HG13	28:DP:48:ALA:N	2.35	0.41
28:DP:91:VAL:CG2	28:DP:96:LEU:HD21	2.51	0.41
29:DE:154:ASP:OD2	29:DE:157:LEU:HB3	2.20	0.41
31:D0:9:ARG:O	31:D0:12:ARG:HB3	2.20	0.41
32:D4:10:LEU:HD12	32:D4:33:HIS:CA	2.48	0.41
34:D3:7:ARG:O	34:D3:8:GLY:C	2.58	0.41
35:DV:5:ASN:OD1	35:DV:5:ASN:N	2.54	0.41
37:DL:77:ILE:O	37:DL:110:VAL:O	2.37	0.41
40:DH:9:VAL:CG1	40:DH:12:LEU:HG	2.50	0.41
45:DS:71:VAL:O	45:DS:71:VAL:HG22	2.19	0.41
46:DU:23:LYS:HD2	46:DU:23:LYS:H	1.86	0.41
48:DG:42:VAL:HA	48:DG:50:THR:O	2.20	0.41
49:DR:61:ALA:CB	49:DR:98:ILE:HA	2.51	0.41
50:DT:21:SER:O	50:DT:25:GLU:HB2	2.20	0.41
51:DZ:40:VAL:HG21	51:DZ:43:GLU:HB3	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:279:A:OP1	1:AA:281:G:H5'	2.19	0.41
1:AA:844:G:OP2	1:AA:844:G:H3'	2.21	0.41
1:AA:893:C:H2'	1:AA:894:G:C8	2.55	0.41
1:AA:1025:U:O2'	1:AA:1026:G:N7	2.53	0.41
1:AA:1073:U:H2'	1:AA:1074:G:C8	2.56	0.41
2:AC:84:GLU:OE2	2:AC:87:ARG:HD3	2.21	0.41
6:AG:45:ALA:HB2	6:AG:116:ALA:O	2.21	0.41
7:AH:55:LYS:HA	7:AH:55:LYS:CE	2.50	0.41
7:AH:58:LEU:CD2	7:AH:60:LEU:HB2	2.50	0.41
8:AI:45:MET:SD	8:AI:45:MET:N	2.94	0.41
10:AK:17:ASP:HB3	10:AK:80:ASN:CG	2.41	0.41
10:AK:92:ARG:NH1	10:AK:92:ARG:CG	2.83	0.41
11:AL:22:ALA:O	11:AL:23:LEU:O	2.39	0.41
11:AL:35:ARG:HH12	11:AL:75:GLU:HA	1.86	0.41
12:AM:2:ARG:H	12:AM:2:ARG:CD	2.31	0.41
20:AB:114:LYS:NZ	20:AB:152:ASP:OD1	2.54	0.41
20:AB:184:ALA:O	20:AB:199:ILE:HB	2.20	0.41
23:BB:382:A:H2'	23:BB:383:C:O4'	2.20	0.41
23:BB:566:U:H2'	23:BB:567:U:O4'	2.20	0.41
23:BB:675:A:N3	23:BB:2443:C:O2'	2.52	0.41
23:BB:692:C:H2'	23:BB:693:A:C8	2.55	0.41
23:BB:765:C:H2'	23:BB:766:U:C6	2.56	0.41
23:BB:798:G:O2'	23:BB:799:G:H5'	2.21	0.41
23:BB:1253:A:H4'	23:BB:1254:A:OP2	2.20	0.41
23:BB:1722:A:H61	23:BB:1738:G:H1'	1.85	0.41
23:BB:1892:C:O2'	23:BB:1893:C:H5'	2.20	0.41
23:BB:2010:G:H2'	23:BB:2011:U:C6	2.56	0.41
23:BB:2016:U:H1'	31:B0:2:VAL:HG11	2.02	0.41
23:BB:2063:C:O2	23:BB:2450:A:N1	2.54	0.41
23:BB:2080:A:H2'	23:BB:2081:U:C6	2.56	0.41
23:BB:2145:C:O2	23:BB:2145:C:H2'	2.21	0.41
23:BB:2212:A:O3'	23:BB:2213:U:C4	2.73	0.41
23:BB:2358:A:N6	37:BL:54:GLN:HE22	2.18	0.41
23:BB:2641:G:H2'	23:BB:2642:G:C8	2.56	0.41
23:BB:2645:G:H4'	23:BB:2732:G:H2'	2.02	0.41
23:BB:2893:A:H4'	23:BB:2894:G:H5'	2.02	0.41
24:BI:91:LYS:O	24:BI:91:LYS:HG3	2.20	0.41
25:BC:196:ASN:OD1	25:BC:199:HIS:N	2.54	0.41
27:BK:2:ILE:HG13	27:BK:33:ALA:O	2.20	0.41
29:BE:138:LEU:O	29:BE:142:ALA:N	2.54	0.41
29:BE:151:GLY:CA	29:BE:195:GLN:HE22	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:B1:16:THR:HG21	33:B1:39:ASP:OD2	2.21	0.41
33:B1:20:TYR:CD2	33:B1:37:LYS:HD3	2.55	0.41
35:BV:89:ILE:HD13	35:BV:91:PHE:CZ	2.56	0.41
37:BL:55:MET:HG3	37:BL:59:ARG:CB	2.51	0.41
38:BM:116:ALA:C	38:BM:118:LYS:N	2.74	0.41
43:BO:7:ARG:HA	43:BO:10:ARG:CZ	2.51	0.41
43:BO:55:GLU:O	43:BO:56:LYS:C	2.59	0.41
45:BS:95:ARG:O	45:BS:96:ILE:HG22	2.21	0.41
46:BU:41:VAL:HG23	46:BU:42:LYS:N	2.36	0.41
47:BF:62:GLN:NE2	47:BF:90:LEU:HD13	2.33	0.41
51:BZ:14:THR:HA	51:BZ:28:ARG:HA	2.03	0.41
53:B6:15:GLN:HG2	53:B6:16:LYS:HZ1	1.85	0.41
53:B6:111:ARG:NH2	53:B6:184:LEU:HA	2.36	0.41
1:CA:46:G:HO2'	1:CA:365:U:H1'	1.84	0.41
1:CA:377:G:O2'	1:CA:378:G:H5'	2.20	0.41
1:CA:486:U:H2'	1:CA:487:A:C8	2.56	0.41
1:CA:555:U:H2'	1:CA:556:C:C6	2.56	0.41
1:CA:691:G:H1'	1:CA:696:A:H61	1.85	0.41
1:CA:708:C:H2'	1:CA:709:U:H6	1.84	0.41
1:CA:780:A:C2	1:CA:803:G:C6	3.09	0.41
1:CA:817:C:C2	1:CA:819:A:O4'	2.74	0.41
1:CA:1170:A:H2'	1:CA:1171:A:O4'	2.20	0.41
1:CA:1317:C:OP1	13:CN:56:PRO:HD2	2.20	0.41
3:CD:22:SER:H	3:CD:109:THR:CG2	2.33	0.41
3:CD:31:CYS:O	3:CD:32:LYS:HB2	2.20	0.41
4:CE:28:ARG:NH1	4:CE:30:PHE:HB3	2.36	0.41
4:CE:39:GLY:HA3	4:CE:116:VAL:HB	2.03	0.41
4:CE:157:GLY:O	4:CE:158:LYS:HB2	2.20	0.41
7:CH:45:ILE:C	7:CH:63:LYS:HE3	2.41	0.41
8:CI:17:ARG:HH21	8:CI:65:THR:HG21	1.85	0.41
12:CM:90:HIS:HA	12:CM:108:ARG:HH22	1.85	0.41
13:CN:9:GLU:HB2	13:CN:62:ARG:NE	2.35	0.41
14:CO:16:GLY:HA2	14:CO:27:VAL:CG2	2.50	0.41
17:CR:26:ALA:HA	17:CR:29:LYS:HE3	2.02	0.41
18:CS:25:GLY:O	18:CS:27:LYS:HE2	2.20	0.41
20:CB:11:ALA:C	20:CB:13:VAL:H	2.24	0.41
20:CB:27:LYS:HD2	20:CB:28:PRO:HD3	2.02	0.41
20:CB:111:LYS:O	20:CB:114:LYS:HB2	2.21	0.41
23:DB:27:G:O2'	23:DB:28:A:H8	2.01	0.41
23:DB:545:U:C4	23:DB:548:G:OP1	2.74	0.41
23:DB:741:U:H2'	23:DB:742:A:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1097:U:C2	23:DB:1098:A:H1'	2.56	0.41
23:DB:1197:G:H2'	23:DB:1198:U:C6	2.55	0.41
23:DB:1274:A:C2	23:DB:1302:A:H2	2.38	0.41
23:DB:1341:G:H2'	23:DB:1397:U:O2'	2.21	0.41
23:DB:1348:C:C3'	23:DB:1349:C:H5'	2.51	0.41
23:DB:1541:C:H2'	23:DB:1542:U:C6	2.55	0.41
23:DB:1573:G:H2'	23:DB:1574:C:H5'	2.01	0.41
23:DB:1885:A:H3'	23:DB:1886:U:C6	2.56	0.41
23:DB:2022:U:O2'	23:DB:2617:U:H5'	2.20	0.41
23:DB:2259:U:H1'	23:DB:2427:C:C2	2.55	0.41
23:DB:2296:U:H4'	23:DB:2297:A:OP1	2.20	0.41
23:DB:2373:G:H2'	23:DB:2374:C:C6	2.55	0.41
23:DB:2580:U:C5'	26:DD:136:ASN:H	2.33	0.41
23:DB:2582:G:O2'	23:DB:2583:G:H5'	2.20	0.41
23:DB:2617:U:H2'	23:DB:2618:G:O4'	2.20	0.41
23:DB:2636:C:H2'	23:DB:2637:U:H6	1.85	0.41
24:DI:4:VAL:O	24:DI:5:GLN:O	2.39	0.41
25:DC:66:PHE:CD1	25:DC:66:PHE:N	2.88	0.41
28:DP:4:ILE:CG2	28:DP:5:LYS:H	2.17	0.41
28:DP:27:VAL:O	28:DP:42:PHE:N	2.53	0.41
31:D0:41:HIS:CD2	31:D0:41:HIS:N	2.87	0.41
35:DV:42:LEU:HD11	35:DV:89:ILE:HD11	2.03	0.41
38:DM:47:GLU:CD	38:DM:50:ARG:HH11	2.24	0.41
39:DX:25:GLN:HE21	39:DX:25:GLN:HB3	1.60	0.41
41:DJ:9:GLU:N	41:DJ:9:GLU:CD	2.74	0.41
43:DO:88:LYS:HG2	43:DO:89:ASP:N	2.36	0.41
45:DS:66:ILE:HG12	45:DS:67:ASP:N	2.35	0.41
48:DG:34:ARG:N	48:DG:34:ARG:CD	2.83	0.41
48:DG:97:VAL:HG21	48:DG:124:CYS:HB2	2.01	0.41
48:DG:108:PHE:C	48:DG:110:HIS:H	2.24	0.41
49:DR:23:GLU:O	49:DR:24:LYS:C	2.58	0.41
53:D6:38:LEU:O	53:D6:52:LEU:HB3	2.21	0.41
1:AA:21:G:H2'	1:AA:22:G:H8	1.77	0.41
1:AA:125:U:H2'	1:AA:126:G:H8	1.84	0.41
1:AA:913:A:H4'	1:AA:914:A:OP1	2.20	0.41
1:AA:1081:A:O2'	1:AA:1082:A:H5'	2.21	0.41
1:AA:1102:A:O2'	1:AA:1103:C:H5'	2.20	0.41
1:AA:1246:A:H2'	1:AA:1247:U:C6	2.56	0.41
1:AA:1324:A:H2'	1:AA:1325:C:H6	1.85	0.41
2:AC:5:HIS:O	2:AC:9:ILE:HG22	2.20	0.41
2:AC:146:LYS:HB2	2:AC:202:PHE:CD2	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:13:ARG:HA	3:AD:37:PRO:CG	2.51	0.41
6:AG:70:PRO:O	6:AG:71:THR:HB	2.20	0.41
7:AH:45:ILE:HG21	7:AH:60:LEU:CD2	2.48	0.41
14:AO:21:ASP:O	14:AO:21:ASP:CG	2.59	0.41
16:AQ:28:VAL:O	16:AQ:36:PHE:HA	2.18	0.41
16:AQ:46:HIS:CB	16:AQ:70:LYS:HE2	2.49	0.41
18:AS:14:LEU:O	18:AS:18:VAL:HG12	2.21	0.41
18:AS:35:ARG:HB2	18:AS:71:GLY:CA	2.50	0.41
19:AT:34:VAL:CG1	19:AT:78:LEU:HD22	2.50	0.41
20:AB:26:MET:SD	20:AB:192:PRO:HD3	2.61	0.41
20:AB:44:LYS:O	20:AB:47:PRO:HD2	2.21	0.41
20:AB:101:THR:HA	20:AB:178:LEU:HD11	2.02	0.41
21:AU:20:ARG:HG3	21:AU:24:LYS:HZ2	1.86	0.41
21:AU:24:LYS:HE2	21:AU:25:ALA:HB2	2.02	0.41
23:BB:329:G:N1	46:BU:16:LYS:HG2	2.30	0.41
23:BB:364:C:O2'	23:BB:365:U:H5'	2.21	0.41
23:BB:508:A:N6	45:BS:9:HIS:CD2	2.89	0.41
23:BB:1056:G:H1'	23:BB:1103:A:H62	1.86	0.41
23:BB:1224:U:H4'	49:BR:88:GLY:O	2.21	0.41
23:BB:1534:U:O5'	23:BB:1534:U:H6	2.03	0.41
23:BB:1595:C:O2'	23:BB:1596:A:H5'	2.21	0.41
23:BB:2008:C:H2'	23:BB:2009:A:C8	2.54	0.41
23:BB:2361:G:H2'	23:BB:2362:C:O4'	2.20	0.41
23:BB:2394:C:O2'	23:BB:2395:C:H5'	2.20	0.41
23:BB:2846:G:OP1	28:BP:51:ASN:HB2	2.21	0.41
23:BB:2849:U:O4	28:BP:20:ARG:NH1	2.54	0.41
25:BC:29:PHE:C	25:BC:31:PRO:HD2	2.41	0.41
25:BC:99:GLU:HG2	25:BC:100:ARG:N	2.35	0.41
25:BC:108:GLY:C	25:BC:110:LYS:H	2.24	0.41
26:BD:104:VAL:HG11	26:BD:205:PRO:HB3	2.02	0.41
28:BP:3:ILE:CD1	28:BP:7:LEU:HD11	2.50	0.41
35:BV:51:GLN:NE2	35:BV:79:ARG:HH22	2.18	0.41
38:BM:33:LEU:HD23	38:BM:33:LEU:HA	1.90	0.41
40:BH:9:VAL:HB	40:BH:13:GLY:CA	2.51	0.41
40:BH:82:SER:HB2	40:BH:94:ILE:CG1	2.49	0.41
40:BH:101:ASP:HA	40:BH:104:THR:HG22	2.03	0.41
43:BO:51:ALA:CB	43:BO:78:VAL:HG22	2.48	0.41
47:BF:64:PRO:CA	47:BF:88:VAL:HG22	2.48	0.41
47:BF:105:ILE:O	47:BF:109:ARG:HB2	2.21	0.41
48:BG:97:VAL:HG21	48:BG:124:CYS:HB2	2.03	0.41
48:BG:144:ALA:O	48:BG:147:LEU:HB2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:168:VAL:HG12	48:BG:170:THR:CG2	2.49	0.41
53:B6:41:LEU:O	53:B6:52:LEU:HB2	2.21	0.41
1:CA:31:G:H5'	1:CA:306:A:C2	2.56	0.41
1:CA:499:A:H1'	1:CA:500:G:C8	2.56	0.41
1:CA:557:G:H2'	1:CA:558:G:O4'	2.21	0.41
1:CA:564:C:H1'	16:CQ:32:ILE:O	2.21	0.41
1:CA:708:C:H2'	1:CA:709:U:C6	2.56	0.41
1:CA:916:U:H2'	1:CA:917:G:H8	1.86	0.41
1:CA:948:C:H2'	1:CA:949:A:H8	1.85	0.41
1:CA:1463:U:H2'	1:CA:1464:U:H6	1.82	0.41
2:CC:25:THR:HG23	13:CN:75:LYS:CD	2.50	0.41
2:CC:133:MET:HB2	2:CC:133:MET:HE2	1.78	0.41
4:CE:80:LEU:HD11	4:CE:95:MET:HG3	2.03	0.41
5:CF:9:MET:HA	5:CF:58:HIS:O	2.20	0.41
5:CF:18:VAL:N	5:CF:19:PRO:HD2	2.36	0.41
5:CF:73:GLU:HG2	5:CF:73:GLU:H	1.69	0.41
6:CG:19:SER:HB2	6:CG:21:LEU:CD2	2.51	0.41
6:CG:19:SER:OG	6:CG:22:LEU:HD12	2.21	0.41
10:CK:126:ARG:HA	10:CK:126:ARG:NE	2.36	0.41
16:CQ:10:ARG:O	16:CQ:10:ARG:HG3	2.20	0.41
18:CS:13:HIS:ND1	18:CS:13:HIS:N	2.69	0.41
20:CB:63:LYS:HA	20:CB:224:ARG:NH1	2.34	0.41
22:DA:2:G:O2'	22:DA:3:C:H5'	2.20	0.41
23:DB:182:A:H2'	23:DB:183:C:H6	1.85	0.41
23:DB:480:A:H3'	23:DB:481:G:H5"	2.03	0.41
23:DB:485:C:H2'	23:DB:486:C:H6	1.86	0.41
23:DB:584:C:O2'	23:DB:585:G:H5'	2.20	0.41
23:DB:649:G:H2'	23:DB:650:C:H6	1.86	0.41
23:DB:657:U:H2'	23:DB:658:U:H6	1.83	0.41
23:DB:1207:C:O2'	23:DB:1208:C:H5'	2.21	0.41
23:DB:1315:C:H2'	23:DB:1316:U:C6	2.56	0.41
23:DB:1350:C:O2	23:DB:1350:C:H2'	2.20	0.41
23:DB:1417:C:O2'	23:DB:1418:G:H5'	2.21	0.41
23:DB:1430:G:H2'	23:DB:1431:A:C8	2.55	0.41
23:DB:1526:C:C2'	23:DB:1527:G:H5'	2.51	0.41
23:DB:1652:A:P	42:DN:8:ARG:HD3	2.61	0.41
23:DB:2394:C:H2'	23:DB:2395:C:C6	2.55	0.41
23:DB:2599:G:O2'	23:DB:2600:A:H5'	2.20	0.41
24:DI:63:ASP:O	24:DI:63:ASP:OD1	2.39	0.41
24:DI:140:GLU:H	24:DI:140:GLU:CD	2.23	0.41
25:DC:42:ARG:HG3	25:DC:46:GLY:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:66:PHE:CD2	25:DC:104:LEU:HD11	2.56	0.41
25:DC:141:HIS:HB3	25:DC:190:THR:HG1	1.84	0.41
26:DD:13:ARG:HH12	28:DP:74:GLN:NE2	2.19	0.41
26:DD:14:ILE:HG23	26:DD:22:ILE:HB	2.02	0.41
26:DD:14:ILE:HG13	28:DP:11:GLN:HE22	1.85	0.41
26:DD:117:GLY:O	26:DD:119:ALA:N	2.53	0.41
28:DP:31:VAL:HG13	28:DP:32:VAL:N	2.35	0.41
28:DP:91:VAL:HG21	28:DP:96:LEU:HD21	2.03	0.41
30:DY:23:LEU:HD21	30:DY:53:MET:HE1	2.02	0.41
35:DV:76:ASP:H	35:DV:90:ASP:HB2	1.86	0.41
36:D2:12:ARG:HG2	36:D2:44:VAL:HG11	2.03	0.41
36:D2:28:ARG:C	36:D2:30:VAL:N	2.74	0.41
37:DL:79:LEU:HB2	37:DL:113:ALA:H	1.86	0.41
37:DL:116:VAL:HG13	37:DL:117:THR:N	2.22	0.41
39:DX:5:GLU:HA	39:DX:5:GLU:OE2	2.21	0.41
42:DN:2:ARG:O	42:DN:2:ARG:NE	2.42	0.41
42:DN:34:ILE:HB	42:DN:113:ILE:CG2	2.48	0.41
49:DR:70:GLU:CD	49:DR:70:GLU:N	2.74	0.41
50:DT:10:VAL:O	50:DT:12:ARG:N	2.54	0.41
51:DZ:68:LEU:HD22	51:DZ:78:TYR:CE1	2.55	0.41
1:AA:553:A:N6	1:AA:554:A:N6	2.69	0.41
1:AA:643:C:H5"	7:AH:31:LEU:HD22	2.03	0.41
1:AA:744:C:O2'	1:AA:745:G:H5'	2.20	0.41
1:AA:778:G:H2'	1:AA:779:C:C6	2.56	0.41
1:AA:1032:G:C2'	1:AA:1033:G:H5'	2.51	0.41
1:AA:1033:G:H5"	1:AA:1034:G:OP2	2.20	0.41
1:AA:1097:C:H2'	1:AA:1098:C:H6	1.85	0.41
3:AD:43:ARG:NH1	3:AD:43:ARG:HB3	2.35	0.41
5:AF:11:HIS:HA	5:AF:85:ILE:HD11	2.02	0.41
5:AF:18:VAL:N	5:AF:19:PRO:HD2	2.36	0.41
5:AF:61:LEU:HD12	5:AF:62:MET:H	1.85	0.41
6:AG:19:SER:HB2	6:AG:21:LEU:CD2	2.49	0.41
7:AH:50:VAL:HG13	7:AH:50:VAL:O	2.21	0.41
11:AL:63:THR:O	11:AL:94:TYR:HB2	2.20	0.41
11:AL:82:ARG:HG2	11:AL:82:ARG:HH11	1.86	0.41
12:AM:22:TYR:HB3	12:AM:69:ARG:NH1	2.35	0.41
23:BB:66:C:O2'	23:BB:67:U:H5'	2.21	0.41
23:BB:234:U:H2'	23:BB:235:U:O4'	2.20	0.41
23:BB:476:G:O4'	23:BB:505:A:H2	2.03	0.41
23:BB:532:A:O2'	23:BB:2021:C:C5	2.74	0.41
23:BB:602:A:H4'	23:BB:604:G:O3'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:622:G:OP1	37:BL:103:ILE:HD13	2.20	0.41
23:BB:649:G:H2'	23:BB:650:C:H6	1.86	0.41
23:BB:740:C:OP1	23:BB:1784:A:H2'	2.20	0.41
23:BB:996:A:H4'	44:BQ:91:ARG:HD2	2.02	0.41
23:BB:1068:G:C6	23:BB:1069:A:N6	2.88	0.41
23:BB:1273:U:H4'	23:BB:1275:A:P	2.60	0.41
23:BB:1689:A:H2'	23:BB:1690:A:C8	2.56	0.41
23:BB:1830:C:H2'	23:BB:1831:G:C8	2.55	0.41
23:BB:2196:C:O2'	23:BB:2197:U:H5'	2.21	0.41
23:BB:2260:C:H2'	23:BB:2261:C:H6	1.85	0.41
23:BB:2437:G:H2'	23:BB:2438:U:C6	2.55	0.41
23:BB:2494:G:H2'	23:BB:2495:G:H8	1.86	0.41
23:BB:2657:A:H2'	23:BB:2658:C:O4'	2.20	0.41
23:BB:2746:U:C5'	48:BG:138:GLN:HA	2.45	0.41
23:BB:2880:C:O2'	42:BN:93:GLY:HA3	2.20	0.41
25:BC:29:PHE:CE2	25:BC:31:PRO:HG2	2.55	0.41
25:BC:130:PRO:O	25:BC:132:ARG:N	2.53	0.41
25:BC:180:MET:HB2	25:BC:268:ARG:HB2	2.03	0.41
26:BD:77:ARG:HB2	26:BD:80:TRP:HH2	1.86	0.41
26:BD:96:ILE:HD12	26:BD:96:ILE:N	2.36	0.41
27:BK:110:GLU:HA	27:BK:113:MET:HG2	2.02	0.41
31:B0:2:VAL:HG12	31:B0:3:GLN:N	2.36	0.41
38:BM:41:LEU:HA	38:BM:45:GLN:OE1	2.21	0.41
38:BM:54:THR:O	38:BM:56:ALA:N	2.54	0.41
41:BJ:45:THR:N	41:BJ:46:PRO:CD	2.84	0.41
43:BO:12:THR:HG23	43:BO:16:ARG:HH11	1.84	0.41
43:BO:31:THR:HG23	43:BO:34:HIS:C	2.41	0.41
45:BS:2:GLU:O	45:BS:107:VAL:O	2.38	0.41
47:BF:37:MET:SD	47:BF:56:LEU:HD23	2.61	0.41
50:BT:22:THR:O	50:BT:26:LYS:N	2.36	0.41
53:B6:7:TYR:CD1	53:B6:160:GLU:HG2	2.56	0.41
53:B6:22:GLU:H	53:B6:22:GLU:HG3	1.63	0.41
1:CA:181:A:N6	1:CA:195:A:OP2	2.54	0.41
1:CA:586:C:C2'	1:CA:587:G:H5'	2.51	0.41
1:CA:605:U:O2'	1:CA:606:G:H5'	2.21	0.41
1:CA:834:U:H2'	1:CA:835:U:H6	1.85	0.41
1:CA:1053:G:O6	1:CA:1199:U:H2'	2.21	0.41
2:CC:54:ILE:O	2:CC:54:ILE:HG23	2.20	0.41
2:CC:152:VAL:O	2:CC:164:THR:HG23	2.21	0.41
3:CD:41:GLY:C	3:CD:43:ARG:N	2.73	0.41
4:CE:111:ARG:HG3	4:CE:112:ALA:N	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CF:22:ILE:O	5:CF:26:THR:HG23	2.21	0.41
8:CI:60:LEU:N	8:CI:60:LEU:HD23	2.35	0.41
17:CR:31:TYR:CG	17:CR:54:LEU:HD11	2.56	0.41
19:CT:75:LYS:O	19:CT:78:LEU:HB2	2.20	0.41
20:CB:30:ILE:HD11	20:CB:188:THR:HG22	2.03	0.41
20:CB:103:TRP:CH2	20:CB:107:ARG:HD2	2.56	0.41
20:CB:150:ILE:O	20:CB:151:LYS:C	2.59	0.41
22:DA:83:G:OP1	30:DY:16:LEU:HD21	2.21	0.41
22:DA:116:G:H4'	43:DO:54:VAL:HG13	2.02	0.41
23:DB:527:C:O2	23:DB:527:C:O4'	2.36	0.41
23:DB:569:U:H2'	23:DB:570:G:O4'	2.21	0.41
23:DB:673:C:C2'	23:DB:674:G:H5'	2.51	0.41
23:DB:799:G:C6	23:DB:800:A:C6	3.09	0.41
23:DB:920:A:O2'	23:DB:921:C:H5'	2.20	0.41
23:DB:955:U:H5'	38:DM:86:LYS:HE2	2.02	0.41
23:DB:973:A:H1'	23:DB:1188:U:C6	2.56	0.41
23:DB:1040:A:O2'	23:DB:1041:G:H5'	2.21	0.41
23:DB:1575:C:O2'	23:DB:1576:U:H5'	2.21	0.41
23:DB:1945:G:H2'	23:DB:1946:U:C6	2.56	0.41
23:DB:1970:A:H1'	23:DB:1972:G:C8	2.56	0.41
23:DB:2071:A:H2'	23:DB:2072:C:H6	1.83	0.41
23:DB:2083:G:H2'	23:DB:2084:C:H6	1.85	0.41
23:DB:2320:U:O2'	23:DB:2322:A:N7	2.48	0.41
23:DB:2795:C:H6	23:DB:2795:C:O5'	2.04	0.41
23:DB:2883:A:OP1	31:D0:48:TYR:CE1	2.74	0.41
25:DC:63:ILE:HD13	25:DC:63:ILE:HA	1.89	0.41
25:DC:69:ASN:HB3	25:DC:70:LYS:H	1.58	0.41
29:DE:176:ASP:OD1	29:DE:176:ASP:C	2.59	0.41
32:D4:22:VAL:O	32:D4:24:ARG:HG3	2.20	0.41
36:D2:21:ARG:HD2	36:D2:43:THR:CG2	2.42	0.41
40:DH:9:VAL:HB	40:DH:13:GLY:CA	2.50	0.41
42:DN:22:ARG:HG3	42:DN:70:THR:HA	2.02	0.41
42:DN:25:ALA:HA	42:DN:44:LEU:HD11	2.03	0.41
43:DO:55:GLU:O	43:DO:56:LYS:C	2.58	0.41
44:DQ:91:ARG:HH12	49:DR:10:LYS:HA	1.85	0.41
45:DS:13:SER:CB	45:DS:16:LYS:HE3	2.51	0.41
47:DF:35:LEU:HD13	47:DF:56:LEU:CD1	2.45	0.41
47:DF:38:GLY:HA2	47:DF:85:GLY:HA3	2.03	0.41
47:DF:137:PHE:HB2	47:DF:138:PRO:CD	2.46	0.41
48:DG:116:LEU:HD23	48:DG:120:ILE:HD13	2.02	0.41
50:DT:27:SER:O	50:DT:28:ASN:CB	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DW:57:THR:O	52:DW:59:PHE:N	2.54	0.41
53:D6:154:THR:HG23	53:D6:155:LYS:H	1.83	0.41
53:D6:174:GLN:HG2	53:D6:178:LYS:HE2	2.03	0.41
1:AA:426:U:H2'	1:AA:427:U:C6	2.56	0.41
1:AA:555:U:H2'	1:AA:556:C:C6	2.56	0.41
1:AA:720:C:C5'	17:AR:40:PRO:HA	2.50	0.41
1:AA:765:G:O6	1:AA:811:C:C5	2.74	0.41
1:AA:852:G:H2'	1:AA:853:C:C6	2.56	0.41
1:AA:987:G:H2'	1:AA:988:G:C8	2.55	0.41
1:AA:1073:U:H4'	20:AB:104:LYS:CE	2.51	0.41
1:AA:1222:G:C2'	1:AA:1223:C:H5'	2.51	0.41
1:AA:1301:U:O2	1:AA:1301:U:C2'	2.67	0.41
1:AA:1384:C:O2'	1:AA:1385:G:H5'	2.20	0.41
1:AA:1418:A:H2	23:BB:1948:G:N3	2.19	0.41
1:AA:1419:G:H2'	1:AA:1420:U:C6	2.56	0.41
1:AA:1436:U:H2'	1:AA:1437:A:C8	2.55	0.41
2:AC:63:ILE:HD11	2:AC:94:ALA:CB	2.50	0.41
2:AC:141:MET:HA	2:AC:141:MET:CE	2.51	0.41
3:AD:25:ARG:HB2	3:AD:26:ALA:H	1.65	0.41
3:AD:90:LEU:HD21	3:AD:196:GLU:HB3	2.03	0.41
3:AD:110:ARG:HG3	3:AD:110:ARG:NH1	2.35	0.41
3:AD:182:LYS:NZ	3:AD:182:LYS:HB3	2.36	0.41
4:AE:9:GLU:O	4:AE:40:ASP:HA	2.20	0.41
4:AE:24:VAL:O	4:AE:25:LYS:C	2.59	0.41
4:AE:87:VAL:HG23	4:AE:92:ARG:HA	2.02	0.41
5:AF:31:GLY:C	5:AF:33:GLU:H	2.24	0.41
5:AF:37:HIS:ND1	5:AF:95:ALA:HB1	2.36	0.41
5:AF:54:LEU:HD22	5:AF:54:LEU:N	2.36	0.41
5:AF:70:VAL:HG23	5:AF:71:ILE:H	1.85	0.41
6:AG:49:LEU:HD23	6:AG:49:LEU:HA	1.86	0.41
6:AG:119:LEU:O	6:AG:123:LEU:HG	2.21	0.41
7:AH:25:THR:O	7:AH:26:MET:HE2	2.20	0.41
7:AH:74:ILE:HG23	7:AH:74:ILE:O	2.21	0.41
8:AI:11:ARG:HA	8:AI:105:ARG:CZ	2.50	0.41
9:AJ:6:ILE:O	9:AJ:75:ASP:HA	2.21	0.41
11:AL:79:ILE:C	11:AL:101:LEU:HD12	2.40	0.41
11:AL:98:ARG:NH2	11:AL:104:SER:OG	2.54	0.41
12:AM:15:VAL:O	12:AM:16:ILE:C	2.59	0.41
12:AM:65:GLU:O	12:AM:66:GLY:C	2.59	0.41
13:AN:50:LEU:HG	13:AN:51:PRO:N	2.36	0.41
13:AN:88:MET:C	13:AN:90:GLY:H	2.23	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AP:36:VAL:O	15:AP:36:VAL:HG13	2.20	0.41
16:AQ:61:ARG:HH11	16:AQ:61:ARG:HG2	1.85	0.41
18:AS:23:GLU:HG3	18:AS:24:SER:H	1.86	0.41
21:AU:35:GLU:HB3	21:AU:36:PHE:H	1.51	0.41
22:BA:83:G:P	30:BY:16:LEU:HD21	2.60	0.41
23:BB:26:G:H2'	23:BB:27:G:O4'	2.21	0.41
23:BB:57:C:H2'	23:BB:58:G:C8	2.55	0.41
23:BB:132:G:O2'	23:BB:133:U:H5'	2.21	0.41
23:BB:633:A:H2'	23:BB:634:C:O4'	2.20	0.41
23:BB:665:U:O2'	23:BB:666:A:H5'	2.21	0.41
23:BB:747:U:OP2	45:BS:90:LYS:HD2	2.21	0.41
23:BB:809:G:O2'	23:BB:810:U:H5'	2.21	0.41
23:BB:928:A:H2'	23:BB:929:U:C6	2.55	0.41
23:BB:974:G:O5'	23:BB:1186:G:N2	2.50	0.41
23:BB:991:C:H2'	23:BB:992:C:H6	1.86	0.41
23:BB:996:A:H4'	44:BQ:91:ARG:CZ	2.51	0.41
23:BB:1056:G:H1'	23:BB:1103:A:N6	2.36	0.41
23:BB:1062:G:H2'	23:BB:1063:G:H8	1.85	0.41
23:BB:1106:G:H2'	23:BB:1107:G:H8	1.85	0.41
23:BB:1161:C:H2'	23:BB:1162:G:C8	2.56	0.41
23:BB:1212:G:HO2'	23:BB:1213:A:P	2.43	0.41
23:BB:1244:A:C5'	37:BL:8:PRO:HD3	2.40	0.41
23:BB:1259:G:H2'	23:BB:1260:A:C8	2.56	0.41
23:BB:1508:A:H3'	23:BB:1509:A:C5	2.55	0.41
23:BB:1551:A:H5"	23:BB:1552:A:OP2	2.20	0.41
23:BB:1657:U:H4'	26:BD:138:LEU:CB	2.49	0.41
23:BB:1733:G:H2'	23:BB:1734:G:H8	1.85	0.41
23:BB:1802:A:C6	23:BB:1817:G:N2	2.89	0.41
23:BB:1821:A:H2'	23:BB:1822:C:C6	2.56	0.41
23:BB:1945:G:C4	23:BB:1946:U:C5	3.09	0.41
23:BB:1956:U:C2'	23:BB:1957:C:H5'	2.51	0.41
23:BB:2010:G:H2'	23:BB:2011:U:H6	1.85	0.41
23:BB:2145:C:H3'	23:BB:2146:C:H5'	2.02	0.41
23:BB:2233:U:H2'	23:BB:2234:G:C8	2.55	0.41
23:BB:2259:U:H1'	23:BB:2427:C:C2	2.56	0.41
23:BB:2266:A:N3	23:BB:2272:U:H5	2.18	0.41
23:BB:2291:U:OP1	23:BB:2381:A:H5'	2.21	0.41
23:BB:2361:G:OP1	34:B3:25:HIS:HA	2.21	0.41
23:BB:2408:U:H2'	23:BB:2409:G:C8	2.55	0.41
23:BB:2515:C:O2'	23:BB:2516:A:H5'	2.20	0.41
23:BB:2586:U:H2'	23:BB:2587:A:C8	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2636:C:H2'	23:BB:2637:U:H6	1.86	0.41
23:BB:2669:G:O2'	23:BB:2670:A:H5'	2.21	0.41
23:BB:2734:A:H2'	23:BB:2735:G:C5'	2.51	0.41
23:BB:2747:G:H2'	23:BB:2748:A:C8	2.55	0.41
23:BB:2800:A:C2'	23:BB:2801:G:O4'	2.65	0.41
24:BI:37:PHE:HZ	24:BI:56:VAL:HG11	1.86	0.41
25:BC:17:LYS:H	25:BC:17:LYS:HG3	1.58	0.41
25:BC:80:LEU:HD23	25:BC:91:ALA:HB2	2.02	0.41
25:BC:151:GLY:C	25:BC:152:GLN:HG3	2.40	0.41
25:BC:154:ALA:HB2	25:BC:161:VAL:HG23	2.02	0.41
25:BC:259:ASN:C	25:BC:261:ARG:H	2.23	0.41
26:BD:13:ARG:HD2	28:BP:55:HIS:ND1	2.35	0.41
26:BD:90:PHE:O	26:BD:91:THR:C	2.59	0.41
26:BD:117:GLY:O	26:BD:119:ALA:N	2.54	0.41
27:BK:35:VAL:CG2	27:BK:36:GLY:H	2.08	0.41
27:BK:58:LEU:CD1	27:BK:86:LEU:HB3	2.50	0.41
27:BK:109:SER:O	27:BK:113:MET:HG2	2.21	0.41
31:B0:38:LEU:HD13	31:B0:41:HIS:CE1	2.56	0.41
32:B4:33:HIS:O	32:B4:35:GLN:N	2.54	0.41
34:B3:21:PHE:O	34:B3:22:LYS:HB3	2.20	0.41
35:BV:77:VAL:HG11	38:BM:136:MET:O	2.20	0.41
36:B2:28:ARG:C	36:B2:30:VAL:N	2.73	0.41
37:BL:50:PHE:O	37:BL:52:GLY:N	2.54	0.41
37:BL:91:ASP:HB2	37:BL:94:THR:OG1	2.20	0.41
38:BM:58:LYS:O	38:BM:59:ARG:HB3	2.21	0.41
38:BM:124:LEU:HA	38:BM:125:PRO:HD3	1.89	0.41
39:BX:29:ARG:CZ	50:BT:12:ARG:HE	2.34	0.41
39:BX:31:GLN:HG2	39:BX:37:LEU:H	1.86	0.41
39:BX:56:LEU:O	39:BX:57:LEU:CB	2.67	0.41
41:BJ:21:THR:C	41:BJ:23:LYS:N	2.74	0.41
41:BJ:30:THR:HA	41:BJ:108:MET:SD	2.60	0.41
41:BJ:40:HIS:ND1	41:BJ:41:LYS:N	2.68	0.41
42:BN:8:ARG:HE	42:BN:8:ARG:HB2	1.61	0.41
42:BN:34:ILE:HB	42:BN:113:ILE:CG2	2.46	0.41
43:BO:18:LEU:HD11	43:BO:91:SER:HB3	2.02	0.41
43:BO:20:GLU:OE2	43:BO:21:LEU:N	2.54	0.41
44:BQ:111:LYS:HB2	44:BQ:111:LYS:HZ2	1.86	0.41
45:BS:3:THR:HG21	45:BS:58:ALA:HA	2.02	0.41
45:BS:4:ILE:HG22	45:BS:106:VAL:HA	2.02	0.41
45:BS:33:LEU:HG	45:BS:51:LEU:CD2	2.50	0.41
47:BF:3:LEU:O	47:BF:3:LEU:HD13	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:49:LEU:C	47:BF:49:LEU:HD13	2.40	0.41
47:BF:118:ALA:HA	47:BF:176:PHE:HE2	1.86	0.41
48:BG:148:ARG:HD3	48:BG:152:ARG:HD3	2.03	0.41
49:BR:49:ILE:HD13	49:BR:53:PHE:N	2.36	0.41
49:BR:86:GLN:HE21	49:BR:86:GLN:HB2	1.54	0.41
53:B6:39:LEU:CG	53:B6:40:HIS:N	2.83	0.41
53:B6:68:VAL:HG11	53:B6:79:ILE:HG21	2.02	0.41
1:CA:34:C:H2'	1:CA:35:G:C8	2.56	0.41
1:CA:213:G:H3'	1:CA:214:C:C6	2.55	0.41
1:CA:693:G:H2'	1:CA:694:A:O4'	2.21	0.41
1:CA:720:C:O5'	1:CA:720:C:H6	2.03	0.41
1:CA:869:G:H4'	1:CA:872:A:C8	2.56	0.41
1:CA:891:U:O2'	1:CA:892:A:H5'	2.21	0.41
1:CA:1003:G:N2	1:CA:1005:A:C5'	2.83	0.41
1:CA:1084:G:H2'	1:CA:1085:U:C6	2.55	0.41
1:CA:1251:A:O2'	1:CA:1252:A:H5'	2.21	0.41
1:CA:1295:U:H2'	1:CA:1296:C:C6	2.55	0.41
1:CA:1381:U:O2'	1:CA:1382:C:H5'	2.21	0.41
1:CA:1418:A:O4'	23:DB:1959:G:H4'	2.21	0.41
2:CC:53:ARG:HB3	2:CC:68:HIS:CD2	2.55	0.41
2:CC:149:LYS:HE2	2:CC:200:TRP:CZ3	2.54	0.41
2:CC:152:VAL:HA	2:CC:197:VAL:HG22	2.02	0.41
3:CD:87:GLU:OE1	3:CD:91:ALA:HB2	2.20	0.41
4:CE:55:VAL:N	4:CE:56:PRO:CD	2.84	0.41
4:CE:117:ALA:HB3	4:CE:119:VAL:HG23	2.03	0.41
5:CF:4:TYR:CE2	5:CF:71:ILE:HD13	2.55	0.41
5:CF:11:HIS:HA	5:CF:85:ILE:HD11	2.02	0.41
5:CF:81:ASN:HB3	5:CF:84:VAL:HG12	2.02	0.41
6:CG:19:SER:OG	6:CG:22:LEU:HB2	2.21	0.41
6:CG:151:ALA:HB3	6:CG:153:TYR:CE1	2.56	0.41
7:CH:29:SER:O	7:CH:33:VAL:HG23	2.21	0.41
7:CH:58:LEU:CD2	7:CH:60:LEU:HB2	2.51	0.41
7:CH:82:LEU:O	7:CH:82:LEU:HD13	2.21	0.41
8:CI:21:LYS:O	8:CI:61:ASP:N	2.48	0.41
8:CI:129:ARG:HD2	8:CI:129:ARG:O	2.21	0.41
11:CL:22:ALA:O	11:CL:23:LEU:O	2.39	0.41
12:CM:94:LEU:C	12:CM:108:ARG:HG2	2.41	0.41
13:CN:40:ARG:HH11	18:CS:6:LYS:HB2	1.86	0.41
14:CO:46:HIS:O	14:CO:48:LYS:N	2.47	0.41
15:CP:20:VAL:HG21	15:CP:32:PHE:HB2	2.03	0.41
18:CS:50:VAL:HG22	18:CS:70:LEU:HD21	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CT:47:GLN:O	19:CT:50:PHE:HB3	2.20	0.41
20:CB:20:ARG:HB3	20:CB:20:ARG:CZ	2.51	0.41
20:CB:35:ASN:ND2	20:CB:36:LYS:HE2	2.36	0.41
20:CB:125:PHE:C	20:CB:127:LYS:HE3	2.40	0.41
20:CB:147:LEU:O	20:CB:148:GLY:C	2.60	0.41
21:CU:23:GLU:HA	21:CU:27:VAL:HG21	2.02	0.41
22:DA:12:C:N3	52:DW:73:PRO:HG3	2.35	0.41
22:DA:13:G:C5	22:DA:70:C:H4'	2.56	0.41
23:DB:86:G:O2'	23:DB:104:A:H4'	2.20	0.41
23:DB:182:A:H2'	23:DB:183:C:C6	2.56	0.41
23:DB:512:G:OP2	23:DB:1235:G:H5'	2.20	0.41
23:DB:686:U:H1'	36:D2:6:GLN:O	2.21	0.41
23:DB:776:G:H4'	23:DB:777:G:C5'	2.50	0.41
23:DB:816:C:O2'	23:DB:817:C:H5'	2.21	0.41
23:DB:910:A:H2'	23:DB:911:A:C8	2.56	0.41
23:DB:960:A:H4'	23:DB:2457:U:H4'	2.02	0.41
23:DB:1082:U:C4	23:DB:1086:A:N1	2.85	0.41
23:DB:1348:C:H2'	23:DB:1349:C:H5'	2.03	0.41
23:DB:1357:C:H2'	23:DB:1358:G:C8	2.56	0.41
23:DB:1369:G:O2'	23:DB:1370:C:H5'	2.21	0.41
23:DB:1370:C:H2'	23:DB:1371:G:C8	2.55	0.41
23:DB:1549:A:H2'	23:DB:1550:C:H6	1.83	0.41
23:DB:1900:A:N1	23:DB:1970:A:C5	2.89	0.41
23:DB:2064:C:H1'	23:DB:2450:A:C5	2.56	0.41
23:DB:2338:C:O2'	23:DB:2339:C:H5'	2.21	0.41
23:DB:2368:C:H2'	23:DB:2369:A:C8	2.55	0.41
23:DB:2756:U:H1'	23:DB:2757:A:H5"	2.02	0.41
23:DB:2830:C:O4'	23:DB:2836:U:H5'	2.21	0.41
23:DB:2853:C:H2'	23:DB:2854:G:H8	1.86	0.41
24:DI:14:ALA:HB3	24:DI:51:GLY:H	1.86	0.41
24:DI:53:PRO:HG2	24:DI:77:VAL:HG11	2.01	0.41
24:DI:68:PHE:N	24:DI:68:PHE:CD1	2.89	0.41
25:DC:64:VAL:HG11	25:DC:66:PHE:CZ	2.56	0.41
25:DC:156:SER:HB3	25:DC:159:THR:HG21	2.03	0.41
25:DC:259:ASN:C	25:DC:261:ARG:H	2.24	0.41
26:DD:69:ALA:CA	26:DD:73:VAL:HB	2.51	0.41
26:DD:118:PHE:CE2	42:DN:1:MET:HB3	2.56	0.41
27:DK:58:LEU:HD23	27:DK:58:LEU:H	1.83	0.41
27:DK:108:ARG:O	27:DK:113:MET:HE3	2.21	0.41
29:DE:69:ARG:O	29:DE:70:SER:OG	2.35	0.41
29:DE:147:LEU:O	29:DE:168:ASP:O	2.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:D4:33:HIS:O	32:D4:35:GLN:N	2.54	0.41
33:D1:3:GLY:C	33:D1:5:ARG:N	2.73	0.41
34:D3:28:LEU:HD21	34:D3:44:ARG:HA	2.03	0.41
35:DV:1:MET:HB3	35:DV:59:GLU:OE1	2.21	0.41
37:DL:18:ARG:C	37:DL:19:LEU:HD12	2.41	0.41
37:DL:91:ASP:HB2	37:DL:94:THR:OG1	2.21	0.41
37:DL:111:ILE:N	37:DL:111:ILE:HD13	2.35	0.41
38:DM:19:GLY:H	38:DM:38:ARG:NH1	2.05	0.41
38:DM:54:THR:O	38:DM:56:ALA:N	2.53	0.41
38:DM:100:LYS:HD3	38:DM:101:VAL:H	1.86	0.41
40:DH:32:PRO:HA	51:DZ:39:TRP:CD1	2.56	0.41
41:DJ:101:ILE:O	41:DJ:105:VAL:HG22	2.20	0.41
42:DN:107:ASN:ND2	45:DS:40:ASN:ND2	2.64	0.41
43:DO:36:TYR:N	43:DO:36:TYR:HD2	2.19	0.41
43:DO:105:ALA:HA	43:DO:108:ASP:OD2	2.21	0.41
45:DS:108:SER:OG	45:DS:109:ASP:N	2.54	0.41
47:DF:121:PHE:HD1	47:DF:127:TYR:OH	2.03	0.41
48:DG:26:LYS:HA	48:DG:32:LEU:H	1.86	0.41
48:DG:148:ARG:HB2	48:DG:152:ARG:HH21	1.85	0.41
49:DR:31:GLU:O	49:DR:63:VAL:HG22	2.21	0.41
50:DT:14:PRO:HA	50:DT:32:LEU:HB2	2.02	0.41
51:DZ:59:ILE:HG23	51:DZ:67:VAL:HG21	2.02	0.41
51:DZ:64:ILE:H	51:DZ:64:ILE:CD1	2.27	0.41
53:D6:22:GLU:H	53:D6:22:GLU:HG3	1.54	0.41
53:D6:64:ARG:HA	53:D6:103:ILE:HB	2.02	0.41
53:D6:77:LYS:O	53:D6:81:LYS:HG3	2.21	0.41
1:AA:108:G:N3	1:AA:108:G:O4'	2.53	0.41
1:AA:126:G:H4'	1:AA:634:C:O2	2.21	0.41
1:AA:321:A:O2'	1:AA:322:C:H5'	2.20	0.41
1:AA:659:U:O2'	1:AA:660:C:H5'	2.21	0.41
1:AA:675:A:O2'	1:AA:676:A:H5'	2.21	0.41
1:AA:908:A:H2'	1:AA:909:A:H8	1.85	0.41
1:AA:947:G:H5"	12:AM:106:ARG:HB2	2.02	0.41
1:AA:1131:G:O2'	1:AA:1132:C:H5'	2.20	0.41
1:AA:1188:A:H2'	1:AA:1189:U:O4'	2.21	0.41
1:AA:1394:A:C5	1:AA:1501:C:H4'	2.56	0.41
1:AA:1522:U:H2'	1:AA:1523:G:H8	1.85	0.41
2:AC:155:ARG:H	2:AC:162:ALA:CA	2.34	0.41
6:AG:142:ARG:HH11	6:AG:142:ARG:CB	2.26	0.41
7:AH:34:ALA:O	7:AH:38:VAL:HG23	2.21	0.41
7:AH:93:LYS:HG3	7:AH:116:ARG:NH2	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:90:ASP:HB3	8:AI:93:LEU:CD2	2.51	0.41
10:AK:13:LYS:HD2	10:AK:76:TYR:HE2	1.86	0.41
12:AM:78:ARG:HA	12:AM:81:ASP:OD2	2.20	0.41
20:AB:124:THR:HA	20:AB:127:LYS:HZ2	1.86	0.41
20:AB:150:ILE:O	20:AB:151:LYS:C	2.60	0.41
21:AU:3:ILE:HD12	21:AU:19:LYS:HA	2.01	0.41
23:BB:77:G:H2'	23:BB:78:U:O4'	2.21	0.41
23:BB:616:A:H4'	29:BE:101:TYR:CZ	2.56	0.41
23:BB:675:A:P	29:BE:60:TRP:HZ2	2.44	0.41
23:BB:729:G:H2'	23:BB:729:G:N3	2.35	0.41
23:BB:794:A:H2'	23:BB:795:C:H6	1.85	0.41
23:BB:1079:C:C2	23:BB:1080:A:C8	3.09	0.41
23:BB:1081:U:O2'	23:BB:1082:U:H5'	2.21	0.41
23:BB:1411:U:O2'	23:BB:1412:U:H5'	2.21	0.41
23:BB:2049:G:C2'	23:BB:2050:C:H5'	2.51	0.41
23:BB:2261:C:O2'	23:BB:2262:U:H5'	2.21	0.41
23:BB:2338:C:O2'	23:BB:2339:C:H5'	2.20	0.41
23:BB:2452:C:H2'	23:BB:2453:A:C8	2.56	0.41
23:BB:2507:C:C2	23:BB:2583:G:C2	3.08	0.41
23:BB:2571:U:O3'	26:BD:151:THR:HB	2.20	0.41
23:BB:2823:A:O2'	23:BB:2824:C:H5'	2.21	0.41
26:BD:40:LEU:HA	26:BD:45:TYR:N	2.36	0.41
26:BD:91:THR:HG23	26:BD:92:VAL:N	2.28	0.41
26:BD:107:VAL:N	26:BD:206:ALA:H	2.19	0.41
29:BE:33:VAL:O	29:BE:36:ALA:HB3	2.21	0.41
29:BE:172:ALA:O	29:BE:199:MET:HE3	2.20	0.41
38:BM:17:ASN:HD22	38:BM:17:ASN:HA	1.70	0.41
39:BX:41:HIS:CD2	39:BX:41:HIS:N	2.89	0.41
40:BH:5:LEU:HD11	40:BH:12:LEU:O	2.21	0.41
41:BJ:102:GLU:HG3	41:BJ:124:VAL:HG11	2.02	0.41
41:BJ:110:PRO:HB2	41:BJ:111:LYS:HE3	2.02	0.41
42:BN:74:GLU:O	42:BN:77:ALA:HB3	2.21	0.41
45:BS:46:LEU:O	45:BS:50:VAL:HG23	2.21	0.41
47:BF:1:ALA:O	47:BF:2:LYS:C	2.59	0.41
47:BF:7:TYR:HA	47:BF:11:VAL:HB	2.02	0.41
49:BR:78:ARG:HH21	49:BR:78:ARG:HG3	1.86	0.41
50:BT:39:THR:HG23	50:BT:42:GLU:H	1.86	0.41
51:BZ:77:LYS:O	51:BZ:78:TYR:HB3	2.21	0.41
1:CA:17:U:H4'	1:CA:1079:G:O2'	2.20	0.41
1:CA:213:G:H2'	1:CA:213:G:N3	2.35	0.41
1:CA:239:U:H6	1:CA:239:U:H5'	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:420:U:C2'	1:CA:421:U:H5"	2.51	0.41
1:CA:729:A:H2'	1:CA:730:G:C8	2.56	0.41
1:CA:987:G:H2'	1:CA:988:G:C8	2.56	0.41
1:CA:1077:G:N2	1:CA:1080:A:OP2	2.39	0.41
1:CA:1211:U:H1'	1:CA:1213:A:C2	2.56	0.41
1:CA:1221:G:OP1	1:CA:1321:U:N3	2.52	0.41
1:CA:1226:C:H5'	12:CM:94:LEU:CD1	2.51	0.41
1:CA:1394:A:C5	1:CA:1501:C:H4'	2.56	0.41
2:CC:2:GLN:HE22	2:CC:3:LYS:HZ2	1.67	0.41
2:CC:13:ILE:C	2:CC:15:LYS:N	2.75	0.41
2:CC:63:ILE:HD11	2:CC:94:ALA:CB	2.51	0.41
2:CC:109:GLU:HG2	2:CC:139:ASN:HB3	2.03	0.41
4:CE:93:VAL:HG22	4:CE:126:ALA:CB	2.50	0.41
6:CG:63:VAL:HG12	6:CG:127:ALA:HB1	2.02	0.41
10:CK:36:ARG:HH11	10:CK:36:ARG:CG	2.34	0.41
15:CP:52:LEU:HD21	15:CP:75:ILE:HA	2.03	0.41
19:CT:4:LYS:HE3	19:CT:6:ALA:H	1.85	0.41
20:CB:185:ILE:HG12	20:CB:199:ILE:HG21	2.03	0.41
23:DB:572:A:C2	23:DB:2033:A:C2	3.09	0.41
23:DB:620:G:H5'	23:DB:620:G:N3	2.35	0.41
23:DB:675:A:OP1	29:DE:60:TRP:CZ2	2.74	0.41
23:DB:775:G:H4'	23:DB:776:G:H5'	2.02	0.41
23:DB:853:C:H2'	23:DB:854:C:H6	1.86	0.41
23:DB:856:G:H2'	23:DB:857:G:C8	2.56	0.41
23:DB:1248:G:OP1	44:DQ:1:ALA:HB3	2.21	0.41
23:DB:1419:A:H2'	23:DB:1421:G:C8	2.56	0.41
23:DB:1434:A:H62	23:DB:1558:C:N4	2.18	0.41
23:DB:1765:U:H2'	23:DB:1766:G:C8	2.56	0.41
23:DB:1819:A:OP1	25:DC:154:ALA:HA	2.21	0.41
23:DB:1856:U:C2'	23:DB:1857:G:H5'	2.51	0.41
23:DB:1940:U:O2	23:DB:1940:U:O4'	2.38	0.41
23:DB:2108:A:C8	23:DB:2108:A:OP2	2.74	0.41
23:DB:2230:G:H2'	23:DB:2231:U:H6	1.85	0.41
23:DB:2544:G:H1'	23:DB:2646:C:H5'	2.02	0.41
23:DB:2659:G:O2'	23:DB:2661:G:N7	2.45	0.41
23:DB:2743:U:H2'	23:DB:2744:G:H5"	2.03	0.41
23:DB:2882:A:C3'	23:DB:2883:A:H5"	2.52	0.41
24:DI:5:GLN:O	24:DI:6:ALA:CB	2.69	0.41
24:DI:129:GLU:O	24:DI:133:ARG:HG3	2.21	0.41
25:DC:76:VAL:HA	25:DC:113:ASP:O	2.21	0.41
26:DD:159:LYS:HZ3	26:DD:159:LYS:HA	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:159:LYS:O	26:DD:161:MET:HG2	2.20	0.41
28:DP:19:PHE:HE2	28:DP:25:VAL:HG11	1.85	0.41
28:DP:96:LEU:O	28:DP:99:LEU:HB2	2.21	0.41
28:DP:114:ASN:HD22	28:DP:114:ASN:HA	1.53	0.41
29:DE:5:LEU:HD22	29:DE:122:GLU:HG3	2.02	0.41
29:DE:130:LYS:O	29:DE:132:LYS:N	2.53	0.41
31:D0:38:LEU:HD23	31:D0:39:ARG:N	2.36	0.41
33:D1:26:LYS:HD2	33:D1:30:PRO:HA	2.02	0.41
33:D1:28:THR:C	33:D1:30:PRO:HD3	2.42	0.41
37:DL:59:ARG:O	37:DL:61:LEU:N	2.54	0.41
40:DH:90:LEU:HD22	40:DH:122:LEU:O	2.20	0.41
40:DH:128:HIS:O	40:DH:144:VAL:HG22	2.21	0.41
41:DJ:36:LEU:HD12	41:DJ:121:LYS:HB2	2.03	0.41
42:DN:61:ALA:C	42:DN:63:ARG:H	2.22	0.41
45:DS:3:THR:HG21	45:DS:58:ALA:HA	2.02	0.41
45:DS:99:ARG:HE	45:DS:99:ARG:HB3	1.55	0.41
47:DF:49:LEU:HD13	47:DF:49:LEU:C	2.41	0.41
50:DT:25:GLU:C	50:DT:27:SER:N	2.74	0.41
50:DT:31:VAL:C	50:DT:32:LEU:HD23	2.42	0.41
50:DT:47:VAL:HG12	50:DT:47:VAL:O	2.21	0.41
1:AA:207:C:H3'	1:AA:208:U:C5	2.56	0.40
1:AA:213:G:H3'	1:AA:214:C:C6	2.55	0.40
1:AA:238:A:H3'	1:AA:239:U:H5"	2.04	0.40
1:AA:592:G:H2'	1:AA:593:U:O4'	2.21	0.40
1:AA:791:G:C6	1:AA:792:A:N7	2.89	0.40
1:AA:902:G:O2'	1:AA:903:G:H5'	2.20	0.40
1:AA:1206:G:O2'	1:AA:1207:G:H5'	2.22	0.40
1:AA:1243:C:O2'	1:AA:1244:G:H5'	2.21	0.40
3:AD:34:GLU:O	3:AD:34:GLU:CG	2.68	0.40
8:AI:79:ARG:O	8:AI:83:THR:HG22	2.21	0.40
12:AM:12:LYS:HB3	12:AM:13:HIS:H	1.71	0.40
13:AN:52:ARG:HB3	13:AN:53:ASP:H	1.73	0.40
14:AO:26:GLU:HA	14:AO:81:LEU:HD11	2.02	0.40
15:AP:61:VAL:CA	15:AP:65:ALA:HB3	2.48	0.40
16:AQ:57:VAL:HB	16:AQ:79:GLU:CB	2.51	0.40
18:AS:33:TRP:C	18:AS:35:ARG:H	2.24	0.40
19:AT:67:HIS:CE1	19:AT:68:LYS:HE3	2.55	0.40
20:AB:46:VAL:HA	20:AB:49:PHE:HD2	1.84	0.40
22:BA:16:G:C5	22:BA:69:G:C2	3.09	0.40
22:BA:97:C:H2'	22:BA:98:G:H5'	2.03	0.40
23:BB:1:G:C2	23:BB:2:G:N7	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:41:C:O2'	23:BB:42:A:H5'	2.21	0.40
23:BB:70:G:O2'	23:BB:113:U:H4'	2.21	0.40
23:BB:122:G:O2'	23:BB:123:G:H5'	2.21	0.40
23:BB:278:A:N3	23:BB:278:A:C2'	2.83	0.40
23:BB:651:G:O2'	23:BB:652:U:H5'	2.21	0.40
23:BB:1171:G:C4	23:BB:1172:C:H1'	2.55	0.40
23:BB:1184:U:O2'	23:BB:1185:G:H5'	2.20	0.40
23:BB:1825:U:H2'	23:BB:1826:G:C8	2.56	0.40
23:BB:2231:U:H2'	23:BB:2232:C:C6	2.56	0.40
23:BB:2538:C:O2'	23:BB:2539:C:H5'	2.21	0.40
23:BB:2557:G:C6	23:BB:2558:C:N4	2.89	0.40
23:BB:2579:C:H1'	26:BD:130:GLN:NE2	2.28	0.40
23:BB:2722:G:O2'	23:BB:2723:C:H5'	2.21	0.40
23:BB:2760:C:H2'	23:BB:2761:A:H5'	2.03	0.40
27:BK:99:ILE:N	27:BK:118:LEU:HD23	2.34	0.40
27:BK:111:LYS:HD3	27:BK:111:LYS:N	2.36	0.40
32:B4:11:CYS:SG	32:B4:12:ARG:N	2.94	0.40
32:B4:22:VAL:O	32:B4:24:ARG:HG3	2.21	0.40
41:BJ:43:GLU:O	41:BJ:45:THR:HG22	2.21	0.40
43:BO:36:TYR:N	43:BO:36:TYR:HD2	2.19	0.40
44:BQ:93:ILE:HG23	44:BQ:94:LEU:CD2	2.50	0.40
46:BU:60:LYS:HG3	46:BU:61:GLU:H	1.87	0.40
50:BT:21:SER:O	50:BT:25:GLU:HB2	2.21	0.40
1:CA:16:A:N1	1:CA:919:A:C2	2.89	0.40
1:CA:501:C:H1'	1:CA:549:C:H1'	2.03	0.40
1:CA:665:A:H2'	1:CA:732:C:O2	2.21	0.40
1:CA:675:A:H2'	1:CA:676:A:H8	1.86	0.40
1:CA:768:A:H4'	1:CA:1523:G:N2	2.37	0.40
1:CA:981:U:P	13:CN:5:MET:HE1	2.61	0.40
1:CA:1112:C:O2	2:CC:178:ARG:HB3	2.20	0.40
1:CA:1140:C:O2'	1:CA:1141:C:H5'	2.21	0.40
1:CA:1413:A:N6	1:CA:1488:G:C6	2.89	0.40
3:CD:25:ARG:O	3:CD:26:ALA:HB3	2.21	0.40
6:CG:16:LYS:HB3	6:CG:43:TYR:CE1	2.56	0.40
6:CG:119:LEU:O	6:CG:123:LEU:HG	2.21	0.40
7:CH:72:GLU:CD	7:CH:72:GLU:N	2.75	0.40
8:CI:27:ILE:CB	8:CI:34:LEU:HB2	2.48	0.40
8:CI:33:SER:CB	8:CI:36:GLN:HB2	2.49	0.40
10:CK:28:ASN:HD22	10:CK:46:ALA:HB3	1.81	0.40
11:CL:13:ARG:H	11:CL:13:ARG:HG2	1.72	0.40
12:CM:68:LEU:O	12:CM:72:ILE:HB	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CO:70:LEU:HD12	14:CO:78:TYR:CB	2.51	0.40
17:CR:38:ILE:CG2	17:CR:58:ILE:HG21	2.50	0.40
18:CS:46:LEU:O	18:CS:60:PHE:HA	2.21	0.40
19:CT:82:ILE:O	19:CT:85:LEU:HD22	2.21	0.40
22:DA:67:G:O2'	22:DA:68:C:H5'	2.21	0.40
23:DB:15:G:O2'	23:DB:16:C:H5'	2.21	0.40
23:DB:48:G:O3'	23:DB:51:G:H5'	2.21	0.40
23:DB:319:G:H2'	23:DB:320:A:O4'	2.21	0.40
23:DB:545:U:C6	23:DB:546:U:H1'	2.56	0.40
23:DB:555:G:HO2'	23:DB:556:A:H8	1.67	0.40
23:DB:717:C:C3'	23:DB:718:A:H5"	2.48	0.40
23:DB:877:A:C2	23:DB:901:C:N4	2.89	0.40
23:DB:1215:G:H2'	23:DB:1216:G:H8	1.86	0.40
23:DB:1249:U:O4'	44:DQ:3:VAL:HG21	2.21	0.40
23:DB:1372:U:H4'	23:DB:2213:U:O2	2.21	0.40
23:DB:1373:A:H4'	23:DB:2212:A:N3	2.36	0.40
23:DB:1754:A:N1	23:DB:2716:C:O2'	2.55	0.40
23:DB:2352:A:C2'	23:DB:2353:G:H5'	2.51	0.40
23:DB:2595:G:H1	25:DC:238:ASN:ND2	2.19	0.40
23:DB:2597:G:C6	23:DB:2598:A:N6	2.89	0.40
23:DB:2798:U:H1'	23:DB:2800:A:H61	1.77	0.40
24:DI:10:LEU:HD12	24:DI:10:LEU:C	2.40	0.40
25:DC:30:ALA:O	25:DC:32:LEU:N	2.48	0.40
25:DC:108:GLY:C	25:DC:110:LYS:H	2.24	0.40
26:DD:116:LYS:HB2	26:DD:165:MET:HB3	2.03	0.40
26:DD:136:ASN:HD21	26:DD:140:HIS:N	2.19	0.40
27:DK:54:LYS:H	27:DK:54:LYS:CD	2.31	0.40
29:DE:126:VAL:HG21	29:DE:133:LEU:HB2	2.03	0.40
37:DL:70:LYS:HE3	37:DL:107:PHE:HE2	1.86	0.40
40:DH:112:LYS:O	40:DH:112:LYS:HG3	2.21	0.40
42:DN:52:ILE:HD13	42:DN:87:PHE:CE2	2.56	0.40
45:DS:14:ALA:C	45:DS:16:LYS:H	2.25	0.40
46:DU:12:VAL:HG22	46:DU:69:VAL:CG1	2.42	0.40
47:DF:33:ILE:HG21	47:DF:98:PHE:CE2	2.55	0.40
47:DF:168:LEU:O	47:DF:169:LEU:HB2	2.20	0.40
50:DT:39:THR:O	50:DT:40:LYS:HB2	2.21	0.40
50:DT:40:LYS:HG2	50:DT:60:THR:CG2	2.51	0.40
50:DT:59:ASN:O	50:DT:83:ALA:O	2.39	0.40
53:D6:87:ASP:OD2	53:D6:88:LEU:HD12	2.21	0.40
1:AA:36:C:H2'	1:AA:37:U:O4'	2.22	0.40
1:AA:82:G:H1'	1:AA:89:U:O4'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:370:C:H2'	1:AA:371:A:C8	2.55	0.40
1:AA:370:C:H2'	1:AA:371:A:H8	1.85	0.40
1:AA:375:U:OP1	15:AP:70:ARG:NH1	2.53	0.40
1:AA:455:G:H2'	1:AA:456:A:H8	1.87	0.40
1:AA:734:G:H21	17:AR:63:TYR:HE1	1.59	0.40
1:AA:927:G:N1	1:AA:1391:U:C2	2.89	0.40
1:AA:1028:C:H3'	1:AA:1029:U:C6	2.57	0.40
1:AA:1080:A:OP1	4:AE:49:TYR:HE2	2.04	0.40
1:AA:1164:G:H2'	1:AA:1165:U:C6	2.56	0.40
1:AA:1236:A:H2'	1:AA:1237:C:C6	2.56	0.40
1:AA:1242:G:H2'	1:AA:1243:C:H6	1.86	0.40
2:AC:126:ARG:HH21	2:AC:191:THR:CG2	2.31	0.40
5:AF:22:ILE:O	5:AF:26:THR:HG23	2.21	0.40
5:AF:46:GLN:CD	5:AF:47:LEU:H	2.24	0.40
7:AH:39:LEU:CD2	7:AH:128:VAL:HG21	2.52	0.40
7:AH:94:VAL:HG12	7:AH:99:GLY:HA3	2.03	0.40
8:AI:10:ARG:HA	8:AI:14:SER:O	2.21	0.40
8:AI:66:VAL:CG1	8:AI:74:GLN:HG3	2.51	0.40
9:AJ:21:ALA:O	9:AJ:25:ILE:HG13	2.22	0.40
9:AJ:57:VAL:O	9:AJ:58:ASN:HB2	2.21	0.40
10:AK:51:PHE:HD1	10:AK:51:PHE:O	2.03	0.40
12:AM:37:GLY:O	12:AM:38:ILE:HD13	2.22	0.40
12:AM:52:ILE:HA	12:AM:55:LEU:HG	2.02	0.40
20:AB:143:LEU:O	20:AB:147:LEU:N	2.53	0.40
22:BA:116:G:H4'	43:BO:54:VAL:HG13	2.02	0.40
23:BB:409:G:H2'	23:BB:410:G:C8	2.56	0.40
23:BB:547:A:H2'	23:BB:547:A:N3	2.36	0.40
23:BB:679:C:H2'	23:BB:680:C:C6	2.56	0.40
23:BB:858:G:N2	23:BB:2269:G:OP2	2.54	0.40
23:BB:1210:G:C5'	23:BB:1212:G:H5'	2.50	0.40
23:BB:1586:A:H8	23:BB:1586:A:O5'	2.04	0.40
23:BB:1819:A:OP1	25:BC:154:ALA:HA	2.22	0.40
23:BB:2026:U:C2	23:BB:2027:G:C8	3.09	0.40
23:BB:2231:U:H2'	23:BB:2232:C:O4'	2.21	0.40
23:BB:2353:G:H1'	52:BW:30:VAL:HG12	2.01	0.40
25:BC:64:VAL:HG11	25:BC:66:PHE:CZ	2.56	0.40
27:BK:113:MET:O	27:BK:116:ILE:HG13	2.22	0.40
28:BP:46:VAL:HA	28:BP:60:VAL:HG12	2.02	0.40
29:BE:170:ARG:HH22	29:BE:176:ASP:HB3	1.86	0.40
31:B0:51:ARG:O	31:B0:52:LYS:HB2	2.22	0.40
37:BL:69:ARG:HD3	37:BL:69:ARG:O	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BL:81:ASP:CG	37:BL:100:ILE:HD11	2.41	0.40
37:BL:90:VAL:CB	37:BL:122:VAL:HG12	2.49	0.40
38:BM:38:ARG:HA	38:BM:98:PRO:HD3	2.02	0.40
41:BJ:19:ASP:OD2	41:BJ:58:ASN:HB2	2.21	0.40
41:BJ:38:GLY:CA	41:BJ:51:GLY:HA2	2.51	0.40
41:BJ:112:GLY:N	41:BJ:113:PRO:HD2	2.23	0.40
43:BO:74:VAL:O	43:BO:78:VAL:HG22	2.21	0.40
43:BO:88:LYS:HG2	43:BO:89:ASP:N	2.37	0.40
44:BQ:91:ARG:HE	44:BQ:94:LEU:CD2	2.34	0.40
45:BS:68:ASP:OD1	45:BS:68:ASP:N	2.53	0.40
50:BT:59:ASN:O	50:BT:83:ALA:O	2.38	0.40
51:BZ:53:ALA:O	51:BZ:54:LYS:HB3	2.21	0.40
51:BZ:54:LYS:HA	51:BZ:57:ARG:CD	2.46	0.40
1:CA:182:A:H5”	1:CA:182:A:N3	2.37	0.40
1:CA:202:G:H2’	1:CA:203:G:H8	1.86	0.40
1:CA:208:U:H6	1:CA:208:U:O5’	2.05	0.40
1:CA:210:C:H1’	1:CA:211:G:N1	2.36	0.40
1:CA:611:C:H2’	1:CA:612:C:C6	2.55	0.40
1:CA:646:G:O2’	1:CA:647:C:H5’	2.21	0.40
1:CA:688:G:O2’	1:CA:689:C:H5’	2.21	0.40
1:CA:740:U:O2’	1:CA:741:G:H5’	2.21	0.40
1:CA:751:U:H2’	1:CA:752:G:O4’	2.21	0.40
1:CA:812:G:OP1	1:CA:812:G:H4’	2.21	0.40
1:CA:834:U:H6	1:CA:834:U:O5’	2.03	0.40
1:CA:852:G:H2’	1:CA:853:C:C6	2.56	0.40
1:CA:907:A:O2’	1:CA:908:A:H5’	2.22	0.40
1:CA:1143:G:H2’	1:CA:1144:G:H8	1.86	0.40
1:CA:1411:C:H2’	1:CA:1412:C:C6	2.56	0.40
1:CA:1478:U:O2’	1:CA:1479:C:H5’	2.22	0.40
3:CD:156:ALA:O	3:CD:159:GLU:HB3	2.22	0.40
4:CE:151:MET:O	4:CE:154:ALA:HB3	2.21	0.40
5:CF:86:ARG:HD2	17:CR:63:TYR:O	2.21	0.40
5:CF:97:THR:O	5:CF:98:GLU:HB3	2.20	0.40
5:CF:100:SER:HA	17:CR:23:LYS:HE2	2.03	0.40
6:CG:14:ASP:CB	6:CG:19:SER:H	2.34	0.40
7:CH:50:VAL:O	7:CH:50:VAL:HG13	2.21	0.40
9:CJ:10:LEU:HD12	9:CJ:72:ARG:HB2	2.03	0.40
12:CM:12:LYS:H	12:CM:44:ILE:HD12	1.86	0.40
12:CM:15:VAL:O	12:CM:16:ILE:C	2.60	0.40
13:CN:72:PHE:CG	13:CN:73:LEU:N	2.89	0.40
15:CP:12:LYS:O	15:CP:13:LYS:HB2	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CP:38:PHE:HE2	15:CP:51:ARG:HH11	1.69	0.40
18:CS:14:LEU:HD23	18:CS:14:LEU:H	1.86	0.40
18:CS:23:GLU:HG3	18:CS:24:SER:H	1.87	0.40
20:CB:23:ASN:C	20:CB:23:ASN:ND2	2.73	0.40
20:CB:65:LYS:HG2	20:CB:89:PHE:CE1	2.56	0.40
23:DB:107:G:C2	23:DB:108:G:C8	3.10	0.40
23:DB:196:A:N3	23:DB:196:A:H2'	2.36	0.40
23:DB:454:A:H3'	23:DB:455:C:C5'	2.50	0.40
23:DB:460:A:H4'	50:DT:72:GLN:CB	2.42	0.40
23:DB:954:G:H5'	23:DB:955:U:OP2	2.21	0.40
23:DB:1055:G:C2'	23:DB:1056:G:H5'	2.52	0.40
23:DB:1057:A:C8	23:DB:1086:A:C8	3.09	0.40
23:DB:1251:C:OP2	44:DQ:5:ARG:NE	2.55	0.40
23:DB:1521:G:O5'	23:DB:1522:A:H2'	2.21	0.40
23:DB:1892:C:O2'	23:DB:1893:C:H5'	2.21	0.40
23:DB:1916:A:H2'	23:DB:1917:U:C6	2.57	0.40
23:DB:2142:A:H2'	23:DB:2143:C:H1'	2.03	0.40
23:DB:2283:C:H2'	23:DB:2284:A:C5'	2.51	0.40
23:DB:2301:C:H2'	23:DB:2302:U:H6	1.86	0.40
23:DB:2527:C:O2'	23:DB:2528:U:H5'	2.22	0.40
23:DB:2834:G:H2'	23:DB:2879:A:N6	2.36	0.40
24:DI:56:VAL:CG2	24:DI:68:PHE:HB2	2.51	0.40
25:DC:130:PRO:O	25:DC:132:ARG:N	2.54	0.40
26:DD:62:LYS:N	26:DD:63:PRO:CD	2.85	0.40
26:DD:104:VAL:HG11	26:DD:205:PRO:HB3	2.03	0.40
26:DD:133:THR:HG23	26:DD:134:HIS:CD2	2.56	0.40
27:DK:2:ILE:HG13	27:DK:33:ALA:O	2.21	0.40
27:DK:79:PHE:O	27:DK:81:GLY:N	2.51	0.40
28:DP:31:VAL:O	28:DP:32:VAL:CB	2.69	0.40
28:DP:33:GLU:HB3	28:DP:34:GLY:H	1.56	0.40
31:D0:41:HIS:O	31:D0:42:ILE:O	2.39	0.40
35:DV:1:MET:O	35:DV:62:THR:HG23	2.21	0.40
38:DM:57:VAL:O	38:DM:60:GLN:HG2	2.21	0.40
40:DH:94:ILE:HG22	40:DH:122:LEU:HB3	2.00	0.40
40:DH:95:GLY:H	40:DH:98:ASP:HB2	1.86	0.40
41:DJ:102:GLU:O	41:DJ:106:LYS:HB2	2.21	0.40
45:DS:17:VAL:O	45:DS:19:LEU:N	2.54	0.40
46:DU:5:ARG:HG2	46:DU:5:ARG:HH21	1.85	0.40
46:DU:20:LYS:HB2	46:DU:20:LYS:HZ3	1.85	0.40
47:DF:66:ILE:HA	47:DF:85:GLY:O	2.21	0.40
48:DG:9:VAL:C	48:DG:11:PRO:HD3	2.41	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DG:88:LEU:CB	48:DG:161:VAL:HG22	2.50	0.40
48:DG:88:LEU:C	48:DG:88:LEU:HD12	2.42	0.40
50:DT:43:ILE:O	50:DT:46:ALA:HB3	2.22	0.40
53:D6:13:HIS:HB3	53:D6:132:ILE:HD13	2.04	0.40
1:AA:93:U:C2	1:AA:95:C:C5	3.10	0.40
1:AA:202:G:H2'	1:AA:203:G:H8	1.85	0.40
1:AA:279:A:P	1:AA:281:G:H5'	2.61	0.40
1:AA:620:C:H2'	1:AA:621:A:C8	2.56	0.40
1:AA:844:G:H2'	1:AA:845:A:H8	1.86	0.40
1:AA:1015:G:N2	1:AA:1218:C:O2	2.53	0.40
1:AA:1138:G:N3	1:AA:1138:G:H3'	2.36	0.40
1:AA:1514:G:O2'	1:AA:1515:G:H5'	2.21	0.40
3:AD:87:GLU:OE1	3:AD:91:ALA:HB2	2.22	0.40
4:AE:55:VAL:N	4:AE:56:PRO:CD	2.84	0.40
8:AI:11:ARG:NH2	8:AI:106:ASP:OD1	2.55	0.40
8:AI:46:VAL:CG2	8:AI:47:VAL:N	2.84	0.40
8:AI:90:ASP:HB3	8:AI:93:LEU:HG	2.03	0.40
11:AL:34:THR:HG23	11:AL:55:ARG:HB2	2.03	0.40
12:AM:1:ALA:O	12:AM:3:ILE:HG13	2.21	0.40
12:AM:52:ILE:CD1	12:AM:55:LEU:HD12	2.39	0.40
13:AN:40:ARG:HH11	18:AS:6:LYS:HB2	1.85	0.40
13:AN:45:LEU:HD23	13:AN:46:LYS:HD3	2.02	0.40
14:AO:70:LEU:HD12	14:AO:78:TYR:CB	2.51	0.40
16:AQ:46:HIS:NE2	16:AQ:48:GLU:HG2	2.37	0.40
16:AQ:60:ILE:H	16:AQ:60:ILE:HD13	1.86	0.40
17:AR:25:ILE:O	17:AR:29:LYS:HG3	2.22	0.40
19:AT:66:ILE:HG13	19:AT:70:LYS:HE3	2.04	0.40
20:AB:111:LYS:O	20:AB:114:LYS:HB2	2.21	0.40
22:BA:43:C:H1'	47:BF:91:ARG:NH2	2.36	0.40
23:BB:535:G:O4'	44:BQ:48:ASP:HB3	2.21	0.40
23:BB:686:U:H4'	23:BB:687:C:OP2	2.20	0.40
23:BB:951:C:O2'	23:BB:952:G:H5'	2.22	0.40
23:BB:1151:A:H2'	23:BB:1152:C:O4'	2.22	0.40
23:BB:1335:C:H2'	23:BB:1336:A:C8	2.55	0.40
23:BB:1551:A:H3'	23:BB:1552:A:C5'	2.42	0.40
23:BB:1605:C:H1'	23:BB:1610:A:C8	2.57	0.40
23:BB:1687:G:O2'	23:BB:1688:U:H5'	2.21	0.40
23:BB:2071:A:H2'	23:BB:2072:C:H6	1.78	0.40
23:BB:2362:C:OP2	34:B3:43:LEU:HD21	2.22	0.40
23:BB:2513:A:C2	26:BD:148:GLN:OE1	2.75	0.40
23:BB:2528:U:HO2'	23:BB:2529:G:H8	1.68	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2655:G:O2'	23:BB:2656:U:P	2.80	0.40
23:BB:2655:G:H1'	23:BB:2656:U:H5	1.86	0.40
24:BI:7:TYR:CD1	24:BI:7:TYR:C	2.95	0.40
25:BC:120:ASP:OD2	25:BC:120:ASP:N	2.54	0.40
25:BC:166:ARG:CB	25:BC:171:VAL:HG22	2.50	0.40
27:BK:112:PHE:O	27:BK:113:MET:C	2.59	0.40
29:BE:2:GLU:OE1	29:BE:2:GLU:HA	2.21	0.40
31:B0:30:ASP:OD2	31:B0:31:LYS:N	2.53	0.40
37:BL:4:ASN:O	37:BL:6:LEU:N	2.54	0.40
38:BM:33:LEU:HD22	38:BM:128:THR:CB	2.51	0.40
41:BJ:3:THR:CB	41:BJ:44:TYR:OH	2.70	0.40
42:BN:62:ASN:O	42:BN:80:PHE:HZ	2.04	0.40
43:BO:67:ASN:HB3	43:BO:70:ALA:HB2	2.02	0.40
48:BG:26:LYS:HA	48:BG:32:LEU:H	1.86	0.40
48:BG:43:LYS:N	48:BG:50:THR:O	2.48	0.40
48:BG:62:ALA:O	48:BG:66:THR:HG22	2.21	0.40
51:BZ:39:TRP:HA	51:BZ:46:PHE:HD2	1.83	0.40
1:CA:90:C:H2'	1:CA:91:U:C5	2.55	0.40
1:CA:175:C:O2'	1:CA:176:C:H5'	2.21	0.40
1:CA:238:A:H3'	1:CA:239:U:H5"	2.02	0.40
1:CA:413:G:O6	3:CD:32:LYS:HG3	2.20	0.40
1:CA:482:A:C2	1:CA:483:C:H1'	2.56	0.40
1:CA:652:U:H1'	1:CA:653:U:H5	1.86	0.40
1:CA:767:A:H3'	57:CA:1855:HOH:O	2.20	0.40
1:CA:777:A:H2'	1:CA:778:G:C8	2.55	0.40
1:CA:782:A:H2'	1:CA:783:C:O4'	2.20	0.40
1:CA:812:G:O2'	1:CA:813:U:O5'	2.39	0.40
1:CA:818:G:O2'	1:CA:819:A:H5"	2.21	0.40
1:CA:1131:G:O2'	1:CA:1132:C:H5'	2.21	0.40
1:CA:1147:C:H2'	1:CA:1148:U:H6	1.86	0.40
2:CC:46:LEU:HB3	2:CC:49:ALA:HB3	2.03	0.40
2:CC:112:ALA:O	2:CC:113:LYS:C	2.59	0.40
2:CC:146:LYS:HB2	2:CC:202:PHE:CD2	2.56	0.40
3:CD:13:ARG:HA	3:CD:37:PRO:CG	2.51	0.40
3:CD:110:ARG:HG3	3:CD:110:ARG:NH1	2.36	0.40
4:CE:15:ILE:HB	4:CE:35:LEU:O	2.21	0.40
4:CE:62:ALA:O	4:CE:65:LYS:HB2	2.21	0.40
8:CI:78:ILE:HG22	8:CI:82:ILE:HD11	2.02	0.40
11:CL:86:VAL:CB	11:CL:89:LEU:HB2	2.51	0.40
22:DA:80:U:H2'	22:DA:81:G:C8	2.57	0.40
22:DA:83:G:O2'	22:DA:84:G:H5'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:76:C:O2'	39:DX:55:THR:HG21	2.20	0.40
23:DB:98:G:H2'	23:DB:99:U:H5'	2.03	0.40
23:DB:572:A:H3'	23:DB:573:U:O4'	2.22	0.40
23:DB:1064:C:O2'	23:DB:1065:U:H5'	2.20	0.40
23:DB:1334:G:O2'	23:DB:1335:C:H5'	2.22	0.40
23:DB:1403:A:H2'	23:DB:1404:C:H6	1.85	0.40
23:DB:1856:U:H2'	23:DB:1857:G:H5'	2.02	0.40
23:DB:2028:U:H2'	23:DB:2029:G:O4'	2.21	0.40
23:DB:2032:G:N7	23:DB:2454:G:H1'	2.37	0.40
23:DB:2036:C:H2'	23:DB:2037:A:C8	2.57	0.40
23:DB:2078:C:O2'	23:DB:2079:U:H5'	2.21	0.40
23:DB:2471:A:O2'	23:DB:2472:G:P	2.79	0.40
23:DB:2691:C:C4	23:DB:2719:G:N2	2.89	0.40
25:DC:29:PHE:C	25:DC:31:PRO:HD2	2.42	0.40
28:DP:49:ILE:HG12	28:DP:50:ARG:H	1.87	0.40
29:DE:29:HIS:C	29:DE:31:VAL:N	2.74	0.40
31:D0:28:SER:HB2	31:D0:39:ARG:HG2	2.03	0.40
33:D1:20:TYR:CD2	33:D1:37:LYS:HD3	2.56	0.40
36:D2:6:GLN:HA	36:D2:7:PRO:HD2	1.89	0.40
37:DL:21:ARG:HA	37:DL:21:ARG:HD3	1.99	0.40
37:DL:127:VAL:HG22	37:DL:128:THR:O	2.21	0.40
39:DX:56:LEU:O	39:DX:57:LEU:CB	2.68	0.40
40:DH:10:ALA:C	40:DH:12:LEU:H	2.23	0.40
40:DH:111:ALA:O	40:DH:112:LYS:C	2.60	0.40
41:DJ:28:LEU:HD23	41:DJ:29:ALA:H	1.86	0.40
43:DO:67:ASN:O	43:DO:69:ASP:N	2.55	0.40
44:DQ:45:ALA:O	44:DQ:49:ARG:N	2.50	0.40
44:DQ:60:TRP:CE2	44:DQ:93:ILE:HB	2.56	0.40
45:DS:14:ALA:C	45:DS:16:LYS:N	2.74	0.40
47:DF:33:ILE:HG22	47:DF:90:LEU:HD23	2.03	0.40
52:DW:54:ARG:C	52:DW:56:HIS:H	2.25	0.40
1:AA:84:U:C3'	1:AA:86:G:H21	2.34	0.40
1:AA:515:G:O2'	1:AA:516:U:H5'	2.22	0.40
1:AA:1108:G:H5'	2:AC:175:HIS:ND1	2.37	0.40
1:AA:1295:U:H2'	1:AA:1296:C:C6	2.56	0.40
1:AA:1424:U:H2'	1:AA:1425:U:C6	2.57	0.40
1:AA:1495:U:O2'	1:AA:1496:C:H5'	2.20	0.40
3:AD:29:THR:HG22	3:AD:30:LYS:H	1.87	0.40
3:AD:115:GLN:HG3	3:AD:119:HIS:CE1	2.56	0.40
5:AF:18:VAL:HG11	5:AF:58:HIS:NE2	2.37	0.40
6:AG:31:VAL:HG22	6:AG:32:ASP:N	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AG:61:PHE:O	6:AG:65:LEU:HD13	2.22	0.40
8:AI:10:ARG:O	8:AI:11:ARG:HB3	2.21	0.40
8:AI:27:ILE:CB	8:AI:34:LEU:HB2	2.46	0.40
11:AL:23:LEU:HG	11:AL:24:GLU:H	1.86	0.40
11:AL:86:VAL:CG1	11:AL:89:LEU:HB2	2.51	0.40
20:AB:169:HIS:CG	20:AB:170:ILE:N	2.89	0.40
21:AU:34:ARG:HD2	21:AU:35:GLU:N	2.36	0.40
23:BB:90:U:OP2	23:BB:91:A:H3'	2.21	0.40
23:BB:125:A:C3'	23:BB:126:A:H5'	2.52	0.40
23:BB:263:G:H2'	23:BB:264:C:C6	2.55	0.40
23:BB:540:C:H2'	23:BB:541:A:H8	1.85	0.40
23:BB:673:C:H2'	23:BB:674:G:H5'	2.02	0.40
23:BB:675:A:H4'	29:BE:60:TRP:HZ2	1.85	0.40
23:BB:783:A:H4'	23:BB:1779:U:O2	2.22	0.40
23:BB:783:A:C8	23:BB:784:G:H4'	2.43	0.40
23:BB:787:C:H3'	23:BB:791:C:H41	1.86	0.40
23:BB:1281:G:H2'	23:BB:1282:U:C6	2.56	0.40
23:BB:2010:G:O2'	23:BB:2011:U:H5'	2.21	0.40
23:BB:2135:A:H61	23:BB:2156:G:H1'	1.86	0.40
23:BB:2297:A:C2	23:BB:2320:U:H1'	2.56	0.40
23:BB:2386:A:N3	52:BW:38:ARG:HD2	2.37	0.40
23:BB:2559:C:O2'	23:BB:2560:A:H5'	2.22	0.40
23:BB:2611:C:O2'	23:BB:2612:C:H5'	2.20	0.40
23:BB:2787:C:H2'	23:BB:2788:C:C6	2.56	0.40
25:BC:92:LEU:HD12	25:BC:101:ARG:O	2.22	0.40
25:BC:120:ASP:CG	25:BC:121:ALA:H	2.25	0.40
25:BC:188:ARG:NH2	25:BC:188:ARG:HG2	2.37	0.40
25:BC:242:HIS:O	25:BC:244:VAL:HG13	2.21	0.40
26:BD:24:VAL:HG23	26:BD:189:VAL:H	1.86	0.40
26:BD:24:VAL:HG23	26:BD:189:VAL:N	2.37	0.40
29:BE:176:ASP:OD1	29:BE:176:ASP:C	2.60	0.40
33:B1:9:LYS:O	33:B1:50:GLU:O	2.39	0.40
38:BM:101:VAL:HG13	38:BM:101:VAL:O	2.21	0.40
41:BJ:21:THR:C	41:BJ:23:LYS:H	2.25	0.40
41:BJ:44:TYR:HB2	44:BQ:63:ARG:HD2	2.02	0.40
42:BN:118:ARG:HE	42:BN:118:ARG:HB3	1.46	0.40
43:BO:3:LYS:H	43:BO:3:LYS:CD	2.19	0.40
43:BO:14:ALA:C	43:BO:16:ARG:N	2.75	0.40
43:BO:25:ARG:HD2	43:BO:93:ASP:HB2	2.02	0.40
45:BS:25:ARG:HE	45:BS:74:ILE:CG2	2.34	0.40
45:BS:29:VAL:HG23	45:BS:70:LYS:CA	2.50	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:135:ILE:HD12	47:BF:135:ILE:O	2.21	0.40
47:BF:141:ASP:CB	47:BF:144:LYS:HB2	2.51	0.40
48:BG:83:THR:C	48:BG:84:LYS:HD3	2.42	0.40
48:BG:93:TYR:N	48:BG:93:TYR:CD2	2.90	0.40
48:BG:94:ARG:HG2	48:BG:127:GLN:NE2	2.36	0.40
49:BR:14:VAL:HG22	49:BR:15:SER:H	1.84	0.40
52:BW:57:THR:O	52:BW:59:PHE:N	2.55	0.40
53:B6:36:ALA:HB1	53:B6:39:LEU:HD23	2.03	0.40
1:CA:21:G:H2'	1:CA:22:G:H8	1.79	0.40
1:CA:42:G:H2'	1:CA:43:C:H6	1.87	0.40
1:CA:134:G:H2'	1:CA:135:C:O4'	2.20	0.40
1:CA:185:U:H2'	1:CA:186:C:C6	2.57	0.40
1:CA:714:G:N3	1:CA:777:A:H1'	2.37	0.40
1:CA:824:G:C6	1:CA:877:G:C6	3.09	0.40
1:CA:966:G:H2'	1:CA:967:C:C6	2.57	0.40
1:CA:1060:U:H2'	1:CA:1061:G:C8	2.57	0.40
1:CA:1073:U:H2'	1:CA:1074:G:H8	1.86	0.40
1:CA:1105:A:H2'	1:CA:1106:G:C8	2.53	0.40
1:CA:1141:C:H2'	1:CA:1142:G:H8	1.86	0.40
3:CD:21:LYS:C	3:CD:23:GLY:H	2.25	0.40
4:CE:93:VAL:HG22	4:CE:126:ALA:HB1	2.04	0.40
7:CH:39:LEU:CD2	7:CH:128:VAL:HG21	2.51	0.40
7:CH:77:VAL:HG12	7:CH:78:SER:N	2.37	0.40
9:CJ:28:THR:O	9:CJ:32:THR:HG22	2.21	0.40
12:CM:6:ILE:CD1	47:DF:144:LYS:HE3	2.51	0.40
15:CP:45:GLU:O	15:CP:47:GLU:N	2.50	0.40
15:CP:46:LYS:O	15:CP:47:GLU:HB2	2.22	0.40
16:CQ:46:HIS:NE2	16:CQ:48:GLU:HG2	2.37	0.40
17:CR:31:TYR:CD1	17:CR:54:LEU:HD11	2.57	0.40
18:CS:39:ILE:HB	18:CS:66:VAL:O	2.22	0.40
22:DA:6:G:H2'	22:DA:7:G:H8	1.86	0.40
22:DA:13:G:C2'	22:DA:14:U:H5"	2.50	0.40
22:DA:102:G:H2'	22:DA:103:U:H6	1.86	0.40
23:DB:26:G:H1'	23:DB:515:A:N6	2.36	0.40
23:DB:123:G:H4'	23:DB:1376:C:O5'	2.20	0.40
23:DB:291:G:H2'	23:DB:292:U:C6	2.56	0.40
23:DB:372:G:O2'	23:DB:373:U:P	2.78	0.40
23:DB:458:G:HO2'	23:DB:459:U:P	2.44	0.40
23:DB:568:U:O2'	23:DB:570:G:N7	2.43	0.40
23:DB:577:G:OP1	23:DB:2502:G:H2'	2.22	0.40
23:DB:1099:G:H4'	24:DI:4:VAL:CG1	2.52	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1332:G:H5'	23:DB:1332:G:N3	2.36	0.40
23:DB:1424:G:O2'	23:DB:1425:G:H5'	2.22	0.40
23:DB:1816:C:H3'	25:DC:61:TYR:CE2	2.57	0.40
23:DB:2206:C:H2'	23:DB:2207:C:H6	1.87	0.40
23:DB:2227:A:H2'	23:DB:2228:G:O4'	2.21	0.40
23:DB:2345:G:H5'	23:DB:2347:C:O4'	2.22	0.40
23:DB:2562:U:H4'	27:DK:25:LEU:HD23	2.02	0.40
23:DB:2657:A:C2'	23:DB:2658:C:H5'	2.52	0.40
24:DI:16:MET:N	24:DI:42:ASN:OD1	2.54	0.40
24:DI:91:LYS:HD2	24:DI:91:LYS:N	2.36	0.40
25:DC:151:GLY:C	25:DC:152:GLN:HG3	2.40	0.40
26:DD:49:GLN:NE2	26:DD:79:LEU:HD12	2.36	0.40
26:DD:161:MET:O	26:DD:161:MET:HG3	2.22	0.40
27:DK:38:ILE:HD11	27:DK:112:PHE:CZ	2.56	0.40
28:DP:25:VAL:HA	28:DP:85:VAL:CA	2.51	0.40
29:DE:37:ALA:C	29:DE:39:ALA:N	2.71	0.40
29:DE:108:ILE:HG12	37:DL:2:ARG:HH22	1.86	0.40
33:D1:34:GLU:HA	33:D1:48:TYR:O	2.22	0.40
35:DV:31:TYR:O	35:DV:92:VAL:HA	2.21	0.40
37:DL:47:ARG:HH21	37:DL:47:ARG:CB	2.35	0.40
37:DL:50:PHE:O	37:DL:52:GLY:N	2.54	0.40
37:DL:69:ARG:HD3	37:DL:69:ARG:O	2.22	0.40
37:DL:78:ARG:HB3	37:DL:78:ARG:NH2	2.37	0.40
41:DJ:12:LYS:O	41:DJ:13:ARG:HB2	2.22	0.40
41:DJ:21:THR:C	41:DJ:23:LYS:N	2.75	0.40
41:DJ:41:LYS:HB3	41:DJ:42:ALA:H	1.64	0.40
42:DN:51:LEU:O	42:DN:55:ALA:N	2.54	0.40
43:DO:9:ARG:HA	43:DO:12:THR:OG1	2.21	0.40
43:DO:16:ARG:HD3	43:DO:16:ARG:HA	1.94	0.40
43:DO:51:ALA:CB	43:DO:78:VAL:HG13	2.52	0.40
44:DQ:97:ILE:HG13	44:DQ:105:PHE:HB2	2.04	0.40
45:DS:88:ARG:N	45:DS:92:ARG:O	2.49	0.40
46:DU:28:LEU:C	46:DU:30:SER:N	2.75	0.40
46:DU:51:LEU:N	46:DU:53:GLN:NE2	2.69	0.40
47:DF:51:ASN:O	47:DF:55:ASP:HB2	2.21	0.40
48:DG:84:LYS:HG3	48:DG:131:VAL:C	2.41	0.40
49:DR:46:GLU:HG3	49:DR:46:GLU:O	2.22	0.40
52:DW:24:ARG:HA	52:DW:66:VAL:H	1.86	0.40
1:AA:373:A:O4'	1:AA:481:G:H1'	2.22	0.40
1:AA:491:G:O2'	1:AA:492:C:H5'	2.22	0.40
1:AA:982:U:H4'	1:AA:983:A:O4'	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:992:U:C2	1:AA:1043:G:N7	2.90	0.40
1:AA:1051:C:H2'	1:AA:1052:U:C6	2.57	0.40
1:AA:1077:G:N2	1:AA:1079:G:H3'	2.37	0.40
1:AA:1237:C:H3'	1:AA:1336:C:N4	2.36	0.40
1:AA:1309:G:OP1	12:AM:90:HIS:NE2	2.53	0.40
1:AA:1347:G:C8	8:AI:108:ARG:HD2	2.56	0.40
2:AC:32:LEU:O	2:AC:35:ASP:HB2	2.21	0.40
3:AD:41:GLY:C	3:AD:43:ARG:N	2.75	0.40
4:AE:155:LYS:O	4:AE:158:LYS:HD2	2.21	0.40
6:AG:19:SER:OG	6:AG:22:LEU:HB2	2.21	0.40
8:AI:35:GLU:O	8:AI:39:GLY:HA3	2.21	0.40
12:AM:32:ILE:HD11	12:AM:58:GLU:HB3	2.03	0.40
12:AM:49:GLU:O	12:AM:52:ILE:HG22	2.22	0.40
13:AN:87:ALA:CA	13:AN:92:ILE:HD13	2.51	0.40
16:AQ:68:LYS:C	16:AQ:70:LYS:N	2.74	0.40
17:AR:49:LYS:HA	17:AR:52:ARG:NH1	2.36	0.40
18:AS:51:HIS:HB2	18:AS:56:HIS:CD2	2.57	0.40
18:AS:77:ARG:H	18:AS:77:ARG:HG2	1.62	0.40
20:AB:161:PHE:HA	20:AB:183:PHE:O	2.21	0.40
21:AU:16:ARG:O	21:AU:17:ARG:C	2.59	0.40
22:BA:102:G:H2'	22:BA:103:U:H6	1.86	0.40
23:BB:191:A:O2'	23:BB:192:C:H5'	2.22	0.40
23:BB:235:U:H2'	23:BB:236:C:C6	2.56	0.40
23:BB:265:A:N6	23:BB:427:U:O2'	2.54	0.40
23:BB:457:A:H61	23:BB:470:A:H5"	1.87	0.40
23:BB:467:G:N7	36:B2:39:ARG:NH2	2.69	0.40
23:BB:538:A:N6	23:BB:555:G:O2'	2.53	0.40
23:BB:738:G:H1'	23:BB:759:G:N2	2.37	0.40
23:BB:861:A:H2'	23:BB:862:G:O4'	2.22	0.40
23:BB:918:A:C2'	23:BB:919:U:H5'	2.47	0.40
23:BB:1000:A:H2'	23:BB:1001:A:H8	1.83	0.40
23:BB:1024:G:P	23:BB:1025:G:H3'	2.62	0.40
23:BB:1181:U:H2'	23:BB:1182:G:H8	1.86	0.40
23:BB:1190:G:O5'	37:BL:32:GLY:HA2	2.22	0.40
23:BB:1507:C:C2'	23:BB:1508:A:H4'	2.51	0.40
23:BB:1693:U:H1'	25:BC:13:ARG:HH21	1.87	0.40
23:BB:2095:A:H2'	23:BB:2096:C:H6	1.83	0.40
23:BB:2235:G:H2'	23:BB:2236:U:C6	2.56	0.40
23:BB:2321:U:O2	23:BB:2321:U:C3'	2.69	0.40
23:BB:2364:C:C2'	23:BB:2365:G:H5'	2.52	0.40
23:BB:2618:G:H2'	23:BB:2619:C:C6	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2789:C:H2'	23:BB:2893:A:N7	2.36	0.40
23:BB:2820:A:C8	42:BN:4:ARG:HD3	2.56	0.40
25:BC:66:PHE:CD1	25:BC:66:PHE:N	2.89	0.40
25:BC:89:ASN:HD22	25:BC:89:ASN:HA	1.52	0.40
25:BC:91:ALA:HB3	25:BC:105:ALA:HB2	2.00	0.40
26:BD:69:ALA:CA	26:BD:73:VAL:HB	2.51	0.40
26:BD:92:VAL:O	26:BD:93:GLY:C	2.60	0.40
27:BK:98:ARG:HE	27:BK:98:ARG:N	2.20	0.40
29:BE:83:VAL:HG12	29:BE:86:ALA:HA	2.03	0.40
32:B4:22:VAL:O	32:B4:24:ARG:N	2.54	0.40
33:B1:8:ILE:CG1	33:B1:51:ALA:HA	2.51	0.40
33:B1:37:LYS:HB2	33:B1:48:TYR:CD2	2.57	0.40
34:B3:21:PHE:CE1	34:B3:58:ILE:HG12	2.57	0.40
36:B2:26:ASN:HA	36:B2:29:GLN:CB	2.46	0.40
36:B2:30:VAL:HG22	36:B2:33:ARG:HH22	1.87	0.40
43:BO:67:ASN:O	43:BO:69:ASP:N	2.54	0.40
44:BQ:60:TRP:CZ2	44:BQ:93:ILE:HD12	2.56	0.40
44:BQ:109:VAL:O	44:BQ:113:LYS:HG3	2.21	0.40
45:BS:34:ASP:O	45:BS:38:TYR:HD1	2.04	0.40
47:BF:137:PHE:O	47:BF:138:PRO:C	2.60	0.40
48:BG:74:MET:O	48:BG:78:VAL:HG13	2.22	0.40
48:BG:126:THR:O	48:BG:128:THR:N	2.55	0.40
49:BR:49:ILE:HG21	49:BR:54:VAL:HA	2.03	0.40
49:BR:72:VAL:CG2	49:BR:89:HIS:HB3	2.49	0.40
49:BR:98:ILE:N	49:BR:98:ILE:HD12	2.36	0.40
53:B6:137:LEU:HD13	53:B6:161:ILE:HG21	2.03	0.40
1:CA:191:G:H8	1:CA:191:G:OP2	2.04	0.40
1:CA:620:C:C6	3:CD:131:ILE:HD13	2.56	0.40
1:CA:675:A:O2'	1:CA:676:A:H5'	2.22	0.40
1:CA:749:A:O2'	1:CA:750:C:H5'	2.22	0.40
1:CA:846:G:H3'	1:CA:847:G:H8	1.87	0.40
1:CA:982:U:H4'	1:CA:983:A:O4'	2.22	0.40
1:CA:1097:C:H2'	1:CA:1098:C:H6	1.86	0.40
1:CA:1105:A:O2'	1:CA:1106:G:H5'	2.21	0.40
1:CA:1109:C:H2'	1:CA:1110:A:O4'	2.21	0.40
1:CA:1133:G:O2'	1:CA:1134:G:H5'	2.22	0.40
1:CA:1248:A:C2	8:CI:71:ILE:HD11	2.56	0.40
2:CC:26:LYS:HE2	2:CC:27:GLU:CG	2.52	0.40
2:CC:154:GLY:HA3	2:CC:162:ALA:HB1	2.04	0.40
7:CH:113:ARG:HA	7:CH:116:ARG:NH1	2.37	0.40
10:CK:110:THR:HG22	21:CU:4:LYS:CA	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CK:122:PRO:HD2	21:CU:35:GLU:HG2	2.02	0.40
11:CL:63:THR:O	11:CL:94:TYR:HB2	2.22	0.40
15:CP:1:MET:O	15:CP:1:MET:HG3	2.21	0.40
18:CS:11:ASP:N	18:CS:14:LEU:HD21	2.37	0.40
18:CS:35:ARG:HB2	18:CS:71:GLY:CA	2.51	0.40
19:CT:38:ILE:HD11	19:CT:82:ILE:HA	2.04	0.40
19:CT:50:PHE:HE2	19:CT:75:LYS:HA	1.86	0.40
20:CB:9:LEU:C	20:CB:11:ALA:H	2.25	0.40
21:CU:34:ARG:NH1	21:CU:39:LYS:NZ	2.70	0.40
23:DB:96:C:H2'	23:DB:97:C:H6	1.87	0.40
23:DB:111:A:O2'	23:DB:112:U:H5'	2.21	0.40
23:DB:162:U:O2	23:DB:162:U:H2'	2.21	0.40
23:DB:202:U:H2'	23:DB:203:A:C8	2.57	0.40
23:DB:265:A:H2'	23:DB:266:G:O4'	2.21	0.40
23:DB:392:U:H2'	23:DB:393:C:H6	1.85	0.40
23:DB:415:A:H2'	23:DB:416:U:C6	2.56	0.40
23:DB:651:G:O2'	23:DB:652:U:H5'	2.21	0.40
23:DB:754:U:H2'	23:DB:755:U:C6	2.57	0.40
23:DB:845:A:N1	23:DB:847:U:H1'	2.36	0.40
23:DB:1292:G:O2'	23:DB:1293:C:H5'	2.21	0.40
23:DB:1473:G:C6	23:DB:1519:G:C6	3.10	0.40
23:DB:1689:A:H2'	23:DB:1690:A:H8	1.86	0.40
23:DB:1948:G:C6	23:DB:1959:G:C6	3.10	0.40
23:DB:2143:C:N3	23:DB:2144:G:H1'	2.36	0.40
23:DB:2263:C:H4'	23:DB:2329:U:H4'	2.03	0.40
23:DB:2356:U:H4'	52:DW:16:GLU:OE1	2.21	0.40
23:DB:2410:G:H2'	23:DB:2411:A:O4'	2.21	0.40
23:DB:2485:G:H4'	38:DM:123:LYS:O	2.22	0.40
23:DB:2679:A:H2'	23:DB:2680:U:H6	1.85	0.40
24:DI:102:ARG:O	24:DI:106:GLN:HG3	2.22	0.40
25:DC:119:VAL:HA	25:DC:133:ASN:ND2	2.36	0.40
26:DD:154:LYS:HG2	26:DD:155:VAL:N	2.36	0.40
27:DK:88:ASN:HB3	27:DK:92:GLU:O	2.22	0.40
27:DK:109:SER:C	27:DK:111:LYS:H	2.24	0.40
32:D4:8:LYS:HG3	32:D4:9:LYS:HD3	2.04	0.40
35:DV:70:ILE:CD1	35:DV:71:LYS:N	2.82	0.40
38:DM:69:PRO:HB2	38:DM:92:TRP:HB3	2.03	0.40
38:DM:93:VAL:HG22	38:DM:94:ALA:N	2.37	0.40
38:DM:126:ILE:HD12	38:DM:126:ILE:N	2.37	0.40
39:DX:35:GLY:O	39:DX:37:LEU:N	2.54	0.40
40:DH:14:SER:HB3	40:DH:17:ASP:CB	2.45	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DJ:43:GLU:O	41:DJ:44:TYR:C	2.59	0.40
44:DQ:89:ILE:C	44:DQ:91:ARG:H	2.25	0.40
44:DQ:89:ILE:O	44:DQ:90:ASP:HB2	2.22	0.40
45:DS:25:ARG:NH2	45:DS:74:ILE:HG23	2.37	0.40
48:DG:137:LYS:O	48:DG:140:ILE:HG13	2.21	0.40
49:DR:49:ILE:HG21	49:DR:54:VAL:HA	2.04	0.40
49:DR:49:ILE:HG21	49:DR:54:VAL:N	2.37	0.40
51:DZ:65:ASP:O	51:DZ:69:ALA:HB2	2.21	0.40
51:DZ:65:ASP:O	51:DZ:69:ALA:N	2.54	0.40
52:DW:48:ALA:HB3	52:DW:81:ILE:O	2.21	0.40
53:D6:86:SER:C	53:D6:88:LEU:N	2.75	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%)	151 (74%)	38 (19%)	15 (7%)	1 15
2	CC	204/232 (88%)	152 (74%)	37 (18%)	15 (7%)	1 15
3	AD	203/205 (99%)	151 (74%)	39 (19%)	13 (6%)	1 18
3	CD	203/205 (99%)	148 (73%)	42 (21%)	13 (6%)	1 18
4	AE	148/166 (89%)	117 (79%)	25 (17%)	6 (4%)	3 25
4	CE	148/166 (89%)	117 (79%)	25 (17%)	6 (4%)	3 25
5	AF	98/135 (73%)	64 (65%)	25 (26%)	9 (9%)	1 11
5	CF	98/135 (73%)	65 (66%)	24 (24%)	9 (9%)	1 11
6	AG	148/178 (83%)	106 (72%)	33 (22%)	9 (6%)	1 19
6	CG	150/178 (84%)	112 (75%)	29 (19%)	9 (6%)	1 19
7	AH	127/129 (98%)	98 (77%)	23 (18%)	6 (5%)	2 23

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
7	CH	127/129 (98%)	96 (76%)	25 (20%)	6 (5%)	2	23
8	AI	125/129 (97%)	99 (79%)	17 (14%)	9 (7%)	1	16
8	CI	125/129 (97%)	98 (78%)	18 (14%)	9 (7%)	1	16
9	AJ	96/103 (93%)	70 (73%)	13 (14%)	13 (14%)	0	4
9	CJ	96/103 (93%)	71 (74%)	12 (12%)	13 (14%)	0	4
10	AK	115/128 (90%)	87 (76%)	22 (19%)	6 (5%)	2	21
10	CK	115/128 (90%)	87 (76%)	22 (19%)	6 (5%)	2	21
11	AL	121/123 (98%)	73 (60%)	33 (27%)	15 (12%)	0	5
11	CL	121/123 (98%)	75 (62%)	31 (26%)	15 (12%)	0	5
12	AM	112/117 (96%)	79 (70%)	24 (21%)	9 (8%)	1	14
12	CM	111/117 (95%)	76 (68%)	25 (22%)	10 (9%)	1	12
13	AN	92/100 (92%)	59 (64%)	26 (28%)	7 (8%)	1	14
13	CN	92/100 (92%)	60 (65%)	24 (26%)	8 (9%)	1	12
14	AO	86/89 (97%)	59 (69%)	22 (26%)	5 (6%)	1	19
14	CO	86/89 (97%)	60 (70%)	22 (26%)	4 (5%)	2	23
15	AP	80/82 (98%)	59 (74%)	16 (20%)	5 (6%)	1	18
15	CP	78/82 (95%)	56 (72%)	16 (20%)	6 (8%)	1	14
16	AQ	78/83 (94%)	58 (74%)	15 (19%)	5 (6%)	1	18
16	CQ	79/83 (95%)	59 (75%)	15 (19%)	5 (6%)	1	18
17	AR	53/74 (72%)	41 (77%)	9 (17%)	3 (6%)	1	19
17	CR	53/74 (72%)	41 (77%)	9 (17%)	3 (6%)	1	19
18	AS	77/91 (85%)	60 (78%)	12 (16%)	5 (6%)	1	18
18	CS	78/91 (86%)	61 (78%)	11 (14%)	6 (8%)	1	14
19	AT	83/86 (96%)	63 (76%)	15 (18%)	5 (6%)	1	19
19	CT	83/86 (96%)	62 (75%)	16 (19%)	5 (6%)	1	19
20	AB	216/240 (90%)	142 (66%)	57 (26%)	17 (8%)	1	14
20	CB	216/240 (90%)	134 (62%)	65 (30%)	17 (8%)	1	14
21	AU	49/70 (70%)	28 (57%)	11 (22%)	10 (20%)	0	2
21	CU	49/70 (70%)	28 (57%)	12 (24%)	9 (18%)	0	2
24	BI	139/141 (99%)	120 (86%)	14 (10%)	5 (4%)	3	28
24	DI	139/141 (99%)	114 (82%)	20 (14%)	5 (4%)	3	28

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
25	BC	269/272 (99%)	155 (58%)	66 (24%)	48 (18%)	0	2
25	DC	269/272 (99%)	155 (58%)	65 (24%)	49 (18%)	0	2
26	BD	207/209 (99%)	122 (59%)	54 (26%)	31 (15%)	0	3
26	DD	207/209 (99%)	124 (60%)	51 (25%)	32 (16%)	0	3
27	BK	119/123 (97%)	78 (66%)	24 (20%)	17 (14%)	0	3
27	DK	119/123 (97%)	78 (66%)	24 (20%)	17 (14%)	0	3
28	BP	112/114 (98%)	61 (54%)	32 (29%)	19 (17%)	0	3
28	DP	112/114 (98%)	61 (54%)	34 (30%)	17 (15%)	0	3
29	BE	199/201 (99%)	125 (63%)	50 (25%)	24 (12%)	0	5
29	DE	199/201 (99%)	125 (63%)	51 (26%)	23 (12%)	0	6
30	BY	56/58 (97%)	39 (70%)	12 (21%)	5 (9%)	1	12
30	DY	56/58 (97%)	39 (70%)	12 (21%)	5 (9%)	1	12
31	B0	54/56 (96%)	39 (72%)	8 (15%)	7 (13%)	0	4
31	D0	54/56 (96%)	39 (72%)	8 (15%)	7 (13%)	0	4
32	B4	36/38 (95%)	16 (44%)	10 (28%)	10 (28%)	0	0
32	D4	36/38 (95%)	16 (44%)	10 (28%)	10 (28%)	0	0
33	B1	48/54 (89%)	37 (77%)	7 (15%)	4 (8%)	1	13
33	D1	48/54 (89%)	36 (75%)	8 (17%)	4 (8%)	1	13
34	B3	62/64 (97%)	35 (56%)	21 (34%)	6 (10%)	0	10
34	D3	62/64 (97%)	34 (55%)	22 (36%)	6 (10%)	0	10
35	BV	92/94 (98%)	64 (70%)	22 (24%)	6 (6%)	1	18
35	DV	92/94 (98%)	62 (67%)	24 (26%)	6 (6%)	1	18
36	B2	44/46 (96%)	30 (68%)	10 (23%)	4 (9%)	1	12
36	D2	44/46 (96%)	30 (68%)	10 (23%)	4 (9%)	1	12
37	BL	141/144 (98%)	89 (63%)	31 (22%)	21 (15%)	0	3
37	DL	141/144 (98%)	89 (63%)	32 (23%)	20 (14%)	0	3
38	BM	134/136 (98%)	84 (63%)	29 (22%)	21 (16%)	0	3
38	DM	134/136 (98%)	83 (62%)	31 (23%)	20 (15%)	0	3
39	BX	61/63 (97%)	36 (59%)	17 (28%)	8 (13%)	0	4
39	DX	61/63 (97%)	36 (59%)	17 (28%)	8 (13%)	0	4
40	BH	147/149 (99%)	76 (52%)	46 (31%)	25 (17%)	0	3

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
40	DH	147/149 (99%)	91 (62%)	33 (22%)	23 (16%)	0	3
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	4
42	BN	118/127 (93%)	76 (64%)	29 (25%)	13 (11%)	0	7
42	DN	118/127 (93%)	77 (65%)	28 (24%)	13 (11%)	0	7
43	BO	114/117 (97%)	74 (65%)	29 (25%)	11 (10%)	0	10
43	DO	114/117 (97%)	75 (66%)	27 (24%)	12 (10%)	0	8
44	BQ	115/117 (98%)	75 (65%)	31 (27%)	9 (8%)	1	14
44	DQ	115/117 (98%)	75 (65%)	29 (25%)	11 (10%)	0	10
45	BS	108/110 (98%)	68 (63%)	29 (27%)	11 (10%)	0	9
45	DS	108/110 (98%)	66 (61%)	31 (29%)	11 (10%)	0	9
46	BU	100/103 (97%)	58 (58%)	23 (23%)	19 (19%)	0	2
46	DU	100/103 (97%)	59 (59%)	22 (22%)	19 (19%)	0	2
47	BF	176/178 (99%)	103 (58%)	44 (25%)	29 (16%)	0	3
47	DF	176/178 (99%)	105 (60%)	42 (24%)	29 (16%)	0	3
48	BG	174/176 (99%)	99 (57%)	42 (24%)	33 (19%)	0	2
48	DG	174/176 (99%)	101 (58%)	41 (24%)	32 (18%)	0	2
49	BR	101/103 (98%)	72 (71%)	20 (20%)	9 (9%)	1	12
49	DR	101/103 (98%)	74 (73%)	18 (18%)	9 (9%)	1	12
50	BT	91/100 (91%)	48 (53%)	23 (25%)	20 (22%)	0	1
50	DT	91/100 (91%)	46 (50%)	27 (30%)	18 (20%)	0	2
51	BZ	75/78 (96%)	50 (67%)	13 (17%)	12 (16%)	0	3
51	DZ	75/78 (96%)	50 (67%)	13 (17%)	12 (16%)	0	3
52	BW	77/84 (92%)	28 (36%)	23 (30%)	26 (34%)	0	0
52	DW	77/84 (92%)	28 (36%)	24 (31%)	25 (32%)	0	0
53	B6	183/185 (99%)	162 (88%)	16 (9%)	5 (3%)	5	34
53	D6	183/185 (99%)	152 (83%)	24 (13%)	7 (4%)	3	27
All	All	11607/12284 (94%)	7731 (67%)	2581 (22%)	1295 (11%)	0	7

All (1295) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AC	14	VAL

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Mol	Chain	Res	Type
2	AC	54	ILE
2	AC	205	GLU
3	AD	24	VAL
3	AD	25	ARG
5	AF	92	THR
6	AG	6	ILE
6	AG	71	THR
8	AI	8	THR
9	AJ	57	VAL
10	AK	126	ARG
11	AL	13	ARG
11	AL	23	LEU
11	AL	121	PRO
12	AM	15	VAL
12	AM	111	PRO
13	AN	50	LEU
13	AN	61	ASN
15	AP	28	ARG
15	AP	44	SER
16	AQ	32	ILE
20	AB	9	LEU
20	AB	15	PHE
20	AB	19	THR
20	AB	22	TRP
20	AB	73	ARG
20	AB	94	ARG
20	AB	188	THR
21	AU	12	ASP
21	AU	35	GLU
24	BI	18	ASN
25	BC	17	LYS
25	BC	51	ARG
25	BC	59	GLN
25	BC	77	VAL
25	BC	141	HIS
26	BD	9	VAL
26	BD	74	GLU
26	BD	91	THR
26	BD	102	ALA
26	BD	106	LYS
26	BD	107	VAL
26	BD	159	LYS

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Mol	Chain	Res	Type
26	BD	169	ARG
26	BD	170	VAL
26	BD	194	PRO
26	BD	196	ALA
27	BK	17	ARG
27	BK	18	ARG
27	BK	31	ARG
27	BK	35	VAL
27	BK	72	PRO
27	BK	73	ASP
27	BK	119	ALA
27	BK	120	PRO
28	BP	25	VAL
28	BP	50	ARG
28	BP	64	SER
28	BP	75	THR
28	BP	100	ARG
29	BE	62	GLN
29	BE	79	ARG
29	BE	165	HIS
30	BY	2	LYS
31	B0	23	ALA
31	B0	42	ILE
32	B4	16	ILE
33	B1	51	ALA
35	BV	25	LYS
36	B2	5	PHE
37	BL	31	GLY
37	BL	54	GLN
37	BL	89	VAL
37	BL	100	ILE
37	BL	111	ILE
37	BL	116	VAL
38	BM	56	ALA
38	BM	59	ARG
38	BM	78	LEU
39	BX	2	LYS
40	BH	3	VAL
40	BH	6	LEU
40	BH	10	ALA
40	BH	14	SER
40	BH	31	VAL

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Mol	Chain	Res	Type
40	BH	32	PRO
40	BH	33	GLN
40	BH	64	ALA
40	BH	125	THR
40	BH	140	ALA
41	BJ	4	PHE
41	BJ	5	THR
41	BJ	44	TYR
41	BJ	45	THR
41	BJ	81	ILE
41	BJ	111	LYS
41	BJ	124	VAL
42	BN	11	ASN
42	BN	58	ASP
42	BN	82	GLU
45	BS	3	THR
45	BS	14	ALA
45	BS	40	ASN
46	BU	6	ARG
46	BU	18	LYS
46	BU	50	ALA
47	BF	32	LYS
47	BF	80	GLN
47	BF	112	ASP
47	BF	138	PRO
47	BF	148	VAL
47	BF	149	ARG
48	BG	11	PRO
48	BG	83	THR
48	BG	91	VAL
48	BG	94	ARG
49	BR	7	SER
50	BT	16	VAL
50	BT	38	ALA
50	BT	39	THR
50	BT	69	ARG
50	BT	88	LYS
51	BZ	33	LEU
51	BZ	45	ARG
51	BZ	46	PHE
51	BZ	77	LYS
52	BW	14	ASP

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Mol	Chain	Res	Type
52	BW	30	VAL
52	BW	50	VAL
52	BW	61	LYS
53	B6	30	THR
2	CC	14	VAL
2	CC	54	ILE
2	CC	205	GLU
3	CD	24	VAL
3	CD	25	ARG
5	CF	92	THR
6	CG	71	THR
7	CH	65	PHE
8	CI	8	THR
9	CJ	57	VAL
10	CK	126	ARG
11	CL	13	ARG
11	CL	23	LEU
11	CL	121	PRO
12	CM	15	VAL
12	CM	111	PRO
13	CN	50	LEU
13	CN	61	ASN
15	CP	28	ARG
15	CP	44	SER
16	CQ	32	ILE
20	CB	15	PHE
20	CB	19	THR
20	CB	22	TRP
20	CB	73	ARG
20	CB	94	ARG
20	CB	131	LYS
20	CB	153	MET
20	CB	188	THR
21	CU	12	ASP
21	CU	35	GLU
24	DI	5	GLN
24	DI	18	ASN
25	DC	51	ARG
25	DC	59	GLN
25	DC	77	VAL
25	DC	141	HIS
26	DD	9	VAL

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Mol	Chain	Res	Type
26	DD	74	GLU
26	DD	91	THR
26	DD	102	ALA
26	DD	106	LYS
26	DD	107	VAL
26	DD	159	LYS
26	DD	169	ARG
26	DD	170	VAL
26	DD	182	ALA
26	DD	194	PRO
26	DD	196	ALA
27	DK	17	ARG
27	DK	18	ARG
27	DK	31	ARG
27	DK	35	VAL
27	DK	72	PRO
27	DK	73	ASP
27	DK	92	GLU
27	DK	119	ALA
27	DK	120	PRO
28	DP	25	VAL
28	DP	50	ARG
28	DP	64	SER
28	DP	75	THR
28	DP	100	ARG
29	DE	62	GLN
29	DE	79	ARG
29	DE	165	HIS
30	DY	2	LYS
31	D0	23	ALA
31	D0	42	ILE
32	D4	16	ILE
33	D1	51	ALA
35	DV	25	LYS
36	D2	5	PHE
37	DL	31	GLY
37	DL	54	GLN
37	DL	89	VAL
37	DL	100	ILE
37	DL	111	ILE
37	DL	116	VAL
38	DM	56	ALA

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Mol	Chain	Res	Type
38	DM	59	ARG
38	DM	78	LEU
39	DX	2	LYS
40	DH	3	VAL
40	DH	6	LEU
40	DH	10	ALA
40	DH	14	SER
40	DH	31	VAL
40	DH	32	PRO
40	DH	33	GLN
40	DH	86	ASP
40	DH	148	ALA
41	DJ	4	PHE
41	DJ	5	THR
41	DJ	44	TYR
41	DJ	45	THR
41	DJ	81	ILE
41	DJ	111	LYS
42	DN	11	ASN
42	DN	58	ASP
42	DN	82	GLU
45	DS	3	THR
45	DS	14	ALA
45	DS	40	ASN
46	DU	6	ARG
46	DU	18	LYS
46	DU	50	ALA
47	DF	32	LYS
47	DF	80	GLN
47	DF	112	ASP
47	DF	135	ILE
47	DF	138	PRO
47	DF	148	VAL
47	DF	149	ARG
48	DG	11	PRO
48	DG	83	THR
48	DG	91	VAL
48	DG	94	ARG
49	DR	7	SER
50	DT	16	VAL
50	DT	38	ALA
50	DT	39	THR

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Mol	Chain	Res	Type
50	DT	69	ARG
50	DT	88	LYS
51	DZ	33	LEU
51	DZ	45	ARG
51	DZ	46	PHE
51	DZ	77	LYS
52	DW	14	ASP
52	DW	30	VAL
52	DW	50	VAL
52	DW	61	LYS
52	DW	62	ALA
53	D6	30	THR
53	D6	41	LEU
53	D6	84	ARG
2	AC	47	ALA
2	AC	180	ASP
3	AD	31	CYS
3	AD	191	SER
4	AE	20	VAL
4	AE	108	GLY
5	AF	82	ASP
5	AF	85	ILE
5	AF	95	ALA
6	AG	112	ASP
7	AH	2	MET
7	AH	65	PHE
8	AI	57	VAL
8	AI	127	SER
9	AJ	32	THR
9	AJ	34	ALA
9	AJ	36	VAL
9	AJ	75	ASP
10	AK	88	PRO
11	AL	24	GLU
11	AL	70	GLY
11	AL	117	GLY
11	AL	122	LYS
13	AN	71	GLY
14	AO	22	THR
14	AO	74	ASP
17	AR	44	THR
18	AS	7	GLY

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Mol	Chain	Res	Type
18	AS	27	LYS
18	AS	53	GLY
20	AB	14	HIS
20	AB	18	GLN
20	AB	87	ASP
20	AB	153	MET
21	AU	34	ARG
24	BI	14	ALA
24	BI	64	ARG
25	BC	4	LYS
25	BC	29	PHE
25	BC	35	LYS
25	BC	36	ASN
25	BC	52	HIS
25	BC	94	LEU
25	BC	140	VAL
25	BC	151	GLY
25	BC	222	THR
25	BC	232	GLY
26	BD	93	GLY
26	BD	122	VAL
26	BD	145	SER
26	BD	149	ASN
26	BD	181	ASP
26	BD	182	ALA
26	BD	184	ARG
27	BK	92	GLU
28	BP	31	VAL
28	BP	37	LYS
28	BP	38	ARG
28	BP	101	GLU
28	BP	111	GLU
29	BE	42	GLY
29	BE	45	ALA
29	BE	167	VAL
30	BY	4	ILE
30	BY	34	THR
31	B0	51	ARG
31	B0	52	LYS
32	B4	4	ARG
32	B4	7	VAL
32	B4	8	LYS

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Mol	Chain	Res	Type
32	B4	23	ILE
32	B4	34	LYS
32	B4	37	GLN
33	B1	4	ILE
34	B3	31	ILE
34	B3	50	SER
37	BL	5	THR
37	BL	36	LYS
37	BL	51	GLU
37	BL	60	ARG
38	BM	13	HIS
38	BM	69	PRO
38	BM	83	GLY
38	BM	87	GLY
38	BM	116	ALA
39	BX	9	LYS
39	BX	45	GLN
39	BX	58	ASN
40	BH	5	LEU
40	BH	8	LYS
40	BH	11	ASN
40	BH	12	LEU
40	BH	29	PHE
40	BH	54	LEU
40	BH	105	ALA
40	BH	132	PHE
41	BJ	41	LYS
41	BJ	43	GLU
41	BJ	52	ASP
41	BJ	73	VAL
41	BJ	84	ILE
42	BN	10	LEU
42	BN	19	ALA
42	BN	60	VAL
42	BN	101	GLY
43	BO	13	ARG
43	BO	22	GLY
43	BO	100	HIS
44	BQ	86	SER
44	BQ	87	VAL
44	BQ	91	ARG
45	BS	25	ARG

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Mol	Chain	Res	Type
45	BS	65	ASP
45	BS	96	ILE
46	BU	5	ARG
46	BU	42	LYS
46	BU	49	PRO
46	BU	61	GLU
46	BU	62	ALA
46	BU	85	ARG
46	BU	92	VAL
47	BF	78	ILE
47	BF	87	LYS
47	BF	92	GLY
47	BF	103	ILE
47	BF	135	ILE
48	BG	8	VAL
48	BG	61	TRP
48	BG	84	LYS
48	BG	85	LYS
48	BG	102	ILE
48	BG	117	PRO
48	BG	125	PRO
48	BG	164	ALA
48	BG	170	THR
49	BR	24	LYS
49	BR	43	ASN
49	BR	70	GLU
49	BR	101	ILE
50	BT	19	LYS
50	BT	58	VAL
51	BZ	31	PRO
51	BZ	41	GLU
51	BZ	71	LEU
52	BW	9	THR
52	BW	34	SER
52	BW	36	ILE
52	BW	58	LEU
52	BW	62	ALA
52	BW	70	VAL
53	B6	41	LEU
53	B6	52	LEU
53	B6	85	ASP
2	CC	3	LYS

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Mol	Chain	Res	Type
2	CC	47	ALA
2	CC	104	GLU
2	CC	180	ASP
3	CD	31	CYS
3	CD	191	SER
4	CE	20	VAL
4	CE	108	GLY
5	CF	82	ASP
5	CF	85	ILE
5	CF	95	ALA
6	CG	81	GLY
6	CG	112	ASP
6	CG	127	ALA
7	CH	2	MET
8	CI	57	VAL
8	CI	127	SER
9	CJ	32	THR
9	CJ	34	ALA
9	CJ	36	VAL
9	CJ	61	ALA
9	CJ	75	ASP
10	CK	88	PRO
11	CL	24	GLU
11	CL	70	GLY
11	CL	117	GLY
11	CL	122	LYS
12	CM	49	GLU
13	CN	71	GLY
14	CO	22	THR
14	CO	74	ASP
15	CP	79	ASN
17	CR	44	THR
18	CS	27	LYS
18	CS	53	GLY
20	CB	14	HIS
20	CB	18	GLN
21	CU	34	ARG
25	DC	4	LYS
25	DC	17	LYS
25	DC	29	PHE
25	DC	36	ASN
25	DC	52	HIS

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Mol	Chain	Res	Type
25	DC	140	VAL
25	DC	142	ASN
25	DC	151	GLY
25	DC	195	GLY
25	DC	220	ARG
25	DC	222	THR
25	DC	232	GLY
26	DD	93	GLY
26	DD	122	VAL
26	DD	145	SER
26	DD	149	ASN
26	DD	181	ASP
26	DD	184	ARG
28	DP	31	VAL
28	DP	38	ARG
28	DP	101	GLU
28	DP	111	GLU
29	DE	42	GLY
29	DE	45	ALA
29	DE	167	VAL
30	DY	4	ILE
30	DY	34	THR
31	D0	51	ARG
31	D0	52	LYS
32	D4	4	ARG
32	D4	7	VAL
32	D4	8	LYS
32	D4	23	ILE
32	D4	34	LYS
32	D4	37	GLN
33	D1	4	ILE
34	D3	31	ILE
34	D3	50	SER
37	DL	5	THR
37	DL	51	GLU
37	DL	52	GLY
37	DL	60	ARG
38	DM	13	HIS
38	DM	69	PRO
38	DM	83	GLY
38	DM	87	GLY
38	DM	116	ALA

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Mol	Chain	Res	Type
39	DX	9	LYS
39	DX	45	GLN
39	DX	58	ASN
40	DH	5	LEU
40	DH	8	LYS
40	DH	11	ASN
40	DH	12	LEU
40	DH	29	PHE
40	DH	89	LYS
40	DH	121	VAL
41	DJ	41	LYS
41	DJ	43	GLU
41	DJ	52	ASP
41	DJ	73	VAL
41	DJ	84	ILE
41	DJ	124	VAL
42	DN	10	LEU
42	DN	19	ALA
42	DN	60	VAL
42	DN	100	CYS
42	DN	101	GLY
43	DO	13	ARG
43	DO	60	GLU
43	DO	100	HIS
44	DQ	76	SER
44	DQ	86	SER
44	DQ	87	VAL
44	DQ	91	ARG
45	DS	25	ARG
45	DS	65	ASP
45	DS	96	ILE
46	DU	5	ARG
46	DU	49	PRO
46	DU	61	GLU
46	DU	62	ALA
46	DU	85	ARG
46	DU	92	VAL
47	DF	78	ILE
47	DF	87	LYS
47	DF	92	GLY
47	DF	103	ILE
47	DF	142	TYR

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Mol	Chain	Res	Type
48	DG	8	VAL
48	DG	61	TRP
48	DG	84	LYS
48	DG	85	LYS
48	DG	102	ILE
48	DG	117	PRO
48	DG	125	PRO
48	DG	164	ALA
49	DR	43	ASN
49	DR	70	GLU
49	DR	101	ILE
50	DT	19	LYS
51	DZ	31	PRO
51	DZ	35	SER
51	DZ	41	GLU
51	DZ	71	LEU
52	DW	9	THR
52	DW	32	ALA
52	DW	34	SER
52	DW	36	ILE
52	DW	58	LEU
52	DW	70	VAL
53	D6	52	LEU
53	D6	89	GLY
2	AC	3	LYS
2	AC	59	PRO
2	AC	100	ILE
2	AC	104	GLU
2	AC	153	SER
2	AC	176	THR
3	AD	18	LEU
3	AD	22	SER
3	AD	42	ALA
3	AD	86	GLY
3	AD	192	ALA
5	AF	54	LEU
5	AF	62	MET
6	AG	70	PRO
6	AG	127	ALA
7	AH	82	LEU
8	AI	25	GLY
8	AI	42	THR

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Mol	Chain	Res	Type
9	AJ	38	GLY
9	AJ	61	ALA
9	AJ	62	ARG
9	AJ	74	VAL
10	AK	124	LYS
12	AM	49	GLU
13	AN	31	SER
14	AO	76	ALA
15	AP	33	ILE
15	AP	52	LEU
19	AT	76	ALA
20	AB	76	SER
20	AB	95	TRP
20	AB	114	LYS
21	AU	41	THR
24	BI	23	VAL
25	BC	3	VAL
25	BC	37	SER
25	BC	53	ILE
25	BC	88	ALA
25	BC	131	MET
25	BC	135	PRO
25	BC	142	ASN
25	BC	145	MET
25	BC	195	GLY
25	BC	220	ARG
25	BC	246	PRO
25	BC	250	GLN
26	BD	31	ALA
26	BD	118	PHE
26	BD	127	PHE
26	BD	136	ASN
26	BD	164	GLN
27	BK	6	THR
27	BK	16	ALA
27	BK	46	ALA
28	BP	30	TRP
28	BP	65	ASN
28	BP	73	PHE
29	BE	46	GLN
29	BE	52	VAL
29	BE	61	ARG

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Mol	Chain	Res	Type
29	BE	69	ARG
29	BE	106	LYS
29	BE	166	LYS
29	BE	188	MET
31	B0	48	TYR
31	B0	54	ILE
32	B4	9	LYS
32	B4	18	LYS
33	B1	36	LYS
34	B3	10	ALA
34	B3	29	ARG
35	BV	71	LYS
35	BV	75	GLN
36	B2	45	SER
37	BL	52	GLY
37	BL	94	THR
38	BM	43	ALA
38	BM	72	PRO
38	BM	134	THR
39	BX	36	GLN
39	BX	46	VAL
40	BH	73	ASN
40	BH	131	SER
42	BN	68	ALA
42	BN	88	ALA
42	BN	100	CYS
43	BO	51	ALA
43	BO	60	GLU
43	BO	68	LYS
43	BO	99	TYR
44	BQ	10	ARG
44	BQ	76	SER
45	BS	13	SER
45	BS	80	PRO
47	BF	9	ASP
47	BF	11	VAL
47	BF	28	PRO
47	BF	42	ALA
47	BF	133	GLU
47	BF	142	TYR
48	BG	2	ARG
48	BG	29	ASN

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Mol	Chain	Res	Type
48	BG	32	LEU
48	BG	45	ALA
48	BG	111	PRO
48	BG	112	VAL
48	BG	118	ALA
48	BG	151	ARG
48	BG	152	ARG
49	BR	65	ALA
50	BT	11	LEU
50	BT	28	ASN
50	BT	35	ALA
51	BZ	34	HIS
51	BZ	35	SER
51	BZ	70	GLU
52	BW	15	SER
52	BW	27	GLY
52	BW	29	SER
52	BW	32	ALA
52	BW	59	PHE
52	BW	60	ALA
52	BW	77	LYS
2	CC	59	PRO
2	CC	176	THR
3	CD	18	LEU
3	CD	22	SER
3	CD	42	ALA
3	CD	86	GLY
3	CD	192	ALA
5	CF	54	LEU
5	CF	62	MET
6	CG	70	PRO
6	CG	151	ALA
7	CH	82	LEU
8	CI	25	GLY
8	CI	42	THR
9	CJ	38	GLY
9	CJ	56	HIS
9	CJ	74	VAL
10	CK	124	LYS
11	CL	47	ALA
12	CM	3	ILE
12	CM	105	ALA

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Mol	Chain	Res	Type
13	CN	31	SER
13	CN	48	GLN
14	CO	76	ALA
14	CO	88	ARG
15	CP	33	ILE
15	CP	52	LEU
18	CS	4	LEU
18	CS	7	GLY
19	CT	76	ALA
20	CB	87	ASP
20	CB	95	TRP
20	CB	114	LYS
20	CB	205	ALA
21	CU	41	THR
24	DI	23	VAL
25	DC	3	VAL
25	DC	35	LYS
25	DC	53	ILE
25	DC	88	ALA
25	DC	94	LEU
25	DC	131	MET
25	DC	135	PRO
25	DC	145	MET
25	DC	246	PRO
25	DC	250	GLN
26	DD	31	ALA
26	DD	118	PHE
26	DD	127	PHE
26	DD	136	ASN
26	DD	164	GLN
27	DK	6	THR
27	DK	16	ALA
27	DK	46	ALA
28	DP	37	LYS
28	DP	65	ASN
28	DP	73	PHE
29	DE	46	GLN
29	DE	106	LYS
29	DE	166	LYS
29	DE	188	MET
31	D0	48	TYR
31	D0	54	ILE

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Mol	Chain	Res	Type
32	D4	9	LYS
32	D4	18	LYS
33	D1	36	LYS
34	D3	10	ALA
34	D3	22	LYS
34	D3	29	ARG
35	DV	71	LYS
35	DV	75	GLN
36	D2	45	SER
37	DL	36	LYS
37	DL	94	THR
38	DM	43	ALA
38	DM	72	PRO
38	DM	134	THR
39	DX	36	GLN
39	DX	46	VAL
40	DH	41	LYS
40	DH	113	SER
42	DN	68	ALA
42	DN	88	ALA
43	DO	22	GLY
43	DO	51	ALA
43	DO	68	LYS
43	DO	99	TYR
44	DQ	10	ARG
45	DS	13	SER
45	DS	80	PRO
46	DU	42	LYS
47	DF	9	ASP
47	DF	11	VAL
47	DF	28	PRO
47	DF	42	ALA
47	DF	133	GLU
48	DG	2	ARG
48	DG	32	LEU
48	DG	45	ALA
48	DG	111	PRO
48	DG	118	ALA
48	DG	151	ARG
48	DG	152	ARG
48	DG	170	THR
49	DR	24	LYS

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Mol	Chain	Res	Type
49	DR	65	ALA
50	DT	11	LEU
50	DT	28	ASN
50	DT	35	ALA
51	DZ	3	ARG
51	DZ	34	HIS
51	DZ	70	GLU
52	DW	15	SER
52	DW	27	GLY
52	DW	28	GLU
52	DW	59	PHE
52	DW	60	ALA
52	DW	77	LYS
53	D6	112	LYS
2	AC	107	LYS
2	AC	112	ALA
2	AC	167	TYR
3	AD	68	GLU
3	AD	108	ALA
4	AE	43	GLY
4	AE	100	GLU
4	AE	101	GLY
6	AG	81	GLY
7	AH	30	LYS
7	AH	112	ASP
9	AJ	56	HIS
9	AJ	93	ALA
10	AK	14	GLN
10	AK	89	GLY
11	AL	10	PRO
11	AL	14	LYS
11	AL	47	ALA
12	AM	3	ILE
12	AM	16	ILE
12	AM	81	ASP
12	AM	105	ALA
13	AN	30	ILE
13	AN	48	GLN
16	AQ	67	SER
18	AS	63	ASP
19	AT	3	ILE
19	AT	46	ALA

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Mol	Chain	Res	Type
20	AB	205	ALA
21	AU	9	GLU
21	AU	21	SER
21	AU	36	PHE
25	BC	34	GLU
25	BC	105	ALA
25	BC	186	ASP
25	BC	190	THR
25	BC	196	ASN
25	BC	200	MET
25	BC	202	ARG
25	BC	204	LEU
26	BD	109	VAL
26	BD	121	THR
27	BK	14	SER
27	BK	54	LYS
27	BK	110	GLU
29	BE	21	ARG
29	BE	70	SER
30	BY	9	THR
31	B0	26	SER
34	B3	22	LYS
35	BV	6	ALA
35	BV	45	ASP
37	BL	4	ASN
37	BL	19	LEU
37	BL	81	ASP
37	BL	99	ASN
37	BL	117	THR
38	BM	20	LEU
38	BM	21	ALA
38	BM	70	ASP
40	BH	7	ASP
40	BH	9	VAL
41	BJ	13	ARG
41	BJ	134	ALA
42	BN	70	THR
43	BO	98	GLN
44	BQ	15	LYS
44	BQ	88	GLU
45	BS	18	ARG
45	BS	61	ASN

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Mol	Chain	Res	Type
46	BU	24	VAL
46	BU	96	LYS
47	BF	41	GLU
47	BF	43	ILE
47	BF	81	GLY
48	BG	9	VAL
48	BG	16	VAL
48	BG	59	ASP
48	BG	97	VAL
49	BR	40	MET
50	BT	8	LEU
50	BT	29	THR
50	BT	66	LYS
51	BZ	3	ARG
52	BW	28	GLU
52	BW	40	ARG
2	CC	100	ILE
2	CC	107	LYS
2	CC	112	ALA
2	CC	153	SER
2	CC	167	TYR
3	CD	68	GLU
3	CD	108	ALA
4	CE	43	GLY
4	CE	100	GLU
5	CF	14	GLN
6	CG	3	ARG
6	CG	92	PRO
9	CJ	62	ARG
9	CJ	93	ALA
11	CL	10	PRO
11	CL	85	ARG
12	CM	22	TYR
12	CM	81	ASP
15	CP	46	LYS
16	CQ	67	SER
18	CS	2	ARG
18	CS	63	ASP
19	CT	41	GLY
19	CT	46	ALA
20	CB	76	SER
21	CU	9	GLU

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Mol	Chain	Res	Type
21	CU	21	SER
21	CU	36	PHE
24	DI	14	ALA
25	DC	5	CYS
25	DC	34	GLU
25	DC	37	SER
25	DC	105	ALA
25	DC	186	ASP
25	DC	190	THR
25	DC	196	ASN
25	DC	200	MET
25	DC	204	LEU
26	DD	109	VAL
26	DD	121	THR
27	DK	14	SER
27	DK	54	LYS
27	DK	110	GLU
28	DP	30	TRP
28	DP	86	LYS
29	DE	27	LEU
29	DE	52	VAL
29	DE	61	ARG
29	DE	68	ALA
29	DE	69	ARG
29	DE	70	SER
30	DY	9	THR
31	D0	26	SER
35	DV	6	ALA
35	DV	45	ASP
37	DL	4	ASN
37	DL	19	LEU
37	DL	81	ASP
37	DL	99	ASN
37	DL	117	THR
38	DM	20	LEU
38	DM	21	ALA
38	DM	70	ASP
39	DX	37	LEU
40	DH	7	ASP
40	DH	9	VAL
40	DH	96	THR
41	DJ	13	ARG

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Mol	Chain	Res	Type
43	DO	57	ALA
43	DO	98	GLN
44	DQ	15	LYS
44	DQ	88	GLU
45	DS	18	ARG
45	DS	30	SER
45	DS	61	ASN
46	DU	24	VAL
46	DU	51	LEU
46	DU	59	GLU
46	DU	96	LYS
47	DF	41	GLU
47	DF	81	GLY
48	DG	9	VAL
48	DG	16	VAL
48	DG	29	ASN
48	DG	54	ARG
48	DG	97	VAL
48	DG	109	SER
48	DG	112	VAL
49	DR	40	MET
50	DT	8	LEU
50	DT	29	THR
50	DT	58	VAL
52	DW	12	GLY
2	AC	133	MET
3	AD	27	ILE
4	AE	77	ASN
5	AF	94	HIS
6	AG	92	PRO
7	AH	66	GLN
8	AI	55	ASP
9	AJ	41	PRO
10	AK	125	LYS
11	AL	33	CYS
11	AL	56	LEU
11	AL	85	ARG
12	AM	66	GLY
12	AM	104	ASN
13	AN	51	PRO
14	AO	88	ARG
15	AP	46	LYS

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Mol	Chain	Res	Type
16	AQ	80	LYS
17	AR	40	PRO
17	AR	43	ILE
18	AS	4	LEU
20	AB	189	ASN
20	AB	200	PRO
21	AU	22	CYS
21	AU	37	TYR
24	BI	49	GLU
25	BC	5	CYS
25	BC	84	PRO
25	BC	189	ALA
25	BC	238	ASN
25	BC	254	LYS
26	BD	54	ALA
26	BD	131	ASP
26	BD	162	ALA
27	BK	93	GLN
27	BK	108	ARG
28	BP	4	ILE
28	BP	86	LYS
29	BE	27	LEU
29	BE	68	ALA
29	BE	73	ILE
29	BE	83	VAL
29	BE	96	VAL
33	B1	50	GLU
36	B2	22	MET
37	BL	58	TYR
37	BL	66	PHE
38	BM	27	SER
38	BM	82	MET
39	BX	37	LEU
40	BH	83	LYS
41	BJ	14	ASP
42	BN	89	SER
45	BS	30	SER
46	BU	12	VAL
46	BU	16	LYS
46	BU	41	VAL
46	BU	45	GLN
46	BU	51	LEU

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Mol	Chain	Res	Type
46	BU	59	GLU
47	BF	93	GLU
47	BF	110	ILE
47	BF	156	THR
48	BG	54	ARG
48	BG	109	SER
49	BR	52	PRO
49	BR	98	ILE
50	BT	77	ARG
50	BT	86	THR
50	BT	91	GLN
51	BZ	18	ARG
52	BW	12	GLY
52	BW	23	LYS
52	BW	37	VAL
52	BW	78	PHE
53	B6	81	LYS
2	CC	133	MET
3	CD	27	ILE
4	CE	77	ASN
4	CE	101	GLY
5	CF	94	HIS
7	CH	30	LYS
7	CH	66	GLN
7	CH	112	ASP
8	CI	55	ASP
10	CK	14	GLN
10	CK	125	LYS
11	CL	14	LYS
11	CL	56	LEU
12	CM	16	ILE
12	CM	66	GLY
12	CM	104	ASN
13	CN	30	ILE
13	CN	51	PRO
17	CR	40	PRO
17	CR	43	ILE
19	CT	3	ILE
19	CT	4	LYS
25	DC	84	PRO
25	DC	189	ALA
25	DC	202	ARG

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Mol	Chain	Res	Type
25	DC	238	ASN
25	DC	254	LYS
26	DD	54	ALA
26	DD	112	THR
26	DD	131	ASP
27	DK	93	GLN
28	DP	4	ILE
29	DE	73	ILE
29	DE	83	VAL
29	DE	96	VAL
29	DE	131	THR
33	D1	50	GLU
36	D2	22	MET
37	DL	58	TYR
37	DL	66	PHE
38	DM	26	VAL
38	DM	82	MET
40	DH	109	GLU
40	DH	119	ASN
41	DJ	14	ASP
41	DJ	134	ALA
42	DN	70	THR
42	DN	89	SER
43	DO	27	VAL
43	DO	115	LEU
44	DQ	78	PHE
46	DU	12	VAL
46	DU	16	LYS
46	DU	41	VAL
47	DF	43	ILE
47	DF	93	GLU
47	DF	110	ILE
47	DF	156	THR
48	DG	59	ASP
49	DR	52	PRO
49	DR	98	ILE
50	DT	66	LYS
50	DT	86	THR
50	DT	91	GLN
51	DZ	18	ARG
52	DW	23	LYS
52	DW	29	SER

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Mol	Chain	Res	Type
52	DW	40	ARG
52	DW	78	PHE
53	D6	61	PRO
3	AD	35	GLN
5	AF	14	GLN
8	AI	101	GLY
8	AI	106	ASP
11	AL	15	VAL
19	AT	4	LYS
19	AT	41	GLY
26	BD	119	ALA
29	BE	129	PRO
29	BE	131	THR
34	B3	58	ILE
35	BV	84	PRO
37	BL	143	GLU
38	BM	24	THR
38	BM	26	VAL
38	BM	73	ILE
40	BH	44	ILE
42	BN	59	SER
43	BO	27	VAL
43	BO	57	ALA
47	BF	136	ILE
48	BG	38	ASP
48	BG	168	VAL
50	BT	55	VAL
52	BW	55	ASP
52	BW	76	ARG
3	CD	29	THR
8	CI	71	ILE
8	CI	101	GLY
8	CI	106	ASP
9	CJ	41	PRO
10	CK	89	GLY
11	CL	33	CYS
13	CN	20	PHE
16	CQ	80	LYS
20	CB	200	PRO
21	CU	37	TYR
24	DI	6	ALA
25	DC	63	ILE

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Mol	Chain	Res	Type
25	DC	78	GLU
26	DD	143	PRO
26	DD	162	ALA
34	D3	58	ILE
35	DV	84	PRO
38	DM	27	SER
38	DM	73	ILE
38	DM	106	ASP
41	DJ	60	ASP
42	DN	59	SER
44	DQ	18	LYS
44	DQ	89	ILE
46	DU	45	GLN
47	DF	136	ILE
48	DG	168	VAL
50	DT	55	VAL
52	DW	68	PHE
6	AG	5	VAL
26	BD	143	PRO
28	BP	104	GLY
41	BJ	64	VAL
41	BJ	112	GLY
44	BQ	89	ILE
47	BF	82	TYR
48	BG	89	VAL
48	BG	155	PRO
11	CL	15	VAL
16	CQ	28	VAL
29	DE	129	PRO
39	DX	62	GLY
41	DJ	112	GLY
41	DJ	139	VAL
47	DF	82	TYR
48	DG	89	VAL
48	DG	155	PRO
52	DW	37	VAL
16	AQ	31	PRO
25	BC	63	ILE
25	BC	64	VAL
25	BC	106	PRO
25	BC	150	GLY
26	BD	24	VAL

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Mol	Chain	Res	Type
28	BP	63	ILE
28	BP	83	ILE
30	BY	13	ILE
32	B4	17	VAL
39	BX	62	GLY
41	BJ	139	VAL
43	BO	8	ILE
47	BF	88	VAL
50	BT	10	VAL
6	CG	91	ARG
16	CQ	31	PRO
25	DC	150	GLY
26	DD	24	VAL
27	DK	101	GLY
28	DP	63	ILE
32	D4	17	VAL
41	DJ	64	VAL
43	DO	8	ILE
46	DU	82	VAL
47	DF	88	VAL
47	DF	105	ILE
50	DT	10	VAL
5	AF	51	ILE
8	AI	71	ILE
9	AJ	100	ILE
25	BC	123	ILE
28	BP	46	VAL
38	BM	19	GLY
38	BM	23	GLY
46	BU	82	VAL
47	BF	105	ILE
5	CF	51	ILE
11	CL	3	VAL
25	DC	18	VAL
25	DC	64	VAL
25	DC	106	PRO
25	DC	123	ILE
28	DP	46	VAL
29	DE	59	PRO
29	DE	187	VAL
47	DF	145	VAL
48	DG	18	ILE

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Mol	Chain	Res	Type
50	DT	65	GLY
6	AG	91	ARG
11	AL	3	VAL
14	AO	36	ILE
16	AQ	28	VAL
21	AU	10	PRO
25	BC	15	VAL
25	BC	18	VAL
29	BE	59	PRO
29	BE	187	VAL
36	B2	44	VAL
37	BL	28	GLY
40	BH	88	GLY
47	BF	145	VAL
48	BG	18	ILE
9	CJ	100	ILE
20	CB	194	GLY
21	CU	10	PRO
25	DC	31	PRO
26	DD	92	VAL
36	D2	44	VAL
37	DL	28	GLY
38	DM	23	GLY
47	DF	123	GLY
52	DW	33	GLY
25	BC	31	PRO
44	BQ	30	VAL
47	BF	123	GLY
50	BT	57	VAL
50	BT	65	GLY
52	BW	33	GLY
25	DC	203	VAL
30	DY	13	ILE
44	DQ	30	VAL

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%)	144 (85%)	26 (15%)	2	16
2	CC	170/189 (90%)	143 (84%)	27 (16%)	2	16
3	AD	172/172 (100%)	146 (85%)	26 (15%)	3	17
3	CD	172/172 (100%)	147 (86%)	25 (14%)	3	18
4	AE	113/125 (90%)	95 (84%)	18 (16%)	2	16
4	CE	113/125 (90%)	96 (85%)	17 (15%)	3	17
5	AF	87/116 (75%)	76 (87%)	11 (13%)	4	22
5	CF	87/116 (75%)	76 (87%)	11 (13%)	4	22
6	AG	123/146 (84%)	105 (85%)	18 (15%)	3	18
6	CG	125/146 (86%)	106 (85%)	19 (15%)	3	16
7	AH	104/104 (100%)	96 (92%)	8 (8%)	13	40
7	CH	104/104 (100%)	97 (93%)	7 (7%)	16	44
8	AI	105/106 (99%)	91 (87%)	14 (13%)	4	21
8	CI	105/106 (99%)	89 (85%)	16 (15%)	3	16
9	AJ	86/90 (96%)	76 (88%)	10 (12%)	5	24
9	CJ	86/90 (96%)	76 (88%)	10 (12%)	5	24
10	AK	90/98 (92%)	77 (86%)	13 (14%)	3	18
10	CK	90/98 (92%)	75 (83%)	15 (17%)	2	14
11	AL	103/103 (100%)	86 (84%)	17 (16%)	2	14
11	CL	103/103 (100%)	85 (82%)	18 (18%)	2	12
12	AM	92/95 (97%)	77 (84%)	15 (16%)	2	15
12	CM	91/95 (96%)	76 (84%)	15 (16%)	2	14
13	AN	79/83 (95%)	62 (78%)	17 (22%)	1	6
13	CN	79/83 (95%)	62 (78%)	17 (22%)	1	6
14	AO	76/77 (99%)	69 (91%)	7 (9%)	9	32
14	CO	76/77 (99%)	69 (91%)	7 (9%)	9	32
15	AP	65/65 (100%)	59 (91%)	6 (9%)	9	32
15	CP	65/65 (100%)	59 (91%)	6 (9%)	9	32
16	AQ	74/77 (96%)	61 (82%)	13 (18%)	2	12
16	CQ	75/77 (97%)	63 (84%)	12 (16%)	2	15
17	AR	48/64 (75%)	40 (83%)	8 (17%)	2	14
17	CR	48/64 (75%)	39 (81%)	9 (19%)	1	10

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
18	AS	70/78 (90%)	56 (80%)	14 (20%)	1	8
18	CS	71/78 (91%)	57 (80%)	14 (20%)	1	8
19	AT	65/65 (100%)	55 (85%)	10 (15%)	2	16
19	CT	65/65 (100%)	55 (85%)	10 (15%)	2	16
20	AB	180/198 (91%)	148 (82%)	32 (18%)	2	12
20	CB	180/198 (91%)	150 (83%)	30 (17%)	2	14
21	AU	44/60 (73%)	32 (73%)	12 (27%)	0	3
21	CU	44/60 (73%)	32 (73%)	12 (27%)	0	3
24	BI	109/109 (100%)	107 (98%)	2 (2%)	59	77
24	DI	109/109 (100%)	103 (94%)	6 (6%)	21	50
25	BC	216/217 (100%)	179 (83%)	37 (17%)	2	13
25	DC	216/217 (100%)	176 (82%)	40 (18%)	1	10
26	BD	164/164 (100%)	135 (82%)	29 (18%)	2	12
26	DD	164/164 (100%)	134 (82%)	30 (18%)	1	11
27	BK	102/104 (98%)	80 (78%)	22 (22%)	1	6
27	DK	102/104 (98%)	81 (79%)	21 (21%)	1	7
28	BP	99/99 (100%)	80 (81%)	19 (19%)	1	9
28	DP	99/99 (100%)	80 (81%)	19 (19%)	1	9
29	BE	165/165 (100%)	143 (87%)	22 (13%)	4	21
29	DE	165/165 (100%)	142 (86%)	23 (14%)	3	20
30	BY	48/48 (100%)	38 (79%)	10 (21%)	1	6
30	DY	48/48 (100%)	38 (79%)	10 (21%)	1	6
31	B0	47/47 (100%)	38 (81%)	9 (19%)	1	9
31	D0	47/47 (100%)	38 (81%)	9 (19%)	1	9
32	B4	34/34 (100%)	28 (82%)	6 (18%)	2	12
32	D4	34/34 (100%)	29 (85%)	5 (15%)	3	18
33	B1	45/48 (94%)	40 (89%)	5 (11%)	6	26
33	D1	45/48 (94%)	41 (91%)	4 (9%)	9	34
34	B3	51/51 (100%)	45 (88%)	6 (12%)	5	24
34	D3	51/51 (100%)	46 (90%)	5 (10%)	8	29
35	BV	78/78 (100%)	64 (82%)	14 (18%)	2	11

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
35	DV	78/78 (100%)	64 (82%)	14 (18%)	2	11
36	B2	38/38 (100%)	28 (74%)	10 (26%)	0	3
36	D2	38/38 (100%)	28 (74%)	10 (26%)	0	3
37	BL	102/103 (99%)	91 (89%)	11 (11%)	6	27
37	DL	102/103 (99%)	91 (89%)	11 (11%)	6	27
38	BM	109/109 (100%)	87 (80%)	22 (20%)	1	7
38	DM	109/109 (100%)	87 (80%)	22 (20%)	1	7
39	BX	55/55 (100%)	46 (84%)	9 (16%)	2	14
39	DX	55/55 (100%)	46 (84%)	9 (16%)	2	14
40	BH	114/114 (100%)	79 (69%)	35 (31%)	0	2
40	DH	114/114 (100%)	89 (78%)	25 (22%)	1	6
41	BJ	116/116 (100%)	100 (86%)	16 (14%)	3	20
41	DJ	116/116 (100%)	100 (86%)	16 (14%)	3	20
42	BN	100/103 (97%)	84 (84%)	16 (16%)	2	15
42	DN	100/103 (97%)	84 (84%)	16 (16%)	2	15
43	BO	86/87 (99%)	71 (83%)	15 (17%)	2	12
43	DO	86/87 (99%)	72 (84%)	14 (16%)	2	15
44	BQ	89/89 (100%)	79 (89%)	10 (11%)	6	25
44	DQ	89/89 (100%)	79 (89%)	10 (11%)	6	25
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%)	65 (78%)	18 (22%)	1	6
46	DU	83/84 (99%)	65 (78%)	18 (22%)	1	6
47	BF	149/149 (100%)	117 (78%)	32 (22%)	1	6
47	DF	149/149 (100%)	117 (78%)	32 (22%)	1	6
48	BG	137/137 (100%)	110 (80%)	27 (20%)	1	8
48	DG	137/137 (100%)	112 (82%)	25 (18%)	1	11
49	BR	84/84 (100%)	71 (84%)	13 (16%)	2	16
49	DR	84/84 (100%)	70 (83%)	14 (17%)	2	14
50	BT	80/84 (95%)	64 (80%)	16 (20%)	1	8
50	DT	80/84 (95%)	64 (80%)	16 (20%)	1	8

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
51	BZ	67/68 (98%)	53 (79%)	14 (21%)	1 6
51	DZ	67/68 (98%)	56 (84%)	11 (16%)	2 14
52	BW	59/62 (95%)	42 (71%)	17 (29%)	0 2
52	DW	59/62 (95%)	42 (71%)	17 (29%)	0 2
53	B6	157/157 (100%)	137 (87%)	20 (13%)	4 22
53	D6	157/157 (100%)	134 (85%)	23 (15%)	3 18
All	All	9647/10014 (96%)	8066 (84%)	1581 (16%)	2 14

All (1581) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AC	2	GLN
2	AC	13	ILE
2	AC	17	TRP
2	AC	20	THR
2	AC	27	GLU
2	AC	28	PHE
2	AC	35	ASP
2	AC	41	TYR
2	AC	48	LYS
2	AC	61	LYS
2	AC	62	SER
2	AC	63	ILE
2	AC	64	ARG
2	AC	88	LYS
2	AC	101	ASN
2	AC	106	ARG
2	AC	126	ARG
2	AC	128	MET
2	AC	131	ARG
2	AC	155	ARG
2	AC	167	TYR
2	AC	168	ARG
2	AC	171	ARG
2	AC	184	ASN
2	AC	192	TYR
2	AC	206	ILE
3	AD	7	LYS
3	AD	18	LEU
3	AD	25	ARG

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Mol	Chain	Res	Type
3	AD	28	ASP
3	AD	35	GLN
3	AD	39	GLN
3	AD	49	ASP
3	AD	55	ARG
3	AD	70	GLN
3	AD	84	ASN
3	AD	87	GLU
3	AD	97	LEU
3	AD	118	SER
3	AD	146	GLU
3	AD	147	LYS
3	AD	151	GLN
3	AD	153	ARG
3	AD	155	LYS
3	AD	160	LEU
3	AD	170	LEU
3	AD	176	LYS
3	AD	183	ARG
3	AD	186	GLU
3	AD	189	ASP
3	AD	190	LEU
3	AD	196	GLU
4	AE	9	GLU
4	AE	23	THR
4	AE	31	SER
4	AE	44	ARG
4	AE	45	VAL
4	AE	51	LYS
4	AE	61	LYS
4	AE	64	GLU
4	AE	70	MET
4	AE	72	ASN
4	AE	92	ARG
4	AE	119	VAL
4	AE	123	LEU
4	AE	127	TYR
4	AE	145	ASN
4	AE	147	ASN
4	AE	151	MET
4	AE	156	ARG
5	AF	6	ILE

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Mol	Chain	Res	Type
5	AF	13	ASP
5	AF	16	GLU
5	AF	39	LEU
5	AF	53	LYS
5	AF	55	HIS
5	AF	61	LEU
5	AF	65	GLU
5	AF	69	GLU
5	AF	86	ARG
5	AF	98	GLU
6	AG	6	ILE
6	AG	10	LYS
6	AG	11	ILE
6	AG	21	LEU
6	AG	49	LEU
6	AG	55	LYS
6	AG	56	SER
6	AG	58	LEU
6	AG	62	GLU
6	AG	78	ARG
6	AG	94	ARG
6	AG	109	LYS
6	AG	110	ARG
6	AG	112	ASP
6	AG	117	LEU
6	AG	132	THR
6	AG	137	ARG
6	AG	142	ARG
7	AH	49	LYS
7	AH	53	ASP
7	AH	55	LYS
7	AH	57	GLU
7	AH	72	GLU
7	AH	76	ARG
7	AH	111	THR
7	AH	113	ARG
8	AI	4	GLN
8	AI	24	ASN
8	AI	36	GLN
8	AI	45	MET
8	AI	58	GLU
8	AI	62	LEU

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Mol	Chain	Res	Type
8	AI	67	LYS
8	AI	74	GLN
8	AI	84	ARG
8	AI	87	MET
8	AI	94	ARG
8	AI	109	GLN
8	AI	122	ARG
8	AI	123	ARG
9	AJ	17	LEU
9	AJ	31	ARG
9	AJ	37	ARG
9	AJ	47	GLU
9	AJ	52	LEU
9	AJ	87	LEU
9	AJ	88	MET
9	AJ	89	ARG
9	AJ	92	LEU
9	AJ	97	ASP
10	AK	28	ASN
10	AK	29	THR
10	AK	34	THR
10	AK	51	PHE
10	AK	55	ARG
10	AK	75	GLU
10	AK	76	TYR
10	AK	80	ASN
10	AK	82	GLU
10	AK	84	MET
10	AK	100	ASN
10	AK	105	ARG
10	AK	118	ASN
11	AL	9	LYS
11	AL	13	ARG
11	AL	14	LYS
11	AL	15	VAL
11	AL	17	LYS
11	AL	19	ASN
11	AL	28	GLN
11	AL	33	CYS
11	AL	35	ARG
11	AL	38	THR
11	AL	43	LYS

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Mol	Chain	Res	Type
11	AL	49	ARG
11	AL	77	SER
11	AL	85	ARG
11	AL	95	HIS
11	AL	107	LYS
11	AL	122	LYS
12	AM	2	ARG
12	AM	28	ARG
12	AM	40	GLU
12	AM	44	ILE
12	AM	46	GLU
12	AM	57	ASP
12	AM	65	GLU
12	AM	70	ARG
12	AM	71	GLU
12	AM	79	LEU
12	AM	82	LEU
12	AM	91	ARG
12	AM	102	LYS
12	AM	103	THR
12	AM	106	ARG
13	AN	3	GLN
13	AN	4	SER
13	AN	5	MET
13	AN	17	ASP
13	AN	25	GLU
13	AN	26	LEU
13	AN	27	LYS
13	AN	40	ARG
13	AN	41	TRP
13	AN	50	LEU
13	AN	52	ARG
13	AN	53	ASP
13	AN	55	SER
13	AN	65	GLN
13	AN	68	ARG
13	AN	96	LYS
13	AN	97	LYS
14	AO	11	ILE
14	AO	42	HIS
14	AO	54	ARG
14	AO	66	LEU

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Mol	Chain	Res	Type
14	AO	70	LEU
14	AO	71	LYS
14	AO	88	ARG
15	AP	5	ARG
15	AP	26	ASN
15	AP	28	ARG
15	AP	45	GLU
15	AP	51	ARG
15	AP	68	SER
16	AQ	3	LYS
16	AQ	5	ARG
16	AQ	10	ARG
16	AQ	37	ILE
16	AQ	39	ARG
16	AQ	48	GLU
16	AQ	59	GLU
16	AQ	60	ILE
16	AQ	61	ARG
16	AQ	66	LEU
16	AQ	74	LEU
16	AQ	79	GLU
16	AQ	80	LYS
17	AR	21	ASP
17	AR	23	LYS
17	AR	33	THR
17	AR	35	SER
17	AR	38	ILE
17	AR	44	THR
17	AR	46	THR
17	AR	60	ARG
18	AS	2	ARG
18	AS	4	LEU
18	AS	5	LYS
18	AS	13	HIS
18	AS	14	LEU
18	AS	20	LYS
18	AS	26	ASP
18	AS	27	LYS
18	AS	28	LYS
18	AS	42	ASN
18	AS	47	THR
18	AS	55	GLN

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Mol	Chain	Res	Type
18	AS	64	GLU
18	AS	80	ARG
19	AT	3	ILE
19	AT	4	LYS
19	AT	5	SER
19	AT	25	SER
19	AT	35	TYR
19	AT	43	LYS
19	AT	53	MET
19	AT	69	ASN
19	AT	74	HIS
19	AT	77	ASN
20	AB	8	MET
20	AB	19	THR
20	AB	23	ASN
20	AB	27	LYS
20	AB	35	ASN
20	AB	38	HIS
20	AB	46	VAL
20	AB	48	MET
20	AB	51	GLU
20	AB	62	ARG
20	AB	67	LEU
20	AB	72	LYS
20	AB	87	ASP
20	AB	88	GLN
20	AB	94	ARG
20	AB	99	MET
20	AB	104	LYS
20	AB	107	ARG
20	AB	113	LEU
20	AB	121	GLN
20	AB	125	PHE
20	AB	127	LYS
20	AB	128	LEU
20	AB	144	GLU
20	AB	156	LEU
20	AB	176	ASN
20	AB	187	ASP
20	AB	196	ASP
20	AB	202	ASN
20	AB	211	LEU

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Mol	Chain	Res	Type
20	AB	212	TYR
20	AB	221	ARG
21	AU	11	PHE
21	AU	15	LEU
21	AU	16	ARG
21	AU	20	ARG
21	AU	24	LYS
21	AU	27	VAL
21	AU	33	ARG
21	AU	34	ARG
21	AU	36	PHE
21	AU	38	GLU
21	AU	44	ARG
21	AU	48	LYS
24	BI	63	ASP
24	BI	96	LYS
25	BC	4	LYS
25	BC	5	CYS
25	BC	12	ARG
25	BC	23	LEU
25	BC	43	ASN
25	BC	45	ASN
25	BC	52	HIS
25	BC	53	ILE
25	BC	62	ARG
25	BC	65	ASP
25	BC	86	ARG
25	BC	89	ASN
25	BC	90	ILE
25	BC	100	ARG
25	BC	123	ILE
25	BC	129	LEU
25	BC	134	ILE
25	BC	142	ASN
25	BC	155	ARG
25	BC	166	ARG
25	BC	172	THR
25	BC	173	LEU
25	BC	176	ARG
25	BC	180	MET
25	BC	190	THR
25	BC	191	LEU

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Mol	Chain	Res	Type
25	BC	202	ARG
25	BC	212	TRP
25	BC	213	ARG
25	BC	224	MET
25	BC	239	PHE
25	BC	249	VAL
25	BC	251	THR
25	BC	257	ARG
25	BC	267	VAL
25	BC	268	ARG
25	BC	269	ARG
26	BD	17	GLU
26	BD	35	THR
26	BD	36	GLN
26	BD	40	LEU
26	BD	46	ARG
26	BD	56	LYS
26	BD	59	ARG
26	BD	79	LEU
26	BD	81	GLU
26	BD	84	LEU
26	BD	89	GLU
26	BD	91	THR
26	BD	99	GLU
26	BD	124	ARG
26	BD	131	ASP
26	BD	137	SER
26	BD	138	LEU
26	BD	142	VAL
26	BD	148	GLN
26	BD	151	THR
26	BD	154	LYS
26	BD	159	LYS
26	BD	165	MET
26	BD	167	ASN
26	BD	179	ARG
26	BD	186	LEU
26	BD	201	LEU
26	BD	204	LYS
26	BD	207	VAL
27	BK	8	LEU
27	BK	21	CYS

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Mol	Chain	Res	Type
27	BK	32	TYR
27	BK	39	ILE
27	BK	41	ILE
27	BK	47	ILE
27	BK	52	VAL
27	BK	53	LYS
27	BK	54	LYS
27	BK	58	LEU
27	BK	64	ARG
27	BK	72	PRO
27	BK	79	PHE
27	BK	86	LEU
27	BK	87	LEU
27	BK	98	ARG
27	BK	104	THR
27	BK	105	ARG
27	BK	107	LEU
27	BK	108	ARG
27	BK	111	LYS
27	BK	120	PRO
28	BP	3	ILE
28	BP	6	GLN
28	BP	19	PHE
28	BP	20	ARG
28	BP	24	THR
28	BP	25	VAL
28	BP	28	LYS
28	BP	33	GLU
28	BP	37	LYS
28	BP	38	ARG
28	BP	43	GLU
28	BP	61	ARG
28	BP	83	ILE
28	BP	99	LEU
28	BP	100	ARG
28	BP	101	GLU
28	BP	111	GLU
28	BP	112	ARG
28	BP	114	ASN
29	BE	2	GLU
29	BE	12	LEU
29	BE	22	ASP

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Mol	Chain	Res	Type
29	BE	24	ASN
29	BE	40	ARG
29	BE	51	GLU
29	BE	58	LYS
29	BE	60	TRP
29	BE	62	GLN
29	BE	67	ARG
29	BE	75	SER
29	BE	78	TRP
29	BE	108	ILE
29	BE	116	ASP
29	BE	118	LEU
29	BE	122	GLU
29	BE	124	PHE
29	BE	133	LEU
29	BE	147	LEU
29	BE	153	LEU
29	BE	163	ASN
29	BE	170	ARG
30	BY	2	LYS
30	BY	3	THR
30	BY	6	ILE
30	BY	15	ARG
30	BY	16	LEU
30	BY	19	HIS
30	BY	23	LEU
30	BY	30	ARG
30	BY	37	ARG
30	BY	57	GLU
31	B0	3	GLN
31	B0	26	SER
31	B0	27	LEU
31	B0	37	HIS
31	B0	41	HIS
31	B0	45	ASP
31	B0	51	ARG
31	B0	53	VAL
31	B0	56	LYS
32	B4	3	VAL
32	B4	6	SER
32	B4	9	LYS
32	B4	28	SER

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Mol	Chain	Res	Type
32	B4	35	GLN
32	B4	37	GLN
33	B1	6	GLU
33	B1	8	ILE
33	B1	9	LYS
33	B1	35	LEU
33	B1	44	GLN
34	B3	7	ARG
34	B3	14	LYS
34	B3	18	LYS
34	B3	27	ASN
34	B3	42	HIS
34	B3	61	LEU
35	BV	7	GLU
35	BV	12	GLN
35	BV	18	ARG
35	BV	40	ILE
35	BV	42	LEU
35	BV	46	LYS
35	BV	51	GLN
35	BV	53	LYS
35	BV	55	GLU
35	BV	66	ASP
35	BV	70	ILE
35	BV	75	GLN
35	BV	89	ILE
35	BV	90	ASP
36	B2	4	THR
36	B2	10	LEU
36	B2	19	ARG
36	B2	22	MET
36	B2	24	THR
36	B2	33	ARG
36	B2	39	ARG
36	B2	41	ARG
36	B2	42	LEU
36	B2	43	THR
37	BL	12	SER
37	BL	40	SER
37	BL	47	ARG
37	BL	60	ARG
37	BL	69	ARG

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Mol	Chain	Res	Type
37	BL	91	ASP
37	BL	92	LEU
37	BL	95	LEU
37	BL	112	LEU
37	BL	118	THR
37	BL	123	ARG
38	BM	1	MET
38	BM	10	ARG
38	BM	20	LEU
38	BM	25	ASP
38	BM	38	ARG
38	BM	47	GLU
38	BM	58	LYS
38	BM	59	ARG
38	BM	63	ILE
38	BM	65	ILE
38	BM	70	ASP
38	BM	90	GLU
38	BM	91	TYR
38	BM	95	LEU
38	BM	100	LYS
38	BM	104	GLU
38	BM	105	MET
38	BM	108	VAL
38	BM	110	GLU
38	BM	115	GLU
38	BM	127	LYS
38	BM	131	VAL
39	BX	14	LEU
39	BX	18	LEU
39	BX	25	GLN
39	BX	28	LEU
39	BX	29	ARG
39	BX	41	HIS
39	BX	48	ARG
39	BX	57	LEU
39	BX	59	GLU
40	BH	3	VAL
40	BH	12	LEU
40	BH	15	LEU
40	BH	17	ASP
40	BH	28	ASN

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Mol	Chain	Res	Type
40	BH	31	VAL
40	BH	32	PRO
40	BH	33	GLN
40	BH	43	ASN
40	BH	44	ILE
40	BH	47	PHE
40	BH	48	GLU
40	BH	50	ARG
40	BH	53	GLU
40	BH	54	LEU
40	BH	58	LEU
40	BH	60	GLU
40	BH	62	LEU
40	BH	66	ASN
40	BH	68	ARG
40	BH	71	LYS
40	BH	73	ASN
40	BH	76	GLU
40	BH	87	GLU
40	BH	89	LYS
40	BH	98	ASP
40	BH	101	ASP
40	BH	109	GLU
40	BH	112	LYS
40	BH	114	GLU
40	BH	116	ARG
40	BH	127	GLU
40	BH	130	VAL
40	BH	138	VAL
40	BH	141	LYS
41	BJ	2	LYS
41	BJ	5	THR
41	BJ	12	LYS
41	BJ	28	LEU
41	BJ	35	ARG
41	BJ	44	TYR
41	BJ	65	THR
41	BJ	71	ASP
41	BJ	76	HIS
41	BJ	95	ARG
41	BJ	111	LYS
41	BJ	120	ARG

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Mol	Chain	Res	Type
41	BJ	124	VAL
41	BJ	129	GLU
41	BJ	136	GLN
41	BJ	138	GLN
42	BN	1	MET
42	BN	2	ARG
42	BN	9	GLN
42	BN	11	ASN
42	BN	18	GLN
42	BN	20	MET
42	BN	35	LYS
42	BN	46	ARG
42	BN	59	SER
42	BN	69	ARG
42	BN	71	ARG
42	BN	82	GLU
42	BN	83	LEU
42	BN	114	GLU
42	BN	118	ARG
42	BN	120	GLU
43	BO	3	LYS
43	BO	9	ARG
43	BO	17	LYS
43	BO	20	GLU
43	BO	31	THR
43	BO	36	TYR
43	BO	43	ASN
43	BO	69	ASP
43	BO	78	VAL
43	BO	80	GLU
43	BO	89	ASP
43	BO	98	GLN
43	BO	100	HIS
43	BO	104	GLN
43	BO	106	LEU
44	BQ	5	ARG
44	BQ	10	ARG
44	BQ	13	HIS
44	BQ	29	ARG
44	BQ	63	ARG
44	BQ	79	ILE
44	BQ	83	LYS

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Mol	Chain	Res	Type
44	BQ	84	LYS
44	BQ	90	ASP
44	BQ	96	ASP
45	BS	1	MET
45	BS	6	LYS
45	BS	18	ARG
45	BS	22	ASP
45	BS	33	LEU
45	BS	39	THR
45	BS	55	ILE
45	BS	62	ASP
45	BS	66	ILE
45	BS	72	THR
45	BS	73	LYS
45	BS	84	ARG
45	BS	86	MET
45	BS	88	ARG
45	BS	99	ARG
45	BS	100	THR
46	BU	7	ASP
46	BU	11	ILE
46	BU	13	LEU
46	BU	20	LYS
46	BU	30	SER
46	BU	34	ILE
46	BU	49	PRO
46	BU	51	LEU
46	BU	52	ASN
46	BU	53	GLN
46	BU	60	LYS
46	BU	64	ILE
46	BU	65	GLN
46	BU	73	ASN
46	BU	78	LYS
46	BU	80	ASP
46	BU	81	ARG
46	BU	85	ARG
47	BF	2	LYS
47	BF	13	LYS
47	BF	15	LEU
47	BF	18	GLU
47	BF	29	ARG

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Mol	Chain	Res	Type
47	BF	32	LYS
47	BF	50	ASP
47	BF	55	ASP
47	BF	56	LEU
47	BF	59	ILE
47	BF	76	PHE
47	BF	82	TYR
47	BF	86	CYS
47	BF	91	ARG
47	BF	96	TRP
47	BF	97	GLU
47	BF	101	ARG
47	BF	102	LEU
47	BF	103	ILE
47	BF	109	ARG
47	BF	111	ARG
47	BF	121	PHE
47	BF	126	ASN
47	BF	129	MET
47	BF	134	GLN
47	BF	137	PHE
47	BF	138	PRO
47	BF	147	ARG
47	BF	149	ARG
47	BF	174	PHE
47	BF	177	ARG
47	BF	178	LYS
48	BG	1	SER
48	BG	2	ARG
48	BG	15	ASP
48	BG	17	LYS
48	BG	24	THR
48	BG	31	GLU
48	BG	34	ARG
48	BG	36	LEU
48	BG	54	ARG
48	BG	55	ASP
48	BG	61	TRP
48	BG	68	ARG
48	BG	70	LEU
48	BG	71	LEU
48	BG	80	GLU

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Mol	Chain	Res	Type
48	BG	84	LYS
48	BG	85	LYS
48	BG	86	LEU
48	BG	94	ARG
48	BG	106	LEU
48	BG	120	ILE
48	BG	132	LEU
48	BG	138	GLN
48	BG	148	ARG
48	BG	154	GLU
48	BG	162	ARG
48	BG	166	GLU
49	BR	4	VAL
49	BR	22	LEU
49	BR	39	LEU
49	BR	40	MET
49	BR	45	GLU
49	BR	48	LYS
49	BR	53	PHE
49	BR	55	ASP
49	BR	70	GLU
49	BR	71	LYS
49	BR	72	VAL
49	BR	79	ARG
49	BR	86	GLN
50	BT	2	ILE
50	BT	3	ARG
50	BT	4	GLU
50	BT	7	LEU
50	BT	9	LYS
50	BT	11	LEU
50	BT	12	ARG
50	BT	24	MET
50	BT	32	LEU
50	BT	64	LYS
50	BT	68	LYS
50	BT	69	ARG
50	BT	70	HIS
50	BT	73	ARG
50	BT	81	LYS
50	BT	87	LEU
51	BZ	25	THR

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Mol	Chain	Res	Type
51	BZ	27	ARG
51	BZ	28	ARG
51	BZ	33	LEU
51	BZ	37	ARG
51	BZ	41	GLU
51	BZ	46	PHE
51	BZ	48	THR
51	BZ	49	LEU
51	BZ	50	ARG
51	BZ	64	ILE
51	BZ	66	THR
51	BZ	72	ARG
51	BZ	78	TYR
52	BW	13	ARG
52	BW	14	ASP
52	BW	16	GLU
52	BW	18	LYS
52	BW	19	ARG
52	BW	23	LYS
52	BW	24	ARG
52	BW	25	PHE
52	BW	38	ARG
52	BW	39	GLN
52	BW	40	ARG
52	BW	44	PHE
52	BW	49	ASN
52	BW	50	VAL
52	BW	54	ARG
52	BW	77	LYS
52	BW	80	SER
53	B6	1	MET
53	B6	6	LEU
53	B6	16	LYS
53	B6	17	SER
53	B6	29	ARG
53	B6	39	LEU
53	B6	52	LEU
53	B6	55	ILE
53	B6	62	ASP
53	B6	66	LEU
53	B6	73	GLN
53	B6	93	SER

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Mol	Chain	Res	Type
53	B6	106	LEU
53	B6	109	GLU
53	B6	114	LEU
53	B6	147	LEU
53	B6	154	THR
53	B6	165	THR
53	B6	177	GLU
53	B6	183	ILE
2	CC	2	GLN
2	CC	13	ILE
2	CC	17	TRP
2	CC	20	THR
2	CC	27	GLU
2	CC	28	PHE
2	CC	35	ASP
2	CC	41	TYR
2	CC	48	LYS
2	CC	61	LYS
2	CC	62	SER
2	CC	63	ILE
2	CC	64	ARG
2	CC	88	LYS
2	CC	100	ILE
2	CC	101	ASN
2	CC	106	ARG
2	CC	126	ARG
2	CC	128	MET
2	CC	131	ARG
2	CC	155	ARG
2	CC	167	TYR
2	CC	168	ARG
2	CC	171	ARG
2	CC	184	ASN
2	CC	192	TYR
2	CC	206	ILE
3	CD	7	LYS
3	CD	18	LEU
3	CD	25	ARG
3	CD	28	ASP
3	CD	35	GLN
3	CD	39	GLN
3	CD	55	ARG

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Mol	Chain	Res	Type
3	CD	70	GLN
3	CD	84	ASN
3	CD	87	GLU
3	CD	97	LEU
3	CD	118	SER
3	CD	146	GLU
3	CD	147	LYS
3	CD	151	GLN
3	CD	153	ARG
3	CD	155	LYS
3	CD	160	LEU
3	CD	170	LEU
3	CD	176	LYS
3	CD	183	ARG
3	CD	186	GLU
3	CD	189	ASP
3	CD	190	LEU
3	CD	196	GLU
4	CE	9	GLU
4	CE	23	THR
4	CE	31	SER
4	CE	44	ARG
4	CE	45	VAL
4	CE	51	LYS
4	CE	61	LYS
4	CE	64	GLU
4	CE	70	MET
4	CE	72	ASN
4	CE	92	ARG
4	CE	119	VAL
4	CE	123	LEU
4	CE	127	TYR
4	CE	147	ASN
4	CE	151	MET
4	CE	156	ARG
5	CF	6	ILE
5	CF	13	ASP
5	CF	16	GLU
5	CF	39	LEU
5	CF	53	LYS
5	CF	55	HIS
5	CF	61	LEU

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Mol	Chain	Res	Type
5	CF	65	GLU
5	CF	69	GLU
5	CF	86	ARG
5	CF	98	GLU
6	CG	4	ARG
6	CG	10	LYS
6	CG	11	ILE
6	CG	21	LEU
6	CG	49	LEU
6	CG	55	LYS
6	CG	56	SER
6	CG	58	LEU
6	CG	62	GLU
6	CG	78	ARG
6	CG	94	ARG
6	CG	109	LYS
6	CG	110	ARG
6	CG	112	ASP
6	CG	117	LEU
6	CG	132	THR
6	CG	137	ARG
6	CG	142	ARG
6	CG	153	TYR
7	CH	49	LYS
7	CH	53	ASP
7	CH	55	LYS
7	CH	57	GLU
7	CH	72	GLU
7	CH	111	THR
7	CH	113	ARG
8	CI	4	GLN
8	CI	24	ASN
8	CI	30	ASN
8	CI	36	GLN
8	CI	45	MET
8	CI	58	GLU
8	CI	62	LEU
8	CI	67	LYS
8	CI	74	GLN
8	CI	84	ARG
8	CI	87	MET
8	CI	93	LEU

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Mol	Chain	Res	Type
8	CI	94	ARG
8	CI	109	GLN
8	CI	122	ARG
8	CI	123	ARG
9	CJ	17	LEU
9	CJ	31	ARG
9	CJ	37	ARG
9	CJ	47	GLU
9	CJ	52	LEU
9	CJ	87	LEU
9	CJ	88	MET
9	CJ	89	ARG
9	CJ	92	LEU
9	CJ	97	ASP
10	CK	28	ASN
10	CK	29	THR
10	CK	34	THR
10	CK	51	PHE
10	CK	55	ARG
10	CK	68	ARG
10	CK	75	GLU
10	CK	76	TYR
10	CK	80	ASN
10	CK	82	GLU
10	CK	84	MET
10	CK	100	ASN
10	CK	105	ARG
10	CK	112	VAL
10	CK	118	ASN
11	CL	9	LYS
11	CL	13	ARG
11	CL	14	LYS
11	CL	15	VAL
11	CL	17	LYS
11	CL	18	SER
11	CL	19	ASN
11	CL	28	GLN
11	CL	33	CYS
11	CL	35	ARG
11	CL	38	THR
11	CL	43	LYS
11	CL	49	ARG

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Mol	Chain	Res	Type
11	CL	77	SER
11	CL	85	ARG
11	CL	95	HIS
11	CL	107	LYS
11	CL	122	LYS
12	CM	2	ARG
12	CM	28	ARG
12	CM	40	GLU
12	CM	44	ILE
12	CM	46	GLU
12	CM	57	ASP
12	CM	65	GLU
12	CM	70	ARG
12	CM	71	GLU
12	CM	79	LEU
12	CM	82	LEU
12	CM	91	ARG
12	CM	102	LYS
12	CM	103	THR
12	CM	106	ARG
13	CN	3	GLN
13	CN	4	SER
13	CN	5	MET
13	CN	17	ASP
13	CN	25	GLU
13	CN	26	LEU
13	CN	27	LYS
13	CN	40	ARG
13	CN	41	TRP
13	CN	50	LEU
13	CN	52	ARG
13	CN	53	ASP
13	CN	55	SER
13	CN	65	GLN
13	CN	68	ARG
13	CN	96	LYS
13	CN	97	LYS
14	CO	11	ILE
14	CO	42	HIS
14	CO	54	ARG
14	CO	66	LEU
14	CO	70	LEU

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Mol	Chain	Res	Type
14	CO	71	LYS
14	CO	88	ARG
15	CP	5	ARG
15	CP	26	ASN
15	CP	28	ARG
15	CP	45	GLU
15	CP	51	ARG
15	CP	68	SER
16	CQ	3	LYS
16	CQ	5	ARG
16	CQ	10	ARG
16	CQ	37	ILE
16	CQ	48	GLU
16	CQ	59	GLU
16	CQ	60	ILE
16	CQ	61	ARG
16	CQ	66	LEU
16	CQ	74	LEU
16	CQ	79	GLU
16	CQ	80	LYS
17	CR	21	ASP
17	CR	23	LYS
17	CR	33	THR
17	CR	35	SER
17	CR	38	ILE
17	CR	44	THR
17	CR	46	THR
17	CR	60	ARG
17	CR	71	ASP
18	CS	2	ARG
18	CS	4	LEU
18	CS	5	LYS
18	CS	13	HIS
18	CS	14	LEU
18	CS	20	LYS
18	CS	26	ASP
18	CS	27	LYS
18	CS	28	LYS
18	CS	42	ASN
18	CS	47	THR
18	CS	55	GLN
18	CS	64	GLU

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Mol	Chain	Res	Type
18	CS	80	ARG
19	CT	3	ILE
19	CT	4	LYS
19	CT	5	SER
19	CT	25	SER
19	CT	35	TYR
19	CT	43	LYS
19	CT	53	MET
19	CT	69	ASN
19	CT	74	HIS
19	CT	77	ASN
20	CB	8	MET
20	CB	19	THR
20	CB	23	ASN
20	CB	27	LYS
20	CB	35	ASN
20	CB	46	VAL
20	CB	48	MET
20	CB	51	GLU
20	CB	62	ARG
20	CB	67	LEU
20	CB	72	LYS
20	CB	86	CYS
20	CB	87	ASP
20	CB	88	GLN
20	CB	94	ARG
20	CB	99	MET
20	CB	104	LYS
20	CB	107	ARG
20	CB	113	LEU
20	CB	122	ASP
20	CB	127	LYS
20	CB	144	GLU
20	CB	156	LEU
20	CB	176	ASN
20	CB	187	ASP
20	CB	196	ASP
20	CB	202	ASN
20	CB	211	LEU
20	CB	212	TYR
20	CB	221	ARG
21	CU	11	PHE

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Mol	Chain	Res	Type
21	CU	15	LEU
21	CU	16	ARG
21	CU	20	ARG
21	CU	24	LYS
21	CU	27	VAL
21	CU	33	ARG
21	CU	34	ARG
21	CU	36	PHE
21	CU	38	GLU
21	CU	44	ARG
21	CU	48	LYS
24	DI	2	LYS
24	DI	54	ILE
24	DI	91	LYS
24	DI	99	LYS
24	DI	121	ILE
24	DI	140	GLU
25	DC	4	LYS
25	DC	5	CYS
25	DC	12	ARG
25	DC	23	LEU
25	DC	37	SER
25	DC	43	ASN
25	DC	45	ASN
25	DC	52	HIS
25	DC	53	ILE
25	DC	62	ARG
25	DC	65	ASP
25	DC	86	ARG
25	DC	89	ASN
25	DC	90	ILE
25	DC	100	ARG
25	DC	123	ILE
25	DC	129	LEU
25	DC	134	ILE
25	DC	142	ASN
25	DC	155	ARG
25	DC	166	ARG
25	DC	172	THR
25	DC	173	LEU
25	DC	176	ARG
25	DC	180	MET

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Mol	Chain	Res	Type
25	DC	190	THR
25	DC	191	LEU
25	DC	202	ARG
25	DC	212	TRP
25	DC	213	ARG
25	DC	224	MET
25	DC	239	PHE
25	DC	245	THR
25	DC	249	VAL
25	DC	251	THR
25	DC	257	ARG
25	DC	264	LYS
25	DC	267	VAL
25	DC	268	ARG
25	DC	269	ARG
26	DD	17	GLU
26	DD	35	THR
26	DD	36	GLN
26	DD	40	LEU
26	DD	46	ARG
26	DD	48	ILE
26	DD	56	LYS
26	DD	59	ARG
26	DD	79	LEU
26	DD	81	GLU
26	DD	84	LEU
26	DD	89	GLU
26	DD	91	THR
26	DD	99	GLU
26	DD	124	ARG
26	DD	131	ASP
26	DD	137	SER
26	DD	138	LEU
26	DD	142	VAL
26	DD	148	GLN
26	DD	151	THR
26	DD	154	LYS
26	DD	159	LYS
26	DD	165	MET
26	DD	167	ASN
26	DD	179	ARG
26	DD	186	LEU

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Mol	Chain	Res	Type
26	DD	201	LEU
26	DD	204	LYS
26	DD	207	VAL
27	DK	8	LEU
27	DK	21	CYS
27	DK	32	TYR
27	DK	39	ILE
27	DK	41	ILE
27	DK	47	ILE
27	DK	52	VAL
27	DK	53	LYS
27	DK	54	LYS
27	DK	58	LEU
27	DK	64	ARG
27	DK	72	PRO
27	DK	79	PHE
27	DK	86	LEU
27	DK	87	LEU
27	DK	98	ARG
27	DK	104	THR
27	DK	105	ARG
27	DK	107	LEU
27	DK	111	LYS
27	DK	120	PRO
28	DP	3	ILE
28	DP	6	GLN
28	DP	19	PHE
28	DP	20	ARG
28	DP	24	THR
28	DP	25	VAL
28	DP	28	LYS
28	DP	33	GLU
28	DP	37	LYS
28	DP	38	ARG
28	DP	43	GLU
28	DP	61	ARG
28	DP	83	ILE
28	DP	99	LEU
28	DP	100	ARG
28	DP	101	GLU
28	DP	111	GLU
28	DP	112	ARG

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Mol	Chain	Res	Type
28	DP	114	ASN
29	DE	2	GLU
29	DE	12	LEU
29	DE	22	ASP
29	DE	24	ASN
29	DE	40	ARG
29	DE	48	THR
29	DE	51	GLU
29	DE	58	LYS
29	DE	60	TRP
29	DE	62	GLN
29	DE	67	ARG
29	DE	75	SER
29	DE	78	TRP
29	DE	108	ILE
29	DE	116	ASP
29	DE	118	LEU
29	DE	122	GLU
29	DE	124	PHE
29	DE	133	LEU
29	DE	147	LEU
29	DE	153	LEU
29	DE	163	ASN
29	DE	170	ARG
30	DY	2	LYS
30	DY	3	THR
30	DY	6	ILE
30	DY	15	ARG
30	DY	16	LEU
30	DY	19	HIS
30	DY	23	LEU
30	DY	30	ARG
30	DY	37	ARG
30	DY	57	GLU
31	D0	3	GLN
31	D0	26	SER
31	D0	27	LEU
31	D0	37	HIS
31	D0	41	HIS
31	D0	45	ASP
31	D0	51	ARG
31	D0	53	VAL

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Mol	Chain	Res	Type
31	D0	56	LYS
32	D4	3	VAL
32	D4	9	LYS
32	D4	28	SER
32	D4	35	GLN
32	D4	37	GLN
33	D1	8	ILE
33	D1	9	LYS
33	D1	35	LEU
33	D1	44	GLN
34	D3	7	ARG
34	D3	14	LYS
34	D3	18	LYS
34	D3	27	ASN
34	D3	42	HIS
35	DV	7	GLU
35	DV	12	GLN
35	DV	18	ARG
35	DV	40	ILE
35	DV	42	LEU
35	DV	46	LYS
35	DV	51	GLN
35	DV	53	LYS
35	DV	55	GLU
35	DV	66	ASP
35	DV	70	ILE
35	DV	75	GLN
35	DV	89	ILE
35	DV	90	ASP
36	D2	4	THR
36	D2	10	LEU
36	D2	19	ARG
36	D2	22	MET
36	D2	24	THR
36	D2	33	ARG
36	D2	39	ARG
36	D2	41	ARG
36	D2	42	LEU
36	D2	43	THR
37	DL	12	SER
37	DL	40	SER
37	DL	47	ARG

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Mol	Chain	Res	Type
37	DL	60	ARG
37	DL	69	ARG
37	DL	91	ASP
37	DL	92	LEU
37	DL	95	LEU
37	DL	112	LEU
37	DL	118	THR
37	DL	123	ARG
38	DM	1	MET
38	DM	10	ARG
38	DM	20	LEU
38	DM	25	ASP
38	DM	38	ARG
38	DM	47	GLU
38	DM	58	LYS
38	DM	59	ARG
38	DM	63	ILE
38	DM	65	ILE
38	DM	70	ASP
38	DM	90	GLU
38	DM	91	TYR
38	DM	95	LEU
38	DM	100	LYS
38	DM	104	GLU
38	DM	105	MET
38	DM	108	VAL
38	DM	110	GLU
38	DM	115	GLU
38	DM	127	LYS
38	DM	131	VAL
39	DX	14	LEU
39	DX	18	LEU
39	DX	25	GLN
39	DX	28	LEU
39	DX	29	ARG
39	DX	41	HIS
39	DX	48	ARG
39	DX	57	LEU
39	DX	59	GLU
40	DH	3	VAL
40	DH	12	LEU
40	DH	15	LEU

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Mol	Chain	Res	Type
40	DH	17	ASP
40	DH	28	ASN
40	DH	31	VAL
40	DH	32	PRO
40	DH	33	GLN
40	DH	48	GLU
40	DH	50	ARG
40	DH	58	LEU
40	DH	70	GLU
40	DH	73	ASN
40	DH	75	LEU
40	DH	79	THR
40	DH	89	LYS
40	DH	114	GLU
40	DH	115	VAL
40	DH	121	VAL
40	DH	124	THR
40	DH	129	GLU
40	DH	133	GLN
40	DH	137	GLU
40	DH	139	PHE
40	DH	145	ASN
41	DJ	2	LYS
41	DJ	5	THR
41	DJ	12	LYS
41	DJ	28	LEU
41	DJ	35	ARG
41	DJ	44	TYR
41	DJ	65	THR
41	DJ	71	ASP
41	DJ	76	HIS
41	DJ	93	ILE
41	DJ	95	ARG
41	DJ	111	LYS
41	DJ	120	ARG
41	DJ	124	VAL
41	DJ	129	GLU
41	DJ	138	GLN
42	DN	1	MET
42	DN	2	ARG
42	DN	9	GLN
42	DN	11	ASN

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Mol	Chain	Res	Type
42	DN	18	GLN
42	DN	20	MET
42	DN	35	LYS
42	DN	46	ARG
42	DN	59	SER
42	DN	69	ARG
42	DN	71	ARG
42	DN	82	GLU
42	DN	83	LEU
42	DN	114	GLU
42	DN	118	ARG
42	DN	120	GLU
43	DO	3	LYS
43	DO	9	ARG
43	DO	17	LYS
43	DO	31	THR
43	DO	36	TYR
43	DO	43	ASN
43	DO	69	ASP
43	DO	78	VAL
43	DO	80	GLU
43	DO	89	ASP
43	DO	98	GLN
43	DO	100	HIS
43	DO	104	GLN
43	DO	106	LEU
44	DQ	5	ARG
44	DQ	10	ARG
44	DQ	13	HIS
44	DQ	29	ARG
44	DQ	63	ARG
44	DQ	79	ILE
44	DQ	83	LYS
44	DQ	84	LYS
44	DQ	90	ASP
44	DQ	96	ASP
45	DS	1	MET
45	DS	6	LYS
45	DS	18	ARG
45	DS	22	ASP
45	DS	33	LEU
45	DS	39	THR

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Mol	Chain	Res	Type
45	DS	55	ILE
45	DS	62	ASP
45	DS	66	ILE
45	DS	72	THR
45	DS	73	LYS
45	DS	84	ARG
45	DS	86	MET
45	DS	88	ARG
45	DS	99	ARG
45	DS	100	THR
46	DU	7	ASP
46	DU	11	ILE
46	DU	13	LEU
46	DU	20	LYS
46	DU	30	SER
46	DU	34	ILE
46	DU	49	PRO
46	DU	51	LEU
46	DU	52	ASN
46	DU	53	GLN
46	DU	60	LYS
46	DU	64	ILE
46	DU	65	GLN
46	DU	73	ASN
46	DU	78	LYS
46	DU	80	ASP
46	DU	81	ARG
46	DU	85	ARG
47	DF	2	LYS
47	DF	13	LYS
47	DF	15	LEU
47	DF	18	GLU
47	DF	29	ARG
47	DF	32	LYS
47	DF	50	ASP
47	DF	55	ASP
47	DF	56	LEU
47	DF	59	ILE
47	DF	76	PHE
47	DF	82	TYR
47	DF	86	CYS
47	DF	91	ARG

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Mol	Chain	Res	Type
47	DF	96	TRP
47	DF	97	GLU
47	DF	101	ARG
47	DF	102	LEU
47	DF	103	ILE
47	DF	109	ARG
47	DF	111	ARG
47	DF	121	PHE
47	DF	126	ASN
47	DF	129	MET
47	DF	134	GLN
47	DF	137	PHE
47	DF	138	PRO
47	DF	147	ARG
47	DF	149	ARG
47	DF	174	PHE
47	DF	177	ARG
47	DF	178	LYS
48	DG	1	SER
48	DG	15	ASP
48	DG	17	LYS
48	DG	24	THR
48	DG	31	GLU
48	DG	34	ARG
48	DG	36	LEU
48	DG	54	ARG
48	DG	55	ASP
48	DG	61	TRP
48	DG	68	ARG
48	DG	70	LEU
48	DG	71	LEU
48	DG	84	LYS
48	DG	85	LYS
48	DG	86	LEU
48	DG	94	ARG
48	DG	106	LEU
48	DG	120	ILE
48	DG	132	LEU
48	DG	138	GLN
48	DG	148	ARG
48	DG	154	GLU
48	DG	162	ARG

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Mol	Chain	Res	Type
48	DG	166	GLU
49	DR	4	VAL
49	DR	22	LEU
49	DR	39	LEU
49	DR	40	MET
49	DR	45	GLU
49	DR	48	LYS
49	DR	53	PHE
49	DR	55	ASP
49	DR	70	GLU
49	DR	71	LYS
49	DR	72	VAL
49	DR	79	ARG
49	DR	82	HIS
49	DR	86	GLN
50	DT	2	ILE
50	DT	3	ARG
50	DT	4	GLU
50	DT	7	LEU
50	DT	9	LYS
50	DT	11	LEU
50	DT	12	ARG
50	DT	24	MET
50	DT	32	LEU
50	DT	64	LYS
50	DT	68	LYS
50	DT	69	ARG
50	DT	70	HIS
50	DT	73	ARG
50	DT	81	LYS
50	DT	87	LEU
51	DZ	25	THR
51	DZ	27	ARG
51	DZ	28	ARG
51	DZ	33	LEU
51	DZ	37	ARG
51	DZ	41	GLU
51	DZ	46	PHE
51	DZ	49	LEU
51	DZ	50	ARG
51	DZ	66	THR
51	DZ	78	TYR

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Mol	Chain	Res	Type
52	DW	13	ARG
52	DW	14	ASP
52	DW	16	GLU
52	DW	18	LYS
52	DW	19	ARG
52	DW	23	LYS
52	DW	24	ARG
52	DW	25	PHE
52	DW	38	ARG
52	DW	39	GLN
52	DW	40	ARG
52	DW	44	PHE
52	DW	49	ASN
52	DW	50	VAL
52	DW	54	ARG
52	DW	77	LYS
52	DW	80	SER
53	D6	1	MET
53	D6	6	LEU
53	D6	12	SER
53	D6	16	LYS
53	D6	17	SER
53	D6	24	ASN
53	D6	44	GLU
53	D6	59	THR
53	D6	64	ARG
53	D6	84	ARG
53	D6	85	ASP
53	D6	93	SER
53	D6	94	ASN
53	D6	97	ASP
53	D6	106	LEU
53	D6	107	THR
53	D6	108	GLU
53	D6	114	LEU
53	D6	137	LEU
53	D6	146	GLU
53	D6	147	LEU
53	D6	156	ARG
53	D6	174	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (320) such sidechains are listed below:

Mol	Chain	Res	Type
2	AC	2	GLN
2	AC	31	ASN
2	AC	139	ASN
3	AD	35	GLN
3	AD	53	GLN
3	AD	70	GLN
3	AD	135	GLN
3	AD	151	GLN
3	AD	163	GLN
3	AD	195	ASN
4	AE	72	ASN
4	AE	81	GLN
4	AE	82	HIS
4	AE	131	ASN
5	AF	63	ASN
6	AG	67	ASN
6	AG	121	ASN
7	AH	3	GLN
7	AH	37	ASN
7	AH	117	GLN
8	AI	24	ASN
8	AI	30	ASN
8	AI	36	GLN
8	AI	49	GLN
8	AI	80	HIS
9	AJ	20	GLN
9	AJ	99	GLN
10	AK	21	HIS
10	AK	28	ASN
10	AK	80	ASN
10	AK	118	ASN
11	AL	5	GLN
11	AL	19	ASN
11	AL	28	GLN
11	AL	45	ASN
11	AL	111	GLN
12	AM	7	ASN
14	AO	28	GLN
14	AO	37	ASN
14	AO	40	GLN
16	AQ	50	ASN
18	AS	42	ASN
18	AS	55	GLN

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Mol	Chain	Res	Type
19	AT	2	ASN
19	AT	20	ASN
19	AT	83	ASN
20	AB	14	HIS
20	AB	17	HIS
20	AB	18	GLN
20	AB	23	ASN
20	AB	35	ASN
20	AB	41	ASN
20	AB	119	GLN
20	AB	121	GLN
20	AB	145	ASN
20	AB	202	ASN
24	BI	11	GLN
24	BI	29	GLN
24	BI	33	ASN
24	BI	93	ASN
25	BC	20	ASN
25	BC	43	ASN
25	BC	59	GLN
25	BC	89	ASN
25	BC	152	GLN
25	BC	162	GLN
25	BC	225	ASN
26	BD	32	ASN
26	BD	36	GLN
26	BD	49	GLN
26	BD	126	ASN
26	BD	130	GLN
26	BD	136	ASN
26	BD	173	GLN
27	BK	5	GLN
27	BK	13	ASN
27	BK	88	ASN
27	BK	89	ASN
28	BP	6	GLN
28	BP	40	GLN
28	BP	114	ASN
29	BE	24	ASN
29	BE	30	GLN
29	BE	62	GLN
29	BE	97	ASN

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Mol	Chain	Res	Type
29	BE	136	GLN
29	BE	163	ASN
29	BE	195	GLN
30	BY	33	HIS
30	BY	48	ASN
31	B0	3	GLN
32	B4	35	GLN
34	B3	30	HIS
35	BV	44	HIS
35	BV	51	GLN
35	BV	75	GLN
35	BV	80	HIS
35	BV	88	HIS
36	B2	13	ASN
36	B2	29	GLN
37	BL	4	ASN
37	BL	93	ASN
37	BL	104	GLN
38	BM	13	HIS
38	BM	17	ASN
38	BM	60	GLN
39	BX	15	ASN
39	BX	20	ASN
39	BX	25	GLN
39	BX	27	ASN
39	BX	31	GLN
39	BX	45	GLN
40	BH	18	GLN
40	BH	20	ASN
40	BH	28	ASN
40	BH	43	ASN
40	BH	66	ASN
40	BH	73	ASN
40	BH	128	HIS
40	BH	133	GLN
40	BH	135	HIS
40	BH	145	ASN
41	BJ	138	GLN
42	BN	11	ASN
42	BN	62	ASN
42	BN	107	ASN
43	BO	19	GLN

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Mol	Chain	Res	Type
43	BO	38	GLN
43	BO	61	GLN
44	BQ	19	GLN
44	BQ	51	GLN
44	BQ	55	GLN
44	BQ	58	GLN
44	BQ	70	GLN
44	BQ	80	ASN
45	BS	40	ASN
45	BS	57	ASN
45	BS	61	ASN
46	BU	65	GLN
46	BU	68	ASN
46	BU	73	ASN
47	BF	51	ASN
47	BF	134	GLN
48	BG	29	ASN
48	BG	37	ASN
48	BG	63	GLN
48	BG	110	HIS
48	BG	127	GLN
49	BR	6	GLN
49	BR	86	GLN
49	BR	91	GLN
50	BT	48	GLN
50	BT	91	GLN
50	BT	92	ASN
51	BZ	17	ASN
51	BZ	23	ASN
51	BZ	36	HIS
52	BW	39	GLN
52	BW	56	HIS
52	BW	75	ASN
53	B6	120	GLN
53	B6	131	ASN
2	CC	2	GLN
2	CC	31	ASN
2	CC	139	ASN
3	CD	35	GLN
3	CD	53	GLN
3	CD	70	GLN
3	CD	135	GLN

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Mol	Chain	Res	Type
3	CD	151	GLN
3	CD	163	GLN
3	CD	195	ASN
4	CE	81	GLN
4	CE	82	HIS
4	CE	131	ASN
5	CF	63	ASN
6	CG	8	GLN
6	CG	67	ASN
6	CG	121	ASN
7	CH	3	GLN
7	CH	37	ASN
7	CH	117	GLN
8	CI	24	ASN
8	CI	30	ASN
8	CI	36	GLN
8	CI	49	GLN
8	CI	74	GLN
8	CI	80	HIS
9	CJ	20	GLN
9	CJ	99	GLN
10	CK	21	HIS
10	CK	28	ASN
10	CK	80	ASN
11	CL	5	GLN
11	CL	19	ASN
11	CL	28	GLN
11	CL	45	ASN
11	CL	111	GLN
12	CM	7	ASN
14	CO	28	GLN
14	CO	37	ASN
14	CO	40	GLN
16	CQ	50	ASN
18	CS	42	ASN
18	CS	55	GLN
19	CT	20	ASN
19	CT	83	ASN
20	CB	14	HIS
20	CB	17	HIS
20	CB	18	GLN
20	CB	23	ASN

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Mol	Chain	Res	Type
20	CB	35	ASN
20	CB	41	ASN
20	CB	119	GLN
20	CB	145	ASN
20	CB	202	ASN
24	DI	5	GLN
24	DI	11	GLN
24	DI	29	GLN
24	DI	33	ASN
24	DI	93	ASN
25	DC	20	ASN
25	DC	43	ASN
25	DC	59	GLN
25	DC	89	ASN
25	DC	133	ASN
25	DC	152	GLN
25	DC	162	GLN
26	DD	32	ASN
26	DD	36	GLN
26	DD	49	GLN
26	DD	126	ASN
26	DD	130	GLN
26	DD	136	ASN
26	DD	173	GLN
27	DK	5	GLN
27	DK	13	ASN
27	DK	88	ASN
27	DK	89	ASN
28	DP	6	GLN
28	DP	40	GLN
28	DP	114	ASN
29	DE	9	GLN
29	DE	24	ASN
29	DE	30	GLN
29	DE	62	GLN
29	DE	136	GLN
29	DE	195	GLN
30	DY	33	HIS
30	DY	48	ASN
31	D0	3	GLN
31	D0	18	HIS
32	D4	35	GLN

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Mol	Chain	Res	Type
32	D4	37	GLN
34	D3	30	HIS
34	D3	42	HIS
35	DV	44	HIS
35	DV	51	GLN
35	DV	80	HIS
36	D2	13	ASN
37	DL	4	ASN
37	DL	54	GLN
37	DL	93	ASN
37	DL	104	GLN
38	DM	17	ASN
38	DM	60	GLN
39	DX	15	ASN
39	DX	20	ASN
39	DX	25	GLN
39	DX	27	ASN
39	DX	31	GLN
39	DX	41	HIS
39	DX	45	GLN
40	DH	18	GLN
40	DH	20	ASN
40	DH	28	ASN
40	DH	43	ASN
40	DH	66	ASN
40	DH	135	HIS
41	DJ	136	GLN
41	DJ	138	GLN
42	DN	11	ASN
42	DN	62	ASN
42	DN	107	ASN
43	DO	19	GLN
43	DO	38	GLN
43	DO	61	GLN
44	DQ	19	GLN
44	DQ	51	GLN
44	DQ	58	GLN
44	DQ	70	GLN
44	DQ	80	ASN
45	DS	40	ASN
45	DS	57	ASN
45	DS	61	ASN

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Mol	Chain	Res	Type
46	DU	65	GLN
46	DU	68	ASN
46	DU	73	ASN
47	DF	51	ASN
47	DF	134	GLN
48	DG	29	ASN
48	DG	37	ASN
48	DG	127	GLN
49	DR	6	GLN
49	DR	86	GLN
50	DT	48	GLN
50	DT	91	GLN
50	DT	92	ASN
51	DZ	17	ASN
51	DZ	20	HIS
51	DZ	23	ASN
51	DZ	36	HIS
52	DW	39	GLN
52	DW	56	HIS
52	DW	75	ASN
53	D6	24	ASN
53	D6	49	HIS
53	D6	53	ASN
53	D6	102	ASN
53	D6	174	GLN

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1529/1542 (99%)	244 (15%)	21 (1%)
1	CA	1529/1542 (99%)	235 (15%)	19 (1%)
22	BA	116/120 (96%)	17 (14%)	0
22	DA	116/120 (96%)	16 (13%)	0
23	BB	2837/2904 (97%)	457 (16%)	17 (0%)
23	DB	2837/2904 (97%)	435 (15%)	22 (0%)
All	All	8964/9132 (98%)	1404 (15%)	79 (0%)

All (1404) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	9	G

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Mol	Chain	Res	Type
1	AA	14	U
1	AA	32	A
1	AA	39	G
1	AA	47	C
1	AA	48	C
1	AA	51	A
1	AA	52	C
1	AA	55	A
1	AA	65	A
1	AA	66	A
1	AA	71	A
1	AA	72	A
1	AA	76	G
1	AA	79	G
1	AA	81	A
1	AA	82	G
1	AA	83	C
1	AA	85	U
1	AA	86	G
1	AA	87	C
1	AA	88	U
1	AA	89	U
1	AA	92	U
1	AA	93	U
1	AA	94	G
1	AA	108	G
1	AA	119	A
1	AA	121	U
1	AA	122	G
1	AA	131	A
1	AA	151	A
1	AA	182	A
1	AA	183	C
1	AA	191	G
1	AA	197	A
1	AA	209	U
1	AA	210	C
1	AA	215	C
1	AA	233	C
1	AA	239	U
1	AA	240	G
1	AA	243	A

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Mol	Chain	Res	Type
1	AA	244	U
1	AA	245	U
1	AA	247	G
1	AA	250	A
1	AA	251	G
1	AA	257	G
1	AA	258	G
1	AA	266	G
1	AA	267	C
1	AA	280	C
1	AA	289	G
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	346	G
1	AA	352	C
1	AA	354	G
1	AA	367	U
1	AA	373	A
1	AA	374	A
1	AA	381	C
1	AA	382	A
1	AA	384	G
1	AA	397	A
1	AA	398	U
1	AA	406	G
1	AA	408	A
1	AA	409	U
1	AA	411	A
1	AA	412	A
1	AA	413	G
1	AA	414	A
1	AA	421	U
1	AA	422	C
1	AA	424	G
1	AA	428	G
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	461	A
1	AA	462	G
1	AA	463	U
1	AA	464	U
1	AA	465	A
1	AA	466	A
1	AA	467	U
1	AA	468	A
1	AA	484	G
1	AA	485	U
1	AA	493	A
1	AA	500	G
1	AA	509	A
1	AA	518	C
1	AA	527	G
1	AA	532	A
1	AA	547	A
1	AA	559	A
1	AA	562	U
1	AA	572	A
1	AA	573	A
1	AA	576	C
1	AA	577	G
1	AA	639	G
1	AA	653	U
1	AA	665	A
1	AA	687	A
1	AA	695	A
1	AA	700	G
1	AA	721	G
1	AA	724	G
1	AA	731	G
1	AA	733	G
1	AA	747	A
1	AA	748	G
1	AA	755	G
1	AA	781	A
1	AA	782	A
1	AA	787	A
1	AA	793	U

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Mol	Chain	Res	Type
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	821	G
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	846	G
1	AA	847	G
1	AA	907	A
1	AA	914	A
1	AA	926	G
1	AA	927	G
1	AA	931	C
1	AA	934	C
1	AA	935	A
1	AA	960	U
1	AA	961	U
1	AA	969	A
1	AA	971	G
1	AA	974	A
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	991	U
1	AA	992	U
1	AA	993	G
1	AA	994	A
1	AA	1004	A
1	AA	1009	U
1	AA	1020	G
1	AA	1025	U
1	AA	1027	C
1	AA	1028	C
1	AA	1030	U
1	AA	1031	C

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Mol	Chain	Res	Type
1	AA	1034	G
1	AA	1049	U
1	AA	1050	G
1	AA	1054	C
1	AA	1065	U
1	AA	1066	C
1	AA	1085	U
1	AA	1094	G
1	AA	1095	U
1	AA	1101	A
1	AA	1118	U
1	AA	1136	C
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1140	C
1	AA	1158	C
1	AA	1159	U
1	AA	1168	U
1	AA	1169	A
1	AA	1171	A
1	AA	1174	G
1	AA	1181	G
1	AA	1182	G
1	AA	1183	U
1	AA	1184	G
1	AA	1196	A
1	AA	1197	A
1	AA	1201	A
1	AA	1202	U
1	AA	1211	U
1	AA	1212	U
1	AA	1213	A
1	AA	1225	A
1	AA	1226	C
1	AA	1227	A
1	AA	1240	U
1	AA	1241	G
1	AA	1256	A
1	AA	1257	A
1	AA	1278	G
1	AA	1279	G

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Mol	Chain	Res	Type
1	AA	1280	A
1	AA	1281	C
1	AA	1286	U
1	AA	1299	A
1	AA	1300	G
1	AA	1305	G
1	AA	1316	G
1	AA	1317	C
1	AA	1319	A
1	AA	1320	C
1	AA	1323	G
1	AA	1336	C
1	AA	1363	A
1	AA	1364	U
1	AA	1381	U
1	AA	1398	A
1	AA	1400	C
1	AA	1410	A
1	AA	1432	G
1	AA	1446	A
1	AA	1451	U
1	AA	1452	C
1	AA	1492	A
1	AA	1497	G
1	AA	1503	A
1	AA	1506	U
1	AA	1517	G
1	AA	1520	C
1	AA	1529	G
1	AA	1530	G
1	AA	1532	U
1	AA	1533	C
1	AA	1534	A
22	BA	4	C
22	BA	9	G
22	BA	16	G
22	BA	24	G
22	BA	26	C
22	BA	29	A
22	BA	30	C
22	BA	35	C
22	BA	42	C

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Mol	Chain	Res	Type
22	BA	43	C
22	BA	66	A
22	BA	67	G
22	BA	74	U
22	BA	88	C
22	BA	90	C
22	BA	99	A
22	BA	109	A
23	BB	2	G
23	BB	27	G
23	BB	33	C
23	BB	34	U
23	BB	46	G
23	BB	51	G
23	BB	63	A
23	BB	64	A
23	BB	71	A
23	BB	74	A
23	BB	75	G
23	BB	79	C
23	BB	91	A
23	BB	99	U
23	BB	100	U
23	BB	101	A
23	BB	102	U
23	BB	103	A
23	BB	118	A
23	BB	119	A
23	BB	120	U
23	BB	125	A
23	BB	128	C
23	BB	139	U
23	BB	140	C
23	BB	141	G
23	BB	142	A
23	BB	143	C
23	BB	144	A
23	BB	149	A
23	BB	160	A
23	BB	162	U
23	BB	163	C
23	BB	181	A

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Mol	Chain	Res	Type
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	225	C
23	BB	230	G
23	BB	233	A
23	BB	248	G
23	BB	250	G
23	BB	255	A
23	BB	265	A
23	BB	266	G
23	BB	268	C
23	BB	271	G
23	BB	275	C
23	BB	277	G
23	BB	279	A
23	BB	280	U
23	BB	281	C
23	BB	291	G
23	BB	295	G
23	BB	299	A
23	BB	311	A
23	BB	323	C
23	BB	329	G
23	BB	330	A
23	BB	333	G
23	BB	346	A
23	BB	352	A
23	BB	353	C
23	BB	355	U
23	BB	363	G
23	BB	371	A
23	BB	372	G
23	BB	383	C
23	BB	386	G
23	BB	387	U
23	BB	396	G
23	BB	411	G
23	BB	412	A

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Mol	Chain	Res	Type
23	BB	423	A
23	BB	424	G
23	BB	444	C
23	BB	451	U
23	BB	455	C
23	BB	456	C
23	BB	457	A
23	BB	479	A
23	BB	480	A
23	BB	481	G
23	BB	491	G
23	BB	492	A
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	531	C
23	BB	532	A
23	BB	533	G
23	BB	544	C
23	BB	546	U
23	BB	547	A
23	BB	548	G
23	BB	563	A
23	BB	573	U
23	BB	575	A
23	BB	586	A
23	BB	588	U
23	BB	603	A
23	BB	613	A
23	BB	614	A
23	BB	615	U
23	BB	616	A
23	BB	627	A
23	BB	637	A
23	BB	645	C
23	BB	646	U
23	BB	653	U
23	BB	654	A
23	BB	655	A

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Mol	Chain	Res	Type
23	BB	656	G
23	BB	671	C
23	BB	686	U
23	BB	717	C
23	BB	718	A
23	BB	719	C
23	BB	727	A
23	BB	730	A
23	BB	746	U
23	BB	747	U
23	BB	764	A
23	BB	775	G
23	BB	782	A
23	BB	784	G
23	BB	785	G
23	BB	805	G
23	BB	812	C
23	BB	819	A
23	BB	827	U
23	BB	828	U
23	BB	846	U
23	BB	847	U
23	BB	859	G
23	BB	869	G
23	BB	874	G
23	BB	875	G
23	BB	876	C
23	BB	877	A
23	BB	878	A
23	BB	899	A
23	BB	910	A
23	BB	912	C
23	BB	931	U
23	BB	932	U
23	BB	933	A
23	BB	941	A
23	BB	946	C
23	BB	953	G
23	BB	955	U
23	BB	961	C
23	BB	973	A
23	BB	974	G

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Mol	Chain	Res	Type
23	BB	982	C
23	BB	983	A
23	BB	985	C
23	BB	991	C
23	BB	995	C
23	BB	996	A
23	BB	1012	U
23	BB	1013	C
23	BB	1022	G
23	BB	1025	G
23	BB	1033	U
23	BB	1046	A
23	BB	1047	G
23	BB	1055	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	1116	G
23	BB	1126	A
23	BB	1132	U
23	BB	1133	A
23	BB	1134	A
23	BB	1135	C
23	BB	1136	G
23	BB	1139	G
23	BB	1141	U
23	BB	1142	A
23	BB	1143	A
23	BB	1157	G
23	BB	1172	C
23	BB	1173	U
23	BB	1174	U
23	BB	1176	U
23	BB	1179	G
23	BB	1186	G
23	BB	1195	G
23	BB	1204	A
23	BB	1205	A

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Mol	Chain	Res	Type
23	BB	1206	G
23	BB	1211	C
23	BB	1212	G
23	BB	1237	A
23	BB	1241	A
23	BB	1242	U
23	BB	1247	A
23	BB	1248	G
23	BB	1250	G
23	BB	1253	A
23	BB	1256	G
23	BB	1266	G
23	BB	1271	G
23	BB	1272	A
23	BB	1273	U
23	BB	1275	A
23	BB	1276	A
23	BB	1301	A
23	BB	1302	A
23	BB	1321	A
23	BB	1325	U
23	BB	1337	G
23	BB	1341	G
23	BB	1359	A
23	BB	1365	A
23	BB	1368	G
23	BB	1379	U
23	BB	1383	A
23	BB	1384	A
23	BB	1396	U
23	BB	1397	U
23	BB	1416	G
23	BB	1419	A
23	BB	1420	A
23	BB	1426	G
23	BB	1427	A
23	BB	1428	C
23	BB	1434	A
23	BB	1451	C
23	BB	1453	A
23	BB	1454	C
23	BB	1459	G

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Mol	Chain	Res	Type
23	BB	1461	C
23	BB	1470	A
23	BB	1471	G
23	BB	1476	U
23	BB	1477	A
23	BB	1478	G
23	BB	1482	G
23	BB	1490	A
23	BB	1493	C
23	BB	1497	U
23	BB	1504	A
23	BB	1507	C
23	BB	1508	A
23	BB	1509	A
23	BB	1510	G
23	BB	1524	G
23	BB	1535	A
23	BB	1540	G
23	BB	1552	A
23	BB	1558	C
23	BB	1559	U
23	BB	1567	G
23	BB	1569	A
23	BB	1578	U
23	BB	1583	A
23	BB	1585	C
23	BB	1588	G
23	BB	1607	C
23	BB	1608	A
23	BB	1610	A
23	BB	1613	G
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	1674	G
23	BB	1681	G
23	BB	1700	A
23	BB	1703	G
23	BB	1713	A

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Mol	Chain	Res	Type
23	BB	1714	U
23	BB	1715	G
23	BB	1730	C
23	BB	1731	G
23	BB	1733	G
23	BB	1738	G
23	BB	1764	C
23	BB	1773	A
23	BB	1782	U
23	BB	1800	C
23	BB	1816	C
23	BB	1829	A
23	BB	1870	C
23	BB	1876	A
23	BB	1884	G
23	BB	1906	G
23	BB	1913	A
23	BB	1927	A
23	BB	1929	G
23	BB	1930	G
23	BB	1937	A
23	BB	1938	A
23	BB	1939	U
23	BB	1940	U
23	BB	1944	U
23	BB	1955	U
23	BB	1963	U
23	BB	1966	A
23	BB	1967	C
23	BB	1970	A
23	BB	1971	U
23	BB	1972	G
23	BB	1991	U
23	BB	1993	U
23	BB	1996	C
23	BB	1997	C
23	BB	2020	A
23	BB	2022	U
23	BB	2023	C
23	BB	2031	A
23	BB	2043	C
23	BB	2055	C

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Mol	Chain	Res	Type
23	BB	2056	G
23	BB	2060	A
23	BB	2061	G
23	BB	2062	A
23	BB	2069	G
23	BB	2096	C
23	BB	2102	G
23	BB	2103	C
23	BB	2108	A
23	BB	2134	A
23	BB	2136	G
23	BB	2137	U
23	BB	2138	G
23	BB	2144	G
23	BB	2145	C
23	BB	2146	C
23	BB	2147	A
23	BB	2148	G
23	BB	2149	U
23	BB	2152	G
23	BB	2153	C
23	BB	2154	A
23	BB	2156	G
23	BB	2157	G
23	BB	2180	U
23	BB	2181	U
23	BB	2182	U
23	BB	2183	A
23	BB	2184	A
23	BB	2187	U
23	BB	2188	U
23	BB	2192	U
23	BB	2198	A
23	BB	2199	A
23	BB	2203	U
23	BB	2204	G
23	BB	2212	A
23	BB	2225	A
23	BB	2238	G
23	BB	2239	G
23	BB	2250	G
23	BB	2266	A

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Mol	Chain	Res	Type
23	BB	2268	A
23	BB	2279	G
23	BB	2283	C
23	BB	2287	A
23	BB	2288	A
23	BB	2305	U
23	BB	2307	G
23	BB	2308	G
23	BB	2311	A
23	BB	2321	U
23	BB	2322	A
23	BB	2325	G
23	BB	2335	A
23	BB	2337	G
23	BB	2345	G
23	BB	2347	C
23	BB	2361	G
23	BB	2379	G
23	BB	2383	G
23	BB	2385	C
23	BB	2396	G
23	BB	2402	U
23	BB	2406	A
23	BB	2423	U
23	BB	2425	A
23	BB	2426	A
23	BB	2429	G
23	BB	2430	A
23	BB	2434	A
23	BB	2441	U
23	BB	2448	A
23	BB	2472	G
23	BB	2476	A
23	BB	2491	U
23	BB	2502	G
23	BB	2505	G
23	BB	2506	U
23	BB	2518	A
23	BB	2535	G
23	BB	2552	U
23	BB	2554	U
23	BB	2566	A

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Mol	Chain	Res	Type
23	BB	2567	G
23	BB	2573	C
23	BB	2582	G
23	BB	2586	U
23	BB	2609	U
23	BB	2613	U
23	BB	2619	C
23	BB	2629	U
23	BB	2630	G
23	BB	2634	A
23	BB	2646	C
23	BB	2654	A
23	BB	2682	A
23	BB	2689	U
23	BB	2690	U
23	BB	2714	G
23	BB	2739	U
23	BB	2744	G
23	BB	2751	G
23	BB	2752	C
23	BB	2757	A
23	BB	2759	G
23	BB	2760	C
23	BB	2778	A
23	BB	2791	G
23	BB	2796	U
23	BB	2799	A
23	BB	2800	A
23	BB	2801	G
23	BB	2802	G
23	BB	2808	G
23	BB	2820	A
23	BB	2821	A
23	BB	2823	A
23	BB	2833	U
23	BB	2834	G
23	BB	2836	U
23	BB	2866	U
23	BB	2867	G
23	BB	2872	A
23	BB	2873	A
23	BB	2883	A

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Mol	Chain	Res	Type
23	BB	2901	C
23	BB	2902	C
23	BB	2903	U
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	51	A
1	CA	52	C
1	CA	55	A
1	CA	61	G
1	CA	71	A
1	CA	72	A
1	CA	76	G
1	CA	83	C
1	CA	84	U
1	CA	87	C
1	CA	94	G
1	CA	97	G
1	CA	108	G
1	CA	119	A
1	CA	121	U
1	CA	122	G
1	CA	131	A
1	CA	151	A
1	CA	182	A
1	CA	183	C
1	CA	191	G
1	CA	197	A
1	CA	209	U
1	CA	210	C
1	CA	215	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

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Mol	Chain	Res	Type
1	CA	257	G
1	CA	258	G
1	CA	266	G
1	CA	267	C
1	CA	280	C
1	CA	289	G
1	CA	316	C
1	CA	321	A
1	CA	328	C
1	CA	329	A
1	CA	330	C
1	CA	332	G
1	CA	345	C
1	CA	346	G
1	CA	352	C
1	CA	354	G
1	CA	367	U
1	CA	373	A
1	CA	374	A
1	CA	381	C
1	CA	382	A
1	CA	384	G
1	CA	397	A
1	CA	398	U
1	CA	406	G
1	CA	408	A
1	CA	409	U
1	CA	411	A
1	CA	412	A
1	CA	413	G
1	CA	414	A
1	CA	421	U
1	CA	422	C
1	CA	424	G
1	CA	428	G
1	CA	429	U
1	CA	430	A
1	CA	435	A
1	CA	438	U
1	CA	461	A
1	CA	462	G
1	CA	463	U

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Mol	Chain	Res	Type
1	CA	464	U
1	CA	465	A
1	CA	466	A
1	CA	467	U
1	CA	468	A
1	CA	484	G
1	CA	485	U
1	CA	493	A
1	CA	500	G
1	CA	509	A
1	CA	518	C
1	CA	527	G
1	CA	532	A
1	CA	547	A
1	CA	559	A
1	CA	562	U
1	CA	572	A
1	CA	573	A
1	CA	576	C
1	CA	577	G
1	CA	639	G
1	CA	653	U
1	CA	665	A
1	CA	687	A
1	CA	695	A
1	CA	700	G
1	CA	721	G
1	CA	724	G
1	CA	731	G
1	CA	733	G
1	CA	747	A
1	CA	748	G
1	CA	755	G
1	CA	781	A
1	CA	782	A
1	CA	787	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

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Mol	Chain	Res	Type
1	CA	819	A
1	CA	821	G
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	846	G
1	CA	847	G
1	CA	907	A
1	CA	914	A
1	CA	926	G
1	CA	927	G
1	CA	934	C
1	CA	935	A
1	CA	960	U
1	CA	961	U
1	CA	969	A
1	CA	971	G
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	994	A
1	CA	1004	A
1	CA	1009	U
1	CA	1020	G
1	CA	1025	U
1	CA	1027	C
1	CA	1028	C
1	CA	1030	U
1	CA	1031	C
1	CA	1034	G
1	CA	1049	U
1	CA	1050	G
1	CA	1054	C
1	CA	1065	U
1	CA	1066	C

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Mol	Chain	Res	Type
1	CA	1085	U
1	CA	1094	G
1	CA	1095	U
1	CA	1101	A
1	CA	1118	U
1	CA	1136	C
1	CA	1137	C
1	CA	1138	G
1	CA	1139	G
1	CA	1140	C
1	CA	1158	C
1	CA	1159	U
1	CA	1168	U
1	CA	1169	A
1	CA	1174	G
1	CA	1181	G
1	CA	1182	G
1	CA	1183	U
1	CA	1184	G
1	CA	1196	A
1	CA	1197	A
1	CA	1201	A
1	CA	1202	U
1	CA	1211	U
1	CA	1212	U
1	CA	1213	A
1	CA	1225	A
1	CA	1226	C
1	CA	1227	A
1	CA	1240	U
1	CA	1241	G
1	CA	1256	A
1	CA	1257	A
1	CA	1278	G
1	CA	1279	G
1	CA	1280	A
1	CA	1281	C
1	CA	1286	U
1	CA	1299	A
1	CA	1300	G
1	CA	1305	G
1	CA	1316	G

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Mol	Chain	Res	Type
1	CA	1317	C
1	CA	1319	A
1	CA	1320	C
1	CA	1323	G
1	CA	1336	C
1	CA	1338	G
1	CA	1363	A
1	CA	1364	U
1	CA	1381	U
1	CA	1398	A
1	CA	1400	C
1	CA	1419	G
1	CA	1432	G
1	CA	1446	A
1	CA	1451	U
1	CA	1452	C
1	CA	1492	A
1	CA	1494	G
1	CA	1497	G
1	CA	1503	A
1	CA	1506	U
1	CA	1507	A
1	CA	1517	G
1	CA	1520	C
1	CA	1529	G
1	CA	1530	G
1	CA	1533	C
1	CA	1534	A
22	DA	4	C
22	DA	9	G
22	DA	16	G
22	DA	24	G
22	DA	26	C
22	DA	29	A
22	DA	30	C
22	DA	35	C
22	DA	42	C
22	DA	43	C
22	DA	66	A
22	DA	67	G
22	DA	88	C
22	DA	90	C

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Mol	Chain	Res	Type
22	DA	99	A
22	DA	109	A
23	DB	27	G
23	DB	33	C
23	DB	34	U
23	DB	46	G
23	DB	51	G
23	DB	63	A
23	DB	64	A
23	DB	71	A
23	DB	74	A
23	DB	75	G
23	DB	79	C
23	DB	99	U
23	DB	100	U
23	DB	101	A
23	DB	102	U
23	DB	103	A
23	DB	114	U
23	DB	119	A
23	DB	120	U
23	DB	125	A
23	DB	126	A
23	DB	139	U
23	DB	140	C
23	DB	141	G
23	DB	142	A
23	DB	143	C
23	DB	160	A
23	DB	162	U
23	DB	163	C
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	225	C
23	DB	230	G
23	DB	233	A
23	DB	248	G

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Mol	Chain	Res	Type
23	DB	250	G
23	DB	255	A
23	DB	265	A
23	DB	266	G
23	DB	271	G
23	DB	277	G
23	DB	278	A
23	DB	280	U
23	DB	281	C
23	DB	282	A
23	DB	284	U
23	DB	286	U
23	DB	287	G
23	DB	288	U
23	DB	289	G
23	DB	295	G
23	DB	299	A
23	DB	311	A
23	DB	323	C
23	DB	329	G
23	DB	330	A
23	DB	333	G
23	DB	346	A
23	DB	347	A
23	DB	350	G
23	DB	358	U
23	DB	371	A
23	DB	372	G
23	DB	383	C
23	DB	386	G
23	DB	387	U
23	DB	396	G
23	DB	411	G
23	DB	412	A
23	DB	423	A
23	DB	424	G
23	DB	444	C
23	DB	451	U
23	DB	455	C
23	DB	456	C
23	DB	457	A
23	DB	479	A

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Mol	Chain	Res	Type
23	DB	480	A
23	DB	481	G
23	DB	491	G
23	DB	504	A
23	DB	505	A
23	DB	508	A
23	DB	512	G
23	DB	527	C
23	DB	531	C
23	DB	532	A
23	DB	533	G
23	DB	544	C
23	DB	545	U
23	DB	546	U
23	DB	547	A
23	DB	548	G
23	DB	549	G
23	DB	550	C
23	DB	561	G
23	DB	563	A
23	DB	573	U
23	DB	574	A
23	DB	575	A
23	DB	603	A
23	DB	613	A
23	DB	614	A
23	DB	615	U
23	DB	616	A
23	DB	627	A
23	DB	637	A
23	DB	645	C
23	DB	646	U
23	DB	653	U
23	DB	654	A
23	DB	656	G
23	DB	671	C
23	DB	686	U
23	DB	717	C
23	DB	718	A
23	DB	719	C
23	DB	730	A
23	DB	747	U

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Mol	Chain	Res	Type
23	DB	764	A
23	DB	775	G
23	DB	782	A
23	DB	784	G
23	DB	785	G
23	DB	805	G
23	DB	812	C
23	DB	819	A
23	DB	827	U
23	DB	828	U
23	DB	846	U
23	DB	847	U
23	DB	859	G
23	DB	869	G
23	DB	874	G
23	DB	875	G
23	DB	876	C
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	953	G
23	DB	955	U
23	DB	961	C
23	DB	973	A
23	DB	974	G
23	DB	983	A
23	DB	985	C
23	DB	991	C
23	DB	995	C
23	DB	996	A
23	DB	1012	U
23	DB	1013	C
23	DB	1022	G
23	DB	1024	G
23	DB	1025	G
23	DB	1033	U
23	DB	1046	A

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Mol	Chain	Res	Type
23	DB	1047	G
23	DB	1048	A
23	DB	1070	A
23	DB	1088	A
23	DB	1090	A
23	DB	1098	A
23	DB	1111	A
23	DB	1112	G
23	DB	1116	G
23	DB	1122	G
23	DB	1126	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	1142	A
23	DB	1143	A
23	DB	1157	G
23	DB	1174	U
23	DB	1176	U
23	DB	1195	G
23	DB	1204	A
23	DB	1205	A
23	DB	1206	G
23	DB	1211	C
23	DB	1212	G
23	DB	1237	A
23	DB	1238	G
23	DB	1241	A
23	DB	1242	U
23	DB	1247	A
23	DB	1248	G
23	DB	1250	G
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

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Mol	Chain	Res	Type
23	DB	1276	A
23	DB	1301	A
23	DB	1302	A
23	DB	1321	A
23	DB	1325	U
23	DB	1337	G
23	DB	1341	G
23	DB	1345	C
23	DB	1365	A
23	DB	1368	G
23	DB	1379	U
23	DB	1383	A
23	DB	1384	A
23	DB	1396	U
23	DB	1397	U
23	DB	1416	G
23	DB	1419	A
23	DB	1420	A
23	DB	1426	G
23	DB	1427	A
23	DB	1428	C
23	DB	1434	A
23	DB	1451	C
23	DB	1453	A
23	DB	1454	C
23	DB	1459	G
23	DB	1461	C
23	DB	1470	A
23	DB	1471	G
23	DB	1476	U
23	DB	1477	A
23	DB	1478	G
23	DB	1482	G
23	DB	1490	A
23	DB	1493	C
23	DB	1497	U
23	DB	1504	A
23	DB	1507	C
23	DB	1508	A
23	DB	1509	A
23	DB	1510	G
23	DB	1524	G

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Mol	Chain	Res	Type
23	DB	1535	A
23	DB	1540	G
23	DB	1552	A
23	DB	1558	C
23	DB	1559	U
23	DB	1567	G
23	DB	1569	A
23	DB	1578	U
23	DB	1583	A
23	DB	1584	U
23	DB	1585	C
23	DB	1607	C
23	DB	1608	A
23	DB	1610	A
23	DB	1613	G
23	DB	1616	A
23	DB	1634	A
23	DB	1635	A
23	DB	1640	A
23	DB	1647	U
23	DB	1648	U
23	DB	1674	G
23	DB	1700	A
23	DB	1713	A
23	DB	1715	G
23	DB	1716	U
23	DB	1727	C
23	DB	1730	C
23	DB	1731	G
23	DB	1733	G
23	DB	1738	G
23	DB	1746	A
23	DB	1764	C
23	DB	1772	A
23	DB	1773	A
23	DB	1800	C
23	DB	1816	C
23	DB	1829	A
23	DB	1870	C
23	DB	1872	A
23	DB	1876	A
23	DB	1884	G

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Mol	Chain	Res	Type
23	DB	1906	G
23	DB	1912	A
23	DB	1913	A
23	DB	1914	C
23	DB	1927	A
23	DB	1929	G
23	DB	1930	G
23	DB	1937	A
23	DB	1938	A
23	DB	1939	U
23	DB	1940	U
23	DB	1944	U
23	DB	1955	U
23	DB	1963	U
23	DB	1967	C
23	DB	1970	A
23	DB	1971	U
23	DB	1972	G
23	DB	1991	U
23	DB	1993	U
23	DB	1997	C
23	DB	2020	A
23	DB	2022	U
23	DB	2023	C
23	DB	2031	A
23	DB	2033	A
23	DB	2043	C
23	DB	2055	C
23	DB	2056	G
23	DB	2060	A
23	DB	2061	G
23	DB	2062	A
23	DB	2069	G
23	DB	2096	C
23	DB	2099	U
23	DB	2102	G
23	DB	2106	U
23	DB	2107	G
23	DB	2108	A
23	DB	2109	U
23	DB	2110	G
23	DB	2135	A

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Mol	Chain	Res	Type
23	DB	2138	G
23	DB	2144	G
23	DB	2147	A
23	DB	2148	G
23	DB	2149	U
23	DB	2156	G
23	DB	2157	G
23	DB	2180	U
23	DB	2190	G
23	DB	2193	G
23	DB	2198	A
23	DB	2203	U
23	DB	2204	G
23	DB	2212	A
23	DB	2225	A
23	DB	2238	G
23	DB	2239	G
23	DB	2250	G
23	DB	2266	A
23	DB	2268	A
23	DB	2283	C
23	DB	2287	A
23	DB	2288	A
23	DB	2297	A
23	DB	2305	U
23	DB	2307	G
23	DB	2308	G
23	DB	2311	A
23	DB	2320	U
23	DB	2321	U
23	DB	2322	A
23	DB	2325	G
23	DB	2335	A
23	DB	2337	G
23	DB	2347	C
23	DB	2361	G
23	DB	2379	G
23	DB	2383	G
23	DB	2385	C
23	DB	2396	G
23	DB	2402	U
23	DB	2406	A

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Mol	Chain	Res	Type
23	DB	2423	U
23	DB	2425	A
23	DB	2426	A
23	DB	2429	G
23	DB	2430	A
23	DB	2434	A
23	DB	2441	U
23	DB	2448	A
23	DB	2472	G
23	DB	2476	A
23	DB	2491	U
23	DB	2502	G
23	DB	2505	G
23	DB	2506	U
23	DB	2518	A
23	DB	2535	G
23	DB	2554	U
23	DB	2566	A
23	DB	2567	G
23	DB	2573	C
23	DB	2586	U
23	DB	2609	U
23	DB	2613	U
23	DB	2629	U
23	DB	2630	G
23	DB	2634	A
23	DB	2646	C
23	DB	2654	A
23	DB	2682	A
23	DB	2689	U
23	DB	2690	U
23	DB	2714	G
23	DB	2739	U
23	DB	2744	G
23	DB	2748	A
23	DB	2757	A
23	DB	2760	C
23	DB	2778	A
23	DB	2791	G
23	DB	2796	U
23	DB	2799	A
23	DB	2800	A

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Mol	Chain	Res	Type
23	DB	2801	G
23	DB	2802	G
23	DB	2808	G
23	DB	2820	A
23	DB	2821	A
23	DB	2823	A
23	DB	2832	U
23	DB	2833	U
23	DB	2834	G
23	DB	2836	U
23	DB	2850	A
23	DB	2866	U
23	DB	2867	G
23	DB	2872	A
23	DB	2873	A
23	DB	2883	A
23	DB	2903	U

All (79) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	51	A
1	AA	81	A
1	AA	239	U
1	AA	243	A
1	AA	279	A
1	AA	328	C
1	AA	366	A
1	AA	372	C
1	AA	428	G
1	AA	429	U
1	AA	484	G
1	AA	960	U
1	AA	975	A
1	AA	1049	U
1	AA	1065	U
1	AA	1124	G
1	AA	1168	U
1	AA	1201	A
1	AA	1226	C
1	AA	1397	C
1	AA	1451	U

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Mol	Chain	Res	Type
23	BB	63	A
23	BB	102	U
23	BB	162	U
23	BB	508	A
23	BB	546	U
23	BB	670	A
23	BB	1205	A
23	BB	1210	G
23	BB	1301	A
23	BB	1419	A
23	BB	1943	U
23	BB	2062	A
23	BB	2282	G
23	BB	2336	A
23	BB	2425	A
23	BB	2756	U
23	BB	2798	U
1	CA	51	A
1	CA	239	U
1	CA	243	A
1	CA	279	A
1	CA	328	C
1	CA	366	A
1	CA	372	C
1	CA	428	G
1	CA	429	U
1	CA	484	G
1	CA	960	U
1	CA	975	A
1	CA	1049	U
1	CA	1065	U
1	CA	1168	U
1	CA	1201	A
1	CA	1226	C
1	CA	1397	C
1	CA	1451	U
23	DB	63	A
23	DB	125	A
23	DB	139	U
23	DB	162	U
23	DB	508	A
23	DB	544	C

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Mol	Chain	Res	Type
23	DB	670	A
23	DB	1126	A
23	DB	1205	A
23	DB	1210	G
23	DB	1301	A
23	DB	1419	A
23	DB	1911	U
23	DB	1943	U
23	DB	2148	G
23	DB	2282	G
23	DB	2336	A
23	DB	2425	A
23	DB	2756	U
23	DB	2798	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 monosaccharides in this entry.

5.6 Ligand geometry (i)

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

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
55	LLL	BB	3111	-	29,33,33	2.33	11 (37%)	34,49,49	1.20	4 (11%)
55	LLL	AA	1661	-	29,33,33	2.37	11 (37%)	34,49,49	1.26	4 (11%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
55	LLL	CA	1662	-	29,33,33	2.37	11 (37%)	34,49,49	1.26	4 (11%)
55	LLL	DB	3112	-	29,33,33	2.38	12 (41%)	34,49,49	1.23	5 (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
55	LLL	BB	3111	-	-	1/11/65/65	0/3/3/3
55	LLL	AA	1661	-	-	1/11/65/65	0/3/3/3
55	LLL	CA	1662	-	-	1/11/65/65	0/3/3/3
55	LLL	DB	3112	-	-	1/11/65/65	0/3/3/3

All (45) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	CA	1662	LLL	O53-C53	6.36	1.52	1.43
55	AA	1661	LLL	O53-C53	6.34	1.52	1.43
55	DB	3112	LLL	O53-C53	6.32	1.52	1.43
55	BB	3111	LLL	O53-C53	6.27	1.52	1.43
55	CA	1662	LLL	O53-C13	4.57	1.51	1.41
55	AA	1661	LLL	O53-C13	4.55	1.51	1.41
55	DB	3112	LLL	O53-C13	4.49	1.51	1.41
55	BB	3111	LLL	O53-C13	4.46	1.51	1.41
55	AA	1661	LLL	O51-C11	3.56	1.50	1.41
55	CA	1662	LLL	O51-C11	3.55	1.50	1.41
55	BB	3111	LLL	C41-C51	3.45	1.60	1.51
55	DB	3112	LLL	O51-C11	3.44	1.50	1.41
55	BB	3111	LLL	O51-C11	3.43	1.50	1.41
55	DB	3112	LLL	C41-C51	3.42	1.60	1.51
55	AA	1661	LLL	C41-C51	3.42	1.60	1.51
55	CA	1662	LLL	C41-C51	3.42	1.60	1.51
55	DB	3112	LLL	C23-C33	3.12	1.60	1.53
55	AA	1661	LLL	C23-C33	3.11	1.60	1.53
55	CA	1662	LLL	C23-C33	3.06	1.60	1.53
55	BB	3111	LLL	C23-C33	2.95	1.59	1.53
55	DB	3112	LLL	C52-C42	2.91	1.60	1.52
55	DB	3112	LLL	C42-C32	2.89	1.59	1.53
55	BB	3111	LLL	C42-C32	2.85	1.59	1.53
55	AA	1661	LLL	C52-C42	2.79	1.59	1.52
55	CA	1662	LLL	C52-C42	2.75	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	BB	3111	LLL	C52-C42	2.73	1.59	1.52
55	CA	1662	LLL	C42-C32	2.71	1.59	1.53
55	AA	1661	LLL	C42-C32	2.67	1.59	1.53
55	AA	1661	LLL	C22-C32	2.62	1.59	1.53
55	CA	1662	LLL	C22-C32	2.59	1.59	1.53
55	DB	3112	LLL	C22-C32	2.57	1.59	1.53
55	AA	1661	LLL	O51-C51	2.48	1.48	1.44
55	DB	3112	LLL	O51-C51	2.45	1.48	1.44
55	BB	3111	LLL	C52-C62	2.45	1.58	1.52
55	CA	1662	LLL	O51-C51	2.45	1.48	1.44
55	DB	3112	LLL	C52-C62	2.42	1.58	1.52
55	BB	3111	LLL	O51-C51	2.41	1.48	1.44
55	AA	1661	LLL	C31-C21	2.40	1.59	1.52
55	AA	1661	LLL	C52-C62	2.39	1.58	1.52
55	CA	1662	LLL	C31-C21	2.38	1.59	1.52
55	DB	3112	LLL	C31-C21	2.35	1.59	1.52
55	BB	3111	LLL	C22-C32	2.34	1.58	1.53
55	CA	1662	LLL	C52-C62	2.33	1.58	1.52
55	BB	3111	LLL	C31-C21	2.31	1.59	1.52
55	DB	3112	LLL	C22-C12	2.01	1.58	1.53

All (17) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
55	CA	1662	LLL	C53-O53-C13	3.78	117.62	111.53
55	DB	3112	LLL	C53-O53-C13	3.76	117.59	111.53
55	AA	1661	LLL	C53-O53-C13	3.68	117.45	111.53
55	BB	3111	LLL	C53-O53-C13	3.68	117.45	111.53
55	AA	1661	LLL	C13-O62-C62	2.64	124.50	117.96
55	AA	1661	LLL	O43-C43-C83	-2.58	102.47	108.13
55	DB	3112	LLL	O43-C43-C83	-2.55	102.54	108.13
55	BB	3111	LLL	O43-C43-C83	-2.50	102.66	108.13
55	CA	1662	LLL	C13-O62-C62	2.47	124.09	117.96
55	CA	1662	LLL	O43-C43-C83	-2.47	102.73	108.13
55	AA	1661	LLL	C11-O51-C51	2.44	115.84	113.13
55	CA	1662	LLL	C11-O51-C51	2.42	115.81	113.13
55	BB	3111	LLL	C11-O51-C51	2.40	115.79	113.13
55	DB	3112	LLL	C11-O51-C51	2.39	115.78	113.13
55	BB	3111	LLL	C93-N33-C33	2.17	117.55	114.38
55	DB	3112	LLL	C93-N33-C33	2.12	117.48	114.38
55	DB	3112	LLL	C13-O62-C62	2.07	123.08	117.96

There are no chirality outliers.

All (4) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
55	AA	1661	LLL	C23-C33-N33-C93
55	BB	3111	LLL	C23-C33-N33-C93
55	CA	1662	LLL	C23-C33-N33-C93
55	DB	3112	LLL	C23-C33-N33-C93

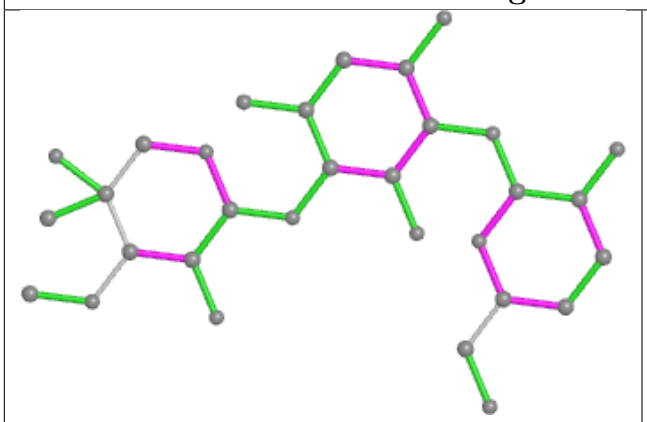
There are no ring outliers.

2 monomers are involved in 5 short contacts:

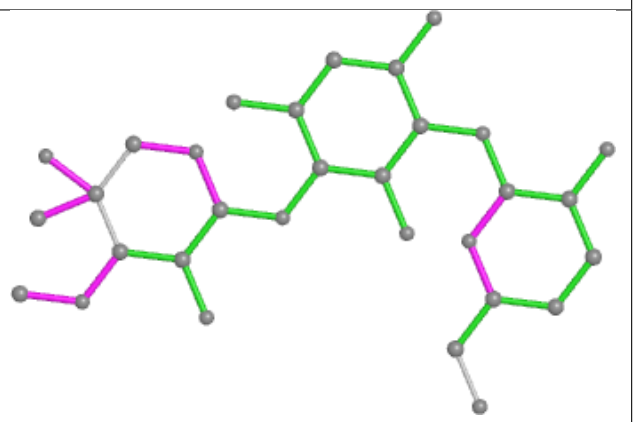
Mol	Chain	Res	Type	Clashes	Symm-Clashes
55	BB	3111	LLL	2	0
55	CA	1662	LLL	3	0

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.

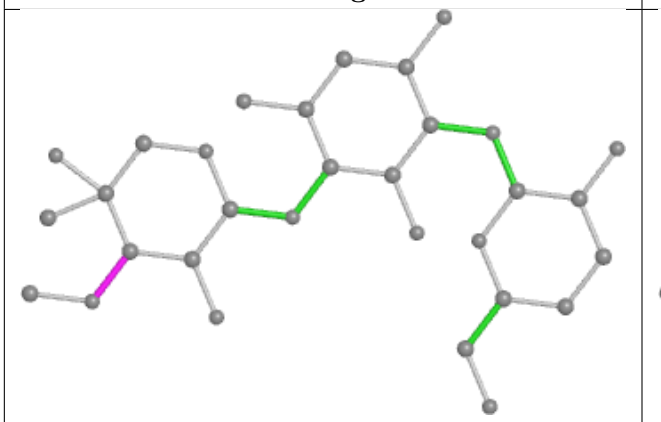
Ligand LLL BB 3111



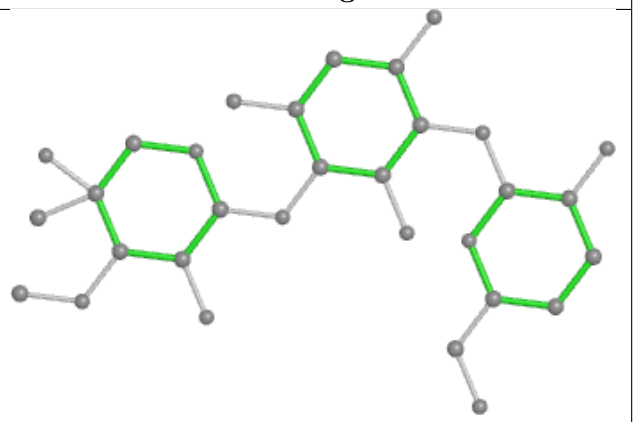
Bond lengths



Bond angles

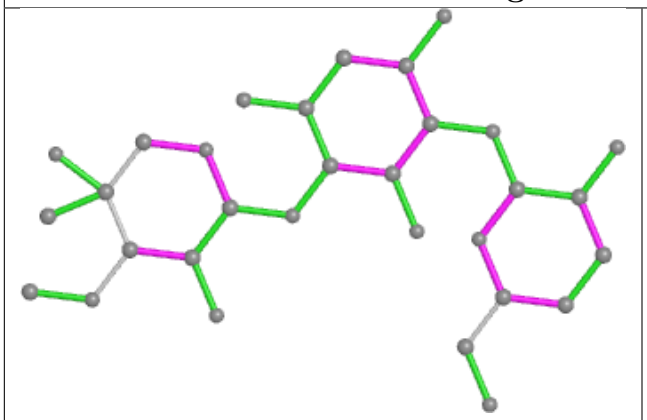


Torsions

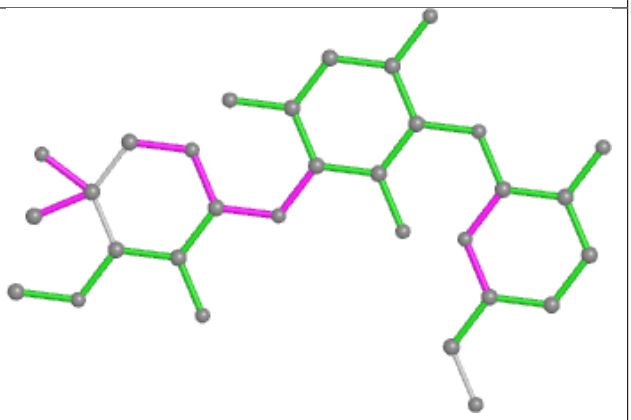


Rings

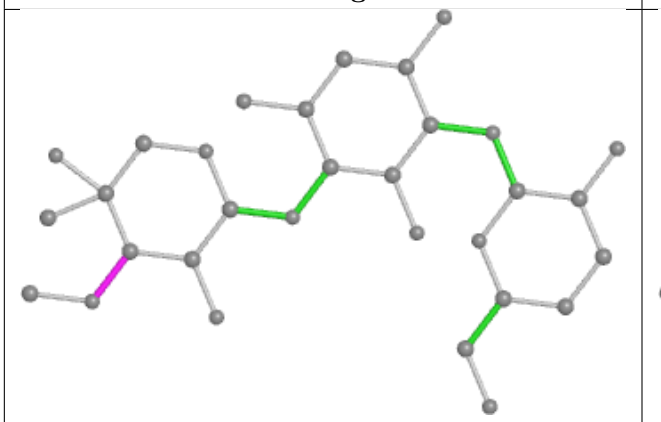
Ligand LLL AA 1661



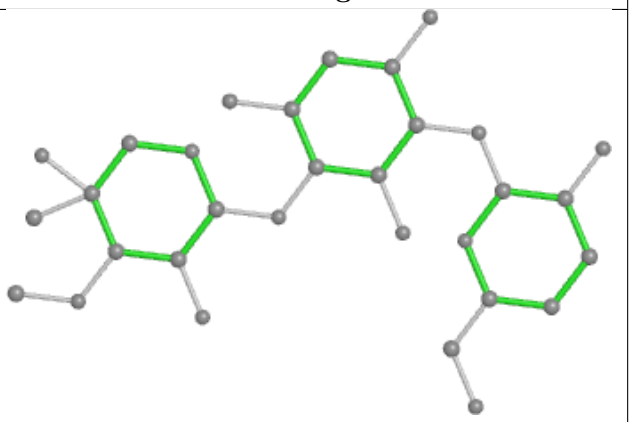
Bond lengths



Bond angles

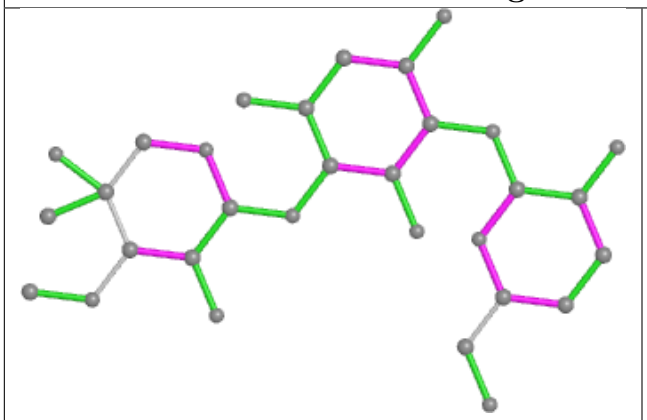


Torsions

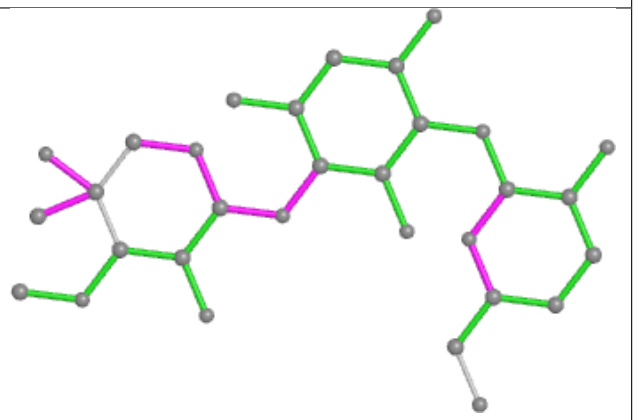


Rings

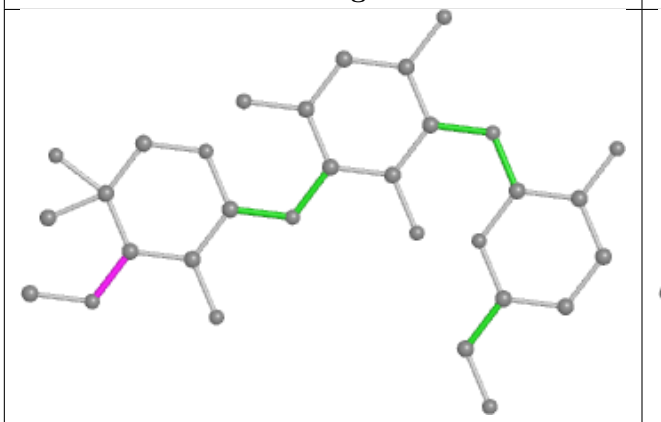
Ligand LLL CA 1662



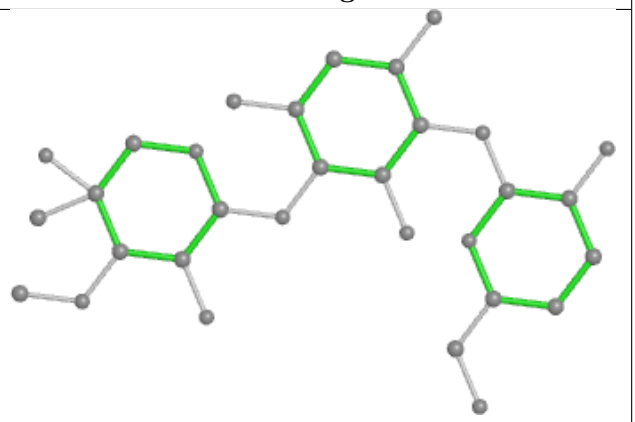
Bond lengths



Bond angles

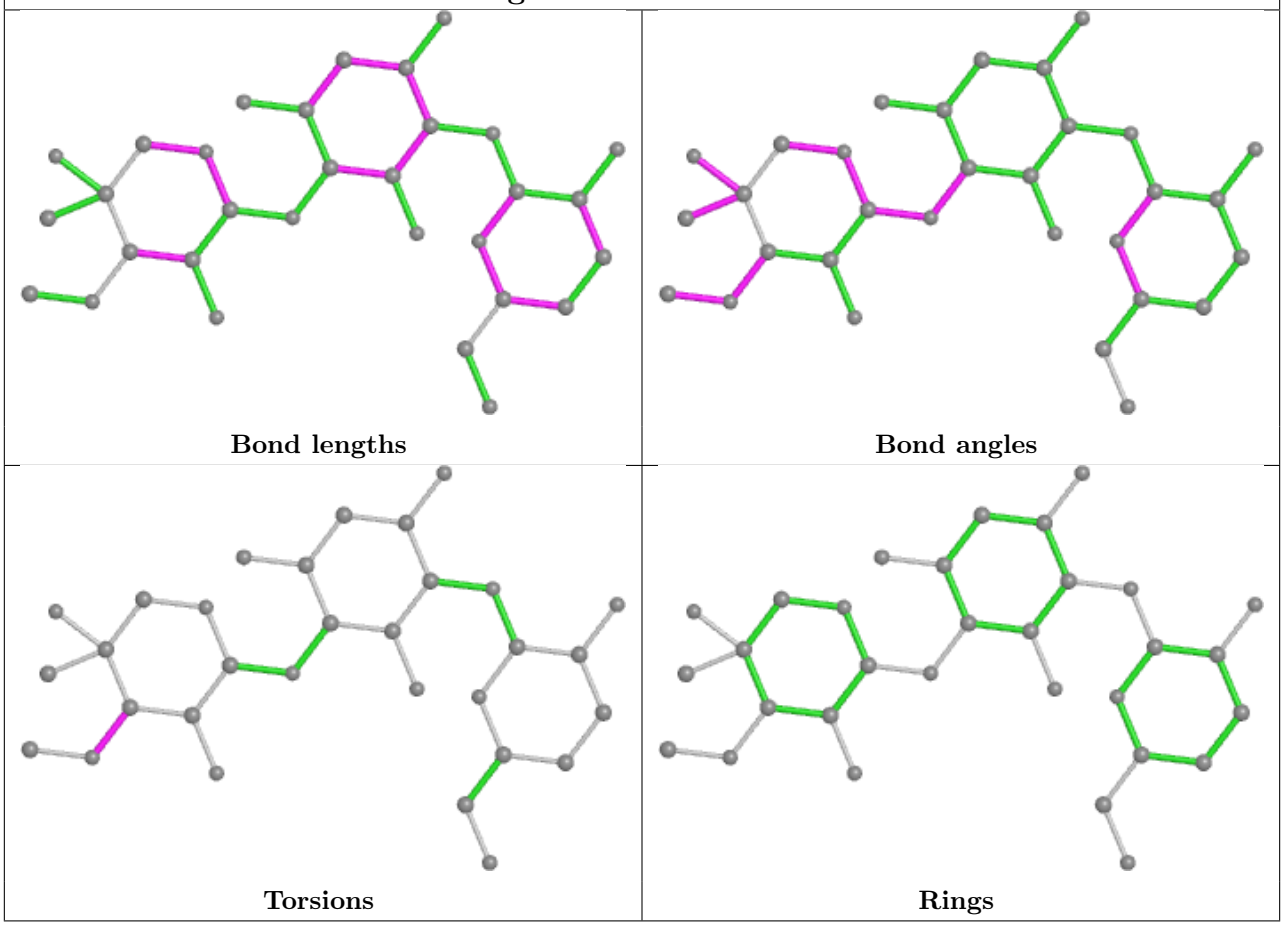


Torsions



Rings

Ligand LLL DB 3112



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 (i)

6.1 Protein, DNA and RNA chains (i)

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
1	AA	1530/1542 (99%)	-0.34	8 (0%)	91	85	13, 75, 157, 180	0
1	CA	1530/1542 (99%)	-0.40	1 (0%)	95	94	8, 52, 139, 180	0
2	AC	206/232 (88%)	-0.19	3 (1%)	73	64	5, 72, 147, 180	0
2	CC	206/232 (88%)	-0.10	1 (0%)	91	85	6, 72, 131, 180	0
3	AD	205/205 (100%)	0.19	8 (3%)	39	31	20, 95, 159, 180	0
3	CD	205/205 (100%)	-0.17	0	100	100	5, 56, 145, 180	0
4	AE	150/166 (90%)	0.16	3 (2%)	65	56	7, 69, 146, 180	0
4	CE	150/166 (90%)	0.16	3 (2%)	65	56	5, 49, 112, 180	0
5	AF	100/135 (74%)	0.24	6 (6%)	21	17	5, 69, 150, 177	0
5	CF	100/135 (74%)	-0.01	1 (1%)	82	74	5, 72, 143, 166	0
6	AG	150/178 (84%)	0.01	4 (2%)	54	44	20, 97, 159, 175	0
6	CG	152/178 (85%)	-0.14	1 (0%)	87	82	29, 85, 147, 180	0
7	AH	129/129 (100%)	0.26	8 (6%)	20	17	26, 80, 143, 177	0
7	CH	129/129 (100%)	0.00	0	100	100	6, 49, 117, 174	0
8	AI	127/129 (98%)	0.01	2 (1%)	72	62	18, 89, 171, 180	0
8	CI	127/129 (98%)	-0.05	2 (1%)	72	62	22, 92, 160, 180	0
9	AJ	98/103 (95%)	0.21	2 (2%)	65	56	16, 92, 169, 180	0
9	CJ	98/103 (95%)	0.30	5 (5%)	28	24	26, 87, 153, 180	0
10	AK	117/128 (91%)	-0.16	0	100	100	7, 59, 119, 180	0
10	CK	117/128 (91%)	-0.19	2 (1%)	70	60	5, 52, 120, 180	0
11	AL	123/123 (100%)	0.10	3 (2%)	59	49	14, 78, 152, 180	0
11	CL	123/123 (100%)	-0.05	0	100	100	5, 46, 127, 170	0
12	AM	114/117 (97%)	-0.18	0	100	100	40, 114, 180, 180	0
12	CM	113/117 (96%)	-0.23	0	100	100	27, 100, 173, 180	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
13	AN	96/100 (96%)	-0.01	0	100	100	8, 86, 158, 180	0
13	CN	96/100 (96%)	0.08	1 (1%)	82	74	14, 87, 147, 178	0
14	AO	88/89 (98%)	-0.35	0	100	100	5, 76, 128, 180	0
14	CO	88/89 (98%)	-0.20	0	100	100	10, 63, 132, 159	0
15	AP	82/82 (100%)	0.67	3 (3%)	41	32	24, 94, 154, 180	0
15	CP	80/82 (97%)	0.43	5 (6%)	20	16	5, 46, 128, 180	0
16	AQ	80/83 (96%)	0.02	0	100	100	36, 96, 168, 180	0
16	CQ	81/83 (97%)	0.02	0	100	100	5, 52, 135, 180	0
17	AR	55/74 (74%)	-0.05	1 (1%)	68	59	14, 70, 148, 180	0
17	CR	55/74 (74%)	0.39	3 (5%)	25	21	12, 64, 136, 180	0
18	AS	79/91 (86%)	0.40	6 (7%)	13	11	44, 120, 176, 180	0
18	CS	80/91 (87%)	-0.18	0	100	100	34, 107, 180, 180	0
19	AT	85/86 (98%)	-0.20	0	100	100	34, 101, 168, 180	0
19	CT	85/86 (98%)	-0.40	0	100	100	5, 62, 140, 180	0
20	AB	218/240 (90%)	0.13	8 (3%)	41	32	18, 97, 160, 180	0
20	CB	218/240 (90%)	0.11	6 (2%)	53	42	16, 93, 160, 180	0
21	AU	51/70 (72%)	0.00	1 (1%)	65	56	27, 89, 171, 180	0
21	CU	51/70 (72%)	-0.11	0	100	100	23, 81, 137, 180	0
22	BA	117/120 (97%)	-0.42	0	100	100	49, 85, 136, 180	0
22	DA	117/120 (97%)	-0.35	2 (1%)	70	60	36, 88, 148, 180	0
23	BB	2841/2904 (97%)	-0.16	14 (0%)	91	85	6, 60, 150, 180	0
23	DB	2841/2904 (97%)	-0.20	8 (0%)	94	90	5, 46, 154, 180	0
24	BI	141/141 (100%)	0.97	24 (17%)	1	2	72, 166, 180, 180	0
24	DI	141/141 (100%)	0.58	12 (8%)	10	9	63, 162, 180, 180	0
25	BC	271/272 (99%)	0.09	2 (0%)	87	82	5, 47, 107, 156	0
25	DC	271/272 (99%)	0.03	0	100	100	5, 38, 99, 145	0
26	BD	209/209 (100%)	0.38	16 (7%)	13	11	8, 72, 145, 180	0
26	DD	209/209 (100%)	0.10	1 (0%)	91	85	5, 51, 131, 180	0
27	BK	121/123 (98%)	0.62	5 (4%)	37	30	16, 62, 142, 180	0
27	DK	121/123 (98%)	0.24	0	100	100	5, 42, 103, 180	0
28	BP	114/114 (100%)	1.10	18 (15%)	2	2	28, 86, 155, 173	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
28	DP	114/114 (100%)	-0.22	0 100 100	5, 52, 119, 161	0
29	BE	201/201 (100%)	0.34	14 (6%) 16 13	5, 76, 143, 180	0
29	DE	201/201 (100%)	0.08	5 (2%) 57 47	5, 66, 138, 180	0
30	BY	58/58 (100%)	0.28	3 (5%) 27 24	22, 84, 137, 180	0
30	DY	58/58 (100%)	-0.05	1 (1%) 70 60	10, 66, 149, 158	0
31	B0	56/56 (100%)	0.16	2 (3%) 42 34	5, 81, 149, 180	0
31	D0	56/56 (100%)	-0.25	0 100 100	9, 54, 119, 180	0
32	B4	38/38 (100%)	0.08	1 (2%) 56 46	5, 71, 153, 168	0
32	D4	38/38 (100%)	-0.01	0 100 100	17, 62, 132, 171	0
33	B1	50/54 (92%)	0.40	3 (6%) 21 17	32, 87, 132, 174	0
33	D1	50/54 (92%)	0.17	2 (4%) 38 30	24, 73, 125, 155	0
34	B3	64/64 (100%)	0.59	4 (6%) 20 16	19, 64, 105, 133	0
34	D3	64/64 (100%)	0.14	1 (1%) 72 62	6, 49, 107, 180	0
35	BV	94/94 (100%)	-0.11	1 (1%) 80 72	37, 92, 143, 180	0
35	DV	94/94 (100%)	-0.09	0 100 100	27, 94, 160, 180	0
36	B2	46/46 (100%)	0.00	0 100 100	5, 50, 123, 143	0
36	D2	46/46 (100%)	-0.12	0 100 100	7, 43, 103, 180	0
37	BL	143/144 (99%)	0.25	1 (0%) 87 82	7, 72, 131, 180	0
37	DL	143/144 (99%)	0.12	0 100 100	5, 61, 128, 162	0
38	BM	136/136 (100%)	0.08	4 (2%) 51 41	16, 68, 144, 165	0
38	DM	136/136 (100%)	0.22	4 (2%) 51 41	5, 63, 134, 171	0
39	BX	63/63 (100%)	0.26	2 (3%) 47 37	24, 92, 169, 180	0
39	DX	63/63 (100%)	-0.09	2 (3%) 47 37	38, 94, 166, 180	0
40	BH	149/149 (100%)	1.22	28 (18%) 1 1	13, 125, 180, 180	0
40	DH	149/149 (100%)	0.38	6 (4%) 38 30	5, 109, 171, 180	0
41	BJ	142/142 (100%)	0.03	2 (1%) 75 65	13, 77, 132, 166	0
41	DJ	142/142 (100%)	-0.13	1 (0%) 87 82	5, 65, 128, 180	0
42	BN	120/127 (94%)	0.06	1 (0%) 86 79	5, 68, 136, 180	0
42	DN	120/127 (94%)	-0.38	0 100 100	5, 44, 116, 141	0
43	BO	116/117 (99%)	0.39	8 (6%) 16 13	29, 94, 144, 180	0
43	DO	116/117 (99%)	-0.10	2 (1%) 70 60	5, 93, 156, 180	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
44	BQ	117/117 (100%)	-0.37	0	100	100	5, 72, 134, 171	0
44	DQ	117/117 (100%)	0.05	1 (0%)	84	77	5, 50, 131, 156	0
45	BS	110/110 (100%)	0.44	2 (1%)	68	59	5, 67, 129, 180	0
45	DS	110/110 (100%)	0.29	0	100	100	5, 50, 120, 157	0
46	BU	102/103 (99%)	0.71	6 (5%)	22	18	13, 88, 148, 177	0
46	DU	102/103 (99%)	-0.00	1 (0%)	82	74	26, 93, 154, 180	0
47	BF	178/178 (100%)	0.29	2 (1%)	80	72	39, 115, 174, 180	0
47	DF	178/178 (100%)	0.60	13 (7%)	15	12	22, 106, 175, 180	0
48	BG	176/176 (100%)	0.23	2 (1%)	80	72	8, 102, 172, 180	0
48	DG	176/176 (100%)	0.03	3 (1%)	70	60	32, 104, 164, 180	0
49	BR	103/103 (100%)	0.14	3 (2%)	51	41	18, 99, 151, 173	0
49	DR	103/103 (100%)	0.29	4 (3%)	39	31	5, 85, 144, 180	0
50	BT	93/100 (93%)	0.23	2 (2%)	62	52	13, 83, 160, 180	0
50	DT	93/100 (93%)	0.31	3 (3%)	47	37	15, 79, 167, 180	0
51	BZ	77/78 (98%)	0.29	3 (3%)	39	31	12, 57, 112, 152	0
51	DZ	77/78 (98%)	-0.13	1 (1%)	77	68	5, 56, 101, 131	0
52	BW	79/84 (94%)	0.60	7 (8%)	9	8	19, 88, 139, 180	0
52	DW	79/84 (94%)	0.03	3 (3%)	40	32	5, 79, 143, 180	0
53	B6	185/185 (100%)	2.72	83 (44%)	0	0	23, 123, 180, 180	0
53	D6	185/185 (100%)	1.06	49 (26%)	0	0	5, 104, 180, 180	0
All	All	20787/21416 (97%)	0.00	485 (2%)	60	51	5, 69, 159, 180	0

All (485) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
53	B6	96	GLY	15.3
53	B6	97	ASP	15.0
53	B6	98	ALA	13.2
53	B6	88	LEU	10.7
53	B6	94	ASN	10.0
53	B6	95	LYS	9.7
53	B6	86	SER	9.6
53	B6	53	ASN	9.6
53	B6	68	VAL	9.1
53	B6	85	ASP	8.5

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Mol	Chain	Res	Type	RSRZ
53	B6	87	ASP	8.5
53	B6	99	LEU	8.4
53	B6	51	PRO	8.3
53	B6	90	LEU	8.3
53	B6	52	LEU	8.1
53	B6	84	ARG	8.0
53	B6	70	SER	8.0
53	B6	89	GLY	8.0
53	B6	74	ASN	7.9
53	B6	58	VAL	7.8
53	B6	69	GLN	7.8
53	B6	35	PRO	7.7
53	B6	59	THR	7.4
53	B6	54	GLN	7.3
40	BH	45	GLU	7.2
53	B6	72	ASP	7.2
40	BH	142	VAL	7.1
53	B6	34	ASN	7.1
53	B6	47	GLY	6.8
53	B6	73	GLN	6.7
53	B6	91	ASN	6.6
53	B6	43	VAL	6.3
53	B6	75	ALA	6.2
53	D6	36	ALA	6.2
53	B6	36	ALA	6.1
53	B6	76	LEU	5.9
53	B6	57	THR	5.8
23	BB	139	U	5.8
24	DI	83	ALA	5.7
53	B6	30	THR	5.7
8	CI	129	ARG	5.7
53	D6	32	ARG	5.6
53	B6	62	ASP	5.5
53	D6	72	ASP	5.5
53	B6	67	VAL	5.5
53	B6	83	ILE	5.4
40	BH	130	VAL	5.4
53	B6	44	GLU	5.4
53	D6	98	ALA	5.4
23	BB	140	C	5.3
53	D6	44	GLU	5.3
53	B6	48	ALA	5.3

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Mol	Chain	Res	Type	RSRZ
53	B6	71	TRP	5.3
53	B6	103	ILE	5.3
53	B6	31	GLY	5.3
53	D6	75	ALA	5.2
39	BX	62	GLY	5.2
53	B6	38	LEU	5.1
24	DI	84	GLY	5.1
53	B6	60	ALA	5.1
53	D6	37	LEU	5.1
53	B6	32	ARG	5.0
39	DX	63	ALA	4.9
53	B6	41	LEU	4.9
53	B6	49	HIS	4.9
53	B6	82	ALA	4.8
24	DI	85	ILE	4.8
53	B6	77	LYS	4.8
53	B6	56	ALA	4.7
53	D6	95	LYS	4.7
53	B6	50	VAL	4.7
24	BI	3	LYS	4.7
47	DF	173	ASP	4.7
53	B6	37	LEU	4.6
24	DI	81	LYS	4.5
53	D6	38	LEU	4.5
26	BD	111	GLY	4.5
53	D6	40	HIS	4.5
53	B6	29	ARG	4.5
53	B6	104	PRO	4.4
53	B6	79	ILE	4.4
22	DA	88	C	4.4
53	D6	41	LEU	4.4
53	B6	55	ILE	4.4
8	AI	129	ARG	4.4
24	BI	58	ILE	4.3
15	CP	80	LYS	4.3
17	CR	19	GLU	4.3
24	BI	6	ALA	4.3
15	AP	80	LYS	4.3
24	BI	60	VAL	4.3
53	B6	78	ALA	4.2
53	D6	66	LEU	4.2
53	D6	43	VAL	4.1

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Mol	Chain	Res	Type	RSRZ
53	B6	80	GLU	4.1
11	AL	11	ARG	4.1
1	AA	79	G	4.1
53	B6	46	TYR	4.1
53	D6	76	LEU	4.0
53	D6	54	GLN	4.0
53	B6	45	TYR	3.9
15	AP	81	ALA	3.9
47	DF	10	GLU	3.9
40	BH	132	PHE	3.9
29	BE	14	VAL	3.8
7	AH	126	CYS	3.8
53	D6	42	LYS	3.8
53	B6	65	THR	3.7
24	DI	99	LYS	3.7
53	D6	71	TRP	3.7
40	DH	110	VAL	3.7
23	BB	2145	C	3.7
24	BI	97	VAL	3.7
53	B6	93	SER	3.7
33	D1	52	LYS	3.7
53	B6	66	LEU	3.7
53	D6	99	LEU	3.7
53	D6	29	ARG	3.7
48	BG	42	VAL	3.6
53	B6	61	PRO	3.6
51	BZ	78	TYR	3.6
40	BH	80	ILE	3.6
26	BD	25	THR	3.6
53	B6	110	ARG	3.6
23	BB	546	U	3.5
4	AE	158	LYS	3.5
53	D6	45	TYR	3.5
53	D6	100	TYR	3.5
28	BP	47	ILE	3.5
24	BI	59	THR	3.5
47	DF	169	LEU	3.5
28	BP	91	VAL	3.5
23	DB	1175	A	3.5
46	BU	93	ARG	3.4
51	BZ	77	LYS	3.4
53	D6	49	HIS	3.4

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Mol	Chain	Res	Type	RSRZ
24	DI	98	GLY	3.4
40	BH	86	ASP	3.4
53	B6	42	LYS	3.4
24	DI	52	LEU	3.4
40	BH	147	VAL	3.4
1	AA	78	A	3.4
53	D6	46	TYR	3.4
53	B6	101	ILE	3.3
20	AB	193	ASP	3.3
53	D6	65	THR	3.3
1	AA	86	G	3.3
24	BI	5	GLN	3.3
53	B6	109	GLU	3.3
43	DO	3	LYS	3.3
20	AB	192	PRO	3.3
40	BH	55	GLU	3.3
28	BP	75	THR	3.2
4	CE	158	LYS	3.2
53	B6	113	ASP	3.2
51	DZ	78	TYR	3.2
24	BI	34	ILE	3.2
53	D6	73	GLN	3.2
30	DY	58	GLU	3.2
53	D6	55	ILE	3.2
6	AG	78	ARG	3.2
24	DI	82	ALA	3.2
48	BG	43	LYS	3.2
28	BP	90	ALA	3.1
53	D6	103	ILE	3.1
28	BP	58	PHE	3.1
3	AD	22	SER	3.1
23	BB	654	A	3.1
53	D6	77	LYS	3.1
6	AG	79	VAL	3.1
26	BD	27	ILE	3.1
53	D6	57	THR	3.1
23	DB	645	C	3.1
26	BD	187	LEU	3.1
40	BH	81	ALA	3.1
40	BH	146	VAL	3.1
26	BD	186	LEU	3.0
26	BD	188	LEU	3.0

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Mol	Chain	Res	Type	RSRZ
39	BX	63	ALA	3.0
24	BI	18	ASN	3.0
40	BH	61	VAL	3.0
47	DF	30	VAL	3.0
52	DW	84	GLU	3.0
29	BE	119	ILE	3.0
53	D6	58	VAL	3.0
40	BH	60	GLU	3.0
53	D6	34	ASN	3.0
31	B0	55	ALA	3.0
23	BB	2147	A	3.0
10	CK	18	GLY	3.0
29	BE	150	THR	3.0
43	BO	88	LYS	3.0
29	BE	188	MET	3.0
53	B6	81	LYS	2.9
47	DF	174	PHE	2.9
23	BB	1730	C	2.9
53	B6	63	PRO	2.9
17	AR	19	GLU	2.9
9	CJ	89	ARG	2.9
53	D6	84	ARG	2.9
24	BI	1	ALA	2.9
53	B6	92	PRO	2.9
3	AD	178	GLU	2.9
26	BD	4	LEU	2.9
15	CP	52	LEU	2.9
53	D6	39	LEU	2.9
26	DD	32	ASN	2.9
40	BH	46	PHE	2.9
40	BH	85	GLY	2.9
40	DH	141	LYS	2.9
18	AS	30	LEU	2.9
53	B6	100	TYR	2.8
53	D6	59	THR	2.8
29	DE	119	ILE	2.8
24	DI	49	GLU	2.8
40	DH	72	ILE	2.8
53	D6	61	PRO	2.8
41	BJ	86	GLN	2.8
53	D6	79	ILE	2.8
28	BP	48	ALA	2.8

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Mol	Chain	Res	Type	RSRZ
38	BM	103	TYR	2.8
9	CJ	81	GLU	2.8
24	BI	2	LYS	2.8
1	AA	412	A	2.8
53	B6	39	LEU	2.8
11	AL	13	ARG	2.8
26	BD	3	GLY	2.8
28	BP	71	ARG	2.8
40	BH	123	ARG	2.8
23	BB	2146	C	2.8
40	BH	124	THR	2.8
46	BU	84	PHE	2.8
26	BD	26	VAL	2.7
24	BI	19	PRO	2.7
29	BE	1	MET	2.7
6	CG	4	ARG	2.7
45	BS	74	ILE	2.7
53	D6	101	ILE	2.7
53	B6	33	ALA	2.7
53	B6	106	LEU	2.7
28	BP	43	GLU	2.7
47	DF	172	PHE	2.7
23	DB	2134	A	2.7
4	AE	54	GLU	2.7
28	BP	73	PHE	2.7
49	BR	20	VAL	2.7
10	CK	13	LYS	2.7
26	BD	7	LYS	2.7
27	BK	104	THR	2.7
40	BH	90	LEU	2.7
28	BP	86	LYS	2.6
23	BB	2157	G	2.6
28	BP	21	PRO	2.6
28	BP	46	VAL	2.6
15	CP	47	GLU	2.6
6	AG	4	ARG	2.6
40	DH	140	ALA	2.6
7	AH	128	VAL	2.6
53	B6	180	GLU	2.6
7	AH	102	VAL	2.6
24	BI	4	VAL	2.6
24	DI	80	LYS	2.6

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Mol	Chain	Res	Type	RSRZ
29	DE	169	VAL	2.6
17	CR	31	TYR	2.6
17	CR	71	ASP	2.6
38	BM	67	VAL	2.6
23	BB	62	U	2.6
53	D6	50	VAL	2.6
24	BI	21	PRO	2.6
23	DB	2133	G	2.5
33	D1	51	ALA	2.5
18	AS	65	MET	2.5
24	BI	141	ASP	2.5
53	B6	40	HIS	2.5
49	DR	50	GLY	2.5
27	BK	84	CYS	2.5
40	BH	92	GLY	2.5
53	D6	67	VAL	2.5
24	BI	32	VAL	2.5
44	DQ	90	ASP	2.5
2	CC	55	VAL	2.5
8	CI	40	ARG	2.5
20	CB	14	HIS	2.5
26	BD	2	ILE	2.5
42	BN	17	ARG	2.5
43	BO	92	PHE	2.5
43	DO	2	ASP	2.5
29	DE	124	PHE	2.5
38	DM	31	PHE	2.5
53	D6	53	ASN	2.5
40	BH	101	ASP	2.5
40	BH	48	GLU	2.5
47	DF	178	LYS	2.5
32	B4	7	VAL	2.5
7	AH	129	ALA	2.5
20	CB	216	VAL	2.4
23	DB	613	A	2.4
52	BW	45	HIS	2.4
53	D6	68	VAL	2.4
53	D6	83	ILE	2.4
53	B6	114	LEU	2.4
3	AD	108	ALA	2.4
7	AH	127	TYR	2.4
30	BY	55	LYS	2.4

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Mol	Chain	Res	Type	RSRZ
18	AS	2	ARG	2.4
2	AC	90	VAL	2.4
47	DF	27	VAL	2.4
53	D6	97	ASP	2.4
20	CB	68	PHE	2.4
20	CB	212	TYR	2.4
53	D6	94	ASN	2.4
39	DX	62	GLY	2.4
3	AD	106	PHE	2.4
34	B3	19	GLY	2.4
52	BW	64	GLY	2.4
47	DF	171	ALA	2.4
27	BK	103	VAL	2.4
34	B3	14	LYS	2.4
24	DI	53	PRO	2.4
40	DH	38	PRO	2.4
23	DB	359	G	2.4
20	CB	163	ILE	2.4
1	AA	209	U	2.4
23	BB	138	U	2.4
50	DT	71	GLY	2.4
40	BH	93	SER	2.4
49	DR	95	ASP	2.4
46	BU	83	GLY	2.4
34	B3	22	LYS	2.3
18	AS	40	PHE	2.3
24	DI	48	ILE	2.3
7	AH	110	MET	2.3
53	D6	62	ASP	2.3
6	AG	61	PHE	2.3
28	BP	96	LEU	2.3
29	DE	188	MET	2.3
53	D6	93	SER	2.3
53	D6	96	GLY	2.3
28	BP	57	ALA	2.3
53	B6	26	ALA	2.3
23	DB	548	G	2.3
29	BE	144	GLU	2.3
33	B1	52	LYS	2.3
5	AF	5	GLU	2.3
5	AF	100	SER	2.3
29	BE	124	PHE	2.3

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Mol	Chain	Res	Type	RSRZ
53	B6	105	PRO	2.3
51	BZ	76	GLU	2.3
9	AJ	36	VAL	2.3
38	DM	29	GLY	2.3
40	BH	131	SER	2.3
29	BE	155	GLU	2.3
34	B3	13	PHE	2.3
11	AL	47	ALA	2.3
21	AU	3	ILE	2.3
29	BE	152	GLU	2.3
47	BF	174	PHE	2.3
52	BW	42	THR	2.3
43	BO	28	VAL	2.3
3	AD	107	GLY	2.3
1	CA	1032	G	2.3
49	DR	76	LYS	2.3
24	BI	29	GLN	2.3
43	BO	89	ASP	2.3
20	CB	69	VAL	2.3
28	BP	76	HIS	2.3
29	BE	187	VAL	2.3
53	D6	74	ASN	2.3
24	BI	37	PHE	2.3
49	BR	35	PHE	2.3
40	BH	128	HIS	2.3
15	CP	37	GLY	2.3
25	BC	179	GLU	2.3
3	AD	174	ALA	2.2
38	DM	104	GLU	2.2
28	BP	88	ARG	2.2
28	BP	102	ARG	2.2
38	BM	105	MET	2.2
9	CJ	84	VAL	2.2
31	B0	54	ILE	2.2
47	DF	33	ILE	2.2
20	AB	87	ASP	2.2
48	DG	88	LEU	2.2
40	BH	145	ASN	2.2
23	DB	1459	G	2.2
24	BI	66	PHE	2.2
40	DH	18	GLN	2.2
26	BD	10	GLY	2.2

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Mol	Chain	Res	Type	RSRZ
38	DM	28	PHE	2.2
43	BO	26	LEU	2.2
47	BF	155	ILE	2.2
20	AB	188	THR	2.2
25	BC	114	GLN	2.2
26	BD	200	ASP	2.2
41	BJ	54	ILE	2.2
18	AS	60	PHE	2.2
22	DA	52	A	2.2
27	BK	102	PRO	2.2
4	CE	12	GLU	2.2
24	BI	14	ALA	2.2
5	AF	61	LEU	2.2
15	AP	82	ALA	2.2
9	CJ	88	MET	2.2
7	AH	101	ALA	2.2
40	BH	12	LEU	2.2
43	BO	24	THR	2.2
35	BV	57	TYR	2.2
45	BS	7	HIS	2.2
27	BK	73	ASP	2.2
4	CE	13	LYS	2.2
13	CN	42	ASN	2.2
26	BD	8	LYS	2.2
9	AJ	76	ILE	2.2
20	AB	195	VAL	2.1
23	BB	1175	A	2.1
24	BI	95	ASP	2.1
52	DW	6	GLY	2.1
40	BH	125	THR	2.1
7	AH	44	PHE	2.1
49	BR	46	GLU	2.1
46	BU	89	GLY	2.1
29	BE	143	LEU	2.1
5	AF	8	PHE	2.1
24	BI	33	ASN	2.1
47	DF	21	TYR	2.1
18	AS	29	PRO	2.1
53	D6	51	PRO	2.1
40	BH	1	MET	2.1
43	BO	38	GLN	2.1
50	DT	12	ARG	2.1

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Mol	Chain	Res	Type	RSRZ
33	B1	51	ALA	2.1
2	AC	48	LYS	2.1
15	CP	41	PRO	2.1
40	BH	100	ALA	2.1
43	BO	35	ILE	2.1
46	DU	32	LYS	2.1
48	DG	41	GLU	2.1
4	AE	85	LYS	2.1
5	CF	59	TYR	2.1
26	BD	1	MET	2.1
47	DF	82	TYR	2.1
23	BB	653	U	2.1
37	BL	2	ARG	2.1
34	D3	15	LYS	2.1
20	AB	55	GLU	2.1
50	DT	90	GLY	2.1
1	AA	80	A	2.1
9	CJ	91	ASP	2.1
24	BI	27	LEU	2.1
29	BE	11	ALA	2.1
52	BW	82	GLU	2.1
8	AI	40	ARG	2.1
52	BW	36	ILE	2.1
46	BU	14	THR	2.0
30	BY	1	ALA	2.0
28	BP	70	GLU	2.0
24	BI	87	SER	2.0
29	BE	151	GLY	2.0
41	DJ	52	ASP	2.0
50	BT	65	GLY	2.0
50	BT	1	MET	2.0
38	BM	66	ARG	2.0
1	AA	562	U	2.0
52	DW	45	HIS	2.0
23	BB	715	A	2.0
1	AA	87	C	2.0
29	DE	120	VAL	2.0
20	AB	63	LYS	2.0
5	AF	7	VAL	2.0
47	DF	24	VAL	2.0
49	DR	48	LYS	2.0
52	BW	19	ARG	2.0

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Mol	Chain	Res	Type	RSRZ
26	BD	203	VAL	2.0
3	AD	177	MET	2.0
20	AB	198	VAL	2.0
53	B6	64	ARG	2.0
3	AD	24	VAL	2.0
29	BE	120	VAL	2.0
33	B1	16	THR	2.0
46	BU	92	VAL	2.0
2	AC	167	TYR	2.0
52	BW	84	GLU	2.0
5	AF	62	MET	2.0
48	DG	44	HIS	2.0
30	BY	54	VAL	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 monosaccharides 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, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	AA	1625	1/1	0.26	0.88	84,84,84,84	1
54	MG	AA	1608	1/1	0.48	0.29	147,147,147,147	0
54	MG	BB	3033	1/1	0.48	0.65	141,141,141,141	0
54	MG	AA	1635	1/1	0.52	0.09	103,103,103,103	0
54	MG	CA	1627	1/1	0.52	0.33	69,69,69,69	1
54	MG	AA	1622	1/1	0.53	0.39	163,163,163,163	0
54	MG	AA	1626	1/1	0.54	0.18	49,49,49,49	1
54	MG	AA	1647	1/1	0.55	0.99	180,180,180,180	0
54	MG	DB	3060	1/1	0.55	0.10	104,104,104,104	0
54	MG	BB	3042	1/1	0.56	0.12	135,135,135,135	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	AA	1639	1/1	0.60	0.34	134,134,134,134	0
54	MG	AA	1632	1/1	0.65	0.26	62,62,62,62	0
54	MG	AA	1619	1/1	0.65	0.25	180,180,180,180	0
54	MG	AA	1637	1/1	0.66	2.40	151,151,151,151	0
54	MG	DB	3066	1/1	0.68	0.30	158,158,158,158	0
54	MG	DB	3059	1/1	0.69	0.23	166,166,166,166	0
54	MG	AA	1659	1/1	0.69	0.45	180,180,180,180	0
54	MG	AA	1650	1/1	0.69	0.14	122,122,122,122	0
54	MG	BB	3093	1/1	0.70	0.37	131,131,131,131	0
54	MG	CA	1619	1/1	0.70	0.19	70,70,70,70	0
54	MG	CA	1614	1/1	0.71	0.16	90,90,90,90	0
54	MG	AA	1614	1/1	0.71	0.11	113,113,113,113	0
54	MG	AA	1656	1/1	0.71	0.79	161,161,161,161	0
54	MG	AA	1646	1/1	0.73	0.18	104,104,104,104	0
54	MG	AA	1602	1/1	0.73	0.18	147,147,147,147	0
54	MG	AA	1657	1/1	0.76	0.42	124,124,124,124	0
54	MG	CA	1623	1/1	0.76	0.08	173,173,173,173	0
54	MG	BB	3080	1/1	0.79	0.20	77,77,77,77	0
54	MG	AA	1627	1/1	0.79	0.19	68,68,68,68	0
54	MG	BB	3079	1/1	0.79	0.20	63,63,63,63	0
54	MG	BB	3097	1/1	0.80	0.07	88,88,88,88	0
54	MG	CE	201	1/1	0.80	0.22	113,113,113,113	0
54	MG	DB	3057	1/1	0.80	0.10	77,77,77,77	0
54	MG	BB	3013	1/1	0.81	0.18	92,92,92,92	0
54	MG	CA	1641	1/1	0.81	0.17	42,42,42,42	0
54	MG	AA	1613	1/1	0.81	0.08	71,71,71,71	0
54	MG	DB	3034	1/1	0.81	0.20	69,69,69,69	0
54	MG	BB	3043	1/1	0.82	0.08	122,122,122,122	0
54	MG	CA	1616	1/1	0.83	0.14	88,88,88,88	0
54	MG	DB	3058	1/1	0.83	0.85	162,162,162,162	0
54	MG	CA	1658	1/1	0.83	0.34	53,53,53,53	0
54	MG	AA	1623	1/1	0.83	0.65	73,73,73,73	1
54	MG	CA	1635	1/1	0.83	0.14	98,98,98,98	0
54	MG	BB	3010	1/1	0.84	0.13	40,40,40,40	0
54	MG	CA	1643	1/1	0.84	0.07	32,32,32,32	0
55	LLL	DB	3112	31/31	0.84	0.34	121,121,121,121	0
54	MG	DB	3100	1/1	0.85	0.21	46,46,46,46	0
54	MG	AA	1620	1/1	0.85	0.06	113,113,113,113	0
54	MG	CA	1638	1/1	0.86	0.11	98,98,98,98	0
54	MG	DB	3030	1/1	0.86	0.17	10,10,10,10	0
54	MG	AA	1651	1/1	0.86	0.09	112,112,112,112	0
54	MG	BB	3019	1/1	0.86	0.09	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	AA	1658	1/1	0.86	0.09	85,85,85,85	0
55	LLL	BB	3111	31/31	0.87	0.26	107,107,107,107	0
54	MG	AA	1606	1/1	0.87	0.08	47,47,47,47	0
54	MG	DB	3029	1/1	0.88	0.14	59,59,59,59	0
54	MG	BB	3081	1/1	0.88	0.17	16,16,16,16	0
54	MG	BB	3049	1/1	0.88	0.15	35,35,35,35	0
54	MG	DB	3055	1/1	0.88	0.13	41,41,41,41	0
54	MG	DB	3013	1/1	0.88	0.14	41,41,41,41	0
54	MG	DB	3026	1/1	0.88	0.18	54,54,54,54	0
54	MG	BB	3053	1/1	0.89	0.07	79,79,79,79	0
54	MG	CA	1629	1/1	0.89	0.12	65,65,65,65	1
54	MG	BB	3092	1/1	0.89	0.08	45,45,45,45	0
54	MG	BB	3008	1/1	0.89	0.20	75,75,75,75	0
54	MG	DB	3015	1/1	0.89	0.10	24,24,24,24	0
54	MG	AA	1645	1/1	0.89	0.09	95,95,95,95	0
54	MG	BB	3057	1/1	0.90	0.36	65,65,65,65	0
54	MG	DB	3072	1/1	0.90	0.09	54,54,54,54	0
54	MG	DB	3033	1/1	0.90	0.12	43,43,43,43	0
54	MG	BB	3072	1/1	0.90	0.14	79,79,79,79	0
54	MG	BB	3037	1/1	0.90	0.11	44,44,44,44	0
54	MG	BB	3078	1/1	0.91	0.21	101,101,101,101	0
54	MG	AA	1601	1/1	0.91	0.12	41,41,41,41	0
54	MG	CA	1621	1/1	0.91	0.53	110,110,110,110	0
54	MG	BB	3061	1/1	0.91	0.10	56,56,56,56	0
54	MG	CA	1646	1/1	0.91	0.08	99,99,99,99	0
54	MG	CA	1649	1/1	0.91	0.14	127,127,127,127	0
54	MG	DB	3074	1/1	0.91	0.09	17,17,17,17	0
54	MG	CA	1609	1/1	0.91	0.04	84,84,84,84	0
54	MG	DB	3052	1/1	0.91	0.24	113,113,113,113	0
54	MG	AA	1649	1/1	0.91	0.06	82,82,82,82	0
54	MG	CA	1659	1/1	0.92	0.09	90,90,90,90	0
54	MG	DB	3053	1/1	0.92	0.09	80,80,80,80	0
54	MG	CA	1660	1/1	0.92	0.10	63,63,63,63	0
54	MG	AA	1615	1/1	0.92	0.23	106,106,106,106	0
54	MG	DB	3006	1/1	0.92	0.14	15,15,15,15	0
54	MG	BB	3088	1/1	0.92	0.08	36,36,36,36	0
54	MG	BB	3018	1/1	0.92	0.18	50,50,50,50	0
54	MG	DB	3064	1/1	0.92	0.10	19,19,19,19	0
54	MG	BB	3003	1/1	0.92	0.09	51,51,51,51	0
54	MG	AA	1630	1/1	0.92	0.11	88,88,88,88	0
54	MG	BB	3108	1/1	0.92	0.22	44,44,44,44	0
54	MG	CA	1657	1/1	0.92	0.24	89,89,89,89	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	AA	1641	1/1	0.92	0.04	69,69,69,69	0
54	MG	DB	3045	1/1	0.92	0.07	68,68,68,68	0
54	MG	DB	3003	1/1	0.93	0.16	33,33,33,33	0
54	MG	CA	1620	1/1	0.93	0.14	37,37,37,37	0
54	MG	CA	1642	1/1	0.93	0.13	108,108,108,108	0
54	MG	CA	1606	1/1	0.93	0.13	138,138,138,138	0
54	MG	AA	1624	1/1	0.93	0.10	77,77,77,77	0
54	MG	CA	1624	1/1	0.93	0.12	56,56,56,56	0
54	MG	BB	3017	1/1	0.93	0.17	73,73,73,73	0
54	MG	CA	1615	1/1	0.93	0.09	180,180,180,180	0
54	MG	BB	3035	1/1	0.93	0.13	82,82,82,82	0
54	MG	DB	3035	1/1	0.93	0.19	75,75,75,75	0
54	MG	DB	3080	1/1	0.93	0.08	5,5,5,5	0
54	MG	DB	3037	1/1	0.93	0.17	54,54,54,54	0
54	MG	CA	1636	1/1	0.93	0.05	92,92,92,92	0
54	MG	BB	3004	1/1	0.93	0.19	73,73,73,73	0
54	MG	BB	3065	1/1	0.94	0.06	5,5,5,5	0
54	MG	AA	1660	1/1	0.94	0.08	37,37,37,37	0
54	MG	BB	3100	1/1	0.94	0.22	151,151,151,151	0
54	MG	DB	3061	1/1	0.94	0.09	69,69,69,69	0
54	MG	CA	1652	1/1	0.94	0.17	65,65,65,65	0
54	MG	CA	1654	1/1	0.94	0.10	59,59,59,59	0
54	MG	DB	3042	1/1	0.94	0.07	23,23,23,23	0
54	MG	AA	1631	1/1	0.94	0.12	88,88,88,88	0
54	MG	DB	3020	1/1	0.94	0.20	13,13,13,13	0
54	MG	DB	3093	1/1	0.94	0.17	10,10,10,10	0
54	MG	DB	3097	1/1	0.94	0.18	64,64,64,64	0
54	MG	DB	3022	1/1	0.94	0.08	71,71,71,71	0
54	MG	DB	3106	1/1	0.94	0.18	64,64,64,64	0
54	MG	DB	3110	1/1	0.94	0.18	38,38,38,38	0
54	MG	AA	1644	1/1	0.94	0.13	98,98,98,98	0
55	LLL	CA	1662	31/31	0.94	0.22	14,14,14,14	0
54	MG	CA	1628	1/1	0.94	0.07	44,44,44,44	0
56	ZN	D4	101	1/1	0.94	0.07	45,45,45,45	0
54	MG	DB	3038	1/1	0.95	0.15	37,37,37,37	0
54	MG	CA	1651	1/1	0.95	0.11	38,38,38,38	0
54	MG	BB	3024	1/1	0.95	0.06	44,44,44,44	0
54	MG	BB	3026	1/1	0.95	0.21	43,43,43,43	0
54	MG	BB	3067	1/1	0.95	0.13	24,24,24,24	0
54	MG	BB	3027	1/1	0.95	0.13	42,42,42,42	0
54	MG	BB	3031	1/1	0.95	0.13	63,63,63,63	0
54	MG	AA	1648	1/1	0.95	0.07	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	AA	1654	1/1	0.95	0.07	82,82,82,82	0
54	MG	AA	1655	1/1	0.95	0.06	54,54,54,54	0
54	MG	CA	1625	1/1	0.95	0.18	6,6,6,6	0
54	MG	BB	3038	1/1	0.95	0.23	152,152,152,152	0
54	MG	BB	3001	1/1	0.95	0.07	29,29,29,29	0
54	MG	DB	3016	1/1	0.95	0.07	25,25,25,25	0
54	MG	AA	1636	1/1	0.95	0.06	93,93,93,93	0
54	MG	BB	3095	1/1	0.95	0.11	81,81,81,81	0
54	MG	DB	3081	1/1	0.95	0.11	19,19,19,19	0
54	MG	DB	3083	1/1	0.95	0.17	83,83,83,83	0
54	MG	DB	3089	1/1	0.95	0.19	61,61,61,61	0
54	MG	DB	3024	1/1	0.95	0.14	45,45,45,45	0
54	MG	BB	3048	1/1	0.95	0.10	7,7,7,7	0
54	MG	BB	3099	1/1	0.95	0.16	56,56,56,56	0
54	MG	AA	1618	1/1	0.95	0.13	93,93,93,93	0
54	MG	DB	3109	1/1	0.95	0.09	83,83,83,83	0
54	MG	BB	3050	1/1	0.95	0.10	33,33,33,33	0
55	LLL	AA	1661	31/31	0.95	0.21	21,21,21,21	0
54	MG	BB	3110	1/1	0.95	0.09	40,40,40,40	0
54	MG	BB	3020	1/1	0.95	0.09	36,36,36,36	0
54	MG	DB	3036	1/1	0.95	0.08	20,20,20,20	0
56	ZN	B4	101	1/1	0.95	0.09	64,64,64,64	0
54	MG	BB	3022	1/1	0.95	0.29	37,37,37,37	0
54	MG	BB	3047	1/1	0.96	0.13	116,116,116,116	0
54	MG	DB	3050	1/1	0.96	0.14	123,123,123,123	0
54	MG	BB	3009	1/1	0.96	0.14	96,96,96,96	0
54	MG	BB	3002	1/1	0.96	0.08	30,30,30,30	0
54	MG	DB	3054	1/1	0.96	0.06	29,29,29,29	0
54	MG	BB	3086	1/1	0.96	0.17	18,18,18,18	0
54	MG	BB	3034	1/1	0.96	0.24	59,59,59,59	0
54	MG	CA	1661	1/1	0.96	0.10	48,48,48,48	0
54	MG	BB	3051	1/1	0.96	0.18	65,65,65,65	0
54	MG	AA	1607	1/1	0.96	0.07	42,42,42,42	0
54	MG	BB	3054	1/1	0.96	0.14	46,46,46,46	0
54	MG	DB	3063	1/1	0.96	0.06	19,19,19,19	0
54	MG	DB	3008	1/1	0.96	0.14	17,17,17,17	0
54	MG	CA	1626	1/1	0.96	0.23	41,41,41,41	1
54	MG	DB	3068	1/1	0.96	0.17	22,22,22,22	0
54	MG	BB	3036	1/1	0.96	0.13	62,62,62,62	0
54	MG	BB	3014	1/1	0.96	0.13	58,58,58,58	0
54	MG	DB	3017	1/1	0.96	0.10	5,5,5,5	0
54	MG	AA	1603	1/1	0.96	0.10	14,14,14,14	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	CA	1633	1/1	0.96	0.14	50,50,50,50	0
54	MG	DB	3085	1/1	0.96	0.13	49,49,49,49	0
54	MG	CA	1634	1/1	0.96	0.10	23,23,23,23	0
54	MG	DB	3090	1/1	0.96	0.31	64,64,64,64	0
54	MG	DB	3092	1/1	0.96	0.15	56,56,56,56	0
54	MG	BB	3103	1/1	0.96	0.09	20,20,20,20	0
54	MG	DB	3095	1/1	0.96	0.12	88,88,88,88	0
54	MG	DB	3027	1/1	0.96	0.17	28,28,28,28	0
54	MG	BB	3107	1/1	0.96	0.08	30,30,30,30	0
54	MG	DB	3104	1/1	0.96	0.19	71,71,71,71	0
54	MG	BB	3041	1/1	0.96	0.15	8,8,8,8	0
54	MG	DB	3032	1/1	0.96	0.09	51,51,51,51	0
54	MG	BB	3071	1/1	0.96	0.09	89,89,89,89	0
54	MG	AA	1612	1/1	0.96	0.12	88,88,88,88	0
54	MG	CA	1607	1/1	0.96	0.07	83,83,83,83	0
54	MG	CA	1608	1/1	0.96	0.09	139,139,139,139	0
54	MG	BB	3077	1/1	0.96	0.07	83,83,83,83	0
54	MG	CA	1610	1/1	0.96	0.07	75,75,75,75	0
54	MG	BB	3029	1/1	0.96	0.11	17,17,17,17	0
54	MG	DB	3039	1/1	0.97	0.08	69,69,69,69	0
54	MG	CA	1648	1/1	0.97	0.19	14,14,14,14	0
54	MG	AA	1617	1/1	0.97	0.12	100,100,100,100	0
54	MG	DB	3046	1/1	0.97	0.07	11,11,11,11	0
54	MG	AA	1621	1/1	0.97	0.17	26,26,26,26	0
54	MG	AA	1605	1/1	0.97	0.09	47,47,47,47	0
54	MG	AA	1642	1/1	0.97	0.12	41,41,41,41	0
54	MG	CA	1656	1/1	0.97	0.05	11,11,11,11	0
54	MG	BB	3074	1/1	0.97	0.14	13,13,13,13	0
54	MG	CA	1611	1/1	0.97	0.06	57,57,57,57	0
54	MG	BB	3075	1/1	0.97	0.16	29,29,29,29	0
54	MG	BB	3039	1/1	0.97	0.07	5,5,5,5	0
54	MG	BB	3021	1/1	0.97	0.10	51,51,51,51	0
54	MG	AA	1652	1/1	0.97	0.08	90,90,90,90	0
54	MG	DB	3062	1/1	0.97	0.04	67,67,67,67	0
54	MG	DB	3001	1/1	0.97	0.09	6,6,6,6	0
54	MG	BB	3023	1/1	0.97	0.20	11,11,11,11	0
54	MG	DB	3065	1/1	0.97	0.06	45,45,45,45	0
54	MG	BB	3044	1/1	0.97	0.08	52,52,52,52	0
54	MG	DB	3067	1/1	0.97	0.13	16,16,16,16	0
54	MG	DB	3007	1/1	0.97	0.11	13,13,13,13	0
54	MG	AA	1653	1/1	0.97	0.18	87,87,87,87	0
54	MG	DB	3011	1/1	0.97	0.27	33,33,33,33	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BB	3005	1/1	0.97	0.19	20,20,20,20	0
54	MG	BB	3091	1/1	0.97	0.10	37,37,37,37	0
54	MG	AA	1643	1/1	0.97	0.03	29,29,29,29	0
54	MG	BB	3028	1/1	0.97	0.15	61,61,61,61	0
54	MG	DB	3018	1/1	0.97	0.10	22,22,22,22	0
54	MG	AA	1633	1/1	0.97	0.03	48,48,48,48	0
54	MG	BB	3052	1/1	0.97	0.08	36,36,36,36	0
54	MG	DB	3023	1/1	0.97	0.10	17,17,17,17	0
54	MG	CA	1630	1/1	0.97	0.28	52,52,52,52	0
54	MG	DB	3025	1/1	0.97	0.17	42,42,42,42	0
54	MG	AA	1634	1/1	0.97	0.07	67,67,67,67	0
54	MG	DB	3102	1/1	0.97	0.09	22,22,22,22	0
54	MG	BB	3032	1/1	0.97	0.21	49,49,49,49	0
54	MG	DB	3105	1/1	0.97	0.08	30,30,30,30	0
54	MG	BB	3056	1/1	0.97	0.06	31,31,31,31	0
54	MG	DB	3108	1/1	0.97	0.10	5,5,5,5	0
54	MG	AA	1616	1/1	0.97	0.06	42,42,42,42	0
54	MG	BB	3058	1/1	0.97	0.09	11,11,11,11	0
54	MG	DB	3111	1/1	0.97	0.18	32,32,32,32	0
54	MG	CA	1640	1/1	0.97	0.08	5,5,5,5	0
54	MG	AA	1628	1/1	0.97	0.12	59,59,59,59	0
54	MG	CA	1603	1/1	0.97	0.09	29,29,29,29	0
54	MG	CA	1604	1/1	0.97	0.27	16,16,16,16	0
54	MG	CA	1605	1/1	0.97	0.12	18,18,18,18	0
54	MG	CA	1647	1/1	0.97	0.07	65,65,65,65	0
54	MG	CA	1644	1/1	0.98	0.07	68,68,68,68	0
54	MG	CA	1645	1/1	0.98	0.10	66,66,66,66	0
54	MG	BB	3062	1/1	0.98	0.05	27,27,27,27	0
54	MG	DB	3040	1/1	0.98	0.09	18,18,18,18	0
54	MG	DB	3041	1/1	0.98	0.08	34,34,34,34	0
54	MG	BB	3082	1/1	0.98	0.19	5,5,5,5	0
54	MG	DB	3044	1/1	0.98	0.07	21,21,21,21	0
54	MG	BB	3083	1/1	0.98	0.21	28,28,28,28	0
54	MG	BB	3084	1/1	0.98	0.20	77,77,77,77	0
54	MG	DB	3047	1/1	0.98	0.11	19,19,19,19	0
54	MG	DB	3049	1/1	0.98	0.07	9,9,9,9	0
54	MG	BB	3063	1/1	0.98	0.14	28,28,28,28	0
54	MG	DB	3051	1/1	0.98	0.20	32,32,32,32	0
54	MG	BB	3087	1/1	0.98	0.22	114,114,114,114	0
54	MG	CA	1653	1/1	0.98	0.04	51,51,51,51	0
54	MG	BB	3064	1/1	0.98	0.08	37,37,37,37	0
54	MG	CA	1612	1/1	0.98	0.07	72,72,72,72	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	CA	1613	1/1	0.98	0.11	40,40,40,40	0
54	MG	BB	3089	1/1	0.98	0.19	25,25,25,25	0
54	MG	BB	3090	1/1	0.98	0.10	91,91,91,91	0
54	MG	AA	1610	1/1	0.98	0.06	62,62,62,62	0
54	MG	CA	1617	1/1	0.98	0.08	5,5,5,5	0
54	MG	CA	1618	1/1	0.98	0.12	30,30,30,30	0
54	MG	BB	3066	1/1	0.98	0.15	25,25,25,25	0
54	MG	DB	3002	1/1	0.98	0.08	6,6,6,6	0
54	MG	AA	1640	1/1	0.98	0.09	56,56,56,56	0
54	MG	DB	3005	1/1	0.98	0.16	45,45,45,45	0
54	MG	BB	3094	1/1	0.98	0.13	47,47,47,47	0
54	MG	CA	1622	1/1	0.98	0.10	18,18,18,18	0
54	MG	DB	3069	1/1	0.98	0.20	14,14,14,14	0
54	MG	DB	3070	1/1	0.98	0.10	38,38,38,38	0
54	MG	DB	3071	1/1	0.98	0.05	37,37,37,37	0
54	MG	BB	3069	1/1	0.98	0.14	10,10,10,10	0
54	MG	DB	3073	1/1	0.98	0.21	67,67,67,67	0
54	MG	DB	3009	1/1	0.98	0.17	18,18,18,18	0
54	MG	DB	3075	1/1	0.98	0.12	35,35,35,35	0
54	MG	DB	3076	1/1	0.98	0.14	104,104,104,104	0
54	MG	DB	3077	1/1	0.98	0.08	15,15,15,15	0
54	MG	DB	3079	1/1	0.98	0.12	34,34,34,34	0
54	MG	DB	3010	1/1	0.98	0.09	16,16,16,16	0
54	MG	BB	3096	1/1	0.98	0.15	67,67,67,67	0
54	MG	DB	3082	1/1	0.98	0.08	57,57,57,57	0
54	MG	DB	3012	1/1	0.98	0.09	12,12,12,12	0
54	MG	DB	3084	1/1	0.98	0.14	16,16,16,16	0
54	MG	BB	3070	1/1	0.98	0.19	59,59,59,59	0
54	MG	DB	3086	1/1	0.98	0.20	52,52,52,52	0
54	MG	DB	3088	1/1	0.98	0.16	46,46,46,46	0
54	MG	BB	3098	1/1	0.98	0.16	16,16,16,16	0
54	MG	BB	3007	1/1	0.98	0.07	53,53,53,53	0
54	MG	AA	1611	1/1	0.98	0.09	77,77,77,77	0
54	MG	BB	3101	1/1	0.98	0.05	5,5,5,5	0
54	MG	DB	3094	1/1	0.98	0.10	55,55,55,55	0
54	MG	DB	3019	1/1	0.98	0.06	5,5,5,5	0
54	MG	BB	3102	1/1	0.98	0.04	31,31,31,31	0
54	MG	DB	3099	1/1	0.98	0.20	5,5,5,5	0
54	MG	CA	1631	1/1	0.98	0.09	40,40,40,40	0
54	MG	CA	1632	1/1	0.98	0.08	18,18,18,18	0
54	MG	DB	3103	1/1	0.98	0.11	42,42,42,42	0
54	MG	AA	1604	1/1	0.98	0.09	19,19,19,19	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BB	3106	1/1	0.98	0.11	39,39,39,39	0
54	MG	BB	3055	1/1	0.98	0.19	53,53,53,53	0
54	MG	DB	3107	1/1	0.98	0.07	11,11,11,11	0
54	MG	BB	3046	1/1	0.98	0.08	64,64,64,64	0
54	MG	DB	3028	1/1	0.98	0.18	58,58,58,58	0
54	MG	CA	1637	1/1	0.98	0.07	92,92,92,92	0
54	MG	BB	3109	1/1	0.98	0.07	59,59,59,59	0
54	MG	DB	3031	1/1	0.98	0.07	24,24,24,24	0
54	MG	CA	1639	1/1	0.98	0.07	7,7,7,7	0
54	MG	AA	1638	1/1	0.98	0.07	20,20,20,20	0
54	MG	CA	1601	1/1	0.98	0.17	5,5,5,5	0
54	MG	BB	3012	1/1	0.98	0.09	53,53,53,53	0
54	MG	BB	3030	1/1	0.98	0.04	70,70,70,70	0
54	MG	DB	3087	1/1	0.99	0.15	75,75,75,75	0
54	MG	DB	3014	1/1	0.99	0.12	43,43,43,43	0
54	MG	BB	3025	1/1	0.99	0.06	42,42,42,42	0
54	MG	BB	3040	1/1	0.99	0.12	27,27,27,27	0
54	MG	DB	3091	1/1	0.99	0.14	5,5,5,5	0
54	MG	BB	3059	1/1	0.99	0.11	60,60,60,60	0
54	MG	BB	3085	1/1	0.99	0.11	43,43,43,43	0
54	MG	BB	3060	1/1	0.99	0.08	22,22,22,22	0
54	MG	BB	3073	1/1	0.99	0.23	38,38,38,38	0
54	MG	DB	3096	1/1	0.99	0.16	20,20,20,20	0
54	MG	DB	3043	1/1	0.99	0.08	32,32,32,32	0
54	MG	DB	3098	1/1	0.99	0.17	28,28,28,28	0
54	MG	DB	3021	1/1	0.99	0.08	51,51,51,51	0
54	MG	BB	3006	1/1	0.99	0.08	20,20,20,20	0
54	MG	DB	3101	1/1	0.99	0.25	25,25,25,25	0
54	MG	AA	1609	1/1	0.99	0.11	5,5,5,5	0
54	MG	BB	3104	1/1	0.99	0.16	28,28,28,28	0
54	MG	DB	3048	1/1	0.99	0.08	34,34,34,34	0
54	MG	BB	3105	1/1	0.99	0.05	60,60,60,60	0
54	MG	DB	3004	1/1	0.99	0.13	69,69,69,69	0
54	MG	BB	3076	1/1	0.99	0.06	20,20,20,20	0
54	MG	BB	3015	1/1	0.99	0.08	42,42,42,42	0
54	MG	DB	3078	1/1	0.99	0.08	32,32,32,32	0
54	MG	BB	3016	1/1	0.99	0.13	91,91,91,91	0
54	MG	CA	1650	1/1	0.99	0.07	33,33,33,33	0
54	MG	BB	3045	1/1	0.99	0.04	38,38,38,38	0
54	MG	DB	3056	1/1	0.99	0.12	12,12,12,12	0
54	MG	BB	3011	1/1	0.99	0.21	29,29,29,29	0
54	MG	AA	1629	1/1	0.99	0.05	26,26,26,26	0

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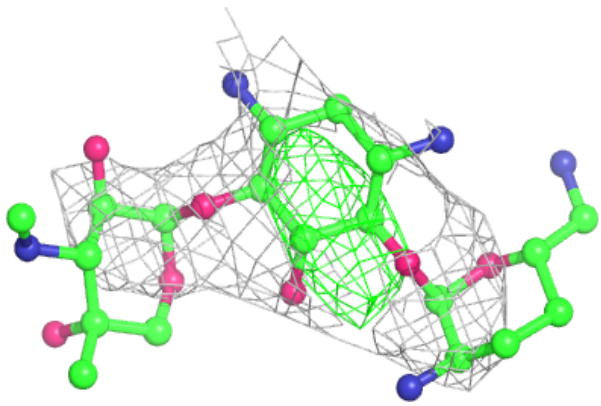
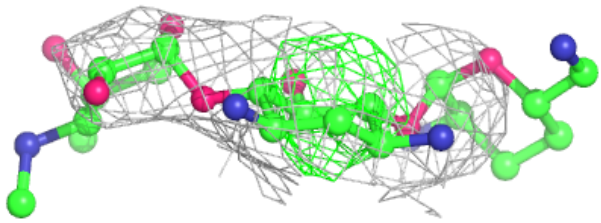
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	CA	1602	1/1	0.99	0.12	11,11,11,11	0
54	MG	CA	1655	1/1	0.99	0.07	25,25,25,25	0
54	MG	BB	3068	1/1	1.00	0.05	61,61,61,61	0

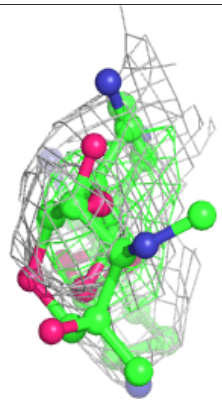
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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

Electron density around LLL DB 3112:

2mF$_o$-DF$_c$ (at 0.7 rmsd) in gray
mF$_o$-DF$_c$ (at 3 rmsd) in purple (negative)
and green (positive)

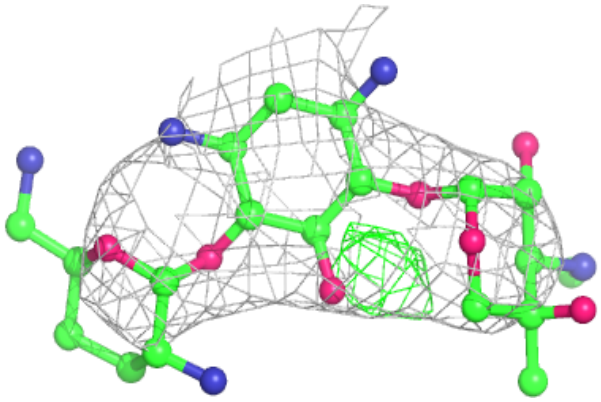


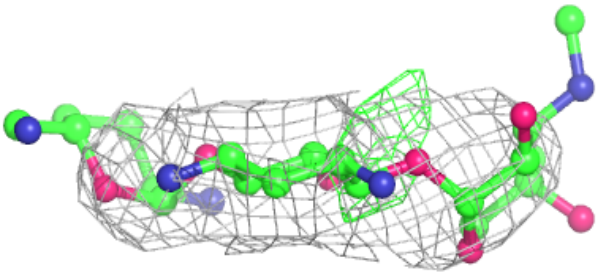


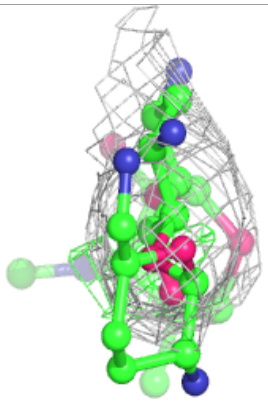


Electron density around LLL BB 3111:

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

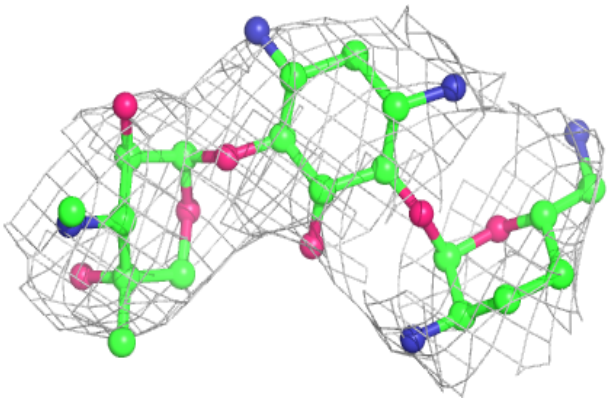


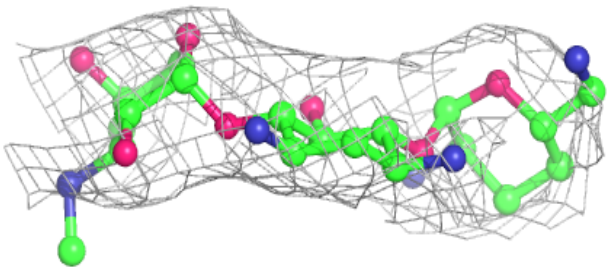


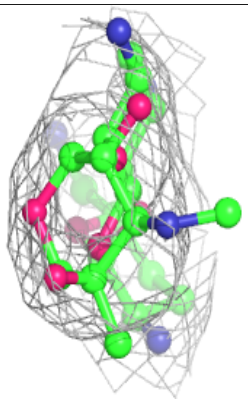


Electron density around LLL CA 1662:

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

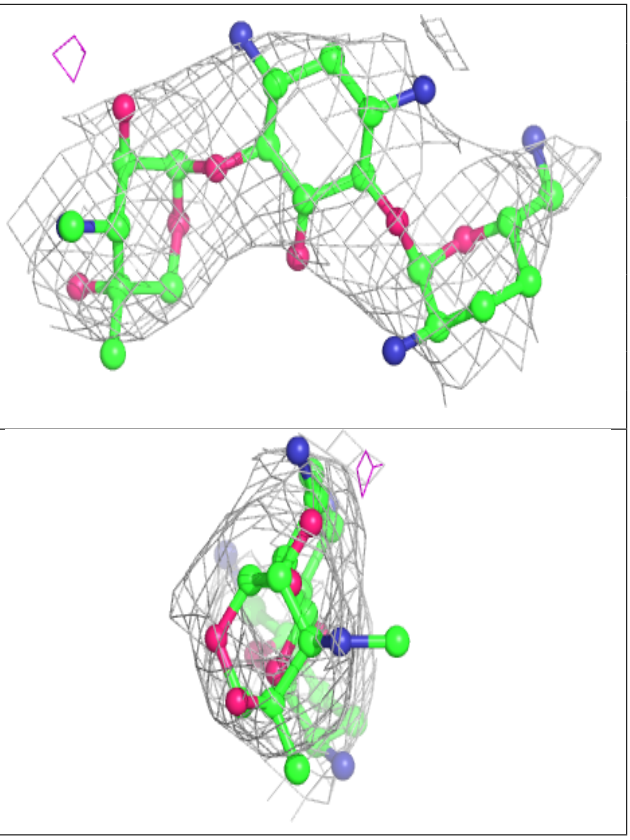






Electron density around LLL AA 1661:

$2mF_o$-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.