Full wwPDB X-ray Structure Validation Report ⓘ

Sep 14, 2023 – 04:07 AM EDT

PDB ID	:	4V64
Title	:	Crystal structure of the bacterial ribosome from Escherichia coli in complex with hygromycin B.
Authors	:	Borovinskaya, M.A.; Shoji, S.; Fredrick, K.; Cate, J.H.D.
Deposited on	:	2008-06-11
Resolution	:	3.50 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/XrayValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

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

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

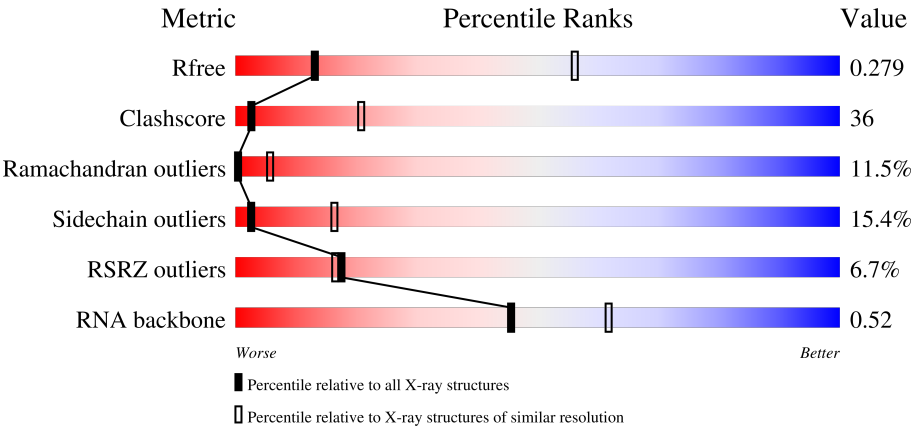
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.35.1
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & 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 3.50 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1659 (3.60-3.40)
Clashscore	141614	1036 (3.58-3.42)
Ramachandran outliers	138981	1005 (3.58-3.42)
Sidechain outliers	138945	1006 (3.58-3.42)
RSRZ outliers	127900	1559 (3.60-3.40)
RNA backbone	3102	1002 (4.00-3.00)

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	22% 63% 14% ••
1	CA	1542	21% 65% 13% ••
2	AC	232	13% 31% 43% 13% • 11%
2	CC	232	7% 31% 44% 13% • 11%

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Mol	Chain	Length	Quality of chain
3	AD	205	12% 26% 61% 12%
3	CD	205	2% 29% 59% 12%
4	AE	166	3% 30% 52% 8% 10%
4	CE	166	14% 29% 51% 10% 10%
5	AF	135	20% 13% 51% 7% 26%
5	CF	135	2% 16% 48% 7% 26%
6	AG	178	12% 27% 49% 8% 16%
6	CG	178	6% 29% 48% 8% 15%
7	AH	129	8% 33% 59% 6%
7	CH	129	9% 34% 57% 7%
8	AI	129	21% 24% 64% 11%
8	CI	129	11% 19% 67% 12%
9	AJ	103	11% 36% 46% 14% 5%
9	CJ	103	27% 36% 46% 14% 5%
10	AK	128	2% 24% 55% 12% 9%
10	CK	128	4% 26% 53% 12% 9%
11	AL	123	13% 33% 52% 11%
11	CL	123	2% 32% 53% 11% 5%
12	AM	117	14% 26% 62% 10%
12	CM	117	3% 25% 62% 9%
13	AN	100	10% 27% 54% 14%
13	CN	100	6% 29% 53% 12%
14	AO	89	4% 43% 47% 9%
14	CO	89	2% 46% 45% 8%
15	AP	82	40% 34% 55% 10%

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Mol	Chain	Length	Quality of chain
15	CP	82	5% 32% 54% 11%
16	AQ	83	22% 23% 61% 12%
16	CQ	83	25% 60% 12%
17	AR	74	4% 39% 32% 26%
17	CR	74	7% 38% 34% 26%
18	AS	91	24% 18% 53% 15% 13%
18	CS	91	3% 19% 53% 15% 12%
19	AT	86	3% 38% 47% 12%
19	CT	86	43% 42% 12%
20	AB	240	10% 25% 50% 15% 9%
20	CB	240	30% 24% 48% 18% 9%
21	AU	71	3% 20% 37% 13% 28%
21	CU	71	11% 17% 39% 13% 28%
22	BA	120	% 21% 63% 12%
22	DA	120	% 20% 65% 12%
23	BB	2904	% 24% 61% 12%
23	DB	2904	23% 62% 12%
24	BV	94	5% 26% 61% 14%
24	DV	94	3% 23% 65% 12%
25	BC	273	11% 25% 51% 22%
25	DC	273	8% 23% 51% 22%
26	BD	209	13% 25% 56% 17%
26	DD	209	10% 24% 57% 17%
27	BE	201	12% 29% 54% 17%
27	DE	201	6% 30% 53% 16%

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Mol	Chain	Length	Quality of chain
28	BF	178	30% 18% 49% 30%
28	DF	178	19% 19% 48% 31%
29	BG	176	13% 28% 49% 21%
29	DG	176	6% 24% 52% 21%
30	BH	149	34% 23% 43% 26% 7%
30	DH	149	9% 23% 54% 21%
31	BJ	142	6% 26% 54% 17%
31	DJ	142	6% 23% 58% 16%
32	BK	123	37% 21% 53% 23%
32	DK	123	9% 20% 52% 24%
33	BL	144	3% 25% 53% 19%
33	DL	144	12% 26% 53% 19%
34	BM	136	4% 26% 57% 15%
34	DM	136	14% 26% 55% 16%
35	BN	127	9% 14% 64% 14% 6%
35	DN	127	% 16% 61% 14% 6%
36	BO	117	23% 26% 56% 15%
36	DO	117	% 25% 56% 16%
37	BP	114	40% 32% 45% 18% 6%
37	DP	114	4% 33% 45% 17% 5%
38	BQ	117	3% 26% 62% 12%
38	DQ	117	4% 26% 63% 11%
39	BR	103	5% 26% 52% 20%
39	DR	103	9% 22% 58% 18%
40	BS	110	6% 29% 55% 15%

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Mol	Chain	Length	Quality of chain
40	DS	110	19% 32% 53% 15%
41	BT	100	% 10% 58% 21% 7%
41	DT	100	16% 10% 56% 23% 7%
42	BU	103	25% 21% 52% 24%
42	DU	103	2% 22% 50% 25%
43	BW	84	6% 15% 44% 27% 7% 6%
43	DW	84	5% 15% 44% 29% 6% 6%
44	BX	63	21% 19% 60% 16% 5%
44	DX	63	6% 17% 60% 17% 5%
45	BY	58	7% 31% 52% 16%
45	DY	58	3% 31% 50% 17%
46	BZ	78	12% 14% 62% 22%
46	DZ	78	3% 14% 62% 22%
47	B0	56	9% 34% 50% 16%
47	D0	56	5% 29% 57% 14%
48	B1	54	52% 26% 54% 13% 7%
48	D1	54	20% 24% 57% 11% 7%
49	B2	46	4% 28% 57% 13%
49	D2	46	2% 35% 48% 13%
50	B3	64	9% 38% 53% 6%
50	D3	64	9% 38% 55% 5%
51	B4	38	3% 21% 61% 18%
51	D4	38	29% 50% 21%
52	BI	141	18% 37% 60%
52	DI	141	16% 31% 61% 8%

2 Entry composition

There are 56 unique types of molecules in this entry. The entry contains 284077 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	AO	88	Total	C	N	O	S	0	0	0
			715	440	146	128	1			
14	CO	88	Total	C	N	O	S	0	0	0
			715	440	146	128	1			

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- Molecule 46 is a protein called 50S ribosomal protein L28.

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

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

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

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

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

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

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

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

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

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

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

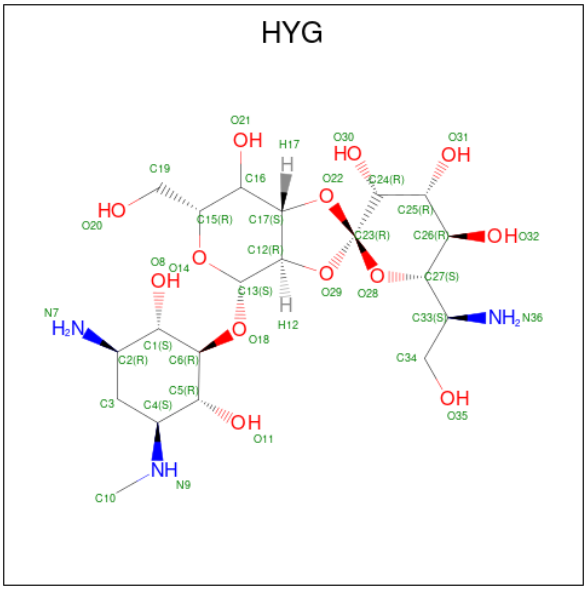
- Molecule 52 is a protein called 50S ribosomal protein L11.

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

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
53	AA	58	Total Mg 58 58	0	0
53	AE	1	Total Mg 1 1	0	0
53	AN	1	Total Mg 1 1	0	0
53	BB	110	Total Mg 110 110	0	0
53	CA	61	Total Mg 61 61	0	0
53	CE	1	Total Mg 1 1	0	0
53	DB	111	Total Mg 111 111	0	0

- Molecule 54 is HYGROMYCIN B (three-letter code: HYG) (formula: $C_{20}H_{37}N_3O_{13}$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
54	AA	1	Total C N O 36 20 3 13	0	0
54	CA	1	Total C N O 36 20 3 13	0	0

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

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

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

- Molecule 56 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
56	AA	282	Total O 282 282	0	0
56	AE	4	Total O 4 4	0	0
56	AK	2	Total O 2 2	0	0
56	AL	5	Total O 5 5	0	0
56	AN	4	Total O 4 4	0	0
56	AT	3	Total O 3 3	0	0
56	BB	492	Total O 492 492	0	0
56	BC	8	Total O 8 8	0	0
56	BD	1	Total O 1 1	0	0
56	BE	2	Total O 2 2	0	0
56	BH	1	Total O 1 1	0	0
56	BL	2	Total O 2 2	0	0
56	B2	1	Total O 1 1	0	0
56	CA	294	Total O 294 294	0	0
56	CE	4	Total O 4 4	0	0
56	CI	1	Total O 1 1	0	0
56	CK	1	Total O 1 1	0	0
56	CL	3	Total O 3 3	0	0

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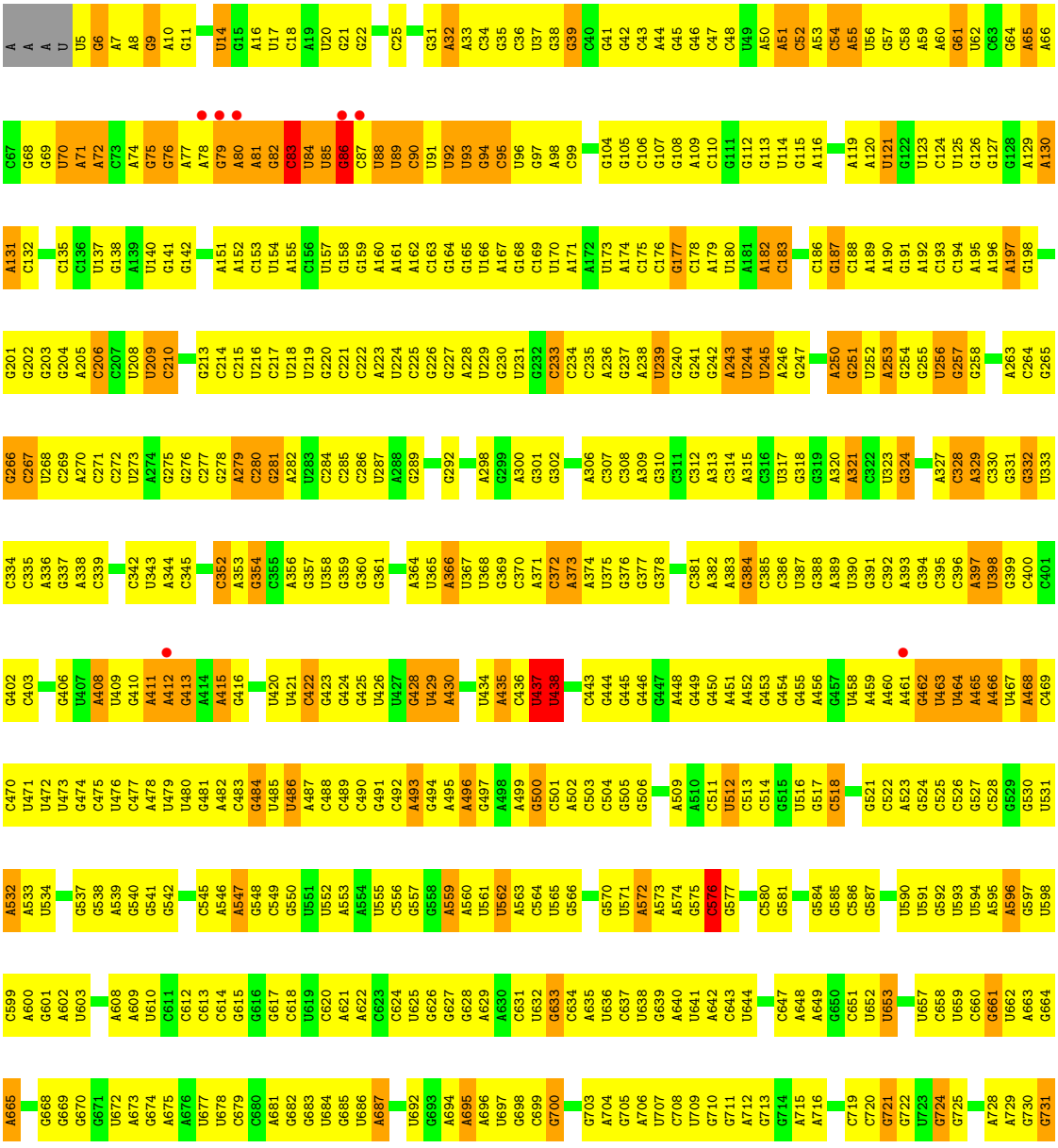
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
56	CN	3	Total O 3 3	0	0
56	CT	1	Total O 1 1	0	0
56	DB	499	Total O 499 499	0	0
56	DC	5	Total O 5 5	0	0
56	DD	1	Total O 1 1	0	0
56	DE	1	Total O 1 1	0	0
56	DL	5	Total O 5 5	0	0
56	DP	1	Total O 1 1	0	0
56	D2	1	Total O 1 1	0	0

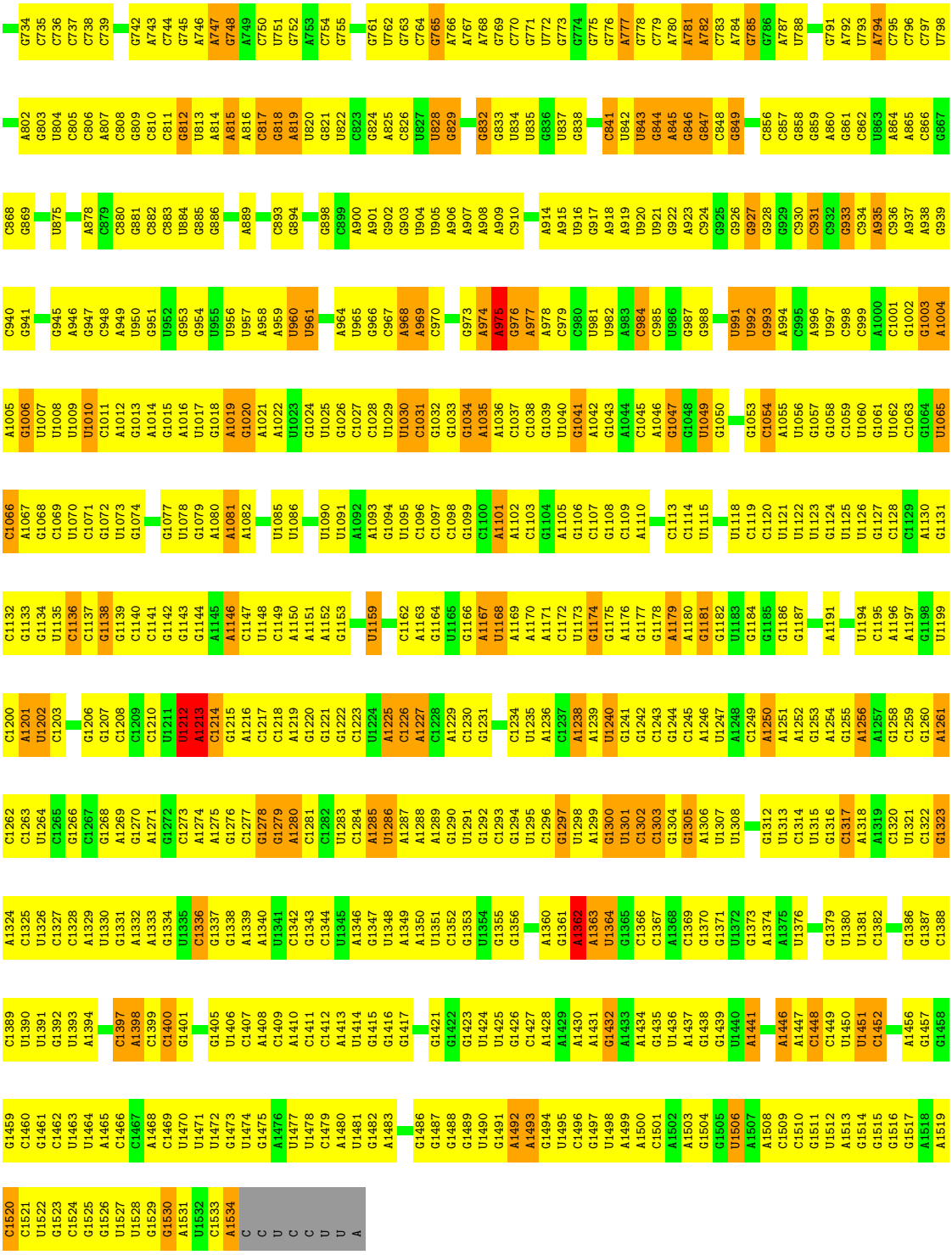
3 Residue-property plots (i)

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 ribosomal RNA

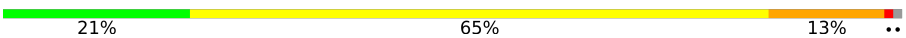
Chain AA: 22% 63% 14%

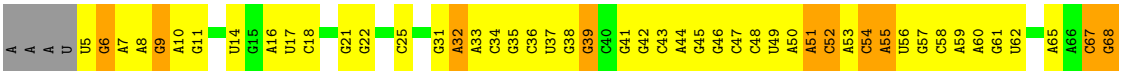


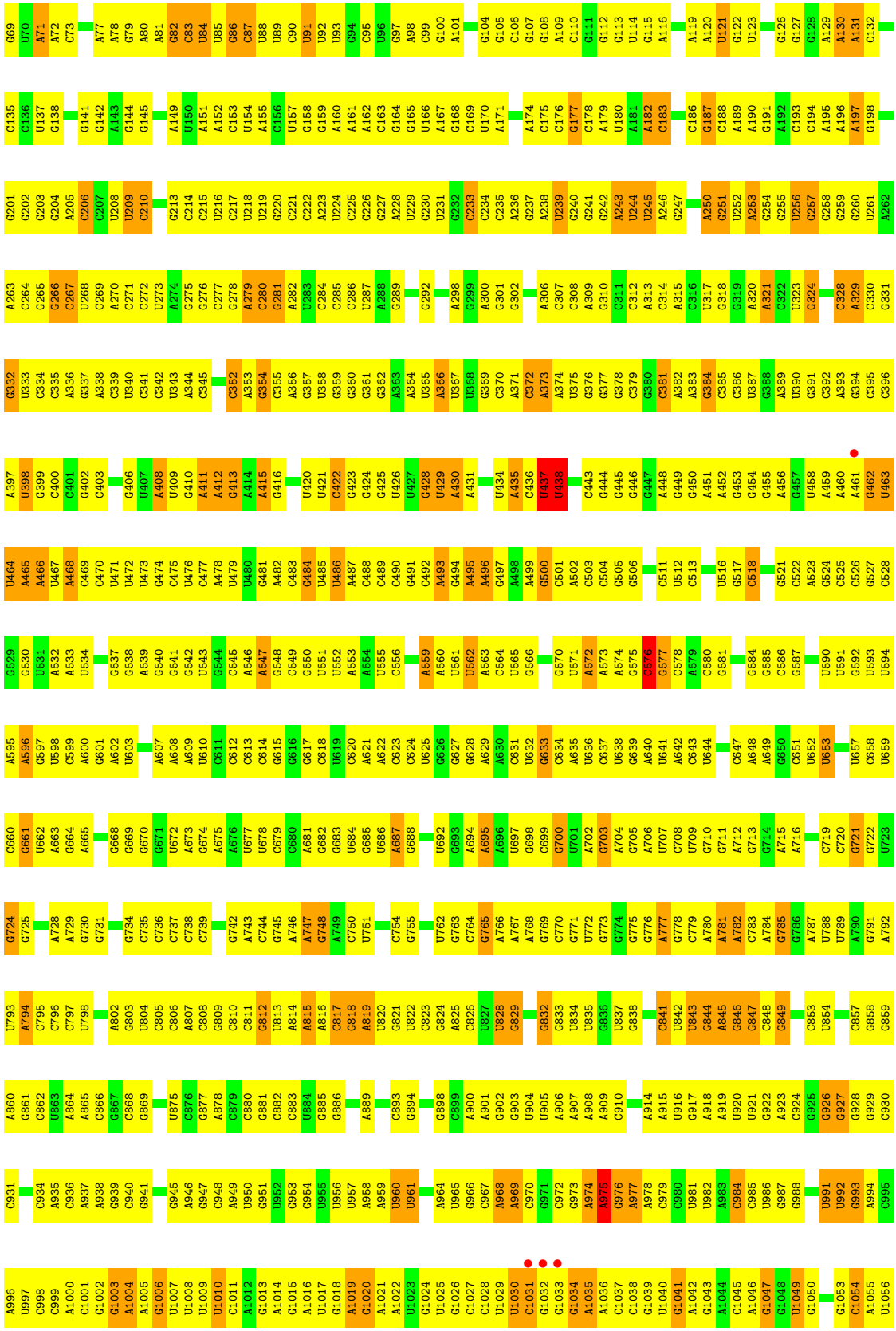


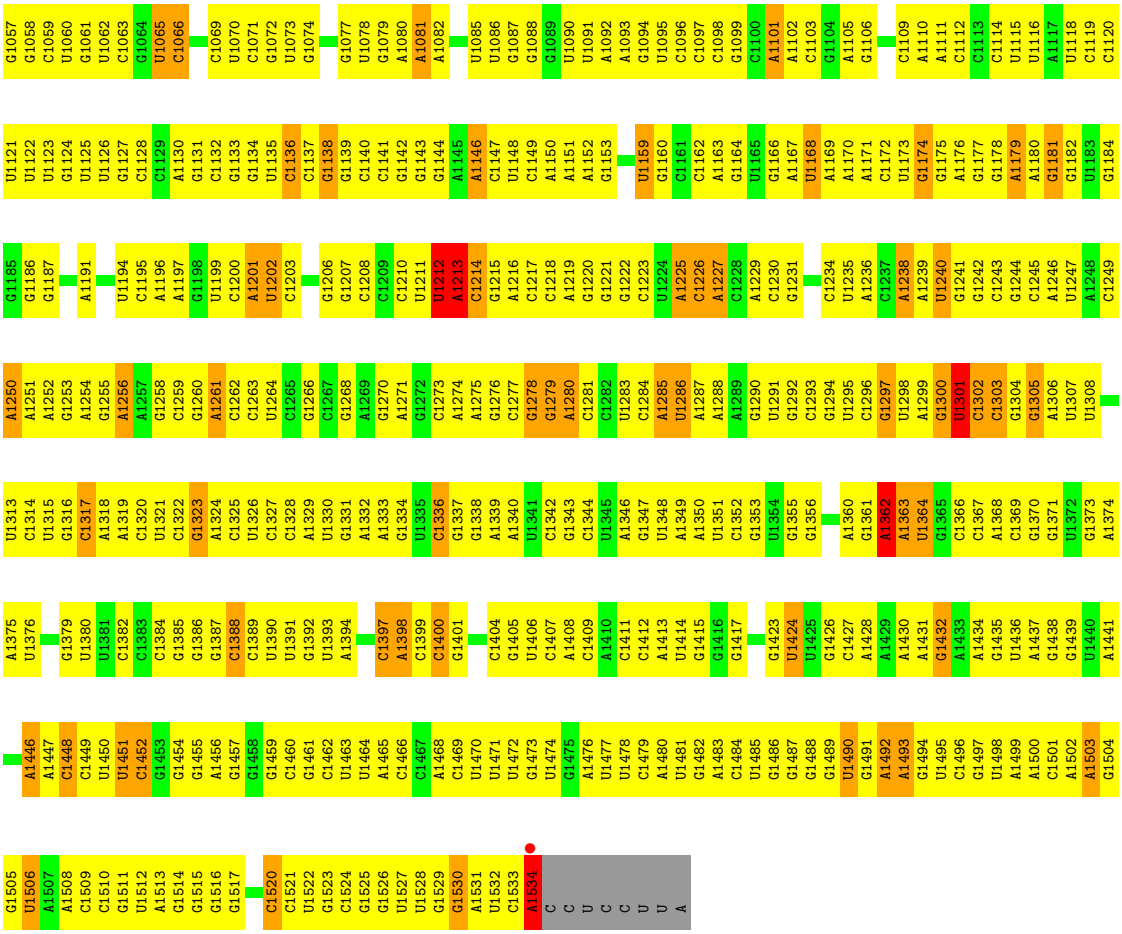
• Molecule 1: 16S ribosomal RNA

Chain CA:



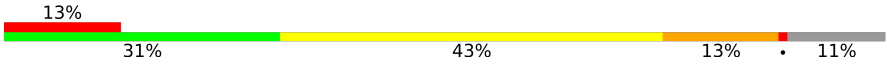


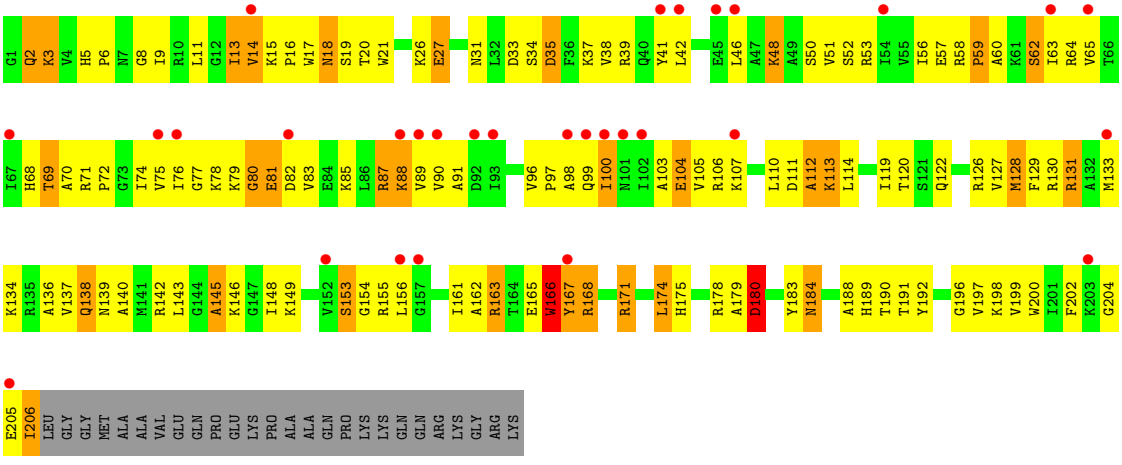




• Molecule 2: 30S ribosomal protein S3

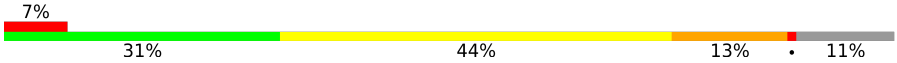
Chain AC:

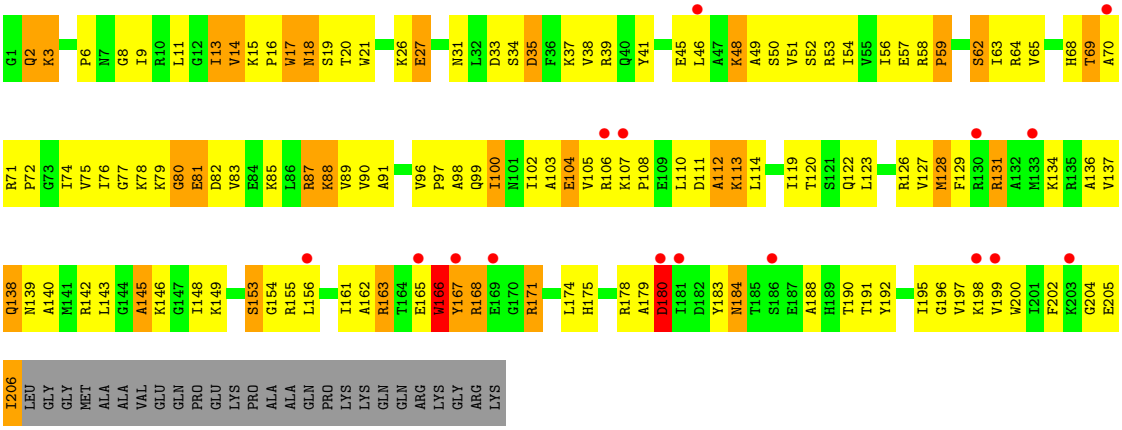




• Molecule 2: 30S ribosomal protein S3

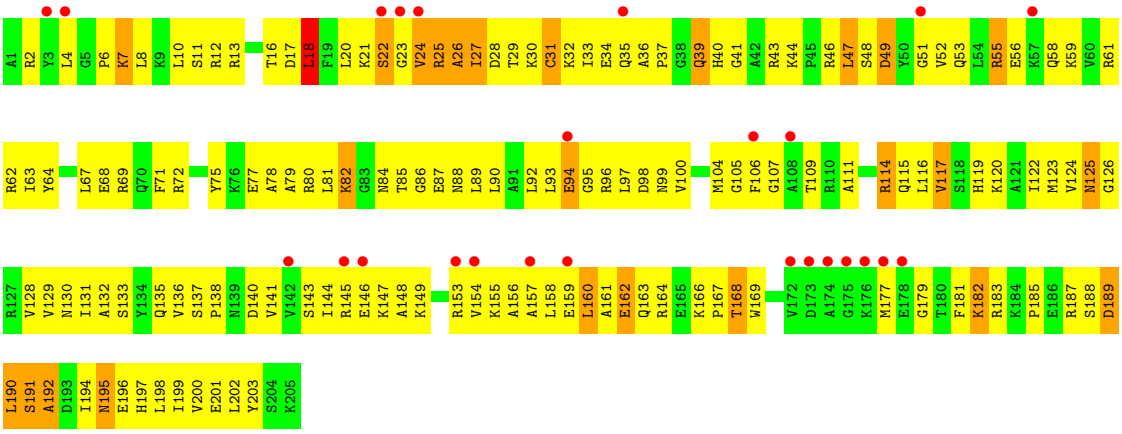
Chain CC:





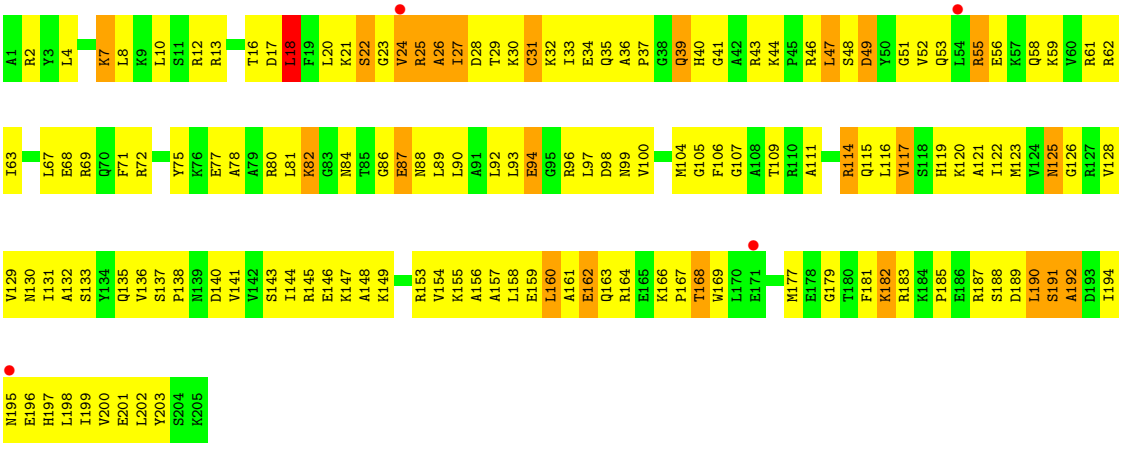
• Molecule 3: 30S ribosomal protein S4

Chain AD:



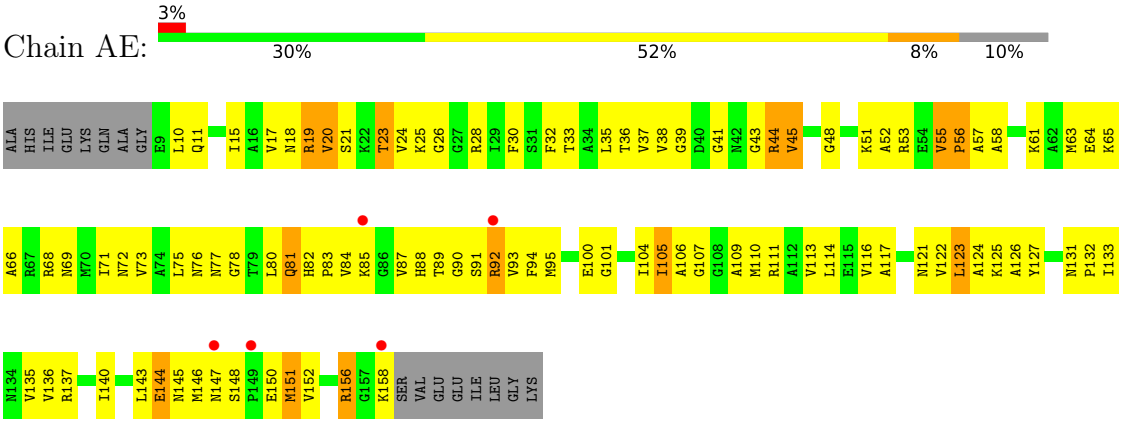
• Molecule 3: 30S ribosomal protein S4

Chain CD:



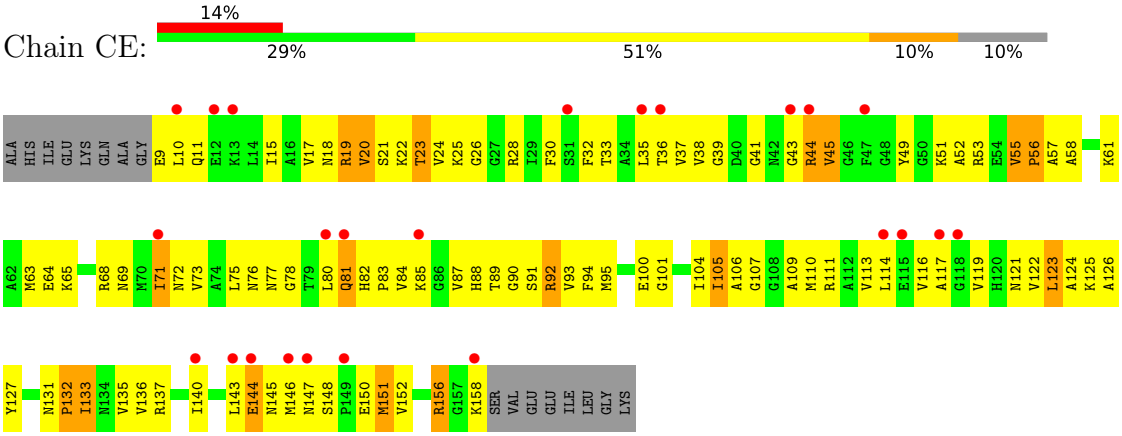
• Molecule 4: 30S ribosomal protein S5

Chain AE:



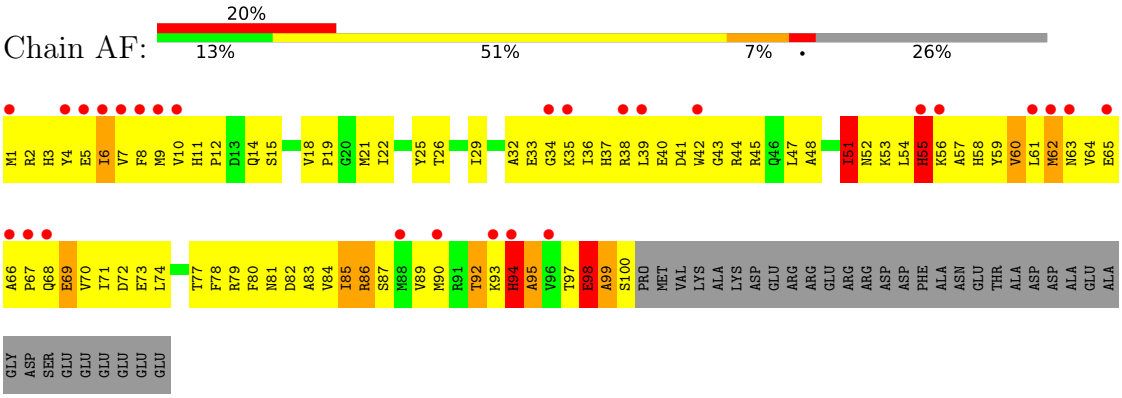
• Molecule 4: 30S ribosomal protein S5

Chain CE:



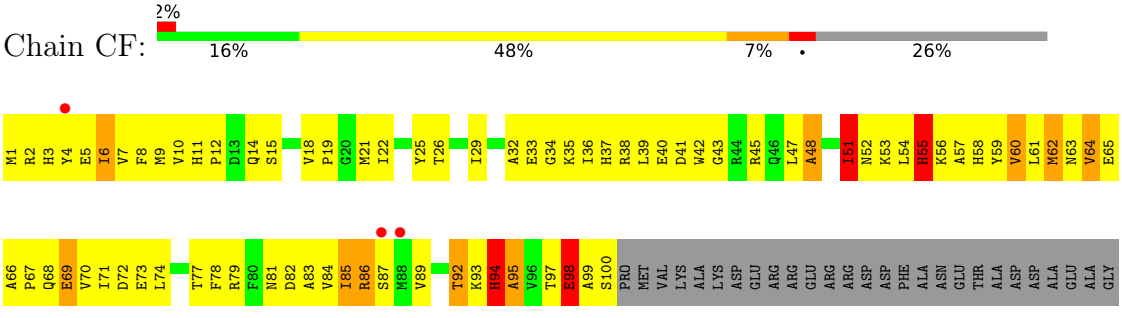
• Molecule 5: 30S ribosomal protein S6

Chain AF:



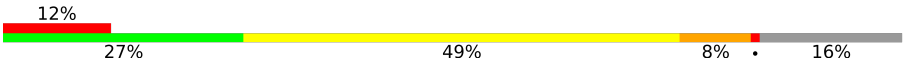
• Molecule 5: 30S ribosomal protein S6

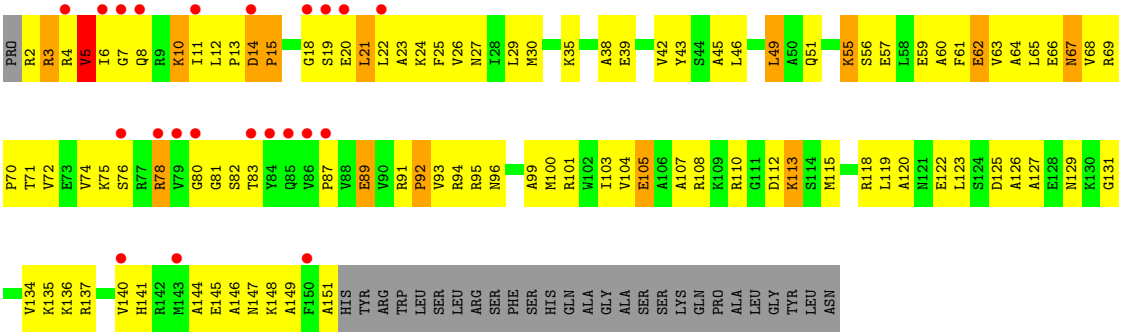
Chain CF:



• Molecule 6: 30S ribosomal protein S7

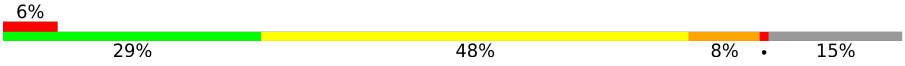
Chain AG:

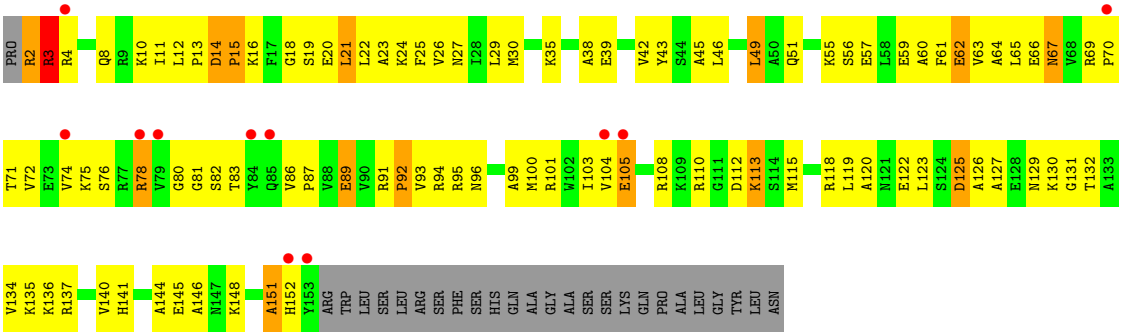




• Molecule 6: 30S ribosomal protein S7

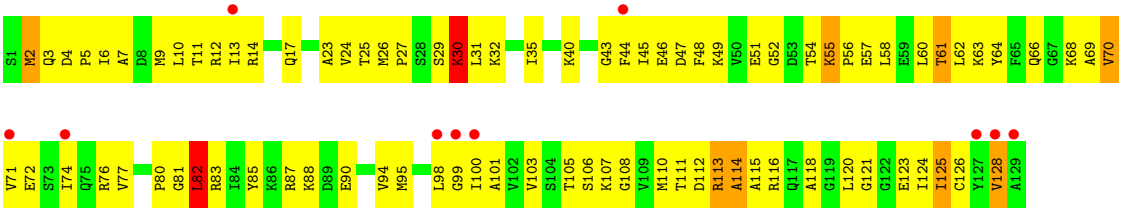
Chain CG:





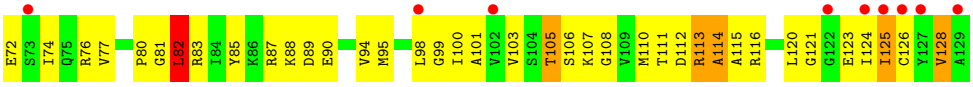
• Molecule 7: 30S ribosomal protein S8

Chain AH:

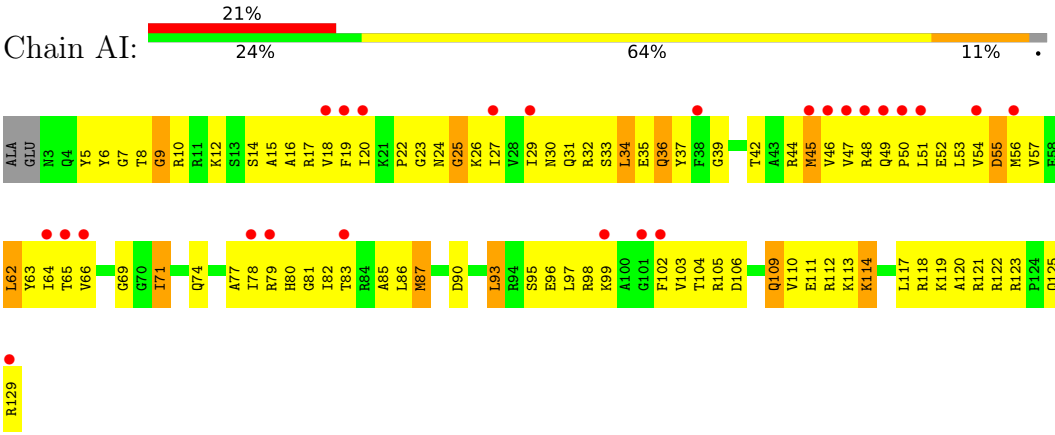


• Molecule 7: 30S ribosomal protein S8

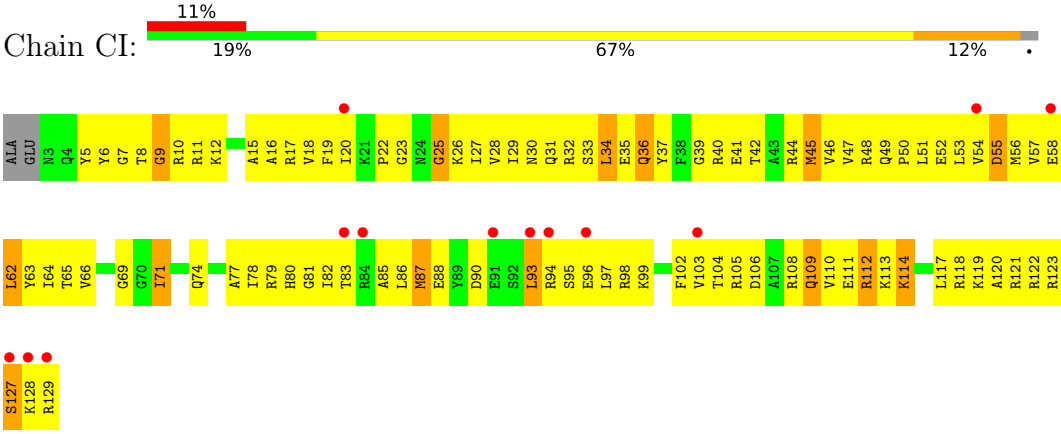
Chain CH:



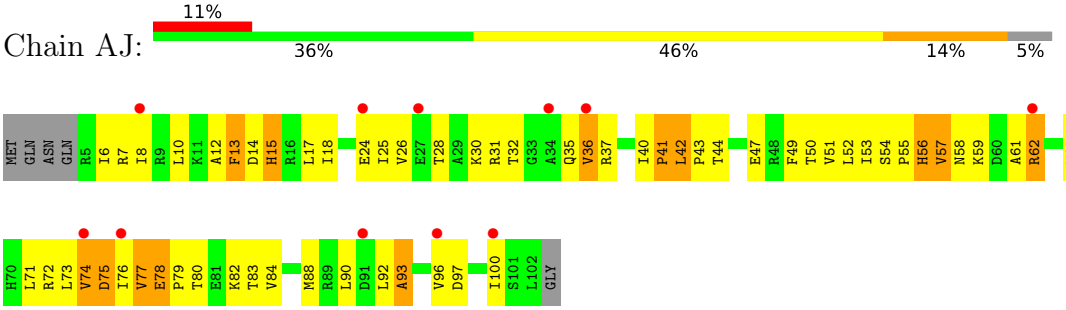
• Molecule 8: 30S ribosomal protein S9



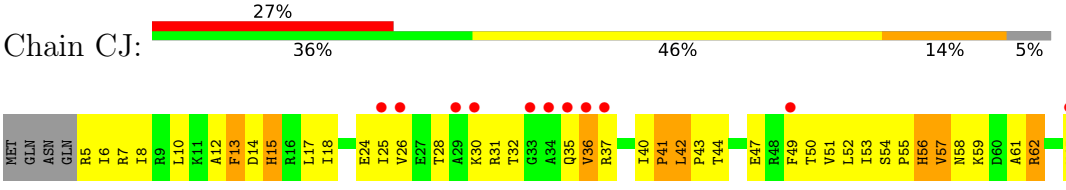
• Molecule 8: 30S ribosomal protein S9

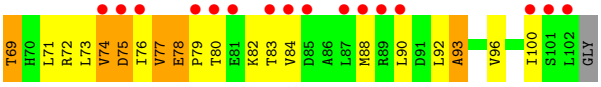


• Molecule 9: 30S ribosomal protein S10



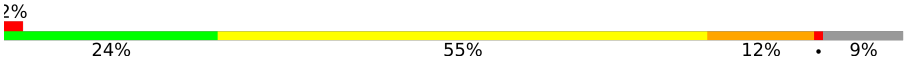
• Molecule 9: 30S ribosomal protein S10

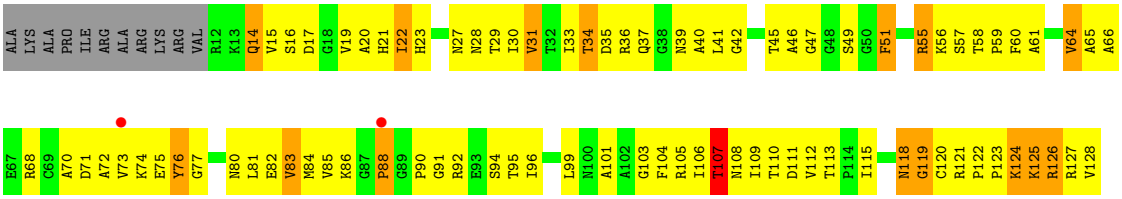




• Molecule 10: 30S ribosomal protein S11

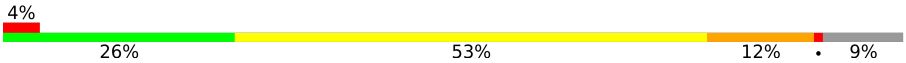
Chain AK:

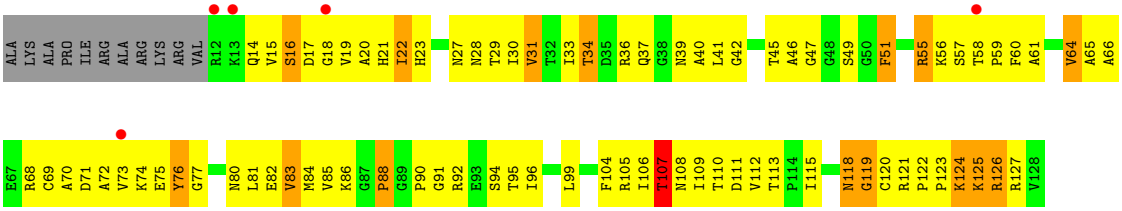




• Molecule 10: 30S ribosomal protein S11

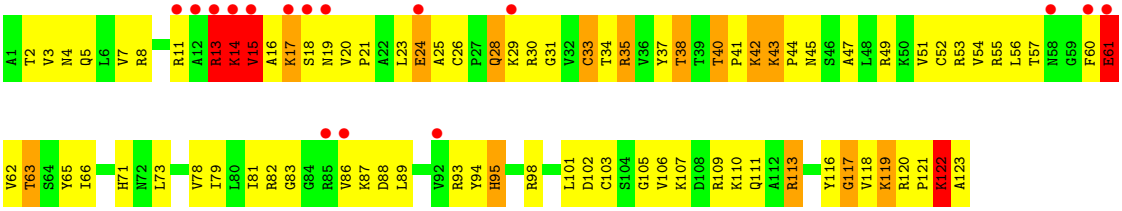
Chain CK:





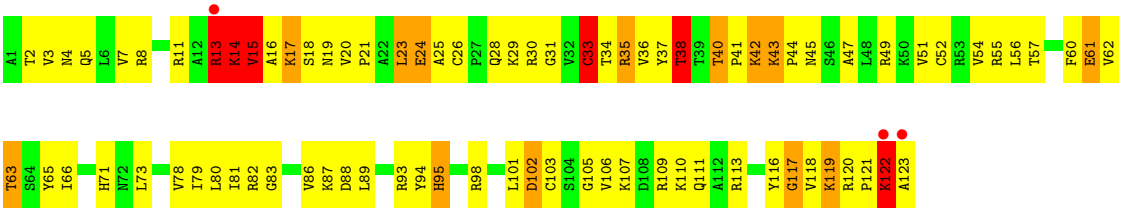
• Molecule 11: 30S ribosomal protein S12

Chain AL:



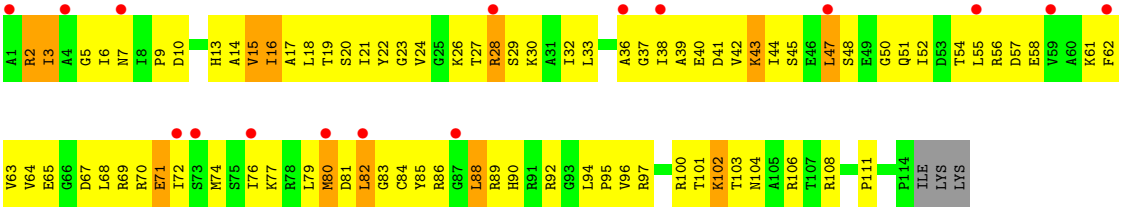
• Molecule 11: 30S ribosomal protein S12

Chain CL:



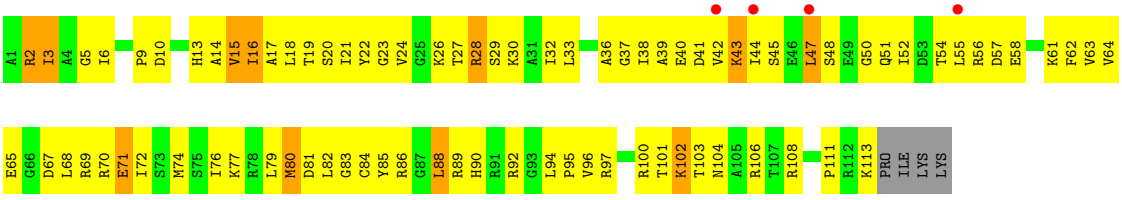
• Molecule 12: 30S ribosomal protein S13

Chain AM:



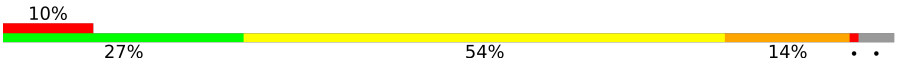
• Molecule 12: 30S ribosomal protein S13

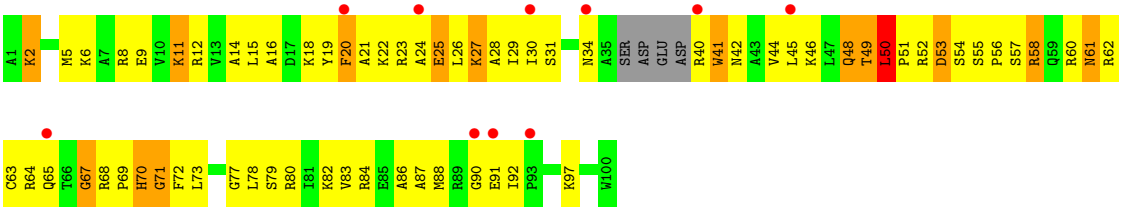
Chain CM:



• Molecule 13: 30S ribosomal protein S14

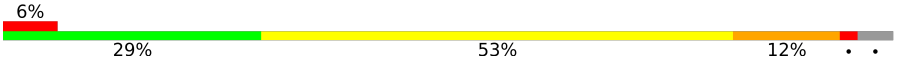
Chain AN:

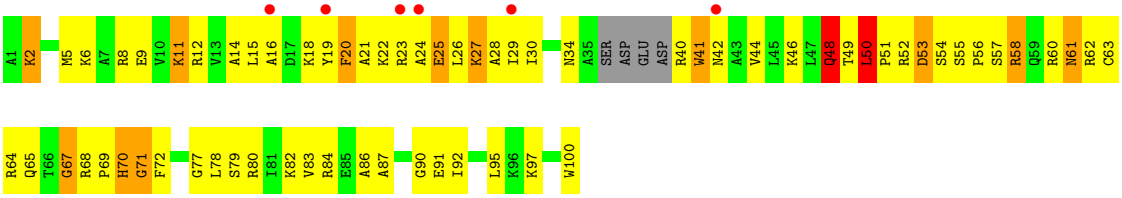




• Molecule 13: 30S ribosomal protein S14

Chain CN:



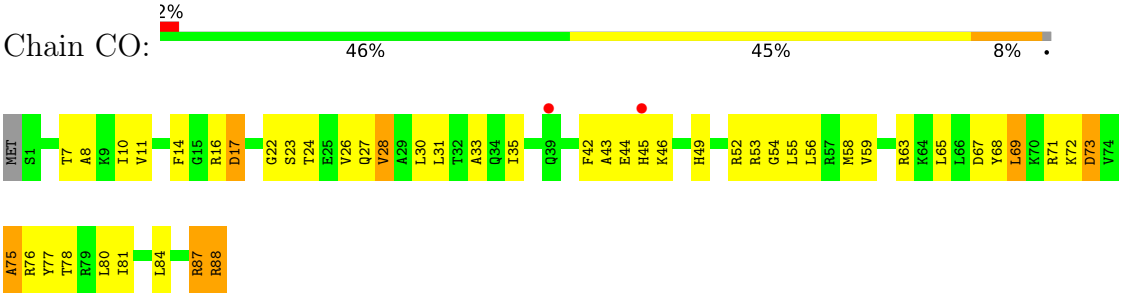


• Molecule 14: 30S ribosomal protein S15

Chain AO:

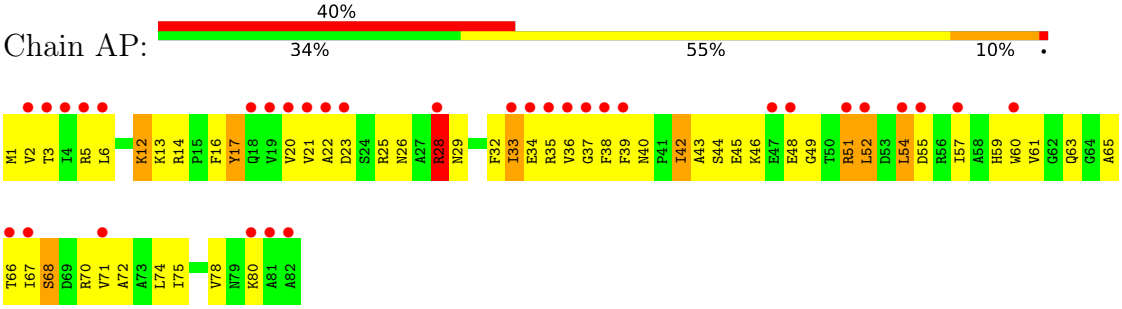
• Molecule 14: 30S ribosomal protein S15

Chain CO:



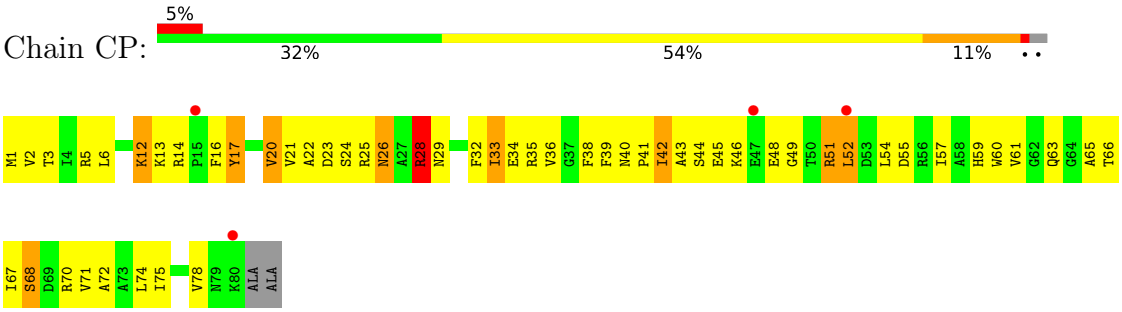
• Molecule 15: 30S ribosomal protein S16

Chain AP:



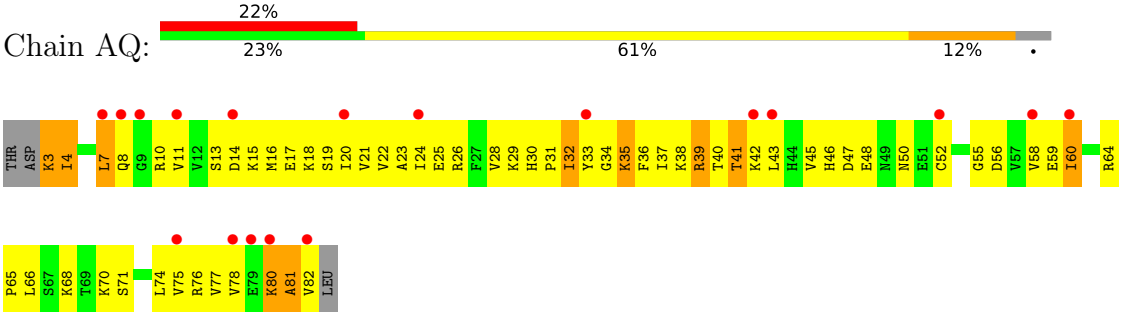
• Molecule 15: 30S ribosomal protein S16

Chain CP:



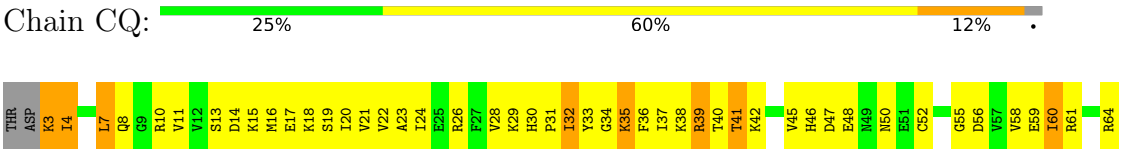
• Molecule 16: 30S ribosomal protein S17

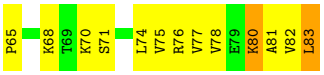
Chain AQ:



• Molecule 16: 30S ribosomal protein S17

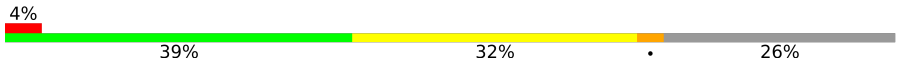
Chain CQ:

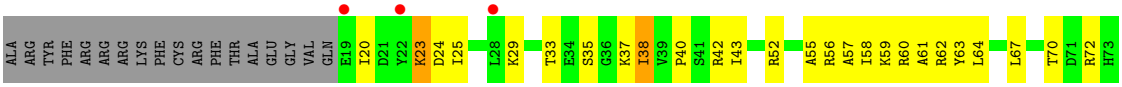




• Molecule 17: 30S ribosomal protein S18

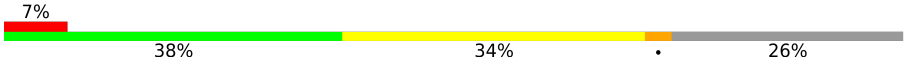
Chain AR:

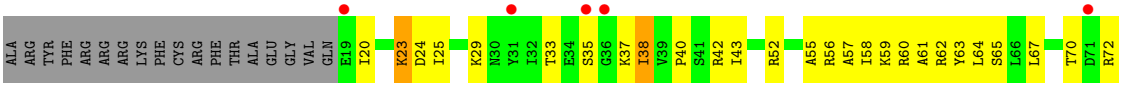




• Molecule 17: 30S ribosomal protein S18

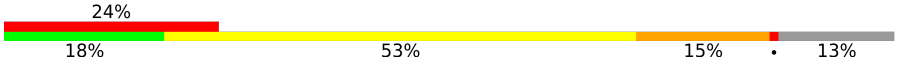
Chain CR:

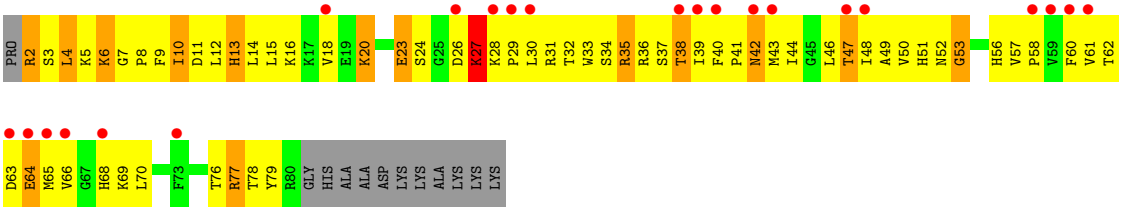




• Molecule 18: 30S ribosomal protein S19

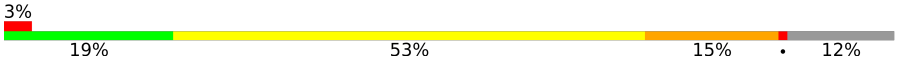
Chain AS:

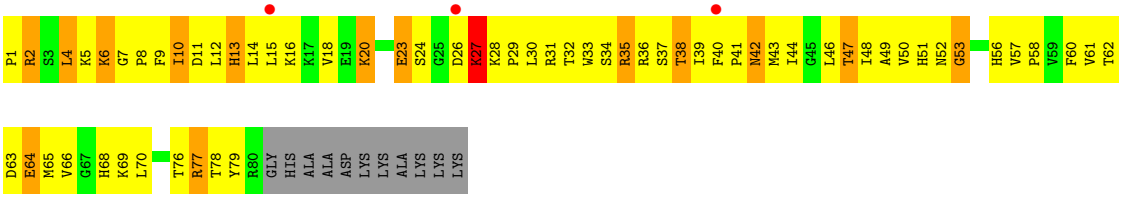




• Molecule 18: 30S ribosomal protein S19

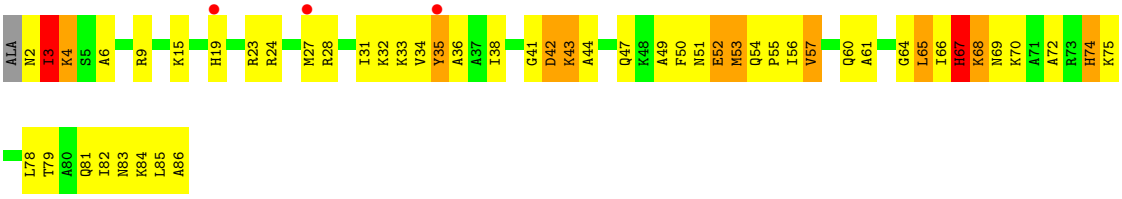
Chain CS:





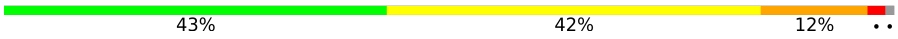
• Molecule 19: 30S ribosomal protein S20

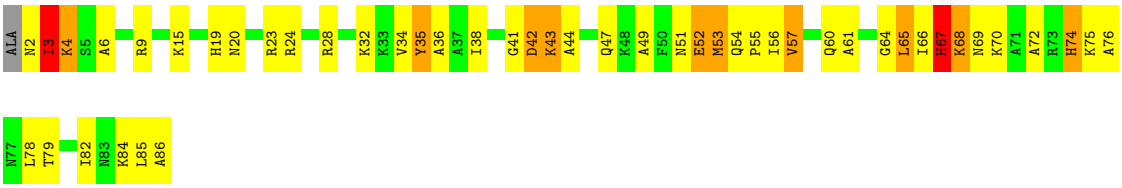
Chain AT:



• Molecule 19: 30S ribosomal protein S20

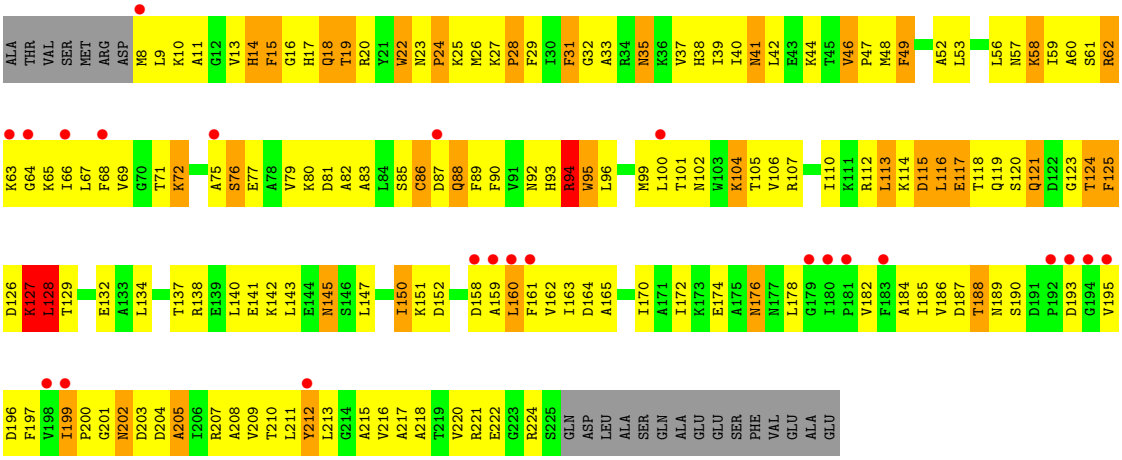
Chain CT:





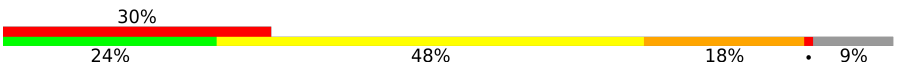
• Molecule 20: 30S ribosomal protein S2

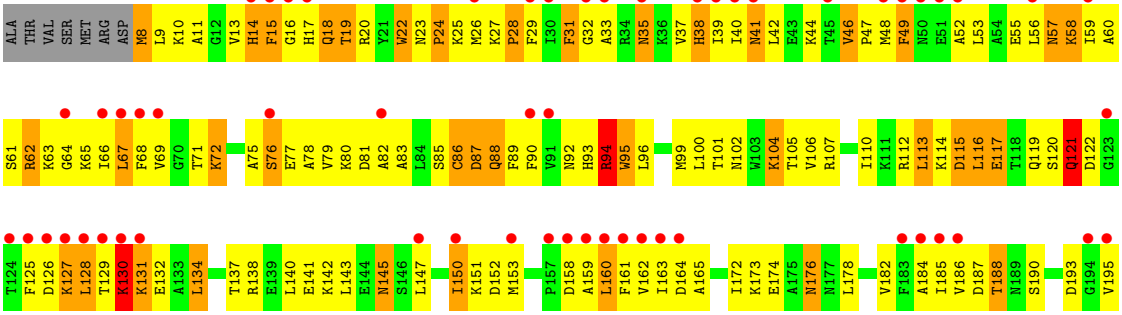
Chain AB:

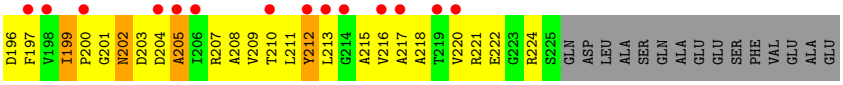


• Molecule 20: 30S ribosomal protein S2

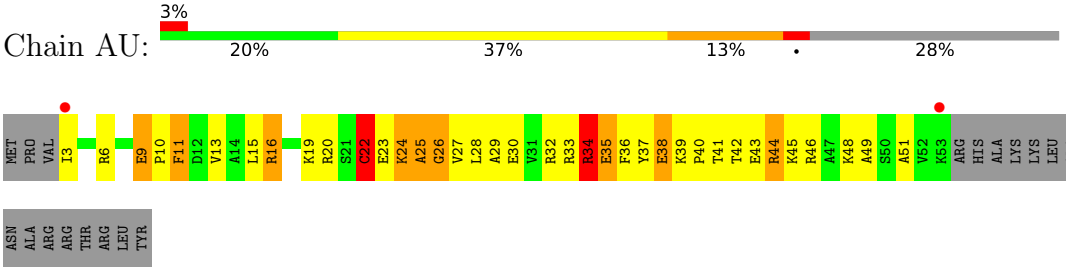
Chain CB:



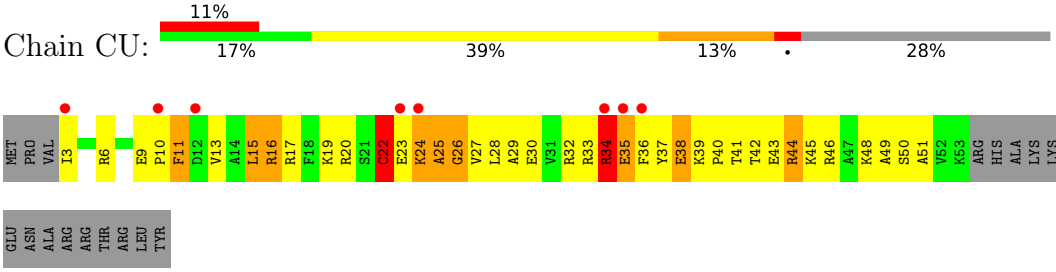




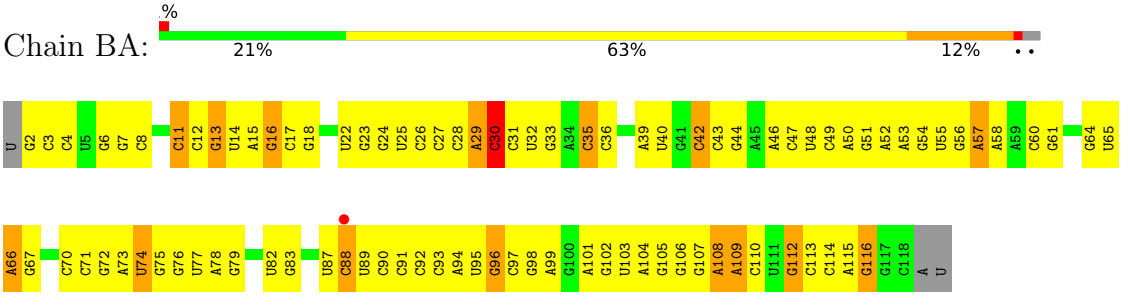
• Molecule 21: 30S ribosomal protein S21



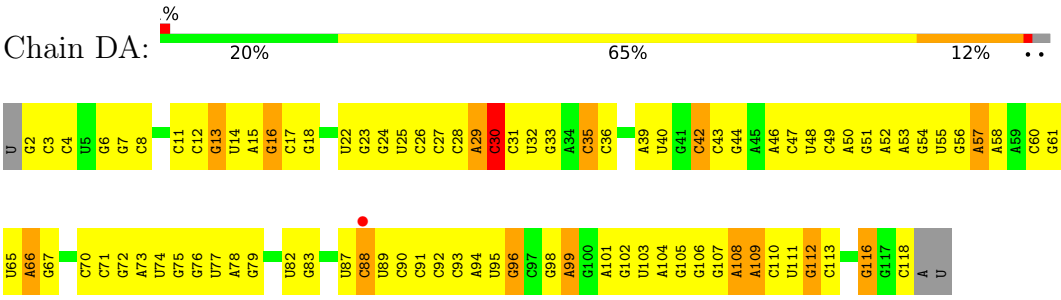
• Molecule 21: 30S ribosomal protein S21



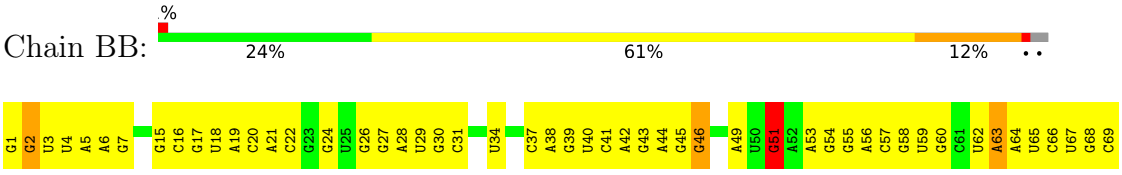
• Molecule 22: 5S ribosomal RNA

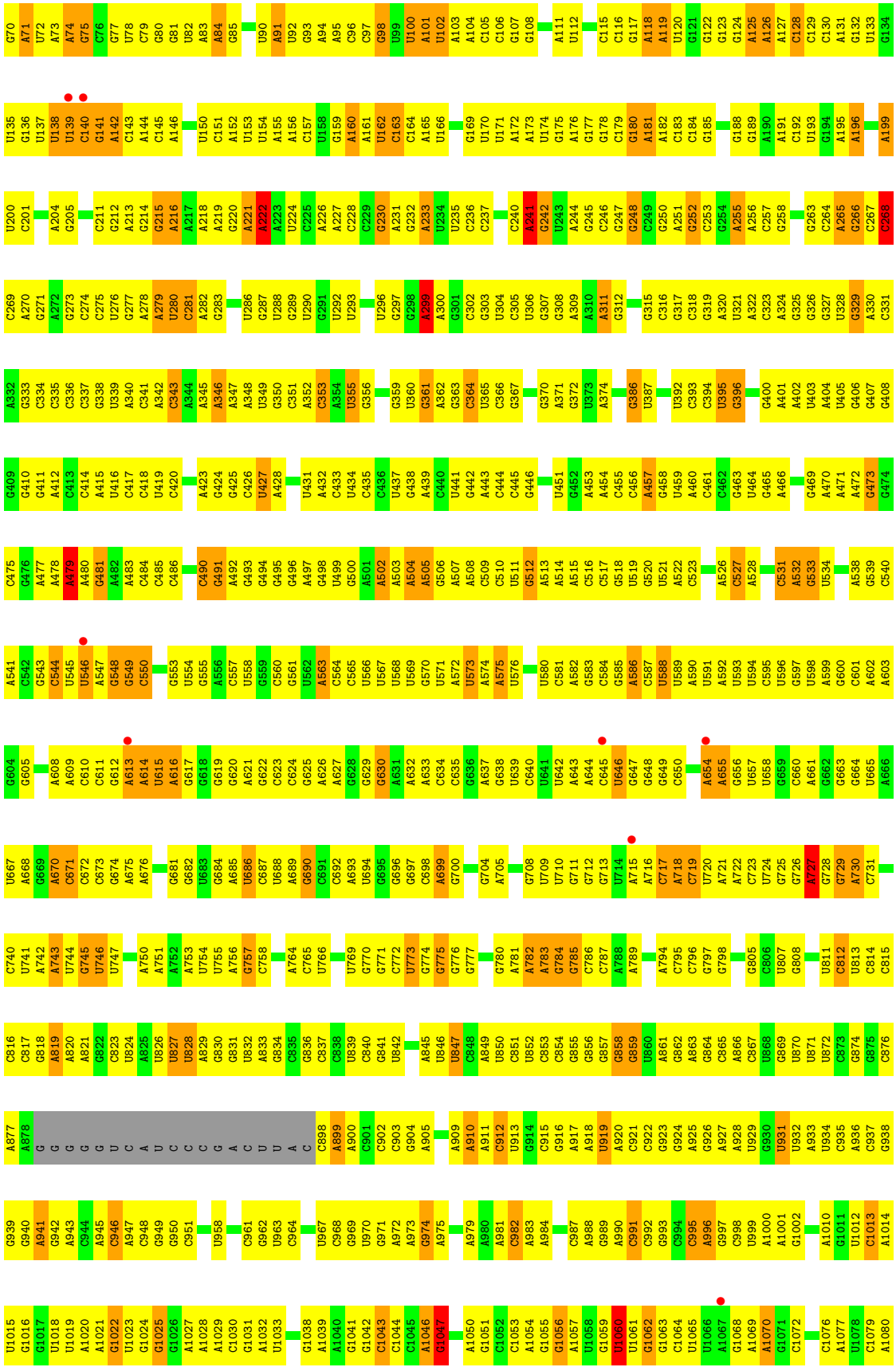


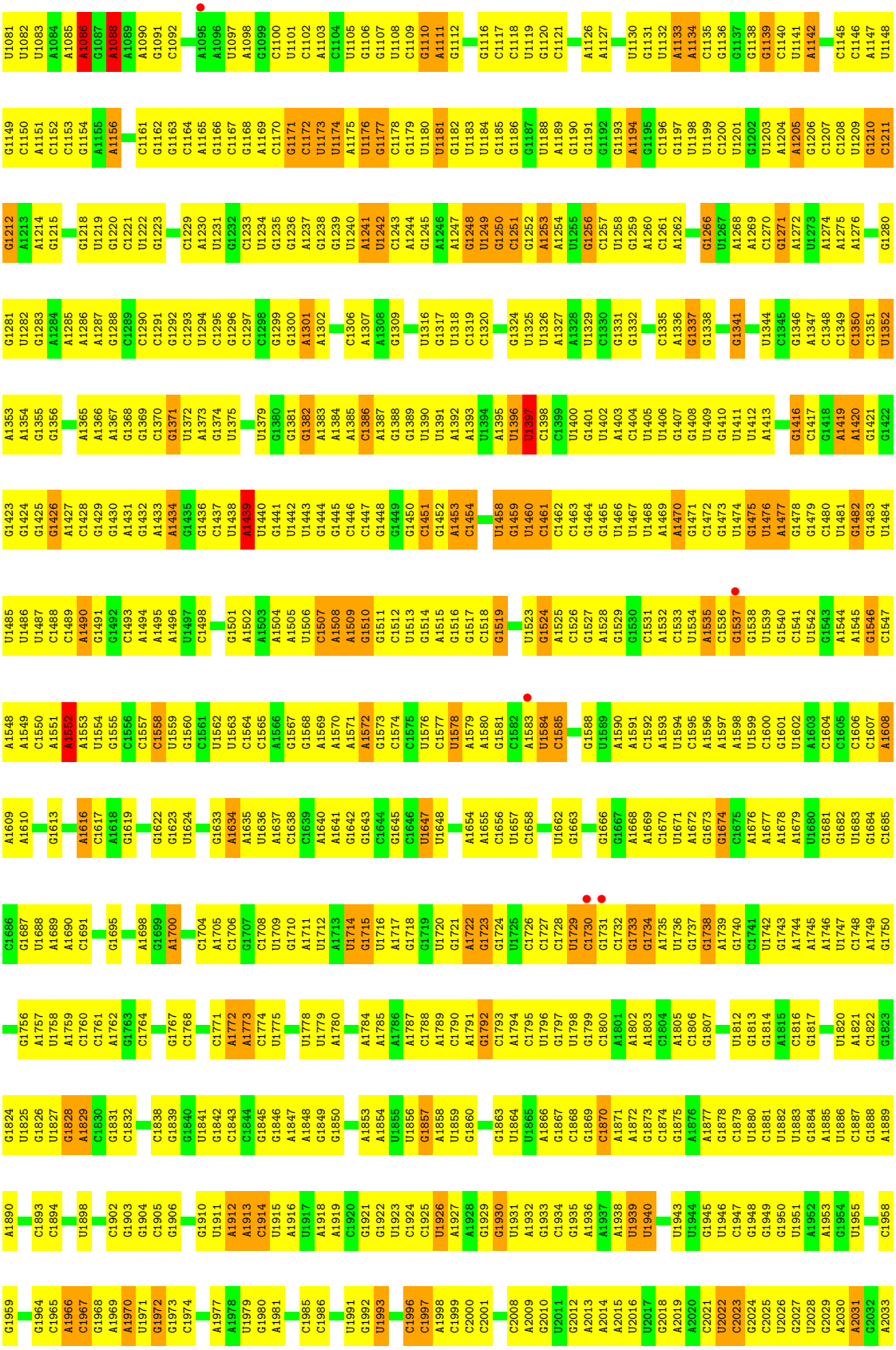
• Molecule 22: 5S ribosomal RNA

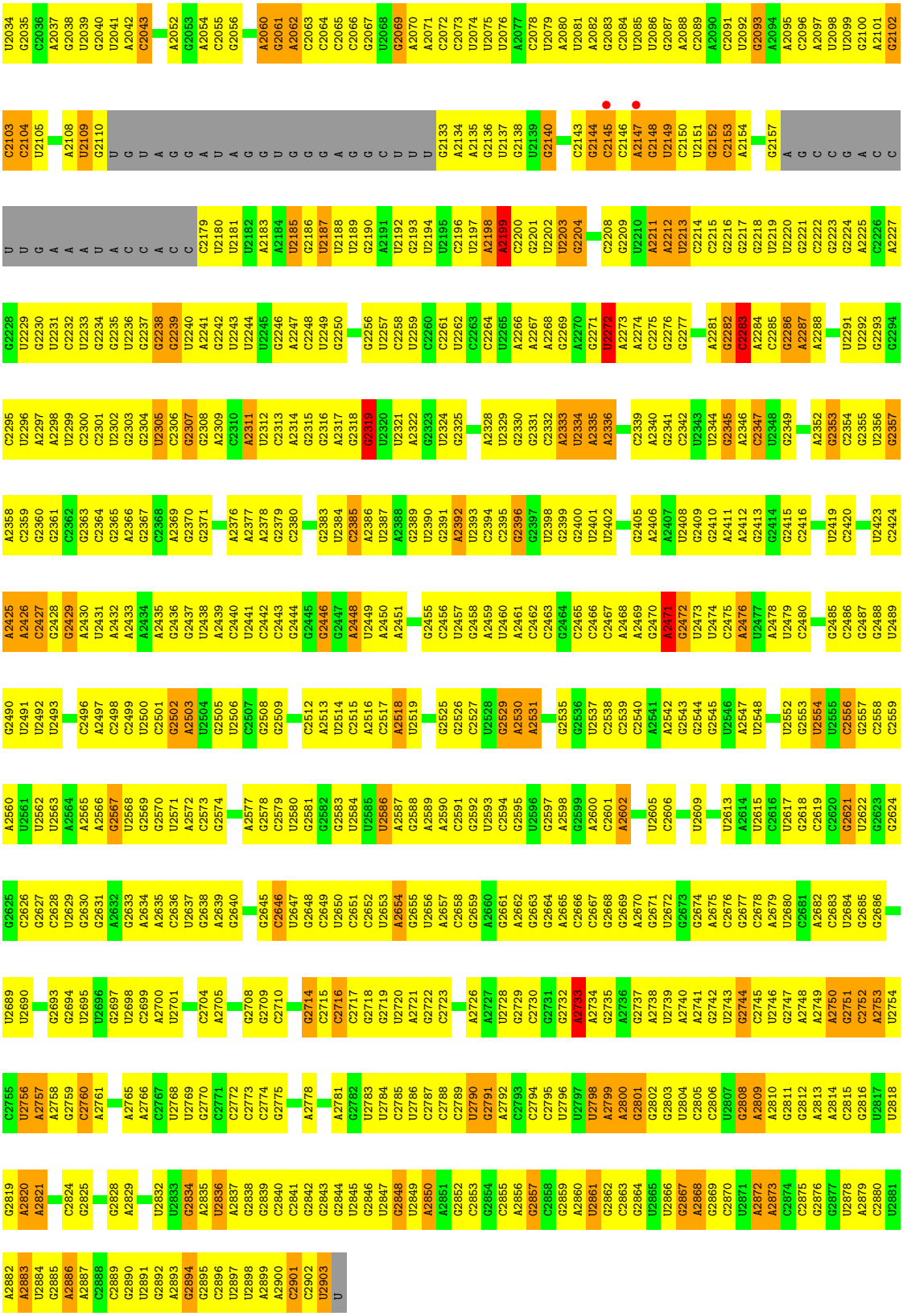


• Molecule 23: 23S ribosomal RNA



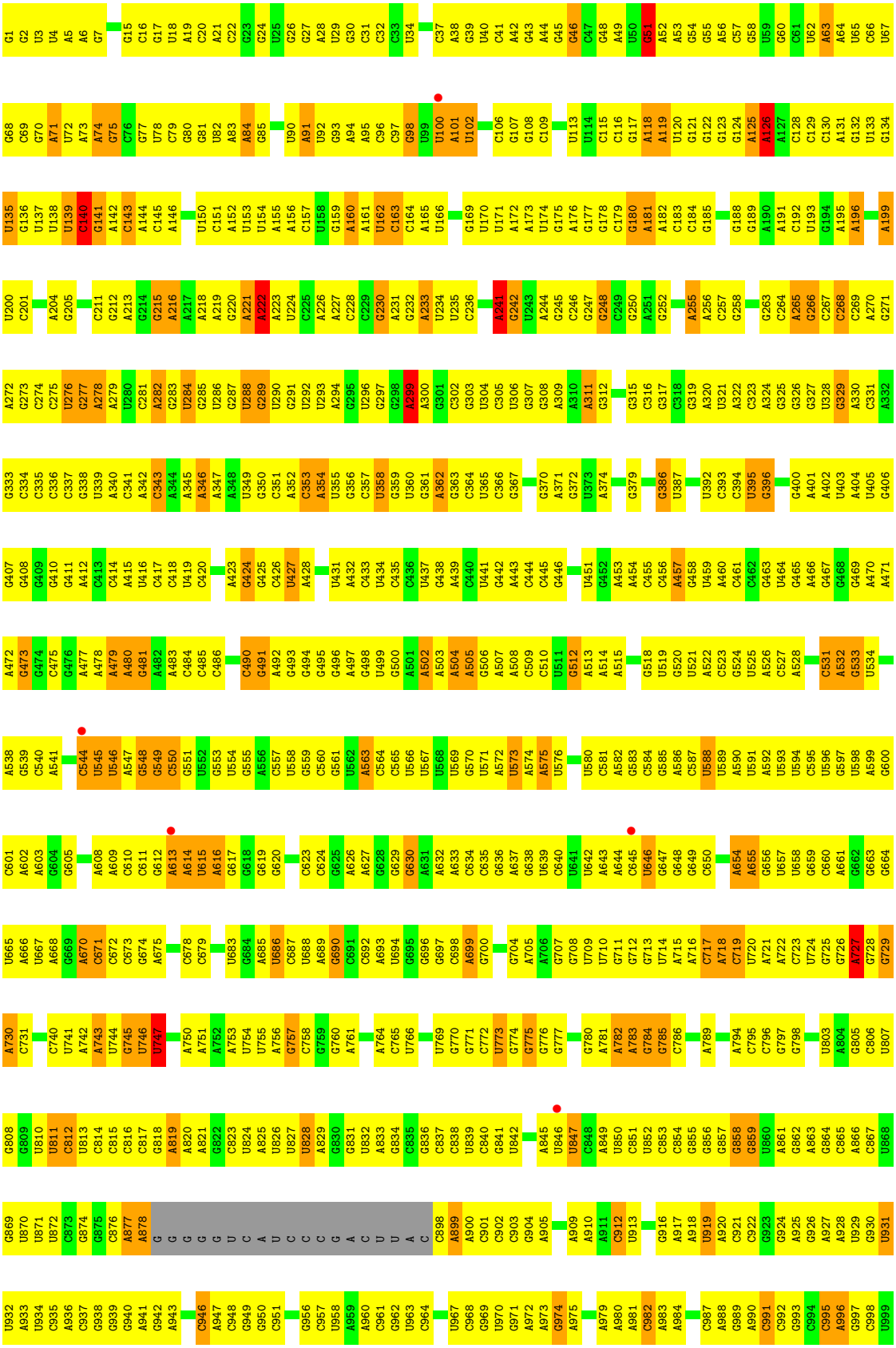






• Molecule 23: 23S ribosomal RNA

Chain DB: 23% 62% 12%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G68 C69 G70 A71 U72 A73 A74 G75 C76 G77 U78 C79 G80 G81 U82 A83 A84 G85 U90 A91 U92 G93 A94 A95 C96 C97 G98 U99 U100 A101 U102 C106 G107 G108 C109 U113 U114 C115 C116 G117 A118 A119 U120 G121 G122 G123 G124 A125 A126 A127 C128 C129 C130 A131 G132 U133 G134
U135 G136 U137 U138 U139 C140 G141 A142 C143 A144 C145 A146 U150 C151 A152 U153 U154 A155 A156 C157 U158 G159 A160 A161 U162 C163 C164 A165 U166 G169 U170 U171 A172 A173 U174 G175 A176 G177 G178 C179 G180 A181 A182 C183 C184 G185 G188 G189 A190 A191 C192 U193 G194 A195 A196 A199
U200 C201 A204 G205 C211 G212 A213 G214 G215 A216 A217 A218 A219 G220 A221 A222 A223 U224 C225 A226 A227 C228 C229 G230 A231 G232 A233 U234 U235 C236 A241 G242 U243 A244 G245 C246 G247 G248 C249 G250 A251 G252 A255 A256 C257 G258 G263 C264 A265 G266 C267 C268 C269 A270 G271
A272 G273 C274 C275 U276 G277 A278 A279 U280 C281 A282 G283 U284 G285 U286 G287 U288 G289 U290 G291 U292 U293 A294 G295 U296 G297 G298 A299 A300 G301 C302 G303 U304 C305 U306 G307 G308 A309 A310 A311 G312 G315 C316 G317 C318 G319 A320 U321 A322 C323 A324 G325 G326 G327 U328 G329 A330 C331 A332
G333 C334 C335 C336 C337 G338 U339 A340 C341 A342 C343 A344 A345 A346 A347 A348 U349 G350 C351 A352 C353 A354 U355 G356 C357 U358 G359 U360 G361 A362 G363 C364 U365 C366 G367 G370 A371 G372 U373 A374 G379 G386 U387 U392 C393 C394 U395 G396 G400 A401 A402 U403 A404 U405 G406
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A730 C731 C740 U741 A742 A743 U744 G745 U746 U747 A750 A751 A752 A753 U754 U755 A756 G757 C758 G759 G760 A761 A764 C765 U766 U769 G770 G771 C772 U773 G774 G775 G776 G777 G780 A781 A782 A783 G784 G785 C786 A789 A794 C795 C796 G797 G798 U803 A804 G805 C806 U807
G808 G809 U810 U811 C812 U813 C814 C815 C816 C817 G818 A819 A820 A821 G822 C823 U824 A825 U826 U827 U828 A829 G830 G831 U832 A833 G834 C835 G836 C837 C838 U839 C840 G841 U842 A845 U846 U847 C848 A849 U850 C851 U852 C853 C854 G855 G856 G857 G858 G859 U860 A861 G862 A863 G864 C865 A866 C867 U868
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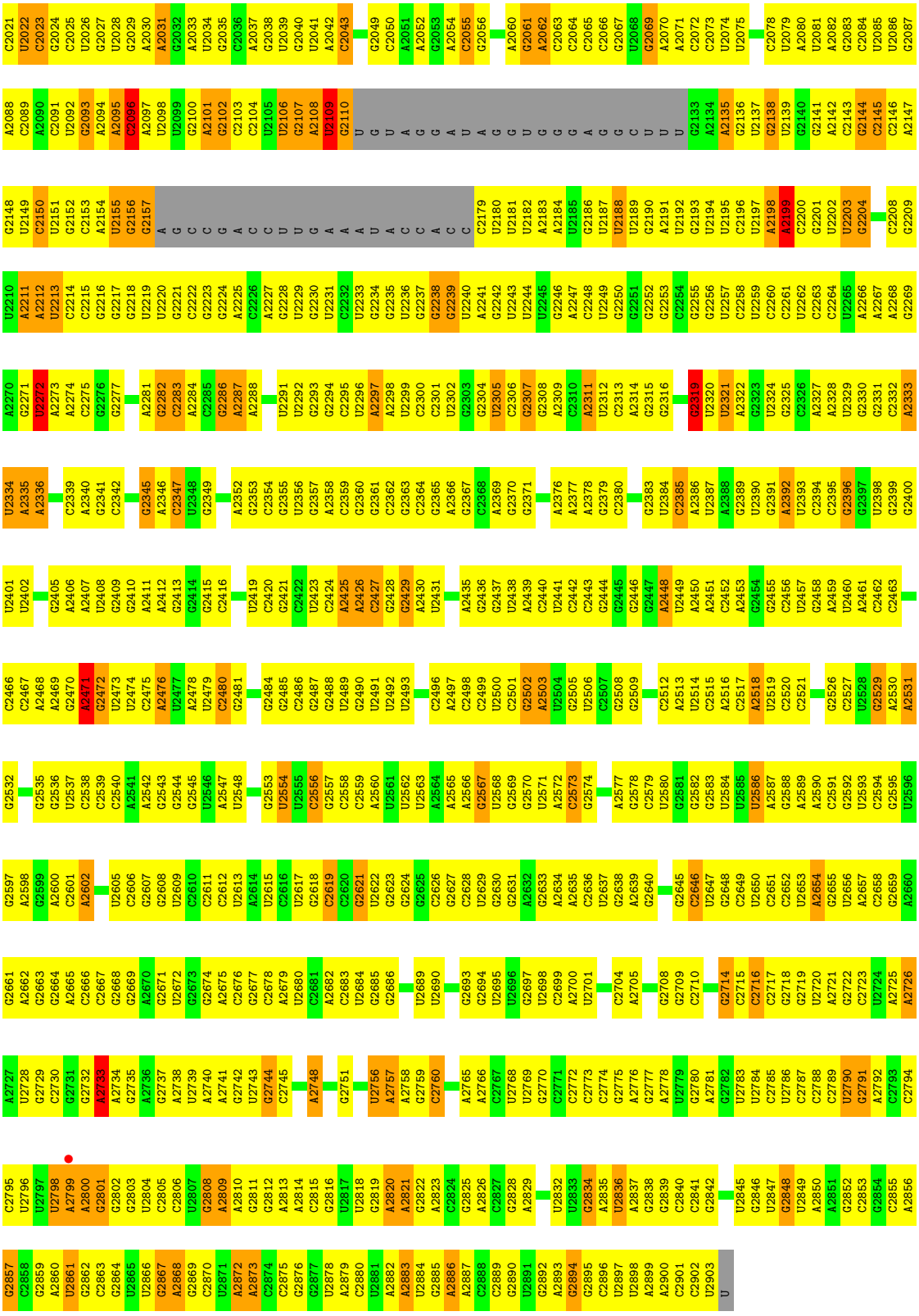
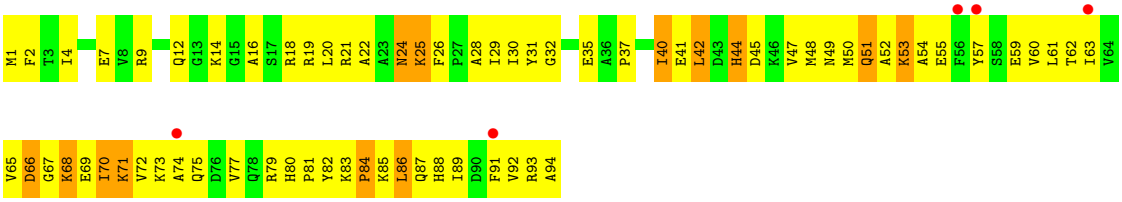
U932 A933 U934 C935 A936 C937 G938 G939 G940 A941 G942 A943 C946 A947 C948 G949 G950 C951 G956 C957 U958 A959 A960 C961 G962 U963 C964 U967 C968 G969 U970 G971 A972 A973 G974 A975 A979 A980 A981 C982 A983 A984 C987 A988 G989 A990 C991 C992 G993 C994 C995 A996 G997 C998 U999



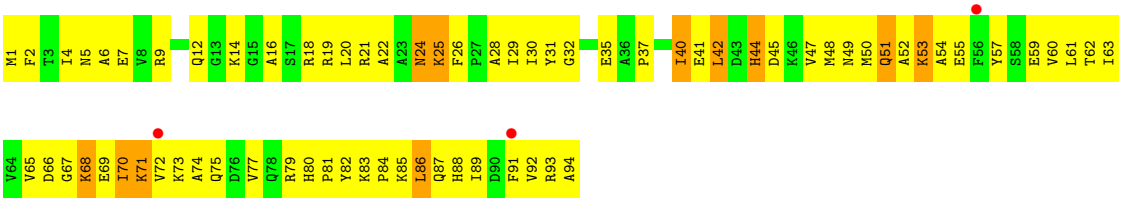
• Molecule 24: 50S ribosomal protein L25

Chain BV:



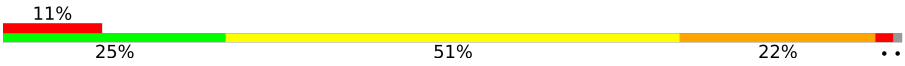
• Molecule 24: 50S ribosomal protein L25

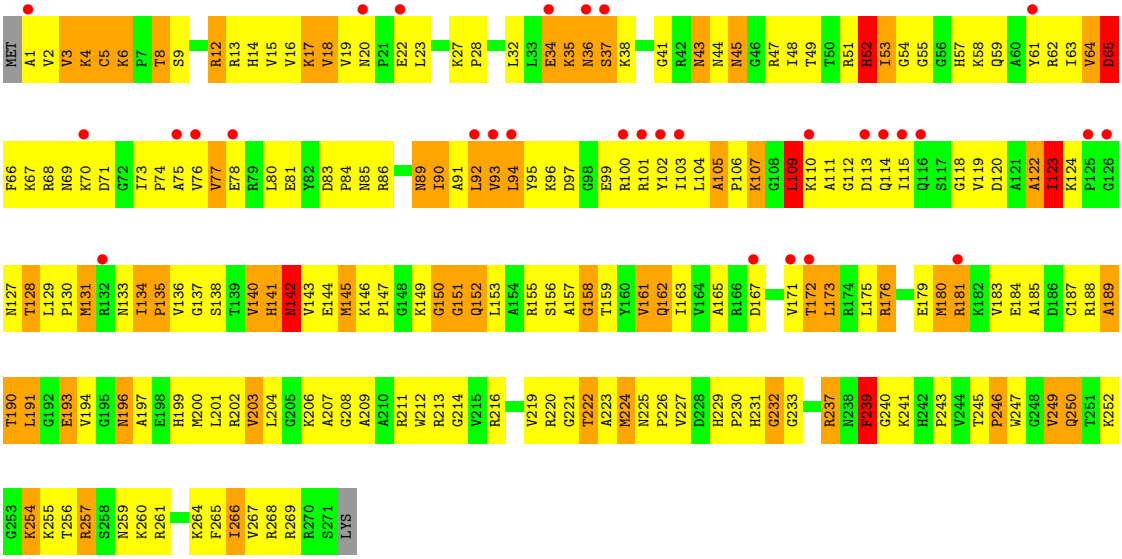
Chain DV:



• Molecule 25: 50S ribosomal protein L2

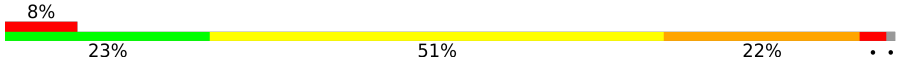
Chain BC:

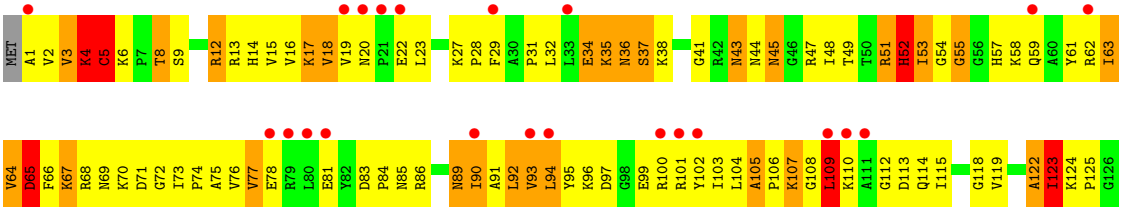




• Molecule 25: 50S ribosomal protein L2

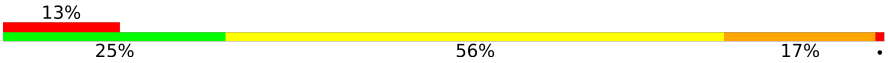
Chain DC:

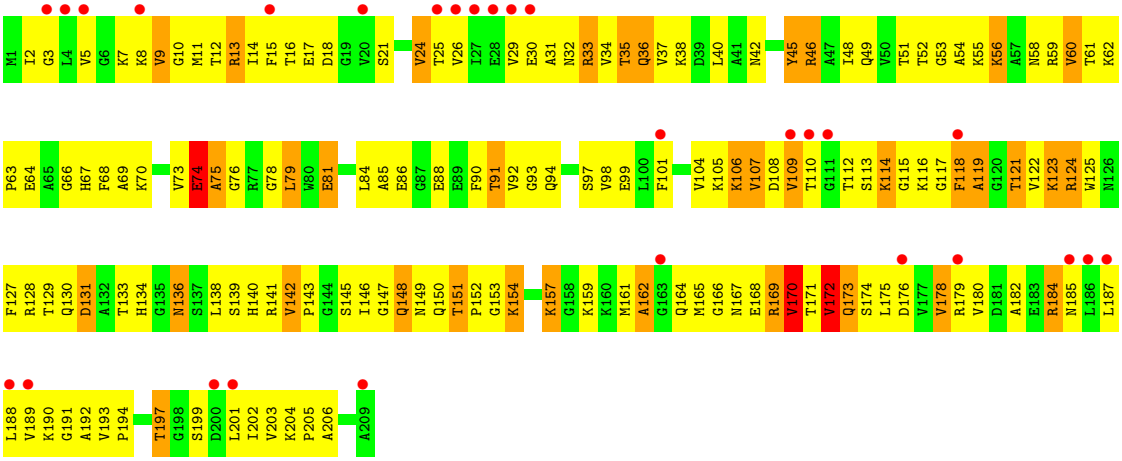




• Molecule 26: 50S ribosomal protein L3

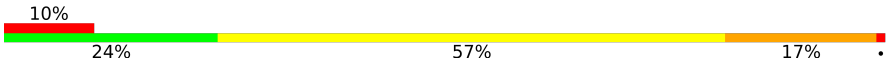
Chain BD:

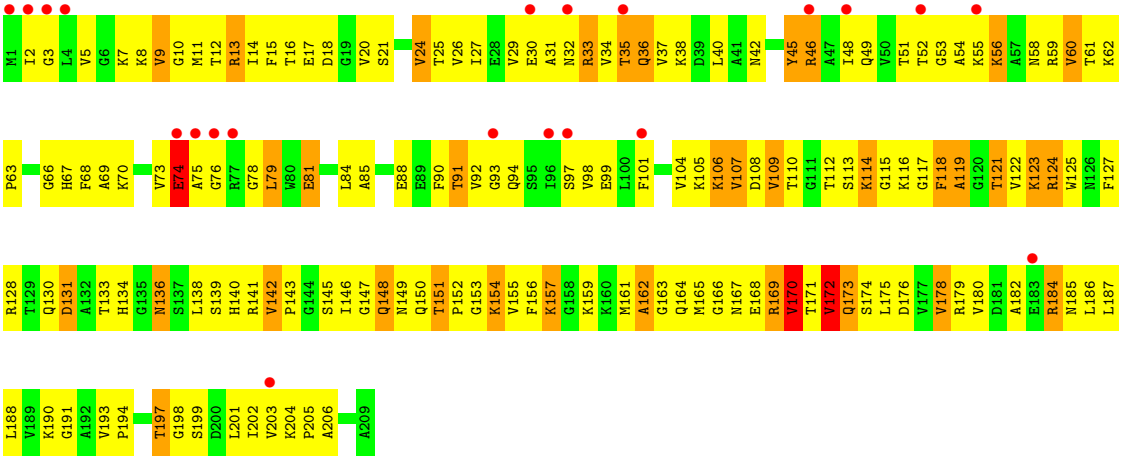




• Molecule 26: 50S ribosomal protein L3

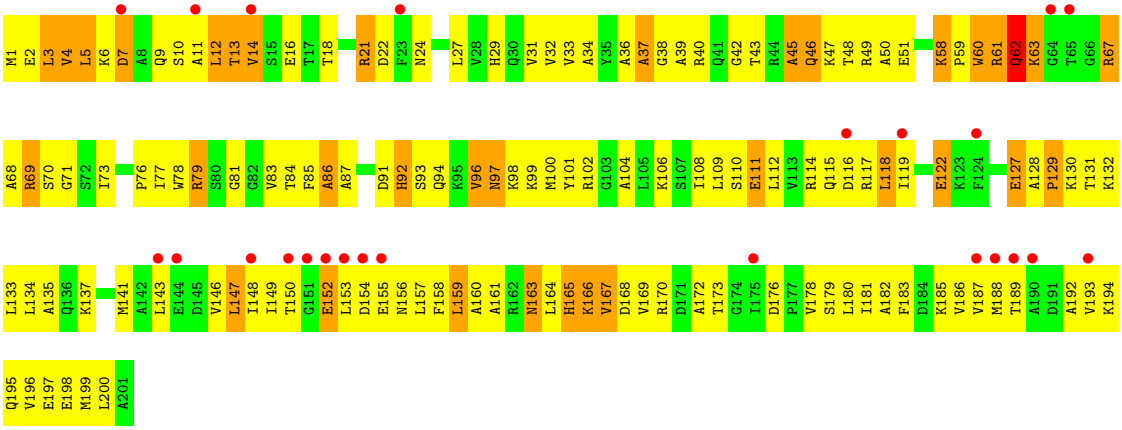
Chain DD:



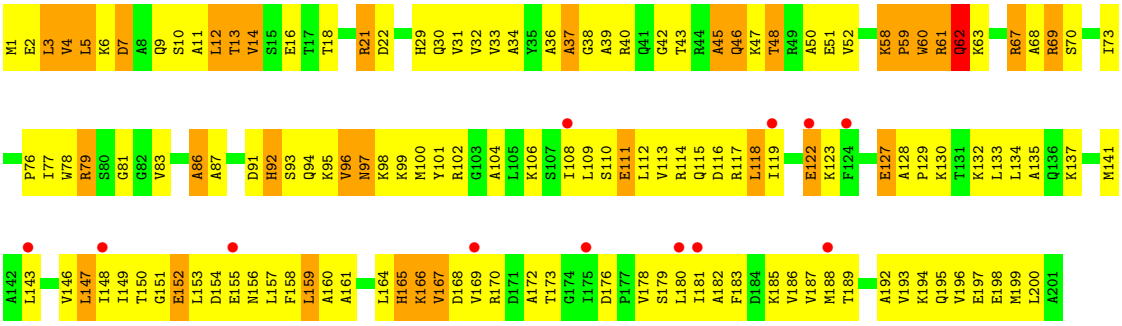


• Molecule 27: 50S ribosomal protein L4

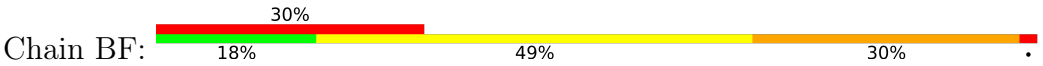
Chain BE:

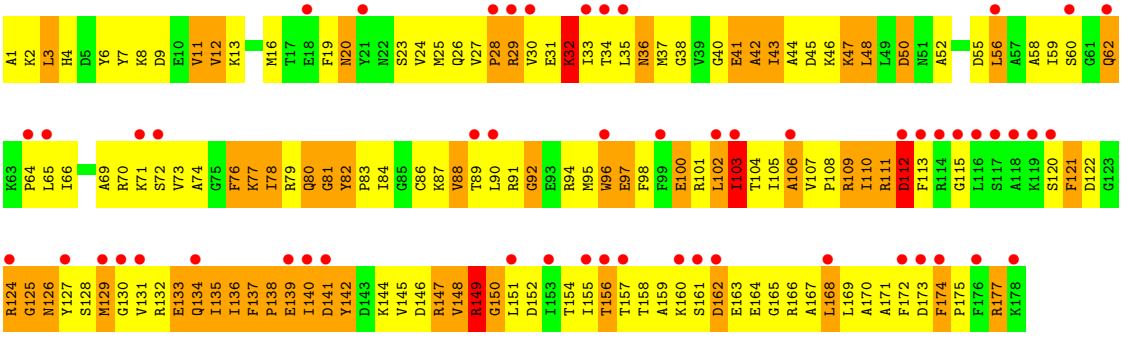


• Molecule 27: 50S ribosomal protein L4

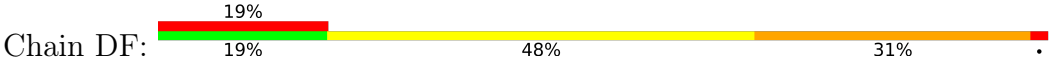


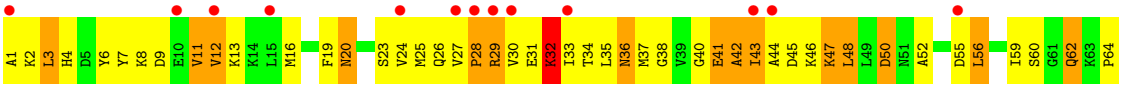
• Molecule 28: 50S ribosomal protein L5

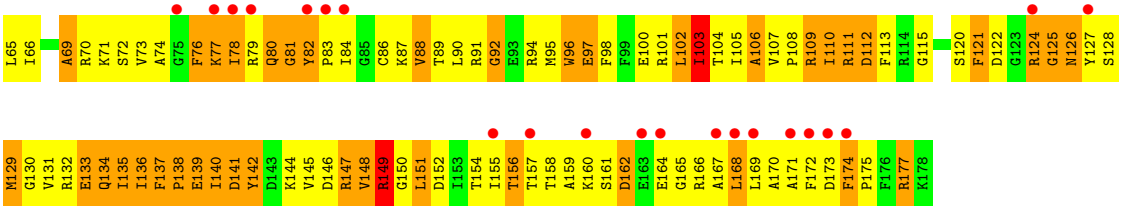




• Molecule 28: 50S ribosomal protein L5

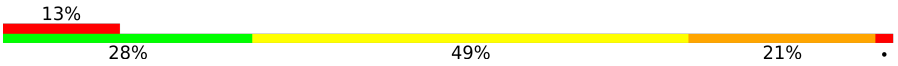


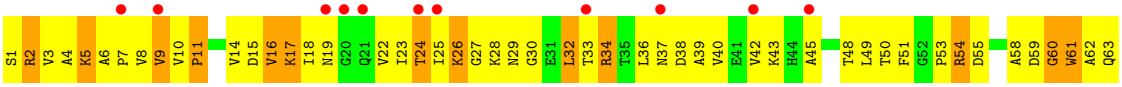


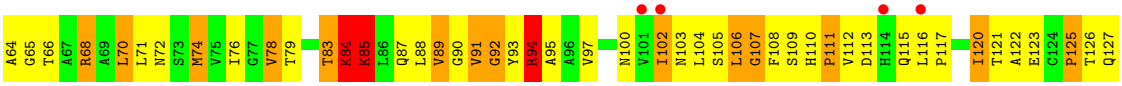


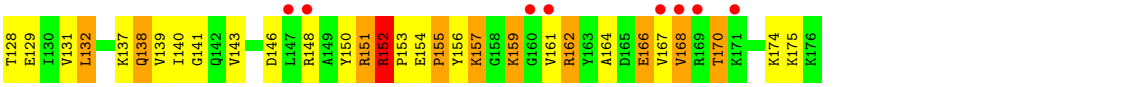
• Molecule 29: 50S ribosomal protein L6

Chain BG:



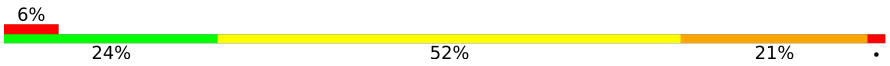


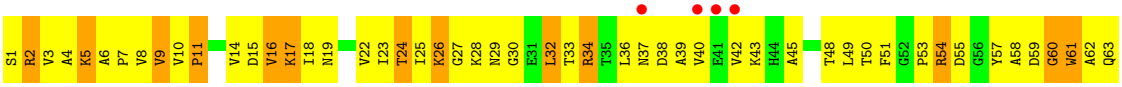


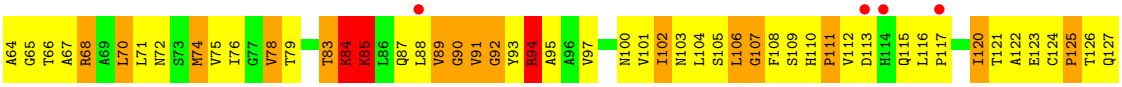


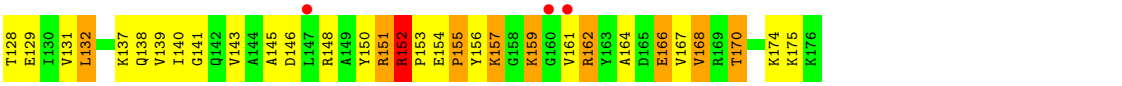
• Molecule 29: 50S ribosomal protein L6

Chain DG:



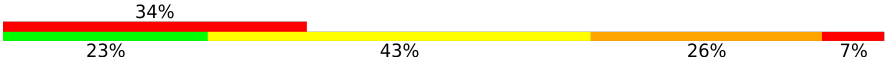


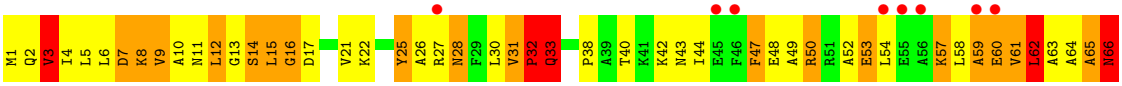


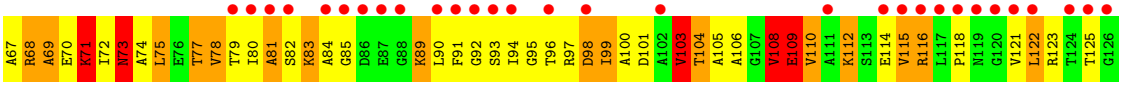


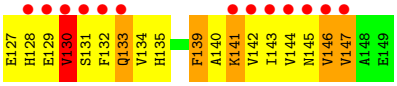
• Molecule 30: 50S ribosomal protein L9

Chain BH:



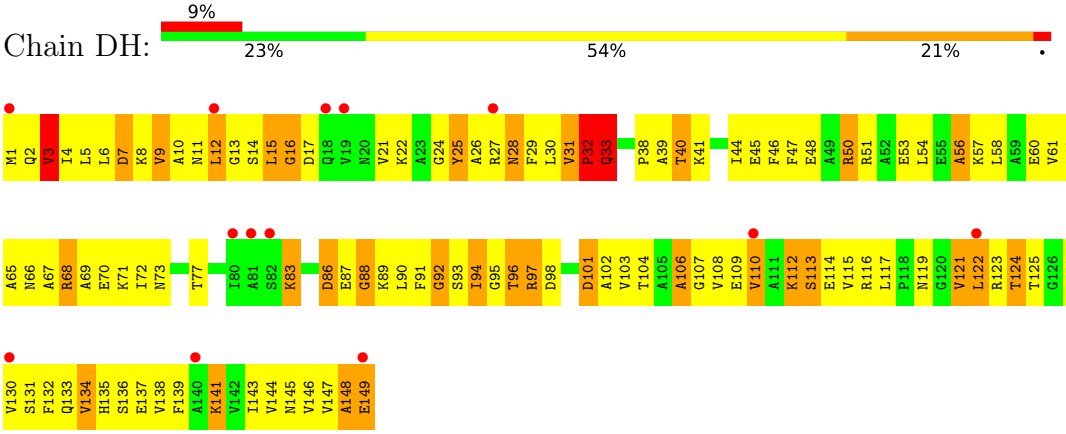






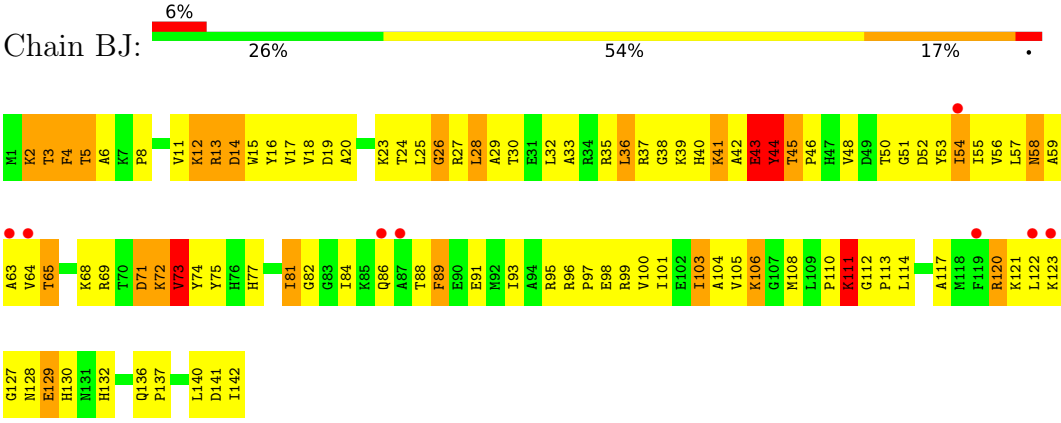
• Molecule 30: 50S ribosomal protein L9

Chain DH:



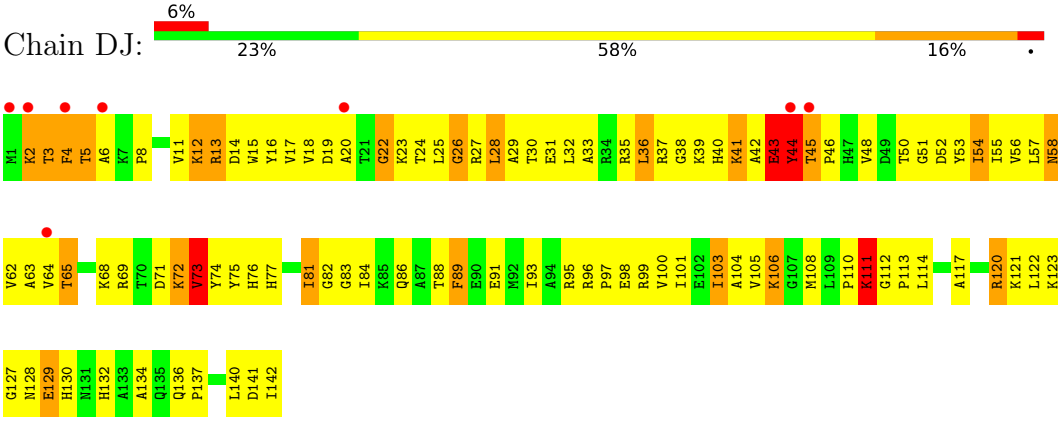
• Molecule 31: 50S ribosomal protein L13

Chain BJ:



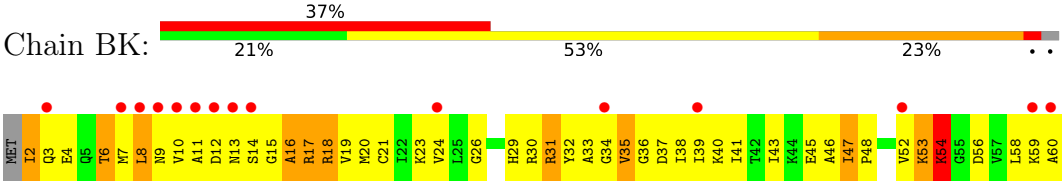
• Molecule 31: 50S ribosomal protein L13

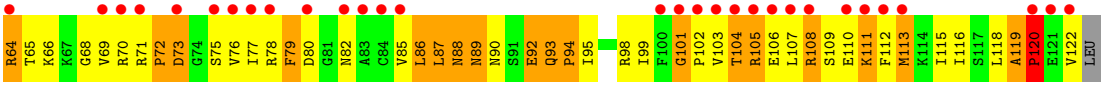
Chain DJ:



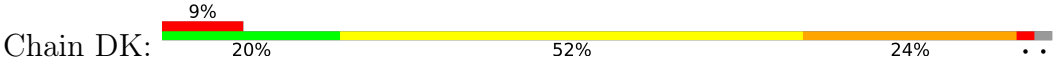
• Molecule 32: 50S ribosomal protein L14

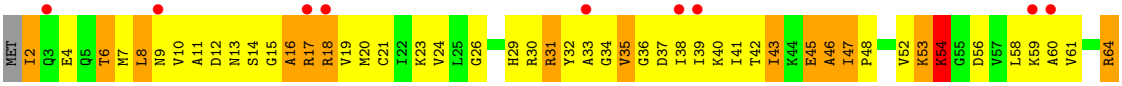
Chain BK:

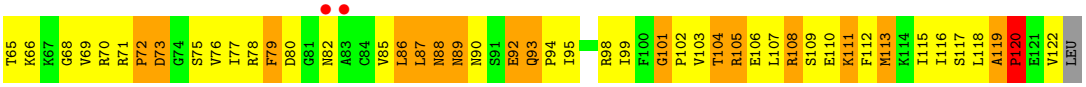




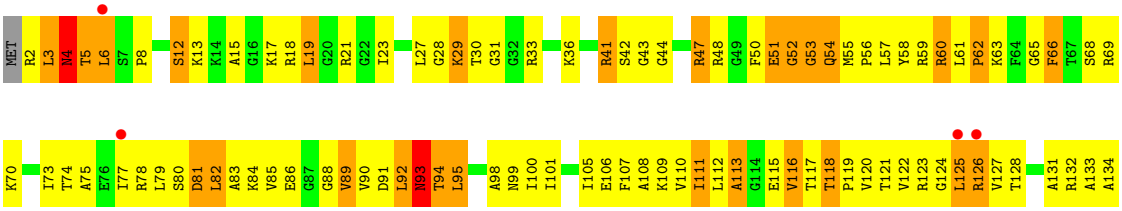
• Molecule 32: 50S ribosomal protein L14



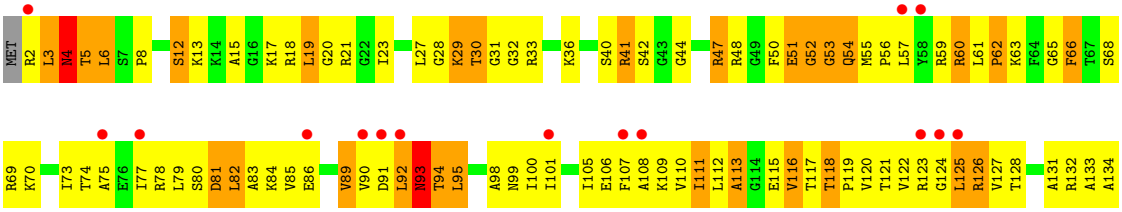




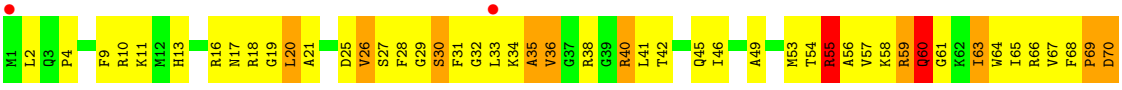
• Molecule 33: 50S ribosomal protein L15

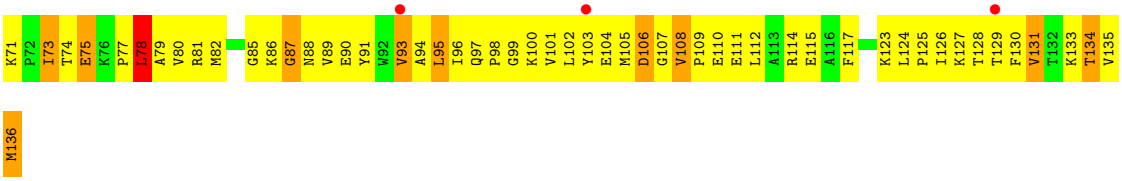


• Molecule 33: 50S ribosomal protein L15

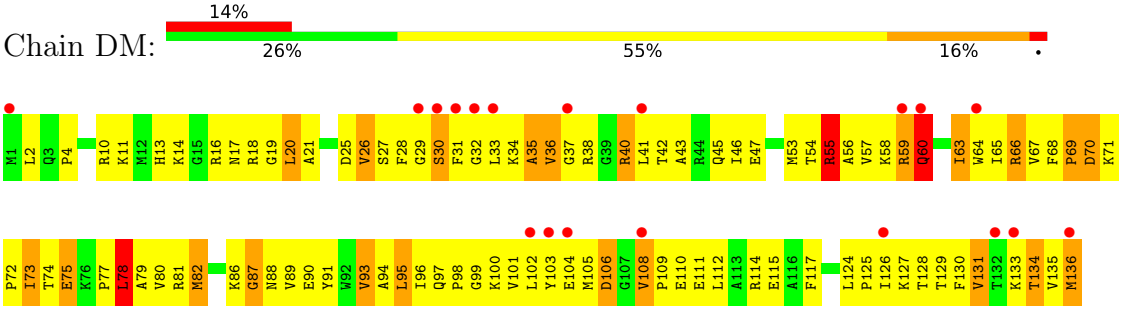


• Molecule 34: 50S ribosomal protein L16

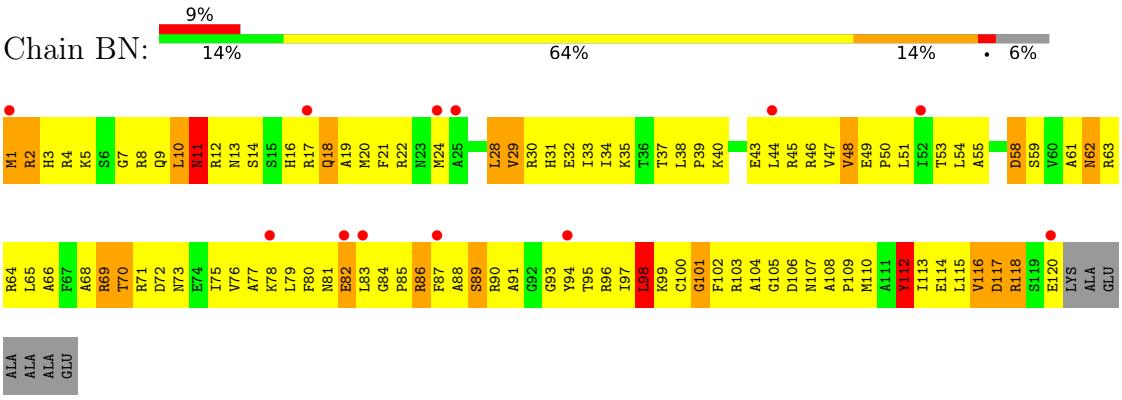




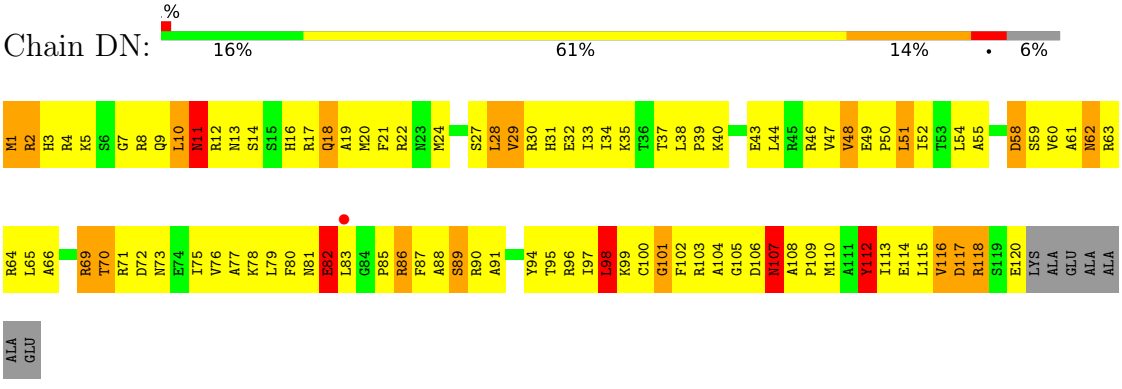
• Molecule 34: 50S ribosomal protein L16



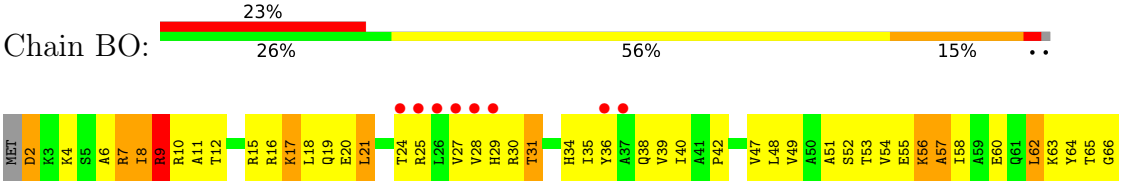
• Molecule 35: 50S ribosomal protein L17

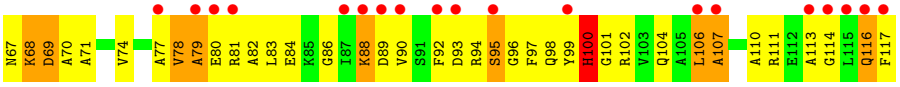


• Molecule 35: 50S ribosomal protein L17

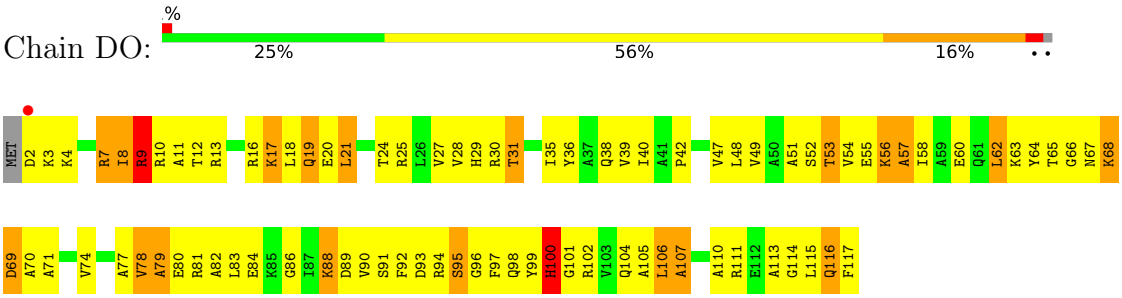


• Molecule 36: 50S ribosomal protein L18

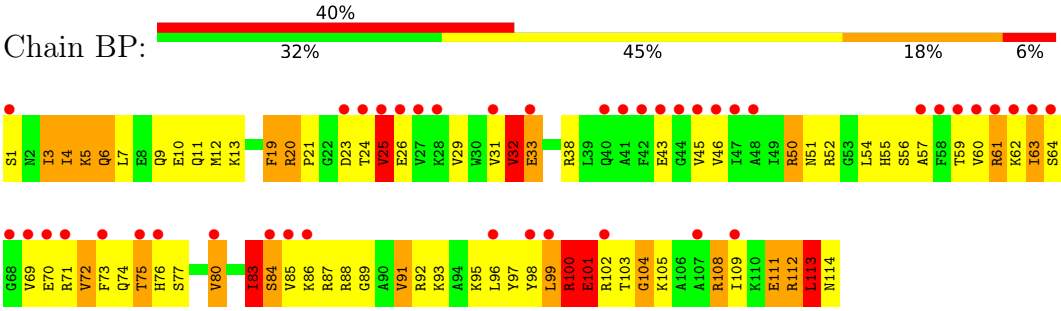




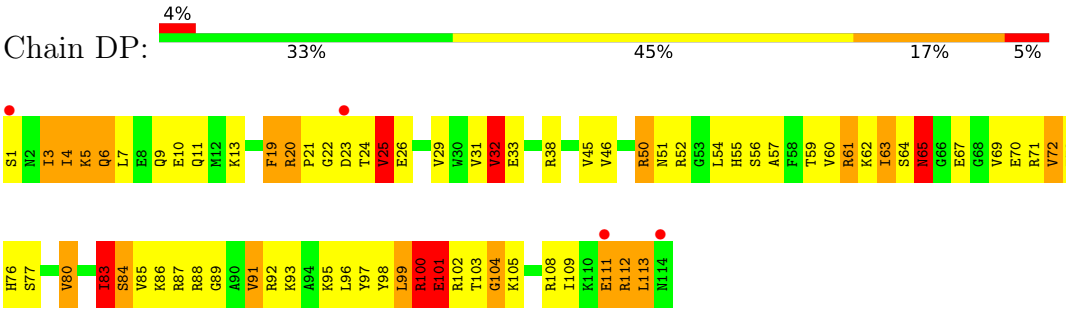
• Molecule 36: 50S ribosomal protein L18



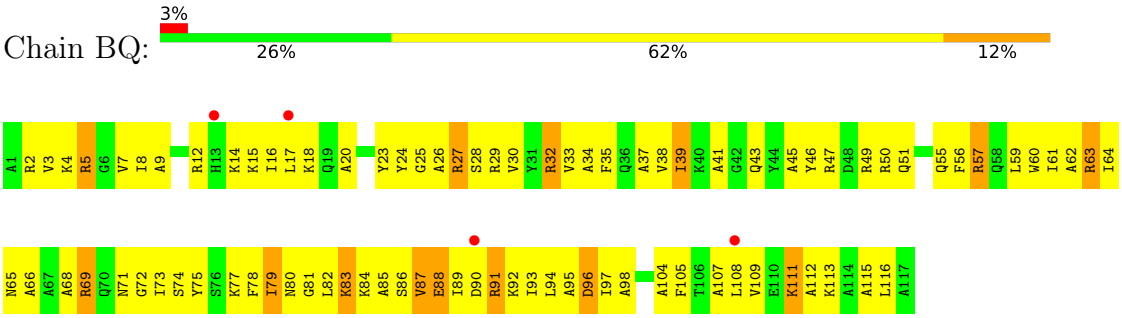
• Molecule 37: 50S ribosomal protein L19



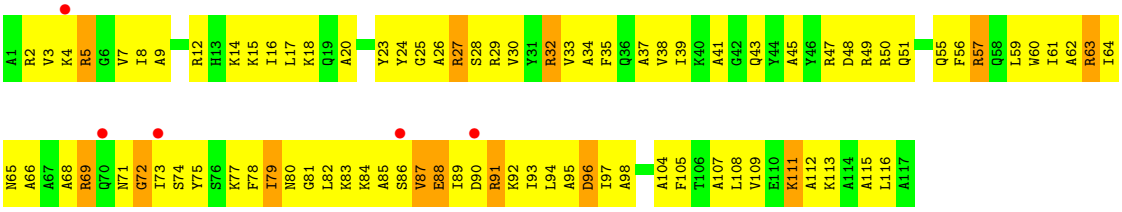
• Molecule 37: 50S ribosomal protein L19



• Molecule 38: 50S ribosomal protein L20

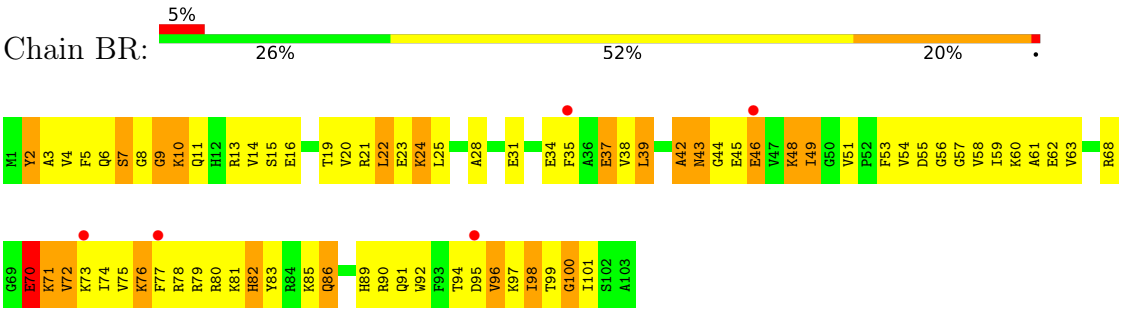


• Molecule 38: 50S ribosomal protein L20



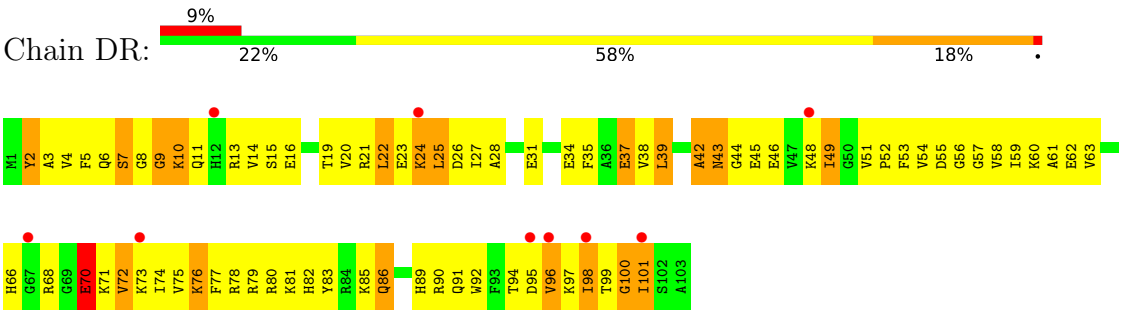
• Molecule 39: 50S ribosomal protein L21

Chain BR:



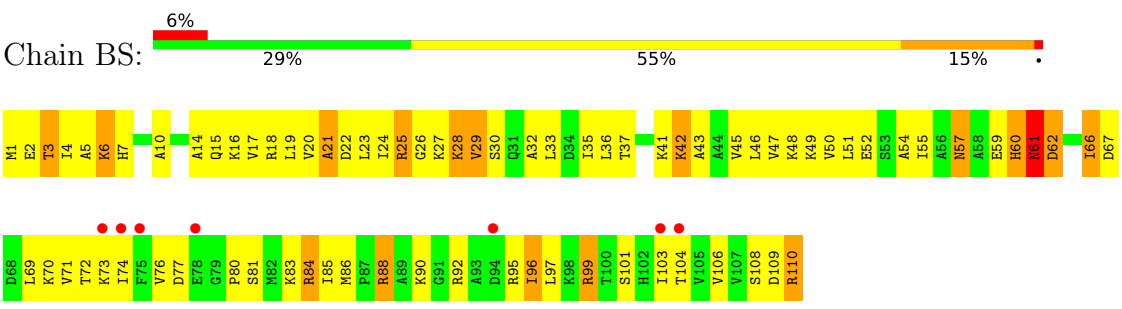
• Molecule 39: 50S ribosomal protein L21

Chain DR:



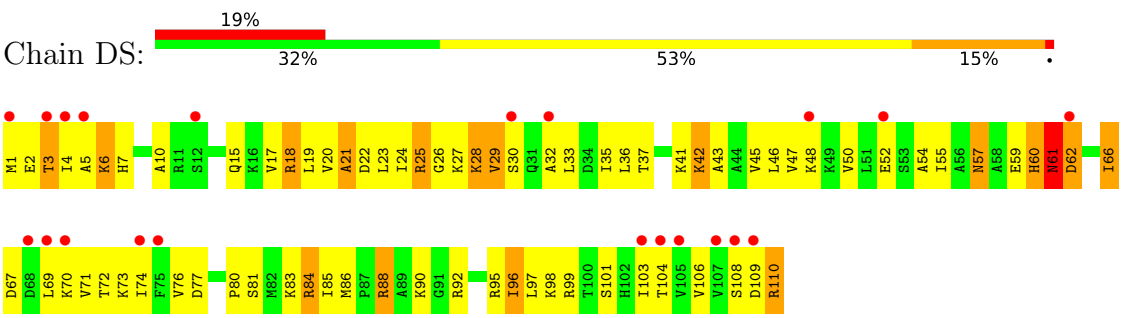
• Molecule 40: 50S ribosomal protein L22

Chain BS:



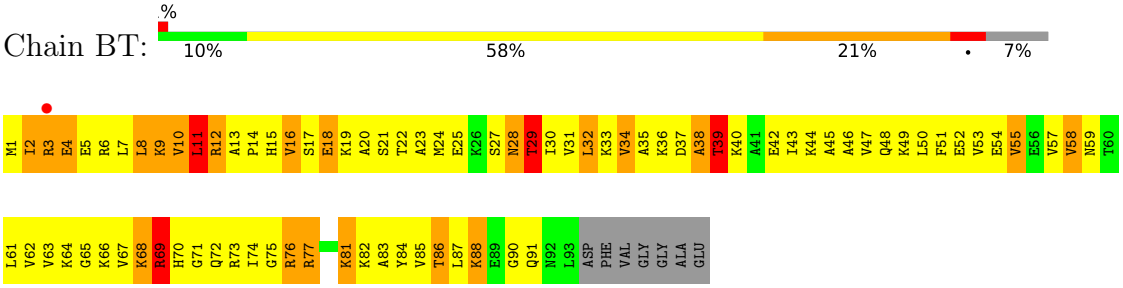
• Molecule 40: 50S ribosomal protein L22

Chain DS:



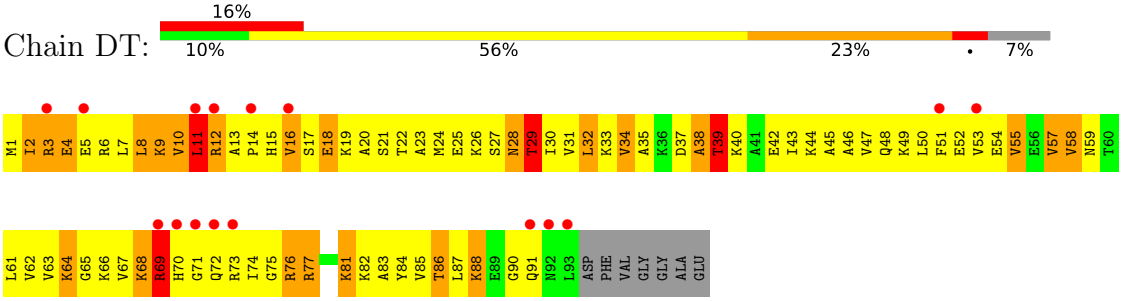
• Molecule 41: 50S ribosomal protein L23

Chain BT:



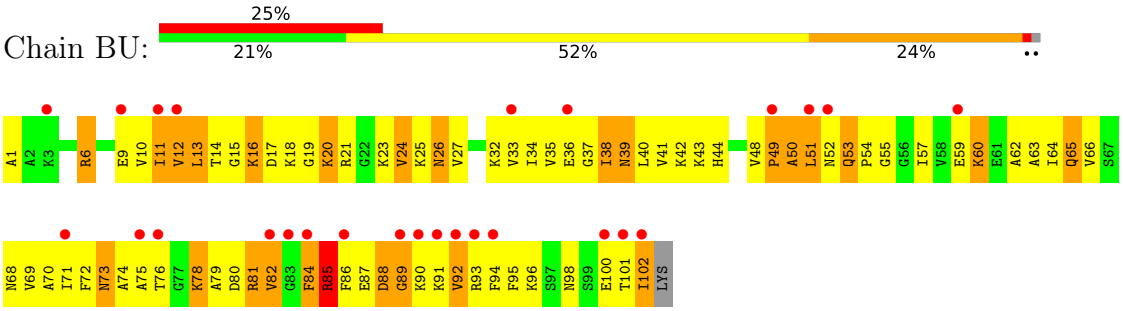
• Molecule 41: 50S ribosomal protein L23

Chain DT:



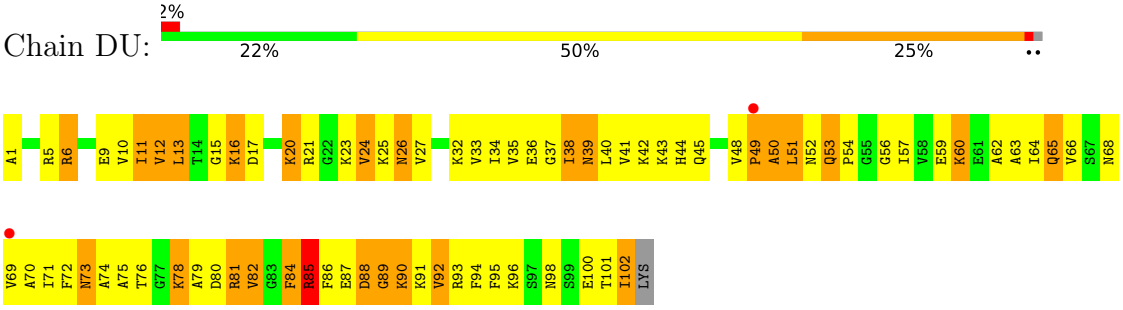
• Molecule 42: 50S ribosomal protein L24

Chain BU:



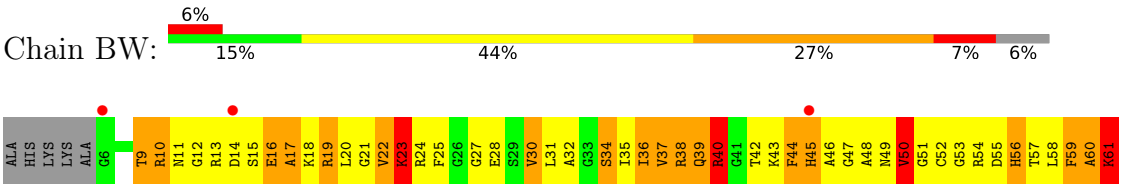
• Molecule 42: 50S ribosomal protein L24

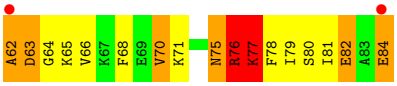
Chain DU:



• Molecule 43: 50S ribosomal protein L27

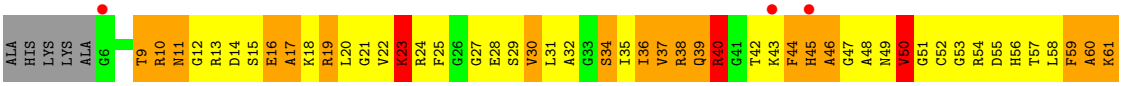
Chain BW:

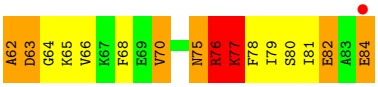




• Molecule 43: 50S ribosomal protein L27

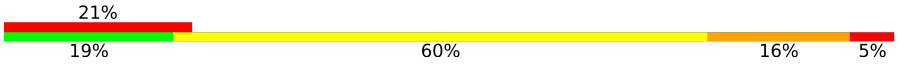
Chain DW:

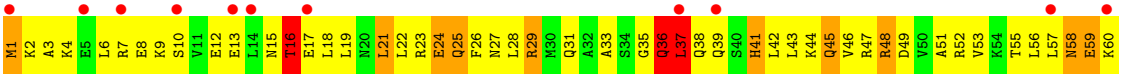




• Molecule 44: 50S ribosomal protein L29

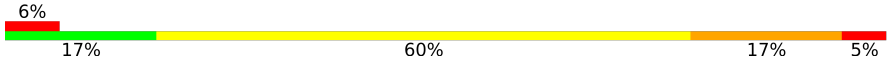
Chain BX:

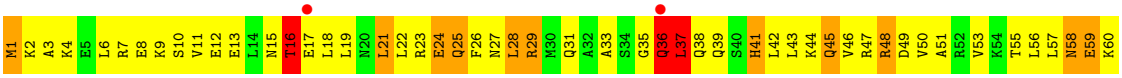




• Molecule 44: 50S ribosomal protein L29

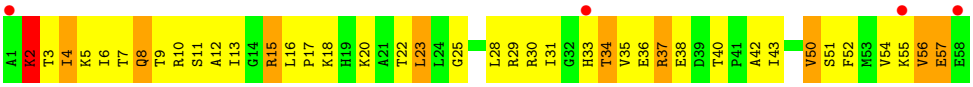
Chain DX:





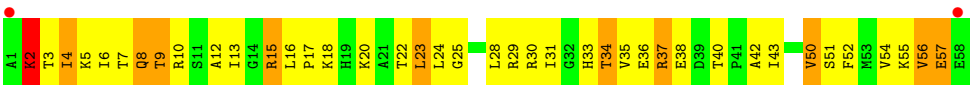
• Molecule 45: 50S ribosomal protein L30

Chain BY:



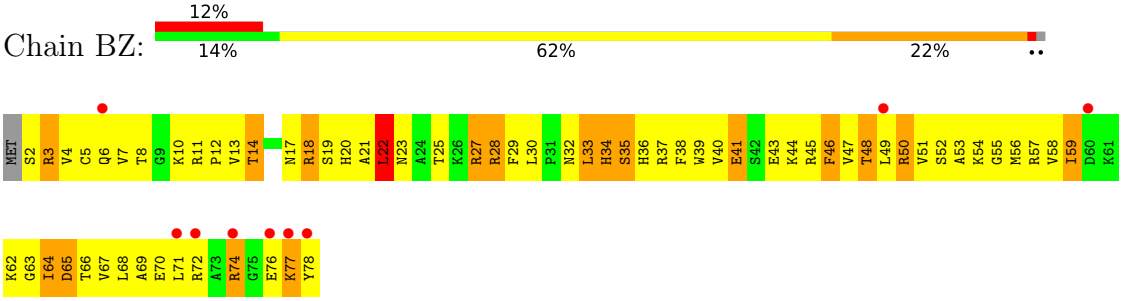
• Molecule 45: 50S ribosomal protein L30

Chain DY:



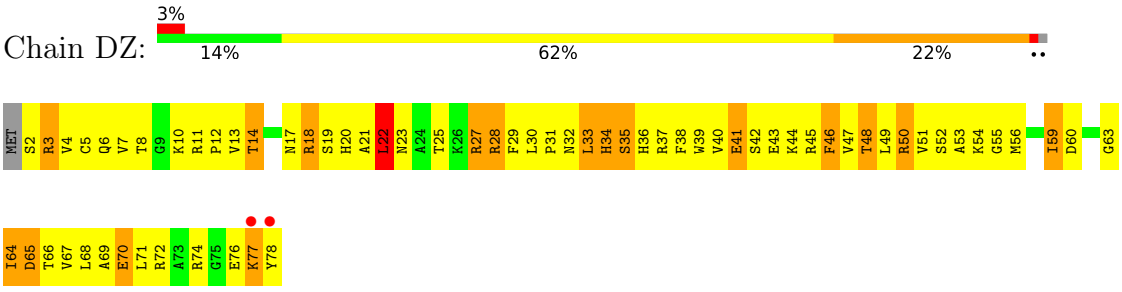
• Molecule 46: 50S ribosomal protein L28

Chain BZ:



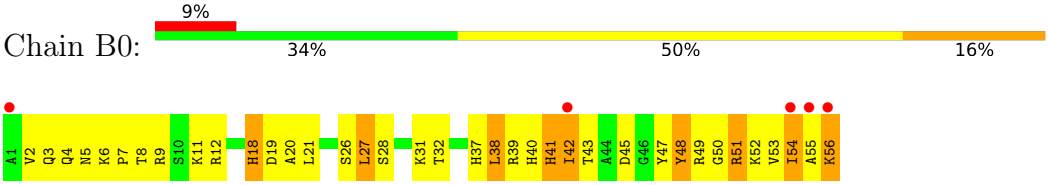
• Molecule 46: 50S ribosomal protein L28

Chain DZ:



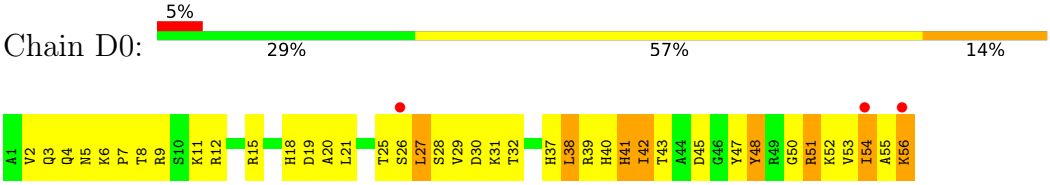
• Molecule 47: 50S ribosomal protein L32

Chain B0:



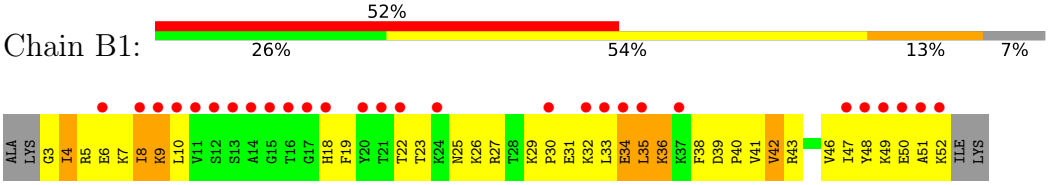
• Molecule 47: 50S ribosomal protein L32

Chain D0:



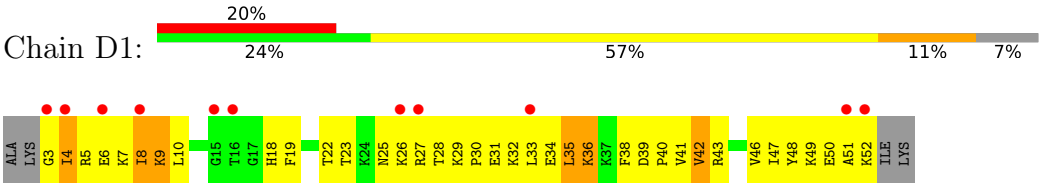
• Molecule 48: 50S ribosomal protein L33

Chain B1:



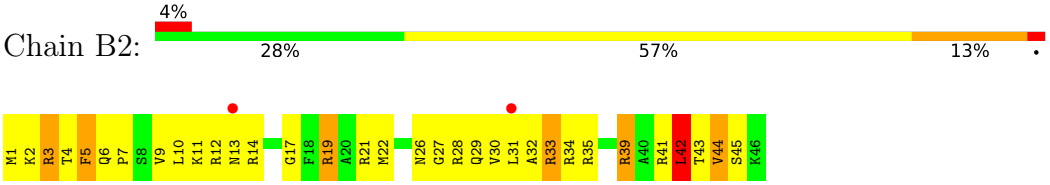
• Molecule 48: 50S ribosomal protein L33

Chain D1:



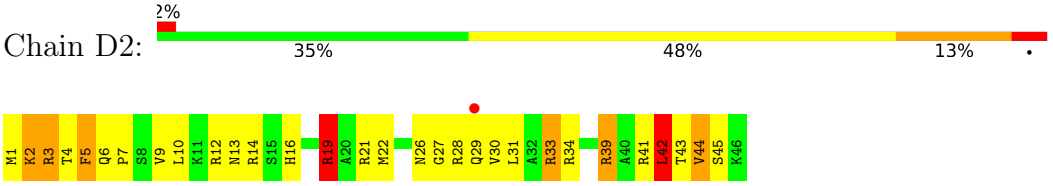
• Molecule 49: 50S ribosomal protein L34

Chain B2:



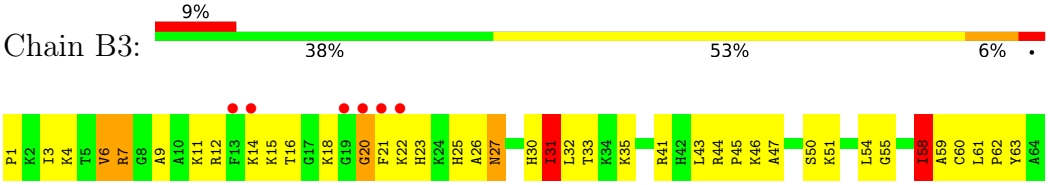
• Molecule 49: 50S ribosomal protein L34

Chain D2:



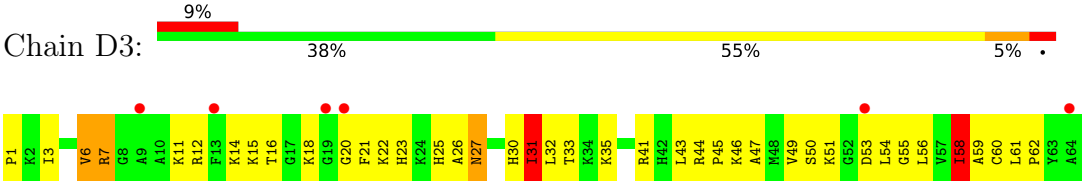
• Molecule 50: 50S ribosomal protein L35

Chain B3:



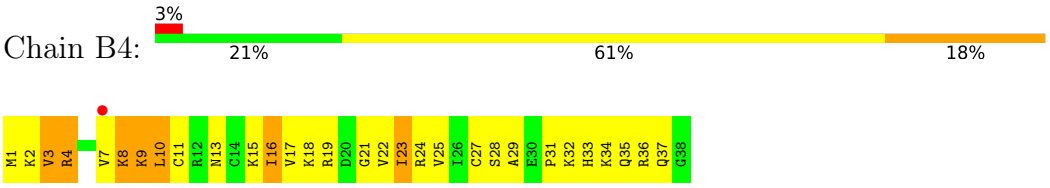
• Molecule 50: 50S ribosomal protein L35

Chain D3:



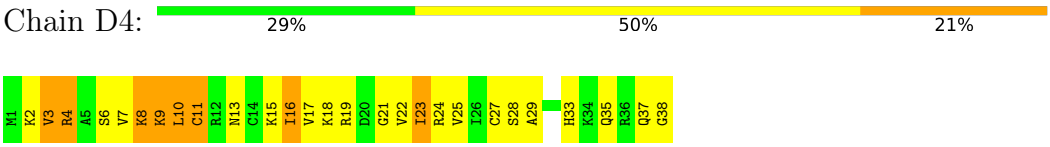
• Molecule 51: 50S ribosomal protein L36

Chain B4:



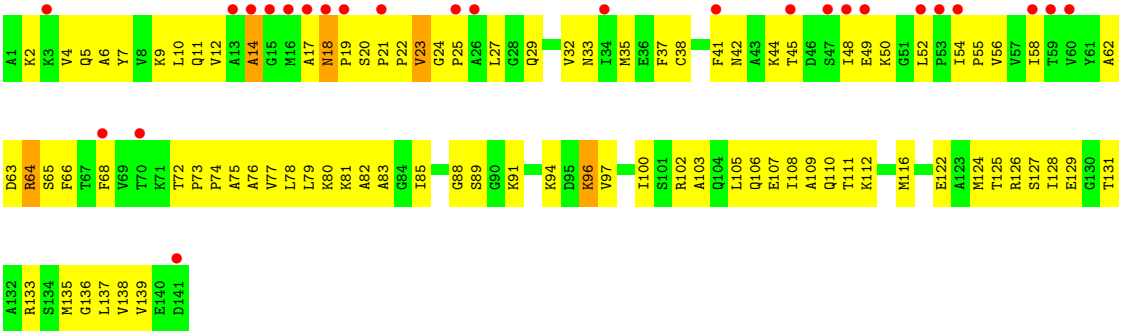
• Molecule 51: 50S ribosomal protein L36

Chain D4:



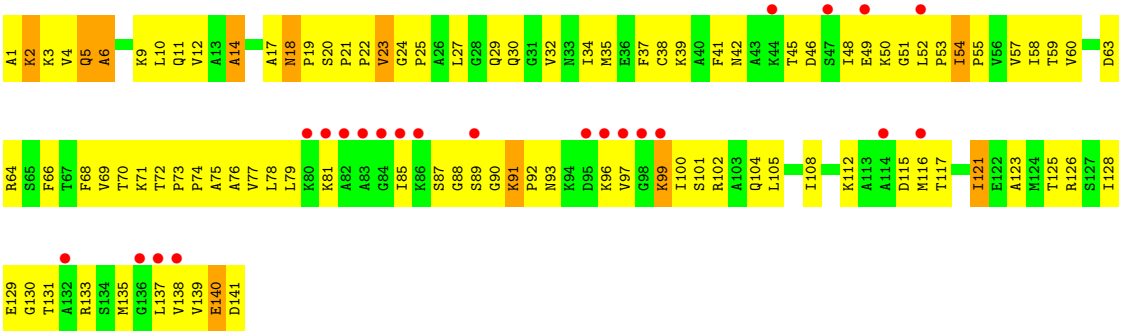
• Molecule 52: 50S ribosomal protein L11

Chain BI:



• Molecule 52: 50S ribosomal protein L11

Chain DI:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	208.70Å 379.50Å 739.30Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	70.00 – 3.50 137.77 – 3.50	Depositor EDS
% Data completeness (in resolution range)	62.1 (70.00-3.50) 62.3 (137.77-3.50)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	0.07	Depositor
$< I/\sigma(I) >$ [1]	1.88 (at 3.49Å)	Xtriage
Refinement program	CNS	Depositor
R, R_{free}	0.269 , 0.318 0.234 , 0.279	Depositor DCC
R_{free} test set	22229 reflections (4.89%)	wwPDB-VP
Wilson B-factor (Å^2)	117.9	Xtriage
Anisotropy	0.294	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.23 , 67.2	EDS
L-test for twinning[2]	$< \|L\| > = 0.50$, $< L^2 > = 0.33$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.92	EDS
Total number of atoms	284077	wwPDB-VP
Average B, all atoms (Å^2)	70.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.15% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

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

5 Model quality (i)

5.1 Standard geometry (i)

Bond lengths and bond angles in the following residue types are not validated in this section: MG, HYG, 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	0.26	1/36762 (0.0%)	0.77	13/57350 (0.0%)
1	CA	0.26	1/36762 (0.0%)	0.77	17/57350 (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	0.43	0/2227
3	CD	0.23	0/1665	0.43	0/2227
4	AE	0.23	0/1118	0.45	0/1504
4	CE	0.23	0/1118	0.45	0/1504
5	AF	0.24	0/835	0.44	0/1128
5	CF	0.24	0/835	0.44	0/1128
6	AG	0.23	0/1187	0.45	0/1591
6	CG	0.23	0/1211	0.44	0/1624
7	AH	0.23	0/989	0.45	0/1326
7	CH	0.23	0/989	0.45	0/1326
8	AI	0.24	0/1034	0.44	0/1375
8	CI	0.24	0/1034	0.44	0/1375
9	AJ	0.22	0/796	0.47	0/1077
9	CJ	0.22	0/796	0.47	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	0.47	0/1300
11	CL	0.22	0/969	0.47	0/1300
12	AM	0.21	0/892	0.45	0/1193
12	CM	0.21	0/884	0.45	0/1181
13	AN	0.24	0/785	0.43	0/1043
13	CN	0.24	0/785	0.43	0/1043
14	AO	0.22	0/723	0.44	0/966
14	CO	0.22	0/723	0.44	0/966
15	AP	0.25	0/659	0.45	0/884
15	CP	0.25	0/648	0.44	0/870
16	AQ	0.24	0/657	0.46	0/881
16	CQ	0.24	0/665	0.48	0/892

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
17	AR	0.23	0/462	0.44	0/621
17	CR	0.23	0/462	0.44	0/621
18	AS	0.25	0/652	0.45	0/877
18	CS	0.25	0/660	0.46	0/888
19	AT	0.23	0/671	0.41	0/888
19	CT	0.24	0/671	0.41	0/888
20	AB	0.25	0/1735	0.44	0/2338
20	CB	0.25	0/1735	0.44	0/2338
21	AU	0.26	0/430	0.46	0/570
21	CU	0.26	0/430	0.46	0/570
22	BA	0.24	0/2803	0.75	2/4371 (0.0%)
22	DA	0.25	0/2803	0.75	1/4371 (0.0%)
23	BB	0.27	7/68314 (0.0%)	0.78	41/106569 (0.0%)
23	DB	0.28	7/68314 (0.0%)	0.78	49/106569 (0.0%)
24	BV	0.25	0/766	0.43	0/1025
24	DV	0.25	0/766	0.43	0/1025
25	BC	0.22	0/2121	0.47	0/2852
25	DC	0.22	0/2121	0.47	0/2852
26	BD	0.24	0/1586	0.46	0/2134
26	DD	0.24	0/1586	0.47	0/2134
27	BE	0.23	0/1571	0.49	0/2113
27	DE	0.24	0/1571	0.49	0/2113
28	BF	0.26	0/1444	0.51	0/1937
28	DF	0.26	0/1444	0.51	0/1937
29	BG	0.23	0/1343	0.46	0/1816
29	DG	0.23	0/1343	0.46	0/1816
30	BH	0.25	0/1122	0.46	0/1515
30	DH	0.25	0/1122	0.46	0/1515
31	BJ	0.23	0/1152	0.47	0/1551
31	DJ	0.23	0/1152	0.47	0/1551
32	BK	0.24	0/939	0.52	0/1258
32	DK	0.23	0/939	0.52	0/1258
33	BL	0.23	0/1054	0.47	0/1403
33	DL	0.23	0/1054	0.47	0/1403
34	BM	0.25	0/1093	0.47	0/1460
34	DM	0.25	0/1093	0.47	0/1460
35	BN	0.24	0/973	0.51	0/1301
35	DN	0.24	0/973	0.51	0/1301
36	BO	0.23	0/902	0.47	0/1209
36	DO	0.23	0/902	0.48	0/1209
37	BP	0.24	0/929	0.48	0/1242
37	DP	0.24	0/929	0.48	0/1242
38	BQ	0.25	0/960	0.46	0/1278

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
38	DQ	0.25	0/960	0.46	0/1278
39	BR	0.25	0/829	0.48	0/1107
39	DR	0.25	0/829	0.48	0/1107
40	BS	0.22	0/864	0.49	0/1156
40	DS	0.22	0/864	0.49	0/1156
41	BT	0.23	0/744	0.52	0/994
41	DT	0.23	0/744	0.52	0/994
42	BU	0.25	0/787	0.45	0/1051
42	DU	0.25	0/787	0.45	0/1051
43	BW	0.28	0/603	0.48	0/797
43	DW	0.27	0/603	0.48	0/797
44	BX	0.23	0/510	0.51	0/677
44	DX	0.23	0/510	0.51	0/677
45	BY	0.23	0/453	0.49	0/605
45	DY	0.23	0/453	0.49	0/605
46	BZ	0.25	0/635	0.51	0/848
46	DZ	0.25	0/635	0.51	0/848
47	B0	0.22	0/450	0.52	0/599
47	D0	0.22	0/450	0.52	0/599
48	B1	0.27	0/416	0.47	0/554
48	D1	0.27	0/416	0.47	0/554
49	B2	0.25	0/380	0.49	0/498
49	D2	0.26	0/380	0.49	0/498
50	B3	0.24	0/513	0.46	0/676
50	D3	0.24	0/513	0.46	0/676
51	B4	0.22	0/303	0.46	0/397
51	D4	0.22	0/303	0.46	0/397
52	BI	0.24	0/1046	0.46	0/1410
52	DI	0.25	0/1046	0.47	0/1410
All	All	0.26	16/306361 (0.0%)	0.70	123/457973 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	AA	0	13
1	CA	0	13
23	BB	0	36
23	DB	0	38
All	All	0	100

All (16) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	DB	1086	A	C5-C6	-16.14	1.26	1.41
23	BB	1086	A	C5-C6	-16.11	1.26	1.41
23	BB	1088	A	C6-N1	-10.49	1.28	1.35
23	DB	1088	A	C6-N1	-10.45	1.28	1.35
23	DB	1060	U	C2-N3	7.89	1.43	1.37
23	BB	1060	U	C2-N3	7.86	1.43	1.37
23	BB	1086	A	N3-C4	-7.29	1.30	1.34
23	DB	1086	A	N3-C4	-7.04	1.30	1.34
23	DB	1086	A	N7-C5	-6.41	1.35	1.39
23	BB	1086	A	N7-C5	-6.28	1.35	1.39
1	AA	495	A	N3-C4	-5.62	1.31	1.34
1	CA	495	A	N3-C4	-5.48	1.31	1.34
23	DB	2272	U	C2-N3	5.41	1.41	1.37
23	BB	2272	U	C2-N3	5.34	1.41	1.37
23	BB	2267	A	C6-N6	-5.14	1.29	1.33
23	DB	2267	A	C6-N6	-5.13	1.29	1.33

All (123) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	BB	2791	G	O5'-P-OP1	-31.87	72.45	110.70
23	DB	2791	G	O5'-P-OP2	-31.41	73.01	110.70
23	DB	2204	G	O5'-P-OP1	-29.65	75.12	110.70
1	AA	1213	A	O5'-P-OP2	-29.58	75.21	110.70
23	BB	2204	G	O5'-P-OP2	-28.34	76.69	110.70
1	CA	1213	A	O5'-P-OP1	-26.18	79.28	110.70
23	DB	2204	G	O5'-P-OP2	17.93	132.22	110.70
23	BB	2204	G	O5'-P-OP1	17.70	131.94	110.70
1	CA	1213	A	O5'-P-OP2	17.64	131.86	110.70
1	AA	1213	A	O5'-P-OP1	16.79	130.85	110.70
23	BB	2791	G	O5'-P-OP2	16.25	130.19	110.70
1	CA	1212	U	OP1-P-O3'	15.45	139.18	105.20
23	DB	2791	G	O5'-P-OP1	15.06	128.77	110.70
23	DB	2203	U	OP1-P-O3'	14.29	136.63	105.20
1	AA	1212	U	OP2-P-O3'	14.25	136.56	105.20
23	DB	2790	U	OP2-P-O3'	14.20	136.44	105.20
23	BB	2203	U	OP2-P-O3'	14.09	136.19	105.20
23	BB	2790	U	OP1-P-O3'	13.23	134.30	105.20
23	DB	1552	A	N9-C1'-C2'	-9.81	101.21	112.00
23	BB	1552	A	N9-C1'-C2'	-9.76	101.26	112.00
23	DB	1088	A	N1-C6-N6	-8.31	113.61	118.60
23	BB	1088	A	N1-C6-N6	-8.20	113.68	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	CA	1049	U	O5'-P-OP1	-7.79	98.69	105.70
23	BB	1439	A	N9-C1'-C2'	-7.78	103.44	112.00
23	DB	1439	A	N9-C1'-C2'	-7.75	103.47	112.00
23	BB	773	U	C5'-C4'-C3'	-7.59	103.86	116.00
23	DB	1060	U	C5-C4-O4	-7.35	121.49	125.90
23	BB	1060	U	C5-C4-O4	-7.29	121.53	125.90
1	CA	975	A	C5'-C4'-C3'	-7.25	104.41	116.00
23	DB	773	U	C5'-C4'-C3'	-7.14	104.57	116.00
23	BB	1086	A	C4-C5-C6	7.13	120.56	117.00
23	DB	1086	A	C4-C5-C6	7.12	120.56	117.00
23	BB	2733	A	N9-C1'-C2'	-7.06	104.23	112.00
23	DB	2272	U	N3-C4-O4	-7.05	114.47	119.40
23	BB	2272	U	N3-C4-O4	-6.98	114.51	119.40
23	DB	2733	A	N9-C1'-C2'	-6.94	104.37	112.00
1	AA	975	A	C5'-C4'-C3'	-6.77	105.17	116.00
1	AA	1212	U	O3'-P-O5'	-6.76	91.16	104.00
1	AA	86	G	N9-C1'-C2'	6.63	122.62	114.00
23	DB	2135	A	N9-C1'-C2'	-6.63	104.71	112.00
23	DB	745	G	C5'-C4'-C3'	-6.61	105.42	116.00
23	DB	1350	C	C5'-C4'-C3'	-6.55	105.52	116.00
23	BB	745	G	C5'-C4'-C3'	-6.46	105.66	116.00
1	CA	1212	U	O3'-P-O5'	-6.43	91.78	104.00
23	BB	690	G	C5'-C4'-C3'	-6.42	105.72	116.00
23	DB	1088	A	C5-C6-N6	6.40	128.82	123.70
23	BB	1088	A	C5-C6-N6	6.39	128.81	123.70
23	BB	2283	C	O5'-P-OP2	-6.38	99.95	105.70
23	BB	1251	C	C5'-C4'-C3'	-6.20	106.08	116.00
1	CA	1424	U	C5'-C4'-C3'	-6.11	106.23	116.00
23	DB	2480	C	C5'-C4'-C3'	6.11	125.77	116.00
23	DB	1086	A	C6-C5-N7	-6.08	128.04	132.30
23	BB	1086	A	C6-C5-N7	-6.07	128.05	132.30
23	DB	2199	A	C5'-C4'-C3'	-6.07	106.29	116.00
23	BB	241	A	C5'-C4'-C3'	-6.01	106.38	116.00
23	BB	1552	A	C4'-C3'-O3'	5.99	124.98	113.00
1	CA	1534	A	C2'-C3'-O3'	-5.99	96.33	109.50
22	BA	108	A	C5'-C4'-O4'	-5.96	101.94	109.10
23	DB	1251	C	C5'-C4'-C3'	-5.89	106.57	116.00
23	DB	2096	C	C5'-C4'-C3'	-5.88	106.60	116.00
23	DB	690	G	C5'-C4'-C3'	-5.87	106.61	116.00
1	AA	576	C	C5'-C4'-C3'	5.87	125.39	116.00
1	CA	1213	A	C5'-C4'-O4'	5.84	116.11	109.10
23	DB	241	A	C5'-C4'-O4'	5.82	116.08	109.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	DB	126	A	C5'-C4'-C3'	5.82	125.30	116.00
1	CA	576	C	O5'-P-OP1	-5.80	100.48	105.70
23	BB	1318	U	C5'-C4'-C3'	-5.77	106.77	116.00
23	DB	2203	U	O3'-P-O5'	-5.76	93.06	104.00
1	AA	1213	A	C1'-O4'-C4'	-5.75	105.30	109.90
23	BB	1060	U	N1-C2-O2	-5.71	118.81	122.80
23	DB	1397	U	C5'-C4'-C3'	-5.68	106.91	116.00
23	DB	242	G	C4'-C3'-O3'	-5.68	97.48	109.40
23	BB	2480	C	C5'-C4'-C3'	5.67	125.08	116.00
23	DB	2790	U	C4'-C3'-O3'	5.61	124.23	113.00
23	DB	1086	A	C2-N3-C4	-5.61	107.79	110.60
23	BB	1086	A	C2-N3-C4	-5.61	107.79	110.60
23	DB	1552	A	C4'-C3'-O3'	5.58	124.16	113.00
23	DB	1060	U	N1-C2-O2	-5.57	118.90	122.80
23	DB	2894	G	C5'-C4'-C3'	-5.57	107.09	116.00
23	DB	1318	U	C5'-C4'-C3'	-5.56	107.10	116.00
23	BB	2199	A	C5'-C4'-C3'	-5.55	107.12	116.00
23	BB	479	A	C4'-C3'-O3'	-5.54	97.77	109.40
1	CA	1213	A	C1'-O4'-C4'	-5.54	105.47	109.90
1	CA	765	G	N9-C1'-C2'	-5.51	105.94	112.00
1	AA	765	G	N9-C1'-C2'	-5.51	105.94	112.00
23	DB	2109	U	N1-C1'-C2'	-5.51	105.94	112.00
23	BB	2471	A	C5'-C4'-C3'	-5.44	107.30	116.00
1	CA	67	C	C5'-C4'-C3'	-5.42	107.33	116.00
23	BB	2894	G	C5'-C4'-C3'	-5.41	107.34	116.00
23	DB	2619	C	C5'-C4'-C3'	-5.41	107.35	116.00
23	BB	1382	G	C5'-C4'-C3'	5.39	124.63	116.00
23	DB	140	C	C5'-C4'-C3'	5.39	124.62	116.00
23	DB	1654	A	C5'-C4'-C3'	-5.38	107.40	116.00
23	BB	2716	C	C5'-C4'-C3'	5.37	124.59	116.00
23	BB	1350	C	C5'-C4'-C3'	-5.37	107.41	116.00
23	BB	242	G	C4'-C3'-O3'	-5.36	98.15	109.40
23	BB	1060	U	N3-C2-O2	5.34	125.94	122.20
23	DB	1280	G	C5'-C4'-C3'	-5.34	107.46	116.00
23	DB	2471	A	C5'-C4'-C3'	-5.33	107.47	116.00
23	BB	2203	U	O3'-P-O5'	-5.30	93.93	104.00
23	BB	2272	U	N1-C2-O2	-5.30	119.09	122.80
23	DB	1060	U	N3-C2-O2	5.29	125.91	122.20
23	BB	2790	U	O3'-P-O5'	-5.29	93.95	104.00
23	DB	1382	G	C5'-C4'-C3'	5.28	124.45	116.00
23	DB	2138	G	C5'-C4'-C3'	-5.28	107.55	116.00
1	CA	437	U	N1-C1'-C2'	5.28	120.86	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	BB	1397	U	C5'-C4'-C3'	-5.27	107.56	116.00
1	AA	437	U	N1-C1'-C2'	5.27	120.85	114.00
23	DB	1634	A	C5'-C4'-C3'	-5.26	107.58	116.00
1	AA	1362	A	C5'-C4'-O4'	5.23	115.38	109.10
1	CA	1362	A	C5'-C4'-O4'	5.23	115.38	109.10
23	BB	2134	A	C5'-C4'-C3'	5.21	124.34	116.00
23	DB	2272	U	N1-C2-O2	-5.19	119.17	122.80
1	CA	1362	A	C5'-C4'-C3'	5.18	124.30	116.00
22	BA	30	C	C5'-C4'-C3'	-5.18	107.71	116.00
23	DB	2716	C	C5'-C4'-C3'	5.17	124.27	116.00
1	AA	1049	U	O5'-P-OP1	5.12	116.84	110.70
1	AA	1049	U	O5'-P-OP2	-5.11	101.11	105.70
23	BB	268	C	C5'-C4'-C3'	-5.07	107.89	116.00
23	DB	747	U	C5'-C4'-C3'	5.05	124.08	116.00
1	CA	1301	U	N1-C1'-C2'	5.02	120.52	114.00
22	DA	30	C	C5'-C4'-C3'	-5.01	107.98	116.00
23	DB	134	G	C5'-C4'-C3'	-5.00	108.00	116.00

There are no chirality outliers.

All (100) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	AA	1006	G	Sidechain
1	AA	1047	G	Sidechain
1	AA	1441	A	Sidechain
1	AA	187	G	Sidechain
1	AA	281	G	Sidechain
1	AA	324	G	Sidechain
1	AA	437	U	Sidechain
1	AA	438	U	Sidechain
1	AA	496	A	Sidechain
1	AA	703	G	Sidechain
1	AA	83	C	Sidechain
1	AA	832	G	Sidechain
1	AA	992	U	Sidechain
23	BB	1047	G	Sidechain
23	BB	1060	U	Sidechain
23	BB	1086	A	Sidechain
23	BB	1088	A	Sidechain
23	BB	1111	A	Sidechain
23	BB	1439	A	Sidechain
23	BB	1533	C	Sidechain

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Mol	Chain	Res	Type	Group
23	BB	1538	G	Sidechain
23	BB	1546	G	Sidechain
23	BB	1572	A	Sidechain
23	BB	1645	G	Sidechain
23	BB	1734	G	Sidechain
23	BB	1792	G	Sidechain
23	BB	1814	G	Sidechain
23	BB	1828	G	Sidechain
23	BB	2062	A	Sidechain
23	BB	2108	A	Sidechain
23	BB	221	A	Sidechain
23	BB	222	A	Sidechain
23	BB	2272	U	Sidechain
23	BB	2319	G	Sidechain
23	BB	2471	A	Sidechain
23	BB	2503	A	Sidechain
23	BB	2638	G	Sidechain
23	BB	2733	A	Sidechain
23	BB	2848	G	Sidechain
23	BB	2857	G	Sidechain
23	BB	2868	A	Sidechain
23	BB	299	A	Sidechain
23	BB	361	G	Sidechain
23	BB	427	U	Sidechain
23	BB	51	G	Sidechain
23	BB	630	G	Sidechain
23	BB	727	A	Sidechain
23	BB	729	G	Sidechain
23	BB	757	G	Sidechain
1	CA	1006	G	Sidechain
1	CA	1047	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	496	A	Sidechain
1	CA	703	G	Sidechain
1	CA	82	G	Sidechain
1	CA	832	G	Sidechain
1	CA	992	U	Sidechain

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Mol	Chain	Res	Type	Group
23	DB	1047	G	Sidechain
23	DB	1060	U	Sidechain
23	DB	1086	A	Sidechain
23	DB	1088	A	Sidechain
23	DB	1439	A	Sidechain
23	DB	1533	C	Sidechain
23	DB	1538	G	Sidechain
23	DB	1546	G	Sidechain
23	DB	1572	A	Sidechain
23	DB	1645	G	Sidechain
23	DB	1734	G	Sidechain
23	DB	1792	G	Sidechain
23	DB	1814	G	Sidechain
23	DB	1828	G	Sidechain
23	DB	2062	A	Sidechain
23	DB	2109	U	Sidechain
23	DB	2135	A	Sidechain
23	DB	2136	G	Sidechain
23	DB	2155	U	Sidechain
23	DB	221	A	Sidechain
23	DB	222	A	Sidechain
23	DB	2272	U	Sidechain
23	DB	2319	G	Sidechain
23	DB	2471	A	Sidechain
23	DB	2503	A	Sidechain
23	DB	2638	G	Sidechain
23	DB	2733	A	Sidechain
23	DB	2848	G	Sidechain
23	DB	2857	G	Sidechain
23	DB	2868	A	Sidechain
23	DB	299	A	Sidechain
23	DB	356	G	Sidechain
23	DB	427	U	Sidechain
23	DB	51	G	Sidechain
23	DB	630	G	Sidechain
23	DB	727	A	Sidechain
23	DB	729	G	Sidechain
23	DB	757	G	Sidechain

5.2 Too-close contacts (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	1355	0
1	CA	32831	0	16521	1385	0
2	AC	1624	0	1699	137	0
2	CC	1624	0	1699	145	0
3	AD	1643	0	1710	166	0
3	CD	1643	0	1710	156	0
4	AE	1105	0	1148	105	0
4	CE	1105	0	1148	115	0
5	AF	817	0	808	98	0
5	CF	817	0	808	88	0
6	AG	1174	0	1230	118	0
6	CG	1196	0	1246	110	0
7	AH	979	0	1034	93	0
7	CH	979	0	1034	93	0
8	AI	1022	0	1070	153	0
8	CI	1022	0	1070	151	0
9	AJ	786	0	828	78	0
9	CJ	786	0	828	84	0
10	AK	877	0	887	100	0
10	CK	877	0	887	101	0
11	AL	955	0	1019	90	0
11	CL	955	0	1019	94	0
12	AM	883	0	944	110	0
12	CM	876	0	937	109	0
13	AN	774	0	827	96	0
13	CN	774	0	827	90	0
14	AO	715	0	742	48	0
14	CO	715	0	742	41	0
15	AP	649	0	666	53	0
15	CP	638	0	656	55	0
16	AQ	648	0	691	73	0
16	CQ	656	0	702	73	0
17	AR	455	0	478	34	0
17	CR	455	0	478	34	0
18	AS	637	0	665	101	0
18	CS	644	0	675	98	0
19	AT	665	0	714	49	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
19	CT	665	0	714	49	0
20	AB	1704	0	1732	205	0
20	CB	1704	0	1732	208	0
21	AU	425	0	449	75	0
21	CU	425	0	449	68	0
22	BA	2507	0	1270	109	0
22	DA	2507	0	1270	111	0
23	BB	60995	0	30678	2412	0
23	DB	60995	0	30677	2498	0
24	BV	753	0	780	89	0
24	DV	753	0	780	90	0
25	BC	2082	0	2157	261	0
25	DC	2082	0	2157	274	0
26	BD	1565	0	1616	216	0
26	DD	1565	0	1616	220	0
27	BE	1552	0	1619	180	0
27	DE	1552	0	1619	170	0
28	BF	1420	0	1460	236	0
28	DF	1420	0	1460	238	0
29	BG	1323	0	1374	163	0
29	DG	1323	0	1374	161	0
30	BH	1111	0	1148	176	0
30	DH	1111	0	1148	146	0
31	BJ	1129	0	1162	150	0
31	DJ	1129	0	1162	154	0
32	BK	930	0	1000	122	0
32	DK	930	0	1000	134	0
33	BL	1045	0	1117	150	0
33	DL	1045	0	1117	155	0
34	BM	1074	0	1157	114	0
34	DM	1074	0	1157	112	0
35	BN	960	0	1000	135	0
35	DN	960	0	1000	129	0
36	BO	892	0	923	97	0
36	DO	892	0	923	104	0
37	BP	917	0	965	112	0
37	DP	917	0	965	113	0
38	BQ	947	0	1022	156	0
38	DQ	947	0	1022	167	0
39	BR	816	0	839	123	0
39	DR	816	0	839	138	0
40	BS	857	0	922	93	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
40	DS	857	0	922	93	0
41	BT	738	0	807	127	0
41	DT	738	0	807	122	0
42	BU	779	0	834	132	0
42	DU	779	0	834	121	0
43	BW	596	0	610	128	0
43	DW	596	0	610	137	0
44	BX	509	0	543	54	0
44	DX	509	0	543	50	0
45	BY	449	0	491	48	0
45	DY	449	0	491	50	0
46	BZ	625	0	652	89	0
46	DZ	625	0	652	92	0
47	B0	444	0	461	40	0
47	D0	444	0	461	42	0
48	B1	409	0	440	57	0
48	D1	409	0	440	44	0
49	B2	377	0	418	43	0
49	D2	377	0	418	43	0
50	B3	504	0	574	40	0
50	D3	504	0	574	40	0
51	B4	302	0	340	40	0
51	D4	302	0	340	35	0
52	BI	1032	0	1088	111	0
52	DI	1032	0	1088	182	0
53	AA	58	0	0	0	0
53	AE	1	0	0	0	0
53	AN	1	0	0	0	0
53	BB	110	0	0	0	0
53	CA	61	0	0	0	0
53	CE	1	0	0	0	0
53	DB	111	0	0	0	0
54	AA	36	0	37	2	0
54	CA	36	0	37	1	0
55	B4	1	0	0	0	0
55	D4	1	0	0	0	0
56	AA	282	0	0	4	0
56	AE	4	0	0	0	0
56	AK	2	0	0	0	0
56	AL	5	0	0	0	0
56	AN	4	0	0	0	0
56	AT	3	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
56	B2	1	0	0	0	0
56	BB	492	0	0	5	0
56	BC	8	0	0	0	0
56	BD	1	0	0	0	0
56	BE	2	0	0	0	0
56	BH	1	0	0	0	0
56	BL	2	0	0	0	0
56	CA	294	0	0	0	0
56	CE	4	0	0	0	0
56	CI	1	0	0	0	0
56	CK	1	0	0	0	0
56	CL	3	0	0	0	0
56	CN	3	0	0	0	0
56	CT	1	0	0	0	0
56	D2	1	0	0	0	0
56	DB	499	0	0	8	0
56	DC	5	0	0	0	0
56	DD	1	0	0	0	0
56	DE	1	0	0	0	0
56	DL	5	0	0	1	0
56	DP	1	0	0	0	0
All	All	284077	0	190751	17232	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 36.

All (17232) 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	52:DI:3:LYS:N	1.38	1.20
23:BB:855:G:H21	43:BW:23:LYS:HG2	1.08	1.15
42:DU:85:ARG:HD3	42:DU:86:PHE:H	1.13	1.14
41:DT:5:GLU:HA	41:DT:8:LEU:HB2	1.25	1.13
42:BU:85:ARG:HD3	42:BU:86:PHE:H	1.11	1.12
41:BT:5:GLU:HA	41:BT:8:LEU:HB2	1.25	1.12
1:CA:1533:C:H2'	1:CA:1534:A:H3'	1.34	1.08
23:DB:545:U:H5"	23:DB:546:U:H4'	1.25	1.08
23:DB:1098:A:H3'	52:DI:3:LYS:HA	1.38	1.05
21:AU:16:ARG:HA	21:AU:16:ARG:HE	1.20	1.04
23:BB:1338:G:H4'	41:BT:18:GLU:HG3	1.40	1.04
23:DB:1099:G:C8	52:DI:3:LYS:N	2.26	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:106:LYS:HB3	26:BD:206:ALA:H	1.23	1.03
1:AA:1221:G:H4'	18:AS:76:THR:HG21	1.40	1.03
31:DJ:58:ASN:HA	31:DJ:127:GLY:HA2	1.40	1.03
31:BJ:58:ASN:HA	31:BJ:127:GLY:HA2	1.38	1.03
45:DY:8:GLN:HG2	45:DY:31:ILE:HA	1.40	1.02
8:AI:20:ILE:HA	8:AI:62:LEU:HD12	1.37	1.02
23:DB:1099:G:O5'	52:DI:4:VAL:N	1.92	1.02
28:DF:36:ASN:HD22	28:DF:152:ASP:HB2	1.24	1.02
1:CA:1221:G:H4'	18:CS:76:THR:HG21	1.41	1.02
23:DB:1098:A:H3'	52:DI:3:LYS:CA	1.87	1.02
32:DK:35:VAL:HG23	32:DK:36:GLY:H	1.23	1.02
21:CU:16:ARG:HA	21:CU:16:ARG:HE	1.23	1.02
32:BK:35:VAL:HG23	32:BK:36:GLY:H	1.24	1.01
8:CI:20:ILE:HA	8:CI:62:LEU:HD12	1.37	1.01
28:DF:126:ASN:HD22	28:DF:156:THR:HG23	1.20	1.01
42:BU:80:ASP:HB3	42:BU:96:LYS:H	1.25	1.01
28:BF:126:ASN:HD22	28:BF:156:THR:HG23	1.20	1.01
35:BN:2:ARG:HA	35:BN:5:LYS:HD3	1.43	1.01
23:DB:1812:U:H1'	25:DC:43:ASN:HD21	1.23	1.01
31:DJ:17:VAL:HG23	31:DJ:137:PRO:HB2	1.42	1.01
23:BB:1812:U:H1'	25:BC:43:ASN:HD21	1.25	1.01
23:DB:1338:G:H4'	41:DT:18:GLU:HG3	1.40	1.01
28:BF:65:LEU:H	28:BF:88:VAL:HG22	1.24	1.00
35:DN:29:VAL:HG12	35:DN:83:LEU:HD21	1.40	1.00
1:AA:1086:U:H3	1:AA:1099:G:H22	1.10	1.00
25:BC:77:VAL:HG23	25:BC:112:GLY:H	1.23	1.00
31:BJ:17:VAL:HG23	31:BJ:137:PRO:HB2	1.39	1.00
45:BY:8:GLN:HG2	45:BY:31:ILE:HA	1.42	1.00
23:DB:137:U:H2'	23:DB:138:U:O4'	1.59	1.00
23:DB:1244:A:H5"	33:DL:8:PRO:HD3	1.41	1.00
38:DQ:63:ARG:HH22	38:DQ:96:ASP:HA	1.26	1.00
13:AN:51:PRO:HB2	13:AN:54:SER:HB3	1.44	1.00
28:BF:36:ASN:HD22	28:BF:152:ASP:HB2	1.26	1.00
35:BN:96:ARG:HH11	35:BN:116:VAL:HG23	1.24	1.00
42:BU:38:ILE:HG23	42:BU:39:ASN:H	1.25	1.00
20:CB:202:ASN:HD22	20:CB:204:ASP:H	1.06	1.00
42:DU:80:ASP:HB3	42:DU:96:LYS:H	1.22	1.00
5:CF:92:THR:HG22	5:CF:94:HIS:H	1.26	1.00
25:DC:77:VAL:HG23	25:DC:112:GLY:H	1.23	1.00
30:BH:7:ASP:HA	30:BH:15:LEU:HD22	1.44	0.99
23:DB:1174:U:H1'	23:DB:1176:U:H1'	1.43	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BN:2:ARG:HG2	35:BN:5:LYS:HB2	1.43	0.99
30:DH:127:GLU:HA	30:DH:145:ASN:HA	1.44	0.99
10:CK:33:ILE:HB	10:CK:73:VAL:HG11	1.42	0.99
23:BB:1203:U:H1'	33:BL:4:ASN:HD21	1.21	0.99
35:DN:2:ARG:HA	35:DN:5:LYS:HD3	1.44	0.99
26:DD:106:LYS:HB3	26:DD:206:ALA:H	1.24	0.98
42:DU:38:ILE:HG23	42:DU:39:ASN:H	1.26	0.98
20:CB:46:VAL:HG13	20:CB:47:PRO:HD3	1.45	0.98
40:BS:24:ILE:HD11	40:BS:36:LEU:HD11	1.43	0.98
1:CA:1086:U:H3	1:CA:1099:G:H22	1.11	0.98
13:CN:51:PRO:HB2	13:CN:54:SER:HB3	1.45	0.98
2:AC:128:MET:HB2	2:AC:131:ARG:HB2	1.46	0.98
30:DH:7:ASP:HA	30:DH:15:LEU:HD22	1.45	0.98
38:BQ:63:ARG:HH22	38:BQ:96:ASP:HA	1.28	0.98
31:BJ:112:GLY:H	31:BJ:113:PRO:HD2	1.29	0.97
33:DL:79:LEU:HB2	33:DL:113:ALA:HB3	1.45	0.97
2:CC:48:LYS:HE2	2:CC:48:LYS:H	1.29	0.97
5:AF:92:THR:HG22	5:AF:94:HIS:H	1.26	0.97
35:BN:29:VAL:HG12	35:BN:83:LEU:HD21	1.43	0.97
25:DC:144:GLU:HG3	25:DC:151:GLY:H	1.23	0.97
31:DJ:112:GLY:H	31:DJ:113:PRO:HD2	1.28	0.97
20:AB:202:ASN:HD22	20:AB:204:ASP:H	1.07	0.96
23:DB:1654:A:O2'	26:DD:118:PHE:HB2	1.65	0.96
10:AK:33:ILE:HB	10:AK:73:VAL:HG11	1.44	0.96
33:BL:79:LEU:HB2	33:BL:113:ALA:HB3	1.47	0.96
1:CA:465:A:H2'	1:CA:466:A:H3'	1.46	0.96
20:AB:46:VAL:HG13	20:AB:47:PRO:HD3	1.47	0.96
23:BB:1420:A:H2'	23:BB:2211:A:H62	1.28	0.96
25:BC:144:GLU:HG3	25:BC:151:GLY:H	1.28	0.96
23:BB:460:A:H4'	41:BT:72:GLN:HB2	1.45	0.96
2:CC:69:THR:HG21	2:CC:75:VAL:HG21	1.48	0.96
28:DF:65:LEU:H	28:DF:88:VAL:HG22	1.25	0.96
23:DB:1420:A:H2'	23:DB:2211:A:H62	1.28	0.95
23:BB:962:G:H21	23:BB:2250:G:H22	1.13	0.95
23:BB:2502:G:H5'	23:BB:2503:A:H5"	1.49	0.95
33:DL:29:LYS:HG3	33:DL:30:THR:HG23	1.48	0.95
1:AA:1399:C:H4'	1:AA:1400:C:H5"	1.48	0.95
34:BM:40:ARG:HD3	34:BM:93:VAL:HG21	1.48	0.95
34:DM:40:ARG:HD3	34:DM:93:VAL:HG21	1.45	0.95
2:AC:69:THR:HG21	2:AC:75:VAL:HG21	1.48	0.95
25:BC:183:VAL:HG13	25:BC:185:ALA:H	1.29	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CF:29:ILE:HG21	5:CF:64:VAL:HG11	1.48	0.95
35:DN:2:ARG:HG2	35:DN:5:LYS:HB2	1.47	0.95
23:BB:1244:A:H5"	33:BL:8:PRO:HD3	1.48	0.95
18:AS:18:VAL:HG21	18:AS:43:MET:HG2	1.48	0.95
23:DB:2502:G:H5'	23:DB:2503:A:H5"	1.47	0.95
25:DC:27:LYS:HG3	25:DC:28:PRO:HD2	1.46	0.94
15:AP:28:ARG:HD2	15:AP:29:ASN:H	1.32	0.94
25:DC:183:VAL:HG13	25:DC:185:ALA:H	1.28	0.94
1:AA:465:A:H2'	1:AA:466:A:H3'	1.49	0.94
5:AF:29:ILE:HG21	5:AF:64:VAL:HG11	1.49	0.94
23:BB:1283:G:H22	23:BB:1286:A:H5'	1.31	0.94
25:BC:146:LYS:HB3	25:BC:147:PRO:HD2	1.47	0.94
1:CA:1399:C:H4'	1:CA:1400:C:H5"	1.48	0.94
23:DB:1099:G:H8	52:DI:3:LYS:H	1.01	0.94
44:DX:39:GLN:HB3	44:DX:42:LEU:HD13	1.48	0.94
2:CC:128:MET:HB2	2:CC:131:ARG:HB2	1.46	0.94
23:DB:855:G:H21	43:DW:23:LYS:HG2	1.33	0.93
25:BC:27:LYS:HG3	25:BC:28:PRO:HD2	1.49	0.93
23:DB:1283:G:H22	23:DB:1286:A:H5'	1.29	0.93
10:AK:88:PRO:HD3	21:AU:28:LEU:HD11	1.49	0.93
40:DS:24:ILE:HD11	40:DS:36:LEU:HD11	1.48	0.93
46:DZ:40:VAL:HG21	46:DZ:43:GLU:HB3	1.50	0.93
23:BB:855:G:N2	43:BW:23:LYS:HG2	1.82	0.93
21:CU:24:LYS:HZ3	21:CU:25:ALA:H	1.17	0.93
33:BL:29:LYS:HG3	33:BL:30:THR:HG23	1.50	0.93
20:CB:65:LYS:HB2	20:CB:158:ASP:H	1.34	0.93
3:CD:116:LEU:HB3	3:CD:122:ILE:HD11	1.50	0.93
26:DD:106:LYS:HB3	26:DD:206:ALA:N	1.84	0.93
44:BX:39:GLN:HB3	44:BX:42:LEU:HD13	1.49	0.92
1:CA:1003:G:H21	1:CA:1005:A:H5'	1.33	0.92
1:AA:1432:G:H5"	37:BP:105:LYS:HG2	1.47	0.92
26:BD:114:LYS:HZ2	26:BD:116:LYS:HZ2	0.96	0.92
12:CM:21:ILE:HB	12:CM:24:VAL:HG22	1.48	0.92
2:AC:48:LYS:HE2	2:AC:48:LYS:H	1.33	0.92
10:CK:88:PRO:HD3	21:CU:28:LEU:HD11	1.50	0.92
35:DN:37:THR:HG22	35:DN:39:PRO:HD2	1.50	0.92
28:BF:62:GLN:HE22	28:BF:90:LEU:HD13	1.35	0.92
15:CP:28:ARG:HD2	15:CP:29:ASN:H	1.33	0.92
25:DC:146:LYS:HB3	25:DC:147:PRO:HD2	1.48	0.92
3:CD:90:LEU:HA	3:CD:93:LEU:HD12	1.50	0.92
12:AM:21:ILE:HB	12:AM:24:VAL:HG22	1.49	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:106:LYS:HB3	26:BD:206:ALA:N	1.83	0.92
1:AA:1003:G:N2	1:AA:1005:A:H5'	1.85	0.91
30:BH:31:VAL:HB	30:BH:32:PRO:HD3	1.50	0.91
28:DF:43:ILE:HG23	28:DF:44:ALA:H	1.34	0.91
43:DW:51:GLY:HA3	43:DW:59:PHE:HB2	1.53	0.91
23:BB:856:G:H1'	43:BW:23:LYS:HB3	1.53	0.91
23:DB:2365:G:H4'	43:DW:59:PHE:HE1	1.34	0.91
52:DI:11:GLN:HG2	52:DI:55:PRO:HB3	1.52	0.91
25:BC:128:THR:HA	25:BC:190:THR:HG22	1.52	0.91
30:BH:128:HIS:HB2	30:BH:144:VAL:HB	1.51	0.91
3:AD:116:LEU:HB3	3:AD:122:ILE:HD11	1.51	0.91
28:DF:62:GLN:HE22	28:DF:90:LEU:HD13	1.33	0.91
5:AF:3:HIS:ND1	5:AF:92:THR:HG23	1.85	0.91
21:AU:24:LYS:HZ3	21:AU:25:ALA:H	1.17	0.91
26:BD:5:VAL:H	26:BD:32:ASN:HD21	1.13	0.91
30:DH:131:SER:HB2	30:DH:141:LYS:HA	1.52	0.91
20:AB:65:LYS:HB2	20:AB:158:ASP:H	1.34	0.91
26:BD:113:SER:HB3	26:BD:168:GLU:H	1.36	0.91
23:BB:2787:C:H1'	26:BD:63:PRO:HG3	1.50	0.91
31:BJ:72:LYS:HB2	31:BJ:89:PHE:HB2	1.53	0.91
5:CF:38:ARG:HH21	5:CF:63:ASN:ND2	1.69	0.91
1:AA:1003:G:H21	1:AA:1005:A:H5'	1.33	0.90
23:BB:470:A:H61	41:BT:72:GLN:HE22	1.12	0.90
8:AI:5:TYR:HB2	8:AI:20:ILE:HB	1.51	0.90
32:BK:47:ILE:HG12	32:BK:48:PRO:HD2	1.53	0.90
8:CI:5:TYR:HB2	8:CI:20:ILE:HB	1.51	0.90
30:DH:31:VAL:HB	30:DH:32:PRO:HD3	1.51	0.90
30:DH:48:GLU:HB2	30:DH:51:ARG:HH21	1.34	0.90
28:BF:11:VAL:HG12	28:BF:12:VAL:H	1.36	0.90
28:BF:43:ILE:HG23	28:BF:44:ALA:H	1.34	0.90
23:BB:547:A:H3'	23:BB:548:G:H8	1.35	0.90
27:BE:58:LYS:HD3	27:BE:58:LYS:H	1.34	0.90
23:DB:962:G:H21	23:DB:2250:G:H22	1.13	0.90
30:BH:116:ARG:HH11	30:BH:116:ARG:HB2	1.36	0.90
43:BW:18:LYS:HA	43:BW:36:ILE:HG12	1.54	0.90
28:DF:3:LEU:HD21	28:DF:172:PHE:HB3	1.53	0.90
16:AQ:74:LEU:HD22	16:AQ:75:VAL:H	1.35	0.90
40:BS:26:GLY:H	40:BS:71:VAL:HG13	1.37	0.90
1:AA:699:C:H2'	1:AA:700:G:H5"	1.49	0.90
1:CA:1003:G:N2	1:CA:1005:A:H5'	1.87	0.90
5:CF:3:HIS:ND1	5:CF:92:THR:HG23	1.86	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:85:SER:HB3	20:CB:221:ARG:HD3	1.54	0.90
26:DD:5:VAL:H	26:DD:32:ASN:HD21	1.11	0.90
23:DB:1060:U:N3	23:DB:1088:A:N7	2.20	0.90
3:AD:160:LEU:H	3:AD:160:LEU:HD13	1.37	0.90
6:AG:3:ARG:HD3	6:AG:3:ARG:H	1.36	0.90
23:BB:858:G:N3	23:BB:2268:A:H2'	1.87	0.90
43:DW:9:THR:HG23	43:DW:10:ARG:HD3	1.52	0.90
46:DZ:6:GLN:HE22	46:DZ:50:ARG:H	1.17	0.90
27:DE:58:LYS:HD3	27:DE:58:LYS:H	1.36	0.89
3:AD:90:LEU:HA	3:AD:93:LEU:HD12	1.51	0.89
23:BB:136:G:H2'	23:BB:137:U:C6	2.07	0.89
18:CS:18:VAL:HG21	18:CS:43:MET:HG2	1.51	0.89
23:BB:2356:U:H5"	43:BW:16:GLU:HG3	1.54	0.89
38:BQ:79:ILE:HA	38:BQ:82:LEU:HD12	1.53	0.89
35:DN:32:GLU:HG3	35:DN:115:LEU:HD12	1.51	0.89
30:BH:116:ARG:HE	30:BH:139:PHE:HB2	1.37	0.89
20:AB:112:ARG:HD2	20:AB:116:LEU:HD12	1.54	0.89
23:BB:1173:U:H2'	23:BB:1174:U:H4'	1.52	0.89
3:CD:160:LEU:HD13	3:CD:160:LEU:H	1.36	0.89
1:AA:600:A:H5"	7:AH:88:LYS:HD2	1.54	0.89
1:AA:812:G:HO2'	1:AA:813:U:H6	0.92	0.89
8:AI:34:LEU:HD21	8:AI:48:ARG:HH21	1.37	0.89
35:BN:37:THR:HG22	35:BN:39:PRO:HD2	1.53	0.89
23:DB:1024:G:H3'	23:DB:1025:G:H5"	1.53	0.89
31:DJ:36:LEU:HD21	31:DJ:122:LEU:HB2	1.53	0.89
35:DN:96:ARG:HH11	35:DN:116:VAL:HG23	1.35	0.89
1:CA:812:G:HO2'	1:CA:813:U:H6	0.94	0.89
4:CE:21:SER:HB2	4:CE:28:ARG:HE	1.37	0.89
23:DB:79:C:HO2'	23:DB:346:A:H8	1.20	0.89
23:DB:117:G:H5'	23:DB:126:A:H8	1.36	0.89
26:DD:113:SER:HB3	26:DD:168:GLU:H	1.37	0.89
23:BB:1060:U:N3	23:BB:1088:A:N7	2.20	0.89
23:BB:1654:A:O2'	26:BD:118:PHE:HB2	1.72	0.89
23:BB:2305:U:H5"	28:BF:130:GLY:HA3	1.55	0.89
28:BF:3:LEU:HD21	28:BF:172:PHE:HB3	1.54	0.89
25:DC:128:THR:HA	25:DC:190:THR:HG22	1.53	0.89
33:BL:57:LEU:HD12	33:BL:60:ARG:HH22	1.36	0.89
24:DV:44:HIS:HE1	24:DV:86:LEU:H	1.20	0.89
40:DS:26:GLY:H	40:DS:71:VAL:HG13	1.34	0.89
16:CQ:74:LEU:HD22	16:CQ:75:VAL:H	1.38	0.89
12:AM:52:ILE:HD12	12:AM:55:LEU:HD12	1.54	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BZ:40:VAL:HG21	46:BZ:43:GLU:HB3	1.53	0.88
28:DF:11:VAL:HG12	28:DF:12:VAL:H	1.36	0.88
31:DJ:72:LYS:HB2	31:DJ:89:PHE:HB2	1.53	0.88
1:AA:429:U:H5'	3:AD:8:LEU:HG	1.56	0.88
23:BB:27:G:H22	23:BB:512:G:H2'	1.38	0.88
52:BI:129:GLU:HB3	52:BI:133:ARG:HH12	1.35	0.88
23:DB:27:G:H22	23:DB:512:G:H2'	1.38	0.88
23:DB:858:G:N3	23:DB:2268:A:H2'	1.88	0.88
5:CF:3:HIS:HB2	5:CF:92:THR:HA	1.55	0.88
20:CB:112:ARG:HD2	20:CB:116:LEU:HD12	1.55	0.88
25:DC:180:MET:HB2	25:DC:268:ARG:HB2	1.56	0.88
5:AF:3:HIS:HB2	5:AF:92:THR:HA	1.56	0.88
20:AB:85:SER:HB3	20:AB:221:ARG:HD3	1.52	0.88
30:BH:73:ASN:HD22	30:BH:74:ALA:H	1.21	0.88
31:BJ:36:LEU:HD21	31:BJ:122:LEU:HB2	1.54	0.88
1:CA:699:C:H2'	1:CA:700:G:H5"	1.53	0.88
23:DB:2882:A:H4'	35:DN:97:ILE:HD11	1.56	0.88
30:DH:31:VAL:HB	30:DH:32:PRO:CD	2.04	0.88
6:CG:14:ASP:H	6:CG:23:ALA:HB2	1.38	0.88
6:CG:46:LEU:HG	6:CG:57:GLU:HB3	1.56	0.88
37:DP:4:ILE:HG22	37:DP:5:LYS:H	1.39	0.88
8:CI:34:LEU:HD21	8:CI:48:ARG:HH21	1.37	0.87
19:CT:24:ARG:HG3	19:CT:65:LEU:HD11	1.55	0.87
39:DR:14:VAL:HG22	39:DR:15:SER:H	1.36	0.87
43:BW:9:THR:HG23	43:BW:10:ARG:HD3	1.53	0.87
48:D1:7:LYS:HA	48:D1:23:THR:HG22	1.57	0.87
6:AG:14:ASP:H	6:AG:23:ALA:HB2	1.37	0.87
12:AM:70:ARG:HH12	28:BF:112:ASP:HB2	1.37	0.87
26:BD:29:VAL:HB	26:BD:98:VAL:HG22	1.56	0.87
3:AD:105:GLY:HA3	3:AD:158:LEU:HD23	1.55	0.87
43:BW:51:GLY:HA3	43:BW:59:PHE:HB2	1.55	0.87
23:DB:2179:C:O2	23:DB:2179:C:H2'	1.75	0.87
30:BH:31:VAL:HB	30:BH:32:PRO:CD	2.04	0.87
1:AA:981:U:H4'	13:AN:60:ARG:HD2	1.55	0.87
37:BP:4:ILE:HG22	37:BP:5:LYS:H	1.39	0.87
42:DU:81:ARG:H	42:DU:81:ARG:HH21	1.22	0.87
29:DG:8:VAL:HG11	29:DG:49:LEU:HB3	1.57	0.87
23:BB:470:A:H61	41:BT:72:GLN:NE2	1.72	0.86
24:BV:44:HIS:HE1	24:BV:86:LEU:H	1.21	0.86
40:DS:29:VAL:HG11	40:DS:55:ILE:HD13	1.54	0.86
1:CA:817:C:H1'	1:CA:819:A:H5'	1.57	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1084:A:H1'	23:DB:1106:G:H5'	1.55	0.86
4:AE:81:GLN:HG2	4:AE:148:SER:HA	1.57	0.86
48:B1:7:LYS:HA	48:B1:23:THR:HG22	1.54	0.86
1:CA:600:A:H5"	7:CH:88:LYS:HD2	1.57	0.86
32:DK:47:ILE:HG12	32:DK:48:PRO:HD2	1.54	0.86
33:DL:57:LEU:HD12	33:DL:60:ARG:HH22	1.40	0.86
52:BI:27:LEU:HD23	52:BI:27:LEU:H	1.40	0.86
1:AA:72:A:H61	1:AA:99:C:H1'	1.41	0.86
6:CG:129:ASN:HA	6:CG:134:VAL:HG11	1.57	0.86
23:DB:2787:C:H1'	26:DD:63:PRO:HG3	1.58	0.86
24:BV:72:VAL:HG12	24:BV:93:ARG:HA	1.58	0.86
1:CA:981:U:H4'	13:CN:60:ARG:HD2	1.58	0.86
23:DB:1437:C:H2'	23:DB:1438:U:C6	2.10	0.86
20:AB:125:PHE:HD2	20:AB:125:PHE:H	1.24	0.86
23:DB:996:A:H4'	38:DQ:91:ARG:HD2	1.56	0.86
26:DD:29:VAL:HB	26:DD:98:VAL:HG22	1.57	0.86
39:DR:19:THR:HG22	39:DR:97:LYS:HA	1.58	0.86
46:BZ:6:GLN:HE22	46:BZ:50:ARG:H	1.21	0.86
1:CA:1328:C:H5"	12:CM:27:THR:HG21	1.56	0.86
26:DD:114:LYS:NZ	26:DD:116:LYS:HZ2	1.73	0.86
6:AG:149:ALA:H	10:AK:55:ARG:NH2	1.73	0.86
10:AK:86:LYS:HB3	10:AK:112:VAL:HG23	1.58	0.86
15:AP:61:VAL:HA	15:AP:65:ALA:HB3	1.57	0.86
35:BN:102:PHE:H	35:BN:109:PRO:HA	1.40	0.86
23:BB:1024:G:H3'	23:BB:1025:G:H5"	1.57	0.85
23:BB:2769:U:H2'	23:BB:2770:G:H8	1.39	0.85
42:BU:81:ARG:HH21	42:BU:81:ARG:H	1.23	0.85
38:DQ:105:PHE:HA	38:DQ:108:LEU:HD13	1.57	0.85
48:B1:26:LYS:HD3	48:B1:52:LYS:HB3	1.56	0.85
23:DB:2269:G:H4'	43:DW:19:ARG:HH12	1.41	0.85
26:DD:148:GLN:HB2	26:DD:152:PRO:HG2	1.58	0.85
39:BR:19:THR:HG22	39:BR:97:LYS:HA	1.58	0.85
1:CA:426:U:H4'	3:CD:39:GLN:HA	1.59	0.85
23:BB:546:U:H4'	23:BB:547:A:OP1	1.77	0.85
29:BG:8:VAL:HG11	29:BG:49:LEU:HB3	1.56	0.85
37:BP:20:ARG:HD2	37:BP:21:PRO:HD2	1.56	0.85
49:B2:30:VAL:HG22	49:B2:33:ARG:HH22	1.41	0.85
3:AD:138:PRO:HA	3:AD:181:PHE:HD2	1.42	0.85
25:BC:180:MET:HB2	25:BC:268:ARG:HB2	1.58	0.85
30:BH:100:ALA:HA	30:BH:110:VAL:HG22	1.56	0.85
31:BJ:25:LEU:HD22	31:BJ:26:GLY:H	1.39	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:429:U:H5'	3:CD:8:LEU:HG	1.56	0.85
15:CP:40:ASN:HD21	15:CP:43:ALA:N	1.74	0.85
26:DD:14:ILE:HA	37:DP:11:GLN:HE22	1.41	0.85
35:DN:102:PHE:H	35:DN:109:PRO:HA	1.39	0.85
41:DT:11:LEU:HD22	41:DT:11:LEU:H	1.42	0.85
6:AG:46:LEU:HG	6:AG:57:GLU:HB3	1.56	0.85
9:AJ:42:LEU:HD11	9:AJ:73:LEU:HB2	1.58	0.85
37:DP:20:ARG:HD2	37:DP:21:PRO:HD2	1.58	0.85
32:BK:71:ARG:HD2	32:BK:105:ARG:HE	1.40	0.85
39:BR:14:VAL:HG22	39:BR:15:SER:H	1.40	0.85
8:CI:26:LYS:H	8:CI:61:ASP:HB3	1.42	0.85
34:DM:19:GLY:HA2	34:DM:97:GLN:HB2	1.58	0.85
43:DW:18:LYS:HA	43:DW:36:ILE:HG12	1.56	0.85
20:AB:221:ARG:HG3	20:AB:222:GLU:HG2	1.57	0.85
24:DV:72:VAL:HG12	24:DV:93:ARG:HA	1.55	0.85
29:BG:15:ASP:HB3	29:BG:26:LYS:H	1.41	0.85
41:BT:53:VAL:HG11	41:BT:87:LEU:HD13	1.58	0.85
1:CA:120:A:H2'	1:CA:121:U:H5"	1.57	0.85
27:DE:31:VAL:HG21	27:DE:104:ALA:HB2	1.59	0.85
33:DL:6:LEU:H	33:DL:6:LEU:HD23	1.42	0.85
19:AT:24:ARG:HG3	19:AT:65:LEU:HD11	1.57	0.85
1:CA:1323:G:H2'	1:CA:1324:A:C8	2.12	0.85
34:DM:55:ARG:HA	34:DM:55:ARG:HH21	1.42	0.85
36:DO:11:ALA:HB3	36:DO:96:GLY:H	1.42	0.85
3:CD:105:GLY:HA3	3:CD:158:LEU:HD23	1.58	0.84
29:DG:26:LYS:HA	29:DG:32:LEU:H	1.40	0.84
6:AG:129:ASN:HA	6:AG:134:VAL:HG11	1.57	0.84
15:AP:40:ASN:HD21	15:AP:43:ALA:N	1.75	0.84
9:CJ:42:LEU:HD11	9:CJ:73:LEU:HB2	1.59	0.84
32:DK:71:ARG:HD2	32:DK:105:ARG:HE	1.40	0.84
41:DT:57:VAL:HG22	41:DT:58:VAL:H	1.42	0.84
1:AA:1493:A:H1'	54:AA:2059:HYG:H362	1.41	0.84
23:BB:2039:U:H2'	23:BB:2040:G:H8	1.43	0.84
23:BB:532:A:H2'	38:BQ:27:ARG:HH22	1.41	0.84
20:CB:221:ARG:HG3	20:CB:222:GLU:HG2	1.58	0.84
1:AA:1060:U:H4'	9:AJ:54:SER:HB2	1.57	0.84
8:AI:26:LYS:H	8:AI:61:ASP:HB3	1.41	0.84
15:CP:61:VAL:HA	15:CP:65:ALA:HB3	1.58	0.84
23:DB:2769:U:H2'	23:DB:2770:G:H8	1.43	0.84
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.13	0.84
23:BB:140:C:H4'	23:BB:141:G:H21	1.40	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1437:C:H2'	23:BB:1438:U:C6	2.13	0.84
32:BK:86:LEU:HD23	32:BK:86:LEU:H	1.42	0.84
1:AA:781:A:H2'	1:AA:782:A:H5'	1.59	0.84
29:BG:26:LYS:HA	29:BG:32:LEU:H	1.41	0.84
49:B2:10:LEU:HD21	49:B2:14:ARG:HH11	1.41	0.84
34:DM:19:GLY:H	34:DM:38:ARG:HH12	1.26	0.84
41:DT:29:THR:HA	41:DT:86:THR:HA	1.59	0.84
4:AE:21:SER:HB2	4:AE:28:ARG:HE	1.40	0.84
14:AO:88:ARG:HA	14:AO:88:ARG:HH11	1.43	0.84
1:AA:120:A:H2'	1:AA:121:U:H5"	1.59	0.83
21:CU:36:PHE:HB3	21:CU:40:PRO:HD3	1.59	0.83
26:DD:114:LYS:HZ2	26:DD:116:LYS:NZ	1.75	0.83
34:BM:19:GLY:H	34:BM:38:ARG:HH12	1.26	0.83
41:BT:57:VAL:HG22	41:BT:58:VAL:H	1.43	0.83
1:CA:1060:U:H4'	9:CJ:54:SER:HB2	1.59	0.83
23:DB:2743:U:H2'	23:DB:2744:G:H5"	1.58	0.83
26:DD:114:LYS:HZ2	26:DD:116:LYS:HZ2	0.86	0.83
2:AC:70:ALA:HA	2:AC:105:VAL:HG21	1.59	0.83
23:BB:1674:G:H21	23:BB:1677:A:H61	1.26	0.83
10:CK:105:ARG:HH21	21:CU:10:PRO:HD3	1.43	0.83
23:DB:1099:G:H5"	52:DI:3:LYS:N	1.93	0.83
41:DT:39:THR:HG22	41:DT:42:GLU:H	1.43	0.83
28:BF:42:ALA:HA	28:BF:48:LEU:HD21	1.58	0.83
28:BF:42:ALA:H	28:BF:48:LEU:HD11	1.42	0.83
41:BT:29:THR:HA	41:BT:86:THR:HA	1.57	0.83
23:DB:704:G:H2'	23:DB:726:G:H22	1.41	0.83
49:D2:10:LEU:HD21	49:D2:14:ARG:HH11	1.41	0.83
41:BT:39:THR:HG22	41:BT:42:GLU:H	1.41	0.83
23:DB:2039:U:H2'	23:DB:2040:G:H8	1.44	0.83
23:BB:979:A:H2'	23:BB:982:C:H41	1.42	0.83
34:BM:55:ARG:HH21	34:BM:55:ARG:HA	1.42	0.83
39:BR:16:GLU:HA	39:BR:98:ILE:HG22	1.60	0.83
44:BX:17:GLU:HB3	44:BX:53:VAL:HG11	1.61	0.83
11:AL:13:ARG:HD2	11:AL:13:ARG:H	1.44	0.83
20:CB:116:LEU:HD22	20:CB:140:LEU:HD11	1.61	0.83
48:D1:26:LYS:HD3	48:D1:52:LYS:HB3	1.60	0.83
52:DI:27:LEU:H	52:DI:27:LEU:HD23	1.44	0.83
17:AR:40:PRO:HD2	17:AR:43:ILE:HD12	1.59	0.83
23:BB:75:G:H4'	44:BX:48:ARG:HH22	1.44	0.83
34:BM:19:GLY:HA2	34:BM:97:GLN:HB2	1.61	0.83
3:CD:138:PRO:HA	3:CD:181:PHE:HD2	1.42	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CE:81:GLN:HG2	4:CE:148:SER:HA	1.60	0.83
16:CQ:16:MET:HB2	16:CQ:19:SER:HB2	1.59	0.83
31:DJ:25:LEU:HD22	31:DJ:26:GLY:H	1.42	0.83
6:AG:4:ARG:HG3	6:AG:5:VAL:H	1.44	0.83
10:AK:105:ARG:HH21	21:AU:10:PRO:HD3	1.42	0.83
23:BB:1082:U:C4	23:BB:1086:A:C2	2.66	0.83
27:DE:161:ALA:HA	27:DE:164:LEU:HB2	1.61	0.83
1:AA:426:U:H4'	3:AD:39:GLN:HA	1.60	0.82
24:DV:72:VAL:HG21	24:DV:91:PHE:HB3	1.61	0.82
23:BB:1060:U:C2	23:BB:1088:A:N7	2.48	0.82
28:DF:42:ALA:H	28:DF:48:LEU:HD11	1.43	0.82
1:CA:18:C:H4'	1:CA:1078:U:O2	1.78	0.82
20:CB:19:THR:HG23	20:CB:20:ARG:H	1.44	0.82
35:DN:101:GLY:HA2	35:DN:110:MET:N	1.95	0.82
46:BZ:7:VAL:HG13	46:BZ:8:THR:HG23	1.61	0.82
28:DF:42:ALA:HA	28:DF:48:LEU:HD21	1.60	0.82
38:BQ:105:PHE:HA	38:BQ:108:LEU:HD13	1.60	0.82
12:CM:52:ILE:HD12	12:CM:55:LEU:HD12	1.58	0.82
23:DB:979:A:H2'	23:DB:982:C:H41	1.44	0.82
10:AK:22:ILE:HD13	10:AK:85:VAL:HG22	1.61	0.82
21:AU:36:PHE:HB3	21:AU:40:PRO:HD3	1.59	0.82
30:DH:68:ARG:HG3	30:DH:134:VAL:HG21	1.58	0.82
38:DQ:63:ARG:NH2	38:DQ:96:ASP:HA	1.95	0.82
33:BL:6:LEU:HD23	33:BL:6:LEU:H	1.42	0.82
40:BS:29:VAL:HG11	40:BS:55:ILE:HD13	1.59	0.82
41:BT:67:VAL:HB	41:BT:76:ARG:HG2	1.61	0.82
2:CC:70:ALA:HA	2:CC:105:VAL:HG21	1.59	0.82
14:CO:88:ARG:HA	14:CO:88:ARG:HH11	1.42	0.82
17:CR:40:PRO:HD2	17:CR:43:ILE:HD12	1.61	0.82
23:DB:62:U:H2'	23:DB:63:A:O4'	1.80	0.82
6:AG:62:GLU:HG2	6:AG:69:ARG:HH21	1.44	0.82
36:BO:11:ALA:HB3	36:BO:96:GLY:H	1.43	0.82
10:AK:31:VAL:HG21	10:AK:66:ALA:HA	1.62	0.82
41:BT:11:LEU:H	41:BT:11:LEU:HD22	1.45	0.82
1:CA:841:C:H3'	1:CA:843:U:OP2	1.79	0.82
23:DB:1475:G:H1'	23:DB:1514:G:O6	1.79	0.82
23:BB:321:U:OP2	27:BE:130:LYS:HA	1.80	0.82
26:BD:148:GLN:HB2	26:BD:152:PRO:HG2	1.58	0.82
45:BY:35:VAL:HG22	45:BY:36:GLU:H	1.45	0.82
10:CK:124:LYS:HA	21:CU:34:ARG:HB3	1.61	0.82
23:DB:1082:U:C4	23:DB:1086:A:C2	2.67	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1099:G:P	52:DI:3:LYS:HA	2.20	0.82
46:DZ:33:LEU:HA	46:DZ:52:SER:HA	1.62	0.82
1:AA:817:C:H1'	1:AA:819:A:H5'	1.61	0.81
5:AF:86:ARG:NH1	17:AR:63:TYR:HB3	1.94	0.81
19:AT:34:VAL:HG11	19:AT:78:LEU:HD22	1.61	0.81
23:BB:958:U:H3	34:BM:16:ARG:HB3	1.45	0.81
37:BP:57:ALA:HA	37:BP:73:PHE:O	1.80	0.81
10:CK:86:LYS:HB3	10:CK:112:VAL:HG23	1.60	0.81
27:DE:147:LEU:HB3	27:DE:186:VAL:HG23	1.62	0.81
32:DK:24:VAL:HA	32:DK:39:ILE:HD12	1.62	0.81
41:DT:53:VAL:HG11	41:DT:87:LEU:HD13	1.59	0.81
52:DI:121:ILE:HD13	52:DI:121:ILE:H	1.45	0.81
23:BB:704:G:H2'	23:BB:726:G:H22	1.43	0.81
35:BN:101:GLY:HA2	35:BN:110:MET:N	1.95	0.81
3:CD:29:THR:H	3:CD:33:ILE:HG21	1.45	0.81
10:CK:31:VAL:HG21	10:CK:66:ALA:HA	1.60	0.81
11:CL:13:ARG:HD2	11:CL:13:ARG:H	1.43	0.81
23:DB:1060:U:C2	23:DB:1088:A:N7	2.48	0.81
23:DB:1509:A:H5'	23:DB:1510:G:H5'	1.60	0.81
29:DG:15:ASP:HB3	29:DG:26:LYS:H	1.43	0.81
16:AQ:16:MET:HB2	16:AQ:19:SER:HB2	1.61	0.81
23:BB:322:A:H5'	23:BB:340:A:H1'	1.62	0.81
23:BB:1594:U:H2'	23:BB:1595:C:C6	2.16	0.81
25:BC:161:VAL:HG12	25:BC:162:GLN:H	1.46	0.81
30:BH:127:GLU:HG3	30:BH:143:ILE:HB	1.62	0.81
32:BK:87:LEU:HB2	32:BK:93:GLN:O	1.80	0.81
30:DH:86:ASP:HB2	30:DH:89:LYS:HD3	1.62	0.81
41:DT:67:VAL:HB	41:DT:76:ARG:HG2	1.62	0.81
23:BB:2579:C:O2'	26:BD:136:ASN:HA	1.79	0.81
1:CA:1361:G:H2'	1:CA:1362:A:H5"	1.61	0.81
30:DH:135:HIS:HB3	30:DH:138:VAL:HB	1.60	0.81
5:CF:86:ARG:NH1	17:CR:63:TYR:HB3	1.95	0.81
29:DG:84:LYS:HG2	29:DG:85:LYS:H	1.44	0.81
23:BB:1475:G:H1'	23:BB:1514:G:O6	1.81	0.81
23:BB:1509:A:H5'	23:BB:1510:G:H5'	1.61	0.81
23:BB:1729:U:H2'	23:BB:1730:C:H4'	1.62	0.81
31:BJ:81:ILE:HG23	31:BJ:82:GLY:H	1.46	0.81
12:CM:47:LEU:HD13	12:CM:51:GLN:HB3	1.63	0.81
23:DB:1203:U:H1'	33:DL:4:ASN:HD21	1.46	0.81
38:DQ:79:ILE:HA	38:DQ:82:LEU:HD12	1.60	0.81
1:AA:1328:C:H5"	12:AM:27:THR:HG21	1.61	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1178:C:H2'	23:BB:1179:G:C8	2.14	0.81
23:BB:2306:C:H3'	23:BB:2307:G:H5'	1.63	0.81
27:BE:31:VAL:HG21	27:BE:104:ALA:HB2	1.61	0.81
35:BN:97:ILE:HD12	35:BN:98:LEU:H	1.46	0.81
12:CM:2:ARG:HB2	12:CM:56:ARG:HH22	1.46	0.81
18:CS:51:HIS:HA	18:CS:56:HIS:HA	1.63	0.81
32:DK:87:LEU:HB2	32:DK:93:GLN:O	1.81	0.81
5:AF:38:ARG:HH21	5:AF:63:ASN:ND2	1.78	0.81
8:AI:39:GLY:HA2	8:AI:44:ARG:HD3	1.62	0.81
20:AB:19:THR:HG23	20:AB:20:ARG:H	1.45	0.81
25:BC:140:VAL:HG12	25:BC:141:HIS:H	1.45	0.81
27:BE:147:LEU:HB3	27:BE:186:VAL:HG23	1.61	0.81
45:DY:35:VAL:HG22	45:DY:36:GLU:H	1.45	0.81
12:AM:47:LEU:HD13	12:AM:51:GLN:HB3	1.62	0.80
30:BH:84:ALA:HA	30:BH:90:LEU:HA	1.63	0.80
1:AA:935:A:N6	6:AG:2:ARG:HD2	1.96	0.80
29:BG:84:LYS:HG2	29:BG:85:LYS:H	1.43	0.80
30:BH:83:LYS:HB3	30:BH:91:PHE:HB2	1.61	0.80
1:CA:1343:G:H1'	8:CI:122:ARG:HH12	1.46	0.80
37:DP:23:ASP:HA	37:DP:88:ARG:HA	1.62	0.80
37:DP:57:ALA:HA	37:DP:73:PHE:O	1.80	0.80
46:DZ:7:VAL:HG13	46:DZ:8:THR:HG23	1.62	0.80
18:AS:51:HIS:HA	18:AS:56:HIS:HA	1.63	0.80
23:DB:2306:C:H3'	23:DB:2307:G:H5'	1.63	0.80
25:DC:144:GLU:HA	25:DC:151:GLY:HA2	1.63	0.80
52:DI:21:PRO:HB2	52:DI:22:PRO:HD3	1.64	0.80
2:AC:137:VAL:HA	2:AC:148:ILE:HD13	1.63	0.80
22:BA:104:A:H2'	22:BA:105:G:O4'	1.81	0.80
31:DJ:81:ILE:HG23	31:DJ:82:GLY:H	1.44	0.80
1:AA:841:C:H3'	1:AA:843:U:OP2	1.81	0.80
6:CG:2:ARG:NH1	6:CG:2:ARG:HB3	1.97	0.80
23:DB:322:A:H5'	23:DB:340:A:H1'	1.63	0.80
23:DB:2153:C:H2'	23:DB:2154:A:H8	1.47	0.80
49:D2:30:VAL:HG22	49:D2:33:ARG:HH22	1.47	0.80
1:AA:1343:G:H1'	8:AI:122:ARG:HH12	1.47	0.80
2:CC:137:VAL:HA	2:CC:148:ILE:HD13	1.61	0.80
23:DB:479:A:O2'	23:DB:481:G:H5'	1.82	0.80
39:DR:16:GLU:HA	39:DR:98:ILE:HG22	1.63	0.80
23:BB:1141:U:H4'	23:BB:1142:A:O4'	1.82	0.80
42:BU:85:ARG:HD3	42:BU:86:PHE:N	1.94	0.80
46:BZ:33:LEU:HA	46:BZ:52:SER:HA	1.63	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1451:C:H4'	23:DB:1452:G:H5'	1.64	0.80
32:DK:86:LEU:H	32:DK:86:LEU:HD23	1.45	0.80
35:DN:38:LEU:HB3	35:DN:39:PRO:HD3	1.63	0.80
32:BK:13:ASN:HD21	32:BK:98:ARG:H	1.30	0.80
23:DB:1141:U:H4'	23:DB:1142:A:O4'	1.81	0.80
29:BG:122:ALA:HB2	29:BG:132:LEU:HB3	1.64	0.80
20:CB:32:GLY:H	20:CB:39:ILE:HB	1.46	0.80
1:AA:1361:G:H2'	1:AA:1362:A:H5"	1.64	0.80
35:BN:38:LEU:HB3	35:BN:39:PRO:HD3	1.62	0.80
35:DN:97:ILE:HD12	35:DN:98:LEU:H	1.46	0.80
29:DG:40:VAL:HG22	29:DG:64:ALA:HA	1.62	0.79
6:AG:21:LEU:HD23	6:AG:21:LEU:H	1.46	0.79
23:BB:100:U:H2'	23:BB:100:U:O2	1.81	0.79
27:BE:161:ALA:HA	27:BE:164:LEU:HB2	1.62	0.79
13:CN:15:LEU:HB3	13:CN:54:SER:HB2	1.64	0.79
22:DA:98:G:H1	24:DV:14:LYS:HB2	1.47	0.79
29:DG:122:ALA:HB2	29:DG:132:LEU:HB3	1.64	0.79
10:AK:124:LYS:HA	21:AU:34:ARG:HB3	1.63	0.79
12:AM:44:ILE:H	12:AM:44:ILE:HD12	1.48	0.79
23:BB:1925:C:H2'	23:BB:1926:U:H5"	1.64	0.79
23:DB:1099:G:OP2	52:DI:3:LYS:HA	1.81	0.79
24:DV:66:ASP:HB2	24:DV:68:LYS:HE3	1.64	0.79
28:DF:141:ASP:HB3	28:DF:144:LYS:HB3	1.62	0.79
34:DM:60:GLN:H	34:DM:60:GLN:NE2	1.80	0.79
38:DQ:57:ARG:HH11	38:DQ:57:ARG:HB3	1.46	0.79
23:BB:2151:U:H2'	23:BB:2152:G:C8	2.16	0.79
23:BB:2680:U:OP2	26:BD:114:LYS:HB3	1.82	0.79
24:BV:66:ASP:HB2	24:BV:68:LYS:HE3	1.64	0.79
14:AO:35:ILE:HD11	14:AO:58:MET:HG3	1.65	0.79
8:CI:29:ILE:HG12	8:CI:64:ILE:HB	1.63	0.79
23:DB:532:A:H2'	38:DQ:27:ARG:HH22	1.46	0.79
25:DC:140:VAL:HG12	25:DC:141:HIS:H	1.46	0.79
11:AL:20:VAL:HG12	11:AL:93:ARG:HB3	1.63	0.79
23:BB:855:G:H21	43:BW:23:LYS:CG	1.94	0.79
28:BF:65:LEU:HD23	28:BF:87:LYS:HD2	1.63	0.79
1:CA:1032:G:H2'	1:CA:1033:G:O4'	1.83	0.79
8:CI:39:GLY:HA2	8:CI:44:ARG:HD3	1.64	0.79
13:CN:87:ALA:HB2	13:CN:92:ILE:HD12	1.65	0.79
23:DB:2356:U:H5"	43:DW:16:GLU:HG3	1.64	0.79
32:DK:13:ASN:HD21	32:DK:98:ARG:H	1.29	0.79
23:BB:2748:A:H1'	29:BG:66:THR:HB	1.63	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BF:141:ASP:HB3	28:BF:144:LYS:HB3	1.63	0.79
43:BW:39:GLN:HG2	43:BW:40:ARG:N	1.97	0.79
22:DA:104:A:H2'	22:DA:105:G:O4'	1.81	0.79
23:DB:1674:G:H21	23:DB:1677:A:H61	1.27	0.79
1:AA:264:C:H4'	16:AQ:64:ARG:HD2	1.64	0.79
2:AC:122:GLN:HB3	2:AC:127:VAL:HG21	1.63	0.79
22:BA:75:G:H1	22:BA:102:G:N2	1.79	0.79
31:BJ:77:HIS:HD2	31:BJ:84:ILE:H	1.31	0.79
52:BI:21:PRO:HB2	52:BI:22:PRO:HD3	1.62	0.79
19:CT:34:VAL:HG11	19:CT:78:LEU:HD22	1.63	0.79
1:AA:1032:G:H2'	1:AA:1033:G:O4'	1.83	0.79
20:AB:116:LEU:HD22	20:AB:140:LEU:HD11	1.64	0.79
42:DU:85:ARG:HD3	42:DU:86:PHE:N	1.96	0.79
20:AB:32:GLY:H	20:AB:39:ILE:HB	1.48	0.79
25:BC:226:PRO:HG3	25:BC:233:GLY:H	1.48	0.79
35:BN:32:GLU:HG3	35:BN:115:LEU:HD12	1.64	0.79
23:DB:90:U:H3'	23:DB:91:A:H5"	1.64	0.79
4:AE:104:ILE:HG23	4:AE:111:ARG:HH12	1.47	0.78
25:BC:144:GLU:HA	25:BC:151:GLY:HA2	1.65	0.78
52:BI:33:ASN:HD21	52:BI:64:ARG:HH11	1.31	0.78
37:DP:97:TYR:O	37:DP:100:ARG:HB2	1.83	0.78
13:AN:87:ALA:HB2	13:AN:92:ILE:HD12	1.65	0.78
23:BB:364:C:H2'	23:BB:365:U:C6	2.18	0.78
38:BQ:65:ASN:HB2	38:BQ:75:TYR:HB2	1.65	0.78
23:DB:899:A:H2'	23:DB:900:A:O4'	1.82	0.78
25:DC:161:VAL:HG12	25:DC:162:GLN:H	1.49	0.78
23:BB:62:U:H2'	23:BB:63:A:O4'	1.83	0.78
23:BB:172:A:H2'	23:BB:173:A:C8	2.18	0.78
23:BB:1060:U:OP2	52:BI:74:PRO:HA	1.84	0.78
6:CG:62:GLU:HG2	6:CG:69:ARG:HH21	1.48	0.78
22:DA:116:G:H4'	36:DO:54:VAL:HG22	1.64	0.78
12:AM:89:ARG:HH22	12:AM:94:LEU:HD12	1.48	0.78
37:BP:7:LEU:HD12	37:BP:7:LEU:H	1.47	0.78
37:BP:97:TYR:O	37:BP:100:ARG:HB2	1.84	0.78
38:BQ:63:ARG:NH2	38:BQ:96:ASP:HA	1.97	0.78
6:CG:91:ARG:HD2	6:CG:91:ARG:H	1.46	0.78
25:DC:226:PRO:HG3	25:DC:233:GLY:H	1.47	0.78
2:CC:122:GLN:HB3	2:CC:127:VAL:HG21	1.64	0.78
15:CP:3:THR:HG22	15:CP:66:THR:HB	1.65	0.78
23:DB:958:U:H3	34:DM:16:ARG:HB3	1.44	0.78
23:BB:2734:A:H2'	23:BB:2735:G:H5'	1.65	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:781:A:H2'	1:CA:782:A:H5'	1.63	0.78
43:DW:39:GLN:HG3	43:DW:42:THR:HB	1.66	0.78
44:DX:17:GLU:HB3	44:DX:53:VAL:HG11	1.65	0.78
3:AD:29:THR:H	3:AD:33:ILE:HG21	1.47	0.78
8:AI:29:ILE:HG12	8:AI:64:ILE:HB	1.64	0.78
13:AN:15:LEU:HB3	13:AN:54:SER:HB2	1.65	0.78
23:BB:479:A:O2'	23:BB:481:G:H5'	1.84	0.78
7:CH:103:VAL:HG22	7:CH:124:ILE:HA	1.65	0.78
6:AG:91:ARG:HD2	6:AG:91:ARG:H	1.49	0.78
29:BG:126:THR:HB	29:BG:129:GLU:HG3	1.64	0.78
52:BI:55:PRO:HD3	52:BI:74:PRO:HD3	1.65	0.78
1:CA:1144:G:N2	1:CA:1146:A:H62	1.82	0.78
23:DB:2365:G:H4'	43:DW:59:PHE:CE1	2.17	0.78
28:DF:65:LEU:HD23	28:DF:87:LYS:HD2	1.66	0.78
22:BA:116:G:H4'	36:BO:54:VAL:HG22	1.64	0.78
11:CL:20:VAL:HG12	11:CL:93:ARG:HB3	1.65	0.78
23:DB:1099:G:H8	52:DI:3:LYS:CA	1.97	0.78
23:DB:1729:U:H2'	23:DB:1730:C:H4'	1.65	0.78
19:AT:85:LEU:HD23	19:AT:86:ALA:H	1.49	0.78
23:BB:2010:G:H5"	40:BS:42:LYS:HB2	1.66	0.78
34:BM:21:ALA:HB1	34:BM:100:LYS:HE2	1.65	0.78
37:BP:23:ASP:HA	37:BP:88:ARG:HA	1.64	0.78
12:AM:19:THR:HA	12:AM:24:VAL:HG23	1.66	0.77
23:BB:996:A:H4'	38:BQ:91:ARG:HD2	1.66	0.77
29:BG:40:VAL:HG22	29:BG:64:ALA:HA	1.66	0.77
42:BU:26:ASN:HD21	42:BU:34:ILE:HD12	1.49	0.77
48:B1:33:LEU:HB3	48:B1:51:ALA:HB3	1.64	0.77
1:AA:108:G:H5'	1:AA:109:A:H5"	1.66	0.77
39:DR:60:LYS:H	39:DR:100:GLY:HA3	1.50	0.77
43:DW:17:ALA:HA	43:DW:35:ILE:HG23	1.64	0.77
52:DI:45:THR:HA	52:DI:48:ILE:HG22	1.66	0.77
24:DV:75:GLN:HG2	24:DV:92:VAL:HG23	1.66	0.77
39:DR:24:LYS:HA	39:DR:94:THR:HG23	1.66	0.77
43:DW:39:GLN:HG2	43:DW:40:ARG:N	1.98	0.77
1:AA:1057:G:H4'	2:AC:196:GLY:H	1.50	0.77
25:BC:32:LEU:O	25:BC:63:ILE:HG12	1.85	0.77
29:BG:148:ARG:HA	29:BG:161:VAL:HB	1.67	0.77
37:BP:20:ARG:HE	37:BP:91:VAL:HG21	1.47	0.77
46:BZ:30:LEU:HD23	46:BZ:30:LEU:H	1.47	0.77
23:DB:1099:G:H5"	52:DI:2:LYS:C	2.03	0.77
23:DB:2734:A:H2'	23:DB:2735:G:H5'	1.65	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DZ:30:LEU:H	46:DZ:30:LEU:HD23	1.47	0.77
23:BB:2769:U:H2'	23:BB:2770:G:C8	2.20	0.77
1:CA:83:C:O2'	1:CA:84:U:H3'	1.85	0.77
23:DB:608:A:H2'	23:DB:609:A:C8	2.20	0.77
23:DB:918:A:H2'	23:DB:919:U:H5'	1.66	0.77
12:CM:44:ILE:HD12	12:CM:44:ILE:H	1.48	0.77
23:DB:172:A:H2'	23:DB:173:A:C8	2.20	0.77
23:BB:90:U:H3'	23:BB:91:A:H5"	1.65	0.77
23:BB:1993:U:H4'	26:BD:133:THR:CG2	2.14	0.77
23:BB:2185:U:H2'	23:BB:2186:G:H8	1.50	0.77
24:BV:72:VAL:HG21	24:BV:91:PHE:HB3	1.64	0.77
30:BH:57:LYS:HE2	30:BH:58:LEU:HB2	1.66	0.77
34:BM:60:GLN:NE2	34:BM:60:GLN:H	1.83	0.77
23:DB:532:A:H3'	38:DQ:27:ARG:HH12	1.50	0.77
8:AI:27:ILE:HD12	8:AI:34:LEU:HD22	1.67	0.77
10:AK:106:ILE:HG13	10:AK:107:THR:H	1.50	0.77
1:CA:1057:G:H4'	2:CC:196:GLY:H	1.50	0.77
18:CS:30:LEU:HB2	18:CS:48:ILE:HG23	1.66	0.77
23:DB:1594:U:H2'	23:DB:1595:C:C6	2.20	0.77
37:DP:88:ARG:HB2	37:DP:112:ARG:NH1	2.00	0.77
51:D4:16:ILE:HG12	51:D4:25:VAL:HG22	1.66	0.77
6:AG:74:VAL:HA	6:AG:87:PRO:HA	1.67	0.77
22:BA:98:G:H1	24:BV:14:LYS:HB2	1.50	0.77
43:BW:17:ALA:HA	43:BW:35:ILE:HG23	1.67	0.77
1:CA:1078:U:H4'	4:CE:137:ARG:NH1	2.00	0.77
20:CB:202:ASN:ND2	20:CB:204:ASP:H	1.81	0.77
2:AC:26:LYS:HG3	2:AC:27:GLU:HG3	1.65	0.77
34:BM:11:LYS:HD3	34:BM:86:LYS:HG2	1.67	0.77
7:CH:17:GLN:HG2	7:CH:62:LEU:HD23	1.65	0.77
35:DN:72:ASP:HB3	35:DN:75:ILE:HG12	1.67	0.77
39:DR:2:TYR:HB2	39:DR:42:ALA:HB2	1.66	0.77
25:BC:129:LEU:HD22	25:BC:134:ILE:HG22	1.67	0.76
26:BD:25:THR:HG21	26:BD:193:VAL:HG22	1.67	0.76
42:BU:42:LYS:HG3	42:BU:57:ILE:HG21	1.67	0.76
7:AH:103:VAL:HG22	7:AH:124:ILE:HA	1.65	0.76
23:BB:38:A:O2'	27:BE:43:THR:HA	1.85	0.76
23:BB:62:U:H3'	23:BB:63:A:C8	2.19	0.76
32:BK:24:VAL:HA	32:BK:39:ILE:HD12	1.67	0.76
1:CA:1160:G:H4'	20:CB:130:LYS:HB2	1.65	0.76
15:CP:25:ARG:HD3	15:CP:25:ARG:H	1.50	0.76
23:DB:1166:G:H2'	23:DB:1167:C:C6	2.21	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DE:58:LYS:HE2	27:DE:60:TRP:HD1	1.50	0.76
39:DR:7:SER:HB2	39:DR:22:LEU:HB3	1.68	0.76
28:BF:110:ILE:HA	28:BF:111:ARG:CZ	2.15	0.76
8:CI:27:ILE:HD12	8:CI:34:LEU:HD22	1.67	0.76
14:CO:35:ILE:HD11	14:CO:58:MET:HG3	1.66	0.76
23:DB:161:A:H3'	23:DB:162:U:H5"	1.67	0.76
1:AA:243:A:H4'	1:AA:244:U:H5'	1.67	0.76
27:BE:157:LEU:HG	27:BE:169:VAL:HG11	1.68	0.76
40:BS:70:LYS:HD3	40:BS:110:ARG:HA	1.67	0.76
2:CC:77:GLY:HA3	2:CC:81:GLU:HB3	1.68	0.76
23:DB:354:A:H2'	23:DB:355:U:C6	2.20	0.76
23:DB:2305:U:H5"	28:DF:130:GLY:HA3	1.68	0.76
30:DH:31:VAL:O	30:DH:33:GLN:N	2.18	0.76
45:BY:54:VAL:HB	45:BY:56:VAL:HG23	1.67	0.76
6:CG:21:LEU:HD23	6:CG:21:LEU:H	1.49	0.76
30:DH:133:GLN:HB3	30:DH:139:PHE:HA	1.67	0.76
31:DJ:29:ALA:HA	31:DJ:32:LEU:HD12	1.67	0.76
20:AB:163:ILE:HG23	20:AB:164:ASP:H	1.49	0.76
23:BB:1082:U:N3	23:BB:1086:A:C2	2.53	0.76
23:BB:1469:A:H2'	23:BB:1470:A:C8	2.21	0.76
24:BV:75:GLN:HG2	24:BV:92:VAL:HG23	1.66	0.76
39:BR:2:TYR:HB2	39:BR:42:ALA:HB2	1.66	0.76
1:CA:238:A:H2'	1:CA:239:U:H5"	1.67	0.76
1:CA:1306:A:H61	1:CA:1331:G:H1'	1.50	0.76
6:CG:14:ASP:HB3	6:CG:19:SER:H	1.51	0.76
23:DB:3:U:H2'	23:DB:4:U:C6	2.20	0.76
23:DB:62:U:H3'	23:DB:63:A:C8	2.21	0.76
23:DB:1019:U:H2'	23:DB:1020:A:C8	2.20	0.76
23:DB:1283:G:N2	23:DB:1286:A:H5'	2.01	0.76
31:DJ:112:GLY:H	31:DJ:113:PRO:CD	1.97	0.76
15:AP:3:THR:HG22	15:AP:66:THR:HB	1.68	0.76
23:BB:1166:G:H2'	23:BB:1167:C:C6	2.20	0.76
1:CA:243:A:H4'	1:CA:244:U:H5'	1.66	0.76
3:CD:13:ARG:HA	3:CD:37:PRO:HB3	1.67	0.76
8:CI:46:VAL:HA	8:CI:49:GLN:HG3	1.68	0.76
10:CK:106:ILE:HG13	10:CK:107:THR:H	1.51	0.76
24:DV:79:ARG:HA	24:DV:86:LEU:HA	1.68	0.76
37:DP:1:SER:HA	37:DP:4:ILE:HB	1.68	0.76
48:D1:49:LYS:HG2	48:D1:50:GLU:H	1.51	0.76
23:BB:2653:U:H3'	23:BB:2654:A:H2'	1.67	0.76
31:BJ:112:GLY:H	31:BJ:113:PRO:CD	1.98	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:423:G:H2'	1:CA:424:G:O4'	1.85	0.76
15:CP:52:LEU:HD21	15:CP:75:ILE:HG12	1.67	0.76
23:DB:1248:G:H2'	38:DQ:2:ARG:HA	1.67	0.76
23:DB:1437:C:H2'	23:DB:1438:U:H6	1.49	0.76
32:DK:35:VAL:HG23	32:DK:36:GLY:N	2.01	0.76
2:CC:26:LYS:HG3	2:CC:27:GLU:HG3	1.68	0.76
19:CT:85:LEU:HD23	19:CT:86:ALA:H	1.51	0.76
23:DB:2021:C:OP1	47:D0:8:THR:HG21	1.86	0.76
34:DM:78:LEU:HD12	34:DM:78:LEU:H	1.51	0.76
1:AA:410:G:OP2	3:AD:25:ARG:HD2	1.85	0.76
3:AD:24:VAL:HA	3:AD:27:ILE:HD11	1.66	0.76
21:AU:10:PRO:HB2	2:CC:71:ARG:HE	1.49	0.76
6:CG:2:ARG:HB3	6:CG:2:ARG:HH11	1.51	0.76
10:CK:22:ILE:HD13	10:CK:85:VAL:HG22	1.68	0.76
28:DF:168:LEU:HD13	28:DF:169:LEU:H	1.51	0.76
43:DW:37:VAL:HG12	43:DW:38:ARG:H	1.50	0.76
48:D1:33:LEU:HB3	48:D1:51:ALA:HB3	1.67	0.76
12:AM:2:ARG:HB2	12:AM:56:ARG:HH22	1.49	0.75
23:BB:2143:C:H2'	23:BB:2144:G:O4'	1.87	0.75
25:BC:91:ALA:HB2	25:BC:105:ALA:HB2	1.68	0.75
43:BW:24:ARG:HD3	43:BW:65:LYS:HG2	1.68	0.75
23:DB:1099:G:P	52:DI:4:VAL:H	2.09	0.75
1:AA:238:A:H2'	1:AA:239:U:H5"	1.65	0.75
23:BB:90:U:H3'	23:BB:91:A:C5'	2.16	0.75
23:BB:2328:A:H2'	23:BB:2329:U:C6	2.21	0.75
28:BF:168:LEU:HD13	28:BF:169:LEU:H	1.52	0.75
38:BQ:8:ILE:H	38:BQ:8:ILE:HD12	1.49	0.75
1:CA:437:U:H2'	1:CA:438:U:O4'	1.86	0.75
34:DM:21:ALA:HB1	34:DM:100:LYS:HE2	1.68	0.75
1:AA:1133:G:H2'	1:AA:1134:G:O4'	1.87	0.75
8:AI:33:SER:HB3	8:AI:36:GLN:HB2	1.68	0.75
23:BB:2269:G:H4'	43:BW:19:ARG:HH12	1.50	0.75
1:CA:264:C:H4'	16:CQ:64:ARG:HD2	1.67	0.75
23:DB:742:A:H2'	23:DB:743:A:C8	2.21	0.75
34:DM:11:LYS:HD3	34:DM:86:LYS:HG2	1.68	0.75
37:DP:13:LYS:HD3	37:DP:76:HIS:HA	1.67	0.75
1:AA:1306:A:H61	1:AA:1331:G:H1'	1.50	0.75
27:BE:130:LYS:HB2	27:BE:133:LEU:HG	1.67	0.75
30:BH:31:VAL:O	30:BH:33:GLN:N	2.20	0.75
30:BH:73:ASN:HB3	30:BH:141:LYS:HZ1	1.52	0.75
39:BR:24:LYS:HA	39:BR:94:THR:HG23	1.67	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CE:44:ARG:HA	4:CE:71:ILE:O	1.87	0.75
23:DB:2010:G:H5"	40:DS:42:LYS:HB2	1.68	0.75
23:DB:2619:C:H5'	26:DD:157:LYS:HD3	1.69	0.75
28:DF:65:LEU:N	28:DF:88:VAL:HG22	1.99	0.75
32:BK:38:ILE:HD13	32:BK:61:VAL:HG12	1.66	0.75
34:BM:78:LEU:H	34:BM:78:LEU:HD12	1.50	0.75
1:CA:812:G:O2'	1:CA:813:U:H6	1.70	0.75
3:CD:24:VAL:HA	3:CD:27:ILE:HD11	1.68	0.75
23:DB:1469:A:H2'	23:DB:1470:A:C8	2.21	0.75
42:DU:84:PHE:O	42:DU:85:ARG:HB2	1.86	0.75
2:AC:119:ILE:HG21	2:AC:197:VAL:HG11	1.69	0.75
36:BO:49:VAL:HG11	36:BO:82:ALA:HA	1.69	0.75
43:BW:66:VAL:HA	43:BW:81:ILE:HG22	1.69	0.75
23:DB:287:G:H2'	23:DB:288:U:C6	2.21	0.75
52:DI:9:LYS:HG2	52:DI:57:VAL:HG13	1.69	0.75
22:DA:2:G:H2'	22:DA:3:C:C6	2.21	0.75
1:AA:269:C:H2'	1:AA:270:A:C8	2.22	0.75
1:AA:674:G:H2'	1:AA:675:A:H8	1.52	0.75
23:BB:2258:C:H5'	23:BB:2259:U:H5	1.52	0.75
28:BF:65:LEU:N	28:BF:88:VAL:HG22	1.99	0.75
39:BR:60:LYS:H	39:BR:100:GLY:HA3	1.50	0.75
41:BT:28:ASN:HA	41:BT:91:GLN:HE22	1.52	0.75
9:CJ:10:LEU:HD11	9:CJ:25:ILE:HD12	1.68	0.75
23:DB:2653:U:H3'	23:DB:2654:A:H2'	1.69	0.75
27:DE:157:LEU:HG	27:DE:169:VAL:HG11	1.69	0.75
37:DP:20:ARG:HE	37:DP:91:VAL:HG21	1.50	0.75
42:DU:42:LYS:HG3	42:DU:57:ILE:HG21	1.67	0.75
1:AA:423:G:H2'	1:AA:424:G:O4'	1.86	0.75
1:AA:1348:U:H4'	8:AI:121:ARG:HG3	1.69	0.75
6:AG:2:ARG:HB3	6:AG:3:ARG:HH11	1.50	0.75
29:BG:167:VAL:HG23	29:BG:168:VAL:H	1.51	0.75
39:BR:7:SER:HB2	39:BR:22:LEU:HB3	1.69	0.75
43:BW:37:VAL:HG12	43:BW:38:ARG:H	1.51	0.75
23:DB:877:A:N6	23:DB:898:C:H2'	2.01	0.75
23:DB:2756:U:H1'	23:DB:2757:A:H5"	1.67	0.75
32:DK:38:ILE:HD13	32:DK:61:VAL:HG12	1.67	0.75
33:DL:109:LYS:HG2	33:DL:126:ARG:HB2	1.67	0.75
52:DI:72:THR:HG21	52:DI:112:LYS:HA	1.69	0.75
23:BB:161:A:H3'	23:BB:162:U:H5"	1.68	0.74
23:BB:1283:G:N2	23:BB:1286:A:H5'	2.01	0.74
28:BF:177:ARG:CZ	28:BF:177:ARG:HA	2.16	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:946:A:H2'	1:CA:947:G:C8	2.22	0.74
1:CA:979:C:H1'	1:CA:1317:C:H41	1.51	0.74
20:CB:163:ILE:HG23	20:CB:164:ASP:H	1.52	0.74
21:CU:16:ARG:HA	21:CU:16:ARG:NE	2.01	0.74
23:DB:404:A:H4'	23:DB:405:U:H5'	1.69	0.74
23:DB:1168:G:H2'	23:DB:1169:A:C8	2.22	0.74
28:DF:177:ARG:CZ	28:DF:177:ARG:HA	2.16	0.74
25:BC:156:SER:O	25:BC:194:VAL:HG11	1.87	0.74
38:BQ:107:ALA:HB1	39:BR:48:LYS:HE2	1.67	0.74
1:CA:108:G:H5'	1:CA:109:A:H5"	1.69	0.74
13:CN:68:ARG:HH12	13:CN:70:HIS:HB2	1.53	0.74
23:DB:856:G:H1'	43:DW:23:LYS:HB3	1.68	0.74
37:DP:7:LEU:H	37:DP:7:LEU:HD12	1.50	0.74
8:AI:99:LYS:HE3	9:CJ:80:THR:HA	1.68	0.74
23:BB:2882:A:H4'	35:BN:97:ILE:HD11	1.67	0.74
38:BQ:65:ASN:HD21	38:BQ:69:ARG:HH11	1.33	0.74
40:BS:66:ILE:H	40:BS:66:ILE:HD13	1.51	0.74
41:BT:76:ARG:NH2	41:BT:77:ARG:HB2	2.01	0.74
41:BT:82:LYS:HD3	41:BT:84:TYR:HE1	1.51	0.74
52:BI:27:LEU:HD12	52:BI:32:VAL:HG11	1.69	0.74
34:DM:63:ILE:HG23	34:DM:105:MET:HG3	1.68	0.74
1:AA:979:C:H1'	1:AA:1317:C:H41	1.52	0.74
1:AA:1144:G:N2	1:AA:1146:A:H62	1.84	0.74
4:AE:105:ILE:HG13	4:AE:123:LEU:HA	1.69	0.74
9:AJ:36:VAL:HG22	9:AJ:76:ILE:HG22	1.68	0.74
20:AB:59:ILE:H	20:AB:59:ILE:HD12	1.52	0.74
30:BH:116:ARG:HD2	30:BH:133:GLN:HB3	1.69	0.74
38:BQ:57:ARG:HH11	38:BQ:57:ARG:HB3	1.52	0.74
9:CJ:36:VAL:HG22	9:CJ:76:ILE:HG22	1.67	0.74
23:DB:90:U:H3'	23:DB:91:A:C5'	2.16	0.74
23:DB:2354:C:H4'	43:DW:31:LEU:HD23	1.67	0.74
23:DB:2579:C:O2'	26:DD:136:ASN:HA	1.88	0.74
23:DB:2901:C:H2'	23:DB:2902:C:C6	2.23	0.74
27:DE:130:LYS:HB2	27:DE:133:LEU:HG	1.67	0.74
38:DQ:86:SER:HB3	39:DR:51:VAL:HA	1.68	0.74
41:DT:28:ASN:HA	41:DT:91:GLN:HE22	1.52	0.74
1:AA:1472:U:H2'	1:AA:1473:G:C8	2.23	0.74
2:AC:77:GLY:HA3	2:AC:81:GLU:HB3	1.69	0.74
3:AD:13:ARG:HA	3:AD:37:PRO:HB3	1.69	0.74
23:BB:591:U:H1'	50:B3:1:PRO:N	2.03	0.74
23:BB:2153:C:H2'	23:BB:2154:A:C8	2.23	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2185:U:H2'	23:BB:2186:G:C8	2.23	0.74
29:BG:26:LYS:HB3	29:BG:26:LYS:HZ2	1.52	0.74
23:DB:1082:U:N3	23:DB:1086:A:C2	2.55	0.74
29:DG:148:ARG:HA	29:DG:161:VAL:HB	1.70	0.74
29:DG:167:VAL:HG23	29:DG:168:VAL:H	1.51	0.74
40:DS:28:LYS:HD2	40:DS:29:VAL:H	1.52	0.74
52:DI:105:LEU:HD13	52:DI:129:GLU:HG2	1.68	0.74
2:AC:57:GLU:HB2	2:AC:64:ARG:HB2	1.68	0.74
10:AK:22:ILE:HG21	10:AK:95:THR:HG21	1.68	0.74
10:AK:91:GLY:HA2	10:AK:94:SER:HB3	1.70	0.74
17:AR:38:ILE:HD13	17:AR:38:ILE:H	1.51	0.74
23:BB:2333:A:H4'	23:BB:2334:U:H5"	1.68	0.74
33:BL:109:LYS:HG2	33:BL:126:ARG:HB2	1.68	0.74
34:BM:63:ILE:HG23	34:BM:105:MET:HG3	1.69	0.74
51:B4:16:ILE:HG12	51:B4:25:VAL:HG22	1.68	0.74
1:CA:269:C:H2'	1:CA:270:A:C8	2.23	0.74
1:CA:674:G:H2'	1:CA:675:A:H8	1.50	0.74
4:CE:105:ILE:HG13	4:CE:123:LEU:HA	1.70	0.74
23:DB:2352:A:C6	43:DW:30:VAL:HG11	2.21	0.74
23:DB:2376:A:H1'	36:DO:111:ARG:HH22	1.52	0.74
24:DV:63:ILE:HB	24:DV:70:ILE:HD11	1.70	0.74
29:DG:126:THR:HB	29:DG:129:GLU:HG3	1.68	0.74
31:DJ:77:HIS:HD2	31:DJ:84:ILE:H	1.36	0.74
45:DY:54:VAL:HB	45:DY:56:VAL:HG23	1.68	0.74
19:AT:38:ILE:HD11	19:AT:82:ILE:HG22	1.68	0.74
22:BA:75:G:H1	22:BA:102:G:H22	1.34	0.74
23:BB:608:A:H2'	23:BB:609:A:C8	2.22	0.74
25:BC:35:LYS:HG2	25:BC:36:ASN:H	1.52	0.74
26:BD:51:THR:HG22	26:BD:52:THR:H	1.51	0.74
23:DB:2748:A:H1'	29:DG:66:THR:HB	1.69	0.74
9:AJ:51:VAL:HG23	13:AN:80:ARG:HB2	1.69	0.74
20:AB:202:ASN:ND2	20:AB:204:ASP:H	1.84	0.74
43:BW:39:GLN:HG3	43:BW:42:THR:HB	1.70	0.74
45:BY:23:LEU:HD13	45:BY:28:LEU:HB2	1.70	0.74
9:CJ:51:VAL:HG23	13:CN:80:ARG:HB2	1.69	0.74
10:CK:20:ALA:HB2	10:CK:81:LEU:HD12	1.70	0.74
10:CK:22:ILE:HG21	10:CK:95:THR:HG21	1.69	0.74
17:CR:38:ILE:H	17:CR:38:ILE:HD13	1.51	0.74
19:CT:43:LYS:HE2	19:CT:44:ALA:H	1.50	0.74
20:CB:61:SER:HB2	20:CB:62:ARG:HH11	1.52	0.74
23:DB:224:U:O4	23:DB:420:C:H5'	1.88	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1301:A:O2'	23:DB:1302:A:H3'	1.87	0.74
30:DH:54:LEU:HD23	30:DH:58:LEU:HD12	1.70	0.74
42:DU:81:ARG:HH21	42:DU:81:ARG:N	1.86	0.74
43:DW:51:GLY:CA	43:DW:59:PHE:HB2	2.17	0.74
15:AP:25:ARG:HD3	15:AP:25:ARG:H	1.53	0.74
25:BC:64:VAL:O	25:BC:65:ASP:HB3	1.88	0.74
1:CA:410:G:OP2	3:CD:25:ARG:HD2	1.88	0.74
19:CT:47:GLN:HG2	19:CT:82:ILE:HD12	1.70	0.74
23:DB:571:U:H3'	39:DR:80:ARG:NH1	2.03	0.74
23:DB:1097:U:H2'	23:DB:1098:A:O4'	1.87	0.74
26:DD:25:THR:HG21	26:DD:193:VAL:HG22	1.68	0.74
26:DD:51:THR:HG22	26:DD:52:THR:H	1.53	0.74
23:BB:404:A:H4'	23:BB:405:U:H5'	1.68	0.74
23:BB:2834:G:H1'	23:BB:2883:A:N6	2.02	0.74
28:BF:126:ASN:HB3	28:BF:156:THR:HA	1.70	0.74
31:BJ:29:ALA:HA	31:BJ:32:LEU:HD12	1.69	0.74
52:BI:77:VAL:HA	52:BI:80:LYS:HE2	1.70	0.74
23:DB:1454:C:H5'	35:DN:63:ARG:HE	1.53	0.74
29:DG:148:ARG:HD3	29:DG:152:ARG:CZ	2.17	0.74
38:DQ:27:ARG:HG2	38:DQ:37:ALA:HB2	1.69	0.74
45:DY:6:ILE:HA	45:DY:56:VAL:HG22	1.70	0.74
23:BB:479:A:N3	23:BB:481:G:H5"	2.03	0.73
23:BB:1287:A:OP1	35:BN:104:ALA:HB3	1.88	0.73
23:BB:1451:C:H4'	23:BB:1452:G:H5'	1.68	0.73
35:BN:33:ILE:HG22	35:BN:114:GLU:HB2	1.69	0.73
6:CG:74:VAL:HA	6:CG:87:PRO:HA	1.70	0.73
23:DB:2393:U:H5"	33:DL:62:PRO:HG3	1.70	0.73
31:DJ:6:ALA:HB3	31:DJ:45:THR:HG21	1.70	0.73
3:AD:137:SER:HB2	3:AD:138:PRO:HD2	1.70	0.73
23:BB:1019:U:H2'	23:BB:1020:A:C8	2.23	0.73
28:BF:48:LEU:H	28:BF:48:LEU:HD23	1.53	0.73
29:BG:37:ASN:HD22	29:BG:40:VAL:HB	1.53	0.73
31:BJ:124:VAL:HG23	31:BJ:125:TYR:H	1.52	0.73
35:BN:116:VAL:O	35:BN:117:ASP:HB3	1.88	0.73
37:BP:91:VAL:HG23	37:BP:92:ARG:H	1.52	0.73
42:BU:84:PHE:O	42:BU:85:ARG:HB2	1.88	0.73
47:B0:32:THR:OG1	47:B0:50:GLY:HA2	1.88	0.73
2:CC:57:GLU:HB2	2:CC:64:ARG:HB2	1.69	0.73
23:DB:143:C:H2'	23:DB:144:A:H8	1.52	0.73
23:DB:743:A:O2'	23:DB:744:U:H5'	1.88	0.73
23:DB:1868:C:H2'	23:DB:1869:G:O4'	1.88	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2769:U:H2'	23:DB:2770:G:C8	2.23	0.73
24:DV:9:ARG:HH22	24:DV:12:GLN:HA	1.54	0.73
28:DF:48:LEU:HD23	28:DF:48:LEU:H	1.52	0.73
35:DN:33:ILE:HG22	35:DN:114:GLU:HB2	1.69	0.73
38:DQ:8:ILE:HD12	38:DQ:8:ILE:H	1.51	0.73
1:AA:842:U:H3'	1:AA:843:U:H4'	1.68	0.73
1:AA:1220:G:H3'	18:AS:36:ARG:HH21	1.53	0.73
1:AA:1472:U:H2'	1:AA:1473:G:H8	1.51	0.73
4:AE:44:ARG:HA	4:AE:71:ILE:O	1.88	0.73
8:AI:46:VAL:HA	8:AI:49:GLN:HG3	1.70	0.73
9:AJ:10:LEU:HD11	9:AJ:25:ILE:HD12	1.68	0.73
23:BB:616:A:H3'	23:BB:617:G:H8	1.53	0.73
23:BB:2109:U:H2'	23:BB:2110:G:H5'	1.70	0.73
26:BD:114:LYS:NZ	26:BD:116:LYS:HZ2	1.83	0.73
1:CA:1323:G:H2'	1:CA:1324:A:H8	1.54	0.73
19:CT:38:ILE:HD11	19:CT:82:ILE:HG22	1.68	0.73
23:DB:1925:C:H2'	23:DB:1926:U:H5"	1.68	0.73
25:DC:156:SER:O	25:DC:194:VAL:HG11	1.89	0.73
28:DF:72:SER:HA	28:DF:80:GLN:H	1.53	0.73
23:DB:171:U:H2'	23:DB:172:A:C8	2.23	0.73
23:DB:2258:C:H5'	23:DB:2259:U:H5	1.54	0.73
23:DB:2333:A:H4'	23:DB:2334:U:H5"	1.69	0.73
28:DF:62:GLN:NE2	28:DF:90:LEU:HD13	2.03	0.73
38:DQ:65:ASN:HB2	38:DQ:75:TYR:HB2	1.70	0.73
43:DW:49:ASN:HB3	43:DW:81:ILE:HD11	1.69	0.73
43:DW:66:VAL:HA	43:DW:81:ILE:HG22	1.70	0.73
46:DZ:64:ILE:H	46:DZ:64:ILE:HD12	1.51	0.73
23:BB:532:A:H3'	38:BQ:27:ARG:HH12	1.53	0.73
23:BB:2241:A:H2'	23:BB:2242:G:C8	2.22	0.73
34:BM:34:LYS:HE2	34:BM:99:GLY:HA2	1.70	0.73
42:BU:81:ARG:HH21	42:BU:81:ARG:N	1.87	0.73
13:CN:52:ARG:HH11	13:CN:58:ARG:HH21	1.37	0.73
23:DB:580:U:H2'	23:DB:581:C:H6	1.54	0.73
25:DC:64:VAL:O	25:DC:65:ASP:HB3	1.86	0.73
30:DH:94:ILE:O	30:DH:122:LEU:HB2	1.88	0.73
13:AN:52:ARG:HH11	13:AN:58:ARG:HH21	1.36	0.73
21:AU:43:GLU:HG3	21:AU:44:ARG:HH21	1.54	0.73
23:BB:362:A:H3'	23:BB:363:G:H8	1.54	0.73
30:BH:81:ALA:HA	30:BH:146:VAL:HA	1.70	0.73
1:CA:842:U:H3'	1:CA:843:U:H4'	1.69	0.73
13:CN:50:LEU:H	13:CN:51:PRO:HD2	1.53	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:547:A:H2'	23:BB:548:G:H5'	1.71	0.73
24:BV:9:ARG:HH22	24:BV:12:GLN:HA	1.54	0.73
46:BZ:64:ILE:HD12	46:BZ:64:ILE:H	1.53	0.73
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.23	0.73
23:DB:38:A:O2'	27:DE:43:THR:HA	1.89	0.73
23:DB:1080:A:H2'	23:DB:1081:U:H6	1.52	0.73
25:DC:91:ALA:HB2	25:DC:105:ALA:HB2	1.71	0.73
32:DK:19:VAL:HG12	32:DK:41:ILE:HG12	1.70	0.73
38:DQ:43:GLN:NE2	39:DR:77:PHE:HB3	2.03	0.73
40:DS:70:LYS:HD3	40:DS:110:ARG:HA	1.69	0.73
12:AM:92:ARG:HH12	18:AS:79:TYR:HD2	1.37	0.73
14:AO:7:THR:O	14:AO:10:ILE:HG22	1.88	0.73
23:BB:125:A:H3'	23:BB:126:A:H5"	1.71	0.73
23:BB:2292:U:H2'	23:BB:2293:G:H8	1.52	0.73
28:BF:72:SER:HA	28:BF:80:GLN:H	1.52	0.73
34:BM:40:ARG:HB2	34:BM:93:VAL:HG22	1.70	0.73
1:CA:957:U:H4'	18:CS:78:THR:HB	1.70	0.73
1:CA:1026:G:H2'	1:CA:1027:C:H6	1.54	0.73
20:CB:19:THR:HA	20:CB:37:VAL:HA	1.70	0.73
20:CB:61:SER:HB2	20:CB:62:ARG:NH1	2.03	0.73
23:DB:580:U:H2'	23:DB:581:C:C6	2.24	0.73
23:DB:836:G:H2'	23:DB:837:C:C6	2.23	0.73
23:DB:2264:C:H41	43:DW:11:ASN:HD21	1.36	0.73
28:DF:8:LYS:HA	28:DF:12:VAL:HG21	1.71	0.73
29:DG:37:ASN:HD22	29:DG:40:VAL:HB	1.53	0.73
44:DX:3:ALA:HA	44:DX:6:LEU:HD23	1.71	0.73
19:AT:47:GLN:HG2	19:AT:82:ILE:HD12	1.70	0.73
24:BV:79:ARG:HA	24:BV:86:LEU:HA	1.69	0.73
26:BD:24:VAL:HG21	26:BD:188:LEU:HB3	1.70	0.73
32:BK:15:GLY:HA3	32:BK:52:VAL:HG23	1.70	0.73
35:BN:72:ASP:HB3	35:BN:75:ILE:HG12	1.69	0.73
38:BQ:27:ARG:HG2	38:BQ:37:ALA:HB2	1.71	0.73
40:BS:15:GLN:HA	40:BS:18:ARG:HG2	1.71	0.73
43:BW:23:LYS:HD2	43:BW:24:ARG:HB3	1.69	0.73
45:BY:6:ILE:HA	45:BY:56:VAL:HG22	1.71	0.73
12:CM:19:THR:HA	12:CM:24:VAL:HG23	1.69	0.73
14:CO:7:THR:O	14:CO:10:ILE:HG22	1.88	0.73
23:DB:1098:A:H2'	52:DI:4:VAL:N	2.02	0.73
28:DF:126:ASN:HB3	28:DF:156:THR:HA	1.70	0.73
29:DG:157:LYS:HB3	29:DG:159:LYS:HG3	1.71	0.73
38:DQ:65:ASN:HD21	38:DQ:69:ARG:HH11	1.35	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:84:U:O2	1:AA:84:U:H2'	1.88	0.73
21:AU:36:PHE:CB	21:AU:40:PRO:HD3	2.19	0.73
28:BF:62:GLN:NE2	28:BF:90:LEU:HD13	2.04	0.73
29:BG:148:ARG:HD3	29:BG:152:ARG:CZ	2.19	0.73
40:BS:28:LYS:HD2	40:BS:29:VAL:H	1.53	0.73
40:BS:30:SER:HA	40:BS:33:LEU:HD12	1.71	0.73
1:CA:17:U:H2'	1:CA:18:C:C6	2.24	0.73
1:CA:1320:C:H41	18:CS:36:ARG:HG2	1.54	0.73
9:CJ:12:ALA:HB2	9:CJ:96:VAL:HG12	1.69	0.73
12:CM:89:ARG:HH22	12:CM:94:LEU:HD12	1.54	0.73
23:DB:30:G:H2'	23:DB:31:C:C6	2.24	0.73
23:DB:2243:U:H2'	23:DB:2244:U:C6	2.24	0.73
30:DH:67:ALA:O	30:DH:70:GLU:HG3	1.89	0.73
31:DJ:124:VAL:HG23	31:DJ:125:TYR:H	1.54	0.73
34:DM:40:ARG:HB2	34:DM:93:VAL:HG22	1.69	0.73
35:DN:116:VAL:O	35:DN:117:ASP:HB3	1.87	0.73
52:DI:55:PRO:HD3	52:DI:74:PRO:HD3	1.69	0.73
6:AG:3:ARG:HD3	6:AG:3:ARG:N	2.03	0.72
8:AI:126:PHE:HE1	8:AI:129:ARG:HD3	1.54	0.72
28:BF:128:SER:HB3	28:BF:154:THR:HG23	1.70	0.72
32:BK:99:ILE:HB	32:BK:118:LEU:HD22	1.71	0.72
37:BP:1:SER:HA	37:BP:4:ILE:HB	1.69	0.72
48:B1:49:LYS:HG2	48:B1:50:GLU:H	1.53	0.72
4:CE:104:ILE:HG23	4:CE:111:ARG:HH12	1.53	0.72
6:CG:110:ARG:HD2	6:CG:122:GLU:HB2	1.70	0.72
11:CL:37:TYR:HB2	11:CL:51:VAL:HB	1.71	0.72
23:DB:140:C:OP1	41:DT:2:ILE:HG23	1.88	0.72
25:DC:129:LEU:HD23	25:DC:130:PRO:HD2	1.71	0.72
40:DS:66:ILE:HD13	40:DS:66:ILE:H	1.54	0.72
6:AG:110:ARG:HD2	6:AG:122:GLU:HB2	1.69	0.72
20:AB:61:SER:HB2	20:AB:62:ARG:HH11	1.53	0.72
23:BB:2867:G:H2'	23:BB:2867:G:N3	2.04	0.72
1:CA:337:G:H2'	1:CA:338:A:C8	2.24	0.72
20:CB:15:PHE:HA	20:CB:42:LEU:HD21	1.71	0.72
36:DO:49:VAL:HG11	36:DO:82:ALA:HA	1.71	0.72
41:DT:82:LYS:HD3	41:DT:84:TYR:HE1	1.52	0.72
5:AF:64:VAL:HG12	5:AF:65:GLU:H	1.52	0.72
7:AH:74:ILE:HG13	7:AH:128:VAL:HG22	1.72	0.72
21:AU:16:ARG:HE	21:AU:16:ARG:CA	2.01	0.72
23:BB:812:C:H4'	38:BQ:12:ARG:HH22	1.54	0.72
27:BE:108:ILE:HG13	33:BL:2:ARG:NH2	2.04	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BM:66:ARG:CZ	34:BM:101:VAL:HG11	2.18	0.72
41:BT:73:ARG:HH21	41:BT:73:ARG:HA	1.54	0.72
43:BW:51:GLY:CA	43:BW:59:PHE:HB2	2.20	0.72
1:CA:859:G:H2'	1:CA:860:A:C8	2.23	0.72
9:CJ:8:ILE:HG13	9:CJ:100:ILE:HG22	1.71	0.72
13:CN:63:CYS:HB2	13:CN:79:SER:HB3	1.71	0.72
24:DV:44:HIS:CE1	24:DV:86:LEU:H	2.07	0.72
24:DV:62:THR:HA	24:DV:71:LYS:HA	1.71	0.72
25:DC:196:ASN:ND2	25:DC:199:HIS:HB2	2.04	0.72
29:DG:166:GLU:HG2	29:DG:168:VAL:HG23	1.71	0.72
34:DM:34:LYS:HE2	34:DM:99:GLY:HA2	1.70	0.72
35:DN:17:ARG:HA	35:DN:20:MET:HB3	1.70	0.72
38:DQ:68:ALA:HB1	38:DQ:73:ILE:HG23	1.71	0.72
1:AA:1118:U:H2'	1:AA:1119:C:C6	2.24	0.72
1:AA:1320:C:H41	18:AS:36:ARG:HG2	1.53	0.72
2:AC:149:LYS:HB3	2:AC:200:TRP:HB2	1.71	0.72
2:AC:156:LEU:HD12	2:AC:163:ARG:HD2	1.70	0.72
12:AM:67:ASP:O	12:AM:71:GLU:HB2	1.89	0.72
13:AN:30:ILE:HB	13:AN:44:VAL:HG11	1.71	0.72
18:AS:30:LEU:HB2	18:AS:48:ILE:HG23	1.72	0.72
23:BB:329:G:H22	42:BU:16:LYS:HE3	1.54	0.72
27:BE:58:LYS:HE2	27:BE:60:TRP:HD1	1.53	0.72
30:BH:73:ASN:HB3	30:BH:141:LYS:NZ	2.04	0.72
32:BK:35:VAL:HG23	32:BK:36:GLY:N	2.03	0.72
1:CA:1472:U:H2'	1:CA:1473:G:C8	2.25	0.72
23:DB:992:C:H4'	39:DR:74:ILE:HD13	1.71	0.72
23:DB:2386:A:C2	43:DW:38:ARG:HB3	2.24	0.72
24:DV:62:THR:HG22	24:DV:71:LYS:HG2	1.71	0.72
37:DP:91:VAL:HG23	37:DP:92:ARG:H	1.53	0.72
38:DQ:107:ALA:HB1	39:DR:48:LYS:HE2	1.71	0.72
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.24	0.72
20:AB:120:SER:HA	20:AB:125:PHE:CG	2.25	0.72
23:BB:191:A:H2'	23:BB:192:C:C6	2.24	0.72
23:BB:856:G:C1'	43:BW:23:LYS:HB3	2.20	0.72
23:BB:1105:U:H2'	23:BB:1106:G:C8	2.24	0.72
23:BB:1301:A:O2'	23:BB:1302:A:H3'	1.89	0.72
20:CB:66:ILE:HD13	20:CB:159:ALA:HB3	1.71	0.72
21:CU:36:PHE:CB	21:CU:40:PRO:HD3	2.19	0.72
23:DB:616:A:H3'	23:DB:617:G:H8	1.54	0.72
23:DB:855:G:N2	43:DW:23:LYS:HG2	2.05	0.72
23:DB:878:A:N3	23:DB:878:A:H2'	2.04	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1168:G:H2'	23:DB:1169:A:H8	1.53	0.72
23:DB:2292:U:H2'	23:DB:2293:G:H8	1.52	0.72
26:DD:69:ALA:HA	26:DD:73:VAL:HB	1.72	0.72
28:DF:110:ILE:HA	28:DF:111:ARG:CZ	2.18	0.72
30:DH:63:ALA:HA	30:DH:66:ASN:HD22	1.52	0.72
42:DU:24:VAL:HA	42:DU:35:VAL:HA	1.72	0.72
1:AA:946:A:H2'	1:AA:947:G:C8	2.24	0.72
1:AA:1292:G:H2'	1:AA:1293:C:C6	2.25	0.72
9:AJ:8:ILE:HG13	9:AJ:100:ILE:HG22	1.72	0.72
10:AK:20:ALA:HB2	10:AK:81:LEU:HD12	1.71	0.72
12:AM:10:ASP:HA	12:AM:44:ILE:HD13	1.70	0.72
23:BB:743:A:O2'	23:BB:744:U:H5'	1.89	0.72
23:BB:2353:G:H1'	43:BW:30:VAL:CG1	2.18	0.72
26:BD:69:ALA:HA	26:BD:73:VAL:HB	1.71	0.72
32:BK:17:ARG:HB3	32:BK:45:GLU:HG3	1.71	0.72
1:CA:193:C:H2'	1:CA:194:C:C6	2.25	0.72
1:CA:1348:U:H4'	8:CI:121:ARG:HG3	1.70	0.72
2:CC:149:LYS:HB3	2:CC:200:TRP:HB2	1.72	0.72
20:CB:99:MET:HA	20:CB:106:VAL:HG21	1.72	0.72
23:DB:28:A:H61	23:DB:512:G:H1'	1.55	0.72
32:DK:15:GLY:HA3	32:DK:52:VAL:HG23	1.70	0.72
37:DP:85:VAL:HG21	37:DP:88:ARG:HH11	1.52	0.72
52:DI:20:SER:HB3	52:DI:21:PRO:HD3	1.69	0.72
23:BB:2591:C:H2'	23:BB:2592:G:C8	2.25	0.72
25:BC:129:LEU:HD23	25:BC:130:PRO:HD2	1.71	0.72
48:B1:46:VAL:HG22	48:B1:47:ILE:H	1.52	0.72
1:CA:279:A:H5"	1:CA:280:C:H3'	1.71	0.72
23:DB:1412:U:H2'	23:DB:1413:A:H8	1.55	0.72
30:DH:83:LYS:HG3	30:DH:149:GLU:HG2	1.69	0.72
32:DK:99:ILE:HB	32:DK:118:LEU:HD22	1.71	0.72
2:AC:16:PRO:HG2	2:AC:53:ARG:HH12	1.54	0.72
23:BB:2794:C:H2'	23:BB:2795:C:C6	2.24	0.72
25:BC:81:GLU:HB2	25:BC:90:ILE:HG22	1.70	0.72
1:CA:1004:A:H3'	1:CA:1024:G:H22	1.53	0.72
20:CB:59:ILE:H	20:CB:59:ILE:HD12	1.54	0.72
23:DB:1060:U:C4	23:DB:1088:A:N6	2.58	0.72
23:DB:2241:A:H2'	23:DB:2242:G:C8	2.25	0.72
23:DB:2800:A:N3	23:DB:2801:G:H1'	2.05	0.72
23:DB:2834:G:H1'	23:DB:2883:A:N6	2.04	0.72
30:DH:122:LEU:HD11	30:DH:130:VAL:HG21	1.70	0.72
40:DS:30:SER:HA	40:DS:33:LEU:HD12	1.72	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:25:GLY:HA2	8:AI:60:LEU:O	1.90	0.72
23:BB:28:A:H61	23:BB:512:G:H1'	1.54	0.72
23:BB:141:G:O6	41:BT:2:ILE:HD12	1.90	0.72
23:BB:2331:G:H21	23:BB:2336:A:H8	1.37	0.72
23:BB:2886:A:H3'	23:BB:2887:A:H8	1.55	0.72
34:BM:19:GLY:HA2	34:BM:98:PRO:HD2	1.72	0.72
1:CA:1133:G:H2'	1:CA:1134:G:O4'	1.89	0.72
23:DB:191:A:H2'	23:DB:192:C:C6	2.24	0.72
23:DB:1099:G:O4'	52:DI:3:LYS:C	2.27	0.72
23:DB:1274:A:N3	23:DB:1297:C:H1'	2.05	0.72
25:DC:129:LEU:HD22	25:DC:134:ILE:HG22	1.70	0.72
28:DF:126:ASN:HA	28:DF:157:THR:HG22	1.72	0.72
38:DQ:91:ARG:HH12	39:DR:10:LYS:HB3	1.55	0.72
7:AH:17:GLN:HG2	7:AH:62:LEU:HD23	1.70	0.72
23:BB:571:U:H3'	39:BR:80:ARG:NH1	2.05	0.72
23:BB:2091:C:H1'	46:BZ:34:HIS:CD2	2.25	0.72
24:BV:21:ARG:HE	24:BV:87:GLN:HB3	1.55	0.72
43:BW:43:LYS:HD2	43:BW:79:ILE:HD11	1.71	0.72
43:BW:49:ASN:HB3	43:BW:81:ILE:HD11	1.72	0.72
1:CA:462:G:H5'	1:CA:463:U:OP2	1.90	0.72
1:CA:1292:G:H2'	1:CA:1293:C:C6	2.25	0.72
2:CC:104:GLU:HG2	2:CC:105:VAL:H	1.53	0.72
4:CE:76:ASN:HB2	4:CE:81:GLN:NE2	2.05	0.72
6:AG:87:PRO:HG2	6:AG:151:ALA:HB2	1.69	0.71
15:AP:28:ARG:CD	15:AP:29:ASN:H	2.03	0.71
20:AB:66:ILE:HD13	20:AB:159:ALA:HB3	1.72	0.71
23:BB:1868:C:H2'	23:BB:1869:G:O4'	1.89	0.71
24:BV:63:ILE:HB	24:BV:70:ILE:HD11	1.72	0.71
28:BF:8:LYS:HA	28:BF:12:VAL:HG21	1.72	0.71
32:BK:19:VAL:HG12	32:BK:41:ILE:HG12	1.73	0.71
48:B1:32:LYS:HA	48:B1:51:ALA:O	1.90	0.71
52:BI:106:GLN:O	52:BI:110:GLN:HG3	1.90	0.71
8:CI:33:SER:HB3	8:CI:36:GLN:HB2	1.72	0.71
23:DB:1464:G:H2'	23:DB:1465:G:H8	1.53	0.71
35:DN:83:LEU:HA	35:DN:86:ARG:HG3	1.70	0.71
41:DT:73:ARG:HH21	41:DT:73:ARG:HA	1.55	0.71
38:BQ:68:ALA:HB1	38:BQ:73:ILE:HG23	1.71	0.71
38:BQ:104:ALA:HA	39:BR:46:GLU:CD	2.10	0.71
31:DJ:112:GLY:N	31:DJ:113:PRO:HD2	2.04	0.71
34:DM:19:GLY:HA2	34:DM:98:PRO:HD2	1.73	0.71
1:AA:337:G:H2'	1:AA:338:A:C8	2.26	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:408:A:OP1	3:AD:111:ALA:HB3	1.90	0.71
1:AA:764:C:H2'	1:AA:765:G:H5'	1.71	0.71
13:AN:68:ARG:HH12	13:AN:70:HIS:HB2	1.53	0.71
23:BB:62:U:H3'	23:BB:63:A:H8	1.54	0.71
23:BB:181:A:H2'	23:BB:182:A:C8	2.24	0.71
23:BB:1056:G:H1'	23:BB:1103:A:N6	2.06	0.71
23:BB:1354:A:H2'	23:BB:1355:G:O4'	1.90	0.71
23:BB:2146:C:H1'	23:BB:2147:A:H5'	1.71	0.71
23:BB:2153:C:H2'	23:BB:2154:A:H8	1.53	0.71
23:BB:2749:A:H3'	23:BB:2750:A:H5"	1.71	0.71
24:BV:62:THR:HA	24:BV:71:LYS:HA	1.72	0.71
29:BG:166:GLU:HG2	29:BG:168:VAL:HG23	1.71	0.71
37:BP:88:ARG:HB2	37:BP:112:ARG:NH1	2.03	0.71
41:BT:32:LEU:H	41:BT:83:ALA:HB3	1.55	0.71
52:BI:20:SER:HB3	52:BI:21:PRO:HD3	1.71	0.71
1:CA:408:A:OP1	3:CD:111:ALA:HB3	1.90	0.71
1:CA:882:C:O2'	1:CA:883:C:H5'	1.91	0.71
1:CA:1142:G:H2'	1:CA:1143:G:O4'	1.90	0.71
23:DB:1080:A:O2'	52:DI:126:ARG:HD2	1.90	0.71
23:DB:2591:C:H2'	23:DB:2592:G:C8	2.25	0.71
23:DB:2867:G:H2'	23:DB:2867:G:N3	2.04	0.71
25:DC:43:ASN:ND2	25:DC:44:ASN:H	1.88	0.71
40:DS:24:ILE:HG22	40:DS:71:VAL:HG11	1.72	0.71
2:AC:63:ILE:HD12	2:AC:98:ALA:HB2	1.71	0.71
13:AN:50:LEU:H	13:AN:51:PRO:HD2	1.53	0.71
21:AU:9:GLU:HG2	2:CC:108:PRO:HG3	1.73	0.71
23:BB:580:U:H2'	23:BB:581:C:C6	2.24	0.71
23:BB:742:A:H2'	23:BB:743:A:C8	2.24	0.71
23:BB:836:G:H2'	23:BB:837:C:C6	2.25	0.71
23:BB:2880:C:O4'	35:BN:91:ALA:HB3	1.91	0.71
1:CA:797:C:OP1	10:CK:125:LYS:HE3	1.91	0.71
6:CG:115:MET:HA	6:CG:118:ARG:HD2	1.72	0.71
22:DA:32:U:H4'	22:DA:52:A:H62	1.55	0.71
22:DA:98:G:N1	24:DV:14:LYS:HB2	2.04	0.71
31:DJ:17:VAL:HG22	31:DJ:55:ILE:HD11	1.69	0.71
41:DT:76:ARG:NH2	41:DT:77:ARG:HB2	2.05	0.71
3:AD:196:GLU:O	3:AD:199:ILE:HG13	1.90	0.71
8:AI:26:LYS:H	8:AI:61:ASP:CB	2.03	0.71
16:AQ:20:ILE:HD13	16:AQ:47:ASP:HB3	1.73	0.71
19:AT:43:LYS:HE2	19:AT:44:ALA:H	1.55	0.71
23:BB:918:A:H2'	23:BB:919:U:H5'	1.70	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:202:ARG:HH11	25:BC:213:ARG:HE	1.36	0.71
28:BF:126:ASN:HA	28:BF:157:THR:HG22	1.73	0.71
36:BO:51:ALA:HB3	36:BO:78:VAL:HG22	1.72	0.71
1:CA:764:C:H2'	1:CA:765:G:H5'	1.72	0.71
1:CA:1472:U:H2'	1:CA:1473:G:H8	1.53	0.71
23:DB:1440:U:H2'	23:DB:1441:G:H8	1.55	0.71
27:DE:58:LYS:HE2	27:DE:60:TRP:CD1	2.26	0.71
42:DU:26:ASN:HD21	42:DU:34:ILE:HD12	1.54	0.71
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.24	0.71
20:AB:205:ALA:HB3	20:AB:208:ALA:HB3	1.72	0.71
23:BB:27:G:N2	23:BB:512:G:H2'	2.05	0.71
23:BB:590:A:H2'	23:BB:591:U:C6	2.26	0.71
23:BB:1060:U:C4	23:BB:1088:A:N6	2.58	0.71
29:BG:157:LYS:HB3	29:BG:159:LYS:HG3	1.72	0.71
52:BI:122:GLU:O	52:BI:126:ARG:HG3	1.91	0.71
23:DB:329:G:H22	42:DU:16:LYS:HE3	1.53	0.71
23:DB:1447:C:H2'	23:DB:1448:G:H8	1.56	0.71
38:DQ:63:ARG:HH22	38:DQ:96:ASP:CA	2.02	0.71
1:AA:559:A:H4'	1:AA:560:A:H3'	1.73	0.71
1:AA:812:G:O2'	1:AA:813:U:H6	1.72	0.71
1:AA:1412:C:H2'	1:AA:1413:A:H8	1.55	0.71
2:AC:148:ILE:HA	2:AC:200:TRP:O	1.90	0.71
4:AE:36:THR:HG21	4:AE:63:MET:HG2	1.72	0.71
9:AJ:12:ALA:HB2	9:AJ:96:VAL:HG12	1.70	0.71
20:AB:19:THR:HA	20:AB:37:VAL:HA	1.72	0.71
23:BB:773:U:H5'	23:BB:774:G:OP2	1.91	0.71
28:BF:34:THR:HG22	28:BF:89:THR:HG22	1.72	0.71
28:BF:34:THR:HA	28:BF:89:THR:HA	1.72	0.71
31:BJ:77:HIS:CD2	31:BJ:84:ILE:H	2.08	0.71
35:BN:83:LEU:HA	35:BN:86:ARG:HG3	1.71	0.71
9:CJ:57:VAL:HG22	9:CJ:58:ASN:H	1.56	0.71
13:CN:30:ILE:HB	13:CN:44:VAL:HG11	1.71	0.71
23:DB:200:U:H5"	46:DZ:22:LEU:O	1.90	0.71
23:DB:919:U:H2'	23:DB:920:A:C8	2.25	0.71
23:DB:1354:A:H2'	23:DB:1355:G:O4'	1.91	0.71
23:DB:2071:A:H2'	23:DB:2072:C:C6	2.25	0.71
24:DV:51:GLN:NE2	24:DV:79:ARG:HH22	1.89	0.71
25:DC:81:GLU:HB2	25:DC:90:ILE:HG22	1.71	0.71
1:AA:677:U:H2'	1:AA:678:U:C6	2.26	0.71
1:AA:957:U:H4'	18:AS:78:THR:HB	1.71	0.71
1:AA:1477:U:H2'	1:AA:1478:U:C6	2.26	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AG:14:ASP:HB3	6:AG:19:SER:H	1.54	0.71
29:BG:71:LEU:HA	29:BG:74:MET:SD	2.31	0.71
46:BZ:59:ILE:HG22	46:BZ:64:ILE:HA	1.72	0.71
1:CA:764:C:C2'	1:CA:765:G:H5'	2.21	0.71
10:CK:91:GLY:HA2	10:CK:94:SER:HB3	1.72	0.71
21:CU:43:GLU:HG3	21:CU:44:ARG:HH21	1.56	0.71
23:DB:742:A:H2'	23:DB:743:A:H8	1.54	0.71
31:DJ:93:ILE:O	31:DJ:97:PRO:HG3	1.91	0.71
36:DO:11:ALA:CB	36:DO:96:GLY:H	2.03	0.71
20:AB:61:SER:HB2	20:AB:62:ARG:NH1	2.05	0.71
21:AU:42:THR:O	21:AU:46:ARG:HG3	1.91	0.71
23:BB:224:U:O4	23:BB:420:C:H5'	1.91	0.71
29:BG:43:LYS:HB2	29:BG:50:THR:HB	1.71	0.71
1:CA:1118:U:H2'	1:CA:1119:C:C6	2.25	0.71
34:DM:66:ARG:CZ	34:DM:101:VAL:HG11	2.20	0.71
43:DW:23:LYS:HD2	43:DW:24:ARG:HB3	1.72	0.71
46:DZ:59:ILE:HG22	46:DZ:64:ILE:HA	1.73	0.71
1:AA:1072:G:N2	20:AB:105:THR:HG21	2.06	0.71
23:BB:2071:A:H2'	23:BB:2072:C:C6	2.25	0.71
23:BB:2872:A:O2'	23:BB:2873:A:H5"	1.91	0.71
28:BF:126:ASN:HA	28:BF:157:THR:H	1.55	0.71
31:BJ:93:ILE:O	31:BJ:97:PRO:HG3	1.90	0.71
23:DB:62:U:H3'	23:DB:63:A:H8	1.55	0.71
23:DB:362:A:H3'	23:DB:363:G:H8	1.56	0.71
23:DB:1857:G:H1'	23:DB:1885:A:H61	1.56	0.71
23:DB:1949:G:H2'	23:DB:1950:G:C8	2.25	0.71
23:DB:2328:A:H2'	23:DB:2329:U:C6	2.25	0.71
20:AB:53:LEU:HA	20:AB:56:LEU:HD13	1.73	0.70
23:BB:30:G:H2'	23:BB:31:C:C6	2.25	0.70
23:BB:171:U:H2'	23:BB:172:A:C8	2.26	0.70
23:BB:1001:A:H2'	23:BB:1002:G:O4'	1.91	0.70
44:BX:3:ALA:HA	44:BX:6:LEU:HD23	1.73	0.70
1:CA:522:C:H41	11:CL:49:ARG:HH22	1.39	0.70
1:CA:617:G:H4'	15:CP:46:LYS:HE2	1.73	0.70
1:CA:695:A:H61	1:CA:797:C:H1'	1.56	0.70
1:CA:1132:C:H2'	1:CA:1133:G:H8	1.55	0.70
8:CI:93:LEU:HD13	8:CI:97:LEU:HD11	1.71	0.70
23:DB:1001:A:H2'	23:DB:1002:G:O4'	1.91	0.70
23:DB:1287:A:OP1	35:DN:104:ALA:HB3	1.91	0.70
23:DB:2438:U:O2'	23:DB:2439:A:H5"	1.91	0.70
30:DH:27:ARG:NH1	46:DZ:60:ASP:HA	2.06	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DT:15:HIS:H	41:DT:32:LEU:HA	1.55	0.70
1:AA:108:G:C6	19:AT:9:ARG:HG2	2.26	0.70
1:AA:437:U:H2'	1:AA:438:U:O4'	1.90	0.70
1:AA:764:C:C2'	1:AA:765:G:H5'	2.22	0.70
1:AA:1142:G:H2'	1:AA:1143:G:O4'	1.91	0.70
2:AC:112:ALA:HB1	2:AC:184:ASN:HB2	1.72	0.70
8:AI:93:LEU:HD13	8:AI:97:LEU:HD11	1.73	0.70
23:BB:1437:C:H2'	23:BB:1438:U:H6	1.54	0.70
23:BB:2297:A:N6	23:BB:2319:G:H1'	2.06	0.70
31:BJ:29:ALA:HA	31:BJ:32:LEU:HB2	1.73	0.70
12:CM:86:ARG:HG3	12:CM:96:VAL:HG11	1.73	0.70
12:CM:90:HIS:HA	12:CM:108:ARG:NH2	2.06	0.70
15:CP:57:ILE:O	15:CP:61:VAL:HG23	1.90	0.70
20:CB:137:THR:O	20:CB:141:GLU:HG3	1.92	0.70
23:DB:27:G:N2	23:DB:512:G:H2'	2.06	0.70
23:DB:96:C:H4'	44:DX:41:HIS:ND1	2.06	0.70
23:DB:849:A:H2'	23:DB:850:U:C6	2.26	0.70
28:DF:126:ASN:HA	28:DF:157:THR:H	1.56	0.70
28:DF:128:SER:HB3	28:DF:154:THR:HG23	1.73	0.70
41:DT:11:LEU:HD21	41:DT:46:ALA:HB1	1.71	0.70
1:AA:90:C:H2'	1:AA:91:U:C5	2.27	0.70
1:AA:475:C:H2'	1:AA:476:U:C6	2.25	0.70
7:AH:44:PHE:HA	7:AH:70:VAL:HG11	1.72	0.70
23:BB:287:G:H2'	23:BB:288:U:C6	2.25	0.70
36:BO:24:THR:HG22	36:BO:42:PRO:HD3	1.72	0.70
48:B1:9:LYS:HD3	48:B1:9:LYS:H	1.57	0.70
1:CA:235:C:H2'	1:CA:236:A:C8	2.27	0.70
2:CC:112:ALA:HB1	2:CC:184:ASN:HB2	1.73	0.70
8:CI:64:ILE:HD12	8:CI:64:ILE:H	1.57	0.70
13:CN:30:ILE:HG22	13:CN:41:TRP:HB2	1.74	0.70
20:CB:53:LEU:HA	20:CB:56:LEU:HD13	1.72	0.70
23:DB:2720:U:H5"	37:DP:52:ARG:HH21	1.55	0.70
25:DC:32:LEU:O	25:DC:63:ILE:HG12	1.90	0.70
25:DC:202:ARG:HH11	25:DC:213:ARG:HE	1.38	0.70
18:AS:62:THR:HB	18:AS:64:GLU:OE1	1.92	0.70
20:AB:99:MET:HA	20:AB:106:VAL:HG21	1.72	0.70
23:BB:2021:C:OP1	47:B0:8:THR:HG21	1.91	0.70
25:BC:43:ASN:ND2	25:BC:44:ASN:H	1.89	0.70
30:BH:73:ASN:HD22	30:BH:74:ALA:N	1.87	0.70
34:BM:59:ARG:NH1	34:BM:60:GLN:HB3	2.07	0.70
37:BP:45:VAL:H	37:BP:60:VAL:HB	1.56	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:63:ILE:HD12	2:CC:98:ALA:HB2	1.72	0.70
3:CD:47:LEU:HB2	3:CD:51:GLY:HA3	1.72	0.70
3:CD:197:HIS:O	3:CD:200:VAL:HG22	1.91	0.70
10:CK:33:ILE:HG13	10:CK:73:VAL:HG21	1.72	0.70
13:CN:86:ALA:HB1	13:CN:91:GLU:HB2	1.73	0.70
26:DD:124:ARG:HA	26:DD:165:MET:HE3	1.73	0.70
29:DG:84:LYS:HB3	29:DG:132:LEU:O	1.91	0.70
4:AE:76:ASN:HB2	4:AE:81:GLN:NE2	2.07	0.70
22:BA:32:U:H4'	22:BA:52:A:H62	1.55	0.70
23:BB:1412:U:H2'	23:BB:1413:A:H8	1.56	0.70
23:BB:1464:G:H2'	23:BB:1465:G:H8	1.55	0.70
32:BK:102:PRO:HA	32:BK:120:PRO:HB3	1.74	0.70
23:DB:2872:A:O2'	23:DB:2873:A:H5"	1.92	0.70
25:DC:35:LYS:HG2	25:DC:36:ASN:H	1.54	0.70
29:DG:71:LEU:HA	29:DG:74:MET:SD	2.31	0.70
40:DS:26:GLY:N	40:DS:71:VAL:HG13	2.06	0.70
47:D0:32:THR:OG1	47:D0:50:GLY:HA2	1.90	0.70
48:D1:46:VAL:HG22	48:D1:47:ILE:H	1.53	0.70
3:AD:58:GLN:O	3:AD:62:ARG:HG2	1.92	0.70
16:AQ:30:HIS:CE1	16:AQ:32:ILE:HG22	2.27	0.70
16:AQ:74:LEU:HD22	16:AQ:75:VAL:N	2.06	0.70
23:BB:1454:C:H5'	35:BN:63:ARG:HE	1.55	0.70
23:BB:2557:G:H2'	23:BB:2558:C:C6	2.27	0.70
30:BH:90:LEU:HD11	30:BH:146:VAL:HG11	1.71	0.70
44:BX:8:GLU:O	44:BX:12:GLU:HB2	1.92	0.70
2:CC:156:LEU:HD12	2:CC:163:ARG:HD2	1.72	0.70
21:CU:42:THR:O	21:CU:46:ARG:HG3	1.92	0.70
23:DB:215:G:H4'	23:DB:216:A:H4'	1.74	0.70
23:DB:2109:U:H2'	23:DB:2110:G:H5"	1.73	0.70
23:DB:2794:C:H2'	23:DB:2795:C:C6	2.26	0.70
8:AI:64:ILE:H	8:AI:64:ILE:HD12	1.57	0.70
16:AQ:59:GLU:O	16:AQ:75:VAL:HG22	1.91	0.70
20:AB:76:SER:HA	20:AB:92:ASN:HB2	1.73	0.70
23:BB:1447:C:H2'	23:BB:1448:G:H8	1.56	0.70
23:BB:1461:C:H2'	23:BB:1462:C:H6	1.56	0.70
23:BB:2512:C:H2'	23:BB:2513:A:O4'	1.91	0.70
24:BV:62:THR:HG22	24:BV:71:LYS:HG2	1.73	0.70
41:BT:12:ARG:HA	44:BX:29:ARG:HH22	1.57	0.70
1:CA:522:C:H41	11:CL:49:ARG:NH2	1.90	0.70
1:CA:974:A:H4'	1:CA:975:A:H5'	1.74	0.70
23:DB:871:U:H2'	23:DB:872:U:H6	1.56	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2645:G:H3'	23:DB:2646:C:H5'	1.74	0.70
24:DV:21:ARG:HE	24:DV:87:GLN:HB3	1.56	0.70
27:DE:192:ALA:HA	27:DE:195:GLN:HE21	1.56	0.70
1:AA:964:A:H2'	1:AA:965:U:H5"	1.72	0.70
23:BB:1056:G:H1'	23:BB:1103:A:H62	1.56	0.70
23:BB:1287:A:H3'	23:BB:1288:G:N2	2.07	0.70
23:BB:2645:G:H3'	23:BB:2646:C:H5'	1.74	0.70
30:BH:132:PHE:H	30:BH:142:VAL:HG23	1.56	0.70
20:CB:60:ALA:HA	20:CB:64:GLY:HA3	1.73	0.70
20:CB:76:SER:HA	20:CB:92:ASN:HB2	1.74	0.70
23:DB:591:U:H1'	50:D3:1:PRO:N	2.06	0.70
23:DB:1592:C:H2'	23:DB:1593:A:H8	1.57	0.70
23:DB:2366:A:H4'	43:DW:61:LYS:HE2	1.73	0.70
27:DE:117:ARG:HH12	33:DL:2:ARG:HB2	1.57	0.70
28:DF:34:THR:HA	28:DF:89:THR:HA	1.74	0.70
41:DT:32:LEU:H	41:DT:83:ALA:HB3	1.56	0.70
1:AA:974:A:H4'	1:AA:975:A:H5'	1.74	0.70
12:AM:86:ARG:HG3	12:AM:96:VAL:HG11	1.74	0.70
16:AQ:45:VAL:HG12	16:AQ:46:HIS:H	1.55	0.70
20:AB:15:PHE:HA	20:AB:42:LEU:HD21	1.72	0.70
23:BB:643:A:N3	48:B1:43:ARG:HD2	2.07	0.70
23:BB:1440:U:H2'	23:BB:1441:G:H8	1.57	0.70
23:BB:2060:A:H2'	27:BE:63:LYS:HE2	1.72	0.70
23:BB:2800:A:N3	23:BB:2801:G:H1'	2.07	0.70
31:BJ:18:VAL:HG22	31:BJ:19:ASP:H	1.57	0.70
33:BL:112:LEU:HG	33:BL:113:ALA:H	1.56	0.70
3:CD:137:SER:HB2	3:CD:138:PRO:HD2	1.73	0.70
23:DB:27:G:H1'	23:DB:513:A:N6	2.07	0.70
23:DB:458:G:N2	23:DB:469:G:H2'	2.07	0.70
23:DB:807:U:H2'	23:DB:808:G:H8	1.56	0.70
23:DB:1535:A:O2'	23:DB:1536:C:H5'	1.92	0.70
42:DU:38:ILE:HG23	42:DU:39:ASN:N	2.05	0.70
44:DX:23:ARG:HD2	44:DX:27:ASN:HD21	1.57	0.70
15:AP:52:LEU:HD21	15:AP:75:ILE:HG12	1.71	0.70
23:BB:1178:C:H2'	23:BB:1179:G:H8	1.55	0.70
37:BP:85:VAL:HG21	37:BP:88:ARG:HH11	1.55	0.70
3:CD:196:GLU:O	3:CD:199:ILE:HG13	1.91	0.70
5:CF:26:THR:HA	5:CF:29:ILE:HD12	1.73	0.70
7:CH:44:PHE:HA	7:CH:70:VAL:HG11	1.72	0.70
11:CL:122:LYS:HD2	11:CL:123:ALA:N	2.06	0.70
16:CQ:45:VAL:HG12	16:CQ:46:HIS:H	1.56	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:773:U:H5'	23:DB:774:G:OP2	1.92	0.70
30:DH:48:GLU:HB2	30:DH:51:ARG:NH2	2.06	0.70
31:DJ:77:HIS:CD2	31:DJ:84:ILE:H	2.10	0.70
31:DJ:117:ALA:HA	31:DJ:120:ARG:HD2	1.74	0.70
39:DR:14:VAL:HG22	39:DR:15:SER:N	2.07	0.70
39:DR:16:GLU:H	39:DR:101:ILE:HG13	1.57	0.70
1:AA:920:U:H2'	1:AA:921:U:C6	2.27	0.69
20:AB:60:ALA:HA	20:AB:64:GLY:HA3	1.74	0.69
23:BB:919:U:H2'	23:BB:920:A:C8	2.27	0.69
23:BB:2751:G:H2'	23:BB:2751:G:N3	2.07	0.69
28:BF:62:GLN:NE2	28:BF:90:LEU:HA	2.07	0.69
30:BH:68:ARG:NH1	30:BH:110:VAL:HG12	2.07	0.69
35:BN:17:ARG:HA	35:BN:20:MET:HB3	1.72	0.69
41:BT:15:HIS:H	41:BT:32:LEU:HA	1.57	0.69
6:CG:66:GLU:HA	6:CG:69:ARG:HD2	1.74	0.69
11:CL:51:VAL:HG12	11:CL:52:CYS:H	1.57	0.69
11:CL:66:ILE:HG21	11:CL:71:HIS:HB3	1.72	0.69
12:CM:92:ARG:HH12	18:CS:79:TYR:HD2	1.40	0.69
23:DB:1993:U:H4'	26:DD:133:THR:CG2	2.22	0.69
36:DO:24:THR:HG22	36:DO:42:PRO:HD3	1.73	0.69
1:AA:193:C:H2'	1:AA:194:C:C6	2.26	0.69
2:AC:171:ARG:HB2	2:AC:171:ARG:HH11	1.57	0.69
3:AD:29:THR:HB	3:AD:30:LYS:NZ	2.06	0.69
3:AD:153:ARG:HG3	3:AD:154:VAL:N	2.08	0.69
4:AE:32:PHE:O	4:AE:51:LYS:HB2	1.91	0.69
23:BB:215:G:H4'	23:BB:216:A:H4'	1.74	0.69
23:BB:580:U:H2'	23:BB:581:C:H6	1.57	0.69
23:BB:1274:A:N3	23:BB:1297:C:H1'	2.06	0.69
23:BB:2619:C:H5'	26:BD:157:LYS:HD3	1.72	0.69
42:BU:24:VAL:HA	42:BU:35:VAL:HA	1.73	0.69
42:BU:86:PHE:HB2	42:BU:92:VAL:HB	1.73	0.69
20:CB:205:ALA:HB3	20:CB:208:ALA:HB3	1.73	0.69
23:DB:45:G:H5'	23:DB:46:G:H5'	1.73	0.69
23:DB:350:G:H2'	23:DB:351:C:O4'	1.92	0.69
23:DB:571:U:H3'	39:DR:80:ARG:HH12	1.57	0.69
26:DD:13:ARG:HD2	37:DP:55:HIS:ND1	2.07	0.69
30:DH:88:GLY:HA3	30:DH:125:THR:OG1	1.93	0.69
31:DJ:18:VAL:HG22	31:DJ:19:ASP:H	1.55	0.69
31:DJ:45:THR:H	31:DJ:46:PRO:HD3	1.56	0.69
1:AA:17:U:H2'	1:AA:18:C:C6	2.27	0.69
1:AA:239:U:OP1	1:AA:239:U:H4'	1.90	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1026:G:H2'	1:AA:1027:C:H6	1.55	0.69
2:AC:104:GLU:HG2	2:AC:105:VAL:H	1.56	0.69
5:AF:26:THR:HA	5:AF:29:ILE:HD12	1.74	0.69
7:AH:63:LYS:HD2	7:AH:70:VAL:HG21	1.74	0.69
9:AJ:57:VAL:HG22	9:AJ:58:ASN:H	1.56	0.69
12:AM:90:HIS:HA	12:AM:108:ARG:NH2	2.08	0.69
13:AN:30:ILE:HG22	13:AN:41:TRP:HB2	1.73	0.69
23:BB:1038:G:H2'	23:BB:1039:A:C8	2.28	0.69
23:BB:1857:G:HO2'	23:BB:1858:A:H8	1.39	0.69
33:BL:57:LEU:O	33:BL:61:LEU:HD13	1.93	0.69
2:CC:148:ILE:HA	2:CC:200:TRP:O	1.92	0.69
7:CH:124:ILE:HG22	7:CH:125:ILE:H	1.55	0.69
12:CM:67:ASP:O	12:CM:71:GLU:HB2	1.92	0.69
23:DB:142:A:H2'	23:DB:143:C:C6	2.26	0.69
23:DB:2732:G:H5'	23:DB:2733:A:O4'	1.92	0.69
41:DT:12:ARG:HA	44:DX:29:ARG:HH22	1.58	0.69
52:DI:85:ILE:HD13	52:DI:137:LEU:HD21	1.73	0.69
1:AA:449:G:H2'	1:AA:450:G:C8	2.28	0.69
1:AA:859:G:H2'	1:AA:860:A:C8	2.25	0.69
11:AL:66:ILE:HG21	11:AL:71:HIS:HB3	1.72	0.69
22:BA:29:A:H3'	22:BA:30:C:H6	1.58	0.69
34:BM:4:PRO:HG3	34:BM:68:PHE:HE2	1.58	0.69
37:BP:29:VAL:HG12	37:BP:80:VAL:HA	1.74	0.69
39:BR:16:GLU:H	39:BR:101:ILE:HG13	1.57	0.69
51:B4:2:LYS:HE3	51:B4:4:ARG:HH21	1.58	0.69
4:CE:36:THR:HG21	4:CE:63:MET:HG2	1.73	0.69
11:CL:86:VAL:HG11	11:CL:89:LEU:HD23	1.74	0.69
12:CM:28:ARG:NH2	12:CM:62:PHE:HB2	2.08	0.69
18:CS:62:THR:HB	18:CS:64:GLU:OE1	1.90	0.69
29:DG:85:LYS:HB2	29:DG:164:ALA:HB3	1.75	0.69
40:DS:15:GLN:HA	40:DS:18:ARG:HG2	1.74	0.69
51:D4:2:LYS:HE3	51:D4:4:ARG:HH21	1.56	0.69
1:AA:462:G:H5'	1:AA:463:U:OP2	1.93	0.69
1:AA:522:C:H41	11:AL:49:ARG:HH22	1.40	0.69
1:AA:617:G:H4'	15:AP:46:LYS:HE2	1.73	0.69
1:AA:797:C:OP1	10:AK:125:LYS:HE3	1.92	0.69
13:AN:63:CYS:HB2	13:AN:79:SER:HB3	1.74	0.69
20:AB:199:ILE:HD13	20:AB:212:TYR:HE2	1.58	0.69
23:BB:620:G:N3	23:BB:620:G:H5'	2.08	0.69
1:CA:964:A:H2'	1:CA:965:U:H5"	1.74	0.69
4:CE:84:VAL:HG11	4:CE:146:MET:HB3	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2512:C:H2'	23:DB:2513:A:O4'	1.92	0.69
29:DG:53:PRO:HG3	29:DG:61:TRP:HA	1.75	0.69
32:DK:54:LYS:H	32:DK:54:LYS:HD2	1.57	0.69
37:DP:45:VAL:H	37:DP:60:VAL:HB	1.56	0.69
38:DQ:26:ALA:HA	38:DQ:29:ARG:HG2	1.75	0.69
38:DQ:81:GLY:HA2	38:DQ:84:LYS:HB3	1.74	0.69
1:AA:1004:A:H3'	1:AA:1024:G:H22	1.56	0.69
26:BD:62:LYS:H	26:BD:62:LYS:HD2	1.57	0.69
26:BD:113:SER:CB	26:BD:168:GLU:H	2.06	0.69
26:BD:172:VAL:HG11	26:BD:175:LEU:HD12	1.74	0.69
28:BF:30:VAL:HG21	28:BF:96:TRP:HE1	1.57	0.69
1:CA:229:U:H2'	1:CA:230:G:H8	1.58	0.69
8:CI:25:GLY:HA2	8:CI:60:LEU:O	1.93	0.69
23:DB:721:A:H2'	23:DB:722:A:C8	2.27	0.69
23:DB:1911:U:H2'	23:DB:1918:A:C2	2.28	0.69
23:DB:2097:A:H2'	23:DB:2098:U:C6	2.28	0.69
23:DB:2722:G:H4'	35:DN:4:ARG:HB2	1.73	0.69
30:DH:96:THR:HG23	30:DH:97:ARG:H	1.56	0.69
52:DI:105:LEU:HD11	52:DI:139:VAL:HG21	1.72	0.69
1:AA:522:C:H41	11:AL:49:ARG:NH2	1.89	0.69
1:AA:1060:U:C4'	9:AJ:54:SER:HB2	2.23	0.69
6:AG:66:GLU:HA	6:AG:69:ARG:HD2	1.75	0.69
23:BB:458:G:N2	23:BB:469:G:H2'	2.07	0.69
23:BB:1486:U:H2'	23:BB:1487:U:C6	2.28	0.69
27:BE:192:ALA:HA	27:BE:195:GLN:HE21	1.56	0.69
29:BG:85:LYS:HB2	29:BG:164:ALA:HB3	1.75	0.69
43:BW:35:ILE:HA	43:BW:57:THR:HG23	1.73	0.69
3:CD:58:GLN:O	3:CD:62:ARG:HG2	1.92	0.69
23:DB:140:C:H5'	23:DB:141:G:N7	2.08	0.69
23:DB:674:G:H1'	27:DE:69:ARG:HE	1.57	0.69
23:DB:1098:A:H2'	52:DI:4:VAL:CA	2.21	0.69
23:DB:1827:U:O2'	23:DB:1828:G:H5'	1.93	0.69
32:DK:20:MET:O	32:DK:41:ILE:HG13	1.93	0.69
1:AA:532:A:H62	2:AC:191:THR:CB	2.05	0.69
6:AG:115:MET:HA	6:AG:118:ARG:HD2	1.74	0.69
11:AL:51:VAL:HG12	11:AL:52:CYS:H	1.57	0.69
23:BB:871:U:H2'	23:BB:872:U:H6	1.57	0.69
23:BB:1935:G:H1'	23:BB:1964:G:N2	2.08	0.69
40:BS:24:ILE:HG22	40:BS:71:VAL:HG11	1.73	0.69
1:CA:475:C:H2'	1:CA:476:U:C6	2.28	0.69
1:CA:920:U:H2'	1:CA:921:U:C6	2.27	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:119:ILE:HG21	2:CC:197:VAL:HG11	1.72	0.69
8:CI:126:PHE:HE1	8:CI:129:ARG:HD3	1.57	0.69
20:CB:88:GLN:OE1	20:CB:221:ARG:HB3	1.93	0.69
23:DB:3:U:H2'	23:DB:4:U:H6	1.57	0.69
23:DB:1654:A:H2'	23:DB:1655:A:H8	1.58	0.69
30:DH:53:GLU:OE2	30:DH:54:LEU:HG	1.93	0.69
37:DP:29:VAL:HG12	37:DP:80:VAL:HA	1.75	0.69
41:DT:8:LEU:HD13	41:DT:49:LYS:HD2	1.75	0.69
1:AA:662:U:H2'	1:AA:663:A:C8	2.27	0.69
1:AA:1026:G:H2'	1:AA:1027:C:C6	2.28	0.69
3:AD:122:ILE:O	3:AD:128:VAL:HG23	1.93	0.69
20:AB:69:VAL:HB	20:AB:162:VAL:HG23	1.73	0.69
21:AU:16:ARG:HA	21:AU:16:ARG:NE	2.00	0.69
23:BB:2438:U:O2'	23:BB:2439:A:H5"	1.93	0.69
33:BL:116:VAL:HG13	33:BL:117:THR:H	1.58	0.69
37:BP:19:PHE:O	37:BP:20:ARG:HB2	1.92	0.69
39:BR:20:VAL:HG12	39:BR:21:ARG:H	1.58	0.69
20:CB:69:VAL:HB	20:CB:162:VAL:HG23	1.74	0.69
23:DB:973:A:H5"	39:DR:81:LYS:HD2	1.75	0.69
25:DC:145:MET:HB2	25:DC:152:GLN:HE22	1.58	0.69
28:DF:62:GLN:NE2	28:DF:90:LEU:HA	2.08	0.69
31:DJ:20:ALA:HB1	31:DJ:23:LYS:HB2	1.73	0.69
31:DJ:29:ALA:HA	31:DJ:32:LEU:HB2	1.75	0.69
39:DR:71:LYS:HG2	39:DR:73:LYS:NZ	2.08	0.69
42:DU:34:ILE:HG12	42:DU:63:ALA:HB2	1.75	0.69
45:DY:23:LEU:HD13	45:DY:28:LEU:HB2	1.74	0.69
11:AL:86:VAL:HG11	11:AL:89:LEU:HD23	1.74	0.69
20:AB:145:ASN:N	20:AB:145:ASN:HD22	1.88	0.69
23:BB:2866:U:H4'	23:BB:2867:G:H4'	1.75	0.69
28:BF:102:LEU:HD22	28:BF:103:ILE:N	2.08	0.69
31:BJ:6:ALA:HB3	31:BJ:45:THR:HG21	1.75	0.69
1:CA:337:G:H2'	1:CA:338:A:H8	1.58	0.69
1:CA:677:U:H2'	1:CA:678:U:C6	2.27	0.69
8:CI:26:LYS:H	8:CI:61:ASP:CB	2.05	0.69
8:CI:71:ILE:H	8:CI:71:ILE:HD12	1.56	0.69
15:CP:28:ARG:HD2	15:CP:29:ASN:N	2.08	0.69
23:DB:18:U:H2'	23:DB:19:A:C8	2.28	0.69
23:DB:479:A:N3	23:DB:481:G:H5"	2.07	0.69
7:AH:124:ILE:HG22	7:AH:125:ILE:H	1.57	0.68
16:AQ:77:VAL:HG11	16:AQ:80:LYS:HB3	1.75	0.68
23:BB:729:G:OP1	25:BC:12:ARG:HB2	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1060:U:O2	23:BB:1088:A:N7	2.26	0.68
23:BB:1788:C:O2'	23:BB:1789:A:H5'	1.92	0.68
23:BB:1857:G:H1'	23:BB:1885:A:H61	1.56	0.68
38:BQ:26:ALA:HA	38:BQ:29:ARG:HG2	1.76	0.68
1:CA:195:A:H1'	1:CA:222:C:O2'	1.93	0.68
1:CA:449:G:H2'	1:CA:450:G:C8	2.28	0.68
7:CH:74:ILE:HG13	7:CH:128:VAL:HG22	1.74	0.68
8:CI:51:LEU:HD13	8:CI:56:MET:HG2	1.75	0.68
9:CJ:7:ARG:O	9:CJ:100:ILE:HA	1.93	0.68
16:CQ:77:VAL:HG11	16:CQ:80:LYS:HB3	1.74	0.68
23:DB:278:A:H1'	23:DB:362:A:C2	2.28	0.68
43:DW:24:ARG:HD3	43:DW:65:LYS:HG2	1.73	0.68
48:D1:9:LYS:HD3	48:D1:9:LYS:H	1.58	0.68
23:BB:200:U:H5"	46:BZ:22:LEU:O	1.92	0.68
23:BB:721:A:H2'	23:BB:722:A:C8	2.28	0.68
25:BC:4:LYS:HD2	25:BC:5:CYS:N	2.09	0.68
35:BN:19:ALA:HA	35:BN:22:ARG:HB3	1.75	0.68
52:BI:10:LEU:HD13	52:BI:12:VAL:HG13	1.74	0.68
1:CA:1026:G:H2'	1:CA:1027:C:C6	2.27	0.68
1:CA:1220:G:H3'	18:CS:36:ARG:HH21	1.56	0.68
2:CC:2:GLN:H	2:CC:2:GLN:NE2	1.92	0.68
23:DB:2893:A:H5"	23:DB:2894:G:H5'	1.74	0.68
29:DG:43:LYS:HB2	29:DG:50:THR:HB	1.73	0.68
31:DJ:55:ILE:HB	31:DJ:123:LYS:HB2	1.74	0.68
34:DM:10:ARG:HE	34:DM:89:VAL:HG21	1.58	0.68
34:DM:59:ARG:NH1	34:DM:60:GLN:HB3	2.08	0.68
35:DN:19:ALA:HA	35:DN:22:ARG:HB3	1.76	0.68
2:AC:51:VAL:HA	2:AC:69:THR:HA	1.75	0.68
4:AE:85:LYS:HG3	4:AE:93:VAL:O	1.92	0.68
7:AH:11:THR:HG22	7:AH:14:ARG:HH22	1.59	0.68
23:BB:163:C:H2'	23:BB:164:C:O4'	1.93	0.68
23:BB:192:C:H2'	23:BB:193:U:H5'	1.73	0.68
23:BB:222:A:N6	23:BB:232:G:H1'	2.09	0.68
23:BB:1248:G:H2'	38:BQ:2:ARG:HA	1.76	0.68
25:BC:14:HIS:O	25:BC:203:VAL:HG11	1.93	0.68
27:BE:181:ILE:HG13	33:BL:2:ARG:HB3	1.75	0.68
30:BH:96:THR:HB	30:BH:112:LYS:HB2	1.75	0.68
31:BJ:57:LEU:HD11	31:BJ:129:GLU:H	1.57	0.68
31:BJ:112:GLY:N	31:BJ:113:PRO:HD2	2.04	0.68
31:BJ:117:ALA:HA	31:BJ:120:ARG:HD2	1.75	0.68
36:BO:67:ASN:H	36:BO:70:ALA:HB3	1.58	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BT:8:LEU:HD13	41:BT:49:LYS:HD2	1.75	0.68
42:BU:34:ILE:HG12	42:BU:63:ALA:HB2	1.75	0.68
16:CQ:30:HIS:CE1	16:CQ:32:ILE:HG22	2.27	0.68
16:CQ:83:LEU:H	16:CQ:83:LEU:HD22	1.57	0.68
39:DR:20:VAL:HG12	39:DR:21:ARG:H	1.57	0.68
40:DS:52:GLU:HA	40:DS:55:ILE:HG22	1.76	0.68
1:AA:532:A:H62	2:AC:191:THR:HB	1.58	0.68
1:AA:935:A:H61	6:AG:2:ARG:HD2	1.57	0.68
20:AB:88:GLN:OE1	20:AB:221:ARG:HB3	1.92	0.68
23:BB:27:G:H1'	23:BB:513:A:N6	2.09	0.68
23:BB:129:C:H2'	23:BB:130:C:H6	1.58	0.68
23:BB:807:U:H2'	23:BB:808:G:H8	1.59	0.68
38:BQ:81:GLY:HA2	38:BQ:84:LYS:HB3	1.73	0.68
39:BR:71:LYS:HG2	39:BR:73:LYS:NZ	2.08	0.68
49:B2:30:VAL:HA	49:B2:33:ARG:NH2	2.08	0.68
1:CA:17:U:H2'	1:CA:18:C:H6	1.57	0.68
1:CA:176:C:H2'	1:CA:177:G:N3	2.07	0.68
2:CC:16:PRO:HG2	2:CC:53:ARG:HH12	1.58	0.68
12:CM:10:ASP:HA	12:CM:44:ILE:HD13	1.73	0.68
23:DB:1778:U:H2'	23:DB:1784:A:H62	1.57	0.68
23:DB:2199:A:H5'	23:DB:2200:C:OP2	1.93	0.68
32:DK:102:PRO:HA	32:DK:120:PRO:HB3	1.74	0.68
1:AA:1288:A:N1	1:AA:1371:G:H1'	2.08	0.68
1:AA:1306:A:N6	1:AA:1331:G:H1'	2.08	0.68
13:AN:52:ARG:NH1	13:AN:58:ARG:HH21	1.92	0.68
15:AP:34:GLU:CD	15:AP:60:TRP:HE1	1.97	0.68
18:AS:38:THR:HA	18:AS:69:LYS:HA	1.75	0.68
25:BC:76:VAL:HA	25:BC:113:ASP:O	1.93	0.68
27:BE:58:LYS:HE2	27:BE:60:TRP:CD1	2.28	0.68
28:BF:78:ILE:HA	28:BF:82:TYR:CD1	2.29	0.68
1:CA:451:A:H5'	15:CP:70:ARG:HH22	1.58	0.68
14:CO:28:VAL:HG11	14:CO:80:LEU:HD21	1.75	0.68
23:DB:775:G:H4'	23:DB:776:G:H5'	1.75	0.68
23:DB:1386:C:H2'	23:DB:1387:A:C8	2.29	0.68
28:DF:78:ILE:HA	28:DF:82:TYR:CD1	2.29	0.68
31:DJ:25:LEU:HD13	31:DJ:26:GLY:N	2.08	0.68
36:DO:67:ASN:H	36:DO:70:ALA:HB3	1.57	0.68
38:DQ:34:ALA:O	38:DQ:37:ALA:HB3	1.93	0.68
1:AA:176:C:H2'	1:AA:177:G:N3	2.09	0.68
25:BC:74:PRO:HG2	25:BC:96:LYS:HG3	1.76	0.68
31:BJ:20:ALA:HB1	31:BJ:23:LYS:HB2	1.74	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:55:ILE:HB	31:BJ:123:LYS:HB2	1.75	0.68
38:BQ:97:ILE:HG13	38:BQ:105:PHE:HB2	1.74	0.68
2:CC:149:LYS:HA	2:CC:168:ARG:HB2	1.76	0.68
20:CB:145:ASN:HD22	20:CB:145:ASN:N	1.90	0.68
23:DB:352:A:H3'	23:DB:353:C:H6	1.59	0.68
23:DB:2461:A:H2'	23:DB:2462:C:C6	2.29	0.68
27:DE:108:ILE:HD11	27:DE:181:ILE:HB	1.75	0.68
30:DH:2:GLN:O	30:DH:3:VAL:HG22	1.94	0.68
30:DH:94:ILE:HG13	30:DH:98:ASP:HB3	1.75	0.68
19:AT:61:ALA:HA	19:AT:67:HIS:H	1.58	0.68
23:BB:1028:A:H2'	23:BB:1029:A:C8	2.29	0.68
23:BB:1041:G:H2'	23:BB:1042:G:C8	2.29	0.68
29:BG:84:LYS:HB3	29:BG:132:LEU:O	1.94	0.68
40:BS:73:LYS:HE3	40:BS:74:ILE:H	1.58	0.68
40:BS:81:SER:HA	40:BS:99:ARG:HA	1.76	0.68
1:CA:89:U:H2'	1:CA:90:C:C6	2.28	0.68
1:CA:108:G:C6	19:CT:9:ARG:HG2	2.29	0.68
1:CA:559:A:H4'	1:CA:560:A:H3'	1.76	0.68
2:CC:51:VAL:HA	2:CC:69:THR:HA	1.74	0.68
23:DB:499:U:H5'	42:DU:44:HIS:HE1	1.58	0.68
23:DB:858:G:H21	23:DB:2268:A:H3'	1.59	0.68
25:DC:14:HIS:O	25:DC:203:VAL:HG11	1.93	0.68
25:DC:74:PRO:HG2	25:DC:96:LYS:HG3	1.76	0.68
37:DP:3:ILE:HD13	37:DP:7:LEU:HD11	1.74	0.68
44:DX:31:GLN:HG2	44:DX:37:LEU:HB2	1.75	0.68
45:DY:8:GLN:CG	45:DY:31:ILE:HA	2.19	0.68
1:AA:108:G:O6	19:AT:9:ARG:HG2	1.93	0.68
4:AE:84:VAL:HG11	4:AE:146:MET:HB3	1.74	0.68
20:AB:9:LEU:H	20:AB:9:LEU:HD12	1.57	0.68
23:BB:2732:G:H5'	23:BB:2733:A:O4'	1.93	0.68
24:BV:40:ILE:HD13	24:BV:40:ILE:H	1.59	0.68
1:CA:97:G:H2'	1:CA:98:A:O4'	1.94	0.68
1:CA:1134:G:C2	1:CA:1135:U:H1'	2.29	0.68
1:CA:1238:A:H5'	1:CA:1336:C:H41	1.59	0.68
1:CA:1505:G:H4'	1:CA:1506:U:H5"	1.73	0.68
19:CT:61:ALA:HA	19:CT:67:HIS:H	1.59	0.68
23:DB:171:U:H2'	23:DB:172:A:H8	1.57	0.68
23:DB:2153:C:H2'	23:DB:2154:A:C8	2.29	0.68
47:D0:38:LEU:HB3	47:D0:41:HIS:NE2	2.09	0.68
52:DI:73:PRO:HG2	52:DI:78:LEU:HD21	1.74	0.68
1:AA:1513:A:H2'	1:AA:1514:G:C8	2.29	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1021:A:H61	23:BB:1142:A:N6	1.92	0.68
23:BB:2340:A:H2'	23:BB:2341:G:H8	1.59	0.68
23:BB:2365:G:H4'	43:BW:59:PHE:HE1	1.57	0.68
28:BF:134:GLN:NE2	28:BF:136:ILE:HD13	2.08	0.68
37:BP:13:LYS:HD3	37:BP:76:HIS:HA	1.75	0.68
1:CA:344:A:H4'	1:CA:345:C:OP2	1.93	0.68
5:CF:64:VAL:HG12	5:CF:65:GLU:H	1.57	0.68
26:DD:24:VAL:HG21	26:DD:188:LEU:HB3	1.75	0.68
37:DP:61:ARG:HD3	37:DP:70:GLU:HG3	1.76	0.68
42:DU:86:PHE:HB2	42:DU:92:VAL:HB	1.73	0.68
23:BB:1353:A:H2'	23:BB:1354:A:C8	2.29	0.68
23:BB:2064:C:H2'	23:BB:2065:C:C6	2.29	0.68
25:BC:16:VAL:H	25:BC:203:VAL:HG12	1.59	0.68
29:BG:140:ILE:HA	29:BG:143:VAL:HG22	1.76	0.68
31:BJ:17:VAL:HG22	31:BJ:55:ILE:HD11	1.76	0.68
34:BM:10:ARG:HE	34:BM:89:VAL:HG21	1.59	0.68
40:BS:52:GLU:HA	40:BS:55:ILE:HG22	1.76	0.68
41:BT:38:ALA:HB3	41:BT:81:LYS:NZ	2.09	0.68
43:BW:24:ARG:HA	43:BW:66:VAL:H	1.59	0.68
1:CA:239:U:H4'	1:CA:239:U:OP1	1.92	0.68
1:CA:1234:C:O2'	1:CA:1235:U:H5'	1.94	0.68
1:CA:1412:C:H2'	1:CA:1413:A:H8	1.59	0.68
1:CA:1414:U:H2'	1:CA:1415:G:H8	1.60	0.68
6:CG:91:ARG:HB3	6:CG:92:PRO:HD2	1.76	0.68
11:CL:49:ARG:HG2	11:CL:89:LEU:HD21	1.75	0.68
16:CQ:16:MET:CB	16:CQ:19:SER:HB2	2.23	0.68
18:CS:31:ARG:HA	18:CS:49:ALA:HB3	1.76	0.68
25:DC:76:VAL:HA	25:DC:113:ASP:O	1.94	0.68
29:DG:103:ASN:HD21	29:DG:111:PRO:HB3	1.58	0.68
34:DM:4:PRO:HG3	34:DM:68:PHE:HE2	1.59	0.68
1:AA:279:A:H5"	1:AA:280:C:H3'	1.74	0.67
1:AA:451:A:H5'	15:AP:70:ARG:HH22	1.59	0.67
1:AA:1486:G:H2'	1:AA:1487:G:O4'	1.94	0.67
3:AD:47:LEU:HB2	3:AD:51:GLY:HA3	1.77	0.67
11:AL:106:VAL:HG23	11:AL:116:TYR:HB3	1.76	0.67
13:AN:86:ALA:HB1	13:AN:91:GLU:HB2	1.74	0.67
23:BB:742:A:H2'	23:BB:743:A:H8	1.59	0.67
23:BB:1102:C:O2'	23:BB:1103:A:H5'	1.94	0.67
23:BB:1447:C:H2'	23:BB:1448:G:C8	2.29	0.67
23:BB:2658:C:H5'	29:BG:159:LYS:HZ2	1.59	0.67
24:BV:44:HIS:CE1	24:BV:86:LEU:H	2.08	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:89:PHE:HE1	31:BJ:93:ILE:HD13	1.57	0.67
34:BM:64:TRP:HB2	34:BM:104:GLU:HB2	1.76	0.67
43:BW:23:LYS:HD2	43:BW:24:ARG:H	1.59	0.67
1:CA:810:C:O2'	1:CA:811:C:H5'	1.93	0.67
1:CA:973:G:H3'	1:CA:974:A:H5"	1.76	0.67
1:CA:1306:A:N6	1:CA:1331:G:H1'	2.09	0.67
1:CA:1513:A:H2'	1:CA:1514:G:C8	2.29	0.67
3:CD:56:GLU:HG2	3:CD:198:LEU:HD12	1.77	0.67
12:CM:70:ARG:O	12:CM:74:MET:HG2	1.94	0.67
23:DB:143:C:H2'	23:DB:144:A:C8	2.28	0.67
23:DB:277:G:H4'	23:DB:278:A:C5	2.29	0.67
23:DB:1592:C:H2'	23:DB:1593:A:C8	2.29	0.67
23:DB:2866:U:H4'	23:DB:2867:G:H4'	1.75	0.67
24:DV:20:LEU:HB3	24:DV:25:LYS:O	1.94	0.67
26:DD:37:VAL:HG23	26:DD:91:THR:HA	1.76	0.67
36:DO:88:LYS:HD2	36:DO:89:ASP:N	2.09	0.67
1:AA:80:A:H3'	1:AA:81:A:H8	1.57	0.67
1:AA:195:A:H1'	1:AA:222:C:O2'	1.94	0.67
2:AC:2:GLN:H	2:AC:2:GLN:NE2	1.92	0.67
16:AQ:16:MET:CB	16:AQ:19:SER:HB2	2.24	0.67
21:AU:10:PRO:HG3	2:CC:71:ARG:HH21	1.59	0.67
21:AU:38:GLU:C	21:AU:40:PRO:HD2	2.14	0.67
23:BB:145:C:H2'	23:BB:146:A:H8	1.59	0.67
23:BB:152:A:H2'	23:BB:153:U:C6	2.30	0.67
27:BE:47:LYS:HB3	27:BE:51:GLU:HB2	1.75	0.67
31:BJ:37:ARG:HE	31:BJ:110:PRO:HG3	1.59	0.67
31:BJ:43:GLU:O	31:BJ:45:THR:N	2.27	0.67
1:CA:1060:U:C4'	9:CJ:54:SER:HB2	2.24	0.67
20:CB:199:ILE:HD13	20:CB:212:TYR:HE2	1.59	0.67
21:CU:38:GLU:C	21:CU:40:PRO:HD2	2.14	0.67
23:DB:222:A:N6	23:DB:232:G:H1'	2.09	0.67
23:DB:729:G:H2'	23:DB:1775:U:H1'	1.76	0.67
23:DB:1866:A:H2'	23:DB:1867:G:O4'	1.94	0.67
23:DB:2108:A:H2'	23:DB:2108:A:N3	2.09	0.67
23:DB:2400:G:O2'	23:DB:2401:U:H5'	1.94	0.67
23:DB:2886:A:H3'	23:DB:2887:A:H8	1.59	0.67
33:DL:116:VAL:HG13	33:DL:117:THR:H	1.57	0.67
39:DR:60:LYS:H	39:DR:100:GLY:CA	2.07	0.67
1:AA:763:G:H2'	1:AA:764:C:H6	1.59	0.67
1:AA:1314:C:H3'	18:AS:5:LYS:HZ2	1.59	0.67
11:AL:37:TYR:HB2	11:AL:51:VAL:HB	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AP:28:ARG:HD2	15:AP:29:ASN:N	2.06	0.67
23:BB:246:C:C2'	23:BB:247:G:H5'	2.24	0.67
23:BB:460:A:H2'	23:BB:461:C:O4'	1.94	0.67
23:BB:545:U:H3	23:BB:548:G:P	2.17	0.67
31:BJ:45:THR:H	31:BJ:46:PRO:HD3	1.59	0.67
41:BT:11:LEU:HD21	41:BT:46:ALA:HB1	1.75	0.67
1:CA:376:G:H5"	15:CP:5:ARG:HB2	1.76	0.67
3:CD:153:ARG:HG3	3:CD:154:VAL:N	2.07	0.67
8:CI:29:ILE:HA	8:CI:64:ILE:O	1.95	0.67
23:DB:152:A:H2'	23:DB:153:U:C6	2.30	0.67
23:DB:181:A:H2'	23:DB:182:A:C8	2.30	0.67
23:DB:729:G:OP1	25:DC:12:ARG:HB2	1.95	0.67
23:DB:2336:A:H61	43:DW:40:ARG:CD	2.07	0.67
26:DD:172:VAL:HG11	26:DD:175:LEU:HD12	1.76	0.67
38:DQ:63:ARG:HA	38:DQ:66:ALA:HB3	1.75	0.67
1:AA:98:A:H2'	1:AA:99:C:O4'	1.94	0.67
1:AA:973:G:H3'	1:AA:974:A:H5"	1.75	0.67
1:AA:1132:C:H2'	1:AA:1133:G:H8	1.58	0.67
1:AA:1148:U:H5'	8:AI:6:TYR:OH	1.94	0.67
23:BB:2292:U:H2'	23:BB:2293:G:C8	2.29	0.67
29:BG:89:VAL:HB	29:BG:159:LYS:HA	1.76	0.67
22:DA:75:G:H1'	24:DV:29:ILE:HG12	1.76	0.67
35:DN:49:GLU:OE2	35:DN:95:THR:HG22	1.94	0.67
37:DP:5:LYS:HE2	37:DP:5:LYS:HA	1.75	0.67
3:AD:36:ALA:HA	3:AD:41:GLY:HA3	1.75	0.67
8:AI:71:ILE:H	8:AI:71:ILE:HD12	1.59	0.67
23:BB:322:A:H3'	27:BE:163:ASN:HD21	1.59	0.67
23:BB:571:U:H3'	39:BR:80:ARG:HH12	1.59	0.67
23:BB:634:C:H2'	23:BB:635:C:H6	1.60	0.67
23:BB:729:G:H2'	23:BB:1775:U:H1'	1.75	0.67
25:BC:16:VAL:HB	25:BC:203:VAL:HB	1.77	0.67
29:BG:103:ASN:HD21	29:BG:111:PRO:HB3	1.58	0.67
1:CA:108:G:O6	19:CT:9:ARG:HG2	1.95	0.67
16:CQ:20:ILE:HD13	16:CQ:47:ASP:HB3	1.76	0.67
23:DB:1447:C:H2'	23:DB:1448:G:C8	2.29	0.67
23:DB:1486:U:H2'	23:DB:1487:U:C6	2.28	0.67
23:DB:2039:U:H2'	23:DB:2040:G:C8	2.29	0.67
43:DW:43:LYS:HD2	43:DW:79:ILE:HD11	1.76	0.67
1:AA:1297:G:H1'	1:AA:1298:U:H5	1.60	0.67
1:AA:1323:G:H2'	1:AA:1324:A:H8	1.55	0.67
12:AM:28:ARG:NH2	12:AM:62:PHE:HB2	2.09	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AU:9:GLU:HG2	2:CC:108:PRO:CG	2.24	0.67
25:BC:180:MET:HB3	25:BC:267:VAL:HB	1.77	0.67
27:BE:188:MET:HG2	27:BE:193:VAL:HG22	1.75	0.67
1:CA:1314:C:H3'	18:CS:5:LYS:HZ2	1.58	0.67
23:DB:95:A:H4'	44:DX:38:GLN:O	1.94	0.67
23:DB:145:C:H2'	23:DB:146:A:H8	1.59	0.67
31:DJ:32:LEU:O	31:DJ:36:LEU:HD23	1.95	0.67
31:DJ:57:LEU:HD11	31:DJ:129:GLU:H	1.58	0.67
32:DK:71:ARG:HD2	32:DK:105:ARG:NE	2.07	0.67
37:DP:19:PHE:O	37:DP:20:ARG:HB2	1.93	0.67
1:AA:337:G:H2'	1:AA:338:A:H8	1.60	0.67
1:AA:882:C:O2'	1:AA:883:C:H5'	1.93	0.67
12:AM:64:VAL:HA	12:AM:68:LEU:HD11	1.75	0.67
18:AS:41:PRO:O	18:AS:44:ILE:HG22	1.95	0.67
23:BB:125:A:H3'	23:BB:126:A:C5'	2.24	0.67
23:BB:575:A:O2'	23:BB:576:U:H5'	1.94	0.67
23:BB:1050:A:H2'	23:BB:1051:G:H8	1.59	0.67
23:BB:1911:U:H2'	23:BB:1918:A:C2	2.30	0.67
23:BB:2425:A:H5'	23:BB:2427:C:O4'	1.94	0.67
26:BD:124:ARG:HA	26:BD:165:MET:HE3	1.77	0.67
6:CG:23:ALA:O	6:CG:26:VAL:HG22	1.95	0.67
18:CS:38:THR:HA	18:CS:69:LYS:HA	1.77	0.67
23:DB:812:C:H4'	38:DQ:12:ARG:HH22	1.59	0.67
23:DB:1287:A:H3'	23:DB:1288:G:N2	2.09	0.67
23:DB:2298:A:OP1	28:DF:70:ARG:HD3	1.94	0.67
25:DC:127:ASN:O	25:DC:190:THR:HA	1.95	0.67
26:DD:62:LYS:HD2	26:DD:62:LYS:H	1.60	0.67
26:DD:141:ARG:O	26:DD:141:ARG:HG3	1.95	0.67
40:DS:81:SER:HA	40:DS:99:ARG:HA	1.76	0.67
46:DZ:6:GLN:HE22	46:DZ:50:ARG:N	1.90	0.67
1:AA:1258:G:H2'	1:AA:1259:C:C6	2.30	0.67
14:AO:28:VAL:HG11	14:AO:80:LEU:HD21	1.77	0.67
23:BB:280:U:H2'	23:BB:281:C:C6	2.29	0.67
23:BB:1654:A:H2'	23:BB:1655:A:H8	1.59	0.67
30:BH:116:ARG:NE	30:BH:139:PHE:HB2	2.10	0.67
30:BH:127:GLU:HA	30:BH:144:VAL:O	1.94	0.67
36:BO:11:ALA:CB	36:BO:96:GLY:H	2.06	0.67
2:CC:171:ARG:HH11	2:CC:171:ARG:HB2	1.58	0.67
13:CN:68:ARG:NH1	13:CN:71:GLY:H	1.92	0.67
20:CB:113:LEU:HD13	20:CB:147:LEU:HB2	1.75	0.67
23:DB:634:C:H2'	23:DB:635:C:H6	1.59	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:636:G:H3'	33:DL:128:THR:HG21	1.75	0.67
23:DB:1461:C:H2'	23:DB:1462:C:H6	1.58	0.67
23:DB:2312:U:O2	28:DF:38:GLY:HA3	1.95	0.67
23:DB:2808:G:HO2'	23:DB:2809:A:H8	1.43	0.67
28:DF:16:MET:O	28:DF:20:ASN:HA	1.95	0.67
50:D3:41:ARG:HA	50:D3:44:ARG:HH21	1.58	0.67
1:AA:344:A:H4'	1:AA:345:C:OP2	1.94	0.67
1:AA:373:A:H2'	1:AA:374:A:H8	1.59	0.67
1:AA:539:A:H2'	1:AA:540:G:C8	2.30	0.67
2:AC:149:LYS:HA	2:AC:168:ARG:HB2	1.77	0.67
12:AM:89:ARG:HG3	12:AM:96:VAL:HG13	1.76	0.67
20:AB:113:LEU:HD13	20:AB:147:LEU:HB2	1.76	0.67
23:BB:18:U:H2'	23:BB:19:A:C8	2.30	0.67
23:BB:1032:A:H1'	51:B4:23:ILE:HD13	1.77	0.67
24:BV:51:GLN:NE2	24:BV:79:ARG:HH22	1.92	0.67
26:BD:107:VAL:HG13	26:BD:203:VAL:HG23	1.76	0.67
38:BQ:63:ARG:HA	38:BQ:66:ALA:HB3	1.76	0.67
1:CA:865:A:H2	1:CA:918:A:H4'	1.60	0.67
23:DB:163:C:H2'	23:DB:164:C:O4'	1.94	0.67
23:DB:528:A:C2	23:DB:2042:A:H2'	2.30	0.67
26:DD:5:VAL:N	26:DD:32:ASN:HD21	1.90	0.67
26:DD:33:ARG:NE	26:DD:74:GLU:HB3	2.10	0.67
35:DN:24:MET:HE1	35:DN:40:LYS:HD2	1.77	0.67
35:DN:34:ILE:HB	35:DN:113:ILE:HG22	1.77	0.67
42:DU:81:ARG:H	42:DU:81:ARG:NH2	1.93	0.67
1:AA:1513:A:H2'	1:AA:1514:G:H8	1.58	0.67
6:AG:72:VAL:HG12	6:AG:89:GLU:HB3	1.76	0.67
9:AJ:7:ARG:O	9:AJ:100:ILE:HA	1.95	0.67
23:BB:718:A:H2'	23:BB:719:C:H5'	1.77	0.67
23:BB:849:A:H2'	23:BB:850:U:C6	2.30	0.67
23:BB:1000:A:H2'	23:BB:1001:A:C8	2.30	0.67
23:BB:1440:U:H2'	23:BB:1441:G:C8	2.30	0.67
25:BC:196:ASN:ND2	25:BC:199:HIS:HB2	2.10	0.67
27:BE:108:ILE:HD11	27:BE:181:ILE:HB	1.76	0.67
28:BF:135:ILE:HD11	28:BF:137:PHE:HB3	1.77	0.67
32:BK:54:LYS:HD2	32:BK:54:LYS:H	1.58	0.67
38:BQ:104:ALA:HA	39:BR:46:GLU:OE1	1.93	0.67
43:BW:47:GLY:HA3	43:BW:80:SER:HA	1.77	0.67
1:CA:157:U:O2'	1:CA:158:G:H5'	1.94	0.67
23:DB:1060:U:O2	23:DB:1088:A:N7	2.27	0.67
35:DN:78:LYS:HG3	35:DN:83:LEU:HG	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DX:1:MET:HB3	44:DX:4:LYS:HB3	1.77	0.67
48:D1:32:LYS:HA	48:D1:51:ALA:O	1.95	0.67
1:AA:235:C:H2'	1:AA:236:A:C8	2.29	0.66
23:BB:547:A:H3'	23:BB:548:G:C8	2.25	0.66
23:BB:858:G:H21	23:BB:2268:A:H3'	1.59	0.66
1:CA:229:U:H2'	1:CA:230:G:C8	2.30	0.66
8:CI:87:MET:HA	8:CI:93:LEU:HD11	1.77	0.66
23:DB:309:A:H4'	42:DU:15:GLY:CA	2.25	0.66
23:DB:329:G:H1	42:DU:16:LYS:HG2	1.60	0.66
23:DB:361:G:O2'	23:DB:362:A:H5'	1.94	0.66
25:DC:36:ASN:HD21	25:DC:85:ASN:ND2	1.93	0.66
27:DE:127:GLU:HB2	27:DE:133:LEU:HD13	1.77	0.66
33:DL:101:ILE:HG22	33:DL:105:ILE:HG13	1.77	0.66
1:AA:17:U:H2'	1:AA:18:C:H6	1.60	0.66
1:AA:157:U:O2'	1:AA:158:G:H5'	1.95	0.66
12:AM:2:ARG:HD3	12:AM:2:ARG:H	1.58	0.66
23:BB:2243:U:H2'	23:BB:2244:U:C6	2.31	0.66
23:BB:2400:G:O2'	23:BB:2401:U:H5'	1.95	0.66
28:BF:101:ARG:HA	28:BF:105:ILE:HD13	1.76	0.66
30:BH:90:LEU:HD21	30:BH:146:VAL:HG11	1.76	0.66
30:BH:133:GLN:HB2	30:BH:139:PHE:HA	1.77	0.66
32:BK:70:ARG:HB3	32:BK:76:VAL:HG22	1.77	0.66
41:BT:54:GLU:HG3	41:BT:90:GLY:H	1.57	0.66
1:CA:21:G:H2'	1:CA:22:G:C8	2.30	0.66
1:CA:415:A:H3'	1:CA:416:G:H8	1.60	0.66
1:CA:706:A:H4'	10:CK:30:ILE:HD11	1.77	0.66
1:CA:1388:C:H2'	1:CA:1389:C:H6	1.60	0.66
15:CP:34:GLU:CD	15:CP:60:TRP:HE1	1.99	0.66
23:DB:246:C:C2'	23:DB:247:G:H5'	2.26	0.66
23:DB:545:U:C5	23:DB:547:A:H5"	2.31	0.66
23:DB:620:G:H5'	23:DB:620:G:N3	2.10	0.66
30:DH:48:GLU:HA	30:DH:51:ARG:HE	1.60	0.66
31:DJ:56:VAL:HG12	31:DJ:57:LEU:H	1.60	0.66
32:DK:17:ARG:HB3	32:DK:45:GLU:HG3	1.75	0.66
34:DM:66:ARG:NE	34:DM:101:VAL:HG11	2.09	0.66
40:DS:32:ALA:O	40:DS:35:ILE:HB	1.95	0.66
41:DT:54:GLU:HG3	41:DT:90:GLY:H	1.58	0.66
43:DW:77:LYS:O	43:DW:78:PHE:HB2	1.95	0.66
1:AA:21:G:H2'	1:AA:22:G:C8	2.31	0.66
1:AA:841:C:O5'	1:AA:842:U:H5"	1.95	0.66
6:AG:91:ARG:HB3	6:AG:92:PRO:HD2	1.76	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:222:A:H61	23:BB:232:G:H1'	1.57	0.66
23:BB:528:A:C2	23:BB:2042:A:H2'	2.29	0.66
23:BB:1812:U:H2'	23:BB:1813:G:H8	1.61	0.66
23:BB:2443:C:H2'	23:BB:2444:G:H8	1.59	0.66
26:BD:14:ILE:HA	37:BP:11:GLN:HE22	1.60	0.66
32:BK:68:GLY:HA3	32:BK:78:ARG:HB3	1.77	0.66
33:BL:79:LEU:HD23	33:BL:82:LEU:HD11	1.76	0.66
38:BQ:34:ALA:O	38:BQ:37:ALA:HB3	1.95	0.66
42:BU:87:GLU:OE2	42:BU:88:ASP:HB3	1.95	0.66
47:B0:38:LEU:HB3	47:B0:41:HIS:NE2	2.11	0.66
1:CA:6:G:H3'	1:CA:6:G:N3	2.09	0.66
1:CA:1382:C:H4'	6:CG:78:ARG:CZ	2.25	0.66
6:CG:72:VAL:HG12	6:CG:89:GLU:HB3	1.78	0.66
10:CK:83:VAL:HG21	10:CK:109:ILE:HG12	1.76	0.66
13:CN:52:ARG:NH1	13:CN:58:ARG:HH21	1.92	0.66
23:DB:812:C:H4'	38:DQ:12:ARG:HH12	1.60	0.66
23:DB:1464:G:H2'	23:DB:1465:G:C8	2.31	0.66
23:DB:2591:C:H2'	23:DB:2592:G:H8	1.60	0.66
24:DV:40:ILE:H	24:DV:40:ILE:HD13	1.60	0.66
28:DF:30:VAL:HG21	28:DF:96:TRP:HE1	1.59	0.66
36:DO:51:ALA:HB3	36:DO:78:VAL:HG22	1.76	0.66
40:DS:17:VAL:C	40:DS:19:LEU:H	1.99	0.66
1:AA:1152:A:H2'	1:AA:1153:G:H8	1.61	0.66
1:AA:1343:G:H1'	8:AI:122:ARG:NH1	2.10	0.66
1:AA:1432:G:H5"	37:BP:105:LYS:CG	2.25	0.66
7:AH:6:ILE:HD11	7:AH:31:LEU:HD23	1.78	0.66
7:AH:51:GLU:HG2	7:AH:52:GLY:H	1.61	0.66
11:AL:122:LYS:HD2	11:AL:123:ALA:N	2.10	0.66
20:AB:119:GLN:O	20:AB:124:THR:HG23	1.96	0.66
20:AB:209:VAL:HG23	20:AB:210:THR:H	1.61	0.66
23:BB:499:U:H5'	42:BU:44:HIS:HE1	1.60	0.66
23:BB:1486:U:H2'	23:BB:1487:U:H6	1.60	0.66
23:BB:1676:A:H2'	23:BB:1677:A:O4'	1.95	0.66
23:BB:1866:A:H2'	23:BB:1867:G:O4'	1.96	0.66
23:BB:2461:A:H2'	23:BB:2462:C:C6	2.30	0.66
26:BD:68:PHE:HB3	26:BD:73:VAL:HA	1.77	0.66
27:BE:189:THR:O	27:BE:193:VAL:HG23	1.96	0.66
34:BM:78:LEU:O	34:BM:80:VAL:HG12	1.95	0.66
38:BQ:91:ARG:NH2	39:BR:11:GLN:H	1.94	0.66
1:CA:1288:A:N1	1:CA:1371:G:H1'	2.10	0.66
20:CB:212:TYR:HA	20:CB:215:ALA:HB3	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:414:C:H2'	23:DB:415:A:C8	2.30	0.66
27:DE:47:LYS:HB3	27:DE:51:GLU:HB2	1.78	0.66
30:DH:63:ALA:HA	30:DH:66:ASN:ND2	2.10	0.66
38:DQ:104:ALA:HA	39:DR:46:GLU:CD	2.16	0.66
48:D1:26:LYS:HB2	48:D1:52:LYS:HZ2	1.61	0.66
1:AA:129:A:H1'	1:AA:130:A:C8	2.31	0.66
1:AA:865:A:H2	1:AA:918:A:H4'	1.59	0.66
1:AA:1391:U:H2'	1:AA:1392:G:H8	1.61	0.66
10:AK:33:ILE:HG13	10:AK:73:VAL:HG21	1.77	0.66
23:BB:634:C:H2'	23:BB:635:C:C6	2.30	0.66
23:BB:2039:U:H2'	23:BB:2040:G:C8	2.28	0.66
23:BB:2376:A:H61	36:BO:94:ARG:HD3	1.60	0.66
25:BC:131:MET:HE2	25:BC:143:VAL:HG13	1.75	0.66
27:BE:127:GLU:HB2	27:BE:133:LEU:HD13	1.78	0.66
32:BK:71:ARG:HD2	32:BK:105:ARG:NE	2.08	0.66
44:BX:23:ARG:HD2	44:BX:27:ASN:HD21	1.60	0.66
1:CA:1078:U:H4'	4:CE:137:ARG:HH12	1.57	0.66
1:CA:1080:A:H2'	1:CA:1081:A:H5'	1.78	0.66
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.29	0.66
15:CP:28:ARG:CD	15:CP:29:ASN:H	2.05	0.66
20:CB:68:PHE:HA	20:CB:161:PHE:O	1.96	0.66
23:DB:2471:A:O2'	23:DB:2472:G:H8	1.78	0.66
28:DF:107:VAL:HG11	28:DF:175:PRO:HG3	1.77	0.66
28:DF:135:ILE:HD11	28:DF:137:PHE:HB3	1.76	0.66
37:DP:4:ILE:C	37:DP:6:GLN:H	1.99	0.66
42:DU:10:VAL:O	42:DU:21:ARG:HA	1.96	0.66
1:AA:473:U:H2'	1:AA:474:G:C8	2.31	0.66
22:BA:6:G:H2'	22:BA:7:G:H8	1.60	0.66
23:BB:45:G:H5'	23:BB:46:G:H5'	1.78	0.66
23:BB:138:U:C1'	41:BT:1:MET:H2	2.08	0.66
23:BB:857:G:O2'	43:BW:19:ARG:HD2	1.96	0.66
23:BB:2649:C:H2'	23:BB:2650:U:H6	1.61	0.66
24:BV:80:HIS:CD2	24:BV:83:LYS:H	2.13	0.66
38:BQ:43:GLN:NE2	39:BR:77:PHE:HB3	2.11	0.66
39:BR:39:LEU:HA	39:BR:53:PHE:HA	1.78	0.66
39:BR:60:LYS:H	39:BR:100:GLY:CA	2.08	0.66
1:CA:208:U:H2'	1:CA:210:C:C4	2.30	0.66
1:CA:1342:C:H2'	1:CA:1343:G:C8	2.30	0.66
3:CD:96:ARG:HB3	3:CD:98:ASP:OD2	1.95	0.66
4:CE:32:PHE:O	4:CE:51:LYS:HB2	1.94	0.66
23:DB:192:C:H2'	23:DB:193:U:H5'	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:460:A:H2'	23:DB:461:C:O4'	1.96	0.66
23:DB:575:A:O2'	23:DB:576:U:H5'	1.95	0.66
23:DB:1124:G:H1'	51:D4:38:GLY:OXT	1.94	0.66
30:DH:133:GLN:NE2	30:DH:139:PHE:HB3	2.10	0.66
39:DR:78:ARG:HB3	39:DR:83:TYR:HB3	1.77	0.66
43:DW:35:ILE:HA	43:DW:57:THR:HG23	1.76	0.66
46:DZ:6:GLN:NE2	46:DZ:50:ARG:H	1.90	0.66
1:AA:6:G:H3'	1:AA:6:G:N3	2.09	0.66
1:AA:86:G:H1'	1:AA:87:C:C5	2.30	0.66
1:AA:1080:A:H2'	1:AA:1081:A:H5'	1.78	0.66
8:AI:10:ARG:HA	8:AI:77:ALA:HB1	1.76	0.66
8:AI:87:MET:HA	8:AI:93:LEU:HD11	1.77	0.66
23:BB:1387:A:C4'	23:BB:1469:A:H1'	2.26	0.66
23:BB:1993:U:H4'	26:BD:133:THR:HG21	1.75	0.66
35:BN:101:GLY:HA2	35:BN:110:MET:H	1.58	0.66
37:BP:45:VAL:N	37:BP:60:VAL:HB	2.10	0.66
50:B3:54:LEU:O	50:B3:58:ILE:HG13	1.96	0.66
1:CA:266:G:O2'	1:CA:267:C:H3'	1.96	0.66
1:CA:384:G:H2'	1:CA:385:C:C6	2.30	0.66
1:CA:1095:U:H2'	1:CA:1096:C:C6	2.30	0.66
1:CA:1417:G:H22	1:CA:1482:G:H2'	1.60	0.66
23:DB:162:U:H4'	23:DB:163:C:OP1	1.96	0.66
23:DB:634:C:H2'	23:DB:635:C:C6	2.31	0.66
23:DB:784:G:N1	25:DC:227:VAL:HG11	2.10	0.66
23:DB:1440:U:H2'	23:DB:1441:G:C8	2.30	0.66
23:DB:1676:A:H2'	23:DB:1677:A:O4'	1.94	0.66
23:DB:2292:U:H2'	23:DB:2293:G:C8	2.29	0.66
23:DB:2340:A:H2'	23:DB:2341:G:H8	1.59	0.66
23:DB:2352:A:H2'	23:DB:2353:G:O4'	1.95	0.66
27:DE:58:LYS:O	27:DE:60:TRP:N	2.29	0.66
31:DJ:43:GLU:O	31:DJ:45:THR:N	2.29	0.66
33:DL:56:PRO:HD2	33:DL:59:ARG:HG3	1.78	0.66
34:DM:78:LEU:O	34:DM:80:VAL:HG12	1.95	0.66
42:DU:82:VAL:HG13	42:DU:93:ARG:HB3	1.78	0.66
43:DW:24:ARG:HA	43:DW:66:VAL:H	1.61	0.66
1:AA:384:G:H2'	1:AA:385:C:C6	2.31	0.66
1:AA:1141:C:H2'	1:AA:1142:G:H8	1.61	0.66
10:AK:108:ASN:ND2	21:AU:6:ARG:HB2	2.11	0.66
23:BB:279:A:C2	23:BB:362:A:H4'	2.30	0.66
23:BB:1939:U:H5'	23:BB:1939:U:H6	1.59	0.66
26:BD:5:VAL:N	26:BD:32:ASN:HD21	1.90	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:37:VAL:HG23	26:BD:91:THR:HA	1.76	0.66
27:BE:69:ARG:O	27:BE:70:SER:HB3	1.94	0.66
27:BE:97:ASN:HD21	27:BE:100:MET:HG3	1.59	0.66
33:BL:101:ILE:HG22	33:BL:105:ILE:HG13	1.76	0.66
37:BP:20:ARG:HB3	37:BP:23:ASP:OD2	1.96	0.66
1:CA:673:A:H2'	1:CA:674:G:C8	2.31	0.66
8:CI:10:ARG:HA	8:CI:77:ALA:HB1	1.76	0.66
22:DA:56:G:H4'	22:DA:57:A:H5'	1.78	0.66
23:DB:974:G:OP2	39:DR:78:ARG:HD3	1.96	0.66
23:DB:1684:G:H2'	23:DB:1685:C:C6	2.31	0.66
23:DB:2144:G:N3	23:DB:2146:C:H5'	2.11	0.66
28:DF:102:LEU:HD22	28:DF:103:ILE:N	2.09	0.66
1:AA:1095:U:H2'	1:AA:1096:C:C6	2.31	0.66
2:AC:48:LYS:HE2	2:AC:48:LYS:N	2.09	0.66
12:AM:89:ARG:NH2	12:AM:94:LEU:HD12	2.11	0.66
20:AB:212:TYR:HA	20:AB:215:ALA:HB3	1.78	0.66
23:BB:1947:C:H2'	23:BB:1948:G:H8	1.59	0.66
23:BB:2473:U:O2	23:BB:2473:U:H2'	1.96	0.66
32:BK:112:PHE:O	32:BK:115:ILE:HG22	1.95	0.66
35:BN:34:ILE:HB	35:BN:113:ILE:HG22	1.78	0.66
44:BX:1:MET:HB3	44:BX:4:LYS:HB3	1.78	0.66
1:CA:575:G:H4'	1:CA:576:C:O5'	1.96	0.66
1:CA:1152:A:H2'	1:CA:1153:G:H8	1.61	0.66
4:CE:45:VAL:HG12	4:CE:116:VAL:HG23	1.78	0.66
16:CQ:74:LEU:HD22	16:CQ:75:VAL:N	2.08	0.66
23:DB:28:A:N6	23:DB:512:G:H1'	2.11	0.66
23:DB:65:U:H2'	23:DB:66:C:H6	1.61	0.66
23:DB:222:A:H61	23:DB:232:G:H1'	1.58	0.66
23:DB:445:C:O2'	23:DB:446:G:H5'	1.96	0.66
23:DB:1099:G:C5'	52:DI:3:LYS:N	2.59	0.66
23:DB:1412:U:H2'	23:DB:1413:A:C8	2.30	0.66
23:DB:2073:C:H5"	25:DC:227:VAL:HG12	1.78	0.66
23:DB:2680:U:OP2	26:DD:114:LYS:HB3	1.95	0.66
25:DC:16:VAL:HB	25:DC:203:VAL:HB	1.77	0.66
28:DF:87:LYS:HG3	28:DF:88:VAL:H	1.60	0.66
40:DS:4:ILE:HG22	40:DS:106:VAL:HG13	1.77	0.66
43:DW:23:LYS:HD2	43:DW:24:ARG:H	1.61	0.66
3:AD:197:HIS:O	3:AD:200:VAL:HG22	1.96	0.66
12:AM:63:VAL:O	12:AM:68:LEU:HD21	1.96	0.66
20:AB:68:PHE:HA	20:AB:161:PHE:O	1.96	0.66
23:BB:2:G:H2'	23:BB:3:U:C6	2.30	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1827:U:O2'	23:BB:1828:G:H5'	1.95	0.66
26:BD:182:ALA:O	26:BD:184:ARG:HG2	1.95	0.66
27:BE:58:LYS:O	27:BE:60:TRP:N	2.29	0.66
28:BF:111:ARG:NH2	28:BF:113:PHE:HB2	2.10	0.66
35:BN:99:LYS:HB2	47:B0:41:HIS:HB3	1.77	0.66
38:BQ:94:LEU:HD21	39:BR:11:GLN:HB2	1.77	0.66
40:BS:26:GLY:N	40:BS:71:VAL:HG13	2.09	0.66
1:CA:1343:G:H1'	8:CI:122:ARG:NH1	2.10	0.66
12:CM:89:ARG:HG3	12:CM:96:VAL:HG13	1.77	0.66
16:CQ:75:VAL:HG23	16:CQ:76:ARG:HG2	1.77	0.66
23:DB:590:A:H2'	23:DB:591:U:C6	2.31	0.66
23:DB:718:A:H2'	23:DB:719:C:H5'	1.77	0.66
25:DC:16:VAL:H	25:DC:203:VAL:HG12	1.60	0.66
26:DD:107:VAL:H	26:DD:205:PRO:HA	1.61	0.66
27:DE:98:LYS:HZ2	27:DE:99:LYS:HG2	1.60	0.66
44:DX:8:GLU:O	44:DX:12:GLU:HB2	1.96	0.66
1:AA:335:C:H2'	1:AA:336:A:H8	1.62	0.65
1:AA:1382:C:H4'	6:AG:78:ARG:CZ	2.26	0.65
8:AI:29:ILE:HA	8:AI:64:ILE:O	1.96	0.65
23:BB:1386:C:H2'	23:BB:1387:A:C8	2.30	0.65
23:BB:1535:A:O2'	23:BB:1536:C:H5'	1.96	0.65
23:BB:2213:U:H2'	23:BB:2213:U:O2	1.94	0.65
23:BB:2591:C:H2'	23:BB:2592:G:H8	1.60	0.65
26:BD:109:VAL:HG11	26:BD:193:VAL:HB	1.78	0.65
29:BG:152:ARG:NH1	29:BG:162:ARG:HA	2.11	0.65
36:BO:88:LYS:HD2	36:BO:89:ASP:N	2.11	0.65
38:BQ:60:TRP:O	38:BQ:64:ILE:HG12	1.96	0.65
42:BU:10:VAL:O	42:BU:21:ARG:HA	1.95	0.65
52:BI:129:GLU:HB3	52:BI:133:ARG:NH1	2.09	0.65
23:DB:1000:A:H2'	23:DB:1001:A:C8	2.31	0.65
23:DB:1788:C:O2'	23:DB:1789:A:H5'	1.97	0.65
23:DB:2143:C:H3'	23:DB:2144:G:H8	1.61	0.65
28:DF:31:GLU:O	28:DF:32:LYS:HD3	1.97	0.65
12:AM:70:ARG:O	12:AM:74:MET:HG2	1.94	0.65
20:AB:71:THR:CG2	20:AB:94:ARG:H	2.10	0.65
23:BB:557:C:H2'	23:BB:558:U:C6	2.31	0.65
23:BB:2457:U:H2'	23:BB:2458:G:H5'	1.77	0.65
25:BC:173:LEU:H	25:BC:173:LEU:HD13	1.61	0.65
30:BH:2:GLN:O	30:BH:3:VAL:HG22	1.95	0.65
36:BO:83:LEU:HD21	36:BO:114:GLY:HA3	1.79	0.65
39:BR:78:ARG:HH21	39:BR:78:ARG:HG3	1.61	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BT:2:ILE:N	41:BT:2:ILE:HD13	2.11	0.65
42:BU:81:ARG:H	42:BU:81:ARG:NH2	1.93	0.65
49:B2:33:ARG:CB	49:B2:33:ARG:HH21	2.09	0.65
1:CA:825:A:H2'	1:CA:826:C:H6	1.60	0.65
1:CA:1149:C:H2'	1:CA:1150:A:H8	1.61	0.65
1:CA:1513:A:H2'	1:CA:1514:G:H8	1.60	0.65
4:CE:152:VAL:HG21	7:CH:98:LEU:HB3	1.78	0.65
6:CG:56:SER:HB3	6:CG:59:GLU:HG3	1.77	0.65
20:CB:209:VAL:HG23	20:CB:210:THR:H	1.60	0.65
23:DB:1098:A:OP2	52:DI:3:LYS:HG2	1.97	0.65
23:DB:1203:U:O4'	33:DL:3:LEU:HD12	1.96	0.65
23:DB:1939:U:H5'	23:DB:1939:U:H6	1.61	0.65
25:DC:180:MET:HB3	25:DC:267:VAL:HB	1.78	0.65
6:AG:23:ALA:O	6:AG:26:VAL:HG22	1.97	0.65
6:AG:49:LEU:HD21	6:AG:60:ALA:HB3	1.78	0.65
18:AS:30:LEU:HD12	18:AS:48:ILE:HG12	1.78	0.65
23:BB:532:A:H4'	23:BB:533:G:C8	2.32	0.65
23:BB:718:A:H3'	23:BB:719:C:H6	1.61	0.65
23:BB:1993:U:H4'	26:BD:133:THR:HG22	1.79	0.65
23:BB:2086:U:H2'	23:BB:2087:G:C8	2.31	0.65
23:BB:2199:A:H5'	23:BB:2200:C:OP2	1.96	0.65
23:BB:2472:G:H2'	23:BB:2475:C:H42	1.62	0.65
28:BF:107:VAL:HG11	28:BF:175:PRO:HG3	1.77	0.65
29:BG:53:PRO:HG3	29:BG:61:TRP:HA	1.78	0.65
30:BH:27:ARG:HH11	46:BZ:64:ILE:HD11	1.61	0.65
45:BY:6:ILE:HA	45:BY:56:VAL:HG13	1.78	0.65
1:CA:841:C:O5'	1:CA:842:U:H5"	1.96	0.65
12:CM:64:VAL:HA	12:CM:68:LEU:HD11	1.77	0.65
23:DB:2649:C:H2'	23:DB:2650:U:H6	1.61	0.65
29:DG:140:ILE:HA	29:DG:143:VAL:HG22	1.79	0.65
32:DK:60:ALA:HA	32:DK:87:LEU:HD23	1.78	0.65
52:DI:1:ALA:HB1	52:DI:2:LYS:HD2	1.78	0.65
10:AK:83:VAL:HG21	10:AK:109:ILE:HG12	1.77	0.65
23:BB:28:A:N6	23:BB:512:G:H1'	2.12	0.65
23:BB:973:A:H5"	39:BR:81:LYS:HD2	1.79	0.65
23:BB:2751:G:H5'	29:BG:2:ARG:HD3	1.78	0.65
24:BV:20:LEU:HB3	24:BV:25:LYS:O	1.96	0.65
36:BO:7:ARG:HA	36:BO:10:ARG:CZ	2.25	0.65
37:BP:3:ILE:HD13	37:BP:7:LEU:HD11	1.77	0.65
43:BW:18:LYS:H	43:BW:35:ILE:HG23	1.61	0.65
1:CA:1070:U:H2'	1:CA:1071:C:C6	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1297:G:H1'	1:CA:1298:U:H5	1.61	0.65
12:CM:63:VAL:O	12:CM:68:LEU:HD21	1.97	0.65
20:CB:195:VAL:HG12	20:CB:197:PHE:H	1.61	0.65
23:DB:18:U:H2'	23:DB:19:A:H8	1.62	0.65
23:DB:1722:A:H2'	23:DB:1723:G:C8	2.31	0.65
23:DB:2229:U:H2'	23:DB:2230:G:H8	1.62	0.65
23:DB:2901:C:H2'	23:DB:2902:C:H6	1.59	0.65
30:DH:125:THR:HA	30:DH:146:VAL:HB	1.77	0.65
37:DP:45:VAL:N	37:DP:60:VAL:HB	2.11	0.65
38:DQ:97:ILE:HG13	38:DQ:105:PHE:HB2	1.77	0.65
43:DW:23:LYS:HZ3	43:DW:24:ARG:HG3	1.60	0.65
1:AA:1320:C:N4	18:AS:36:ARG:HG2	2.11	0.65
20:AB:195:VAL:HG12	20:AB:197:PHE:H	1.62	0.65
23:BB:643:A:C2	48:B1:43:ARG:HD2	2.31	0.65
23:BB:1461:C:H2'	23:BB:1462:C:C6	2.32	0.65
31:BJ:13:ARG:O	31:BJ:52:ASP:HA	1.97	0.65
31:BJ:25:LEU:HD13	31:BJ:26:GLY:N	2.12	0.65
35:BN:78:LYS:HG3	35:BN:83:LEU:HG	1.76	0.65
1:CA:373:A:H2'	1:CA:374:A:H8	1.61	0.65
1:CA:1085:U:H3'	1:CA:1086:U:C5	2.31	0.65
12:CM:2:ARG:HD3	12:CM:2:ARG:H	1.59	0.65
18:CS:30:LEU:HD12	18:CS:48:ILE:HG12	1.78	0.65
23:DB:1241:A:H2'	23:DB:1242:U:H5'	1.79	0.65
23:DB:1381:G:H2'	23:DB:1382:G:H5'	1.79	0.65
23:DB:2457:U:H2'	23:DB:2458:G:H5'	1.77	0.65
25:DC:4:LYS:HD2	25:DC:5:CYS:N	2.12	0.65
26:DD:107:VAL:HG13	26:DD:203:VAL:HG23	1.77	0.65
26:DD:182:ALA:O	26:DD:184:ARG:HG2	1.96	0.65
32:DK:112:PHE:O	32:DK:115:ILE:HG22	1.97	0.65
49:D2:30:VAL:HA	49:D2:33:ARG:NH2	2.11	0.65
1:AA:677:U:H2'	1:AA:678:U:H6	1.61	0.65
1:AA:1270:G:H2'	1:AA:1271:A:H8	1.61	0.65
1:AA:1307:U:H2'	1:AA:1308:U:C6	2.32	0.65
1:AA:1347:G:N2	1:AA:1373:G:H2'	2.11	0.65
3:AD:84:ASN:ND2	4:AE:101:GLY:HA3	2.12	0.65
3:AD:123:MET:SD	3:AD:145:ARG:HD2	2.37	0.65
10:AK:28:ASN:HD21	10:AK:46:ALA:HB3	1.61	0.65
16:AQ:13:SER:HB3	16:AQ:21:VAL:HB	1.77	0.65
23:BB:118:A:OP2	23:BB:119:A:H2'	1.97	0.65
23:BB:162:U:H4'	23:BB:163:C:OP1	1.96	0.65
23:BB:329:G:H1	42:BU:16:LYS:HE3	1.60	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1549:A:H2'	23:BB:1550:C:C6	2.32	0.65
23:BB:1949:G:H2'	23:BB:1950:G:C8	2.32	0.65
23:BB:2502:G:H5'	23:BB:2503:A:C5'	2.26	0.65
32:BK:20:MET:O	32:BK:41:ILE:HG13	1.97	0.65
33:BL:56:PRO:HD2	33:BL:59:ARG:HG3	1.79	0.65
39:BR:78:ARG:HB3	39:BR:83:TYR:HB3	1.78	0.65
45:BY:12:ALA:HA	45:BY:15:ARG:HD3	1.79	0.65
51:B4:9:LYS:HD3	51:B4:9:LYS:H	1.60	0.65
1:CA:473:U:H2'	1:CA:474:G:C8	2.31	0.65
1:CA:834:U:H2'	1:CA:835:U:C6	2.31	0.65
1:CA:1103:C:H5"	20:CB:96:LEU:HD12	1.79	0.65
14:CO:7:THR:O	14:CO:11:VAL:HG23	1.96	0.65
16:CQ:59:GLU:O	16:CQ:75:VAL:HG22	1.96	0.65
20:CB:14:HIS:HB2	20:CB:208:ALA:HB2	1.79	0.65
20:CB:114:LYS:HE2	20:CB:151:LYS:HZ1	1.62	0.65
23:DB:784:G:O2'	23:DB:785:G:H5"	1.97	0.65
23:DB:2557:G:H2'	23:DB:2558:C:C6	2.31	0.65
28:DF:134:GLN:NE2	28:DF:136:ILE:HD13	2.11	0.65
39:DR:49:ILE:HD13	39:DR:53:PHE:N	2.11	0.65
14:AO:7:THR:O	14:AO:11:VAL:HG23	1.96	0.65
23:BB:329:G:H1	42:BU:16:LYS:HG2	1.60	0.65
23:BB:962:G:H21	23:BB:2250:G:N2	1.92	0.65
28:BF:87:LYS:HG3	28:BF:88:VAL:H	1.61	0.65
28:BF:139:GLU:HG2	28:BF:140:ILE:N	2.11	0.65
30:BH:81:ALA:HA	30:BH:147:VAL:H	1.60	0.65
30:BH:104:THR:HG23	30:BH:105:ALA:H	1.59	0.65
32:BK:60:ALA:HA	32:BK:87:LEU:HD23	1.79	0.65
43:BW:39:GLN:NE2	43:BW:43:LYS:HB2	2.12	0.65
44:BX:31:GLN:HG2	44:BX:37:LEU:HB2	1.79	0.65
3:CD:122:ILE:O	3:CD:128:VAL:HG23	1.96	0.65
13:CN:58:ARG:HH11	13:CN:58:ARG:HB3	1.62	0.65
18:CS:42:ASN:N	18:CS:42:ASN:HD22	1.95	0.65
23:DB:1387:A:C4'	23:DB:1469:A:H1'	2.26	0.65
23:DB:2086:U:H2'	23:DB:2087:G:C8	2.32	0.65
23:DB:2895:G:H2'	23:DB:2896:C:C6	2.32	0.65
29:DG:84:LYS:HG3	29:DG:131:VAL:CA	2.27	0.65
35:DN:70:THR:HB	35:DN:75:ILE:HD11	1.78	0.65
36:DO:83:LEU:HD21	36:DO:114:GLY:HA3	1.78	0.65
37:DP:93:LYS:HB3	37:DP:96:LEU:HD12	1.79	0.65
42:DU:25:LYS:HE3	42:DU:36:GLU:HA	1.79	0.65
1:AA:78:A:H3'	1:AA:79:G:C8	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:706:A:H4'	10:AK:30:ILE:HD11	1.79	0.65
1:AA:810:C:O2'	1:AA:811:C:H5'	1.96	0.65
23:BB:145:C:H2'	23:BB:146:A:C8	2.32	0.65
23:BB:1241:A:H2'	23:BB:1242:U:H5'	1.77	0.65
23:BB:2834:G:H1'	23:BB:2883:A:H61	1.61	0.65
34:BM:66:ARG:NE	34:BM:101:VAL:HG11	2.11	0.65
37:BP:61:ARG:HD3	37:BP:70:GLU:HG3	1.78	0.65
40:BS:4:ILE:HG22	40:BS:106:VAL:HG13	1.79	0.65
18:CS:41:PRO:O	18:CS:44:ILE:HG22	1.97	0.65
23:DB:1028:A:H2'	23:DB:1029:A:C8	2.31	0.65
23:DB:2624:G:H1'	47:D0:18:HIS:NE2	2.12	0.65
25:DC:142:ASN:HA	25:DC:153:LEU:O	1.97	0.65
25:DC:173:LEU:HD13	25:DC:173:LEU:H	1.60	0.65
26:DD:91:THR:HG23	26:DD:92:VAL:H	1.60	0.65
34:DM:21:ALA:CB	34:DM:100:LYS:HG2	2.26	0.65
1:AA:208:U:H2'	1:AA:210:C:C4	2.31	0.65
1:AA:673:A:H2'	1:AA:674:G:C8	2.32	0.65
1:AA:1213:A:H2'	1:AA:1215:G:N7	2.12	0.65
5:AF:3:HIS:CE1	5:AF:95:ALA:H	2.15	0.65
10:AK:28:ASN:ND2	10:AK:46:ALA:HB3	2.12	0.65
10:AK:75:GLU:CD	10:AK:75:GLU:H	2.00	0.65
12:AM:3:ILE:O	12:AM:56:ARG:HG3	1.97	0.65
22:BA:46:A:H2'	22:BA:47:C:O4'	1.96	0.65
23:BB:419:U:H2'	23:BB:420:C:C6	2.32	0.65
23:BB:496:G:H1'	40:BS:61:ASN:HD21	1.62	0.65
25:BC:123:ILE:HD12	25:BC:191:LEU:HD13	1.79	0.65
26:BD:33:ARG:NE	26:BD:74:GLU:HB3	2.12	0.65
31:BJ:32:LEU:O	31:BJ:36:LEU:HD23	1.97	0.65
1:CA:51:A:H5"	1:CA:52:C:H5"	1.78	0.65
1:CA:678:U:H2'	1:CA:679:C:C6	2.32	0.65
1:CA:1391:U:H2'	1:CA:1392:G:H8	1.60	0.65
1:CA:1432:G:H5"	37:DP:105:LYS:HG2	1.79	0.65
3:CD:36:ALA:HA	3:CD:41:GLY:HA3	1.77	0.65
33:DL:112:LEU:HG	33:DL:113:ALA:H	1.62	0.65
40:DS:73:LYS:HE3	40:DS:74:ILE:H	1.61	0.65
43:DW:18:LYS:H	43:DW:35:ILE:HG23	1.62	0.65
1:AA:695:A:H61	1:AA:797:C:H1'	1.59	0.65
3:AD:25:ARG:CZ	3:AD:26:ALA:HB2	2.26	0.65
20:AB:14:HIS:HB2	20:AB:208:ALA:HB2	1.79	0.65
23:BB:532:A:H3'	38:BQ:27:ARG:NH1	2.12	0.65
23:BB:1046:A:C3'	23:BB:1047:G:H5"	2.27	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BF:62:GLN:OE1	28:BF:94:ARG:HG2	1.96	0.65
31:BJ:56:VAL:HG12	31:BJ:57:LEU:H	1.62	0.65
34:BM:96:ILE:HD11	34:BM:126:ILE:HG12	1.79	0.65
39:BR:14:VAL:HG22	39:BR:15:SER:N	2.10	0.65
39:BR:49:ILE:HD13	39:BR:53:PHE:N	2.12	0.65
45:BY:7:THR:HB	45:BY:55:LYS:H	1.61	0.65
5:CF:38:ARG:HH21	5:CF:63:ASN:HD21	1.43	0.65
7:CH:63:LYS:HD2	7:CH:70:VAL:HG21	1.78	0.65
8:CI:25:GLY:HA3	8:CI:57:VAL:CA	2.27	0.65
11:CL:106:VAL:HG23	11:CL:116:TYR:HB3	1.79	0.65
16:CQ:13:SER:HB3	16:CQ:21:VAL:HB	1.78	0.65
23:DB:70:G:H3'	23:DB:113:U:H4'	1.79	0.65
23:DB:1346:G:O2'	23:DB:1347:A:H5'	1.97	0.65
23:DB:1439:A:C6	23:DB:1552:A:N7	2.65	0.65
23:DB:1674:G:H21	23:DB:1677:A:N6	1.94	0.65
23:DB:1911:U:H2'	23:DB:1918:A:N1	2.11	0.65
27:DE:69:ARG:O	27:DE:70:SER:HB3	1.97	0.65
36:DO:7:ARG:HA	36:DO:10:ARG:CZ	2.27	0.65
1:AA:82:G:H2'	1:AA:83:C:O4'	1.98	0.64
1:AA:802:A:H2'	1:AA:803:G:O4'	1.97	0.64
1:AA:1072:G:H21	20:AB:105:THR:HG21	1.62	0.64
1:AA:1423:G:H2'	1:AA:1424:U:C6	2.32	0.64
13:AN:68:ARG:NH1	13:AN:71:GLY:H	1.95	0.64
15:AP:57:ILE:O	15:AP:61:VAL:HG23	1.96	0.64
23:BB:720:U:H2'	23:BB:721:A:C8	2.32	0.64
23:BB:2188:U:H2'	23:BB:2189:U:C6	2.31	0.64
26:BD:141:ARG:O	26:BD:141:ARG:HG3	1.95	0.64
29:BG:87:GLN:HE21	29:BG:164:ALA:HA	1.61	0.64
30:BH:78:VAL:HB	30:BH:143:ILE:HG12	1.78	0.64
45:BY:16:LEU:HD22	45:BY:16:LEU:H	1.61	0.64
1:CA:662:U:H2'	1:CA:663:A:C8	2.31	0.64
4:CE:85:LYS:HG3	4:CE:93:VAL:O	1.96	0.64
6:CG:45:ALA:HB1	6:CG:120:ALA:HB2	1.79	0.64
23:DB:807:U:H2'	23:DB:808:G:C8	2.31	0.64
23:DB:2693:G:H2'	23:DB:2694:G:H8	1.61	0.64
24:DV:80:HIS:CD2	24:DV:83:LYS:H	2.15	0.64
32:DK:68:GLY:HA3	32:DK:78:ARG:HB3	1.77	0.64
35:DN:32:GLU:O	35:DN:114:GLU:HA	1.97	0.64
37:DP:52:ARG:HH11	37:DP:52:ARG:HG2	1.62	0.64
38:DQ:60:TRP:O	38:DQ:64:ILE:HG12	1.96	0.64
1:AA:218:U:H2'	1:AA:219:U:C6	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:229:U:H2'	1:AA:230:G:C8	2.31	0.64
9:AJ:52:LEU:H	9:AJ:52:LEU:HD12	1.63	0.64
20:AB:186:VAL:HB	20:AB:190:SER:CB	2.28	0.64
23:BB:65:U:H2'	23:BB:66:C:H6	1.61	0.64
23:BB:273:G:O2'	23:BB:274:C:H5'	1.97	0.64
23:BB:775:G:H4'	23:BB:776:G:H5'	1.77	0.64
23:BB:2471:A:O2'	23:BB:2472:G:H8	1.79	0.64
42:BU:38:ILE:HG23	42:BU:39:ASN:N	2.06	0.64
42:BU:70:ALA:HB1	42:BU:79:ALA:CB	2.28	0.64
1:CA:1258:G:H2'	1:CA:1259:C:C6	2.33	0.64
2:CC:48:LYS:HE2	2:CC:48:LYS:N	2.07	0.64
8:CI:20:ILE:H	8:CI:20:ILE:HD12	1.62	0.64
23:DB:106:C:H2'	23:DB:107:G:H8	1.61	0.64
23:DB:155:A:H2'	23:DB:156:A:H8	1.62	0.64
23:DB:1324:G:H1'	23:DB:1616:A:N6	2.12	0.64
23:DB:1771:C:H2'	23:DB:1772:A:C8	2.32	0.64
23:DB:1947:C:H2'	23:DB:1948:G:H8	1.62	0.64
34:DM:60:GLN:H	34:DM:60:GLN:HE21	1.44	0.64
39:DR:78:ARG:HG3	39:DR:78:ARG:HH21	1.61	0.64
1:AA:78:A:H3'	1:AA:79:G:H8	1.62	0.64
1:AA:376:G:H5"	15:AP:5:ARG:HB2	1.77	0.64
5:AF:40:GLU:HB2	5:AF:61:LEU:HB2	1.79	0.64
8:AI:51:LEU:HD13	8:AI:56:MET:HG2	1.79	0.64
23:BB:17:G:H2'	23:BB:18:U:C6	2.32	0.64
23:BB:171:U:H2'	23:BB:172:A:H8	1.61	0.64
23:BB:2861:U:H2'	23:BB:2862:G:H8	1.61	0.64
26:BD:107:VAL:H	26:BD:205:PRO:HA	1.62	0.64
40:BS:32:ALA:O	40:BS:35:ILE:HB	1.97	0.64
44:BX:1:MET:HB3	44:BX:4:LYS:HD3	1.78	0.64
46:BZ:40:VAL:CG2	46:BZ:45:ARG:H	2.09	0.64
1:CA:658:C:H2'	1:CA:659:U:H6	1.62	0.64
1:CA:707:U:H2'	1:CA:708:C:C6	2.33	0.64
1:CA:1132:C:H2'	1:CA:1133:G:C8	2.32	0.64
1:CA:1270:G:H2'	1:CA:1271:A:H8	1.62	0.64
5:CF:40:GLU:HB2	5:CF:61:LEU:HB2	1.80	0.64
10:CK:108:ASN:ND2	21:CU:6:ARG:HB2	2.12	0.64
21:CU:16:ARG:HE	21:CU:16:ARG:CA	2.01	0.64
23:DB:173:A:H2'	23:DB:174:U:C6	2.33	0.64
23:DB:532:A:H3'	38:DQ:27:ARG:NH1	2.11	0.64
23:DB:962:G:H21	23:DB:2250:G:N2	1.92	0.64
23:DB:1856:U:H2'	23:DB:1857:G:O4'	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2331:G:H21	23:DB:2336:A:H8	1.44	0.64
26:DD:118:PHE:O	26:DD:119:ALA:HB3	1.97	0.64
33:DL:141:LYS:HD3	33:DL:142:ILE:H	1.61	0.64
38:DQ:63:ARG:HH12	38:DQ:96:ASP:HA	1.63	0.64
38:DQ:91:ARG:HG2	38:DQ:93:ILE:HG22	1.79	0.64
39:DR:39:LEU:HA	39:DR:53:PHE:HA	1.78	0.64
40:DS:36:LEU:H	40:DS:36:LEU:HD22	1.62	0.64
1:AA:1342:C:H2'	1:AA:1343:G:C8	2.32	0.64
2:AC:13:ILE:O	2:AC:14:VAL:HG22	1.97	0.64
2:AC:59:PRO:HG2	2:AC:62:SER:OG	1.97	0.64
23:BB:1412:U:H2'	23:BB:1413:A:C8	2.31	0.64
23:BB:1464:G:H2'	23:BB:1465:G:C8	2.33	0.64
23:BB:2893:A:H5"	23:BB:2894:G:H5'	1.79	0.64
26:BD:113:SER:HB3	26:BD:168:GLU:N	2.12	0.64
29:BG:84:LYS:HG3	29:BG:131:VAL:CA	2.26	0.64
35:BN:32:GLU:O	35:BN:114:GLU:HA	1.97	0.64
38:BQ:63:ARG:HH22	38:BQ:96:ASP:CA	2.04	0.64
38:BQ:91:ARG:HH12	39:BR:10:LYS:HB3	1.62	0.64
49:B2:33:ARG:HH21	49:B2:33:ARG:HB2	1.62	0.64
1:CA:71:A:O2'	1:CA:72:A:H5"	1.98	0.64
1:CA:825:A:H2'	1:CA:826:C:C6	2.33	0.64
1:CA:927:G:H4'	1:CA:1503:A:N7	2.12	0.64
8:CI:79:ARG:NH2	8:CI:102:PHE:HA	2.11	0.64
10:CK:75:GLU:CD	10:CK:75:GLU:H	1.98	0.64
11:CL:113:ARG:HG2	11:CL:118:VAL:HB	1.80	0.64
23:DB:72:U:O2'	23:DB:73:A:H5'	1.97	0.64
23:DB:132:G:H2'	23:DB:133:U:C6	2.32	0.64
23:DB:1021:A:H61	23:DB:1142:A:N6	1.95	0.64
23:DB:2473:U:H2'	23:DB:2473:U:O2	1.96	0.64
23:DB:2502:G:H5'	23:DB:2503:A:C5'	2.23	0.64
32:DK:64:ARG:O	32:DK:82:ASN:HA	1.98	0.64
1:AA:1432:G:H1'	1:AA:1468:A:N6	2.13	0.64
5:AF:18:VAL:HG21	5:AF:58:HIS:ND1	2.13	0.64
23:BB:1060:U:O4	52:BI:131:THR:HG22	1.97	0.64
23:BB:1485:U:H2'	23:BB:1486:U:C6	2.32	0.64
23:BB:2229:U:H2'	23:BB:2230:G:H8	1.62	0.64
42:BU:25:LYS:HE3	42:BU:36:GLU:HA	1.79	0.64
52:BI:25:PRO:O	52:BI:29:GLN:HG2	1.98	0.64
1:CA:735:C:O2'	1:CA:736:C:H5'	1.97	0.64
1:CA:763:G:H2'	1:CA:764:C:H6	1.62	0.64
23:DB:365:U:H2'	23:DB:366:C:C6	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1690:A:H2'	23:DB:1691:C:O4'	1.97	0.64
23:DB:1812:U:H2'	23:DB:1813:G:H8	1.61	0.64
23:DB:2182:U:H2'	23:DB:2183:A:C8	2.32	0.64
23:DB:2425:A:H5'	23:DB:2427:C:O4'	1.96	0.64
28:DF:139:GLU:HG2	28:DF:140:ILE:N	2.10	0.64
29:DG:152:ARG:HG3	29:DG:153:PRO:HD2	1.80	0.64
42:DU:11:ILE:HG22	42:DU:70:ALA:HB3	1.80	0.64
1:AA:845:A:H5"	1:AA:846:G:N7	2.12	0.64
23:BB:72:U:O2'	23:BB:73:A:H5'	1.97	0.64
23:BB:246:C:H2'	23:BB:247:G:H5'	1.78	0.64
23:BB:587:C:O2'	33:BL:19:LEU:HD13	1.98	0.64
23:BB:1220:G:H2'	23:BB:1221:C:C6	2.33	0.64
37:BP:61:ARG:HH21	37:BP:61:ARG:HB3	1.61	0.64
50:B3:41:ARG:HA	50:B3:44:ARG:HH21	1.60	0.64
1:CA:131:A:H2'	1:CA:132:C:H6	1.62	0.64
3:CD:106:PHE:CD1	3:CD:144:ILE:HD11	2.32	0.64
43:DW:49:ASN:HB2	43:DW:61:LYS:H	1.60	0.64
45:DY:16:LEU:H	45:DY:16:LEU:HD22	1.61	0.64
1:AA:859:G:H2'	1:AA:860:A:H8	1.63	0.64
23:BB:154:U:H2'	23:BB:155:A:C8	2.33	0.64
23:BB:2019:A:H2	23:BB:2035:G:H22	1.42	0.64
26:BD:8:LYS:HB2	26:BD:201:LEU:HD21	1.78	0.64
30:BH:80:ILE:HD12	30:BH:144:VAL:HG22	1.79	0.64
40:BS:90:LYS:HD2	40:BS:92:ARG:HH12	1.62	0.64
1:CA:1008:U:H5"	13:CN:23:ARG:NH2	2.13	0.64
3:CD:29:THR:HB	3:CD:30:LYS:NZ	2.12	0.64
4:CE:125:LYS:HD2	4:CE:126:ALA:N	2.12	0.64
20:CB:115:ASP:O	20:CB:119:GLN:HG2	1.97	0.64
23:DB:2213:U:O2	23:DB:2213:U:H2'	1.95	0.64
23:DB:2804:U:H2'	23:DB:2805:C:H6	1.62	0.64
27:DE:176:ASP:HB3	27:DE:179:SER:HB2	1.80	0.64
31:DJ:136:GLN:N	31:DJ:137:PRO:HD3	2.13	0.64
32:DK:118:LEU:C	32:DK:120:PRO:HD2	2.18	0.64
37:DP:61:ARG:HB3	37:DP:61:ARG:HH21	1.61	0.64
38:DQ:104:ALA:HA	39:DR:46:GLU:OE1	1.97	0.64
49:D2:10:LEU:HD11	49:D2:14:ARG:NH1	2.13	0.64
51:D4:9:LYS:HD3	51:D4:9:LYS:H	1.62	0.64
1:AA:229:U:H2'	1:AA:230:G:H8	1.62	0.64
1:AA:415:A:H3'	1:AA:416:G:H8	1.63	0.64
1:AA:1437:A:H2'	1:AA:1438:G:H8	1.63	0.64
3:AD:88:ASN:O	3:AD:92:LEU:HD23	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AG:56:SER:HB3	6:AG:59:GLU:HG3	1.80	0.64
22:BA:56:G:H4'	22:BA:57:A:H5'	1.78	0.64
23:BB:173:A:H2'	23:BB:174:U:C6	2.32	0.64
23:BB:414:C:H2'	23:BB:415:A:C8	2.32	0.64
23:BB:1654:A:H2'	23:BB:1655:A:C8	2.33	0.64
23:BB:1802:A:H2'	23:BB:1803:A:C8	2.33	0.64
23:BB:2352:A:H2'	23:BB:2353:G:O4'	1.98	0.64
27:BE:117:ARG:O	27:BE:186:VAL:HG12	1.98	0.64
32:BK:105:ARG:HD3	32:BK:106:GLU:OE1	1.98	0.64
35:BN:77:ALA:O	35:BN:81:ASN:HB2	1.98	0.64
1:CA:845:A:H5"	1:CA:846:G:N7	2.13	0.64
4:CE:105:ILE:HD11	4:CE:123:LEU:HB3	1.80	0.64
7:CH:6:ILE:HD11	7:CH:31:LEU:HD23	1.79	0.64
7:CH:51:GLU:HG2	7:CH:52:GLY:H	1.61	0.64
10:CK:28:ASN:ND2	10:CK:46:ALA:HB3	2.12	0.64
20:CB:186:VAL:HB	20:CB:190:SER:CB	2.28	0.64
23:DB:145:C:H2'	23:DB:146:A:C8	2.32	0.64
23:DB:1163:G:H4'	39:DR:92:TRP:NE1	2.13	0.64
23:DB:1407:G:H2'	23:DB:1408:G:H8	1.63	0.64
23:DB:2269:G:C4'	43:DW:19:ARG:HH12	2.11	0.64
26:DD:34:VAL:HB	26:DD:48:ILE:HD11	1.80	0.64
27:DE:33:VAL:O	27:DE:36:ALA:HB3	1.97	0.64
27:DE:189:THR:O	27:DE:193:VAL:HG23	1.96	0.64
41:DT:38:ALA:HB3	41:DT:81:LYS:NZ	2.12	0.64
49:D2:1:MET:HG2	49:D2:2:LYS:H	1.63	0.64
1:AA:270:A:H2'	1:AA:271:C:C6	2.32	0.64
1:AA:1070:U:H2'	1:AA:1071:C:C6	2.33	0.64
8:AI:23:GLY:H	8:AI:60:LEU:HA	1.63	0.64
13:AN:58:ARG:HH11	13:AN:58:ARG:HB3	1.63	0.64
20:AB:128:LEU:HD12	20:AB:132:GLU:HB3	1.79	0.64
23:BB:155:A:H2'	23:BB:156:A:H8	1.63	0.64
23:BB:2720:U:H5"	37:BP:52:ARG:HH21	1.62	0.64
23:BB:2804:U:H2'	23:BB:2805:C:H6	1.63	0.64
26:BD:91:THR:HG23	26:BD:92:VAL:H	1.62	0.64
26:BD:115:GLY:HA2	26:BD:167:ASN:HB2	1.79	0.64
37:BP:5:LYS:HE2	37:BP:5:LYS:HA	1.80	0.64
40:BS:36:LEU:HD22	40:BS:36:LEU:H	1.61	0.64
1:CA:69:G:N2	1:CA:71:A:H62	1.96	0.64
1:CA:412:A:H4'	1:CA:413:G:OP1	1.98	0.64
1:CA:1320:C:N4	18:CS:36:ARG:HG2	2.13	0.64
1:CA:1323:G:H4'	1:CA:1362:A:C4	2.33	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:25:ARG:CZ	3:CD:26:ALA:HB2	2.26	0.64
12:CM:3:ILE:O	12:CM:56:ARG:HG3	1.98	0.64
23:DB:1100:C:H2'	23:DB:1101:U:H6	1.62	0.64
23:DB:1292:G:H2'	23:DB:1293:C:C6	2.32	0.64
23:DB:2443:C:H2'	23:DB:2444:G:H8	1.63	0.64
26:DD:113:SER:CB	26:DD:168:GLU:H	2.10	0.64
29:DG:132:LEU:HD23	29:DG:132:LEU:H	1.63	0.64
49:D2:33:ARG:CB	49:D2:33:ARG:HH21	2.11	0.64
7:AH:94:VAL:HG23	7:AH:101:ALA:HB2	1.80	0.64
9:AJ:52:LEU:HA	9:AJ:62:ARG:HA	1.79	0.64
20:AB:115:ASP:O	20:AB:119:GLN:HG2	1.97	0.64
23:BB:2749:A:C3'	23:BB:2750:A:H5"	2.28	0.64
25:BC:142:ASN:HA	25:BC:153:LEU:O	1.98	0.64
26:BD:51:THR:CG2	26:BD:76:GLY:HA3	2.28	0.64
26:BD:114:LYS:HZ2	26:BD:116:LYS:NZ	1.84	0.64
26:BD:118:PHE:O	26:BD:119:ALA:HB3	1.97	0.64
30:BH:131:SER:HB3	30:BH:141:LYS:HA	1.79	0.64
30:BH:133:GLN:HB2	30:BH:139:PHE:CB	2.27	0.64
37:BP:4:ILE:C	37:BP:6:GLN:H	2.00	0.64
46:BZ:71:LEU:HD13	46:BZ:76:GLU:HB3	1.80	0.64
1:CA:129:A:H1'	1:CA:130:A:C8	2.33	0.64
1:CA:131:A:H2'	1:CA:132:C:C6	2.33	0.64
1:CA:524:G:H2'	1:CA:525:C:C6	2.33	0.64
1:CA:1404:C:H2'	1:CA:1405:G:C8	2.33	0.64
3:CD:153:ARG:HG3	3:CD:154:VAL:H	1.63	0.64
5:CF:47:LEU:HD21	5:CF:57:ALA:HB3	1.80	0.64
8:CI:42:THR:HA	8:CI:45:MET:SD	2.37	0.64
9:CJ:52:LEU:HA	9:CJ:62:ARG:HA	1.80	0.64
20:CB:62:ARG:HD2	20:CB:62:ARG:H	1.63	0.64
26:DD:51:THR:CG2	26:DD:76:GLY:HA3	2.28	0.64
29:DG:87:GLN:HE21	29:DG:164:ALA:HA	1.63	0.64
33:DL:60:ARG:HH21	33:DL:60:ARG:HB2	1.63	0.64
1:AA:499:A:H4'	1:AA:500:G:H5'	1.80	0.63
1:AA:763:G:H2'	1:AA:764:C:C6	2.32	0.63
1:AA:921:U:H2'	1:AA:922:G:C8	2.33	0.63
1:AA:1210:C:H1'	1:AA:1214:C:H2'	1.80	0.63
21:AU:33:ARG:HG2	21:AU:34:ARG:H	1.64	0.63
23:BB:287:G:H2'	23:BB:288:U:H6	1.63	0.63
23:BB:401:A:H2'	23:BB:402:A:C8	2.33	0.63
23:BB:547:A:C2'	23:BB:548:G:H5'	2.26	0.63
23:BB:1324:G:H1'	23:BB:1616:A:N6	2.13	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:145:MET:HB2	25:BC:152:GLN:HE22	1.64	0.63
28:BF:16:MET:O	28:BF:20:ASN:HA	1.97	0.63
33:BL:60:ARG:HH21	33:BL:60:ARG:HB2	1.63	0.63
34:BM:21:ALA:CB	34:BM:100:LYS:HG2	2.28	0.63
41:BT:67:VAL:C	41:BT:68:LYS:HD3	2.19	0.63
1:CA:958:A:H61	18:CS:53:GLY:HA3	1.64	0.63
1:CA:1004:A:H3'	1:CA:1024:G:N2	2.12	0.63
1:CA:1148:U:H5'	8:CI:6:TYR:OH	1.98	0.63
1:CA:1347:G:N2	1:CA:1373:G:H2'	2.13	0.63
22:DA:7:G:H1'	36:DO:38:GLN:HE22	1.63	0.63
23:DB:720:U:H2'	23:DB:721:A:C8	2.32	0.63
23:DB:1047:G:H1'	23:DB:1110:G:N2	2.12	0.63
23:DB:1486:U:H2'	23:DB:1487:U:H6	1.62	0.63
23:DB:2019:A:H2	23:DB:2035:G:H22	1.44	0.63
23:DB:2183:A:H2'	23:DB:2184:A:C8	2.33	0.63
26:DD:13:ARG:HH12	37:DP:74:GLN:NE2	1.96	0.63
28:DF:101:ARG:HA	28:DF:105:ILE:HD13	1.78	0.63
35:DN:101:GLY:HA2	35:DN:110:MET:H	1.59	0.63
42:DU:85:ARG:CD	42:DU:86:PHE:H	2.02	0.63
1:AA:41:G:H2'	1:AA:42:G:C8	2.33	0.63
1:AA:865:A:C2	1:AA:918:A:H4'	2.33	0.63
23:BB:549:G:H3'	23:BB:549:G:OP2	1.98	0.63
23:BB:1439:A:C6	23:BB:1552:A:N7	2.66	0.63
32:BK:64:ARG:O	32:BK:82:ASN:HA	1.97	0.63
44:BX:39:GLN:O	44:BX:42:LEU:HB2	1.98	0.63
48:B1:26:LYS:HB2	48:B1:52:LYS:HZ2	1.63	0.63
3:CD:25:ARG:NH1	3:CD:26:ALA:HB2	2.12	0.63
6:CG:49:LEU:HD21	6:CG:60:ALA:HB3	1.79	0.63
22:DA:28:C:OP1	36:DO:31:THR:HG21	1.98	0.63
23:DB:189:G:H2'	23:DB:205:G:N2	2.13	0.63
23:DB:300:A:H2'	23:DB:334:C:H1'	1.80	0.63
23:DB:699:A:H4'	23:DB:1634:A:N7	2.12	0.63
23:DB:1060:U:O4	23:DB:1088:A:N6	2.31	0.63
23:DB:1935:G:H1'	23:DB:1964:G:N2	2.13	0.63
31:DJ:13:ARG:O	31:DJ:52:ASP:HA	1.98	0.63
52:DI:41:PHE:O	52:DI:45:THR:HG23	1.98	0.63
1:AA:51:A:H5"	1:AA:52:C:H5"	1.80	0.63
1:AA:865:A:H5'	1:AA:1078:U:O4	1.99	0.63
1:AA:918:A:H2'	1:AA:919:A:C8	2.32	0.63
4:AE:37:VAL:HG11	4:AE:113:VAL:HG12	1.81	0.63
8:AI:27:ILE:HB	8:AI:34:LEU:HB2	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:98:G:N1	24:BV:14:LYS:HB2	2.12	0.63
23:BB:98:G:H1	42:BU:6:ARG:HH12	1.47	0.63
23:BB:968:C:H2'	23:BB:969:G:H8	1.63	0.63
23:BB:1341:G:H3'	23:BB:1397:U:O2	1.99	0.63
23:BB:2393:U:H5"	33:BL:62:PRO:HG3	1.80	0.63
23:BB:2443:C:H2'	23:BB:2444:G:C8	2.34	0.63
25:BC:77:VAL:HG22	25:BC:113:ASP:H	1.63	0.63
37:BP:24:THR:O	37:BP:25:VAL:HG22	1.98	0.63
41:BT:1:MET:HB2	41:BT:2:ILE:HD13	1.80	0.63
43:BW:77:LYS:O	43:BW:78:PHE:HB2	1.97	0.63
1:CA:370:C:O2'	1:CA:371:A:H5'	1.99	0.63
1:CA:437:U:H4'	3:CD:153:ARG:HH12	1.63	0.63
1:CA:492:C:H2'	1:CA:493:A:N3	2.12	0.63
1:CA:859:G:H2'	1:CA:860:A:H8	1.61	0.63
1:CA:1330:U:H4'	12:CM:69:ARG:HH12	1.63	0.63
2:CC:62:SER:HA	2:CC:97:PRO:O	1.98	0.63
11:CL:40:THR:HG22	11:CL:41:PRO:HD2	1.79	0.63
20:CB:101:THR:HG22	20:CB:174:GLU:OE1	1.98	0.63
22:DA:15:A:H3'	22:DA:15:A:OP2	1.97	0.63
22:DA:46:A:H2'	22:DA:47:C:O4'	1.98	0.63
23:DB:1050:A:H2'	23:DB:1051:G:O4'	1.98	0.63
23:DB:2861:U:H2'	23:DB:2862:G:H8	1.62	0.63
23:DB:2898:U:H2'	23:DB:2899:A:H8	1.63	0.63
26:DD:178:VAL:HG12	26:DD:179:ARG:H	1.64	0.63
27:DE:97:ASN:HD21	27:DE:100:MET:HG3	1.62	0.63
31:DJ:89:PHE:HE1	31:DJ:93:ILE:HD13	1.64	0.63
32:DK:43:ILE:HG21	32:DK:46:ALA:HB2	1.80	0.63
33:DL:57:LEU:O	33:DL:61:LEU:HD13	1.98	0.63
36:DO:40:ILE:HA	36:DO:47:VAL:HA	1.80	0.63
45:DY:6:ILE:HA	45:DY:56:VAL:HG13	1.79	0.63
1:AA:978:A:H5'	1:AA:1362:A:N6	2.14	0.63
3:AD:25:ARG:NH1	3:AD:26:ALA:HB2	2.14	0.63
13:AN:9:GLU:HB2	13:AN:62:ARG:NE	2.13	0.63
13:AN:26:LEU:HA	13:AN:29:ILE:HD12	1.81	0.63
23:BB:2144:G:O2'	23:BB:2146:C:H5'	1.99	0.63
25:BC:158:GLY:N	25:BC:194:VAL:HG13	2.13	0.63
29:BG:89:VAL:HG12	29:BG:90:GLY:H	1.63	0.63
1:CA:1342:C:H2'	1:CA:1343:G:H8	1.63	0.63
23:DB:1857:G:HO2'	23:DB:1858:A:H8	1.46	0.63
23:DB:2353:G:H1'	43:DW:30:VAL:CG1	2.28	0.63
25:DC:77:VAL:HG22	25:DC:113:ASP:H	1.64	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:68:PHE:HB3	26:DD:73:VAL:HA	1.80	0.63
42:DU:27:VAL:HG23	42:DU:33:VAL:HG12	1.80	0.63
43:DW:44:PHE:O	43:DW:78:PHE:HA	1.98	0.63
8:AI:20:ILE:H	8:AI:20:ILE:HD12	1.62	0.63
23:BB:1346:G:O2'	23:BB:1347:A:H5'	1.98	0.63
23:BB:2331:G:N2	23:BB:2336:A:H8	1.96	0.63
23:BB:2895:G:H2'	23:BB:2896:C:C6	2.34	0.63
32:BK:7:MET:SD	32:BK:20:MET:HB2	2.39	0.63
43:BW:44:PHE:O	43:BW:78:PHE:HA	1.99	0.63
51:B4:2:LYS:HG2	51:B4:3:VAL:H	1.64	0.63
11:CL:122:LYS:HD2	11:CL:123:ALA:H	1.64	0.63
18:CS:5:LYS:O	18:CS:6:LYS:HD2	1.97	0.63
23:DB:548:G:H2'	23:DB:548:G:N3	2.12	0.63
23:DB:1220:G:H2'	23:DB:1221:C:C6	2.34	0.63
23:DB:1508:A:H5'	23:DB:1509:A:N6	2.14	0.63
23:DB:1735:A:H2'	23:DB:1736:U:C6	2.34	0.63
28:DF:60:SER:HB2	28:DF:62:GLN:OE1	1.99	0.63
41:DT:67:VAL:C	41:DT:68:LYS:HD3	2.19	0.63
44:DX:26:PHE:HD1	44:DX:27:ASN:HD22	1.44	0.63
1:AA:1173:U:H2'	1:AA:1174:G:C8	2.33	0.63
1:AA:1258:G:H2'	1:AA:1259:C:H6	1.64	0.63
3:AD:138:PRO:HA	3:AD:181:PHE:CD2	2.31	0.63
4:AE:125:LYS:HD2	4:AE:126:ALA:N	2.13	0.63
11:AL:49:ARG:HG2	11:AL:89:LEU:HD21	1.80	0.63
23:BB:155:A:H2'	23:BB:156:A:C8	2.34	0.63
23:BB:2313:C:H4'	28:BF:87:LYS:HB3	1.80	0.63
23:BB:2658:C:H5'	29:BG:159:LYS:NZ	2.14	0.63
23:BB:2752:C:H3'	23:BB:2753:A:H8	1.63	0.63
23:BB:2800:A:H2'	23:BB:2801:G:O4'	1.99	0.63
25:BC:20:ASN:HB3	25:BC:23:LEU:HD22	1.79	0.63
38:BQ:63:ARG:HH12	38:BQ:96:ASP:HA	1.63	0.63
41:BT:7:LEU:HA	41:BT:9:LYS:HZ1	1.64	0.63
1:CA:1307:U:H2'	1:CA:1308:U:C6	2.33	0.63
1:CA:1380:U:O4	6:CG:2:ARG:HB2	1.99	0.63
3:CD:160:LEU:HA	3:CD:163:GLN:HG3	1.80	0.63
13:CN:42:ASN:O	13:CN:46:LYS:HG2	1.99	0.63
21:CU:48:LYS:HA	21:CU:51:ALA:HB3	1.80	0.63
23:DB:195:A:H1'	23:DB:250:G:N2	2.12	0.63
23:DB:1205:A:H4'	23:DB:1206:G:OP2	1.98	0.63
23:DB:1654:A:H2'	23:DB:1655:A:C8	2.33	0.63
23:DB:1812:U:H1'	25:DC:43:ASN:ND2	2.06	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DG:89:VAL:HB	29:DG:159:LYS:HA	1.81	0.63
31:DJ:37:ARG:HE	31:DJ:110:PRO:HG3	1.63	0.63
1:AA:1234:C:O2'	1:AA:1235:U:H5'	1.99	0.63
1:AA:1236:A:H4'	1:AA:1304:G:H4'	1.81	0.63
4:AE:106:ALA:HB1	4:AE:110:MET:HB3	1.81	0.63
5:AF:42:TRP:HB2	5:AF:59:TYR:HB2	1.78	0.63
23:BB:37:C:H4'	23:BB:451:U:OP1	1.98	0.63
23:BB:350:G:H2'	23:BB:351:C:O4'	1.99	0.63
23:BB:1373:A:H2'	23:BB:1374:G:O4'	1.98	0.63
23:BB:1551:A:H3'	23:BB:1552:A:H5"	1.81	0.63
23:BB:1735:A:H2'	23:BB:1736:U:C6	2.33	0.63
26:BD:97:SER:HB3	26:BD:99:GLU:HG2	1.80	0.63
38:BQ:91:ARG:HG2	38:BQ:93:ILE:HG22	1.79	0.63
8:CI:23:GLY:H	8:CI:60:LEU:HA	1.62	0.63
9:CJ:56:HIS:O	9:CJ:57:VAL:HG12	1.99	0.63
17:CR:55:ALA:HA	17:CR:58:ILE:HD13	1.80	0.63
24:DV:28:ALA:HA	24:DV:88:HIS:CE1	2.33	0.63
38:DQ:86:SER:O	39:DR:51:VAL:HA	1.99	0.63
46:DZ:71:LEU:HD13	46:DZ:76:GLU:HB3	1.81	0.63
1:AA:412:A:H4'	1:AA:413:G:OP1	1.99	0.63
1:AA:825:A:H2'	1:AA:826:C:H6	1.62	0.63
1:AA:950:U:H2'	1:AA:951:G:C8	2.33	0.63
12:AM:63:VAL:HG13	12:AM:67:ASP:HB2	1.81	0.63
13:AN:63:CYS:HB3	13:AN:67:GLY:H	1.64	0.63
19:AT:4:LYS:HZ1	19:AT:6:ALA:HB2	1.63	0.63
21:AU:48:LYS:HA	21:AU:51:ALA:HB3	1.79	0.63
22:BA:28:C:OP1	36:BO:31:THR:HG21	1.99	0.63
23:BB:140:C:H4'	23:BB:141:G:N2	2.12	0.63
23:BB:654:A:H2'	23:BB:655:A:H5"	1.81	0.63
23:BB:1060:U:O4	23:BB:1088:A:N6	2.31	0.63
23:BB:1722:A:H2'	23:BB:1723:G:C8	2.34	0.63
23:BB:1856:U:H2'	23:BB:1857:G:O4'	1.99	0.63
23:BB:2748:A:H5"	29:BG:3:VAL:HG21	1.81	0.63
33:BL:141:LYS:HD3	33:BL:142:ILE:H	1.63	0.63
35:BN:70:THR:HB	35:BN:75:ILE:HD11	1.78	0.63
1:CA:950:U:H2'	1:CA:951:G:C8	2.34	0.63
10:CK:28:ASN:HD21	10:CK:46:ALA:HB3	1.62	0.63
22:DA:6:G:H2'	22:DA:7:G:H8	1.64	0.63
23:DB:286:U:H2'	23:DB:287:G:H8	1.63	0.63
23:DB:2080:A:H4'	46:DZ:19:SER:OG	1.98	0.63
23:DB:2428:G:H21	33:DL:60:ARG:HE	1.47	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:20:ASN:HB3	25:DC:23:LEU:HD22	1.81	0.63
41:DT:32:LEU:N	41:DT:83:ALA:HB3	2.13	0.63
46:DZ:40:VAL:CG2	46:DZ:45:ARG:H	2.11	0.63
49:D2:27:GLY:O	49:D2:30:VAL:HB	1.99	0.63
4:AE:45:VAL:HG12	4:AE:116:VAL:HG23	1.79	0.63
23:BB:274:C:H2'	23:BB:275:C:O4'	1.99	0.63
23:BB:1723:G:N7	23:BB:1737:G:N2	2.47	0.63
23:BB:2834:G:H2'	23:BB:2879:A:N6	2.13	0.63
26:BD:40:LEU:HA	26:BD:45:TYR:N	2.14	0.63
42:BU:27:VAL:HG23	42:BU:33:VAL:HG12	1.79	0.63
45:BY:8:GLN:CG	45:BY:31:ILE:HA	2.21	0.63
1:CA:204:G:H2'	1:CA:205:A:C8	2.34	0.63
1:CA:376:G:H2'	1:CA:377:G:H8	1.64	0.63
1:CA:462:G:H2'	1:CA:462:G:N3	2.13	0.63
1:CA:620:C:C2	3:CD:131:ILE:HD13	2.33	0.63
1:CA:677:U:H2'	1:CA:678:U:H6	1.63	0.63
3:CD:29:THR:HG22	3:CD:30:LYS:H	1.64	0.63
4:CE:158:LYS:HZ3	7:CH:63:LYS:HD3	1.62	0.63
7:CH:94:VAL:HG23	7:CH:101:ALA:HB2	1.80	0.63
23:DB:401:A:H2'	23:DB:402:A:C8	2.33	0.63
23:DB:521:U:H2'	23:DB:522:A:C8	2.34	0.63
23:DB:594:U:H2'	23:DB:595:C:H6	1.64	0.63
23:DB:963:U:H5"	56:DB:3697:HOH:O	1.99	0.63
23:DB:1080:A:H2'	23:DB:1081:U:C6	2.32	0.63
23:DB:1593:A:H2'	23:DB:1594:U:C6	2.34	0.63
23:DB:1796:U:H2'	23:DB:1797:G:H8	1.63	0.63
35:DN:77:ALA:O	35:DN:81:ASN:HB2	1.99	0.63
36:DO:17:LYS:O	36:DO:21:LEU:HB2	1.99	0.63
45:DY:12:ALA:HA	45:DY:15:ARG:HD3	1.81	0.63
47:D0:8:THR:HG23	47:D0:11:LYS:H	1.64	0.63
52:DI:72:THR:HG22	52:DI:115:ASP:OD2	1.98	0.63
52:DI:78:LEU:HA	52:DI:81:LYS:HE2	1.81	0.63
1:AA:154:U:H2'	1:AA:155:A:C8	2.33	0.62
1:AA:208:U:H2'	1:AA:210:C:N3	2.14	0.62
1:AA:437:U:H4'	3:AD:153:ARG:HH12	1.62	0.62
1:AA:1134:G:C2	1:AA:1135:U:H1'	2.33	0.62
8:AI:42:THR:HA	8:AI:45:MET:SD	2.38	0.62
23:BB:1166:G:H2'	23:BB:1167:C:H6	1.64	0.62
23:BB:1309:G:OP1	49:B2:9:VAL:HG12	1.99	0.62
23:BB:1508:A:H5'	23:BB:1509:A:N6	2.13	0.62
23:BB:1678:A:H2'	23:BB:1679:A:H8	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2277:G:H5”	34:BM:86:LYS:HB2	1.81	0.62
23:BB:2841:C:H2’	23:BB:2842:G:C8	2.33	0.62
24:BV:80:HIS:CD2	24:BV:83:LYS:HB2	2.33	0.62
25:BC:202:ARG:HH11	25:BC:213:ARG:NE	1.96	0.62
34:BM:34:LYS:HB3	34:BM:129:THR:HG22	1.80	0.62
38:BQ:14:LYS:O	38:BQ:18:LYS:HB2	1.98	0.62
8:CI:25:GLY:HA3	8:CI:57:VAL:N	2.13	0.62
9:CJ:28:THR:O	9:CJ:32:THR:HG22	1.98	0.62
9:CJ:52:LEU:H	9:CJ:52:LEU:HD12	1.64	0.62
23:DB:414:C:H2’	23:DB:415:A:H8	1.63	0.62
23:DB:581:C:H2’	23:DB:582:A:C8	2.33	0.62
23:DB:1080:A:H4’	52:DI:126:ARG:HD3	1.81	0.62
29:DG:26:LYS:HZ2	29:DG:26:LYS:HB3	1.64	0.62
32:DK:7:MET:SD	32:DK:20:MET:HB2	2.39	0.62
1:AA:462:G:H2’	1:AA:462:G:N3	2.12	0.62
1:AA:750:C:O2	14:AO:22:GLY:HA3	2.00	0.62
23:BB:1244:A:H5”	33:BL:8:PRO:CD	2.27	0.62
23:BB:1341:G:N2	23:BB:1398:C:H4’	2.13	0.62
23:BB:1690:A:H2’	23:BB:1691:C:O4’	1.98	0.62
23:BB:2898:U:H2’	23:BB:2899:A:H8	1.64	0.62
24:BV:28:ALA:HA	24:BV:88:HIS:CE1	2.34	0.62
26:BD:117:GLY:HA2	26:BD:164:GLN:CD	2.19	0.62
26:BD:179:ARG:HH11	26:BD:179:ARG:HB3	1.64	0.62
28:BF:102:LEU:HD22	28:BF:103:ILE:H	1.65	0.62
29:BG:152:ARG:HG3	29:BG:153:PRO:HD2	1.81	0.62
30:BH:58:LEU:O	30:BH:62:LEU:HG	1.99	0.62
40:BS:17:VAL:C	40:BS:19:LEU:H	2.01	0.62
1:CA:600:A:H2’	1:CA:601:G:H8	1.63	0.62
1:CA:978:A:HO2’	1:CA:1322:C:H5	1.46	0.62
22:DA:29:A:H3’	22:DA:30:C:H6	1.64	0.62
23:DB:639:U:H2’	23:DB:640:C:H6	1.64	0.62
23:DB:1287:A:N7	35:DN:105:GLY:HA3	2.13	0.62
23:DB:1853:A:N1	23:DB:2087:G:H1’	2.14	0.62
23:DB:2141:G:H2’	23:DB:2142:A:C8	2.34	0.62
33:DL:85:VAL:HG21	33:DL:94:THR:HB	1.81	0.62
52:DI:121:ILE:HD13	52:DI:121:ILE:N	2.13	0.62
1:AA:792:A:H1’	1:AA:794:A:N7	2.14	0.62
1:AA:1278:G:H4’	1:AA:1279:G:C5’	2.29	0.62
3:AD:56:GLU:HG2	3:AD:198:LEU:HD12	1.81	0.62
7:AH:6:ILE:HB	7:AH:76:ARG:NH1	2.15	0.62
7:AH:25:THR:HA	7:AH:58:LEU:O	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AJ:28:THR:O	9:AJ:32:THR:HG22	1.99	0.62
13:AN:42:ASN:O	13:AN:46:LYS:HG2	1.99	0.62
18:AS:31:ARG:HA	18:AS:49:ALA:HB3	1.81	0.62
23:BB:135:U:O2'	23:BB:136:G:H5'	1.99	0.62
23:BB:988:A:H3'	45:BY:13:ILE:HD11	1.80	0.62
23:BB:1847:A:H4'	23:BB:1848:A:C8	2.34	0.62
23:BB:2563:U:H2'	23:BB:2565:A:OP2	2.00	0.62
25:BC:36:ASN:HD21	25:BC:85:ASN:ND2	1.97	0.62
28:BF:168:LEU:HD13	28:BF:169:LEU:N	2.14	0.62
30:BH:5:LEU:O	30:BH:6:LEU:HD12	1.99	0.62
52:BI:105:LEU:HD11	52:BI:139:VAL:HG11	1.80	0.62
6:CG:14:ASP:CB	6:CG:19:SER:H	2.12	0.62
6:CG:86:VAL:HG13	6:CG:151:ALA:O	1.98	0.62
9:CJ:24:GLU:HG3	9:CJ:90:LEU:HD11	1.81	0.62
23:DB:264:C:C2'	23:DB:265:A:H5"	2.28	0.62
23:DB:718:A:H3'	23:DB:719:C:H6	1.64	0.62
23:DB:784:G:C6	25:DC:227:VAL:HG11	2.34	0.62
23:DB:987:C:H2'	23:DB:988:A:O4'	1.99	0.62
23:DB:2841:C:H2'	23:DB:2842:G:C8	2.34	0.62
23:DB:2898:U:H2'	23:DB:2899:A:C8	2.35	0.62
25:DC:136:VAL:HG12	25:DC:137:GLY:H	1.64	0.62
26:DD:8:LYS:HB2	26:DD:201:LEU:HD21	1.80	0.62
26:DD:136:ASN:HD21	26:DD:139:SER:C	2.03	0.62
28:DF:168:LEU:HD13	28:DF:169:LEU:N	2.14	0.62
30:DH:53:GLU:HB2	30:DH:57:LYS:HB3	1.82	0.62
33:DL:79:LEU:HD23	33:DL:82:LEU:HD11	1.81	0.62
41:DT:7:LEU:HA	41:DT:9:LYS:HZ1	1.62	0.62
42:DU:87:GLU:OE2	42:DU:88:ASP:HB3	1.98	0.62
50:D3:54:LEU:O	50:D3:58:ILE:HG13	1.98	0.62
52:DI:27:LEU:HD12	52:DI:32:VAL:HG11	1.79	0.62
2:AC:62:SER:HA	2:AC:97:PRO:O	1.99	0.62
5:AF:47:LEU:HD21	5:AF:57:ALA:HB3	1.81	0.62
6:AG:45:ALA:HB1	6:AG:120:ALA:HB2	1.79	0.62
9:AJ:55:PRO:HA	13:AN:80:ARG:NH2	2.15	0.62
14:AO:52:ARG:HD2	23:BB:715:A:N6	2.13	0.62
23:BB:195:A:H1'	23:BB:250:G:N2	2.14	0.62
23:BB:1407:G:H2'	23:BB:1408:G:H8	1.63	0.62
23:BB:1535:A:H5"	23:BB:1536:C:H5	1.64	0.62
26:BD:136:ASN:HD21	26:BD:139:SER:C	2.03	0.62
26:BD:178:VAL:HG12	26:BD:179:ARG:H	1.64	0.62
36:BO:17:LYS:O	36:BO:21:LEU:HB2	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BU:11:ILE:HG22	42:BU:70:ALA:HB3	1.80	0.62
1:CA:750:C:O2	14:CO:22:GLY:HA3	1.98	0.62
1:CA:1144:G:H21	1:CA:1146:A:H62	1.46	0.62
18:CS:10:ILE:HD12	18:CS:15:LEU:HG	1.81	0.62
23:DB:1341:G:N2	23:DB:1398:C:H4'	2.13	0.62
23:DB:1353:A:H2'	23:DB:1354:A:C8	2.34	0.62
23:DB:2654:A:N1	23:DB:2665:A:H5"	2.14	0.62
26:DD:109:VAL:HG11	26:DD:193:VAL:HB	1.81	0.62
26:DD:115:GLY:HA2	26:DD:167:ASN:HB2	1.81	0.62
29:DG:89:VAL:HG12	29:DG:90:GLY:H	1.64	0.62
31:DJ:40:HIS:ND1	31:DJ:41:LYS:HG3	2.14	0.62
32:DK:38:ILE:O	32:DK:39:ILE:HD13	2.00	0.62
42:DU:71:ILE:HD11	42:DU:82:VAL:HG22	1.82	0.62
1:AA:97:G:H2'	1:AA:98:A:O4'	1.99	0.62
1:AA:1004:A:H3'	1:AA:1024:G:N2	2.14	0.62
1:AA:1085:U:H3'	1:AA:1086:U:C5	2.34	0.62
11:AL:40:THR:HG22	11:AL:41:PRO:HD2	1.81	0.62
22:BA:7:G:H1'	36:BO:38:GLN:HE22	1.63	0.62
22:BA:74:U:H2'	22:BA:75:G:C8	2.33	0.62
23:BB:445:C:O2'	23:BB:446:G:H5'	1.99	0.62
23:BB:495:G:H1'	40:BS:57:ASN:ND2	2.15	0.62
23:BB:946:C:H2'	23:BB:947:A:H8	1.65	0.62
23:BB:1260:A:H2'	23:BB:1261:C:C6	2.34	0.62
23:BB:2066:C:O2'	23:BB:2067:G:H5'	1.98	0.62
23:BB:2810:A:H2'	23:BB:2811:G:O4'	1.99	0.62
32:BK:38:ILE:O	32:BK:39:ILE:HD13	1.99	0.62
1:CA:946:A:H2'	1:CA:947:G:H8	1.63	0.62
1:CA:1053:G:H4'	1:CA:1054:C:H5'	1.81	0.62
2:CC:59:PRO:HG2	2:CC:62:SER:OG	2.00	0.62
23:DB:545:U:H4'	23:DB:550:C:O2	2.00	0.62
23:DB:1198:U:H2'	23:DB:1199:U:C6	2.35	0.62
26:DD:105:LYS:HE3	26:DD:176:ASP:OD1	1.99	0.62
28:DF:62:GLN:OE1	28:DF:94:ARG:HG2	2.00	0.62
30:DH:41:LYS:O	30:DH:44:ILE:HG12	1.99	0.62
32:DK:70:ARG:HB3	32:DK:76:VAL:HG22	1.82	0.62
38:DQ:57:ARG:HH11	38:DQ:57:ARG:CB	2.12	0.62
38:DQ:74:SER:OG	38:DQ:77:LYS:HD3	2.00	0.62
6:AG:14:ASP:N	6:AG:23:ALA:HB2	2.13	0.62
8:AI:126:PHE:CE1	8:AI:129:ARG:HD3	2.35	0.62
11:AL:113:ARG:HG2	11:AL:118:VAL:HB	1.82	0.62
19:AT:24:ARG:HD2	19:AT:28:ARG:NH2	2.14	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:172:A:H2'	23:BB:173:A:H8	1.63	0.62
23:BB:639:U:H2'	23:BB:640:C:H6	1.64	0.62
23:BB:675:A:H4'	27:BE:62:GLN:HE22	1.63	0.62
23:BB:1593:A:H2'	23:BB:1594:U:C6	2.35	0.62
23:BB:1704:C:O2'	23:BB:1705:A:H5'	1.99	0.62
28:BF:104:THR:C	28:BF:108:PRO:HG2	2.20	0.62
31:BJ:23:LYS:HE2	31:BJ:142:ILE:HA	1.82	0.62
32:BK:43:ILE:HG21	32:BK:46:ALA:HB2	1.80	0.62
36:BO:53:THR:HB	36:BO:65:THR:HG22	1.81	0.62
1:CA:162:A:H2'	1:CA:163:C:O4'	2.00	0.62
1:CA:482:A:H2'	1:CA:483:C:O4'	2.00	0.62
1:CA:763:G:H2'	1:CA:764:C:C6	2.34	0.62
4:CE:37:VAL:HG11	4:CE:113:VAL:HG12	1.82	0.62
8:CI:18:VAL:HG11	8:CI:82:ILE:HG12	1.81	0.62
13:CN:26:LEU:HA	13:CN:29:ILE:HD12	1.82	0.62
20:CB:205:ALA:O	20:CB:209:VAL:HG22	1.98	0.62
23:DB:2064:C:H2'	23:DB:2065:C:C6	2.33	0.62
23:DB:2102:G:H2'	23:DB:2103:C:O4'	1.99	0.62
25:DC:94:LEU:HA	25:DC:100:ARG:HB3	1.80	0.62
28:DF:72:SER:HA	28:DF:80:GLN:N	2.15	0.62
34:DM:71:LYS:HB3	34:DM:93:VAL:HG12	1.81	0.62
37:DP:24:THR:O	37:DP:25:VAL:HG22	1.99	0.62
38:DQ:14:LYS:O	38:DQ:18:LYS:HB2	1.99	0.62
44:DX:1:MET:HB3	44:DX:4:LYS:HD3	1.80	0.62
1:AA:46:G:O2'	1:AA:365:U:H1'	1.99	0.62
1:AA:1323:G:H4'	1:AA:1362:A:C4	2.35	0.62
3:AD:96:ARG:HB3	3:AD:98:ASP:OD2	2.00	0.62
23:BB:189:G:H2'	23:BB:205:G:N2	2.14	0.62
23:BB:784:G:N1	25:BC:227:VAL:HG11	2.15	0.62
23:BB:1133:A:H4'	23:BB:1134:A:O5'	2.00	0.62
23:BB:1406:U:H2'	23:BB:1407:G:C8	2.35	0.62
23:BB:1657:U:O2'	23:BB:1658:C:H5'	2.00	0.62
23:BB:1674:G:H21	23:BB:1677:A:N6	1.96	0.62
23:BB:2312:U:O2	28:BF:38:GLY:HA3	1.99	0.62
28:BF:36:ASN:HA	28:BF:87:LYS:HA	1.82	0.62
29:BG:132:LEU:HD23	29:BG:132:LEU:H	1.64	0.62
38:BQ:65:ASN:CB	38:BQ:75:TYR:HB2	2.29	0.62
46:BZ:6:GLN:NE2	46:BZ:50:ARG:H	1.94	0.62
1:CA:154:U:H2'	1:CA:155:A:C8	2.35	0.62
1:CA:1092:A:H5"	6:CG:3:ARG:HH11	1.64	0.62
3:CD:84:ASN:ND2	4:CE:101:GLY:HA3	2.14	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:63:VAL:HG13	12:CM:67:ASP:HB2	1.82	0.62
13:CN:63:CYS:HB3	13:CN:67:GLY:H	1.63	0.62
23:DB:522:A:H2'	23:DB:523:C:C6	2.35	0.62
23:DB:2834:G:H1'	23:DB:2883:A:H61	1.63	0.62
32:DK:104:THR:H	32:DK:107:LEU:HD12	1.64	0.62
34:DM:64:TRP:HB2	34:DM:104:GLU:HB2	1.81	0.62
1:AA:131:A:H2'	1:AA:132:C:C6	2.34	0.62
1:AA:678:U:H2'	1:AA:679:C:C6	2.35	0.62
1:AA:1132:C:H2'	1:AA:1133:G:C8	2.34	0.62
1:AA:1414:U:H2'	1:AA:1415:G:H8	1.65	0.62
6:AG:78:ARG:HH11	6:AG:81:GLY:H	1.47	0.62
23:BB:1760:C:H2'	23:BB:1761:C:O4'	1.99	0.62
23:BB:1778:U:H2'	23:BB:1784:A:H62	1.64	0.62
23:BB:2073:C:H5"	25:BC:227:VAL:HG12	1.80	0.62
23:BB:2737:G:H2'	23:BB:2738:A:C8	2.34	0.62
23:BB:2772:C:H2'	23:BB:2773:C:H6	1.64	0.62
23:BB:2820:A:H4'	35:BN:3:HIS:ND1	2.15	0.62
28:BF:41:GLU:O	28:BF:43:ILE:HG22	2.00	0.62
28:BF:72:SER:HA	28:BF:80:GLN:N	2.15	0.62
30:BH:32:PRO:O	30:BH:33:GLN:HB2	1.99	0.62
31:BJ:136:GLN:N	31:BJ:137:PRO:HD3	2.15	0.62
42:BU:11:ILE:O	42:BU:12:VAL:HB	2.00	0.62
46:BZ:45:ARG:HE	46:BZ:47:VAL:CG1	2.13	0.62
1:CA:865:A:C2	1:CA:918:A:H4'	2.34	0.62
11:CL:14:LYS:HG2	11:CL:16:ALA:H	1.63	0.62
19:CT:4:LYS:HZ1	19:CT:6:ALA:HB2	1.63	0.62
20:CB:71:THR:CG2	20:CB:94:ARG:H	2.12	0.62
23:DB:557:C:H2'	23:DB:558:U:C6	2.35	0.62
23:DB:946:C:H2'	23:DB:947:A:H8	1.64	0.62
23:DB:947:A:H2'	23:DB:948:C:C6	2.35	0.62
23:DB:1549:A:H2'	23:DB:1550:C:C6	2.34	0.62
23:DB:1760:C:H2'	23:DB:1761:C:O4'	1.98	0.62
23:DB:1778:U:H2'	23:DB:1784:A:N6	2.15	0.62
23:DB:2156:G:H2'	23:DB:2157:G:H4'	1.81	0.62
23:DB:2443:C:H2'	23:DB:2444:G:C8	2.35	0.62
36:DO:67:ASN:HB3	36:DO:70:ALA:HB2	1.82	0.62
36:DO:111:ARG:HD2	36:DO:117:PHE:O	2.00	0.62
38:DQ:91:ARG:HH12	39:DR:10:LYS:CB	2.12	0.62
42:DU:9:GLU:HG3	42:DU:21:ARG:HD2	1.81	0.62
45:DY:7:THR:HB	45:DY:55:LYS:H	1.64	0.62
1:AA:266:G:O2'	1:AA:267:C:H3'	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:658:C:H2'	1:AA:659:U:H6	1.63	0.62
1:AA:806:C:H2'	1:AA:807:A:C8	2.35	0.62
1:AA:834:U:H2'	1:AA:835:U:C6	2.35	0.62
1:AA:1151:A:HO2'	1:AA:1152:A:H8	1.45	0.62
1:AA:1238:A:H5'	1:AA:1336:C:H41	1.64	0.62
18:AS:42:ASN:N	18:AS:42:ASN:HD22	1.95	0.62
20:AB:62:ARG:HD2	20:AB:62:ARG:H	1.65	0.62
20:AB:221:ARG:HG3	20:AB:222:GLU:N	2.15	0.62
21:AU:40:PRO:HA	21:AU:44:ARG:HB2	1.80	0.62
23:BB:18:U:H2'	23:BB:19:A:H8	1.64	0.62
23:BB:1149:G:H2'	23:BB:1150:C:C6	2.35	0.62
23:BB:1287:A:H3'	23:BB:1288:G:H21	1.64	0.62
23:BB:2269:G:C4'	43:BW:19:ARG:HH12	2.12	0.62
23:BB:2898:U:H2'	23:BB:2899:A:C8	2.35	0.62
33:BL:19:LEU:O	33:BL:21:ARG:HG2	2.00	0.62
52:BI:85:ILE:HD13	52:BI:137:LEU:HD21	1.82	0.62
1:CA:487:A:H2'	1:CA:488:C:O4'	2.00	0.62
5:CF:3:HIS:CE1	5:CF:95:ALA:H	2.18	0.62
23:DB:704:G:H2'	23:DB:726:G:N2	2.14	0.62
24:DV:80:HIS:CD2	24:DV:83:LYS:HB2	2.35	0.62
25:DC:36:ASN:HD21	25:DC:85:ASN:HD21	1.46	0.62
25:DC:70:LYS:HE2	25:DC:99:GLU:HB3	1.82	0.62
30:DH:83:LYS:O	30:DH:90:LEU:HA	2.00	0.62
31:DJ:40:HIS:CE1	31:DJ:41:LYS:HG3	2.35	0.62
32:DK:71:ARG:HG3	32:DK:105:ARG:HH21	1.65	0.62
43:DW:39:GLN:NE2	43:DW:43:LYS:HB2	2.14	0.62
1:AA:335:C:H2'	1:AA:336:A:C8	2.34	0.62
1:AA:482:A:H2'	1:AA:483:C:O4'	2.00	0.62
1:AA:1053:G:H4'	1:AA:1054:C:H5'	1.82	0.62
1:AA:1296:C:H4'	1:AA:1302:C:N3	2.15	0.62
1:AA:1463:U:H2'	1:AA:1464:U:C6	2.34	0.62
16:AQ:58:VAL:HG12	16:AQ:77:VAL:HA	1.80	0.62
20:AB:72:LYS:HE3	20:AB:203:ASP:O	2.00	0.62
22:BA:75:G:H1'	24:BV:29:ILE:HG12	1.81	0.62
23:BB:1109:C:H2'	23:BB:1110:G:C4	2.35	0.62
23:BB:2693:G:H2'	23:BB:2694:G:H8	1.63	0.62
28:BF:31:GLU:O	28:BF:32:LYS:HD3	2.00	0.62
36:BO:40:ILE:HA	36:BO:47:VAL:HA	1.80	0.62
41:BT:32:LEU:N	41:BT:83:ALA:HB3	2.13	0.62
1:CA:255:G:H2'	1:CA:256:U:C6	2.34	0.62
1:CA:539:A:H2'	1:CA:540:G:C8	2.35	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:678:U:H2'	1:CA:679:C:H6	1.64	0.62
1:CA:909:A:H2'	1:CA:910:C:O4'	1.99	0.62
1:CA:1141:C:H2'	1:CA:1142:G:H8	1.65	0.62
1:CA:1149:C:H2'	1:CA:1150:A:C8	2.35	0.62
1:CA:1432:G:H1'	1:CA:1468:A:N6	2.14	0.62
6:CG:14:ASP:N	6:CG:23:ALA:HB2	2.14	0.62
22:DA:32:U:H4'	22:DA:52:A:N6	2.15	0.62
23:DB:62:U:O2'	23:DB:63:A:H5'	1.98	0.62
23:DB:64:A:H2'	23:DB:65:U:C6	2.35	0.62
23:DB:321:U:OP2	27:DE:130:LYS:HD3	2.00	0.62
23:DB:359:G:H2'	23:DB:360:U:H5'	1.80	0.62
23:DB:721:A:H2'	23:DB:722:A:H8	1.65	0.62
23:DB:1024:G:C3'	23:DB:1025:G:H5"	2.28	0.62
23:DB:1149:G:H2'	23:DB:1150:C:C6	2.34	0.62
23:DB:1485:U:H2'	23:DB:1486:U:C6	2.35	0.62
23:DB:1518:C:H2'	23:DB:1519:G:C8	2.35	0.62
23:DB:1557:C:H3'	23:DB:1558:C:H5"	1.82	0.62
23:DB:1802:A:H2'	23:DB:1803:A:C8	2.35	0.62
23:DB:2815:C:H2'	23:DB:2816:G:H8	1.65	0.62
23:DB:2895:G:H2'	23:DB:2896:C:H6	1.64	0.62
27:DE:188:MET:HG2	27:DE:193:VAL:HG22	1.82	0.62
28:DF:41:GLU:O	28:DF:43:ILE:HG22	1.99	0.62
51:D4:2:LYS:HG2	51:D4:3:VAL:H	1.64	0.62
1:AA:735:C:O2'	1:AA:736:C:H5'	1.99	0.61
3:AD:12:ARG:HA	3:AD:33:ILE:HD12	1.82	0.61
18:AS:5:LYS:O	18:AS:6:LYS:HD2	2.00	0.61
23:BB:592:A:H2'	23:BB:593:U:C6	2.35	0.61
23:BB:717:C:H3'	23:BB:718:A:H5"	1.82	0.61
23:BB:753:A:H2'	23:BB:754:U:C6	2.35	0.61
23:BB:2264:C:H41	43:BW:11:ASN:HD21	1.48	0.61
23:BB:2743:U:H2'	23:BB:2744:G:O4'	1.99	0.61
25:BC:127:ASN:O	25:BC:190:THR:HA	1.99	0.61
26:BD:13:ARG:HD3	26:BD:15:PHE:HE1	1.65	0.61
27:BE:117:ARG:HH12	33:BL:2:ARG:HB2	1.64	0.61
52:BI:18:ASN:N	52:BI:19:PRO:HD2	2.14	0.61
3:CD:123:MET:HB3	3:CD:128:VAL:HA	1.82	0.61
4:CE:93:VAL:HG13	4:CE:126:ALA:HB2	1.82	0.61
6:CG:2:ARG:HH11	6:CG:2:ARG:CB	2.13	0.61
9:CJ:53:ILE:HG22	9:CJ:61:ALA:HB1	1.82	0.61
23:DB:37:C:O2'	27:DE:45:ALA:HA	2.00	0.61
23:DB:63:A:H8	23:DB:63:A:OP2	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:155:A:H2'	23:DB:156:A:C8	2.34	0.61
23:DB:419:U:H2'	23:DB:420:C:C6	2.35	0.61
23:DB:441:U:H2'	23:DB:442:G:H8	1.65	0.61
23:DB:1013:C:H2'	23:DB:1014:A:H8	1.64	0.61
42:DU:70:ALA:HB1	42:DU:79:ALA:CB	2.30	0.61
1:AA:600:A:H2'	1:AA:601:G:H8	1.64	0.61
1:AA:1179:A:H2'	1:AA:1180:A:O4'	2.01	0.61
56:AA:2260:HOH:O	8:AI:110:VAL:HG13	1.99	0.61
3:AD:29:THR:HG22	3:AD:30:LYS:HD3	1.80	0.61
8:AI:7:GLY:HA2	8:AI:85:ALA:HB2	1.82	0.61
12:AM:89:ARG:HD3	12:AM:95:PRO:O	1.99	0.61
20:AB:202:ASN:HD22	20:AB:204:ASP:N	1.90	0.61
23:BB:633:A:OP1	33:BL:68:SER:HB2	2.00	0.61
23:BB:987:C:H2'	23:BB:988:A:O4'	2.00	0.61
23:BB:1591:A:H2'	23:BB:1592:C:O4'	2.00	0.61
41:BT:11:LEU:HD22	41:BT:11:LEU:N	2.15	0.61
46:BZ:6:GLN:HE22	46:BZ:50:ARG:N	1.95	0.61
1:CA:46:G:O2'	1:CA:365:U:H1'	2.00	0.61
5:CF:36:ILE:HG13	5:CF:64:VAL:HG13	1.81	0.61
16:CQ:58:VAL:HG12	16:CQ:77:VAL:HA	1.82	0.61
19:CT:79:THR:HA	19:CT:82:ILE:HG12	1.82	0.61
21:CU:33:ARG:HG2	21:CU:34:ARG:H	1.65	0.61
23:DB:27:G:H1'	23:DB:513:A:H61	1.63	0.61
23:DB:441:U:H2'	23:DB:442:G:C8	2.36	0.61
23:DB:443:A:C5	27:DE:40:ARG:HD3	2.34	0.61
23:DB:1373:A:H2'	23:DB:1374:G:O4'	1.99	0.61
23:DB:2810:A:H2'	23:DB:2811:G:O4'	1.99	0.61
26:DD:40:LEU:HA	26:DD:45:TYR:N	2.14	0.61
26:DD:113:SER:HB3	26:DD:168:GLU:N	2.13	0.61
28:DF:37:MET:HB2	28:DF:56:LEU:HD21	1.82	0.61
30:DH:3:VAL:HG12	30:DH:38:PRO:HA	1.81	0.61
36:DO:53:THR:HB	36:DO:65:THR:HG22	1.81	0.61
44:DX:49:ASP:O	44:DX:53:VAL:HG23	1.99	0.61
1:AA:131:A:H2'	1:AA:132:C:H6	1.64	0.61
1:AA:1239:A:H4'	1:AA:1240:U:H5'	1.82	0.61
1:AA:1342:C:H2'	1:AA:1343:G:H8	1.63	0.61
8:AI:25:GLY:HA3	8:AI:57:VAL:CA	2.30	0.61
18:AS:50:VAL:O	18:AS:57:VAL:HG22	1.99	0.61
20:AB:187:ASP:HB3	20:AB:201:GLY:O	2.01	0.61
23:BB:300:A:H2'	23:BB:334:C:H1'	1.81	0.61
23:BB:355:U:H2'	23:BB:356:G:H8	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:670:A:H4'	33:BL:42:SER:HB2	1.82	0.61
23:BB:1535:A:H5"	23:BB:1536:C:C5	2.35	0.61
23:BB:2366:A:H2'	23:BB:2367:G:O4'	2.01	0.61
25:BC:136:VAL:HG12	25:BC:137:GLY:H	1.64	0.61
35:BN:24:MET:HG3	35:BN:44:LEU:HD22	1.82	0.61
38:BQ:93:ILE:HG23	38:BQ:94:LEU:HD22	1.81	0.61
42:BU:81:ARG:HB2	42:BU:96:LYS:CG	2.29	0.61
49:B2:27:GLY:O	49:B2:30:VAL:HB	2.00	0.61
1:CA:410:G:P	3:CD:25:ARG:HD2	2.40	0.61
1:CA:1244:G:H2'	1:CA:1245:C:C6	2.35	0.61
1:CA:1409:C:H4'	23:DB:1915:U:O4	2.00	0.61
21:CU:40:PRO:HA	21:CU:44:ARG:HB2	1.82	0.61
23:DB:233:A:H61	23:DB:428:A:N6	1.98	0.61
23:DB:417:C:H2'	23:DB:418:C:C6	2.36	0.61
23:DB:851:C:O2	45:DY:42:ALA:HB1	2.00	0.61
23:DB:1591:A:H2'	23:DB:1592:C:O4'	2.00	0.61
28:DF:71:LYS:HE2	28:DF:73:VAL:HB	1.81	0.61
42:DU:26:ASN:HD22	42:DU:26:ASN:N	1.96	0.61
1:AA:253:A:H2'	1:AA:254:G:C8	2.35	0.61
1:AA:512:U:H2'	1:AA:513:C:C6	2.36	0.61
1:AA:825:A:H2'	1:AA:826:C:C6	2.34	0.61
1:AA:1029:U:H1'	1:AA:1032:G:O6	2.00	0.61
4:AE:61:LYS:O	4:AE:65:LYS:HG2	2.01	0.61
4:AE:105:ILE:HD11	4:AE:123:LEU:HB3	1.83	0.61
6:AG:2:ARG:HB3	6:AG:3:ARG:NH1	2.15	0.61
20:AB:163:ILE:HG23	20:AB:164:ASP:N	2.15	0.61
23:BB:27:G:H1'	23:BB:513:A:H61	1.65	0.61
23:BB:49:A:H5"	23:BB:51:G:O4'	2.01	0.61
23:BB:233:A:H61	23:BB:428:A:N6	1.98	0.61
23:BB:1024:G:C3'	23:BB:1025:G:H5"	2.30	0.61
23:BB:1518:C:H2'	23:BB:1519:G:C8	2.35	0.61
23:BB:1592:C:H2'	23:BB:1593:A:H8	1.65	0.61
23:BB:1684:G:H2'	23:BB:1685:C:C6	2.35	0.61
25:BC:94:LEU:HA	25:BC:100:ARG:HB3	1.81	0.61
25:BC:103:ILE:HG22	25:BC:105:ALA:H	1.64	0.61
31:BJ:40:HIS:ND1	31:BJ:41:LYS:HG3	2.15	0.61
31:BJ:101:ILE:O	31:BJ:105:VAL:HG22	2.01	0.61
31:BJ:111:LYS:HB3	31:BJ:113:PRO:HD2	1.81	0.61
35:BN:85:PRO:HA	35:BN:88:ALA:HB2	1.82	0.61
38:BQ:79:ILE:O	38:BQ:82:LEU:HB2	2.00	0.61
41:BT:45:ALA:HA	41:BT:48:GLN:HB2	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:B3:54:LEU:HG	50:B3:58:ILE:HD11	1.82	0.61
1:CA:1029:U:H1'	1:CA:1032:G:O6	2.00	0.61
1:CA:1382:C:H4'	6:CG:78:ARG:NH2	2.15	0.61
1:CA:1463:U:H2'	1:CA:1464:U:C6	2.36	0.61
8:CI:17:ARG:O	8:CI:64:ILE:HA	2.00	0.61
19:CT:66:ILE:HG22	19:CT:67:HIS:N	2.15	0.61
23:DB:402:A:H2'	23:DB:403:U:O4'	1.99	0.61
23:DB:639:U:H2'	23:DB:640:C:C6	2.35	0.61
23:DB:1100:C:OP2	52:DI:2:LYS:HB3	2.00	0.61
23:DB:1847:A:H4'	23:DB:1848:A:C8	2.35	0.61
23:DB:1917:U:H2'	23:DB:1918:A:H5'	1.82	0.61
23:DB:2041:U:H2'	23:DB:2042:A:C8	2.35	0.61
25:DC:202:ARG:HH11	25:DC:213:ARG:NE	1.97	0.61
35:DN:9:GLN:HA	35:DN:17:ARG:NE	2.15	0.61
39:DR:4:VAL:HG21	39:DR:39:LEU:HG	1.81	0.61
52:DI:128:ILE:HA	52:DI:131:THR:HG23	1.81	0.61
1:AA:958:A:H61	18:AS:53:GLY:HA3	1.65	0.61
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.36	0.61
16:AQ:75:VAL:HG23	16:AQ:76:ARG:HG2	1.82	0.61
20:AB:101:THR:HG22	20:AB:174:GLU:OE1	1.99	0.61
22:BA:24:G:O2'	22:BA:25:U:H5"	2.01	0.61
23:BB:63:A:H8	23:BB:63:A:OP2	1.83	0.61
23:BB:1485:U:H2'	23:BB:1486:U:H6	1.66	0.61
1:CA:41:G:H2'	1:CA:42:G:C8	2.35	0.61
1:CA:335:C:H2'	1:CA:336:A:H8	1.64	0.61
1:CA:978:A:H5'	1:CA:1362:A:N6	2.14	0.61
1:CA:987:G:O2'	1:CA:988:G:H5'	2.00	0.61
4:CE:81:GLN:H	4:CE:146:MET:CE	2.14	0.61
5:CF:42:TRP:HB2	5:CF:59:TYR:HB2	1.82	0.61
8:CI:29:ILE:HD13	8:CI:78:ILE:HD13	1.81	0.61
13:CN:9:GLU:HB2	13:CN:62:ARG:NE	2.15	0.61
18:CS:62:THR:HG22	18:CS:63:ASP:H	1.66	0.61
23:DB:246:C:H2'	23:DB:247:G:H5'	1.81	0.61
23:DB:401:A:H2'	23:DB:402:A:H8	1.66	0.61
23:DB:1550:C:H2'	23:DB:1551:A:C8	2.36	0.61
23:DB:1579:A:H2'	23:DB:1580:A:C8	2.35	0.61
23:DB:2366:A:H2'	23:DB:2367:G:O4'	2.01	0.61
23:DB:2415:G:H4'	33:DL:66:PHE:HB2	1.81	0.61
23:DB:2472:G:H2'	23:DB:2475:C:H42	1.66	0.61
31:DJ:20:ALA:HA	31:DJ:23:LYS:HG2	1.81	0.61
31:DJ:101:ILE:O	31:DJ:105:VAL:HG22	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DL:19:LEU:O	33:DL:21:ARG:HG2	2.00	0.61
34:DM:36:VAL:HB	34:DM:127:LYS:O	2.01	0.61
39:DR:5:PHE:O	39:DR:11:GLN:HA	2.00	0.61
1:AA:473:U:H2'	1:AA:474:G:H8	1.65	0.61
3:AD:153:ARG:HG3	3:AD:154:VAL:H	1.65	0.61
23:BB:2639:A:H2'	23:BB:2640:G:O4'	1.99	0.61
25:BC:70:LYS:HE2	25:BC:99:GLU:HB3	1.83	0.61
29:BG:137:LYS:HA	29:BG:140:ILE:HD11	1.81	0.61
1:CA:668:G:O2'	14:CO:45:HIS:HB3	2.00	0.61
1:CA:792:A:H1'	1:CA:794:A:N7	2.15	0.61
1:CA:1213:A:H2'	1:CA:1215:G:N7	2.16	0.61
18:CS:30:LEU:H	18:CS:48:ILE:HA	1.66	0.61
23:DB:1152:C:O2'	23:DB:1153:C:H5'	2.01	0.61
23:DB:1335:C:H2'	23:DB:1336:A:H8	1.65	0.61
23:DB:1461:C:H2'	23:DB:1462:C:C6	2.34	0.61
25:DC:104:LEU:O	25:DC:105:ALA:HB3	2.01	0.61
25:DC:145:MET:HB2	25:DC:152:GLN:NE2	2.14	0.61
25:DC:158:GLY:N	25:DC:194:VAL:HG13	2.15	0.61
26:DD:97:SER:HB3	26:DD:99:GLU:HG2	1.81	0.61
29:DG:152:ARG:NH1	29:DG:162:ARG:HA	2.15	0.61
31:DJ:72:LYS:O	31:DJ:73:VAL:HG13	2.00	0.61
37:DP:6:GLN:HA	37:DP:9:GLN:HG2	1.82	0.61
41:DT:45:ALA:HA	41:DT:48:GLN:HB2	1.81	0.61
43:DW:24:ARG:HD2	43:DW:25:PHE:N	2.16	0.61
52:DI:20:SER:O	52:DI:25:PRO:HD2	2.00	0.61
1:AA:204:G:H2'	1:AA:205:A:C8	2.36	0.61
1:AA:524:G:H2'	1:AA:525:C:C6	2.36	0.61
3:AD:106:PHE:CD1	3:AD:144:ILE:HD11	2.36	0.61
5:AF:79:ARG:NH2	5:AF:87:SER:HB3	2.14	0.61
23:BB:62:U:O2'	23:BB:63:A:H5'	2.00	0.61
23:BB:581:C:H2'	23:BB:582:A:C8	2.35	0.61
23:BB:1013:C:H2'	23:BB:1014:A:H8	1.66	0.61
23:BB:1381:G:H2'	23:BB:1382:G:H5'	1.81	0.61
33:BL:70:LYS:O	33:BL:73:ILE:HG12	2.01	0.61
41:BT:11:LEU:HA	41:BT:34:VAL:HG12	1.81	0.61
44:BX:26:PHE:HD1	44:BX:27:ASN:HD22	1.48	0.61
49:B2:1:MET:HG2	49:B2:2:LYS:H	1.65	0.61
52:BI:7:TYR:HB2	52:BI:58:ILE:O	2.00	0.61
52:BI:20:SER:O	52:BI:25:PRO:HD2	2.01	0.61
1:CA:335:C:H2'	1:CA:336:A:C8	2.36	0.61
1:CA:1210:C:H1'	1:CA:1214:C:H2'	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:79:LEU:HD21	12:CM:86:ARG:HH21	1.65	0.61
20:CB:20:ARG:HA	20:CB:38:HIS:HE1	1.65	0.61
23:DB:138:U:O3'	23:DB:139:U:H3'	1.99	0.61
23:DB:593:U:H2'	23:DB:594:U:C6	2.35	0.61
23:DB:1550:C:H2'	23:DB:1551:A:H8	1.66	0.61
23:DB:1871:A:H2'	23:DB:1872:A:C8	2.35	0.61
23:DB:2097:A:H2'	23:DB:2098:U:H6	1.65	0.61
23:DB:2457:U:C2'	23:DB:2458:G:H5'	2.31	0.61
27:DE:117:ARG:O	27:DE:186:VAL:HG12	2.00	0.61
30:DH:5:LEU:O	30:DH:6:LEU:HD12	2.01	0.61
44:DX:39:GLN:O	44:DX:42:LEU:HB2	2.00	0.61
48:D1:29:LYS:HE2	48:D1:31:GLU:OE1	2.00	0.61
50:D3:51:LYS:HA	50:D3:54:LEU:HB2	1.81	0.61
52:DI:25:PRO:O	52:DI:29:GLN:HG3	2.00	0.61
52:DI:42:ASN:HA	52:DI:45:THR:OG1	1.99	0.61
1:AA:1486:G:H2'	1:AA:1487:G:C1'	2.30	0.61
3:AD:169:TRP:CE2	3:AD:185:PRO:HB3	2.35	0.61
4:AE:28:ARG:NH1	4:AE:30:PHE:HB3	2.15	0.61
23:BB:402:A:H2'	23:BB:403:U:O4'	2.01	0.61
23:BB:967:U:H2'	23:BB:968:C:C6	2.36	0.61
23:BB:1130:U:C2	23:BB:2025:C:H5"	2.36	0.61
23:BB:1287:A:N7	35:BN:105:GLY:HA3	2.15	0.61
23:BB:1843:C:H5"	25:BC:250:GLN:HE21	1.66	0.61
23:BB:2722:G:H2'	23:BB:2723:C:C6	2.36	0.61
25:BC:75:ALA:HB2	25:BC:95:TYR:HA	1.83	0.61
31:BJ:8:PRO:HG3	31:BJ:48:VAL:HG22	1.83	0.61
32:BK:104:THR:H	32:BK:107:LEU:HD12	1.65	0.61
34:BM:71:LYS:HB3	34:BM:93:VAL:HG12	1.81	0.61
37:BP:4:ILE:HG22	37:BP:5:LYS:N	2.14	0.61
1:CA:512:U:H2'	1:CA:513:C:C6	2.36	0.61
1:CA:1278:G:H4'	1:CA:1279:G:C5'	2.29	0.61
5:CF:100:SER:HA	17:CR:23:LYS:CE	2.30	0.61
12:CM:89:ARG:NH2	12:CM:94:LEU:HD12	2.15	0.61
23:DB:154:U:H2'	23:DB:155:A:C8	2.35	0.61
23:DB:1061:U:O4'	23:DB:1070:A:H1'	2.00	0.61
23:DB:1812:U:H2'	23:DB:1813:G:C8	2.36	0.61
23:DB:2626:C:O2'	23:DB:2627:G:H5'	2.00	0.61
23:DB:2639:A:H2'	23:DB:2640:G:O4'	2.00	0.61
26:DD:136:ASN:HD21	26:DD:140:HIS:N	1.99	0.61
34:DM:19:GLY:H	34:DM:38:ARG:NH1	1.98	0.61
36:DO:94:ARG:O	36:DO:97:PHE:HB2	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DQ:86:SER:HB3	39:DR:51:VAL:CA	2.30	0.61
40:DS:36:LEU:HB3	40:DS:48:LYS:HB2	1.81	0.61
42:DU:11:ILE:O	42:DU:12:VAL:HB	2.01	0.61
1:AA:253:A:H2'	1:AA:254:G:H8	1.66	0.61
1:AA:946:A:H2'	1:AA:947:G:H8	1.65	0.61
1:AA:1144:G:H21	1:AA:1146:A:H62	1.48	0.61
1:AA:1271:A:H5'	1:AA:1314:C:H5"	1.83	0.61
1:AA:1411:C:O2'	1:AA:1412:C:H5'	2.00	0.61
9:AJ:24:GLU:HG3	9:AJ:90:LEU:HD11	1.83	0.61
22:BA:94:A:H2'	22:BA:95:U:O4'	2.00	0.61
23:BB:807:U:H2'	23:BB:808:G:C8	2.35	0.61
23:BB:975:A:H1'	23:BB:990:A:C2	2.36	0.61
23:BB:1597:A:H5"	23:BB:1598:A:H5'	1.83	0.61
28:BF:90:LEU:C	28:BF:91:ARG:HD3	2.21	0.61
35:BN:49:GLU:OE2	35:BN:95:THR:HG22	2.00	0.61
37:BP:52:ARG:HG2	37:BP:52:ARG:HH11	1.65	0.61
47:B0:8:THR:HG23	47:B0:11:LYS:H	1.66	0.61
14:CO:72:LYS:O	14:CO:73:ASP:HB2	2.01	0.61
20:CB:221:ARG:HG3	20:CB:222:GLU:N	2.15	0.61
23:DB:2091:C:H1'	46:DZ:34:HIS:CD2	2.35	0.61
23:DB:2353:G:N3	43:DW:30:VAL:HG13	2.16	0.61
23:DB:2529:G:H4'	29:DG:174:LYS:CD	2.31	0.61
35:DN:34:ILE:O	35:DN:112:TYR:HA	2.01	0.61
43:DW:47:GLY:HA3	43:DW:80:SER:HA	1.81	0.61
1:AA:87:C:H2'	1:AA:88:U:H4'	1.83	0.61
1:AA:651:C:H2'	1:AA:652:U:C6	2.36	0.61
1:AA:1038:C:H2'	1:AA:1039:G:C8	2.36	0.61
3:AD:123:MET:HB3	3:AD:128:VAL:HA	1.82	0.61
4:AE:143:LEU:O	4:AE:146:MET:HG2	2.00	0.61
9:AJ:56:HIS:O	9:AJ:57:VAL:HG12	2.01	0.61
12:AM:21:ILE:HB	12:AM:24:VAL:CG2	2.29	0.61
23:BB:64:A:H2'	23:BB:65:U:C6	2.36	0.61
23:BB:1419:A:H2'	23:BB:1421:G:N7	2.16	0.61
23:BB:1592:C:H2'	23:BB:1593:A:C8	2.35	0.61
23:BB:1914:C:H2'	23:BB:1915:U:O4'	2.01	0.61
23:BB:2852:G:H2'	23:BB:2853:C:C6	2.36	0.61
31:BJ:40:HIS:CE1	31:BJ:41:LYS:HG3	2.36	0.61
40:BS:36:LEU:HB3	40:BS:48:LYS:HB2	1.83	0.61
42:BU:82:VAL:HG13	42:BU:93:ARG:HB3	1.83	0.61
47:B0:38:LEU:HD23	47:B0:39:ARG:H	1.65	0.61
50:B3:51:LYS:HA	50:B3:54:LEU:HB2	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:13:ILE:O	2:CC:14:VAL:HG22	2.00	0.61
7:CH:11:THR:HG22	7:CH:14:ARG:HH22	1.65	0.61
23:DB:1133:A:H4'	23:DB:1134:A:O5'	2.01	0.61
23:DB:1164:C:H2'	23:DB:1165:A:C8	2.36	0.61
23:DB:2088:A:H2'	23:DB:2089:C:C6	2.36	0.61
31:DJ:111:LYS:HB3	31:DJ:113:PRO:HD2	1.82	0.61
43:DW:37:VAL:HG11	43:DW:38:ARG:HH11	1.66	0.61
52:DI:27:LEU:H	52:DI:27:LEU:CD2	2.14	0.61
1:AA:195:A:H2'	1:AA:196:A:C8	2.36	0.60
1:AA:255:G:H2'	1:AA:256:U:C6	2.36	0.60
1:AA:751:U:H4'	14:AO:23:SER:HA	1.82	0.60
3:AD:160:LEU:HA	3:AD:163:GLN:HG3	1.83	0.60
8:AI:18:VAL:HG11	8:AI:82:ILE:HG12	1.83	0.60
14:AO:72:LYS:O	14:AO:73:ASP:HB2	2.01	0.60
18:AS:18:VAL:CG2	18:AS:43:MET:HG2	2.29	0.60
19:AT:79:THR:HA	19:AT:82:ILE:HG12	1.83	0.60
23:BB:417:C:H2'	23:BB:418:C:C6	2.35	0.60
23:BB:639:U:H2'	23:BB:640:C:C6	2.35	0.60
23:BB:992:C:H4'	39:BR:74:ILE:HD13	1.82	0.60
23:BB:2369:A:O2'	23:BB:2370:G:H5'	2.00	0.60
25:BC:76:VAL:HG12	25:BC:114:GLN:HG2	1.83	0.60
27:BE:29:HIS:NE2	33:BL:8:PRO:HG3	2.16	0.60
27:BE:98:LYS:HZ2	27:BE:99:LYS:HG2	1.65	0.60
27:BE:104:ALA:O	27:BE:108:ILE:HG22	2.01	0.60
27:BE:176:ASP:HB3	27:BE:179:SER:HB2	1.82	0.60
28:BF:125:GLY:HA2	28:BF:162:ASP:HA	1.82	0.60
35:BN:9:GLN:HA	35:BN:17:ARG:NE	2.16	0.60
37:BP:93:LYS:HB3	37:BP:96:LEU:HD12	1.82	0.60
43:BW:37:VAL:HG11	43:BW:38:ARG:HH11	1.66	0.60
44:BX:48:ARG:O	44:BX:51:ALA:HB3	2.00	0.60
44:BX:49:ASP:O	44:BX:53:VAL:HG23	2.01	0.60
52:BI:11:GLN:HA	52:BI:55:PRO:HA	1.82	0.60
1:CA:1071:C:H2'	1:CA:1072:G:H8	1.65	0.60
1:CA:1296:C:H4'	1:CA:1302:C:C4	2.36	0.60
13:CN:41:TRP:HB3	13:CN:44:VAL:HB	1.83	0.60
18:CS:50:VAL:O	18:CS:57:VAL:HG22	2.00	0.60
23:DB:17:G:H2'	23:DB:18:U:C6	2.36	0.60
23:DB:360:U:H2'	23:DB:361:G:O4'	2.01	0.60
26:DD:169:ARG:O	26:DD:170:VAL:HG22	2.00	0.60
28:DF:104:THR:C	28:DF:108:PRO:HG2	2.21	0.60
30:DH:69:ALA:HB1	30:DH:73:ASN:ND2	2.16	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DJ:24:THR:HA	31:DJ:63:ALA:HB3	1.83	0.60
44:DX:57:LEU:H	44:DX:60:LYS:HG3	1.66	0.60
52:DI:123:ALA:HA	52:DI:126:ARG:HH12	1.66	0.60
1:AA:620:C:C2	3:AD:131:ILE:HD13	2.36	0.60
1:AA:707:U:H2'	1:AA:708:C:C6	2.36	0.60
13:AN:14:ALA:O	13:AN:18:LYS:HG2	2.01	0.60
18:AS:62:THR:HG22	18:AS:63:ASP:H	1.66	0.60
23:BB:3:U:H2'	23:BB:4:U:C6	2.36	0.60
23:BB:45:G:H5'	23:BB:46:G:OP1	2.02	0.60
23:BB:125:A:H5'	49:B2:19:ARG:HG3	1.82	0.60
23:BB:1771:C:H2'	23:BB:1772:A:C8	2.36	0.60
23:BB:2101:A:C3'	23:BB:2102:G:H5"	2.31	0.60
23:BB:2297:A:H61	23:BB:2319:G:H1'	1.66	0.60
23:BB:2457:U:C2'	23:BB:2458:G:H5'	2.31	0.60
25:BC:77:VAL:CG2	25:BC:112:GLY:H	2.06	0.60
26:BD:178:VAL:HB	26:BD:188:LEU:HB2	1.82	0.60
27:BE:98:LYS:HZ1	27:BE:99:LYS:HE2	1.66	0.60
33:BL:79:LEU:HB3	33:BL:115:GLU:O	2.01	0.60
33:BL:93:ASN:O	33:BL:95:LEU:N	2.35	0.60
36:BO:94:ARG:O	36:BO:97:PHE:HB2	2.00	0.60
46:BZ:70:GLU:C	46:BZ:72:ARG:H	2.03	0.60
1:CA:195:A:H2'	1:CA:196:A:C8	2.36	0.60
1:CA:218:U:H2'	1:CA:219:U:C6	2.36	0.60
1:CA:253:A:H2'	1:CA:254:G:C8	2.36	0.60
1:CA:1238:A:H2'	1:CA:1238:A:N3	2.16	0.60
1:CA:1388:C:H2'	1:CA:1389:C:C6	2.35	0.60
8:CI:7:GLY:HA2	8:CI:85:ALA:HB2	1.82	0.60
10:CK:70:ALA:O	10:CK:74:LYS:HB2	2.01	0.60
10:CK:81:LEU:HD11	10:CK:99:LEU:HD23	1.81	0.60
23:DB:660:C:H2'	23:DB:661:A:H8	1.66	0.60
23:DB:1199:U:H2'	23:DB:1200:C:H6	1.66	0.60
23:DB:2497:A:H5"	56:DB:3696:HOH:O	2.01	0.60
23:DB:2737:G:H2'	23:DB:2738:A:C8	2.36	0.60
26:DD:179:ARG:HB2	26:DD:188:LEU:HD12	1.83	0.60
28:DF:155:ILE:O	28:DF:156:THR:HB	2.01	0.60
30:DH:32:PRO:O	30:DH:33:GLN:HB2	2.01	0.60
33:DL:70:LYS:O	33:DL:73:ILE:HG12	2.02	0.60
1:AA:10:A:H2'	1:AA:11:G:C8	2.37	0.60
1:AA:487:A:H2'	1:AA:488:C:O4'	2.00	0.60
1:AA:909:A:H2'	1:AA:910:C:O4'	2.01	0.60
1:AA:1249:C:H4'	8:AI:37:TYR:OH	2.00	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1405:G:O4'	1:AA:1519:A:H4'	2.01	0.60
18:AS:16:LYS:O	18:AS:20:LYS:HB2	2.01	0.60
22:BA:6:G:H2'	22:BA:7:G:C8	2.36	0.60
23:BB:264:C:C2'	23:BB:265:A:H5"	2.31	0.60
23:BB:716:A:H2'	23:BB:717:C:H5"	1.83	0.60
23:BB:1443:U:H2'	23:BB:1444:G:C8	2.37	0.60
27:BE:111:GLU:HB3	33:BL:2:ARG:HH12	1.66	0.60
35:BN:96:ARG:NH1	35:BN:116:VAL:HG23	2.08	0.60
40:BS:29:VAL:HG23	40:BS:70:LYS:HA	1.83	0.60
40:BS:72:THR:OG1	40:BS:108:SER:HB3	2.01	0.60
45:BY:37:ARG:HG2	45:BY:43:ILE:HD11	1.84	0.60
49:B2:3:ARG:HE	49:B2:4:THR:HG22	1.66	0.60
1:CA:17:U:O2'	1:CA:1079:G:H1'	2.01	0.60
1:CA:1343:G:H4'	8:CI:123:ARG:O	2.01	0.60
5:CF:18:VAL:HG21	5:CF:58:HIS:ND1	2.16	0.60
7:CH:46:GLU:HB2	7:CH:61:THR:HB	1.82	0.60
10:CK:81:LEU:HD21	10:CK:104:PHE:HB3	1.83	0.60
12:CM:95:PRO:N	12:CM:108:ARG:HG2	2.16	0.60
19:CT:19:HIS:O	19:CT:23:ARG:HG2	2.01	0.60
20:CB:20:ARG:HA	20:CB:38:HIS:CE1	2.36	0.60
22:DA:28:C:H2'	22:DA:29:A:O4'	2.01	0.60
23:DB:395:U:H2'	23:DB:396:G:N7	2.16	0.60
23:DB:594:U:H2'	23:DB:595:C:C6	2.36	0.60
23:DB:1015:U:H2'	23:DB:1016:G:C8	2.36	0.60
23:DB:1419:A:H2'	23:DB:1421:G:N7	2.16	0.60
23:DB:1535:A:H3'	23:DB:1536:C:H6	1.66	0.60
23:DB:1704:C:O2'	23:DB:1705:A:H5'	2.02	0.60
25:DC:75:ALA:O	25:DC:114:GLN:HA	2.01	0.60
28:DF:125:GLY:HA2	28:DF:162:ASP:HA	1.81	0.60
30:DH:117:LEU:HB2	30:DH:130:VAL:HG13	1.84	0.60
35:DN:33:ILE:HD12	35:DN:33:ILE:O	2.01	0.60
41:DT:31:VAL:HA	41:DT:84:TYR:H	1.66	0.60
42:DU:95:PHE:CE1	42:DU:102:ILE:HB	2.36	0.60
50:D3:44:ARG:N	50:D3:45:PRO:HD2	2.17	0.60
1:AA:239:U:H6	1:AA:239:U:C5'	2.14	0.60
1:AA:376:G:H2'	1:AA:377:G:H8	1.65	0.60
8:AI:17:ARG:O	8:AI:64:ILE:HA	2.01	0.60
23:BB:79:C:O2'	23:BB:346:A:H1'	2.01	0.60
23:BB:136:G:H2'	23:BB:137:U:H6	1.64	0.60
23:BB:594:U:H2'	23:BB:595:C:H6	1.65	0.60
23:BB:820:A:H1'	23:BB:943:A:O2'	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2025:C:H2'	23:BB:2026:U:C6	2.36	0.60
23:BB:2626:C:O2'	23:BB:2627:G:H5'	2.01	0.60
32:BK:13:ASN:ND2	32:BK:98:ARG:H	1.99	0.60
35:BN:34:ILE:O	35:BN:112:TYR:HA	2.01	0.60
38:BQ:86:SER:HB3	39:BR:51:VAL:HA	1.82	0.60
43:BW:49:ASN:HB2	43:BW:61:LYS:H	1.65	0.60
6:CG:145:GLU:HA	6:CG:148:LYS:HB2	1.84	0.60
8:CI:25:GLY:HA3	8:CI:57:VAL:H	1.65	0.60
11:CL:26:CYS:SG	11:CL:29:LYS:HE2	2.41	0.60
23:DB:1060:U:C5	52:DI:131:THR:HG22	2.36	0.60
23:DB:1443:U:H2'	23:DB:1444:G:C8	2.37	0.60
23:DB:2078:C:H2'	23:DB:2079:U:C6	2.36	0.60
31:DJ:8:PRO:HG3	31:DJ:48:VAL:HG22	1.84	0.60
31:DJ:57:LEU:HD21	31:DJ:128:ASN:HA	1.84	0.60
43:DW:35:ILE:HG13	43:DW:57:THR:OG1	2.01	0.60
1:AA:162:A:H2'	1:AA:163:C:O4'	2.01	0.60
1:AA:719:C:O2'	17:AR:37:LYS:HB2	2.02	0.60
23:BB:184:C:H2'	23:BB:185:G:H8	1.66	0.60
23:BB:248:G:H5'	23:BB:250:G:N7	2.16	0.60
23:BB:1082:U:N3	23:BB:1086:A:C6	2.70	0.60
23:BB:1240:U:O2'	23:BB:1241:A:H5"	2.02	0.60
23:BB:2041:U:H2'	23:BB:2042:A:C8	2.35	0.60
23:BB:2100:G:H2'	23:BB:2101:A:O4'	2.00	0.60
23:BB:2758:A:H2'	23:BB:2759:G:O4'	2.02	0.60
26:BD:92:VAL:O	26:BD:94:GLN:N	2.34	0.60
26:BD:136:ASN:HD21	26:BD:140:HIS:N	1.99	0.60
42:BU:9:GLU:HG3	42:BU:21:ARG:HD2	1.82	0.60
52:BI:89:SER:HA	52:BI:97:VAL:HG21	1.83	0.60
1:CA:1427:C:H2'	1:CA:1428:A:C8	2.37	0.60
6:CG:62:GLU:O	6:CG:66:GLU:HG3	2.01	0.60
13:CN:30:ILE:HG21	13:CN:44:VAL:HG21	1.83	0.60
18:CS:16:LYS:O	18:CS:20:LYS:HB2	2.01	0.60
20:CB:72:LYS:HE3	20:CB:203:ASP:O	2.02	0.60
22:DA:94:A:H2'	22:DA:95:U:O4'	2.01	0.60
23:DB:96:C:H4'	44:DX:41:HIS:CE1	2.36	0.60
23:DB:172:A:H2'	23:DB:173:A:H8	1.64	0.60
23:DB:717:C:H3'	23:DB:718:A:H5"	1.82	0.60
23:DB:1291:C:O2'	23:DB:1292:G:H5'	2.02	0.60
28:DF:90:LEU:C	28:DF:91:ARG:HD3	2.21	0.60
35:DN:85:PRO:HA	35:DN:88:ALA:HB2	1.83	0.60
35:DN:103:ARG:HG2	35:DN:104:ALA:H	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DW:18:LYS:HG3	43:DW:19:ARG:NE	2.16	0.60
43:DW:37:VAL:HG13	43:DW:55:ASP:O	2.02	0.60
49:D2:33:ARG:HH21	49:D2:33:ARG:HB2	1.65	0.60
1:AA:35:G:H2'	1:AA:36:C:C6	2.36	0.60
1:AA:1492:A:H2'	23:BB:1913:A:C2	2.36	0.60
8:AI:79:ARG:NH2	8:AI:102:PHE:HA	2.15	0.60
12:AM:77:LYS:HG2	12:AM:81:ASP:OD2	2.01	0.60
20:AB:16:GLY:HA3	20:AB:39:ILE:HA	1.82	0.60
20:AB:205:ALA:O	20:AB:209:VAL:HG22	2.01	0.60
23:BB:1292:G:H2'	23:BB:1293:C:C6	2.36	0.60
23:BB:1857:G:H1'	23:BB:1885:A:N6	2.16	0.60
24:BV:24:ASN:O	24:BV:44:HIS:HB2	2.01	0.60
25:BC:161:VAL:HG12	25:BC:162:GLN:N	2.16	0.60
26:BD:29:VAL:O	26:BD:185:ASN:HB3	2.01	0.60
26:BD:55:LYS:NZ	26:BD:59:ARG:HD2	2.16	0.60
28:BF:60:SER:HB2	28:BF:62:GLN:OE1	2.01	0.60
28:BF:62:GLN:CB	28:BF:91:ARG:HE	2.15	0.60
1:CA:270:A:H2'	1:CA:271:C:C6	2.35	0.60
1:CA:473:U:H2'	1:CA:474:G:H8	1.66	0.60
4:CE:106:ALA:HB1	4:CE:110:MET:HB3	1.84	0.60
6:CG:26:VAL:HB	6:CG:39:GLU:HG2	1.83	0.60
23:DB:716:A:H2'	23:DB:717:C:H5"	1.83	0.60
23:DB:1199:U:H2'	23:DB:1200:C:C6	2.36	0.60
23:DB:1843:C:H5"	25:DC:250:GLN:HE21	1.67	0.60
23:DB:2143:C:H3'	23:DB:2144:G:C8	2.36	0.60
23:DB:2229:U:H2'	23:DB:2230:G:C8	2.37	0.60
23:DB:2387:U:H1'	43:DW:38:ARG:CZ	2.32	0.60
23:DB:2804:U:H2'	23:DB:2805:C:C6	2.36	0.60
23:DB:2899:A:H2'	23:DB:2900:A:C8	2.36	0.60
26:DD:178:VAL:HB	26:DD:188:LEU:HB2	1.83	0.60
30:DH:21:VAL:HG22	30:DH:22:LYS:H	1.67	0.60
40:DS:42:LYS:O	40:DS:45:VAL:HG22	2.01	0.60
43:DW:49:ASN:HD22	43:DW:59:PHE:HB3	1.66	0.60
23:BB:751:A:H5'	40:BS:90:LYS:HA	1.84	0.60
23:BB:1490:A:H2'	25:BC:97:ASP:OD1	2.02	0.60
23:BB:1842:G:H2'	23:BB:1843:C:C6	2.37	0.60
23:BB:1871:A:H2'	23:BB:1872:A:C8	2.37	0.60
23:BB:2064:C:H2'	23:BB:2065:C:H6	1.66	0.60
23:BB:2277:G:C5'	34:BM:86:LYS:HB2	2.32	0.60
23:BB:2649:C:H2'	23:BB:2650:U:C6	2.37	0.60
28:BF:111:ARG:HH22	28:BF:113:PHE:HB2	1.65	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BH:50:ARG:NE	30:BH:50:ARG:H	2.00	0.60
33:BL:80:SER:HA	33:BL:115:GLU:HB2	1.83	0.60
43:BW:24:ARG:HD3	43:BW:65:LYS:CG	2.31	0.60
1:CA:91:U:H2'	1:CA:92:U:C6	2.36	0.60
1:CA:208:U:H2'	1:CA:210:C:N3	2.16	0.60
4:CE:143:LEU:O	4:CE:146:MET:HG2	2.02	0.60
23:DB:191:A:H2'	23:DB:192:C:H6	1.65	0.60
23:DB:1406:U:H2'	23:DB:1407:G:C8	2.36	0.60
23:DB:1484:U:H2'	23:DB:1485:U:C6	2.36	0.60
23:DB:1513:U:O2'	23:DB:1514:G:H5'	2.00	0.60
23:DB:2645:G:H3'	23:DB:2646:C:C5'	2.32	0.60
25:DC:123:ILE:HD12	25:DC:191:LEU:HD13	1.84	0.60
29:DG:72:ASN:O	29:DG:76:ILE:HG12	2.02	0.60
34:DM:34:LYS:HB3	34:DM:129:THR:HG22	1.82	0.60
1:AA:532:A:N6	2:AC:191:THR:HB	2.16	0.60
1:AA:919:A:O2'	1:AA:920:U:H5'	2.01	0.60
1:AA:1149:C:H2'	1:AA:1150:A:H8	1.65	0.60
5:AF:29:ILE:HG23	5:AF:66:ALA:HB2	1.82	0.60
13:AN:30:ILE:HG21	13:AN:44:VAL:HG21	1.83	0.60
23:BB:594:U:H2'	23:BB:595:C:C6	2.36	0.60
23:BB:1535:A:H3'	23:BB:1536:C:H6	1.65	0.60
23:BB:2359:C:H2'	23:BB:2360:G:C8	2.37	0.60
23:BB:2654:A:N1	23:BB:2665:A:H5"	2.16	0.60
30:BH:27:ARG:NH1	46:BZ:64:ILE:HD11	2.16	0.60
41:BT:14:PRO:HD2	44:BX:33:ALA:HB3	1.83	0.60
41:BT:31:VAL:HA	41:BT:84:TYR:H	1.66	0.60
41:BT:76:ARG:HH21	41:BT:77:ARG:HB2	1.67	0.60
43:BW:64:GLY:HA2	43:BW:84:GLU:HG2	1.84	0.60
1:CA:276:G:H5'	16:CQ:16:MET:SD	2.42	0.60
1:CA:923:A:H2'	1:CA:924:C:C6	2.37	0.60
1:CA:1001:C:H2'	1:CA:1002:G:C8	2.36	0.60
1:CA:1437:A:H2'	1:CA:1438:G:H8	1.67	0.60
4:CE:100:GLU:HA	4:CE:121:ASN:ND2	2.16	0.60
6:CG:24:LYS:HA	6:CG:27:ASN:HD22	1.66	0.60
7:CH:25:THR:HA	7:CH:58:LEU:O	2.01	0.60
8:CI:9:GLY:HA3	8:CI:81:GLY:H	1.67	0.60
23:DB:592:A:H2'	23:DB:593:U:C6	2.37	0.60
23:DB:1857:G:H1'	23:DB:1885:A:N6	2.15	0.60
23:DB:2103:C:H3'	23:DB:2104:C:C2	2.37	0.60
23:DB:2720:U:H5"	37:DP:52:ARG:NH2	2.16	0.60
26:DD:55:LYS:NZ	26:DD:59:ARG:HD2	2.17	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:117:GLY:HA2	26:DD:164:GLN:CD	2.21	0.60
40:DS:90:LYS:HD2	40:DS:92:ARG:HH12	1.65	0.60
1:AA:1001:C:H2'	1:AA:1002:G:C8	2.37	0.60
1:AA:1053:G:HO2'	1:AA:1199:U:H5	1.48	0.60
1:AA:1218:C:H2'	1:AA:1219:A:C8	2.37	0.60
1:AA:1330:U:H4'	12:AM:69:ARG:HH12	1.67	0.60
5:AF:86:ARG:HH12	17:AR:63:TYR:HB3	1.66	0.60
8:AI:29:ILE:HD13	8:AI:78:ILE:HD13	1.82	0.60
10:AK:70:ALA:O	10:AK:74:LYS:HB2	2.01	0.60
12:AM:58:GLU:O	12:AM:61:LYS:HG2	2.02	0.60
18:AS:10:ILE:HD12	18:AS:15:LEU:HG	1.82	0.60
23:BB:191:A:H2'	23:BB:192:C:H6	1.66	0.60
23:BB:521:U:H2'	23:BB:522:A:C8	2.37	0.60
23:BB:1054:A:H2'	23:BB:1055:G:C8	2.37	0.60
23:BB:1220:G:H2'	23:BB:1221:C:H6	1.67	0.60
23:BB:1796:U:H2'	23:BB:1797:G:H8	1.65	0.60
24:BV:30:ILE:HG13	24:BV:40:ILE:HD12	1.84	0.60
26:BD:176:ASP:HB2	26:BD:190:LYS:HG2	1.84	0.60
29:BG:155:PRO:HA	29:BG:170:THR:HA	1.84	0.60
32:BK:118:LEU:C	32:BK:120:PRO:HD2	2.22	0.60
35:BN:62:ASN:N	35:BN:62:ASN:HD22	2.00	0.60
1:CA:35:G:H2'	1:CA:36:C:C6	2.37	0.60
1:CA:190:A:O5'	1:CA:190:A:H8	1.85	0.60
1:CA:1236:A:H4'	1:CA:1304:G:H4'	1.81	0.60
1:CA:1302:C:H5'	12:CM:16:ILE:HG13	1.84	0.60
1:CA:1386:G:H2'	1:CA:1387:G:H8	1.67	0.60
11:CL:7:VAL:HG22	16:CQ:33:TYR:HD1	1.66	0.60
12:CM:79:LEU:HD11	12:CM:86:ARG:HH21	1.66	0.60
20:CB:187:ASP:HB3	20:CB:201:GLY:O	2.02	0.60
20:CB:202:ASN:HD22	20:CB:204:ASP:N	1.88	0.60
23:DB:1535:A:H5"	23:DB:1536:C:H5	1.66	0.60
23:DB:2376:A:N1	36:DO:92:PHE:HD2	2.00	0.60
23:DB:2852:G:H2'	23:DB:2853:C:C6	2.37	0.60
25:DC:76:VAL:HG12	25:DC:114:GLN:HG2	1.84	0.60
29:DG:68:ARG:HH12	29:DG:72:ASN:HD22	1.49	0.60
32:DK:54:LYS:HD2	32:DK:54:LYS:N	2.17	0.60
40:DS:72:THR:OG1	40:DS:108:SER:HB3	2.01	0.60
1:AA:411:A:H62	1:AA:413:G:H21	1.49	0.60
1:AA:492:C:H2'	1:AA:493:A:N3	2.16	0.60
1:AA:538:G:H5"	11:AL:110:LYS:HG2	1.83	0.60
1:AA:1090:U:H2'	1:AA:1091:U:C6	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1238:A:N3	1:AA:1238:A:H2'	2.16	0.60
1:AA:1382:C:H4'	6:AG:78:ARG:NH2	2.16	0.60
3:AD:22:SER:H	3:AD:109:THR:HG22	1.66	0.60
11:AL:35:ARG:NH1	11:AL:35:ARG:HA	2.17	0.60
23:BB:784:G:O2'	23:BB:785:G:H5"	2.01	0.60
23:BB:1198:U:H2'	23:BB:1199:U:C6	2.36	0.60
23:BB:1491:G:H5'	25:BC:97:ASP:OD1	2.02	0.60
23:BB:1501:G:O2'	23:BB:1502:A:H5'	2.01	0.60
23:BB:1925:C:C2'	23:BB:1926:U:H5"	2.31	0.60
23:BB:2073:C:O2'	23:BB:2074:U:H5'	2.02	0.60
23:BB:2488:G:O2'	23:BB:2489:U:H5'	2.02	0.60
23:BB:2498:C:O2'	23:BB:2499:C:H5'	2.02	0.60
23:BB:2635:A:H4'	26:BD:79:LEU:HB2	1.84	0.60
30:BH:69:ALA:C	30:BH:140:ALA:HB2	2.22	0.60
31:BJ:45:THR:HG21	31:BJ:50:THR:HG21	1.83	0.60
34:BM:108:VAL:HG11	34:BM:112:LEU:HD12	1.84	0.60
1:CA:1417:G:N2	1:CA:1482:G:H2'	2.17	0.60
3:CD:29:THR:HG22	3:CD:30:LYS:HD3	1.83	0.60
5:CF:79:ARG:NH2	5:CF:87:SER:HB3	2.17	0.60
7:CH:24:VAL:HG12	7:CH:60:LEU:O	2.01	0.60
23:DB:1082:U:N3	23:DB:1086:A:C6	2.69	0.60
23:DB:1647:U:H3'	23:DB:1647:U:P	2.42	0.60
23:DB:2458:G:H1'	23:DB:2460:U:O4	2.02	0.60
25:DC:141:HIS:CG	25:DC:142:ASN:H	2.20	0.60
29:DG:2:ARG:H	29:DG:5:LYS:HE2	1.67	0.60
31:DJ:100:VAL:O	31:DJ:104:ALA:HB2	2.02	0.60
32:DK:105:ARG:HD3	32:DK:106:GLU:OE1	2.01	0.60
35:DN:62:ASN:N	35:DN:62:ASN:HD22	1.99	0.60
41:DT:29:THR:CA	41:DT:86:THR:HA	2.30	0.60
45:DY:35:VAL:HG22	45:DY:36:GLU:N	2.16	0.60
47:D0:38:LEU:HD23	47:D0:39:ARG:H	1.67	0.60
1:AA:410:G:P	3:AD:25:ARG:HD2	2.42	0.59
1:AA:685:G:O2'	1:AA:686:U:H5'	2.02	0.59
1:AA:1329:A:OP1	12:AM:28:ARG:HB2	2.02	0.59
1:AA:1508:A:H2'	1:AA:1509:C:C6	2.37	0.59
4:AE:158:LYS:HZ3	7:AH:63:LYS:HD3	1.67	0.59
8:AI:93:LEU:O	8:AI:97:LEU:HG	2.02	0.59
23:BB:150:U:H2'	23:BB:151:C:C6	2.37	0.59
23:BB:181:A:H2'	23:BB:182:A:H8	1.64	0.59
23:BB:279:A:H2'	23:BB:280:U:H5'	1.84	0.59
23:BB:282:A:H2'	23:BB:283:G:H8	1.66	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:401:A:H2'	23:BB:402:A:H8	1.64	0.59
23:BB:545:U:C4	23:BB:547:A:H5"	2.37	0.59
23:BB:741:U:H2'	23:BB:742:A:C8	2.37	0.59
23:BB:1268:A:H2'	23:BB:1269:A:O4'	2.02	0.59
23:BB:1425:G:H2'	23:BB:1426:G:C8	2.37	0.59
23:BB:2651:C:O2'	23:BB:2652:C:H5'	2.02	0.59
23:BB:2728:U:H2'	23:BB:2729:G:H8	1.67	0.59
27:BE:108:ILE:HG13	33:BL:2:ARG:HH22	1.66	0.59
31:BJ:25:LEU:HB2	31:BJ:62:VAL:CG2	2.32	0.59
31:BJ:100:VAL:O	31:BJ:104:ALA:HB2	2.02	0.59
43:BW:49:ASN:HD22	43:BW:59:PHE:HB3	1.67	0.59
47:B0:39:ARG:O	47:B0:40:HIS:HB2	2.02	0.59
48:B1:29:LYS:HE2	48:B1:31:GLU:OE1	2.02	0.59
1:CA:182:A:O2'	1:CA:183:C:H3'	2.02	0.59
1:CA:1271:A:H5'	1:CA:1314:C:H5"	1.83	0.59
3:CD:138:PRO:HA	3:CD:181:PHE:CD2	2.31	0.59
20:CB:31:PHE:N	20:CB:39:ILE:O	2.34	0.59
23:DB:196:A:H5"	33:DL:47:ARG:HH12	1.66	0.59
23:DB:233:A:H61	23:DB:428:A:H61	1.48	0.59
23:DB:1130:U:C2	23:DB:2025:C:H5"	2.37	0.59
23:DB:1178:C:H2'	23:DB:1179:G:H8	1.66	0.59
23:DB:2025:C:H2'	23:DB:2026:U:C6	2.37	0.59
23:DB:2031:A:C6	23:DB:2498:C:H1'	2.37	0.59
23:DB:2392:A:H2'	23:DB:2392:A:N3	2.17	0.59
23:DB:2834:G:H2'	23:DB:2879:A:N6	2.17	0.59
32:DK:60:ALA:HA	32:DK:87:LEU:CD2	2.32	0.59
45:DY:6:ILE:O	45:DY:34:THR:HG23	2.02	0.59
1:AA:1301:U:O2	1:AA:1301:U:H2'	2.01	0.59
3:AD:29:THR:HG22	3:AD:30:LYS:H	1.67	0.59
8:AI:25:GLY:HA3	8:AI:57:VAL:N	2.16	0.59
9:AJ:53:ILE:HG22	9:AJ:61:ALA:HB1	1.83	0.59
12:AM:39:ALA:HB3	12:AM:42:VAL:HG13	1.84	0.59
13:AN:16:ALA:HB2	13:AN:55:SER:N	2.17	0.59
20:AB:65:LYS:H	20:AB:158:ASP:CG	2.04	0.59
20:AB:99:MET:HA	20:AB:106:VAL:HG11	1.84	0.59
23:BB:131:A:H2'	23:BB:132:G:C8	2.37	0.59
23:BB:1205:A:H4'	23:BB:1206:G:OP2	2.01	0.59
23:BB:1281:G:H2'	23:BB:1282:U:C6	2.37	0.59
23:BB:1484:U:H2'	23:BB:1485:U:C6	2.38	0.59
23:BB:1853:A:N1	23:BB:2087:G:H1'	2.17	0.59
23:BB:2229:U:H2'	23:BB:2230:G:C8	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2598:A:H5”	25:BC:233:GLY:CA	2.32	0.59
23:BB:2884:U:H2’	23:BB:2885:G:C8	2.37	0.59
24:BV:80:HIS:HD2	24:BV:83:LYS:H	1.48	0.59
28:BF:42:ALA:HA	28:BF:48:LEU:CD2	2.31	0.59
28:BF:71:LYS:HE2	28:BF:73:VAL:HB	1.83	0.59
29:BG:15:ASP:CB	29:BG:26:LYS:H	2.12	0.59
29:BG:115:GLN:CD	29:BG:115:GLN:H	2.06	0.59
31:BJ:72:LYS:O	31:BJ:73:VAL:HG13	2.02	0.59
32:BK:11:ALA:HB3	32:BK:85:VAL:HG22	1.84	0.59
35:BN:103:ARG:HG2	35:BN:104:ALA:H	1.65	0.59
1:CA:10:A:H2’	1:CA:11:G:C8	2.37	0.59
1:CA:1151:A:HO2’	1:CA:1152:A:H8	1.49	0.59
1:CA:1301:U:H2’	1:CA:1301:U:O2	2.02	0.59
3:CD:169:TRP:CE2	3:CD:185:PRO:HB3	2.36	0.59
8:CI:126:PHE:CE1	8:CI:129:ARG:HD3	2.37	0.59
10:CK:51:PHE:HB2	10:CK:55:ARG:HB3	1.84	0.59
20:CB:163:ILE:HG23	20:CB:164:ASP:N	2.17	0.59
23:DB:712:G:H2’	23:DB:713:G:O4’	2.03	0.59
23:DB:857:G:O2’	23:DB:858:G:H5’	2.02	0.59
23:DB:1316:U:O2’	23:DB:1317:G:H5’	2.02	0.59
23:DB:1993:U:H4’	26:DD:133:THR:HG22	1.83	0.59
23:DB:2651:C:O2’	23:DB:2652:C:H5’	2.03	0.59
25:DC:131:MET:HE2	25:DC:189:ALA:HB2	1.84	0.59
27:DE:3:LEU:H	27:DE:13:THR:H	1.50	0.59
28:DF:102:LEU:HA	28:DF:106:ALA:CB	2.32	0.59
33:DL:93:ASN:O	33:DL:95:LEU:N	2.36	0.59
37:DP:13:LYS:CD	37:DP:76:HIS:HA	2.31	0.59
44:DX:48:ARG:O	44:DX:51:ALA:HB3	2.02	0.59
47:D0:39:ARG:O	47:D0:40:HIS:HB2	2.01	0.59
1:AA:370:C:O2’	1:AA:371:A:H5’	2.02	0.59
4:AE:81:GLN:H	4:AE:146:MET:CE	2.15	0.59
4:AE:82:HIS:HB2	4:AE:83:PRO:HD2	1.84	0.59
10:AK:51:PHE:HB2	10:AK:55:ARG:HB3	1.85	0.59
10:AK:81:LEU:HD11	10:AK:99:LEU:HD23	1.82	0.59
23:BB:321:U:OP2	27:BE:130:LYS:HD3	2.02	0.59
23:BB:365:U:H2’	23:BB:366:C:C6	2.36	0.59
23:BB:1487:U:H2’	23:BB:1488:C:C6	2.37	0.59
23:BB:2015:A:N3	47:B0:2:VAL:HG22	2.18	0.59
23:BB:2216:G:H2’	23:BB:2217:G:H8	1.68	0.59
23:BB:2377:A:H2’	23:BB:2378:A:C8	2.37	0.59
23:BB:2530:A:H3’	29:BG:156:TYR:OH	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2848:G:H22	23:BB:2867:G:N2	2.00	0.59
25:BC:243:PRO:O	25:BC:250:GLN:HA	2.02	0.59
29:BG:59:ASP:O	29:BG:63:GLN:HB2	2.01	0.59
32:BK:71:ARG:HG3	32:BK:105:ARG:HH21	1.67	0.59
34:BM:36:VAL:HB	34:BM:127:LYS:O	2.01	0.59
39:BR:5:PHE:O	39:BR:11:GLN:HA	2.01	0.59
1:CA:824:G:O2'	1:CA:825:A:H5'	2.02	0.59
1:CA:1179:A:H2'	1:CA:1180:A:O4'	2.02	0.59
1:CA:1258:G:H2'	1:CA:1259:C:H6	1.68	0.59
1:CA:1296:C:H4'	1:CA:1302:C:N3	2.18	0.59
8:CI:27:ILE:HB	8:CI:34:LEU:HB2	1.84	0.59
20:CB:42:LEU:O	20:CB:46:VAL:HG12	2.02	0.59
22:DA:106:G:H2'	22:DA:107:G:O4'	2.03	0.59
23:DB:125:A:O2'	49:D2:13:ASN:HB3	2.02	0.59
23:DB:1552:A:H2'	23:DB:1553:A:H5'	1.83	0.59
23:DB:1993:U:H4'	26:DD:133:THR:HG21	1.84	0.59
23:DB:2037:A:H2'	23:DB:2038:G:C8	2.37	0.59
25:DC:1:ALA:HB3	25:DC:19:VAL:HG23	1.84	0.59
27:DE:104:ALA:O	27:DE:108:ILE:HG22	2.01	0.59
32:DK:37:ASP:O	32:DK:61:VAL:HA	2.03	0.59
35:DN:24:MET:HG3	35:DN:44:LEU:HD22	1.83	0.59
37:DP:56:SER:O	37:DP:74:GLN:HA	2.03	0.59
41:DT:65:GLY:HA3	41:DT:76:ARG:HH22	1.67	0.59
52:DI:112:LYS:O	52:DI:116:MET:HG3	2.02	0.59
1:AA:845:A:H3'	1:AA:846:G:C8	2.37	0.59
2:AC:8:GLY:HA2	2:AC:11:LEU:HG	1.83	0.59
5:AF:3:HIS:NE2	5:AF:95:ALA:HB2	2.18	0.59
5:AF:98:GLU:HG2	5:AF:99:ALA:N	2.17	0.59
6:AG:64:ALA:HA	6:AG:127:ALA:HA	1.84	0.59
13:AN:68:ARG:NH1	13:AN:70:HIS:HB2	2.16	0.59
19:AT:66:ILE:HG22	19:AT:67:HIS:N	2.16	0.59
23:BB:30:G:H2'	23:BB:31:C:H6	1.68	0.59
23:BB:233:A:H61	23:BB:428:A:H61	1.49	0.59
23:BB:969:G:OP1	45:BY:17:PRO:HG3	2.02	0.59
23:BB:1063:G:O2'	52:BI:88:GLY:HA3	2.02	0.59
23:BB:1164:C:H2'	23:BB:1165:A:C8	2.38	0.59
23:BB:1552:A:H2'	23:BB:1553:A:H5'	1.85	0.59
23:BB:2666:C:O4'	23:BB:2666:C:O2	2.20	0.59
29:BG:34:ARG:HH11	29:BG:34:ARG:HG2	1.67	0.59
30:BH:53:GLU:HA	30:BH:57:LYS:HG2	1.83	0.59
31:BJ:25:LEU:HD22	31:BJ:26:GLY:N	2.16	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BQ:91:ARG:CZ	39:BR:11:GLN:H	2.14	0.59
1:CA:751:U:H4'	14:CO:23:SER:HA	1.83	0.59
1:CA:806:C:H2'	1:CA:807:A:C8	2.36	0.59
1:CA:918:A:H2'	1:CA:919:A:C8	2.38	0.59
12:CM:58:GLU:O	12:CM:61:LYS:HG2	2.01	0.59
20:CB:23:ASN:HD22	20:CB:24:PRO:HD2	1.67	0.59
23:DB:150:U:H2'	23:DB:151:C:C6	2.37	0.59
23:DB:1400:U:H2'	23:DB:1401:G:H8	1.67	0.59
23:DB:1551:A:H3'	23:DB:1552:A:H5"	1.83	0.59
23:DB:1771:C:H2'	23:DB:1772:A:H8	1.65	0.59
23:DB:1790:C:O2'	25:DC:207:ALA:HB2	2.02	0.59
28:DF:66:ILE:HA	28:DF:86:CYS:HB3	1.84	0.59
29:DG:34:ARG:HH11	29:DG:34:ARG:HG2	1.67	0.59
33:DL:4:ASN:ND2	33:DL:4:ASN:N	2.50	0.59
38:DQ:91:ARG:CZ	39:DR:11:GLN:H	2.15	0.59
1:AA:182:A:O2'	1:AA:183:C:H3'	2.03	0.59
1:AA:275:G:H5'	16:AQ:15:LYS:HD3	1.84	0.59
2:AC:183:TYR:HA	2:AC:199:VAL:O	2.02	0.59
4:AE:152:VAL:HG21	7:AH:98:LEU:HB3	1.82	0.59
6:AG:24:LYS:HA	6:AG:27:ASN:HD22	1.67	0.59
11:AL:14:LYS:HG2	11:AL:16:ALA:H	1.66	0.59
12:AM:79:LEU:HD11	12:AM:86:ARG:NH2	2.18	0.59
14:AO:43:ALA:O	14:AO:46:LYS:HE3	2.03	0.59
20:AB:31:PHE:N	20:AB:39:ILE:O	2.34	0.59
23:BB:78:U:H2'	23:BB:79:C:C6	2.37	0.59
23:BB:528:A:N1	23:BB:2042:A:H2'	2.18	0.59
23:BB:721:A:H2'	23:BB:722:A:H8	1.68	0.59
23:BB:1061:U:H4'	23:BB:1070:A:O3'	2.03	0.59
23:BB:1551:A:H2'	23:BB:1552:A:O4'	2.01	0.59
23:BB:2458:G:H1'	23:BB:2460:U:O4	2.02	0.59
25:BC:71:ASP:OD2	25:BC:118:GLY:HA2	2.02	0.59
25:BC:141:HIS:CG	25:BC:142:ASN:H	2.20	0.59
29:BG:72:ASN:O	29:BG:76:ILE:HG12	2.03	0.59
31:BJ:24:THR:HA	31:BJ:63:ALA:HB3	1.84	0.59
32:BK:37:ASP:O	32:BK:61:VAL:HA	2.02	0.59
33:BL:30:THR:O	33:BL:33:ARG:HG2	2.01	0.59
36:BO:55:GLU:HB2	36:BO:58:ILE:HD12	1.84	0.59
42:BU:26:ASN:N	42:BU:26:ASN:HD22	1.98	0.59
43:BW:23:LYS:HD2	43:BW:24:ARG:N	2.16	0.59
1:CA:336:A:O2'	1:CA:337:G:H5'	2.03	0.59
1:CA:699:C:C2'	1:CA:700:G:H5"	2.30	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:93:LEU:O	8:CI:97:LEU:HG	2.02	0.59
12:CM:43:LYS:H	12:CM:43:LYS:HD2	1.68	0.59
16:CQ:45:VAL:HG12	16:CQ:46:HIS:N	2.18	0.59
23:DB:1326:U:H2'	23:DB:1327:A:H8	1.65	0.59
23:DB:1657:U:O2'	23:DB:1658:C:H5'	2.01	0.59
23:DB:2498:C:O2'	23:DB:2499:C:H5'	2.02	0.59
28:DF:62:GLN:CB	28:DF:91:ARG:HE	2.14	0.59
28:DF:102:LEU:HD22	28:DF:103:ILE:H	1.68	0.59
34:DM:40:ARG:HB2	34:DM:93:VAL:CG2	2.32	0.59
34:DM:60:GLN:HG2	34:DM:108:VAL:HG23	1.84	0.59
36:DO:2:ASP:OD2	36:DO:4:LYS:HB3	2.03	0.59
37:DP:20:ARG:HB3	37:DP:23:ASP:OD2	2.02	0.59
39:DR:4:VAL:HG23	39:DR:39:LEU:H	1.68	0.59
39:DR:79:ARG:CD	39:DR:80:ARG:HH21	2.15	0.59
46:DZ:45:ARG:HE	46:DZ:47:VAL:CG1	2.16	0.59
50:D3:22:LYS:HA	50:D3:47:ALA:O	2.01	0.59
1:AA:699:C:C2'	1:AA:700:G:H5"	2.26	0.59
1:AA:746:A:H2'	1:AA:747:A:C8	2.36	0.59
1:AA:996:A:H2'	1:AA:997:U:C6	2.37	0.59
1:AA:1213:A:O2'	1:AA:1214:C:H5"	2.03	0.59
22:BA:32:U:H4'	22:BA:52:A:N6	2.17	0.59
22:BA:43:C:H1'	28:BF:91:ARG:HH21	1.66	0.59
23:BB:176:A:O2'	23:BB:177:G:H5'	2.02	0.59
23:BB:458:G:H22	23:BB:469:G:H2'	1.66	0.59
23:BB:569:U:H2'	23:BB:570:G:O4'	2.03	0.59
23:BB:704:G:H2'	23:BB:726:G:N2	2.16	0.59
23:BB:1326:U:H2'	23:BB:1327:A:H8	1.66	0.59
23:BB:1550:C:H2'	23:BB:1551:A:H8	1.68	0.59
24:BV:42:LEU:HD11	24:BV:89:ILE:HD11	1.85	0.59
30:BH:73:ASN:ND2	30:BH:74:ALA:H	1.95	0.59
30:BH:85:GLY:HA3	30:BH:91:PHE:HE1	1.67	0.59
30:BH:141:LYS:HD3	30:BH:141:LYS:N	2.18	0.59
34:BM:40:ARG:HB2	34:BM:93:VAL:CG2	2.32	0.59
34:BM:41:LEU:HB2	34:BM:94:ALA:HB3	1.84	0.59
35:BN:33:ILE:O	35:BN:33:ILE:HD12	2.02	0.59
35:BN:76:VAL:HA	35:BN:79:LEU:HD12	1.85	0.59
44:BX:45:GLN:O	44:BX:47:ARG:N	2.34	0.59
1:CA:239:U:H6	1:CA:239:U:C5'	2.15	0.59
1:CA:499:A:H4'	1:CA:500:G:H5'	1.85	0.59
1:CA:1058:G:OP1	2:CC:198:LYS:HE3	2.03	0.59
8:CI:120:ALA:O	8:CI:121:ARG:HG2	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:22:TYR:HB2	12:CM:65:GLU:HA	1.83	0.59
23:DB:722:A:H2'	23:DB:723:C:C6	2.38	0.59
23:DB:1082:U:C2	23:DB:1086:A:C6	2.90	0.59
23:DB:1739:A:H2'	23:DB:1740:G:O4'	2.02	0.59
23:DB:2066:C:O2'	23:DB:2067:G:H5'	2.02	0.59
23:DB:2598:A:H5"	25:DC:233:GLY:CA	2.32	0.59
23:DB:2772:C:H2'	23:DB:2773:C:H6	1.68	0.59
24:DV:24:ASN:O	24:DV:44:HIS:HB2	2.02	0.59
27:DE:29:HIS:O	27:DE:33:VAL:HG23	2.03	0.59
27:DE:48:THR:HG22	27:DE:86:ALA:HB3	1.83	0.59
27:DE:111:GLU:HB3	33:DL:2:ARG:HH12	1.65	0.59
28:DF:34:THR:HG22	28:DF:89:THR:HG22	1.83	0.59
28:DF:111:ARG:NH2	28:DF:113:PHE:HB2	2.17	0.59
33:DL:80:SER:HA	33:DL:115:GLU:HB2	1.84	0.59
33:DL:85:VAL:CG2	33:DL:94:THR:HB	2.32	0.59
40:DS:28:LYS:HD2	40:DS:29:VAL:N	2.18	0.59
42:DU:35:VAL:O	42:DU:38:ILE:HG22	2.02	0.59
50:D3:54:LEU:HG	50:D3:58:ILE:HD11	1.84	0.59
13:AN:41:TRP:HB3	13:AN:44:VAL:HB	1.84	0.59
15:AP:20:VAL:HG23	15:AP:35:ARG:HA	1.85	0.59
16:AQ:26:ARG:HG2	16:AQ:39:ARG:O	2.02	0.59
20:AB:20:ARG:HA	20:AB:38:HIS:CE1	2.38	0.59
20:AB:42:LEU:O	20:AB:46:VAL:HG12	2.02	0.59
20:AB:110:ILE:HG23	20:AB:151:LYS:HA	1.84	0.59
23:BB:233:A:N6	23:BB:428:A:H61	2.00	0.59
23:BB:345:A:H1'	23:BB:346:A:C2	2.37	0.59
23:BB:419:U:H2'	23:BB:420:C:H6	1.67	0.59
23:BB:1015:U:H2'	23:BB:1016:G:C8	2.37	0.59
23:BB:2037:A:H2'	23:BB:2038:G:C8	2.37	0.59
23:BB:2328:A:H2'	23:BB:2329:U:H6	1.68	0.59
23:BB:2784:U:H2'	23:BB:2785:C:C6	2.38	0.59
25:BC:93:VAL:HG13	25:BC:94:LEU:N	2.17	0.59
27:BE:46:GLN:HG3	27:BE:87:ALA:HB3	1.83	0.59
37:BP:13:LYS:CD	37:BP:76:HIS:HA	2.32	0.59
42:BU:94:PHE:CB	42:BU:101:THR:HA	2.33	0.59
46:BZ:40:VAL:HG22	46:BZ:45:ARG:H	1.67	0.59
50:B3:44:ARG:N	50:B3:45:PRO:HD2	2.17	0.59
1:CA:1239:A:H4'	1:CA:1240:U:H5'	1.84	0.59
1:CA:1296:C:H4'	1:CA:1302:C:N4	2.17	0.59
2:CC:82:ASP:HA	2:CC:85:LYS:HB3	1.85	0.59
12:CM:70:ARG:NH1	28:DF:142:TYR:HB2	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:65:U:H2'	23:DB:66:C:C6	2.38	0.59
23:DB:309:A:H4'	42:DU:15:GLY:HA2	1.85	0.59
23:DB:630:G:N2	23:DB:632:A:H3'	2.16	0.59
23:DB:636:G:O5'	33:DL:128:THR:HG22	2.03	0.59
23:DB:1535:A:H5"	23:DB:1536:C:C5	2.37	0.59
23:DB:1723:G:N7	23:DB:1737:G:N2	2.51	0.59
23:DB:2241:A:H2'	23:DB:2242:G:H8	1.68	0.59
23:DB:2394:C:OP1	33:DL:63:LYS:HG2	2.03	0.59
23:DB:2784:U:H2'	23:DB:2785:C:C6	2.37	0.59
24:DV:80:HIS:HD2	24:DV:83:LYS:H	1.49	0.59
28:DF:36:ASN:HA	28:DF:87:LYS:HA	1.84	0.59
28:DF:40:GLY:HA2	28:DF:84:ILE:HG23	1.85	0.59
29:DG:26:LYS:HG2	29:DG:27:GLY:H	1.67	0.59
41:DT:14:PRO:HD2	44:DX:33:ALA:HB3	1.84	0.59
1:AA:1007:U:H2'	1:AA:1008:U:C6	2.37	0.59
1:AA:1302:C:H5'	12:AM:16:ILE:HG13	1.85	0.59
7:AH:46:GLU:HB2	7:AH:61:THR:HB	1.85	0.59
11:AL:35:ARG:HA	11:AL:35:ARG:CZ	2.33	0.59
15:AP:68:SER:OG	15:AP:71:VAL:HG12	2.02	0.59
16:AQ:45:VAL:HG12	16:AQ:46:HIS:N	2.18	0.59
23:BB:138:U:C4	23:BB:140:C:H1'	2.37	0.59
23:BB:573:U:O2'	23:BB:574:A:H3'	2.02	0.59
23:BB:722:A:H2'	23:BB:723:C:C6	2.38	0.59
23:BB:1219:U:H2'	23:BB:1220:G:H8	1.68	0.59
23:BB:2376:A:N6	36:BO:94:ARG:HD3	2.18	0.59
31:BJ:20:ALA:HA	31:BJ:23:LYS:HG2	1.85	0.59
37:BP:7:LEU:HA	37:BP:10:GLU:HG2	1.85	0.59
37:BP:56:SER:O	37:BP:74:GLN:HA	2.03	0.59
45:BY:6:ILE:O	45:BY:34:THR:HG23	2.03	0.59
1:CA:72:A:H5'	1:CA:73:C:OP2	2.02	0.59
1:CA:501:C:H2'	1:CA:502:A:C8	2.37	0.59
5:CF:3:HIS:NE2	5:CF:95:ALA:HB2	2.18	0.59
12:CM:79:LEU:HD11	12:CM:86:ARG:NH2	2.17	0.59
20:CB:16:GLY:CA	20:CB:40:ILE:H	2.16	0.59
23:DB:967:U:H2'	23:DB:968:C:C6	2.38	0.59
23:DB:968:C:H2'	23:DB:969:G:H8	1.66	0.59
23:DB:2359:C:H2'	23:DB:2360:G:C8	2.38	0.59
23:DB:2722:G:H2'	23:DB:2723:C:C6	2.38	0.59
29:DG:137:LYS:HA	29:DG:140:ILE:HD11	1.84	0.59
34:DM:96:ILE:HD11	34:DM:126:ILE:HG12	1.84	0.59
34:DM:108:VAL:HG11	34:DM:112:LEU:HD12	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DO:88:LYS:HD2	36:DO:89:ASP:HB2	1.85	0.59
41:DT:2:ILE:HD13	41:DT:2:ILE:N	2.18	0.59
42:DU:80:ASP:HB3	42:DU:96:LYS:N	2.06	0.59
51:D4:8:LYS:HG2	51:D4:9:LYS:H	1.67	0.59
52:DI:126:ARG:HH11	52:DI:126:ARG:HB3	1.68	0.59
1:AA:628:G:H2'	1:AA:629:A:C8	2.38	0.59
1:AA:1294:G:H2'	1:AA:1295:U:C6	2.38	0.59
18:AS:30:LEU:H	18:AS:48:ILE:HA	1.67	0.59
20:AB:140:LEU:H	20:AB:140:LEU:HD12	1.68	0.59
23:BB:141:G:C6	41:BT:2:ILE:HD12	2.38	0.59
23:BB:282:A:H2'	23:BB:283:G:C8	2.38	0.59
23:BB:395:U:H2'	23:BB:396:G:N7	2.16	0.59
23:BB:1245:G:OP1	33:BL:13:LYS:HE3	2.02	0.59
23:BB:2815:C:H2'	23:BB:2816:G:H8	1.67	0.59
24:BV:4:ILE:O	24:BV:63:ILE:HA	2.03	0.59
25:BC:66:PHE:HB2	25:BC:150:GLY:O	2.02	0.59
26:BD:169:ARG:O	26:BD:170:VAL:HG22	2.02	0.59
28:BF:30:VAL:HG21	28:BF:96:TRP:NE1	2.18	0.59
28:BF:90:LEU:HD12	28:BF:95:MET:HA	1.84	0.59
30:BH:72:ILE:HD13	30:BH:142:VAL:HG22	1.85	0.59
30:BH:122:LEU:H	30:BH:122:LEU:HD12	1.68	0.59
34:BM:19:GLY:N	34:BM:38:ARG:HH22	2.01	0.59
36:BO:2:ASP:OD2	36:BO:4:LYS:HB3	2.02	0.59
39:BR:34:GLU:HA	39:BR:59:ILE:O	2.03	0.59
1:CA:621:A:H2'	1:CA:622:A:C8	2.38	0.59
7:CH:17:GLN:HE21	7:CH:62:LEU:HB3	1.68	0.59
12:CM:21:ILE:HB	12:CM:24:VAL:CG2	2.27	0.59
18:CS:43:MET:HB2	18:CS:61:VAL:HG11	1.84	0.59
20:CB:32:GLY:N	20:CB:39:ILE:HB	2.16	0.59
22:DA:6:G:H2'	22:DA:7:G:C8	2.38	0.59
22:DA:43:C:H1'	28:DF:91:ARG:HH21	1.68	0.59
23:DB:37:C:H4'	23:DB:451:U:OP1	2.02	0.59
23:DB:825:A:H1'	33:DL:54:GLN:HE21	1.68	0.59
23:DB:856:G:C1'	43:DW:23:LYS:HB3	2.33	0.59
23:DB:2061:G:H5"	23:DB:2503:A:C2	2.37	0.59
23:DB:2179:C:O2	23:DB:2179:C:C2'	2.48	0.59
23:DB:2384:U:H5"	23:DB:2386:A:OP1	2.03	0.59
23:DB:2800:A:H2'	23:DB:2801:G:O4'	2.02	0.59
23:DB:2813:A:H2'	23:DB:2814:A:C8	2.38	0.59
25:DC:171:VAL:HB	25:DC:183:VAL:HG12	1.85	0.59
26:DD:36:GLN:O	26:DD:36:GLN:HG3	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:92:VAL:O	26:DD:94:GLN:N	2.36	0.59
27:DE:108:ILE:HG13	33:DL:2:ARG:NH2	2.18	0.59
30:DH:117:LEU:HD22	30:DH:130:VAL:HG13	1.85	0.59
30:DH:128:HIS:HB2	30:DH:144:VAL:HG23	1.85	0.59
31:DJ:25:LEU:HB2	31:DJ:62:VAL:CG2	2.33	0.59
32:DK:8:LEU:HD12	32:DK:8:LEU:N	2.17	0.59
41:DT:18:GLU:C	41:DT:20:ALA:H	2.06	0.59
5:AF:100:SER:HA	17:AR:23:LYS:CE	2.32	0.59
6:AG:26:VAL:HB	6:AG:39:GLU:HG2	1.84	0.59
6:AG:62:GLU:O	6:AG:66:GLU:HG3	2.03	0.59
10:AK:81:LEU:HD21	10:AK:104:PHE:HB3	1.85	0.59
23:BB:660:C:H2'	23:BB:661:A:H8	1.67	0.59
23:BB:1812:U:H2'	23:BB:1813:G:C8	2.37	0.59
27:BE:33:VAL:O	27:BE:36:ALA:HB3	2.02	0.59
30:BH:21:VAL:HG22	30:BH:22:LYS:H	1.66	0.59
31:BJ:45:THR:OG1	31:BJ:48:VAL:HB	2.03	0.59
31:BJ:124:VAL:O	31:BJ:125:TYR:HB2	2.02	0.59
36:BO:27:VAL:HG21	36:BO:40:ILE:HD12	1.85	0.59
36:BO:67:ASN:HB3	36:BO:70:ALA:HB2	1.83	0.59
51:B4:7:VAL:HG13	51:B4:8:LYS:N	2.18	0.59
52:BI:96:LYS:N	52:BI:96:LYS:HD2	2.18	0.59
1:CA:332:G:OP2	19:CT:4:LYS:HB2	2.03	0.59
1:CA:719:C:O2'	17:CR:37:LYS:HB2	2.03	0.59
1:CA:802:A:H2'	1:CA:803:G:O4'	2.03	0.59
1:CA:1478:U:H2'	1:CA:1479:C:C6	2.38	0.59
12:CM:77:LYS:HG2	12:CM:81:ASP:OD2	2.02	0.59
16:CQ:26:ARG:HG2	16:CQ:39:ARG:O	2.03	0.59
20:CB:99:MET:HA	20:CB:106:VAL:HG11	1.85	0.59
22:DA:13:G:C2'	22:DA:14:U:H5"	2.32	0.59
23:DB:233:A:N6	23:DB:428:A:H61	2.00	0.59
23:DB:569:U:H2'	23:DB:570:G:O4'	2.03	0.59
23:DB:782:A:H5'	23:DB:783:A:C2	2.38	0.59
23:DB:1454:C:H5'	35:DN:63:ARG:NE	2.18	0.59
23:DB:1551:A:H2'	23:DB:1552:A:O4'	2.03	0.59
23:DB:2258:C:O2'	23:DB:2426:A:H4'	2.02	0.59
23:DB:2334:U:H1'	36:DO:13:ARG:HA	1.85	0.59
23:DB:2354:C:H4'	43:DW:31:LEU:CD2	2.32	0.59
23:DB:2758:A:H2'	23:DB:2759:G:O4'	2.03	0.59
34:DM:41:LEU:HB2	34:DM:94:ALA:HB3	1.85	0.59
38:DQ:91:ARG:NH2	39:DR:11:GLN:H	2.01	0.59
40:DS:29:VAL:HG11	40:DS:55:ILE:CD1	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DT:44:LYS:O	41:DT:48:GLN:HG2	2.02	0.59
42:DU:81:ARG:HB2	42:DU:96:LYS:CG	2.33	0.59
45:DY:2:LYS:HD3	45:DY:2:LYS:H	1.67	0.59
1:AA:264:C:O2'	16:AQ:65:PRO:HG2	2.03	0.58
1:AA:922:G:H4'	4:AE:24:VAL:HA	1.85	0.58
1:AA:1270:G:H2'	1:AA:1271:A:C8	2.38	0.58
2:AC:82:ASP:HA	2:AC:85:LYS:HB3	1.84	0.58
17:AR:55:ALA:HA	17:AR:58:ILE:HD13	1.84	0.58
19:AT:19:HIS:O	19:AT:23:ARG:HG2	2.02	0.58
23:BB:1406:U:H2'	23:BB:1407:G:H8	1.68	0.58
23:BB:1557:C:H3'	23:BB:1558:C:H5"	1.85	0.58
23:BB:2277:G:H5"	34:BM:86:LYS:CB	2.33	0.58
26:BD:7:LYS:O	26:BD:9:VAL:HG12	2.03	0.58
40:BS:42:LYS:O	40:BS:45:VAL:HG22	2.03	0.58
41:BT:48:GLN:HE21	41:BT:48:GLN:HA	1.68	0.58
41:BT:57:VAL:HG13	41:BT:58:VAL:N	2.18	0.58
45:BY:2:LYS:HD3	45:BY:2:LYS:H	1.67	0.58
48:B1:34:GLU:HA	48:B1:48:TYR:O	2.03	0.58
1:CA:6:G:HO2'	1:CA:7:A:H8	1.48	0.58
1:CA:545:C:H5"	3:CD:68:GLU:HG2	1.85	0.58
1:CA:1249:C:H4'	8:CI:37:TYR:OH	2.03	0.58
1:CA:1270:G:H2'	1:CA:1271:A:C8	2.38	0.58
7:CH:124:ILE:HG22	7:CH:125:ILE:N	2.16	0.58
11:CL:35:ARG:HA	11:CL:35:ARG:NH1	2.18	0.58
20:CB:16:GLY:HA3	20:CB:39:ILE:HA	1.84	0.58
23:DB:1098:A:H3'	52:DI:3:LYS:C	2.24	0.58
23:DB:2264:C:H41	43:DW:11:ASN:ND2	1.99	0.58
23:DB:2573:C:H3'	56:DB:3631:HOH:O	2.03	0.58
23:DB:2633:G:H2'	23:DB:2634:A:O4'	2.02	0.58
23:DB:2859:G:H2'	23:DB:2860:A:C8	2.38	0.58
26:DD:13:ARG:HD3	26:DD:15:PHE:HE1	1.67	0.58
27:DE:98:LYS:HZ1	27:DE:99:LYS:HE2	1.68	0.58
28:DF:43:ILE:HG23	28:DF:44:ALA:N	2.13	0.58
29:DG:59:ASP:O	29:DG:63:GLN:HB2	2.03	0.58
32:DK:70:ARG:HA	32:DK:76:VAL:HA	1.85	0.58
42:DU:94:PHE:CB	42:DU:101:THR:HA	2.33	0.58
43:DW:9:THR:OG1	43:DW:10:ARG:N	2.32	0.58
45:DY:37:ARG:HG2	45:DY:43:ILE:HD11	1.85	0.58
52:DI:32:VAL:HG22	52:DI:60:VAL:HG21	1.85	0.58
1:AA:68:G:H5'	1:AA:171:A:H1'	1.84	0.58
1:AA:812:G:N3	1:AA:812:G:H2'	2.18	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1008:U:H5”	13:AN:23:ARG:NH2	2.17	0.58
4:AE:11:GLN:HE22	4:AE:41:GLY:HA3	1.69	0.58
8:AI:25:GLY:HA3	8:AI:57:VAL:H	1.68	0.58
20:AB:126:ASP:O	20:AB:127:LYS:HB3	2.03	0.58
23:BB:782:A:N7	25:BC:219:VAL:HG21	2.18	0.58
23:BB:1171:G:H2’	23:BB:1172:C:C6	2.37	0.58
23:BB:1320:C:H5	23:BB:1329:U:H5”	1.68	0.58
23:BB:1739:A:H2’	23:BB:1740:G:O4’	2.04	0.58
23:BB:2088:A:H2’	23:BB:2089:C:C6	2.38	0.58
23:BB:2384:U:H5”	23:BB:2386:A:OP1	2.03	0.58
23:BB:2624:G:H1’	47:B0:18:HIS:NE2	2.17	0.58
24:BV:35:GLU:OE1	24:BV:93:ARG:HD3	2.03	0.58
25:BC:171:VAL:HB	25:BC:183:VAL:HG12	1.85	0.58
27:BE:5:LEU:HB2	27:BE:11:ALA:N	2.18	0.58
28:BF:102:LEU:HA	28:BF:106:ALA:CB	2.33	0.58
29:BG:39:ALA:C	29:BG:54:ARG:HB2	2.24	0.58
34:BM:19:GLY:H	34:BM:38:ARG:NH1	1.98	0.58
35:BN:72:ASP:OD1	35:BN:75:ILE:HG23	2.03	0.58
37:BP:6:GLN:O	37:BP:9:GLN:HG2	2.03	0.58
41:BT:29:THR:CA	41:BT:86:THR:HA	2.30	0.58
42:BU:35:VAL:O	42:BU:38:ILE:HG22	2.03	0.58
45:BY:5:LYS:HG3	45:BY:57:GLU:HB2	1.85	0.58
1:CA:411:A:H62	1:CA:413:G:H21	1.50	0.58
1:CA:451:A:H5’	15:CP:70:ARG:NH2	2.17	0.58
1:CA:638:U:H2’	1:CA:639:G:O4’	2.02	0.58
2:CC:154:GLY:HA3	2:CC:162:ALA:HB1	1.86	0.58
5:CF:86:ARG:HH12	17:CR:63:TYR:HB3	1.66	0.58
10:CK:70:ALA:C	10:CK:72:ALA:H	2.05	0.58
10:CK:124:LYS:HA	21:CU:34:ARG:CB	2.30	0.58
13:CN:68:ARG:NH1	13:CN:70:HIS:HB2	2.17	0.58
22:DA:24:G:O2’	22:DA:25:U:H5”	2.02	0.58
23:DB:674:G:H4’	27:DE:69:ARG:HB3	1.85	0.58
23:DB:825:A:H1’	33:DL:54:GLN:NE2	2.18	0.58
23:DB:1443:U:H2’	23:DB:1444:G:H8	1.68	0.58
23:DB:2468:A:H2’	23:DB:2476:A:C6	2.38	0.58
38:DQ:105:PHE:O	38:DQ:109:VAL:HG23	2.03	0.58
39:DR:39:LEU:CA	39:DR:49:ILE:HG12	2.34	0.58
46:DZ:70:GLU:C	46:DZ:72:ARG:H	2.05	0.58
1:AA:370:C:H2’	1:AA:371:A:H8	1.67	0.58
1:AA:539:A:H2’	1:AA:540:G:H8	1.67	0.58
1:AA:728:A:H2’	1:AA:729:A:C8	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:881:G:P	11:AL:8:ARG:HH12	2.26	0.58
6:AG:78:ARG:NH1	6:AG:81:GLY:H	2.01	0.58
11:AL:26:CYS:SG	11:AL:29:LYS:HE2	2.43	0.58
11:AL:109:ARG:HB3	11:AL:118:VAL:HG21	1.85	0.58
18:AS:11:ASP:H	18:AS:14:LEU:HD21	1.67	0.58
18:AS:43:MET:HB2	18:AS:61:VAL:HG11	1.84	0.58
21:AU:3:ILE:HD12	21:AU:3:ILE:N	2.18	0.58
22:BA:13:G:C2'	22:BA:14:U:H5"	2.34	0.58
22:BA:15:A:H3'	22:BA:15:A:OP2	2.03	0.58
23:BB:470:A:N6	41:BT:72:GLN:HE22	1.93	0.58
23:BB:1172:C:H3'	23:BB:1173:U:C5	2.38	0.58
23:BB:1400:U:H2'	23:BB:1401:G:C8	2.38	0.58
23:BB:1785:A:H2'	23:BB:1787:A:N7	2.18	0.58
23:BB:1882:U:O2'	23:BB:1883:U:H5'	2.04	0.58
23:BB:2241:A:H2'	23:BB:2242:G:H8	1.65	0.58
23:BB:2633:G:H2'	23:BB:2634:A:O4'	2.03	0.58
23:BB:2804:U:H2'	23:BB:2805:C:C6	2.38	0.58
28:BF:37:MET:HB2	28:BF:56:LEU:HD21	1.85	0.58
29:BG:2:ARG:H	29:BG:5:LYS:HE2	1.67	0.58
29:BG:68:ARG:HH12	29:BG:72:ASN:HD22	1.51	0.58
31:BJ:57:LEU:HG	31:BJ:128:ASN:H	1.68	0.58
34:BM:60:GLN:HG2	34:BM:108:VAL:HG23	1.85	0.58
40:BS:1:MET:SD	40:BS:62:ASP:HB2	2.43	0.58
41:BT:44:LYS:O	41:BT:48:GLN:HG2	2.02	0.58
41:BT:50:LEU:C	41:BT:52:GLU:H	2.06	0.58
43:BW:17:ALA:HB1	43:BW:36:ILE:HA	1.85	0.58
43:BW:24:ARG:HD2	43:BW:25:PHE:N	2.18	0.58
1:CA:268:U:H2'	1:CA:269:C:C6	2.38	0.58
1:CA:555:U:H2'	1:CA:556:C:H6	1.68	0.58
1:CA:685:G:O2'	1:CA:686:U:H5'	2.02	0.58
1:CA:845:A:H3'	1:CA:846:G:C8	2.37	0.58
1:CA:1218:C:H2'	1:CA:1219:A:C8	2.37	0.58
3:CD:123:MET:HB2	3:CD:126:GLY:O	2.03	0.58
5:CF:67:PRO:HG2	5:CF:70:VAL:HG22	1.85	0.58
8:CI:32:ARG:HH21	8:CI:36:GLN:HG3	1.68	0.58
11:CL:109:ARG:HB3	11:CL:118:VAL:HG21	1.85	0.58
20:CB:15:PHE:O	20:CB:40:ILE:HD12	2.03	0.58
23:DB:57:C:H2'	23:DB:58:G:O4'	2.03	0.58
23:DB:78:U:H2'	23:DB:79:C:C6	2.38	0.58
23:DB:309:A:H4'	42:DU:15:GLY:HA3	1.86	0.58
23:DB:360:U:H2'	23:DB:361:G:C1'	2.34	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1281:G:H2'	23:DB:1282:U:C6	2.37	0.58
23:DB:2884:U:H2'	23:DB:2885:G:C8	2.38	0.58
23:DB:2897:U:H2'	23:DB:2898:U:C6	2.38	0.58
25:DC:75:ALA:HB2	25:DC:95:TYR:HA	1.84	0.58
25:DC:103:ILE:HG22	25:DC:105:ALA:H	1.68	0.58
25:DC:196:ASN:HD22	25:DC:199:HIS:HB2	1.69	0.58
29:DG:83:THR:HA	29:DG:84:LYS:NZ	2.18	0.58
31:DJ:23:LYS:HE2	31:DJ:142:ILE:HA	1.86	0.58
31:DJ:45:THR:N	31:DJ:46:PRO:HD3	2.18	0.58
32:DK:2:ILE:HA	32:DK:33:ALA:H	1.68	0.58
45:DY:40:THR:O	45:DY:43:ILE:HG22	2.03	0.58
1:AA:93:U:O2'	1:AA:94:G:H5'	2.04	0.58
1:AA:625:U:H4'	15:AP:16:PHE:CZ	2.38	0.58
1:AA:1149:C:H2'	1:AA:1150:A:C8	2.38	0.58
23:BB:57:C:H2'	23:BB:58:G:O4'	2.03	0.58
23:BB:182:A:H2'	23:BB:183:C:C6	2.39	0.58
23:BB:947:A:H2'	23:BB:948:C:C6	2.38	0.58
23:BB:1082:U:C2	23:BB:1086:A:C6	2.91	0.58
23:BB:1097:U:H2'	23:BB:1098:A:H5'	1.85	0.58
23:BB:1203:U:O4'	33:BL:3:LEU:HD12	2.03	0.58
23:BB:1400:U:H2'	23:BB:1401:G:H8	1.67	0.58
23:BB:2054:A:H2'	47:B0:4:GLN:OE1	2.04	0.58
26:BD:117:GLY:O	26:BD:164:GLN:HA	2.03	0.58
31:BJ:16:TYR:O	31:BJ:55:ILE:HG12	2.04	0.58
38:BQ:91:ARG:HH22	39:BR:10:LYS:HB3	1.67	0.58
42:BU:71:ILE:HD11	42:BU:82:VAL:HG22	1.85	0.58
1:CA:472:U:H2'	1:CA:473:U:C6	2.39	0.58
1:CA:576:C:OP2	1:CA:576:C:H3'	2.03	0.58
1:CA:742:G:H2'	1:CA:743:A:H8	1.68	0.58
1:CA:746:A:H2'	1:CA:747:A:C8	2.38	0.58
4:CE:82:HIS:HB2	4:CE:83:PRO:HD2	1.85	0.58
10:CK:16:SER:HA	10:CK:77:GLY:O	2.03	0.58
11:CL:35:ARG:HA	11:CL:35:ARG:CZ	2.34	0.58
14:CO:27:GLN:O	14:CO:31:LEU:HD23	2.02	0.58
20:CB:117:GLU:HA	20:CB:140:LEU:HD21	1.85	0.58
23:DB:176:A:O2'	23:DB:177:G:H5'	2.03	0.58
23:DB:1018:U:O2'	23:DB:1019:U:H5'	2.02	0.58
23:DB:1092:C:H2'	23:DB:1093:G:H5'	1.86	0.58
23:DB:2331:G:N2	23:DB:2336:A:H8	2.00	0.58
23:DB:2472:G:O6	23:DB:2476:A:H4'	2.04	0.58
23:DB:2848:G:H22	23:DB:2867:G:N2	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DV:30:ILE:HG13	24:DV:40:ILE:HD12	1.83	0.58
34:DM:19:GLY:N	34:DM:38:ARG:HH22	2.01	0.58
34:DM:63:ILE:H	34:DM:63:ILE:HD12	1.67	0.58
39:DR:28:ALA:O	39:DR:63:VAL:HG21	2.03	0.58
43:DW:17:ALA:HB1	43:DW:36:ILE:HA	1.85	0.58
45:DY:15:ARG:HD2	45:DY:15:ARG:N	2.18	0.58
47:D0:53:VAL:O	47:D0:54:ILE:HB	2.04	0.58
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.39	0.58
1:AA:1071:C:H2'	1:AA:1072:G:H8	1.69	0.58
6:AG:14:ASP:CB	6:AG:19:SER:H	2.15	0.58
7:AH:17:GLN:HE21	7:AH:62:LEU:HB3	1.69	0.58
10:AK:70:ALA:C	10:AK:72:ALA:H	2.07	0.58
13:AN:9:GLU:HB2	13:AN:62:ARG:CZ	2.33	0.58
18:AS:11:ASP:O	18:AS:14:LEU:HG	2.02	0.58
20:AB:172:ILE:HG22	20:AB:176:ASN:HD21	1.69	0.58
23:BB:65:U:H2'	23:BB:66:C:C6	2.38	0.58
23:BB:1443:U:H2'	23:BB:1444:G:H8	1.68	0.58
23:BB:2291:U:H2'	23:BB:2292:U:C6	2.38	0.58
23:BB:2370:G:H2'	23:BB:2371:G:O4'	2.03	0.58
26:BD:179:ARG:HB2	26:BD:188:LEU:HD12	1.86	0.58
27:BE:137:LYS:HE2	27:BE:141:MET:SD	2.43	0.58
30:BH:80:ILE:HD13	30:BH:99:ILE:HD13	1.84	0.58
32:BK:108:ARG:O	32:BK:113:MET:HE3	2.04	0.58
1:CA:390:U:H2'	1:CA:391:G:C8	2.39	0.58
1:CA:620:C:O2	3:CD:131:ILE:HG21	2.03	0.58
1:CA:728:A:H2'	1:CA:729:A:C8	2.38	0.58
1:CA:1008:U:H5"	13:CN:23:ARG:HH22	1.69	0.58
7:CH:6:ILE:HB	7:CH:76:ARG:NH1	2.18	0.58
22:DA:95:U:H2'	22:DA:96:G:C8	2.39	0.58
23:DB:654:A:H2'	23:DB:655:A:H5"	1.84	0.58
23:DB:1381:G:C2'	23:DB:1382:G:H5'	2.33	0.58
23:DB:1485:U:H2'	23:DB:1486:U:H6	1.69	0.58
23:DB:2144:G:O2'	23:DB:2146:C:H5"	2.03	0.58
23:DB:2649:C:H2'	23:DB:2650:U:C6	2.36	0.58
24:DV:70:ILE:H	24:DV:70:ILE:HD13	1.69	0.58
25:DC:146:LYS:HB3	25:DC:147:PRO:CD	2.28	0.58
26:DD:176:ASP:HB2	26:DD:190:LYS:HG2	1.85	0.58
27:DE:46:GLN:HG3	27:DE:87:ALA:HB3	1.85	0.58
38:DQ:65:ASN:CB	38:DQ:75:TYR:HB2	2.32	0.58
38:DQ:79:ILE:O	38:DQ:82:LEU:HB2	2.03	0.58
40:DS:18:ARG:HB3	40:DS:76:VAL:CG2	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DT:7:LEU:HA	41:DT:9:LYS:NZ	2.19	0.58
41:DT:57:VAL:HG13	41:DT:58:VAL:N	2.18	0.58
46:DZ:70:GLU:O	46:DZ:71:LEU:HB3	2.03	0.58
1:AA:352:C:H4'	1:AA:354:G:OP1	2.03	0.58
1:AA:596:A:H2'	1:AA:597:G:H8	1.69	0.58
1:AA:1461:G:H2'	1:AA:1462:C:H6	1.69	0.58
6:AG:72:VAL:HG12	6:AG:89:GLU:HA	1.85	0.58
7:AH:45:ILE:HG22	7:AH:62:LEU:HA	1.86	0.58
10:AK:124:LYS:HA	21:AU:34:ARG:CB	2.33	0.58
14:AO:27:GLN:O	14:AO:31:LEU:HD23	2.03	0.58
20:AB:93:HIS:CD2	20:AB:145:ASN:HB3	2.39	0.58
23:BB:15:G:O2'	23:BB:16:C:H5'	2.03	0.58
23:BB:118:A:H5'	23:BB:119:A:H8	1.68	0.58
23:BB:443:A:C5	27:BE:40:ARG:HD3	2.38	0.58
23:BB:712:G:H2'	23:BB:713:G:O4'	2.04	0.58
23:BB:770:G:H5"	49:B2:10:LEU:HD12	1.84	0.58
23:BB:1550:C:H2'	23:BB:1551:A:C8	2.39	0.58
23:BB:2820:A:OP1	35:BN:4:ARG:HA	2.03	0.58
27:BE:48:THR:HG22	27:BE:86:ALA:HB3	1.84	0.58
30:BH:89:LYS:HA	30:BH:89:LYS:HE3	1.85	0.58
31:BJ:57:LEU:HD21	31:BJ:128:ASN:HA	1.86	0.58
34:BM:71:LYS:HG2	34:BM:73:ILE:HD11	1.85	0.58
44:BX:56:LEU:C	44:BX:58:ASN:H	2.06	0.58
45:BY:40:THR:O	45:BY:43:ILE:HG22	2.03	0.58
50:B3:30:HIS:O	50:B3:31:ILE:HG12	2.02	0.58
52:BI:27:LEU:H	52:BI:27:LEU:CD2	2.15	0.58
1:CA:628:G:H2'	1:CA:629:A:C8	2.38	0.58
1:CA:651:C:H2'	1:CA:652:U:C6	2.39	0.58
1:CA:777:A:H2'	1:CA:778:G:C8	2.37	0.58
1:CA:921:U:H2'	1:CA:922:G:C8	2.38	0.58
1:CA:950:U:H2'	1:CA:951:G:H8	1.68	0.58
1:CA:1090:U:H2'	1:CA:1091:U:C6	2.37	0.58
1:CA:1461:G:H2'	1:CA:1462:C:H6	1.68	0.58
5:CF:79:ARG:HH21	5:CF:87:SER:HB3	1.69	0.58
20:CB:44:LYS:C	20:CB:47:PRO:HD2	2.24	0.58
20:CB:80:LYS:HG3	20:CB:81:ASP:H	1.69	0.58
23:DB:572:A:H5"	23:DB:573:U:OP2	2.03	0.58
23:DB:1042:G:H2'	23:DB:1043:C:C6	2.38	0.58
23:DB:1429:G:O2'	23:DB:1430:G:H5'	2.04	0.58
23:DB:1450:G:H21	23:DB:1452:G:H1	1.51	0.58
23:DB:1678:A:H2'	23:DB:1679:A:H8	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2377:A:H2'	23:DB:2378:A:C8	2.39	0.58
25:DC:93:VAL:HG13	25:DC:94:LEU:N	2.18	0.58
33:DL:51:GLU:HG2	50:D3:56:LEU:HD21	1.85	0.58
34:DM:97:GLN:HB2	34:DM:98:PRO:HD2	1.85	0.58
52:DI:121:ILE:H	52:DI:121:ILE:CD1	2.14	0.58
1:AA:328:C:H4'	1:AA:329:A:H5"	1.84	0.58
1:AA:472:U:H2'	1:AA:473:U:C6	2.39	0.58
18:AS:27:LYS:NZ	18:AS:27:LYS:HB3	2.19	0.58
20:AB:23:ASN:HD22	20:AB:24:PRO:HD2	1.67	0.58
23:BB:131:A:H2'	23:BB:132:G:H8	1.69	0.58
23:BB:142:A:H2'	23:BB:143:C:O4'	2.02	0.58
23:BB:414:C:H2'	23:BB:415:A:H8	1.67	0.58
23:BB:593:U:H2'	23:BB:594:U:C6	2.38	0.58
23:BB:857:G:O2'	23:BB:858:G:H5'	2.04	0.58
23:BB:877:A:H3'	23:BB:899:A:N1	2.18	0.58
23:BB:1458:U:H2'	23:BB:1459:G:H5"	1.85	0.58
23:BB:1747:U:H2'	23:BB:1748:C:C6	2.39	0.58
23:BB:2700:A:H2'	23:BB:2701:U:H6	1.68	0.58
24:BV:53:LYS:HE2	24:BV:53:LYS:HA	1.86	0.58
27:BE:5:LEU:HD12	27:BE:10:SER:HB2	1.86	0.58
32:BK:70:ARG:CB	32:BK:76:VAL:HG22	2.34	0.58
33:BL:85:VAL:HG21	33:BL:94:THR:HB	1.84	0.58
38:BQ:4:LYS:HE3	38:BQ:8:ILE:HD11	1.86	0.58
41:BT:18:GLU:C	41:BT:20:ALA:H	2.07	0.58
43:BW:23:LYS:HZ3	43:BW:24:ARG:HG3	1.68	0.58
43:BW:35:ILE:HG13	43:BW:57:THR:OG1	2.02	0.58
47:B0:38:LEU:HB3	47:B0:41:HIS:CD2	2.38	0.58
1:CA:16:A:O2'	1:CA:17:U:H5'	2.03	0.58
1:CA:1054:C:O2'	1:CA:1055:A:H5"	2.04	0.58
3:CD:22:SER:H	3:CD:109:THR:HG22	1.68	0.58
3:CD:123:MET:SD	3:CD:145:ARG:HD2	2.43	0.58
12:CM:39:ALA:HB3	12:CM:42:VAL:HG13	1.86	0.58
13:CN:60:ARG:NE	13:CN:62:ARG:HG2	2.19	0.58
20:CB:65:LYS:H	20:CB:158:ASP:CG	2.07	0.58
20:CB:217:ALA:O	20:CB:221:ARG:HG2	2.03	0.58
23:DB:124:G:O2'	23:DB:125:A:H5"	2.04	0.58
23:DB:248:G:H5'	23:DB:250:G:N7	2.18	0.58
23:DB:370:G:O2'	23:DB:423:A:H3'	2.04	0.58
23:DB:532:A:H4'	23:DB:533:G:C8	2.38	0.58
23:DB:929:U:O2	45:DY:25:GLY:HA2	2.02	0.58
23:DB:996:A:C4'	38:DQ:91:ARG:HD2	2.31	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1407:G:H2'	23:DB:1408:G:C8	2.39	0.58
23:DB:1487:U:H2'	23:DB:1488:C:C6	2.38	0.58
23:DB:2054:A:H2'	47:D0:4:GLN:OE1	2.03	0.58
23:DB:2346:A:H3'	23:DB:2347:C:H5"	1.84	0.58
23:DB:2718:G:H4'	37:DP:95:LYS:HB2	1.85	0.58
25:DC:161:VAL:HG12	25:DC:162:GLN:N	2.17	0.58
31:DJ:16:TYR:O	31:DJ:55:ILE:HG12	2.03	0.58
39:DR:78:ARG:HG3	39:DR:78:ARG:NH2	2.18	0.58
49:D2:3:ARG:HE	49:D2:4:THR:HG22	1.69	0.58
1:AA:190:A:H8	1:AA:190:A:O5'	1.87	0.58
1:AA:208:U:H4'	1:AA:209:U:C5	2.38	0.58
1:AA:265:G:H2'	1:AA:267:C:H5	1.68	0.58
1:AA:313:A:H2'	1:AA:314:C:C6	2.39	0.58
1:AA:621:A:H2'	1:AA:622:A:C8	2.38	0.58
1:AA:1250:A:H2'	1:AA:1251:A:C8	2.39	0.58
1:AA:1338:G:H2'	1:AA:1339:A:C8	2.39	0.58
2:AC:18:ASN:OD1	2:AC:53:ARG:HD2	2.04	0.58
2:AC:154:GLY:HA3	2:AC:162:ALA:HB1	1.86	0.58
3:AD:7:LYS:O	3:AD:20:LEU:HD12	2.04	0.58
3:AD:123:MET:HB2	3:AD:126:GLY:O	2.04	0.58
6:AG:65:LEU:O	6:AG:69:ARG:HG3	2.04	0.58
10:AK:16:SER:HA	10:AK:77:GLY:O	2.02	0.58
12:AM:79:LEU:HD21	12:AM:86:ARG:HH21	1.67	0.58
20:AB:83:ALA:CB	20:AB:90:PHE:HB3	2.34	0.58
23:BB:141:G:H5"	23:BB:142:A:C5	2.38	0.58
23:BB:279:A:N6	23:BB:361:G:H1'	2.19	0.58
23:BB:1203:U:H1'	33:BL:4:ASN:ND2	2.06	0.58
23:BB:2060:A:H62	27:BE:69:ARG:HH12	1.50	0.58
26:BD:34:VAL:CG1	26:BD:94:GLN:H	2.15	0.58
30:BH:68:ARG:HH12	30:BH:110:VAL:HG12	1.68	0.58
31:BJ:13:ARG:HB3	31:BJ:53:TYR:HD2	1.68	0.58
1:CA:328:C:H4'	1:CA:329:A:H5"	1.86	0.58
1:CA:538:G:H5"	11:CL:110:LYS:HG2	1.84	0.58
1:CA:922:G:H4'	4:CE:24:VAL:HA	1.84	0.58
13:CN:79:SER:OG	13:CN:82:LYS:HG2	2.04	0.58
18:CS:62:THR:H	18:CS:65:MET:HB2	1.69	0.58
23:DB:30:G:H2'	23:DB:31:C:H6	1.66	0.58
23:DB:352:A:H3'	23:DB:353:C:C6	2.39	0.58
23:DB:1882:U:O2'	23:DB:1883:U:H5'	2.04	0.58
23:DB:2271:G:H2'	23:DB:2272:U:C6	2.39	0.58
33:DL:116:VAL:HG13	33:DL:117:THR:N	2.19	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DN:9:GLN:O	35:DN:11:ASN:N	2.37	0.58
36:DO:55:GLU:HB2	36:DO:58:ILE:HD12	1.86	0.58
38:DQ:26:ALA:HB1	38:DQ:30:VAL:HB	1.85	0.58
48:D1:8:ILE:HD12	48:D1:51:ALA:HA	1.85	0.58
49:D2:34:ARG:HE	49:D2:39:ARG:HG2	1.69	0.58
1:AA:60:A:H4'	1:AA:61:G:OP1	2.03	0.58
1:AA:276:G:H5'	16:AQ:16:MET:SD	2.44	0.58
1:AA:1141:C:H2'	1:AA:1142:G:C8	2.39	0.58
4:AE:125:LYS:HD2	4:AE:126:ALA:H	1.69	0.58
12:AM:2:ARG:HB2	12:AM:56:ARG:NH2	2.18	0.58
12:AM:95:PRO:N	12:AM:108:ARG:HG2	2.18	0.58
17:AR:25:ILE:O	17:AR:29:LYS:HG3	2.02	0.58
20:AB:32:GLY:N	20:AB:39:ILE:HB	2.18	0.58
23:BB:1812:U:H1'	25:BC:43:ASN:ND2	2.08	0.58
26:BD:36:GLN:O	26:BD:36:GLN:HG3	2.02	0.58
28:BF:155:ILE:O	28:BF:156:THR:HB	2.03	0.58
29:BG:9:VAL:HA	29:BG:48:THR:HG22	1.86	0.58
32:BK:70:ARG:HA	32:BK:76:VAL:HA	1.84	0.58
35:BN:9:GLN:O	35:BN:11:ASN:N	2.37	0.58
39:BR:78:ARG:HG3	39:BR:78:ARG:NH2	2.18	0.58
45:BY:35:VAL:HG22	45:BY:36:GLU:N	2.16	0.58
1:CA:182:A:H1'	1:CA:183:C:C5	2.38	0.58
1:CA:501:C:H2'	1:CA:502:A:H8	1.68	0.58
1:CA:1448:C:H2'	1:CA:1449:C:C6	2.38	0.58
2:CC:31:ASN:ND2	2:CC:58:ARG:HE	2.01	0.58
20:CB:107:ARG:HA	20:CB:110:ILE:HD12	1.86	0.58
20:CB:172:ILE:HG22	20:CB:176:ASN:HD21	1.69	0.58
23:DB:730:A:O2'	23:DB:731:C:H5'	2.04	0.58
23:DB:753:A:H2'	23:DB:754:U:C6	2.39	0.58
23:DB:2052:A:O4'	26:DD:147:GLY:HA3	2.04	0.58
23:DB:2144:G:O2'	23:DB:2145:C:H5'	2.03	0.58
30:DH:133:GLN:HB3	30:DH:139:PHE:CA	2.32	0.58
33:DL:109:LYS:O	33:DL:111:ILE:HG12	2.04	0.58
39:DR:34:GLU:HA	39:DR:59:ILE:O	2.03	0.58
46:DZ:40:VAL:HG22	46:DZ:45:ARG:H	1.67	0.58
1:AA:668:G:O2'	14:AO:45:HIS:HB3	2.03	0.58
1:AA:950:U:H2'	1:AA:951:G:H8	1.67	0.58
1:AA:1244:G:H2'	1:AA:1245:C:C6	2.38	0.58
1:AA:1427:C:H2'	1:AA:1428:A:C8	2.38	0.58
3:AD:77:GLU:O	3:AD:81:LEU:HG	2.04	0.58
3:AD:201:GLU:OE1	4:AE:104:ILE:HG22	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AE:73:VAL:HB	4:AE:75:LEU:HD21	1.86	0.58
6:AG:72:VAL:HA	6:AG:89:GLU:HA	1.86	0.58
8:AI:9:GLY:HA3	8:AI:81:GLY:H	1.69	0.58
11:AL:13:ARG:H	11:AL:13:ARG:CD	2.16	0.58
18:AS:24:SER:HB2	18:AS:27:LYS:HE3	1.86	0.58
23:BB:1353:A:H2'	23:BB:1354:A:H8	1.69	0.58
23:BB:1355:G:O2'	23:BB:1356:G:H5'	2.03	0.58
23:BB:2015:A:C2	47:B0:2:VAL:HG22	2.38	0.58
23:BB:2031:A:C6	23:BB:2498:C:H1'	2.38	0.58
25:BC:239:PHE:O	25:BC:241:LYS:HG3	2.04	0.58
32:BK:88:ASN:HB3	32:BK:92:GLU:O	2.03	0.58
40:BS:81:SER:HB3	40:BS:99:ARG:HB3	1.85	0.58
1:CA:518:C:H2'	1:CA:530:G:H8	1.69	0.58
1:CA:580:C:H2'	1:CA:581:G:O4'	2.04	0.58
1:CA:747:A:H2'	1:CA:748:G:O4'	2.04	0.58
2:CC:13:ILE:HD13	2:CC:13:ILE:H	1.68	0.58
2:CC:88:LYS:O	2:CC:88:LYS:HE3	2.03	0.58
5:CF:98:GLU:HG2	5:CF:99:ALA:N	2.19	0.58
19:CT:43:LYS:HE2	19:CT:44:ALA:N	2.18	0.58
23:DB:322:A:H5'	23:DB:340:A:C1'	2.34	0.58
23:DB:609:A:H2'	23:DB:610:C:O4'	2.04	0.58
23:DB:1054:A:H2'	23:DB:1055:G:H8	1.67	0.58
23:DB:2194:U:H2'	23:DB:2195:U:H6	1.69	0.58
23:DB:2291:U:H2'	23:DB:2292:U:C6	2.39	0.58
23:DB:2563:U:H2'	23:DB:2565:A:OP2	2.03	0.58
23:DB:2636:C:O5'	26:DD:81:GLU:HB2	2.03	0.58
23:DB:2678:C:H2'	23:DB:2679:A:H8	1.69	0.58
25:DC:239:PHE:O	25:DC:241:LYS:HG3	2.04	0.58
27:DE:106:LYS:HE2	27:DE:200:LEU:HB3	1.86	0.58
28:DF:11:VAL:HG12	28:DF:12:VAL:N	2.15	0.58
32:DK:88:ASN:HB3	32:DK:92:GLU:O	2.03	0.58
34:DM:35:ALA:HB3	34:DM:99:GLY:N	2.19	0.58
36:DO:35:ILE:CG1	36:DO:102:ARG:HE	2.16	0.58
41:DT:11:LEU:HD22	41:DT:11:LEU:N	2.15	0.58
41:DT:48:GLN:HA	41:DT:48:GLN:HE21	1.69	0.58
41:DT:50:LEU:C	41:DT:52:GLU:H	2.06	0.58
46:DZ:65:ASP:HA	46:DZ:68:LEU:HB2	1.85	0.58
51:D4:7:VAL:HG13	51:D4:8:LYS:N	2.19	0.58
1:AA:791:G:C6	1:AA:792:A:N7	2.72	0.57
1:AA:987:G:O2'	1:AA:988:G:H5'	2.03	0.57
1:AA:1057:G:H5"	2:AC:153:SER:HB2	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AF:36:ILE:HG13	5:AF:64:VAL:HG13	1.86	0.57
17:AR:58:ILE:HD12	17:AR:58:ILE:H	1.69	0.57
20:AB:20:ARG:HA	20:AB:38:HIS:HE1	1.68	0.57
20:AB:117:GLU:HA	20:AB:140:LEU:HD21	1.86	0.57
23:BB:572:A:H5"	23:BB:573:U:OP2	2.04	0.57
23:BB:693:A:OP1	25:BC:38:LYS:HG2	2.04	0.57
23:BB:709:U:H2'	23:BB:710:U:C6	2.39	0.57
23:BB:1647:U:P	23:BB:1647:U:H3'	2.42	0.57
23:BB:2339:C:H2'	23:BB:2340:A:C8	2.39	0.57
23:BB:2718:G:H4'	37:BP:95:LYS:HB2	1.86	0.57
23:BB:2801:G:H3'	23:BB:2802:G:H8	1.69	0.57
25:BC:146:LYS:HB3	25:BC:147:PRO:CD	2.28	0.57
26:BD:105:LYS:HE3	26:BD:176:ASP:OD1	2.03	0.57
28:BF:66:ILE:HA	28:BF:86:CYS:HB3	1.84	0.57
34:BM:4:PRO:HG2	34:BM:70:ASP:HA	1.85	0.57
37:BP:6:GLN:HA	37:BP:9:GLN:HG2	1.85	0.57
38:BQ:91:ARG:HH12	39:BR:10:LYS:CB	2.17	0.57
39:BR:8:GLY:HA3	39:BR:23:GLU:HB2	1.86	0.57
40:BS:5:ALA:HB3	40:BS:54:ALA:HB2	1.86	0.57
1:CA:235:C:H2'	1:CA:236:A:H8	1.67	0.57
1:CA:285:C:H2'	1:CA:286:C:H6	1.68	0.57
1:CA:920:U:H2'	1:CA:921:U:H6	1.69	0.57
1:CA:1004:A:N7	1:CA:1025:U:H1'	2.19	0.57
1:CA:1160:G:H4'	20:CB:130:LYS:CB	2.34	0.57
1:CA:1343:G:H2'	1:CA:1344:C:C6	2.39	0.57
3:CD:24:VAL:HG13	3:CD:160:LEU:HB3	1.86	0.57
3:CD:44:LYS:HD2	3:CD:46:ARG:HG2	1.86	0.57
7:CH:10:LEU:HD22	7:CH:74:ILE:HD11	1.86	0.57
8:CI:22:PRO:HA	8:CI:60:LEU:HB2	1.87	0.57
11:CL:82:ARG:HH11	11:CL:82:ARG:HG2	1.68	0.57
19:CT:15:LYS:HE2	19:CT:15:LYS:HA	1.84	0.57
19:CT:24:ARG:HD2	19:CT:28:ARG:NH2	2.19	0.57
23:DB:182:A:H2'	23:DB:183:C:C6	2.38	0.57
23:DB:833:A:H2'	23:DB:834:G:C8	2.39	0.57
23:DB:1287:A:H3'	23:DB:1288:G:H21	1.66	0.57
23:DB:1341:G:H3'	23:DB:1397:U:O2	2.03	0.57
23:DB:1400:U:H2'	23:DB:1401:G:C8	2.37	0.57
26:DD:136:ASN:OD1	26:DD:139:SER:HB2	2.04	0.57
29:DG:84:LYS:HG2	29:DG:85:LYS:N	2.18	0.57
41:DT:11:LEU:HA	41:DT:34:VAL:HG12	1.85	0.57
43:DW:23:LYS:HD2	43:DW:24:ARG:N	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DW:50:VAL:HG23	43:DW:61:LYS:HE3	1.86	0.57
50:D3:30:HIS:O	50:D3:31:ILE:HG12	2.04	0.57
1:AA:285:C:H2'	1:AA:286:C:H6	1.68	0.57
1:AA:518:C:H2'	1:AA:530:G:H8	1.69	0.57
1:AA:638:U:H2'	1:AA:639:G:O4'	2.03	0.57
1:AA:1091:U:H2'	1:AA:1093:A:OP2	2.03	0.57
2:AC:33:ASP:O	2:AC:37:LYS:HG3	2.04	0.57
10:AK:58:THR:HB	10:AK:59:PRO:HD2	1.86	0.57
11:AL:3:VAL:O	11:AL:7:VAL:HG23	2.04	0.57
12:AM:70:ARG:HH12	28:BF:112:ASP:CB	2.13	0.57
21:AU:36:PHE:HA	21:AU:39:LYS:HE2	1.85	0.57
23:BB:1857:G:H2'	23:BB:1884:G:N2	2.19	0.57
23:BB:2149:U:O2'	23:BB:2150:C:H5'	2.04	0.57
23:BB:2393:U:O2'	23:BB:2394:C:H5'	2.04	0.57
25:BC:131:MET:HA	25:BC:134:ILE:HG23	1.86	0.57
27:BE:155:GLU:HA	27:BE:158:PHE:HB3	1.86	0.57
29:BG:84:LYS:HG2	29:BG:85:LYS:N	2.17	0.57
33:BL:4:ASN:ND2	33:BL:4:ASN:N	2.51	0.57
33:BL:57:LEU:HA	33:BL:60:ARG:NH2	2.19	0.57
35:BN:7:GLY:HA2	35:BN:46:ARG:NH1	2.19	0.57
36:BO:88:LYS:HD2	36:BO:89:ASP:HB2	1.85	0.57
42:BU:40:LEU:HD23	42:BU:59:GLU:HG2	1.86	0.57
44:BX:19:LEU:O	44:BX:24:GLU:HB2	2.03	0.57
48:B1:8:ILE:HD12	48:B1:51:ALA:HA	1.86	0.57
51:B4:13:ASN:HB3	51:B4:28:SER:H	1.69	0.57
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.86	0.57
1:CA:777:A:H2'	1:CA:778:G:H8	1.68	0.57
1:CA:1004:A:H5'	1:CA:1024:G:N2	2.18	0.57
4:CE:11:GLN:HE22	4:CE:41:GLY:HA3	1.69	0.57
8:CI:18:VAL:HA	8:CI:64:ILE:HG13	1.86	0.57
14:CO:43:ALA:O	14:CO:46:LYS:HE3	2.04	0.57
20:CB:110:ILE:HG23	20:CB:151:LYS:HA	1.85	0.57
20:CB:112:ARG:HH11	20:CB:116:LEU:HG	1.69	0.57
21:CU:36:PHE:HB3	21:CU:39:LYS:HB2	1.86	0.57
22:DA:2:G:H2'	22:DA:3:C:H6	1.65	0.57
23:DB:709:U:H2'	23:DB:710:U:C6	2.39	0.57
23:DB:1164:C:H2'	23:DB:1165:A:H8	1.69	0.57
23:DB:1260:A:H2'	23:DB:1261:C:C6	2.39	0.57
23:DB:2194:U:H2'	23:DB:2195:U:C6	2.39	0.57
23:DB:2369:A:O2'	23:DB:2370:G:H5'	2.04	0.57
23:DB:2723:C:H5"	35:DN:1:MET:HE2	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DV:53:LYS:HE2	24:DV:53:LYS:HA	1.85	0.57
25:DC:71:ASP:OD2	25:DC:118:GLY:HA2	2.03	0.57
26:DD:34:VAL:CG1	26:DD:94:GLN:H	2.17	0.57
28:DF:37:MET:CG	28:DF:52:ALA:HB1	2.35	0.57
31:DJ:45:THR:HG21	31:DJ:50:THR:HG21	1.85	0.57
32:DK:24:VAL:HG13	32:DK:33:ALA:HB2	1.85	0.57
39:DR:4:VAL:CG2	39:DR:39:LEU:HG	2.34	0.57
44:DX:45:GLN:O	44:DX:47:ARG:N	2.36	0.57
52:DI:99:LYS:HD3	52:DI:99:LYS:H	1.69	0.57
1:AA:476:U:O2'	1:AA:477:C:H5'	2.03	0.57
1:AA:678:U:H2'	1:AA:679:C:H6	1.67	0.57
3:AD:77:GLU:HA	3:AD:80:ARG:HG2	1.87	0.57
4:AE:39:GLY:HA2	4:AE:45:VAL:HA	1.86	0.57
5:AF:79:ARG:HH21	5:AF:87:SER:HB3	1.69	0.57
12:AM:48:SER:O	12:AM:52:ILE:HG22	2.05	0.57
12:AM:79:LEU:HD11	12:AM:86:ARG:HH21	1.68	0.57
23:BB:609:A:H2'	23:BB:610:C:O4'	2.04	0.57
23:BB:630:G:N2	23:BB:632:A:H3'	2.18	0.57
23:BB:1429:G:H2'	23:BB:1430:G:H8	1.68	0.57
23:BB:2621:G:P	26:BD:124:ARG:HH22	2.27	0.57
23:BB:2813:A:H2'	23:BB:2814:A:C8	2.39	0.57
25:BC:221:GLY:C	25:BC:223:ALA:H	2.07	0.57
27:BE:29:HIS:HA	27:BE:32:VAL:HG22	1.87	0.57
28:BF:106:ALA:HA	28:BF:135:ILE:HD13	1.86	0.57
30:BH:72:ILE:HG13	30:BH:75:LEU:HD11	1.85	0.57
33:BL:90:VAL:HB	33:BL:122:VAL:HG13	1.86	0.57
36:BO:62:LEU:HD11	36:BO:70:ALA:HA	1.86	0.57
38:BQ:71:ASN:HD22	38:BQ:73:ILE:HG22	1.69	0.57
40:BS:18:ARG:HB3	40:BS:76:VAL:HG22	1.86	0.57
41:BT:7:LEU:HA	41:BT:9:LYS:NZ	2.19	0.57
1:CA:1405:G:O2'	1:CA:1406:U:H5'	2.04	0.57
2:CC:183:TYR:HA	2:CC:199:VAL:O	2.04	0.57
3:CD:201:GLU:OE1	4:CE:104:ILE:HG22	2.04	0.57
6:CG:64:ALA:HA	6:CG:127:ALA:HA	1.85	0.57
12:CM:48:SER:O	12:CM:52:ILE:HG22	2.03	0.57
19:CT:68:LYS:HA	19:CT:68:LYS:NZ	2.19	0.57
20:CB:58:LYS:HB3	20:CB:58:LYS:NZ	2.19	0.57
23:DB:553:G:O2'	23:DB:554:U:H5'	2.05	0.57
23:DB:947:A:H2'	23:DB:948:C:H6	1.69	0.57
23:DB:1166:G:H2'	23:DB:1167:C:H6	1.67	0.57
23:DB:1923:U:H2'	23:DB:1924:C:C6	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2393:U:O2'	23:DB:2394:C:H5'	2.04	0.57
23:DB:2784:U:H4'	26:DD:42:ASN:O	2.05	0.57
26:DD:53:GLY:C	26:DD:76:GLY:HA2	2.24	0.57
26:DD:117:GLY:O	26:DD:164:GLN:HA	2.05	0.57
26:DD:133:THR:HG23	26:DD:134:HIS:N	2.19	0.57
28:DF:74:ALA:HB1	28:DF:76:PHE:CD2	2.39	0.57
31:DJ:103:ILE:HA	31:DJ:106:LYS:HB3	1.86	0.57
4:AE:93:VAL:HG13	4:AE:126:ALA:HB2	1.85	0.57
8:AI:19:PHE:O	8:AI:62:LEU:HA	2.04	0.57
23:BB:83:A:H5"	42:BU:1:ALA:N	2.19	0.57
23:BB:192:C:C2'	23:BB:193:U:H5'	2.34	0.57
23:BB:364:C:H2'	23:BB:365:U:H6	1.70	0.57
23:BB:1139:G:O2'	23:BB:1140:C:H5'	2.05	0.57
23:BB:1347:A:H2'	23:BB:1348:C:O4'	2.04	0.57
23:BB:1513:U:O2'	23:BB:1514:G:H5'	2.03	0.57
23:BB:2199:A:H5"	23:BB:2200:C:H5	1.69	0.57
23:BB:2261:C:N4	43:BW:10:ARG:HB3	2.19	0.57
23:BB:2472:G:O6	23:BB:2476:A:H4'	2.03	0.57
26:BD:53:GLY:C	26:BD:76:GLY:HA2	2.25	0.57
31:BJ:23:LYS:HE3	31:BJ:142:ILE:HG12	1.87	0.57
31:BJ:45:THR:N	31:BJ:46:PRO:HD3	2.18	0.57
34:BM:97:GLN:HB2	34:BM:98:PRO:HD2	1.86	0.57
37:BP:112:ARG:HH11	37:BP:112:ARG:HB2	1.69	0.57
39:BR:4:VAL:HG23	39:BR:39:LEU:H	1.69	0.57
42:BU:85:ARG:CD	42:BU:86:PHE:H	2.01	0.57
47:B0:53:VAL:O	47:B0:54:ILE:HB	2.05	0.57
50:B3:22:LYS:HA	50:B3:47:ALA:O	2.05	0.57
1:CA:709:U:H2'	1:CA:710:G:H8	1.69	0.57
1:CA:1351:U:O2'	1:CA:1352:C:H5'	2.05	0.57
3:CD:84:ASN:ND2	3:CD:86:GLY:H	2.03	0.57
12:CM:86:ARG:HA	12:CM:96:VAL:HG11	1.87	0.57
18:CS:27:LYS:NZ	18:CS:27:LYS:HB3	2.20	0.57
20:CB:93:HIS:CD2	20:CB:145:ASN:HB3	2.39	0.57
23:DB:71:A:H5"	23:DB:73:A:C8	2.40	0.57
23:DB:458:G:H22	23:DB:469:G:H2'	1.67	0.57
23:DB:654:A:H2'	23:DB:654:A:N3	2.18	0.57
23:DB:722:A:H2'	23:DB:723:C:H6	1.68	0.57
23:DB:828:U:H4'	23:DB:831:G:N1	2.18	0.57
23:DB:971:G:H2'	23:DB:972:A:O4'	2.05	0.57
23:DB:1240:U:O2'	23:DB:1241:A:H5"	2.03	0.57
23:DB:1385:A:HO2'	23:DB:1396:U:H6	1.53	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2150:C:H2'	23:DB:2151:U:C6	2.39	0.57
23:DB:2187:U:H2'	23:DB:2188:U:C6	2.40	0.57
27:DE:155:GLU:HA	27:DE:158:PHE:HB3	1.87	0.57
28:DF:64:PRO:HA	28:DF:88:VAL:CG2	2.35	0.57
33:DL:30:THR:O	33:DL:33:ARG:HG2	2.04	0.57
40:DS:66:ILE:HG12	40:DS:67:ASP:N	2.20	0.57
44:DX:19:LEU:O	44:DX:24:GLU:HB2	2.04	0.57
48:D1:34:GLU:HA	48:D1:48:TYR:O	2.04	0.57
52:DI:108:ILE:HG22	52:DI:128:ILE:HD13	1.87	0.57
1:AA:451:A:H5'	15:AP:70:ARG:NH2	2.18	0.57
1:AA:600:A:H2'	1:AA:601:G:C8	2.39	0.57
2:AC:71:ARG:O	2:AC:74:ILE:HG22	2.04	0.57
14:AO:78:THR:HA	14:AO:81:ILE:HD12	1.86	0.57
21:AU:36:PHE:HB3	21:AU:39:LYS:HB2	1.87	0.57
23:BB:335:C:H5"	42:BU:81:ARG:NH1	2.19	0.57
23:BB:591:U:H1'	50:B3:1:PRO:H3	1.68	0.57
23:BB:2539:C:H4'	51:B4:36:ARG:NH2	2.20	0.57
25:BC:222:THR:HA	25:BC:231:HIS:O	2.03	0.57
35:BN:24:MET:HE1	35:BN:40:LYS:HD2	1.87	0.57
43:BW:18:LYS:HG3	43:BW:19:ARG:NE	2.18	0.57
1:CA:1006:G:H2'	1:CA:1007:U:H6	1.69	0.57
1:CA:1007:U:H2'	1:CA:1008:U:C6	2.40	0.57
1:CA:1152:A:H2'	1:CA:1153:G:C8	2.39	0.57
1:CA:1162:C:H2'	1:CA:1163:A:C8	2.39	0.57
1:CA:1253:G:N1	1:CA:1285:A:N6	2.52	0.57
4:CE:39:GLY:HA2	4:CE:45:VAL:HA	1.85	0.57
5:CF:29:ILE:HG23	5:CF:66:ALA:HB2	1.85	0.57
6:CG:78:ARG:HH11	6:CG:81:GLY:H	1.50	0.57
9:CJ:40:ILE:HD12	9:CJ:73:LEU:HD12	1.87	0.57
12:CM:2:ARG:HB2	12:CM:56:ARG:NH2	2.16	0.57
12:CM:89:ARG:HD3	12:CM:95:PRO:O	2.05	0.57
13:CN:16:ALA:HB2	13:CN:55:SER:N	2.19	0.57
15:CP:68:SER:OG	15:CP:71:VAL:HG12	2.04	0.57
18:CS:11:ASP:O	18:CS:14:LEU:HG	2.04	0.57
23:DB:784:G:H5"	25:DC:225:ASN:OD1	2.04	0.57
23:DB:2385:C:H2'	23:DB:2386:A:H8	1.69	0.57
23:DB:2539:C:O2'	23:DB:2540:C:H5'	2.03	0.57
23:DB:2815:C:H2'	23:DB:2816:G:C8	2.39	0.57
26:DD:179:ARG:HH11	26:DD:179:ARG:HB3	1.68	0.57
29:DG:30:GLY:CA	29:DG:78:VAL:HA	2.35	0.57
29:DG:116:LEU:HD23	29:DG:120:ILE:HD13	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DH:112:LYS:HA	30:DH:132:PHE:CE1	2.39	0.57
36:DO:27:VAL:HG21	36:DO:40:ILE:HD12	1.86	0.57
40:DS:5:ALA:HB3	40:DS:54:ALA:HB2	1.86	0.57
44:DX:56:LEU:C	44:DX:58:ASN:H	2.08	0.57
1:AA:32:A:H2'	1:AA:33:A:C8	2.38	0.57
1:AA:272:C:H2'	1:AA:273:U:C6	2.39	0.57
1:AA:580:C:H2'	1:AA:581:G:O4'	2.05	0.57
1:AA:736:C:H2'	1:AA:737:C:C6	2.40	0.57
1:AA:860:A:H2'	1:AA:861:G:O4'	2.05	0.57
1:AA:920:U:H2'	1:AA:921:U:H6	1.68	0.57
8:AI:6:TYR:HB2	8:AI:19:PHE:CE1	2.39	0.57
10:AK:34:THR:HA	10:AK:41:LEU:HG	1.86	0.57
18:AS:43:MET:O	18:AS:61:VAL:HB	2.05	0.57
19:AT:15:LYS:HE2	19:AT:15:LYS:HA	1.86	0.57
22:BA:28:C:H2'	22:BA:29:A:O4'	2.04	0.57
22:BA:95:U:H2'	22:BA:96:G:C8	2.39	0.57
22:BA:106:G:H2'	22:BA:107:G:O4'	2.05	0.57
23:BB:129:C:H2'	23:BB:130:C:C6	2.37	0.57
23:BB:654:A:H2'	23:BB:654:A:N3	2.20	0.57
23:BB:722:A:H2'	23:BB:723:C:H6	1.68	0.57
23:BB:782:A:H5'	23:BB:783:A:C2	2.40	0.57
23:BB:1567:G:H2'	25:BC:84:PRO:HG3	1.87	0.57
23:BB:2264:C:H41	43:BW:11:ASN:ND2	2.03	0.57
23:BB:2772:C:H2'	23:BB:2773:C:C6	2.40	0.57
24:BV:70:ILE:HD13	24:BV:70:ILE:H	1.69	0.57
25:BC:1:ALA:HB3	25:BC:19:VAL:HG23	1.85	0.57
25:BC:129:LEU:HD23	25:BC:130:PRO:CD	2.33	0.57
25:BC:143:VAL:HB	25:BC:153:LEU:HB2	1.87	0.57
26:BD:5:VAL:H	26:BD:32:ASN:ND2	1.93	0.57
28:BF:74:ALA:HB1	28:BF:76:PHE:CD2	2.40	0.57
30:BH:133:GLN:HB2	30:BH:139:PHE:CA	2.35	0.57
50:B3:7:ARG:O	50:B3:11:LYS:HG3	2.04	0.57
1:CA:194:C:O2'	1:CA:195:A:H5'	2.04	0.57
1:CA:778:G:H2'	1:CA:779:C:C6	2.40	0.57
1:CA:928:G:H2'	1:CA:929:G:H8	1.69	0.57
1:CA:1173:U:H2'	1:CA:1174:G:C8	2.39	0.57
1:CA:1213:A:O2'	1:CA:1214:C:H5"	2.04	0.57
1:CA:1446:A:H2'	1:CA:1447:A:H5"	1.87	0.57
3:CD:7:LYS:O	3:CD:20:LEU:HD12	2.03	0.57
13:CN:60:ARG:HD3	13:CN:62:ARG:CZ	2.35	0.57
23:DB:566:U:H5"	33:DL:29:LYS:NZ	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:770:G:H5”	49:D2:10:LEU:HD12	1.86	0.57
23:DB:917:A:H2’	23:DB:918:A:O4’	2.05	0.57
23:DB:1429:G:H2’	23:DB:1430:G:H8	1.68	0.57
23:DB:1831:G:H2’	23:DB:1832:C:C6	2.40	0.57
23:DB:2199:A:H5”	23:DB:2200:C:H5	1.70	0.57
23:DB:2700:A:H2’	23:DB:2701:U:H6	1.70	0.57
27:DE:161:ALA:HA	27:DE:164:LEU:HD12	1.86	0.57
31:DJ:57:LEU:HG	31:DJ:128:ASN:H	1.68	0.57
31:DJ:58:ASN:HA	31:DJ:127:GLY:CA	2.27	0.57
32:DK:105:ARG:HD2	32:DK:122:VAL:CG1	2.34	0.57
33:DL:79:LEU:HB3	33:DL:115:GLU:O	2.04	0.57
38:DQ:93:ILE:HG23	38:DQ:94:LEU:HD22	1.86	0.57
40:DS:18:ARG:HB3	40:DS:76:VAL:HG22	1.87	0.57
44:DX:56:LEU:O	44:DX:57:LEU:HB3	2.04	0.57
46:DZ:20:HIS:O	46:DZ:21:ALA:HB3	2.05	0.57
1:AA:1123:U:O2’	1:AA:1124:G:H5’	2.04	0.57
1:AA:1296:C:H4’	1:AA:1302:C:C4	2.38	0.57
1:AA:1477:U:H2’	1:AA:1478:U:H6	1.69	0.57
7:AH:24:VAL:HG12	7:AH:60:LEU:O	2.04	0.57
10:AK:22:ILE:HD12	10:AK:84:MET:O	2.03	0.57
10:AK:34:THR:HB	10:AK:40:ALA:HA	1.86	0.57
16:AQ:39:ARG:HH11	16:AQ:39:ARG:HG3	1.69	0.57
21:AU:28:LEU:HD23	21:AU:29:ALA:N	2.19	0.57
22:BA:88:C:H2’	22:BA:88:C:OP1	2.05	0.57
23:BB:856:G:H2’	23:BB:857:G:C8	2.39	0.57
23:BB:1082:U:O4	23:BB:1086:A:C2	2.58	0.57
23:BB:1262:A:N3	47:B0:6:LYS:HE3	2.20	0.57
23:BB:2023:C:O2’	23:BB:2024:G:H5’	2.05	0.57
23:BB:2151:U:H2’	23:BB:2152:G:H8	1.67	0.57
23:BB:2598:A:H5”	25:BC:233:GLY:HA2	1.87	0.57
23:BB:2678:C:H2’	23:BB:2679:A:H8	1.69	0.57
23:BB:2899:A:H2’	23:BB:2900:A:C8	2.39	0.57
25:BC:104:LEU:O	25:BC:105:ALA:HB3	2.03	0.57
26:BD:34:VAL:HB	26:BD:48:ILE:HD11	1.85	0.57
29:BG:10:VAL:O	29:BG:10:VAL:HG12	2.05	0.57
30:BH:116:ARG:HH11	30:BH:116:ARG:CB	2.15	0.57
41:BT:65:GLY:HA3	41:BT:76:ARG:HH22	1.70	0.57
44:BX:57:LEU:H	44:BX:60:LYS:HG3	1.68	0.57
1:CA:1014:A:H4’	18:CS:13:HIS:CE1	2.39	0.57
1:CA:1057:G:H5”	2:CC:153:SER:HB2	1.87	0.57
1:CA:1512:U:H2’	1:CA:1513:A:H8	1.68	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CJ:80:THR:HG21	9:CJ:82:LYS:HZ2	1.70	0.57
18:CS:18:VAL:CG2	18:CS:43:MET:HG2	2.32	0.57
20:CB:83:ALA:CB	20:CB:90:PHE:HB3	2.34	0.57
23:DB:573:U:O2'	23:DB:574:A:H3'	2.04	0.57
23:DB:820:A:H1'	23:DB:943:A:O2'	2.04	0.57
23:DB:1015:U:H2'	23:DB:1016:G:H8	1.70	0.57
23:DB:1098:A:H3'	52:DI:3:LYS:CB	2.35	0.57
23:DB:1220:G:H2'	23:DB:1221:C:H6	1.69	0.57
23:DB:1640:A:H2'	23:DB:1641:A:C8	2.39	0.57
23:DB:1914:C:H2'	23:DB:1915:U:C6	2.39	0.57
23:DB:2074:U:H2'	23:DB:2075:U:C6	2.39	0.57
23:DB:2398:U:H2'	23:DB:2399:G:H8	1.70	0.57
23:DB:2774:C:H2'	23:DB:2775:G:O4'	2.04	0.57
28:DF:30:VAL:HG21	28:DF:96:TRP:NE1	2.20	0.57
40:DS:29:VAL:HG23	40:DS:70:LYS:HA	1.86	0.57
1:AA:336:A:O2'	1:AA:337:G:H5'	2.05	0.57
1:AA:437:U:H4'	3:AD:153:ARG:NH1	2.20	0.57
1:AA:518:C:H2'	1:AA:530:G:C8	2.40	0.57
1:AA:545:C:H5"	3:AD:68:GLU:HG2	1.86	0.57
1:AA:923:A:H2'	1:AA:924:C:C6	2.40	0.57
1:AA:1004:A:N7	1:AA:1025:U:H1'	2.20	0.57
4:AE:18:ASN:HB2	4:AE:33:THR:OG1	2.05	0.57
22:BA:54:G:H21	28:BF:25:MET:CE	2.17	0.57
23:BB:1105:U:H2'	23:BB:1106:G:H8	1.68	0.57
23:BB:1381:G:C2'	23:BB:1382:G:H5'	2.35	0.57
23:BB:2745:C:H4'	29:BG:141:GLY:O	2.05	0.57
23:BB:2885:G:N2	47:B0:31:LYS:HG2	2.19	0.57
24:BV:80:HIS:HD2	24:BV:82:TYR:H	1.52	0.57
26:BD:13:ARG:HD2	37:BP:55:HIS:ND1	2.20	0.57
26:BD:46:ARG:NH1	26:BD:85:ALA:HA	2.20	0.57
32:BK:60:ALA:HA	32:BK:87:LEU:CD2	2.34	0.57
33:BL:17:LYS:HD2	33:BL:19:LEU:HD11	1.86	0.57
33:BL:116:VAL:HG13	33:BL:117:THR:N	2.19	0.57
42:BU:70:ALA:HB1	42:BU:79:ALA:HB2	1.87	0.57
43:BW:35:ILE:O	43:BW:36:ILE:C	2.43	0.57
1:CA:505:G:H2'	1:CA:506:G:H8	1.70	0.57
1:CA:881:G:P	11:CL:8:ARG:HH12	2.27	0.57
1:CA:1081:A:P	4:CE:22:LYS:HB2	2.44	0.57
1:CA:1379:G:N7	6:CG:2:ARG:CZ	2.68	0.57
1:CA:1486:G:H2'	1:CA:1487:G:O4'	2.05	0.57
1:CA:1508:A:H2'	1:CA:1509:C:C6	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:70:ALA:HA	2:CC:105:VAL:CG2	2.34	0.57
8:CI:19:PHE:O	8:CI:62:LEU:HA	2.04	0.57
23:DB:5:A:H2'	23:DB:6:A:C8	2.40	0.57
23:DB:741:U:H2'	23:DB:742:A:C8	2.40	0.57
23:DB:1098:A:P	52:DI:3:LYS:HG2	2.44	0.57
23:DB:1490:A:H2'	25:DC:97:ASP:OD1	2.04	0.57
23:DB:1684:G:H2'	23:DB:1685:C:H6	1.68	0.57
23:DB:1714:U:H3'	23:DB:1715:G:C5'	2.35	0.57
23:DB:2094:A:H2'	23:DB:2095:A:C8	2.39	0.57
23:DB:2728:U:H2'	23:DB:2729:G:H8	1.68	0.57
23:DB:2786:U:C5'	26:DD:70:LYS:HG3	2.34	0.57
23:DB:2801:G:H3'	23:DB:2802:G:H8	1.69	0.57
29:DG:9:VAL:HA	29:DG:48:THR:HG22	1.85	0.57
29:DG:155:PRO:HA	29:DG:170:THR:HA	1.86	0.57
30:DH:94:ILE:HG13	30:DH:98:ASP:CB	2.34	0.57
31:DJ:15:TRP:HB3	31:DJ:137:PRO:HG3	1.87	0.57
38:DQ:91:ARG:HH22	39:DR:10:LYS:HB3	1.70	0.57
40:DS:41:LYS:HB3	40:DS:41:LYS:NZ	2.20	0.57
42:DU:35:VAL:HB	42:DU:38:ILE:HG21	1.85	0.57
1:AA:10:A:H2'	1:AA:11:G:H8	1.69	0.57
1:AA:373:A:H1'	1:AA:481:G:N3	2.20	0.57
1:AA:843:U:H5'	1:AA:844:G:N7	2.20	0.57
10:AK:14:GLN:HA	10:AK:77:GLY:HA3	1.87	0.57
10:AK:27:ASN:O	10:AK:56:LYS:HE3	2.05	0.57
13:AN:71:GLY:O	13:AN:79:SER:HA	2.05	0.57
18:AS:14:LEU:O	18:AS:18:VAL:HG12	2.05	0.57
23:BB:522:A:H2'	23:BB:523:C:C6	2.39	0.57
23:BB:718:A:H3'	23:BB:719:C:C6	2.40	0.57
23:BB:962:G:N2	23:BB:2250:G:H22	1.95	0.57
23:BB:1354:A:OP1	25:BC:35:LYS:HE2	2.05	0.57
23:BB:1842:G:H2'	23:BB:1843:C:H6	1.69	0.57
23:BB:2078:C:O2'	23:BB:2079:U:H5'	2.05	0.57
23:BB:2859:G:H2'	23:BB:2860:A:C8	2.40	0.57
23:BB:2886:A:H3'	23:BB:2887:A:C8	2.39	0.57
24:BV:44:HIS:NE2	24:BV:85:LYS:HB2	2.20	0.57
26:BD:133:THR:HG23	26:BD:134:HIS:N	2.18	0.57
27:BE:58:LYS:HD3	27:BE:58:LYS:N	2.14	0.57
29:BG:116:LEU:HD23	29:BG:120:ILE:HD13	1.85	0.57
30:BH:77:THR:HG22	30:BH:79:THR:HG23	1.87	0.57
30:BH:121:VAL:HG22	30:BH:128:HIS:NE2	2.19	0.57
32:BK:54:LYS:HD2	32:BK:54:LYS:N	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BL:111:ILE:HG22	33:BL:112:LEU:N	2.20	0.57
34:BM:54:THR:C	34:BM:56:ALA:H	2.08	0.57
38:BQ:56:PHE:HA	38:BQ:59:LEU:HB3	1.86	0.57
39:BR:4:VAL:HG21	39:BR:39:LEU:HG	1.85	0.57
46:BZ:35:SER:HA	46:BZ:50:ARG:HA	1.86	0.57
1:CA:31:G:H5'	1:CA:306:A:C2	2.40	0.57
1:CA:275:G:H5'	16:CQ:15:LYS:HD3	1.85	0.57
1:CA:430:A:OP1	3:CD:8:LEU:HB2	2.03	0.57
1:CA:996:A:H2'	1:CA:997:U:C6	2.40	0.57
1:CA:1492:A:H5'	1:CA:1493:A:OP2	2.05	0.57
3:CD:12:ARG:HA	3:CD:33:ILE:HD12	1.87	0.57
8:CI:50:PRO:HB3	8:CI:83:THR:HB	1.87	0.57
22:DA:88:C:H2'	22:DA:88:C:OP1	2.05	0.57
23:DB:521:U:H2'	23:DB:522:A:H8	1.69	0.57
23:DB:2008:C:H2'	23:DB:2009:A:H8	1.70	0.57
23:DB:2353:G:H1'	43:DW:30:VAL:HG12	1.87	0.57
23:DB:2385:C:H2'	23:DB:2386:A:C8	2.40	0.57
23:DB:2460:U:H2'	23:DB:2461:A:H8	1.70	0.57
23:DB:2488:G:O2'	23:DB:2489:U:H5'	2.05	0.57
25:DC:77:VAL:CG2	25:DC:112:GLY:H	2.07	0.57
27:DE:2:GLU:HA	27:DE:13:THR:OG1	2.05	0.57
34:DM:4:PRO:HG2	34:DM:70:ASP:HA	1.85	0.57
34:DM:54:THR:C	34:DM:56:ALA:H	2.08	0.57
35:DN:72:ASP:OD1	35:DN:75:ILE:HG23	2.04	0.57
45:DY:5:LYS:HG3	45:DY:57:GLU:HB2	1.85	0.57
47:D0:38:LEU:HB3	47:D0:41:HIS:CD2	2.39	0.57
1:AA:272:C:H2'	1:AA:273:U:H6	1.70	0.57
1:AA:1152:A:H2'	1:AA:1153:G:C8	2.38	0.57
5:AF:67:PRO:HG2	5:AF:70:VAL:HG22	1.86	0.57
8:AI:113:LYS:HA	8:AI:120:ALA:HB2	1.87	0.57
10:AK:86:LYS:HA	10:AK:113:THR:OG1	2.05	0.57
12:AM:22:TYR:HB2	12:AM:65:GLU:HA	1.86	0.57
23:BB:688:U:O2'	23:BB:689:A:H5'	2.05	0.57
23:BB:850:U:H2'	23:BB:851:C:C6	2.39	0.57
23:BB:2398:U:H2'	23:BB:2399:G:H8	1.69	0.57
23:BB:2615:U:C2	47:B0:3:GLN:HA	2.40	0.57
23:BB:2897:U:H2'	23:BB:2898:U:C6	2.40	0.57
28:BF:11:VAL:HG21	28:BF:172:PHE:CE1	2.40	0.57
30:BH:3:VAL:HG12	30:BH:38:PRO:HA	1.86	0.57
30:BH:47:PHE:HA	30:BH:50:ARG:HE	1.70	0.57
34:BM:67:VAL:HG11	34:BM:102:LEU:HD22	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:32:A:H2'	1:CA:33:A:C8	2.39	0.57
1:CA:600:A:H2'	1:CA:601:G:C8	2.39	0.57
1:CA:1038:C:H2'	1:CA:1039:G:C8	2.40	0.57
5:CF:92:THR:HG22	5:CF:93:LYS:N	2.19	0.57
6:CG:25:PHE:HZ	6:CG:119:LEU:HD11	1.70	0.57
7:CH:45:ILE:HG22	7:CH:62:LEU:HA	1.87	0.57
18:CS:1:PRO:O	18:CS:2:ARG:HB2	2.05	0.57
23:DB:523:C:H4'	23:DB:540:C:O2	2.04	0.57
23:DB:845:A:N1	23:DB:847:U:H1'	2.20	0.57
23:DB:850:U:H2'	23:DB:851:C:C6	2.40	0.57
23:DB:1338:G:H4'	41:DT:18:GLU:CG	2.24	0.57
23:DB:2064:C:H2'	23:DB:2065:C:H6	1.70	0.57
23:DB:2355:G:O3'	43:DW:20:LEU:HD13	2.05	0.57
23:DB:2439:A:N7	23:DB:2586:U:H4'	2.20	0.57
23:DB:2875:C:H2'	23:DB:2876:G:H8	1.70	0.57
25:DC:66:PHE:HB2	25:DC:150:GLY:O	2.05	0.57
31:DJ:13:ARG:HB3	31:DJ:53:TYR:HD2	1.68	0.57
42:DU:43:LYS:O	42:DU:57:ILE:HA	2.04	0.57
1:AA:624:C:H2'	1:AA:625:U:H6	1.70	0.56
1:AA:1054:C:O2'	1:AA:1055:A:H5"	2.05	0.56
2:AC:149:LYS:HB2	2:AC:168:ARG:HG3	1.87	0.56
11:AL:7:VAL:HG22	16:AQ:33:TYR:HD1	1.70	0.56
23:BB:296:U:H2'	23:BB:297:G:H8	1.70	0.56
23:BB:988:A:C8	45:BY:13:ILE:HD12	2.39	0.56
23:BB:1316:U:O2'	23:BB:1317:G:H5'	2.05	0.56
23:BB:1508:A:H5'	23:BB:1509:A:C6	2.40	0.56
23:BB:1553:A:O2'	23:BB:1554:U:H2'	2.05	0.56
23:BB:2258:C:O2'	23:BB:2426:A:H4'	2.05	0.56
23:BB:2392:A:H2'	23:BB:2392:A:N3	2.19	0.56
23:BB:2516:A:O2'	23:BB:2517:C:H5'	2.05	0.56
23:BB:2774:C:H2'	23:BB:2775:G:O4'	2.05	0.56
25:BC:75:ALA:O	25:BC:114:GLN:HA	2.05	0.56
28:BF:12:VAL:O	28:BF:16:MET:HG2	2.05	0.56
29:BG:26:LYS:HG2	29:BG:27:GLY:H	1.70	0.56
30:BH:79:THR:HG22	30:BH:145:ASN:CG	2.25	0.56
32:BK:2:ILE:HA	32:BK:33:ALA:H	1.68	0.56
41:BT:54:GLU:HG3	41:BT:90:GLY:N	2.20	0.56
45:BY:29:ARG:H	45:BY:33:HIS:HD2	1.53	0.56
1:CA:253:A:H2'	1:CA:254:G:H8	1.69	0.56
1:CA:975:A:H4'	1:CA:976:G:O5'	2.05	0.56
1:CA:1294:G:H2'	1:CA:1295:U:C6	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:71:ARG:O	2:CC:74:ILE:HG22	2.05	0.56
3:CD:100:VAL:O	3:CD:104:MET:HG3	2.04	0.56
6:CG:65:LEU:O	6:CG:69:ARG:HG3	2.05	0.56
10:CK:58:THR:HB	10:CK:59:PRO:HD2	1.87	0.56
20:CB:140:LEU:H	20:CB:140:LEU:HD12	1.68	0.56
23:DB:548:G:N3	23:DB:548:G:C2'	2.68	0.56
23:DB:1518:C:H2'	23:DB:1519:G:H8	1.69	0.56
23:DB:2189:U:H2'	23:DB:2190:G:O4'	2.05	0.56
25:DC:222:THR:HA	25:DC:231:HIS:O	2.03	0.56
25:DC:226:PRO:CG	25:DC:233:GLY:H	2.17	0.56
27:DE:5:LEU:HB2	27:DE:11:ALA:N	2.20	0.56
29:DG:25:ILE:HG22	29:DG:78:VAL:HG21	1.87	0.56
32:DK:13:ASN:ND2	32:DK:98:ARG:H	1.99	0.56
46:DZ:40:VAL:CG2	46:DZ:43:GLU:HB3	2.31	0.56
1:AA:82:G:H1'	1:AA:89:U:O2	2.06	0.56
1:AA:811:C:H4'	1:AA:900:A:N6	2.20	0.56
1:AA:1417:G:H22	1:AA:1482:G:H2'	1.70	0.56
6:AG:129:ASN:ND2	6:AG:137:ARG:HH22	2.03	0.56
7:AH:124:ILE:HG22	7:AH:125:ILE:N	2.19	0.56
8:AI:50:PRO:HB3	8:AI:83:THR:HB	1.86	0.56
20:AB:40:ILE:HD13	20:AB:201:GLY:HA2	1.88	0.56
22:BA:54:G:H21	28:BF:25:MET:HE3	1.69	0.56
23:BB:477:A:H2'	23:BB:478:A:C8	2.40	0.56
23:BB:570:G:H2'	23:BB:2030:A:N7	2.20	0.56
23:BB:974:G:OP2	39:BR:78:ARG:HD3	2.05	0.56
23:BB:1018:U:O2'	23:BB:1019:U:H5'	2.05	0.56
23:BB:1056:G:H4'	23:BB:1086:A:H8	1.69	0.56
23:BB:1790:C:O2'	25:BC:207:ALA:HB2	2.04	0.56
23:BB:2298:A:OP1	28:BF:70:ARG:HD3	2.05	0.56
23:BB:2303:G:H4'	28:BF:121:PHE:O	2.05	0.56
23:BB:2439:A:N7	23:BB:2586:U:H4'	2.20	0.56
23:BB:2468:A:H2'	23:BB:2476:A:C6	2.40	0.56
24:BV:7:GLU:O	24:BV:41:GLU:HG2	2.05	0.56
27:BE:192:ALA:HA	27:BE:195:GLN:NE2	2.19	0.56
38:BQ:105:PHE:O	38:BQ:109:VAL:HG23	2.05	0.56
1:CA:920:U:O2'	1:CA:1081:A:H4'	2.05	0.56
1:CA:1338:G:H2'	1:CA:1339:A:C8	2.40	0.56
1:CA:1450:U:H2'	1:CA:1452:C:C5	2.40	0.56
2:CC:8:GLY:HA2	2:CC:11:LEU:HG	1.87	0.56
3:CD:29:THR:HG22	3:CD:30:LYS:N	2.20	0.56
3:CD:77:GLU:HA	3:CD:80:ARG:HG2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CN:50:LEU:N	13:CN:51:PRO:HD2	2.20	0.56
16:CQ:37:ILE:HG22	16:CQ:38:LYS:H	1.70	0.56
23:DB:15:G:O2'	23:DB:16:C:H5'	2.04	0.56
23:DB:286:U:H2'	23:DB:287:G:C8	2.39	0.56
23:DB:601:C:H2'	23:DB:602:A:H8	1.70	0.56
23:DB:1355:G:O2'	23:DB:1356:G:H5'	2.04	0.56
23:DB:1406:U:H2'	23:DB:1407:G:H8	1.68	0.56
23:DB:1567:G:H2'	25:DC:84:PRO:HG3	1.87	0.56
23:DB:1597:A:H5"	23:DB:1598:A:H5'	1.85	0.56
23:DB:1785:A:H2'	23:DB:1787:A:N7	2.20	0.56
23:DB:2141:G:H2'	23:DB:2142:A:H8	1.69	0.56
24:DV:63:ILE:HD12	24:DV:63:ILE:N	2.21	0.56
25:DC:131:MET:HA	25:DC:134:ILE:HG23	1.86	0.56
25:DC:221:GLY:C	25:DC:223:ALA:H	2.08	0.56
25:DC:243:PRO:O	25:DC:250:GLN:HA	2.04	0.56
35:DN:59:SER:O	35:DN:63:ARG:HB2	2.05	0.56
37:DP:112:ARG:HB2	37:DP:112:ARG:HH11	1.70	0.56
40:DS:81:SER:HB3	40:DS:99:ARG:HB3	1.86	0.56
41:DT:69:ARG:CZ	41:DT:69:ARG:HA	2.36	0.56
42:DU:85:ARG:HA	42:DU:85:ARG:NE	2.20	0.56
1:AA:90:C:H2'	1:AA:91:U:C6	2.40	0.56
1:AA:190:A:H2'	1:AA:191:G:O4'	2.05	0.56
1:AA:390:U:H2'	1:AA:391:G:C8	2.40	0.56
1:AA:505:G:H2'	1:AA:506:G:H8	1.68	0.56
1:AA:734:G:H21	17:AR:63:TYR:HE1	1.53	0.56
1:AA:922:G:N3	1:AA:1398:A:H2	2.03	0.56
1:AA:1078:U:H2'	1:AA:1079:G:O4'	2.05	0.56
1:AA:1296:C:H4'	1:AA:1302:C:N4	2.21	0.56
1:AA:1317:C:OP1	13:AN:56:PRO:HD2	2.05	0.56
4:AE:56:PRO:HG2	4:AE:57:ALA:H	1.70	0.56
4:AE:82:HIS:CD2	7:AH:95:MET:HG3	2.41	0.56
6:AG:145:GLU:HA	6:AG:148:LYS:HB2	1.86	0.56
8:AI:27:ILE:HG21	8:AI:34:LEU:HD13	1.88	0.56
9:AJ:40:ILE:HB	9:AJ:73:LEU:HB3	1.87	0.56
23:BB:286:U:H2'	23:BB:287:G:H8	1.69	0.56
23:BB:523:C:H4'	23:BB:540:C:O2	2.05	0.56
23:BB:784:G:H5"	25:BC:225:ASN:OD1	2.05	0.56
23:BB:898:C:H2'	23:BB:899:A:C4	2.41	0.56
23:BB:1709:U:H2'	23:BB:1710:G:H8	1.71	0.56
23:BB:1923:U:H2'	23:BB:1924:C:C6	2.40	0.56
23:BB:2485:G:H5"	34:BM:125:PRO:HG3	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2645:G:H3'	23:BB:2646:C:C5'	2.32	0.56
23:BB:2714:G:O2'	23:BB:2715:C:H5'	2.06	0.56
23:BB:2720:U:H5"	37:BP:52:ARG:NH2	2.20	0.56
23:BB:2774:C:OP1	26:BD:169:ARG:HG3	2.05	0.56
24:BV:9:ARG:NH2	24:BV:12:GLN:HA	2.19	0.56
25:BC:75:ALA:CB	25:BC:95:TYR:HA	2.35	0.56
36:BO:35:ILE:CG1	36:BO:102:ARG:HE	2.17	0.56
38:BQ:79:ILE:O	38:BQ:79:ILE:HD13	2.06	0.56
39:BR:4:VAL:CG2	39:BR:39:LEU:HG	2.35	0.56
40:BS:48:LYS:HE2	40:BS:52:GLU:OE1	2.05	0.56
42:BU:95:PHE:CE1	42:BU:102:ILE:HB	2.39	0.56
46:BZ:65:ASP:HA	46:BZ:68:LEU:HB2	1.86	0.56
51:B4:13:ASN:O	51:B4:27:CYS:HA	2.04	0.56
1:CA:251:G:H1	1:CA:271:C:H41	1.53	0.56
1:CA:352:C:H4'	1:CA:354:G:OP1	2.06	0.56
1:CA:518:C:H2'	1:CA:530:G:C8	2.41	0.56
1:CA:1320:C:H42	18:CS:35:ARG:HD3	1.70	0.56
1:CA:1512:U:H2'	1:CA:1513:A:C8	2.40	0.56
2:CC:6:PRO:HA	2:CC:9:ILE:HG22	1.88	0.56
4:CE:61:LYS:O	4:CE:65:LYS:HG2	2.05	0.56
4:CE:125:LYS:HD2	4:CE:126:ALA:H	1.69	0.56
4:CE:140:ILE:HG22	4:CE:144:GLU:OE1	2.06	0.56
8:CI:10:ARG:HB3	8:CI:15:ALA:HA	1.87	0.56
9:CJ:53:ILE:CG2	9:CJ:61:ALA:HB1	2.36	0.56
10:CK:34:THR:HA	10:CK:41:LEU:HG	1.87	0.56
11:CL:20:VAL:HB	11:CL:94:TYR:CE1	2.40	0.56
15:CP:40:ASN:ND2	15:CP:42:ILE:H	2.04	0.56
15:CP:74:LEU:O	15:CP:78:VAL:HG12	2.05	0.56
21:CU:24:LYS:NZ	21:CU:25:ALA:H	1.98	0.56
23:DB:21:A:H2'	23:DB:22:C:C6	2.40	0.56
23:DB:53:A:N6	23:DB:117:G:H1'	2.21	0.56
23:DB:455:C:N3	23:DB:473:G:H5'	2.21	0.56
23:DB:483:A:H4'	42:DU:45:GLN:O	2.05	0.56
23:DB:570:G:H2'	23:DB:2030:A:N7	2.19	0.56
23:DB:659:G:H21	27:DE:30:GLN:NE2	2.03	0.56
23:DB:857:G:C2'	23:DB:858:G:H5'	2.34	0.56
23:DB:899:A:H3'	23:DB:900:A:H8	1.70	0.56
23:DB:1061:U:H4'	23:DB:1070:A:O3'	2.04	0.56
23:DB:1080:A:H4'	52:DI:126:ARG:CD	2.34	0.56
23:DB:1438:U:H2'	23:DB:1439:A:O4'	2.06	0.56
23:DB:1709:U:H2'	23:DB:1710:G:C8	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1965:C:H5”	23:DB:1966:A:H2’	1.87	0.56
23:DB:2081:U:OP1	46:DZ:19:SER:HB3	2.05	0.56
23:DB:2088:A:H2’	23:DB:2089:C:H6	1.71	0.56
23:DB:2137:U:O2’	23:DB:2138:G:H5’	2.04	0.56
23:DB:2336:A:H61	43:DW:40:ARG:CG	2.19	0.56
24:DV:44:HIS:NE2	24:DV:85:LYS:HB2	2.19	0.56
25:DC:161:VAL:O	25:DC:162:GLN:HB2	2.04	0.56
26:DD:12:THR:HG22	26:DD:13:ARG:H	1.69	0.56
27:DE:5:LEU:HD12	27:DE:10:SER:HB2	1.87	0.56
27:DE:117:ARG:NH1	33:DL:2:ARG:HB2	2.20	0.56
28:DF:11:VAL:HG21	28:DF:172:PHE:CE1	2.40	0.56
32:DK:118:LEU:O	32:DK:120:PRO:HD2	2.04	0.56
33:DL:3:LEU:O	33:DL:5:THR:N	2.39	0.56
35:DN:96:ARG:HG2	35:DN:96:ARG:HH21	1.71	0.56
35:DN:102:PHE:N	35:DN:109:PRO:HA	2.17	0.56
40:DS:1:MET:SD	40:DS:62:ASP:HB2	2.45	0.56
40:DS:48:LYS:HE2	40:DS:52:GLU:OE1	2.04	0.56
43:DW:35:ILE:O	43:DW:36:ILE:C	2.43	0.56
52:DI:37:PHE:CZ	52:DI:58:ILE:HD11	2.40	0.56
1:AA:33:A:H2’	1:AA:34:C:H6	1.70	0.56
1:AA:224:U:H2’	1:AA:225:C:C6	2.39	0.56
1:AA:505:G:H4’	1:AA:534:U:C4	2.40	0.56
1:AA:1058:G:OP1	2:AC:198:LYS:HE3	2.05	0.56
12:AM:43:LYS:HD2	12:AM:43:LYS:H	1.70	0.56
13:AN:79:SER:OG	13:AN:82:LYS:HG2	2.05	0.56
15:AP:40:ASN:ND2	15:AP:42:ILE:H	2.04	0.56
22:BA:50:A:OP1	36:BO:68:LYS:HG3	2.04	0.56
23:BB:5:A:H2’	23:BB:6:A:C8	2.41	0.56
23:BB:633:A:H8	23:BB:633:A:O5’	1.89	0.56
23:BB:828:U:H4’	23:BB:831:G:N1	2.19	0.56
23:BB:1291:C:O2’	23:BB:1292:G:H5’	2.06	0.56
23:BB:1579:A:H2’	23:BB:1580:A:C8	2.40	0.56
25:BC:36:ASN:HD21	25:BC:85:ASN:HD21	1.53	0.56
25:BC:43:ASN:HB3	25:BC:45:ASN:HD22	1.70	0.56
25:BC:43:ASN:HB3	25:BC:45:ASN:ND2	2.21	0.56
29:BG:10:VAL:HG13	29:BG:16:VAL:HG21	1.87	0.56
29:BG:19:ASN:HB2	29:BG:22:VAL:HB	1.87	0.56
31:BJ:58:ASN:HA	31:BJ:127:GLY:CA	2.26	0.56
38:BQ:71:ASN:HD21	38:BQ:109:VAL:HG11	1.70	0.56
40:BS:28:LYS:HD2	40:BS:29:VAL:N	2.19	0.56
42:BU:81:ARG:HB2	42:BU:96:LYS:HG3	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BI:58:ILE:HD12	52:BI:58:ILE:N	2.20	0.56
1:CA:135:C:O2	15:CP:1:MET:HB2	2.06	0.56
1:CA:313:A:H2'	1:CA:314:C:C6	2.41	0.56
1:CA:1004:A:C8	1:CA:1025:U:H1'	2.40	0.56
1:CA:1250:A:H4'	8:CI:69:GLY:O	2.06	0.56
2:CC:33:ASP:O	2:CC:37:LYS:HG3	2.05	0.56
2:CC:149:LYS:HB2	2:CC:168:ARG:HG3	1.87	0.56
8:CI:18:VAL:HG13	8:CI:64:ILE:HG13	1.87	0.56
8:CI:109:GLN:NE2	8:CI:110:VAL:H	2.03	0.56
9:CJ:55:PRO:HA	13:CN:80:ARG:NH2	2.20	0.56
23:DB:1796:U:H2'	23:DB:1797:G:C8	2.40	0.56
23:DB:2370:G:H2'	23:DB:2371:G:O4'	2.05	0.56
23:DB:2469:A:H2'	23:DB:2470:G:O4'	2.04	0.56
23:DB:2849:U:N3	23:DB:2867:G:C8	2.74	0.56
31:DJ:124:VAL:O	31:DJ:125:TYR:HB2	2.04	0.56
35:DN:7:GLY:HA2	35:DN:46:ARG:NH1	2.19	0.56
50:D3:3:ILE:HG21	50:D3:62:PRO:HG2	1.88	0.56
51:D4:13:ASN:O	51:D4:27:CYS:HA	2.06	0.56
51:D4:13:ASN:HB3	51:D4:28:SER:H	1.69	0.56
1:AA:135:C:O2	15:AP:1:MET:HB2	2.04	0.56
1:AA:555:U:H2'	1:AA:556:C:H6	1.70	0.56
1:AA:975:A:H4'	1:AA:976:G:O5'	2.04	0.56
1:AA:1004:A:H5'	1:AA:1024:G:N2	2.20	0.56
4:AE:19:ARG:HH11	4:AE:28:ARG:HH22	1.53	0.56
7:AH:13:ILE:HD11	7:AH:60:LEU:HD21	1.87	0.56
20:AB:58:LYS:NZ	20:AB:58:LYS:HB3	2.20	0.56
22:BA:76:G:O2'	22:BA:77:U:H5'	2.06	0.56
23:BB:664:G:H2'	23:BB:665:U:C6	2.40	0.56
23:BB:1518:C:H2'	23:BB:1519:G:H8	1.70	0.56
23:BB:1838:C:N4	23:BB:1898:U:H2'	2.21	0.56
23:BB:2895:G:H2'	23:BB:2896:C:H6	1.68	0.56
26:BD:178:VAL:O	26:BD:180:VAL:HG23	2.06	0.56
29:BG:146:ASP:O	29:BG:150:TYR:HD1	1.89	0.56
30:BH:31:VAL:CB	30:BH:32:PRO:CD	2.82	0.56
30:BH:81:ALA:HA	30:BH:147:VAL:N	2.20	0.56
32:BK:10:VAL:HG21	32:BK:16:ALA:HA	1.86	0.56
34:BM:63:ILE:H	34:BM:63:ILE:HD12	1.69	0.56
38:BQ:71:ASN:ND2	38:BQ:109:VAL:HG11	2.20	0.56
50:B3:3:ILE:HG21	50:B3:62:PRO:HG2	1.86	0.56
1:CA:230:G:H2'	1:CA:231:U:O4'	2.06	0.56
1:CA:370:C:H2'	1:CA:371:A:H8	1.69	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CE:28:ARG:NH1	4:CE:30:PHE:HB3	2.21	0.56
13:CN:71:GLY:O	13:CN:79:SER:HA	2.05	0.56
23:DB:1098:A:C8	52:DI:3:LYS:HB3	2.40	0.56
23:DB:1259:G:H2'	23:DB:1260:A:H8	1.69	0.56
23:DB:1501:G:O2'	23:DB:1502:A:H5'	2.05	0.56
28:DF:90:LEU:HD12	28:DF:95:MET:HA	1.86	0.56
29:DG:84:LYS:HG3	29:DG:132:LEU:N	2.20	0.56
29:DG:132:LEU:HD23	29:DG:132:LEU:N	2.21	0.56
31:DJ:23:LYS:HE3	31:DJ:142:ILE:HG12	1.87	0.56
31:DJ:56:VAL:HG12	31:DJ:57:LEU:N	2.21	0.56
33:DL:122:VAL:HG12	33:DL:143:GLU:OE2	2.06	0.56
38:DQ:94:LEU:C	38:DQ:96:ASP:H	2.09	0.56
1:AA:562:U:H2'	1:AA:562:U:OP2	2.05	0.56
1:AA:672:U:H2'	1:AA:673:A:C8	2.40	0.56
1:AA:777:A:H2'	1:AA:778:G:C8	2.40	0.56
1:AA:824:G:O2'	1:AA:825:A:H5'	2.05	0.56
1:AA:933:G:N7	6:AG:2:ARG:NH1	2.54	0.56
1:AA:1347:G:H22	1:AA:1373:G:H2'	1.71	0.56
1:AA:1508:A:H2'	1:AA:1509:C:H6	1.70	0.56
11:AL:122:LYS:HD2	11:AL:123:ALA:H	1.69	0.56
19:AT:85:LEU:HD23	19:AT:86:ALA:N	2.21	0.56
20:AB:145:ASN:N	20:AB:145:ASN:ND2	2.53	0.56
22:BA:49:C:H2'	22:BA:50:A:H8	1.71	0.56
23:BB:2704:C:H2'	23:BB:2705:A:O4'	2.06	0.56
27:BE:3:LEU:H	27:BE:13:THR:H	1.53	0.56
32:BK:24:VAL:HG13	32:BK:33:ALA:HB2	1.88	0.56
35:BN:49:GLU:HA	35:BN:94:TYR:HD2	1.70	0.56
46:BZ:77:LYS:O	46:BZ:78:TYR:HB3	2.05	0.56
52:BI:75:ALA:HB2	52:BI:112:LYS:HE2	1.85	0.56
1:CA:546:A:OP1	3:CD:69:ARG:HB2	2.05	0.56
1:CA:811:C:H4'	1:CA:900:A:N6	2.21	0.56
1:CA:1250:A:H2'	1:CA:1251:A:C8	2.40	0.56
1:CA:1349:A:H2'	1:CA:1350:A:O4'	2.05	0.56
1:CA:1508:A:H2'	1:CA:1509:C:H6	1.70	0.56
4:CE:152:VAL:O	4:CE:156:ARG:HG2	2.05	0.56
22:DA:76:G:O2'	22:DA:77:U:H5'	2.05	0.56
23:DB:642:U:O2	23:DB:644:A:H3'	2.05	0.56
23:DB:782:A:N3	25:DC:224:MET:HB3	2.21	0.56
23:DB:1476:U:H4'	23:DB:1732:C:O2'	2.05	0.56
23:DB:2415:G:H2'	23:DB:2416:C:C6	2.40	0.56
26:DD:79:LEU:N	26:DD:79:LEU:HD22	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DH:90:LEU:HD22	30:DH:122:LEU:O	2.06	0.56
33:DL:17:LYS:HD2	33:DL:19:LEU:HD11	1.88	0.56
33:DL:57:LEU:HA	33:DL:60:ARG:NH2	2.21	0.56
33:DL:78:ARG:HG2	33:DL:113:ALA:HB2	1.86	0.56
38:DQ:56:PHE:HA	38:DQ:59:LEU:HB3	1.87	0.56
42:DU:12:VAL:HG22	42:DU:69:VAL:HG12	1.88	0.56
42:DU:17:ASP:HB3	42:DU:20:LYS:HE3	1.87	0.56
1:AA:1332:A:H2'	1:AA:1333:A:H8	1.69	0.56
1:AA:1351:U:O2'	1:AA:1352:C:H5'	2.05	0.56
3:AD:40:HIS:HB3	3:AD:43:ARG:HG2	1.87	0.56
23:BB:823:C:O2'	23:BB:824:U:H5'	2.05	0.56
23:BB:857:G:C2'	23:BB:858:G:H5'	2.36	0.56
23:BB:1119:U:OP1	24:BV:83:LYS:HE3	2.05	0.56
23:BB:1640:A:H2'	23:BB:1641:A:C8	2.40	0.56
23:BB:2567:G:H2'	23:BB:2568:U:C6	2.41	0.56
23:BB:2815:C:H2'	23:BB:2816:G:C8	2.40	0.56
23:BB:2841:C:H2'	23:BB:2842:G:H8	1.71	0.56
26:BD:136:ASN:OD1	26:BD:139:SER:HB2	2.06	0.56
27:BE:21:ARG:HG3	27:BE:22:ASP:N	2.21	0.56
30:BH:68:ARG:HB2	30:BH:134:VAL:CG2	2.34	0.56
33:BL:85:VAL:CG2	33:BL:94:THR:HB	2.35	0.56
44:BX:23:ARG:HA	44:BX:27:ASN:ND2	2.20	0.56
52:BI:105:LEU:HD11	52:BI:139:VAL:CG1	2.36	0.56
1:CA:314:C:O2'	1:CA:315:A:H5'	2.06	0.56
1:CA:474:G:H2'	1:CA:475:C:C6	2.41	0.56
1:CA:778:G:H2'	1:CA:779:C:H6	1.70	0.56
1:CA:1329:A:OP1	12:CM:28:ARG:HB2	2.06	0.56
4:CE:148:SER:OG	4:CE:151:MET:HB2	2.06	0.56
6:CG:78:ARG:HG2	6:CG:83:THR:HG22	1.86	0.56
13:CN:9:GLU:HB2	13:CN:62:ARG:CZ	2.35	0.56
18:CS:11:ASP:H	18:CS:14:LEU:HD21	1.70	0.56
23:DB:106:C:H2'	23:DB:107:G:C8	2.41	0.56
23:DB:184:C:H2'	23:DB:185:G:H8	1.70	0.56
23:DB:845:A:C2	23:DB:847:U:H1'	2.41	0.56
23:DB:871:U:H2'	23:DB:872:U:C6	2.39	0.56
23:DB:996:A:H4'	38:DQ:91:ARG:CD	2.32	0.56
23:DB:1747:U:H2'	23:DB:1748:C:C6	2.41	0.56
23:DB:2389:G:H5"	23:DB:2390:U:H5'	1.88	0.56
23:DB:2412:A:H2'	23:DB:2413:G:O4'	2.06	0.56
26:DD:8:LYS:CG	26:DD:197:THR:H	2.19	0.56
27:DE:40:ARG:NH2	27:DE:92:HIS:NE2	2.54	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DE:192:ALA:HA	27:DE:195:GLN:NE2	2.20	0.56
36:DO:52:SER:OG	36:DO:54:VAL:HG12	2.05	0.56
39:DR:31:GLU:H	39:DR:63:VAL:CG2	2.18	0.56
39:DR:79:ARG:NE	39:DR:80:ARG:HH21	2.04	0.56
43:DW:36:ILE:HB	43:DW:39:GLN:NE2	2.21	0.56
1:AA:1171:A:H2'	1:AA:1172:C:C6	2.40	0.56
3:AD:44:LYS:HD2	3:AD:46:ARG:HG2	1.88	0.56
6:AG:25:PHE:HZ	6:AG:119:LEU:HD11	1.71	0.56
8:AI:126:PHE:O	8:AI:128:LYS:N	2.39	0.56
13:AN:63:CYS:HB3	13:AN:67:GLY:N	2.20	0.56
23:BB:71:A:H5"	23:BB:73:A:C8	2.41	0.56
23:BB:1778:U:H2'	23:BB:1784:A:N6	2.20	0.56
23:BB:1821:A:H2'	23:BB:1822:C:C6	2.41	0.56
23:BB:2145:C:O4'	23:BB:2145:C:O2	2.23	0.56
23:BB:2415:G:H2'	23:BB:2416:C:C6	2.40	0.56
23:BB:2860:A:H8	23:BB:2860:A:O5'	1.87	0.56
25:BC:196:ASN:HD22	25:BC:199:HIS:HB2	1.69	0.56
27:BE:97:ASN:ND2	27:BE:100:MET:HG3	2.21	0.56
33:BL:92:LEU:HD21	33:BL:123:ARG:NH1	2.20	0.56
34:BM:103:TYR:O	34:BM:104:GLU:HG3	2.05	0.56
42:BU:43:LYS:O	42:BU:57:ILE:HA	2.06	0.56
45:BY:37:ARG:HG3	45:BY:38:GLU:OE1	2.05	0.56
46:BZ:70:GLU:O	46:BZ:71:LEU:HB3	2.06	0.56
49:B2:31:LEU:HD22	49:B2:42:LEU:HD12	1.88	0.56
1:CA:215:C:H2'	1:CA:216:U:C6	2.41	0.56
1:CA:264:C:O2'	16:CQ:65:PRO:HG2	2.06	0.56
1:CA:1021:A:H2'	1:CA:1022:A:O4'	2.06	0.56
1:CA:1091:U:H2'	1:CA:1093:A:OP2	2.05	0.56
3:CD:88:ASN:O	3:CD:92:LEU:HD23	2.05	0.56
4:CE:82:HIS:CD2	7:CH:95:MET:HG3	2.41	0.56
6:CG:144:ALA:O	6:CG:146:ALA:N	2.37	0.56
13:CN:63:CYS:HB3	13:CN:67:GLY:N	2.20	0.56
20:CB:145:ASN:N	20:CB:145:ASN:ND2	2.54	0.56
23:DB:781:A:OP1	25:DC:216:ARG:NH2	2.39	0.56
23:DB:1351:C:H2'	23:DB:1352:U:O4'	2.05	0.56
23:DB:1857:G:H2'	23:DB:1884:G:N2	2.21	0.56
23:DB:2339:C:H2'	23:DB:2340:A:C8	2.40	0.56
29:DG:10:VAL:HG13	29:DG:16:VAL:HG21	1.88	0.56
35:DN:103:ARG:CG	35:DN:104:ALA:H	2.19	0.56
46:DZ:35:SER:HA	46:DZ:50:ARG:HA	1.87	0.56
51:D4:2:LYS:HG2	51:D4:3:VAL:N	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:45:G:H2'	1:AA:46:G:H8	1.71	0.56
1:AA:576:C:H3'	1:AA:576:C:OP2	2.06	0.56
1:AA:715:A:H2'	1:AA:716:A:C8	2.41	0.56
1:AA:1534:A:H3'	1:AA:1534:A:N3	2.21	0.56
3:AD:2:ARG:HH22	3:AD:132:ALA:HB3	1.71	0.56
3:AD:55:ARG:HH11	3:AD:55:ARG:HG3	1.70	0.56
8:AI:55:ASP:CB	8:AI:59:LYS:HG3	2.36	0.56
15:AP:74:LEU:O	15:AP:78:VAL:HG12	2.06	0.56
19:AT:49:ALA:HA	19:AT:52:GLU:HB3	1.87	0.56
19:AT:68:LYS:HA	19:AT:68:LYS:NZ	2.21	0.56
20:AB:15:PHE:O	20:AB:40:ILE:HD12	2.05	0.56
20:AB:16:GLY:CA	20:AB:40:ILE:H	2.19	0.56
20:AB:65:LYS:HG2	20:AB:89:PHE:HE1	1.71	0.56
20:AB:112:ARG:HH11	20:AB:116:LEU:HG	1.71	0.56
20:AB:114:LYS:HE2	20:AB:151:LYS:HZ1	1.71	0.56
21:AU:24:LYS:NZ	21:AU:25:ALA:H	1.98	0.56
21:AU:39:LYS:N	21:AU:40:PRO:HD2	2.21	0.56
23:BB:222:A:N1	23:BB:233:A:H5"	2.21	0.56
23:BB:661:A:H1'	33:BL:12:SER:O	2.06	0.56
23:BB:673:C:H5"	27:BE:76:PRO:HD2	1.86	0.56
23:BB:832:U:H2'	23:BB:833:A:C8	2.41	0.56
23:BB:1061:U:O4'	23:BB:1070:A:H1'	2.06	0.56
23:BB:1179:G:H2'	23:BB:1180:U:O4'	2.06	0.56
23:BB:1351:C:H2'	23:BB:1352:U:O4'	2.06	0.56
23:BB:1441:G:H2'	23:BB:1442:U:C6	2.39	0.56
23:BB:2213:U:O2	23:BB:2213:U:C2'	2.54	0.56
23:BB:2469:A:H2'	23:BB:2470:G:O4'	2.06	0.56
23:BB:2786:U:O2'	26:BD:66:GLY:HA3	2.06	0.56
24:BV:80:HIS:HB3	24:BV:83:LYS:O	2.06	0.56
30:BH:38:PRO:O	30:BH:40:THR:HG23	2.06	0.56
35:BN:102:PHE:N	35:BN:109:PRO:HA	2.18	0.56
40:BS:24:ILE:HD11	40:BS:36:LEU:CD1	2.27	0.56
42:BU:12:VAL:HG22	42:BU:69:VAL:HG12	1.87	0.56
42:BU:90:LYS:HB3	42:BU:92:VAL:HG23	1.87	0.56
43:BW:37:VAL:HG13	43:BW:55:ASP:O	2.05	0.56
1:CA:10:A:H2'	1:CA:11:G:H8	1.69	0.56
1:CA:373:A:H1'	1:CA:481:G:N3	2.21	0.56
1:CA:796:C:OP1	10:CK:127:ARG:HB3	2.06	0.56
1:CA:812:G:H2'	1:CA:812:G:N3	2.19	0.56
1:CA:1488:G:O2'	1:CA:1489:G:H5'	2.06	0.56
7:CH:76:ARG:HG3	7:CH:77:VAL:N	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CJ:30:LYS:NZ	9:CJ:36:VAL:HB	2.21	0.56
10:CK:86:LYS:HA	10:CK:113:THR:OG1	2.05	0.56
22:DA:13:G:H2'	22:DA:14:U:H5"	1.88	0.56
23:DB:49:A:H5"	23:DB:51:G:O4'	2.05	0.56
23:DB:643:A:H61	23:DB:2370:G:H1'	1.71	0.56
23:DB:670:A:H4'	33:DL:42:SER:HB2	1.87	0.56
23:DB:1082:U:O4	23:DB:1086:A:C2	2.57	0.56
23:DB:1099:G:C8	52:DI:3:LYS:CA	2.84	0.56
23:DB:1320:C:H5	23:DB:1329:U:H5"	1.71	0.56
23:DB:1709:U:H2'	23:DB:1710:G:H8	1.69	0.56
23:DB:2213:U:O2	23:DB:2213:U:C2'	2.54	0.56
23:DB:2600:A:O2'	23:DB:2601:C:H5'	2.06	0.56
25:DC:143:VAL:HB	25:DC:153:LEU:HB2	1.88	0.56
27:DE:137:LYS:HE2	27:DE:141:MET:SD	2.46	0.56
29:DG:8:VAL:HG11	29:DG:49:LEU:CB	2.34	0.56
35:DN:76:VAL:HA	35:DN:79:LEU:HD12	1.88	0.56
38:DQ:94:LEU:HD21	39:DR:11:GLN:HB2	1.87	0.56
41:DT:1:MET:HB2	41:DT:2:ILE:HD13	1.88	0.56
48:D1:35:LEU:O	48:D1:36:LYS:HB2	2.05	0.56
1:AA:41:G:H2'	1:AA:42:G:H8	1.71	0.56
1:AA:216:U:H2'	1:AA:217:C:C6	2.41	0.56
1:AA:465:A:O2'	1:AA:466:A:H5'	2.06	0.56
1:AA:501:C:H2'	1:AA:502:A:C8	2.41	0.56
1:AA:778:G:H2'	1:AA:779:C:H6	1.71	0.56
1:AA:811:C:H4'	1:AA:900:A:H62	1.72	0.56
1:AA:1343:G:H4'	8:AI:123:ARG:O	2.06	0.56
1:AA:1397:C:H4'	1:AA:1398:A:OP2	2.05	0.56
4:AE:92:ARG:HH11	4:AE:92:ARG:HB3	1.70	0.56
5:AF:15:SER:HA	5:AF:18:VAL:HG23	1.88	0.56
14:AO:28:VAL:HB	14:AO:80:LEU:HD11	1.88	0.56
18:AS:39:ILE:HB	18:AS:65:MET:O	2.06	0.56
20:AB:112:ARG:HA	20:AB:115:ASP:OD2	2.06	0.56
20:AB:199:ILE:HG21	20:AB:212:TYR:CE2	2.41	0.56
22:BA:91:C:H2'	22:BA:92:C:H6	1.71	0.56
23:BB:730:A:O2'	23:BB:731:C:H5'	2.06	0.56
23:BB:1021:A:H62	23:BB:1141:U:H3	1.54	0.56
23:BB:1086:A:H4'	23:BB:1103:A:N1	2.21	0.56
23:BB:2102:G:C2'	23:BB:2103:C:H5'	2.35	0.56
23:BB:2197:U:O2'	23:BB:2198:A:H2'	2.05	0.56
23:BB:2605:U:H2'	23:BB:2606:C:C6	2.41	0.56
23:BB:2849:U:H4'	23:BB:2850:A:H5'	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:89:ASN:O	25:BC:105:ALA:HB3	2.06	0.56
36:BO:47:VAL:HG12	36:BO:48:LEU:H	1.72	0.56
41:BT:38:ALA:HB3	41:BT:81:LYS:HZ1	1.69	0.56
52:BI:76:ALA:O	52:BI:80:LYS:HG3	2.05	0.56
1:CA:476:U:O2'	1:CA:477:C:H5'	2.06	0.56
1:CA:672:U:H2'	1:CA:673:A:C8	2.40	0.56
1:CA:738:C:H2'	1:CA:739:C:C6	2.41	0.56
1:CA:843:U:H5'	1:CA:844:G:N7	2.21	0.56
1:CA:1320:C:H5"	18:CS:2:ARG:NH2	2.20	0.56
1:CA:1430:A:H2'	1:CA:1431:A:O4'	2.06	0.56
5:CF:22:ILE:HD11	5:CF:60:VAL:HG11	1.88	0.56
6:CG:91:ARG:HD2	6:CG:91:ARG:N	2.19	0.56
19:CT:53:MET:HA	19:CT:56:ILE:HD12	1.88	0.56
21:CU:28:LEU:HD23	21:CU:29:ALA:N	2.20	0.56
23:DB:1397:U:H5"	23:DB:1398:C:H5	1.70	0.56
23:DB:2666:C:O4'	23:DB:2666:C:O2	2.20	0.56
23:DB:2860:A:H8	23:DB:2860:A:O5'	1.89	0.56
24:DV:80:HIS:HB3	24:DV:83:LYS:O	2.06	0.56
27:DE:18:THR:O	27:DE:110:SER:HB2	2.05	0.56
29:DG:74:MET:O	29:DG:78:VAL:HG22	2.06	0.56
33:DL:78:ARG:HG2	33:DL:113:ALA:CB	2.36	0.56
37:DP:88:ARG:HB2	37:DP:112:ARG:CZ	2.35	0.56
43:DW:24:ARG:HD3	43:DW:65:LYS:CG	2.35	0.56
45:DY:29:ARG:H	45:DY:33:HIS:HD2	1.54	0.56
52:DI:5:GLN:O	52:DI:6:ALA:HB3	2.05	0.56
1:AA:182:A:H1'	1:AA:183:C:C5	2.40	0.55
1:AA:189:A:H2'	1:AA:190:A:C8	2.41	0.55
1:AA:332:G:OP2	19:AT:4:LYS:HB2	2.06	0.55
5:AF:92:THR:HG22	5:AF:93:LYS:N	2.20	0.55
18:AS:6:LYS:O	18:AS:8:PRO:HD3	2.05	0.55
22:BA:3:C:H2'	22:BA:4:C:C6	2.41	0.55
23:BB:500:G:N2	23:BB:502:A:H3'	2.21	0.55
23:BB:1210:G:H5'	23:BB:1212:G:H5"	1.87	0.55
23:BB:1450:G:H21	23:BB:1452:G:H1	1.53	0.55
23:BB:2008:C:H2'	23:BB:2009:A:H8	1.71	0.55
23:BB:2092:U:H4'	23:BB:2093:G:H5"	1.88	0.55
23:BB:2186:G:H2'	23:BB:2187:U:C6	2.41	0.55
23:BB:2722:G:H2'	23:BB:2723:C:H6	1.71	0.55
28:BF:64:PRO:HA	28:BF:88:VAL:CG2	2.35	0.55
31:BJ:103:ILE:HA	31:BJ:106:LYS:HB3	1.88	0.55
37:BP:89:GLY:HA2	37:BP:111:GLU:C	2.26	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BW:59:PHE:CE2	43:BW:61:LYS:HG3	2.40	0.55
52:BI:17:ALA:O	52:BI:18:ASN:HB3	2.05	0.55
1:CA:434:U:H3'	1:CA:435:A:H8	1.71	0.55
1:CA:1504:G:H4'	1:CA:1505:G:C4	2.41	0.55
9:CJ:80:THR:HG21	9:CJ:82:LYS:NZ	2.21	0.55
17:CR:25:ILE:O	17:CR:29:LYS:HG3	2.05	0.55
20:CB:95:TRP:CH2	20:CB:100:LEU:HB2	2.40	0.55
23:DB:1163:G:H4'	39:DR:92:TRP:HE1	1.69	0.55
23:DB:2598:A:H5"	25:DC:233:GLY:HA2	1.87	0.55
23:DB:2836:U:H2'	23:DB:2837:A:C8	2.40	0.55
24:DV:4:ILE:O	24:DV:63:ILE:HA	2.06	0.55
24:DV:31:TYR:HA	24:DV:93:ARG:HH21	1.71	0.55
26:DD:29:VAL:O	26:DD:185:ASN:HB3	2.05	0.55
28:DF:177:ARG:HA	28:DF:177:ARG:NH1	2.21	0.55
30:DH:1:MET:HB3	30:DH:21:VAL:O	2.06	0.55
36:DO:62:LEU:HD11	36:DO:70:ALA:HA	1.88	0.55
40:DS:10:ALA:HB3	40:DS:101:SER:OG	2.06	0.55
43:DW:64:GLY:HA2	43:DW:84:GLU:HG2	1.86	0.55
1:AA:45:G:H2'	1:AA:46:G:C8	2.41	0.55
1:AA:490:C:H2'	1:AA:491:G:C8	2.41	0.55
1:AA:709:U:H2'	1:AA:710:G:H8	1.71	0.55
1:AA:778:G:H2'	1:AA:779:C:C6	2.41	0.55
2:AC:68:HIS:HA	2:AC:103:ALA:HB3	1.88	0.55
7:AH:11:THR:HA	7:AH:14:ARG:CZ	2.36	0.55
18:AS:41:PRO:HA	18:AS:66:VAL:HG11	1.88	0.55
19:AT:53:MET:O	19:AT:57:VAL:HG22	2.07	0.55
23:BB:948:C:H2'	23:BB:949:G:H8	1.71	0.55
23:BB:1205:A:N1	27:BE:165:HIS:HB2	2.20	0.55
23:BB:2698:U:H2'	23:BB:2699:C:C6	2.41	0.55
23:BB:2828:G:O2'	23:BB:2829:A:H5'	2.05	0.55
25:BC:105:ALA:HB1	25:BC:109:LEU:HD11	1.87	0.55
25:BC:250:GLN:HG2	25:BC:250:GLN:O	2.06	0.55
26:BD:116:LYS:HG3	26:BD:165:MET:SD	2.46	0.55
28:BF:37:MET:CG	28:BF:52:ALA:HB1	2.36	0.55
30:BH:122:LEU:HD12	30:BH:122:LEU:N	2.21	0.55
38:BQ:57:ARG:HH11	38:BQ:57:ARG:CB	2.19	0.55
38:BQ:63:ARG:NH1	38:BQ:96:ASP:HA	2.22	0.55
39:BR:28:ALA:O	39:BR:63:VAL:HG21	2.06	0.55
41:BT:13:ALA:O	41:BT:32:LEU:HB2	2.06	0.55
41:BT:69:ARG:CZ	41:BT:69:ARG:HA	2.36	0.55
1:CA:168:G:O2'	1:CA:169:C:H5'	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:555:U:H2'	1:CA:556:C:C6	2.42	0.55
1:CA:560:A:N1	1:CA:566:G:H5'	2.21	0.55
1:CA:663:A:O2'	1:CA:664:G:H5'	2.06	0.55
1:CA:1078:U:H2'	1:CA:1079:G:O4'	2.07	0.55
1:CA:1085:U:H3'	1:CA:1086:U:H5	1.70	0.55
1:CA:1118:U:H2'	1:CA:1119:C:H6	1.70	0.55
1:CA:1448:C:H2'	1:CA:1449:C:H6	1.71	0.55
3:CD:169:TRP:HB2	3:CD:183:ARG:O	2.06	0.55
12:CM:17:ALA:CB	12:CM:44:ILE:HD11	2.36	0.55
18:CS:52:ASN:CG	18:CS:53:GLY:H	2.09	0.55
20:CB:33:ALA:HA	20:CB:38:HIS:HA	1.87	0.55
22:DA:49:C:H2'	22:DA:50:A:H8	1.71	0.55
23:DB:299:A:N6	23:DB:322:A:O2'	2.39	0.55
23:DB:1386:C:H2'	23:DB:1387:A:H8	1.71	0.55
23:DB:1458:U:H2'	23:DB:1459:G:H5"	1.88	0.55
23:DB:2450:A:O2'	23:DB:2451:A:H5'	2.06	0.55
23:DB:2788:C:H2'	23:DB:2789:C:C6	2.40	0.55
24:DV:65:VAL:C	24:DV:67:GLY:H	2.09	0.55
25:DC:86:ARG:CZ	25:DC:86:ARG:HB3	2.36	0.55
28:DF:106:ALA:HA	28:DF:135:ILE:HD13	1.89	0.55
29:DG:10:VAL:HG12	29:DG:10:VAL:O	2.05	0.55
32:DK:11:ALA:HB3	32:DK:85:VAL:HG22	1.88	0.55
40:DS:6:LYS:HB2	40:DS:103:ILE:O	2.06	0.55
42:DU:21:ARG:HH11	42:DU:21:ARG:HG3	1.71	0.55
50:D3:55:GLY:HA2	50:D3:58:ILE:HD12	1.89	0.55
52:DI:45:THR:CA	52:DI:48:ILE:HG22	2.35	0.55
1:AA:77:A:OP1	1:AA:88:U:H5"	2.06	0.55
1:AA:546:A:OP1	3:AD:69:ARG:HB2	2.07	0.55
1:AA:1021:A:H2'	1:AA:1022:A:O4'	2.06	0.55
9:AJ:40:ILE:HD12	9:AJ:73:LEU:HD12	1.88	0.55
11:AL:13:ARG:O	11:AL:14:LYS:HB3	2.06	0.55
23:BB:2539:C:O2'	23:BB:2540:C:H5'	2.07	0.55
23:BB:2636:C:O2'	23:BB:2637:U:H5'	2.05	0.55
23:BB:2659:G:N2	23:BB:2661:G:H5"	2.22	0.55
23:BB:2795:C:H2'	23:BB:2796:U:O4'	2.07	0.55
23:BB:2901:C:H2'	23:BB:2902:C:H5'	1.88	0.55
25:BC:226:PRO:CG	25:BC:233:GLY:H	2.18	0.55
28:BF:31:GLU:O	28:BF:32:LYS:O	2.24	0.55
33:BL:122:VAL:HG12	33:BL:143:GLU:OE2	2.07	0.55
34:BM:35:ALA:HB3	34:BM:99:GLY:N	2.20	0.55
37:BP:1:SER:O	37:BP:5:LYS:HB2	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:B4:2:LYS:HG2	51:B4:3:VAL:N	2.20	0.55
51:B4:8:LYS:HG2	51:B4:9:LYS:H	1.71	0.55
1:CA:562:U:H1'	11:CL:11:ARG:HD2	1.87	0.55
1:CA:1121:U:H2'	1:CA:1122:U:O4'	2.07	0.55
1:CA:1123:U:O2'	1:CA:1124:G:H5'	2.07	0.55
10:CK:30:ILE:HG22	10:CK:45:THR:OG1	2.07	0.55
14:CO:63:ARG:HH12	14:CO:87:ARG:HH22	1.54	0.55
23:DB:289:G:H2'	23:DB:290:U:C6	2.40	0.55
23:DB:920:A:H2'	23:DB:921:C:C6	2.41	0.55
23:DB:2756:U:H4'	23:DB:2757:A:OP1	2.06	0.55
25:DC:43:ASN:HB3	25:DC:45:ASN:ND2	2.21	0.55
27:DE:12:LEU:HD12	27:DE:14:VAL:HG22	1.87	0.55
27:DE:147:LEU:HD12	27:DE:149:ILE:HB	1.87	0.55
28:DF:42:ALA:HA	28:DF:48:LEU:CD2	2.33	0.55
30:DH:135:HIS:CG	30:DH:136:SER:N	2.73	0.55
32:DK:107:LEU:HB2	32:DK:116:ILE:CG2	2.37	0.55
41:DT:54:GLU:HG3	41:DT:90:GLY:N	2.21	0.55
1:AA:33:A:H2'	1:AA:34:C:C6	2.41	0.55
1:AA:168:G:O2'	1:AA:169:C:H5'	2.06	0.55
1:AA:484:G:H5'	1:AA:486:U:H5'	1.87	0.55
1:AA:590:U:H2'	1:AA:591:U:H6	1.72	0.55
1:AA:692:U:O2	1:AA:694:A:H5"	2.07	0.55
1:AA:742:G:H2'	1:AA:743:A:H8	1.71	0.55
1:AA:1246:A:H2'	1:AA:1247:U:O4'	2.05	0.55
1:AA:1432:G:H1'	1:AA:1468:A:H61	1.70	0.55
2:AC:16:PRO:CG	2:AC:53:ARG:HH12	2.20	0.55
18:AS:52:ASN:CG	18:AS:53:GLY:H	2.08	0.55
23:BB:845:A:N1	23:BB:847:U:H1'	2.21	0.55
23:BB:1947:C:H2'	23:BB:1948:G:C8	2.42	0.55
23:BB:1969:A:H2'	23:BB:1972:G:H21	1.71	0.55
23:BB:2037:A:H2'	23:BB:2038:G:H8	1.70	0.55
23:BB:2285:C:OP2	48:B1:5:ARG:HD3	2.06	0.55
23:BB:2466:C:OP1	51:B4:4:ARG:HB3	2.07	0.55
23:BB:2592:G:H2'	23:BB:2593:U:O4'	2.06	0.55
23:BB:2788:C:H2'	23:BB:2789:C:C6	2.41	0.55
28:BF:28:PRO:HG3	28:BF:159:ALA:HB2	1.87	0.55
28:BF:78:ILE:HA	28:BF:82:TYR:CE1	2.42	0.55
42:BU:35:VAL:HB	42:BU:38:ILE:HG21	1.87	0.55
42:BU:85:ARG:NE	42:BU:85:ARG:HA	2.22	0.55
43:BW:18:LYS:N	43:BW:35:ILE:HG23	2.21	0.55
52:BI:109:ALA:HB1	52:BI:124:MET:HG3	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:470:C:H2'	1:CA:471:U:C6	2.41	0.55
1:CA:625:U:H4'	15:CP:16:PHE:CZ	2.42	0.55
1:CA:1397:C:H4'	1:CA:1398:A:OP2	2.05	0.55
2:CC:39:ARG:HG3	2:CC:56:ILE:HD11	1.88	0.55
3:CD:55:ARG:HH11	3:CD:55:ARG:HG3	1.72	0.55
12:CM:33:LEU:HD13	12:CM:39:ALA:O	2.06	0.55
19:CT:72:ALA:HA	19:CT:75:LYS:HD3	1.89	0.55
23:DB:558:U:OP1	31:DJ:114:LEU:HB2	2.06	0.55
23:DB:572:A:C2	23:DB:2033:A:C2	2.94	0.55
23:DB:870:U:O2'	23:DB:871:U:H5'	2.06	0.55
23:DB:936:A:H2'	23:DB:937:C:C6	2.42	0.55
23:DB:2015:A:C2	47:D0:2:VAL:HG22	2.42	0.55
23:DB:2313:C:H4'	28:DF:87:LYS:HB3	1.87	0.55
32:DK:79:PHE:HD2	37:DP:69:VAL:HG12	1.72	0.55
37:DP:4:ILE:HG22	37:DP:5:LYS:N	2.15	0.55
38:DQ:79:ILE:O	38:DQ:79:ILE:HD13	2.06	0.55
52:DI:17:ALA:O	52:DI:18:ASN:CB	2.53	0.55
1:AA:179:A:H2'	1:AA:180:U:C6	2.41	0.55
1:AA:1320:C:H42	18:AS:35:ARG:HD3	1.70	0.55
2:AC:6:PRO:HA	2:AC:9:ILE:HG22	1.87	0.55
12:AM:18:LEU:HB2	12:AM:29:SER:OG	2.06	0.55
12:AM:86:ARG:HA	12:AM:96:VAL:HG11	1.88	0.55
20:AB:80:LYS:HG3	20:AB:81:ASP:H	1.71	0.55
20:AB:95:TRP:CH2	20:AB:100:LEU:HB2	2.41	0.55
23:BB:161:A:C3'	23:BB:162:U:H5"	2.37	0.55
23:BB:729:G:C8	25:BC:206:LYS:HE3	2.42	0.55
23:BB:870:U:O2'	23:BB:871:U:H5'	2.05	0.55
23:BB:1407:G:H2'	23:BB:1408:G:C8	2.40	0.55
23:BB:1771:C:H2'	23:BB:1772:A:H8	1.70	0.55
23:BB:1979:U:O2'	23:BB:1980:G:H5'	2.07	0.55
23:BB:2097:A:H2'	23:BB:2098:U:C6	2.41	0.55
23:BB:2149:U:H2'	23:BB:2150:C:H6	1.71	0.55
23:BB:2185:U:C2	23:BB:2186:G:N7	2.74	0.55
23:BB:2271:G:H2'	23:BB:2272:U:C6	2.41	0.55
23:BB:2772:C:H4'	26:BD:171:THR:HG21	1.89	0.55
25:BC:4:LYS:HD2	25:BC:5:CYS:H	1.71	0.55
26:BD:62:LYS:HB2	26:BD:63:PRO:HD3	1.88	0.55
30:BH:1:MET:HB3	30:BH:21:VAL:O	2.07	0.55
42:BU:64:ILE:HG13	42:BU:65:GLN:N	2.21	0.55
42:BU:94:PHE:HA	42:BU:101:THR:HA	1.89	0.55
45:BY:6:ILE:N	45:BY:35:VAL:O	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BZ:40:VAL:HG22	46:BZ:45:ARG:O	2.07	0.55
48:B1:26:LYS:HD2	48:B1:30:PRO:HA	1.89	0.55
48:B1:35:LEU:O	48:B1:36:LYS:HB2	2.06	0.55
1:CA:858:G:O6	1:CA:869:G:H3'	2.07	0.55
1:CA:1127:G:H5'	1:CA:1280:A:O2'	2.06	0.55
3:CD:77:GLU:O	3:CD:81:LEU:HG	2.06	0.55
6:CG:78:ARG:NH1	6:CG:81:GLY:H	2.04	0.55
8:CI:6:TYR:HB2	8:CI:19:PHE:CE1	2.42	0.55
8:CI:49:GLN:N	8:CI:50:PRO:HD2	2.21	0.55
8:CI:113:LYS:HA	8:CI:120:ALA:HB2	1.89	0.55
11:CL:13:ARG:O	11:CL:14:LYS:HB3	2.06	0.55
16:CQ:83:LEU:H	16:CQ:83:LEU:HD13	1.71	0.55
18:CS:29:PRO:HA	18:CS:47:THR:O	2.05	0.55
23:DB:6:A:O2'	23:DB:7:G:H5'	2.06	0.55
23:DB:45:G:H5'	23:DB:46:G:OP1	2.07	0.55
23:DB:138:U:H2'	23:DB:140:C:O4'	2.06	0.55
23:DB:635:C:O2'	23:DB:639:U:H5"	2.06	0.55
23:DB:919:U:H2'	23:DB:920:A:H8	1.69	0.55
23:DB:1013:C:H2'	23:DB:1014:A:C8	2.40	0.55
23:DB:1064:C:H5'	52:DI:88:GLY:HA3	1.89	0.55
23:DB:1838:C:N4	23:DB:1898:U:H2'	2.21	0.55
23:DB:1842:G:H2'	23:DB:1843:C:C6	2.41	0.55
23:DB:2024:G:O2'	23:DB:2025:C:H5'	2.07	0.55
23:DB:2340:A:H2'	23:DB:2341:G:C8	2.41	0.55
23:DB:2415:G:H2'	23:DB:2416:C:H6	1.72	0.55
23:DB:2516:A:O2'	23:DB:2517:C:H5'	2.07	0.55
23:DB:2816:G:O3'	35:DN:99:LYS:HE3	2.06	0.55
23:DB:2836:U:H2'	23:DB:2837:A:H8	1.71	0.55
27:DE:110:SER:O	27:DE:114:ARG:HG3	2.07	0.55
28:DF:7:TYR:HA	28:DF:11:VAL:CG2	2.36	0.55
29:DG:25:ILE:HD13	29:DG:74:MET:HE2	1.88	0.55
29:DG:115:GLN:CD	29:DG:115:GLN:H	2.10	0.55
30:DH:53:GLU:HA	30:DH:57:LYS:HB3	1.89	0.55
41:DT:7:LEU:HD13	41:DT:7:LEU:O	2.07	0.55
46:DZ:66:THR:O	46:DZ:69:ALA:HB3	2.06	0.55
51:D4:3:VAL:HG23	51:D4:4:ARG:H	1.72	0.55
1:AA:34:C:H2'	1:AA:35:G:C8	2.42	0.55
1:AA:1085:U:H3'	1:AA:1086:U:H5	1.72	0.55
8:AI:49:GLN:N	8:AI:50:PRO:HD2	2.22	0.55
13:AN:5:MET:HE3	13:AN:60:ARG:HH11	1.70	0.55
15:AP:38:PHE:CD2	15:AP:51:ARG:HB2	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:441:U:H2'	23:BB:442:G:C8	2.41	0.55
23:BB:664:G:H2'	23:BB:665:U:H6	1.70	0.55
23:BB:833:A:H2'	23:BB:834:G:C8	2.42	0.55
23:BB:871:U:H2'	23:BB:872:U:C6	2.40	0.55
23:BB:997:G:O2'	23:BB:998:C:H5'	2.07	0.55
23:BB:1820:U:OP1	25:BC:176:ARG:HD2	2.06	0.55
23:BB:1841:U:H2'	23:BB:1842:G:H8	1.72	0.55
23:BB:2080:A:H4'	46:BZ:19:SER:OG	2.06	0.55
24:BV:24:ASN:HB3	24:BV:44:HIS:HB3	1.89	0.55
24:BV:31:TYR:HA	24:BV:93:ARG:HH21	1.71	0.55
27:BE:166:LYS:O	27:BE:167:VAL:HB	2.06	0.55
28:BF:7:TYR:HA	28:BF:11:VAL:CG2	2.37	0.55
35:BN:49:GLU:HB2	35:BN:50:PRO:HD3	1.89	0.55
42:BU:80:ASP:HB2	42:BU:95:PHE:HD2	1.72	0.55
44:BX:41:HIS:O	44:BX:44:LYS:HB3	2.07	0.55
1:CA:252:U:H2'	1:CA:253:A:C8	2.42	0.55
1:CA:284:C:H2'	1:CA:285:C:H6	1.71	0.55
1:CA:393:A:O2'	1:CA:394:G:H5'	2.06	0.55
1:CA:784:A:H2'	1:CA:785:G:C8	2.42	0.55
7:CH:31:LEU:O	7:CH:35:ILE:HG13	2.06	0.55
8:CI:55:ASP:CB	8:CI:59:LYS:HG3	2.36	0.55
23:DB:132:G:H2'	23:DB:133:U:H6	1.70	0.55
23:DB:296:U:H2'	23:DB:297:G:H8	1.72	0.55
23:DB:394:C:H2'	23:DB:395:U:O4'	2.07	0.55
23:DB:704:G:H1'	23:DB:727:A:H61	1.72	0.55
23:DB:782:A:N7	25:DC:219:VAL:HG21	2.21	0.55
23:DB:1139:G:O2'	23:DB:1140:C:H5'	2.06	0.55
23:DB:1335:C:H2'	23:DB:1336:A:C8	2.42	0.55
23:DB:2101:A:O2'	23:DB:2102:G:H5'	2.07	0.55
23:DB:2665:A:H2'	23:DB:2666:C:O2	2.06	0.55
29:DG:24:THR:HA	29:DG:33:THR:O	2.07	0.55
29:DG:30:GLY:HA3	29:DG:78:VAL:HA	1.87	0.55
33:DL:3:LEU:HA	33:DL:6:LEU:HD21	1.88	0.55
36:DO:107:ALA:O	36:DO:111:ARG:HG3	2.07	0.55
39:DR:3:ALA:O	39:DR:13:ARG:HA	2.07	0.55
39:DR:62:GLU:O	39:DR:96:VAL:HA	2.06	0.55
42:DU:90:LYS:HB3	42:DU:92:VAL:HG23	1.87	0.55
52:DI:125:THR:O	52:DI:129:GLU:HG3	2.07	0.55
1:AA:430:A:OP1	3:AD:8:LEU:HB2	2.06	0.55
1:AA:620:C:O2	3:AD:131:ILE:HG21	2.07	0.55
1:AA:845:A:H3'	1:AA:846:G:H8	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1226:C:H4'	1:AA:1227:A:OP1	2.06	0.55
2:AC:2:GLN:H	2:AC:2:GLN:HE21	1.55	0.55
2:AC:171:ARG:HB2	2:AC:171:ARG:NH1	2.22	0.55
4:AE:158:LYS:NZ	7:AH:63:LYS:HD3	2.22	0.55
5:AF:69:GLU:OE1	5:AF:70:VAL:HG13	2.07	0.55
6:AG:4:ARG:HG3	6:AG:5:VAL:N	2.18	0.55
13:AN:60:ARG:HD3	13:AN:62:ARG:CZ	2.37	0.55
22:BA:11:C:H5'	43:BW:71:LYS:HG3	1.86	0.55
23:BB:6:A:O2'	23:BB:7:G:H5'	2.06	0.55
23:BB:441:U:H2'	23:BB:442:G:H8	1.72	0.55
23:BB:917:A:H2'	23:BB:918:A:O4'	2.06	0.55
23:BB:936:A:H2'	23:BB:937:C:C6	2.42	0.55
23:BB:2021:C:P	47:B0:8:THR:HG21	2.47	0.55
23:BB:2364:C:H2'	23:BB:2365:G:O4'	2.06	0.55
23:BB:2678:C:H2'	23:BB:2679:A:C8	2.42	0.55
25:BC:5:CYS:HB2	25:BC:15:VAL:O	2.06	0.55
27:BE:12:LEU:HD12	27:BE:14:VAL:HG22	1.88	0.55
28:BF:126:ASN:HB3	28:BF:156:THR:CA	2.36	0.55
30:BH:99:ILE:HG13	30:BH:130:VAL:HG11	1.89	0.55
38:BQ:86:SER:O	39:BR:51:VAL:HA	2.06	0.55
38:BQ:94:LEU:CD2	39:BR:11:GLN:HB2	2.37	0.55
41:BT:69:ARG:HB2	41:BT:75:GLY:N	2.22	0.55
1:CA:34:C:H2'	1:CA:35:G:C8	2.42	0.55
1:CA:1226:C:H4'	1:CA:1227:A:OP1	2.06	0.55
2:CC:68:HIS:HA	2:CC:103:ALA:HB3	1.88	0.55
3:CD:29:THR:HB	3:CD:30:LYS:HZ3	1.71	0.55
4:CE:18:ASN:HB2	4:CE:33:THR:OG1	2.07	0.55
4:CE:19:ARG:NH1	4:CE:28:ARG:HH22	2.04	0.55
4:CE:23:THR:HA	4:CE:28:ARG:HA	1.88	0.55
6:CG:129:ASN:ND2	6:CG:137:ARG:HH22	2.04	0.55
10:CK:34:THR:HB	10:CK:40:ALA:HA	1.87	0.55
13:CN:20:PHE:C	13:CN:22:LYS:H	2.10	0.55
14:CO:78:THR:HA	14:CO:81:ILE:HD12	1.87	0.55
14:CO:80:LEU:HD21	14:CO:84:LEU:HD22	1.89	0.55
16:CQ:83:LEU:HD22	16:CQ:83:LEU:N	2.21	0.55
23:DB:228:C:O2	23:DB:418:C:H4'	2.06	0.55
23:DB:660:C:H2'	23:DB:661:A:C8	2.41	0.55
23:DB:1351:C:O2'	23:DB:1571:A:H1'	2.07	0.55
23:DB:1731:G:O2'	23:DB:1732:C:H5"	2.06	0.55
23:DB:1774:C:H2'	23:DB:1774:C:O2	2.06	0.55
23:DB:2008:C:H2'	23:DB:2009:A:C8	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2648:G:H2'	23:DB:2649:C:C6	2.41	0.55
23:DB:2674:G:H4'	32:DK:30:ARG:HG3	1.88	0.55
23:DB:2678:C:H2'	23:DB:2679:A:C8	2.42	0.55
23:DB:2863:C:O2'	23:DB:2864:G:H5'	2.07	0.55
25:DC:130:PRO:HG2	25:DC:133:ASN:ND2	2.22	0.55
29:DG:39:ALA:C	29:DG:54:ARG:HB2	2.27	0.55
32:DK:53:LYS:HD3	32:DK:56:ASP:OD2	2.07	0.55
38:DQ:63:ARG:NH1	38:DQ:96:ASP:HA	2.20	0.55
38:DQ:71:ASN:HD22	38:DQ:73:ILE:HG22	1.70	0.55
40:DS:24:ILE:CD1	40:DS:36:LEU:HD21	2.36	0.55
45:DY:6:ILE:N	45:DY:35:VAL:O	2.38	0.55
52:DI:71:LYS:HB3	52:DI:115:ASP:OD2	2.06	0.55
1:AA:16:A:O2'	1:AA:17:U:H5'	2.07	0.55
1:AA:137:U:H2'	1:AA:138:G:C8	2.42	0.55
1:AA:642:A:H2'	1:AA:643:C:H6	1.72	0.55
1:AA:692:U:C2	1:AA:694:A:H5"	2.42	0.55
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.87	0.55
1:AA:1006:G:H2'	1:AA:1007:U:H6	1.71	0.55
1:AA:1438:G:O2'	1:AA:1439:G:H5'	2.06	0.55
1:AA:1448:C:H2'	1:AA:1449:C:C6	2.42	0.55
3:AD:29:THR:HG22	3:AD:30:LYS:N	2.22	0.55
6:AG:78:ARG:HG2	6:AG:83:THR:HG22	1.88	0.55
7:AH:76:ARG:HG3	7:AH:77:VAL:N	2.21	0.55
13:AN:11:LYS:HZ3	13:AN:11:LYS:N	2.05	0.55
13:AN:60:ARG:NE	13:AN:62:ARG:HG2	2.21	0.55
15:AP:59:HIS:O	15:AP:63:GLN:HG3	2.07	0.55
16:AQ:7:LEU:O	16:AQ:60:ILE:HD13	2.06	0.55
18:AS:62:THR:H	18:AS:65:MET:HB2	1.71	0.55
20:AB:53:LEU:HD11	20:AB:216:VAL:HA	1.88	0.55
23:BB:416:U:H2'	23:BB:417:C:C6	2.42	0.55
23:BB:616:A:H4'	27:BE:101:TYR:CE2	2.42	0.55
23:BB:1021:A:H61	23:BB:1142:A:H61	1.55	0.55
23:BB:1152:C:O2'	23:BB:1153:C:H5'	2.07	0.55
23:BB:1210:G:N3	23:BB:1212:G:N2	2.55	0.55
23:BB:1260:A:H2'	23:BB:1261:C:H6	1.70	0.55
23:BB:1549:A:H2'	23:BB:1550:C:H6	1.70	0.55
23:BB:2537:U:H2'	23:BB:2538:C:C6	2.42	0.55
23:BB:2868:A:H2'	23:BB:2869:G:C8	2.42	0.55
27:BE:110:SER:O	27:BE:114:ARG:HG3	2.07	0.55
27:BE:149:ILE:O	27:BE:188:MET:HA	2.07	0.55
29:BG:74:MET:O	29:BG:78:VAL:HG22	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BG:83:THR:HA	29:BG:84:LYS:NZ	2.22	0.55
29:BG:85:LYS:HB2	29:BG:164:ALA:CB	2.37	0.55
33:BL:78:ARG:HG2	33:BL:113:ALA:HB2	1.88	0.55
33:BL:135:ILE:HG12	33:BL:140:GLY:CA	2.36	0.55
38:BQ:26:ALA:HB1	38:BQ:30:VAL:HB	1.88	0.55
38:BQ:74:SER:OG	38:BQ:77:LYS:HD3	2.06	0.55
38:BQ:94:LEU:C	38:BQ:96:ASP:H	2.09	0.55
40:BS:83:LYS:HB3	40:BS:95:ARG:NH1	2.21	0.55
42:BU:17:ASP:HB3	42:BU:20:LYS:HE3	1.88	0.55
43:BW:37:VAL:HG12	43:BW:38:ARG:N	2.22	0.55
47:B0:52:LYS:NZ	47:B0:56:LYS:H	2.05	0.55
50:B3:7:ARG:HH11	50:B3:7:ARG:HG3	1.71	0.55
52:BI:14:ALA:HB1	52:BI:50:LYS:HA	1.88	0.55
1:CA:845:A:H3'	1:CA:846:G:H8	1.71	0.55
11:CL:3:VAL:O	11:CL:7:VAL:HG23	2.07	0.55
20:CB:122:ASP:OD2	20:CB:125:PHE:HB2	2.07	0.55
21:CU:3:ILE:HD13	21:CU:19:LYS:HA	1.89	0.55
23:DB:438:G:H2'	23:DB:439:A:H8	1.72	0.55
23:DB:1230:A:H2'	23:DB:1231:U:C6	2.42	0.55
23:DB:2714:G:O2'	23:DB:2715:C:H5'	2.05	0.55
23:DB:2720:U:H2'	23:DB:2721:A:C8	2.42	0.55
25:DC:75:ALA:CB	25:DC:95:TYR:HA	2.37	0.55
34:DM:21:ALA:HB2	34:DM:100:LYS:HG2	1.88	0.55
43:DW:18:LYS:N	43:DW:35:ILE:HG23	2.22	0.55
1:AA:230:G:H2'	1:AA:231:U:O4'	2.07	0.55
1:AA:747:A:H2'	1:AA:748:G:O4'	2.07	0.55
1:AA:858:G:O6	1:AA:869:G:H3'	2.07	0.55
1:AA:1004:A:C8	1:AA:1025:U:H1'	2.42	0.55
1:AA:1147:C:H2'	1:AA:1148:U:C6	2.42	0.55
1:AA:1332:A:H2'	1:AA:1333:A:C8	2.42	0.55
3:AD:24:VAL:HG13	3:AD:160:LEU:HB3	1.87	0.55
4:AE:148:SER:OG	4:AE:151:MET:HB2	2.07	0.55
8:AI:46:VAL:O	8:AI:79:ARG:HG3	2.06	0.55
11:AL:41:PRO:HB3	11:AL:49:ARG:NH1	2.22	0.55
19:AT:53:MET:HA	19:AT:56:ILE:HD12	1.89	0.55
20:AB:33:ALA:HA	20:AB:38:HIS:HA	1.87	0.55
20:AB:205:ALA:HB3	20:AB:208:ALA:CB	2.37	0.55
23:BB:83:A:C6	23:BB:101:A:H5'	2.42	0.55
23:BB:782:A:N3	25:BC:224:MET:HB3	2.21	0.55
23:BB:909:A:H2'	23:BB:912:C:H5	1.71	0.55
23:BB:1714:U:H3'	23:BB:1715:G:C5'	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1831:G:H2'	23:BB:1832:C:C6	2.42	0.55
24:BV:9:ARG:CZ	24:BV:20:LEU:HD11	2.37	0.55
25:BC:145:MET:HB2	25:BC:152:GLN:NE2	2.21	0.55
30:BH:73:ASN:HD22	30:BH:73:ASN:N	2.04	0.55
31:BJ:89:PHE:CE1	31:BJ:93:ILE:HD13	2.40	0.55
52:BI:5:GLN:HG2	52:BI:6:ALA:N	2.22	0.55
52:BI:10:LEU:O	52:BI:10:LEU:HD12	2.06	0.55
1:CA:189:A:H2'	1:CA:190:A:C8	2.41	0.55
1:CA:522:C:H2'	1:CA:523:A:O4'	2.07	0.55
1:CA:782:A:H2'	1:CA:783:C:O4'	2.06	0.55
3:CD:2:ARG:HH22	3:CD:132:ALA:HB3	1.72	0.55
6:CG:72:VAL:HG12	6:CG:89:GLU:HA	1.88	0.55
18:CS:63:ASP:O	18:CS:66:VAL:HG22	2.07	0.55
21:CU:3:ILE:HD12	21:CU:3:ILE:N	2.21	0.55
21:CU:39:LYS:N	21:CU:40:PRO:HD2	2.21	0.55
22:DA:14:U:H5'	22:DA:70:C:O2'	2.07	0.55
23:DB:496:G:H1'	40:DS:61:ASN:HD21	1.71	0.55
23:DB:2037:A:H2'	23:DB:2038:G:H8	1.71	0.55
23:DB:2106:U:H2'	23:DB:2107:G:H8	1.72	0.55
23:DB:2216:G:H2'	23:DB:2217:G:H8	1.72	0.55
23:DB:2247:A:H3'	56:DB:3580:HOH:O	2.06	0.55
23:DB:2547:A:H2'	23:DB:2548:U:C6	2.42	0.55
23:DB:2704:C:H2'	23:DB:2705:A:O4'	2.07	0.55
23:DB:2803:G:H2'	23:DB:2804:U:H6	1.72	0.55
24:DV:80:HIS:HD2	24:DV:82:TYR:H	1.54	0.55
25:DC:43:ASN:HB3	25:DC:45:ASN:HD22	1.71	0.55
25:DC:105:ALA:HB1	25:DC:109:LEU:HD11	1.87	0.55
27:DE:29:HIS:HA	27:DE:32:VAL:HG22	1.89	0.55
30:DH:94:ILE:HG22	30:DH:122:LEU:HB3	1.88	0.55
30:DH:131:SER:OG	30:DH:132:PHE:N	2.40	0.55
31:DJ:55:ILE:CB	31:DJ:123:LYS:HB2	2.37	0.55
34:DM:35:ALA:HB2	34:DM:100:LYS:HB2	1.89	0.55
39:DR:39:LEU:HA	39:DR:49:ILE:HG12	1.89	0.55
39:DR:68:ARG:NH2	39:DR:90:ARG:HG2	2.22	0.55
41:DT:69:ARG:HB2	41:DT:75:GLY:N	2.22	0.55
44:DX:23:ARG:HA	44:DX:27:ASN:ND2	2.21	0.55
46:DZ:5:CYS:HB2	46:DZ:10:LYS:HB2	1.89	0.55
48:D1:26:LYS:HD2	48:D1:30:PRO:HA	1.89	0.55
52:DI:129:GLU:HB3	52:DI:133:ARG:HH12	1.71	0.55
1:AA:80:A:N3	1:AA:81:A:H1'	2.22	0.55
1:AA:153:C:H2'	1:AA:154:U:C6	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:235:C:H2'	1:AA:236:A:H8	1.69	0.55
1:AA:474:G:H2'	1:AA:475:C:H6	1.72	0.55
1:AA:1349:A:H2'	1:AA:1350:A:O4'	2.07	0.55
2:AC:142:ARG:HH21	2:AC:143:LEU:HD21	1.72	0.55
9:AJ:53:ILE:CG2	9:AJ:61:ALA:HB1	2.37	0.55
23:BB:126:A:O5'	49:B2:19:ARG:HB2	2.07	0.55
23:BB:132:G:H2'	23:BB:133:U:C6	2.41	0.55
23:BB:417:C:H2'	23:BB:418:C:H6	1.71	0.55
23:BB:438:G:H2'	23:BB:439:A:H8	1.72	0.55
23:BB:699:A:H4'	23:BB:1634:A:N7	2.22	0.55
23:BB:812:C:H4'	38:BQ:12:ARG:NH2	2.22	0.55
23:BB:1133:A:H5'	23:BB:1134:A:OP1	2.07	0.55
23:BB:1709:U:H2'	23:BB:1710:G:C8	2.42	0.55
28:BF:106:ALA:HA	28:BF:135:ILE:CD1	2.37	0.55
28:BF:134:GLN:C	28:BF:136:ILE:H	2.11	0.55
29:BG:25:ILE:HG22	29:BG:78:VAL:HG21	1.88	0.55
29:BG:34:ARG:HG2	29:BG:34:ARG:NH1	2.21	0.55
29:BG:84:LYS:HG3	29:BG:132:LEU:N	2.21	0.55
31:BJ:4:PHE:CG	31:BJ:5:THR:N	2.75	0.55
40:BS:6:LYS:HB2	40:BS:103:ILE:O	2.07	0.55
46:BZ:20:HIS:O	46:BZ:21:ALA:HB3	2.07	0.55
1:CA:17:U:O2'	1:CA:18:C:H5'	2.06	0.55
1:CA:484:G:H5'	1:CA:486:U:H5'	1.88	0.55
1:CA:674:G:H2'	1:CA:675:A:C8	2.38	0.55
1:CA:709:U:H2'	1:CA:710:G:C8	2.41	0.55
1:CA:736:C:H2'	1:CA:737:C:C6	2.42	0.55
12:CM:18:LEU:HB2	12:CM:29:SER:OG	2.05	0.55
18:CS:24:SER:HB2	18:CS:27:LYS:HE3	1.88	0.55
20:CB:75:ALA:O	20:CB:79:VAL:HG23	2.07	0.55
22:DA:49:C:H2'	22:DA:50:A:C8	2.42	0.55
23:DB:189:G:H2'	23:DB:205:G:H22	1.72	0.55
23:DB:596:U:H2'	23:DB:597:G:H8	1.72	0.55
23:DB:638:G:H2'	23:DB:639:U:C6	2.42	0.55
23:DB:1098:A:C2'	52:DI:4:VAL:N	2.70	0.55
23:DB:1495:A:O2'	23:DB:1496:A:H5'	2.07	0.55
23:DB:1508:A:H5'	23:DB:1509:A:C6	2.42	0.55
23:DB:1553:A:O2'	23:DB:1554:U:H2'	2.06	0.55
23:DB:2455:G:H2'	23:DB:2456:C:C6	2.42	0.55
23:DB:2579:C:HO2'	26:DD:136:ASN:HA	1.72	0.55
26:DD:8:LYS:HG2	26:DD:197:THR:H	1.72	0.55
28:DF:134:GLN:C	28:DF:136:ILE:H	2.10	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DG:8:VAL:CG1	29:DG:49:LEU:HB3	2.32	0.55
29:DG:85:LYS:HB2	29:DG:164:ALA:CB	2.36	0.55
33:DL:41:ARG:HG2	33:DL:41:ARG:HH21	1.73	0.55
33:DL:91:ASP:OD1	33:DL:92:LEU:HG	2.07	0.55
34:DM:67:VAL:HG11	34:DM:102:LEU:HD22	1.88	0.55
34:DM:126:ILE:HD12	34:DM:126:ILE:N	2.22	0.55
40:DS:95:ARG:HG3	40:DS:97:LEU:HD13	1.89	0.55
42:DU:66:VAL:O	42:DU:69:VAL:HG22	2.07	0.55
43:DW:31:LEU:N	43:DW:60:ALA:HB3	2.22	0.55
46:DZ:41:GLU:O	46:DZ:44:LYS:HD2	2.06	0.55
1:AA:474:G:H2'	1:AA:475:C:C6	2.42	0.54
1:AA:777:A:H2'	1:AA:778:G:H8	1.72	0.54
3:AD:24:VAL:CG1	3:AD:160:LEU:HB3	2.37	0.54
3:AD:90:LEU:HD11	3:AD:194:ILE:CD1	2.37	0.54
7:AH:123:GLU:HG2	7:AH:124:ILE:O	2.07	0.54
9:AJ:93:ALA:HB3	9:AJ:96:VAL:HG22	1.89	0.54
12:AM:89:ARG:HB3	12:AM:96:VAL:HG22	1.90	0.54
16:AQ:37:ILE:HG22	16:AQ:38:LYS:H	1.70	0.54
23:BB:418:C:H2'	23:BB:419:U:C6	2.42	0.54
23:BB:971:G:H2'	23:BB:972:A:O4'	2.07	0.54
23:BB:1438:U:H2'	23:BB:1439:A:O4'	2.08	0.54
23:BB:1570:A:H2'	23:BB:1571:A:C8	2.42	0.54
23:BB:2135:A:C2	23:BB:2136:G:H1'	2.42	0.54
27:BE:173:THR:HA	27:BE:199:MET:HE1	1.88	0.54
30:BH:128:HIS:O	30:BH:143:ILE:HA	2.07	0.54
34:BM:60:GLN:H	34:BM:60:GLN:HE21	1.51	0.54
40:BS:18:ARG:HB3	40:BS:76:VAL:CG2	2.37	0.54
48:B1:39:ASP:OD1	48:B1:42:VAL:HG23	2.08	0.54
1:CA:41:G:H2'	1:CA:42:G:H8	1.72	0.54
3:CD:24:VAL:CG1	3:CD:160:LEU:HB3	2.37	0.54
9:CJ:40:ILE:HB	9:CJ:73:LEU:HB3	1.89	0.54
10:CK:83:VAL:HB	10:CK:109:ILE:HG23	1.90	0.54
20:CB:172:ILE:HD12	20:CB:172:ILE:H	1.71	0.54
23:DB:321:U:OP2	27:DE:130:LYS:HA	2.07	0.54
23:DB:823:C:O2'	23:DB:824:U:H5'	2.07	0.54
23:DB:1197:G:H2'	23:DB:1198:U:H6	1.72	0.54
23:DB:1198:U:H2'	23:DB:1199:U:H6	1.72	0.54
23:DB:1531:C:H2'	23:DB:1532:A:C8	2.42	0.54
23:DB:2828:G:O2'	23:DB:2829:A:H5'	2.08	0.54
25:DC:209:ALA:O	25:DC:213:ARG:HB2	2.07	0.54
28:DF:78:ILE:HD12	28:DF:78:ILE:N	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DG:34:ARG:HG2	29:DG:34:ARG:NH1	2.21	0.54
31:DJ:45:THR:OG1	31:DJ:48:VAL:HB	2.07	0.54
33:DL:111:ILE:HG22	33:DL:112:LEU:N	2.22	0.54
39:DR:14:VAL:CG2	39:DR:15:SER:H	2.16	0.54
40:DS:96:ILE:HG23	40:DS:96:ILE:O	2.06	0.54
1:AA:251:G:H1	1:AA:271:C:H41	1.53	0.54
8:AI:18:VAL:HA	8:AI:64:ILE:HG13	1.88	0.54
8:AI:22:PRO:HA	8:AI:60:LEU:HB2	1.87	0.54
13:AN:20:PHE:C	13:AN:22:LYS:H	2.10	0.54
15:AP:25:ARG:HD3	15:AP:25:ARG:N	2.22	0.54
19:AT:54:GLN:N	19:AT:55:PRO:HD2	2.22	0.54
23:BB:513:A:H8	23:BB:513:A:O5'	1.91	0.54
23:BB:566:U:H5"	33:BL:29:LYS:NZ	2.22	0.54
23:BB:1930:G:H2'	23:BB:1968:G:H1	1.71	0.54
23:BB:2196:C:O2'	23:BB:2197:U:H5'	2.07	0.54
25:BC:77:VAL:CG2	25:BC:113:ASP:H	2.19	0.54
25:BC:78:GLU:HB2	25:BC:92:LEU:HD23	1.89	0.54
25:BC:209:ALA:O	25:BC:213:ARG:HB2	2.07	0.54
27:BE:188:MET:HE2	27:BE:193:VAL:HG22	1.89	0.54
32:BK:8:LEU:HD12	32:BK:8:LEU:N	2.22	0.54
33:BL:4:ASN:N	33:BL:4:ASN:HD22	2.04	0.54
33:BL:42:SER:C	33:BL:44:GLY:H	2.10	0.54
34:BM:17:ASN:HD21	34:BM:95:LEU:HG	1.72	0.54
35:BN:29:VAL:O	35:BN:78:LYS:HE3	2.07	0.54
37:BP:88:ARG:HB2	37:BP:112:ARG:CZ	2.37	0.54
39:BR:79:ARG:CD	39:BR:80:ARG:HH21	2.20	0.54
42:BU:80:ASP:HB3	42:BU:96:LYS:N	2.08	0.54
52:BI:52:LEU:HD21	52:BI:81:LYS:HZ2	1.72	0.54
1:CA:17:U:H4'	1:CA:1079:G:O2'	2.08	0.54
1:CA:490:C:H2'	1:CA:491:G:C8	2.42	0.54
1:CA:734:G:H21	17:CR:63:TYR:HE1	1.54	0.54
1:CA:1053:G:HO2'	1:CA:1199:U:H5	1.55	0.54
1:CA:1275:A:H2'	1:CA:1276:G:O4'	2.07	0.54
1:CA:1317:C:OP1	13:CN:56:PRO:HD2	2.06	0.54
2:CC:156:LEU:HD11	2:CC:165:GLU:HB2	1.89	0.54
4:CE:73:VAL:HB	4:CE:75:LEU:HD21	1.88	0.54
12:CM:17:ALA:HB2	12:CM:44:ILE:HD11	1.89	0.54
20:CB:13:VAL:HG11	20:CB:207:ARG:HG2	1.87	0.54
23:DB:226:A:H1'	23:DB:230:G:N2	2.22	0.54
23:DB:856:G:H2'	23:DB:857:G:C8	2.41	0.54
23:DB:1441:G:H2'	23:DB:1442:U:C6	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1925:C:C2'	23:DB:1926:U:H5"	2.34	0.54
23:DB:2741:A:H2'	23:DB:2742:G:O4'	2.06	0.54
23:DB:2772:C:H2'	23:DB:2773:C:C6	2.42	0.54
23:DB:2840:C:H2'	23:DB:2841:C:H6	1.72	0.54
23:DB:2861:U:H2'	23:DB:2862:G:C8	2.42	0.54
25:DC:250:GLN:HG2	25:DC:250:GLN:O	2.06	0.54
26:DD:62:LYS:HB2	26:DD:63:PRO:HD3	1.89	0.54
27:DE:21:ARG:HG3	27:DE:22:ASP:N	2.21	0.54
28:DF:56:LEU:HD22	28:DF:59:ILE:HD12	1.88	0.54
29:DG:36:LEU:N	29:DG:36:LEU:HD22	2.22	0.54
34:DM:17:ASN:HD21	34:DM:95:LEU:HG	1.71	0.54
36:DO:100:HIS:HA	36:DO:104:GLN:HE21	1.71	0.54
37:DP:7:LEU:HA	37:DP:10:GLU:HG2	1.88	0.54
38:DQ:91:ARG:HB2	39:DR:11:GLN:OE1	2.07	0.54
46:DZ:6:GLN:NE2	46:DZ:50:ARG:N	2.54	0.54
46:DZ:7:VAL:HG21	46:DZ:59:ILE:CD1	2.37	0.54
1:AA:31:G:H5'	1:AA:306:A:C2	2.42	0.54
1:AA:343:U:O2'	1:AA:344:A:H2'	2.07	0.54
1:AA:555:U:H2'	1:AA:556:C:C6	2.42	0.54
1:AA:1166:G:H2'	1:AA:1168:U:OP2	2.07	0.54
1:AA:1524:C:H2'	1:AA:1525:G:C8	2.42	0.54
12:AM:33:LEU:HD13	12:AM:39:ALA:O	2.07	0.54
12:AM:50:GLY:O	12:AM:54:THR:HG23	2.08	0.54
22:BA:30:C:O2	22:BA:30:C:H2'	2.07	0.54
23:BB:154:U:H2'	23:BB:155:A:H8	1.72	0.54
23:BB:528:A:C2	23:BB:2043:C:H4'	2.42	0.54
23:BB:753:A:H2'	23:BB:754:U:H6	1.70	0.54
23:BB:934:U:H2'	23:BB:935:C:C6	2.42	0.54
23:BB:1168:G:H2'	23:BB:1169:A:H8	1.72	0.54
23:BB:2547:A:H2'	23:BB:2548:U:C6	2.43	0.54
23:BB:2665:A:H2'	23:BB:2666:C:O2	2.07	0.54
23:BB:2741:A:H2'	23:BB:2742:G:O4'	2.08	0.54
23:BB:2746:U:H5'	29:BG:138:GLN:HA	1.89	0.54
24:BV:72:VAL:HG21	24:BV:91:PHE:CB	2.37	0.54
26:BD:13:ARG:HH12	37:BP:74:GLN:NE2	2.06	0.54
29:BG:24:THR:HA	29:BG:33:THR:O	2.08	0.54
30:BH:83:LYS:HD2	30:BH:91:PHE:CG	2.43	0.54
32:BK:15:GLY:HA2	32:BK:46:ALA:HA	1.89	0.54
35:BN:97:ILE:HD12	35:BN:98:LEU:N	2.20	0.54
37:BP:20:ARG:HB3	37:BP:23:ASP:CG	2.28	0.54
40:BS:24:ILE:HG23	40:BS:32:ALA:HB1	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:B1:33:LEU:HB3	48:B1:51:ALA:CB	2.36	0.54
1:CA:179:A:H2'	1:CA:180:U:C6	2.42	0.54
1:CA:272:C:H2'	1:CA:273:U:C6	2.42	0.54
1:CA:596:A:H2'	1:CA:597:G:H8	1.73	0.54
1:CA:1261:A:H1'	1:CA:1275:A:C2	2.43	0.54
1:CA:1326:U:H2'	1:CA:1327:C:H6	1.72	0.54
1:CA:1477:U:H2'	1:CA:1478:U:C6	2.42	0.54
4:CE:56:PRO:HG2	4:CE:57:ALA:H	1.71	0.54
7:CH:123:GLU:HG2	7:CH:124:ILE:O	2.07	0.54
10:CK:22:ILE:HD12	10:CK:84:MET:O	2.07	0.54
13:CN:5:MET:HE3	13:CN:60:ARG:HH11	1.72	0.54
13:CN:60:ARG:HD3	13:CN:62:ARG:NH2	2.22	0.54
17:CR:58:ILE:H	17:CR:58:ILE:HD12	1.72	0.54
23:DB:416:U:H2'	23:DB:417:C:C6	2.42	0.54
23:DB:692:C:H2'	23:DB:693:A:H8	1.72	0.54
23:DB:2784:U:H2'	23:DB:2785:C:H6	1.72	0.54
24:DV:42:LEU:HD11	24:DV:89:ILE:HD11	1.88	0.54
38:DQ:78:PHE:O	38:DQ:82:LEU:HG	2.06	0.54
39:DR:8:GLY:HA3	39:DR:23:GLU:HB2	1.88	0.54
44:DX:6:LEU:C	44:DX:8:GLU:H	2.10	0.54
48:D1:25:ASN:OD1	48:D1:27:ARG:HB2	2.07	0.54
52:DI:2:LYS:HB3	52:DI:2:LYS:NZ	2.22	0.54
1:AA:5:U:H4'	1:AA:6:G:H5'	1.90	0.54
1:AA:90:C:H2'	1:AA:91:U:H5	1.72	0.54
1:AA:224:U:H2'	1:AA:225:C:H6	1.71	0.54
1:AA:384:G:H2'	1:AA:385:C:H6	1.73	0.54
1:AA:499:A:H4'	1:AA:500:G:OP1	2.07	0.54
1:AA:1446:A:H2'	1:AA:1447:A:H5"	1.89	0.54
1:AA:1450:U:H2'	1:AA:1452:C:C5	2.42	0.54
2:AC:31:ASN:ND2	2:AC:58:ARG:HE	2.05	0.54
20:AB:75:ALA:O	20:AB:79:VAL:HG23	2.07	0.54
23:BB:642:U:O2	23:BB:644:A:H3'	2.07	0.54
23:BB:674:G:H1'	27:BE:69:ARG:HE	1.73	0.54
23:BB:927:A:H2'	23:BB:928:A:C8	2.43	0.54
23:BB:1476:U:H4'	23:BB:1732:C:O2'	2.08	0.54
23:BB:2186:G:H2'	23:BB:2187:U:H6	1.73	0.54
23:BB:2852:G:H2'	23:BB:2853:C:H6	1.69	0.54
27:BE:161:ALA:HA	27:BE:164:LEU:HD12	1.89	0.54
28:BF:72:SER:CA	28:BF:80:GLN:H	2.21	0.54
29:BG:132:LEU:HD23	29:BG:132:LEU:N	2.22	0.54
30:BH:69:ALA:O	30:BH:140:ALA:HB2	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BH:130:VAL:C	30:BH:142:VAL:HB	2.27	0.54
35:BN:98:LEU:HG	47:B0:42:ILE:HD11	1.89	0.54
36:BO:111:ARG:HD2	36:BO:117:PHE:O	2.07	0.54
39:BR:68:ARG:NH2	39:BR:90:ARG:HG2	2.22	0.54
39:BR:79:ARG:NE	39:BR:80:ARG:HH21	2.05	0.54
44:BX:6:LEU:C	44:BX:8:GLU:H	2.11	0.54
46:BZ:18:ARG:HG3	46:BZ:22:LEU:HA	1.88	0.54
46:BZ:41:GLU:O	46:BZ:44:LYS:HD2	2.07	0.54
52:BI:112:LYS:O	52:BI:116:MET:HG3	2.07	0.54
1:CA:190:A:H2'	1:CA:191:G:O4'	2.08	0.54
1:CA:437:U:H4'	3:CD:153:ARG:NH1	2.21	0.54
1:CA:552:U:O2'	1:CA:553:A:H5'	2.07	0.54
1:CA:1525:G:O2'	1:CA:1526:G:H5'	2.07	0.54
3:CD:72:ARG:HD3	3:CD:203:TYR:CZ	2.42	0.54
10:CK:124:LYS:CA	21:CU:34:ARG:HB3	2.36	0.54
20:CB:199:ILE:HG21	20:CB:212:TYR:CE2	2.42	0.54
23:DB:285:G:H2'	23:DB:286:U:O4'	2.08	0.54
23:DB:997:G:O2'	23:DB:998:C:H5'	2.07	0.54
23:DB:1268:A:H2'	23:DB:1269:A:O4'	2.07	0.54
23:DB:1657:U:O2'	26:DD:138:LEU:HD12	2.07	0.54
23:DB:2083:G:H2'	23:DB:2084:C:H6	1.71	0.54
23:DB:2333:A:H4'	23:DB:2334:U:C5'	2.37	0.54
23:DB:2615:U:C2	47:D0:3:GLN:HA	2.43	0.54
24:DV:35:GLU:OE1	24:DV:93:ARG:HD3	2.07	0.54
25:DC:77:VAL:CG2	25:DC:113:ASP:H	2.20	0.54
25:DC:129:LEU:HD23	25:DC:130:PRO:CD	2.35	0.54
28:DF:62:GLN:HG3	28:DF:91:ARG:HH11	1.72	0.54
31:DJ:4:PHE:CG	31:DJ:5:THR:N	2.76	0.54
32:DK:71:ARG:CG	32:DK:105:ARG:HH21	2.21	0.54
41:DT:76:ARG:HH21	41:DT:77:ARG:HB2	1.72	0.54
46:DZ:63:GLY:O	46:DZ:67:VAL:HG23	2.07	0.54
48:D1:3:GLY:O	48:D1:4:ILE:HG12	2.07	0.54
48:D1:39:ASP:OD1	48:D1:42:VAL:HG23	2.07	0.54
52:DI:1:ALA:CB	52:DI:2:LYS:HD2	2.38	0.54
52:DI:49:GLU:CB	52:DI:52:LEU:HD12	2.38	0.54
1:AA:1275:A:H2'	1:AA:1276:G:O4'	2.07	0.54
2:AC:39:ARG:HG3	2:AC:56:ILE:HD11	1.90	0.54
5:AF:22:ILE:HD11	5:AF:60:VAL:HG11	1.90	0.54
8:AI:20:ILE:HD12	8:AI:20:ILE:N	2.22	0.54
10:AK:17:ASP:C	10:AK:36:ARG:HH12	2.11	0.54
11:AL:98:ARG:HB2	11:AL:116:TYR:HA	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:638:G:H2'	23:BB:639:U:C6	2.41	0.54
23:BB:784:G:C6	25:BC:227:VAL:HG11	2.42	0.54
23:BB:1230:A:H2'	23:BB:1231:U:C6	2.42	0.54
23:BB:1319:C:O2'	23:BB:1320:C:H5'	2.08	0.54
23:BB:2074:U:H2'	23:BB:2075:U:C6	2.42	0.54
23:BB:2199:A:H3'	23:BB:2200:C:H6	1.72	0.54
23:BB:2346:A:H3'	23:BB:2347:C:H5"	1.87	0.54
23:BB:2412:A:H2'	23:BB:2413:G:O4'	2.07	0.54
26:BD:165:MET:HG2	26:BD:166:GLY:N	2.23	0.54
29:BG:8:VAL:CG1	29:BG:49:LEU:HB3	2.34	0.54
29:BG:122:ALA:HA	29:BG:132:LEU:HA	1.90	0.54
31:BJ:64:VAL:HG22	31:BJ:68:LYS:HD3	1.90	0.54
32:BK:105:ARG:HD2	32:BK:122:VAL:CG1	2.37	0.54
37:BP:103:THR:HG22	37:BP:104:GLY:H	1.72	0.54
47:B0:5:ASN:O	47:B0:7:PRO:HD3	2.08	0.54
50:B3:55:GLY:HA2	50:B3:58:ILE:HD12	1.90	0.54
51:B4:10:LEU:HD22	51:B4:33:HIS:CD2	2.42	0.54
1:CA:1062:U:H2'	1:CA:1063:C:C6	2.41	0.54
1:CA:1081:A:OP1	4:CE:22:LYS:HB2	2.06	0.54
1:CA:1147:C:H2'	1:CA:1148:U:C6	2.42	0.54
1:CA:1314:C:H3'	18:CS:5:LYS:NZ	2.23	0.54
11:CL:7:VAL:HG22	16:CQ:33:TYR:CD1	2.42	0.54
14:CO:28:VAL:HB	14:CO:80:LEU:HD11	1.88	0.54
15:CP:6:LEU:HB3	15:CP:17:TYR:HB3	1.89	0.54
18:CS:41:PRO:HA	18:CS:66:VAL:HG11	1.89	0.54
23:DB:115:C:O2'	23:DB:116:C:H5'	2.08	0.54
23:DB:497:A:H2'	23:DB:498:G:O4'	2.07	0.54
23:DB:528:A:N1	23:DB:2042:A:H2'	2.21	0.54
23:DB:927:A:H2'	23:DB:928:A:C8	2.43	0.54
23:DB:931:U:H3	23:DB:1166:G:N2	2.06	0.54
23:DB:936:A:H2'	23:DB:937:C:H6	1.72	0.54
23:DB:1880:U:H2'	23:DB:1881:C:C6	2.42	0.54
23:DB:2364:C:H2'	23:DB:2365:G:O4'	2.07	0.54
23:DB:2722:G:H2'	23:DB:2723:C:H6	1.73	0.54
27:DE:1:MET:O	27:DE:13:THR:HA	2.07	0.54
28:DF:102:LEU:O	28:DF:103:ILE:HB	2.07	0.54
32:DK:60:ALA:HB2	32:DK:86:LEU:HA	1.90	0.54
35:DN:49:GLU:HB2	35:DN:50:PRO:HD3	1.88	0.54
45:DY:37:ARG:HG3	45:DY:38:GLU:OE1	2.08	0.54
1:AA:194:C:O2'	1:AA:195:A:H5'	2.07	0.54
1:AA:389:A:H2'	1:AA:389:A:N3	2.23	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1014:A:H4'	18:AS:13:HIS:CE1	2.42	0.54
1:AA:1118:U:H2'	1:AA:1119:C:H6	1.69	0.54
1:AA:1324:A:H2'	1:AA:1325:C:O4'	2.08	0.54
1:AA:1437:A:H2'	1:AA:1438:G:C8	2.43	0.54
3:AD:84:ASN:ND2	3:AD:86:GLY:H	2.05	0.54
4:AE:19:ARG:NH1	4:AE:28:ARG:HH22	2.05	0.54
6:AG:78:ARG:HD2	6:AG:78:ARG:C	2.28	0.54
11:AL:20:VAL:O	11:AL:20:VAL:HG23	2.08	0.54
20:AB:172:ILE:H	20:AB:172:ILE:HD12	1.71	0.54
22:BA:43:C:C4'	28:BF:91:ARG:HD2	2.38	0.54
23:BB:138:U:C5	23:BB:140:C:H1'	2.43	0.54
23:BB:545:U:H2'	23:BB:547:A:OP1	2.08	0.54
23:BB:635:C:O2'	23:BB:639:U:H5"	2.08	0.54
23:BB:1164:C:H2'	23:BB:1165:A:H8	1.71	0.54
23:BB:1168:G:H2'	23:BB:1169:A:C8	2.43	0.54
23:BB:1335:C:H2'	23:BB:1336:A:H8	1.72	0.54
23:BB:1401:G:H2'	23:BB:1402:U:C6	2.42	0.54
23:BB:1857:G:O2'	23:BB:1858:A:H8	1.91	0.54
23:BB:2354:C:H4'	43:BW:31:LEU:HD23	1.90	0.54
23:BB:2570:G:H2'	23:BB:2571:U:O4'	2.08	0.54
23:BB:2751:G:H5'	29:BG:2:ARG:CD	2.37	0.54
23:BB:2808:G:HO2'	23:BB:2809:A:H8	1.55	0.54
23:BB:2819:G:H2'	23:BB:2821:A:N7	2.23	0.54
25:BC:12:ARG:HA	25:BC:15:VAL:HG23	1.89	0.54
25:BC:57:HIS:ND1	25:BC:58:LYS:N	2.56	0.54
26:BD:114:LYS:HB2	26:BD:116:LYS:HE3	1.89	0.54
28:BF:78:ILE:HD12	28:BF:78:ILE:N	2.22	0.54
29:BG:17:LYS:O	29:BG:23:ILE:HG23	2.08	0.54
36:BO:100:HIS:HA	36:BO:104:GLN:HE21	1.72	0.54
39:BR:31:GLU:H	39:BR:63:VAL:CG2	2.20	0.54
40:BS:41:LYS:NZ	40:BS:41:LYS:HB3	2.23	0.54
48:B1:3:GLY:C	48:B1:5:ARG:H	2.11	0.54
1:CA:265:G:H2'	1:CA:267:C:H5	1.72	0.54
1:CA:817:C:H1'	1:CA:819:A:C5'	2.35	0.54
1:CA:968:A:C8	1:CA:1062:U:H4'	2.42	0.54
1:CA:1171:A:H2'	1:CA:1172:C:C6	2.42	0.54
1:CA:1332:A:H2'	1:CA:1333:A:H8	1.72	0.54
10:CK:27:ASN:O	10:CK:56:LYS:HE3	2.08	0.54
22:DA:43:C:C4'	28:DF:91:ARG:HD2	2.38	0.54
23:DB:67:U:H2'	23:DB:68:G:H8	1.72	0.54
23:DB:794:A:H2'	23:DB:795:C:C6	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:794:A:H2'	23:DB:795:C:H6	1.72	0.54
23:DB:1081:U:H5'	52:DI:126:ARG:NH1	2.22	0.54
23:DB:1820:U:OP1	25:DC:176:ARG:HD2	2.07	0.54
25:DC:89:ASN:O	25:DC:105:ALA:HB3	2.07	0.54
25:DC:93:VAL:HG12	25:DC:101:ARG:O	2.07	0.54
25:DC:122:ALA:O	25:DC:123:ILE:C	2.46	0.54
26:DD:178:VAL:O	26:DD:180:VAL:HG23	2.08	0.54
29:DG:26:LYS:HG2	29:DG:27:GLY:N	2.23	0.54
36:DO:47:VAL:HG12	36:DO:48:LEU:H	1.72	0.54
40:DS:83:LYS:HB3	40:DS:95:ARG:NH1	2.22	0.54
41:DT:13:ALA:O	41:DT:32:LEU:HB2	2.07	0.54
50:D3:7:ARG:O	50:D3:11:LYS:HG3	2.08	0.54
52:DI:79:LEU:HD11	52:DI:131:THR:OG1	2.07	0.54
1:AA:95:C:H2'	1:AA:96:U:H6	1.73	0.54
1:AA:501:C:H2'	1:AA:502:A:H8	1.73	0.54
1:AA:1017:U:H2'	1:AA:1018:G:C8	2.42	0.54
1:AA:1349:A:OP1	8:AI:121:ARG:HB2	2.08	0.54
1:AA:1441:A:C2	37:BP:113:LEU:HD13	2.43	0.54
1:AA:1512:U:H2'	1:AA:1513:A:C8	2.43	0.54
5:AF:70:VAL:HA	5:AF:73:GLU:HG3	1.89	0.54
7:AH:94:VAL:CG2	7:AH:101:ALA:HB2	2.37	0.54
8:AI:18:VAL:HG13	8:AI:64:ILE:HG13	1.88	0.54
9:AJ:52:LEU:HB2	13:AN:80:ARG:HE	1.73	0.54
18:AS:38:THR:HG22	18:AS:68:HIS:O	2.08	0.54
19:AT:65:LEU:HG	19:AT:66:ILE:HD13	1.90	0.54
21:AU:35:GLU:HB2	21:AU:37:TYR:CZ	2.43	0.54
22:BA:13:G:H2'	22:BA:14:U:H5"	1.89	0.54
23:BB:497:A:H2'	23:BB:498:G:O4'	2.07	0.54
23:BB:854:C:O2'	23:BB:855:G:H5'	2.08	0.54
23:BB:1013:C:H2'	23:BB:1014:A:C8	2.42	0.54
23:BB:1076:C:H4'	52:BI:94:LYS:HE3	1.88	0.54
23:BB:1320:C:C5	23:BB:1329:U:H5"	2.42	0.54
23:BB:2008:C:H2'	23:BB:2009:A:C8	2.43	0.54
23:BB:2543:G:H5'	23:BB:2543:G:H8	1.73	0.54
23:BB:2722:G:H4'	35:BN:4:ARG:HB2	1.90	0.54
23:BB:2803:G:H2'	23:BB:2804:U:C6	2.42	0.54
24:BV:1:MET:O	24:BV:62:THR:HG23	2.08	0.54
25:BC:122:ALA:O	25:BC:123:ILE:C	2.46	0.54
26:BD:121:THR:C	26:BD:123:LYS:H	2.11	0.54
26:BD:175:LEU:HD21	26:BD:191:GLY:O	2.07	0.54
27:BE:18:THR:O	27:BE:110:SER:HB2	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BM:2:LEU:HD23	34:BM:46:ILE:HD11	1.90	0.54
37:BP:103:THR:HG22	37:BP:104:GLY:N	2.23	0.54
1:CA:8:A:H61	3:CD:53:GLN:HE22	1.56	0.54
1:CA:79:G:H2'	1:CA:80:A:C8	2.42	0.54
1:CA:678:U:H4'	1:CA:778:G:OP1	2.07	0.54
1:CA:715:A:H2'	1:CA:716:A:C8	2.43	0.54
1:CA:961:U:O4'	1:CA:961:U:O2	2.26	0.54
6:CG:129:ASN:HA	6:CG:134:VAL:HG21	1.90	0.54
8:CI:126:PHE:O	8:CI:128:LYS:N	2.41	0.54
22:DA:50:A:OP1	36:DO:68:LYS:HG3	2.06	0.54
22:DA:88:C:H1'	22:DA:89:U:C6	2.43	0.54
23:DB:265:A:O2'	23:DB:266:G:H4'	2.08	0.54
23:DB:345:A:N3	23:DB:346:A:N1	2.56	0.54
23:DB:1347:A:H2'	23:DB:1348:C:O4'	2.08	0.54
23:DB:1425:G:H2'	23:DB:1426:G:C8	2.43	0.54
23:DB:2360:G:H4'	33:DL:61:LEU:HD11	1.89	0.54
28:DF:31:GLU:O	28:DF:32:LYS:O	2.24	0.54
30:DH:133:GLN:HB3	30:DH:139:PHE:HB3	1.90	0.54
32:DK:15:GLY:HA2	32:DK:46:ALA:HA	1.88	0.54
32:DK:109:SER:C	32:DK:111:LYS:H	2.11	0.54
33:DL:65:GLY:O	33:DL:66:PHE:HB3	2.08	0.54
34:DM:126:ILE:HD12	34:DM:126:ILE:H	1.73	0.54
35:DN:99:LYS:HB2	47:D0:41:HIS:HB3	1.88	0.54
38:DQ:4:LYS:HE3	38:DQ:8:ILE:HD11	1.90	0.54
51:D4:10:LEU:HD13	51:D4:33:HIS:HA	1.90	0.54
1:AA:443:C:H2'	1:AA:444:G:C8	2.43	0.54
1:AA:562:U:H1'	11:AL:11:ARG:HD2	1.90	0.54
1:AA:565:U:H3'	1:AA:566:G:H2'	1.90	0.54
1:AA:1261:A:H1'	1:AA:1275:A:C2	2.43	0.54
1:AA:1262:C:H2'	1:AA:1263:C:C6	2.43	0.54
4:AE:152:VAL:O	4:AE:156:ARG:HG2	2.08	0.54
4:AE:156:ARG:HB2	7:AH:43:GLY:HA3	1.90	0.54
13:AN:20:PHE:HB2	13:AN:54:SER:OG	2.07	0.54
15:AP:6:LEU:HB3	15:AP:17:TYR:HB3	1.89	0.54
23:BB:278:A:N3	23:BB:278:A:H2'	2.23	0.54
23:BB:917:A:C2	23:BB:918:A:H1'	2.43	0.54
23:BB:1100:C:H2'	23:BB:1101:U:H6	1.72	0.54
23:BB:1242:U:H2'	23:BB:1243:C:C6	2.42	0.54
23:BB:1259:G:H2'	23:BB:1260:A:H8	1.72	0.54
23:BB:1565:C:H5"	25:BC:17:LYS:HE2	1.90	0.54
23:BB:1604:C:H5"	56:BB:3373:HOH:O	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1796:U:H2'	23:BB:1797:G:C8	2.42	0.54
23:BB:1828:G:O6	25:BC:220:ARG:HD2	2.08	0.54
23:BB:2101:A:H2'	23:BB:2102:G:H5"	1.90	0.54
23:BB:2408:U:O2'	23:BB:2409:G:H5'	2.08	0.54
23:BB:2875:C:H2'	23:BB:2876:G:H8	1.72	0.54
29:BG:30:GLY:CA	29:BG:78:VAL:HA	2.38	0.54
33:BL:58:TYR:HB2	50:B3:9:ALA:HA	1.90	0.54
33:BL:91:ASP:OD1	33:BL:92:LEU:HG	2.07	0.54
36:BO:30:ARG:HG3	36:BO:30:ARG:HH11	1.72	0.54
42:BU:41:VAL:HG22	42:BU:60:LYS:O	2.08	0.54
52:BI:91:LYS:HB2	52:BI:94:LYS:HD2	1.87	0.54
1:CA:238:A:C2'	1:CA:239:U:H5"	2.38	0.54
1:CA:642:A:H2'	1:CA:643:C:H6	1.73	0.54
1:CA:762:U:H2'	1:CA:763:G:C8	2.43	0.54
1:CA:811:C:H4'	1:CA:900:A:H62	1.73	0.54
1:CA:1246:A:H2'	1:CA:1247:U:O4'	2.08	0.54
1:CA:1300:G:H1'	1:CA:1301:U:H5	1.73	0.54
1:CA:1326:U:H2'	1:CA:1327:C:C6	2.43	0.54
2:CC:18:ASN:OD1	2:CC:53:ARG:HD2	2.07	0.54
4:CE:19:ARG:HH11	4:CE:28:ARG:HH22	1.56	0.54
4:CE:92:ARG:HH11	4:CE:92:ARG:HB3	1.73	0.54
6:CG:72:VAL:HA	6:CG:89:GLU:HA	1.89	0.54
6:CG:78:ARG:HD2	6:CG:78:ARG:C	2.28	0.54
7:CH:13:ILE:HD11	7:CH:60:LEU:HD21	1.89	0.54
7:CH:94:VAL:CG2	7:CH:101:ALA:HB2	2.37	0.54
10:CK:14:GLN:HA	10:CK:77:GLY:HA3	1.89	0.54
17:CR:35:SER:O	17:CR:70:THR:HA	2.08	0.54
21:CU:35:GLU:HB2	21:CU:37:TYR:CE2	2.42	0.54
23:DB:307:G:N2	23:DB:309:A:H3'	2.23	0.54
23:DB:308:G:H2'	23:DB:309:A:O4'	2.08	0.54
23:DB:587:C:O2'	33:DL:19:LEU:HD13	2.08	0.54
23:DB:744:U:H2'	23:DB:745:G:O4'	2.08	0.54
23:DB:1491:G:H5'	25:DC:97:ASP:OD1	2.08	0.54
23:DB:2487:G:H2'	23:DB:2488:G:C8	2.42	0.54
23:DB:2605:U:H2'	23:DB:2606:C:C6	2.43	0.54
23:DB:2679:A:O2'	23:DB:2680:U:H5'	2.08	0.54
25:DC:57:HIS:ND1	25:DC:58:LYS:N	2.55	0.54
26:DD:175:LEU:HD21	26:DD:191:GLY:O	2.08	0.54
28:DF:169:LEU:HB3	28:DF:174:PHE:CD1	2.42	0.54
30:DH:65:ALA:O	30:DH:68:ARG:HB2	2.08	0.54
31:DJ:18:VAL:HG12	31:DJ:54:ILE:HD11	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DN:29:VAL:O	35:DN:78:LYS:HE3	2.08	0.54
42:DU:48:VAL:O	42:DU:50:ALA:N	2.41	0.54
42:DU:70:ALA:HB1	42:DU:79:ALA:HB2	1.90	0.54
43:DW:49:ASN:HA	43:DW:61:LYS:HB2	1.88	0.54
1:AA:268:U:H2'	1:AA:269:C:C6	2.42	0.54
1:AA:844:G:H2'	1:AA:846:G:C8	2.43	0.54
1:AA:1124:G:H4'	9:AJ:40:ILE:HG12	1.89	0.54
1:AA:1492:A:H5'	1:AA:1493:A:OP2	2.08	0.54
3:AD:100:VAL:O	3:AD:104:MET:HG3	2.08	0.54
4:AE:140:ILE:HG22	4:AE:144:GLU:OE1	2.07	0.54
6:AG:2:ARG:HG2	6:AG:3:ARG:HD3	1.90	0.54
6:AG:13:PRO:O	6:AG:14:ASP:O	2.26	0.54
11:AL:52:CYS:SG	11:AL:66:ILE:HD11	2.48	0.54
15:AP:40:ASN:HD21	15:AP:42:ILE:C	2.11	0.54
23:BB:475:C:H4'	23:BB:509:C:H2'	1.90	0.54
23:BB:946:C:H2'	23:BB:947:A:C8	2.43	0.54
23:BB:1219:U:H2'	23:BB:1220:G:C8	2.42	0.54
23:BB:1283:G:N2	23:BB:1285:A:H3'	2.23	0.54
23:BB:1779:U:C5	23:BB:1784:A:N7	2.76	0.54
23:BB:2460:U:H2'	23:BB:2461:A:H8	1.73	0.54
26:BD:12:THR:HG22	26:BD:13:ARG:H	1.71	0.54
27:BE:46:GLN:HB3	27:BE:86:ALA:HA	1.90	0.54
29:BG:26:LYS:CA	29:BG:32:LEU:H	2.17	0.54
29:BG:36:LEU:HD22	29:BG:36:LEU:N	2.22	0.54
31:BJ:3:THR:HG21	38:BQ:60:TRP:HE1	1.73	0.54
31:BJ:36:LEU:HD13	31:BJ:121:LYS:HE3	1.90	0.54
33:BL:47:ARG:HB3	33:BL:47:ARG:HH21	1.73	0.54
38:BQ:111:LYS:HZ2	38:BQ:111:LYS:HB2	1.73	0.54
40:BS:95:ARG:HG3	40:BS:97:LEU:HD13	1.90	0.54
44:BX:56:LEU:O	44:BX:57:LEU:HB3	2.06	0.54
1:CA:692:U:C2	1:CA:694:A:H5"	2.42	0.54
1:CA:692:U:O2	1:CA:694:A:H5"	2.07	0.54
1:CA:1278:G:H4'	1:CA:1279:G:H5'	1.89	0.54
1:CA:1384:C:H2'	1:CA:1385:G:H8	1.72	0.54
1:CA:1464:U:H2'	1:CA:1465:A:H8	1.73	0.54
7:CH:11:THR:HA	7:CH:14:ARG:CZ	2.38	0.54
10:CK:124:LYS:HA	21:CU:34:ARG:HG2	1.89	0.54
11:CL:2:THR:HG22	11:CL:5:GLN:NE2	2.23	0.54
13:CN:14:ALA:O	13:CN:18:LYS:HG2	2.07	0.54
19:CT:54:GLN:N	19:CT:55:PRO:HD2	2.23	0.54
20:CB:101:THR:HA	20:CB:178:LEU:HD21	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:45:G:C5'	23:DB:46:G:H5'	2.37	0.54
23:DB:303:G:H2'	23:DB:304:U:C6	2.43	0.54
23:DB:2538:C:O2'	23:DB:2539:C:H5'	2.08	0.54
23:DB:2698:U:H2'	23:DB:2699:C:C6	2.42	0.54
24:DV:9:ARG:NH2	24:DV:12:GLN:HA	2.21	0.54
26:DD:51:THR:HG21	26:DD:76:GLY:HA3	1.90	0.54
27:DE:166:LYS:O	27:DE:167:VAL:HB	2.07	0.54
29:DG:146:ASP:O	29:DG:150:TYR:HD1	1.91	0.54
30:DH:53:GLU:CA	30:DH:57:LYS:HB3	2.38	0.54
31:DJ:44:TYR:CE2	38:DQ:59:LEU:HD11	2.43	0.54
35:DN:81:ASN:O	35:DN:85:PRO:HD2	2.08	0.54
38:DQ:68:ALA:HA	38:DQ:71:ASN:HB3	1.89	0.54
1:AA:613:C:H2'	1:AA:614:C:C6	2.43	0.54
1:AA:1127:G:H5'	1:AA:1280:A:O2'	2.07	0.54
3:AD:75:TYR:HE1	3:AD:200:VAL:HA	1.73	0.54
4:AE:53:ARG:HB3	4:AE:53:ARG:NH1	2.23	0.54
4:AE:100:GLU:HA	4:AE:121:ASN:ND2	2.22	0.54
6:AG:14:ASP:OD2	6:AG:22:LEU:HB3	2.08	0.54
6:AG:70:PRO:O	6:AG:95:ARG:HG3	2.08	0.54
13:AN:50:LEU:N	13:AN:51:PRO:HD2	2.20	0.54
20:AB:107:ARG:HA	20:AB:110:ILE:HD12	1.90	0.54
23:BB:21:A:H2'	23:BB:22:C:C6	2.43	0.54
23:BB:67:U:H2'	23:BB:68:G:H8	1.73	0.54
23:BB:322:A:H5'	23:BB:340:A:C1'	2.33	0.54
23:BB:532:A:H2'	38:BQ:27:ARG:NH2	2.16	0.54
23:BB:2258:C:H4'	23:BB:2259:U:OP2	2.07	0.54
24:BV:70:ILE:HD13	24:BV:70:ILE:N	2.23	0.54
30:BH:100:ALA:HB1	30:BH:110:VAL:O	2.07	0.54
31:BJ:52:ASP:O	31:BJ:54:ILE:HG22	2.07	0.54
31:BJ:59:ALA:C	31:BJ:61:LYS:H	2.10	0.54
32:BK:20:MET:C	32:BK:41:ILE:HG13	2.29	0.54
33:BL:3:LEU:HA	33:BL:6:LEU:HD21	1.90	0.54
36:BO:18:LEU:HD23	36:BO:25:ARG:HD2	1.91	0.54
40:BS:15:GLN:HA	40:BS:18:ARG:CG	2.38	0.54
43:BW:36:ILE:HB	43:BW:39:GLN:NE2	2.23	0.54
43:BW:36:ILE:O	43:BW:39:GLN:HB3	2.08	0.54
49:B2:34:ARG:HB3	49:B2:39:ARG:HB2	1.88	0.54
52:BI:77:VAL:HA	52:BI:80:LYS:CE	2.38	0.54
1:CA:89:U:H2'	1:CA:90:C:O4'	2.08	0.54
1:CA:193:C:H2'	1:CA:194:C:H6	1.71	0.54
1:CA:1070:U:H2'	1:CA:1071:C:H6	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1438:G:O2'	1:CA:1439:G:H5'	2.08	0.54
10:CK:17:ASP:C	10:CK:36:ARG:HH12	2.11	0.54
15:CP:40:ASN:HD21	15:CP:42:ILE:C	2.11	0.54
23:DB:181:A:H2'	23:DB:182:A:H8	1.73	0.54
23:DB:305:C:H2'	23:DB:306:U:C6	2.43	0.54
23:DB:633:A:H8	23:DB:633:A:O5'	1.89	0.54
23:DB:1150:C:H2'	23:DB:1151:A:H8	1.73	0.54
23:DB:2258:C:H4'	23:DB:2259:U:OP2	2.06	0.54
23:DB:2803:G:H2'	23:DB:2804:U:C6	2.42	0.54
25:DC:18:VAL:O	25:DC:18:VAL:HG13	2.08	0.54
27:DE:4:VAL:HG12	27:DE:6:LYS:H	1.73	0.54
27:DE:97:ASN:ND2	27:DE:100:MET:HG3	2.23	0.54
31:DJ:59:ALA:C	31:DJ:61:LYS:H	2.12	0.54
31:DJ:84:ILE:O	31:DJ:84:ILE:HG23	2.08	0.54
31:DJ:96:ARG:O	31:DJ:99:ARG:HG3	2.07	0.54
32:DK:120:PRO:HA	37:DP:65:ASN:ND2	2.23	0.54
34:DM:103:TYR:O	34:DM:104:GLU:HG3	2.08	0.54
37:DP:89:GLY:HA2	37:DP:111:GLU:C	2.29	0.54
37:DP:103:THR:HG22	37:DP:104:GLY:H	1.72	0.54
41:DT:10:VAL:HG21	41:DT:42:GLU:HG3	1.89	0.54
42:DU:41:VAL:O	42:DU:59:GLU:HA	2.08	0.54
46:DZ:18:ARG:HG3	46:DZ:22:LEU:HA	1.90	0.54
46:DZ:53:ALA:O	46:DZ:55:GLY:N	2.37	0.54
1:AA:560:A:H4'	1:AA:561:U:H5"	1.88	0.53
1:AA:1253:G:N1	1:AA:1285:A:N6	2.56	0.53
2:AC:70:ALA:HA	2:AC:105:VAL:CG2	2.33	0.53
8:AI:10:ARG:HB3	8:AI:15:ALA:HA	1.89	0.53
9:AJ:28:THR:O	9:AJ:31:ARG:HG2	2.09	0.53
20:AB:186:VAL:HB	20:AB:190:SER:HB2	1.88	0.53
22:BA:49:C:H2'	22:BA:50:A:C8	2.42	0.53
22:BA:88:C:H1'	22:BA:89:U:C6	2.43	0.53
23:BB:3:U:H2'	23:BB:4:U:H6	1.72	0.53
23:BB:41:C:O2'	23:BB:42:A:H5'	2.08	0.53
23:BB:643:A:H61	23:BB:2370:G:H1'	1.74	0.53
23:BB:845:A:C2	23:BB:847:U:H1'	2.42	0.53
23:BB:1138:G:H2'	23:BB:1139:G:O4'	2.08	0.53
23:BB:1244:A:O2'	23:BB:1245:G:H5'	2.08	0.53
23:BB:1257:C:O2'	27:BE:79:ARG:HB2	2.08	0.53
23:BB:1351:C:O2'	23:BB:1571:A:H1'	2.08	0.53
23:BB:2193:G:H2'	23:BB:2194:U:H6	1.73	0.53
28:BF:40:GLY:HA2	28:BF:84:ILE:HG23	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BF:131:VAL:O	28:BF:132:ARG:HB2	2.07	0.53
34:BM:35:ALA:HB2	34:BM:100:LYS:HB2	1.90	0.53
37:BP:89:GLY:HA2	37:BP:112:ARG:N	2.23	0.53
39:BR:39:LEU:CA	39:BR:49:ILE:HG12	2.37	0.53
40:BS:10:ALA:HB3	40:BS:101:SER:OG	2.08	0.53
40:BS:96:ILE:O	40:BS:96:ILE:HG23	2.08	0.53
43:BW:9:THR:OG1	43:BW:10:ARG:N	2.34	0.53
46:BZ:67:VAL:O	46:BZ:70:GLU:HG3	2.07	0.53
1:CA:208:U:H4'	1:CA:209:U:C5	2.42	0.53
1:CA:474:G:H2'	1:CA:475:C:H6	1.72	0.53
1:CA:624:C:H2'	1:CA:625:U:H6	1.73	0.53
1:CA:1141:C:H2'	1:CA:1142:G:C8	2.42	0.53
1:CA:1262:C:H2'	1:CA:1263:C:C6	2.43	0.53
3:CD:40:HIS:HB3	3:CD:43:ARG:HG2	1.88	0.53
12:CM:82:LEU:HD11	18:CS:64:GLU:HB2	1.90	0.53
17:CR:52:ARG:O	17:CR:56:ARG:HG3	2.08	0.53
20:CB:53:LEU:HD11	20:CB:216:VAL:HA	1.88	0.53
23:DB:41:C:O2'	23:DB:42:A:H5'	2.08	0.53
23:DB:275:C:H2'	23:DB:276:U:C6	2.42	0.53
23:DB:365:U:H2'	23:DB:366:C:H6	1.73	0.53
23:DB:419:U:H2'	23:DB:420:C:H6	1.71	0.53
23:DB:972:A:OP2	23:DB:974:G:H5"	2.08	0.53
23:DB:1178:C:H2'	23:DB:1179:G:C8	2.42	0.53
23:DB:1495:A:H2'	23:DB:1496:A:C8	2.43	0.53
23:DB:2096:C:H2'	23:DB:2097:A:C8	2.43	0.53
23:DB:2841:C:H2'	23:DB:2842:G:H8	1.73	0.53
25:DC:209:ALA:HA	25:DC:212:TRP:NE1	2.23	0.53
25:DC:261:ARG:HG2	25:DC:261:ARG:O	2.08	0.53
30:DH:31:VAL:O	30:DH:32:PRO:C	2.47	0.53
30:DH:95:GLY:H	30:DH:98:ASP:HB2	1.72	0.53
34:DM:31:PHE:O	34:DM:131:VAL:HG23	2.08	0.53
35:DN:37:THR:HB	35:DN:40:LYS:HG3	1.91	0.53
37:DP:89:GLY:HA2	37:DP:112:ARG:N	2.23	0.53
38:DQ:78:PHE:CE2	38:DQ:82:LEU:HD11	2.43	0.53
39:DR:16:GLU:HA	39:DR:98:ILE:O	2.08	0.53
46:DZ:77:LYS:O	46:DZ:78:TYR:HB3	2.07	0.53
48:D1:6:GLU:CD	48:D1:6:GLU:H	2.12	0.53
49:D2:34:ARG:HB3	49:D2:39:ARG:HB2	1.89	0.53
1:AA:453:G:H2'	1:AA:454:G:C8	2.44	0.53
1:AA:590:U:H2'	1:AA:591:U:C6	2.43	0.53
1:AA:961:U:O4'	1:AA:961:U:O2	2.26	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1162:C:H2'	1:AA:1163:A:C8	2.43	0.53
1:AA:1273:C:H2'	1:AA:1274:A:O4'	2.09	0.53
7:AH:10:LEU:HD22	7:AH:74:ILE:HD11	1.90	0.53
11:AL:20:VAL:HB	11:AL:94:TYR:CE1	2.43	0.53
16:AQ:75:VAL:HG23	16:AQ:76:ARG:N	2.23	0.53
20:AB:18:GLN:O	20:AB:37:VAL:HG23	2.07	0.53
20:AB:44:LYS:C	20:AB:47:PRO:HD2	2.27	0.53
23:BB:83:A:N6	23:BB:101:A:H5'	2.24	0.53
23:BB:329:G:N1	42:BU:16:LYS:HG2	2.23	0.53
23:BB:660:C:H2'	23:BB:661:A:C8	2.42	0.53
23:BB:1442:U:H2'	23:BB:1443:U:C6	2.44	0.53
23:BB:1684:G:H2'	23:BB:1685:C:H6	1.74	0.53
23:BB:2306:C:C3'	23:BB:2307:G:H5'	2.36	0.53
23:BB:2340:A:H2'	23:BB:2341:G:C8	2.41	0.53
23:BB:2840:C:H2'	23:BB:2841:C:H6	1.72	0.53
23:BB:2840:C:H2'	23:BB:2841:C:C6	2.43	0.53
25:BC:209:ALA:HA	25:BC:212:TRP:CE2	2.44	0.53
27:BE:40:ARG:NH2	27:BE:92:HIS:NE2	2.56	0.53
31:BJ:56:VAL:HG12	31:BJ:57:LEU:N	2.23	0.53
33:BL:65:GLY:O	33:BL:66:PHE:HB3	2.09	0.53
36:BO:36:TYR:HA	36:BO:52:SER:HB3	1.90	0.53
36:BO:107:ALA:O	36:BO:111:ARG:HG3	2.07	0.53
37:BP:50:ARG:HB3	37:BP:57:ALA:H	1.72	0.53
44:BX:23:ARG:O	44:BX:27:ASN:N	2.42	0.53
1:CA:95:C:H2'	1:CA:95:C:O2	2.06	0.53
1:CA:343:U:O2'	1:CA:344:A:H2'	2.07	0.53
1:CA:512:U:O2'	1:CA:513:C:H5'	2.08	0.53
1:CA:590:U:H2'	1:CA:591:U:C6	2.43	0.53
1:CA:734:G:H2'	1:CA:735:C:H6	1.72	0.53
1:CA:1352:C:H2'	1:CA:1353:G:C8	2.43	0.53
1:CA:1530:G:HO2'	1:CA:1531:A:H8	1.56	0.53
3:CD:7:LYS:HB2	3:CD:21:LYS:HE2	1.91	0.53
3:CD:90:LEU:HD11	3:CD:194:ILE:CD1	2.38	0.53
8:CI:33:SER:CB	8:CI:36:GLN:HB2	2.37	0.53
23:DB:62:U:C2'	23:DB:63:A:H5'	2.39	0.53
23:DB:126:A:H5'	49:D2:19:ARG:CG	2.37	0.53
23:DB:470:A:H61	41:DT:72:GLN:NE2	2.06	0.53
23:DB:477:A:H2'	23:DB:478:A:C8	2.43	0.53
23:DB:545:U:H3'	23:DB:546:U:O3'	2.08	0.53
23:DB:819:A:H5'	23:DB:973:A:N1	2.23	0.53
23:DB:839:U:H2'	23:DB:840:C:C6	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:853:C:O2'	23:DB:854:C:H5'	2.09	0.53
23:DB:899:A:H3'	23:DB:900:A:C8	2.43	0.53
23:DB:1841:U:H2'	23:DB:1842:G:H8	1.74	0.53
23:DB:1930:G:H2'	23:DB:1968:G:H1	1.73	0.53
23:DB:2512:C:OP2	26:DD:128:ARG:HD2	2.09	0.53
23:DB:2840:C:H2'	23:DB:2841:C:C6	2.44	0.53
24:DV:7:GLU:O	24:DV:41:GLU:HG2	2.09	0.53
24:DV:77:VAL:CG1	34:DM:136:MET:HB3	2.37	0.53
27:DE:4:VAL:HG12	27:DE:5:LEU:N	2.23	0.53
27:DE:149:ILE:O	27:DE:188:MET:HA	2.07	0.53
27:DE:181:ILE:HG13	33:DL:2:ARG:HB3	1.90	0.53
28:DF:78:ILE:HA	28:DF:82:TYR:CE1	2.43	0.53
31:DJ:18:VAL:HG22	31:DJ:19:ASP:N	2.21	0.53
33:DL:119:PRO:HA	33:DL:138:ALA:O	2.08	0.53
39:DR:28:ALA:HB3	39:DR:31:GLU:HB2	1.90	0.53
40:DS:24:ILE:HD11	40:DS:36:LEU:HD21	1.90	0.53
41:DT:32:LEU:O	41:DT:83:ALA:HB2	2.09	0.53
44:DX:41:HIS:O	44:DX:44:LYS:HB3	2.07	0.53
51:D4:27:CYS:SG	51:D4:29:ALA:HB3	2.48	0.53
1:AA:205:A:H2'	1:AA:206:C:C6	2.43	0.53
1:AA:301:G:H2'	1:AA:302:G:H8	1.73	0.53
1:AA:505:G:H2'	1:AA:506:G:C8	2.43	0.53
1:AA:734:G:O2'	17:AR:59:LYS:HD3	2.08	0.53
2:AC:190:THR:HG22	2:AC:191:THR:N	2.23	0.53
4:AE:28:ARG:CZ	4:AE:30:PHE:HB3	2.39	0.53
18:AS:44:ILE:HG13	18:AS:62:THR:HA	1.89	0.53
20:AB:13:VAL:HG11	20:AB:207:ARG:HG2	1.89	0.53
20:AB:27:LYS:HB3	20:AB:28:PRO:HD3	1.91	0.53
23:BB:4:U:H2'	23:BB:5:A:C8	2.43	0.53
23:BB:972:A:OP2	23:BB:974:G:H5"	2.08	0.53
23:BB:1429:G:O2'	23:BB:1430:G:H5'	2.08	0.53
23:BB:1531:C:H2'	23:BB:1532:A:C8	2.44	0.53
23:BB:2861:U:H2'	23:BB:2862:G:C8	2.41	0.53
25:BC:261:ARG:O	25:BC:261:ARG:HG2	2.08	0.53
26:BD:79:LEU:N	26:BD:79:LEU:HD22	2.23	0.53
26:BD:149:ASN:O	26:BD:152:PRO:HD2	2.09	0.53
26:BD:172:VAL:HG12	26:BD:173:GLN:N	2.24	0.53
30:BH:8:LYS:HE3	1:CA:494:G:O3'	2.07	0.53
32:BK:53:LYS:HD3	32:BK:56:ASP:OD2	2.09	0.53
33:BL:119:PRO:HA	33:BL:138:ALA:O	2.09	0.53
34:BM:134:THR:HG22	34:BM:136:MET:H	1.71	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BT:28:ASN:CA	41:BT:91:GLN:HE22	2.19	0.53
46:BZ:5:CYS:HB2	46:BZ:10:LYS:HB2	1.90	0.53
1:CA:9:G:OP2	4:CE:125:LYS:HD3	2.07	0.53
1:CA:254:G:H4'	16:CQ:19:SER:OG	2.07	0.53
1:CA:465:A:O2'	1:CA:466:A:H5'	2.07	0.53
1:CA:860:A:H2'	1:CA:861:G:O4'	2.07	0.53
2:CC:146:LYS:HD3	2:CC:204:GLY:HA2	1.91	0.53
3:CD:10:LEU:HD12	3:CD:20:LEU:HD11	1.89	0.53
7:CH:9:MET:O	7:CH:13:ILE:HG13	2.08	0.53
7:CH:17:GLN:NE2	7:CH:62:LEU:HB3	2.23	0.53
8:CI:78:ILE:O	8:CI:82:ILE:HG13	2.08	0.53
10:CK:81:LEU:HD23	10:CK:81:LEU:N	2.23	0.53
11:CL:24:GLU:HB2	11:CL:26:CYS:SG	2.48	0.53
23:DB:433:C:H2'	23:DB:434:U:C6	2.43	0.53
23:DB:564:C:O2'	23:DB:565:C:H5'	2.08	0.53
23:DB:598:U:H2'	23:DB:599:A:H8	1.73	0.53
23:DB:783:A:H2'	23:DB:784:G:O5'	2.08	0.53
23:DB:1917:U:C2'	23:DB:1918:A:H5'	2.39	0.53
23:DB:2023:C:O2'	23:DB:2024:G:H5'	2.08	0.53
23:DB:2508:G:H2'	23:DB:2509:G:H8	1.73	0.53
23:DB:2869:G:H2'	23:DB:2870:C:O4'	2.09	0.53
23:DB:2885:G:N2	47:D0:31:LYS:HG2	2.24	0.53
28:DF:126:ASN:HB3	28:DF:156:THR:CA	2.37	0.53
30:DH:31:VAL:CB	30:DH:32:PRO:CD	2.81	0.53
37:DP:1:SER:O	37:DP:5:LYS:HB2	2.09	0.53
37:DP:88:ARG:HB2	37:DP:112:ARG:HH12	1.74	0.53
41:DT:27:SER:O	41:DT:28:ASN:HB3	2.09	0.53
52:DI:52:LEU:HD22	52:DI:81:LYS:HD3	1.90	0.53
1:AA:284:C:H2'	1:AA:285:C:H6	1.73	0.53
1:AA:470:C:H2'	1:AA:471:U:C6	2.43	0.53
1:AA:978:A:HO2'	1:AA:1322:C:H5	1.53	0.53
1:AA:1018:G:H2'	1:AA:1019:A:C8	2.43	0.53
1:AA:1258:G:O2'	1:AA:1259:C:H5'	2.09	0.53
1:AA:1277:C:O2'	1:AA:1279:G:H1'	2.08	0.53
1:AA:1278:G:H4'	1:AA:1279:G:H5'	1.89	0.53
1:AA:1511:G:O2'	1:AA:1512:U:H5'	2.08	0.53
1:AA:1525:G:O2'	1:AA:1526:G:H5'	2.08	0.53
2:AC:13:ILE:H	2:AC:13:ILE:HD13	1.74	0.53
6:AG:91:ARG:HD2	6:AG:91:ARG:N	2.22	0.53
15:AP:54:LEU:HD13	15:AP:80:LYS:HG3	1.90	0.53
18:AS:43:MET:O	18:AS:46:LEU:HB2	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:138:U:O4'	41:BT:1:MET:N	2.39	0.53
23:BB:346:A:H5'	23:BB:346:A:N3	2.23	0.53
23:BB:490:C:H3'	23:BB:491:G:H5"	1.91	0.53
23:BB:1015:U:H2'	23:BB:1016:G:H8	1.73	0.53
23:BB:1046:A:H3'	23:BB:1047:G:H5"	1.90	0.53
23:BB:1623:G:O2'	23:BB:1624:U:H5'	2.08	0.53
23:BB:2152:G:H2'	23:BB:2152:G:N3	2.23	0.53
23:BB:2239:G:O2'	23:BB:2240:U:H5'	2.08	0.53
23:BB:2333:A:H4'	23:BB:2334:U:C5'	2.39	0.53
23:BB:2882:A:C3'	23:BB:2883:A:H5"	2.38	0.53
25:BC:239:PHE:HD1	25:BC:241:LYS:H	1.57	0.53
27:BE:1:MET:HB2	27:BE:16:GLU:HB2	1.89	0.53
31:BJ:25:LEU:O	31:BJ:27:ARG:N	2.41	0.53
39:BR:49:ILE:HB	39:BR:53:PHE:O	2.08	0.53
39:BR:72:VAL:HG23	39:BR:89:HIS:O	2.08	0.53
42:BU:66:VAL:O	42:BU:69:VAL:HG22	2.07	0.53
45:BY:15:ARG:N	45:BY:15:ARG:HD2	2.22	0.53
51:B4:3:VAL:HG23	51:B4:4:ARG:H	1.74	0.53
1:CA:90:C:H2'	1:CA:91:U:C6	2.44	0.53
1:CA:106:C:O2'	1:CA:107:G:H5'	2.08	0.53
1:CA:499:A:H4'	1:CA:500:G:OP1	2.08	0.53
1:CA:652:U:H1'	1:CA:653:U:C5	2.43	0.53
1:CA:928:G:H2'	1:CA:929:G:C8	2.44	0.53
3:CD:94:GLU:HG3	3:CD:99:ASN:HD21	1.73	0.53
5:CF:15:SER:HA	5:CF:18:VAL:HG23	1.90	0.53
6:CG:113:LYS:HB3	6:CG:113:LYS:HZ2	1.73	0.53
8:CI:46:VAL:O	8:CI:79:ARG:HG3	2.08	0.53
11:CL:20:VAL:HG23	11:CL:20:VAL:O	2.07	0.53
12:CM:15:VAL:O	12:CM:19:THR:HG23	2.09	0.53
15:CP:38:PHE:CD2	15:CP:51:ARG:HB2	2.43	0.53
17:CR:60:ARG:O	17:CR:64:LEU:HD13	2.08	0.53
18:CS:44:ILE:HG13	18:CS:62:THR:HA	1.90	0.53
22:DA:32:U:C4'	22:DA:52:A:H62	2.21	0.53
22:DA:35:C:O2	22:DA:35:C:H3'	2.08	0.53
23:DB:69:C:H2'	23:DB:70:G:C8	2.42	0.53
23:DB:596:U:H2'	23:DB:597:G:C8	2.44	0.53
23:DB:812:C:H4'	38:DQ:12:ARG:NH1	2.24	0.53
23:DB:948:C:H2'	23:DB:949:G:H8	1.73	0.53
23:DB:1149:G:H2'	23:DB:1150:C:H6	1.73	0.53
23:DB:1210:G:H5'	23:DB:1212:G:H5"	1.91	0.53
23:DB:2239:G:O2'	23:DB:2240:U:H5'	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2439:A:H4'	23:DB:2440:C:O5'	2.08	0.53
23:DB:2537:U:H2'	23:DB:2538:C:C6	2.44	0.53
33:DL:4:ASN:N	33:DL:4:ASN:HD22	2.04	0.53
37:DP:98:TYR:C	37:DP:100:ARG:H	2.11	0.53
1:AA:796:C:OP1	10:AK:127:ARG:HB3	2.08	0.53
1:AA:1060:U:H5"	9:AJ:53:ILE:HG12	1.90	0.53
3:AD:169:TRP:HB2	3:AD:183:ARG:O	2.09	0.53
5:AF:37:HIS:O	5:AF:97:THR:HG23	2.09	0.53
5:AF:74:LEU:HG	5:AF:78:PHE:CE1	2.43	0.53
8:AI:32:ARG:HH21	8:AI:36:GLN:HG3	1.73	0.53
9:AJ:8:ILE:HD11	9:AJ:76:ILE:HG13	1.91	0.53
10:AK:30:ILE:HG22	10:AK:45:THR:OG1	2.08	0.53
13:AN:26:LEU:HD12	13:AN:44:VAL:HG13	1.89	0.53
13:AN:60:ARG:HD3	13:AN:62:ARG:NH2	2.22	0.53
16:AQ:24:ILE:O	16:AQ:40:THR:HA	2.09	0.53
21:AU:10:PRO:HB2	2:CC:71:ARG:NE	2.19	0.53
22:BA:14:U:H5'	22:BA:70:C:O2'	2.09	0.53
22:BA:51:G:OP1	36:BO:63:LYS:HE3	2.08	0.53
23:BB:100:U:O2	23:BB:100:U:C2'	2.54	0.53
23:BB:819:A:H5'	23:BB:973:A:N1	2.23	0.53
23:BB:1061:U:H5'	52:BI:9:LYS:HZ1	1.73	0.53
23:BB:1061:U:H5'	52:BI:9:LYS:NZ	2.24	0.53
23:BB:1847:A:H4'	23:BB:1848:A:H8	1.73	0.53
23:BB:1930:G:H2'	23:BB:1968:G:N1	2.23	0.53
23:BB:2455:G:H2'	23:BB:2456:C:C6	2.44	0.53
23:BB:2512:C:OP2	26:BD:128:ARG:HD2	2.08	0.53
23:BB:2728:U:H2'	23:BB:2729:G:C8	2.44	0.53
23:BB:2742:G:P	51:B4:24:ARG:HH12	2.31	0.53
23:BB:2809:A:H2'	23:BB:2810:A:C8	2.44	0.53
23:BB:2846:G:H2'	23:BB:2847:U:C6	2.44	0.53
25:BC:86:ARG:CZ	25:BC:86:ARG:HB3	2.39	0.53
25:BC:183:VAL:HG22	25:BC:184:GLU:H	1.74	0.53
26:BD:8:LYS:CG	26:BD:197:THR:H	2.22	0.53
27:BE:4:VAL:HG12	27:BE:5:LEU:N	2.23	0.53
27:BE:153:LEU:HG	27:BE:154:ASP:N	2.24	0.53
31:BJ:25:LEU:HB2	31:BJ:62:VAL:HG22	1.89	0.53
31:BJ:130:HIS:HD2	31:BJ:132:HIS:HB2	1.73	0.53
32:BK:105:ARG:HD2	32:BK:105:ARG:H	1.72	0.53
37:BP:26:GLU:HB3	37:BP:84:SER:HB3	1.90	0.53
43:BW:9:THR:O	43:BW:10:ARG:HB2	2.09	0.53
1:CA:82:G:H2'	1:CA:83:C:O4'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:188:C:H2'	1:CA:189:A:O4'	2.09	0.53
1:CA:620:C:C2	3:CD:131:ILE:HG21	2.44	0.53
1:CA:627:G:H2'	1:CA:628:G:C8	2.42	0.53
9:CJ:8:ILE:HD12	9:CJ:8:ILE:N	2.24	0.53
11:CL:98:ARG:HB2	11:CL:116:TYR:HA	1.89	0.53
13:CN:2:LYS:O	13:CN:6:LYS:HG3	2.09	0.53
13:CN:5:MET:HB3	13:CN:62:ARG:HH12	1.73	0.53
20:CB:142:LYS:HA	20:CB:145:ASN:OD1	2.09	0.53
22:DA:43:C:H4'	28:DF:91:ARG:HD2	1.90	0.53
23:DB:81:G:H2'	23:DB:82:U:O4'	2.08	0.53
23:DB:93:G:H2'	23:DB:94:A:O4'	2.09	0.53
23:DB:598:U:H2'	23:DB:599:A:C8	2.44	0.53
23:DB:1022:G:N2	23:DB:1142:A:C2	2.76	0.53
23:DB:1031:G:H4'	51:D4:6:SER:OG	2.08	0.53
23:DB:1320:C:C5	23:DB:1329:U:H5"	2.44	0.53
23:DB:1526:C:H2'	23:DB:1527:G:O4'	2.08	0.53
23:DB:2284:A:OP2	48:D1:5:ARG:HG3	2.09	0.53
23:DB:2852:G:H2'	23:DB:2853:C:H6	1.70	0.53
25:DC:2:VAL:HG23	25:DC:3:VAL:H	1.74	0.53
29:DG:17:LYS:O	29:DG:23:ILE:HG23	2.09	0.53
30:DH:88:GLY:O	30:DH:124:THR:HA	2.08	0.53
33:DL:90:VAL:HB	33:DL:122:VAL:HG13	1.89	0.53
34:DM:71:LYS:HG2	34:DM:73:ILE:HD11	1.90	0.53
34:DM:71:LYS:HG2	34:DM:93:VAL:HG12	1.89	0.53
43:DW:49:ASN:O	43:DW:50:VAL:HG13	2.07	0.53
46:DZ:17:ASN:HB2	46:DZ:25:THR:OG1	2.08	0.53
46:DZ:39:TRP:HB2	46:DZ:46:PHE:CE2	2.44	0.53
50:D3:32:LEU:HA	50:D3:35:LYS:HD2	1.90	0.53
52:DI:54:ILE:HD13	52:DI:55:PRO:N	2.23	0.53
1:AA:652:U:H1'	1:AA:653:U:C5	2.44	0.53
1:AA:1020:G:H2'	1:AA:1021:A:H5'	1.90	0.53
1:AA:1326:U:H2'	1:AA:1327:C:H6	1.74	0.53
2:AC:19:SER:HB2	2:AC:39:ARG:HH22	1.74	0.53
3:AD:96:ARG:NH1	3:AD:133:SER:HA	2.24	0.53
5:AF:6:ILE:HG23	5:AF:62:MET:HB3	1.91	0.53
13:AN:50:LEU:HG	13:AN:51:PRO:HD3	1.91	0.53
18:AS:35:ARG:HB3	18:AS:50:VAL:HG13	1.90	0.53
22:BA:43:C:H4'	28:BF:91:ARG:HD2	1.89	0.53
23:BB:182:A:H2'	23:BB:183:C:H6	1.74	0.53
23:BB:296:U:H2'	23:BB:297:G:C8	2.43	0.53
23:BB:370:G:O2'	23:BB:423:A:H3'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1495:A:O2'	23:BB:1496:A:H5'	2.09	0.53
23:BB:1948:G:O2'	23:BB:1949:G:H5'	2.09	0.53
23:BB:2329:U:H2'	23:BB:2330:G:C8	2.44	0.53
23:BB:2366:A:H4'	43:BW:61:LYS:HE2	1.90	0.53
23:BB:2478:A:OP1	51:B4:32:LYS:HE2	2.08	0.53
26:BD:164:GLN:HG3	26:BD:165:MET:N	2.23	0.53
28:BF:56:LEU:HD22	28:BF:59:ILE:HD12	1.89	0.53
33:BL:110:VAL:HB	33:BL:127:VAL:HG23	1.89	0.53
44:BX:17:GLU:HB3	44:BX:53:VAL:CG1	2.36	0.53
49:B2:10:LEU:HD11	49:B2:14:ARG:NH1	2.23	0.53
1:CA:33:A:H2'	1:CA:34:C:C6	2.44	0.53
1:CA:153:C:H2'	1:CA:154:U:C6	2.43	0.53
1:CA:922:G:N3	1:CA:1398:A:H2	2.06	0.53
1:CA:1097:C:H2'	1:CA:1098:C:C6	2.44	0.53
23:DB:192:C:C2'	23:DB:193:U:H5'	2.37	0.53
23:DB:591:U:H1'	50:D3:1:PRO:H3	1.72	0.53
23:DB:633:A:OP1	33:DL:68:SER:HB2	2.08	0.53
23:DB:1131:G:N2	23:DB:2024:G:H21	2.06	0.53
23:DB:1442:U:H2'	23:DB:1443:U:C6	2.43	0.53
23:DB:1849:G:H2'	23:DB:1850:G:H8	1.74	0.53
23:DB:1872:A:H8	23:DB:1872:A:O5'	1.92	0.53
23:DB:2395:C:H2'	23:DB:2396:G:O4'	2.08	0.53
23:DB:2795:C:H2'	23:DB:2796:U:O4'	2.08	0.53
23:DB:2819:G:H2'	23:DB:2821:A:N7	2.24	0.53
26:DD:121:THR:C	26:DD:123:LYS:H	2.09	0.53
29:DG:15:ASP:CB	29:DG:26:LYS:H	2.16	0.53
29:DG:25:ILE:CG2	29:DG:78:VAL:HG21	2.39	0.53
31:DJ:130:HIS:HD2	31:DJ:132:HIS:HB2	1.73	0.53
32:DK:70:ARG:CB	32:DK:76:VAL:HG22	2.38	0.53
33:DL:110:VAL:HB	33:DL:127:VAL:HG23	1.91	0.53
38:DQ:63:ARG:CZ	38:DQ:96:ASP:HA	2.39	0.53
39:DR:6:GLN:HE22	39:DR:9:GLY:CA	2.22	0.53
8:AI:33:SER:CB	8:AI:36:GLN:HB2	2.38	0.53
21:AU:35:GLU:HB2	21:AU:37:TYR:CE2	2.43	0.53
22:BA:35:C:H3'	22:BA:35:C:O2	2.08	0.53
23:BB:123:G:H2'	23:BB:124:G:H8	1.74	0.53
23:BB:543:G:H2'	23:BB:544:C:H5"	1.91	0.53
23:BB:757:G:H2'	23:BB:758:C:H5'	1.90	0.53
23:BB:813:U:H2'	23:BB:814:C:H6	1.74	0.53
24:BV:44:HIS:CE1	24:BV:85:LYS:HB2	2.43	0.53
26:BD:13:ARG:HD3	26:BD:15:PHE:CE1	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BE:147:LEU:HD12	27:BE:149:ILE:HB	1.89	0.53
30:BH:1:MET:HE3	30:BH:26:ALA:HB3	1.90	0.53
32:BK:35:VAL:CG2	32:BK:36:GLY:H	2.08	0.53
35:BN:37:THR:HB	35:BN:40:LYS:HG3	1.91	0.53
37:BP:31:VAL:HG12	37:BP:38:ARG:O	2.09	0.53
41:BT:7:LEU:HD13	41:BT:7:LEU:O	2.08	0.53
52:BI:18:ASN:N	52:BI:19:PRO:CD	2.71	0.53
1:CA:33:A:H2'	1:CA:34:C:H6	1.72	0.53
1:CA:98:A:H2'	1:CA:99:C:H6	1.74	0.53
1:CA:707:U:H2'	1:CA:708:C:H6	1.71	0.53
1:CA:1238:A:H2	1:CA:1241:G:N3	2.06	0.53
1:CA:1291:U:H2'	1:CA:1292:G:C8	2.44	0.53
1:CA:1432:G:H1'	1:CA:1468:A:H61	1.72	0.53
2:CC:50:SER:HB2	2:CC:70:ALA:HB3	1.91	0.53
18:CS:14:LEU:O	18:CS:18:VAL:HG12	2.08	0.53
18:CS:43:MET:O	18:CS:61:VAL:HB	2.08	0.53
19:CT:53:MET:O	19:CT:57:VAL:HG22	2.08	0.53
20:CB:102:ASN:ND2	20:CB:105:THR:HB	2.22	0.53
21:CU:3:ILE:HB	21:CU:19:LYS:HD2	1.90	0.53
22:DA:89:U:O2	23:DB:958:U:H2'	2.08	0.53
23:DB:276:U:H2'	23:DB:278:A:N7	2.24	0.53
23:DB:291:G:H2'	23:DB:292:U:H6	1.74	0.53
23:DB:1381:G:H1'	23:DB:1571:A:N1	2.24	0.53
23:DB:1549:A:H2'	23:DB:1550:C:H6	1.74	0.53
23:DB:1733:G:H2'	23:DB:1734:G:C8	2.43	0.53
23:DB:2306:C:C3'	23:DB:2307:G:H5'	2.35	0.53
23:DB:2415:G:C4'	33:DL:66:PHE:HB2	2.38	0.53
23:DB:2740:A:H2'	23:DB:2741:A:C8	2.43	0.53
25:DC:5:CYS:HB2	25:DC:15:VAL:O	2.09	0.53
29:DG:106:LEU:O	29:DG:108:PHE:N	2.41	0.53
29:DG:122:ALA:HA	29:DG:132:LEU:HA	1.90	0.53
34:DM:2:LEU:HD23	34:DM:46:ILE:HD11	1.90	0.53
38:DQ:104:ALA:O	38:DQ:105:PHE:HB3	2.09	0.53
42:DU:40:LEU:HD23	42:DU:59:GLU:HG2	1.91	0.53
43:DW:30:VAL:HG13	43:DW:30:VAL:O	2.08	0.53
46:DZ:67:VAL:O	46:DZ:70:GLU:HG3	2.09	0.53
52:DI:79:LEU:HD12	52:DI:135:MET:SD	2.48	0.53
52:DI:99:LYS:HD3	52:DI:99:LYS:N	2.24	0.53
1:AA:370:C:H2'	1:AA:371:A:C8	2.44	0.53
1:AA:738:C:H2'	1:AA:739:C:C6	2.44	0.53
1:AA:787:A:O2'	1:AA:788:U:H5'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1101:A:C8	20:AB:170:ILE:HD12	2.43	0.53
14:AO:80:LEU:HD21	14:AO:84:LEU:HD22	1.91	0.53
23:BB:143:C:H2'	23:BB:144:A:H8	1.73	0.53
23:BB:564:C:O2'	23:BB:565:C:H5'	2.09	0.53
23:BB:947:A:O2'	23:BB:984:A:H2	1.92	0.53
23:BB:1526:C:H2'	23:BB:1527:G:O4'	2.09	0.53
23:BB:1731:G:O2'	23:BB:1732:C:H5"	2.09	0.53
23:BB:1854:A:N6	23:BB:1888:G:H1'	2.24	0.53
23:BB:2022:U:O2'	23:BB:2617:U:H5'	2.09	0.53
23:BB:2216:G:H2'	23:BB:2217:G:C8	2.43	0.53
25:BC:2:VAL:HG23	25:BC:3:VAL:H	1.73	0.53
27:BE:181:ILE:HD13	33:BL:3:LEU:HD23	1.90	0.53
28:BF:46:LYS:NZ	28:BF:83:PRO:HD2	2.24	0.53
29:BG:30:GLY:HA3	29:BG:78:VAL:HA	1.90	0.53
31:BJ:18:VAL:HG22	31:BJ:19:ASP:N	2.24	0.53
33:BL:18:ARG:C	33:BL:19:LEU:HD12	2.29	0.53
39:BR:43:ASN:HD21	39:BR:45:GLU:HG2	1.74	0.53
43:BW:31:LEU:N	43:BW:60:ALA:HB3	2.24	0.53
1:CA:384:G:H2'	1:CA:385:C:H6	1.73	0.53
1:CA:1221:G:O2'	1:CA:1222:G:H5'	2.09	0.53
2:CC:2:GLN:H	2:CC:2:GLN:HE21	1.55	0.53
4:CE:158:LYS:NZ	7:CH:63:LYS:HD3	2.23	0.53
23:DB:256:A:H2'	23:DB:257:C:C6	2.44	0.53
23:DB:417:C:H2'	23:DB:418:C:H6	1.72	0.53
23:DB:854:C:O2'	23:DB:855:G:H5'	2.08	0.53
23:DB:934:U:H2'	23:DB:935:C:C6	2.44	0.53
23:DB:1032:A:H1'	51:D4:23:ILE:HD13	1.91	0.53
23:DB:1063:G:C5'	52:DI:135:MET:HG2	2.39	0.53
23:DB:1570:A:H2'	23:DB:1571:A:C8	2.44	0.53
23:DB:1576:U:O2'	23:DB:1577:C:H5'	2.09	0.53
23:DB:1821:A:H2'	23:DB:1822:C:C6	2.43	0.53
23:DB:1846:G:H2'	23:DB:1847:A:O4'	2.08	0.53
23:DB:1973:G:H2'	23:DB:1974:C:C6	2.44	0.53
23:DB:2199:A:H3'	23:DB:2200:C:H6	1.73	0.53
23:DB:2277:G:H5"	34:DM:86:LYS:HB2	1.91	0.53
23:DB:2305:U:H2'	23:DB:2306:C:C6	2.44	0.53
23:DB:2621:G:P	26:DD:124:ARG:HH22	2.31	0.53
23:DB:2821:A:OP2	26:DD:115:GLY:HA3	2.08	0.53
24:DV:24:ASN:HB3	24:DV:44:HIS:HB3	1.91	0.53
27:DE:149:ILE:HG23	27:DE:188:MET:CA	2.39	0.53
27:DE:176:ASP:OD1	27:DE:178:VAL:HG12	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DF:106:ALA:HA	28:DF:135:ILE:CD1	2.39	0.53
28:DF:122:ASP:OD2	28:DF:126:ASN:HB2	2.08	0.53
34:DM:94:ALA:O	34:DM:96:ILE:HG23	2.09	0.53
1:AA:312:C:H2'	1:AA:313:A:C8	2.43	0.53
1:AA:678:U:H4'	1:AA:778:G:OP1	2.09	0.53
1:AA:820:U:H4'	1:AA:821:G:OP2	2.09	0.53
1:AA:1250:A:H4'	8:AI:69:GLY:O	2.08	0.53
4:AE:23:THR:HA	4:AE:28:ARG:HA	1.90	0.53
6:AG:131:GLY:O	6:AG:134:VAL:HG22	2.09	0.53
8:AI:61:ASP:C	8:AI:62:LEU:HD13	2.29	0.53
23:BB:256:A:H2'	23:BB:257:C:C6	2.43	0.53
23:BB:1747:U:H2'	23:BB:1748:C:H6	1.72	0.53
23:BB:2078:C:H2'	23:BB:2079:U:C6	2.43	0.53
23:BB:2186:G:H2'	23:BB:2187:U:O4'	2.09	0.53
23:BB:2508:G:H2'	23:BB:2509:G:H8	1.73	0.53
23:BB:2784:U:H2'	23:BB:2785:C:H6	1.72	0.53
25:BC:140:VAL:HG12	25:BC:141:HIS:N	2.20	0.53
25:BC:159:THR:O	25:BC:194:VAL:HG12	2.09	0.53
26:BD:56:LYS:HG3	26:BD:58:ASN:HB2	1.91	0.53
26:BD:187:LEU:HD12	26:BD:188:LEU:H	1.74	0.53
29:BG:25:ILE:CG2	29:BG:78:VAL:HG21	2.39	0.53
31:BJ:38:GLY:HA3	31:BJ:50:THR:O	2.09	0.53
31:BJ:96:ARG:O	31:BJ:99:ARG:HG3	2.09	0.53
31:BJ:123:LYS:HG2	31:BJ:132:HIS:NE2	2.23	0.53
32:BK:107:LEU:HB2	32:BK:116:ILE:CG2	2.39	0.53
33:BL:41:ARG:HH21	33:BL:41:ARG:HG2	1.74	0.53
39:BR:28:ALA:HB3	39:BR:31:GLU:HB2	1.90	0.53
41:BT:57:VAL:HG12	41:BT:86:THR:OG1	2.09	0.53
41:BT:81:LYS:HG3	41:BT:82:LYS:N	2.23	0.53
48:B1:3:GLY:O	48:B1:4:ILE:HG12	2.08	0.53
1:CA:590:U:H2'	1:CA:591:U:H6	1.72	0.53
1:CA:1168:U:H4'	1:CA:1169:A:OP2	2.08	0.53
1:CA:1277:C:O2'	1:CA:1279:G:H1'	2.09	0.53
1:CA:1332:A:H2'	1:CA:1333:A:C8	2.44	0.53
3:CD:22:SER:HB2	3:CD:109:THR:HG22	1.91	0.53
5:CF:4:TYR:CE2	5:CF:71:ILE:HD13	2.44	0.53
7:CH:100:ILE:HG13	7:CH:128:VAL:O	2.08	0.53
13:CN:50:LEU:CD2	13:CN:51:PRO:HD3	2.39	0.53
20:CB:23:ASN:HD22	20:CB:24:PRO:CD	2.21	0.53
21:CU:35:GLU:HB2	21:CU:37:TYR:CZ	2.43	0.53
23:DB:513:A:H8	23:DB:513:A:O5'	1.92	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1099:G:H4'	52:DI:4:VAL:CG1	2.39	0.53
23:DB:1210:G:N3	23:DB:1212:G:N2	2.56	0.53
23:DB:1244:A:O2'	23:DB:1245:G:H5'	2.09	0.53
23:DB:1623:G:O2'	23:DB:1624:U:H5'	2.08	0.53
23:DB:1792:G:O2'	23:DB:1793:C:H5'	2.09	0.53
23:DB:2846:G:H2'	23:DB:2847:U:C6	2.43	0.53
26:DD:165:MET:HG2	26:DD:166:GLY:N	2.24	0.53
26:DD:172:VAL:HG12	26:DD:173:GLN:N	2.23	0.53
27:DE:150:THR:HG21	27:DE:153:LEU:HA	1.91	0.53
32:DK:19:VAL:HG12	32:DK:41:ILE:CG1	2.39	0.53
34:DM:19:GLY:N	34:DM:38:ARG:HH12	2.02	0.53
36:DO:111:ARG:HD2	36:DO:117:PHE:C	2.29	0.53
38:DQ:68:ALA:O	38:DQ:71:ASN:HB3	2.09	0.53
40:DS:57:ASN:O	40:DS:61:ASN:HB2	2.09	0.53
42:DU:41:VAL:HG22	42:DU:60:LYS:O	2.09	0.53
42:DU:64:ILE:HG13	42:DU:65:GLN:N	2.23	0.53
44:DX:23:ARG:O	44:DX:27:ASN:N	2.41	0.53
51:D4:7:VAL:HG13	51:D4:8:LYS:H	1.74	0.53
1:AA:320:A:H2'	1:AA:321:A:C8	2.44	0.53
1:AA:429:U:H3'	3:AD:8:LEU:HD23	1.91	0.53
1:AA:462:G:H3'	1:AA:463:U:C6	2.44	0.53
1:AA:546:A:OP2	3:AD:67:LEU:HB3	2.09	0.53
1:AA:632:U:H3'	1:AA:633:G:H5'	1.90	0.53
1:AA:709:U:H2'	1:AA:710:G:C8	2.43	0.53
1:AA:784:A:H2'	1:AA:785:G:C8	2.44	0.53
5:AF:53:LYS:H	5:AF:53:LYS:HZ2	1.57	0.53
6:AG:29:LEU:O	6:AG:29:LEU:HD23	2.09	0.53
7:AH:31:LEU:O	7:AH:35:ILE:HG13	2.09	0.53
9:AJ:76:ILE:HD13	9:AJ:79:PRO:HB3	1.91	0.53
16:AQ:29:LYS:HG3	16:AQ:34:GLY:HA2	1.90	0.53
20:AB:101:THR:HA	20:AB:178:LEU:HD21	1.91	0.53
22:BA:89:U:O2	23:BB:958:U:H2'	2.08	0.53
23:BB:948:C:H2'	23:BB:949:G:C8	2.44	0.53
23:BB:1198:U:H2'	23:BB:1199:U:H6	1.74	0.53
23:BB:1229:C:H2'	23:BB:1230:A:C8	2.44	0.53
23:BB:1792:G:O2'	23:BB:1793:C:H5'	2.09	0.53
23:BB:2415:G:H2'	23:BB:2416:C:H6	1.74	0.53
23:BB:2600:A:O2'	23:BB:2601:C:H5'	2.09	0.53
23:BB:2648:G:H2'	23:BB:2649:C:C6	2.43	0.53
23:BB:2803:G:H2'	23:BB:2804:U:H6	1.72	0.53
25:BC:115:ILE:HA	25:BC:124:LYS:NZ	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:209:ALA:HA	25:BC:212:TRP:NE1	2.24	0.53
26:BD:90:PHE:N	26:BD:94:GLN:OE1	2.42	0.53
27:BE:2:GLU:HA	27:BE:13:THR:OG1	2.09	0.53
29:BG:106:LEU:O	29:BG:108:PHE:N	2.41	0.53
33:BL:142:ILE:HG22	33:BL:143:GLU:N	2.24	0.53
36:BO:7:ARG:HA	36:BO:10:ARG:NH2	2.24	0.53
39:BR:3:ALA:O	39:BR:13:ARG:HA	2.09	0.53
41:BT:32:LEU:O	41:BT:83:ALA:HB2	2.09	0.53
46:BZ:66:THR:O	46:BZ:69:ALA:HB3	2.08	0.53
1:CA:91:U:H2'	1:CA:92:U:H6	1.72	0.53
1:CA:312:C:H2'	1:CA:313:A:C8	2.44	0.53
1:CA:505:G:H2'	1:CA:506:G:C8	2.44	0.53
1:CA:539:A:H2'	1:CA:540:G:H8	1.72	0.53
1:CA:1245:C:H2'	1:CA:1246:A:C8	2.43	0.53
2:CC:57:GLU:O	2:CC:63:ILE:HA	2.09	0.53
2:CC:190:THR:HG22	2:CC:191:THR:N	2.24	0.53
16:CQ:7:LEU:O	16:CQ:60:ILE:HD13	2.09	0.53
16:CQ:24:ILE:O	16:CQ:40:THR:HA	2.09	0.53
18:CS:39:ILE:HB	18:CS:65:MET:O	2.09	0.53
21:CU:36:PHE:HA	21:CU:39:LYS:HE2	1.91	0.53
23:DB:346:A:H2'	23:DB:347:A:O4'	2.09	0.53
23:DB:584:C:OP1	38:DQ:5:ARG:HB3	2.07	0.53
23:DB:674:G:H1'	27:DE:69:ARG:NE	2.24	0.53
23:DB:705:A:N6	23:DB:726:G:O2'	2.41	0.53
23:DB:947:A:O2'	23:DB:984:A:H2	1.92	0.53
23:DB:1193:G:H2'	23:DB:1194:A:H5"	1.90	0.53
23:DB:1949:G:H2'	23:DB:1950:G:H8	1.69	0.53
23:DB:2021:C:P	47:D0:8:THR:HG21	2.49	0.53
23:DB:2774:C:OP1	26:DD:169:ARG:HG3	2.08	0.53
24:DV:72:VAL:HG21	24:DV:91:PHE:CB	2.34	0.53
25:DC:12:ARG:HA	25:DC:15:VAL:HG23	1.90	0.53
27:DE:5:LEU:HD22	27:DE:122:GLU:HG3	1.91	0.53
27:DE:46:GLN:HB3	27:DE:86:ALA:HA	1.91	0.53
27:DE:128:ALA:H	27:DE:133:LEU:CD1	2.22	0.53
28:DF:12:VAL:O	28:DF:16:MET:HG2	2.09	0.53
28:DF:28:PRO:HG3	28:DF:159:ALA:HB2	1.90	0.53
31:DJ:123:LYS:HG2	31:DJ:132:HIS:NE2	2.23	0.53
37:DP:6:GLN:O	37:DP:9:GLN:HG2	2.09	0.53
40:DS:17:VAL:HG11	40:DS:103:ILE:HG12	1.91	0.53
1:AA:8:A:H61	3:AD:53:GLN:HE22	1.56	0.52
1:AA:9:G:OP2	4:AE:125:LYS:HD3	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:434:U:H3'	1:AA:435:A:H8	1.72	0.52
1:AA:806:C:H2'	1:AA:807:A:H8	1.73	0.52
1:AA:930:C:H2'	1:AA:931:C:O4'	2.08	0.52
3:AD:53:GLN:HB3	3:AD:202:LEU:HB2	1.91	0.52
6:AG:15:PRO:HG2	6:AG:43:TYR:OH	2.10	0.52
8:AI:44:ARG:O	8:AI:47:VAL:HG22	2.08	0.52
23:BB:123:G:H2'	23:BB:124:G:C8	2.44	0.52
23:BB:189:G:H2'	23:BB:205:G:H22	1.72	0.52
23:BB:553:G:O2'	23:BB:554:U:H5'	2.10	0.52
23:BB:674:G:O3'	27:BE:60:TRP:CZ2	2.62	0.52
23:BB:1145:C:O2'	23:BB:1146:C:H5'	2.08	0.52
23:BB:1746:A:H2'	23:BB:1747:U:C6	2.45	0.52
23:BB:2386:A:H2'	23:BB:2387:U:C6	2.44	0.52
23:BB:2389:G:H5"	23:BB:2390:U:H5'	1.91	0.52
23:BB:2814:A:H2'	23:BB:2815:C:H6	1.74	0.52
27:BE:106:LYS:HE2	27:BE:200:LEU:HB3	1.91	0.52
28:BF:11:VAL:HG12	28:BF:12:VAL:N	2.15	0.52
32:BK:101:GLY:HA2	37:BP:65:ASN:HB2	1.90	0.52
34:BM:126:ILE:HD12	34:BM:126:ILE:N	2.24	0.52
46:BZ:5:CYS:SG	46:BZ:8:THR:HG23	2.49	0.52
52:BI:2:LYS:HB3	52:BI:2:LYS:NZ	2.24	0.52
52:BI:81:LYS:HG3	52:BI:82:ALA:N	2.23	0.52
1:CA:55:A:OP2	1:CA:352:C:N4	2.41	0.52
1:CA:546:A:OP2	3:CD:67:LEU:HB3	2.09	0.52
1:CA:1018:G:H2'	1:CA:1019:A:C8	2.45	0.52
2:CC:166:TRP:HA	2:CC:166:TRP:CE3	2.44	0.52
8:CI:27:ILE:HG21	8:CI:34:LEU:HD13	1.91	0.52
19:CT:49:ALA:HA	19:CT:52:GLU:HB3	1.89	0.52
20:CB:27:LYS:HB3	20:CB:28:PRO:HD3	1.91	0.52
23:DB:418:C:H2'	23:DB:419:U:C6	2.44	0.52
23:DB:581:C:H2'	23:DB:582:A:H8	1.73	0.52
23:DB:832:U:H2'	23:DB:833:A:C8	2.44	0.52
23:DB:851:C:H2'	23:DB:852:U:H6	1.74	0.52
23:DB:909:A:H2'	23:DB:912:C:H5	1.72	0.52
23:DB:969:G:OP1	45:DY:17:PRO:HG3	2.08	0.52
23:DB:1771:C:O2'	23:DB:1772:A:H5'	2.09	0.52
23:DB:1947:C:H2'	23:DB:1948:G:C8	2.44	0.52
23:DB:2106:U:H2'	23:DB:2107:G:C8	2.44	0.52
23:DB:2471:A:O2'	23:DB:2472:G:O5'	2.27	0.52
23:DB:2597:G:H5'	25:DC:240:GLY:HA3	1.92	0.52
25:DC:20:ASN:OD1	25:DC:22:GLU:HG2	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DF:133:GLU:HA	28:DF:150:GLY:HA2	1.90	0.52
31:DJ:25:LEU:HB2	31:DJ:62:VAL:HG22	1.90	0.52
35:DN:8:ARG:HG2	35:DN:10:LEU:HD22	1.91	0.52
35:DN:108:ALA:O	35:DN:110:MET:HE3	2.09	0.52
37:DP:3:ILE:CD1	37:DP:7:LEU:HD11	2.38	0.52
37:DP:6:GLN:O	37:DP:10:GLU:HG2	2.10	0.52
42:DU:81:ARG:HB2	42:DU:96:LYS:HG3	1.91	0.52
46:DZ:69:ALA:HA	46:DZ:72:ARG:NH2	2.24	0.52
52:DI:57:VAL:HG23	52:DI:71:LYS:NZ	2.24	0.52
1:AA:169:C:O2'	1:AA:170:U:H5'	2.09	0.52
1:AA:269:C:H2'	1:AA:270:A:H8	1.73	0.52
1:AA:490:C:H2'	1:AA:491:G:H8	1.73	0.52
1:AA:782:A:H2'	1:AA:783:C:O4'	2.09	0.52
2:AC:156:LEU:HD11	2:AC:165:GLU:HB2	1.91	0.52
11:AL:7:VAL:HG22	16:AQ:33:TYR:CD1	2.44	0.52
12:AM:17:ALA:CB	12:AM:44:ILE:HD11	2.39	0.52
23:BB:37:C:O2'	27:BE:45:ALA:HA	2.10	0.52
23:BB:77:G:H5'	44:BX:52:ARG:HG2	1.91	0.52
23:BB:196:A:H2'	23:BB:196:A:N3	2.23	0.52
23:BB:247:G:H4'	23:BB:386:G:C5	2.44	0.52
23:BB:1170:C:H2'	23:BB:1171:G:C8	2.45	0.52
23:BB:1369:G:O2'	23:BB:1370:C:H5'	2.09	0.52
23:BB:1387:A:H2'	23:BB:1388:G:H8	1.74	0.52
23:BB:1511:G:H2'	23:BB:1512:C:H6	1.74	0.52
23:BB:1733:G:H2'	23:BB:1734:G:C8	2.43	0.52
24:BV:63:ILE:HD12	24:BV:63:ILE:N	2.25	0.52
30:BH:110:VAL:HB	30:BH:132:PHE:CZ	2.44	0.52
32:BK:71:ARG:CG	32:BK:105:ARG:HH21	2.22	0.52
33:BL:135:ILE:HG12	33:BL:140:GLY:HA3	1.91	0.52
35:BN:99:LYS:O	47:B0:42:ILE:HG12	2.08	0.52
38:BQ:59:LEU:O	38:BQ:62:ALA:HB3	2.08	0.52
1:CA:370:C:H2'	1:CA:371:A:C8	2.45	0.52
1:CA:390:U:H2'	1:CA:391:G:H8	1.74	0.52
1:CA:455:G:O2'	1:CA:456:A:H5'	2.08	0.52
1:CA:657:U:O2'	1:CA:658:C:H5'	2.09	0.52
1:CA:1124:G:H4'	9:CJ:40:ILE:HG12	1.91	0.52
1:CA:1324:A:H2'	1:CA:1325:C:O4'	2.10	0.52
1:CA:1423:G:H2'	1:CA:1424:U:H6	1.73	0.52
1:CA:1521:C:H2'	1:CA:1522:U:C6	2.44	0.52
2:CC:155:ARG:NH2	2:CC:192:TYR:HB2	2.24	0.52
3:CD:117:VAL:O	3:CD:130:ASN:HA	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:104:VAL:O	6:CG:108:ARG:HG3	2.09	0.52
13:CN:50:LEU:HG	13:CN:51:PRO:HD3	1.92	0.52
16:CQ:75:VAL:HG23	16:CQ:76:ARG:N	2.25	0.52
20:CB:65:LYS:HG2	20:CB:89:PHE:HE1	1.74	0.52
22:DA:54:G:H21	28:DF:25:MET:HE3	1.75	0.52
23:DB:163:C:O4'	23:DB:163:C:O2	2.25	0.52
23:DB:931:U:H3	23:DB:1166:G:H21	1.56	0.52
23:DB:989:G:OP2	45:DY:13:ILE:HD11	2.10	0.52
23:DB:993:G:H1'	39:DR:91:GLN:NE2	2.25	0.52
23:DB:1332:G:HO2'	23:DB:1609:A:H2	1.56	0.52
23:DB:2028:U:H2'	23:DB:2029:G:C8	2.44	0.52
23:DB:2092:U:H4'	23:DB:2093:G:H5"	1.90	0.52
23:DB:2882:A:C3'	23:DB:2883:A:H5"	2.39	0.52
23:DB:2886:A:H3'	23:DB:2887:A:C8	2.42	0.52
24:DV:16:ALA:HA	24:DV:19:ARG:HE	1.73	0.52
26:DD:5:VAL:H	26:DD:32:ASN:ND2	1.94	0.52
26:DD:7:LYS:O	26:DD:9:VAL:HG12	2.08	0.52
26:DD:46:ARG:NH1	26:DD:85:ALA:HA	2.24	0.52
28:DF:131:VAL:O	28:DF:132:ARG:HB2	2.09	0.52
29:DG:6:ALA:HB3	29:DG:68:ARG:NE	2.24	0.52
29:DG:19:ASN:HB2	29:DG:22:VAL:HB	1.90	0.52
30:DH:133:GLN:HB3	30:DH:139:PHE:CB	2.39	0.52
31:DJ:25:LEU:HD22	31:DJ:26:GLY:N	2.18	0.52
31:DJ:125:TYR:HH	31:DJ:132:HIS:CE1	2.26	0.52
41:DT:28:ASN:CA	41:DT:91:GLN:HE22	2.20	0.52
41:DT:29:THR:HA	41:DT:86:THR:CA	2.35	0.52
42:DU:82:VAL:CG1	42:DU:93:ARG:HB3	2.39	0.52
47:D0:52:LYS:NZ	47:D0:56:LYS:H	2.06	0.52
48:D1:3:GLY:C	48:D1:5:ARG:H	2.11	0.52
1:AA:79:G:H8	1:AA:79:G:OP2	1.93	0.52
1:AA:927:G:O2'	1:AA:928:G:H5'	2.09	0.52
1:AA:1320:C:C5	18:AS:36:ARG:HA	2.45	0.52
8:AI:55:ASP:HB2	8:AI:59:LYS:HG3	1.92	0.52
23:BB:126:A:O2'	23:BB:127:A:H5'	2.09	0.52
23:BB:527:C:H5'	56:BB:3416:HOH:O	2.09	0.52
23:BB:936:A:H2'	23:BB:937:C:H6	1.73	0.52
23:BB:1000:A:H2'	23:BB:1001:A:H8	1.71	0.52
23:BB:1131:G:N2	23:BB:2024:G:H21	2.07	0.52
23:BB:1287:A:P	35:BN:104:ALA:HB3	2.49	0.52
23:BB:1386:C:OP2	23:BB:1396:U:H5	1.93	0.52
23:BB:1571:A:H2'	23:BB:1572:A:C8	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1846:G:H2'	23:BB:1847:A:O4'	2.10	0.52
23:BB:2352:A:C6	43:BW:30:VAL:HG11	2.44	0.52
23:BB:2411:A:H2'	23:BB:2412:A:C8	2.44	0.52
26:BD:16:THR:HB	26:BD:18:ASP:OD1	2.09	0.52
30:BH:132:PHE:N	30:BH:142:VAL:HG23	2.24	0.52
31:BJ:55:ILE:CB	31:BJ:123:LYS:HB2	2.37	0.52
35:BN:59:SER:O	35:BN:63:ARG:HB2	2.08	0.52
38:BQ:68:ALA:HA	38:BQ:71:ASN:HB3	1.91	0.52
38:BQ:104:ALA:O	38:BQ:105:PHE:HB3	2.08	0.52
39:BR:14:VAL:HG21	39:BR:98:ILE:HG12	1.91	0.52
39:BR:16:GLU:H	39:BR:101:ILE:CG1	2.22	0.52
41:BT:12:ARG:HG2	44:BX:29:ARG:HH12	1.74	0.52
51:B4:10:LEU:HD13	51:B4:33:HIS:HA	1.90	0.52
1:CA:45:G:H2'	1:CA:46:G:H8	1.74	0.52
1:CA:165:G:O2'	1:CA:166:U:H5'	2.09	0.52
1:CA:443:C:H2'	1:CA:444:G:C8	2.44	0.52
1:CA:814:A:H5'	1:CA:1511:G:H4'	1.90	0.52
1:CA:900:A:H2'	1:CA:901:A:C8	2.44	0.52
1:CA:1302:C:H4'	1:CA:1303:C:OP2	2.09	0.52
1:CA:1379:G:O2'	1:CA:1380:U:H5'	2.09	0.52
2:CC:35:ASP:HB3	2:CC:39:ARG:HH12	1.75	0.52
3:CD:157:ALA:O	3:CD:160:LEU:HD22	2.09	0.52
6:CG:15:PRO:HG2	6:CG:43:TYR:OH	2.09	0.52
8:CI:32:ARG:NH1	8:CI:37:TYR:HA	2.24	0.52
9:CJ:28:THR:O	9:CJ:31:ARG:HG2	2.10	0.52
23:DB:75:G:H4'	44:DX:48:ARG:HH22	1.75	0.52
23:DB:196:A:H2'	23:DB:196:A:N3	2.24	0.52
23:DB:500:G:N2	23:DB:502:A:H3'	2.24	0.52
23:DB:528:A:C2	23:DB:2043:C:H4'	2.44	0.52
23:DB:812:C:H5"	23:DB:1250:G:O2'	2.09	0.52
23:DB:912:C:O2'	23:DB:913:U:H5'	2.09	0.52
23:DB:1790:C:H2'	23:DB:1791:A:C8	2.44	0.52
23:DB:1923:U:H2'	23:DB:1924:C:H6	1.74	0.52
23:DB:2015:A:N3	47:D0:2:VAL:HG22	2.23	0.52
23:DB:2572:A:OP2	26:DD:151:THR:HB	2.09	0.52
23:DB:2659:G:N2	23:DB:2661:G:H5"	2.23	0.52
23:DB:2662:A:H2'	23:DB:2663:G:O4'	2.09	0.52
25:DC:159:THR:O	25:DC:194:VAL:HG12	2.09	0.52
26:DD:114:LYS:HB2	26:DD:116:LYS:HE3	1.91	0.52
29:DG:7:PRO:O	29:DG:8:VAL:HB	2.09	0.52
29:DG:88:LEU:HD12	29:DG:88:LEU:O	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DK:20:MET:C	32:DK:41:ILE:HG13	2.29	0.52
36:DO:25:ARG:HD2	36:DO:93:ASP:HB2	1.90	0.52
36:DO:30:ARG:HH11	36:DO:30:ARG:HG3	1.74	0.52
38:DQ:59:LEU:O	38:DQ:62:ALA:HB3	2.09	0.52
38:DQ:71:ASN:ND2	38:DQ:109:VAL:HG11	2.24	0.52
38:DQ:71:ASN:ND2	38:DQ:73:ILE:HG22	2.24	0.52
47:D0:5:ASN:O	47:D0:7:PRO:HD3	2.09	0.52
52:DI:75:ALA:O	52:DI:79:LEU:HG	2.10	0.52
1:AA:399:G:H2'	1:AA:400:C:C6	2.44	0.52
1:AA:552:U:O2'	1:AA:553:A:H5'	2.10	0.52
1:AA:586:C:O2'	1:AA:878:A:H4'	2.10	0.52
1:AA:1070:U:H2'	1:AA:1071:C:H6	1.73	0.52
3:AD:55:ARG:HG3	3:AD:55:ARG:NH1	2.25	0.52
10:AK:124:LYS:HA	21:AU:34:ARG:HG2	1.91	0.52
10:AK:126:ARG:NE	10:AK:126:ARG:HA	2.24	0.52
11:AL:43:LYS:NZ	11:AL:44:PRO:HD3	2.24	0.52
12:AM:44:ILE:HA	12:AM:47:LEU:HD23	1.90	0.52
13:AN:5:MET:HB3	13:AN:62:ARG:HH12	1.74	0.52
17:AR:60:ARG:O	17:AR:64:LEU:HD13	2.09	0.52
23:BB:308:G:H2'	23:BB:309:A:O4'	2.09	0.52
23:BB:1050:A:H2'	23:BB:1051:G:C8	2.42	0.52
23:BB:1060:U:O2	23:BB:1088:A:C8	2.63	0.52
23:BB:1097:U:C2'	23:BB:1098:A:H5'	2.38	0.52
23:BB:1117:C:H2'	23:BB:1118:C:H6	1.74	0.52
23:BB:1196:C:H2'	23:BB:1197:G:C8	2.44	0.52
23:BB:1442:U:H2'	23:BB:1443:U:H6	1.73	0.52
23:BB:2547:A:H4'	32:BK:29:HIS:CE1	2.45	0.52
25:BC:91:ALA:CB	25:BC:105:ALA:HB2	2.37	0.52
25:BC:93:VAL:HG12	25:BC:101:ARG:O	2.09	0.52
27:BE:5:LEU:HD22	27:BE:122:GLU:HG3	1.90	0.52
28:BF:177:ARG:HA	28:BF:177:ARG:NH1	2.24	0.52
29:BG:93:TYR:C	29:BG:94:ARG:HG3	2.29	0.52
30:BH:73:ASN:ND2	30:BH:73:ASN:N	2.57	0.52
33:BL:109:LYS:O	33:BL:111:ILE:HG12	2.09	0.52
35:BN:103:ARG:CG	35:BN:104:ALA:H	2.22	0.52
36:BO:52:SER:OG	36:BO:54:VAL:HG12	2.10	0.52
38:BQ:78:PHE:CE2	38:BQ:82:LEU:HD11	2.44	0.52
44:BX:56:LEU:O	44:BX:58:ASN:N	2.41	0.52
46:BZ:68:LEU:HB3	46:BZ:78:TYR:HE1	1.75	0.52
49:B2:19:ARG:HG2	49:B2:19:ARG:HH21	1.73	0.52
49:B2:30:VAL:HA	49:B2:33:ARG:HH21	1.73	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:B4:7:VAL:HG13	51:B4:8:LYS:H	1.74	0.52
1:CA:160:A:H2'	1:CA:161:A:O4'	2.09	0.52
1:CA:252:U:H2'	1:CA:253:A:H8	1.74	0.52
1:CA:562:U:H2'	1:CA:562:U:OP2	2.09	0.52
1:CA:1207:G:O2'	1:CA:1208:C:H5'	2.09	0.52
1:CA:1386:G:H2'	1:CA:1387:G:C8	2.45	0.52
1:CA:1434:A:H2'	1:CA:1435:G:C8	2.44	0.52
4:CE:15:ILE:HD12	4:CE:35:LEU:HG	1.90	0.52
5:CF:74:LEU:HG	5:CF:78:PHE:CE1	2.45	0.52
6:CG:126:ALA:HA	6:CG:134:VAL:HG13	1.90	0.52
10:CK:74:LYS:C	10:CK:76:TYR:H	2.12	0.52
13:CN:97:LYS:HB3	13:CN:97:LYS:HZ2	1.74	0.52
16:CQ:3:LYS:HE2	16:CQ:3:LYS:HA	1.91	0.52
18:CS:12:LEU:O	18:CS:15:LEU:HB2	2.10	0.52
20:CB:186:VAL:HB	20:CB:190:SER:HB2	1.90	0.52
23:DB:718:A:H3'	23:DB:719:C:C6	2.42	0.52
23:DB:729:G:C8	25:DC:206:LYS:HE3	2.44	0.52
23:DB:1021:A:H61	23:DB:1142:A:H61	1.58	0.52
23:DB:1196:C:H2'	23:DB:1197:G:C8	2.44	0.52
24:DV:1:MET:O	24:DV:62:THR:HG23	2.09	0.52
31:DJ:42:ALA:O	31:DJ:44:TYR:N	2.43	0.52
34:DM:97:GLN:HB2	34:DM:98:PRO:CD	2.39	0.52
37:DP:31:VAL:HG12	37:DP:38:ARG:O	2.09	0.52
44:DX:3:ALA:O	44:DX:6:LEU:HB2	2.09	0.52
1:AA:151:A:H5'	1:AA:152:A:OP2	2.09	0.52
1:AA:215:C:H2'	1:AA:216:U:C6	2.45	0.52
1:AA:312:C:H2'	1:AA:313:A:H8	1.74	0.52
1:AA:314:C:O2'	1:AA:315:A:H5'	2.09	0.52
1:AA:608:A:H3'	56:AA:2292:HOH:O	2.09	0.52
1:AA:996:A:H2	1:AA:1045:C:HO2'	1.55	0.52
1:AA:1300:G:H1'	1:AA:1301:U:H5	1.73	0.52
1:AA:1461:G:H2'	1:AA:1462:C:C6	2.44	0.52
2:AC:34:SER:O	2:AC:38:VAL:HG22	2.10	0.52
3:AD:117:VAL:O	3:AD:130:ASN:HA	2.10	0.52
8:AI:35:GLU:HG3	8:AI:44:ARG:HD3	1.92	0.52
10:AK:81:LEU:HD23	10:AK:81:LEU:N	2.24	0.52
12:AM:10:ASP:CA	12:AM:44:ILE:HD13	2.39	0.52
21:AU:3:ILE:HD13	21:AU:19:LYS:HA	1.91	0.52
22:BA:39:A:O2'	22:BA:40:U:H5'	2.10	0.52
23:BB:394:C:H2'	23:BB:395:U:O4'	2.10	0.52
23:BB:499:U:H5'	42:BU:44:HIS:CE1	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:704:G:H1'	23:BB:727:A:H61	1.74	0.52
23:BB:812:C:H4'	38:BQ:12:ARG:HH12	1.75	0.52
23:BB:1453:A:OP1	23:BB:1453:A:H4'	2.09	0.52
23:BB:2365:G:H4'	43:BW:59:PHE:CE1	2.41	0.52
24:BV:14:LYS:HE3	24:BV:18:ARG:NH2	2.25	0.52
29:BG:154:GLU:C	29:BG:156:TYR:H	2.13	0.52
32:BK:109:SER:C	32:BK:111:LYS:H	2.12	0.52
33:BL:61:LEU:HD12	33:BL:61:LEU:N	2.25	0.52
33:BL:78:ARG:HG2	33:BL:113:ALA:CB	2.39	0.52
38:BQ:59:LEU:HD13	38:BQ:60:TRP:N	2.25	0.52
46:BZ:68:LEU:HB3	46:BZ:78:TYR:CE1	2.44	0.52
1:CA:5:U:H4'	1:CA:6:G:H5'	1.91	0.52
1:CA:1004:A:H5'	1:CA:1024:G:H22	1.74	0.52
1:CA:1384:C:H2'	1:CA:1385:G:C8	2.44	0.52
3:CD:75:TYR:HE1	3:CD:200:VAL:HA	1.74	0.52
6:CG:61:PHE:O	6:CG:65:LEU:HD13	2.10	0.52
8:CI:44:ARG:O	8:CI:47:VAL:HG22	2.09	0.52
9:CJ:12:ALA:HB3	9:CJ:18:ILE:HB	1.91	0.52
20:CB:112:ARG:HA	20:CB:115:ASP:OD2	2.09	0.52
23:DB:283:G:H2'	23:DB:284:U:O4'	2.10	0.52
23:DB:405:U:OP2	23:DB:405:U:H4'	2.10	0.52
23:DB:753:A:H2'	23:DB:754:U:H6	1.72	0.52
23:DB:1130:U:O2	23:DB:2025:C:H5"	2.10	0.52
23:DB:1442:U:H2'	23:DB:1443:U:H6	1.73	0.52
23:DB:1642:G:O2'	23:DB:1643:G:H5'	2.10	0.52
23:DB:1828:G:O6	25:DC:220:ARG:HD2	2.10	0.52
23:DB:1847:A:H4'	23:DB:1848:A:H8	1.74	0.52
23:DB:1854:A:N6	23:DB:1888:G:H1'	2.24	0.52
23:DB:2529:G:H4'	29:DG:174:LYS:HD2	1.90	0.52
23:DB:2543:G:H8	23:DB:2543:G:H5'	1.74	0.52
23:DB:2592:G:H2'	23:DB:2593:U:O4'	2.10	0.52
23:DB:2813:A:H2'	23:DB:2814:A:H8	1.74	0.52
25:DC:6:LYS:HB3	25:DC:8:THR:HG22	1.92	0.52
26:DD:13:ARG:HD3	26:DD:15:PHE:CE1	2.45	0.52
26:DD:90:PHE:N	26:DD:94:GLN:OE1	2.42	0.52
26:DD:154:LYS:HD3	26:DD:154:LYS:H	1.74	0.52
28:DF:72:SER:CA	28:DF:80:GLN:H	2.20	0.52
32:DK:105:ARG:HD2	32:DK:122:VAL:HG11	1.91	0.52
1:AA:252:U:H2'	1:AA:253:A:C8	2.45	0.52
1:AA:411:A:C4	1:AA:413:G:H1'	2.45	0.52
1:AA:560:A:N1	1:AA:566:G:H5'	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:957:U:O2	1:AA:959:A:H8	1.92	0.52
1:AA:1121:U:H2'	1:AA:1122:U:O4'	2.09	0.52
1:AA:1121:U:O2'	1:AA:1122:U:H5'	2.10	0.52
1:AA:1127:G:O2'	1:AA:1128:C:H5'	2.09	0.52
1:AA:1521:C:H2'	1:AA:1522:U:C6	2.45	0.52
2:AC:35:ASP:HB3	2:AC:39:ARG:HH12	1.75	0.52
2:AC:88:LYS:HE3	2:AC:88:LYS:O	2.09	0.52
3:AD:157:ALA:O	3:AD:160:LEU:HD22	2.10	0.52
21:AU:40:PRO:HA	21:AU:44:ARG:HD2	1.91	0.52
23:BB:228:C:O2	23:BB:418:C:H4'	2.09	0.52
23:BB:705:A:N6	23:BB:726:G:O2'	2.42	0.52
23:BB:815:C:OP2	39:BR:85:LYS:HE2	2.10	0.52
23:BB:1043:C:O2'	23:BB:1044:C:H5'	2.10	0.52
23:BB:1397:U:H5"	23:BB:1398:C:H5	1.74	0.52
23:BB:2083:G:H2'	23:BB:2084:C:H6	1.74	0.52
23:BB:2098:U:H2'	23:BB:2099:U:H6	1.75	0.52
23:BB:2487:G:H2'	23:BB:2488:G:C8	2.45	0.52
26:BD:8:LYS:HB2	26:BD:201:LEU:HD11	1.91	0.52
26:BD:180:VAL:HG22	26:BD:187:LEU:CD1	2.40	0.52
27:BE:182:ALA:O	27:BE:183:PHE:HB2	2.09	0.52
28:BF:62:GLN:HE22	28:BF:90:LEU:HA	1.75	0.52
28:BF:133:GLU:HA	28:BF:150:GLY:HA2	1.90	0.52
30:BH:27:ARG:HG2	30:BH:27:ARG:HH21	1.75	0.52
32:BK:17:ARG:HB3	32:BK:45:GLU:CG	2.38	0.52
34:BM:94:ALA:O	34:BM:96:ILE:HG23	2.09	0.52
41:BT:59:ASN:O	41:BT:84:TYR:HB2	2.08	0.52
48:B1:6:GLU:HB2	48:B1:52:LYS:HZ3	1.75	0.52
1:CA:301:G:H2'	1:CA:302:G:H8	1.75	0.52
1:CA:1273:C:H2'	1:CA:1274:A:O4'	2.09	0.52
7:CH:55:LYS:HA	7:CH:55:LYS:NZ	2.25	0.52
8:CI:46:VAL:HG23	8:CI:47:VAL:H	1.74	0.52
10:CK:95:THR:HG23	10:CK:96:ILE:N	2.25	0.52
14:CO:35:ILE:CD1	14:CO:58:MET:HG3	2.39	0.52
15:CP:25:ARG:HD3	15:CP:25:ARG:N	2.21	0.52
15:CP:59:HIS:O	15:CP:63:GLN:HG3	2.08	0.52
23:DB:100:U:OP1	23:DB:100:U:H3'	2.09	0.52
23:DB:138:U:H5"	23:DB:139:U:OP1	2.09	0.52
23:DB:693:A:H2'	23:DB:694:U:C6	2.44	0.52
23:DB:812:C:H4'	38:DQ:12:ARG:NH2	2.23	0.52
23:DB:1453:A:H4'	23:DB:1453:A:OP1	2.10	0.52
23:DB:1607:C:H4'	23:DB:1608:A:O5'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2144:G:C2	23:DB:2146:C:H5'	2.44	0.52
23:DB:2298:A:H2'	23:DB:2299:U:O4'	2.09	0.52
23:DB:2657:A:H2'	23:DB:2658:C:O4'	2.10	0.52
24:DV:9:ARG:CZ	24:DV:20:LEU:HD11	2.40	0.52
26:DD:116:LYS:HB3	26:DD:118:PHE:CZ	2.44	0.52
28:DF:3:LEU:HD11	28:DF:172:PHE:CG	2.45	0.52
32:DK:101:GLY:HA2	37:DP:65:ASN:HB2	1.92	0.52
35:DN:28:LEU:HD12	35:DN:48:VAL:HG21	1.91	0.52
35:DN:49:GLU:HA	35:DN:94:TYR:HD2	1.74	0.52
35:DN:106:ASP:C	35:DN:108:ALA:H	2.12	0.52
41:DT:81:LYS:HG3	41:DT:82:LYS:N	2.24	0.52
43:DW:17:ALA:HA	43:DW:35:ILE:CG2	2.38	0.52
43:DW:59:PHE:CE2	43:DW:61:LYS:HG3	2.45	0.52
49:D2:30:VAL:HA	49:D2:33:ARG:HH21	1.75	0.52
1:AA:398:U:H2'	1:AA:399:G:C8	2.45	0.52
1:AA:1029:U:O3'	1:AA:1030:U:H3'	2.10	0.52
1:AA:1326:U:H2'	1:AA:1327:C:C6	2.44	0.52
2:AC:178:ARG:HG2	2:AC:206:ILE:HA	1.90	0.52
3:AD:94:GLU:HG3	3:AD:99:ASN:HD21	1.75	0.52
12:AM:22:TYR:CD1	12:AM:65:GLU:HA	2.45	0.52
18:AS:12:LEU:O	18:AS:15:LEU:HB2	2.09	0.52
19:AT:66:ILE:HG23	19:AT:70:LYS:HB3	1.92	0.52
21:AU:24:LYS:HZ3	21:AU:25:ALA:N	1.99	0.52
23:BB:93:G:H2'	23:BB:94:A:O4'	2.10	0.52
23:BB:1487:U:H2'	23:BB:1488:C:H6	1.74	0.52
23:BB:1576:U:O2'	23:BB:1577:C:H5'	2.09	0.52
23:BB:1607:C:H4'	23:BB:1608:A:O5'	2.10	0.52
23:BB:2276:G:OP2	34:BM:85:GLY:N	2.40	0.52
23:BB:2598:A:OP1	25:BC:233:GLY:HA3	2.10	0.52
23:BB:2814:A:H2'	23:BB:2815:C:C6	2.45	0.52
24:BV:57:TYR:HA	24:BV:74:ALA:HB3	1.91	0.52
28:BF:62:GLN:HG3	28:BF:91:ARG:HH11	1.75	0.52
29:BG:152:ARG:HH11	29:BG:162:ARG:HA	1.74	0.52
31:BJ:15:TRP:HB3	31:BJ:137:PRO:HG3	1.92	0.52
31:BJ:71:ASP:HA	31:BJ:88:THR:OG1	2.10	0.52
32:BK:4:GLU:OE2	32:BK:23:LYS:HD2	2.10	0.52
34:BM:31:PHE:O	34:BM:131:VAL:HG23	2.09	0.52
37:BP:20:ARG:NE	37:BP:91:VAL:HG21	2.21	0.52
41:BT:29:THR:HA	41:BT:86:THR:CA	2.34	0.52
43:BW:49:ASN:O	43:BW:50:VAL:HG13	2.09	0.52
46:BZ:69:ALA:HA	46:BZ:72:ARG:NH2	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:469:C:H2'	1:CA:470:C:H6	1.75	0.52
1:CA:818:G:C3'	1:CA:819:A:H5"	2.40	0.52
3:CD:187:ARG:NH1	3:CD:191:SER:HB3	2.25	0.52
4:CE:113:VAL:HG23	4:CE:114:LEU:N	2.25	0.52
8:CI:46:VAL:HG23	8:CI:47:VAL:N	2.25	0.52
9:CJ:76:ILE:HD13	9:CJ:79:PRO:HB3	1.91	0.52
9:CJ:93:ALA:HB3	9:CJ:96:VAL:HG22	1.91	0.52
11:CL:41:PRO:HB3	11:CL:49:ARG:NH1	2.24	0.52
13:CN:16:ALA:HA	13:CN:20:PHE:HB2	1.92	0.52
23:DB:161:A:C3'	23:DB:162:U:H5"	2.37	0.52
23:DB:296:U:H2'	23:DB:297:G:C8	2.44	0.52
23:DB:587:C:N3	33:DL:33:ARG:NH2	2.57	0.52
23:DB:946:C:H2'	23:DB:947:A:C8	2.44	0.52
23:DB:1826:G:H2'	23:DB:1827:U:H6	1.75	0.52
23:DB:2083:G:H2'	23:DB:2084:C:C6	2.45	0.52
23:DB:2329:U:H2'	23:DB:2330:G:C8	2.44	0.52
23:DB:2617:U:C2'	23:DB:2618:G:H5'	2.39	0.52
29:DG:152:ARG:HH11	29:DG:162:ARG:HA	1.75	0.52
29:DG:154:GLU:C	29:DG:156:TYR:H	2.13	0.52
30:DH:5:LEU:HD13	30:DH:13:GLY:HA2	1.92	0.52
33:DL:73:ILE:O	33:DL:105:ILE:HG23	2.09	0.52
33:DL:92:LEU:HD21	33:DL:123:ARG:NH1	2.25	0.52
35:DN:63:ARG:O	35:DN:66:ALA:HB3	2.09	0.52
37:DP:50:ARG:HB3	37:DP:56:SER:HB3	1.92	0.52
41:DT:59:ASN:O	41:DT:84:TYR:HB2	2.10	0.52
1:AA:1207:G:O2'	1:AA:1208:C:H5'	2.10	0.52
6:AG:135:LYS:HE2	6:AG:136:LYS:N	2.24	0.52
11:AL:49:ARG:HH12	11:AL:88:ASP:CB	2.23	0.52
13:AN:50:LEU:CD2	13:AN:51:PRO:HD3	2.40	0.52
18:AS:63:ASP:O	18:AS:66:VAL:HG22	2.10	0.52
20:AB:134:LEU:HA	20:AB:137:THR:HG23	1.90	0.52
21:AU:11:PHE:HA	2:CC:70:ALA:O	2.09	0.52
23:BB:286:U:H2'	23:BB:287:G:C8	2.44	0.52
23:BB:781:A:OP1	25:BC:216:ARG:NH2	2.42	0.52
23:BB:1080:A:H1'	52:BI:127:SER:HA	1.90	0.52
23:BB:1199:U:H2'	23:BB:1200:C:C6	2.45	0.52
23:BB:1454:C:H5'	35:BN:63:ARG:NE	2.22	0.52
23:BB:1774:C:H2'	23:BB:1774:C:O2	2.10	0.52
23:BB:2757:A:H2'	23:BB:2757:A:N3	2.23	0.52
23:BB:2836:U:H2'	23:BB:2837:A:C8	2.45	0.52
24:BV:16:ALA:HA	24:BV:19:ARG:HE	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:34:VAL:HG12	26:BD:94:GLN:H	1.74	0.52
26:BD:51:THR:HG21	26:BD:76:GLY:HA3	1.91	0.52
33:BL:124:GLY:N	33:BL:143:GLU:HG3	2.25	0.52
35:BN:28:LEU:HD12	35:BN:48:VAL:HG21	1.91	0.52
38:BQ:78:PHE:O	38:BQ:82:LEU:HG	2.10	0.52
41:BT:27:SER:O	41:BT:28:ASN:HB3	2.10	0.52
43:BW:23:LYS:NZ	43:BW:24:ARG:HG3	2.25	0.52
46:BZ:39:TRP:HB2	46:BZ:46:PHE:CE2	2.44	0.52
52:BI:17:ALA:O	52:BI:18:ASN:CB	2.58	0.52
52:BI:23:VAL:HG23	52:BI:24:GLY:N	2.25	0.52
52:BI:48:ILE:HG22	52:BI:49:GLU:HG2	1.91	0.52
1:CA:436:C:O2'	1:CA:437:U:H5'	2.10	0.52
1:CA:803:G:H2'	1:CA:804:U:O4'	2.09	0.52
1:CA:806:C:H2'	1:CA:807:A:H8	1.74	0.52
1:CA:1427:C:H2'	1:CA:1428:A:H8	1.74	0.52
2:CC:35:ASP:HB3	2:CC:39:ARG:NH1	2.25	0.52
3:CD:33:ILE:O	3:CD:35:GLN:HG3	2.10	0.52
5:CF:37:HIS:O	5:CF:97:THR:HG23	2.10	0.52
6:CG:21:LEU:HG	6:CG:22:LEU:H	1.74	0.52
8:CI:44:ARG:HE	8:CI:48:ARG:HH22	1.57	0.52
9:CJ:52:LEU:HB2	13:CN:80:ARG:HE	1.74	0.52
10:CK:28:ASN:HD21	10:CK:47:GLY:H	1.56	0.52
12:CM:111:PRO:O	12:CM:113:LYS:HG3	2.10	0.52
16:CQ:29:LYS:HG3	16:CQ:34:GLY:HA2	1.91	0.52
17:CR:58:ILE:O	17:CR:62:ARG:HG3	2.10	0.52
20:CB:31:PHE:HB2	20:CB:41:ASN:HA	1.91	0.52
21:CU:40:PRO:HA	21:CU:44:ARG:HD2	1.92	0.52
23:DB:257:C:H2'	23:DB:258:G:O4'	2.09	0.52
23:DB:338:G:N2	23:DB:339:U:H1'	2.24	0.52
23:DB:582:A:H2'	23:DB:583:G:H8	1.74	0.52
23:DB:1219:U:H2'	23:DB:1220:G:H8	1.73	0.52
23:DB:1395:A:H4'	23:DB:1397:U:C5	2.45	0.52
23:DB:1886:U:H2'	23:DB:1887:C:C6	2.45	0.52
23:DB:1979:U:O2'	23:DB:1980:G:H5'	2.10	0.52
23:DB:2548:U:H1'	32:DK:23:LYS:NZ	2.24	0.52
25:DC:183:VAL:HG22	25:DC:184:GLU:H	1.75	0.52
28:DF:104:THR:HB	28:DF:105:ILE:HD12	1.92	0.52
29:DG:84:LYS:H	29:DG:85:LYS:HD2	1.75	0.52
30:DH:72:ILE:HG23	30:DH:108:VAL:HG11	1.92	0.52
31:DJ:81:ILE:HG23	31:DJ:82:GLY:N	2.21	0.52
33:DL:73:ILE:HD12	33:DL:106:GLU:HB2	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DO:24:THR:O	36:DO:90:VAL:HB	2.10	0.52
38:DQ:71:ASN:HD21	38:DQ:109:VAL:HG11	1.75	0.52
40:DS:24:ILE:HG23	40:DS:32:ALA:HB1	1.91	0.52
46:DZ:63:GLY:HA3	46:DZ:66:THR:OG1	2.10	0.52
52:DI:63:ASP:O	52:DI:64:ARG:HB2	2.09	0.52
52:DI:126:ARG:HB3	52:DI:126:ARG:NH1	2.24	0.52
1:AA:17:U:O2'	1:AA:18:C:H5'	2.10	0.52
1:AA:36:C:H4'	11:AL:118:VAL:O	2.09	0.52
1:AA:165:G:O2'	1:AA:166:U:H5'	2.10	0.52
1:AA:398:U:H2'	1:AA:399:G:H8	1.73	0.52
1:AA:455:G:O2'	1:AA:456:A:H5'	2.10	0.52
1:AA:1168:U:H4'	1:AA:1169:A:OP2	2.10	0.52
1:AA:1238:A:H2	1:AA:1241:G:N3	2.07	0.52
1:AA:1245:C:H2'	1:AA:1246:A:C8	2.45	0.52
1:AA:1483:A:H1'	23:BB:1948:G:H1'	1.90	0.52
2:AC:120:THR:HG22	2:AC:188:ALA:HB2	1.92	0.52
2:AC:166:TRP:HA	2:AC:166:TRP:CE3	2.45	0.52
5:AF:52:ASN:HA	5:AF:53:LYS:HZ3	1.75	0.52
14:AO:35:ILE:CD1	14:AO:58:MET:HG3	2.38	0.52
21:AU:40:PRO:O	21:AU:44:ARG:HB2	2.10	0.52
23:BB:433:C:H2'	23:BB:434:U:C6	2.45	0.52
23:BB:644:A:H2'	23:BB:644:A:N3	2.24	0.52
23:BB:1107:G:H2'	23:BB:1108:U:H6	1.74	0.52
23:BB:1210:G:C5'	23:BB:1212:G:H5"	2.39	0.52
23:BB:1849:G:H2'	23:BB:1850:G:H8	1.75	0.52
24:BV:65:VAL:C	24:BV:67:GLY:H	2.12	0.52
25:BC:211:ARG:C	25:BC:213:ARG:H	2.12	0.52
26:BD:149:ASN:C	26:BD:152:PRO:HD2	2.29	0.52
28:BF:43:ILE:HG23	28:BF:44:ALA:N	2.13	0.52
29:BG:6:ALA:HB3	29:BG:68:ARG:NE	2.24	0.52
30:BH:31:VAL:O	30:BH:32:PRO:C	2.47	0.52
34:BM:21:ALA:HB2	34:BM:100:LYS:HG2	1.90	0.52
34:BM:126:ILE:HD12	34:BM:126:ILE:H	1.75	0.52
1:CA:151:A:H5'	1:CA:152:A:OP2	2.09	0.52
1:CA:636:U:H2'	1:CA:637:C:C6	2.45	0.52
1:CA:1020:G:H2'	1:CA:1021:A:H5'	1.91	0.52
1:CA:1166:G:H2'	1:CA:1168:U:OP2	2.09	0.52
1:CA:1436:U:H2'	1:CA:1437:A:H8	1.75	0.52
2:CC:19:SER:HB2	2:CC:39:ARG:HH22	1.74	0.52
2:CC:165:GLU:HG3	2:CC:166:TRP:H	1.75	0.52
12:CM:86:ARG:CG	12:CM:96:VAL:HG11	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CS:44:ILE:O	18:CS:44:ILE:HG23	2.10	0.52
19:CT:68:LYS:HA	19:CT:68:LYS:HZ3	1.75	0.52
22:DA:30:C:H2'	22:DA:30:C:O2	2.09	0.52
22:DA:54:G:H21	28:DF:25:MET:CE	2.22	0.52
23:DB:182:A:H2'	23:DB:183:C:H6	1.74	0.52
23:DB:438:G:H2'	23:DB:439:A:C8	2.45	0.52
23:DB:519:U:H2'	23:DB:520:G:H8	1.74	0.52
23:DB:857:G:O2'	43:DW:19:ARG:HD2	2.10	0.52
23:DB:1099:G:H5"	52:DI:2:LYS:HB2	1.92	0.52
23:DB:1221:C:O2'	23:DB:1222:U:H5'	2.10	0.52
23:DB:1387:A:H2'	23:DB:1388:G:H8	1.73	0.52
23:DB:1688:U:H2'	23:DB:1698:A:N6	2.25	0.52
23:DB:1720:U:O2'	23:DB:1721:G:H5'	2.10	0.52
23:DB:1863:G:H2'	23:DB:1864:U:O4'	2.09	0.52
23:DB:2577:A:H5"	23:DB:2578:G:H5'	1.90	0.52
26:DD:16:THR:HB	26:DD:18:ASP:OD1	2.10	0.52
26:DD:180:VAL:HG22	26:DD:187:LEU:CD1	2.40	0.52
29:DG:93:TYR:C	29:DG:94:ARG:HG3	2.29	0.52
33:DL:61:LEU:HD12	33:DL:61:LEU:N	2.25	0.52
43:DW:36:ILE:O	43:DW:39:GLN:HB3	2.09	0.52
46:DZ:21:ALA:HB3	46:DZ:23:ASN:HD21	1.73	0.52
52:DI:32:VAL:HG22	52:DI:60:VAL:CG2	2.40	0.52
1:AA:376:G:H2'	1:AA:377:G:C8	2.45	0.52
1:AA:469:C:H2'	1:AA:470:C:H6	1.75	0.52
1:AA:547:A:H4'	1:AA:548:G:O5'	2.10	0.52
1:AA:707:U:H4'	10:AK:21:HIS:CD2	2.45	0.52
3:AD:33:ILE:HG13	3:AD:34:GLU:N	2.25	0.52
3:AD:199:ILE:HD12	3:AD:200:VAL:N	2.25	0.52
7:AH:17:GLN:NE2	7:AH:62:LEU:HB3	2.25	0.52
13:AN:50:LEU:H	13:AN:51:PRO:CD	2.23	0.52
14:AO:52:ARG:HD2	23:BB:715:A:H61	1.75	0.52
17:AR:63:TYR:N	17:AR:63:TYR:CD2	2.77	0.52
20:AB:204:ASP:O	20:AB:208:ALA:HB3	2.09	0.52
23:BB:142:A:C2	41:BT:2:ILE:HG22	2.44	0.52
23:BB:265:A:O2'	23:BB:266:G:H4'	2.10	0.52
23:BB:839:U:H2'	23:BB:840:C:C6	2.45	0.52
23:BB:920:A:H2'	23:BB:921:C:C6	2.45	0.52
23:BB:1060:U:P	52:BI:74:PRO:HA	2.49	0.52
23:BB:1373:A:H5"	23:BB:2213:U:O4	2.10	0.52
23:BB:2636:C:O5'	26:BD:81:GLU:HB2	2.09	0.52
26:BD:69:ALA:CA	26:BD:73:VAL:HB	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:154:LYS:HD3	26:BD:154:LYS:H	1.74	0.52
27:BE:32:VAL:HG23	27:BE:33:VAL:N	2.25	0.52
27:BE:149:ILE:HG23	27:BE:188:MET:CA	2.40	0.52
28:BF:29:ARG:CD	28:BF:29:ARG:H	2.23	0.52
31:BJ:84:ILE:O	31:BJ:84:ILE:HG23	2.09	0.52
33:BL:110:VAL:HG23	33:BL:126:ARG:O	2.09	0.52
35:BN:96:ARG:HG2	35:BN:96:ARG:HH21	1.74	0.52
38:BQ:60:TRP:C	38:BQ:64:ILE:HG12	2.31	0.52
38:BQ:71:ASN:ND2	38:BQ:73:ILE:HG22	2.25	0.52
39:BR:39:LEU:HA	39:BR:49:ILE:HG12	1.92	0.52
40:BS:71:VAL:HG22	40:BS:71:VAL:O	2.10	0.52
42:BU:48:VAL:O	42:BU:50:ALA:N	2.43	0.52
46:BZ:17:ASN:HB2	46:BZ:25:THR:OG1	2.08	0.52
48:B1:25:ASN:OD1	48:B1:27:ARG:HB2	2.09	0.52
1:CA:45:G:H2'	1:CA:46:G:C8	2.45	0.52
1:CA:169:C:O2'	1:CA:170:U:H5'	2.09	0.52
1:CA:505:G:H4'	1:CA:534:U:C4	2.45	0.52
1:CA:1092:A:H5"	6:CG:3:ARG:NH1	2.25	0.52
6:CG:13:PRO:O	6:CG:14:ASP:O	2.27	0.52
8:CI:61:ASP:C	8:CI:62:LEU:HD13	2.30	0.52
18:CS:43:MET:O	18:CS:46:LEU:HB2	2.09	0.52
18:CS:49:ALA:O	18:CS:56:HIS:HD2	1.93	0.52
20:CB:18:GLN:O	20:CB:37:VAL:HG23	2.09	0.52
22:DA:14:U:H4'	22:DA:70:C:O2	2.09	0.52
23:DB:41:C:H2'	23:DB:42:A:H8	1.74	0.52
23:DB:925:A:O2'	23:DB:926:G:H5'	2.10	0.52
23:DB:964:C:O2'	23:DB:2273:A:H1'	2.09	0.52
23:DB:1100:C:H2'	23:DB:1101:U:C6	2.42	0.52
23:DB:1259:G:H2'	23:DB:1260:A:C8	2.45	0.52
23:DB:1373:A:H5"	23:DB:2213:U:O4	2.10	0.52
23:DB:1482:G:H2'	23:DB:1483:G:H8	1.75	0.52
23:DB:1571:A:H2'	23:DB:1572:A:C8	2.45	0.52
23:DB:2336:A:H61	43:DW:40:ARG:HG3	1.74	0.52
23:DB:2751:G:OP2	29:DG:2:ARG:HD2	2.10	0.52
23:DB:2805:C:O2'	23:DB:2806:C:H5'	2.10	0.52
26:DD:164:GLN:HG3	26:DD:165:MET:N	2.23	0.52
32:DK:34:GLY:O	32:DK:36:GLY:N	2.43	0.52
40:DS:17:VAL:C	40:DS:19:LEU:N	2.64	0.52
41:DT:11:LEU:CD2	41:DT:46:ALA:HB1	2.40	0.52
43:DW:32:ALA:C	43:DW:34:SER:H	2.12	0.52
48:D1:8:ILE:HD11	48:D1:52:LYS:HG3	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DI:45:THR:HA	52:DI:48:ILE:CG2	2.40	0.52
1:AA:160:A:H2'	1:AA:161:A:O4'	2.10	0.51
1:AA:730:G:O2'	1:AA:766:A:H5'	2.09	0.51
1:AA:1101:A:H4'	1:AA:1102:A:O5'	2.10	0.51
1:AA:1120:C:H2'	1:AA:1121:U:C6	2.46	0.51
1:AA:1151:A:O2'	1:AA:1152:A:H8	1.92	0.51
3:AD:185:PRO:HB2	3:AD:190:LEU:HD12	1.91	0.51
6:AG:42:VAL:O	6:AG:46:LEU:HB2	2.10	0.51
6:AG:99:ALA:O	6:AG:103:ILE:HG13	2.10	0.51
6:AG:129:ASN:HA	6:AG:134:VAL:HG21	1.92	0.51
8:AI:71:ILE:HD12	8:AI:71:ILE:N	2.25	0.51
11:AL:106:VAL:CG2	11:AL:116:TYR:HB3	2.40	0.51
13:AN:26:LEU:HA	13:AN:29:ILE:HB	1.93	0.51
17:AR:23:LYS:HG3	17:AR:24:ASP:N	2.26	0.51
22:BA:70:C:O2'	22:BA:71:C:H5'	2.10	0.51
23:BB:41:C:H2'	23:BB:42:A:H8	1.75	0.51
23:BB:136:G:H2'	23:BB:137:U:C5	2.44	0.51
23:BB:299:A:N6	23:BB:322:A:O2'	2.42	0.51
23:BB:504:A:H2'	23:BB:504:A:N3	2.24	0.51
23:BB:642:U:HO2'	23:BB:643:A:H8	1.58	0.51
23:BB:947:A:H2'	23:BB:948:C:H6	1.74	0.51
23:BB:2436:G:O2'	23:BB:2437:G:H5'	2.11	0.51
23:BB:2543:G:H2'	23:BB:2544:G:C8	2.45	0.51
23:BB:2653:U:O2'	29:BG:109:SER:HB2	2.10	0.51
26:BD:25:THR:HG21	26:BD:193:VAL:CG2	2.39	0.51
30:BH:25:TYR:CG	30:BH:30:LEU:HG	2.45	0.51
30:BH:31:VAL:CB	30:BH:32:PRO:HD3	2.33	0.51
32:BK:12:ASP:OD2	32:BK:85:VAL:HG13	2.09	0.51
33:BL:73:ILE:O	33:BL:105:ILE:HG23	2.10	0.51
33:BL:81:ASP:HA	33:BL:84:LYS:HD2	1.91	0.51
35:BN:83:LEU:HA	35:BN:86:ARG:HB2	1.92	0.51
38:BQ:26:ALA:C	38:BQ:28:SER:H	2.13	0.51
39:BR:16:GLU:CA	39:BR:98:ILE:HG22	2.37	0.51
39:BR:19:THR:CG2	39:BR:97:LYS:HD2	2.40	0.51
47:B0:43:THR:HG21	47:B0:47:TYR:HB2	1.91	0.51
48:B1:6:GLU:CD	48:B1:6:GLU:H	2.13	0.51
52:BI:100:ILE:O	52:BI:139:VAL:HA	2.10	0.51
1:CA:205:A:H2'	1:CA:206:C:C6	2.45	0.51
1:CA:1347:G:H22	1:CA:1373:G:H2'	1.72	0.51
1:CA:1461:G:H2'	1:CA:1462:C:C6	2.43	0.51
1:CA:1524:C:H2'	1:CA:1525:G:C8	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CE:156:ARG:HB2	7:CH:43:GLY:HA3	1.91	0.51
5:CF:70:VAL:HA	5:CF:73:GLU:HG3	1.91	0.51
7:CH:17:GLN:OE1	7:CH:69:ALA:HB1	2.10	0.51
13:CN:68:ARG:HH11	13:CN:71:GLY:H	1.57	0.51
14:CO:80:LEU:O	14:CO:84:LEU:HD13	2.10	0.51
18:CS:61:VAL:HA	18:CS:65:MET:SD	2.49	0.51
21:CU:40:PRO:O	21:CU:44:ARG:HB2	2.10	0.51
23:DB:141:G:H3'	23:DB:141:G:N3	2.24	0.51
23:DB:165:A:H2'	23:DB:166:U:C6	2.45	0.51
23:DB:245:G:H2'	23:DB:246:C:H6	1.75	0.51
23:DB:2151:U:O2'	23:DB:2152:G:H5'	2.10	0.51
23:DB:2570:G:H2'	23:DB:2571:U:O4'	2.10	0.51
23:DB:2786:U:H5"	26:DD:70:LYS:HG3	1.92	0.51
23:DB:2809:A:H2'	23:DB:2810:A:C8	2.45	0.51
23:DB:2868:A:H2'	23:DB:2869:G:C8	2.45	0.51
24:DV:70:ILE:HD13	24:DV:70:ILE:N	2.23	0.51
24:DV:77:VAL:HA	24:DV:89:ILE:HG22	1.90	0.51
27:DE:161:ALA:CA	27:DE:164:LEU:HB2	2.35	0.51
35:DN:2:ARG:HE	35:DN:2:ARG:C	2.14	0.51
38:DQ:90:ASP:O	38:DQ:94:LEU:HB2	2.09	0.51
39:DR:60:LYS:N	39:DR:100:GLY:HA3	2.23	0.51
41:DT:57:VAL:HG12	41:DT:86:THR:OG1	2.09	0.51
49:D2:43:THR:O	49:D2:44:VAL:C	2.47	0.51
52:DI:54:ILE:HD13	52:DI:54:ILE:C	2.29	0.51
1:AA:238:A:C2'	1:AA:239:U:H5"	2.36	0.51
1:AA:458:U:H2'	1:AA:459:A:H8	1.75	0.51
1:AA:724:G:O2'	1:AA:725:G:H5'	2.10	0.51
1:AA:1220:G:H2'	1:AA:1221:G:H8	1.74	0.51
1:AA:1315:U:H5	18:AS:5:LYS:HZ1	1.57	0.51
1:AA:1478:U:H2'	1:AA:1479:C:C6	2.45	0.51
1:AA:1530:G:H2'	1:AA:1531:A:H8	1.75	0.51
4:AE:35:LEU:HD22	4:AE:133:ILE:HA	1.92	0.51
4:AE:113:VAL:HG11	4:AE:136:VAL:HG23	1.90	0.51
5:AF:73:GLU:O	5:AF:77:THR:HG23	2.10	0.51
7:AH:100:ILE:HG13	7:AH:128:VAL:O	2.10	0.51
10:AK:74:LYS:C	10:AK:76:TYR:H	2.14	0.51
15:AP:72:ALA:HA	15:AP:75:ILE:HD12	1.92	0.51
18:AS:29:PRO:HA	18:AS:47:THR:O	2.11	0.51
19:AT:49:ALA:C	19:AT:52:GLU:HB3	2.31	0.51
23:BB:7:G:H4'	31:BJ:15:TRP:CZ2	2.46	0.51
23:BB:279:A:H61	23:BB:361:G:H1'	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:861:A:H2'	23:BB:862:G:O4'	2.10	0.51
23:BB:1495:A:H2'	23:BB:1496:A:C8	2.46	0.51
23:BB:2662:A:H2'	23:BB:2663:G:O4'	2.11	0.51
24:BV:80:HIS:HA	24:BV:87:GLN:OE1	2.10	0.51
25:BC:6:LYS:HB3	25:BC:8:THR:HG22	1.92	0.51
25:BC:18:VAL:O	25:BC:18:VAL:HG13	2.09	0.51
30:BH:83:LYS:O	30:BH:91:PHE:N	2.43	0.51
34:BM:73:ILE:HG13	34:BM:93:VAL:HB	1.92	0.51
40:BS:57:ASN:O	40:BS:61:ASN:HB2	2.10	0.51
46:BZ:6:GLN:NE2	46:BZ:50:ARG:N	2.57	0.51
48:B1:29:LYS:N	48:B1:30:PRO:HD3	2.26	0.51
1:CA:83:C:HO2'	1:CA:84:U:H3'	1.73	0.51
1:CA:224:U:H2'	1:CA:225:C:C6	2.45	0.51
1:CA:501:C:H1'	1:CA:549:C:H1'	1.91	0.51
1:CA:584:G:O2'	1:CA:585:G:H5'	2.10	0.51
1:CA:1097:C:H2'	1:CA:1098:C:H6	1.76	0.51
1:CA:1150:A:O2'	1:CA:1151:A:H5'	2.10	0.51
1:CA:1349:A:OP1	8:CI:121:ARG:HB2	2.11	0.51
1:CA:1459:G:H2'	1:CA:1460:C:H6	1.75	0.51
1:CA:1521:C:H2'	1:CA:1522:U:H6	1.75	0.51
2:CC:13:ILE:HD13	2:CC:13:ILE:N	2.24	0.51
13:CN:64:ARG:HB2	13:CN:77:GLY:O	2.11	0.51
17:CR:63:TYR:CD2	17:CR:63:TYR:N	2.78	0.51
21:CU:39:LYS:O	21:CU:43:GLU:HB3	2.10	0.51
23:DB:299:A:H2'	23:DB:300:A:C8	2.46	0.51
23:DB:504:A:H2'	23:DB:504:A:N3	2.24	0.51
23:DB:980:A:C6	23:DB:981:A:N1	2.79	0.51
23:DB:1021:A:H62	23:DB:1141:U:H3	1.57	0.51
23:DB:1063:G:H4'	52:DI:135:MET:HG2	1.91	0.51
23:DB:1260:A:H2'	23:DB:1261:C:H6	1.75	0.51
23:DB:1454:C:C5	35:DN:64:ARG:HG2	2.45	0.51
23:DB:2674:G:H2'	23:DB:2675:A:C8	2.46	0.51
28:DF:62:GLN:HE22	28:DF:90:LEU:HA	1.75	0.51
30:DH:135:HIS:CG	30:DH:136:SER:H	2.29	0.51
34:DM:134:THR:HG22	34:DM:136:MET:H	1.74	0.51
38:DQ:94:LEU:CD2	39:DR:11:GLN:HB2	2.40	0.51
39:DR:49:ILE:HB	39:DR:53:PHE:O	2.10	0.51
43:DW:45:HIS:HB3	43:DW:52:CYS:HB2	1.92	0.51
46:DZ:40:VAL:HG22	46:DZ:45:ARG:O	2.10	0.51
51:D4:8:LYS:O	51:D4:25:VAL:HG21	2.10	0.51
1:AA:254:G:H4'	16:AQ:19:SER:OG	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1229:A:H2'	1:AA:1230:C:C6	2.45	0.51
2:AC:35:ASP:HB3	2:AC:39:ARG:NH1	2.26	0.51
4:AE:10:LEU:HA	4:AE:39:GLY:O	2.10	0.51
5:AF:5:GLU:HA	5:AF:63:ASN:HA	1.92	0.51
11:AL:82:ARG:HH11	11:AL:82:ARG:HG2	1.75	0.51
23:BB:60:G:C6	23:BB:74:A:N6	2.78	0.51
23:BB:62:U:C2'	23:BB:63:A:H5'	2.39	0.51
23:BB:165:A:H2'	23:BB:166:U:C6	2.44	0.51
23:BB:1203:U:H3'	23:BB:1204:A:H5"	1.92	0.51
23:BB:1430:G:H2'	23:BB:1431:A:O4'	2.10	0.51
23:BB:1794:A:O2'	23:BB:1795:C:H5'	2.10	0.51
23:BB:2395:C:H2'	23:BB:2396:G:O4'	2.10	0.51
27:BE:98:LYS:NZ	27:BE:99:LYS:HG2	2.24	0.51
28:BF:103:ILE:HD11	28:BF:174:PHE:CG	2.46	0.51
28:BF:103:ILE:HD11	28:BF:174:PHE:HA	1.92	0.51
28:BF:104:THR:HB	28:BF:105:ILE:HD12	1.92	0.51
30:BH:26:ALA:C	30:BH:28:ASN:H	2.14	0.51
33:BL:3:LEU:O	33:BL:5:THR:N	2.43	0.51
34:BM:97:GLN:HB2	34:BM:98:PRO:CD	2.40	0.51
36:BO:111:ARG:HD2	36:BO:117:PHE:C	2.31	0.51
49:B2:43:THR:O	49:B2:44:VAL:C	2.48	0.51
51:B4:3:VAL:HB	51:B4:37:GLN:HE22	1.75	0.51
52:BI:125:THR:O	52:BI:129:GLU:HG3	2.10	0.51
1:CA:60:A:H4'	1:CA:61:G:O5'	2.10	0.51
1:CA:81:A:O2'	1:CA:82:G:H5'	2.09	0.51
1:CA:98:A:H2'	1:CA:99:C:C6	2.45	0.51
1:CA:279:A:C5'	1:CA:280:C:H3'	2.40	0.51
1:CA:844:G:H2'	1:CA:846:G:C8	2.45	0.51
1:CA:1006:G:H2'	1:CA:1007:U:C6	2.45	0.51
1:CA:1320:C:C5	18:CS:36:ARG:HA	2.46	0.51
3:CD:185:PRO:HB2	3:CD:190:LEU:HD12	1.92	0.51
4:CE:55:VAL:N	4:CE:56:PRO:HD2	2.25	0.51
8:CI:35:GLU:HG3	8:CI:44:ARG:HD3	1.91	0.51
10:CK:126:ARG:HA	10:CK:126:ARG:NE	2.24	0.51
12:CM:36:ALA:HB1	12:CM:54:THR:HB	1.92	0.51
23:DB:154:U:H2'	23:DB:155:A:H8	1.74	0.51
23:DB:199:A:O2'	23:DB:200:U:H5'	2.10	0.51
23:DB:495:G:H1'	40:DS:57:ASN:ND2	2.25	0.51
23:DB:526:A:N6	23:DB:2626:C:H4'	2.26	0.51
23:DB:545:U:H4'	23:DB:550:C:C2	2.45	0.51
23:DB:644:A:H2'	23:DB:644:A:N3	2.24	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:664:G:H2'	23:DB:665:U:C6	2.45	0.51
23:DB:720:U:H2'	23:DB:721:A:H8	1.75	0.51
23:DB:2336:A:N6	43:DW:40:ARG:HG3	2.25	0.51
23:DB:2411:A:H2'	23:DB:2412:A:C8	2.45	0.51
23:DB:2728:U:H2'	23:DB:2729:G:C8	2.45	0.51
23:DB:2880:C:O4'	35:DN:91:ALA:HB3	2.10	0.51
25:DC:53:ILE:O	25:DC:53:ILE:HG23	2.10	0.51
27:DE:58:LYS:HD3	27:DE:58:LYS:N	2.16	0.51
27:DE:153:LEU:HG	27:DE:154:ASP:N	2.25	0.51
31:DJ:106:LYS:HA	31:DJ:106:LYS:HE3	1.93	0.51
33:DL:142:ILE:HG22	33:DL:143:GLU:N	2.24	0.51
42:DU:48:VAL:O	42:DU:48:VAL:HG13	2.10	0.51
43:DW:37:VAL:CG1	43:DW:38:ARG:HH11	2.22	0.51
46:DZ:68:LEU:HB3	46:DZ:78:TYR:CE1	2.46	0.51
1:AA:104:G:O2'	1:AA:105:G:H5'	2.11	0.51
1:AA:501:C:H1'	1:AA:549:C:H1'	1.91	0.51
1:AA:522:C:H2'	1:AA:523:A:O4'	2.10	0.51
1:AA:636:U:H2'	1:AA:637:C:C6	2.45	0.51
1:AA:1136:C:OP1	1:AA:1136:C:H3'	2.10	0.51
1:AA:1297:G:H1'	1:AA:1298:U:C5	2.43	0.51
1:AA:1430:A:H2'	1:AA:1431:A:O4'	2.10	0.51
1:AA:1471:U:O2'	1:AA:1472:U:H5'	2.10	0.51
2:AC:50:SER:HB2	2:AC:70:ALA:HB3	1.91	0.51
7:AH:4:ASP:OD1	7:AH:7:ALA:HB2	2.11	0.51
10:AK:110:THR:HA	21:AU:3:ILE:O	2.10	0.51
18:AS:10:ILE:HG22	18:AS:37:SER:HB3	1.91	0.51
19:AT:49:ALA:O	19:AT:52:GLU:HB3	2.11	0.51
22:BA:74:U:H2'	22:BA:75:G:H8	1.73	0.51
23:BB:107:G:H2'	23:BB:108:G:H8	1.76	0.51
23:BB:329:G:N2	42:BU:16:LYS:HE3	2.25	0.51
23:BB:438:G:H2'	23:BB:439:A:C8	2.46	0.51
23:BB:596:U:H2'	23:BB:597:G:H8	1.75	0.51
23:BB:674:G:H5"	27:BE:71:GLY:N	2.26	0.51
23:BB:744:U:H2'	23:BB:745:G:O4'	2.11	0.51
23:BB:1511:G:H2'	23:BB:1512:C:C6	2.45	0.51
23:BB:1793:C:H2'	23:BB:1794:A:C8	2.46	0.51
23:BB:1973:G:H2'	23:BB:1974:C:C6	2.45	0.51
23:BB:2085:U:O2'	23:BB:2086:U:H5'	2.11	0.51
23:BB:2538:C:O2'	23:BB:2539:C:H5'	2.11	0.51
23:BB:2556:C:H2'	23:BB:2557:G:O4'	2.11	0.51
23:BB:2740:A:H2'	23:BB:2741:A:C8	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2772:C:H4'	26:BD:171:THR:CG2	2.41	0.51
24:BV:77:VAL:HA	24:BV:89:ILE:HG22	1.92	0.51
25:BC:245:THR:C	25:BC:247:TRP:H	2.14	0.51
27:BE:29:HIS:O	27:BE:33:VAL:HG23	2.10	0.51
27:BE:112:LEU:C	27:BE:114:ARG:H	2.13	0.51
35:BN:81:ASN:O	35:BN:85:PRO:HD2	2.10	0.51
37:BP:50:ARG:HB3	37:BP:56:SER:HB3	1.93	0.51
38:BQ:56:PHE:O	38:BQ:59:LEU:HB3	2.10	0.51
39:BR:16:GLU:HA	39:BR:98:ILE:O	2.09	0.51
40:BS:66:ILE:HG12	40:BS:67:ASP:N	2.24	0.51
48:B1:8:ILE:HD11	48:B1:52:LYS:HG3	1.92	0.51
51:B4:27:CYS:SG	51:B4:29:ALA:HB3	2.51	0.51
2:CC:34:SER:O	2:CC:38:VAL:HG22	2.10	0.51
4:CE:113:VAL:HG11	4:CE:136:VAL:HG23	1.92	0.51
5:CF:100:SER:HA	17:CR:23:LYS:HE2	1.91	0.51
6:CG:131:GLY:O	6:CG:134:VAL:HG22	2.11	0.51
6:CG:135:LYS:HE2	6:CG:136:LYS:N	2.25	0.51
7:CH:11:THR:HA	7:CH:14:ARG:NH1	2.25	0.51
11:CL:49:ARG:HH12	11:CL:88:ASP:CB	2.24	0.51
15:CP:20:VAL:HG23	15:CP:35:ARG:HA	1.92	0.51
19:CT:85:LEU:HD23	19:CT:86:ALA:N	2.23	0.51
23:DB:117:G:H5'	23:DB:126:A:C8	2.29	0.51
23:DB:188:G:OP1	46:DZ:14:THR:HG23	2.10	0.51
23:DB:281:C:H2'	23:DB:282:A:C8	2.44	0.51
23:DB:693:A:OP1	25:DC:38:LYS:HG2	2.11	0.51
23:DB:836:G:H2'	23:DB:837:C:H6	1.70	0.51
23:DB:839:U:H2'	23:DB:840:C:H6	1.76	0.51
23:DB:948:C:H2'	23:DB:949:G:C8	2.45	0.51
23:DB:975:A:H1'	23:DB:990:A:C2	2.45	0.51
23:DB:1256:G:H21	27:DE:77:ILE:HG22	1.74	0.51
23:DB:1820:U:H4'	23:DB:1821:A:OP2	2.11	0.51
23:DB:2352:A:N1	43:DW:30:VAL:HG11	2.25	0.51
24:DV:57:TYR:HA	24:DV:74:ALA:HB3	1.92	0.51
25:DC:211:ARG:C	25:DC:213:ARG:H	2.13	0.51
26:DD:9:VAL:O	26:DD:9:VAL:HG13	2.11	0.51
33:DL:42:SER:C	33:DL:44:GLY:H	2.13	0.51
37:DP:103:THR:HG22	37:DP:104:GLY:N	2.25	0.51
39:DR:80:ARG:O	39:DR:81:LYS:HD3	2.11	0.51
43:DW:70:VAL:HG22	43:DW:70:VAL:O	2.11	0.51
46:DZ:33:LEU:O	46:DZ:34:HIS:CG	2.64	0.51
49:D2:31:LEU:HD22	49:D2:42:LEU:HD12	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:79:G:H2'	1:AA:80:A:N7	2.25	0.51
1:AA:762:U:H2'	1:AA:763:G:C8	2.45	0.51
5:AF:38:ARG:HH21	5:AF:63:ASN:HD21	1.53	0.51
5:AF:100:SER:HA	17:AR:23:LYS:HE2	1.91	0.51
9:AJ:30:LYS:NZ	9:AJ:36:VAL:HB	2.25	0.51
15:AP:25:ARG:H	15:AP:25:ARG:CD	2.23	0.51
18:AS:11:ASP:OD1	18:AS:34:SER:HA	2.10	0.51
19:AT:43:LYS:HE2	19:AT:44:ALA:N	2.22	0.51
20:AB:119:GLN:O	20:AB:125:PHE:HB3	2.10	0.51
21:AU:39:LYS:O	21:AU:43:GLU:HB3	2.09	0.51
23:BB:81:G:H2'	23:BB:82:U:O4'	2.09	0.51
23:BB:241:A:H8	23:BB:241:A:OP1	1.93	0.51
23:BB:297:G:H5"	42:BU:84:PHE:HB3	1.93	0.51
23:BB:492:A:H2'	23:BB:493:G:O4'	2.10	0.51
23:BB:544:C:H2'	23:BB:545:U:C5	2.45	0.51
23:BB:1580:A:H2'	23:BB:1581:G:O4'	2.11	0.51
23:BB:2188:U:H2'	23:BB:2189:U:H6	1.73	0.51
23:BB:2674:G:H2'	23:BB:2675:A:C8	2.45	0.51
23:BB:2745:C:O3'	29:BG:141:GLY:HA3	2.10	0.51
23:BB:2869:G:H2'	23:BB:2870:C:O4'	2.10	0.51
26:BD:51:THR:HG22	26:BD:52:THR:N	2.24	0.51
27:BE:1:MET:O	27:BE:13:THR:HA	2.09	0.51
27:BE:117:ARG:NH1	33:BL:2:ARG:HB2	2.25	0.51
30:BH:49:ALA:HB3	30:BH:50:ARG:CZ	2.41	0.51
39:BR:39:LEU:HD23	39:BR:39:LEU:N	2.26	0.51
40:BS:73:LYS:HE3	40:BS:74:ILE:N	2.25	0.51
41:BT:39:THR:O	41:BT:39:THR:HG23	2.10	0.51
43:BW:45:HIS:HB3	43:BW:52:CYS:HB2	1.93	0.51
44:BX:13:GLU:HA	44:BX:16:THR:OG1	2.11	0.51
45:BY:50:VAL:HA	45:BY:52:PHE:CE1	2.45	0.51
46:BZ:5:CYS:SG	46:BZ:7:VAL:HG12	2.50	0.51
46:BZ:7:VAL:HG21	46:BZ:59:ILE:CD1	2.40	0.51
1:CA:137:U:H2'	1:CA:138:G:C8	2.45	0.51
1:CA:452:A:H2'	1:CA:453:G:O4'	2.09	0.51
1:CA:1361:G:C2'	1:CA:1362:A:H5"	2.36	0.51
1:CA:1477:U:H2'	1:CA:1478:U:H6	1.75	0.51
12:CM:76:ILE:HG23	12:CM:79:LEU:HD12	1.93	0.51
20:CB:95:TRP:HH2	20:CB:100:LEU:HB2	1.75	0.51
20:CB:212:TYR:O	20:CB:216:VAL:HG22	2.11	0.51
23:DB:4:U:H2'	23:DB:5:A:C8	2.45	0.51
23:DB:38:A:N3	27:DE:43:THR:HB	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:58:G:N3	23:DB:73:A:H2	2.08	0.51
23:DB:200:U:O2'	46:DZ:22:LEU:HD12	2.10	0.51
23:DB:455:C:N3	23:DB:472:A:H2'	2.26	0.51
23:DB:642:U:HO2'	23:DB:643:A:H8	1.57	0.51
23:DB:1117:C:H2'	23:DB:1118:C:C6	2.46	0.51
23:DB:1565:C:H5"	25:DC:17:LYS:HE2	1.92	0.51
23:DB:2634:A:H2'	23:DB:2635:A:C8	2.45	0.51
25:DC:141:HIS:NE2	25:DC:194:VAL:HB	2.26	0.51
27:DE:1:MET:HB2	27:DE:16:GLU:HB2	1.91	0.51
27:DE:29:HIS:NE2	33:DL:8:PRO:HG3	2.24	0.51
28:DF:62:GLN:HG3	28:DF:91:ARG:NH1	2.25	0.51
44:DX:18:LEU:O	44:DX:22:LEU:HB3	2.10	0.51
1:AA:218:U:H2'	1:AA:219:U:H6	1.74	0.51
1:AA:531:U:H3	1:AA:1208:C:H5"	1.76	0.51
1:AA:968:A:C8	1:AA:1062:U:H4'	2.44	0.51
1:AA:1512:U:H2'	1:AA:1513:A:H8	1.75	0.51
7:AH:11:THR:HA	7:AH:14:ARG:NH1	2.25	0.51
12:AM:14:ALA:HB2	12:AM:42:VAL:HG23	1.92	0.51
22:BA:42:C:C6	28:BF:65:LEU:HD13	2.46	0.51
23:BB:526:A:N6	23:BB:2626:C:H4'	2.26	0.51
23:BB:1022:G:N2	23:BB:1142:A:C2	2.76	0.51
23:BB:1203:U:H3'	23:BB:1204:A:C5'	2.40	0.51
23:BB:1247:A:O2'	23:BB:1248:G:H5'	2.11	0.51
23:BB:1541:C:H2'	23:BB:1542:U:O4'	2.11	0.51
23:BB:1921:G:H2'	23:BB:1922:G:H8	1.76	0.51
23:BB:1965:C:H5"	23:BB:1966:A:H2'	1.92	0.51
23:BB:2075:U:H2'	23:BB:2238:G:N2	2.26	0.51
23:BB:2098:U:H2'	23:BB:2099:U:C6	2.45	0.51
23:BB:2246:G:H2'	23:BB:2247:A:C8	2.46	0.51
23:BB:2700:A:H2'	23:BB:2701:U:C6	2.46	0.51
23:BB:2882:A:H3'	23:BB:2883:A:H5"	1.92	0.51
25:BC:93:VAL:HG13	25:BC:94:LEU:H	1.75	0.51
25:BC:130:PRO:HG2	25:BC:133:ASN:ND2	2.25	0.51
26:BD:141:ARG:O	26:BD:142:VAL:HG13	2.10	0.51
27:BE:150:THR:HG21	27:BE:153:LEU:HA	1.92	0.51
32:BK:60:ALA:HB2	32:BK:86:LEU:HA	1.93	0.51
32:BK:79:PHE:CD1	32:BK:79:PHE:N	2.78	0.51
35:BN:106:ASP:C	35:BN:108:ALA:H	2.13	0.51
38:BQ:24:TYR:CG	38:BQ:25:GLY:N	2.78	0.51
43:BW:18:LYS:HG3	43:BW:19:ARG:H	1.76	0.51
46:BZ:63:GLY:O	46:BZ:67:VAL:HG23	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:394:G:H2'	1:CA:395:C:H6	1.74	0.51
1:CA:398:U:H2'	1:CA:399:G:H8	1.76	0.51
1:CA:420:U:H2'	1:CA:422:C:C5	2.46	0.51
1:CA:448:A:H2'	1:CA:449:G:C8	2.46	0.51
1:CA:919:A:O2'	1:CA:920:U:H5'	2.11	0.51
1:CA:1464:U:H2'	1:CA:1465:A:C8	2.45	0.51
3:CD:199:ILE:HD12	3:CD:200:VAL:N	2.26	0.51
7:CH:51:GLU:HB3	7:CH:57:GLU:HB3	1.91	0.51
11:CL:14:LYS:HG2	11:CL:15:VAL:N	2.26	0.51
22:DA:54:G:O2'	22:DA:55:U:H5'	2.10	0.51
22:DA:109:A:H2'	22:DA:110:C:O4'	2.10	0.51
23:DB:544:C:H2'	23:DB:545:U:C5	2.45	0.51
23:DB:664:G:H2'	23:DB:665:U:H6	1.76	0.51
23:DB:813:U:H2'	23:DB:814:C:H6	1.76	0.51
23:DB:877:A:H2'	23:DB:900:A:N6	2.26	0.51
23:DB:1041:G:C2	23:DB:1042:G:N7	2.79	0.51
23:DB:2015:A:H2'	23:DB:2016:U:O4'	2.10	0.51
23:DB:2093:G:O5'	30:DH:24:GLY:HA3	2.10	0.51
23:DB:2471:A:O2'	23:DB:2472:G:C8	2.59	0.51
27:DE:182:ALA:O	27:DE:183:PHE:HB2	2.11	0.51
28:DF:47:LYS:HA	28:DF:50:ASP:OD1	2.10	0.51
28:DF:134:GLN:HB3	28:DF:149:ARG:HB3	1.93	0.51
29:DG:10:VAL:CG1	29:DG:16:VAL:HG21	2.40	0.51
30:DH:65:ALA:HA	30:DH:68:ARG:CG	2.40	0.51
32:DK:19:VAL:C	32:DK:41:ILE:HD11	2.31	0.51
33:DL:81:ASP:HA	33:DL:84:LYS:HD2	1.92	0.51
35:DN:38:LEU:CB	35:DN:39:PRO:HD3	2.38	0.51
36:DO:66:GLY:HA2	36:DO:102:ARG:NE	2.26	0.51
37:DP:20:ARG:NE	37:DP:91:VAL:HG21	2.22	0.51
40:DS:24:ILE:HD11	40:DS:36:LEU:CD1	2.31	0.51
43:DW:30:VAL:HA	43:DW:60:ALA:O	2.10	0.51
49:D2:19:ARG:HG2	49:D2:19:ARG:HH21	1.74	0.51
52:DI:85:ILE:CD1	52:DI:137:LEU:HD21	2.40	0.51
1:AA:176:C:H3'	1:AA:177:G:H21	1.76	0.51
1:AA:188:C:H2'	1:AA:189:A:O4'	2.10	0.51
1:AA:285:C:H2'	1:AA:286:C:C6	2.45	0.51
1:AA:797:C:O2'	1:AA:798:U:H5'	2.10	0.51
1:AA:1008:U:H5"	13:AN:23:ARG:HH22	1.75	0.51
1:AA:1219:A:H2'	1:AA:1220:G:C8	2.46	0.51
3:AD:187:ARG:NH1	3:AD:191:SER:HB3	2.26	0.51
4:AE:15:ILE:HD12	4:AE:35:LEU:HG	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AG:61:PHE:O	6:AG:65:LEU:HD13	2.11	0.51
9:AJ:12:ALA:HB3	9:AJ:18:ILE:HB	1.92	0.51
14:AO:52:ARG:HG3	14:AO:56:LEU:HD13	1.92	0.51
18:AS:49:ALA:O	18:AS:56:HIS:HD2	1.93	0.51
20:AB:69:VAL:HB	20:AB:162:VAL:CG2	2.40	0.51
21:AU:13:VAL:O	21:AU:13:VAL:HG13	2.10	0.51
23:BB:315:G:H2'	23:BB:316:C:C6	2.46	0.51
23:BB:794:A:H2'	23:BB:795:C:H6	1.76	0.51
23:BB:836:G:H2'	23:BB:837:C:H6	1.72	0.51
23:BB:1193:G:H2'	23:BB:1194:A:H5"	1.93	0.51
23:BB:1256:G:H21	27:BE:77:ILE:HG22	1.75	0.51
23:BB:1688:U:H2'	23:BB:1698:A:N6	2.26	0.51
23:BB:1949:G:H2'	23:BB:1950:G:H8	1.75	0.51
23:BB:2065:C:H1'	23:BB:2449:U:O2	2.11	0.51
23:BB:2449:U:H4'	23:BB:2450:A:OP1	2.11	0.51
23:BB:2634:A:H2'	23:BB:2635:A:C8	2.46	0.51
25:BC:53:ILE:O	25:BC:53:ILE:HG23	2.11	0.51
25:BC:245:THR:OG1	25:BC:249:VAL:HG23	2.10	0.51
27:BE:128:ALA:H	27:BE:133:LEU:CD1	2.24	0.51
30:BH:83:LYS:HD2	30:BH:91:PHE:CD1	2.45	0.51
30:BH:103:VAL:HG12	30:BH:106:ALA:HB3	1.91	0.51
31:BJ:36:LEU:O	31:BJ:51:GLY:HA3	2.10	0.51
31:BJ:42:ALA:O	31:BJ:44:TYR:N	2.43	0.51
31:BJ:44:TYR:CD2	38:BQ:59:LEU:HD21	2.45	0.51
37:BP:98:TYR:C	37:BP:100:ARG:H	2.13	0.51
38:BQ:80:ASN:ND2	38:BQ:81:GLY:H	2.09	0.51
41:BT:12:ARG:HE	44:BX:29:ARG:NH1	2.09	0.51
52:BI:29:GLN:HE21	52:BI:29:GLN:HA	1.75	0.51
1:CA:285:C:H2'	1:CA:286:C:C6	2.45	0.51
1:CA:369:G:O2'	1:CA:370:C:H5'	2.10	0.51
1:CA:462:G:H3'	1:CA:463:U:C6	2.45	0.51
1:CA:730:G:O2'	1:CA:766:A:H5'	2.09	0.51
3:CD:53:GLN:HB3	3:CD:202:LEU:HB2	1.93	0.51
6:CG:20:GLU:O	6:CG:23:ALA:HB3	2.11	0.51
6:CG:99:ALA:O	6:CG:103:ILE:HG13	2.10	0.51
6:CG:110:ARG:HD3	6:CG:118:ARG:HA	1.92	0.51
7:CH:115:ALA:O	7:CH:120:LEU:HD23	2.11	0.51
9:CJ:41:PRO:HA	9:CJ:72:ARG:HD3	1.93	0.51
11:CL:43:LYS:NZ	11:CL:44:PRO:HD3	2.25	0.51
11:CL:113:ARG:HE	11:CL:120:ARG:HA	1.75	0.51
20:CB:130:LYS:O	20:CB:134:LEU:HB2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:205:ALA:HB3	20:CB:208:ALA:CB	2.39	0.51
23:DB:289:G:H2'	23:DB:290:U:H6	1.76	0.51
23:DB:757:G:H2'	23:DB:758:C:H5'	1.92	0.51
23:DB:973:A:O4'	23:DB:1188:U:C6	2.64	0.51
23:DB:1000:A:H2'	23:DB:1001:A:H8	1.74	0.51
23:DB:1163:G:H4'	39:DR:92:TRP:CD1	2.45	0.51
23:DB:1219:U:H2'	23:DB:1220:G:C8	2.46	0.51
23:DB:2078:C:O2'	23:DB:2079:U:H5'	2.11	0.51
23:DB:2398:U:H2'	23:DB:2399:G:C8	2.45	0.51
24:DV:44:HIS:CE1	24:DV:85:LYS:HB2	2.46	0.51
25:DC:43:ASN:HB2	25:DC:49:THR:CG2	2.40	0.51
25:DC:245:THR:C	25:DC:247:TRP:H	2.14	0.51
28:DF:102:LEU:HA	28:DF:106:ALA:HB3	1.91	0.51
30:DH:1:MET:HE3	30:DH:26:ALA:HB3	1.93	0.51
31:DJ:71:ASP:HA	31:DJ:88:THR:OG1	2.11	0.51
31:DJ:89:PHE:CE1	31:DJ:93:ILE:HD13	2.45	0.51
36:DO:110:ALA:HA	36:DO:113:ALA:HB3	1.92	0.51
37:DP:56:SER:HB2	37:DP:75:THR:HB	1.93	0.51
46:DZ:2:SER:O	46:DZ:4:VAL:HG13	2.11	0.51
52:DI:78:LEU:HD13	52:DI:108:ILE:HG23	1.92	0.51
1:AA:610:U:O2	1:AA:610:U:O4'	2.29	0.51
1:AA:1427:C:H2'	1:AA:1428:A:H8	1.75	0.51
2:AC:78:LYS:C	2:AC:80:GLY:H	2.14	0.51
14:AO:42:PHE:CE1	14:AO:55:LEU:HD22	2.46	0.51
14:AO:63:ARG:HH12	14:AO:87:ARG:HH22	1.57	0.51
23:BB:69:C:H2'	23:BB:70:G:C8	2.46	0.51
23:BB:199:A:O2'	23:BB:200:U:H5'	2.11	0.51
23:BB:596:U:H2'	23:BB:597:G:C8	2.45	0.51
23:BB:964:C:O2'	23:BB:2273:A:H1'	2.11	0.51
23:BB:1150:C:H2'	23:BB:1151:A:H8	1.76	0.51
23:BB:1642:G:O2'	23:BB:1643:G:H5'	2.11	0.51
23:BB:1858:A:H2'	23:BB:1859:U:O4'	2.11	0.51
23:BB:1880:U:H2'	23:BB:1881:C:C6	2.45	0.51
23:BB:2233:U:H2'	23:BB:2234:G:C8	2.46	0.51
23:BB:2258:C:H5'	23:BB:2259:U:C5	2.39	0.51
23:BB:2379:G:H2'	23:BB:2380:C:C6	2.46	0.51
23:BB:2398:U:H2'	23:BB:2399:G:C8	2.46	0.51
25:BC:14:HIS:O	25:BC:16:VAL:HG23	2.10	0.51
25:BC:173:LEU:HD13	25:BC:173:LEU:N	2.25	0.51
26:BD:117:GLY:O	26:BD:119:ALA:N	2.44	0.51
27:BE:153:LEU:HG	27:BE:154:ASP:H	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BG:7:PRO:O	29:BG:8:VAL:HB	2.10	0.51
29:BG:91:VAL:O	29:BG:93:TYR:N	2.44	0.51
32:BK:18:ARG:O	32:BK:45:GLU:HB2	2.11	0.51
33:BL:2:ARG:HG2	33:BL:2:ARG:O	2.11	0.51
35:BN:8:ARG:HG2	35:BN:10:LEU:HD22	1.93	0.51
37:BP:112:ARG:NH1	37:BP:112:ARG:HB2	2.26	0.51
39:BR:6:GLN:HE22	39:BR:9:GLY:CA	2.23	0.51
41:BT:12:ARG:CD	44:BX:29:ARG:HH12	2.23	0.51
49:B2:39:ARG:HH11	49:B2:39:ARG:HG3	1.76	0.51
1:CA:58:C:O2'	1:CA:59:A:H5'	2.11	0.51
1:CA:272:C:H2'	1:CA:273:U:H6	1.74	0.51
1:CA:389:A:N3	1:CA:389:A:H2'	2.24	0.51
1:CA:738:C:H2'	1:CA:739:C:H6	1.75	0.51
1:CA:1118:U:H1'	1:CA:1179:A:C4	2.46	0.51
3:CD:18:LEU:HG	3:CD:63:ILE:HG12	1.92	0.51
3:CD:31:CYS:SG	3:CD:33:ILE:HB	2.51	0.51
4:CE:10:LEU:HA	4:CE:39:GLY:O	2.11	0.51
13:CN:61:ASN:HB3	13:CN:72:PHE:CE2	2.46	0.51
14:CO:52:ARG:HG3	14:CO:56:LEU:HD13	1.93	0.51
21:CU:43:GLU:HA	21:CU:46:ARG:NE	2.26	0.51
22:DA:42:C:C6	28:DF:65:LEU:HD13	2.46	0.51
23:DB:464:U:H2'	23:DB:465:G:O4'	2.11	0.51
23:DB:855:G:H21	43:DW:23:LYS:CG	2.15	0.51
23:DB:1046:A:H3'	23:DB:1047:G:C5'	2.41	0.51
23:DB:1319:C:O2'	23:DB:1320:C:H5'	2.11	0.51
23:DB:1726:C:H2'	23:DB:1727:C:C6	2.46	0.51
23:DB:1857:G:O2'	23:DB:1858:A:H8	1.92	0.51
23:DB:2070:A:H2'	23:DB:2071:A:C8	2.46	0.51
23:DB:2514:U:H2'	23:DB:2515:C:C6	2.46	0.51
23:DB:2634:A:H2'	23:DB:2635:A:H8	1.76	0.51
25:DC:115:ILE:HA	25:DC:124:LYS:NZ	2.26	0.51
26:DD:10:GLY:HA2	37:DP:4:ILE:HD11	1.91	0.51
26:DD:34:VAL:HG12	26:DD:94:GLN:H	1.75	0.51
32:DK:47:ILE:CG1	32:DK:48:PRO:HD2	2.36	0.51
32:DK:115:ILE:HG23	32:DK:116:ILE:N	2.26	0.51
35:DN:115:LEU:O	35:DN:117:ASP:N	2.44	0.51
36:DO:36:TYR:HA	36:DO:52:SER:HB3	1.92	0.51
37:DP:20:ARG:HB3	37:DP:23:ASP:CG	2.32	0.51
38:DQ:59:LEU:HD13	38:DQ:60:TRP:N	2.26	0.51
39:DR:49:ILE:HD12	39:DR:49:ILE:O	2.11	0.51
42:DU:11:ILE:O	42:DU:11:ILE:HD13	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DW:23:LYS:NZ	43:DW:24:ARG:HG3	2.26	0.51
1:AA:620:C:C2	3:AD:131:ILE:HG21	2.46	0.51
1:AA:663:A:O2'	1:AA:664:G:H5'	2.11	0.51
1:AA:1302:C:H4'	1:AA:1303:C:OP2	2.10	0.51
1:AA:1432:G:C5'	37:BP:105:LYS:HG2	2.31	0.51
3:AD:72:ARG:HD3	3:AD:203:TYR:CZ	2.45	0.51
6:AG:126:ALA:HA	6:AG:134:VAL:HG13	1.92	0.51
7:AH:27:PRO:HA	7:AH:56:PRO:O	2.11	0.51
10:AK:28:ASN:HD21	10:AK:47:GLY:H	1.59	0.51
12:AM:3:ILE:HD12	12:AM:9:PRO:HD2	1.93	0.51
20:AB:95:TRP:HH2	20:AB:100:LEU:HB2	1.76	0.51
20:AB:119:GLN:C	20:AB:125:PHE:HB3	2.31	0.51
23:BB:263:G:H2'	23:BB:264:C:O4'	2.11	0.51
23:BB:1120:G:O2'	23:BB:1121:C:H5'	2.11	0.51
23:BB:1335:C:H2'	23:BB:1336:A:C8	2.46	0.51
23:BB:1863:G:H2'	23:BB:1864:U:O4'	2.10	0.51
23:BB:2597:G:H5'	25:BC:240:GLY:HA3	1.93	0.51
23:BB:2630:G:H2'	23:BB:2631:G:H8	1.76	0.51
25:BC:128:THR:CA	25:BC:190:THR:HG22	2.35	0.51
26:BD:8:LYS:HG2	26:BD:197:THR:H	1.76	0.51
28:BF:91:ARG:HD3	28:BF:91:ARG:N	2.26	0.51
28:BF:122:ASP:OD2	28:BF:126:ASN:HB2	2.10	0.51
32:BK:26:GLY:O	32:BK:30:ARG:HD2	2.10	0.51
36:BO:56:LYS:O	36:BO:57:ALA:C	2.49	0.51
39:BR:49:ILE:HD12	39:BR:49:ILE:O	2.11	0.51
43:BW:17:ALA:HB1	43:BW:37:VAL:H	1.76	0.51
43:BW:48:ALA:HB3	43:BW:81:ILE:HG13	1.93	0.51
45:BY:20:LYS:HA	45:BY:23:LEU:HB2	1.93	0.51
52:BI:33:ASN:HD21	52:BI:64:ARG:NH1	2.03	0.51
1:CA:176:C:H3'	1:CA:177:G:H21	1.76	0.51
1:CA:254:G:O2'	1:CA:255:G:H5'	2.11	0.51
1:CA:565:U:H3'	1:CA:566:G:H2'	1.92	0.51
1:CA:791:G:C6	1:CA:792:A:N7	2.79	0.51
1:CA:1136:C:OP1	1:CA:1136:C:H3'	2.10	0.51
2:CC:171:ARG:HB2	2:CC:171:ARG:NH1	2.25	0.51
8:CI:55:ASP:HB2	8:CI:59:LYS:HG3	1.93	0.51
15:CP:39:PHE:CG	15:CP:40:ASN:N	2.78	0.51
15:CP:46:LYS:C	15:CP:48:GLU:H	2.12	0.51
16:CQ:30:HIS:HB3	16:CQ:33:TYR:HB2	1.93	0.51
20:CB:16:GLY:HA2	20:CB:40:ILE:HG13	1.93	0.51
22:DA:51:G:OP1	36:DO:63:LYS:HE3	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1098:A:C3’	52:DI:4:VAL:N	2.73	0.51
23:DB:1242:U:H2’	23:DB:1243:C:C6	2.46	0.51
23:DB:1584:U:H5”	23:DB:1585:C:C5	2.46	0.51
23:DB:1827:U:C2’	23:DB:1828:G:H5’	2.41	0.51
23:DB:2258:C:H5’	23:DB:2259:U:C5	2.40	0.51
23:DB:2283:C:H5”	23:DB:2389:G:O2’	2.11	0.51
23:DB:2394:C:H2’	23:DB:2395:C:C6	2.46	0.51
23:DB:2408:U:O2’	23:DB:2409:G:H5’	2.11	0.51
23:DB:2460:U:O5’	23:DB:2460:U:H6	1.93	0.51
25:DC:136:VAL:HG12	25:DC:137:GLY:N	2.26	0.51
26:DD:151:THR:HB	26:DD:152:PRO:HD3	1.93	0.51
27:DE:98:LYS:NZ	27:DE:99:LYS:HG2	2.26	0.51
29:DG:123:GLU:O	29:DG:125:PRO:HD3	2.11	0.51
30:DH:94:ILE:HG22	30:DH:122:LEU:CB	2.40	0.51
30:DH:103:VAL:HG22	30:DH:108:VAL:O	2.11	0.51
32:DK:43:ILE:CG2	32:DK:46:ALA:HB2	2.41	0.51
32:DK:105:ARG:HD2	32:DK:105:ARG:H	1.76	0.51
36:DO:58:ILE:O	36:DO:62:LEU:HB2	2.11	0.51
39:DR:7:SER:HB2	39:DR:22:LEU:CB	2.40	0.51
40:DS:23:LEU:HD21	47:D0:21:LEU:HB3	1.92	0.51
41:DT:38:ALA:HB3	41:DT:81:LYS:HZ3	1.74	0.51
44:DX:26:PHE:HD1	44:DX:27:ASN:ND2	2.07	0.51
52:DI:85:ILE:HD12	52:DI:87:SER:O	2.10	0.51
1:AA:512:U:H2’	1:AA:513:C:H6	1.75	0.51
1:AA:772:U:H2’	1:AA:773:G:C8	2.46	0.51
1:AA:807:A:H2’	1:AA:808:C:C6	2.45	0.51
1:AA:1225:A:H5’	1:AA:1226:C:OP2	2.11	0.51
1:AA:1352:C:H2’	1:AA:1353:G:C8	2.46	0.51
1:AA:1448:C:H2’	1:AA:1449:C:H6	1.76	0.51
5:AF:21:MET:HB3	5:AF:25:TYR:CZ	2.46	0.51
8:AI:120:ALA:O	8:AI:121:ARG:HG2	2.11	0.51
11:AL:113:ARG:HE	11:AL:120:ARG:HA	1.75	0.51
13:AN:2:LYS:O	13:AN:6:LYS:HG3	2.11	0.51
13:AN:50:LEU:HD23	13:AN:51:PRO:HD3	1.93	0.51
20:AB:143:LEU:HB3	20:AB:147:LEU:HD12	1.93	0.51
22:BA:60:C:H2’	22:BA:61:G:H8	1.76	0.51
23:BB:4:U:H2’	23:BB:5:A:H8	1.76	0.51
23:BB:674:G:H4’	27:BE:69:ARG:HB3	1.92	0.51
23:BB:1149:G:H2’	23:BB:1150:C:H6	1.75	0.51
23:BB:1324:G:C6	23:BB:1331:G:C6	2.98	0.51
23:BB:2101:A:H3’	23:BB:2102:G:H5”	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2405:G:H1'	23:BB:2412:A:H61	1.76	0.51
23:BB:2529:G:H4'	29:BG:174:LYS:HB2	1.91	0.51
24:BV:16:ALA:CA	24:BV:19:ARG:HH21	2.25	0.51
25:BC:35:LYS:HG2	25:BC:36:ASN:N	2.23	0.51
26:BD:116:LYS:HD2	26:BD:123:LYS:HE2	1.93	0.51
28:BF:91:ARG:O	28:BF:92:GLY:C	2.49	0.51
32:BK:79:PHE:HD2	37:BP:69:VAL:HG12	1.75	0.51
32:BK:120:PRO:HA	37:BP:65:ASN:ND2	2.25	0.51
35:BN:55:ALA:HA	35:BN:80:PHE:CE1	2.46	0.51
36:BO:84:GLU:C	36:BO:86:GLY:H	2.15	0.51
36:BO:111:ARG:HG2	36:BO:117:PHE:CZ	2.46	0.51
39:BR:4:VAL:O	39:BR:38:VAL:HA	2.11	0.51
39:BR:22:LEU:HD12	39:BR:25:LEU:HD23	1.91	0.51
41:BT:10:VAL:HG21	41:BT:42:GLU:HG3	1.92	0.51
46:BZ:2:SER:O	46:BZ:4:VAL:HG13	2.10	0.51
51:B4:15:LYS:O	51:B4:16:ILE:HB	2.11	0.51
1:CA:79:G:H2'	1:CA:80:A:H8	1.75	0.51
1:CA:612:C:H2'	1:CA:613:C:C6	2.46	0.51
1:CA:734:G:H2'	1:CA:735:C:C6	2.45	0.51
1:CA:1238:A:H5'	1:CA:1336:C:N4	2.26	0.51
1:CA:1471:U:O2'	1:CA:1472:U:H5'	2.10	0.51
1:CA:1515:G:O2'	1:CA:1516:G:H5'	2.11	0.51
8:CI:25:GLY:HA3	8:CI:57:VAL:HA	1.92	0.51
20:CB:69:VAL:HB	20:CB:162:VAL:CG2	2.40	0.51
23:DB:460:A:H4'	41:DT:72:GLN:HB2	1.92	0.51
23:DB:1098:A:C4	52:DI:3:LYS:O	2.63	0.51
23:DB:1245:G:OP1	33:DL:13:LYS:HE3	2.11	0.51
23:DB:1742:U:H2'	23:DB:1743:G:C8	2.45	0.51
23:DB:1792:G:P	25:DC:204:LEU:HD12	2.51	0.51
23:DB:2269:G:H4'	43:DW:19:ARG:NH1	2.20	0.51
25:DC:91:ALA:CB	25:DC:105:ALA:HB2	2.40	0.51
25:DC:142:ASN:O	25:DC:142:ASN:CG	2.49	0.51
26:DD:10:GLY:O	26:DD:11:MET:HB2	2.11	0.51
28:DF:62:GLN:HB2	28:DF:91:ARG:HH11	1.75	0.51
31:DJ:25:LEU:O	31:DJ:27:ARG:N	2.43	0.51
31:DJ:44:TYR:O	31:DJ:45:THR:HB	2.10	0.51
31:DJ:64:VAL:HG22	31:DJ:68:LYS:HD3	1.93	0.51
33:DL:2:ARG:HG2	33:DL:2:ARG:O	2.10	0.51
33:DL:18:ARG:C	33:DL:19:LEU:HD12	2.31	0.51
33:DL:110:VAL:HG23	33:DL:126:ARG:O	2.11	0.51
33:DL:124:GLY:N	33:DL:143:GLU:HG3	2.24	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DL:135:ILE:HG12	33:DL:140:GLY:CA	2.40	0.51
1:AA:584:G:O2'	1:AA:585:G:H5'	2.11	0.50
1:AA:658:C:H2'	1:AA:659:U:C6	2.45	0.50
1:AA:1283:U:H2'	1:AA:1284:C:C6	2.46	0.50
1:AA:1361:G:C2'	1:AA:1362:A:H5"	2.39	0.50
1:AA:1417:G:N2	1:AA:1482:G:H2'	2.25	0.50
1:AA:1500:A:H2'	1:AA:1501:C:H5'	1.93	0.50
4:AE:132:PRO:O	4:AE:136:VAL:HG12	2.11	0.50
5:AF:51:ILE:HD11	5:AF:86:ARG:HG3	1.93	0.50
6:AG:20:GLU:O	6:AG:23:ALA:HB3	2.11	0.50
7:AH:47:ASP:CG	7:AH:48:PHE:H	2.15	0.50
7:AH:55:LYS:HA	7:AH:55:LYS:NZ	2.27	0.50
8:AI:25:GLY:HA3	8:AI:57:VAL:HA	1.93	0.50
13:AN:16:ALA:HA	13:AN:20:PHE:HB2	1.93	0.50
15:AP:43:ALA:HA	15:AP:46:LYS:HE3	1.93	0.50
20:AB:23:ASN:HD22	20:AB:24:PRO:CD	2.23	0.50
20:AB:212:TYR:O	20:AB:216:VAL:HG22	2.10	0.50
22:BA:7:G:O2'	22:BA:8:C:H5'	2.10	0.50
23:BB:79:C:HO2'	23:BB:346:A:H1'	1.75	0.50
23:BB:184:C:H2'	23:BB:185:G:C8	2.45	0.50
23:BB:307:G:N2	23:BB:309:A:H3'	2.25	0.50
23:BB:521:U:H2'	23:BB:522:A:H8	1.74	0.50
23:BB:718:A:H5'	23:BB:719:C:C5	2.46	0.50
23:BB:794:A:H2'	23:BB:795:C:C6	2.46	0.50
23:BB:1023:U:H2'	23:BB:1024:G:H5'	1.93	0.50
23:BB:1744:A:H2'	23:BB:1745:A:C8	2.46	0.50
23:BB:1872:A:H8	23:BB:1872:A:O5'	1.95	0.50
23:BB:2721:A:H2'	23:BB:2722:G:H8	1.76	0.50
26:BD:148:GLN:HG3	26:BD:152:PRO:CB	2.41	0.50
29:BG:8:VAL:HG11	29:BG:49:LEU:CB	2.34	0.50
29:BG:25:ILE:HD13	29:BG:74:MET:HE2	1.93	0.50
30:BH:130:VAL:O	30:BH:142:VAL:HB	2.11	0.50
39:BR:60:LYS:N	39:BR:100:GLY:HA3	2.24	0.50
39:BR:62:GLU:O	39:BR:96:VAL:HA	2.10	0.50
40:BS:29:VAL:HG11	40:BS:55:ILE:CD1	2.37	0.50
52:BI:49:GLU:CG	52:BI:54:ILE:HD11	2.41	0.50
1:CA:317:U:H2'	1:CA:318:G:H8	1.75	0.50
1:CA:458:U:H2'	1:CA:459:A:H8	1.76	0.50
1:CA:493:A:H3'	1:CA:494:G:C8	2.46	0.50
1:CA:784:A:H2'	1:CA:785:G:H8	1.75	0.50
1:CA:1229:A:H2'	1:CA:1230:C:C6	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1283:U:H2'	1:CA:1284:C:C6	2.45	0.50
1:CA:1484:C:H2'	1:CA:1485:U:O4'	2.11	0.50
2:CC:178:ARG:HG2	2:CC:206:ILE:HA	1.93	0.50
5:CF:69:GLU:OE1	5:CF:70:VAL:HG13	2.11	0.50
8:CI:71:ILE:HD12	8:CI:71:ILE:N	2.24	0.50
9:CJ:44:THR:HG23	9:CJ:69:THR:O	2.11	0.50
10:CK:110:THR:HA	21:CU:3:ILE:O	2.12	0.50
10:CK:111:ASP:HB2	21:CU:19:LYS:HE3	1.91	0.50
13:CN:50:LEU:HD23	13:CN:51:PRO:HD3	1.92	0.50
14:CO:42:PHE:CE1	14:CO:55:LEU:HD22	2.46	0.50
18:CS:6:LYS:O	18:CS:8:PRO:HD3	2.10	0.50
18:CS:20:LYS:O	18:CS:23:GLU:HG3	2.11	0.50
23:DB:212:G:H2'	23:DB:213:A:H8	1.76	0.50
23:DB:623:C:H2'	23:DB:624:C:C6	2.46	0.50
23:DB:815:C:OP2	39:DR:85:LYS:HE2	2.11	0.50
23:DB:917:A:C2	23:DB:918:A:H1'	2.46	0.50
23:DB:942:G:H2'	23:DB:943:A:H8	1.76	0.50
23:DB:1099:G:O2'	23:DB:1100:C:H5'	2.11	0.50
23:DB:1401:G:H2'	23:DB:1402:U:C6	2.46	0.50
23:DB:1430:G:H2'	23:DB:1431:A:O4'	2.10	0.50
23:DB:1509:A:H5"	23:DB:1509:A:C8	2.46	0.50
23:DB:2838:G:H2'	23:DB:2839:G:H8	1.76	0.50
23:DB:2885:G:H2'	23:DB:2886:A:C4'	2.41	0.50
25:DC:43:ASN:HD22	25:DC:44:ASN:H	1.59	0.50
25:DC:171:VAL:HG23	25:DC:185:ALA:HB2	1.92	0.50
26:DD:8:LYS:HB2	26:DD:201:LEU:HD11	1.93	0.50
26:DD:35:THR:OG1	26:DD:49:GLN:HG2	2.11	0.50
27:DE:32:VAL:HG23	27:DE:33:VAL:N	2.25	0.50
28:DF:86:CYS:O	28:DF:88:VAL:HG23	2.12	0.50
29:DG:148:ARG:HD3	29:DG:152:ARG:NE	2.26	0.50
30:DH:48:GLU:CB	30:DH:51:ARG:HH21	2.15	0.50
32:DK:8:LEU:HD12	32:DK:8:LEU:H	1.76	0.50
32:DK:17:ARG:HB3	32:DK:45:GLU:CG	2.40	0.50
32:DK:79:PHE:CD1	32:DK:79:PHE:N	2.78	0.50
34:DM:40:ARG:HB3	34:DM:95:LEU:HD12	1.92	0.50
38:DQ:94:LEU:HD12	39:DR:13:ARG:HB2	1.93	0.50
40:DS:84:ARG:HB3	40:DS:96:ILE:HG23	1.93	0.50
42:DU:11:ILE:HA	42:DU:21:ARG:HG2	1.93	0.50
44:DX:17:GLU:HB3	44:DX:53:VAL:CG1	2.40	0.50
51:D4:10:LEU:HD22	51:D4:33:HIS:CD2	2.46	0.50
1:AA:394:G:H2'	1:AA:395:C:H6	1.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:448:A:H2'	1:AA:449:G:C8	2.46	0.50
1:AA:464:U:H2'	1:AA:466:A:OP2	2.11	0.50
1:AA:575:G:H4'	1:AA:576:C:O5'	2.11	0.50
1:AA:586:C:H5"	7:AH:81:GLY:HA2	1.93	0.50
1:AA:627:G:H2'	1:AA:628:G:C8	2.47	0.50
1:AA:708:C:O2'	1:AA:709:U:H5'	2.10	0.50
1:AA:1434:A:H2'	1:AA:1435:G:C8	2.46	0.50
8:AI:78:ILE:HG22	8:AI:82:ILE:HD11	1.93	0.50
9:AJ:8:ILE:HD12	9:AJ:8:ILE:N	2.25	0.50
14:AO:55:LEU:O	14:AO:59:VAL:HG23	2.11	0.50
22:BA:43:C:O2'	28:BF:91:ARG:HD2	2.11	0.50
23:BB:122:G:O2'	23:BB:123:G:H5'	2.11	0.50
23:BB:200:U:O2'	46:BZ:22:LEU:HD12	2.11	0.50
23:BB:257:C:H2'	23:BB:258:G:O4'	2.10	0.50
23:BB:693:A:H2'	23:BB:694:U:C6	2.47	0.50
23:BB:968:C:H2'	23:BB:969:G:C8	2.44	0.50
23:BB:1458:U:C2'	23:BB:1459:G:H5"	2.41	0.50
23:BB:1799:G:C5	25:BC:175:LEU:HD13	2.46	0.50
23:BB:1857:G:H2'	23:BB:1884:G:H22	1.75	0.50
23:BB:1998:A:OP2	26:BD:141:ARG:NH2	2.43	0.50
23:BB:2460:U:H6	23:BB:2460:U:O5'	1.94	0.50
23:BB:2674:G:H4'	32:BK:30:ARG:HG3	1.93	0.50
28:BF:71:LYS:O	28:BF:72:SER:HB3	2.11	0.50
29:BG:140:ILE:HA	29:BG:143:VAL:CG2	2.41	0.50
32:BK:115:ILE:HG23	32:BK:116:ILE:N	2.26	0.50
33:BL:95:LEU:H	33:BL:95:LEU:HD12	1.76	0.50
33:BL:131:ALA:O	33:BL:134:ALA:HB3	2.12	0.50
34:BM:42:THR:O	34:BM:45:GLN:HB2	2.12	0.50
1:CA:547:A:H4'	1:CA:548:G:O5'	2.11	0.50
1:CA:586:C:O2'	1:CA:878:A:H4'	2.11	0.50
1:CA:807:A:H2'	1:CA:808:C:C6	2.47	0.50
1:CA:974:A:OP1	1:CA:974:A:H8	1.93	0.50
1:CA:1101:A:H4'	1:CA:1102:A:O5'	2.11	0.50
1:CA:1500:A:H2'	1:CA:1501:C:H5'	1.93	0.50
2:CC:96:VAL:HB	2:CC:97:PRO:HD2	1.93	0.50
2:CC:161:ILE:HD12	2:CC:161:ILE:N	2.26	0.50
4:CE:35:LEU:HD22	4:CE:133:ILE:HA	1.94	0.50
4:CE:87:VAL:HG23	4:CE:92:ARG:HA	1.93	0.50
16:CQ:39:ARG:HG3	16:CQ:39:ARG:HH11	1.75	0.50
20:CB:83:ALA:HA	20:CB:88:GLN:NE2	2.26	0.50
20:CB:143:LEU:HB3	20:CB:147:LEU:HD12	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:230:G:H2'	23:DB:231:A:H8	1.75	0.50
23:DB:832:U:O2	33:DL:52:GLY:HA2	2.11	0.50
23:DB:1930:G:H2'	23:DB:1968:G:N1	2.26	0.50
23:DB:2544:G:O2'	23:DB:2545:G:H5'	2.11	0.50
23:DB:2567:G:H2'	23:DB:2568:U:C6	2.46	0.50
23:DB:2798:U:H5"	23:DB:2799:A:OP1	2.11	0.50
23:DB:2811:G:O2'	23:DB:2812:G:H5'	2.11	0.50
23:DB:2875:C:H2'	23:DB:2876:G:C8	2.46	0.50
25:DC:128:THR:CA	25:DC:190:THR:HG22	2.36	0.50
25:DC:209:ALA:HA	25:DC:212:TRP:CE2	2.47	0.50
27:DE:1:MET:HB3	27:DE:14:VAL:O	2.11	0.50
27:DE:48:THR:HG23	27:DE:51:GLU:OE2	2.10	0.50
30:DH:114:GLU:CB	30:DH:133:GLN:HG3	2.40	0.50
31:DJ:57:LEU:CD2	31:DJ:128:ASN:HA	2.40	0.50
32:DK:4:GLU:OE2	32:DK:23:LYS:HD2	2.11	0.50
36:DO:111:ARG:HG2	36:DO:117:PHE:CZ	2.47	0.50
37:DP:112:ARG:NH1	37:DP:112:ARG:HB2	2.27	0.50
42:DU:73:ASN:C	42:DU:75:ALA:H	2.15	0.50
42:DU:80:ASP:HB2	42:DU:95:PHE:HD2	1.75	0.50
45:DY:37:ARG:HG2	45:DY:43:ILE:CD1	2.42	0.50
1:AA:239:U:H6	1:AA:239:U:H5'	1.74	0.50
1:AA:734:G:H2'	1:AA:735:C:H6	1.76	0.50
1:AA:1006:G:H2'	1:AA:1007:U:C6	2.46	0.50
1:AA:1097:C:H2'	1:AA:1098:C:C6	2.46	0.50
1:AA:1150:A:H4'	9:AJ:43:PRO:HB3	1.94	0.50
1:AA:1150:A:O2'	1:AA:1151:A:H5'	2.12	0.50
1:AA:1379:G:O2'	1:AA:1380:U:H5'	2.11	0.50
1:AA:1493:A:H1'	54:AA:2059:HYG:N36	2.19	0.50
1:AA:1515:G:O2'	1:AA:1516:G:H5'	2.11	0.50
1:AA:1521:C:H2'	1:AA:1522:U:H6	1.75	0.50
2:AC:57:GLU:O	2:AC:63:ILE:HA	2.10	0.50
12:AM:15:VAL:O	12:AM:19:THR:HG23	2.11	0.50
15:AP:39:PHE:CG	15:AP:40:ASN:N	2.79	0.50
20:AB:116:LEU:HA	20:AB:119:GLN:HG3	1.93	0.50
21:AU:20:ARG:N	21:AU:20:ARG:HD2	2.27	0.50
23:BB:41:C:H2'	23:BB:42:A:C8	2.45	0.50
23:BB:137:U:H2'	23:BB:138:U:O4'	2.10	0.50
23:BB:163:C:O4'	23:BB:163:C:O2	2.25	0.50
23:BB:201:C:H1'	23:BB:250:G:O6	2.11	0.50
23:BB:305:C:H2'	23:BB:306:U:C6	2.45	0.50
23:BB:839:U:H1'	23:BB:1191:G:H1'	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:850:U:O2'	45:BY:22:THR:HG22	2.11	0.50
23:BB:1197:G:H2'	23:BB:1198:U:H6	1.75	0.50
23:BB:1439:A:N7	23:BB:1440:U:N1	2.59	0.50
23:BB:1838:C:H4'	23:BB:1839:G:H8	1.76	0.50
23:BB:1881:C:H2'	23:BB:1882:U:O4'	2.10	0.50
23:BB:2137:U:H2'	23:BB:2138:G:O4'	2.11	0.50
23:BB:2189:U:O2'	23:BB:2190:G:H5'	2.12	0.50
23:BB:2298:A:H2'	23:BB:2299:U:O4'	2.12	0.50
23:BB:2657:A:H2'	23:BB:2658:C:O4'	2.10	0.50
23:BB:2684:U:H2'	23:BB:2685:G:O4'	2.11	0.50
23:BB:2747:G:H2'	23:BB:2748:A:C8	2.46	0.50
23:BB:2867:G:N3	23:BB:2867:G:C2'	2.74	0.50
24:BV:51:GLN:HB2	24:BV:57:TYR:OH	2.10	0.50
25:BC:43:ASN:HD22	25:BC:44:ASN:H	1.59	0.50
25:BC:142:ASN:CG	25:BC:142:ASN:O	2.49	0.50
25:BC:161:VAL:O	25:BC:162:GLN:HB2	2.11	0.50
29:BG:26:LYS:HG2	29:BG:27:GLY:N	2.25	0.50
30:BH:72:ILE:HG13	30:BH:75:LEU:HD21	1.92	0.50
31:BJ:57:LEU:CD2	31:BJ:128:ASN:HA	2.41	0.50
42:BU:21:ARG:HG3	42:BU:21:ARG:HH11	1.76	0.50
43:BW:17:ALA:HA	43:BW:35:ILE:CG2	2.40	0.50
45:BY:23:LEU:CD1	45:BY:28:LEU:HB2	2.41	0.50
52:BI:11:GLN:O	52:BI:11:GLN:HG3	2.10	0.50
52:BI:23:VAL:HG23	52:BI:24:GLY:H	1.76	0.50
1:CA:34:C:H2'	1:CA:35:G:H8	1.76	0.50
1:CA:663:A:O3'	17:CR:52:ARG:NH2	2.43	0.50
1:CA:720:C:OP1	17:CR:40:PRO:HG3	2.11	0.50
1:CA:1017:U:H2'	1:CA:1018:G:C8	2.45	0.50
1:CA:1258:G:O2'	1:CA:1259:C:H5'	2.10	0.50
4:CE:35:LEU:HD21	4:CE:136:VAL:HG11	1.93	0.50
4:CE:80:LEU:HA	4:CE:146:MET:HE1	1.93	0.50
7:CH:7:ALA:O	7:CH:11:THR:HG23	2.11	0.50
10:CK:33:ILE:HG12	10:CK:69:CYS:SG	2.51	0.50
22:DA:60:C:H2'	22:DA:61:G:H8	1.77	0.50
23:DB:358:U:H2'	23:DB:359:G:C8	2.46	0.50
23:DB:425:G:O2'	23:DB:426:C:H5'	2.12	0.50
23:DB:591:U:H1'	50:D3:1:PRO:H2	1.76	0.50
23:DB:920:A:H2'	23:DB:921:C:H6	1.76	0.50
23:DB:1140:C:H2'	23:DB:1141:U:H5'	1.94	0.50
23:DB:1197:G:O2'	23:DB:1198:U:H5'	2.12	0.50
23:DB:1881:C:H2'	23:DB:1882:U:O4'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2515:C:H2'	23:DB:2516:A:H8	1.76	0.50
23:DB:2543:G:H2'	23:DB:2544:G:C8	2.46	0.50
24:DV:16:ALA:CA	24:DV:19:ARG:HH21	2.24	0.50
30:DH:48:GLU:HA	30:DH:51:ARG:NE	2.26	0.50
30:DH:113:SER:N	30:DH:132:PHE:CZ	2.79	0.50
36:DO:56:LYS:O	36:DO:57:ALA:C	2.49	0.50
41:DT:4:GLU:OE1	41:DT:5:GLU:HG2	2.11	0.50
42:DU:94:PHE:HA	42:DU:101:THR:HA	1.93	0.50
43:DW:9:THR:HG23	43:DW:10:ARG:CD	2.34	0.50
43:DW:27:GLY:O	43:DW:63:ASP:HA	2.11	0.50
44:DX:13:GLU:HA	44:DX:16:THR:OG1	2.11	0.50
48:D1:6:GLU:HB2	48:D1:52:LYS:HZ3	1.77	0.50
1:AA:531:U:H3	1:AA:1208:C:C5'	2.24	0.50
1:AA:720:C:OP1	17:AR:40:PRO:HG3	2.12	0.50
1:AA:974:A:H8	1:AA:974:A:OP1	1.95	0.50
1:AA:1074:G:C4'	20:AB:102:ASN:HB2	2.42	0.50
1:AA:1291:U:H2'	1:AA:1292:G:C8	2.46	0.50
1:AA:1389:C:H2'	1:AA:1390:U:C6	2.47	0.50
3:AD:48:SER:O	3:AD:52:VAL:HG23	2.11	0.50
5:AF:51:ILE:O	5:AF:51:ILE:HG23	2.11	0.50
6:AG:74:VAL:HG12	6:AG:87:PRO:HB3	1.93	0.50
7:AH:17:GLN:OE1	7:AH:69:ALA:HB1	2.11	0.50
8:AI:32:ARG:NH1	8:AI:37:TYR:HA	2.27	0.50
10:AK:106:ILE:HG13	10:AK:107:THR:N	2.22	0.50
11:AL:42:LYS:HB3	11:AL:44:PRO:HD2	1.93	0.50
14:AO:16:ARG:HH11	14:AO:16:ARG:HA	1.75	0.50
15:AP:12:LYS:HD2	15:AP:13:LYS:HG3	1.93	0.50
20:AB:46:VAL:O	20:AB:49:PHE:HB2	2.12	0.50
20:AB:68:PHE:HE1	20:AB:88:GLN:HB3	1.77	0.50
22:BA:109:A:H2'	22:BA:110:C:O4'	2.11	0.50
23:BB:58:G:N3	23:BB:73:A:H2	2.09	0.50
23:BB:175:G:O2'	23:BB:176:A:H5'	2.11	0.50
23:BB:1820:U:H4'	23:BB:1821:A:OP2	2.12	0.50
23:BB:1886:U:H2'	23:BB:1887:C:C6	2.46	0.50
23:BB:2450:A:O2'	23:BB:2451:A:H5'	2.11	0.50
23:BB:2811:G:O2'	23:BB:2812:G:H5'	2.10	0.50
23:BB:2849:U:N3	23:BB:2867:G:C8	2.79	0.50
25:BC:136:VAL:HG12	25:BC:137:GLY:N	2.26	0.50
25:BC:221:GLY:O	25:BC:224:MET:HG3	2.11	0.50
29:BG:102:ILE:HG13	29:BG:116:LEU:HD11	1.94	0.50
31:BJ:64:VAL:O	31:BJ:68:LYS:HD2	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BL:57:LEU:C	33:BL:59:ARG:H	2.14	0.50
36:BO:110:ALA:HA	36:BO:113:ALA:HB3	1.93	0.50
38:BQ:90:ASP:O	38:BQ:94:LEU:HB2	2.10	0.50
40:BS:24:ILE:CD1	40:BS:36:LEU:HD21	2.41	0.50
42:BU:78:LYS:CD	42:BU:79:ALA:H	2.24	0.50
43:BW:23:LYS:CG	43:BW:24:ARG:N	2.75	0.50
43:BW:46:ALA:HB2	43:BW:78:PHE:HD1	1.76	0.50
1:CA:538:G:OP2	11:CL:111:GLN:HB2	2.11	0.50
1:CA:560:A:H4'	1:CA:561:U:H5"	1.92	0.50
1:CA:779:C:H5"	10:CK:123:PRO:HB3	1.93	0.50
1:CA:957:U:O2	1:CA:959:A:H8	1.94	0.50
1:CA:1029:U:O3'	1:CA:1030:U:H3'	2.11	0.50
1:CA:1124:G:H5"	9:CJ:37:ARG:O	2.12	0.50
1:CA:1125:U:HO2'	1:CA:1126:U:H2'	1.75	0.50
1:CA:1150:A:H4'	9:CJ:43:PRO:HB3	1.93	0.50
1:CA:1151:A:O2'	1:CA:1152:A:H8	1.94	0.50
1:CA:1220:G:H2'	1:CA:1221:G:H8	1.76	0.50
2:CC:106:ARG:HH11	2:CC:106:ARG:HG2	1.77	0.50
6:CG:29:LEU:O	6:CG:29:LEU:HD23	2.11	0.50
6:CG:42:VAL:O	6:CG:46:LEU:HB2	2.11	0.50
8:CI:52:GLU:O	8:CI:53:LEU:HD13	2.11	0.50
11:CL:33:CYS:H	11:CL:54:VAL:HG13	1.75	0.50
17:CR:23:LYS:HG3	17:CR:24:ASP:N	2.26	0.50
18:CS:39:ILE:HG21	18:CS:61:VAL:HG13	1.93	0.50
22:DA:7:G:O2'	22:DA:8:C:H5'	2.11	0.50
23:DB:588:U:H2'	23:DB:589:U:C6	2.46	0.50
23:DB:1060:U:O2	23:DB:1088:A:C8	2.64	0.50
23:DB:1511:G:H2'	23:DB:1512:C:H6	1.75	0.50
23:DB:1796:U:O2'	23:DB:1797:G:H5'	2.11	0.50
23:DB:1858:A:H2'	23:DB:1859:U:O4'	2.11	0.50
23:DB:2072:C:O2'	23:DB:2073:C:H5'	2.11	0.50
23:DB:2421:G:N7	50:D3:30:HIS:NE2	2.58	0.50
23:DB:2849:U:H4'	23:DB:2850:A:H5'	1.93	0.50
23:DB:2872:A:H1'	23:DB:2873:A:C8	2.46	0.50
25:DC:173:LEU:HD13	25:DC:173:LEU:N	2.25	0.50
25:DC:246:PRO:HB2	25:DC:247:TRP:CZ3	2.46	0.50
27:DE:170:ARG:NH2	27:DE:176:ASP:HB2	2.26	0.50
28:DF:91:ARG:O	28:DF:92:GLY:C	2.49	0.50
32:DK:10:VAL:HG21	32:DK:16:ALA:HA	1.92	0.50
33:DL:47:ARG:HB3	33:DL:47:ARG:HH21	1.76	0.50
50:D3:16:THR:C	50:D3:18:LYS:H	2.14	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DI:2:LYS:C	52:DI:3:LYS:HD2	2.32	0.50
1:AA:137:U:H2'	1:AA:138:G:H8	1.75	0.50
1:AA:193:C:H2'	1:AA:194:C:H6	1.75	0.50
1:AA:600:A:OP2	7:AH:87:ARG:HG2	2.11	0.50
1:AA:602:A:O2'	1:AA:603:U:H5'	2.11	0.50
1:AA:634:C:H2'	1:AA:635:A:H8	1.76	0.50
1:AA:1243:C:O2'	1:AA:1244:G:H5'	2.11	0.50
1:AA:1500:A:C2'	1:AA:1501:C:H5'	2.41	0.50
3:AD:7:LYS:HB2	3:AD:21:LYS:HE2	1.94	0.50
5:AF:18:VAL:HG21	5:AF:58:HIS:CE1	2.46	0.50
10:AK:83:VAL:HG22	10:AK:106:ILE:HD11	1.93	0.50
10:AK:95:THR:HG23	10:AK:96:ILE:N	2.27	0.50
12:AM:36:ALA:HB1	12:AM:54:THR:HB	1.92	0.50
12:AM:106:ARG:HD3	12:AM:111:PRO:HA	1.94	0.50
22:BA:76:G:H1	22:BA:101:A:N6	2.10	0.50
23:BB:130:C:O2'	23:BB:131:A:H5'	2.11	0.50
23:BB:406:G:O2'	23:BB:407:G:H5'	2.12	0.50
23:BB:455:C:N3	23:BB:473:G:H5'	2.26	0.50
23:BB:519:U:H2'	23:BB:520:G:H8	1.77	0.50
23:BB:581:C:H2'	23:BB:582:A:H8	1.77	0.50
23:BB:931:U:H3	23:BB:1166:G:H21	1.60	0.50
23:BB:1083:U:H2'	23:BB:1085:A:OP2	2.11	0.50
23:BB:1150:C:O2'	23:BB:1151:A:H5'	2.11	0.50
23:BB:1199:U:H2'	23:BB:1200:C:H6	1.76	0.50
23:BB:1374:G:H2'	23:BB:1375:U:C6	2.47	0.50
24:BV:89:ILE:HD12	24:BV:89:ILE:O	2.12	0.50
27:BE:48:THR:C	27:BE:50:ALA:H	2.13	0.50
28:BF:1:ALA:O	28:BF:4:HIS:HB3	2.11	0.50
28:BF:107:VAL:N	28:BF:108:PRO:CD	2.75	0.50
31:BJ:48:VAL:HG12	31:BJ:50:THR:HG23	1.94	0.50
32:BK:105:ARG:H	32:BK:105:ARG:CD	2.24	0.50
34:BM:90:GLU:HA	34:BM:90:GLU:OE1	2.12	0.50
37:BP:25:VAL:HA	37:BP:85:VAL:C	2.32	0.50
42:BU:81:ARG:HB2	42:BU:96:LYS:HG2	1.92	0.50
50:B3:16:THR:C	50:B3:18:LYS:H	2.15	0.50
1:CA:1219:A:H2'	1:CA:1220:G:C8	2.46	0.50
3:CD:96:ARG:NH1	3:CD:133:SER:HA	2.25	0.50
5:CF:73:GLU:O	5:CF:77:THR:HG23	2.12	0.50
8:CI:20:ILE:HD12	8:CI:20:ILE:N	2.24	0.50
12:CM:29:SER:O	12:CM:33:LEU:HG	2.11	0.50
13:CN:26:LEU:HA	13:CN:29:ILE:HB	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CN:60:ARG:HE	13:CN:62:ARG:HG2	1.76	0.50
14:CO:55:LEU:O	14:CO:59:VAL:HG23	2.11	0.50
17:CR:42:ARG:HG3	17:CR:43:ILE:N	2.27	0.50
18:CS:35:ARG:HB3	18:CS:50:VAL:HG13	1.91	0.50
20:CB:127:LYS:HD2	20:CB:128:LEU:HD13	1.94	0.50
22:DA:3:C:H2'	22:DA:4:C:C6	2.47	0.50
22:DA:43:C:O2'	28:DF:91:ARG:HD2	2.12	0.50
23:DB:204:A:H4'	23:DB:205:G:OP1	2.11	0.50
23:DB:288:U:C2'	23:DB:289:G:H5'	2.41	0.50
23:DB:490:C:H3'	23:DB:491:G:H5"	1.94	0.50
23:DB:1064:C:H5"	52:DI:87:SER:OG	2.11	0.50
23:DB:1099:G:H3'	52:DI:2:LYS:HA	1.93	0.50
23:DB:1210:G:C5'	23:DB:1212:G:H5"	2.42	0.50
23:DB:1229:C:H2'	23:DB:1230:A:C8	2.47	0.50
23:DB:1794:A:O2'	23:DB:1795:C:H5'	2.12	0.50
26:DD:148:GLN:HG3	26:DD:152:PRO:CB	2.42	0.50
28:DF:33:ILE:HG12	28:DF:155:ILE:HG13	1.94	0.50
28:DF:71:LYS:O	28:DF:72:SER:HB3	2.11	0.50
29:DG:26:LYS:CA	29:DG:32:LEU:H	2.16	0.50
29:DG:116:LEU:HD23	29:DG:121:THR:HA	1.94	0.50
30:DH:27:ARG:CZ	46:DZ:60:ASP:HA	2.41	0.50
31:DJ:36:LEU:HD13	31:DJ:121:LYS:HE3	1.93	0.50
35:DN:55:ALA:HA	35:DN:80:PHE:CE1	2.47	0.50
41:DT:57:VAL:HG22	41:DT:58:VAL:N	2.20	0.50
41:DT:66:LYS:N	41:DT:76:ARG:NH2	2.59	0.50
1:AA:114:U:H2'	1:AA:115:G:C8	2.47	0.50
1:AA:390:U:H2'	1:AA:391:G:H8	1.76	0.50
1:AA:1029:U:H5"	1:AA:1030:U:C5	2.47	0.50
1:AA:1118:U:H1'	1:AA:1179:A:C4	2.47	0.50
3:AD:149:LYS:HB2	3:AD:177:MET:HG3	1.94	0.50
6:AG:21:LEU:HG	6:AG:22:LEU:H	1.76	0.50
6:AG:67:ASN:HB2	6:AG:134:VAL:HG12	1.93	0.50
12:AM:17:ALA:HB2	12:AM:44:ILE:HD11	1.93	0.50
14:AO:80:LEU:O	14:AO:84:LEU:HD13	2.11	0.50
17:AR:42:ARG:HG3	17:AR:43:ILE:N	2.27	0.50
20:AB:10:LYS:O	20:AB:13:VAL:HG23	2.12	0.50
23:BB:219:A:O2'	23:BB:220:G:H5'	2.12	0.50
23:BB:338:G:N2	23:BB:339:U:H1'	2.26	0.50
23:BB:626:A:H2'	33:BL:78:ARG:NH1	2.27	0.50
23:BB:1163:G:O2'	23:BB:1164:C:H5'	2.12	0.50
23:BB:1403:A:H2'	23:BB:1404:C:C6	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1482:G:H2'	23:BB:1483:G:H8	1.76	0.50
23:BB:2072:C:O2'	23:BB:2073:C:H5'	2.12	0.50
25:BC:90:ILE:HD12	25:BC:102:TYR:HB3	1.93	0.50
26:BD:104:VAL:HA	26:BD:106:LYS:HZ1	1.77	0.50
27:BE:5:LEU:CD1	27:BE:10:SER:HB2	2.41	0.50
35:BN:38:LEU:CB	35:BN:39:PRO:HD3	2.37	0.50
1:CA:86:G:H1'	1:CA:87:C:O4'	2.12	0.50
1:CA:312:C:H2'	1:CA:313:A:H8	1.77	0.50
1:CA:724:G:O2'	1:CA:725:G:H5'	2.10	0.50
1:CA:1387:G:H2'	1:CA:1388:C:C6	2.46	0.50
1:CA:1459:G:H2'	1:CA:1460:C:C6	2.45	0.50
3:CD:55:ARG:HG3	3:CD:55:ARG:NH1	2.26	0.50
4:CE:87:VAL:HG22	4:CE:88:HIS:N	2.26	0.50
6:CG:12:LEU:HD22	6:CG:13:PRO:HD2	1.94	0.50
12:CM:3:ILE:HD12	12:CM:9:PRO:HD2	1.93	0.50
12:CM:70:ARG:CZ	28:DF:142:TYR:HB2	2.42	0.50
23:DB:41:C:H2'	23:DB:42:A:C8	2.45	0.50
23:DB:279:A:N6	23:DB:361:G:O2'	2.44	0.50
23:DB:475:C:H4'	23:DB:509:C:H2'	1.94	0.50
23:DB:688:U:O2'	23:DB:689:A:H5'	2.12	0.50
23:DB:696:G:O2'	23:DB:697:G:H5'	2.11	0.50
23:DB:1047:G:H1'	23:DB:1111:A:N6	2.27	0.50
23:DB:1779:U:C5	23:DB:1784:A:N7	2.79	0.50
23:DB:1812:U:O2'	25:DC:43:ASN:ND2	2.44	0.50
23:DB:1841:U:C2	23:DB:1842:G:C8	3.00	0.50
23:DB:1857:G:H2'	23:DB:1884:G:H22	1.76	0.50
23:DB:2294:G:P	36:DO:94:ARG:HH11	2.35	0.50
23:DB:2341:G:H2'	23:DB:2342:C:C6	2.46	0.50
24:DV:30:ILE:HG23	24:DV:72:VAL:HG11	1.92	0.50
26:DD:56:LYS:HG3	26:DD:58:ASN:HB2	1.93	0.50
27:DE:5:LEU:CD1	27:DE:10:SER:HB2	2.42	0.50
27:DE:67:ARG:HD2	27:DE:68:ALA:O	2.11	0.50
34:DM:73:ILE:HG13	34:DM:93:VAL:HB	1.94	0.50
38:DQ:80:ASN:ND2	38:DQ:81:GLY:H	2.09	0.50
39:DR:16:GLU:CA	39:DR:98:ILE:HG22	2.39	0.50
39:DR:19:THR:CG2	39:DR:97:LYS:HD2	2.42	0.50
41:DT:9:LYS:HG2	41:DT:9:LYS:O	2.12	0.50
41:DT:68:LYS:O	41:DT:69:ARG:CB	2.59	0.50
48:D1:6:GLU:HB2	48:D1:52:LYS:CE	2.42	0.50
52:DI:1:ALA:C	52:DI:2:LYS:HD2	2.32	0.50
1:AA:452:A:H2'	1:AA:453:G:O4'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:767:A:H2'	1:AA:768:A:C8	2.47	0.50
2:AC:146:LYS:HD3	2:AC:204:GLY:HA2	1.92	0.50
3:AD:16:THR:HG22	3:AD:17:ASP:N	2.27	0.50
8:AI:109:GLN:NE2	8:AI:110:VAL:H	2.09	0.50
12:AM:21:ILE:HG22	12:AM:23:GLY:H	1.76	0.50
12:AM:29:SER:O	12:AM:33:LEU:HG	2.12	0.50
17:AR:42:ARG:HG3	17:AR:43:ILE:H	1.76	0.50
18:AS:39:ILE:HG21	18:AS:61:VAL:HG13	1.92	0.50
23:BB:588:U:H2'	23:BB:589:U:C6	2.46	0.50
23:BB:671:C:O2'	23:BB:672:C:H5'	2.12	0.50
23:BB:692:C:H2'	23:BB:693:A:H8	1.77	0.50
23:BB:784:G:OP1	23:BB:2588:G:H5"	2.12	0.50
23:BB:1117:C:H2'	23:BB:1118:C:C6	2.46	0.50
23:BB:1141:U:H5"	31:BJ:27:ARG:HH21	1.76	0.50
23:BB:1563:U:O2'	23:BB:1564:C:H5'	2.11	0.50
23:BB:2269:G:H4'	43:BW:19:ARG:NH1	2.22	0.50
23:BB:2355:G:O3'	43:BW:20:LEU:HD13	2.11	0.50
23:BB:2577:A:H5"	23:BB:2578:G:H5'	1.94	0.50
24:BV:53:LYS:HD2	24:BV:55:GLU:OE1	2.12	0.50
26:BD:9:VAL:O	26:BD:9:VAL:HG13	2.11	0.50
26:BD:10:GLY:O	26:BD:11:MET:HB2	2.11	0.50
26:BD:106:LYS:O	26:BD:107:VAL:HB	2.12	0.50
28:BF:47:LYS:HA	28:BF:50:ASP:OD1	2.11	0.50
28:BF:134:GLN:O	28:BF:136:ILE:N	2.44	0.50
32:BK:34:GLY:O	32:BK:36:GLY:N	2.44	0.50
34:BM:35:ALA:O	34:BM:36:VAL:HB	2.12	0.50
36:BO:7:ARG:O	36:BO:96:GLY:HA3	2.11	0.50
37:BP:31:VAL:O	37:BP:32:VAL:HG12	2.12	0.50
38:BQ:63:ARG:CZ	38:BQ:96:ASP:HA	2.41	0.50
42:BU:11:ILE:HA	42:BU:21:ARG:HG2	1.94	0.50
47:B0:47:TYR:O	47:B0:48:TYR:HB2	2.11	0.50
1:CA:9:G:H2'	1:CA:10:A:H8	1.77	0.50
1:CA:216:U:H2'	1:CA:217:C:C6	2.47	0.50
1:CA:399:G:H2'	1:CA:400:C:C6	2.47	0.50
1:CA:453:G:H2'	1:CA:454:G:C8	2.47	0.50
1:CA:643:C:H2'	1:CA:644:U:H6	1.77	0.50
1:CA:1254:A:H2'	1:CA:1255:G:C8	2.47	0.50
1:CA:1530:G:H2'	1:CA:1531:A:H8	1.77	0.50
4:CE:95:MET:HA	4:CE:124:ALA:HB2	1.94	0.50
6:CG:3:ARG:HH11	6:CG:3:ARG:HG3	1.76	0.50
13:CN:11:LYS:HZ3	13:CN:11:LYS:N	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CO:16:ARG:HA	14:CO:16:ARG:HH11	1.76	0.50
18:CS:51:HIS:HB2	18:CS:56:HIS:CE1	2.47	0.50
19:CT:65:LEU:HG	19:CT:66:ILE:HD13	1.93	0.50
19:CT:66:ILE:HG23	19:CT:70:LYS:HB3	1.92	0.50
23:DB:315:G:H2'	23:DB:316:C:C6	2.46	0.50
23:DB:358:U:O5'	23:DB:358:U:H6	1.94	0.50
23:DB:817:C:H2'	23:DB:818:G:O4'	2.12	0.50
23:DB:992:C:H2'	23:DB:993:G:H8	1.76	0.50
23:DB:1049:C:O2	23:DB:1113:U:H4'	2.12	0.50
23:DB:1747:U:H2'	23:DB:1748:C:H6	1.76	0.50
23:DB:2246:G:H2'	23:DB:2247:A:C8	2.47	0.50
23:DB:2487:G:H2'	23:DB:2488:G:H8	1.77	0.50
23:DB:2519:U:C6	23:DB:2542:A:N6	2.80	0.50
23:DB:2734:A:H2'	23:DB:2735:G:C5'	2.40	0.50
26:DD:149:ASN:C	26:DD:152:PRO:HD2	2.32	0.50
28:DF:62:GLN:HB2	28:DF:91:ARG:HE	1.77	0.50
29:DG:42:VAL:HG23	29:DG:50:THR:O	2.12	0.50
29:DG:51:PHE:CD2	29:DG:68:ARG:HG2	2.47	0.50
31:DJ:36:LEU:O	31:DJ:51:GLY:HA3	2.11	0.50
31:DJ:52:ASP:O	31:DJ:54:ILE:HG22	2.11	0.50
32:DK:18:ARG:O	32:DK:45:GLU:HB2	2.11	0.50
33:DL:120:VAL:HG12	33:DL:121:THR:N	2.27	0.50
48:D1:29:LYS:N	48:D1:30:PRO:HD3	2.26	0.50
52:DI:128:ILE:HA	52:DI:131:THR:CG2	2.41	0.50
52:DI:131:THR:O	52:DI:135:MET:HG3	2.11	0.50
1:AA:493:A:H3'	1:AA:494:G:C8	2.47	0.50
1:AA:657:U:O2'	1:AA:658:C:H5'	2.11	0.50
2:AC:139:ASN:O	2:AC:143:LEU:HD23	2.11	0.50
3:AD:71:PHE:CE1	3:AD:89:LEU:HD11	2.46	0.50
3:AD:77:GLU:OE2	3:AD:81:LEU:HD21	2.12	0.50
4:AE:35:LEU:HD21	4:AE:136:VAL:HG11	1.93	0.50
4:AE:55:VAL:N	4:AE:56:PRO:HD2	2.26	0.50
7:AH:51:GLU:HB3	7:AH:57:GLU:HB3	1.94	0.50
10:AK:103:GLY:HA2	2:CC:74:ILE:HD13	1.93	0.50
11:AL:13:ARG:HG2	11:AL:14:LYS:H	1.77	0.50
11:AL:14:LYS:HG2	11:AL:15:VAL:N	2.27	0.50
12:AM:82:LEU:HD11	18:AS:64:GLU:HB2	1.92	0.50
16:AQ:3:LYS:HE2	16:AQ:3:LYS:HA	1.92	0.50
20:AB:216:VAL:O	20:AB:220:VAL:HG23	2.12	0.50
23:BB:598:U:H2'	23:BB:599:A:H8	1.76	0.50
23:BB:1259:G:H2'	23:BB:1260:A:C8	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2034:U:O2'	23:BB:2035:G:H5'	2.12	0.50
23:BB:2798:U:H5"	23:BB:2799:A:OP1	2.10	0.50
28:BF:102:LEU:HA	28:BF:106:ALA:HB3	1.92	0.50
31:BJ:44:TYR:O	31:BJ:45:THR:HB	2.12	0.50
31:BJ:64:VAL:HG11	31:BJ:69:ARG:HB2	1.93	0.50
32:BK:118:LEU:O	32:BK:120:PRO:HD2	2.12	0.50
36:BO:24:THR:O	36:BO:90:VAL:HB	2.12	0.50
51:B4:4:ARG:N	51:B4:37:GLN:HE22	2.09	0.50
1:CA:490:C:H2'	1:CA:491:G:H8	1.75	0.50
1:CA:613:C:H2'	1:CA:614:C:C6	2.46	0.50
1:CA:632:U:H3'	1:CA:633:G:H5'	1.94	0.50
1:CA:640:A:O2'	1:CA:641:U:H5'	2.12	0.50
1:CA:893:C:H2'	1:CA:894:G:C8	2.47	0.50
1:CA:1005:A:H4'	1:CA:1037:C:O2	2.12	0.50
1:CA:1121:U:O2'	1:CA:1122:U:H5'	2.11	0.50
8:CI:56:MET:O	8:CI:57:VAL:HB	2.10	0.50
9:CJ:12:ALA:CB	9:CJ:96:VAL:HG12	2.41	0.50
15:CP:25:ARG:H	15:CP:25:ARG:CD	2.21	0.50
16:CQ:30:HIS:HE1	16:CQ:32:ILE:HG22	1.77	0.50
20:CB:16:GLY:HA2	20:CB:40:ILE:CG1	2.42	0.50
20:CB:128:LEU:HD23	20:CB:132:GLU:HB3	1.94	0.50
23:DB:132:G:O2'	23:DB:133:U:H5'	2.11	0.50
23:DB:291:G:H2'	23:DB:292:U:C6	2.46	0.50
23:DB:704:G:H1'	23:DB:727:A:N6	2.26	0.50
23:DB:710:U:H2'	23:DB:711:G:H8	1.77	0.50
23:DB:968:C:H2'	23:DB:969:G:C8	2.46	0.50
23:DB:1349:C:H2'	23:DB:1350:C:H6	1.77	0.50
23:DB:1746:A:H2'	23:DB:1747:U:C6	2.46	0.50
23:DB:1992:G:N2	23:DB:1996:C:O2'	2.45	0.50
23:DB:2305:U:H4'	28:DF:132:ARG:NE	2.27	0.50
23:DB:2783:U:H2'	23:DB:2784:U:C6	2.47	0.50
25:DC:77:VAL:HG23	25:DC:112:GLY:N	2.08	0.50
26:DD:117:GLY:O	26:DD:119:ALA:N	2.44	0.50
28:DF:107:VAL:N	28:DF:108:PRO:CD	2.75	0.50
28:DF:134:GLN:O	28:DF:136:ILE:N	2.43	0.50
29:DG:87:GLN:HG2	29:DG:164:ALA:HA	1.94	0.50
29:DG:93:TYR:O	29:DG:94:ARG:HG3	2.12	0.50
30:DH:31:VAL:CB	30:DH:32:PRO:HD3	2.33	0.50
30:DH:77:THR:HG22	30:DH:143:ILE:HB	1.92	0.50
31:DJ:104:ALA:O	31:DJ:108:MET:HG2	2.12	0.50
36:DO:51:ALA:CB	36:DO:81:ARG:HH11	2.25	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DQ:81:GLY:HA3	38:DQ:116:LEU:CD1	2.42	0.50
39:DR:2:TYR:HB2	39:DR:42:ALA:CB	2.40	0.50
41:DT:43:ILE:O	41:DT:47:VAL:HG23	2.12	0.50
42:DU:78:LYS:CD	42:DU:79:ALA:H	2.24	0.50
49:D2:34:ARG:NE	49:D2:39:ARG:HG2	2.26	0.50
52:DI:21:PRO:CB	52:DI:22:PRO:HD3	2.38	0.50
52:DI:102:ARG:HG3	52:DI:141:ASP:HB2	1.94	0.50
1:AA:528:C:H41	11:AL:45:ASN:CG	2.16	0.50
1:AA:538:G:OP2	11:AL:111:GLN:HB2	2.12	0.50
1:AA:1057:G:O3'	2:AC:196:GLY:HA3	2.11	0.50
1:AA:1081:A:O2'	1:AA:1082:A:H5'	2.12	0.50
1:AA:1432:G:O2'	1:AA:1468:A:N6	2.45	0.50
1:AA:1451:U:O2	1:AA:1451:U:H2'	2.12	0.50
5:AF:80:PHE:CZ	25:BC:123:ILE:HG12	2.47	0.50
8:AI:56:MET:O	8:AI:57:VAL:HB	2.12	0.50
13:AN:61:ASN:HB3	13:AN:72:PHE:CE2	2.47	0.50
18:AS:20:LYS:O	18:AS:23:GLU:HG3	2.11	0.50
20:AB:8:MET:HB3	20:AB:46:VAL:HB	1.93	0.50
22:BA:32:U:C4'	22:BA:52:A:H62	2.22	0.50
22:BA:78:A:H2'	22:BA:79:G:O4'	2.12	0.50
23:BB:24:G:H1'	40:BS:77:ASP:HB3	1.94	0.50
23:BB:601:C:H2'	23:BB:602:A:H8	1.76	0.50
23:BB:1173:U:HO2'	23:BB:1176:U:H3	1.60	0.50
23:BB:1395:A:H4'	23:BB:1397:U:C5	2.47	0.50
23:BB:1509:A:C8	23:BB:1509:A:H5"	2.46	0.50
23:BB:1742:U:H2'	23:BB:1743:G:C8	2.47	0.50
23:BB:1794:A:H2'	23:BB:1795:C:H6	1.77	0.50
23:BB:1817:G:OP1	25:BC:86:ARG:NH2	2.45	0.50
23:BB:1911:U:H2'	23:BB:1918:A:N1	2.27	0.50
23:BB:2295:C:O2'	23:BB:2296:U:H5'	2.12	0.50
23:BB:2405:G:H1'	23:BB:2412:A:N6	2.26	0.50
23:BB:2519:U:C6	23:BB:2542:A:N6	2.80	0.50
23:BB:2527:C:O3'	51:B4:31:PRO:HB2	2.12	0.50
23:BB:2720:U:H2'	23:BB:2721:A:C8	2.47	0.50
23:BB:2872:A:H1'	23:BB:2873:A:C8	2.47	0.50
25:BC:119:VAL:HA	25:BC:133:ASN:ND2	2.27	0.50
29:BG:84:LYS:HG3	29:BG:131:VAL:HA	1.94	0.50
29:BG:148:ARG:HD3	29:BG:152:ARG:NE	2.27	0.50
31:BJ:44:TYR:CE2	38:BQ:59:LEU:HD11	2.47	0.50
34:BM:74:THR:O	34:BM:75:GLU:HB2	2.11	0.50
36:BO:56:LYS:C	36:BO:60:GLU:HG2	2.32	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BW:50:VAL:HG23	43:BW:61:LYS:HE3	1.92	0.50
44:BX:18:LEU:O	44:BX:22:LEU:HB3	2.12	0.50
45:BY:37:ARG:HG2	45:BY:43:ILE:CD1	2.42	0.50
1:CA:528:C:H41	11:CL:45:ASN:CG	2.15	0.50
1:CA:658:C:H2'	1:CA:659:U:C6	2.44	0.50
1:CA:1379:G:O6	6:CG:2:ARG:HD3	2.12	0.50
1:CA:1437:A:H2'	1:CA:1438:G:C8	2.46	0.50
2:CC:14:VAL:O	2:CC:15:LYS:HD2	2.11	0.50
2:CC:149:LYS:HE3	2:CC:166:TRP:CH2	2.47	0.50
4:CE:28:ARG:CZ	4:CE:30:PHE:HB3	2.42	0.50
5:CF:5:GLU:HA	5:CF:63:ASN:HA	1.94	0.50
7:CH:111:THR:H	7:CH:114:ALA:HB3	1.76	0.50
8:CI:30:ASN:O	8:CI:31:GLN:HB2	2.11	0.50
8:CI:56:MET:SD	8:CI:57:VAL:HG23	2.52	0.50
9:CJ:36:VAL:HA	9:CJ:76:ILE:HA	1.94	0.50
12:CM:89:ARG:HB3	12:CM:96:VAL:HG22	1.94	0.50
20:CB:46:VAL:O	20:CB:49:PHE:HB2	2.12	0.50
22:DA:71:C:H2'	22:DA:72:G:O4'	2.11	0.50
23:DB:156:A:O2'	23:DB:157:C:H5'	2.12	0.50
23:DB:747:U:OP2	40:DS:90:LYS:NZ	2.43	0.50
23:DB:1283:G:N2	23:DB:1285:A:H3'	2.27	0.50
23:DB:1439:A:N7	23:DB:1440:U:N1	2.59	0.50
23:DB:1487:U:H2'	23:DB:1488:C:H6	1.76	0.50
23:DB:1678:A:H2'	23:DB:1679:A:C8	2.47	0.50
23:DB:1838:C:H4'	23:DB:1839:G:H8	1.76	0.50
23:DB:1948:G:O2'	23:DB:1949:G:H5'	2.12	0.50
23:DB:2196:C:O2'	23:DB:2197:U:H5'	2.11	0.50
23:DB:2835:A:N6	23:DB:2878:U:H2'	2.26	0.50
24:DV:53:LYS:HD2	24:DV:55:GLU:OE1	2.12	0.50
25:DC:119:VAL:HA	25:DC:133:ASN:ND2	2.27	0.50
25:DC:250:GLN:CD	25:DC:254:LYS:HG2	2.33	0.50
27:DE:112:LEU:C	27:DE:114:ARG:H	2.14	0.50
28:DF:43:ILE:HA	28:DF:46:LYS:CE	2.42	0.50
28:DF:111:ARG:HH22	28:DF:113:PHE:HB2	1.76	0.50
31:DJ:19:ASP:CG	31:DJ:57:LEU:HB3	2.31	0.50
32:DK:61:VAL:HG11	32:DK:112:PHE:CZ	2.47	0.50
37:DP:3:ILE:HD13	37:DP:3:ILE:C	2.32	0.50
43:DW:37:VAL:HG12	43:DW:38:ARG:N	2.22	0.50
1:AA:9:G:H2'	1:AA:10:A:H8	1.76	0.49
1:AA:512:U:O2'	1:AA:513:C:H5'	2.12	0.49
1:AA:636:U:H2'	1:AA:637:C:H6	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1317:C:H3'	1:AA:1318:A:H8	1.76	0.49
2:AC:155:ARG:NH2	2:AC:192:TYR:HB2	2.26	0.49
5:AF:2:ARG:O	5:AF:65:GLU:HA	2.12	0.49
7:AH:113:ARG:NH2	7:AH:114:ALA:HA	2.27	0.49
8:AI:46:VAL:HG23	8:AI:47:VAL:H	1.77	0.49
9:AJ:36:VAL:HA	9:AJ:76:ILE:HA	1.93	0.49
10:AK:30:ILE:HG22	10:AK:45:THR:CB	2.42	0.49
15:AP:43:ALA:CA	15:AP:46:LYS:HE3	2.42	0.49
18:AS:44:ILE:O	18:AS:44:ILE:HG23	2.11	0.49
20:AB:212:TYR:O	20:AB:216:VAL:HG13	2.12	0.49
23:BB:45:G:C5'	23:BB:46:G:H5'	2.40	0.49
23:BB:138:U:H2'	23:BB:140:C:O4'	2.11	0.49
23:BB:934:U:H2'	23:BB:935:C:H6	1.77	0.49
23:BB:1173:U:O5'	23:BB:1173:U:H6	1.95	0.49
23:BB:1175:A:H2'	23:BB:1176:U:H5'	1.94	0.49
23:BB:1436:G:O2'	23:BB:1437:C:H5'	2.12	0.49
23:BB:2215:C:H2'	23:BB:2216:G:H8	1.77	0.49
23:BB:2760:C:O2'	23:BB:2761:A:H5'	2.12	0.49
23:BB:2786:U:C5'	26:BD:70:LYS:HG3	2.42	0.49
23:BB:2885:G:H2'	23:BB:2886:A:C4'	2.42	0.49
25:BC:106:PRO:O	25:BC:109:LEU:HD13	2.12	0.49
28:BF:71:LYS:HD3	28:BF:73:VAL:O	2.12	0.49
28:BF:86:CYS:O	28:BF:88:VAL:HG23	2.12	0.49
32:BK:40:LYS:NZ	32:BK:59:LYS:HE3	2.26	0.49
32:BK:43:ILE:CG2	32:BK:46:ALA:HB2	2.42	0.49
32:BK:113:MET:HA	32:BK:116:ILE:HD11	1.94	0.49
33:BL:6:LEU:H	33:BL:6:LEU:CD2	2.20	0.49
33:BL:120:VAL:HG12	33:BL:121:THR:N	2.26	0.49
41:BT:68:LYS:O	41:BT:69:ARG:CB	2.59	0.49
42:BU:64:ILE:HG13	42:BU:68:ASN:HD22	1.77	0.49
43:BW:30:VAL:O	43:BW:30:VAL:HG13	2.12	0.49
1:CA:239:U:H6	1:CA:239:U:H5'	1.76	0.49
1:CA:772:U:H2'	1:CA:773:G:C8	2.46	0.49
4:CE:53:ARG:HB3	4:CE:53:ARG:CZ	2.42	0.49
8:CI:78:ILE:HG22	8:CI:82:ILE:HD11	1.92	0.49
9:CJ:6:ILE:HB	9:CJ:76:ILE:HD11	1.94	0.49
11:CL:17:LYS:N	11:CL:17:LYS:HZ1	2.11	0.49
12:CM:44:ILE:HA	12:CM:47:LEU:HD23	1.93	0.49
15:CP:28:ARG:HD3	15:CP:29:ASN:HD22	1.76	0.49
18:CS:10:ILE:HG22	18:CS:37:SER:HB3	1.94	0.49
18:CS:11:ASP:OD1	18:CS:34:SER:HA	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:142:A:N3	41:DT:2:ILE:HG22	2.27	0.49
23:DB:264:C:O2'	23:DB:265:A:H5"	2.12	0.49
23:DB:272:A:H2'	23:DB:273:G:C8	2.47	0.49
23:DB:1145:C:O2'	23:DB:1146:C:H5'	2.10	0.49
23:DB:1820:U:H3	25:DC:197:ALA:HA	1.76	0.49
23:DB:2216:G:H2'	23:DB:2217:G:C8	2.47	0.49
23:DB:2234:G:O2'	23:DB:2235:G:H5'	2.13	0.49
23:DB:2332:C:H1'	23:DB:2336:A:C8	2.47	0.49
23:DB:2556:C:H2'	23:DB:2557:G:O4'	2.12	0.49
25:DC:36:ASN:ND2	25:DC:85:ASN:HD21	2.08	0.49
28:DF:31:GLU:C	28:DF:32:LYS:HD3	2.33	0.49
28:DF:55:ASP:O	28:DF:59:ILE:HG13	2.12	0.49
28:DF:113:PHE:CZ	28:DF:175:PRO:HB2	2.48	0.49
28:DF:155:ILE:HG22	28:DF:156:THR:N	2.26	0.49
29:DG:91:VAL:O	29:DG:93:TYR:N	2.44	0.49
42:DU:81:ARG:HB2	42:DU:96:LYS:HG2	1.94	0.49
1:AA:113:G:O4'	1:AA:354:G:H4'	2.12	0.49
1:AA:921:U:H2'	1:AA:922:G:H8	1.75	0.49
2:AC:161:ILE:HD12	2:AC:161:ILE:N	2.27	0.49
4:AE:53:ARG:HB3	4:AE:53:ARG:CZ	2.41	0.49
4:AE:113:VAL:HG23	4:AE:114:LEU:N	2.27	0.49
8:AI:30:ASN:O	8:AI:31:GLN:HB2	2.12	0.49
20:AB:59:ILE:HG21	20:AB:158:ASP:HB3	1.94	0.49
23:BB:685:A:H1'	23:BB:688:U:O4	2.13	0.49
23:BB:729:G:H5"	23:BB:730:A:H5"	1.93	0.49
23:BB:925:A:O2'	23:BB:926:G:H5'	2.12	0.49
23:BB:1386:C:H2'	23:BB:1387:A:H8	1.72	0.49
23:BB:1590:A:H2'	23:BB:1591:A:C8	2.48	0.49
23:BB:1843:C:H5"	25:BC:250:GLN:NE2	2.25	0.49
23:BB:2394:C:OP1	33:BL:63:LYS:HG2	2.12	0.49
23:BB:2805:C:O2'	23:BB:2806:C:H5'	2.12	0.49
25:BC:20:ASN:OD1	25:BC:22:GLU:HG2	2.12	0.49
26:BD:174:SER:O	26:BD:175:LEU:HB2	2.11	0.49
27:BE:161:ALA:CA	27:BE:164:LEU:HB2	2.37	0.49
35:BN:63:ARG:O	35:BN:66:ALA:HB3	2.11	0.49
37:BP:3:ILE:CD1	37:BP:7:LEU:HD11	2.42	0.49
41:BT:29:THR:CG2	41:BT:86:THR:HG22	2.42	0.49
43:BW:37:VAL:CG1	43:BW:38:ARG:HH11	2.24	0.49
44:BX:55:THR:O	44:BX:58:ASN:HB3	2.13	0.49
46:BZ:21:ALA:HB3	46:BZ:23:ASN:HD21	1.77	0.49
51:B4:8:LYS:O	51:B4:25:VAL:HG21	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BI:72:THR:HG21	52:BI:111:THR:O	2.12	0.49
1:CA:643:C:H2'	1:CA:644:U:C6	2.47	0.49
1:CA:1069:C:H5"	4:CE:25:LYS:NZ	2.27	0.49
1:CA:1134:G:N2	1:CA:1135:U:H1'	2.26	0.49
1:CA:1317:C:H3'	1:CA:1318:A:H8	1.77	0.49
3:CD:120:LYS:O	3:CD:145:ARG:HG3	2.12	0.49
4:CE:15:ILE:HB	4:CE:35:LEU:O	2.12	0.49
7:CH:108:GLY:O	7:CH:110:MET:HG3	2.12	0.49
8:CI:34:LEU:HD21	8:CI:48:ARG:NH2	2.18	0.49
10:CK:75:GLU:CD	10:CK:75:GLU:N	2.66	0.49
10:CK:90:PRO:C	10:CK:92:ARG:H	2.16	0.49
11:CL:13:ARG:HG2	11:CL:14:LYS:H	1.76	0.49
12:CM:43:LYS:HD2	12:CM:43:LYS:N	2.26	0.49
15:CP:36:VAL:O	15:CP:36:VAL:HG13	2.12	0.49
16:CQ:29:LYS:HG3	16:CQ:34:GLY:O	2.12	0.49
17:CR:56:ARG:O	17:CR:60:ARG:HG2	2.12	0.49
18:CS:10:ILE:HB	18:CS:14:LEU:HD11	1.94	0.49
23:DB:7:G:H4'	31:DJ:15:TRP:CZ2	2.47	0.49
23:DB:140:C:H5'	23:DB:141:G:C5	2.47	0.49
23:DB:311:A:H3'	23:DB:312:G:H8	1.77	0.49
23:DB:502:A:H5'	23:DB:503:A:OP2	2.11	0.49
23:DB:861:A:H2'	23:DB:862:G:O4'	2.12	0.49
23:DB:1511:G:H2'	23:DB:1512:C:C6	2.48	0.49
23:DB:1541:C:H2'	23:DB:1542:U:O4'	2.12	0.49
23:DB:2143:C:N3	23:DB:2144:G:H1'	2.26	0.49
23:DB:2684:U:H2'	23:DB:2685:G:O4'	2.12	0.49
25:DC:105:ALA:HB1	25:DC:109:LEU:CD1	2.42	0.49
26:DD:108:ASP:OD2	26:DD:206:ALA:HA	2.12	0.49
31:DJ:13:ARG:HB3	31:DJ:53:TYR:CD2	2.46	0.49
32:DK:108:ARG:O	32:DK:113:MET:HE3	2.12	0.49
34:DM:35:ALA:O	34:DM:36:VAL:HB	2.11	0.49
35:DN:117:ASP:C	35:DN:117:ASP:OD2	2.51	0.49
36:DO:84:GLU:C	36:DO:86:GLY:H	2.14	0.49
39:DR:39:LEU:N	39:DR:39:LEU:HD23	2.26	0.49
39:DR:61:ALA:HB1	39:DR:96:VAL:HB	1.94	0.49
42:DU:26:ASN:N	42:DU:26:ASN:ND2	2.61	0.49
46:DZ:56:MET:O	46:DZ:59:ILE:HG12	2.12	0.49
50:D3:54:LEU:CG	50:D3:58:ILE:HD11	2.42	0.49
1:AA:393:A:O2'	1:AA:394:G:H5'	2.12	0.49
1:AA:411:A:N6	1:AA:413:G:H21	2.09	0.49
1:AA:1073:U:H2'	1:AA:1074:G:H8	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1464:U:H2'	1:AA:1465:A:C8	2.47	0.49
1:AA:1480:A:H2'	1:AA:1481:U:O4'	2.12	0.49
1:AA:1522:U:H2'	1:AA:1523:G:H8	1.77	0.49
2:AC:14:VAL:O	2:AC:15:LYS:HD2	2.12	0.49
3:AD:120:LYS:O	3:AD:145:ARG:HG3	2.12	0.49
4:AE:136:VAL:HG13	4:AE:137:ARG:N	2.27	0.49
6:AG:144:ALA:O	6:AG:146:ALA:N	2.38	0.49
8:AI:56:MET:HA	8:AI:59:LYS:HB2	1.94	0.49
10:AK:90:PRO:C	10:AK:92:ARG:H	2.15	0.49
11:AL:34:THR:O	11:AL:35:ARG:HD2	2.12	0.49
12:AM:90:HIS:CE1	12:AM:96:VAL:HG21	2.47	0.49
16:AQ:29:LYS:HG3	16:AQ:34:GLY:O	2.12	0.49
17:AR:63:TYR:N	17:AR:63:TYR:HD2	2.10	0.49
22:BA:55:U:H2'	22:BA:56:G:C8	2.47	0.49
23:BB:37:C:O2'	23:BB:38:A:H5'	2.13	0.49
23:BB:725:G:H2'	23:BB:726:G:C1'	2.43	0.49
23:BB:764:A:H5"	25:BC:208:GLY:HA2	1.94	0.49
23:BB:853:C:O2'	23:BB:854:C:H5'	2.11	0.49
23:BB:1789:A:OP1	25:BC:220:ARG:HD3	2.12	0.49
23:BB:1893:C:H2'	23:BB:1894:C:O4'	2.12	0.49
23:BB:1914:C:H2'	23:BB:1915:U:C6	2.47	0.49
23:BB:2247:A:H3'	56:BB:3266:HOH:O	2.11	0.49
23:BB:2443:C:O2'	23:BB:2444:G:H5'	2.13	0.49
26:BD:204:LYS:HB2	26:BD:205:PRO:HD2	1.93	0.49
28:BF:169:LEU:HB3	28:BF:174:PHE:CD1	2.47	0.49
29:BG:10:VAL:CG1	29:BG:16:VAL:HG21	2.41	0.49
29:BG:148:ARG:HB2	29:BG:152:ARG:HH11	1.76	0.49
30:BH:73:ASN:ND2	30:BH:74:ALA:N	2.56	0.49
31:BJ:35:ARG:HA	31:BJ:40:HIS:NE2	2.27	0.49
31:BJ:106:LYS:HE3	31:BJ:106:LYS:HA	1.94	0.49
34:BM:40:ARG:HB3	34:BM:95:LEU:HD12	1.93	0.49
35:BN:108:ALA:O	35:BN:110:MET:HE3	2.12	0.49
39:BR:5:PHE:HB2	39:BR:37:GLU:OE1	2.12	0.49
40:BS:23:LEU:HD21	47:B0:21:LEU:HB3	1.93	0.49
41:BT:4:GLU:OE1	41:BT:5:GLU:HG2	2.12	0.49
41:BT:43:ILE:O	41:BT:46:ALA:HB3	2.13	0.49
42:BU:73:ASN:C	42:BU:75:ALA:H	2.16	0.49
47:B0:42:ILE:HG22	47:B0:43:THR:O	2.12	0.49
1:CA:429:U:OP2	3:CD:31:CYS:HB2	2.13	0.49
1:CA:1029:U:H5"	1:CA:1030:U:C5	2.47	0.49
1:CA:1030:U:H4'	1:CA:1031:C:OP2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1163:A:H2'	1:CA:1164:G:H8	1.77	0.49
1:CA:1250:A:H2	1:CA:1370:G:H1'	1.77	0.49
1:CA:1432:G:O2'	1:CA:1468:A:N6	2.45	0.49
1:CA:1510:C:H2'	1:CA:1511:G:C8	2.47	0.49
2:CC:142:ARG:HH21	2:CC:143:LEU:HD21	1.77	0.49
7:CH:27:PRO:HA	7:CH:56:PRO:O	2.12	0.49
7:CH:45:ILE:HB	7:CH:61:THR:O	2.13	0.49
10:CK:30:ILE:HG22	10:CK:45:THR:CB	2.42	0.49
10:CK:106:ILE:HG13	10:CK:107:THR:N	2.23	0.49
16:CQ:74:LEU:HD13	16:CQ:75:VAL:N	2.28	0.49
22:DA:52:A:OP1	22:DA:52:A:H4'	2.12	0.49
23:DB:345:A:H1'	23:DB:346:A:C2	2.48	0.49
23:DB:765:C:H2'	23:DB:766:U:H6	1.77	0.49
23:DB:785:G:H2'	23:DB:786:C:C6	2.47	0.49
23:DB:851:C:H2'	23:DB:852:U:C6	2.48	0.49
23:DB:2295:C:OP2	36:DO:10:ARG:HG2	2.12	0.49
23:DB:2328:A:H2'	23:DB:2329:U:H6	1.73	0.49
23:DB:2598:A:OP1	25:DC:233:GLY:HA3	2.12	0.49
23:DB:2636:C:H2'	23:DB:2637:U:C6	2.47	0.49
23:DB:2814:A:H2'	23:DB:2815:C:C6	2.48	0.49
25:DC:90:ILE:HD12	25:DC:102:TYR:HB3	1.93	0.49
25:DC:131:MET:HE2	25:DC:143:VAL:HG13	1.93	0.49
25:DC:175:LEU:HD11	25:DC:181:ARG:HG3	1.94	0.49
26:DD:69:ALA:CA	26:DD:73:VAL:HB	2.41	0.49
27:DE:153:LEU:HG	27:DE:154:ASP:H	1.76	0.49
28:DF:29:ARG:CD	28:DF:29:ARG:H	2.25	0.49
31:DJ:75:TYR:CD1	31:DJ:86:GLN:HB3	2.47	0.49
33:DL:142:ILE:N	33:DL:142:ILE:HD12	2.28	0.49
35:DN:97:ILE:HD12	35:DN:98:LEU:N	2.21	0.49
36:DO:7:ARG:O	36:DO:96:GLY:HA3	2.12	0.49
44:DX:55:THR:O	44:DX:58:ASN:HB3	2.12	0.49
1:AA:55:A:OP2	1:AA:352:C:N4	2.44	0.49
1:AA:898:G:N2	1:AA:900:A:H3'	2.28	0.49
1:AA:1124:G:H5"	9:AJ:37:ARG:O	2.13	0.49
1:AA:1314:C:H3'	18:AS:5:LYS:NZ	2.26	0.49
9:AJ:15:HIS:O	9:AJ:18:ILE:HG22	2.13	0.49
15:AP:46:LYS:C	15:AP:48:GLU:H	2.16	0.49
17:AR:56:ARG:O	17:AR:60:ARG:HG2	2.12	0.49
20:AB:128:LEU:HD13	20:AB:129:THR:H	1.77	0.49
22:BA:88:C:H1'	22:BA:89:U:C5	2.46	0.49
23:BB:289:G:H2'	23:BB:290:U:O4'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:329:G:O6	42:BU:16:LYS:HG2	2.11	0.49
23:BB:337:C:H2'	23:BB:338:G:O4'	2.12	0.49
23:BB:2027:G:C6	23:BB:2028:U:C4	3.00	0.49
23:BB:2353:G:H1'	43:BW:30:VAL:HG12	1.91	0.49
23:BB:2838:G:H2'	23:BB:2839:G:H8	1.77	0.49
23:BB:2899:A:H5'	31:BJ:136:GLN:OE1	2.12	0.49
31:BJ:13:ARG:HB3	31:BJ:53:TYR:CD2	2.45	0.49
38:BQ:57:ARG:HA	38:BQ:60:TRP:CE3	2.47	0.49
42:BU:48:VAL:O	42:BU:48:VAL:HG13	2.12	0.49
46:BZ:7:VAL:HG13	46:BZ:8:THR:CG2	2.39	0.49
1:CA:320:A:H2'	1:CA:321:A:C8	2.47	0.49
1:CA:429:U:H3'	3:CD:8:LEU:HD23	1.93	0.49
1:CA:464:U:H2'	1:CA:466:A:OP2	2.11	0.49
1:CA:598:U:H4'	7:CH:85:TYR:CG	2.46	0.49
1:CA:634:C:H2'	1:CA:635:A:H8	1.77	0.49
1:CA:636:U:H2'	1:CA:637:C:H6	1.78	0.49
1:CA:767:A:H2'	1:CA:768:A:C8	2.47	0.49
1:CA:1118:U:H1'	1:CA:1179:A:C5	2.47	0.49
1:CA:1127:G:O2'	1:CA:1128:C:H5'	2.12	0.49
1:CA:1413:A:O2'	1:CA:1414:U:H5'	2.12	0.49
7:CH:47:ASP:CG	7:CH:48:PHE:H	2.16	0.49
9:CJ:15:HIS:O	9:CJ:18:ILE:HG22	2.11	0.49
12:CM:50:GLY:O	12:CM:54:THR:HG23	2.11	0.49
22:DA:91:C:H2'	22:DA:92:C:H6	1.77	0.49
23:DB:175:G:O2'	23:DB:176:A:H5'	2.12	0.49
23:DB:1040:A:H2'	23:DB:1041:G:O4'	2.12	0.49
23:DB:1083:U:H2'	23:DB:1085:A:OP2	2.12	0.49
23:DB:1655:A:H2'	23:DB:1656:C:O4'	2.11	0.49
23:DB:2461:A:H2'	23:DB:2462:C:H6	1.77	0.49
24:DV:75:GLN:HA	24:DV:75:GLN:OE1	2.11	0.49
25:DC:69:ASN:O	25:DC:70:LYS:C	2.50	0.49
28:DF:45:ASP:HB3	28:DF:48:LEU:CD2	2.42	0.49
30:DH:25:TYR:CG	30:DH:30:LEU:HG	2.47	0.49
30:DH:114:GLU:HB3	30:DH:133:GLN:HG3	1.94	0.49
31:DJ:44:TYR:CD2	38:DQ:59:LEU:HD21	2.47	0.49
31:DJ:64:VAL:HG11	31:DJ:69:ARG:HB2	1.92	0.49
37:DP:50:ARG:HB3	37:DP:57:ALA:H	1.77	0.49
38:DQ:26:ALA:C	38:DQ:28:SER:H	2.14	0.49
39:DR:95:ASP:O	39:DR:96:VAL:HG13	2.13	0.49
47:D0:42:ILE:HG22	47:D0:43:THR:O	2.12	0.49
47:D0:43:THR:HG21	47:D0:47:TYR:HB2	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:106:C:O2'	1:AA:107:G:H5'	2.13	0.49
1:AA:233:C:H2'	1:AA:234:C:H6	1.77	0.49
1:AA:1030:U:H4'	1:AA:1031:C:OP2	2.12	0.49
2:AC:72:PRO:O	2:AC:76:ILE:HG12	2.12	0.49
2:AC:190:THR:HG22	2:AC:191:THR:H	1.75	0.49
3:AD:29:THR:HB	3:AD:30:LYS:HZ3	1.77	0.49
3:AD:97:LEU:HD13	3:AD:136:VAL:HG11	1.93	0.49
5:AF:2:ARG:HB3	5:AF:92:THR:OG1	2.11	0.49
6:AG:113:LYS:HZ2	6:AG:113:LYS:HB3	1.77	0.49
9:AJ:41:PRO:O	9:AJ:42:LEU:HB2	2.12	0.49
22:BA:14:U:H4'	22:BA:70:C:O2	2.13	0.49
23:BB:83:A:OP1	42:BU:91:LYS:HD2	2.12	0.49
23:BB:211:C:O2'	23:BB:212:G:H5'	2.12	0.49
23:BB:991:C:H5'	23:BB:991:C:H6	1.78	0.49
23:BB:1229:C:H2'	23:BB:1230:A:H8	1.76	0.49
23:BB:1531:C:H2'	23:BB:1532:A:H8	1.78	0.49
23:BB:1729:U:C2'	23:BB:1730:C:H4'	2.36	0.49
23:BB:2088:A:H2'	23:BB:2089:C:H6	1.76	0.49
23:BB:2813:A:H2'	23:BB:2814:A:H8	1.76	0.49
28:BF:31:GLU:HB3	28:BF:156:THR:O	2.13	0.49
29:BG:94:ARG:HG2	29:BG:127:GLN:HE21	1.78	0.49
30:BH:53:GLU:HG3	30:BH:57:LYS:HD3	1.94	0.49
31:BJ:12:LYS:HG3	31:BJ:41:LYS:NZ	2.27	0.49
31:BJ:35:ARG:HA	31:BJ:40:HIS:CD2	2.47	0.49
32:BK:105:ARG:HD2	32:BK:122:VAL:HG11	1.94	0.49
33:BL:3:LEU:O	33:BL:5:THR:HG23	2.13	0.49
35:BN:115:LEU:O	35:BN:117:ASP:N	2.45	0.49
43:BW:49:ASN:HA	43:BW:61:LYS:HB2	1.94	0.49
1:CA:50:A:N6	1:CA:361:G:H4'	2.28	0.49
1:CA:366:A:O2'	1:CA:394:G:N2	2.45	0.49
1:CA:664:G:H5"	17:CR:52:ARG:HE	1.77	0.49
1:CA:984:C:O2'	1:CA:985:C:H5'	2.12	0.49
1:CA:1101:A:H62	20:CB:173:LYS:HE3	1.77	0.49
1:CA:1500:A:C2'	1:CA:1501:C:H5'	2.42	0.49
2:CC:129:PHE:CE2	2:CC:156:LEU:HD13	2.47	0.49
3:CD:77:GLU:OE2	3:CD:81:LEU:HD21	2.12	0.49
3:CD:160:LEU:HA	3:CD:163:GLN:CG	2.41	0.49
8:CI:109:GLN:CD	8:CI:110:VAL:H	2.16	0.49
10:CK:86:LYS:HB2	10:CK:113:THR:HA	1.94	0.49
12:CM:22:TYR:CD1	12:CM:65:GLU:HA	2.46	0.49
13:CN:50:LEU:H	13:CN:51:PRO:CD	2.22	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CP:6:LEU:N	15:CP:6:LEU:HD12	2.27	0.49
23:DB:201:C:H1'	23:DB:250:G:O6	2.13	0.49
23:DB:263:G:H2'	23:DB:264:C:O4'	2.11	0.49
23:DB:274:C:H2'	23:DB:275:C:O4'	2.13	0.49
23:DB:904:G:H2'	23:DB:905:A:H8	1.78	0.49
23:DB:1175:A:H2'	23:DB:1176:U:H5'	1.94	0.49
23:DB:1210:G:H1'	23:DB:1212:G:C2	2.48	0.49
23:DB:1262:A:N3	47:D0:6:LYS:HE3	2.27	0.49
23:DB:1386:C:OP2	23:DB:1396:U:H5	1.94	0.49
23:DB:1531:C:H2'	23:DB:1532:A:H8	1.77	0.49
23:DB:1745:A:H2'	23:DB:1746:A:O4'	2.12	0.49
23:DB:1973:G:O2'	23:DB:1974:C:H5'	2.13	0.49
23:DB:2882:A:H3'	23:DB:2883:A:H5"	1.93	0.49
27:DE:48:THR:C	27:DE:50:ALA:H	2.16	0.49
29:DG:89:VAL:HG12	29:DG:90:GLY:N	2.27	0.49
32:DK:61:VAL:HG11	32:DK:112:PHE:CE2	2.48	0.49
38:DQ:24:TYR:CG	38:DQ:25:GLY:N	2.80	0.49
38:DQ:80:ASN:O	38:DQ:116:LEU:HD11	2.13	0.49
41:DT:39:THR:O	41:DT:39:THR:HG23	2.12	0.49
45:DY:4:ILE:HG22	45:DY:56:VAL:CG1	2.43	0.49
51:D4:15:LYS:O	51:D4:16:ILE:HB	2.13	0.49
52:DI:92:PRO:O	52:DI:93:ASN:HB2	2.12	0.49
1:AA:252:U:H2'	1:AA:253:A:H8	1.77	0.49
1:AA:847:G:H2'	1:AA:848:C:C6	2.47	0.49
1:AA:1163:A:H2'	1:AA:1164:G:H8	1.77	0.49
1:AA:1346:A:N1	1:AA:1374:A:H5"	2.27	0.49
2:AC:59:PRO:HD2	2:AC:62:SER:O	2.11	0.49
2:AC:96:VAL:HB	2:AC:97:PRO:HD2	1.93	0.49
10:AK:28:ASN:ND2	10:AK:29:THR:H	2.11	0.49
11:AL:2:THR:HG22	11:AL:5:GLN:NE2	2.27	0.49
19:AT:4:LYS:HZ1	19:AT:6:ALA:CB	2.25	0.49
23:BB:230:G:H2'	23:BB:231:A:H8	1.76	0.49
23:BB:418:C:H2'	23:BB:419:U:H6	1.78	0.49
23:BB:785:G:H2'	23:BB:786:C:C6	2.46	0.49
23:BB:989:G:OP2	45:BY:13:ILE:HD11	2.12	0.49
23:BB:1080:A:O2'	23:BB:1081:U:H5'	2.12	0.49
23:BB:1230:A:H2'	23:BB:1231:U:H6	1.77	0.49
23:BB:2617:U:C2'	23:BB:2618:G:H5'	2.42	0.49
25:BC:141:HIS:NE2	25:BC:194:VAL:HB	2.28	0.49
26:BD:148:GLN:HG3	26:BD:152:PRO:HB3	1.95	0.49
28:BF:102:LEU:O	28:BF:103:ILE:HB	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BG:132:LEU:HD12	29:BG:140:ILE:HG22	1.93	0.49
30:BH:21:VAL:HG22	30:BH:22:LYS:N	2.28	0.49
34:BM:31:PHE:HB3	34:BM:130:PHE:CZ	2.48	0.49
34:BM:69:PRO:HA	34:BM:94:ALA:HA	1.94	0.49
36:BO:66:GLY:HA2	36:BO:102:ARG:NE	2.27	0.49
36:BO:93:ASP:C	36:BO:95:SER:H	2.16	0.49
42:BU:62:ALA:O	42:BU:63:ALA:HB3	2.12	0.49
46:BZ:53:ALA:O	46:BZ:55:GLY:N	2.36	0.49
1:CA:602:A:H2'	1:CA:603:U:C6	2.47	0.49
1:CA:602:A:O2'	1:CA:603:U:H5'	2.12	0.49
1:CA:1057:G:O3'	2:CC:196:GLY:HA3	2.13	0.49
1:CA:1085:U:H3'	1:CA:1086:U:C6	2.48	0.49
2:CC:16:PRO:CG	2:CC:53:ARG:HH12	2.23	0.49
2:CC:120:THR:HG22	2:CC:188:ALA:HB2	1.94	0.49
3:CD:22:SER:N	3:CD:109:THR:HG22	2.28	0.49
12:CM:14:ALA:HB2	12:CM:42:VAL:HG23	1.95	0.49
12:CM:90:HIS:HA	12:CM:108:ARG:HH22	1.74	0.49
16:CQ:83:LEU:HD13	16:CQ:83:LEU:N	2.27	0.49
18:CS:40:PHE:O	18:CS:43:MET:HG3	2.11	0.49
19:CT:49:ALA:C	19:CT:52:GLU:HB3	2.33	0.49
22:DA:88:C:H1'	22:DA:89:U:C5	2.47	0.49
23:DB:725:G:H2'	23:DB:726:G:C1'	2.42	0.49
23:DB:1306:C:O2'	23:DB:1307:A:H5'	2.12	0.49
23:DB:2636:C:O2'	23:DB:2637:U:H5'	2.13	0.49
23:DB:2729:G:H2'	23:DB:2730:C:C6	2.48	0.49
23:DB:2786:U:O2'	26:DD:66:GLY:HA3	2.12	0.49
25:DC:4:LYS:HD2	25:DC:5:CYS:H	1.75	0.49
26:DD:187:LEU:O	26:DD:188:LEU:HD23	2.13	0.49
28:DF:19:PHE:CE2	28:DF:164:GLU:HG2	2.47	0.49
28:DF:91:ARG:HD3	28:DF:91:ARG:N	2.27	0.49
30:DH:27:ARG:HG2	30:DH:27:ARG:HH21	1.78	0.49
30:DH:39:ALA:C	30:DH:41:LYS:H	2.16	0.49
30:DH:97:ARG:HB3	30:DH:112:LYS:HG2	1.94	0.49
30:DH:114:GLU:HB2	30:DH:133:GLN:O	2.12	0.49
35:DN:98:LEU:HG	47:D0:42:ILE:HD11	1.95	0.49
36:DO:56:LYS:C	36:DO:60:GLU:HG2	2.33	0.49
37:DP:24:THR:HB	37:DP:86:LYS:HB3	1.93	0.49
37:DP:26:GLU:HB3	37:DP:84:SER:HB3	1.94	0.49
39:DR:35:PHE:C	39:DR:58:VAL:HG23	2.33	0.49
42:DU:32:LYS:HG3	42:DU:65:GLN:HA	1.95	0.49
43:DW:19:ARG:CD	43:DW:19:ARG:H	2.26	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:80:A:H3'	1:AA:81:A:C8	2.44	0.49
1:AA:724:G:H2'	1:AA:725:G:H8	1.78	0.49
1:AA:728:A:H2'	1:AA:729:A:H8	1.78	0.49
1:AA:784:A:H2'	1:AA:785:G:H8	1.77	0.49
1:AA:1005:A:H4'	1:AA:1037:C:O2	2.13	0.49
1:AA:1159:U:O4'	1:AA:1182:G:N2	2.45	0.49
1:AA:1299:A:H2'	1:AA:1301:U:H1'	1.95	0.49
5:AF:53:LYS:HB2	5:AF:54:LEU:HD22	1.94	0.49
7:AH:115:ALA:O	7:AH:120:LEU:HD23	2.13	0.49
8:AI:78:ILE:O	8:AI:82:ILE:HG13	2.12	0.49
12:AM:64:VAL:HA	12:AM:68:LEU:CD1	2.40	0.49
13:AN:25:GLU:O	13:AN:29:ILE:HG13	2.12	0.49
16:AQ:30:HIS:HB3	16:AQ:33:TYR:HB2	1.93	0.49
18:AS:48:ILE:O	18:AS:58:PRO:HA	2.12	0.49
21:AU:43:GLU:HA	21:AU:46:ARG:NE	2.28	0.49
23:BB:582:A:H2'	23:BB:583:G:H8	1.78	0.49
23:BB:931:U:H3	23:BB:1166:G:N2	2.11	0.49
23:BB:1057:A:H62	23:BB:1086:A:H2'	1.78	0.49
23:BB:1294:U:C2'	23:BB:1295:C:H5'	2.42	0.49
23:BB:1584:U:H5"	23:BB:1585:C:C5	2.47	0.49
23:BB:1794:A:H2'	23:BB:1795:C:C6	2.47	0.49
23:BB:2590:A:H5"	25:BC:237:ARG:NH2	2.27	0.49
23:BB:2836:U:H2'	23:BB:2837:A:H8	1.77	0.49
25:BC:43:ASN:HD22	25:BC:44:ASN:N	2.10	0.49
26:BD:59:ARG:O	26:BD:59:ARG:HD3	2.13	0.49
28:BF:76:PHE:HD2	28:BF:78:ILE:HD13	1.77	0.49
28:BF:160:LYS:HG3	28:BF:161:SER:N	2.28	0.49
29:BG:42:VAL:HG23	29:BG:50:THR:O	2.12	0.49
29:BG:71:LEU:HD13	29:BG:74:MET:SD	2.53	0.49
30:BH:12:LEU:O	30:BH:12:LEU:HG	2.13	0.49
32:BK:98:ARG:C	32:BK:99:ILE:HD12	2.33	0.49
36:BO:58:ILE:O	36:BO:62:LEU:HB2	2.13	0.49
43:BW:27:GLY:O	43:BW:63:ASP:HA	2.12	0.49
43:BW:58:LEU:HG	43:BW:79:ILE:HD12	1.94	0.49
46:BZ:7:VAL:HG11	46:BZ:51:VAL:HG13	1.93	0.49
50:B3:7:ARG:HG3	50:B3:7:ARG:NH1	2.28	0.49
52:BI:21:PRO:CB	52:BI:22:PRO:HD3	2.39	0.49
52:BI:56:VAL:CG2	52:BI:68:PHE:HB2	2.43	0.49
52:BI:74:PRO:O	52:BI:77:VAL:HG22	2.13	0.49
1:CA:376:G:H2'	1:CA:377:G:C8	2.45	0.49
1:CA:1009:U:H2'	1:CA:1010:U:C6	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1527:U:O2'	1:CA:1528:U:H5'	2.13	0.49
6:CG:14:ASP:OD2	6:CG:22:LEU:HB3	2.11	0.49
7:CH:4:ASP:OD1	7:CH:7:ALA:HB2	2.13	0.49
7:CH:113:ARG:NH2	7:CH:114:ALA:HA	2.28	0.49
9:CJ:8:ILE:HD11	9:CJ:76:ILE:HG13	1.93	0.49
12:CM:86:ARG:HA	12:CM:96:VAL:CG1	2.42	0.49
13:CN:25:GLU:O	13:CN:29:ILE:HG13	2.12	0.49
13:CN:29:ILE:HB	13:CN:30:ILE:HD12	1.93	0.49
21:CU:13:VAL:O	21:CU:13:VAL:HG13	2.12	0.49
23:DB:19:A:H2'	23:DB:20:C:C6	2.47	0.49
23:DB:278:A:O3'	23:DB:279:A:H8	1.95	0.49
23:DB:1099:G:C8	52:DI:3:LYS:HB2	2.48	0.49
23:DB:1433:A:H2'	23:DB:1434:A:O4'	2.12	0.49
23:DB:1838:C:H4'	23:DB:1839:G:C8	2.48	0.49
23:DB:2295:C:O2'	23:DB:2296:U:H5'	2.12	0.49
26:DD:55:LYS:HB2	26:DD:60:VAL:HG13	1.94	0.49
27:DE:173:THR:HA	27:DE:199:MET:HE1	1.95	0.49
28:DF:87:LYS:CG	28:DF:88:VAL:H	2.24	0.49
33:DL:77:ILE:HG12	33:DL:95:LEU:HD22	1.95	0.49
35:DN:75:ILE:O	35:DN:79:LEU:HD12	2.12	0.49
36:DO:106:LEU:HG	36:DO:107:ALA:N	2.28	0.49
39:DR:10:LYS:N	39:DR:10:LYS:HD2	2.27	0.49
40:DS:4:ILE:CG2	40:DS:106:VAL:HG13	2.41	0.49
40:DS:47:VAL:HG23	40:DS:48:LYS:N	2.27	0.49
42:DU:40:LEU:HA	42:DU:60:LYS:O	2.13	0.49
45:DY:20:LYS:HA	45:DY:23:LEU:HB2	1.93	0.49
46:DZ:7:VAL:HG23	46:DZ:67:VAL:HG11	1.94	0.49
48:D1:7:LYS:HD3	50:D3:33:THR:HG21	1.94	0.49
1:AA:17:U:H1'	1:AA:1080:A:N3	2.28	0.49
1:AA:79:G:C2	1:AA:80:A:N6	2.80	0.49
1:AA:420:U:H2'	1:AA:422:C:C5	2.47	0.49
1:AA:844:G:H3'	1:AA:844:G:OP2	2.13	0.49
1:AA:846:G:H2'	1:AA:846:G:N3	2.27	0.49
1:AA:1074:G:H4'	20:AB:102:ASN:HB2	1.94	0.49
1:AA:1343:G:H2'	1:AA:1344:C:H6	1.76	0.49
2:AC:78:LYS:HE3	2:AC:79:LYS:NZ	2.28	0.49
4:AE:92:ARG:HB3	4:AE:92:ARG:NH1	2.27	0.49
10:AK:60:PHE:O	10:AK:64:VAL:HG12	2.13	0.49
10:AK:83:VAL:HB	10:AK:109:ILE:HG23	1.93	0.49
16:AQ:74:LEU:HD13	16:AQ:75:VAL:N	2.28	0.49
22:BA:52:A:H3'	22:BA:53:A:H8	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:309:A:H4'	42:BU:15:GLY:CA	2.42	0.49
23:BB:454:A:H3'	23:BB:455:C:H5'	1.95	0.49
23:BB:670:A:H4'	23:BB:671:C:O5'	2.13	0.49
23:BB:751:A:C5'	40:BS:90:LYS:HA	2.42	0.49
23:BB:817:C:H2'	23:BB:818:G:O4'	2.13	0.49
23:BB:1470:A:H3'	23:BB:1471:G:H8	1.77	0.49
23:BB:2015:A:H2'	23:BB:2016:U:O4'	2.13	0.49
23:BB:2734:A:H2'	23:BB:2735:G:C5'	2.41	0.49
23:BB:2875:C:H2'	23:BB:2876:G:C8	2.47	0.49
26:BD:107:VAL:HA	26:BD:204:LYS:O	2.13	0.49
27:BE:170:ARG:NH2	27:BE:176:ASP:HB2	2.28	0.49
28:BF:3:LEU:HD11	28:BF:172:PHE:CG	2.47	0.49
28:BF:45:ASP:HB3	28:BF:48:LEU:CD2	2.43	0.49
28:BF:111:ARG:HD2	28:BF:111:ARG:N	2.28	0.49
28:BF:165:GLY:O	28:BF:169:LEU:HD12	2.12	0.49
38:BQ:80:ASN:ND2	38:BQ:81:GLY:N	2.61	0.49
39:BR:35:PHE:C	39:BR:58:VAL:HG23	2.33	0.49
41:BT:43:ILE:O	41:BT:47:VAL:HG23	2.13	0.49
43:BW:32:ALA:C	43:BW:34:SER:H	2.16	0.49
46:BZ:33:LEU:O	46:BZ:34:HIS:CG	2.66	0.49
1:CA:398:U:H2'	1:CA:399:G:C8	2.47	0.49
1:CA:780:A:O2'	1:CA:781:A:H5"	2.13	0.49
1:CA:1206:G:H4'	2:CC:191:THR:O	2.13	0.49
1:CA:1320:C:N4	18:CS:35:ARG:HD3	2.28	0.49
1:CA:1339:A:H2'	1:CA:1340:A:O4'	2.12	0.49
1:CA:1423:G:H2'	1:CA:1424:U:C6	2.48	0.49
1:CA:1511:G:O2'	1:CA:1512:U:H5'	2.12	0.49
3:CD:16:THR:HG22	3:CD:17:ASP:N	2.28	0.49
5:CF:18:VAL:HG21	5:CF:58:HIS:CE1	2.48	0.49
5:CF:51:ILE:HG23	5:CF:51:ILE:O	2.12	0.49
5:CF:53:LYS:HB2	5:CF:54:LEU:HD22	1.93	0.49
7:CH:95:MET:HG2	7:CH:98:LEU:HB2	1.93	0.49
9:CJ:76:ILE:O	9:CJ:76:ILE:HD12	2.11	0.49
12:CM:21:ILE:HG22	12:CM:23:GLY:H	1.77	0.49
13:CN:50:LEU:N	13:CN:51:PRO:CD	2.76	0.49
18:CS:40:PHE:HB2	18:CS:43:MET:HE3	1.95	0.49
20:CB:128:LEU:HD23	20:CB:132:GLU:CB	2.42	0.49
22:DA:28:C:H2'	22:DA:29:A:C8	2.48	0.49
23:DB:37:C:H1'	27:DE:45:ALA:HB2	1.93	0.49
23:DB:616:A:H3'	23:DB:617:G:C8	2.43	0.49
23:DB:655:A:H4'	23:DB:656:G:H5'	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1168:G:O2'	23:DB:1169:A:H5'	2.11	0.49
23:DB:1580:A:H2'	23:DB:1581:G:O4'	2.13	0.49
23:DB:1792:G:OP1	25:DC:204:LEU:HD12	2.13	0.49
23:DB:1985:C:O2'	23:DB:1986:C:H5'	2.13	0.49
23:DB:2221:G:O2'	23:DB:2222:C:H5'	2.13	0.49
23:DB:2818:U:H4'	23:DB:2837:A:O4'	2.13	0.49
26:DD:36:GLN:HB3	26:DD:67:HIS:HE1	1.78	0.49
26:DD:51:THR:HG23	26:DD:78:GLY:O	2.12	0.49
26:DD:149:ASN:O	26:DD:152:PRO:HD2	2.12	0.49
28:DF:71:LYS:HD3	28:DF:73:VAL:O	2.13	0.49
29:DG:11:PRO:O	29:DG:14:VAL:HG22	2.13	0.49
29:DG:84:LYS:HG3	29:DG:131:VAL:C	2.32	0.49
30:DH:65:ALA:HB1	30:DH:138:VAL:HG11	1.94	0.49
35:DN:12:ARG:HG3	35:DN:13:ASN:H	1.78	0.49
37:DP:24:THR:N	37:DP:87:ARG:O	2.46	0.49
39:DR:16:GLU:H	39:DR:101:ILE:CG1	2.23	0.49
39:DR:72:VAL:HG23	39:DR:89:HIS:O	2.12	0.49
42:DU:53:GLN:N	42:DU:54:PRO:CD	2.76	0.49
43:DW:9:THR:O	43:DW:10:ARG:HB2	2.12	0.49
46:DZ:5:CYS:HG	46:DZ:52:SER:HG	1.61	0.49
48:D1:33:LEU:HB3	48:D1:51:ALA:CB	2.40	0.49
52:DI:24:GLY:HA2	52:DI:34:ILE:HD12	1.95	0.49
1:AA:34:C:H2'	1:AA:35:G:H8	1.77	0.49
1:AA:36:C:O3'	11:AL:119:LYS:HA	2.12	0.49
1:AA:66:A:H5'	1:AA:173:U:O4	2.13	0.49
1:AA:715:A:H2'	1:AA:716:A:H8	1.78	0.49
1:AA:1060:U:H2'	1:AA:1061:G:H8	1.77	0.49
3:AD:2:ARG:HG3	3:AD:114:ARG:NH1	2.28	0.49
8:AI:46:VAL:HG23	8:AI:47:VAL:N	2.27	0.49
10:AK:108:ASN:HD21	21:AU:6:ARG:HD2	1.78	0.49
18:AS:10:ILE:HB	18:AS:14:LEU:HD11	1.95	0.49
20:AB:186:VAL:O	20:AB:200:PRO:HA	2.13	0.49
21:AU:20:ARG:HD2	21:AU:20:ARG:H	1.78	0.49
22:BA:42:C:C5	28:BF:65:LEU:HD22	2.47	0.49
23:BB:245:G:H2'	23:BB:246:C:H6	1.77	0.49
23:BB:256:A:H2'	23:BB:257:C:H6	1.78	0.49
23:BB:670:A:C4'	33:BL:42:SER:HB2	2.42	0.49
23:BB:704:G:H1'	23:BB:727:A:N6	2.27	0.49
23:BB:784:G:HO2'	23:BB:785:G:H5"	1.77	0.49
23:BB:922:C:H1'	43:BW:22:VAL:HG21	1.94	0.49
23:BB:2394:C:H2'	23:BB:2395:C:C6	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2462:C:H2'	23:BB:2463:C:C6	2.48	0.49
23:BB:2589:A:H2'	23:BB:2590:A:H8	1.77	0.49
23:BB:2863:C:O2'	23:BB:2864:G:H5'	2.12	0.49
24:BV:30:ILE:O	24:BV:37:PRO:HA	2.12	0.49
25:BC:92:LEU:HG	25:BC:93:VAL:H	1.78	0.49
25:BC:153:LEU:HD13	25:BC:175:LEU:HD21	1.94	0.49
26:BD:108:ASP:OD2	26:BD:206:ALA:HA	2.12	0.49
27:BE:118:LEU:O	27:BE:119:ILE:HD13	2.12	0.49
28:BF:62:GLN:HB2	28:BF:91:ARG:HH11	1.78	0.49
29:BG:84:LYS:H	29:BG:85:LYS:HD2	1.77	0.49
29:BG:89:VAL:HG12	29:BG:90:GLY:N	2.26	0.49
30:BH:9:VAL:CG1	30:BH:12:LEU:HG	2.43	0.49
36:BO:106:LEU:HG	36:BO:107:ALA:N	2.26	0.49
41:BT:15:HIS:O	41:BT:16:VAL:C	2.51	0.49
49:B2:34:ARG:HE	49:B2:39:ARG:HG2	1.78	0.49
1:CA:69:G:N2	1:CA:71:A:N6	2.61	0.49
1:CA:104:G:O2'	1:CA:105:G:H5'	2.13	0.49
1:CA:137:U:H2'	1:CA:138:G:H8	1.78	0.49
1:CA:394:G:O2'	1:CA:395:C:H5'	2.13	0.49
1:CA:502:A:H2'	1:CA:503:C:H6	1.76	0.49
1:CA:916:U:O2'	1:CA:917:G:H5'	2.12	0.49
1:CA:1216:A:H2'	1:CA:1217:C:C6	2.47	0.49
1:CA:1297:G:H1'	1:CA:1298:U:C5	2.44	0.49
2:CC:156:LEU:CD1	2:CC:165:GLU:HB2	2.43	0.49
4:CE:88:HIS:CE1	4:CE:137:ARG:HD2	2.48	0.49
5:CF:6:ILE:O	5:CF:6:ILE:HG13	2.13	0.49
8:CI:22:PRO:HA	8:CI:60:LEU:CB	2.43	0.49
13:CN:79:SER:O	13:CN:83:VAL:HG23	2.13	0.49
16:CQ:60:ILE:HD13	16:CQ:60:ILE:H	1.78	0.49
23:DB:222:A:N1	23:DB:233:A:H5"	2.28	0.49
23:DB:303:G:H2'	23:DB:304:U:H6	1.78	0.49
23:DB:1033:U:H5	51:D4:15:LYS:HE2	1.78	0.49
23:DB:1099:G:H4'	52:DI:4:VAL:HG12	1.95	0.49
23:DB:1150:C:O2'	23:DB:1151:A:H5'	2.12	0.49
23:DB:2307:G:O6	28:DF:40:GLY:HA3	2.12	0.49
23:DB:2443:C:O2'	23:DB:2444:G:H5'	2.13	0.49
23:DB:2756:U:C1'	23:DB:2757:A:H5"	2.40	0.49
25:DC:138:SER:O	25:DC:162:GLN:HA	2.13	0.49
25:DC:149:LYS:HD3	25:DC:152:GLN:HE22	1.78	0.49
25:DC:264:LYS:HG3	25:DC:265:PHE:CD2	2.48	0.49
28:DF:103:ILE:HD11	28:DF:174:PHE:HA	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DF:126:ASN:ND2	28:DF:156:THR:HG23	2.06	0.49
32:DK:113:MET:HA	32:DK:116:ILE:HD11	1.95	0.49
38:DQ:89:ILE:C	38:DQ:91:ARG:H	2.16	0.49
40:DS:25:ARG:HE	40:DS:74:ILE:CG2	2.25	0.49
43:DW:18:LYS:HG3	43:DW:19:ARG:H	1.77	0.49
1:AA:50:A:N6	1:AA:361:G:H4'	2.28	0.49
1:AA:153:C:H2'	1:AA:154:U:H6	1.78	0.49
1:AA:242:G:H2'	1:AA:243:A:H5"	1.94	0.49
1:AA:382:A:H2'	1:AA:383:A:C8	2.48	0.49
1:AA:602:A:H2'	1:AA:603:U:C6	2.48	0.49
1:AA:674:G:H2'	1:AA:675:A:C8	2.40	0.49
1:AA:1114:C:O2'	1:AA:1115:U:H5'	2.13	0.49
1:AA:1464:U:H2'	1:AA:1465:A:H8	1.77	0.49
2:AC:165:GLU:HG3	2:AC:166:TRP:H	1.77	0.49
3:AD:90:LEU:HD13	3:AD:93:LEU:HD12	1.94	0.49
3:AD:192:ALA:C	3:AD:194:ILE:H	2.16	0.49
4:AE:15:ILE:HB	4:AE:35:LEU:O	2.13	0.49
5:AF:54:LEU:HD22	5:AF:54:LEU:N	2.28	0.49
7:AH:111:THR:H	7:AH:114:ALA:HB3	1.76	0.49
9:AJ:76:ILE:HD12	9:AJ:76:ILE:O	2.13	0.49
12:AM:44:ILE:O	12:AM:47:LEU:HB2	2.12	0.49
12:AM:68:LEU:O	12:AM:72:ILE:HG22	2.13	0.49
13:AN:50:LEU:N	13:AN:51:PRO:CD	2.76	0.49
16:AQ:28:VAL:O	16:AQ:36:PHE:HA	2.13	0.49
20:AB:31:PHE:HB2	20:AB:41:ASN:HA	1.94	0.49
23:BB:150:U:H2'	23:BB:151:C:H6	1.76	0.49
23:BB:311:A:H3'	23:BB:312:G:H8	1.78	0.49
23:BB:392:U:H2'	23:BB:393:C:H6	1.78	0.49
23:BB:1444:G:H2'	23:BB:1445:G:C8	2.47	0.49
23:BB:1951:U:H2'	23:BB:1953:A:OP2	2.13	0.49
23:BB:2073:C:C5'	25:BC:227:VAL:HG12	2.43	0.49
23:BB:2101:A:H2'	23:BB:2102:G:O4'	2.13	0.49
23:BB:2284:A:OP1	48:B1:4:ILE:HG12	2.12	0.49
23:BB:2721:A:H2'	23:BB:2722:G:C8	2.48	0.49
25:BC:77:VAL:HG23	25:BC:112:GLY:N	2.08	0.49
26:BD:30:GLU:OE1	26:BD:53:GLY:HA2	2.13	0.49
27:BE:176:ASP:OD1	27:BE:178:VAL:HG12	2.12	0.49
27:BE:181:ILE:HG13	33:BL:2:ARG:HE	1.78	0.49
28:BF:102:LEU:HD13	28:BF:103:ILE:HB	1.93	0.49
29:BG:42:VAL:HA	29:BG:50:THR:O	2.13	0.49
31:BJ:110:PRO:HB2	31:BJ:111:LYS:HE3	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BL:105:ILE:HG22	33:BL:106:GLU:N	2.28	0.49
38:BQ:63:ARG:HH21	38:BQ:64:ILE:HD13	1.78	0.49
50:B3:25:HIS:HB2	50:B3:43:LEU:O	2.13	0.49
1:CA:660:C:H2'	1:CA:661:G:O4'	2.13	0.49
1:CA:847:G:H2'	1:CA:848:C:C6	2.48	0.49
1:CA:1225:A:H5'	1:CA:1226:C:OP2	2.13	0.49
1:CA:1238:A:C8	1:CA:1303:C:H1'	2.48	0.49
3:CD:106:PHE:CE1	3:CD:158:LEU:HD21	2.48	0.49
4:CE:132:PRO:HG2	4:CE:133:ILE:H	1.78	0.49
4:CE:136:VAL:HG13	4:CE:137:ARG:H	1.78	0.49
11:CL:81:ILE:HG23	11:CL:94:TYR:HB3	1.95	0.49
15:CP:72:ALA:HA	15:CP:75:ILE:HD12	1.95	0.49
20:CB:14:HIS:HD2	20:CB:202:ASN:H	1.60	0.49
23:DB:138:U:H2'	23:DB:140:C:C4'	2.42	0.49
23:DB:545:U:H5"	23:DB:546:U:C4'	2.19	0.49
23:DB:545:U:H2'	23:DB:547:A:OP1	2.13	0.49
23:DB:626:A:H2'	33:DL:78:ARG:NH1	2.28	0.49
23:DB:1256:G:H21	27:DE:77:ILE:CG2	2.26	0.49
23:DB:2223:G:C2'	23:DB:2224:G:H5'	2.43	0.49
23:DB:2240:U:O2'	23:DB:2241:A:H5'	2.12	0.49
23:DB:2772:C:H4'	26:DD:171:THR:HG21	1.95	0.49
28:DF:33:ILE:HB	28:DF:90:LEU:HG	1.95	0.49
29:DG:154:GLU:CD	29:DG:156:TYR:HB2	2.33	0.49
31:DJ:16:TYR:CD2	31:DJ:140:LEU:HD12	2.48	0.49
31:DJ:38:GLY:HA3	31:DJ:50:THR:O	2.13	0.49
33:DL:125:LEU:H	33:DL:143:GLU:HG3	1.78	0.49
35:DN:90:ARG:HB3	35:DN:94:TYR:HE1	1.78	0.49
39:DR:71:LYS:HG2	39:DR:73:LYS:HZ1	1.76	0.49
43:DW:51:GLY:N	43:DW:59:PHE:HB2	2.28	0.49
44:DX:21:LEU:HD23	44:DX:21:LEU:H	1.78	0.49
46:DZ:68:LEU:HB3	46:DZ:78:TYR:HE1	1.76	0.49
47:D0:47:TYR:O	47:D0:48:TYR:HB2	2.12	0.49
50:D3:15:LYS:HA	50:D3:21:PHE:HA	1.95	0.49
52:DI:19:PRO:HB2	52:DI:22:PRO:HD2	1.95	0.49
1:AA:598:U:H4'	7:AH:85:TYR:CG	2.48	0.48
1:AA:815:A:H4'	1:AA:817:C:C4	2.48	0.48
1:AA:922:G:H2'	1:AA:923:A:C8	2.49	0.48
1:AA:1109:C:H2'	1:AA:1110:A:O4'	2.13	0.48
1:AA:1221:G:O2'	1:AA:1222:G:H5'	2.13	0.48
1:AA:1239:A:H4'	1:AA:1240:U:C5'	2.43	0.48
1:AA:1254:A:H2'	1:AA:1255:G:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:22:SER:HB2	3:AD:109:THR:HG22	1.94	0.48
7:AH:9:MET:O	7:AH:13:ILE:HG13	2.13	0.48
8:AI:44:ARG:HE	8:AI:48:ARG:HH22	1.61	0.48
10:AK:86:LYS:HB2	10:AK:113:THR:HA	1.94	0.48
12:AM:86:ARG:HA	12:AM:96:VAL:CG1	2.43	0.48
13:AN:79:SER:O	13:AN:83:VAL:HG23	2.13	0.48
20:AB:23:ASN:C	20:AB:25:LYS:H	2.16	0.48
23:BB:796:C:H2'	23:BB:797:G:H8	1.78	0.48
23:BB:904:G:H2'	23:BB:905:A:H8	1.77	0.48
23:BB:992:C:H2'	23:BB:993:G:H8	1.78	0.48
23:BB:1729:U:O4	23:BB:1733:G:H1'	2.12	0.48
23:BB:1985:C:O2'	23:BB:1986:C:H5'	2.13	0.48
23:BB:2070:A:H2'	23:BB:2071:A:C8	2.49	0.48
23:BB:2234:G:O2'	23:BB:2235:G:H5'	2.13	0.48
23:BB:2783:U:H2'	23:BB:2784:U:C6	2.47	0.48
23:BB:2849:U:H4'	23:BB:2850:A:C5'	2.43	0.48
28:BF:33:ILE:HB	28:BF:90:LEU:HG	1.95	0.48
29:BG:93:TYR:O	29:BG:94:ARG:HG3	2.11	0.48
29:BG:116:LEU:HD23	29:BG:121:THR:HA	1.94	0.48
30:BH:53:GLU:HA	30:BH:53:GLU:OE1	2.12	0.48
30:BH:66:ASN:N	30:BH:66:ASN:HD22	2.12	0.48
30:BH:80:ILE:H	30:BH:145:ASN:H	1.61	0.48
30:BH:108:VAL:HG12	30:BH:109:GLU:H	1.78	0.48
34:BM:35:ALA:HB3	34:BM:99:GLY:H	1.78	0.48
34:BM:86:LYS:HG3	34:BM:87:GLY:N	2.27	0.48
38:BQ:35:PHE:O	38:BQ:39:ILE:HG12	2.13	0.48
38:BQ:80:ASN:C	38:BQ:82:LEU:H	2.17	0.48
41:BT:50:LEU:HD22	41:BT:50:LEU:N	2.28	0.48
44:BX:3:ALA:O	44:BX:6:LEU:HB2	2.12	0.48
47:B0:18:HIS:H	47:B0:18:HIS:HD1	1.59	0.48
52:BI:89:SER:HA	52:BI:97:VAL:CG2	2.43	0.48
1:CA:591:U:H2'	1:CA:592:G:H8	1.78	0.48
1:CA:724:G:H2'	1:CA:725:G:H8	1.77	0.48
1:CA:728:A:H2'	1:CA:729:A:H8	1.77	0.48
7:CH:12:ARG:HG3	7:CH:12:ARG:HH11	1.78	0.48
12:CM:9:PRO:HB2	12:CM:17:ALA:HB1	1.95	0.48
16:CQ:10:ARG:NH2	16:CQ:55:GLY:HA2	2.28	0.48
20:CB:40:ILE:HD13	20:CB:201:GLY:HA2	1.93	0.48
20:CB:113:LEU:HD23	20:CB:114:LYS:N	2.28	0.48
22:DA:39:A:O2'	22:DA:40:U:H5'	2.13	0.48
22:DA:74:U:H2'	22:DA:75:G:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:519:U:H2'	23:DB:520:G:C8	2.48	0.48
23:DB:685:A:H1'	23:DB:688:U:O4	2.13	0.48
23:DB:1348:C:H2'	23:DB:1349:C:H5'	1.94	0.48
23:DB:1794:A:H2'	23:DB:1795:C:C6	2.48	0.48
23:DB:1826:G:H2'	23:DB:1827:U:C6	2.48	0.48
23:DB:1939:U:O2	23:DB:1967:C:H4'	2.13	0.48
23:DB:2405:G:H1'	23:DB:2412:A:H61	1.78	0.48
25:DC:239:PHE:HD1	25:DC:241:LYS:H	1.59	0.48
26:DD:171:THR:HG23	26:DD:172:VAL:H	1.77	0.48
28:DF:79:ARG:HB2	28:DF:82:TYR:CE2	2.48	0.48
32:DK:35:VAL:H	32:DK:65:THR:HG21	1.78	0.48
35:DN:90:ARG:HB3	35:DN:94:TYR:CE1	2.48	0.48
38:DQ:91:ARG:HE	38:DQ:94:LEU:HD23	1.77	0.48
50:D3:25:HIS:HB2	50:D3:43:LEU:O	2.13	0.48
1:AA:264:C:HO2'	16:AQ:65:PRO:HG2	1.78	0.48
1:AA:317:U:H2'	1:AA:318:G:H8	1.78	0.48
1:AA:908:A:H2'	1:AA:909:A:H8	1.78	0.48
1:AA:1001:C:H2'	1:AA:1002:G:H8	1.78	0.48
1:AA:1234:C:H1'	1:AA:1364:U:O2	2.14	0.48
1:AA:1414:U:H2'	1:AA:1415:G:C8	2.48	0.48
1:AA:1424:U:H2'	1:AA:1425:U:C6	2.47	0.48
2:AC:13:ILE:HD13	2:AC:13:ILE:N	2.29	0.48
2:AC:149:LYS:O	2:AC:200:TRP:HE3	1.95	0.48
3:AD:24:VAL:O	3:AD:27:ILE:HG13	2.13	0.48
4:AE:71:ILE:HG21	4:AE:144:GLU:OE2	2.12	0.48
4:AE:148:SER:HB2	4:AE:150:GLU:OE1	2.13	0.48
6:AG:12:LEU:HD22	6:AG:13:PRO:HD2	1.94	0.48
6:AG:120:ALA:O	6:AG:123:LEU:HB2	2.13	0.48
6:AG:136:LYS:O	6:AG:140:VAL:HG23	2.13	0.48
8:AI:127:SER:O	8:AI:129:ARG:HG3	2.12	0.48
12:AM:90:HIS:HA	12:AM:108:ARG:HH22	1.76	0.48
14:AO:55:LEU:O	14:AO:58:MET:HG2	2.14	0.48
18:AS:62:THR:O	18:AS:66:VAL:HG13	2.13	0.48
22:BA:91:C:H2'	22:BA:92:C:C6	2.48	0.48
23:BB:623:C:H2'	23:BB:624:C:C6	2.48	0.48
23:BB:710:U:H2'	23:BB:711:G:H8	1.79	0.48
23:BB:851:C:H2'	23:BB:852:U:H6	1.78	0.48
23:BB:1059:G:H2'	23:BB:1060:U:C5	2.48	0.48
23:BB:1210:G:H1'	23:BB:1212:G:C2	2.48	0.48
23:BB:1716:U:H2'	23:BB:1717:A:H8	1.78	0.48
23:BB:1838:C:H4'	23:BB:1839:G:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2282:G:OP1	23:BB:2283:C:H1'	2.13	0.48
23:BB:2531:A:H4'	29:BG:156:TYR:CD1	2.48	0.48
23:BB:2569:G:O2'	23:BB:2570:G:H5'	2.13	0.48
23:BB:2820:A:H4'	35:BN:3:HIS:CG	2.48	0.48
25:BC:69:ASN:O	25:BC:70:LYS:C	2.51	0.48
26:BD:55:LYS:HB2	26:BD:60:VAL:HG13	1.94	0.48
26:BD:116:LYS:HB3	26:BD:118:PHE:CZ	2.47	0.48
30:BH:64:ALA:O	30:BH:65:ALA:HB2	2.13	0.48
31:BJ:75:TYR:CD1	31:BJ:86:GLN:HB3	2.48	0.48
32:BK:35:VAL:H	32:BK:65:THR:HG21	1.78	0.48
35:BN:11:ASN:O	35:BN:12:ARG:HB2	2.13	0.48
36:BO:39:VAL:HB	36:BO:49:VAL:HG22	1.96	0.48
37:BP:24:THR:N	37:BP:87:ARG:O	2.47	0.48
39:BR:61:ALA:HB1	39:BR:96:VAL:HB	1.95	0.48
40:BS:17:VAL:HG11	40:BS:103:ILE:HG12	1.93	0.48
45:BY:29:ARG:H	45:BY:33:HIS:CD2	2.30	0.48
46:BZ:76:GLU:HG3	46:BZ:77:LYS:H	1.77	0.48
50:B3:58:ILE:HG13	50:B3:58:ILE:H	1.39	0.48
1:CA:114:U:H2'	1:CA:115:G:C8	2.48	0.48
1:CA:386:C:C2'	1:CA:387:U:H5'	2.44	0.48
1:CA:734:G:O2'	17:CR:59:LYS:HD3	2.13	0.48
1:CA:820:U:H4'	1:CA:821:G:OP2	2.12	0.48
1:CA:846:G:N3	1:CA:846:G:H2'	2.28	0.48
2:CC:155:ARG:H	2:CC:162:ALA:HA	1.78	0.48
3:CD:8:LEU:HD12	3:CD:31:CYS:SG	2.53	0.48
5:CF:68:GLN:HA	5:CF:71:ILE:HD11	1.95	0.48
8:CI:50:PRO:HD3	8:CI:79:ARG:CG	2.43	0.48
14:CO:68:TYR:HA	14:CO:71:ARG:HE	1.77	0.48
20:CB:75:ALA:C	20:CB:79:VAL:HG23	2.33	0.48
20:CB:93:HIS:O	20:CB:94:ARG:O	2.30	0.48
23:DB:492:A:H2'	23:DB:493:G:O4'	2.13	0.48
23:DB:636:G:H3'	33:DL:128:THR:CG2	2.42	0.48
23:DB:796:C:O2'	23:DB:797:G:H5'	2.13	0.48
23:DB:1387:A:H5'	23:DB:1469:A:H1'	1.95	0.48
23:DB:1445:G:H2'	23:DB:1446:C:O4'	2.13	0.48
23:DB:1467:U:O2'	23:DB:1468:U:H5'	2.13	0.48
23:DB:1794:A:H2'	23:DB:1795:C:H6	1.77	0.48
23:DB:1885:A:H2'	23:DB:1886:U:O4'	2.14	0.48
23:DB:2466:C:O2'	23:DB:2467:C:H5'	2.12	0.48
31:DJ:16:TYR:N	31:DJ:137:PRO:HB3	2.29	0.48
33:DL:125:LEU:HD23	33:DL:126:ARG:N	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DQ:60:TRP:C	38:DQ:64:ILE:HG12	2.33	0.48
38:DQ:80:ASN:ND2	38:DQ:81:GLY:N	2.61	0.48
40:DS:76:VAL:HG12	40:DS:103:ILE:HA	1.95	0.48
41:DT:14:PRO:HA	41:DT:32:LEU:CB	2.44	0.48
1:AA:251:G:N3	1:AA:266:G:O6	2.46	0.48
1:AA:1178:G:H3'	8:AI:98:ARG:NH2	2.29	0.48
3:AD:31:CYS:SG	3:AD:33:ILE:HB	2.53	0.48
12:AM:15:VAL:HG22	12:AM:33:LEU:CD1	2.44	0.48
15:AP:6:LEU:HD12	15:AP:6:LEU:N	2.28	0.48
23:BB:204:A:H4'	23:BB:205:G:OP1	2.13	0.48
23:BB:286:U:O2'	23:BB:287:G:H5'	2.12	0.48
23:BB:320:A:H2'	27:BE:131:THR:OG1	2.13	0.48
23:BB:464:U:H2'	23:BB:465:G:O4'	2.13	0.48
23:BB:571:U:O2'	23:BB:573:U:O5'	2.31	0.48
23:BB:598:U:H2'	23:BB:599:A:C8	2.47	0.48
23:BB:816:C:O2'	23:BB:817:C:H5'	2.13	0.48
23:BB:1711:A:O2'	23:BB:1712:U:H5'	2.13	0.48
23:BB:2083:G:H2'	23:BB:2084:C:C6	2.48	0.48
23:BB:2385:C:H2'	23:BB:2386:A:C8	2.47	0.48
23:BB:2472:G:C2'	23:BB:2475:C:H42	2.27	0.48
23:BB:2539:C:H4'	51:B4:36:ARG:HH21	1.77	0.48
25:BC:12:ARG:HA	25:BC:15:VAL:CG2	2.44	0.48
28:BF:43:ILE:HA	28:BF:46:LYS:HE2	1.95	0.48
28:BF:62:GLN:HG3	28:BF:91:ARG:NH1	2.29	0.48
28:BF:105:ILE:C	28:BF:108:PRO:HD2	2.34	0.48
29:BG:28:LYS:HG2	29:BG:79:THR:HA	1.95	0.48
29:BG:154:GLU:CD	29:BG:156:TYR:HB2	2.33	0.48
30:BH:5:LEU:HD13	30:BH:13:GLY:HA2	1.94	0.48
34:BM:10:ARG:HH21	34:BM:10:ARG:HG3	1.78	0.48
38:BQ:68:ALA:O	38:BQ:71:ASN:HB3	2.13	0.48
38:BQ:91:ARG:HE	38:BQ:94:LEU:HD23	1.77	0.48
39:BR:10:LYS:N	39:BR:10:LYS:HD2	2.27	0.48
40:BS:25:ARG:HE	40:BS:74:ILE:HG23	1.79	0.48
42:BU:11:ILE:O	42:BU:11:ILE:HD13	2.12	0.48
42:BU:26:ASN:N	42:BU:26:ASN:ND2	2.62	0.48
42:BU:41:VAL:O	42:BU:59:GLU:HA	2.13	0.48
46:BZ:40:VAL:CG2	46:BZ:43:GLU:HB3	2.34	0.48
46:BZ:45:ARG:HE	46:BZ:47:VAL:HG12	1.77	0.48
1:CA:794:A:H2'	1:CA:795:C:C6	2.48	0.48
1:CA:908:A:H2'	1:CA:909:A:H8	1.79	0.48
1:CA:1001:C:H2'	1:CA:1002:G:H8	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:129:PHE:HD2	2:CC:156:LEU:HD22	1.78	0.48
2:CC:149:LYS:HG3	2:CC:168:ARG:HB2	1.96	0.48
3:CD:129:VAL:HG12	3:CD:131:ILE:H	1.78	0.48
4:CE:53:ARG:HB3	4:CE:53:ARG:NH1	2.28	0.48
6:CG:67:ASN:HB2	6:CG:134:VAL:HG12	1.95	0.48
6:CG:70:PRO:O	6:CG:95:ARG:HG3	2.13	0.48
11:CL:42:LYS:HB3	11:CL:44:PRO:HD2	1.94	0.48
13:CN:5:MET:SD	13:CN:8:ARG:HD3	2.53	0.48
17:CR:42:ARG:HG3	17:CR:43:ILE:H	1.78	0.48
20:CB:209:VAL:HG23	20:CB:210:THR:N	2.27	0.48
22:DA:30:C:H2'	22:DA:31:C:H5'	1.95	0.48
23:DB:1290:C:O2'	23:DB:1291:C:H5'	2.13	0.48
23:DB:1292:G:H2'	23:DB:1293:C:H6	1.77	0.48
23:DB:1793:C:H2'	23:DB:1794:A:C8	2.48	0.48
23:DB:2074:U:O2'	23:DB:2075:U:H5'	2.13	0.48
23:DB:2391:G:HO2'	23:DB:2424:C:H41	1.61	0.48
23:DB:2663:G:H2'	23:DB:2664:G:O4'	2.13	0.48
23:DB:2675:A:N1	23:DB:2732:G:O6	2.47	0.48
23:DB:2708:G:O2'	23:DB:2709:G:H5'	2.11	0.48
23:DB:2897:U:H2'	23:DB:2898:U:H6	1.76	0.48
25:DC:43:ASN:HD22	25:DC:44:ASN:N	2.11	0.48
25:DC:57:HIS:CG	25:DC:58:LYS:H	2.31	0.48
26:DD:106:LYS:O	26:DD:107:VAL:HB	2.13	0.48
26:DD:107:VAL:N	26:DD:206:ALA:H	2.11	0.48
30:DH:87:GLU:HB2	30:DH:89:LYS:NZ	2.27	0.48
30:DH:113:SER:N	30:DH:132:PHE:HZ	2.11	0.48
31:DJ:64:VAL:O	31:DJ:68:LYS:HD2	2.12	0.48
34:DM:55:ARG:HH22	34:DM:58:LYS:HA	1.78	0.48
52:DI:11:GLN:HA	52:DI:55:PRO:HA	1.94	0.48
52:DI:100:ILE:O	52:DI:139:VAL:HA	2.14	0.48
1:AA:56:U:H2'	1:AA:57:G:H8	1.79	0.48
1:AA:87:C:H2'	1:AA:88:U:O3'	2.13	0.48
1:AA:175:C:H2'	1:AA:176:C:H6	1.78	0.48
1:AA:591:U:OP2	7:AH:30:LYS:HE2	2.14	0.48
1:AA:624:C:H2'	1:AA:625:U:C6	2.48	0.48
1:AA:814:A:H5'	1:AA:1511:G:H4'	1.96	0.48
1:AA:1390:U:O2'	1:AA:1391:U:H5'	2.14	0.48
2:AC:149:LYS:HE3	2:AC:166:TRP:CH2	2.49	0.48
3:AD:104:MET:SD	3:AD:179:GLY:HA3	2.54	0.48
4:AE:87:VAL:HG22	4:AE:88:HIS:N	2.28	0.48
11:AL:33:CYS:HA	11:AL:54:VAL:HA	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AR:58:ILE:O	17:AR:62:ARG:HG3	2.14	0.48
21:AU:39:LYS:HD3	21:AU:39:LYS:H	1.78	0.48
23:BB:196:A:H5"	33:BL:47:ARG:HH12	1.78	0.48
23:BB:235:U:H2'	23:BB:236:C:C6	2.47	0.48
23:BB:392:U:O2'	23:BB:393:C:H5'	2.14	0.48
23:BB:783:A:H2'	23:BB:784:G:O5'	2.12	0.48
23:BB:812:C:H5"	23:BB:1250:G:O2'	2.12	0.48
23:BB:939:G:O2'	23:BB:940:G:H5'	2.13	0.48
23:BB:979:A:H2'	23:BB:982:C:N4	2.20	0.48
23:BB:1387:A:H5'	23:BB:1469:A:H1'	1.95	0.48
23:BB:2286:G:H4'	23:BB:2287:A:O4'	2.13	0.48
23:BB:2557:G:H2'	23:BB:2558:C:H6	1.74	0.48
23:BB:2716:C:H2'	23:BB:2717:C:C6	2.48	0.48
24:BV:72:VAL:HG21	24:BV:91:PHE:CG	2.48	0.48
24:BV:77:VAL:CG1	34:BM:136:MET:HB3	2.43	0.48
26:BD:171:THR:HG23	26:BD:172:VAL:H	1.78	0.48
28:BF:70:ARG:HA	28:BF:80:GLN:NE2	2.29	0.48
28:BF:126:ASN:ND2	28:BF:156:THR:HG23	2.05	0.48
29:BG:10:VAL:HG23	29:BG:48:THR:HA	1.94	0.48
31:BJ:125:TYR:HH	31:BJ:132:HIS:CE1	2.32	0.48
33:BL:73:ILE:HD12	33:BL:106:GLU:HB2	1.95	0.48
33:BL:77:ILE:HG12	33:BL:95:LEU:HD22	1.94	0.48
36:BO:49:VAL:HG11	36:BO:82:ALA:CA	2.41	0.48
42:BU:53:GLN:N	42:BU:54:PRO:CD	2.76	0.48
42:BU:82:VAL:CG1	42:BU:93:ARG:HB3	2.43	0.48
43:BW:30:VAL:HA	43:BW:60:ALA:O	2.12	0.48
46:BZ:56:MET:O	46:BZ:59:ILE:HG12	2.13	0.48
1:CA:233:C:H2'	1:CA:234:C:H6	1.78	0.48
1:CA:308:C:H2'	1:CA:309:A:H8	1.78	0.48
1:CA:474:G:O2'	1:CA:475:C:H5'	2.13	0.48
1:CA:475:C:H2'	1:CA:476:U:H6	1.78	0.48
1:CA:586:C:H2'	1:CA:587:G:H5'	1.95	0.48
1:CA:775:G:H2'	1:CA:776:G:H8	1.78	0.48
1:CA:815:A:H4'	1:CA:817:C:C4	2.49	0.48
1:CA:1060:U:H5"	9:CJ:53:ILE:HG12	1.94	0.48
5:CF:6:ILE:HG23	5:CF:62:MET:HB3	1.95	0.48
5:CF:21:MET:HB3	5:CF:25:TYR:CZ	2.48	0.48
11:CL:2:THR:HG22	11:CL:5:GLN:HE21	1.79	0.48
11:CL:98:ARG:HD2	11:CL:103:CYS:SG	2.53	0.48
13:CN:97:LYS:HB3	13:CN:97:LYS:NZ	2.28	0.48
23:DB:559:G:H21	38:DQ:51:GLN:NE2	2.11	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1098:A:C3'	52:DI:3:LYS:HA	2.26	0.48
23:DB:1369:G:O2'	23:DB:1370:C:H5'	2.14	0.48
23:DB:1436:G:O2'	23:DB:1437:C:H5'	2.13	0.48
23:DB:1716:U:H2'	23:DB:1717:A:H8	1.78	0.48
23:DB:1729:U:O4	23:DB:1733:G:H1'	2.13	0.48
23:DB:2144:G:H2'	23:DB:2145:C:O3'	2.13	0.48
23:DB:2462:C:H2'	23:DB:2463:C:C6	2.47	0.48
23:DB:2617:U:O2'	23:DB:2618:G:H5'	2.13	0.48
24:DV:14:LYS:HE3	24:DV:18:ARG:NH2	2.29	0.48
25:DC:14:HIS:O	25:DC:16:VAL:HG23	2.13	0.48
25:DC:35:LYS:HG2	25:DC:36:ASN:N	2.25	0.48
25:DC:64:VAL:HG11	25:DC:66:PHE:CE2	2.49	0.48
25:DC:93:VAL:HG13	25:DC:94:LEU:H	1.77	0.48
25:DC:259:ASN:C	25:DC:261:ARG:H	2.16	0.48
26:DD:25:THR:HG21	26:DD:193:VAL:CG2	2.39	0.48
26:DD:33:ARG:HG2	26:DD:33:ARG:HH21	1.78	0.48
26:DD:171:THR:HG23	26:DD:172:VAL:N	2.28	0.48
27:DE:106:LYS:CE	27:DE:200:LEU:HB3	2.42	0.48
27:DE:188:MET:HE2	27:DE:193:VAL:HG22	1.94	0.48
29:DG:166:GLU:CG	29:DG:168:VAL:HG23	2.43	0.48
30:DH:47:PHE:CE1	30:DH:51:ARG:HD3	2.48	0.48
33:DL:95:LEU:H	33:DL:95:LEU:HD12	1.78	0.48
36:DO:67:ASN:O	36:DO:69:ASP:N	2.46	0.48
37:DP:52:ARG:HG2	37:DP:52:ARG:NH1	2.27	0.48
38:DQ:56:PHE:O	38:DQ:59:LEU:HB3	2.12	0.48
47:D0:18:HIS:HD1	47:D0:18:HIS:H	1.61	0.48
1:AA:36:C:O2'	1:AA:37:U:H5'	2.14	0.48
1:AA:69:G:H2'	1:AA:70:U:C6	2.48	0.48
1:AA:309:A:O2'	1:AA:310:G:H5'	2.12	0.48
1:AA:409:U:OP1	3:AD:23:GLY:HA3	2.13	0.48
1:AA:957:U:H2'	1:AA:959:A:OP2	2.13	0.48
1:AA:1320:C:N4	18:AS:35:ARG:HD3	2.28	0.48
2:AC:21:TRP:CH2	2:AC:31:ASN:HB3	2.49	0.48
2:AC:91:ALA:HB2	2:AC:98:ALA:H	1.78	0.48
3:AD:10:LEU:HD12	3:AD:20:LEU:HD11	1.96	0.48
4:AE:80:LEU:HA	4:AE:146:MET:HE1	1.95	0.48
7:AH:7:ALA:O	7:AH:11:THR:HG23	2.14	0.48
7:AH:95:MET:HG2	7:AH:98:LEU:HB2	1.95	0.48
8:AI:32:ARG:HD3	8:AI:37:TYR:CD1	2.49	0.48
12:AM:89:ARG:CB	12:AM:96:VAL:HG22	2.43	0.48
13:AN:29:ILE:HB	13:AN:30:ILE:HD12	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AP:36:VAL:O	15:AP:36:VAL:HG13	2.14	0.48
16:AQ:60:ILE:HG22	16:AQ:74:LEU:HA	1.95	0.48
19:AT:61:ALA:HB1	19:AT:67:HIS:HA	1.95	0.48
20:AB:63:LYS:HA	20:AB:224:ARG:NH1	2.29	0.48
21:AU:33:ARG:HG2	21:AU:34:ARG:N	2.27	0.48
23:BB:1059:G:O2'	52:BI:112:LYS:HE2	2.14	0.48
23:BB:1606:C:H5"	23:BB:1607:C:OP1	2.14	0.48
23:BB:1678:A:H2'	23:BB:1679:A:C8	2.45	0.48
23:BB:1682:G:H2'	23:BB:1683:U:C6	2.49	0.48
23:BB:1848:A:H2'	23:BB:1849:G:C8	2.47	0.48
23:BB:2025:C:H2'	23:BB:2026:U:H6	1.77	0.48
23:BB:2305:U:H2'	23:BB:2306:C:C6	2.47	0.48
23:BB:2471:A:O2'	23:BB:2472:G:O5'	2.30	0.48
23:BB:2583:G:H2'	23:BB:2584:U:O4'	2.14	0.48
23:BB:2835:A:N6	23:BB:2878:U:H2'	2.29	0.48
25:BC:43:ASN:HB2	25:BC:49:THR:CG2	2.43	0.48
25:BC:54:GLY:O	25:BC:214:GLY:HA2	2.14	0.48
25:BC:105:ALA:HB1	25:BC:109:LEU:CD1	2.43	0.48
26:BD:36:GLN:HB3	26:BD:67:HIS:HE1	1.79	0.48
28:BF:33:ILE:O	28:BF:90:LEU:HB2	2.14	0.48
29:BG:88:LEU:O	29:BG:88:LEU:HD12	2.13	0.48
30:BH:9:VAL:HG11	30:BH:12:LEU:HG	1.95	0.48
30:BH:26:ALA:C	30:BH:28:ASN:N	2.66	0.48
30:BH:48:GLU:HG2	30:BH:49:ALA:N	2.29	0.48
1:CA:546:A:P	3:CD:68:GLU:HB3	2.53	0.48
1:CA:923:A:H2'	1:CA:924:C:H6	1.77	0.48
2:CC:59:PRO:HD2	2:CC:62:SER:O	2.13	0.48
8:CI:32:ARG:HD3	8:CI:37:TYR:CD1	2.47	0.48
11:CL:66:ILE:HD12	11:CL:66:ILE:N	2.28	0.48
13:CN:68:ARG:HH11	13:CN:68:ARG:HG2	1.78	0.48
19:CT:70:LYS:O	19:CT:74:HIS:HB2	2.13	0.48
20:CB:10:LYS:O	20:CB:13:VAL:HG23	2.13	0.48
23:DB:48:G:HO2'	23:DB:49:A:H2	1.61	0.48
23:DB:69:C:H2'	23:DB:70:G:H8	1.78	0.48
23:DB:969:G:H2'	23:DB:970:U:C6	2.49	0.48
23:DB:1199:U:H5"	56:DB:3623:HOH:O	2.12	0.48
23:DB:1247:A:O2'	23:DB:1248:G:H5'	2.13	0.48
23:DB:1266:G:OP1	47:D0:15:ARG:NE	2.42	0.48
23:DB:1309:G:OP1	49:D2:9:VAL:HG12	2.14	0.48
23:DB:1403:A:H2'	23:DB:1404:C:C6	2.49	0.48
23:DB:1534:U:H2'	23:DB:1536:C:C5	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2336:A:H61	43:DW:40:ARG:HD2	1.75	0.48
23:DB:2590:A:H5"	25:DC:237:ARG:NH2	2.28	0.48
23:DB:2811:G:OP1	26:DD:61:THR:HB	2.12	0.48
27:DE:34:ALA:HA	27:DE:94:GLN:NE2	2.28	0.48
29:DG:25:ILE:HD12	29:DG:25:ILE:N	2.29	0.48
29:DG:49:LEU:HD23	29:DG:51:PHE:CZ	2.48	0.48
31:DJ:3:THR:HG21	38:DQ:60:TRP:HE1	1.78	0.48
39:DR:34:GLU:HB3	39:DR:58:VAL:HG21	1.95	0.48
42:DU:78:LYS:CG	42:DU:79:ALA:H	2.27	0.48
43:DW:49:ASN:CB	43:DW:61:LYS:H	2.25	0.48
46:DZ:5:CYS:SG	46:DZ:8:THR:HG23	2.54	0.48
46:DZ:45:ARG:HE	46:DZ:47:VAL:HG12	1.77	0.48
48:D1:49:LYS:O	48:D1:50:GLU:HB3	2.14	0.48
1:AA:517:G:H22	1:AA:533:A:P	2.37	0.48
1:AA:660:C:H2'	1:AA:661:G:O4'	2.13	0.48
1:AA:1530:G:HO2'	1:AA:1531:A:H8	1.62	0.48
3:AD:10:LEU:HD13	3:AD:62:ARG:HD3	1.95	0.48
3:AD:160:LEU:H	3:AD:160:LEU:CD1	2.16	0.48
6:AG:4:ARG:CG	6:AG:5:VAL:H	2.22	0.48
8:AI:12:LYS:HA	8:AI:109:GLN:HG2	1.94	0.48
8:AI:17:ARG:HB2	8:AI:65:THR:HB	1.95	0.48
11:AL:33:CYS:H	11:AL:54:VAL:HG13	1.79	0.48
11:AL:65:TYR:HB3	11:AL:95:HIS:CD2	2.48	0.48
11:AL:81:ILE:HG23	11:AL:94:TYR:HB3	1.95	0.48
12:AM:52:ILE:HA	12:AM:55:LEU:HG	1.96	0.48
16:AQ:3:LYS:HG3	16:AQ:4:ILE:H	1.78	0.48
22:BA:76:G:H1	22:BA:101:A:H61	1.60	0.48
23:BB:543:G:H2'	23:BB:544:C:C5'	2.43	0.48
23:BB:1196:C:H2'	23:BB:1197:G:H8	1.78	0.48
23:BB:1463:C:H2'	23:BB:1464:G:C8	2.49	0.48
23:BB:1508:A:H3'	23:BB:1509:A:C2	2.48	0.48
23:BB:1655:A:H2'	23:BB:1656:C:O4'	2.13	0.48
23:BB:1945:G:H2'	23:BB:1946:U:C6	2.49	0.48
23:BB:2027:G:O2'	23:BB:2028:U:H5'	2.13	0.48
23:BB:2150:C:O2'	23:BB:2151:U:H5'	2.13	0.48
23:BB:2273:A:H2'	23:BB:2274:A:C8	2.48	0.48
23:BB:2385:C:H2'	23:BB:2386:A:H8	1.78	0.48
23:BB:2391:G:HO2'	23:BB:2392:A:P	2.36	0.48
23:BB:2723:C:H5"	35:BN:1:MET:HE2	1.94	0.48
23:BB:2821:A:OP2	35:BN:3:HIS:NE2	2.47	0.48
26:BD:107:VAL:N	26:BD:206:ALA:H	2.11	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BE:172:ALA:HB2	27:BE:195:GLN:NE2	2.29	0.48
28:BF:31:GLU:C	28:BF:32:LYS:HD3	2.34	0.48
28:BF:55:ASP:O	28:BF:59:ILE:HG13	2.13	0.48
30:BH:131:SER:HA	30:BH:142:VAL:N	2.27	0.48
31:BJ:98:GLU:HB3	31:BJ:124:VAL:HG21	1.95	0.48
32:BK:77:ILE:HD11	37:BP:71:ARG:CZ	2.43	0.48
36:BO:30:ARG:HG3	36:BO:30:ARG:NH1	2.29	0.48
38:BQ:7:VAL:HG23	38:BQ:8:ILE:N	2.29	0.48
41:BT:51:PHE:HB3	41:BT:53:VAL:HG23	1.95	0.48
41:BT:74:ILE:HG13	41:BT:75:GLY:N	2.29	0.48
44:BX:21:LEU:HD23	44:BX:21:LEU:H	1.77	0.48
46:BZ:7:VAL:HG23	46:BZ:67:VAL:HG11	1.95	0.48
52:BI:124:MET:O	52:BI:128:ILE:HG12	2.13	0.48
1:CA:113:G:O4’	1:CA:354:G:H4’	2.13	0.48
1:CA:1009:U:H1’	1:CA:1021:A:C2	2.49	0.48
2:CC:71:ARG:O	2:CC:75:VAL:HG23	2.13	0.48
2:CC:78:LYS:C	2:CC:80:GLY:H	2.16	0.48
2:CC:146:LYS:HB2	2:CC:202:PHE:CD2	2.49	0.48
3:CD:149:LYS:HB2	3:CD:177:MET:HG3	1.94	0.48
4:CE:17:VAL:HG23	4:CE:33:THR:O	2.14	0.48
4:CE:37:VAL:HG11	4:CE:113:VAL:CG1	2.43	0.48
4:CE:136:VAL:HG13	4:CE:137:ARG:N	2.28	0.48
20:CB:68:PHE:HE1	20:CB:88:GLN:HB3	1.79	0.48
22:DA:42:C:C5	28:DF:65:LEU:HD22	2.49	0.48
23:DB:7:G:OP1	31:DJ:132:HIS:HE1	1.96	0.48
23:DB:470:A:H61	41:DT:72:GLN:HE22	1.60	0.48
23:DB:659:G:H4’	27:DE:95:LYS:CD	2.43	0.48
23:DB:950:G:H2’	23:DB:951:C:C6	2.48	0.48
23:DB:992:C:O2’	23:DB:993:G:H5’	2.14	0.48
23:DB:1048:A:H8	23:DB:1048:A:P	2.36	0.48
23:DB:1063:G:H5’	52:DI:135:MET:HG2	1.94	0.48
23:DB:1101:U:O2’	23:DB:1102:C:H5’	2.13	0.48
23:DB:1460:U:H3’	23:DB:1461:C:H5’	1.96	0.48
23:DB:1799:G:C5	25:DC:175:LEU:HD13	2.49	0.48
23:DB:2063:C:O2	23:DB:2450:A:N1	2.47	0.48
23:DB:2867:G:N3	23:DB:2867:G:C2’	2.74	0.48
24:DV:61:LEU:O	24:DV:71:LYS:HA	2.14	0.48
24:DV:72:VAL:HG21	24:DV:91:PHE:CG	2.48	0.48
26:DD:171:THR:O	26:DD:172:VAL:HG23	2.12	0.48
28:DF:121:PHE:HB3	28:DF:127:TYR:CD2	2.49	0.48
28:DF:160:LYS:HG3	28:DF:161:SER:N	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DG:10:VAL:HG23	29:DG:48:THR:HA	1.96	0.48
29:DG:42:VAL:HA	29:DG:50:THR:O	2.14	0.48
30:DH:4:ILE:HG21	30:DH:47:PHE:CE1	2.49	0.48
40:DS:20:VAL:C	40:DS:22:ASP:H	2.16	0.48
41:DT:29:THR:CG2	41:DT:86:THR:HG22	2.44	0.48
41:DT:50:LEU:N	41:DT:50:LEU:HD22	2.28	0.48
43:DW:48:ALA:HB3	43:DW:81:ILE:HG13	1.95	0.48
45:DY:29:ARG:H	45:DY:33:HIS:CD2	2.30	0.48
1:AA:95:C:H2'	1:AA:96:U:C6	2.48	0.48
1:AA:308:C:H2'	1:AA:309:A:H8	1.79	0.48
1:AA:369:G:O2'	1:AA:370:C:H5'	2.13	0.48
1:AA:373:A:H2'	1:AA:374:A:C8	2.46	0.48
1:AA:436:C:O2'	1:AA:437:U:H5'	2.12	0.48
1:AA:612:C:H2'	1:AA:613:C:C6	2.48	0.48
1:AA:613:C:H2'	1:AA:614:C:H6	1.78	0.48
1:AA:687:A:C2	1:AA:704:A:C5	3.01	0.48
1:AA:893:C:H2'	1:AA:894:G:C8	2.48	0.48
1:AA:945:G:H21	1:AA:1334:G:H4'	1.79	0.48
1:AA:1293:C:O2'	1:AA:1294:G:H5'	2.13	0.48
1:AA:1388:C:H2'	1:AA:1389:C:C6	2.48	0.48
1:AA:1479:C:O2'	1:AA:1480:A:H5'	2.14	0.48
3:AD:129:VAL:HG12	3:AD:131:ILE:H	1.78	0.48
4:AE:37:VAL:HG11	4:AE:113:VAL:CG1	2.43	0.48
5:AF:85:ILE:HG22	5:AF:86:ARG:H	1.78	0.48
7:AH:45:ILE:HB	7:AH:61:THR:O	2.14	0.48
8:AI:16:ALA:HA	8:AI:66:VAL:HA	1.96	0.48
8:AI:74:GLN:O	8:AI:78:ILE:HG13	2.13	0.48
12:AM:14:ALA:O	12:AM:17:ALA:HB3	2.14	0.48
12:AM:83:GLY:O	12:AM:88:LEU:HD21	2.14	0.48
20:AB:71:THR:HG23	20:AB:94:ARG:H	1.78	0.48
20:AB:83:ALA:O	20:AB:88:GLN:HB2	2.14	0.48
20:AB:113:LEU:HD23	20:AB:114:LYS:N	2.28	0.48
20:AB:217:ALA:O	20:AB:221:ARG:HG2	2.14	0.48
23:BB:572:A:C2	23:BB:2033:A:C2	3.02	0.48
23:BB:942:G:O2'	23:BB:943:A:H5'	2.14	0.48
23:BB:1940:U:H5"	23:BB:1940:U:O2	2.14	0.48
23:BB:2571:U:O3'	26:BD:151:THR:HB	2.13	0.48
23:BB:2589:A:H2'	23:BB:2590:A:C8	2.48	0.48
23:BB:2677:G:H2'	23:BB:2678:C:C6	2.49	0.48
28:BF:113:PHE:CZ	28:BF:175:PRO:HB2	2.48	0.48
29:BG:84:LYS:HG3	29:BG:131:VAL:C	2.33	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BG:87:GLN:HG2	29:BG:164:ALA:HA	1.94	0.48
29:BG:123:GLU:O	29:BG:125:PRO:HD3	2.13	0.48
32:BK:11:ALA:HB3	32:BK:85:VAL:CG2	2.43	0.48
32:BK:99:ILE:HD13	32:BK:118:LEU:HD22	1.96	0.48
33:BL:125:LEU:H	33:BL:143:GLU:HG3	1.78	0.48
34:BM:101:VAL:HG22	34:BM:101:VAL:O	2.13	0.48
40:BS:60:HIS:O	40:BS:61:ASN:CB	2.62	0.48
42:BU:13:LEU:HD12	42:BU:68:ASN:O	2.13	0.48
1:CA:54:C:H2'	1:CA:352:C:H41	1.78	0.48
1:CA:411:A:C4	1:CA:413:G:H1'	2.49	0.48
1:CA:610:U:O2	1:CA:610:U:O4'	2.30	0.48
1:CA:614:C:O2'	1:CA:615:G:H5'	2.14	0.48
1:CA:1320:C:OP2	18:CS:69:LYS:HE3	2.13	0.48
4:CE:95:MET:HA	4:CE:124:ALA:CB	2.44	0.48
5:CF:2:ARG:O	5:CF:65:GLU:HA	2.14	0.48
5:CF:8:PHE:O	5:CF:60:VAL:HG23	2.14	0.48
8:CI:56:MET:SD	8:CI:57:VAL:N	2.87	0.48
8:CI:98:ARG:NE	8:CI:103:VAL:HG21	2.28	0.48
10:CK:37:GLN:HB2	10:CK:39:ASN:HD22	1.79	0.48
12:CM:38:ILE:HD12	12:CM:47:LEU:HD11	1.95	0.48
14:CO:88:ARG:HH22	23:DB:715:A:H5"	1.78	0.48
23:DB:141:G:N3	23:DB:141:G:H5"	2.29	0.48
23:DB:471:A:OP1	27:DE:79:ARG:NH1	2.47	0.48
23:DB:544:C:H2'	23:DB:545:U:C4	2.48	0.48
23:DB:1060:U:OP1	52:DI:75:ALA:HB3	2.14	0.48
23:DB:1063:G:C4'	52:DI:135:MET:HG2	2.44	0.48
23:DB:1353:A:H2'	23:DB:1354:A:H8	1.78	0.48
23:DB:1478:G:O2'	23:DB:1479:G:H5'	2.14	0.48
23:DB:1789:A:P	25:DC:220:ARG:HH11	2.36	0.48
23:DB:2034:U:O2'	23:DB:2035:G:H5'	2.13	0.48
23:DB:2073:C:O2'	23:DB:2074:U:H5'	2.13	0.48
23:DB:2233:U:H2'	23:DB:2234:G:C8	2.48	0.48
23:DB:2271:G:H2'	23:DB:2272:U:H6	1.77	0.48
23:DB:2355:G:H4'	43:DW:20:LEU:HD13	1.94	0.48
23:DB:2436:G:O2'	23:DB:2437:G:H5'	2.13	0.48
23:DB:2589:A:H2'	23:DB:2590:A:H8	1.78	0.48
25:DC:144:GLU:OE2	25:DC:188:ARG:HG3	2.14	0.48
26:DD:55:LYS:HZ1	26:DD:59:ARG:HD2	1.77	0.48
26:DD:204:LYS:HB2	26:DD:205:PRO:HD2	1.96	0.48
27:DE:118:LEU:O	27:DE:119:ILE:HD13	2.13	0.48
28:DF:43:ILE:HA	28:DF:46:LYS:HE2	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DF:102:LEU:HD13	28:DF:103:ILE:HB	1.94	0.48
30:DH:26:ALA:C	30:DH:28:ASN:H	2.15	0.48
31:DJ:110:PRO:HB2	31:DJ:111:LYS:HE3	1.95	0.48
34:DM:31:PHE:HB3	34:DM:130:PHE:CZ	2.49	0.48
35:DN:83:LEU:HA	35:DN:86:ARG:HB2	1.94	0.48
38:DQ:18:LYS:C	38:DQ:20:ALA:H	2.15	0.48
38:DQ:63:ARG:HH21	38:DQ:64:ILE:HD13	1.78	0.48
39:DR:79:ARG:NE	39:DR:80:ARG:NH2	2.61	0.48
40:DS:73:LYS:HE3	40:DS:74:ILE:N	2.26	0.48
42:DU:98:ASN:OD1	42:DU:100:GLU:HB2	2.13	0.48
1:AA:208:U:O2'	1:AA:209:U:H3'	2.13	0.48
1:AA:643:C:H2'	1:AA:644:U:H6	1.79	0.48
1:AA:734:G:H2'	1:AA:735:C:C6	2.48	0.48
1:AA:868:C:H2'	1:AA:869:G:O4'	2.14	0.48
1:AA:1216:A:H2'	1:AA:1217:C:C6	2.48	0.48
1:AA:1459:G:H2'	1:AA:1460:C:C6	2.48	0.48
23:BB:56:A:H2'	23:BB:57:C:C6	2.48	0.48
23:BB:405:U:OP2	23:BB:405:U:H4'	2.13	0.48
23:BB:502:A:H5'	23:BB:503:A:OP2	2.13	0.48
23:BB:566:U:H5"	33:BL:29:LYS:HZ2	1.79	0.48
23:BB:912:C:O2'	23:BB:913:U:H5'	2.13	0.48
23:BB:1258:U:H2'	23:BB:1259:G:C8	2.49	0.48
23:BB:1551:A:C3'	23:BB:1552:A:H5"	2.43	0.48
23:BB:1720:U:O2'	23:BB:1721:G:H5'	2.13	0.48
23:BB:1841:U:C2	23:BB:1842:G:C8	3.01	0.48
23:BB:2572:A:OP2	26:BD:151:THR:HB	2.13	0.48
25:BC:183:VAL:HG22	25:BC:187:CYS:SG	2.53	0.48
26:BD:171:THR:HG23	26:BD:172:VAL:N	2.29	0.48
28:BF:29:ARG:HB2	28:BF:158:THR:HG21	1.96	0.48
29:BG:37:ASN:HD22	29:BG:40:VAL:CB	2.24	0.48
33:BL:100:ILE:O	33:BL:100:ILE:HG12	2.13	0.48
34:BM:71:LYS:HG2	34:BM:93:VAL:HG12	1.95	0.48
38:BQ:64:ILE:HD12	38:BQ:95:ALA:HB3	1.95	0.48
41:BT:66:LYS:N	41:BT:76:ARG:NH2	2.62	0.48
52:BI:52:LEU:HD12	52:BI:52:LEU:N	2.29	0.48
1:CA:624:C:H2'	1:CA:625:U:C6	2.48	0.48
1:CA:1234:C:H1'	1:CA:1364:U:O2	2.13	0.48
1:CA:1263:C:O2'	1:CA:1264:U:H5'	2.14	0.48
1:CA:1451:U:H2'	1:CA:1451:U:O2	2.13	0.48
1:CA:1522:U:H2'	1:CA:1523:G:H8	1.79	0.48
8:CI:52:GLU:C	8:CI:53:LEU:HD22	2.33	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CP:12:LYS:HD2	15:CP:13:LYS:HG3	1.96	0.48
15:CP:20:VAL:HG21	15:CP:32:PHE:CG	2.48	0.48
15:CP:43:ALA:HA	15:CP:46:LYS:HE3	1.96	0.48
18:CS:62:THR:O	18:CS:66:VAL:HG13	2.14	0.48
20:CB:8:MET:C	20:CB:9:LEU:HD12	2.33	0.48
20:CB:63:LYS:HA	20:CB:224:ARG:NH1	2.29	0.48
20:CB:212:TYR:O	20:CB:216:VAL:HG13	2.13	0.48
21:CU:20:ARG:HD2	21:CU:20:ARG:N	2.29	0.48
23:DB:324:A:H2'	23:DB:325:G:O4'	2.14	0.48
23:DB:1230:A:H2'	23:DB:1231:U:H6	1.79	0.48
23:DB:1405:U:H2'	23:DB:1406:U:C6	2.49	0.48
23:DB:1541:C:O2'	23:DB:1542:U:H5'	2.13	0.48
23:DB:1786:A:H1'	23:DB:1938:A:N6	2.29	0.48
23:DB:1969:A:H2'	23:DB:1972:G:H21	1.79	0.48
23:DB:2022:U:O2'	23:DB:2617:U:H5'	2.14	0.48
23:DB:2301:C:H2'	23:DB:2302:U:H6	1.79	0.48
23:DB:2428:G:H21	33:DL:60:ARG:NE	2.09	0.48
23:DB:2485:G:H5"	34:DM:125:PRO:HG3	1.94	0.48
24:DV:77:VAL:HG12	34:DM:136:MET:HG2	1.94	0.48
25:DC:106:PRO:O	25:DC:109:LEU:HD13	2.14	0.48
26:DD:107:VAL:HA	26:DD:204:LYS:O	2.14	0.48
26:DD:118:PHE:O	26:DD:119:ALA:CB	2.62	0.48
27:DE:132:LYS:O	27:DE:135:ALA:HB3	2.13	0.48
27:DE:192:ALA:O	27:DE:196:VAL:HG23	2.14	0.48
28:DF:102:LEU:HA	28:DF:106:ALA:HB2	1.96	0.48
29:DG:84:LYS:HG3	29:DG:131:VAL:HA	1.96	0.48
31:DJ:48:VAL:HG12	31:DJ:50:THR:HG23	1.96	0.48
33:DL:51:GLU:HG2	50:D3:56:LEU:CD2	2.43	0.48
39:DR:20:VAL:HG12	39:DR:21:ARG:N	2.26	0.48
41:DT:23:ALA:C	41:DT:25:GLU:H	2.17	0.48
41:DT:40:LYS:HA	41:DT:43:ILE:HB	1.95	0.48
43:DW:61:LYS:O	43:DW:62:ALA:O	2.31	0.48
1:AA:537:G:H2'	1:AA:538:G:H8	1.78	0.48
1:AA:586:C:H2'	1:AA:587:G:H5'	1.95	0.48
1:AA:794:A:H2'	1:AA:795:C:C6	2.48	0.48
1:AA:847:G:H2'	1:AA:848:C:H6	1.79	0.48
1:AA:875:U:O2'	7:AH:14:ARG:HD2	2.14	0.48
1:AA:981:U:C4'	13:AN:60:ARG:HD2	2.37	0.48
6:AG:72:VAL:HG12	6:AG:89:GLU:CB	2.43	0.48
10:AK:122:PRO:HG2	21:AU:34:ARG:HA	1.95	0.48
12:AM:13:HIS:O	12:AM:17:ALA:HB2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AN:68:ARG:HH11	13:AN:71:GLY:H	1.60	0.48
15:AP:28:ARG:HD3	15:AP:29:ASN:HD22	1.77	0.48
18:AS:4:LEU:HD11	18:AS:9:PHE:HB3	1.96	0.48
20:AB:93:HIS:O	20:AB:94:ARG:O	2.32	0.48
22:BA:43:C:H1'	28:BF:91:ARG:NH2	2.29	0.48
23:BB:39:G:H2'	23:BB:40:U:C6	2.49	0.48
23:BB:98:G:H22	42:BU:6:ARG:NH1	2.11	0.48
23:BB:226:A:H1'	23:BB:230:G:N2	2.29	0.48
23:BB:1349:C:H2'	23:BB:1350:C:H6	1.79	0.48
23:BB:1789:A:P	25:BC:220:ARG:HH11	2.37	0.48
23:BB:2081:U:OP1	46:BZ:19:SER:HB3	2.14	0.48
23:BB:2247:A:H2'	23:BB:2248:C:C6	2.48	0.48
26:BD:151:THR:HB	26:BD:152:PRO:HD3	1.94	0.48
30:BH:25:TYR:CD1	30:BH:30:LEU:HG	2.49	0.48
30:BH:54:LEU:O	30:BH:58:LEU:HB3	2.13	0.48
30:BH:66:ASN:HA	30:BH:134:VAL:HG21	1.96	0.48
35:BN:2:ARG:C	35:BN:2:ARG:HE	2.16	0.48
40:BS:17:VAL:C	40:BS:19:LEU:N	2.66	0.48
41:BT:9:LYS:O	41:BT:9:LYS:HG2	2.12	0.48
42:BU:10:VAL:HB	42:BU:69:VAL:HB	1.96	0.48
52:BI:89:SER:HB2	52:BI:136:GLY:HA3	1.95	0.48
1:CA:130:A:H1'	1:CA:263:A:O2'	2.13	0.48
1:CA:599:C:H4'	7:CH:121:GLY:HA3	1.96	0.48
1:CA:1004:A:H2'	1:CA:1005:A:O4'	2.14	0.48
1:CA:1180:A:OP1	8:CI:104:THR:HG22	2.14	0.48
1:CA:1406:U:C2'	1:CA:1407:C:H5'	2.43	0.48
2:CC:139:ASN:O	2:CC:143:LEU:HD23	2.13	0.48
5:CF:52:ASN:HA	5:CF:53:LYS:HZ3	1.79	0.48
8:CI:12:LYS:HA	8:CI:109:GLN:HG2	1.95	0.48
8:CI:74:GLN:O	8:CI:78:ILE:HG13	2.14	0.48
8:CI:129:ARG:CZ	8:CI:129:ARG:HB2	2.43	0.48
12:CM:83:GLY:O	12:CM:88:LEU:HD21	2.14	0.48
13:CN:20:PHE:HB2	13:CN:54:SER:OG	2.13	0.48
20:CB:19:THR:HG23	20:CB:20:ARG:N	2.23	0.48
20:CB:23:ASN:C	20:CB:25:LYS:H	2.17	0.48
23:DB:129:C:H2'	23:DB:130:C:C6	2.49	0.48
23:DB:924:G:H2'	23:DB:925:A:H8	1.79	0.48
23:DB:1163:G:O2'	23:DB:1164:C:H5'	2.14	0.48
23:DB:1181:U:H2'	23:DB:1182:G:H8	1.78	0.48
23:DB:1193:G:H2'	23:DB:1194:A:O4'	2.14	0.48
23:DB:1196:C:H2'	23:DB:1197:G:H8	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1374:G:H2'	23:DB:1375:U:C6	2.49	0.48
23:DB:1485:U:O2'	23:DB:1486:U:H5'	2.14	0.48
23:DB:1789:A:OP1	25:DC:220:ARG:HD3	2.14	0.48
25:DC:43:ASN:ND2	25:DC:44:ASN:N	2.60	0.48
28:DF:111:ARG:N	28:DF:111:ARG:HD2	2.29	0.48
30:DH:131:SER:CB	30:DH:141:LYS:HA	2.34	0.48
30:DH:135:HIS:HB3	30:DH:138:VAL:CB	2.36	0.48
33:DL:3:LEU:O	33:DL:5:THR:HG23	2.14	0.48
33:DL:23:ILE:HD12	33:DL:23:ILE:N	2.29	0.48
33:DL:55:MET:HE2	33:DL:56:PRO:HD2	1.94	0.48
33:DL:122:VAL:HB	33:DL:143:GLU:OE1	2.13	0.48
33:DL:135:ILE:HG12	33:DL:140:GLY:HA3	1.96	0.48
34:DM:30:SER:HA	34:DM:133:LYS:HB2	1.95	0.48
34:DM:74:THR:O	34:DM:75:GLU:HB2	2.14	0.48
40:DS:42:LYS:HG3	40:DS:43:ALA:N	2.28	0.48
43:DW:43:LYS:HB3	43:DW:79:ILE:HD11	1.96	0.48
49:D2:3:ARG:HG2	49:D2:3:ARG:HH21	1.78	0.48
1:AA:72:A:N6	1:AA:99:C:H1'	2.20	0.48
1:AA:270:A:H2'	1:AA:271:C:O4'	2.14	0.48
1:AA:502:A:H2'	1:AA:503:C:H6	1.78	0.48
1:AA:546:A:P	3:AD:68:GLU:HB3	2.54	0.48
1:AA:599:C:H4'	7:AH:121:GLY:HA3	1.94	0.48
1:AA:1009:U:H2'	1:AA:1010:U:C6	2.48	0.48
2:AC:119:ILE:CG2	2:AC:120:THR:N	2.76	0.48
3:AD:125:ASN:OD1	3:AD:140:ASP:HA	2.14	0.48
4:AE:17:VAL:HG23	4:AE:33:THR:O	2.14	0.48
7:AH:94:VAL:HG12	7:AH:99:GLY:HA3	1.96	0.48
9:AJ:80:THR:HG21	9:AJ:82:LYS:HZ2	1.79	0.48
12:AM:43:LYS:HD2	12:AM:43:LYS:N	2.28	0.48
18:AS:42:ASN:N	18:AS:42:ASN:ND2	2.62	0.48
20:AB:142:LYS:HA	20:AB:145:ASN:OD1	2.13	0.48
23:BB:299:A:H2'	23:BB:300:A:C8	2.48	0.48
23:BB:558:U:OP1	31:BJ:113:PRO:HB2	2.13	0.48
23:BB:942:G:H2'	23:BB:943:A:H8	1.77	0.48
23:BB:1107:G:H2'	23:BB:1108:U:C6	2.48	0.48
23:BB:1222:U:P	39:BR:90:ARG:HH22	2.37	0.48
23:BB:1564:C:O2'	23:BB:1565:C:H5'	2.13	0.48
23:BB:1826:G:H2'	23:BB:1827:U:H6	1.79	0.48
23:BB:2063:C:O2	23:BB:2450:A:N1	2.46	0.48
23:BB:2281:A:O2'	23:BB:2282:G:H5'	2.13	0.48
23:BB:2341:G:H2'	23:BB:2342:C:C6	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2663:G:H2'	23:BB:2664:G:O4'	2.13	0.48
25:BC:129:LEU:HD21	25:BC:133:ASN:HB2	1.95	0.48
26:BD:8:LYS:CA	26:BD:201:LEU:HD11	2.43	0.48
26:BD:33:ARG:HG2	26:BD:33:ARG:HH21	1.79	0.48
26:BD:171:THR:O	26:BD:172:VAL:HG23	2.13	0.48
27:BE:58:LYS:H	27:BE:58:LYS:CD	2.13	0.48
28:BF:139:GLU:O	28:BF:141:ASP:N	2.47	0.48
29:BG:51:PHE:CD2	29:BG:68:ARG:HG2	2.49	0.48
29:BG:156:TYR:O	29:BG:157:LYS:HD2	2.14	0.48
30:BH:112:LYS:C	30:BH:112:LYS:HE3	2.34	0.48
30:BH:133:GLN:HB2	30:BH:139:PHE:HB3	1.95	0.48
31:BJ:44:TYR:CD2	31:BJ:44:TYR:C	2.88	0.48
31:BJ:104:ALA:O	31:BJ:108:MET:HG2	2.14	0.48
32:BK:19:VAL:HG13	32:BK:43:ILE:HA	1.96	0.48
36:BO:25:ARG:HD2	36:BO:93:ASP:HB2	1.95	0.48
43:BW:70:VAL:HG22	43:BW:70:VAL:O	2.14	0.48
45:BY:4:ILE:HG22	45:BY:56:VAL:CG1	2.43	0.48
46:BZ:63:GLY:HA3	46:BZ:66:THR:OG1	2.14	0.48
1:CA:708:C:O2'	1:CA:709:U:H5'	2.14	0.48
1:CA:828:U:OP1	1:CA:828:U:H4'	2.14	0.48
1:CA:1346:A:N1	1:CA:1374:A:H5"	2.29	0.48
5:CF:51:ILE:HD11	5:CF:86:ARG:HG3	1.96	0.48
8:CI:83:THR:OG1	8:CI:97:LEU:HD22	2.14	0.48
10:CK:60:PHE:O	10:CK:64:VAL:HG12	2.14	0.48
14:CO:55:LEU:O	14:CO:58:MET:HG2	2.14	0.48
22:DA:102:G:O2'	22:DA:103:U:H5'	2.14	0.48
23:DB:589:U:H2'	23:DB:590:A:C8	2.49	0.48
23:DB:675:A:H4'	27:DE:62:GLN:HE22	1.79	0.48
23:DB:979:A:H2'	23:DB:982:C:N4	2.23	0.48
23:DB:1120:G:O2'	23:DB:1121:C:H5'	2.14	0.48
23:DB:1274:A:C2	23:DB:1297:C:H1'	2.49	0.48
23:DB:1508:A:H3'	23:DB:1509:A:C2	2.49	0.48
23:DB:1656:C:H2'	23:DB:1657:U:H6	1.79	0.48
23:DB:1700:A:H2'	23:DB:1701:A:H5'	1.96	0.48
23:DB:2070:A:C2	23:DB:2442:C:C2	3.02	0.48
23:DB:2405:G:H1'	23:DB:2412:A:N6	2.29	0.48
25:DC:74:PRO:HG2	25:DC:96:LYS:CG	2.43	0.48
25:DC:76:VAL:CG1	25:DC:114:GLN:HG2	2.44	0.48
28:DF:36:ASN:ND2	28:DF:152:ASP:HB2	2.08	0.48
30:DH:14:SER:C	30:DH:16:GLY:N	2.67	0.48
33:DL:75:ALA:HB3	33:DL:108:ALA:HB2	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DL:93:ASN:O	33:DL:95:LEU:HD12	2.14	0.48
38:DQ:4:LYS:CE	38:DQ:7:VAL:HG22	2.44	0.48
38:DQ:91:ARG:HB2	39:DR:11:GLN:CD	2.35	0.48
39:DR:4:VAL:O	39:DR:38:VAL:HA	2.13	0.48
40:DS:15:GLN:HA	40:DS:18:ARG:CG	2.43	0.48
43:DW:17:ALA:HB1	43:DW:37:VAL:H	1.78	0.48
52:DI:100:ILE:O	52:DI:139:VAL:HG13	2.14	0.48
1:AA:429:U:H3'	3:AD:8:LEU:CD2	2.44	0.47
1:AA:643:C:H2'	1:AA:644:U:C6	2.49	0.47
1:AA:716:A:N3	10:AK:118:ASN:O	2.47	0.47
1:AA:818:G:C3'	1:AA:819:A:H5"	2.43	0.47
1:AA:1016:A:H4'	1:AA:1218:C:H4'	1.95	0.47
1:AA:1263:C:O2'	1:AA:1264:U:H5'	2.14	0.47
1:AA:1423:G:H2'	1:AA:1424:U:H6	1.77	0.47
3:AD:106:PHE:CE1	3:AD:158:LEU:HD21	2.49	0.47
6:AG:104:VAL:O	6:AG:108:ARG:HG3	2.14	0.47
8:AI:98:ARG:NE	8:AI:103:VAL:HG21	2.29	0.47
12:AM:76:ILE:HG23	12:AM:79:LEU:HD12	1.95	0.47
20:AB:75:ALA:C	20:AB:79:VAL:HG23	2.33	0.47
23:BB:68:G:O2'	23:BB:69:C:H5'	2.14	0.47
23:BB:919:U:H2'	23:BB:920:A:H8	1.73	0.47
23:BB:1080:A:H2'	23:BB:1081:U:H6	1.79	0.47
23:BB:1221:C:O2'	23:BB:1222:U:H5'	2.13	0.47
23:BB:1416:G:HO2'	23:BB:1417:C:H6	1.60	0.47
23:BB:1745:A:H2'	23:BB:1746:A:O4'	2.14	0.47
23:BB:1792:G:P	25:BC:204:LEU:HD12	2.54	0.47
23:BB:2193:G:H2'	23:BB:2194:U:C6	2.48	0.47
23:BB:2419:U:OP2	50:B3:32:LEU:HD13	2.14	0.47
23:BB:2439:A:H4'	23:BB:2440:C:O5'	2.13	0.47
25:BC:74:PRO:HG2	25:BC:96:LYS:CG	2.42	0.47
28:BF:23:SER:O	28:BF:26:GLN:HB2	2.14	0.47
28:BF:62:GLN:HB2	28:BF:91:ARG:HE	1.78	0.47
29:BG:25:ILE:HD12	29:BG:25:ILE:N	2.29	0.47
29:BG:66:THR:O	29:BG:70:LEU:HB2	2.14	0.47
30:BH:114:GLU:HB3	30:BH:133:GLN:O	2.14	0.47
31:BJ:19:ASP:CG	31:BJ:57:LEU:HB3	2.34	0.47
33:BL:23:ILE:HG13	39:BR:82:HIS:CE1	2.49	0.47
34:BM:29:GLY:HA2	34:BM:106:ASP:HB2	1.96	0.47
37:BP:24:THR:HB	37:BP:86:LYS:HB3	1.95	0.47
42:BU:78:LYS:CG	42:BU:79:ALA:H	2.27	0.47
1:CA:454:G:H2'	1:CA:455:G:H8	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:468:A:H3'	1:CA:469:C:C6	2.49	0.47
1:CA:754:C:H3'	1:CA:754:C:O2	2.14	0.47
1:CA:1040:U:H2'	1:CA:1041:G:C8	2.49	0.47
1:CA:1299:A:H2'	1:CA:1301:U:H1'	1.96	0.47
4:CE:132:PRO:O	4:CE:136:VAL:HG12	2.14	0.47
6:CG:78:ARG:NH1	6:CG:80:GLY:H	2.11	0.47
6:CG:129:ASN:HA	6:CG:134:VAL:CG1	2.38	0.47
7:CH:82:LEU:HD13	7:CH:82:LEU:O	2.13	0.47
7:CH:94:VAL:HG21	7:CH:100:ILE:O	2.13	0.47
8:CI:127:SER:O	8:CI:129:ARG:HG3	2.14	0.47
12:CM:14:ALA:O	12:CM:17:ALA:HB3	2.14	0.47
19:CT:3:ILE:H	19:CT:3:ILE:HG13	1.47	0.47
20:CB:116:LEU:O	20:CB:119:GLN:HB2	2.13	0.47
20:CB:204:ASP:O	20:CB:208:ALA:HB3	2.14	0.47
22:DA:35:C:H2'	22:DA:36:C:O4'	2.14	0.47
23:DB:137:U:H6	23:DB:137:U:O5'	1.97	0.47
23:DB:785:G:H2'	23:DB:786:C:H6	1.79	0.47
23:DB:991:C:H5'	23:DB:991:C:H6	1.78	0.47
23:DB:1060:U:OP2	52:DI:74:PRO:HA	2.13	0.47
23:DB:1133:A:H5'	23:DB:1134:A:OP1	2.13	0.47
23:DB:1222:U:O2'	23:DB:1223:G:H5'	2.14	0.47
23:DB:1439:A:N7	23:DB:1440:U:C6	2.82	0.47
23:DB:1484:U:H2'	23:DB:1485:U:H6	1.79	0.47
23:DB:1607:C:N4	23:DB:1622:G:OP2	2.46	0.47
23:DB:1842:G:H2'	23:DB:1843:C:H6	1.78	0.47
23:DB:2286:G:H4'	23:DB:2287:A:O4'	2.14	0.47
23:DB:2379:G:H2'	23:DB:2380:C:C6	2.49	0.47
23:DB:2449:U:H4'	23:DB:2450:A:OP1	2.14	0.47
23:DB:2559:C:H2'	23:DB:2560:A:H8	1.79	0.47
24:DV:21:ARG:NE	24:DV:87:GLN:HB3	2.28	0.47
25:DC:52:HIS:O	25:DC:53:ILE:HB	2.14	0.47
26:DD:141:ARG:O	26:DD:142:VAL:HG13	2.14	0.47
32:DK:26:GLY:O	32:DK:30:ARG:HD2	2.14	0.47
32:DK:77:ILE:HD11	37:DP:71:ARG:CZ	2.44	0.47
37:DP:4:ILE:O	37:DP:6:GLN:N	2.45	0.47
37:DP:25:VAL:HA	37:DP:85:VAL:C	2.34	0.47
37:DP:77:SER:O	37:DP:80:VAL:HG12	2.14	0.47
38:DQ:51:GLN:O	38:DQ:55:GLN:HG3	2.13	0.47
44:DX:43:LEU:O	44:DX:47:ARG:HG3	2.14	0.47
1:AA:142:G:N3	1:AA:196:A:H2	2.12	0.47
1:AA:738:C:H2'	1:AA:739:C:H6	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:949:A:H2'	1:AA:950:U:O4'	2.14	0.47
1:AA:1004:A:H5'	1:AA:1024:G:H22	1.77	0.47
1:AA:1032:G:H5"	1:AA:1032:G:N3	2.29	0.47
1:AA:1252:A:H2'	1:AA:1253:G:O4'	2.14	0.47
1:AA:1436:U:H2'	1:AA:1437:A:H8	1.78	0.47
6:AG:72:VAL:HG12	6:AG:89:GLU:CA	2.43	0.47
7:AH:68:LYS:HG3	7:AH:69:ALA:N	2.29	0.47
8:AI:18:VAL:HA	8:AI:64:ILE:HA	1.96	0.47
14:AO:67:ASP:O	14:AO:71:ARG:HG3	2.13	0.47
14:AO:88:ARG:HH11	14:AO:88:ARG:CA	2.22	0.47
22:BA:55:U:H2'	22:BA:56:G:H8	1.79	0.47
22:BA:60:C:O2'	22:BA:61:G:H5'	2.13	0.47
23:BB:615:U:O4	27:BE:39:ALA:HB2	2.14	0.47
23:BB:786:C:H5"	23:BB:1780:A:N7	2.28	0.47
23:BB:1046:A:C4'	23:BB:1047:G:H5"	2.44	0.47
23:BB:1274:A:C2	23:BB:1297:C:H1'	2.49	0.47
23:BB:1726:C:H2'	23:BB:1727:C:C6	2.49	0.47
23:BB:1958:C:H2'	23:BB:1959:G:H8	1.79	0.47
23:BB:2630:G:O2'	23:BB:2631:G:H5'	2.14	0.47
23:BB:2848:G:H1	23:BB:2867:G:N2	2.11	0.47
28:BF:19:PHE:CE2	28:BF:164:GLU:HG2	2.48	0.47
35:BN:12:ARG:HG3	35:BN:13:ASN:H	1.78	0.47
38:BQ:33:VAL:HG23	38:BQ:34:ALA:H	1.78	0.47
38:BQ:51:GLN:O	38:BQ:55:GLN:HG3	2.14	0.47
38:BQ:64:ILE:HD12	38:BQ:95:ALA:CB	2.44	0.47
39:BR:43:ASN:CG	39:BR:45:GLU:H	2.17	0.47
43:BW:30:VAL:O	43:BW:30:VAL:HG22	2.13	0.47
52:BI:32:VAL:HG13	52:BI:66:PHE:CD2	2.49	0.47
1:CA:36:C:O3'	11:CL:119:LYS:HA	2.14	0.47
1:CA:443:C:H2'	1:CA:444:G:H8	1.79	0.47
1:CA:549:C:H2'	1:CA:550:G:C8	2.49	0.47
1:CA:898:G:N2	1:CA:900:A:H3'	2.29	0.47
1:CA:1109:C:H2'	1:CA:1110:A:O4'	2.14	0.47
1:CA:1317:C:H3'	1:CA:1318:A:C8	2.49	0.47
2:CC:129:PHE:CD2	2:CC:156:LEU:HD22	2.48	0.47
3:CD:123:MET:CB	3:CD:128:VAL:HA	2.44	0.47
6:CG:75:LYS:HD3	6:CG:76:SER:N	2.28	0.47
6:CG:125:ASP:HB3	6:CG:131:GLY:H	1.78	0.47
7:CH:58:LEU:HD22	7:CH:60:LEU:HB2	1.96	0.47
9:CJ:13:PHE:CD2	9:CJ:69:THR:HG23	2.49	0.47
10:CK:74:LYS:HG3	10:CK:104:PHE:CZ	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CL:113:ARG:NE	11:CL:120:ARG:HA	2.29	0.47
13:CN:27:LYS:HG3	13:CN:28:ALA:H	1.79	0.47
16:CQ:11:VAL:HG13	16:CQ:20:ILE:HG23	1.94	0.47
19:CT:49:ALA:O	19:CT:52:GLU:HB3	2.14	0.47
20:CB:8:MET:HG3	20:CB:9:LEU:HD12	1.95	0.47
20:CB:216:VAL:O	20:CB:220:VAL:HG23	2.14	0.47
21:CU:20:ARG:HD2	21:CU:20:ARG:H	1.79	0.47
22:DA:70:C:O2'	22:DA:71:C:H5'	2.14	0.47
23:DB:19:A:H2'	23:DB:20:C:H6	1.79	0.47
23:DB:77:G:O2'	23:DB:78:U:H5'	2.13	0.47
23:DB:138:U:H2'	23:DB:140:C:C1'	2.44	0.47
23:DB:275:C:H2'	23:DB:276:U:C1'	2.43	0.47
23:DB:364:C:H2'	23:DB:365:U:C6	2.49	0.47
23:DB:531:C:O2'	23:DB:563:A:H5"	2.13	0.47
23:DB:786:C:H5"	23:DB:1780:A:N7	2.29	0.47
23:DB:1190:G:OP1	33:DL:32:GLY:HA2	2.14	0.47
23:DB:1470:A:H3'	23:DB:1471:G:H8	1.78	0.47
23:DB:1668:A:N3	23:DB:1670:C:C4	2.82	0.47
23:DB:2273:A:H2'	23:DB:2274:A:C8	2.49	0.47
23:DB:2709:G:H2'	23:DB:2710:C:C6	2.49	0.47
24:DV:30:ILE:O	24:DV:37:PRO:HA	2.13	0.47
24:DV:80:HIS:HA	24:DV:87:GLN:OE1	2.14	0.47
25:DC:229:HIS:ND1	25:DC:230:PRO:HD2	2.28	0.47
25:DC:245:THR:OG1	25:DC:249:VAL:HG23	2.14	0.47
26:DD:30:GLU:OE1	26:DD:53:GLY:HA2	2.14	0.47
26:DD:101:PHE:O	26:DD:180:VAL:HG11	2.14	0.47
28:DF:115:GLY:HA3	28:DF:177:ARG:HB2	1.95	0.47
28:DF:137:PHE:N	28:DF:137:PHE:CD2	2.82	0.47
29:DG:94:ARG:HG2	29:DG:127:GLN:HE21	1.80	0.47
30:DH:122:LEU:HD11	30:DH:130:VAL:CG2	2.40	0.47
32:DK:12:ASP:OD2	32:DK:85:VAL:HG13	2.15	0.47
34:DM:86:LYS:HG3	34:DM:87:GLY:N	2.29	0.47
36:DO:28:VAL:HG12	36:DO:93:ASP:O	2.14	0.47
36:DO:52:SER:C	36:DO:54:VAL:H	2.17	0.47
38:DQ:91:ARG:NH1	39:DR:10:LYS:HB3	2.25	0.47
38:DQ:111:LYS:H	39:DR:48:LYS:HZ3	1.62	0.47
41:DT:51:PHE:HB3	41:DT:53:VAL:HG23	1.96	0.47
42:DU:38:ILE:HG13	42:DU:39:ASN:N	2.29	0.47
42:DU:51:LEU:HD22	42:DU:52:ASN:OD1	2.14	0.47
43:DW:46:ALA:HB2	43:DW:78:PHE:HD1	1.78	0.47
43:DW:58:LEU:HG	43:DW:79:ILE:HD12	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DZ:7:VAL:HG11	46:DZ:51:VAL:HG13	1.95	0.47
48:D1:6:GLU:HB2	48:D1:52:LYS:NZ	2.29	0.47
1:AA:82:G:H1'	1:AA:89:U:H1'	1.96	0.47
1:AA:109:A:H4'	1:AA:110:C:OP2	2.14	0.47
1:AA:366:A:O2'	1:AA:394:G:N2	2.48	0.47
1:AA:443:C:H2'	1:AA:444:G:H8	1.78	0.47
1:AA:591:U:H2'	1:AA:592:G:H8	1.77	0.47
1:AA:805:C:O2'	1:AA:806:C:H5'	2.13	0.47
1:AA:814:A:H2'	1:AA:816:A:O5'	2.14	0.47
8:AI:22:PRO:HA	8:AI:60:LEU:CB	2.44	0.47
9:AJ:41:PRO:HA	9:AJ:72:ARG:HD3	1.96	0.47
13:AN:64:ARG:HB2	13:AN:77:GLY:O	2.13	0.47
16:AQ:11:VAL:HG13	16:AQ:20:ILE:HG23	1.95	0.47
16:AQ:59:GLU:HG3	16:AQ:78:VAL:HG21	1.95	0.47
20:AB:53:LEU:HD13	20:AB:216:VAL:HG12	1.96	0.47
21:AU:3:ILE:HB	21:AU:19:LYS:HD2	1.96	0.47
21:AU:20:ARG:HG3	21:AU:24:LYS:HG3	1.97	0.47
22:BA:11:C:H5'	43:BW:71:LYS:CG	2.44	0.47
22:BA:71:C:H2'	22:BA:72:G:O4'	2.14	0.47
22:BA:91:C:O2'	22:BA:92:C:H5'	2.14	0.47
23:BB:297:G:OP1	42:BU:91:LYS:HD3	2.14	0.47
23:BB:558:U:OP1	31:BJ:114:LEU:HB2	2.14	0.47
23:BB:648:G:O2'	23:BB:649:G:H5'	2.15	0.47
23:BB:696:G:O2'	23:BB:697:G:H5'	2.14	0.47
23:BB:758:C:O2	23:BB:1981:A:H2	1.96	0.47
23:BB:1100:C:H2'	23:BB:1101:U:C6	2.48	0.47
23:BB:1405:U:H2'	23:BB:1406:U:C6	2.49	0.47
23:BB:1593:A:H2'	23:BB:1594:U:H6	1.75	0.47
23:BB:1640:A:H2'	23:BB:1641:A:H8	1.79	0.47
23:BB:2101:A:C2'	23:BB:2102:G:H5"	2.44	0.47
23:BB:2444:G:OP2	27:BE:63:LYS:HD2	2.13	0.47
23:BB:2709:G:H2'	23:BB:2710:C:C6	2.49	0.47
25:BC:144:GLU:CA	25:BC:151:GLY:HA2	2.42	0.47
28:BF:87:LYS:CG	28:BF:88:VAL:H	2.25	0.47
30:BH:40:THR:O	30:BH:42:LYS:N	2.40	0.47
35:BN:73:ASN:O	35:BN:76:VAL:HG22	2.14	0.47
38:BQ:23:TYR:CD2	38:BQ:23:TYR:N	2.81	0.47
38:BQ:80:ASN:O	38:BQ:116:LEU:HD11	2.14	0.47
40:BS:47:VAL:HG23	40:BS:48:LYS:N	2.28	0.47
44:BX:26:PHE:HD1	44:BX:27:ASN:ND2	2.10	0.47
50:B3:54:LEU:CG	50:B3:58:ILE:HD11	2.43	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:242:G:H2'	1:CA:243:A:H5"	1.96	0.47
1:CA:269:C:H2'	1:CA:270:A:H8	1.74	0.47
1:CA:309:A:O2'	1:CA:310:G:H5'	2.14	0.47
1:CA:411:A:N6	1:CA:413:G:H21	2.10	0.47
1:CA:1035:A:H2'	1:CA:1036:A:C8	2.49	0.47
1:CA:1510:C:H2'	1:CA:1511:G:H8	1.79	0.47
3:CD:44:LYS:HD2	3:CD:46:ARG:CG	2.44	0.47
3:CD:94:GLU:HG3	3:CD:99:ASN:ND2	2.29	0.47
13:CN:79:SER:HG	13:CN:82:LYS:HG2	1.79	0.47
14:CO:88:ARG:HH11	14:CO:88:ARG:CA	2.20	0.47
22:DA:55:U:H2'	22:DA:56:G:C8	2.48	0.47
23:DB:53:A:H61	23:DB:117:G:H1'	1.79	0.47
23:DB:247:G:H4'	23:DB:386:G:C5	2.50	0.47
23:DB:335:C:H5"	42:DU:81:ARG:NH1	2.29	0.47
23:DB:335:C:O2'	23:DB:336:C:H5'	2.14	0.47
23:DB:337:C:H2'	23:DB:338:G:O4'	2.13	0.47
23:DB:659:G:H4'	27:DE:95:LYS:HD3	1.96	0.47
23:DB:754:U:H2'	23:DB:755:U:C6	2.48	0.47
23:DB:934:U:H2'	23:DB:935:C:H6	1.80	0.47
23:DB:1162:G:H1'	39:DR:23:GLU:OE2	2.14	0.47
23:DB:1222:U:P	39:DR:90:ARG:HH22	2.38	0.47
23:DB:1266:G:N2	23:DB:2012:G:H2'	2.29	0.47
23:DB:1416:G:HO2'	23:DB:1417:C:H6	1.60	0.47
23:DB:1970:A:H1'	23:DB:1972:G:C8	2.48	0.47
23:DB:2065:C:H1'	23:DB:2449:U:O2	2.13	0.47
23:DB:2520:C:O2'	23:DB:2521:C:H5'	2.14	0.47
23:DB:2553:G:H2'	23:DB:2554:U:H4'	1.96	0.47
23:DB:2814:A:H2'	23:DB:2815:C:H6	1.78	0.47
25:DC:68:ARG:HB3	25:DC:128:THR:OG1	2.14	0.47
25:DC:141:HIS:O	25:DC:143:VAL:HG23	2.14	0.47
30:DH:53:GLU:CB	30:DH:57:LYS:HB3	2.44	0.47
31:DJ:88:THR:HG22	31:DJ:91:GLU:OE1	2.14	0.47
32:DK:120:PRO:HA	37:DP:65:ASN:HD21	1.80	0.47
35:DN:54:LEU:HD11	35:DN:62:ASN:HB3	1.96	0.47
35:DN:99:LYS:O	47:D0:42:ILE:HG12	2.14	0.47
36:DO:9:ARG:HA	36:DO:12:THR:OG1	2.13	0.47
37:DP:50:ARG:CB	37:DP:56:SER:HB3	2.43	0.47
38:DQ:85:ALA:HB2	38:DQ:115:ALA:HB1	1.95	0.47
38:DQ:96:ASP:C	38:DQ:98:ALA:H	2.18	0.47
39:DR:21:ARG:C	39:DR:22:LEU:HD23	2.35	0.47
41:DT:2:ILE:HG13	41:DT:3:ARG:CZ	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DT:43:ILE:O	41:DT:46:ALA:HB3	2.13	0.47
43:DW:23:LYS:CG	43:DW:24:ARG:N	2.76	0.47
46:DZ:36:HIS:O	46:DZ:48:THR:HA	2.15	0.47
1:AA:251:G:H1	1:AA:271:C:N4	2.12	0.47
1:AA:366:A:H1'	1:AA:395:C:O2	2.14	0.47
1:AA:454:G:H2'	1:AA:455:G:H8	1.78	0.47
1:AA:562:U:H4'	1:AA:563:A:O5'	2.15	0.47
1:AA:1300:G:H1'	1:AA:1301:U:C5	2.49	0.47
1:AA:1499:A:O2'	1:AA:1500:A:H5'	2.14	0.47
3:AD:22:SER:N	3:AD:109:THR:HG22	2.29	0.47
6:AG:144:ALA:O	6:AG:145:GLU:HB3	2.15	0.47
9:AJ:80:THR:HB	9:AJ:83:THR:OG1	2.15	0.47
13:AN:27:LYS:HG3	13:AN:28:ALA:H	1.79	0.47
20:AB:19:THR:HG23	20:AB:20:ARG:N	2.23	0.47
20:AB:83:ALA:HA	20:AB:88:GLN:NE2	2.29	0.47
20:AB:163:ILE:HD12	20:AB:185:ILE:HD12	1.97	0.47
22:BA:30:C:H2'	22:BA:31:C:H5'	1.97	0.47
23:BB:533:G:H5'	38:BQ:23:TYR:CD2	2.49	0.47
23:BB:771:G:OP1	49:B2:14:ARG:HD2	2.14	0.47
23:BB:859:G:HO2'	23:BB:916:G:H1	1.61	0.47
23:BB:1038:G:H2'	23:BB:1039:A:H8	1.76	0.47
23:BB:1126:A:H4'	23:BB:1127:A:O5'	2.14	0.47
23:BB:1130:U:O2	23:BB:2025:C:H5"	2.15	0.47
23:BB:1197:G:O2'	23:BB:1198:U:H5'	2.14	0.47
23:BB:1222:U:O2'	23:BB:1223:G:H5'	2.14	0.47
23:BB:1717:A:H2'	23:BB:1718:G:O4'	2.15	0.47
23:BB:2070:A:C2	23:BB:2442:C:C2	3.01	0.47
23:BB:2602:A:OP1	23:BB:2602:A:H3'	2.14	0.47
23:BB:2811:G:OP1	26:BD:62:LYS:HD2	2.14	0.47
23:BB:2818:U:H4'	23:BB:2837:A:O4'	2.15	0.47
27:BE:146:VAL:HA	27:BE:185:LYS:O	2.14	0.47
30:BH:49:ALA:HB3	30:BH:50:ARG:NH1	2.29	0.47
30:BH:110:VAL:HB	30:BH:132:PHE:CE1	2.49	0.47
31:BJ:43:GLU:O	31:BJ:45:THR:HG22	2.15	0.47
31:BJ:55:ILE:CG2	31:BJ:123:LYS:HB2	2.44	0.47
34:BM:19:GLY:N	34:BM:38:ARG:HH12	2.03	0.47
34:BM:30:SER:HA	34:BM:133:LYS:HB2	1.96	0.47
40:BS:66:ILE:HD13	40:BS:66:ILE:N	2.26	0.47
42:BU:53:GLN:CD	42:BU:53:GLN:H	2.18	0.47
42:BU:60:LYS:HA	42:BU:60:LYS:HE2	1.95	0.47
46:BZ:33:LEU:HD23	46:BZ:52:SER:HB3	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:65:A:C6	1:CA:381:C:N3	2.83	0.47
1:CA:208:U:O2'	1:CA:209:U:H3'	2.13	0.47
1:CA:702:A:C8	23:DB:1848:A:H1'	2.50	0.47
1:CA:1060:U:H2'	1:CA:1061:G:H8	1.78	0.47
1:CA:1086:U:H3	1:CA:1099:G:N2	1.94	0.47
1:CA:1125:U:O2'	1:CA:1126:U:H2'	2.15	0.47
1:CA:1363:A:H2'	1:CA:1363:A:N3	2.30	0.47
3:CD:33:ILE:HD12	3:CD:34:GLU:H	1.79	0.47
3:CD:47:LEU:HD13	3:CD:52:VAL:HG22	1.96	0.47
8:CI:18:VAL:HA	8:CI:64:ILE:HA	1.96	0.47
13:CN:26:LEU:HD12	13:CN:44:VAL:HG13	1.96	0.47
14:CO:67:ASP:O	14:CO:71:ARG:HG3	2.14	0.47
20:CB:130:LYS:HA	20:CB:130:LYS:NZ	2.29	0.47
23:DB:140:C:H4'	23:DB:141:G:C6	2.50	0.47
23:DB:1138:G:H2'	23:DB:1139:G:O4'	2.14	0.47
23:DB:1444:G:H2'	23:DB:1445:G:C8	2.49	0.47
23:DB:2840:C:O2'	23:DB:2841:C:H5'	2.14	0.47
25:DC:183:VAL:HG22	25:DC:187:CYS:SG	2.54	0.47
27:DE:172:ALA:HB2	27:DE:195:GLN:NE2	2.30	0.47
28:DF:141:ASP:O	28:DF:144:LYS:N	2.47	0.47
31:DJ:30:THR:O	31:DJ:33:ALA:HB3	2.15	0.47
32:DK:98:ARG:C	32:DK:99:ILE:HD12	2.35	0.47
34:DM:69:PRO:HA	34:DM:94:ALA:HA	1.95	0.47
34:DM:69:PRO:HG2	34:DM:70:ASP:H	1.79	0.47
35:DN:7:GLY:HA2	35:DN:46:ARG:HH12	1.79	0.47
35:DN:58:ASP:O	35:DN:59:SER:HB3	2.15	0.47
35:DN:83:LEU:HA	35:DN:86:ARG:CG	2.44	0.47
39:DR:5:PHE:HB2	39:DR:37:GLU:OE1	2.14	0.47
52:DI:35:MET:HE3	52:DI:39:LYS:HG2	1.96	0.47
52:DI:76:ALA:HA	52:DI:135:MET:SD	2.54	0.47
1:AA:86:G:H1'	1:AA:87:C:H5	1.77	0.47
1:AA:386:C:C2'	1:AA:387:U:H5'	2.45	0.47
1:AA:916:U:O2'	1:AA:917:G:H5'	2.14	0.47
1:AA:1339:A:H2'	1:AA:1340:A:O4'	2.14	0.47
2:AC:111:ASP:HB3	2:AC:114:LEU:HD12	1.97	0.47
3:AD:33:ILE:O	3:AD:35:GLN:HG3	2.15	0.47
3:AD:162:GLU:HA	3:AD:166:LYS:NZ	2.29	0.47
6:AG:78:ARG:NH1	6:AG:80:GLY:H	2.13	0.47
9:AJ:44:THR:HG23	9:AJ:69:THR:O	2.13	0.47
12:AM:86:ARG:CG	12:AM:96:VAL:HG11	2.43	0.47
17:AR:35:SER:O	17:AR:70:THR:HA	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AB:35:ASN:HD22	20:AB:35:ASN:HA	1.54	0.47
22:BA:82:U:O2'	22:BA:83:G:H5'	2.14	0.47
23:BB:138:U:H1'	41:BT:1:MET:H2	1.78	0.47
23:BB:303:G:H2'	23:BB:304:U:C6	2.50	0.47
23:BB:324:A:H2'	23:BB:325:G:O4'	2.14	0.47
23:BB:431:U:O2'	23:BB:432:A:H5'	2.14	0.47
23:BB:519:U:H2'	23:BB:520:G:C8	2.50	0.47
23:BB:996:A:C4'	38:BQ:91:ARG:HD2	2.41	0.47
23:BB:1027:A:N6	23:BB:1126:A:H1'	2.29	0.47
23:BB:1193:G:H2'	23:BB:1194:A:O4'	2.13	0.47
23:BB:1445:G:H2'	23:BB:1446:C:O4'	2.15	0.47
23:BB:1496:A:H2'	23:BB:1498:C:C5	2.49	0.47
23:BB:1790:C:H2'	23:BB:1791:A:C8	2.49	0.47
23:BB:2052:A:O4'	26:BD:147:GLY:HA3	2.14	0.47
23:BB:2061:G:H5"	23:BB:2503:A:C2	2.50	0.47
23:BB:2230:G:H2'	23:BB:2231:U:C6	2.50	0.47
23:BB:2515:C:H2'	23:BB:2516:A:H8	1.80	0.47
23:BB:2553:G:H2'	23:BB:2554:U:C4'	2.44	0.47
23:BB:2880:C:H1'	35:BN:93:GLY:H	1.79	0.47
25:BC:179:GLU:CD	25:BC:266:ILE:HD11	2.35	0.47
28:BF:134:GLN:HB3	28:BF:149:ARG:HB3	1.96	0.47
29:BG:10:VAL:CG2	29:BG:48:THR:HA	2.45	0.47
30:BH:65:ALA:C	30:BH:67:ALA:H	2.16	0.47
32:BK:119:ALA:O	32:BK:120:PRO:O	2.33	0.47
33:BL:81:ASP:O	33:BL:83:ALA:N	2.48	0.47
33:BL:118:THR:O	33:BL:120:VAL:HG23	2.14	0.47
37:BP:6:GLN:O	37:BP:10:GLU:HG2	2.13	0.47
38:BQ:18:LYS:C	38:BQ:20:ALA:H	2.17	0.47
40:BS:4:ILE:CG2	40:BS:106:VAL:HG13	2.44	0.47
41:BT:38:ALA:HB3	41:BT:81:LYS:HZ3	1.79	0.47
1:CA:286:C:H2'	1:CA:287:U:C6	2.50	0.47
1:CA:382:A:H2'	1:CA:383:A:C8	2.49	0.47
1:CA:502:A:H2'	1:CA:503:C:C6	2.49	0.47
1:CA:512:U:H2'	1:CA:513:C:H6	1.75	0.47
1:CA:545:C:O2'	1:CA:546:A:H5'	2.15	0.47
1:CA:904:U:H2'	1:CA:905:U:C6	2.50	0.47
1:CA:1414:U:H2'	1:CA:1415:G:C8	2.44	0.47
2:CC:119:ILE:CG2	2:CC:120:THR:N	2.76	0.47
5:CF:85:ILE:HG22	5:CF:86:ARG:H	1.80	0.47
8:CI:30:ASN:HD22	8:CI:65:THR:HA	1.79	0.47
20:CB:46:VAL:HA	20:CB:49:PHE:CD2	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:288:U:H2'	23:DB:289:G:H5'	1.96	0.47
23:DB:512:G:OP1	23:DB:512:G:H4'	2.15	0.47
23:DB:572:A:OP2	39:DR:80:ARG:NH2	2.47	0.47
23:DB:776:G:H4'	23:DB:777:G:O5'	2.14	0.47
23:DB:929:U:H1'	45:DY:25:GLY:O	2.14	0.47
23:DB:1057:A:H62	23:DB:1086:A:H2'	1.80	0.47
23:DB:1064:C:H2'	23:DB:1065:U:O4'	2.14	0.47
23:DB:1551:A:C3'	23:DB:1552:A:H5"	2.44	0.47
23:DB:1557:C:H3'	23:DB:1558:C:C5'	2.45	0.47
23:DB:1590:A:H2'	23:DB:1591:A:C8	2.49	0.47
23:DB:1672:A:C6	23:DB:1673:G:C6	3.02	0.47
23:DB:1682:G:H2'	23:DB:1683:U:C6	2.49	0.47
23:DB:2197:U:O2'	23:DB:2198:A:H2'	2.14	0.47
23:DB:2247:A:H2'	23:DB:2248:C:C6	2.50	0.47
23:DB:2700:A:H2'	23:DB:2701:U:C6	2.48	0.47
23:DB:2822:G:H5"	26:DD:164:GLN:HE22	1.78	0.47
25:DC:140:VAL:CG2	25:DC:163:ILE:HG12	2.45	0.47
26:DD:174:SER:O	26:DD:175:LEU:HB2	2.14	0.47
26:DD:187:LEU:HD12	26:DD:188:LEU:H	1.79	0.47
31:DJ:58:ASN:CA	31:DJ:127:GLY:HA2	2.29	0.47
33:DL:51:GLU:O	33:DL:53:GLY:N	2.47	0.47
34:DM:63:ILE:HD12	34:DM:63:ILE:N	2.28	0.47
42:DU:90:LYS:O	42:DU:92:VAL:HG23	2.14	0.47
52:DI:10:LEU:HD12	52:DI:10:LEU:O	2.13	0.47
52:DI:129:GLU:HB3	52:DI:133:ARG:NH1	2.29	0.47
1:AA:394:G:O2'	1:AA:395:C:H5'	2.15	0.47
1:AA:811:C:O2'	1:AA:901:A:N1	2.46	0.47
1:AA:1062:U:H2'	1:AA:1063:C:C5	2.50	0.47
2:AC:156:LEU:CD1	2:AC:165:GLU:HB2	2.44	0.47
4:AE:45:VAL:HG11	4:AE:117:ALA:HB2	1.97	0.47
4:AE:87:VAL:HG23	4:AE:92:ARG:HA	1.96	0.47
5:AF:4:TYR:CE2	5:AF:71:ILE:HD13	2.50	0.47
5:AF:32:ALA:O	5:AF:33:GLU:HB2	2.15	0.47
7:AH:77:VAL:HG23	7:AH:126:CYS:HA	1.96	0.47
7:AH:94:VAL:HG21	7:AH:100:ILE:O	2.14	0.47
8:AI:56:MET:SD	8:AI:57:VAL:N	2.87	0.47
11:AL:66:ILE:HD12	11:AL:66:ILE:N	2.30	0.47
18:AS:40:PHE:O	18:AS:43:MET:HG3	2.15	0.47
23:BB:499:U:H2'	23:BB:500:G:O4'	2.14	0.47
23:BB:531:C:O2'	23:BB:563:A:H5"	2.14	0.47
23:BB:1381:G:H1'	23:BB:1571:A:N1	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2233:U:H2'	23:BB:2234:G:H8	1.80	0.47
23:BB:2544:G:O2'	23:BB:2545:G:H5'	2.14	0.47
23:BB:2679:A:O2'	23:BB:2680:U:H5'	2.14	0.47
23:BB:2697:G:H2'	23:BB:2698:U:O4'	2.15	0.47
23:BB:2708:G:O2'	23:BB:2709:G:H5'	2.14	0.47
25:BC:259:ASN:C	25:BC:261:ARG:H	2.18	0.47
27:BE:48:THR:HG23	27:BE:51:GLU:OE2	2.15	0.47
27:BE:115:GLN:O	27:BE:117:ARG:HG3	2.14	0.47
27:BE:157:LEU:O	27:BE:160:ALA:HB3	2.15	0.47
28:BF:137:PHE:CD2	28:BF:137:PHE:N	2.83	0.47
28:BF:155:ILE:HG22	28:BF:156:THR:N	2.30	0.47
29:BG:94:ARG:HA	29:BG:128:THR:HG22	1.97	0.47
29:BG:106:LEU:O	29:BG:108:PHE:HD1	1.97	0.47
30:BH:81:ALA:HB2	30:BH:147:VAL:HG23	1.95	0.47
31:BJ:81:ILE:HG23	31:BJ:82:GLY:N	2.23	0.47
32:BK:104:THR:H	32:BK:107:LEU:CD1	2.26	0.47
32:BK:112:PHE:O	32:BK:113:MET:C	2.53	0.47
42:BU:85:ARG:HH11	42:BU:86:PHE:N	2.13	0.47
1:CA:44:A:O2'	1:CA:45:G:H5'	2.14	0.47
1:CA:142:G:N3	1:CA:196:A:H2	2.12	0.47
1:CA:197:A:H4'	1:CA:198:G:O5'	2.13	0.47
1:CA:358:U:H2'	1:CA:359:G:C8	2.50	0.47
1:CA:435:A:H2'	1:CA:435:A:N3	2.30	0.47
1:CA:659:U:O2'	1:CA:660:C:H5'	2.15	0.47
1:CA:844:G:H3'	1:CA:844:G:OP2	2.14	0.47
1:CA:967:C:H4'	8:CI:129:ARG:HG2	1.96	0.47
1:CA:1120:C:H2'	1:CA:1121:U:C6	2.49	0.47
1:CA:1406:U:H2'	1:CA:1407:C:H5'	1.96	0.47
2:CC:190:THR:HG22	2:CC:191:THR:H	1.78	0.47
6:CG:144:ALA:O	6:CG:145:GLU:HB3	2.14	0.47
7:CH:10:LEU:CD2	7:CH:74:ILE:HD11	2.44	0.47
8:CI:19:PHE:HB2	8:CI:63:TYR:HB3	1.97	0.47
17:CR:63:TYR:N	17:CR:63:TYR:HD2	2.11	0.47
18:CS:48:ILE:O	18:CS:58:PRO:HA	2.14	0.47
20:CB:80:LYS:HG3	20:CB:81:ASP:N	2.29	0.47
23:DB:28:A:O2'	23:DB:583:G:H5'	2.15	0.47
23:DB:37:C:O2'	23:DB:38:A:H5'	2.15	0.47
23:DB:184:C:H2'	23:DB:185:G:C8	2.49	0.47
23:DB:241:A:OP1	23:DB:241:A:H8	1.97	0.47
23:DB:269:C:H2'	23:DB:270:A:H8	1.79	0.47
23:DB:335:C:H2'	23:DB:336:C:H6	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:615:U:O4	27:DE:39:ALA:HB2	2.14	0.47
23:DB:692:C:H2'	23:DB:693:A:C8	2.49	0.47
23:DB:784:G:HO2'	23:DB:785:G:H5"	1.79	0.47
23:DB:1203:U:H3'	23:DB:1204:A:C5'	2.44	0.47
23:DB:1729:U:C2'	23:DB:1730:C:H4'	2.39	0.47
23:DB:2589:A:H2'	23:DB:2590:A:C8	2.49	0.47
23:DB:2635:A:H4'	26:DD:79:LEU:HB2	1.96	0.47
26:DD:123:LYS:HD3	26:DD:165:MET:SD	2.54	0.47
29:DG:95:ALA:HA	29:DG:104:LEU:HD23	1.96	0.47
29:DG:148:ARG:HB2	29:DG:152:ARG:HH11	1.79	0.47
30:DH:9:VAL:CG1	30:DH:12:LEU:HG	2.45	0.47
30:DH:21:VAL:HG22	30:DH:22:LYS:N	2.29	0.47
32:DK:59:LYS:HD2	32:DK:89:ASN:O	2.15	0.47
33:DL:89:VAL:O	33:DL:89:VAL:HG13	2.15	0.47
36:DO:93:ASP:C	36:DO:95:SER:H	2.16	0.47
37:DP:4:ILE:C	37:DP:6:GLN:N	2.66	0.47
40:DS:52:GLU:HA	40:DS:55:ILE:CG2	2.43	0.47
41:DT:54:GLU:HB3	41:DT:88:LYS:HB2	1.95	0.47
42:DU:60:LYS:HE2	42:DU:60:LYS:HA	1.97	0.47
52:DI:18:ASN:HB2	52:DI:38:CYS:SG	2.54	0.47
52:DI:18:ASN:N	52:DI:19:PRO:CD	2.77	0.47
1:AA:57:G:H2'	1:AA:58:C:C6	2.49	0.47
1:AA:222:C:H2'	1:AA:223:A:H8	1.79	0.47
1:AA:246:A:C2	1:AA:282:A:C5	3.03	0.47
1:AA:377:G:H2'	1:AA:378:G:H8	1.80	0.47
1:AA:462:G:H5'	1:AA:463:U:P	2.55	0.47
1:AA:889:A:N1	1:AA:907:A:H5"	2.29	0.47
1:AA:900:A:H2'	1:AA:901:A:C8	2.50	0.47
1:AA:953:G:H2'	1:AA:954:G:O4'	2.15	0.47
1:AA:1009:U:H1'	1:AA:1021:A:C2	2.49	0.47
1:AA:1024:G:H2'	1:AA:1025:U:C6	2.50	0.47
1:AA:1071:C:O2'	1:AA:1072:G:H5'	2.15	0.47
1:AA:1097:C:H2'	1:AA:1098:C:H6	1.79	0.47
1:AA:1169:A:H2'	1:AA:1170:A:C8	2.50	0.47
1:AA:1486:G:C2'	1:AA:1487:G:O4'	2.63	0.47
2:AC:71:ARG:O	2:AC:75:VAL:HG23	2.14	0.47
2:AC:87:ARG:HD3	2:AC:88:LYS:N	2.30	0.47
3:AD:44:LYS:HD2	3:AD:46:ARG:CG	2.44	0.47
4:AE:88:HIS:CE1	4:AE:137:ARG:HD2	2.49	0.47
5:AF:1:MET:HG2	5:AF:67:PRO:HD3	1.97	0.47
6:AG:30:MET:HA	6:AG:38:ALA:CB	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AG:110:ARG:HD3	6:AG:118:ARG:HA	1.96	0.47
7:AH:58:LEU:HD22	7:AH:60:LEU:HB2	1.96	0.47
8:AI:117:LEU:HD22	8:AI:123:ARG:HG2	1.96	0.47
10:AK:37:GLN:HB2	10:AK:39:ASN:ND2	2.29	0.47
10:AK:83:VAL:CG2	10:AK:106:ILE:HD11	2.45	0.47
11:AL:51:VAL:HG12	11:AL:63:THR:HG22	1.96	0.47
13:AN:60:ARG:HE	13:AN:62:ARG:HG2	1.79	0.47
19:AT:3:ILE:H	19:AT:3:ILE:HG13	1.46	0.47
20:AB:46:VAL:HA	20:AB:49:PHE:CD2	2.49	0.47
20:AB:116:LEU:HA	20:AB:119:GLN:CG	2.45	0.47
20:AB:120:SER:HA	20:AB:125:PHE:CD1	2.49	0.47
23:BB:63:A:OP2	23:BB:63:A:H2'	2.15	0.47
23:BB:97:C:H2'	23:BB:98:G:O4'	2.15	0.47
23:BB:115:C:O2'	23:BB:116:C:H5'	2.14	0.47
23:BB:131:A:O2'	23:BB:132:G:H5'	2.15	0.47
23:BB:510:C:O2'	23:BB:1236:G:H5'	2.15	0.47
23:BB:538:A:N6	23:BB:555:G:O2'	2.46	0.47
23:BB:589:U:H2'	23:BB:590:A:C8	2.49	0.47
23:BB:656:G:O2'	23:BB:657:U:H5'	2.14	0.47
23:BB:920:A:H2'	23:BB:921:C:H6	1.79	0.47
23:BB:1010:A:N3	23:BB:1153:C:H1'	2.29	0.47
23:BB:1324:G:N1	23:BB:1331:G:C6	2.83	0.47
23:BB:1374:G:O2'	23:BB:1375:U:H5'	2.15	0.47
23:BB:1419:A:H2'	23:BB:1421:G:C8	2.50	0.47
23:BB:1438:U:C4	23:BB:1552:A:N6	2.83	0.47
23:BB:1516:G:O2'	23:BB:1517:G:H5'	2.14	0.47
23:BB:1607:C:N4	23:BB:1622:G:OP2	2.48	0.47
23:BB:2179:C:H2'	23:BB:2180:U:H6	1.79	0.47
23:BB:2261:C:O2'	23:BB:2262:U:H5'	2.14	0.47
23:BB:2586:U:H2'	23:BB:2587:A:C8	2.50	0.47
23:BB:2895:G:O2'	23:BB:2896:C:H5'	2.15	0.47
23:BB:2897:U:H2'	23:BB:2898:U:H6	1.79	0.47
25:BC:75:ALA:HB1	25:BC:93:VAL:HG22	1.97	0.47
25:BC:115:ILE:HA	25:BC:124:LYS:HZ1	1.77	0.47
25:BC:129:LEU:CD2	25:BC:133:ASN:HB2	2.45	0.47
26:BD:55:LYS:HZ1	26:BD:59:ARG:HD2	1.78	0.47
27:BE:97:ASN:OD1	27:BE:97:ASN:N	2.48	0.47
28:BF:79:ARG:HB2	28:BF:82:TYR:CE2	2.50	0.47
29:BG:95:ALA:HA	29:BG:104:LEU:HD23	1.95	0.47
29:BG:104:LEU:HB3	29:BG:106:LEU:HD21	1.96	0.47
31:BJ:16:TYR:N	31:BJ:137:PRO:HB3	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:119:ALA:HB3	32:BK:120:PRO:HD3	1.97	0.47
33:BL:17:LYS:O	33:BL:18:ARG:HG2	2.13	0.47
34:BM:55:ARG:HH22	34:BM:58:LYS:HA	1.80	0.47
34:BM:69:PRO:HG2	34:BM:70:ASP:H	1.79	0.47
36:BO:28:VAL:HG12	36:BO:93:ASP:O	2.15	0.47
37:BP:3:ILE:HD13	37:BP:3:ILE:C	2.35	0.47
37:BP:19:PHE:CE2	37:BP:83:ILE:HD11	2.50	0.47
38:BQ:49:ARG:HH11	38:BQ:49:ARG:HG2	1.79	0.47
39:BR:7:SER:HB2	39:BR:22:LEU:CB	2.42	0.47
39:BR:31:GLU:O	39:BR:63:VAL:HG22	2.14	0.47
40:BS:20:VAL:C	40:BS:22:ASP:H	2.18	0.47
40:BS:25:ARG:HE	40:BS:74:ILE:CG2	2.27	0.47
46:BZ:64:ILE:HG22	46:BZ:68:LEU:CD1	2.44	0.47
50:B3:32:LEU:HA	50:B3:35:LYS:HD2	1.97	0.47
1:CA:36:C:H4'	11:CL:118:VAL:O	2.15	0.47
1:CA:92:U:H2'	1:CA:93:U:C6	2.49	0.47
1:CA:119:A:H4'	1:CA:120:A:O4'	2.15	0.47
1:CA:213:G:H3'	1:CA:214:C:H6	1.79	0.47
1:CA:284:C:H2'	1:CA:285:C:C6	2.49	0.47
1:CA:342:C:O2'	1:CA:343:U:H5'	2.15	0.47
1:CA:429:U:H3'	3:CD:8:LEU:CD2	2.45	0.47
1:CA:692:U:H2'	1:CA:694:A:OP2	2.15	0.47
1:CA:762:U:H2'	1:CA:763:G:H8	1.79	0.47
1:CA:1073:U:H2'	1:CA:1074:G:H8	1.78	0.47
1:CA:1216:A:H2'	1:CA:1217:C:H6	1.80	0.47
2:CC:21:TRP:CH2	2:CC:31:ASN:HB3	2.50	0.47
2:CC:110:LEU:HD21	2:CC:140:ALA:O	2.14	0.47
2:CC:110:LEU:HD22	2:CC:145:ALA:HB2	1.97	0.47
3:CD:188:SER:C	3:CD:190:LEU:H	2.18	0.47
3:CD:192:ALA:C	3:CD:194:ILE:H	2.18	0.47
4:CE:92:ARG:HB3	4:CE:92:ARG:NH1	2.29	0.47
5:CF:2:ARG:HB3	5:CF:92:THR:OG1	2.14	0.47
5:CF:11:HIS:CG	5:CF:12:PRO:HD2	2.49	0.47
5:CF:36:ILE:HD12	5:CF:36:ILE:N	2.30	0.47
5:CF:54:LEU:HD22	5:CF:54:LEU:N	2.28	0.47
6:CG:30:MET:HA	6:CG:38:ALA:CB	2.45	0.47
8:CI:16:ALA:HA	8:CI:66:VAL:HA	1.96	0.47
8:CI:123:ARG:CZ	8:CI:123:ARG:HB3	2.44	0.47
9:CJ:41:PRO:O	9:CJ:42:LEU:HB2	2.15	0.47
10:CK:61:ALA:O	10:CK:64:VAL:HG13	2.13	0.47
12:CM:77:LYS:O	12:CM:80:MET:HG2	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CN:63:CYS:HB3	13:CN:68:ARG:H	1.80	0.47
15:CP:3:THR:CG2	15:CP:66:THR:HB	2.41	0.47
15:CP:21:VAL:HG12	15:CP:33:ILE:HD12	1.97	0.47
19:CT:2:ASN:CG	19:CT:3:ILE:N	2.67	0.47
22:DA:73:A:H2'	22:DA:73:A:N3	2.29	0.47
22:DA:78:A:H2'	22:DA:79:G:O4'	2.13	0.47
22:DA:82:U:O2'	22:DA:83:G:H5'	2.14	0.47
22:DA:95:U:H2'	22:DA:96:G:H8	1.78	0.47
23:DB:20:C:H2'	23:DB:21:A:H8	1.80	0.47
23:DB:97:C:H2'	23:DB:98:G:O4'	2.15	0.47
23:DB:235:U:H2'	23:DB:236:C:C6	2.50	0.47
23:DB:392:U:O2'	23:DB:393:C:H5'	2.14	0.47
23:DB:437:U:H2'	23:DB:438:G:C8	2.50	0.47
23:DB:547:A:OP1	23:DB:547:A:H3'	2.13	0.47
23:DB:580:U:O3'	38:DQ:30:VAL:HG13	2.15	0.47
23:DB:632:A:H2'	23:DB:633:A:C8	2.49	0.47
23:DB:648:G:O2'	23:DB:649:G:H5'	2.15	0.47
23:DB:657:U:H2'	23:DB:658:U:C6	2.50	0.47
23:DB:718:A:H5'	23:DB:719:C:C5	2.50	0.47
23:DB:728:G:O2'	23:DB:730:A:H8	1.97	0.47
23:DB:758:C:O2	23:DB:1981:A:H2	1.98	0.47
23:DB:816:C:O2'	23:DB:817:C:H5'	2.15	0.47
23:DB:956:G:C4'	34:DM:82:MET:HE1	2.45	0.47
23:DB:993:G:H5"	38:DQ:49:ARG:NH1	2.29	0.47
23:DB:1253:A:H4'	23:DB:1254:A:OP2	2.14	0.47
23:DB:1299:G:H5"	23:DB:1300:G:OP1	2.14	0.47
23:DB:1324:G:H1'	23:DB:1616:A:C6	2.49	0.47
23:DB:1376:C:H3'	56:DB:3279:HOH:O	2.14	0.47
23:DB:1439:A:N7	23:DB:1440:U:C2	2.83	0.47
23:DB:1845:G:O2'	23:DB:1846:G:H5'	2.15	0.47
23:DB:1998:A:OP2	26:DD:141:ARG:NH2	2.48	0.47
23:DB:2085:U:O2'	23:DB:2086:U:H5'	2.15	0.47
23:DB:2094:A:H2'	23:DB:2095:A:H8	1.79	0.47
23:DB:2138:G:H2'	23:DB:2139:U:O4'	2.14	0.47
23:DB:2281:A:O2'	23:DB:2282:G:H5'	2.15	0.47
23:DB:2331:G:O2'	23:DB:2332:C:H5'	2.15	0.47
23:DB:2362:C:OP2	50:D3:43:LEU:HD21	2.15	0.47
23:DB:2583:G:H2'	23:DB:2584:U:O4'	2.15	0.47
23:DB:2655:G:O2'	23:DB:2656:U:P	2.72	0.47
23:DB:2683:C:O2'	23:DB:2684:U:H5'	2.14	0.47
23:DB:2848:G:H1	23:DB:2867:G:N2	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2892:G:H5”	23:DB:2894:G:N2	2.30	0.47
24:DV:51:GLN:HB2	24:DV:57:TYR:OH	2.13	0.47
25:DC:102:TYR:O	25:DC:103:ILE:HG13	2.15	0.47
25:DC:123:ILE:O	25:DC:123:ILE:HG13	2.15	0.47
26:DD:116:LYS:HG3	26:DD:165:MET:SD	2.54	0.47
27:DE:97:ASN:OD1	27:DE:97:ASN:N	2.47	0.47
27:DE:137:LYS:O	27:DE:141:MET:HG3	2.15	0.47
28:DF:74:ALA:HB3	28:DF:77:LYS:O	2.15	0.47
32:DK:85:VAL:HG21	32:DK:115:ILE:HD11	1.97	0.47
33:DL:57:LEU:C	33:DL:59:ARG:H	2.16	0.47
33:DL:100:ILE:HG12	33:DL:100:ILE:O	2.15	0.47
34:DM:42:THR:O	34:DM:45:GLN:HB2	2.14	0.47
35:DN:8:ARG:HB3	35:DN:43:GLU:OE2	2.14	0.47
35:DN:11:ASN:HD22	35:DN:11:ASN:HA	1.55	0.47
35:DN:114:GLU:CD	35:DN:118:ARG:HH11	2.18	0.47
36:DO:4:LYS:O	36:DO:8:ILE:HG13	2.15	0.47
38:DQ:80:ASN:C	38:DQ:82:LEU:H	2.18	0.47
38:DQ:109:VAL:HG12	38:DQ:113:LYS:HE3	1.97	0.47
39:DR:31:GLU:H	39:DR:63:VAL:HG22	1.80	0.47
40:DS:46:LEU:O	40:DS:50:VAL:HG23	2.15	0.47
40:DS:47:VAL:HG12	40:DS:103:ILE:HG21	1.97	0.47
40:DS:60:HIS:O	40:DS:61:ASN:CB	2.62	0.47
40:DS:71:VAL:HG22	40:DS:71:VAL:O	2.13	0.47
41:DT:68:LYS:HD3	41:DT:68:LYS:N	2.29	0.47
41:DT:85:VAL:C	41:DT:86:THR:HG23	2.35	0.47
42:DU:10:VAL:HB	42:DU:69:VAL:HB	1.95	0.47
43:DW:18:LYS:HE3	43:DW:19:ARG:NH2	2.29	0.47
45:DY:23:LEU:CD1	45:DY:28:LEU:HB2	2.43	0.47
45:DY:50:VAL:O	45:DY:54:VAL:HG22	2.15	0.47
46:DZ:76:GLU:HG3	46:DZ:77:LYS:H	1.79	0.47
48:D1:39:ASP:OD1	48:D1:41:VAL:HB	2.13	0.47
52:DI:2:LYS:O	52:DI:3:LYS:HG3	2.14	0.47
52:DI:17:ALA:O	52:DI:18:ASN:HB3	2.13	0.47
52:DI:37:PHE:HB2	52:DI:66:PHE:CE2	2.50	0.47
52:DI:129:GLU:CB	52:DI:133:ARG:HH12	2.27	0.47
1:AA:323:U:H2’	1:AA:324:G:O4’	2.14	0.47
1:AA:373:A:C1’	1:AA:481:G:H1’	2.45	0.47
1:AA:468:A:H3’	1:AA:469:C:C6	2.50	0.47
1:AA:586:C:C2’	1:AA:587:G:H5’	2.45	0.47
1:AA:981:U:H2’	1:AA:982:U:C5	2.50	0.47
1:AA:1222:G:C2’	1:AA:1223:C:H5’	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1320:C:OP2	18:AS:69:LYS:HE3	2.14	0.47
15:AP:20:VAL:HG21	15:AP:32:PHE:CG	2.50	0.47
20:AB:93:HIS:HA	20:AB:94:ARG:NH2	2.30	0.47
22:BA:16:G:O2'	22:BA:17:C:H5'	2.15	0.47
22:BA:32:U:H2'	22:BA:33:G:O4'	2.14	0.47
23:BB:68:G:H2'	23:BB:69:C:C6	2.49	0.47
23:BB:98:G:H1	42:BU:6:ARG:NH1	2.11	0.47
23:BB:352:A:H3'	23:BB:353:C:H6	1.80	0.47
23:BB:425:G:O2'	23:BB:426:C:H5'	2.13	0.47
23:BB:971:G:OP2	23:BB:974:G:N2	2.47	0.47
23:BB:993:G:H5"	38:BQ:49:ARG:NH1	2.29	0.47
23:BB:1396:U:H5'	23:BB:1396:U:O2	2.15	0.47
23:BB:2305:U:H2'	23:BB:2306:C:O4'	2.15	0.47
23:BB:2553:G:H2'	23:BB:2554:U:H4'	1.97	0.47
23:BB:2675:A:N1	23:BB:2732:G:O6	2.47	0.47
24:BV:19:ARG:O	24:BV:22:ALA:HB3	2.15	0.47
24:BV:30:ILE:HG23	24:BV:72:VAL:HG11	1.97	0.47
25:BC:229:HIS:ND1	25:BC:230:PRO:HD2	2.29	0.47
27:BE:179:SER:HA	27:BE:182:ALA:HB3	1.96	0.47
28:BF:33:ILE:HG12	28:BF:155:ILE:HG13	1.97	0.47
33:BL:123:ARG:HD2	33:BL:124:GLY:N	2.30	0.47
35:BN:83:LEU:O	35:BN:86:ARG:HB2	2.15	0.47
36:BO:4:LYS:O	36:BO:8:ILE:HG13	2.14	0.47
37:BP:4:ILE:C	37:BP:6:GLN:N	2.67	0.47
38:BQ:85:ALA:HB2	38:BQ:115:ALA:HB1	1.96	0.47
39:BR:75:VAL:O	39:BR:76:LYS:HD2	2.15	0.47
43:BW:51:GLY:N	43:BW:59:PHE:HB2	2.29	0.47
1:CA:202:G:H2'	1:CA:203:G:H8	1.80	0.47
1:CA:224:U:H2'	1:CA:225:C:H6	1.80	0.47
1:CA:429:U:H1'	1:CA:430:A:H5"	1.96	0.47
1:CA:811:C:O2'	1:CA:901:A:N1	2.48	0.47
1:CA:1016:A:H4'	1:CA:1218:C:H4'	1.96	0.47
1:CA:1222:G:C2'	1:CA:1223:C:H5'	2.45	0.47
10:CK:88:PRO:HD3	21:CU:28:LEU:CD1	2.34	0.47
11:CL:33:CYS:HA	11:CL:54:VAL:HA	1.97	0.47
13:CN:53:ASP:HA	13:CN:58:ARG:NE	2.30	0.47
20:CB:116:LEU:HA	20:CB:119:GLN:HG3	1.97	0.47
20:CB:186:VAL:O	20:CB:200:PRO:HA	2.14	0.47
22:DA:55:U:H2'	22:DA:56:G:H8	1.79	0.47
23:DB:4:U:H2'	23:DB:5:A:H8	1.80	0.47
23:DB:292:U:O2'	23:DB:293:U:H5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:406:G:O2'	23:DB:407:G:H5'	2.15	0.47
23:DB:693:A:H2'	23:DB:694:U:H6	1.80	0.47
23:DB:1287:A:P	35:DN:104:ALA:HB3	2.55	0.47
23:DB:1336:A:H3'	23:DB:1337:G:H8	1.80	0.47
23:DB:1599:U:H2'	23:DB:1600:C:C6	2.49	0.47
23:DB:2258:C:O2'	23:DB:2427:C:OP2	2.32	0.47
25:DC:78:GLU:HB2	25:DC:92:LEU:HD23	1.96	0.47
28:DF:65:LEU:CD2	28:DF:87:LYS:HD2	2.42	0.47
29:DG:71:LEU:HD13	29:DG:74:MET:SD	2.55	0.47
29:DG:140:ILE:HA	29:DG:143:VAL:CG2	2.44	0.47
30:DH:92:GLY:O	30:DH:93:SER:HB2	2.15	0.47
31:DJ:98:GLU:HB3	31:DJ:124:VAL:HG21	1.96	0.47
32:DK:104:THR:H	32:DK:107:LEU:CD1	2.28	0.47
33:DL:132:ARG:O	33:DL:135:ILE:HG22	2.14	0.47
34:DM:38:ARG:HH11	34:DM:38:ARG:HG2	1.79	0.47
35:DN:2:ARG:O	35:DN:2:ARG:NE	2.45	0.47
36:DO:68:LYS:H	36:DO:102:ARG:HD3	1.79	0.47
38:DQ:57:ARG:HA	38:DQ:60:TRP:CE3	2.50	0.47
41:DT:50:LEU:O	41:DT:52:GLU:N	2.47	0.47
42:DU:53:GLN:CD	42:DU:53:GLN:H	2.18	0.47
1:AA:76:G:H8	1:AA:76:G:OP2	1.97	0.47
1:AA:475:C:H2'	1:AA:476:U:H6	1.76	0.47
1:AA:1187:G:OP1	8:AI:114:LYS:HE3	2.15	0.47
1:AA:1510:C:H2'	1:AA:1511:G:C8	2.49	0.47
2:AC:110:LEU:HD22	2:AC:145:ALA:HB2	1.96	0.47
7:AH:87:ARG:HD3	7:AH:90:GLU:OE1	2.15	0.47
8:AI:123:ARG:HB3	8:AI:123:ARG:CZ	2.45	0.47
10:AK:75:GLU:CD	10:AK:75:GLU:N	2.68	0.47
12:AM:38:ILE:HD12	12:AM:47:LEU:HD11	1.95	0.47
12:AM:84:CYS:O	12:AM:88:LEU:HG	2.15	0.47
18:AS:2:ARG:HD3	18:AS:3:SER:N	2.29	0.47
20:AB:118:THR:HA	20:AB:121:GLN:HB2	1.95	0.47
20:AB:172:ILE:HD12	20:AB:172:ILE:N	2.30	0.47
22:BA:73:A:N3	22:BA:73:A:H2'	2.30	0.47
23:BB:922:C:H1'	43:BW:22:VAL:CG2	2.44	0.47
23:BB:1000:A:H4'	45:BY:10:ARG:HH22	1.80	0.47
23:BB:1439:A:N7	23:BB:1440:U:C2	2.82	0.47
23:BB:1478:G:O2'	23:BB:1479:G:H5'	2.14	0.47
23:BB:1670:C:H2'	23:BB:1671:U:O4'	2.15	0.47
23:BB:1998:A:H2'	23:BB:1999:C:H6	1.80	0.47
23:BB:2153:C:O5'	23:BB:2153:C:H6	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2271:G:H2'	23:BB:2272:U:H6	1.79	0.47
23:BB:2634:A:H2'	23:BB:2635:A:H8	1.78	0.47
23:BB:2729:G:H2'	23:BB:2730:C:C6	2.49	0.47
23:BB:2847:U:OP1	37:BP:95:LYS:HD3	2.15	0.47
25:BC:36:ASN:ND2	25:BC:61:TYR:HB2	2.30	0.47
25:BC:188:ARG:HG2	25:BC:188:ARG:HH21	1.80	0.47
26:BD:114:LYS:HG3	26:BD:116:LYS:HG2	1.97	0.47
28:BF:121:PHE:HB3	28:BF:127:TYR:CD2	2.50	0.47
28:BF:168:LEU:O	28:BF:170:ALA:N	2.48	0.47
32:BK:47:ILE:CG1	32:BK:48:PRO:HD2	2.35	0.47
33:BL:93:ASN:O	33:BL:95:LEU:HD12	2.14	0.47
41:BT:23:ALA:C	41:BT:25:GLU:H	2.17	0.47
46:BZ:70:GLU:C	46:BZ:72:ARG:N	2.67	0.47
1:CA:364:A:H2'	1:CA:365:U:O2	2.14	0.47
1:CA:960:U:H6	1:CA:1222:G:O2'	1.98	0.47
1:CA:1242:G:H2'	1:CA:1243:C:O4'	2.14	0.47
2:CC:91:ALA:HB2	2:CC:98:ALA:H	1.80	0.47
8:CI:11:ARG:HH21	8:CI:12:LYS:HD2	1.80	0.47
9:CJ:6:ILE:O	9:CJ:75:ASP:HA	2.15	0.47
10:CK:83:VAL:HG22	10:CK:106:ILE:HD11	1.95	0.47
12:CM:90:HIS:CE1	12:CM:96:VAL:HG21	2.49	0.47
12:CM:92:ARG:NH1	18:CS:79:TYR:HD2	2.12	0.47
15:CP:26:ASN:HD22	15:CP:26:ASN:HA	1.59	0.47
19:CT:56:ILE:O	19:CT:60:GLN:HG2	2.15	0.47
20:CB:27:LYS:C	20:CB:29:PHE:H	2.18	0.47
22:DA:48:U:O2'	36:DO:100:HIS:HE1	1.98	0.47
22:DA:83:G:H4'	45:DY:52:PHE:CD2	2.50	0.47
23:DB:277:G:H4'	23:DB:278:A:N7	2.29	0.47
23:DB:418:C:H2'	23:DB:419:U:H6	1.80	0.47
23:DB:532:A:H2'	38:DQ:27:ARG:NH2	2.21	0.47
23:DB:663:G:OP1	33:DL:17:LYS:HG2	2.15	0.47
23:DB:753:A:O2'	23:DB:754:U:H5'	2.13	0.47
23:DB:770:G:O2'	23:DB:771:G:H5'	2.13	0.47
23:DB:1324:G:C6	23:DB:1331:G:C6	3.03	0.47
23:DB:1419:A:H2'	23:DB:1421:G:C8	2.49	0.47
23:DB:1541:C:H2'	23:DB:1542:U:C6	2.50	0.47
23:DB:1744:A:H2'	23:DB:1745:A:C8	2.49	0.47
23:DB:1893:C:H2'	23:DB:1894:C:O4'	2.15	0.47
23:DB:1969:A:O2'	23:DB:1972:G:N3	2.40	0.47
23:DB:2261:C:N4	43:DW:10:ARG:HB3	2.30	0.47
23:DB:2526:G:H5'	23:DB:2742:G:O2'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2526:G:H2'	23:DB:2527:C:H6	1.80	0.47
23:DB:2569:G:O2'	23:DB:2570:G:H5'	2.15	0.47
23:DB:2716:C:H2'	23:DB:2717:C:C6	2.49	0.47
25:DC:129:LEU:CD2	25:DC:133:ASN:HB2	2.45	0.47
26:DD:104:VAL:HA	26:DD:106:LYS:HZ1	1.80	0.47
27:DE:73:ILE:HG12	27:DE:73:ILE:O	2.15	0.47
27:DE:179:SER:HA	27:DE:182:ALA:HB3	1.95	0.47
28:DF:76:PHE:HD2	28:DF:78:ILE:HD13	1.78	0.47
28:DF:103:ILE:HD11	28:DF:174:PHE:CG	2.50	0.47
29:DG:14:VAL:O	29:DG:16:VAL:HG23	2.14	0.47
30:DH:12:LEU:HG	30:DH:12:LEU:O	2.15	0.47
31:DJ:35:ARG:HA	31:DJ:40:HIS:CD2	2.50	0.47
32:DK:119:ALA:HB3	32:DK:120:PRO:HD3	1.97	0.47
33:DL:81:ASP:O	33:DL:83:ALA:N	2.48	0.47
37:DP:83:ILE:HD13	37:DP:83:ILE:O	2.15	0.47
41:DT:15:HIS:O	41:DT:16:VAL:C	2.51	0.47
50:D3:58:ILE:HG13	50:D3:58:ILE:H	1.41	0.47
51:D4:8:LYS:HG2	51:D4:9:LYS:HD3	1.97	0.47
52:DI:49:GLU:HB3	52:DI:52:LEU:HD12	1.97	0.47
52:DI:52:LEU:HD13	52:DI:81:LYS:HZ3	1.79	0.47
1:AA:5:U:H1'	1:AA:6:G:C2	2.50	0.47
1:AA:130:A:H1'	1:AA:263:A:O2'	2.14	0.47
1:AA:279:A:C5'	1:AA:280:C:H3'	2.43	0.47
1:AA:332:G:H2'	1:AA:333:U:H6	1.80	0.47
1:AA:429:U:OP2	3:AD:31:CYS:HB2	2.15	0.47
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.51	0.47
1:AA:1118:U:H1'	1:AA:1179:A:C5	2.49	0.47
1:AA:1238:A:C8	1:AA:1303:C:H1'	2.50	0.47
1:AA:1302:C:H5'	1:AA:1302:C:H6	1.80	0.47
3:AD:123:MET:CB	3:AD:128:VAL:HA	2.45	0.47
6:AG:101:ARG:HG2	6:AG:105:GLU:OE2	2.15	0.47
6:AG:125:ASP:HB3	6:AG:131:GLY:H	1.78	0.47
7:AH:83:ARG:HB3	7:AH:85:TYR:CE1	2.50	0.47
8:AI:87:MET:HA	8:AI:90:ASP:O	2.15	0.47
10:AK:37:GLN:HB2	10:AK:39:ASN:HD22	1.80	0.47
12:AM:37:GLY:O	12:AM:38:ILE:HD13	2.15	0.47
18:AS:51:HIS:HB2	18:AS:56:HIS:CE1	2.49	0.47
20:AB:80:LYS:HG3	20:AB:81:ASP:N	2.30	0.47
23:BB:126:A:H5'	49:B2:19:ARG:CG	2.45	0.47
23:BB:129:C:H4'	23:BB:1348:C:O2'	2.15	0.47
23:BB:512:G:H4'	23:BB:512:G:OP1	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:720:U:H2'	23:BB:721:A:H8	1.77	0.47
23:BB:754:U:H2'	23:BB:755:U:C6	2.50	0.47
23:BB:924:G:H2'	23:BB:925:A:H8	1.80	0.47
23:BB:1082:U:C2	23:BB:1086:A:N1	2.83	0.47
23:BB:1140:C:H2'	23:BB:1141:U:H5'	1.96	0.47
23:BB:1172:C:H2'	23:BB:1173:U:O5'	2.15	0.47
23:BB:1403:A:H2'	23:BB:1404:C:H6	1.80	0.47
23:BB:1433:A:H2'	23:BB:1434:A:O4'	2.15	0.47
23:BB:1506:U:H2'	23:BB:1507:C:C6	2.50	0.47
23:BB:1672:A:C6	23:BB:1673:G:C6	3.03	0.47
23:BB:1922:G:H2'	23:BB:1923:U:O4'	2.15	0.47
23:BB:2355:G:H4'	43:BW:20:LEU:CD1	2.44	0.47
23:BB:2386:A:C2	43:BW:38:ARG:HB3	2.49	0.47
23:BB:2756:U:H1'	23:BB:2757:A:H5"	1.96	0.47
28:BF:33:ILE:HG23	28:BF:155:ILE:HD12	1.97	0.47
28:BF:65:LEU:CD2	28:BF:87:LYS:HD2	2.40	0.47
28:BF:102:LEU:HA	28:BF:106:ALA:HB2	1.97	0.47
29:BG:33:THR:HG21	29:BG:74:MET:HB3	1.96	0.47
31:BJ:45:THR:O	31:BJ:45:THR:HG23	2.15	0.47
33:BL:23:ILE:HD12	33:BL:23:ILE:N	2.30	0.47
37:BP:83:ILE:HD13	37:BP:83:ILE:O	2.15	0.47
38:BQ:16:ILE:O	38:BQ:18:LYS:N	2.43	0.47
38:BQ:45:ALA:O	38:BQ:49:ARG:N	2.46	0.47
38:BQ:108:LEU:N	39:BR:48:LYS:HD3	2.30	0.47
40:BS:84:ARG:HB3	40:BS:96:ILE:HG23	1.96	0.47
51:B4:2:LYS:HD3	51:B4:4:ARG:HE	1.80	0.47
1:CA:193:C:H2'	1:CA:194:C:C5	2.49	0.47
1:CA:571:U:O2	1:CA:918:A:H5'	2.14	0.47
1:CA:586:C:C2'	1:CA:587:G:H5'	2.44	0.47
1:CA:716:A:N3	10:CK:118:ASN:O	2.48	0.47
1:CA:861:G:H2'	1:CA:862:C:H6	1.80	0.47
1:CA:908:A:H2'	1:CA:909:A:C8	2.50	0.47
1:CA:1081:A:OP1	4:CE:21:SER:O	2.33	0.47
1:CA:1239:A:H4'	1:CA:1240:U:C5'	2.44	0.47
2:CC:72:PRO:O	2:CC:76:ILE:HG12	2.13	0.47
3:CD:123:MET:HG3	3:CD:143:SER:OG	2.15	0.47
8:CI:9:GLY:HA3	8:CI:81:GLY:N	2.30	0.47
8:CI:78:ILE:HG22	8:CI:82:ILE:CD1	2.45	0.47
11:CL:106:VAL:CG2	11:CL:116:TYR:HB3	2.44	0.47
12:CM:68:LEU:O	12:CM:72:ILE:HG22	2.15	0.47
20:CB:131:LYS:HG3	20:CB:132:GLU:N	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:11:PHE:CE1	21:CU:13:VAL:HG12	2.50	0.47
23:DB:121:G:H2'	23:DB:122:G:C8	2.49	0.47
23:DB:218:A:O2'	23:DB:219:A:H5'	2.15	0.47
23:DB:392:U:H2'	23:DB:393:C:H6	1.80	0.47
23:DB:540:C:O2'	23:DB:541:A:H5'	2.15	0.47
23:DB:862:G:H2'	23:DB:863:A:O4'	2.15	0.47
23:DB:974:G:H1'	23:DB:975:A:C8	2.50	0.47
23:DB:1294:U:C2'	23:DB:1295:C:H5'	2.44	0.47
23:DB:2562:U:H2'	23:DB:2563:U:H5'	1.97	0.47
23:DB:2628:C:O2'	23:DB:2781:A:H2'	2.15	0.47
25:DC:41:GLY:O	25:DC:48:ILE:HA	2.15	0.47
26:DD:125:TRP:HA	26:DD:125:TRP:CE3	2.50	0.47
28:DF:3:LEU:HD11	28:DF:172:PHE:CD1	2.50	0.47
28:DF:31:GLU:HB3	28:DF:156:THR:O	2.14	0.47
29:DG:106:LEU:O	29:DG:108:PHE:HD1	1.98	0.47
30:DH:25:TYR:CD1	30:DH:30:LEU:HG	2.50	0.47
30:DH:89:LYS:N	30:DH:89:LYS:HD2	2.30	0.47
30:DH:125:THR:HA	30:DH:146:VAL:CB	2.45	0.47
32:DK:112:PHE:O	32:DK:113:MET:C	2.53	0.47
35:DN:116:VAL:O	35:DN:117:ASP:CB	2.60	0.47
37:DP:31:VAL:O	37:DP:32:VAL:HG12	2.14	0.47
38:DQ:7:VAL:HG23	38:DQ:8:ILE:N	2.30	0.47
38:DQ:108:LEU:N	39:DR:48:LYS:HD3	2.29	0.47
47:D0:26:SER:HB3	47:D0:39:ARG:NH2	2.29	0.47
49:D2:10:LEU:HD11	49:D2:14:ARG:CZ	2.46	0.47
1:AA:220:G:O2'	1:AA:221:C:H5'	2.16	0.46
1:AA:286:C:H2'	1:AA:287:U:C6	2.51	0.46
1:AA:556:C:O2'	1:AA:557:G:H5'	2.14	0.46
1:AA:1040:U:H2'	1:AA:1041:G:C8	2.50	0.46
1:AA:1225:A:H3'	1:AA:1226:C:C6	2.50	0.46
3:AD:90:LEU:HD11	3:AD:194:ILE:HD11	1.95	0.46
4:AE:156:ARG:HB3	7:AH:43:GLY:O	2.15	0.46
5:AF:6:ILE:O	5:AF:6:ILE:HG13	2.15	0.46
5:AF:11:HIS:CG	5:AF:12:PRO:HD2	2.51	0.46
8:AI:50:PRO:HD3	8:AI:79:ARG:CG	2.45	0.46
9:AJ:13:PHE:CD2	9:AJ:69:THR:HG23	2.50	0.46
14:AO:68:TYR:HA	14:AO:71:ARG:HE	1.79	0.46
20:AB:27:LYS:C	20:AB:29:PHE:H	2.17	0.46
22:BA:3:C:H2'	22:BA:4:C:H6	1.79	0.46
23:BB:950:G:H2'	23:BB:951:C:C6	2.50	0.46
23:BB:1169:A:H8	23:BB:1169:A:O5'	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1429:G:H2'	23:BB:1430:G:C8	2.49	0.46
23:BB:1477:A:H2'	23:BB:1478:G:O4'	2.15	0.46
23:BB:1485:U:O2'	23:BB:1486:U:H5'	2.15	0.46
23:BB:1687:G:O2'	23:BB:1688:U:H5'	2.14	0.46
23:BB:1812:U:O2'	25:BC:43:ASN:ND2	2.48	0.46
23:BB:2023:C:H4'	23:BB:2617:U:O3'	2.14	0.46
23:BB:2249:U:H4'	23:BB:2275:C:C5	2.50	0.46
23:BB:2628:C:O2'	23:BB:2781:A:H2'	2.14	0.46
23:BB:2889:C:O2'	23:BB:2890:G:H5'	2.15	0.46
25:BC:57:HIS:CG	25:BC:58:LYS:H	2.32	0.46
26:BD:51:THR:HG23	26:BD:78:GLY:O	2.15	0.46
26:BD:107:VAL:HG12	26:BD:109:VAL:HG23	1.97	0.46
27:BE:73:ILE:O	27:BE:73:ILE:HG12	2.15	0.46
30:BH:96:THR:C	30:BH:98:ASP:H	2.17	0.46
32:BK:61:VAL:HG11	32:BK:112:PHE:CZ	2.50	0.46
32:BK:64:ARG:NH2	37:BP:67:GLU:HG3	2.29	0.46
33:BL:78:ARG:NH2	33:BL:113:ALA:HB1	2.29	0.46
34:BM:28:PHE:HB3	34:BM:64:TRP:CE2	2.50	0.46
34:BM:56:ALA:C	34:BM:58:LYS:H	2.18	0.46
35:BN:83:LEU:HA	35:BN:86:ARG:CG	2.43	0.46
36:BO:67:ASN:O	36:BO:69:ASP:N	2.47	0.46
40:BS:52:GLU:HA	40:BS:55:ILE:CG2	2.44	0.46
41:BT:40:LYS:HA	41:BT:43:ILE:HB	1.96	0.46
42:BU:86:PHE:CD2	42:BU:92:VAL:HG21	2.50	0.46
47:B0:9:ARG:HB2	47:B0:12:ARG:NH2	2.30	0.46
48:B1:6:GLU:HB2	48:B1:52:LYS:CE	2.45	0.46
48:B1:18:HIS:NE2	48:B1:40:PRO:HD2	2.30	0.46
51:B4:8:LYS:HG2	51:B4:9:LYS:HD3	1.98	0.46
52:BI:122:GLU:CD	52:BI:122:GLU:H	2.18	0.46
1:CA:201:G:O2'	1:CA:469:C:H4'	2.15	0.46
1:CA:373:A:C1'	1:CA:481:G:H1'	2.45	0.46
1:CA:664:G:P	17:CR:52:ARG:HH21	2.38	0.46
1:CA:697:U:H2'	1:CA:698:G:H5'	1.98	0.46
1:CA:787:A:O2'	1:CA:788:U:H5'	2.15	0.46
1:CA:1147:C:H2'	1:CA:1148:U:H6	1.80	0.46
1:CA:1169:A:H2'	1:CA:1170:A:C8	2.50	0.46
1:CA:1245:C:H2'	1:CA:1246:A:H8	1.80	0.46
1:CA:1266:G:N2	1:CA:1268:G:H3'	2.29	0.46
1:CA:1360:A:H2'	1:CA:1361:G:O4'	2.16	0.46
1:CA:1465:A:H2'	1:CA:1466:C:C6	2.50	0.46
10:CK:112:VAL:HA	17:CR:72:ARG:HH21	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CL:60:PHE:O	11:CL:62:VAL:N	2.48	0.46
15:CP:43:ALA:CA	15:CP:46:LYS:HE3	2.45	0.46
23:DB:499:U:H2'	23:DB:500:G:O4'	2.15	0.46
23:DB:643:A:C5	23:DB:644:A:N7	2.83	0.46
23:DB:705:A:N6	23:DB:726:G:H1'	2.30	0.46
23:DB:1062:G:H2'	23:DB:1063:G:H8	1.79	0.46
23:DB:1176:U:H2'	23:DB:1177:G:C8	2.50	0.46
23:DB:1354:A:OP1	25:DC:35:LYS:HE2	2.14	0.46
23:DB:1477:A:H2'	23:DB:1478:G:O4'	2.15	0.46
23:DB:1936:A:H2	23:DB:1943:U:C5	2.33	0.46
23:DB:2386:A:H2'	23:DB:2387:U:C6	2.51	0.46
23:DB:2462:C:H2'	23:DB:2463:C:H6	1.80	0.46
24:DV:1:MET:HG3	24:DV:2:PHE:CD2	2.50	0.46
24:DV:21:ARG:HE	24:DV:87:GLN:CB	2.24	0.46
29:DG:91:VAL:HG23	29:DG:92:GLY:H	1.80	0.46
29:DG:148:ARG:HD3	29:DG:152:ARG:NH1	2.29	0.46
32:DK:79:PHE:CD2	37:DP:69:VAL:HG12	2.49	0.46
36:DO:88:LYS:HE3	36:DO:88:LYS:HB3	1.66	0.46
38:DQ:64:ILE:HD12	38:DQ:95:ALA:CB	2.45	0.46
46:DZ:35:SER:HA	46:DZ:49:LEU:O	2.14	0.46
48:D1:33:LEU:HD12	48:D1:34:GLU:N	2.30	0.46
1:AA:193:C:H2'	1:AA:194:C:C5	2.51	0.46
1:AA:202:G:H2'	1:AA:203:G:H8	1.79	0.46
2:AC:129:PHE:CE2	2:AC:156:LEU:HD13	2.50	0.46
2:AC:146:LYS:HB2	2:AC:202:PHE:CD2	2.49	0.46
4:AE:136:VAL:HG13	4:AE:137:ARG:H	1.79	0.46
6:AG:71:THR:H	6:AG:141:HIS:CE1	2.33	0.46
8:AI:83:THR:OG1	8:AI:97:LEU:HD22	2.15	0.46
16:AQ:64:ARG:HG2	16:AQ:65:PRO:HD2	1.95	0.46
19:AT:64:GLY:O	19:AT:66:ILE:N	2.47	0.46
20:AB:23:ASN:O	20:AB:25:LYS:N	2.48	0.46
21:AU:10:PRO:CB	2:CC:71:ARG:HE	2.22	0.46
21:AU:44:ARG:HH11	21:AU:44:ARG:HG3	1.81	0.46
22:BA:54:G:O2'	22:BA:55:U:H5'	2.15	0.46
23:BB:242:G:N7	50:B3:4:LYS:HG2	2.30	0.46
23:BB:329:G:C6	42:BU:16:LYS:HG2	2.50	0.46
23:BB:455:C:N3	23:BB:472:A:H2'	2.31	0.46
23:BB:785:G:H2'	23:BB:786:C:H6	1.80	0.46
23:BB:988:A:H3'	45:BY:13:ILE:CD1	2.44	0.46
23:BB:1210:G:H5'	23:BB:1212:G:O4'	2.15	0.46
23:BB:1596:A:O2'	23:BB:1597:A:H5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1749:A:H2'	23:BB:1750:G:C8	2.50	0.46
23:BB:1885:A:H2'	23:BB:1886:U:O4'	2.14	0.46
23:BB:2230:G:H5"	46:BZ:30:LEU:HD11	1.97	0.46
23:BB:2307:G:O6	28:BF:40:GLY:HA3	2.16	0.46
23:BB:2636:C:H2'	23:BB:2637:U:C6	2.51	0.46
23:BB:2845:U:O2'	23:BB:2846:G:H5'	2.14	0.46
25:BC:119:VAL:HG13	25:BC:133:ASN:ND2	2.30	0.46
27:BE:106:LYS:CE	27:BE:200:LEU:HB3	2.45	0.46
27:BE:176:ASP:O	27:BE:180:LEU:HG	2.15	0.46
29:BG:88:LEU:HD13	29:BG:93:TYR:HB3	1.96	0.46
30:BH:133:GLN:O	30:BH:133:GLN:HG2	2.11	0.46
31:BJ:128:ASN:O	31:BJ:129:GLU:HB3	2.16	0.46
33:BL:132:ARG:O	33:BL:135:ILE:HG22	2.14	0.46
34:BM:68:PHE:CG	34:BM:69:PRO:HD2	2.51	0.46
35:BN:58:ASP:O	35:BN:59:SER:HB3	2.15	0.46
39:BR:34:GLU:HB3	39:BR:58:VAL:HG21	1.95	0.46
41:BT:50:LEU:O	41:BT:52:GLU:N	2.49	0.46
41:BT:55:VAL:HG22	41:BT:87:LEU:CD2	2.45	0.46
43:BW:43:LYS:HB3	43:BW:79:ILE:HD11	1.97	0.46
46:BZ:27:ARG:HD2	46:BZ:29:PHE:CE1	2.50	0.46
47:B0:9:ARG:O	47:B0:12:ARG:HB3	2.16	0.46
49:B2:30:VAL:HG22	49:B2:33:ARG:NH2	2.20	0.46
51:B4:17:VAL:HG11	51:B4:19:ARG:HE	1.80	0.46
52:BI:19:PRO:HB2	52:BI:22:PRO:HD2	1.97	0.46
1:CA:687:A:C2	1:CA:704:A:C5	3.04	0.46
1:CA:805:C:O2'	1:CA:806:C:H5'	2.15	0.46
1:CA:817:C:C2	1:CA:819:A:O4'	2.68	0.46
1:CA:953:G:H2'	1:CA:954:G:O4'	2.16	0.46
1:CA:1175:G:O2'	1:CA:1176:A:H5'	2.14	0.46
1:CA:1241:G:O2'	1:CA:1242:G:H5'	2.15	0.46
1:CA:1300:G:H1'	1:CA:1301:U:C5	2.49	0.46
1:CA:1302:C:H5'	1:CA:1302:C:H6	1.80	0.46
1:CA:1390:U:O2'	1:CA:1391:U:H5'	2.15	0.46
3:CD:187:ARG:CZ	3:CD:191:SER:HB3	2.46	0.46
7:CH:83:ARG:HB3	7:CH:85:TYR:CE1	2.49	0.46
9:CJ:18:ILE:HG13	9:CJ:72:ARG:HG2	1.97	0.46
10:CK:65:ALA:O	10:CK:68:ARG:HB3	2.15	0.46
19:CT:61:ALA:HB1	19:CT:67:HIS:HA	1.98	0.46
23:DB:150:U:H2'	23:DB:151:C:H6	1.78	0.46
23:DB:962:G:N2	23:DB:2250:G:H22	1.95	0.46
23:DB:962:G:H2'	23:DB:963:U:H6	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1439:A:H1'	23:DB:1553:A:N6	2.30	0.46
23:DB:1640:A:H2'	23:DB:1641:A:H8	1.77	0.46
23:DB:2339:C:H2'	23:DB:2340:A:H8	1.79	0.46
25:DC:165:ALA:HB3	25:DC:172:THR:HG23	1.96	0.46
25:DC:221:GLY:O	25:DC:224:MET:HG3	2.15	0.46
26:DD:33:ARG:NH1	26:DD:53:GLY:O	2.48	0.46
26:DD:114:LYS:HG3	26:DD:116:LYS:HG2	1.96	0.46
26:DD:125:TRP:HE1	26:DD:161:MET:H	1.63	0.46
27:DE:134:LEU:HD21	27:DE:161:ALA:HB2	1.97	0.46
27:DE:176:ASP:O	27:DE:180:LEU:HG	2.15	0.46
28:DF:29:ARG:HB2	28:DF:158:THR:HG21	1.97	0.46
28:DF:105:ILE:C	28:DF:108:PRO:HD2	2.34	0.46
30:DH:44:ILE:O	30:DH:48:GLU:HB3	2.16	0.46
30:DH:147:VAL:HG12	30:DH:148:ALA:N	2.29	0.46
34:DM:90:GLU:HA	34:DM:90:GLU:OE1	2.14	0.46
35:DN:61:ALA:C	35:DN:63:ARG:N	2.68	0.46
36:DO:30:ARG:HG3	36:DO:30:ARG:NH1	2.30	0.46
36:DO:74:VAL:O	36:DO:77:ALA:HB3	2.15	0.46
36:DO:100:HIS:HA	36:DO:104:GLN:NE2	2.29	0.46
39:DR:43:ASN:ND2	39:DR:44:GLY:N	2.63	0.46
41:DT:67:VAL:HG22	41:DT:74:ILE:HD11	1.97	0.46
42:DU:62:ALA:O	42:DU:63:ALA:HB3	2.15	0.46
1:AA:429:U:H1'	1:AA:430:A:H5"	1.98	0.46
1:AA:521:G:O2'	1:AA:522:C:H5'	2.16	0.46
1:AA:549:C:H2'	1:AA:550:G:C8	2.51	0.46
1:AA:599:C:O2'	1:AA:600:A:H5'	2.15	0.46
1:AA:1465:A:H2'	1:AA:1466:C:C6	2.51	0.46
2:AC:149:LYS:HG3	2:AC:168:ARG:HB2	1.97	0.46
3:AD:61:ARG:HG3	3:AD:71:PHE:CD2	2.50	0.46
3:AD:160:LEU:HA	3:AD:163:GLN:CG	2.44	0.46
5:AF:9:MET:HB3	5:AF:59:TYR:CD2	2.50	0.46
5:AF:36:ILE:HD12	5:AF:36:ILE:N	2.30	0.46
6:AG:75:LYS:HD3	6:AG:76:SER:N	2.30	0.46
6:AG:137:ARG:HE	6:AG:137:ARG:HB3	1.52	0.46
7:AH:12:ARG:HH11	7:AH:12:ARG:HG3	1.80	0.46
11:AL:17:LYS:NZ	11:AL:17:LYS:N	2.64	0.46
12:AM:3:ILE:HA	12:AM:56:ARG:HB2	1.97	0.46
12:AM:3:ILE:H	12:AM:56:ARG:NH2	2.13	0.46
14:AO:23:SER:HB3	14:AO:26:VAL:CG2	2.45	0.46
15:AP:22:ALA:HA	15:AP:33:ILE:HG13	1.97	0.46
20:AB:116:LEU:O	20:AB:119:GLN:HB2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:102:G:O2'	22:BA:103:U:H5'	2.15	0.46
23:BB:159:G:O2'	23:BB:160:A:H5"	2.15	0.46
23:BB:826:U:H5"	23:BB:2428:G:O3'	2.14	0.46
23:BB:945:A:OP2	23:BB:945:A:H4'	2.15	0.46
23:BB:1253:A:H4'	23:BB:1254:A:OP2	2.15	0.46
23:BB:1759:A:N3	23:BB:1759:A:H2'	2.30	0.46
23:BB:1854:A:H2	23:BB:2087:G:N3	2.13	0.46
23:BB:1912:A:HO2'	23:BB:1913:A:C5'	2.28	0.46
23:BB:2149:U:H2'	23:BB:2150:C:C6	2.49	0.46
23:BB:2212:A:C8	23:BB:2214:C:N4	2.83	0.46
23:BB:2256:G:O2'	23:BB:2257:U:H5'	2.15	0.46
23:BB:2355:G:H4'	43:BW:20:LEU:HD13	1.98	0.46
23:BB:2514:U:H2'	23:BB:2515:C:C6	2.50	0.46
25:BC:45:ASN:ND2	25:BC:45:ASN:H	2.12	0.46
25:BC:107:LYS:O	25:BC:109:LEU:HD22	2.15	0.46
26:BD:101:PHE:CZ	26:BD:204:LYS:HA	2.49	0.46
27:BE:34:ALA:HA	27:BE:94:GLN:NE2	2.31	0.46
28:BF:135:ILE:HG13	28:BF:137:PHE:H	1.80	0.46
29:BG:1:SER:O	29:BG:3:VAL:N	2.49	0.46
30:BH:128:HIS:CB	30:BH:144:VAL:HB	2.34	0.46
33:BL:47:ARG:HH21	33:BL:47:ARG:CB	2.28	0.46
37:BP:75:THR:O	37:BP:80:VAL:HG11	2.15	0.46
39:BR:20:VAL:HG12	39:BR:21:ARG:N	2.28	0.46
41:BT:69:ARG:HA	41:BT:69:ARG:NH1	2.31	0.46
42:BU:32:LYS:HG3	42:BU:65:GLN:HA	1.97	0.46
1:CA:86:G:O2'	1:CA:87:C:O5'	2.27	0.46
1:CA:220:G:O2'	1:CA:221:C:H5'	2.15	0.46
1:CA:270:A:H2'	1:CA:271:C:O4'	2.16	0.46
1:CA:308:C:H2'	1:CA:309:A:C8	2.51	0.46
1:CA:814:A:H2'	1:CA:816:A:O5'	2.14	0.46
1:CA:945:G:H21	1:CA:1334:G:H4'	1.80	0.46
1:CA:984:C:H2'	1:CA:985:C:C6	2.51	0.46
1:CA:1040:U:H2'	1:CA:1041:G:O4'	2.16	0.46
1:CA:1291:U:H2'	1:CA:1292:G:H8	1.79	0.46
1:CA:1343:G:H2'	1:CA:1344:C:H6	1.80	0.46
8:CI:82:ILE:O	8:CI:86:LEU:HB2	2.16	0.46
10:CK:108:ASN:HD21	21:CU:6:ARG:HD2	1.80	0.46
11:CL:78:VAL:O	11:CL:102:ASP:HB2	2.16	0.46
20:CB:59:ILE:HG21	20:CB:158:ASP:HB3	1.97	0.46
20:CB:134:LEU:HD12	20:CB:134:LEU:HA	1.82	0.46
20:CB:172:ILE:HD12	20:CB:172:ILE:N	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:91:C:O2'	22:DA:92:C:H5'	2.15	0.46
23:DB:19:A:O2'	23:DB:20:C:H5'	2.15	0.46
23:DB:311:A:H3'	23:DB:312:G:C8	2.50	0.46
23:DB:431:U:O2'	23:DB:432:A:H5'	2.15	0.46
23:DB:510:C:O2'	23:DB:1236:G:H5'	2.16	0.46
23:DB:1098:A:H2'	52:DI:4:VAL:C	2.36	0.46
23:DB:1173:U:H2'	23:DB:1174:U:C5	2.50	0.46
23:DB:1174:U:H1'	23:DB:1176:U:O2	2.15	0.46
23:DB:1214:A:H2'	23:DB:1215:G:H8	1.81	0.46
23:DB:1245:G:H4'	27:DE:33:VAL:HG13	1.96	0.46
23:DB:1854:A:H2	23:DB:2087:G:N3	2.13	0.46
23:DB:2630:G:H2'	23:DB:2631:G:H8	1.81	0.46
26:DD:116:LYS:HD2	26:DD:123:LYS:HE2	1.97	0.46
28:DF:147:ARG:HD2	28:DF:148:VAL:HG22	1.96	0.46
31:DJ:4:PHE:HB3	31:DJ:44:TYR:CD1	2.51	0.46
31:DJ:45:THR:O	31:DJ:45:THR:HG23	2.15	0.46
32:DK:41:ILE:HG13	32:DK:42:THR:H	1.80	0.46
34:DM:101:VAL:HG22	34:DM:101:VAL:O	2.15	0.46
36:DO:84:GLU:C	36:DO:86:GLY:N	2.69	0.46
37:DP:100:ARG:HB3	37:DP:101:GLU:OE2	2.15	0.46
38:DQ:35:PHE:O	38:DQ:39:ILE:HG12	2.16	0.46
41:DT:48:GLN:HA	41:DT:48:GLN:NE2	2.30	0.46
41:DT:54:GLU:CB	41:DT:88:LYS:HB2	2.45	0.46
47:D0:18:HIS:C	47:D0:20:ALA:H	2.19	0.46
52:DI:2:LYS:HD2	52:DI:2:LYS:N	2.31	0.46
52:DI:89:SER:HA	52:DI:97:VAL:HG11	1.98	0.46
1:AA:451:A:H4'	1:AA:452:A:O4'	2.16	0.46
1:AA:669:G:H2'	1:AA:670:G:C8	2.50	0.46
1:AA:707:U:H2'	1:AA:708:C:H6	1.79	0.46
1:AA:984:C:O2'	1:AA:985:C:H5'	2.15	0.46
1:AA:1242:G:H2'	1:AA:1243:C:O4'	2.14	0.46
1:AA:1278:G:H4'	1:AA:1279:G:O4'	2.16	0.46
1:AA:1369:C:H2'	1:AA:1370:G:C8	2.51	0.46
3:AD:75:TYR:CE1	3:AD:200:VAL:HA	2.50	0.46
7:AH:46:GLU:N	7:AH:63:LYS:HB2	2.31	0.46
8:AI:129:ARG:CZ	8:AI:129:ARG:HB2	2.45	0.46
13:AN:97:LYS:NZ	13:AN:97:LYS:HB3	2.31	0.46
19:AT:70:LYS:O	19:AT:74:HIS:HB2	2.14	0.46
22:BA:52:A:OP1	22:BA:52:A:H4'	2.15	0.46
23:BB:923:G:N3	43:BW:23:LYS:HE3	2.31	0.46
23:BB:1439:A:N7	23:BB:1440:U:C6	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1441:G:H2'	23:BB:1442:U:H6	1.80	0.46
23:BB:1669:A:H2'	23:BB:1669:A:N3	2.30	0.46
23:BB:2074:U:O2'	23:BB:2075:U:H5'	2.16	0.46
23:BB:2240:U:O2'	23:BB:2241:A:H5'	2.15	0.46
23:BB:2537:U:H2'	23:BB:2538:C:H6	1.79	0.46
23:BB:2626:C:H2'	23:BB:2627:G:C8	2.50	0.46
24:BV:21:ARG:HE	24:BV:87:GLN:CB	2.24	0.46
25:BC:43:ASN:ND2	25:BC:44:ASN:N	2.60	0.46
27:BE:67:ARG:HD2	27:BE:68:ALA:O	2.15	0.46
29:BG:33:THR:C	29:BG:34:ARG:HD3	2.35	0.46
30:BH:47:PHE:CA	30:BH:50:ARG:HH21	2.28	0.46
30:BH:78:VAL:HB	30:BH:143:ILE:CG1	2.44	0.46
31:BJ:30:THR:O	31:BJ:33:ALA:HB3	2.16	0.46
33:BL:51:GLU:O	33:BL:53:GLY:N	2.48	0.46
34:BM:53:MET:O	34:BM:57:VAL:HG23	2.16	0.46
36:BO:52:SER:C	36:BO:54:VAL:H	2.19	0.46
37:BP:52:ARG:HG2	37:BP:52:ARG:NH1	2.29	0.46
48:B1:33:LEU:HD12	48:B1:34:GLU:N	2.31	0.46
1:CA:425:G:H2'	1:CA:426:U:C6	2.50	0.46
1:CA:984:C:H2'	1:CA:985:C:H6	1.80	0.46
1:CA:1130:A:H2'	1:CA:1131:G:C8	2.50	0.46
1:CA:1212:U:H4'	1:CA:1213:A:C8	2.50	0.46
1:CA:1476:A:H2'	1:CA:1477:U:O4'	2.14	0.46
3:CD:40:HIS:O	3:CD:43:ARG:HG2	2.15	0.46
4:CE:45:VAL:HG11	4:CE:117:ALA:HB2	1.97	0.46
8:CI:16:ALA:HA	8:CI:66:VAL:HG23	1.97	0.46
11:CL:17:LYS:N	11:CL:17:LYS:NZ	2.64	0.46
12:CM:13:HIS:O	12:CM:17:ALA:HB2	2.15	0.46
12:CM:44:ILE:O	12:CM:47:LEU:HB2	2.15	0.46
14:CO:69:LEU:HD11	14:CO:76:ARG:CB	2.46	0.46
15:CP:42:ILE:HG22	15:CP:43:ALA:N	2.31	0.46
22:DA:75:G:H2'	22:DA:76:G:C8	2.51	0.46
23:DB:39:G:H2'	23:DB:40:U:C6	2.50	0.46
23:DB:211:C:O2'	23:DB:212:G:H5'	2.16	0.46
23:DB:233:A:N6	23:DB:428:A:N6	2.62	0.46
23:DB:454:A:H3'	23:DB:455:C:H5'	1.97	0.46
23:DB:566:U:H5"	33:DL:29:LYS:HZ2	1.79	0.46
23:DB:839:U:H1'	23:DB:1191:G:H1'	1.97	0.46
23:DB:1126:A:H4'	23:DB:1127:A:O5'	2.16	0.46
23:DB:1749:A:H2'	23:DB:1750:G:C8	2.50	0.46
23:DB:1823:G:O2'	23:DB:1824:G:H5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1945:G:H2'	23:DB:1946:U:C6	2.50	0.46
23:DB:1958:C:H2'	23:DB:1959:G:H8	1.81	0.46
23:DB:2075:U:H2'	23:DB:2238:G:N2	2.29	0.46
23:DB:2355:G:H4'	43:DW:20:LEU:CD1	2.45	0.46
23:DB:2579:C:H1'	26:DD:130:GLN:HE22	1.81	0.46
23:DB:2720:U:H2'	23:DB:2721:A:H8	1.80	0.46
24:DV:9:ARG:NE	24:DV:20:LEU:HD11	2.29	0.46
25:DC:71:ASP:O	25:DC:73:ILE:HG12	2.15	0.46
25:DC:119:VAL:HG13	25:DC:133:ASN:ND2	2.29	0.46
28:DF:19:PHE:HE1	28:DF:167:ALA:HB2	1.80	0.46
29:DG:122:ALA:HA	29:DG:131:VAL:O	2.15	0.46
30:DH:70:GLU:CD	30:DH:71:LYS:N	2.69	0.46
32:DK:105:ARG:H	32:DK:105:ARG:CD	2.28	0.46
34:DM:29:GLY:HA2	34:DM:106:ASP:HB2	1.97	0.46
38:DQ:92:LYS:O	38:DQ:95:ALA:HB3	2.15	0.46
42:DU:12:VAL:HA	42:DU:69:VAL:HA	1.98	0.46
1:AA:16:A:N1	1:AA:919:A:H2	2.13	0.46
1:AA:189:A:O2'	1:AA:190:A:H5'	2.16	0.46
1:AA:197:A:H4'	1:AA:198:G:O5'	2.16	0.46
1:AA:640:A:O2'	1:AA:641:U:H5'	2.16	0.46
1:AA:659:U:O2'	1:AA:660:C:H5'	2.16	0.46
1:AA:948:C:O2'	1:AA:949:A:H5'	2.16	0.46
1:AA:1147:C:H2'	1:AA:1148:U:H6	1.81	0.46
1:AA:1180:A:OP1	8:AI:104:THR:HG22	2.16	0.46
2:AC:63:ILE:HD12	2:AC:90:VAL:HG12	1.96	0.46
8:AI:34:LEU:HD21	8:AI:48:ARG:NH2	2.18	0.46
13:AN:12:ARG:NE	13:AN:58:ARG:HH12	2.13	0.46
19:AT:72:ALA:HA	19:AT:75:LYS:HD3	1.96	0.46
22:BA:116:G:H4'	36:BO:54:VAL:CG2	2.39	0.46
23:BB:38:A:N3	27:BE:43:THR:HB	2.31	0.46
23:BB:39:G:H2'	23:BB:40:U:H6	1.80	0.46
23:BB:111:A:H2'	23:BB:112:U:C6	2.50	0.46
23:BB:236:C:O2'	23:BB:237:C:H5'	2.16	0.46
23:BB:581:C:OP1	38:BQ:32:ARG:HG3	2.15	0.46
23:BB:902:C:H2'	23:BB:903:C:C6	2.50	0.46
23:BB:1290:C:O2'	23:BB:1291:C:H5'	2.15	0.46
23:BB:1930:G:H2'	23:BB:1968:G:C6	2.51	0.46
23:BB:2248:C:H2'	23:BB:2249:U:O4'	2.15	0.46
23:BB:2339:C:H2'	23:BB:2340:A:H8	1.78	0.46
23:BB:2758:A:C2'	23:BB:2759:G:H5'	2.45	0.46
24:BV:80:HIS:HB2	24:BV:85:LYS:HG3	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:76:VAL:CG1	25:BC:114:GLN:HG2	2.45	0.46
25:BC:144:GLU:OE2	25:BC:188:ARG:HG3	2.16	0.46
26:BD:36:GLN:HE21	26:BD:36:GLN:HB2	1.53	0.46
29:BG:49:LEU:HD23	29:BG:51:PHE:CZ	2.50	0.46
30:BH:90:LEU:CB	30:BH:123:ARG:HD2	2.45	0.46
31:BJ:18:VAL:HG12	31:BJ:54:ILE:HD11	1.96	0.46
32:BK:8:LEU:HD12	32:BK:8:LEU:H	1.79	0.46
32:BK:95:ILE:O	32:BK:95:ILE:HG13	2.15	0.46
33:BL:122:VAL:HB	33:BL:143:GLU:OE1	2.15	0.46
35:BN:54:LEU:HD11	35:BN:62:ASN:HB3	1.98	0.46
36:BO:88:LYS:HB3	36:BO:88:LYS:HE3	1.66	0.46
38:BQ:91:ARG:HB2	39:BR:11:GLN:OE1	2.16	0.46
40:BS:4:ILE:CG2	40:BS:106:VAL:HG22	2.45	0.46
41:BT:85:VAL:C	41:BT:86:THR:HG23	2.36	0.46
1:CA:16:A:H2	1:CA:1080:A:N3	2.14	0.46
1:CA:204:G:H2'	1:CA:205:A:H8	1.79	0.46
1:CA:333:U:H2'	1:CA:334:C:C6	2.51	0.46
1:CA:707:U:H4'	10:CK:21:HIS:CD2	2.50	0.46
1:CA:1095:U:H5"	1:CA:1109:C:O2	2.16	0.46
1:CA:1125:U:C6	9:CJ:40:ILE:HD13	2.51	0.46
1:CA:1178:G:H3'	8:CI:98:ARG:NH2	2.29	0.46
1:CA:1181:G:H1'	1:CA:1182:G:C5	2.51	0.46
1:CA:1293:C:O2'	1:CA:1294:G:H5'	2.14	0.46
3:CD:75:TYR:CE1	3:CD:200:VAL:HA	2.50	0.46
4:CE:68:ARG:O	4:CE:69:ASN:HB2	2.16	0.46
6:CG:59:GLU:O	6:CG:63:VAL:HG23	2.15	0.46
6:CG:71:THR:H	6:CG:141:HIS:CE1	2.33	0.46
6:CG:74:VAL:HG12	6:CG:87:PRO:HB3	1.98	0.46
7:CH:68:LYS:HG3	7:CH:69:ALA:N	2.30	0.46
9:CJ:8:ILE:HD12	9:CJ:8:ILE:H	1.80	0.46
16:CQ:3:LYS:HG3	16:CQ:4:ILE:H	1.79	0.46
20:CB:93:HIS:HA	20:CB:94:ARG:NH2	2.30	0.46
20:CB:129:THR:O	20:CB:131:LYS:N	2.48	0.46
23:DB:68:G:H2'	23:DB:69:C:C6	2.51	0.46
23:DB:485:C:O2'	23:DB:486:C:H5'	2.15	0.46
23:DB:493:G:O2'	40:DS:7:HIS:HA	2.15	0.46
23:DB:596:U:O2'	23:DB:597:G:H5'	2.15	0.46
23:DB:935:C:H2'	23:DB:936:A:C8	2.50	0.46
23:DB:1010:A:N3	23:DB:1153:C:H1'	2.30	0.46
23:DB:1023:U:H2'	23:DB:1024:G:H5'	1.98	0.46
23:DB:1092:C:C2'	23:DB:1093:G:H5'	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1387:A:H2'	23:DB:1388:G:C8	2.51	0.46
23:DB:1429:G:H2'	23:DB:1430:G:C8	2.49	0.46
23:DB:1458:U:C2'	23:DB:1459:G:H5"	2.45	0.46
23:DB:1848:A:H2'	23:DB:1849:G:C8	2.50	0.46
23:DB:1919:A:N3	23:DB:1919:A:H2'	2.31	0.46
23:DB:2305:U:H2'	23:DB:2306:C:O4'	2.16	0.46
23:DB:2674:G:H2'	23:DB:2675:A:H8	1.80	0.46
26:DD:106:LYS:HD3	26:DD:106:LYS:N	2.30	0.46
27:DE:137:LYS:HG3	27:DE:141:MET:SD	2.56	0.46
29:DG:33:THR:C	29:DG:34:ARG:HD3	2.36	0.46
30:DH:26:ALA:C	30:DH:28:ASN:N	2.68	0.46
30:DH:117:LEU:HD22	30:DH:130:VAL:CG1	2.45	0.46
32:DK:40:LYS:NZ	32:DK:59:LYS:HE3	2.31	0.46
33:DL:123:ARG:HD2	33:DL:124:GLY:N	2.30	0.46
33:DL:132:ARG:O	33:DL:136:GLU:HG2	2.15	0.46
34:DM:35:ALA:HB3	34:DM:99:GLY:H	1.78	0.46
36:DO:18:LEU:HD23	36:DO:25:ARG:CD	2.45	0.46
38:DQ:26:ALA:HA	38:DQ:29:ARG:CG	2.45	0.46
41:DT:14:PRO:HA	41:DT:32:LEU:HB2	1.97	0.46
44:DX:56:LEU:O	44:DX:58:ASN:N	2.42	0.46
45:DY:50:VAL:HA	45:DY:52:PHE:CE1	2.51	0.46
1:AA:119:A:H4'	1:AA:120:A:O4'	2.14	0.46
1:AA:279:A:H5'	1:AA:281:G:O4'	2.15	0.46
1:AA:600:A:OP1	7:AH:87:ARG:HB3	2.16	0.46
1:AA:669:G:H2'	1:AA:670:G:H8	1.80	0.46
1:AA:697:U:H2'	1:AA:698:G:H5'	1.97	0.46
1:AA:1125:U:C6	9:AJ:40:ILE:HD13	2.51	0.46
1:AA:1216:A:H2'	1:AA:1217:C:H6	1.81	0.46
4:AE:132:PRO:HG2	4:AE:133:ILE:H	1.79	0.46
5:AF:7:VAL:O	5:AF:7:VAL:HG13	2.15	0.46
6:AG:13:PRO:O	6:AG:14:ASP:C	2.53	0.46
7:AH:40:LYS:HD3	7:AH:48:PHE:CE1	2.49	0.46
8:AI:99:LYS:HE3	9:CJ:80:THR:CA	2.41	0.46
9:AJ:53:ILE:HG13	13:AN:84:ARG:CZ	2.46	0.46
13:AN:20:PHE:CD1	13:AN:24:ALA:HB2	2.51	0.46
19:AT:2:ASN:CG	19:AT:3:ILE:N	2.69	0.46
21:AU:11:PHE:CE1	21:AU:13:VAL:HG12	2.50	0.46
23:BB:188:G:OP1	46:BZ:14:THR:HG23	2.15	0.46
23:BB:359:G:O2'	23:BB:360:U:H5'	2.15	0.46
23:BB:643:A:H1'	48:B1:43:ARG:NH2	2.31	0.46
23:BB:657:U:H2'	23:BB:658:U:C6	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:851:C:H2'	23:BB:852:U:C6	2.51	0.46
23:BB:921:C:H2'	23:BB:922:C:H6	1.81	0.46
23:BB:1030:C:O2'	23:BB:1031:G:H5'	2.15	0.46
23:BB:2559:C:H2'	23:BB:2560:A:H8	1.80	0.46
23:BB:2578:G:O2'	23:BB:2579:C:H5'	2.15	0.46
23:BB:2617:U:O2'	23:BB:2618:G:H5'	2.15	0.46
24:BV:9:ARG:NE	24:BV:20:LEU:HD11	2.30	0.46
25:BC:83:ASP:HB3	25:BC:86:ARG:HG2	1.97	0.46
25:BC:138:SER:O	25:BC:162:GLN:HA	2.14	0.46
26:BD:106:LYS:HD3	26:BD:106:LYS:N	2.31	0.46
28:BF:59:ILE:HG12	28:BF:137:PHE:CE2	2.50	0.46
28:BF:98:PHE:C	28:BF:100:GLU:N	2.69	0.46
34:BM:38:ARG:HH11	34:BM:38:ARG:HG2	1.81	0.46
36:BO:84:GLU:C	36:BO:86:GLY:N	2.69	0.46
37:BP:77:SER:O	37:BP:80:VAL:HG12	2.15	0.46
40:BS:41:LYS:O	40:BS:43:ALA:N	2.49	0.46
42:BU:11:ILE:HG12	42:BU:20:LYS:O	2.16	0.46
42:BU:23:LYS:HD2	42:BU:23:LYS:H	1.80	0.46
43:BW:61:LYS:O	43:BW:62:ALA:O	2.33	0.46
46:BZ:36:HIS:O	46:BZ:48:THR:HA	2.16	0.46
48:B1:39:ASP:OD1	48:B1:41:VAL:HB	2.15	0.46
1:CA:36:C:O2'	1:CA:37:U:H5'	2.16	0.46
1:CA:251:G:H1	1:CA:271:C:N4	2.13	0.46
1:CA:373:A:H2'	1:CA:374:A:C8	2.47	0.46
1:CA:586:C:H5"	7:CH:81:GLY:HA2	1.98	0.46
1:CA:893:C:H2'	1:CA:894:G:H8	1.81	0.46
1:CA:1102:A:H2'	1:CA:1103:C:C6	2.51	0.46
1:CA:1308:U:H3'	12:CM:97:ARG:NH1	2.31	0.46
3:CD:2:ARG:HG3	3:CD:114:ARG:NH1	2.31	0.46
3:CD:24:VAL:O	3:CD:27:ILE:HG13	2.14	0.46
3:CD:90:LEU:HD13	3:CD:93:LEU:HD12	1.97	0.46
3:CD:162:GLU:C	3:CD:164:ARG:H	2.19	0.46
5:CF:10:VAL:HG12	5:CF:11:HIS:N	2.31	0.46
10:CK:37:GLN:HB2	10:CK:39:ASN:ND2	2.31	0.46
16:CQ:64:ARG:HG2	16:CQ:65:PRO:HD2	1.97	0.46
22:DA:75:G:N1	22:DA:102:G:N2	2.63	0.46
23:DB:5:A:H2'	23:DB:6:A:H8	1.81	0.46
23:DB:63:A:OP2	23:DB:63:A:H2'	2.15	0.46
23:DB:754:U:H2'	23:DB:755:U:H6	1.81	0.46
23:DB:771:G:O2'	23:DB:772:C:H5'	2.16	0.46
23:DB:899:A:C2	23:DB:900:A:H1'	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1082:U:C2	23:DB:1086:A:N1	2.83	0.46
23:DB:1547:C:H2'	23:DB:1548:A:C8	2.50	0.46
23:DB:1872:A:H2'	23:DB:1873:G:O4'	2.15	0.46
23:DB:2314:A:O4'	28:DF:154:THR:HG21	2.16	0.46
23:DB:2334:U:O3'	36:DO:13:ARG:HB2	2.14	0.46
23:DB:2379:G:C5'	36:DO:21:LEU:HD11	2.46	0.46
23:DB:2489:U:O2'	23:DB:2490:G:H5'	2.15	0.46
23:DB:2492:U:O2'	23:DB:2493:U:H5'	2.15	0.46
23:DB:2820:A:H4'	35:DN:3:HIS:ND1	2.30	0.46
24:DV:16:ALA:HA	24:DV:19:ARG:HH21	1.81	0.46
25:DC:64:VAL:O	25:DC:65:ASP:CB	2.62	0.46
30:DH:87:GLU:HB2	30:DH:89:LYS:HZ2	1.81	0.46
31:DJ:58:ASN:C	31:DJ:60:ASP:H	2.18	0.46
33:DL:133:ALA:HA	33:DL:136:GLU:HB2	1.98	0.46
34:DM:101:VAL:O	34:DM:101:VAL:HG13	2.16	0.46
38:DQ:64:ILE:HD12	38:DQ:95:ALA:HB3	1.97	0.46
40:DS:41:LYS:O	40:DS:42:LYS:C	2.54	0.46
40:DS:88:ARG:HH21	40:DS:88:ARG:HG3	1.81	0.46
42:DU:86:PHE:CD2	42:DU:92:VAL:HG21	2.50	0.46
46:DZ:5:CYS:SG	46:DZ:7:VAL:HG12	2.56	0.46
1:AA:87:C:C2'	1:AA:88:U:H4'	2.45	0.46
1:AA:106:C:HO2'	1:AA:107:G:H5'	1.80	0.46
1:AA:503:C:H2'	1:AA:504:C:C6	2.51	0.46
1:AA:762:U:H2'	1:AA:763:G:H8	1.80	0.46
1:AA:803:G:H2'	1:AA:804:U:O4'	2.15	0.46
1:AA:1317:C:H3'	1:AA:1318:A:C8	2.49	0.46
1:AA:1360:A:H2'	1:AA:1361:G:O4'	2.15	0.46
1:AA:1392:G:H2'	1:AA:1393:U:C6	2.51	0.46
4:AE:77:ASN:CG	4:AE:78:GLY:H	2.17	0.46
5:AF:80:PHE:CE1	25:BC:135:PRO:HG2	2.51	0.46
9:AJ:6:ILE:O	9:AJ:8:ILE:HD12	2.16	0.46
11:AL:78:VAL:O	11:AL:102:ASP:HB2	2.16	0.46
15:AP:52:LEU:CD2	15:AP:75:ILE:HA	2.45	0.46
22:BA:32:U:H1'	22:BA:52:A:N7	2.31	0.46
23:BB:265:A:O2'	23:BB:266:G:C4'	2.64	0.46
23:BB:572:A:OP2	39:BR:80:ARG:NH2	2.49	0.46
23:BB:969:G:H2'	23:BB:970:U:C6	2.50	0.46
23:BB:1460:U:H3'	23:BB:1461:C:H5'	1.98	0.46
23:BB:1505:A:H2'	23:BB:1506:U:C6	2.51	0.46
23:BB:1936:A:H2	23:BB:1943:U:C5	2.34	0.46
23:BB:2756:U:C1'	23:BB:2757:A:H5"	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:15:PHE:H	26:BD:15:PHE:HD1	1.64	0.46
28:BF:11:VAL:HG21	28:BF:172:PHE:HE1	1.81	0.46
28:BF:28:PRO:O	28:BF:168:LEU:HG	2.16	0.46
28:BF:43:ILE:HA	28:BF:46:LYS:CE	2.45	0.46
28:BF:43:ILE:HG13	28:BF:44:ALA:N	2.31	0.46
28:BF:65:LEU:O	28:BF:86:CYS:HA	2.15	0.46
31:BJ:16:TYR:CD2	31:BJ:140:LEU:HD12	2.51	0.46
31:BJ:58:ASN:C	31:BJ:60:ASP:H	2.18	0.46
31:BJ:64:VAL:O	31:BJ:65:THR:HG22	2.16	0.46
34:BM:19:GLY:N	34:BM:38:ARG:NH2	2.63	0.46
35:BN:13:ASN:OD1	35:BN:16:HIS:HB2	2.15	0.46
36:BO:18:LEU:HD23	36:BO:25:ARG:CD	2.44	0.46
37:BP:54:LEU:HD12	37:BP:76:HIS:HB2	1.98	0.46
38:BQ:86:SER:HB3	39:BR:51:VAL:CA	2.46	0.46
42:BU:12:VAL:HA	42:BU:69:VAL:HA	1.98	0.46
42:BU:71:ILE:HD11	42:BU:81:ARG:O	2.16	0.46
42:BU:85:ARG:NH1	42:BU:86:PHE:N	2.64	0.46
1:CA:562:U:H4'	1:CA:563:A:O5'	2.15	0.46
1:CA:751:U:O2'	14:CO:24:THR:HG23	2.16	0.46
1:CA:1499:A:O2'	1:CA:1500:A:H5'	2.16	0.46
2:CC:50:SER:CB	2:CC:70:ALA:HB3	2.46	0.46
2:CC:134:LYS:HA	2:CC:167:TYR:HE2	1.81	0.46
3:CD:33:ILE:HG13	3:CD:34:GLU:N	2.30	0.46
6:CG:136:LYS:O	6:CG:140:VAL:HG23	2.16	0.46
8:CI:49:GLN:HA	8:CI:52:GLU:HG2	1.98	0.46
9:CJ:8:ILE:HA	9:CJ:100:ILE:HG22	1.97	0.46
9:CJ:12:ALA:H	9:CJ:18:ILE:HD13	1.81	0.46
10:CK:28:ASN:ND2	10:CK:29:THR:H	2.14	0.46
20:CB:102:ASN:HD21	20:CB:105:THR:HB	1.81	0.46
20:CB:160:LEU:HD22	20:CB:182:VAL:HA	1.97	0.46
21:CU:33:ARG:HG2	21:CU:34:ARG:N	2.28	0.46
23:DB:533:G:H5'	38:DQ:23:TYR:CD2	2.51	0.46
23:DB:796:C:H2'	23:DB:797:G:H8	1.79	0.46
23:DB:877:A:H2'	23:DB:877:A:N3	2.30	0.46
23:DB:1099:G:OP2	52:DI:2:LYS:O	2.33	0.46
23:DB:1733:G:H8	23:DB:1733:G:H5'	1.81	0.46
23:DB:1999:C:H2'	23:DB:2000:C:O4'	2.16	0.46
23:DB:2009:A:O4'	35:DN:107:ASN:HB2	2.16	0.46
23:DB:2148:G:O3'	23:DB:2149:U:H6	1.99	0.46
23:DB:2648:G:H2'	23:DB:2649:C:H6	1.79	0.46
23:DB:2849:U:H4'	23:DB:2850:A:C5'	2.44	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DV:80:HIS:HB2	24:DV:85:LYS:HG3	1.97	0.46
25:DC:153:LEU:HD13	25:DC:175:LEU:HD21	1.97	0.46
28:DF:33:ILE:O	28:DF:90:LEU:HB2	2.15	0.46
28:DF:139:GLU:O	28:DF:141:ASP:N	2.49	0.46
29:DG:37:ASN:HD22	29:DG:40:VAL:CB	2.25	0.46
30:DH:60:GLU:C	30:DH:62:LEU:N	2.68	0.46
30:DH:95:GLY:O	30:DH:98:ASP:N	2.49	0.46
31:DJ:44:TYR:CD2	31:DJ:44:TYR:C	2.89	0.46
32:DK:11:ALA:HB3	32:DK:85:VAL:CG2	2.46	0.46
33:DL:105:ILE:HG22	33:DL:106:GLU:N	2.31	0.46
34:DM:56:ALA:C	34:DM:58:LYS:H	2.18	0.46
35:DN:11:ASN:O	35:DN:12:ARG:HB2	2.15	0.46
35:DN:48:VAL:O	35:DN:51:LEU:N	2.49	0.46
35:DN:61:ALA:C	35:DN:63:ARG:H	2.19	0.46
36:DO:3:LYS:H	36:DO:3:LYS:HG2	1.50	0.46
39:DR:54:VAL:HG13	39:DR:56:GLY:O	2.15	0.46
39:DR:59:ILE:HA	39:DR:100:GLY:HA3	1.97	0.46
39:DR:63:VAL:O	39:DR:63:VAL:HG23	2.16	0.46
41:DT:40:LYS:O	41:DT:43:ILE:HB	2.15	0.46
41:DT:61:LEU:C	41:DT:61:LEU:HD12	2.36	0.46
42:DU:11:ILE:HB	42:DU:72:PHE:HD1	1.81	0.46
49:D2:21:ARG:HG2	49:D2:31:LEU:HD21	1.98	0.46
52:DI:23:VAL:HG12	52:DI:24:GLY:N	2.31	0.46
1:AA:313:A:H2'	1:AA:314:C:H6	1.80	0.46
1:AA:502:A:H2'	1:AA:503:C:C6	2.50	0.46
1:AA:545:C:O2'	1:AA:546:A:H5'	2.15	0.46
1:AA:861:G:H2'	1:AA:862:C:H6	1.80	0.46
1:AA:918:A:C6	1:AA:919:A:C6	3.04	0.46
2:AC:106:ARG:HH11	2:AC:106:ARG:HG2	1.81	0.46
3:AD:162:GLU:C	3:AD:164:ARG:H	2.19	0.46
8:AI:16:ALA:HA	8:AI:66:VAL:HG23	1.98	0.46
8:AI:56:MET:SD	8:AI:57:VAL:HG23	2.55	0.46
8:AI:78:ILE:HG22	8:AI:82:ILE:CD1	2.46	0.46
8:AI:109:GLN:CD	8:AI:110:VAL:H	2.19	0.46
9:AJ:8:ILE:HD12	9:AJ:8:ILE:H	1.81	0.46
12:AM:19:THR:HG22	12:AM:29:SER:HB3	1.98	0.46
18:AS:40:PHE:HB2	18:AS:43:MET:HE2	1.97	0.46
20:AB:117:GLU:HA	20:AB:140:LEU:CD2	2.45	0.46
20:AB:151:LYS:HG3	20:AB:152:ASP:N	2.30	0.46
22:BA:48:U:O2'	36:BO:100:HIS:HE1	1.99	0.46
22:BA:106:G:H2'	22:BA:107:G:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:28:A:N6	23:BB:512:G:O2'	2.48	0.46
23:BB:309:A:H4'	42:BU:15:GLY:HA2	1.97	0.46
23:BB:348:A:H2'	23:BB:349:U:C6	2.51	0.46
23:BB:434:U:H1'	23:BB:435:C:H5	1.81	0.46
23:BB:583:G:H2'	23:BB:584:C:H6	1.79	0.46
23:BB:663:G:OP1	33:BL:17:LYS:HG2	2.16	0.46
23:BB:740:C:H5"	23:BB:1784:A:OP1	2.15	0.46
23:BB:942:G:H2'	23:BB:943:A:O4'	2.16	0.46
23:BB:974:G:H1'	23:BB:975:A:C8	2.50	0.46
23:BB:1482:G:N2	23:BB:1508:A:H1'	2.31	0.46
23:BB:1737:G:H5'	23:BB:1738:G:OP2	2.16	0.46
23:BB:2024:G:O2'	23:BB:2025:C:H5'	2.15	0.46
23:BB:2635:A:H5'	26:BD:79:LEU:HD23	1.98	0.46
23:BB:2655:G:O2'	23:BB:2656:U:P	2.74	0.46
23:BB:2658:C:H2'	23:BB:2659:G:H5'	1.97	0.46
26:BD:125:TRP:HE1	26:BD:161:MET:H	1.63	0.46
27:BE:148:ILE:HA	27:BE:187:VAL:CG2	2.46	0.46
29:BG:109:SER:O	29:BG:110:HIS:HB3	2.16	0.46
31:BJ:63:ALA:HA	31:BJ:69:ARG:HH22	1.80	0.46
32:BK:59:LYS:HD2	32:BK:89:ASN:O	2.16	0.46
34:BM:63:ILE:HD12	34:BM:63:ILE:N	2.30	0.46
35:BN:8:ARG:HB3	35:BN:43:GLU:OE2	2.15	0.46
39:BR:70:GLU:O	39:BR:90:ARG:HD2	2.16	0.46
41:BT:14:PRO:HA	41:BT:32:LEU:CB	2.46	0.46
1:CA:9:G:H5'	4:CE:107:GLY:HA3	1.98	0.46
1:CA:395:C:H2'	1:CA:396:C:C6	2.50	0.46
1:CA:517:G:H22	1:CA:533:A:P	2.39	0.46
1:CA:775:G:H2'	1:CA:776:G:C8	2.51	0.46
1:CA:1252:A:H2'	1:CA:1253:G:O4'	2.16	0.46
2:CC:122:GLN:O	2:CC:127:VAL:HG13	2.16	0.46
2:CC:149:LYS:O	2:CC:200:TRP:HE3	1.98	0.46
6:CG:13:PRO:O	6:CG:14:ASP:C	2.53	0.46
8:CI:17:ARG:HB2	8:CI:65:THR:HB	1.96	0.46
9:CJ:35:GLN:HG2	9:CJ:78:GLU:OE2	2.14	0.46
11:CL:51:VAL:HG12	11:CL:52:CYS:N	2.29	0.46
11:CL:51:VAL:HG12	11:CL:63:THR:HG22	1.97	0.46
12:CM:3:ILE:H	12:CM:56:ARG:NH2	2.13	0.46
13:CN:20:PHE:CD1	13:CN:24:ALA:HB2	2.50	0.46
23:DB:353:C:O2	23:DB:353:C:H2'	2.15	0.46
23:DB:582:A:H2'	23:DB:583:G:C8	2.50	0.46
23:DB:623:C:H2'	23:DB:624:C:H6	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:950:G:H2'	23:DB:951:C:H6	1.81	0.46
23:DB:1054:A:H2'	23:DB:1055:G:C8	2.49	0.46
23:DB:1745:A:H2'	23:DB:1746:A:C8	2.51	0.46
23:DB:2023:C:H4'	23:DB:2617:U:O3'	2.16	0.46
23:DB:2223:G:H2'	23:DB:2224:G:H5'	1.97	0.46
23:DB:2626:C:H2'	23:DB:2627:G:C8	2.51	0.46
23:DB:2668:G:O2'	23:DB:2669:G:H5'	2.16	0.46
26:DD:107:VAL:HG12	26:DD:109:VAL:HG23	1.98	0.46
27:DE:181:ILE:HD13	33:DL:3:LEU:HD23	1.97	0.46
28:DF:33:ILE:H	28:DF:95:MET:HG3	1.81	0.46
28:DF:102:LEU:O	28:DF:103:ILE:CB	2.63	0.46
29:DG:1:SER:O	29:DG:3:VAL:N	2.49	0.46
30:DH:60:GLU:O	30:DH:62:LEU:HD23	2.16	0.46
32:DK:119:ALA:O	32:DK:120:PRO:O	2.33	0.46
38:DQ:111:LYS:HB2	38:DQ:111:LYS:HZ2	1.81	0.46
51:D4:2:LYS:HD3	51:D4:4:ARG:HE	1.81	0.46
52:DI:69:VAL:O	52:DI:69:VAL:HG23	2.15	0.46
1:AA:113:G:O2'	1:AA:354:G:H5'	2.16	0.46
1:AA:373:A:O2'	1:AA:374:A:H5'	2.16	0.46
1:AA:631:C:H3'	1:AA:632:U:H5'	1.97	0.46
1:AA:828:U:OP1	1:AA:828:U:H4'	2.14	0.46
1:AA:1125:U:HO2'	1:AA:1126:U:H2'	1.81	0.46
2:AC:155:ARG:H	2:AC:162:ALA:HA	1.80	0.46
3:AD:148:ALA:O	3:AD:154:VAL:HG11	2.16	0.46
5:AF:93:LYS:O	5:AF:94:HIS:HB2	2.15	0.46
6:AG:2:ARG:HG2	6:AG:3:ARG:CD	2.46	0.46
6:AG:46:LEU:HG	6:AG:57:GLU:CB	2.38	0.46
9:AJ:35:GLN:HG2	9:AJ:78:GLU:OE2	2.16	0.46
10:AK:124:LYS:CA	21:AU:34:ARG:HB3	2.39	0.46
14:AO:55:LEU:HD21	23:BB:715:A:C2	2.51	0.46
16:AQ:60:ILE:HD13	16:AQ:60:ILE:H	1.80	0.46
23:BB:90:U:OP2	23:BB:91:A:H3'	2.15	0.46
23:BB:244:A:H1'	23:BB:255:A:N6	2.31	0.46
23:BB:544:C:H2'	23:BB:545:U:C6	2.51	0.46
23:BB:655:A:H4'	23:BB:656:G:H5'	1.96	0.46
23:BB:730:A:H3'	56:BB:3593:HOH:O	2.16	0.46
23:BB:813:U:H2'	23:BB:814:C:C6	2.50	0.46
23:BB:839:U:H2'	23:BB:840:C:H6	1.80	0.46
23:BB:1515:A:H2'	23:BB:1516:G:O4'	2.16	0.46
23:BB:1568:G:H4'	25:BC:58:LYS:HB3	1.97	0.46
23:BB:2019:A:H4'	38:BQ:33:VAL:HG11	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2392:A:OP1	50:B3:30:HIS:HB3	2.16	0.46
23:BB:2419:U:H2'	23:BB:2420:C:C6	2.51	0.46
23:BB:2733:A:H2'	23:BB:2734:A:O4'	2.16	0.46
23:BB:2868:A:H2'	23:BB:2869:G:H8	1.81	0.46
24:BV:48:MET:O	24:BV:51:GLN:HG3	2.16	0.46
24:BV:77:VAL:HG23	24:BV:89:ILE:CG2	2.45	0.46
25:BC:103:ILE:HG22	25:BC:105:ALA:N	2.30	0.46
25:BC:119:VAL:HG13	25:BC:133:ASN:HD21	1.81	0.46
26:BD:8:LYS:HZ2	26:BD:25:THR:CG2	2.29	0.46
27:BE:4:VAL:HG12	27:BE:6:LYS:H	1.80	0.46
37:BP:62:LYS:HB3	37:BP:69:VAL:CG2	2.45	0.46
38:BQ:78:PHE:CZ	38:BQ:82:LEU:HD11	2.51	0.46
40:BS:41:LYS:O	40:BS:42:LYS:C	2.54	0.46
42:BU:86:PHE:CG	42:BU:87:GLU:N	2.84	0.46
1:CA:62:U:H5"	1:CA:385:C:O2'	2.15	0.46
1:CA:67:C:H2'	1:CA:68:G:C8	2.51	0.46
1:CA:167:A:O2'	1:CA:168:G:H5'	2.16	0.46
1:CA:241:G:O2'	1:CA:242:G:H5'	2.15	0.46
1:CA:599:C:O2'	1:CA:600:A:H5'	2.15	0.46
1:CA:744:C:H2'	1:CA:745:G:C8	2.50	0.46
1:CA:868:C:H2'	1:CA:869:G:O4'	2.16	0.46
1:CA:1276:G:H2'	1:CA:1277:C:C6	2.51	0.46
1:CA:1318:A:H4'	18:CS:9:PHE:CE1	2.50	0.46
1:CA:1369:C:H2'	1:CA:1370:G:C8	2.51	0.46
5:CF:7:VAL:O	5:CF:7:VAL:HG13	2.15	0.46
7:CH:46:GLU:N	7:CH:63:LYS:HB2	2.31	0.46
7:CH:77:VAL:HG23	7:CH:126:CYS:HA	1.98	0.46
14:CO:30:LEU:HD23	14:CO:30:LEU:C	2.36	0.46
19:CT:42:ASP:OD1	19:CT:44:ALA:HB3	2.16	0.46
20:CB:96:LEU:HB2	20:CB:99:MET:HE2	1.96	0.46
22:DA:16:G:O2'	22:DA:17:C:H5'	2.16	0.46
23:DB:60:G:C6	23:DB:74:A:N6	2.84	0.46
23:DB:558:U:OP1	31:DJ:113:PRO:HB2	2.16	0.46
23:DB:730:A:H3'	56:DB:3612:HOH:O	2.15	0.46
23:DB:852:U:H2'	23:DB:853:C:C6	2.51	0.46
23:DB:878:A:N3	23:DB:878:A:C2'	2.77	0.46
23:DB:1093:G:O2'	23:DB:1094:U:H5'	2.16	0.46
23:DB:1203:U:H3'	23:DB:1204:A:H5"	1.98	0.46
23:DB:1717:A:H2'	23:DB:1718:G:O4'	2.16	0.46
23:DB:1849:G:H2'	23:DB:1850:G:C8	2.50	0.46
25:DC:12:ARG:HA	25:DC:15:VAL:CG2	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DE:146:VAL:HA	27:DE:185:LYS:O	2.16	0.46
31:DJ:128:ASN:O	31:DJ:129:GLU:HB3	2.16	0.46
33:DL:17:LYS:O	33:DL:18:ARG:HG2	2.16	0.46
33:DL:118:THR:O	33:DL:120:VAL:HG23	2.15	0.46
35:DN:21:PHE:HA	35:DN:24:MET:HB2	1.98	0.46
39:DR:31:GLU:O	39:DR:63:VAL:HG22	2.16	0.46
39:DR:49:ILE:CG2	39:DR:54:VAL:HB	2.45	0.46
40:DS:85:ILE:HD12	40:DS:85:ILE:N	2.31	0.46
42:DU:64:ILE:HG13	42:DU:68:ASN:HD22	1.81	0.46
47:D0:9:ARG:O	47:D0:12:ARG:HB3	2.15	0.46
49:D2:3:ARG:CZ	49:D2:3:ARG:HA	2.46	0.46
1:AA:572:A:N3	1:AA:917:G:H1'	2.31	0.46
1:AA:677:U:H3	1:AA:713:G:H22	1.63	0.46
5:AF:43:GLY:HA2	5:AF:58:HIS:CD2	2.51	0.46
7:AH:82:LEU:HD13	7:AH:82:LEU:O	2.16	0.46
9:AJ:6:ILE:HB	9:AJ:76:ILE:HD11	1.98	0.46
11:AL:113:ARG:NE	11:AL:120:ARG:HA	2.30	0.46
14:AO:69:LEU:HD11	14:AO:76:ARG:CB	2.46	0.46
22:BA:52:A:H3'	22:BA:53:A:C8	2.51	0.46
23:BB:20:C:H2'	23:BB:21:A:H8	1.80	0.46
23:BB:218:A:C2'	23:BB:219:A:H5'	2.46	0.46
23:BB:233:A:N6	23:BB:428:A:N6	2.62	0.46
23:BB:534:U:O2'	38:BQ:45:ALA:HA	2.15	0.46
23:BB:540:C:O2'	23:BB:541:A:H5'	2.16	0.46
23:BB:776:G:H4'	23:BB:777:G:O5'	2.16	0.46
23:BB:1401:G:H2'	23:BB:1402:U:H6	1.80	0.46
23:BB:1417:C:O5'	23:BB:1588:G:H1'	2.16	0.46
23:BB:2332:C:H1'	23:BB:2336:A:C8	2.50	0.46
23:BB:2768:U:H2'	23:BB:2769:U:O4'	2.16	0.46
26:BD:125:TRP:CE3	26:BD:125:TRP:HA	2.51	0.46
28:BF:34:THR:CG2	28:BF:89:THR:HG22	2.44	0.46
30:BH:66:ASN:O	30:BH:134:VAL:HG11	2.16	0.46
31:BJ:111:LYS:CB	31:BJ:113:PRO:HD2	2.46	0.46
33:BL:133:ALA:HA	33:BL:136:GLU:HB2	1.97	0.46
34:BM:108:VAL:HG22	34:BM:109:PRO:HD2	1.97	0.46
39:BR:80:ARG:O	39:BR:81:LYS:HD3	2.15	0.46
40:BS:24:ILE:HD11	40:BS:36:LEU:HD21	1.97	0.46
52:BI:29:GLN:HA	52:BI:29:GLN:NE2	2.31	0.46
1:CA:175:C:H2'	1:CA:176:C:H6	1.78	0.46
1:CA:450:G:N7	1:CA:481:G:O6	2.49	0.46
1:CA:462:G:H5'	1:CA:463:U:P	2.55	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:593:U:O2'	1:CA:594:U:H5'	2.16	0.46
1:CA:627:G:H2'	1:CA:628:G:H8	1.81	0.46
1:CA:642:A:C5	7:CH:106:SER:HA	2.51	0.46
1:CA:865:A:H2'	1:CA:866:C:C6	2.51	0.46
1:CA:970:C:H42	8:CI:128:LYS:HG2	1.79	0.46
1:CA:1096:C:H2'	1:CA:1097:C:H6	1.81	0.46
1:CA:1250:A:C2	1:CA:1370:G:H1'	2.51	0.46
1:CA:1285:A:HO2'	1:CA:1286:U:P	2.39	0.46
1:CA:1495:U:O2'	1:CA:1496:C:H5'	2.16	0.46
3:CD:25:ARG:HD3	3:CD:26:ALA:HB3	1.97	0.46
3:CD:61:ARG:HG3	3:CD:71:PHE:CD2	2.51	0.46
5:CF:3:HIS:CD2	5:CF:65:GLU:HG3	2.49	0.46
5:CF:32:ALA:O	5:CF:33:GLU:HB2	2.16	0.46
6:CG:129:ASN:HD22	6:CG:137:ARG:HH22	1.64	0.46
10:CK:70:ALA:C	10:CK:72:ALA:N	2.69	0.46
12:CM:10:ASP:CA	12:CM:44:ILE:HD13	2.42	0.46
12:CM:106:ARG:HD3	12:CM:111:PRO:HA	1.97	0.46
13:CN:12:ARG:NE	13:CN:58:ARG:HH12	2.14	0.46
19:CT:64:GLY:O	19:CT:66:ILE:N	2.48	0.46
23:DB:129:C:H2'	23:DB:130:C:H6	1.81	0.46
23:DB:418:C:O2'	23:DB:419:U:H5'	2.16	0.46
23:DB:560:C:H2'	23:DB:561:G:O4'	2.16	0.46
23:DB:1365:A:O3'	46:DZ:11:ARG:NH1	2.49	0.46
23:DB:1506:U:H2'	23:DB:1507:C:C6	2.51	0.46
23:DB:1523:U:H5"	23:DB:1524:G:C8	2.51	0.46
23:DB:1541:C:H2'	23:DB:1542:U:H6	1.80	0.46
23:DB:1601:G:O2'	23:DB:1602:U:H5'	2.15	0.46
23:DB:1846:G:N2	23:DB:1848:A:N6	2.64	0.46
23:DB:1940:U:O2	23:DB:1940:U:H5"	2.16	0.46
23:DB:2386:A:N3	43:DW:38:ARG:HB3	2.30	0.46
24:DV:48:MET:O	24:DV:51:GLN:HG3	2.16	0.46
28:DF:1:ALA:O	28:DF:4:HIS:HB3	2.16	0.46
28:DF:165:GLY:O	28:DF:169:LEU:HD12	2.16	0.46
29:DG:9:VAL:HA	29:DG:48:THR:CG2	2.46	0.46
30:DH:9:VAL:HG11	30:DH:12:LEU:HG	1.98	0.46
30:DH:119:ASN:ND2	30:DH:121:VAL:HG22	2.31	0.46
32:DK:99:ILE:HD13	32:DK:118:LEU:HD22	1.97	0.46
33:DL:29:LYS:C	33:DL:31:GLY:H	2.19	0.46
34:DM:68:PHE:CG	34:DM:69:PRO:HD2	2.51	0.46
37:DP:19:PHE:CE2	37:DP:83:ILE:HD11	2.50	0.46
41:DT:55:VAL:HG13	41:DT:85:VAL:HG12	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DW:18:LYS:HA	43:DW:18:LYS:HD2	1.71	0.46
43:DW:32:ALA:O	43:DW:34:SER:N	2.48	0.46
43:DW:65:LYS:N	43:DW:84:GLU:HB3	2.31	0.46
46:DZ:70:GLU:C	46:DZ:72:ARG:N	2.69	0.46
1:AA:25:C:H5'	1:AA:524:G:H1'	1.98	0.45
1:AA:89:U:H3'	1:AA:90:C:C6	2.50	0.45
1:AA:213:G:H3'	1:AA:214:C:H6	1.81	0.45
1:AA:571:U:O2	1:AA:918:A:H5'	2.15	0.45
1:AA:936:C:H2'	1:AA:937:A:O4'	2.16	0.45
1:AA:960:U:H6	1:AA:1222:G:O2'	1.99	0.45
1:AA:1130:A:H2'	1:AA:1131:G:C8	2.51	0.45
1:AA:1226:C:H3'	12:AM:101:THR:OG1	2.16	0.45
1:AA:1415:G:O2'	1:AA:1416:G:H5'	2.16	0.45
4:AE:106:ALA:HB1	4:AE:110:MET:CB	2.47	0.45
5:AF:12:PRO:C	5:AF:14:GLN:H	2.20	0.45
11:AL:24:GLU:HB2	11:AL:26:CYS:SG	2.57	0.45
12:AM:2:ARG:HD3	12:AM:2:ARG:N	2.30	0.45
12:AM:9:PRO:HB2	12:AM:17:ALA:HB1	1.97	0.45
14:AO:30:LEU:HD23	14:AO:30:LEU:C	2.36	0.45
14:AO:39:GLN:HE22	23:BB:716:A:H1'	1.81	0.45
23:BB:990:A:H1'	23:BB:1156:A:C2	2.51	0.45
23:BB:1258:U:H2'	23:BB:1259:G:H8	1.81	0.45
23:BB:1534:U:H2'	23:BB:1536:C:C5	2.51	0.45
23:BB:1545:A:H2'	23:BB:1546:G:O4'	2.15	0.45
23:BB:1845:G:O2'	23:BB:1846:G:H5'	2.16	0.45
25:BC:171:VAL:HG23	25:BC:185:ALA:HB2	1.97	0.45
28:BF:115:GLY:HA3	28:BF:177:ARG:HB2	1.97	0.45
28:BF:162:ASP:C	28:BF:166:ARG:HH11	2.19	0.45
30:BH:68:ARG:HB2	30:BH:134:VAL:HB	1.97	0.45
32:BK:61:VAL:HG11	32:BK:112:PHE:CE2	2.50	0.45
32:BK:75:SER:HA	37:BP:72:VAL:O	2.16	0.45
33:BL:120:VAL:O	33:BL:135:ILE:HD11	2.16	0.45
35:BN:12:ARG:HA	35:BN:12:ARG:HD2	1.71	0.45
35:BN:117:ASP:C	35:BN:117:ASP:OD2	2.55	0.45
42:BU:40:LEU:HA	42:BU:60:LYS:O	2.15	0.45
46:BZ:35:SER:HA	46:BZ:49:LEU:O	2.16	0.45
46:BZ:65:ASP:O	46:BZ:69:ALA:HB2	2.16	0.45
48:B1:49:LYS:O	48:B1:50:GLU:HB3	2.16	0.45
49:B2:3:ARG:HH21	49:B2:3:ARG:HG2	1.82	0.45
1:CA:255:G:H5'	16:CQ:17:GLU:O	2.16	0.45
1:CA:292:G:O2'	1:CA:609:A:N6	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:373:A:H1'	1:CA:481:G:H1'	1.98	0.45
1:CA:821:G:O2'	1:CA:822:U:H5'	2.16	0.45
1:CA:940:C:H2'	1:CA:941:G:C8	2.52	0.45
1:CA:1072:G:H2'	1:CA:1073:U:C6	2.51	0.45
1:CA:1278:G:H4'	1:CA:1279:G:O4'	2.15	0.45
1:CA:1456:A:H2'	1:CA:1457:G:O4'	2.17	0.45
2:CC:63:ILE:O	2:CC:65:VAL:HG23	2.16	0.45
4:CE:131:ASN:O	4:CE:135:VAL:HG23	2.16	0.45
5:CF:52:ASN:O	5:CF:52:ASN:CG	2.54	0.45
10:CK:122:PRO:HG2	21:CU:34:ARG:HA	1.97	0.45
10:CK:124:LYS:HA	21:CU:34:ARG:CG	2.46	0.45
11:CL:82:ARG:HG2	11:CL:82:ARG:NH1	2.29	0.45
12:CM:30:LYS:HG3	12:CM:40:GLU:OE1	2.16	0.45
13:CN:26:LEU:HD23	13:CN:27:LYS:N	2.31	0.45
20:CB:18:GLN:HB2	20:CB:188:THR:OG1	2.16	0.45
20:CB:71:THR:HG23	20:CB:94:ARG:H	1.78	0.45
20:CB:151:LYS:HG3	20:CB:152:ASP:N	2.31	0.45
20:CB:187:ASP:OD1	20:CB:203:ASP:HB3	2.16	0.45
21:CU:20:ARG:HG3	21:CU:24:LYS:HG3	1.99	0.45
21:CU:26:GLY:C	21:CU:28:LEU:H	2.18	0.45
22:DA:7:G:H5"	36:DO:29:HIS:CD2	2.51	0.45
23:DB:27:G:HO2'	23:DB:28:A:H8	1.57	0.45
23:DB:571:U:O2'	23:DB:573:U:O5'	2.34	0.45
23:DB:935:C:H2'	23:DB:936:A:H8	1.81	0.45
23:DB:1060:U:H5	52:DI:131:THR:CG2	2.29	0.45
23:DB:1100:C:H41	52:DI:1:ALA:N	2.13	0.45
23:DB:1197:G:H2'	23:DB:1198:U:C6	2.51	0.45
23:DB:1259:G:O2'	23:DB:1260:A:H5'	2.16	0.45
23:DB:2345:G:H4'	23:DB:2346:A:O5'	2.16	0.45
23:DB:2500:U:H5'	23:DB:2501:C:OP2	2.16	0.45
23:DB:2547:A:H4'	32:DK:29:HIS:CE1	2.51	0.45
23:DB:2553:G:H2'	23:DB:2554:U:C4'	2.46	0.45
23:DB:2580:U:H5'	26:DD:136:ASN:H	1.81	0.45
23:DB:2591:C:OP1	25:DC:237:ARG:HG3	2.16	0.45
27:DE:141:MET:O	27:DE:143:LEU:HG	2.16	0.45
28:DF:23:SER:O	28:DF:26:GLN:HB2	2.16	0.45
28:DF:31:GLU:HB2	28:DF:158:THR:HG22	1.98	0.45
28:DF:34:THR:OG1	28:DF:154:THR:HB	2.16	0.45
28:DF:83:PRO:O	28:DF:84:ILE:HD12	2.16	0.45
28:DF:168:LEU:O	28:DF:170:ALA:N	2.49	0.45
29:DG:10:VAL:CG2	29:DG:48:THR:HA	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DG:102:ILE:HG13	29:DG:116:LEU:HD11	1.98	0.45
31:DJ:43:GLU:O	31:DJ:45:THR:HG22	2.16	0.45
32:DK:107:LEU:C	32:DK:109:SER:H	2.20	0.45
33:DL:131:ALA:O	33:DL:134:ALA:HB3	2.16	0.45
35:DN:14:SER:O	35:DN:18:GLN:HB2	2.15	0.45
35:DN:24:MET:CE	35:DN:40:LYS:HB3	2.45	0.45
35:DN:29:VAL:HG21	35:DN:75:ILE:HB	1.98	0.45
36:DO:39:VAL:HB	36:DO:49:VAL:HG22	1.98	0.45
39:DR:43:ASN:CG	39:DR:45:GLU:H	2.18	0.45
39:DR:60:LYS:H	39:DR:100:GLY:N	2.14	0.45
39:DR:61:ALA:CB	39:DR:98:ILE:H	2.29	0.45
41:DT:61:LEU:HG	41:DT:82:LYS:HB2	1.97	0.45
44:DX:39:GLN:HB2	44:DX:42:LEU:HD22	1.98	0.45
52:DI:72:THR:CG2	52:DI:112:LYS:HD2	2.46	0.45
1:AA:54:C:H2'	1:AA:352:C:H41	1.80	0.45
1:AA:245:U:H2'	1:AA:246:A:H5'	1.98	0.45
1:AA:328:C:H4'	1:AA:329:A:C5'	2.46	0.45
1:AA:562:U:H5"	1:AA:563:A:C4	2.51	0.45
1:AA:780:A:O2'	1:AA:781:A:H5"	2.16	0.45
1:AA:833:G:O2'	1:AA:834:U:H5'	2.16	0.45
1:AA:1181:G:H1'	1:AA:1182:G:C5	2.50	0.45
1:AA:1206:G:H4'	2:AC:191:THR:O	2.15	0.45
1:AA:1299:A:C2'	1:AA:1301:U:H1'	2.46	0.45
4:AE:19:ARG:O	4:AE:20:VAL:HB	2.16	0.45
5:AF:55:HIS:CD2	5:AF:56:LYS:HE3	2.51	0.45
10:AK:72:ALA:O	10:AK:75:GLU:HG2	2.17	0.45
10:AK:106:ILE:O	10:AK:107:THR:HG23	2.17	0.45
22:BA:74:U:H2'	22:BA:75:G:O4'	2.16	0.45
23:BB:83:A:H5"	42:BU:1:ALA:H2	1.80	0.45
23:BB:322:A:H2'	27:BE:163:ASN:OD1	2.15	0.45
23:BB:418:C:O2'	23:BB:419:U:H5'	2.16	0.45
23:BB:586:A:H5'	27:BE:84:THR:OG1	2.15	0.45
23:BB:830:G:H1	23:BB:2446:G:C4'	2.29	0.45
23:BB:862:G:H2'	23:BB:863:A:O4'	2.16	0.45
23:BB:1056:G:H8	23:BB:1056:G:O5'	2.00	0.45
23:BB:1061:U:O4	52:BI:10:LEU:HA	2.16	0.45
23:BB:1249:U:C4'	38:BQ:3:VAL:HG21	2.46	0.45
23:BB:1324:G:H1'	23:BB:1616:A:C6	2.51	0.45
23:BB:1387:A:H2'	23:BB:1388:G:C8	2.51	0.45
23:BB:1465:G:H2'	23:BB:1466:U:C6	2.50	0.45
23:BB:1541:C:H2'	23:BB:1542:U:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1541:C:H2'	23:BB:1542:U:H6	1.81	0.45
23:BB:1970:A:H1'	23:BB:1972:G:C8	2.51	0.45
23:BB:2227:A:H5"	25:BC:260:LYS:HD2	1.98	0.45
23:BB:2840:C:H5"	35:BN:53:THR:HG21	1.97	0.45
23:BB:2892:G:H5"	23:BB:2894:G:N2	2.31	0.45
24:BV:61:LEU:O	24:BV:71:LYS:HA	2.16	0.45
26:BD:118:PHE:O	26:BD:119:ALA:CB	2.62	0.45
27:BE:141:MET:O	27:BE:143:LEU:HG	2.16	0.45
28:BF:19:PHE:HE1	28:BF:167:ALA:HB2	1.81	0.45
28:BF:147:ARG:HD2	28:BF:148:VAL:HG22	1.97	0.45
31:BJ:11:VAL:HG21	31:BJ:13:ARG:NH1	2.32	0.45
32:BK:86:LEU:H	32:BK:86:LEU:CD2	2.20	0.45
32:BK:88:ASN:ND2	32:BK:89:ASN:N	2.64	0.45
32:BK:99:ILE:HG12	32:BK:115:ILE:HG13	1.99	0.45
33:BL:54:GLN:O	33:BL:56:PRO:HD3	2.16	0.45
33:BL:80:SER:HB3	33:BL:115:GLU:CD	2.37	0.45
36:BO:51:ALA:CB	36:BO:81:ARG:HH11	2.29	0.45
38:BQ:26:ALA:HA	38:BQ:29:ARG:CG	2.45	0.45
39:BR:49:ILE:CG2	39:BR:54:VAL:HB	2.47	0.45
39:BR:79:ARG:NE	39:BR:80:ARG:NH2	2.64	0.45
40:BS:47:VAL:HG12	40:BS:103:ILE:HG21	1.98	0.45
42:BU:38:ILE:HG13	42:BU:39:ASN:N	2.31	0.45
43:BW:9:THR:HG23	43:BW:10:ARG:CD	2.36	0.45
46:BZ:32:ASN:O	46:BZ:33:LEU:O	2.34	0.45
49:B2:4:THR:O	49:B2:5:PHE:HB2	2.17	0.45
1:CA:79:G:O2'	1:CA:80:A:H5'	2.16	0.45
1:CA:81:A:C2'	1:CA:82:G:H5'	2.46	0.45
1:CA:545:C:H2'	1:CA:546:A:C8	2.51	0.45
1:CA:574:A:H1'	1:CA:883:C:O4'	2.16	0.45
1:CA:677:U:H3	1:CA:713:G:H22	1.62	0.45
1:CA:847:G:H2'	1:CA:848:C:H6	1.81	0.45
1:CA:922:G:H2'	1:CA:923:A:C8	2.50	0.45
1:CA:1163:A:H2'	1:CA:1164:G:C8	2.52	0.45
1:CA:1451:U:O3'	1:CA:1452:C:H6	2.00	0.45
6:CG:120:ALA:O	6:CG:123:LEU:HB2	2.16	0.45
6:CG:137:ARG:HG2	6:CG:141:HIS:NE2	2.31	0.45
7:CH:23:ALA:CB	7:CH:61:THR:HA	2.46	0.45
7:CH:94:VAL:HG12	7:CH:99:GLY:HA3	1.98	0.45
8:CI:9:GLY:HA2	8:CI:80:HIS:CD2	2.51	0.45
8:CI:56:MET:HA	8:CI:59:LYS:HB2	1.97	0.45
8:CI:87:MET:HA	8:CI:90:ASP:O	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CL:66:ILE:CG2	11:CL:71:HIS:HB3	2.44	0.45
16:CQ:18:LYS:HG2	16:CQ:48:GLU:O	2.16	0.45
20:CB:172:ILE:CG2	20:CB:176:ASN:HD21	2.28	0.45
22:DA:42:C:C4	28:DF:65:LEU:HD22	2.51	0.45
22:DA:60:C:O2'	22:DA:61:G:H5'	2.17	0.45
23:DB:98:G:H1	42:DU:6:ARG:HH12	1.64	0.45
23:DB:244:A:H1'	23:DB:255:A:N6	2.31	0.45
23:DB:434:U:H1'	23:DB:435:C:H5	1.81	0.45
23:DB:858:G:H21	23:DB:2268:A:C3'	2.29	0.45
23:DB:988:A:H3'	45:DY:13:ILE:HD11	1.97	0.45
23:DB:1052:C:O2'	23:DB:1053:C:H5'	2.16	0.45
23:DB:1283:G:H22	23:DB:1286:A:C5'	2.13	0.45
23:DB:1463:C:H2'	23:DB:1464:G:C8	2.51	0.45
23:DB:1544:A:H2'	23:DB:1545:A:C8	2.51	0.45
23:DB:1547:C:H2'	23:DB:1548:A:H8	1.81	0.45
23:DB:1687:G:O2'	23:DB:1688:U:H5'	2.15	0.45
23:DB:1915:U:H2'	23:DB:1916:A:C8	2.52	0.45
24:DV:77:VAL:HG23	24:DV:89:ILE:CG2	2.47	0.45
25:DC:107:LYS:O	25:DC:109:LEU:HD22	2.17	0.45
28:DF:98:PHE:C	28:DF:100:GLU:N	2.69	0.45
29:DG:33:THR:HG21	29:DG:74:MET:HB3	1.98	0.45
31:DJ:20:ALA:CB	31:DJ:23:LYS:HB2	2.45	0.45
32:DK:2:ILE:HD12	32:DK:2:ILE:N	2.31	0.45
33:DL:78:ARG:NH2	33:DL:113:ALA:HB1	2.30	0.45
35:DN:73:ASN:O	35:DN:76:VAL:HG22	2.17	0.45
41:DT:62:VAL:HG12	41:DT:63:VAL:H	1.82	0.45
42:DU:95:PHE:HE1	42:DU:102:ILE:HB	1.81	0.45
46:DZ:68:LEU:HD22	46:DZ:78:TYR:CE1	2.52	0.45
52:DI:46:ASP:HA	52:DI:50:LYS:HE2	1.97	0.45
1:AA:9:G:H5'	4:AE:107:GLY:HA3	1.98	0.45
1:AA:14:U:H5"	56:AA:2180:HOH:O	2.16	0.45
1:AA:254:G:O2'	1:AA:255:G:H5'	2.15	0.45
1:AA:754:C:H3'	1:AA:754:C:O2	2.16	0.45
1:AA:908:A:H2'	1:AA:909:A:C8	2.51	0.45
1:AA:1004:A:H2'	1:AA:1005:A:O4'	2.16	0.45
1:AA:1261:A:H1'	1:AA:1275:A:N1	2.31	0.45
5:AF:97:THR:HG22	5:AF:98:GLU:N	2.31	0.45
7:AH:12:ARG:NH1	7:AH:26:MET:HB3	2.31	0.45
8:AI:52:GLU:O	8:AI:53:LEU:HD13	2.16	0.45
10:AK:19:VAL:HG22	10:AK:34:THR:O	2.17	0.45
16:AQ:18:LYS:HG2	16:AQ:48:GLU:O	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AT:35:TYR:CG	19:AT:36:ALA:N	2.84	0.45
20:AB:209:VAL:HG23	20:AB:210:THR:N	2.28	0.45
22:BA:30:C:H1'	22:BA:58:A:N1	2.32	0.45
22:BA:95:U:H2'	22:BA:96:G:H8	1.79	0.45
23:BB:275:C:C2'	23:BB:276:U:H5'	2.46	0.45
23:BB:345:A:H1'	23:BB:346:A:H2	1.80	0.45
23:BB:545:U:H2'	23:BB:547:A:P	2.57	0.45
23:BB:545:U:O5'	23:BB:545:U:H6	2.00	0.45
23:BB:584:C:N4	23:BB:585:G:C6	2.84	0.45
23:BB:643:A:C4	48:B1:43:ARG:HD2	2.50	0.45
23:BB:855:G:N3	43:BW:23:LYS:HE3	2.31	0.45
23:BB:921:C:H2'	23:BB:922:C:C6	2.51	0.45
23:BB:1025:G:OP1	23:BB:1025:G:H8	1.98	0.45
23:BB:1252:G:O3'	38:BQ:32:ARG:NH1	2.50	0.45
23:BB:1488:C:O2'	23:BB:1489:C:H5'	2.17	0.45
23:BB:1601:G:O2'	23:BB:1602:U:H5'	2.17	0.45
23:BB:2199:A:H3'	23:BB:2200:C:C6	2.51	0.45
23:BB:2221:G:O2'	23:BB:2222:C:H5'	2.15	0.45
23:BB:2411:A:H2'	23:BB:2412:A:H8	1.81	0.45
23:BB:2674:G:H2'	23:BB:2675:A:H8	1.81	0.45
23:BB:2729:G:H1'	26:BD:192:ALA:HB3	1.98	0.45
23:BB:2751:G:N3	23:BB:2751:G:C2'	2.76	0.45
24:BV:16:ALA:HA	24:BV:19:ARG:HH21	1.82	0.45
25:BC:140:VAL:CG2	25:BC:163:ILE:HG12	2.46	0.45
25:BC:165:ALA:HB3	25:BC:172:THR:HG23	1.99	0.45
26:BD:26:VAL:HG13	26:BD:188:LEU:CD2	2.46	0.45
27:BE:91:ASP:C	27:BE:93:SER:H	2.19	0.45
27:BE:150:THR:O	27:BE:192:ALA:HB2	2.17	0.45
28:BF:34:THR:OG1	28:BF:154:THR:HB	2.15	0.45
28:BF:103:ILE:HD11	28:BF:174:PHE:CD1	2.51	0.45
30:BH:127:GLU:HG3	30:BH:143:ILE:CB	2.39	0.45
36:BO:111:ARG:HG2	36:BO:117:PHE:CE2	2.50	0.45
37:BP:56:SER:HB2	37:BP:75:THR:HB	1.98	0.45
39:BR:21:ARG:C	39:BR:22:LEU:HD23	2.36	0.45
39:BR:95:ASP:O	39:BR:96:VAL:HG13	2.16	0.45
42:BU:26:ASN:ND2	42:BU:34:ILE:HD12	2.23	0.45
42:BU:90:LYS:O	42:BU:92:VAL:HG23	2.16	0.45
49:B2:34:ARG:NE	49:B2:39:ARG:HG2	2.30	0.45
52:BI:62:ALA:C	52:BI:64:ARG:H	2.20	0.45
52:BI:135:MET:HG3	52:BI:137:LEU:HG	1.98	0.45
1:CA:889:A:N1	1:CA:907:A:H5"	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1024:G:H2'	1:CA:1025:U:C6	2.52	0.45
1:CA:1305:G:H22	1:CA:1331:G:H2'	1.81	0.45
1:CA:1480:A:O2'	1:CA:1481:U:H5'	2.17	0.45
3:CD:7:LYS:HB3	3:CD:20:LEU:HB3	1.97	0.45
5:CF:18:VAL:N	5:CF:19:PRO:HD2	2.31	0.45
8:CI:20:ILE:HD13	8:CI:85:ALA:HB3	1.99	0.45
11:CL:15:VAL:O	11:CL:16:ALA:C	2.54	0.45
18:CS:4:LEU:HD11	18:CS:9:PHE:HB3	1.97	0.45
18:CS:42:ASN:N	18:CS:42:ASN:ND2	2.62	0.45
21:CU:25:ALA:O	21:CU:27:VAL:N	2.49	0.45
22:DA:27:C:C2'	22:DA:28:C:H5'	2.46	0.45
22:DA:32:U:H2'	22:DA:33:G:C8	2.51	0.45
22:DA:76:G:H1	22:DA:101:A:N6	2.15	0.45
23:DB:55:G:H2'	23:DB:56:A:H8	1.81	0.45
23:DB:160:A:H1'	23:DB:2208:C:O2'	2.17	0.45
23:DB:256:A:H2'	23:DB:257:C:H6	1.81	0.45
23:DB:717:C:C3'	23:DB:718:A:H5"	2.46	0.45
23:DB:765:C:H2'	23:DB:766:U:C6	2.51	0.45
23:DB:769:U:H2'	23:DB:770:G:C8	2.51	0.45
23:DB:1596:A:O2'	23:DB:1597:A:H5'	2.17	0.45
23:DB:1708:C:O2'	23:DB:1709:U:H5'	2.17	0.45
23:DB:2256:G:O2'	23:DB:2257:U:H5'	2.16	0.45
23:DB:2452:C:C4	23:DB:2453:A:C6	3.04	0.45
23:DB:2496:C:H2'	23:DB:2497:A:H5'	1.98	0.45
23:DB:2548:U:H1'	32:DK:23:LYS:HZ2	1.80	0.45
26:DD:3:GLY:HA2	26:DD:101:PHE:CZ	2.52	0.45
26:DD:51:THR:HG22	26:DD:52:THR:N	2.27	0.45
28:DF:135:ILE:HG13	28:DF:137:PHE:H	1.81	0.45
29:DG:88:LEU:HD13	29:DG:93:TYR:HB3	1.97	0.45
31:DJ:35:ARG:HA	31:DJ:40:HIS:NE2	2.32	0.45
35:DN:114:GLU:HG2	35:DN:115:LEU:N	2.32	0.45
36:DO:51:ALA:HB3	36:DO:78:VAL:HG13	1.97	0.45
36:DO:68:LYS:H	36:DO:102:ARG:CD	2.30	0.45
39:DR:22:LEU:HD12	39:DR:25:LEU:HD23	1.97	0.45
39:DR:43:ASN:HD21	39:DR:45:GLU:HG2	1.81	0.45
46:DZ:68:LEU:HD22	46:DZ:78:TYR:HE1	1.80	0.45
46:DZ:77:LYS:HG3	46:DZ:78:TYR:H	1.81	0.45
51:D4:3:VAL:HB	51:D4:37:GLN:HE22	1.81	0.45
52:DI:52:LEU:HD13	52:DI:81:LYS:NZ	2.31	0.45
52:DI:138:VAL:HG12	52:DI:139:VAL:N	2.32	0.45
1:AA:85:U:H4'	1:AA:86:G:OP1	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:202:G:H2'	1:AA:203:G:C8	2.51	0.45
1:AA:255:G:H5'	16:AQ:17:GLU:O	2.16	0.45
1:AA:373:A:H1'	1:AA:481:G:H1'	1.98	0.45
1:AA:634:C:H2'	1:AA:635:A:C8	2.51	0.45
1:AA:993:G:H21	1:AA:996:A:N6	2.14	0.45
1:AA:1007:U:H2'	1:AA:1008:U:H6	1.80	0.45
1:AA:1060:U:H2'	1:AA:1061:G:C8	2.51	0.45
1:AA:1096:C:H2'	1:AA:1097:C:H6	1.81	0.45
1:AA:1122:U:H2'	1:AA:1123:U:C6	2.51	0.45
1:AA:1127:G:C2'	1:AA:1128:C:H5'	2.46	0.45
2:AC:6:PRO:HB3	2:AC:174:LEU:HD21	1.99	0.45
2:AC:134:LYS:HA	2:AC:167:TYR:HE2	1.82	0.45
6:AG:59:GLU:O	6:AG:63:VAL:HG23	2.17	0.45
7:AH:11:THR:HG22	7:AH:14:ARG:NH2	2.30	0.45
7:AH:23:ALA:CB	7:AH:61:THR:HA	2.46	0.45
8:AI:29:ILE:HG23	8:AI:64:ILE:HB	1.98	0.45
8:AI:30:ASN:HD22	8:AI:65:THR:HA	1.82	0.45
13:AN:5:MET:SD	13:AN:8:ARG:HD3	2.56	0.45
23:BB:137:U:H3'	23:BB:138:U:C6	2.51	0.45
23:BB:437:U:H2'	23:BB:438:G:C8	2.51	0.45
23:BB:643:A:H1'	48:B1:43:ARG:HH21	1.82	0.45
23:BB:1432:G:H2'	23:BB:1433:A:C8	2.52	0.45
23:BB:1475:G:OP1	23:BB:1475:G:H3'	2.17	0.45
23:BB:1484:U:H2'	23:BB:1485:U:H6	1.80	0.45
23:BB:1657:U:O2'	26:BD:138:LEU:HD12	2.16	0.45
23:BB:1734:G:O2'	23:BB:1735:A:H5'	2.16	0.45
23:BB:1846:G:N2	23:BB:1848:A:N6	2.63	0.45
30:BH:112:LYS:HE3	30:BH:112:LYS:O	2.16	0.45
37:BP:54:LEU:HA	37:BP:76:HIS:HD2	1.81	0.45
38:BQ:89:ILE:C	38:BQ:91:ARG:H	2.19	0.45
41:BT:2:ILE:HG13	41:BT:3:ARG:CZ	2.47	0.45
41:BT:67:VAL:HG22	41:BT:74:ILE:HD11	1.99	0.45
50:B3:15:LYS:HA	50:B3:21:PHE:HA	1.97	0.45
1:CA:174:A:O2'	1:CA:175:C:H5'	2.17	0.45
1:CA:189:A:O2'	1:CA:190:A:H5'	2.16	0.45
1:CA:255:G:P	16:CQ:70:LYS:HZ3	2.40	0.45
1:CA:833:G:O2'	1:CA:834:U:H5'	2.17	0.45
1:CA:1122:U:H2'	1:CA:1123:U:C6	2.52	0.45
1:CA:1296:C:H4'	1:CA:1302:C:H42	1.82	0.45
4:CE:21:SER:CB	4:CE:28:ARG:HE	2.20	0.45
5:CF:18:VAL:O	5:CF:22:ILE:HG13	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CF:45:ARG:NH2	17:CR:25:ILE:HD13	2.31	0.45
8:CI:10:ARG:CB	8:CI:15:ALA:HA	2.46	0.45
11:CL:31:GLY:HA3	11:CL:54:VAL:HG11	1.97	0.45
18:CS:52:ASN:HB2	18:CS:76:THR:HG22	1.98	0.45
23:DB:56:A:H2'	23:DB:57:C:C6	2.50	0.45
23:DB:465:G:H4'	49:D2:16:HIS:CD2	2.51	0.45
23:DB:566:U:H2'	23:DB:567:U:O4'	2.17	0.45
23:DB:813:U:H2'	23:DB:814:C:C6	2.52	0.45
23:DB:902:C:H2'	23:DB:903:C:C6	2.51	0.45
23:DB:1059:G:N2	52:DI:130:GLY:HA3	2.31	0.45
23:DB:2236:U:O2'	23:DB:2237:G:H5'	2.16	0.45
23:DB:2725:A:HO2'	23:DB:2726:A:P	2.39	0.45
23:DB:2820:A:OP1	35:DN:4:ARG:HA	2.16	0.45
24:DV:19:ARG:O	24:DV:22:ALA:HB3	2.15	0.45
25:DC:264:LYS:HG3	25:DC:265:PHE:HD2	1.81	0.45
26:DD:10:GLY:HA3	26:DD:26:VAL:H	1.82	0.45
27:DE:187:VAL:HG12	27:DE:188:MET:N	2.31	0.45
28:DF:65:LEU:O	28:DF:86:CYS:HA	2.16	0.45
29:DG:23:ILE:HG22	29:DG:25:ILE:HD11	1.99	0.45
29:DG:66:THR:O	29:DG:70:LEU:HB2	2.16	0.45
29:DG:132:LEU:HD12	29:DG:140:ILE:HG22	1.98	0.45
30:DH:116:ARG:HB2	30:DH:131:SER:OG	2.16	0.45
31:DJ:74:TYR:HE2	31:DJ:103:ILE:HD11	1.81	0.45
33:DL:99:ASN:HA	56:DL:201:HOH:O	2.15	0.45
35:DN:83:LEU:O	35:DN:86:ARG:HB2	2.17	0.45
41:DT:12:ARG:HG2	44:DX:29:ARG:HH12	1.81	0.45
44:DX:23:ARG:HD2	44:DX:27:ASN:ND2	2.28	0.45
51:D4:17:VAL:HG11	51:D4:19:ARG:HE	1.80	0.45
1:AA:175:C:H2'	1:AA:176:C:C6	2.51	0.45
1:AA:227:G:H2'	1:AA:228:A:C8	2.51	0.45
1:AA:1040:U:H2'	1:AA:1041:G:O4'	2.16	0.45
1:AA:1057:G:H5"	2:AC:153:SER:CB	2.46	0.45
1:AA:1085:U:H3'	1:AA:1086:U:C6	2.52	0.45
1:AA:1096:C:H2'	1:AA:1097:C:C6	2.51	0.45
5:AF:8:PHE:O	5:AF:60:VAL:HG23	2.16	0.45
5:AF:52:ASN:O	5:AF:52:ASN:CG	2.55	0.45
10:AK:65:ALA:O	10:AK:68:ARG:HB3	2.16	0.45
11:AL:105:GLY:HA3	11:AL:117:GLY:O	2.17	0.45
12:AM:100:ARG:HD3	12:AM:103:THR:OG1	2.16	0.45
20:AB:120:SER:HA	20:AB:125:PHE:CB	2.47	0.45
23:BB:43:G:H2'	23:BB:44:A:O4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:77:G:O2'	23:BB:78:U:H5'	2.16	0.45
23:BB:279:A:H2'	23:BB:280:U:C5'	2.46	0.45
23:BB:592:A:H2'	23:BB:593:U:H6	1.81	0.45
23:BB:611:C:H2'	23:BB:612:G:O4'	2.17	0.45
23:BB:1072:C:N3	23:BB:1092:C:N4	2.64	0.45
23:BB:1171:G:H2'	23:BB:1172:C:H6	1.80	0.45
23:BB:1173:U:H1'	23:BB:1177:G:C2	2.52	0.45
23:BB:1472:C:H2'	23:BB:1473:G:C8	2.52	0.45
23:BB:1668:A:N3	23:BB:1670:C:C4	2.85	0.45
23:BB:1877:A:H2'	23:BB:1878:G:C8	2.51	0.45
23:BB:2148:G:H3'	23:BB:2149:U:C6	2.51	0.45
23:BB:2236:U:O2'	23:BB:2237:G:H5'	2.16	0.45
23:BB:2284:A:OP2	48:B1:5:ARG:HG3	2.15	0.45
23:BB:2594:C:O2'	23:BB:2595:G:H5'	2.17	0.45
23:BB:2648:G:H2'	23:BB:2649:C:H6	1.81	0.45
25:BC:264:LYS:HG3	25:BC:265:PHE:CD2	2.52	0.45
26:BD:33:ARG:NH1	26:BD:53:GLY:O	2.49	0.45
27:BE:4:VAL:HA	27:BE:11:ALA:HA	1.99	0.45
27:BE:116:ASP:O	27:BE:119:ILE:HD11	2.16	0.45
28:BF:109:ARG:HB3	28:BF:135:ILE:HD12	1.99	0.45
28:BF:111:ARG:N	28:BF:111:ARG:CD	2.80	0.45
29:BG:11:PRO:O	29:BG:14:VAL:HG22	2.16	0.45
30:BH:14:SER:C	30:BH:16:GLY:H	2.20	0.45
30:BH:68:ARG:C	30:BH:134:VAL:HB	2.36	0.45
32:BK:87:LEU:HB2	32:BK:93:GLN:C	2.35	0.45
32:BK:107:LEU:C	32:BK:109:SER:H	2.20	0.45
33:BL:135:ILE:HG12	33:BL:140:GLY:HA2	1.99	0.45
34:BM:26:VAL:HG22	34:BM:133:LYS:HA	1.98	0.45
36:BO:51:ALA:HB3	36:BO:78:VAL:HG13	1.98	0.45
37:BP:50:ARG:CB	37:BP:56:SER:HB3	2.45	0.45
38:BQ:33:VAL:HG23	38:BQ:34:ALA:N	2.31	0.45
41:BT:48:GLN:HA	41:BT:48:GLN:NE2	2.30	0.45
42:BU:89:GLY:O	42:BU:90:LYS:HG3	2.16	0.45
43:BW:19:ARG:H	43:BW:19:ARG:CD	2.30	0.45
43:BW:45:HIS:ND1	43:BW:45:HIS:N	2.64	0.45
47:B0:41:HIS:CD2	47:B0:41:HIS:N	2.85	0.45
1:CA:53:A:C2	1:CA:54:C:H1'	2.50	0.45
1:CA:109:A:H4'	1:CA:110:C:OP2	2.16	0.45
1:CA:112:G:O2'	1:CA:113:G:H5'	2.17	0.45
1:CA:323:U:H2'	1:CA:324:G:O4'	2.16	0.45
1:CA:1225:A:H3'	1:CA:1226:C:C6	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1260:G:OP1	1:CA:1284:C:H4'	2.17	0.45
1:CA:1392:G:H2'	1:CA:1393:U:C6	2.51	0.45
1:CA:1432:G:H5"	37:DP:105:LYS:CG	2.45	0.45
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.52	0.45
3:CD:97:LEU:HD13	3:CD:136:VAL:HG11	1.98	0.45
4:CE:19:ARG:O	4:CE:20:VAL:HB	2.16	0.45
8:CI:29:ILE:HG23	8:CI:64:ILE:HB	1.97	0.45
9:CJ:6:ILE:O	9:CJ:8:ILE:HD12	2.16	0.45
9:CJ:80:THR:HB	9:CJ:83:THR:OG1	2.16	0.45
12:CM:64:VAL:HA	12:CM:68:LEU:CD1	2.43	0.45
13:CN:20:PHE:CD2	13:CN:55:SER:HA	2.52	0.45
13:CN:30:ILE:CG2	13:CN:41:TRP:HB2	2.45	0.45
18:CS:40:PHE:HB2	18:CS:43:MET:CE	2.47	0.45
23:DB:121:G:H2'	23:DB:122:G:H8	1.81	0.45
23:DB:274:C:H6	23:DB:274:C:O5'	2.00	0.45
23:DB:277:G:H4'	23:DB:278:A:C6	2.51	0.45
23:DB:942:G:H2'	23:DB:943:A:O4'	2.16	0.45
23:DB:1432:G:O2'	23:DB:1433:A:H5'	2.17	0.45
23:DB:2261:C:O2'	23:DB:2262:U:H5'	2.17	0.45
23:DB:2306:C:C5	23:DB:2307:G:H2'	2.52	0.45
23:DB:2655:G:N2	23:DB:2664:G:H2'	2.32	0.45
24:DV:42:LEU:HD23	24:DV:42:LEU:N	2.32	0.45
25:DC:129:LEU:HD21	25:DC:133:ASN:HB2	1.99	0.45
27:DE:48:THR:O	27:DE:52:VAL:HG23	2.17	0.45
27:DE:149:ILE:HG23	27:DE:188:MET:HA	1.99	0.45
29:DG:156:TYR:O	29:DG:157:LYS:HD2	2.17	0.45
30:DH:14:SER:C	30:DH:16:GLY:H	2.18	0.45
31:DJ:57:LEU:HG	31:DJ:128:ASN:N	2.31	0.45
35:DN:65:LEU:HD11	35:DN:69:ARG:NH2	2.31	0.45
38:DQ:23:TYR:CD2	38:DQ:23:TYR:N	2.83	0.45
40:DS:41:LYS:O	40:DS:43:ALA:N	2.49	0.45
42:DU:26:ASN:ND2	42:DU:34:ILE:HD12	2.28	0.45
50:D3:61:LEU:N	50:D3:62:PRO:HD3	2.32	0.45
1:AA:154:U:H2'	1:AA:155:A:H8	1.77	0.45
1:AA:1260:G:OP1	1:AA:1284:C:H4'	2.16	0.45
2:AC:110:LEU:HD21	2:AC:140:ALA:O	2.16	0.45
5:AF:68:GLN:HA	5:AF:71:ILE:HD11	1.98	0.45
7:AH:58:LEU:CD2	7:AH:60:LEU:HB2	2.47	0.45
8:AI:49:GLN:HA	8:AI:52:GLU:HG2	1.99	0.45
16:AQ:39:ARG:HG3	16:AQ:39:ARG:NH1	2.29	0.45
21:AU:26:GLY:O	21:AU:30:GLU:HB3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:877:A:C2	23:BB:900:A:N7	2.84	0.45
23:BB:1177:G:H2'	23:BB:1178:C:C6	2.52	0.45
23:BB:1444:G:H2'	23:BB:1445:G:H8	1.80	0.45
23:BB:1523:U:H5"	23:BB:1524:G:C8	2.51	0.45
23:BB:1849:G:H2'	23:BB:1850:G:C8	2.51	0.45
23:BB:2146:C:C1'	23:BB:2147:A:H5'	2.45	0.45
25:BC:41:GLY:O	25:BC:48:ILE:HA	2.16	0.45
26:BD:101:PHE:O	26:BD:180:VAL:HG11	2.16	0.45
27:BE:5:LEU:HB2	27:BE:11:ALA:H	1.82	0.45
27:BE:152:GLU:O	27:BE:153:LEU:HB3	2.16	0.45
28:BF:126:ASN:HB3	28:BF:156:THR:CB	2.47	0.45
29:BG:39:ALA:O	29:BG:54:ARG:HB2	2.17	0.45
29:BG:91:VAL:HG23	29:BG:92:GLY:H	1.81	0.45
29:BG:148:ARG:HA	29:BG:161:VAL:CB	2.43	0.45
30:BH:61:VAL:O	30:BH:63:ALA:N	2.49	0.45
31:BJ:140:LEU:HD23	31:BJ:141:ASP:N	2.32	0.45
32:BK:19:VAL:C	32:BK:41:ILE:HD11	2.36	0.45
36:BO:51:ALA:CB	36:BO:78:VAL:HG13	2.47	0.45
36:BO:68:LYS:H	36:BO:102:ARG:HD3	1.82	0.45
37:BP:4:ILE:O	37:BP:6:GLN:N	2.46	0.45
39:BR:2:TYR:HB2	39:BR:42:ALA:CB	2.40	0.45
41:BT:83:ALA:O	41:BT:84:TYR:HB2	2.17	0.45
42:BU:11:ILE:CG2	42:BU:70:ALA:HB3	2.45	0.45
43:BW:23:LYS:O	43:BW:66:VAL:HB	2.17	0.45
44:BX:56:LEU:C	44:BX:58:ASN:N	2.70	0.45
1:CA:16:A:N1	1:CA:919:A:H2	2.15	0.45
1:CA:25:C:C5'	1:CA:524:G:H1'	2.47	0.45
1:CA:409:U:OP1	3:CD:23:GLY:HA3	2.16	0.45
1:CA:429:U:H5'	3:CD:8:LEU:CG	2.38	0.45
1:CA:936:C:H2'	1:CA:937:A:O4'	2.16	0.45
1:CA:1013:G:H2'	1:CA:1015:G:OP2	2.16	0.45
1:CA:1014:A:N3	1:CA:1219:A:H1'	2.31	0.45
1:CA:1159:U:O4'	1:CA:1182:G:N2	2.50	0.45
1:CA:1527:U:H2'	1:CA:1528:U:C6	2.52	0.45
3:CD:125:ASN:OD1	3:CD:140:ASP:HA	2.17	0.45
3:CD:162:GLU:HA	3:CD:166:LYS:NZ	2.32	0.45
5:CF:47:LEU:HD21	5:CF:57:ALA:CB	2.47	0.45
5:CF:93:LYS:O	5:CF:94:HIS:HB2	2.16	0.45
6:CG:72:VAL:HG12	6:CG:89:GLU:CA	2.47	0.45
8:CI:9:GLY:HA2	8:CI:80:HIS:HD2	1.81	0.45
12:CM:15:VAL:HG22	12:CM:33:LEU:CD1	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CP:2:VAL:O	15:CP:65:ALA:HA	2.16	0.45
20:CB:117:GLU:HA	20:CB:140:LEU:CD2	2.45	0.45
23:DB:117:G:C5'	23:DB:126:A:H8	2.20	0.45
23:DB:178:G:O2'	23:DB:179:C:H5'	2.17	0.45
23:DB:307:G:H2'	23:DB:309:A:OP2	2.16	0.45
23:DB:503:A:C2	23:DB:505:A:C4	3.05	0.45
23:DB:904:G:H2'	23:DB:905:A:C8	2.51	0.45
23:DB:990:A:H1'	23:DB:1156:A:C2	2.52	0.45
23:DB:1056:G:H5"	23:DB:1057:A:H5'	1.98	0.45
23:DB:1482:G:N2	23:DB:1508:A:H1'	2.31	0.45
23:DB:1515:A:H2'	23:DB:1516:G:O4'	2.16	0.45
23:DB:1737:G:H5'	23:DB:1738:G:OP2	2.17	0.45
23:DB:2109:U:C2	23:DB:2110:G:H5"	2.51	0.45
23:DB:2557:G:H2'	23:DB:2558:C:H6	1.79	0.45
23:DB:2594:C:O2'	23:DB:2595:G:H5'	2.17	0.45
27:DE:115:GLN:O	27:DE:117:ARG:HG3	2.16	0.45
30:DH:119:ASN:O	30:DH:121:VAL:HG23	2.16	0.45
32:DK:109:SER:OG	32:DK:111:LYS:HG2	2.17	0.45
33:DL:50:PHE:CE2	33:DL:53:GLY:HA2	2.52	0.45
35:DN:31:HIS:O	35:DN:32:GLU:HB2	2.17	0.45
36:DO:18:LEU:HD23	36:DO:25:ARG:HD2	1.99	0.45
39:DR:38:VAL:O	39:DR:53:PHE:HB3	2.16	0.45
43:DW:50:VAL:HG23	43:DW:51:GLY:H	1.80	0.45
46:DZ:70:GLU:O	46:DZ:72:ARG:N	2.46	0.45
1:AA:53:A:C2	1:AA:54:C:H1'	2.52	0.45
1:AA:79:G:C2'	1:AA:80:A:N7	2.79	0.45
1:AA:241:G:O2'	1:AA:242:G:H5'	2.16	0.45
1:AA:333:U:H2'	1:AA:334:C:C6	2.52	0.45
1:AA:364:A:H2'	1:AA:365:U:O2	2.16	0.45
1:AA:496:A:H2'	1:AA:497:G:C8	2.51	0.45
1:AA:552:U:H5'	11:AL:82:ARG:HH11	1.81	0.45
1:AA:1266:G:N2	1:AA:1268:G:H3'	2.32	0.45
1:AA:1363:A:N3	1:AA:1363:A:H2'	2.31	0.45
6:AG:13:PRO:O	6:AG:18:GLY:HA2	2.17	0.45
8:AI:9:GLY:HA2	8:AI:80:HIS:CD2	2.51	0.45
10:AK:122:PRO:HD2	21:AU:35:GLU:HG2	1.99	0.45
20:AB:94:ARG:HE	20:AB:94:ARG:N	2.15	0.45
20:AB:160:LEU:HD22	20:AB:182:VAL:HA	1.97	0.45
23:BB:26:G:H1'	23:BB:514:A:N6	2.31	0.45
23:BB:111:A:H2'	23:BB:112:U:O4'	2.16	0.45
23:BB:160:A:H1'	23:BB:2208:C:O2'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:220:G:H1	23:BB:427:U:H2'	1.82	0.45
23:BB:242:G:H5'	50:B3:63:TYR:CD1	2.52	0.45
23:BB:705:A:N6	23:BB:726:G:H1'	2.31	0.45
23:BB:726:G:H5"	23:BB:1432:G:O2'	2.17	0.45
23:BB:770:G:OP2	49:B2:11:LYS:HE2	2.17	0.45
23:BB:1207:C:H2'	23:BB:1208:C:H6	1.82	0.45
23:BB:1689:A:O2'	23:BB:1690:A:H5'	2.17	0.45
23:BB:1730:C:H1'	23:BB:1731:G:N2	2.32	0.45
23:BB:2201:G:O2'	23:BB:2202:U:H5'	2.16	0.45
23:BB:2489:U:O2'	23:BB:2490:G:H5'	2.16	0.45
23:BB:2808:G:O2'	23:BB:2809:A:H8	1.99	0.45
24:BV:49:ASN:O	24:BV:52:ALA:HB3	2.17	0.45
25:BC:6:LYS:O	25:BC:8:THR:HG23	2.16	0.45
27:BE:148:ILE:HA	27:BE:187:VAL:HB	1.98	0.45
27:BE:155:GLU:O	27:BE:159:LEU:HB2	2.17	0.45
28:BF:94:ARG:HD3	28:BF:97:GLU:OE2	2.17	0.45
28:BF:169:LEU:O	28:BF:174:PHE:HB2	2.16	0.45
30:BH:14:SER:C	30:BH:16:GLY:N	2.69	0.45
30:BH:89:LYS:HE2	30:BH:123:ARG:HB3	1.98	0.45
30:BH:114:GLU:HB2	30:BH:132:PHE:CE1	2.52	0.45
32:BK:35:VAL:HG12	32:BK:69:VAL:CG2	2.47	0.45
32:BK:120:PRO:HA	37:BP:65:ASN:HD21	1.81	0.45
35:BN:31:HIS:O	35:BN:32:GLU:HB2	2.15	0.45
38:BQ:4:LYS:CE	38:BQ:7:VAL:HG22	2.46	0.45
39:BR:43:ASN:ND2	39:BR:44:GLY:N	2.64	0.45
39:BR:68:ARG:HG2	39:BR:92:TRP:HA	1.99	0.45
41:BT:57:VAL:HG22	41:BT:58:VAL:N	2.21	0.45
42:BU:86:PHE:HB3	42:BU:90:LYS:O	2.17	0.45
43:BW:70:VAL:O	43:BW:70:VAL:HG13	2.16	0.45
52:BI:52:LEU:HD21	52:BI:81:LYS:NZ	2.31	0.45
52:BI:107:GLU:HA	52:BI:110:GLN:OE1	2.16	0.45
1:CA:246:A:C2	1:CA:282:A:C5	3.05	0.45
1:CA:250:A:H1'	1:CA:252:U:C5	2.52	0.45
1:CA:445:G:H2'	1:CA:446:G:O4'	2.17	0.45
1:CA:708:C:H2'	1:CA:709:U:C6	2.52	0.45
1:CA:818:G:H3'	1:CA:819:A:H5"	1.99	0.45
1:CA:864:A:H2'	1:CA:865:A:C8	2.52	0.45
1:CA:949:A:H2'	1:CA:950:U:O4'	2.15	0.45
2:CC:19:SER:HB2	2:CC:39:ARG:NH2	2.32	0.45
5:CF:1:MET:HG2	5:CF:67:PRO:HD3	1.99	0.45
5:CF:47:LEU:HD13	5:CF:51:ILE:HG22	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:117:LEU:HD22	8:CI:123:ARG:HG2	1.98	0.45
11:CL:60:PHE:O	11:CL:62:VAL:HG13	2.17	0.45
12:CM:52:ILE:HA	12:CM:55:LEU:HG	1.97	0.45
15:CP:67:ILE:O	15:CP:67:ILE:HG23	2.17	0.45
20:CB:83:ALA:HA	20:CB:88:GLN:HE21	1.80	0.45
23:DB:140:C:OP1	41:DT:2:ILE:HD12	2.16	0.45
23:DB:219:A:O2'	23:DB:220:G:H5'	2.17	0.45
23:DB:992:C:H2'	23:DB:993:G:C8	2.52	0.45
23:DB:1181:U:O2'	23:DB:1182:G:H5'	2.16	0.45
23:DB:1390:U:O2'	23:DB:1391:U:H5'	2.17	0.45
23:DB:1439:A:C5	23:DB:1552:A:N6	2.85	0.45
23:DB:1472:C:H2'	23:DB:1473:G:C8	2.52	0.45
23:DB:1516:G:O2'	23:DB:1517:G:H5'	2.16	0.45
23:DB:1565:C:H5"	25:DC:17:LYS:CE	2.47	0.45
23:DB:1606:C:H5"	23:DB:1607:C:OP1	2.16	0.45
23:DB:2050:C:H1'	26:DD:161:MET:CE	2.47	0.45
23:DB:2078:C:H2'	23:DB:2079:U:H6	1.81	0.45
23:DB:2219:U:H2'	23:DB:2220:U:C6	2.52	0.45
23:DB:2428:G:H5"	23:DB:2429:G:OP1	2.17	0.45
25:DC:144:GLU:HG3	25:DC:151:GLY:N	2.08	0.45
25:DC:185:ALA:C	25:DC:187:CYS:H	2.19	0.45
26:DD:15:PHE:HD1	26:DD:15:PHE:H	1.63	0.45
26:DD:61:THR:OG1	26:DD:63:PRO:HD2	2.17	0.45
26:DD:148:GLN:CB	26:DD:152:PRO:HG2	2.40	0.45
27:DE:157:LEU:O	27:DE:160:ALA:HB3	2.17	0.45
28:DF:11:VAL:HG21	28:DF:172:PHE:HE1	1.81	0.45
29:DG:94:ARG:HA	29:DG:128:THR:HG22	1.98	0.45
30:DH:125:THR:HA	30:DH:146:VAL:CG1	2.45	0.45
31:DJ:63:ALA:HA	31:DJ:69:ARG:HH22	1.81	0.45
32:DK:95:ILE:O	32:DK:95:ILE:HG13	2.17	0.45
32:DK:105:ARG:H	32:DK:122:VAL:HG12	1.82	0.45
35:DN:12:ARG:HG2	35:DN:16:HIS:ND1	2.31	0.45
42:DU:85:ARG:HH11	42:DU:86:PHE:N	2.14	0.45
42:DU:85:ARG:NH1	42:DU:86:PHE:N	2.65	0.45
43:DW:28:GLU:H	43:DW:31:LEU:HG	1.82	0.45
45:DY:9:THR:HB	45:DY:10:ARG:H	1.59	0.45
46:DZ:65:ASP:O	46:DZ:69:ALA:HB2	2.17	0.45
52:DI:57:VAL:HG23	52:DI:71:LYS:HZ1	1.80	0.45
1:AA:967:C:H5'	8:AI:129:ARG:HA	1.99	0.45
1:AA:1056:U:H2'	1:AA:1057:G:H8	1.81	0.45
2:AC:63:ILE:O	2:AC:65:VAL:HG23	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:2:ARG:HG3	3:AD:114:ARG:CZ	2.47	0.45
3:AD:11:SER:HA	3:AD:18:LEU:HD22	1.99	0.45
11:AL:15:VAL:O	11:AL:16:ALA:C	2.54	0.45
13:AN:26:LEU:HD23	13:AN:27:LYS:H	1.81	0.45
17:AR:52:ARG:O	17:AR:56:ARG:HG3	2.17	0.45
23:BB:587:C:N3	33:BL:33:ARG:NH2	2.64	0.45
23:BB:2215:C:H2'	23:BB:2216:G:C8	2.52	0.45
23:BB:2344:U:H2'	48:B1:35:LEU:O	2.16	0.45
23:BB:2391:G:HO2'	23:BB:2424:C:H41	1.64	0.45
23:BB:2428:G:H5"	23:BB:2429:G:OP1	2.17	0.45
23:BB:2885:G:H21	47:B0:31:LYS:HG2	1.82	0.45
24:BV:26:PHE:CE2	24:BV:44:HIS:HA	2.52	0.45
25:BC:102:TYR:O	25:BC:103:ILE:HG13	2.17	0.45
25:BC:141:HIS:O	25:BC:143:VAL:HG23	2.17	0.45
28:BF:102:LEU:O	28:BF:103:ILE:CB	2.64	0.45
29:BG:122:ALA:HA	29:BG:131:VAL:O	2.16	0.45
30:BH:90:LEU:HB3	30:BH:123:ARG:HD2	1.98	0.45
31:BJ:64:VAL:HG11	31:BJ:69:ARG:H	1.82	0.45
35:BN:114:GLU:CD	35:BN:118:ARG:HH11	2.19	0.45
35:BN:116:VAL:O	35:BN:116:VAL:HG13	2.17	0.45
36:BO:68:LYS:H	36:BO:102:ARG:CD	2.30	0.45
39:BR:61:ALA:CB	39:BR:98:ILE:H	2.30	0.45
40:BS:42:LYS:HG3	40:BS:43:ALA:N	2.32	0.45
41:BT:68:LYS:HD3	41:BT:68:LYS:N	2.32	0.45
43:BW:44:PHE:CE2	43:BW:76:ARG:HD3	2.51	0.45
43:BW:49:ASN:CB	43:BW:61:LYS:H	2.28	0.45
52:BI:116:MET:SD	52:BI:124:MET:HB2	2.56	0.45
1:CA:175:C:H2'	1:CA:176:C:C6	2.52	0.45
1:CA:201:G:O2'	1:CA:202:G:H5'	2.17	0.45
1:CA:332:G:H2'	1:CA:333:U:H6	1.82	0.45
1:CA:1057:G:H5"	2:CC:153:SER:CB	2.47	0.45
1:CA:1152:A:H4'	9:CJ:15:HIS:CD2	2.52	0.45
3:CD:104:MET:SD	3:CD:179:GLY:HA3	2.56	0.45
3:CD:106:PHE:CD1	3:CD:158:LEU:HD21	2.52	0.45
4:CE:89:THR:HG22	4:CE:90:GLY:N	2.31	0.45
10:CK:83:VAL:CG2	10:CK:106:ILE:HD11	2.47	0.45
14:CO:23:SER:HB3	14:CO:26:VAL:CG2	2.47	0.45
20:CB:23:ASN:O	20:CB:25:LYS:N	2.49	0.45
20:CB:53:LEU:HD13	20:CB:216:VAL:HG12	1.98	0.45
20:CB:86:CYS:SG	20:CB:87:ASP:N	2.87	0.45
20:CB:95:TRP:CH2	20:CB:100:LEU:HD13	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:221:ARG:HG3	20:CB:222:GLU:H	1.81	0.45
23:DB:135:U:H2'	23:DB:136:G:C8	2.52	0.45
23:DB:329:G:N1	42:DU:16:LYS:HG2	2.31	0.45
23:DB:771:G:OP1	49:D2:14:ARG:HD2	2.17	0.45
23:DB:826:U:H2'	23:DB:828:U:O4'	2.16	0.45
23:DB:1417:C:O5'	23:DB:1588:G:H1'	2.16	0.45
23:DB:2489:U:H2'	23:DB:2490:G:O4'	2.17	0.45
23:DB:2733:A:H2'	23:DB:2734:A:O4'	2.16	0.45
23:DB:2773:C:O2'	23:DB:2774:C:H5'	2.16	0.45
24:DV:26:PHE:CE2	24:DV:44:HIS:HA	2.52	0.45
25:DC:54:GLY:O	25:DC:214:GLY:HA2	2.16	0.45
26:DD:108:ASP:N	26:DD:204:LYS:O	2.49	0.45
26:DD:180:VAL:HG22	26:DD:187:LEU:HD12	1.99	0.45
28:DF:64:PRO:HA	28:DF:88:VAL:HG22	1.99	0.45
28:DF:140:ILE:O	28:DF:141:ASP:C	2.56	0.45
29:DG:109:SER:O	29:DG:110:HIS:HB3	2.17	0.45
30:DH:41:LYS:O	30:DH:45:GLU:HG3	2.17	0.45
30:DH:61:VAL:C	30:DH:63:ALA:H	2.20	0.45
31:DJ:64:VAL:HG11	31:DJ:69:ARG:H	1.82	0.45
32:DK:6:THR:O	32:DK:7:MET:HG2	2.17	0.45
33:DL:115:GLU:N	33:DL:115:GLU:OE1	2.49	0.45
35:DN:30:ARG:NH2	35:DN:72:ASP:OD1	2.50	0.45
36:DO:52:SER:H	36:DO:55:GLU:HG3	1.82	0.45
38:DQ:111:LYS:HB2	39:DR:48:LYS:HD2	1.98	0.45
39:DR:70:GLU:O	39:DR:90:ARG:HD2	2.16	0.45
41:DT:13:ALA:O	41:DT:33:LYS:N	2.50	0.45
41:DT:38:ALA:HB3	41:DT:81:LYS:HZ1	1.79	0.45
41:DT:55:VAL:HG22	41:DT:87:LEU:CD2	2.47	0.45
42:DU:11:ILE:HG12	42:DU:20:LYS:O	2.17	0.45
48:D1:46:VAL:HG13	48:D1:47:ILE:N	2.32	0.45
52:DI:17:ALA:C	52:DI:19:PRO:HD3	2.37	0.45
1:AA:222:C:H2'	1:AA:223:A:C8	2.52	0.45
1:AA:358:U:H2'	1:AA:359:G:C8	2.52	0.45
1:AA:454:G:O2'	1:AA:455:G:H5'	2.17	0.45
1:AA:859:G:O2'	1:AA:860:A:H5'	2.16	0.45
1:AA:865:A:H5'	1:AA:1078:U:C4	2.52	0.45
1:AA:968:A:H3'	1:AA:969:A:C5'	2.47	0.45
1:AA:1148:U:O4'	8:AI:17:ARG:HD3	2.17	0.45
1:AA:1352:C:H2'	1:AA:1353:G:H8	1.82	0.45
1:AA:1459:G:H2'	1:AA:1460:C:H6	1.80	0.45
4:AE:89:THR:HG22	4:AE:90:GLY:N	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AG:21:LEU:H	6:AG:21:LEU:CD2	2.24	0.45
8:AI:9:GLY:HA2	8:AI:80:HIS:HD2	1.81	0.45
10:AK:111:ASP:HB2	21:AU:19:LYS:HE3	1.99	0.45
16:AQ:52:CYS:SG	16:AQ:77:VAL:HG22	2.57	0.45
20:AB:48:MET:O	20:AB:52:ALA:HB3	2.17	0.45
21:AU:26:GLY:C	21:AU:28:LEU:N	2.71	0.45
23:BB:292:U:H2'	23:BB:293:U:O4'	2.17	0.45
23:BB:584:C:OP1	38:BQ:5:ARG:HB3	2.16	0.45
23:BB:632:A:H2'	23:BB:633:A:C8	2.52	0.45
23:BB:728:G:O2'	23:BB:730:A:H8	2.00	0.45
23:BB:911:A:N6	34:BM:9:PHE:HB3	2.32	0.45
23:BB:989:G:H5"	45:BY:13:ILE:HD11	1.99	0.45
23:BB:1064:C:H2'	23:BB:1065:U:O4'	2.17	0.45
23:BB:1207:C:H2'	23:BB:1208:C:C6	2.52	0.45
23:BB:1599:U:H2'	23:BB:1600:C:C6	2.52	0.45
23:BB:1695:G:N7	25:BC:13:ARG:NH2	2.65	0.45
23:BB:1796:U:O2'	23:BB:1797:G:H5'	2.17	0.45
23:BB:2211:A:OP2	23:BB:2211:A:H4'	2.16	0.45
23:BB:2315:G:H2'	23:BB:2316:G:H8	1.82	0.45
23:BB:2478:A:H2'	23:BB:2479:U:O4'	2.17	0.45
23:BB:2591:C:OP1	25:BC:237:ARG:HG3	2.17	0.45
25:BC:175:LEU:HD11	25:BC:181:ARG:HG3	1.98	0.45
26:BD:10:GLY:HA3	26:BD:26:VAL:H	1.82	0.45
26:BD:46:ARG:HH22	26:BD:86:GLU:N	2.15	0.45
26:BD:114:LYS:HZ1	26:BD:116:LYS:HG3	1.81	0.45
27:BE:4:VAL:HG12	27:BE:5:LEU:H	1.81	0.45
28:BF:2:LYS:O	28:BF:6:TYR:HB2	2.17	0.45
28:BF:3:LEU:HD11	28:BF:172:PHE:CD1	2.52	0.45
28:BF:141:ASP:O	28:BF:144:LYS:N	2.50	0.45
29:BG:23:ILE:HG22	29:BG:25:ILE:HD11	1.99	0.45
30:BH:8:LYS:HE3	1:CA:495:A:P	2.57	0.45
30:BH:92:GLY:HA3	1:CA:360:G:OP1	2.17	0.45
33:BL:77:ILE:HD12	33:BL:125:LEU:HD21	1.99	0.45
35:BN:90:ARG:HB3	35:BN:94:TYR:CE1	2.52	0.45
38:BQ:38:VAL:O	38:BQ:39:ILE:C	2.56	0.45
38:BQ:60:TRP:O	38:BQ:63:ARG:HG3	2.16	0.45
40:BS:24:ILE:CG2	40:BS:71:VAL:HG11	2.45	0.45
40:BS:88:ARG:HH21	40:BS:88:ARG:HG3	1.82	0.45
46:BZ:49:LEU:HB2	46:BZ:51:VAL:HG23	1.99	0.45
1:CA:356:A:H2'	1:CA:357:G:O4'	2.17	0.45
1:CA:586:C:O2'	1:CA:587:G:H5'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:614:C:C2’	1:CA:615:G:H5’	2.47	0.45
1:CA:721:G:H4’	1:CA:722:G:O4’	2.17	0.45
1:CA:743:A:H2’	1:CA:744:C:H6	1.80	0.45
1:CA:1020:G:H2’	1:CA:1020:G:N3	2.32	0.45
1:CA:1243:C:O2’	1:CA:1244:G:H5’	2.16	0.45
1:CA:1330:U:H2’	1:CA:1331:G:O4’	2.17	0.45
1:CA:1342:C:O2’	8:CI:125:GLN:HB3	2.17	0.45
4:CE:19:ARG:HH12	4:CE:28:ARG:HH12	1.65	0.45
6:CG:11:ILE:HG22	6:CG:12:LEU:N	2.32	0.45
7:CH:87:ARG:HD3	7:CH:90:GLU:OE1	2.17	0.45
15:CP:46:LYS:C	15:CP:48:GLU:N	2.70	0.45
16:CQ:80:LYS:O	16:CQ:80:LYS:HD2	2.16	0.45
17:CR:63:TYR:C	17:CR:64:LEU:HD12	2.37	0.45
20:CB:88:GLN:H	20:CB:88:GLN:HG3	1.49	0.45
21:CU:48:LYS:HG3	21:CU:49:ALA:N	2.31	0.45
23:DB:125:A:H4’	23:DB:126:A:OP2	2.17	0.45
23:DB:218:A:C2’	23:DB:219:A:H5’	2.47	0.45
23:DB:512:G:OP2	23:DB:1234:U:O2’	2.31	0.45
23:DB:1563:U:O2’	23:DB:1564:C:H5’	2.16	0.45
23:DB:1669:A:H2’	23:DB:1669:A:N3	2.31	0.45
23:DB:2472:G:C2’	23:DB:2475:C:H42	2.29	0.45
25:DC:83:ASP:HB3	25:DC:86:ARG:HG2	1.99	0.45
25:DC:107:LYS:N	25:DC:193:GLU:O	2.50	0.45
28:DF:28:PRO:O	28:DF:168:LEU:HG	2.17	0.45
28:DF:108:PRO:O	28:DF:110:ILE:HG23	2.17	0.45
28:DF:135:ILE:CD1	28:DF:137:PHE:HB3	2.44	0.45
30:DH:60:GLU:C	30:DH:62:LEU:H	2.19	0.45
36:DO:7:ARG:HA	36:DO:10:ARG:NH2	2.31	0.45
36:DO:88:LYS:HD2	36:DO:89:ASP:CB	2.46	0.45
38:DQ:107:ALA:C	39:DR:48:LYS:HD3	2.37	0.45
43:DW:45:HIS:N	43:DW:45:HIS:ND1	2.65	0.45
48:D1:36:LYS:HG2	48:D1:47:ILE:HA	1.99	0.45
51:D4:4:ARG:N	51:D4:37:GLN:HE22	2.15	0.45
1:AA:435:A:N3	1:AA:435:A:H2’	2.31	0.45
1:AA:474:G:O2’	1:AA:475:C:H5’	2.17	0.45
1:AA:593:U:O2’	1:AA:594:U:H5’	2.17	0.45
1:AA:642:A:C5	7:AH:106:SER:HA	2.52	0.45
1:AA:664:G:H5”	17:AR:52:ARG:HE	1.82	0.45
1:AA:744:C:H2’	1:AA:745:G:C8	2.52	0.45
1:AA:864:A:H2’	1:AA:865:A:C8	2.52	0.45
1:AA:865:A:O2’	1:AA:866:C:H5’	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1073:U:O2'	20:AB:102:ASN:OD1	2.28	0.45
1:AA:1152:A:H4'	9:AJ:15:HIS:CD2	2.52	0.45
3:AD:188:SER:C	3:AD:190:LEU:H	2.19	0.45
4:AE:131:ASN:O	4:AE:135:VAL:HG23	2.16	0.45
7:AH:74:ILE:CG1	7:AH:128:VAL:HG22	2.45	0.45
9:AJ:6:ILE:O	9:AJ:75:ASP:HA	2.17	0.45
9:AJ:55:PRO:O	9:AJ:56:HIS:HB3	2.17	0.45
10:AK:80:ASN:HB3	10:AK:105:ARG:HB3	1.99	0.45
13:AN:26:LEU:HD23	13:AN:27:LYS:N	2.32	0.45
20:AB:120:SER:HA	20:AB:125:PHE:HB3	1.99	0.45
22:BA:42:C:C4	28:BF:65:LEU:HD22	2.51	0.45
22:BA:112:G:O2'	22:BA:113:C:H5'	2.17	0.45
23:BB:322:A:C2	23:BB:340:A:C6	3.05	0.45
23:BB:681:G:H2'	23:BB:682:G:H8	1.82	0.45
23:BB:746:U:O3'	40:BS:90:LYS:NZ	2.50	0.45
23:BB:753:A:O2'	23:BB:754:U:H5'	2.17	0.45
23:BB:1010:A:OP1	38:BQ:61:ILE:HG22	2.17	0.45
23:BB:1047:G:O2'	23:BB:1110:G:N2	2.43	0.45
23:BB:1076:C:H2'	23:BB:1077:A:C8	2.52	0.45
23:BB:1163:G:H4'	39:BR:92:TRP:HE1	1.81	0.45
23:BB:1472:C:H2'	23:BB:1473:G:H8	1.82	0.45
23:BB:1872:A:H2'	23:BB:1873:G:O4'	2.17	0.45
23:BB:2247:A:H2'	23:BB:2248:C:H6	1.82	0.45
23:BB:2448:A:H4'	23:BB:2449:U:OP2	2.17	0.45
26:BD:8:LYS:O	26:BD:197:THR:HA	2.17	0.45
26:BD:179:ARG:HB3	26:BD:179:ARG:NH1	2.31	0.45
27:BE:102:ARG:O	27:BE:106:LYS:HG3	2.17	0.45
27:BE:132:LYS:O	27:BE:135:ALA:HB3	2.17	0.45
28:BF:98:PHE:C	28:BF:100:GLU:H	2.20	0.45
30:BH:59:ALA:O	30:BH:60:GLU:HB3	2.17	0.45
36:BO:7:ARG:CG	36:BO:7:ARG:HH11	2.30	0.45
40:BS:73:LYS:HD2	40:BS:73:LYS:HA	1.67	0.45
43:BW:65:LYS:N	43:BW:84:GLU:HB3	2.31	0.45
46:BZ:21:ALA:C	46:BZ:22:LEU:HG	2.37	0.45
48:B1:47:ILE:H	48:B1:47:ILE:HD12	1.82	0.45
52:BI:44:LYS:O	52:BI:48:ILE:HG13	2.16	0.45
1:CA:233:C:O2'	1:CA:234:C:H5'	2.17	0.45
1:CA:313:A:H2'	1:CA:314:C:H6	1.81	0.45
1:CA:503:C:H2'	1:CA:504:C:C6	2.52	0.45
1:CA:885:G:O2'	1:CA:886:G:H5'	2.16	0.45
1:CA:921:U:H2'	1:CA:922:G:H8	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1283:U:H2'	1:CA:1284:C:H6	1.82	0.45
1:CA:1411:C:O2'	1:CA:1412:C:H5'	2.17	0.45
3:CD:90:LEU:HD11	3:CD:194:ILE:HD11	1.99	0.45
3:CD:197:HIS:CE1	3:CD:198:LEU:HG	2.52	0.45
4:CE:64:GLU:O	4:CE:68:ARG:HG2	2.17	0.45
4:CE:71:ILE:HD12	4:CE:73:VAL:CG2	2.47	0.45
5:CF:97:THR:HG22	5:CF:98:GLU:N	2.32	0.45
8:CI:20:ILE:CD1	8:CI:85:ALA:HB3	2.47	0.45
10:CK:72:ALA:O	10:CK:75:GLU:HG2	2.17	0.45
11:CL:34:THR:O	11:CL:35:ARG:HD2	2.17	0.45
15:CP:52:LEU:CD2	15:CP:75:ILE:HA	2.46	0.45
20:CB:11:ALA:C	20:CB:13:VAL:H	2.20	0.45
20:CB:83:ALA:O	20:CB:88:GLN:HB2	2.16	0.45
23:DB:212:G:H2'	23:DB:213:A:C8	2.52	0.45
23:DB:264:C:H2'	23:DB:265:A:H5"	1.98	0.45
23:DB:561:G:H8	23:DB:561:G:O5'	2.00	0.45
23:DB:671:C:O2'	23:DB:672:C:H5'	2.17	0.45
23:DB:750:A:H2'	23:DB:751:A:H5"	1.99	0.45
23:DB:962:G:H2'	23:DB:963:U:C6	2.51	0.45
23:DB:1488:C:O2'	23:DB:1489:C:H5'	2.16	0.45
23:DB:1666:G:H4'	32:DK:6:THR:HG23	1.99	0.45
23:DB:1877:A:H2'	23:DB:1878:G:C8	2.52	0.45
23:DB:1904:G:H1'	23:DB:1927:A:N1	2.32	0.45
23:DB:2227:A:H5"	25:DC:260:LYS:HD2	1.97	0.45
23:DB:2296:U:H4'	23:DB:2297:A:OP1	2.16	0.45
23:DB:2386:A:H2	43:DW:38:ARG:HB3	1.80	0.45
23:DB:2473:U:O2	23:DB:2473:U:C2'	2.65	0.45
23:DB:2537:U:H2'	23:DB:2538:C:H6	1.81	0.45
23:DB:2591:C:O2'	23:DB:2592:G:H5'	2.17	0.45
23:DB:2808:G:O2'	23:DB:2809:A:H8	1.98	0.45
24:DV:60:VAL:HG22	24:DV:73:LYS:HE2	1.99	0.45
26:DD:8:LYS:CA	26:DD:201:LEU:HD11	2.47	0.45
26:DD:130:GLN:HB2	26:DD:139:SER:O	2.16	0.45
27:DE:128:ALA:O	27:DE:133:LEU:HD12	2.16	0.45
28:DF:139:GLU:OE2	28:DF:142:TYR:HA	2.17	0.45
32:DK:15:GLY:HA3	32:DK:52:VAL:CG2	2.45	0.45
32:DK:35:VAL:HG12	32:DK:69:VAL:CG2	2.46	0.45
36:DO:111:ARG:HG2	36:DO:117:PHE:CE2	2.52	0.45
41:DT:66:LYS:N	41:DT:76:ARG:HH21	2.15	0.45
42:DU:11:ILE:CG2	42:DU:70:ALA:HB3	2.45	0.45
42:DU:49:PRO:O	42:DU:50:ALA:HB2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DW:77:LYS:HD3	43:DW:77:LYS:HA	1.82	0.45
49:D2:6:GLN:HA	49:D2:6:GLN:NE2	2.32	0.45
52:DI:5:GLN:HB2	52:DI:30:GLN:OE1	2.17	0.45
52:DI:23:VAL:HG12	52:DI:27:LEU:HD21	1.97	0.45
1:AA:64:G:OP1	1:AA:64:G:H3'	2.17	0.44
1:AA:477:C:H2'	1:AA:478:A:C8	2.51	0.44
1:AA:503:C:H2'	1:AA:504:C:H6	1.81	0.44
1:AA:668:G:O2'	1:AA:669:G:H5'	2.16	0.44
1:AA:861:G:H2'	1:AA:862:C:C6	2.52	0.44
1:AA:1313:U:OP2	18:AS:5:LYS:HA	2.17	0.44
1:AA:1469:C:H2'	1:AA:1470:U:O4'	2.16	0.44
1:AA:1498:U:O5'	1:AA:1498:U:H6	1.99	0.44
1:AA:1499:A:H1'	1:AA:1520:C:OP1	2.17	0.44
1:AA:1514:G:H2'	1:AA:1515:G:H8	1.82	0.44
1:AA:1527:U:O2'	1:AA:1528:U:H5'	2.16	0.44
2:AC:129:PHE:CD2	2:AC:156:LEU:HD22	2.52	0.44
2:AC:171:ARG:HH11	2:AC:171:ARG:CB	2.25	0.44
3:AD:29:THR:CG2	3:AD:30:LYS:HD3	2.47	0.44
4:AE:95:MET:HA	4:AE:124:ALA:HB2	1.98	0.44
6:AG:125:ASP:HB3	6:AG:131:GLY:N	2.33	0.44
8:AI:20:ILE:HD13	8:AI:85:ALA:HB3	1.99	0.44
15:AP:2:VAL:O	15:AP:65:ALA:HA	2.17	0.44
20:AB:99:MET:CA	20:AB:106:VAL:HG21	2.43	0.44
21:AU:25:ALA:O	21:AU:27:VAL:N	2.50	0.44
21:AU:26:GLY:C	21:AU:28:LEU:H	2.19	0.44
23:BB:218:A:O2'	23:BB:219:A:H5'	2.17	0.44
23:BB:441:U:O2'	23:BB:442:G:H5'	2.17	0.44
23:BB:453:A:H1'	23:BB:457:A:O2'	2.18	0.44
23:BB:561:G:H8	23:BB:561:G:O5'	2.00	0.44
23:BB:904:G:H2'	23:BB:905:A:C8	2.50	0.44
23:BB:1249:U:O4'	38:BQ:3:VAL:HG21	2.17	0.44
23:BB:1708:C:O2'	23:BB:1709:U:H5'	2.17	0.44
23:BB:1733:G:H5'	23:BB:1733:G:H8	1.82	0.44
23:BB:2102:G:H2'	23:BB:2103:C:H5'	1.99	0.44
23:BB:2439:A:C8	23:BB:2586:U:H4'	2.53	0.44
23:BB:2683:C:O2'	23:BB:2684:U:H5'	2.17	0.44
23:BB:2852:G:H2'	23:BB:2853:C:O4'	2.17	0.44
25:BC:221:GLY:O	25:BC:223:ALA:N	2.50	0.44
26:BD:109:VAL:CG1	26:BD:193:VAL:HB	2.47	0.44
28:BF:29:ARG:HD3	28:BF:158:THR:OG1	2.16	0.44
28:BF:126:ASN:CB	28:BF:156:THR:HA	2.44	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BH:143:ILE:O	30:BH:144:VAL:HG23	2.17	0.44
31:BJ:35:ARG:HG3	31:BJ:40:HIS:HE2	1.82	0.44
33:BL:125:LEU:HD23	33:BL:126:ARG:N	2.32	0.44
33:BL:142:ILE:HD12	33:BL:142:ILE:N	2.31	0.44
35:BN:7:GLY:HA2	35:BN:46:ARG:HH12	1.79	0.44
36:BO:100:HIS:HA	36:BO:104:GLN:NE2	2.32	0.44
38:BQ:57:ARG:HH12	38:BQ:61:ILE:CD1	2.30	0.44
38:BQ:65:ASN:CG	38:BQ:75:TYR:HB2	2.37	0.44
41:BT:55:VAL:HG13	41:BT:85:VAL:HG12	2.00	0.44
47:B0:55:ALA:C	47:B0:56:LYS:HG3	2.37	0.44
1:CA:87:C:H2'	1:CA:88:U:C6	2.51	0.44
1:CA:202:G:H2'	1:CA:203:G:C8	2.52	0.44
1:CA:669:G:H2'	1:CA:670:G:C8	2.52	0.44
1:CA:797:C:O2'	1:CA:798:U:H5'	2.17	0.44
1:CA:968:A:H3'	1:CA:969:A:C5'	2.47	0.44
1:CA:1002:G:H2'	1:CA:1003:G:O4'	2.17	0.44
1:CA:1071:C:O2'	1:CA:1072:G:H5'	2.16	0.44
1:CA:1436:U:H2'	1:CA:1437:A:C8	2.52	0.44
1:CA:1454:G:H2'	1:CA:1455:G:H8	1.81	0.44
5:CF:40:GLU:CB	5:CF:61:LEU:HB2	2.46	0.44
6:CG:14:ASP:HB2	6:CG:19:SER:O	2.17	0.44
6:CG:101:ARG:HG2	6:CG:105:GLU:OE2	2.17	0.44
10:CK:88:PRO:HG3	21:CU:28:LEU:HD21	1.99	0.44
13:CN:16:ALA:O	13:CN:20:PHE:HB3	2.17	0.44
20:CB:129:THR:C	20:CB:131:LYS:N	2.69	0.44
20:CB:138:ARG:O	20:CB:141:GLU:HB2	2.17	0.44
23:DB:522:A:H2'	23:DB:523:C:H6	1.80	0.44
23:DB:643:A:N7	23:DB:644:A:N7	2.65	0.44
23:DB:673:C:H5"	27:DE:76:PRO:HD2	1.99	0.44
23:DB:817:C:O2'	23:DB:839:U:H5"	2.16	0.44
23:DB:921:C:H2'	23:DB:922:C:C6	2.52	0.44
23:DB:1251:C:O2'	23:DB:1252:G:H3'	2.17	0.44
23:DB:1505:A:H2'	23:DB:1506:U:C6	2.52	0.44
23:DB:1734:G:O2'	23:DB:1735:A:H5'	2.17	0.44
23:DB:1932:A:H2'	23:DB:1933:G:O4'	2.17	0.44
23:DB:2107:G:H3'	23:DB:2108:A:H8	1.82	0.44
23:DB:2215:C:H2'	23:DB:2216:G:H8	1.81	0.44
23:DB:2439:A:C8	23:DB:2586:U:H4'	2.52	0.44
23:DB:2578:G:O2'	23:DB:2579:C:H5'	2.16	0.44
23:DB:2742:G:O2'	23:DB:2743:U:H5'	2.17	0.44
24:DV:28:ALA:HA	24:DV:88:HIS:ND1	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DV:89:ILE:O	24:DV:89:ILE:HD12	2.17	0.44
26:DD:101:PHE:CZ	26:DD:204:LYS:HA	2.51	0.44
27:DE:3:LEU:O	27:DE:12:LEU:N	2.50	0.44
31:DJ:18:VAL:CG1	31:DJ:54:ILE:HD11	2.46	0.44
35:DN:80:PHE:O	35:DN:85:PRO:HD3	2.18	0.44
37:DP:31:VAL:CG1	37:DP:38:ARG:HB2	2.48	0.44
37:DP:61:ARG:HD3	37:DP:70:GLU:CG	2.45	0.44
37:DP:75:THR:O	37:DP:80:VAL:HG11	2.16	0.44
42:DU:86:PHE:CG	42:DU:87:GLU:N	2.85	0.44
52:DI:102:ARG:HG3	52:DI:141:ASP:CB	2.47	0.44
1:AA:25:C:C5'	1:AA:524:G:H1'	2.47	0.44
1:AA:58:C:O2'	1:AA:59:A:H5'	2.17	0.44
1:AA:284:C:O2'	1:AA:285:C:H5'	2.17	0.44
1:AA:653:U:C6	7:AH:55:LYS:HE2	2.52	0.44
1:AA:967:C:H4'	8:AI:129:ARG:HG2	1.99	0.44
1:AA:1020:G:H2'	1:AA:1020:G:N3	2.32	0.44
1:AA:1035:A:H2'	1:AA:1036:A:C8	2.51	0.44
1:AA:1138:G:H3'	1:AA:1138:G:N3	2.32	0.44
1:AA:1194:U:H2'	1:AA:1195:C:C6	2.53	0.44
1:AA:1276:G:H2'	1:AA:1277:C:C6	2.53	0.44
1:AA:1342:C:O2'	8:AI:125:GLN:HB3	2.17	0.44
1:AA:1408:A:O2'	1:AA:1409:C:H5'	2.17	0.44
2:AC:35:ASP:O	2:AC:39:ARG:HG3	2.16	0.44
5:AF:3:HIS:HA	5:AF:64:VAL:O	2.17	0.44
5:AF:45:ARG:NH2	17:AR:25:ILE:HD13	2.32	0.44
8:AI:20:ILE:CD1	8:AI:85:ALA:HB3	2.48	0.44
12:AM:77:LYS:O	12:AM:80:MET:HG2	2.16	0.44
17:AR:57:ALA:O	17:AR:60:ARG:HG3	2.16	0.44
19:AT:56:ILE:O	19:AT:60:GLN:HG2	2.16	0.44
20:AB:14:HIS:HD2	20:AB:202:ASN:H	1.64	0.44
22:BA:35:C:H2'	22:BA:36:C:O4'	2.17	0.44
22:BA:93:C:O2'	22:BA:94:A:H5'	2.16	0.44
23:BB:19:A:H2'	23:BB:20:C:C6	2.52	0.44
23:BB:156:A:O2'	23:BB:157:C:H5'	2.18	0.44
23:BB:533:G:H2'	23:BB:534:U:C6	2.53	0.44
23:BB:616:A:H5"	56:BB:3449:HOH:O	2.16	0.44
23:BB:729:G:C5	25:BC:206:LYS:HB2	2.52	0.44
23:BB:786:C:H5"	23:BB:1780:A:C8	2.52	0.44
23:BB:1060:U:C4	52:BI:131:THR:HG22	2.51	0.44
23:BB:2300:C:H2'	23:BB:2301:C:H6	1.81	0.44
23:BB:2743:U:H3'	23:BB:2744:G:H5"	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2816:G:O3'	35:BN:99:LYS:HE3	2.16	0.44
23:BB:2884:U:H4'	47:B0:49:ARG:NH2	2.32	0.44
25:BC:185:ALA:C	25:BC:187:CYS:H	2.20	0.44
25:BC:250:GLN:CD	25:BC:254:LYS:HG2	2.37	0.44
26:BD:16:THR:HG22	26:BD:17:GLU:N	2.33	0.44
26:BD:35:THR:OG1	26:BD:49:GLN:HG2	2.17	0.44
26:BD:51:THR:HG22	26:BD:76:GLY:HA3	1.99	0.44
26:BD:110:THR:HG21	26:BD:169:ARG:HH11	1.83	0.44
27:BE:149:ILE:HG23	27:BE:188:MET:HA	1.99	0.44
29:BG:94:ARG:HB2	29:BG:127:GLN:HG2	1.98	0.44
30:BH:27:ARG:HH11	46:BZ:64:ILE:CD1	2.30	0.44
31:BJ:103:ILE:HG13	31:BJ:104:ALA:N	2.32	0.44
32:BK:87:LEU:HD12	32:BK:92:GLU:C	2.37	0.44
34:BM:32:GLY:HA2	34:BM:117:PHE:CZ	2.52	0.44
36:BO:9:ARG:HA	36:BO:12:THR:OG1	2.17	0.44
36:BO:52:SER:H	36:BO:55:GLU:HG3	1.82	0.44
39:BR:60:LYS:H	39:BR:100:GLY:N	2.15	0.44
46:BZ:53:ALA:C	46:BZ:55:GLY:H	2.18	0.44
47:B0:18:HIS:HD1	47:B0:18:HIS:N	2.14	0.44
48:B1:7:LYS:NZ	50:B3:33:THR:HG22	2.32	0.44
50:B3:6:VAL:HB	50:B3:60:CYS:HB3	1.98	0.44
1:CA:227:G:H2'	1:CA:228:A:C8	2.53	0.44
1:CA:366:A:H1'	1:CA:395:C:O2	2.16	0.44
1:CA:454:G:O2'	1:CA:455:G:H5'	2.17	0.44
1:CA:473:U:O5'	1:CA:473:U:H6	2.00	0.44
1:CA:526:C:OP2	11:CL:87:LYS:HE3	2.18	0.44
1:CA:647:C:H2'	1:CA:648:A:C8	2.51	0.44
1:CA:716:A:H1'	10:CK:119:GLY:HA2	1.99	0.44
1:CA:1081:A:O2'	1:CA:1082:A:H5'	2.17	0.44
1:CA:1138:G:H3'	1:CA:1138:G:N3	2.33	0.44
1:CA:1313:U:OP2	18:CS:5:LYS:HA	2.17	0.44
2:CC:63:ILE:HD12	2:CC:90:VAL:HG12	1.99	0.44
5:CF:3:HIS:HA	5:CF:64:VAL:O	2.17	0.44
11:CL:49:ARG:N	11:CL:49:ARG:HD2	2.32	0.44
20:CB:16:GLY:HA2	20:CB:40:ILE:H	1.80	0.44
22:DA:94:A:O2'	22:DA:95:U:H5'	2.17	0.44
23:DB:131:A:H2'	23:DB:132:G:H8	1.82	0.44
23:DB:265:A:O2'	23:DB:266:G:C4'	2.64	0.44
23:DB:599:A:H2'	23:DB:600:G:H8	1.83	0.44
23:DB:746:U:O3'	40:DS:90:LYS:NZ	2.49	0.44
23:DB:1210:G:H5'	23:DB:1212:G:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1374:G:O2'	23:DB:1375:U:H5'	2.18	0.44
23:DB:1641:A:H2'	23:DB:1642:G:O4'	2.18	0.44
23:DB:1874:C:H2'	23:DB:1875:G:O4'	2.18	0.44
23:DB:2027:G:O2'	23:DB:2028:U:H5'	2.18	0.44
23:DB:2156:G:C2'	23:DB:2157:G:H4'	2.45	0.44
23:DB:2230:G:H2'	23:DB:2231:U:C6	2.52	0.44
23:DB:2369:A:H2'	23:DB:2370:G:H8	1.83	0.44
23:DB:2611:C:O2'	23:DB:2612:C:H5'	2.18	0.44
23:DB:2869:G:H2'	23:DB:2870:C:C6	2.52	0.44
25:DC:6:LYS:O	25:DC:8:THR:HG23	2.17	0.44
27:DE:38:GLY:C	27:DE:40:ARG:H	2.19	0.44
27:DE:108:ILE:HG13	33:DL:2:ARG:HH22	1.80	0.44
31:DJ:101:ILE:O	31:DJ:104:ALA:HB3	2.16	0.44
32:DK:113:MET:HE1	32:DK:116:ILE:HD11	1.98	0.44
38:DQ:33:VAL:HG23	38:DQ:34:ALA:H	1.81	0.44
39:DR:14:VAL:HG21	39:DR:98:ILE:HG12	2.00	0.44
41:DT:74:ILE:HG13	41:DT:75:GLY:N	2.32	0.44
42:DU:13:LEU:HD12	42:DU:68:ASN:O	2.17	0.44
42:DU:20:LYS:HB3	42:DU:21:ARG:H	1.62	0.44
43:DW:30:VAL:O	43:DW:30:VAL:HG22	2.16	0.44
47:D0:9:ARG:HB2	47:D0:12:ARG:NH2	2.33	0.44
48:D1:47:ILE:H	48:D1:47:ILE:HD12	1.82	0.44
52:DI:27:LEU:HD23	52:DI:27:LEU:N	2.22	0.44
52:DI:100:ILE:HG23	52:DI:104:GLN:OE1	2.17	0.44
1:AA:203:G:H1'	1:AA:465:A:N6	2.32	0.44
1:AA:237:G:H2'	1:AA:238:A:C8	2.51	0.44
1:AA:395:C:H2'	1:AA:396:C:C6	2.52	0.44
1:AA:513:C:H2'	1:AA:514:C:H6	1.83	0.44
1:AA:626:G:H2'	1:AA:627:G:C8	2.53	0.44
1:AA:677:U:H1'	10:AK:120:CYS:SG	2.58	0.44
1:AA:781:A:H2'	1:AA:782:A:C5'	2.40	0.44
1:AA:817:C:H1'	1:AA:819:A:C5'	2.40	0.44
1:AA:1163:A:H2'	1:AA:1164:G:C8	2.51	0.44
1:AA:1212:U:H4'	1:AA:1213:A:C8	2.53	0.44
1:AA:1222:G:H2'	1:AA:1223:C:H5'	1.99	0.44
1:AA:1451:U:O3'	1:AA:1452:C:H6	2.00	0.44
3:AD:97:LEU:HD13	3:AD:136:VAL:CG1	2.47	0.44
9:AJ:8:ILE:HA	9:AJ:100:ILE:HG22	1.99	0.44
9:AJ:80:THR:HG21	9:AJ:82:LYS:NZ	2.32	0.44
18:AS:33:TRP:C	18:AS:35:ARG:H	2.20	0.44
23:BB:118:A:N3	23:BB:178:G:H1'	2.31	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:240:C:H5”	23:BB:241:A:H5”	1.98	0.44
23:BB:264:C:H2’	23:BB:265:A:H5”	2.00	0.44
23:BB:342:A:H2’	23:BB:343:C:O4’	2.17	0.44
23:BB:674:G:O3’	27:BE:60:TRP:HZ2	2.01	0.44
23:BB:817:C:O2’	23:BB:839:U:H5”	2.17	0.44
23:BB:1372:U:O2’	23:BB:1373:A:H5’	2.17	0.44
23:BB:1544:A:H2’	23:BB:1545:A:C8	2.52	0.44
23:BB:1727:C:H2’	23:BB:1728:C:H6	1.83	0.44
23:BB:1792:G:OP1	25:BC:204:LEU:HD12	2.17	0.44
23:BB:1803:A:H4’	25:BC:256:THR:OG1	2.17	0.44
23:BB:1932:A:H2’	23:BB:1933:G:O4’	2.18	0.44
23:BB:2217:G:H2’	23:BB:2218:G:H8	1.83	0.44
23:BB:2246:G:H2’	23:BB:2247:A:H8	1.81	0.44
23:BB:2306:C:C5	23:BB:2307:G:H2’	2.52	0.44
24:BV:66:ASP:HB2	24:BV:68:LYS:CE	2.42	0.44
25:BC:199:HIS:C	25:BC:201:LEU:H	2.21	0.44
26:BD:11:MET:H	26:BD:25:THR:HA	1.82	0.44
26:BD:108:ASP:N	26:BD:204:LYS:O	2.51	0.44
28:BF:62:GLN:HE21	28:BF:91:ARG:NE	2.15	0.44
30:BH:58:LEU:HG	30:BH:62:LEU:HD23	2.00	0.44
32:BK:85:VAL:HG21	32:BK:115:ILE:HD11	1.99	0.44
33:BL:47:ARG:HG3	33:BL:48:ARG:N	2.32	0.44
35:BN:61:ALA:C	35:BN:63:ARG:N	2.71	0.44
38:BQ:38:VAL:O	38:BQ:41:ALA:N	2.51	0.44
38:BQ:81:GLY:HA3	38:BQ:116:LEU:CD1	2.48	0.44
38:BQ:96:ASP:C	38:BQ:98:ALA:H	2.19	0.44
39:BR:39:LEU:CA	39:BR:53:PHE:HA	2.44	0.44
41:BT:54:GLU:HB3	41:BT:88:LYS:HB2	1.99	0.44
43:BW:18:LYS:H	43:BW:35:ILE:CG2	2.29	0.44
43:BW:50:VAL:HG23	43:BW:51:GLY:H	1.82	0.44
47:B0:18:HIS:C	47:B0:20:ALA:H	2.21	0.44
50:B3:61:LEU:N	50:B3:62:PRO:HD3	2.32	0.44
1:CA:564:C:C4	16:CQ:32:ILE:HD11	2.52	0.44
1:CA:837:U:H2’	1:CA:838:G:H8	1.82	0.44
1:CA:859:G:O2’	1:CA:860:A:H5’	2.16	0.44
1:CA:938:A:H1’	1:CA:1376:U:O2’	2.17	0.44
1:CA:996:A:H2	1:CA:1045:C:HO2’	1.63	0.44
1:CA:1498:U:H6	1:CA:1498:U:O5’	2.00	0.44
1:CA:1514:G:H2’	1:CA:1515:G:H8	1.83	0.44
2:CC:154:GLY:HA2	2:CC:163:ARG:H	1.82	0.44
3:CD:13:ARG:HG3	3:CD:55:ARG:NH1	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:20:LEU:C	3:CD:21:LYS:HD2	2.38	0.44
4:CE:33:THR:HG22	4:CE:51:LYS:CB	2.46	0.44
6:CG:49:LEU:HD21	6:CG:60:ALA:CB	2.46	0.44
6:CG:67:ASN:ND2	6:CG:127:ALA:HA	2.32	0.44
13:CN:26:LEU:HD23	13:CN:27:LYS:H	1.81	0.44
18:CS:38:THR:HG22	18:CS:68:HIS:O	2.16	0.44
23:DB:53:A:H2'	23:DB:54:G:O4'	2.17	0.44
23:DB:80:G:O5'	23:DB:346:A:H1'	2.16	0.44
23:DB:138:U:O2'	23:DB:140:C:OP1	2.34	0.44
23:DB:1098:A:O5'	52:DI:3:LYS:HG2	2.17	0.44
23:DB:1161:C:H4'	39:DR:8:GLY:O	2.17	0.44
23:DB:1225:G:P	39:DR:71:LYS:HZ2	2.41	0.44
23:DB:1244:A:H5"	33:DL:8:PRO:CD	2.29	0.44
23:DB:1444:G:H2'	23:DB:1445:G:H8	1.82	0.44
23:DB:1727:C:H2'	23:DB:1728:C:H6	1.82	0.44
23:DB:1803:A:O3'	25:DC:256:THR:HB	2.17	0.44
23:DB:2199:A:H3'	23:DB:2200:C:C6	2.52	0.44
23:DB:2252:G:O2'	23:DB:2253:G:H5'	2.17	0.44
23:DB:2262:U:O2'	23:DB:2263:C:H5'	2.18	0.44
23:DB:2282:G:H5"	23:DB:2283:C:O4'	2.17	0.44
23:DB:2768:U:H2'	23:DB:2769:U:O4'	2.17	0.44
23:DB:2886:A:H2'	23:DB:2887:A:O4'	2.17	0.44
23:DB:2901:C:O2'	23:DB:2902:C:H5'	2.18	0.44
25:DC:221:GLY:O	25:DC:223:ALA:N	2.51	0.44
26:DD:7:LYS:HD2	26:DD:198:GLY:HA2	2.00	0.44
26:DD:114:LYS:HZ1	26:DD:116:LYS:HG3	1.81	0.44
26:DD:178:VAL:HB	26:DD:188:LEU:CB	2.48	0.44
27:DE:150:THR:O	27:DE:192:ALA:HB2	2.17	0.44
28:DF:71:LYS:O	28:DF:71:LYS:HG2	2.18	0.44
28:DF:121:PHE:HB2	28:DF:126:ASN:O	2.18	0.44
28:DF:126:ASN:CB	28:DF:156:THR:HA	2.46	0.44
30:DH:39:ALA:O	30:DH:41:LYS:N	2.49	0.44
31:DJ:11:VAL:HG21	31:DJ:13:ARG:NH1	2.33	0.44
32:DK:35:VAL:CG2	32:DK:36:GLY:H	2.07	0.44
37:DP:105:LYS:HA	37:DP:105:LYS:HD3	1.81	0.44
38:DQ:57:ARG:HH12	38:DQ:61:ILE:CD1	2.31	0.44
38:DQ:81:GLY:O	38:DQ:85:ALA:N	2.50	0.44
39:DR:49:ILE:HD13	39:DR:53:PHE:H	1.82	0.44
43:DW:19:ARG:NE	43:DW:19:ARG:H	2.15	0.44
50:D3:6:VAL:HB	50:D3:60:CYS:HB3	1.99	0.44
52:DI:70:THR:O	52:DI:70:THR:HG23	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:338:A:H2'	1:AA:339:C:C6	2.53	0.44
1:AA:473:U:H6	1:AA:473:U:O5'	2.00	0.44
1:AA:488:C:O2'	1:AA:489:C:H5'	2.18	0.44
1:AA:596:A:H2'	1:AA:597:G:C8	2.52	0.44
1:AA:938:A:H1'	1:AA:1376:U:O2'	2.18	0.44
1:AA:993:G:N2	1:AA:996:A:N6	2.65	0.44
1:AA:1178:G:H2'	1:AA:1180:A:OP2	2.17	0.44
1:AA:1314:C:H2'	1:AA:1315:U:C6	2.52	0.44
1:AA:1390:U:H2'	1:AA:1391:U:C6	2.51	0.44
2:AC:174:LEU:HD11	2:AC:200:TRP:NE1	2.32	0.44
5:AF:67:PRO:O	5:AF:70:VAL:HG22	2.17	0.44
6:AG:55:LYS:H	6:AG:55:LYS:HG2	1.62	0.44
9:AJ:12:ALA:H	9:AJ:18:ILE:HD13	1.82	0.44
11:AL:60:PHE:O	11:AL:62:VAL:HG13	2.17	0.44
11:AL:71:HIS:HD2	11:AL:73:LEU:HG	1.82	0.44
13:AN:20:PHE:CD2	13:AN:55:SER:HA	2.51	0.44
13:AN:30:ILE:CG2	13:AN:41:TRP:HB2	2.44	0.44
16:AQ:10:ARG:NH2	16:AQ:55:GLY:HA2	2.33	0.44
18:AS:39:ILE:HG12	18:AS:70:LEU:CD1	2.48	0.44
20:AB:16:GLY:HA2	20:AB:40:ILE:H	1.81	0.44
23:BB:26:G:H2'	23:BB:27:G:C1'	2.48	0.44
23:BB:84:A:H4'	23:BB:85:G:O5'	2.16	0.44
23:BB:143:C:H2'	23:BB:144:A:C8	2.51	0.44
23:BB:329:G:N1	42:BU:16:LYS:HE3	2.30	0.44
23:BB:591:U:H1'	50:B3:1:PRO:H2	1.77	0.44
23:BB:841:G:O2'	23:BB:842:U:H5'	2.17	0.44
23:BB:1059:G:H2'	23:BB:1060:U:C6	2.52	0.44
23:BB:1173:U:N3	23:BB:1174:U:H1'	2.32	0.44
23:BB:1341:G:O4'	41:BT:61:LEU:HD23	2.16	0.44
23:BB:1387:A:H4'	23:BB:1469:A:H1'	1.98	0.44
23:BB:1541:C:O2'	23:BB:1542:U:H5'	2.17	0.44
23:BB:1640:A:O2'	23:BB:1641:A:H5'	2.18	0.44
23:BB:1870:C:H3'	23:BB:1871:A:C8	2.52	0.44
23:BB:2526:G:H5'	23:BB:2742:G:O2'	2.16	0.44
23:BB:2880:C:C1'	35:BN:91:ALA:HB3	2.46	0.44
23:BB:2886:A:H2'	23:BB:2887:A:O4'	2.16	0.44
25:BC:68:ARG:HB3	25:BC:128:THR:OG1	2.17	0.44
26:BD:3:GLY:HA2	26:BD:101:PHE:CZ	2.53	0.44
28:BF:69:ALA:HB3	28:BF:80:GLN:O	2.18	0.44
29:BG:94:ARG:HH21	29:BG:105:SER:H	1.63	0.44
31:BJ:4:PHE:HB3	31:BJ:44:TYR:CD1	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BL:132:ARG:O	33:BL:136:GLU:HG2	2.17	0.44
35:BN:80:PHE:O	35:BN:85:PRO:HD3	2.17	0.44
37:BP:31:VAL:CG1	37:BP:38:ARG:HB2	2.47	0.44
37:BP:33:GLU:OE2	37:BP:38:ARG:NE	2.49	0.44
37:BP:61:ARG:HD3	37:BP:70:GLU:CG	2.47	0.44
38:BQ:7:VAL:O	38:BQ:8:ILE:C	2.56	0.44
38:BQ:91:ARG:HB2	39:BR:11:GLN:CD	2.38	0.44
38:BQ:108:LEU:HA	39:BR:48:LYS:HD3	1.99	0.44
39:BR:38:VAL:O	39:BR:53:PHE:HB3	2.17	0.44
39:BR:71:LYS:HG2	39:BR:73:LYS:HZ3	1.79	0.44
42:BU:84:PHE:O	42:BU:85:ARG:CB	2.63	0.44
44:BX:7:ARG:HA	44:BX:7:ARG:HD2	1.83	0.44
1:CA:175:C:O2	1:CA:1447:A:H2	2.01	0.44
1:CA:631:C:H3’	1:CA:632:U:H5’	1.99	0.44
1:CA:634:C:H2’	1:CA:635:A:C8	2.52	0.44
1:CA:939:G:H2’	1:CA:940:C:C6	2.52	0.44
1:CA:982:U:H5”	13:CN:5:MET:HE1	1.99	0.44
1:CA:1069:C:H5”	4:CE:25:LYS:HZ3	1.82	0.44
1:CA:1329:A:O2’	1:CA:1330:U:H5’	2.17	0.44
2:CC:78:LYS:HE3	2:CC:79:LYS:NZ	2.32	0.44
5:CF:45:ARG:HH22	17:CR:25:ILE:HD13	1.81	0.44
8:CI:30:ASN:ND2	8:CI:65:THR:HA	2.32	0.44
10:CK:122:PRO:HD2	21:CU:35:GLU:HG2	2.00	0.44
10:CK:126:ARG:HB2	21:CU:33:ARG:HD2	2.00	0.44
12:CM:37:GLY:O	12:CM:38:ILE:HD13	2.18	0.44
13:CN:60:ARG:NH2	13:CN:69:PRO:HB3	2.32	0.44
13:CN:86:ALA:HA	13:CN:91:GLU:HG3	1.99	0.44
16:CQ:60:ILE:HG22	16:CQ:74:LEU:HA	1.99	0.44
22:DA:116:G:H4’	36:DO:54:VAL:CG2	2.40	0.44
23:DB:67:U:H2’	23:DB:68:G:C8	2.52	0.44
23:DB:108:G:O2’	23:DB:109:C:H5’	2.17	0.44
23:DB:159:G:O2’	23:DB:160:A:H5”	2.17	0.44
23:DB:246:C:O2’	23:DB:247:G:H5’	2.17	0.44
23:DB:714:U:H2’	23:DB:716:A:OP2	2.18	0.44
23:DB:993:G:N3	39:DR:91:GLN:NE2	2.57	0.44
23:DB:1092:C:H2’	23:DB:1093:G:C5’	2.46	0.44
23:DB:1258:U:H2’	23:DB:1259:G:C8	2.52	0.44
23:DB:1344:U:O2’	23:DB:1385:A:H2’	2.18	0.44
23:DB:1525:A:H2’	23:DB:1526:C:O4’	2.18	0.44
23:DB:1711:A:O2’	23:DB:1712:U:H5’	2.17	0.44
23:DB:2104:C:H3’	23:DB:2104:C:H6	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2531:A:O2'	23:DB:2532:G:H5'	2.17	0.44
23:DB:2693:G:H2'	23:DB:2694:G:C8	2.48	0.44
25:DC:216:ARG:HH11	25:DC:216:ARG:HG3	1.81	0.44
28:DF:3:LEU:HD13	28:DF:3:LEU:O	2.17	0.44
28:DF:43:ILE:HG13	28:DF:44:ALA:N	2.33	0.44
28:DF:70:ARG:HA	28:DF:80:GLN:NE2	2.32	0.44
28:DF:162:ASP:C	28:DF:166:ARG:HH11	2.20	0.44
30:DH:101:ASP:O	30:DH:104:THR:HB	2.17	0.44
30:DH:112:LYS:HA	30:DH:132:PHE:HE1	1.81	0.44
31:DJ:40:HIS:HE1	31:DJ:41:LYS:HE3	1.82	0.44
32:DK:35:VAL:HG12	32:DK:69:VAL:HG22	1.98	0.44
33:DL:141:LYS:C	33:DL:142:ILE:HD12	2.38	0.44
34:DM:10:ARG:HH21	34:DM:10:ARG:HG3	1.83	0.44
41:DT:65:GLY:HA3	41:DT:76:ARG:NH2	2.33	0.44
48:D1:18:HIS:NE2	48:D1:40:PRO:HD2	2.31	0.44
49:D2:39:ARG:HG3	49:D2:39:ARG:HH11	1.81	0.44
52:DI:140:GLU:H	52:DI:140:GLU:CD	2.21	0.44
1:AA:458:U:H2'	1:AA:459:A:C8	2.53	0.44
1:AA:486:U:O2'	1:AA:487:A:H5'	2.18	0.44
1:AA:537:G:H2'	1:AA:538:G:C8	2.52	0.44
1:AA:586:C:O2'	1:AA:587:G:H5'	2.17	0.44
1:AA:751:U:O2'	14:AO:24:THR:HG23	2.18	0.44
1:AA:940:C:H2'	1:AA:941:G:C8	2.52	0.44
1:AA:1014:A:N3	1:AA:1219:A:H1'	2.33	0.44
1:AA:1080:A:O3'	4:AE:20:VAL:HG11	2.17	0.44
1:AA:1219:A:H2'	1:AA:1220:G:H8	1.82	0.44
1:AA:1388:C:H2'	1:AA:1389:C:H6	1.83	0.44
1:AA:1510:C:H2'	1:AA:1511:G:H8	1.82	0.44
2:AC:5:HIS:ND1	13:AN:88:MET:HB3	2.33	0.44
3:AD:25:ARG:HD3	3:AD:26:ALA:HB3	1.99	0.44
3:AD:123:MET:HA	3:AD:128:VAL:HA	1.99	0.44
8:AI:10:ARG:CB	8:AI:15:ALA:HA	2.48	0.44
8:AI:19:PHE:HB2	8:AI:63:TYR:HB3	1.99	0.44
10:AK:74:LYS:HG3	10:AK:104:PHE:CZ	2.52	0.44
10:AK:112:VAL:HA	17:AR:72:ARG:HH21	1.82	0.44
13:AN:23:ARG:C	13:AN:25:GLU:H	2.21	0.44
13:AN:86:ALA:HA	13:AN:91:GLU:HG3	1.99	0.44
20:AB:18:GLN:HB2	20:AB:188:THR:OG1	2.17	0.44
20:AB:218:ALA:O	20:AB:222:GLU:N	2.51	0.44
21:AU:39:LYS:N	21:AU:40:PRO:CD	2.81	0.44
23:BB:124:G:C5	49:B2:19:ARG:NH1	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:264:C:O2'	23:BB:265:A:H5"	2.18	0.44
23:BB:601:C:O2	23:BB:605:G:H4'	2.17	0.44
23:BB:629:G:O2'	23:BB:630:G:H5'	2.18	0.44
23:BB:935:C:H2'	23:BB:936:A:C8	2.52	0.44
23:BB:1091:G:O2'	23:BB:1092:C:H5'	2.17	0.44
23:BB:1163:G:H4'	39:BR:92:TRP:NE1	2.31	0.44
23:BB:1183:U:O2'	23:BB:1184:U:H5'	2.17	0.44
23:BB:1309:G:H4'	49:B2:7:PRO:HB2	1.99	0.44
23:BB:1439:A:H1'	23:BB:1553:A:N6	2.33	0.44
23:BB:2300:C:H2'	23:BB:2301:C:C6	2.52	0.44
27:BE:29:HIS:CD2	33:BL:8:PRO:HA	2.52	0.44
30:BH:114:GLU:O	30:BH:115:VAL:HG13	2.17	0.44
31:BJ:44:TYR:HB2	38:BQ:63:ARG:HD2	1.99	0.44
31:BJ:57:LEU:HG	31:BJ:128:ASN:N	2.31	0.44
35:BN:9:GLN:O	35:BN:17:ARG:HD3	2.17	0.44
38:BQ:91:ARG:HE	38:BQ:94:LEU:CD2	2.30	0.44
39:BR:39:LEU:HD22	39:BR:53:PHE:CD1	2.53	0.44
42:BU:11:ILE:N	42:BU:70:ALA:O	2.45	0.44
42:BU:94:PHE:HB2	42:BU:101:THR:HA	2.00	0.44
49:B2:19:ARG:O	49:B2:22:MET:HB2	2.18	0.44
1:CA:49:U:O2	1:CA:362:G:H1'	2.18	0.44
1:CA:254:G:OP1	16:CQ:68:LYS:O	2.36	0.44
1:CA:770:C:O2'	1:CA:771:G:H5'	2.17	0.44
1:CA:923:A:OP1	4:CE:25:LYS:HB3	2.17	0.44
1:CA:1299:A:C2'	1:CA:1301:U:H1'	2.47	0.44
1:CA:1454:G:H2'	1:CA:1455:G:C8	2.53	0.44
1:CA:1502:A:HO2'	1:CA:1503:A:P	2.40	0.44
4:CE:148:SER:HB2	4:CE:150:GLU:OE1	2.18	0.44
7:CH:5:PRO:HB2	7:CH:32:LYS:NZ	2.32	0.44
8:CI:48:ARG:O	8:CI:52:GLU:HG2	2.16	0.44
9:CJ:32:THR:HG23	9:CJ:32:THR:O	2.17	0.44
9:CJ:50:THR:HG22	9:CJ:62:ARG:HD2	2.00	0.44
11:CL:89:LEU:N	11:CL:89:LEU:HD22	2.33	0.44
12:CM:57:ASP:O	12:CM:61:LYS:HE2	2.16	0.44
13:CN:50:LEU:CG	13:CN:51:PRO:HD3	2.48	0.44
16:CQ:47:ASP:CG	16:CQ:50:ASN:HA	2.38	0.44
18:CS:40:PHE:HB3	18:CS:41:PRO:HD2	1.98	0.44
20:CB:31:PHE:HB3	20:CB:39:ILE:CG2	2.48	0.44
20:CB:142:LYS:HA	20:CB:145:ASN:CG	2.38	0.44
23:DB:84:A:H4'	23:DB:85:G:O5'	2.18	0.44
23:DB:188:G:H5"	46:DZ:14:THR:CG2	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:302:C:H2'	23:DB:303:G:H8	1.83	0.44
23:DB:309:A:N3	23:DB:329:G:O2'	2.45	0.44
23:DB:407:G:O2'	23:DB:408:G:H5'	2.16	0.44
23:DB:644:A:H2	23:DB:646:U:O4	1.99	0.44
23:DB:1100:C:H41	52:DI:1:ALA:H2	1.66	0.44
23:DB:1153:C:H2'	23:DB:1154:G:O4'	2.17	0.44
23:DB:1183:U:O2'	23:DB:1184:U:H5'	2.18	0.44
23:DB:1403:A:H2'	23:DB:1404:C:H6	1.83	0.44
23:DB:1465:G:H2'	23:DB:1466:U:C6	2.52	0.44
23:DB:1496:A:H2'	23:DB:1498:C:C5	2.53	0.44
23:DB:1593:A:H2'	23:DB:1594:U:H6	1.78	0.44
23:DB:1904:G:O2'	23:DB:1905:C:H5'	2.18	0.44
23:DB:2246:G:H2'	23:DB:2247:A:H8	1.83	0.44
23:DB:2419:U:OP2	50:D3:32:LEU:HD13	2.17	0.44
23:DB:2448:A:H4'	23:DB:2449:U:OP2	2.16	0.44
23:DB:2456:C:H2'	23:DB:2457:U:O4'	2.17	0.44
24:DV:71:LYS:HB2	24:DV:94:ALA:OXT	2.16	0.44
25:DC:140:VAL:HG12	25:DC:141:HIS:N	2.22	0.44
26:DD:33:ARG:HG2	26:DD:33:ARG:NH2	2.32	0.44
28:DF:29:ARG:HD3	28:DF:158:THR:OG1	2.17	0.44
28:DF:46:LYS:NZ	28:DF:83:PRO:HD2	2.33	0.44
28:DF:59:ILE:HG12	28:DF:137:PHE:CE2	2.53	0.44
29:DG:154:GLU:OE1	29:DG:157:LYS:HB2	2.18	0.44
30:DH:57:LYS:HG3	30:DH:58:LEU:N	2.32	0.44
35:DN:31:HIS:C	35:DN:33:ILE:H	2.21	0.44
35:DN:33:ILE:C	35:DN:34:ILE:HG13	2.38	0.44
39:DR:6:GLN:HE22	39:DR:9:GLY:C	2.21	0.44
39:DR:75:VAL:O	39:DR:76:LYS:HD2	2.17	0.44
40:DS:4:ILE:CG2	40:DS:106:VAL:HG22	2.48	0.44
40:DS:60:HIS:O	40:DS:60:HIS:ND1	2.50	0.44
40:DS:61:ASN:HB3	40:DS:62:ASP:H	1.56	0.44
42:DU:84:PHE:HE2	42:DU:93:ARG:HG2	1.82	0.44
43:DW:23:LYS:HZ3	43:DW:24:ARG:CG	2.27	0.44
47:D0:18:HIS:HD1	47:D0:18:HIS:N	2.16	0.44
48:D1:3:GLY:C	48:D1:5:ARG:N	2.71	0.44
52:DI:21:PRO:HB2	52:DI:22:PRO:CD	2.43	0.44
1:AA:44:A:O2'	1:AA:45:G:H5'	2.18	0.44
1:AA:107:G:O6	19:AT:9:ARG:HD3	2.17	0.44
1:AA:356:A:H2'	1:AA:357:G:O4'	2.18	0.44
1:AA:618:C:N3	1:AA:622:A:N6	2.63	0.44
1:AA:1105:A:O2'	1:AA:1106:G:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1134:G:N2	1:AA:1135:U:H1'	2.32	0.44
1:AA:1175:G:O2'	1:AA:1176:A:H5'	2.18	0.44
1:AA:1318:A:H4'	18:AS:9:PHE:CE1	2.53	0.44
1:AA:1456:A:H2'	1:AA:1457:G:O4'	2.17	0.44
2:AC:129:PHE:HD2	2:AC:156:LEU:HD22	1.83	0.44
4:AE:104:ILE:CG2	4:AE:111:ARG:HH12	2.23	0.44
5:AF:35:LYS:HB2	5:AF:65:GLU:HB3	2.00	0.44
9:AJ:18:ILE:HG13	9:AJ:72:ARG:HG2	1.98	0.44
10:AK:47:GLY:C	10:AK:49:SER:H	2.21	0.44
15:AP:67:ILE:HG23	15:AP:67:ILE:O	2.18	0.44
20:AB:187:ASP:OD1	20:AB:203:ASP:HB3	2.17	0.44
23:BB:182:A:H1'	23:BB:434:U:H5'	2.00	0.44
23:BB:212:G:H2'	23:BB:213:A:H8	1.81	0.44
23:BB:309:A:N3	23:BB:329:G:O2'	2.48	0.44
23:BB:311:A:H3'	23:BB:312:G:C8	2.52	0.44
23:BB:483:A:H2'	23:BB:484:C:H5'	2.00	0.44
23:BB:538:A:H2'	23:BB:539:G:O4'	2.17	0.44
23:BB:599:A:H2'	23:BB:600:G:H8	1.82	0.44
23:BB:1286:A:H1'	23:BB:1288:G:OP2	2.18	0.44
23:BB:1637:A:H5'	23:BB:1760:C:O2'	2.17	0.44
23:BB:2301:C:H2'	23:BB:2302:U:H6	1.82	0.44
23:BB:2389:G:H5"	23:BB:2390:U:O4'	2.18	0.44
23:BB:2571:U:O2'	26:BD:152:PRO:HG3	2.18	0.44
23:BB:2646:C:H2'	23:BB:2647:U:O4'	2.18	0.44
25:BC:180:MET:O	25:BC:267:VAL:HG23	2.17	0.44
32:BK:106:GLU:OE1	32:BK:106:GLU:N	2.47	0.44
36:BO:36:TYR:N	36:BO:36:TYR:CD2	2.86	0.44
38:BQ:94:LEU:C	38:BQ:96:ASP:N	2.71	0.44
39:BR:6:GLN:HE22	39:BR:9:GLY:N	2.16	0.44
39:BR:59:ILE:HA	39:BR:100:GLY:HA3	1.99	0.44
41:BT:7:LEU:C	41:BT:9:LYS:H	2.20	0.44
41:BT:11:LEU:CD2	41:BT:46:ALA:HB1	2.44	0.44
41:BT:54:GLU:CB	41:BT:88:LYS:HB2	2.48	0.44
42:BU:49:PRO:O	42:BU:50:ALA:HB2	2.16	0.44
42:BU:73:ASN:HD21	42:BU:76:THR:H	1.66	0.44
43:BW:70:VAL:CG2	43:BW:75:ASN:HD21	2.31	0.44
46:BZ:68:LEU:HD22	46:BZ:78:TYR:CE1	2.53	0.44
48:B1:3:GLY:O	48:B1:5:ARG:N	2.50	0.44
49:B2:39:ARG:HG3	49:B2:39:ARG:NH1	2.32	0.44
1:CA:57:G:H2'	1:CA:58:C:C6	2.52	0.44
1:CA:570:G:H2'	1:CA:571:U:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:594:U:O2'	1:CA:595:A:H5'	2.17	0.44
1:CA:861:G:H2'	1:CA:862:C:C6	2.52	0.44
1:CA:948:C:O2'	1:CA:949:A:H5'	2.17	0.44
1:CA:1105:A:O2'	1:CA:1106:G:H5'	2.18	0.44
1:CA:1261:A:H1'	1:CA:1275:A:N1	2.32	0.44
1:CA:1296:C:H5'	12:CM:13:HIS:CE1	2.53	0.44
2:CC:35:ASP:O	2:CC:39:ARG:HG3	2.17	0.44
5:CF:12:PRO:C	5:CF:14:GLN:H	2.21	0.44
5:CF:66:ALA:HB1	5:CF:70:VAL:HG21	2.00	0.44
6:CG:11:ILE:HD12	6:CG:11:ILE:N	2.33	0.44
8:CI:118:ARG:NH1	8:CI:122:ARG:HE	2.16	0.44
12:CM:84:CYS:O	12:CM:88:LEU:HG	2.16	0.44
12:CM:89:ARG:CB	12:CM:96:VAL:HG22	2.47	0.44
19:CT:35:TYR:CG	19:CT:36:ALA:N	2.85	0.44
23:DB:83:A:H5"	42:DU:1:ALA:N	2.33	0.44
23:DB:179:C:H2'	23:DB:180:G:O4'	2.17	0.44
23:DB:231:A:H3'	23:DB:232:G:C8	2.53	0.44
23:DB:550:C:H2'	23:DB:551:G:H8	1.82	0.44
23:DB:601:C:O2	23:DB:605:G:H4'	2.17	0.44
23:DB:1062:G:H2'	23:DB:1063:G:C8	2.53	0.44
23:DB:1063:G:O2'	52:DI:88:GLY:HA3	2.17	0.44
23:DB:1201:U:O2'	23:DB:1202:G:H5'	2.18	0.44
23:DB:1535:A:C5'	23:DB:1536:C:H5	2.30	0.44
23:DB:2049:G:O2'	23:DB:2050:C:H5'	2.18	0.44
23:DB:2233:U:H2'	23:DB:2234:G:H8	1.83	0.44
23:DB:2247:A:H2'	23:DB:2248:C:H6	1.83	0.44
23:DB:2304:G:H2'	23:DB:2304:G:N3	2.31	0.44
23:DB:2409:G:H2'	23:DB:2410:G:O4'	2.16	0.44
23:DB:2730:C:H4'	26:DD:174:SER:HB3	1.99	0.44
23:DB:2786:U:H5'	26:DD:70:LYS:HG3	1.99	0.44
26:DD:51:THR:HG22	26:DD:76:GLY:HA3	1.97	0.44
26:DD:202:ILE:HG22	26:DD:202:ILE:O	2.16	0.44
27:DE:200:LEU:HD22	27:DE:200:LEU:N	2.33	0.44
28:DF:98:PHE:C	28:DF:100:GLU:H	2.20	0.44
29:DG:84:LYS:HB2	29:DG:132:LEU:H	1.83	0.44
31:DJ:64:VAL:O	31:DJ:65:THR:HG22	2.17	0.44
33:DL:75:ALA:HB2	33:DL:101:ILE:HG23	2.00	0.44
33:DL:125:LEU:HD23	33:DL:126:ARG:H	1.82	0.44
40:DS:81:SER:CA	40:DS:99:ARG:HA	2.46	0.44
43:DW:23:LYS:O	43:DW:66:VAL:HB	2.18	0.44
45:DY:3:THR:HB	45:DY:36:GLU:CG	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DZ:32:ASN:O	46:DZ:33:LEU:O	2.35	0.44
48:D1:38:PHE:O	48:D1:40:PRO:HD3	2.18	0.44
49:D2:26:ASN:HA	49:D2:29:GLN:HB3	1.99	0.44
1:AA:244:U:O4	1:AA:906:A:H1'	2.17	0.44
1:AA:342:C:O2'	1:AA:343:U:H5'	2.18	0.44
1:AA:502:A:H2'	1:AA:503:C:O4'	2.17	0.44
1:AA:599:C:H4'	7:AH:121:GLY:CA	2.48	0.44
1:AA:647:C:H2'	1:AA:648:A:C8	2.52	0.44
2:AC:52:SER:O	2:AC:113:LYS:HG2	2.18	0.44
3:AD:2:ARG:HH22	3:AD:132:ALA:CB	2.30	0.44
6:AG:67:ASN:ND2	6:AG:127:ALA:HA	2.32	0.44
7:AH:29:SER:OG	7:AH:32:LYS:HG3	2.17	0.44
10:AK:70:ALA:C	10:AK:72:ALA:N	2.71	0.44
11:AL:49:ARG:HD2	11:AL:49:ARG:N	2.32	0.44
18:AS:10:ILE:HB	18:AS:14:LEU:HD21	2.00	0.44
19:AT:49:ALA:CA	19:AT:52:GLU:HB3	2.47	0.44
20:AB:16:GLY:HA2	20:AB:40:ILE:CG1	2.48	0.44
20:AB:16:GLY:HA2	20:AB:40:ILE:HG13	2.00	0.44
20:AB:40:ILE:HD13	20:AB:201:GLY:CA	2.47	0.44
20:AB:64:GLY:HA2	20:AB:158:ASP:OD1	2.17	0.44
23:BB:28:A:O2'	23:BB:583:G:H5'	2.17	0.44
23:BB:64:A:H2'	23:BB:65:U:H6	1.81	0.44
23:BB:83:A:N1	23:BB:101:A:H5'	2.32	0.44
23:BB:137:U:H2'	41:BT:1:MET:N	2.33	0.44
23:BB:364:C:O5'	23:BB:364:C:H6	2.01	0.44
23:BB:613:A:H4'	23:BB:614:A:OP2	2.18	0.44
23:BB:765:C:H2'	23:BB:766:U:H6	1.83	0.44
23:BB:1076:C:H2'	23:BB:1077:A:H8	1.82	0.44
23:BB:1147:A:O2'	23:BB:1148:U:H5'	2.18	0.44
23:BB:1439:A:C5	23:BB:1552:A:N6	2.85	0.44
23:BB:1591:A:O2'	23:BB:1592:C:H5'	2.17	0.44
23:BB:1656:C:H2'	23:BB:1657:U:H6	1.82	0.44
23:BB:1826:G:H2'	23:BB:1827:U:C6	2.51	0.44
23:BB:2459:A:H2'	23:BB:2459:A:N3	2.33	0.44
23:BB:2466:C:O2'	23:BB:2467:C:H5'	2.18	0.44
23:BB:2618:G:H2'	23:BB:2619:C:H6	1.83	0.44
23:BB:2848:G:N2	23:BB:2867:G:C2	2.86	0.44
24:BV:2:PHE:HD1	24:BV:50:MET:HE2	1.83	0.44
25:BC:52:HIS:O	25:BC:53:ILE:HB	2.17	0.44
26:BD:8:LYS:HA	26:BD:201:LEU:HD11	1.99	0.44
26:BD:14:ILE:HG23	26:BD:14:ILE:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BF:24:VAL:O	28:BF:27:VAL:HG22	2.18	0.44
28:BF:43:ILE:CG2	28:BF:44:ALA:H	2.16	0.44
28:BF:140:ILE:O	28:BF:141:ASP:C	2.56	0.44
33:BL:89:VAL:O	33:BL:89:VAL:HG13	2.17	0.44
33:BL:93:ASN:HB2	33:BL:94:THR:H	1.66	0.44
37:BP:26:GLU:HB2	37:BP:86:LYS:HD3	2.00	0.44
38:BQ:104:ALA:HA	39:BR:46:GLU:OE2	2.18	0.44
41:BT:12:ARG:HA	44:BX:29:ARG:NH2	2.26	0.44
41:BT:61:LEU:HG	41:BT:82:LYS:HB2	1.99	0.44
42:BU:51:LEU:HD22	42:BU:52:ASN:OD1	2.17	0.44
43:BW:18:LYS:HA	43:BW:18:LYS:HD2	1.72	0.44
43:BW:37:VAL:HB	43:BW:38:ARG:HD3	1.98	0.44
45:BY:50:VAL:O	45:BY:54:VAL:HG22	2.17	0.44
47:B0:26:SER:HB3	47:B0:39:ARG:NH2	2.33	0.44
52:BI:102:ARG:HA	52:BI:105:LEU:HD12	1.99	0.44
1:CA:338:A:H2'	1:CA:339:C:C6	2.53	0.44
1:CA:600:A:OP2	7:CH:87:ARG:HG2	2.18	0.44
1:CA:669:G:H2'	1:CA:670:G:H8	1.83	0.44
1:CA:686:U:O4	1:CA:703:G:H1'	2.18	0.44
3:CD:25:ARG:O	3:CD:27:ILE:N	2.51	0.44
3:CD:48:SER:O	3:CD:49:ASP:C	2.56	0.44
5:CF:81:ASN:O	5:CF:84:VAL:HG12	2.18	0.44
9:CJ:49:PHE:HB2	9:CJ:65:TYR:HB2	1.99	0.44
9:CJ:80:THR:O	9:CJ:84:VAL:HG23	2.18	0.44
11:CL:105:GLY:HA3	11:CL:117:GLY:O	2.17	0.44
18:CS:33:TRP:C	18:CS:35:ARG:H	2.21	0.44
18:CS:52:ASN:ND2	18:CS:53:GLY:H	2.15	0.44
21:CU:39:LYS:N	21:CU:40:PRO:CD	2.81	0.44
22:DA:65:U:C2'	22:DA:66:A:H5'	2.48	0.44
23:DB:24:G:H1'	40:DS:77:ASP:HB3	2.00	0.44
23:DB:39:G:O2'	23:DB:40:U:H5'	2.18	0.44
23:DB:357:C:H2'	23:DB:358:U:C6	2.53	0.44
23:DB:729:G:H5"	23:DB:730:A:H5"	1.98	0.44
23:DB:1286:A:H1'	23:DB:1288:G:OP2	2.18	0.44
23:DB:1537:G:N3	23:DB:1537:G:H5"	2.33	0.44
23:DB:1749:A:H2'	23:DB:1750:G:H8	1.83	0.44
23:DB:1754:A:OP1	37:DP:93:LYS:HD3	2.18	0.44
23:DB:1851:U:H2'	23:DB:1852:U:H6	1.83	0.44
23:DB:2073:C:C5'	25:DC:227:VAL:HG12	2.45	0.44
23:DB:2156:G:H2'	23:DB:2157:G:C4'	2.45	0.44
23:DB:2248:C:H2'	23:DB:2249:U:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2580:U:C5'	26:DD:136:ASN:H	2.31	0.44
23:DB:2693:G:O2'	23:DB:2694:G:H5'	2.18	0.44
26:DD:171:THR:OG1	26:DD:172:VAL:N	2.50	0.44
28:DF:42:ALA:O	28:DF:44:ALA:N	2.50	0.44
28:DF:111:ARG:N	28:DF:111:ARG:CD	2.80	0.44
29:DG:28:LYS:O	29:DG:30:GLY:N	2.50	0.44
29:DG:58:ALA:C	29:DG:60:GLY:H	2.21	0.44
31:DJ:20:ALA:CB	31:DJ:28:LEU:HD22	2.48	0.44
32:DK:19:VAL:HG13	32:DK:43:ILE:HA	1.99	0.44
39:DR:26:ASP:O	39:DR:27:ILE:HD13	2.18	0.44
39:DR:86:GLN:HE21	39:DR:86:GLN:HB2	1.53	0.44
42:DU:86:PHE:HE1	42:DU:88:ASP:OD1	2.01	0.44
1:AA:570:G:H2'	1:AA:571:U:C6	2.52	0.44
1:AA:643:C:H5'	7:AH:31:LEU:HD13	2.00	0.44
1:AA:708:C:H2'	1:AA:709:U:C6	2.53	0.44
1:AA:1245:C:H2'	1:AA:1246:A:H8	1.81	0.44
2:AC:122:GLN:O	2:AC:127:VAL:HG13	2.17	0.44
4:AE:21:SER:CB	4:AE:28:ARG:HE	2.22	0.44
5:AF:71:ILE:HG13	5:AF:72:ASP:N	2.33	0.44
6:AG:46:LEU:O	6:AG:57:GLU:HG3	2.18	0.44
6:AG:129:ASN:HD22	6:AG:137:ARG:HH22	1.63	0.44
8:AI:52:GLU:C	8:AI:53:LEU:HD22	2.38	0.44
8:AI:82:ILE:O	8:AI:86:LEU:HB2	2.17	0.44
12:AM:57:ASP:O	12:AM:61:LYS:HE2	2.17	0.44
16:AQ:47:ASP:CG	16:AQ:50:ASN:HA	2.38	0.44
17:AR:63:TYR:C	17:AR:64:LEU:HD12	2.37	0.44
18:AS:77:ARG:H	18:AS:77:ARG:HG2	1.56	0.44
20:AB:46:VAL:HA	20:AB:49:PHE:HD2	1.82	0.44
23:BB:59:U:H5'	23:BB:73:A:N1	2.33	0.44
23:BB:231:A:H3'	23:BB:232:G:C8	2.53	0.44
23:BB:866:A:O2'	23:BB:867:C:H5'	2.18	0.44
23:BB:1210:G:H5'	23:BB:1212:G:C4'	2.47	0.44
23:BB:1336:A:H3'	23:BB:1337:G:H8	1.81	0.44
23:BB:1463:C:H2'	23:BB:1464:G:H8	1.82	0.44
23:BB:1821:A:H2'	23:BB:1822:C:H6	1.81	0.44
23:BB:1933:G:H2'	23:BB:1934:C:C6	2.53	0.44
23:BB:1998:A:H2'	23:BB:1999:C:C6	2.53	0.44
23:BB:2369:A:H2'	23:BB:2370:G:H8	1.83	0.44
23:BB:2462:C:H2'	23:BB:2463:C:H6	1.82	0.44
23:BB:2487:G:H2'	23:BB:2488:G:H8	1.83	0.44
23:BB:2699:C:H2'	23:BB:2700:A:C8	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BF:64:PRO:HA	28:BF:88:VAL:HG22	1.99	0.44
28:BF:74:ALA:C	28:BF:76:PHE:H	2.21	0.44
28:BF:135:ILE:CD1	28:BF:137:PHE:HB3	2.45	0.44
34:BM:10:ARG:HH11	34:BM:89:VAL:HG23	1.83	0.44
35:BN:90:ARG:HB3	35:BN:94:TYR:HE1	1.82	0.44
37:BP:88:ARG:HB2	37:BP:112:ARG:HH12	1.78	0.44
40:BS:66:ILE:H	40:BS:66:ILE:CD1	2.26	0.44
44:BX:59:GLU:N	44:BX:59:GLU:OE2	2.51	0.44
46:BZ:49:LEU:HD11	46:BZ:68:LEU:HD21	2.00	0.44
49:B2:6:GLN:NE2	49:B2:6:GLN:HA	2.33	0.44
1:CA:865:A:O2'	1:CA:866:C:H5'	2.17	0.44
2:CC:6:PRO:HB3	2:CC:174:LEU:HD21	1.99	0.44
2:CC:46:LEU:HB3	2:CC:49:ALA:CB	2.48	0.44
4:CE:11:GLN:HB2	4:CE:116:VAL:HB	2.00	0.44
6:CG:22:LEU:O	6:CG:25:PHE:HB3	2.18	0.44
6:CG:72:VAL:HG12	6:CG:89:GLU:CB	2.45	0.44
6:CG:87:PRO:O	6:CG:152:HIS:HB3	2.18	0.44
9:CJ:8:ILE:CD1	9:CJ:76:ILE:HG13	2.48	0.44
20:CB:16:GLY:HA3	20:CB:40:ILE:H	1.83	0.44
20:CB:99:MET:CA	20:CB:106:VAL:HG21	2.44	0.44
20:CB:112:ARG:O	20:CB:116:LEU:HB2	2.17	0.44
20:CB:150:ILE:HG12	20:CB:150:ILE:O	2.17	0.44
21:CU:44:ARG:HG3	21:CU:44:ARG:HH11	1.83	0.44
23:DB:4:U:O2'	23:DB:5:A:H5'	2.17	0.44
23:DB:28:A:N6	23:DB:512:G:O2'	2.51	0.44
23:DB:30:G:OP1	38:DQ:4:LYS:HG2	2.17	0.44
23:DB:52:A:C5	23:DB:118:A:C2	3.06	0.44
23:DB:64:A:H2'	23:DB:65:U:H6	1.79	0.44
23:DB:101:A:O2'	23:DB:102:U:P	2.75	0.44
23:DB:107:G:O2'	23:DB:108:G:H5'	2.17	0.44
23:DB:177:G:H3'	23:DB:178:G:H8	1.83	0.44
23:DB:181:A:H1'	23:DB:435:C:H5'	1.98	0.44
23:DB:538:A:N6	23:DB:555:G:O2'	2.51	0.44
23:DB:540:C:H2'	23:DB:541:A:H8	1.83	0.44
23:DB:576:U:H5	56:DB:3400:HOH:O	2.01	0.44
23:DB:600:G:H1'	27:DE:100:MET:CG	2.48	0.44
23:DB:659:G:H21	27:DE:30:GLN:CD	2.21	0.44
23:DB:859:G:HO2'	23:DB:916:G:H1	1.65	0.44
23:DB:1324:G:N1	23:DB:1331:G:C6	2.86	0.44
23:DB:1387:A:H4'	23:DB:1469:A:H1'	1.99	0.44
23:DB:1599:U:H2'	23:DB:1600:C:H6	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2393:U:H2'	23:DB:2394:C:C6	2.52	0.44
23:DB:2450:A:C2'	23:DB:2451:A:H5'	2.47	0.44
23:DB:2646:C:H2'	23:DB:2647:U:O4'	2.17	0.44
24:DV:80:HIS:CD2	24:DV:81:PRO:HD2	2.53	0.44
25:DC:63:ILE:HD13	25:DC:63:ILE:HA	1.77	0.44
27:DE:37:ALA:C	27:DE:39:ALA:H	2.20	0.44
27:DE:148:ILE:HA	27:DE:187:VAL:HB	1.99	0.44
32:DK:87:LEU:HB2	32:DK:93:GLN:C	2.36	0.44
34:DM:108:VAL:HG22	34:DM:109:PRO:HD2	1.98	0.44
35:DN:118:ARG:HE	35:DN:118:ARG:HB3	1.50	0.44
37:DP:54:LEU:HD12	37:DP:76:HIS:HB2	1.99	0.44
38:DQ:96:ASP:C	38:DQ:98:ALA:N	2.70	0.44
42:DU:89:GLY:O	42:DU:90:LYS:HG3	2.17	0.44
43:DW:18:LYS:H	43:DW:35:ILE:CG2	2.29	0.44
47:D0:41:HIS:CD2	47:D0:41:HIS:N	2.85	0.44
47:D0:55:ALA:C	47:D0:56:LYS:HG3	2.38	0.44
52:DI:2:LYS:HB3	52:DI:2:LYS:HZ2	1.83	0.44
52:DI:78:LEU:HD23	52:DI:81:LYS:HE2	2.00	0.44
1:AA:159:G:N1	1:AA:163:C:N4	2.66	0.44
1:AA:167:A:O2'	1:AA:168:G:H5'	2.17	0.44
1:AA:186:C:H2'	1:AA:187:G:O4'	2.18	0.44
1:AA:284:C:H2'	1:AA:285:C:C6	2.52	0.44
1:AA:308:C:H2'	1:AA:309:A:C8	2.52	0.44
1:AA:584:G:H2'	1:AA:585:G:H8	1.83	0.44
1:AA:683:G:O2'	1:AA:684:U:H5'	2.17	0.44
1:AA:746:A:N1	1:AA:747:A:N6	2.66	0.44
1:AA:915:A:H2'	1:AA:916:U:H5'	2.00	0.44
1:AA:1057:G:H4'	2:AC:196:GLY:N	2.27	0.44
1:AA:1086:U:H3	1:AA:1099:G:N2	1.94	0.44
3:AD:187:ARG:CZ	3:AD:191:SER:HB3	2.48	0.44
4:AE:95:MET:HA	4:AE:124:ALA:CB	2.47	0.44
6:AG:30:MET:HG3	6:AG:35:LYS:HA	2.00	0.44
10:AK:57:SER:O	10:AK:90:PRO:HG3	2.18	0.44
11:AL:98:ARG:HD2	11:AL:103:CYS:SG	2.58	0.44
18:AS:10:ILE:CD1	18:AS:14:LEU:HD11	2.47	0.44
20:AB:22:TRP:CZ3	20:AB:24:PRO:HA	2.53	0.44
20:AB:102:ASN:ND2	20:AB:105:THR:HB	2.32	0.44
23:BB:4:U:O2'	23:BB:5:A:H5'	2.18	0.44
23:BB:30:G:OP1	38:BQ:4:LYS:HG2	2.18	0.44
23:BB:69:C:H2'	23:BB:70:G:H8	1.83	0.44
23:BB:152:A:H2'	23:BB:153:U:C5	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:177:G:H3'	23:BB:178:G:H8	1.83	0.44
23:BB:470:A:H2'	23:BB:471:A:C8	2.53	0.44
23:BB:1171:G:H2'	23:BB:1172:C:O4'	2.18	0.44
23:BB:1292:G:H2'	23:BB:1293:C:H6	1.82	0.44
23:BB:1338:G:H4'	41:BT:18:GLU:CG	2.29	0.44
23:BB:1708:C:H2'	23:BB:1709:U:H6	1.82	0.44
23:BB:2860:A:H2'	23:BB:2861:U:O4'	2.18	0.44
25:BC:64:VAL:HG22	25:BC:90:ILE:HD11	2.00	0.44
28:BF:65:LEU:HD23	28:BF:87:LYS:CD	2.43	0.44
28:BF:74:ALA:HB3	28:BF:77:LYS:O	2.17	0.44
29:BG:89:VAL:HG21	29:BG:162:ARG:HH11	1.83	0.44
29:BG:154:GLU:O	29:BG:156:TYR:N	2.51	0.44
30:BH:141:LYS:HE2	30:BH:141:LYS:HB2	1.75	0.44
34:BM:101:VAL:O	34:BM:101:VAL:HG13	2.18	0.44
42:BU:11:ILE:HB	42:BU:72:PHE:HD1	1.83	0.44
44:BX:21:LEU:HD23	44:BX:21:LEU:N	2.33	0.44
52:BI:129:GLU:CB	52:BI:133:ARG:HH12	2.18	0.44
1:CA:5:U:H1'	1:CA:6:G:C2	2.53	0.44
1:CA:83:C:H4'	1:CA:83:C:OP1	2.18	0.44
1:CA:503:C:H2'	1:CA:504:C:H6	1.82	0.44
1:CA:607:A:H2'	1:CA:608:A:C8	2.53	0.44
1:CA:958:A:N1	18:CS:53:GLY:C	2.71	0.44
2:CC:126:ARG:HA	2:CC:126:ARG:NE	2.33	0.44
2:CC:178:ARG:HG2	2:CC:178:ARG:O	2.18	0.44
5:CF:71:ILE:HG13	5:CF:72:ASP:N	2.33	0.44
8:CI:42:THR:O	8:CI:46:VAL:HG22	2.18	0.44
11:CL:54:VAL:CG2	11:CL:79:ILE:HD11	2.48	0.44
11:CL:65:TYR:HB3	11:CL:95:HIS:CD2	2.52	0.44
12:CM:2:ARG:HD3	12:CM:2:ARG:N	2.31	0.44
12:CM:18:LEU:HD13	12:CM:33:LEU:HD21	2.00	0.44
18:CS:12:LEU:O	18:CS:16:LYS:HE2	2.17	0.44
18:CS:77:ARG:HE	18:CS:77:ARG:HB3	1.64	0.44
19:CT:69:ASN:O	19:CT:70:LYS:C	2.57	0.44
21:CU:40:PRO:HG2	21:CU:41:THR:H	1.83	0.44
22:DA:32:U:H2'	22:DA:33:G:O4'	2.18	0.44
22:DA:43:C:H1'	28:DF:91:ARG:NH2	2.31	0.44
22:DA:111:U:H2'	22:DA:112:G:C8	2.53	0.44
23:DB:90:U:OP2	23:DB:91:A:H3'	2.18	0.44
23:DB:784:G:OP1	23:DB:2588:G:H5"	2.18	0.44
23:DB:1563:U:H2'	23:DB:1564:C:C6	2.53	0.44
23:DB:1764:C:H2'	23:DB:1765:U:H6	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1774:C:O2	23:DB:1774:C:C2'	2.66	0.44
23:DB:1843:C:H5"	25:DC:250:GLN:NE2	2.30	0.44
23:DB:2277:G:C5'	34:DM:86:LYS:HB2	2.48	0.44
23:DB:2654:A:N6	23:DB:2666:C:OP2	2.50	0.44
25:DC:103:ILE:HG22	25:DC:105:ALA:N	2.32	0.44
26:DD:11:MET:H	26:DD:25:THR:HA	1.83	0.44
27:DE:101:TYR:O	27:DE:104:ALA:HB3	2.17	0.44
28:DF:55:ASP:OD2	28:DF:149:ARG:HD2	2.18	0.44
30:DH:14:SER:HB2	30:DH:17:ASP:CB	2.47	0.44
32:DK:75:SER:HA	37:DP:72:VAL:O	2.17	0.44
34:DM:69:PRO:HA	34:DM:94:ALA:CA	2.48	0.44
36:DO:51:ALA:CB	36:DO:78:VAL:HG13	2.48	0.44
37:DP:46:VAL:HA	37:DP:60:VAL:HG12	2.00	0.44
38:DQ:7:VAL:O	38:DQ:8:ILE:C	2.56	0.44
38:DQ:18:LYS:C	38:DQ:20:ALA:N	2.71	0.44
39:DR:6:GLN:HE22	39:DR:9:GLY:N	2.16	0.44
41:DT:39:THR:HG22	41:DT:42:GLU:HG2	2.00	0.44
42:DU:32:LYS:HD3	42:DU:32:LYS:H	1.83	0.44
43:DW:37:VAL:HB	43:DW:38:ARG:HD3	2.00	0.44
44:DX:24:GLU:O	44:DX:28:LEU:HD23	2.18	0.44
44:DX:56:LEU:C	44:DX:58:ASN:N	2.72	0.44
46:DZ:10:LYS:O	46:DZ:31:PRO:HG2	2.18	0.44
46:DZ:53:ALA:O	46:DZ:54:LYS:HB3	2.18	0.44
49:D2:4:THR:O	49:D2:5:PHE:HB2	2.16	0.44
50:D3:7:ARG:HH11	50:D3:7:ARG:HG3	1.82	0.44
1:AA:90:C:H6	1:AA:90:C:OP2	2.01	0.43
1:AA:178:C:O2'	1:AA:179:A:H5'	2.17	0.43
1:AA:201:G:O2'	1:AA:469:C:H4'	2.17	0.43
1:AA:516:U:O2'	1:AA:517:G:H5'	2.17	0.43
1:AA:791:G:C5	1:AA:792:A:N7	2.86	0.43
1:AA:837:U:H2'	1:AA:838:G:H8	1.83	0.43
1:AA:845:A:H5"	1:AA:846:G:C8	2.53	0.43
1:AA:878:A:C5'	7:AH:80:PRO:HG2	2.48	0.43
1:AA:885:G:O2'	1:AA:886:G:H5'	2.17	0.43
1:AA:987:G:H2'	1:AA:988:G:H8	1.83	0.43
1:AA:1102:A:H2'	1:AA:1103:C:C6	2.53	0.43
1:AA:1200:C:H4'	1:AA:1201:A:H3'	2.00	0.43
1:AA:1406:U:O2'	1:AA:1407:C:H5'	2.18	0.43
3:AD:7:LYS:HB3	3:AD:20:LEU:HB3	1.99	0.43
3:AD:29:THR:HB	3:AD:30:LYS:HZ2	1.81	0.43
3:AD:123:MET:HG3	3:AD:143:SER:OG	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AF:18:VAL:N	5:AF:19:PRO:HD2	2.32	0.43
8:AI:20:ILE:H	8:AI:20:ILE:CD1	2.30	0.43
10:AK:126:ARG:HB2	21:AU:33:ARG:HD2	1.99	0.43
11:AL:54:VAL:CG2	11:AL:79:ILE:HD11	2.48	0.43
13:AN:50:LEU:CG	13:AN:51:PRO:HD3	2.47	0.43
13:AN:69:PRO:HG2	13:AN:70:HIS:H	1.83	0.43
15:AP:21:VAL:HG12	15:AP:33:ILE:HD12	1.98	0.43
15:AP:40:ASN:ND2	15:AP:43:ALA:HB2	2.33	0.43
18:AS:52:ASN:ND2	18:AS:53:GLY:H	2.16	0.43
21:AU:40:PRO:HG2	21:AU:41:THR:H	1.83	0.43
22:BA:22:U:H2'	22:BA:23:G:C8	2.53	0.43
22:BA:27:C:C2'	22:BA:28:C:H5'	2.48	0.43
22:BA:75:G:N1	22:BA:102:G:N2	2.47	0.43
22:BA:115:A:O2'	22:BA:116:G:H5'	2.17	0.43
23:BB:55:G:H2'	23:BB:56:A:H8	1.83	0.43
23:BB:67:U:H2'	23:BB:68:G:C8	2.53	0.43
23:BB:560:C:H2'	23:BB:561:G:O4'	2.19	0.43
23:BB:588:U:H1'	27:BE:85:PHE:CG	2.53	0.43
23:BB:596:U:O2'	23:BB:597:G:H5'	2.18	0.43
23:BB:643:A:C5	23:BB:644:A:N7	2.86	0.43
23:BB:1241:A:O4'	23:BB:1241:A:N3	2.51	0.43
23:BB:1244:A:C5'	33:BL:8:PRO:HD3	2.34	0.43
23:BB:1299:G:H5"	23:BB:1300:G:OP1	2.17	0.43
23:BB:1902:C:H2'	23:BB:1903:G:O4'	2.18	0.43
23:BB:1904:G:H1'	23:BB:1927:A:N1	2.32	0.43
23:BB:1912:A:H4'	23:BB:1913:A:OP1	2.18	0.43
23:BB:2133:G:C2'	23:BB:2133:G:N3	2.80	0.43
23:BB:2140:G:H8	23:BB:2140:G:OP2	2.01	0.43
25:BC:226:PRO:HA	25:BC:232:GLY:HA3	2.00	0.43
27:BE:104:ALA:C	27:BE:106:LYS:H	2.21	0.43
27:BE:134:LEU:HD21	27:BE:161:ALA:HB2	2.00	0.43
28:BF:33:ILE:H	28:BF:95:MET:HG3	1.83	0.43
28:BF:71:LYS:O	28:BF:71:LYS:HG2	2.18	0.43
28:BF:87:LYS:C	28:BF:88:VAL:HG23	2.38	0.43
28:BF:148:VAL:O	28:BF:149:ARG:HG2	2.18	0.43
29:BG:58:ALA:C	29:BG:60:GLY:H	2.21	0.43
31:BJ:59:ALA:C	31:BJ:61:LYS:N	2.71	0.43
35:BN:33:ILE:C	35:BN:34:ILE:HG13	2.37	0.43
39:BR:19:THR:HG22	39:BR:97:LYS:HD2	2.00	0.43
40:BS:81:SER:CA	40:BS:99:ARG:HA	2.46	0.43
44:BX:35:GLY:O	44:BX:36:GLN:C	2.57	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BY:35:VAL:HG21	45:BY:37:ARG:NH2	2.33	0.43
52:BI:4:VAL:O	52:BI:4:VAL:HG13	2.17	0.43
52:BI:12:VAL:HG23	52:BI:41:PHE:CE2	2.54	0.43
1:CA:69:G:H21	1:CA:71:A:H62	1.65	0.43
1:CA:317:U:H2'	1:CA:318:G:C8	2.53	0.43
1:CA:328:C:H4'	1:CA:329:A:C5'	2.47	0.43
1:CA:599:C:H4'	7:CH:121:GLY:CA	2.47	0.43
1:CA:926:G:H3'	1:CA:1505:G:H21	1.82	0.43
1:CA:993:G:O2'	1:CA:994:A:N7	2.51	0.43
1:CA:993:G:N2	1:CA:996:A:N6	2.66	0.43
1:CA:1065:U:H1'	1:CA:1066:C:OP2	2.18	0.43
1:CA:1114:C:O2'	1:CA:1115:U:H5'	2.18	0.43
1:CA:1473:G:O2'	1:CA:1474:U:H5'	2.18	0.43
3:CD:123:MET:HA	3:CD:128:VAL:HA	2.00	0.43
3:CD:160:LEU:H	3:CD:160:LEU:CD1	2.16	0.43
5:CF:47:LEU:HD13	5:CF:51:ILE:CG2	2.47	0.43
10:CK:23:HIS:HB3	10:CK:30:ILE:HG12	2.00	0.43
11:CL:54:VAL:HG12	11:CL:55:ARG:H	1.83	0.43
12:CM:5:GLY:O	12:CM:6:ILE:HB	2.18	0.43
21:CU:36:PHE:HB3	21:CU:40:PRO:CD	2.41	0.43
21:CU:39:LYS:HD3	21:CU:39:LYS:H	1.82	0.43
22:DA:30:C:H1'	22:DA:58:A:N1	2.33	0.43
22:DA:106:G:H2'	22:DA:107:G:C8	2.53	0.43
23:DB:139:U:O2'	41:DT:1:MET:HB3	2.18	0.43
23:DB:327:G:O2'	23:DB:328:U:H5'	2.18	0.43
23:DB:470:A:H2'	23:DB:471:A:C8	2.53	0.43
23:DB:483:A:H5'	42:DU:44:HIS:O	2.18	0.43
23:DB:704:G:O2'	23:DB:727:A:N6	2.51	0.43
23:DB:939:G:O2'	23:DB:940:G:H5'	2.18	0.43
23:DB:963:U:H2'	23:DB:964:C:C6	2.52	0.43
23:DB:1249:U:C4'	38:DQ:3:VAL:HG21	2.47	0.43
23:DB:1315:C:O2'	23:DB:1316:U:H5'	2.18	0.43
23:DB:1495:A:H2'	23:DB:1496:A:H8	1.82	0.43
23:DB:1767:G:O2'	23:DB:1768:C:H5'	2.18	0.43
23:DB:1817:G:OP1	25:DC:86:ARG:NH2	2.50	0.43
23:DB:2496:C:C2'	23:DB:2497:A:H5'	2.48	0.43
23:DB:2617:U:H2'	23:DB:2618:G:H5'	1.99	0.43
23:DB:2716:C:H2'	23:DB:2717:C:H6	1.83	0.43
25:DC:77:VAL:HG23	25:DC:77:VAL:O	2.18	0.43
25:DC:78:GLU:OE1	25:DC:94:LEU:HD22	2.18	0.43
25:DC:226:PRO:HA	25:DC:232:GLY:HA3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:8:LYS:O	26:DD:197:THR:HA	2.18	0.43
26:DD:34:VAL:HG23	26:DD:48:ILE:HG13	2.00	0.43
26:DD:91:THR:HG23	26:DD:92:VAL:N	2.32	0.43
26:DD:148:GLN:HG3	26:DD:152:PRO:HB3	1.98	0.43
28:DF:62:GLN:HE21	28:DF:91:ARG:NE	2.15	0.43
29:DG:4:ALA:HA	29:DG:65:GLY:HA2	2.00	0.43
30:DH:4:ILE:HG23	30:DH:17:ASP:N	2.33	0.43
32:DK:7:MET:CE	32:DK:18:ARG:HB3	2.48	0.43
32:DK:24:VAL:CG1	32:DK:33:ALA:HB2	2.47	0.43
32:DK:31:ARG:HH11	32:DK:31:ARG:HG3	1.83	0.43
34:DM:53:MET:O	34:DM:57:VAL:HG23	2.17	0.43
36:DO:116:GLN:O	36:DO:117:PHE:HB3	2.18	0.43
38:DQ:38:VAL:O	38:DQ:41:ALA:N	2.52	0.43
39:DR:76:LYS:HB2	39:DR:85:LYS:HB3	2.00	0.43
43:DW:35:ILE:HA	43:DW:57:THR:HA	2.00	0.43
43:DW:49:ASN:CB	43:DW:61:LYS:HB2	2.48	0.43
45:DY:6:ILE:HG23	45:DY:56:VAL:HG22	1.99	0.43
46:DZ:27:ARG:CG	46:DZ:28:ARG:N	2.81	0.43
46:DZ:40:VAL:O	46:DZ:42:SER:N	2.51	0.43
46:DZ:65:ASP:OD2	46:DZ:65:ASP:N	2.51	0.43
1:AA:389:A:C6	1:AA:390:U:H1’	2.53	0.43
1:AA:736:C:H2’	1:AA:737:C:H6	1.83	0.43
1:AA:893:C:H2’	1:AA:894:G:H8	1.82	0.43
1:AA:923:A:OP1	4:AE:25:LYS:HB3	2.18	0.43
2:AC:179:ALA:O	2:AC:180:ASP:O	2.36	0.43
3:AD:24:VAL:HA	3:AD:27:ILE:CD1	2.45	0.43
4:AE:64:GLU:O	4:AE:68:ARG:HG2	2.18	0.43
5:AF:40:GLU:CB	5:AF:61:LEU:HB2	2.46	0.43
5:AF:47:LEU:HD13	5:AF:51:ILE:HG22	2.00	0.43
6:AG:137:ARG:HG2	6:AG:141:HIS:NE2	2.32	0.43
8:AI:95:SER:O	8:AI:99:LYS:HB2	2.18	0.43
9:AJ:8:ILE:CD1	9:AJ:76:ILE:HG13	2.47	0.43
19:AT:42:ASP:OD1	19:AT:44:ALA:HB3	2.18	0.43
20:AB:17:HIS:CG	20:AB:18:GLN:H	2.36	0.43
20:AB:17:HIS:CG	20:AB:18:GLN:N	2.86	0.43
22:BA:28:C:H2’	22:BA:29:A:C8	2.53	0.43
23:BB:127:A:H5”	23:BB:128:C:C6	2.54	0.43
23:BB:623:C:H2’	23:BB:624:C:H6	1.83	0.43
23:BB:1182:G:H2’	23:BB:1183:U:O4’	2.18	0.43
23:BB:1387:A:C5’	23:BB:1469:A:H1’	2.48	0.43
23:BB:1745:A:H2’	23:BB:1746:A:C8	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1973:G:O2'	23:BB:1974:C:H5'	2.18	0.43
23:BB:2485:G:O2'	23:BB:2486:C:H5'	2.18	0.43
23:BB:2667:C:H1'	29:BG:108:PHE:CD2	2.53	0.43
25:BC:64:VAL:HG11	25:BC:66:PHE:CE2	2.52	0.43
25:BC:131:MET:HE3	25:BC:187:CYS:O	2.17	0.43
26:BD:171:THR:OG1	26:BD:172:VAL:N	2.50	0.43
26:BD:201:LEU:C	26:BD:202:ILE:HD12	2.38	0.43
27:BE:24:ASN:OD1	27:BE:27:LEU:HB2	2.19	0.43
27:BE:192:ALA:O	27:BE:196:VAL:HG23	2.18	0.43
32:BK:19:VAL:HG12	32:BK:41:ILE:CG1	2.44	0.43
33:BL:143:GLU:O	33:BL:144:GLU:HB2	2.18	0.43
36:BO:74:VAL:O	36:BO:77:ALA:HB3	2.18	0.43
41:BT:62:VAL:HG12	41:BT:63:VAL:H	1.83	0.43
42:BU:21:ARG:HD3	42:BU:72:PHE:CG	2.53	0.43
46:BZ:68:LEU:HD22	46:BZ:78:TYR:HE1	1.83	0.43
48:B1:3:GLY:C	48:B1:5:ARG:N	2.71	0.43
48:B1:6:GLU:HB2	48:B1:52:LYS:NZ	2.32	0.43
1:CA:35:G:H2'	1:CA:36:C:H6	1.80	0.43
1:CA:789:U:O2'	1:CA:791:G:N7	2.44	0.43
1:CA:1062:U:H2'	1:CA:1063:C:C5	2.53	0.43
1:CA:1314:C:H2'	1:CA:1315:U:C6	2.53	0.43
3:CD:169:TRP:O	3:CD:182:LYS:HB2	2.17	0.43
4:CE:87:VAL:HG23	4:CE:91:SER:O	2.18	0.43
5:CF:36:ILE:HD12	5:CF:36:ILE:H	1.83	0.43
5:CF:67:PRO:O	5:CF:70:VAL:HG22	2.17	0.43
7:CH:58:LEU:CD2	7:CH:60:LEU:HB2	2.47	0.43
8:CI:87:MET:HE2	8:CI:88:GLU:HA	2.00	0.43
13:CN:48:GLN:H	13:CN:48:GLN:HG3	1.68	0.43
14:CO:42:PHE:CD1	14:CO:55:LEU:HD22	2.53	0.43
16:CQ:45:VAL:HG11	16:CQ:60:ILE:HG21	2.00	0.43
21:CU:26:GLY:C	21:CU:28:LEU:N	2.71	0.43
23:DB:484:C:H2'	23:DB:485:C:H6	1.83	0.43
23:DB:493:G:H2'	23:DB:494:G:O4'	2.17	0.43
23:DB:538:A:H2'	23:DB:539:G:O4'	2.18	0.43
23:DB:619:G:H2'	23:DB:620:G:H5"	2.00	0.43
23:DB:755:U:H2'	23:DB:756:A:C8	2.53	0.43
23:DB:958:U:OP2	34:DM:14:LYS:NZ	2.51	0.43
23:DB:1182:G:H2'	23:DB:1183:U:O4'	2.18	0.43
23:DB:1309:G:H4'	49:D2:7:PRO:HB2	2.00	0.43
23:DB:1322:A:C2'	23:DB:1323:C:H5'	2.48	0.43
23:DB:1472:C:H2'	23:DB:1473:G:H8	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1528:A:H2'	23:DB:1529:G:O4'	2.18	0.43
23:DB:2630:G:O2'	23:DB:2631:G:H5'	2.18	0.43
23:DB:2760:C:O2	23:DB:2760:C:H2'	2.18	0.43
23:DB:2860:A:H2'	23:DB:2861:U:O4'	2.18	0.43
24:DV:48:MET:SD	24:DV:85:LYS:HA	2.59	0.43
28:DF:19:PHE:CE1	28:DF:167:ALA:HB2	2.53	0.43
28:DF:79:ARG:O	28:DF:81:GLY:N	2.51	0.43
29:DG:104:LEU:HB3	29:DG:106:LEU:HD21	1.99	0.43
33:DL:135:ILE:HG12	33:DL:140:GLY:HA2	2.00	0.43
34:DM:135:VAL:O	34:DM:135:VAL:HG12	2.18	0.43
35:DN:70:THR:O	35:DN:70:THR:OG1	2.36	0.43
38:DQ:33:VAL:HG23	38:DQ:34:ALA:N	2.34	0.43
38:DQ:68:ALA:C	38:DQ:71:ASN:HB3	2.38	0.43
38:DQ:78:PHE:CZ	38:DQ:82:LEU:HD11	2.53	0.43
41:DT:22:THR:O	41:DT:25:GLU:HB3	2.18	0.43
46:DZ:43:GLU:HG2	46:DZ:43:GLU:O	2.18	0.43
46:DZ:49:LEU:HB2	46:DZ:51:VAL:HG23	2.00	0.43
51:D4:2:LYS:HD3	51:D4:4:ARG:HG3	2.00	0.43
1:AA:138:G:C6	1:AA:226:G:C6	3.06	0.43
1:AA:152:A:H3'	1:AA:153:C:C6	2.54	0.43
1:AA:182:A:HO2'	1:AA:183:C:H3'	1.82	0.43
1:AA:1069:C:O4'	1:AA:1191:A:H2	2.00	0.43
1:AA:1148:U:C4'	8:AI:17:ARG:HD3	2.48	0.43
1:AA:1241:G:O2'	1:AA:1242:G:H5'	2.18	0.43
1:AA:1292:G:H2'	1:AA:1293:C:H6	1.78	0.43
1:AA:1320:C:H41	18:AS:36:ARG:HA	1.83	0.43
3:AD:40:HIS:O	3:AD:43:ARG:HG2	2.18	0.43
3:AD:47:LEU:HD13	3:AD:52:VAL:HG22	1.98	0.43
3:AD:169:TRP:O	3:AD:182:LYS:HB2	2.18	0.43
5:AF:45:ARG:HH22	17:AR:25:ILE:HD13	1.83	0.43
5:AF:80:PHE:CE2	25:BC:123:ILE:HG12	2.53	0.43
5:AF:98:GLU:CG	5:AF:99:ALA:N	2.80	0.43
6:AG:22:LEU:O	6:AG:25:PHE:HB3	2.18	0.43
8:AI:119:LYS:C	8:AI:121:ARG:H	2.22	0.43
11:AL:31:GLY:HA3	11:AL:54:VAL:HG11	2.00	0.43
11:AL:51:VAL:HG12	11:AL:52:CYS:N	2.30	0.43
23:BB:27:G:HO2'	23:BB:28:A:H8	1.60	0.43
23:BB:443:A:H1'	23:BB:1201:U:O4'	2.18	0.43
23:BB:566:U:H2'	23:BB:567:U:O4'	2.18	0.43
23:BB:643:A:N3	48:B1:43:ARG:NH2	2.65	0.43
23:BB:672:C:H2'	23:BB:673:C:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:686:U:O4	49:B2:12:ARG:HB2	2.18	0.43
23:BB:743:A:C2'	23:BB:744:U:H5'	2.47	0.43
23:BB:1432:G:O2'	23:BB:1433:A:H5'	2.17	0.43
23:BB:1820:U:H3	25:BC:197:ALA:HA	1.83	0.43
23:BB:1946:U:O2'	23:BB:1947:C:H5'	2.18	0.43
23:BB:2037:A:C6	23:BB:2038:G:C6	3.07	0.43
23:BB:2096:C:H2'	23:BB:2097:A:H8	1.84	0.43
23:BB:2492:U:O2'	23:BB:2493:U:H5'	2.18	0.43
23:BB:2500:U:H5'	23:BB:2501:C:OP2	2.18	0.43
23:BB:2773:C:O2'	23:BB:2774:C:H5'	2.18	0.43
24:BV:21:ARG:NE	24:BV:87:GLN:HB3	2.28	0.43
25:BC:123:ILE:O	25:BC:123:ILE:HG13	2.17	0.43
26:BD:24:VAL:HG23	26:BD:189:VAL:N	2.34	0.43
26:BD:33:ARG:HG2	26:BD:33:ARG:NH2	2.33	0.43
26:BD:55:LYS:HE3	26:BD:59:ARG:HB3	2.00	0.43
26:BD:130:GLN:HB2	26:BD:139:SER:O	2.17	0.43
28:BF:19:PHE:CE1	28:BF:167:ALA:HB2	2.54	0.43
28:BF:74:ALA:CB	28:BF:78:ILE:HD13	2.48	0.43
29:BG:60:GLY:O	29:BG:62:ALA:N	2.51	0.43
29:BG:154:GLU:OE1	29:BG:157:LYS:HB2	2.18	0.43
30:BH:133:GLN:CB	30:BH:139:PHE:HA	2.45	0.43
31:BJ:101:ILE:O	31:BJ:104:ALA:HB3	2.18	0.43
34:BM:21:ALA:HB3	34:BM:99:GLY:O	2.18	0.43
35:BN:48:VAL:O	35:BN:51:LEU:N	2.52	0.43
39:BR:49:ILE:HD13	39:BR:53:PHE:H	1.81	0.43
40:BS:14:ALA:C	40:BS:16:LYS:H	2.22	0.43
40:BS:24:ILE:HG23	40:BS:32:ALA:CB	2.48	0.43
42:BU:23:LYS:HD2	42:BU:23:LYS:N	2.34	0.43
42:BU:38:ILE:CG2	42:BU:39:ASN:H	2.07	0.43
42:BU:94:PHE:CA	42:BU:101:THR:HA	2.48	0.43
46:BZ:43:GLU:HG2	46:BZ:43:GLU:O	2.18	0.43
48:B1:26:LYS:HB2	48:B1:52:LYS:NZ	2.33	0.43
50:B3:11:LYS:C	50:B3:12:ARG:HG3	2.39	0.43
1:CA:153:C:H2'	1:CA:154:U:H6	1.79	0.43
1:CA:307:C:H2'	1:CA:308:C:H6	1.83	0.43
1:CA:394:G:H2'	1:CA:395:C:C6	2.53	0.43
1:CA:795:C:H1'	1:CA:1506:U:C5	2.53	0.43
1:CA:1057:G:H4'	2:CC:196:GLY:N	2.27	0.43
1:CA:1080:A:H4'	4:CE:20:VAL:HG13	1.98	0.43
1:CA:1407:C:O2'	1:CA:1408:A:H5'	2.17	0.43
1:CA:1500:A:OP1	1:CA:1505:G:OP1	2.36	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:121:ALA:C	3:CD:122:ILE:HD13	2.39	0.43
8:CI:29:ILE:HG23	8:CI:64:ILE:C	2.39	0.43
11:CL:43:LYS:CD	11:CL:44:PRO:HD3	2.48	0.43
13:CN:51:PRO:HB2	13:CN:54:SER:CB	2.33	0.43
16:CQ:30:HIS:CG	16:CQ:33:TYR:HB2	2.53	0.43
16:CQ:60:ILE:HD13	16:CQ:60:ILE:N	2.33	0.43
20:CB:46:VAL:HA	20:CB:49:PHE:HD2	1.84	0.43
20:CB:94:ARG:HE	20:CB:94:ARG:N	2.16	0.43
21:CU:15:LEU:C	21:CU:17:ARG:H	2.21	0.43
21:CU:26:GLY:O	21:CU:30:GLU:HB3	2.17	0.43
22:DA:64:G:O2'	22:DA:65:U:H5'	2.19	0.43
23:DB:102:U:P	23:DB:102:U:O4'	2.76	0.43
23:DB:611:C:H2'	23:DB:612:G:O4'	2.17	0.43
23:DB:719:C:O2'	23:DB:720:U:H5'	2.17	0.43
23:DB:1112:G:H2'	23:DB:1113:U:O4'	2.18	0.43
23:DB:1387:A:C5'	23:DB:1469:A:H1'	2.48	0.43
23:DB:1528:A:H2'	23:DB:1529:G:H5'	2.00	0.43
23:DB:1674:G:N2	23:DB:1677:A:N1	2.67	0.43
23:DB:1973:G:H2'	23:DB:1974:C:H6	1.83	0.43
23:DB:2025:C:H2'	23:DB:2026:U:H6	1.78	0.43
23:DB:2211:A:H4'	23:DB:2211:A:OP2	2.18	0.43
23:DB:2459:A:H2'	23:DB:2459:A:N3	2.32	0.43
23:DB:2697:G:H2'	23:DB:2698:U:O4'	2.17	0.43
25:DC:92:LEU:HG	25:DC:93:VAL:H	1.82	0.43
25:DC:157:ALA:C	25:DC:159:THR:H	2.22	0.43
26:DD:197:THR:C	26:DD:199:SER:H	2.21	0.43
27:DE:91:ASP:C	27:DE:93:SER:H	2.21	0.43
29:DG:28:LYS:HG2	29:DG:79:THR:HA	1.99	0.43
29:DG:83:THR:C	29:DG:84:LYS:HD3	2.39	0.43
33:DL:61:LEU:N	33:DL:61:LEU:CD1	2.81	0.43
33:DL:120:VAL:O	33:DL:135:ILE:HD11	2.17	0.43
34:DM:28:PHE:HB3	34:DM:64:TRP:CE2	2.52	0.43
36:DO:8:ILE:HG13	36:DO:8:ILE:H	1.67	0.43
36:DO:67:ASN:H	36:DO:70:ALA:CB	2.29	0.43
38:DQ:45:ALA:O	38:DQ:49:ARG:N	2.47	0.43
39:DR:39:LEU:CA	39:DR:53:PHE:HA	2.44	0.43
41:DT:32:LEU:H	41:DT:83:ALA:CB	2.30	0.43
42:DU:94:PHE:HB2	42:DU:101:THR:HA	1.99	0.43
51:D4:18:LYS:HE3	51:D4:21:GLY:HA2	2.00	0.43
52:DI:11:GLN:NE2	52:DI:74:PRO:HG3	2.33	0.43
1:AA:394:G:H2'	1:AA:395:C:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1002:G:H2'	1:AA:1003:G:O4'	2.18	0.43
1:AA:1042:A:H2'	1:AA:1043:G:O4'	2.18	0.43
1:AA:1150:A:O3'	9:AJ:43:PRO:HA	2.19	0.43
1:AA:1381:U:O2'	1:AA:1382:C:H5'	2.18	0.43
1:AA:1426:G:H2'	1:AA:1427:C:O4'	2.19	0.43
4:AE:68:ARG:O	4:AE:69:ASN:HB2	2.17	0.43
5:AF:10:VAL:HG12	5:AF:11:HIS:N	2.33	0.43
6:AG:11:ILE:HG22	6:AG:12:LEU:N	2.33	0.43
8:AI:18:VAL:HG12	8:AI:19:PHE:N	2.33	0.43
8:AI:42:THR:O	8:AI:46:VAL:HG22	2.18	0.43
9:AJ:49:PHE:HB2	9:AJ:65:TYR:HB2	1.99	0.43
11:AL:16:ALA:HB1	11:AL:17:LYS:HZ1	1.82	0.43
11:AL:60:PHE:O	11:AL:62:VAL:N	2.51	0.43
12:AM:30:LYS:HG3	12:AM:40:GLU:OE1	2.19	0.43
12:AM:102:LYS:HB2	12:AM:102:LYS:NZ	2.33	0.43
20:AB:31:PHE:HB3	20:AB:39:ILE:CG2	2.48	0.43
20:AB:48:MET:H	20:AB:48:MET:HG2	1.58	0.43
21:AU:44:ARG:HG3	21:AU:44:ARG:NH1	2.33	0.43
23:BB:95:A:H4'	44:BX:38:GLN:O	2.18	0.43
23:BB:252:G:O2'	23:BB:253:C:H5'	2.18	0.43
23:BB:416:U:H2'	23:BB:417:C:H6	1.82	0.43
23:BB:514:A:N6	23:BB:515:A:N6	2.66	0.43
23:BB:673:C:C5'	27:BE:76:PRO:HD2	2.47	0.43
23:BB:826:U:H2'	23:BB:828:U:O4'	2.18	0.43
23:BB:967:U:H2'	23:BB:968:C:H6	1.82	0.43
23:BB:1053:C:H2'	23:BB:1054:A:C8	2.53	0.43
23:BB:1411:U:H2'	23:BB:1412:U:C6	2.54	0.43
23:BB:1706:C:H2'	23:BB:1757:A:OP2	2.18	0.43
23:BB:2304:G:N3	23:BB:2304:G:H2'	2.33	0.43
23:BB:2547:A:H2'	23:BB:2548:U:H6	1.82	0.43
23:BB:2800:A:H2'	23:BB:2801:G:C1'	2.49	0.43
24:BV:60:VAL:HG22	24:BV:73:LYS:HE2	2.00	0.43
25:BC:120:ASP:OD2	25:BC:120:ASP:N	2.50	0.43
25:BC:255:LYS:C	25:BC:256:THR:HG23	2.38	0.43
26:BD:109:VAL:HG11	26:BD:193:VAL:CB	2.48	0.43
26:BD:202:ILE:HG22	26:BD:202:ILE:O	2.17	0.43
27:BE:1:MET:HB3	27:BE:14:VAL:O	2.19	0.43
30:BH:67:ALA:C	30:BH:69:ALA:H	2.21	0.43
32:BK:79:PHE:CD2	37:BP:69:VAL:HG12	2.52	0.43
33:BL:74:THR:HA	33:BL:107:PHE:O	2.19	0.43
35:BN:24:MET:CG	35:BN:44:LEU:HD22	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BN:29:VAL:HG21	35:BN:75:ILE:HB	2.01	0.43
44:BX:22:LEU:O	44:BX:24:GLU:N	2.51	0.43
51:B4:3:VAL:O	51:B4:4:ARG:HB2	2.19	0.43
52:BI:85:ILE:CD1	52:BI:137:LEU:HD21	2.47	0.43
52:BI:138:VAL:HG12	52:BI:139:VAL:N	2.33	0.43
1:CA:78:A:H2'	1:CA:79:G:C8	2.53	0.43
1:CA:409:U:O2'	1:CA:410:G:H5'	2.18	0.43
1:CA:451:A:H4'	1:CA:452:A:O4'	2.18	0.43
1:CA:496:A:H2'	1:CA:497:G:C8	2.52	0.43
1:CA:502:A:H2'	1:CA:503:C:O4'	2.19	0.43
1:CA:845:A:H5"	1:CA:846:G:C8	2.53	0.43
1:CA:880:C:H2'	1:CA:881:G:H8	1.84	0.43
1:CA:902:G:H2'	1:CA:903:G:H8	1.84	0.43
4:CE:11:GLN:O	4:CE:38:VAL:HA	2.18	0.43
5:CF:43:GLY:HA2	5:CF:58:HIS:CD2	2.53	0.43
7:CH:105:THR:HG21	7:CH:110:MET:SD	2.59	0.43
8:CI:123:ARG:HB3	8:CI:123:ARG:NH1	2.32	0.43
9:CJ:5:ARG:N	9:CJ:76:ILE:O	2.52	0.43
12:CM:19:THR:HG22	12:CM:29:SER:HB3	2.01	0.43
13:CN:23:ARG:C	13:CN:25:GLU:H	2.20	0.43
20:CB:104:LYS:HB2	20:CB:104:LYS:NZ	2.33	0.43
20:CB:116:LEU:HA	20:CB:119:GLN:CG	2.48	0.43
23:DB:91:A:H1'	23:DB:92:U:C6	2.54	0.43
23:DB:96:C:H2'	23:DB:97:C:H6	1.83	0.43
23:DB:183:C:O2'	23:DB:184:C:H5'	2.19	0.43
23:DB:342:A:H2'	23:DB:343:C:O4'	2.19	0.43
23:DB:699:A:H2'	23:DB:700:G:O4'	2.19	0.43
23:DB:708:G:N2	23:DB:724:U:H1'	2.33	0.43
23:DB:937:C:H2'	23:DB:938:G:H8	1.84	0.43
23:DB:1042:G:H2'	23:DB:1043:C:H6	1.82	0.43
23:DB:1099:G:O5'	52:DI:4:VAL:HG12	2.18	0.43
23:DB:1103:A:H2'	23:DB:1103:A:N3	2.34	0.43
23:DB:1124:G:N3	51:D4:38:GLY:O	2.51	0.43
23:DB:1184:U:O2'	23:DB:1185:G:H5'	2.19	0.43
23:DB:1370:C:H2'	23:DB:1371:G:O4'	2.19	0.43
23:DB:1545:A:H2'	23:DB:1546:G:O4'	2.19	0.43
23:DB:2249:U:H4'	23:DB:2275:C:C5	2.54	0.43
23:DB:2297:A:H61	23:DB:2319:G:H1'	1.83	0.43
23:DB:2315:G:H2'	23:DB:2316:G:H8	1.83	0.43
23:DB:2466:C:OP1	51:D4:4:ARG:HB3	2.18	0.43
23:DB:2572:A:P	26:DD:151:THR:HB	2.59	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2766:A:H2'	23:DB:2766:A:N3	2.33	0.43
23:DB:2857:G:N2	23:DB:2859:G:H3'	2.33	0.43
25:DC:75:ALA:HB1	25:DC:93:VAL:HG22	1.99	0.43
25:DC:244:VAL:HB	25:DC:249:VAL:H	1.82	0.43
26:DD:55:LYS:HE3	26:DD:59:ARG:HB3	1.99	0.43
28:DF:24:VAL:O	28:DF:27:VAL:HG22	2.18	0.43
28:DF:126:ASN:HB3	28:DF:156:THR:CB	2.49	0.43
30:DH:131:SER:OG	30:DH:141:LYS:HE3	2.18	0.43
31:DJ:55:ILE:O	31:DJ:55:ILE:HG13	2.16	0.43
35:DN:96:ARG:HG2	35:DN:96:ARG:NH2	2.33	0.43
38:DQ:94:LEU:C	38:DQ:96:ASP:N	2.72	0.43
50:D3:11:LYS:C	50:D3:12:ARG:HG3	2.38	0.43
52:DI:54:ILE:HD11	52:DI:71:LYS:N	2.33	0.43
1:AA:808:C:O2'	1:AA:809:G:H5'	2.18	0.43
1:AA:1250:A:H2	1:AA:1370:G:H1'	1.82	0.43
1:AA:1261:A:N7	1:AA:1274:A:H2	2.17	0.43
1:AA:1337:G:H5"	1:AA:1338:G:OP1	2.18	0.43
1:AA:1439:G:OP2	19:AT:32:LYS:HE2	2.18	0.43
2:AC:8:GLY:HA3	13:AN:88:MET:SD	2.58	0.43
2:AC:19:SER:HB2	2:AC:39:ARG:NH2	2.32	0.43
3:AD:25:ARG:HE	3:AD:25:ARG:HB2	1.57	0.43
3:AD:115:GLN:HG3	3:AD:119:HIS:CE1	2.53	0.43
9:AJ:12:ALA:CB	9:AJ:96:VAL:HG12	2.43	0.43
10:AK:61:ALA:O	10:AK:64:VAL:HG13	2.19	0.43
10:AK:88:PRO:HD3	21:AU:28:LEU:CD1	2.34	0.43
11:AL:21:PRO:HG2	11:AL:94:TYR:OH	2.18	0.43
18:AS:40:PHE:HB3	18:AS:41:PRO:HD2	1.98	0.43
20:AB:11:ALA:C	20:AB:13:VAL:H	2.22	0.43
20:AB:96:LEU:HB2	20:AB:99:MET:HE2	1.98	0.43
20:AB:160:LEU:HG	20:AB:161:PHE:N	2.34	0.43
20:AB:184:ALA:HB3	20:AB:195:VAL:HG21	2.01	0.43
23:BB:612:G:H2'	23:BB:614:A:H5"	2.00	0.43
23:BB:674:G:C4'	27:BE:69:ARG:HB3	2.48	0.43
23:BB:1203:U:C4'	33:BL:3:LEU:HD12	2.49	0.43
23:BB:1369:G:H2'	23:BB:1370:C:O4'	2.19	0.43
23:BB:1496:A:H1'	23:BB:1577:C:O2'	2.17	0.43
23:BB:1525:A:H2'	23:BB:1526:C:O4'	2.18	0.43
23:BB:1573:G:H2'	23:BB:1574:C:H5'	2.01	0.43
23:BB:1704:C:H2'	23:BB:1705:A:H8	1.84	0.43
23:BB:1749:A:H2'	23:BB:1750:G:H8	1.84	0.43
23:BB:1874:C:H2'	23:BB:1875:G:O4'	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1933:G:H2'	23:BB:1934:C:H6	1.82	0.43
23:BB:2147:A:H5"	23:BB:2148:G:O4'	2.18	0.43
23:BB:2496:C:H2'	23:BB:2497:A:H5'	2.01	0.43
23:BB:2784:U:H4'	26:BD:42:ASN:O	2.18	0.43
25:BC:71:ASP:O	25:BC:73:ILE:HG12	2.18	0.43
25:BC:77:VAL:HG23	25:BC:77:VAL:O	2.19	0.43
25:BC:149:LYS:HD3	25:BC:152:GLN:HE22	1.81	0.43
25:BC:259:ASN:OD1	25:BC:261:ARG:HB3	2.18	0.43
26:BD:13:ARG:HH12	37:BP:74:GLN:HE21	1.67	0.43
28:BF:3:LEU:HD13	28:BF:3:LEU:O	2.18	0.43
29:BG:152:ARG:NE	29:BG:152:ARG:HA	2.33	0.43
29:BG:152:ARG:HA	29:BG:152:ARG:HE	1.83	0.43
30:BH:104:THR:HA	30:BH:109:GLU:OE2	2.18	0.43
32:BK:54:LYS:H	32:BK:54:LYS:CD	2.29	0.43
34:BM:33:LEU:HD22	34:BM:128:THR:HB	2.00	0.43
38:BQ:63:ARG:HG3	38:BQ:63:ARG:H	1.60	0.43
38:BQ:93:ILE:O	38:BQ:96:ASP:HB3	2.18	0.43
41:BT:14:PRO:HA	41:BT:32:LEU:HB2	1.99	0.43
43:BW:54:ARG:HB3	43:BW:54:ARG:NH1	2.34	0.43
44:BX:51:ALA:O	44:BX:55:THR:N	2.46	0.43
51:B4:9:LYS:HD3	51:B4:9:LYS:N	2.31	0.43
1:CA:6:G:N3	1:CA:6:G:C3'	2.81	0.43
1:CA:215:C:H2'	1:CA:216:U:H6	1.82	0.43
1:CA:222:C:H2'	1:CA:223:A:H8	1.82	0.43
1:CA:237:G:H2'	1:CA:238:A:C8	2.53	0.43
1:CA:521:G:O2'	1:CA:522:C:H5'	2.18	0.43
1:CA:642:A:H2'	1:CA:643:C:C6	2.53	0.43
1:CA:981:U:H2'	1:CA:982:U:C5	2.53	0.43
1:CA:1026:G:O2'	1:CA:1027:C:H5'	2.19	0.43
1:CA:1060:U:H2'	1:CA:1061:G:C8	2.52	0.43
1:CA:1290:G:H2'	1:CA:1291:U:C6	2.54	0.43
1:CA:1393:U:O2'	1:CA:1394:A:H2'	2.19	0.43
3:CD:47:LEU:HD22	3:CD:51:GLY:O	2.18	0.43
6:CG:129:ASN:CA	6:CG:134:VAL:HG21	2.47	0.43
7:CH:9:MET:HG3	7:CH:26:MET:SD	2.58	0.43
9:CJ:42:LEU:CD1	9:CJ:73:LEU:HB2	2.39	0.43
10:CK:111:ASP:HB3	21:CU:3:ILE:N	2.34	0.43
11:CL:31:GLY:HA3	11:CL:54:VAL:CG1	2.49	0.43
11:CL:33:CYS:N	11:CL:54:VAL:HG13	2.33	0.43
13:CN:30:ILE:O	13:CN:40:ARG:HA	2.18	0.43
15:CP:21:VAL:O	15:CP:33:ILE:HB	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CQ:28:VAL:O	16:CQ:36:PHE:HA	2.18	0.43
22:DA:52:A:H3'	22:DA:53:A:H8	1.82	0.43
23:DB:29:U:H2'	23:DB:30:G:C8	2.54	0.43
23:DB:277:G:H1'	23:DB:361:G:O6	2.19	0.43
23:DB:322:A:C2	23:DB:340:A:C6	3.07	0.43
23:DB:483:A:O2'	42:DU:56:GLY:N	2.52	0.43
23:DB:725:G:H2'	23:DB:726:G:O4'	2.19	0.43
23:DB:1708:C:H2'	23:DB:1709:U:H6	1.83	0.43
23:DB:1742:U:H2'	23:DB:1743:G:H8	1.82	0.43
23:DB:1930:G:C2'	23:DB:1931:U:OP2	2.67	0.43
23:DB:2217:G:H2'	23:DB:2218:G:H8	1.82	0.43
23:DB:2320:U:H4'	23:DB:2321:U:C2	2.54	0.43
23:DB:2341:G:H2'	23:DB:2342:C:H6	1.81	0.43
23:DB:2636:C:H2'	23:DB:2637:U:H6	1.83	0.43
23:DB:2676:C:O2'	23:DB:2677:G:H5'	2.19	0.43
23:DB:2677:G:H2'	23:DB:2678:C:C6	2.53	0.43
23:DB:2748:A:H5'	29:DG:3:VAL:HG21	2.00	0.43
23:DB:2835:A:H61	23:DB:2878:U:H2'	1.83	0.43
23:DB:2852:G:H2'	23:DB:2853:C:O4'	2.18	0.43
26:DD:2:ILE:O	26:DD:2:ILE:HD12	2.18	0.43
28:DF:76:PHE:O	28:DF:77:LYS:HB2	2.18	0.43
31:DJ:59:ALA:C	31:DJ:61:LYS:N	2.72	0.43
32:DK:106:GLU:OE1	32:DK:106:GLU:N	2.49	0.43
34:DM:19:GLY:N	34:DM:38:ARG:NH2	2.64	0.43
34:DM:37:GLY:HA3	34:DM:126:ILE:HG23	2.00	0.43
36:DO:35:ILE:HG13	36:DO:102:ARG:HE	1.81	0.43
39:DR:2:TYR:N	39:DR:42:ALA:HB2	2.34	0.43
40:DS:20:VAL:HG13	40:DS:21:ALA:N	2.34	0.43
40:DS:25:ARG:HE	40:DS:74:ILE:HG23	1.82	0.43
46:DZ:7:VAL:HG13	46:DZ:8:THR:CG2	2.39	0.43
46:DZ:33:LEU:HD23	46:DZ:52:SER:HB3	2.01	0.43
50:D3:44:ARG:N	50:D3:45:PRO:CD	2.82	0.43
52:DI:59:THR:O	52:DI:59:THR:HG23	2.19	0.43
1:AA:332:G:O2'	1:AA:333:U:H5'	2.19	0.43
1:AA:541:G:H2'	1:AA:542:G:H8	1.84	0.43
1:AA:642:A:H2'	1:AA:643:C:C6	2.52	0.43
1:AA:721:G:H4'	1:AA:722:G:O4'	2.18	0.43
1:AA:767:A:H2'	1:AA:768:A:H8	1.84	0.43
1:AA:975:A:H61	9:AJ:50:THR:HG21	1.83	0.43
1:AA:1421:G:N2	1:AA:1479:C:O2	2.51	0.43
9:AJ:50:THR:HG22	9:AJ:62:ARG:HD2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AL:30:ARG:O	11:AL:57:THR:HG23	2.18	0.43
11:AL:86:VAL:HG12	11:AL:89:LEU:H	1.82	0.43
11:AL:89:LEU:N	11:AL:89:LEU:HD22	2.33	0.43
12:AM:63:VAL:HG13	12:AM:67:ASP:CB	2.48	0.43
20:AB:95:TRP:CH2	20:AB:100:LEU:HD13	2.53	0.43
20:AB:172:ILE:CG2	20:AB:176:ASN:HD21	2.31	0.43
22:BA:51:G:H5"	36:BO:64:TYR:CD2	2.53	0.43
23:BB:705:A:O2'	25:BC:6:LYS:HD2	2.18	0.43
23:BB:1270:C:H5"	23:BB:1271:G:O5'	2.17	0.43
23:BB:1467:U:O2'	23:BB:1468:U:H5'	2.18	0.43
23:BB:1708:C:H2'	23:BB:1709:U:C6	2.53	0.43
23:BB:1805:A:H5"	25:BC:247:TRP:CE2	2.54	0.43
23:BB:2026:U:H2'	23:BB:2027:G:H8	1.83	0.43
23:BB:2694:G:H2'	23:BB:2695:U:C6	2.54	0.43
23:BB:2716:C:H2'	23:BB:2717:C:H6	1.82	0.43
23:BB:2742:G:O2'	23:BB:2743:U:H5'	2.19	0.43
25:BC:156:SER:HB3	25:BC:159:THR:HG21	2.00	0.43
25:BC:224:MET:SD	25:BC:229:HIS:HB2	2.58	0.43
27:BE:188:MET:HG2	27:BE:193:VAL:CG2	2.44	0.43
28:BF:107:VAL:HB	28:BF:108:PRO:HD3	2.01	0.43
30:BH:131:SER:CB	30:BH:141:LYS:HA	2.46	0.43
31:BJ:64:VAL:HG22	31:BJ:68:LYS:CD	2.49	0.43
32:BK:2:ILE:HD12	32:BK:2:ILE:N	2.33	0.43
32:BK:7:MET:CE	32:BK:18:ARG:HB3	2.49	0.43
34:BM:49:ALA:HA	34:BM:123:LYS:HG3	2.00	0.43
37:BP:19:PHE:O	37:BP:20:ARG:CB	2.66	0.43
37:BP:100:ARG:HB3	37:BP:101:GLU:OE2	2.19	0.43
38:BQ:77:LYS:O	38:BQ:80:ASN:HB3	2.19	0.43
39:BR:39:LEU:H	39:BR:39:LEU:HD23	1.82	0.43
41:BT:40:LYS:O	41:BT:43:ILE:HB	2.18	0.43
41:BT:58:VAL:O	41:BT:58:VAL:HG13	2.19	0.43
42:BU:73:ASN:ND2	42:BU:74:ALA:N	2.67	0.43
43:BW:28:GLU:H	43:BW:31:LEU:HG	1.84	0.43
43:BW:55:ASP:C	43:BW:57:THR:H	2.21	0.43
45:BY:6:ILE:HG23	45:BY:56:VAL:HG22	2.01	0.43
46:BZ:70:GLU:O	46:BZ:72:ARG:N	2.42	0.43
46:BZ:77:LYS:HG3	46:BZ:78:TYR:H	1.84	0.43
52:BI:56:VAL:HG13	52:BI:58:ILE:HD11	2.01	0.43
1:CA:126:G:H2'	1:CA:127:G:O4'	2.18	0.43
1:CA:186:C:H2'	1:CA:187:G:O4'	2.19	0.43
1:CA:375:U:O2'	1:CA:376:G:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:386:C:O2'	1:CA:387:U:H5'	2.18	0.43
1:CA:562:U:H5"	1:CA:563:A:C4	2.54	0.43
1:CA:828:U:H2'	1:CA:829:G:O5'	2.19	0.43
1:CA:948:C:H2'	1:CA:949:A:H8	1.83	0.43
1:CA:1077:G:N1	1:CA:1081:A:C6	2.87	0.43
1:CA:1096:C:H2'	1:CA:1097:C:C6	2.52	0.43
1:CA:1222:G:H2'	1:CA:1223:C:H5'	2.00	0.43
3:CD:2:ARG:HG3	3:CD:114:ARG:CZ	2.49	0.43
6:CG:30:MET:HG3	6:CG:35:LYS:HA	2.00	0.43
7:CH:12:ARG:HG3	7:CH:12:ARG:NH1	2.34	0.43
10:CK:91:GLY:O	10:CK:95:THR:HG22	2.19	0.43
11:CL:37:TYR:O	11:CL:38:THR:HG23	2.18	0.43
17:CR:57:ALA:O	17:CR:60:ARG:HG3	2.18	0.43
19:CT:4:LYS:HZ1	19:CT:6:ALA:CB	2.30	0.43
20:CB:8:MET:SD	20:CB:9:LEU:N	2.92	0.43
20:CB:35:ASN:HD22	20:CB:35:ASN:HA	1.53	0.43
20:CB:165:ALA:HB3	20:CB:186:VAL:HG11	2.01	0.43
23:DB:39:G:H2'	23:DB:40:U:H6	1.82	0.43
23:DB:463:G:N1	23:DB:467:G:C6	2.87	0.43
23:DB:672:C:H2'	23:DB:673:C:C6	2.54	0.43
23:DB:811:U:OP2	33:DL:20:GLY:HA2	2.19	0.43
23:DB:989:G:H5"	45:DY:13:ILE:HD11	2.00	0.43
23:DB:1030:C:O2'	23:DB:1031:G:H5'	2.18	0.43
23:DB:1438:U:O2'	23:DB:1439:A:H5'	2.18	0.43
23:DB:1704:C:H2'	23:DB:1705:A:H8	1.83	0.43
23:DB:1795:C:H2'	23:DB:1796:U:C6	2.53	0.43
23:DB:1797:G:O3'	25:DC:255:LYS:O	2.37	0.43
23:DB:1831:G:H2'	23:DB:1832:C:H6	1.82	0.43
23:DB:2485:G:O2'	23:DB:2486:C:H5'	2.19	0.43
23:DB:2655:G:H1'	23:DB:2656:U:H5	1.84	0.43
23:DB:2722:G:O2'	23:DB:2723:C:H5'	2.19	0.43
23:DB:2743:U:C2'	23:DB:2744:G:H5"	2.37	0.43
24:DV:49:ASN:O	24:DV:52:ALA:HB3	2.17	0.43
26:DD:8:LYS:HA	26:DD:201:LEU:HD11	2.01	0.43
26:DD:33:ARG:HE	26:DD:74:GLU:HB3	1.83	0.43
26:DD:34:VAL:CG2	26:DD:48:ILE:HG13	2.49	0.43
26:DD:161:MET:O	26:DD:162:ALA:C	2.57	0.43
30:DH:87:GLU:CD	30:DH:87:GLU:H	2.22	0.43
33:DL:54:GLN:O	33:DL:56:PRO:HD3	2.18	0.43
34:DM:32:GLY:HA2	34:DM:117:PHE:CZ	2.54	0.43
35:DN:116:VAL:O	35:DN:116:VAL:HG13	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DO:35:ILE:HG21	36:DO:71:ALA:HB1	2.00	0.43
36:DO:51:ALA:HB2	36:DO:81:ARG:HH11	1.84	0.43
38:DQ:9:ALA:O	38:DQ:12:ARG:N	2.51	0.43
38:DQ:30:VAL:HG12	38:DQ:33:VAL:HG22	1.99	0.43
38:DQ:65:ASN:CG	38:DQ:75:TYR:HB2	2.39	0.43
40:DS:6:LYS:HB3	40:DS:104:THR:HA	2.01	0.43
41:DT:12:ARG:HA	44:DX:29:ARG:NH2	2.30	0.43
41:DT:58:VAL:O	41:DT:58:VAL:HG13	2.18	0.43
43:DW:70:VAL:O	43:DW:70:VAL:HG13	2.19	0.43
48:D1:18:HIS:CG	48:D1:19:PHE:N	2.86	0.43
48:D1:46:VAL:HG22	48:D1:47:ILE:HD12	2.01	0.43
1:AA:71:A:O2'	1:AA:72:A:H5"	2.18	0.43
1:AA:82:G:H1'	1:AA:89:U:C2	2.54	0.43
1:AA:187:G:N2	1:AA:189:A:H3'	2.34	0.43
1:AA:191:G:H2'	1:AA:192:A:H8	1.84	0.43
1:AA:263:A:H2'	1:AA:264:C:C6	2.53	0.43
1:AA:386:C:O2'	1:AA:387:U:H5'	2.18	0.43
1:AA:594:U:O2'	1:AA:595:A:H5'	2.17	0.43
1:AA:716:A:H1'	10:AK:119:GLY:HA2	2.01	0.43
1:AA:1140:C:O2'	1:AA:1141:C:H5'	2.18	0.43
1:AA:1329:A:O2'	1:AA:1330:U:H5'	2.18	0.43
1:AA:1409:C:H4'	23:BB:1915:U:O4	2.19	0.43
2:AC:2:GLN:O	2:AC:3:LYS:HB2	2.19	0.43
2:AC:50:SER:CB	2:AC:70:ALA:HB3	2.48	0.43
3:AD:106:PHE:CD1	3:AD:158:LEU:HD21	2.54	0.43
5:AF:6:ILE:HG23	5:AF:62:MET:CB	2.48	0.43
5:AF:81:ASN:O	5:AF:84:VAL:HG12	2.18	0.43
8:AI:9:GLY:HA3	8:AI:81:GLY:N	2.32	0.43
8:AI:54:VAL:HG21	8:AI:86:LEU:HD21	2.00	0.43
8:AI:66:VAL:HG11	8:AI:78:ILE:HD11	2.01	0.43
9:AJ:8:ILE:HB	9:AJ:74:VAL:HB	2.01	0.43
12:AM:72:ILE:O	12:AM:76:ILE:HG13	2.18	0.43
23:BB:5:A:H2'	23:BB:6:A:H8	1.82	0.43
23:BB:504:A:HO2'	23:BB:505:A:P	2.41	0.43
23:BB:510:C:H2'	23:BB:511:U:O4'	2.19	0.43
23:BB:697:G:O2'	23:BB:698:C:H5'	2.18	0.43
23:BB:741:U:H2'	23:BB:742:A:H8	1.84	0.43
23:BB:771:G:O2'	23:BB:772:C:H5'	2.19	0.43
23:BB:852:U:H2'	23:BB:853:C:C6	2.53	0.43
23:BB:950:G:H2'	23:BB:951:C:H6	1.84	0.43
23:BB:1233:C:O2'	23:BB:1234:U:H5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1405:U:H2'	23:BB:1406:U:H6	1.83	0.43
23:BB:1459:G:N3	23:BB:1459:G:O5'	2.52	0.43
23:BB:1490:A:H2'	25:BC:97:ASP:CG	2.39	0.43
23:BB:1528:A:H2'	23:BB:1529:G:H5'	2.00	0.43
23:BB:1563:U:H2'	23:BB:1564:C:C6	2.53	0.43
23:BB:1742:U:H2'	23:BB:1743:G:H8	1.83	0.43
23:BB:1797:G:O3'	25:BC:255:LYS:O	2.37	0.43
23:BB:1798:U:H5"	25:BC:257:ARG:HB2	2.01	0.43
23:BB:1939:U:H5'	23:BB:1939:U:C6	2.47	0.43
23:BB:1973:G:H2'	23:BB:1974:C:H6	1.84	0.43
23:BB:2526:G:H2'	23:BB:2527:C:H6	1.83	0.43
23:BB:2786:U:H5'	26:BD:70:LYS:HG3	2.00	0.43
23:BB:2869:G:H2'	23:BB:2870:C:C6	2.53	0.43
25:BC:36:ASN:ND2	25:BC:85:ASN:HD21	2.15	0.43
25:BC:226:PRO:HG3	25:BC:233:GLY:N	2.26	0.43
26:BD:187:LEU:O	26:BD:188:LEU:HD23	2.19	0.43
28:BF:121:PHE:HE1	28:BF:162:ASP:CB	2.32	0.43
29:BG:9:VAL:HA	29:BG:48:THR:CG2	2.47	0.43
30:BH:78:VAL:HG11	30:BH:142:VAL:CG1	2.49	0.43
31:BJ:88:THR:HG22	31:BJ:91:GLU:OE1	2.19	0.43
33:BL:29:LYS:C	33:BL:31:GLY:H	2.22	0.43
33:BL:109:LYS:HE3	33:BL:111:ILE:HD11	2.01	0.43
35:BN:19:ALA:HA	35:BN:22:ARG:CB	2.47	0.43
38:BQ:96:ASP:C	38:BQ:98:ALA:N	2.71	0.43
48:B1:7:LYS:HD3	50:B3:33:THR:HG21	2.00	0.43
51:B4:2:LYS:HD3	51:B4:4:ARG:HG3	2.01	0.43
52:BI:49:GLU:HG3	52:BI:54:ILE:HD11	2.00	0.43
1:CA:25:C:H5'	1:CA:524:G:H1'	2.00	0.43
1:CA:59:A:H3'	1:CA:331:G:H22	1.83	0.43
1:CA:113:G:O2'	1:CA:354:G:H5'	2.19	0.43
1:CA:251:G:N3	1:CA:266:G:O6	2.51	0.43
1:CA:389:A:C6	1:CA:390:U:H1'	2.53	0.43
1:CA:488:C:O2'	1:CA:489:C:H5'	2.19	0.43
1:CA:957:U:H2'	1:CA:959:A:OP2	2.19	0.43
1:CA:1111:A:O2'	1:CA:1112:C:H5'	2.19	0.43
1:CA:1366:C:H2'	1:CA:1367:C:H6	1.83	0.43
1:CA:1390:U:H2'	1:CA:1391:U:C6	2.53	0.43
1:CA:1469:C:H2'	1:CA:1470:U:O4'	2.18	0.43
2:CC:154:GLY:HA2	2:CC:163:ARG:N	2.34	0.43
3:CD:31:CYS:O	3:CD:32:LYS:HB2	2.18	0.43
7:CH:40:LYS:HD3	7:CH:48:PHE:CE1	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CH:54:THR:HG23	7:CH:55:LYS:HG2	2.00	0.43
9:CJ:37:ARG:NH1	9:CJ:77:VAL:HG11	2.34	0.43
10:CK:36:ARG:HH11	10:CK:36:ARG:HG3	1.83	0.43
10:CK:59:PRO:HA	10:CK:90:PRO:HB2	2.00	0.43
10:CK:106:ILE:O	10:CK:107:THR:HG23	2.18	0.43
16:CQ:30:HIS:CB	16:CQ:33:TYR:HB2	2.49	0.43
18:CS:41:PRO:C	18:CS:43:MET:H	2.22	0.43
19:CT:64:GLY:H	19:CT:67:HIS:CD2	2.37	0.43
20:CB:44:LYS:O	20:CB:47:PRO:HD2	2.18	0.43
21:CU:20:ARG:C	21:CU:22:CYS:H	2.22	0.43
22:DA:91:C:H2'	22:DA:92:C:C6	2.52	0.43
23:DB:43:G:H2'	23:DB:44:A:O4'	2.19	0.43
23:DB:533:G:H2'	23:DB:534:U:C6	2.53	0.43
23:DB:1025:G:OP1	23:DB:1025:G:H8	2.01	0.43
23:DB:1027:A:N6	23:DB:1126:A:H1'	2.33	0.43
23:DB:1059:G:H2'	23:DB:1060:U:C5	2.53	0.43
23:DB:1708:C:H2'	23:DB:1709:U:C6	2.54	0.43
23:DB:1803:A:H4'	25:DC:256:THR:OG1	2.18	0.43
23:DB:1930:G:H2'	23:DB:1968:G:C6	2.54	0.43
23:DB:2052:A:N7	26:DD:146:ILE:HD11	2.34	0.43
23:DB:2391:G:HO2'	23:DB:2392:A:P	2.41	0.43
23:DB:2800:A:C2	23:DB:2801:G:H1'	2.53	0.43
23:DB:2882:A:OP1	35:DN:96:ARG:HD2	2.18	0.43
25:DC:36:ASN:ND2	25:DC:61:TYR:HB2	2.34	0.43
27:DE:134:LEU:CD2	27:DE:161:ALA:HB2	2.49	0.43
31:DJ:103:ILE:HG13	31:DJ:104:ALA:N	2.33	0.43
32:DK:54:LYS:H	32:DK:54:LYS:CD	2.28	0.43
32:DK:88:ASN:ND2	32:DK:89:ASN:N	2.66	0.43
35:DN:79:LEU:HA	35:DN:83:LEU:HD12	2.00	0.43
38:DQ:63:ARG:HH12	38:DQ:96:ASP:HB2	1.84	0.43
39:DR:39:LEU:H	39:DR:39:LEU:HD23	1.82	0.43
41:DT:39:THR:O	41:DT:40:LYS:HB3	2.18	0.43
41:DT:69:ARG:HA	41:DT:69:ARG:NH1	2.33	0.43
42:DU:73:ASN:ND2	42:DU:74:ALA:N	2.67	0.43
43:DW:70:VAL:CG2	43:DW:75:ASN:HD21	2.32	0.43
45:DY:23:LEU:HD23	45:DY:50:VAL:HG11	2.00	0.43
46:DZ:64:ILE:HG22	46:DZ:68:LEU:CD1	2.48	0.43
48:D1:3:GLY:O	48:D1:5:ARG:N	2.51	0.43
1:AA:704:A:C2	1:AA:705:G:H1'	2.54	0.43
1:AA:1120:C:H2'	1:AA:1121:U:H6	1.82	0.43
1:AA:1305:G:H22	1:AA:1331:G:H2'	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1527:U:H2'	1:AA:1528:U:C6	2.54	0.43
5:AF:3:HIS:CD2	5:AF:65:GLU:HG3	2.53	0.43
6:AG:100:MET:O	6:AG:104:VAL:HG23	2.18	0.43
8:AI:118:ARG:NH1	8:AI:122:ARG:HE	2.17	0.43
12:AM:18:LEU:HD13	12:AM:33:LEU:HD21	2.01	0.43
15:AP:43:ALA:HB1	15:AP:46:LYS:HE3	2.01	0.43
16:AQ:34:GLY:O	16:AQ:35:LYS:C	2.57	0.43
19:AT:32:LYS:O	19:AT:35:TYR:N	2.51	0.43
23:BB:19:A:O2'	23:BB:20:C:H5'	2.19	0.43
23:BB:63:A:C8	23:BB:63:A:OP2	2.69	0.43
23:BB:582:A:H2'	23:BB:583:G:C8	2.54	0.43
23:BB:754:U:H2'	23:BB:755:U:H6	1.84	0.43
23:BB:1153:C:H2'	23:BB:1154:G:O4'	2.19	0.43
23:BB:1332:G:HO2'	23:BB:1609:A:H2	1.65	0.43
23:BB:1454:C:C5	35:BN:64:ARG:HG2	2.54	0.43
23:BB:1636:U:O2'	23:BB:1637:A:H5'	2.18	0.43
23:BB:2219:U:O2'	23:BB:2220:U:H5'	2.17	0.43
24:BV:40:ILE:H	24:BV:40:ILE:CD1	2.30	0.43
24:BV:71:LYS:HB2	24:BV:94:ALA:OXT	2.19	0.43
24:BV:80:HIS:CD2	24:BV:81:PRO:HD2	2.54	0.43
26:BD:117:GLY:HA2	26:BD:164:GLN:NE2	2.34	0.43
28:BF:36:ASN:ND2	28:BF:152:ASP:HB2	2.10	0.43
28:BF:111:ARG:O	28:BF:112:ASP:HB2	2.18	0.43
29:BG:107:GLY:HA3	29:BG:151:ARG:NH2	2.34	0.43
29:BG:148:ARG:HD3	29:BG:152:ARG:NH1	2.33	0.43
30:BH:68:ARG:HB3	30:BH:132:PHE:HE2	1.84	0.43
30:BH:82:SER:HB2	30:BH:94:ILE:HG12	2.01	0.43
31:BJ:24:THR:O	31:BJ:25:LEU:HB3	2.19	0.43
33:BL:50:PHE:CE2	33:BL:53:GLY:HA2	2.54	0.43
36:BO:34:HIS:HB3	36:BO:36:TYR:CE2	2.54	0.43
36:BO:78:VAL:HA	36:BO:81:ARG:HB3	2.00	0.43
38:BQ:16:ILE:C	38:BQ:18:LYS:H	2.20	0.43
38:BQ:24:TYR:CD1	38:BQ:25:GLY:N	2.86	0.43
44:BX:1:MET:CG	44:BX:4:LYS:HD3	2.49	0.43
46:BZ:65:ASP:OD2	46:BZ:65:ASP:N	2.52	0.43
47:B0:27:LEU:H	47:B0:27:LEU:HD12	1.83	0.43
1:CA:38:G:O2'	1:CA:39:G:H5'	2.19	0.43
1:CA:106:C:HO2'	1:CA:107:G:H5'	1.83	0.43
1:CA:116:A:H8	1:CA:116:A:O5'	2.02	0.43
1:CA:138:G:C6	1:CA:226:G:C6	3.07	0.43
1:CA:282:A:H2'	1:CA:282:A:N3	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:300:A:H2'	1:CA:301:G:O4'	2.19	0.43
1:CA:542:G:O2'	1:CA:543:U:H5'	2.19	0.43
1:CA:967:C:H5'	8:CI:129:ARG:HA	2.01	0.43
1:CA:993:G:H21	1:CA:996:A:N6	2.17	0.43
1:CA:1186:G:H4'	8:CI:111:GLU:OE1	2.19	0.43
1:CA:1313:U:O2'	1:CA:1314:C:H5'	2.18	0.43
1:CA:1368:A:O2'	1:CA:1369:C:H5'	2.19	0.43
1:CA:1484:C:O2'	1:CA:1485:U:H5'	2.19	0.43
2:CC:18:ASN:HB2	13:CN:90:GLY:HA3	1.99	0.43
3:CD:197:HIS:O	3:CD:201:GLU:HG3	2.18	0.43
5:CF:54:LEU:C	5:CF:56:LYS:H	2.22	0.43
5:CF:97:THR:O	5:CF:98:GLU:CD	2.57	0.43
6:CG:46:LEU:HG	6:CG:57:GLU:CB	2.38	0.43
7:CH:106:SER:C	7:CH:107:LYS:HE2	2.38	0.43
9:CJ:57:VAL:HG13	9:CJ:58:ASN:N	2.33	0.43
10:CK:19:VAL:HG22	10:CK:34:THR:O	2.18	0.43
10:CK:33:ILE:CG1	10:CK:73:VAL:HG21	2.46	0.43
11:CL:79:ILE:C	11:CL:101:LEU:HD12	2.39	0.43
11:CL:86:VAL:HG12	11:CL:89:LEU:H	1.83	0.43
14:CO:54:GLY:O	14:CO:58:MET:HG2	2.19	0.43
20:CB:17:HIS:CG	20:CB:18:GLN:H	2.37	0.43
20:CB:46:VAL:CG1	20:CB:47:PRO:HD3	2.33	0.43
20:CB:48:MET:O	20:CB:52:ALA:HB3	2.19	0.43
20:CB:95:TRP:HZ3	20:CB:174:GLU:CD	2.22	0.43
23:DB:118:A:OP2	23:DB:119:A:H5"	2.18	0.43
23:DB:426:C:O2'	23:DB:427:U:H5'	2.17	0.43
23:DB:523:C:O2'	23:DB:524:G:H5'	2.18	0.43
23:DB:560:C:H3'	23:DB:561:G:C8	2.54	0.43
23:DB:866:A:H61	23:DB:913:U:C1'	2.32	0.43
23:DB:876:C:H2'	23:DB:877:A:C1'	2.49	0.43
23:DB:1060:U:O4	52:DI:131:THR:HG22	2.18	0.43
23:DB:1897:G:O2'	23:DB:1898:U:H5'	2.19	0.43
23:DB:1994:C:O2'	23:DB:1995:U:H5'	2.19	0.43
23:DB:2571:U:O3'	26:DD:151:THR:HB	2.18	0.43
23:DB:2618:G:H2'	23:DB:2619:C:H6	1.84	0.43
23:DB:2658:C:H2'	23:DB:2659:G:H5'	2.00	0.43
23:DB:2893:A:C5'	23:DB:2894:G:H5'	2.47	0.43
25:DC:45:ASN:ND2	25:DC:45:ASN:H	2.15	0.43
25:DC:70:LYS:HB2	25:DC:101:ARG:NH2	2.33	0.43
26:DD:59:ARG:HD3	26:DD:59:ARG:O	2.19	0.43
28:DF:107:VAL:HB	28:DF:108:PRO:HD3	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DH:56:ALA:O	30:DH:60:GLU:HB3	2.18	0.43
30:DH:110:VAL:HG22	30:DH:110:VAL:O	2.17	0.43
32:DK:64:ARG:NH2	37:DP:67:GLU:HG3	2.34	0.43
33:DL:47:ARG:HH21	33:DL:47:ARG:CB	2.31	0.43
33:DL:57:LEU:HD22	50:D3:53:ASP:HB3	2.01	0.43
38:DQ:68:ALA:HB1	38:DQ:73:ILE:CG2	2.46	0.43
38:DQ:81:GLY:HA3	38:DQ:116:LEU:HD11	2.00	0.43
41:DT:83:ALA:O	41:DT:84:TYR:HB2	2.19	0.43
42:DU:86:PHE:HB3	42:DU:90:LYS:O	2.19	0.43
49:D2:9:VAL:HG13	49:D2:10:LEU:N	2.34	0.43
52:DI:90:GLY:C	52:DI:91:LYS:HD2	2.38	0.43
1:AA:152:A:H3'	1:AA:153:C:H6	1.84	0.43
1:AA:307:C:H2'	1:AA:308:C:H6	1.84	0.43
1:AA:425:G:H2'	1:AA:426:U:C6	2.54	0.43
1:AA:523:A:H61	11:AL:88:ASP:HB2	1.83	0.43
1:AA:574:A:H1'	1:AA:883:C:O4'	2.18	0.43
1:AA:779:C:H5"	10:AK:123:PRO:HB3	2.00	0.43
1:AA:904:U:H2'	1:AA:905:U:C6	2.53	0.43
1:AA:956:U:O2'	1:AA:957:U:H5'	2.19	0.43
1:AA:1065:U:H1'	1:AA:1066:C:OP2	2.19	0.43
1:AA:1313:U:OP1	18:AS:6:LYS:HD3	2.19	0.43
1:AA:1488:G:H2'	1:AA:1489:G:O4'	2.19	0.43
1:AA:1495:U:O2'	1:AA:1496:C:H5'	2.19	0.43
6:AG:149:ALA:HB2	10:AK:55:ARG:CZ	2.48	0.43
16:AQ:45:VAL:HG11	16:AQ:60:ILE:HG21	2.00	0.43
20:AB:82:ALA:HB3	20:AB:213:LEU:HD22	2.00	0.43
20:AB:128:LEU:CD1	20:AB:132:GLU:HB3	2.48	0.43
21:AU:9:GLU:CG	2:CC:108:PRO:HG3	2.47	0.43
23:BB:91:A:H1'	23:BB:92:U:C6	2.54	0.43
23:BB:1474:U:H2'	23:BB:1475:G:H5"	2.00	0.43
23:BB:2219:U:H2'	23:BB:2220:U:C6	2.54	0.43
23:BB:2231:U:O2'	23:BB:2232:C:H5'	2.19	0.43
23:BB:2258:C:O2'	23:BB:2427:C:OP2	2.35	0.43
23:BB:2456:C:H2'	23:BB:2457:U:O4'	2.19	0.43
23:BB:2515:C:O2'	23:BB:2516:A:H5'	2.19	0.43
23:BB:2548:U:H1'	32:BK:23:LYS:NZ	2.34	0.43
23:BB:2840:C:O2'	23:BB:2841:C:H5'	2.18	0.43
23:BB:2891:U:O2'	23:BB:2892:G:H5'	2.19	0.43
23:BB:2902:C:O2'	23:BB:2903:U:H5'	2.19	0.43
26:BD:35:THR:N	26:BD:49:GLN:O	2.50	0.43
26:BD:202:ILE:HD12	26:BD:202:ILE:N	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BG:4:ALA:HA	29:BG:65:GLY:HA2	1.99	0.43
29:BG:166:GLU:CG	29:BG:168:VAL:HG23	2.43	0.43
30:BH:65:ALA:O	30:BH:67:ALA:N	2.49	0.43
30:BH:94:ILE:HG23	30:BH:98:ASP:OD2	2.19	0.43
38:BQ:47:ARG:O	38:BQ:51:GLN:HG3	2.18	0.43
44:BX:1:MET:HG2	44:BX:4:LYS:HD3	2.00	0.43
49:B2:3:ARG:CZ	49:B2:3:ARG:HA	2.48	0.43
52:BI:19:PRO:HG2	52:BI:22:PRO:HB2	2.01	0.43
52:BI:63:ASP:O	52:BI:65:SER:N	2.52	0.43
1:CA:8:A:H1'	4:CE:106:ALA:O	2.18	0.43
1:CA:373:A:O2'	1:CA:374:A:H5'	2.19	0.43
1:CA:402:G:O2'	1:CA:403:C:H5'	2.19	0.43
1:CA:537:G:H2'	1:CA:538:G:H8	1.84	0.43
1:CA:591:U:OP2	7:CH:30:LYS:HE2	2.18	0.43
1:CA:618:C:H3'	1:CA:620:C:OP2	2.19	0.43
1:CA:647:C:H2'	1:CA:648:A:H8	1.84	0.43
1:CA:715:A:H2'	1:CA:716:A:H8	1.80	0.43
1:CA:875:U:O2'	7:CH:14:ARG:HD2	2.17	0.43
3:CD:71:PHE:CE1	3:CD:89:LEU:HD11	2.54	0.43
5:CF:53:LYS:NZ	5:CF:53:LYS:N	2.66	0.43
8:CI:11:ARG:NH2	8:CI:12:LYS:HD2	2.34	0.43
10:CK:80:ASN:HB3	10:CK:105:ARG:HB3	2.00	0.43
11:CL:21:PRO:HG2	11:CL:94:TYR:OH	2.19	0.43
12:CM:100:ARG:HD3	12:CM:103:THR:OG1	2.19	0.43
14:CO:49:HIS:O	14:CO:52:ARG:HB3	2.19	0.43
20:CB:119:GLN:O	20:CB:121:GLN:N	2.41	0.43
20:CB:128:LEU:HB3	20:CB:132:GLU:HB2	2.01	0.43
23:DB:31:C:C4	23:DB:32:C:C5	3.07	0.43
23:DB:123:G:O3'	23:DB:1376:C:H4'	2.19	0.43
23:DB:164:C:H2'	23:DB:165:A:H5'	2.00	0.43
23:DB:277:G:O5'	23:DB:278:A:N7	2.51	0.43
23:DB:443:A:H1'	23:DB:1201:U:O4'	2.19	0.43
23:DB:495:G:H4'	40:DS:4:ILE:O	2.19	0.43
23:DB:876:C:H2'	23:DB:877:A:H1'	2.00	0.43
23:DB:1195:G:O2'	23:DB:1196:C:H5'	2.19	0.43
23:DB:1229:C:H2'	23:DB:1230:A:H8	1.81	0.43
23:DB:2685:G:O2'	23:DB:2686:G:H5'	2.19	0.43
23:DB:2885:G:H2'	23:DB:2886:A:H4'	2.01	0.43
25:DC:34:GLU:O	25:DC:34:GLU:HG3	2.19	0.43
27:DE:4:VAL:HG12	27:DE:5:LEU:H	1.84	0.43
27:DE:4:VAL:HA	27:DE:11:ALA:HA	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DE:116:ASP:O	27:DE:119:ILE:HD11	2.18	0.43
28:DF:33:ILE:HG23	28:DF:155:ILE:HD12	2.00	0.43
29:DG:95:ALA:HB3	29:DG:124:CYS:SG	2.59	0.43
31:DJ:12:LYS:O	31:DJ:13:ARG:HB2	2.19	0.43
32:DK:64:ARG:HD2	32:DK:102:PRO:O	2.19	0.43
33:DL:6:LEU:H	33:DL:6:LEU:CD2	2.20	0.43
34:DM:38:ARG:HG3	34:DM:98:PRO:HD3	2.00	0.43
38:DQ:26:ALA:C	38:DQ:28:SER:N	2.72	0.43
38:DQ:94:LEU:O	38:DQ:97:ILE:HG23	2.19	0.43
43:DW:16:GLU:CD	43:DW:16:GLU:H	2.20	0.43
1:AA:59:A:H3'	1:AA:331:G:H22	1.84	0.43
1:AA:250:A:H1'	1:AA:252:U:C5	2.54	0.43
1:AA:256:U:H3'	1:AA:257:G:H8	1.84	0.43
1:AA:970:C:H42	8:AI:128:LYS:HG2	1.84	0.43
1:AA:994:A:C5	1:AA:1216:A:H4'	2.54	0.43
1:AA:1113:C:O2'	1:AA:1114:C:H5'	2.19	0.43
1:AA:1296:C:H4'	1:AA:1302:C:H42	1.83	0.43
1:AA:1464:U:OP2	37:BP:108:ARG:NH2	2.52	0.43
2:AC:130:ARG:HA	2:AC:130:ARG:HD2	1.90	0.43
3:AD:78:ALA:HA	3:AD:81:LEU:HD12	2.01	0.43
3:AD:94:GLU:HG3	3:AD:99:ASN:ND2	2.33	0.43
3:AD:97:LEU:HA	3:AD:100:VAL:CG2	2.49	0.43
4:AE:143:LEU:C	4:AE:145:ASN:H	2.22	0.43
6:AG:14:ASP:HB2	6:AG:19:SER:O	2.19	0.43
9:AJ:32:THR:O	9:AJ:32:THR:HG23	2.18	0.43
9:AJ:57:VAL:HG13	9:AJ:58:ASN:N	2.34	0.43
9:AJ:80:THR:O	9:AJ:84:VAL:HG23	2.18	0.43
11:AL:28:GLN:HE21	11:AL:28:GLN:HB3	1.50	0.43
11:AL:43:LYS:CD	11:AL:44:PRO:HD3	2.49	0.43
13:AN:30:ILE:O	13:AN:40:ARG:HA	2.18	0.43
14:AO:10:ILE:O	14:AO:14:PHE:HD1	2.02	0.43
14:AO:42:PHE:CD1	14:AO:55:LEU:HD22	2.53	0.43
16:AQ:30:HIS:CB	16:AQ:33:TYR:HB2	2.49	0.43
18:AS:41:PRO:C	18:AS:43:MET:H	2.22	0.43
23:BB:506:G:H1'	23:BB:507:A:C8	2.54	0.43
23:BB:687:C:H2'	23:BB:688:U:O4'	2.19	0.43
23:BB:915:C:H3'	23:BB:916:G:H8	1.83	0.43
23:BB:1131:G:O2'	23:BB:1133:A:N7	2.52	0.43
23:BB:1557:C:H3'	23:BB:1558:C:C5'	2.46	0.43
23:BB:1641:A:H2'	23:BB:1642:G:O4'	2.19	0.43
23:BB:1939:U:O2	23:BB:1967:C:H4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2052:A:N7	26:BD:146:ILE:HD11	2.34	0.43
23:BB:2282:G:O2'	23:BB:2283:C:OP2	2.32	0.43
23:BB:2461:A:H2'	23:BB:2462:C:H6	1.80	0.43
23:BB:2473:U:O2	23:BB:2473:U:C2'	2.65	0.43
23:BB:2668:G:O2'	23:BB:2669:G:H5'	2.19	0.43
23:BB:2757:A:H2	29:BG:63:GLN:HE22	1.67	0.43
23:BB:2819:G:C6	23:BB:2828:G:C6	3.07	0.43
23:BB:2821:A:OP2	26:BD:115:GLY:HA3	2.19	0.43
27:BE:101:TYR:O	27:BE:104:ALA:HB3	2.19	0.43
28:BF:120:SER:OG	28:BF:129:MET:HB3	2.19	0.43
29:BG:14:VAL:O	29:BG:16:VAL:HG23	2.19	0.43
38:BQ:18:LYS:C	38:BQ:20:ALA:N	2.72	0.43
38:BQ:26:ALA:C	38:BQ:28:SER:N	2.72	0.43
40:BS:60:HIS:O	40:BS:60:HIS:ND1	2.50	0.43
41:BT:39:THR:HG22	41:BT:42:GLU:HG2	2.01	0.43
43:BW:16:GLU:CD	43:BW:16:GLU:H	2.21	0.43
44:BX:43:LEU:O	44:BX:47:ARG:HG3	2.17	0.43
47:B0:27:LEU:HB2	47:B0:28:SER:H	1.63	0.43
48:B1:36:LYS:HG2	48:B1:47:ILE:HA	2.01	0.43
1:CA:218:U:H2'	1:CA:219:U:H6	1.80	0.43
1:CA:377:G:H2'	1:CA:378:G:H8	1.84	0.43
1:CA:493:A:H3'	1:CA:494:G:H8	1.83	0.43
1:CA:643:C:H5'	7:CH:31:LEU:HD13	2.00	0.43
1:CA:857:C:H2'	1:CA:858:G:O4'	2.19	0.43
1:CA:994:A:N3	1:CA:994:A:H2'	2.34	0.43
1:CA:1172:C:O2'	1:CA:1173:U:H5'	2.19	0.43
1:CA:1226:C:H3'	12:CM:101:THR:OG1	2.18	0.43
2:CC:54:ILE:HG23	2:CC:54:ILE:O	2.19	0.43
4:CE:82:HIS:HE1	4:CE:147:ASN:H	1.67	0.43
5:CF:79:ARG:HA	5:CF:79:ARG:HD3	1.89	0.43
6:CG:78:ARG:HH11	6:CG:80:GLY:H	1.67	0.43
8:CI:53:LEU:HD22	8:CI:53:LEU:N	2.34	0.43
11:CL:30:ARG:O	11:CL:57:THR:HG23	2.19	0.43
20:CB:17:HIS:CG	20:CB:18:GLN:N	2.87	0.43
20:CB:95:TRP:HH2	20:CB:100:LEU:HD22	1.83	0.43
20:CB:160:LEU:HG	20:CB:161:PHE:N	2.33	0.43
20:CB:163:ILE:HD12	20:CB:185:ILE:HD12	2.00	0.43
20:CB:165:ALA:H	20:CB:186:VAL:HG12	1.83	0.43
22:DA:15:A:OP1	22:DA:108:A:H5'	2.19	0.43
22:DA:22:U:H2'	22:DA:23:G:C8	2.54	0.43
23:DB:716:A:C2'	23:DB:717:C:H5"	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:755:U:H2'	23:DB:756:A:H8	1.83	0.43
23:DB:864:G:O2'	23:DB:865:C:H5'	2.18	0.43
23:DB:930:G:H1'	45:DY:24:LEU:HD11	2.01	0.43
23:DB:1241:A:N3	23:DB:1241:A:O4'	2.51	0.43
23:DB:1411:U:H2'	23:DB:1412:U:C6	2.54	0.43
23:DB:1474:U:H2'	23:DB:1475:G:H5"	2.01	0.43
23:DB:1633:G:O2'	23:DB:1634:A:H5"	2.19	0.43
23:DB:1946:U:O2'	23:DB:1947:C:H5'	2.18	0.43
23:DB:2149:U:H2'	23:DB:2150:C:O4'	2.18	0.43
23:DB:2780:G:H4'	23:DB:2781:A:OP2	2.18	0.43
24:DV:32:GLY:O	24:DV:93:ARG:HB2	2.19	0.43
25:DC:180:MET:O	25:DC:267:VAL:HG23	2.19	0.43
27:DE:104:ALA:C	27:DE:106:LYS:H	2.22	0.43
28:DF:31:GLU:HB2	28:DF:158:THR:CG2	2.48	0.43
28:DF:36:ASN:HD22	28:DF:152:ASP:CB	2.12	0.43
28:DF:87:LYS:C	28:DF:88:VAL:HG23	2.39	0.43
30:DH:83:LYS:HG3	30:DH:149:GLU:CG	2.46	0.43
31:DJ:29:ALA:O	31:DJ:32:LEU:HB2	2.19	0.43
34:DM:26:VAL:HG22	34:DM:133:LYS:HA	2.00	0.43
34:DM:126:ILE:HG22	34:DM:127:LYS:N	2.34	0.43
35:DN:13:ASN:OD1	35:DN:16:HIS:HB2	2.19	0.43
38:DQ:63:ARG:NH2	38:DQ:95:ALA:O	2.52	0.43
38:DQ:93:ILE:HG23	38:DQ:94:LEU:H	1.84	0.43
39:DR:71:LYS:HG2	39:DR:73:LYS:HZ3	1.83	0.43
40:DS:41:LYS:HB3	40:DS:41:LYS:HZ2	1.82	0.43
41:DT:7:LEU:C	41:DT:9:LYS:H	2.21	0.43
44:DX:59:GLU:N	44:DX:59:GLU:OE2	2.52	0.43
49:D2:30:VAL:HG22	49:D2:33:ARG:NH2	2.24	0.43
52:DI:72:THR:OG1	52:DI:73:PRO:HD2	2.18	0.43
52:DI:126:ARG:NH1	52:DI:126:ARG:CB	2.82	0.43
1:AA:402:G:O2'	1:AA:403:C:H5'	2.19	0.42
1:AA:429:U:H5'	3:AD:8:LEU:CG	2.38	0.42
1:AA:878:A:OP1	7:AH:80:PRO:HG2	2.18	0.42
1:AA:927:G:H2'	1:AA:928:G:H8	1.83	0.42
16:AQ:18:LYS:H	16:AQ:50:ASN:HD21	1.67	0.42
18:AS:30:LEU:HG	18:AS:47:THR:O	2.19	0.42
20:AB:93:HIS:O	20:AB:94:ARG:HG2	2.19	0.42
22:BA:49:C:OP1	36:BO:101:GLY:HA3	2.19	0.42
23:BB:302:C:H2'	23:BB:303:G:H8	1.84	0.42
23:BB:327:G:O2'	23:BB:328:U:H5'	2.19	0.42
23:BB:554:U:H2'	23:BB:555:G:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:621:A:H2'	23:BB:622:G:O4'	2.19	0.42
23:BB:692:C:H2'	23:BB:693:A:C8	2.54	0.42
23:BB:909:A:H2'	23:BB:912:C:C5	2.53	0.42
23:BB:937:C:H2'	23:BB:938:G:H8	1.84	0.42
23:BB:962:G:H2'	23:BB:963:U:H6	1.84	0.42
23:BB:1208:C:C2'	23:BB:1209:U:H5'	2.49	0.42
23:BB:1238:G:O2'	23:BB:1239:G:H5'	2.19	0.42
23:BB:1535:A:C5'	23:BB:1536:C:H5	2.30	0.42
23:BB:1565:C:H5"	25:BC:17:LYS:HZ1	1.83	0.42
23:BB:1637:A:H2'	23:BB:1638:C:C6	2.54	0.42
23:BB:2146:C:O2'	23:BB:2147:A:H5'	2.17	0.42
23:BB:2590:A:O2'	23:BB:2591:C:H5'	2.18	0.42
23:BB:2655:G:N2	23:BB:2664:G:H2'	2.34	0.42
24:BV:2:PHE:HD2	24:BV:59:GLU:OE1	2.02	0.42
24:BV:77:VAL:HG12	34:BM:136:MET:HG2	2.00	0.42
26:BD:150:GLN:O	26:BD:153:GLY:N	2.52	0.42
26:BD:197:THR:C	26:BD:199:SER:H	2.21	0.42
27:BE:12:LEU:HD11	27:BE:14:VAL:HG13	2.00	0.42
27:BE:148:ILE:HG22	27:BE:148:ILE:O	2.18	0.42
28:BF:76:PHE:O	28:BF:77:LYS:HB2	2.19	0.42
29:BG:1:SER:HA	29:BG:61:TRP:CZ3	2.54	0.42
34:BM:124:LEU:HA	34:BM:125:PRO:HD3	1.87	0.42
35:BN:116:VAL:O	35:BN:117:ASP:CB	2.59	0.42
36:BO:88:LYS:HD2	36:BO:89:ASP:CB	2.48	0.42
36:BO:92:PHE:HB2	36:BO:117:PHE:CE1	2.53	0.42
37:BP:100:ARG:O	37:BP:102:ARG:N	2.52	0.42
39:BR:54:VAL:HG13	39:BR:56:GLY:O	2.18	0.42
39:BR:63:VAL:HG23	39:BR:63:VAL:O	2.19	0.42
41:BT:29:THR:HB	41:BT:86:THR:HG22	2.01	0.42
42:BU:80:ASP:HB2	42:BU:95:PHE:CD2	2.54	0.42
42:BU:84:PHE:HE2	42:BU:93:ARG:HG2	1.84	0.42
42:BU:85:ARG:HH11	42:BU:86:PHE:H	1.65	0.42
43:BW:35:ILE:HA	43:BW:57:THR:HA	2.01	0.42
46:BZ:11:ARG:HB3	46:BZ:12:PRO:HD2	2.00	0.42
48:B1:18:HIS:CG	48:B1:19:PHE:N	2.87	0.42
1:CA:51:A:H61	1:CA:314:C:H1'	1.83	0.42
1:CA:201:G:H2'	1:CA:202:G:C8	2.53	0.42
1:CA:623:C:H2'	1:CA:624:C:C6	2.54	0.42
1:CA:695:A:H61	1:CA:797:C:C1'	2.28	0.42
1:CA:822:U:H2'	1:CA:823:C:H6	1.84	0.42
1:CA:915:A:H2'	1:CA:916:U:H5'	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:977:A:O2'	1:CA:1223:C:N4	2.52	0.42
1:CA:986:U:H2'	1:CA:987:G:C8	2.54	0.42
1:CA:1014:A:C2	1:CA:1219:A:H1'	2.54	0.42
1:CA:1056:U:H2'	1:CA:1057:G:H8	1.84	0.42
1:CA:1187:G:OP1	8:CI:114:LYS:HE3	2.19	0.42
1:CA:1320:C:H41	18:CS:36:ARG:HA	1.84	0.42
1:CA:1352:C:H2'	1:CA:1353:G:H8	1.81	0.42
2:CC:174:LEU:HD23	2:CC:174:LEU:O	2.18	0.42
4:CE:94:PHE:O	4:CE:124:ALA:HB1	2.19	0.42
5:CF:9:MET:HB3	5:CF:59:TYR:CD2	2.54	0.42
6:CG:13:PRO:O	6:CG:18:GLY:HA2	2.19	0.42
11:CL:35:ARG:NH2	11:CL:36:VAL:HG22	2.34	0.42
16:CQ:39:ARG:HG3	16:CQ:39:ARG:NH1	2.33	0.42
19:CT:54:GLN:O	19:CT:57:VAL:HG23	2.19	0.42
23:DB:554:U:H2'	23:DB:555:G:O4'	2.18	0.42
23:DB:616:A:H4'	27:DE:101:TYR:CE2	2.54	0.42
23:DB:687:C:H2'	23:DB:688:U:O4'	2.19	0.42
23:DB:760:G:C2'	23:DB:761:A:H5'	2.49	0.42
23:DB:862:G:H2'	23:DB:863:A:C8	2.54	0.42
23:DB:1109:C:H2'	23:DB:1110:G:C4	2.53	0.42
23:DB:1205:A:N1	27:DE:165:HIS:HB2	2.34	0.42
23:DB:1270:C:H5"	23:DB:1271:G:O5'	2.19	0.42
23:DB:1759:A:H2'	23:DB:1759:A:N3	2.34	0.42
23:DB:1812:U:H4'	25:DC:44:ASN:OD1	2.18	0.42
23:DB:1851:U:O2'	23:DB:1852:U:H5'	2.19	0.42
23:DB:2227:A:H2'	23:DB:2228:G:O4'	2.19	0.42
23:DB:2811:G:OP1	26:DD:62:LYS:HD2	2.19	0.42
23:DB:2845:U:O2'	23:DB:2846:G:H5'	2.19	0.42
25:DC:138:SER:O	25:DC:140:VAL:HG23	2.19	0.42
25:DC:164:VAL:O	25:DC:165:ALA:HB2	2.19	0.42
26:DD:13:ARG:HH21	37:DP:55:HIS:HA	1.84	0.42
27:DE:148:ILE:HG22	27:DE:148:ILE:O	2.18	0.42
29:DG:60:GLY:O	29:DG:62:ALA:N	2.52	0.42
30:DH:40:THR:O	30:DH:41:LYS:HB2	2.17	0.42
30:DH:138:VAL:O	30:DH:138:VAL:HG12	2.18	0.42
31:DJ:12:LYS:HG3	31:DJ:41:LYS:HZ3	1.83	0.42
35:DN:10:LEU:HD21	35:DN:43:GLU:HG3	2.01	0.42
37:DP:100:ARG:O	37:DP:102:ARG:N	2.51	0.42
39:DR:79:ARG:O	39:DR:81:LYS:HG2	2.19	0.42
43:DW:55:ASP:C	43:DW:57:THR:H	2.22	0.42
49:D2:19:ARG:O	49:D2:22:MET:HB2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DI:68:PHE:N	52:DI:68:PHE:CD1	2.87	0.42
52:DI:96:LYS:HD3	52:DI:138:VAL:HG21	2.00	0.42
1:AA:174:A:O2'	1:AA:175:C:H5'	2.19	0.42
1:AA:175:C:O2	1:AA:1447:A:H2	2.03	0.42
1:AA:445:G:H2'	1:AA:446:G:O4'	2.18	0.42
1:AA:1078:U:H2'	1:AA:1079:G:C8	2.54	0.42
1:AA:1229:A:H2'	1:AA:1230:C:H6	1.82	0.42
1:AA:1324:A:H4'	1:AA:1363:A:OP1	2.19	0.42
2:AC:119:ILE:CG2	2:AC:197:VAL:HG11	2.46	0.42
3:AD:8:LEU:HD12	3:AD:31:CYS:SG	2.59	0.42
3:AD:47:LEU:HD22	3:AD:51:GLY:O	2.19	0.42
4:AE:11:GLN:O	4:AE:38:VAL:HA	2.19	0.42
5:AF:34:GLY:C	5:AF:35:LYS:HD2	2.40	0.42
5:AF:92:THR:CG2	5:AF:94:HIS:H	2.14	0.42
6:AG:11:ILE:HD12	6:AG:11:ILE:N	2.33	0.42
6:AG:129:ASN:HA	6:AG:134:VAL:CG1	2.39	0.42
7:AH:112:ASP:HB2	7:AH:116:ARG:NH2	2.35	0.42
10:AK:88:PRO:HG3	21:AU:28:LEU:HD21	2.00	0.42
11:AL:66:ILE:CG2	11:AL:71:HIS:HB3	2.44	0.42
12:AM:5:GLY:O	12:AM:6:ILE:HB	2.19	0.42
13:AN:45:LEU:O	13:AN:45:LEU:HD23	2.19	0.42
14:AO:73:ASP:OD1	14:AO:75:ALA:HB3	2.19	0.42
15:AP:42:ILE:HG22	15:AP:43:ALA:N	2.33	0.42
18:AS:52:ASN:CG	18:AS:53:GLY:N	2.71	0.42
20:AB:138:ARG:O	20:AB:141:GLU:HB2	2.19	0.42
20:AB:150:ILE:HG12	20:AB:150:ILE:O	2.18	0.42
22:BA:94:A:O2'	22:BA:95:U:H5'	2.18	0.42
23:BB:346:A:H2'	23:BB:347:A:O4'	2.19	0.42
23:BB:407:G:O2'	23:BB:408:G:H5'	2.20	0.42
23:BB:463:G:N2	23:BB:466:A:OP2	2.52	0.42
23:BB:649:G:H2'	23:BB:650:C:C6	2.54	0.42
23:BB:693:A:H2'	23:BB:694:U:H6	1.84	0.42
23:BB:725:G:H2'	23:BB:726:G:O4'	2.19	0.42
23:BB:962:G:H2'	23:BB:963:U:C6	2.54	0.42
23:BB:2311:A:H3'	23:BB:2312:U:C6	2.54	0.42
23:BB:2722:G:O2'	23:BB:2723:C:H5'	2.18	0.42
27:BE:194:LYS:O	27:BE:197:GLU:HB3	2.19	0.42
30:BH:68:ARG:CB	30:BH:134:VAL:HB	2.49	0.42
30:BH:121:VAL:O	30:BH:121:VAL:HG23	2.19	0.42
33:BL:95:LEU:HB2	33:BL:101:ILE:CG1	2.48	0.42
35:BN:14:SER:O	35:BN:18:GLN:HB2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BN:24:MET:CE	35:BN:40:LYS:HB3	2.49	0.42
35:BN:118:ARG:HE	35:BN:118:ARG:HB3	1.52	0.42
36:BO:52:SER:HA	36:BO:74:VAL:CG1	2.48	0.42
43:BW:18:LYS:HE3	43:BW:19:ARG:NH2	2.34	0.42
52:BI:5:GLN:HG2	52:BI:6:ALA:H	1.81	0.42
52:BI:52:LEU:O	52:BI:54:ILE:HG13	2.19	0.42
52:BI:63:ASP:C	52:BI:65:SER:H	2.22	0.42
1:CA:42:G:H2'	1:CA:43:C:C6	2.53	0.42
1:CA:56:U:H2'	1:CA:57:G:H8	1.84	0.42
1:CA:541:G:H2'	1:CA:542:G:H8	1.84	0.42
1:CA:677:U:H1'	10:CK:120:CYS:SG	2.58	0.42
1:CA:826:C:H4'	7:CH:12:ARG:NE	2.34	0.42
1:CA:878:A:OP1	7:CH:80:PRO:HG2	2.19	0.42
1:CA:979:C:H1'	1:CA:1317:C:N4	2.26	0.42
1:CA:1035:A:H2'	1:CA:1036:A:H8	1.84	0.42
1:CA:1150:A:O3'	9:CJ:43:PRO:HA	2.18	0.42
1:CA:1230:C:H2'	1:CA:1231:G:H8	1.85	0.42
1:CA:1446:A:C2'	1:CA:1447:A:H5"	2.48	0.42
3:CD:2:ARG:HH22	3:CD:132:ALA:CB	2.32	0.42
6:CG:67:ASN:O	6:CG:134:VAL:HA	2.19	0.42
7:CH:112:ASP:HB2	7:CH:116:ARG:NH2	2.34	0.42
9:CJ:6:ILE:HD12	9:CJ:76:ILE:HD11	1.99	0.42
10:CK:126:ARG:HA	10:CK:126:ARG:HE	1.84	0.42
16:CQ:34:GLY:O	16:CQ:35:LYS:C	2.57	0.42
18:CS:39:ILE:HG12	18:CS:70:LEU:CD1	2.49	0.42
19:CT:52:GLU:O	19:CT:52:GLU:HG2	2.19	0.42
23:DB:656:G:O2'	23:DB:657:U:H5'	2.19	0.42
23:DB:1011:G:O2'	23:DB:1013:C:H5"	2.19	0.42
23:DB:1106:G:H2'	23:DB:1107:G:H8	1.83	0.42
23:DB:1214:A:H2'	23:DB:1215:G:C8	2.54	0.42
23:DB:1366:A:H2'	23:DB:1367:A:O4'	2.20	0.42
23:DB:1389:G:O2'	23:DB:1390:U:H5'	2.19	0.42
23:DB:1479:G:O2'	23:DB:1480:C:H5'	2.19	0.42
23:DB:1636:U:O2'	23:DB:1637:A:H5'	2.18	0.42
23:DB:1683:U:O2'	23:DB:1684:G:H5'	2.19	0.42
23:DB:1764:C:H2'	23:DB:1765:U:C6	2.54	0.42
23:DB:1891:G:H2'	23:DB:1892:C:C6	2.54	0.42
23:DB:2081:U:P	46:DZ:19:SER:HB3	2.59	0.42
23:DB:2201:G:O2'	23:DB:2202:U:H5'	2.20	0.42
23:DB:2734:A:C2'	23:DB:2735:G:H5'	2.44	0.42
26:DD:110:THR:HG21	26:DD:169:ARG:HH11	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:138:LEU:N	26:DD:138:LEU:HD22	2.34	0.42
27:DE:152:GLU:O	27:DE:153:LEU:HB3	2.18	0.42
28:DF:121:PHE:HE1	28:DF:162:ASP:CB	2.33	0.42
30:DH:103:VAL:HA	30:DH:106:ALA:HB3	2.00	0.42
31:DJ:36:LEU:CD1	31:DJ:121:LYS:HE3	2.49	0.42
31:DJ:55:ILE:CG2	31:DJ:123:LYS:HB2	2.49	0.42
36:DO:79:ALA:O	36:DO:83:LEU:HD13	2.19	0.42
36:DO:92:PHE:HB2	36:DO:117:PHE:CE1	2.55	0.42
40:DS:24:ILE:HG23	40:DS:32:ALA:CB	2.49	0.42
40:DS:60:HIS:O	40:DS:61:ASN:HB2	2.19	0.42
45:DY:6:ILE:HD13	45:DY:56:VAL:CG1	2.49	0.42
52:DI:128:ILE:CA	52:DI:131:THR:HG23	2.49	0.42
1:AA:43:C:H2'	1:AA:44:A:O4'	2.19	0.42
1:AA:74:A:H2'	1:AA:75:G:H5"	2.01	0.42
1:AA:731:G:H5'	1:AA:766:A:H4'	2.02	0.42
1:AA:775:G:H2'	1:AA:776:G:H8	1.84	0.42
1:AA:848:C:H2'	1:AA:849:G:O4'	2.18	0.42
1:AA:923:A:H2'	1:AA:924:C:H6	1.82	0.42
1:AA:1290:G:H2'	1:AA:1291:U:C6	2.53	0.42
2:AC:119:ILE:HD13	2:AC:136:ALA:HB2	2.00	0.42
3:AD:64:TYR:CE2	3:AD:93:LEU:HB3	2.54	0.42
3:AD:162:GLU:HB2	3:AD:166:LYS:HZ1	1.84	0.42
5:AF:36:ILE:HD12	5:AF:36:ILE:H	1.84	0.42
5:AF:68:GLN:HA	5:AF:71:ILE:HG12	2.00	0.42
8:AI:48:ARG:O	8:AI:52:GLU:HG2	2.19	0.42
12:AM:85:TYR:HA	12:AM:88:LEU:CD1	2.49	0.42
13:AN:79:SER:HG	13:AN:82:LYS:HG2	1.83	0.42
14:AO:54:GLY:O	14:AO:58:MET:HG2	2.19	0.42
16:AQ:10:ARG:O	16:AQ:10:ARG:HG3	2.18	0.42
16:AQ:23:ALA:HA	16:AQ:41:THR:O	2.19	0.42
16:AQ:81:ALA:O	16:AQ:82:VAL:HB	2.19	0.42
19:AT:52:GLU:O	19:AT:52:GLU:HG2	2.18	0.42
20:AB:165:ALA:HB3	20:AB:186:VAL:HG11	2.00	0.42
23:BB:107:G:O2'	23:BB:108:G:H5'	2.20	0.42
23:BB:182:A:O2'	23:BB:183:C:H5'	2.19	0.42
23:BB:465:G:N2	23:BB:684:G:H1'	2.34	0.42
23:BB:673:C:OP1	27:BE:49:ARG:HD2	2.19	0.42
23:BB:992:C:H2'	23:BB:993:G:C8	2.54	0.42
23:BB:1197:G:H2'	23:BB:1198:U:C6	2.53	0.42
23:BB:1366:A:H2'	23:BB:1367:A:O4'	2.19	0.42
23:BB:1547:C:H2'	23:BB:1548:A:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1565:C:H5”	25:BC:17:LYS:CE	2.49	0.42
23:BB:1727:C:H2’	23:BB:1728:C:O4’	2.20	0.42
23:BB:1767:G:O2’	23:BB:1768:C:H5’	2.18	0.42
23:BB:1803:A:O3’	25:BC:256:THR:HB	2.19	0.42
23:BB:2363:G:O2’	23:BB:2364:C:H5’	2.19	0.42
23:BB:2552:U:C2	23:BB:2554:U:H5’	2.55	0.42
27:BE:29:HIS:O	27:BE:32:VAL:HG22	2.19	0.42
27:BE:148:ILE:HB	27:BE:169:VAL:HG12	2.01	0.42
28:BF:7:TYR:O	28:BF:11:VAL:HB	2.20	0.42
28:BF:42:ALA:O	28:BF:43:ILE:C	2.57	0.42
29:BG:167:VAL:HG23	29:BG:168:VAL:N	2.26	0.42
30:BH:80:ILE:CD1	30:BH:99:ILE:HG23	2.49	0.42
34:BM:26:VAL:CG2	34:BM:133:LYS:HA	2.50	0.42
34:BM:26:VAL:HB	34:BM:104:GLU:OE2	2.19	0.42
35:BN:28:LEU:HD23	35:BN:28:LEU:HA	1.85	0.42
37:BP:61:ARG:HE	37:BP:100:ARG:HD2	1.83	0.42
37:BP:99:LEU:HD22	37:BP:99:LEU:HA	1.92	0.42
39:BR:6:GLN:HE21	39:BR:6:GLN:C	2.23	0.42
41:BT:39:THR:O	41:BT:40:LYS:HB3	2.19	0.42
42:BU:86:PHE:HE1	42:BU:88:ASP:OD1	2.02	0.42
42:BU:98:ASN:OD1	42:BU:100:GLU:HB2	2.19	0.42
44:BX:1:MET:CB	44:BX:4:LYS:HD3	2.47	0.42
45:BY:40:THR:HG22	45:BY:42:ALA:H	1.84	0.42
1:CA:378:G:H2’	1:CA:379:C:C6	2.54	0.42
1:CA:438:U:H4’	3:CD:119:HIS:HD2	1.84	0.42
1:CA:848:C:H2’	1:CA:849:G:O4’	2.19	0.42
1:CA:974:A:H4’	1:CA:975:A:C5’	2.46	0.42
1:CA:1058:G:H2’	1:CA:1059:C:C6	2.55	0.42
1:CA:1078:U:H2’	1:CA:1079:G:C8	2.54	0.42
2:CC:2:GLN:O	2:CC:3:LYS:HB2	2.19	0.42
3:CD:24:VAL:HA	3:CD:27:ILE:CD1	2.46	0.42
4:CE:52:ALA:H	4:CE:58:ALA:HB2	1.84	0.42
4:CE:106:ALA:HB1	4:CE:110:MET:CB	2.49	0.42
7:CH:125:ILE:HG22	7:CH:126:CYS:SG	2.59	0.42
9:CJ:14:ASP:OD1	9:CJ:17:LEU:HB2	2.18	0.42
9:CJ:17:LEU:HD22	9:CJ:96:VAL:HG13	2.01	0.42
10:CK:42:GLY:HA3	10:CK:73:VAL:HG13	2.00	0.42
10:CK:57:SER:O	10:CK:90:PRO:HG3	2.19	0.42
13:CN:69:PRO:HG2	13:CN:70:HIS:H	1.83	0.42
14:CO:69:LEU:HD11	14:CO:76:ARG:HB2	2.02	0.42
16:CQ:32:ILE:HG23	16:CQ:33:TYR:CD2	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CQ:40:THR:HG22	16:CQ:41:THR:N	2.34	0.42
18:CS:2:ARG:NE	18:CS:2:ARG:HA	2.35	0.42
18:CS:39:ILE:HD13	18:CS:65:MET:HB3	2.01	0.42
20:CB:55:GLU:O	20:CB:58:LYS:HB2	2.19	0.42
23:DB:21:A:H2'	23:DB:22:C:H6	1.83	0.42
23:DB:80:G:HO2'	23:DB:294:A:H2	1.65	0.42
23:DB:177:G:H3'	23:DB:178:G:C8	2.54	0.42
23:DB:423:A:H5"	23:DB:424:G:H5'	2.00	0.42
23:DB:1028:A:N3	23:DB:2486:C:O2'	2.41	0.42
23:DB:2026:U:H2'	23:DB:2027:G:H8	1.84	0.42
23:DB:2365:G:C4'	43:DW:59:PHE:HE1	2.17	0.42
23:DB:2898:U:O2	31:DJ:134:ALA:HB1	2.19	0.42
25:DC:92:LEU:HD12	25:DC:101:ARG:O	2.19	0.42
25:DC:141:HIS:CG	25:DC:142:ASN:N	2.87	0.42
26:DD:3:GLY:HA2	26:DD:101:PHE:HZ	1.83	0.42
26:DD:150:GLN:O	26:DD:151:THR:C	2.58	0.42
28:DF:72:SER:CB	28:DF:80:GLN:H	2.32	0.42
29:DG:1:SER:HA	29:DG:61:TRP:CZ3	2.55	0.42
29:DG:140:ILE:HD12	29:DG:141:GLY:N	2.34	0.42
29:DG:175:LYS:HD3	29:DG:175:LYS:HA	1.85	0.42
30:DH:133:GLN:HB2	30:DH:138:VAL:O	2.19	0.42
32:DK:71:ARG:HG3	32:DK:105:ARG:NH2	2.33	0.42
33:DL:29:LYS:C	33:DL:31:GLY:N	2.72	0.42
34:DM:10:ARG:HH11	34:DM:89:VAL:HG23	1.84	0.42
35:DN:98:LEU:O	35:DN:112:TYR:HB2	2.19	0.42
38:DQ:91:ARG:HE	38:DQ:94:LEU:CD2	2.32	0.42
38:DQ:112:ALA:O	38:DQ:113:LYS:C	2.57	0.42
41:DT:18:GLU:C	41:DT:20:ALA:N	2.71	0.42
42:DU:21:ARG:HG3	42:DU:21:ARG:NH1	2.34	0.42
45:DY:2:LYS:H	45:DY:2:LYS:CD	2.29	0.42
52:DI:53:PRO:CG	52:DI:77:VAL:HG11	2.49	0.42
1:AA:292:G:O2'	1:AA:609:A:N6	2.53	0.42
1:AA:372:C:H1'	1:AA:373:A:OP2	2.19	0.42
1:AA:602:A:H2'	1:AA:603:U:H6	1.84	0.42
1:AA:1011:C:H2'	1:AA:1012:A:C8	2.54	0.42
1:AA:1172:C:O2'	1:AA:1173:U:H5'	2.19	0.42
1:AA:1178:G:H3'	8:AI:98:ARG:HH21	1.85	0.42
1:AA:1302:C:H6	12:AM:16:ILE:HG13	1.84	0.42
1:AA:1366:C:H2'	1:AA:1367:C:H6	1.84	0.42
7:AH:6:ILE:CD1	7:AH:31:LEU:HD23	2.48	0.42
7:AH:108:GLY:O	7:AH:110:MET:HG3	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:62:LEU:N	8:AI:62:LEU:HD22	2.34	0.42
10:AK:14:GLN:HA	10:AK:76:TYR:O	2.19	0.42
11:AL:43:LYS:N	11:AL:44:PRO:HD2	2.34	0.42
13:AN:16:ALA:O	13:AN:20:PHE:HB3	2.19	0.42
13:AN:20:PHE:HB2	13:AN:54:SER:HG	1.83	0.42
14:AO:69:LEU:HD11	14:AO:76:ARG:HB2	2.02	0.42
18:AS:40:PHE:HB2	18:AS:43:MET:CE	2.49	0.42
23:BB:1:G:H2'	23:BB:1:G:N3	2.35	0.42
23:BB:80:G:N7	23:BB:102:U:O4	2.52	0.42
23:BB:246:C:O2'	23:BB:247:G:H5'	2.20	0.42
23:BB:276:U:O2'	23:BB:278:A:N7	2.51	0.42
23:BB:404:A:H4'	23:BB:405:U:C5'	2.45	0.42
23:BB:570:G:C4	23:BB:2030:A:N7	2.87	0.42
23:BB:750:A:H2'	23:BB:751:A:H5"	2.00	0.42
23:BB:912:C:H2'	23:BB:913:U:C6	2.54	0.42
23:BB:1666:G:H4'	32:BK:6:THR:HG23	2.00	0.42
23:BB:1688:U:N3	23:BB:1698:A:C2	2.88	0.42
23:BB:1930:G:C2'	23:BB:1931:U:OP2	2.67	0.42
23:BB:1931:U:H2'	23:BB:1932:A:H8	1.84	0.42
23:BB:2572:A:P	26:BD:151:THR:HB	2.59	0.42
23:BB:2885:G:H2'	23:BB:2886:A:H4'	2.02	0.42
24:BV:35:GLU:HG2	24:BV:93:ARG:NH1	2.35	0.42
24:BV:75:GLN:HA	24:BV:75:GLN:OE1	2.18	0.42
25:BC:138:SER:O	25:BC:140:VAL:HG23	2.20	0.42
27:BE:147:LEU:O	27:BE:168:ASP:O	2.37	0.42
28:BF:94:ARG:O	28:BF:98:PHE:N	2.45	0.42
28:BF:124:ARG:HH11	28:BF:124:ARG:HG2	1.84	0.42
29:BG:34:ARG:HD3	29:BG:34:ARG:N	2.34	0.42
30:BH:96:THR:OG1	30:BH:112:LYS:HD2	2.19	0.42
30:BH:122:LEU:H	30:BH:122:LEU:CD1	2.31	0.42
31:BJ:12:LYS:O	31:BJ:13:ARG:HB2	2.19	0.42
32:BK:35:VAL:HG12	32:BK:69:VAL:HG22	2.01	0.42
33:BL:138:ALA:O	33:BL:139:GLY:C	2.57	0.42
37:BP:113:LEU:C	37:BP:114:ASN:HD22	2.22	0.42
46:BZ:76:GLU:HG3	46:BZ:77:LYS:N	2.35	0.42
48:B1:46:VAL:HG13	48:B1:47:ILE:N	2.34	0.42
49:B2:26:ASN:HA	49:B2:29:GLN:HB3	2.01	0.42
52:BI:103:ALA:O	52:BI:107:GLU:HG3	2.20	0.42
52:BI:109:ALA:HB1	52:BI:124:MET:CG	2.49	0.42
1:CA:256:U:H3'	1:CA:257:G:H8	1.84	0.42
1:CA:260:G:H2'	1:CA:261:U:C6	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:263:A:H2'	1:CA:264:C:C6	2.55	0.42
1:CA:458:U:H2'	1:CA:459:A:C8	2.54	0.42
1:CA:477:C:H2'	1:CA:478:A:C8	2.55	0.42
1:CA:602:A:H2'	1:CA:603:U:H6	1.85	0.42
1:CA:706:A:C4'	10:CK:30:ILE:HD11	2.48	0.42
1:CA:808:C:O2'	1:CA:809:G:H5'	2.19	0.42
1:CA:1046:A:H2'	1:CA:1047:G:O4'	2.18	0.42
1:CA:1170:A:H3'	1:CA:1171:A:H8	1.84	0.42
1:CA:1492:A:H2'	23:DB:1913:A:C2	2.54	0.42
2:CC:119:ILE:HD13	2:CC:136:ALA:HB2	2.01	0.42
3:CD:78:ALA:HA	3:CD:81:LEU:HD12	2.02	0.42
5:CF:47:LEU:HB3	17:CR:65:SER:OG	2.19	0.42
5:CF:66:ALA:HB1	5:CF:67:PRO:HD2	2.01	0.42
8:CI:36:GLN:HE21	8:CI:36:GLN:N	2.17	0.42
14:CO:73:ASP:OD1	14:CO:75:ALA:HB3	2.19	0.42
15:CP:40:ASN:ND2	15:CP:43:ALA:HB2	2.34	0.42
18:CS:10:ILE:CD1	18:CS:14:LEU:HD11	2.49	0.42
19:CT:49:ALA:CA	19:CT:52:GLU:HB3	2.49	0.42
20:CB:82:ALA:HB3	20:CB:213:LEU:HD22	2.01	0.42
20:CB:96:LEU:HD23	20:CB:99:MET:CE	2.49	0.42
23:DB:583:G:H2'	23:DB:584:C:H6	1.84	0.42
23:DB:636:G:P	33:DL:128:THR:HG22	2.59	0.42
23:DB:643:A:C2	48:D1:43:ARG:HD2	2.54	0.42
23:DB:740:C:H5"	23:DB:1784:A:OP1	2.19	0.42
23:DB:814:C:OP1	39:DR:85:LYS:HA	2.19	0.42
23:DB:974:G:H2'	23:DB:974:G:N3	2.35	0.42
23:DB:1098:A:C3'	52:DI:3:LYS:C	2.88	0.42
23:DB:1372:U:O2'	23:DB:1373:A:H5'	2.20	0.42
23:DB:1396:U:O2	23:DB:1396:U:H5'	2.19	0.42
23:DB:2300:C:H2'	23:DB:2301:C:C6	2.55	0.42
23:DB:2311:A:H3'	23:DB:2312:U:C6	2.55	0.42
23:DB:2547:A:H2'	23:DB:2548:U:H6	1.82	0.42
24:DV:1:MET:HE3	24:DV:2:PHE:H	1.83	0.42
25:DC:255:LYS:C	25:DC:256:THR:HG23	2.39	0.42
26:DD:101:PHE:HE1	26:DD:203:VAL:HG13	1.85	0.42
26:DD:109:VAL:HG11	26:DD:193:VAL:CB	2.49	0.42
27:DE:21:ARG:HB2	27:DE:21:ARG:NH2	2.34	0.42
27:DE:148:ILE:HA	27:DE:187:VAL:CG2	2.49	0.42
28:DF:7:TYR:O	28:DF:11:VAL:HB	2.19	0.42
28:DF:169:LEU:O	28:DF:174:PHE:HB2	2.20	0.42
29:DG:9:VAL:HG12	29:DG:11:PRO:HD3	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DG:84:LYS:HG3	29:DG:131:VAL:CB	2.50	0.42
29:DG:107:GLY:HA3	29:DG:151:ARG:NH2	2.34	0.42
29:DG:154:GLU:O	29:DG:156:TYR:N	2.52	0.42
30:DH:83:LYS:N	30:DH:83:LYS:HD2	2.34	0.42
37:DP:89:GLY:N	37:DP:112:ARG:NH1	2.67	0.42
38:DQ:60:TRP:O	38:DQ:63:ARG:HG3	2.18	0.42
38:DQ:68:ALA:CA	38:DQ:71:ASN:HB3	2.49	0.42
38:DQ:93:ILE:O	38:DQ:96:ASP:HB3	2.19	0.42
39:DR:7:SER:CA	39:DR:22:LEU:HD13	2.49	0.42
41:DT:30:ILE:O	41:DT:85:VAL:HG23	2.20	0.42
42:DU:90:LYS:O	42:DU:91:LYS:C	2.58	0.42
43:DW:66:VAL:HG22	43:DW:81:ILE:HG22	2.01	0.42
52:DI:12:VAL:HG13	52:DI:41:PHE:CE2	2.55	0.42
52:DI:101:SER:OG	52:DI:104:GLN:HG3	2.19	0.42
1:AA:9:G:H2'	1:AA:10:A:C8	2.55	0.42
1:AA:61:G:H2'	1:AA:62:U:C6	2.54	0.42
1:AA:204:G:H2'	1:AA:205:A:H8	1.81	0.42
1:AA:254:G:OP1	16:AQ:68:LYS:O	2.38	0.42
1:AA:493:A:H3'	1:AA:494:G:H8	1.83	0.42
1:AA:991:U:H2'	1:AA:1212:U:O2	2.19	0.42
1:AA:1077:G:N1	1:AA:1081:A:C6	2.88	0.42
1:AA:1305:G:O2'	1:AA:1332:A:N6	2.53	0.42
1:AA:1330:U:H2'	1:AA:1331:G:O4'	2.19	0.42
2:AC:99:GLN:O	2:AC:100:ILE:HB	2.19	0.42
2:AC:112:ALA:O	2:AC:113:LYS:C	2.58	0.42
2:AC:154:GLY:HA2	2:AC:163:ARG:N	2.34	0.42
6:AG:89:GLU:H	6:AG:89:GLU:HG3	1.61	0.42
7:AH:49:LYS:HA	7:AH:49:LYS:HD2	1.89	0.42
9:AJ:92:LEU:N	9:AJ:92:LEU:HD22	2.34	0.42
10:AK:91:GLY:O	10:AK:95:THR:HG22	2.20	0.42
11:AL:2:THR:HG22	11:AL:5:GLN:HE21	1.83	0.42
11:AL:31:GLY:HA3	11:AL:54:VAL:CG1	2.50	0.42
13:AN:15:LEU:HB3	13:AN:54:SER:CB	2.44	0.42
15:AP:46:LYS:C	15:AP:48:GLU:N	2.73	0.42
16:AQ:80:LYS:H	16:AQ:80:LYS:NZ	2.17	0.42
17:AR:57:ALA:HA	17:AR:60:ARG:HH11	1.84	0.42
19:AT:64:GLY:H	19:AT:67:HIS:CD2	2.37	0.42
20:AB:134:LEU:HA	20:AB:137:THR:CG2	2.49	0.42
20:AB:142:LYS:HA	20:AB:145:ASN:CG	2.40	0.42
22:BA:75:G:H2'	22:BA:76:G:C8	2.55	0.42
23:BB:179:C:H2'	23:BB:180:G:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:307:G:H2'	23:BB:309:A:OP2	2.19	0.42
23:BB:780:G:H2'	23:BB:782:A:N7	2.34	0.42
23:BB:1296:G:O2'	23:BB:1297:C:H5'	2.20	0.42
23:BB:1633:G:O2'	23:BB:1634:A:H5"	2.19	0.42
23:BB:1662:U:H2'	23:BB:1663:G:O4'	2.20	0.42
23:BB:1771:C:O2'	23:BB:1772:A:H5'	2.19	0.42
23:BB:1784:A:H4'	23:BB:1785:A:O5'	2.18	0.42
23:BB:1824:G:O2'	23:BB:1825:U:H5'	2.19	0.42
23:BB:2028:U:H2'	23:BB:2029:G:C8	2.54	0.42
23:BB:2095:A:H2'	23:BB:2096:C:C6	2.54	0.42
23:BB:2301:C:O2'	23:BB:2302:U:H5'	2.20	0.42
23:BB:2331:G:O2'	23:BB:2332:C:H5'	2.19	0.42
23:BB:2432:A:H2'	23:BB:2433:A:C8	2.55	0.42
23:BB:2526:G:N3	51:B4:1:MET:N	2.67	0.42
23:BB:2636:C:H2'	23:BB:2637:U:H6	1.85	0.42
23:BB:2855:C:O2'	23:BB:2856:A:H5'	2.19	0.42
25:BC:221:GLY:C	25:BC:223:ALA:N	2.72	0.42
25:BC:264:LYS:HG3	25:BC:265:PHE:HD2	1.84	0.42
26:BD:3:GLY:HA2	26:BD:101:PHE:HZ	1.84	0.42
26:BD:178:VAL:HB	26:BD:188:LEU:CB	2.47	0.42
29:BG:9:VAL:HG12	29:BG:11:PRO:HD3	2.00	0.42
30:BH:73:ASN:HD22	30:BH:73:ASN:H	1.67	0.42
34:BM:19:GLY:N	34:BM:38:ARG:NH1	2.65	0.42
35:BN:75:ILE:O	35:BN:79:LEU:HD12	2.19	0.42
37:BP:54:LEU:HA	37:BP:76:HIS:CD2	2.55	0.42
38:BQ:109:VAL:HG12	38:BQ:113:LYS:HE3	2.02	0.42
39:BR:15:SER:O	39:BR:16:GLU:C	2.58	0.42
39:BR:72:VAL:CG2	39:BR:89:HIS:HB3	2.49	0.42
40:BS:76:VAL:HG12	40:BS:103:ILE:HA	2.01	0.42
43:BW:19:ARG:NE	43:BW:19:ARG:H	2.17	0.42
44:BX:23:ARG:O	44:BX:27:ASN:HB2	2.19	0.42
1:CA:372:C:H1'	1:CA:373:A:OP2	2.20	0.42
1:CA:878:A:C5'	7:CH:80:PRO:HG2	2.49	0.42
1:CA:1152:A:H4'	9:CJ:15:HIS:HD2	1.84	0.42
1:CA:1219:A:H2'	1:CA:1220:G:H8	1.84	0.42
1:CA:1370:G:O2'	1:CA:1371:G:H5'	2.18	0.42
2:CC:52:SER:O	2:CC:113:LYS:HG2	2.19	0.42
2:CC:166:TRP:HA	2:CC:166:TRP:HE3	1.84	0.42
8:CI:62:LEU:HD22	8:CI:62:LEU:N	2.34	0.42
12:CM:13:HIS:HB2	12:CM:16:ILE:HG22	2.02	0.42
20:CB:16:GLY:HA2	20:CB:40:ILE:HD12	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:8:C:O2'	36:DO:40:ILE:HD13	2.19	0.42
22:DA:57:A:O2'	28:DF:26:GLN:NE2	2.53	0.42
23:DB:1248:G:C5	38:DQ:2:ARG:HD2	2.54	0.42
23:DB:1252:G:O4'	38:DQ:32:ARG:HG2	2.20	0.42
23:DB:1496:A:H1'	23:DB:1577:C:O2'	2.19	0.42
23:DB:1591:A:O2'	23:DB:1592:C:H5'	2.19	0.42
23:DB:1640:A:O2'	23:DB:1641:A:H5'	2.19	0.42
23:DB:1745:A:H2'	23:DB:1746:A:H8	1.85	0.42
23:DB:1937:A:N7	23:DB:1939:U:H2'	2.34	0.42
23:DB:1984:G:O2'	23:DB:1985:C:H5'	2.18	0.42
23:DB:2012:G:OP1	40:DS:98:LYS:HG2	2.20	0.42
23:DB:2300:C:H2'	23:DB:2301:C:H6	1.84	0.42
23:DB:2376:A:N6	36:DO:94:ARG:HD3	2.34	0.42
23:DB:2855:C:O2'	23:DB:2856:A:H5'	2.19	0.42
23:DB:2895:G:O2'	23:DB:2896:C:H5'	2.20	0.42
25:DC:208:GLY:O	25:DC:209:ALA:C	2.57	0.42
27:DE:150:THR:HG22	27:DE:170:ARG:O	2.20	0.42
28:DF:2:LYS:O	28:DF:6:TYR:HB2	2.18	0.42
30:DH:115:VAL:HG23	30:DH:131:SER:O	2.19	0.42
31:DJ:111:LYS:CB	31:DJ:113:PRO:HD2	2.47	0.42
32:DK:76:VAL:HB	37:DP:72:VAL:CG2	2.50	0.42
36:DO:78:VAL:HA	36:DO:81:ARG:HB3	2.01	0.42
37:DP:109:ILE:HD12	37:DP:109:ILE:O	2.19	0.42
39:DR:66:HIS:CG	39:DR:94:THR:HG22	2.54	0.42
44:DX:21:LEU:HD23	44:DX:21:LEU:N	2.35	0.42
47:D0:41:HIS:O	47:D0:42:ILE:O	2.36	0.42
47:D0:53:VAL:O	47:D0:54:ILE:CB	2.67	0.42
50:D3:30:HIS:O	50:D3:31:ILE:O	2.38	0.42
51:D4:2:LYS:CE	51:D4:4:ARG:HE	2.33	0.42
1:AA:51:A:H61	1:AA:314:C:H1'	1.85	0.42
1:AA:98:A:O2'	1:AA:99:C:H5'	2.19	0.42
1:AA:152:A:N6	1:AA:170:U:C2	2.88	0.42
1:AA:160:A:H2'	1:AA:161:A:C8	2.55	0.42
1:AA:770:C:O2'	1:AA:771:G:H5'	2.19	0.42
1:AA:795:C:H1'	1:AA:1506:U:C5	2.54	0.42
1:AA:1029:U:H2'	1:AA:1031:C:C2	2.55	0.42
1:AA:1186:G:H4'	8:AI:111:GLU:OE1	2.19	0.42
2:AC:42:LEU:O	2:AC:46:LEU:HB2	2.20	0.42
4:AE:33:THR:HG22	4:AE:51:LYS:CB	2.49	0.42
5:AF:36:ILE:HA	5:AF:64:VAL:HG13	2.01	0.42
5:AF:53:LYS:NZ	5:AF:53:LYS:N	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AH:54:THR:HG23	7:AH:55:LYS:HG2	2.01	0.42
8:AI:35:GLU:HG3	8:AI:44:ARG:CD	2.49	0.42
8:AI:36:GLN:N	8:AI:36:GLN:HE21	2.17	0.42
9:AJ:18:ILE:CG1	9:AJ:72:ARG:HG2	2.50	0.42
9:AJ:35:GLN:HG2	9:AJ:77:VAL:HG23	2.01	0.42
12:AM:92:ARG:NH1	18:AS:79:TYR:HD2	2.10	0.42
13:AN:12:ARG:NE	13:AN:58:ARG:NH1	2.68	0.42
13:AN:97:LYS:HB3	13:AN:97:LYS:HZ2	1.84	0.42
15:AP:21:VAL:O	15:AP:33:ILE:HB	2.19	0.42
18:AS:61:VAL:HA	18:AS:65:MET:SD	2.59	0.42
20:AB:95:TRP:HZ3	20:AB:174:GLU:CD	2.23	0.42
23:BB:125:A:H5'	49:B2:19:ARG:CG	2.49	0.42
23:BB:282:A:O2'	23:BB:283:G:H5'	2.19	0.42
23:BB:335:C:O2'	23:BB:336:C:H5'	2.19	0.42
23:BB:786:C:O2'	23:BB:787:C:H5'	2.20	0.42
23:BB:827:U:H5'	23:BB:828:U:O5'	2.18	0.42
23:BB:929:U:O2	45:BY:25:GLY:HA2	2.20	0.42
23:BB:1479:G:O2'	23:BB:1480:C:H5'	2.20	0.42
23:BB:1552:A:H2'	23:BB:1553:A:C5'	2.49	0.42
23:BB:1789:A:H2'	23:BB:1790:C:O4'	2.19	0.42
23:BB:2314:A:H2'	23:BB:2315:G:H8	1.85	0.42
23:BB:2352:A:N1	43:BW:30:VAL:HG11	2.34	0.42
23:BB:2751:G:H2'	23:BB:2751:G:OP1	2.20	0.42
23:BB:2766:A:N3	23:BB:2766:A:H2'	2.35	0.42
24:BV:42:LEU:N	24:BV:42:LEU:HD23	2.34	0.42
25:BC:157:ALA:C	25:BC:159:THR:H	2.22	0.42
25:BC:245:THR:HG23	25:BC:249:VAL:O	2.19	0.42
26:BD:150:GLN:O	26:BD:151:THR:C	2.58	0.42
27:BE:37:ALA:C	27:BE:39:ALA:H	2.20	0.42
30:BH:100:ALA:HA	30:BH:110:VAL:CG2	2.39	0.42
32:BK:105:ARG:HH11	32:BK:122:VAL:CG1	2.33	0.42
33:BL:4:ASN:HB2	33:BL:5:THR:H	1.71	0.42
33:BL:55:MET:HE2	33:BL:59:ARG:HB3	2.02	0.42
33:BL:88:GLY:HA2	33:BL:120:VAL:HG13	2.02	0.42
37:BP:46:VAL:HA	37:BP:60:VAL:HG12	2.01	0.42
40:BS:6:LYS:HB3	40:BS:104:THR:HA	2.02	0.42
42:BU:18:LYS:HB3	42:BU:19:GLY:H	1.68	0.42
43:BW:23:LYS:C	43:BW:66:VAL:HB	2.40	0.42
47:B0:53:VAL:O	47:B0:54:ILE:CB	2.68	0.42
52:BI:79:LEU:HD23	52:BI:108:ILE:CD1	2.50	0.42
1:CA:9:G:H2'	1:CA:10:A:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:36:C:H5”	11:CL:119:LYS:HD2	2.01	0.42
1:CA:82:G:H21	1:CA:84:U:H3	1.67	0.42
1:CA:972:C:P	9:CJ:59:LYS:HD3	2.59	0.42
1:CA:1069:C:O4’	1:CA:1191:A:H2	2.01	0.42
1:CA:1374:A:H2’	1:CA:1375:A:H8	1.85	0.42
2:CC:31:ASN:ND2	2:CC:58:ARG:NE	2.66	0.42
2:CC:184:ASN:HD22	2:CC:184:ASN:HA	1.60	0.42
3:CD:115:GLN:HG3	3:CD:119:HIS:CE1	2.54	0.42
6:CG:125:ASP:HB3	6:CG:131:GLY:N	2.34	0.42
8:CI:66:VAL:HG11	8:CI:78:ILE:HD11	2.02	0.42
9:CJ:55:PRO:O	9:CJ:56:HIS:HB3	2.19	0.42
9:CJ:59:LYS:C	9:CJ:61:ALA:H	2.23	0.42
13:CN:46:LYS:NZ	18:CS:10:ILE:HG13	2.34	0.42
20:CB:59:ILE:O	20:CB:62:ARG:HD2	2.20	0.42
23:DB:193:U:O3’	23:DB:803:U:H4’	2.20	0.42
23:DB:416:U:H2’	23:DB:417:C:H6	1.82	0.42
23:DB:518:G:H2’	23:DB:519:U:C6	2.54	0.42
23:DB:599:A:O2’	23:DB:600:G:H5’	2.19	0.42
23:DB:629:G:O2’	23:DB:630:G:H5’	2.20	0.42
23:DB:659:G:N2	27:DE:30:GLN:NE2	2.67	0.42
23:DB:743:A:C2’	23:DB:744:U:H5’	2.49	0.42
23:DB:784:G:H1	25:DC:227:VAL:HG11	1.80	0.42
23:DB:850:U:O2’	45:DY:22:THR:HG22	2.18	0.42
23:DB:1055:G:H2’	23:DB:1056:G:O4’	2.20	0.42
23:DB:1405:U:H2’	23:DB:1406:U:H6	1.84	0.42
23:DB:1539:U:O2	23:DB:1539:U:H2’	2.19	0.42
23:DB:1670:C:H2’	23:DB:1671:U:O4’	2.19	0.42
23:DB:1707:G:O2’	23:DB:1708:C:H5’	2.19	0.42
23:DB:1870:C:H3’	23:DB:1871:A:C8	2.54	0.42
23:DB:1916:A:H2’	23:DB:1917:U:O4’	2.20	0.42
23:DB:2389:G:H5”	23:DB:2390:U:O4’	2.19	0.42
23:DB:2411:A:H2’	23:DB:2412:A:H8	1.84	0.42
23:DB:2719:G:O2’	23:DB:2846:G:H4’	2.19	0.42
23:DB:2786:U:H2’	23:DB:2787:C:H6	1.84	0.42
23:DB:2828:G:H2’	23:DB:2829:A:H8	1.85	0.42
25:DC:124:LYS:HG2	25:DC:125:PRO:N	2.35	0.42
26:DD:16:THR:HG22	26:DD:17:GLU:N	2.35	0.42
27:DE:68:ALA:O	27:DE:69:ARG:C	2.58	0.42
27:DE:148:ILE:HB	27:DE:169:VAL:HG12	2.00	0.42
28:DF:69:ALA:HB3	28:DF:80:GLN:O	2.20	0.42
28:DF:94:ARG:O	28:DF:98:PHE:N	2.46	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DG:39:ALA:O	29:DG:54:ARG:HB2	2.19	0.42
34:DM:32:GLY:HA3	34:DM:103:TYR:O	2.19	0.42
35:DN:94:TYR:C	35:DN:116:VAL:HG12	2.40	0.42
37:DP:62:LYS:O	37:DP:63:ILE:HB	2.19	0.42
45:DY:18:LYS:O	45:DY:22:THR:HG23	2.20	0.42
46:DZ:30:LEU:H	46:DZ:30:LEU:CD2	2.27	0.42
1:AA:36:C:C2'	1:AA:37:U:H5'	2.50	0.42
1:AA:141:G:H2'	1:AA:142:G:O4'	2.19	0.42
1:AA:585:G:H4'	11:AL:4:ASN:HD21	1.85	0.42
1:AA:663:A:O3'	17:AR:52:ARG:NH2	2.49	0.42
1:AA:696:A:O2'	1:AA:697:U:H5'	2.20	0.42
1:AA:1446:A:C2'	1:AA:1447:A:H5"	2.50	0.42
2:AC:52:SER:HA	2:AC:113:LYS:HG2	2.01	0.42
2:AC:85:LYS:O	2:AC:89:VAL:HG23	2.20	0.42
7:AH:5:PRO:HB2	7:AH:32:LYS:NZ	2.34	0.42
10:AK:46:ALA:HA	10:AK:65:ALA:HB2	2.00	0.42
13:AN:70:HIS:O	13:AN:71:GLY:C	2.58	0.42
18:AS:52:ASN:HB2	18:AS:76:THR:HG22	2.02	0.42
20:AB:83:ALA:HA	20:AB:88:GLN:HE21	1.84	0.42
23:BB:37:C:H1'	27:BE:45:ALA:HB2	2.02	0.42
23:BB:485:C:O2'	23:BB:486:C:H5'	2.20	0.42
23:BB:493:G:H2'	23:BB:494:G:O4'	2.19	0.42
23:BB:644:A:H2	23:BB:646:U:O4	2.03	0.42
23:BB:814:C:OP1	39:BR:85:LYS:HA	2.19	0.42
23:BB:1041:G:H2'	23:BB:1042:G:H8	1.77	0.42
23:BB:1348:C:H2'	23:BB:1349:C:H5'	2.01	0.42
23:BB:1505:A:H2'	23:BB:1506:U:H6	1.85	0.42
23:BB:1553:A:H2'	23:BB:1555:G:N7	2.35	0.42
23:BB:1736:U:H2'	23:BB:1737:G:O4'	2.19	0.42
23:BB:2231:U:H2'	23:BB:2232:C:H6	1.85	0.42
23:BB:2305:U:H5'	28:BF:152:ASP:OD2	2.19	0.42
23:BB:2489:U:H2'	23:BB:2490:G:O4'	2.19	0.42
23:BB:2654:A:N6	23:BB:2666:C:OP2	2.51	0.42
23:BB:2699:C:H2'	23:BB:2700:A:H8	1.85	0.42
23:BB:2742:G:OP2	51:B4:24:ARG:NH1	2.52	0.42
23:BB:2773:C:H5"	26:BD:169:ARG:HB3	2.01	0.42
24:BV:1:MET:HG3	24:BV:2:PHE:CD2	2.54	0.42
24:BV:28:ALA:HA	24:BV:88:HIS:ND1	2.34	0.42
25:BC:188:ARG:HG2	25:BC:188:ARG:NH2	2.35	0.42
25:BC:255:LYS:C	25:BC:257:ARG:H	2.23	0.42
26:BD:10:GLY:HA2	37:BP:4:ILE:HD11	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:21:SER:HB2	32:BK:73:ASP:HA	2.00	0.42
26:BD:123:LYS:HD3	26:BD:165:MET:SD	2.59	0.42
27:BE:3:LEU:O	27:BE:12:LEU:N	2.53	0.42
27:BE:187:VAL:HG12	27:BE:188:MET:N	2.34	0.42
28:BF:42:ALA:O	28:BF:44:ALA:N	2.53	0.42
28:BF:79:ARG:O	28:BF:81:GLY:N	2.53	0.42
30:BH:14:SER:HB2	30:BH:17:ASP:HB3	2.01	0.42
31:BJ:84:ILE:O	31:BJ:84:ILE:HG13	2.19	0.42
33:BL:75:ALA:HB3	33:BL:108:ALA:HB2	2.00	0.42
36:BO:8:ILE:HG13	36:BO:8:ILE:H	1.70	0.42
37:BP:86:LYS:HB3	37:BP:87:ARG:H	1.54	0.42
43:BW:28:GLU:H	43:BW:31:LEU:CD1	2.33	0.42
46:BZ:54:LYS:O	46:BZ:57:ARG:HB2	2.20	0.42
48:B1:18:HIS:ND1	48:B1:19:PHE:N	2.68	0.42
51:B4:7:VAL:HG23	51:B4:35:GLN:CB	2.50	0.42
52:BI:78:LEU:HD13	52:BI:108:ILE:HG23	2.00	0.42
1:CA:77:A:H2'	1:CA:78:A:C8	2.55	0.42
1:CA:244:U:O4	1:CA:906:A:H1'	2.20	0.42
1:CA:301:G:H2'	1:CA:302:G:C8	2.53	0.42
1:CA:683:G:O2'	1:CA:684:U:H5'	2.20	0.42
1:CA:708:C:H2'	1:CA:709:U:H6	1.84	0.42
1:CA:1355:G:O2'	1:CA:1356:G:H5'	2.19	0.42
1:CA:1426:G:H2'	1:CA:1427:C:O4'	2.20	0.42
8:CI:95:SER:O	8:CI:99:LYS:HB2	2.19	0.42
12:CM:95:PRO:CA	12:CM:108:ARG:HG2	2.50	0.42
15:CP:28:ARG:HD3	15:CP:29:ASN:ND2	2.35	0.42
16:CQ:39:ARG:CZ	16:CQ:39:ARG:HA	2.50	0.42
20:CB:31:PHE:HB3	20:CB:39:ILE:HG22	2.01	0.42
20:CB:64:GLY:HA2	20:CB:158:ASP:OD1	2.20	0.42
23:DB:70:G:H3'	23:DB:113:U:C4'	2.49	0.42
23:DB:584:C:N4	23:DB:585:G:C6	2.87	0.42
23:DB:1223:G:OP2	39:DR:90:ARG:NH1	2.53	0.42
23:DB:1921:G:O2'	23:DB:1922:G:H5'	2.19	0.42
23:DB:2282:G:OP1	23:DB:2283:C:H1'	2.20	0.42
23:DB:2349:G:OP2	50:D3:41:ARG:HD3	2.20	0.42
23:DB:2363:G:O2'	23:DB:2364:C:H5'	2.18	0.42
23:DB:2602:A:OP1	23:DB:2602:A:H3'	2.20	0.42
23:DB:2757:A:H2'	23:DB:2757:A:N3	2.34	0.42
25:DC:255:LYS:C	25:DC:257:ARG:H	2.23	0.42
26:DD:178:VAL:HG12	26:DD:179:ARG:N	2.33	0.42
26:DD:186:LEU:HD21	37:DP:7:LEU:HD21	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DE:109:LEU:HD13	27:DE:180:LEU:HD13	2.00	0.42
27:DE:147:LEU:O	27:DE:168:ASP:O	2.38	0.42
28:DF:3:LEU:HB2	28:DF:100:GLU:OE1	2.19	0.42
29:DG:112:VAL:O	29:DG:113:ASP:HB2	2.19	0.42
30:DH:117:LEU:HD13	30:DH:130:VAL:HA	2.02	0.42
31:DJ:20:ALA:C	31:DJ:22:GLY:N	2.73	0.42
32:DK:87:LEU:HD12	32:DK:92:GLU:C	2.40	0.42
33:DL:23:ILE:HD12	33:DL:23:ILE:H	1.84	0.42
33:DL:95:LEU:HB2	33:DL:101:ILE:CG1	2.49	0.42
34:DM:33:LEU:HD22	34:DM:128:THR:HB	2.02	0.42
35:DN:28:LEU:HD21	35:DN:113:ILE:HG23	2.02	0.42
37:DP:38:ARG:NH2	37:DP:38:ARG:HB3	2.35	0.42
37:DP:54:LEU:HA	37:DP:76:HIS:HD2	1.85	0.42
38:DQ:24:TYR:CD1	38:DQ:25:GLY:N	2.87	0.42
38:DQ:49:ARG:HH11	38:DQ:49:ARG:HG2	1.85	0.42
43:DW:56:HIS:O	43:DW:57:THR:C	2.57	0.42
52:DI:27:LEU:HB2	52:DI:32:VAL:HG21	2.01	0.42
1:AA:36:C:H5"	11:AL:119:LYS:HD2	2.01	0.42
1:AA:64:G:H4'	1:AA:65:A:H3'	2.02	0.42
1:AA:126:G:H2'	1:AA:127:G:O4'	2.20	0.42
1:AA:277:C:O2'	1:AA:278:G:H5'	2.18	0.42
1:AA:301:G:H2'	1:AA:302:G:C8	2.52	0.42
1:AA:939:G:H2'	1:AA:940:C:C6	2.54	0.42
1:AA:993:G:O2'	1:AA:994:A:N7	2.53	0.42
1:AA:1320:C:N4	18:AS:36:ARG:HA	2.34	0.42
1:AA:1451:U:O5'	1:AA:1452:C:H5	2.03	0.42
2:AC:154:GLY:HA2	2:AC:163:ARG:H	1.84	0.42
3:AD:18:LEU:HG	3:AD:63:ILE:HG12	2.02	0.42
3:AD:78:ALA:HB1	3:AD:85:THR:O	2.19	0.42
4:AE:82:HIS:HE1	4:AE:147:ASN:H	1.68	0.42
6:AG:49:LEU:HD21	6:AG:60:ALA:CB	2.46	0.42
6:AG:67:ASN:O	6:AG:134:VAL:HA	2.19	0.42
8:AI:35:GLU:O	8:AI:39:GLY:HA3	2.20	0.42
9:AJ:6:ILE:HD12	9:AJ:76:ILE:HD11	2.01	0.42
9:AJ:52:LEU:HB2	13:AN:80:ARG:NE	2.35	0.42
15:AP:20:VAL:HG21	15:AP:32:PHE:CD2	2.54	0.42
16:AQ:30:HIS:CG	16:AQ:33:TYR:HB2	2.54	0.42
16:AQ:60:ILE:HD13	16:AQ:60:ILE:N	2.34	0.42
18:AS:39:ILE:HD13	18:AS:65:MET:HB3	2.01	0.42
21:AU:20:ARG:C	21:AU:22:CYS:H	2.21	0.42
23:BB:19:A:H2'	23:BB:20:C:H6	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:68:G:H2'	23:BB:69:C:H6	1.85	0.42
23:BB:170:U:O2'	23:BB:171:U:H5'	2.19	0.42
23:BB:183:C:O2	23:BB:432:A:H2	2.02	0.42
23:BB:230:G:H2'	23:BB:231:A:C8	2.55	0.42
23:BB:625:G:O2'	23:BB:626:A:H5'	2.20	0.42
23:BB:708:G:N2	23:BB:724:U:H1'	2.34	0.42
23:BB:924:G:H2'	23:BB:925:A:C8	2.54	0.42
23:BB:1234:U:H2'	23:BB:1235:G:O4'	2.20	0.42
23:BB:2082:A:N6	23:BB:2237:G:H1'	2.35	0.42
23:BB:2846:G:H2'	23:BB:2847:U:O4'	2.20	0.42
25:BC:141:HIS:CG	25:BC:142:ASN:N	2.87	0.42
27:BE:102:ARG:HH21	27:BE:102:ARG:HG3	1.84	0.42
27:BE:109:LEU:HD13	27:BE:180:LEU:HD13	2.02	0.42
27:BE:128:ALA:O	27:BE:133:LEU:HD12	2.19	0.42
27:BE:200:LEU:N	27:BE:200:LEU:HD22	2.35	0.42
28:BF:31:GLU:HB2	28:BF:158:THR:HG22	2.00	0.42
31:BJ:57:LEU:HD11	31:BJ:129:GLU:N	2.29	0.42
31:BJ:74:TYR:HE2	31:BJ:103:ILE:HD11	1.84	0.42
31:BJ:77:HIS:HD2	31:BJ:84:ILE:N	2.09	0.42
32:BK:111:LYS:HD3	32:BK:111:LYS:N	2.35	0.42
35:BN:30:ARG:NH2	35:BN:72:ASP:OD1	2.53	0.42
38:BQ:83:LYS:HA	38:BQ:87:VAL:O	2.19	0.42
41:BT:22:THR:O	41:BT:25:GLU:HB3	2.19	0.42
43:BW:59:PHE:CD2	43:BW:61:LYS:HG3	2.55	0.42
46:BZ:18:ARG:HA	46:BZ:23:ASN:O	2.19	0.42
50:B3:31:ILE:C	50:B3:32:LEU:HG	2.40	0.42
1:CA:87:C:H2'	1:CA:88:U:C5	2.55	0.42
1:CA:279:A:H5'	1:CA:281:G:O4'	2.19	0.42
1:CA:523:A:H61	11:CL:88:ASP:HB2	1.85	0.42
1:CA:553:A:O2'	11:CL:25:ALA:HB1	2.20	0.42
1:CA:688:G:O3'	10:CK:45:THR:HG21	2.20	0.42
1:CA:1007:U:H2'	1:CA:1008:U:H6	1.84	0.42
1:CA:1033:G:H2'	1:CA:1034:G:H5"	2.01	0.42
1:CA:1306:A:C2'	1:CA:1307:U:H5'	2.49	0.42
1:CA:1476:A:O2'	1:CA:1477:U:H5'	2.20	0.42
10:CK:15:VAL:C	10:CK:17:ASP:H	2.23	0.42
19:CT:32:LYS:O	19:CT:35:TYR:N	2.52	0.42
20:CB:83:ALA:C	20:CB:85:SER:H	2.23	0.42
23:DB:26:G:H1'	23:DB:514:A:N6	2.34	0.42
23:DB:215:G:C4'	23:DB:216:A:H4'	2.47	0.42
23:DB:329:G:H1	42:DU:16:LYS:HE3	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:346:A:H3'	23:DB:347:A:H8	1.84	0.42
23:DB:374:A:N6	23:DB:400:G:H1'	2.35	0.42
23:DB:548:G:O2'	23:DB:549:G:H5"	2.20	0.42
23:DB:912:C:H2'	23:DB:913:U:C6	2.54	0.42
23:DB:981:A:H4'	23:DB:2037:A:H5'	2.02	0.42
23:DB:1131:G:O2'	23:DB:1133:A:N7	2.52	0.42
23:DB:1891:G:H2'	23:DB:1892:C:H6	1.85	0.42
23:DB:2215:C:H2'	23:DB:2216:G:C8	2.55	0.42
23:DB:2283:C:H2'	23:DB:2284:A:H5'	2.01	0.42
23:DB:2721:A:H2'	23:DB:2722:G:H8	1.84	0.42
23:DB:2838:G:C4	23:DB:2839:G:C8	3.07	0.42
23:DB:2847:U:OP1	37:DP:95:LYS:HD3	2.19	0.42
25:DC:119:VAL:HG13	25:DC:133:ASN:HD21	1.84	0.42
25:DC:153:LEU:HD22	25:DC:175:LEU:HD22	2.01	0.42
28:DF:11:VAL:HG13	28:DF:171:ALA:HB1	2.01	0.42
28:DF:33:ILE:HB	28:DF:90:LEU:CG	2.49	0.42
28:DF:90:LEU:HB3	28:DF:95:MET:HB2	2.02	0.42
28:DF:109:ARG:HB3	28:DF:135:ILE:HD12	2.00	0.42
31:DJ:6:ALA:HB3	31:DJ:45:THR:CG2	2.44	0.42
33:DL:138:ALA:O	33:DL:139:GLY:C	2.58	0.42
34:DM:66:ARG:HB3	34:DM:101:VAL:HG13	2.01	0.42
34:DM:108:VAL:CG1	34:DM:112:LEU:HD12	2.49	0.42
35:DN:33:ILE:HG22	35:DN:114:GLU:CB	2.44	0.42
35:DN:47:VAL:O	35:DN:51:LEU:HD13	2.20	0.42
36:DO:100:HIS:ND1	36:DO:101:GLY:N	2.68	0.42
37:DP:89:GLY:N	37:DP:112:ARG:HH12	2.17	0.42
39:DR:19:THR:HG22	39:DR:97:LYS:HD2	2.01	0.42
40:DS:2:GLU:O	40:DS:3:THR:C	2.58	0.42
42:DU:85:ARG:O	42:DU:92:VAL:HB	2.20	0.42
44:DX:35:GLY:O	44:DX:36:GLN:C	2.57	0.42
46:DZ:21:ALA:C	46:DZ:22:LEU:HG	2.39	0.42
46:DZ:38:PHE:CE2	46:DZ:51:VAL:HG21	2.55	0.42
48:D1:10:LEU:HB3	48:D1:48:TYR:HB3	2.02	0.42
1:AA:300:A:H2'	1:AA:301:G:O4'	2.19	0.42
1:AA:438:U:H4'	3:AD:119:HIS:HD2	1.85	0.42
1:AA:564:C:C4	16:AQ:32:ILE:HD11	2.55	0.42
1:AA:614:C:O2'	1:AA:615:G:H5'	2.20	0.42
1:AA:706:A:C4'	10:AK:30:ILE:HD11	2.48	0.42
1:AA:821:G:O2'	1:AA:822:U:H5'	2.20	0.42
1:AA:958:A:N1	18:AS:53:GLY:C	2.73	0.42
1:AA:984:C:H2'	1:AA:985:C:H6	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1036:A:H2'	1:AA:1037:C:O4'	2.19	0.42
1:AA:1136:C:O2	1:AA:1136:C:H2'	2.19	0.42
1:AA:1202:U:H2'	1:AA:1203:C:H5'	2.02	0.42
2:AC:78:LYS:HE3	2:AC:79:LYS:HZ3	1.84	0.42
5:AF:44:ARG:HA	5:AF:57:ALA:O	2.20	0.42
5:AF:47:LEU:HD13	5:AF:51:ILE:CG2	2.50	0.42
5:AF:51:ILE:CD1	5:AF:86:ARG:HG3	2.50	0.42
6:AG:129:ASN:CA	6:AG:134:VAL:HG21	2.49	0.42
8:AI:93:LEU:HD13	8:AI:97:LEU:CD1	2.47	0.42
10:AK:124:LYS:HA	21:AU:34:ARG:CG	2.49	0.42
11:AL:79:ILE:C	11:AL:101:LEU:HD12	2.40	0.42
11:AL:82:ARG:HG2	11:AL:82:ARG:NH1	2.35	0.42
14:AO:49:HIS:O	14:AO:52:ARG:HB3	2.20	0.42
19:AT:54:GLN:O	19:AT:57:VAL:HG23	2.20	0.42
20:AB:137:THR:O	20:AB:141:GLU:HG3	2.20	0.42
23:BB:20:C:H2'	23:BB:21:A:C8	2.54	0.42
23:BB:104:A:H2'	23:BB:105:C:O4'	2.19	0.42
23:BB:106:C:H2'	23:BB:107:G:C8	2.54	0.42
23:BB:212:G:H2'	23:BB:213:A:C8	2.54	0.42
23:BB:335:C:H2'	23:BB:336:C:H6	1.85	0.42
23:BB:560:C:H3'	23:BB:561:G:C8	2.55	0.42
23:BB:670:A:H5"	33:BL:42:SER:HB2	2.01	0.42
23:BB:717:C:C3'	23:BB:718:A:H5"	2.48	0.42
23:BB:1060:U:C1'	23:BB:1062:G:H5'	2.50	0.42
23:BB:1161:C:H2'	23:BB:1162:G:H8	1.85	0.42
23:BB:1214:A:H2'	23:BB:1215:G:H8	1.85	0.42
23:BB:1344:U:O2'	23:BB:1385:A:H2'	2.20	0.42
23:BB:1714:U:HO2'	23:BB:1715:G:P	2.43	0.42
23:BB:1910:G:H2'	23:BB:1911:U:O4'	2.19	0.42
23:BB:2081:U:H2'	23:BB:2082:A:C8	2.55	0.42
23:BB:2409:G:H2'	23:BB:2410:G:O4'	2.19	0.42
23:BB:2676:C:O2'	23:BB:2677:G:H5'	2.20	0.42
23:BB:2733:A:C8	23:BB:2733:A:H3'	2.54	0.42
23:BB:2795:C:O5'	23:BB:2795:C:H6	2.03	0.42
27:BE:150:THR:HG22	27:BE:170:ARG:O	2.20	0.42
28:BF:1:ALA:HB1	28:BF:4:HIS:HB3	2.01	0.42
28:BF:33:ILE:HB	28:BF:90:LEU:CG	2.50	0.42
28:BF:83:PRO:O	28:BF:84:ILE:HD12	2.20	0.42
28:BF:137:PHE:O	28:BF:139:GLU:N	2.53	0.42
29:BG:33:THR:HB	29:BG:74:MET:HG2	2.02	0.42
30:BH:8:LYS:HE3	1:CA:495:A:OP1	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BH:68:ARG:HB2	30:BH:134:VAL:HG23	2.02	0.42
31:BJ:14:ASP:O	31:BJ:53:TYR:N	2.51	0.42
31:BJ:30:THR:N	31:BJ:108:MET:HE3	2.35	0.42
31:BJ:38:GLY:O	31:BJ:43:GLU:HB2	2.20	0.42
33:BL:75:ALA:HB2	33:BL:101:ILE:HG23	2.02	0.42
34:BM:18:ARG:C	34:BM:38:ARG:HH22	2.23	0.42
35:BN:87:PHE:C	35:BN:89:SER:H	2.23	0.42
37:BP:50:ARG:O	37:BP:51:ASN:HB2	2.19	0.42
39:BR:86:GLN:HE21	39:BR:86:GLN:HB2	1.54	0.42
40:BS:60:HIS:O	40:BS:61:ASN:HB2	2.19	0.42
40:BS:85:ILE:HD12	40:BS:85:ILE:N	2.34	0.42
41:BT:62:VAL:HG12	41:BT:63:VAL:N	2.34	0.42
41:BT:66:LYS:N	41:BT:76:ARG:HH21	2.18	0.42
42:BU:14:THR:HG23	42:BU:15:GLY:N	2.35	0.42
42:BU:43:LYS:HD3	42:BU:44:HIS:N	2.33	0.42
43:BW:35:ILE:O	43:BW:37:VAL:N	2.53	0.42
44:BX:23:ARG:HD2	44:BX:27:ASN:ND2	2.32	0.42
46:BZ:58:VAL:O	46:BZ:62:LYS:N	2.43	0.42
49:B2:9:VAL:HG13	49:B2:10:LEU:N	2.34	0.42
52:BI:11:GLN:NE2	52:BI:74:PRO:HG2	2.35	0.42
1:CA:152:A:H3'	1:CA:153:C:H6	1.85	0.42
1:CA:430:A:C2'	1:CA:431:A:H5'	2.50	0.42
1:CA:586:C:O2'	7:CH:3:GLN:NE2	2.53	0.42
4:CE:25:LYS:HG3	4:CE:26:GLY:H	1.85	0.42
4:CE:71:ILE:HG21	4:CE:144:GLU:OE2	2.20	0.42
7:CH:24:VAL:CG1	7:CH:60:LEU:HB3	2.49	0.42
8:CI:19:PHE:HB2	8:CI:63:TYR:O	2.19	0.42
12:CM:72:ILE:O	12:CM:76:ILE:HG13	2.19	0.42
14:CO:8:ALA:O	14:CO:11:VAL:HB	2.20	0.42
19:CT:75:LYS:O	19:CT:76:ALA:C	2.59	0.42
20:CB:127:LYS:CD	20:CB:128:LEU:HD13	2.50	0.42
23:DB:1:G:H2'	23:DB:2:G:C8	2.54	0.42
23:DB:26:G:H2'	23:DB:27:G:C1'	2.50	0.42
23:DB:55:G:H2'	23:DB:56:A:C8	2.55	0.42
23:DB:169:G:O2'	23:DB:170:U:H5'	2.19	0.42
23:DB:227:A:H61	23:DB:410:G:H1'	1.84	0.42
23:DB:321:U:O4'	27:DE:159:LEU:HG	2.19	0.42
23:DB:504:A:HO2'	23:DB:505:A:P	2.42	0.42
23:DB:850:U:O3'	45:DY:22:THR:HG22	2.19	0.42
23:DB:969:G:H2'	23:DB:970:U:H6	1.85	0.42
23:DB:1028:A:N6	23:DB:1125:G:H2'	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1099:G:C8	52:DI:3:LYS:CB	3.03	0.42
23:DB:1210:G:H5'	23:DB:1212:G:C4'	2.49	0.42
23:DB:1280:G:C2'	23:DB:1281:G:H5'	2.49	0.42
23:DB:1401:G:H2'	23:DB:1402:U:H6	1.85	0.42
23:DB:1441:G:H2'	23:DB:1442:U:H6	1.83	0.42
23:DB:1490:A:H2'	25:DC:97:ASP:CG	2.41	0.42
23:DB:1662:U:H2'	23:DB:1663:G:O4'	2.20	0.42
23:DB:1831:G:C6	23:DB:1832:C:N4	2.88	0.42
23:DB:1847:A:H1'	23:DB:1848:A:N7	2.35	0.42
23:DB:1914:C:O2'	23:DB:1915:U:C5'	2.68	0.42
23:DB:2260:C:O2'	23:DB:2261:C:H5'	2.20	0.42
23:DB:2419:U:H2'	23:DB:2420:C:C6	2.55	0.42
23:DB:2622:U:O2'	23:DB:2825:G:N7	2.53	0.42
23:DB:2667:C:HO2'	29:DG:108:PHE:HD2	1.68	0.42
26:DD:26:VAL:HG13	26:DD:188:LEU:CD2	2.50	0.42
26:DD:27:ILE:HG23	26:DD:201:LEU:HD12	2.02	0.42
26:DD:121:THR:C	26:DD:123:LYS:N	2.72	0.42
27:DE:147:LEU:O	27:DE:147:LEU:HD13	2.20	0.42
29:DG:89:VAL:HG21	29:DG:162:ARG:HH11	1.84	0.42
32:DK:41:ILE:CG1	32:DK:42:THR:N	2.82	0.42
33:DL:98:ALA:O	33:DL:99:ASN:C	2.59	0.42
34:DM:18:ARG:C	34:DM:38:ARG:HH22	2.23	0.42
34:DM:124:LEU:HA	34:DM:125:PRO:HD3	1.87	0.42
36:DO:36:TYR:N	36:DO:36:TYR:CD2	2.87	0.42
37:DP:4:ILE:O	37:DP:5:LYS:HB2	2.20	0.42
38:DQ:71:ASN:ND2	38:DQ:72:GLY:N	2.68	0.42
38:DQ:87:VAL:HB	39:DR:52:PRO:HG3	2.02	0.42
40:DS:57:ASN:HD22	40:DS:57:ASN:HA	1.59	0.42
43:DW:18:LYS:HG3	43:DW:19:ARG:CZ	2.49	0.42
51:D4:3:VAL:O	51:D4:4:ARG:HB2	2.19	0.42
1:AA:317:U:H2'	1:AA:318:G:C8	2.54	0.42
1:AA:450:G:N7	1:AA:481:G:O6	2.52	0.42
1:AA:564:C:H1'	16:AQ:32:ILE:O	2.19	0.42
1:AA:647:C:H2'	1:AA:648:A:H8	1.85	0.42
1:AA:828:U:H2'	1:AA:829:G:O5'	2.20	0.42
1:AA:978:A:H5'	1:AA:1362:A:H62	1.84	0.42
1:AA:1013:G:H2'	1:AA:1015:G:OP2	2.20	0.42
1:AA:1046:A:H2'	1:AA:1047:G:O4'	2.20	0.42
1:AA:1194:U:H5'	4:AE:26:GLY:O	2.20	0.42
1:AA:1225:A:H5"	1:AA:1226:C:C5	2.55	0.42
2:AC:38:VAL:HG23	2:AC:39:ARG:N	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AG:70:PRO:HD2	6:AG:95:ARG:O	2.20	0.42
8:AI:19:PHE:HB2	8:AI:63:TYR:O	2.20	0.42
9:AJ:26:VAL:HG12	9:AJ:30:LYS:HG3	2.02	0.42
10:AK:125:LYS:O	21:AU:33:ARG:NH2	2.53	0.42
20:AB:8:MET:O	20:AB:11:ALA:HB3	2.20	0.42
20:AB:68:PHE:CE1	20:AB:88:GLN:HB3	2.55	0.42
20:AB:164:ASP:OD1	20:AB:186:VAL:HA	2.20	0.42
21:AU:36:PHE:CE1	21:AU:44:ARG:HD3	2.55	0.42
23:BB:7:G:OP1	31:BJ:132:HIS:HE1	2.02	0.42
23:BB:279:A:H8	23:BB:279:A:P	2.43	0.42
23:BB:616:A:H3'	23:BB:617:G:C8	2.43	0.42
23:BB:709:U:H2'	23:BB:710:U:H6	1.85	0.42
23:BB:727:A:H2'	23:BB:728:G:C8	2.55	0.42
23:BB:995:C:H42	31:BJ:2:LYS:HB2	1.84	0.42
23:BB:1028:A:N3	23:BB:2486:C:O2'	2.39	0.42
23:BB:1116:G:H2'	23:BB:1117:C:H6	1.85	0.42
23:BB:1795:C:H2'	23:BB:1796:U:C6	2.55	0.42
23:BB:1936:A:H2	23:BB:1943:U:O4	2.03	0.42
23:BB:2000:C:O2'	23:BB:2001:C:H5'	2.19	0.42
23:BB:2069:G:O2'	23:BB:2070:A:H5'	2.20	0.42
23:BB:2669:G:O2'	23:BB:2670:A:H5'	2.20	0.42
23:BB:2840:C:H5"	35:BN:53:THR:CG2	2.50	0.42
23:BB:2899:A:H2'	23:BB:2900:A:H8	1.84	0.42
25:BC:245:THR:O	25:BC:247:TRP:N	2.53	0.42
27:BE:31:VAL:O	27:BE:34:ALA:HB3	2.20	0.42
27:BE:38:GLY:C	27:BE:40:ARG:H	2.22	0.42
27:BE:61:ARG:O	27:BE:62:GLN:C	2.58	0.42
27:BE:118:LEU:HA	27:BE:186:VAL:HG13	2.02	0.42
28:BF:37:MET:HG3	28:BF:52:ALA:HB1	2.01	0.42
30:BH:69:ALA:C	30:BH:71:LYS:N	2.73	0.42
31:BJ:36:LEU:HD11	31:BJ:121:LYS:HB2	2.02	0.42
33:BL:81:ASP:HA	33:BL:84:LYS:CD	2.49	0.42
33:BL:98:ALA:O	33:BL:99:ASN:C	2.58	0.42
33:BL:123:ARG:HD2	33:BL:123:ARG:C	2.40	0.42
34:BM:126:ILE:HG22	34:BM:127:LYS:N	2.35	0.42
38:BQ:107:ALA:C	39:BR:48:LYS:HD3	2.40	0.42
39:BR:71:LYS:HG2	39:BR:73:LYS:HZ1	1.81	0.42
40:BS:33:LEU:HD23	40:BS:51:LEU:HD23	2.01	0.42
40:BS:55:ILE:HD12	40:BS:69:LEU:HD23	2.00	0.42
42:BU:96:LYS:C	42:BU:98:ASN:H	2.23	0.42
43:BW:15:SER:O	43:BW:16:GLU:C	2.58	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BZ:53:ALA:O	46:BZ:54:LYS:HB3	2.19	0.42
51:B4:11:CYS:HB3	51:B4:33:HIS:HE1	1.84	0.42
1:CA:58:C:C2'	1:CA:59:A:H5'	2.50	0.42
1:CA:152:A:H3'	1:CA:153:C:C6	2.55	0.42
1:CA:277:C:O2'	1:CA:278:G:H5'	2.19	0.42
1:CA:499:A:C2	1:CA:546:A:N3	2.88	0.42
1:CA:704:A:C2	1:CA:705:G:H1'	2.54	0.42
1:CA:711:G:O2'	1:CA:712:A:H5'	2.20	0.42
1:CA:822:U:H2'	1:CA:823:C:C6	2.54	0.42
1:CA:853:C:O2'	1:CA:854:U:H5'	2.19	0.42
1:CA:1229:A:H2'	1:CA:1230:C:H6	1.83	0.42
1:CA:1346:A:H61	1:CA:1374:A:H3'	1.84	0.42
1:CA:1499:A:H1'	1:CA:1520:C:OP1	2.20	0.42
2:CC:38:VAL:HG23	2:CC:39:ARG:N	2.35	0.42
2:CC:76:ILE:O	2:CC:82:ASP:N	2.53	0.42
2:CC:111:ASP:HB3	2:CC:114:LEU:HD12	2.02	0.42
3:CD:48:SER:O	3:CD:52:VAL:HG23	2.19	0.42
6:CG:130:LYS:N	6:CG:134:VAL:HG21	2.35	0.42
8:CI:32:ARG:HD3	8:CI:37:TYR:HD1	1.85	0.42
9:CJ:92:LEU:N	9:CJ:92:LEU:HD22	2.35	0.42
16:CQ:52:CYS:SG	16:CQ:77:VAL:HG22	2.60	0.42
22:DA:32:U:H2'	22:DA:33:G:H8	1.85	0.42
23:DB:68:G:O2'	23:DB:69:C:H5'	2.19	0.42
23:DB:234:U:H2'	23:DB:235:U:H6	1.85	0.42
23:DB:256:A:O2'	23:DB:257:C:H5'	2.19	0.42
23:DB:404:A:H4'	23:DB:405:U:C5'	2.44	0.42
23:DB:441:U:O2'	23:DB:442:G:H5'	2.20	0.42
23:DB:776:G:N1	23:DB:2072:C:OP1	2.41	0.42
23:DB:841:G:O2'	23:DB:842:U:H5'	2.20	0.42
23:DB:924:G:H2'	23:DB:925:A:C8	2.54	0.42
23:DB:936:A:O2'	23:DB:937:C:H5'	2.20	0.42
23:DB:1207:C:H2'	23:DB:1208:C:C6	2.55	0.42
23:DB:1448:G:H2'	23:DB:1449:G:H8	1.85	0.42
23:DB:1637:A:H2'	23:DB:1638:C:C6	2.55	0.42
23:DB:2301:C:H2'	23:DB:2302:U:C6	2.55	0.42
25:DC:67:LYS:O	25:DC:188:ARG:HD3	2.20	0.42
25:DC:128:THR:HG22	25:DC:188:ARG:HB3	2.02	0.42
26:DD:35:THR:N	26:DD:49:GLN:O	2.51	0.42
28:DF:134:GLN:HB3	28:DF:134:GLN:HE21	1.62	0.42
29:DG:18:ILE:HA	29:DG:22:VAL:O	2.20	0.42
31:DJ:75:TYR:O	31:DJ:76:HIS:HB3	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DK:99:ILE:HG12	32:DK:115:ILE:HG13	2.01	0.42
33:DL:61:LEU:HD23	50:D3:23:HIS:CG	2.55	0.42
36:DO:7:ARG:HH11	36:DO:7:ARG:CG	2.33	0.42
38:DQ:93:ILE:HG23	38:DQ:94:LEU:N	2.35	0.42
39:DR:79:ARG:HD2	39:DR:80:ARG:HH21	1.84	0.42
40:DS:24:ILE:O	40:DS:25:ARG:C	2.58	0.42
1:AA:33:A:O2'	1:AA:34:C:H5'	2.20	0.41
1:AA:35:G:H2'	1:AA:36:C:H6	1.80	0.41
1:AA:560:A:H5'	1:AA:566:G:N2	2.35	0.41
1:AA:742:G:H2'	1:AA:743:A:C8	2.53	0.41
1:AA:817:C:C2	1:AA:819:A:O4'	2.73	0.41
1:AA:878:A:H5"	7:AH:80:PRO:HG2	2.02	0.41
1:AA:1152:A:H4'	9:AJ:15:HIS:HD2	1.85	0.41
1:AA:1386:G:H2'	1:AA:1387:G:H8	1.85	0.41
1:AA:1408:A:HO2'	23:BB:1916:A:H61	1.67	0.41
1:AA:1504:G:H3'	56:AA:2144:HOH:O	2.20	0.41
5:AF:6:ILE:HD12	5:AF:7:VAL:N	2.34	0.41
7:AH:118:ALA:HB3	7:AH:120:LEU:CD2	2.50	0.41
9:AJ:42:LEU:CD1	9:AJ:73:LEU:HB2	2.39	0.41
11:AL:53:ARG:HG2	11:AL:61:GLU:OE1	2.20	0.41
11:AL:56:LEU:HG	11:AL:60:PHE:O	2.20	0.41
12:AM:26:LYS:O	12:AM:30:LYS:HB2	2.20	0.41
13:AN:53:ASP:HA	13:AN:58:ARG:NE	2.35	0.41
18:AS:42:ASN:HD22	18:AS:42:ASN:H	1.67	0.41
20:AB:25:LYS:HD3	20:AB:193:ASP:OD2	2.20	0.41
20:AB:46:VAL:CG1	20:AB:47:PRO:HD3	2.34	0.41
20:AB:165:ALA:H	20:AB:186:VAL:HG12	1.85	0.41
22:BA:97:C:O2	23:BB:918:A:H4'	2.20	0.41
23:BB:96:C:H2'	23:BB:97:C:H6	1.85	0.41
23:BB:100:U:H2'	23:BB:101:A:C8	2.55	0.41
23:BB:116:C:H2'	23:BB:117:G:C8	2.55	0.41
23:BB:135:U:H2'	23:BB:136:G:C8	2.55	0.41
23:BB:235:U:H2'	23:BB:236:C:H6	1.84	0.41
23:BB:445:C:H4'	23:BB:1248:G:O6	2.20	0.41
23:BB:1046:A:H3'	23:BB:1047:G:C5'	2.49	0.41
23:BB:1306:C:O2'	23:BB:1307:A:H5'	2.19	0.41
23:BB:1409:U:O2'	23:BB:1410:G:H5'	2.19	0.41
23:BB:1681:G:N3	23:BB:1762:A:H2'	2.34	0.41
23:BB:1827:U:C2'	23:BB:1828:G:H5'	2.50	0.41
23:BB:2335:A:H2'	23:BB:2336:A:H5"	2.02	0.41
23:BB:2349:G:OP2	50:B3:41:ARG:HD3	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2655:G:H1'	23:BB:2656:U:H5	1.84	0.41
23:BB:2745:C:H3'	23:BB:2746:U:C5	2.54	0.41
26:BD:61:THR:OG1	26:BD:64:GLU:HB2	2.19	0.41
26:BD:121:THR:C	26:BD:123:LYS:N	2.73	0.41
27:BE:34:ALA:CB	27:BE:96:VAL:HG21	2.50	0.41
27:BE:48:THR:C	27:BE:50:ALA:N	2.73	0.41
28:BF:29:ARG:H	28:BF:29:ARG:HD3	1.85	0.41
28:BF:105:ILE:O	28:BF:109:ARG:HB2	2.20	0.41
30:BH:4:ILE:HG23	30:BH:17:ASP:N	2.35	0.41
30:BH:129:GLU:C	30:BH:131:SER:H	2.24	0.41
32:BK:13:ASN:HD21	32:BK:98:ARG:N	2.07	0.41
33:BL:61:LEU:HD23	50:B3:23:HIS:CG	2.55	0.41
34:BM:59:ARG:CZ	34:BM:60:GLN:HB3	2.49	0.41
35:BN:65:LEU:HD11	35:BN:69:ARG:NH2	2.35	0.41
36:BO:35:ILE:HG21	36:BO:71:ALA:HB1	2.02	0.41
37:BP:91:VAL:HG23	37:BP:92:ARG:N	2.26	0.41
38:BQ:92:LYS:O	38:BQ:95:ALA:HB3	2.20	0.41
38:BQ:93:ILE:HG23	38:BQ:94:LEU:H	1.85	0.41
38:BQ:112:ALA:O	38:BQ:113:LYS:C	2.58	0.41
40:BS:24:ILE:O	40:BS:25:ARG:C	2.58	0.41
45:BY:6:ILE:HD13	45:BY:56:VAL:CG1	2.50	0.41
48:B1:38:PHE:O	48:B1:40:PRO:HD3	2.20	0.41
49:B2:19:ARG:HG2	49:B2:19:ARG:NH2	2.34	0.41
52:BI:38:CYS:O	52:BI:42:ASN:ND2	2.53	0.41
1:CA:43:C:H2'	1:CA:44:A:O4'	2.20	0.41
1:CA:54:C:N4	1:CA:352:C:H2'	2.35	0.41
1:CA:67:C:H2'	1:CA:68:G:H8	1.84	0.41
1:CA:222:C:H2'	1:CA:223:A:C8	2.55	0.41
1:CA:635:A:H2'	1:CA:636:U:C6	2.54	0.41
1:CA:926:G:N2	1:CA:1505:G:H2'	2.35	0.41
1:CA:998:C:H2'	1:CA:999:C:C6	2.56	0.41
1:CA:1162:C:H2'	1:CA:1163:A:O4'	2.20	0.41
3:CD:155:LYS:HG3	3:CD:156:ALA:N	2.35	0.41
3:CD:159:GLU:C	3:CD:161:ALA:H	2.24	0.41
9:CJ:80:THR:CG2	9:CJ:82:LYS:HZ2	2.33	0.41
12:CM:43:LYS:C	12:CM:45:SER:N	2.74	0.41
20:CB:25:LYS:HD3	20:CB:193:ASP:OD2	2.20	0.41
23:DB:451:U:C2	23:DB:453:A:N7	2.88	0.41
23:DB:612:G:H2'	23:DB:614:A:H5"	2.01	0.41
23:DB:649:G:H2'	23:DB:650:C:C6	2.55	0.41
23:DB:811:U:O2	23:DB:1250:G:H3'	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1180:U:H2'	23:DB:1181:U:O4'	2.20	0.41
23:DB:1187:G:H5"	39:DR:83:TYR:CE2	2.55	0.41
23:DB:1334:G:O2'	23:DB:1335:C:H5'	2.20	0.41
23:DB:1706:C:H2'	23:DB:1757:A:OP2	2.19	0.41
23:DB:1727:C:H2'	23:DB:1728:C:O4'	2.20	0.41
23:DB:1801:A:P	25:DC:149:LYS:HZ3	2.43	0.41
23:DB:1998:A:H2'	23:DB:1999:C:H6	1.84	0.41
23:DB:2219:U:H2'	23:DB:2220:U:H6	1.85	0.41
23:DB:2314:A:H2'	23:DB:2315:G:H8	1.84	0.41
23:DB:2478:A:H2'	23:DB:2479:U:O4'	2.20	0.41
23:DB:2586:U:H2'	23:DB:2587:A:C8	2.54	0.41
23:DB:2743:U:H2'	23:DB:2744:G:C5'	2.41	0.41
25:DC:115:ILE:HA	25:DC:124:LYS:HZ1	1.84	0.41
26:DD:110:THR:O	26:DD:201:LEU:HA	2.20	0.41
27:DE:59:PRO:O	27:DE:67:ARG:NH2	2.53	0.41
27:DE:150:THR:OG1	27:DE:151:GLY:N	2.52	0.41
28:DF:8:LYS:HA	28:DF:12:VAL:CG2	2.45	0.41
28:DF:65:LEU:HD23	28:DF:87:LYS:CD	2.45	0.41
30:DH:90:LEU:N	30:DH:90:LEU:HD12	2.35	0.41
31:DJ:35:ARG:HG3	31:DJ:40:HIS:HE2	1.85	0.41
32:DK:6:THR:HG22	32:DK:7:MET:H	1.84	0.41
32:DK:105:ARG:HH11	32:DK:122:VAL:CG1	2.33	0.41
33:DL:118:THR:HA	33:DL:119:PRO:HD3	1.91	0.41
34:DM:26:VAL:CG2	34:DM:133:LYS:HA	2.50	0.41
36:DO:19:GLN:HE21	36:DO:19:GLN:HB3	1.62	0.41
36:DO:49:VAL:HG11	36:DO:82:ALA:CA	2.44	0.41
37:DP:86:LYS:HB3	37:DP:87:ARG:H	1.54	0.41
39:DR:39:LEU:HD22	39:DR:53:PHE:CD1	2.55	0.41
41:DT:45:ALA:HA	41:DT:48:GLN:CG	2.50	0.41
42:DU:71:ILE:HD11	42:DU:81:ARG:O	2.19	0.41
45:DY:51:SER:HA	45:DY:54:VAL:CG2	2.50	0.41
49:D2:21:ARG:CD	49:D2:43:THR:HG21	2.50	0.41
50:D3:14:LYS:O	50:D3:15:LYS:C	2.58	0.41
50:D3:49:VAL:HG11	50:D3:54:LEU:HA	2.02	0.41
51:D4:11:CYS:HB3	51:D4:33:HIS:HE1	1.84	0.41
1:AA:91:U:H2'	1:AA:92:U:O4'	2.20	0.41
1:AA:285:C:O2'	1:AA:286:C:H5'	2.20	0.41
1:AA:621:A:H2'	1:AA:622:A:H8	1.83	0.41
1:AA:697:U:O2	1:AA:798:U:H1'	2.20	0.41
1:AA:857:C:H2'	1:AA:858:G:O4'	2.21	0.41
1:AA:1170:A:H3'	1:AA:1171:A:H8	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1201:A:H4'	1:AA:1202:U:O5'	2.20	0.41
1:AA:1258:G:C2	1:AA:1278:G:N2	2.88	0.41
1:AA:1269:A:N6	1:AA:1313:U:H5'	2.35	0.41
1:AA:1355:G:O2'	1:AA:1356:G:H5'	2.20	0.41
2:AC:78:LYS:C	2:AC:80:GLY:N	2.73	0.41
2:AC:87:ARG:HB2	2:AC:100:ILE:HG22	2.02	0.41
4:AE:20:VAL:HG12	4:AE:21:SER:N	2.35	0.41
4:AE:104:ILE:HG13	4:AE:122:VAL:HG23	2.02	0.41
5:AF:42:TRP:HE1	5:AF:61:LEU:CD2	2.33	0.41
5:AF:81:ASN:OD1	5:AF:83:ALA:HB3	2.20	0.41
7:AH:10:LEU:CD2	7:AH:74:ILE:HD11	2.49	0.41
8:AI:30:ASN:ND2	8:AI:65:THR:HA	2.35	0.41
8:AI:123:ARG:HB3	8:AI:123:ARG:NH1	2.34	0.41
11:AL:43:LYS:H	11:AL:43:LYS:HG3	1.65	0.41
13:AN:55:SER:HB2	13:AN:58:ARG:HD2	2.02	0.41
16:AQ:39:ARG:CZ	16:AQ:39:ARG:HA	2.50	0.41
18:AS:35:ARG:HB3	18:AS:50:VAL:CG1	2.49	0.41
20:AB:75:ALA:O	20:AB:76:SER:C	2.59	0.41
20:AB:95:TRP:HH2	20:AB:100:LEU:HD22	1.86	0.41
22:BA:65:U:C2'	22:BA:66:A:H5'	2.49	0.41
23:BB:191:A:O2'	23:BB:192:C:H5'	2.20	0.41
23:BB:250:G:H2'	23:BB:251:A:C8	2.55	0.41
23:BB:288:U:O2'	23:BB:289:G:H5'	2.19	0.41
23:BB:317:G:H2'	23:BB:318:C:H6	1.85	0.41
23:BB:829:A:H5'	23:BB:831:G:N7	2.34	0.41
23:BB:993:G:H1'	39:BR:91:GLN:NE2	2.35	0.41
23:BB:1184:U:O2'	23:BB:1185:G:H5'	2.20	0.41
23:BB:1210:G:H4'	23:BB:1211:C:OP2	2.21	0.41
23:BB:1222:U:OP2	39:BR:90:ARG:NH2	2.53	0.41
23:BB:1248:G:C5	38:BQ:2:ARG:HD2	2.54	0.41
23:BB:1904:G:O2'	23:BB:1905:C:H5'	2.20	0.41
23:BB:2218:G:O2'	23:BB:2219:U:H5'	2.20	0.41
23:BB:2223:G:C2'	23:BB:2224:G:H5'	2.49	0.41
23:BB:2857:G:N2	23:BB:2859:G:H3'	2.34	0.41
24:BV:42:LEU:HB2	24:BV:47:VAL:HG21	2.02	0.41
25:BC:189:ALA:C	25:BC:190:THR:HG23	2.40	0.41
26:BD:38:LYS:HD3	26:BD:45:TYR:OH	2.20	0.41
26:BD:110:THR:O	26:BD:201:LEU:HA	2.19	0.41
27:BE:68:ALA:O	27:BE:69:ARG:C	2.58	0.41
29:BG:84:LYS:HG3	29:BG:131:VAL:CB	2.50	0.41
29:BG:175:LYS:HA	29:BG:175:LYS:HD3	1.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BM:135:VAL:HG12	34:BM:135:VAL:O	2.20	0.41
35:BN:49:GLU:N	35:BN:50:PRO:CD	2.83	0.41
35:BN:51:LEU:O	35:BN:54:LEU:HB3	2.20	0.41
35:BN:65:LEU:O	35:BN:68:ALA:HB3	2.21	0.41
39:BR:79:ARG:O	39:BR:81:LYS:HG2	2.20	0.41
45:BY:7:THR:O	45:BY:54:VAL:HG12	2.19	0.41
47:B0:41:HIS:O	47:B0:42:ILE:O	2.38	0.41
52:BI:37:PHE:HZ	52:BI:56:VAL:HG11	1.85	0.41
52:BI:63:ASP:C	52:BI:65:SER:N	2.73	0.41
1:CA:551:U:H2'	1:CA:552:U:C6	2.54	0.41
1:CA:921:U:O2	4:CE:23:THR:HG23	2.20	0.41
1:CA:977:A:H1'	1:CA:982:U:O4	2.20	0.41
1:CA:1029:U:H2'	1:CA:1031:C:C2	2.55	0.41
1:CA:1148:U:H2'	1:CA:1149:C:O4'	2.20	0.41
2:CC:75:VAL:O	2:CC:82:ASP:HB2	2.20	0.41
2:CC:154:GLY:HA2	2:CC:163:ARG:O	2.20	0.41
4:CE:19:ARG:NH1	4:CE:28:ARG:HH12	2.18	0.41
7:CH:124:ILE:O	7:CH:125:ILE:HG13	2.20	0.41
8:CI:35:GLU:O	8:CI:39:GLY:HA3	2.20	0.41
9:CJ:18:ILE:CG1	9:CJ:72:ARG:HG2	2.50	0.41
9:CJ:53:ILE:HG13	13:CN:84:ARG:CZ	2.49	0.41
10:CK:46:ALA:HA	10:CK:65:ALA:HB2	2.01	0.41
20:CB:22:TRP:CZ3	20:CB:24:PRO:HA	2.55	0.41
20:CB:93:HIS:O	20:CB:94:ARG:HG2	2.19	0.41
23:DB:68:G:H2'	23:DB:69:C:H6	1.85	0.41
23:DB:268:C:O2	23:DB:268:C:H2'	2.19	0.41
23:DB:459:U:O2'	23:DB:460:A:H5'	2.20	0.41
23:DB:499:U:H5'	42:DU:44:HIS:CE1	2.46	0.41
23:DB:1098:A:H3'	52:DI:3:LYS:HB3	2.00	0.41
23:DB:1173:U:H2'	23:DB:1174:U:C6	2.56	0.41
23:DB:1207:C:H2'	23:DB:1208:C:H6	1.85	0.41
23:DB:1552:A:H2'	23:DB:1553:A:C5'	2.49	0.41
23:DB:1637:A:H5'	23:DB:1760:C:O2'	2.20	0.41
23:DB:2013:A:H2'	23:DB:2014:A:H5'	2.02	0.41
23:DB:2018:G:H2'	23:DB:2019:A:H8	1.85	0.41
23:DB:2191:A:H2'	23:DB:2192:U:O4'	2.20	0.41
25:DC:166:ARG:HH21	25:DC:166:ARG:HG3	1.85	0.41
28:DF:35:LEU:HD13	28:DF:56:LEU:HD13	2.03	0.41
28:DF:124:ARG:HG2	28:DF:124:ARG:HH11	1.85	0.41
29:DG:84:LYS:CB	29:DG:132:LEU:H	2.33	0.41
29:DG:91:VAL:HG23	29:DG:92:GLY:N	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DH:86:ASP:HB2	30:DH:89:LYS:CD	2.42	0.41
31:DJ:38:GLY:O	31:DJ:43:GLU:HB2	2.21	0.41
34:DM:40:ARG:HD3	34:DM:93:VAL:CG2	2.33	0.41
35:DN:79:LEU:C	35:DN:81:ASN:H	2.22	0.41
36:DO:56:LYS:O	36:DO:60:GLU:HG2	2.20	0.41
37:DP:4:ILE:HA	37:DP:7:LEU:CD1	2.50	0.41
37:DP:20:ARG:HG3	37:DP:91:VAL:HG11	2.01	0.41
37:DP:21:PRO:O	37:DP:96:LEU:HD22	2.20	0.41
37:DP:98:TYR:CE2	37:DP:99:LEU:HD23	2.55	0.41
39:DR:6:GLN:C	39:DR:6:GLN:HE21	2.23	0.41
41:DT:17:SER:N	41:DT:21:SER:OG	2.52	0.41
41:DT:18:GLU:O	41:DT:20:ALA:N	2.53	0.41
41:DT:29:THR:HB	41:DT:86:THR:HG22	2.03	0.41
42:DU:78:LYS:HD3	42:DU:79:ALA:H	1.85	0.41
43:DW:18:LYS:HE3	43:DW:19:ARG:CD	2.51	0.41
44:DX:25:GLN:HE21	44:DX:25:GLN:HB3	1.53	0.41
45:DY:35:VAL:HG21	45:DY:37:ARG:NH2	2.34	0.41
46:DZ:53:ALA:C	46:DZ:55:GLY:H	2.19	0.41
47:D0:29:VAL:HG22	47:D0:30:ASP:N	2.35	0.41
49:D2:6:GLN:HA	49:D2:7:PRO:HD2	1.89	0.41
1:AA:637:C:H2'	1:AA:638:U:C6	2.55	0.41
1:AA:692:U:H2'	1:AA:694:A:OP2	2.20	0.41
1:AA:708:C:H2'	1:AA:709:U:H6	1.84	0.41
1:AA:720:C:H6	1:AA:720:C:O5'	2.03	0.41
1:AA:775:G:H2'	1:AA:776:G:C8	2.55	0.41
1:AA:1058:G:H2'	1:AA:1059:C:C6	2.56	0.41
1:AA:1238:A:H5'	1:AA:1336:C:N4	2.30	0.41
1:AA:1256:A:O4'	1:AA:1278:G:N2	2.54	0.41
3:AD:25:ARG:O	3:AD:27:ILE:N	2.53	0.41
3:AD:55:ARG:HA	3:AD:55:ARG:NE	2.36	0.41
3:AD:95:GLY:O	3:AD:136:VAL:HG22	2.20	0.41
4:AE:48:GLY:H	4:AE:66:ALA:CB	2.34	0.41
7:AH:63:LYS:HG2	7:AH:64:TYR:N	2.35	0.41
8:AI:98:ARG:HG3	8:AI:103:VAL:HG22	2.01	0.41
11:AL:54:VAL:HG12	11:AL:55:ARG:H	1.85	0.41
14:AO:8:ALA:O	14:AO:11:VAL:HB	2.21	0.41
20:AB:114:LYS:O	20:AB:117:GLU:HB3	2.21	0.41
20:AB:187:ASP:O	20:AB:189:ASN:N	2.53	0.41
20:AB:218:ALA:C	20:AB:220:VAL:H	2.24	0.41
23:BB:85:G:OP1	42:BU:6:ARG:N	2.53	0.41
23:BB:177:G:H3'	23:BB:178:G:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:484:C:H2'	23:BB:485:C:H6	1.84	0.41
23:BB:550:C:H2'	23:BB:550:C:O2	2.20	0.41
23:BB:567:U:H2'	23:BB:568:U:O4'	2.20	0.41
23:BB:600:G:H1'	27:BE:100:MET:CG	2.50	0.41
23:BB:619:G:H2'	23:BB:620:G:H5"	2.02	0.41
23:BB:675:A:C6	23:BB:676:A:C6	3.08	0.41
23:BB:922:C:H2'	23:BB:923:G:H8	1.85	0.41
23:BB:939:G:C2'	23:BB:940:G:H5'	2.50	0.41
23:BB:1370:C:H2'	23:BB:1371:G:O4'	2.20	0.41
23:BB:1408:G:H2'	23:BB:1409:U:C6	2.55	0.41
23:BB:2353:G:H1'	43:BW:30:VAL:HG13	2.01	0.41
24:BV:48:MET:SD	24:BV:85:LYS:HA	2.60	0.41
28:BF:121:PHE:HB2	28:BF:126:ASN:O	2.20	0.41
30:BH:14:SER:HB2	30:BH:17:ASP:CB	2.50	0.41
30:BH:58:LEU:O	30:BH:60:GLU:N	2.53	0.41
30:BH:63:ALA:HA	30:BH:66:ASN:HD21	1.85	0.41
31:BJ:18:VAL:CG1	31:BJ:54:ILE:HD11	2.50	0.41
31:BJ:20:ALA:HA	31:BJ:23:LYS:CG	2.51	0.41
31:BJ:58:ASN:O	31:BJ:59:ALA:HB3	2.20	0.41
31:BJ:72:LYS:HB3	31:BJ:73:VAL:H	1.52	0.41
33:BL:61:LEU:N	33:BL:61:LEU:CD1	2.82	0.41
33:BL:89:VAL:HA	33:BL:121:THR:OG1	2.21	0.41
34:BM:53:MET:O	34:BM:56:ALA:HB3	2.21	0.41
34:BM:69:PRO:HA	34:BM:94:ALA:CA	2.49	0.41
35:BN:10:LEU:HD21	35:BN:43:GLU:HG3	2.01	0.41
35:BN:31:HIS:C	35:BN:33:ILE:H	2.22	0.41
38:BQ:91:ARG:NH1	39:BR:10:LYS:HB3	2.33	0.41
38:BQ:93:ILE:HG23	38:BQ:94:LEU:N	2.35	0.41
41:BT:65:GLY:HA3	41:BT:76:ARG:NH2	2.34	0.41
42:BU:26:ASN:ND2	42:BU:26:ASN:O	2.54	0.41
44:BX:39:GLN:HB2	44:BX:42:LEU:HD22	2.02	0.41
45:BY:3:THR:HB	45:BY:36:GLU:CG	2.51	0.41
46:BZ:38:PHE:CE2	46:BZ:51:VAL:HG21	2.56	0.41
50:B3:14:LYS:O	50:B3:15:LYS:C	2.58	0.41
1:CA:6:G:C8	4:CE:123:LEU:HD21	2.55	0.41
1:CA:298:A:OP1	1:CA:298:A:H8	2.02	0.41
1:CA:301:G:O2'	1:CA:302:G:H5'	2.19	0.41
1:CA:371:A:O2'	1:CA:372:C:H5'	2.20	0.41
1:CA:448:A:H2'	1:CA:449:G:H8	1.85	0.41
1:CA:681:A:H2'	1:CA:682:G:C8	2.56	0.41
1:CA:824:G:C6	1:CA:877:G:C6	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:991:U:H2'	1:CA:1212:U:O2	2.20	0.41
1:CA:1015:G:H2'	1:CA:1016:A:C8	2.56	0.41
1:CA:1127:G:C2'	1:CA:1128:C:H5'	2.50	0.41
1:CA:1503:A:H5'	1:CA:1531:A:H1'	2.02	0.41
2:CC:17:TRP:HZ2	13:CN:95:LEU:O	2.03	0.41
6:CG:70:PRO:HD2	6:CG:95:ARG:O	2.20	0.41
12:CM:43:LYS:O	12:CM:47:LEU:HD23	2.20	0.41
15:CP:20:VAL:HG21	15:CP:32:PHE:CD2	2.56	0.41
21:CU:24:LYS:HZ3	21:CU:25:ALA:N	2.00	0.41
23:DB:574:A:H1'	23:DB:2055:C:C5	2.55	0.41
23:DB:833:A:H1'	33:DL:52:GLY:N	2.35	0.41
23:DB:921:C:H2'	23:DB:922:C:H6	1.83	0.41
23:DB:937:C:H2'	23:DB:938:G:C8	2.55	0.41
23:DB:1040:A:O2'	23:DB:1041:G:H5'	2.20	0.41
23:DB:1161:C:H2'	23:DB:1162:G:H8	1.85	0.41
23:DB:1168:G:C6	23:DB:1182:G:C6	3.08	0.41
23:DB:1430:G:H2'	23:DB:1431:A:C8	2.55	0.41
23:DB:1723:G:H2'	23:DB:1724:G:H5'	2.02	0.41
23:DB:1951:U:H2'	23:DB:1953:A:OP2	2.19	0.41
23:DB:2019:A:H4'	38:DQ:33:VAL:HG11	2.02	0.41
23:DB:2305:U:C1'	28:DF:132:ARG:HA	2.50	0.41
23:DB:2733:A:H3'	23:DB:2733:A:C8	2.55	0.41
23:DB:2889:C:O2'	23:DB:2890:G:H5'	2.20	0.41
25:DC:131:MET:HE3	25:DC:187:CYS:O	2.19	0.41
25:DC:149:LYS:HD3	25:DC:152:GLN:NE2	2.35	0.41
26:DD:150:GLN:O	26:DD:153:GLY:N	2.53	0.41
27:DE:9:GLN:O	27:DE:9:GLN:HG3	2.21	0.41
27:DE:59:PRO:HB2	27:DE:67:ARG:NH2	2.35	0.41
28:DF:42:ALA:O	28:DF:43:ILE:C	2.58	0.41
29:DG:94:ARG:HH21	29:DG:105:SER:H	1.68	0.41
31:DJ:54:ILE:HD12	31:DJ:55:ILE:H	1.84	0.41
33:DL:40:SER:C	33:DL:41:ARG:HG3	2.39	0.41
33:DL:80:SER:HB3	33:DL:115:GLU:CD	2.41	0.41
35:DN:9:GLN:O	35:DN:17:ARG:HD3	2.20	0.41
35:DN:60:VAL:O	35:DN:63:ARG:HB3	2.20	0.41
36:DO:52:SER:HA	36:DO:74:VAL:CG1	2.50	0.41
38:DQ:38:VAL:O	38:DQ:39:ILE:C	2.56	0.41
41:DT:25:GLU:HA	41:DT:28:ASN:O	2.20	0.41
42:DU:23:LYS:H	42:DU:23:LYS:HD2	1.86	0.41
42:DU:41:VAL:N	42:DU:60:LYS:O	2.53	0.41
44:DX:46:VAL:O	44:DX:50:VAL:HG23	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:8:A:H1'	4:AE:106:ALA:O	2.20	0.41
1:AA:54:C:N4	1:AA:352:C:H2'	2.35	0.41
1:AA:125:U:H2'	1:AA:126:G:C8	2.56	0.41
1:AA:282:A:N3	1:AA:282:A:H2'	2.35	0.41
1:AA:526:C:OP2	11:AL:87:LYS:HE3	2.20	0.41
1:AA:766:A:H2'	1:AA:767:A:C8	2.55	0.41
1:AA:902:G:H2'	1:AA:903:G:H8	1.85	0.41
1:AA:1314:C:N4	18:AS:3:SER:HB3	2.35	0.41
1:AA:1329:A:H5"	12:AM:24:VAL:HA	2.02	0.41
1:AA:1394:A:C5	1:AA:1501:C:H4'	2.55	0.41
2:AC:154:GLY:HA2	2:AC:163:ARG:O	2.20	0.41
3:AD:79:ALA:N	3:AD:85:THR:HG23	2.35	0.41
4:AE:19:ARG:HH12	4:AE:28:ARG:HH12	1.67	0.41
4:AE:52:ALA:H	4:AE:58:ALA:HB2	1.85	0.41
5:AF:79:ARG:HA	5:AF:79:ARG:HD3	1.89	0.41
6:AG:57:GLU:H	6:AG:57:GLU:CD	2.24	0.41
7:AH:12:ARG:HG3	7:AH:12:ARG:NH1	2.35	0.41
8:AI:53:LEU:HD22	8:AI:53:LEU:N	2.34	0.41
12:AM:63:VAL:CG1	12:AM:67:ASP:HB2	2.49	0.41
14:AO:87:ARG:NE	14:AO:87:ARG:HA	2.35	0.41
16:AQ:80:LYS:O	16:AQ:80:LYS:HD2	2.21	0.41
20:AB:59:ILE:O	20:AB:62:ARG:HD2	2.21	0.41
20:AB:112:ARG:O	20:AB:116:LEU:HB2	2.20	0.41
23:BB:214:G:N2	23:BB:216:A:N3	2.64	0.41
23:BB:269:C:H2'	23:BB:270:A:H8	1.86	0.41
23:BB:518:G:H2'	23:BB:519:U:C6	2.56	0.41
23:BB:548:G:H4'	23:BB:549:G:N1	2.35	0.41
23:BB:583:G:H2'	23:BB:584:C:C6	2.55	0.41
23:BB:866:A:H61	23:BB:913:U:C1'	2.34	0.41
23:BB:1283:G:H22	23:BB:1286:A:C5'	2.15	0.41
23:BB:1547:C:H2'	23:BB:1548:A:H8	1.86	0.41
23:BB:1848:A:H2'	23:BB:1849:G:H8	1.84	0.41
23:BB:2562:U:H2'	23:BB:2563:U:H5'	2.03	0.41
23:BB:2617:U:H2'	23:BB:2618:G:H5'	2.02	0.41
23:BB:2787:C:O2'	23:BB:2788:C:H5'	2.20	0.41
25:BC:203:VAL:O	25:BC:204:LEU:HB2	2.20	0.41
26:BD:113:SER:HB3	26:BD:167:ASN:CA	2.51	0.41
27:BE:9:GLN:O	27:BE:9:GLN:HG3	2.20	0.41
28:BF:31:GLU:HB2	28:BF:158:THR:CG2	2.50	0.41
28:BF:134:GLN:HE22	28:BF:136:ILE:HD13	1.81	0.41
29:BG:43:LYS:CB	29:BG:50:THR:HB	2.46	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BG:112:VAL:O	29:BG:113:ASP:HB2	2.19	0.41
34:BM:29:GLY:O	34:BM:133:LYS:HD2	2.21	0.41
34:BM:41:LEU:CD2	34:BM:124:LEU:HD22	2.50	0.41
34:BM:108:VAL:CG1	34:BM:112:LEU:HD12	2.51	0.41
35:BN:12:ARG:HG2	35:BN:16:HIS:ND1	2.36	0.41
36:BO:16:ARG:C	36:BO:18:LEU:N	2.74	0.41
37:BP:89:GLY:N	37:BP:112:ARG:NH1	2.67	0.41
40:BS:57:ASN:HD22	40:BS:57:ASN:HA	1.59	0.41
42:BU:39:ASN:HB3	42:BU:62:ALA:HB3	2.02	0.41
46:BZ:27:ARG:CG	46:BZ:28:ARG:N	2.82	0.41
46:BZ:71:LEU:HA	46:BZ:74:ARG:HE	1.85	0.41
50:B3:30:HIS:O	50:B3:31:ILE:O	2.38	0.41
1:CA:100:G:N7	1:CA:101:A:C5	2.88	0.41
1:CA:154:U:H2'	1:CA:155:A:H8	1.80	0.41
1:CA:261:U:H2'	1:CA:263:A:OP2	2.19	0.41
1:CA:493:A:H5'	1:CA:494:G:OP2	2.19	0.41
1:CA:956:U:O2'	1:CA:957:U:H5'	2.20	0.41
1:CA:1200:C:H4'	1:CA:1201:A:H3'	2.03	0.41
1:CA:1202:U:H2'	1:CA:1203:C:H5'	2.02	0.41
1:CA:1313:U:OP1	18:CS:6:LYS:HD3	2.20	0.41
1:CA:1337:G:H5"	1:CA:1338:G:OP1	2.20	0.41
1:CA:1531:A:H2'	1:CA:1532:U:H5'	2.02	0.41
11:CL:30:ARG:HA	11:CL:80:LEU:HD12	2.02	0.41
12:CM:3:ILE:HA	12:CM:56:ARG:HB2	2.01	0.41
15:CP:12:LYS:O	15:CP:13:LYS:HB2	2.20	0.41
15:CP:12:LYS:C	15:CP:14:ARG:H	2.24	0.41
16:CQ:23:ALA:HA	16:CQ:41:THR:O	2.19	0.41
18:CS:43:MET:C	18:CS:46:LEU:HD23	2.40	0.41
22:DA:32:U:H1'	22:DA:52:A:N7	2.35	0.41
23:DB:230:G:H2'	23:DB:231:A:C8	2.55	0.41
23:DB:235:U:H2'	23:DB:236:C:H6	1.85	0.41
23:DB:325:G:O2'	23:DB:326:G:H5'	2.20	0.41
23:DB:341:C:O2'	23:DB:342:A:H5'	2.21	0.41
23:DB:460:A:P	49:D2:41:ARG:HH12	2.44	0.41
23:DB:506:G:H1'	23:DB:507:A:C8	2.55	0.41
23:DB:532:A:H2'	23:DB:532:A:N3	2.34	0.41
23:DB:570:G:C4	23:DB:2030:A:N7	2.88	0.41
23:DB:686:U:O4	49:D2:12:ARG:HB2	2.20	0.41
23:DB:1716:U:H2'	23:DB:1717:A:C8	2.56	0.41
23:DB:1789:A:H2'	23:DB:1790:C:O4'	2.20	0.41
23:DB:1798:U:H5"	25:DC:257:ARG:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2219:U:O2'	23:DB:2220:U:H5'	2.20	0.41
23:DB:2437:G:H2'	23:DB:2438:U:C6	2.56	0.41
23:DB:2607:G:O2'	23:DB:2608:G:H5'	2.20	0.41
23:DB:2769:U:O2'	23:DB:2770:G:H5'	2.20	0.41
25:DC:29:PHE:CE2	25:DC:31:PRO:HG2	2.55	0.41
25:DC:144:GLU:CA	25:DC:151:GLY:HA2	2.40	0.41
26:DD:15:PHE:HA	26:DD:20:VAL:O	2.21	0.41
26:DD:62:LYS:N	26:DD:63:PRO:CD	2.84	0.41
26:DD:201:LEU:C	26:DD:202:ILE:HD12	2.41	0.41
27:DE:194:LYS:O	27:DE:197:GLU:HB3	2.21	0.41
28:DF:148:VAL:O	28:DF:149:ARG:HG2	2.20	0.41
29:DG:148:ARG:HA	29:DG:161:VAL:CB	2.45	0.41
30:DH:54:LEU:CD2	30:DH:58:LEU:HD12	2.46	0.41
30:DH:58:LEU:O	30:DH:61:VAL:HG12	2.20	0.41
31:DJ:44:TYR:HB2	38:DQ:63:ARG:HD2	2.01	0.41
31:DJ:140:LEU:HD23	31:DJ:141:ASP:N	2.34	0.41
34:DM:26:VAL:HB	34:DM:104:GLU:OE2	2.19	0.41
34:DM:100:LYS:HA	34:DM:100:LYS:HD3	1.87	0.41
35:DN:12:ARG:HD2	35:DN:12:ARG:HA	1.72	0.41
36:DO:36:TYR:HA	36:DO:52:SER:CB	2.50	0.41
38:DQ:48:ASP:HA	38:DQ:51:GLN:HG3	2.03	0.41
38:DQ:108:LEU:HA	39:DR:48:LYS:HD3	2.01	0.41
40:DS:55:ILE:HD12	40:DS:69:LEU:HD23	2.02	0.41
41:DT:5:GLU:N	41:DT:8:LEU:HD12	2.35	0.41
41:DT:22:THR:O	41:DT:26:LYS:N	2.44	0.41
41:DT:68:LYS:HB2	41:DT:68:LYS:HE3	1.81	0.41
42:DU:32:LYS:HD3	42:DU:32:LYS:N	2.34	0.41
42:DU:88:ASP:CG	42:DU:89:GLY:N	2.73	0.41
44:DX:23:ARG:O	44:DX:27:ASN:HB2	2.20	0.41
46:DZ:7:VAL:CG2	46:DZ:67:VAL:HG11	2.50	0.41
46:DZ:11:ARG:HB3	46:DZ:12:PRO:HD2	2.01	0.41
46:DZ:27:ARG:HD2	46:DZ:29:PHE:CE1	2.55	0.41
48:D1:18:HIS:ND1	48:D1:19:PHE:N	2.68	0.41
52:DI:99:LYS:HB2	52:DI:140:GLU:OE1	2.20	0.41
1:AA:298:A:H8	1:AA:298:A:OP1	2.03	0.41
1:AA:356:A:H1'	1:AA:368:U:O2'	2.20	0.41
1:AA:415:A:N1	1:AA:428:G:O6	2.54	0.41
1:AA:493:A:H5'	1:AA:494:G:OP2	2.20	0.41
1:AA:553:A:O2'	11:AL:25:ALA:HB1	2.20	0.41
1:AA:856:C:O2'	1:AA:857:C:H5'	2.20	0.41
1:AA:1269:A:H2	1:AA:1312:G:H21	1.67	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1285:A:HO2'	1:AA:1286:U:P	2.44	0.41
1:AA:1436:U:H2'	1:AA:1437:A:C8	2.55	0.41
2:AC:133:MET:O	2:AC:137:VAL:HG23	2.20	0.41
2:AC:134:LYS:HE3	2:AC:138:GLN:HG2	2.03	0.41
5:AF:66:ALA:HB1	5:AF:67:PRO:HD2	2.03	0.41
5:AF:66:ALA:HB1	5:AF:70:VAL:HG21	2.01	0.41
6:AG:80:GLY:C	6:AG:82:SER:H	2.24	0.41
10:AK:15:VAL:C	10:AK:17:ASP:H	2.24	0.41
10:AK:35:ASP:OD1	10:AK:37:GLN:HB2	2.20	0.41
12:AM:43:LYS:C	12:AM:45:SER:N	2.73	0.41
13:AN:73:LEU:HD12	13:AN:83:VAL:HG21	2.03	0.41
19:AT:69:ASN:O	19:AT:70:LYS:C	2.58	0.41
20:AB:85:SER:O	20:AB:86:CYS:HB2	2.21	0.41
20:AB:104:LYS:HB2	20:AB:104:LYS:NZ	2.35	0.41
23:BB:215:G:C4'	23:BB:216:A:H4'	2.47	0.41
23:BB:522:A:H2'	23:BB:523:C:H6	1.84	0.41
23:BB:935:C:H2'	23:BB:936:A:H8	1.85	0.41
23:BB:973:A:O4'	23:BB:1188:U:C6	2.74	0.41
23:BB:1054:A:H2'	23:BB:1055:G:H8	1.82	0.41
23:BB:1266:G:N2	23:BB:2012:G:H2'	2.36	0.41
23:BB:1389:G:O2'	23:BB:1390:U:H5'	2.21	0.41
23:BB:1806:C:O2'	23:BB:1807:G:H5'	2.20	0.41
23:BB:2496:C:C2'	23:BB:2497:A:H5'	2.50	0.41
23:BB:2518:A:N3	23:BB:2518:A:H5'	2.35	0.41
23:BB:2685:G:O2'	23:BB:2686:G:H5'	2.20	0.41
23:BB:2751:G:OP2	29:BG:2:ARG:HD2	2.20	0.41
23:BB:2794:C:H2'	23:BB:2795:C:C5	2.55	0.41
24:BV:24:ASN:O	24:BV:26:PHE:N	2.54	0.41
25:BC:107:LYS:N	25:BC:193:GLU:O	2.51	0.41
25:BC:146:LYS:HB2	25:BC:149:LYS:HB2	2.02	0.41
28:BF:4:HIS:O	28:BF:7:TYR:HB3	2.21	0.41
30:BH:77:THR:CG2	30:BH:79:THR:HG23	2.49	0.41
30:BH:90:LEU:CD1	30:BH:146:VAL:HG11	2.45	0.41
30:BH:132:PHE:O	30:BH:140:ALA:HB3	2.20	0.41
37:BP:4:ILE:O	37:BP:5:LYS:HB2	2.20	0.41
37:BP:38:ARG:HB3	37:BP:38:ARG:NH2	2.35	0.41
37:BP:89:GLY:N	37:BP:112:ARG:HH12	2.18	0.41
38:BQ:9:ALA:O	38:BQ:12:ARG:N	2.53	0.41
38:BQ:94:LEU:O	38:BQ:97:ILE:HG23	2.20	0.41
41:BT:1:MET:C	41:BT:2:ILE:HD13	2.40	0.41
41:BT:13:ALA:O	41:BT:33:LYS:N	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BZ:2:SER:O	46:BZ:3:ARG:C	2.58	0.41
46:BZ:64:ILE:HG22	46:BZ:68:LEU:HD11	2.01	0.41
50:B3:18:LYS:HE3	50:B3:20:GLY:H	1.85	0.41
52:BI:126:ARG:HA	52:BI:129:GLU:OE2	2.20	0.41
1:CA:355:C:O2'	1:CA:356:A:H5'	2.21	0.41
1:CA:702:A:N6	23:DB:1848:A:C6	2.88	0.41
1:CA:975:A:H61	9:CJ:50:THR:HG21	1.85	0.41
1:CA:1140:C:O2'	1:CA:1141:C:H5'	2.20	0.41
1:CA:1261:A:N7	1:CA:1274:A:H2	2.17	0.41
1:CA:1314:C:H2'	1:CA:1315:U:H6	1.86	0.41
1:CA:1315:U:H5	18:CS:5:LYS:HZ1	1.69	0.41
1:CA:1320:C:N4	18:CS:36:ARG:HA	2.36	0.41
1:CA:1330:U:H4'	12:CM:69:ARG:NH1	2.33	0.41
4:CE:143:LEU:C	4:CE:145:ASN:H	2.23	0.41
5:CF:48:ALA:N	17:CR:65:SER:OG	2.54	0.41
6:CG:46:LEU:O	6:CG:57:GLU:HG3	2.20	0.41
7:CH:29:SER:OG	7:CH:32:LYS:HG3	2.20	0.41
7:CH:49:LYS:HA	7:CH:49:LYS:HD2	1.88	0.41
8:CI:18:VAL:HG12	8:CI:19:PHE:N	2.36	0.41
11:CL:43:LYS:N	11:CL:44:PRO:HD2	2.34	0.41
12:CM:26:LYS:O	12:CM:30:LYS:HB2	2.20	0.41
16:CQ:7:LEU:HD21	16:CQ:24:ILE:HG21	2.01	0.41
20:CB:62:ARG:HH11	20:CB:62:ARG:HG3	1.86	0.41
20:CB:127:LYS:HD2	20:CB:127:LYS:C	2.40	0.41
21:CU:33:ARG:NE	21:CU:34:ARG:HG3	2.36	0.41
22:DA:25:U:OP1	22:DA:25:U:H3'	2.20	0.41
22:DA:27:C:H2'	22:DA:28:C:H5'	2.02	0.41
23:DB:20:C:H2'	23:DB:21:A:C8	2.55	0.41
23:DB:346:A:N3	23:DB:346:A:O4'	2.54	0.41
23:DB:661:A:H1'	33:DL:12:SER:O	2.21	0.41
23:DB:828:U:H2'	23:DB:829:A:C8	2.54	0.41
23:DB:1369:G:H2'	23:DB:1370:C:O4'	2.20	0.41
23:DB:1423:G:H2'	23:DB:1424:G:H8	1.85	0.41
23:DB:2327:A:H2'	23:DB:2328:A:C8	2.56	0.41
23:DB:2335:A:H2'	23:DB:2336:A:H5"	2.02	0.41
23:DB:2386:A:H4'	43:DW:54:ARG:O	2.19	0.41
23:DB:2407:A:H2'	23:DB:2408:U:C6	2.56	0.41
23:DB:2800:A:H2'	23:DB:2801:G:C1'	2.50	0.41
24:DV:2:PHE:HD1	24:DV:50:MET:HE2	1.86	0.41
24:DV:77:VAL:HG12	34:DM:136:MET:CE	2.50	0.41
25:DC:58:LYS:HD2	25:DC:58:LYS:HA	1.95	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:124:LYS:CG	25:DC:125:PRO:HD2	2.50	0.41
28:DF:82:TYR:O	28:DF:84:ILE:HD13	2.21	0.41
28:DF:102:LEU:HD13	28:DF:102:LEU:C	2.41	0.41
28:DF:107:VAL:O	28:DF:110:ILE:HG22	2.21	0.41
29:DG:50:THR:HG22	29:DG:51:PHE:N	2.36	0.41
29:DG:94:ARG:HB2	29:DG:127:GLN:HG2	2.01	0.41
31:DJ:84:ILE:O	31:DJ:84:ILE:HG13	2.21	0.41
32:DK:117:SER:C	32:DK:118:LEU:HD12	2.41	0.41
34:DM:21:ALA:HB3	34:DM:99:GLY:O	2.21	0.41
34:DM:43:ALA:O	34:DM:47:GLU:HB2	2.21	0.41
38:DQ:63:ARG:HH12	38:DQ:96:ASP:CA	2.32	0.41
40:DS:73:LYS:HD2	40:DS:73:LYS:HA	1.66	0.41
42:DU:43:LYS:HD3	42:DU:44:HIS:N	2.35	0.41
42:DU:73:ASN:HD21	42:DU:76:THR:H	1.67	0.41
42:DU:96:LYS:C	42:DU:98:ASN:H	2.23	0.41
43:DW:49:ASN:CA	43:DW:61:LYS:HB2	2.50	0.41
45:DY:55:LYS:O	45:DY:56:VAL:C	2.59	0.41
46:DZ:51:VAL:HG12	46:DZ:52:SER:N	2.36	0.41
50:D3:26:ALA:O	50:D3:27:ASN:C	2.59	0.41
51:D4:22:VAL:O	51:D4:24:ARG:N	2.54	0.41
52:DI:108:ILE:CG2	52:DI:128:ILE:HD13	2.50	0.41
1:AA:38:G:O2'	1:AA:39:G:H5'	2.21	0.41
1:AA:80:A:C4	1:AA:81:A:H1'	2.56	0.41
1:AA:360:G:O2'	1:AA:361:G:H5'	2.20	0.41
1:AA:648:A:O2'	1:AA:649:A:H5'	2.21	0.41
1:AA:865:A:H2'	1:AA:866:C:C6	2.55	0.41
1:AA:1291:U:H2'	1:AA:1292:G:H8	1.84	0.41
1:AA:1320:C:N3	18:AS:35:ARG:NH1	2.69	0.41
1:AA:1370:G:O2'	1:AA:1371:G:H5'	2.21	0.41
2:AC:76:ILE:O	2:AC:82:ASP:N	2.53	0.41
2:AC:120:THR:CG2	2:AC:188:ALA:HB2	2.51	0.41
3:AD:13:ARG:HG3	3:AD:55:ARG:NH1	2.36	0.41
3:AD:20:LEU:C	3:AD:21:LYS:HD2	2.41	0.41
3:AD:48:SER:O	3:AD:49:ASP:C	2.59	0.41
3:AD:115:GLN:HE21	3:AD:119:HIS:CE1	2.37	0.41
4:AE:87:VAL:HG23	4:AE:91:SER:O	2.20	0.41
12:AM:15:VAL:N	12:AM:33:LEU:HD11	2.36	0.41
12:AM:43:LYS:C	12:AM:45:SER:H	2.24	0.41
16:AQ:65:PRO:HA	16:AQ:71:SER:OG	2.20	0.41
20:AB:185:ILE:HA	20:AB:199:ILE:O	2.20	0.41
21:AU:39:LYS:N	21:AU:39:LYS:HD3	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:8:C:O2'	36:BO:40:ILE:HD13	2.20	0.41
22:BA:29:A:H3'	22:BA:30:C:C6	2.47	0.41
22:BA:32:U:H2'	22:BA:33:G:C8	2.55	0.41
22:BA:64:G:O2'	22:BA:65:U:H5'	2.21	0.41
23:BB:245:G:H2'	23:BB:246:C:C6	2.56	0.41
23:BB:426:C:O2'	23:BB:427:U:H5'	2.20	0.41
23:BB:493:G:O2'	40:BS:7:HIS:HA	2.21	0.41
23:BB:755:U:H2'	23:BB:756:A:C8	2.56	0.41
23:BB:757:G:C2'	23:BB:758:C:H5'	2.51	0.41
23:BB:910:A:C6	23:BB:911:A:C6	3.09	0.41
23:BB:963:U:H2'	23:BB:964:C:C6	2.55	0.41
23:BB:1259:G:O2'	23:BB:1260:A:H5'	2.21	0.41
23:BB:1481:U:H2'	23:BB:1482:G:H4'	2.03	0.41
23:BB:1870:C:H2'	23:BB:1871:A:C8	2.56	0.41
23:BB:1979:U:C2'	23:BB:1980:G:H5'	2.51	0.41
23:BB:2734:A:C2'	23:BB:2735:G:H5'	2.43	0.41
23:BB:2747:G:H1	23:BB:2754:U:H2'	1.86	0.41
26:BD:2:ILE:HD12	26:BD:2:ILE:O	2.21	0.41
26:BD:51:THR:HG21	26:BD:75:ALA:O	2.20	0.41
27:BE:112:LEU:C	27:BE:114:ARG:N	2.74	0.41
27:BE:137:LYS:HG3	27:BE:141:MET:SD	2.60	0.41
27:BE:198:GLU:O	27:BE:199:MET:C	2.59	0.41
32:BK:15:GLY:HA3	32:BK:52:VAL:CG2	2.47	0.41
35:BN:47:VAL:O	35:BN:51:LEU:HD13	2.21	0.41
35:BN:114:GLU:HG2	35:BN:115:LEU:N	2.34	0.41
36:BO:67:ASN:H	36:BO:70:ALA:CB	2.29	0.41
36:BO:67:ASN:N	36:BO:70:ALA:HB3	2.32	0.41
36:BO:116:GLN:O	36:BO:117:PHE:HB3	2.19	0.41
37:BP:62:LYS:O	37:BP:63:ILE:HB	2.20	0.41
39:BR:2:TYR:N	39:BR:42:ALA:HB2	2.35	0.41
40:BS:46:LEU:O	40:BS:50:VAL:HG23	2.20	0.41
42:BU:78:LYS:HD3	42:BU:79:ALA:H	1.85	0.41
1:CA:152:A:N6	1:CA:170:U:C2	2.88	0.41
1:CA:203:G:H1'	1:CA:465:A:N6	2.35	0.41
1:CA:501:C:OP1	11:CL:113:ARG:NH2	2.54	0.41
1:CA:577:G:O2'	1:CA:578:C:H5'	2.21	0.41
1:CA:613:C:H2'	1:CA:614:C:H6	1.82	0.41
1:CA:832:G:H2'	1:CA:833:G:H8	1.86	0.41
1:CA:1087:G:O2'	1:CA:1088:G:H5'	2.20	0.41
1:CA:1096:C:O2'	1:CA:1097:C:H5'	2.21	0.41
1:CA:1258:G:C4	1:CA:1278:G:N2	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1320:C:N3	18:CS:35:ARG:NH1	2.69	0.41
1:CA:1320:C:H2'	1:CA:1321:U:O4'	2.20	0.41
1:CA:1325:C:H2'	1:CA:1326:U:H6	1.84	0.41
1:CA:1483:A:H2'	1:CA:1484:C:O4'	2.20	0.41
2:CC:112:ALA:O	2:CC:113:LYS:C	2.58	0.41
2:CC:179:ALA:O	2:CC:180:ASP:O	2.39	0.41
3:CD:89:LEU:HD22	3:CD:199:ILE:HD11	2.03	0.41
4:CE:156:ARG:HB3	7:CH:43:GLY:O	2.21	0.41
6:CG:3:ARG:HB3	6:CG:4:ARG:H	1.71	0.41
6:CG:45:ALA:CB	6:CG:120:ALA:HB2	2.49	0.41
7:CH:88:LYS:CG	7:CH:89:ASP:H	2.33	0.41
8:CI:18:VAL:CG1	8:CI:82:ILE:HG12	2.48	0.41
10:CK:47:GLY:C	10:CK:49:SER:H	2.24	0.41
11:CL:71:HIS:HD2	11:CL:73:LEU:HG	1.86	0.41
14:CO:44:GLU:O	14:CO:46:LYS:N	2.51	0.41
18:CS:51:HIS:HB2	18:CS:56:HIS:NE2	2.35	0.41
20:CB:57:ASN:HA	20:CB:60:ALA:HB3	2.02	0.41
20:CB:204:ASP:O	20:CB:209:VAL:HG13	2.21	0.41
22:DA:61:G:H2'	22:DA:62:C:H6	1.84	0.41
22:DA:112:G:O2'	22:DA:113:C:H5'	2.19	0.41
23:DB:182:A:O2'	23:DB:183:C:H5'	2.20	0.41
23:DB:183:C:O2	23:DB:432:A:H2	2.04	0.41
23:DB:289:G:H3'	23:DB:289:G:OP2	2.20	0.41
23:DB:319:G:H2'	23:DB:320:A:O4'	2.21	0.41
23:DB:480:A:H2	23:DB:499:U:O2	2.03	0.41
23:DB:547:A:OP1	23:DB:548:G:OP2	2.39	0.41
23:DB:697:G:H2'	23:DB:698:C:C6	2.56	0.41
23:DB:780:G:H2'	23:DB:782:A:N7	2.35	0.41
23:DB:866:A:O2'	23:DB:867:C:H5'	2.20	0.41
23:DB:1060:U:C1'	23:DB:1062:G:H5'	2.50	0.41
23:DB:1161:C:O2'	23:DB:1162:G:H5'	2.20	0.41
23:DB:1295:C:H2'	23:DB:1296:G:C8	2.55	0.41
23:DB:1446:C:H2'	23:DB:1447:C:C6	2.55	0.41
23:DB:1654:A:O2'	23:DB:1655:A:H5'	2.21	0.41
23:DB:2052:A:C4	26:DD:155:VAL:HG23	2.56	0.41
23:DB:2069:G:O2'	23:DB:2070:A:H5'	2.20	0.41
23:DB:2526:G:H2'	23:DB:2527:C:C6	2.55	0.41
24:DV:24:ASN:O	24:DV:26:PHE:N	2.54	0.41
27:DE:3:LEU:H	27:DE:13:THR:N	2.18	0.41
27:DE:62:GLN:HE21	27:DE:62:GLN:HB2	1.60	0.41
27:DE:109:LEU:O	27:DE:113:VAL:HG23	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DE:154:ASP:C	27:DE:156:ASN:H	2.23	0.41
27:DE:155:GLU:O	27:DE:159:LEU:HB2	2.20	0.41
28:DF:74:ALA:C	28:DF:76:PHE:H	2.23	0.41
28:DF:133:GLU:HA	28:DF:150:GLY:CA	2.51	0.41
29:DG:71:LEU:O	29:DG:75:VAL:HG23	2.21	0.41
32:DK:13:ASN:HD21	32:DK:98:ARG:N	2.08	0.41
32:DK:33:ALA:CB	32:DK:39:ILE:HD11	2.50	0.41
32:DK:47:ILE:HG23	32:DK:48:PRO:CD	2.51	0.41
34:DM:40:ARG:NH2	34:DM:73:ILE:HD12	2.35	0.41
35:DN:27:SER:O	35:DN:30:ARG:HB2	2.20	0.41
36:DO:16:ARG:C	36:DO:18:LEU:N	2.74	0.41
38:DQ:77:LYS:O	38:DQ:80:ASN:HB3	2.20	0.41
40:DS:24:ILE:CG2	40:DS:71:VAL:HG11	2.44	0.41
43:DW:18:LYS:CA	43:DW:36:ILE:HG12	2.40	0.41
45:DY:40:THR:HG22	45:DY:42:ALA:H	1.86	0.41
46:DZ:2:SER:O	46:DZ:3:ARG:C	2.58	0.41
48:D1:8:ILE:HG21	48:D1:51:ALA:CB	2.51	0.41
49:D2:19:ARG:HG2	49:D2:19:ARG:NH2	2.35	0.41
50:D3:31:ILE:C	50:D3:32:LEU:HG	2.41	0.41
52:DI:54:ILE:O	52:DI:54:ILE:HG23	2.19	0.41
1:AA:112:G:O2'	1:AA:113:G:H5'	2.20	0.41
1:AA:173:U:H5'	1:AA:197:A:O4'	2.21	0.41
1:AA:237:G:H2'	1:AA:238:A:H8	1.85	0.41
1:AA:324:G:N1	1:AA:327:A:OP2	2.50	0.41
1:AA:618:C:H3'	1:AA:620:C:OP2	2.21	0.41
1:AA:635:A:H2'	1:AA:636:U:C6	2.56	0.41
1:AA:711:G:O2'	1:AA:712:A:H5'	2.20	0.41
1:AA:751:U:H2'	1:AA:752:G:O4'	2.21	0.41
1:AA:796:C:H5'	10:AK:128:VAL:HG13	2.03	0.41
1:AA:1119:C:O2'	1:AA:1120:C:H5'	2.21	0.41
1:AA:1230:C:H2'	1:AA:1231:G:H8	1.86	0.41
1:AA:1313:U:O2'	1:AA:1314:C:H5'	2.20	0.41
1:AA:1320:C:H2'	1:AA:1321:U:O4'	2.21	0.41
2:AC:59:PRO:HB2	2:AC:60:ALA:H	1.74	0.41
4:AE:93:VAL:HG22	4:AE:126:ALA:CB	2.51	0.41
6:AG:64:ALA:O	6:AG:68:VAL:HG23	2.21	0.41
8:AI:18:VAL:CG1	8:AI:82:ILE:HG12	2.51	0.41
8:AI:44:ARG:HB3	8:AI:48:ARG:NH2	2.35	0.41
10:AK:59:PRO:HA	10:AK:90:PRO:HB2	2.02	0.41
12:AM:7:ASN:N	12:AM:7:ASN:HD22	2.18	0.41
15:AP:67:ILE:HD11	15:AP:75:ILE:HD11	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AS:12:LEU:HA	18:AS:15:LEU:HD12	2.02	0.41
20:AB:16:GLY:HA2	20:AB:40:ILE:HD12	2.02	0.41
20:AB:85:SER:CB	20:AB:221:ARG:HD3	2.38	0.41
23:BB:327:G:H2'	23:BB:328:U:C6	2.56	0.41
23:BB:704:G:O2'	23:BB:727:A:N6	2.53	0.41
23:BB:765:C:H2'	23:BB:766:U:C6	2.55	0.41
23:BB:820:A:H2'	23:BB:821:A:O4'	2.20	0.41
23:BB:839:U:O2'	23:BB:1191:G:H1'	2.20	0.41
23:BB:1577:C:H2'	23:BB:1578:U:C6	2.55	0.41
23:BB:1716:U:H2'	23:BB:1717:A:C8	2.55	0.41
23:BB:1829:A:N6	23:BB:1977:A:N6	2.68	0.41
23:BB:2018:G:O2'	23:BB:2019:A:H5'	2.21	0.41
23:BB:2076:U:O2	23:BB:2076:U:O4'	2.39	0.41
23:BB:2336:A:H61	43:BW:40:ARG:CD	2.34	0.41
23:BB:2356:U:H2'	23:BB:2357:G:O4'	2.21	0.41
23:BB:2671:G:H2'	23:BB:2672:U:C6	2.56	0.41
23:BB:2720:U:H2'	23:BB:2721:A:H8	1.86	0.41
25:BC:20:ASN:O	25:BC:23:LEU:HB2	2.21	0.41
25:BC:90:ILE:HD13	25:BC:90:ILE:HA	1.93	0.41
27:BE:46:GLN:HB2	27:BE:87:ALA:O	2.20	0.41
29:BG:18:ILE:HA	29:BG:22:VAL:O	2.21	0.41
30:BH:5:LEU:HD12	30:BH:17:ASP:HB3	2.03	0.41
30:BH:70:GLU:O	30:BH:72:ILE:N	2.54	0.41
31:BJ:55:ILE:O	31:BJ:55:ILE:HG13	2.19	0.41
31:BJ:58:ASN:CA	31:BJ:127:GLY:HA2	2.26	0.41
32:BK:99:ILE:CB	32:BK:118:LEU:HD22	2.47	0.41
33:BL:23:ILE:HD12	33:BL:23:ILE:H	1.84	0.41
35:BN:28:LEU:HD21	35:BN:113:ILE:HG23	2.01	0.41
35:BN:61:ALA:C	35:BN:63:ARG:H	2.22	0.41
35:BN:79:LEU:C	35:BN:81:ASN:H	2.24	0.41
35:BN:94:TYR:C	35:BN:116:VAL:HG12	2.41	0.41
36:BO:56:LYS:O	36:BO:60:GLU:HG2	2.19	0.41
36:BO:79:ALA:O	36:BO:83:LEU:HD13	2.20	0.41
37:BP:50:ARG:HB3	37:BP:57:ALA:N	2.36	0.41
38:BQ:4:LYS:HE3	38:BQ:8:ILE:CD1	2.49	0.41
41:BT:50:LEU:O	41:BT:51:PHE:HB2	2.21	0.41
42:BU:25:LYS:N	42:BU:34:ILE:O	2.54	0.41
43:BW:66:VAL:HG22	43:BW:81:ILE:HG22	2.03	0.41
45:BY:18:LYS:O	45:BY:22:THR:HG23	2.21	0.41
49:B2:13:ASN:O	49:B2:17:GLY:HA3	2.20	0.41
1:CA:126:G:H4'	1:CA:634:C:O2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:187:G:N2	1:CA:189:A:H3'	2.36	0.41
1:CA:245:U:H2'	1:CA:246:A:H5'	2.03	0.41
1:CA:409:U:H2'	1:CA:410:G:C8	2.55	0.41
1:CA:486:U:O2'	1:CA:487:A:H5'	2.21	0.41
1:CA:516:U:O2'	1:CA:517:G:H5'	2.20	0.41
1:CA:572:A:N3	1:CA:917:G:H1'	2.35	0.41
1:CA:637:C:H2'	1:CA:638:U:C6	2.56	0.41
1:CA:746:A:N1	1:CA:747:A:N6	2.68	0.41
1:CA:1036:A:H2'	1:CA:1037:C:O4'	2.20	0.41
1:CA:1120:C:H2'	1:CA:1121:U:H6	1.84	0.41
1:CA:1125:U:H1'	1:CA:1126:U:H6	1.86	0.41
1:CA:1226:C:H5"	12:CM:94:LEU:HD11	2.03	0.41
1:CA:1240:U:H3	6:CG:29:LEU:HD23	1.85	0.41
1:CA:1336:C:O4'	1:CA:1337:G:C2	2.74	0.41
2:CC:63:ILE:HD12	2:CC:98:ALA:CB	2.48	0.41
2:CC:87:ARG:HB2	2:CC:100:ILE:CG2	2.51	0.41
2:CC:149:LYS:CB	2:CC:168:ARG:HG3	2.51	0.41
2:CC:188:ALA:HB3	2:CC:195:ILE:HB	2.02	0.41
3:CD:84:ASN:OD1	3:CD:87:GLU:HB2	2.20	0.41
6:CG:132:THR:HA	6:CG:135:LYS:HB3	2.03	0.41
7:CH:12:ARG:NH1	7:CH:26:MET:HB3	2.35	0.41
8:CI:112:ARG:HD2	13:CN:100:TRP:OXT	2.21	0.41
10:CK:70:ALA:O	10:CK:72:ALA:N	2.53	0.41
13:CN:15:LEU:HB3	13:CN:54:SER:CB	2.44	0.41
14:CO:10:ILE:O	14:CO:14:PHE:HD1	2.03	0.41
16:CQ:18:LYS:H	16:CQ:50:ASN:HD21	1.69	0.41
16:CQ:22:VAL:O	16:CQ:42:LYS:HA	2.21	0.41
16:CQ:80:LYS:H	16:CQ:80:LYS:NZ	2.18	0.41
20:CB:75:ALA:O	20:CB:78:ALA:N	2.53	0.41
20:CB:77:GLU:O	20:CB:77:GLU:HG2	2.21	0.41
20:CB:164:ASP:OD1	20:CB:186:VAL:HA	2.20	0.41
21:CU:44:ARG:HG3	21:CU:44:ARG:NH1	2.35	0.41
23:DB:116:C:O2'	23:DB:126:A:C8	2.69	0.41
23:DB:246:C:H2'	23:DB:247:G:C5'	2.50	0.41
23:DB:324:A:H61	23:DB:338:G:C2'	2.33	0.41
23:DB:453:A:N3	23:DB:457:A:O2'	2.53	0.41
23:DB:764:A:H5"	25:DC:208:GLY:HA2	2.02	0.41
23:DB:810:U:O2'	33:DL:20:GLY:HA3	2.21	0.41
23:DB:995:C:H42	31:DJ:2:LYS:HB2	1.86	0.41
23:DB:1243:C:O2'	23:DB:1244:A:H5'	2.21	0.41
23:DB:1248:G:C4	38:DQ:2:ARG:HD2	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1258:U:H2'	23:DB:1259:G:H8	1.85	0.41
23:DB:1280:G:H2'	23:DB:1281:G:H5'	2.02	0.41
23:DB:1572:A:O2'	23:DB:1573:G:H5'	2.21	0.41
23:DB:1666:G:O3'	32:DK:6:THR:HG23	2.21	0.41
23:DB:1704:C:H2'	23:DB:1705:A:C8	2.56	0.41
23:DB:1889:A:H2'	23:DB:1890:A:C8	2.56	0.41
23:DB:1901:A:OP2	25:DC:252:LYS:NZ	2.53	0.41
23:DB:2143:C:H5"	23:DB:2144:G:C8	2.55	0.41
23:DB:2186:G:H2'	23:DB:2187:U:O4'	2.21	0.41
23:DB:2208:C:O2'	23:DB:2209:G:H5'	2.21	0.41
23:DB:2301:C:O2'	23:DB:2302:U:H5'	2.20	0.41
23:DB:2352:A:H8	23:DB:2352:A:O5'	2.04	0.41
23:DB:2623:G:O5'	23:DB:2826:A:H1'	2.20	0.41
23:DB:2671:G:H2'	23:DB:2672:U:C6	2.56	0.41
23:DB:2694:G:H2'	23:DB:2695:U:C6	2.55	0.41
24:DV:1:MET:HE3	24:DV:2:PHE:HA	2.02	0.41
24:DV:62:THR:CG2	24:DV:71:LYS:HG2	2.46	0.41
25:DC:107:LYS:HB3	25:DC:108:GLY:H	1.68	0.41
25:DC:156:SER:HB3	25:DC:159:THR:HG21	2.02	0.41
25:DC:245:THR:O	25:DC:247:TRP:N	2.53	0.41
27:DE:21:ARG:HG3	27:DE:22:ASP:O	2.21	0.41
27:DE:61:ARG:O	27:DE:62:GLN:C	2.58	0.41
28:DF:11:VAL:CG1	28:DF:12:VAL:H	2.18	0.41
28:DF:37:MET:SD	28:DF:52:ALA:HB1	2.60	0.41
28:DF:105:ILE:O	28:DF:109:ARG:HB2	2.20	0.41
29:DG:34:ARG:HD3	29:DG:34:ARG:N	2.35	0.41
30:DH:5:LEU:HD12	30:DH:17:ASP:HB3	2.03	0.41
30:DH:83:LYS:HD2	30:DH:83:LYS:H	1.85	0.41
33:DL:61:LEU:HA	33:DL:62:PRO:HD3	1.92	0.41
34:DM:73:ILE:HG21	34:DM:91:TYR:CE2	2.56	0.41
38:DQ:73:ILE:HD11	38:DQ:77:LYS:HB3	2.03	0.41
40:DS:3:THR:HG23	40:DS:3:THR:O	2.21	0.41
40:DS:61:ASN:HD22	40:DS:61:ASN:HA	1.55	0.41
40:DS:66:ILE:CG1	40:DS:67:ASP:N	2.84	0.41
42:DU:25:LYS:N	42:DU:34:ILE:O	2.54	0.41
43:DW:15:SER:O	43:DW:16:GLU:C	2.58	0.41
43:DW:24:ARG:HH11	43:DW:65:LYS:HA	1.86	0.41
43:DW:28:GLU:H	43:DW:31:LEU:CD1	2.34	0.41
43:DW:35:ILE:O	43:DW:37:VAL:N	2.53	0.41
47:D0:25:THR:O	47:D0:39:ARG:NH2	2.53	0.41
1:AA:998:C:H2'	1:AA:999:C:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1220:G:H2'	1:AA:1221:G:C8	2.55	0.41
1:AA:1220:G:O3'	18:AS:35:ARG:HD2	2.19	0.41
1:AA:1226:C:H5"	12:AM:94:LEU:HD11	2.02	0.41
1:AA:1258:G:C4	1:AA:1278:G:N2	2.89	0.41
1:AA:1348:U:C4'	8:AI:121:ARG:HG3	2.46	0.41
1:AA:1473:G:O2'	1:AA:1474:U:H5'	2.21	0.41
1:AA:1514:G:H2'	1:AA:1515:G:C8	2.55	0.41
2:AC:87:ARG:HB2	2:AC:100:ILE:CG2	2.50	0.41
3:AD:191:SER:O	3:AD:192:ALA:HB2	2.20	0.41
3:AD:197:HIS:CE1	3:AD:198:LEU:HG	2.56	0.41
4:AE:107:GLY:C	4:AE:109:ALA:H	2.24	0.41
5:AF:47:LEU:HD21	5:AF:57:ALA:CB	2.48	0.41
5:AF:90:MET:HE3	17:AR:60:ARG:HE	1.84	0.41
10:AK:23:HIS:HB3	10:AK:30:ILE:HG12	2.03	0.41
12:AM:18:LEU:C	12:AM:20:SER:N	2.74	0.41
14:AO:77:TYR:CZ	14:AO:81:ILE:HD11	2.54	0.41
15:AP:28:ARG:HD3	15:AP:29:ASN:ND2	2.36	0.41
18:AS:44:ILE:HD12	18:AS:63:ASP:HA	2.03	0.41
20:AB:31:PHE:HB3	20:AB:39:ILE:HG22	2.03	0.41
20:AB:83:ALA:C	20:AB:85:SER:H	2.24	0.41
22:BA:113:C:H2'	22:BA:114:C:C6	2.56	0.41
23:BB:7:G:H4'	31:BJ:15:TRP:HZ2	1.85	0.41
23:BB:164:C:H2'	23:BB:165:A:H5'	2.03	0.41
23:BB:181:A:H1'	23:BB:435:C:H5'	2.03	0.41
23:BB:528:A:H3'	23:BB:528:A:H8	1.85	0.41
23:BB:689:A:H2'	23:BB:690:G:H8	1.86	0.41
23:BB:705:A:H8	23:BB:705:A:O5'	2.02	0.41
23:BB:776:G:N1	23:BB:2072:C:OP1	2.43	0.41
23:BB:833:A:H1'	33:BL:52:GLY:N	2.35	0.41
23:BB:974:G:N3	23:BB:974:G:H2'	2.35	0.41
23:BB:988:A:H5"	45:BY:11:SER:HB3	2.02	0.41
23:BB:1423:G:H2'	23:BB:1424:G:H8	1.86	0.41
23:BB:2391:G:O6	23:BB:2427:C:H1'	2.21	0.41
23:BB:2465:C:O2'	23:BB:2466:C:H5'	2.19	0.41
23:BB:2526:G:O2'	51:B4:34:LYS:HE3	2.21	0.41
23:BB:2693:G:H2'	23:BB:2694:G:C8	2.50	0.41
23:BB:2786:U:H2'	23:BB:2787:C:H6	1.85	0.41
24:BV:32:GLY:O	24:BV:93:ARG:HB2	2.21	0.41
24:BV:75:GLN:HG2	24:BV:92:VAL:CG2	2.44	0.41
25:BC:153:LEU:HD22	25:BC:175:LEU:HD22	2.02	0.41
26:BD:24:VAL:HG23	26:BD:189:VAL:H	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BE:154:ASP:C	27:BE:156:ASN:H	2.24	0.41
28:BF:163:GLU:HA	28:BF:166:ARG:NH1	2.36	0.41
29:BG:40:VAL:CG2	29:BG:64:ALA:HA	2.45	0.41
29:BG:89:VAL:CG1	29:BG:90:GLY:H	2.27	0.41
32:BK:6:THR:HG22	32:BK:7:MET:H	1.85	0.41
34:BM:73:ILE:HG21	34:BM:91:TYR:CE2	2.55	0.41
36:BO:15:ARG:HH21	36:BO:95:SER:HB3	1.85	0.41
36:BO:63:LYS:HD2	36:BO:64:TYR:HB2	2.03	0.41
38:BQ:81:GLY:O	38:BQ:85:ALA:N	2.52	0.41
38:BQ:111:LYS:HB2	38:BQ:111:LYS:NZ	2.34	0.41
40:BS:3:THR:O	40:BS:3:THR:HG23	2.21	0.41
41:BT:17:SER:N	41:BT:21:SER:OG	2.53	0.41
41:BT:53:VAL:HG12	41:BT:54:GLU:N	2.36	0.41
48:B1:22:THR:OG1	48:B1:23:THR:N	2.53	0.41
49:B2:21:ARG:HG2	49:B2:31:LEU:HD21	2.02	0.41
50:B3:44:ARG:N	50:B3:45:PRO:CD	2.82	0.41
52:BI:91:LYS:O	52:BI:94:LYS:HB2	2.21	0.41
1:CA:259:G:O2'	1:CA:260:G:H5'	2.20	0.41
1:CA:415:A:N1	1:CA:428:G:O6	2.54	0.41
1:CA:585:G:H4'	11:CL:4:ASN:HD21	1.86	0.41
1:CA:599:C:H2'	1:CA:600:A:H8	1.85	0.41
1:CA:600:A:OP1	7:CH:87:ARG:HB3	2.21	0.41
1:CA:621:A:H2'	1:CA:622:A:H8	1.84	0.41
1:CA:987:G:H2'	1:CA:988:G:H8	1.85	0.41
1:CA:1053:G:C6	1:CA:1199:U:H2'	2.56	0.41
1:CA:1178:G:H2'	1:CA:1180:A:OP2	2.20	0.41
1:CA:1366:C:H2'	1:CA:1367:C:C6	2.55	0.41
1:CA:1375:A:P	6:CG:24:LYS:HZ3	2.43	0.41
2:CC:123:LEU:HD12	2:CC:188:ALA:CB	2.51	0.41
2:CC:134:LYS:HE3	2:CC:138:GLN:HG2	2.02	0.41
3:CD:116:LEU:O	3:CD:121:ALA:HB3	2.20	0.41
5:CF:6:ILE:HD12	5:CF:7:VAL:N	2.35	0.41
9:CJ:17:LEU:HD13	9:CJ:96:VAL:HG13	2.01	0.41
10:CK:92:ARG:HH11	10:CK:92:ARG:HG2	1.84	0.41
12:CM:80:MET:C	12:CM:82:LEU:H	2.24	0.41
16:CQ:52:CYS:SG	16:CQ:74:LEU:HG	2.61	0.41
18:CS:20:LYS:NZ	18:CS:24:SER:HB3	2.36	0.41
19:CT:38:ILE:HD11	19:CT:82:ILE:HA	2.03	0.41
20:CB:18:GLN:C	20:CB:37:VAL:HG23	2.41	0.41
21:CU:36:PHE:CD1	21:CU:44:ARG:HD3	2.56	0.41
23:DB:191:A:O2'	23:DB:192:C:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:275:C:H2'	23:DB:276:U:O4'	2.20	0.41
23:DB:316:C:O2'	23:DB:317:G:H5'	2.20	0.41
23:DB:379:G:N1	23:DB:396:G:C6	2.89	0.41
23:DB:466:A:N3	23:DB:683:U:H1'	2.36	0.41
23:DB:514:A:N6	23:DB:515:A:N6	2.68	0.41
23:DB:667:U:H2'	23:DB:668:A:O4'	2.21	0.41
23:DB:1099:G:N7	52:DI:3:LYS:CD	2.84	0.41
23:DB:1126:A:H4'	23:DB:1127:A:C5'	2.50	0.41
23:DB:1174:U:O2	23:DB:1174:U:H2'	2.20	0.41
23:DB:1187:G:H5"	39:DR:83:TYR:CZ	2.55	0.41
23:DB:1243:C:O2	33:DL:4:ASN:HA	2.20	0.41
23:DB:1322:A:C5	23:DB:1323:C:C5	3.09	0.41
23:DB:1475:G:H3'	23:DB:1475:G:OP1	2.21	0.41
23:DB:1577:C:H2'	23:DB:1578:U:C6	2.55	0.41
23:DB:1636:U:H2'	23:DB:1637:A:C8	2.56	0.41
23:DB:2039:U:O2'	23:DB:2040:G:H5'	2.21	0.41
23:DB:2262:U:H2'	23:DB:2263:C:H6	1.86	0.41
23:DB:2336:A:N6	43:DW:40:ARG:CG	2.81	0.41
23:DB:2358:A:H61	33:DL:54:GLN:HE22	1.68	0.41
23:DB:2369:A:H2'	23:DB:2370:G:C8	2.55	0.41
23:DB:2393:U:H5'	33:DL:60:ARG:O	2.21	0.41
23:DB:2623:G:O2'	23:DB:2624:G:H5'	2.21	0.41
23:DB:2675:A:H4'	32:DK:29:HIS:HB2	2.02	0.41
23:DB:2721:A:H2'	23:DB:2722:G:C8	2.55	0.41
23:DB:2751:G:H2'	23:DB:2751:G:N3	2.35	0.41
24:DV:2:PHE:HD2	24:DV:59:GLU:OE1	2.03	0.41
25:DC:132:ARG:O	25:DC:132:ARG:HG3	2.20	0.41
25:DC:203:VAL:O	25:DC:204:LEU:HB2	2.21	0.41
25:DC:221:GLY:C	25:DC:223:ALA:N	2.73	0.41
26:DD:38:LYS:HD3	26:DD:45:TYR:OH	2.21	0.41
29:DG:33:THR:HA	29:DG:34:ARG:NH1	2.36	0.41
29:DG:67:ALA:O	29:DG:71:LEU:HD23	2.21	0.41
30:DH:14:SER:HB2	30:DH:17:ASP:HB3	2.03	0.41
31:DJ:20:ALA:HA	31:DJ:23:LYS:CG	2.50	0.41
31:DJ:24:THR:O	31:DJ:25:LEU:HB3	2.20	0.41
31:DJ:45:THR:H	31:DJ:46:PRO:CD	2.28	0.41
32:DK:109:SER:O	32:DK:111:LYS:N	2.54	0.41
35:DN:82:GLU:HB3	35:DN:83:LEU:H	1.63	0.41
36:DO:63:LYS:HD2	36:DO:64:TYR:HB2	2.03	0.41
36:DO:88:LYS:HA	36:DO:115:LEU:HD13	2.03	0.41
38:DQ:109:VAL:CG1	38:DQ:113:LYS:HE3	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DT:72:GLN:H	41:DT:72:GLN:HG2	1.68	0.41
43:DW:44:PHE:CE2	43:DW:76:ARG:HD3	2.56	0.41
45:DY:6:ILE:HB	45:DY:35:VAL:HG12	2.03	0.41
49:D2:39:ARG:HG3	49:D2:39:ARG:NH1	2.36	0.41
52:DI:91:LYS:HD2	52:DI:91:LYS:N	2.35	0.41
1:AA:51:A:H4'	1:AA:52:C:C5'	2.51	0.41
1:AA:237:G:H5"	16:AQ:26:ARG:NH2	2.36	0.41
1:AA:397:A:H3'	1:AA:397:A:N3	2.36	0.41
1:AA:488:C:H2'	1:AA:489:C:H6	1.86	0.41
1:AA:509:A:H5'	3:AD:51:GLY:HA2	2.02	0.41
1:AA:586:C:O2'	7:AH:3:GLN:NE2	2.54	0.41
1:AA:641:U:H1'	1:AA:642:A:N7	2.35	0.41
1:AA:664:G:P	17:AR:52:ARG:HH21	2.44	0.41
1:AA:975:A:N1	9:AJ:50:THR:HB	2.36	0.41
1:AA:984:C:H2'	1:AA:985:C:C6	2.55	0.41
1:AA:1073:U:O2'	1:AA:1074:G:H5'	2.21	0.41
1:AA:1095:U:H5"	1:AA:1109:C:O2	2.19	0.41
1:AA:1098:C:O2'	1:AA:1099:G:H5'	2.20	0.41
1:AA:1162:C:H2'	1:AA:1163:A:O4'	2.21	0.41
1:AA:1170:A:H2'	1:AA:1171:A:O4'	2.21	0.41
1:AA:1254:A:H2'	1:AA:1255:G:O4'	2.21	0.41
1:AA:1307:U:H2'	1:AA:1308:U:H6	1.82	0.41
1:AA:1325:C:H2'	1:AA:1326:U:H6	1.85	0.41
2:AC:63:ILE:CD1	2:AC:98:ALA:HB2	2.46	0.41
2:AC:126:ARG:HA	2:AC:126:ARG:NE	2.36	0.41
3:AD:31:CYS:O	3:AD:32:LYS:HB2	2.20	0.41
3:AD:72:ARG:O	3:AD:75:TYR:HB3	2.21	0.41
3:AD:155:LYS:HG3	3:AD:156:ALA:N	2.36	0.41
4:AE:11:GLN:HB2	4:AE:116:VAL:HB	2.03	0.41
5:AF:18:VAL:O	5:AF:22:ILE:HG13	2.20	0.41
6:AG:148:LYS:HG3	6:AG:151:ALA:HB3	2.02	0.41
6:AG:149:ALA:H	10:AK:55:ARG:HH21	1.63	0.41
7:AH:68:LYS:HZ3	7:AH:69:ALA:HB3	1.86	0.41
8:AI:14:SER:HB2	8:AI:69:GLY:HA3	2.01	0.41
8:AI:48:ARG:HA	8:AI:51:LEU:HD12	2.02	0.41
8:AI:64:ILE:HD12	8:AI:64:ILE:N	2.31	0.41
9:AJ:53:ILE:HG23	9:AJ:54:SER:N	2.36	0.41
10:AK:51:PHE:HD1	10:AK:51:PHE:O	2.03	0.41
11:AL:66:ILE:O	11:AL:66:ILE:HG22	2.21	0.41
12:AM:15:VAL:HG22	12:AM:33:LEU:HD12	2.02	0.41
13:AN:27:LYS:HA	13:AN:31:SER:HB2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AN:68:ARG:HH11	13:AN:68:ARG:HG2	1.86	0.41
13:AN:78:LEU:HD23	13:AN:82:LYS:HB3	2.03	0.41
14:AO:80:LEU:HD23	14:AO:80:LEU:C	2.41	0.41
16:AQ:25:GLU:HA	16:AQ:39:ARG:O	2.21	0.41
16:AQ:75:VAL:CG2	16:AQ:76:ARG:N	2.83	0.41
18:AS:13:HIS:HD2	18:AS:34:SER:HB3	1.86	0.41
19:AT:27:MET:O	19:AT:31:ILE:HG13	2.20	0.41
23:BB:141:G:H5"	23:BB:142:A:C6	2.56	0.41
23:BB:227:A:H61	23:BB:410:G:H1'	1.85	0.41
23:BB:268:C:O2	23:BB:268:C:H2'	2.21	0.41
23:BB:319:G:H2'	23:BB:320:A:O4'	2.21	0.41
23:BB:325:G:O2'	23:BB:326:G:H5'	2.20	0.41
23:BB:670:A:H3'	33:BL:43:GLY:H	1.86	0.41
23:BB:699:A:H2'	23:BB:700:G:O4'	2.21	0.41
23:BB:769:U:H2'	23:BB:770:G:C8	2.55	0.41
23:BB:949:G:O2'	23:BB:950:G:H5'	2.21	0.41
23:BB:1076:C:H4'	52:BI:94:LYS:CE	2.50	0.41
23:BB:1188:U:O2'	23:BB:1189:A:H5'	2.21	0.41
23:BB:1341:G:C2	23:BB:1398:C:H4'	2.56	0.41
23:BB:1537:G:H5"	23:BB:1537:G:N3	2.36	0.41
23:BB:1562:U:H2'	23:BB:1563:U:C6	2.55	0.41
23:BB:1773:A:H2'	23:BB:1774:C:O4'	2.20	0.41
23:BB:1831:G:C6	23:BB:1832:C:N4	2.89	0.41
23:BB:1859:U:H2'	23:BB:1860:G:H8	1.86	0.41
23:BB:1948:G:C6	23:BB:1959:G:C6	3.09	0.41
23:BB:2471:A:O2'	23:BB:2472:G:C8	2.60	0.41
23:BB:2531:A:H5"	29:BG:156:TYR:CE2	2.56	0.41
23:BB:2580:U:H5'	26:BD:136:ASN:H	1.86	0.41
23:BB:2635:A:C5'	26:BD:79:LEU:HB2	2.51	0.41
23:BB:2800:A:H2'	23:BB:2801:G:C4'	2.51	0.41
23:BB:2800:A:C2	23:BB:2801:G:H1'	2.56	0.41
23:BB:2835:A:H61	23:BB:2878:U:H2'	1.86	0.41
23:BB:2848:G:N3	23:BB:2849:U:H5	2.18	0.41
24:BV:4:ILE:HB	24:BV:63:ILE:HA	2.02	0.41
24:BV:14:LYS:HE3	24:BV:18:ARG:HH21	1.85	0.41
25:BC:80:LEU:HD21	25:BC:109:LEU:HG	2.03	0.41
25:BC:83:ASP:HA	25:BC:84:PRO:HD3	1.89	0.41
25:BC:128:THR:HG22	25:BC:188:ARG:HB3	2.03	0.41
27:BE:46:GLN:HB3	27:BE:86:ALA:CA	2.51	0.41
27:BE:166:LYS:O	27:BE:167:VAL:CB	2.69	0.41
27:BE:181:ILE:CG1	33:BL:2:ARG:HB3	2.46	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BF:11:VAL:HG13	28:BF:171:ALA:HB1	2.03	0.41
28:BF:107:VAL:O	28:BF:110:ILE:HG22	2.20	0.41
28:BF:133:GLU:HA	28:BF:150:GLY:CA	2.50	0.41
29:BG:84:LYS:HB2	29:BG:132:LEU:H	1.86	0.41
30:BH:40:THR:C	30:BH:42:LYS:H	2.21	0.41
30:BH:58:LEU:HB3	30:BH:59:ALA:H	1.73	0.41
30:BH:141:LYS:N	30:BH:141:LYS:CD	2.83	0.41
31:BJ:43:GLU:O	31:BJ:44:TYR:C	2.58	0.41
32:BK:33:ALA:CB	32:BK:39:ILE:HD11	2.51	0.41
33:BL:56:PRO:O	33:BL:59:ARG:HB2	2.21	0.41
34:BM:61:GLY:HA2	34:BM:107:GLY:C	2.41	0.41
35:BN:79:LEU:HA	35:BN:83:LEU:HD12	2.03	0.41
35:BN:80:PHE:N	35:BN:84:GLY:HA3	2.36	0.41
40:BS:20:VAL:HG13	40:BS:21:ALA:N	2.36	0.41
41:BT:28:ASN:C	41:BT:29:THR:HG23	2.41	0.41
41:BT:63:VAL:HG12	41:BT:65:GLY:H	1.86	0.41
43:BW:56:HIS:O	43:BW:57:THR:C	2.59	0.41
44:BX:25:GLN:HE21	44:BX:25:GLN:HB3	1.53	0.41
48:B1:35:LEU:N	48:B1:35:LEU:CD2	2.84	0.41
48:B1:39:ASP:O	48:B1:43:ARG:N	2.53	0.41
48:B1:46:VAL:HG22	48:B1:47:ILE:N	2.28	0.41
52:BI:14:ALA:CB	52:BI:50:LYS:HA	2.50	0.41
52:BI:35:MET:SD	52:BI:35:MET:C	2.99	0.41
52:BI:83:ALA:N	52:BI:100:ILE:HD11	2.35	0.41
1:CA:141:G:H2'	1:CA:142:G:O4'	2.20	0.41
1:CA:170:U:O2'	1:CA:171:A:H5'	2.20	0.41
1:CA:264:C:H2'	1:CA:265:G:O4'	2.21	0.41
1:CA:284:C:O2'	1:CA:285:C:H5'	2.21	0.41
1:CA:451:A:H1'	1:CA:452:A:C8	2.56	0.41
1:CA:538:G:O3'	11:CL:110:LYS:HG3	2.21	0.41
1:CA:601:G:O2'	1:CA:602:A:H5'	2.21	0.41
1:CA:653:U:C6	7:CH:55:LYS:HE2	2.56	0.41
1:CA:736:C:H2'	1:CA:737:C:H6	1.85	0.41
1:CA:986:U:H2'	1:CA:987:G:O4'	2.21	0.41
1:CA:1073:U:OP1	4:CE:61:LYS:HE3	2.21	0.41
1:CA:1115:U:H2'	1:CA:1116:U:C6	2.56	0.41
1:CA:1125:U:H5'	9:CJ:40:ILE:HD11	2.03	0.41
1:CA:1174:G:O2'	1:CA:1175:G:H5'	2.20	0.41
1:CA:1194:U:H2'	1:CA:1195:C:C6	2.56	0.41
1:CA:1258:G:C2	1:CA:1278:G:N2	2.89	0.41
1:CA:1296:C:C5'	1:CA:1302:C:H42	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1319:A:H4'	1:CA:1320:C:OP1	2.20	0.41
2:CC:85:LYS:O	2:CC:89:VAL:HG23	2.21	0.41
2:CC:102:ILE:N	2:CC:102:ILE:HD12	2.36	0.41
2:CC:112:ALA:CB	2:CC:184:ASN:HB2	2.47	0.41
3:CD:7:LYS:HD2	3:CD:21:LYS:NZ	2.35	0.41
3:CD:29:THR:CG2	3:CD:30:LYS:HD3	2.49	0.41
3:CD:141:VAL:HA	3:CD:179:GLY:O	2.20	0.41
3:CD:148:ALA:O	3:CD:154:VAL:HG11	2.21	0.41
4:CE:77:ASN:CG	4:CE:78:GLY:H	2.19	0.41
4:CE:117:ALA:HB3	4:CE:119:VAL:HG23	2.03	0.41
5:CF:36:ILE:HA	5:CF:64:VAL:HG13	2.02	0.41
5:CF:68:GLN:HA	5:CF:71:ILE:HG12	2.02	0.41
6:CG:80:GLY:C	6:CG:82:SER:H	2.25	0.41
8:CI:28:VAL:HA	8:CI:32:ARG:O	2.21	0.41
8:CI:44:ARG:NE	8:CI:48:ARG:HH22	2.19	0.41
8:CI:50:PRO:HD3	8:CI:79:ARG:HG3	2.03	0.41
8:CI:87:MET:SD	8:CI:88:GLU:N	2.93	0.41
9:CJ:8:ILE:O	9:CJ:74:VAL:HB	2.20	0.41
12:CM:29:SER:HA	12:CM:32:ILE:HG22	2.03	0.41
18:CS:35:ARG:HB3	18:CS:50:VAL:CG1	2.51	0.41
20:CB:26:MET:HG3	20:CB:188:THR:O	2.19	0.41
20:CB:67:LEU:HG	20:CB:153:MET:HE2	2.03	0.41
20:CB:75:ALA:O	20:CB:76:SER:C	2.59	0.41
20:CB:165:ALA:H	20:CB:186:VAL:CG1	2.34	0.41
22:DA:17:C:O2'	22:DA:18:G:H5'	2.21	0.41
22:DA:49:C:O2'	22:DA:50:A:H5'	2.21	0.41
23:DB:524:G:O2'	23:DB:525:U:H5'	2.20	0.41
23:DB:597:G:H2'	23:DB:598:U:C6	2.55	0.41
23:DB:707:G:O2'	23:DB:708:G:H5'	2.20	0.41
23:DB:783:A:C2'	23:DB:784:G:O5'	2.68	0.41
23:DB:858:G:C2	23:DB:2268:A:C4	3.09	0.41
23:DB:942:G:O2'	23:DB:943:A:H5'	2.21	0.41
23:DB:1032:A:H4'	51:D4:16:ILE:HD13	2.01	0.41
23:DB:1058:U:H1'	52:DI:117:THR:HG22	2.03	0.41
23:DB:1068:G:C6	23:DB:1069:A:N6	2.89	0.41
23:DB:1080:A:O2'	23:DB:1081:U:H5'	2.21	0.41
23:DB:1159:U:O2'	23:DB:1160:G:H5'	2.20	0.41
23:DB:1210:G:H4'	23:DB:1211:C:OP2	2.20	0.41
23:DB:1233:C:O2'	23:DB:1234:U:H5'	2.21	0.41
23:DB:1392:A:H2'	23:DB:1393:A:C8	2.56	0.41
23:DB:1409:U:O2'	23:DB:1410:G:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1463:C:H2'	23:DB:1464:G:H8	1.85	0.41
23:DB:1513:U:H2'	23:DB:1514:G:O4'	2.20	0.41
23:DB:1568:G:H4'	25:DC:58:LYS:HB3	2.03	0.41
23:DB:1573:G:H2'	23:DB:1574:C:H5'	2.02	0.41
23:DB:1689:A:O2'	23:DB:1690:A:H5'	2.20	0.41
23:DB:1736:U:H2'	23:DB:1737:G:O4'	2.21	0.41
23:DB:1824:G:O2'	23:DB:1825:U:H5'	2.21	0.41
23:DB:1862:G:O2'	23:DB:1863:G:H5'	2.21	0.41
23:DB:1902:C:H2'	23:DB:1903:G:O4'	2.19	0.41
23:DB:1914:C:O2'	23:DB:1915:U:H5'	2.21	0.41
23:DB:2081:U:H2'	23:DB:2082:A:C8	2.56	0.41
23:DB:2143:C:H3'	23:DB:2144:G:O4'	2.21	0.41
23:DB:2212:A:C8	23:DB:2214:C:N4	2.88	0.41
23:DB:2305:U:C5	28:DF:151:LEU:HA	2.56	0.41
23:DB:2393:U:H5"	33:DL:62:PRO:CG	2.44	0.41
23:DB:2455:G:H2'	23:DB:2456:C:H6	1.85	0.41
23:DB:2480:C:O2'	23:DB:2481:G:H5'	2.21	0.41
23:DB:2818:U:O5'	23:DB:2837:A:H1'	2.21	0.41
24:DV:29:ILE:HD12	24:DV:29:ILE:O	2.20	0.41
24:DV:42:LEU:HB2	24:DV:47:VAL:HG21	2.02	0.41
25:DC:72:GLY:O	25:DC:73:ILE:HD13	2.20	0.41
25:DC:109:LEU:O	25:DC:110:LYS:C	2.59	0.41
25:DC:115:ILE:O	25:DC:115:ILE:HG13	2.20	0.41
25:DC:146:LYS:CB	25:DC:147:PRO:HD2	2.32	0.41
25:DC:259:ASN:OD1	25:DC:261:ARG:HB3	2.21	0.41
26:DD:21:SER:HB2	32:DK:73:ASP:HA	2.02	0.41
26:DD:68:PHE:CB	26:DD:73:VAL:HG23	2.51	0.41
26:DD:151:THR:CB	26:DD:152:PRO:HD3	2.51	0.41
27:DE:112:LEU:C	27:DE:114:ARG:N	2.75	0.41
28:DF:81:GLY:O	28:DF:82:TYR:C	2.59	0.41
29:DG:49:LEU:HG	29:DG:50:THR:H	1.86	0.41
30:DH:50:ARG:HG3	30:DH:54:LEU:HD11	2.03	0.41
31:DJ:6:ALA:CB	31:DJ:45:THR:HG21	2.46	0.41
31:DJ:25:LEU:HA	31:DJ:28:LEU:HD23	2.03	0.41
31:DJ:72:LYS:HB3	31:DJ:73:VAL:H	1.52	0.41
33:DL:47:ARG:HG3	33:DL:48:ARG:N	2.36	0.41
33:DL:81:ASP:HA	33:DL:84:LYS:CD	2.50	0.41
33:DL:124:GLY:CA	33:DL:143:GLU:HG3	2.50	0.41
35:DN:24:MET:HE1	35:DN:40:LYS:HB3	2.03	0.41
35:DN:87:PHE:C	35:DN:89:SER:H	2.25	0.41
41:DT:27:SER:O	41:DT:28:ASN:CB	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DU:21:ARG:HD3	42:DU:72:PHE:CG	2.56	0.41
43:DW:65:LYS:H	43:DW:84:GLU:HB3	1.86	0.41
46:DZ:36:HIS:HB3	46:DZ:38:PHE:CE2	2.56	0.41
48:D1:28:THR:C	48:D1:30:PRO:HD3	2.41	0.41
49:D2:41:ARG:O	49:D2:42:LEU:C	2.59	0.41
50:D3:7:ARG:HG3	50:D3:7:ARG:NH1	2.36	0.41
52:DI:10:LEU:HD12	52:DI:10:LEU:C	2.40	0.41
1:AA:20:U:H2'	1:AA:21:G:O4'	2.21	0.41
1:AA:176:C:H3'	1:AA:177:G:N2	2.35	0.41
1:AA:270:A:H2'	1:AA:271:C:H6	1.82	0.41
1:AA:334:C:H2'	1:AA:335:C:C6	2.56	0.41
1:AA:402:G:H5'	1:AA:621:A:H1'	2.02	0.41
1:AA:451:A:N6	1:AA:480:U:H2'	2.36	0.41
1:AA:1072:G:H2'	1:AA:1073:U:H6	1.85	0.41
1:AA:1176:A:H2'	1:AA:1177:G:O4'	2.21	0.41
3:AD:124:VAL:HA	3:AD:141:VAL:O	2.21	0.41
3:AD:159:GLU:C	3:AD:161:ALA:H	2.24	0.41
5:AF:97:THR:O	5:AF:98:GLU:O	2.38	0.41
8:AI:32:ARG:HH11	8:AI:37:TYR:HD1	1.69	0.41
9:AJ:14:ASP:OD1	9:AJ:17:LEU:HB2	2.20	0.41
10:AK:42:GLY:HA3	10:AK:73:VAL:HG13	2.02	0.41
12:AM:82:LEU:HD21	18:AS:64:GLU:OE1	2.20	0.41
15:AP:3:THR:CG2	15:AP:66:THR:HB	2.44	0.41
16:AQ:58:VAL:HB	16:AQ:74:LEU:CD2	2.51	0.41
21:AU:48:LYS:HG3	21:AU:49:ALA:N	2.34	0.41
23:BB:83:A:H2	23:BB:103:A:N7	2.19	0.41
23:BB:142:A:C8	23:BB:142:A:O5'	2.74	0.41
23:BB:345:A:N3	23:BB:346:A:N1	2.69	0.41
23:BB:729:G:H5"	23:BB:730:A:C5'	2.51	0.41
23:BB:940:G:H2'	23:BB:941:A:O4'	2.21	0.41
23:BB:1064:C:O2'	23:BB:1065:U:H5'	2.21	0.41
23:BB:1079:C:O2'	52:BI:133:ARG:NH2	2.53	0.41
23:BB:1392:A:H2'	23:BB:1393:A:C8	2.56	0.41
23:BB:1528:A:H2'	23:BB:1529:G:O4'	2.21	0.41
23:BB:1723:G:H2'	23:BB:1724:G:H5'	2.02	0.41
23:BB:1841:U:O2'	23:BB:1842:G:H5'	2.21	0.41
23:BB:1859:U:H2'	23:BB:1860:G:C8	2.56	0.41
23:BB:1889:A:H2'	23:BB:1890:A:C8	2.56	0.41
23:BB:2314:A:H2'	23:BB:2315:G:C8	2.56	0.41
23:BB:2317:A:C2'	23:BB:2318:G:H5'	2.51	0.41
25:BC:18:VAL:O	25:BC:18:VAL:HG22	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:92:LEU:HD12	25:BC:101:ARG:O	2.21	0.41
26:BD:54:ALA:HA	26:BD:76:GLY:N	2.36	0.41
26:BD:90:PHE:HD2	26:BD:94:GLN:HG3	1.86	0.41
26:BD:138:LEU:N	26:BD:138:LEU:HD22	2.36	0.41
26:BD:161:MET:O	26:BD:162:ALA:C	2.58	0.41
27:BE:137:LYS:O	27:BE:141:MET:HG3	2.21	0.41
28:BF:46:LYS:HZ2	28:BF:83:PRO:HD2	1.85	0.41
30:BH:26:ALA:O	30:BH:28:ASN:N	2.54	0.41
31:BJ:6:ALA:HB3	31:BJ:45:THR:CG2	2.48	0.41
31:BJ:20:ALA:CB	31:BJ:23:LYS:HB2	2.45	0.41
31:BJ:45:THR:N	31:BJ:46:PRO:CD	2.84	0.41
32:BK:24:VAL:CG1	32:BK:33:ALA:HB2	2.51	0.41
34:BM:42:THR:H	34:BM:45:GLN:HB2	1.86	0.41
34:BM:63:ILE:HA	34:BM:104:GLU:O	2.20	0.41
37:BP:101:GLU:OE2	37:BP:101:GLU:N	2.54	0.41
37:BP:109:ILE:O	37:BP:109:ILE:HD12	2.21	0.41
38:BQ:73:ILE:HD11	38:BQ:77:LYS:HB3	2.03	0.41
40:BS:26:GLY:O	40:BS:28:LYS:N	2.53	0.41
45:BY:6:ILE:HA	45:BY:56:VAL:CG2	2.48	0.41
49:B2:10:LEU:HD11	49:B2:14:ARG:CZ	2.51	0.41
51:B4:2:LYS:CE	51:B4:4:ARG:HE	2.34	0.41
1:CA:51:A:H4'	1:CA:52:C:C5'	2.50	0.41
1:CA:159:G:N1	1:CA:163:C:N4	2.69	0.41
1:CA:178:C:O2'	1:CA:179:A:H5'	2.21	0.41
1:CA:242:G:H2'	1:CA:243:A:C5'	2.51	0.41
1:CA:332:G:O2'	1:CA:333:U:H5'	2.21	0.41
1:CA:742:G:H2'	1:CA:743:A:C8	2.52	0.41
1:CA:842:U:O2'	1:CA:846:G:N1	2.54	0.41
1:CA:878:A:H5"	7:CH:80:PRO:HG2	2.03	0.41
1:CA:1042:A:H2'	1:CA:1043:G:O4'	2.20	0.41
1:CA:1260:G:H4'	1:CA:1283:U:O2'	2.20	0.41
1:CA:1347:G:H8	8:CI:108:ARG:HB3	1.85	0.41
1:CA:1531:A:C2'	1:CA:1532:U:H5'	2.51	0.41
2:CC:99:GLN:O	2:CC:100:ILE:HB	2.21	0.41
2:CC:171:ARG:HH11	2:CC:171:ARG:CB	2.27	0.41
4:CE:105:ILE:HG12	4:CE:122:VAL:O	2.21	0.41
5:CF:81:ASN:OD1	5:CF:83:ALA:HB3	2.21	0.41
10:CK:111:ASP:HB2	21:CU:19:LYS:CE	2.51	0.41
14:CO:31:LEU:O	14:CO:35:ILE:HG12	2.21	0.41
16:CQ:61:ARG:O	16:CQ:61:ARG:HD2	2.21	0.41
16:CQ:65:PRO:HA	16:CQ:71:SER:OG	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CQ:75:VAL:CG2	16:CQ:76:ARG:N	2.83	0.41
21:CU:48:LYS:C	21:CU:50:SER:N	2.75	0.41
22:DA:93:C:O2'	22:DA:94:A:H5'	2.21	0.41
23:DB:269:C:C2	23:DB:270:A:C8	3.09	0.41
23:DB:453:A:H1'	23:DB:457:A:O2'	2.21	0.41
23:DB:581:C:OP1	38:DQ:32:ARG:HG3	2.21	0.41
23:DB:585:G:H2'	23:DB:1251:C:H42	1.86	0.41
23:DB:678:C:H2'	23:DB:679:C:H6	1.86	0.41
23:DB:729:G:C5	25:DC:206:LYS:HB2	2.56	0.41
23:DB:1174:U:H2'	23:DB:1176:U:OP2	2.21	0.41
23:DB:1338:G:O2'	23:DB:1339:G:H5'	2.21	0.41
23:DB:1389:G:H2'	23:DB:1390:U:O4'	2.21	0.41
23:DB:1408:G:H2'	23:DB:1409:U:C6	2.56	0.41
23:DB:1900:A:N1	23:DB:1970:A:C6	2.89	0.41
23:DB:1911:U:O4	23:DB:1918:A:H2'	2.21	0.41
23:DB:1939:U:H5'	23:DB:1939:U:C6	2.49	0.41
23:DB:2082:A:N6	23:DB:2237:G:H1'	2.36	0.41
23:DB:2391:G:O6	23:DB:2427:C:H1'	2.21	0.41
23:DB:2590:A:O2'	23:DB:2591:C:H5'	2.21	0.41
23:DB:2776:A:H4'	23:DB:2777:G:C5'	2.51	0.41
24:DV:1:MET:HE3	24:DV:2:PHE:N	2.36	0.41
25:DC:16:VAL:N	25:DC:203:VAL:HG12	2.33	0.41
25:DC:51:ARG:NH2	25:DC:246:PRO:HG2	2.36	0.41
25:DC:54:GLY:O	25:DC:55:GLY:C	2.59	0.41
25:DC:226:PRO:HG3	25:DC:233:GLY:N	2.24	0.41
26:DD:130:GLN:HE21	26:DD:130:GLN:HB3	1.74	0.41
27:DE:12:LEU:HD11	27:DE:14:VAL:HG13	2.02	0.41
27:DE:122:GLU:O	27:DE:123:LYS:HB2	2.20	0.41
27:DE:176:ASP:OD1	27:DE:176:ASP:C	2.59	0.41
29:DG:24:THR:CG2	29:DG:32:LEU:HD22	2.51	0.41
29:DG:101:VAL:HG12	29:DG:115:GLN:HB3	2.02	0.41
29:DG:167:VAL:HG23	29:DG:168:VAL:N	2.27	0.41
35:DN:49:GLU:N	35:DN:50:PRO:CD	2.83	0.41
37:DP:85:VAL:HG21	37:DP:88:ARG:NH1	2.29	0.41
38:DQ:89:ILE:C	38:DQ:91:ARG:N	2.74	0.41
41:DT:53:VAL:HG12	41:DT:54:GLU:N	2.36	0.41
42:DU:51:LEU:O	42:DU:52:ASN:C	2.60	0.41
47:D0:27:LEU:HD12	47:D0:27:LEU:H	1.85	0.41
1:AA:6:G:N3	1:AA:6:G:C3'	2.81	0.40
1:AA:56:U:H2'	1:AA:57:G:C8	2.54	0.40
1:AA:451:A:C1'	1:AA:452:A:C8	3.05	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:681:A:H2'	1:AA:682:G:C8	2.56	0.40
1:AA:766:A:H2'	1:AA:767:A:O4'	2.21	0.40
1:AA:1073:U:H2'	1:AA:1074:G:C8	2.56	0.40
1:AA:1167:A:O2'	1:AA:1168:U:H2'	2.21	0.40
1:AA:1314:C:H2'	1:AA:1315:U:H6	1.85	0.40
1:AA:1317:C:O2'	13:AN:49:THR:HG23	2.21	0.40
3:AD:56:GLU:OE1	3:AD:195:ASN:HB2	2.21	0.40
4:AE:25:LYS:HG3	4:AE:26:GLY:N	2.36	0.40
6:AG:92:PRO:HG2	6:AG:93:VAL:H	1.86	0.40
7:AH:106:SER:C	7:AH:107:LYS:HE2	2.42	0.40
10:AK:101:ALA:C	10:AK:103:GLY:H	2.24	0.40
10:AK:111:ASP:HB3	21:AU:3:ILE:N	2.36	0.40
12:AM:7:ASN:N	12:AM:7:ASN:ND2	2.69	0.40
18:AS:4:LEU:HD22	18:AS:7:GLY:O	2.21	0.40
19:AT:32:LYS:O	19:AT:33:LYS:C	2.59	0.40
19:AT:81:GLN:C	19:AT:83:ASN:H	2.23	0.40
20:AB:77:GLU:O	20:AB:77:GLU:HG2	2.21	0.40
21:AU:33:ARG:NE	21:AU:34:ARG:HG3	2.36	0.40
22:BA:17:C:O2'	22:BA:18:G:H5'	2.21	0.40
22:BA:87:U:H2'	22:BA:88:C:O5'	2.21	0.40
23:BB:29:U:H2'	23:BB:30:G:C8	2.56	0.40
23:BB:53:A:H2'	23:BB:54:G:O4'	2.21	0.40
23:BB:116:C:O2'	23:BB:117:G:H5'	2.21	0.40
23:BB:317:G:H2'	23:BB:318:C:C6	2.55	0.40
23:BB:340:A:H2'	23:BB:341:C:O4'	2.21	0.40
23:BB:516:C:O2'	23:BB:517:C:H5'	2.21	0.40
23:BB:575:A:C2'	23:BB:576:U:H5'	2.51	0.40
23:BB:1878:G:H2'	23:BB:1879:C:O4'	2.22	0.40
23:BB:1999:C:H2'	23:BB:2000:C:O4'	2.21	0.40
23:BB:2013:A:H2'	23:BB:2014:A:H5'	2.04	0.40
23:BB:2098:U:O2'	23:BB:2099:U:H5'	2.21	0.40
23:BB:2282:G:H5'	23:BB:2389:G:H1'	2.03	0.40
23:BB:2306:C:O5'	23:BB:2306:C:H6	2.04	0.40
23:BB:2317:A:H2'	23:BB:2318:G:O4'	2.21	0.40
23:BB:2341:G:H2'	23:BB:2342:C:H6	1.85	0.40
23:BB:2345:G:H4'	23:BB:2346:A:O5'	2.21	0.40
23:BB:2838:G:H1'	35:BN:45:ARG:CZ	2.51	0.40
23:BB:2843:G:O2'	23:BB:2844:G:H5'	2.20	0.40
23:BB:2843:G:H2'	23:BB:2844:G:O4'	2.20	0.40
25:BC:137:GLY:N	25:BC:163:ILE:O	2.54	0.40
25:BC:246:PRO:HB2	25:BC:247:TRP:CZ3	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:148:GLN:CB	26:BD:152:PRO:HG2	2.41	0.40
28:BF:35:LEU:HD12	28:BF:88:VAL:O	2.21	0.40
30:BH:103:VAL:HG21	30:BH:110:VAL:HG13	2.03	0.40
32:BK:71:ARG:HG3	32:BK:105:ARG:NH2	2.34	0.40
33:BL:42:SER:C	33:BL:44:GLY:N	2.74	0.40
33:BL:65:GLY:O	33:BL:66:PHE:CB	2.69	0.40
33:BL:111:ILE:HG22	33:BL:112:LEU:H	1.86	0.40
33:BL:115:GLU:OE1	33:BL:115:GLU:N	2.54	0.40
34:BM:2:LEU:O	34:BM:69:PRO:HG3	2.21	0.40
34:BM:18:ARG:HA	34:BM:18:ARG:HD2	1.95	0.40
35:BN:96:ARG:CG	35:BN:98:LEU:HD13	2.51	0.40
37:BP:12:MET:HG2	37:BP:76:HIS:CD2	2.56	0.40
38:BQ:46:TYR:CE1	39:BR:76:LYS:HE3	2.56	0.40
38:BQ:68:ALA:C	38:BQ:71:ASN:HB3	2.41	0.40
41:BT:30:ILE:O	41:BT:85:VAL:HG23	2.21	0.40
41:BT:45:ALA:HA	41:BT:48:GLN:CB	2.51	0.40
41:BT:61:LEU:C	41:BT:61:LEU:HD12	2.40	0.40
48:B1:33:LEU:HD12	48:B1:34:GLU:H	1.86	0.40
49:B2:41:ARG:O	49:B2:42:LEU:C	2.59	0.40
1:CA:33:A:O2'	1:CA:34:C:H5'	2.21	0.40
1:CA:78:A:O2'	1:CA:79:G:H5'	2.22	0.40
1:CA:107:G:O6	19:CT:9:ARG:HD3	2.21	0.40
1:CA:122:G:C2'	1:CA:123:U:H5'	2.52	0.40
1:CA:160:A:H2'	1:CA:161:A:C8	2.56	0.40
1:CA:340:U:O2'	1:CA:341:C:H5'	2.21	0.40
1:CA:450:G:H4'	15:CP:41:PRO:HB2	2.03	0.40
1:CA:451:A:C1'	1:CA:452:A:C8	3.04	0.40
1:CA:488:C:H2'	1:CA:489:C:H6	1.86	0.40
1:CA:584:G:H2'	1:CA:585:G:H8	1.85	0.40
1:CA:633:G:H2'	1:CA:634:C:C6	2.56	0.40
1:CA:648:A:O2'	1:CA:649:A:H5'	2.21	0.40
1:CA:660:C:H2'	1:CA:661:G:C8	2.57	0.40
1:CA:975:A:N1	9:CJ:50:THR:HB	2.36	0.40
1:CA:999:C:H2'	1:CA:1000:A:C8	2.57	0.40
1:CA:1058:G:H2'	1:CA:1059:C:H6	1.86	0.40
1:CA:1071:C:H2'	1:CA:1072:G:C8	2.51	0.40
1:CA:1225:A:H5"	1:CA:1226:C:C5	2.55	0.40
2:CC:106:ARG:HG2	2:CC:106:ARG:NH1	2.35	0.40
3:CD:97:LEU:HD13	3:CD:136:VAL:CG1	2.51	0.40
6:CG:16:LYS:HB3	6:CG:43:TYR:CE1	2.56	0.40
6:CG:100:MET:O	6:CG:104:VAL:HG23	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:44:ARG:O	8:CI:48:ARG:HG3	2.21	0.40
8:CI:58:GLU:O	8:CI:59:LYS:HD2	2.20	0.40
8:CI:93:LEU:HD13	8:CI:97:LEU:CD1	2.46	0.40
10:CK:14:GLN:HA	10:CK:76:TYR:O	2.21	0.40
11:CL:23:LEU:O	11:CL:25:ALA:N	2.54	0.40
16:CQ:13:SER:HB3	16:CQ:21:VAL:CB	2.50	0.40
20:CB:114:LYS:O	20:CB:117:GLU:HB3	2.22	0.40
23:DB:689:A:H2'	23:DB:690:G:C8	2.57	0.40
23:DB:957:C:N4	23:DB:2459:A:C8	2.88	0.40
23:DB:1029:A:H2'	23:DB:1030:C:O4'	2.21	0.40
23:DB:1159:U:H2'	23:DB:1160:G:H8	1.85	0.40
23:DB:1249:U:O4'	38:DQ:3:VAL:HG21	2.20	0.40
23:DB:1346:G:C6	23:DB:1601:G:C6	3.08	0.40
23:DB:1635:A:H2'	23:DB:1636:U:C5'	2.52	0.40
23:DB:1703:G:H2'	23:DB:1704:C:C6	2.56	0.40
23:DB:1742:U:O2'	23:DB:1743:G:H5'	2.21	0.40
23:DB:1777:U:O2'	23:DB:1778:U:H5'	2.21	0.40
23:DB:1798:U:OP1	25:DC:257:ARG:HB2	2.21	0.40
23:DB:1810:A:H2'	23:DB:1811:G:O4'	2.21	0.40
23:DB:2016:U:C4	23:DB:2017:U:C4	3.09	0.40
23:DB:2282:G:H5'	23:DB:2389:G:H1'	2.03	0.40
23:DB:2331:G:N2	23:DB:2385:C:C4	2.90	0.40
23:DB:2353:G:N3	43:DW:30:VAL:CG1	2.81	0.40
23:DB:2518:A:H5'	23:DB:2518:A:N3	2.36	0.40
23:DB:2684:U:O4'	32:DK:70:ARG:NH2	2.55	0.40
23:DB:2745:C:O3'	29:DG:141:GLY:HA3	2.21	0.40
23:DB:2846:G:OP1	37:DP:52:ARG:NH1	2.48	0.40
24:DV:65:VAL:C	24:DV:67:GLY:N	2.73	0.40
25:DC:189:ALA:C	25:DC:190:THR:HG23	2.41	0.40
26:DD:54:ALA:HA	26:DD:76:GLY:N	2.35	0.40
28:DF:94:ARG:HD3	28:DF:97:GLU:OE2	2.21	0.40
29:DG:152:ARG:HG3	29:DG:153:PRO:CD	2.50	0.40
31:DJ:20:ALA:HB2	31:DJ:28:LEU:HD22	2.02	0.40
31:DJ:43:GLU:O	31:DJ:44:TYR:C	2.58	0.40
31:DJ:58:ASN:O	31:DJ:59:ALA:HB3	2.21	0.40
32:DK:111:LYS:N	32:DK:111:LYS:HD3	2.36	0.40
34:DM:2:LEU:O	34:DM:69:PRO:HG3	2.21	0.40
36:DO:105:ALA:C	36:DO:107:ALA:H	2.24	0.40
37:DP:6:GLN:CA	37:DP:9:GLN:HG2	2.48	0.40
38:DQ:47:ARG:O	38:DQ:51:GLN:HG3	2.21	0.40
47:D0:25:THR:O	47:D0:26:SER:HB3	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DI:5:GLN:O	52:DI:6:ALA:CB	2.68	0.40
52:DI:112:LYS:HB2	52:DI:116:MET:SD	2.61	0.40
1:AA:126:G:H4'	1:AA:634:C:O2	2.22	0.40
1:AA:264:C:H2'	1:AA:265:G:O4'	2.22	0.40
1:AA:327:A:O2'	1:AA:329:A:H5"	2.21	0.40
1:AA:665:A:H2'	1:AA:725:G:N2	2.36	0.40
1:AA:883:C:O2'	1:AA:884:U:H5'	2.20	0.40
1:AA:1096:C:O2'	1:AA:1097:C:H5'	2.20	0.40
1:AA:1288:A:H2'	1:AA:1289:A:O4'	2.21	0.40
1:AA:1308:U:H3'	12:AM:97:ARG:NH1	2.36	0.40
1:AA:1313:U:H6	1:AA:1313:U:O5'	2.04	0.40
2:AC:31:ASN:ND2	2:AC:58:ARG:NE	2.69	0.40
2:AC:174:LEU:O	2:AC:174:LEU:HD23	2.21	0.40
3:AD:196:GLU:HG3	3:AD:197:HIS:N	2.36	0.40
6:AG:107:ALA:O	6:AG:118:ARG:HB3	2.22	0.40
6:AG:147:ASN:C	10:AK:55:ARG:HH21	2.24	0.40
7:AH:57:GLU:HG3	7:AH:58:LEU:H	1.86	0.40
9:AJ:59:LYS:C	9:AJ:61:ALA:H	2.25	0.40
13:AN:63:CYS:HB3	13:AN:68:ARG:H	1.86	0.40
14:AO:77:TYR:O	14:AO:81:ILE:HG13	2.21	0.40
15:AP:75:ILE:H	15:AP:75:ILE:HG13	1.73	0.40
16:AQ:66:LEU:HB2	16:AQ:70:LYS:HG2	2.04	0.40
18:AS:12:LEU:O	18:AS:16:LYS:HE2	2.21	0.40
20:AB:18:GLN:C	20:AB:37:VAL:HG23	2.42	0.40
20:AB:71:THR:HG21	20:AB:94:ARG:H	1.85	0.40
21:AU:16:ARG:CZ	21:AU:19:LYS:HD3	2.51	0.40
22:BA:2:G:H2'	22:BA:2:G:N3	2.37	0.40
23:BB:65:U:C2	23:BB:66:C:C5	3.09	0.40
23:BB:137:U:H2'	41:BT:1:MET:H2	1.86	0.40
23:BB:139:U:OP1	23:BB:139:U:H2'	2.21	0.40
23:BB:169:G:O2'	23:BB:170:U:H5'	2.21	0.40
23:BB:858:G:C2	23:BB:2268:A:C4	3.08	0.40
23:BB:864:G:O2'	23:BB:865:C:H5'	2.21	0.40
23:BB:999:U:O2'	23:BB:1000:A:H5'	2.21	0.40
23:BB:1165:A:O2'	23:BB:1166:G:H5'	2.22	0.40
23:BB:1190:G:O2'	23:BB:1191:G:H5'	2.21	0.40
23:BB:1280:G:C2'	23:BB:1281:G:H5'	2.51	0.40
23:BB:1513:U:H2'	23:BB:1514:G:O4'	2.22	0.40
23:BB:2143:C:H6	23:BB:2143:C:O5'	2.04	0.40
23:BB:2199:A:O2'	46:BZ:36:HIS:CE1	2.74	0.40
23:BB:2248:C:C2'	23:BB:2249:U:H5'	2.52	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2415:G:H4'	33:BL:66:PHE:HB2	2.03	0.40
23:BB:2580:U:H3'	23:BB:2581:G:C2	2.57	0.40
23:BB:2591:C:O2'	23:BB:2592:G:H5'	2.20	0.40
23:BB:2667:C:H1'	29:BG:108:PHE:HD2	1.87	0.40
23:BB:2758:A:H2'	23:BB:2759:G:H5'	2.03	0.40
25:BC:63:ILE:HD13	25:BC:63:ILE:HA	1.79	0.40
25:BC:245:THR:C	25:BC:247:TRP:N	2.75	0.40
27:BE:21:ARG:HG3	27:BE:22:ASP:O	2.22	0.40
27:BE:129:PRO:HG3	27:BE:156:ASN:OD1	2.21	0.40
28:BF:3:LEU:HB2	28:BF:100:GLU:OE1	2.21	0.40
28:BF:108:PRO:O	28:BF:110:ILE:HG23	2.22	0.40
30:BH:70:GLU:O	30:BH:71:LYS:C	2.59	0.40
31:BJ:29:ALA:O	31:BJ:32:LEU:HB2	2.21	0.40
32:BK:10:VAL:CG2	32:BK:16:ALA:HA	2.52	0.40
32:BK:31:ARG:HG3	32:BK:31:ARG:HH11	1.85	0.40
32:BK:93:GLN:CD	32:BK:94:PRO:HD2	2.41	0.40
34:BM:56:ALA:C	34:BM:58:LYS:N	2.74	0.40
39:BR:6:GLN:HE22	39:BR:9:GLY:C	2.25	0.40
41:BT:36:LYS:C	41:BT:36:LYS:HD3	2.42	0.40
42:BU:54:PRO:HG2	42:BU:55:GLY:H	1.87	0.40
43:BW:17:ALA:CA	43:BW:35:ILE:HG23	2.46	0.40
51:B4:1:MET:SD	51:B4:36:ARG:HG3	2.61	0.40
51:B4:18:LYS:HE3	51:B4:21:GLY:HA2	2.02	0.40
51:B4:22:VAL:O	51:B4:24:ARG:HG3	2.21	0.40
52:BI:73:PRO:HA	52:BI:74:PRO:HD3	1.99	0.40
52:BI:79:LEU:HD11	52:BI:131:THR:OG1	2.20	0.40
52:BI:116:MET:HE1	52:BI:124:MET:O	2.20	0.40
1:CA:360:G:O2'	1:CA:361:G:H5'	2.22	0.40
1:CA:537:G:H2'	1:CA:538:G:C8	2.55	0.40
1:CA:789:U:H2'	1:CA:791:G:OP2	2.20	0.40
1:CA:1080:A:H5"	4:CE:20:VAL:HG11	2.03	0.40
1:CA:1211:U:H5'	1:CA:1212:U:H5'	2.03	0.40
1:CA:1296:C:H5"	1:CA:1302:C:H42	1.86	0.40
1:CA:1493:A:H1'	54:CA:2062:HYG:H362	1.86	0.40
1:CA:1520:C:H2'	1:CA:1521:C:C6	2.57	0.40
2:CC:46:LEU:HB3	2:CC:49:ALA:HB3	2.03	0.40
3:CD:97:LEU:HA	3:CD:100:VAL:CG2	2.51	0.40
3:CD:117:VAL:HA	3:CD:122:ILE:HG12	2.03	0.40
4:CE:25:LYS:HG3	4:CE:26:GLY:N	2.36	0.40
4:CE:104:ILE:HG13	4:CE:122:VAL:HG23	2.02	0.40
5:CF:55:HIS:CD2	5:CF:56:LYS:HE3	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:3:ARG:NH1	6:CG:3:ARG:HG3	2.36	0.40
8:CI:48:ARG:HA	8:CI:51:LEU:HD12	2.03	0.40
11:CL:56:LEU:HD12	11:CL:60:PHE:HB2	2.04	0.40
11:CL:73:LEU:HD21	11:CL:103:CYS:CB	2.50	0.40
12:CM:22:TYR:N	12:CM:22:TYR:CD2	2.88	0.40
12:CM:102:LYS:HB2	12:CM:102:LYS:NZ	2.37	0.40
14:CO:69:LEU:HD12	14:CO:77:TYR:HB2	2.01	0.40
15:CP:22:ALA:HA	15:CP:33:ILE:HG13	2.03	0.40
17:CR:61:ALA:HB3	17:CR:67:LEU:HD12	2.04	0.40
18:CS:52:ASN:CG	18:CS:53:GLY:N	2.72	0.40
20:CB:48:MET:SD	20:CB:200:PRO:HD2	2.61	0.40
21:CU:42:THR:O	21:CU:45:LYS:N	2.54	0.40
22:DA:47:C:H5'	22:DA:48:U:OP2	2.21	0.40
22:DA:63:C:H2'	22:DA:64:G:H8	1.86	0.40
23:DB:126:A:H5'	49:D2:19:ARG:HB2	2.03	0.40
23:DB:613:A:H4'	23:DB:614:A:OP2	2.21	0.40
23:DB:666:A:O2'	23:DB:667:U:H5'	2.21	0.40
23:DB:818:G:H4'	23:DB:838:C:O3'	2.22	0.40
23:DB:1076:C:H2'	23:DB:1077:A:C8	2.57	0.40
23:DB:1076:C:H2'	23:DB:1077:A:H8	1.86	0.40
23:DB:1870:C:H2'	23:DB:1871:A:C8	2.56	0.40
23:DB:2026:U:C2	23:DB:2027:G:C8	3.08	0.40
23:DB:2027:G:C6	23:DB:2028:U:C4	3.09	0.40
23:DB:2252:G:H2'	23:DB:2253:G:C8	2.56	0.40
23:DB:2376:A:O2'	36:DO:111:ARG:NH2	2.54	0.40
23:DB:2515:C:O2'	23:DB:2516:A:H5'	2.20	0.40
23:DB:2536:G:H2'	23:DB:2537:U:O4'	2.22	0.40
23:DB:2579:C:H6	23:DB:2579:C:O5'	2.04	0.40
23:DB:2699:C:H2'	23:DB:2700:A:C8	2.56	0.40
23:DB:2772:C:H4'	26:DD:171:THR:CG2	2.51	0.40
23:DB:2848:G:N2	23:DB:2867:G:C2	2.89	0.40
25:DC:145:MET:HE1	25:DC:153:LEU:HD21	2.03	0.40
25:DC:254:LYS:HB3	25:DC:255:LYS:H	1.72	0.40
26:DD:2:ILE:H	26:DD:2:ILE:HG13	1.69	0.40
26:DD:117:GLY:O	26:DD:118:PHE:C	2.59	0.40
27:DE:38:GLY:C	27:DE:40:ARG:N	2.75	0.40
28:DF:45:ASP:C	28:DF:47:LYS:H	2.25	0.40
28:DF:137:PHE:O	28:DF:139:GLU:N	2.55	0.40
30:DH:57:LYS:O	30:DH:61:VAL:N	2.50	0.40
30:DH:108:VAL:HG12	30:DH:110:VAL:HG12	2.03	0.40
31:DJ:64:VAL:HG22	31:DJ:68:LYS:CD	2.50	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DL:74:THR:HA	33:DL:107:PHE:O	2.21	0.40
34:DM:71:LYS:HB3	34:DM:93:VAL:O	2.21	0.40
37:DP:101:GLU:OE2	37:DP:101:GLU:N	2.53	0.40
39:DR:49:ILE:HG22	39:DR:54:VAL:HB	2.02	0.40
40:DS:36:LEU:HD22	40:DS:36:LEU:N	2.33	0.40
41:DT:45:ALA:HA	41:DT:48:GLN:CB	2.50	0.40
42:DU:65:GLN:H	42:DU:65:GLN:HG2	1.54	0.40
46:DZ:76:GLU:HG3	46:DZ:77:LYS:N	2.36	0.40
49:D2:21:ARG:HD3	49:D2:43:THR:HG21	2.04	0.40
51:D4:7:VAL:HG23	51:D4:35:GLN:CB	2.51	0.40
1:AA:81:A:OP2	1:AA:81:A:O4'	2.39	0.40
1:AA:105:G:H2'	1:AA:106:C:C6	2.57	0.40
1:AA:116:A:O5'	1:AA:116:A:H8	2.04	0.40
1:AA:123:U:H2'	1:AA:124:C:C6	2.57	0.40
1:AA:191:G:H2'	1:AA:192:A:C8	2.57	0.40
1:AA:201:G:O2'	1:AA:202:G:H5'	2.22	0.40
1:AA:201:G:H2'	1:AA:202:G:C8	2.56	0.40
1:AA:818:G:H3'	1:AA:819:A:H5"	2.04	0.40
1:AA:880:C:H2'	1:AA:881:G:H8	1.85	0.40
1:AA:1033:G:H2'	1:AA:1034:G:H5"	2.03	0.40
1:AA:1067:A:H4'	1:AA:1068:G:O5'	2.21	0.40
3:AD:195:ASN:HD22	3:AD:195:ASN:HA	1.57	0.40
4:AE:105:ILE:HG12	4:AE:122:VAL:O	2.21	0.40
5:AF:54:LEU:C	5:AF:56:LYS:H	2.24	0.40
8:AI:29:ILE:HG12	8:AI:64:ILE:HD13	2.03	0.40
12:AM:80:MET:C	12:AM:82:LEU:H	2.24	0.40
13:AN:30:ILE:CG2	13:AN:44:VAL:HG21	2.49	0.40
14:AO:57:ARG:CZ	14:AO:61:GLN:HE22	2.34	0.40
14:AO:69:LEU:HD12	14:AO:77:TYR:HB2	2.03	0.40
16:AQ:13:SER:HB3	16:AQ:21:VAL:CB	2.49	0.40
16:AQ:22:VAL:O	16:AQ:42:LYS:HA	2.22	0.40
18:AS:77:ARG:HE	18:AS:77:ARG:HB3	1.64	0.40
20:AB:26:MET:HG3	20:AB:188:THR:O	2.21	0.40
20:AB:68:PHE:HD1	20:AB:89:PHE:O	2.05	0.40
21:AU:42:THR:O	21:AU:45:LYS:N	2.55	0.40
23:BB:548:G:C8	23:BB:548:G:OP2	2.74	0.40
23:BB:580:U:O3'	38:BQ:30:VAL:HG13	2.21	0.40
23:BB:711:G:O2'	23:BB:712:G:H5'	2.22	0.40
23:BB:755:U:H2'	23:BB:756:A:H8	1.86	0.40
23:BB:783:A:H4'	23:BB:1779:U:O2	2.22	0.40
23:BB:858:G:H21	23:BB:2268:A:C3'	2.29	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1179:G:C2'	23:BB:1180:U:H5'	2.51	0.40
23:BB:1390:U:O2'	23:BB:1391:U:H5'	2.21	0.40
23:BB:1446:C:H2'	23:BB:1447:C:C6	2.56	0.40
23:BB:1616:A:H4'	23:BB:1617:C:OP2	2.22	0.40
23:BB:1688:U:O2	23:BB:1700:A:H8	2.05	0.40
23:BB:1992:G:N2	23:BB:1996:C:O2'	2.54	0.40
23:BB:1997:C:OP2	26:BD:129:THR:HB	2.21	0.40
23:BB:2387:U:H1'	43:BW:38:ARG:CZ	2.52	0.40
23:BB:2437:G:H2'	23:BB:2438:U:C6	2.57	0.40
23:BB:2622:U:O2'	23:BB:2825:G:N7	2.54	0.40
23:BB:2769:U:O2'	23:BB:2770:G:H5'	2.21	0.40
23:BB:2840:C:OP1	35:BN:50:PRO:HA	2.21	0.40
25:BC:34:GLU:HG3	25:BC:34:GLU:O	2.22	0.40
25:BC:110:LYS:O	25:BC:111:ALA:C	2.59	0.40
28:BF:8:LYS:HA	28:BF:12:VAL:CG2	2.46	0.40
28:BF:139:GLU:OE2	28:BF:142:TYR:HA	2.20	0.40
29:BG:106:LEU:N	29:BG:106:LEU:HD23	2.37	0.40
32:BK:105:ARG:CD	32:BK:105:ARG:N	2.84	0.40
34:BM:38:ARG:HG3	34:BM:98:PRO:HD3	2.02	0.40
34:BM:61:GLY:HA2	34:BM:107:GLY:HA3	2.04	0.40
35:BN:21:PHE:HA	35:BN:24:MET:HB2	2.04	0.40
35:BN:49:GLU:HA	35:BN:94:TYR:CD2	2.55	0.40
36:BO:36:TYR:HA	36:BO:52:SER:CB	2.51	0.40
40:BS:2:GLU:O	40:BS:3:THR:C	2.60	0.40
40:BS:49:LYS:HA	40:BS:52:GLU:HG2	2.04	0.40
41:BT:12:ARG:CG	44:BX:29:ARG:HH12	2.33	0.40
42:BU:21:ARG:HD3	42:BU:72:PHE:CB	2.51	0.40
43:BW:18:LYS:CA	43:BW:36:ILE:HG12	2.38	0.40
47:B0:18:HIS:N	47:B0:18:HIS:ND1	2.70	0.40
48:B1:10:LEU:HD23	48:B1:35:LEU:HD21	2.03	0.40
49:B2:32:ALA:HA	49:B2:35:ARG:HB2	2.03	0.40
50:B3:26:ALA:O	50:B3:27:ASN:C	2.59	0.40
52:BI:49:GLU:OE1	52:BI:52:LEU:HD22	2.21	0.40
1:CA:176:C:H3'	1:CA:177:G:N2	2.35	0.40
1:CA:549:C:H2'	1:CA:550:G:H8	1.86	0.40
1:CA:625:U:H4'	15:CP:16:PHE:CE1	2.56	0.40
1:CA:668:G:O2'	1:CA:669:G:H5'	2.22	0.40
1:CA:812:G:O2'	1:CA:813:U:C6	2.56	0.40
1:CA:930:C:H2'	1:CA:931:C:C6	2.56	0.40
1:CA:994:A:C5	1:CA:1216:A:H4'	2.56	0.40
1:CA:1176:A:H2'	1:CA:1177:G:O4'	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1220:G:O3'	18:CS:35:ARG:HD2	2.20	0.40
1:CA:1238:A:C2	1:CA:1241:G:N3	2.88	0.40
1:CA:1271:A:H5'	1:CA:1314:C:C5'	2.49	0.40
1:CA:1324:A:H4'	1:CA:1363:A:OP1	2.22	0.40
1:CA:1329:A:H5"	12:CM:24:VAL:HA	2.03	0.40
1:CA:1489:G:H2'	1:CA:1490:U:C6	2.55	0.40
3:CD:196:GLU:HG3	3:CD:197:HIS:N	2.35	0.40
4:CE:84:VAL:CG1	4:CE:146:MET:HB3	2.49	0.40
4:CE:107:GLY:C	4:CE:109:ALA:H	2.25	0.40
6:CG:92:PRO:HG2	6:CG:93:VAL:H	1.86	0.40
7:CH:74:ILE:CG1	7:CH:128:VAL:HG22	2.47	0.40
8:CI:44:ARG:HB3	8:CI:48:ARG:NH2	2.36	0.40
9:CJ:8:ILE:HB	9:CJ:74:VAL:HB	2.02	0.40
9:CJ:26:VAL:HG12	9:CJ:30:LYS:HG3	2.04	0.40
10:CK:51:PHE:O	10:CK:51:PHE:HD1	2.04	0.40
10:CK:107:THR:HB	10:CK:108:ASN:OD1	2.20	0.40
11:CL:33:CYS:H	11:CL:54:VAL:CG1	2.33	0.40
11:CL:73:LEU:HD21	11:CL:103:CYS:HB2	2.04	0.40
12:CM:18:LEU:C	12:CM:20:SER:N	2.75	0.40
12:CM:85:TYR:HA	12:CM:88:LEU:CD1	2.52	0.40
13:CN:56:PRO:C	13:CN:58:ARG:H	2.25	0.40
16:CQ:58:VAL:HB	16:CQ:74:LEU:CD2	2.51	0.40
16:CQ:59:GLU:HG3	16:CQ:78:VAL:HG21	2.02	0.40
22:DA:3:C:H2'	22:DA:4:C:H6	1.85	0.40
22:DA:42:C:O2'	28:DF:91:ARG:NH1	2.54	0.40
22:DA:49:C:OP1	36:DO:101:GLY:HA3	2.22	0.40
22:DA:98:G:HO2'	22:DA:99:A:H5"	1.86	0.40
23:DB:689:A:H2'	23:DB:690:G:H8	1.86	0.40
23:DB:760:G:H2'	23:DB:761:A:O4'	2.21	0.40
23:DB:1126:A:H4'	23:DB:1127:A:H5"	2.03	0.40
23:DB:1204:A:N1	23:DB:1241:A:C2	2.89	0.40
23:DB:1420:A:C2'	23:DB:2211:A:H62	2.15	0.40
23:DB:1805:A:H5"	25:DC:247:TRP:CE2	2.55	0.40
23:DB:1933:G:H2'	23:DB:1934:C:H6	1.86	0.40
23:DB:2142:A:H2'	23:DB:2143:C:O4'	2.22	0.40
23:DB:2484:G:O2'	23:DB:2485:G:H5'	2.21	0.40
23:DB:2846:G:H2'	23:DB:2847:U:O4'	2.21	0.40
25:DC:4:LYS:HE3	25:DC:13:ARG:O	2.22	0.40
25:DC:20:ASN:O	25:DC:23:LEU:HB2	2.22	0.40
25:DC:86:ARG:HB3	25:DC:86:ARG:NH1	2.36	0.40
27:DE:29:HIS:O	27:DE:32:VAL:HG22	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DG:39:ALA:HB2	29:DG:57:TYR:CD2	2.57	0.40
30:DH:38:PRO:O	30:DH:40:THR:HG23	2.22	0.40
31:DJ:25:LEU:HB2	31:DJ:62:VAL:HG21	2.02	0.40
31:DJ:83:GLY:O	31:DJ:84:ILE:C	2.60	0.40
32:DK:60:ALA:CB	32:DK:86:LEU:HA	2.51	0.40
32:DK:86:LEU:H	32:DK:86:LEU:CD2	2.23	0.40
34:DM:42:THR:H	34:DM:45:GLN:HB2	1.87	0.40
37:DP:61:ARG:HE	37:DP:100:ARG:HD2	1.87	0.40
37:DP:109:ILE:H	37:DP:109:ILE:HG13	1.67	0.40
38:DQ:16:ILE:C	38:DQ:18:LYS:H	2.24	0.40
39:DR:7:SER:HA	39:DR:22:LEU:HD13	2.02	0.40
39:DR:101:ILE:HG22	39:DR:101:ILE:O	2.22	0.40
46:DZ:40:VAL:HG22	46:DZ:45:ARG:N	2.36	0.40
47:D0:27:LEU:HB2	47:D0:28:SER:H	1.65	0.40
48:D1:22:THR:OG1	48:D1:23:THR:N	2.53	0.40
50:D3:31:ILE:CG1	50:D3:35:LYS:HE3	2.51	0.40
1:AA:78:A:H8	1:AA:78:A:O5'	2.03	0.40
1:AA:140:U:H2'	1:AA:141:G:H8	1.86	0.40
1:AA:177:G:N3	1:AA:177:G:O4'	2.54	0.40
1:AA:430:A:P	3:AD:6:PRO:HA	2.61	0.40
1:AA:761:G:O2'	1:AA:762:U:H5'	2.21	0.40
1:AA:832:G:H2'	1:AA:833:G:H8	1.86	0.40
1:AA:1107:C:C4	1:AA:1108:G:N7	2.89	0.40
1:AA:1336:C:O4'	1:AA:1337:G:C2	2.74	0.40
2:AC:18:ASN:HB2	13:AN:90:GLY:HA3	2.04	0.40
4:AE:94:PHE:O	4:AE:124:ALA:HB1	2.22	0.40
6:AG:10:LYS:HB2	6:AG:10:LYS:NZ	2.35	0.40
6:AG:147:ASN:CA	10:AK:55:ARG:HH21	2.35	0.40
9:AJ:71:LEU:H	9:AJ:71:LEU:HD23	1.87	0.40
12:AM:22:TYR:N	12:AM:22:TYR:CD2	2.88	0.40
16:AQ:32:ILE:HG23	16:AQ:33:TYR:CD2	2.56	0.40
17:AR:61:ALA:HB3	17:AR:67:LEU:HD12	2.02	0.40
18:AS:20:LYS:O	18:AS:20:LYS:HD2	2.20	0.40
18:AS:33:TRP:CE3	18:AS:33:TRP:N	2.90	0.40
23:BB:28:A:O2'	23:BB:29:U:H5'	2.20	0.40
23:BB:459:U:O2'	23:BB:460:A:H5'	2.21	0.40
23:BB:719:C:O2'	23:BB:720:U:H5'	2.20	0.40
23:BB:981:A:H4'	23:BB:2037:A:H5'	2.03	0.40
23:BB:996:A:H4'	38:BQ:91:ARG:CD	2.43	0.40
23:BB:1295:C:H2'	23:BB:1296:G:C8	2.56	0.40
23:BB:1316:U:H2'	23:BB:1317:G:C8	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1495:A:H2'	23:BB:1496:A:H8	1.85	0.40
23:BB:2027:G:C2	23:BB:2028:U:C2	3.09	0.40
23:BB:2104:C:H3'	23:BB:2104:C:H6	1.87	0.40
23:BB:2208:C:O2'	23:BB:2209:G:H5'	2.21	0.40
23:BB:2525:G:C2	23:BB:2539:C:C2	3.10	0.40
23:BB:2818:U:O5'	23:BB:2837:A:H1'	2.21	0.40
26:BD:118:PHE:HE2	35:BN:1:MET:SD	2.44	0.40
27:BE:102:ARG:HG3	27:BE:102:ARG:NH2	2.36	0.40
27:BE:176:ASP:OD1	27:BE:176:ASP:C	2.59	0.40
28:BF:42:ALA:O	28:BF:45:ASP:N	2.48	0.40
28:BF:81:GLY:O	28:BF:82:TYR:C	2.60	0.40
30:BH:48:GLU:CG	30:BH:49:ALA:N	2.84	0.40
31:BJ:20:ALA:CB	31:BJ:28:LEU:HD22	2.51	0.40
31:BJ:36:LEU:CD1	31:BJ:121:LYS:HE3	2.50	0.40
33:BL:50:PHE:O	33:BL:52:GLY:N	2.54	0.40
34:BM:17:ASN:HB3	34:BM:38:ARG:NH1	2.36	0.40
36:BO:6:ALA:HB3	36:BO:10:ARG:HH11	1.86	0.40
36:BO:100:HIS:ND1	36:BO:101:GLY:N	2.69	0.40
40:BS:14:ALA:C	40:BS:16:LYS:N	2.75	0.40
41:BT:68:LYS:HE3	41:BT:68:LYS:HB2	1.79	0.40
42:BU:19:GLY:O	42:BU:20:LYS:HD3	2.22	0.40
42:BU:32:LYS:H	42:BU:32:LYS:HD3	1.87	0.40
42:BU:90:LYS:O	42:BU:91:LYS:C	2.59	0.40
45:BY:55:LYS:O	45:BY:56:VAL:C	2.59	0.40
46:BZ:5:CYS:HB3	46:BZ:10:LYS:N	2.36	0.40
46:BZ:51:VAL:HG12	46:BZ:52:SER:N	2.36	0.40
52:BI:14:ALA:HA	52:BI:45:THR:HG21	2.02	0.40
52:BI:27:LEU:HB2	52:BI:32:VAL:HG21	2.02	0.40
1:CA:95:C:O2	1:CA:95:C:C2'	2.69	0.40
1:CA:120:A:C2'	1:CA:121:U:H5"	2.40	0.40
1:CA:144:G:H2'	1:CA:145:G:O4'	2.22	0.40
1:CA:618:C:N3	1:CA:622:A:N6	2.64	0.40
1:CA:926:G:H5'	1:CA:927:G:C5'	2.51	0.40
1:CA:1148:U:O4'	8:CI:17:ARG:HD3	2.21	0.40
1:CA:1256:A:O4'	1:CA:1278:G:N2	2.54	0.40
1:CA:1320:C:H41	18:CS:36:ARG:CG	2.30	0.40
1:CA:1514:G:H2'	1:CA:1515:G:C8	2.55	0.40
2:CC:45:GLU:C	2:CC:46:LEU:HD22	2.42	0.40
4:CE:33:THR:HB	4:CE:49:TYR:CE1	2.57	0.40
5:CF:34:GLY:C	5:CF:35:LYS:HD2	2.42	0.40
8:CI:40:ARG:C	8:CI:41:GLU:HG3	2.41	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:54:VAL:HG21	8:CI:86:LEU:HD21	2.03	0.40
10:CK:18:GLY:HA2	10:CK:36:ARG:NH1	2.37	0.40
11:CL:56:LEU:HG	11:CL:60:PHE:O	2.21	0.40
12:CM:88:LEU:O	12:CM:92:ARG:HG3	2.22	0.40
16:CQ:11:VAL:HG13	16:CQ:20:ILE:CG2	2.52	0.40
18:CS:4:LEU:HD22	18:CS:7:GLY:O	2.21	0.40
22:DA:43:C:C1'	28:DF:91:ARG:HD2	2.51	0.40
23:DB:63:A:C8	23:DB:63:A:OP2	2.69	0.40
23:DB:122:G:O2'	23:DB:123:G:H5'	2.21	0.40
23:DB:130:C:O2'	23:DB:131:A:H5'	2.21	0.40
23:DB:329:G:N2	42:DU:16:LYS:HE3	2.29	0.40
23:DB:483:A:N7	23:DB:497:A:H2	2.19	0.40
23:DB:673:C:C2'	23:DB:674:G:H5'	2.52	0.40
23:DB:726:G:H5"	23:DB:1432:G:O2'	2.22	0.40
23:DB:960:A:C4'	23:DB:2457:U:H4'	2.51	0.40
23:DB:1022:G:N2	23:DB:1142:A:N1	2.69	0.40
23:DB:1459:G:N3	23:DB:1459:G:O5'	2.54	0.40
23:DB:1702:G:H2'	23:DB:1703:G:O4'	2.21	0.40
23:DB:1829:A:H3'	23:DB:1830:C:H6	1.87	0.40
23:DB:2305:U:H1'	28:DF:132:ARG:HA	2.03	0.40
23:DB:2582:G:O2'	23:DB:2583:G:H5'	2.22	0.40
24:DV:5:ASN:O	24:DV:6:ALA:HB2	2.22	0.40
24:DV:80:HIS:HA	24:DV:81:PRO:HD3	1.96	0.40
25:DC:184:GLU:O	25:DC:185:ALA:HB3	2.21	0.40
25:DC:249:VAL:O	25:DC:250:GLN:C	2.59	0.40
27:DE:34:ALA:CB	27:DE:96:VAL:HG21	2.51	0.40
27:DE:198:GLU:O	27:DE:199:MET:C	2.60	0.40
28:DF:74:ALA:CB	28:DF:78:ILE:HD13	2.51	0.40
28:DF:120:SER:OG	28:DF:129:MET:HB3	2.22	0.40
30:DH:14:SER:O	30:DH:16:GLY:N	2.54	0.40
31:DJ:45:THR:N	31:DJ:46:PRO:CD	2.83	0.40
31:DJ:77:HIS:HD2	31:DJ:83:GLY:HA3	1.87	0.40
33:DL:123:ARG:HD2	33:DL:123:ARG:C	2.41	0.40
34:DM:19:GLY:C	34:DM:97:GLN:HG3	2.41	0.40
35:DN:99:LYS:O	47:D0:41:HIS:HB2	2.21	0.40
37:DP:50:ARG:O	37:DP:51:ASN:HB2	2.22	0.40
38:DQ:3:VAL:CG1	38:DQ:4:LYS:N	2.84	0.40
40:DS:26:GLY:O	40:DS:28:LYS:N	2.54	0.40
41:DT:62:VAL:HG12	41:DT:63:VAL:N	2.37	0.40
41:DT:87:LEU:HB2	41:DT:91:GLN:HG2	2.02	0.40
44:DX:7:ARG:HD2	44:DX:7:ARG:HA	1.84	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DX:22:LEU:O	44:DX:24:GLU:N	2.52	0.40
52:DI:14:ALA:HB3	52:DI:51:GLY:H	1.87	0.40
1:AA:7:A:H2'	4:AE:123:LEU:HB2	2.03	0.40
1:AA:58:C:O2'	1:AA:388:G:N7	2.49	0.40
1:AA:80:A:OP2	1:AA:81:A:N7	2.54	0.40
1:AA:242:G:H2'	1:AA:243:A:C5'	2.52	0.40
1:AA:375:U:O2'	1:AA:376:G:H5'	2.22	0.40
1:AA:448:A:H2'	1:AA:449:G:H8	1.85	0.40
1:AA:977:A:H1'	1:AA:982:U:O4	2.21	0.40
1:AA:1053:G:C6	1:AA:1199:U:H2'	2.57	0.40
1:AA:1058:G:H2'	1:AA:1059:C:H6	1.87	0.40
1:AA:1147:C:H4'	8:AI:6:TYR:CE1	2.56	0.40
1:AA:1386:G:O2'	1:AA:1387:G:H5'	2.21	0.40
3:AD:89:LEU:HD22	3:AD:199:ILE:HD11	2.04	0.40
4:AE:25:LYS:HG3	4:AE:26:GLY:H	1.87	0.40
4:AE:71:ILE:HD12	4:AE:73:VAL:CG2	2.52	0.40
6:AG:14:ASP:OD2	6:AG:22:LEU:HD22	2.22	0.40
7:AH:24:VAL:CG1	7:AH:60:LEU:HB3	2.52	0.40
8:AI:24:ASN:O	8:AI:60:LEU:N	2.55	0.40
8:AI:42:THR:O	8:AI:45:MET:HG2	2.22	0.40
9:AJ:71:LEU:O	9:AJ:72:ARG:HD3	2.22	0.40
12:AM:29:SER:HA	12:AM:32:ILE:HG22	2.04	0.40
13:AN:46:LYS:HA	13:AN:46:LYS:HD3	1.87	0.40
14:AO:31:LEU:O	14:AO:35:ILE:HG12	2.21	0.40
14:AO:81:ILE:HG23	14:AO:86:LEU:HB2	2.04	0.40
15:AP:12:LYS:C	15:AP:14:ARG:H	2.23	0.40
16:AQ:11:VAL:HG13	16:AQ:20:ILE:CG2	2.52	0.40
16:AQ:30:HIS:HE1	16:AQ:32:ILE:HG22	1.78	0.40
16:AQ:40:THR:HG22	16:AQ:41:THR:N	2.36	0.40
16:AQ:43:LEU:HD12	16:AQ:43:LEU:N	2.37	0.40
19:AT:50:PHE:C	19:AT:52:GLU:H	2.24	0.40
22:BA:7:G:H5"	36:BO:29:HIS:CD2	2.57	0.40
23:BB:78:U:H2'	23:BB:79:C:H6	1.83	0.40
23:BB:275:C:H2'	23:BB:276:U:O4'	2.21	0.40
23:BB:324:A:H61	23:BB:338:G:C2'	2.35	0.40
23:BB:374:A:N6	23:BB:400:G:H1'	2.36	0.40
23:BB:667:U:H2'	23:BB:668:A:O4'	2.22	0.40
23:BB:821:A:H2'	23:BB:946:C:O4'	2.21	0.40
23:BB:1063:G:O2'	23:BB:1064:C:H5'	2.22	0.40
23:BB:1068:G:C6	23:BB:1069:A:N6	2.89	0.40
23:BB:1180:U:H2'	23:BB:1181:U:C6	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1210:G:H5'	23:BB:1212:G:C5'	2.50	0.40
23:BB:1539:U:O2	23:BB:1539:U:H2'	2.19	0.40
23:BB:1654:A:O2'	23:BB:1655:A:H5'	2.22	0.40
23:BB:1923:U:H2'	23:BB:1924:C:C5	2.56	0.40
23:BB:2033:A:H1'	23:BB:2035:G:OP2	2.22	0.40
23:BB:2438:U:O3'	23:BB:2439:A:H3'	2.22	0.40
23:BB:2719:G:O2'	23:BB:2846:G:H4'	2.21	0.40
23:BB:2737:G:H2'	23:BB:2738:A:H8	1.85	0.40
23:BB:2824:C:C4	23:BB:2825:G:C5	3.10	0.40
24:BV:83:LYS:HA	24:BV:84:PRO:HD3	1.93	0.40
25:BC:115:ILE:O	25:BC:115:ILE:HG13	2.21	0.40
26:BD:2:ILE:H	26:BD:2:ILE:HG13	1.69	0.40
26:BD:109:VAL:HG11	26:BD:193:VAL:CG1	2.51	0.40
27:BE:29:HIS:CA	27:BE:32:VAL:HG22	2.52	0.40
28:BF:55:ASP:O	28:BF:58:ALA:HB3	2.21	0.40
28:BF:139:GLU:O	28:BF:140:ILE:C	2.60	0.40
30:BH:103:VAL:CG2	30:BH:109:GLU:HA	2.52	0.40
33:BL:111:ILE:CG2	33:BL:112:LEU:N	2.85	0.40
35:BN:24:MET:HE3	35:BN:40:LYS:HB3	2.02	0.40
35:BN:44:LEU:O	35:BN:48:VAL:HG23	2.22	0.40
35:BN:96:ARG:HG3	35:BN:98:LEU:HD13	2.04	0.40
36:BO:29:HIS:HB3	36:BO:36:TYR:HB2	2.03	0.40
36:BO:35:ILE:HD11	36:BO:102:ARG:NE	2.36	0.40
41:BT:45:ALA:HA	41:BT:48:GLN:CG	2.51	0.40
43:BW:37:VAL:C	43:BW:38:ARG:HG2	2.42	0.40
45:BY:2:LYS:H	45:BY:2:LYS:CD	2.30	0.40
45:BY:51:SER:HA	45:BY:54:VAL:CG2	2.52	0.40
48:B1:10:LEU:HB3	48:B1:48:TYR:HB3	2.04	0.40
48:B1:33:LEU:CB	48:B1:51:ALA:HB3	2.44	0.40
50:B3:51:LYS:HD2	50:B3:54:LEU:HD22	2.04	0.40
1:CA:105:G:H2'	1:CA:106:C:C6	2.56	0.40
1:CA:261:U:OP2	19:CT:70:LYS:HE2	2.21	0.40
1:CA:423:G:N3	1:CA:423:G:H3'	2.37	0.40
1:CA:469:C:O2'	1:CA:470:C:H5'	2.22	0.40
1:CA:1388:C:O2'	1:CA:1389:C:H5'	2.21	0.40
2:CC:134:LYS:HA	2:CC:167:TYR:CE2	2.56	0.40
4:CE:110:MET:O	4:CE:113:VAL:HG22	2.22	0.40
8:CI:119:LYS:C	8:CI:121:ARG:H	2.25	0.40
9:CJ:71:LEU:H	9:CJ:71:LEU:HD23	1.87	0.40
10:CK:34:THR:HA	10:CK:41:LEU:CG	2.50	0.40
12:CM:43:LYS:C	12:CM:45:SER:H	2.24	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CN:78:LEU:HD23	13:CN:82:LYS:HB3	2.02	0.40
14:CO:77:TYR:CZ	14:CO:81:ILE:HD11	2.56	0.40
15:CP:43:ALA:HB1	15:CP:46:LYS:HE3	2.03	0.40
15:CP:71:VAL:HG13	15:CP:72:ALA:N	2.37	0.40
18:CS:2:ARG:NE	18:CS:2:ARG:CA	2.85	0.40
19:CT:20:ASN:O	19:CT:24:ARG:HB2	2.22	0.40
20:CB:184:ALA:HB3	20:CB:195:VAL:HG21	2.03	0.40
20:CB:185:ILE:HA	20:CB:199:ILE:O	2.20	0.40
20:CB:218:ALA:O	20:CB:222:GLU:N	2.53	0.40
22:DA:87:U:H2'	22:DA:88:C:O5'	2.21	0.40
23:DB:78:U:H2'	23:DB:79:C:H6	1.84	0.40
23:DB:182:A:H1'	23:DB:434:U:H5'	2.02	0.40
23:DB:584:C:OP1	38:DQ:5:ARG:CB	2.70	0.40
23:DB:656:G:H2'	23:DB:657:U:O4'	2.22	0.40
23:DB:821:A:H2'	23:DB:946:C:O4'	2.22	0.40
23:DB:901:C:H3'	23:DB:902:C:H6	1.87	0.40
23:DB:1328:A:H2'	23:DB:1330:C:C4	2.56	0.40
23:DB:1437:C:O2'	23:DB:1516:G:H4'	2.21	0.40
23:DB:1481:U:H2'	23:DB:1482:G:H4'	2.03	0.40
23:DB:1710:G:H2'	23:DB:1711:A:C8	2.57	0.40
23:DB:1797:G:C6	23:DB:1823:G:C6	3.09	0.40
23:DB:1843:C:O2'	23:DB:1844:C:H5'	2.21	0.40
23:DB:1859:U:H2'	23:DB:1860:G:C8	2.57	0.40
23:DB:1998:A:H2'	23:DB:1999:C:C6	2.56	0.40
23:DB:2255:G:H2'	23:DB:2256:G:O4'	2.22	0.40
23:DB:2314:A:H2'	23:DB:2315:G:C8	2.56	0.40
23:DB:2379:G:H5'	36:DO:21:LEU:HD21	2.03	0.40
27:DE:102:ARG:O	27:DE:106:LYS:HG3	2.21	0.40
29:DG:145:ALA:O	29:DG:148:ARG:HG3	2.20	0.40
30:DH:90:LEU:HD13	30:DH:123:ARG:C	2.42	0.40
30:DH:117:LEU:HD13	30:DH:130:VAL:HG22	2.03	0.40
30:DH:121:VAL:C	30:DH:122:LEU:HD22	2.41	0.40
34:DM:59:ARG:CZ	34:DM:60:GLN:HB3	2.52	0.40
35:DN:52:ILE:HB	35:DN:94:TYR:CD2	2.57	0.40
35:DN:96:ARG:CG	35:DN:98:LEU:HD13	2.52	0.40
37:DP:20:ARG:C	37:DP:22:GLY:H	2.25	0.40
37:DP:62:LYS:HB3	37:DP:69:VAL:CG2	2.51	0.40
46:DZ:30:LEU:HA	46:DZ:31:PRO:HD3	1.95	0.40
46:DZ:53:ALA:C	46:DZ:55:GLY:N	2.75	0.40
46:DZ:54:LYS:C	46:DZ:56:MET:N	2.75	0.40
52:DI:45:THR:O	52:DI:48:ILE:HG22	2.21	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%)	147 (72%)	40 (20%)	17 (8%)	1 9
2	CC	204/232 (88%)	148 (72%)	40 (20%)	16 (8%)	1 10
3	AD	203/205 (99%)	136 (67%)	52 (26%)	15 (7%)	1 11
3	CD	203/205 (99%)	134 (66%)	54 (27%)	15 (7%)	1 11
4	AE	148/166 (89%)	117 (79%)	27 (18%)	4 (3%)	5 33
4	CE	148/166 (89%)	117 (79%)	25 (17%)	6 (4%)	3 23
5	AF	98/135 (73%)	66 (67%)	21 (21%)	11 (11%)	0 6
5	CF	98/135 (73%)	67 (68%)	21 (21%)	10 (10%)	0 7
6	AG	148/178 (83%)	122 (82%)	18 (12%)	8 (5%)	2 17
6	CG	150/178 (84%)	124 (83%)	20 (13%)	6 (4%)	3 24
7	AH	127/129 (98%)	92 (72%)	26 (20%)	9 (7%)	1 12
7	CH	127/129 (98%)	90 (71%)	28 (22%)	9 (7%)	1 12
8	AI	125/129 (97%)	88 (70%)	29 (23%)	8 (6%)	1 14
8	CI	125/129 (97%)	88 (70%)	29 (23%)	8 (6%)	1 14
9	AJ	96/103 (93%)	69 (72%)	17 (18%)	10 (10%)	0 7
9	CJ	96/103 (93%)	68 (71%)	18 (19%)	10 (10%)	0 7
10	AK	115/128 (90%)	81 (70%)	26 (23%)	8 (7%)	1 12
10	CK	115/128 (90%)	80 (70%)	27 (24%)	8 (7%)	1 12
11	AL	121/123 (98%)	78 (64%)	29 (24%)	14 (12%)	0 5
11	CL	121/123 (98%)	79 (65%)	28 (23%)	14 (12%)	0 5
12	AM	112/117 (96%)	72 (64%)	36 (32%)	4 (4%)	3 26
12	CM	111/117 (95%)	69 (62%)	38 (34%)	4 (4%)	3 26

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
13	AN	92/100 (92%)	57 (62%)	25 (27%)	10 (11%)	0 6
13	CN	92/100 (92%)	56 (61%)	26 (28%)	10 (11%)	0 6
14	AO	86/89 (97%)	65 (76%)	16 (19%)	5 (6%)	1 16
14	CO	86/89 (97%)	65 (76%)	16 (19%)	5 (6%)	1 16
15	AP	80/82 (98%)	56 (70%)	15 (19%)	9 (11%)	0 6
15	CP	78/82 (95%)	53 (68%)	15 (19%)	10 (13%)	0 4
16	AQ	78/83 (94%)	56 (72%)	17 (22%)	5 (6%)	1 14
16	CQ	79/83 (95%)	56 (71%)	17 (22%)	6 (8%)	1 10
17	AR	53/74 (72%)	41 (77%)	10 (19%)	2 (4%)	3 25
17	CR	53/74 (72%)	41 (77%)	10 (19%)	2 (4%)	3 25
18	AS	77/91 (85%)	58 (75%)	17 (22%)	2 (3%)	5 33
18	CS	78/91 (86%)	58 (74%)	18 (23%)	2 (3%)	5 33
19	AT	83/86 (96%)	59 (71%)	19 (23%)	5 (6%)	1 15
19	CT	83/86 (96%)	59 (71%)	19 (23%)	5 (6%)	1 15
20	AB	216/240 (90%)	143 (66%)	53 (24%)	20 (9%)	0 8
20	CB	216/240 (90%)	148 (68%)	46 (21%)	22 (10%)	0 7
21	AU	49/71 (69%)	28 (57%)	14 (29%)	7 (14%)	0 3
21	CU	49/71 (69%)	28 (57%)	14 (29%)	7 (14%)	0 3
24	BV	92/94 (98%)	63 (68%)	23 (25%)	6 (6%)	1 14
24	DV	92/94 (98%)	62 (67%)	24 (26%)	6 (6%)	1 14
25	BC	269/273 (98%)	158 (59%)	65 (24%)	46 (17%)	0 2
25	DC	269/273 (98%)	158 (59%)	65 (24%)	46 (17%)	0 2
26	BD	207/209 (99%)	121 (58%)	56 (27%)	30 (14%)	0 3
26	DD	207/209 (99%)	123 (59%)	52 (25%)	32 (16%)	0 3
27	BE	199/201 (99%)	120 (60%)	56 (28%)	23 (12%)	0 5
27	DE	199/201 (99%)	120 (60%)	56 (28%)	23 (12%)	0 5
28	BF	176/178 (99%)	103 (58%)	39 (22%)	34 (19%)	0 2
28	DF	176/178 (99%)	101 (57%)	41 (23%)	34 (19%)	0 2
29	BG	174/176 (99%)	105 (60%)	37 (21%)	32 (18%)	0 2
29	DG	174/176 (99%)	105 (60%)	36 (21%)	33 (19%)	0 2
30	BH	147/149 (99%)	68 (46%)	43 (29%)	36 (24%)	0 0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
30	DH	147/149 (99%)	88 (60%)	32 (22%)	27 (18%)	0 2
31	BJ	140/142 (99%)	85 (61%)	39 (28%)	16 (11%)	0 6
31	DJ	140/142 (99%)	83 (59%)	40 (29%)	17 (12%)	0 5
32	BK	119/123 (97%)	70 (59%)	28 (24%)	21 (18%)	0 2
32	DK	119/123 (97%)	69 (58%)	27 (23%)	23 (19%)	0 2
33	BL	141/144 (98%)	75 (53%)	40 (28%)	26 (18%)	0 2
33	DL	141/144 (98%)	75 (53%)	40 (28%)	26 (18%)	0 2
34	BM	134/136 (98%)	77 (58%)	38 (28%)	19 (14%)	0 3
34	DM	134/136 (98%)	78 (58%)	35 (26%)	21 (16%)	0 2
35	BN	118/127 (93%)	73 (62%)	33 (28%)	12 (10%)	0 7
35	DN	118/127 (93%)	73 (62%)	32 (27%)	13 (11%)	0 6
36	BO	114/117 (97%)	83 (73%)	21 (18%)	10 (9%)	1 8
36	DO	114/117 (97%)	83 (73%)	20 (18%)	11 (10%)	0 8
37	BP	112/114 (98%)	59 (53%)	35 (31%)	18 (16%)	0 2
37	DP	112/114 (98%)	58 (52%)	36 (32%)	18 (16%)	0 2
38	BQ	115/117 (98%)	79 (69%)	27 (24%)	9 (8%)	1 10
38	DQ	115/117 (98%)	75 (65%)	32 (28%)	8 (7%)	1 12
39	BR	101/103 (98%)	60 (59%)	31 (31%)	10 (10%)	0 7
39	DR	101/103 (98%)	61 (60%)	29 (29%)	11 (11%)	0 6
40	BS	108/110 (98%)	75 (69%)	21 (19%)	12 (11%)	0 6
40	DS	108/110 (98%)	75 (69%)	20 (18%)	13 (12%)	0 5
41	BT	91/100 (91%)	47 (52%)	25 (28%)	19 (21%)	0 1
41	DT	91/100 (91%)	47 (52%)	23 (25%)	21 (23%)	0 1
42	BU	100/103 (97%)	53 (53%)	35 (35%)	12 (12%)	0 5
42	DU	100/103 (97%)	51 (51%)	35 (35%)	14 (14%)	0 3
43	BW	77/84 (92%)	29 (38%)	23 (30%)	25 (32%)	0 0
43	DW	77/84 (92%)	29 (38%)	22 (29%)	26 (34%)	0 0
44	BX	61/63 (97%)	37 (61%)	14 (23%)	10 (16%)	0 2
44	DX	61/63 (97%)	37 (61%)	14 (23%)	10 (16%)	0 2
45	BY	56/58 (97%)	40 (71%)	11 (20%)	5 (9%)	1 8
45	DY	56/58 (97%)	40 (71%)	11 (20%)	5 (9%)	1 8

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
46	BZ	75/78 (96%)	47 (63%)	20 (27%)	8 (11%)	0 6
46	DZ	75/78 (96%)	48 (64%)	19 (25%)	8 (11%)	0 6
47	B0	54/56 (96%)	33 (61%)	16 (30%)	5 (9%)	0 8
47	D0	54/56 (96%)	33 (61%)	16 (30%)	5 (9%)	0 8
48	B1	48/54 (89%)	34 (71%)	12 (25%)	2 (4%)	3 23
48	D1	48/54 (89%)	34 (71%)	12 (25%)	2 (4%)	3 23
49	B2	44/46 (96%)	31 (70%)	9 (20%)	4 (9%)	1 8
49	D2	44/46 (96%)	30 (68%)	8 (18%)	6 (14%)	0 4
50	B3	62/64 (97%)	41 (66%)	15 (24%)	6 (10%)	0 7
50	D3	62/64 (97%)	42 (68%)	14 (23%)	6 (10%)	0 7
51	B4	36/38 (95%)	21 (58%)	10 (28%)	5 (14%)	0 3
51	D4	36/38 (95%)	21 (58%)	9 (25%)	6 (17%)	0 2
52	BI	139/141 (99%)	119 (86%)	16 (12%)	4 (3%)	4 31
52	DI	139/141 (99%)	115 (83%)	19 (14%)	5 (4%)	3 26
All	All	11241/11918 (94%)	7279 (65%)	2673 (24%)	1289 (12%)	0 6

All (1289) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AC	112	ALA
2	AC	180	ASP
2	AC	205	GLU
4	AE	20	VAL
5	AF	98	GLU
6	AG	6	ILE
6	AG	14	ASP
8	AI	127	SER
9	AJ	36	VAL
9	AJ	57	VAL
10	AK	126	ARG
11	AL	13	ARG
11	AL	38	THR
11	AL	121	PRO
13	AN	50	LEU
14	AO	73	ASP
15	AP	44	SER
16	AQ	32	ILE

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Mol	Chain	Res	Type
20	AB	22	TRP
20	AB	58	LYS
20	AB	94	ARG
20	AB	188	THR
25	BC	18	VAL
25	BC	53	ILE
25	BC	107	LYS
25	BC	109	LEU
25	BC	123	ILE
26	BD	9	VAL
26	BD	74	GLU
26	BD	93	GLY
26	BD	106	LYS
26	BD	112	THR
26	BD	118	PHE
26	BD	122	VAL
26	BD	169	ARG
26	BD	170	VAL
26	BD	172	VAL
27	BE	7	ASP
27	BE	62	GLN
27	BE	69	ARG
27	BE	79	ARG
27	BE	167	VAL
28	BF	32	LYS
28	BF	43	ILE
28	BF	77	LYS
28	BF	78	ILE
28	BF	92	GLY
28	BF	112	ASP
28	BF	135	ILE
28	BF	138	PRO
28	BF	140	ILE
28	BF	148	VAL
29	BG	9	VAL
29	BG	85	LYS
29	BG	91	VAL
29	BG	94	ARG
29	BG	117	PRO
29	BG	125	PRO
30	BH	3	VAL
30	BH	8	LYS

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Mol	Chain	Res	Type
30	BH	10	ALA
30	BH	31	VAL
30	BH	32	PRO
30	BH	33	GLN
30	BH	60	GLU
30	BH	62	LEU
30	BH	65	ALA
30	BH	69	ALA
30	BH	125	THR
31	BJ	4	PHE
31	BJ	44	TYR
31	BJ	45	THR
31	BJ	73	VAL
32	BK	18	ARG
32	BK	31	ARG
32	BK	35	VAL
32	BK	89	ASN
32	BK	92	GLU
32	BK	119	ALA
32	BK	120	PRO
33	BL	36	LYS
33	BL	81	ASP
33	BL	89	VAL
33	BL	94	THR
33	BL	111	ILE
33	BL	116	VAL
34	BM	30	SER
34	BM	78	LEU
35	BN	11	ASN
35	BN	58	ASP
35	BN	82	GLU
35	BN	116	VAL
35	BN	117	ASP
36	BO	56	LYS
37	BP	20	ARG
37	BP	25	VAL
37	BP	50	ARG
37	BP	75	THR
37	BP	100	ARG
39	BR	7	SER
39	BR	70	GLU
40	BS	3	THR

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Mol	Chain	Res	Type
40	BS	27	LYS
40	BS	42	LYS
40	BS	59	GLU
40	BS	61	ASN
41	BT	16	VAL
41	BT	39	THR
41	BT	58	VAL
41	BT	77	ARG
41	BT	88	LYS
42	BU	6	ARG
42	BU	38	ILE
42	BU	49	PRO
42	BU	50	ALA
43	BW	30	VAL
43	BW	36	ILE
43	BW	50	VAL
43	BW	59	PHE
43	BW	60	ALA
43	BW	62	ALA
44	BX	2	LYS
45	BY	56	VAL
46	BZ	33	LEU
47	B0	42	ILE
47	B0	48	TYR
49	B2	44	VAL
52	BI	18	ASN
2	CC	112	ALA
2	CC	180	ASP
2	CC	205	GLU
4	CE	20	VAL
5	CF	41	ASP
5	CF	98	GLU
6	CG	14	ASP
8	CI	127	SER
9	CJ	36	VAL
9	CJ	57	VAL
10	CK	126	ARG
11	CL	13	ARG
11	CL	38	THR
11	CL	121	PRO
13	CN	50	LEU
14	CO	73	ASP

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Mol	Chain	Res	Type
15	CP	44	SER
16	CQ	32	ILE
16	CQ	82	VAL
20	CB	22	TRP
20	CB	58	LYS
20	CB	94	ARG
20	CB	188	THR
21	CU	23	GLU
25	DC	18	VAL
25	DC	53	ILE
25	DC	107	LYS
25	DC	109	LEU
25	DC	123	ILE
25	DC	162	GLN
26	DD	9	VAL
26	DD	74	GLU
26	DD	106	LYS
26	DD	112	THR
26	DD	118	PHE
26	DD	122	VAL
26	DD	169	ARG
26	DD	170	VAL
26	DD	172	VAL
27	DE	7	ASP
27	DE	62	GLN
27	DE	69	ARG
27	DE	79	ARG
27	DE	167	VAL
28	DF	32	LYS
28	DF	43	ILE
28	DF	77	LYS
28	DF	78	ILE
28	DF	80	GLN
28	DF	92	GLY
28	DF	112	ASP
28	DF	135	ILE
28	DF	138	PRO
28	DF	140	ILE
28	DF	148	VAL
29	DG	9	VAL
29	DG	85	LYS
29	DG	91	VAL

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Mol	Chain	Res	Type
29	DG	94	ARG
29	DG	117	PRO
29	DG	125	PRO
30	DH	3	VAL
30	DH	8	LYS
30	DH	10	ALA
30	DH	31	VAL
30	DH	32	PRO
30	DH	33	GLN
30	DH	86	ASP
30	DH	121	VAL
31	DJ	4	PHE
31	DJ	44	TYR
31	DJ	45	THR
31	DJ	73	VAL
32	DK	18	ARG
32	DK	31	ARG
32	DK	35	VAL
32	DK	89	ASN
32	DK	92	GLU
32	DK	119	ALA
32	DK	120	PRO
33	DL	36	LYS
33	DL	81	ASP
33	DL	89	VAL
33	DL	94	THR
33	DL	111	ILE
33	DL	116	VAL
34	DM	30	SER
34	DM	78	LEU
35	DN	11	ASN
35	DN	58	ASP
35	DN	82	GLU
35	DN	116	VAL
35	DN	117	ASP
36	DO	56	LYS
37	DP	25	VAL
37	DP	50	ARG
37	DP	75	THR
37	DP	100	ARG
39	DR	7	SER
39	DR	70	GLU

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Mol	Chain	Res	Type
40	DS	3	THR
40	DS	27	LYS
40	DS	42	LYS
40	DS	59	GLU
40	DS	61	ASN
41	DT	16	VAL
41	DT	39	THR
41	DT	58	VAL
41	DT	77	ARG
41	DT	88	LYS
42	DU	6	ARG
42	DU	38	ILE
42	DU	49	PRO
42	DU	50	ALA
42	DU	85	ARG
43	DW	30	VAL
43	DW	36	ILE
43	DW	50	VAL
43	DW	59	PHE
43	DW	60	ALA
43	DW	62	ALA
43	DW	70	VAL
44	DX	2	LYS
45	DY	2	LYS
45	DY	56	VAL
46	DZ	33	LEU
47	D0	42	ILE
47	D0	48	TYR
49	D2	44	VAL
52	DI	5	GLN
52	DI	18	ASN
2	AC	14	VAL
2	AC	59	PRO
2	AC	100	ILE
2	AC	153	SER
3	AD	107	GLY
3	AD	191	SER
3	AD	192	ALA
5	AF	41	ASP
5	AF	92	THR
6	AG	5	VAL
7	AH	2	MET

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Mol	Chain	Res	Type
7	AH	66	GLN
7	AH	70	VAL
7	AH	82	LEU
7	AH	114	ALA
8	AI	8	THR
9	AJ	74	VAL
9	AJ	75	ASP
10	AK	124	LYS
11	AL	14	LYS
11	AL	42	LYS
11	AL	61	GLU
11	AL	117	GLY
12	AM	3	ILE
12	AM	47	LEU
12	AM	104	ASN
13	AN	2	LYS
13	AN	70	HIS
13	AN	71	GLY
14	AO	17	ASP
15	AP	52	LEU
16	AQ	81	ALA
19	AT	41	GLY
19	AT	65	LEU
20	AB	14	HIS
20	AB	19	THR
20	AB	121	GLN
20	AB	150	ILE
21	AU	23	GLU
21	AU	25	ALA
21	AU	34	ARG
21	AU	35	GLU
24	BV	25	LYS
25	BC	3	VAL
25	BC	93	VAL
25	BC	135	PRO
25	BC	140	VAL
25	BC	142	ASN
25	BC	151	GLY
25	BC	162	GLN
25	BC	222	THR
25	BC	232	GLY
25	BC	239	PHE

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Mol	Chain	Res	Type
26	BD	24	VAL
26	BD	107	VAL
26	BD	119	ALA
26	BD	121	THR
26	BD	136	ASN
26	BD	184	ARG
26	BD	197	THR
27	BE	42	GLY
27	BE	45	ALA
27	BE	165	HIS
28	BF	11	VAL
28	BF	36	ASN
28	BF	80	GLN
28	BF	141	ASP
28	BF	149	ARG
29	BG	2	ARG
29	BG	32	LEU
29	BG	84	LYS
29	BG	89	VAL
29	BG	92	GLY
29	BG	107	GLY
30	BH	52	ALA
30	BH	59	ALA
30	BH	130	VAL
31	BJ	5	THR
31	BJ	41	LYS
31	BJ	43	GLU
31	BJ	81	ILE
31	BJ	124	VAL
31	BJ	129	GLU
32	BK	108	ARG
32	BK	113	MET
33	BL	3	LEU
33	BL	5	THR
33	BL	28	GLY
33	BL	29	LYS
33	BL	51	GLU
33	BL	52	GLY
33	BL	93	ASN
33	BL	113	ALA
34	BM	20	LEU
34	BM	36	VAL

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Mol	Chain	Res	Type
34	BM	59	ARG
34	BM	69	PRO
34	BM	79	ALA
35	BN	89	SER
35	BN	100	CYS
35	BN	101	GLY
36	BO	57	ALA
36	BO	79	ALA
36	BO	107	ALA
37	BP	32	VAL
37	BP	84	SER
37	BP	101	GLU
37	BP	108	ARG
38	BQ	87	VAL
38	BQ	91	ARG
39	BR	42	ALA
39	BR	49	ILE
39	BR	100	GLY
40	BS	25	ARG
40	BS	96	ILE
40	BS	109	ASP
41	BT	28	ASN
41	BT	35	ALA
41	BT	38	ALA
41	BT	69	ARG
42	BU	12	VAL
42	BU	85	ARG
42	BU	92	VAL
43	BW	12	GLY
43	BW	14	ASP
43	BW	23	LYS
43	BW	40	ARG
43	BW	61	LYS
43	BW	70	VAL
43	BW	76	ARG
43	BW	77	LYS
44	BX	10	SER
44	BX	36	GLN
45	BY	2	LYS
46	BZ	3	ARG
46	BZ	77	LYS
47	B0	51	ARG

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Mol	Chain	Res	Type
48	B1	4	ILE
49	B2	42	LEU
50	B3	31	ILE
52	BI	14	ALA
52	BI	23	VAL
52	BI	64	ARG
2	CC	14	VAL
2	CC	59	PRO
2	CC	100	ILE
3	CD	26	ALA
3	CD	107	GLY
3	CD	168	THR
3	CD	189	ASP
3	CD	191	SER
3	CD	192	ALA
5	CF	51	ILE
5	CF	92	THR
7	CH	2	MET
7	CH	66	GLN
7	CH	70	VAL
7	CH	82	LEU
8	CI	8	THR
9	CJ	74	VAL
9	CJ	75	ASP
10	CK	124	LYS
11	CL	14	LYS
11	CL	42	LYS
11	CL	61	GLU
11	CL	117	GLY
12	CM	3	ILE
12	CM	47	LEU
12	CM	104	ASN
13	CN	2	LYS
13	CN	70	HIS
13	CN	71	GLY
14	CO	17	ASP
15	CP	52	LEU
16	CQ	81	ALA
17	CR	20	ILE
19	CT	65	LEU
20	CB	14	HIS
20	CB	19	THR

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Mol	Chain	Res	Type
20	CB	121	GLN
20	CB	128	LEU
20	CB	131	LYS
20	CB	150	ILE
21	CU	25	ALA
21	CU	26	GLY
21	CU	34	ARG
21	CU	35	GLU
24	DV	25	LYS
25	DC	3	VAL
25	DC	52	HIS
25	DC	93	VAL
25	DC	135	PRO
25	DC	140	VAL
25	DC	142	ASN
25	DC	151	GLY
25	DC	222	THR
25	DC	232	GLY
25	DC	239	PHE
26	DD	24	VAL
26	DD	93	GLY
26	DD	107	VAL
26	DD	119	ALA
26	DD	121	THR
26	DD	136	ASN
26	DD	184	ARG
26	DD	197	THR
27	DE	42	GLY
27	DE	45	ALA
27	DE	165	HIS
28	DF	11	VAL
28	DF	36	ASN
28	DF	141	ASP
28	DF	142	TYR
28	DF	149	ARG
29	DG	2	ARG
29	DG	84	LYS
29	DG	89	VAL
29	DG	92	GLY
29	DG	107	GLY
29	DG	170	THR
30	DH	40	THR

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Mol	Chain	Res	Type
30	DH	96	THR
30	DH	102	ALA
30	DH	106	ALA
30	DH	109	GLU
30	DH	110	VAL
30	DH	113	SER
30	DH	148	ALA
31	DJ	5	THR
31	DJ	41	LYS
31	DJ	43	GLU
31	DJ	81	ILE
31	DJ	124	VAL
31	DJ	129	GLU
32	DK	108	ARG
32	DK	110	GLU
32	DK	113	MET
33	DL	3	LEU
33	DL	4	ASN
33	DL	5	THR
33	DL	28	GLY
33	DL	29	LYS
33	DL	51	GLU
33	DL	52	GLY
33	DL	93	ASN
33	DL	113	ALA
34	DM	20	LEU
34	DM	36	VAL
34	DM	59	ARG
34	DM	69	PRO
34	DM	79	ALA
34	DM	134	THR
35	DN	10	LEU
35	DN	89	SER
35	DN	100	CYS
35	DN	101	GLY
36	DO	57	ALA
36	DO	68	LYS
36	DO	79	ALA
36	DO	107	ALA
37	DP	20	ARG
37	DP	32	VAL
37	DP	84	SER

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Mol	Chain	Res	Type
37	DP	101	GLU
37	DP	108	ARG
38	DQ	87	VAL
39	DR	42	ALA
39	DR	49	ILE
39	DR	100	GLY
40	DS	25	ARG
40	DS	96	ILE
40	DS	109	ASP
41	DT	19	LYS
41	DT	28	ASN
41	DT	35	ALA
41	DT	38	ALA
41	DT	69	ARG
42	DU	12	VAL
42	DU	92	VAL
43	DW	12	GLY
43	DW	14	ASP
43	DW	23	LYS
43	DW	40	ARG
43	DW	76	ARG
43	DW	77	LYS
44	DX	10	SER
44	DX	36	GLN
46	DZ	3	ARG
46	DZ	77	LYS
47	D0	51	ARG
48	D1	4	ILE
49	D2	42	LEU
50	D3	31	ILE
2	AC	81	GLU
2	AC	104	GLU
3	AD	24	VAL
3	AD	26	ALA
3	AD	31	CYS
3	AD	168	THR
3	AD	182	LYS
3	AD	189	ASP
4	AE	144	GLU
5	AF	51	ILE
8	AI	9	GLY
9	AJ	56	HIS

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Mol	Chain	Res	Type
9	AJ	93	ALA
10	AK	88	PRO
10	AK	125	LYS
11	AL	23	LEU
11	AL	47	ALA
13	AN	21	ALA
14	AO	33	ALA
16	AQ	14	ASP
17	AR	20	ILE
19	AT	42	ASP
19	AT	67	HIS
20	AB	15	PHE
20	AB	18	GLN
20	AB	41	ASN
20	AB	76	SER
20	AB	127	LYS
20	AB	205	ALA
21	AU	22	CYS
21	AU	26	GLY
24	BV	71	LYS
25	BC	17	LYS
25	BC	34	GLU
25	BC	35	LYS
25	BC	37	SER
25	BC	52	HIS
25	BC	94	LEU
25	BC	122	ALA
25	BC	141	HIS
25	BC	145	MET
25	BC	190	THR
25	BC	200	MET
25	BC	250	GLN
25	BC	254	LYS
26	BD	127	PHE
26	BD	143	PRO
26	BD	145	SER
26	BD	159	LYS
26	BD	162	ALA
26	BD	194	PRO
27	BE	13	THR
27	BE	81	GLY
27	BE	86	ALA

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Mol	Chain	Res	Type
27	BE	97	ASN
27	BE	127	GLU
27	BE	166	LYS
28	BF	9	ASP
28	BF	28	PRO
28	BF	42	ALA
28	BF	81	GLY
28	BF	110	ILE
28	BF	125	GLY
28	BF	142	TYR
29	BG	11	PRO
29	BG	38	ASP
29	BG	61	TRP
29	BG	102	ILE
29	BG	170	THR
30	BH	7	ASP
30	BH	11	ASN
30	BH	66	ASN
30	BH	71	LYS
30	BH	77	THR
30	BH	83	LYS
30	BH	108	VAL
30	BH	122	LEU
31	BJ	14	ASP
31	BJ	72	LYS
31	BJ	111	LYS
32	BK	72	PRO
32	BK	101	GLY
32	BK	110	GLU
33	BL	4	ASN
33	BL	54	GLN
33	BL	82	LEU
34	BM	13	HIS
34	BM	60	GLN
34	BM	77	PRO
34	BM	134	THR
35	BN	10	LEU
35	BN	70	THR
35	BN	98	LEU
36	BO	9	ARG
36	BO	68	LYS
36	BO	95	SER

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Mol	Chain	Res	Type
36	BO	100	HIS
37	BP	64	SER
37	BP	104	GLY
37	BP	113	LEU
38	BQ	17	LEU
38	BQ	32	ARG
38	BQ	69	ARG
38	BQ	72	GLY
38	BQ	88	GLU
39	BR	24	LYS
39	BR	57	GLY
40	BS	60	HIS
40	BS	80	PRO
41	BT	10	VAL
41	BT	19	LYS
42	BU	16	LYS
42	BU	89	GLY
43	BW	9	THR
43	BW	13	ARG
43	BW	17	ALA
43	BW	82	GLU
44	BX	45	GLN
44	BX	62	GLY
46	BZ	35	SER
49	B2	5	PHE
51	B4	8	LYS
2	CC	81	GLU
2	CC	104	GLU
2	CC	153	SER
3	CD	24	VAL
3	CD	31	CYS
3	CD	182	LYS
4	CE	144	GLU
6	CG	3	ARG
6	CG	112	ASP
6	CG	151	ALA
7	CH	114	ALA
8	CI	9	GLY
8	CI	34	LEU
8	CI	106	ASP
9	CJ	56	HIS
9	CJ	93	ALA

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Mol	Chain	Res	Type
10	CK	71	ASP
10	CK	88	PRO
10	CK	125	LYS
11	CL	47	ALA
13	CN	21	ALA
14	CO	33	ALA
16	CQ	14	ASP
19	CT	41	GLY
19	CT	42	ASP
19	CT	67	HIS
20	CB	15	PHE
20	CB	18	GLN
20	CB	41	ASN
20	CB	76	SER
20	CB	120	SER
20	CB	130	LYS
20	CB	205	ALA
21	CU	22	CYS
24	DV	71	LYS
25	DC	17	LYS
25	DC	34	GLU
25	DC	35	LYS
25	DC	37	SER
25	DC	51	ARG
25	DC	94	LEU
25	DC	145	MET
25	DC	190	THR
25	DC	250	GLN
25	DC	254	LYS
26	DD	127	PHE
26	DD	143	PRO
26	DD	145	SER
26	DD	159	LYS
26	DD	162	ALA
26	DD	194	PRO
27	DE	13	THR
27	DE	81	GLY
27	DE	86	ALA
27	DE	97	ASN
27	DE	127	GLU
27	DE	166	LYS
28	DF	9	ASP

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Mol	Chain	Res	Type
28	DF	28	PRO
28	DF	42	ALA
28	DF	81	GLY
28	DF	125	GLY
29	DG	11	PRO
29	DG	32	LEU
29	DG	38	ASP
29	DG	61	TRP
29	DG	159	LYS
30	DH	7	ASP
30	DH	11	ASN
30	DH	12	LEU
30	DH	56	ALA
30	DH	88	GLY
31	DJ	14	ASP
31	DJ	72	LYS
31	DJ	111	LYS
32	DK	72	PRO
33	DL	82	LEU
34	DM	35	ALA
34	DM	60	GLN
34	DM	77	PRO
35	DN	98	LEU
36	DO	9	ARG
36	DO	95	SER
36	DO	100	HIS
37	DP	64	SER
38	DQ	69	ARG
38	DQ	72	GLY
38	DQ	88	GLU
38	DQ	91	ARG
39	DR	24	LYS
40	DS	60	HIS
40	DS	80	PRO
42	DU	5	ARG
42	DU	16	LYS
42	DU	89	GLY
43	DW	9	THR
43	DW	13	ARG
43	DW	17	ALA
43	DW	61	LYS
43	DW	82	GLU

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Mol	Chain	Res	Type
44	DX	62	GLY
45	DY	34	THR
46	DZ	35	SER
49	D2	5	PHE
50	D3	6	VAL
51	D4	8	LYS
52	DI	23	VAL
2	AC	3	LYS
2	AC	166	TRP
3	AD	27	ILE
3	AD	167	PRO
5	AF	48	ALA
5	AF	89	VAL
6	AG	8	GLN
6	AG	112	ASP
8	AI	25	GLY
8	AI	34	LEU
8	AI	106	ASP
10	AK	71	ASP
10	AK	107	THR
11	AL	24	GLU
11	AL	33	CYS
11	AL	122	LYS
12	AM	15	VAL
13	AN	34	ASN
13	AN	48	GLN
13	AN	61	ASN
14	AO	75	ALA
16	AQ	35	LYS
20	AB	86	CYS
20	AB	128	LEU
20	AB	211	LEU
21	AU	9	GLU
25	BC	51	ARG
25	BC	59	GLN
25	BC	64	VAL
25	BC	92	LEU
25	BC	131	MET
25	BC	189	ALA
25	BC	196	ASN
26	BD	31	ALA
27	BE	92	HIS

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Mol	Chain	Res	Type
28	BF	82	TYR
28	BF	103	ILE
28	BF	106	ALA
28	BF	124	ARG
29	BG	45	ALA
29	BG	83	THR
29	BG	100	ASN
29	BG	111	PRO
30	BH	9	VAL
30	BH	12	LEU
30	BH	73	ASN
30	BH	97	ARG
30	BH	109	GLU
30	BH	118	PRO
30	BH	146	VAL
31	BJ	26	GLY
31	BJ	58	ASN
32	BK	14	SER
32	BK	54	LYS
32	BK	90	ASN
32	BK	94	PRO
33	BL	12	SER
33	BL	15	ALA
33	BL	19	LEU
33	BL	53	GLY
34	BM	27	SER
34	BM	35	ALA
34	BM	55	ARG
34	BM	75	GLU
34	BM	106	ASP
35	BN	112	TYR
36	BO	99	TYR
37	BP	65	ASN
39	BR	98	ILE
41	BT	8	LEU
41	BT	11	LEU
41	BT	37	ASP
41	BT	86	THR
43	BW	21	GLY
43	BW	34	SER
43	BW	75	ASN
44	BX	16	THR

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Mol	Chain	Res	Type
44	BX	37	LEU
44	BX	58	ASN
45	BY	4	ILE
45	BY	34	THR
46	BZ	22	LEU
46	BZ	34	HIS
48	B1	36	LYS
50	B3	6	VAL
50	B3	20	GLY
50	B3	50	SER
50	B3	58	ILE
50	B3	59	ALA
51	B4	4	ARG
2	CC	3	LYS
2	CC	166	TRP
3	CD	18	LEU
3	CD	22	SER
3	CD	27	ILE
3	CD	59	LYS
3	CD	82	LYS
3	CD	167	PRO
5	CF	48	ALA
5	CF	89	VAL
7	CH	30	LYS
8	CI	25	GLY
9	CJ	13	PHE
10	CK	107	THR
11	CL	23	LEU
11	CL	24	GLU
11	CL	33	CYS
11	CL	122	LYS
13	CN	34	ASN
13	CN	57	SER
13	CN	61	ASN
15	CP	17	TYR
15	CP	54	LEU
16	CQ	35	LYS
20	CB	38	HIS
20	CB	86	CYS
21	CU	9	GLU
24	DV	44	HIS
25	DC	59	GLN

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Mol	Chain	Res	Type
25	DC	64	VAL
25	DC	92	LEU
25	DC	122	ALA
25	DC	131	MET
25	DC	141	HIS
25	DC	150	GLY
25	DC	161	VAL
25	DC	189	ALA
25	DC	196	ASN
25	DC	200	MET
26	DD	31	ALA
26	DD	75	ALA
27	DE	92	HIS
28	DF	20	ASN
28	DF	41	GLU
28	DF	82	TYR
28	DF	103	ILE
28	DF	106	ALA
28	DF	110	ILE
29	DG	45	ALA
29	DG	78	VAL
29	DG	83	THR
29	DG	100	ASN
29	DG	102	ILE
29	DG	111	PRO
29	DG	151	ARG
30	DH	9	VAL
30	DH	92	GLY
32	DK	14	SER
32	DK	16	ALA
32	DK	54	LYS
32	DK	90	ASN
32	DK	94	PRO
33	DL	15	ALA
33	DL	19	LEU
33	DL	53	GLY
33	DL	54	GLN
34	DM	13	HIS
34	DM	26	VAL
34	DM	27	SER
34	DM	55	ARG
34	DM	87	GLY

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Mol	Chain	Res	Type
34	DM	106	ASP
35	DN	70	THR
36	DO	99	TYR
37	DP	65	ASN
37	DP	104	GLY
37	DP	113	LEU
38	DQ	17	LEU
40	DS	21	ALA
41	DT	8	LEU
41	DT	11	LEU
41	DT	18	GLU
41	DT	29	THR
41	DT	37	ASP
41	DT	64	LYS
41	DT	86	THR
43	DW	21	GLY
43	DW	34	SER
43	DW	75	ASN
44	DX	16	THR
44	DX	45	GLN
44	DX	58	ASN
45	DY	4	ILE
46	DZ	22	LEU
46	DZ	34	HIS
47	D0	19	ASP
48	D1	36	LYS
50	D3	50	SER
50	D3	59	ALA
51	D4	4	ARG
51	D4	23	ILE
2	AC	107	LYS
2	AC	145	ALA
2	AC	189	HIS
3	AD	18	LEU
3	AD	22	SER
3	AD	59	LYS
4	AE	43	GLY
4	AE	56	PRO
5	AF	85	ILE
5	AF	95	ALA
6	AG	7	GLY
7	AH	30	LYS

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Mol	Chain	Res	Type
9	AJ	13	PHE
9	AJ	62	ARG
10	AK	14	GLN
10	AK	119	GLY
11	AL	83	GLY
13	AN	57	SER
13	AN	67	GLY
15	AP	17	TYR
15	AP	28	ARG
15	AP	54	LEU
16	AQ	31	PRO
17	AR	33	THR
20	AB	24	PRO
24	BV	44	HIS
24	BV	54	ALA
25	BC	5	CYS
25	BC	36	ASN
25	BC	105	ALA
25	BC	150	GLY
25	BC	161	VAL
25	BC	237	ARG
26	BD	75	ALA
26	BD	109	VAL
26	BD	131	ASP
27	BE	4	VAL
27	BE	12	LEU
27	BE	46	GLN
27	BE	59	PRO
27	BE	129	PRO
28	BF	20	ASN
28	BF	41	GLU
28	BF	156	THR
29	BG	78	VAL
29	BG	97	VAL
29	BG	151	ARG
29	BG	157	LYS
29	BG	159	LYS
29	BG	168	VAL
30	BH	14	SER
30	BH	16	GLY
30	BH	81	ALA
30	BH	95	GLY

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Mol	Chain	Res	Type
31	BJ	13	ARG
32	BK	3	GLN
32	BK	16	ALA
32	BK	17	ARG
32	BK	93	GLN
33	BL	41	ARG
33	BL	66	PHE
33	BL	86	GLU
34	BM	73	ILE
34	BM	87	GLY
36	BO	8	ILE
37	BP	59	THR
38	BQ	27	ARG
39	BR	46	GLU
41	BT	18	GLU
41	BT	29	THR
42	BU	37	GLY
43	BW	56	HIS
44	BX	9	LYS
46	BZ	18	ARG
47	B0	19	ASP
47	B0	54	ILE
49	B2	45	SER
51	B4	16	ILE
51	B4	23	ILE
2	CC	83	VAL
2	CC	107	LYS
2	CC	145	ALA
2	CC	167	TYR
4	CE	43	GLY
5	CF	55	HIS
5	CF	85	ILE
5	CF	95	ALA
8	CI	55	ASP
9	CJ	62	ARG
10	CK	119	GLY
12	CM	15	VAL
13	CN	48	GLN
13	CN	67	GLY
14	CO	75	ALA
16	CQ	31	PRO
17	CR	33	THR

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Mol	Chain	Res	Type
18	CS	27	LYS
20	CB	24	PRO
20	CB	211	LEU
24	DV	45	ASP
24	DV	54	ALA
25	DC	5	CYS
25	DC	36	ASN
25	DC	55	GLY
25	DC	65	ASP
25	DC	77	VAL
25	DC	105	ALA
26	DD	109	VAL
26	DD	131	ASP
26	DD	156	PHE
26	DD	173	GLN
27	DE	12	LEU
27	DE	37	ALA
27	DE	46	GLN
27	DE	59	PRO
28	DF	69	ALA
28	DF	124	ARG
28	DF	156	THR
29	DG	97	VAL
29	DG	157	LYS
29	DG	168	VAL
30	DH	16	GLY
30	DH	91	PHE
30	DH	107	GLY
31	DJ	13	ARG
31	DJ	26	GLY
31	DJ	58	ASN
32	DK	17	ARG
32	DK	45	GLU
32	DK	46	ALA
32	DK	73	ASP
32	DK	93	GLN
32	DK	101	GLY
33	DL	12	SER
33	DL	30	THR
33	DL	41	ARG
33	DL	66	PHE
33	DL	86	GLU

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Mol	Chain	Res	Type
34	DM	66	ARG
34	DM	73	ILE
34	DM	75	GLU
35	DN	107	ASN
35	DN	112	TYR
36	DO	8	ILE
36	DO	53	THR
37	DP	59	THR
38	DQ	27	ARG
39	DR	57	GLY
39	DR	82	HIS
39	DR	98	ILE
42	DU	24	VAL
43	DW	29	SER
44	DX	9	LYS
44	DX	37	LEU
46	DZ	18	ARG
47	D0	54	ILE
49	D2	45	SER
50	D3	20	GLY
50	D3	58	ILE
52	DI	6	ALA
52	DI	14	ALA
2	AC	83	VAL
2	AC	167	TYR
3	AD	82	LYS
5	AF	55	HIS
5	AF	94	HIS
5	AF	99	ALA
8	AI	55	ASP
18	AS	27	LYS
18	AS	53	GLY
20	AB	123	GLY
24	BV	45	ASP
24	BV	84	PRO
25	BC	65	ASP
26	BD	173	GLN
27	BE	37	ALA
27	BE	83	VAL
28	BF	88	VAL
29	BG	155	PRO
32	BK	73	ASP

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Mol	Chain	Res	Type
37	BP	4	ILE
39	BR	9	GLY
40	BS	21	ALA
40	BS	29	VAL
41	BT	55	VAL
41	BT	71	GLY
4	CE	56	PRO
5	CF	94	HIS
7	CH	71	VAL
10	CK	16	SER
11	CL	83	GLY
15	CP	24	SER
15	CP	28	ARG
18	CS	53	GLY
24	DV	84	PRO
25	DC	4	LYS
27	DE	83	VAL
27	DE	129	PRO
28	DF	12	VAL
28	DF	88	VAL
29	DG	60	GLY
29	DG	155	PRO
30	DH	29	PHE
33	DL	62	PRO
37	DP	4	ILE
38	DQ	32	ARG
39	DR	9	GLY
40	DS	18	ARG
40	DS	29	VAL
41	DT	10	VAL
41	DT	55	VAL
42	DU	37	GLY
42	DU	90	LYS
43	DW	46	ALA
49	D2	2	LYS
49	D2	19	ARG
51	D4	11	CYS
51	D4	16	ILE
6	AG	15	PRO
9	AJ	41	PRO
9	AJ	42	LEU
15	AP	42	ILE

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Mol	Chain	Res	Type
19	AT	3	ILE
20	AB	28	PRO
25	BC	55	GLY
25	BC	77	VAL
27	BE	96	VAL
28	BF	12	VAL
30	BH	61	VAL
30	BH	103	VAL
33	BL	62	PRO
34	BM	26	VAL
37	BP	63	ILE
42	BU	24	VAL
43	BW	53	GLY
45	BY	50	VAL
51	B4	3	VAL
6	CG	15	PRO
8	CI	71	ILE
9	CJ	42	LEU
15	CP	33	ILE
15	CP	42	ILE
25	DC	158	GLY
28	DF	145	VAL
37	DP	63	ILE
41	DT	71	GLY
45	DY	50	VAL
51	D4	3	VAL
6	AG	92	PRO
7	AH	71	VAL
7	AH	128	VAL
8	AI	71	ILE
25	BC	158	GLY
25	BC	246	PRO
28	BF	136	ILE
28	BF	145	VAL
29	BG	60	GLY
4	CE	133	ILE
6	CG	92	PRO
9	CJ	41	PRO
15	CP	49	GLY
19	CT	3	ILE
20	CB	28	PRO
25	DC	246	PRO

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Mol	Chain	Res	Type
26	DD	60	VAL
27	DE	4	VAL
27	DE	96	VAL
28	DF	136	ILE
43	DW	22	VAL
43	DW	53	GLY
14	AO	28	VAL
15	AP	33	ILE
29	BG	16	VAL
29	BG	152	ARG
30	BH	78	VAL
37	BP	91	VAL
43	BW	22	VAL
46	BZ	64	ILE
4	CE	132	PRO
7	CH	125	ILE
7	CH	128	VAL
14	CO	28	VAL
26	DD	178	VAL
29	DG	16	VAL
29	DG	152	ARG
34	DM	72	PRO
37	DP	91	VAL
43	DW	37	VAL
46	DZ	64	ILE
7	AH	125	ILE
11	AL	15	VAL
15	AP	37	GLY
15	AP	49	GLY
26	BD	60	VAL
26	BD	178	VAL
29	BG	139	VAL
33	BL	139	GLY
37	BP	83	ILE
42	BU	82	VAL
43	BW	37	VAL
44	BX	46	VAL
11	CL	15	VAL
15	CP	20	VAL
29	DG	139	VAL
37	DP	83	ILE
39	DR	101	ILE

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Mol	Chain	Res	Type
42	DU	82	VAL
44	DX	11	VAL
2	AC	80	GLY
28	BF	150	GLY
38	BQ	39	ILE
2	CC	80	GLY
26	DD	163	GLY
29	DG	90	GLY
31	DJ	22	GLY
32	DK	43	ILE
41	DT	57	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 17
2	CC	170/189 (90%)	145 (85%)	25 (15%)	3 18
3	AD	172/172 (100%)	148 (86%)	24 (14%)	3 19
3	CD	172/172 (100%)	149 (87%)	23 (13%)	4 21
4	AE	113/125 (90%)	100 (88%)	13 (12%)	5 26
4	CE	113/125 (90%)	98 (87%)	15 (13%)	4 21
5	AF	87/116 (75%)	76 (87%)	11 (13%)	4 22
5	CF	87/116 (75%)	75 (86%)	12 (14%)	3 20
6	AG	123/146 (84%)	108 (88%)	15 (12%)	5 23
6	CG	125/146 (86%)	108 (86%)	17 (14%)	3 20
7	AH	104/104 (100%)	96 (92%)	8 (8%)	13 42
7	CH	104/104 (100%)	96 (92%)	8 (8%)	13 42
8	AI	105/106 (99%)	94 (90%)	11 (10%)	7 31
8	CI	105/106 (99%)	93 (89%)	12 (11%)	5 26
9	AJ	86/90 (96%)	79 (92%)	7 (8%)	11 41

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
9	CJ	86/90 (96%)	80 (93%)	6 (7%)	15 46
10	AK	90/98 (92%)	77 (86%)	13 (14%)	3 18
10	CK	90/98 (92%)	77 (86%)	13 (14%)	3 18
11	AL	103/103 (100%)	85 (82%)	18 (18%)	2 10
11	CL	103/103 (100%)	84 (82%)	19 (18%)	1 8
12	AM	92/95 (97%)	82 (89%)	10 (11%)	6 29
12	CM	91/95 (96%)	82 (90%)	9 (10%)	8 33
13	AN	79/83 (95%)	67 (85%)	12 (15%)	3 17
13	CN	79/83 (95%)	67 (85%)	12 (15%)	3 17
14	AO	76/77 (99%)	69 (91%)	7 (9%)	9 36
14	CO	76/77 (99%)	70 (92%)	6 (8%)	12 41
15	AP	65/65 (100%)	57 (88%)	8 (12%)	4 23
15	CP	65/65 (100%)	57 (88%)	8 (12%)	4 23
16	AQ	74/77 (96%)	65 (88%)	9 (12%)	5 23
16	CQ	75/77 (97%)	65 (87%)	10 (13%)	4 21
17	AR	48/64 (75%)	46 (96%)	2 (4%)	30 63
17	CR	48/64 (75%)	46 (96%)	2 (4%)	30 63
18	AS	70/78 (90%)	52 (74%)	18 (26%)	0 3
18	CS	71/78 (91%)	53 (75%)	18 (25%)	0 3
19	AT	65/65 (100%)	53 (82%)	12 (18%)	1 8
19	CT	65/65 (100%)	53 (82%)	12 (18%)	1 8
20	AB	180/198 (91%)	152 (84%)	28 (16%)	2 16
20	CB	180/198 (91%)	150 (83%)	30 (17%)	2 12
21	AU	44/61 (72%)	35 (80%)	9 (20%)	1 6
21	CU	44/61 (72%)	35 (80%)	9 (20%)	1 6
24	BV	78/78 (100%)	68 (87%)	10 (13%)	4 22
24	DV	78/78 (100%)	69 (88%)	9 (12%)	5 26
25	BC	216/218 (99%)	178 (82%)	38 (18%)	2 10
25	DC	216/218 (99%)	175 (81%)	41 (19%)	1 8
26	BD	164/164 (100%)	140 (85%)	24 (15%)	3 18
26	DD	164/164 (100%)	140 (85%)	24 (15%)	3 18

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
27	BE	165/165 (100%)	146 (88%)	19 (12%)	5 26
27	DE	165/165 (100%)	146 (88%)	19 (12%)	5 26
28	BF	149/149 (100%)	114 (76%)	35 (24%)	1 4
28	DF	149/149 (100%)	115 (77%)	34 (23%)	1 4
29	BG	137/137 (100%)	116 (85%)	21 (15%)	2 17
29	DG	137/137 (100%)	116 (85%)	21 (15%)	2 17
30	BH	114/114 (100%)	77 (68%)	37 (32%)	0 2
30	DH	114/114 (100%)	93 (82%)	21 (18%)	1 8
31	BJ	116/116 (100%)	98 (84%)	18 (16%)	2 16
31	DJ	116/116 (100%)	98 (84%)	18 (16%)	2 16
32	BK	102/104 (98%)	79 (78%)	23 (22%)	1 4
32	DK	102/104 (98%)	79 (78%)	23 (22%)	1 4
33	BL	102/103 (99%)	89 (87%)	13 (13%)	4 22
33	DL	102/103 (99%)	90 (88%)	12 (12%)	5 25
34	BM	109/109 (100%)	88 (81%)	21 (19%)	1 7
34	DM	109/109 (100%)	88 (81%)	21 (19%)	1 7
35	BN	100/103 (97%)	82 (82%)	18 (18%)	1 9
35	DN	100/103 (97%)	81 (81%)	19 (19%)	1 8
36	BO	86/87 (99%)	69 (80%)	17 (20%)	1 7
36	DO	86/87 (99%)	69 (80%)	17 (20%)	1 7
37	BP	99/99 (100%)	80 (81%)	19 (19%)	1 7
37	DP	99/99 (100%)	81 (82%)	18 (18%)	1 9
38	BQ	89/89 (100%)	79 (89%)	10 (11%)	6 27
38	DQ	89/89 (100%)	79 (89%)	10 (11%)	6 27
39	BR	84/84 (100%)	68 (81%)	16 (19%)	1 8
39	DR	84/84 (100%)	70 (83%)	14 (17%)	2 12
40	BS	93/93 (100%)	81 (87%)	12 (13%)	4 22
40	DS	93/93 (100%)	82 (88%)	11 (12%)	5 25
41	BT	80/84 (95%)	62 (78%)	18 (22%)	1 4
41	DT	80/84 (95%)	62 (78%)	18 (22%)	1 4
42	BU	83/84 (99%)	67 (81%)	16 (19%)	1 7

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
42	DU	83/84 (99%)	67 (81%)	16 (19%)	1 7
43	BW	59/62 (95%)	42 (71%)	17 (29%)	0 2
43	DW	59/62 (95%)	42 (71%)	17 (29%)	0 2
44	BX	55/55 (100%)	42 (76%)	13 (24%)	1 4
44	DX	55/55 (100%)	42 (76%)	13 (24%)	1 4
45	BY	48/48 (100%)	40 (83%)	8 (17%)	2 12
45	DY	48/48 (100%)	40 (83%)	8 (17%)	2 12
46	BZ	67/68 (98%)	54 (81%)	13 (19%)	1 7
46	DZ	67/68 (98%)	53 (79%)	14 (21%)	1 6
47	B0	47/47 (100%)	39 (83%)	8 (17%)	2 12
47	D0	47/47 (100%)	40 (85%)	7 (15%)	3 17
48	B1	45/48 (94%)	40 (89%)	5 (11%)	6 28
48	D1	45/48 (94%)	41 (91%)	4 (9%)	9 37
49	B2	38/38 (100%)	32 (84%)	6 (16%)	2 15
49	D2	38/38 (100%)	32 (84%)	6 (16%)	2 15
50	B3	51/51 (100%)	46 (90%)	5 (10%)	8 33
50	D3	51/51 (100%)	46 (90%)	5 (10%)	8 33
51	B4	34/34 (100%)	32 (94%)	2 (6%)	19 53
51	D4	34/34 (100%)	32 (94%)	2 (6%)	19 53
52	BI	109/109 (100%)	108 (99%)	1 (1%)	78 90
52	DI	109/109 (100%)	103 (94%)	6 (6%)	21 54
All	All	9333/9704 (96%)	7895 (85%)	1438 (15%)	2 16

All (1438) 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	18	ASN
2	AC	20	THR
2	AC	27	GLU
2	AC	35	ASP
2	AC	41	TYR
2	AC	48	LYS

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Mol	Chain	Res	Type
2	AC	62	SER
2	AC	69	THR
2	AC	87	ARG
2	AC	88	LYS
2	AC	113	LYS
2	AC	128	MET
2	AC	131	ARG
2	AC	138	GLN
2	AC	163	ARG
2	AC	166	TRP
2	AC	168	ARG
2	AC	171	ARG
2	AC	174	LEU
2	AC	175	HIS
2	AC	180	ASP
2	AC	184	ASN
2	AC	206	ILE
3	AD	4	LEU
3	AD	7	LYS
3	AD	18	LEU
3	AD	25	ARG
3	AD	28	ASP
3	AD	39	GLN
3	AD	47	LEU
3	AD	49	ASP
3	AD	55	ARG
3	AD	82	LYS
3	AD	87	GLU
3	AD	94	GLU
3	AD	114	ARG
3	AD	117	VAL
3	AD	125	ASN
3	AD	135	GLN
3	AD	146	GLU
3	AD	147	LYS
3	AD	160	LEU
3	AD	162	GLU
3	AD	168	THR
3	AD	189	ASP
3	AD	190	LEU
3	AD	195	ASN
4	AE	19	ARG

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Mol	Chain	Res	Type
4	AE	23	THR
4	AE	44	ARG
4	AE	45	VAL
4	AE	55	VAL
4	AE	72	ASN
4	AE	81	GLN
4	AE	92	ARG
4	AE	105	ILE
4	AE	123	LEU
4	AE	127	TYR
4	AE	151	MET
4	AE	156	ARG
5	AF	6	ILE
5	AF	39	LEU
5	AF	51	ILE
5	AF	55	HIS
5	AF	60	VAL
5	AF	62	MET
5	AF	69	GLU
5	AF	82	ASP
5	AF	86	ARG
5	AF	94	HIS
5	AF	98	GLU
6	AG	3	ARG
6	AG	5	VAL
6	AG	10	LYS
6	AG	21	LEU
6	AG	49	LEU
6	AG	51	GLN
6	AG	55	LYS
6	AG	62	GLU
6	AG	67	ASN
6	AG	78	ARG
6	AG	89	GLU
6	AG	94	ARG
6	AG	96	ASN
6	AG	105	GLU
6	AG	113	LYS
7	AH	2	MET
7	AH	30	LYS
7	AH	55	LYS
7	AH	61	THR

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Mol	Chain	Res	Type
7	AH	72	GLU
7	AH	82	LEU
7	AH	105	THR
7	AH	113	ARG
8	AI	36	GLN
8	AI	45	MET
8	AI	59	LYS
8	AI	62	LEU
8	AI	87	MET
8	AI	93	LEU
8	AI	96	GLU
8	AI	105	ARG
8	AI	109	GLN
8	AI	112	ARG
8	AI	114	LYS
9	AJ	15	HIS
9	AJ	47	GLU
9	AJ	69	THR
9	AJ	77	VAL
9	AJ	78	GLU
9	AJ	88	MET
9	AJ	97	ASP
10	AK	22	ILE
10	AK	31	VAL
10	AK	34	THR
10	AK	51	PHE
10	AK	55	ARG
10	AK	64	VAL
10	AK	76	TYR
10	AK	82	GLU
10	AK	83	VAL
10	AK	107	THR
10	AK	115	ILE
10	AK	118	ASN
10	AK	121	ARG
11	AL	13	ARG
11	AL	14	LYS
11	AL	15	VAL
11	AL	17	LYS
11	AL	18	SER
11	AL	19	ASN
11	AL	28	GLN

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Mol	Chain	Res	Type
11	AL	35	ARG
11	AL	38	THR
11	AL	40	THR
11	AL	43	LYS
11	AL	61	GLU
11	AL	63	THR
11	AL	95	HIS
11	AL	107	LYS
11	AL	113	ARG
11	AL	119	LYS
11	AL	122	LYS
12	AM	2	ARG
12	AM	16	ILE
12	AM	28	ARG
12	AM	41	ASP
12	AM	43	LYS
12	AM	71	GLU
12	AM	80	MET
12	AM	82	LEU
12	AM	88	LEU
12	AM	102	LYS
13	AN	11	LYS
13	AN	19	TYR
13	AN	20	PHE
13	AN	25	GLU
13	AN	27	LYS
13	AN	41	TRP
13	AN	48	GLN
13	AN	49	THR
13	AN	50	LEU
13	AN	53	ASP
13	AN	58	ARG
13	AN	65	GLN
14	AO	17	ASP
14	AO	39	GLN
14	AO	53	ARG
14	AO	65	LEU
14	AO	69	LEU
14	AO	87	ARG
14	AO	88	ARG
15	AP	12	LYS
15	AP	23	ASP

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Mol	Chain	Res	Type
15	AP	26	ASN
15	AP	28	ARG
15	AP	45	GLU
15	AP	51	ARG
15	AP	55	ASP
15	AP	68	SER
16	AQ	3	LYS
16	AQ	4	ILE
16	AQ	7	LEU
16	AQ	8	GLN
16	AQ	39	ARG
16	AQ	41	THR
16	AQ	56	ASP
16	AQ	60	ILE
16	AQ	80	LYS
17	AR	23	LYS
17	AR	38	ILE
18	AS	2	ARG
18	AS	4	LEU
18	AS	6	LYS
18	AS	10	ILE
18	AS	13	HIS
18	AS	20	LYS
18	AS	23	GLU
18	AS	26	ASP
18	AS	27	LYS
18	AS	28	LYS
18	AS	32	THR
18	AS	35	ARG
18	AS	38	THR
18	AS	42	ASN
18	AS	47	THR
18	AS	60	PHE
18	AS	64	GLU
18	AS	77	ARG
19	AT	3	ILE
19	AT	4	LYS
19	AT	35	TYR
19	AT	43	LYS
19	AT	51	ASN
19	AT	52	GLU
19	AT	53	MET

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Mol	Chain	Res	Type
19	AT	57	VAL
19	AT	67	HIS
19	AT	68	LYS
19	AT	74	HIS
19	AT	84	LYS
20	AB	31	PHE
20	AB	35	ASN
20	AB	46	VAL
20	AB	49	PHE
20	AB	57	ASN
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	95	TRP
20	AB	104	LYS
20	AB	113	LEU
20	AB	115	ASP
20	AB	116	LEU
20	AB	117	GLU
20	AB	124	THR
20	AB	125	PHE
20	AB	127	LYS
20	AB	128	LEU
20	AB	145	ASN
20	AB	160	LEU
20	AB	176	ASN
20	AB	196	ASP
20	AB	199	ILE
20	AB	202	ASN
20	AB	212	TYR
21	AU	11	PHE
21	AU	15	LEU
21	AU	16	ARG
21	AU	22	CYS
21	AU	24	LYS
21	AU	32	ARG
21	AU	34	ARG
21	AU	38	GLU
21	AU	44	ARG

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Mol	Chain	Res	Type
24	BV	24	ASN
24	BV	40	ILE
24	BV	42	LEU
24	BV	51	GLN
24	BV	53	LYS
24	BV	66	ASP
24	BV	68	LYS
24	BV	69	GLU
24	BV	70	ILE
24	BV	86	LEU
25	BC	4	LYS
25	BC	6	LYS
25	BC	8	THR
25	BC	9	SER
25	BC	12	ARG
25	BC	37	SER
25	BC	43	ASN
25	BC	45	ASN
25	BC	47	ARG
25	BC	52	HIS
25	BC	62	ARG
25	BC	65	ASP
25	BC	67	LYS
25	BC	89	ASN
25	BC	90	ILE
25	BC	109	LEU
25	BC	123	ILE
25	BC	128	THR
25	BC	134	ILE
25	BC	142	ASN
25	BC	152	GLN
25	BC	155	ARG
25	BC	167	ASP
25	BC	172	THR
25	BC	173	LEU
25	BC	176	ARG
25	BC	180	MET
25	BC	181	ARG
25	BC	191	LEU
25	BC	193	GLU
25	BC	203	VAL
25	BC	224	MET

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Mol	Chain	Res	Type
25	BC	239	PHE
25	BC	249	VAL
25	BC	252	LYS
25	BC	257	ARG
25	BC	266	ILE
25	BC	269	ARG
26	BD	13	ARG
26	BD	33	ARG
26	BD	35	THR
26	BD	36	GLN
26	BD	45	TYR
26	BD	46	ARG
26	BD	56	LYS
26	BD	74	GLU
26	BD	79	LEU
26	BD	81	GLU
26	BD	84	LEU
26	BD	88	GLU
26	BD	91	THR
26	BD	114	LYS
26	BD	123	LYS
26	BD	124	ARG
26	BD	131	ASP
26	BD	142	VAL
26	BD	148	GLN
26	BD	151	THR
26	BD	154	LYS
26	BD	157	LYS
26	BD	170	VAL
26	BD	172	VAL
27	BE	3	LEU
27	BE	5	LEU
27	BE	7	ASP
27	BE	14	VAL
27	BE	21	ARG
27	BE	58	LYS
27	BE	60	TRP
27	BE	61	ARG
27	BE	62	GLN
27	BE	63	LYS
27	BE	67	ARG
27	BE	78	TRP

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Mol	Chain	Res	Type
27	BE	111	GLU
27	BE	118	LEU
27	BE	122	GLU
27	BE	147	LEU
27	BE	152	GLU
27	BE	159	LEU
27	BE	163	ASN
28	BF	3	LEU
28	BF	13	LYS
28	BF	29	ARG
28	BF	32	LYS
28	BF	47	LYS
28	BF	48	LEU
28	BF	50	ASP
28	BF	56	LEU
28	BF	62	GLN
28	BF	76	PHE
28	BF	96	TRP
28	BF	97	GLU
28	BF	100	GLU
28	BF	102	LEU
28	BF	103	ILE
28	BF	109	ARG
28	BF	111	ARG
28	BF	112	ASP
28	BF	121	PHE
28	BF	126	ASN
28	BF	129	MET
28	BF	133	GLU
28	BF	134	GLN
28	BF	137	PHE
28	BF	138	PRO
28	BF	139	GLU
28	BF	146	ASP
28	BF	147	ARG
28	BF	149	ARG
28	BF	151	LEU
28	BF	162	ASP
28	BF	168	LEU
28	BF	173	ASP
28	BF	174	PHE
28	BF	177	ARG

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Mol	Chain	Res	Type
29	BG	5	LYS
29	BG	17	LYS
29	BG	24	THR
29	BG	26	LYS
29	BG	29	ASN
29	BG	34	ARG
29	BG	54	ARG
29	BG	55	ASP
29	BG	68	ARG
29	BG	70	LEU
29	BG	74	MET
29	BG	84	LYS
29	BG	85	LYS
29	BG	94	ARG
29	BG	106	LEU
29	BG	120	ILE
29	BG	132	LEU
29	BG	138	GLN
29	BG	152	ARG
29	BG	162	ARG
29	BG	166	GLU
30	BH	3	VAL
30	BH	15	LEU
30	BH	25	TYR
30	BH	28	ASN
30	BH	32	PRO
30	BH	33	GLN
30	BH	43	ASN
30	BH	44	ILE
30	BH	47	PHE
30	BH	50	ARG
30	BH	53	GLU
30	BH	57	LYS
30	BH	62	LEU
30	BH	66	ASN
30	BH	68	ARG
30	BH	71	LYS
30	BH	73	ASN
30	BH	75	LEU
30	BH	89	LYS
30	BH	93	SER
30	BH	98	ASP

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Mol	Chain	Res	Type
30	BH	99	ILE
30	BH	101	ASP
30	BH	103	VAL
30	BH	104	THR
30	BH	108	VAL
30	BH	109	GLU
30	BH	110	VAL
30	BH	112	LYS
30	BH	115	VAL
30	BH	116	ARG
30	BH	130	VAL
30	BH	133	GLN
30	BH	135	HIS
30	BH	139	PHE
30	BH	141	LYS
30	BH	147	VAL
31	BJ	2	LYS
31	BJ	3	THR
31	BJ	12	LYS
31	BJ	28	LEU
31	BJ	36	LEU
31	BJ	39	LYS
31	BJ	43	GLU
31	BJ	44	TYR
31	BJ	54	ILE
31	BJ	65	THR
31	BJ	71	ASP
31	BJ	73	VAL
31	BJ	89	PHE
31	BJ	95	ARG
31	BJ	103	ILE
31	BJ	106	LYS
31	BJ	111	LYS
31	BJ	120	ARG
32	BK	2	ILE
32	BK	6	THR
32	BK	8	LEU
32	BK	9	ASN
32	BK	21	CYS
32	BK	32	TYR
32	BK	47	ILE
32	BK	53	LYS

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Mol	Chain	Res	Type
32	BK	54	LYS
32	BK	58	LEU
32	BK	64	ARG
32	BK	66	LYS
32	BK	72	PRO
32	BK	79	PHE
32	BK	80	ASP
32	BK	86	LEU
32	BK	87	LEU
32	BK	88	ASN
32	BK	103	VAL
32	BK	104	THR
32	BK	105	ARG
32	BK	111	LYS
32	BK	120	PRO
33	BL	4	ASN
33	BL	6	LEU
33	BL	27	LEU
33	BL	47	ARG
33	BL	60	ARG
33	BL	69	ARG
33	BL	92	LEU
33	BL	93	ASN
33	BL	95	LEU
33	BL	118	THR
33	BL	125	LEU
33	BL	126	ARG
33	BL	128	THR
34	BM	20	LEU
34	BM	25	ASP
34	BM	40	ARG
34	BM	55	ARG
34	BM	60	GLN
34	BM	63	ILE
34	BM	65	ILE
34	BM	70	ASP
34	BM	78	LEU
34	BM	81	ARG
34	BM	82	MET
34	BM	88	ASN
34	BM	93	VAL
34	BM	95	LEU

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Mol	Chain	Res	Type
34	BM	108	VAL
34	BM	110	GLU
34	BM	111	GLU
34	BM	114	ARG
34	BM	115	GLU
34	BM	131	VAL
34	BM	136	MET
35	BN	1	MET
35	BN	2	ARG
35	BN	11	ASN
35	BN	18	GLN
35	BN	28	LEU
35	BN	29	VAL
35	BN	35	LYS
35	BN	48	VAL
35	BN	62	ASN
35	BN	69	ARG
35	BN	71	ARG
35	BN	82	GLU
35	BN	86	ARG
35	BN	98	LEU
35	BN	107	ASN
35	BN	112	TYR
35	BN	118	ARG
35	BN	120	GLU
36	BO	2	ASP
36	BO	7	ARG
36	BO	9	ARG
36	BO	17	LYS
36	BO	19	GLN
36	BO	20	GLU
36	BO	21	LEU
36	BO	31	THR
36	BO	62	LEU
36	BO	69	ASP
36	BO	78	VAL
36	BO	80	GLU
36	BO	88	LYS
36	BO	98	GLN
36	BO	100	HIS
36	BO	106	LEU
36	BO	116	GLN

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Mol	Chain	Res	Type
37	BP	3	ILE
37	BP	5	LYS
37	BP	6	GLN
37	BP	19	PHE
37	BP	25	VAL
37	BP	32	VAL
37	BP	33	GLU
37	BP	43	GLU
37	BP	61	ARG
37	BP	65	ASN
37	BP	72	VAL
37	BP	80	VAL
37	BP	83	ILE
37	BP	99	LEU
37	BP	100	ARG
37	BP	101	GLU
37	BP	111	GLU
37	BP	112	ARG
37	BP	113	LEU
38	BQ	5	ARG
38	BQ	15	LYS
38	BQ	50	ARG
38	BQ	57	ARG
38	BQ	63	ARG
38	BQ	79	ILE
38	BQ	83	LYS
38	BQ	88	GLU
38	BQ	96	ASP
38	BQ	111	LYS
39	BR	2	TYR
39	BR	10	LYS
39	BR	22	LEU
39	BR	37	GLU
39	BR	39	LEU
39	BR	43	ASN
39	BR	48	LYS
39	BR	55	ASP
39	BR	70	GLU
39	BR	71	LYS
39	BR	72	VAL
39	BR	76	LYS
39	BR	82	HIS

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Mol	Chain	Res	Type
39	BR	86	GLN
39	BR	96	VAL
39	BR	99	THR
40	BS	6	LYS
40	BS	28	LYS
40	BS	37	THR
40	BS	57	ASN
40	BS	61	ASN
40	BS	62	ASP
40	BS	66	ILE
40	BS	84	ARG
40	BS	86	MET
40	BS	88	ARG
40	BS	99	ARG
40	BS	110	ARG
41	BT	2	ILE
41	BT	3	ARG
41	BT	4	GLU
41	BT	6	ARG
41	BT	9	LYS
41	BT	11	LEU
41	BT	12	ARG
41	BT	24	MET
41	BT	29	THR
41	BT	32	LEU
41	BT	34	VAL
41	BT	39	THR
41	BT	64	LYS
41	BT	68	LYS
41	BT	69	ARG
41	BT	70	HIS
41	BT	76	ARG
41	BT	81	LYS
42	BU	11	ILE
42	BU	13	LEU
42	BU	20	LYS
42	BU	26	ASN
42	BU	39	ASN
42	BU	51	LEU
42	BU	53	GLN
42	BU	60	LYS
42	BU	65	GLN

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Mol	Chain	Res	Type
42	BU	73	ASN
42	BU	78	LYS
42	BU	81	ARG
42	BU	84	PHE
42	BU	85	ARG
42	BU	88	ASP
42	BU	102	ILE
43	BW	10	ARG
43	BW	16	GLU
43	BW	19	ARG
43	BW	23	LYS
43	BW	38	ARG
43	BW	39	GLN
43	BW	40	ARG
43	BW	44	PHE
43	BW	45	HIS
43	BW	50	VAL
43	BW	61	LYS
43	BW	63	ASP
43	BW	68	PHE
43	BW	76	ARG
43	BW	77	LYS
43	BW	82	GLU
43	BW	84	GLU
44	BX	1	MET
44	BX	15	ASN
44	BX	16	THR
44	BX	21	LEU
44	BX	24	GLU
44	BX	25	GLN
44	BX	28	LEU
44	BX	29	ARG
44	BX	36	GLN
44	BX	37	LEU
44	BX	41	HIS
44	BX	48	ARG
44	BX	59	GLU
45	BY	2	LYS
45	BY	8	GLN
45	BY	9	THR
45	BY	15	ARG
45	BY	23	LEU

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Mol	Chain	Res	Type
45	BY	30	ARG
45	BY	37	ARG
45	BY	57	GLU
46	BZ	13	VAL
46	BZ	14	THR
46	BZ	22	LEU
46	BZ	27	ARG
46	BZ	28	ARG
46	BZ	37	ARG
46	BZ	41	GLU
46	BZ	46	PHE
46	BZ	48	THR
46	BZ	50	ARG
46	BZ	59	ILE
46	BZ	65	ASP
46	BZ	74	ARG
47	B0	18	HIS
47	B0	27	LEU
47	B0	37	HIS
47	B0	38	LEU
47	B0	41	HIS
47	B0	45	ASP
47	B0	51	ARG
47	B0	56	LYS
48	B1	8	ILE
48	B1	9	LYS
48	B1	34	GLU
48	B1	35	LEU
48	B1	42	VAL
49	B2	3	ARG
49	B2	19	ARG
49	B2	28	ARG
49	B2	33	ARG
49	B2	39	ARG
49	B2	42	LEU
50	B3	7	ARG
50	B3	27	ASN
50	B3	31	ILE
50	B3	46	LYS
50	B3	58	ILE
51	B4	9	LYS
51	B4	10	LEU

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Mol	Chain	Res	Type
52	BI	96	LYS
2	CC	2	GLN
2	CC	13	ILE
2	CC	17	TRP
2	CC	18	ASN
2	CC	20	THR
2	CC	27	GLU
2	CC	35	ASP
2	CC	41	TYR
2	CC	48	LYS
2	CC	62	SER
2	CC	69	THR
2	CC	87	ARG
2	CC	88	LYS
2	CC	113	LYS
2	CC	128	MET
2	CC	131	ARG
2	CC	138	GLN
2	CC	163	ARG
2	CC	166	TRP
2	CC	168	ARG
2	CC	171	ARG
2	CC	175	HIS
2	CC	180	ASP
2	CC	184	ASN
2	CC	206	ILE
3	CD	4	LEU
3	CD	7	LYS
3	CD	18	LEU
3	CD	25	ARG
3	CD	28	ASP
3	CD	39	GLN
3	CD	47	LEU
3	CD	49	ASP
3	CD	55	ARG
3	CD	82	LYS
3	CD	87	GLU
3	CD	94	GLU
3	CD	114	ARG
3	CD	117	VAL
3	CD	125	ASN
3	CD	135	GLN

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Mol	Chain	Res	Type
3	CD	146	GLU
3	CD	147	LYS
3	CD	160	LEU
3	CD	162	GLU
3	CD	168	THR
3	CD	190	LEU
3	CD	195	ASN
4	CE	9	GLU
4	CE	19	ARG
4	CE	23	THR
4	CE	44	ARG
4	CE	45	VAL
4	CE	55	VAL
4	CE	71	ILE
4	CE	72	ASN
4	CE	81	GLN
4	CE	92	ARG
4	CE	105	ILE
4	CE	123	LEU
4	CE	127	TYR
4	CE	151	MET
4	CE	156	ARG
5	CF	6	ILE
5	CF	39	LEU
5	CF	51	ILE
5	CF	55	HIS
5	CF	60	VAL
5	CF	62	MET
5	CF	64	VAL
5	CF	69	GLU
5	CF	82	ASP
5	CF	86	ARG
5	CF	94	HIS
5	CF	98	GLU
6	CG	2	ARG
6	CG	3	ARG
6	CG	8	GLN
6	CG	10	LYS
6	CG	21	LEU
6	CG	49	LEU
6	CG	51	GLN
6	CG	55	LYS

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Mol	Chain	Res	Type
6	CG	62	GLU
6	CG	67	ASN
6	CG	78	ARG
6	CG	89	GLU
6	CG	94	ARG
6	CG	96	ASN
6	CG	105	GLU
6	CG	113	LYS
6	CG	125	ASP
7	CH	2	MET
7	CH	30	LYS
7	CH	55	LYS
7	CH	61	THR
7	CH	72	GLU
7	CH	82	LEU
7	CH	105	THR
7	CH	113	ARG
8	CI	36	GLN
8	CI	45	MET
8	CI	59	LYS
8	CI	62	LEU
8	CI	87	MET
8	CI	93	LEU
8	CI	94	ARG
8	CI	96	GLU
8	CI	105	ARG
8	CI	109	GLN
8	CI	112	ARG
8	CI	114	LYS
9	CJ	15	HIS
9	CJ	47	GLU
9	CJ	69	THR
9	CJ	77	VAL
9	CJ	78	GLU
9	CJ	88	MET
10	CK	22	ILE
10	CK	31	VAL
10	CK	34	THR
10	CK	51	PHE
10	CK	55	ARG
10	CK	64	VAL
10	CK	76	TYR

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Mol	Chain	Res	Type
10	CK	82	GLU
10	CK	83	VAL
10	CK	107	THR
10	CK	115	ILE
10	CK	118	ASN
10	CK	121	ARG
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	40	THR
11	CL	43	LYS
11	CL	61	GLU
11	CL	63	THR
11	CL	95	HIS
11	CL	102	ASP
11	CL	107	LYS
11	CL	119	LYS
11	CL	122	LYS
12	CM	2	ARG
12	CM	16	ILE
12	CM	28	ARG
12	CM	41	ASP
12	CM	43	LYS
12	CM	71	GLU
12	CM	80	MET
12	CM	88	LEU
12	CM	102	LYS
13	CN	11	LYS
13	CN	19	TYR
13	CN	20	PHE
13	CN	25	GLU
13	CN	27	LYS
13	CN	41	TRP
13	CN	48	GLN
13	CN	49	THR

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Mol	Chain	Res	Type
13	CN	50	LEU
13	CN	53	ASP
13	CN	58	ARG
13	CN	65	GLN
14	CO	17	ASP
14	CO	53	ARG
14	CO	65	LEU
14	CO	69	LEU
14	CO	87	ARG
14	CO	88	ARG
15	CP	12	LYS
15	CP	23	ASP
15	CP	26	ASN
15	CP	28	ARG
15	CP	45	GLU
15	CP	51	ARG
15	CP	55	ASP
15	CP	68	SER
16	CQ	3	LYS
16	CQ	4	ILE
16	CQ	7	LEU
16	CQ	8	GLN
16	CQ	39	ARG
16	CQ	41	THR
16	CQ	56	ASP
16	CQ	60	ILE
16	CQ	80	LYS
16	CQ	83	LEU
17	CR	23	LYS
17	CR	38	ILE
18	CS	2	ARG
18	CS	4	LEU
18	CS	6	LYS
18	CS	10	ILE
18	CS	13	HIS
18	CS	20	LYS
18	CS	23	GLU
18	CS	26	ASP
18	CS	27	LYS
18	CS	28	LYS
18	CS	32	THR
18	CS	35	ARG

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Mol	Chain	Res	Type
18	CS	38	THR
18	CS	42	ASN
18	CS	47	THR
18	CS	60	PHE
18	CS	64	GLU
18	CS	77	ARG
19	CT	3	ILE
19	CT	4	LYS
19	CT	35	TYR
19	CT	43	LYS
19	CT	51	ASN
19	CT	52	GLU
19	CT	53	MET
19	CT	57	VAL
19	CT	67	HIS
19	CT	68	LYS
19	CT	74	HIS
19	CT	84	LYS
20	CB	8	MET
20	CB	31	PHE
20	CB	35	ASN
20	CB	46	VAL
20	CB	49	PHE
20	CB	57	ASN
20	CB	62	ARG
20	CB	67	LEU
20	CB	72	LYS
20	CB	87	ASP
20	CB	88	GLN
20	CB	94	ARG
20	CB	95	TRP
20	CB	104	LYS
20	CB	113	LEU
20	CB	115	ASP
20	CB	116	LEU
20	CB	117	GLU
20	CB	121	GLN
20	CB	126	ASP
20	CB	127	LYS
20	CB	130	LYS
20	CB	134	LEU
20	CB	145	ASN

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Mol	Chain	Res	Type
20	CB	160	LEU
20	CB	176	ASN
20	CB	196	ASP
20	CB	199	ILE
20	CB	202	ASN
20	CB	212	TYR
21	CU	11	PHE
21	CU	15	LEU
21	CU	16	ARG
21	CU	22	CYS
21	CU	24	LYS
21	CU	32	ARG
21	CU	34	ARG
21	CU	38	GLU
21	CU	44	ARG
24	DV	24	ASN
24	DV	40	ILE
24	DV	42	LEU
24	DV	51	GLN
24	DV	53	LYS
24	DV	68	LYS
24	DV	69	GLU
24	DV	70	ILE
24	DV	86	LEU
25	DC	4	LYS
25	DC	5	CYS
25	DC	8	THR
25	DC	9	SER
25	DC	12	ARG
25	DC	37	SER
25	DC	43	ASN
25	DC	45	ASN
25	DC	47	ARG
25	DC	52	HIS
25	DC	62	ARG
25	DC	63	ILE
25	DC	65	ASP
25	DC	67	LYS
25	DC	89	ASN
25	DC	90	ILE
25	DC	109	LEU
25	DC	123	ILE

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Mol	Chain	Res	Type
25	DC	128	THR
25	DC	134	ILE
25	DC	142	ASN
25	DC	152	GLN
25	DC	155	ARG
25	DC	167	ASP
25	DC	172	THR
25	DC	173	LEU
25	DC	176	ARG
25	DC	180	MET
25	DC	181	ARG
25	DC	191	LEU
25	DC	193	GLU
25	DC	203	VAL
25	DC	212	TRP
25	DC	224	MET
25	DC	239	PHE
25	DC	249	VAL
25	DC	252	LYS
25	DC	255	LYS
25	DC	257	ARG
25	DC	266	ILE
25	DC	269	ARG
26	DD	13	ARG
26	DD	33	ARG
26	DD	35	THR
26	DD	36	GLN
26	DD	45	TYR
26	DD	46	ARG
26	DD	56	LYS
26	DD	74	GLU
26	DD	79	LEU
26	DD	81	GLU
26	DD	84	LEU
26	DD	88	GLU
26	DD	91	THR
26	DD	114	LYS
26	DD	123	LYS
26	DD	124	ARG
26	DD	131	ASP
26	DD	142	VAL
26	DD	148	GLN

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Mol	Chain	Res	Type
26	DD	151	THR
26	DD	154	LYS
26	DD	157	LYS
26	DD	170	VAL
26	DD	172	VAL
27	DE	3	LEU
27	DE	5	LEU
27	DE	7	ASP
27	DE	14	VAL
27	DE	21	ARG
27	DE	48	THR
27	DE	58	LYS
27	DE	60	TRP
27	DE	61	ARG
27	DE	62	GLN
27	DE	63	LYS
27	DE	67	ARG
27	DE	78	TRP
27	DE	111	GLU
27	DE	118	LEU
27	DE	122	GLU
27	DE	147	LEU
27	DE	152	GLU
27	DE	159	LEU
28	DF	3	LEU
28	DF	13	LYS
28	DF	29	ARG
28	DF	32	LYS
28	DF	47	LYS
28	DF	48	LEU
28	DF	50	ASP
28	DF	56	LEU
28	DF	62	GLN
28	DF	76	PHE
28	DF	96	TRP
28	DF	97	GLU
28	DF	102	LEU
28	DF	103	ILE
28	DF	109	ARG
28	DF	111	ARG
28	DF	112	ASP
28	DF	121	PHE

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Mol	Chain	Res	Type
28	DF	126	ASN
28	DF	129	MET
28	DF	133	GLU
28	DF	134	GLN
28	DF	137	PHE
28	DF	138	PRO
28	DF	139	GLU
28	DF	146	ASP
28	DF	147	ARG
28	DF	149	ARG
28	DF	151	LEU
28	DF	162	ASP
28	DF	168	LEU
28	DF	173	ASP
28	DF	174	PHE
28	DF	177	ARG
29	DG	5	LYS
29	DG	17	LYS
29	DG	24	THR
29	DG	26	LYS
29	DG	29	ASN
29	DG	34	ARG
29	DG	54	ARG
29	DG	55	ASP
29	DG	68	ARG
29	DG	70	LEU
29	DG	74	MET
29	DG	84	LYS
29	DG	85	LYS
29	DG	94	ARG
29	DG	106	LEU
29	DG	120	ILE
29	DG	132	LEU
29	DG	138	GLN
29	DG	152	ARG
29	DG	162	ARG
29	DG	166	GLU
30	DH	3	VAL
30	DH	15	LEU
30	DH	25	TYR
30	DH	28	ASN
30	DH	32	PRO

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Mol	Chain	Res	Type
30	DH	33	GLN
30	DH	46	PHE
30	DH	50	ARG
30	DH	68	ARG
30	DH	83	LYS
30	DH	94	ILE
30	DH	97	ARG
30	DH	101	ASP
30	DH	112	LYS
30	DH	122	LEU
30	DH	124	THR
30	DH	129	GLU
30	DH	134	VAL
30	DH	137	GLU
30	DH	141	LYS
30	DH	149	GLU
31	DJ	2	LYS
31	DJ	3	THR
31	DJ	12	LYS
31	DJ	28	LEU
31	DJ	31	GLU
31	DJ	36	LEU
31	DJ	39	LYS
31	DJ	43	GLU
31	DJ	44	TYR
31	DJ	54	ILE
31	DJ	65	THR
31	DJ	73	VAL
31	DJ	89	PHE
31	DJ	95	ARG
31	DJ	103	ILE
31	DJ	106	LYS
31	DJ	111	LYS
31	DJ	120	ARG
32	DK	2	ILE
32	DK	6	THR
32	DK	8	LEU
32	DK	9	ASN
32	DK	21	CYS
32	DK	32	TYR
32	DK	47	ILE
32	DK	53	LYS

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Mol	Chain	Res	Type
32	DK	54	LYS
32	DK	58	LEU
32	DK	64	ARG
32	DK	66	LYS
32	DK	72	PRO
32	DK	79	PHE
32	DK	80	ASP
32	DK	86	LEU
32	DK	87	LEU
32	DK	88	ASN
32	DK	103	VAL
32	DK	104	THR
32	DK	105	ARG
32	DK	111	LYS
32	DK	120	PRO
33	DL	4	ASN
33	DL	6	LEU
33	DL	27	LEU
33	DL	47	ARG
33	DL	60	ARG
33	DL	69	ARG
33	DL	92	LEU
33	DL	93	ASN
33	DL	95	LEU
33	DL	118	THR
33	DL	125	LEU
33	DL	126	ARG
34	DM	20	LEU
34	DM	25	ASP
34	DM	40	ARG
34	DM	55	ARG
34	DM	60	GLN
34	DM	63	ILE
34	DM	65	ILE
34	DM	70	ASP
34	DM	78	LEU
34	DM	81	ARG
34	DM	82	MET
34	DM	88	ASN
34	DM	93	VAL
34	DM	95	LEU
34	DM	108	VAL

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Mol	Chain	Res	Type
34	DM	110	GLU
34	DM	111	GLU
34	DM	114	ARG
34	DM	115	GLU
34	DM	131	VAL
34	DM	136	MET
35	DN	1	MET
35	DN	2	ARG
35	DN	11	ASN
35	DN	18	GLN
35	DN	28	LEU
35	DN	29	VAL
35	DN	35	LYS
35	DN	48	VAL
35	DN	51	LEU
35	DN	62	ASN
35	DN	69	ARG
35	DN	71	ARG
35	DN	82	GLU
35	DN	86	ARG
35	DN	98	LEU
35	DN	107	ASN
35	DN	112	TYR
35	DN	118	ARG
35	DN	120	GLU
36	DO	7	ARG
36	DO	9	ARG
36	DO	17	LYS
36	DO	19	GLN
36	DO	20	GLU
36	DO	21	LEU
36	DO	31	THR
36	DO	62	LEU
36	DO	69	ASP
36	DO	78	VAL
36	DO	80	GLU
36	DO	88	LYS
36	DO	91	SER
36	DO	98	GLN
36	DO	100	HIS
36	DO	106	LEU
36	DO	116	GLN

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Mol	Chain	Res	Type
37	DP	3	ILE
37	DP	5	LYS
37	DP	6	GLN
37	DP	19	PHE
37	DP	25	VAL
37	DP	32	VAL
37	DP	33	GLU
37	DP	61	ARG
37	DP	65	ASN
37	DP	72	VAL
37	DP	80	VAL
37	DP	83	ILE
37	DP	99	LEU
37	DP	100	ARG
37	DP	101	GLU
37	DP	111	GLU
37	DP	112	ARG
37	DP	113	LEU
38	DQ	5	ARG
38	DQ	15	LYS
38	DQ	50	ARG
38	DQ	57	ARG
38	DQ	63	ARG
38	DQ	79	ILE
38	DQ	83	LYS
38	DQ	88	GLU
38	DQ	96	ASP
38	DQ	111	LYS
39	DR	2	TYR
39	DR	10	LYS
39	DR	22	LEU
39	DR	25	LEU
39	DR	37	GLU
39	DR	39	LEU
39	DR	43	ASN
39	DR	55	ASP
39	DR	70	GLU
39	DR	72	VAL
39	DR	76	LYS
39	DR	86	GLN
39	DR	96	VAL
39	DR	99	THR

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Mol	Chain	Res	Type
40	DS	6	LYS
40	DS	28	LYS
40	DS	37	THR
40	DS	57	ASN
40	DS	61	ASN
40	DS	62	ASP
40	DS	66	ILE
40	DS	84	ARG
40	DS	86	MET
40	DS	88	ARG
40	DS	110	ARG
41	DT	2	ILE
41	DT	3	ARG
41	DT	4	GLU
41	DT	6	ARG
41	DT	9	LYS
41	DT	11	LEU
41	DT	12	ARG
41	DT	24	MET
41	DT	29	THR
41	DT	32	LEU
41	DT	34	VAL
41	DT	39	THR
41	DT	64	LYS
41	DT	68	LYS
41	DT	69	ARG
41	DT	70	HIS
41	DT	76	ARG
41	DT	81	LYS
42	DU	11	ILE
42	DU	13	LEU
42	DU	20	LYS
42	DU	26	ASN
42	DU	39	ASN
42	DU	51	LEU
42	DU	53	GLN
42	DU	60	LYS
42	DU	65	GLN
42	DU	73	ASN
42	DU	78	LYS
42	DU	81	ARG
42	DU	84	PHE

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Mol	Chain	Res	Type
42	DU	85	ARG
42	DU	88	ASP
42	DU	102	ILE
43	DW	10	ARG
43	DW	11	ASN
43	DW	16	GLU
43	DW	19	ARG
43	DW	23	LYS
43	DW	38	ARG
43	DW	39	GLN
43	DW	40	ARG
43	DW	44	PHE
43	DW	45	HIS
43	DW	50	VAL
43	DW	63	ASP
43	DW	68	PHE
43	DW	76	ARG
43	DW	77	LYS
43	DW	82	GLU
43	DW	84	GLU
44	DX	1	MET
44	DX	15	ASN
44	DX	16	THR
44	DX	21	LEU
44	DX	24	GLU
44	DX	25	GLN
44	DX	28	LEU
44	DX	29	ARG
44	DX	36	GLN
44	DX	37	LEU
44	DX	41	HIS
44	DX	48	ARG
44	DX	59	GLU
45	DY	2	LYS
45	DY	8	GLN
45	DY	9	THR
45	DY	15	ARG
45	DY	23	LEU
45	DY	30	ARG
45	DY	37	ARG
45	DY	57	GLU
46	DZ	13	VAL

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Mol	Chain	Res	Type
46	DZ	14	THR
46	DZ	22	LEU
46	DZ	27	ARG
46	DZ	28	ARG
46	DZ	37	ARG
46	DZ	41	GLU
46	DZ	46	PHE
46	DZ	48	THR
46	DZ	50	ARG
46	DZ	59	ILE
46	DZ	65	ASP
46	DZ	70	GLU
46	DZ	74	ARG
47	D0	27	LEU
47	D0	37	HIS
47	D0	38	LEU
47	D0	41	HIS
47	D0	45	ASP
47	D0	51	ARG
47	D0	56	LYS
48	D1	8	ILE
48	D1	9	LYS
48	D1	35	LEU
48	D1	42	VAL
49	D2	3	ARG
49	D2	19	ARG
49	D2	28	ARG
49	D2	33	ARG
49	D2	39	ARG
49	D2	42	LEU
50	D3	7	ARG
50	D3	27	ASN
50	D3	31	ILE
50	D3	46	LYS
50	D3	58	ILE
51	D4	9	LYS
51	D4	10	LEU
52	DI	2	LYS
52	DI	54	ILE
52	DI	91	LYS
52	DI	99	LYS
52	DI	121	ILE

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Mol	Chain	Res	Type
52	DI	140	GLU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (346) such sidechains are listed below:

Mol	Chain	Res	Type
2	AC	2	GLN
2	AC	7	ASN
2	AC	31	ASN
2	AC	68	HIS
2	AC	139	ASN
3	AD	35	GLN
3	AD	39	GLN
3	AD	53	GLN
3	AD	70	GLN
3	AD	88	ASN
3	AD	115	GLN
3	AD	135	GLN
3	AD	195	ASN
4	AE	18	ASN
4	AE	72	ASN
4	AE	81	GLN
4	AE	131	ASN
5	AF	46	GLN
6	AG	27	ASN
6	AG	67	ASN
6	AG	121	ASN
6	AG	129	ASN
6	AG	141	HIS
7	AH	3	GLN
7	AH	75	GLN
7	AH	117	GLN
8	AI	30	ASN
8	AI	31	GLN
8	AI	36	GLN
8	AI	80	HIS
8	AI	109	GLN
9	AJ	15	HIS
9	AJ	20	GLN
9	AJ	56	HIS
9	AJ	70	HIS
10	AK	14	GLN
10	AK	28	ASN

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Mol	Chain	Res	Type
10	AK	39	ASN
10	AK	118	ASN
11	AL	5	GLN
11	AL	28	GLN
11	AL	45	ASN
11	AL	71	HIS
12	AM	7	ASN
13	AN	34	ASN
13	AN	48	GLN
13	AN	61	ASN
14	AO	27	GLN
14	AO	36	ASN
14	AO	39	GLN
14	AO	61	GLN
15	AP	9	HIS
15	AP	29	ASN
15	AP	40	ASN
16	AQ	50	ASN
17	AR	53	GLN
17	AR	73	HIS
18	AS	42	ASN
18	AS	56	HIS
18	AS	68	HIS
19	AT	67	HIS
19	AT	74	HIS
20	AB	14	HIS
20	AB	23	ASN
20	AB	35	ASN
20	AB	38	HIS
20	AB	41	ASN
20	AB	119	GLN
20	AB	145	ASN
20	AB	169	HIS
20	AB	202	ASN
24	BV	44	HIS
24	BV	51	GLN
24	BV	80	HIS
25	BC	43	ASN
25	BC	45	ASN
25	BC	59	GLN
25	BC	85	ASN
25	BC	114	GLN

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Mol	Chain	Res	Type
25	BC	133	ASN
25	BC	152	GLN
25	BC	162	GLN
25	BC	196	ASN
26	BD	32	ASN
26	BD	36	GLN
26	BD	49	GLN
26	BD	126	ASN
26	BD	136	ASN
26	BD	148	GLN
26	BD	173	GLN
27	BE	29	HIS
27	BE	30	GLN
27	BE	62	GLN
27	BE	90	GLN
27	BE	94	GLN
27	BE	195	GLN
28	BF	26	GLN
28	BF	36	ASN
28	BF	51	ASN
28	BF	62	GLN
28	BF	80	GLN
28	BF	134	GLN
29	BG	29	ASN
29	BG	63	GLN
29	BG	87	GLN
29	BG	103	ASN
29	BG	127	GLN
30	BH	28	ASN
30	BH	66	ASN
30	BH	73	ASN
31	BJ	130	HIS
31	BJ	138	GLN
32	BK	5	GLN
32	BK	13	ASN
32	BK	89	ASN
33	BL	4	ASN
33	BL	54	GLN
33	BL	104	GLN
34	BM	17	ASN
34	BM	60	GLN
34	BM	88	ASN

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Mol	Chain	Res	Type
35	BN	11	ASN
35	BN	62	ASN
35	BN	107	ASN
36	BO	19	GLN
36	BO	29	HIS
36	BO	38	GLN
36	BO	61	GLN
36	BO	104	GLN
37	BP	11	GLN
37	BP	40	GLN
37	BP	74	GLN
37	BP	76	HIS
37	BP	114	ASN
38	BQ	51	GLN
38	BQ	71	ASN
38	BQ	80	ASN
39	BR	6	GLN
39	BR	82	HIS
39	BR	86	GLN
40	BS	61	ASN
41	BT	48	GLN
41	BT	59	ASN
41	BT	72	GLN
41	BT	91	GLN
41	BT	92	ASN
42	BU	26	ASN
42	BU	65	GLN
42	BU	68	ASN
42	BU	73	ASN
43	BW	11	ASN
43	BW	39	GLN
43	BW	49	ASN
43	BW	56	HIS
43	BW	75	ASN
44	BX	20	ASN
44	BX	25	GLN
44	BX	27	ASN
44	BX	31	GLN
44	BX	58	ASN
45	BY	33	HIS
45	BY	48	ASN
46	BZ	6	GLN

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Mol	Chain	Res	Type
46	BZ	23	ASN
46	BZ	36	HIS
47	B0	3	GLN
49	B2	6	GLN
49	B2	29	GLN
50	B3	42	HIS
51	B4	35	GLN
52	BI	11	GLN
52	BI	29	GLN
52	BI	33	ASN
52	BI	93	ASN
2	CC	2	GLN
2	CC	7	ASN
2	CC	31	ASN
2	CC	68	HIS
2	CC	139	ASN
3	CD	35	GLN
3	CD	39	GLN
3	CD	53	GLN
3	CD	70	GLN
3	CD	135	GLN
3	CD	195	ASN
4	CE	18	ASN
4	CE	72	ASN
4	CE	81	GLN
4	CE	131	ASN
5	CF	46	GLN
6	CG	27	ASN
6	CG	67	ASN
6	CG	121	ASN
6	CG	129	ASN
6	CG	141	HIS
7	CH	3	GLN
7	CH	117	GLN
8	CI	30	ASN
8	CI	31	GLN
8	CI	36	GLN
8	CI	80	HIS
8	CI	109	GLN
9	CJ	15	HIS
9	CJ	20	GLN
9	CJ	35	GLN

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Mol	Chain	Res	Type
9	CJ	56	HIS
9	CJ	70	HIS
10	CK	14	GLN
10	CK	28	ASN
10	CK	39	ASN
10	CK	118	ASN
11	CL	5	GLN
11	CL	28	GLN
11	CL	45	ASN
11	CL	71	HIS
12	CM	7	ASN
13	CN	34	ASN
13	CN	48	GLN
13	CN	61	ASN
14	CO	27	GLN
14	CO	36	ASN
14	CO	39	GLN
14	CO	61	GLN
15	CP	9	HIS
15	CP	29	ASN
15	CP	40	ASN
16	CQ	50	ASN
17	CR	53	GLN
17	CR	73	HIS
18	CS	42	ASN
18	CS	56	HIS
18	CS	68	HIS
19	CT	67	HIS
19	CT	74	HIS
20	CB	14	HIS
20	CB	23	ASN
20	CB	35	ASN
20	CB	41	ASN
20	CB	119	GLN
20	CB	121	GLN
20	CB	145	ASN
20	CB	169	HIS
20	CB	202	ASN
24	DV	44	HIS
24	DV	51	GLN
24	DV	80	HIS
24	DV	88	HIS

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Mol	Chain	Res	Type
25	DC	43	ASN
25	DC	45	ASN
25	DC	59	GLN
25	DC	85	ASN
25	DC	114	GLN
25	DC	133	ASN
25	DC	152	GLN
25	DC	162	GLN
25	DC	196	ASN
26	DD	32	ASN
26	DD	36	GLN
26	DD	49	GLN
26	DD	126	ASN
26	DD	136	ASN
26	DD	148	GLN
26	DD	173	GLN
27	DE	30	GLN
27	DE	62	GLN
27	DE	90	GLN
27	DE	195	GLN
28	DF	26	GLN
28	DF	36	ASN
28	DF	51	ASN
28	DF	62	GLN
28	DF	80	GLN
28	DF	134	GLN
29	DG	29	ASN
29	DG	87	GLN
29	DG	103	ASN
29	DG	127	GLN
29	DG	142	GLN
30	DH	28	ASN
30	DH	43	ASN
30	DH	66	ASN
30	DH	133	GLN
31	DJ	130	HIS
31	DJ	138	GLN
32	DK	5	GLN
32	DK	13	ASN
32	DK	89	ASN
33	DL	4	ASN
33	DL	54	GLN

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Mol	Chain	Res	Type
33	DL	104	GLN
34	DM	17	ASN
34	DM	60	GLN
34	DM	88	ASN
35	DN	11	ASN
35	DN	23	ASN
35	DN	62	ASN
35	DN	107	ASN
36	DO	19	GLN
36	DO	38	GLN
36	DO	61	GLN
36	DO	100	HIS
36	DO	104	GLN
37	DP	11	GLN
37	DP	40	GLN
37	DP	74	GLN
37	DP	76	HIS
37	DP	114	ASN
38	DQ	51	GLN
38	DQ	71	ASN
38	DQ	80	ASN
39	DR	6	GLN
39	DR	82	HIS
39	DR	86	GLN
40	DS	57	ASN
40	DS	61	ASN
41	DT	48	GLN
41	DT	72	GLN
41	DT	91	GLN
41	DT	92	ASN
42	DU	26	ASN
42	DU	65	GLN
42	DU	68	ASN
42	DU	73	ASN
43	DW	11	ASN
43	DW	39	GLN
43	DW	49	ASN
43	DW	56	HIS
43	DW	75	ASN
44	DX	20	ASN
44	DX	25	GLN
44	DX	27	ASN

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Mol	Chain	Res	Type
44	DX	31	GLN
44	DX	58	ASN
45	DY	33	HIS
45	DY	48	ASN
46	DZ	6	GLN
46	DZ	23	ASN
46	DZ	36	HIS
47	D0	3	GLN
49	D2	6	GLN
49	D2	29	GLN
50	D3	42	HIS
51	D4	35	GLN
52	DI	5	GLN
52	DI	11	GLN
52	DI	33	ASN

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1529/1542 (99%)	257 (16%)	27 (1%)
1	CA	1529/1542 (99%)	240 (15%)	27 (1%)
22	BA	116/120 (96%)	22 (18%)	0
22	DA	116/120 (96%)	22 (18%)	0
23	BB	2837/2904 (97%)	460 (16%)	17 (0%)
23	DB	2837/2904 (97%)	460 (16%)	21 (0%)
All	All	8964/9132 (98%)	1461 (16%)	92 (1%)

All (1461) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	6	G
1	AA	9	G
1	AA	14	U
1	AA	32	A
1	AA	39	G
1	AA	47	C
1	AA	48	C
1	AA	52	C
1	AA	54	C
1	AA	55	A
1	AA	61	G

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Mol	Chain	Res	Type
1	AA	65	A
1	AA	70	U
1	AA	71	A
1	AA	72	A
1	AA	75	G
1	AA	76	G
1	AA	79	G
1	AA	80	A
1	AA	81	A
1	AA	82	G
1	AA	83	C
1	AA	84	U
1	AA	85	U
1	AA	86	G
1	AA	88	U
1	AA	89	U
1	AA	90	C
1	AA	92	U
1	AA	93	U
1	AA	94	G
1	AA	95	C
1	AA	121	U
1	AA	130	A
1	AA	131	A
1	AA	164	G
1	AA	177	G
1	AA	182	A
1	AA	183	C
1	AA	197	A
1	AA	206	C
1	AA	209	U
1	AA	210	C
1	AA	233	C
1	AA	239	U
1	AA	240	G
1	AA	243	A
1	AA	244	U
1	AA	245	U
1	AA	247	G
1	AA	250	A
1	AA	251	G
1	AA	253	A

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Mol	Chain	Res	Type
1	AA	256	U
1	AA	257	G
1	AA	258	G
1	AA	266	G
1	AA	267	C
1	AA	280	C
1	AA	289	G
1	AA	321	A
1	AA	328	C
1	AA	329	A
1	AA	330	C
1	AA	332	G
1	AA	352	C
1	AA	353	A
1	AA	354	G
1	AA	367	U
1	AA	372	C
1	AA	373	A
1	AA	381	C
1	AA	384	G
1	AA	392	C
1	AA	397	A
1	AA	398	U
1	AA	406	G
1	AA	408	A
1	AA	411	A
1	AA	412	A
1	AA	413	G
1	AA	415	A
1	AA	421	U
1	AA	422	C
1	AA	429	U
1	AA	430	A
1	AA	435	A
1	AA	438	U
1	AA	460	A
1	AA	461	A
1	AA	462	G
1	AA	463	U
1	AA	464	U
1	AA	465	A
1	AA	466	A

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Mol	Chain	Res	Type
1	AA	467	U
1	AA	468	A
1	AA	479	U
1	AA	484	G
1	AA	485	U
1	AA	486	U
1	AA	493	A
1	AA	500	G
1	AA	511	C
1	AA	512	U
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	596	A
1	AA	633	G
1	AA	653	U
1	AA	661	G
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	747	A
1	AA	748	G
1	AA	755	G
1	AA	777	A
1	AA	781	A
1	AA	782	A
1	AA	785	G
1	AA	793	U
1	AA	794	A
1	AA	812	G
1	AA	815	A

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Mol	Chain	Res	Type
1	AA	817	C
1	AA	818	G
1	AA	819	A
1	AA	828	U
1	AA	829	G
1	AA	841	C
1	AA	843	U
1	AA	844	G
1	AA	845	A
1	AA	846	G
1	AA	847	G
1	AA	849	G
1	AA	914	A
1	AA	926	G
1	AA	927	G
1	AA	931	C
1	AA	933	G
1	AA	934	C
1	AA	935	A
1	AA	960	U
1	AA	961	U
1	AA	966	G
1	AA	968	A
1	AA	969	A
1	AA	974	A
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	984	C
1	AA	991	U
1	AA	992	U
1	AA	993	G
1	AA	1003	G
1	AA	1004	A
1	AA	1010	U
1	AA	1019	A
1	AA	1020	G
1	AA	1028	C
1	AA	1030	U
1	AA	1031	C
1	AA	1034	G
1	AA	1035	A

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Mol	Chain	Res	Type
1	AA	1041	G
1	AA	1049	U
1	AA	1050	G
1	AA	1054	C
1	AA	1065	U
1	AA	1066	C
1	AA	1081	A
1	AA	1094	G
1	AA	1101	A
1	AA	1136	C
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1146	A
1	AA	1159	U
1	AA	1167	A
1	AA	1168	U
1	AA	1174	G
1	AA	1179	A
1	AA	1181	G
1	AA	1184	G
1	AA	1196	A
1	AA	1197	A
1	AA	1202	U
1	AA	1212	U
1	AA	1213	A
1	AA	1214	C
1	AA	1225	A
1	AA	1226	C
1	AA	1227	A
1	AA	1238	A
1	AA	1240	U
1	AA	1250	A
1	AA	1256	A
1	AA	1261	A
1	AA	1278	G
1	AA	1279	G
1	AA	1280	A
1	AA	1281	C
1	AA	1285	A
1	AA	1286	U
1	AA	1287	A

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Mol	Chain	Res	Type
1	AA	1297	G
1	AA	1300	G
1	AA	1301	U
1	AA	1302	C
1	AA	1303	C
1	AA	1305	G
1	AA	1316	G
1	AA	1317	C
1	AA	1323	G
1	AA	1336	C
1	AA	1362	A
1	AA	1363	A
1	AA	1364	U
1	AA	1398	A
1	AA	1400	C
1	AA	1401	G
1	AA	1410	A
1	AA	1432	G
1	AA	1446	A
1	AA	1448	C
1	AA	1452	C
1	AA	1475	G
1	AA	1490	U
1	AA	1491	G
1	AA	1492	A
1	AA	1493	A
1	AA	1494	G
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	1533	C
1	AA	1534	A
22	BA	11	C
22	BA	12	C
22	BA	13	G
22	BA	16	G
22	BA	26	C
22	BA	29	A

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Mol	Chain	Res	Type
22	BA	30	C
22	BA	35	C
22	BA	42	C
22	BA	44	G
22	BA	57	A
22	BA	66	A
22	BA	67	G
22	BA	74	U
22	BA	88	C
22	BA	90	C
22	BA	96	G
22	BA	99	A
22	BA	108	A
22	BA	109	A
22	BA	112	G
22	BA	116	G
23	BB	2	G
23	BB	34	U
23	BB	46	G
23	BB	51	G
23	BB	63	A
23	BB	71	A
23	BB	74	A
23	BB	75	G
23	BB	84	A
23	BB	91	A
23	BB	98	G
23	BB	100	U
23	BB	101	A
23	BB	102	U
23	BB	118	A
23	BB	119	A
23	BB	120	U
23	BB	125	A
23	BB	126	A
23	BB	128	C
23	BB	138	U
23	BB	139	U
23	BB	140	C
23	BB	141	G
23	BB	142	A
23	BB	160	A

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Mol	Chain	Res	Type
23	BB	162	U
23	BB	163	C
23	BB	180	G
23	BB	181	A
23	BB	196	A
23	BB	199	A
23	BB	215	G
23	BB	216	A
23	BB	221	A
23	BB	222	A
23	BB	230	G
23	BB	233	A
23	BB	241	A
23	BB	248	G
23	BB	252	G
23	BB	255	A
23	BB	265	A
23	BB	266	G
23	BB	267	C
23	BB	268	C
23	BB	271	G
23	BB	277	G
23	BB	279	A
23	BB	280	U
23	BB	281	C
23	BB	299	A
23	BB	311	A
23	BB	323	C
23	BB	329	G
23	BB	330	A
23	BB	331	C
23	BB	333	G
23	BB	343	C
23	BB	346	A
23	BB	353	C
23	BB	355	U
23	BB	364	C
23	BB	367	G
23	BB	371	A
23	BB	372	G
23	BB	386	G
23	BB	387	U

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Mol	Chain	Res	Type
23	BB	395	U
23	BB	396	G
23	BB	411	G
23	BB	412	A
23	BB	424	G
23	BB	444	C
23	BB	456	C
23	BB	457	A
23	BB	473	G
23	BB	479	A
23	BB	480	A
23	BB	481	G
23	BB	490	C
23	BB	491	G
23	BB	502	A
23	BB	504	A
23	BB	505	A
23	BB	508	A
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	548	G
23	BB	549	G
23	BB	550	C
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

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Mol	Chain	Res	Type
23	BB	647	G
23	BB	654	A
23	BB	655	A
23	BB	671	C
23	BB	686	U
23	BB	699	A
23	BB	717	C
23	BB	718	A
23	BB	719	C
23	BB	727	A
23	BB	730	A
23	BB	743	A
23	BB	746	U
23	BB	747	U
23	BB	775	G
23	BB	782	A
23	BB	783	A
23	BB	784	G
23	BB	785	G
23	BB	789	A
23	BB	798	G
23	BB	805	G
23	BB	811	U
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	876	C
23	BB	899	A
23	BB	910	A
23	BB	912	C
23	BB	919	U
23	BB	931	U
23	BB	932	U
23	BB	933	A
23	BB	941	A
23	BB	946	C

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Mol	Chain	Res	Type
23	BB	961	C
23	BB	974	G
23	BB	982	C
23	BB	983	A
23	BB	991	C
23	BB	995	C
23	BB	996	A
23	BB	1012	U
23	BB	1013	C
23	BB	1022	G
23	BB	1025	G
23	BB	1033	U
23	BB	1043	C
23	BB	1046	A
23	BB	1047	G
23	BB	1056	G
23	BB	1062	G
23	BB	1070	A
23	BB	1088	A
23	BB	1090	A
23	BB	1110	G
23	BB	1111	A
23	BB	1112	G
23	BB	1132	U
23	BB	1133	A
23	BB	1134	A
23	BB	1135	C
23	BB	1136	G
23	BB	1139	G
23	BB	1142	A
23	BB	1156	A
23	BB	1171	G
23	BB	1172	C
23	BB	1173	U
23	BB	1174	U
23	BB	1176	U
23	BB	1177	G
23	BB	1181	U
23	BB	1186	G
23	BB	1194	A
23	BB	1205	A
23	BB	1211	C

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Mol	Chain	Res	Type
23	BB	1212	G
23	BB	1218	G
23	BB	1237	A
23	BB	1241	A
23	BB	1242	U
23	BB	1248	G
23	BB	1249	U
23	BB	1250	G
23	BB	1251	C
23	BB	1253	A
23	BB	1256	G
23	BB	1266	G
23	BB	1271	G
23	BB	1272	A
23	BB	1275	A
23	BB	1276	A
23	BB	1301	A
23	BB	1325	U
23	BB	1337	G
23	BB	1341	G
23	BB	1352	U
23	BB	1365	A
23	BB	1368	G
23	BB	1371	G
23	BB	1379	U
23	BB	1383	A
23	BB	1384	A
23	BB	1386	C
23	BB	1396	U
23	BB	1397	U
23	BB	1416	G
23	BB	1419	A
23	BB	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	1458	U
23	BB	1459	G

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Mol	Chain	Res	Type
23	BB	1460	U
23	BB	1461	C
23	BB	1470	A
23	BB	1475	G
23	BB	1476	U
23	BB	1477	A
23	BB	1482	G
23	BB	1490	A
23	BB	1493	C
23	BB	1494	A
23	BB	1504	A
23	BB	1507	C
23	BB	1508	A
23	BB	1509	A
23	BB	1510	G
23	BB	1519	G
23	BB	1524	G
23	BB	1535	A
23	BB	1537	G
23	BB	1540	G
23	BB	1552	A
23	BB	1558	C
23	BB	1559	U
23	BB	1560	G
23	BB	1569	A
23	BB	1578	U
23	BB	1583	A
23	BB	1584	U
23	BB	1585	C
23	BB	1608	A
23	BB	1610	A
23	BB	1613	G
23	BB	1616	A
23	BB	1619	G
23	BB	1634	A
23	BB	1635	A
23	BB	1647	U
23	BB	1648	U
23	BB	1674	G
23	BB	1700	A
23	BB	1714	U
23	BB	1715	G

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Mol	Chain	Res	Type
23	BB	1722	A
23	BB	1723	G
23	BB	1729	U
23	BB	1730	C
23	BB	1733	G
23	BB	1738	G
23	BB	1756	G
23	BB	1758	U
23	BB	1764	C
23	BB	1772	A
23	BB	1773	A
23	BB	1800	C
23	BB	1816	C
23	BB	1829	A
23	BB	1857	G
23	BB	1870	C
23	BB	1906	G
23	BB	1913	A
23	BB	1914	C
23	BB	1919	A
23	BB	1926	U
23	BB	1929	G
23	BB	1930	G
23	BB	1938	A
23	BB	1939	U
23	BB	1940	U
23	BB	1955	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	2022	U
23	BB	2023	C
23	BB	2031	A
23	BB	2043	C
23	BB	2055	C
23	BB	2056	G

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Mol	Chain	Res	Type
23	BB	2060	A
23	BB	2061	G
23	BB	2062	A
23	BB	2069	G
23	BB	2093	G
23	BB	2102	G
23	BB	2103	C
23	BB	2104	C
23	BB	2105	U
23	BB	2109	U
23	BB	2140	G
23	BB	2144	G
23	BB	2145	C
23	BB	2147	A
23	BB	2148	G
23	BB	2149	U
23	BB	2152	G
23	BB	2153	C
23	BB	2157	G
23	BB	2181	U
23	BB	2183	A
23	BB	2185	U
23	BB	2187	U
23	BB	2192	U
23	BB	2198	A
23	BB	2199	A
23	BB	2203	U
23	BB	2204	G
23	BB	2211	A
23	BB	2212	A
23	BB	2213	U
23	BB	2225	A
23	BB	2238	G
23	BB	2239	G
23	BB	2266	A
23	BB	2272	U
23	BB	2283	C
23	BB	2287	A
23	BB	2288	A
23	BB	2305	U
23	BB	2307	G
23	BB	2308	G

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Mol	Chain	Res	Type
23	BB	2309	A
23	BB	2311	A
23	BB	2319	G
23	BB	2321	U
23	BB	2322	A
23	BB	2324	U
23	BB	2325	G
23	BB	2333	A
23	BB	2334	U
23	BB	2335	A
23	BB	2336	A
23	BB	2345	G
23	BB	2347	C
23	BB	2353	G
23	BB	2357	G
23	BB	2358	A
23	BB	2361	G
23	BB	2383	G
23	BB	2385	C
23	BB	2392	A
23	BB	2396	G
23	BB	2402	U
23	BB	2406	A
23	BB	2423	U
23	BB	2426	A
23	BB	2427	C
23	BB	2429	G
23	BB	2430	A
23	BB	2431	U
23	BB	2435	A
23	BB	2441	U
23	BB	2446	G
23	BB	2448	A
23	BB	2472	G
23	BB	2474	U
23	BB	2476	A
23	BB	2491	U
23	BB	2502	G
23	BB	2505	G
23	BB	2506	U
23	BB	2518	A
23	BB	2529	G

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Mol	Chain	Res	Type
23	BB	2530	A
23	BB	2531	A
23	BB	2535	G
23	BB	2554	U
23	BB	2556	C
23	BB	2566	A
23	BB	2567	G
23	BB	2573	C
23	BB	2574	G
23	BB	2586	U
23	BB	2602	A
23	BB	2609	U
23	BB	2613	U
23	BB	2621	G
23	BB	2629	U
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	2726	A
23	BB	2739	U
23	BB	2744	G
23	BB	2750	A
23	BB	2751	G
23	BB	2752	C
23	BB	2753	A
23	BB	2756	U
23	BB	2757	A
23	BB	2760	C
23	BB	2765	A
23	BB	2778	A
23	BB	2790	U
23	BB	2791	G
23	BB	2792	A
23	BB	2798	U
23	BB	2799	A
23	BB	2800	A
23	BB	2801	G
23	BB	2808	G
23	BB	2809	A

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Mol	Chain	Res	Type
23	BB	2820	A
23	BB	2821	A
23	BB	2832	U
23	BB	2834	G
23	BB	2836	U
23	BB	2850	A
23	BB	2861	U
23	BB	2867	G
23	BB	2872	A
23	BB	2873	A
23	BB	2883	A
23	BB	2886	A
23	BB	2901	C
23	BB	2903	U
1	CA	6	G
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	52	C
1	CA	54	C
1	CA	55	A
1	CA	68	G
1	CA	71	A
1	CA	83	C
1	CA	84	U
1	CA	85	U
1	CA	86	G
1	CA	87	C
1	CA	91	U
1	CA	121	U
1	CA	130	A
1	CA	131	A
1	CA	149	A
1	CA	164	G
1	CA	177	G
1	CA	182	A
1	CA	183	C
1	CA	197	A
1	CA	206	C

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Mol	Chain	Res	Type
1	CA	209	U
1	CA	210	C
1	CA	233	C
1	CA	239	U
1	CA	240	G
1	CA	243	A
1	CA	244	U
1	CA	245	U
1	CA	247	G
1	CA	250	A
1	CA	251	G
1	CA	253	A
1	CA	256	U
1	CA	257	G
1	CA	258	G
1	CA	266	G
1	CA	267	C
1	CA	280	C
1	CA	289	G
1	CA	321	A
1	CA	328	C
1	CA	329	A
1	CA	330	C
1	CA	332	G
1	CA	352	C
1	CA	353	A
1	CA	354	G
1	CA	367	U
1	CA	372	C
1	CA	373	A
1	CA	381	C
1	CA	384	G
1	CA	392	C
1	CA	397	A
1	CA	398	U
1	CA	406	G
1	CA	408	A
1	CA	411	A
1	CA	412	A
1	CA	413	G
1	CA	415	A
1	CA	421	U

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Mol	Chain	Res	Type
1	CA	422	C
1	CA	429	U
1	CA	430	A
1	CA	435	A
1	CA	438	U
1	CA	460	A
1	CA	461	A
1	CA	462	G
1	CA	463	U
1	CA	464	U
1	CA	465	A
1	CA	466	A
1	CA	467	U
1	CA	468	A
1	CA	479	U
1	CA	484	G
1	CA	485	U
1	CA	486	U
1	CA	493	A
1	CA	500	G
1	CA	511	C
1	CA	518	C
1	CA	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	596	A
1	CA	633	G
1	CA	653	U
1	CA	661	G
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

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Mol	Chain	Res	Type
1	CA	747	A
1	CA	748	G
1	CA	755	G
1	CA	777	A
1	CA	781	A
1	CA	782	A
1	CA	785	G
1	CA	793	U
1	CA	794	A
1	CA	812	G
1	CA	815	A
1	CA	817	C
1	CA	818	G
1	CA	819	A
1	CA	828	U
1	CA	829	G
1	CA	841	C
1	CA	843	U
1	CA	844	G
1	CA	845	A
1	CA	846	G
1	CA	847	G
1	CA	849	G
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	966	G
1	CA	968	A
1	CA	969	A
1	CA	974	A
1	CA	975	A
1	CA	976	G
1	CA	977	A
1	CA	984	C
1	CA	991	U
1	CA	992	U
1	CA	993	G
1	CA	1003	G

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Mol	Chain	Res	Type
1	CA	1004	A
1	CA	1010	U
1	CA	1011	C
1	CA	1019	A
1	CA	1020	G
1	CA	1028	C
1	CA	1030	U
1	CA	1031	C
1	CA	1034	G
1	CA	1035	A
1	CA	1041	G
1	CA	1049	U
1	CA	1050	G
1	CA	1054	C
1	CA	1065	U
1	CA	1066	C
1	CA	1081	A
1	CA	1094	G
1	CA	1101	A
1	CA	1136	C
1	CA	1137	C
1	CA	1138	G
1	CA	1139	G
1	CA	1146	A
1	CA	1159	U
1	CA	1167	A
1	CA	1168	U
1	CA	1174	G
1	CA	1179	A
1	CA	1181	G
1	CA	1184	G
1	CA	1196	A
1	CA	1197	A
1	CA	1202	U
1	CA	1212	U
1	CA	1213	A
1	CA	1214	C
1	CA	1225	A
1	CA	1226	C
1	CA	1227	A
1	CA	1238	A
1	CA	1240	U

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Mol	Chain	Res	Type
1	CA	1250	A
1	CA	1256	A
1	CA	1261	A
1	CA	1278	G
1	CA	1279	G
1	CA	1280	A
1	CA	1281	C
1	CA	1285	A
1	CA	1286	U
1	CA	1287	A
1	CA	1297	G
1	CA	1300	G
1	CA	1301	U
1	CA	1302	C
1	CA	1303	C
1	CA	1305	G
1	CA	1316	G
1	CA	1317	C
1	CA	1323	G
1	CA	1336	C
1	CA	1362	A
1	CA	1363	A
1	CA	1364	U
1	CA	1388	C
1	CA	1398	A
1	CA	1400	C
1	CA	1401	G
1	CA	1432	G
1	CA	1446	A
1	CA	1448	C
1	CA	1452	C
1	CA	1490	U
1	CA	1491	G
1	CA	1492	A
1	CA	1493	A
1	CA	1494	G
1	CA	1497	G
1	CA	1503	A
1	CA	1506	U
1	CA	1517	G
1	CA	1520	C
1	CA	1529	G

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Mol	Chain	Res	Type
1	CA	1530	G
1	CA	1534	A
22	DA	11	C
22	DA	12	C
22	DA	13	G
22	DA	16	G
22	DA	26	C
22	DA	29	A
22	DA	30	C
22	DA	35	C
22	DA	42	C
22	DA	44	G
22	DA	57	A
22	DA	66	A
22	DA	67	G
22	DA	88	C
22	DA	90	C
22	DA	96	G
22	DA	99	A
22	DA	108	A
22	DA	109	A
22	DA	112	G
22	DA	116	G
22	DA	118	C
23	DB	34	U
23	DB	46	G
23	DB	51	G
23	DB	63	A
23	DB	71	A
23	DB	74	A
23	DB	75	G
23	DB	84	A
23	DB	91	A
23	DB	98	G
23	DB	100	U
23	DB	101	A
23	DB	102	U
23	DB	118	A
23	DB	119	A
23	DB	120	U
23	DB	125	A
23	DB	126	A

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Mol	Chain	Res	Type
23	DB	128	C
23	DB	135	U
23	DB	139	U
23	DB	140	C
23	DB	141	G
23	DB	143	C
23	DB	160	A
23	DB	162	U
23	DB	163	C
23	DB	180	G
23	DB	181	A
23	DB	196	A
23	DB	199	A
23	DB	215	G
23	DB	216	A
23	DB	221	A
23	DB	222	A
23	DB	223	A
23	DB	230	G
23	DB	233	A
23	DB	241	A
23	DB	242	G
23	DB	248	G
23	DB	252	G
23	DB	255	A
23	DB	265	A
23	DB	266	G
23	DB	267	C
23	DB	268	C
23	DB	271	G
23	DB	276	U
23	DB	277	G
23	DB	278	A
23	DB	282	A
23	DB	284	U
23	DB	288	U
23	DB	289	G
23	DB	299	A
23	DB	311	A
23	DB	323	C
23	DB	329	G
23	DB	330	A

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Mol	Chain	Res	Type
23	DB	331	C
23	DB	333	G
23	DB	343	C
23	DB	346	A
23	DB	349	U
23	DB	353	C
23	DB	354	A
23	DB	358	U
23	DB	362	A
23	DB	367	G
23	DB	371	A
23	DB	372	G
23	DB	386	G
23	DB	387	U
23	DB	395	U
23	DB	396	G
23	DB	411	G
23	DB	412	A
23	DB	424	G
23	DB	444	C
23	DB	456	C
23	DB	457	A
23	DB	473	G
23	DB	479	A
23	DB	480	A
23	DB	481	G
23	DB	490	C
23	DB	491	G
23	DB	502	A
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	548	G
23	DB	549	G

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Mol	Chain	Res	Type
23	DB	550	C
23	DB	563	A
23	DB	573	U
23	DB	575	A
23	DB	586	A
23	DB	588	U
23	DB	603	A
23	DB	613	A
23	DB	614	A
23	DB	615	U
23	DB	616	A
23	DB	627	A
23	DB	637	A
23	DB	645	C
23	DB	646	U
23	DB	647	G
23	DB	654	A
23	DB	655	A
23	DB	671	C
23	DB	686	U
23	DB	699	A
23	DB	717	C
23	DB	718	A
23	DB	719	C
23	DB	727	A
23	DB	730	A
23	DB	743	A
23	DB	746	U
23	DB	747	U
23	DB	775	G
23	DB	782	A
23	DB	783	A
23	DB	784	G
23	DB	785	G
23	DB	789	A
23	DB	798	G
23	DB	805	G
23	DB	806	C
23	DB	811	U
23	DB	812	C
23	DB	819	A
23	DB	827	U

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Mol	Chain	Res	Type
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	877	A
23	DB	878	A
23	DB	899	A
23	DB	910	A
23	DB	912	C
23	DB	919	U
23	DB	931	U
23	DB	932	U
23	DB	933	A
23	DB	941	A
23	DB	946	C
23	DB	961	C
23	DB	974	G
23	DB	982	C
23	DB	983	A
23	DB	991	C
23	DB	995	C
23	DB	996	A
23	DB	1012	U
23	DB	1013	C
23	DB	1022	G
23	DB	1025	G
23	DB	1033	U
23	DB	1046	A
23	DB	1047	G
23	DB	1070	A
23	DB	1088	A
23	DB	1090	A
23	DB	1098	A
23	DB	1110	G
23	DB	1111	A
23	DB	1112	G
23	DB	1116	G
23	DB	1118	C
23	DB	1132	U
23	DB	1133	A

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Mol	Chain	Res	Type
23	DB	1134	A
23	DB	1135	C
23	DB	1136	G
23	DB	1139	G
23	DB	1142	A
23	DB	1156	A
23	DB	1172	C
23	DB	1173	U
23	DB	1174	U
23	DB	1176	U
23	DB	1186	G
23	DB	1194	A
23	DB	1205	A
23	DB	1211	C
23	DB	1212	G
23	DB	1218	G
23	DB	1237	A
23	DB	1241	A
23	DB	1242	U
23	DB	1248	G
23	DB	1249	U
23	DB	1250	G
23	DB	1251	C
23	DB	1253	A
23	DB	1256	G
23	DB	1266	G
23	DB	1271	G
23	DB	1272	A
23	DB	1275	A
23	DB	1276	A
23	DB	1301	A
23	DB	1324	G
23	DB	1325	U
23	DB	1337	G
23	DB	1341	G
23	DB	1352	U
23	DB	1365	A
23	DB	1368	G
23	DB	1379	U
23	DB	1383	A
23	DB	1384	A
23	DB	1386	C

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Mol	Chain	Res	Type
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	1428	C
23	DB	1434	A
23	DB	1451	C
23	DB	1453	A
23	DB	1454	C
23	DB	1458	U
23	DB	1459	G
23	DB	1460	U
23	DB	1461	C
23	DB	1470	A
23	DB	1475	G
23	DB	1476	U
23	DB	1477	A
23	DB	1482	G
23	DB	1490	A
23	DB	1493	C
23	DB	1494	A
23	DB	1504	A
23	DB	1507	C
23	DB	1508	A
23	DB	1509	A
23	DB	1510	G
23	DB	1519	G
23	DB	1524	G
23	DB	1535	A
23	DB	1537	G
23	DB	1540	G
23	DB	1552	A
23	DB	1558	C
23	DB	1559	U
23	DB	1560	G
23	DB	1569	A
23	DB	1578	U
23	DB	1583	A
23	DB	1584	U
23	DB	1585	C

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Mol	Chain	Res	Type
23	DB	1608	A
23	DB	1610	A
23	DB	1613	G
23	DB	1619	G
23	DB	1634	A
23	DB	1635	A
23	DB	1647	U
23	DB	1648	U
23	DB	1674	G
23	DB	1700	A
23	DB	1714	U
23	DB	1715	G
23	DB	1723	G
23	DB	1729	U
23	DB	1730	C
23	DB	1733	G
23	DB	1738	G
23	DB	1756	G
23	DB	1758	U
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	1848	A
23	DB	1857	G
23	DB	1870	C
23	DB	1906	G
23	DB	1913	A
23	DB	1914	C
23	DB	1915	U
23	DB	1916	A
23	DB	1926	U
23	DB	1929	G
23	DB	1930	G
23	DB	1938	A
23	DB	1939	U
23	DB	1940	U
23	DB	1955	U
23	DB	1966	A
23	DB	1967	C

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Mol	Chain	Res	Type
23	DB	1970	A
23	DB	1971	U
23	DB	1972	G
23	DB	1991	U
23	DB	1993	U
23	DB	1996	C
23	DB	1997	C
23	DB	2022	U
23	DB	2023	C
23	DB	2031	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	2093	G
23	DB	2095	A
23	DB	2096	C
23	DB	2100	G
23	DB	2101	A
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	2144	G
23	DB	2145	C
23	DB	2147	A
23	DB	2150	C
23	DB	2155	U
23	DB	2156	G
23	DB	2157	G
23	DB	2181	U
23	DB	2188	U
23	DB	2193	G
23	DB	2198	A
23	DB	2199	A
23	DB	2203	U
23	DB	2204	G

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Mol	Chain	Res	Type
23	DB	2211	A
23	DB	2212	A
23	DB	2213	U
23	DB	2225	A
23	DB	2238	G
23	DB	2239	G
23	DB	2266	A
23	DB	2272	U
23	DB	2283	C
23	DB	2287	A
23	DB	2288	A
23	DB	2297	A
23	DB	2305	U
23	DB	2307	G
23	DB	2308	G
23	DB	2309	A
23	DB	2311	A
23	DB	2319	G
23	DB	2321	U
23	DB	2322	A
23	DB	2324	U
23	DB	2325	G
23	DB	2333	A
23	DB	2334	U
23	DB	2335	A
23	DB	2336	A
23	DB	2345	G
23	DB	2347	C
23	DB	2357	G
23	DB	2361	G
23	DB	2383	G
23	DB	2385	C
23	DB	2392	A
23	DB	2396	G
23	DB	2402	U
23	DB	2406	A
23	DB	2423	U
23	DB	2426	A
23	DB	2427	C
23	DB	2429	G
23	DB	2430	A
23	DB	2431	U

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Mol	Chain	Res	Type
23	DB	2435	A
23	DB	2441	U
23	DB	2446	G
23	DB	2448	A
23	DB	2472	G
23	DB	2474	U
23	DB	2476	A
23	DB	2491	U
23	DB	2502	G
23	DB	2505	G
23	DB	2506	U
23	DB	2518	A
23	DB	2529	G
23	DB	2530	A
23	DB	2531	A
23	DB	2535	G
23	DB	2554	U
23	DB	2556	C
23	DB	2566	A
23	DB	2567	G
23	DB	2573	C
23	DB	2574	G
23	DB	2586	U
23	DB	2602	A
23	DB	2609	U
23	DB	2613	U
23	DB	2621	G
23	DB	2629	U
23	DB	2646	C
23	DB	2654	A
23	DB	2682	A
23	DB	2689	U
23	DB	2690	U
23	DB	2714	G
23	DB	2726	A
23	DB	2739	U
23	DB	2744	G
23	DB	2748	A
23	DB	2757	A
23	DB	2760	C
23	DB	2765	A
23	DB	2778	A

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Mol	Chain	Res	Type
23	DB	2790	U
23	DB	2791	G
23	DB	2792	A
23	DB	2798	U
23	DB	2799	A
23	DB	2800	A
23	DB	2801	G
23	DB	2808	G
23	DB	2809	A
23	DB	2820	A
23	DB	2821	A
23	DB	2823	A
23	DB	2832	U
23	DB	2834	G
23	DB	2836	U
23	DB	2861	U
23	DB	2867	G
23	DB	2872	A
23	DB	2873	A
23	DB	2883	A
23	DB	2886	A
23	DB	2903	U

All (92) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	51	A
1	AA	81	A
1	AA	84	U
1	AA	243	A
1	AA	279	A
1	AA	328	C
1	AA	366	A
1	AA	372	C
1	AA	412	A
1	AA	428	G
1	AA	429	U
1	AA	484	G
1	AA	576	C
1	AA	960	U
1	AA	975	A
1	AA	1030	U

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Mol	Chain	Res	Type
1	AA	1049	U
1	AA	1065	U
1	AA	1201	A
1	AA	1213	A
1	AA	1226	C
1	AA	1285	A
1	AA	1302	C
1	AA	1362	A
1	AA	1397	C
1	AA	1451	U
1	AA	1492	A
23	BB	63	A
23	BB	162	U
23	BB	670	A
23	BB	858	G
23	BB	1133	A
23	BB	1210	G
23	BB	1419	A
23	BB	1509	A
23	BB	1912	A
23	BB	2213	U
23	BB	2282	G
23	BB	2286	G
23	BB	2425	A
23	BB	2430	A
23	BB	2756	U
23	BB	2808	G
23	BB	2873	A
1	CA	51	A
1	CA	239	U
1	CA	243	A
1	CA	266	G
1	CA	279	A
1	CA	328	C
1	CA	366	A
1	CA	372	C
1	CA	412	A
1	CA	428	G
1	CA	429	U
1	CA	484	G
1	CA	960	U
1	CA	975	A

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Mol	Chain	Res	Type
1	CA	1030	U
1	CA	1049	U
1	CA	1065	U
1	CA	1201	A
1	CA	1212	U
1	CA	1213	A
1	CA	1226	C
1	CA	1285	A
1	CA	1302	C
1	CA	1362	A
1	CA	1397	C
1	CA	1451	U
1	CA	1492	A
23	DB	63	A
23	DB	125	A
23	DB	162	U
23	DB	241	A
23	DB	544	C
23	DB	670	A
23	DB	858	G
23	DB	1133	A
23	DB	1210	G
23	DB	1419	A
23	DB	1509	A
23	DB	1914	C
23	DB	2180	U
23	DB	2213	U
23	DB	2282	G
23	DB	2286	G
23	DB	2425	A
23	DB	2430	A
23	DB	2756	U
23	DB	2808	G
23	DB	2873	A

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 347 ligands modelled in this entry, 345 are monoatomic - leaving 2 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
54	HYG	CA	2062	-	35,39,39	1.38	6 (17%)	43,60,60	1.45	5 (11%)
54	HYG	AA	2059	-	35,39,39	1.36	6 (17%)	43,60,60	1.45	5 (11%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
54	HYG	CA	2062	-	-	9/12/87/87	0/4/4/4
54	HYG	AA	2059	-	-	9/12/87/87	0/4/4/4

All (12) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
54	CA	2062	HYG	O28-C23	2.99	1.44	1.40
54	AA	2059	HYG	O28-C23	2.97	1.44	1.40
54	AA	2059	HYG	C27-C33	2.73	1.56	1.52
54	CA	2062	HYG	C27-C33	2.72	1.56	1.52
54	CA	2062	HYG	O22-C17	-2.49	1.38	1.43
54	CA	2062	HYG	C16-C15	2.19	1.57	1.53
54	AA	2059	HYG	C16-C15	2.14	1.57	1.53
54	CA	2062	HYG	C3-C4	2.12	1.56	1.53
54	AA	2059	HYG	C3-C4	2.11	1.56	1.53
54	AA	2059	HYG	C1-C6	2.09	1.57	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
54	CA	2062	HYG	C1-C6	2.08	1.57	1.52
54	AA	2059	HYG	O22-C17	-2.06	1.39	1.43

All (10) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	CA	2062	HYG	O22-C17-C16	4.52	122.21	111.22
54	AA	2059	HYG	O22-C17-C16	4.46	122.08	111.22
54	CA	2062	HYG	O8-C1-C2	-4.38	101.78	109.81
54	AA	2059	HYG	O8-C1-C2	-4.36	101.81	109.81
54	CA	2062	HYG	O35-C34-C33	-3.56	103.94	111.43
54	AA	2059	HYG	O35-C34-C33	-3.55	103.97	111.43
54	AA	2059	HYG	C26-C25-C24	-2.24	108.22	111.30
54	CA	2062	HYG	C26-C25-C24	-2.21	108.26	111.30
54	AA	2059	HYG	C23-O28-C27	2.03	115.86	112.00
54	CA	2062	HYG	C23-O28-C27	2.02	115.84	112.00

There are no chirality outliers.

All (18) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
54	AA	2059	HYG	C5-C4-N9-C10
54	AA	2059	HYG	N36-C33-C34-O35
54	CA	2062	HYG	C3-C4-N9-C10
54	CA	2062	HYG	C5-C4-N9-C10
54	CA	2062	HYG	N36-C33-C34-O35
54	CA	2062	HYG	O14-C15-C19-O20
54	CA	2062	HYG	C16-C15-C19-O20
54	AA	2059	HYG	O14-C15-C19-O20
54	AA	2059	HYG	C16-C15-C19-O20
54	AA	2059	HYG	C3-C4-N9-C10
54	AA	2059	HYG	C27-C33-C34-O35
54	CA	2062	HYG	C27-C33-C34-O35
54	AA	2059	HYG	C12-C13-O18-C6
54	CA	2062	HYG	C12-C13-O18-C6
54	CA	2062	HYG	O14-C13-O18-C6
54	AA	2059	HYG	O14-C13-O18-C6
54	CA	2062	HYG	C5-C6-O18-C13
54	AA	2059	HYG	C5-C6-O18-C13

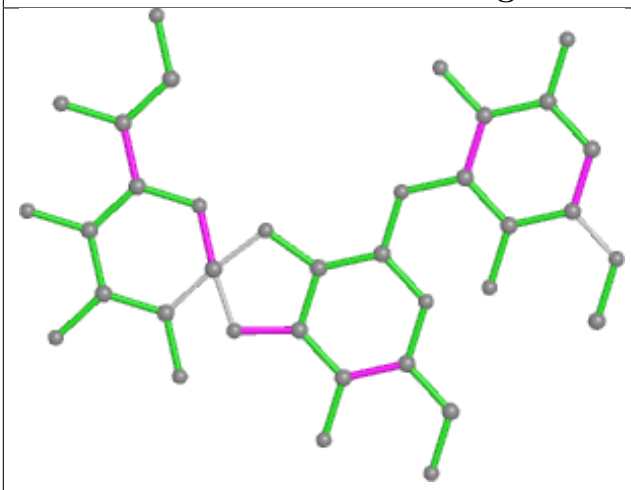
There are no ring outliers.

2 monomers are involved in 3 short contacts:

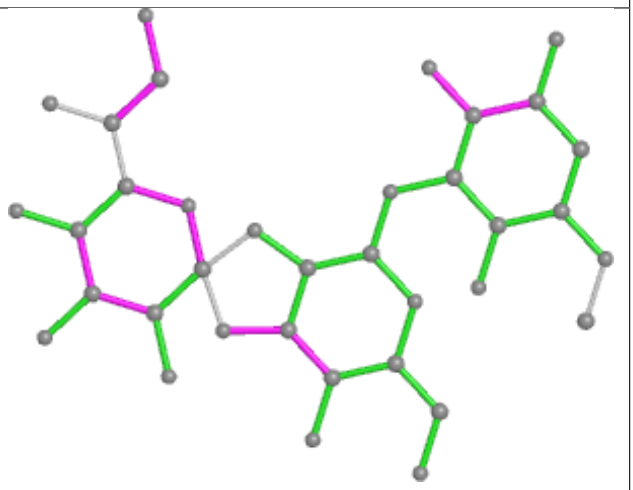
Mol	Chain	Res	Type	Clashes	Symm-Clashes
54	CA	2062	HYG	1	0
54	AA	2059	HYG	2	0

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.

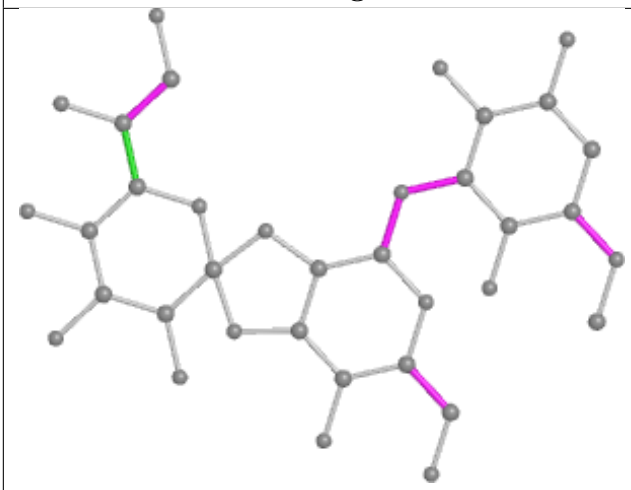
Ligand HYG CA 2062



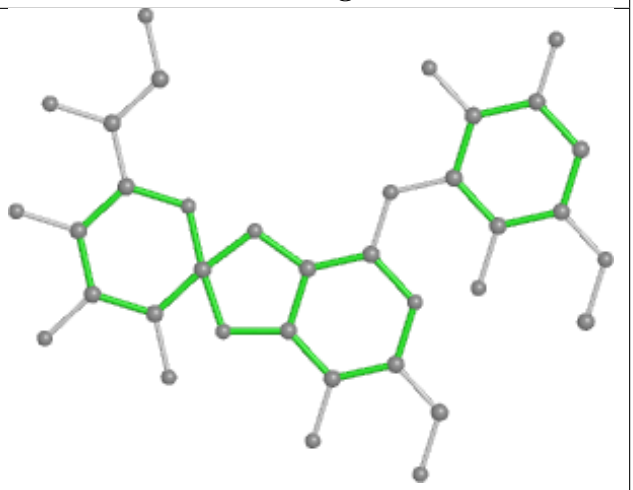
Bond lengths



Bond angles

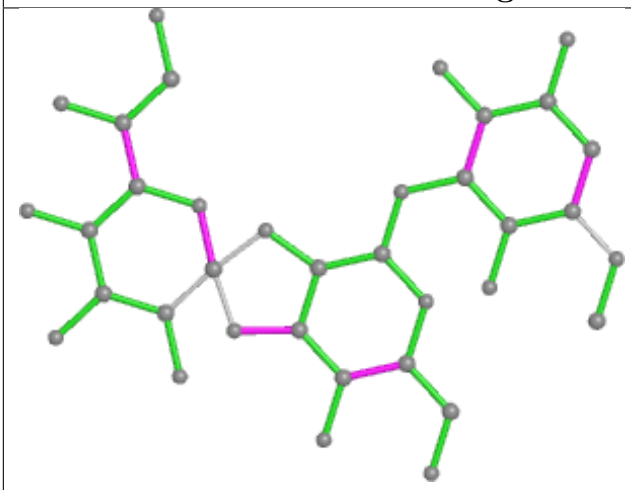


Torsions

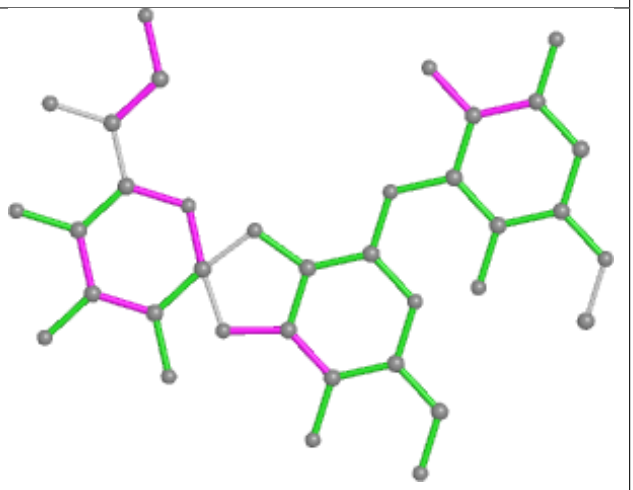


Rings

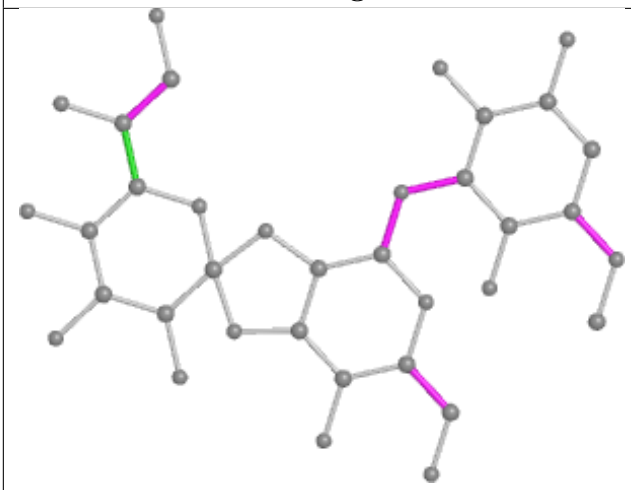
Ligand HYG AA 2059



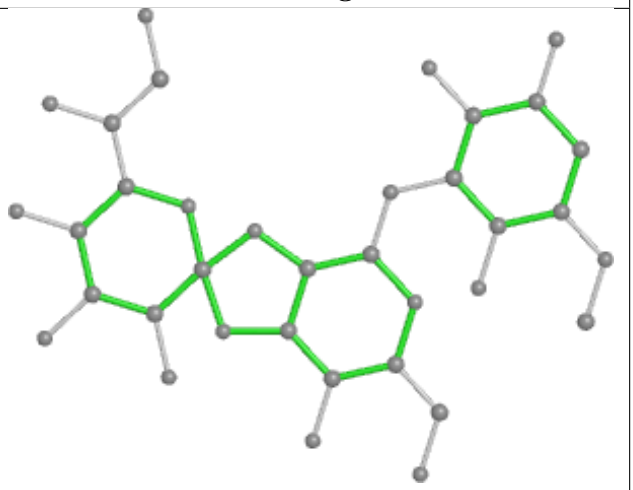
Bond lengths



Bond angles



Torsions



Rings

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
1	AA	1530/1542 (99%)	-0.72	7 (0%) 91 88	16, 85, 158, 180	0
1	CA	1530/1542 (99%)	-0.74	5 (0%) 94 91	8, 57, 142, 180	0
2	AC	206/232 (88%)	0.84	30 (14%) 2 3	8, 89, 145, 180	0
2	CC	206/232 (88%)	0.30	16 (7%) 13 13	15, 81, 138, 180	0
3	AD	205/205 (100%)	0.63	25 (12%) 4 5	19, 97, 160, 180	0
3	CD	205/205 (100%)	-0.03	4 (1%) 65 60	5, 63, 135, 180	0
4	AE	150/166 (90%)	0.16	5 (3%) 46 41	5, 76, 136, 167	0
4	CE	150/166 (90%)	0.86	24 (16%) 1 2	5, 62, 135, 175	0
5	AF	100/135 (74%)	1.19	27 (27%) 0 0	13, 81, 137, 180	0
5	CF	100/135 (74%)	0.34	3 (3%) 50 44	14, 78, 126, 166	0
6	AG	150/178 (84%)	0.38	22 (14%) 2 3	41, 110, 166, 180	0
6	CG	152/178 (85%)	0.16	11 (7%) 15 15	27, 98, 156, 177	0
7	AH	129/129 (100%)	0.24	10 (7%) 13 13	26, 91, 148, 180	0
7	CH	129/129 (100%)	0.28	12 (9%) 8 9	5, 53, 117, 153	0
8	AI	127/129 (98%)	0.85	27 (21%) 0 1	32, 103, 160, 180	0
8	CI	127/129 (98%)	0.66	14 (11%) 5 6	32, 103, 162, 180	0
9	AJ	98/103 (95%)	0.85	11 (11%) 5 6	34, 106, 162, 180	0
9	CJ	98/103 (95%)	1.22	28 (28%) 0 0	42, 107, 156, 180	0
10	AK	117/128 (91%)	-0.06	2 (1%) 70 64	5, 71, 122, 174	0
10	CK	117/128 (91%)	0.12	5 (4%) 35 31	5, 57, 112, 179	0
11	AL	123/123 (100%)	0.51	16 (13%) 3 4	15, 82, 132, 153	0
11	CL	123/123 (100%)	-0.04	3 (2%) 59 53	5, 44, 109, 165	0
12	AM	114/117 (97%)	0.68	16 (14%) 2 3	68, 130, 178, 180	0
12	CM	113/117 (96%)	0.02	4 (3%) 44 39	32, 108, 156, 180	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
13	AN	96/100 (96%)	0.56	10 (10%) 6 7	32, 103, 161, 180	0
13	CN	96/100 (96%)	0.18	6 (6%) 20 18	38, 99, 137, 171	0
14	AO	88/89 (98%)	0.40	4 (4%) 33 29	35, 83, 132, 180	0
14	CO	88/89 (98%)	-0.03	2 (2%) 60 54	8, 54, 111, 165	0
15	AP	82/82 (100%)	1.81	33 (40%) 0 0	43, 99, 163, 180	0
15	CP	80/82 (97%)	0.07	4 (5%) 28 25	5, 51, 143, 164	0
16	AQ	80/83 (96%)	1.10	18 (22%) 0 0	49, 106, 156, 177	0
16	CQ	81/83 (97%)	-0.09	0 100 100	5, 51, 121, 157	0
17	AR	55/74 (74%)	0.29	3 (5%) 25 22	16, 78, 142, 152	0
17	CR	55/74 (74%)	0.72	5 (9%) 9 9	13, 69, 132, 149	0
18	AS	79/91 (86%)	1.07	22 (27%) 0 0	67, 128, 175, 180	0
18	CS	80/91 (87%)	-0.12	3 (3%) 40 36	49, 113, 171, 180	0
19	AT	85/86 (98%)	0.02	3 (3%) 44 39	43, 100, 153, 175	0
19	CT	85/86 (98%)	-0.17	0 100 100	14, 58, 121, 177	0
20	AB	218/240 (90%)	0.28	23 (10%) 6 7	30, 102, 152, 180	0
20	CB	218/240 (90%)	1.40	71 (32%) 0 0	26, 106, 160, 180	0
21	AU	51/71 (71%)	0.37	2 (3%) 39 35	26, 102, 172, 180	0
21	CU	51/71 (71%)	0.77	8 (15%) 2 2	19, 85, 151, 180	0
22	BA	117/120 (97%)	-0.77	1 (0%) 84 79	43, 83, 131, 172	0
22	DA	117/120 (97%)	-0.82	1 (0%) 84 79	32, 75, 118, 180	0
23	BB	2841/2904 (97%)	-0.49	15 (0%) 91 88	6, 56, 146, 180	0
23	DB	2841/2904 (97%)	-0.53	7 (0%) 95 93	5, 40, 139, 180	0
24	BV	94/94 (100%)	0.09	5 (5%) 26 24	11, 96, 146, 176	0
24	DV	94/94 (100%)	-0.10	3 (3%) 47 42	14, 86, 143, 180	0
25	BC	271/273 (99%)	0.66	30 (11%) 5 6	7, 48, 104, 170	0
25	DC	271/273 (99%)	0.47	23 (8%) 10 11	5, 28, 81, 120	0
26	BD	209/209 (100%)	0.52	28 (13%) 3 4	5, 73, 138, 180	0
26	DD	209/209 (100%)	0.43	21 (10%) 7 8	5, 42, 118, 180	0
27	BE	201/201 (100%)	0.79	24 (11%) 4 5	5, 65, 142, 180	0
27	DE	201/201 (100%)	0.35	12 (5%) 21 19	5, 67, 135, 180	0
28	BF	178/178 (100%)	1.40	54 (30%) 0 0	50, 116, 175, 180	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
28	DF	178/178 (100%)	1.08	34 (19%) 1 1	7, 101, 172, 180	0
29	BG	176/176 (100%)	0.64	23 (13%) 3 4	23, 102, 155, 180	0
29	DG	176/176 (100%)	0.19	11 (6%) 20 18	24, 90, 161, 180	0
30	BH	149/149 (100%)	1.71	51 (34%) 0 0	14, 117, 177, 180	0
30	DH	149/149 (100%)	0.52	13 (8%) 10 11	11, 100, 156, 180	0
31	BJ	142/142 (100%)	0.35	8 (5%) 24 22	6, 80, 141, 171	0
31	DJ	142/142 (100%)	0.31	8 (5%) 24 22	5, 60, 119, 164	0
32	BK	121/123 (98%)	1.75	46 (38%) 0 0	5, 73, 135, 180	0
32	DK	121/123 (98%)	0.56	11 (9%) 9 9	5, 35, 102, 145	0
33	BL	143/144 (99%)	0.03	5 (3%) 44 39	10, 64, 128, 180	0
33	DL	143/144 (99%)	0.54	18 (12%) 3 5	5, 54, 118, 162	0
34	BM	136/136 (100%)	0.07	5 (3%) 41 37	8, 70, 129, 172	0
34	DM	136/136 (100%)	0.75	19 (13%) 2 3	5, 51, 114, 168	0
35	BN	120/127 (94%)	0.50	12 (10%) 7 8	7, 66, 132, 163	0
35	DN	120/127 (94%)	-0.09	1 (0%) 86 81	5, 42, 86, 145	0
36	BO	116/117 (99%)	0.77	27 (23%) 0 0	27, 87, 135, 156	0
36	DO	116/117 (99%)	-0.04	1 (0%) 84 79	17, 78, 142, 180	0
37	BP	114/114 (100%)	1.71	46 (40%) 0 0	20, 85, 149, 178	0
37	DP	114/114 (100%)	0.14	4 (3%) 44 39	5, 48, 107, 159	0
38	BQ	117/117 (100%)	-0.18	4 (3%) 45 40	5, 63, 127, 180	0
38	DQ	117/117 (100%)	0.41	5 (4%) 35 31	5, 48, 116, 150	0
39	BR	103/103 (100%)	-0.02	5 (4%) 29 26	16, 82, 145, 158	0
39	DR	103/103 (100%)	0.54	9 (8%) 10 11	5, 73, 136, 180	0
40	BS	110/110 (100%)	0.40	7 (6%) 19 18	5, 53, 116, 142	0
40	DS	110/110 (100%)	0.98	21 (19%) 1 1	5, 42, 116, 146	0
41	BT	93/100 (93%)	0.00	1 (1%) 80 75	6, 72, 139, 179	0
41	DT	93/100 (93%)	0.79	16 (17%) 1 1	11, 64, 156, 180	0
42	BU	102/103 (99%)	1.23	26 (25%) 0 0	5, 78, 144, 178	0
42	DU	102/103 (99%)	0.08	2 (1%) 65 60	10, 90, 154, 180	0
43	BW	79/84 (94%)	0.36	5 (6%) 20 18	10, 79, 157, 163	0
43	DW	79/84 (94%)	0.16	4 (5%) 28 25	5, 75, 131, 174	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
44	BX	63/63 (100%)	0.88	13 (20%) 1 1	9, 74, 146, 179	0
44	DX	63/63 (100%)	0.51	4 (6%) 20 18	17, 96, 147, 180	0
45	BY	58/58 (100%)	0.32	4 (6%) 16 16	14, 78, 135, 170	0
45	DY	58/58 (100%)	-0.08	2 (3%) 45 40	10, 73, 129, 160	0
46	BZ	77/78 (98%)	0.60	9 (11%) 4 5	5, 49, 121, 160	0
46	DZ	77/78 (98%)	-0.02	2 (2%) 56 49	5, 42, 107, 141	0
47	B0	56/56 (100%)	0.43	5 (8%) 9 10	5, 77, 144, 166	0
47	D0	56/56 (100%)	0.27	3 (5%) 25 23	8, 52, 128, 160	0
48	B1	50/54 (92%)	2.28	28 (56%) 0 0	51, 99, 149, 165	0
48	D1	50/54 (92%)	1.43	11 (22%) 0 0	43, 93, 138, 171	0
49	B2	46/46 (100%)	0.42	2 (4%) 35 31	7, 49, 103, 135	0
49	D2	46/46 (100%)	0.18	1 (2%) 62 56	5, 28, 99, 180	0
50	B3	64/64 (100%)	0.60	6 (9%) 8 9	16, 56, 110, 137	0
50	D3	64/64 (100%)	0.35	6 (9%) 8 9	5, 43, 112, 152	0
51	B4	38/38 (100%)	0.15	1 (2%) 56 49	33, 92, 143, 146	0
51	D4	38/38 (100%)	-0.41	0 100 100	5, 68, 112, 150	0
52	BI	141/141 (100%)	0.99	26 (18%) 1 1	67, 169, 180, 180	0
52	DI	141/141 (100%)	0.82	23 (16%) 1 2	91, 160, 180, 180	0
All	All	20417/21050 (96%)	0.03	1362 (6%) 17 16	5, 70, 153, 180	0

All (1362) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
30	BH	84	ALA	9.6
15	AP	80	LYS	9.6
48	D1	52	LYS	9.6
15	AP	81	ALA	9.4
30	BH	45	GLU	8.8
48	B1	52	LYS	8.4
22	DA	88	C	7.7
30	BH	80	ILE	7.7
30	DH	149	GLU	7.2
48	B1	51	ALA	7.2
30	BH	142	VAL	6.9
23	BB	139	U	6.8
52	DI	98	GLY	6.8

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Mol	Chain	Res	Type	RSRZ
9	CJ	84	VAL	6.7
28	BF	131	VAL	6.5
37	BP	41	ALA	6.4
5	AF	5	GLU	6.3
17	AR	19	GLU	6.2
30	BH	130	VAL	6.2
1	AA	461	A	6.1
32	BK	84	CYS	6.1
15	AP	82	ALA	6.0
26	BD	186	LEU	6.0
6	AG	150	PHE	6.0
44	DX	63	ALA	6.0
30	BH	125	THR	5.9
1	AA	80	A	5.8
8	CI	129	ARG	5.8
25	BC	114	GLN	5.8
20	CB	50	ASN	5.8
9	CJ	34	ALA	5.7
7	AH	129	ALA	5.7
37	BP	71	ARG	5.7
32	BK	104	THR	5.6
27	BE	155	GLU	5.6
20	CB	220	VAL	5.5
4	CE	158	LYS	5.5
48	B1	15	GLY	5.5
18	AS	30	LEU	5.5
30	BH	93	SER	5.5
52	DI	83	ALA	5.5
23	BB	546	U	5.5
48	B1	10	LEU	5.4
18	AS	65	MET	5.4
30	BH	94	ILE	5.4
27	BE	188	MET	5.4
8	CI	127	SER	5.4
17	CR	19	GLU	5.4
9	CJ	36	VAL	5.4
37	BP	70	GLU	5.4
37	BP	42	PHE	5.4
48	B1	16	THR	5.3
23	BB	2145	C	5.3
5	AF	66	ALA	5.3
20	CB	212	TYR	5.3

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Mol	Chain	Res	Type	RSRZ
5	AF	1	MET	5.3
28	DF	173	ASP	5.2
9	CJ	81	GLU	5.2
32	BK	121	GLU	5.1
23	BB	2147	A	5.1
48	D1	27	ARG	5.1
43	BW	84	GLU	5.1
28	DF	30	VAL	5.1
20	CB	17	HIS	5.1
20	CB	68	PHE	5.1
8	AI	47	VAL	5.1
28	BF	116	LEU	5.0
37	BP	68	GLY	5.0
26	DD	1	MET	5.0
23	BB	140	C	5.0
27	DE	188	MET	5.0
32	BK	108	ARG	5.0
48	B1	49	LYS	4.9
31	DJ	44	TYR	4.9
30	DH	130	VAL	4.9
44	DX	62	GLY	4.9
28	DF	44	ALA	4.9
48	B1	14	ALA	4.9
27	DE	155	GLU	4.9
20	CB	49	PHE	4.9
52	DI	85	ILE	4.9
30	BH	128	HIS	4.8
37	BP	64	SER	4.8
14	AO	88	ARG	4.8
38	DQ	90	ASP	4.8
26	BD	111	GLY	4.8
28	BF	18	GLU	4.8
28	DF	27	VAL	4.8
20	CB	124	THR	4.7
30	BH	117	LEU	4.7
37	BP	62	LYS	4.7
6	AG	8	GLN	4.7
11	CL	123	ALA	4.7
2	AC	90	VAL	4.7
20	CB	52	ALA	4.7
28	BF	30	VAL	4.7
32	BK	71	ARG	4.7

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Mol	Chain	Res	Type	RSRZ
26	BD	27	ILE	4.7
9	CJ	35	GLN	4.6
1	AA	412	A	4.6
42	BU	93	ARG	4.6
9	CJ	80	THR	4.6
30	BH	85	GLY	4.6
3	AD	178	GLU	4.6
20	CB	160	LEU	4.6
5	AF	94	HIS	4.6
30	BH	133	GLN	4.6
6	AG	84	TYR	4.6
10	CK	13	LYS	4.6
30	DH	82	SER	4.6
1	AA	79	G	4.6
52	DI	97	VAL	4.5
30	BH	124	THR	4.5
2	CC	133	MET	4.5
52	BI	54	ILE	4.5
6	AG	80	GLY	4.5
32	BK	11	ALA	4.5
32	BK	110	GLU	4.5
41	DT	70	HIS	4.5
32	BK	103	VAL	4.5
46	BZ	60	ASP	4.5
10	CK	12	ARG	4.5
37	BP	65	ASN	4.5
30	BH	129	GLU	4.5
37	BP	27	VAL	4.5
52	DI	99	LYS	4.5
41	DT	93	LEU	4.5
23	DB	544	C	4.5
46	BZ	78	TYR	4.4
50	D3	19	GLY	4.4
6	AG	78	ARG	4.4
20	CB	150	ILE	4.4
2	AC	93	ILE	4.4
47	D0	56	LYS	4.4
30	BH	144	VAL	4.4
37	BP	61	ARG	4.4
26	DD	2	ILE	4.4
52	BI	14	ALA	4.4
2	AC	99	GLN	4.4

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Mol	Chain	Res	Type	RSRZ
37	BP	76	HIS	4.4
6	AG	85	GLN	4.4
27	DE	143	LEU	4.4
30	BH	131	SER	4.4
1	AA	86	G	4.4
46	BZ	71	LEU	4.3
6	CG	152	HIS	4.3
20	CB	69	VAL	4.3
52	BI	15	GLY	4.3
28	BF	29	ARG	4.3
52	BI	45	THR	4.3
32	BK	83	ALA	4.3
45	BY	1	ALA	4.3
9	AJ	8	ILE	4.3
37	BP	43	GLU	4.3
37	BP	69	VAL	4.3
8	AI	50	PRO	4.3
15	AP	19	VAL	4.3
18	AS	48	ILE	4.2
18	AS	73	PHE	4.2
20	CB	56	LEU	4.2
26	BD	187	LEU	4.2
16	AQ	78	VAL	4.2
36	BO	114	GLY	4.2
46	DZ	78	TYR	4.2
33	DL	2	ARG	4.2
9	CJ	25	ILE	4.2
20	CB	128	LEU	4.1
13	AN	65	GLN	4.1
9	CJ	102	LEU	4.1
20	CB	123	GLY	4.1
28	BF	118	ALA	4.1
11	AL	14	LYS	4.1
29	BG	42	VAL	4.1
20	CB	184	ALA	4.1
28	BF	28	PRO	4.1
11	AL	13	ARG	4.1
44	BX	10	SER	4.1
28	BF	35	LEU	4.1
37	BP	86	LYS	4.1
20	CB	67	LEU	4.1
28	BF	33	ILE	4.1

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Mol	Chain	Res	Type	RSRZ
27	BE	151	GLY	4.1
30	DH	12	LEU	4.0
52	BI	49	GLU	4.0
8	AI	49	GLN	4.0
26	BD	25	THR	4.0
23	DB	613	A	4.0
8	AI	29	ILE	4.0
34	DM	104	GLU	4.0
20	AB	66	ILE	4.0
42	BU	100	GLU	4.0
5	AF	8	PHE	4.0
23	BB	715	A	4.0
46	BZ	77	LYS	4.0
48	D1	51	ALA	4.0
31	DJ	45	THR	4.0
8	AI	128	LYS	4.0
15	CP	52	LEU	4.0
30	BH	118	PRO	4.0
20	AB	192	PRO	3.9
32	BK	12	ASP	3.9
27	BE	190	ALA	3.9
26	BD	188	LEU	3.9
25	BC	34	GLU	3.9
26	DD	32	ASN	3.9
32	BK	77	ILE	3.9
4	CE	12	GLU	3.9
26	BD	28	GLU	3.9
28	DF	169	LEU	3.9
52	BI	18	ASN	3.9
25	BC	115	ILE	3.9
41	DT	3	ARG	3.9
27	BE	152	GLU	3.9
9	CJ	83	THR	3.9
23	DB	645	C	3.9
28	BF	161	SER	3.9
30	DH	81	ALA	3.9
6	CG	78	ARG	3.9
32	BK	122	VAL	3.9
15	AP	47	GLU	3.9
2	AC	41	TYR	3.9
18	AS	29	PRO	3.9
18	AS	68	HIS	3.9

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Mol	Chain	Res	Type	RSRZ
8	CI	20	ILE	3.9
37	BP	58	PHE	3.9
4	CE	43	GLY	3.8
9	CJ	100	ILE	3.8
44	BX	62	GLY	3.8
32	BK	9	ASN	3.8
29	BG	167	VAL	3.8
3	AD	106	PHE	3.8
28	BF	178	LYS	3.8
8	AI	129	ARG	3.8
37	BP	67	GLU	3.8
10	CK	73	VAL	3.8
37	BP	44	GLY	3.8
7	CH	44	PHE	3.8
8	CI	126	PHE	3.8
52	DI	84	GLY	3.8
7	CH	98	LEU	3.8
3	AD	22	SER	3.8
26	DD	77	ARG	3.8
34	DM	103	TYR	3.8
28	BF	129	MET	3.8
44	BX	63	ALA	3.8
48	B1	32	LYS	3.8
37	BP	26	GLU	3.8
28	DF	83	PRO	3.8
52	BI	47	SER	3.8
2	AC	133	MET	3.8
15	AP	38	PHE	3.8
16	AQ	79	GLU	3.8
28	DF	24	VAL	3.7
28	DF	124	ARG	3.7
20	CB	127	LYS	3.7
18	AS	64	GLU	3.7
37	BP	96	LEU	3.7
42	BU	84	PHE	3.7
37	BP	40	GLN	3.7
36	BO	92	PHE	3.7
12	CM	44	ILE	3.7
2	AC	75	VAL	3.7
20	CB	153	MET	3.7
34	BM	1	MET	3.7
28	BF	140	ILE	3.7

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Mol	Chain	Res	Type	RSRZ
9	CJ	26	VAL	3.7
33	DL	92	LEU	3.7
31	BJ	54	ILE	3.7
4	CE	81	GLN	3.6
28	DF	157	THR	3.6
2	AC	156	LEU	3.6
8	AI	51	LEU	3.6
27	DE	169	VAL	3.6
37	BP	73	PHE	3.6
2	AC	45	GLU	3.6
8	CI	91	GLU	3.6
21	CU	23	GLU	3.6
26	BD	4	LEU	3.6
6	AG	7	GLY	3.6
7	AH	98	LEU	3.6
20	CB	91	VAL	3.6
49	B2	13	ASN	3.6
20	CB	126	ASP	3.6
27	BE	144	GLU	3.6
8	AI	79	ARG	3.6
20	CB	185	ILE	3.6
20	AB	159	ALA	3.6
16	AQ	8	GLN	3.6
28	BF	157	THR	3.6
42	BU	52	ASN	3.6
10	CK	18	GLY	3.6
20	CB	38	HIS	3.6
32	BK	10	VAL	3.6
15	AP	4	ILE	3.6
20	CB	162	VAL	3.6
35	BN	82	GLU	3.6
28	DF	163	GLU	3.6
36	BO	26	LEU	3.6
20	CB	213	LEU	3.6
26	DD	74	GLU	3.6
48	D1	26	LYS	3.5
36	BO	37	ALA	3.5
12	AM	55	LEU	3.5
28	BF	160	LYS	3.5
15	AP	6	LEU	3.5
30	BH	122	LEU	3.5
4	AE	158	LYS	3.5

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Mol	Chain	Res	Type	RSRZ
23	DB	1175	A	3.5
28	DF	172	PHE	3.5
37	BP	47	ILE	3.5
26	BD	185	ASN	3.5
47	B0	56	LYS	3.5
27	BE	189	THR	3.5
8	CI	96	GLU	3.5
28	BF	127	TYR	3.5
20	CB	161	PHE	3.5
16	AQ	80	LYS	3.5
25	BC	70	LYS	3.5
29	BG	25	ILE	3.5
3	AD	177	MET	3.5
4	CE	44	ARG	3.5
28	BF	34	THR	3.5
23	DB	846	U	3.5
30	DH	122	LEU	3.5
11	CL	13	ARG	3.5
20	CB	204	ASP	3.5
28	DF	82	TYR	3.5
8	AI	64	ILE	3.5
2	AC	167	TYR	3.5
9	CJ	85	ASP	3.5
20	AB	63	LYS	3.4
43	BW	6	GLY	3.4
15	AP	52	LEU	3.4
5	AF	4	TYR	3.4
25	BC	93	VAL	3.4
41	BT	3	ARG	3.4
20	CB	163	ILE	3.4
17	AR	22	TYR	3.4
26	BD	26	VAL	3.4
2	AC	205	GLU	3.4
27	BE	143	LEU	3.4
30	BH	55	GLU	3.4
30	BH	119	ASN	3.4
21	CU	3	ILE	3.4
25	DC	111	ALA	3.4
2	AC	100	ILE	3.4
29	DG	37	ASN	3.4
15	AP	36	VAL	3.4
30	BH	56	ALA	3.4

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Mol	Chain	Res	Type	RSRZ
42	BU	82	VAL	3.4
9	CJ	101	SER	3.4
9	AJ	27	GLU	3.4
46	BZ	76	GLU	3.4
41	DT	91	GLN	3.4
20	AB	161	PHE	3.4
42	BU	86	PHE	3.4
2	CC	167	TYR	3.4
8	AI	56	MET	3.4
37	BP	99	LEU	3.4
31	DJ	6	ALA	3.4
20	CB	51	GLU	3.4
52	BI	48	ILE	3.4
25	DC	79	ARG	3.4
20	CB	205	ALA	3.4
28	DF	10	GLU	3.4
20	CB	195	VAL	3.4
3	AD	108	ALA	3.4
28	BF	115	GLY	3.4
30	BH	98	ASP	3.4
31	BJ	63	ALA	3.4
30	BH	121	VAL	3.4
17	CR	31	TYR	3.4
44	BX	5	GLU	3.4
13	AN	91	GLU	3.4
15	AP	37	GLY	3.4
45	BY	58	GLU	3.4
16	AQ	82	VAL	3.4
52	BI	59	THR	3.3
31	BJ	64	VAL	3.3
42	BU	101	THR	3.3
14	CO	45	HIS	3.3
37	BP	25	VAL	3.3
4	CE	80	LEU	3.3
42	BU	3	LYS	3.3
8	AI	38	PHE	3.3
30	BH	46	PHE	3.3
43	DW	84	GLU	3.3
5	AF	9	MET	3.3
31	BJ	86	GLN	3.3
48	B1	34	GLU	3.3
16	AQ	58	VAL	3.3

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Mol	Chain	Res	Type	RSRZ
52	DI	137	LEU	3.3
2	AC	42	LEU	3.3
2	AC	98	ALA	3.3
39	DR	95	ASP	3.3
44	BX	1	MET	3.3
27	BE	175	ILE	3.3
23	BB	613	A	3.3
11	AL	11	ARG	3.3
28	DF	75	GLY	3.3
32	BK	113	MET	3.3
8	AI	20	ILE	3.3
28	DF	174	PHE	3.3
14	AO	19	ASN	3.3
41	DT	92	ASN	3.3
36	BO	24	THR	3.3
12	AM	59	VAL	3.3
28	BF	174	PHE	3.3
9	CJ	29	ALA	3.3
40	DS	109	ASP	3.3
52	BI	141	ASP	3.3
5	AF	62	MET	3.3
34	DM	1	MET	3.3
8	CI	103	VAL	3.3
20	CB	40	ILE	3.3
26	DD	101	PHE	3.3
27	DE	148	ILE	3.3
30	DH	110	VAL	3.3
37	BP	85	VAL	3.3
16	AQ	43	LEU	3.2
33	BL	126	ARG	3.2
44	BX	39	GLN	3.2
4	CE	117	ALA	3.2
30	BH	88	GLY	3.2
6	AG	79	VAL	3.2
30	BH	145	ASN	3.2
52	BI	58	ILE	3.2
30	BH	59	ALA	3.2
27	DE	119	ILE	3.2
2	CC	198	LYS	3.2
32	BK	64	ARG	3.2
42	BU	94	PHE	3.2
29	DG	88	LEU	3.2

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Mol	Chain	Res	Type	RSRZ
30	BH	90	LEU	3.2
27	BE	150	THR	3.2
4	CE	47	PHE	3.2
37	BP	66	GLY	3.2
32	BK	107	LEU	3.2
32	BK	120	PRO	3.2
52	BI	52	LEU	3.2
28	DF	171	ALA	3.2
9	CJ	74	VAL	3.2
26	DD	52	THR	3.2
29	BG	102	ILE	3.2
34	DM	33	LEU	3.2
28	DF	28	PRO	3.2
52	BI	19	PRO	3.2
1	AA	78	A	3.2
20	CB	194	GLY	3.2
52	BI	17	ALA	3.2
29	DG	160	GLY	3.2
15	AP	54	LEU	3.2
33	DL	108	ALA	3.2
2	AC	101	ASN	3.2
5	AF	35	LYS	3.2
7	AH	128	VAL	3.2
8	AI	27	ILE	3.2
36	BO	115	LEU	3.2
20	CB	216	VAL	3.2
15	AP	5	ARG	3.2
28	BF	151	LEU	3.2
27	BE	187	VAL	3.2
47	B0	54	ILE	3.1
25	DC	78	GLU	3.1
34	DM	60	GLN	3.1
9	CJ	79	PRO	3.1
48	B1	35	LEU	3.1
28	BF	119	LYS	3.1
20	CB	186	VAL	3.1
32	BK	78	ARG	3.1
29	BG	21	GLN	3.1
6	AG	143	MET	3.1
2	AC	46	LEU	3.1
26	BD	201	LEU	3.1
37	BP	59	THR	3.1

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Mol	Chain	Res	Type	RSRZ
4	CE	144	GLU	3.1
5	AF	67	PRO	3.1
16	AQ	14	ASP	3.1
4	CE	71	ILE	3.1
25	BC	116	GLN	3.1
6	AG	86	VAL	3.1
27	BE	193	VAL	3.1
32	BK	82	ASN	3.1
18	CS	26	ASP	3.1
30	BH	86	ASP	3.1
25	BC	20	ASN	3.1
18	AS	40	PHE	3.1
43	DW	45	HIS	3.1
1	CA	1032	G	3.1
20	CB	66	ILE	3.1
27	BE	124	PHE	3.1
40	DS	68	ASP	3.1
29	BG	147	LEU	3.1
30	BH	141	LYS	3.1
38	DQ	4	LYS	3.1
7	CH	102	VAL	3.1
23	BB	645	C	3.1
33	DL	91	ASP	3.1
26	DD	48	ILE	3.1
37	BP	75	THR	3.1
6	AG	18	GLY	3.1
12	CM	55	LEU	3.1
3	AD	172	VAL	3.1
40	DS	3	THR	3.1
20	CB	206	ILE	3.1
35	BN	44	LEU	3.1
27	DE	124	PHE	3.1
28	DF	79	ARG	3.0
21	CU	10	PRO	3.0
13	CN	24	ALA	3.0
48	B1	30	PRO	3.0
32	BK	105	ARG	3.0
5	AF	56	LYS	3.0
22	BA	88	C	3.0
2	CC	165	GLU	3.0
28	DF	33	ILE	3.0
26	DD	97	SER	3.0

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Mol	Chain	Res	Type	RSRZ
50	B3	19	GLY	3.0
32	BK	102	PRO	3.0
4	CE	36	THR	3.0
34	DM	30	SER	3.0
41	DT	71	GLY	3.0
13	AN	34	ASN	3.0
28	DF	55	ASP	3.0
5	AF	88	MET	3.0
15	AP	3	THR	3.0
5	AF	39	LEU	3.0
20	CB	16	GLY	3.0
2	AC	92	ASP	3.0
5	AF	55	HIS	3.0
6	CG	74	VAL	3.0
20	AB	8	MET	3.0
32	BK	80	ASP	3.0
43	BW	14	ASP	3.0
47	D0	54	ILE	3.0
25	DC	100	ARG	3.0
9	AJ	36	VAL	3.0
30	BH	147	VAL	3.0
2	AC	82	ASP	3.0
20	CB	45	THR	3.0
30	BH	27	ARG	3.0
37	BP	63	ILE	3.0
2	CC	46	LEU	3.0
9	CJ	33	GLY	3.0
32	DK	59	LYS	3.0
29	DG	161	VAL	2.9
48	B1	13	SER	2.9
9	CJ	88	MET	2.9
2	CC	169	GLU	2.9
21	CU	35	GLU	2.9
52	DI	80	LYS	2.9
20	CB	183	PHE	2.9
27	DE	108	ILE	2.9
9	CJ	87	LEU	2.9
48	B1	24	LYS	2.9
8	AI	48	ARG	2.9
32	BK	70	ARG	2.9
20	AB	183	PHE	2.9
40	DS	5	ALA	2.9

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Mol	Chain	Res	Type	RSRZ
29	DG	40	VAL	2.9
3	AD	157	ALA	2.9
5	AF	68	GLN	2.9
36	BO	90	VAL	2.9
37	BP	1	SER	2.9
39	DR	48	LYS	2.9
15	AP	39	PHE	2.9
25	DC	81	GLU	2.9
30	DH	1	MET	2.9
25	BC	171	VAL	2.9
52	BI	70	THR	2.9
20	CB	41	ASN	2.9
17	CR	36	GLY	2.9
34	BM	33	LEU	2.9
42	BU	33	VAL	2.9
25	BC	102	TYR	2.9
8	AI	78	ILE	2.9
28	BF	139	GLU	2.9
52	DI	86	LYS	2.9
3	AD	153	ARG	2.9
24	BV	74	ALA	2.9
52	BI	13	ALA	2.9
50	B3	13	PHE	2.9
40	DS	1	MET	2.9
30	BH	91	PHE	2.9
6	AG	20	GLU	2.9
30	BH	115	VAL	2.9
15	AP	57	ILE	2.9
26	BD	15	PHE	2.9
12	AM	7	ASN	2.9
32	DK	82	ASN	2.9
20	CB	30	ILE	2.9
26	DD	96	ILE	2.9
40	BS	74	ILE	2.9
20	AB	68	PHE	2.9
20	AB	181	PRO	2.9
26	BD	20	VAL	2.9
40	DS	52	GLU	2.9
25	DC	20	ASN	2.9
28	BF	168	LEU	2.9
40	DS	69	LEU	2.9
33	DL	75	ALA	2.9

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Mol	Chain	Res	Type	RSRZ
42	BU	76	THR	2.8
11	AL	24	GLU	2.8
4	AE	147	ASN	2.8
25	DC	29	PHE	2.8
28	BF	72	SER	2.8
30	BH	82	SER	2.8
40	BS	75	PHE	2.8
9	CJ	75	ASP	2.8
20	AB	198	VAL	2.8
37	BP	60	VAL	2.8
30	BH	96	THR	2.8
13	AN	30	ILE	2.8
5	AF	34	GLY	2.8
20	CB	164	ASP	2.8
15	AP	48	GLU	2.8
32	DK	3	GLN	2.8
36	BO	81	ARG	2.8
26	BD	176	ASP	2.8
15	AP	22	ALA	2.8
26	BD	189	VAL	2.8
52	DI	136	GLY	2.8
5	AF	93	LYS	2.8
17	CR	35	SER	2.8
29	DG	114	HIS	2.8
37	DP	1	SER	2.8
16	AQ	20	ILE	2.8
32	BK	8	LEU	2.8
35	BN	87	PHE	2.8
30	BH	146	VAL	2.8
2	AC	107	LYS	2.8
35	BN	78	LYS	2.8
15	AP	21	VAL	2.8
32	BK	73	ASP	2.8
28	DF	167	ALA	2.8
18	AS	47	THR	2.8
21	AU	53	LYS	2.8
31	DJ	2	LYS	2.8
12	CM	47	LEU	2.8
28	BF	60	SER	2.8
29	BG	114	HIS	2.8
41	DT	5	GLU	2.8
42	BU	71	ILE	2.8

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Mol	Chain	Res	Type	RSRZ
18	AS	60	PHE	2.8
20	CB	29	PHE	2.8
25	DC	109	LEU	2.8
30	BH	54	LEU	2.8
30	BH	132	PHE	2.8
36	BO	116	GLN	2.8
13	CN	19	TYR	2.8
15	AP	60	TRP	2.8
33	DL	141	LYS	2.8
3	AD	173	ASP	2.8
20	CB	125	PHE	2.8
25	DC	80	LEU	2.8
20	CB	129	THR	2.8
28	BF	156	THR	2.8
33	DL	57	LEU	2.8
4	AE	85	LYS	2.8
5	AF	61	LEU	2.8
6	AG	22	LEU	2.8
37	BP	31	VAL	2.8
36	BO	88	LYS	2.8
40	BS	94	ASP	2.8
5	AF	63	ASN	2.8
8	AI	54	VAL	2.7
20	CB	130	LYS	2.7
3	AD	174	ALA	2.7
4	CE	10	LEU	2.7
7	CH	73	SER	2.7
27	BE	11	ALA	2.7
5	AF	10	VAL	2.7
2	AC	157	GLY	2.7
6	CG	70	PRO	2.7
3	AD	145	ARG	2.7
32	DK	83	ALA	2.7
25	BC	103	ILE	2.7
20	CB	158	ASP	2.7
36	BO	80	GLU	2.7
19	AT	35	TYR	2.7
41	DT	72	GLN	2.7
40	DS	62	ASP	2.7
28	BF	106	ALA	2.7
42	BU	92	VAL	2.7
48	B1	11	VAL	2.7

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Mol	Chain	Res	Type	RSRZ
52	BI	26	ALA	2.7
25	DC	101	ARG	2.7
50	B3	22	LYS	2.7
20	CB	14	HIS	2.7
28	DF	1	ALA	2.7
21	CU	34	ARG	2.7
33	DL	123	ARG	2.7
52	DI	52	LEU	2.7
14	AO	43	ALA	2.7
16	AQ	60	ILE	2.7
9	CJ	90	LEU	2.7
48	D1	6	GLU	2.7
16	AQ	11	VAL	2.7
2	AC	102	ILE	2.7
7	CH	129	ALA	2.7
20	AB	64	GLY	2.7
26	DD	3	GLY	2.7
32	BK	101	GLY	2.7
16	AQ	52	CYS	2.7
40	DS	104	THR	2.7
3	CD	171	GLU	2.7
25	DC	22	GLU	2.7
36	BO	106	LEU	2.7
41	DT	11	LEU	2.7
39	DR	98	ILE	2.7
25	BC	125	PRO	2.7
15	AP	18	GLN	2.7
15	CP	47	GLU	2.7
31	BJ	122	LEU	2.7
5	AF	38	ARG	2.7
13	AN	45	LEU	2.7
20	CB	200	PRO	2.7
37	DP	111	GLU	2.7
17	AR	28	LEU	2.7
9	AJ	96	VAL	2.7
40	DS	30	SER	2.7
28	BF	153	ILE	2.7
48	D1	4	ILE	2.7
28	BF	99	PHE	2.7
29	BG	169	ARG	2.6
26	DD	30	GLU	2.6
6	CG	84	TYR	2.6

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Mol	Chain	Res	Type	RSRZ
2	AC	76	ILE	2.6
39	DR	67	GLY	2.6
48	B1	47	ILE	2.6
3	AD	3	TYR	2.6
3	AD	146	GLU	2.6
15	AP	71	VAL	2.6
24	DV	72	VAL	2.6
9	AJ	24	GLU	2.6
30	BH	87	GLU	2.6
20	CB	64	GLY	2.6
20	CB	90	PHE	2.6
32	BK	60	ALA	2.6
40	DS	105	VAL	2.6
30	BH	120	GLY	2.6
10	AK	73	VAL	2.6
25	DC	110	LYS	2.6
43	BW	45	HIS	2.6
18	AS	42	ASN	2.6
18	AS	61	VAL	2.6
48	B1	37	LYS	2.6
16	AQ	9	GLY	2.6
20	CB	157	PRO	2.6
20	CB	159	ALA	2.6
29	BG	7	PRO	2.6
28	DF	77	LYS	2.6
37	BP	84	SER	2.6
52	DI	89	SER	2.6
26	DD	4	LEU	2.6
28	BF	90	LEU	2.6
52	DI	114	ALA	2.6
8	AI	127	SER	2.6
15	AP	34	GLU	2.6
30	BH	60	GLU	2.6
31	DJ	1	MET	2.6
38	DQ	73	ILE	2.6
3	AD	142	VAL	2.6
25	BC	1	ALA	2.6
25	DC	1	ALA	2.6
52	DI	82	ALA	2.6
3	AD	23	GLY	2.6
13	AN	24	ALA	2.6
48	B1	18	HIS	2.6

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Mol	Chain	Res	Type	RSRZ
4	CE	149	PRO	2.6
37	BP	33	GLU	2.6
46	BZ	72	ARG	2.6
2	AC	54	ILE	2.6
48	B1	20	TYR	2.6
50	D3	13	PHE	2.6
28	DF	168	LEU	2.6
32	BK	75	SER	2.6
41	DT	16	VAL	2.6
9	AJ	91	ASP	2.6
42	BU	102	ILE	2.6
6	AG	140	VAL	2.6
12	AM	73	SER	2.6
12	AM	82	LEU	2.6
15	AP	2	VAL	2.6
34	BM	93	VAL	2.6
35	BN	24	MET	2.6
30	DH	140	ALA	2.6
23	BB	1095	A	2.6
36	BO	117	PHE	2.6
8	AI	99	LYS	2.6
30	BH	79	THR	2.6
49	B2	31	LEU	2.6
32	BK	69	VAL	2.6
9	CJ	30	LYS	2.5
20	AB	100	LEU	2.5
45	DY	58	GLU	2.5
20	CB	198	VAL	2.5
37	BP	107	ALA	2.5
13	AN	20	PHE	2.5
52	DI	47	SER	2.5
8	AI	66	VAL	2.5
19	AT	27	MET	2.5
28	BF	62	GLN	2.5
36	BO	93	ASP	2.5
11	AL	60	PHE	2.5
28	BF	113	PHE	2.5
40	DS	103	ILE	2.5
29	BG	160	GLY	2.5
26	BD	110	THR	2.5
28	BF	89	THR	2.5
45	BY	55	LYS	2.5

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Mol	Chain	Res	Type	RSRZ
8	CI	84	ARG	2.5
28	BF	124	ARG	2.5
42	BU	75	ALA	2.5
52	DI	95	ASP	2.5
9	CJ	76	ILE	2.5
25	DC	102	TYR	2.5
26	BD	29	VAL	2.5
11	AL	12	ALA	2.5
12	AM	72	ILE	2.5
37	BP	109	ILE	2.5
33	BL	6	LEU	2.5
24	BV	57	TYR	2.5
15	AP	67	ILE	2.5
7	CH	126	CYS	2.5
9	CJ	37	ARG	2.5
29	DG	41	GLU	2.5
33	BL	144	GLU	2.5
28	BF	103	ILE	2.5
26	DD	46	ARG	2.5
44	BX	37	LEU	2.5
16	AQ	75	VAL	2.5
39	DR	96	VAL	2.5
48	B1	12	SER	2.5
12	AM	28	ARG	2.5
34	DM	59	ARG	2.5
8	AI	19	PHE	2.5
52	DI	81	LYS	2.5
17	CR	71	ASP	2.5
28	BF	56	LEU	2.5
48	B1	17	GLY	2.5
36	BO	28	VAL	2.5
52	BI	21	PRO	2.5
4	CE	85	LYS	2.5
27	BE	23	PHE	2.5
6	CG	79	VAL	2.5
12	AM	4	ALA	2.5
28	DF	15	LEU	2.5
1	CA	1031	C	2.5
23	BB	1583	A	2.5
26	DD	35	THR	2.5
29	BG	168	VAL	2.5
4	CE	13	LYS	2.5

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Mol	Chain	Res	Type	RSRZ
26	DD	55	LYS	2.5
26	BD	101	PHE	2.5
3	AD	4	LEU	2.5
7	AH	99	GLY	2.5
12	AM	76	ILE	2.5
18	AS	39	ILE	2.5
20	AB	180	ILE	2.5
20	CB	217	ALA	2.5
25	BC	76	VAL	2.5
30	BH	111	ALA	2.5
33	DL	77	ILE	2.5
40	DS	107	VAL	2.5
48	B1	48	TYR	2.5
9	CJ	89	ARG	2.5
27	BE	148	ILE	2.5
38	BQ	90	ASP	2.5
42	BU	49	PRO	2.5
46	BZ	6	GLN	2.5
8	AI	45	MET	2.5
28	DF	78	ILE	2.5
48	D1	3	GLY	2.5
40	DS	75	PHE	2.5
27	BE	64	GLY	2.4
37	BP	46	VAL	2.4
28	BF	176	PHE	2.4
3	AD	24	VAL	2.4
29	BG	101	VAL	2.4
37	DP	114	ASN	2.4
1	CA	1534	A	2.4
3	AD	94	GLU	2.4
16	AQ	33	TYR	2.4
36	BO	99	TYR	2.4
39	DR	12	HIS	2.4
15	AP	35	ARG	2.4
37	BP	102	ARG	2.4
50	B3	14	LYS	2.4
7	AH	13	ILE	2.4
8	AI	65	THR	2.4
43	BW	62	ALA	2.4
50	D3	20	GLY	2.4
15	AP	51	ARG	2.4
40	BS	73	LYS	2.4

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Mol	Chain	Res	Type	RSRZ
26	DD	75	ALA	2.4
37	BP	48	ALA	2.4
9	CJ	66	GLU	2.4
2	AC	63	ILE	2.4
27	DE	181	ILE	2.4
34	DM	29	GLY	2.4
36	DO	2	ASP	2.4
35	DN	83	LEU	2.4
20	CB	82	ALA	2.4
29	DG	147	LEU	2.4
32	DK	17	ARG	2.4
28	DF	43	ILE	2.4
14	AO	42	PHE	2.4
21	CU	36	PHE	2.4
7	CH	127	TYR	2.4
8	CI	54	VAL	2.4
15	AP	66	THR	2.4
28	BF	117	SER	2.4
20	CB	15	PHE	2.4
29	BG	20	GLY	2.4
18	AS	18	VAL	2.4
18	CS	15	LEU	2.4
20	CB	131	LYS	2.4
26	BD	179	ARG	2.4
31	DJ	64	VAL	2.4
25	BC	22	GLU	2.4
42	BU	59	GLU	2.4
12	AM	87	GLY	2.4
18	AS	43	MET	2.4
32	BK	34	GLY	2.4
2	CC	130	ARG	2.4
15	AP	28	ARG	2.4
5	AF	7	VAL	2.4
29	DG	42	VAL	2.4
52	BI	60	VAL	2.4
5	AF	6	ILE	2.4
29	DG	113	ASP	2.4
48	B1	33	LEU	2.4
4	AE	149	PRO	2.4
38	DQ	70	GLN	2.4
13	CN	29	ILE	2.4
20	AB	158	ASP	2.4

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Mol	Chain	Res	Type	RSRZ
28	BF	112	ASP	2.4
31	BJ	123	LYS	2.4
52	BI	16	MET	2.4
34	DM	132	THR	2.4
35	BN	83	LEU	2.4
37	BP	24	THR	2.4
41	DT	69	ARG	2.4
8	AI	46	VAL	2.4
30	DH	18	GLN	2.4
5	AF	65	GLU	2.4
40	DS	4	ILE	2.4
5	CF	88	MET	2.4
20	AB	179	GLY	2.4
30	BH	116	ARG	2.4
47	B0	1	ALA	2.4
2	AC	14	VAL	2.4
4	CE	115	GLU	2.4
52	BI	68	PHE	2.4
52	DI	96	LYS	2.4
23	DB	100	U	2.4
48	B1	21	THR	2.4
29	DG	117	PRO	2.4
32	DK	39	ILE	2.4
52	BI	25	PRO	2.4
29	BG	9	VAL	2.4
6	CG	105	GLU	2.3
12	AM	38	ILE	2.3
28	DF	84	ILE	2.3
33	DL	144	GLU	2.3
7	AH	71	VAL	2.3
29	BG	161	VAL	2.3
36	BO	27	VAL	2.3
1	CA	1033	G	2.3
7	AH	44	PHE	2.3
8	AI	83	THR	2.3
20	AB	193	ASP	2.3
29	BG	33	THR	2.3
33	DL	135	ILE	2.3
37	BP	23	ASP	2.3
40	BS	78	GLU	2.3
25	DC	21	PRO	2.3
26	DD	76	GLY	2.3

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Mol	Chain	Res	Type	RSRZ
28	BF	65	LEU	2.3
30	DH	27	ARG	2.3
3	AD	154	VAL	2.3
28	BF	64	PRO	2.3
28	BF	130	GLY	2.3
27	BE	119	ILE	2.3
20	CB	219	THR	2.3
25	BC	113	ASP	2.3
28	BF	134	GLN	2.3
41	DT	53	VAL	2.3
28	BF	172	PHE	2.3
41	DT	12	ARG	2.3
12	AM	47	LEU	2.3
20	AB	160	LEU	2.3
25	BC	78	GLU	2.3
8	CI	83	THR	2.3
41	DT	73	ARG	2.3
45	BY	33	HIS	2.3
2	AC	65	VAL	2.3
28	BF	102	LEU	2.3
32	DK	9	ASN	2.3
44	BX	14	LEU	2.3
3	AD	51	GLY	2.3
12	AM	36	ALA	2.3
6	AG	14	ASP	2.3
4	CE	140	ILE	2.3
7	AH	74	ILE	2.3
26	BD	8	LYS	2.3
29	BG	171	LYS	2.3
6	AG	76	SER	2.3
3	CD	24	VAL	2.3
26	BD	30	GLU	2.3
52	DI	49	GLU	2.3
48	D1	15	GLY	2.3
6	CG	85	GLN	2.3
2	AC	89	VAL	2.3
20	AB	87	ASP	2.3
25	DC	59	GLN	2.3
7	CH	71	VAL	2.3
12	CM	42	VAL	2.3
48	D1	16	THR	2.3
6	AG	11	ILE	2.3

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Mol	Chain	Res	Type	RSRZ
7	AH	100	ILE	2.3
34	DM	102	LEU	2.3
34	DM	133	LYS	2.3
2	CC	180	ASP	2.3
8	AI	102	PHE	2.3
52	BI	41	PHE	2.3
5	AF	42	TRP	2.3
29	BG	45	ALA	2.3
24	BV	63	ILE	2.3
25	BC	94	LEU	2.3
29	BG	19	ASN	2.3
2	CC	106	ARG	2.3
4	CE	118	GLY	2.3
25	BC	101	ARG	2.3
52	BI	3	LYS	2.3
30	DH	19	VAL	2.3
25	BC	37	SER	2.3
20	CB	35	ASN	2.3
29	BG	37	ASN	2.3
4	CE	143	LEU	2.3
28	DF	155	ILE	2.3
39	DR	101	ILE	2.3
5	AF	96	VAL	2.3
14	CO	39	GLN	2.3
28	DF	29	ARG	2.3
35	BN	1	MET	2.3
36	BO	79	ALA	2.3
6	AG	83	THR	2.3
8	AI	18	VAL	2.3
28	BF	173	ASP	2.3
6	AG	4	ARG	2.2
25	BC	100	ARG	2.2
15	CP	80	LYS	2.2
40	DS	48	LYS	2.2
50	D3	64	ALA	2.2
52	DI	44	LYS	2.2
27	BE	14	VAL	2.2
33	BL	125	LEU	2.2
34	DM	64	TRP	2.2
24	BV	56	PHE	2.2
32	BK	106	GLU	2.2
6	AG	19	SER	2.2

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Mol	Chain	Res	Type	RSRZ
9	AJ	76	ILE	2.2
42	BU	11	ILE	2.2
5	CF	4	TYR	2.2
9	CJ	49	PHE	2.2
13	CN	23	ARG	2.2
20	AB	212	TYR	2.2
48	B1	6	GLU	2.2
48	B1	50	GLU	2.2
40	DS	12	SER	2.2
6	CG	4	ARG	2.2
13	CN	42	ASN	2.2
35	BN	94	TYR	2.2
26	DD	93	GLY	2.2
27	BE	7	ASP	2.2
34	DM	37	GLY	2.2
36	BO	89	ASP	2.2
43	DW	6	GLY	2.2
4	CE	146	MET	2.2
34	DM	41	LEU	2.2
5	CF	87	SER	2.2
12	AM	62	PHE	2.2
41	DT	51	PHE	2.2
33	DL	86	GLU	2.2
44	BX	13	GLU	2.2
12	AM	80	MET	2.2
27	BE	154	ASP	2.2
42	DU	69	VAL	2.2
51	B4	7	VAL	2.2
25	DC	198	GLU	2.2
30	BH	114	GLU	2.2
20	CB	33	ALA	2.2
20	CB	48	MET	2.2
32	BK	13	ASN	2.2
37	BP	45	VAL	2.2
34	BM	103	TYR	2.2
6	AG	6	ILE	2.2
26	BD	163	GLY	2.2
13	CN	16	ALA	2.2
25	BC	181	ARG	2.2
15	CP	15	PRO	2.2
27	BE	116	ASP	2.2
41	DT	14	PRO	2.2

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Mol	Chain	Res	Type	RSRZ
26	BD	5	VAL	2.2
18	AS	28	LYS	2.2
25	BC	75	ALA	2.2
42	BU	91	LYS	2.2
50	B3	21	PHE	2.2
18	AS	26	ASP	2.2
23	BB	1731	G	2.2
8	CI	94	ARG	2.2
20	CB	39	ILE	2.2
32	BK	24	VAL	2.2
38	DQ	86	SER	2.2
52	BI	34	ILE	2.2
31	BJ	87	ALA	2.2
48	B1	9	LYS	2.2
52	DI	132	ALA	2.2
29	BG	116	LEU	2.2
34	BM	129	THR	2.2
7	CH	124	ILE	2.2
18	AS	59	VAL	2.2
44	BX	17	GLU	2.2
20	AB	75	ALA	2.2
31	DJ	4	PHE	2.2
46	DZ	77	LYS	2.2
11	AL	86	VAL	2.2
13	AN	93	PRO	2.2
2	CC	107	LYS	2.2
2	CC	203	LYS	2.2
7	CH	122	GLY	2.2
25	DC	90	ILE	2.2
48	B1	22	THR	2.2
36	BO	77	ALA	2.2
36	BO	95	SER	2.2
36	BO	107	ALA	2.2
2	CC	199	VAL	2.2
25	DC	94	LEU	2.2
20	CB	59	ILE	2.2
15	AP	55	ASP	2.2
25	BC	36	ASN	2.2
29	BG	148	ARG	2.2
33	DL	124	GLY	2.2
37	DP	23	ASP	2.2
2	CC	186	SER	2.2

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Mol	Chain	Res	Type	RSRZ
31	DJ	20	ALA	2.2
40	DS	108	SER	2.2
8	CI	128	LYS	2.2
13	AN	40	ARG	2.2
25	DC	33	LEU	2.2
28	BF	114	ARG	2.2
30	BH	102	ALA	2.2
34	DM	136	MET	2.2
35	BN	25	ALA	2.2
1	CA	461	A	2.2
16	AQ	42	LYS	2.2
20	CB	147	LEU	2.2
20	AB	194	GLY	2.2
20	AB	199	ILE	2.2
34	DM	32	GLY	2.2
11	CL	122	LYS	2.2
37	BP	28	LYS	2.2
30	DH	80	ILE	2.2
8	AI	101	GLY	2.1
52	BI	53	PRO	2.1
25	DC	19	VAL	2.1
25	DC	62	ARG	2.1
32	BK	14	SER	2.1
33	DL	90	VAL	2.1
39	DR	24	LYS	2.1
2	AC	67	ILE	2.1
28	BF	96	TRP	2.1
30	BH	143	ILE	2.1
32	DK	38	ILE	2.1
12	AM	1	ALA	2.1
2	AC	88	LYS	2.1
4	CE	114	LEU	2.1
9	AJ	74	VAL	2.1
11	AL	15	VAL	2.1
19	AT	19	HIS	2.1
26	DD	203	VAL	2.1
28	DF	160	LYS	2.1
2	CC	181	ILE	2.1
4	CE	31	SER	2.1
26	DD	183	GLU	2.1
7	CH	9	MET	2.1
36	BO	113	ALA	2.1

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Mol	Chain	Res	Type	RSRZ
33	DL	125	LEU	2.1
10	CK	58	THR	2.1
11	AL	61	GLU	2.1
18	AS	63	ASP	2.1
28	BF	120	SER	2.1
34	DM	126	ILE	2.1
47	B0	42	ILE	2.1
23	BB	1537	G	2.1
30	BH	92	GLY	2.1
21	CU	24	LYS	2.1
32	DK	18	ARG	2.1
37	BP	80	VAL	2.1
32	BK	39	ILE	2.1
48	B1	8	ILE	2.1
8	CI	58	GLU	2.1
28	BF	71	LYS	2.1
30	BH	81	ALA	2.1
32	BK	59	LYS	2.1
37	BP	57	ALA	2.1
27	DE	175	ILE	2.1
40	BS	103	ILE	2.1
48	D1	8	ILE	2.1
39	BR	46	GLU	2.1
42	BU	9	GLU	2.1
20	CB	76	SER	2.1
27	BE	65	THR	2.1
29	BG	24	THR	2.1
11	AL	92	VAL	2.1
42	BU	12	VAL	2.1
7	AH	127	TYR	2.1
15	AP	33	ILE	2.1
24	DV	91	PHE	2.1
31	BJ	119	PHE	2.1
11	AL	17	LYS	2.1
13	AN	90	GLY	2.1
30	BH	126	GLY	2.1
44	BX	60	LYS	2.1
2	AC	152	VAL	2.1
3	AD	35	GLN	2.1
6	CG	104	VAL	2.1
16	AQ	7	LEU	2.1
35	BN	17	ARG	2.1

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Mol	Chain	Res	Type	RSRZ
4	CE	147	ASN	2.1
9	AJ	100	ILE	2.1
28	DF	127	TYR	2.1
8	CI	93	LEU	2.1
9	AJ	62	ARG	2.1
26	BD	3	GLY	2.1
15	AP	20	VAL	2.1
20	CB	26	MET	2.1
23	DB	2799	A	2.1
34	DM	31	PHE	2.1
39	BR	77	PHE	2.1
1	AA	87	C	2.1
11	AL	29	LYS	2.1
28	DF	164	GLU	2.1
39	BR	73	LYS	2.1
11	AL	85	ARG	2.1
42	BU	83	GLY	2.1
44	DX	17	GLU	2.1
47	D0	26	SER	2.1
3	CD	54	LEU	2.1
18	AS	66	VAL	2.1
32	BK	3	GLN	2.1
36	BO	36	TYR	2.1
6	AG	87	PRO	2.1
15	AP	23	ASP	2.1
28	BF	141	ASP	2.1
2	CC	156	LEU	2.1
20	CB	214	GLY	2.1
25	DC	93	VAL	2.1
32	BK	52	VAL	2.1
52	DI	138	VAL	2.1
26	BD	209	ALA	2.1
32	BK	7	MET	2.1
32	DK	60	ALA	2.1
7	CH	125	ILE	2.1
43	DW	43	LYS	2.1
44	DX	36	GLN	2.1
28	BF	162	ASP	2.1
35	BN	120	GLU	2.1
39	BR	95	ASP	2.1
40	BS	104	THR	2.1
44	BX	7	ARG	2.1

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Mol	Chain	Res	Type	RSRZ
25	BC	92	LEU	2.1
2	CC	70	ALA	2.1
5	AF	90	MET	2.1
32	DK	33	ALA	2.1
16	AQ	24	ILE	2.1
21	AU	3	ILE	2.1
28	BF	21	TYR	2.1
37	BP	98	TYR	2.1
40	DS	70	LYS	2.1
4	AE	92	ARG	2.1
11	AL	18	SER	2.1
18	AS	58	PRO	2.1
32	BK	76	VAL	2.1
3	AD	176	LYS	2.1
36	BO	87	ILE	2.1
39	DR	73	LYS	2.1
24	DV	56	PHE	2.1
25	BC	126	GLY	2.1
34	DM	108	VAL	2.1
42	BU	51	LEU	2.1
9	AJ	34	ALA	2.1
33	DL	101	ILE	2.1
20	AB	195	VAL	2.1
32	BK	85	VAL	2.1
3	AD	175	GLY	2.1
38	BQ	17	LEU	2.1
44	BX	57	LEU	2.1
46	BZ	49	LEU	2.1
42	BU	90	LYS	2.0
18	AS	38	THR	2.0
40	DS	32	ALA	2.0
45	DY	1	ALA	2.0
11	AL	19	ASN	2.0
11	AL	58	ASN	2.0
38	BQ	108	LEU	2.0
3	AD	57	LYS	2.0
32	BK	112	PHE	2.0
50	B3	20	GLY	2.0
33	BL	77	ILE	2.0
47	B0	55	ALA	2.0
9	CJ	65	TYR	2.0
20	CB	210	THR	2.0

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Mol	Chain	Res	Type	RSRZ
4	CE	35	LEU	2.0
20	CB	32	GLY	2.0
33	DL	107	PHE	2.0
42	BU	89	GLY	2.0
25	BC	172	THR	2.0
24	BV	91	PHE	2.0
26	BD	118	PHE	2.0
3	CD	195	ASN	2.0
35	BN	52	ILE	2.0
40	DS	74	ILE	2.0
42	DU	49	PRO	2.0
52	DI	116	MET	2.0
28	DF	12	VAL	2.0
36	BO	29	HIS	2.0
32	BK	100	PHE	2.0
32	BK	111	LYS	2.0
21	CU	12	ASP	2.0
50	D3	53	ASP	2.0
23	BB	1730	C	2.0
28	BF	155	ILE	2.0
46	BZ	74	ARG	2.0
10	AK	88	PRO	2.0
20	CB	197	PHE	2.0
27	DE	180	LEU	2.0
38	BQ	13	HIS	2.0
23	BB	654	A	2.0
23	BB	1067	A	2.0
25	BC	132	ARG	2.0
36	BO	25	ARG	2.0
49	D2	29	GLN	2.0
25	BC	61	TYR	2.0
33	DL	58	TYR	2.0
18	CS	40	PHE	2.0
48	D1	33	LEU	2.0
3	AD	159	GLU	2.0
25	BC	167	ASP	2.0
26	BD	200	ASP	2.0
2	AC	203	LYS	2.0
6	CG	153	TYR	2.0
25	BC	110	LYS	2.0
26	BD	109	VAL	2.0
27	BE	153	LEU	2.0

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Mol	Chain	Res	Type	RSRZ
32	BK	63	VAL	2.0
50	D3	9	ALA	2.0
39	BR	35	PHE	2.0
27	DE	122	GLU	2.0
42	BU	36	GLU	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, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
53	MG	BB	3042	1/1	0.13	0.10	168,168,168,168	0
53	MG	AA	2023	1/1	0.54	0.36	66,66,66,66	1
53	MG	AA	2037	1/1	0.58	0.33	138,138,138,138	0
53	MG	AA	2057	1/1	0.62	0.17	141,141,141,141	0
53	MG	CA	2011	1/1	0.65	0.28	132,132,132,132	0
53	MG	AA	2014	1/1	0.68	0.22	112,112,112,112	0
53	MG	CA	2015	1/1	0.68	0.10	149,149,149,149	0
53	MG	CA	2027	1/1	0.69	0.13	50,50,50,50	1
53	MG	DB	3060	1/1	0.71	0.20	112,112,112,112	0
53	MG	AN	201	1/1	0.72	0.12	69,69,69,69	0
53	MG	BB	3100	1/1	0.72	0.20	129,129,129,129	0
53	MG	AA	2031	1/1	0.74	0.09	58,58,58,58	0
53	MG	AA	2047	1/1	0.74	0.04	100,100,100,100	0
53	MG	AA	2008	1/1	0.76	0.08	125,125,125,125	0
53	MG	CA	2059	1/1	0.78	0.12	94,94,94,94	0
53	MG	AA	2019	1/1	0.78	0.06	107,107,107,107	0
53	MG	CA	2023	1/1	0.79	0.20	137,137,137,137	0
53	MG	AA	2033	1/1	0.79	0.11	99,99,99,99	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
53	MG	AA	2056	1/1	0.79	0.12	124,124,124,124	0
53	MG	CA	2021	1/1	0.79	0.36	125,125,125,125	0
53	MG	AE	201	1/1	0.80	0.07	144,144,144,144	0
53	MG	DB	3059	1/1	0.80	0.12	180,180,180,180	0
53	MG	CA	2057	1/1	0.80	0.09	99,99,99,99	0
53	MG	DB	3066	1/1	0.80	0.08	146,146,146,146	0
53	MG	CA	2060	1/1	0.81	0.05	80,80,80,80	0
53	MG	BB	3080	1/1	0.81	0.18	39,39,39,39	0
53	MG	AA	2018	1/1	0.81	0.09	131,131,131,131	0
53	MG	AA	2012	1/1	0.81	0.09	84,84,84,84	0
53	MG	AA	2005	1/1	0.82	0.08	69,69,69,69	0
53	MG	BB	3010	1/1	0.82	0.10	44,44,44,44	0
53	MG	AA	2035	1/1	0.83	0.34	137,137,137,137	0
53	MG	CA	2026	1/1	0.83	0.20	26,26,26,26	1
53	MG	AA	2055	1/1	0.83	0.20	102,102,102,102	0
53	MG	CA	2038	1/1	0.83	0.12	128,128,128,128	0
53	MG	CA	2008	1/1	0.83	0.09	93,93,93,93	0
53	MG	BB	3099	1/1	0.85	0.17	40,40,40,40	0
53	MG	BB	3081	1/1	0.86	0.22	46,46,46,46	0
53	MG	BB	3037	1/1	0.86	0.11	23,23,23,23	0
53	MG	CE	201	1/1	0.86	0.15	127,127,127,127	0
53	MG	CA	2042	1/1	0.87	0.08	58,58,58,58	0
53	MG	DB	3045	1/1	0.87	0.06	57,57,57,57	0
53	MG	AA	2050	1/1	0.87	0.14	105,105,105,105	0
53	MG	AA	2024	1/1	0.87	0.08	5,5,5,5	1
53	MG	AA	2013	1/1	0.87	0.12	122,122,122,122	0
53	MG	DB	3095	1/1	0.87	0.15	89,89,89,89	0
53	MG	BB	3077	1/1	0.88	0.09	36,36,36,36	0
53	MG	BB	3097	1/1	0.88	0.18	114,114,114,114	0
53	MG	DB	3013	1/1	0.88	0.17	51,51,51,51	0
53	MG	DB	3090	1/1	0.88	0.08	37,37,37,37	0
53	MG	AA	2044	1/1	0.88	0.12	112,112,112,112	0
53	MG	AA	2026	1/1	0.89	0.08	65,65,65,65	0
53	MG	CA	2014	1/1	0.90	0.07	47,47,47,47	0
53	MG	CA	2029	1/1	0.90	0.05	23,23,23,23	1
53	MG	CA	2035	1/1	0.90	0.08	89,89,89,89	0
53	MG	DB	3023	1/1	0.90	0.08	32,32,32,32	0
53	MG	DB	3029	1/1	0.90	0.16	88,88,88,88	0
53	MG	AA	2030	1/1	0.90	0.09	99,99,99,99	0
53	MG	BB	3017	1/1	0.90	0.14	34,34,34,34	0
53	MG	CA	2052	1/1	0.90	0.09	73,73,73,73	0
53	MG	CA	2054	1/1	0.90	0.08	104,104,104,104	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
53	MG	BB	3052	1/1	0.90	0.08	38,38,38,38	0
53	MG	BB	3071	1/1	0.90	0.09	26,26,26,26	0
54	HYG	AA	2059	36/36	0.90	0.24	52,52,52,52	0
53	MG	DB	3036	1/1	0.91	0.09	30,30,30,30	0
53	MG	AA	2052	1/1	0.91	0.07	78,78,78,78	0
53	MG	AA	2049	1/1	0.91	0.06	75,75,75,75	0
53	MG	AA	2017	1/1	0.91	0.12	87,87,87,87	0
53	MG	BB	3014	1/1	0.91	0.05	50,50,50,50	0
53	MG	AA	2051	1/1	0.91	0.10	41,41,41,41	0
53	MG	DB	3092	1/1	0.91	0.13	66,66,66,66	0
53	MG	BB	3104	1/1	0.91	0.18	36,36,36,36	0
53	MG	CA	2007	1/1	0.91	0.04	46,46,46,46	0
54	HYG	CA	2062	36/36	0.91	0.22	45,45,45,45	0
53	MG	AA	2021	1/1	0.92	0.31	5,5,5,5	1
53	MG	AA	2004	1/1	0.92	0.14	56,56,56,56	0
53	MG	AA	2045	1/1	0.92	0.64	92,92,92,92	0
53	MG	DB	3050	1/1	0.92	0.08	90,90,90,90	0
53	MG	BB	3048	1/1	0.92	0.10	44,44,44,44	0
53	MG	BB	3051	1/1	0.92	0.14	35,35,35,35	0
53	MG	BB	3046	1/1	0.93	0.11	22,22,22,22	0
53	MG	AA	2046	1/1	0.93	0.07	5,5,5,5	0
53	MG	BB	3049	1/1	0.93	0.10	10,10,10,10	0
53	MG	AA	2054	1/1	0.93	0.08	110,110,110,110	0
53	MG	AA	2015	1/1	0.93	0.06	24,24,24,24	0
53	MG	BB	3053	1/1	0.93	0.06	28,28,28,28	0
53	MG	BB	3054	1/1	0.93	0.06	77,77,77,77	0
53	MG	AA	2016	1/1	0.93	0.09	89,89,89,89	0
53	MG	DB	3044	1/1	0.93	0.11	24,24,24,24	0
53	MG	BB	3024	1/1	0.93	0.11	15,15,15,15	0
53	MG	BB	3031	1/1	0.93	0.14	41,41,41,41	0
53	MG	DB	3058	1/1	0.93	0.33	151,151,151,151	0
53	MG	CA	2028	1/1	0.93	0.07	75,75,75,75	0
53	MG	BB	3032	1/1	0.93	0.10	56,56,56,56	0
53	MG	BB	3085	1/1	0.93	0.17	103,103,103,103	0
53	MG	CA	2037	1/1	0.93	0.08	94,94,94,94	0
53	MG	BB	3093	1/1	0.93	0.24	71,71,71,71	0
53	MG	BB	3033	1/1	0.93	0.33	125,125,125,125	0
53	MG	AA	2032	1/1	0.93	0.08	62,62,62,62	0
53	MG	AA	2001	1/1	0.93	0.07	35,35,35,35	0
53	MG	CA	2036	1/1	0.94	0.17	101,101,101,101	0
53	MG	BB	3027	1/1	0.94	0.08	33,33,33,33	0
53	MG	CA	2019	1/1	0.94	0.10	73,73,73,73	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
53	MG	BB	3039	1/1	0.94	0.18	7,7,7,7	0
53	MG	AA	2002	1/1	0.94	0.06	99,99,99,99	0
53	MG	DB	3052	1/1	0.94	0.12	100,100,100,100	0
53	MG	CA	2024	1/1	0.94	0.06	29,29,29,29	0
53	MG	BB	3020	1/1	0.94	0.10	26,26,26,26	0
53	MG	CA	2058	1/1	0.94	0.11	106,106,106,106	0
53	MG	BB	3001	1/1	0.94	0.10	51,51,51,51	0
53	MG	CA	2010	1/1	0.94	0.08	33,33,33,33	0
53	MG	BB	3055	1/1	0.94	0.15	17,17,17,17	0
53	MG	CA	2033	1/1	0.94	0.15	56,56,56,56	0
53	MG	DB	3015	1/1	0.94	0.07	33,33,33,33	0
53	MG	BB	3057	1/1	0.94	0.19	28,28,28,28	0
53	MG	AA	2022	1/1	0.95	0.07	82,82,82,82	0
53	MG	BB	3083	1/1	0.95	0.22	12,12,12,12	0
53	MG	AA	2028	1/1	0.95	0.17	100,100,100,100	0
53	MG	DB	3005	1/1	0.95	0.12	10,10,10,10	0
53	MG	BB	3088	1/1	0.95	0.06	28,28,28,28	0
53	MG	BB	3036	1/1	0.95	0.11	42,42,42,42	0
53	MG	AA	2029	1/1	0.95	0.06	39,39,39,39	0
53	MG	AA	2006	1/1	0.95	0.03	60,60,60,60	0
53	MG	DB	3035	1/1	0.95	0.06	55,55,55,55	0
53	MG	AA	2007	1/1	0.95	0.06	31,31,31,31	0
53	MG	DB	3041	1/1	0.95	0.11	29,29,29,29	0
53	MG	BB	3102	1/1	0.95	0.12	20,20,20,20	0
53	MG	BB	3045	1/1	0.95	0.10	31,31,31,31	0
53	MG	DB	3046	1/1	0.95	0.09	24,24,24,24	0
53	MG	BB	3061	1/1	0.95	0.04	48,48,48,48	0
53	MG	BB	3063	1/1	0.95	0.09	11,11,11,11	0
53	MG	CA	2009	1/1	0.95	0.06	67,67,67,67	0
53	MG	BB	3064	1/1	0.95	0.08	35,35,35,35	0
53	MG	CA	2043	1/1	0.95	0.04	19,19,19,19	0
53	MG	CA	2047	1/1	0.95	0.06	121,121,121,121	0
53	MG	DB	3072	1/1	0.95	0.12	18,18,18,18	0
53	MG	DB	3073	1/1	0.95	0.10	14,14,14,14	0
53	MG	DB	3074	1/1	0.95	0.09	12,12,12,12	0
53	MG	DB	3080	1/1	0.95	0.10	10,10,10,10	0
53	MG	CA	2049	1/1	0.95	0.06	74,74,74,74	0
53	MG	AA	2025	1/1	0.95	0.17	58,58,58,58	0
53	MG	BB	3047	1/1	0.95	0.06	75,75,75,75	0
53	MG	DB	3097	1/1	0.95	0.14	38,38,38,38	0
53	MG	DB	3110	1/1	0.95	0.14	21,21,21,21	0
53	MG	BB	3008	1/1	0.95	0.10	89,89,89,89	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
53	MG	CA	2016	1/1	0.95	0.04	53,53,53,53	0
53	MG	BB	3056	1/1	0.96	0.08	26,26,26,26	0
53	MG	BB	3098	1/1	0.96	0.15	35,35,35,35	0
53	MG	DB	3021	1/1	0.96	0.23	11,11,11,11	0
53	MG	AA	2058	1/1	0.96	0.14	86,86,86,86	0
53	MG	DB	3026	1/1	0.96	0.08	34,34,34,34	0
53	MG	AA	2038	1/1	0.96	0.11	71,71,71,71	0
53	MG	DB	3032	1/1	0.96	0.09	63,63,63,63	0
53	MG	DB	3034	1/1	0.96	0.16	52,52,52,52	0
53	MG	BB	3021	1/1	0.96	0.08	30,30,30,30	0
53	MG	AA	2039	1/1	0.96	0.12	64,64,64,64	0
53	MG	BB	3109	1/1	0.96	0.09	54,54,54,54	0
53	MG	BB	3068	1/1	0.96	0.12	53,53,53,53	0
53	MG	AA	2041	1/1	0.96	0.07	83,83,83,83	0
53	MG	CA	2040	1/1	0.96	0.09	48,48,48,48	0
53	MG	DB	3047	1/1	0.96	0.17	14,14,14,14	0
53	MG	CA	2041	1/1	0.96	0.05	46,46,46,46	0
53	MG	BB	3003	1/1	0.96	0.07	32,32,32,32	0
53	MG	DB	3054	1/1	0.96	0.04	19,19,19,19	0
53	MG	DB	3057	1/1	0.96	0.06	71,71,71,71	0
53	MG	BB	3078	1/1	0.96	0.15	70,70,70,70	0
53	MG	CA	2044	1/1	0.96	0.07	59,59,59,59	0
53	MG	AA	2048	1/1	0.96	0.03	99,99,99,99	0
53	MG	CA	2048	1/1	0.96	0.11	58,58,58,58	0
53	MG	DB	3071	1/1	0.96	0.06	16,16,16,16	0
53	MG	AA	2042	1/1	0.96	0.09	69,69,69,69	0
53	MG	BB	3082	1/1	0.96	0.16	46,46,46,46	0
53	MG	BB	3034	1/1	0.96	0.10	35,35,35,35	0
53	MG	AA	2009	1/1	0.96	0.10	7,7,7,7	0
53	MG	CA	2020	1/1	0.96	0.21	73,73,73,73	0
53	MG	BB	3087	1/1	0.96	0.16	57,57,57,57	0
53	MG	DB	3093	1/1	0.96	0.22	11,11,11,11	0
53	MG	BB	3016	1/1	0.96	0.07	38,38,38,38	0
53	MG	BB	3038	1/1	0.96	0.03	71,71,71,71	0
53	MG	DB	3108	1/1	0.96	0.09	37,37,37,37	0
53	MG	DB	3003	1/1	0.96	0.19	63,63,63,63	0
53	MG	DB	3111	1/1	0.96	0.09	38,38,38,38	0
53	MG	CA	2025	1/1	0.96	0.12	50,50,50,50	0
53	MG	DB	3011	1/1	0.96	0.16	17,17,17,17	0
53	MG	AA	2036	1/1	0.97	0.04	31,31,31,31	0
53	MG	DB	3022	1/1	0.97	0.08	25,25,25,25	0
53	MG	BB	3013	1/1	0.97	0.10	43,43,43,43	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
53	MG	DB	3025	1/1	0.97	0.15	5,5,5,5	0
53	MG	BB	3035	1/1	0.97	0.07	15,15,15,15	0
53	MG	DB	3028	1/1	0.97	0.06	24,24,24,24	0
53	MG	BB	3090	1/1	0.97	0.12	112,112,112,112	0
53	MG	DB	3030	1/1	0.97	0.17	6,6,6,6	0
53	MG	BB	3091	1/1	0.97	0.09	16,16,16,16	0
53	MG	DB	3033	1/1	0.97	0.08	9,9,9,9	0
53	MG	AA	2043	1/1	0.97	0.08	96,96,96,96	0
53	MG	CA	2034	1/1	0.97	0.11	6,6,6,6	0
53	MG	BB	3096	1/1	0.97	0.11	34,34,34,34	0
53	MG	DB	3038	1/1	0.97	0.12	5,5,5,5	0
53	MG	DB	3039	1/1	0.97	0.04	22,22,22,22	0
53	MG	AA	2011	1/1	0.97	0.07	85,85,85,85	0
53	MG	BB	3058	1/1	0.97	0.10	22,22,22,22	0
53	MG	BB	3060	1/1	0.97	0.13	19,19,19,19	0
53	MG	AA	2027	1/1	0.97	0.09	36,36,36,36	0
53	MG	BB	3062	1/1	0.97	0.17	14,14,14,14	0
53	MG	AA	2034	1/1	0.97	0.06	68,68,68,68	0
53	MG	AA	2040	1/1	0.97	0.10	83,83,83,83	0
53	MG	CA	2004	1/1	0.97	0.09	8,8,8,8	0
53	MG	DB	3055	1/1	0.97	0.11	26,26,26,26	0
53	MG	DB	3056	1/1	0.97	0.09	5,5,5,5	0
53	MG	CA	2046	1/1	0.97	0.09	57,57,57,57	0
53	MG	CA	2005	1/1	0.97	0.09	24,24,24,24	0
53	MG	BB	3065	1/1	0.97	0.06	29,29,29,29	0
53	MG	BB	3066	1/1	0.97	0.12	23,23,23,23	0
53	MG	DB	3061	1/1	0.97	0.09	69,69,69,69	0
53	MG	BB	3043	1/1	0.97	0.05	104,104,104,104	0
53	MG	DB	3070	1/1	0.97	0.08	45,45,45,45	0
53	MG	BB	3069	1/1	0.97	0.11	17,17,17,17	0
53	MG	BB	3023	1/1	0.97	0.14	5,5,5,5	0
53	MG	BB	3074	1/1	0.97	0.07	28,28,28,28	0
53	MG	BB	3075	1/1	0.97	0.21	40,40,40,40	0
53	MG	DB	3078	1/1	0.97	0.08	27,27,27,27	0
53	MG	BB	3004	1/1	0.97	0.06	32,32,32,32	0
53	MG	DB	3082	1/1	0.97	0.10	30,30,30,30	0
53	MG	DB	3086	1/1	0.97	0.15	11,11,11,11	0
53	MG	DB	3087	1/1	0.97	0.15	53,53,53,53	0
53	MG	DB	3088	1/1	0.97	0.14	25,25,25,25	0
53	MG	CA	2061	1/1	0.97	0.08	23,23,23,23	0
53	MG	BB	3026	1/1	0.97	0.08	39,39,39,39	0
53	MG	BB	3005	1/1	0.97	0.19	5,5,5,5	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
53	MG	DB	3094	1/1	0.97	0.03	29,29,29,29	0
53	MG	BB	3029	1/1	0.97	0.07	14,14,14,14	0
53	MG	DB	3007	1/1	0.97	0.14	18,18,18,18	0
53	MG	DB	3100	1/1	0.97	0.16	13,13,13,13	0
53	MG	DB	3102	1/1	0.97	0.09	12,12,12,12	0
53	MG	DB	3103	1/1	0.97	0.13	27,27,27,27	0
53	MG	DB	3105	1/1	0.97	0.14	23,23,23,23	0
53	MG	DB	3009	1/1	0.97	0.07	29,29,29,29	0
53	MG	DB	3109	1/1	0.97	0.10	9,9,9,9	0
53	MG	DB	3010	1/1	0.97	0.08	8,8,8,8	0
53	MG	CA	2022	1/1	0.97	0.10	63,63,63,63	0
53	MG	AA	2010	1/1	0.97	0.04	60,60,60,60	0
53	MG	BB	3009	1/1	0.97	0.04	46,46,46,46	0
55	ZN	B4	101	1/1	0.97	0.04	80,80,80,80	0
53	MG	BB	3067	1/1	0.98	0.09	44,44,44,44	0
53	MG	BB	3022	1/1	0.98	0.26	34,34,34,34	0
53	MG	DB	3040	1/1	0.98	0.16	5,5,5,5	0
53	MG	CA	2013	1/1	0.98	0.08	73,73,73,73	0
53	MG	DB	3042	1/1	0.98	0.10	6,6,6,6	0
53	MG	DB	3043	1/1	0.98	0.11	5,5,5,5	0
53	MG	BB	3089	1/1	0.98	0.15	56,56,56,56	0
53	MG	CA	2051	1/1	0.98	0.05	39,39,39,39	0
53	MG	BB	3044	1/1	0.98	0.15	53,53,53,53	0
53	MG	AA	2020	1/1	0.98	0.07	5,5,5,5	0
53	MG	DB	3048	1/1	0.98	0.12	28,28,28,28	0
53	MG	DB	3049	1/1	0.98	0.09	36,36,36,36	0
53	MG	CA	2055	1/1	0.98	0.07	11,11,11,11	0
53	MG	DB	3051	1/1	0.98	0.19	23,23,23,23	0
53	MG	CA	2056	1/1	0.98	0.05	5,5,5,5	0
53	MG	CA	2017	1/1	0.98	0.11	5,5,5,5	0
53	MG	BB	3072	1/1	0.98	0.12	17,17,17,17	0
53	MG	BB	3094	1/1	0.98	0.07	28,28,28,28	0
53	MG	BB	3095	1/1	0.98	0.07	33,33,33,33	0
53	MG	BB	3073	1/1	0.98	0.09	39,39,39,39	0
53	MG	BB	3006	1/1	0.98	0.07	5,5,5,5	0
53	MG	DB	3002	1/1	0.98	0.07	12,12,12,12	0
53	MG	BB	3059	1/1	0.98	0.12	26,26,26,26	0
53	MG	DB	3062	1/1	0.98	0.04	77,77,77,77	0
53	MG	DB	3063	1/1	0.98	0.12	43,43,43,43	0
53	MG	DB	3064	1/1	0.98	0.05	20,20,20,20	0
53	MG	DB	3065	1/1	0.98	0.05	37,37,37,37	0
53	MG	DB	3004	1/1	0.98	0.11	6,6,6,6	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
53	MG	DB	3067	1/1	0.98	0.07	5,5,5,5	0
53	MG	DB	3068	1/1	0.98	0.10	5,5,5,5	0
53	MG	DB	3069	1/1	0.98	0.18	11,11,11,11	0
53	MG	BB	3025	1/1	0.98	0.13	30,30,30,30	0
53	MG	DB	3006	1/1	0.98	0.10	5,5,5,5	0
53	MG	BB	3011	1/1	0.98	0.19	5,5,5,5	0
53	MG	DB	3008	1/1	0.98	0.18	6,6,6,6	0
53	MG	BB	3101	1/1	0.98	0.09	24,24,24,24	0
53	MG	DB	3075	1/1	0.98	0.10	57,57,57,57	0
53	MG	DB	3077	1/1	0.98	0.21	54,54,54,54	0
53	MG	BB	3079	1/1	0.98	0.04	19,19,19,19	0
53	MG	DB	3079	1/1	0.98	0.14	28,28,28,28	0
53	MG	BB	3103	1/1	0.98	0.08	5,5,5,5	0
53	MG	CA	2030	1/1	0.98	0.12	7,7,7,7	0
53	MG	DB	3083	1/1	0.98	0.16	85,85,85,85	0
53	MG	DB	3084	1/1	0.98	0.17	5,5,5,5	0
53	MG	CA	2032	1/1	0.98	0.17	33,33,33,33	0
53	MG	DB	3016	1/1	0.98	0.05	15,15,15,15	0
53	MG	DB	3017	1/1	0.98	0.10	13,13,13,13	0
53	MG	DB	3089	1/1	0.98	0.17	7,7,7,7	0
53	MG	BB	3019	1/1	0.98	0.05	22,22,22,22	0
53	MG	BB	3105	1/1	0.98	0.08	20,20,20,20	0
53	MG	BB	3108	1/1	0.98	0.10	47,47,47,47	0
53	MG	DB	3024	1/1	0.98	0.13	63,63,63,63	0
53	MG	BB	3028	1/1	0.98	0.20	86,86,86,86	0
53	MG	DB	3096	1/1	0.98	0.12	6,6,6,6	0
53	MG	CA	2001	1/1	0.98	0.05	5,5,5,5	0
53	MG	DB	3099	1/1	0.98	0.19	7,7,7,7	0
53	MG	DB	3027	1/1	0.98	0.15	6,6,6,6	0
53	MG	BB	3012	1/1	0.98	0.09	32,32,32,32	0
53	MG	CA	2039	1/1	0.98	0.12	16,16,16,16	0
53	MG	DB	3104	1/1	0.98	0.08	33,33,33,33	0
53	MG	BB	3040	1/1	0.98	0.18	26,26,26,26	0
53	MG	DB	3106	1/1	0.98	0.13	23,23,23,23	0
53	MG	DB	3107	1/1	0.98	0.07	10,10,10,10	0
53	MG	DB	3031	1/1	0.98	0.18	8,8,8,8	0
53	MG	CA	2006	1/1	0.98	0.05	95,95,95,95	0
53	MG	BB	3084	1/1	0.98	0.16	24,24,24,24	0
53	MG	AA	2053	1/1	0.98	0.07	79,79,79,79	0
53	MG	BB	3086	1/1	0.98	0.26	42,42,42,42	0
53	MG	CA	2045	1/1	0.98	0.16	48,48,48,48	0
53	MG	DB	3037	1/1	0.98	0.16	28,28,28,28	0

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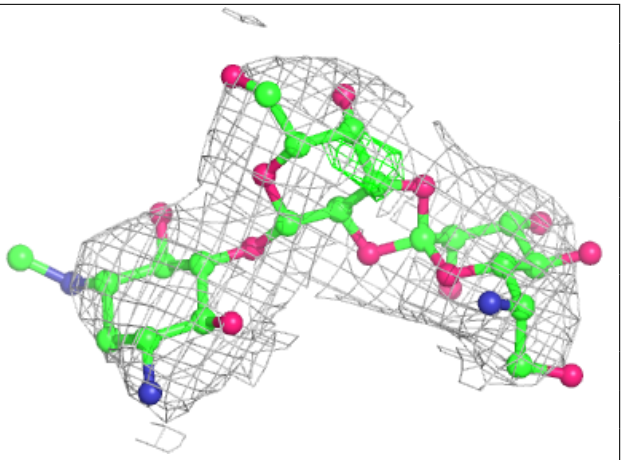
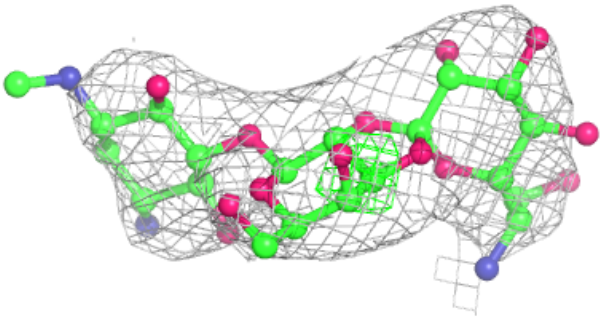
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	ZN	D4	101	1/1	0.98	0.06	46,46,46,46	0
53	MG	DB	3001	1/1	0.99	0.10	5,5,5,5	0
53	MG	BB	3007	1/1	0.99	0.14	82,82,82,82	0
53	MG	DB	3085	1/1	0.99	0.12	5,5,5,5	0
53	MG	BB	3092	1/1	0.99	0.06	54,54,54,54	0
53	MG	BB	3018	1/1	0.99	0.14	32,32,32,32	0
53	MG	BB	3041	1/1	0.99	0.08	7,7,7,7	0
53	MG	CA	2012	1/1	0.99	0.08	93,93,93,93	0
53	MG	BB	3106	1/1	0.99	0.12	62,62,62,62	0
53	MG	DB	3091	1/1	0.99	0.18	13,13,13,13	0
53	MG	CA	2031	1/1	0.99	0.06	28,28,28,28	0
53	MG	CA	2050	1/1	0.99	0.11	8,8,8,8	0
53	MG	BB	3107	1/1	0.99	0.11	6,6,6,6	0
53	MG	AA	2003	1/1	0.99	0.17	39,39,39,39	0
53	MG	DB	3012	1/1	0.99	0.20	9,9,9,9	0
53	MG	CA	2053	1/1	0.99	0.06	30,30,30,30	0
53	MG	DB	3098	1/1	0.99	0.22	44,44,44,44	0
53	MG	DB	3014	1/1	0.99	0.05	5,5,5,5	0
53	MG	BB	3050	1/1	0.99	0.12	28,28,28,28	0
53	MG	DB	3101	1/1	0.99	0.20	5,5,5,5	0
53	MG	BB	3110	1/1	0.99	0.15	23,23,23,23	0
53	MG	CA	2018	1/1	0.99	0.03	6,6,6,6	0
53	MG	DB	3018	1/1	0.99	0.07	22,22,22,22	0
53	MG	DB	3019	1/1	0.99	0.09	5,5,5,5	0
53	MG	DB	3020	1/1	0.99	0.15	5,5,5,5	0
53	MG	BB	3076	1/1	0.99	0.05	38,38,38,38	0
53	MG	CA	2003	1/1	0.99	0.04	35,35,35,35	0
53	MG	DB	3076	1/1	0.99	0.10	5,5,5,5	0
53	MG	BB	3030	1/1	0.99	0.03	35,35,35,35	0
53	MG	BB	3015	1/1	0.99	0.09	13,13,13,13	0
53	MG	BB	3002	1/1	0.99	0.07	5,5,5,5	0
53	MG	BB	3070	1/1	0.99	0.14	37,37,37,37	0
53	MG	DB	3081	1/1	0.99	0.13	18,18,18,18	0
53	MG	DB	3053	1/1	0.99	0.07	35,35,35,35	0
53	MG	CA	2002	1/1	1.00	0.11	5,5,5,5	0

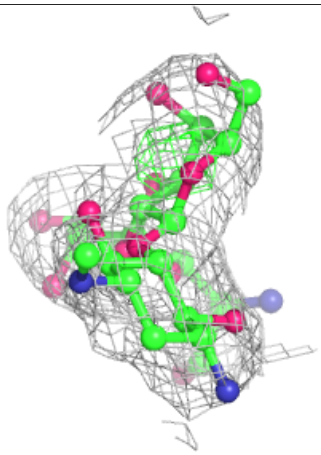
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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

Electron density around HYG AA 2059:

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

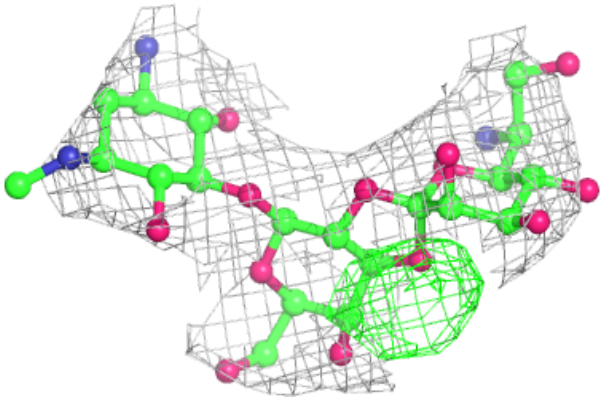


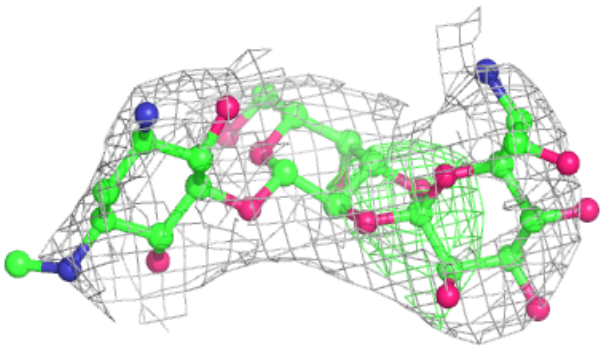


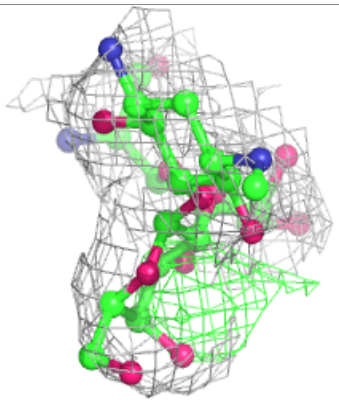


Electron density around HYG CA 2062:

$2mF_o$-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.