Full wwPDB X-ray Structure Validation Report (i)

Mar 28, 2026 – 07:22 PM UTC

PDB ID	:	4V7S / pdb_00004v7s
Title	:	Crystal structure of the E. coli ribosome bound to telithromycin.
Authors	:	Dunkle, J.A.; Xiong, L.; Mankin, A.S.; Cate, J.H.D.
Deposited on	:	2010-08-05
Resolution	:	3.25 Å(reported)

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

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

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

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

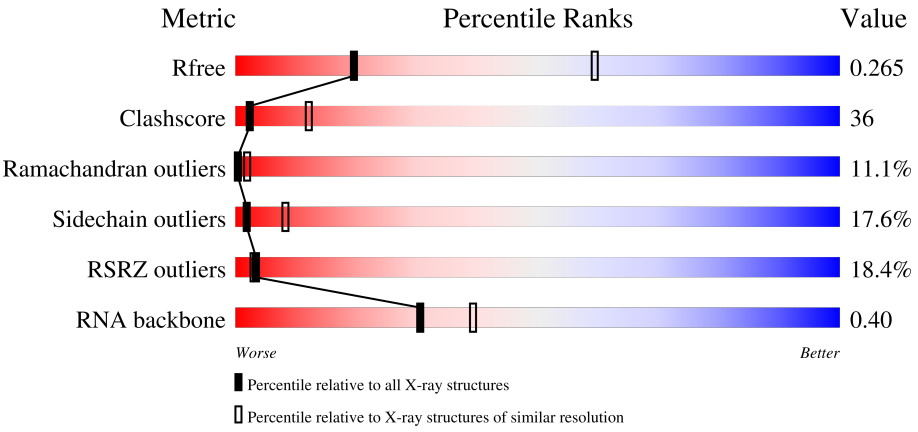
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal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

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 3.25 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	1605 (3.30-3.22)
Clashscore	190562	1660 (3.30-3.22)
Ramachandran outliers	187476	1630 (3.30-3.22)
Sidechain outliers	187428	1629 (3.30-3.22)
RSRZ outliers	180081	1605 (3.30-3.22)
RNA backbone	3983	1006 (3.54-2.98)

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	1533	2% 31% 49% 19%
2	AB	218	6% 26% 51% 22%
2	CB	218	11% 33% 53% 14%
3	AC	206	9% 43% 39% 17%

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Mol	Chain	Length	Quality of chain
3	CC	206	8% 38% 47% 16%
4	AD	205	13% 34% 49% 17%
4	CD	205	7% 35% 45% 17%
5	AE	150	11% 29% 47% 21%
5	CE	150	5% 34% 47% 17%
6	AF	100	13% 30% 52% 14%
6	CF	100	10% 37% 45% 17%
7	AG	151	14% 39% 48% 12%
8	AH	129	3% 29% 53% 17%
8	CH	129	16% 33% 53% 14%
9	AI	127	28% 35% 50% 13%
9	CI	127	42% 27% 58% 13%
10	AJ	98	23% 23% 57% 18%
10	CJ	98	42% 26% 58% 14%
11	AK	117	6% 42% 43% 13%
11	CK	117	9% 49% 38% 14%
12	AL	123	8% 37% 46% 15%
12	CL	123	13% 33% 49% 18%
13	AM	114	16% 39% 53% 9%
14	AN	100	29% 30% 56% 8%
14	CN	100	35% 35% 49% 10% 5%
15	AO	88	5% 45% 48% 7%
15	CO	88	14% 42% 50% 7%
16	AP	82	7% 40% 48% 11%
17	AQ	80	8% 28% 48% 21%

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Mol	Chain	Length	Quality of chain
17	CQ	80	20% 35% 44% 20%
18	AR	55	13% 38% 58%
18	CR	55	11% 35% 56% 9%
19	AS	79	16% 33% 56% 6% 5%
19	CS	79	35% 35% 53% 10%
20	AT	85	8% 29% 45% 21% 5%
20	CT	85	34% 45% 34% 20%
21	AU	51	37% 24% 51% 24%
21	CU	51	27% 25% 35% 31% 8%
22	BA	2903	2% 38% 46% 14%
22	DA	2903	32% 20% 51% 27%
23	BB	118	43% 43% 14%
24	BC	271	4% 34% 45% 18%
24	DC	271	38% 27% 55% 16%
25	BD	209	4% 30% 44% 22%
25	DD	209	47% 27% 50% 21%
26	BE	201	% 31% 50% 15%
26	DE	201	59% 24% 58% 16%
27	BF	177	6% 32% 53% 14%
28	BG	176	9% 29% 49% 19%
28	DG	176	23% 31% 48% 19%
29	BH	149	22% 33% 44% 18% 5%
29	DH	149	39% 31% 50% 16%
30	BI	141	40% 30% 52% 16%
30	DI	141	18% 41% 47% 11%

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Mol	Chain	Length	Quality of chain
31	BJ	142	4% 27% 53% 14% 6%
31	DJ	142	46% 32% 49% 16%
32	BK	122	2% 19% 48% 30%
32	DK	122	24% 22% 49% 28%
33	BL	143	4% 31% 43% 22%
33	DL	143	66% 31% 47% 18%
34	BM	136	2% 38% 41% 18%
34	DM	136	26% 34% 50% 16%
35	BN	120	2% 30% 48% 19%
35	DN	120	61% 30% 52% 16%
36	BO	116	2% 28% 49% 22%
36	DO	116	29% 34% 56% 9%
37	BP	114	4% 28% 38% 29% 5%
37	DP	114	35% 20% 61% 19%
38	BQ	117	3% 32% 45% 17% 5%
38	DQ	117	68% 30% 49% 21%
39	BR	103	2% 30% 48% 21%
39	DR	103	62% 30% 53% 17%
40	BS	110	40% 37% 20%
40	DS	110	65% 37% 49% 12%
41	BT	93	17% 26% 41% 29%
41	DT	93	80% 22% 60% 14%
42	BU	102	8% 30% 43% 20% 7%
42	DU	102	87% 27% 49% 21%
43	BV	94	2% 38% 45% 17%

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Mol	Chain	Length	Quality of chain
43	DV	94	11% 37% 52% 11%
44	BW	79	14% 11% 34% 44% 10%
44	DW	79	65% 29% 38% 28% 5%
45	BX	77	3% 30% 55% 13%
45	DX	77	61% 22% 60% 16%
46	BY	63	16% 33% 38% 22% 6%
46	DY	63	83% 35% 52% 11%
47	BZ	58	2% 40% 41% 12% 7%
47	DZ	58	53% 29% 55% 14%
48	B0	56	2% 38% 46% 16%
48	D0	56	52% 29% 52% 20%
49	B1	50	12% 36% 46% 16%
49	D1	50	28% 32% 56% 12%
50	B2	46	2% 28% 59% 13%
50	D2	46	83% 39% 48% 13%
51	B3	64	42% 41% 12% 5%
51	D3	64	84% 30% 55% 12%
52	B4	38	5% 39% 45% 11% 5%
52	D4	38	89% 39% 45% 16%
53	CA	1530	9% 24% 51% 25%
54	CG	150	30% 27% 55% 16%
55	CM	113	49% 28% 60% 10%
56	CP	80	35% 29% 54% 15%
57	DB	117	7% 22% 55% 23%
58	DF	178	20% 25% 51% 20%

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
59	MG	DA	3062	-	-	-	X
59	MG	DA	3063	-	-	-	X
59	MG	DA	3074	-	-	-	X
59	MG	DA	3127	-	-	-	X
60	TEL	BA	3135	X	-	-	-

2 Entry composition (i)

There are 62 unique types of molecules in this entry. The entry contains 284525 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
1	AA	1533	32895	14671	6036	10655	1533	0	0	0

- Molecule 2 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	AB	218	1705	1081	305	312	7	0	0	0
			Total	C	N	O	S			
2	CB	218	1705	1081	305	312	7	0	0	0

- Molecule 3 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
3	AC	206	1625	1028	305	289	3	0	0	0
			Total	C	N	O	S			
3	CC	206	1625	1028	305	289	3	0	0	0

- Molecule 4 is a protein called 30S ribosomal protein S4.

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

- Molecule 5 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
5	AE	150	1106	687	211	202	6	0	0	0

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	CE	150	Total	C	N	O	S	0	0	0
			1106	687	211	202	6			

- Molecule 6 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	AF	100	Total	C	N	O	S	0	0	0
			818	515	148	149	6			
6	CF	100	Total	C	N	O	S	0	0	0
			818	515	148	149	6			

- Molecule 7 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	AG	151	Total	C	N	O	S	0	0	0
			1182	735	227	216	4			

- Molecule 8 is a protein called 30S ribosomal protein S8.

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

- Molecule 9 is a protein called 30S ribosomal protein S9.

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

- Molecule 10 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	AJ	98	Total	C	N	O	S	0	0	0
			787	493	150	143	1			
10	CJ	98	Total	C	N	O	S	0	0	0
			787	493	150	143	1			

- Molecule 11 is a protein called 30S ribosomal protein S11.

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

- Molecule 12 is a protein called 30S ribosomal protein S12.

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

- Molecule 13 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	AM	114	Total	C	N	O	S	0	0	0
			884	546	178	157	3			

- Molecule 14 is a protein called 30S ribosomal protein S14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	AN	96	Total	C	N	O	S	0	0	0
			774	483	160	128	3			
14	CN	95	Total	C	N	O	S	0	0	0
			769	480	159	127	3			

- Molecule 15 is a protein called 30S ribosomal protein S15.

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

- Molecule 16 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	AP	82	Total	C	N	O	S	0	0	0
			649	406	128	114	1			

- Molecule 17 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	AQ	80	Total	C	N	O	S	0	0	0
			649	411	121	114	3			
17	CQ	80	Total	C	N	O	S	0	0	0
			649	411	121	114	3			

- Molecule 18 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
18	AR	55	Total	C	N	O	0	0	0
			456	288	86	82			
18	CR	55	Total	C	N	O	0	0	0
			456	288	86	82			

- Molecule 19 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AS	79	Total	C	N	O	S	0	0	0
			638	408	120	108	2			
19	CS	79	Total	C	N	O	S	0	0	0
			638	408	120	108	2			

- Molecule 20 is a protein called 30S ribosomal protein S20.

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

- 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
			426	265	86	74	1			
21	CU	51	Total	C	N	O	S	0	0	0
			426	265	86	74	1			

- Molecule 22 is a RNA chain called 23S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	BA	2854	Total	C	N	O	P	0	0	0
			61274	27334	11279	19807	2854			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	DA	2841	Total	C	N	O	P	0	0	0
			60995	27210	11229	19715	2841			

- Molecule 23 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	BB	118	Total	C	N	O	P	0	0	0
			2529	1126	464	821	118			

- Molecule 24 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	BC	271	Total	C	N	O	S	0	0	0
			2083	1288	423	365	7			
24	DC	271	Total	C	N	O	S	0	0	0
			2083	1288	423	365	7			

- Molecule 25 is a protein called 50S ribosomal protein L3.

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

- Molecule 26 is a protein called 50S ribosomal protein L4.

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

- Molecule 27 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	BF	177	Total	C	N	O	S	0	0	0
			1411	899	249	257	6			

- Molecule 28 is a protein called 50S ribosomal protein L6.

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

- Molecule 29 is a protein called 50S ribosomal protein L9.

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

- Molecule 30 is a protein called 50S ribosomal protein L11.

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

- 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	122	Total	C	N	O	S	0	0	0
			939	587	180	166	6			
32	DK	122	Total	C	N	O	S	0	0	0
			939	587	180	166	6			

- 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			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
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
			961	593	196	167	5			
35	DN	120	Total	C	N	O	S	0	0	0
			961	593	196	167	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
			739	466	139	132	2			
41	DT	93	Total	C	N	O	S	0	0	0
			739	466	139	132	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
			780	492	146	142			
42	DU	102	Total	C	N	O	0	0	0
			780	492	146	142			

- Molecule 43 is a protein called 50S ribosomal protein L25.

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

- Molecule 44 is a protein called 50S ribosomal protein L27.

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

- Molecule 45 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	BX	77	Total	C	N	O	S	0	0	0
			625	388	129	106	2			
45	DX	77	Total	C	N	O	S	0	0	0
			625	388	129	106	2			

- Molecule 46 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	BY	63	Total	C	N	O	S	0	0	0
			509	313	99	95	2			
46	DY	63	Total	C	N	O	S	0	0	0
			509	313	99	95	2			

- Molecule 47 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	BZ	58	Total	C	N	O	S	0	0	0
			449	281	87	79	2			
47	DZ	58	Total	C	N	O	S	0	0	0
			449	281	87	79	2			

- Molecule 48 is a protein called 50S ribosomal protein L32.

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

- Molecule 49 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
49	B1	50	Total	C	N	O	0	0	0
			410	263	75	72			

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
49	D1	50	Total	C	N	O	0	0	0
			410	263	75	72			

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

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

- Molecule 51 is a protein called 50S ribosomal protein L35.

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

- Molecule 52 is a protein called 50S ribosomal protein L36.

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

- Molecule 53 is a RNA chain called 16S rRNA.

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

- Molecule 54 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	CG	150	Total	C	N	O	S	0	0	0
			1175	730	226	215	4			

- Molecule 55 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
55	CM	113	Total	C	N	O	S	0	0	0
			877	541	177	156	3			

- Molecule 56 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
56	CP	80	Total	C	N	O	S	0	0	0
			639	400	126	112	1			

- Molecule 57 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
57	DB	117	Total	C	N	O	P	0	0	0
			2507	1116	459	815	117			

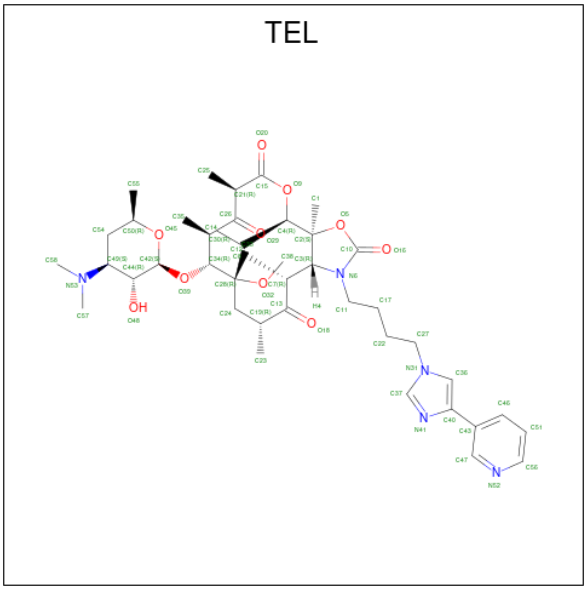
- Molecule 58 is a protein called 50S ribosomal protein L5.

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

- Molecule 59 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
59	AA	43	Total	Mg	0	0
			43	43		
59	BA	134	Total	Mg	0	0
			134	134		
59	BB	4	Total	Mg	0	0
			4	4		
59	CA	41	Total	Mg	0	0
			41	41		
59	CE	1	Total	Mg	0	0
			1	1		
59	DA	133	Total	Mg	0	0
			133	133		
59	DB	1	Total	Mg	0	0
			1	1		
59	DC	2	Total	Mg	0	0
			2	2		
59	DJ	1	Total	Mg	0	0
			1	1		

- Molecule 60 is TELITHROMYCIN (CCD ID: TEL) (formula: $C_{43}H_{65}N_5O_{10}$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
60	BA	1	Total C N O 58 43 5 10	0	0

- Molecule 61 is ZINC ION (CCD ID: ZN) (formula: Zn).

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

- Molecule 62 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
62	AA	198	Total O 198 198	0	0
62	AL	1	Total O 1 1	0	0
62	AN	6	Total O 6 6	0	0
62	AT	2	Total O 2 2	0	0
62	AU	1	Total O 1 1	0	0
62	BA	598	Total O 598 598	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
62	BB	20	Total O 20 20	0	0
62	BC	10	Total O 10 10	0	0
62	BD	2	Total O 2 2	0	0
62	BE	1	Total O 1 1	0	0
62	BL	2	Total O 2 2	0	0
62	BN	3	Total O 3 3	0	0
62	BQ	1	Total O 1 1	0	0
62	BR	1	Total O 1 1	0	0
62	BT	1	Total O 1 1	0	0
62	B2	1	Total O 1 1	0	0
62	B3	3	Total O 3 3	0	0
62	B4	1	Total O 1 1	0	0
62	CA	192	Total O 192 192	0	0
62	CE	5	Total O 5 5	0	0
62	CI	1	Total O 1 1	0	0
62	CL	1	Total O 1 1	0	0
62	CN	3	Total O 3 3	0	0
62	CT	3	Total O 3 3	0	0
62	CU	2	Total O 2 2	0	0
62	DA	595	Total O 595 595	0	0
62	DB	4	Total O 4 4	0	0

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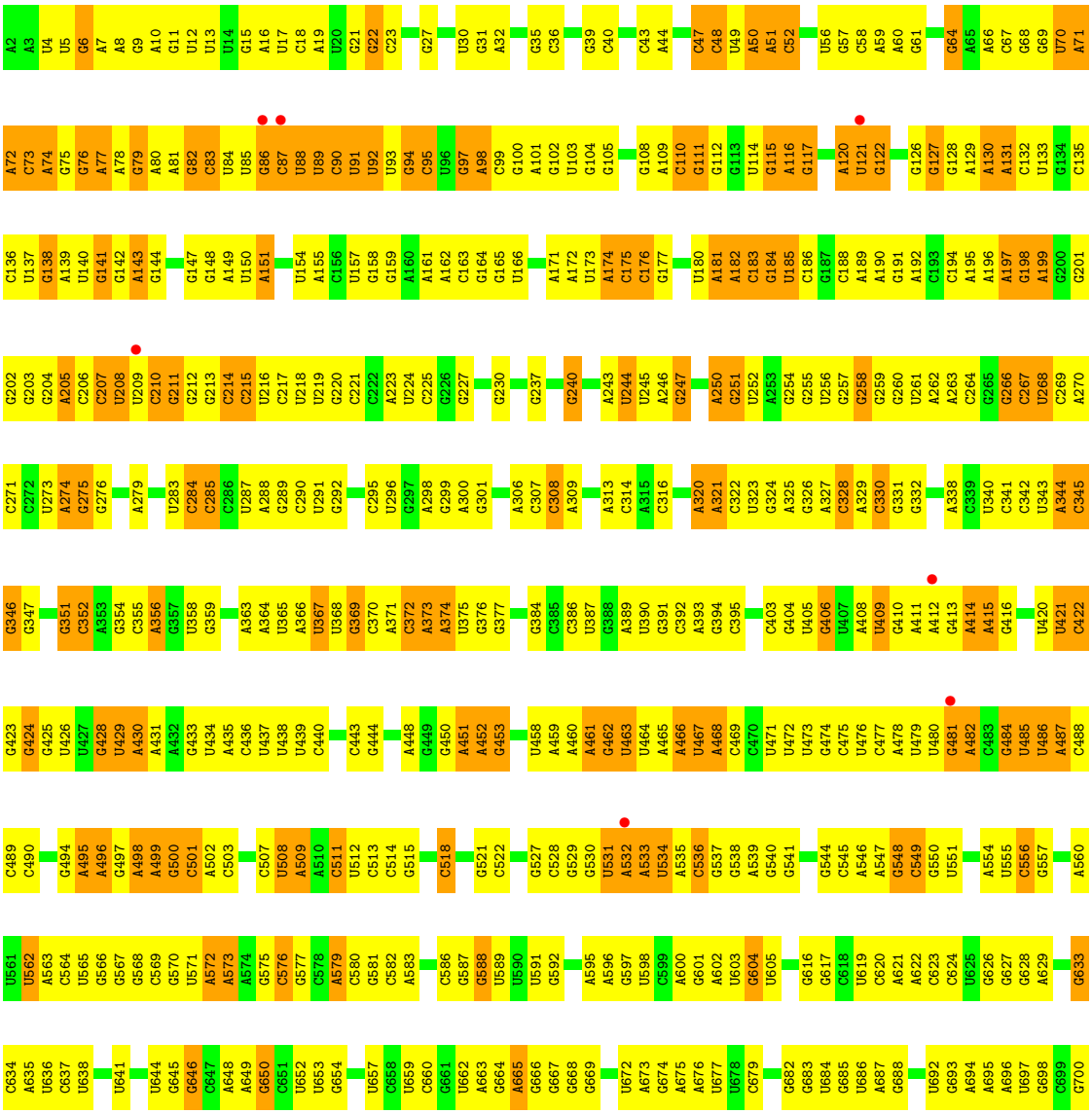
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
62	DC	13	Total O 13 13	0	0
62	DD	3	Total O 3 3	0	0
62	DE	3	Total O 3 3	0	0
62	DJ	6	Total O 6 6	0	0
62	DL	6	Total O 6 6	0	0
62	DN	2	Total O 2 2	0	0
62	DT	3	Total O 3 3	0	0
62	DU	2	Total O 2 2	0	0
62	DV	1	Total O 1 1	0	0
62	D2	1	Total O 1 1	0	0
62	D3	1	Total O 1 1	0	0
62	D4	3	Total O 3 3	0	0

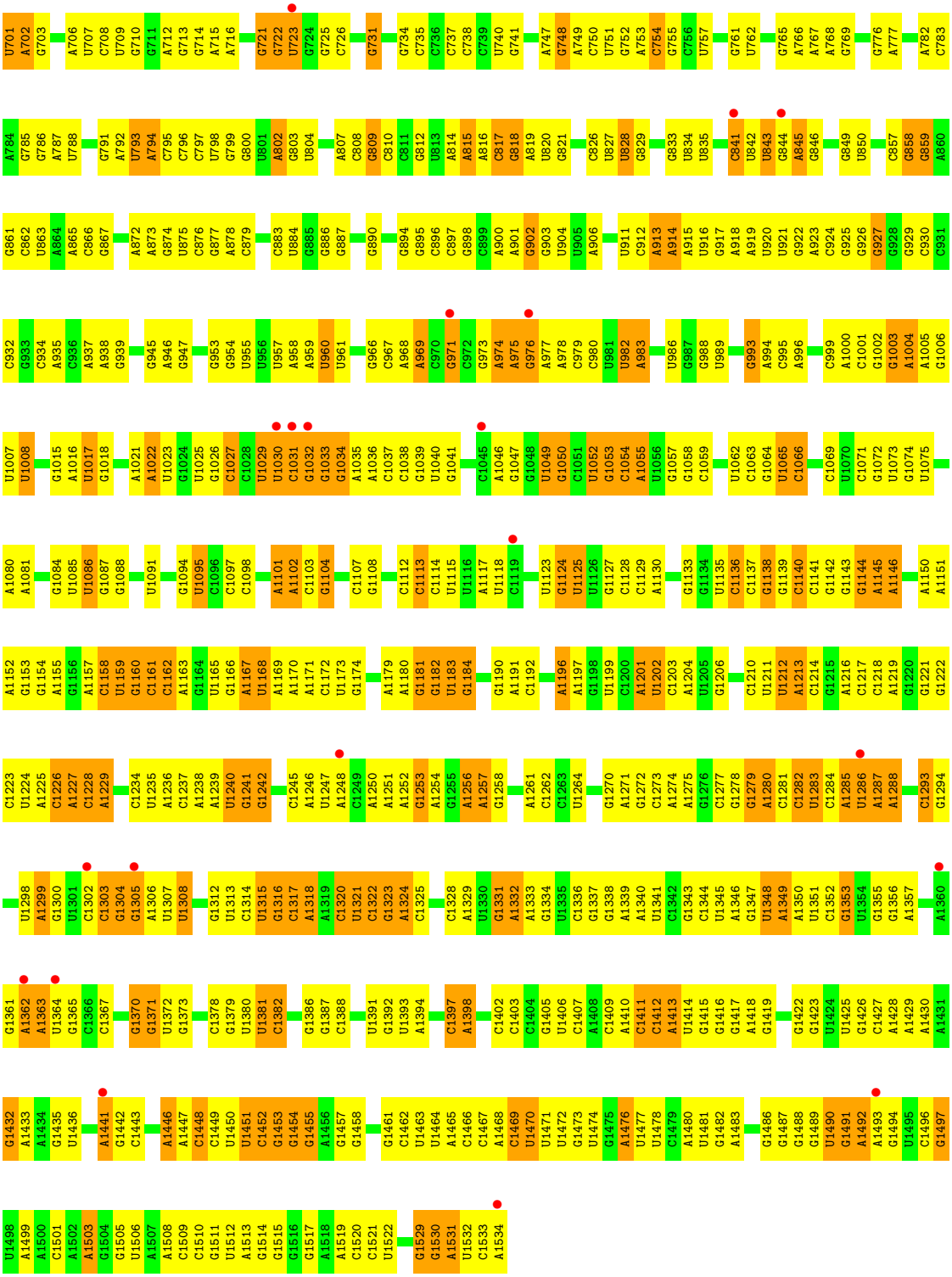
3 Residue-property plots (i)

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

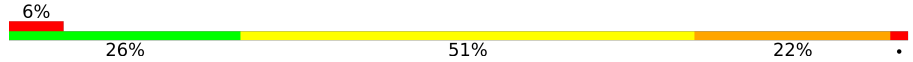
- Molecule 1: 16S rRNA

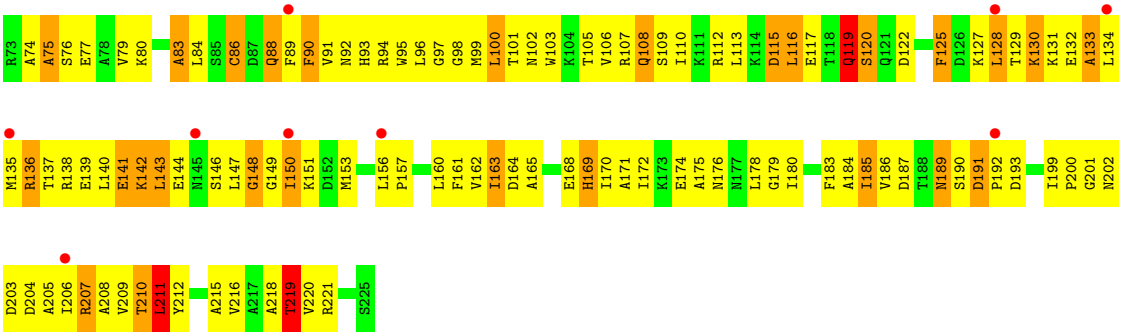
Chain AA:





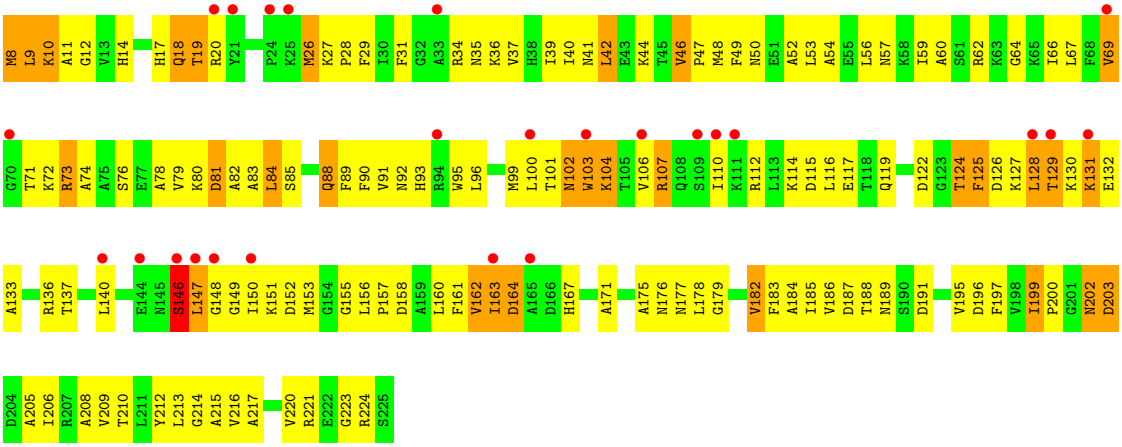
• Molecule 2: 30S ribosomal protein S2





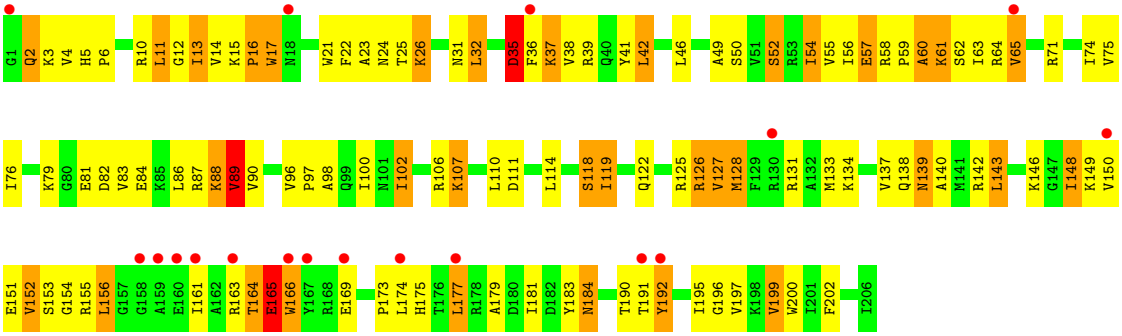
• Molecule 2: 30S ribosomal protein S2

Chain CB:



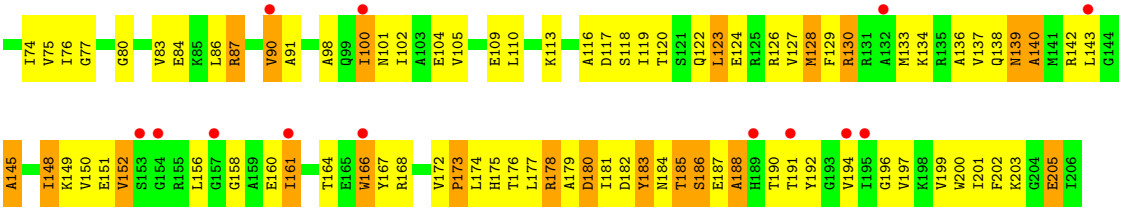
• Molecule 3: 30S ribosomal protein S3

Chain AC:



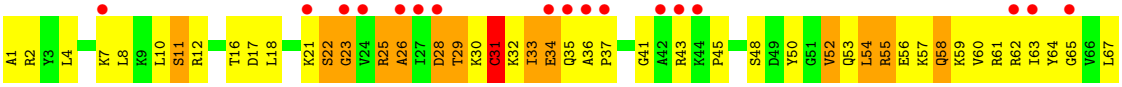
• Molecule 3: 30S ribosomal protein S3

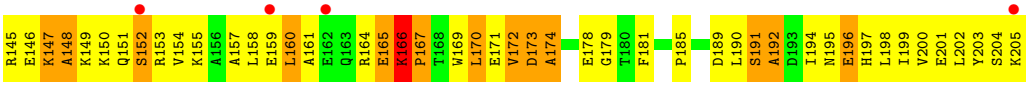
Chain CC:



• Molecule 4: 30S ribosomal protein S4

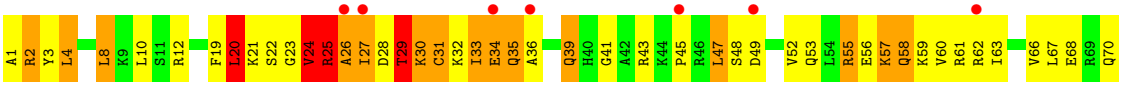
Chain AD:

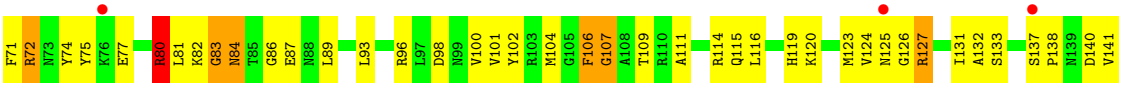


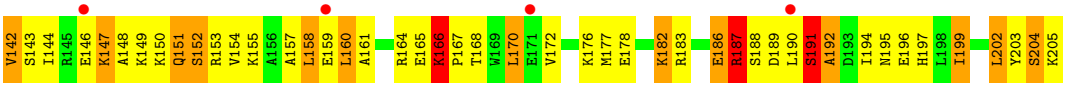


• Molecule 4: 30S ribosomal protein S4

Chain CD:

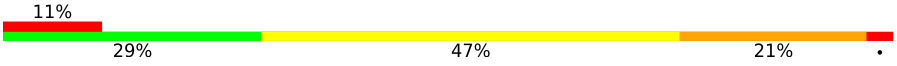


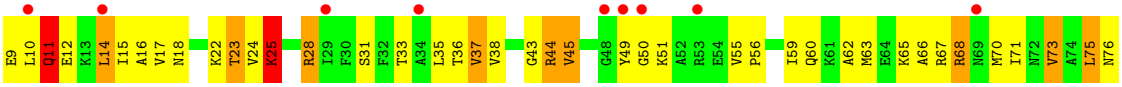


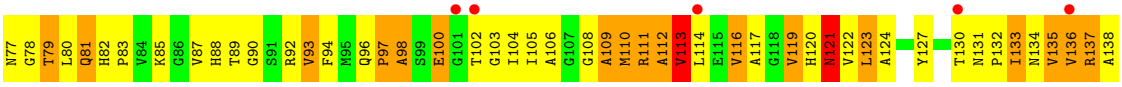


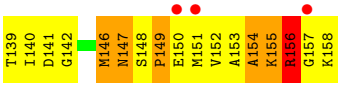
• Molecule 5: 30S ribosomal protein S5

Chain AE:



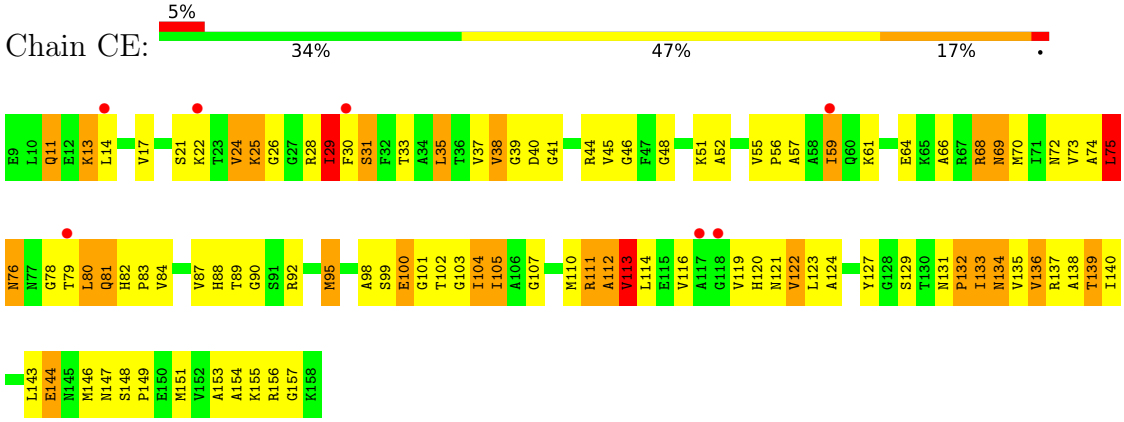






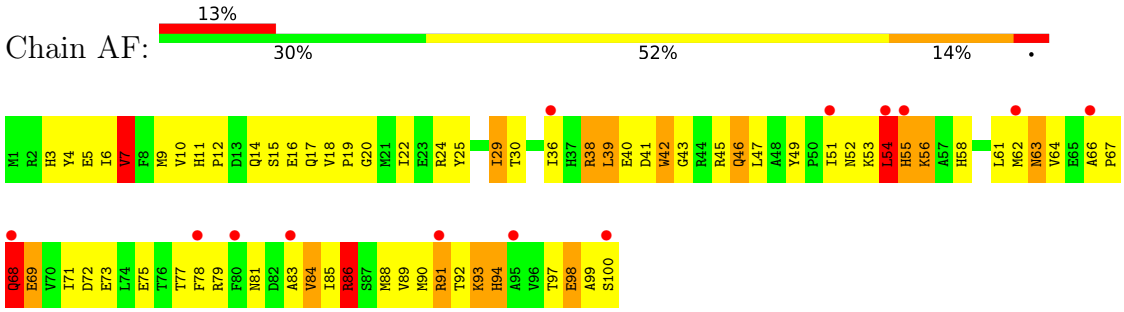
• Molecule 5: 30S ribosomal protein S5

Chain CE:



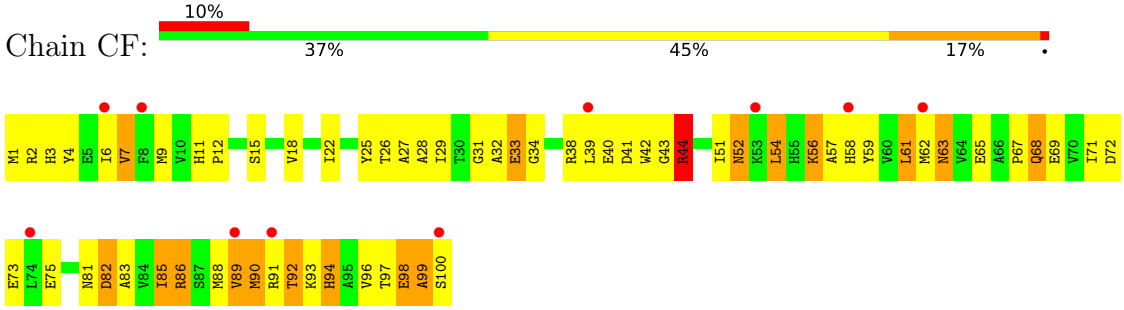
• Molecule 6: 30S ribosomal protein S6

Chain AF:



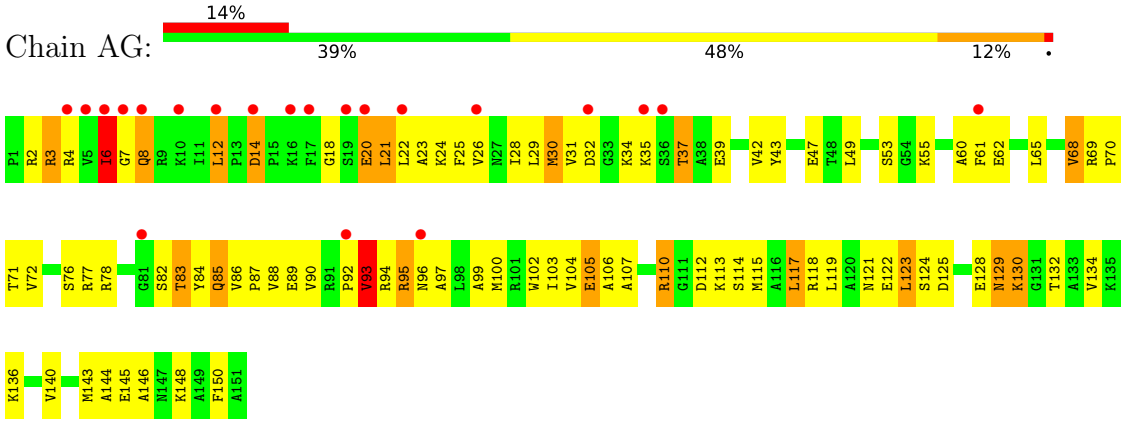
• Molecule 6: 30S ribosomal protein S6

Chain CF:



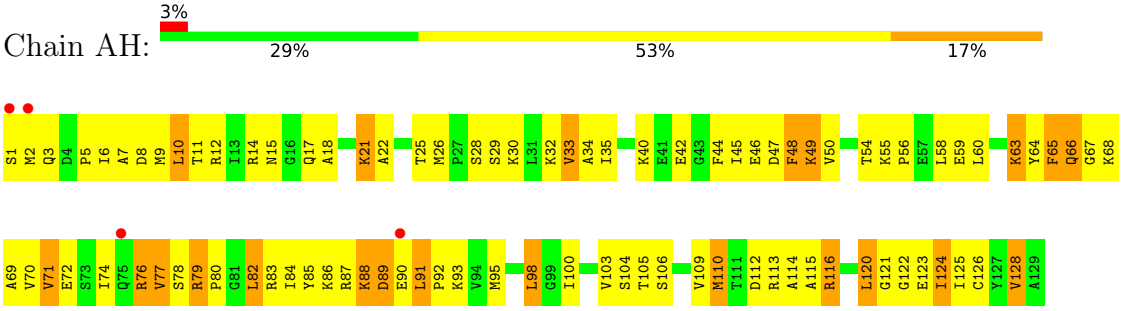
• Molecule 7: 30S ribosomal protein S7

Chain AG:



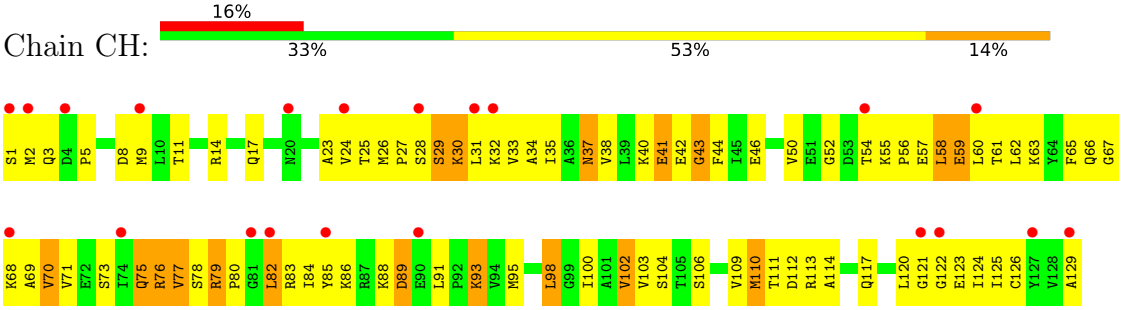
• Molecule 8: 30S ribosomal protein S8

Chain AH:



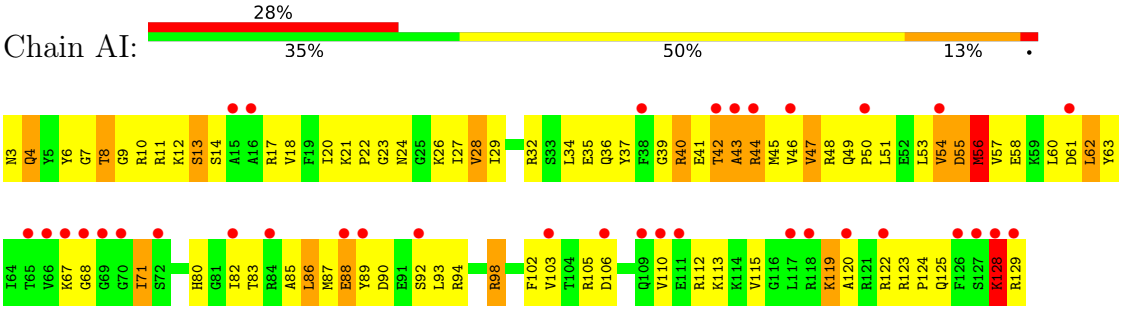
• Molecule 8: 30S ribosomal protein S8

Chain CH:



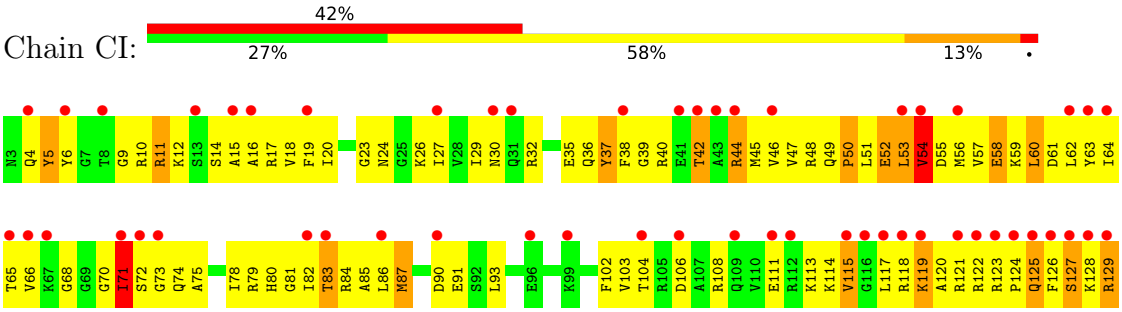
• Molecule 9: 30S ribosomal protein S9

Chain AI:



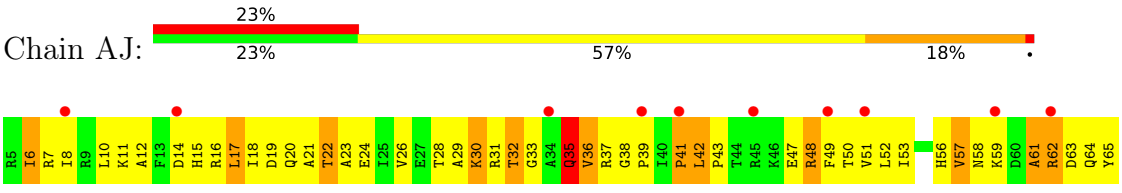
• Molecule 9: 30S ribosomal protein S9

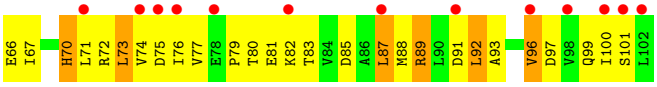
Chain CI:



• Molecule 10: 30S ribosomal protein S10

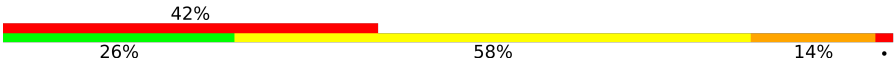
Chain AJ:

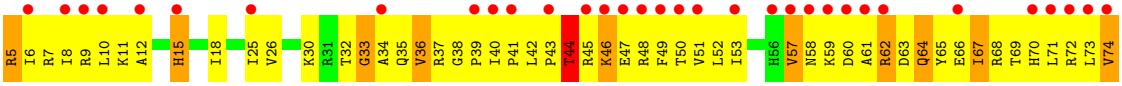


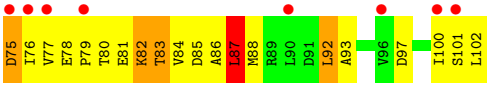


• Molecule 10: 30S ribosomal protein S10

Chain CJ:

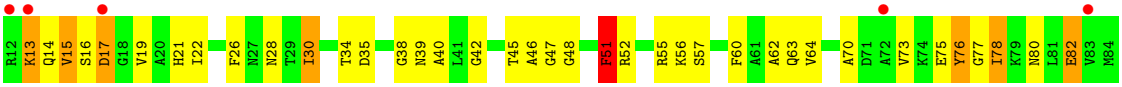






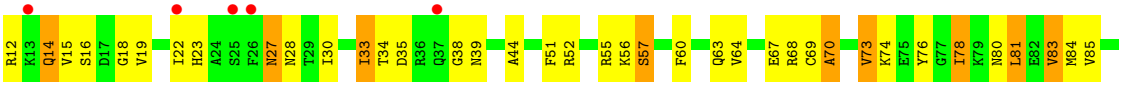
• Molecule 11: 30S ribosomal protein S11

Chain AK:



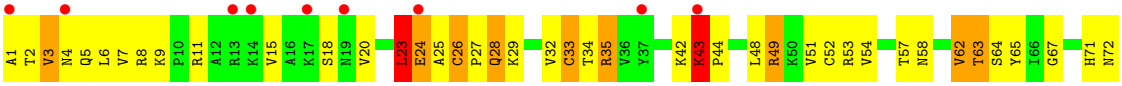
• Molecule 11: 30S ribosomal protein S11

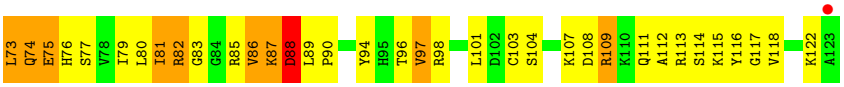
Chain CK:



• Molecule 12: 30S ribosomal protein S12

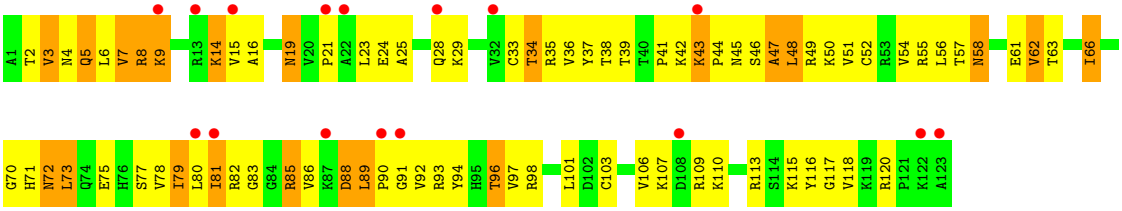
Chain AL:

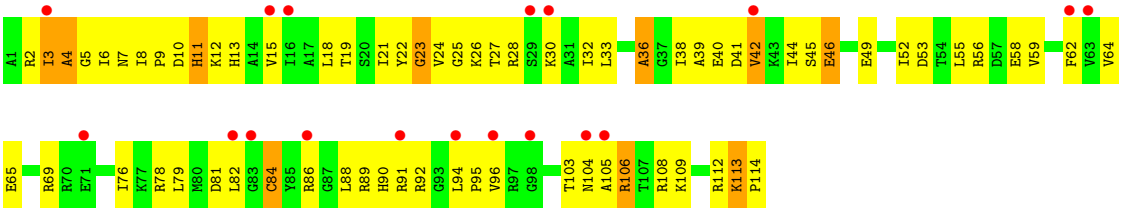




• Molecule 12: 30S ribosomal protein S12

Chain CL:



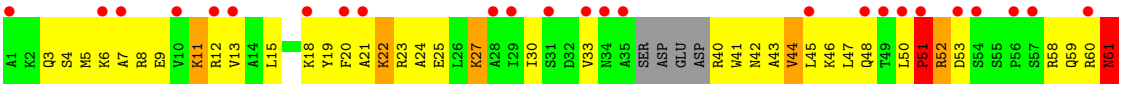


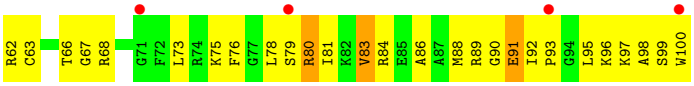
• Molecule 13: 30S ribosomal protein S13

Chain AM:

• Molecule 14: 30S ribosomal protein S14

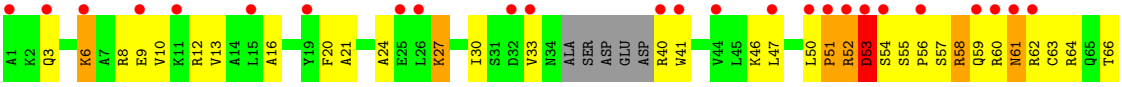
Chain AN:

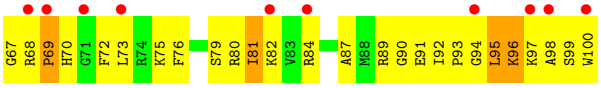




• Molecule 14: 30S ribosomal protein S14

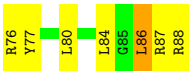
Chain CN:





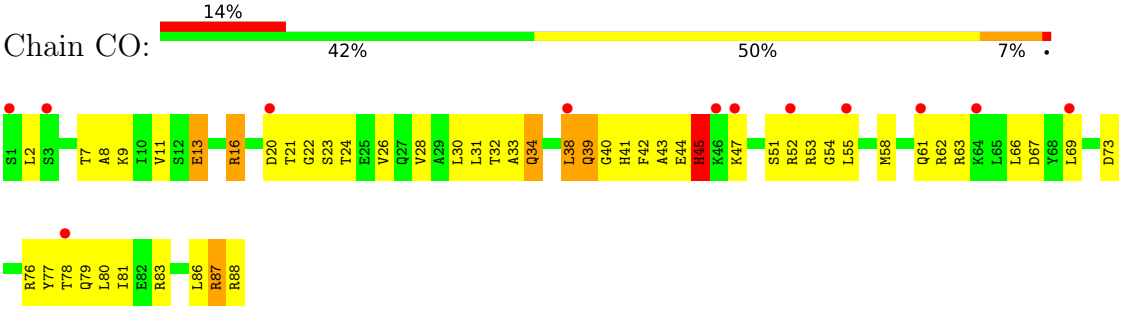
• Molecule 15: 30S ribosomal protein S15

Chain AO:



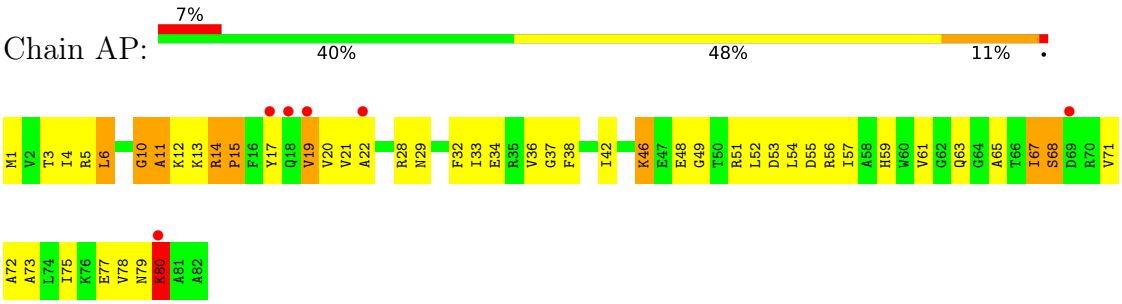
• Molecule 15: 30S ribosomal protein S15

Chain CO:



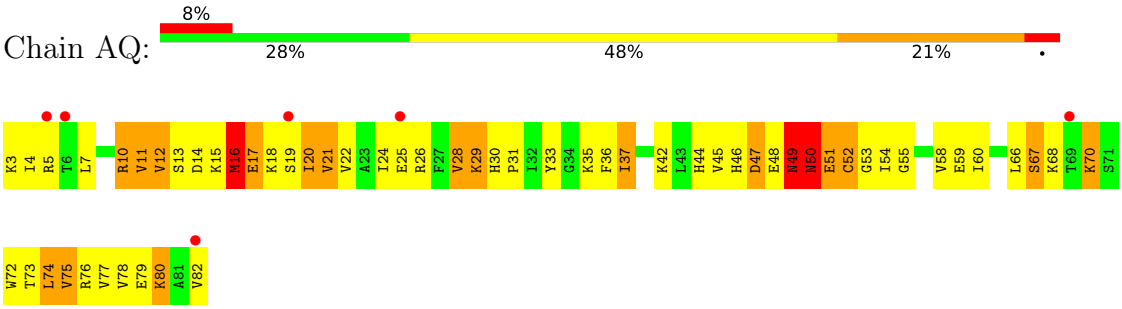
• Molecule 16: 30S ribosomal protein S16

Chain AP:



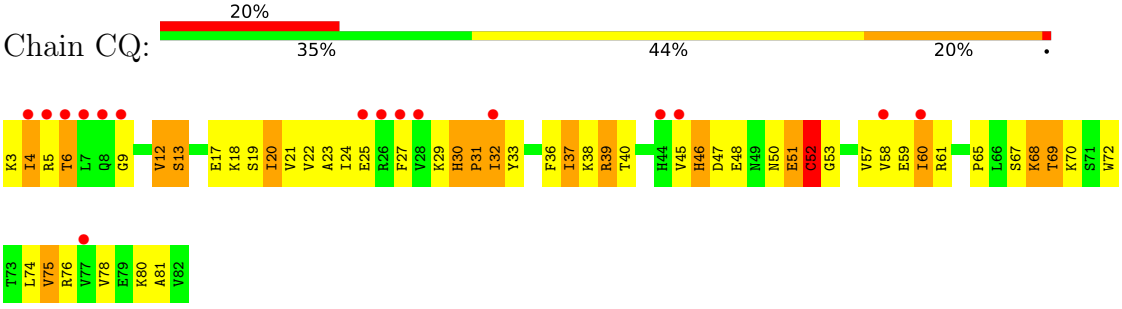
• Molecule 17: 30S ribosomal protein S17

Chain AQ:



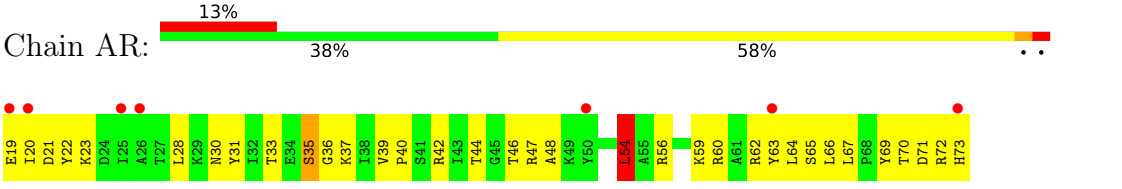
• Molecule 17: 30S ribosomal protein S17

Chain CQ:



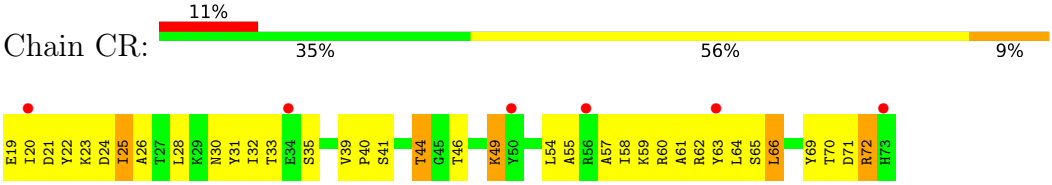
• Molecule 18: 30S ribosomal protein S18

Chain AR:



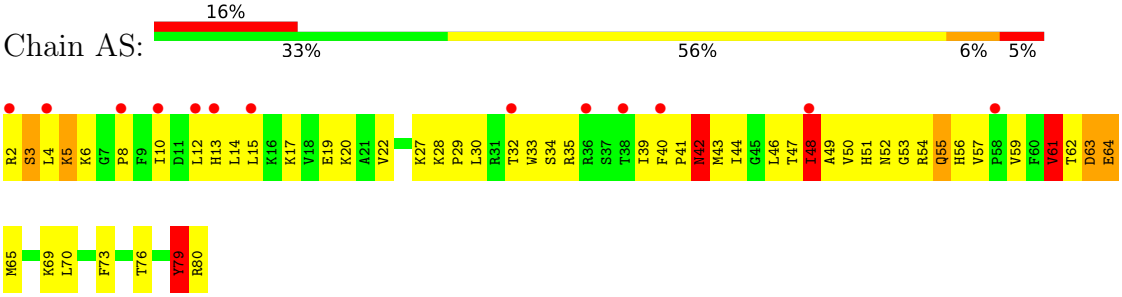
• Molecule 18: 30S ribosomal protein S18

Chain CR:



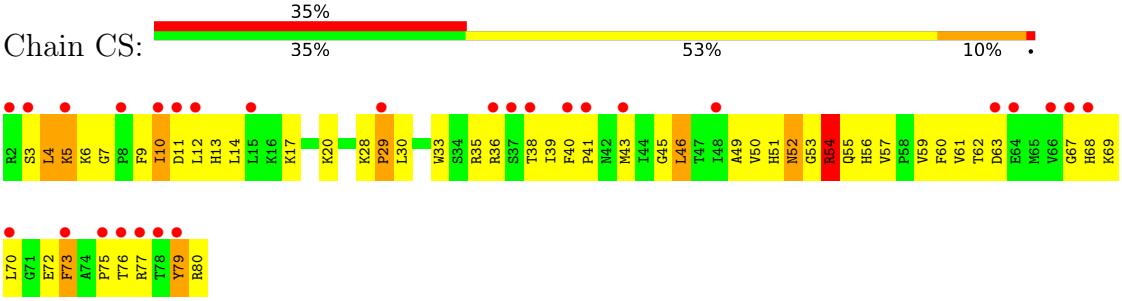
• Molecule 19: 30S ribosomal protein S19

Chain AS:



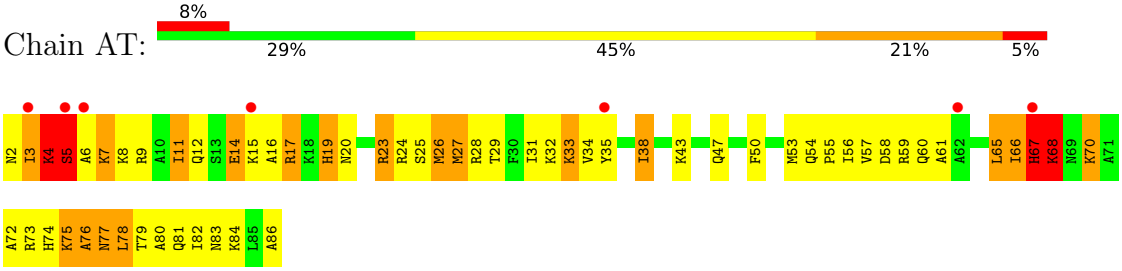
• Molecule 19: 30S ribosomal protein S19

Chain CS:



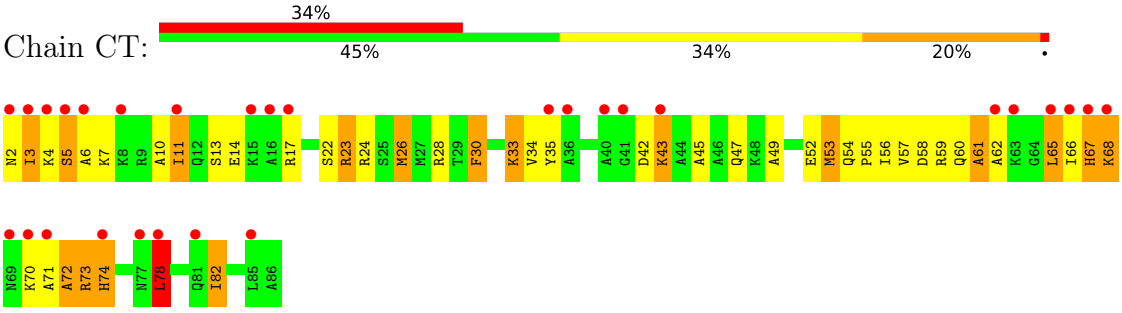
• Molecule 20: 30S ribosomal protein S20

Chain AT:



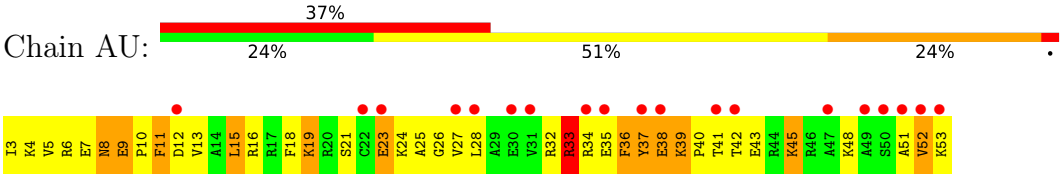
• Molecule 20: 30S ribosomal protein S20

Chain CT:



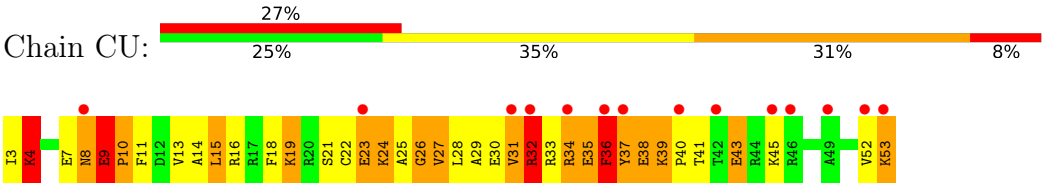
• Molecule 21: 30S ribosomal protein S21

Chain AU:



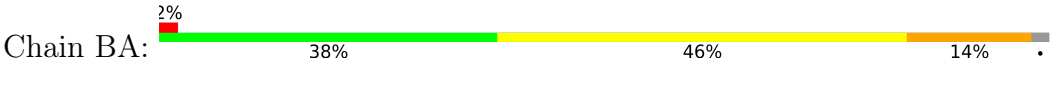
• Molecule 21: 30S ribosomal protein S21

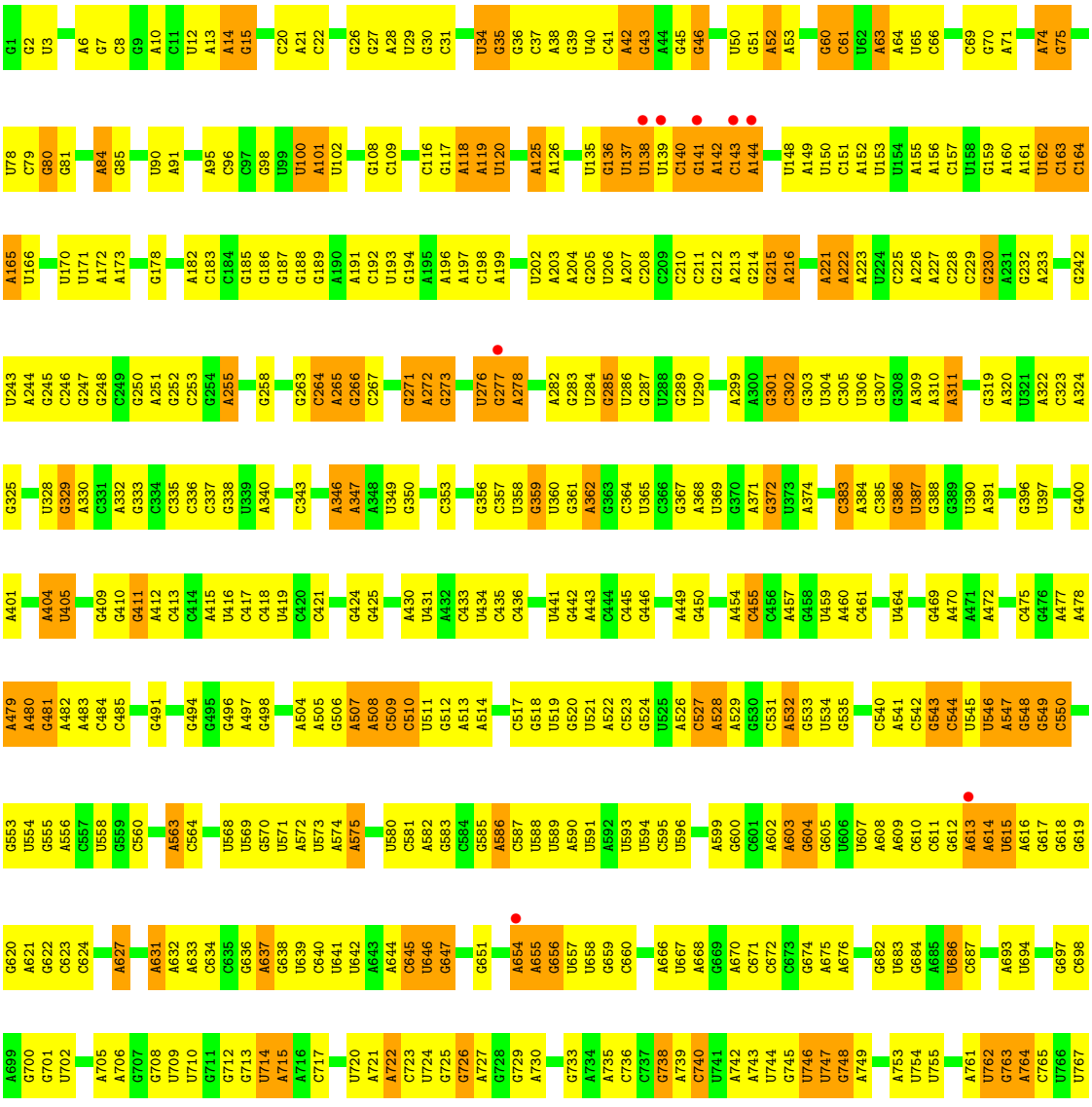
Chain CU:

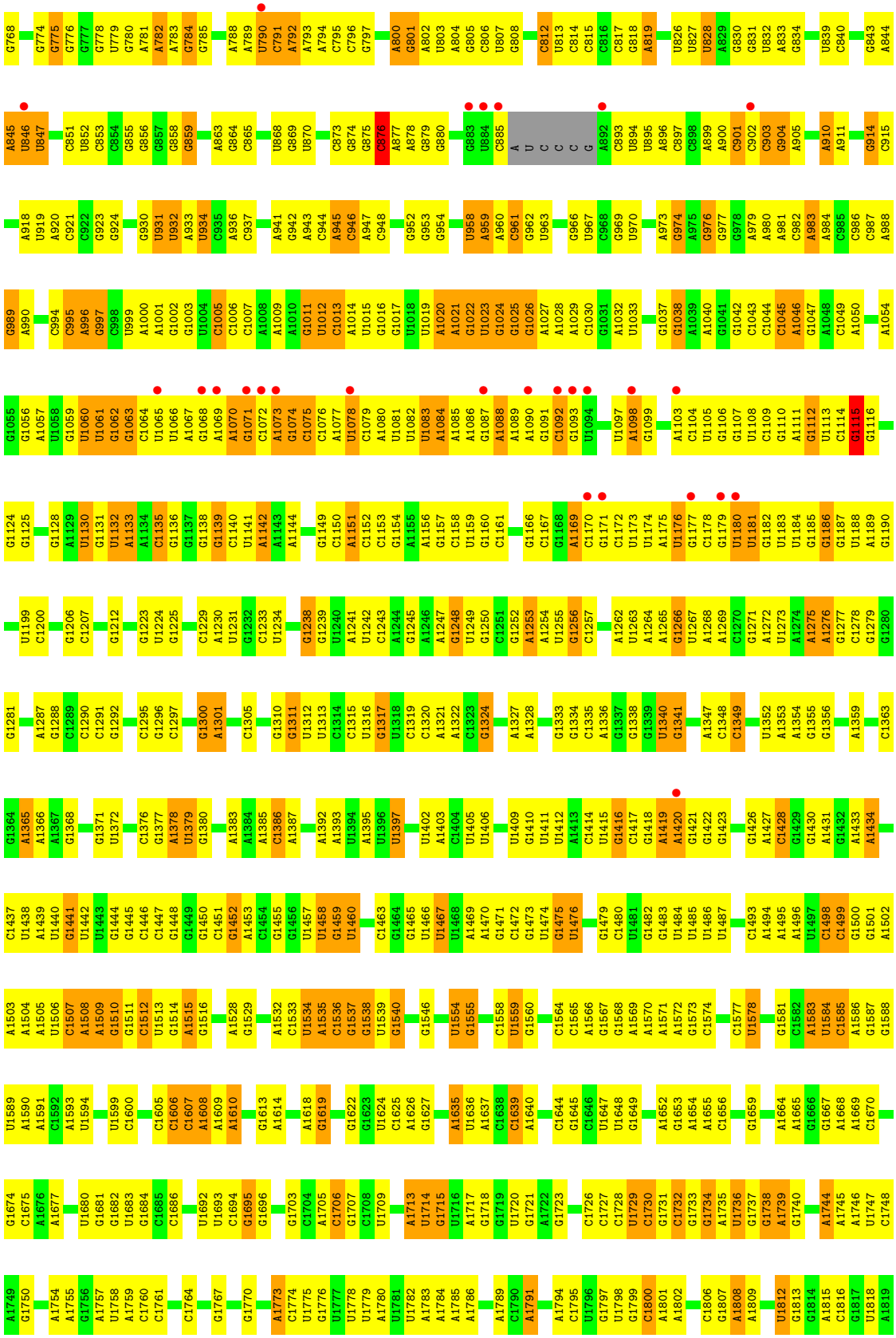


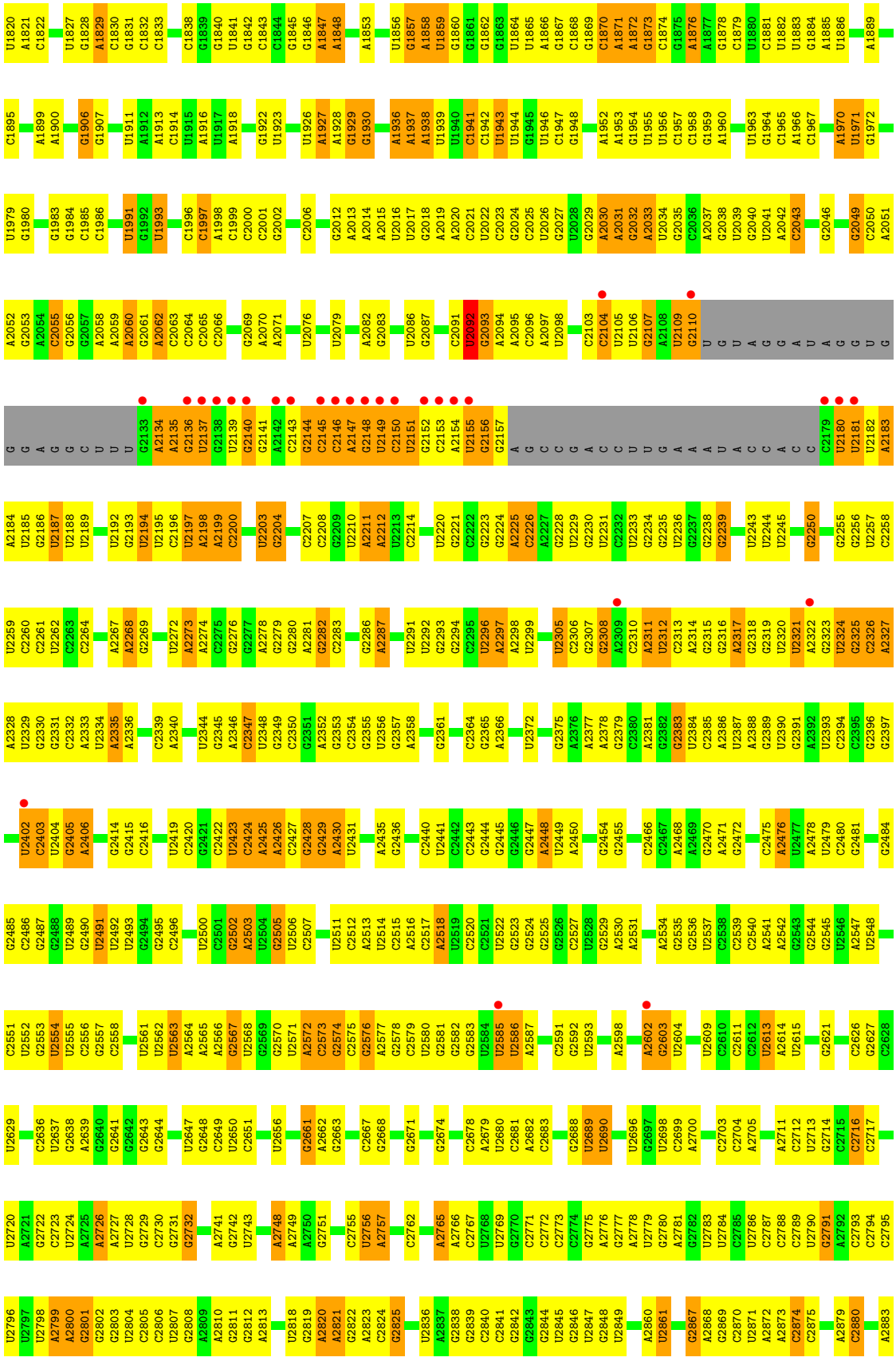
• Molecule 22: 23S rRNA

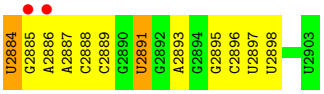
Chain BA:





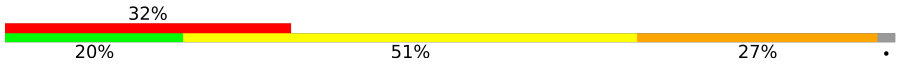


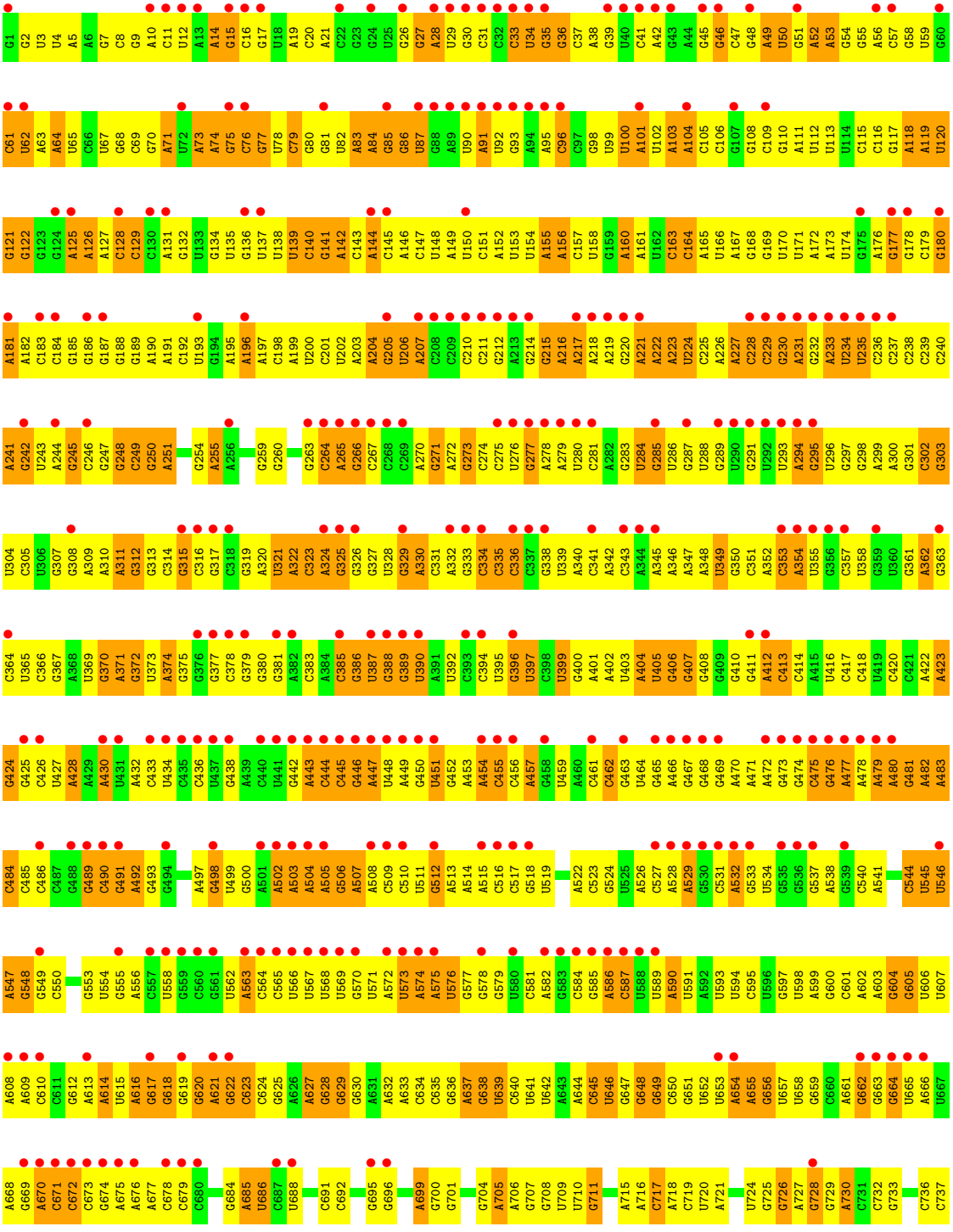


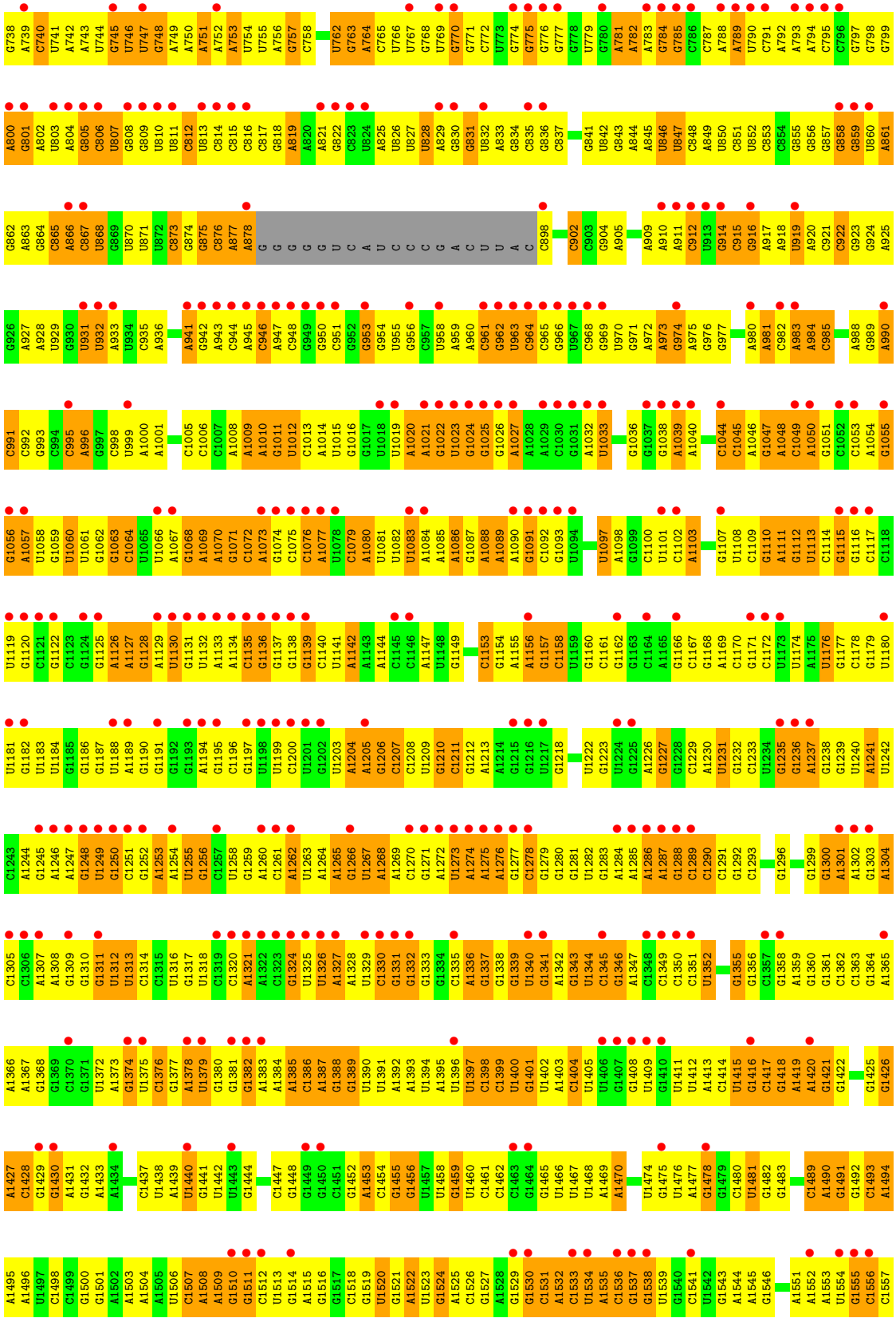


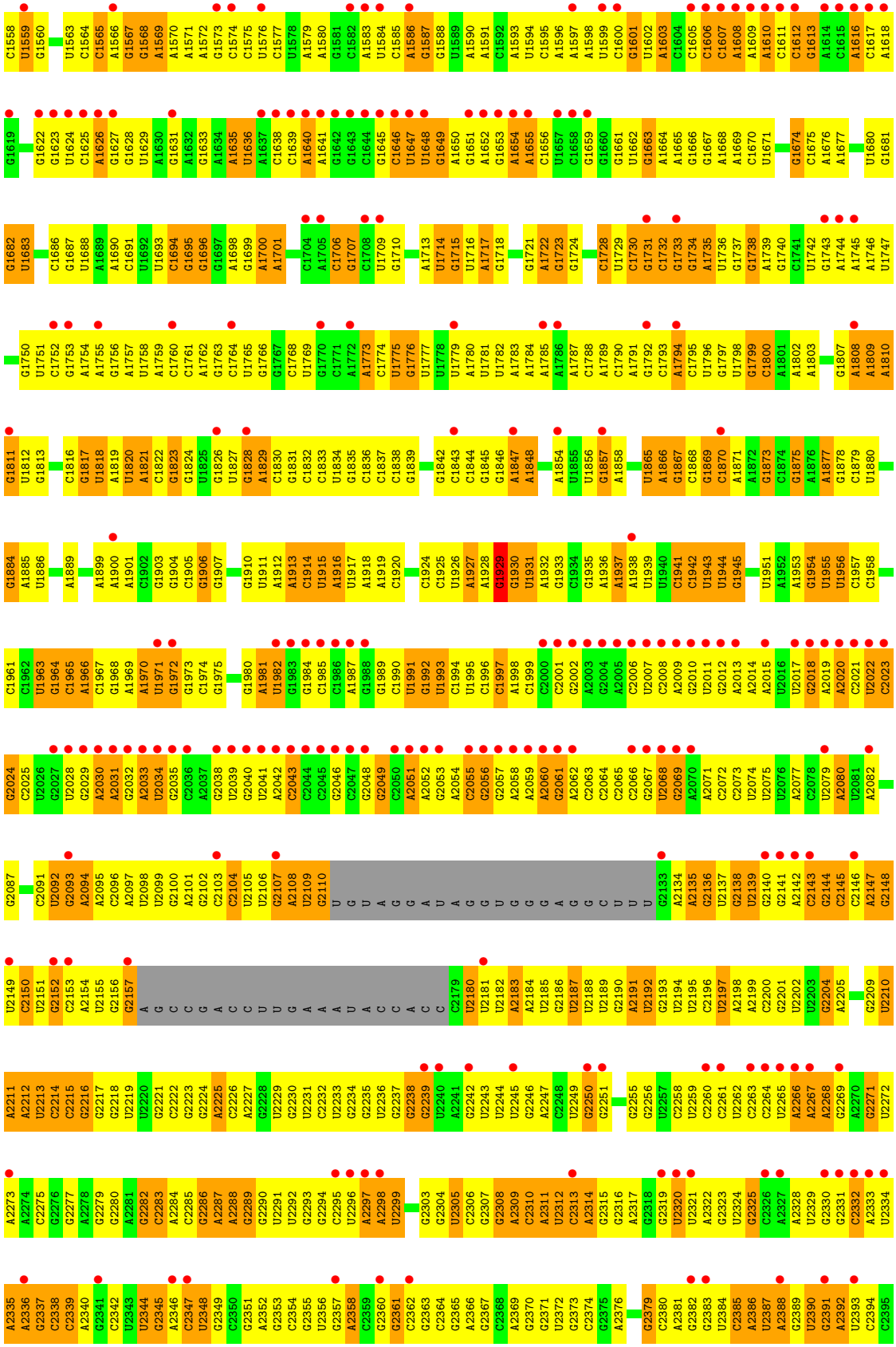
• Molecule 22: 23S rRNA

Chain DA:





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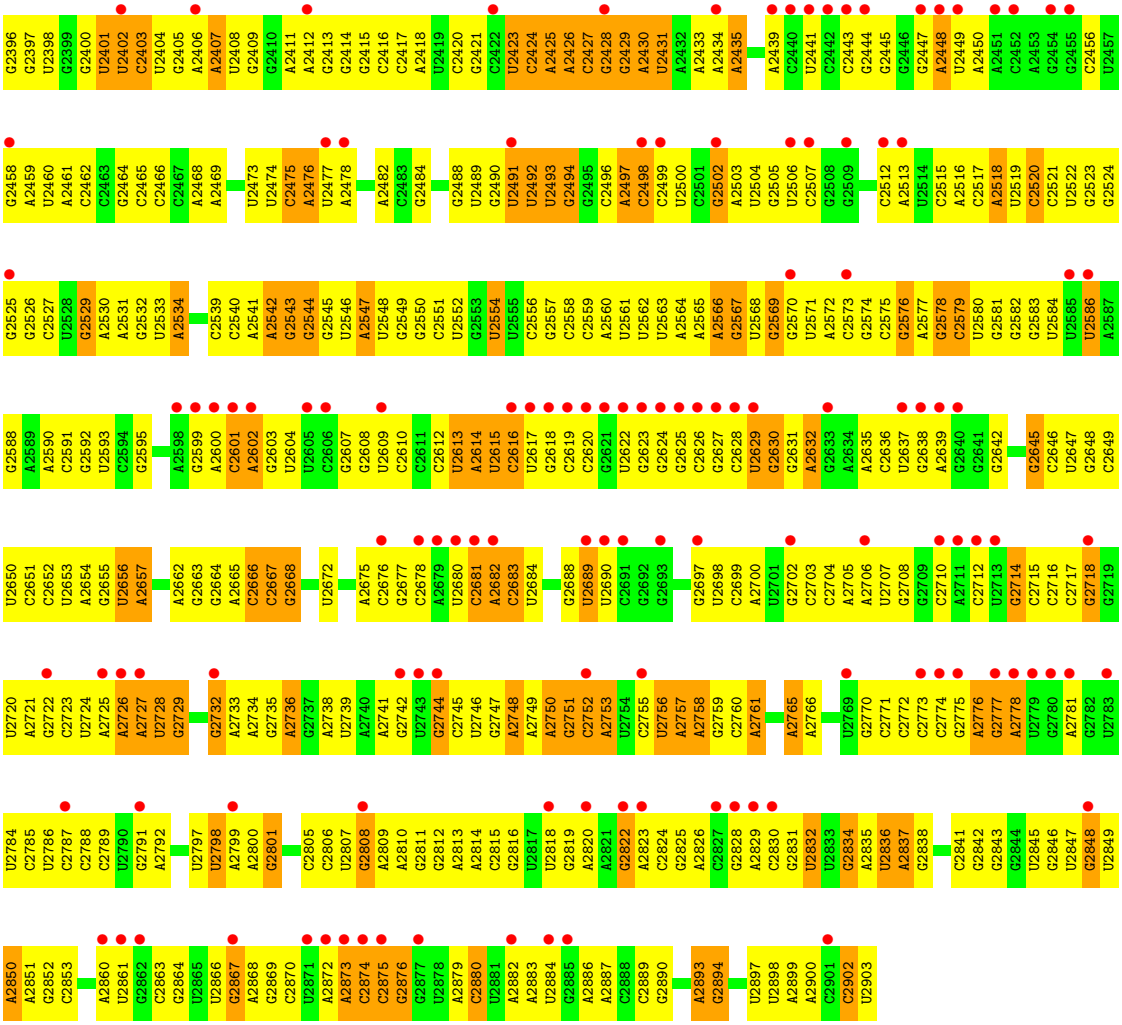
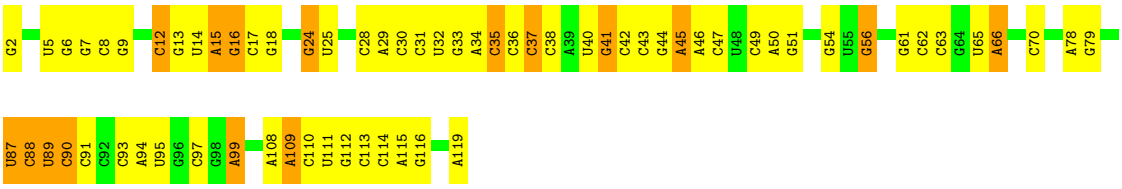


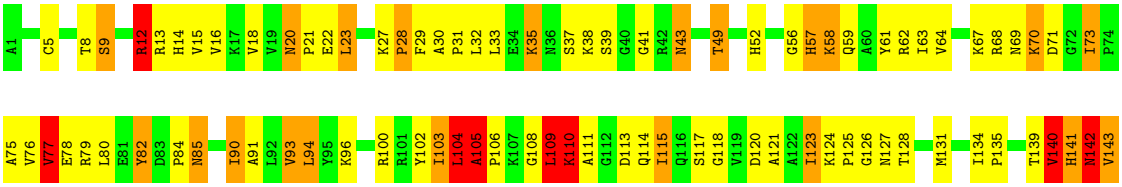
• Molecule 23: 5S rRNA

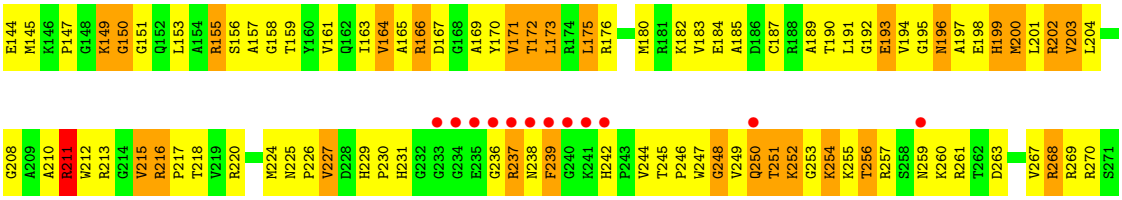
Chain BB:

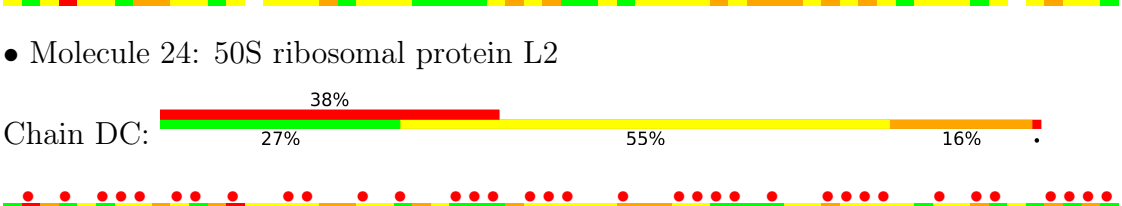


• Molecule 24: 50S ribosomal protein L2

Chain BC:

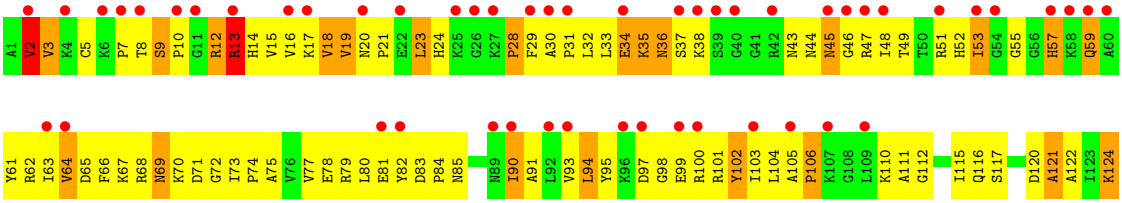


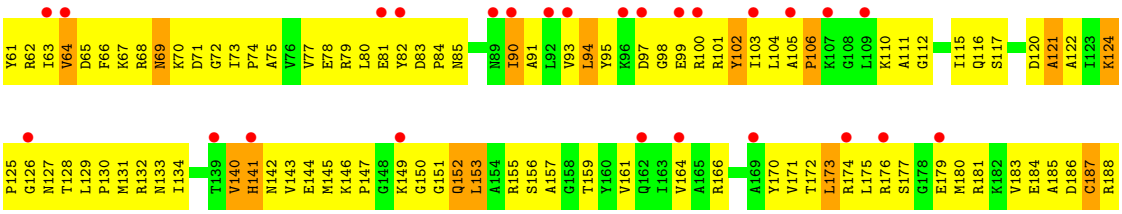


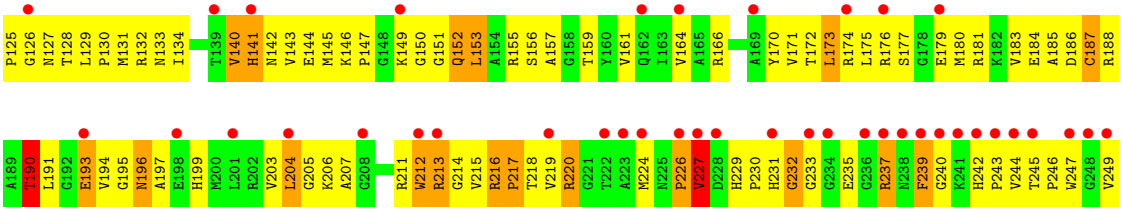


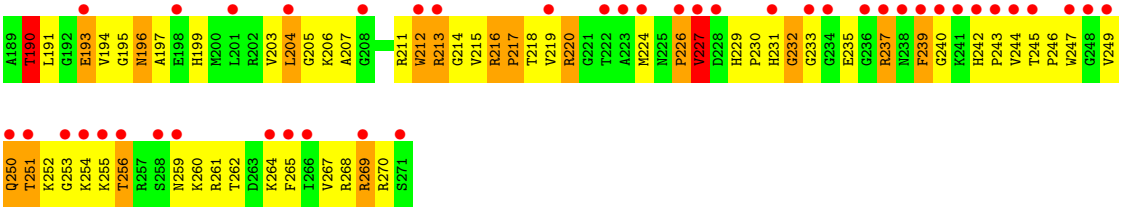
• Molecule 24: 50S ribosomal protein L2

Chain DC:



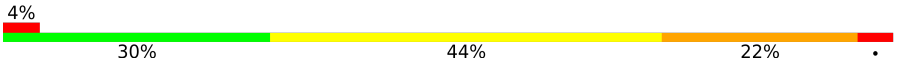


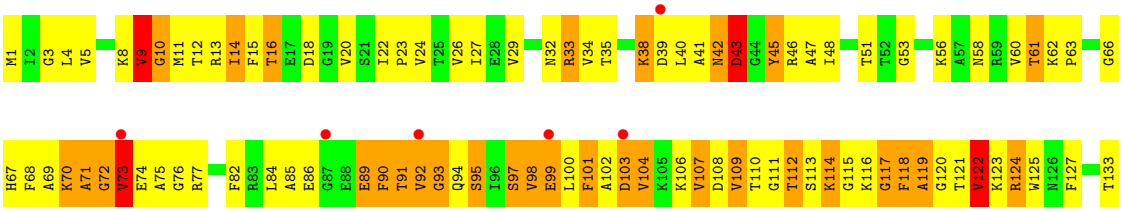


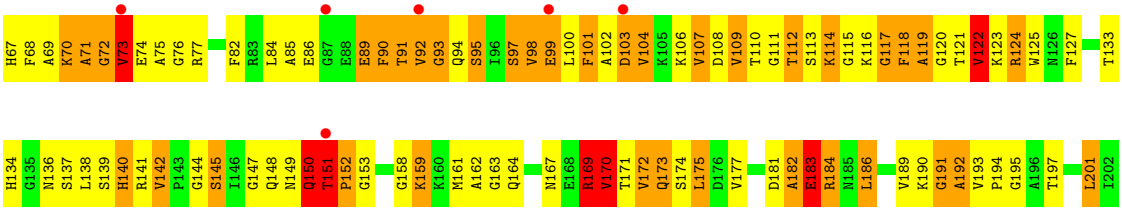


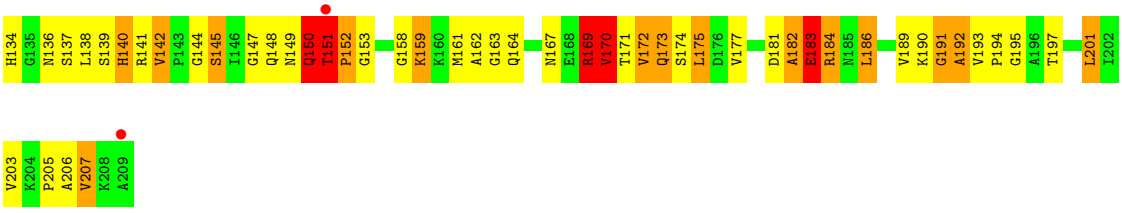
• Molecule 25: 50S ribosomal protein L3

Chain BD:



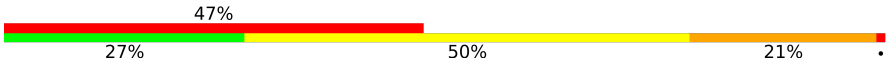


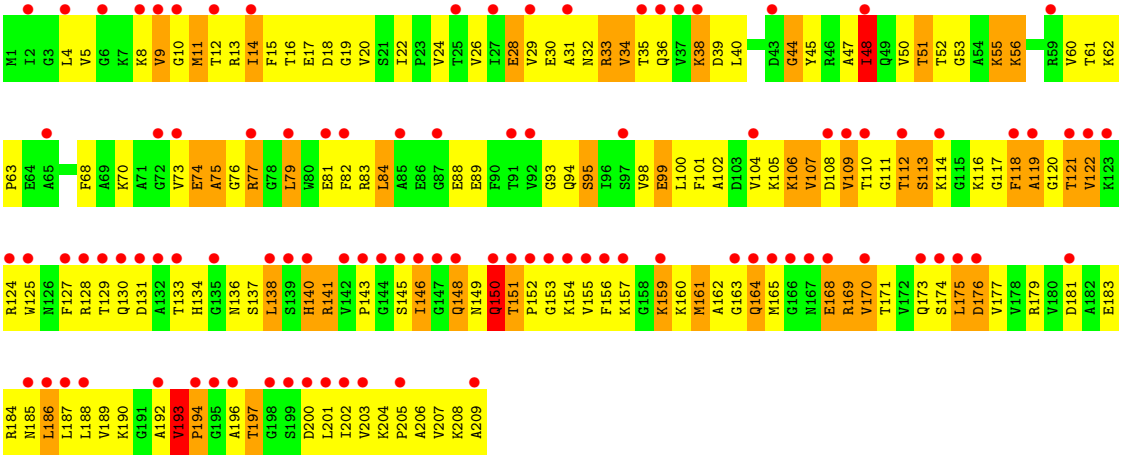




• Molecule 25: 50S ribosomal protein L3

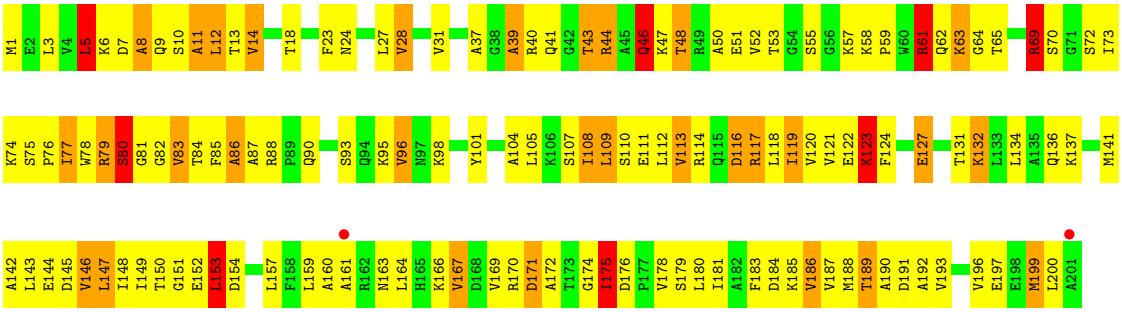
Chain DD:





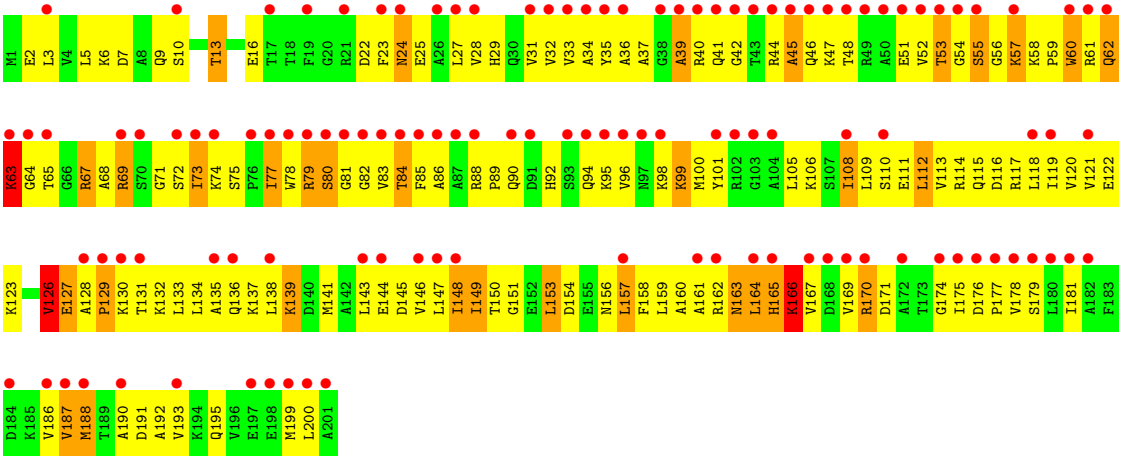
• Molecule 26: 50S ribosomal protein L4

Chain BE:



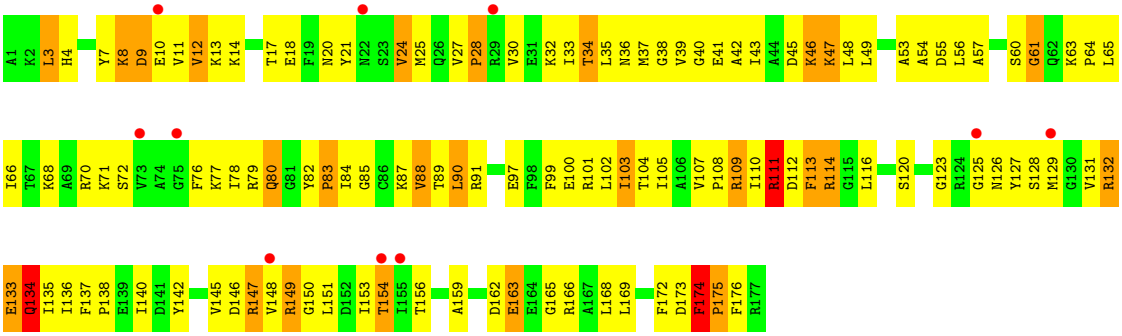
• Molecule 26: 50S ribosomal protein L4

Chain DE:



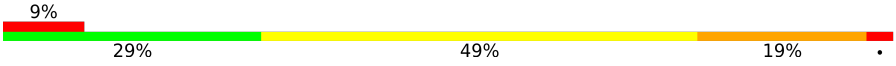
• Molecule 27: 50S ribosomal protein L5

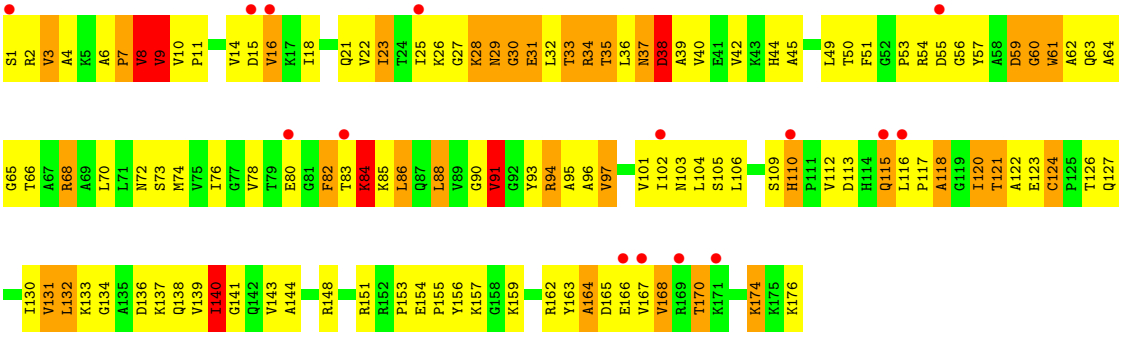
Chain BF:



• Molecule 28: 50S ribosomal protein L6

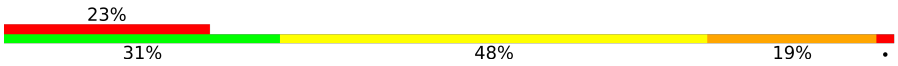
Chain BG:

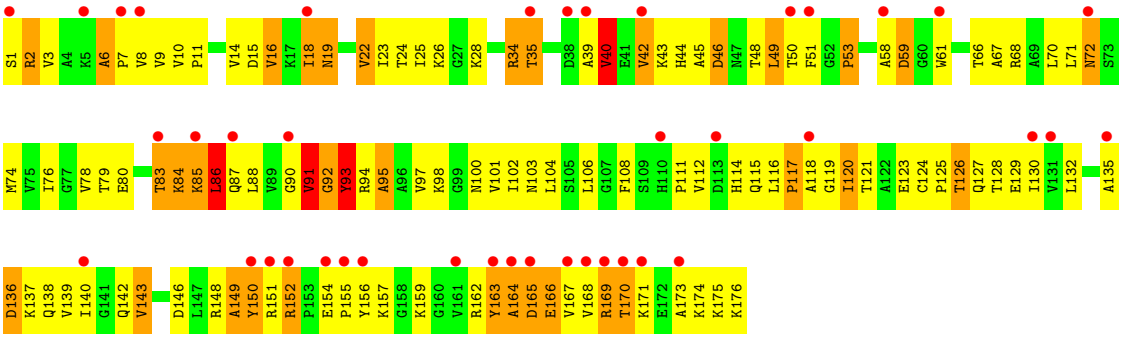




• Molecule 28: 50S ribosomal protein L6

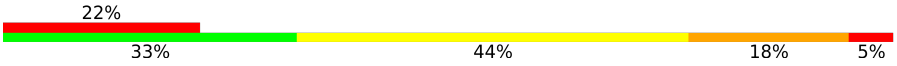
Chain DG:

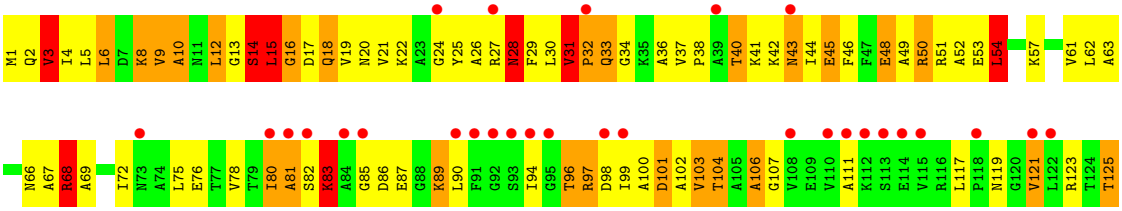


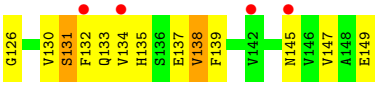


• Molecule 29: 50S ribosomal protein L9

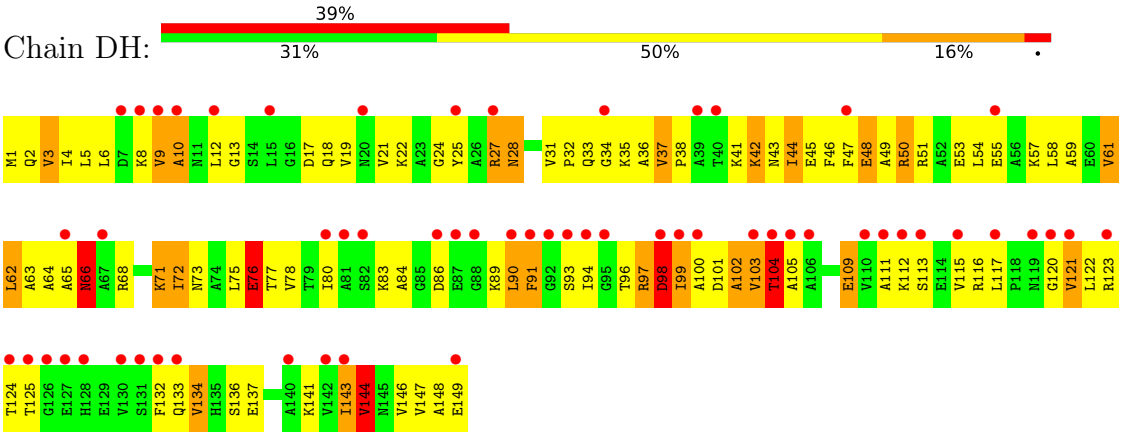
Chain BH:



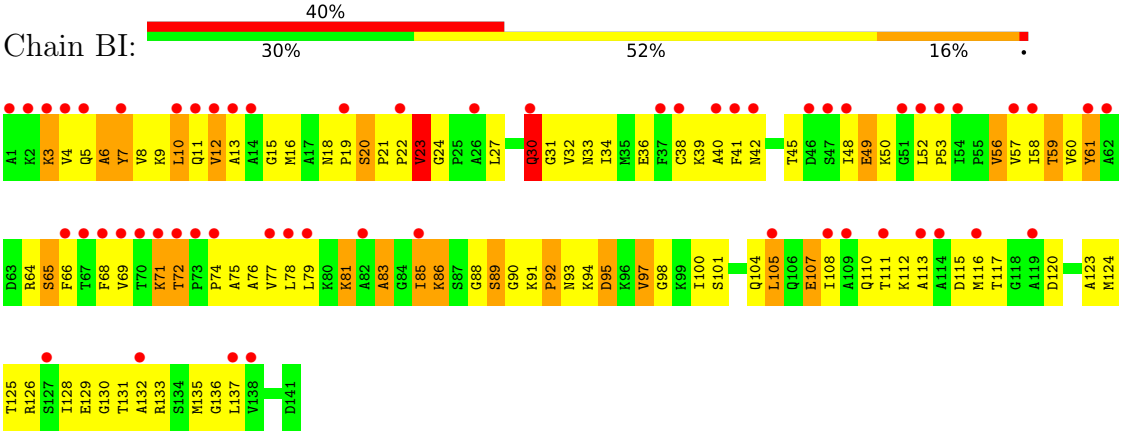




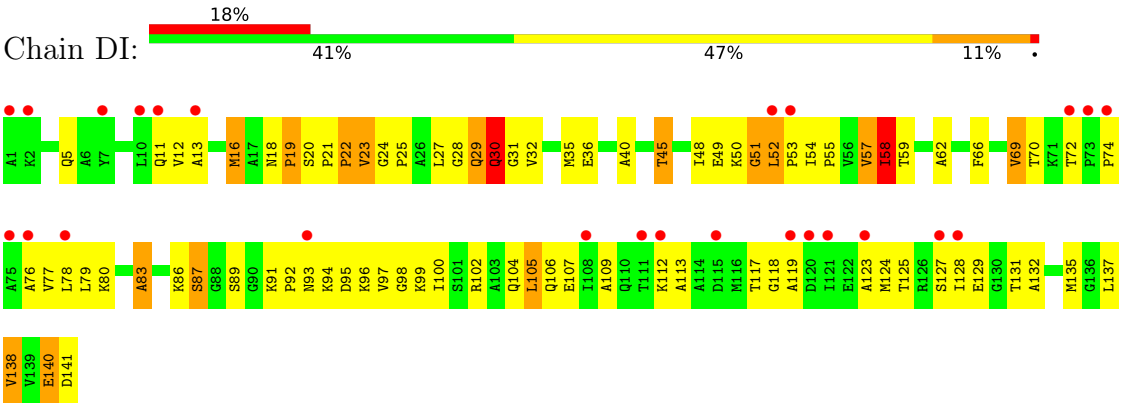
• Molecule 29: 50S ribosomal protein L9



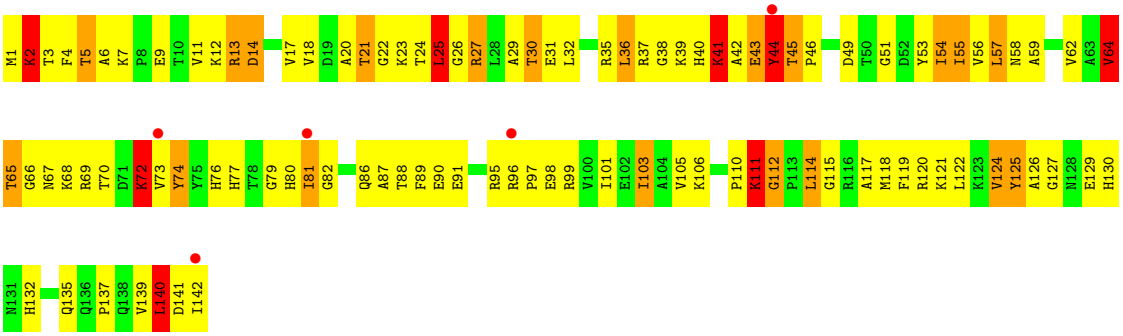
• Molecule 30: 50S ribosomal protein L11



• Molecule 30: 50S ribosomal protein L11

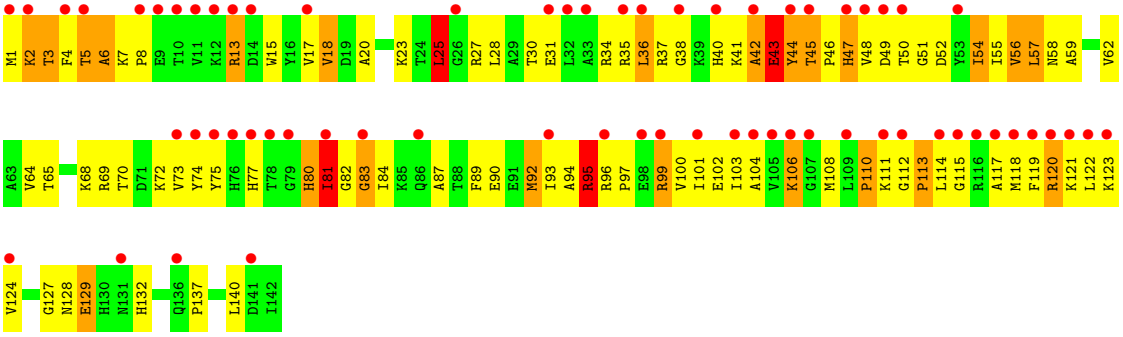


• Molecule 31: 50S ribosomal protein L13



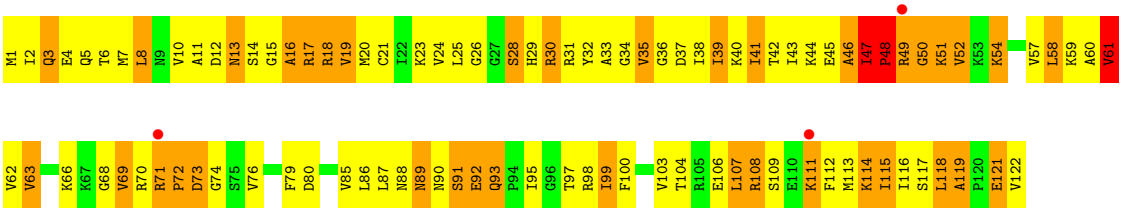
• Molecule 31: 50S ribosomal protein L13

Chain DJ:



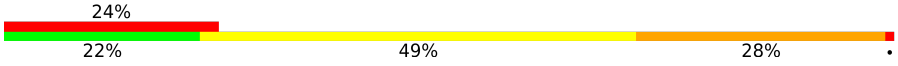
• Molecule 32: 50S ribosomal protein L14

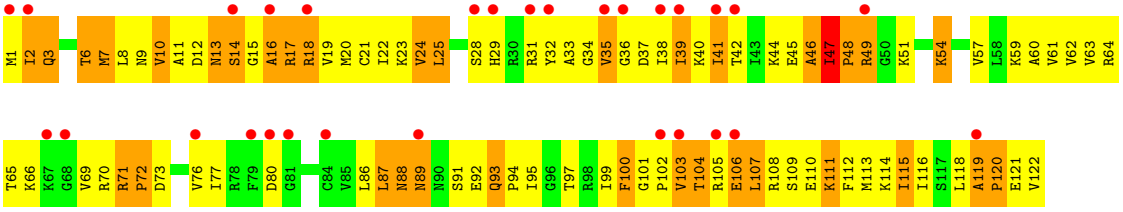
Chain BK:



• Molecule 32: 50S ribosomal protein L14

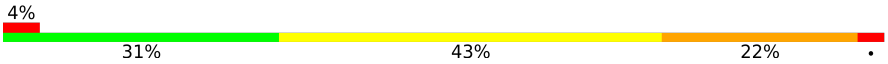
Chain DK:

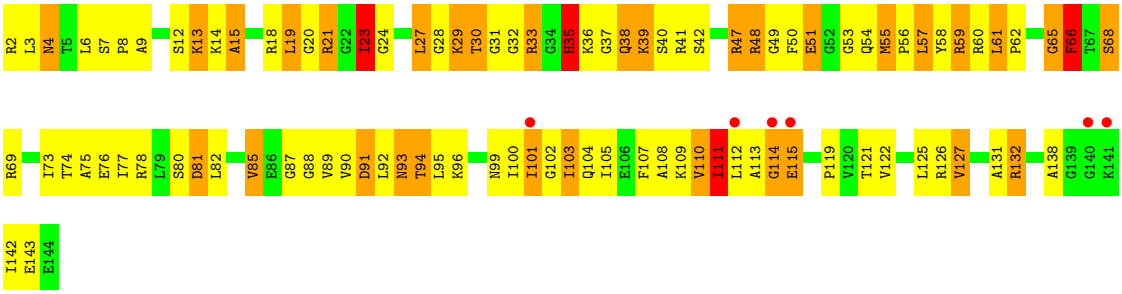




• Molecule 33: 50S ribosomal protein L15

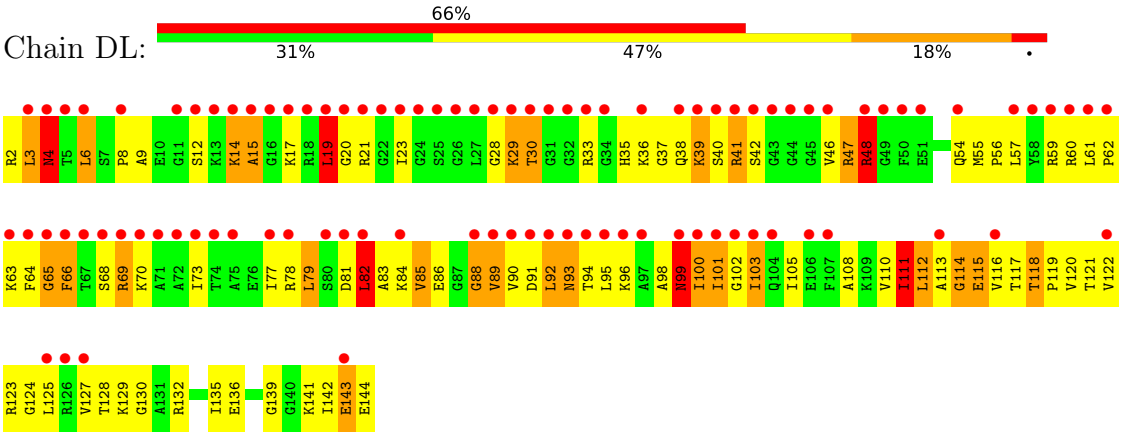
Chain BL:





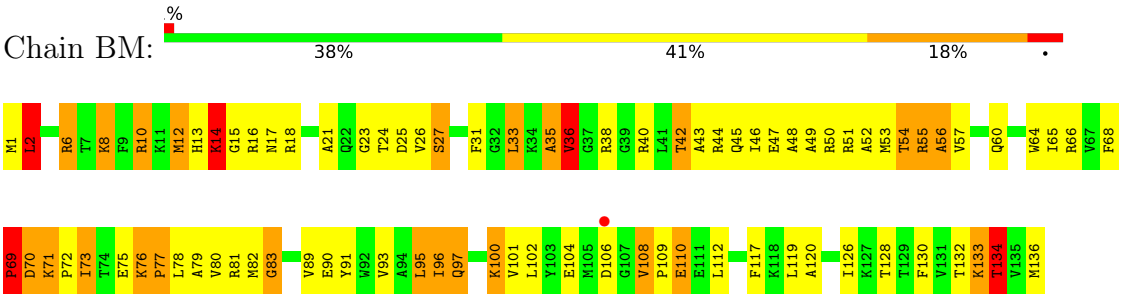
• Molecule 33: 50S ribosomal protein L15

Chain DL:



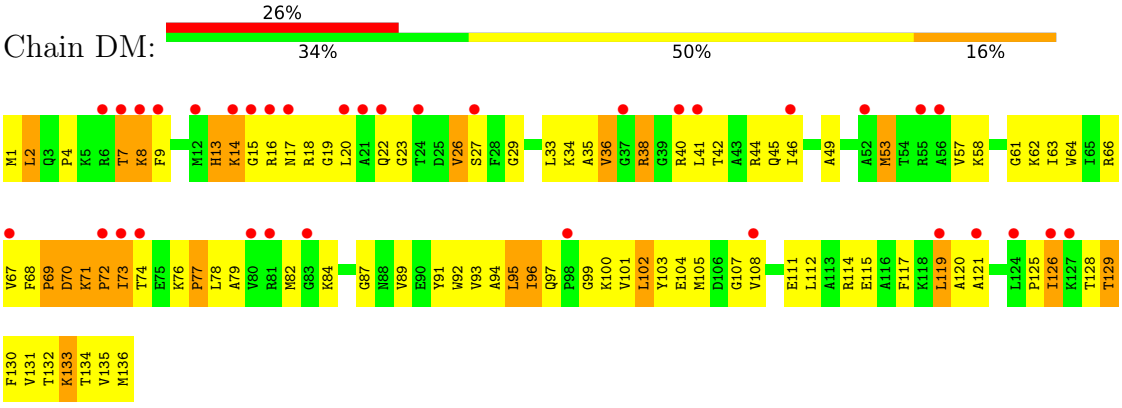
• Molecule 34: 50S ribosomal protein L16

Chain BM:



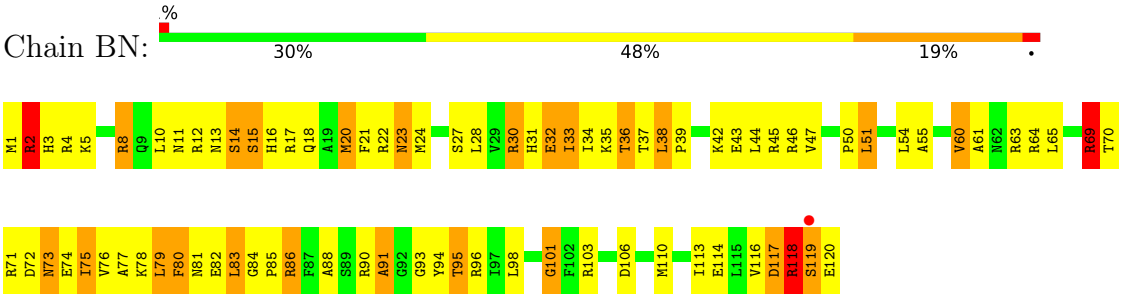
• Molecule 34: 50S ribosomal protein L16

Chain DM:



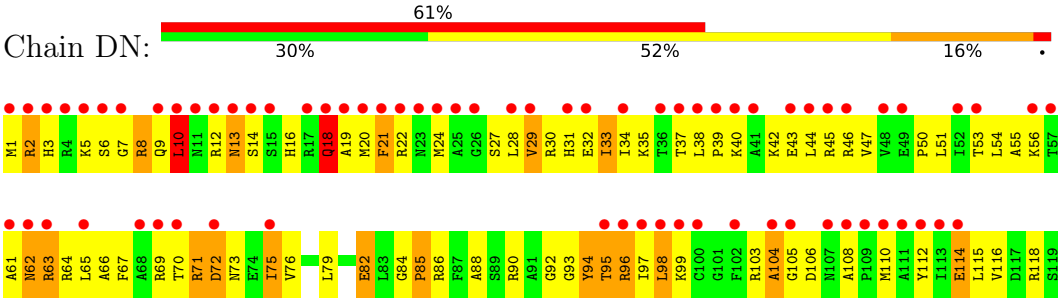
• Molecule 35: 50S ribosomal protein L17

Chain BN:



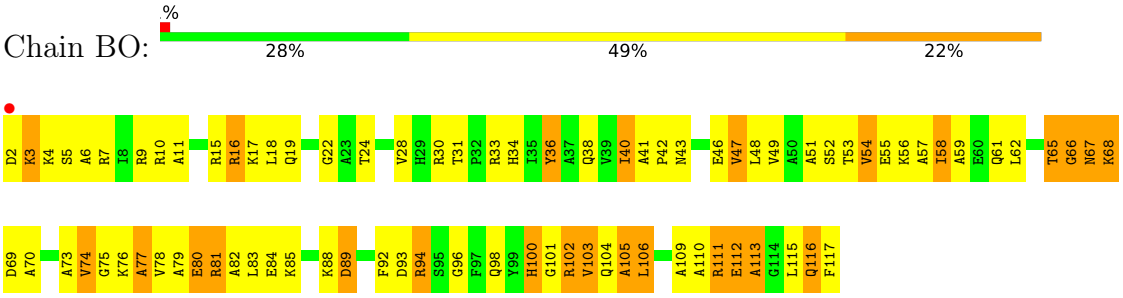
• Molecule 35: 50S ribosomal protein L17

Chain DN:



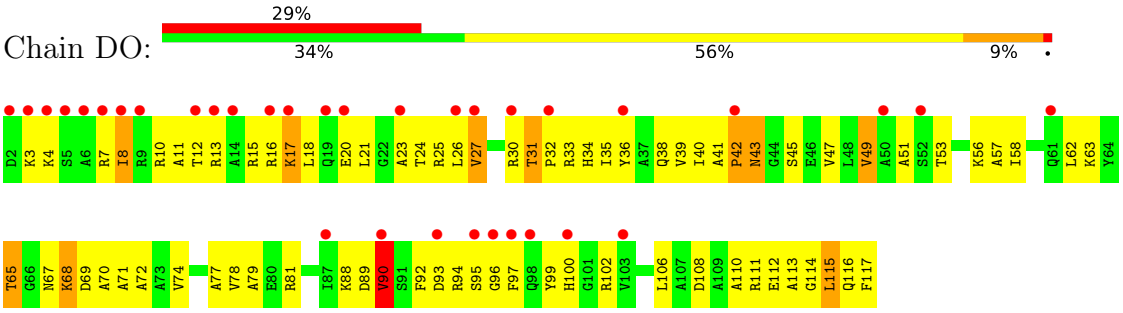
• Molecule 36: 50S ribosomal protein L18

Chain BO:



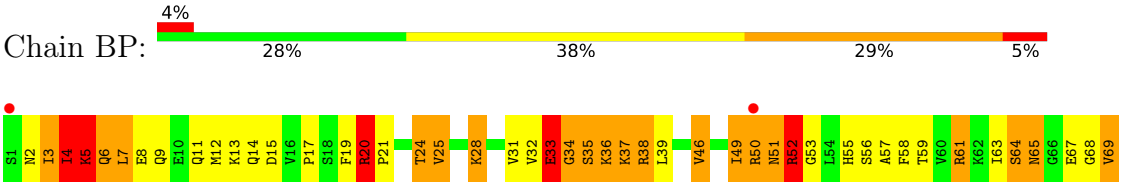
• Molecule 36: 50S ribosomal protein L18

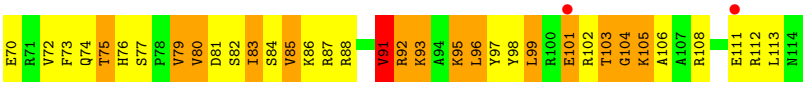
Chain DO:



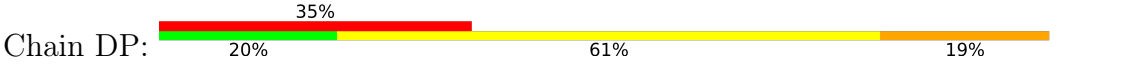
• Molecule 37: 50S ribosomal protein L19

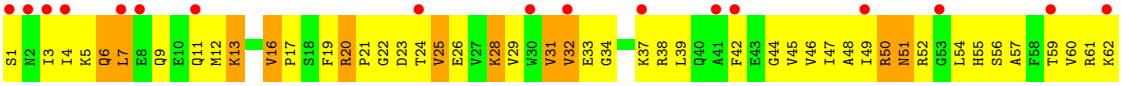
Chain BP:

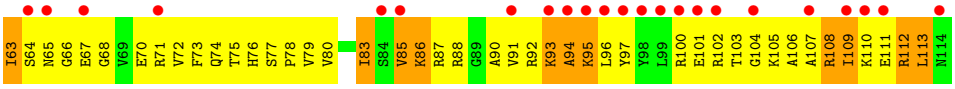




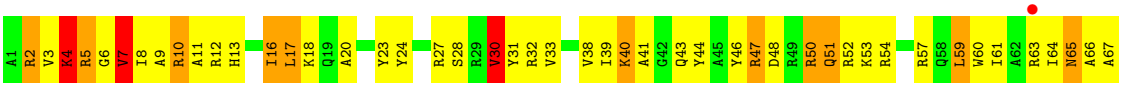
• Molecule 37: 50S ribosomal protein L19

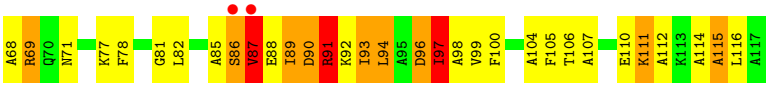




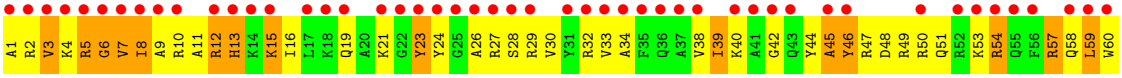


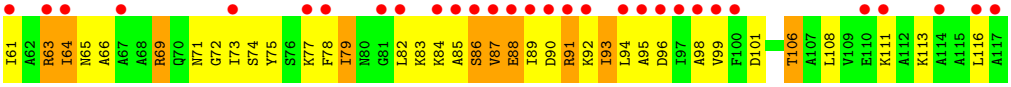
• Molecule 38: 50S ribosomal protein L20



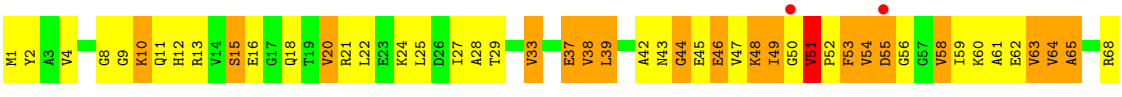


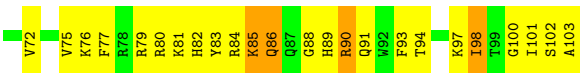
• Molecule 38: 50S ribosomal protein L20



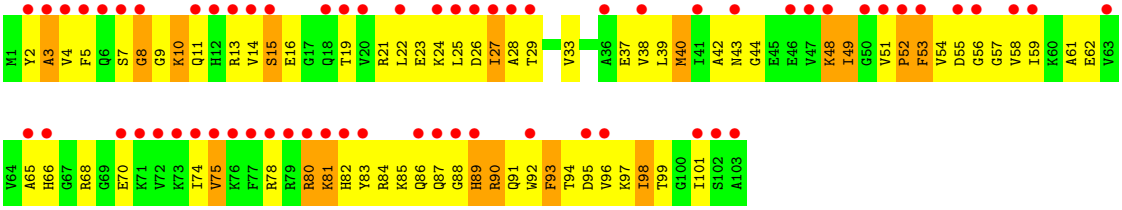


• Molecule 39: 50S ribosomal protein L21



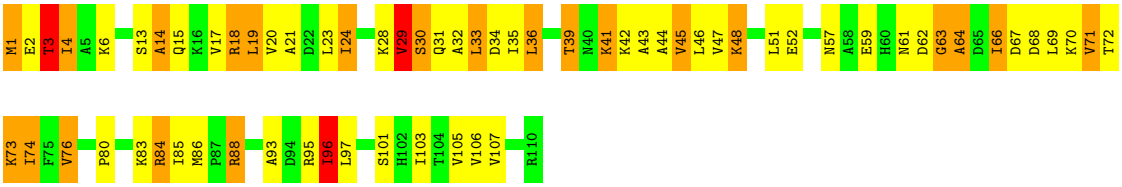


• Molecule 39: 50S ribosomal protein L21



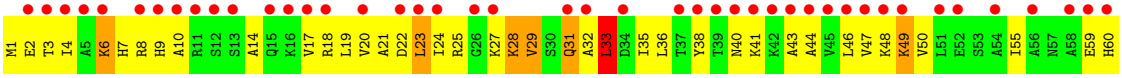
• Molecule 40: 50S ribosomal protein L22

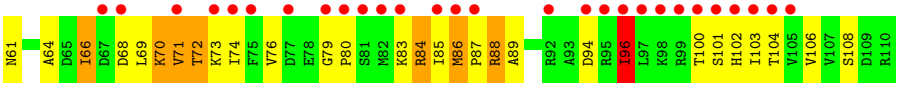
Chain BS:



• Molecule 40: 50S ribosomal protein L22

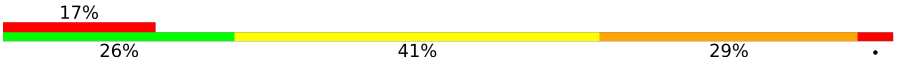
Chain DS:

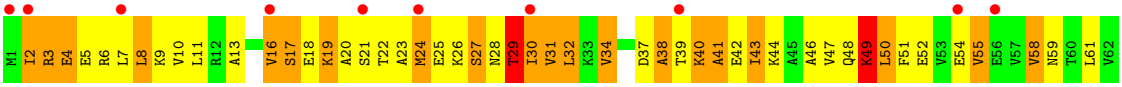


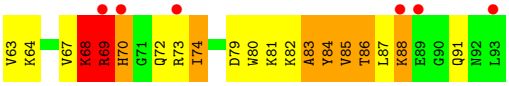


• Molecule 41: 50S ribosomal protein L23

Chain BT:

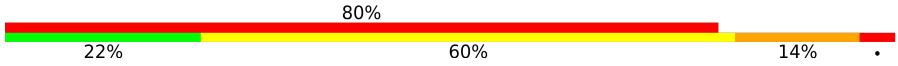


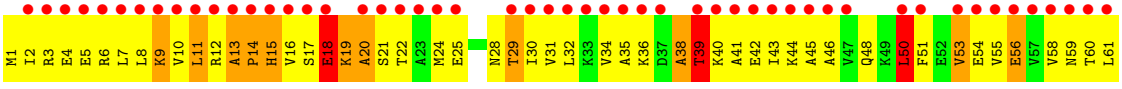


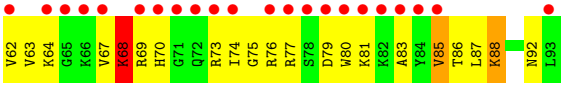


• Molecule 41: 50S ribosomal protein L23

Chain DT:

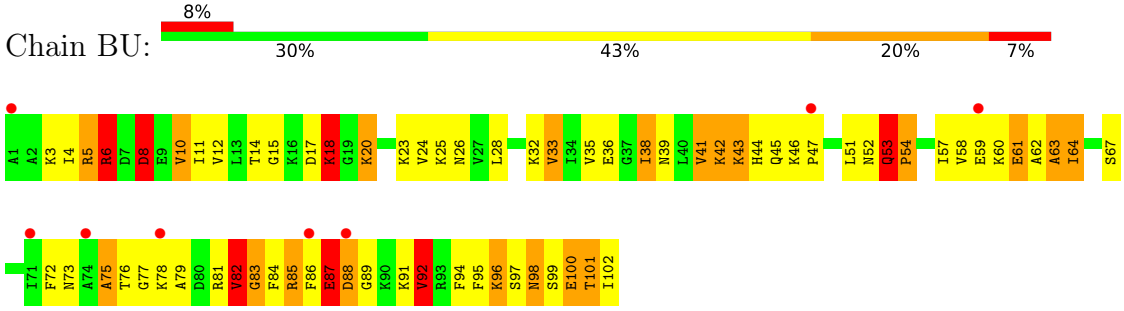






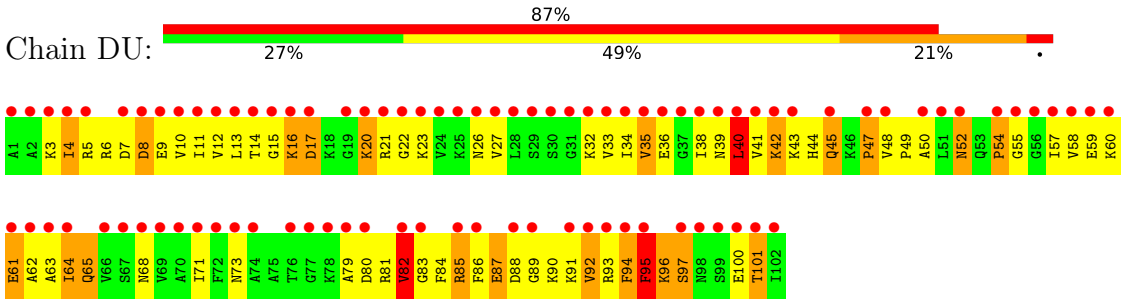
• Molecule 42: 50S ribosomal protein L24

Chain BU:



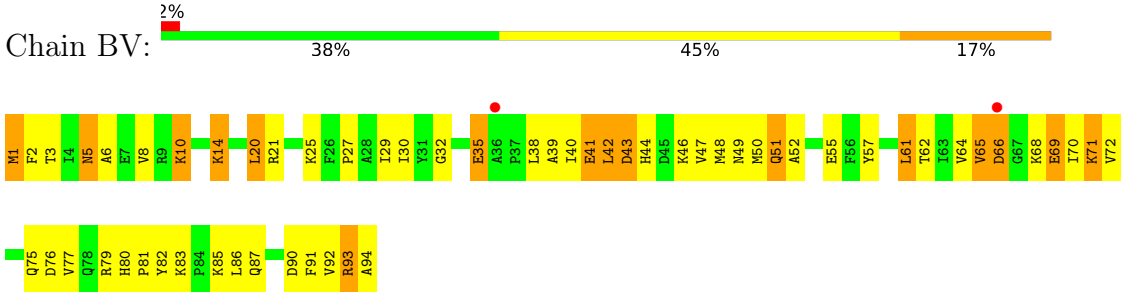
• Molecule 42: 50S ribosomal protein L24

Chain DU:



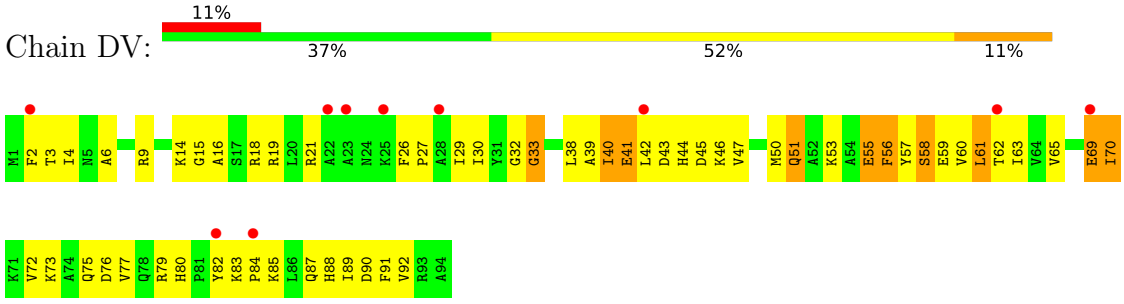
• Molecule 43: 50S ribosomal protein L25

Chain BV:



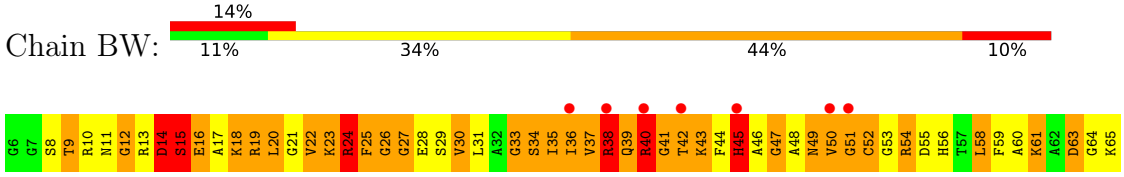
• Molecule 43: 50S ribosomal protein L25

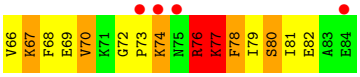
Chain DV:



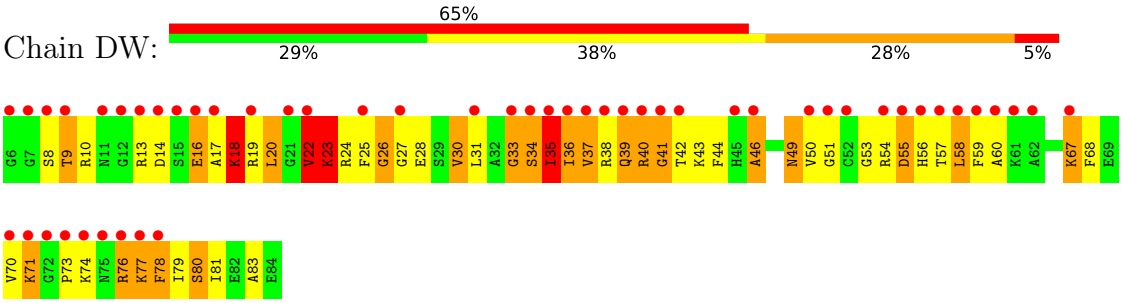
• Molecule 44: 50S ribosomal protein L27

Chain BW:

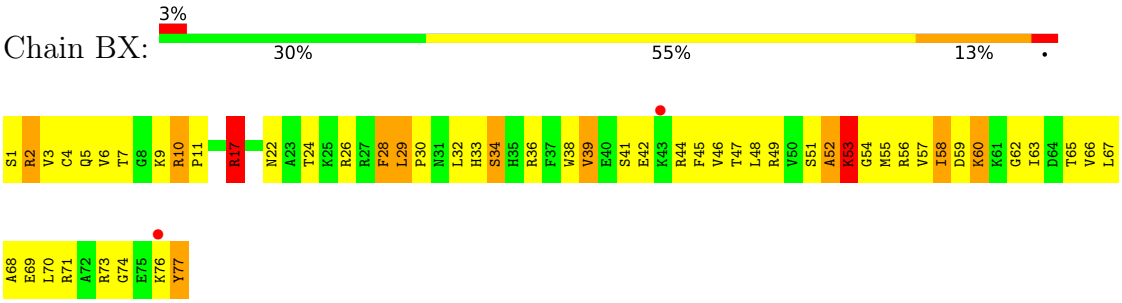




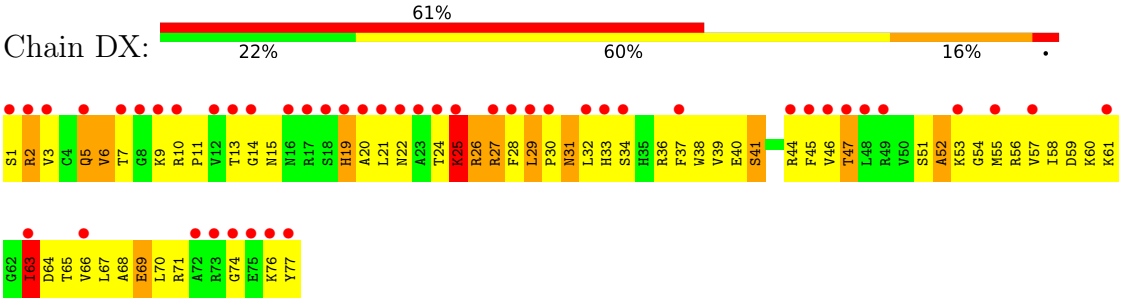
• Molecule 44: 50S ribosomal protein L27



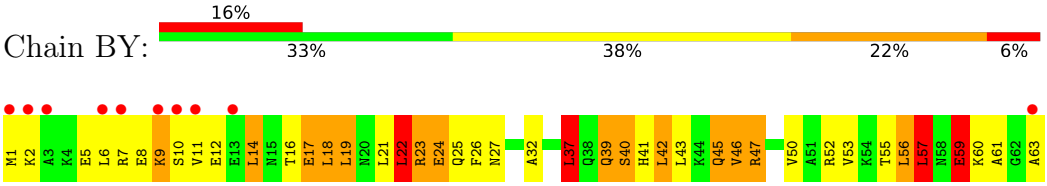
• Molecule 45: 50S ribosomal protein L28



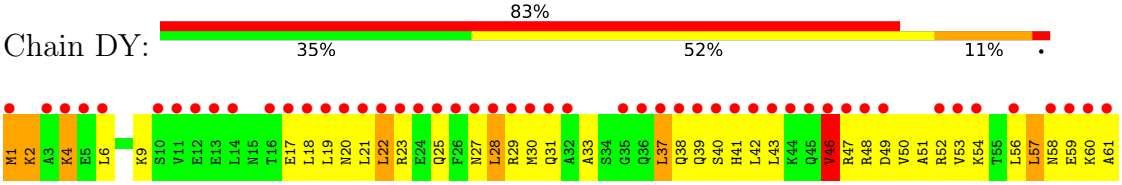
• Molecule 45: 50S ribosomal protein L28



• Molecule 46: 50S ribosomal protein L29

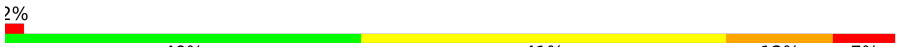


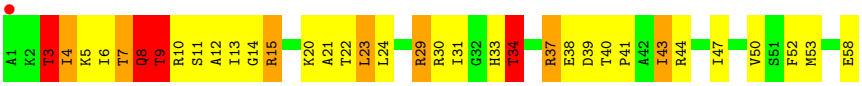
• Molecule 46: 50S ribosomal protein L29



• Molecule 47: 50S ribosomal protein L30

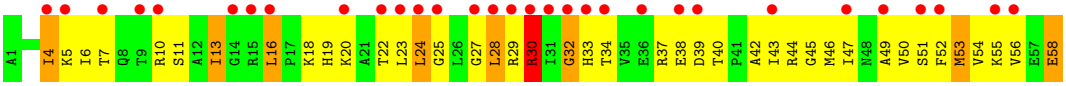
Chain BZ:





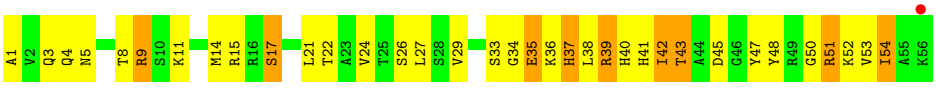
• Molecule 47: 50S ribosomal protein L30

Chain DZ:



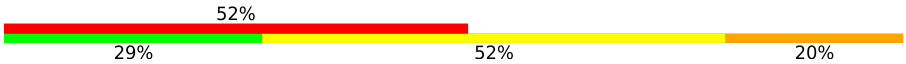
• Molecule 48: 50S ribosomal protein L32

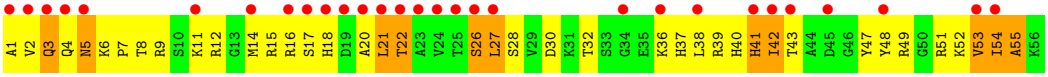
Chain B0:



• Molecule 48: 50S ribosomal protein L32

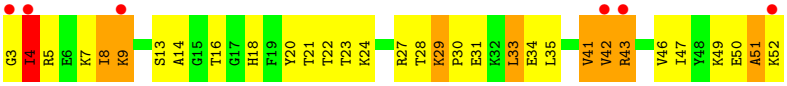
Chain D0:





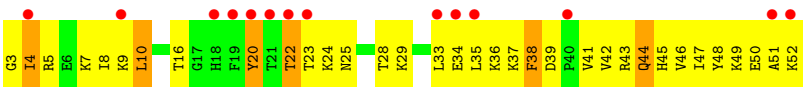
• Molecule 49: 50S ribosomal protein L33

Chain B1:



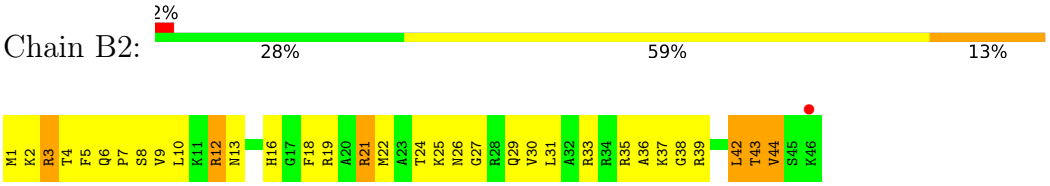
• Molecule 49: 50S ribosomal protein L33

Chain D1:



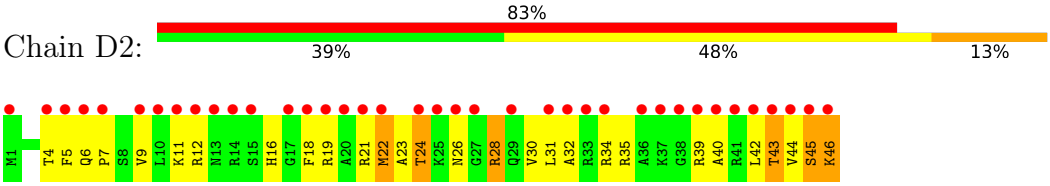
• Molecule 50: 50S ribosomal protein L34

Chain B2:



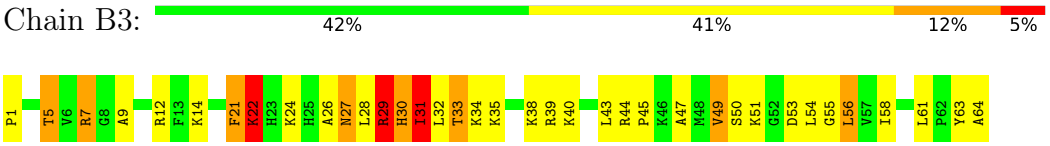
• Molecule 50: 50S ribosomal protein L34

Chain D2:



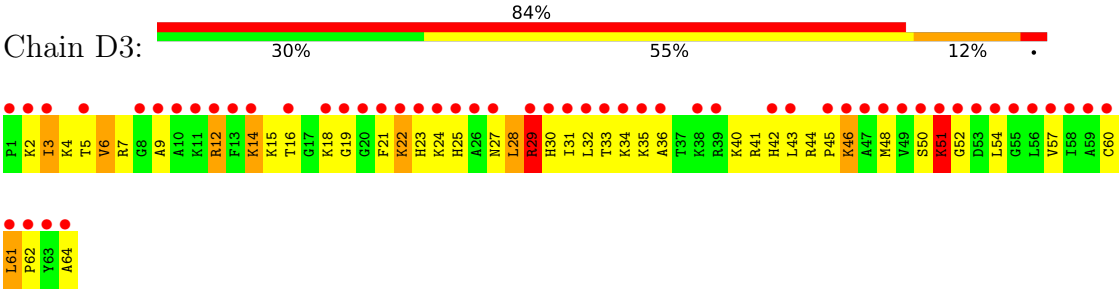
• Molecule 51: 50S ribosomal protein L35

Chain B3:



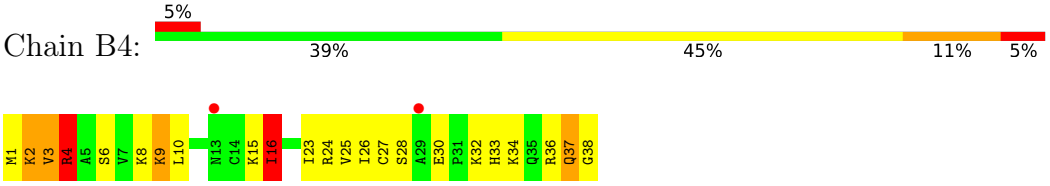
• Molecule 51: 50S ribosomal protein L35

Chain D3:



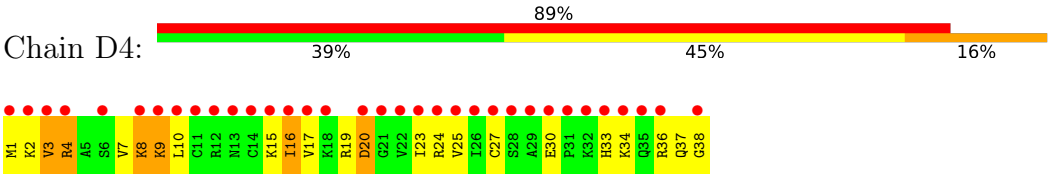
• Molecule 52: 50S ribosomal protein L36

Chain B4:



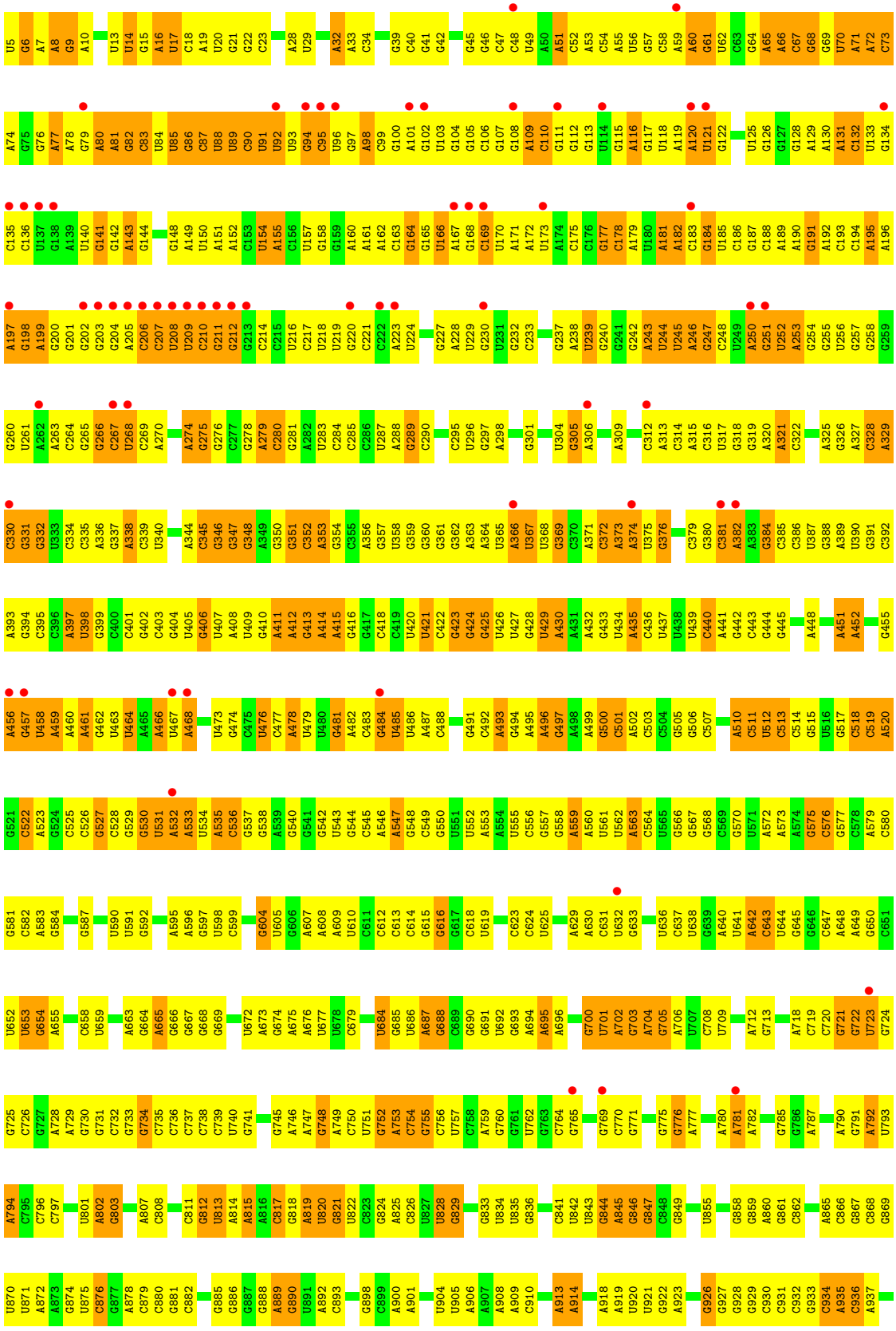
• Molecule 52: 50S ribosomal protein L36

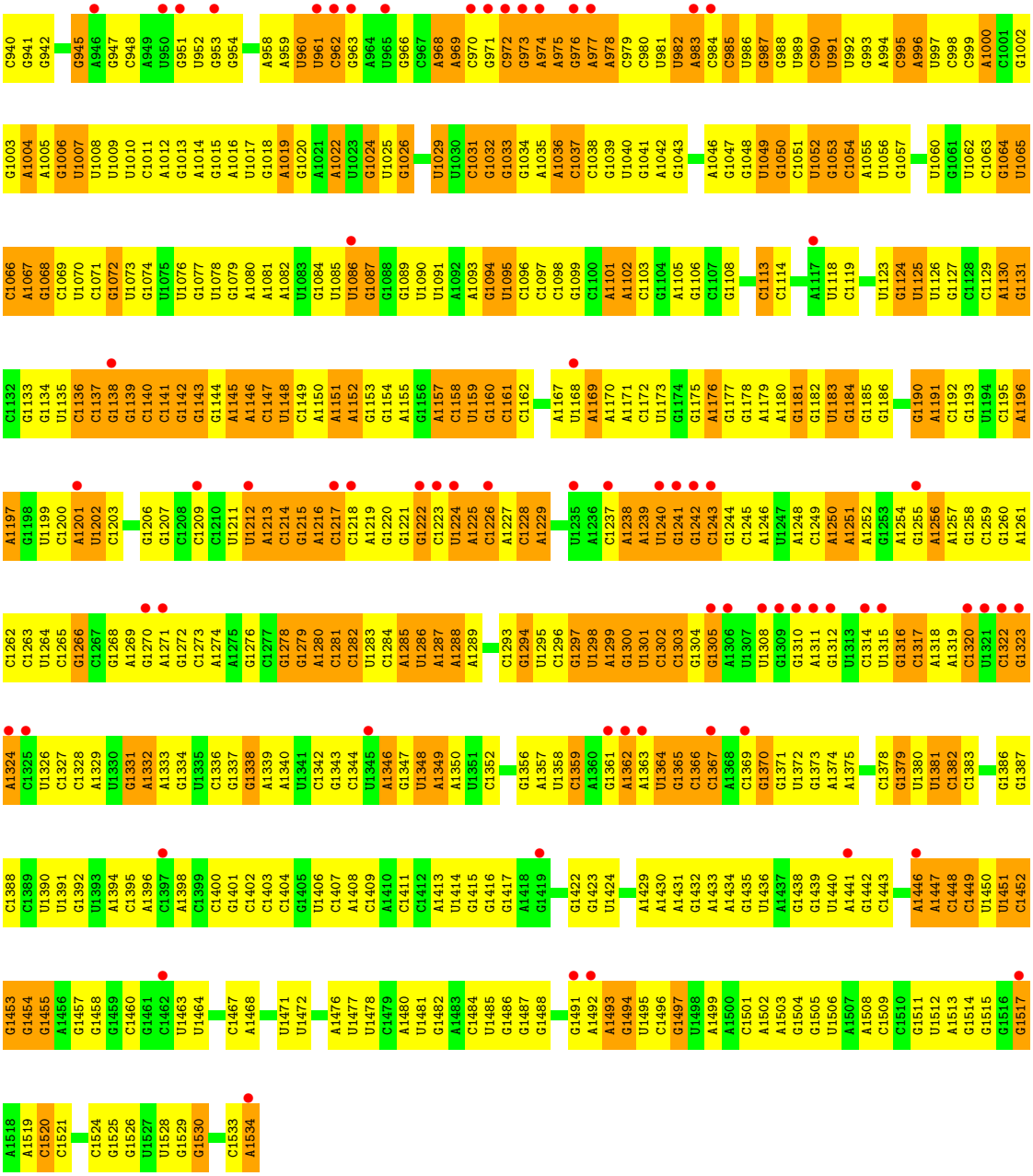
Chain D4:



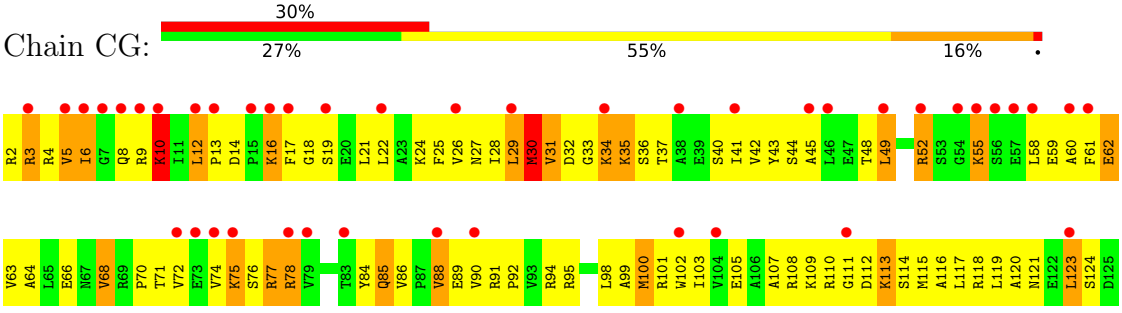
• Molecule 53: 16S rRNA

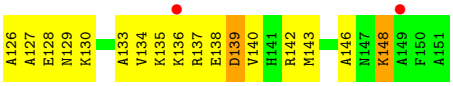
Chain CA:



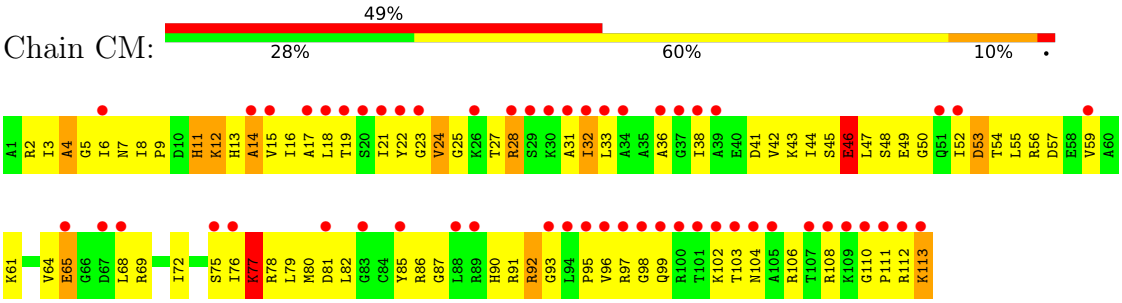


• Molecule 54: 30S ribosomal protein S7

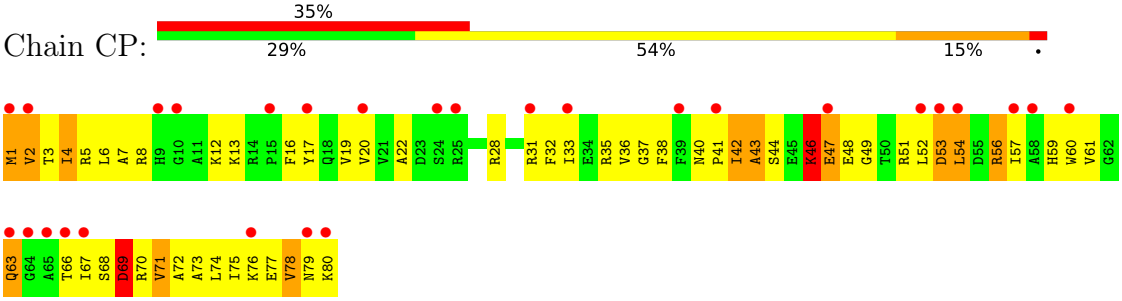




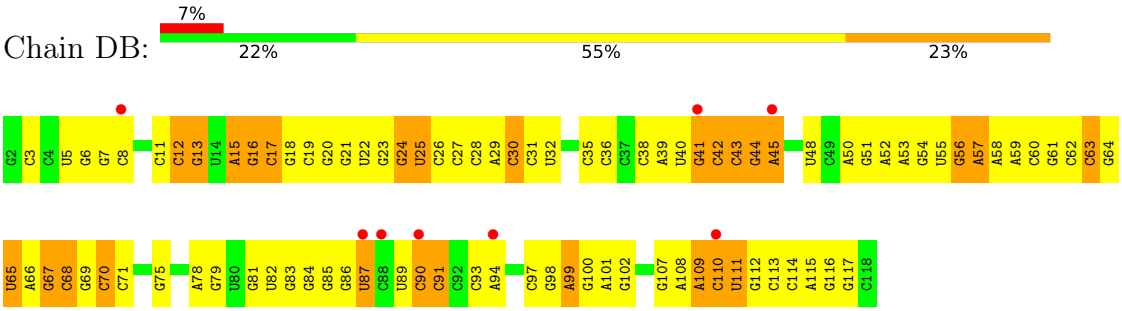
• Molecule 55: 30S ribosomal protein S13



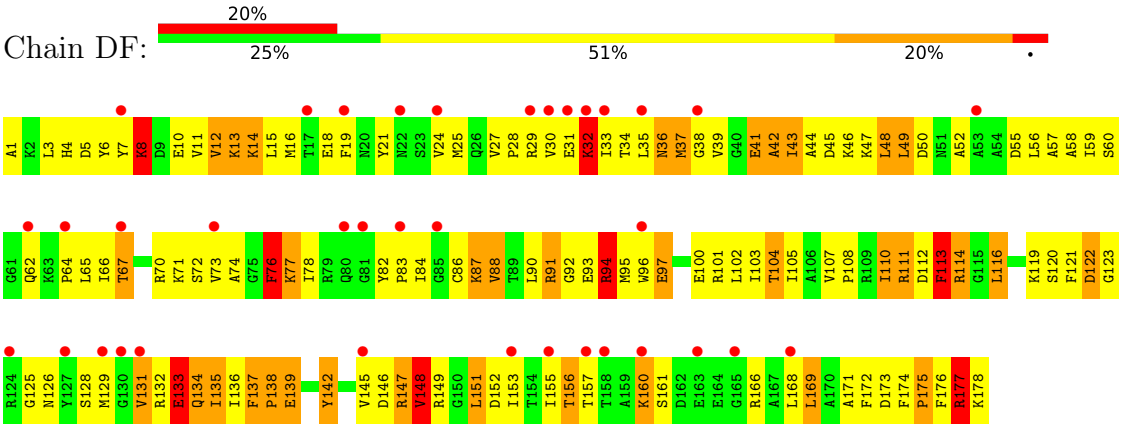
• Molecule 56: 30S ribosomal protein S16



• Molecule 57: 5S rRNA



• Molecule 58: 50S ribosomal protein L5



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	210.76Å 433.27Å 618.86Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	85.22 – 3.25 85.22 – 3.25	Depositor EDS
% Data completeness (in resolution range)	85.8 (85.22-3.25) 85.9 (85.22-3.25)	Depositor EDS
R_{merge}	0.08	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.27 (at 3.26Å)	Xtriage
Refinement program	PHENIX 1.6.1_357, PHENIX (phenix.refine: 1.6.1_357)	Depositor
R, R_{free}	0.193 , 0.245 0.223 , 0.265	Depositor DCC
R_{free} test set	16191 reflections (2.02%)	wwPDB-VP
Wilson B-factor (Å^2)	60.4	Xtriage
Anisotropy	0.387	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.24 , 72.5	EDS
L-test for twinning[2]	$< \|L\| > = 0.46$, $< L^2 > = 0.29$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.91	EDS
Total number of atoms	284525	wwPDB-VP
Average B, all atoms (Å^2)	104.0	wwPDB-VP

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

[1] Intensities estimated from amplitudes.

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

5 Model quality (i)

5.1 Standard geometry (i)

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

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	AA	0.27	1/36834 (0.0%)	0.45	0/57462
2	AB	0.53	1/1736 (0.1%)	0.85	7/2338 (0.3%)
2	CB	0.44	1/1736 (0.1%)	0.92	8/2338 (0.3%)
3	AC	0.37	0/1652	0.83	6/2225 (0.3%)
3	CC	0.35	0/1652	0.74	0/2225
4	AD	0.40	0/1665	0.87	2/2227 (0.1%)
4	CD	0.52	0/1665	0.94	3/2227 (0.1%)
5	AE	0.66	1/1119 (0.1%)	0.98	5/1504 (0.3%)
5	CE	0.52	1/1119 (0.1%)	0.94	2/1504 (0.1%)
6	AF	0.42	0/836	0.78	0/1128
6	CF	0.39	0/836	0.79	0/1128
7	AG	0.31	0/1196	0.81	2/1602 (0.1%)
8	AH	0.43	0/989	0.93	5/1326 (0.4%)
8	CH	0.41	0/989	0.85	2/1326 (0.2%)
9	AI	0.32	0/1034	0.77	0/1375
9	CI	0.30	0/1034	0.76	1/1375 (0.1%)
10	AJ	0.40	0/797	0.79	0/1077
10	CJ	0.36	0/797	0.80	1/1077 (0.1%)
11	AK	0.40	0/893	0.88	3/1205 (0.2%)
11	CK	0.38	0/893	0.88	0/1205
12	AL	0.49	0/969	0.97	2/1300 (0.2%)
12	CL	0.48	1/969 (0.1%)	0.93	4/1300 (0.3%)
13	AM	0.34	0/893	0.77	0/1193
14	AN	0.34	0/785	0.78	0/1043
14	CN	0.29	0/780	0.76	0/1036
15	AO	0.38	0/722	0.75	0/964
15	CO	0.58	2/722 (0.3%)	0.79	0/964
16	AP	0.40	0/659	0.88	2/884 (0.2%)
17	AQ	0.47	0/658	0.91	0/881
17	CQ	0.45	0/658	0.86	2/881 (0.2%)
18	AR	0.40	0/463	0.84	0/621
18	CR	0.39	0/463	0.80	0/621

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
19	AS	0.33	0/653	0.74	0/877
19	CS	0.27	0/653	0.80	0/877
20	AT	0.46	0/671	0.95	4/888 (0.5%)
20	CT	0.35	0/671	0.91	3/888 (0.3%)
21	AU	0.37	0/431	0.81	0/570
21	CU	0.42	0/431	0.88	0/570
22	BA	0.43	3/68626 (0.0%)	0.48	5/107056 (0.0%)
22	DA	0.24	1/68314 (0.0%)	0.48	3/106569 (0.0%)
23	BB	0.38	0/2828	0.43	0/4410
24	BC	0.61	0/2122	1.08	7/2852 (0.2%)
24	DC	0.42	0/2122	0.89	4/2852 (0.1%)
25	BD	0.73	1/1586 (0.1%)	1.15	8/2134 (0.4%)
25	DD	0.40	0/1586	0.92	7/2134 (0.3%)
26	BE	0.59	0/1571	0.99	4/2113 (0.2%)
26	DE	0.35	0/1571	0.82	1/2113 (0.0%)
27	BF	0.43	0/1435	0.86	2/1926 (0.1%)
28	BG	0.51	0/1343	0.95	5/1816 (0.3%)
28	DG	0.33	0/1343	0.79	2/1816 (0.1%)
29	BH	0.46	0/1122	0.84	3/1515 (0.2%)
29	DH	0.57	1/1122 (0.1%)	0.81	3/1515 (0.2%)
30	BI	0.35	0/1046	0.88	4/1410 (0.3%)
30	DI	0.33	0/1046	0.82	1/1410 (0.1%)
31	BJ	0.79	1/1152 (0.1%)	1.34	16/1551 (1.0%)
31	DJ	0.39	0/1152	0.83	1/1551 (0.1%)
32	BK	0.73	0/948	1.13	5/1268 (0.4%)
32	DK	0.43	0/948	0.90	2/1268 (0.2%)
33	BL	0.64	0/1054	1.19	6/1403 (0.4%)
33	DL	0.36	0/1054	0.78	0/1403
34	BM	0.71	0/1093	1.10	7/1460 (0.5%)
34	DM	0.36	0/1093	0.88	4/1460 (0.3%)
35	BN	0.70	0/974	1.06	2/1301 (0.2%)
35	DN	0.38	0/974	0.90	1/1301 (0.1%)
36	BO	0.59	0/902	1.03	3/1209 (0.2%)
36	DO	0.32	0/902	0.75	0/1209
37	BP	0.64	0/929	1.09	2/1242 (0.2%)
37	DP	0.37	0/929	0.84	3/1242 (0.2%)
38	BQ	0.79	0/960	1.12	9/1278 (0.7%)
38	DQ	0.37	0/960	0.81	0/1278
39	BR	0.71	1/829 (0.1%)	1.15	7/1107 (0.6%)
39	DR	0.36	0/829	0.76	0/1107
40	BS	0.76	0/864	1.03	2/1156 (0.2%)
40	DS	0.40	0/864	0.82	1/1156 (0.1%)
41	BT	0.59	0/745	0.99	5/994 (0.5%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
41	DT	0.32	0/745	0.74	2/994 (0.2%)
42	BU	0.56	0/788	1.04	7/1051 (0.7%)
42	DU	0.34	0/788	0.83	1/1051 (0.1%)
43	BV	0.54	0/766	0.95	1/1025 (0.1%)
43	DV	0.33	0/766	0.72	0/1025
44	BW	0.79	0/603	1.24	7/797 (0.9%)
44	DW	0.36	0/603	0.77	0/797
45	BX	0.54	0/635	1.06	4/848 (0.5%)
45	DX	0.39	0/635	0.92	4/848 (0.5%)
46	BY	0.49	0/510	0.98	4/677 (0.6%)
46	DY	0.27	0/510	0.72	0/677
47	BZ	0.71	0/453	1.12	2/605 (0.3%)
47	DZ	0.38	0/453	0.85	0/605
48	B0	0.61	0/450	0.98	1/599 (0.2%)
48	D0	0.35	0/450	0.80	0/599
49	B1	0.49	0/417	0.88	0/554
49	D1	0.38	0/417	0.74	1/554 (0.2%)
50	B2	0.72	0/380	1.10	2/498 (0.4%)
50	D2	0.35	0/380	0.89	2/498 (0.4%)
51	B3	0.68	0/513	0.98	1/676 (0.1%)
51	D3	0.42	0/513	0.89	0/676
52	B4	0.73	0/303	1.09	1/397 (0.3%)
52	D4	0.75	2/303 (0.7%)	0.80	1/397 (0.3%)
53	CA	0.25	1/36762 (0.0%)	0.45	0/57350
54	CG	0.31	0/1188	0.79	2/1591 (0.1%)
55	CM	0.26	0/885	0.66	0/1181
56	CP	0.40	0/649	0.81	0/870
57	DB	0.25	1/2803 (0.0%)	0.50	1/4371 (0.0%)
58	DF	0.31	0/1444	0.87	4/1937 (0.2%)
All	All	0.37	20/306773 (0.0%)	0.62	247/458565 (0.1%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
25	BD	0	1
35	BN	0	1
51	B3	0	1
All	All	0	3

All (20) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	AB	146	SER	C-N	16.77	1.54	1.33
5	AE	73	VAL	C-N	15.75	1.54	1.33
29	DH	48	GLU	C-N	13.74	1.51	1.33
22	BA	2092	U	O3'-P	-11.18	1.44	1.61
22	DA	2197	U	O3'-P	-10.75	1.45	1.61
53	CA	1396	A	O3'-P	-10.68	1.45	1.61
2	CB	107	ARG	C-N	10.47	1.48	1.33
15	CO	78	THR	C-N	9.80	1.48	1.33
57	DB	107	G	O3'-P	-7.92	1.49	1.61
52	D4	33	HIS	CG-ND1	7.79	1.46	1.38
5	CE	73	VAL	C-N	7.41	1.42	1.33
1	AA	986	U	O3'-P	7.32	1.72	1.61
15	CO	79	GLN	C-N	-7.15	1.24	1.33
22	BA	1115	G	O3'-P	6.97	1.71	1.61
52	D4	33	HIS	CG-CD2	-6.83	1.28	1.35
25	BD	172	VAL	CA-CB	-5.78	1.49	1.55
12	CL	21	PRO	C-N	5.70	1.41	1.33
31	BJ	43	GLU	CA-C	-5.34	1.45	1.52
39	BR	86	GLN	CB-CG	5.21	1.68	1.52
22	BA	2197	U	O3'-P	-5.14	1.53	1.61

All (247) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	CB	146	SER	O-C-N	-15.42	105.44	122.09
31	BJ	96	ARG	CA-C-N	13.02	133.50	119.05
31	BJ	96	ARG	C-N-CA	13.02	133.50	119.05
58	DF	177	ARG	O-C-N	11.19	134.54	123.46
2	AB	146	SER	O-C-N	-10.62	110.65	122.23
26	BE	39	ALA	N-CA-C	-10.54	100.42	113.28
25	BD	151	THR	CA-C-N	-10.36	108.99	119.56
25	BD	151	THR	C-N-CA	-10.36	108.99	119.56
31	BJ	42	ALA	N-CA-C	-10.20	97.83	110.88
31	BJ	64	VAL	N-CA-C	9.71	120.28	112.12
2	CB	146	SER	CA-C-N	9.46	139.23	123.25
2	CB	146	SER	C-N-CA	9.46	139.23	123.25
31	BJ	43	GLU	N-CA-C	-9.45	99.77	111.11
39	BR	51	VAL	CA-C-N	-9.02	111.47	120.31
39	BR	51	VAL	C-N-CA	-9.02	111.47	120.31
5	AE	73	VAL	O-C-N	9.00	133.02	123.03
25	BD	117	GLY	N-CA-C	8.53	125.23	115.08
37	BP	85	VAL	N-CA-C	8.35	119.22	111.45
4	CD	166	LYS	CA-C-N	8.17	128.65	119.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	CD	166	LYS	C-N-CA	8.17	128.65	119.83
58	DF	177	ARG	CA-C-N	-8.13	107.07	121.70
58	DF	177	ARG	C-N-CA	-8.13	107.07	121.70
8	AH	91	LEU	CA-C-N	8.11	128.42	119.90
8	AH	91	LEU	C-N-CA	8.11	128.42	119.90
39	BR	9	GLY	N-CA-C	-8.11	104.03	115.30
24	BC	12	ARG	N-CA-C	-7.97	104.16	114.04
2	AB	146	SER	CA-C-N	7.60	133.64	122.39
2	AB	146	SER	C-N-CA	7.60	133.64	122.39
22	BA	1038	G	O3'-P-O5'	7.41	115.12	104.00
27	BF	174	PHE	CA-C-N	7.36	129.03	119.84
27	BF	174	PHE	C-N-CA	7.36	129.03	119.84
44	BW	38	ARG	N-CA-C	-7.34	101.36	111.28
20	AT	7	LYS	N-CA-C	-7.31	104.16	113.23
50	D2	6	GLN	CA-C-N	7.24	127.24	119.78
50	D2	6	GLN	C-N-CA	7.24	127.24	119.78
22	DA	2197	U	O3'-P-O5'	-7.22	93.17	104.00
34	BM	76	LYS	CA-C-N	7.20	128.84	119.84
34	BM	76	LYS	C-N-CA	7.20	128.84	119.84
34	DM	71	LYS	CA-C-N	7.18	128.82	119.84
34	DM	71	LYS	C-N-CA	7.18	128.82	119.84
31	BJ	27	ARG	N-CA-C	-7.18	104.67	113.50
47	BZ	8	GLN	N-CA-C	7.17	122.12	113.23
32	BK	68	GLY	N-CA-C	7.17	120.26	111.45
25	DD	151	THR	CA-C-N	-7.17	110.88	119.84
25	DD	151	THR	C-N-CA	-7.17	110.88	119.84
43	BV	32	GLY	N-CA-C	-7.10	104.79	112.04
12	CL	89	LEU	CA-C-N	7.05	128.16	119.98
12	CL	89	LEU	C-N-CA	7.05	128.16	119.98
33	BL	68	SER	N-CA-C	7.03	119.98	111.40
20	AT	70	LYS	N-CA-C	-6.99	103.74	111.36
22	BA	2197	U	O3'-P-O5'	-6.99	93.52	104.00
25	BD	172	VAL	N-CA-C	6.98	118.04	111.48
8	CH	40	LYS	N-CA-C	-6.90	104.68	113.23
42	BU	84	PHE	N-CA-C	6.88	119.87	109.41
4	CD	20	LEU	N-CA-C	-6.87	101.00	110.35
31	BJ	112	GLY	CA-C-N	6.86	128.42	119.84
31	BJ	112	GLY	C-N-CA	6.86	128.42	119.84
51	B3	21	PHE	N-CA-C	6.77	122.18	113.18
20	AT	66	ILE	N-CA-C	-6.75	106.55	113.10
12	AL	23	LEU	N-CA-C	6.73	125.14	110.80
35	DN	18	GLN	N-CA-C	-6.70	106.99	114.62

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
32	BK	61	VAL	CB-CA-C	-6.67	102.64	110.91
45	BX	54	GLY	N-CA-C	-6.66	104.58	112.64
22	BA	876	C	O3'-P-O5'	-6.58	94.13	104.00
34	BM	71	LYS	CA-C-N	6.55	125.78	118.97
34	BM	71	LYS	C-N-CA	6.55	125.78	118.97
40	BS	86	MET	CA-C-N	-6.54	112.74	120.13
40	BS	86	MET	C-N-CA	-6.54	112.74	120.13
35	BN	69	ARG	N-CA-C	-6.51	102.14	110.53
33	BL	132	ARG	N-CA-C	-6.48	103.33	111.11
4	AD	166	LYS	CA-C-N	6.47	127.93	119.84
4	AD	166	LYS	C-N-CA	6.47	127.93	119.84
33	BL	23	ILE	N-CA-C	6.47	116.96	110.23
37	BP	49	ILE	N-CA-C	6.46	117.60	108.17
34	BM	42	THR	N-CA-C	6.45	119.13	110.88
22	DA	1929	G	O3'-P-O5'	-6.44	94.34	104.00
35	BN	79	LEU	N-CA-C	-6.41	100.94	110.23
44	BW	42	THR	N-CA-C	-6.40	103.58	111.33
38	BQ	7	VAL	N-CA-C	-6.39	104.28	110.42
38	BQ	41	ALA	N-CA-C	-6.38	104.24	111.07
24	BC	105	ALA	CA-C-N	6.36	127.24	120.11
24	BC	105	ALA	C-N-CA	6.36	127.24	120.11
45	DX	29	LEU	N-CA-C	6.33	113.71	108.07
42	DU	16	LYS	CB-CA-C	-6.33	109.26	116.54
38	BQ	97	ILE	N-CA-C	-6.33	104.72	112.76
46	BY	45	GLN	N-CA-C	-6.33	102.14	110.43
24	BC	211	ARG	N-CA-C	-6.33	104.30	111.07
5	AE	111	ARG	N-CA-C	-6.28	105.78	113.50
25	DD	146	ILE	N-CA-C	-6.25	107.04	113.10
34	BM	83	GLY	N-CA-C	6.25	123.33	115.21
57	DB	107	G	O3'-P-O5'	-6.25	94.63	104.00
31	BJ	41	LYS	N-CA-C	6.23	124.07	110.80
46	BY	59	GLU	N-CA-C	-6.22	106.33	114.04
5	AE	73	VAL	CA-C-N	-6.20	112.78	122.08
5	AE	73	VAL	C-N-CA	-6.20	112.78	122.08
54	CG	86	VAL	CA-C-N	6.18	126.54	119.92
54	CG	86	VAL	C-N-CA	6.18	126.54	119.92
30	BI	94	LYS	N-CA-C	-6.17	105.54	114.12
44	BW	77	LYS	N-CA-C	6.13	120.54	111.04
41	BT	85	VAL	N-CA-C	6.12	117.26	112.12
45	BX	28	PHE	N-CA-C	-6.12	100.32	110.17
32	DK	47	ILE	CA-C-N	6.11	127.48	119.84
32	DK	47	ILE	C-N-CA	6.11	127.48	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
10	CJ	88	MET	N-CA-C	-6.09	104.70	111.71
24	DC	19	VAL	N-CA-C	6.09	115.12	106.53
36	BO	105	ALA	N-CA-C	-6.09	102.48	110.33
26	BE	117	ARG	N-CA-C	-6.08	105.15	113.30
52	B4	28	SER	N-CA-C	-6.08	104.94	112.90
42	BU	5	ARG	N-CA-C	6.07	118.51	108.99
37	DP	16	VAL	CA-C-N	6.06	126.52	120.52
37	DP	16	VAL	C-N-CA	6.06	126.52	120.52
46	BY	11	VAL	N-CA-C	-6.05	106.61	111.81
58	DF	176	PHE	CB-CA-C	-6.03	109.64	116.63
20	AT	68	LYS	CB-CA-C	-5.97	109.11	117.23
26	BE	88	ARG	N-CA-C	-5.96	101.28	110.58
25	DD	193	VAL	CA-C-N	5.96	127.29	119.84
25	DD	193	VAL	C-N-CA	5.96	127.29	119.84
39	BR	90	ARG	N-CA-C	5.90	120.03	112.12
2	CB	107	ARG	CA-C-N	5.89	132.26	122.54
2	CB	107	ARG	C-N-CA	5.89	132.26	122.54
25	BD	10	GLY	N-CA-C	5.88	127.11	113.18
5	CE	122	VAL	N-CA-C	5.87	116.39	108.17
36	BO	102	ARG	N-CA-C	-5.86	105.62	112.89
24	BC	143	VAL	CB-CA-C	-5.86	103.65	110.91
45	DX	55	MET	N-CA-C	-5.84	106.19	113.55
29	BH	48	GLU	N-CA-C	-5.80	106.84	114.04
28	BG	82	PHE	N-CA-C	5.78	118.96	109.72
38	BQ	30	VAL	CB-CA-C	-5.78	103.92	111.25
26	BE	46	GLN	N-CA-C	5.77	123.10	110.80
41	BT	34	VAL	N-CA-C	5.77	115.13	106.42
25	DD	113	SER	N-CA-C	5.74	116.87	108.14
25	BD	152	PRO	N-CA-C	-5.72	106.41	113.84
2	AB	83	ALA	N-CA-C	-5.71	106.15	113.23
12	CL	58	ASN	N-CA-C	-5.71	106.36	113.38
31	BJ	140	LEU	N-CA-C	5.69	116.89	108.86
29	DH	48	GLU	O-C-N	5.69	128.63	122.15
44	BW	21	GLY	N-CA-C	-5.68	103.45	112.66
28	BG	140	ILE	N-CA-C	-5.68	103.33	111.17
45	DX	19	HIS	N-CA-C	-5.68	103.03	110.53
17	CQ	30	HIS	CA-C-N	5.67	126.93	119.84
17	CQ	30	HIS	C-N-CA	5.67	126.93	119.84
34	DM	68	PHE	CA-C-N	5.67	126.93	119.84
34	DM	68	PHE	C-N-CA	5.67	126.93	119.84
42	BU	75	ALA	N-CA-C	-5.67	106.91	113.88
24	BC	140	VAL	N-CA-C	5.67	121.12	109.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
8	AH	71	VAL	N-CA-C	5.66	112.27	106.21
3	AC	107	LYS	CA-C-N	5.65	125.18	119.19
3	AC	107	LYS	C-N-CA	5.65	125.18	119.19
45	BX	52	ALA	N-CA-C	-5.65	102.27	110.24
50	B2	43	THR	N-CA-C	5.65	122.84	110.80
39	BR	44	GLY	N-CA-C	-5.63	105.41	113.86
38	BQ	33	VAL	CB-CA-C	-5.62	104.71	112.24
28	BG	56	GLY	N-CA-C	-5.58	108.44	115.08
44	BW	24	ARG	N-CA-C	-5.58	102.76	110.35
29	BH	45	GLU	N-CA-C	-5.55	107.16	114.04
42	BU	53	GLN	CA-C-N	-5.54	112.92	119.84
42	BU	53	GLN	C-N-CA	-5.54	112.92	119.84
45	DX	52	ALA	N-CA-C	-5.53	102.30	110.48
2	AB	191	ASP	CA-C-N	5.52	125.14	119.56
2	AB	191	ASP	C-N-CA	5.52	125.14	119.56
44	BW	20	LEU	N-CA-C	-5.52	105.66	112.72
8	CH	44	PHE	N-CA-C	-5.52	106.39	114.39
31	DJ	42	ALA	N-CA-C	-5.49	102.20	110.70
47	BZ	9	THR	N-CA-C	5.48	122.48	110.80
41	BT	34	VAL	CB-CA-C	-5.47	105.71	111.23
25	DD	153	GLY	N-CA-C	-5.45	107.45	115.30
52	D4	33	HIS	CG-CD2-NE2	5.43	112.63	107.20
3	AC	5	HIS	CA-C-N	5.41	125.23	119.28
3	AC	5	HIS	C-N-CA	5.41	125.23	119.28
38	BQ	3	VAL	N-CA-C	5.41	115.65	107.75
22	DA	1929	G	P-O3'-C3'	-5.41	112.08	120.20
41	BT	32	LEU	N-CA-C	5.40	116.62	108.46
31	BJ	124	VAL	N-CA-C	5.37	120.52	109.34
8	AH	55	LYS	CA-C-N	5.36	126.54	119.84
8	AH	55	LYS	C-N-CA	5.36	126.54	119.84
2	AB	109	SER	N-CA-C	-5.35	106.25	112.89
33	BL	110	VAL	N-CA-C	5.35	116.16	111.56
20	CT	78	LEU	N-CA-C	-5.35	106.69	113.43
24	BC	58	LYS	N-CA-C	5.34	117.91	111.40
12	CL	73	LEU	N-CA-C	5.33	117.90	109.96
3	AC	184	ASN	N-CA-C	5.33	116.09	108.74
33	BL	35	HIS	N-CA-C	5.33	118.39	107.69
46	BY	16	THR	N-CA-C	-5.32	105.48	111.28
37	DP	49	ILE	N-CA-C	5.30	115.60	108.17
42	BU	100	GLU	N-CA-C	5.30	117.97	111.82
38	BQ	24	TYR	N-CA-C	5.30	118.86	109.96
39	BR	86	GLN	CB-CG-CD	5.30	121.61	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
38	BQ	11	ALA	N-CA-C	-5.29	105.41	111.07
22	BA	2197	U	P-O3'-C3'	-5.29	112.27	120.20
25	BD	14	ILE	CB-CA-C	5.29	116.44	110.41
39	BR	86	GLN	CB-CA-C	5.29	119.47	109.37
24	DC	63	ILE	N-CA-C	5.29	115.39	110.42
34	BM	57	VAL	N-CA-C	-5.28	106.72	113.22
20	CT	5	SER	N-CA-C	-5.28	106.61	113.16
50	B2	30	VAL	CB-CA-C	-5.27	105.22	111.97
45	BX	39	VAL	N-CA-C	5.26	116.16	111.90
9	CI	42	THR	N-CA-C	-5.24	106.57	113.17
24	DC	216	ARG	CA-C-N	5.24	126.39	119.84
24	DC	216	ARG	C-N-CA	5.24	126.39	119.84
31	BJ	7	LYS	CA-C-N	5.23	124.90	119.56
31	BJ	7	LYS	C-N-CA	5.23	124.90	119.56
12	AL	67	GLY	N-CA-C	5.22	119.68	112.37
3	AC	37	LYS	N-CA-C	-5.20	107.95	114.56
31	BJ	25	LEU	CA-C-N	-5.20	117.79	123.30
31	BJ	25	LEU	C-N-CA	-5.20	117.79	123.30
32	BK	121	GLU	N-CA-C	5.20	117.76	109.65
29	DH	109	GLU	N-CA-C	5.20	118.26	108.65
5	AE	138	ALA	N-CA-C	-5.17	105.65	111.28
25	BD	109	VAL	N-CA-C	5.16	120.08	109.34
30	DI	105	LEU	N-CA-C	-5.15	106.77	113.16
29	BH	85	GLY	N-CA-C	5.15	117.14	110.45
49	D1	22	THR	N-CA-C	5.15	115.03	108.24
44	BW	63	ASP	N-CA-C	5.12	117.52	110.35
7	AG	14	ASP	CA-C-N	5.12	124.84	119.82
7	AG	14	ASP	C-N-CA	5.12	124.84	119.82
41	DT	13	ALA	N-CA-C	5.12	112.62	108.07
32	BK	47	ILE	CA-C-N	5.12	126.23	119.84
32	BK	47	ILE	C-N-CA	5.12	126.23	119.84
38	BQ	99	VAL	CB-CA-C	-5.11	105.67	111.55
48	B0	24	VAL	N-CA-C	5.11	115.39	110.74
33	BL	20	GLY	N-CA-C	-5.11	107.95	115.30
5	CE	78	GLY	N-CA-C	-5.11	107.22	115.08
30	BI	72	THR	CA-C-N	5.10	125.64	120.38
30	BI	72	THR	C-N-CA	5.10	125.64	120.38
40	DS	64	ALA	CA-C-O	5.10	120.90	117.94
20	CT	33	LYS	N-CA-C	-5.10	105.91	111.82
11	AK	122	PRO	CA-C-N	5.09	125.09	119.90
11	AK	122	PRO	C-N-CA	5.09	125.09	119.90
42	BU	82	VAL	N-CA-C	5.09	119.92	109.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	DE	39	ALA	N-CA-C	-5.08	106.34	112.54
31	BJ	72	LYS	N-CA-C	5.08	117.23	110.53
36	BO	54	VAL	N-CA-C	-5.07	107.81	112.83
30	BI	56	VAL	N-CA-C	5.07	113.89	107.70
41	BT	69	ARG	N-CA-C	5.07	121.60	110.80
11	AK	92	ARG	N-CA-C	-5.07	106.93	113.01
2	CB	104	LYS	N-CA-C	-5.04	105.97	111.82
28	BG	124	CYS	CA-C-N	5.04	124.69	119.56
28	BG	124	CYS	C-N-CA	5.04	124.69	119.56
29	DH	112	LYS	N-CA-C	5.03	117.49	109.65
41	DT	85	VAL	N-CA-C	5.02	115.25	110.53
16	AP	14	ARG	CA-C-N	5.01	126.11	119.84
16	AP	14	ARG	C-N-CA	5.01	126.11	119.84
22	BA	2092	U	P-O3'-C3'	5.01	127.72	120.20
2	CB	199	ILE	CA-C-N	5.01	126.10	119.84
2	CB	199	ILE	C-N-CA	5.01	126.10	119.84
28	DG	6	ALA	CA-C-N	5.01	125.68	120.12
28	DG	6	ALA	C-N-CA	5.01	125.68	120.12

There are no chirality outliers.

All (3) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
51	B3	29	ARG	Peptide
25	BD	9	VAL	Peptide
35	BN	101	GLY	Peptide

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	32895	0	16553	1235	1
2	AB	1705	0	1732	194	0
2	CB	1705	0	1732	159	0
3	AC	1625	0	1699	113	0
3	CC	1625	0	1699	132	0
4	AD	1643	0	1710	151	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	CD	1643	0	1710	169	0
5	AE	1106	0	1148	157	0
5	CE	1106	0	1148	109	0
6	AF	818	0	808	91	0
6	CF	818	0	808	76	0
7	AG	1182	0	1240	93	0
8	AH	979	0	1034	108	0
8	CH	979	0	1034	101	0
9	AI	1022	0	1070	88	0
9	CI	1022	0	1070	112	0
10	AJ	787	0	828	82	0
10	CJ	787	0	828	94	0
11	AK	877	0	887	94	0
11	CK	877	0	887	74	0
12	AL	955	0	1019	93	0
12	CL	955	0	1019	102	0
13	AM	884	0	944	74	0
14	AN	774	0	827	71	0
14	CN	769	0	822	78	0
15	AO	714	0	737	53	0
15	CO	714	0	737	55	0
16	AP	649	0	666	51	0
17	AQ	649	0	691	76	0
17	CQ	649	0	691	67	0
18	AR	456	0	478	34	0
18	CR	456	0	478	45	0
19	AS	638	0	665	60	0
19	CS	638	0	665	67	0
20	AT	665	0	714	87	0
20	CT	665	0	714	49	0
21	AU	426	0	449	84	0
21	CU	426	0	449	83	0
22	BA	61274	0	30819	1947	6
22	DA	60995	0	30679	3517	8
23	BB	2529	0	1281	75	0
24	BC	2083	0	2157	227	0
24	DC	2083	0	2157	229	0
25	BD	1565	0	1616	203	1
25	DD	1565	0	1616	202	0
26	BE	1552	0	1619	157	0
26	DE	1552	0	1619	188	0
27	BF	1411	0	1447	138	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
28	BG	1323	0	1374	158	0
28	DG	1323	0	1374	135	0
29	BH	1111	0	1148	112	0
29	DH	1111	0	1148	104	0
30	BI	1032	0	1088	117	0
30	DI	1032	0	1088	69	0
31	BJ	1129	0	1162	159	0
31	DJ	1129	0	1162	145	0
32	BK	939	0	1012	126	0
32	DK	939	0	1012	116	0
33	BL	1045	0	1117	133	1
33	DL	1045	0	1117	131	0
34	BM	1074	0	1157	94	0
34	DM	1074	0	1157	101	0
35	BN	961	0	1000	97	0
35	DN	961	0	1000	133	0
36	BO	892	0	923	80	0
36	DO	892	0	923	83	0
37	BP	917	0	965	147	0
37	DP	917	0	965	121	0
38	BQ	947	0	1022	137	0
38	DQ	947	0	1022	125	0
39	BR	816	0	839	120	0
39	DR	816	0	839	95	0
40	BS	857	0	922	79	0
40	DS	857	0	922	65	0
41	BT	739	0	807	114	0
41	DT	739	0	807	100	0
42	BU	780	0	834	58	0
42	DU	780	0	834	97	0
43	BV	753	0	780	70	0
43	DV	753	0	780	66	0
44	BW	596	0	610	213	0
44	DW	596	0	610	117	0
45	BX	625	0	655	57	0
45	DX	625	0	655	78	0
46	BY	509	0	543	53	0
46	DY	509	0	543	67	0
47	BZ	449	0	491	34	0
47	DZ	449	0	491	44	1
48	B0	444	0	461	30	0
48	D0	444	0	461	59	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
49	B1	410	0	440	34	0
49	D1	410	0	440	39	0
50	B2	377	0	418	35	0
50	D2	377	0	418	47	0
51	B3	504	0	574	49	0
51	D3	504	0	574	60	0
52	B4	302	0	340	32	0
52	D4	302	0	342	27	0
53	CA	32831	0	16521	1611	0
54	CG	1175	0	1230	138	0
55	CM	877	0	937	95	0
56	CP	639	0	656	66	0
57	DB	2507	0	1270	156	0
58	DF	1420	0	1460	188	0
59	AA	43	0	0	0	0
59	BA	134	0	0	0	0
59	BB	4	0	0	0	0
59	CA	41	0	0	0	0
59	CE	1	0	0	0	0
59	DA	133	0	0	0	0
59	DB	1	0	0	0	0
59	DC	2	0	0	0	0
59	DJ	1	0	0	0	0
60	BA	58	0	64	8	0
61	B4	1	0	0	0	0
61	D4	1	0	0	0	0
62	AA	198	0	0	5	0
62	AL	1	0	0	0	0
62	AN	6	0	0	1	0
62	AT	2	0	0	0	0
62	AU	1	0	0	0	0
62	B2	1	0	0	0	0
62	B3	3	0	0	0	0
62	B4	1	0	0	0	0
62	BA	598	0	0	29	0
62	BB	20	0	0	1	0
62	BC	10	0	0	0	0
62	BD	2	0	0	0	0
62	BE	1	0	0	0	0
62	BL	2	0	0	1	0
62	BN	3	0	0	1	0
62	BQ	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
62	BR	1	0	0	0	0
62	BT	1	0	0	1	0
62	CA	192	0	0	6	0
62	CE	5	0	0	1	0
62	CI	1	0	0	0	0
62	CL	1	0	0	0	0
62	CN	3	0	0	0	0
62	CT	3	0	0	0	0
62	CU	2	0	0	0	0
62	D2	1	0	0	1	0
62	D3	1	0	0	0	0
62	D4	3	0	0	0	0
62	DA	595	0	0	28	0
62	DB	4	0	0	0	0
62	DC	13	0	0	1	0
62	DD	3	0	0	1	0
62	DE	3	0	0	0	0
62	DJ	6	0	0	0	0
62	DL	6	0	0	1	0
62	DN	2	0	0	0	0
62	DT	3	0	0	0	0
62	DU	2	0	0	0	0
62	DV	1	0	0	0	0
All	All	284525	0	190904	16802	9

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 (16802) 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)
53:CA:1157:A:H4'	53:CA:1158:C:O5'	1.38	1.20
22:DA:1808:A:H3'	22:DA:1809:A:H8	1.05	1.20
53:CA:120:A:C3'	53:CA:121:U:H5"	1.73	1.19
22:DA:2091:C:OP2	22:DA:2092:U:H3'	1.39	1.18
22:BA:900:A:C2'	22:BA:901:C:H5'	1.74	1.17
21:CU:16:ARG:HG3	21:CU:19:LYS:HG2	1.23	1.16
22:BA:1082:U:H5'	30:BI:117:THR:O	1.43	1.16
38:BQ:63:ARG:NH1	38:BQ:96:ASP:HA	1.59	1.16
1:AA:975:A:H4'	1:AA:976:G:H5'	1.28	1.16
12:CL:43:LYS:HB3	12:CL:44:PRO:HD2	1.26	1.15

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:227:A:H4'	22:DA:228:C:OP1	1.46	1.15
22:DA:1385:A:H4'	22:DA:1386:C:OP1	1.37	1.15
1:AA:721:G:H4'	1:AA:722:G:O5'	1.44	1.15
29:BH:31:VAL:HB	29:BH:32:PRO:HD2	1.19	1.14
22:BA:1179:G:H3'	22:BA:1180:U:H4'	1.25	1.13
1:AA:1129:C:H5"	9:AI:17:ARG:HH22	0.96	1.12
22:BA:2800:A:H4'	22:BA:2801:G:OP2	1.32	1.12
22:DA:454:A:H4'	22:DA:455:C:OP2	1.37	1.12
22:DA:2344:U:H4'	22:DA:2345:G:OP1	1.44	1.12
24:DC:145:MET:HE3	24:DC:181:ARG:HH22	1.10	1.12
22:BA:1458:U:H4'	22:BA:1459:G:O5'	1.26	1.12
22:DA:1489:C:H4'	22:DA:1490:A:OP1	1.39	1.11
22:BA:900:A:H2'	22:BA:901:C:H5'	1.17	1.11
22:BA:1073:A:H3'	22:BA:1074:G:H5"	1.27	1.11
31:BJ:44:TYR:HB2	38:BQ:63:ARG:HB3	1.29	1.10
22:BA:904:G:H2'	22:BA:905:A:H8	1.08	1.10
22:BA:1025:G:H4'	22:BA:1026:G:OP2	1.44	1.10
1:AA:982:U:H4'	1:AA:983:A:O5'	1.43	1.10
44:BW:76:ARG:HH21	44:BW:76:ARG:HG3	1.10	1.09
43:BV:80:HIS:CD2	43:BV:83:LYS:H	1.70	1.09
57:DB:12:C:H4'	57:DB:13:G:OP1	1.30	1.09
38:DQ:61:ILE:HD11	38:DQ:92:LYS:HD3	1.25	1.09
22:DA:1913:A:H4'	22:DA:1914:C:OP1	1.28	1.09
4:CD:2:ARG:HH21	4:CD:114:ARG:HD3	1.06	1.09
12:AL:49:ARG:HH11	12:AL:49:ARG:HG2	1.05	1.08
6:AF:16:GLU:HG2	4:CD:191:SER:HB2	1.22	1.08
27:BF:35:LEU:HB3	27:BF:153:ILE:HG22	1.27	1.08
57:DB:56:G:H4'	57:DB:57:A:O5'	1.46	1.08
22:DA:241:A:H4'	22:DA:242:G:OP1	1.35	1.08
57:DB:112:G:H21	36:DO:45:SER:HA	1.18	1.08
22:DA:483:A:H2'	22:DA:484:C:H6	1.18	1.08
33:BL:93:ASN:HD22	33:BL:94:THR:N	1.53	1.07
6:AF:3:HIS:H	6:AF:92:THR:HG23	1.19	1.07
53:CA:1183:U:H3'	53:CA:1184:G:H5"	1.28	1.07
44:DW:40:ARG:HH11	44:DW:40:ARG:HG2	1.05	1.07
22:DA:2092:U:H4'	22:DA:2093:G:OP1	1.35	1.07
8:CH:103:VAL:HG12	8:CH:124:ILE:HA	1.35	1.07
22:DA:1032:A:H1'	52:D4:23:ILE:HD13	1.37	1.06
9:AI:98:ARG:HG2	9:AI:103:VAL:HG21	1.34	1.06
44:BW:9:THR:HG23	44:BW:10:ARG:HD3	1.35	1.06
22:DA:397:U:OP1	45:DX:30:PRO:HA	1.54	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1537:G:C2'	22:DA:1538:G:H4'	1.85	1.06
22:BA:902:C:C4	22:BA:903:C:N4	2.24	1.06
53:CA:120:A:H3'	53:CA:121:U:H5"	1.32	1.06
21:CU:24:LYS:HG3	21:CU:25:ALA:H	1.20	1.06
35:DN:37:THR:HG22	35:DN:39:PRO:HD2	1.37	1.06
44:BW:28:GLU:HB3	44:BW:31:LEU:HD21	1.35	1.05
44:DW:27:GLY:HA2	44:DW:31:LEU:HD11	1.31	1.05
22:BA:636:G:C6	33:BL:111:ILE:HD11	1.91	1.05
22:DA:1126:A:H4'	22:DA:1127:A:O5'	1.44	1.05
2:AB:89:PHE:HB3	2:AB:149:GLY:HA2	1.34	1.05
30:BI:79:LEU:HA	30:BI:83:ALA:HB3	1.34	1.05
1:AA:204:G:H3'	1:AA:205:A:H5"	1.32	1.05
37:BP:50:ARG:CB	37:BP:57:ALA:H	1.69	1.05
1:AA:1468:A:H2'	1:AA:1469:C:H5"	1.39	1.04
22:DA:49:A:H4'	22:DA:50:U:O5'	1.56	1.04
22:DA:1537:G:H2'	22:DA:1538:G:H4'	1.36	1.04
22:DA:2091:C:H3'	22:DA:2092:U:H5"	1.39	1.04
22:DA:1915:U:H2'	22:DA:1916:A:C8	1.92	1.04
37:BP:4:ILE:HG22	37:BP:5:LYS:H	1.22	1.04
22:DA:1808:A:H3'	22:DA:1809:A:C8	1.92	1.04
22:BA:1060:U:H4'	22:BA:1061:U:H5'	1.34	1.04
22:BA:1179:G:C5	22:BA:1180:U:H1'	1.91	1.04
43:BV:80:HIS:HD2	43:BV:83:LYS:N	1.56	1.04
22:DA:491:G:H2'	22:DA:492:A:H8	1.22	1.04
34:DM:27:SER:H	34:DM:66:ARG:NH2	1.55	1.04
54:CG:22:LEU:HA	54:CG:25:PHE:HB3	1.40	1.03
12:CL:43:LYS:HB3	12:CL:44:PRO:CD	1.88	1.03
32:DK:71:ARG:HB3	32:DK:72:PRO:HD3	1.40	1.03
53:CA:1145:A:H4'	53:CA:1146:A:OP1	1.52	1.03
20:CT:73:ARG:HH11	20:CT:73:ARG:HG2	1.22	1.03
22:DA:302:C:O2'	22:DA:303:G:H8	1.39	1.03
38:DQ:87:VAL:HG21	39:DR:52:PRO:HD3	1.39	1.03
1:AA:451:A:H4'	1:AA:452:A:O5'	1.56	1.03
53:CA:330:C:O2'	53:CA:331:G:H8	1.38	1.03
41:BT:50:LEU:H	41:BT:50:LEU:HD12	1.24	1.02
37:BP:50:ARG:HB3	37:BP:57:ALA:H	1.17	1.02
22:DA:249:C:H5'	22:DA:2394:C:O2'	1.58	1.02
22:DA:1021:A:O2'	22:DA:1022:G:H4'	1.59	1.02
22:DA:1552:A:O2'	22:DA:1553:A:H5'	1.59	1.02
32:BK:18:ARG:HH11	32:BK:18:ARG:HG3	1.21	1.02
9:CI:51:LEU:HG	9:CI:86:LEU:HD22	1.42	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1817:G:O2'	22:DA:1818:U:H5'	1.59	1.02
32:DK:61:VAL:HG11	32:DK:112:PHE:HE2	1.22	1.02
22:BA:1654:A:O2'	25:BD:118:PHE:CG	2.13	1.02
20:AT:43:LYS:HB3	20:AT:86:ALA:HB1	1.42	1.02
24:DC:147:PRO:HD3	24:DC:184:GLU:HG3	1.42	1.02
22:BA:855:G:H21	44:BW:23:LYS:HG2	1.21	1.01
29:DH:115:VAL:HG12	29:DH:132:PHE:HB2	1.37	1.01
37:DP:20:ARG:HG2	37:DP:112:ARG:HH12	1.25	1.01
53:CA:60:A:H4'	53:CA:61:G:O5'	1.58	1.01
22:DA:216:A:O2'	22:DA:217:A:H8	1.42	1.01
39:DR:27:ILE:HG22	39:DR:28:ALA:H	1.26	1.01
22:DA:491:G:H2'	22:DA:492:A:C8	1.95	1.01
22:DA:1693:U:H4'	22:DA:1694:C:OP2	1.60	1.01
22:DA:2346:A:H3'	22:DA:2347:C:H5"	1.38	1.01
22:DA:2389:G:H5"	22:DA:2390:U:H5'	1.42	1.01
22:DA:1565:C:H3'	24:DC:17:LYS:HE2	1.40	1.01
1:AA:1055:A:H1'	3:AC:155:ARG:HH21	1.24	1.01
22:DA:762:U:H4'	22:DA:763:G:O5'	1.57	1.01
28:BG:84:LYS:HG3	28:BG:132:LEU:N	1.75	1.00
22:DA:2800:A:H2'	22:DA:2801:G:H4'	1.42	1.00
17:AQ:18:LYS:HA	17:AQ:47:ASP:HB2	1.42	1.00
22:BA:271:G:H4'	22:BA:272:A:OP1	1.58	1.00
5:CE:29:ILE:HG23	5:CE:30:PHE:N	1.74	1.00
22:BA:904:G:O2'	22:BA:905:A:H5'	1.60	1.00
17:AQ:45:VAL:HG21	17:AQ:60:ILE:HD13	1.43	1.00
4:AD:145:ARG:HH11	4:AD:147:LYS:HE3	1.27	1.00
53:CA:209:U:H5"	53:CA:210:C:OP2	1.62	1.00
22:DA:1079:C:H41	22:DA:1088:A:H5"	1.24	1.00
45:DX:53:LYS:HA	45:DX:56:ARG:HB3	1.40	1.00
22:BA:1535:A:H4'	22:BA:1536:C:OP2	1.61	1.00
32:DK:13:ASN:HD21	32:DK:97:THR:H	1.03	1.00
1:AA:923:A:H5"	5:AE:25:LYS:HE2	1.44	0.99
57:DB:24:G:H1'	57:DB:27:C:H42	1.23	0.99
22:BA:1340:U:H4'	22:BA:1341:G:OP2	1.58	0.99
33:BL:74:THR:HG22	33:BL:107:PHE:HB2	1.39	0.99
1:AA:1239:A:H62	1:AA:1299:A:N6	1.59	0.99
51:B3:31:ILE:HD11	51:B3:34:LYS:HD2	1.41	0.99
22:DA:1508:A:H4'	22:DA:1509:A:OP1	1.61	0.99
53:CA:82:G:H2'	53:CA:83:C:H4'	1.41	0.99
22:DA:70:G:H4'	22:DA:71:A:OP1	1.61	0.99
22:DA:2776:A:H4'	22:DA:2777:G:O5'	1.55	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DP:91:VAL:HG22	37:DP:109:ILE:HG21	1.40	0.99
41:BT:32:LEU:H	41:BT:83:ALA:HB3	1.27	0.99
22:DA:931:U:O2	22:DA:931:U:H2'	1.58	0.99
22:BA:904:G:N3	22:BA:905:A:C8	2.31	0.99
52:D4:16:ILE:HG12	52:D4:25:VAL:HG22	1.38	0.99
1:AA:1021:A:H2'	1:AA:1022:A:H5"	1.43	0.99
2:CB:114:LYS:HE3	2:CB:151:LYS:HB2	1.45	0.98
22:DA:1237:A:C2	22:DA:1238:G:H1'	1.98	0.98
31:DJ:44:TYR:HB2	38:DQ:63:ARG:CZ	1.93	0.98
2:AB:40:ILE:HD13	2:AB:201:GLY:HA2	1.46	0.98
22:BA:903:C:O2'	22:BA:904:G:H5'	1.62	0.98
10:CJ:84:VAL:HG23	10:CJ:85:ASP:H	1.25	0.98
57:DB:24:G:H1'	57:DB:27:C:N4	1.75	0.98
1:AA:486:U:C6	1:AA:486:U:H5"	1.99	0.98
5:AE:80:LEU:HD23	5:AE:122:VAL:HG11	1.44	0.98
31:BJ:77:HIS:CD2	31:BJ:79:GLY:H	1.80	0.98
22:BA:1734:G:H2'	22:BA:1735:A:H8	1.26	0.98
8:CH:76:ARG:HD3	8:CH:77:VAL:H	1.28	0.98
12:CL:80:LEU:HB3	12:CL:97:VAL:HG22	1.42	0.98
22:DA:2838:G:H1'	35:DN:45:ARG:HH22	1.28	0.98
1:AA:1129:C:H5"	9:AI:17:ARG:NH2	1.78	0.98
25:BD:97:SER:O	25:BD:99:GLU:HG2	1.60	0.98
53:CA:764:C:H2'	53:CA:765:G:H5'	1.45	0.98
22:DA:1386:C:HO2'	22:DA:1387:A:H8	1.03	0.98
22:DA:2321:U:O2	22:DA:2321:U:H3'	1.63	0.98
44:DW:37:VAL:HG12	44:DW:55:ASP:HB2	1.45	0.98
11:AK:126:ARG:HB2	21:AU:33:ARG:NH1	1.79	0.98
28:BG:83:THR:HA	28:BG:84:LYS:HZ3	1.22	0.98
39:BR:49:ILE:HD12	39:BR:52:PRO:HA	1.41	0.98
41:DT:39:THR:HG21	41:DT:42:GLU:HB2	1.42	0.98
5:AE:152:VAL:HB	5:AE:155:LYS:HZ2	1.26	0.98
21:AU:9:GLU:HG3	21:AU:10:PRO:HD3	1.42	0.98
22:BA:161:A:H3'	22:BA:162:U:H5"	1.42	0.98
15:AO:63:ARG:HG2	15:AO:87:ARG:HH12	1.26	0.97
53:CA:752:G:H1'	53:CA:754:C:N4	1.79	0.97
53:CA:243:A:H4'	53:CA:244:U:H5'	1.46	0.97
4:CD:55:ARG:HA	4:CD:55:ARG:HH11	1.28	0.97
22:DA:2297:A:O2'	22:DA:2298:A:H8	1.43	0.97
26:BE:31:VAL:HG21	26:BE:104:ALA:HB2	1.42	0.97
44:BW:17:ALA:HA	44:BW:35:ILE:HG23	1.45	0.97
22:DA:1038:G:H2'	22:DA:1039:A:H5'	1.47	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:636:G:C5	33:BL:111:ILE:HD11	1.99	0.97
22:BA:904:G:H2'	22:BA:905:A:C8	2.00	0.97
2:CB:99:MET:HA	2:CB:106:VAL:HG21	1.44	0.97
22:BA:2320:U:H4'	22:BA:2321:U:H5"	1.44	0.97
22:DA:1307:A:H62	22:DA:1606:C:H6	1.05	0.97
22:DA:1275:A:O2'	22:DA:1276:A:H1'	1.65	0.97
22:DA:2266:A:H4'	22:DA:2267:A:O5'	1.64	0.97
1:AA:1138:G:N3	1:AA:1138:G:H2'	1.80	0.96
5:CE:103:GLY:O	5:CE:104:ILE:HG22	1.65	0.96
22:DA:125:A:H4'	22:DA:126:A:OP2	1.64	0.96
22:DA:1300:G:H4'	22:DA:1301:A:O5'	1.60	0.96
33:BL:27:LEU:H	33:BL:27:LEU:HD12	1.23	0.96
53:CA:973:G:O2'	53:CA:974:A:H5'	1.63	0.96
22:DA:1847:A:HO2'	22:DA:1848:A:H8	1.06	0.96
22:BA:855:G:N3	44:BW:23:LYS:HD3	1.80	0.96
27:BF:37:MET:HE3	27:BF:151:LEU:HB3	1.46	0.96
10:CJ:15:HIS:HA	10:CJ:18:ILE:HG22	1.46	0.96
25:BD:106:LYS:HB3	25:BD:206:ALA:HB3	1.43	0.96
53:CA:1129:C:H1'	53:CA:1146:A:H61	1.29	0.96
22:DA:482:A:N6	22:DA:506:G:C4	2.34	0.96
53:CA:1278:G:H4'	53:CA:1279:G:O5'	1.64	0.96
53:CA:1493:A:H8	22:DA:1913:A:H61	1.13	0.96
25:DD:8:LYS:HB2	25:DD:201:LEU:HD11	1.46	0.96
1:AA:747:A:H5'	1:AA:748:G:OP2	1.65	0.96
53:CA:1329:A:H5"	55:CM:25:GLY:H	1.30	0.96
22:BA:243:U:OP1	51:B3:5:THR:HG21	1.66	0.96
39:DR:39:LEU:HA	39:DR:49:ILE:HG21	1.47	0.96
3:AC:76:ILE:HA	3:AC:83:VAL:HG23	1.47	0.95
22:BA:904:G:N2	22:BA:905:A:C4	2.34	0.95
34:BM:35:ALA:O	34:BM:36:VAL:HB	1.64	0.95
58:DF:177:ARG:NE	58:DF:178:LYS:H	1.63	0.95
2:AB:108:GLN:HE21	2:AB:108:GLN:H	1.06	0.95
53:CA:245:U:O2'	53:CA:246:A:H5'	1.64	0.95
4:AD:109:THR:HG23	4:AD:112:GLU:H	1.28	0.95
21:AU:52:VAL:HG13	21:AU:53:LYS:H	1.31	0.95
37:BP:50:ARG:HG2	37:BP:57:ALA:N	1.81	0.95
41:BT:39:THR:HB	41:BT:42:GLU:HB2	1.45	0.95
4:CD:25:ARG:NH1	4:CD:30:LYS:HG2	1.82	0.95
39:BR:24:LYS:HA	39:BR:94:THR:HG23	1.47	0.95
47:BZ:29:ARG:HH21	47:BZ:29:ARG:HG3	1.31	0.95
5:CE:29:ILE:HG23	5:CE:30:PHE:H	1.22	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1954:G:O2'	22:DA:1955:U:OP2	1.85	0.95
22:DA:1965:C:H5'	22:DA:1966:A:H5"	1.45	0.95
1:AA:1441:A:H62	1:AA:1461:G:H21	1.11	0.95
53:CA:701:U:O2'	53:CA:702:A:OP2	1.84	0.95
53:CA:1182:G:H4'	53:CA:1183:U:H5'	1.47	0.95
54:CG:74:VAL:HG13	54:CG:140:VAL:HG13	1.47	0.95
22:DA:867:C:O2'	22:DA:868:U:H6	1.49	0.95
22:BA:1509:A:H1'	22:BA:1510:G:H5'	1.48	0.95
22:DA:1458:U:O3'	22:DA:1459:G:H4'	1.64	0.95
22:DA:2875:C:O2'	22:DA:2876:G:H8	1.48	0.95
28:DG:93:TYR:H	28:DG:93:TYR:HD2	1.12	0.95
38:BQ:63:ARG:HH12	38:BQ:96:ASP:HA	1.16	0.95
53:CA:913:A:H4'	53:CA:914:A:O5'	1.66	0.95
22:BA:2328:A:H2'	22:BA:2329:U:C6	2.02	0.94
30:BI:15:GLY:HA2	30:BI:50:LYS:HB3	1.47	0.94
53:CA:990:C:H2'	53:CA:991:U:O4'	1.65	0.94
41:BT:39:THR:HG22	41:BT:41:ALA:HB3	1.49	0.94
1:AA:877:G:H21	8:AH:1:SER:HB2	1.29	0.94
15:AO:63:ARG:HD3	15:AO:87:ARG:HH22	1.33	0.94
22:BA:31:C:O3'	22:BA:1238:G:H5"	1.67	0.94
25:BD:174:SER:O	25:BD:175:LEU:HB2	1.63	0.94
22:DA:2666:C:O2'	22:DA:2667:C:H5'	1.65	0.94
53:CA:6:G:H2'	53:CA:6:G:N3	1.82	0.94
22:DA:33:C:H4'	22:DA:34:U:OP1	1.68	0.94
22:DA:310:A:O2'	22:DA:311:A:H8	1.50	0.94
5:AE:11:GLN:HE21	5:AE:11:GLN:HA	1.30	0.94
53:CA:1046:A:O2'	53:CA:1047:G:H5'	1.64	0.94
53:CA:1299:A:H2'	53:CA:1299:A:N3	1.81	0.94
10:CJ:57:VAL:HG22	10:CJ:58:ASN:H	1.32	0.94
1:AA:1101:A:H4'	1:AA:1102:A:O5'	1.64	0.94
1:AA:1046:A:O2'	1:AA:1047:G:H5'	1.68	0.94
28:BG:120:ILE:HD11	28:BG:132:LEU:HB2	1.47	0.94
22:DA:1391:U:H4'	41:DT:19:LYS:HZ1	1.31	0.94
1:AA:507:C:H3'	1:AA:508:U:H5"	1.46	0.94
37:BP:25:VAL:HG11	37:BP:46:VAL:HG23	1.49	0.94
22:DA:996:A:H4'	38:DQ:91:ARG:HD2	1.49	0.94
22:DA:1313:U:H2'	22:DA:1313:U:O2	1.66	0.94
22:DA:1935:G:H1'	22:DA:1964:G:N2	1.83	0.94
57:DB:75:G:H1	57:DB:102:G:H22	1.10	0.94
32:DK:7:MET:HA	32:DK:7:MET:HE3	1.49	0.94
31:BJ:81:ILE:HG23	31:BJ:82:GLY:H	1.32	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DF:137:PHE:HB2	58:DF:138:PRO:HD2	1.50	0.94
1:AA:484:G:H4'	1:AA:485:U:O5'	1.65	0.94
22:BA:2225:A:H4'	22:BA:2226:C:O5'	1.66	0.94
44:BW:24:ARG:HD2	44:BW:25:PHE:N	1.82	0.94
53:CA:94:G:H4'	53:CA:95:C:OP1	1.66	0.94
22:DA:1905:C:O4'	22:DA:1928:A:C2	2.21	0.94
53:CA:961:U:O2'	53:CA:962:C:H6	1.50	0.93
22:DA:138:U:H2'	22:DA:140:C:H1'	1.51	0.93
34:DM:42:THR:HG22	34:DM:44:ARG:H	1.32	0.93
6:AF:38:ARG:HH11	6:AF:38:ARG:HG2	1.29	0.93
28:BG:85:LYS:HG2	28:BG:131:VAL:HG12	1.49	0.93
52:B4:9:LYS:HD3	52:B4:9:LYS:H	1.31	0.93
52:B4:36:ARG:HG2	52:B4:37:GLN:H	1.33	0.93
53:CA:120:A:C2'	53:CA:121:U:H5"	1.98	0.93
22:DA:1474:U:H2'	22:DA:1475:G:H5'	1.47	0.93
26:DE:130:LYS:HB3	26:DE:133:LEU:HB3	1.49	0.93
22:BA:1063:G:H2'	22:BA:1064:C:O4'	1.69	0.93
22:DA:215:G:H4'	22:DA:216:A:OP1	1.66	0.93
22:DA:2197:U:O2'	22:DA:2198:A:H2'	1.68	0.93
22:BA:119:A:H4'	22:BA:120:U:O5'	1.67	0.93
22:BA:869:G:H4'	34:BM:8:LYS:HE2	1.49	0.93
28:BG:115:GLN:CD	28:BG:115:GLN:H	1.76	0.93
22:DA:206:U:H2'	22:DA:207:A:H8	1.30	0.93
22:DA:240:C:H3'	22:DA:241:A:H5"	1.48	0.93
57:DB:57:A:O2'	57:DB:58:A:H8	1.50	0.93
37:BP:51:ASN:O	37:BP:52:ARG:HG2	1.67	0.93
2:CB:114:LYS:HA	2:CB:117:GLU:HG2	1.50	0.93
53:CA:1141:C:HO2'	53:CA:1142:G:H8	0.94	0.93
6:CF:86:ARG:NH1	18:CR:63:TYR:HB3	1.84	0.93
22:BA:2336:A:N6	44:BW:40:ARG:HD2	1.82	0.92
1:AA:841:C:C2	1:AA:843:U:H5'	2.03	0.92
39:BR:42:ALA:HA	39:BR:46:GLU:HB2	1.51	0.92
29:BH:31:VAL:HB	29:BH:32:PRO:CD	1.98	0.92
30:BI:23:VAL:HB	30:BI:27:LEU:HB3	1.49	0.92
22:DA:479:A:H4'	22:DA:480:A:OP1	1.66	0.92
57:DB:40:U:O2	57:DB:43:C:H2'	1.69	0.92
35:DN:22:ARG:HG3	35:DN:70:THR:HA	1.51	0.92
35:DN:28:LEU:HD21	35:DN:115:LEU:HD21	1.47	0.92
22:BA:2502:G:H5'	22:BA:2503:A:H5"	1.47	0.92
28:BG:84:LYS:HG3	28:BG:132:LEU:H	1.31	0.92
53:CA:198:G:HO2'	53:CA:199:A:H8	1.01	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:2:ARG:NH2	4:CD:114:ARG:HD3	1.84	0.92
11:CK:74:LYS:HA	11:CK:78:ILE:HD11	1.49	0.92
22:BA:931:U:H4'	22:BA:932:U:OP2	1.67	0.92
53:CA:519:C:H2'	53:CA:520:A:C8	2.05	0.92
22:DA:333:G:HO2'	22:DA:334:C:H6	0.92	0.92
22:DA:1716:U:O2'	22:DA:1717:A:H8	1.52	0.92
22:DA:1606:C:H5'	22:DA:1606:C:O2	1.70	0.92
1:AA:1277:C:O2'	1:AA:1279:G:H8	1.52	0.91
12:AL:49:ARG:HG2	12:AL:49:ARG:NH1	1.78	0.91
22:DA:647:G:H2'	22:DA:648:G:H8	1.35	0.91
33:DL:79:LEU:HB2	33:DL:113:ALA:H	1.35	0.91
22:BA:2585:U:O2'	22:BA:2586:U:H5'	1.70	0.91
22:DA:811:U:H5"	22:DA:812:C:OP2	1.69	0.91
57:DB:42:C:O2'	57:DB:43:C:H5'	1.70	0.91
1:AA:204:G:H3'	1:AA:205:A:C5'	1.98	0.91
5:CE:44:ARG:HG2	5:CE:72:ASN:HA	1.52	0.91
22:DA:1341:G:O2'	22:DA:1398:C:H5'	1.70	0.91
22:DA:2313:C:HO2'	22:DA:2314:A:H8	0.99	0.91
53:CA:120:A:H3'	53:CA:121:U:C5'	2.00	0.91
22:DA:1915:U:H2'	22:DA:1916:A:H8	1.32	0.91
35:DN:62:ASN:O	35:DN:63:ARG:HB2	1.71	0.91
24:BC:246:PRO:HG2	24:BC:247:TRP:CZ3	2.05	0.91
39:BR:61:ALA:HB2	39:BR:98:ILE:HA	1.50	0.91
50:B2:24:THR:HG23	50:B2:27:GLY:H	1.34	0.91
3:AC:156:LEU:HD12	3:AC:156:LEU:H	1.35	0.91
22:DA:668:A:H2'	22:DA:670:A:H62	1.36	0.91
22:DA:876:C:H5"	22:DA:876:C:O2	1.70	0.91
24:DC:144:GLU:HA	24:DC:151:GLY:HA2	1.51	0.91
37:BP:50:ARG:HD3	37:BP:56:SER:HB3	1.50	0.91
44:BW:51:GLY:HA3	44:BW:59:PHE:CE2	2.06	0.91
5:CE:104:ILE:H	5:CE:122:VAL:H	1.14	0.91
22:DA:2023:C:O2'	22:DA:2024:G:H8	1.54	0.91
12:AL:33:CYS:HA	12:AL:54:VAL:HA	1.52	0.91
22:BA:902:C:N4	22:BA:903:C:N4	2.18	0.91
38:BQ:40:LYS:HA	38:BQ:43:GLN:HG3	1.53	0.91
22:DA:232:G:H4'	22:DA:233:A:OP1	1.67	0.91
25:BD:5:VAL:H	25:BD:32:ASN:HD21	0.92	0.91
25:BD:91:THR:O	25:BD:93:GLY:N	2.04	0.90
22:DA:617:G:O2'	22:DA:618:G:H8	1.54	0.90
25:DD:11:MET:HE1	25:DD:192:ALA:HA	1.51	0.90
1:AA:1007:U:H2'	1:AA:1008:U:H5"	1.51	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:77:HIS:HD2	31:BJ:79:GLY:H	0.98	0.90
22:DA:1345:C:HO2'	22:DA:1346:G:H8	0.96	0.90
22:BA:904:G:C2	22:BA:905:A:C5	2.58	0.90
29:DH:72:ILE:HD11	29:DH:141:LYS:H	1.36	0.90
22:DA:508:A:H62	40:DS:9:HIS:CE1	1.89	0.90
22:BA:1941:C:H5'	22:BA:1941:C:H6	1.34	0.90
24:DC:146:LYS:HB2	24:DC:149:LYS:HB2	1.52	0.90
44:DW:28:GLU:H	44:DW:31:LEU:HD21	1.37	0.90
34:BM:43:ALA:HA	34:BM:46:ILE:HG13	1.52	0.90
22:DA:503:A:H4'	22:DA:504:A:O5'	1.69	0.90
12:AL:23:LEU:HB2	12:AL:58:ASN:HD22	1.37	0.90
22:BA:2135:A:O2'	22:BA:2136:G:H8	1.54	0.90
25:BD:16:THR:HG23	25:BD:18:ASP:OD1	1.71	0.90
54:CG:134:VAL:HB	54:CG:137:ARG:HH21	1.34	0.90
17:CQ:19:SER:HB3	17:CQ:70:LYS:HZ2	1.34	0.90
18:CR:72:ARG:HE	18:CR:72:ARG:H	1.15	0.90
22:DA:335:C:O2'	22:DA:336:C:H6	1.51	0.90
22:DA:604:G:O2'	22:DA:605:G:H5'	1.71	0.90
22:DA:2800:A:H2'	22:DA:2801:G:C4'	2.00	0.90
24:DC:16:VAL:H	24:DC:203:VAL:HG12	1.32	0.90
22:DA:483:A:H2'	22:DA:484:C:C6	2.05	0.90
22:DA:2822:G:H5"	25:DD:164:GLN:HE22	1.36	0.90
29:DH:48:GLU:HG2	29:DH:51:ARG:HH21	1.36	0.90
49:D1:7:LYS:HD3	51:D3:33:THR:HG21	1.52	0.90
1:AA:250:A:H4'	1:AA:251:G:O5'	1.70	0.90
22:BA:2346:A:H3'	22:BA:2347:C:H5"	1.52	0.90
53:CA:33:A:H2'	53:CA:34:C:H6	1.37	0.90
53:CA:373:A:O2'	53:CA:374:A:H5'	1.69	0.90
22:BA:265:A:H4'	22:BA:266:G:OP1	1.70	0.89
22:BA:1179:G:C6	22:BA:1180:U:H1'	2.06	0.89
33:BL:109:LYS:HG2	33:BL:126:ARG:HB3	1.54	0.89
38:BQ:4:LYS:HG3	38:BQ:5:ARG:H	1.36	0.89
2:AB:42:LEU:HG	2:AB:43:GLU:HG3	1.55	0.89
53:CA:976:G:H5'	53:CA:977:A:OP2	1.71	0.89
22:BA:947:A:O2'	22:BA:984:A:H2	1.54	0.89
29:BH:89:LYS:HG2	29:BH:90:LEU:H	1.36	0.89
53:CA:247:G:O6	53:CA:278:G:C6	2.26	0.89
53:CA:1014:A:H4'	19:CS:13:HIS:CD2	2.06	0.89
22:DA:1126:A:H4'	22:DA:1127:A:C5'	2.02	0.89
22:DA:1447:C:H2'	22:DA:1448:G:C8	2.08	0.89
26:DE:148:ILE:HD13	26:DE:187:VAL:HG21	1.55	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:464:U:H1'	22:DA:686:U:H5	1.37	0.89
40:DS:47:VAL:HG12	40:DS:103:ILE:HG12	1.53	0.89
4:CD:109:THR:HG22	4:CD:111:ALA:H	1.36	0.89
22:DA:216:A:HO2'	22:DA:217:A:H8	0.94	0.89
22:DA:972:A:H3'	22:DA:973:A:H5"	1.53	0.89
22:DA:2304:G:H22	22:DA:2312:U:H3	1.20	0.89
1:AA:1279:G:H1'	1:AA:1282:C:N4	1.88	0.89
44:BW:39:GLN:HG2	44:BW:41:GLY:H	1.37	0.89
22:DA:2214:C:O2'	22:DA:2215:C:H5'	1.73	0.89
57:DB:54:G:H21	58:DF:25:MET:HE2	1.36	0.89
2:AB:110:ILE:CD1	2:AB:147:LEU:HD13	2.03	0.89
2:AB:163:ILE:HG23	2:AB:164:ASP:H	1.35	0.89
28:BG:83:THR:HA	28:BG:84:LYS:NZ	1.88	0.89
35:BN:33:ILE:HD11	35:BN:118:ARG:NH2	1.87	0.89
6:CF:92:THR:HG22	6:CF:94:HIS:H	1.36	0.89
3:AC:119:ILE:HG21	3:AC:197:VAL:HG11	1.50	0.89
3:AC:166:TRP:H	3:AC:166:TRP:HE3	1.16	0.89
53:CA:1172:C:O2'	53:CA:1173:U:H5'	1.72	0.89
22:DA:2216:G:H2'	22:DA:2217:G:H8	1.38	0.89
1:AA:974:A:H4'	1:AA:975:A:H5'	1.55	0.89
22:BA:903:C:H2'	22:BA:904:G:H8	1.38	0.89
22:BA:1813:G:N3	24:BC:49:THR:HG21	1.86	0.89
22:BA:2267:A:H5"	22:BA:2268:A:H5'	1.54	0.89
22:DA:1326:U:O2'	22:DA:1327:A:H8	1.54	0.89
44:DW:40:ARG:HH11	44:DW:40:ARG:CG	1.85	0.89
22:BA:904:G:C2	22:BA:905:A:C4	2.61	0.88
22:DA:1135:C:N4	22:DA:1139:G:C6	2.42	0.88
22:DA:2215:C:HO2'	22:DA:2216:G:H8	1.21	0.88
44:DW:18:LYS:HD3	44:DW:19:ARG:N	1.87	0.88
19:AS:28:LYS:HB3	19:AS:29:PRO:HD2	1.55	0.88
31:BJ:6:ALA:CB	31:BJ:45:THR:HG21	2.02	0.88
31:BJ:6:ALA:HB3	31:BJ:45:THR:HG21	1.55	0.88
48:B0:39:ARG:HB2	48:B0:39:ARG:HH11	1.37	0.88
55:CM:95:PRO:HD3	55:CM:108:ARG:HG2	1.55	0.88
22:DA:1654:A:O2'	22:DA:1655:A:H8	1.56	0.88
22:DA:2466:C:OP1	52:D4:4:ARG:HB3	1.73	0.88
1:AA:205:A:OP1	1:AA:205:A:H4'	1.74	0.88
22:DA:2311:A:H5'	22:DA:2312:U:C6	2.07	0.88
41:DT:29:THR:HB	41:DT:87:LEU:H	1.38	0.88
1:AA:1468:A:C2'	1:AA:1469:C:H5"	2.03	0.88
2:CB:130:LYS:HA	2:CB:133:ALA:HB3	1.54	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:76:ARG:HD3	8:CH:77:VAL:N	1.87	0.88
2:AB:69:VAL:HB	2:AB:162:VAL:HG12	1.55	0.88
54:CG:88:VAL:HG22	54:CG:89:GLU:H	1.38	0.88
22:DA:1429:G:HO2'	22:DA:1430:G:H8	0.94	0.88
22:BA:1590:A:H2'	22:BA:1591:A:C8	2.09	0.88
26:BE:44:ARG:HH21	26:BE:44:ARG:HG3	1.39	0.88
26:BE:119:ILE:HD11	26:BE:187:VAL:HG22	1.56	0.88
31:BJ:111:LYS:HD3	31:BJ:112:GLY:H	1.38	0.88
54:CG:110:ARG:HG3	54:CG:111:GLY:H	1.38	0.88
22:DA:2258:C:H4'	22:DA:2259:U:OP2	1.72	0.88
10:AJ:80:THR:HB	10:AJ:83:THR:HG22	1.55	0.88
22:BA:1590:A:H2'	22:BA:1591:A:H8	1.36	0.88
53:CA:575:G:H4'	53:CA:576:C:O5'	1.72	0.88
53:CA:753:A:H4'	53:CA:754:C:O5'	1.70	0.88
2:CB:89:PHE:HE2	2:CB:152:ASP:HB2	1.36	0.88
22:BA:1110:G:HO2'	22:BA:1111:A:H8	1.21	0.88
22:BA:2358:A:H61	33:BL:54:GLN:HE22	1.20	0.88
4:CD:151:GLN:HB3	4:CD:154:VAL:HG12	1.54	0.88
22:DA:975:A:O2'	22:DA:976:G:H8	1.56	0.88
1:AA:214:C:O2'	1:AA:215:C:H6	1.56	0.88
9:AI:51:LEU:HB3	9:AI:56:MET:HG2	1.55	0.88
22:BA:684:G:OP1	50:B2:16:HIS:HD2	1.56	0.88
22:BA:1060:U:O4'	22:BA:1062:G:H5"	1.74	0.88
22:BA:1238:G:O2'	22:BA:1239:G:H5'	1.73	0.88
57:DB:57:A:O2'	57:DB:58:A:C8	2.26	0.88
4:AD:43:ARG:O	4:AD:45:PRO:HD3	1.73	0.88
34:DM:42:THR:HB	34:DM:45:GLN:HG3	1.56	0.88
17:AQ:16:MET:HB2	17:AQ:19:SER:HB3	1.55	0.87
22:BA:1654:A:H2'	22:BA:1655:A:H8	1.39	0.87
27:BF:104:THR:HG22	27:BF:105:ILE:HG23	1.56	0.87
11:CK:27:ASN:N	11:CK:27:ASN:HD22	1.73	0.87
20:AT:27:MET:HE1	20:AT:57:VAL:HG22	1.56	0.87
22:BA:1733:G:HO2'	22:BA:1734:G:H8	0.91	0.87
22:DA:2415:G:H4'	33:DL:66:PHE:HB2	1.56	0.87
22:DA:2752:C:H2'	22:DA:2753:A:C8	2.09	0.87
32:DK:61:VAL:HG11	32:DK:112:PHE:CE2	2.09	0.87
32:DK:69:VAL:HG11	32:DK:106:GLU:HG2	1.54	0.87
4:AD:167:PRO:HB2	4:AD:170:LEU:HD11	1.54	0.87
32:BK:18:ARG:H	32:BK:45:GLU:HB2	1.38	0.87
32:BK:71:ARG:HB2	32:BK:72:PRO:HD3	1.55	0.87
2:CB:46:VAL:HG13	2:CB:47:PRO:HD3	1.57	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:279:A:H5”	53:CA:280:C:H3’	1.54	0.87
21:CU:24:LYS:CG	21:CU:25:ALA:H	1.86	0.87
57:DB:54:G:N2	58:DF:25:MET:HE2	1.87	0.87
22:BA:1131:G:OP1	31:BJ:82:GLY:HA2	1.75	0.87
25:BD:110:THR:HG23	25:BD:171:THR:HG22	1.57	0.87
29:DH:90:LEU:HB2	29:DH:123:ARG:HB3	1.54	0.87
32:DK:87:LEU:HD12	32:DK:92:GLU:HA	1.55	0.87
51:D3:35:LYS:HB2	51:D3:40:LYS:HD3	1.56	0.87
9:AI:23:GLY:H	9:AI:60:LEU:HA	1.40	0.87
22:DA:616:A:HO2’	22:DA:617:G:H8	1.19	0.87
45:DX:31:ASN:HD22	45:DX:31:ASN:H	1.18	0.87
28:BG:96:ALA:HB3	28:BG:103:ASN:HB3	1.55	0.87
38:BQ:63:ARG:HH12	38:BQ:96:ASP:CA	1.86	0.87
28:DG:112:VAL:HG13	28:DG:150:TYR:HE1	1.40	0.87
17:AQ:22:VAL:HG21	17:AQ:60:ILE:HD11	1.55	0.86
24:BC:180:MET:HG3	24:BC:268:ARG:HH11	1.39	0.86
12:CL:79:ILE:HD12	12:CL:96:THR:HG21	1.56	0.86
22:DA:704:G:O2’	22:DA:726:G:N2	2.08	0.86
22:BA:276:U:O2’	22:BA:278:A:N7	2.08	0.86
42:BU:73:ASN:ND2	42:BU:76:THR:HG23	1.91	0.86
44:DW:40:ARG:HG2	44:DW:40:ARG:NH1	1.83	0.86
24:BC:123:ILE:O	24:BC:123:ILE:HG12	1.74	0.86
46:BY:7:ARG:H	46:BY:60:LYS:HZ1	1.22	0.86
53:CA:668:G:O2’	15:CO:45:HIS:HB3	1.75	0.86
22:DA:647:G:O2’	22:DA:648:G:H5’	1.76	0.86
22:DA:873:C:H4’	34:DM:64:TRP:HE1	1.39	0.86
22:BA:923:G:N3	44:BW:23:LYS:HE2	1.90	0.86
58:DF:74:ALA:HB3	58:DF:78:ILE:HB	1.56	0.86
22:BA:84:A:H4’	22:BA:85:G:O5’	1.74	0.86
36:BO:49:VAL:HG21	36:BO:82:ALA:HA	1.58	0.86
22:DA:990:A:O2’	22:DA:991:C:H5”	1.74	0.86
24:BC:12:ARG:HH11	24:BC:12:ARG:CG	1.88	0.86
2:AB:9:LEU:HD12	2:AB:42:LEU:HD13	1.57	0.86
4:AD:69:ARG:HA	4:AD:69:ARG:HE	1.41	0.86
31:BJ:21:THR:HG22	31:BJ:22:GLY:N	1.88	0.86
34:BM:49:ALA:HB1	34:BM:120:ALA:HB1	1.56	0.86
36:BO:41:ALA:HB2	36:BO:48:LEU:HD21	1.55	0.86
22:BA:137:U:H5”	22:BA:140:C:C5	2.10	0.86
22:DA:616:A:O2’	22:DA:617:G:H8	1.59	0.86
22:DA:2389:G:C5’	22:DA:2390:U:H5’	2.05	0.86
40:DS:73:LYS:HB2	40:DS:106:VAL:HB	1.58	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:654:G:H4'	8:AH:2:MET:HE1	1.58	0.86
6:AF:29:ILE:HG12	6:AF:64:VAL:HG11	1.57	0.86
22:BA:272:A:HO2'	22:BA:273:G:H8	0.88	0.86
14:AN:15:LEU:HD23	14:AN:18:LYS:HD2	1.57	0.85
38:BQ:69:ARG:HH21	38:BQ:69:ARG:HB2	1.41	0.85
44:BW:18:LYS:HG3	44:BW:19:ARG:N	1.89	0.85
52:B4:10:LEU:HD12	52:B4:33:HIS:CD2	2.11	0.85
53:CA:1047:G:O2'	53:CA:1216:A:OP1	1.94	0.85
22:DA:648:G:O2'	22:DA:649:G:H8	1.58	0.85
22:DA:873:C:H4'	34:DM:64:TRP:NE1	1.90	0.85
22:DA:2748:A:H1'	28:DG:66:THR:HG22	1.58	0.85
26:DE:47:LYS:HB3	26:DE:51:GLU:HB2	1.57	0.85
2:AB:66:ILE:HB	2:AB:88:GLN:HB3	1.57	0.85
8:AH:105:THR:HG21	8:AH:120:LEU:HD13	1.56	0.85
31:DJ:74:TYR:HE2	31:DJ:103:ILE:HD11	1.41	0.85
32:DK:39:ILE:HD11	32:DK:62:VAL:HG23	1.57	0.85
26:BE:189:THR:OG1	26:BE:191:ASP:HB3	1.76	0.85
50:B2:3:ARG:HH21	50:B2:3:ARG:HG2	1.41	0.85
53:CA:239:U:H4'	53:CA:239:U:OP1	1.77	0.85
53:CA:752:G:H1'	53:CA:754:C:H41	1.41	0.85
4:CD:143:SER:HB3	4:CD:178:GLU:HG3	1.58	0.85
22:DA:230:G:HO2'	22:DA:231:A:H8	0.90	0.85
22:BA:1022:G:N2	22:BA:1142:A:C2	2.45	0.85
45:BX:58:ILE:HG13	45:BX:66:VAL:HG21	1.58	0.85
46:BY:32:ALA:HB2	46:BY:37:LEU:HD12	1.57	0.85
22:DA:1387:A:H5'	22:DA:1469:A:H1'	1.56	0.85
47:DZ:16:LEU:H	47:DZ:16:LEU:HD22	1.40	0.85
1:AA:1241:G:O2'	1:AA:1242:G:H8	1.59	0.85
22:DA:197:A:H62	22:DA:2430:A:H2'	1.41	0.85
22:DA:593:U:H2'	22:DA:594:U:C6	2.11	0.85
32:DK:7:MET:HE1	32:DK:20:MET:HB2	1.58	0.85
35:DN:90:ARG:NH2	35:DN:116:VAL:HG11	1.91	0.85
10:AJ:53:ILE:HG22	10:AJ:61:ALA:HB1	1.58	0.85
22:BA:1063:G:OP1	30:BI:76:ALA:HB3	1.76	0.85
31:BJ:2:LYS:HD3	31:BJ:2:LYS:H	1.41	0.85
53:CA:373:A:H2'	53:CA:374:A:H8	1.39	0.85
53:CA:1151:A:O2'	53:CA:1152:A:H8	1.57	0.85
53:CA:1239:A:H5"	54:CG:118:ARG:HH12	1.39	0.85
22:DA:1038:G:C2'	22:DA:1039:A:H5'	2.07	0.85
25:BD:114:LYS:HE3	25:BD:114:LYS:N	1.92	0.85
33:BL:30:THR:O	33:BL:33:ARG:HG2	1.77	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:CP:70:ARG:O	56:CP:74:LEU:HG	1.77	0.85
22:DA:1024:G:H3'	22:DA:1025:G:H5"	1.56	0.85
24:DC:145:MET:HE3	24:DC:181:ARG:NH2	1.91	0.85
22:BA:2092:U:H4'	22:BA:2093:G:O5'	1.76	0.85
28:BG:73:SER:HA	28:BG:76:ILE:HG22	1.59	0.85
53:CA:818:G:O2'	53:CA:819:A:H5"	1.77	0.85
53:CA:1221:G:H4'	19:CS:35:ARG:NH2	1.92	0.85
2:CB:206:ILE:HA	2:CB:209:VAL:HG22	1.58	0.85
22:DA:2091:C:OP2	22:DA:2092:U:C3'	2.23	0.85
25:BD:61:THR:OG1	25:BD:63:PRO:HD2	1.77	0.85
53:CA:814:A:H5'	53:CA:1511:G:H4'	1.57	0.85
6:CF:18:VAL:O	6:CF:22:ILE:HG12	1.75	0.85
22:DA:2319:G:O2'	22:DA:2321:U:O4	1.92	0.85
25:BD:5:VAL:H	25:BD:32:ASN:ND2	1.74	0.85
22:DA:1181:U:H2'	22:DA:1182:G:H8	1.42	0.85
32:DK:70:ARG:HB3	32:DK:76:VAL:HG22	1.58	0.85
38:DQ:60:TRP:O	38:DQ:63:ARG:HG2	1.77	0.85
1:AA:198:G:O2'	1:AA:199:A:H8	1.58	0.84
22:BA:2328:A:H2'	22:BA:2329:U:H6	1.39	0.84
28:BG:22:VAL:HG22	28:BG:36:LEU:HD11	1.59	0.84
19:CS:40:PHE:HB3	19:CS:41:PRO:HD2	1.56	0.84
22:DA:2135:A:H2'	22:DA:2136:G:O4'	1.77	0.84
24:BC:20:ASN:HD21	24:BC:22:GLU:HG2	1.42	0.84
53:CA:764:C:C2'	53:CA:765:G:H5'	2.07	0.84
11:CK:55:ARG:H	11:CK:55:ARG:HD2	1.42	0.84
22:DA:320:A:H4'	22:DA:322:A:N7	1.92	0.84
29:DH:3:VAL:HG12	29:DH:38:PRO:HA	1.58	0.84
1:AA:198:G:HO2'	1:AA:199:A:H8	0.84	0.84
22:BA:747:U:C5	22:BA:2613:U:C5	2.66	0.84
22:DA:1816:C:H2'	24:DC:61:TYR:CZ	2.12	0.84
24:DC:144:GLU:HB3	24:DC:187:CYS:HB2	1.59	0.84
32:DK:13:ASN:HD21	32:DK:97:THR:N	1.74	0.84
33:DL:23:ILE:HG13	39:DR:82:HIS:CE1	2.12	0.84
1:AA:996:A:C2	1:AA:1046:A:H5'	2.12	0.84
22:DA:241:A:C4'	22:DA:242:G:OP1	2.25	0.84
22:DA:1662:U:H2'	22:DA:1663:G:H5"	1.59	0.84
22:DA:2091:C:H3'	22:DA:2092:U:C5'	2.07	0.84
1:AA:1299:A:H2'	1:AA:1299:A:N3	1.90	0.84
22:BA:545:U:H2'	22:BA:546:U:H4'	1.57	0.84
22:BA:1073:A:H3'	22:BA:1074:G:C5'	2.07	0.84
57:DB:42:C:H2'	57:DB:43:C:C6	2.12	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DB:42:C:H41	58:DF:87:LYS:HZ3	1.25	0.84
1:AA:982:U:C4'	1:AA:983:A:O5'	2.26	0.84
53:CA:995:C:H42	53:CA:1046:A:H1'	1.42	0.84
5:CE:52:ALA:HB2	5:CE:61:LYS:HE3	1.59	0.84
22:DA:2091:C:P	22:DA:2092:U:H3'	2.18	0.84
2:AB:137:THR:HA	2:AB:140:LEU:HD13	1.59	0.84
22:DA:806:C:H2'	22:DA:807:U:H6	1.43	0.84
22:DA:834:G:H1'	22:DA:2358:A:N3	1.93	0.84
22:DA:1943:U:H4'	22:DA:1944:U:OP1	1.75	0.84
30:DI:45:THR:HG23	30:DI:54:ILE:HD13	1.59	0.84
12:AL:27:PRO:HB2	12:AL:28:GLN:OE1	1.76	0.84
22:BA:784:G:C6	24:BC:227:VAL:HG11	2.13	0.84
22:BA:947:A:HO2'	22:BA:984:A:H2	0.89	0.84
37:BP:63:ILE:HA	37:BP:68:GLY:HA2	1.59	0.84
1:AA:548:G:H2'	1:AA:549:C:C6	2.13	0.84
3:CC:10:ARG:HH21	3:CC:181:ILE:HB	1.41	0.84
54:CG:14:ASP:HB3	54:CG:18:GLY:H	1.43	0.84
22:DA:67:U:H2'	22:DA:68:G:H8	1.43	0.84
22:DA:1049:C:O2'	22:DA:1050:A:H8	1.61	0.84
22:DA:1417:C:H2'	22:DA:1418:G:C8	2.13	0.84
22:DA:1847:A:O2'	22:DA:1848:A:H8	1.60	0.84
22:DA:2757:A:N1	28:DG:66:THR:HG21	1.92	0.84
1:AA:94:G:H4'	1:AA:95:C:H5"	1.60	0.84
35:BN:98:LEU:HD22	48:B0:42:ILE:HD11	1.58	0.84
20:CT:22:SER:O	20:CT:26:MET:HB2	1.78	0.84
24:DC:68:ARG:HH12	24:DC:115:ILE:HD12	1.42	0.84
44:DW:39:GLN:HE22	44:DW:58:LEU:HD23	1.42	0.84
1:AA:1123:U:H4'	10:AJ:39:PRO:HD2	1.60	0.83
22:BA:2269:G:H4'	44:BW:18:LYS:HE2	1.58	0.83
22:BA:2352:A:N1	44:BW:30:VAL:HG11	1.93	0.83
31:BJ:2:LYS:HD3	31:BJ:2:LYS:N	1.93	0.83
53:CA:1101:A:H4'	53:CA:1102:A:O5'	1.76	0.83
54:CG:45:ALA:HB1	54:CG:120:ALA:HB2	1.60	0.83
22:DA:1847:A:O2'	22:DA:1848:A:C8	2.31	0.83
24:DC:128:THR:HG22	24:DC:188:ARG:HB3	1.59	0.83
22:BA:1073:A:C3'	22:BA:1074:G:H5"	2.08	0.83
54:CG:91:ARG:HG2	54:CG:92:PRO:HD2	1.60	0.83
22:DA:1714:U:H3'	22:DA:1715:G:C5'	2.08	0.83
44:DW:27:GLY:CA	44:DW:31:LEU:HD11	2.07	0.83
1:AA:1227:A:N3	1:AA:1227:A:H2'	1.93	0.83
41:BT:32:LEU:H	41:BT:83:ALA:CB	1.90	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:451:A:H4'	53:CA:452:A:O5'	1.77	0.83
53:CA:1182:G:C4'	53:CA:1183:U:H5'	2.06	0.83
53:CA:1241:G:H2'	53:CA:1242:G:H8	1.43	0.83
1:AA:6:G:O6	5:AE:98:ALA:HB1	1.77	0.83
22:BA:568:U:OP1	33:BL:36:LYS:HE3	1.78	0.83
3:CC:109:GLU:HG2	3:CC:139:ASN:HB2	1.60	0.83
55:CM:33:LEU:HB3	55:CM:38:ILE:HB	1.59	0.83
22:DA:279:A:H61	22:DA:361:G:H1'	1.43	0.83
22:DA:456:C:O2'	41:DT:73:ARG:HG3	1.76	0.83
28:DG:1:SER:HB2	28:DG:61:TRP:HB3	1.60	0.83
5:AE:155:LYS:HA	5:AE:158:LYS:NZ	1.94	0.83
24:BC:16:VAL:HB	24:BC:203:VAL:HB	1.61	0.83
44:BW:18:LYS:HA	44:BW:36:ILE:CG1	2.08	0.83
52:B4:9:LYS:H	52:B4:9:LYS:CD	1.85	0.83
53:CA:372:C:H1'	53:CA:373:A:OP2	1.78	0.83
22:DA:181:A:H2	22:DA:434:U:H1'	1.44	0.83
22:DA:674:G:O2'	26:DE:69:ARG:HG2	1.79	0.83
22:DA:1929:G:H4'	22:DA:1930:G:OP1	1.76	0.83
2:CB:79:VAL:HA	2:CB:213:LEU:HD21	1.60	0.83
33:DL:124:GLY:H	33:DL:143:GLU:HG3	1.44	0.83
44:DW:17:ALA:O	44:DW:18:LYS:HB3	1.77	0.83
14:AN:40:ARG:HH12	14:AN:44:VAL:HG11	1.43	0.83
22:BA:284:U:H2'	22:BA:285:G:H8	1.43	0.83
22:BA:2203:U:H5"	22:BA:2204:G:OP1	1.79	0.83
22:BA:2352:A:C2	44:BW:30:VAL:HG11	2.13	0.83
53:CA:238:A:H2'	53:CA:239:U:H5"	1.61	0.83
20:CT:26:MET:HE1	20:CT:56:ILE:HD13	1.58	0.83
22:DA:297:G:H5"	42:DU:84:PHE:HB2	1.60	0.83
22:DA:2286:G:H4'	22:DA:2287:A:O4'	1.77	0.83
50:D2:31:LEU:HA	50:D2:34:ARG:HB2	1.60	0.83
1:AA:428:G:H4'	1:AA:429:U:OP1	1.79	0.83
22:DA:1049:C:HO2'	22:DA:1050:A:H8	0.83	0.83
47:DZ:30:ARG:NH2	47:DZ:33:HIS:HB2	1.94	0.83
42:BU:38:ILE:HG22	42:BU:39:ASN:N	1.91	0.83
2:CB:127:LYS:HE3	2:CB:132:GLU:HG3	1.61	0.83
11:CK:111:ASP:H	21:CU:3:ILE:N	1.75	0.83
24:DC:75:ALA:HB2	24:DC:95:TYR:CD1	2.13	0.83
1:AA:486:U:H5"	1:AA:486:U:H6	1.34	0.83
1:AA:1279:G:H2'	1:AA:1279:G:N3	1.92	0.83
22:BA:1779:U:H5	22:BA:1784:A:N7	1.76	0.83
42:BU:73:ASN:HD22	42:BU:76:THR:H	1.23	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:52:LEU:HD23	10:CJ:62:ARG:HG2	1.59	0.83
22:DA:634:C:H2'	22:DA:635:C:C6	2.14	0.83
41:DT:3:ARG:HD2	41:DT:42:GLU:HG2	1.60	0.83
1:AA:16:A:O2'	1:AA:17:U:H5'	1.79	0.82
1:AA:71:A:O2'	1:AA:72:A:H5"	1.78	0.82
22:BA:84:A:H62	22:BA:101:A:H2	1.23	0.82
22:BA:289:G:H2'	22:BA:290:U:O4'	1.79	0.82
22:BA:2502:G:H5'	22:BA:2503:A:C5'	2.08	0.82
48:B0:42:ILE:HD12	48:B0:48:TYR:HB2	1.61	0.82
53:CA:87:C:O2'	53:CA:88:U:H4'	1.79	0.82
55:CM:64:VAL:HG12	55:CM:65:GLU:H	1.43	0.82
12:AL:24:GLU:HB2	12:AL:26:CYS:SG	2.19	0.82
23:BB:90:C:H5"	23:BB:90:C:H6	1.43	0.82
31:BJ:3:THR:HG21	38:BQ:60:TRP:HE1	1.42	0.82
43:BV:44:HIS:HE1	43:BV:86:LEU:H	1.26	0.82
20:CT:73:ARG:HH11	20:CT:73:ARG:CG	1.92	0.82
41:BT:30:ILE:HG23	41:BT:85:VAL:HB	1.59	0.82
53:CA:252:U:H2'	53:CA:253:A:C8	2.15	0.82
22:DA:204:A:H4'	22:DA:205:G:OP1	1.80	0.82
22:DA:1204:A:H4'	22:DA:1205:A:O5'	1.78	0.82
22:DA:1905:C:O2'	22:DA:1929:G:H1'	1.78	0.82
22:DA:1931:U:H2'	22:DA:1932:A:H8	1.44	0.82
25:DD:106:LYS:HB3	25:DD:206:ALA:HB3	1.59	0.82
5:AE:80:LEU:HD12	5:AE:146:MET:HE1	1.61	0.82
22:DA:1307:A:N6	22:DA:1606:C:H6	1.76	0.82
34:DM:96:ILE:HD13	34:DM:102:LEU:HD11	1.61	0.82
1:AA:143:A:H5'	1:AA:144:G:H5'	1.61	0.82
22:BA:902:C:O2'	22:BA:903:C:H5'	1.79	0.82
53:CA:1159:U:H5	53:CA:1182:G:HO2'	1.24	0.82
53:CA:1287:A:O2'	53:CA:1288:A:C8	2.33	0.82
53:CA:1348:U:HO2'	53:CA:1349:A:H8	0.85	0.82
22:DA:1857:G:H1'	22:DA:1884:G:H22	1.45	0.82
34:DM:27:SER:H	34:DM:66:ARG:HH22	1.23	0.82
1:AA:1239:A:H62	1:AA:1299:A:H62	1.25	0.82
53:CA:522:C:H41	12:CL:49:ARG:HH22	1.27	0.82
4:CD:104:MET:HE3	4:CD:170:LEU:HD22	1.61	0.82
10:AJ:51:VAL:HB	14:AN:80:ARG:HB2	1.60	0.82
14:AN:44:VAL:HG23	14:AN:45:LEU:H	1.44	0.82
22:BA:2148:G:H2'	22:BA:2149:U:O4'	1.78	0.82
22:DA:216:A:O2'	22:DA:217:A:C8	2.25	0.82
22:DA:322:A:H3'	26:DE:163:ASN:ND2	1.94	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:443:A:H61	26:DE:36:ALA:HB1	1.45	0.82
22:DA:1913:A:C4'	22:DA:1914:C:OP1	2.22	0.82
26:DE:108:ILE:HD11	26:DE:181:ILE:HB	1.62	0.82
1:AA:267:C:H2'	1:AA:268:U:C6	2.15	0.82
2:AB:218:ALA:HA	2:AB:221:ARG:HH21	1.45	0.82
27:BF:132:ARG:O	27:BF:133:GLU:HB3	1.78	0.82
32:BK:113:MET:O	32:BK:116:ILE:HG13	1.79	0.82
33:BL:114:GLY:C	33:BL:115:GLU:HG3	2.05	0.82
53:CA:986:U:H2'	53:CA:987:G:C8	2.14	0.82
22:DA:1312:U:H4'	22:DA:1313:U:O5'	1.79	0.82
22:DA:2142:A:C3'	22:DA:2143:C:H4'	2.09	0.82
38:DQ:91:ARG:NH1	39:DR:10:LYS:HB3	1.93	0.82
42:DU:45:GLN:HA	42:DU:45:GLN:HE21	1.43	0.82
51:D3:32:LEU:HA	51:D3:35:LYS:HG3	1.60	0.82
1:AA:619:U:H3	4:AD:130:ASN:HB3	1.45	0.82
20:AT:26:MET:HE1	20:AT:56:ILE:HD11	1.60	0.82
22:BA:386:G:H4'	22:BA:387:U:OP2	1.80	0.82
44:BW:23:LYS:HG3	44:BW:24:ARG:O	1.80	0.82
22:DA:1695:G:H2'	22:DA:1696:G:O4'	1.79	0.82
30:DI:91:LYS:HB3	30:DI:94:LYS:HB2	1.61	0.82
31:DJ:35:ARG:HG2	31:DJ:40:HIS:CD2	2.15	0.82
32:DK:60:ALA:HA	32:DK:87:LEU:HD23	1.60	0.82
5:AE:133:ILE:H	5:AE:133:ILE:HD12	1.44	0.82
6:AF:3:HIS:N	6:AF:92:THR:HG23	1.95	0.82
12:AL:72:ASN:ND2	12:AL:73:LEU:H	1.78	0.82
37:BP:21:PRO:HA	37:BP:46:VAL:HG12	1.62	0.82
53:CA:90:C:O2'	53:CA:91:U:C6	2.32	0.82
53:CA:1299:A:O2'	53:CA:1300:G:H4'	1.79	0.82
22:DA:616:A:C2'	22:DA:617:G:H8	1.91	0.82
1:AA:1331:G:O2'	1:AA:1332:A:OP2	1.97	0.81
10:CJ:64:GLN:HB2	14:CN:98:ALA:HB3	1.62	0.81
25:DD:53:GLY:HA3	25:DD:77:ARG:HG3	1.62	0.81
24:BC:20:ASN:HB3	24:BC:23:LEU:HD23	1.61	0.81
49:B1:24:LYS:HE2	49:B1:52:LYS:HB2	1.61	0.81
53:CA:1135:U:H5'	53:CA:1136:C:OP2	1.79	0.81
4:CD:25:ARG:HH12	4:CD:30:LYS:HG2	1.45	0.81
22:DA:921:C:C2'	22:DA:922:C:H5'	2.10	0.81
22:DA:1056:G:H1'	22:DA:1103:A:H61	1.45	0.81
25:DD:124:ARG:HD3	25:DD:125:TRP:CD1	2.14	0.81
7:AG:110:ARG:NH1	7:AG:122:GLU:HG2	1.95	0.81
24:BC:52:HIS:NE2	24:BC:218:THR:HG23	1.96	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BS:59:GLU:HA	40:BS:64:ALA:HB2	1.61	0.81
53:CA:79:G:H2'	53:CA:80:A:H8	1.45	0.81
53:CA:252:U:H5'	53:CA:252:U:H6	1.44	0.81
22:DA:379:G:C6	22:DA:396:G:O6	2.34	0.81
22:DA:502:A:H5'	22:DA:503:A:OP2	1.79	0.81
22:DA:627:A:H2'	33:DL:78:ARG:HH11	1.43	0.81
14:AN:19:TYR:O	14:AN:22:LYS:HB3	1.80	0.81
31:BJ:77:HIS:HD2	31:BJ:79:GLY:N	1.78	0.81
53:CA:1146:A:O2'	53:CA:1147:C:H5'	1.81	0.81
58:DF:39:VAL:HA	58:DF:49:LEU:HG	1.62	0.81
30:DI:74:PRO:HB2	30:DI:77:VAL:HG22	1.61	0.81
1:AA:620:C:C2	4:AD:131:ILE:HG21	2.14	0.81
1:AA:1303:C:H2'	1:AA:1304:G:C8	2.15	0.81
22:BA:137:U:O2'	22:BA:138:U:P	2.38	0.81
44:BW:37:VAL:HG12	44:BW:38:ARG:H	1.46	0.81
53:CA:1446:A:H2'	53:CA:1447:A:H5"	1.62	0.81
17:CQ:13:SER:HB3	17:CQ:21:VAL:HB	1.63	0.81
22:DA:1255:U:H3'	22:DA:1256:G:H5"	1.62	0.81
22:DA:1809:A:O2'	22:DA:1810:A:C8	2.32	0.81
58:DF:49:LEU:HA	58:DF:52:ALA:HB3	1.62	0.81
24:BC:170:TYR:CD2	24:BC:184:GLU:HA	2.15	0.81
22:DA:1060:U:C4'	22:DA:1061:U:H2'	2.10	0.81
22:DA:1391:U:H4'	41:DT:19:LYS:NZ	1.95	0.81
25:DD:184:ARG:HH22	37:DP:6:GLN:HE21	1.27	0.81
32:DK:111:LYS:H	32:DK:111:LYS:HE3	1.46	0.81
1:AA:49:U:O4	1:AA:365:U:H5	1.64	0.81
1:AA:1441:A:N6	1:AA:1461:G:H21	1.78	0.81
2:AB:209:VAL:HG23	2:AB:210:THR:H	1.46	0.81
25:BD:169:ARG:O	25:BD:170:VAL:HG13	1.81	0.81
22:DA:831:G:H5"	33:DL:37:GLY:HA2	1.63	0.81
22:DA:1303:G:HO2'	22:DA:1304:A:H8	0.84	0.81
22:DA:1429:G:O2'	22:DA:1430:G:H8	1.62	0.81
35:DN:71:ARG:HH21	35:DN:71:ARG:HB2	1.44	0.81
1:AA:206:C:H2'	1:AA:207:C:O4'	1.81	0.81
22:BA:903:C:C2'	22:BA:904:G:H5'	2.11	0.81
43:BV:10:LYS:HD3	43:BV:10:LYS:H	1.44	0.81
44:BW:8:SER:O	44:BW:9:THR:HG22	1.81	0.81
53:CA:374:A:H5"	53:CA:452:A:N1	1.96	0.81
53:CA:1105:A:H2'	53:CA:1106:G:H8	1.45	0.81
22:DA:2800:A:C4	22:DA:2801:G:H1'	2.16	0.81
25:DD:14:ILE:HG13	37:DP:11:GLN:HE22	1.45	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DL:92:LEU:HD22	33:DL:124:GLY:HA3	1.62	0.81
1:AA:452:A:H2'	1:AA:453:G:O4'	1.81	0.81
1:AA:496:A:H2'	1:AA:496:A:N3	1.95	0.81
1:AA:975:A:H4'	1:AA:976:G:C5'	2.08	0.81
22:BA:228:C:H4'	22:BA:229:C:H5"	1.61	0.81
53:CA:496:A:N3	53:CA:496:A:H2'	1.95	0.81
5:AE:83:PRO:HB3	5:AE:96:GLN:NE2	1.96	0.81
53:CA:1201:A:H1'	53:CA:1202:U:OP2	1.81	0.81
53:CA:1493:A:H8	22:DA:1913:A:N6	1.79	0.81
22:DA:320:A:H2'	26:DE:131:THR:OG1	1.80	0.81
22:DA:627:A:H2'	33:DL:78:ARG:NH1	1.95	0.81
22:DA:1447:C:H2'	22:DA:1448:G:H8	1.46	0.81
38:DQ:4:LYS:HZ2	38:DQ:6:GLY:HA3	1.46	0.81
20:AT:82:ILE:O	20:AT:86:ALA:HB3	1.81	0.80
39:BR:39:LEU:HA	39:BR:49:ILE:HG21	1.62	0.80
53:CA:973:G:C2'	53:CA:974:A:H5'	2.11	0.80
28:DG:124:CYS:HB3	28:DG:130:ILE:HA	1.60	0.80
1:AA:548:G:H2'	1:AA:549:C:H6	1.44	0.80
1:AA:1228:C:H2'	1:AA:1229:A:C8	2.16	0.80
6:AF:86:ARG:HD2	18:AR:63:TYR:O	1.81	0.80
29:BH:32:PRO:HB3	45:BX:38:TRP:HB3	1.62	0.80
4:CD:30:LYS:HD3	4:CD:30:LYS:N	1.96	0.80
5:CE:55:VAL:O	5:CE:59:ILE:HG22	1.81	0.80
22:DA:1275:A:O2'	22:DA:1276:A:C1'	2.29	0.80
22:BA:2577:A:H5"	22:BA:2578:G:H5'	1.61	0.80
53:CA:439:U:H4'	4:CD:120:LYS:HD2	1.60	0.80
4:CD:77:GLU:HG3	4:CD:81:LEU:HD11	1.61	0.80
22:DA:1455:G:HO2'	22:DA:1456:G:H8	1.25	0.80
22:DA:2387:U:H1'	44:DW:38:ARG:HH12	1.46	0.80
34:DM:7:THR:HG22	34:DM:9:PHE:H	1.46	0.80
1:AA:255:G:H4'	17:AQ:18:LYS:HE3	1.63	0.80
11:AK:22:ILE:HD13	11:AK:95:THR:HG21	1.63	0.80
24:BC:20:ASN:HD22	24:BC:20:ASN:C	1.87	0.80
28:BG:86:LEU:HD12	28:BG:86:LEU:N	1.97	0.80
22:DA:2665:A:H2'	22:DA:2666:C:O2	1.82	0.80
23:BB:54:G:H21	27:BF:25:MET:HE3	1.46	0.80
53:CA:1268:G:H21	53:CA:1327:C:H1'	1.47	0.80
22:DA:1205:A:H5"	22:DA:1206:G:C8	2.17	0.80
22:BA:900:A:H2'	22:BA:901:C:C5'	2.07	0.80
35:BN:85:PRO:HA	35:BN:88:ALA:HB2	1.63	0.80
38:BQ:85:ALA:O	38:BQ:86:SER:C	2.24	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1399:C:O2'	22:DA:1400:U:H5'	1.82	0.80
28:DG:120:ILE:HG13	28:DG:140:ILE:HG22	1.62	0.80
37:DP:20:ARG:HD2	37:DP:21:PRO:HD2	1.63	0.80
44:DW:18:LYS:HD3	44:DW:19:ARG:H	1.46	0.80
22:BA:2136:G:H2'	22:BA:2137:U:H5	1.46	0.80
53:CA:14:U:H2'	53:CA:16:A:OP2	1.82	0.80
53:CA:994:A:N6	53:CA:1216:A:H5'	1.97	0.80
53:CA:1348:U:O2'	53:CA:1349:A:H8	1.63	0.80
5:CE:154:ALA:HB1	8:CH:65:PHE:HE2	1.45	0.80
1:AA:485:U:O2'	1:AA:486:U:OP1	1.99	0.80
2:AB:89:PHE:HB3	2:AB:149:GLY:CA	2.12	0.80
22:BA:2135:A:O2'	22:BA:2136:G:C8	2.33	0.80
29:BH:18:GLN:HE21	29:BH:18:GLN:HA	1.47	0.80
32:BK:88:ASN:HD22	32:BK:91:SER:H	1.30	0.80
44:BW:9:THR:CG2	44:BW:10:ARG:HD3	2.09	0.80
22:DA:45:G:H5'	22:DA:46:G:OP1	1.82	0.80
22:DA:616:A:H2'	22:DA:617:G:H8	1.47	0.80
10:AJ:36:VAL:HG22	10:AJ:76:ILE:HG23	1.64	0.80
53:CA:77:A:H2'	53:CA:78:A:C8	2.17	0.80
3:CC:63:ILE:HG12	3:CC:65:VAL:HG23	1.64	0.80
10:CJ:47:GLU:HB2	10:CJ:67:ILE:HG13	1.63	0.80
33:DL:79:LEU:HA	33:DL:82:LEU:HD11	1.64	0.80
5:CE:76:ASN:O	5:CE:79:THR:HG22	1.81	0.80
22:DA:989:G:H4'	22:DA:990:A:OP1	1.82	0.80
22:DA:1489:C:C4'	22:DA:1490:A:OP1	2.25	0.80
57:DB:5:U:H2'	57:DB:6:G:C8	2.16	0.80
36:DO:53:THR:HB	36:DO:65:THR:HG22	1.61	0.80
44:DW:23:LYS:HD2	44:DW:24:ARG:N	1.96	0.80
22:BA:1056:G:H5"	22:BA:1057:A:H5'	1.62	0.79
22:BA:1079:C:N4	22:BA:1088:A:H2	1.80	0.79
33:BL:93:ASN:ND2	33:BL:94:THR:N	2.30	0.79
8:CH:28:SER:HA	8:CH:58:LEU:HD12	1.63	0.79
22:DA:118:A:N3	22:DA:178:G:H1'	1.96	0.79
22:DA:1324:G:O2'	22:DA:1616:A:C6	2.34	0.79
41:DT:50:LEU:HD23	41:DT:51:PHE:H	1.47	0.79
1:AA:373:A:O2'	1:AA:374:A:H5'	1.82	0.79
4:AD:10:LEU:HD22	4:AD:62:ARG:HG3	1.63	0.79
22:BA:1062:G:O2'	22:BA:1063:G:C8	2.35	0.79
22:DA:762:U:C4'	22:DA:763:G:O5'	2.31	0.79
22:DA:1606:C:O2'	22:DA:1607:C:OP2	1.99	0.79
1:AA:89:U:O2'	1:AA:90:C:H5"	1.81	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:3:HIS:H	6:AF:92:THR:CG2	1.93	0.79
45:BX:67:LEU:HD13	45:BX:77:TYR:CE1	2.18	0.79
53:CA:335:C:H2'	53:CA:336:A:C8	2.16	0.79
53:CA:491:G:O2'	53:CA:492:C:H5'	1.83	0.79
53:CA:1224:U:H5'	53:CA:1225:A:OP2	1.83	0.79
11:CK:27:ASN:HD22	11:CK:27:ASN:H	1.25	0.79
22:DA:279:A:N6	22:DA:361:G:H1'	1.97	0.79
22:DA:922:C:H1'	44:DW:22:VAL:HG21	1.64	0.79
28:DG:86:LEU:HA	28:DG:163:TYR:HB3	1.63	0.79
46:DY:20:ASN:HD22	46:DY:50:VAL:HG22	1.46	0.79
22:BA:272:A:O2'	22:BA:273:G:H8	1.64	0.79
22:BA:1458:U:C4'	22:BA:1459:G:O5'	2.19	0.79
30:BI:53:PRO:HD2	30:BI:77:VAL:HG21	1.64	0.79
3:CC:190:THR:HG22	3:CC:191:THR:H	1.48	0.79
22:DA:481:G:O2'	22:DA:507:A:N6	2.15	0.79
22:DA:616:A:H2'	22:DA:617:G:C8	2.17	0.79
22:DA:648:G:HO2'	22:DA:649:G:H8	0.82	0.79
31:DJ:17:VAL:HG23	31:DJ:137:PRO:HB2	1.63	0.79
49:D1:25:ASN:HB3	49:D1:28:THR:OG1	1.82	0.79
8:AH:86:LYS:HG3	8:AH:90:GLU:HB3	1.62	0.79
22:BA:1941:C:H5'	22:BA:1941:C:C6	2.16	0.79
35:BN:103:ARG:HD3	35:BN:110:MET:CE	2.13	0.79
10:CJ:15:HIS:CE1	10:CJ:68:ARG:HD3	2.18	0.79
22:DA:1714:U:H3'	22:DA:1715:G:H5'	1.63	0.79
22:DA:2358:A:H61	33:DL:54:GLN:HE22	1.27	0.79
22:DA:2750:A:H4'	22:DA:2751:G:OP2	1.82	0.79
31:DJ:99:ARG:HA	31:DJ:102:GLU:HB3	1.63	0.79
1:AA:1168:U:C6	1:AA:1168:U:OP1	2.34	0.79
4:AD:96:ARG:HB3	4:AD:98:ASP:OD1	1.81	0.79
22:BA:2757:A:N1	28:BG:66:THR:HG21	1.98	0.79
2:CB:103:TRP:HA	2:CB:106:VAL:HB	1.63	0.79
1:AA:1046:A:H2'	1:AA:1047:G:H8	1.48	0.79
1:AA:1241:G:HO2'	1:AA:1242:G:H8	0.80	0.79
11:AK:88:PRO:HD3	21:AU:28:LEU:HD13	1.65	0.79
22:BA:1733:G:O2'	22:BA:1734:G:H8	1.65	0.79
24:BC:144:GLU:HA	24:BC:151:GLY:HA2	1.62	0.79
51:B3:56:LEU:HD22	51:B3:56:LEU:H	1.47	0.79
53:CA:410:G:OP1	4:CD:25:ARG:HD2	1.81	0.79
53:CA:1329:A:H5"	55:CM:25:GLY:N	1.96	0.79
10:CJ:40:ILE:HG22	10:CJ:42:LEU:HD12	1.62	0.79
11:CK:74:LYS:HD2	11:CK:104:PHE:HE1	1.48	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DO:115:LEU:H	36:DO:115:LEU:HD13	1.44	0.79
15:AO:63:ARG:HD3	15:AO:87:ARG:NH2	1.98	0.79
25:BD:5:VAL:N	25:BD:32:ASN:HD21	1.77	0.79
30:BI:100:ILE:HG22	30:BI:101:SER:H	1.47	0.79
39:BR:51:VAL:HB	39:BR:52:PRO:HD2	1.64	0.79
22:DA:647:G:H2'	22:DA:648:G:C8	2.17	0.79
37:DP:88:ARG:HE	37:DP:112:ARG:HH21	1.31	0.79
38:BQ:65:ASN:ND2	38:BQ:69:ARG:HH22	1.79	0.79
51:B3:22:LYS:HA	51:B3:47:ALA:O	1.83	0.79
9:CI:118:ARG:NH2	9:CI:122:ARG:HE	1.80	0.79
22:DA:1645:G:OP1	22:DA:1646:C:H5'	1.82	0.79
1:AA:1469:C:H6	1:AA:1469:C:H5'	1.47	0.79
7:AG:76:SER:HA	7:AG:85:GLN:HB2	1.65	0.79
22:DA:2216:G:H2'	22:DA:2217:G:C8	2.16	0.79
34:DM:36:VAL:HG22	43:DV:82:TYR:HB2	1.65	0.79
2:AB:127:LYS:HG3	2:AB:128:LEU:H	1.48	0.78
7:AG:26:VAL:HG12	7:AG:42:VAL:HG21	1.63	0.78
7:AG:114:SER:HB3	7:AG:117:LEU:HG	1.63	0.78
22:BA:1993:U:H4'	25:BD:133:THR:HG21	1.65	0.78
26:BE:146:VAL:HG23	26:BE:167:VAL:CG2	2.13	0.78
32:BK:71:ARG:CB	32:BK:72:PRO:HD3	2.12	0.78
34:BM:73:ILE:HG21	34:BM:91:TYR:CZ	2.18	0.78
9:CI:17:ARG:HB2	9:CI:65:THR:HB	1.64	0.78
55:CM:77:LYS:HA	55:CM:80:MET:HE2	1.65	0.78
20:CT:23:ARG:HB3	20:CT:60:GLN:NE2	1.98	0.78
22:DA:1310:G:H2'	22:DA:1311:G:O4'	1.83	0.78
22:DA:1490:A:H8	24:DC:73:ILE:HD12	1.48	0.78
22:DA:2023:C:HO2'	22:DA:2024:G:H8	0.80	0.78
22:DA:2060:A:H62	26:DE:69:ARG:HH12	1.28	0.78
1:AA:1285:A:H5'	1:AA:1286:U:C4	2.18	0.78
22:BA:301:G:OP2	42:BU:81:ARG:NH1	2.16	0.78
22:BA:1654:A:O2'	25:BD:118:PHE:CD2	2.36	0.78
24:BC:244:VAL:HG12	24:BC:250:GLN:HA	1.65	0.78
28:BG:104:LEU:HB2	28:BG:112:VAL:CG2	2.13	0.78
53:CA:464:U:O4	53:CA:466:A:H4'	1.81	0.78
54:CG:71:THR:HG23	54:CG:72:VAL:HG23	1.65	0.78
9:CI:90:ASP:HB3	9:CI:93:LEU:HD23	1.65	0.78
22:DA:649:G:H2'	22:DA:650:C:C6	2.19	0.78
22:DA:1275:A:HO2'	22:DA:1276:A:C1'	1.95	0.78
57:DB:42:C:H41	58:DF:87:LYS:NZ	1.81	0.78
1:AA:202:G:H21	1:AA:466:A:H61	1.30	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:328:C:H1'	53:CA:329:A:OP2	1.83	0.78
53:CA:456:A:H2'	53:CA:457:G:H8	1.47	0.78
3:CC:166:TRP:O	3:CC:167:TYR:HB2	1.83	0.78
12:CL:82:ARG:HH11	12:CL:82:ARG:HG2	1.49	0.78
56:CP:44:SER:H	56:CP:46:LYS:HZ2	1.29	0.78
43:DV:30:ILE:HG12	43:DV:91:PHE:HB2	1.64	0.78
1:AA:973:G:H3'	1:AA:974:A:H5"	1.64	0.78
4:AD:25:ARG:HH11	4:AD:30:LYS:HE3	1.47	0.78
5:AE:152:VAL:HB	5:AE:155:LYS:NZ	1.97	0.78
22:BA:1778:U:H2'	22:BA:1784:A:N6	1.98	0.78
25:BD:45:TYR:N	25:BD:45:TYR:CD1	2.50	0.78
53:CA:563:A:H2'	53:CA:563:A:N3	1.95	0.78
53:CA:960:U:H4'	53:CA:961:U:H5"	1.65	0.78
5:CE:24:VAL:HG23	5:CE:26:GLY:H	1.48	0.78
33:DL:117:THR:HG22	33:DL:118:THR:H	1.49	0.78
10:AJ:57:VAL:HG22	10:AJ:58:ASN:H	1.47	0.78
22:BA:506:G:H4'	22:BA:507:A:H5'	1.65	0.78
29:BH:8:LYS:O	29:BH:9:VAL:HB	1.82	0.78
30:BI:33:ASN:HB3	30:BI:36:GLU:HB2	1.66	0.78
31:BJ:111:LYS:HD3	31:BJ:112:GLY:N	1.97	0.78
33:BL:55:MET:HE2	33:BL:56:PRO:CD	2.14	0.78
22:DA:1038:G:C2	22:DA:1039:A:C8	2.71	0.78
4:AD:34:GLU:O	4:AD:37:PRO:HD3	1.84	0.78
38:BQ:91:ARG:NH1	39:BR:10:LYS:HB3	1.99	0.78
53:CA:17:U:H2'	53:CA:18:C:C6	2.19	0.78
53:CA:1195:C:H5"	53:CA:1196:A:OP2	1.83	0.78
53:CA:1422:G:H5"	32:DK:48:PRO:HB3	1.64	0.78
5:CE:29:ILE:CG2	5:CE:30:PHE:N	2.47	0.78
22:DA:1534:U:H6	22:DA:1538:G:H1	1.32	0.78
35:DN:38:LEU:HB3	35:DN:39:PRO:HD3	1.63	0.78
22:BA:1287:A:H5'	35:BN:103:ARG:HD2	1.65	0.78
25:BD:122:VAL:HG12	25:BD:123:LYS:N	1.97	0.78
28:BG:23:ILE:H	28:BG:23:ILE:HD12	1.49	0.78
41:BT:50:LEU:HD12	41:BT:50:LEU:N	1.98	0.78
53:CA:1218:C:H2'	53:CA:1219:A:C8	2.19	0.78
22:DA:1274:A:O2'	22:DA:1275:A:H5"	1.84	0.78
22:DA:1809:A:O2'	22:DA:1810:A:H8	1.67	0.78
22:DA:2544:G:H5'	22:DA:2645:G:N7	1.98	0.78
37:DP:63:ILE:HA	37:DP:68:GLY:HA2	1.66	0.78
43:DV:61:LEU:HD23	43:DV:61:LEU:H	1.48	0.78
7:AG:12:LEU:H	7:AG:12:LEU:HD22	1.47	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:28:GLN:HB2	12:AL:81:ILE:O	1.82	0.78
9:CI:51:LEU:HB2	9:CI:56:MET:SD	2.24	0.78
22:DA:71:A:H5"	22:DA:73:A:C8	2.18	0.78
22:DA:1237:A:H2	22:DA:1238:G:H1'	1.49	0.78
22:DA:1552:A:H2'	22:DA:1552:A:N3	1.99	0.78
22:DA:1568:G:H21	24:DC:57:HIS:CE1	2.01	0.78
22:DA:2324:U:H5'	22:DA:2325:G:C5'	2.14	0.78
31:DJ:20:ALA:HA	31:DJ:23:LYS:HG3	1.65	0.78
31:DJ:74:TYR:CE2	31:DJ:103:ILE:HD11	2.18	0.78
40:DS:14:ALA:O	40:DS:18:ARG:HB2	1.83	0.78
1:AA:188:C:O2	1:AA:188:C:H2'	1.83	0.78
22:BA:902:C:C2'	22:BA:903:C:H5'	2.12	0.78
24:BC:70:LYS:HE2	24:BC:73:ILE:HD12	1.65	0.78
17:CQ:3:LYS:NZ	17:CQ:6:THR:HG21	1.99	0.78
22:DA:777:G:N7	22:DA:793:A:H2	1.81	0.78
22:DA:1071:G:O2'	22:DA:1072:C:H5'	1.84	0.78
38:DQ:16:ILE:HG23	38:DQ:38:VAL:HG21	1.66	0.78
5:AE:153:ALA:HA	5:AE:156:ARG:HB2	1.65	0.78
22:BA:1257:C:H5'	26:BE:78:TRP:CZ3	2.18	0.78
30:BI:3:LYS:HD2	30:BI:4:VAL:HG23	1.66	0.78
44:BW:24:ARG:HD3	44:BW:65:LYS:HD3	1.66	0.78
53:CA:500:G:H5"	53:CA:500:G:C8	2.18	0.78
22:DA:740:C:H5'	22:DA:1784:A:H3'	1.64	0.78
4:AD:55:ARG:HH12	4:AD:58:GLN:HG2	1.48	0.77
24:BC:68:ARG:HD3	24:BC:103:ILE:HD11	1.66	0.77
10:CJ:15:HIS:HE1	10:CJ:68:ARG:HD3	1.48	0.77
22:DA:1469:A:H2'	22:DA:1470:A:C8	2.19	0.77
45:DX:31:ASN:H	45:DX:31:ASN:ND2	1.81	0.77
3:CC:18:ASN:HA	3:CC:55:VAL:HG12	1.65	0.77
22:DA:226:A:C2	22:DA:230:G:O6	2.37	0.77
22:DA:686:U:O4	50:D2:12:ARG:HG3	1.83	0.77
22:DA:2190:G:H5'	22:DA:2191:A:OP2	1.84	0.77
25:DD:105:LYS:HA	25:DD:177:VAL:HG22	1.66	0.77
58:DF:43:ILE:HG23	58:DF:44:ALA:H	1.50	0.77
37:DP:67:GLU:CD	37:DP:68:GLY:H	1.91	0.77
1:AA:92:U:H2'	1:AA:93:U:C6	2.19	0.77
6:AF:38:ARG:HG3	6:AF:39:LEU:N	1.98	0.77
22:BA:221:A:H4'	22:BA:222:A:O5'	1.84	0.77
30:BI:104:GLN:O	30:BI:105:LEU:HB2	1.84	0.77
33:BL:55:MET:HE2	33:BL:56:PRO:HD3	1.67	0.77
53:CA:66:A:H2'	53:CA:66:A:N3	2.00	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:500:G:H5”	53:CA:500:G:H8	1.47	0.77
53:CA:1452:C:H4’	53:CA:1453:G:O5’	1.84	0.77
2:CB:162:VAL:HG13	2:CB:184:ALA:HB2	1.66	0.77
22:DA:128:C:H2’	22:DA:129:C:C6	2.19	0.77
22:DA:1076:C:O2	30:DI:92:PRO:HG2	1.84	0.77
22:DA:2752:C:H2’	22:DA:2753:A:H8	1.48	0.77
58:DF:49:LEU:H	58:DF:49:LEU:HD22	1.47	0.77
42:DU:95:PHE:HD1	42:DU:95:PHE:H	1.32	0.77
1:AA:374:A:OP1	1:AA:452:A:N1	2.18	0.77
19:AS:50:VAL:HG21	19:AS:70:LEU:HB3	1.64	0.77
22:BA:1069:A:O2’	22:BA:1070:A:H5”	1.84	0.77
53:CA:16:A:C2’	53:CA:17:U:H5’	2.15	0.77
53:CA:1526:G:OP1	21:CU:38:GLU:HG3	1.84	0.77
54:CG:28:ILE:HG21	54:CG:100:MET:HG3	1.66	0.77
15:CO:47:LYS:HD2	15:CO:47:LYS:H	1.48	0.77
22:DA:1490:A:C8	24:DC:73:ILE:HD12	2.20	0.77
18:AR:44:THR:OG1	18:AR:46:THR:HG22	1.85	0.77
32:BK:38:ILE:HD11	32:BK:112:PHE:HZ	1.49	0.77
37:BP:83:ILE:C	37:BP:83:ILE:HD13	2.10	0.77
22:DA:2430:A:H5’	22:DA:2431:U:OP2	1.84	0.77
22:BA:855:G:N2	44:BW:23:LYS:HG2	1.98	0.77
22:BA:1190:G:OP1	33:BL:32:GLY:HA2	1.84	0.77
35:BN:96:ARG:HH22	35:BN:116:VAL:HG23	1.50	0.77
41:BT:32:LEU:N	41:BT:83:ALA:HB3	1.99	0.77
53:CA:1450:U:H4’	53:CA:1451:U:H5	1.50	0.77
22:DA:286:U:H2’	22:DA:287:G:C8	2.19	0.77
22:DA:2060:A:H62	26:DE:69:ARG:NH1	1.81	0.77
32:DK:13:ASN:ND2	32:DK:97:THR:H	1.81	0.77
52:D4:7:VAL:HG13	52:D4:8:LYS:H	1.49	0.77
9:AI:83:THR:HG21	9:AI:102:PHE:HB3	1.64	0.77
22:BA:873:C:H42	22:BA:904:G:H1	1.33	0.77
28:BG:73:SER:HA	28:BG:76:ILE:CG2	2.15	0.77
35:BN:103:ARG:HD3	35:BN:110:MET:HE3	1.65	0.77
43:BV:72:VAL:HG12	43:BV:93:ARG:HA	1.66	0.77
53:CA:1299:A:C8	53:CA:1301:U:H1’	2.19	0.77
14:CN:76:PHE:HE2	14:CN:92:ILE:HG21	1.48	0.77
22:DA:1799:G:H8	24:DC:179:GLU:OE1	1.67	0.77
24:DC:15:VAL:HG22	24:DC:205:GLY:HA3	1.67	0.77
13:AM:2:ARG:O	13:AM:3:ILE:HG12	1.85	0.77
16:AP:59:HIS:CE1	16:AP:63:GLN:HE22	2.03	0.77
20:AT:27:MET:HE2	20:AT:31:ILE:HD11	1.66	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BT:50:LEU:H	41:BT:50:LEU:CD1	1.96	0.77
53:CA:346:G:H2'	53:CA:346:G:N3	1.99	0.77
53:CA:1450:U:H4'	53:CA:1451:U:C5	2.20	0.77
22:DA:445:C:H2'	22:DA:446:G:C8	2.19	0.77
22:DA:804:A:H2'	22:DA:806:C:C4	2.19	0.77
22:DA:1326:U:HO2'	22:DA:1327:A:H8	0.78	0.77
22:DA:1809:A:HO2'	22:DA:1810:A:H8	1.31	0.77
28:DG:112:VAL:HG12	28:DG:114:HIS:H	1.50	0.77
1:AA:87:C:H2'	1:AA:88:U:H6	1.49	0.77
1:AA:202:G:N2	1:AA:466:A:H61	1.83	0.77
8:AH:87:ARG:O	8:AH:121:GLY:HA3	1.85	0.77
13:AM:26:LYS:O	13:AM:30:LYS:HG3	1.85	0.77
44:BW:24:ARG:HD3	44:BW:65:LYS:CD	2.15	0.77
50:B2:3:ARG:HG2	50:B2:3:ARG:NH2	1.99	0.77
53:CA:820:U:H4'	53:CA:821:G:OP2	1.85	0.77
22:DA:322:A:H3'	26:DE:163:ASN:HD21	1.49	0.77
22:DA:614:A:H4'	22:DA:616:A:H62	1.50	0.77
22:DA:2291:U:H2'	22:DA:2292:U:C6	2.20	0.77
1:AA:214:C:HO2'	1:AA:215:C:H6	0.78	0.77
1:AA:1348:U:H2'	1:AA:1349:A:H8	1.50	0.77
27:BF:120:SER:HB2	27:BF:127:TYR:CE1	2.20	0.77
37:BP:50:ARG:CD	37:BP:51:ASN:H	1.97	0.77
38:BQ:48:ASP:HA	38:BQ:51:GLN:HB2	1.67	0.77
22:DA:163:C:O2'	22:DA:164:C:O4'	2.02	0.77
22:DA:396:G:O2'	22:DA:397:U:C6	2.36	0.77
22:DA:2022:U:HO2'	22:DA:2616:C:HO2'	1.27	0.77
41:DT:44:LYS:O	41:DT:48:GLN:HG2	1.84	0.77
11:AK:100:ASN:HD22	11:AK:106:ILE:HG22	1.50	0.76
11:AK:122:PRO:HG2	21:AU:33:ARG:O	1.84	0.76
22:BA:1062:G:OP1	22:BA:1070:A:H4'	1.85	0.76
24:BC:16:VAL:H	24:BC:203:VAL:HG12	1.47	0.76
38:BQ:91:ARG:NH2	38:BQ:93:ILE:HD13	1.99	0.76
46:BY:17:GLU:HG3	46:BY:18:LEU:N	1.99	0.76
53:CA:1108:G:H5"	3:CC:175:HIS:CE1	2.19	0.76
15:CO:63:ARG:HH22	22:DA:715:A:H5'	1.49	0.76
22:DA:1340:U:H4'	22:DA:1340:U:OP1	1.83	0.76
22:DA:1345:C:H3'	22:DA:1345:C:OP2	1.85	0.76
22:DA:2601:C:H4'	22:DA:2602:A:OP2	1.83	0.76
57:DB:75:G:H1	57:DB:102:G:N2	1.82	0.76
35:DN:71:ARG:HB2	35:DN:71:ARG:NH2	2.01	0.76
1:AA:922:G:H4'	5:AE:24:VAL:HA	1.67	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1411:C:C2'	1:AA:1412:C:H5'	2.14	0.76
4:AD:145:ARG:NH1	4:AD:147:LYS:HE3	2.00	0.76
6:AF:19:PRO:HA	6:AF:22:ILE:HD12	1.68	0.76
22:BA:1475:G:H1'	22:BA:1476:U:OP2	1.84	0.76
28:BG:97:VAL:HG22	28:BG:102:ILE:HG12	1.66	0.76
44:BW:37:VAL:HG13	44:BW:55:ASP:O	1.85	0.76
45:BX:38:TRP:HB2	45:BX:45:PHE:HE2	1.49	0.76
53:CA:429:U:H3'	4:CD:8:LEU:HD23	1.65	0.76
53:CA:1245:C:H2'	53:CA:1246:A:H8	1.50	0.76
4:CD:34:GLU:O	4:CD:36:ALA:N	2.18	0.76
54:CG:68:VAL:HG22	54:CG:134:VAL:HG12	1.67	0.76
11:CK:23:HIS:HB3	11:CK:30:ILE:HB	1.68	0.76
37:DP:91:VAL:HG11	37:DP:96:LEU:HD11	1.66	0.76
42:DU:3:LYS:HG2	42:DU:84:PHE:HZ	1.50	0.76
50:D2:5:PHE:HZ	50:D2:12:ARG:HH11	1.31	0.76
36:BO:31:THR:HG22	36:BO:34:HIS:O	1.86	0.76
44:BW:39:GLN:HG3	44:BW:42:THR:H	1.50	0.76
53:CA:990:C:C2'	53:CA:991:U:O4'	2.33	0.76
53:CA:1169:A:H2'	53:CA:1170:A:C8	2.21	0.76
11:CK:44:ALA:HB3	11:CK:69:CYS:HB2	1.67	0.76
22:DA:2612:C:H5"	22:DA:2613:U:OP1	1.85	0.76
29:DH:80:ILE:HB	29:DH:101:ASP:CB	2.16	0.76
38:DQ:40:LYS:HD2	38:DQ:44:TYR:HE2	1.49	0.76
22:BA:1469:A:H2'	22:BA:1470:A:C8	2.19	0.76
23:BB:13:G:HO2'	23:BB:15:A:H5'	1.50	0.76
23:BB:13:G:O2'	23:BB:15:A:H5'	1.83	0.76
33:BL:93:ASN:HD22	33:BL:94:THR:H	1.30	0.76
37:BP:28:LYS:HB2	37:BP:82:SER:HB3	1.68	0.76
38:BQ:111:LYS:HE2	39:BR:50:GLY:HA2	1.67	0.76
39:BR:51:VAL:HB	39:BR:52:PRO:CD	2.14	0.76
56:CP:8:ARG:HB3	56:CP:28:ARG:NH1	2.00	0.76
22:DA:15:G:OP1	48:D0:20:ALA:HB2	1.83	0.76
22:DA:2136:G:H2'	22:DA:2137:U:C6	2.21	0.76
26:DE:6:LYS:HB2	26:DE:121:VAL:HG12	1.66	0.76
2:AB:22:TRP:O	2:AB:22:TRP:CG	2.38	0.76
4:AD:25:ARG:NH1	4:AD:30:LYS:HE3	2.01	0.76
13:AM:10:ASP:CG	13:AM:11:HIS:N	2.43	0.76
28:BG:88:LEU:HD11	28:BG:95:ALA:HB2	1.67	0.76
31:BJ:4:PHE:O	31:BJ:44:TYR:CE1	2.38	0.76
53:CA:1005:A:C5	53:CA:1006:G:H1'	2.20	0.76
22:DA:1062:G:H8	22:DA:1070:A:OP2	1.67	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2056:G:H21	48:D0:1:ALA:H3	1.30	0.76
22:BA:1871:A:O2'	22:BA:1872:A:C8	2.39	0.76
25:BD:118:PHE:HD2	25:BD:119:ALA:H	1.34	0.76
30:BI:7:TYR:HB3	30:BI:58:ILE:H	1.50	0.76
53:CA:108:G:H5'	53:CA:109:A:H5"	1.67	0.76
17:CQ:46:HIS:HB2	17:CQ:70:LYS:HE3	1.67	0.76
37:DP:50:ARG:HB3	37:DP:57:ALA:N	2.00	0.76
12:AL:43:LYS:HB2	12:AL:44:PRO:HD3	1.68	0.76
21:AU:16:ARG:NH1	21:AU:19:LYS:HG3	2.01	0.76
22:BA:856:G:H1'	44:BW:23:LYS:HB3	1.65	0.76
22:BA:2813:A:H2	22:BA:2887:A:N6	1.83	0.76
26:BE:112:LEU:HD13	26:BE:186:VAL:HG11	1.68	0.76
22:DA:959:A:H2'	22:DA:960:A:C8	2.21	0.76
4:AD:172:VAL:HG22	4:AD:173:ASP:H	1.51	0.76
36:BO:31:THR:CG2	36:BO:34:HIS:H	1.98	0.76
44:BW:37:VAL:HG12	44:BW:38:ARG:N	1.96	0.76
22:DA:412:A:N7	22:DA:2412:A:H1'	2.01	0.76
22:DA:2618:G:H21	25:DD:155:VAL:HG21	1.50	0.76
25:DD:114:LYS:HD2	25:DD:116:LYS:NZ	2.01	0.76
25:DD:137:SER:HB3	25:DD:138:LEU:HD22	1.68	0.76
1:AA:1052:U:H5"	1:AA:1053:G:OP2	1.85	0.76
2:AB:99:MET:HA	2:AB:106:VAL:HG21	1.68	0.76
28:BG:60:GLY:O	28:BG:61:TRP:HB2	1.86	0.76
39:BR:16:GLU:HA	39:BR:98:ILE:HG22	1.67	0.76
39:BR:48:LYS:H	39:BR:48:LYS:HD2	1.51	0.76
44:BW:39:GLN:HG3	44:BW:42:THR:N	2.01	0.76
53:CA:33:A:H2'	53:CA:34:C:C6	2.19	0.76
53:CA:344:A:H5"	53:CA:345:C:C5	2.21	0.76
10:CJ:26:VAL:O	10:CJ:30:LYS:HB3	1.85	0.76
55:CM:12:LYS:HA	55:CM:12:LYS:HE3	1.68	0.76
43:DV:80:HIS:CD2	43:DV:82:TYR:H	2.04	0.76
22:BA:357:C:H2'	22:BA:358:U:C6	2.21	0.76
25:BD:12:THR:HG22	25:BD:13:ARG:N	2.01	0.76
28:BG:8:VAL:HG11	28:BG:49:LEU:HB2	1.66	0.76
29:BH:94:ILE:HG21	29:BH:99:ILE:HG12	1.68	0.76
34:BM:43:ALA:HA	34:BM:46:ILE:CG1	2.15	0.76
43:BV:80:HIS:HD2	43:BV:83:LYS:H	0.81	0.76
46:BY:56:LEU:O	46:BY:57:LEU:HB3	1.85	0.76
21:CU:16:ARG:CG	21:CU:19:LYS:HG2	2.12	0.76
22:DA:388:G:N7	22:DA:390:U:H2'	2.01	0.76
22:DA:600:G:H5"	26:DE:27:LEU:HD22	1.67	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2458:G:H8	22:DA:2459:A:H62	1.34	0.76
25:DD:118:PHE:CD1	25:DD:119:ALA:N	2.54	0.76
26:DE:128:ALA:HB1	26:DE:129:PRO:HD2	1.68	0.76
58:DF:104:THR:HG22	58:DF:105:ILE:HG13	1.67	0.76
42:DU:14:THR:HG23	42:DU:15:GLY:H	1.51	0.76
22:BA:1082:U:C5'	30:BI:117:THR:O	2.31	0.75
37:BP:52:ARG:HG2	37:BP:52:ARG:HH11	1.51	0.75
44:BW:18:LYS:HA	44:BW:36:ILE:HG13	1.67	0.75
53:CA:157:U:O2'	53:CA:158:G:H5'	1.86	0.75
53:CA:1157:A:C4'	53:CA:1158:C:O5'	2.29	0.75
12:CL:2:THR:HG22	12:CL:4:ASN:H	1.51	0.75
22:DA:95:A:H1'	46:DY:40:SER:HB2	1.67	0.75
22:DA:984:A:O2'	22:DA:985:C:OP1	2.03	0.75
25:DD:114:LYS:HD2	25:DD:116:LYS:HZ2	1.50	0.75
38:DQ:34:ALA:O	38:DQ:38:VAL:HG23	1.85	0.75
42:DU:92:VAL:HB	42:DU:101:THR:CG2	2.15	0.75
44:DW:39:GLN:HG2	44:DW:42:THR:HB	1.67	0.75
1:AA:86:G:N2	1:AA:87:C:H41	1.84	0.75
1:AA:121:U:H6	1:AA:121:U:H5"	1.50	0.75
1:AA:1239:A:N6	1:AA:1299:A:H62	1.84	0.75
22:DA:874:G:H5'	22:DA:875:G:OP2	1.85	0.75
22:DA:1906:G:C8	22:DA:1929:G:H2'	2.20	0.75
22:DA:2746:U:H1'	28:DG:138:GLN:HE21	1.51	0.75
58:DF:147:ARG:HG2	58:DF:149:ARG:HH12	1.51	0.75
1:AA:1409:C:O2'	1:AA:1410:A:H5'	1.86	0.75
9:AI:28:VAL:HB	9:AI:63:TYR:HD2	1.49	0.75
22:BA:2104:C:H2'	22:BA:2105:U:O4'	1.87	0.75
44:BW:76:ARG:HH21	44:BW:76:ARG:CG	1.95	0.75
3:CC:18:ASN:HD21	3:CC:53:ARG:NH1	1.83	0.75
11:CK:126:ARG:HB2	21:CU:33:ARG:HD2	1.68	0.75
55:CM:78:ARG:HH21	55:CM:79:LEU:HD23	1.51	0.75
22:DA:1303:G:O2'	22:DA:1304:A:H8	1.66	0.75
22:DA:1379:U:O2	22:DA:1379:U:H2'	1.86	0.75
40:DS:20:VAL:HG23	40:DS:23:LEU:HD12	1.67	0.75
1:AA:464:U:N3	1:AA:466:A:H5'	2.00	0.75
5:AE:155:LYS:HD2	5:AE:156:ARG:H	1.50	0.75
22:BA:1605:C:C3'	22:BA:1606:C:H5"	2.15	0.75
26:BE:149:ILE:O	26:BE:188:MET:HA	1.87	0.75
31:BJ:130:HIS:HD2	31:BJ:132:HIS:H	1.33	0.75
53:CA:1239:A:H1'	53:CA:1241:G:C4	2.22	0.75
9:CI:75:ALA:HA	9:CI:78:ILE:HD12	1.67	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:23:ARG:HB3	20:CT:60:GLN:HE22	1.50	0.75
22:DA:286:U:H2'	22:DA:287:G:H8	1.49	0.75
22:DA:335:C:HO2'	22:DA:336:C:H6	0.77	0.75
22:DA:1519:G:H5'	22:DA:1520:U:OP2	1.86	0.75
22:DA:2321:U:O2	22:DA:2321:U:C3'	2.34	0.75
25:DD:19:GLY:O	32:DK:72:PRO:HB2	1.87	0.75
58:DF:90:LEU:O	58:DF:95:MET:HE3	1.86	0.75
1:AA:1066:C:H5"	1:AA:1066:C:H6	1.50	0.75
22:BA:1076:C:H2'	22:BA:1077:A:H8	1.50	0.75
33:BL:77:ILE:CD1	33:BL:108:ALA:HB1	2.16	0.75
37:BP:4:ILE:O	37:BP:6:GLN:N	2.19	0.75
53:CA:120:A:C3'	53:CA:121:U:C5'	2.58	0.75
53:CA:1366:C:O2'	53:CA:1367:C:C6	2.38	0.75
24:DC:70:LYS:HB2	24:DC:101:ARG:HH22	1.52	0.75
35:DN:35:LYS:HZ2	35:DN:112:TYR:HE1	1.34	0.75
1:AA:1520:C:H2'	1:AA:1521:C:H6	1.51	0.75
2:AB:46:VAL:HB	2:AB:47:PRO:HD3	1.68	0.75
22:BA:1508:A:O2'	22:BA:1509:A:OP2	2.04	0.75
40:BS:20:VAL:HA	40:BS:23:LEU:HD12	1.68	0.75
43:BV:5:ASN:ND2	43:BV:5:ASN:H	1.84	0.75
50:B2:43:THR:O	50:B2:44:VAL:HB	1.84	0.75
53:CA:1322:C:H2'	53:CA:1322:C:O2	1.85	0.75
2:CB:49:PHE:HA	2:CB:52:ALA:HB3	1.68	0.75
6:CF:11:HIS:HD2	6:CF:12:PRO:HD2	1.52	0.75
22:DA:196:A:H61	22:DA:831:G:H21	1.34	0.75
22:DA:729:G:H3'	22:DA:730:A:C5'	2.17	0.75
22:DA:1255:U:H5'	22:DA:2502:G:H22	1.51	0.75
22:DA:1455:G:O2'	22:DA:1456:G:H8	1.70	0.75
22:DA:2356:U:H4'	44:DW:16:GLU:HG3	1.67	0.75
22:DA:2563:U:H1'	22:DA:2566:A:N6	2.01	0.75
22:DA:2773:C:H2'	22:DA:2774:C:H6	1.52	0.75
44:DW:49:ASN:ND2	44:DW:81:ILE:HG23	2.00	0.75
16:AP:19:VAL:HG13	16:AP:37:GLY:C	2.12	0.75
53:CA:1458:G:O2'	20:CT:22:SER:HB3	1.87	0.75
12:CL:97:VAL:O	12:CL:97:VAL:HG23	1.87	0.75
15:CO:28:VAL:HG13	15:CO:62:ARG:HG3	1.67	0.75
22:DA:422:A:O2'	22:DA:423:A:C8	2.40	0.75
22:DA:1534:U:H6	22:DA:1538:G:N1	1.85	0.75
25:DD:119:ALA:HB3	25:DD:163:GLY:H	1.52	0.75
46:DY:4:LYS:HZ3	46:DY:4:LYS:HB2	1.51	0.75
47:DZ:4:ILE:HD12	47:DZ:58:GLU:HA	1.69	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AR:40:PRO:HB2	18:AR:42:ARG:HG2	1.68	0.75
22:BA:904:G:O2'	22:BA:905:A:C5'	2.35	0.75
22:BA:1084:A:H2'	22:BA:1085:A:C8	2.21	0.75
22:BA:1110:G:O2'	22:BA:1111:A:H8	1.68	0.75
28:BG:120:ILE:HD13	28:BG:121:THR:N	2.01	0.75
46:BY:47:ARG:HH21	46:BY:47:ARG:HG3	1.51	0.75
51:B3:21:PHE:HB2	51:B3:49:VAL:CG1	2.17	0.75
53:CA:93:U:H2'	53:CA:95:C:H5	1.51	0.75
53:CA:736:C:H2'	53:CA:737:C:C6	2.22	0.75
17:CQ:30:HIS:HE1	17:CQ:32:ILE:HG13	1.50	0.75
22:DA:389:G:O2'	22:DA:390:U:H5'	1.87	0.75
22:DA:2336:A:N7	44:DW:40:ARG:CZ	2.50	0.75
24:DC:159:THR:O	24:DC:194:VAL:HG12	1.86	0.75
41:DT:60:THR:HG22	41:DT:83:ALA:HA	1.68	0.75
4:AD:36:ALA:HA	4:AD:41:GLY:HA3	1.68	0.75
11:AK:87:GLY:H	11:AK:113:THR:HG22	1.50	0.75
11:AK:126:ARG:HB2	21:AU:33:ARG:HH12	1.50	0.75
22:BA:1020:A:H4'	22:BA:1021:A:O5'	1.86	0.75
31:BJ:53:TYR:CE1	31:BJ:121:LYS:HG2	2.22	0.75
31:BJ:117:ALA:HA	31:BJ:120:ARG:NH2	2.00	0.75
41:BT:87:LEU:HB2	41:BT:91:GLN:HG2	1.69	0.75
53:CA:135:C:O2	56:CP:1:MET:HB2	1.86	0.75
53:CA:266:G:O2'	53:CA:267:C:H3'	1.87	0.75
22:DA:2758:A:H2'	22:DA:2759:G:H5'	1.66	0.75
19:AS:6:LYS:HE2	19:AS:6:LYS:HA	1.69	0.74
21:AU:39:LYS:H	21:AU:40:PRO:HD2	1.51	0.74
30:BI:115:ASP:O	30:BI:116:MET:HG2	1.86	0.74
35:BN:31:HIS:O	35:BN:33:ILE:HD12	1.87	0.74
37:BP:50:ARG:CG	37:BP:57:ALA:N	2.50	0.74
53:CA:371:A:O2'	53:CA:372:C:H5'	1.87	0.74
3:CC:140:ALA:O	3:CC:145:ALA:HB3	1.87	0.74
22:DA:230:G:O2'	22:DA:231:A:H8	1.66	0.74
22:DA:1255:U:H2'	26:DE:68:ALA:HB2	1.69	0.74
47:DZ:30:ARG:HH21	47:DZ:33:HIS:HB2	1.50	0.74
1:AA:1225:A:H2'	1:AA:1226:C:C5	2.22	0.74
18:AR:56:ARG:O	18:AR:60:ARG:HB2	1.87	0.74
22:BA:588:U:H2'	22:BA:589:U:C6	2.22	0.74
22:BA:2267:A:H5"	22:BA:2268:A:C5'	2.16	0.74
37:BP:50:ARG:CD	37:BP:56:SER:HB3	2.17	0.74
41:BT:29:THR:HA	41:BT:86:THR:HA	1.69	0.74
53:CA:1264:U:H2'	53:CA:1265:C:C6	2.21	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:333:G:O2'	22:DA:334:C:H6	1.70	0.74
29:DH:1:MET:HB3	29:DH:21:VAL:O	1.86	0.74
38:DQ:10:ARG:HA	38:DQ:13:HIS:HB2	1.69	0.74
1:AA:80:A:C2	1:AA:81:A:H1'	2.22	0.74
1:AA:1411:C:H2'	1:AA:1412:C:H5'	1.68	0.74
22:BA:1385:A:H1'	22:BA:1386:C:C6	2.21	0.74
53:CA:1038:C:H2'	53:CA:1039:G:C8	2.22	0.74
22:DA:2468:A:O2'	22:DA:2469:A:H8	1.70	0.74
7:AG:86:VAL:HG22	7:AG:150:PHE:HB3	1.68	0.74
30:BI:78:LEU:HD13	30:BI:108:ILE:HG23	1.69	0.74
42:BU:97:SER:O	42:BU:98:ASN:HB3	1.87	0.74
53:CA:597:G:H2'	53:CA:598:U:H5'	1.69	0.74
6:CF:42:TRP:HB2	6:CF:59:TYR:HB2	1.69	0.74
22:DA:654:A:H2'	22:DA:655:A:H5"	1.69	0.74
22:DA:1071:G:N7	22:DA:1089:A:C6	2.55	0.74
26:DE:61:ARG:O	26:DE:61:ARG:HD2	1.88	0.74
1:AA:1021:A:C2'	1:AA:1022:A:H5"	2.16	0.74
9:AI:40:ARG:HA	9:AI:44:ARG:HB3	1.69	0.74
27:BF:34:THR:HG23	27:BF:89:THR:HG23	1.68	0.74
31:BJ:88:THR:HG22	31:BJ:91:GLU:CG	2.17	0.74
32:BK:21:CYS:HB2	32:BK:39:ILE:HD11	1.70	0.74
44:BW:49:ASN:HA	44:BW:61:LYS:HB2	1.70	0.74
12:CL:43:LYS:CB	12:CL:44:PRO:HD2	2.12	0.74
21:CU:33:ARG:NH1	21:CU:34:ARG:HD3	2.02	0.74
22:DA:5:A:C2	22:DA:2899:A:C2	2.75	0.74
22:DA:2056:G:N2	48:D0:1:ALA:H3	1.86	0.74
2:AB:71:THR:HG22	2:AB:72:LYS:H	1.52	0.74
44:BW:18:LYS:HG3	44:BW:19:ARG:H	1.49	0.74
53:CA:1081:A:H5'	5:CE:22:LYS:HD2	1.70	0.74
53:CA:1138:G:O2'	53:CA:1139:G:OP1	2.03	0.74
22:DA:414:C:H5"	22:DA:1879:C:O2'	1.88	0.74
22:DA:976:G:H2'	22:DA:977:G:H8	1.53	0.74
22:DA:1493:C:H2'	22:DA:1493:C:O2	1.86	0.74
22:DA:1521:G:C6	22:DA:1522:A:N6	2.55	0.74
22:DA:1809:A:C2	22:DA:1810:A:C4	2.75	0.74
22:DA:2425:A:H4'	22:DA:2426:A:O5'	1.85	0.74
31:DJ:73:VAL:HG23	31:DJ:74:TYR:H	1.52	0.74
6:AF:38:ARG:HG2	6:AF:38:ARG:NH1	1.96	0.74
7:AG:121:ASN:O	7:AG:125:ASP:HB2	1.87	0.74
8:AH:104:SER:HB2	8:AH:125:ILE:HD11	1.69	0.74
22:BA:923:G:H21	44:BW:23:LYS:HZ3	1.33	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BD:114:LYS:HE3	25:BD:114:LYS:O	1.87	0.74
32:BK:111:LYS:HE2	32:BK:111:LYS:H	1.51	0.74
41:BT:59:ASN:O	41:BT:83:ALA:O	2.04	0.74
53:CA:79:G:H2'	53:CA:80:A:C8	2.22	0.74
53:CA:533:A:O2'	53:CA:535:A:OP2	2.05	0.74
22:DA:273:G:H2'	22:DA:274:C:O4'	1.87	0.74
22:DA:784:G:HO2'	22:DA:785:G:H8	1.34	0.74
22:DA:1012:U:O4	31:DJ:30:THR:HG21	1.86	0.74
26:DE:149:ILE:O	26:DE:188:MET:HA	1.87	0.74
32:DK:71:ARG:HB3	32:DK:72:PRO:CD	2.15	0.74
43:DV:77:VAL:HA	43:DV:89:ILE:HG22	1.67	0.74
10:AJ:53:ILE:CG2	10:AJ:61:ALA:HB1	2.18	0.74
22:BA:682:G:H5'	50:B2:26:ASN:OD1	1.86	0.74
24:BC:71:ASP:HA	24:BC:117:SER:O	1.88	0.74
30:BI:79:LEU:HD13	30:BI:135:MET:SD	2.28	0.74
30:BI:126:ARG:HA	30:BI:129:GLU:HB2	1.69	0.74
31:BJ:44:TYR:C	31:BJ:44:TYR:CD1	2.65	0.74
31:BJ:44:TYR:C	31:BJ:44:TYR:HD1	1.95	0.74
37:BP:83:ILE:HD13	37:BP:84:SER:N	2.03	0.74
4:CD:176:LYS:HG3	4:CD:178:GLU:HB2	1.69	0.74
22:DA:1127:A:O2'	22:DA:1128:G:H5'	1.88	0.74
1:AA:1239:A:N6	1:AA:1299:A:N6	2.35	0.74
2:AB:108:GLN:HE21	2:AB:108:GLN:N	1.85	0.74
53:CA:642:A:N7	8:CH:106:SER:HA	2.02	0.74
9:CI:11:ARG:HD3	9:CI:106:ASP:OD1	1.88	0.74
22:DA:96:C:H4'	46:DY:41:HIS:CD2	2.22	0.74
22:DA:1097:U:H2'	22:DA:1098:A:O4'	1.88	0.74
26:DE:170:ARG:HH22	26:DE:176:ASP:HB2	1.52	0.74
29:DH:84:ALA:H	29:DH:148:ALA:HA	1.52	0.74
6:AF:97:THR:O	6:AF:98:GLU:HG2	1.87	0.74
22:BA:100:U:H4'	22:BA:101:A:O5'	1.88	0.74
22:BA:2427:C:H5"	22:BA:2428:G:OP1	1.88	0.74
53:CA:1024:G:H2'	53:CA:1025:U:O4'	1.87	0.74
2:CB:163:ILE:HG23	2:CB:185:ILE:HD11	1.68	0.74
21:CU:35:GLU:HG3	21:CU:36:PHE:H	1.53	0.74
24:DC:173:LEU:HD22	24:DC:181:ARG:O	1.88	0.74
28:DG:16:VAL:HG11	28:DG:44:HIS:CD2	2.23	0.74
39:DR:62:GLU:HB3	39:DR:97:LYS:HB3	1.68	0.74
8:AH:17:GLN:HE21	8:AH:71:VAL:HG23	1.52	0.73
12:AL:113:ARG:HB3	12:AL:118:VAL:HB	1.70	0.73
22:BA:277:G:H4'	22:BA:278:A:N7	2.03	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:28:PRO:HG2	24:BC:33:LEU:HD11	1.69	0.73
25:BD:51:THR:OG1	25:BD:76:GLY:HA3	1.87	0.73
35:BN:79:LEU:O	35:BN:80:PHE:HB2	1.88	0.73
53:CA:702:A:OP1	53:CA:702:A:H8	1.71	0.73
53:CA:1113:C:H2'	53:CA:1114:C:H6	1.53	0.73
6:CF:43:GLY:HA2	6:CF:58:HIS:CE1	2.22	0.73
22:DA:35:G:O2'	22:DA:36:G:O5'	2.05	0.73
22:DA:2776:A:C4'	22:DA:2777:G:O5'	2.36	0.73
31:DJ:59:ALA:O	31:DJ:62:VAL:HG12	1.88	0.73
1:AA:1218:C:H2'	1:AA:1219:A:C8	2.24	0.73
3:AC:152:VAL:HG12	3:AC:197:VAL:HG13	1.68	0.73
12:AL:23:LEU:CB	12:AL:58:ASN:HD22	2.00	0.73
22:BA:587:C:OP2	33:BL:21:ARG:NH1	2.21	0.73
24:BC:166:ARG:O	24:BC:166:ARG:HG3	1.87	0.73
22:DA:1125:G:H4'	52:D4:37:GLN:NE2	2.03	0.73
28:DG:103:ASN:HD22	28:DG:111:PRO:HB2	1.53	0.73
1:AA:499:A:H4'	1:AA:500:G:OP1	1.87	0.73
2:AB:17:HIS:CD2	2:AB:202:ASN:HD21	2.06	0.73
25:BD:172:VAL:O	25:BD:173:GLN:HB2	1.87	0.73
28:BG:86:LEU:HD11	28:BG:132:LEU:HD21	1.70	0.73
39:BR:58:VAL:HG13	39:BR:102:SER:HB2	1.68	0.73
46:BY:45:GLN:O	46:BY:46:VAL:HB	1.87	0.73
53:CA:405:U:O4	4:CD:1:ALA:HB1	1.87	0.73
53:CA:1011:C:H2'	53:CA:1012:A:H8	1.52	0.73
2:CB:110:ILE:HD13	2:CB:151:LYS:HA	1.70	0.73
3:CC:110:LEU:O	3:CC:110:LEU:HD23	1.88	0.73
6:CF:86:ARG:HD3	18:CR:63:TYR:O	1.87	0.73
22:DA:915:C:H2'	22:DA:916:G:C8	2.23	0.73
22:DA:1742:U:H2'	22:DA:1743:G:C8	2.23	0.73
22:DA:2143:C:H3'	22:DA:2144:G:C8	2.23	0.73
2:AB:20:ARG:HA	2:AB:20:ARG:NH1	2.02	0.73
3:AC:10:ARG:NH2	3:AC:181:ILE:HG13	2.03	0.73
5:AE:14:LEU:HD13	5:AE:14:LEU:O	1.88	0.73
22:BA:335:C:H5"	42:BU:81:ARG:HD3	1.70	0.73
22:BA:2281:A:O2'	22:BA:2282:G:H5'	1.89	0.73
28:BG:30:GLY:HA3	28:BG:78:VAL:HG12	1.68	0.73
40:BS:2:GLU:O	40:BS:107:VAL:O	2.06	0.73
53:CA:381:C:O2	53:CA:381:C:H2'	1.87	0.73
53:CA:721:G:H4'	53:CA:722:G:O5'	1.89	0.73
53:CA:1347:G:N2	53:CA:1373:G:H2'	2.03	0.73
3:CC:9:ILE:HD12	14:CN:97:LYS:HD3	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:14:LEU:HD22	5:CE:59:ILE:HD13	1.70	0.73
22:DA:221:A:H5"	22:DA:222:A:OP1	1.88	0.73
22:DA:638:G:H2'	22:DA:639:U:C6	2.24	0.73
22:DA:962:G:H3'	22:DA:962:G:OP1	1.88	0.73
22:DA:1783:A:H5'	22:DA:2608:G:H4'	1.70	0.73
22:DA:1965:C:C5'	22:DA:1966:A:H5"	2.18	0.73
57:DB:67:G:HO2'	57:DB:68:C:H6	1.36	0.73
32:DK:2:ILE:HB	32:DK:33:ALA:HB3	1.68	0.73
45:DX:63:ILE:HD12	45:DX:64:ASP:H	1.53	0.73
22:BA:459:U:O2'	22:BA:460:A:H5'	1.88	0.73
22:BA:464:U:O2'	50:B2:16:HIS:CE1	2.41	0.73
22:BA:762:U:H4'	22:BA:763:G:O5'	1.88	0.73
22:BA:1277:G:H5'	35:BN:20:MET:CE	2.18	0.73
22:BA:1714:U:H2'	22:BA:1714:U:O2	1.88	0.73
40:BS:33:LEU:HD13	40:BS:51:LEU:HD23	1.70	0.73
43:BV:25:LYS:HD3	43:BV:43:ASP:HA	1.68	0.73
8:CH:11:THR:HG22	8:CH:14:ARG:HH12	1.52	0.73
8:CH:52:GLY:HA3	8:CH:56:PRO:HA	1.70	0.73
15:CO:39:GLN:OE1	22:DA:716:A:H1'	1.89	0.73
17:CQ:18:LYS:HD3	17:CQ:48:GLU:OE2	1.87	0.73
22:DA:1823:G:H5"	62:DC:409:HOH:O	1.87	0.73
42:DU:82:VAL:H	42:DU:96:LYS:HZ2	1.36	0.73
50:D2:19:ARG:NH2	50:D2:19:ARG:HB3	2.04	0.73
1:AA:110:C:H2'	1:AA:111:G:C8	2.23	0.73
1:AA:1201:A:H1'	1:AA:1202:U:OP2	1.88	0.73
3:AC:150:VAL:HG12	3:AC:199:VAL:HB	1.70	0.73
11:AK:42:GLY:HA3	11:AK:73:VAL:HG12	1.70	0.73
22:BA:594:U:H2'	22:BA:595:C:C6	2.22	0.73
33:BL:81:ASP:O	33:BL:82:LEU:HB3	1.89	0.73
40:BS:70:LYS:N	40:BS:70:LYS:HD2	2.03	0.73
46:BY:39:GLN:HB2	46:BY:41:HIS:CD2	2.24	0.73
53:CA:279:A:H4'	53:CA:280:C:O5'	1.86	0.73
53:CA:1160:G:C6	53:CA:1181:G:O6	2.41	0.73
22:DA:397:U:OP2	45:DX:9:LYS:HE2	1.89	0.73
22:DA:422:A:O2'	22:DA:423:A:H8	1.71	0.73
22:DA:675:A:OP1	26:DE:60:TRP:HZ2	1.71	0.73
1:AA:267:C:H5'	1:AA:267:C:H6	1.52	0.73
5:AE:110:MET:O	5:AE:114:LEU:HB2	1.89	0.73
13:AM:10:ASP:CG	13:AM:11:HIS:H	1.95	0.73
22:BA:2264:C:H41	44:BW:11:ASN:HD21	1.35	0.73
24:BC:14:HIS:O	24:BC:203:VAL:HG11	1.89	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:18:ARG:HG3	32:BK:18:ARG:NH1	1.99	0.73
34:BM:132:THR:HG22	34:BM:133:LYS:H	1.52	0.73
44:BW:28:GLU:HB3	44:BW:31:LEU:CD2	2.18	0.73
53:CA:412:A:H4'	53:CA:413:G:OP1	1.87	0.73
53:CA:664:G:H22	53:CA:741:G:H1	1.35	0.73
53:CA:977:A:O2'	53:CA:978:A:H5"	1.88	0.73
2:CB:74:ALA:HB1	2:CB:206:ILE:HD11	1.69	0.73
3:CC:76:ILE:HA	3:CC:83:VAL:HG13	1.71	0.73
41:DT:14:PRO:O	41:DT:15:HIS:HB2	1.87	0.73
44:DW:13:ARG:HG3	44:DW:14:ASP:H	1.53	0.73
1:AA:72:A:N6	1:AA:99:C:H1'	2.04	0.73
10:AJ:88:MET:HB3	10:AJ:89:ARG:HH12	1.52	0.73
24:BC:106:PRO:HB3	24:BC:141:HIS:CE1	2.23	0.73
29:BH:41:LYS:HA	29:BH:44:ILE:HG12	1.69	0.73
32:BK:85:VAL:HG11	32:BK:115:ILE:HD11	1.71	0.73
37:BP:4:ILE:HA	37:BP:7:LEU:HB2	1.70	0.73
53:CA:456:A:H2'	53:CA:457:G:C8	2.24	0.73
53:CA:1074:G:H4'	2:CB:101:THR:O	1.87	0.73
53:CA:1337:G:H5"	53:CA:1338:G:OP1	1.89	0.73
53:CA:1493:A:H3'	22:DA:1913:A:H62	1.52	0.73
4:CD:137:SER:O	4:CD:140:ASP:HB2	1.89	0.73
22:DA:2738:A:H2	22:DA:2766:A:H61	1.36	0.73
24:DC:79:ARG:HD3	24:DC:81:GLU:OE1	1.87	0.73
41:DT:29:THR:H	41:DT:87:LEU:HB2	1.53	0.73
53:CA:1224:U:C5'	53:CA:1225:A:OP2	2.36	0.73
9:CI:23:GLY:H	9:CI:60:LEU:HA	1.53	0.73
22:DA:127:A:N7	50:D2:46:LYS:HE3	2.04	0.73
22:DA:1474:U:C2'	22:DA:1475:G:H5'	2.19	0.73
22:DA:2311:A:H5'	22:DA:2312:U:C5	2.24	0.73
32:DK:21:CYS:HA	32:DK:41:ILE:HD12	1.70	0.73
44:DW:9:THR:HG23	44:DW:10:ARG:HG3	1.70	0.73
51:D3:31:ILE:HG21	51:D3:34:LYS:HZ3	1.53	0.73
1:AA:94:G:H4'	1:AA:95:C:C5'	2.18	0.73
16:AP:22:ALA:HA	16:AP:33:ILE:HG13	1.71	0.73
24:BC:208:GLY:HA2	24:BC:211:ARG:HB2	1.69	0.73
31:BJ:44:TYR:HA	38:BQ:59:LEU:HD21	1.71	0.73
40:BS:14:ALA:O	40:BS:18:ARG:HG3	1.88	0.73
53:CA:948:C:H5"	55:CM:104:ASN:HB3	1.70	0.73
2:CB:209:VAL:O	2:CB:213:LEU:HB2	1.89	0.73
6:CF:3:HIS:HD2	6:CF:65:GLU:HG2	1.53	0.73
11:CK:70:ALA:HA	11:CK:73:VAL:HG22	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:590:A:H2'	22:DA:591:U:H6	1.53	0.73
22:DA:2056:G:C2	22:DA:2057:G:C8	2.77	0.73
1:AA:439:U:H2'	1:AA:440:C:H5'	1.70	0.72
22:BA:137:U:O5'	22:BA:137:U:H6	1.71	0.72
23:BB:30:C:H2'	23:BB:31:C:H5'	1.71	0.72
30:BI:33:ASN:HD22	30:BI:64:ARG:NH2	1.85	0.72
34:BM:1:MET:O	34:BM:2:LEU:HB2	1.88	0.72
53:CA:274:A:H4'	53:CA:275:G:OP1	1.88	0.72
53:CA:510:A:H5"	53:CA:511:C:OP2	1.89	0.72
8:CH:82:LEU:HD12	12:CL:3:VAL:HG11	1.70	0.72
9:CI:18:VAL:HG11	9:CI:82:ILE:HA	1.71	0.72
9:CI:118:ARG:HH21	9:CI:122:ARG:HE	1.37	0.72
22:DA:1210:G:H4'	22:DA:1211:C:O5'	1.88	0.72
22:DA:1608:A:C8	22:DA:1611:C:N4	2.57	0.72
58:DF:103:ILE:HA	58:DF:107:VAL:HG21	1.70	0.72
33:DL:17:LYS:NZ	33:DL:19:LEU:HD22	2.03	0.72
6:AF:46:GLN:HE22	6:AF:55:HIS:HB2	1.52	0.72
17:AQ:80:LYS:HZ3	17:AQ:80:LYS:HB2	1.55	0.72
22:BA:2296:U:H4'	22:BA:2297:A:OP1	1.89	0.72
22:BA:2429:G:OP1	62:BA:3689:HOH:O	2.08	0.72
22:BA:2602:A:H4'	22:BA:2603:G:C5'	2.19	0.72
37:BP:3:ILE:HD13	37:BP:3:ILE:O	1.88	0.72
22:DA:321:U:O2'	22:DA:340:A:N3	2.22	0.72
22:DA:1387:A:N6	22:DA:1401:G:C6	2.56	0.72
1:AA:259:G:H2'	1:AA:260:G:H8	1.54	0.72
1:AA:1055:A:H1'	3:AC:155:ARG:NH2	2.02	0.72
12:AL:43:LYS:HB2	12:AL:44:PRO:CD	2.19	0.72
32:BK:5:GLN:O	32:BK:6:THR:HB	1.88	0.72
45:BX:5:GLN:NE2	45:BX:49:ARG:H	1.86	0.72
53:CA:1293:C:H2'	53:CA:1294:G:C8	2.24	0.72
22:BA:2136:G:H2'	22:BA:2137:U:C5	2.23	0.72
33:BL:110:VAL:O	33:BL:111:ILE:HB	1.88	0.72
38:BQ:63:ARG:CZ	38:BQ:96:ASP:HA	2.18	0.72
53:CA:985:C:C4	53:CA:986:U:O4	2.41	0.72
54:CG:24:LYS:O	54:CG:28:ILE:HG12	1.88	0.72
22:DA:1905:C:O4'	22:DA:1928:A:H2	1.69	0.72
22:DA:1941:C:H2'	22:DA:1942:C:C6	2.23	0.72
22:DA:2492:U:H2'	22:DA:2493:U:H6	1.53	0.72
22:DA:2822:G:H2'	22:DA:2823:A:H5"	1.72	0.72
24:DC:2:VAL:O	24:DC:3:VAL:HB	1.88	0.72
25:DD:124:ARG:HD3	25:DD:125:TRP:NE1	2.04	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:D0:12:ARG:HG3	48:D0:15:ARG:HH11	1.54	0.72
17:AQ:18:LYS:CA	17:AQ:47:ASP:HB2	2.19	0.72
17:AQ:55:GLY:HA3	17:AQ:82:VAL:HG11	1.72	0.72
22:BA:855:G:H21	44:BW:23:LYS:CG	2.00	0.72
22:BA:876:C:H2'	22:BA:877:A:O4'	1.88	0.72
22:BA:1415:U:O2	22:BA:1415:U:H2'	1.88	0.72
22:BA:2841:C:H2'	22:BA:2842:G:C8	2.24	0.72
27:BF:72:SER:HB2	27:BF:80:GLN:HB2	1.71	0.72
53:CA:1046:A:C2'	53:CA:1047:G:H5'	2.19	0.72
53:CA:1047:G:C2'	53:CA:1048:G:H5'	2.19	0.72
22:DA:254:G:N7	51:D3:4:LYS:HE2	2.05	0.72
22:DA:975:A:HO2'	22:DA:976:G:H8	0.78	0.72
22:DA:1019:U:O2'	22:DA:1021:A:N1	2.18	0.72
22:DA:1311:G:H1'	22:DA:1313:U:O4	1.90	0.72
22:DA:1951:U:H2'	22:DA:1953:A:OP2	1.88	0.72
35:DN:97:ILE:HD11	35:DN:99:LYS:HZ2	1.54	0.72
40:DS:8:ARG:O	40:DS:9:HIS:HB2	1.90	0.72
42:DU:92:VAL:HB	42:DU:101:THR:HG21	1.69	0.72
1:AA:667:G:H4'	15:AO:50:HIS:CE1	2.25	0.72
1:AA:1152:A:H5'	10:AJ:15:HIS:CD2	2.25	0.72
1:AA:1183:U:H3'	1:AA:1184:G:H5"	1.71	0.72
4:AD:33:ILE:O	4:AD:34:GLU:HB3	1.88	0.72
22:BA:2680:U:P	25:BD:114:LYS:HE2	2.29	0.72
30:BI:33:ASN:HD22	30:BI:64:ARG:HH22	1.36	0.72
31:BJ:44:TYR:CD2	38:BQ:63:ARG:HG2	2.24	0.72
39:BR:61:ALA:HB1	39:BR:98:ILE:H	1.54	0.72
53:CA:166:U:H2'	53:CA:167:A:H5'	1.70	0.72
53:CA:269:C:H2'	53:CA:270:A:C8	2.25	0.72
10:CJ:35:GLN:HG2	10:CJ:76:ILE:HG23	1.70	0.72
22:DA:538:A:H5"	31:DJ:7:LYS:NZ	2.05	0.72
22:DA:1567:G:H5"	24:DC:84:PRO:HG3	1.71	0.72
24:DC:77:VAL:HG23	24:DC:112:GLY:H	1.55	0.72
38:DQ:57:ARG:NH1	38:DQ:92:LYS:HE2	2.04	0.72
6:AF:86:ARG:NH1	18:AR:63:TYR:HB3	2.04	0.72
6:AF:91:ARG:HG3	6:AF:92:THR:H	1.55	0.72
15:AO:73:ASP:CG	15:AO:76:ARG:HG3	2.15	0.72
22:BA:790:U:H2'	62:BA:3746:HOH:O	1.88	0.72
34:BM:2:LEU:HD23	34:BM:69:PRO:HD2	1.72	0.72
46:BY:57:LEU:HA	46:BY:60:LYS:HB3	1.70	0.72
49:B1:33:LEU:N	49:B1:51:ALA:HB3	2.05	0.72
53:CA:1278:G:C4'	53:CA:1279:G:O5'	2.37	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1304:G:H1'	53:CA:1333:A:H61	1.54	0.72
54:CG:117:LEU:HA	54:CG:121:ASN:HB2	1.71	0.72
57:DB:83:G:OP1	47:DZ:16:LEU:HD21	1.89	0.72
57:DB:86:G:H2'	57:DB:87:U:H5"	1.71	0.72
1:AA:73:C:O2'	1:AA:74:A:O4'	2.06	0.72
22:BA:994:C:H3'	38:BQ:53:LYS:HE2	1.69	0.72
25:BD:8:LYS:HB2	25:BD:201:LEU:HD22	1.70	0.72
28:BG:140:ILE:HD12	28:BG:141:GLY:N	2.05	0.72
17:CQ:61:ARG:HG2	17:CQ:75:VAL:HG11	1.72	0.72
58:DF:64:PRO:HA	58:DF:88:VAL:HG22	1.72	0.72
29:DH:8:LYS:HD2	29:DH:9:VAL:N	2.05	0.72
35:DN:12:ARG:HG3	35:DN:13:ASN:H	1.54	0.72
41:DT:5:GLU:HA	41:DT:8:LEU:HD12	1.71	0.72
44:DW:19:ARG:HA	44:DW:34:SER:HA	1.72	0.72
1:AA:982:U:H4'	1:AA:983:A:C5'	2.20	0.72
2:AB:110:ILE:HD12	2:AB:147:LEU:HD13	1.70	0.72
20:AT:53:MET:HE3	20:AT:57:VAL:HG21	1.71	0.72
22:BA:284:U:H2'	22:BA:285:G:C8	2.24	0.72
22:BA:1187:G:H5"	39:BR:83:TYR:CE2	2.25	0.72
25:BD:92:VAL:O	25:BD:93:GLY:C	2.33	0.72
41:BT:39:THR:O	41:BT:40:LYS:HB2	1.89	0.72
44:BW:19:ARG:HA	44:BW:34:SER:HA	1.72	0.72
22:DA:2295:C:O2'	22:DA:2296:U:H5'	1.90	0.72
31:DJ:25:LEU:HD12	31:DJ:64:VAL:HA	1.70	0.72
1:AA:737:C:H2'	1:AA:738:C:H6	1.53	0.72
2:AB:163:ILE:O	2:AB:185:ILE:HG12	1.90	0.72
11:AK:126:ARG:CB	21:AU:33:ARG:HH12	2.03	0.72
22:BA:714:U:H5'	22:BA:715:A:OP2	1.89	0.72
22:BA:962:G:H21	22:BA:2250:G:H1	1.37	0.72
25:BD:97:SER:C	25:BD:99:GLU:HG2	2.15	0.72
32:BK:10:VAL:HG21	32:BK:16:ALA:HB1	1.72	0.72
35:BN:12:ARG:HD3	35:BN:16:HIS:CD2	2.25	0.72
53:CA:154:U:H2'	53:CA:155:A:H5'	1.72	0.72
53:CA:1029:U:H1'	53:CA:1033:G:O6	1.89	0.72
5:CE:13:LYS:HE2	5:CE:13:LYS:HA	1.71	0.72
9:CI:24:ASN:O	9:CI:61:ASP:HA	1.90	0.72
29:DH:59:ALA:HA	29:DH:63:ALA:HB3	1.70	0.72
39:DR:27:ILE:HG22	39:DR:28:ALA:N	2.03	0.72
1:AA:274:A:H4'	1:AA:275:G:OP1	1.90	0.71
2:AB:106:VAL:O	2:AB:110:ILE:HD13	1.88	0.71
25:BD:151:THR:HG22	25:BD:152:PRO:N	2.04	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BP:50:ARG:CG	37:BP:57:ALA:H	2.02	0.71
51:B3:40:LYS:HA	51:B3:43:LEU:HD12	1.71	0.71
53:CA:78:A:H2'	53:CA:79:G:C8	2.25	0.71
22:DA:312:G:H5'	22:DA:331:C:O2'	1.89	0.71
38:DQ:87:VAL:HG11	39:DR:52:PRO:HG3	1.72	0.71
1:AA:461:A:H3'	1:AA:461:A:N3	2.04	0.71
1:AA:473:U:H2'	1:AA:474:G:H8	1.55	0.71
1:AA:817:C:H4'	1:AA:818:G:OP1	1.90	0.71
5:AE:155:LYS:HD2	5:AE:156:ARG:N	2.05	0.71
11:AK:91:GLY:HA2	11:AK:94:SER:HB3	1.71	0.71
14:AN:22:LYS:HG3	14:AN:23:ARG:H	1.55	0.71
17:AQ:12:VAL:HG13	17:AQ:13:SER:N	2.05	0.71
22:BA:996:A:H4'	38:BQ:91:ARG:HG2	1.71	0.71
22:BA:1378:A:H4'	22:BA:1379:U:OP1	1.88	0.71
62:BB:315:HOH:O	43:BV:14:LYS:HD2	1.89	0.71
24:BC:199:HIS:O	24:BC:201:LEU:N	2.23	0.71
33:BL:9:ALA:O	33:BL:12:SER:HB3	1.90	0.71
53:CA:1387:G:H2'	53:CA:1388:C:C6	2.25	0.71
5:CE:103:GLY:HA3	5:CE:121:ASN:HA	1.72	0.71
22:DA:475:C:H2'	22:DA:476:G:C8	2.26	0.71
22:DA:505:A:O2'	22:DA:506:G:H5'	1.89	0.71
22:DA:1166:G:N2	22:DA:1184:U:H1'	2.04	0.71
22:DA:1280:G:H2'	22:DA:1281:G:H5'	1.72	0.71
22:DA:2443:C:O2'	22:DA:2444:G:H5'	1.90	0.71
57:DB:11:C:H5'	44:DW:71:LYS:HD3	1.71	0.71
2:AB:131:LYS:O	2:AB:135:MET:HB2	1.90	0.71
8:AH:6:ILE:HB	8:AH:76:ARG:HH12	1.55	0.71
35:BN:78:LYS:HG2	35:BN:83:LEU:HD22	1.70	0.71
44:BW:51:GLY:HA3	44:BW:59:PHE:CZ	2.25	0.71
50:B2:35:ARG:HG3	50:B2:42:LEU:HD11	1.72	0.71
2:CB:114:LYS:CA	2:CB:117:GLU:HG2	2.21	0.71
22:DA:1555:G:N2	22:DA:1556:C:C2	2.58	0.71
22:DA:2423:U:H5"	22:DA:2424:C:OP1	1.90	0.71
8:AH:17:GLN:NE2	8:AH:71:VAL:HG23	2.06	0.71
14:AN:22:LYS:HG3	14:AN:23:ARG:N	2.05	0.71
22:BA:560:C:O2	38:BQ:47:ARG:NH1	2.22	0.71
22:BA:1585:C:H2'	22:BA:1586:A:O4'	1.91	0.71
34:BM:23:GLY:O	34:BM:101:VAL:HG12	1.89	0.71
53:CA:983:A:O2'	53:CA:984:C:H5'	1.90	0.71
4:CD:109:THR:HG22	4:CD:111:ALA:N	2.05	0.71
8:CH:17:GLN:NE2	8:CH:69:ALA:HB1	2.05	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DI:113:ALA:HB1	30:DI:124:MET:SD	2.30	0.71
1:AA:1392:G:C2'	1:AA:1393:U:H5'	2.21	0.71
22:BA:1858:A:H2'	22:BA:1859:U:C6	2.25	0.71
26:BE:31:VAL:HG21	26:BE:104:ALA:CB	2.18	0.71
26:BE:95:LYS:O	26:BE:96:VAL:HB	1.88	0.71
27:BF:99:PHE:O	27:BF:103:ILE:HG12	1.91	0.71
53:CA:93:U:H2'	53:CA:95:C:C5	2.26	0.71
53:CA:1215:G:O2'	53:CA:1216:A:H8	1.72	0.71
54:CG:142:ARG:O	54:CG:146:ALA:HB3	1.90	0.71
9:CI:71:ILE:HD12	9:CI:72:SER:H	1.55	0.71
10:CJ:11:LYS:HB3	10:CJ:71:LEU:HD13	1.72	0.71
21:CU:39:LYS:N	21:CU:40:PRO:HD2	2.05	0.71
22:DA:9:G:H1	22:DA:2629:U:H2'	1.56	0.71
22:DA:1071:G:N7	22:DA:1089:A:C5	2.59	0.71
22:DA:1341:G:H3'	22:DA:1397:U:O2	1.91	0.71
22:DA:1590:A:H2'	22:DA:1591:A:C8	2.25	0.71
22:DA:1607:C:H4'	22:DA:1608:A:C8	2.24	0.71
22:DA:2286:G:H4'	22:DA:2287:A:C1'	2.21	0.71
22:DA:2503:A:H4'	22:DA:2504:U:OP1	1.90	0.71
37:DP:56:SER:O	37:DP:75:THR:HG22	1.91	0.71
39:DR:81:LYS:HD3	39:DR:81:LYS:N	2.04	0.71
2:AB:36:LYS:HA	2:AB:36:LYS:HE3	1.72	0.71
3:AC:139:ASN:HA	3:AC:142:ARG:HB2	1.73	0.71
11:AK:28:ASN:OD1	11:AK:46:ALA:HB3	1.89	0.71
24:BC:108:GLY:O	24:BC:109:LEU:HD22	1.90	0.71
28:BG:84:LYS:CG	28:BG:132:LEU:H	2.01	0.71
33:BL:57:LEU:HD22	51:B3:53:ASP:HB3	1.72	0.71
53:CA:250:A:H1'	53:CA:252:U:C4	2.26	0.71
53:CA:351:G:H4'	53:CA:352:C:OP2	1.88	0.71
53:CA:642:A:O2'	53:CA:643:C:C6	2.44	0.71
53:CA:643:C:H5"	8:CH:31:LEU:HD22	1.72	0.71
22:DA:587:C:H1'	22:DA:671:C:H5'	1.72	0.71
22:DA:745:G:H5"	22:DA:746:U:OP2	1.90	0.71
22:DA:1181:U:H2'	22:DA:1182:G:C8	2.26	0.71
22:DA:1441:G:H2'	22:DA:1442:U:C6	2.26	0.71
22:DA:1476:U:H1'	22:DA:1732:C:C2	2.26	0.71
28:DG:162:ARG:H	28:DG:162:ARG:HD2	1.55	0.71
37:DP:9:GLN:HB3	37:DP:12:MET:HE3	1.72	0.71
6:AF:81:ASN:HB3	6:AF:84:VAL:HG12	1.71	0.71
27:BF:35:LEU:CB	27:BF:153:ILE:HG22	2.15	0.71
31:BJ:17:VAL:HG23	31:BJ:137:PRO:HB2	1.73	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BQ:82:LEU:HD23	38:BQ:112:ALA:HB2	1.73	0.71
38:BQ:104:ALA:O	38:BQ:107:ALA:HB3	1.90	0.71
39:BR:39:LEU:HD23	39:BR:39:LEU:N	2.06	0.71
53:CA:60:A:C4'	53:CA:61:G:O5'	2.37	0.71
53:CA:72:A:N6	53:CA:99:C:H1'	2.06	0.71
53:CA:523:A:H61	12:CL:49:ARG:HH12	1.37	0.71
53:CA:892:A:O2'	53:CA:1415:G:H4'	1.90	0.71
53:CA:940:C:H5'	54:CG:101:ARG:NH2	2.05	0.71
22:DA:1258:U:H2'	22:DA:1259:G:C8	2.25	0.71
22:DA:2386:A:O2'	22:DA:2387:U:C6	2.42	0.71
26:DE:126:VAL:HG21	26:DE:134:LEU:HD13	1.73	0.71
31:DJ:18:VAL:HG13	31:DJ:56:VAL:HA	1.73	0.71
41:DT:67:VAL:HG23	41:DT:75:GLY:O	1.91	0.71
51:D3:33:THR:HG23	51:D3:34:LYS:N	2.06	0.71
1:AA:967:C:H1'	9:AI:129:ARG:HH22	1.55	0.71
22:BA:655:A:H4'	22:BA:656:G:OP1	1.90	0.71
22:BA:958:U:H5'	22:BA:958:U:H6	1.54	0.71
26:BE:24:ASN:O	26:BE:28:VAL:HG12	1.90	0.71
32:BK:47:ILE:HG13	32:BK:48:PRO:HD2	1.72	0.71
37:BP:4:ILE:HG22	37:BP:5:LYS:N	2.00	0.71
44:BW:46:ALA:HB3	44:BW:79:ILE:O	1.89	0.71
53:CA:67:C:OP1	53:CA:199:A:H5"	1.91	0.71
54:CG:137:ARG:CZ	54:CG:138:GLU:HG2	2.20	0.71
12:CL:3:VAL:HG23	12:CL:4:ASN:H	1.55	0.71
56:CP:1:MET:HA	56:CP:1:MET:HE3	1.73	0.71
22:DA:995:C:O2	31:DJ:3:THR:HG23	1.90	0.71
22:DA:2631:G:H2'	22:DA:2632:A:H5"	1.73	0.71
34:DM:19:GLY:H	34:DM:38:ARG:NH2	1.89	0.71
22:BA:819:A:OP2	22:BA:1187:G:N2	2.24	0.71
22:BA:1090:A:O2'	22:BA:1091:G:H5'	1.91	0.71
22:BA:1746:A:H2'	22:BA:1747:U:C6	2.26	0.71
22:BA:2199:A:C8	22:BA:2199:A:C5'	2.74	0.71
24:BC:77:VAL:HA	24:BC:93:VAL:HA	1.73	0.71
25:BD:13:ARG:HH12	37:BP:74:GLN:NE2	1.89	0.71
27:BF:40:GLY:CA	27:BF:84:ILE:HD11	2.21	0.71
53:CA:1049:U:H4'	53:CA:1050:G:OP2	1.90	0.71
56:CP:74:LEU:O	56:CP:78:VAL:HG23	1.91	0.71
22:DA:84:A:H5'	42:DU:5:ARG:HD2	1.73	0.71
22:DA:784:G:O2'	22:DA:785:G:H8	1.74	0.71
22:DA:806:C:H2'	22:DA:807:U:C6	2.25	0.71
22:DA:857:G:H1'	44:DW:19:ARG:NE	2.05	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:555:U:H2'	1:AA:556:C:C6	2.26	0.71
1:AA:731:G:OP1	1:AA:766:A:H1'	1.91	0.71
6:AF:6:ILE:HG12	6:AF:89:VAL:HG23	1.73	0.71
22:BA:1105:U:H2'	22:BA:1106:G:H8	1.55	0.71
28:BG:22:VAL:HG22	28:BG:36:LEU:CD1	2.21	0.71
29:BH:67:ALA:HA	29:BH:138:VAL:HB	1.73	0.71
34:BM:35:ALA:O	34:BM:128:THR:HA	1.91	0.71
2:CB:185:ILE:HG22	2:CB:199:ILE:HG13	1.72	0.71
22:DA:1313:U:O2	22:DA:1313:U:C2'	2.37	0.71
22:DA:2346:A:H3'	22:DA:2347:C:C5'	2.19	0.71
22:DA:2529:G:H4'	28:DG:174:LYS:HD3	1.72	0.71
58:DF:41:GLU:HG2	58:DF:42:ALA:H	1.56	0.71
41:DT:1:MET:HG2	41:DT:4:GLU:HA	1.72	0.71
1:AA:753:A:H4'	1:AA:754:C:O5'	1.90	0.70
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.26	0.70
2:AB:221:ARG:CZ	2:AB:221:ARG:HB3	2.21	0.70
5:AE:153:ALA:CA	5:AE:156:ARG:HB2	2.21	0.70
9:AI:32:ARG:HG2	9:AI:36:GLN:HB3	1.73	0.70
12:AL:23:LEU:HG	12:AL:24:GLU:H	1.56	0.70
22:BA:904:G:C4	22:BA:905:A:C8	2.79	0.70
26:BE:151:GLY:HA2	26:BE:192:ALA:HB2	1.72	0.70
31:BJ:31:GLU:HG3	31:BJ:142:ILE:HG21	1.72	0.70
41:BT:61:LEU:C	41:BT:61:LEU:HD12	2.15	0.70
49:B1:49:LYS:HG2	49:B1:50:GLU:H	1.55	0.70
53:CA:168:G:H2'	53:CA:169:C:H5'	1.72	0.70
22:DA:247:G:H4'	22:DA:386:G:C5	2.26	0.70
22:DA:1364:G:N7	45:DX:1:SER:HB2	2.06	0.70
22:DA:2230:G:H2'	22:DA:2231:U:C6	2.26	0.70
22:DA:2716:C:H2'	22:DA:2717:C:H6	1.56	0.70
57:DB:110:C:O2'	57:DB:111:U:H5'	1.90	0.70
51:D3:32:LEU:HD23	51:D3:35:LYS:HE2	1.72	0.70
2:AB:48:MET:HA	2:AB:48:MET:HE3	1.73	0.70
53:CA:1242:G:C2	53:CA:1243:C:H1'	2.27	0.70
22:DA:921:C:H2'	22:DA:922:C:H5'	1.72	0.70
22:DA:1717:A:H2'	22:DA:1718:G:O4'	1.90	0.70
22:DA:2313:C:O2'	22:DA:2314:A:H8	1.73	0.70
22:DA:2426:A:H3'	22:DA:2427:C:C5'	2.21	0.70
22:DA:2515:C:OP1	31:DJ:81:ILE:HG22	1.91	0.70
57:DB:116:G:H2'	57:DB:117:G:H8	1.57	0.70
25:DD:149:ASN:O	25:DD:152:PRO:HD2	1.91	0.70
9:AI:51:LEU:HB3	9:AI:56:MET:CG	2.21	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:62:VAL:HG21	12:AL:94:TYR:CE2	2.26	0.70
21:AU:36:PHE:HA	21:AU:39:LYS:HE2	1.71	0.70
22:BA:215:G:H4'	22:BA:216:A:OP1	1.91	0.70
53:CA:1169:A:H2'	53:CA:1170:A:H8	1.56	0.70
4:CD:195:ASN:HB3	4:CD:197:HIS:CD2	2.24	0.70
5:CE:147:ASN:HA	5:CE:151:MET:HE3	1.71	0.70
22:DA:1009:A:O2'	22:DA:1010:A:C8	2.43	0.70
22:DA:1416:G:C6	22:DA:1417:C:N4	2.59	0.70
22:DA:1490:A:N3	22:DA:1490:A:H5'	2.06	0.70
22:DA:1799:G:H4'	22:DA:1800:C:O5'	1.89	0.70
58:DF:28:PRO:HB2	58:DF:168:LEU:HD21	1.73	0.70
38:DQ:101:ASP:HB2	39:DR:2:TYR:OH	1.92	0.70
50:D2:19:ARG:HB3	50:D2:19:ARG:HH21	1.56	0.70
1:AA:267:C:H5'	1:AA:267:C:C6	2.26	0.70
17:AQ:18:LYS:HA	17:AQ:47:ASP:CB	2.20	0.70
22:BA:902:C:H2'	22:BA:903:C:C6	2.26	0.70
22:BA:1786:A:H1'	22:BA:1938:A:N6	2.06	0.70
22:BA:2352:A:C6	44:BW:30:VAL:HG11	2.25	0.70
22:BA:2353:G:H1'	44:BW:30:VAL:HG13	1.74	0.70
24:BC:180:MET:HG3	24:BC:268:ARG:NH1	2.06	0.70
44:BW:50:VAL:O	44:BW:52:CYS:N	2.21	0.70
53:CA:51:A:H4'	53:CA:52:C:C5'	2.20	0.70
53:CA:1151:A:O2'	53:CA:1152:A:C8	2.39	0.70
53:CA:1347:G:H22	53:CA:1373:G:H2'	1.56	0.70
12:CL:43:LYS:CB	12:CL:44:PRO:CD	2.68	0.70
55:CM:13:HIS:HB2	55:CM:43:LYS:HE2	1.72	0.70
22:DA:332:A:C4	22:DA:335:C:N4	2.60	0.70
22:DA:352:A:C4	22:DA:353:C:H1'	2.27	0.70
22:DA:1439:A:N7	22:DA:1440:U:C1'	2.55	0.70
22:DA:1453:A:H4'	22:DA:1454:C:OP2	1.90	0.70
22:DA:1480:C:H2'	22:DA:1481:U:O4'	1.92	0.70
24:DC:122:ALA:HB3	24:DC:127:ASN:ND2	2.07	0.70
38:DQ:24:TYR:O	38:DQ:27:ARG:HB3	1.91	0.70
47:DZ:16:LEU:H	47:DZ:16:LEU:CD2	2.04	0.70
8:AH:5:PRO:HB2	8:AH:32:LYS:NZ	2.06	0.70
22:BA:1076:C:H2'	22:BA:1077:A:C8	2.26	0.70
22:BA:1085:A:H3'	22:BA:1086:A:C2	2.26	0.70
24:BC:12:ARG:HH11	24:BC:12:ARG:HG3	1.56	0.70
53:CA:1066:C:H2'	53:CA:1067:A:C8	2.26	0.70
55:CM:12:LYS:HB3	55:CM:17:ALA:HB2	1.73	0.70
18:CR:32:ILE:HD12	18:CR:33:THR:O	1.92	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1605:C:H4'	22:DA:1610:A:C6	2.26	0.70
22:DA:1639:C:H2'	22:DA:1640:A:H5"	1.72	0.70
22:DA:2142:A:H2'	22:DA:2144:G:P	2.32	0.70
22:DA:2520:C:H2'	22:DA:2521:C:H6	1.55	0.70
24:DC:8:THR:O	24:DC:9:SER:HB3	1.89	0.70
24:DC:224:MET:SD	24:DC:229:HIS:HB2	2.32	0.70
28:DG:126:THR:HG22	28:DG:127:GLN:H	1.56	0.70
31:DJ:57:LEU:HG	31:DJ:128:ASN:H	1.56	0.70
32:DK:104:THR:OG1	32:DK:106:GLU:HB2	1.92	0.70
4:AD:117:VAL:N	4:AD:122:ILE:HD11	2.06	0.70
22:BA:1734:G:H2'	22:BA:1735:A:C8	2.19	0.70
24:BC:29:PHE:CE2	24:BC:31:PRO:HG2	2.26	0.70
27:BF:43:ILE:HG22	27:BF:82:TYR:CE1	2.27	0.70
29:BH:117:LEU:HD11	29:BH:130:VAL:HG11	1.74	0.70
37:BP:112:ARG:C	37:BP:113:LEU:HD23	2.17	0.70
53:CA:1130:A:C5	53:CA:1146:A:C6	2.79	0.70
4:CD:137:SER:HB2	4:CD:138:PRO:HD2	1.74	0.70
22:DA:410:G:C6	22:DA:2407:A:N6	2.59	0.70
22:DA:1178:C:H2'	22:DA:1179:G:O4'	1.92	0.70
22:DA:1651:G:N2	22:DA:2007:U:C2	2.59	0.70
22:DA:1716:U:HO2'	22:DA:1717:A:H8	0.74	0.70
1:AA:1458:G:H5'	20:AT:26:MET:HB3	1.73	0.70
20:AT:53:MET:CE	20:AT:57:VAL:HG21	2.21	0.70
22:BA:243:U:OP1	51:B3:5:THR:CG2	2.39	0.70
22:BA:404:A:H1'	22:BA:405:U:OP2	1.92	0.70
22:BA:481:G:C4	22:BA:507:A:C2	2.79	0.70
22:BA:1936:A:H2	22:BA:1943:U:C5	2.10	0.70
26:BE:46:GLN:HG3	26:BE:86:ALA:HA	1.72	0.70
33:BL:91:ASP:CB	33:BL:94:THR:HB	2.21	0.70
53:CA:89:U:O2'	53:CA:90:C:O4'	2.09	0.70
53:CA:1226:C:O2'	53:CA:1227:A:H5'	1.91	0.70
22:DA:45:G:H5'	22:DA:46:G:H5'	1.73	0.70
22:DA:774:G:HO2'	22:DA:775:G:H8	1.39	0.70
22:DA:846:U:O2'	22:DA:847:U:H5"	1.92	0.70
22:DA:931:U:O2	22:DA:931:U:C2'	2.36	0.70
34:DM:41:LEU:HD23	34:DM:46:ILE:HG22	1.74	0.70
1:AA:1441:A:H62	1:AA:1461:G:N2	1.87	0.70
2:AB:76:SER:HB2	2:AB:92:ASN:HB2	1.72	0.70
22:BA:574:A:H2	25:BD:150:GLN:HE22	1.37	0.70
25:BD:13:ARG:HH12	37:BP:74:GLN:HE21	1.39	0.70
26:BE:175:ILE:HG23	26:BE:175:ILE:O	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BG:85:LYS:HG2	28:BG:131:VAL:CG1	2.21	0.70
29:BH:27:ARG:NH1	29:BH:38:PRO:HG3	2.07	0.70
31:BJ:81:ILE:HG23	31:BJ:82:GLY:N	2.06	0.70
40:BS:59:GLU:HA	40:BS:64:ALA:CB	2.21	0.70
51:B3:31:ILE:CD1	51:B3:34:LYS:HD2	2.19	0.70
53:CA:512:U:O2'	53:CA:513:C:H5'	1.91	0.70
6:CF:18:VAL:HG21	6:CF:58:HIS:CD2	2.26	0.70
22:DA:674:G:H2'	22:DA:804:A:H61	1.57	0.70
22:DA:1056:G:N2	22:DA:1102:C:H5	1.89	0.70
22:DA:1324:G:H1'	22:DA:1616:A:N6	2.07	0.70
22:DA:1364:G:C5	45:DX:1:SER:HB2	2.26	0.70
24:DC:51:ARG:O	24:DC:53:ILE:HG22	1.91	0.70
24:DC:166:ARG:HB2	24:DC:171:VAL:HG22	1.72	0.70
35:DN:90:ARG:HH21	35:DN:116:VAL:HG11	1.55	0.70
36:DO:23:ALA:O	36:DO:42:PRO:HG3	1.91	0.70
1:AA:86:G:N2	1:AA:87:C:N4	2.39	0.70
1:AA:267:C:H2'	1:AA:268:U:H6	1.57	0.70
12:AL:74:GLN:HG3	12:AL:75:GLU:HG2	1.73	0.70
29:BH:8:LYS:O	29:BH:13:GLY:HA3	1.92	0.70
41:BT:64:LYS:HA	41:BT:79:ASP:OD1	1.92	0.70
3:CC:39:ARG:HG2	3:CC:54:ILE:HD13	1.72	0.70
54:CG:64:ALA:HB2	54:CG:126:ALA:HB1	1.72	0.70
55:CM:13:HIS:HB3	55:CM:16:ILE:HB	1.73	0.70
21:CU:37:TYR:O	21:CU:38:GLU:HG2	1.91	0.70
22:DA:17:G:H4'	38:DQ:24:TYR:HE1	1.56	0.70
41:DT:87:LEU:HD23	41:DT:88:LYS:N	2.07	0.70
20:AT:27:MET:O	20:AT:31:ILE:HG13	1.92	0.70
22:BA:26:G:H1'	22:BA:514:A:H61	1.57	0.70
22:BA:38:A:N3	26:BE:43:THR:HB	2.07	0.70
22:BA:1779:U:C5	22:BA:1784:A:N7	2.58	0.70
22:BA:2180:U:H2'	22:BA:2181:U:C5	2.26	0.70
22:BA:2897:U:H2'	22:BA:2898:U:C6	2.27	0.70
24:BC:141:HIS:HB2	24:BC:190:THR:HB	1.74	0.70
47:BZ:15:ARG:HA	47:BZ:15:ARG:HH11	1.57	0.70
53:CA:330:C:O2'	53:CA:331:G:O5'	2.09	0.70
53:CA:1067:A:H1'	53:CA:1068:G:C8	2.26	0.70
56:CP:44:SER:H	56:CP:46:LYS:NZ	1.89	0.70
22:DA:41:C:H2'	22:DA:42:A:C8	2.27	0.70
22:DA:1439:A:C2	22:DA:1553:A:N7	2.59	0.70
1:AA:1138:G:O2'	1:AA:1139:G:H4'	1.92	0.69
22:BA:1138:G:H5"	22:BA:1139:G:OP2	1.91	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1180:U:H2'	22:BA:1181:U:C6	2.27	0.69
53:CA:642:A:O2'	53:CA:643:C:H6	1.74	0.69
10:CJ:12:ALA:HB3	10:CJ:18:ILE:HB	1.73	0.69
22:DA:528:A:C2	22:DA:2042:A:H2'	2.26	0.69
22:DA:1507:C:H5'	22:DA:1508:A:OP2	1.92	0.69
24:DC:184:GLU:HB2	24:DC:187:CYS:SG	2.32	0.69
30:DI:57:VAL:HG12	30:DI:58:ILE:H	1.57	0.69
1:AA:1452:C:H5'	1:AA:1453:G:C6	2.26	0.69
2:AB:77:GLU:HB2	2:AB:80:LYS:HE2	1.74	0.69
19:AS:51:HIS:CD2	19:AS:53:GLY:H	2.10	0.69
22:BA:161:A:H3'	22:BA:162:U:C5'	2.22	0.69
22:BA:1150:C:C2'	22:BA:1151:A:O5'	2.39	0.69
22:BA:1414:C:C4	22:BA:1415:U:H5	2.09	0.69
24:BC:77:VAL:HG22	24:BC:77:VAL:O	1.91	0.69
30:BI:89:SER:HB3	30:BI:92:PRO:HG3	1.72	0.69
39:BR:39:LEU:HA	39:BR:49:ILE:CG2	2.21	0.69
53:CA:6:G:N3	53:CA:6:G:C2'	2.52	0.69
53:CA:210:C:O2	53:CA:210:C:H2'	1.92	0.69
53:CA:252:U:H2'	53:CA:253:A:H8	1.56	0.69
22:DA:79:C:H2'	22:DA:80:G:O4'	1.92	0.69
22:DA:85:G:HO2'	22:DA:86:G:H8	1.40	0.69
22:DA:275:C:H2'	22:DA:276:U:O4'	1.92	0.69
22:DA:2420:C:OP1	51:D3:33:THR:HB	1.92	0.69
22:DA:2875:C:O2'	22:DA:2876:G:C8	2.32	0.69
1:AA:111:G:O6	1:AA:330:C:N4	2.25	0.69
1:AA:344:A:H4'	1:AA:345:C:OP2	1.92	0.69
1:AA:390:U:H2'	1:AA:391:G:C8	2.28	0.69
1:AA:818:G:O2'	1:AA:819:A:H5'	1.91	0.69
1:AA:1101:A:C4'	1:AA:1102:A:O5'	2.40	0.69
2:AB:116:LEU:HD12	2:AB:140:LEU:HD11	1.74	0.69
22:BA:2547:A:H2'	22:BA:2548:U:C6	2.28	0.69
30:BI:74:PRO:O	30:BI:77:VAL:HG22	1.93	0.69
31:BJ:110:PRO:HB2	31:BJ:111:LYS:HG3	1.73	0.69
53:CA:536:C:OP1	62:CA:1882:HOH:O	2.09	0.69
53:CA:1279:G:H5'	10:CJ:9:ARG:HH12	1.56	0.69
53:CA:1514:G:H2'	53:CA:1515:G:H8	1.57	0.69
22:DA:1797:G:O3'	24:DC:255:LYS:O	2.10	0.69
22:DA:1904:G:H1'	22:DA:1927:A:N1	2.07	0.69
37:DP:50:ARG:HA	37:DP:57:ALA:O	1.92	0.69
5:AE:156:ARG:O	5:AE:158:LYS:N	2.25	0.69
12:AL:23:LEU:HB2	12:AL:58:ASN:ND2	2.06	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:6:ALA:HB1	20:AT:9:ARG:HB2	1.73	0.69
20:AT:66:ILE:HD11	20:AT:70:LYS:HE3	1.73	0.69
22:BA:2485:G:H5"	34:BM:45:GLN:HE21	1.56	0.69
30:BI:98:GLY:HA3	30:BI:137:LEU:HD23	1.74	0.69
35:BN:8:ARG:HD2	35:BN:43:GLU:HG3	1.73	0.69
44:BW:30:VAL:HG22	44:BW:30:VAL:O	1.93	0.69
53:CA:613:C:H2'	53:CA:614:C:C6	2.26	0.69
53:CA:1160:G:O6	53:CA:1181:G:O6	2.11	0.69
5:CE:135:VAL:O	5:CE:138:ALA:HB3	1.92	0.69
12:CL:33:CYS:HB3	12:CL:77:SER:O	1.93	0.69
22:DA:810:U:O4	33:DL:30:THR:HG22	1.92	0.69
22:DA:876:C:C2'	22:DA:877:A:OP1	2.40	0.69
22:DA:1866:A:H2'	22:DA:1867:G:C8	2.28	0.69
31:DJ:35:ARG:NH1	31:DJ:140:LEU:HD11	2.07	0.69
31:DJ:106:LYS:HB2	31:DJ:119:PHE:HE2	1.55	0.69
1:AA:408:A:OP1	4:AD:109:THR:HG21	1.93	0.69
13:AM:78:ARG:O	13:AM:82:LEU:HG	1.91	0.69
21:AU:16:ARG:HH11	21:AU:19:LYS:HG3	1.58	0.69
28:BG:15:ASP:CG	28:BG:16:VAL:N	2.50	0.69
33:BL:38:GLN:O	33:BL:40:SER:O	2.11	0.69
53:CA:920:U:H2'	53:CA:921:U:C6	2.28	0.69
53:CA:1129:C:O2'	53:CA:1130:A:C8	2.45	0.69
15:CO:7:THR:O	15:CO:11:VAL:HG23	1.91	0.69
17:CQ:46:HIS:HB2	17:CQ:70:LYS:CE	2.21	0.69
22:DA:649:G:H2'	22:DA:650:C:H6	1.56	0.69
22:DA:1080:A:H2'	22:DA:1081:U:C6	2.27	0.69
22:DA:1245:G:H4'	26:DE:33:VAL:HG11	1.73	0.69
57:DB:50:A:C2	57:DB:51:G:H1'	2.27	0.69
29:DH:97:ARG:O	29:DH:98:ASP:HB2	1.92	0.69
31:DJ:45:THR:H	31:DJ:46:PRO:HD3	1.57	0.69
41:DT:20:ALA:HB1	41:DT:31:VAL:HG21	1.75	0.69
42:DU:81:ARG:HD2	42:DU:81:ARG:H	1.56	0.69
47:DZ:18:LYS:O	47:DZ:22:THR:HG23	1.93	0.69
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.28	0.69
5:AE:120:HIS:O	5:AE:121:ASN:HB3	1.91	0.69
22:BA:1537:G:H2'	22:BA:1538:G:O4'	1.93	0.69
38:BQ:111:LYS:CE	39:BR:50:GLY:HA2	2.22	0.69
53:CA:413:G:N1	4:CD:32:LYS:HE3	2.06	0.69
53:CA:704:A:H2'	53:CA:705:G:C8	2.28	0.69
53:CA:1225:A:H4'	19:CS:77:ARG:NH1	2.08	0.69
8:CH:54:THR:HG23	8:CH:55:LYS:H	1.55	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:2:THR:HG22	12:CL:4:ASN:N	2.06	0.69
12:CL:2:THR:HB	12:CL:5:GLN:HB2	1.74	0.69
22:DA:206:U:H2'	22:DA:207:A:C8	2.21	0.69
22:DA:2353:G:H1'	44:DW:30:VAL:HG13	1.74	0.69
22:DA:2902:C:H2'	22:DA:2903:U:O4'	1.91	0.69
1:AA:374:A:H5"	1:AA:452:A:N1	2.08	0.69
22:BA:2703:C:H2'	22:BA:2704:C:H6	1.57	0.69
44:BW:40:ARG:H	44:BW:56:HIS:HB3	1.56	0.69
53:CA:974:A:O2'	53:CA:975:A:OP1	2.07	0.69
14:CN:40:ARG:NH1	19:CS:6:LYS:HB2	2.07	0.69
22:DA:12:U:O2	22:DA:12:U:H2'	1.93	0.69
22:DA:181:A:C2	22:DA:434:U:H1'	2.25	0.69
22:DA:412:A:N6	22:DA:2412:A:O4'	2.25	0.69
22:DA:642:U:H4'	22:DA:2349:G:O2'	1.93	0.69
22:DA:1245:G:OP1	33:DL:8:PRO:HG3	1.92	0.69
22:DA:1586:A:H2'	22:DA:1587:G:H8	1.57	0.69
22:DA:1904:G:O2'	22:DA:1927:A:N6	2.26	0.69
29:DH:27:ARG:NH1	45:DX:59:ASP:HA	2.08	0.69
34:DM:41:LEU:HD11	34:DM:126:ILE:HD11	1.75	0.69
43:DV:80:HIS:HD2	43:DV:82:TYR:H	1.40	0.69
1:AA:1160:G:O6	1:AA:1181:G:C6	2.45	0.69
2:AB:119:GLN:HA	2:AB:122:ASP:HB2	1.75	0.69
6:AF:55:HIS:O	6:AF:56:LYS:HB2	1.92	0.69
8:AH:88:LYS:HA	8:AH:91:LEU:HD12	1.75	0.69
10:AJ:42:LEU:HB3	10:AJ:43:PRO:HD2	1.73	0.69
22:BA:320:A:H4'	22:BA:322:A:N7	2.06	0.69
22:BA:1859:U:H2'	22:BA:1860:G:H8	1.58	0.69
22:BA:2180:U:H2'	22:BA:2181:U:H5	1.58	0.69
22:BA:2405:G:O2'	22:BA:2406:A:OP1	2.09	0.69
22:BA:2428:G:H5"	22:BA:2429:G:OP1	1.92	0.69
31:BJ:88:THR:HG22	31:BJ:91:GLU:HG3	1.74	0.69
43:BV:80:HIS:CD2	43:BV:82:TYR:H	2.11	0.69
52:B4:3:VAL:O	52:B4:4:ARG:O	2.10	0.69
53:CA:16:A:H2'	53:CA:17:U:H5'	1.74	0.69
53:CA:372:C:C1'	53:CA:373:A:OP2	2.39	0.69
53:CA:374:A:OP1	53:CA:452:A:N1	2.26	0.69
53:CA:1242:G:O2'	53:CA:1243:C:O4'	2.10	0.69
53:CA:1250:A:H2'	53:CA:1251:A:O4'	1.92	0.69
3:CC:76:ILE:HD11	3:CC:102:ILE:HD11	1.74	0.69
17:CQ:30:HIS:CE1	17:CQ:32:ILE:HG13	2.27	0.69
22:DA:876:C:O2	22:DA:876:C:C5'	2.41	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1558:C:H4'	22:DA:1559:U:H5'	1.73	0.69
22:DA:2800:A:C2'	22:DA:2801:G:H4'	2.22	0.69
24:DC:128:THR:CG2	24:DC:188:ARG:HB3	2.22	0.69
58:DF:5:ASP:C	58:DF:7:TYR:H	2.01	0.69
58:DF:76:PHE:HD2	58:DF:76:PHE:H	1.39	0.69
34:DM:22:GLN:HB2	34:DM:100:LYS:HZ3	1.57	0.69
39:DR:82:HIS:O	39:DR:82:HIS:CG	2.44	0.69
42:DU:58:VAL:HG13	42:DU:60:LYS:HG2	1.74	0.69
51:D3:22:LYS:H	51:D3:48:MET:HB3	1.55	0.69
1:AA:414:A:N6	1:AA:431:A:N3	2.41	0.69
53:CA:252:U:H5'	53:CA:252:U:C6	2.26	0.69
53:CA:692:U:O2'	53:CA:694:A:N7	2.23	0.69
2:CB:19:THR:HG22	2:CB:37:VAL:HG23	1.74	0.69
6:CF:54:LEU:HD12	6:CF:56:LYS:O	1.91	0.69
22:DA:633:A:O5'	22:DA:633:A:H8	1.76	0.69
22:DA:807:U:H1'	22:DA:2445:G:H5'	1.74	0.69
22:DA:973:A:OP1	22:DA:973:A:H8	1.75	0.69
22:DA:1206:G:H2'	22:DA:1207:C:C6	2.27	0.69
24:BC:131:MET:HA	24:BC:134:ILE:HD12	1.74	0.69
53:CA:267:C:OP2	17:CQ:68:LYS:HD2	1.93	0.69
53:CA:1011:C:H2'	53:CA:1012:A:C8	2.28	0.69
14:CN:96:LYS:HD2	14:CN:96:LYS:H	1.57	0.69
21:CU:24:LYS:HG3	21:CU:25:ALA:N	2.02	0.69
22:DA:246:C:H2'	22:DA:247:G:H5'	1.75	0.69
22:DA:1388:G:H2'	22:DA:1389:G:H8	1.58	0.69
22:DA:1776:G:N2	22:DA:1789:A:H1'	2.09	0.69
22:DA:2401:U:H5"	22:DA:2402:U:OP2	1.93	0.69
22:DA:2838:G:H1'	35:DN:45:ARG:NH2	2.05	0.69
58:DF:42:ALA:HB2	58:DF:49:LEU:HD21	1.75	0.69
2:AB:71:THR:O	2:AB:72:LYS:HG2	1.93	0.68
4:AD:100:VAL:HG12	4:AD:100:VAL:O	1.93	0.68
22:BA:34:U:H1'	22:BA:35:G:OP1	1.93	0.68
25:BD:114:LYS:N	25:BD:114:LYS:CE	2.56	0.68
53:CA:90:C:O2'	53:CA:91:U:H5'	1.93	0.68
53:CA:532:A:C8	3:CC:192:TYR:CE2	2.81	0.68
53:CA:984:C:O2'	53:CA:985:C:C6	2.46	0.68
53:CA:1101:A:C4'	53:CA:1102:A:O5'	2.40	0.68
53:CA:1242:G:O2'	53:CA:1243:C:O5'	2.11	0.68
3:CC:110:LEU:HD21	3:CC:203:LYS:HD2	1.75	0.68
22:DA:78:U:O2'	22:DA:79:C:H5'	1.93	0.68
22:DA:1071:G:O2'	22:DA:1072:C:C5'	2.40	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DM:17:ASN:HB3	34:DM:38:ARG:NH2	2.08	0.68
39:DR:89:HIS:NE2	39:DR:91:GLN:HB2	2.08	0.68
46:DY:2:LYS:HD2	46:DY:4:LYS:HE3	1.75	0.68
1:AA:409:U:OP1	4:AD:23:GLY:HA3	1.94	0.68
1:AA:1003:G:N2	1:AA:1005:A:H5'	2.08	0.68
1:AA:1405:G:O4'	1:AA:1519:A:H4'	1.93	0.68
12:AL:79:ILE:HD12	12:AL:96:THR:HG21	1.74	0.68
21:AU:9:GLU:CG	21:AU:10:PRO:HD3	2.19	0.68
22:BA:1097:U:O2'	30:BI:8:VAL:HG12	1.93	0.68
37:BP:77:SER:OG	37:BP:79:VAL:HG13	1.92	0.68
44:BW:76:ARG:HG3	44:BW:76:ARG:NH2	1.91	0.68
53:CA:86:G:O2'	53:CA:87:C:P	2.50	0.68
53:CA:238:A:H2'	53:CA:239:U:C5'	2.22	0.68
14:CN:68:ARG:HG3	14:CN:69:PRO:HD2	1.73	0.68
22:DA:614:A:C4'	22:DA:616:A:H62	2.05	0.68
57:DB:12:C:C4'	57:DB:13:G:OP1	2.24	0.68
51:D3:15:LYS:NZ	51:D3:19:GLY:HA2	2.09	0.68
1:AA:706:A:O2'	11:AK:30:ILE:HD11	1.92	0.68
21:AU:10:PRO:O	21:AU:11:PHE:HB3	1.93	0.68
27:BF:39:VAL:CG1	27:BF:49:LEU:HD13	2.24	0.68
30:BI:20:SER:HB3	30:BI:21:PRO:HD3	1.75	0.68
53:CA:518:C:H2'	53:CA:530:G:N7	2.08	0.68
53:CA:765:G:C5	53:CA:812:G:C5	2.81	0.68
53:CA:1054:C:O2'	53:CA:1055:A:H5"	1.92	0.68
53:CA:1520:C:H2'	53:CA:1521:C:C6	2.29	0.68
54:CG:59:GLU:OE2	54:CG:63:VAL:HG23	1.92	0.68
22:DA:225:C:H2'	22:DA:226:A:O4'	1.91	0.68
22:DA:2492:U:H2'	22:DA:2493:U:C6	2.29	0.68
22:DA:2519:U:C6	22:DA:2542:A:N6	2.61	0.68
58:DF:48:LEU:HD23	58:DF:48:LEU:H	1.57	0.68
58:DF:91:ARG:HH21	58:DF:91:ARG:HB3	1.59	0.68
32:DK:101:GLY:O	32:DK:120:PRO:HB3	1.92	0.68
38:DQ:90:ASP:O	38:DQ:94:LEU:HB2	1.93	0.68
41:DT:6:ARG:O	41:DT:9:LYS:HD2	1.93	0.68
22:BA:141:G:H5'	22:BA:142:A:C8	2.28	0.68
22:BA:1068:G:H2'	22:BA:1069:A:H5'	1.74	0.68
24:BC:210:ALA:O	24:BC:215:VAL:HG23	1.94	0.68
36:BO:75:GLY:HA3	36:BO:109:ALA:HB3	1.74	0.68
37:BP:51:ASN:C	37:BP:52:ARG:HG2	2.18	0.68
22:DA:95:A:H4'	46:DY:38:GLN:O	1.92	0.68
22:DA:664:G:H4'	22:DA:941:A:OP1	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1062:G:O4'	22:DA:1088:A:N7	2.26	0.68
22:DA:1205:A:H5"	22:DA:1206:G:N7	2.08	0.68
22:DA:2798:U:H5'	22:DA:2800:A:C5	2.27	0.68
24:DC:9:SER:O	24:DC:12:ARG:HB2	1.93	0.68
29:DH:78:VAL:HB	29:DH:144:VAL:HA	1.74	0.68
31:DJ:44:TYR:O	31:DJ:45:THR:HB	1.92	0.68
34:DM:62:LYS:HG2	34:DM:64:TRP:CZ2	2.29	0.68
35:DN:114:GLU:HG3	35:DN:118:ARG:HD3	1.75	0.68
51:D3:31:ILE:HG21	51:D3:34:LYS:NZ	2.08	0.68
1:AA:877:G:N2	8:AH:1:SER:HB2	2.06	0.68
3:AC:128:MET:HB3	3:AC:131:ARG:HG3	1.74	0.68
9:AI:34:LEU:HD11	9:AI:47:VAL:HG21	1.73	0.68
21:AU:36:PHE:HD1	21:AU:39:LYS:HB3	1.58	0.68
22:BA:74:A:H4'	22:BA:75:G:O5'	1.94	0.68
22:BA:903:C:C2	22:BA:904:G:N7	2.62	0.68
53:CA:977:A:H8	53:CA:1223:C:N3	1.91	0.68
53:CA:1167:A:N7	53:CA:1169:A:N6	2.41	0.68
4:CD:57:LYS:HG3	4:CD:58:GLN:N	2.08	0.68
5:CE:80:LEU:HD22	5:CE:146:MET:HE1	1.74	0.68
5:CE:131:ASN:O	5:CE:135:VAL:HG23	1.92	0.68
56:CP:52:LEU:HD21	56:CP:75:ILE:HG12	1.76	0.68
20:CT:24:ARG:HD3	20:CT:28:ARG:HH21	1.58	0.68
21:CU:33:ARG:HH12	21:CU:34:ARG:HD3	1.56	0.68
22:DA:482:A:N6	22:DA:506:G:N9	2.41	0.68
22:DA:1467:U:H2'	22:DA:1468:U:H5'	1.74	0.68
22:DA:1723:G:H2'	22:DA:1724:G:H8	1.57	0.68
22:DA:2195:U:H2'	22:DA:2196:C:H6	1.56	0.68
22:DA:2297:A:N3	22:DA:2298:A:C8	2.61	0.68
22:DA:2798:U:H5'	22:DA:2800:A:C6	2.29	0.68
33:DL:96:LYS:HD3	33:DL:103:ILE:HA	1.76	0.68
34:DM:108:VAL:HG21	34:DM:112:LEU:HB3	1.75	0.68
42:DU:14:THR:HB	42:DU:68:ASN:HB3	1.76	0.68
1:AA:430:A:OP1	4:AD:8:LEU:HB2	1.93	0.68
2:AB:185:ILE:HA	2:AB:199:ILE:HB	1.76	0.68
13:AM:106:ARG:HA	13:AM:106:ARG:HH11	1.59	0.68
22:BA:743:A:O3'	62:BA:3643:HOH:O	2.11	0.68
22:BA:790:U:O2'	22:BA:791:C:O5'	2.11	0.68
22:BA:1256:G:C2'	26:BE:77:ILE:HD11	2.23	0.68
27:BF:131:VAL:HG22	27:BF:151:LEU:H	1.59	0.68
37:BP:21:PRO:HA	37:BP:46:VAL:CG1	2.23	0.68
53:CA:205:A:C6	53:CA:206:C:N4	2.61	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1278:G:H4'	53:CA:1279:G:C5'	2.23	0.68
6:CF:92:THR:O	6:CF:93:LYS:HG2	1.93	0.68
14:CN:60:ARG:HG2	14:CN:61:ASN:H	1.58	0.68
19:CS:35:ARG:HA	19:CS:70:LEU:HB2	1.76	0.68
22:DA:35:G:O2'	22:DA:36:G:O4'	2.11	0.68
22:DA:1079:C:O2'	22:DA:1080:A:O4'	2.12	0.68
22:DA:1635:A:H5'	22:DA:1635:A:H8	1.59	0.68
22:DA:2232:C:P	45:DX:26:ARG:HH12	2.17	0.68
22:DA:2847:U:H2'	22:DA:2848:G:H5'	1.74	0.68
43:DV:42:LEU:HD13	43:DV:47:VAL:HG21	1.76	0.68
5:AE:37:VAL:HG13	5:AE:116:VAL:HG21	1.76	0.68
22:BA:510:C:OP1	62:BA:3759:HOH:O	2.12	0.68
22:BA:2425:A:H5"	22:BA:2427:C:O4'	1.93	0.68
26:BE:149:ILE:HD11	26:BE:172:ALA:HA	1.76	0.68
30:BI:7:TYR:HA	30:BI:58:ILE:HB	1.75	0.68
31:BJ:54:ILE:C	31:BJ:54:ILE:HD12	2.19	0.68
53:CA:295:C:H2'	53:CA:296:U:H6	1.57	0.68
53:CA:1190:G:H5'	3:CC:175:HIS:NE2	2.08	0.68
53:CA:1363:A:C6	53:CA:1365:G:O6	2.47	0.68
22:DA:1248:G:H2'	38:DQ:1:ALA:O	1.94	0.68
22:DA:1742:U:H2'	22:DA:1743:G:H8	1.58	0.68
22:DA:2662:A:H2'	22:DA:2663:G:O4'	1.94	0.68
57:DB:58:A:H2'	57:DB:59:A:H8	1.58	0.68
32:DK:35:VAL:HG23	32:DK:36:GLY:H	1.57	0.68
33:DL:100:ILE:O	33:DL:101:ILE:HB	1.93	0.68
44:DW:18:LYS:H	44:DW:36:ILE:HG12	1.59	0.68
1:AA:1451:U:O2	1:AA:1451:U:H2'	1.92	0.68
1:AA:1453:G:N3	1:AA:1453:G:H2'	2.07	0.68
5:AE:12:GLU:HB2	5:AE:38:VAL:HG12	1.76	0.68
15:AO:26:VAL:HG12	15:AO:30:LEU:HD11	1.76	0.68
22:BA:1141:U:H4'	22:BA:1142:A:O4'	1.94	0.68
22:BA:1653:G:H1	35:BN:11:ASN:ND2	1.92	0.68
26:BE:76:PRO:HA	26:BE:82:GLY:HA3	1.75	0.68
28:BG:23:ILE:HD12	28:BG:23:ILE:N	2.09	0.68
29:BH:68:ARG:NH2	29:BH:72:ILE:HG21	2.08	0.68
31:BJ:43:GLU:O	31:BJ:45:THR:HG22	1.92	0.68
37:BP:50:ARG:HB3	37:BP:57:ALA:N	2.01	0.68
39:BR:49:ILE:O	39:BR:49:ILE:HG13	1.94	0.68
53:CA:991:U:C5	53:CA:1212:U:H1'	2.28	0.68
53:CA:1328:C:H5"	55:CM:27:THR:HG21	1.76	0.68
6:CF:11:HIS:CD2	6:CF:54:LEU:HD21	2.28	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CN:52:ARG:CZ	14:CN:52:ARG:HA	2.24	0.68
22:DA:27:G:N2	22:DA:512:G:H2'	2.09	0.68
22:DA:324:A:O2'	22:DA:325:G:O4'	2.08	0.68
22:DA:876:C:H3'	22:DA:877:A:C8	2.28	0.68
22:DA:2629:U:H5"	22:DA:2630:G:OP1	1.94	0.68
24:DC:16:VAL:N	24:DC:203:VAL:HG12	2.06	0.68
58:DF:47:LYS:HA	58:DF:50:ASP:HB3	1.76	0.68
46:DY:19:LEU:HA	46:DY:22:LEU:HB2	1.75	0.68
1:AA:114:U:O2'	1:AA:115:G:H5'	1.94	0.68
1:AA:596:A:N6	1:AA:645:G:C6	2.62	0.68
8:AH:88:LYS:HG3	8:AH:89:ASP:H	1.58	0.68
10:AJ:8:ILE:HG12	10:AJ:100:ILE:HG22	1.74	0.68
14:AN:60:ARG:O	14:AN:61:ASN:HB2	1.93	0.68
22:BA:588:U:H2'	22:BA:589:U:H6	1.57	0.68
22:BA:923:G:H21	44:BW:23:LYS:NZ	1.92	0.68
22:BA:1567:G:H2'	24:BC:84:PRO:HG3	1.74	0.68
25:BD:45:TYR:H	25:BD:45:TYR:HD1	1.39	0.68
38:BQ:63:ARG:HD2	38:BQ:64:ILE:N	2.09	0.68
40:BS:18:ARG:O	40:BS:19:LEU:HB2	1.93	0.68
53:CA:1074:G:H4'	2:CB:102:ASN:HB2	1.75	0.68
9:CI:49:GLN:N	9:CI:50:PRO:HD2	2.09	0.68
9:CI:59:LYS:HE3	9:CI:60:LEU:HG	1.76	0.68
10:CJ:44:THR:HG22	10:CJ:45:ARG:H	1.58	0.68
22:DA:2295:C:C2'	22:DA:2296:U:H5'	2.23	0.68
22:DA:2461:A:H1'	22:DA:2492:U:H3	1.59	0.68
30:DI:55:PRO:HG2	30:DI:70:THR:HG23	1.76	0.68
33:DL:62:PRO:O	51:D3:12:ARG:HB3	1.93	0.68
1:AA:174:A:H2'	1:AA:175:C:H5'	1.76	0.68
16:AP:79:ASN:O	16:AP:80:LYS:HB2	1.91	0.68
32:BK:57:VAL:C	32:BK:58:LEU:HD23	2.18	0.68
38:BQ:114:ALA:C	38:BQ:116:LEU:H	1.99	0.68
11:CK:64:VAL:O	11:CK:68:ARG:HB2	1.93	0.68
11:CK:126:ARG:O	21:CU:33:ARG:NH2	2.27	0.68
22:DA:565:C:H4'	22:DA:1253:A:N6	2.09	0.68
22:DA:1309:G:OP1	50:D2:9:VAL:HG12	1.94	0.68
22:DA:2269:G:O3'	44:DW:18:LYS:HE2	1.94	0.68
22:DA:2667:C:O2'	22:DA:2668:G:O4'	2.12	0.68
57:DB:90:C:H6	57:DB:90:C:H5"	1.59	0.68
58:DF:12:VAL:HA	58:DF:15:LEU:HB2	1.77	0.68
58:DF:136:ILE:O	58:DF:137:PHE:O	2.12	0.68
31:DJ:110:PRO:HG2	31:DJ:111:LYS:HG2	1.74	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:15:G:O4'	5:AE:28:ARG:NH1	2.28	0.67
5:AE:81:GLN:NE2	5:AE:81:GLN:H	1.92	0.67
15:AO:9:LYS:O	15:AO:13:GLU:HG3	1.94	0.67
22:BA:571:U:H4'	22:BA:572:A:OP1	1.94	0.67
24:BC:104:LEU:O	24:BC:105:ALA:HB2	1.93	0.67
36:BO:88:LYS:HE2	36:BO:116:GLN:HE22	1.59	0.67
38:BQ:65:ASN:HD21	38:BQ:69:ARG:HH22	1.40	0.67
43:BV:2:PHE:HD1	43:BV:50:MET:HE2	1.59	0.67
53:CA:464:U:C4	53:CA:466:A:H4'	2.29	0.67
3:CC:36:PHE:HE1	14:CN:91:GLU:HB3	1.59	0.67
17:CQ:46:HIS:HE2	17:CQ:48:GLU:HG2	1.58	0.67
20:CT:60:GLN:HB3	20:CT:65:LEU:HD12	1.75	0.67
22:DA:301:G:H3'	42:DU:81:ARG:NH1	2.09	0.67
22:DA:1056:G:H1'	22:DA:1103:A:N6	2.09	0.67
22:DA:1060:U:O4'	22:DA:1061:U:H2'	1.93	0.67
57:DB:18:G:C2	57:DB:67:G:O6	2.47	0.67
28:DG:163:TYR:HD2	28:DG:163:TYR:N	1.93	0.67
34:DM:17:ASN:HB3	34:DM:38:ARG:HH22	1.59	0.67
1:AA:601:G:H2'	1:AA:602:A:C8	2.29	0.67
8:AH:9:MET:HE2	8:AH:32:LYS:HG2	1.76	0.67
22:BA:568:U:O2	22:BA:570:G:C8	2.47	0.67
22:BA:1506:U:H2'	22:BA:1507:C:C6	2.28	0.67
23:BB:87:U:H3'	23:BB:88:C:H5'	1.76	0.67
36:BO:111:ARG:O	36:BO:113:ALA:N	2.26	0.67
41:BT:73:ARG:NH2	41:BT:74:ILE:H	1.93	0.67
53:CA:68:G:H5'	53:CA:171:A:O2'	1.95	0.67
53:CA:320:A:O2'	53:CA:1435:G:H1'	1.93	0.67
53:CA:818:G:H3'	53:CA:819:A:H5'	1.76	0.67
22:DA:1210:G:C6	22:DA:1237:A:N7	2.62	0.67
22:DA:2135:A:C2'	22:DA:2136:G:O4'	2.41	0.67
35:DN:103:ARG:HD3	35:DN:110:MET:SD	2.35	0.67
40:DS:70:LYS:H	40:DS:70:LYS:HE3	1.59	0.67
8:AH:93:LYS:HE3	8:AH:116:ARG:HH12	1.60	0.67
14:AN:40:ARG:NH1	14:AN:44:VAL:HG11	2.09	0.67
22:BA:2311:A:H1'	27:BF:78:ILE:HD13	1.76	0.67
22:BA:2466:C:OP1	52:B4:4:ARG:HB2	1.95	0.67
33:BL:55:MET:HE3	33:BL:55:MET:HA	1.77	0.67
46:BY:9:LYS:HA	46:BY:9:LYS:NZ	2.09	0.67
53:CA:1183:U:H3'	53:CA:1184:G:C5'	2.14	0.67
8:CH:1:SER:HB3	8:CH:3:GLN:HG3	1.76	0.67
22:DA:822:G:O6	22:DA:943:A:H2	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:867:C:HO2'	22:DA:868:U:H6	0.70	0.67
22:DA:989:G:OP2	47:DZ:11:SER:HB2	1.94	0.67
22:DA:1079:C:N4	22:DA:1088:A:H5"	2.06	0.67
22:DA:1343:G:O2'	22:DA:1344:U:C6	2.42	0.67
22:DA:1722:A:N6	22:DA:1739:A:C8	2.62	0.67
22:DA:1812:U:H2'	22:DA:1813:G:C8	2.28	0.67
26:DE:60:TRP:CZ2	26:DE:71:GLY:HA2	2.30	0.67
26:DE:166:LYS:HE2	26:DE:166:LYS:HA	1.77	0.67
35:DN:32:GLU:OE1	35:DN:115:LEU:HD12	1.95	0.67
39:DR:23:GLU:O	39:DR:25:LEU:HD22	1.95	0.67
49:D1:51:ALA:O	49:D1:52:LYS:HB2	1.94	0.67
1:AA:269:C:H2'	1:AA:270:A:C8	2.28	0.67
1:AA:683:G:N2	11:AK:39:ASN:HA	2.10	0.67
1:AA:1161:C:O2'	1:AA:1162:C:C6	2.46	0.67
22:BA:45:G:H5"	22:BA:46:G:OP1	1.94	0.67
22:BA:1277:G:H5'	35:BN:20:MET:HE1	1.77	0.67
23:BB:7:G:O2'	36:BO:38:GLN:NE2	2.27	0.67
29:BH:90:LEU:HB2	29:BH:123:ARG:HB3	1.75	0.67
32:BK:10:VAL:HG11	32:BK:16:ALA:CB	2.24	0.67
32:BK:63:VAL:CG1	32:BK:103:VAL:HG12	2.25	0.67
53:CA:337:G:H2'	53:CA:338:A:C8	2.30	0.67
53:CA:374:A:H5"	53:CA:452:A:C2	2.30	0.67
53:CA:935:A:O2'	53:CA:936:C:C6	2.47	0.67
22:DA:502:A:C5	22:DA:505:A:N7	2.62	0.67
22:DA:781:A:H5"	22:DA:782:A:OP1	1.94	0.67
22:DA:1327:A:H2'	22:DA:1328:A:O4'	1.95	0.67
22:DA:1870:C:H5"	22:DA:1871:A:C2	2.30	0.67
22:DA:2297:A:HO2'	22:DA:2298:A:H8	0.70	0.67
22:DA:2312:U:H2'	22:DA:2313:C:C6	2.30	0.67
22:DA:2394:C:H41	51:D3:30:HIS:CE1	2.13	0.67
1:AA:1314:C:C5	19:AS:5:LYS:HD3	2.30	0.67
10:AJ:35:GLN:HG2	10:AJ:77:VAL:HB	1.75	0.67
22:BA:1539:U:H2'	22:BA:1540:G:H8	1.59	0.67
22:BA:2573:C:OP1	62:BA:3702:HOH:O	2.10	0.67
37:BP:50:ARG:CB	37:BP:57:ALA:N	2.52	0.67
53:CA:769:G:O2'	53:CA:770:C:H5'	1.94	0.67
53:CA:978:A:O2'	53:CA:979:C:H5'	1.94	0.67
21:CU:3:ILE:HG21	21:CU:18:PHE:HB3	1.77	0.67
22:DA:876:C:H2'	22:DA:877:A:OP1	1.94	0.67
22:DA:1023:U:H5'	22:DA:1023:U:H6	1.58	0.67
22:DA:2060:A:H2'	26:DE:63:LYS:NZ	2.08	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2635:A:H5'	25:DD:79:LEU:HB2	1.75	0.67
26:DE:59:PRO:HB2	26:DE:67:ARG:NH2	2.09	0.67
28:DG:85:LYS:HG3	28:DG:163:TYR:HB2	1.76	0.67
46:DY:28:LEU:HD11	46:DY:43:LEU:HD13	1.74	0.67
2:AB:67:LEU:HD21	2:AB:91:VAL:HG23	1.74	0.67
6:AF:42:TRP:CZ2	6:AF:61:LEU:HD22	2.29	0.67
10:AJ:11:LYS:HG3	10:AJ:97:ASP:HB3	1.77	0.67
22:BA:526:A:H5"	22:BA:527:C:OP1	1.95	0.67
22:BA:873:C:N3	22:BA:904:G:N2	2.41	0.67
22:BA:2324:U:H3'	22:BA:2325:G:H5"	1.76	0.67
44:BW:23:LYS:NZ	44:BW:24:ARG:HG3	2.10	0.67
53:CA:432:A:C2'	53:CA:433:G:H5'	2.24	0.67
53:CA:1322:C:O2'	53:CA:1323:G:H5'	1.95	0.67
4:CD:25:ARG:HH11	4:CD:25:ARG:HG2	1.60	0.67
17:CQ:4:ILE:HG22	17:CQ:5:ARG:H	1.59	0.67
22:DA:187:G:C2	22:DA:210:C:C2	2.83	0.67
22:DA:1231:U:H2'	22:DA:1232:G:C8	2.29	0.67
22:DA:1275:A:C2'	22:DA:1275:A:N3	2.58	0.67
22:DA:2092:U:C4'	22:DA:2093:G:OP1	2.26	0.67
22:DA:2288:A:H4'	22:DA:2289:G:OP2	1.94	0.67
42:DU:83:GLY:O	42:DU:93:ARG:HA	1.94	0.67
1:AA:1038:C:H2'	1:AA:1039:G:C8	2.30	0.67
1:AA:1520:C:H2'	1:AA:1521:C:C6	2.30	0.67
5:AE:37:VAL:CG1	5:AE:116:VAL:HG21	2.25	0.67
11:AK:108:ASN:HB3	21:AU:6:ARG:HG2	1.76	0.67
20:AT:79:THR:O	20:AT:82:ILE:HG13	1.94	0.67
22:BA:137:U:O2'	22:BA:138:U:OP1	2.12	0.67
22:BA:902:C:O5'	22:BA:902:C:H6	1.76	0.67
25:BD:99:GLU:HG3	25:BD:100:LEU:N	2.09	0.67
34:BM:42:THR:O	34:BM:44:ARG:N	2.28	0.67
34:BM:132:THR:HG22	34:BM:133:LYS:N	2.09	0.67
44:BW:19:ARG:NH2	44:BW:22:VAL:HG21	2.10	0.67
53:CA:86:G:O2'	53:CA:87:C:OP2	2.12	0.67
53:CA:1296:C:C4	53:CA:1297:G:N2	2.63	0.67
2:CB:89:PHE:CE2	2:CB:152:ASP:HB2	2.24	0.67
3:CC:36:PHE:CE1	14:CN:91:GLU:HB3	2.30	0.67
8:CH:11:THR:HG22	8:CH:14:ARG:NH1	2.10	0.67
22:DA:1210:G:H5"	22:DA:1211:C:H3'	1.77	0.67
24:DC:33:LEU:O	24:DC:34:GLU:HB3	1.93	0.67
42:DU:17:ASP:HB2	42:DU:38:ILE:HA	1.77	0.67
1:AA:246:A:H4'	1:AA:247:G:OP1	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1287:A:H2'	1:AA:1288:A:C8	2.30	0.67
22:BA:977:G:O6	62:BA:3576:HOH:O	2.11	0.67
22:BA:1223:G:OP2	39:BR:68:ARG:NH1	2.28	0.67
22:BA:1996:C:H4'	22:BA:1997:C:OP1	1.92	0.67
23:BB:28:C:C2'	23:BB:29:A:H5'	2.25	0.67
42:BU:91:LYS:O	42:BU:92:VAL:HB	1.94	0.67
53:CA:878:A:OP1	8:CH:79:ARG:HB2	1.95	0.67
53:CA:1069:C:H4'	53:CA:1192:C:O2	1.94	0.67
53:CA:1458:G:O3'	20:CT:22:SER:HA	1.94	0.67
4:CD:8:LEU:CD2	4:CD:21:LYS:HD2	2.25	0.67
12:CL:80:LEU:HB3	12:CL:97:VAL:CG2	2.23	0.67
22:DA:17:G:H4'	38:DQ:24:TYR:CE1	2.30	0.67
22:DA:1300:G:C4'	22:DA:1301:A:O5'	2.42	0.67
57:DB:13:G:H8	57:DB:13:G:H5"	1.59	0.67
26:DE:61:ARG:HE	26:DE:65:THR:HB	1.59	0.67
32:DK:118:LEU:C	32:DK:120:PRO:HD2	2.19	0.67
34:DM:27:SER:N	34:DM:66:ARG:HH22	1.92	0.67
46:DY:18:LEU:O	46:DY:22:LEU:HD13	1.94	0.67
1:AA:968:A:H4'	1:AA:969:A:OP2	1.95	0.67
22:BA:729:G:H4'	22:BA:763:G:H5'	1.75	0.67
22:BA:1450:G:C6	22:BA:1451:C:N4	2.63	0.67
27:BF:35:LEU:HD13	27:BF:56:LEU:HD22	1.77	0.67
28:BG:115:GLN:CD	28:BG:115:GLN:N	2.44	0.67
35:BN:93:GLY:C	35:BN:95:THR:H	2.01	0.67
41:BT:26:LYS:O	41:BT:27:SER:HB2	1.94	0.67
45:BX:58:ILE:HD11	45:BX:66:VAL:HG11	1.76	0.67
52:B4:9:LYS:O	52:B4:10:LEU:HD23	1.94	0.67
53:CA:344:A:H5"	53:CA:345:C:H5	1.59	0.67
53:CA:1250:A:N3	53:CA:1287:A:N6	2.42	0.67
53:CA:1386:G:O2'	53:CA:1387:G:H5'	1.95	0.67
5:CE:154:ALA:HB1	8:CH:65:PHE:CE2	2.30	0.67
54:CG:76:SER:HA	54:CG:85:GLN:HA	1.77	0.67
12:CL:98:ARG:HB2	12:CL:116:TYR:HA	1.76	0.67
14:CN:76:PHE:CE2	14:CN:92:ILE:HG21	2.30	0.67
19:CS:52:ASN:ND2	19:CS:54:ARG:HG2	2.09	0.67
22:DA:84:A:C5	22:DA:103:A:N6	2.63	0.67
22:DA:111:A:C2	22:DA:112:U:C2	2.82	0.67
22:DA:686:U:OP2	62:DA:3704:HOH:O	2.11	0.67
22:DA:999:U:O2'	22:DA:1000:A:H5'	1.95	0.67
22:DA:2574:G:O2'	25:DD:148:GLN:HB2	1.95	0.67
22:DA:2638:G:H1'	22:DA:2778:A:N6	2.10	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DG:48:THR:O	28:DG:49:LEU:HB2	1.94	0.67
45:DX:31:ASN:HD22	45:DX:31:ASN:N	1.83	0.67
1:AA:414:A:O2'	1:AA:415:A:O4'	2.13	0.67
1:AA:1007:U:C2'	1:AA:1008:U:H5"	2.25	0.67
4:AD:1:ALA:O	4:AD:67:LEU:HD11	1.95	0.67
5:AE:155:LYS:HA	5:AE:158:LYS:HZ3	1.60	0.67
8:AH:110:MET:HE2	8:AH:114:ALA:HB1	1.77	0.67
17:AQ:28:VAL:O	17:AQ:36:PHE:HA	1.94	0.67
22:BA:812:C:H4'	38:BQ:12:ARG:HH22	1.59	0.67
22:BA:1731:G:C4	22:BA:1733:G:N7	2.63	0.67
22:BA:2557:G:H2'	22:BA:2558:C:C6	2.30	0.67
42:BU:73:ASN:HD22	42:BU:76:THR:N	1.93	0.67
53:CA:239:U:C5'	53:CA:239:U:H6	2.07	0.67
53:CA:663:A:O2'	53:CA:664:G:H5'	1.95	0.67
19:CS:35:ARG:HH21	19:CS:51:HIS:CD2	2.13	0.67
57:DB:67:G:O2'	57:DB:68:C:H6	1.78	0.67
5:AE:110:MET:H	5:AE:113:VAL:HG13	1.60	0.66
20:AT:53:MET:HE3	20:AT:57:VAL:CG2	2.24	0.66
22:BA:1013:C:H2'	22:BA:1014:A:H8	1.60	0.66
24:BC:246:PRO:HG2	24:BC:247:TRP:CH2	2.29	0.66
39:BR:49:ILE:HG22	39:BR:54:VAL:HG12	1.77	0.66
40:BS:63:GLY:O	40:BS:64:ALA:HB3	1.93	0.66
53:CA:112:G:N3	53:CA:330:C:N4	2.44	0.66
22:DA:223:A:N6	22:DA:422:A:C6	2.63	0.66
22:DA:324:A:C2	22:DA:325:G:H1'	2.29	0.66
22:DA:1079:C:N4	22:DA:1088:A:N3	2.43	0.66
22:DA:2742:G:OP1	52:D4:36:ARG:HD3	1.94	0.66
28:DG:43:LYS:O	28:DG:49:LEU:HD12	1.95	0.66
35:DN:97:ILE:HG13	35:DN:98:LEU:N	2.09	0.66
22:BA:962:G:OP1	62:BA:3352:HOH:O	2.13	0.66
22:BA:1438:U:O2'	22:BA:1439:A:H5'	1.95	0.66
22:BA:2134:A:N6	22:BA:2135:A:N6	2.43	0.66
27:BF:68:LYS:HD2	27:BF:68:LYS:N	2.10	0.66
36:BO:67:ASN:O	36:BO:69:ASP:N	2.28	0.66
37:BP:95:LYS:HG2	37:BP:97:TYR:CE1	2.31	0.66
44:BW:46:ALA:O	44:BW:47:GLY:O	2.13	0.66
53:CA:560:A:H4'	53:CA:561:U:H5"	1.75	0.66
53:CA:1077:G:N2	53:CA:1080:A:OP2	2.29	0.66
8:CH:102:VAL:HG23	8:CH:125:ILE:HD12	1.75	0.66
12:CL:34:THR:HG22	12:CL:35:ARG:HG2	1.76	0.66
56:CP:67:ILE:HG12	56:CP:72:ALA:HB2	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1125:G:H4'	52:D4:37:GLN:HE21	1.59	0.66
22:DA:1265:A:C8	22:DA:1267:U:C2	2.82	0.66
22:DA:2384:U:H3'	22:DA:2385:C:H3'	1.77	0.66
22:DA:2720:U:H5"	37:DP:52:ARG:NH2	2.10	0.66
28:DG:83:THR:C	28:DG:84:LYS:HD3	2.21	0.66
31:DJ:5:THR:HA	31:DJ:44:TYR:CD2	2.29	0.66
36:DO:23:ALA:HB1	36:DO:90:VAL:HG12	1.77	0.66
40:DS:9:HIS:H	40:DS:102:HIS:CE1	2.13	0.66
52:D4:19:ARG:O	52:D4:20:ASP:HB2	1.94	0.66
1:AA:502:A:H2'	1:AA:503:C:O4'	1.95	0.66
1:AA:1320:C:OP1	19:AS:69:LYS:HE2	1.95	0.66
6:AF:4:TYR:HA	6:AF:91:ARG:O	1.95	0.66
28:BG:3:VAL:O	28:BG:68:ARG:HG3	1.95	0.66
31:BJ:55:ILE:O	31:BJ:55:ILE:HG13	1.93	0.66
31:BJ:99:ARG:O	31:BJ:103:ILE:HG23	1.95	0.66
32:BK:18:ARG:HH11	32:BK:18:ARG:CG	2.02	0.66
34:BM:70:ASP:OD1	34:BM:70:ASP:C	2.39	0.66
42:BU:38:ILE:HG22	42:BU:39:ASN:H	1.59	0.66
53:CA:157:U:C2'	53:CA:158:G:H5'	2.24	0.66
4:CD:187:ARG:NH2	4:CD:191:SER:HB3	2.09	0.66
12:CL:89:LEU:HB3	12:CL:92:VAL:HG21	1.78	0.66
22:DA:1281:G:C6	22:DA:1290:C:N4	2.63	0.66
22:DA:1345:C:H5"	22:DA:1396:U:O4	1.95	0.66
22:DA:1846:G:H5"	22:DA:1847:A:OP2	1.94	0.66
57:DB:57:A:HO2'	57:DB:58:A:H8	0.72	0.66
24:DC:52:HIS:HA	24:DC:216:ARG:HB2	1.77	0.66
11:AK:126:ARG:CB	21:AU:33:ARG:NH1	2.58	0.66
21:AU:10:PRO:HG2	3:CC:71:ARG:NH2	2.10	0.66
22:BA:2103:C:H2'	22:BA:2104:C:H5'	1.78	0.66
26:BE:108:ILE:HD13	26:BE:109:LEU:N	2.11	0.66
27:BF:7:TYR:O	27:BF:12:VAL:HG12	1.95	0.66
27:BF:68:LYS:HD2	27:BF:68:LYS:H	1.59	0.66
46:BY:2:LYS:HG3	46:BY:52:ARG:HD3	1.76	0.66
53:CA:1533:C:H2'	53:CA:1534:A:H5"	1.75	0.66
6:CF:3:HIS:ND1	6:CF:92:THR:HG23	2.11	0.66
9:CI:10:ARG:HG3	9:CI:14:SER:O	1.95	0.66
56:CP:4:ILE:HD12	56:CP:4:ILE:N	2.10	0.66
22:DA:870:U:H2'	22:DA:871:U:H5'	1.78	0.66
22:DA:1566:A:C2	24:DC:212:TRP:HB2	2.29	0.66
22:DA:2683:C:OP1	37:DP:55:HIS:HB3	1.95	0.66
57:DB:24:G:H5'	57:DB:25:U:C5	2.31	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DJ:75:TYR:CD1	31:DJ:84:ILE:HD11	2.29	0.66
38:DQ:4:LYS:HE3	38:DQ:7:VAL:HG13	1.77	0.66
1:AA:70:U:O2'	1:AA:71:A:C8	2.48	0.66
1:AA:338:A:N1	1:AA:351:G:O6	2.28	0.66
22:BA:2841:C:H2'	22:BA:2842:G:H8	1.61	0.66
26:BE:148:ILE:HA	26:BE:187:VAL:HB	1.77	0.66
29:BH:24:GLY:O	29:BH:28:ASN:HB2	1.96	0.66
35:BN:38:LEU:O	35:BN:38:LEU:HD12	1.95	0.66
39:BR:1:MET:HA	39:BR:42:ALA:O	1.95	0.66
44:BW:17:ALA:O	44:BW:18:LYS:HB3	1.94	0.66
53:CA:476:U:C6	53:CA:476:U:OP2	2.49	0.66
53:CA:1091:U:O2	53:CA:1093:A:H8	1.78	0.66
21:CU:36:PHE:HD1	21:CU:40:PRO:HB3	1.61	0.66
22:DA:125:A:C4'	22:DA:126:A:OP2	2.41	0.66
22:DA:172:A:H2'	22:DA:173:A:C8	2.30	0.66
22:DA:594:U:H2'	22:DA:595:C:C6	2.30	0.66
25:DD:106:LYS:HB3	25:DD:206:ALA:CB	2.24	0.66
31:DJ:65:THR:O	31:DJ:68:LYS:NZ	2.27	0.66
39:DR:39:LEU:O	39:DR:40:MET:HB2	1.94	0.66
46:DY:28:LEU:HG	46:DY:42:LEU:HD22	1.77	0.66
2:AB:20:ARG:HH12	2:AB:38:HIS:CE1	2.14	0.66
4:AD:29:THR:C	4:AD:30:LYS:HD3	2.21	0.66
11:AK:14:GLN:HA	11:AK:76:TYR:O	1.95	0.66
17:AQ:12:VAL:HG11	17:AQ:21:VAL:HG13	1.76	0.66
22:BA:933:A:H5'	22:BA:934:U:OP2	1.95	0.66
22:BA:1079:C:C4	22:BA:1088:A:H2	2.12	0.66
22:BA:2310:C:H2'	27:BF:76:PHE:HE1	1.58	0.66
22:BA:2637:U:C2'	22:BA:2638:G:H5'	2.25	0.66
29:BH:5:LEU:HD13	29:BH:13:GLY:HA2	1.78	0.66
34:BM:13:HIS:O	34:BM:14:LYS:HB2	1.96	0.66
35:BN:116:VAL:HG22	35:BN:116:VAL:O	1.96	0.66
41:BT:29:THR:HB	41:BT:86:THR:CG2	2.25	0.66
53:CA:1239:A:O2'	53:CA:1241:G:C5	2.47	0.66
19:CS:40:PHE:CB	19:CS:41:PRO:HD2	2.24	0.66
22:DA:2666:C:O2'	22:DA:2667:C:C5'	2.42	0.66
24:DC:67:LYS:HB3	24:DC:150:GLY:HA2	1.77	0.66
1:AA:439:U:C2'	1:AA:440:C:H5'	2.25	0.66
1:AA:725:G:H2'	1:AA:726:C:H6	1.60	0.66
20:AT:74:HIS:O	20:AT:78:LEU:HB2	1.96	0.66
22:BA:588:U:H1'	26:BE:85:PHE:CD1	2.31	0.66
22:BA:611:C:C2'	22:BA:612:G:H5'	2.25	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:784:G:H5"	24:BC:225:ASN:HD21	1.59	0.66
41:BT:28:ASN:HA	41:BT:91:GLN:NE2	2.10	0.66
8:CH:54:THR:O	8:CH:56:PRO:HD3	1.95	0.66
25:DD:10:GLY:O	25:DD:11:MET:HB2	1.96	0.66
29:DH:93:SER:CB	29:DH:121:VAL:HG21	2.26	0.66
32:DK:60:ALA:HA	32:DK:87:LEU:CD2	2.25	0.66
42:DU:26:ASN:O	42:DU:34:ILE:HB	1.96	0.66
22:BA:142:A:O2'	22:BA:143:C:O4'	2.12	0.66
26:BE:193:VAL:O	26:BE:197:GLU:HB2	1.96	0.66
31:BJ:111:LYS:CD	31:BJ:112:GLY:H	2.06	0.66
32:BK:70:ARG:HD3	32:BK:76:VAL:HG22	1.78	0.66
34:BM:31:PHE:CE2	34:BM:110:GLU:HG2	2.31	0.66
35:BN:2:ARG:HA	35:BN:5:LYS:HD2	1.76	0.66
39:BR:4:VAL:HG23	39:BR:39:LEU:HG	1.77	0.66
53:CA:1084:G:C8	53:CA:1085:U:C6	2.83	0.66
4:CD:57:LYS:HE2	4:CD:58:GLN:OE1	1.95	0.66
10:CJ:84:VAL:HG23	10:CJ:85:ASP:N	2.04	0.66
17:CQ:46:HIS:HB2	17:CQ:70:LYS:NZ	2.09	0.66
20:CT:3:ILE:O	20:CT:4:LYS:HG2	1.96	0.66
22:DA:229:C:O2'	22:DA:230:G:O4'	2.12	0.66
22:DA:287:G:O2'	22:DA:288:U:H5'	1.96	0.66
22:DA:956:G:C2	22:DA:962:G:O6	2.49	0.66
22:DA:1021:A:C2'	22:DA:1022:G:H4'	2.25	0.66
22:DA:2345:G:C6	22:DA:2347:C:N4	2.61	0.66
26:DE:105:LEU:HB3	26:DE:200:LEU:HD11	1.78	0.66
40:DS:49:LYS:HB3	40:DS:49:LYS:NZ	2.11	0.66
48:D0:28:SER:HB3	48:D0:39:ARG:HE	1.61	0.66
1:AA:1239:A:H2'	1:AA:1298:U:O4	1.96	0.66
22:BA:1070:A:H2'	22:BA:1097:U:OP1	1.95	0.66
22:BA:1780:A:OP1	62:BA:3680:HOH:O	2.13	0.66
22:BA:2500:U:O2	62:BA:3523:HOH:O	2.12	0.66
25:BD:133:THR:HG23	25:BD:134:HIS:CD2	2.30	0.66
30:BI:42:ASN:HA	30:BI:45:THR:HB	1.78	0.66
43:BV:21:ARG:HA	43:BV:25:LYS:O	1.95	0.66
53:CA:170:U:O2'	53:CA:171:A:H5'	1.96	0.66
53:CA:708:C:H2'	53:CA:709:U:H6	1.60	0.66
10:CJ:5:ARG:HG2	10:CJ:79:PRO:HG3	1.78	0.66
18:CR:21:ASP:HB3	18:CR:23:LYS:HG2	1.78	0.66
21:CU:35:GLU:O	21:CU:36:PHE:HD2	1.78	0.66
22:DA:644:A:O2'	22:DA:645:C:H5'	1.96	0.66
22:DA:1176:U:H2'	22:DA:1177:G:C8	2.30	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1965:C:H6	22:DA:1965:C:H5"	1.59	0.66
22:DA:2654:A:H4'	22:DA:2655:G:OP1	1.96	0.66
25:DD:107:VAL:H	25:DD:206:ALA:H	1.44	0.66
32:DK:76:VAL:HB	37:DP:72:VAL:HG22	1.77	0.66
22:BA:902:C:N3	22:BA:903:C:C4	2.64	0.66
22:BA:1319:C:O2'	22:BA:1320:C:H5'	1.96	0.66
22:BA:2879:A:H4'	22:BA:2880:C:OP1	1.94	0.66
25:BD:182:ALA:O	25:BD:184:ARG:N	2.29	0.66
31:BJ:111:LYS:CD	31:BJ:112:GLY:N	2.59	0.66
33:BL:77:ILE:HD11	33:BL:108:ALA:HB1	1.78	0.66
34:BM:133:LYS:O	34:BM:134:THR:HB	1.95	0.66
39:BR:90:ARG:O	39:BR:91:GLN:HB3	1.96	0.66
53:CA:17:U:H2'	53:CA:18:C:H6	1.59	0.66
53:CA:404:G:O6	4:CD:1:ALA:HB2	1.96	0.66
5:CE:80:LEU:HD13	5:CE:80:LEU:O	1.96	0.66
5:CE:82:HIS:CE1	8:CH:95:MET:HE3	2.31	0.66
22:DA:915:C:H2'	22:DA:916:G:H8	1.60	0.66
22:DA:1070:A:H5'	22:DA:1071:G:H5"	1.78	0.66
22:DA:2021:C:H4'	22:DA:2022:U:OP2	1.95	0.66
57:DB:11:C:C5	57:DB:12:C:H5	2.14	0.66
26:DE:48:THR:O	26:DE:52:VAL:HG23	1.96	0.66
29:DH:68:ARG:CD	29:DH:71:LYS:HD3	2.26	0.66
31:DJ:57:LEU:HD11	31:DJ:129:GLU:H	1.60	0.66
36:DO:17:LYS:HE3	36:DO:17:LYS:O	1.96	0.66
48:D0:37:HIS:CG	48:D0:43:THR:HG22	2.31	0.66
5:AE:97:PRO:HA	5:AE:122:VAL:HG12	1.78	0.65
8:AH:28:SER:HB2	8:AH:58:LEU:HB2	1.76	0.65
22:BA:1019:U:C4	22:BA:1020:A:N6	2.64	0.65
22:BA:1813:G:N3	24:BC:49:THR:CG2	2.57	0.65
42:BU:100:GLU:O	42:BU:101:THR:HB	1.96	0.65
44:BW:23:LYS:HD2	44:BW:24:ARG:N	2.11	0.65
53:CA:256:U:H2'	53:CA:257:G:O4'	1.96	0.65
53:CA:1118:U:H1'	53:CA:1179:A:C4	2.31	0.65
53:CA:1138:G:N2	53:CA:1140:C:C4	2.64	0.65
53:CA:1239:A:H62	53:CA:1299:A:H61	1.44	0.65
2:CB:9:LEU:HD23	2:CB:9:LEU:H	1.60	0.65
3:CC:26:LYS:HA	3:CC:26:LYS:HE3	1.77	0.65
3:CC:126:ARG:HA	3:CC:126:ARG:HE	1.60	0.65
4:CD:66:VAL:HG22	4:CD:96:ARG:NH1	2.10	0.65
5:CE:107:GLY:O	5:CE:111:ARG:HB2	1.96	0.65
12:CL:98:ARG:HD3	12:CL:103:CYS:SG	2.36	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:628:G:C6	22:DA:636:G:C2	2.84	0.65
22:DA:729:G:H3'	22:DA:730:A:H5"	1.77	0.65
22:DA:1594:U:H2'	22:DA:1595:C:C6	2.31	0.65
22:DA:2333:A:C2	22:DA:2335:A:N6	2.64	0.65
31:DJ:92:MET:HE2	31:DJ:92:MET:HA	1.78	0.65
36:DO:13:ARG:O	36:DO:17:LYS:HB2	1.96	0.65
48:D0:4:GLN:HG2	48:D0:4:GLN:O	1.96	0.65
1:AA:683:G:H21	11:AK:39:ASN:HA	1.60	0.65
10:AJ:53:ILE:HG22	10:AJ:61:ALA:CB	2.25	0.65
21:AU:3:ILE:HA	21:AU:19:LYS:NZ	2.10	0.65
22:BA:902:C:C4	22:BA:903:C:C4	2.83	0.65
22:BA:1045:C:C3'	22:BA:1046:A:H5'	2.26	0.65
38:BQ:69:ARG:HH21	38:BQ:69:ARG:CB	2.09	0.65
53:CA:615:G:H2'	53:CA:616:G:H8	1.60	0.65
53:CA:704:A:O2'	53:CA:705:G:H8	1.78	0.65
53:CA:738:C:H2'	53:CA:739:C:H6	1.59	0.65
53:CA:1533:C:C2'	53:CA:1534:A:H5"	2.26	0.65
22:DA:558:U:OP1	31:DJ:113:PRO:HD2	1.96	0.65
22:DA:2267:A:H61	22:DA:2272:U:H3	1.44	0.65
28:DG:162:ARG:HB2	28:DG:166:GLU:HB3	1.78	0.65
30:DI:104:GLN:HA	30:DI:107:GLU:HB2	1.78	0.65
33:DL:93:ASN:CG	33:DL:94:THR:H	2.01	0.65
38:DQ:50:ARG:HD2	38:DQ:50:ARG:N	2.11	0.65
50:D2:22:MET:HG2	50:D2:22:MET:O	1.96	0.65
3:AC:56:ILE:HG12	3:AC:65:VAL:HG22	1.78	0.65
3:AC:119:ILE:HD11	3:AC:133:MET:HA	1.78	0.65
7:AG:53:SER:C	7:AG:55:LYS:H	2.04	0.65
10:AJ:29:ALA:HB1	10:AJ:36:VAL:HG21	1.79	0.65
17:AQ:12:VAL:HG13	17:AQ:16:MET:HE1	1.78	0.65
17:AQ:20:ILE:N	17:AQ:47:ASP:OD1	2.29	0.65
22:BA:1856:U:H2'	22:BA:1857:G:H5'	1.77	0.65
24:BC:140:VAL:CG1	24:BC:189:ALA:HB1	2.26	0.65
26:BE:147:LEU:HD23	26:BE:183:PHE:CD1	2.31	0.65
27:BF:45:ASP:HB3	27:BF:48:LEU:HB2	1.79	0.65
29:BH:96:THR:O	29:BH:97:ARG:HG3	1.95	0.65
32:BK:21:CYS:HA	32:BK:41:ILE:HD12	1.77	0.65
33:BL:55:MET:HA	33:BL:55:MET:CE	2.27	0.65
53:CA:642:A:HO2'	53:CA:643:C:H6	1.34	0.65
53:CA:954:G:H1	53:CA:1228:C:N4	1.93	0.65
53:CA:982:U:H4'	53:CA:983:A:C5'	2.25	0.65
9:CI:58:GLU:HG3	9:CI:59:LYS:H	1.61	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2624:G:C2	22:DA:2625:G:H1'	2.31	0.65
33:DL:20:GLY:HA2	33:DL:28:GLY:HA2	1.79	0.65
34:DM:27:SER:N	34:DM:66:ARG:NH2	2.39	0.65
1:AA:408:A:P	4:AD:109:THR:HG21	2.36	0.65
1:AA:667:G:H4'	15:AO:50:HIS:ND1	2.11	0.65
1:AA:1386:G:H2'	1:AA:1387:G:H8	1.61	0.65
3:AC:134:LYS:HE3	3:AC:138:GLN:NE2	2.10	0.65
22:BA:666:A:H4'	33:BL:48:ARG:HD2	1.78	0.65
22:BA:1084:A:H2'	22:BA:1085:A:H8	1.60	0.65
24:BC:85:ASN:OD1	24:BC:85:ASN:N	2.30	0.65
26:BE:79:ARG:CG	26:BE:80:SER:H	2.09	0.65
28:BG:84:LYS:HD2	28:BG:133:LYS:HG2	1.78	0.65
41:BT:5:GLU:OE1	46:BY:18:LEU:HD11	1.96	0.65
53:CA:1146:A:O2'	53:CA:1147:C:C5'	2.44	0.65
53:CA:1458:G:O2'	20:CT:22:SER:CB	2.44	0.65
5:CE:148:SER:H	5:CE:151:MET:CE	2.09	0.65
21:CU:15:LEU:O	21:CU:15:LEU:HD12	1.96	0.65
22:DA:184:C:H2'	22:DA:185:G:C8	2.31	0.65
22:DA:686:U:H6	22:DA:788:A:N1	1.94	0.65
22:DA:2829:A:H2'	22:DA:2830:C:H5'	1.76	0.65
26:DE:105:LEU:HD12	26:DE:200:LEU:HD11	1.77	0.65
28:DG:167:VAL:HG23	28:DG:168:VAL:H	1.61	0.65
36:DO:30:ARG:HH12	36:DO:102:ARG:HB2	1.60	0.65
41:DT:29:THR:H	41:DT:87:LEU:CB	2.10	0.65
45:DX:19:HIS:C	45:DX:21:LEU:H	2.04	0.65
1:AA:1025:U:H5"	1:AA:1026:G:H5'	1.77	0.65
1:AA:1123:U:H5"	1:AA:1124:G:OP2	1.97	0.65
1:AA:1348:U:H2'	1:AA:1349:A:C8	2.29	0.65
9:AI:119:LYS:HG3	9:AI:122:ARG:HB3	1.79	0.65
14:AN:42:ASN:HD21	14:AN:46:LYS:NZ	1.95	0.65
20:AT:14:GLU:HA	20:AT:17:ARG:HB2	1.79	0.65
22:BA:136:G:H2'	22:BA:137:U:C5	2.30	0.65
22:BA:364:C:H2'	22:BA:365:U:C6	2.31	0.65
22:BA:923:G:N2	44:BW:23:LYS:HZ3	1.93	0.65
22:BA:1970:A:H4'	22:BA:1971:U:O5'	1.95	0.65
22:BA:2199:A:H8	22:BA:2199:A:H5"	1.62	0.65
28:BG:82:PHE:CE2	28:BG:137:LYS:HB2	2.31	0.65
36:BO:30:ARG:HG2	36:BO:31:THR:N	2.11	0.65
53:CA:1038:C:H2'	53:CA:1039:G:H8	1.58	0.65
4:CD:61:ARG:HH21	4:CD:67:LEU:HA	1.62	0.65
20:CT:30:PHE:HE2	20:CT:52:GLU:HG2	1.61	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:354:A:H2'	22:DA:355:U:O4'	1.96	0.65
22:DA:612:G:N2	22:DA:614:A:HO2'	1.94	0.65
22:DA:1830:C:H5'	24:DC:14:HIS:CE1	2.32	0.65
22:DA:2197:U:C5	22:DA:2224:G:C6	2.84	0.65
22:DA:2324:U:H5'	22:DA:2325:G:H5"	1.78	0.65
22:DA:2331:G:H1'	44:DW:40:ARG:HB3	1.78	0.65
22:DA:2392:A:C8	22:DA:2429:G:C2	2.85	0.65
1:AA:98:A:H2'	1:AA:99:C:H6	1.61	0.65
1:AA:464:U:C2	1:AA:466:A:H5'	2.31	0.65
1:AA:1343:G:H4'	9:AI:123:ARG:HB3	1.78	0.65
5:AE:80:LEU:HD23	5:AE:122:VAL:CG1	2.24	0.65
24:BC:70:LYS:HE2	24:BC:73:ILE:CD1	2.26	0.65
24:BC:141:HIS:NE2	24:BC:194:VAL:HA	2.12	0.65
28:BG:10:VAL:O	28:BG:10:VAL:HG23	1.96	0.65
29:BH:82:SER:O	29:BH:83:LYS:HB2	1.97	0.65
35:BN:24:MET:HG2	35:BN:44:LEU:HD22	1.78	0.65
41:BT:51:PHE:O	41:BT:52:GLU:HG2	1.96	0.65
53:CA:818:G:C2'	53:CA:819:A:H5"	2.26	0.65
53:CA:1382:C:O2'	53:CA:1383:C:H5'	1.95	0.65
3:CC:84:GLU:C	3:CC:86:LEU:H	2.04	0.65
3:CC:134:LYS:HD3	3:CC:138:GLN:OE1	1.96	0.65
10:CJ:63:ASP:OD2	14:CN:84:ARG:NH1	2.30	0.65
14:CN:47:LEU:O	14:CN:50:LEU:HG	1.96	0.65
20:CT:74:HIS:O	20:CT:78:LEU:HB2	1.96	0.65
22:DA:63:A:N6	22:DA:91:A:N6	2.45	0.65
22:DA:1537:G:H2'	22:DA:1538:G:C4'	2.23	0.65
22:DA:2093:G:H21	22:DA:2198:A:N6	1.95	0.65
22:DA:2307:G:H1'	22:DA:2308:G:C5	2.32	0.65
22:DA:2423:U:O2'	22:DA:2425:A:H2'	1.97	0.65
22:DA:2504:U:H5"	62:DA:3510:HOH:O	1.95	0.65
25:DD:12:THR:HG22	25:DD:13:ARG:O	1.96	0.65
26:DE:130:LYS:CB	26:DE:133:LEU:HB3	2.25	0.65
34:DM:49:ALA:O	34:DM:120:ALA:HB1	1.96	0.65
42:DU:81:ARG:HD2	42:DU:81:ARG:N	2.11	0.65
1:AA:115:G:H4'	1:AA:116:A:O5'	1.96	0.65
1:AA:484:G:C4'	1:AA:485:U:O5'	2.41	0.65
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.32	0.65
13:AM:18:LEU:O	13:AM:24:VAL:HG21	1.96	0.65
22:BA:320:A:HO2'	22:BA:322:A:H8	1.45	0.65
22:BA:930:G:H1'	47:BZ:24:LEU:HD21	1.79	0.65
22:BA:1161:C:H1'	39:BR:8:GLY:O	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1847:A:H4'	22:BA:1848:A:OP2	1.92	0.65
22:BA:2492:U:H2'	22:BA:2493:U:H6	1.62	0.65
27:BF:134:GLN:HE22	27:BF:149:ARG:HB3	1.61	0.65
28:BG:83:THR:HA	28:BG:84:LYS:CE	2.27	0.65
29:BH:38:PRO:HB2	29:BH:40:THR:HG23	1.76	0.65
53:CA:112:G:C2	53:CA:330:C:N4	2.65	0.65
53:CA:696:A:H8	53:CA:696:A:O5'	1.80	0.65
53:CA:1144:G:H21	53:CA:1146:A:H62	1.44	0.65
53:CA:1430:A:H2'	53:CA:1431:A:O4'	1.96	0.65
17:CQ:59:GLU:HB3	17:CQ:76:ARG:O	1.97	0.65
22:DA:797:G:OP1	26:DE:57:LYS:HG2	1.96	0.65
22:DA:1555:G:H2'	22:DA:1556:C:C6	2.30	0.65
22:DA:1635:A:H2'	22:DA:1636:U:O4'	1.96	0.65
22:DA:1666:G:O3'	32:DK:6:THR:HG23	1.97	0.65
25:DD:113:SER:HB2	25:DD:168:GLU:OE1	1.96	0.65
6:AF:71:ILE:HD11	6:AF:89:VAL:HG21	1.78	0.65
7:AG:4:ARG:HA	7:AG:4:ARG:NE	2.12	0.65
11:AK:126:ARG:CA	21:AU:33:ARG:HH12	2.09	0.65
22:BA:826:U:O2'	33:BL:53:GLY:HA3	1.96	0.65
22:BA:2135:A:HO2'	22:BA:2136:G:H8	0.73	0.65
23:BB:33:G:O2'	23:BB:34:A:H5'	1.97	0.65
32:BK:34:GLY:O	32:BK:35:VAL:C	2.40	0.65
53:CA:1217:C:H2'	53:CA:1218:C:H6	1.62	0.65
22:DA:455:C:H42	22:DA:473:G:H5'	1.61	0.65
22:DA:974:G:H1'	22:DA:975:A:C8	2.31	0.65
22:DA:1258:U:H2'	22:DA:1259:G:H8	1.59	0.65
40:DS:24:ILE:HG21	40:DS:36:LEU:HD21	1.79	0.65
40:DS:84:ARG:HB3	40:DS:96:ILE:HG23	1.78	0.65
1:AA:633:G:H2'	1:AA:634:C:H6	1.61	0.65
1:AA:807:A:H2'	1:AA:808:C:C6	2.31	0.65
1:AA:1370:G:O5'	9:AI:110:VAL:HG21	1.97	0.65
2:AB:202:ASN:ND2	2:AB:205:ALA:HB2	2.10	0.65
3:AC:21:TRP:HB3	3:AC:58:ARG:H	1.62	0.65
22:BA:894:U:H2'	22:BA:895:U:C6	2.31	0.65
22:BA:1288:G:C4	22:BA:1327:A:C2	2.85	0.65
24:BC:16:VAL:H	24:BC:203:VAL:CG1	2.10	0.65
44:BW:28:GLU:HG3	44:BW:29:SER:H	1.61	0.65
53:CA:982:U:H4'	53:CA:983:A:H5'	1.77	0.65
53:CA:1170:A:H2'	53:CA:1171:A:O4'	1.96	0.65
2:CB:9:LEU:HD12	2:CB:11:ALA:C	2.22	0.65
4:CD:29:THR:HG22	4:CD:30:LYS:HD3	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:CG:128:GLU:HG3	54:CG:130:LYS:H	1.61	0.65
10:CJ:38:GLY:O	10:CJ:40:ILE:HD12	1.95	0.65
11:CK:92:ARG:HH22	21:CU:19:LYS:HD2	1.61	0.65
22:DA:142:A:O2'	22:DA:143:C:C6	2.49	0.65
22:DA:503:A:N3	22:DA:505:A:H2'	2.12	0.65
22:DA:1359:A:C2	22:DA:1360:G:H1'	2.32	0.65
22:DA:1399:C:H2'	22:DA:1400:U:C6	2.32	0.65
22:DA:2058:A:N6	22:DA:2059:A:N6	2.45	0.65
22:DA:2617:U:H2'	22:DA:2618:G:H5'	1.78	0.65
57:DB:17:C:O2'	57:DB:18:G:H5'	1.97	0.65
30:DI:51:GLY:O	30:DI:52:LEU:HB2	1.95	0.65
43:DV:16:ALA:HA	43:DV:19:ARG:CZ	2.27	0.65
1:AA:210:C:H4'	1:AA:211:G:N2	2.12	0.65
22:BA:26:G:H1'	22:BA:514:A:N6	2.11	0.65
22:BA:90:U:H2'	22:BA:91:A:C8	2.32	0.65
22:BA:372:G:O2'	22:BA:400:G:O6	2.10	0.65
62:BA:3286:HOH:O	26:BE:98:LYS:HE2	1.96	0.65
39:BR:68:ARG:HH11	39:BR:90:ARG:HH11	1.45	0.65
46:BY:23:ARG:O	46:BY:24:GLU:C	2.39	0.65
49:B1:49:LYS:O	49:B1:50:GLU:HB3	1.96	0.65
53:CA:113:G:H21	53:CA:353:A:H8	1.43	0.65
53:CA:599:C:H4'	8:CH:121:GLY:C	2.21	0.65
53:CA:1514:G:H2'	53:CA:1515:G:C8	2.31	0.65
12:CL:19:ASN:H	12:CL:19:ASN:HD22	1.43	0.65
22:DA:192:C:OP1	62:DA:3720:HOH:O	2.14	0.65
22:DA:922:C:H2'	22:DA:923:G:H8	1.62	0.65
22:DA:1590:A:H2'	22:DA:1591:A:H8	1.62	0.65
44:DW:18:LYS:HD3	44:DW:19:ARG:HG2	1.79	0.65
1:AA:76:G:H2'	1:AA:76:G:N3	2.13	0.64
5:AE:155:LYS:HA	5:AE:158:LYS:HZ2	1.61	0.64
8:AH:17:GLN:HE21	8:AH:71:VAL:CG2	2.09	0.64
8:AH:21:LYS:HE2	8:AH:21:LYS:HA	1.78	0.64
22:BA:725:G:C6	22:BA:726:G:N1	2.65	0.64
22:BA:2577:A:H5"	22:BA:2578:G:C5'	2.27	0.64
27:BF:134:GLN:H	27:BF:134:GLN:NE2	1.95	0.64
28:BG:11:PRO:O	28:BG:14:VAL:HG22	1.97	0.64
29:BH:12:LEU:HD12	29:BH:19:VAL:HG11	1.78	0.64
32:BK:21:CYS:SG	32:BK:39:ILE:HD11	2.36	0.64
34:BM:21:ALA:HA	34:BM:97:GLN:HG2	1.79	0.64
45:BX:52:ALA:O	45:BX:53:LYS:CB	2.42	0.64
53:CA:1134:G:C6	53:CA:1135:U:H1'	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1303:C:H2'	53:CA:1303:C:O2	1.97	0.64
11:CK:96:ILE:HG21	11:CK:109:ILE:HD11	1.79	0.64
55:CM:13:HIS:HB3	55:CM:16:ILE:HD13	1.80	0.64
17:CQ:46:HIS:NE2	17:CQ:48:GLU:HG2	2.12	0.64
22:DA:36:G:C6	22:DA:445:C:N4	2.65	0.64
22:DA:1737:G:H5'	22:DA:1738:G:OP2	1.96	0.64
22:DA:2147:A:OP1	22:DA:2147:A:H4'	1.96	0.64
28:DG:72:ASN:O	28:DG:76:ILE:HG12	1.98	0.64
42:DU:3:LYS:HG2	42:DU:84:PHE:CZ	2.30	0.64
5:AE:24:VAL:O	5:AE:25:LYS:C	2.39	0.64
12:AL:33:CYS:HB3	12:AL:54:VAL:HG22	1.80	0.64
17:AQ:79:GLU:C	17:AQ:80:LYS:HD3	2.23	0.64
22:BA:587:C:H42	33:BL:33:ARG:HD3	1.63	0.64
22:BA:903:C:H2'	22:BA:904:G:C8	2.28	0.64
22:BA:1278:C:H2'	22:BA:1279:G:H8	1.61	0.64
22:BA:2355:G:H4'	44:BW:20:LEU:HD13	1.78	0.64
22:BA:2478:A:H5'	52:B4:32:LYS:HD3	1.79	0.64
31:BJ:130:HIS:CD2	31:BJ:132:HIS:H	2.14	0.64
53:CA:263:A:OP1	20:CT:73:ARG:NH1	2.27	0.64
53:CA:971:G:H5"	53:CA:972:C:H5"	1.79	0.64
12:CL:19:ASN:H	12:CL:19:ASN:ND2	1.95	0.64
17:CQ:3:LYS:HZ3	17:CQ:6:THR:HG21	1.60	0.64
22:DA:279:A:N6	22:DA:361:G:O2'	2.30	0.64
22:DA:1338:G:H2'	22:DA:1339:G:H5'	1.79	0.64
22:DA:1440:U:O2'	22:DA:1441:G:H5'	1.98	0.64
22:DA:1706:C:H4'	22:DA:1707:G:OP2	1.96	0.64
22:DA:2226:C:H2'	22:DA:2227:A:O4'	1.98	0.64
1:AA:921:U:O2	5:AE:23:THR:HB	1.97	0.64
1:AA:1251:A:H2'	1:AA:1252:A:C8	2.33	0.64
4:AD:106:PHE:CG	4:AD:144:ILE:HD11	2.32	0.64
14:AN:12:ARG:HG2	14:AN:53:ASP:HB3	1.79	0.64
23:BB:28:C:O2'	23:BB:29:A:H5'	1.96	0.64
32:BK:116:ILE:HD12	32:BK:117:SER:N	2.11	0.64
34:BM:77:PRO:HD2	34:BM:80:VAL:HG11	1.79	0.64
40:BS:88:ARG:HH21	40:BS:88:ARG:CG	2.10	0.64
41:BT:39:THR:CG2	41:BT:41:ALA:HB3	2.26	0.64
41:BT:49:LYS:HB2	41:BT:50:LEU:HD12	1.78	0.64
53:CA:1072:G:H2'	53:CA:1073:U:C6	2.32	0.64
53:CA:1520:C:H2'	53:CA:1521:C:H6	1.60	0.64
22:DA:1241:A:N3	22:DA:1241:A:H5'	2.12	0.64
22:DA:1510:G:O2'	22:DA:1511:G:O4'	2.16	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2461:A:H1'	22:DA:2492:U:N3	2.12	0.64
57:DB:16:G:O6	57:DB:69:G:C5	2.51	0.64
57:DB:57:A:C6	58:DF:25:MET:HG2	2.33	0.64
26:DE:110:SER:O	26:DE:113:VAL:HG12	1.97	0.64
33:DL:17:LYS:HZ1	33:DL:19:LEU:HD22	1.62	0.64
38:DQ:91:ARG:HG3	39:DR:11:GLN:CD	2.21	0.64
2:AB:133:ALA:O	2:AB:137:THR:HG23	1.97	0.64
4:AD:129:VAL:HG13	4:AD:131:ILE:HD12	1.80	0.64
5:AE:110:MET:HE2	5:AE:124:ALA:HB1	1.79	0.64
9:AI:56:MET:HE2	9:AI:57:VAL:H	1.62	0.64
22:BA:2520:C:C6	22:BA:2567:G:H1'	2.33	0.64
25:BD:12:THR:CG2	25:BD:13:ARG:N	2.60	0.64
25:BD:106:LYS:H	25:BD:106:LYS:HD2	1.60	0.64
37:BP:33:GLU:HA	37:BP:38:ARG:HH11	1.61	0.64
53:CA:961:U:O4	53:CA:983:A:N6	2.30	0.64
53:CA:1215:G:HO2'	53:CA:1216:A:H8	1.42	0.64
9:CI:71:ILE:CD1	9:CI:72:SER:H	2.11	0.64
56:CP:48:GLU:HG3	56:CP:51:ARG:HH21	1.62	0.64
22:DA:2298:A:O2'	22:DA:2299:U:O4'	2.16	0.64
57:DB:5:U:H2'	57:DB:6:G:H8	1.60	0.64
30:DI:76:ALA:HB2	30:DI:131:THR:HB	1.80	0.64
32:DK:13:ASN:H	32:DK:13:ASN:HD22	1.44	0.64
34:DM:35:ALA:HB3	34:DM:99:GLY:H	1.62	0.64
36:DO:11:ALA:HB2	36:DO:96:GLY:N	2.13	0.64
42:DU:58:VAL:HG12	42:DU:60:LYS:H	1.61	0.64
1:AA:72:A:H61	1:AA:99:C:H1'	1.61	0.64
7:AG:30:MET:HG2	7:AG:31:VAL:N	2.12	0.64
8:AH:88:LYS:HG3	8:AH:89:ASP:N	2.12	0.64
19:AS:41:PRO:O	19:AS:44:ILE:HG13	1.97	0.64
22:BA:2282:G:H4'	22:BA:2389:G:O2'	1.98	0.64
24:BC:61:TYR:HD2	24:BC:85:ASN:HD22	1.44	0.64
33:BL:87:GLY:O	33:BL:89:VAL:N	2.30	0.64
35:BN:38:LEU:HB3	35:BN:39:PRO:HD3	1.77	0.64
47:BZ:13:ILE:HG22	47:BZ:14:GLY:N	2.12	0.64
8:CH:68:LYS:HD3	8:CH:69:ALA:H	1.60	0.64
22:DA:332:A:C5	22:DA:335:C:N4	2.66	0.64
22:DA:507:A:H2'	22:DA:507:A:OP2	1.97	0.64
22:DA:1275:A:N3	22:DA:1275:A:H2'	2.12	0.64
24:DC:68:ARG:HH12	24:DC:115:ILE:CD1	2.10	0.64
26:DE:111:GLU:HA	26:DE:114:ARG:HE	1.63	0.64
58:DF:65:LEU:HD23	58:DF:65:LEU:H	1.63	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DN:2:ARG:HG2	35:DN:5:LYS:HD3	1.80	0.64
38:DQ:79:ILE:HD13	38:DQ:79:ILE:C	2.23	0.64
46:DY:4:LYS:HD3	46:DY:4:LYS:H	1.62	0.64
47:DZ:20:LYS:O	47:DZ:24:LEU:HD13	1.97	0.64
51:D3:6:VAL:HG12	51:D3:9:ALA:H	1.62	0.64
1:AA:204:G:H1'	1:AA:465:A:C2	2.33	0.64
1:AA:1279:G:H1'	1:AA:1282:C:H42	1.61	0.64
1:AA:1452:C:H5'	1:AA:1453:G:C5	2.33	0.64
11:AK:22:ILE:HD11	11:AK:85:VAL:HG13	1.78	0.64
15:AO:23:SER:HB3	15:AO:26:VAL:HG23	1.78	0.64
22:BA:1149:G:O2'	22:BA:1150:C:H5'	1.97	0.64
22:BA:2276:G:OP2	34:BM:83:GLY:O	2.16	0.64
22:BA:2484:G:OP1	34:BM:44:ARG:HD3	1.97	0.64
25:BD:90:PHE:HB2	25:BD:92:VAL:HG23	1.79	0.64
31:BJ:6:ALA:HB2	31:BJ:45:THR:HG21	1.78	0.64
46:BY:5:GLU:O	46:BY:8:GLU:HB2	1.97	0.64
51:B3:53:ASP:HA	51:B3:56:LEU:HD23	1.78	0.64
53:CA:198:G:O6	53:CA:220:G:C4	2.51	0.64
53:CA:844:G:O2'	53:CA:845:A:H5"	1.98	0.64
2:CB:47:PRO:HA	2:CB:50:ASN:HB2	1.80	0.64
4:CD:25:ARG:NH1	4:CD:25:ARG:HG2	2.13	0.64
19:CS:54:ARG:HG2	19:CS:55:GLN:H	1.62	0.64
22:DA:454:A:C4'	22:DA:455:C:OP2	2.29	0.64
22:DA:675:A:OP1	26:DE:60:TRP:CZ2	2.49	0.64
22:DA:1682:G:H2'	22:DA:1683:U:C5	2.32	0.64
22:DA:1954:G:O2'	22:DA:1955:U:P	2.56	0.64
22:DA:2822:G:H5"	25:DD:164:GLN:NE2	2.11	0.64
24:DC:140:VAL:HG22	24:DC:161:VAL:O	1.98	0.64
25:DD:33:ARG:HH21	25:DD:51:THR:HG22	1.63	0.64
32:DK:10:VAL:HG13	32:DK:12:ASP:OD1	1.96	0.64
35:DN:97:ILE:HD11	35:DN:99:LYS:NZ	2.13	0.64
4:AD:133:SER:O	4:AD:134:TYR:C	2.38	0.64
12:AL:6:LEU:HD23	17:AQ:33:TYR:CE2	2.32	0.64
22:BA:1392:A:H61	41:BT:18:GLU:CD	2.05	0.64
22:BA:2390:U:OP2	51:B3:34:LYS:HE2	1.98	0.64
26:BE:44:ARG:HG3	26:BE:44:ARG:NH2	2.03	0.64
27:BF:40:GLY:HA2	27:BF:84:ILE:HD11	1.77	0.64
38:BQ:91:ARG:CZ	39:BR:11:GLN:H	2.11	0.64
51:B3:54:LEU:O	51:B3:58:ILE:HG13	1.97	0.64
53:CA:876:C:H1'	8:CH:11:THR:HG21	1.80	0.64
53:CA:1105:A:H2'	53:CA:1106:G:C8	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1219:A:OP1	14:CN:52:ARG:HG3	1.98	0.64
53:CA:1409:C:H5'	22:DA:1916:A:N1	2.12	0.64
17:CQ:29:LYS:HE2	17:CQ:36:PHE:CE1	2.33	0.64
22:DA:125:A:H5"	50:D2:19:ARG:HD3	1.79	0.64
22:DA:668:A:C5	22:DA:670:A:N7	2.65	0.64
22:DA:1054:A:C4	22:DA:1055:G:H1'	2.32	0.64
22:DA:2348:U:H2'	22:DA:2349:G:H8	1.62	0.64
25:DD:89:GLU:HG2	25:DD:94:GLN:HE22	1.62	0.64
34:DM:34:LYS:HD3	34:DM:131:VAL:HG21	1.80	0.64
35:DN:37:THR:HB	35:DN:40:LYS:HB2	1.80	0.64
38:DQ:57:ARG:C	38:DQ:59:LEU:H	2.06	0.64
41:DT:67:VAL:HB	41:DT:76:ARG:HG3	1.80	0.64
1:AA:666:G:H5'	1:AA:726:C:H1'	1.78	0.64
1:AA:715:A:H2'	1:AA:716:A:C8	2.33	0.64
1:AA:1256:A:H5"	3:AC:26:LYS:HE2	1.79	0.64
22:BA:587:C:N3	33:BL:33:ARG:NH2	2.43	0.64
22:BA:904:G:C2	22:BA:905:A:C8	2.86	0.64
22:BA:1179:G:H3'	22:BA:1180:U:C4'	2.14	0.64
22:BA:1248:G:OP2	26:BE:44:ARG:NH1	2.31	0.64
22:BA:2211:A:O2'	22:BA:2212:A:OP1	2.16	0.64
22:BA:2804:U:H2'	22:BA:2805:C:C6	2.33	0.64
62:BA:3241:HOH:O	26:BE:81:GLY:HA2	1.97	0.64
38:BQ:4:LYS:NZ	38:BQ:7:VAL:HG13	2.12	0.64
53:CA:205:A:C5	53:CA:206:C:N4	2.65	0.64
53:CA:251:G:H4'	53:CA:252:U:C5'	2.28	0.64
53:CA:1336:C:H1'	53:CA:1337:G:C2	2.33	0.64
21:CU:39:LYS:N	21:CU:40:PRO:CD	2.61	0.64
22:DA:67:U:H2'	22:DA:68:G:C8	2.30	0.64
22:DA:150:U:H2'	22:DA:151:C:C6	2.32	0.64
22:DA:172:A:H2'	22:DA:173:A:H8	1.61	0.64
22:DA:1905:C:HO2'	22:DA:1929:G:H1'	1.62	0.64
26:DE:119:ILE:O	26:DE:119:ILE:HG13	1.97	0.64
38:DQ:78:PHE:CZ	38:DQ:82:LEU:HD11	2.33	0.64
1:AA:843:U:H2'	1:AA:844:G:H5'	1.80	0.64
1:AA:1016:A:C8	1:AA:1017:U:H1'	2.33	0.64
5:AE:109:ALA:O	5:AE:110:MET:HG2	1.97	0.64
12:AL:85:ARG:CZ	12:AL:87:LYS:HB3	2.27	0.64
22:BA:170:U:H2'	22:BA:171:U:H6	1.63	0.64
22:BA:923:G:N3	44:BW:23:LYS:CE	2.59	0.64
22:BA:996:A:O2'	38:BQ:91:ARG:HG3	1.98	0.64
22:BA:2136:G:O2'	22:BA:2137:U:C6	2.51	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2220:U:H2'	22:BA:2221:G:H8	1.62	0.64
22:BA:2233:U:H2'	22:BA:2234:G:C8	2.33	0.64
31:BJ:74:TYR:HB2	31:BJ:87:ALA:O	1.98	0.64
34:BM:43:ALA:CA	34:BM:46:ILE:HG13	2.25	0.64
41:BT:2:ILE:HG13	41:BT:3:ARG:NH2	2.13	0.64
53:CA:931:C:H2'	53:CA:932:C:H6	1.63	0.64
2:CB:56:LEU:HD22	2:CB:59:ILE:HD11	1.80	0.64
54:CG:107:ALA:O	54:CG:118:ARG:HB3	1.98	0.64
17:CQ:29:LYS:HB2	17:CQ:36:PHE:CE1	2.33	0.64
21:CU:36:PHE:HB3	21:CU:40:PRO:HD3	1.78	0.64
22:DA:298:G:H2'	22:DA:339:U:O4	1.97	0.64
22:DA:992:C:H4'	39:DR:74:ILE:HD13	1.80	0.64
22:DA:1387:A:C5'	22:DA:1469:A:H1'	2.26	0.64
32:DK:104:THR:C	32:DK:106:GLU:H	2.05	0.64
34:DM:61:GLY:HA2	34:DM:107:GLY:HA3	1.79	0.64
1:AA:182:A:N3	1:AA:184:G:C8	2.66	0.64
1:AA:198:G:C2'	1:AA:199:A:H8	2.10	0.64
1:AA:1285:A:H5'	1:AA:1286:U:O4	1.98	0.64
3:AC:15:LYS:HG3	3:AC:16:PRO:HD2	1.80	0.64
3:AC:52:SER:HB2	3:AC:111:ASP:OD2	1.98	0.64
5:AE:100:GLU:HB3	5:AE:121:ASN:HA	1.80	0.64
5:AE:114:LEU:HG	5:AE:119:VAL:CG2	2.28	0.64
7:AG:68:VAL:HB	7:AG:99:ALA:HB1	1.79	0.64
9:AI:112:ARG:HH22	10:AJ:64:GLN:HE22	1.46	0.64
22:BA:2353:G:H1'	44:BW:30:VAL:CG1	2.28	0.64
27:BF:39:VAL:HG11	27:BF:49:LEU:HD13	1.79	0.64
29:BH:31:VAL:O	29:BH:32:PRO:C	2.41	0.64
43:BV:2:PHE:CD1	43:BV:50:MET:HE2	2.33	0.64
53:CA:87:C:O2'	53:CA:88:U:C4'	2.46	0.64
53:CA:532:A:C8	3:CC:192:TYR:HE2	2.15	0.64
53:CA:989:U:H2'	53:CA:990:C:H5'	1.79	0.64
4:CD:89:LEU:HD23	4:CD:199:ILE:HD11	1.80	0.64
22:DA:83:A:H61	22:DA:101:A:H5'	1.62	0.64
22:DA:185:G:C6	22:DA:212:G:C2	2.86	0.64
22:DA:301:G:C6	22:DA:302:C:N4	2.66	0.64
22:DA:991:C:OP2	22:DA:1186:G:OP2	2.15	0.64
22:DA:1522:A:H1'	22:DA:1524:G:C4	2.33	0.64
22:DA:1611:C:HO2'	22:DA:1612:C:H6	1.40	0.64
32:DK:21:CYS:SG	32:DK:39:ILE:CG2	2.86	0.64
32:DK:76:VAL:O	37:DP:71:ARG:HG3	1.98	0.64
41:DT:24:MET:HE2	41:DT:24:MET:HA	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:467:U:O2'	1:AA:468:A:O5'	2.11	0.63
1:AA:858:G:O2'	1:AA:859:G:H5'	1.98	0.63
1:AA:1088:G:H21	1:AA:1167:A:H62	1.44	0.63
2:AB:89:PHE:CZ	2:AB:153:MET:HB2	2.33	0.63
3:AC:76:ILE:HD11	3:AC:102:ILE:HG12	1.80	0.63
3:AC:146:LYS:HB2	3:AC:202:PHE:CD2	2.32	0.63
5:AE:114:LEU:HD21	5:AE:122:VAL:CG2	2.28	0.63
16:AP:4:ILE:HG12	16:AP:21:VAL:HG22	1.79	0.63
18:AR:22:TYR:CZ	18:AR:23:LYS:HE3	2.33	0.63
21:AU:13:VAL:HG13	21:AU:15:LEU:HG	1.80	0.63
22:BA:995:C:H5'	22:BA:995:C:H6	1.62	0.63
22:BA:1420:A:C8	22:BA:2211:A:N6	2.66	0.63
22:BA:2339:C:H2'	22:BA:2340:A:C8	2.33	0.63
22:BA:2555:U:C5	22:BA:2556:C:C2	2.86	0.63
24:BC:12:ARG:HH11	24:BC:12:ARG:HG2	1.62	0.63
24:BC:13:ARG:HG2	24:BC:14:HIS:CD2	2.33	0.63
26:BE:119:ILE:HD13	26:BE:187:VAL:HA	1.80	0.63
34:BM:73:ILE:HG21	34:BM:91:TYR:CE2	2.33	0.63
35:BN:73:ASN:HA	35:BN:76:VAL:HG12	1.80	0.63
39:BR:97:LYS:O	39:BR:98:ILE:HB	1.98	0.63
53:CA:801:U:H2'	53:CA:802:A:C8	2.33	0.63
53:CA:1052:U:H5"	53:CA:1053:G:OP2	1.98	0.63
53:CA:1071:C:H2'	53:CA:1072:G:C8	2.33	0.63
53:CA:1147:C:O2'	53:CA:1148:U:H6	1.80	0.63
53:CA:1349:A:OP1	9:CI:121:ARG:HB2	1.97	0.63
9:CI:48:ARG:HH21	9:CI:57:VAL:HG21	1.62	0.63
10:CJ:5:ARG:HH21	10:CJ:77:VAL:HG13	1.61	0.63
10:CJ:80:THR:O	10:CJ:84:VAL:HG22	1.99	0.63
12:CL:72:ASN:HD22	12:CL:72:ASN:H	1.45	0.63
14:CN:33:VAL:HG22	14:CN:40:ARG:HH21	1.61	0.63
14:CN:62:ARG:HE	14:CN:69:PRO:HA	1.63	0.63
22:DA:684:G:H5'	50:D2:16:HIS:CE1	2.32	0.63
22:DA:876:C:C2	22:DA:877:A:N7	2.66	0.63
22:DA:1308:A:H2'	22:DA:1309:G:O4'	1.98	0.63
22:DA:1352:U:C5	22:DA:1377:G:C6	2.86	0.63
22:DA:2230:G:H2'	22:DA:2231:U:H6	1.63	0.63
28:DG:10:VAL:HB	28:DG:14:VAL:HG21	1.80	0.63
28:DG:163:TYR:N	28:DG:163:TYR:CD2	2.65	0.63
31:DJ:30:THR:HG23	31:DJ:31:GLU:N	2.13	0.63
35:DN:56:LYS:HD3	35:DN:88:ALA:HA	1.79	0.63
41:DT:28:ASN:HB2	41:DT:87:LEU:HB3	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DU:10:VAL:HG12	42:DU:71:ILE:HA	1.79	0.63
1:AA:186:C:O4'	20:AT:75:LYS:HD2	1.97	0.63
1:AA:344:A:O3'	37:BP:36:LYS:HE3	1.98	0.63
1:AA:842:U:H3'	1:AA:843:U:C5'	2.28	0.63
10:AJ:88:MET:HB3	10:AJ:89:ARG:NH1	2.13	0.63
12:AL:81:ILE:HD11	12:AL:94:TYR:CG	2.34	0.63
22:BA:675:A:OP1	26:BE:58:LYS:HE2	1.97	0.63
22:BA:1115:G:HO2'	22:BA:1116:G:P	2.19	0.63
22:BA:1842:G:H2'	22:BA:1843:C:C6	2.34	0.63
22:BA:2355:G:H4'	44:BW:20:LEU:CD1	2.28	0.63
25:BD:69:ALA:HA	25:BD:73:VAL:HG13	1.80	0.63
28:BG:33:THR:C	28:BG:34:ARG:HD3	2.23	0.63
31:BJ:21:THR:O	31:BJ:23:LYS:N	2.32	0.63
43:BV:80:HIS:CD2	43:BV:83:LYS:N	2.46	0.63
49:B1:33:LEU:H	49:B1:51:ALA:HB3	1.62	0.63
53:CA:313:A:H2'	53:CA:314:C:C6	2.33	0.63
53:CA:996:A:H2'	53:CA:997:U:C6	2.33	0.63
2:CB:81:ASP:CG	2:CB:82:ALA:H	2.06	0.63
3:CC:180:ASP:OD2	3:CC:203:LYS:HB2	1.99	0.63
19:CS:35:ARG:HH21	19:CS:51:HIS:HD2	1.44	0.63
21:CU:35:GLU:O	21:CU:36:PHE:CD2	2.52	0.63
22:DA:228:C:H5'	22:DA:229:C:H5	1.63	0.63
22:DA:586:A:O2'	22:DA:671:C:O2	2.16	0.63
22:DA:1024:G:C3'	22:DA:1025:G:H5"	2.26	0.63
22:DA:1607:C:H4'	22:DA:1608:A:H8	1.63	0.63
22:DA:1813:G:N3	24:DC:49:THR:HB	2.14	0.63
28:DG:44:HIS:HA	28:DG:49:LEU:HA	1.80	0.63
29:DH:32:PRO:HA	45:DX:38:TRP:HD1	1.62	0.63
41:DT:29:THR:HB	41:DT:87:LEU:N	2.12	0.63
41:DT:43:ILE:HG21	41:DT:58:VAL:HG11	1.79	0.63
49:D1:5:ARG:HD2	49:D1:25:ASN:HB2	1.79	0.63
1:AA:662:U:H2'	1:AA:663:A:C8	2.33	0.63
8:AH:85:TYR:CD2	8:AH:123:GLU:HB2	2.34	0.63
11:AK:124:LYS:CE	21:AU:33:ARG:HH21	2.12	0.63
14:AN:90:GLY:O	14:AN:92:ILE:N	2.30	0.63
15:AO:18:ALA:O	15:AO:19:ASN:HB2	1.97	0.63
22:BA:2292:U:O2'	22:BA:2293:G:H5'	1.98	0.63
22:BA:2444:G:OP2	26:BE:63:LYS:HE2	1.98	0.63
25:BD:66:GLY:O	25:BD:69:ALA:HB3	1.98	0.63
29:BH:130:VAL:HG23	29:BH:131:SER:H	1.63	0.63
36:BO:3:LYS:HG3	36:BO:4:LYS:H	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BO:59:ALA:HA	36:BO:62:LEU:HD12	1.80	0.63
38:BQ:10:ARG:HB2	38:BQ:10:ARG:HH11	1.64	0.63
40:BS:73:LYS:HE3	40:BS:74:ILE:H	1.63	0.63
47:BZ:29:ARG:HH21	47:BZ:29:ARG:CG	2.08	0.63
53:CA:140:U:H2'	53:CA:141:G:O4'	1.97	0.63
53:CA:961:U:O4	53:CA:983:A:C6	2.52	0.63
53:CA:1318:A:O2'	19:CS:36:ARG:HD3	1.98	0.63
2:CB:76:SER:O	2:CB:79:VAL:HG12	1.98	0.63
2:CB:96:LEU:H	2:CB:99:MET:HE3	1.61	0.63
54:CG:22:LEU:HA	54:CG:25:PHE:CB	2.24	0.63
22:DA:963:U:HO2'	22:DA:964:C:H6	1.45	0.63
22:DA:1197:G:H5'	22:DA:1227:G:O2'	1.97	0.63
22:DA:1744:A:H3'	22:DA:1745:A:H8	1.62	0.63
22:DA:1816:C:H2'	24:DC:61:TYR:CE2	2.32	0.63
22:DA:2141:G:H2'	22:DA:2142:A:C8	2.33	0.63
28:DG:93:TYR:CD2	28:DG:93:TYR:N	2.64	0.63
32:DK:38:ILE:HG12	32:DK:61:VAL:HG12	1.80	0.63
34:DM:38:ARG:O	34:DM:126:ILE:HG21	1.98	0.63
35:DN:35:LYS:NZ	35:DN:112:TYR:HE1	1.95	0.63
43:DV:80:HIS:CD2	43:DV:83:LYS:N	2.66	0.63
1:AA:214:C:O2'	1:AA:215:C:C6	2.37	0.63
1:AA:737:C:H2'	1:AA:738:C:C6	2.34	0.63
1:AA:1454:G:H2'	1:AA:1455:G:H8	1.63	0.63
4:AD:166:LYS:HB3	4:AD:166:LYS:NZ	2.14	0.63
6:AF:42:TRP:HZ2	6:AF:61:LEU:HD22	1.61	0.63
8:AH:35:ILE:HD11	8:AH:125:ILE:HG21	1.80	0.63
22:BA:528:A:C2	22:BA:2043:C:H4'	2.33	0.63
22:BA:1199:U:H2'	22:BA:1200:C:C6	2.33	0.63
22:BA:2291:U:H2'	22:BA:2292:U:C6	2.34	0.63
28:BG:104:LEU:HB2	28:BG:112:VAL:HG22	1.80	0.63
30:BI:116:MET:HE2	30:BI:116:MET:HA	1.81	0.63
31:BJ:43:GLU:O	31:BJ:44:TYR:C	2.41	0.63
37:BP:24:THR:HG22	37:BP:87:ARG:H	1.63	0.63
40:BS:34:ASP:OD1	48:B0:36:LYS:HE2	1.99	0.63
40:BS:71:VAL:HG22	40:BS:71:VAL:O	1.97	0.63
40:BS:73:LYS:HA	40:BS:73:LYS:CE	2.27	0.63
53:CA:403:C:O2'	53:CA:404:G:H5'	1.98	0.63
53:CA:1145:A:C4'	53:CA:1146:A:OP1	2.39	0.63
53:CA:1366:C:O2'	53:CA:1367:C:H6	1.82	0.63
22:DA:1023:U:H5'	22:DA:1023:U:C6	2.34	0.63
22:DA:1286:A:C4	22:DA:1289:C:N4	2.66	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1515:A:H4'	22:DA:1556:C:O2'	1.99	0.63
22:DA:2104:C:O2	22:DA:2105:U:H5	1.82	0.63
22:DA:2142:A:H2'	22:DA:2143:C:O3'	1.97	0.63
22:DA:2212:A:C8	22:DA:2214:C:N4	2.67	0.63
25:DD:68:PHE:HB3	25:DD:73:VAL:HA	1.80	0.63
26:DE:29:HIS:HA	26:DE:32:VAL:HG22	1.81	0.63
48:D0:28:SER:HB3	48:D0:39:ARG:NE	2.14	0.63
1:AA:1331:G:C2'	1:AA:1332:A:OP2	2.46	0.63
2:AB:67:LEU:HD22	2:AB:69:VAL:HG23	1.79	0.63
4:AD:147:LYS:HE2	4:AD:147:LYS:H	1.63	0.63
8:AH:48:PHE:O	8:AH:49:LYS:HB2	1.97	0.63
9:AI:88:GLU:HG3	9:AI:89:TYR:H	1.62	0.63
22:BA:672:C:OP2	33:BL:42:SER:OG	2.16	0.63
22:BA:1867:G:C2'	22:BA:1868:C:H5'	2.29	0.63
22:BA:2703:C:H2'	22:BA:2704:C:C6	2.34	0.63
24:BC:117:SER:HB2	24:BC:128:THR:HB	1.80	0.63
25:BD:111:GLY:O	25:BD:169:ARG:O	2.16	0.63
25:BD:151:THR:HG22	25:BD:152:PRO:CD	2.28	0.63
30:BI:71:LYS:HG2	30:BI:72:THR:H	1.63	0.63
32:BK:18:ARG:N	32:BK:45:GLU:HB2	2.12	0.63
41:BT:43:ILE:O	41:BT:47:VAL:HG23	1.99	0.63
53:CA:93:U:O5'	53:CA:93:U:H6	1.82	0.63
53:CA:451:A:H61	53:CA:481:G:H5'	1.63	0.63
53:CA:1183:U:C3'	53:CA:1184:G:H5"	2.17	0.63
3:CC:29:ALA:HB1	14:CN:64:ARG:NH1	2.13	0.63
11:CK:63:GLN:HB2	11:CK:98:ALA:HB2	1.79	0.63
12:CL:42:LYS:HG2	12:CL:43:LYS:N	2.12	0.63
22:DA:386:G:H4'	22:DA:387:U:OP2	1.97	0.63
22:DA:749:A:C5	22:DA:750:A:N7	2.66	0.63
22:DA:2882:A:H4'	35:DN:97:ILE:HG12	1.79	0.63
34:DM:34:LYS:HB2	34:DM:131:VAL:CG2	2.29	0.63
38:DQ:6:GLY:C	38:DQ:8:ILE:H	2.05	0.63
39:DR:4:VAL:HG23	39:DR:39:LEU:HG	1.78	0.63
9:AI:11:ARG:HA	9:AI:105:ARG:NH1	2.13	0.63
22:BA:1238:G:C2'	22:BA:1239:G:H5'	2.28	0.63
22:BA:1605:C:H3'	22:BA:1606:C:H5"	1.81	0.63
53:CA:808:C:OP1	15:CO:47:LYS:HE2	1.98	0.63
53:CA:1183:U:O2'	53:CA:1184:G:OP1	2.17	0.63
3:CC:119:ILE:O	3:CC:123:LEU:HB2	1.99	0.63
54:CG:10:LYS:HE3	54:CG:10:LYS:N	2.14	0.63
22:DA:279:A:C2	22:DA:362:A:H4'	2.32	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:533:G:H21	38:DQ:44:TYR:HD1	1.47	0.63
22:DA:2060:A:O2'	62:DA:3512:HOH:O	2.16	0.63
24:DC:166:ARG:HG3	24:DC:166:ARG:O	1.97	0.63
25:DD:89:GLU:HG2	25:DD:94:GLN:NE2	2.14	0.63
58:DF:177:ARG:CZ	58:DF:178:LYS:HB3	2.28	0.63
33:DL:73:ILE:O	33:DL:105:ILE:HG23	1.99	0.63
47:DZ:16:LEU:HD22	47:DZ:16:LEU:N	2.11	0.63
1:AA:261:U:OP2	20:AT:73:ARG:NH2	2.32	0.63
24:BC:230:PRO:HD2	24:BC:246:PRO:HA	1.79	0.63
26:BE:150:THR:HG21	26:BE:153:LEU:HA	1.80	0.63
31:BJ:13:ARG:O	31:BJ:14:ASP:HB2	1.99	0.63
39:BR:28:ALA:O	39:BR:63:VAL:HG21	1.98	0.63
48:B0:43:THR:HG23	48:B0:47:TYR:O	1.99	0.63
53:CA:177:G:O2'	53:CA:1448:C:H4'	1.98	0.63
53:CA:328:C:H2'	53:CA:328:C:O2	1.98	0.63
22:DA:84:A:C4	22:DA:103:A:N6	2.66	0.63
22:DA:118:A:C8	22:DA:119:A:C8	2.86	0.63
22:DA:240:C:OP2	22:DA:241:A:H3'	1.98	0.63
22:DA:620:G:H8	22:DA:622:G:O6	1.81	0.63
22:DA:738:G:H2'	22:DA:739:A:C8	2.34	0.63
22:DA:975:A:O2'	22:DA:976:G:C8	2.40	0.63
22:DA:2261:C:C2	22:DA:2280:G:N2	2.67	0.63
22:DA:2310:C:H42	58:DF:76:PHE:HE1	1.46	0.63
25:DD:110:THR:HA	25:DD:171:THR:HA	1.81	0.63
26:DE:5:LEU:HA	26:DE:120:VAL:HG13	1.81	0.63
58:DF:48:LEU:HG	58:DF:49:LEU:HD22	1.81	0.63
29:DH:116:ARG:O	29:DH:117:LEU:HG	1.99	0.63
31:DJ:2:LYS:HB2	31:DJ:2:LYS:NZ	2.14	0.63
32:DK:61:VAL:HG13	32:DK:87:LEU:CD2	2.29	0.63
42:DU:47:PRO:HB3	42:DU:54:PRO:HG2	1.80	0.63
43:DV:44:HIS:NE2	43:DV:85:LYS:HB2	2.14	0.63
45:DX:52:ALA:O	45:DX:53:LYS:HB3	1.97	0.63
1:AA:722:G:H5"	1:AA:722:G:N3	2.13	0.63
1:AA:1533:C:H3'	1:AA:1534:A:H5"	1.79	0.63
2:AB:13:VAL:HG22	2:AB:207:ARG:HH22	1.64	0.63
4:AD:31:CYS:O	4:AD:32:LYS:HB2	1.97	0.63
7:AG:61:PHE:CE1	7:AG:65:LEU:HD22	2.33	0.63
12:AL:33:CYS:HA	12:AL:53:ARG:O	1.99	0.63
22:BA:31:C:O2'	22:BA:1238:G:H5'	1.99	0.63
22:BA:409:G:O2'	22:BA:410:G:H5'	1.99	0.63
38:BQ:91:ARG:HH12	39:BR:10:LYS:HB3	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BT:38:ALA:HB1	41:BT:43:ILE:CG2	2.29	0.63
53:CA:1268:G:N2	53:CA:1327:C:H1'	2.14	0.63
53:CA:1301:U:H2'	53:CA:1301:U:O2	1.97	0.63
2:CB:59:ILE:HA	2:CB:62:ARG:HD3	1.81	0.63
5:CE:129:SER:HA	62:CE:304:HOH:O	1.98	0.63
12:CL:56:LEU:HB2	12:CL:58:ASN:OD1	1.99	0.63
56:CP:75:ILE:HA	56:CP:78:VAL:HG23	1.80	0.63
22:DA:27:G:H1'	22:DA:513:A:N6	2.14	0.63
22:DA:1040:A:C2	22:DA:1116:G:N1	2.66	0.63
22:DA:1231:U:H2'	22:DA:1232:G:H8	1.64	0.63
22:DA:1265:A:H4'	22:DA:1266:G:O5'	1.98	0.63
22:DA:1345:C:C5'	22:DA:1396:U:O4	2.47	0.63
22:DA:1784:A:H4'	22:DA:1785:A:O5'	1.97	0.63
22:DA:2014:A:H5'	40:DS:94:ASP:OD2	1.98	0.63
22:DA:2336:A:N7	44:DW:40:ARG:NH2	2.47	0.63
22:DA:2345:G:H4'	22:DA:2346:A:H5"	1.79	0.63
22:DA:2822:G:C5'	25:DD:164:GLN:HE22	2.09	0.63
24:DC:94:LEU:HD13	24:DC:100:ARG:HD3	1.79	0.63
25:DD:34:VAL:HG12	25:DD:48:ILE:HD11	1.79	0.63
36:DO:30:ARG:HA	36:DO:35:ILE:HD13	1.79	0.63
39:DR:43:ASN:HD22	39:DR:44:GLY:H	1.47	0.63
50:D2:35:ARG:HG3	50:D2:42:LEU:HD21	1.80	0.63
1:AA:1447:A:H5'	1:AA:1448:C:OP2	1.99	0.63
12:AL:72:ASN:OD1	12:AL:104:SER:HB3	1.98	0.63
22:BA:545:U:H2'	22:BA:546:U:C4'	2.28	0.63
23:BB:42:C:OP1	27:BF:63:LYS:HE2	1.99	0.63
25:BD:149:ASN:OD1	25:BD:150:GLN:N	2.30	0.63
44:BW:13:ARG:O	44:BW:14:ASP:C	2.42	0.63
44:BW:31:LEU:N	44:BW:31:LEU:HD23	2.14	0.63
52:B4:25:VAL:C	52:B4:26:ILE:HD13	2.24	0.63
53:CA:613:C:H2'	53:CA:614:C:H6	1.64	0.63
53:CA:801:U:H2'	53:CA:802:A:H8	1.64	0.63
53:CA:818:G:H3'	53:CA:819:A:C5'	2.29	0.63
53:CA:1296:C:O2'	53:CA:1302:C:C4	2.52	0.63
6:CF:68:GLN:O	6:CF:71:ILE:HG22	1.98	0.63
9:CI:35:GLU:HA	9:CI:39:GLY:HA3	1.80	0.63
22:DA:185:G:H2'	22:DA:186:G:C8	2.34	0.63
22:DA:240:C:P	22:DA:241:A:H3'	2.38	0.63
22:DA:2001:C:H4'	22:DA:2689:U:O2'	1.99	0.63
22:DA:2339:C:H2'	22:DA:2340:A:C8	2.33	0.63
22:DA:2683:C:O2'	37:DP:74:GLN:NE2	2.31	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DK:21:CYS:SG	32:DK:39:ILE:HG21	2.38	0.63
33:DL:142:ILE:HG22	33:DL:144:GLU:H	1.63	0.63
43:DV:63:ILE:O	43:DV:70:ILE:HD11	1.98	0.63
52:D4:7:VAL:HG13	52:D4:8:LYS:N	2.13	0.63
1:AA:82:G:N2	1:AA:84:U:H3	1.97	0.62
1:AA:481:G:O2'	1:AA:482:A:H8	1.82	0.62
1:AA:996:A:C2	1:AA:1046:A:C5'	2.81	0.62
5:AE:80:LEU:HD12	5:AE:146:MET:CE	2.28	0.62
11:AK:87:GLY:N	11:AK:113:THR:HG22	2.14	0.62
22:BA:815:C:OP1	39:BR:85:LYS:HE2	1.98	0.62
22:BA:924:G:H4'	44:BW:24:ARG:HH21	1.63	0.62
53:CA:319:G:H5'	53:CA:1468:A:H4'	1.80	0.62
53:CA:432:A:H2'	53:CA:433:G:H5'	1.81	0.62
53:CA:547:A:H4'	53:CA:548:G:O5'	1.99	0.62
53:CA:1319:A:N6	53:CA:1323:G:C2	2.67	0.62
54:CG:32:ASP:HB2	54:CG:34:LYS:HD3	1.80	0.62
56:CP:5:ARG:HA	56:CP:71:VAL:HG11	1.81	0.62
22:DA:1917:U:H2'	22:DA:1918:A:H5'	1.79	0.62
22:DA:2337:G:H2'	22:DA:2337:G:N3	2.13	0.62
24:DC:183:VAL:HG22	24:DC:184:GLU:H	1.64	0.62
25:DD:38:LYS:HB3	25:DD:38:LYS:NZ	2.14	0.62
25:DD:113:SER:HB3	25:DD:168:GLU:H	1.64	0.62
58:DF:129:MET:HE2	58:DF:174:PHE:CZ	2.33	0.62
29:DH:132:PHE:CZ	29:DH:134:VAL:HB	2.33	0.62
32:DK:54:LYS:H	32:DK:54:LYS:HD2	1.64	0.62
1:AA:340:U:H2'	1:AA:341:C:C6	2.34	0.62
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.34	0.62
1:AA:1373:G:H5"	7:AG:35:LYS:HD2	1.80	0.62
5:AE:132:PRO:HG2	5:AE:133:ILE:HD12	1.81	0.62
13:AM:106:ARG:HH21	13:AM:112:ARG:HB3	1.64	0.62
20:AT:53:MET:O	20:AT:56:ILE:HG22	2.00	0.62
22:BA:2264:C:H41	44:BW:11:ASN:ND2	1.96	0.62
28:BG:61:TRP:O	28:BG:65:GLY:N	2.24	0.62
41:BT:19:LYS:O	41:BT:23:ALA:N	2.25	0.62
47:BZ:7:THR:HG23	47:BZ:34:THR:N	2.13	0.62
53:CA:254:G:H21	17:CQ:17:GLU:HG3	1.64	0.62
53:CA:335:C:H2'	53:CA:336:A:H8	1.59	0.62
53:CA:960:U:H4'	53:CA:961:U:C5'	2.29	0.62
2:CB:146:SER:HB2	2:CB:147:LEU:HD12	1.81	0.62
17:CQ:61:ARG:HG2	17:CQ:75:VAL:CG1	2.28	0.62
22:DA:538:A:H5"	31:DJ:7:LYS:HZ3	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1734:G:H2'	22:DA:1735:A:C8	2.34	0.62
22:DA:2683:C:OP1	37:DP:55:HIS:CB	2.47	0.62
22:DA:2720:U:H5"	37:DP:52:ARG:HH21	1.64	0.62
25:DD:36:GLN:NE2	25:DD:38:LYS:HZ1	1.96	0.62
25:DD:125:TRP:CG	25:DD:160:LYS:HB3	2.34	0.62
32:DK:7:MET:HA	32:DK:7:MET:CE	2.26	0.62
43:DV:44:HIS:CE1	43:DV:85:LYS:HD3	2.34	0.62
45:DX:6:VAL:HG22	45:DX:7:THR:HG23	1.81	0.62
50:D2:45:SER:C	50:D2:46:LYS:HD2	2.22	0.62
1:AA:4:U:O2	1:AA:4:U:H2'	1.99	0.62
1:AA:250:A:C4'	1:AA:251:G:O5'	2.45	0.62
1:AA:546:A:P	4:AD:68:GLU:HB2	2.39	0.62
1:AA:1069:C:H4'	1:AA:1192:C:O2	1.99	0.62
5:AE:89:THR:HG22	5:AE:90:GLY:N	2.14	0.62
8:AH:10:LEU:HD11	8:AH:126:CYS:CB	2.30	0.62
9:AI:32:ARG:HG2	9:AI:36:GLN:CB	2.28	0.62
11:AK:109:ILE:HB	21:AU:5:VAL:HG23	1.81	0.62
16:AP:22:ALA:HB2	16:AP:32:PHE:HA	1.81	0.62
22:BA:277:G:H4'	22:BA:278:A:C8	2.34	0.62
22:BA:641:U:H5"	22:BA:642:U:OP2	1.99	0.62
22:BA:1023:U:H5'	22:BA:1023:U:H6	1.63	0.62
22:BA:2272:U:H5"	22:BA:2273:A:OP1	1.99	0.62
22:BA:2611:C:C5	60:BA:3135:TEL:H352	2.34	0.62
26:BE:44:ARG:HH21	26:BE:44:ARG:CG	2.10	0.62
27:BF:107:VAL:HG11	27:BF:175:PRO:HG2	1.82	0.62
27:BF:131:VAL:C	27:BF:132:ARG:HG3	2.24	0.62
28:BG:126:THR:HG22	28:BG:127:GLN:H	1.64	0.62
29:BH:18:GLN:HE21	29:BH:18:GLN:CA	2.11	0.62
35:BN:72:ASP:OD1	35:BN:75:ILE:HG23	1.99	0.62
39:BR:49:ILE:HD12	39:BR:52:PRO:CA	2.23	0.62
53:CA:961:U:HO2'	53:CA:962:C:H6	0.70	0.62
54:CG:92:PRO:HA	54:CG:95:ARG:HB2	1.81	0.62
56:CP:71:VAL:O	56:CP:74:LEU:HB2	1.99	0.62
22:DA:481:G:HO2'	22:DA:507:A:H61	1.47	0.62
22:DA:1040:A:C2	22:DA:1116:G:C6	2.87	0.62
22:DA:1439:A:N7	22:DA:1440:U:H1'	2.15	0.62
22:DA:2755:C:O2'	22:DA:2756:U:H2'	1.99	0.62
28:DG:164:ALA:O	28:DG:165:ASP:HB2	1.99	0.62
37:DP:5:LYS:HE2	37:DP:9:GLN:HE22	1.64	0.62
38:DQ:42:GLY:O	38:DQ:45:ALA:HB3	1.98	0.62
1:AA:795:C:H5"	1:AA:796:C:OP2	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:69:LEU:HD21	15:AO:76:ARG:HB2	1.82	0.62
22:BA:2239:G:H5'	24:BC:248:GLY:HA3	1.81	0.62
26:BE:111:GLU:HG2	26:BE:114:ARG:NH1	2.14	0.62
37:BP:50:ARG:CD	37:BP:51:ASN:N	2.61	0.62
44:BW:23:LYS:O	44:BW:66:VAL:HB	1.99	0.62
44:BW:23:LYS:HZ1	44:BW:24:ARG:HG3	1.64	0.62
48:B0:29:VAL:HG13	48:B0:34:GLY:O	1.98	0.62
53:CA:142:G:C2	53:CA:143:A:H1'	2.35	0.62
53:CA:1047:G:H2'	53:CA:1048:G:H5'	1.81	0.62
5:CE:148:SER:O	5:CE:151:MET:N	2.31	0.62
19:CS:46:LEU:HD23	19:CS:46:LEU:H	1.63	0.62
22:DA:118:A:H1'	22:DA:178:G:O4'	1.99	0.62
22:DA:574:A:H2	22:DA:2032:G:HO2'	1.47	0.62
22:DA:774:G:O2'	22:DA:775:G:H8	1.82	0.62
22:DA:923:G:H1'	44:DW:23:LYS:HZ2	1.64	0.62
22:DA:1055:G:H2'	22:DA:1055:G:N3	2.14	0.62
22:DA:2311:A:H3'	22:DA:2312:U:O4'	2.00	0.62
38:DQ:4:LYS:NZ	38:DQ:6:GLY:HA3	2.13	0.62
43:DV:70:ILE:N	43:DV:70:ILE:HD13	2.15	0.62
1:AA:51:A:H4'	1:AA:52:C:O5'	1.99	0.62
7:AG:69:ARG:HG3	7:AG:95:ARG:HG2	1.80	0.62
8:AH:5:PRO:HB2	8:AH:32:LYS:HZ1	1.64	0.62
9:AI:7:GLY:HA3	9:AI:85:ALA:HB2	1.81	0.62
20:AT:43:LYS:NZ	20:AT:86:ALA:HA	2.15	0.62
22:BA:1150:C:O2'	22:BA:1151:A:O5'	2.15	0.62
22:BA:1682:G:C8	22:BA:1757:A:C2	2.87	0.62
22:BA:2422:C:H5'	22:BA:2423:U:OP2	1.99	0.62
31:BJ:88:THR:HG22	31:BJ:91:GLU:CD	2.24	0.62
38:BQ:96:ASP:C	38:BQ:98:ALA:H	2.05	0.62
53:CA:168:G:C2'	53:CA:169:C:H5'	2.30	0.62
53:CA:649:A:H2'	53:CA:650:G:O4'	2.00	0.62
53:CA:1095:U:H2'	53:CA:1096:C:C6	2.35	0.62
53:CA:1206:G:H4'	3:CC:191:THR:O	2.00	0.62
10:CJ:15:HIS:HA	10:CJ:18:ILE:CG2	2.26	0.62
22:DA:782:A:H5'	22:DA:783:A:C2	2.34	0.62
22:DA:1255:U:H3'	22:DA:1256:G:C5'	2.29	0.62
22:DA:1800:C:H5"	24:DC:145:MET:HE1	1.81	0.62
22:DA:2718:G:OP1	37:DP:97:TYR:HD1	1.80	0.62
57:DB:38:C:O2'	57:DB:39:A:H5'	1.98	0.62
57:DB:69:G:C8	57:DB:70:C:C5	2.87	0.62
24:DC:66:PHE:HB3	24:DC:150:GLY:O	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DK:13:ASN:HD22	32:DK:13:ASN:N	1.97	0.62
41:DT:38:ALA:HB1	41:DT:81:LYS:NZ	2.14	0.62
22:BA:26:G:OP1	40:BS:80:PRO:HB3	1.99	0.62
22:BA:65:U:H2'	22:BA:66:C:H6	1.64	0.62
22:BA:693:A:O2'	22:BA:694:U:H5'	1.99	0.62
22:BA:1858:A:O2'	22:BA:1859:U:O4'	2.14	0.62
22:BA:2199:A:H3'	22:BA:2200:C:H6	1.65	0.62
22:BA:2344:U:H4'	22:BA:2345:G:OP1	1.98	0.62
22:BA:2680:U:OP1	25:BD:114:LYS:HE2	1.98	0.62
24:BC:61:TYR:HA	24:BC:85:ASN:HD21	1.65	0.62
26:BE:24:ASN:C	26:BE:24:ASN:HD22	2.07	0.62
27:BF:32:LYS:HD3	27:BF:91:ARG:NH1	2.14	0.62
28:BG:54:ARG:HD3	28:BG:54:ARG:C	2.23	0.62
28:BG:85:LYS:HA	28:BG:130:ILE:O	1.98	0.62
29:BH:67:ALA:C	29:BH:69:ALA:H	2.07	0.62
29:BH:96:THR:C	29:BH:97:ARG:HG3	2.25	0.62
41:BT:39:THR:HB	41:BT:42:GLU:CB	2.25	0.62
41:BT:40:LYS:O	41:BT:44:LYS:N	2.31	0.62
44:BW:18:LYS:HA	44:BW:36:ILE:HG12	1.80	0.62
53:CA:968:A:C4	53:CA:1062:U:H4'	2.34	0.62
53:CA:1305:G:H22	53:CA:1331:G:H2'	1.64	0.62
3:CC:10:ARG:O	3:CC:15:LYS:HB2	2.00	0.62
8:CH:1:SER:C	8:CH:3:GLN:H	2.08	0.62
22:DA:729:G:O2'	22:DA:1775:U:H1'	1.99	0.62
22:DA:876:C:N4	22:DA:902:C:N3	2.46	0.62
22:DA:1048:A:N6	22:DA:1111:A:C4	2.68	0.62
22:DA:1196:C:H1'	22:DA:1226:A:C4	2.34	0.62
22:DA:1399:C:H2'	22:DA:1400:U:C5	2.34	0.62
22:DA:2756:U:H4'	22:DA:2757:A:O5'	2.00	0.62
57:DB:13:G:N2	57:DB:16:G:C4	2.67	0.62
57:DB:52:A:N6	36:DO:33:ARG:HE	1.95	0.62
29:DH:83:LYS:HE2	29:DH:149:GLU:HB3	1.81	0.62
38:DQ:60:TRP:CH2	38:DQ:93:ILE:HB	2.34	0.62
41:DT:13:ALA:O	41:DT:32:LEU:HB2	2.00	0.62
4:AD:196:GLU:C	4:AD:198:LEU:H	2.08	0.62
6:AF:7:VAL:HG22	6:AF:7:VAL:O	1.98	0.62
8:AH:45:ILE:HA	8:AH:63:LYS:HG3	1.81	0.62
10:AJ:19:ASP:HA	10:AJ:22:THR:HB	1.82	0.62
11:AK:109:ILE:HB	21:AU:5:VAL:CG2	2.30	0.62
22:BA:125:A:OP2	50:B2:19:ARG:NH2	2.32	0.62
22:BA:1872:A:H2'	22:BA:1873:G:O4'	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:125:THR:HG23	29:BH:126:GLY:H	1.63	0.62
31:BJ:95:ARG:O	31:BJ:95:ARG:HG3	1.98	0.62
32:BK:51:LYS:HE3	32:BK:52:VAL:HG12	1.81	0.62
33:BL:14:LYS:HG3	33:BL:15:ALA:N	2.15	0.62
40:BS:66:ILE:HA	40:BS:69:LEU:HD22	1.81	0.62
52:B4:10:LEU:HD12	52:B4:33:HIS:HD2	1.61	0.62
10:CJ:51:VAL:HB	14:CN:80:ARG:HB2	1.82	0.62
12:CL:89:LEU:HB3	12:CL:92:VAL:CG2	2.30	0.62
55:CM:64:VAL:HG12	55:CM:65:GLU:HG3	1.81	0.62
56:CP:1:MET:HE2	56:CP:2:VAL:O	1.98	0.62
22:DA:464:U:H1'	22:DA:686:U:C5	2.28	0.62
22:DA:1361:G:C2'	22:DA:1362:C:H5'	2.29	0.62
26:DE:75:SER:O	26:DE:78:TRP:HB2	2.00	0.62
58:DF:147:ARG:O	58:DF:148:VAL:HG22	2.00	0.62
32:DK:64:ARG:HD2	32:DK:102:PRO:O	1.99	0.62
42:DU:47:PRO:HB3	42:DU:54:PRO:CG	2.29	0.62
1:AA:1282:C:H2'	1:AA:1283:U:C6	2.35	0.62
14:AN:46:LYS:HD2	19:AS:12:LEU:HD21	1.82	0.62
14:AN:51:PRO:O	14:AN:52:ARG:HB2	1.99	0.62
22:BA:1169:A:C2	22:BA:1181:U:O2	2.52	0.62
22:BA:1437:C:H2'	22:BA:1438:U:C6	2.35	0.62
22:BA:2014:A:H2'	22:BA:2015:A:C8	2.35	0.62
24:BC:165:ALA:HB3	24:BC:172:THR:HG23	1.80	0.62
33:BL:27:LEU:HD12	33:BL:27:LEU:N	2.06	0.62
33:BL:93:ASN:O	33:BL:95:LEU:N	2.33	0.62
38:BQ:10:ARG:HB2	38:BQ:10:ARG:NH1	2.15	0.62
39:BR:49:ILE:CD1	39:BR:52:PRO:HA	2.22	0.62
41:BT:28:ASN:HA	41:BT:91:GLN:HE22	1.65	0.62
41:BT:70:HIS:HB2	41:BT:73:ARG:O	1.99	0.62
52:B4:30:GLU:HB3	52:B4:33:HIS:ND1	2.15	0.62
53:CA:366:A:O2'	53:CA:394:G:N2	2.33	0.62
53:CA:397:A:H5'	53:CA:398:U:OP1	2.00	0.62
53:CA:1051:C:O2'	53:CA:1052:U:O5'	2.17	0.62
54:CG:63:VAL:HG11	54:CG:127:ALA:HB2	1.81	0.62
19:CS:49:ALA:HB1	19:CS:56:HIS:HB3	1.81	0.62
22:DA:27:G:H22	22:DA:512:G:H2'	1.65	0.62
22:DA:389:G:C8	22:DA:2413:G:H4'	2.35	0.62
22:DA:990:A:H61	39:DR:78:ARG:NH1	1.97	0.62
22:DA:1611:C:O2'	22:DA:1612:C:H6	1.82	0.62
22:DA:2285:C:H2'	22:DA:2286:G:H5"	1.81	0.62
22:DA:2335:A:C4	22:DA:2337:G:N7	2.68	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DG:18:ILE:HD12	28:DG:42:VAL:HG13	1.80	0.62
29:DH:41:LYS:HA	29:DH:44:ILE:HG12	1.82	0.62
32:DK:2:ILE:HG22	32:DK:3:GLN:N	2.14	0.62
33:DL:56:PRO:O	33:DL:60:ARG:HG3	1.98	0.62
34:DM:19:GLY:H	34:DM:38:ARG:HH21	1.46	0.62
38:DQ:78:PHE:CE1	38:DQ:82:LEU:HD11	2.34	0.62
1:AA:423:G:H2'	1:AA:424:G:O4'	2.00	0.62
3:AC:166:TRP:HE3	3:AC:166:TRP:N	1.94	0.62
5:AE:105:ILE:HD11	5:AE:123:LEU:HD23	1.80	0.62
7:AG:28:ILE:HG13	7:AG:100:MET:HE3	1.80	0.62
22:BA:1182:G:H2'	22:BA:1183:U:O4'	1.98	0.62
22:BA:1654:A:H2'	22:BA:1655:A:C8	2.28	0.62
22:BA:2059:A:N1	60:BA:3135:TEL:H44	2.15	0.62
24:BC:156:SER:O	24:BC:194:VAL:HG11	2.00	0.62
26:BE:161:ALA:HA	26:BE:164:LEU:HB2	1.81	0.62
32:BK:36:GLY:HA2	32:BK:62:VAL:O	1.99	0.62
44:BW:23:LYS:HD2	44:BW:24:ARG:H	1.63	0.62
47:BZ:40:THR:HG23	47:BZ:43:ILE:H	1.64	0.62
53:CA:1064:G:H4'	53:CA:1065:U:OP1	1.97	0.62
53:CA:1150:A:N6	53:CA:1151:A:N6	2.48	0.62
53:CA:1284:C:H5"	53:CA:1285:A:C5'	2.29	0.62
53:CA:1451:U:C2	53:CA:1453:G:O6	2.53	0.62
3:CC:179:ALA:HB1	3:CC:202:PHE:CE1	2.35	0.62
19:CS:50:VAL:HG11	19:CS:70:LEU:HB3	1.81	0.62
22:DA:28:A:H2'	22:DA:29:U:O4'	1.99	0.62
22:DA:128:C:H6	22:DA:128:C:H5"	1.65	0.62
22:DA:528:A:N1	22:DA:2043:C:O5'	2.33	0.62
22:DA:612:G:N2	22:DA:614:A:O2'	2.33	0.62
22:DA:1068:G:C8	22:DA:1069:A:N7	2.68	0.62
22:DA:1157:G:H2'	22:DA:1158:C:C6	2.34	0.62
22:DA:2056:G:N2	48:D0:1:ALA:N	2.48	0.62
22:DA:2771:C:H2'	22:DA:2772:C:H6	1.65	0.62
29:DH:61:VAL:HG13	29:DH:62:LEU:HG	1.81	0.62
1:AA:601:G:H2'	1:AA:602:A:H8	1.64	0.62
1:AA:1251:A:H2'	1:AA:1252:A:H8	1.65	0.62
1:AA:1414:U:H2'	1:AA:1415:G:H8	1.65	0.62
3:AC:35:ASP:O	3:AC:38:VAL:HG22	1.99	0.62
10:AJ:65:TYR:HB3	14:AN:95:LEU:HD11	1.81	0.62
14:AN:42:ASN:C	14:AN:44:VAL:H	2.07	0.62
22:BA:332:A:C2	22:BA:335:C:C5	2.88	0.62
22:BA:627:A:C6	22:BA:637:A:C8	2.88	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2674:G:H4'	32:BK:30:ARG:HG3	1.82	0.62
25:BD:101:PHE:HD1	25:BD:101:PHE:N	1.98	0.62
28:BG:9:VAL:O	28:BG:11:PRO:HD3	1.99	0.62
29:BH:97:ARG:HG2	29:BH:111:ALA:HB1	1.81	0.62
44:BW:28:GLU:OE2	44:BW:28:GLU:HA	1.98	0.62
45:BX:39:VAL:HG21	45:BX:42:GLU:HB2	1.82	0.62
53:CA:140:U:O2	53:CA:183:C:N4	2.32	0.62
53:CA:392:C:H2'	53:CA:393:A:H8	1.64	0.62
53:CA:1493:A:C8	22:DA:1913:A:N6	2.65	0.62
2:CB:122:ASP:HB3	2:CB:124:THR:HG22	1.82	0.62
4:CD:116:LEU:HD21	4:CD:153:ARG:HD3	1.82	0.62
22:DA:53:A:C2	22:DA:179:C:H4'	2.35	0.62
22:DA:919:U:H2'	22:DA:920:A:C8	2.35	0.62
22:DA:1131:G:O6	22:DA:2024:G:O2'	2.17	0.62
22:DA:1870:C:H5"	22:DA:1871:A:H2	1.64	0.62
22:DA:2232:C:P	45:DX:26:ARG:NH1	2.73	0.62
22:DA:2426:A:H3'	22:DA:2427:C:H5'	1.81	0.62
57:DB:112:G:N2	36:DO:45:SER:HA	2.02	0.62
34:DM:126:ILE:O	34:DM:128:THR:HG23	1.99	0.62
42:DU:58:VAL:CG1	42:DU:60:LYS:HG2	2.29	0.62
1:AA:807:A:H2'	1:AA:808:C:H6	1.65	0.61
1:AA:1183:U:H3'	1:AA:1184:G:C5'	2.28	0.61
1:AA:1236:A:H4'	1:AA:1304:G:H4'	1.81	0.61
22:BA:7:G:H2'	22:BA:8:C:C6	2.35	0.61
22:BA:285:G:N3	22:BA:285:G:H2'	2.13	0.61
22:BA:632:A:O2'	22:BA:633:A:H5'	2.00	0.61
22:BA:1317:G:C2	22:BA:1336:A:C2	2.88	0.61
22:BA:2134:A:O2'	22:BA:2135:A:H8	1.83	0.61
27:BF:131:VAL:HG21	27:BF:151:LEU:HG	1.82	0.61
28:BG:86:LEU:HB3	28:BG:162:ARG:O	2.00	0.61
32:BK:21:CYS:CB	32:BK:39:ILE:HD11	2.28	0.61
37:BP:50:ARG:HD3	37:BP:51:ASN:H	1.65	0.61
38:BQ:60:TRP:CZ2	38:BQ:93:ILE:HB	2.35	0.61
43:BV:75:GLN:HA	43:BV:75:GLN:OE1	1.98	0.61
51:B3:28:LEU:CD1	51:B3:40:LYS:HB3	2.30	0.61
53:CA:433:G:C2'	53:CA:434:U:H5'	2.30	0.61
53:CA:631:C:H3'	53:CA:632:U:H5'	1.81	0.61
53:CA:765:G:C8	53:CA:812:G:C2	2.88	0.61
53:CA:818:G:C3'	53:CA:819:A:C5'	2.78	0.61
5:CE:148:SER:H	5:CE:151:MET:HE2	1.62	0.61
18:CR:59:LYS:O	18:CR:63:TYR:CD1	2.53	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:8:ASN:ND2	21:CU:9:GLU:H	1.97	0.61
21:CU:35:GLU:CG	21:CU:36:PHE:H	2.13	0.61
22:DA:301:G:C6	22:DA:317:G:C6	2.87	0.61
22:DA:627:A:H5"	33:DL:78:ARG:HH12	1.64	0.61
22:DA:1238:G:O2'	22:DA:1239:G:H5'	1.99	0.61
22:DA:2401:U:H3'	22:DA:2402:U:H5"	1.82	0.61
35:DN:73:ASN:HA	35:DN:76:VAL:HG22	1.81	0.61
1:AA:98:A:H2'	1:AA:99:C:C6	2.35	0.61
1:AA:922:G:H1'	5:AE:23:THR:HG22	1.82	0.61
2:AB:40:ILE:HG21	2:AB:201:GLY:HA2	1.83	0.61
16:AP:28:ARG:NE	16:AP:29:ASN:HD21	1.98	0.61
22:BA:1159:U:C2'	22:BA:1160:G:H5'	2.30	0.61
22:BA:1476:U:OP2	22:BA:1476:U:H6	1.82	0.61
22:BA:2311:A:H3'	22:BA:2312:U:C6	2.34	0.61
25:BD:101:PHE:HE2	25:BD:203:VAL:HG22	1.64	0.61
38:BQ:86:SER:O	39:BR:51:VAL:HA	2.01	0.61
40:BS:30:SER:OG	40:BS:31:GLN:N	2.32	0.61
44:BW:9:THR:OG1	44:BW:10:ARG:N	2.29	0.61
53:CA:423:G:H2'	53:CA:424:G:O4'	2.00	0.61
53:CA:994:A:C6	53:CA:1216:A:C5'	2.83	0.61
53:CA:995:C:N3	53:CA:1046:A:O2'	2.31	0.61
53:CA:1176:A:H2'	53:CA:1177:G:O4'	2.00	0.61
53:CA:1326:U:H2'	53:CA:1327:C:C6	2.35	0.61
12:CL:42:LYS:HG2	12:CL:43:LYS:H	1.64	0.61
22:DA:158:U:H1'	22:DA:169:G:N2	2.14	0.61
22:DA:311:A:O2'	22:DA:312:G:OP1	2.18	0.61
22:DA:816:C:H2'	22:DA:817:C:H6	1.64	0.61
22:DA:1166:G:H22	22:DA:1184:U:H1'	1.64	0.61
22:DA:2729:G:H5"	25:DD:190:LYS:NZ	2.15	0.61
22:DA:2746:U:H2'	22:DA:2747:G:H5'	1.81	0.61
58:DF:32:LYS:HB3	58:DF:156:THR:HB	1.82	0.61
28:DG:115:GLN:HG2	28:DG:116:LEU:N	2.13	0.61
32:DK:40:LYS:NZ	32:DK:89:ASN:HD21	1.98	0.61
2:AB:165:ALA:HB2	2:AB:186:VAL:HG12	1.82	0.61
4:AD:62:ARG:NE	4:AD:62:ARG:HA	2.14	0.61
6:AF:5:GLU:OE1	18:AR:22:TYR:HE2	1.84	0.61
11:AK:13:LYS:O	11:AK:14:GLN:HB3	2.00	0.61
13:AM:113:LYS:H	13:AM:114:PRO:CD	2.12	0.61
15:AO:63:ARG:HG2	15:AO:87:ARG:NH1	2.08	0.61
22:BA:357:C:H2'	22:BA:358:U:H6	1.63	0.61
32:BK:63:VAL:HG13	32:BK:103:VAL:HG12	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:644:U:H2'	53:CA:645:G:H8	1.64	0.61
4:CD:123:MET:HE2	4:CD:126:GLY:O	1.99	0.61
5:CE:55:VAL:N	5:CE:56:PRO:HD2	2.16	0.61
54:CG:148:LYS:NZ	54:CG:148:LYS:HB2	2.16	0.61
18:CR:19:GLU:CD	18:CR:20:ILE:N	2.58	0.61
22:DA:30:G:OP1	38:DQ:4:LYS:HG3	2.00	0.61
22:DA:63:A:N6	22:DA:91:A:H62	1.98	0.61
57:DB:65:U:H3'	57:DB:108:A:N6	2.15	0.61
58:DF:33:ILE:HB	58:DF:90:LEU:HB2	1.82	0.61
33:DL:73:ILE:O	33:DL:105:ILE:HA	2.00	0.61
38:DQ:8:ILE:HG12	38:DQ:8:ILE:O	1.98	0.61
40:DS:71:VAL:O	40:DS:71:VAL:HG13	2.01	0.61
50:D2:34:ARG:HB3	50:D2:42:LEU:HD11	1.81	0.61
1:AA:206:C:C2	1:AA:207:C:H1'	2.35	0.61
1:AA:1361:G:H2'	1:AA:1362:A:H5"	1.82	0.61
2:AB:53:LEU:HA	2:AB:56:LEU:HB3	1.82	0.61
5:AE:67:ARG:HB2	5:AE:68:ARG:HE	1.63	0.61
5:AE:153:ALA:HA	5:AE:156:ARG:CB	2.30	0.61
12:AL:23:LEU:O	12:AL:25:ALA:N	2.32	0.61
15:AO:57:ARG:HH11	15:AO:57:ARG:HB3	1.66	0.61
17:AQ:51:GLU:HG2	17:AQ:52:CYS:SG	2.40	0.61
32:BK:107:LEU:O	32:BK:109:SER:N	2.33	0.61
34:BM:132:THR:CG2	34:BM:133:LYS:H	2.12	0.61
51:B3:49:VAL:HG23	51:B3:53:ASP:HB2	1.81	0.61
53:CA:1151:A:O2'	53:CA:1152:A:O5'	2.18	0.61
53:CA:1460:C:O5'	53:CA:1460:C:H6	1.83	0.61
2:CB:31:PHE:HB2	2:CB:41:ASN:HB2	1.81	0.61
2:CB:78:ALA:O	2:CB:213:LEU:HD23	2.01	0.61
2:CB:160:LEU:HB2	2:CB:182:VAL:HG12	1.82	0.61
54:CG:136:LYS:O	54:CG:140:VAL:HG23	2.00	0.61
9:CI:27:ILE:HD13	9:CI:62:LEU:HB3	1.81	0.61
22:DA:37:C:H2'	22:DA:38:A:O4'	1.99	0.61
22:DA:184:C:H2'	22:DA:185:G:H8	1.62	0.61
22:DA:234:U:H2'	22:DA:235:U:C6	2.35	0.61
22:DA:247:G:H4'	22:DA:386:G:C4	2.35	0.61
22:DA:284:U:H2'	22:DA:285:G:H8	1.65	0.61
22:DA:1040:A:N1	22:DA:1116:G:O6	2.34	0.61
22:DA:1081:U:H4'	30:DI:123:ALA:HA	1.83	0.61
22:DA:1437:C:H2'	22:DA:1438:U:C6	2.36	0.61
22:DA:2324:U:C5'	22:DA:2325:G:H5"	2.30	0.61
22:DA:2512:C:H2'	22:DA:2513:A:O4'	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2850:A:N7	22:DA:2868:A:O2'	2.25	0.61
25:DD:51:THR:HG21	25:DD:75:ALA:O	2.00	0.61
30:DI:106:GLN:HA	30:DI:109:ALA:HB3	1.82	0.61
31:DJ:6:ALA:HB3	31:DJ:45:THR:HB	1.81	0.61
31:DJ:111:LYS:HB2	31:DJ:115:GLY:N	2.16	0.61
37:DP:50:ARG:HB3	37:DP:57:ALA:H	1.63	0.61
37:DP:77:SER:OG	37:DP:79:VAL:HG22	2.00	0.61
1:AA:157:U:O2'	1:AA:158:G:H5'	2.00	0.61
5:AE:81:GLN:HG2	5:AE:149:PRO:HG3	1.82	0.61
9:AI:50:PRO:HG3	9:AI:82:ILE:HD12	1.82	0.61
10:AJ:52:LEU:HD23	10:AJ:62:ARG:HG2	1.82	0.61
17:AQ:18:LYS:C	17:AQ:47:ASP:OD2	2.44	0.61
22:BA:142:A:H2'	22:BA:143:C:C6	2.36	0.61
22:BA:242:G:H5"	51:B3:63:TYR:CE2	2.35	0.61
22:BA:1747:U:H2'	22:BA:1748:C:C6	2.35	0.61
22:BA:1956:U:H2'	22:BA:1957:C:H5'	1.81	0.61
29:BH:31:VAL:CB	29:BH:32:PRO:HD2	2.13	0.61
37:BP:59:THR:OG1	37:BP:72:VAL:HG12	2.00	0.61
53:CA:112:G:C2	53:CA:330:C:C4	2.88	0.61
3:CC:10:ARG:NH2	3:CC:181:ILE:HB	2.13	0.61
56:CP:22:ALA:HA	56:CP:33:ILE:HG13	1.82	0.61
22:DA:1494:A:H2'	22:DA:1495:A:C8	2.35	0.61
22:DA:2898:U:H2'	22:DA:2899:A:C8	2.35	0.61
24:DC:44:ASN:C	24:DC:46:GLY:H	2.07	0.61
35:DN:24:MET:HG2	35:DN:44:LEU:HD22	1.82	0.61
46:DY:49:ASP:HA	46:DY:52:ARG:HD2	1.82	0.61
3:AC:154:GLY:O	3:AC:195:ILE:HG12	2.01	0.61
4:AD:151:GLN:H	4:AD:154:VAL:CG1	2.13	0.61
9:AI:50:PRO:HB3	9:AI:83:THR:HG23	1.83	0.61
22:BA:1178:C:H2'	22:BA:1179:G:N7	2.16	0.61
22:BA:1268:A:C2	22:BA:2013:A:C4	2.88	0.61
22:BA:1847:A:N3	22:BA:1847:A:H2'	2.15	0.61
22:BA:1993:U:H4'	25:BD:133:THR:CG2	2.30	0.61
28:BG:8:VAL:O	28:BG:9:VAL:HG12	2.01	0.61
32:BK:71:ARG:HG3	32:BK:106:GLU:OE2	2.01	0.61
35:BN:1:MET:O	35:BN:2:ARG:HB2	2.00	0.61
44:BW:37:VAL:CG1	44:BW:38:ARG:H	2.13	0.61
53:CA:190:A:O5'	53:CA:190:A:H8	1.83	0.61
53:CA:972:C:O2'	10:CJ:57:VAL:HG23	2.01	0.61
53:CA:1228:C:HO2'	53:CA:1229:A:H8	1.46	0.61
53:CA:1242:G:N2	53:CA:1243:C:H1'	2.16	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1304:G:H1'	53:CA:1333:A:N6	2.15	0.61
8:CH:5:PRO:O	8:CH:8:ASP:HB3	2.01	0.61
8:CH:114:ALA:O	8:CH:117:GLN:HB3	2.01	0.61
22:DA:1060:U:H4'	22:DA:1061:U:H2'	1.80	0.61
22:DA:1388:G:N1	22:DA:1400:U:N3	2.48	0.61
22:DA:2197:U:O2'	22:DA:2198:A:C8	2.51	0.61
22:DA:2893:A:H4'	22:DA:2894:G:O5'	2.00	0.61
26:DE:126:VAL:HG11	26:DE:134:LEU:HD22	1.82	0.61
26:DE:133:LEU:O	26:DE:137:LYS:HB2	2.01	0.61
28:DG:70:LEU:O	28:DG:74:MET:HB2	1.99	0.61
28:DG:94:ARG:NH2	28:DG:111:PRO:HB3	2.16	0.61
39:DR:49:ILE:HB	39:DR:51:VAL:O	2.01	0.61
49:D1:8:ILE:HD11	49:D1:52:LYS:HE3	1.83	0.61
1:AA:723:U:OP1	21:AU:48:LYS:HD3	1.99	0.61
1:AA:1314:C:O2'	1:AA:1315:U:H5'	1.99	0.61
1:AA:1491:G:H5'	1:AA:1492:A:OP1	2.00	0.61
4:AD:55:ARG:HH12	4:AD:58:GLN:CG	2.14	0.61
11:AK:60:PHE:O	11:AK:63:GLN:HB3	2.00	0.61
19:AS:17:LYS:HB3	19:AS:30:LEU:HD23	1.82	0.61
22:BA:20:C:O2'	22:BA:21:A:H5'	2.01	0.61
22:BA:2388:A:H5'	22:BA:2389:G:OP2	2.01	0.61
35:BN:38:LEU:HD12	35:BN:38:LEU:C	2.26	0.61
37:BP:63:ILE:HG22	37:BP:63:ILE:O	2.01	0.61
38:BQ:93:ILE:HG23	38:BQ:94:LEU:H	1.66	0.61
44:BW:72:GLY:C	44:BW:74:LYS:H	2.07	0.61
53:CA:736:C:H2'	53:CA:737:C:H6	1.65	0.61
2:CB:153:MET:HE3	2:CB:155:GLY:O	2.01	0.61
54:CG:91:ARG:CG	54:CG:92:PRO:HD2	2.29	0.61
55:CM:106:ARG:HH21	55:CM:112:ARG:CZ	2.14	0.61
22:DA:139:U:H2'	22:DA:139:U:O2	2.00	0.61
22:DA:217:A:H2'	22:DA:218:A:O4'	2.00	0.61
22:DA:412:A:O2'	22:DA:413:C:H5'	2.00	0.61
22:DA:1611:C:O2'	22:DA:1612:C:C6	2.54	0.61
22:DA:1654:A:O2'	22:DA:1655:A:O5'	2.18	0.61
22:DA:1695:G:C8	24:DC:7:PRO:HB2	2.35	0.61
22:DA:1794:A:H1'	22:DA:1900:A:C2	2.35	0.61
22:DA:1993:U:H4'	25:DD:133:THR:CG2	2.31	0.61
22:DA:2336:A:N1	44:DW:56:HIS:HE1	1.98	0.61
31:DJ:4:PHE:O	31:DJ:44:TYR:CZ	2.54	0.61
32:DK:39:ILE:HB	32:DK:41:ILE:HD13	1.80	0.61
35:DN:70:THR:HG22	35:DN:70:THR:O	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:D4:3:VAL:O	52:D4:4:ARG:HB2	1.99	0.61
1:AA:112:G:C6	1:AA:330:C:N4	2.68	0.61
4:AD:55:ARG:HA	4:AD:55:ARG:HH11	1.65	0.61
6:AF:41:ASP:O	6:AF:43:GLY:N	2.34	0.61
22:BA:484:C:H2'	22:BA:485:C:H6	1.66	0.61
22:BA:742:A:H2'	22:BA:743:A:C8	2.36	0.61
22:BA:1936:A:C2	22:BA:1943:U:C5	2.89	0.61
22:BA:2472:G:H2'	22:BA:2475:C:H42	1.64	0.61
23:BB:78:A:C2	23:BB:99:A:C4	2.88	0.61
31:BJ:4:PHE:O	31:BJ:44:TYR:HE1	1.81	0.61
31:BJ:21:THR:C	31:BJ:23:LYS:H	2.06	0.61
36:BO:24:THR:HG22	36:BO:42:PRO:HD3	1.83	0.61
53:CA:330:C:O2'	53:CA:331:G:C8	2.26	0.61
53:CA:373:A:C8	53:CA:373:A:H5'	2.35	0.61
53:CA:976:G:C5'	53:CA:977:A:OP2	2.49	0.61
4:CD:2:ARG:NH2	4:CD:114:ARG:HH11	1.99	0.61
4:CD:23:GLY:O	4:CD:24:VAL:O	2.19	0.61
10:CJ:57:VAL:HG22	10:CJ:58:ASN:N	2.11	0.61
21:CU:39:LYS:O	21:CU:43:GLU:HB2	2.01	0.61
22:DA:309:A:H1'	22:DA:329:G:C4	2.36	0.61
22:DA:1265:A:C8	22:DA:1267:U:N3	2.68	0.61
22:DA:2074:U:O2'	22:DA:2075:U:H5'	1.99	0.61
22:DA:2145:C:O2'	22:DA:2146:C:H3'	2.01	0.61
25:DD:121:THR:HG21	25:DD:127:PHE:CD1	2.35	0.61
29:DH:93:SER:HB3	29:DH:121:VAL:HG21	1.81	0.61
36:DO:70:ALA:O	36:DO:74:VAL:HG23	2.01	0.61
47:DZ:23:LEU:HD12	47:DZ:28:LEU:HD21	1.83	0.61
1:AA:1452:C:H4'	1:AA:1453:G:C4	2.35	0.61
22:BA:747:U:C4	22:BA:2613:U:C5	2.89	0.61
22:BA:1070:A:C2	30:BI:9:LYS:HG2	2.35	0.61
22:BA:1371:G:N7	62:BA:3400:HOH:O	2.31	0.61
22:BA:1830:C:H2'	22:BA:1831:G:H8	1.66	0.61
22:BA:2591:C:H2'	22:BA:2592:G:C8	2.34	0.61
22:BA:2790:U:H4'	22:BA:2791:G:OP1	1.99	0.61
33:BL:95:LEU:HD13	33:BL:100:ILE:HD11	1.83	0.61
38:BQ:40:LYS:HG2	38:BQ:44:TYR:CE1	2.36	0.61
39:BR:62:GLU:O	39:BR:64:VAL:HG23	2.01	0.61
53:CA:350:G:C6	53:CA:351:G:C6	2.88	0.61
53:CA:1254:A:H2'	53:CA:1255:G:C8	2.36	0.61
9:CI:29:ILE:HA	9:CI:64:ILE:O	2.00	0.61
55:CM:82:LEU:HD21	19:CS:60:PHE:HB3	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:24:THR:HG21	15:CO:69:LEU:HB2	1.83	0.61
22:DA:624:C:O2'	22:DA:657:U:H5"	2.01	0.61
22:DA:833:A:H2'	22:DA:834:G:C8	2.35	0.61
22:DA:946:C:H2'	22:DA:947:A:H8	1.65	0.61
22:DA:1275:A:N7	35:DN:16:HIS:HB2	2.16	0.61
22:DA:1655:A:H5'	25:DD:118:PHE:CE1	2.36	0.61
22:DA:1944:U:O4'	22:DA:1955:U:H1'	2.01	0.61
22:DA:1993:U:H4'	25:DD:133:THR:HG22	1.83	0.61
22:DA:2285:C:H5	49:D1:5:ARG:NH2	1.98	0.61
22:DA:2563:U:C1'	22:DA:2566:A:N6	2.64	0.61
22:DA:2638:G:O2'	22:DA:2639:A:C8	2.52	0.61
25:DD:29:VAL:HB	25:DD:98:VAL:HG12	1.83	0.61
25:DD:137:SER:C	25:DD:138:LEU:HD22	2.26	0.61
38:DQ:63:ARG:O	38:DQ:64:ILE:C	2.43	0.61
44:DW:8:SER:O	44:DW:9:THR:HB	2.01	0.61
46:DY:1:MET:N	46:DY:1:MET:HE2	2.15	0.61
1:AA:684:U:H1'	11:AK:39:ASN:O	2.01	0.61
1:AA:820:U:H4'	1:AA:821:G:OP2	2.01	0.61
3:AC:156:LEU:H	3:AC:156:LEU:CD1	2.10	0.61
11:AK:91:GLY:O	11:AK:95:THR:HB	2.01	0.61
13:AM:45:SER:O	13:AM:46:GLU:HB2	2.01	0.61
16:AP:52:LEU:O	16:AP:54:LEU:HD12	2.00	0.61
17:AQ:10:ARG:O	17:AQ:22:VAL:HG13	2.01	0.61
17:AQ:46:HIS:HA	17:AQ:70:LYS:HE3	1.81	0.61
22:BA:843:G:O2'	22:BA:844:A:H5'	2.01	0.61
22:BA:1009:A:OP2	31:BJ:39:LYS:NZ	2.32	0.61
22:BA:2207:C:H2'	22:BA:2208:C:C6	2.35	0.61
22:BA:2292:U:H2'	22:BA:2293:G:H8	1.65	0.61
22:BA:2602:A:H4'	22:BA:2603:G:O5'	2.01	0.61
22:BA:2804:U:H2'	22:BA:2805:C:H6	1.66	0.61
23:BB:90:C:H5"	23:BB:90:C:C6	2.32	0.61
24:BC:251:THR:HG22	24:BC:252:LYS:H	1.66	0.61
28:BG:33:THR:HA	28:BG:34:ARG:HH11	1.66	0.61
28:BG:68:ARG:HD2	28:BG:68:ARG:C	2.26	0.61
28:BG:82:PHE:HB2	28:BG:134:GLY:O	2.01	0.61
36:BO:75:GLY:HA2	36:BO:106:LEU:HD13	1.81	0.61
36:BO:105:ALA:O	36:BO:106:LEU:HB3	1.99	0.61
41:BT:24:MET:HG3	41:BT:29:THR:HG23	1.81	0.61
44:BW:41:GLY:HA2	44:BW:44:PHE:CE2	2.36	0.61
53:CA:251:G:H21	53:CA:253:A:H62	1.48	0.61
53:CA:995:C:N4	53:CA:1046:A:H1'	2.16	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1400:C:H4'	53:CA:1401:G:OP2	2.00	0.61
2:CB:127:LYS:HE2	2:CB:136:ARG:HH21	1.66	0.61
5:CE:68:ARG:O	5:CE:69:ASN:C	2.44	0.61
17:CQ:25:GLU:HG2	17:CQ:40:THR:HG22	1.82	0.61
22:DA:242:G:H8	51:D3:3:ILE:O	1.84	0.61
22:DA:379:G:C6	22:DA:380:G:C5	2.89	0.61
22:DA:410:G:N1	22:DA:2407:A:N6	2.48	0.61
22:DA:1062:G:H22	22:DA:1077:A:H2	1.49	0.61
22:DA:1998:A:H2'	22:DA:1999:C:H6	1.66	0.61
24:DC:13:ARG:HG2	24:DC:14:HIS:CD2	2.36	0.61
58:DF:16:MET:HA	58:DF:21:TYR:HB2	1.81	0.61
35:DN:103:ARG:HB2	35:DN:110:MET:CG	2.30	0.61
45:DX:30:PRO:HG2	45:DX:32:LEU:HD21	1.82	0.61
2:AB:58:LYS:NZ	2:AB:62:ARG:HG3	2.16	0.60
5:AE:158:LYS:HE2	8:AH:63:LYS:NZ	2.16	0.60
9:AI:112:ARG:HH22	10:AJ:64:GLN:NE2	1.99	0.60
10:AJ:29:ALA:CB	10:AJ:36:VAL:HG21	2.30	0.60
17:AQ:16:MET:HE2	17:AQ:20:ILE:HA	1.83	0.60
21:AU:33:ARG:HE	21:AU:34:ARG:HG3	1.66	0.60
25:BD:121:THR:O	25:BD:122:VAL:HB	2.00	0.60
31:BJ:54:ILE:HD11	31:BJ:56:VAL:CG2	2.30	0.60
31:BJ:55:ILE:HD11	31:BJ:57:LEU:HD22	1.82	0.60
31:BJ:73:VAL:HG23	31:BJ:74:TYR:N	2.16	0.60
32:BK:10:VAL:HG11	32:BK:16:ALA:HB2	1.83	0.60
36:BO:88:LYS:HE2	36:BO:116:GLN:NE2	2.15	0.60
53:CA:801:U:O2'	53:CA:802:A:H5'	2.01	0.60
53:CA:920:U:H2'	53:CA:921:U:H6	1.63	0.60
53:CA:932:C:H5"	54:CG:2:ARG:HD3	1.81	0.60
5:CE:44:ARG:NH2	5:CE:70:MET:HB2	2.15	0.60
8:CH:93:LYS:HD3	8:CH:93:LYS:N	2.15	0.60
14:CN:9:GLU:HA	14:CN:12:ARG:HD2	1.83	0.60
17:CQ:25:GLU:HA	17:CQ:39:ARG:O	2.00	0.60
21:CU:19:LYS:HZ3	21:CU:19:LYS:N	1.99	0.60
22:DA:151:C:H2'	22:DA:152:A:C8	2.36	0.60
22:DA:867:C:O2'	22:DA:868:U:O5'	2.17	0.60
22:DA:1395:A:H4'	22:DA:1397:U:C5	2.36	0.60
22:DA:2215:C:O2'	22:DA:2216:G:H8	1.84	0.60
57:DB:108:A:O2'	57:DB:109:A:OP1	2.14	0.60
24:DC:183:VAL:HG13	24:DC:185:ALA:H	1.64	0.60
29:DH:24:GLY:O	29:DH:25:TYR:C	2.43	0.60
31:DJ:64:VAL:HG22	31:DJ:68:LYS:HE2	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DM:36:VAL:HG13	43:DV:82:TYR:CD1	2.36	0.60
1:AA:212:G:H2'	1:AA:213:G:H8	1.66	0.60
3:AC:21:TRP:CD1	3:AC:58:ARG:HG2	2.36	0.60
22:BA:163:C:H6	22:BA:163:C:OP1	1.84	0.60
22:BA:675:A:H4'	26:BE:62:GLN:NE2	2.16	0.60
22:BA:2211:A:O2'	22:BA:2212:A:P	2.58	0.60
22:BA:2292:U:H2'	22:BA:2293:G:C8	2.36	0.60
22:BA:2325:G:C6	22:BA:2326:C:N4	2.69	0.60
33:BL:47:ARG:HG3	33:BL:50:PHE:HB2	1.82	0.60
35:BN:33:ILE:HD11	35:BN:118:ARG:HH21	1.64	0.60
37:BP:91:VAL:O	37:BP:92:ARG:HG2	2.01	0.60
48:B0:50:GLY:O	48:B0:51:ARG:O	2.19	0.60
53:CA:206:C:H2'	53:CA:207:C:H4'	1.83	0.60
53:CA:409:U:H2'	53:CA:410:G:O4'	2.00	0.60
53:CA:1136:C:C5	53:CA:1138:G:O6	2.54	0.60
53:CA:1323:G:H2'	53:CA:1324:A:C8	2.36	0.60
4:CD:111:ALA:O	4:CD:114:ARG:HB3	2.00	0.60
10:CJ:30:LYS:CG	10:CJ:36:VAL:HG22	2.31	0.60
15:CO:63:ARG:HH22	22:DA:715:A:C5'	2.13	0.60
22:DA:394:C:C2'	22:DA:395:U:H5'	2.30	0.60
22:DA:1510:G:N2	22:DA:1511:G:C4	2.69	0.60
22:DA:1568:G:H21	24:DC:57:HIS:HE1	1.45	0.60
22:DA:1965:C:H5"	22:DA:1966:A:H2'	1.82	0.60
24:DC:77:VAL:HG23	24:DC:111:ALA:HA	1.82	0.60
25:DD:36:GLN:HE21	25:DD:38:LYS:HZ1	1.48	0.60
58:DF:36:ASN:O	58:DF:37:MET:HB3	2.00	0.60
30:DI:50:LYS:HA	30:DI:50:LYS:HE2	1.83	0.60
31:DJ:36:LEU:HD21	31:DJ:122:LEU:HD13	1.81	0.60
33:DL:96:LYS:HE2	33:DL:102:GLY:O	2.01	0.60
36:DO:20:GLU:HG3	44:DW:50:VAL:HG11	1.82	0.60
1:AA:201:G:H2'	1:AA:202:G:O4'	2.01	0.60
1:AA:404:G:N7	4:AD:1:ALA:HB2	2.16	0.60
1:AA:1329:A:H5"	13:AM:25:GLY:H	1.65	0.60
3:AC:110:LEU:HD21	3:AC:143:LEU:HD23	1.82	0.60
20:AT:5:SER:OG	20:AT:6:ALA:N	2.34	0.60
22:BA:2648:G:H2'	22:BA:2649:C:C6	2.36	0.60
24:BC:158:GLY:H	24:BC:194:VAL:HG13	1.66	0.60
30:BI:15:GLY:CA	30:BI:50:LYS:HB3	2.28	0.60
39:BR:61:ALA:CB	39:BR:98:ILE:HA	2.26	0.60
40:BS:48:LYS:O	40:BS:52:GLU:HG3	2.01	0.60
44:BW:22:VAL:O	44:BW:25:PHE:HD2	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:32:A:H2'	53:CA:33:A:C8	2.35	0.60
53:CA:121:U:OP1	53:CA:121:U:H3'	2.01	0.60
53:CA:275:G:HO2'	53:CA:276:G:H8	1.47	0.60
10:CJ:52:LEU:CD2	10:CJ:62:ARG:HG2	2.30	0.60
22:DA:2:G:C6	22:DA:3:U:C4	2.89	0.60
22:DA:265:A:N7	22:DA:427:U:O2'	2.35	0.60
22:DA:1135:C:H2'	22:DA:1137:G:OP2	2.01	0.60
22:DA:1352:U:H5	22:DA:1377:G:C6	2.19	0.60
22:DA:1616:A:OP1	22:DA:1616:A:H8	1.84	0.60
22:DA:1779:U:H5	22:DA:1784:A:N7	1.99	0.60
22:DA:2439:A:C8	22:DA:2586:U:H4'	2.36	0.60
22:DA:2716:C:O2'	22:DA:2717:C:H5'	2.01	0.60
22:DA:2882:A:H5"	35:DN:96:ARG:HD3	1.84	0.60
31:DJ:44:TYR:HB2	38:DQ:63:ARG:NH1	2.16	0.60
42:DU:35:VAL:HG12	42:DU:36:GLU:H	1.67	0.60
1:AA:299:G:H2'	1:AA:300:A:C8	2.36	0.60
1:AA:539:A:H2'	1:AA:540:G:C8	2.36	0.60
1:AA:842:U:H3'	1:AA:843:U:H5"	1.84	0.60
5:AE:83:PRO:HB3	5:AE:96:GLN:HE21	1.65	0.60
7:AG:146:ALA:C	7:AG:148:LYS:H	2.08	0.60
22:BA:569:U:H1'	22:BA:947:A:O4'	2.01	0.60
22:BA:2821:A:OP2	25:BD:115:GLY:N	2.34	0.60
31:BJ:17:VAL:CG2	31:BJ:137:PRO:HB2	2.31	0.60
31:BJ:21:THR:HG22	31:BJ:22:GLY:H	1.64	0.60
53:CA:392:C:H2'	53:CA:393:A:C8	2.36	0.60
53:CA:828:U:H2'	53:CA:829:G:O5'	2.00	0.60
53:CA:1057:G:H4'	3:CC:196:GLY:H	1.67	0.60
53:CA:1493:A:H3'	22:DA:1913:A:N6	2.16	0.60
9:CI:51:LEU:C	9:CI:53:LEU:H	2.10	0.60
22:DA:234:U:O2'	22:DA:235:U:H5'	2.00	0.60
22:DA:1056:G:C1'	22:DA:1103:A:H61	2.14	0.60
22:DA:1079:C:N3	22:DA:1088:A:H2	1.99	0.60
22:DA:1552:A:N3	22:DA:1552:A:C2'	2.65	0.60
22:DA:1790:C:O2'	24:DC:207:ALA:HB2	2.01	0.60
22:DA:1821:A:H5'	24:DC:156:SER:OG	2.01	0.60
24:DC:131:MET:HG2	24:DC:134:ILE:HD11	1.84	0.60
25:DD:29:VAL:HB	25:DD:98:VAL:CG1	2.31	0.60
29:DH:49:ALA:O	29:DH:53:GLU:HB2	2.01	0.60
1:AA:834:U:OP1	18:AR:48:ALA:HB2	2.02	0.60
1:AA:1469:C:H6	1:AA:1469:C:C5'	2.12	0.60
6:AF:52:ASN:O	6:AF:53:LYS:HB3	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:59:LYS:HE2	32:BK:89:ASN:O	2.01	0.60
33:BL:77:ILE:HG12	33:BL:95:LEU:HD13	1.82	0.60
33:BL:89:VAL:HA	33:BL:121:THR:HG23	1.84	0.60
35:BN:47:VAL:O	35:BN:50:PRO:HD2	2.02	0.60
37:BP:24:THR:CG2	37:BP:86:LYS:HB2	2.30	0.60
37:BP:105:LYS:HA	37:BP:108:ARG:HH21	1.67	0.60
38:BQ:81:GLY:HA2	38:BQ:116:LEU:HD13	1.81	0.60
43:BV:65:VAL:HG22	43:BV:65:VAL:O	2.01	0.60
44:BW:37:VAL:CG1	44:BW:38:ARG:N	2.65	0.60
53:CA:268:U:H2'	53:CA:269:C:C6	2.35	0.60
53:CA:701:U:O2'	53:CA:702:A:P	2.58	0.60
8:CH:28:SER:HB2	8:CH:57:GLU:O	2.01	0.60
8:CH:100:ILE:C	8:CH:100:ILE:HD12	2.27	0.60
8:CH:104:SER:O	8:CH:122:GLY:HA3	2.02	0.60
17:CQ:47:ASP:HB3	17:CQ:74:LEU:HB3	1.82	0.60
22:DA:54:G:H2'	22:DA:55:G:O4'	2.00	0.60
22:DA:156:A:H2'	22:DA:157:C:H6	1.67	0.60
22:DA:1338:G:C2'	22:DA:1339:G:H5'	2.31	0.60
22:DA:2142:A:O3'	22:DA:2143:C:H4'	2.01	0.60
22:DA:2758:A:C2'	22:DA:2759:G:H5'	2.30	0.60
25:DD:47:ALA:HB2	25:DD:83:ARG:HD2	1.83	0.60
31:DJ:56:VAL:HG11	31:DJ:101:ILE:HG21	1.82	0.60
33:DL:79:LEU:HB3	33:DL:114:GLY:H	1.65	0.60
39:DR:70:GLU:CD	39:DR:70:GLU:H	2.08	0.60
1:AA:1225:A:H2'	1:AA:1226:C:C6	2.37	0.60
1:AA:1303:C:H2'	1:AA:1304:G:H8	1.67	0.60
2:AB:49:PHE:HB2	2:AB:53:LEU:HD23	1.84	0.60
7:AG:143:MET:HA	7:AG:143:MET:HE3	1.84	0.60
8:AH:63:LYS:O	8:AH:70:VAL:HG23	2.02	0.60
8:AH:103:VAL:HG12	8:AH:124:ILE:HG22	1.84	0.60
14:AN:50:LEU:HB3	14:AN:51:PRO:HD2	1.82	0.60
19:AS:46:LEU:H	19:AS:61:VAL:HG23	1.66	0.60
22:BA:1354:A:H2'	22:BA:1355:G:O4'	2.00	0.60
22:BA:1730:C:H1'	22:BA:1731:G:C2	2.36	0.60
22:BA:1856:U:H3	22:BA:1886:U:H3	1.49	0.60
25:BD:99:GLU:CG	25:BD:100:LEU:N	2.64	0.60
27:BF:134:GLN:HG2	27:BF:135:ILE:N	2.17	0.60
33:BL:100:ILE:HD12	33:BL:101:ILE:HD13	1.84	0.60
53:CA:160:A:H2'	53:CA:161:A:O4'	2.01	0.60
53:CA:373:A:N3	53:CA:374:A:C8	2.70	0.60
2:CB:90:PHE:CE2	2:CB:149:GLY:HA3	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:125:PHE:CD1	2:CB:137:THR:HG22	2.36	0.60
54:CG:110:ARG:HG3	54:CG:111:GLY:N	2.15	0.60
22:DA:110:G:N2	22:DA:111:A:H1'	2.17	0.60
22:DA:120:U:H4'	22:DA:121:G:H5'	1.83	0.60
22:DA:686:U:C6	22:DA:788:A:N1	2.70	0.60
22:DA:777:G:N7	22:DA:793:A:C2	2.67	0.60
22:DA:855:G:N3	44:DW:23:LYS:HE3	2.16	0.60
22:DA:1285:A:N6	22:DA:1329:U:C5	2.70	0.60
22:DA:1676:A:H2'	22:DA:1677:A:O4'	2.00	0.60
22:DA:1827:U:H2'	22:DA:1828:G:O4'	2.02	0.60
22:DA:2716:C:H2'	22:DA:2717:C:C6	2.35	0.60
57:DB:52:A:O2'	57:DB:53:A:C8	2.52	0.60
35:DN:92:GLY:H	35:DN:94:TYR:HE1	1.47	0.60
37:DP:9:GLN:HB3	37:DP:12:MET:CE	2.31	0.60
51:D3:61:LEU:HB2	51:D3:64:ALA:HB3	1.84	0.60
1:AA:279:A:H8	1:AA:279:A:H5'	1.66	0.60
1:AA:1180:A:H5"	1:AA:1181:G:OP2	2.01	0.60
1:AA:1234:C:C2'	1:AA:1235:U:H5'	2.31	0.60
2:AB:132:GLU:O	2:AB:132:GLU:HG3	2.00	0.60
3:AC:137:VAL:HA	3:AC:148:ILE:HD13	1.83	0.60
17:AQ:30:HIS:HB2	17:AQ:37:ILE:HD11	1.84	0.60
21:AU:35:GLU:O	21:AU:36:PHE:HB2	2.01	0.60
22:BA:729:G:C4	22:BA:1775:U:O2	2.53	0.60
22:BA:1233:C:C4	22:BA:1234:U:C5	2.89	0.60
22:BA:1475:G:HO2'	22:BA:1476:U:P	2.24	0.60
22:BA:1585:C:C2'	22:BA:1586:A:H5'	2.32	0.60
35:BN:23:ASN:N	35:BN:23:ASN:HD22	2.00	0.60
36:BO:76:LYS:O	36:BO:80:GLU:HG2	2.01	0.60
39:BR:45:GLU:OE2	39:BR:45:GLU:HA	2.01	0.60
40:BS:73:LYS:HB2	40:BS:106:VAL:HB	1.84	0.60
53:CA:71:A:C6	53:CA:100:G:C5	2.89	0.60
53:CA:129:A:O2'	53:CA:130:A:C8	2.54	0.60
53:CA:704:A:O2'	53:CA:705:G:O5'	2.19	0.60
53:CA:998:C:H2'	53:CA:999:C:H6	1.65	0.60
4:CD:8:LEU:HD22	4:CD:21:LYS:HD2	1.83	0.60
4:CD:190:LEU:O	4:CD:191:SER:O	2.20	0.60
18:CR:31:TYR:CD2	18:CR:54:LEU:HD21	2.35	0.60
22:DA:204:A:C5	22:DA:206:U:O4	2.54	0.60
22:DA:489:G:H2'	22:DA:491:G:C8	2.36	0.60
22:DA:1734:G:O2'	22:DA:1735:A:H8	1.83	0.60
22:DA:1810:A:H2'	22:DA:1811:G:O4'	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2333:A:H1'	22:DA:2335:A:C8	2.36	0.60
57:DB:54:G:O2'	58:DF:24:VAL:HG21	2.01	0.60
35:DN:33:ILE:HG23	35:DN:114:GLU:HB2	1.82	0.60
51:D3:28:LEU:HA	51:D3:32:LEU:HD21	1.82	0.60
1:AA:657:U:O2	15:AO:21:THR:HG23	2.01	0.60
21:AU:48:LYS:HA	21:AU:51:ALA:HB3	1.84	0.60
22:BA:172:A:O2'	22:BA:173:A:H5'	2.01	0.60
22:BA:904:G:C4	22:BA:905:A:N7	2.70	0.60
22:BA:1159:U:O2'	22:BA:1160:G:H5'	2.01	0.60
22:BA:1171:G:C6	22:BA:1172:C:C4	2.89	0.60
22:BA:1256:G:H21	26:BE:77:ILE:HG13	1.65	0.60
25:BD:24:VAL:HA	25:BD:191:GLY:H	1.67	0.60
27:BF:116:LEU:O	27:BF:176:PHE:HA	2.01	0.60
34:BM:21:ALA:CB	34:BM:100:LYS:N	2.64	0.60
53:CA:369:G:OP2	53:CA:388:G:N2	2.33	0.60
53:CA:423:G:H2'	53:CA:423:G:N3	2.17	0.60
53:CA:484:G:H4'	53:CA:485:U:O5'	1.98	0.60
53:CA:1071:C:H2'	53:CA:1072:G:H8	1.66	0.60
53:CA:1446:A:C2'	53:CA:1447:A:H5"	2.32	0.60
5:CE:95:MET:HB3	5:CE:124:ALA:HB2	1.83	0.60
22:DA:234:U:H2'	22:DA:235:U:H6	1.67	0.60
22:DA:249:C:H4'	22:DA:250:G:O5'	2.01	0.60
22:DA:616:A:C2'	22:DA:617:G:C8	2.78	0.60
22:DA:1394:U:H4'	22:DA:1603:A:H4'	1.84	0.60
22:DA:1469:A:H2'	22:DA:1470:A:H8	1.66	0.60
22:DA:1536:C:OP2	22:DA:1536:C:C2	2.55	0.60
22:DA:1808:A:N7	45:DX:27:ARG:NH1	2.49	0.60
29:DH:31:VAL:HB	29:DH:32:PRO:HD3	1.83	0.60
32:DK:88:ASN:CB	32:DK:91:SER:HB2	2.32	0.60
34:DM:8:LYS:HA	34:DM:8:LYS:HE3	1.82	0.60
38:DQ:111:LYS:HE3	39:DR:48:LYS:HD3	1.83	0.60
41:DT:43:ILE:CG2	41:DT:58:VAL:HG11	2.32	0.60
1:AA:1124:G:H3'	1:AA:1145:A:N6	2.17	0.60
1:AA:1218:C:H2'	1:AA:1219:A:H8	1.65	0.60
16:AP:5:ARG:HA	16:AP:68:SER:OG	2.02	0.60
22:BA:520:G:H2'	22:BA:521:U:C6	2.37	0.60
22:BA:1568:G:H4'	24:BC:58:LYS:HB3	1.84	0.60
30:BI:10:LEU:HD13	30:BI:27:LEU:HA	1.84	0.60
34:BM:33:LEU:HD22	34:BM:128:THR:HB	1.84	0.60
38:BQ:65:ASN:ND2	38:BQ:69:ARG:NH2	2.48	0.60
38:BQ:96:ASP:C	38:BQ:98:ALA:N	2.59	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BS:4:ILE:HG22	40:BS:106:VAL:HG13	1.84	0.60
53:CA:519:C:O2'	53:CA:520:A:H5'	2.02	0.60
53:CA:958:A:H62	19:CS:54:ARG:NH1	2.00	0.60
3:CC:14:VAL:HG12	3:CC:14:VAL:O	2.01	0.60
54:CG:78:ARG:HA	54:CG:84:TYR:HB2	1.83	0.60
14:CN:80:ARG:HH11	14:CN:80:ARG:HG2	1.67	0.60
22:DA:104:A:H2'	22:DA:105:C:O4'	2.02	0.60
22:DA:125:A:C5'	50:D2:19:ARG:HD3	2.32	0.60
22:DA:1535:A:H2'	22:DA:1535:A:N3	2.16	0.60
22:DA:1809:A:C2	22:DA:1810:A:C5	2.90	0.60
22:DA:2303:G:H5'	58:DF:121:PHE:CE1	2.37	0.60
28:DG:84:LYS:O	28:DG:85:LYS:HB3	2.01	0.60
32:DK:88:ASN:HB2	32:DK:91:SER:HB2	1.84	0.60
33:DL:92:LEU:CD2	33:DL:124:GLY:HA3	2.32	0.60
39:DR:68:ARG:HD2	39:DR:92:TRP:CH2	2.37	0.60
1:AA:109:A:H2'	1:AA:326:G:N2	2.15	0.60
1:AA:451:A:C4'	1:AA:452:A:O5'	2.44	0.60
2:AB:26:MET:HA	2:AB:26:MET:HE3	1.83	0.60
3:AC:10:ARG:HH21	3:AC:181:ILE:HG13	1.66	0.60
12:AL:29:LYS:O	12:AL:81:ILE:HG22	2.02	0.60
22:BA:64:A:H2'	22:BA:65:U:C6	2.37	0.60
22:BA:893:C:H2'	22:BA:894:U:O4'	2.01	0.60
22:BA:974:G:H8	22:BA:990:A:H62	1.49	0.60
22:BA:1062:G:O2'	22:BA:1063:G:O4'	2.20	0.60
22:BA:1414:C:C4	22:BA:1415:U:C5	2.89	0.60
22:BA:2681:C:H4'	22:BA:2682:A:OP1	2.00	0.60
24:BC:90:ILE:CG2	24:BC:102:TYR:CD1	2.85	0.60
26:BE:108:ILE:HB	33:BL:2:ARG:HH22	1.67	0.60
26:BE:150:THR:HA	26:BE:189:THR:HG23	1.84	0.60
28:BG:8:VAL:HG12	28:BG:9:VAL:N	2.17	0.60
31:BJ:45:THR:O	31:BJ:45:THR:HG23	2.02	0.60
32:BK:18:ARG:H	32:BK:45:GLU:CB	2.11	0.60
37:BP:50:ARG:O	37:BP:51:ASN:HB2	2.01	0.60
53:CA:247:G:C6	53:CA:278:G:C2	2.90	0.60
53:CA:963:G:C6	53:CA:973:G:O6	2.54	0.60
53:CA:982:U:H4'	53:CA:983:A:O5'	2.01	0.60
53:CA:1067:A:H4'	53:CA:1068:G:O5'	1.98	0.60
53:CA:1416:G:N2	53:CA:1485:U:H1'	2.17	0.60
2:CB:212:TYR:O	2:CB:212:TYR:HD2	1.84	0.60
5:CE:155:LYS:HB3	8:CH:70:VAL:HG23	1.84	0.60
11:CK:81:LEU:HD11	11:CK:104:PHE:CD2	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CM:111:PRO:HG2	55:CM:113:LYS:HG3	1.83	0.60
22:DA:28:A:C6	22:DA:513:A:C8	2.90	0.60
22:DA:729:G:H2'	22:DA:729:G:N3	2.16	0.60
22:DA:749:A:C4	22:DA:750:A:C8	2.89	0.60
22:DA:960:A:H2'	22:DA:962:G:H5'	1.84	0.60
22:DA:982:C:H5"	22:DA:983:A:OP1	2.02	0.60
22:DA:1342:A:C5	22:DA:1345:C:N4	2.70	0.60
22:DA:1774:C:O2	24:DC:10:PRO:HB2	2.02	0.60
22:DA:1819:A:H4'	22:DA:1820:U:H5'	1.84	0.60
22:DA:2331:G:N1	22:DA:2385:C:N4	2.49	0.60
57:DB:15:A:C8	57:DB:109:A:N6	2.70	0.60
26:DE:130:LYS:HG3	26:DE:133:LEU:HD13	1.84	0.60
28:DG:139:VAL:HA	28:DG:142:GLN:HB3	1.83	0.60
35:DN:2:ARG:HD2	35:DN:5:LYS:HB3	1.83	0.60
37:DP:50:ARG:HB3	37:DP:56:SER:HB3	1.83	0.60
51:D3:23:HIS:O	51:D3:46:LYS:HB2	2.02	0.60
1:AA:8:A:H62	4:AD:204:SER:HB2	1.67	0.59
1:AA:538:G:OP2	12:AL:111:GLN:HB2	2.02	0.59
4:AD:160:LEU:H	4:AD:160:LEU:HD13	1.65	0.59
5:AE:82:HIS:HB2	5:AE:83:PRO:HD2	1.85	0.59
14:AN:42:ASN:HD21	14:AN:46:LYS:HZ1	1.48	0.59
22:BA:654:A:N3	22:BA:654:A:H5'	2.16	0.59
22:BA:996:A:H4'	38:BQ:91:ARG:CG	2.32	0.59
22:BA:2636:C:H2'	22:BA:2637:U:C6	2.36	0.59
28:BG:38:ASP:OD1	28:BG:38:ASP:N	2.35	0.59
29:BH:147:VAL:HG12	29:BH:149:GLU:HG3	1.84	0.59
32:BK:63:VAL:HG22	32:BK:107:LEU:HD21	1.84	0.59
32:BK:76:VAL:HB	37:BP:72:VAL:CG2	2.32	0.59
33:BL:29:LYS:HG2	33:BL:30:THR:HG23	1.83	0.59
33:BL:77:ILE:O	33:BL:110:VAL:O	2.19	0.59
41:BT:31:VAL:C	41:BT:32:LEU:HD23	2.27	0.59
45:BX:65:THR:O	45:BX:68:ALA:HB3	2.02	0.59
46:BY:45:GLN:O	46:BY:46:VAL:CB	2.49	0.59
53:CA:814:A:C5'	53:CA:1511:G:H4'	2.29	0.59
53:CA:928:G:C2	53:CA:1390:U:O2	2.55	0.59
53:CA:1363:A:C5	53:CA:1365:G:C6	2.90	0.59
6:CF:9:MET:HE1	18:CR:64:LEU:HA	1.84	0.59
6:CF:88:MET:HG2	6:CF:90:MET:SD	2.42	0.59
9:CI:6:TYR:HE2	9:CI:17:ARG:HA	1.67	0.59
14:CN:52:ARG:HA	14:CN:52:ARG:NE	2.17	0.59
18:CR:63:TYR:CE2	18:CR:69:TYR:OH	2.54	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:36:G:N1	22:DA:445:C:C4	2.70	0.59
22:DA:70:G:C4'	22:DA:71:A:OP1	2.43	0.59
22:DA:83:A:P	42:DU:91:LYS:HZ2	2.26	0.59
22:DA:304:U:H2'	22:DA:305:C:C6	2.37	0.59
22:DA:1343:G:C5	22:DA:1597:A:N6	2.70	0.59
22:DA:1838:C:H4'	22:DA:1839:G:C8	2.36	0.59
22:DA:2788:C:O2'	22:DA:2809:A:N3	2.34	0.59
57:DB:86:G:C2'	57:DB:87:U:H5"	2.30	0.59
58:DF:91:ARG:HA	58:DF:95:MET:SD	2.42	0.59
34:DM:17:ASN:O	34:DM:18:ARG:HG2	2.02	0.59
3:AC:21:TRP:CG	3:AC:58:ARG:HG2	2.38	0.59
22:BA:194:G:N7	62:BA:3749:HOH:O	2.31	0.59
22:BA:1110:G:O2'	22:BA:1111:A:C8	2.49	0.59
22:BA:2305:U:H2'	22:BA:2306:C:O4'	2.02	0.59
22:BA:2793:C:H2'	22:BA:2794:C:H6	1.67	0.59
24:BC:141:HIS:CD2	24:BC:192:GLY:O	2.54	0.59
27:BF:97:GLU:O	27:BF:101:ARG:HG2	2.01	0.59
35:BN:55:ALA:HA	35:BN:80:PHE:CE1	2.37	0.59
44:BW:24:ARG:HD2	44:BW:24:ARG:C	2.27	0.59
53:CA:1361:G:H2'	53:CA:1362:A:H5'	1.84	0.59
3:CC:120:THR:HG22	3:CC:120:THR:O	2.03	0.59
12:CL:82:ARG:HG2	12:CL:82:ARG:NH1	2.17	0.59
22:DA:607:U:O4	22:DA:619:G:H2'	2.02	0.59
22:DA:729:G:N3	22:DA:729:G:C2'	2.65	0.59
22:DA:763:G:O2'	22:DA:764:A:H3'	2.02	0.59
22:DA:1009:A:H2'	62:DA:3759:HOH:O	2.02	0.59
22:DA:1038:G:C2	22:DA:1039:A:N7	2.70	0.59
22:DA:1252:G:H5"	62:DA:3286:HOH:O	2.02	0.59
22:DA:1279:G:OP1	35:DN:35:LYS:HG3	2.01	0.59
22:DA:2550:G:C2	22:DA:2559:C:O2	2.55	0.59
25:DD:107:VAL:CG1	25:DD:109:VAL:HG23	2.32	0.59
2:AB:19:THR:HG23	2:AB:20:ARG:H	1.66	0.59
5:AE:110:MET:HB3	5:AE:139:THR:HG21	1.84	0.59
6:AF:86:ARG:CZ	18:AR:63:TYR:HB3	2.33	0.59
11:AK:121:ARG:CZ	21:AU:35:GLU:HG3	2.32	0.59
22:BA:622:G:H2'	22:BA:623:C:H6	1.67	0.59
22:BA:999:U:C5	22:BA:1154:G:C5	2.89	0.59
22:BA:1009:A:P	31:BJ:39:LYS:HZ1	2.26	0.59
22:BA:1045:C:H3'	22:BA:1046:A:H5'	1.83	0.59
22:BA:1731:G:C2	22:BA:1733:G:C5	2.90	0.59
22:BA:1731:G:O2'	22:BA:1732:C:H3'	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1867:G:O2'	22:BA:1868:C:H5'	2.03	0.59
25:BD:107:VAL:O	25:BD:174:SER:O	2.19	0.59
25:BD:182:ALA:C	25:BD:184:ARG:N	2.58	0.59
28:BG:61:TRP:O	28:BG:62:ALA:C	2.44	0.59
37:BP:80:VAL:HG12	37:BP:81:ASP:N	2.17	0.59
41:BT:29:THR:HB	41:BT:86:THR:HG23	1.84	0.59
41:BT:50:LEU:O	41:BT:51:PHE:HB2	2.02	0.59
50:B2:43:THR:O	50:B2:44:VAL:CB	2.50	0.59
53:CA:91:U:O2'	53:CA:92:U:H6	1.85	0.59
53:CA:247:G:OP1	53:CA:247:G:H4'	2.01	0.59
53:CA:345:C:H4'	53:CA:346:G:H5"	1.84	0.59
2:CB:80:LYS:HD3	2:CB:90:PHE:CZ	2.38	0.59
3:CC:59:PRO:HG2	3:CC:62:SER:HB3	1.84	0.59
6:CF:41:ASP:OD2	6:CF:58:HIS:HE1	1.85	0.59
55:CM:12:LYS:H	55:CM:44:ILE:HG13	1.67	0.59
15:CO:16:ARG:HB2	15:CO:23:SER:HB2	1.84	0.59
56:CP:78:VAL:C	56:CP:80:LYS:H	2.09	0.59
18:CR:72:ARG:H	18:CR:72:ARG:NE	1.95	0.59
22:DA:612:G:C2	22:DA:617:G:O6	2.55	0.59
22:DA:1141:U:H4'	22:DA:1142:A:O5'	2.02	0.59
22:DA:1204:A:O4'	22:DA:1206:G:N7	2.36	0.59
22:DA:1901:A:OP2	24:DC:252:LYS:HE3	2.02	0.59
22:DA:2617:U:C2'	22:DA:2618:G:H5'	2.32	0.59
28:DG:143:VAL:HA	28:DG:146:ASP:OD2	2.03	0.59
31:DJ:58:ASN:CG	31:DJ:127:GLY:HA2	2.27	0.59
32:DK:107:LEU:C	32:DK:109:SER:H	2.08	0.59
35:DN:5:LYS:HG2	35:DN:6:SER:H	1.66	0.59
37:DP:25:VAL:HA	37:DP:85:VAL:HA	1.84	0.59
38:DQ:48:ASP:HA	38:DQ:51:GLN:HB2	1.84	0.59
44:DW:67:LYS:HB3	44:DW:80:SER:HB2	1.84	0.59
1:AA:1053:G:O6	1:AA:1199:U:H2'	2.01	0.59
10:AJ:14:ASP:HB3	10:AJ:17:LEU:HB3	1.84	0.59
13:AM:19:THR:HA	13:AM:24:VAL:HG23	1.84	0.59
22:BA:544:C:N3	22:BA:548:G:OP1	2.35	0.59
22:BA:1853:A:N1	22:BA:2087:G:H1'	2.17	0.59
22:BA:2148:G:C2'	22:BA:2149:U:O4'	2.50	0.59
26:BE:189:THR:HG1	26:BE:191:ASP:HB3	1.66	0.59
28:BG:109:SER:O	28:BG:110:HIS:HB3	2.01	0.59
30:BI:105:LEU:HA	30:BI:108:ILE:HB	1.84	0.59
31:BJ:3:THR:HG21	38:BQ:60:TRP:NE1	2.15	0.59
40:BS:43:ALA:HA	40:BS:46:LEU:HD12	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BW:22:VAL:HG13	44:BW:25:PHE:CE2	2.37	0.59
53:CA:66:A:N6	53:CA:67:C:N4	2.50	0.59
53:CA:1093:A:C5	53:CA:1095:U:O4'	2.55	0.59
53:CA:1151:A:HO2'	53:CA:1152:A:H8	0.75	0.59
5:CE:132:PRO:O	5:CE:136:VAL:HG12	2.01	0.59
55:CM:21:ILE:HB	55:CM:24:VAL:HG23	1.84	0.59
21:CU:35:GLU:OE2	21:CU:35:GLU:HA	2.01	0.59
22:DA:28:A:C6	22:DA:29:U:O2	2.55	0.59
22:DA:477:A:H2'	22:DA:478:A:H8	1.67	0.59
22:DA:612:G:C2	22:DA:614:A:H1'	2.38	0.59
22:DA:1491:G:O6	22:DA:1500:G:C2	2.56	0.59
22:DA:1812:U:H2'	22:DA:1813:G:H8	1.66	0.59
22:DA:1865:U:C4	22:DA:1875:G:C2	2.90	0.59
22:DA:2015:A:C4	48:D0:2:VAL:HG11	2.37	0.59
22:DA:2402:U:O2'	22:DA:2403:C:OP1	2.20	0.59
24:DC:120:ASP:CG	24:DC:121:ALA:H	2.10	0.59
24:DC:173:LEU:HD22	24:DC:173:LEU:H	1.66	0.59
28:DG:106:LEU:HB2	28:DG:108:PHE:HE1	1.65	0.59
29:DH:32:PRO:HA	45:DX:38:TRP:CD1	2.37	0.59
34:DM:66:ARG:CZ	34:DM:101:VAL:HG11	2.32	0.59
42:DU:73:ASN:HB3	42:DU:95:PHE:HE2	1.67	0.59
44:DW:31:LEU:C	44:DW:33:GLY:H	2.09	0.59
1:AA:507:C:C3'	1:AA:508:U:H5"	2.28	0.59
1:AA:569:C:H5"	1:AA:570:G:OP1	2.01	0.59
1:AA:1002:G:H2'	1:AA:1003:G:O4'	2.01	0.59
1:AA:1142:G:C2	1:AA:1143:G:H1'	2.38	0.59
22:BA:666:A:H2'	22:BA:667:U:H6	1.66	0.59
22:BA:1654:A:O2'	25:BD:118:PHE:CD1	2.46	0.59
22:BA:1847:A:N3	22:BA:1847:A:C2'	2.65	0.59
22:BA:2897:U:H2'	22:BA:2898:U:H6	1.67	0.59
25:BD:56:LYS:HD3	25:BD:58:ASN:HD21	1.68	0.59
36:BO:75:GLY:HA3	36:BO:106:LEU:HA	1.84	0.59
38:BQ:82:LEU:CD2	38:BQ:112:ALA:HB2	2.32	0.59
41:BT:38:ALA:HB1	41:BT:43:ILE:HG22	1.85	0.59
44:BW:40:ARG:HB2	44:BW:56:HIS:ND1	2.17	0.59
53:CA:219:U:H2'	53:CA:220:G:H8	1.67	0.59
53:CA:858:G:O2'	53:CA:859:G:H5'	2.03	0.59
53:CA:888:G:H3'	53:CA:889:A:H5"	1.84	0.59
3:CC:39:ARG:HE	3:CC:54:ILE:HG23	1.67	0.59
4:CD:32:LYS:HB3	4:CD:35:GLN:OE1	2.01	0.59
54:CG:75:LYS:HE3	54:CG:76:SER:H	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CN:66:THR:HG23	14:CN:82:LYS:HE3	1.85	0.59
22:DA:126:A:O5'	50:D2:19:ARG:HG3	2.02	0.59
22:DA:413:C:H4'	22:DA:1880:U:H4'	1.84	0.59
22:DA:503:A:C4	22:DA:506:G:N7	2.70	0.59
22:DA:878:A:H4'	22:DA:898:C:H42	1.67	0.59
22:DA:2053:G:H2'	22:DA:2054:A:O4'	2.03	0.59
22:DA:2135:A:H3'	22:DA:2136:G:H5"	1.84	0.59
57:DB:8:C:O2'	36:DO:40:ILE:HD13	2.03	0.59
57:DB:42:C:O2'	57:DB:43:C:C5'	2.49	0.59
24:DC:245:THR:C	24:DC:247:TRP:H	2.10	0.59
25:DD:116:LYS:HD3	35:DN:1:MET:HE1	1.84	0.59
42:DU:35:VAL:HB	42:DU:38:ILE:HD13	1.85	0.59
45:DX:53:LYS:HA	45:DX:56:ARG:CB	2.24	0.59
1:AA:1247:U:O2'	1:AA:1248:A:H5'	2.03	0.59
6:AF:81:ASN:HB3	6:AF:84:VAL:CG1	2.32	0.59
15:AO:77:TYR:OH	15:AO:87:ARG:HG2	2.02	0.59
22:BA:946:C:O2'	22:BA:947:A:H5'	2.02	0.59
22:BA:1269:A:H8	22:BA:1269:A:O5'	1.84	0.59
22:BA:1277:G:H4'	35:BN:20:MET:HE2	1.84	0.59
22:BA:1652:A:H62	35:BN:11:ASN:HD21	1.51	0.59
22:BA:2887:A:H5'	22:BA:2888:C:OP2	2.02	0.59
31:BJ:44:TYR:CD1	38:BQ:59:LEU:HD11	2.38	0.59
37:BP:56:SER:O	37:BP:75:THR:HG23	2.02	0.59
40:BS:73:LYS:HE3	40:BS:74:ILE:N	2.18	0.59
43:BV:6:ALA:HB2	43:BV:42:LEU:HD22	1.85	0.59
44:BW:14:ASP:O	44:BW:15:SER:HB2	2.01	0.59
44:BW:30:VAL:HA	44:BW:60:ALA:HB3	1.84	0.59
45:BX:38:TRP:HB2	45:BX:45:PHE:CE2	2.35	0.59
46:BY:7:ARG:N	46:BY:60:LYS:HZ1	1.96	0.59
53:CA:175:C:O2	53:CA:1447:A:C2	2.56	0.59
53:CA:981:U:OP2	53:CA:982:U:H3'	2.01	0.59
53:CA:1217:C:OP1	14:CN:8:ARG:HB2	2.01	0.59
5:CE:98:ALA:HB2	5:CE:123:LEU:HG	1.84	0.59
11:CK:126:ARG:N	21:CU:33:ARG:HE	2.01	0.59
12:CL:2:THR:HB	12:CL:5:GLN:H	1.67	0.59
22:DA:68:G:N2	22:DA:74:A:OP2	2.35	0.59
22:DA:128:C:H2'	22:DA:129:C:C5	2.38	0.59
22:DA:186:G:N2	22:DA:211:C:C2	2.70	0.59
22:DA:511:U:H5"	22:DA:512:G:OP2	2.03	0.59
22:DA:2239:G:OP2	62:DA:3528:HOH:O	2.17	0.59
22:DA:2461:A:H1'	22:DA:2492:U:C2	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:17:GLU:CD	25:DD:17:GLU:H	2.10	0.59
25:DD:28:GLU:OE2	25:DD:30:GLU:HG3	2.02	0.59
25:DD:148:GLN:OE1	25:DD:152:PRO:HG2	2.02	0.59
26:DE:122:GLU:HA	26:DE:190:ALA:HB2	1.84	0.59
43:DV:43:ASP:HB3	43:DV:46:LYS:HB2	1.85	0.59
44:DW:77:LYS:O	44:DW:78:PHE:HB2	2.01	0.59
45:DX:52:ALA:C	45:DX:54:GLY:H	2.11	0.59
1:AA:1136:C:O2	1:AA:1136:C:H2'	2.03	0.59
3:AC:179:ALA:HB1	3:AC:202:PHE:HE1	1.67	0.59
10:AJ:52:LEU:HD23	10:AJ:62:ARG:CG	2.33	0.59
12:AL:33:CYS:H	12:AL:54:VAL:HG13	1.68	0.59
20:AT:73:ARG:O	20:AT:76:ALA:HB3	2.03	0.59
22:BA:528:A:H2	22:BA:2043:C:H5'	1.68	0.59
22:BA:1509:A:O2'	22:BA:1510:G:OP2	2.18	0.59
22:BA:2393:U:H5'	33:BL:60:ARG:O	2.02	0.59
22:BA:2808:G:N2	22:BA:2891:U:C6	2.71	0.59
24:BC:75:ALA:HB1	24:BC:93:VAL:HG13	1.84	0.59
25:BD:107:VAL:HG13	25:BD:203:VAL:HG23	1.83	0.59
40:BS:72:THR:O	40:BS:73:LYS:HD2	2.01	0.59
53:CA:238:A:C2'	53:CA:239:U:H5"	2.31	0.59
53:CA:898:G:N2	53:CA:901:A:OP2	2.34	0.59
53:CA:1256:A:N1	53:CA:1278:G:H2'	2.17	0.59
12:CL:42:LYS:HD3	12:CL:43:LYS:NZ	2.18	0.59
22:DA:729:G:C6	24:DC:206:LYS:HB2	2.38	0.59
22:DA:873:C:H4'	34:DM:64:TRP:CD1	2.37	0.59
22:DA:1240:U:O2'	22:DA:1241:A:H5"	2.01	0.59
22:DA:1252:G:N3	38:DQ:32:ARG:HG2	2.18	0.59
22:DA:2255:G:H2'	22:DA:2256:G:O4'	2.03	0.59
22:DA:2543:G:H2'	22:DA:2544:G:C8	2.36	0.59
57:DB:69:G:H3'	57:DB:70:C:C6	2.38	0.59
25:DD:112:THR:HG22	25:DD:113:SER:N	2.18	0.59
25:DD:208:LYS:O	25:DD:209:ALA:HB2	2.02	0.59
58:DF:30:VAL:HA	58:DF:157:THR:HG22	1.84	0.59
29:DH:12:LEU:HD12	29:DH:12:LEU:O	2.03	0.59
31:DJ:111:LYS:HB2	31:DJ:115:GLY:CA	2.32	0.59
35:DN:1:MET:O	35:DN:2:ARG:HB2	2.02	0.59
37:DP:50:ARG:HA	37:DP:57:ALA:H	1.68	0.59
1:AA:116:A:H61	1:AA:313:A:H1'	1.68	0.59
1:AA:340:U:H2'	1:AA:341:C:H6	1.68	0.59
1:AA:373:A:H2'	1:AA:374:A:H8	1.68	0.59
1:AA:1004:A:H2'	1:AA:1005:A:O4'	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:104:SER:O	8:AH:122:GLY:HA3	2.03	0.59
21:AU:33:ARG:HE	21:AU:34:ARG:CG	2.16	0.59
22:BA:527:C:H4'	22:BA:528:A:O5'	2.02	0.59
22:BA:594:U:H2'	22:BA:595:C:H6	1.64	0.59
22:BA:2552:U:H2'	22:BA:2554:U:OP2	2.03	0.59
24:BC:245:THR:OG1	24:BC:249:VAL:HB	2.03	0.59
26:BE:169:VAL:O	26:BE:170:ARG:HD2	2.03	0.59
28:BG:163:TYR:O	28:BG:164:ALA:HB2	2.03	0.59
31:BJ:54:ILE:HD11	31:BJ:56:VAL:HG23	1.83	0.59
35:BN:24:MET:HE3	35:BN:44:LEU:HB2	1.85	0.59
38:BQ:85:ALA:O	38:BQ:87:VAL:O	2.20	0.59
52:B4:15:LYS:O	52:B4:16:ILE:O	2.20	0.59
53:CA:1239:A:H62	53:CA:1299:A:N6	2.00	0.59
2:CB:66:ILE:H	2:CB:88:GLN:HB3	1.67	0.59
4:CD:89:LEU:CD2	4:CD:199:ILE:HD11	2.33	0.59
11:CK:121:ARG:HH21	21:CU:35:GLU:HB2	1.68	0.59
22:DA:323:C:H6	26:DE:165:HIS:CE1	2.21	0.59
22:DA:574:A:H2	22:DA:2032:G:O2'	1.85	0.59
22:DA:852:U:H2'	22:DA:853:C:C6	2.37	0.59
22:DA:871:U:OP1	34:DM:4:PRO:HA	2.03	0.59
22:DA:923:G:H1'	44:DW:23:LYS:NZ	2.17	0.59
22:DA:1140:C:OP2	31:DJ:68:LYS:HE3	2.03	0.59
22:DA:2339:C:H2'	22:DA:2340:A:H8	1.67	0.59
22:DA:2592:G:C5	22:DA:2593:U:C5	2.91	0.59
22:DA:2699:C:H2'	22:DA:2700:A:C8	2.38	0.59
22:DA:2825:G:H3'	22:DA:2826:A:H8	1.66	0.59
22:DA:2880:C:H1'	35:DN:93:GLY:H	1.67	0.59
26:DE:79:ARG:O	26:DE:80:SER:C	2.46	0.59
58:DF:177:ARG:CD	58:DF:178:LYS:H	2.14	0.59
39:DR:2:TYR:CD2	39:DR:42:ALA:HB2	2.37	0.59
40:DS:6:LYS:NZ	40:DS:104:THR:HG23	2.18	0.59
47:DZ:7:THR:O	47:DZ:54:VAL:HA	2.02	0.59
1:AA:284:C:H2'	1:AA:285:C:H6	1.67	0.59
1:AA:862:C:C2'	1:AA:863:U:H5'	2.32	0.59
2:AB:53:LEU:HD21	2:AB:212:TYR:OH	2.01	0.59
2:AB:148:GLY:O	2:AB:151:LYS:HG2	2.03	0.59
4:AD:11:SER:HA	4:AD:18:LEU:HD12	1.83	0.59
7:AG:68:VAL:HG12	7:AG:102:TRP:HE3	1.68	0.59
12:AL:86:VAL:HG11	12:AL:89:LEU:HD23	1.83	0.59
16:AP:77:GLU:C	16:AP:79:ASN:H	2.10	0.59
21:AU:39:LYS:N	21:AU:40:PRO:HD2	2.18	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1728:C:O2'	22:BA:1729:U:C6	2.55	0.59
22:BA:2377:A:O2'	22:BA:2378:A:H5'	2.03	0.59
22:BA:2887:A:H2'	22:BA:2887:A:N3	2.16	0.59
29:BH:14:SER:OG	29:BH:17:ASP:HB2	2.03	0.59
30:BI:120:ASP:HB3	30:BI:123:ALA:HB3	1.83	0.59
32:BK:2:ILE:HG21	32:BK:39:ILE:HD12	1.85	0.59
32:BK:26:GLY:HA3	32:BK:30:ARG:HE	1.67	0.59
33:BL:91:ASP:HB2	33:BL:94:THR:HB	1.85	0.59
39:BR:60:LYS:H	39:BR:100:GLY:HA3	1.68	0.59
53:CA:332:G:OP2	20:CT:4:LYS:HG3	2.02	0.59
53:CA:415:A:H3'	53:CA:416:G:H8	1.66	0.59
53:CA:644:U:H2'	53:CA:645:G:C8	2.38	0.59
53:CA:1206:G:C6	53:CA:1207:G:C5	2.91	0.59
2:CB:26:MET:HG2	2:CB:188:THR:HA	1.85	0.59
15:CO:23:SER:O	15:CO:26:VAL:HB	2.02	0.59
22:DA:1079:C:H41	22:DA:1088:A:C5'	2.08	0.59
22:DA:1416:G:C4	22:DA:1417:C:C5	2.91	0.59
22:DA:1597:A:O3'	22:DA:1598:A:H8	1.85	0.59
22:DA:1957:C:H5'	22:DA:1984:G:O2'	2.03	0.59
31:DJ:94:ALA:O	31:DJ:95:ARG:HB3	2.03	0.59
35:DN:82:GLU:C	35:DN:85:PRO:HD2	2.28	0.59
37:DP:22:GLY:HA3	37:DP:91:VAL:HG21	1.84	0.59
39:DR:87:GLN:HG2	39:DR:88:GLY:N	2.18	0.59
52:D4:36:ARG:HG2	52:D4:37:GLN:N	2.18	0.59
7:AG:92:PRO:O	7:AG:93:VAL:HG13	2.02	0.59
22:BA:34:U:C1'	22:BA:35:G:OP1	2.51	0.59
22:BA:494:G:H21	40:BS:57:ASN:HD21	1.51	0.59
22:BA:514:A:H1'	22:BA:581:C:O2'	2.02	0.59
22:BA:2786:U:H2'	22:BA:2787:C:H6	1.68	0.59
24:BC:106:PRO:CA	24:BC:141:HIS:CE1	2.86	0.59
25:BD:110:THR:CG2	25:BD:171:THR:HG22	2.29	0.59
26:BE:131:THR:CG2	26:BE:160:ALA:HA	2.32	0.59
27:BF:131:VAL:CG2	27:BF:151:LEU:H	2.16	0.59
27:BF:134:GLN:HE22	27:BF:150:GLY:H	1.49	0.59
39:BR:39:LEU:HB3	39:BR:49:ILE:HD13	1.84	0.59
49:B1:3:GLY:O	49:B1:4:ILE:HG12	2.02	0.59
50:B2:18:PHE:HA	50:B2:43:THR:HG21	1.83	0.59
53:CA:177:G:O2'	53:CA:1448:C:H5"	2.02	0.59
53:CA:1159:U:O4'	53:CA:1182:G:N2	2.36	0.59
4:CD:98:ASP:CG	4:CD:114:ARG:HH21	2.10	0.59
4:CD:191:SER:O	4:CD:192:ALA:HB2	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:43:GLY:O	6:CF:44:ARG:C	2.46	0.59
12:CL:49:ARG:HG2	12:CL:89:LEU:HD21	1.84	0.59
55:CM:78:ARG:NH2	55:CM:79:LEU:HD23	2.18	0.59
21:CU:38:GLU:HA	21:CU:41:THR:OG1	2.02	0.59
22:DA:85:G:O2'	22:DA:86:G:H8	1.85	0.59
22:DA:303:G:H2'	22:DA:304:U:C6	2.38	0.59
22:DA:614:A:H4'	22:DA:616:A:N6	2.18	0.59
22:DA:661:A:H2'	22:DA:662:G:O4'	2.03	0.59
22:DA:746:U:H5"	22:DA:748:G:H5'	1.83	0.59
22:DA:851:C:H2'	22:DA:852:U:C6	2.37	0.59
22:DA:1161:C:H2'	22:DA:1162:G:H8	1.68	0.59
22:DA:1249:U:OP1	22:DA:1249:U:H3'	2.03	0.59
22:DA:1968:G:H5'	62:DA:3481:HOH:O	2.03	0.59
29:DH:84:ALA:HA	29:DH:89:LYS:O	2.01	0.59
31:DJ:4:PHE:HB3	38:DQ:63:ARG:HH22	1.68	0.59
1:AA:322:C:O2'	20:AT:17:ARG:HG2	2.03	0.58
1:AA:480:U:H5"	1:AA:481:G:OP2	2.03	0.58
1:AA:499:A:H1'	1:AA:500:G:C8	2.37	0.58
5:AE:76:ASN:HB3	5:AE:81:GLN:HG3	1.84	0.58
22:BA:958:U:H5'	22:BA:958:U:C6	2.36	0.58
22:BA:2086:U:H2'	22:BA:2087:G:C8	2.38	0.58
22:BA:2149:U:HO2'	22:BA:2150:C:C4'	2.15	0.58
24:BC:8:THR:O	24:BC:9:SER:HB3	2.02	0.58
25:BD:113:SER:O	25:BD:167:ASN:HA	2.03	0.58
26:BE:175:ILE:HD11	26:BE:180:LEU:HD11	1.84	0.58
41:BT:32:LEU:N	41:BT:32:LEU:HD23	2.18	0.58
51:B3:28:LEU:HD11	51:B3:40:LYS:HB3	1.85	0.58
53:CA:327:A:O2'	53:CA:328:C:H6	1.86	0.58
53:CA:1053:G:N7	53:CA:1200:C:H5"	2.18	0.58
53:CA:1240:U:O2'	54:CG:37:THR:HB	2.03	0.58
3:CC:83:VAL:HA	3:CC:86:LEU:HD12	1.84	0.58
55:CM:36:ALA:HB2	55:CM:55:LEU:HD21	1.84	0.58
55:CM:81:ASP:HB3	55:CM:82:LEU:HD12	1.85	0.58
14:CN:8:ARG:HD2	14:CN:12:ARG:CZ	2.32	0.58
56:CP:12:LYS:HG2	56:CP:13:LYS:HG2	1.85	0.58
22:DA:321:U:H5'	26:DE:129:PRO:HB3	1.85	0.58
22:DA:922:C:H2'	22:DA:923:G:C8	2.37	0.58
22:DA:1342:A:C4	22:DA:1345:C:N4	2.71	0.58
22:DA:1635:A:O2'	22:DA:1636:U:H5'	2.03	0.58
22:DA:2337:G:C3'	22:DA:2338:C:H5'	2.32	0.58
22:DA:2360:G:H1'	33:DL:60:ARG:HH21	1.67	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:4:LEU:HD23	25:DD:101:PHE:CE1	2.37	0.58
25:DD:114:LYS:HB2	25:DD:116:LYS:HE3	1.85	0.58
25:DD:181:ASP:C	25:DD:183:GLU:H	2.10	0.58
26:DE:147:LEU:O	26:DE:148:ILE:HB	2.02	0.58
31:DJ:37:ARG:HG3	31:DJ:118:MET:SD	2.43	0.58
33:DL:117:THR:HG22	33:DL:118:THR:N	2.16	0.58
37:DP:86:LYS:HA	37:DP:86:LYS:HZ2	1.67	0.58
39:DR:43:ASN:ND2	39:DR:44:GLY:H	1.99	0.58
44:DW:37:VAL:CG1	44:DW:55:ASP:HB2	2.28	0.58
46:DY:1:MET:HG2	46:DY:4:LYS:HZ1	1.67	0.58
1:AA:82:G:N2	1:AA:84:U:N3	2.51	0.58
1:AA:1103:C:H2'	1:AA:1104:G:O4'	2.03	0.58
2:AB:71:THR:HG22	2:AB:72:LYS:N	2.18	0.58
5:AE:158:LYS:HE2	8:AH:63:LYS:HZ1	1.68	0.58
12:AL:109:ARG:NH2	12:AL:116:TYR:CE2	2.71	0.58
22:BA:229:C:H2'	22:BA:230:G:O4'	2.03	0.58
22:BA:470:A:H61	41:BT:72:GLN:HE22	1.52	0.58
22:BA:1656:C:OP1	25:BD:141:ARG:NH1	2.36	0.58
22:BA:2358:A:N6	33:BL:54:GLN:HE22	1.97	0.58
22:BA:2553:G:N1	22:BA:2554:U:O2	2.35	0.58
22:BA:2641:G:OP1	31:BJ:76:HIS:HE1	1.86	0.58
24:BC:255:LYS:O	24:BC:257:ARG:N	2.35	0.58
25:BD:45:TYR:N	25:BD:45:TYR:HD1	1.94	0.58
27:BF:114:ARG:HD2	27:BF:114:ARG:H	1.69	0.58
31:BJ:3:THR:HB	31:BJ:44:TYR:OH	2.03	0.58
32:BK:97:THR:O	32:BK:118:LEU:HD21	2.03	0.58
35:BN:73:ASN:HD22	35:BN:76:VAL:HG11	1.68	0.58
36:BO:30:ARG:HG3	36:BO:102:ARG:HH11	1.68	0.58
43:BV:41:GLU:C	43:BV:42:LEU:HD23	2.28	0.58
53:CA:668:G:O2'	53:CA:669:G:H5'	2.03	0.58
53:CA:765:G:C4	53:CA:812:G:C6	2.91	0.58
53:CA:1167:A:C2'	53:CA:1168:U:OP1	2.51	0.58
53:CA:1451:U:O2'	53:CA:1452:C:OP1	2.15	0.58
4:CD:2:ARG:HH21	4:CD:114:ARG:CD	1.98	0.58
12:CL:41:PRO:HD2	12:CL:47:ALA:O	2.02	0.58
17:CQ:25:GLU:CG	17:CQ:40:THR:HG22	2.34	0.58
22:DA:85:G:O2'	22:DA:86:G:H5"	2.03	0.58
22:DA:120:U:O4	22:DA:177:G:C8	2.56	0.58
22:DA:353:C:N4	22:DA:354:A:N6	2.50	0.58
22:DA:720:U:H2'	22:DA:721:A:C8	2.39	0.58
22:DA:1682:G:H2'	22:DA:1683:U:C6	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1956:U:O2	22:DA:1985:C:H4'	2.03	0.58
57:DB:15:A:C4	57:DB:109:A:C6	2.90	0.58
26:DE:126:VAL:HG22	26:DE:127:GLU:OE2	2.03	0.58
28:DG:28:LYS:HG3	28:DG:79:THR:HG22	1.85	0.58
29:DH:77:THR:HG22	29:DH:143:ILE:HD11	1.85	0.58
4:AD:53:GLN:HE21	4:AD:202:LEU:HA	1.67	0.58
9:AI:46:VAL:HA	9:AI:49:GLN:HG3	1.84	0.58
10:AJ:14:ASP:CB	10:AJ:17:LEU:HB3	2.33	0.58
12:AL:64:SER:OG	12:AL:96:THR:HG23	2.03	0.58
12:AL:115:LYS:O	12:AL:116:TYR:HB2	2.03	0.58
22:BA:483:A:H2'	22:BA:484:C:H5'	1.85	0.58
22:BA:954:G:OP2	34:BM:16:ARG:NH2	2.36	0.58
22:BA:1082:U:H5'	30:BI:117:THR:C	2.23	0.58
22:BA:2149:U:O2'	22:BA:2150:C:O4'	2.21	0.58
23:BB:46:A:H2'	23:BB:47:C:H6	1.68	0.58
26:BE:160:ALA:O	26:BE:161:ALA:HB3	2.03	0.58
29:BH:62:LEU:HD12	29:BH:63:ALA:N	2.18	0.58
37:BP:33:GLU:C	37:BP:33:GLU:OE1	2.46	0.58
44:BW:72:GLY:N	44:BW:73:PRO:HD2	2.17	0.58
53:CA:791:G:C2'	53:CA:792:A:H5'	2.33	0.58
53:CA:859:G:H2'	53:CA:860:A:C8	2.38	0.58
53:CA:920:U:C2	53:CA:921:U:C5	2.91	0.58
53:CA:1297:G:C8	53:CA:1297:G:OP2	2.56	0.58
53:CA:1348:U:H4'	9:CI:121:ARG:HG3	1.84	0.58
18:CR:59:LYS:O	18:CR:63:TYR:HD1	1.85	0.58
21:CU:53:LYS:HB2	21:CU:53:LYS:NZ	2.18	0.58
22:DA:49:A:C4'	22:DA:50:U:O5'	2.44	0.58
22:DA:475:C:H4'	22:DA:509:C:O2'	2.03	0.58
22:DA:553:G:H2'	22:DA:554:U:O4'	2.03	0.58
22:DA:804:A:H2'	22:DA:806:C:N4	2.16	0.58
22:DA:995:C:O2'	38:DQ:93:ILE:HD12	2.04	0.58
22:DA:1393:A:N6	41:DT:19:LYS:HB2	2.18	0.58
22:DA:1438:U:O2'	22:DA:1439:A:H5'	2.03	0.58
22:DA:1515:A:H2'	22:DA:1516:G:O4'	2.04	0.58
22:DA:2387:U:H1'	44:DW:38:ARG:NH1	2.17	0.58
22:DA:2842:G:H2'	22:DA:2843:G:O4'	2.03	0.58
24:DC:171:VAL:N	24:DC:185:ALA:HB2	2.17	0.58
28:DG:88:LEU:HD13	28:DG:93:TYR:HB3	1.85	0.58
29:DH:84:ALA:N	29:DH:148:ALA:HA	2.18	0.58
33:DL:88:GLY:O	33:DL:89:VAL:HG12	2.02	0.58
35:DN:33:ILE:HA	35:DN:114:GLU:HB2	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DS:2:GLU:HA	40:DS:2:GLU:OE2	2.03	0.58
49:D1:47:ILE:H	49:D1:47:ILE:HD12	1.69	0.58
1:AA:138:G:O2'	1:AA:139:A:H5'	2.04	0.58
1:AA:1387:G:H2'	1:AA:1388:C:C6	2.39	0.58
1:AA:1468:A:C3'	1:AA:1469:C:H5"	2.33	0.58
2:AB:13:VAL:CG2	2:AB:207:ARG:HH22	2.16	0.58
5:AE:11:GLN:HA	5:AE:11:GLN:NE2	2.09	0.58
5:AE:152:VAL:CB	5:AE:155:LYS:HZ2	2.09	0.58
13:AM:89:ARG:HH11	13:AM:94:LEU:HB3	1.68	0.58
22:BA:973:A:O4'	22:BA:1188:U:C6	2.56	0.58
22:BA:1026:G:H2'	22:BA:1027:A:C8	2.38	0.58
22:BA:1996:C:OP1	32:BK:31:ARG:NE	2.35	0.58
22:BA:2394:C:OP2	51:B3:29:ARG:HD3	2.03	0.58
26:BE:151:GLY:CA	26:BE:192:ALA:HB2	2.33	0.58
27:BF:129:MET:SD	27:BF:153:ILE:HD11	2.44	0.58
31:BJ:65:THR:HG22	31:BJ:68:LYS:CE	2.34	0.58
39:BR:64:VAL:O	39:BR:65:ALA:HB3	2.04	0.58
44:BW:24:ARG:HD3	44:BW:65:LYS:CE	2.34	0.58
44:BW:50:VAL:HB	44:BW:61:LYS:HZ2	1.67	0.58
53:CA:247:G:C6	53:CA:278:G:N1	2.72	0.58
53:CA:1316:G:N2	53:CA:1318:A:H3'	2.17	0.58
2:CB:125:PHE:HD1	2:CB:137:THR:HG22	1.68	0.58
6:CF:41:ASP:OD2	6:CF:58:HIS:CE1	2.57	0.58
9:CI:114:LYS:HB2	9:CI:117:LEU:HD12	1.85	0.58
14:CN:46:LYS:HE3	19:CS:10:ILE:HB	1.85	0.58
15:CO:66:LEU:HB3	15:CO:77:TYR:HE1	1.67	0.58
19:CS:45:GLY:H	19:CS:61:VAL:HB	1.68	0.58
20:CT:2:ASN:N	20:CT:7:LYS:HZ3	2.00	0.58
20:CT:26:MET:C	20:CT:26:MET:HE2	2.28	0.58
22:DA:125:A:H3'	50:D2:19:ARG:CD	2.33	0.58
22:DA:301:G:H3'	42:DU:81:ARG:HH12	1.66	0.58
22:DA:308:G:C6	22:DA:309:A:C6	2.92	0.58
22:DA:532:A:N1	22:DA:2020:A:O2'	2.30	0.58
22:DA:674:G:H4'	26:DE:69:ARG:HB3	1.84	0.58
22:DA:976:G:H5'	22:DA:1156:A:C6	2.38	0.58
22:DA:1400:U:O2'	22:DA:1401:G:O4'	2.21	0.58
22:DA:1989:G:H2'	22:DA:1990:C:H5'	1.85	0.58
22:DA:2197:U:C5	22:DA:2224:G:C5	2.92	0.58
22:DA:2287:A:O2'	22:DA:2288:A:H2'	2.03	0.58
22:DA:2629:U:C5'	22:DA:2630:G:OP1	2.51	0.58
24:DC:239:PHE:HD1	24:DC:240:GLY:H	1.50	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DN:63:ARG:O	35:DN:67:PHE:HB2	2.03	0.58
1:AA:148:G:N3	1:AA:1446:A:H2	2.02	0.58
1:AA:374:A:H5"	1:AA:452:A:C2	2.39	0.58
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.85	0.58
6:AF:4:TYR:O	6:AF:63:ASN:HA	2.02	0.58
7:AG:4:ARG:HA	7:AG:4:ARG:HE	1.68	0.58
7:AG:24:LYS:O	7:AG:28:ILE:HG12	2.04	0.58
22:BA:358:U:H2'	22:BA:359:G:O4'	2.04	0.58
22:BA:1061:U:H1'	22:BA:1070:A:O4'	2.03	0.58
22:BA:2358:A:H61	33:BL:54:GLN:NE2	1.97	0.58
24:BC:103:ILE:O	24:BC:104:LEU:O	2.21	0.58
26:BE:152:GLU:O	26:BE:153:LEU:HG	2.03	0.58
32:BK:18:ARG:HB2	32:BK:45:GLU:CG	2.34	0.58
36:BO:79:ALA:HB2	36:BO:110:ALA:HA	1.86	0.58
37:BP:25:VAL:CG1	37:BP:46:VAL:HG23	2.31	0.58
39:BR:54:VAL:O	39:BR:55:ASP:C	2.46	0.58
42:BU:6:ARG:O	42:BU:24:VAL:HB	2.03	0.58
42:BU:82:VAL:O	42:BU:94:PHE:O	2.21	0.58
53:CA:162:A:H2'	53:CA:163:C:O4'	2.04	0.58
53:CA:209:U:C5'	53:CA:210:C:OP2	2.45	0.58
53:CA:747:A:H2'	53:CA:748:G:O4'	2.02	0.58
53:CA:1288:A:N6	53:CA:1289:A:N6	2.52	0.58
53:CA:1380:U:H4'	53:CA:1381:U:OP1	2.03	0.58
53:CA:1408:A:C2	53:CA:1492:A:N6	2.71	0.58
4:CD:24:VAL:HG23	4:CD:25:ARG:N	2.17	0.58
22:DA:240:C:C3'	22:DA:241:A:H5"	2.28	0.58
22:DA:241:A:C8	22:DA:243:U:N3	2.72	0.58
22:DA:590:A:H2'	22:DA:591:U:C6	2.35	0.58
22:DA:615:U:O4	26:DE:39:ALA:HB2	2.03	0.58
22:DA:1709:U:H2'	22:DA:1710:G:C8	2.39	0.58
25:DD:110:THR:OG1	25:DD:171:THR:HG22	2.04	0.58
37:DP:22:GLY:HA3	37:DP:91:VAL:CG2	2.34	0.58
38:DQ:71:ASN:HD21	38:DQ:106:THR:HG23	1.67	0.58
40:DS:86:MET:SD	40:DS:87:PRO:HD2	2.44	0.58
1:AA:918:A:H2'	1:AA:919:A:C8	2.38	0.58
5:AE:148:SER:HB2	5:AE:151:MET:HB2	1.84	0.58
20:AT:67:HIS:HB3	20:AT:68:LYS:NZ	2.19	0.58
22:BA:855:G:N3	44:BW:23:LYS:CD	2.63	0.58
22:BA:1509:A:O2'	22:BA:1510:G:P	2.61	0.58
22:BA:1870:C:H2'	22:BA:1871:A:C2	2.39	0.58
22:BA:2207:C:H2'	22:BA:2208:C:H6	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2680:U:OP2	25:BD:114:LYS:CE	2.51	0.58
22:BA:2800:A:C4'	22:BA:2801:G:OP2	2.26	0.58
27:BF:134:GLN:O	27:BF:136:ILE:N	2.29	0.58
34:BM:40:ARG:HB2	34:BM:93:VAL:CG2	2.33	0.58
39:BR:24:LYS:CA	39:BR:94:THR:HG23	2.29	0.58
44:BW:28:GLU:CG	44:BW:29:SER:H	2.16	0.58
44:BW:39:GLN:HG2	44:BW:41:GLY:N	2.14	0.58
47:BZ:23:LEU:HD21	47:BZ:53:MET:CE	2.33	0.58
53:CA:461:A:P	53:CA:462:G:OP2	2.61	0.58
53:CA:1226:C:H41	55:CM:102:LYS:HA	1.68	0.58
53:CA:1350:A:H2	54:CG:33:GLY:HA3	1.68	0.58
9:CI:40:ARG:H	9:CI:44:ARG:HD3	1.69	0.58
22:DA:70:G:H3'	22:DA:113:U:H4'	1.83	0.58
22:DA:445:C:O2'	22:DA:449:A:N3	2.35	0.58
22:DA:1335:C:H2'	22:DA:1336:A:C1'	2.34	0.58
22:DA:1338:G:H4'	41:DT:18:GLU:OE2	2.04	0.58
22:DA:1351:C:H2'	22:DA:1352:U:O4'	2.03	0.58
22:DA:1721:G:H1'	22:DA:1739:A:N6	2.19	0.58
22:DA:1954:G:HO2'	22:DA:1955:U:P	2.20	0.58
41:DT:10:VAL:HG23	41:DT:11:LEU:HD12	1.85	0.58
51:D3:41:ARG:HG3	51:D3:41:ARG:HH21	1.69	0.58
1:AA:980:C:OP2	62:AA:1835:HOH:O	2.17	0.58
1:AA:1356:G:H2'	1:AA:1357:A:H8	1.66	0.58
4:AD:29:THR:HG22	4:AD:30:LYS:HD3	1.86	0.58
9:AI:3:ASN:ND2	9:AI:4:GLN:H	2.01	0.58
10:AJ:71:LEU:O	10:AJ:72:ARG:HD3	2.03	0.58
14:AN:47:LEU:O	14:AN:47:LEU:HD23	2.04	0.58
22:BA:263:G:H1'	22:BA:430:A:N3	2.19	0.58
22:BA:1027:A:H8	22:BA:1027:A:O5'	1.85	0.58
22:BA:1818:U:OP2	24:BC:155:ARG:NH1	2.36	0.58
22:BA:2134:A:N6	22:BA:2157:G:C5	2.72	0.58
23:BB:34:A:H2'	23:BB:35:C:OP2	2.03	0.58
26:BE:131:THR:HG22	26:BE:161:ALA:H	1.68	0.58
28:BG:83:THR:C	28:BG:84:LYS:HD3	2.28	0.58
34:BM:2:LEU:HD23	34:BM:69:PRO:CD	2.33	0.58
36:BO:55:GLU:OE1	36:BO:58:ILE:HD11	2.04	0.58
37:BP:24:THR:HG22	37:BP:86:LYS:HB2	1.86	0.58
51:B3:26:ALA:O	51:B3:27:ASN:HB2	2.03	0.58
53:CA:260:G:C6	53:CA:261:U:C4	2.92	0.58
53:CA:1300:G:H22	53:CA:1334:G:H2'	1.68	0.58
2:CB:160:LEU:HD22	2:CB:175:ALA:HB2	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:836:G:C5	22:DA:837:C:C4	2.92	0.58
22:DA:1237:A:N3	22:DA:1238:G:H1'	2.17	0.58
22:DA:1648:U:O2'	22:DA:1649:G:O4'	2.14	0.58
22:DA:2601:C:C4'	22:DA:2602:A:OP2	2.50	0.58
25:DD:133:THR:HG23	25:DD:134:HIS:N	2.18	0.58
58:DF:45:ASP:C	58:DF:47:LYS:H	2.12	0.58
32:DK:39:ILE:HD11	32:DK:62:VAL:CG2	2.32	0.58
35:DN:103:ARG:HG3	35:DN:104:ALA:N	2.19	0.58
36:DO:94:ARG:HD2	36:DO:97:PHE:O	2.03	0.58
9:AI:44:ARG:HB2	9:AI:45:MET:HE3	1.85	0.58
12:AL:34:THR:HG22	12:AL:35:ARG:NE	2.19	0.58
12:AL:85:ARG:NH2	12:AL:87:LYS:HD2	2.18	0.58
22:BA:1073:A:H8	22:BA:1073:A:OP1	1.87	0.58
22:BA:1936:A:C2	22:BA:1943:U:H5	2.21	0.58
24:BC:5:CYS:HB3	24:BC:12:ARG:NH1	2.18	0.58
25:BD:124:ARG:HG2	25:BD:125:TRP:CD1	2.38	0.58
26:BE:57:LYS:HG3	26:BE:58:LYS:N	2.17	0.58
27:BF:128:SER:OG	27:BF:154:THR:HB	2.04	0.58
32:BK:91:SER:O	32:BK:92:GLU:C	2.46	0.58
35:BN:103:ARG:NH1	35:BN:110:MET:HE1	2.18	0.58
37:BP:67:GLU:HG3	37:BP:68:GLY:H	1.67	0.58
41:BT:87:LEU:O	41:BT:88:LYS:C	2.46	0.58
42:BU:5:ARG:O	42:BU:8:ASP:HB2	2.04	0.58
53:CA:328:C:C1'	53:CA:329:A:OP2	2.52	0.58
53:CA:812:G:HO2'	53:CA:813:U:H6	1.43	0.58
53:CA:1258:G:O2'	53:CA:1259:C:H5'	2.04	0.58
53:CA:1378:C:H3'	53:CA:1379:G:H5"	1.86	0.58
53:CA:1493:A:C8	53:CA:1493:A:OP1	2.57	0.58
4:CD:28:ASP:O	4:CD:29:THR:O	2.21	0.58
4:CD:84:ASN:CG	5:CE:101:GLY:HA3	2.28	0.58
22:DA:7:G:H2'	22:DA:8:C:O4'	2.04	0.58
22:DA:50:U:C6	22:DA:50:U:OP1	2.56	0.58
22:DA:1183:U:H2'	22:DA:1184:U:C6	2.39	0.58
22:DA:1286:A:C6	22:DA:1289:C:N3	2.71	0.58
22:DA:1338:G:H5"	41:DT:17:SER:HB3	1.85	0.58
22:DA:2860:A:H8	22:DA:2860:A:O5'	1.87	0.58
58:DF:131:VAL:C	58:DF:133:GLU:H	2.11	0.58
31:DJ:45:THR:H	31:DJ:46:PRO:CD	2.16	0.58
32:DK:94:PRO:HG3	32:DK:115:ILE:HD12	1.85	0.58
33:DL:3:LEU:C	33:DL:3:LEU:HD12	2.28	0.58
36:DO:62:LEU:HD11	36:DO:65:THR:N	2.19	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DP:22:GLY:H	37:DP:46:VAL:HB	1.68	0.58
38:DQ:69:ARG:HB2	38:DQ:69:ARG:HH21	1.68	0.58
44:DW:20:LEU:HD11	44:DW:35:ILE:HG13	1.85	0.58
1:AA:582:C:C2	1:AA:583:A:C8	2.92	0.58
5:AE:120:HIS:C	5:AE:121:ASN:HD22	2.12	0.58
22:BA:2356:U:H4'	44:BW:16:GLU:HG3	1.86	0.58
25:BD:9:VAL:HG22	25:BD:26:VAL:HB	1.86	0.58
28:BG:25:ILE:HG22	28:BG:78:VAL:HG21	1.85	0.58
30:BI:48:ILE:HG13	30:BI:49:GLU:H	1.68	0.58
34:BM:72:PRO:O	34:BM:91:TYR:O	2.21	0.58
37:BP:104:GLY:O	37:BP:106:ALA:N	2.37	0.58
41:BT:26:LYS:O	41:BT:27:SER:CB	2.52	0.58
41:BT:29:THR:N	41:BT:91:GLN:HE22	2.02	0.58
47:BZ:8:GLN:O	47:BZ:10:ARG:N	2.37	0.58
53:CA:280:C:H4'	53:CA:281:G:OP2	2.02	0.58
53:CA:457:G:C8	53:CA:457:G:OP2	2.56	0.58
53:CA:1091:U:O2	53:CA:1093:A:C8	2.56	0.58
53:CA:1134:G:N1	53:CA:1141:C:C4	2.72	0.58
53:CA:1381:U:C4	54:CG:77:ARG:NH1	2.72	0.58
53:CA:1471:U:O2'	53:CA:1472:U:H5'	2.04	0.58
22:DA:228:C:C5'	22:DA:229:C:C5	2.87	0.58
58:DF:129:MET:HE2	58:DF:174:PHE:HZ	1.67	0.58
42:DU:43:LYS:HG2	42:DU:45:GLN:HG2	1.86	0.58
46:DY:31:GLN:C	46:DY:33:ALA:H	2.11	0.58
1:AA:429:U:H1'	1:AA:430:A:H5"	1.86	0.58
1:AA:501:C:H1'	1:AA:549:C:H1'	1.86	0.58
1:AA:1210:C:H2'	1:AA:1211:U:H5'	1.85	0.58
1:AA:1328:C:H5"	13:AM:27:THR:HG21	1.86	0.58
4:AD:173:ASP:O	4:AD:174:ALA:HB2	2.04	0.58
6:AF:93:LYS:O	6:AF:94:HIS:HB2	2.02	0.58
7:AG:3:ARG:HG3	7:AG:4:ARG:H	1.69	0.58
12:AL:98:ARG:HD2	12:AL:103:CYS:SG	2.44	0.58
20:AT:34:VAL:O	20:AT:38:ILE:HG12	2.04	0.58
22:BA:141:G:H5'	22:BA:142:A:N7	2.18	0.58
22:BA:819:A:C4	22:BA:1189:A:C2	2.91	0.58
22:BA:1015:U:O2'	22:BA:1016:G:H5'	2.03	0.58
22:BA:1475:G:O2'	22:BA:1476:U:P	2.61	0.58
22:BA:2134:A:C6	22:BA:2135:A:N6	2.72	0.58
22:BA:2199:A:C8	22:BA:2199:A:H5'	2.39	0.58
22:BA:2776:A:H4'	22:BA:2777:G:H5"	1.86	0.58
26:BE:108:ILE:CD1	26:BE:180:LEU:HD13	2.34	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:8:LEU:HD23	32:BK:8:LEU:N	2.19	0.58
38:BQ:4:LYS:HZ3	38:BQ:7:VAL:HG13	1.67	0.58
40:BS:88:ARG:HH21	40:BS:88:ARG:HG3	1.68	0.58
43:BV:40:ILE:HG22	43:BV:41:GLU:N	2.18	0.58
44:BW:41:GLY:O	44:BW:42:THR:C	2.47	0.58
53:CA:356:A:H2'	53:CA:357:G:O4'	2.04	0.58
53:CA:555:U:H2'	53:CA:556:C:C6	2.39	0.58
53:CA:1447:A:O3'	53:CA:1448:C:H6	1.86	0.58
54:CG:4:ARG:HH11	54:CG:4:ARG:HG2	1.67	0.58
54:CG:9:ARG:HD3	54:CG:24:LYS:HZ1	1.69	0.58
12:CL:42:LYS:HD3	12:CL:43:LYS:HZ2	1.68	0.58
20:CT:34:VAL:HG21	20:CT:53:MET:HG2	1.86	0.58
22:DA:481:G:O2'	22:DA:482:A:OP2	2.19	0.58
22:DA:1386:C:O2'	22:DA:1387:A:H8	1.79	0.58
22:DA:1797:G:H4'	24:DC:254:LYS:O	2.04	0.58
22:DA:2008:C:H2'	22:DA:2009:A:C8	2.39	0.58
22:DA:2060:A:H2'	26:DE:63:LYS:HZ2	1.69	0.58
22:DA:2184:A:H2'	22:DA:2185:U:O4'	2.04	0.58
22:DA:2365:G:OP1	44:DW:54:ARG:HG3	2.04	0.58
22:DA:2808:G:O2'	22:DA:2809:A:C8	2.57	0.58
25:DD:4:LEU:HD12	25:DD:32:ASN:OD1	2.03	0.58
33:DL:119:PRO:HB3	33:DL:139:GLY:O	2.03	0.58
38:DQ:40:LYS:HD2	38:DQ:44:TYR:CE2	2.35	0.58
1:AA:560:A:H5'	1:AA:566:G:N2	2.18	0.57
1:AA:1160:G:O6	1:AA:1181:G:O6	2.22	0.57
2:AB:20:ARG:HA	2:AB:20:ARG:HH11	1.69	0.57
3:AC:156:LEU:HD12	3:AC:156:LEU:N	2.13	0.57
9:AI:11:ARG:HD2	9:AI:106:ASP:HB2	1.86	0.57
13:AM:40:GLU:HG3	13:AM:41:ASP:N	2.19	0.57
19:AS:46:LEU:H	19:AS:61:VAL:CG2	2.17	0.57
21:AU:10:PRO:HG2	3:CC:71:ARG:CZ	2.34	0.57
22:BA:1510:G:H2'	22:BA:1511:G:O4'	2.04	0.57
22:BA:2134:A:C6	22:BA:2135:A:C6	2.92	0.57
23:BB:28:C:OP1	36:BO:31:THR:HG21	2.04	0.57
27:BF:9:ASP:O	27:BF:10:GLU:HB2	2.04	0.57
28:BG:163:TYR:O	28:BG:164:ALA:CB	2.51	0.57
30:BI:123:ALA:C	30:BI:125:THR:H	2.10	0.57
32:BK:14:SER:OG	32:BK:86:LEU:HD12	2.04	0.57
32:BK:25:LEU:HD12	32:BK:38:ILE:HG22	1.85	0.57
33:BL:40:SER:O	33:BL:41:ARG:HB2	2.04	0.57
33:BL:68:SER:O	33:BL:69:ARG:HB2	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BS:63:GLY:O	40:BS:64:ALA:CB	2.52	0.57
45:BX:11:PRO:HB3	45:BX:29:LEU:HB3	1.87	0.57
53:CA:367:U:OP1	53:CA:395:C:H1'	2.03	0.57
53:CA:523:A:N6	12:CL:49:ARG:HH12	2.01	0.57
53:CA:812:G:O2'	53:CA:813:U:C6	2.53	0.57
53:CA:1090:U:H2'	53:CA:1091:U:H6	1.68	0.57
2:CB:91:VAL:HG11	2:CB:95:TRP:HD1	1.67	0.57
10:CJ:37:ARG:HB3	10:CJ:74:VAL:O	2.04	0.57
10:CJ:44:THR:OG1	10:CJ:70:HIS:CE1	2.57	0.57
11:CK:70:ALA:HB1	11:CK:104:PHE:CZ	2.39	0.57
22:DA:1008:A:H4'	22:DA:1009:A:OP1	2.04	0.57
22:DA:1213:A:H1'	22:DA:1237:A:C2	2.39	0.57
22:DA:2324:U:C5'	22:DA:2325:G:C5'	2.82	0.57
24:DC:72:GLY:O	24:DC:73:ILE:HD13	2.04	0.57
30:DI:109:ALA:HB1	30:DI:125:THR:HA	1.84	0.57
31:DJ:20:ALA:HA	31:DJ:23:LYS:CG	2.34	0.57
34:DM:136:MET:HE2	43:DV:57:TYR:CD2	2.38	0.57
37:DP:5:LYS:HE2	37:DP:9:GLN:NE2	2.19	0.57
37:DP:26:GLU:HB2	37:DP:86:LYS:HD3	1.86	0.57
39:DR:48:LYS:HD2	39:DR:48:LYS:H	1.68	0.57
46:DY:39:GLN:O	46:DY:42:LEU:HB2	2.04	0.57
2:AB:100:LEU:HD12	2:AB:178:LEU:HD23	1.85	0.57
5:AE:104:ILE:O	5:AE:104:ILE:HG23	2.04	0.57
8:AH:85:TYR:CE2	8:AH:123:GLU:HB2	2.39	0.57
22:BA:729:G:H2'	22:BA:1775:U:H1'	1.86	0.57
22:BA:1179:G:C3'	22:BA:1180:U:H4'	2.16	0.57
22:BA:1206:G:C6	22:BA:1207:C:C4	2.93	0.57
22:BA:1409:U:O2'	22:BA:1410:G:H5'	2.04	0.57
22:BA:1476:U:OP2	22:BA:1476:U:C6	2.57	0.57
22:BA:1873:G:O2'	22:BA:1874:C:H5'	2.04	0.57
22:BA:2020:A:H5'	48:B0:8:THR:HG22	1.86	0.57
22:BA:2572:A:OP2	25:BD:151:THR:HB	2.03	0.57
24:BC:109:LEU:HD23	24:BC:110:LYS:H	1.69	0.57
44:BW:39:GLN:O	44:BW:40:ARG:C	2.46	0.57
53:CA:72:A:O2'	53:CA:73:C:H5'	2.04	0.57
53:CA:130:A:N7	17:CQ:65:PRO:HD2	2.19	0.57
53:CA:537:G:H5"	12:CL:109:ARG:NH1	2.19	0.57
53:CA:824:G:O2'	53:CA:825:A:H5'	2.04	0.57
53:CA:1013:G:N2	53:CA:1015:G:H3'	2.19	0.57
53:CA:1134:G:C5	53:CA:1135:U:H1'	2.39	0.57
2:CB:184:ALA:O	2:CB:199:ILE:HG12	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:30:ASN:O	9:CI:32:ARG:HG2	2.04	0.57
11:CK:121:ARG:NH2	21:CU:35:GLU:HB2	2.18	0.57
20:CT:4:LYS:HB3	20:CT:6:ALA:H	1.69	0.57
22:DA:617:G:HO2'	22:DA:618:G:H8	0.71	0.57
22:DA:727:A:H2'	22:DA:728:G:C8	2.39	0.57
22:DA:945:A:H3'	22:DA:946:C:H5"	1.86	0.57
22:DA:1605:C:H3'	22:DA:1606:C:C5'	2.34	0.57
22:DA:1680:U:O2'	22:DA:1763:G:N7	2.32	0.57
22:DA:2305:U:O2'	58:DF:132:ARG:HA	2.05	0.57
22:DA:2563:U:H2'	22:DA:2565:A:OP2	2.04	0.57
22:DA:2626:C:O2'	22:DA:2627:G:H5'	2.03	0.57
22:DA:2683:C:H4'	25:DD:13:ARG:NH2	2.19	0.57
35:DN:56:LYS:HA	35:DN:84:GLY:HA2	1.86	0.57
41:DT:29:THR:CB	41:DT:86:THR:H	2.17	0.57
49:D1:47:ILE:HD12	49:D1:47:ILE:N	2.19	0.57
1:AA:64:G:C8	1:AA:99:C:N4	2.72	0.57
1:AA:481:G:O2'	1:AA:482:A:C8	2.56	0.57
1:AA:664:G:H22	1:AA:741:G:H1	1.51	0.57
1:AA:740:U:O2'	1:AA:741:G:H5'	2.04	0.57
6:AF:46:GLN:NE2	6:AF:55:HIS:HB2	2.19	0.57
7:AG:112:ASP:HB2	7:AG:118:ARG:CG	2.33	0.57
22:BA:1032:A:H1'	52:B4:23:ILE:HD13	1.86	0.57
22:BA:1056:G:O2'	22:BA:1086:A:H1'	2.04	0.57
22:BA:2517:C:C6	22:BA:2542:A:N7	2.72	0.57
22:BA:2773:C:OP1	25:BD:171:THR:HG23	2.05	0.57
24:BC:94:LEU:HB2	24:BC:100:ARG:HD3	1.85	0.57
25:BD:114:LYS:HZ2	25:BD:116:LYS:HE2	1.68	0.57
33:BL:94:THR:HG22	33:BL:95:LEU:N	2.19	0.57
38:BQ:20:ALA:HA	38:BQ:23:TYR:CE1	2.39	0.57
38:BQ:94:LEU:C	38:BQ:96:ASP:H	2.12	0.57
41:BT:39:THR:HG22	41:BT:39:THR:O	2.04	0.57
45:BX:34:SER:HA	45:BX:48:LEU:O	2.03	0.57
53:CA:257:G:C2	53:CA:270:A:N1	2.72	0.57
53:CA:888:G:O3'	53:CA:1488:G:H4'	2.03	0.57
2:CB:69:VAL:HB	2:CB:162:VAL:HB	1.86	0.57
2:CB:128:LEU:HD22	2:CB:132:GLU:HG2	1.87	0.57
5:CE:104:ILE:HA	5:CE:122:VAL:HB	1.86	0.57
54:CG:12:LEU:HD22	54:CG:13:PRO:O	2.04	0.57
8:CH:91:LEU:HB3	8:CH:112:ASP:OD2	2.04	0.57
17:CQ:59:GLU:HG3	17:CQ:75:VAL:HG22	1.84	0.57
22:DA:243:U:O2'	22:DA:244:A:H8	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:381:G:C5'	45:DX:15:ASN:HD22	2.16	0.57
22:DA:574:A:C2	22:DA:2032:G:O2'	2.57	0.57
22:DA:876:C:H3'	22:DA:877:A:H8	1.67	0.57
22:DA:1249:U:O2'	22:DA:1250:G:OP2	2.19	0.57
22:DA:1275:A:H4'	22:DA:1276:A:OP1	2.03	0.57
22:DA:1635:A:H5'	22:DA:1635:A:C8	2.39	0.57
24:DC:28:PRO:HG3	24:DC:62:ARG:NH1	2.20	0.57
25:DD:149:ASN:O	25:DD:151:THR:N	2.36	0.57
31:DJ:18:VAL:HG12	31:DJ:54:ILE:HD11	1.86	0.57
33:DL:48:ARG:HG3	33:DL:48:ARG:HH11	1.69	0.57
38:DQ:87:VAL:HG12	38:DQ:88:GLU:H	1.69	0.57
42:DU:95:PHE:O	42:DU:97:SER:N	2.36	0.57
1:AA:761:G:H2'	1:AA:762:U:H6	1.69	0.57
2:AB:40:ILE:HG21	2:AB:201:GLY:CA	2.34	0.57
12:AL:2:THR:HG22	12:AL:4:ASN:H	1.69	0.57
22:BA:2562:U:C2'	22:BA:2563:U:H5'	2.34	0.57
25:BD:101:PHE:N	25:BD:101:PHE:CD1	2.70	0.57
25:BD:114:LYS:HE3	25:BD:114:LYS:C	2.29	0.57
27:BF:47:LYS:HB3	27:BF:47:LYS:NZ	2.19	0.57
33:BL:91:ASP:HB3	33:BL:94:THR:HB	1.86	0.57
36:BO:36:TYR:CD2	36:BO:36:TYR:N	2.72	0.57
44:BW:18:LYS:HE3	44:BW:19:ARG:HG3	1.86	0.57
53:CA:579:A:H2'	53:CA:580:C:C6	2.39	0.57
53:CA:1047:G:O2'	53:CA:1048:G:H5'	2.03	0.57
53:CA:1279:G:H5"	10:CJ:9:ARG:HH22	1.69	0.57
53:CA:1495:U:O2'	53:CA:1496:C:H5'	2.05	0.57
53:CA:1528:U:O2'	53:CA:1530:G:H5"	2.05	0.57
5:CE:38:VAL:HG12	5:CE:39:GLY:N	2.18	0.57
19:CS:52:ASN:HD21	19:CS:54:ARG:HG2	1.69	0.57
22:DA:508:A:N6	40:DS:9:HIS:CE1	2.69	0.57
22:DA:1734:G:HO2'	22:DA:1735:A:H8	1.53	0.57
22:DA:1919:A:H2'	22:DA:1920:C:H5'	1.86	0.57
22:DA:2259:U:H1'	22:DA:2427:C:C2	2.39	0.57
22:DA:2285:C:OP2	49:D1:5:ARG:HD3	2.03	0.57
22:DA:2345:G:C5	22:DA:2347:C:N4	2.72	0.57
57:DB:38:C:H4'	36:DO:100:HIS:NE2	2.19	0.57
28:DG:112:VAL:HG13	28:DG:150:TYR:CE1	2.29	0.57
30:DI:74:PRO:O	30:DI:78:LEU:HG	2.04	0.57
31:DJ:58:ASN:OD1	31:DJ:127:GLY:HA2	2.05	0.57
38:DQ:60:TRP:CZ2	38:DQ:93:ILE:HB	2.40	0.57
46:DY:19:LEU:HG	46:DY:22:LEU:HD22	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:D2:31:LEU:CA	50:D2:34:ARG:HB2	2.33	0.57
1:AA:194:C:O2'	1:AA:195:A:H5'	2.05	0.57
3:AC:32:LEU:HD21	14:AN:92:ILE:HG12	1.85	0.57
9:AI:6:TYR:HE2	9:AI:17:ARG:HB2	1.70	0.57
14:AN:15:LEU:HD23	14:AN:18:LYS:CD	2.33	0.57
20:AT:43:LYS:CB	20:AT:86:ALA:HB1	2.27	0.57
22:BA:7:G:H2'	22:BA:8:C:H6	1.68	0.57
22:BA:775:G:C4	22:BA:794:A:C8	2.92	0.57
22:BA:783:A:H8	22:BA:784:G:H4'	1.68	0.57
22:BA:1802:A:N1	22:BA:1822:C:H1'	2.18	0.57
22:BA:1856:U:C2'	22:BA:1857:G:H5'	2.34	0.57
22:BA:2000:C:H2'	22:BA:2001:C:H6	1.70	0.57
25:BD:72:GLY:O	25:BD:73:VAL:O	2.22	0.57
26:BE:117:ARG:HA	26:BE:185:LYS:HD3	1.86	0.57
28:BG:29:ASN:CG	28:BG:30:GLY:N	2.61	0.57
30:BI:53:PRO:O	30:BI:74:PRO:HD2	2.04	0.57
32:BK:111:LYS:H	32:BK:111:LYS:CE	2.16	0.57
37:BP:96:LEU:HB3	37:BP:99:LEU:HD22	1.87	0.57
39:BR:8:GLY:C	39:BR:10:LYS:HD2	2.30	0.57
42:BU:46:LYS:HG2	42:BU:47:PRO:HD2	1.86	0.57
53:CA:119:A:H4'	53:CA:120:A:O5'	2.04	0.57
53:CA:429:U:H1'	53:CA:430:A:H5"	1.87	0.57
53:CA:537:G:H2'	53:CA:538:G:C8	2.39	0.57
53:CA:994:A:O2'	53:CA:995:C:H6	1.87	0.57
53:CA:1279:G:OP2	53:CA:1279:G:N2	2.37	0.57
21:CU:38:GLU:N	21:CU:40:PRO:HD2	2.20	0.57
22:DA:320:A:H5"	22:DA:321:U:OP1	2.04	0.57
22:DA:563:A:C4	22:DA:2018:G:C2	2.92	0.57
22:DA:1087:G:C5	22:DA:1089:A:C2	2.91	0.57
22:DA:1912:A:H62	22:DA:1917:U:H3	1.53	0.57
22:DA:1914:C:O2'	22:DA:1915:U:O4'	2.21	0.57
22:DA:1965:C:H3'	22:DA:1966:A:C5'	2.34	0.57
22:DA:2337:G:C2'	22:DA:2338:C:H5'	2.34	0.57
43:DV:29:ILE:HG22	43:DV:39:ALA:HA	1.87	0.57
47:DZ:32:GLY:C	47:DZ:34:THR:H	2.11	0.57
1:AA:164:G:C2'	1:AA:165:G:H5'	2.35	0.57
1:AA:259:G:C4	1:AA:260:G:C8	2.93	0.57
1:AA:797:C:OP2	11:AK:125:LYS:HG3	2.03	0.57
1:AA:1392:G:O2'	1:AA:1393:U:H5'	2.05	0.57
5:AE:79:THR:OG1	5:AE:80:LEU:N	2.37	0.57
9:AI:10:ARG:HB2	9:AI:14:SER:O	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:73:LEU:HD11	12:AL:79:ILE:HG21	1.86	0.57
15:AO:26:VAL:HG12	15:AO:30:LEU:CD1	2.34	0.57
17:AQ:46:HIS:HB2	17:AQ:66:LEU:HD12	1.86	0.57
21:AU:36:PHE:HB3	21:AU:40:PRO:HD3	1.86	0.57
22:BA:995:C:O2	31:BJ:3:THR:HG23	2.05	0.57
22:BA:1106:G:C2	22:BA:1107:G:C8	2.92	0.57
22:BA:1252:G:N3	38:BQ:32:ARG:HG2	2.18	0.57
27:BF:72:SER:OG	27:BF:79:ARG:HA	2.04	0.57
32:BK:112:PHE:O	32:BK:115:ILE:HG22	2.04	0.57
35:BN:117:ASP:O	35:BN:119:SER:N	2.37	0.57
36:BO:106:LEU:C	36:BO:106:LEU:HD12	2.29	0.57
37:BP:80:VAL:O	37:BP:81:ASP:HB3	2.03	0.57
40:BS:18:ARG:HA	40:BS:21:ALA:HB3	1.86	0.57
53:CA:81:A:O2'	53:CA:82:G:C8	2.57	0.57
53:CA:263:A:P	20:CT:73:ARG:HH12	2.28	0.57
53:CA:327:A:H4'	53:CA:328:C:OP2	2.03	0.57
53:CA:735:C:H5'	18:CR:59:LYS:HD3	1.85	0.57
53:CA:1328:C:H2'	53:CA:1329:A:H8	1.69	0.57
5:CE:148:SER:O	5:CE:151:MET:HB3	2.04	0.57
10:CJ:8:ILE:HG22	10:CJ:100:ILE:HG12	1.86	0.57
15:CO:44:GLU:HG2	15:CO:45:HIS:CD2	2.40	0.57
22:DA:558:U:H5"	31:DJ:111:LYS:HD2	1.86	0.57
22:DA:726:G:O2'	22:DA:727:A:OP2	2.19	0.57
22:DA:2347:C:O2'	22:DA:2348:U:C6	2.58	0.57
22:DA:2353:G:H21	44:DW:30:VAL:HG21	1.70	0.57
24:DC:106:PRO:HB3	24:DC:141:HIS:CE1	2.39	0.57
25:DD:9:VAL:HG22	37:DP:4:ILE:HD11	1.85	0.57
29:DH:2:GLN:O	29:DH:3:VAL:O	2.23	0.57
34:DM:72:PRO:O	34:DM:73:ILE:HB	2.04	0.57
46:DY:17:GLU:OE1	46:DY:53:VAL:HB	2.04	0.57
1:AA:1521:C:O2'	1:AA:1522:U:H5'	2.04	0.57
4:AD:21:LYS:O	4:AD:21:LYS:HD3	2.05	0.57
4:AD:72:ARG:HD3	4:AD:203:TYR:CZ	2.39	0.57
8:AH:21:LYS:HE2	8:AH:22:ALA:H	1.68	0.57
12:AL:88:ASP:HB3	12:AL:89:LEU:HD22	1.86	0.57
20:AT:68:LYS:NZ	20:AT:68:LYS:HB2	2.18	0.57
22:BA:65:U:H2'	22:BA:66:C:C6	2.39	0.57
22:BA:78:U:H2'	22:BA:79:C:C6	2.40	0.57
22:BA:2134:A:HO2'	22:BA:2135:A:H8	1.52	0.57
25:BD:158:GLY:O	25:BD:159:LYS:C	2.48	0.57
38:BQ:6:GLY:HA2	38:BQ:9:ALA:HB3	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BT:40:LYS:HG2	41:BT:58:VAL:O	2.04	0.57
45:BX:46:VAL:HG21	45:BX:67:LEU:HD11	1.86	0.57
52:B4:2:LYS:HB2	52:B4:4:ARG:HD3	1.87	0.57
53:CA:68:G:N2	53:CA:152:A:H1'	2.20	0.57
53:CA:338:A:N1	53:CA:351:G:N2	2.53	0.57
53:CA:636:U:H2'	53:CA:637:C:C6	2.40	0.57
53:CA:1186:G:H4'	9:CI:111:GLU:CD	2.30	0.57
53:CA:1451:U:C2'	53:CA:1452:C:OP1	2.52	0.57
4:CD:70:GLN:HE22	4:CD:133:SER:HB3	1.70	0.57
9:CI:51:LEU:HG	9:CI:86:LEU:CD2	2.26	0.57
11:CK:96:ILE:HD13	11:CK:109:ILE:HD13	1.86	0.57
55:CM:32:ILE:HD13	55:CM:32:ILE:O	2.04	0.57
21:CU:39:LYS:H	21:CU:40:PRO:HD2	1.67	0.57
22:DA:246:C:C2'	22:DA:247:G:H5'	2.34	0.57
22:DA:377:G:C6	22:DA:378:C:C4	2.93	0.57
22:DA:523:C:O2'	22:DA:524:G:H5'	2.04	0.57
22:DA:617:G:H21	22:DA:618:G:H1'	1.68	0.57
22:DA:963:U:OP1	22:DA:2497:A:H5"	2.04	0.57
22:DA:1553:A:N7	22:DA:1555:G:C5	2.73	0.57
22:DA:1681:G:O2'	22:DA:1762:A:N3	2.38	0.57
25:DD:51:THR:CG2	25:DD:76:GLY:HA3	2.35	0.57
31:DJ:89:PHE:HE2	31:DJ:100:VAL:HG11	1.68	0.57
38:DQ:27:ARG:HA	38:DQ:33:VAL:CG1	2.34	0.57
38:DQ:60:TRP:O	38:DQ:64:ILE:HG12	2.04	0.57
43:DV:55:GLU:O	43:DV:57:TYR:N	2.38	0.57
1:AA:57:G:H2'	1:AA:58:C:C6	2.40	0.57
1:AA:439:U:H1'	4:AD:118:SER:O	2.04	0.57
4:AD:151:GLN:O	4:AD:152:SER:C	2.48	0.57
7:AG:94:ARG:O	7:AG:95:ARG:C	2.47	0.57
14:AN:20:PHE:C	14:AN:22:LYS:H	2.13	0.57
22:BA:282:A:H2'	22:BA:283:G:C8	2.40	0.57
22:BA:988:A:OP2	47:BZ:11:SER:HB3	2.05	0.57
22:BA:1011:G:H4'	22:BA:1012:U:OP1	2.03	0.57
22:BA:1929:G:H4'	22:BA:1930:G:OP1	2.05	0.57
22:BA:2813:A:C2	22:BA:2887:A:N6	2.71	0.57
41:BT:8:LEU:HD13	41:BT:46:ALA:HA	1.85	0.57
44:BW:39:GLN:C	44:BW:41:GLY:N	2.58	0.57
53:CA:983:A:O2'	53:CA:984:C:C5'	2.53	0.57
53:CA:1372:U:H5"	9:CI:71:ILE:HD11	1.85	0.57
12:CL:6:LEU:C	12:CL:8:ARG:H	2.13	0.57
22:DA:223:A:C4	22:DA:408:G:H1'	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:508:A:H3'	22:DA:509:C:H5'	1.85	0.57
22:DA:784:G:C2	24:DC:227:VAL:HG21	2.40	0.57
22:DA:1857:G:O2'	22:DA:1884:G:N2	2.37	0.57
22:DA:2051:A:H4'	22:DA:2052:A:OP1	2.03	0.57
22:DA:2235:G:H2'	22:DA:2236:U:H6	1.68	0.57
22:DA:2345:G:H4'	22:DA:2346:A:C5'	2.34	0.57
22:DA:2542:A:H4'	22:DA:2543:G:H5'	1.86	0.57
25:DD:33:ARG:HD2	25:DD:33:ARG:H	1.70	0.57
35:DN:20:MET:C	35:DN:22:ARG:H	2.11	0.57
38:DQ:27:ARG:HA	38:DQ:33:VAL:HG12	1.87	0.57
1:AA:35:G:H2'	1:AA:36:C:C6	2.39	0.57
1:AA:351:G:H4'	1:AA:352:C:OP2	2.02	0.57
1:AA:597:G:C2	1:AA:644:U:C2	2.93	0.57
1:AA:1055:A:C6	1:AA:1206:G:C5	2.93	0.57
1:AA:1293:C:H2'	1:AA:1294:G:C8	2.40	0.57
1:AA:1293:C:H2'	1:AA:1294:G:H8	1.69	0.57
4:AD:104:MET:HE2	4:AD:170:LEU:HB2	1.86	0.57
22:BA:902:C:H2'	22:BA:903:C:H5'	1.86	0.57
22:BA:1059:G:O2'	30:BI:128:ILE:HD13	2.05	0.57
22:BA:1288:G:C5	22:BA:1327:A:C2	2.93	0.57
22:BA:1654:A:H4'	25:BD:118:PHE:CZ	2.39	0.57
22:BA:1958:C:C2'	22:BA:1959:G:H5'	2.35	0.57
22:BA:2312:U:OP1	27:BF:70:ARG:HB3	2.05	0.57
39:BR:49:ILE:CG2	39:BR:54:VAL:HG12	2.35	0.57
43:BV:75:GLN:HB2	43:BV:92:VAL:HG23	1.87	0.57
53:CA:275:G:O2'	53:CA:276:G:H8	1.88	0.57
53:CA:373:A:H2'	53:CA:374:A:C8	2.30	0.57
53:CA:1073:U:H2'	53:CA:1074:G:H8	1.70	0.57
53:CA:1130:A:N7	53:CA:1146:A:C6	2.73	0.57
53:CA:1448:C:O2'	53:CA:1449:C:C6	2.58	0.57
2:CB:44:LYS:O	2:CB:48:MET:HG3	2.04	0.57
6:CF:6:ILE:H	6:CF:6:ILE:HD12	1.70	0.57
9:CI:49:GLN:N	9:CI:50:PRO:CD	2.68	0.57
17:CQ:19:SER:HB3	17:CQ:70:LYS:NZ	2.16	0.57
18:CR:31:TYR:CG	18:CR:54:LEU:HD21	2.40	0.57
19:CS:36:ARG:O	19:CS:69:LYS:HD2	2.03	0.57
22:DA:7:G:H4'	31:DJ:15:TRP:CH2	2.40	0.57
22:DA:75:G:HO2'	22:DA:76:C:H6	1.46	0.57
22:DA:85:G:OP2	42:DU:6:ARG:HB2	2.04	0.57
22:DA:538:A:O2'	31:DJ:8:PRO:HG3	2.04	0.57
22:DA:671:C:HO2'	22:DA:672:C:P	2.28	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1181:U:O2'	22:DA:1182:G:H5'	2.05	0.57
22:DA:1309:G:H4'	50:D2:7:PRO:HB2	1.87	0.57
22:DA:1963:U:O2'	22:DA:1964:G:H5'	2.05	0.57
22:DA:1981:A:O2'	22:DA:1982:U:H5"	2.05	0.57
22:DA:2332:C:H5"	22:DA:2333:A:OP2	2.05	0.57
22:DA:2625:G:H5'	22:DA:2626:C:OP2	2.05	0.57
57:DB:109:A:O2'	57:DB:110:C:C6	2.55	0.57
26:DE:108:ILE:O	26:DE:112:LEU:HB2	2.05	0.57
36:DO:7:ARG:HA	36:DO:10:ARG:NH2	2.20	0.57
42:DU:26:ASN:OD1	42:DU:34:ILE:HD12	2.04	0.57
46:DY:17:GLU:HG2	46:DY:50:VAL:HG13	1.87	0.57
1:AA:89:U:O2'	1:AA:90:C:C5'	2.51	0.57
1:AA:174:A:C2'	1:AA:175:C:H5'	2.34	0.57
1:AA:545:C:H5'	4:AD:68:GLU:HG3	1.87	0.57
1:AA:978:A:HO2'	1:AA:1322:C:H5	1.47	0.57
1:AA:994:A:C2	14:AN:4:SER:HB2	2.40	0.57
1:AA:1324:A:H2'	1:AA:1325:C:C6	2.40	0.57
7:AG:30:MET:HG2	7:AG:31:VAL:H	1.69	0.57
8:AH:91:LEU:HD23	8:AH:92:PRO:HD2	1.85	0.57
10:AJ:49:PHE:HE1	10:AJ:67:ILE:HG13	1.69	0.57
15:AO:63:ARG:HH11	15:AO:67:ASP:CG	2.13	0.57
22:BA:644:A:H2'	22:BA:645:C:O4'	2.05	0.57
22:BA:833:A:H2'	22:BA:834:G:C8	2.40	0.57
22:BA:2109:U:C4	22:BA:2181:U:O4	2.57	0.57
22:BA:2182:U:C2'	22:BA:2183:A:OP1	2.53	0.57
31:BJ:72:LYS:HB2	31:BJ:89:PHE:HB2	1.86	0.57
31:BJ:77:HIS:CD2	31:BJ:79:GLY:N	2.62	0.57
33:BL:27:LEU:H	33:BL:27:LEU:CD1	2.01	0.57
36:BO:53:THR:HB	36:BO:65:THR:HG22	1.85	0.57
38:BQ:60:TRP:O	38:BQ:61:ILE:C	2.48	0.57
40:BS:66:ILE:O	40:BS:66:ILE:HG12	2.05	0.57
41:BT:73:ARG:HB3	41:BT:73:ARG:CZ	2.34	0.57
45:BX:76:LYS:HG3	45:BX:77:TYR:H	1.69	0.57
51:B3:35:LYS:O	51:B3:40:LYS:HE2	2.05	0.57
53:CA:83:C:N4	53:CA:85:U:C4	2.73	0.57
53:CA:629:A:H2'	53:CA:630:A:O4'	2.05	0.57
53:CA:1084:G:C8	53:CA:1085:U:C5	2.92	0.57
2:CB:90:PHE:HE1	2:CB:92:ASN:HD22	1.53	0.57
6:CF:3:HIS:HB2	6:CF:92:THR:HA	1.87	0.57
54:CG:27:ASN:O	54:CG:30:MET:HB2	2.04	0.57
8:CH:57:GLU:HG3	8:CH:58:LEU:H	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:56:MET:HG3	9:CI:57:VAL:HG23	1.86	0.57
11:CK:27:ASN:HA	11:CK:57:SER:HB3	1.87	0.57
22:DA:77:G:N2	22:DA:110:G:H1'	2.20	0.57
22:DA:132:G:N2	22:DA:148:U:C2	2.72	0.57
22:DA:526:A:N6	22:DA:2626:C:H4'	2.20	0.57
22:DA:1199:U:H2'	22:DA:1200:C:C6	2.40	0.57
22:DA:1388:G:O2'	22:DA:1389:G:H5'	2.05	0.57
22:DA:1568:G:N2	24:DC:57:HIS:CE1	2.71	0.57
22:DA:1808:A:H4'	22:DA:1809:A:OP2	2.04	0.57
22:DA:2072:C:C2'	22:DA:2073:C:H5'	2.35	0.57
22:DA:2408:U:H5	62:DA:3596:HOH:O	1.87	0.57
57:DB:26:C:H1'	57:DB:117:G:H1'	1.86	0.57
24:DC:82:TYR:O	24:DC:84:PRO:HD3	2.05	0.57
58:DF:91:ARG:HB3	58:DF:91:ARG:NH2	2.20	0.57
58:DF:103:ILE:HG12	58:DF:175:PRO:HD3	1.85	0.57
29:DH:96:THR:HG22	29:DH:113:SER:OG	2.05	0.57
34:DM:42:THR:HG22	34:DM:44:ARG:N	2.14	0.57
36:DO:31:THR:HG23	36:DO:34:HIS:C	2.30	0.57
37:DP:28:LYS:HB2	37:DP:28:LYS:HZ2	1.68	0.57
1:AA:164:G:H2'	1:AA:165:G:H5'	1.87	0.56
1:AA:923:A:OP1	5:AE:25:LYS:HG2	2.05	0.56
1:AA:1239:A:H62	1:AA:1299:A:H61	1.51	0.56
2:AB:101:THR:HG22	2:AB:174:GLU:OE1	2.05	0.56
4:AD:121:ALA:C	4:AD:122:ILE:HD13	2.29	0.56
6:AF:41:ASP:C	6:AF:43:GLY:H	2.13	0.56
7:AG:23:ALA:O	7:AG:26:VAL:HG22	2.05	0.56
9:AI:128:LYS:CD	9:AI:129:ARG:H	2.18	0.56
17:AQ:13:SER:HB3	17:AQ:16:MET:HE1	1.87	0.56
21:AU:24:LYS:O	21:AU:28:LEU:HB2	2.05	0.56
22:BA:197:A:N6	22:BA:2430:A:H2'	2.20	0.56
22:BA:418:C:H2'	22:BA:419:U:O4'	2.05	0.56
22:BA:792:A:H5"	22:BA:793:A:H5'	1.87	0.56
22:BA:873:C:N4	22:BA:904:G:H1	1.99	0.56
22:BA:1059:G:C8	22:BA:1060:U:H2'	2.40	0.56
22:BA:1188:U:O2'	22:BA:1189:A:H5'	2.05	0.56
22:BA:1266:G:H5"	40:BS:15:GLN:HE22	1.69	0.56
22:BA:1845:G:O2'	22:BA:1846:G:H5'	2.04	0.56
22:BA:2332:C:OP1	44:BW:44:PHE:HZ	1.87	0.56
22:BA:2553:G:C2	22:BA:2554:U:O2	2.57	0.56
22:BA:2800:A:C2	22:BA:2895:G:H1'	2.40	0.56
25:BD:148:GLN:OE1	25:BD:152:PRO:HG2	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:61:ARG:NH1	26:BE:64:GLY:HA3	2.20	0.56
30:BI:3:LYS:CD	30:BI:4:VAL:HG23	2.35	0.56
31:BJ:56:VAL:O	31:BJ:124:VAL:O	2.21	0.56
33:BL:55:MET:HE2	33:BL:56:PRO:HD2	1.84	0.56
35:BN:33:ILE:CD1	35:BN:118:ARG:NH2	2.66	0.56
35:BN:90:ARG:O	35:BN:91:ALA:C	2.48	0.56
41:BT:31:VAL:HA	41:BT:83:ALA:HB3	1.87	0.56
41:BT:44:LYS:HG3	41:BT:55:VAL:HG11	1.86	0.56
44:BW:39:GLN:HG3	44:BW:42:THR:HB	1.87	0.56
48:B0:36:LYS:O	48:B0:37:HIS:HB3	2.04	0.56
53:CA:218:U:H2'	53:CA:219:U:O4'	2.05	0.56
53:CA:499:A:C6	53:CA:547:A:C8	2.92	0.56
53:CA:728:A:H2'	53:CA:729:A:C8	2.40	0.56
3:CC:129:PHE:CE1	3:CC:156:LEU:HB3	2.40	0.56
10:CJ:7:ARG:NH1	10:CJ:102:LEU:HG	2.20	0.56
22:DA:170:U:H2'	22:DA:171:U:H6	1.70	0.56
22:DA:1439:A:C8	22:DA:1440:U:O4'	2.59	0.56
33:DL:110:VAL:HB	33:DL:127:VAL:HA	1.87	0.56
37:DP:50:ARG:CA	37:DP:57:ALA:H	2.17	0.56
41:DT:62:VAL:HG12	41:DT:63:VAL:N	2.20	0.56
43:DV:56:PHE:C	43:DV:58:SER:H	2.13	0.56
44:DW:37:VAL:C	44:DW:39:GLN:H	2.13	0.56
46:DY:50:VAL:HA	46:DY:53:VAL:HG23	1.86	0.56
48:D0:38:LEU:HB2	48:D0:41:HIS:NE2	2.20	0.56
1:AA:49:U:C4	1:AA:364:A:C6	2.94	0.56
1:AA:390:U:H2'	1:AA:391:G:H8	1.67	0.56
1:AA:1210:C:C2'	1:AA:1211:U:H5'	2.35	0.56
13:AM:84:CYS:HA	19:AS:73:PHE:HD2	1.69	0.56
22:BA:1062:G:C8	22:BA:1088:A:C8	2.93	0.56
22:BA:1083:U:H2'	22:BA:1084:A:O5'	2.06	0.56
22:BA:2199:A:C8	22:BA:2199:A:H5"	2.39	0.56
24:BC:61:TYR:HD2	24:BC:85:ASN:ND2	2.02	0.56
24:BC:77:VAL:HG22	24:BC:111:ALA:HA	1.87	0.56
31:BJ:43:GLU:O	31:BJ:45:THR:CG2	2.52	0.56
32:BK:59:LYS:HG3	32:BK:89:ASN:ND2	2.20	0.56
33:BL:40:SER:O	33:BL:41:ARG:CB	2.53	0.56
40:BS:96:ILE:O	40:BS:96:ILE:HG13	2.05	0.56
53:CA:702:A:H5'	53:CA:703:G:N7	2.21	0.56
53:CA:791:G:H2'	53:CA:792:A:H5'	1.87	0.56
53:CA:951:G:H2'	53:CA:952:U:C6	2.39	0.56
53:CA:1454:G:O2'	53:CA:1455:G:H8	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:CG:14:ASP:HB3	54:CG:18:GLY:N	2.16	0.56
54:CG:68:VAL:O	54:CG:70:PRO:HD3	2.04	0.56
14:CN:20:PHE:HA	14:CN:24:ALA:HB2	1.86	0.56
22:DA:71:A:H5"	22:DA:73:A:C4	2.40	0.56
22:DA:475:C:O2'	22:DA:476:G:C8	2.58	0.56
22:DA:569:U:H5"	22:DA:821:A:C2	2.40	0.56
22:DA:718:A:H5'	22:DA:719:C:OP2	2.04	0.56
22:DA:2296:U:H4'	22:DA:2297:A:OP1	2.03	0.56
22:DA:2529:G:H4'	28:DG:174:LYS:CD	2.34	0.56
22:DA:2882:A:C5'	35:DN:96:ARG:HD3	2.35	0.56
58:DF:35:LEU:HA	58:DF:152:ASP:O	2.05	0.56
58:DF:147:ARG:HD3	58:DF:149:ARG:HH22	1.70	0.56
34:DM:40:ARG:HB2	34:DM:93:VAL:CG2	2.35	0.56
34:DM:133:LYS:NZ	34:DM:133:LYS:HB3	2.20	0.56
1:AA:115:G:H1'	1:AA:116:A:N7	2.19	0.56
1:AA:259:G:H2'	1:AA:260:G:C8	2.36	0.56
1:AA:1049:U:H4'	1:AA:1050:G:OP2	2.03	0.56
1:AA:1261:A:N1	1:AA:1274:A:C2	2.73	0.56
1:AA:1398:A:H8	1:AA:1398:A:H5"	1.70	0.56
4:AD:169:TRP:CD1	4:AD:170:LEU:HG	2.40	0.56
5:AE:106:ALA:HB2	5:AE:124:ALA:HB3	1.87	0.56
8:AH:9:MET:HE1	8:AH:32:LYS:HA	1.87	0.56
15:AO:72:LYS:HE2	15:AO:72:LYS:HA	1.88	0.56
22:BA:346:A:C2	22:BA:347:A:H1'	2.40	0.56
22:BA:1287:A:C5'	35:BN:103:ARG:HD2	2.33	0.56
22:BA:1767:G:N2	22:BA:1985:C:O2	2.38	0.56
22:BA:1842:G:H2'	22:BA:1843:C:H6	1.69	0.56
22:BA:2154:A:H2'	22:BA:2155:U:O4'	2.05	0.56
22:BA:2485:G:C5'	34:BM:45:GLN:HE21	2.18	0.56
22:BA:2683:C:O2	32:BK:70:ARG:NH2	2.31	0.56
24:BC:77:VAL:O	24:BC:77:VAL:CG2	2.53	0.56
24:BC:159:THR:O	24:BC:194:VAL:HG12	2.05	0.56
24:BC:169:ALA:O	24:BC:185:ALA:HB3	2.06	0.56
25:BD:114:LYS:HE3	25:BD:114:LYS:CA	2.35	0.56
27:BF:30:VAL:O	27:BF:30:VAL:HG13	2.05	0.56
27:BF:133:GLU:H	27:BF:150:GLY:CA	2.17	0.56
29:BH:8:LYS:O	29:BH:13:GLY:CA	2.54	0.56
31:BJ:65:THR:HG23	31:BJ:66:GLY:N	2.20	0.56
31:BJ:81:ILE:CG2	31:BJ:82:GLY:H	2.03	0.56
32:BK:19:VAL:HG23	32:BK:43:ILE:HA	1.87	0.56
33:BL:14:LYS:HG3	33:BL:15:ALA:H	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BP:13:LYS:HE3	37:BP:76:HIS:HA	1.88	0.56
39:BR:52:PRO:O	39:BR:53:PHE:HB2	2.05	0.56
44:BW:35:ILE:O	44:BW:37:VAL:N	2.38	0.56
44:BW:37:VAL:HG13	44:BW:55:ASP:C	2.30	0.56
46:BY:17:GLU:HB2	46:BY:53:VAL:HG11	1.87	0.56
53:CA:491:G:C2'	53:CA:492:C:H5'	2.35	0.56
53:CA:538:G:H5"	12:CL:110:LYS:HB2	1.87	0.56
53:CA:667:G:C2	53:CA:740:U:O2	2.59	0.56
53:CA:1014:A:C2	19:CS:33:TRP:HB2	2.40	0.56
53:CA:1144:G:H21	53:CA:1146:A:N6	2.02	0.56
53:CA:1363:A:C5	53:CA:1365:G:O6	2.58	0.56
53:CA:1365:G:O2'	53:CA:1366:C:C6	2.55	0.56
6:CF:59:TYR:HE2	18:CR:66:LEU:HD21	1.69	0.56
8:CH:17:GLN:NE2	8:CH:71:VAL:HG23	2.20	0.56
11:CK:57:SER:C	11:CK:90:PRO:HG3	2.31	0.56
14:CN:20:PHE:CA	14:CN:24:ALA:HB2	2.35	0.56
17:CQ:13:SER:O	17:CQ:20:ILE:HB	2.05	0.56
20:CT:73:ARG:HG2	20:CT:73:ARG:NH1	2.04	0.56
22:DA:37:C:H1'	26:DE:45:ALA:HB2	1.86	0.56
22:DA:176:A:H3'	22:DA:177:G:N2	2.21	0.56
22:DA:195:A:C4	22:DA:198:C:N4	2.73	0.56
22:DA:201:C:C5	22:DA:202:U:H5	2.23	0.56
22:DA:332:A:H61	42:DU:68:ASN:HD21	1.52	0.56
22:DA:529:A:C8	22:DA:2023:C:N4	2.73	0.56
22:DA:574:A:C8	22:DA:2055:C:H5"	2.41	0.56
22:DA:587:C:H1'	22:DA:671:C:C5'	2.35	0.56
22:DA:627:A:H5"	33:DL:78:ARG:NH1	2.21	0.56
22:DA:639:U:H2'	22:DA:640:C:H6	1.70	0.56
22:DA:822:G:H5"	62:DA:3358:HOH:O	2.05	0.56
22:DA:1049:C:O2'	22:DA:1050:A:O5'	2.23	0.56
22:DA:1090:A:H3'	22:DA:1091:G:H5"	1.86	0.56
22:DA:1412:U:H2'	22:DA:1413:A:O4'	2.05	0.56
22:DA:1417:C:H4'	22:DA:1587:G:H21	1.68	0.56
22:DA:1536:C:H4'	22:DA:1537:G:C5'	2.35	0.56
22:DA:1857:G:O2'	22:DA:1858:A:N7	2.38	0.56
22:DA:2271:G:H2'	22:DA:2272:U:H6	1.70	0.56
22:DA:2550:G:C6	22:DA:2551:C:C4	2.93	0.56
22:DA:2571:U:C4	22:DA:2574:G:C8	2.94	0.56
22:DA:2672:U:H6	22:DA:2672:U:O5'	1.87	0.56
22:DA:2728:U:HO2'	22:DA:2729:G:H8	1.52	0.56
22:DA:2816:G:O3'	35:DN:99:LYS:HE3	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:120:GLY:O	25:DD:124:ARG:HB2	2.05	0.56
25:DD:202:ILE:HD12	25:DD:202:ILE:N	2.21	0.56
26:DE:47:LYS:O	26:DE:83:VAL:HB	2.05	0.56
26:DE:85:PHE:O	26:DE:86:ALA:C	2.48	0.56
58:DF:60:SER:C	58:DF:62:GLN:H	2.14	0.56
58:DF:111:ARG:HG3	58:DF:135:ILE:HG12	1.87	0.56
31:DJ:2:LYS:HB2	31:DJ:2:LYS:HZ3	1.69	0.56
32:DK:6:THR:O	32:DK:8:LEU:HD12	2.06	0.56
38:DQ:9:ALA:O	38:DQ:12:ARG:HG2	2.06	0.56
41:DT:34:VAL:HG12	41:DT:34:VAL:O	2.06	0.56
41:DT:38:ALA:HB1	41:DT:81:LYS:HZ3	1.70	0.56
43:DV:80:HIS:HD2	43:DV:83:LYS:N	2.02	0.56
46:DY:20:ASN:ND2	46:DY:50:VAL:HG22	2.18	0.56
48:D0:37:HIS:HB2	48:D0:41:HIS:HE1	1.69	0.56
1:AA:922:G:H2'	1:AA:923:A:C8	2.40	0.56
1:AA:1240:U:H3'	1:AA:1241:G:H5'	1.86	0.56
1:AA:1392:G:H2'	1:AA:1393:U:H5'	1.86	0.56
2:AB:71:THR:HG23	2:AB:93:HIS:C	2.31	0.56
4:AD:146:GLU:HB3	4:AD:147:LYS:NZ	2.20	0.56
22:BA:1568:G:H4'	24:BC:58:LYS:CG	2.36	0.56
22:BA:2269:G:O2'	44:BW:18:LYS:HG2	2.05	0.56
22:BA:2812:G:H2'	22:BA:2813:A:O4'	2.06	0.56
27:BF:64:PRO:HA	27:BF:88:VAL:HG23	1.88	0.56
31:BJ:97:PRO:C	31:BJ:99:ARG:N	2.61	0.56
35:BN:78:LYS:HG2	35:BN:83:LEU:CD2	2.35	0.56
41:BT:29:THR:CA	41:BT:86:THR:HA	2.35	0.56
44:BW:22:VAL:CG1	44:BW:25:PHE:CE2	2.89	0.56
44:BW:23:LYS:CE	44:BW:24:ARG:HG3	2.35	0.56
45:BX:39:VAL:C	45:BX:41:SER:H	2.13	0.56
50:B2:12:ARG:CZ	50:B2:12:ARG:HB2	2.34	0.56
53:CA:764:C:H3'	53:CA:765:G:H21	1.71	0.56
53:CA:858:G:O6	53:CA:869:G:C8	2.59	0.56
4:CD:125:ASN:N	4:CD:141:VAL:O	2.38	0.56
54:CG:30:MET:O	54:CG:31:VAL:HB	2.04	0.56
55:CM:106:ARG:HA	55:CM:110:GLY:O	2.06	0.56
21:CU:33:ARG:CZ	21:CU:34:ARG:HD3	2.35	0.56
22:DA:108:G:H2'	22:DA:109:C:C6	2.40	0.56
22:DA:202:U:H2'	22:DA:202:U:O2	2.04	0.56
22:DA:244:A:H2'	22:DA:245:G:O4'	2.06	0.56
22:DA:830:G:H4'	22:DA:831:G:OP2	2.05	0.56
22:DA:1552:A:C2'	22:DA:1553:A:H5'	2.33	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:143:VAL:HB	24:DC:153:LEU:HB3	1.88	0.56
25:DD:106:LYS:O	25:DD:107:VAL:HB	2.05	0.56
58:DF:177:ARG:NH1	58:DF:178:LYS:HB3	2.21	0.56
29:DH:72:ILE:HD11	29:DH:141:LYS:N	2.16	0.56
34:DM:35:ALA:HB3	34:DM:99:GLY:N	2.20	0.56
34:DM:112:LEU:HD13	34:DM:112:LEU:O	2.05	0.56
46:DY:4:LYS:HB2	46:DY:4:LYS:NZ	2.18	0.56
1:AA:1472:U:O2'	1:AA:1473:G:H5'	2.05	0.56
3:AC:6:PRO:HG2	3:AC:183:TYR:CD2	2.41	0.56
5:AE:105:ILE:O	5:AE:105:ILE:HG13	2.05	0.56
6:AF:38:ARG:HB3	6:AF:63:ASN:HB2	1.86	0.56
13:AM:40:GLU:HG3	13:AM:41:ASP:H	1.71	0.56
17:AQ:4:ILE:HD12	17:AQ:4:ILE:N	2.20	0.56
19:AS:14:LEU:HD13	19:AS:32:THR:HG21	1.87	0.56
22:BA:744:U:H2'	22:BA:745:G:O4'	2.05	0.56
22:BA:947:A:O2'	22:BA:984:A:C2	2.41	0.56
22:BA:1071:G:C8	22:BA:1089:A:N6	2.73	0.56
22:BA:1452:G:H2'	22:BA:1457:U:O4	2.05	0.56
22:BA:2813:A:H8	22:BA:2813:A:O5'	1.88	0.56
22:BA:2820:A:OP1	35:BN:2:ARG:NH2	2.39	0.56
24:BC:16:VAL:N	24:BC:203:VAL:CG1	2.68	0.56
44:BW:37:VAL:HG11	44:BW:55:ASP:HB2	1.88	0.56
52:B4:10:LEU:CD1	52:B4:33:HIS:CD2	2.86	0.56
53:CA:425:G:H2'	53:CA:426:U:O4'	2.06	0.56
53:CA:666:G:C6	53:CA:741:G:C6	2.94	0.56
53:CA:932:C:H5'	54:CG:3:ARG:HG2	1.88	0.56
53:CA:1195:C:H2'	53:CA:1197:A:O4'	2.05	0.56
53:CA:1417:G:C6	53:CA:1482:G:C6	2.93	0.56
54:CG:135:LYS:O	54:CG:139:ASP:HB2	2.06	0.56
9:CI:114:LYS:HD2	9:CI:120:ALA:O	2.05	0.56
56:CP:8:ARG:HB3	56:CP:28:ARG:HH11	1.70	0.56
22:DA:242:G:C5	51:D3:4:LYS:HE3	2.40	0.56
22:DA:684:G:C2	22:DA:794:A:C2	2.94	0.56
22:DA:1537:G:O2'	22:DA:1538:G:H4'	2.06	0.56
22:DA:1695:G:H8	24:DC:7:PRO:O	1.87	0.56
22:DA:2140:G:C6	22:DA:2152:G:C6	2.93	0.56
22:DA:2148:G:N2	22:DA:2149:U:O4	2.32	0.56
22:DA:2259:U:O4'	22:DA:2427:C:H2'	2.05	0.56
24:DC:93:VAL:CG1	24:DC:101:ARG:H	2.19	0.56
28:DG:162:ARG:HB2	28:DG:166:GLU:CB	2.36	0.56
39:DR:33:VAL:HG23	39:DR:61:ALA:HB3	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DT:9:LYS:HG3	46:DY:21:LEU:HD13	1.86	0.56
1:AA:184:G:C6	1:AA:194:C:N4	2.73	0.56
3:AC:54:ILE:C	3:AC:54:ILE:HD12	2.31	0.56
21:AU:10:PRO:HB3	3:CC:74:ILE:HD12	1.88	0.56
22:BA:923:G:H1'	44:BW:23:LYS:HE2	1.87	0.56
24:BC:20:ASN:HD21	24:BC:22:GLU:CG	2.16	0.56
26:BE:196:VAL:HG13	26:BE:200:LEU:HD23	1.88	0.56
31:BJ:41:LYS:N	38:BQ:66:ALA:HB1	2.21	0.56
31:BJ:54:ILE:HD12	31:BJ:55:ILE:C	2.29	0.56
34:BM:71:LYS:HB3	34:BM:93:VAL:O	2.05	0.56
37:BP:4:ILE:HG22	37:BP:8:GLU:HG3	1.87	0.56
43:BV:39:ALA:C	43:BV:40:ILE:HD13	2.30	0.56
43:BV:42:LEU:HD23	43:BV:42:LEU:N	2.20	0.56
45:BX:4:CYS:HB2	45:BX:51:SER:HB3	1.88	0.56
53:CA:181:A:H4'	53:CA:182:A:OP1	2.04	0.56
53:CA:227:G:H2'	53:CA:228:A:O4'	2.05	0.56
53:CA:461:A:N3	53:CA:461:A:H2'	2.20	0.56
3:CC:34:SER:O	3:CC:38:VAL:HG13	2.05	0.56
4:CD:151:GLN:CB	4:CD:154:VAL:HG12	2.32	0.56
10:CJ:5:ARG:C	10:CJ:6:ILE:HD12	2.31	0.56
17:CQ:27:PHE:CD1	17:CQ:36:PHE:HB3	2.39	0.56
22:DA:1287:A:H5'	35:DN:103:ARG:HD2	1.88	0.56
22:DA:1573:G:H2'	22:DA:1574:C:H5'	1.88	0.56
22:DA:1605:C:H5"	22:DA:1606:C:OP2	2.06	0.56
22:DA:1649:G:N1	22:DA:2009:A:C6	2.74	0.56
22:DA:1654:A:HO2'	22:DA:1655:A:H8	0.73	0.56
22:DA:1734:G:H2'	22:DA:1735:A:H8	1.70	0.56
22:DA:2235:G:H2'	22:DA:2236:U:C6	2.41	0.56
22:DA:2313:C:O2'	22:DA:2314:A:C8	2.54	0.56
22:DA:2714:G:O2'	22:DA:2715:C:H5'	2.06	0.56
24:DC:95:TYR:C	24:DC:97:ASP:H	2.13	0.56
26:DE:109:LEU:O	26:DE:112:LEU:HB3	2.06	0.56
44:DW:22:VAL:O	44:DW:23:LYS:HG3	2.05	0.56
44:DW:23:LYS:HD2	44:DW:24:ARG:H	1.68	0.56
1:AA:211:G:C2	1:AA:212:G:H1'	2.40	0.56
1:AA:924:C:H2'	1:AA:925:G:H8	1.70	0.56
1:AA:1124:G:H2'	1:AA:1145:A:H61	1.69	0.56
1:AA:1228:C:H2'	1:AA:1229:A:H8	1.71	0.56
2:AB:163:ILE:HG23	2:AB:164:ASP:N	2.13	0.56
11:AK:51:PHE:HB2	11:AK:55:ARG:HB3	1.88	0.56
15:AO:57:ARG:HB3	15:AO:57:ARG:NH1	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:22:ALA:CB	16:AP:32:PHE:HA	2.36	0.56
22:BA:580:U:H2'	22:BA:581:C:H6	1.71	0.56
22:BA:611:C:H2'	22:BA:612:G:H5'	1.88	0.56
22:BA:622:G:H2'	22:BA:623:C:C6	2.41	0.56
22:BA:2637:U:H2'	22:BA:2638:G:H5'	1.86	0.56
28:BG:33:THR:H	28:BG:34:ARG:NH1	2.04	0.56
31:BJ:44:TYR:CD1	31:BJ:44:TYR:O	2.59	0.56
32:BK:70:ARG:CD	32:BK:76:VAL:HG22	2.36	0.56
32:BK:91:SER:O	32:BK:93:GLN:HB2	2.05	0.56
33:BL:61:LEU:O	51:B3:12:ARG:HD3	2.05	0.56
44:BW:37:VAL:HG22	44:BW:55:ASP:O	2.06	0.56
53:CA:177:G:O2'	53:CA:1448:C:C5'	2.54	0.56
53:CA:204:G:H2'	53:CA:205:A:O4'	2.06	0.56
53:CA:537:G:H2'	53:CA:538:G:H8	1.70	0.56
53:CA:1154:G:H2'	53:CA:1155:A:H8	1.71	0.56
53:CA:1239:A:H3'	54:CG:118:ARG:HH22	1.70	0.56
53:CA:1372:U:H5"	9:CI:71:ILE:CD1	2.36	0.56
53:CA:1387:G:C6	53:CA:1388:C:N4	2.73	0.56
5:CE:89:THR:OG1	5:CE:90:GLY:N	2.37	0.56
5:CE:104:ILE:N	5:CE:122:VAL:H	1.95	0.56
6:CF:25:TYR:O	6:CF:29:ILE:HD13	2.05	0.56
6:CF:41:ASP:O	6:CF:42:TRP:C	2.49	0.56
9:CI:78:ILE:O	9:CI:82:ILE:HG13	2.06	0.56
12:CL:109:ARG:HB2	12:CL:118:VAL:HG21	1.87	0.56
22:DA:71:A:H5"	22:DA:73:A:N9	2.20	0.56
22:DA:192:C:H2'	22:DA:193:U:H5'	1.88	0.56
22:DA:708:G:H2'	22:DA:709:U:H6	1.71	0.56
22:DA:1036:G:C6	22:DA:1120:G:C6	2.94	0.56
22:DA:1716:U:O2'	22:DA:1717:A:C8	2.39	0.56
22:DA:2142:A:C2'	22:DA:2143:C:H4'	2.35	0.56
22:DA:2229:U:H2'	22:DA:2230:G:H8	1.70	0.56
22:DA:2319:G:O2'	22:DA:2320:U:O5'	2.24	0.56
57:DB:69:G:H2'	57:DB:70:C:H5'	1.87	0.56
24:DC:179:GLU:HA	24:DC:269:ARG:O	2.06	0.56
58:DF:46:LYS:HD3	58:DF:50:ASP:HB2	1.86	0.56
58:DF:107:VAL:N	58:DF:108:PRO:CD	2.69	0.56
29:DH:5:LEU:HD11	29:DH:13:GLY:HA3	1.88	0.56
31:DJ:99:ARG:HG2	31:DJ:102:GLU:OE2	2.05	0.56
42:DU:33:VAL:O	42:DU:34:ILE:HG13	2.05	0.56
51:D3:36:ALA:O	51:D3:40:LYS:HG3	2.06	0.56
1:AA:184:G:H2'	1:AA:185:U:C5	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:725:G:O2'	1:AA:726:C:H5'	2.06	0.56
1:AA:914:A:H2'	1:AA:915:A:H8	1.70	0.56
1:AA:1159:U:O4'	1:AA:1159:U:O2	2.23	0.56
1:AA:1331:G:O2'	1:AA:1332:A:P	2.62	0.56
7:AG:34:LYS:HB3	7:AG:37:THR:HG23	1.86	0.56
10:AJ:8:ILE:HA	10:AJ:99:GLN:O	2.05	0.56
17:AQ:46:HIS:HB2	17:AQ:66:LEU:CD1	2.35	0.56
19:AS:52:ASN:O	19:AS:76:THR:HG22	2.05	0.56
22:BA:212:G:O2'	22:BA:213:A:H5'	2.06	0.56
22:BA:570:G:H2'	22:BA:2030:A:N7	2.21	0.56
22:BA:864:G:O2'	22:BA:865:C:H5'	2.05	0.56
22:BA:952:G:H2'	22:BA:953:G:O5'	2.06	0.56
22:BA:1050:A:C2	22:BA:2751:G:C5	2.94	0.56
22:BA:1070:A:C2	22:BA:1097:U:H4'	2.41	0.56
22:BA:1113:U:H2'	22:BA:1114:C:H6	1.70	0.56
22:BA:2149:U:O2'	22:BA:2150:C:O5'	2.23	0.56
22:BA:2314:A:O2'	22:BA:2315:G:H5'	2.06	0.56
22:BA:2823:A:H2'	22:BA:2824:C:H5'	1.88	0.56
24:BC:106:PRO:CB	24:BC:141:HIS:CE1	2.89	0.56
25:BD:121:THR:O	25:BD:122:VAL:CB	2.54	0.56
26:BE:108:ILE:HD11	26:BE:180:LEU:HB3	1.88	0.56
31:BJ:43:GLU:O	31:BJ:45:THR:N	2.39	0.56
31:BJ:64:VAL:HG13	31:BJ:65:THR:O	2.06	0.56
32:BK:72:PRO:O	32:BK:74:GLY:N	2.36	0.56
38:BQ:69:ARG:HB2	38:BQ:69:ARG:NH2	2.18	0.56
53:CA:188:C:H42	53:CA:189:A:N6	2.04	0.56
53:CA:704:A:O2'	53:CA:705:G:C8	2.52	0.56
53:CA:954:G:N1	53:CA:1228:C:N4	2.52	0.56
53:CA:1239:A:N6	53:CA:1299:A:N6	2.53	0.56
53:CA:1458:G:H4'	20:CT:22:SER:HB2	1.87	0.56
54:CG:35:LYS:O	9:CI:42:THR:HG21	2.06	0.56
54:CG:88:VAL:HG22	54:CG:89:GLU:N	2.16	0.56
54:CG:115:MET:HE1	54:CG:119:LEU:HB3	1.87	0.56
9:CI:17:ARG:NH1	9:CI:65:THR:HG21	2.21	0.56
10:CJ:44:THR:HG23	10:CJ:70:HIS:CD2	2.41	0.56
11:CK:90:PRO:O	11:CK:91:GLY:C	2.47	0.56
22:DA:64:A:H2'	22:DA:65:U:O4'	2.05	0.56
22:DA:223:A:C5	22:DA:422:A:N7	2.74	0.56
22:DA:482:A:N6	22:DA:506:G:C5	2.73	0.56
22:DA:622:G:H2'	22:DA:623:C:C5	2.40	0.56
22:DA:850:U:O2'	47:DZ:22:THR:HG22	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1156:A:OP1	22:DA:1156:A:H8	1.88	0.56
22:DA:1751:U:H2'	22:DA:1752:C:C6	2.41	0.56
22:DA:1826:G:OP2	24:DC:220:ARG:HB3	2.05	0.56
22:DA:2135:A:H8	22:DA:2135:A:OP2	1.88	0.56
22:DA:2297:A:C2	22:DA:2298:A:N7	2.74	0.56
22:DA:2614:A:H4'	22:DA:2615:U:OP1	2.06	0.56
24:DC:19:VAL:O	24:DC:21:PRO:HD3	2.05	0.56
24:DC:43:ASN:ND2	24:DC:44:ASN:H	2.04	0.56
25:DD:10:GLY:HA3	25:DD:26:VAL:HB	1.86	0.56
45:DX:30:PRO:HG2	45:DX:32:LEU:CD2	2.36	0.56
45:DX:51:SER:OG	45:DX:54:GLY:HA3	2.06	0.56
46:DY:17:GLU:HG3	46:DY:53:VAL:HG11	1.88	0.56
1:AA:243:A:H4'	1:AA:244:U:H5"	1.88	0.56
1:AA:254:G:O2'	1:AA:255:G:H5'	2.04	0.56
1:AA:673:A:H1'	18:AR:63:TYR:HE1	1.71	0.56
1:AA:1053:G:C6	1:AA:1199:U:C2	2.94	0.56
1:AA:1320:C:N3	19:AS:35:ARG:NH1	2.53	0.56
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.41	0.56
2:AB:9:LEU:HD23	2:AB:11:ALA:N	2.21	0.56
5:AE:152:VAL:CB	5:AE:155:LYS:NZ	2.68	0.56
8:AH:63:LYS:CB	8:AH:70:VAL:HG21	2.35	0.56
10:AJ:41:PRO:O	10:AJ:42:LEU:HB2	2.05	0.56
12:AL:7:VAL:HG13	17:AQ:30:HIS:CD2	2.41	0.56
22:BA:191:A:H2'	22:BA:192:C:C6	2.41	0.56
22:BA:528:A:C2	22:BA:2042:A:H2'	2.41	0.56
22:BA:879:G:H2'	22:BA:880:G:C8	2.41	0.56
22:BA:903:C:H2'	22:BA:904:G:H5'	1.87	0.56
22:BA:1798:U:OP1	24:BC:255:LYS:O	2.22	0.56
22:BA:2058:A:N1	60:BA:3135:TEL:O48	2.32	0.56
22:BA:2680:U:OP2	25:BD:114:LYS:HE2	2.06	0.56
22:BA:2793:C:H2'	22:BA:2794:C:C6	2.40	0.56
23:BB:30:C:C2'	23:BB:31:C:H5'	2.34	0.56
25:BD:184:ARG:HH11	37:BP:6:GLN:HE22	1.53	0.56
28:BG:1:SER:O	28:BG:3:VAL:N	2.38	0.56
28:BG:33:THR:CA	28:BG:34:ARG:HH11	2.19	0.56
29:BH:26:ALA:O	29:BH:31:VAL:HG23	2.06	0.56
30:BI:23:VAL:HG23	30:BI:24:GLY:H	1.71	0.56
31:BJ:111:LYS:HE2	31:BJ:115:GLY:H	1.71	0.56
36:BO:88:LYS:O	36:BO:89:ASP:HB2	2.06	0.56
40:BS:88:ARG:CG	40:BS:88:ARG:NH2	2.68	0.56
42:BU:73:ASN:C	42:BU:75:ALA:H	2.14	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BY:7:ARG:H	46:BY:60:LYS:NZ	1.97	0.56
52:B4:9:LYS:CD	52:B4:9:LYS:N	2.64	0.56
53:CA:5:U:H4'	53:CA:6:G:C5'	2.36	0.56
53:CA:246:A:N3	53:CA:279:A:N6	2.54	0.56
53:CA:994:A:HO2'	53:CA:995:C:H6	1.53	0.56
53:CA:1013:G:H22	53:CA:1015:G:H3'	1.71	0.56
53:CA:1179:A:H2'	53:CA:1180:A:O4'	2.06	0.56
53:CA:1296:C:C5	53:CA:1297:G:N2	2.74	0.56
54:CG:100:MET:CE	54:CG:100:MET:H	2.19	0.56
55:CM:18:LEU:HD22	55:CM:32:ILE:HG21	1.88	0.56
21:CU:16:ARG:HG3	21:CU:19:LYS:CG	2.16	0.56
21:CU:28:LEU:O	21:CU:28:LEU:HD23	2.06	0.56
22:DA:98:G:O2'	22:DA:103:A:C8	2.59	0.56
22:DA:111:A:N1	22:DA:112:U:C2	2.74	0.56
22:DA:154:U:H2'	22:DA:155:A:O4'	2.05	0.56
22:DA:845:A:N6	22:DA:932:U:N3	2.53	0.56
22:DA:1525:A:C6	22:DA:1526:C:C2	2.94	0.56
22:DA:1915:U:O2'	22:DA:1916:A:H5'	2.06	0.56
26:DE:88:ARG:HB3	26:DE:89:PRO:HD2	1.87	0.56
58:DF:110:ILE:HD13	58:DF:110:ILE:H	1.70	0.56
28:DG:53:PRO:HB3	28:DG:61:TRP:H	1.71	0.56
36:DO:30:ARG:HG2	36:DO:31:THR:N	2.20	0.56
1:AA:532:A:H4'	1:AA:533:A:OP2	2.06	0.56
19:AS:4:LEU:HD22	19:AS:8:PRO:HA	1.86	0.56
23:BB:15:A:O2'	23:BB:16:G:H5'	2.06	0.56
24:BC:229:HIS:O	24:BC:231:HIS:O	2.24	0.56
37:BP:52:ARG:HH11	37:BP:52:ARG:CG	2.17	0.56
37:BP:105:LYS:HA	37:BP:108:ARG:NH2	2.21	0.56
47:BZ:40:THR:CG2	47:BZ:43:ILE:HG23	2.35	0.56
53:CA:71:A:C2	53:CA:72:A:C8	2.94	0.56
53:CA:109:A:H4'	53:CA:110:C:OP2	2.06	0.56
53:CA:750:C:H4'	15:CO:20:ASP:HB2	1.86	0.56
53:CA:1125:U:C5	10:CJ:40:ILE:HG12	2.41	0.56
53:CA:1217:C:H2'	53:CA:1218:C:C6	2.39	0.56
6:CF:98:GLU:O	6:CF:99:ALA:HB3	2.05	0.56
10:CJ:25:ILE:HG22	10:CJ:25:ILE:O	2.06	0.56
22:DA:70:G:H3'	22:DA:113:U:C4'	2.36	0.56
22:DA:381:G:H5"	45:DX:15:ASN:HD22	1.71	0.56
22:DA:443:A:N6	26:DE:36:ALA:HB1	2.18	0.56
22:DA:758:C:O2	22:DA:1981:A:H2	1.89	0.56
22:DA:935:C:H2'	22:DA:936:A:H8	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1204:A:C4	22:DA:1206:G:C6	2.94	0.56
22:DA:1553:A:N7	22:DA:1555:G:C6	2.74	0.56
22:DA:1723:G:O2'	22:DA:1724:G:H5'	2.06	0.56
22:DA:2093:G:O6	22:DA:2225:A:N7	2.39	0.56
22:DA:2478:A:N7	22:DA:2529:G:C6	2.74	0.56
22:DA:2562:U:H1'	32:DK:23:LYS:HE2	1.87	0.56
22:DA:2884:U:P	48:D0:40:HIS:HE2	2.29	0.56
26:DE:151:GLY:HA3	26:DE:191:ASP:OD1	2.06	0.56
58:DF:92:GLY:O	58:DF:95:MET:HB3	2.06	0.56
28:DG:1:SER:C	28:DG:3:VAL:H	2.13	0.56
35:DN:14:SER:C	35:DN:16:HIS:H	2.13	0.56
35:DN:39:PRO:O	35:DN:43:GLU:HG2	2.06	0.56
40:DS:22:ASP:HA	40:DS:25:ARG:HH12	1.71	0.56
46:DY:48:ARG:O	46:DY:51:ALA:HB3	2.06	0.56
1:AA:429:U:H4'	1:AA:430:A:OP1	2.06	0.55
1:AA:1026:G:C6	1:AA:1027:C:N4	2.74	0.55
4:AD:16:THR:HG22	4:AD:17:ASP:N	2.21	0.55
4:AD:191:SER:OG	4:AD:192:ALA:N	2.31	0.55
17:AQ:12:VAL:HG12	17:AQ:21:VAL:O	2.06	0.55
22:BA:364:C:H2'	22:BA:365:U:H6	1.70	0.55
22:BA:1338:G:O2'	22:BA:1393:A:N1	2.37	0.55
22:BA:1459:G:O2'	22:BA:1460:U:H3'	2.07	0.55
26:BE:73:ILE:O	26:BE:73:ILE:HG12	2.05	0.55
32:BK:111:LYS:HE2	32:BK:111:LYS:N	2.21	0.55
53:CA:238:A:H2'	53:CA:239:U:C4'	2.36	0.55
53:CA:998:C:H2'	53:CA:999:C:C6	2.41	0.55
53:CA:1026:G:H1	53:CA:1036:A:N6	2.04	0.55
53:CA:1042:A:H2'	53:CA:1043:G:O4'	2.06	0.55
3:CC:161:ILE:HD13	3:CC:161:ILE:H	1.72	0.55
4:CD:20:LEU:HD23	4:CD:20:LEU:N	2.21	0.55
5:CE:37:VAL:HG12	5:CE:38:VAL:N	2.22	0.55
10:CJ:42:LEU:HB3	10:CJ:43:PRO:HD2	1.89	0.55
55:CM:78:ARG:HH21	55:CM:79:LEU:CD2	2.19	0.55
18:CR:22:TYR:HA	18:CR:57:ALA:HB1	1.89	0.55
22:DA:125:A:H5"	50:D2:19:ARG:HB2	1.87	0.55
22:DA:226:A:H2'	22:DA:227:A:C8	2.41	0.55
22:DA:532:A:N1	22:DA:2020:A:H1'	2.21	0.55
22:DA:574:A:H4'	22:DA:575:A:C5'	2.35	0.55
22:DA:575:A:N3	22:DA:576:U:C5	2.74	0.55
22:DA:727:A:O2'	22:DA:728:G:C8	2.51	0.55
22:DA:763:G:HO2'	22:DA:764:A:H3'	1.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1301:A:C4	22:DA:1303:G:N7	2.74	0.55
22:DA:1311:G:H21	22:DA:1603:A:H62	1.52	0.55
22:DA:2813:A:H2'	22:DA:2814:A:C8	2.41	0.55
39:DR:27:ILE:CG2	39:DR:28:ALA:H	2.06	0.55
39:DR:49:ILE:HG22	39:DR:54:VAL:N	2.21	0.55
46:DY:60:LYS:HG2	46:DY:60:LYS:O	2.06	0.55
1:AA:269:C:H2'	1:AA:270:A:H8	1.71	0.55
1:AA:358:U:H2'	1:AA:359:G:H8	1.70	0.55
1:AA:1084:G:C5	1:AA:1085:U:C4	2.94	0.55
3:AC:6:PRO:O	3:AC:10:ARG:HG2	2.07	0.55
4:AD:131:ILE:HD13	4:AD:134:TYR:HB2	1.89	0.55
15:AO:16:ARG:O	15:AO:17:ASP:HB3	2.05	0.55
22:BA:558:U:H5"	31:BJ:111:LYS:HE3	1.88	0.55
25:BD:151:THR:O	25:BD:152:PRO:C	2.45	0.55
28:BG:70:LEU:O	28:BG:74:MET:HG3	2.06	0.55
33:BL:91:ASP:H	33:BL:94:THR:HG21	1.71	0.55
40:BS:41:LYS:O	40:BS:44:ALA:N	2.39	0.55
53:CA:86:G:H1'	53:CA:87:C:O5'	2.06	0.55
53:CA:151:A:H2'	53:CA:152:A:O4'	2.06	0.55
53:CA:287:U:O2'	53:CA:288:A:H5'	2.06	0.55
53:CA:704:A:C2'	53:CA:705:G:C8	2.89	0.55
53:CA:1146:A:H2'	53:CA:1147:C:C6	2.41	0.55
53:CA:1182:G:C3'	53:CA:1183:U:H5'	2.36	0.55
53:CA:1375:A:O2'	54:CG:101:ARG:NH2	2.39	0.55
2:CB:128:LEU:HB3	2:CB:131:LYS:HB3	1.88	0.55
5:CE:131:ASN:HD22	5:CE:131:ASN:C	2.14	0.55
6:CF:2:ARG:NH2	6:CF:91:ARG:HB2	2.20	0.55
8:CH:28:SER:HB3	8:CH:56:PRO:HB2	1.89	0.55
12:CL:97:VAL:O	12:CL:97:VAL:CG2	2.54	0.55
22:DA:223:A:C6	22:DA:422:A:N7	2.74	0.55
22:DA:1045:C:H4'	22:DA:1047:G:C4	2.40	0.55
22:DA:1338:G:O2'	41:DT:18:GLU:HG3	2.07	0.55
22:DA:1439:A:H1'	22:DA:1553:A:N6	2.21	0.55
22:DA:1537:G:C3'	22:DA:1538:G:H4'	2.36	0.55
22:DA:1639:C:C2'	22:DA:1640:A:H5"	2.37	0.55
22:DA:2015:A:C5	48:D0:2:VAL:HG11	2.41	0.55
22:DA:2258:C:C4'	22:DA:2259:U:OP2	2.49	0.55
24:DC:70:LYS:HB2	24:DC:101:ARG:NH2	2.18	0.55
25:DD:12:THR:OG1	37:DP:4:ILE:HG23	2.06	0.55
25:DD:208:LYS:O	25:DD:209:ALA:CB	2.55	0.55
28:DG:22:VAL:HG12	28:DG:23:ILE:H	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:57:LYS:O	29:DH:57:LYS:HD2	2.06	0.55
33:DL:81:ASP:O	33:DL:83:ALA:N	2.39	0.55
33:DL:112:LEU:O	33:DL:112:LEU:HD23	2.06	0.55
40:DS:9:HIS:H	40:DS:102:HIS:HE1	1.54	0.55
1:AA:47:C:H4'	1:AA:48:C:O5'	2.05	0.55
1:AA:129:A:H1'	1:AA:130:A:C8	2.41	0.55
1:AA:389:A:C6	1:AA:390:U:H1'	2.41	0.55
2:AB:103:TRP:CH2	2:AB:107:ARG:HD3	2.41	0.55
9:AI:6:TYR:CG	9:AI:7:GLY:N	2.75	0.55
22:BA:372:G:H5"	45:BX:60:LYS:HE3	1.89	0.55
22:BA:585:G:H5"	22:BA:586:A:OP1	2.07	0.55
24:BC:106:PRO:HA	24:BC:141:HIS:CE1	2.41	0.55
29:BH:4:ILE:HG23	29:BH:17:ASP:O	2.06	0.55
33:BL:14:LYS:CG	33:BL:15:ALA:N	2.68	0.55
35:BN:75:ILE:C	35:BN:75:ILE:HD12	2.31	0.55
35:BN:93:GLY:C	35:BN:95:THR:N	2.63	0.55
38:BQ:93:ILE:HG23	38:BQ:94:LEU:N	2.21	0.55
49:B1:24:LYS:NZ	49:B1:51:ALA:O	2.39	0.55
52:B4:36:ARG:HG2	52:B4:37:GLN:N	2.12	0.55
53:CA:13:U:O2'	53:CA:14:U:H5'	2.07	0.55
53:CA:284:C:H2'	53:CA:285:C:C6	2.42	0.55
53:CA:951:G:H2'	53:CA:952:U:H6	1.71	0.55
53:CA:996:A:N1	53:CA:1046:A:H5'	2.21	0.55
4:CD:58:GLN:OE1	4:CD:58:GLN:HA	2.06	0.55
14:CN:55:SER:C	14:CN:57:SER:H	2.14	0.55
18:CR:62:ARG:HB3	18:CR:69:TYR:CE1	2.41	0.55
22:DA:167:A:C2	22:DA:168:G:H1'	2.41	0.55
22:DA:185:G:C5	22:DA:212:G:N2	2.75	0.55
22:DA:1731:G:H4'	22:DA:1732:C:OP1	2.06	0.55
22:DA:1776:G:C2	22:DA:1789:A:N3	2.74	0.55
22:DA:2651:C:O2'	22:DA:2652:C:H5'	2.07	0.55
22:DA:2766:A:H2'	22:DA:2766:A:N3	2.21	0.55
25:DD:9:VAL:O	37:DP:4:ILE:HD11	2.05	0.55
26:DE:147:LEU:HB3	26:DE:186:VAL:HG23	1.88	0.55
58:DF:5:ASP:C	58:DF:7:TYR:N	2.63	0.55
58:DF:74:ALA:HB1	58:DF:76:PHE:CD2	2.42	0.55
40:DS:28:LYS:HA	40:DS:70:LYS:HA	1.88	0.55
42:DU:43:LYS:HE3	42:DU:45:GLN:CD	2.30	0.55
1:AA:624:C:H4'	16:AP:10:GLY:O	2.06	0.55
4:AD:16:THR:HG22	4:AD:17:ASP:H	1.72	0.55
13:AM:49:GLU:O	13:AM:52:ILE:HG22	2.05	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:73:ALA:O	16:AP:77:GLU:HB2	2.06	0.55
20:AT:8:LYS:HA	20:AT:11:ILE:HG23	1.88	0.55
22:BA:14:A:H5"	22:BA:15:G:OP2	2.07	0.55
22:BA:39:G:H2'	22:BA:40:U:C6	2.41	0.55
22:BA:1731:G:N1	22:BA:1733:G:C6	2.75	0.55
22:BA:2415:G:H4'	33:BL:66:PHE:HB2	1.88	0.55
22:BA:2478:A:C2'	22:BA:2479:U:H5'	2.37	0.55
22:BA:2755:C:O2'	22:BA:2756:U:H2'	2.05	0.55
23:BB:49:C:OP1	36:BO:102:ARG:HG3	2.05	0.55
24:BC:170:TYR:CE2	24:BC:184:GLU:HA	2.41	0.55
29:BH:49:ALA:HB3	29:BH:50:ARG:NH2	2.21	0.55
40:BS:13:SER:O	40:BS:14:ALA:CB	2.53	0.55
43:BV:61:LEU:O	43:BV:71:LYS:HA	2.05	0.55
49:B1:47:ILE:HD12	49:B1:47:ILE:H	1.71	0.55
53:CA:994:A:C6	53:CA:1216:A:H5'	2.41	0.55
53:CA:1350:A:C2	54:CG:33:GLY:HA3	2.41	0.55
15:CO:58:MET:O	15:CO:61:GLN:HB2	2.06	0.55
21:CU:14:ALA:O	21:CU:15:LEU:O	2.25	0.55
22:DA:206:U:H5'	22:DA:206:U:H6	1.71	0.55
22:DA:396:G:O2'	22:DA:397:U:H6	1.85	0.55
22:DA:1387:A:N3	22:DA:1388:G:C8	2.75	0.55
22:DA:1508:A:C4'	22:DA:1509:A:OP1	2.45	0.55
22:DA:1998:A:H2'	22:DA:1999:C:C6	2.42	0.55
22:DA:2144:G:N3	22:DA:2147:A:OP1	2.40	0.55
22:DA:2726:A:O2'	22:DA:2727:A:H5'	2.06	0.55
22:DA:2756:U:H1'	22:DA:2757:A:C5'	2.36	0.55
57:DB:15:A:OP1	57:DB:108:A:H5'	2.06	0.55
57:DB:42:C:H2'	57:DB:43:C:C5	2.41	0.55
28:DG:167:VAL:HG23	28:DG:168:VAL:N	2.21	0.55
32:DK:9:ASN:HD21	32:DK:17:ARG:NH2	2.05	0.55
35:DN:35:LYS:HG2	35:DN:112:TYR:CE1	2.41	0.55
43:DV:75:GLN:HG3	43:DV:92:VAL:CG1	2.36	0.55
1:AA:1240:U:H3'	1:AA:1241:G:C5'	2.37	0.55
2:AB:14:HIS:HB2	2:AB:208:ALA:HB2	1.87	0.55
2:AB:14:HIS:O	2:AB:14:HIS:CG	2.60	0.55
2:AB:20:ARG:O	2:AB:22:TRP:N	2.40	0.55
2:AB:40:ILE:HG21	2:AB:201:GLY:H	1.70	0.55
2:AB:187:ASP:HB2	2:AB:203:ASP:CG	2.31	0.55
4:AD:56:GLU:O	4:AD:59:LYS:HB3	2.07	0.55
17:AQ:22:VAL:HG21	17:AQ:60:ILE:CD1	2.32	0.55
17:AQ:58:VAL:HG22	17:AQ:59:GLU:N	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AR:35:SER:HA	18:AR:71:ASP:HB3	1.89	0.55
20:AT:2:ASN:O	20:AT:3:ILE:C	2.49	0.55
20:AT:73:ARG:O	20:AT:77:ASN:ND2	2.40	0.55
22:BA:784:G:C5	24:BC:227:VAL:HG11	2.42	0.55
22:BA:904:G:N2	22:BA:905:A:N3	2.53	0.55
22:BA:910:A:H2'	22:BA:911:A:C8	2.41	0.55
22:BA:1806:C:H1'	24:BC:43:ASN:OD1	2.06	0.55
22:BA:2092:U:C4'	22:BA:2093:G:O5'	2.52	0.55
22:BA:2354:C:C4'	44:BW:31:LEU:HD22	2.37	0.55
25:BD:48:ILE:HG23	25:BD:84:LEU:HD11	1.87	0.55
30:BI:104:GLN:O	30:BI:105:LEU:CB	2.54	0.55
31:BJ:44:TYR:O	31:BJ:45:THR:HB	2.05	0.55
33:BL:104:GLN:HA	33:BL:104:GLN:NE2	2.22	0.55
38:BQ:4:LYS:HG3	38:BQ:5:ARG:N	2.13	0.55
46:BY:9:LYS:HB3	46:BY:12:GLU:HG3	1.86	0.55
47:BZ:6:ILE:O	47:BZ:34:THR:HA	2.07	0.55
53:CA:120:A:O2'	53:CA:121:U:H4'	2.05	0.55
53:CA:166:U:C2'	53:CA:167:A:H5'	2.37	0.55
53:CA:194:C:O2'	53:CA:195:A:H5'	2.06	0.55
53:CA:243:A:C4'	53:CA:244:U:OP2	2.54	0.55
53:CA:375:U:C2	53:CA:376:G:C8	2.94	0.55
53:CA:695:A:H61	53:CA:797:C:H1'	1.71	0.55
53:CA:1047:G:N2	53:CA:1213:A:H2	2.04	0.55
4:CD:149:LYS:HB2	4:CD:150:LYS:HE2	1.88	0.55
5:CE:35:LEU:HD11	5:CE:136:VAL:HG11	1.88	0.55
54:CG:74:VAL:HG11	54:CG:143:MET:HB2	1.87	0.55
19:CS:79:TYR:O	19:CS:80:ARG:HB2	2.05	0.55
22:DA:394:C:H2'	22:DA:395:U:H5'	1.89	0.55
22:DA:609:A:H2'	22:DA:610:C:O4'	2.05	0.55
22:DA:832:U:OP1	33:DL:39:LYS:N	2.39	0.55
22:DA:942:G:H4'	22:DA:1190:G:H5'	1.87	0.55
22:DA:1361:G:O2'	22:DA:1362:C:H5'	2.06	0.55
22:DA:1518:C:H2'	22:DA:1519:G:O4'	2.06	0.55
22:DA:1625:C:H5"	22:DA:1626:A:OP2	2.06	0.55
22:DA:2138:G:H8	22:DA:2138:G:OP2	1.88	0.55
22:DA:2330:G:N1	22:DA:2386:A:C6	2.73	0.55
22:DA:2636:C:H4'	25:DD:81:GLU:OE1	2.06	0.55
24:DC:70:LYS:HD3	24:DC:101:ARG:HH12	1.71	0.55
30:DI:32:VAL:HG22	30:DI:58:ILE:HG21	1.88	0.55
1:AA:414:A:H2'	1:AA:415:A:C8	2.41	0.55
1:AA:865:A:H2'	1:AA:866:C:H6	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1410:A:H2'	1:AA:1411:C:H6	1.72	0.55
11:AK:39:ASN:O	11:AK:40:ALA:HB3	2.06	0.55
13:AM:5:GLY:HA3	13:AM:65:GLU:HG3	1.88	0.55
13:AM:7:ASN:HD22	13:AM:8:ILE:N	2.05	0.55
22:BA:455:C:N3	22:BA:472:A:H2'	2.22	0.55
22:BA:1056:G:H21	22:BA:1103:A:H62	1.54	0.55
22:BA:1535:A:C4'	22:BA:1536:C:OP2	2.45	0.55
22:BA:2346:A:H3'	22:BA:2347:C:C5'	2.33	0.55
25:BD:12:THR:CG2	25:BD:13:ARG:H	2.20	0.55
25:BD:70:LYS:O	25:BD:71:ALA:HB3	2.05	0.55
30:BI:58:ILE:O	30:BI:60:VAL:HG23	2.06	0.55
32:BK:121:GLU:HG2	32:BK:122:VAL:H	1.70	0.55
36:BO:31:THR:HG22	36:BO:34:HIS:H	1.68	0.55
47:BZ:29:ARG:HG3	47:BZ:29:ARG:NH2	2.10	0.55
53:CA:261:U:H2'	53:CA:263:A:OP2	2.06	0.55
53:CA:765:G:N7	53:CA:812:G:C4	2.74	0.55
53:CA:1068:G:C2'	53:CA:1069:C:H5'	2.36	0.55
53:CA:1249:C:H2'	53:CA:1250:A:H5"	1.88	0.55
2:CB:9:LEU:C	2:CB:11:ALA:H	2.15	0.55
6:CF:11:HIS:NE2	6:CF:54:LEU:HD21	2.21	0.55
11:CK:78:ILE:H	11:CK:78:ILE:HD13	1.71	0.55
12:CL:5:GLN:HG3	12:CL:9:LYS:NZ	2.22	0.55
22:DA:484:C:N4	22:DA:497:A:C2	2.75	0.55
22:DA:604:G:C2	22:DA:605:G:C5	2.94	0.55
22:DA:642:U:H2'	22:DA:644:A:OP2	2.05	0.55
22:DA:815:C:OP1	39:DR:85:LYS:HE2	2.07	0.55
22:DA:1346:G:H2'	22:DA:1347:A:C8	2.41	0.55
22:DA:1455:G:N7	35:DN:64:ARG:NH1	2.55	0.55
22:DA:1510:G:N2	22:DA:1511:G:N3	2.55	0.55
22:DA:1746:A:H2'	22:DA:1747:U:H6	1.71	0.55
22:DA:2048:G:C6	22:DA:2049:G:C5	2.95	0.55
22:DA:2200:C:O2	22:DA:2226:C:N4	2.39	0.55
22:DA:2310:C:O2'	22:DA:2311:A:H4'	2.06	0.55
22:DA:2331:G:O2'	44:DW:40:ARG:HB3	2.05	0.55
22:DA:2448:A:H61	33:DL:36:LYS:NZ	2.05	0.55
22:DA:2808:G:HO2'	22:DA:2809:A:H8	1.51	0.55
24:DC:5:CYS:HB3	24:DC:12:ARG:HH11	1.72	0.55
58:DF:8:LYS:HB2	58:DF:8:LYS:NZ	2.21	0.55
58:DF:52:ALA:HA	58:DF:55:ASP:HB2	1.88	0.55
58:DF:113:PHE:HE2	58:DF:116:LEU:HB2	1.70	0.55
28:DG:112:VAL:CG1	28:DG:114:HIS:HB3	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DJ:77:HIS:CE1	31:DJ:83:GLY:HA3	2.41	0.55
36:DO:26:LEU:HD23	36:DO:92:PHE:CE1	2.41	0.55
44:DW:43:LYS:HD2	44:DW:79:ILE:HD11	1.89	0.55
44:DW:81:ILE:C	44:DW:81:ILE:HD12	2.32	0.55
51:D3:33:THR:HG23	51:D3:34:LYS:H	1.71	0.55
1:AA:473:U:H2'	1:AA:474:G:C8	2.40	0.55
2:AB:32:GLY:HA3	2:AB:39:ILE:HG12	1.88	0.55
3:AC:59:PRO:HD2	3:AC:62:SER:O	2.06	0.55
7:AG:145:GLU:CA	7:AG:148:LYS:HB2	2.37	0.55
9:AI:90:ASP:CG	9:AI:92:SER:HB3	2.31	0.55
9:AI:128:LYS:HD2	9:AI:129:ARG:H	1.71	0.55
10:AJ:21:ALA:HA	10:AJ:24:GLU:OE2	2.06	0.55
20:AT:43:LYS:HD3	20:AT:86:ALA:O	2.05	0.55
22:BA:245:G:H2'	22:BA:246:C:H6	1.71	0.55
22:BA:619:G:H5"	22:BA:620:G:OP2	2.07	0.55
22:BA:994:C:H1'	39:BR:10:LYS:NZ	2.22	0.55
22:BA:1105:U:H2'	22:BA:1106:G:C8	2.38	0.55
22:BA:2230:G:H2'	22:BA:2231:U:H6	1.72	0.55
22:BA:2330:G:H21	44:BW:38:ARG:HA	1.71	0.55
26:BE:79:ARG:HG2	26:BE:80:SER:N	2.21	0.55
29:BH:2:GLN:HA	29:BH:20:ASN:HA	1.88	0.55
31:BJ:64:VAL:CG1	31:BJ:68:LYS:HB2	2.36	0.55
37:BP:20:ARG:HG3	37:BP:20:ARG:NH2	2.20	0.55
41:BT:51:PHE:C	41:BT:52:GLU:HG2	2.31	0.55
42:BU:17:ASP:O	42:BU:18:LYS:C	2.49	0.55
42:BU:43:LYS:O	42:BU:57:ILE:HA	2.06	0.55
44:BW:8:SER:O	44:BW:9:THR:CG2	2.53	0.55
53:CA:60:A:N3	53:CA:61:G:H1'	2.21	0.55
53:CA:513:C:H2'	53:CA:514:C:C6	2.42	0.55
53:CA:821:G:H2'	53:CA:822:U:C6	2.42	0.55
53:CA:1279:G:H2'	10:CJ:45:ARG:HH21	1.72	0.55
3:CC:84:GLU:HA	3:CC:87:ARG:HB2	1.89	0.55
54:CG:124:SER:O	54:CG:128:GLU:HG2	2.07	0.55
8:CH:33:VAL:C	8:CH:35:ILE:H	2.13	0.55
9:CI:19:PHE:O	9:CI:63:TYR:HB3	2.07	0.55
12:CL:48:LEU:HD23	12:CL:48:LEU:N	2.22	0.55
22:DA:243:U:HO2'	22:DA:244:A:H8	1.54	0.55
22:DA:249:C:C5'	22:DA:2394:C:O2'	2.44	0.55
22:DA:416:U:H2'	22:DA:417:C:C6	2.42	0.55
22:DA:616:A:H4'	26:DE:101:TYR:CZ	2.41	0.55
22:DA:674:G:O3'	26:DE:60:TRP:HH2	1.90	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:677:A:O2'	22:DA:2071:A:H5'	2.06	0.55
22:DA:740:C:O2'	22:DA:741:U:H5'	2.06	0.55
22:DA:749:A:C6	22:DA:750:A:N7	2.75	0.55
22:DA:915:C:O2'	22:DA:916:G:H5'	2.06	0.55
22:DA:1651:G:C2	22:DA:2007:U:N3	2.74	0.55
22:DA:1746:A:H2'	22:DA:1747:U:C6	2.42	0.55
22:DA:2185:U:H2'	22:DA:2186:G:C8	2.41	0.55
22:DA:2234:G:C6	22:DA:2235:G:N7	2.75	0.55
22:DA:2331:G:C1'	44:DW:40:ARG:HB3	2.36	0.55
22:DA:2707:U:H2'	22:DA:2708:G:C8	2.41	0.55
57:DB:55:U:H1'	58:DF:25:MET:SD	2.47	0.55
31:DJ:43:GLU:O	31:DJ:45:THR:N	2.38	0.55
35:DN:1:MET:O	35:DN:2:ARG:CB	2.55	0.55
40:DS:14:ALA:HB1	40:DS:18:ARG:NH2	2.22	0.55
52:D4:19:ARG:O	52:D4:20:ASP:CB	2.54	0.55
1:AA:913:A:H4'	1:AA:914:A:O5'	2.06	0.55
1:AA:954:G:H21	1:AA:1227:A:H2	1.53	0.55
2:AB:161:PHE:HA	2:AB:183:PHE:O	2.06	0.55
4:AD:61:ARG:HH21	4:AD:67:LEU:HD23	1.72	0.55
6:AF:17:GLN:HG2	4:CD:188:SER:HB2	1.89	0.55
6:AF:47:LEU:HD13	6:AF:51:ILE:HG22	1.88	0.55
9:AI:88:GLU:HG3	9:AI:89:TYR:N	2.21	0.55
10:AJ:12:ALA:HB2	10:AJ:96:VAL:HG13	1.88	0.55
21:AU:52:VAL:CG1	21:AU:53:LYS:H	2.13	0.55
22:BA:544:C:H3'	22:BA:545:U:O2	2.06	0.55
22:BA:1483:G:C2	22:BA:1484:U:C2	2.95	0.55
22:BA:2615:U:C2	48:B0:3:GLN:HA	2.41	0.55
25:BD:27:ILE:HG12	25:BD:201:LEU:HD23	1.88	0.55
38:BQ:60:TRP:CE2	38:BQ:93:ILE:HB	2.41	0.55
44:BW:72:GLY:C	44:BW:74:LYS:N	2.64	0.55
53:CA:406:G:H5'	4:CD:4:LEU:HD22	1.88	0.55
53:CA:501:C:H2'	53:CA:502:A:C8	2.42	0.55
53:CA:513:C:H2'	53:CA:514:C:H6	1.72	0.55
53:CA:519:C:O2'	53:CA:520:A:C5'	2.55	0.55
53:CA:640:A:O2'	8:CH:106:SER:HB2	2.06	0.55
53:CA:807:A:H2'	53:CA:808:C:C6	2.41	0.55
53:CA:1171:A:O2'	53:CA:1172:C:H5'	2.07	0.55
54:CG:4:ARG:HD2	54:CG:5:VAL:H	1.71	0.55
54:CG:9:ARG:HD3	54:CG:24:LYS:NZ	2.21	0.55
54:CG:117:LEU:HG	54:CG:121:ASN:HD22	1.70	0.55
12:CL:50:LYS:HD2	12:CL:50:LYS:N	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CM:57:ASP:O	55:CM:61:LYS:HG3	2.06	0.55
22:DA:119:A:H4'	22:DA:120:U:OP1	2.07	0.55
22:DA:141:G:H3'	22:DA:142:A:O4'	2.06	0.55
22:DA:160:A:N6	22:DA:167:A:H1'	2.21	0.55
22:DA:236:C:H2'	22:DA:237:C:H6	1.70	0.55
22:DA:446:G:H4'	22:DA:447:A:OP1	2.07	0.55
22:DA:956:G:O4'	34:DM:82:MET:HE1	2.07	0.55
22:DA:1628:G:H2'	22:DA:1629:U:H6	1.70	0.55
22:DA:1780:A:OP1	62:DA:3675:HOH:O	2.18	0.55
22:DA:2439:A:N7	22:DA:2586:U:H4'	2.20	0.55
22:DA:2624:G:H2'	22:DA:2625:G:O4'	2.07	0.55
22:DA:2823:A:C5	22:DA:2824:C:C5	2.95	0.55
24:DC:170:TYR:HD2	24:DC:183:VAL:O	1.88	0.55
26:DE:149:ILE:HG23	26:DE:188:MET:CA	2.36	0.55
33:DL:65:GLY:O	33:DL:66:PHE:HB2	2.07	0.55
36:DO:31:THR:HG21	36:DO:36:TYR:HE2	1.72	0.55
40:DS:27:LYS:O	40:DS:71:VAL:HG12	2.06	0.55
1:AA:68:G:H5'	1:AA:171:A:O2'	2.07	0.55
1:AA:821:G:H4'	62:AA:1741:HOH:O	2.07	0.55
1:AA:1071:C:H2'	1:AA:1072:G:C8	2.42	0.55
1:AA:1091:U:H1'	1:AA:1095:U:O2	2.07	0.55
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.42	0.55
2:AB:106:VAL:O	2:AB:106:VAL:HG12	2.06	0.55
4:AD:169:TRP:CE3	4:AD:185:PRO:HB3	2.42	0.55
5:AE:12:GLU:CB	5:AE:38:VAL:HG12	2.36	0.55
5:AE:77:ASN:CG	5:AE:78:GLY:N	2.64	0.55
5:AE:121:ASN:HD22	5:AE:121:ASN:N	2.03	0.55
6:AF:98:GLU:HG3	6:AF:99:ALA:N	2.22	0.55
12:AL:74:GLN:O	12:AL:75:GLU:C	2.50	0.55
13:AM:113:LYS:H	13:AM:114:PRO:HD2	1.71	0.55
22:BA:1024:G:N2	22:BA:1142:A:H2	2.05	0.55
22:BA:2017:U:H4'	48:B0:4:GLN:O	2.05	0.55
24:BC:156:SER:O	24:BC:159:THR:HG23	2.06	0.55
29:BH:16:GLY:C	29:BH:51:ARG:HH21	2.14	0.55
34:BM:117:PHE:HD2	34:BM:130:PHE:CD1	2.24	0.55
37:BP:111:GLU:CD	37:BP:111:GLU:H	2.15	0.55
38:BQ:43:GLN:NE2	39:BR:77:PHE:HB3	2.21	0.55
38:BQ:69:ARG:HH21	38:BQ:69:ARG:CG	2.20	0.55
40:BS:84:ARG:HB2	40:BS:96:ILE:HD11	1.89	0.55
50:B2:12:ARG:HB2	50:B2:12:ARG:NH2	2.22	0.55
51:B3:31:ILE:HD11	51:B3:34:LYS:CD	2.27	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:209:U:O2	53:CA:209:U:H2'	2.05	0.55
53:CA:988:G:H2'	53:CA:989:U:O4'	2.06	0.55
53:CA:1284:C:P	53:CA:1285:A:H3'	2.47	0.55
53:CA:1391:U:H2'	53:CA:1392:G:C8	2.41	0.55
2:CB:103:TRP:HB2	2:CB:106:VAL:HB	1.88	0.55
2:CB:221:ARG:HA	2:CB:224:ARG:CZ	2.37	0.55
4:CD:25:ARG:HH11	4:CD:25:ARG:CG	2.19	0.55
5:CE:74:ALA:O	5:CE:75:LEU:HB2	2.05	0.55
54:CG:30:MET:HE1	54:CG:33:GLY:HA2	1.88	0.55
54:CG:74:VAL:CG1	54:CG:143:MET:HB2	2.37	0.55
20:CT:2:ASN:O	20:CT:3:ILE:C	2.50	0.55
22:DA:82:U:H2'	22:DA:83:A:O4'	2.07	0.55
22:DA:558:U:OP2	31:DJ:113:PRO:HG2	2.06	0.55
22:DA:1338:G:H4'	41:DT:18:GLU:CD	2.31	0.55
22:DA:1441:G:H2'	22:DA:1442:U:H6	1.69	0.55
22:DA:1555:G:C2	22:DA:1556:C:C2	2.93	0.55
22:DA:1688:U:C4	22:DA:1698:A:C2	2.95	0.55
22:DA:2213:U:O2'	22:DA:2214:C:H5'	2.06	0.55
31:DJ:44:TYR:CD2	31:DJ:44:TYR:C	2.85	0.55
33:DL:57:LEU:HA	33:DL:60:ARG:HG3	1.88	0.55
35:DN:37:THR:HA	35:DN:110:MET:HE2	1.88	0.55
38:DQ:64:ILE:HD12	38:DQ:95:ALA:CB	2.37	0.55
40:DS:17:VAL:HG11	40:DS:103:ILE:HG13	1.87	0.55
41:DT:9:LYS:HG2	41:DT:9:LYS:O	2.07	0.55
41:DT:29:THR:N	41:DT:87:LEU:HB2	2.20	0.55
43:DV:59:GLU:HG2	43:DV:60:VAL:H	1.70	0.55
1:AA:8:A:N6	4:AD:201:GLU:O	2.40	0.55
1:AA:799:G:H2'	1:AA:800:G:O4'	2.07	0.55
12:AL:62:VAL:HG21	12:AL:94:TYR:CD2	2.42	0.55
21:AU:4:LYS:O	21:AU:4:LYS:HD2	2.07	0.55
22:BA:232:G:H4'	22:BA:233:A:OP1	2.05	0.55
22:BA:460:A:C2	22:BA:470:A:C4	2.94	0.55
22:BA:550:C:H2'	22:BA:550:C:O2	2.07	0.55
22:BA:1229:C:H2'	22:BA:1230:A:C8	2.42	0.55
22:BA:1501:G:O2'	22:BA:1502:A:H5'	2.07	0.55
22:BA:2032:G:C2	25:BD:150:GLN:HG2	2.41	0.55
28:BG:53:PRO:HD3	28:BG:61:TRP:CE3	2.42	0.55
28:BG:86:LEU:N	28:BG:86:LEU:CD1	2.69	0.55
32:BK:15:GLY:O	32:BK:46:ALA:HA	2.06	0.55
46:BY:39:GLN:HB2	46:BY:41:HIS:NE2	2.20	0.55
48:B0:14:MET:O	48:B0:17:SER:HB3	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:B0:39:ARG:HB2	48:B0:39:ARG:NH1	2.17	0.55
53:CA:612:C:H2'	53:CA:613:C:H6	1.72	0.55
53:CA:769:G:H4'	53:CA:1513:A:H4'	1.88	0.55
53:CA:1124:G:H1'	53:CA:1125:U:H5	1.71	0.55
53:CA:1124:G:H4'	53:CA:1125:U:OP1	2.05	0.55
2:CB:8:MET:HB2	2:CB:9:LEU:HD23	1.88	0.55
55:CM:69:ARG:HA	55:CM:72:ILE:HG22	1.89	0.55
14:CN:76:PHE:CE2	14:CN:95:LEU:HD22	2.42	0.55
19:CS:13:HIS:O	19:CS:17:LYS:HG2	2.06	0.55
22:DA:228:C:H5"	22:DA:229:C:C5	2.42	0.55
22:DA:1432:G:O2'	22:DA:1433:A:H5'	2.06	0.55
22:DA:2023:C:O2'	22:DA:2024:G:O5'	2.25	0.55
22:DA:2056:G:N3	22:DA:2056:G:H2'	2.21	0.55
22:DA:2237:G:H5"	22:DA:2238:G:OP1	2.06	0.55
22:DA:2304:G:N2	22:DA:2312:U:H3	1.98	0.55
22:DA:2331:G:N1	22:DA:2385:C:C4	2.75	0.55
22:DA:2725:A:C4	22:DA:2727:A:N7	2.75	0.55
22:DA:2728:U:O2'	22:DA:2729:G:H8	1.90	0.55
57:DB:58:A:H2'	57:DB:59:A:C8	2.39	0.55
26:DE:24:ASN:HB3	26:DE:27:LEU:HB3	1.89	0.55
26:DE:112:LEU:HD11	26:DE:186:VAL:HG11	1.88	0.55
29:DH:61:VAL:HG13	29:DH:62:LEU:N	2.21	0.55
29:DH:103:VAL:C	29:DH:105:ALA:H	2.15	0.55
31:DJ:44:TYR:HB2	38:DQ:63:ARG:NH2	2.22	0.55
32:DK:38:ILE:C	32:DK:39:ILE:HD13	2.32	0.55
38:DQ:46:TYR:CZ	38:DQ:50:ARG:NH1	2.76	0.55
1:AA:370:C:C2'	1:AA:371:A:H5'	2.37	0.54
1:AA:782:A:H2'	1:AA:783:C:H5'	1.88	0.54
1:AA:1038:C:H2'	1:AA:1039:G:H8	1.70	0.54
1:AA:1049:U:C4'	1:AA:1050:G:OP2	2.55	0.54
1:AA:1381:U:HO2'	1:AA:1382:C:H6	1.54	0.54
2:AB:86:CYS:HB2	2:AB:88:GLN:HG3	1.89	0.54
2:AB:134:LEU:HA	2:AB:137:THR:OG1	2.07	0.54
3:AC:174:LEU:O	3:AC:174:LEU:HD12	2.07	0.54
22:BA:914:G:C8	22:BA:914:G:H5"	2.43	0.54
22:BA:958:U:H6	22:BA:958:U:C5'	2.20	0.54
22:BA:1045:C:H3'	22:BA:1046:A:C5'	2.36	0.54
22:BA:1085:A:H2'	22:BA:1086:A:N3	2.22	0.54
22:BA:1287:A:O2'	22:BA:1288:G:H5'	2.06	0.54
22:BA:1956:U:C2'	22:BA:1957:C:H5'	2.36	0.54
22:BA:2210:U:C2	22:BA:2212:A:N7	2.75	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2562:U:H2'	22:BA:2563:U:H5'	1.89	0.54
22:BA:2649:C:H2'	22:BA:2650:U:H6	1.71	0.54
26:BE:119:ILE:HG12	26:BE:119:ILE:O	2.07	0.54
27:BF:12:VAL:HG22	27:BF:13:LYS:N	2.22	0.54
28:BG:166:GLU:OE2	28:BG:168:VAL:HG22	2.06	0.54
30:BI:126:ARG:HA	30:BI:129:GLU:CB	2.36	0.54
33:BL:35:HIS:O	33:BL:36:LYS:HB2	2.08	0.54
34:BM:17:ASN:O	34:BM:38:ARG:HD3	2.07	0.54
44:BW:50:VAL:HB	44:BW:61:LYS:NZ	2.22	0.54
46:BY:9:LYS:HA	46:BY:9:LYS:HZ1	1.72	0.54
53:CA:439:U:H5"	53:CA:440:C:OP2	2.06	0.54
53:CA:457:G:N3	53:CA:457:G:H2'	2.22	0.54
53:CA:834:U:H2'	53:CA:835:U:C6	2.41	0.54
53:CA:990:C:H2'	53:CA:991:U:C1'	2.37	0.54
53:CA:1050:G:O2'	53:CA:1051:C:C6	2.53	0.54
53:CA:1279:G:C8	53:CA:1282:C:N4	2.75	0.54
2:CB:130:LYS:HD3	2:CB:133:ALA:HB3	1.90	0.54
6:CF:99:ALA:O	6:CF:100:SER:HB2	2.08	0.54
12:CL:7:VAL:HG12	12:CL:7:VAL:O	2.07	0.54
22:DA:45:G:C5'	22:DA:46:G:OP1	2.53	0.54
22:DA:179:C:H2'	22:DA:180:G:O4'	2.07	0.54
22:DA:568:U:H2'	22:DA:570:G:OP2	2.07	0.54
22:DA:828:U:H4'	22:DA:831:G:N1	2.22	0.54
22:DA:1062:G:C8	22:DA:1088:A:C8	2.95	0.54
22:DA:1062:G:HO2'	22:DA:1063:G:H8	1.52	0.54
22:DA:1351:C:H4'	22:DA:1572:A:O4'	2.06	0.54
22:DA:1608:A:C5	22:DA:1611:C:N4	2.75	0.54
22:DA:2468:A:O2'	22:DA:2469:A:C8	2.50	0.54
22:DA:2829:A:C2'	22:DA:2830:C:H5'	2.37	0.54
57:DB:41:G:H3'	57:DB:42:C:C5'	2.36	0.54
25:DD:28:GLU:HA	25:DD:185:ASN:O	2.08	0.54
25:DD:122:VAL:HA	25:DD:127:PHE:H	1.72	0.54
28:DG:8:VAL:HB	28:DG:49:LEU:HB3	1.89	0.54
28:DG:148:ARG:HB2	28:DG:152:ARG:NH2	2.22	0.54
31:DJ:73:VAL:HG23	31:DJ:74:TYR:N	2.22	0.54
34:DM:42:THR:HB	34:DM:45:GLN:CG	2.33	0.54
38:DQ:84:LYS:C	38:DQ:86:SER:H	2.14	0.54
39:DR:87:GLN:HG2	39:DR:88:GLY:H	1.71	0.54
40:DS:66:ILE:HD13	40:DS:66:ILE:H	1.72	0.54
41:DT:39:THR:HG21	41:DT:42:GLU:CB	2.26	0.54
1:AA:16:A:C2'	1:AA:17:U:H5'	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:60:A:H4'	1:AA:61:G:O5'	2.06	0.54
1:AA:140:U:H2'	1:AA:141:G:O4'	2.07	0.54
1:AA:674:G:H4'	18:AR:69:TYR:CD1	2.43	0.54
2:AB:102:ASN:O	2:AB:106:VAL:HG23	2.06	0.54
3:AC:71:ARG:O	3:AC:74:ILE:HG22	2.07	0.54
4:AD:48:SER:O	4:AD:52:VAL:HG13	2.07	0.54
4:AD:61:ARG:HH21	4:AD:67:LEU:HA	1.72	0.54
17:AQ:49:ASN:O	17:AQ:50:ASN:C	2.49	0.54
22:BA:603:A:H4'	22:BA:604:G:OP1	2.07	0.54
22:BA:702:U:H2'	22:BA:702:U:O2	2.06	0.54
22:BA:1348:C:H2'	22:BA:1349:C:H5'	1.88	0.54
22:BA:2188:U:H2'	22:BA:2189:U:H6	1.72	0.54
22:BA:2334:U:H4'	22:BA:2335:A:OP2	2.07	0.54
25:BD:136:ASN:HD21	25:BD:139:SER:HB2	1.72	0.54
26:BE:131:THR:HG22	26:BE:160:ALA:HA	1.88	0.54
26:BE:187:VAL:O	26:BE:188:MET:HB3	2.07	0.54
28:BG:73:SER:CA	28:BG:76:ILE:HG22	2.35	0.54
30:BI:19:PRO:HG2	30:BI:23:VAL:CG2	2.37	0.54
34:BM:54:THR:O	34:BM:56:ALA:N	2.39	0.54
53:CA:935:A:O2'	53:CA:936:C:H6	1.89	0.54
53:CA:1003:G:N2	53:CA:1005:A:H5"	2.22	0.54
53:CA:1323:G:H2'	53:CA:1324:A:H8	1.72	0.54
2:CB:9:LEU:HG	2:CB:10:LYS:H	1.73	0.54
2:CB:67:LEU:CD1	2:CB:157:PRO:HG3	2.37	0.54
9:CI:51:LEU:HD11	9:CI:82:ILE:HG22	1.89	0.54
56:CP:44:SER:HB2	56:CP:46:LYS:CG	2.36	0.54
17:CQ:23:ALA:C	17:CQ:24:ILE:HD12	2.32	0.54
22:DA:142:A:H2'	22:DA:143:C:C5	2.42	0.54
22:DA:167:A:H2'	22:DA:168:G:O4'	2.07	0.54
22:DA:233:A:O2'	22:DA:234:U:C6	2.60	0.54
22:DA:310:A:O2'	22:DA:311:A:C8	2.37	0.54
22:DA:477:A:H2'	22:DA:478:A:C8	2.41	0.54
22:DA:480:A:H3'	22:DA:481:G:C5'	2.37	0.54
22:DA:516:C:H2'	22:DA:517:C:H6	1.72	0.54
22:DA:841:G:O2'	22:DA:842:U:H5'	2.07	0.54
22:DA:876:C:O2'	22:DA:877:A:P	2.65	0.54
22:DA:998:C:OP2	38:DQ:57:ARG:NH2	2.40	0.54
22:DA:1156:A:C8	38:DQ:50:ARG:HG2	2.43	0.54
22:DA:2234:G:C5	22:DA:2235:G:C8	2.95	0.54
22:DA:2360:G:H5"	22:DA:2361:G:OP2	2.06	0.54
22:DA:2459:A:C5	22:DA:2460:U:C5	2.94	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DB:57:A:C5	58:DF:25:MET:HB2	2.42	0.54
24:DC:145:MET:CE	24:DC:181:ARG:HH22	2.02	0.54
25:DD:16:THR:HG23	25:DD:18:ASP:H	1.71	0.54
34:DM:57:VAL:HA	34:DM:112:LEU:HD11	1.89	0.54
1:AA:184:G:H2'	1:AA:185:U:C6	2.43	0.54
1:AA:787:A:C5	1:AA:788:U:C5	2.96	0.54
1:AA:890:G:O2'	1:AA:906:A:N6	2.40	0.54
1:AA:1361:G:C2'	1:AA:1362:A:H5"	2.37	0.54
5:AE:150:GLU:HG3	5:AE:151:MET:HE2	1.90	0.54
12:AL:23:LEU:C	12:AL:25:ALA:H	2.14	0.54
13:AM:4:ALA:H	13:AM:56:ARG:HG3	1.72	0.54
20:AT:66:ILE:CD1	20:AT:70:LYS:HE3	2.36	0.54
22:BA:784:G:H5"	24:BC:225:ASN:ND2	2.23	0.54
22:BA:1154:G:OP2	38:BQ:57:ARG:NH1	2.37	0.54
22:BA:1784:A:H4'	22:BA:1785:A:O5'	2.07	0.54
22:BA:2517:C:C5	22:BA:2542:A:C5	2.95	0.54
22:BA:2773:C:OP1	25:BD:171:THR:CG2	2.55	0.54
37:BP:99:LEU:HA	37:BP:102:ARG:HG3	1.89	0.54
38:BQ:63:ARG:HH12	38:BQ:96:ASP:CB	2.20	0.54
38:BQ:85:ALA:O	38:BQ:87:VAL:C	2.51	0.54
41:BT:32:LEU:N	41:BT:83:ALA:CB	2.65	0.54
44:BW:24:ARG:O	44:BW:25:PHE:HB2	2.07	0.54
53:CA:91:U:C6	53:CA:92:U:C5	2.95	0.54
53:CA:328:C:O2	53:CA:328:C:C2'	2.55	0.54
53:CA:532:A:H62	3:CC:191:THR:HG21	1.71	0.54
3:CC:6:PRO:HG3	3:CC:200:TRP:HE1	1.71	0.54
10:CJ:45:ARG:O	10:CJ:46:LYS:C	2.49	0.54
18:CR:19:GLU:CD	18:CR:20:ILE:H	2.15	0.54
22:DA:142:A:H2'	22:DA:143:C:C6	2.42	0.54
22:DA:315:G:H2'	22:DA:316:C:O4'	2.07	0.54
22:DA:379:G:C6	22:DA:396:G:C6	2.95	0.54
22:DA:503:A:C6	22:DA:506:G:C6	2.95	0.54
22:DA:637:A:O5'	33:DL:112:LEU:HD21	2.07	0.54
22:DA:1906:G:N7	22:DA:1929:G:H2'	2.21	0.54
22:DA:2264:C:C2	22:DA:2277:G:N2	2.76	0.54
22:DA:2269:G:O2'	44:DW:18:LYS:HG2	2.08	0.54
22:DA:2619:C:H5'	25:DD:157:LYS:HA	1.88	0.54
22:DA:2638:G:N1	22:DA:2775:G:H2'	2.22	0.54
58:DF:34:THR:O	58:DF:35:LEU:HB2	2.07	0.54
58:DF:122:ASP:HB2	58:DF:126:ASN:HB2	1.89	0.54
58:DF:129:MET:HG3	58:DF:153:ILE:HD12	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DI:52:LEU:O	30:DI:54:ILE:HD12	2.08	0.54
41:DT:4:GLU:HG3	41:DT:6:ARG:NH2	2.22	0.54
51:D3:28:LEU:O	51:D3:29:ARG:HB3	2.07	0.54
1:AA:30:U:H4'	1:AA:31:G:OP2	2.07	0.54
1:AA:363:A:OP1	12:AL:57:THR:HG21	2.07	0.54
1:AA:919:A:O2'	1:AA:920:U:H5'	2.07	0.54
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.41	0.54
3:AC:142:ARG:HB3	3:AC:143:LEU:HD13	1.90	0.54
9:AI:90:ASP:OD2	9:AI:93:LEU:HG	2.06	0.54
20:AT:67:HIS:HB3	20:AT:68:LYS:HZ2	1.72	0.54
22:BA:754:U:H2'	22:BA:755:U:H6	1.72	0.54
22:BA:1057:A:C2	22:BA:1082:U:C2	2.95	0.54
22:BA:1475:G:O2'	22:BA:1476:U:OP1	2.25	0.54
22:BA:1680:U:H2'	22:BA:1681:G:O4'	2.07	0.54
28:BG:88:LEU:HD11	28:BG:95:ALA:CB	2.37	0.54
28:BG:132:LEU:N	28:BG:132:LEU:HD23	2.23	0.54
30:BI:27:LEU:C	30:BI:27:LEU:HD12	2.33	0.54
35:BN:13:ASN:O	35:BN:14:SER:C	2.50	0.54
36:BO:6:ALA:O	36:BO:10:ARG:HB2	2.06	0.54
41:BT:2:ILE:HG13	41:BT:3:ARG:CZ	2.37	0.54
41:BT:23:ALA:C	41:BT:25:GLU:H	2.15	0.54
41:BT:54:GLU:O	41:BT:55:VAL:HB	2.06	0.54
42:BU:24:VAL:HG22	42:BU:35:VAL:HG22	1.90	0.54
44:BW:17:ALA:O	44:BW:18:LYS:CB	2.56	0.54
53:CA:1009:U:H2'	53:CA:1010:U:C6	2.42	0.54
53:CA:1053:G:O6	53:CA:1199:U:H2'	2.08	0.54
53:CA:1142:G:H2'	53:CA:1143:G:C8	2.43	0.54
53:CA:1346:A:N1	54:CG:9:ARG:NH2	2.56	0.54
5:CE:100:GLU:O	5:CE:102:THR:HG23	2.06	0.54
6:CF:6:ILE:HD12	6:CF:6:ILE:N	2.22	0.54
55:CM:64:VAL:HG12	55:CM:65:GLU:N	2.18	0.54
22:DA:61:C:H6	22:DA:61:C:OP1	1.91	0.54
22:DA:233:A:H61	22:DA:428:A:N6	2.05	0.54
22:DA:781:A:H2'	22:DA:1777:U:H1'	1.89	0.54
22:DA:1033:U:O2'	22:DA:2750:A:N6	2.41	0.54
22:DA:1048:A:C4	22:DA:1049:C:N4	2.76	0.54
22:DA:1807:G:H2'	22:DA:1808:A:H5'	1.89	0.54
22:DA:2516:A:O2'	22:DA:2517:C:H5'	2.06	0.54
25:DD:48:ILE:HG22	25:DD:84:LEU:HD23	1.89	0.54
28:DG:74:MET:O	28:DG:78:VAL:HG13	2.07	0.54
28:DG:85:LYS:O	28:DG:86:LEU:HG	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DK:87:LEU:HB2	32:DK:92:GLU:O	2.08	0.54
35:DN:12:ARG:HB3	35:DN:16:HIS:ND1	2.22	0.54
42:DU:22:GLY:HA3	42:DU:36:GLU:HB3	1.87	0.54
45:DX:58:ILE:HG12	45:DX:66:VAL:HG21	1.89	0.54
1:AA:10:A:OP2	5:AE:130:THR:OG1	2.15	0.54
1:AA:1054:C:O4'	1:AA:1054:C:O2	2.25	0.54
2:AB:165:ALA:HB3	2:AB:190:SER:HB3	1.89	0.54
9:AI:123:ARG:HD3	9:AI:124:PRO:HD2	1.90	0.54
11:AK:126:ARG:C	21:AU:33:ARG:HH12	2.15	0.54
22:BA:1405:U:H2'	22:BA:1406:U:C6	2.42	0.54
22:BA:1782:U:C4	22:BA:2587:A:C2	2.95	0.54
22:BA:2353:G:O2'	44:BW:31:LEU:CD2	2.56	0.54
22:BA:2573:C:H3'	62:BA:3701:HOH:O	2.08	0.54
25:BD:91:THR:C	25:BD:93:GLY:N	2.63	0.54
30:BI:24:GLY:O	30:BI:27:LEU:HG	2.07	0.54
30:BI:60:VAL:HG22	30:BI:66:PHE:HB2	1.90	0.54
30:BI:64:ARG:HG3	30:BI:65:SER:N	2.22	0.54
33:BL:93:ASN:ND2	33:BL:94:THR:H	2.02	0.54
39:BR:49:ILE:HG21	39:BR:53:PHE:H	1.73	0.54
40:BS:73:LYS:CB	40:BS:106:VAL:HB	2.38	0.54
43:BV:5:ASN:ND2	43:BV:5:ASN:N	2.51	0.54
47:BZ:39:ASP:OD2	47:BZ:44:ARG:NH1	2.40	0.54
53:CA:53:A:N1	53:CA:359:G:C6	2.75	0.54
53:CA:110:C:H2'	53:CA:111:G:O4'	2.07	0.54
53:CA:878:A:C5	53:CA:879:C:C5	2.96	0.54
53:CA:940:C:H5'	54:CG:101:ARG:HH22	1.72	0.54
2:CB:10:LYS:HA	2:CB:10:LYS:HE3	1.88	0.54
54:CG:4:ARG:HG2	54:CG:4:ARG:NH1	2.22	0.54
9:CI:9:GLY:HA3	9:CI:16:ALA:HB3	1.89	0.54
12:CL:62:VAL:HG21	12:CL:94:TYR:CD2	2.43	0.54
17:CQ:9:GLY:O	17:CQ:57:VAL:HG13	2.07	0.54
18:CR:61:ALA:HB1	18:CR:66:LEU:HB2	1.90	0.54
19:CS:28:LYS:O	19:CS:30:LEU:HD12	2.08	0.54
22:DA:335:C:O2'	22:DA:336:C:O5'	2.25	0.54
22:DA:373:U:O2'	22:DA:374:A:H8	1.91	0.54
22:DA:475:C:C2'	22:DA:476:G:C8	2.90	0.54
22:DA:575:A:C2	22:DA:576:U:C5	2.94	0.54
22:DA:663:G:O6	22:DA:664:G:C6	2.61	0.54
22:DA:727:A:O2'	22:DA:728:G:O5'	2.26	0.54
22:DA:1734:G:C2'	22:DA:1735:A:H8	2.19	0.54
22:DA:1737:G:C5'	22:DA:1738:G:OP2	2.55	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1842:G:O4'	24:DC:242:HIS:CE1	2.60	0.54
22:DA:2008:C:H2'	22:DA:2009:A:H8	1.71	0.54
22:DA:2345:G:C4	22:DA:2347:C:H5	2.24	0.54
22:DA:2636:C:H2'	22:DA:2637:U:C6	2.41	0.54
58:DF:113:PHE:O	58:DF:114:ARG:CB	2.55	0.54
28:DG:94:ARG:HH21	28:DG:111:PRO:HB3	1.72	0.54
34:DM:72:PRO:O	34:DM:92:TRP:HA	2.07	0.54
35:DN:62:ASN:O	35:DN:63:ARG:CB	2.49	0.54
39:DR:68:ARG:HD2	39:DR:92:TRP:CZ2	2.42	0.54
42:DU:11:ILE:HG21	42:DU:79:ALA:HB2	1.89	0.54
48:D0:41:HIS:C	48:D0:41:HIS:ND1	2.66	0.54
1:AA:137:U:H1'	1:AA:227:G:N2	2.22	0.54
1:AA:182:A:C2	1:AA:184:G:C8	2.96	0.54
1:AA:575:G:H4'	1:AA:576:C:OP1	2.06	0.54
1:AA:818:G:HO2'	1:AA:820:U:H6	1.54	0.54
1:AA:1227:A:N3	1:AA:1227:A:C2'	2.70	0.54
1:AA:1257:A:H4'	1:AA:1258:G:OP2	2.07	0.54
3:AC:119:ILE:CG2	3:AC:197:VAL:HG11	2.33	0.54
4:AD:69:ARG:HA	4:AD:69:ARG:NE	2.18	0.54
17:AQ:29:LYS:HB2	17:AQ:36:PHE:CE1	2.43	0.54
22:BA:383:C:H5'	22:BA:384:A:H5"	1.88	0.54
22:BA:479:A:H4'	22:BA:480:A:OP1	2.06	0.54
22:BA:902:C:H2'	22:BA:903:C:H6	1.71	0.54
22:BA:902:C:C2	22:BA:903:C:C5	2.95	0.54
22:BA:959:A:N6	34:BM:82:MET:HE3	2.22	0.54
22:BA:2134:A:O2'	22:BA:2135:A:C8	2.58	0.54
22:BA:2149:U:O2'	22:BA:2150:C:C4'	2.56	0.54
22:BA:2228:G:H2'	22:BA:2229:U:C6	2.43	0.54
24:BC:32:LEU:O	24:BC:63:ILE:HG12	2.07	0.54
25:BD:74:GLU:O	25:BD:75:ALA:C	2.51	0.54
34:BM:31:PHE:CZ	34:BM:110:GLU:HG2	2.42	0.54
35:BN:77:ALA:O	35:BN:81:ASN:HB2	2.07	0.54
38:BQ:91:ARG:HD3	39:BR:11:GLN:CG	2.37	0.54
41:BT:4:GLU:OE1	41:BT:6:ARG:HG3	2.07	0.54
44:BW:40:ARG:HH11	44:BW:45:HIS:CE1	2.26	0.54
53:CA:239:U:C5'	53:CA:239:U:C6	2.89	0.54
53:CA:375:U:N3	53:CA:376:G:N7	2.55	0.54
53:CA:690:G:H2'	53:CA:691:G:O4'	2.08	0.54
53:CA:1269:A:H2	53:CA:1312:G:H21	1.56	0.54
53:CA:1284:C:H5"	53:CA:1285:A:H5"	1.89	0.54
53:CA:1446:A:H2'	53:CA:1447:A:C5'	2.35	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:68:LYS:HD3	8:CH:69:ALA:N	2.23	0.54
14:CN:87:ALA:HB2	14:CN:92:ILE:HD12	1.89	0.54
22:DA:46:G:C2	22:DA:47:C:C5	2.95	0.54
22:DA:59:U:O2'	22:DA:73:A:H2'	2.08	0.54
22:DA:972:A:C3'	22:DA:973:A:H5"	2.33	0.54
22:DA:1989:G:C2'	22:DA:1990:C:H5'	2.38	0.54
22:DA:2145:C:C2'	22:DA:2146:C:H3'	2.38	0.54
22:DA:2667:C:H2'	22:DA:2668:G:C8	2.43	0.54
57:DB:29:A:OP2	36:DO:32:PRO:HD2	2.07	0.54
24:DC:38:LYS:HE2	24:DC:55:GLY:H	1.72	0.54
24:DC:122:ALA:HB3	24:DC:127:ASN:HD22	1.70	0.54
25:DD:40:LEU:HA	25:DD:44:GLY:HA2	1.90	0.54
34:DM:71:LYS:HD3	34:DM:95:LEU:HD13	1.90	0.54
34:DM:74:THR:HB	34:DM:87:GLY:O	2.08	0.54
34:DM:114:ARG:HA	34:DM:130:PHE:CE1	2.41	0.54
37:DP:48:ALA:HB3	37:DP:59:THR:OG1	2.08	0.54
44:DW:54:ARG:C	44:DW:56:HIS:H	2.16	0.54
51:D3:15:LYS:HZ2	51:D3:19:GLY:HA2	1.72	0.54
52:D4:7:VAL:CG1	52:D4:8:LYS:H	2.18	0.54
1:AA:475:C:H2'	1:AA:476:U:H6	1.72	0.54
1:AA:723:U:H5'	21:AU:48:LYS:HE2	1.89	0.54
1:AA:826:C:H5'	8:AH:12:ARG:HH21	1.72	0.54
1:AA:1123:U:O3'	10:AJ:38:GLY:HA3	2.08	0.54
2:AB:27:LYS:HB3	2:AB:28:PRO:HD3	1.88	0.54
2:AB:95:TRP:HZ3	2:AB:98:GLY:H	1.55	0.54
11:AK:87:GLY:H	11:AK:113:THR:CG2	2.20	0.54
16:AP:59:HIS:CE1	16:AP:63:GLN:NE2	2.74	0.54
22:BA:580:U:O3'	38:BQ:30:VAL:CG1	2.55	0.54
22:BA:1881:C:H2'	22:BA:1882:U:O4'	2.07	0.54
22:BA:1906:G:H2'	22:BA:1907:G:O5'	2.07	0.54
22:BA:2415:G:H2'	22:BA:2416:C:H6	1.72	0.54
22:BA:2765:A:H2'	22:BA:2765:A:N3	2.22	0.54
24:BC:69:ASN:O	24:BC:70:LYS:C	2.50	0.54
28:BG:120:ILE:HD11	28:BG:132:LEU:CB	2.29	0.54
29:BH:2:GLN:O	29:BH:3:VAL:HG22	2.07	0.54
32:BK:7:MET:C	32:BK:8:LEU:HD23	2.33	0.54
33:BL:101:ILE:CG2	33:BL:102:GLY:N	2.71	0.54
36:BO:43:ASN:HD21	36:BO:46:GLU:HG2	1.72	0.54
37:BP:31:VAL:O	37:BP:31:VAL:HG13	2.06	0.54
41:BT:18:GLU:HA	41:BT:18:GLU:OE2	2.08	0.54
42:BU:42:LYS:HA	42:BU:58:VAL:O	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BX:5:GLN:HE21	45:BX:49:ARG:HB3	1.72	0.54
53:CA:284:C:H2'	53:CA:285:C:H6	1.72	0.54
53:CA:570:G:H1'	53:CA:820:U:C4	2.42	0.54
53:CA:1241:G:C4	53:CA:1242:G:N7	2.75	0.54
53:CA:1297:G:H5'	53:CA:1299:A:N7	2.23	0.54
3:CC:22:PHE:CD2	10:CJ:97:ASP:HB2	2.43	0.54
6:CF:42:TRP:HB2	6:CF:59:TYR:CB	2.36	0.54
8:CH:82:LEU:HD12	12:CL:3:VAL:CG1	2.38	0.54
12:CL:33:CYS:HA	12:CL:54:VAL:HA	1.90	0.54
56:CP:75:ILE:CG2	56:CP:80:LYS:HD2	2.37	0.54
22:DA:293:U:H5"	22:DA:294:A:OP2	2.08	0.54
22:DA:300:A:H1'	22:DA:333:G:N2	2.23	0.54
22:DA:506:G:H4'	22:DA:507:A:H5'	1.90	0.54
22:DA:528:A:H2	22:DA:2042:A:H2'	1.71	0.54
22:DA:647:G:C5	22:DA:648:G:N7	2.76	0.54
22:DA:1340:U:O2'	22:DA:1341:G:OP1	2.19	0.54
22:DA:1440:U:H2'	22:DA:1441:G:H8	1.72	0.54
22:DA:1737:G:C5	22:DA:1738:G:C6	2.96	0.54
22:DA:1965:C:H3'	22:DA:1966:A:H5"	1.89	0.54
22:DA:1973:G:C6	22:DA:1974:C:C4	2.96	0.54
22:DA:2259:U:H4'	22:DA:2427:C:O2'	2.06	0.54
22:DA:2550:G:O6	22:DA:2551:C:N4	2.41	0.54
25:DD:107:VAL:HG13	25:DD:203:VAL:HG23	1.88	0.54
25:DD:196:ALA:O	25:DD:197:THR:C	2.50	0.54
58:DF:39:VAL:HG22	58:DF:49:LEU:HG	1.89	0.54
30:DI:28:GLY:O	30:DI:29:GLN:C	2.50	0.54
30:DI:132:ALA:HA	30:DI:137:LEU:HD12	1.90	0.54
33:DL:3:LEU:O	33:DL:4:ASN:C	2.51	0.54
37:DP:105:LYS:HA	37:DP:108:ARG:NE	2.23	0.54
43:DV:30:ILE:HG12	43:DV:91:PHE:CB	2.33	0.54
45:DX:14:GLY:HA3	45:DX:28:PHE:HE1	1.72	0.54
1:AA:367:U:OP1	1:AA:395:C:H1'	2.08	0.54
1:AA:587:G:H4'	8:AH:3:GLN:HA	1.90	0.54
2:AB:117:GLU:HA	2:AB:120:SER:HB2	1.90	0.54
6:AF:16:GLU:CG	4:CD:191:SER:HB2	2.16	0.54
9:AI:93:LEU:HD12	9:AI:94:ARG:N	2.23	0.54
14:AN:60:ARG:O	14:AN:61:ASN:CB	2.54	0.54
19:AS:55:GLN:CD	19:AS:56:HIS:H	2.15	0.54
22:BA:278:A:C2	22:BA:362:A:C8	2.95	0.54
22:BA:983:A:C6	22:BA:984:A:C2	2.96	0.54
22:BA:1057:A:N7	22:BA:1086:A:H2'	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1085:A:H3'	22:BA:1086:A:H2	1.70	0.54
25:BD:34:VAL:HG22	25:BD:94:GLN:H	1.72	0.54
26:BE:101:TYR:O	26:BE:104:ALA:HB3	2.08	0.54
27:BF:60:SER:O	27:BF:61:GLY:C	2.49	0.54
28:BG:124:CYS:HB3	28:BG:126:THR:O	2.07	0.54
31:BJ:40:HIS:H	31:BJ:40:HIS:CD2	2.26	0.54
31:BJ:64:VAL:HG13	31:BJ:68:LYS:HB2	1.90	0.54
31:BJ:73:VAL:HG23	31:BJ:74:TYR:H	1.71	0.54
31:BJ:97:PRO:C	31:BJ:99:ARG:H	2.14	0.54
50:B2:3:ARG:HH21	50:B2:3:ARG:CG	2.16	0.54
53:CA:775:G:C2'	53:CA:776:G:H5'	2.38	0.54
53:CA:961:U:C4	53:CA:983:A:C6	2.95	0.54
53:CA:1017:U:OP2	53:CA:1017:U:H6	1.91	0.54
53:CA:1054:C:OP2	53:CA:1197:A:OP2	2.26	0.54
53:CA:1160:G:O6	53:CA:1181:G:C6	2.61	0.54
2:CB:128:LEU:O	2:CB:129:THR:C	2.51	0.54
2:CB:131:LYS:O	2:CB:131:LYS:HE3	2.07	0.54
5:CE:40:ASP:CG	5:CE:41:GLY:H	2.15	0.54
15:CO:62:ARG:HH22	15:CO:88:ARG:HH21	1.54	0.54
17:CQ:45:VAL:HG21	17:CQ:60:ILE:HG21	1.88	0.54
19:CS:54:ARG:CG	19:CS:55:GLN:H	2.20	0.54
22:DA:176:A:H3'	22:DA:177:G:H21	1.71	0.54
22:DA:481:G:H1'	22:DA:506:G:H21	1.73	0.54
22:DA:671:C:O2'	22:DA:672:C:P	2.66	0.54
22:DA:789:A:N1	62:DA:3320:HOH:O	2.34	0.54
22:DA:1274:A:C6	22:DA:1302:A:C2	2.95	0.54
22:DA:1515:A:H5'	22:DA:1557:C:H5'	1.88	0.54
22:DA:1788:C:O5'	22:DA:1788:C:H6	1.91	0.54
22:DA:2271:G:H2'	22:DA:2272:U:C6	2.43	0.54
22:DA:2760:C:H2'	22:DA:2761:A:H5'	1.90	0.54
57:DB:16:G:H2'	57:DB:17:C:C6	2.43	0.54
24:DC:125:PRO:HA	24:DC:191:LEU:HB2	1.90	0.54
58:DF:66:ILE:HG13	58:DF:83:PRO:HB3	1.90	0.54
31:DJ:80:HIS:HB3	31:DJ:81:ILE:HG13	1.90	0.54
31:DJ:106:LYS:HB2	31:DJ:119:PHE:CE2	2.40	0.54
32:DK:87:LEU:HD12	32:DK:92:GLU:CA	2.33	0.54
33:DL:90:VAL:HG13	33:DL:95:LEU:HD21	1.88	0.54
37:DP:50:ARG:CB	37:DP:57:ALA:H	2.21	0.54
39:DR:39:LEU:HB2	39:DR:49:ILE:HG12	1.89	0.54
43:DV:80:HIS:CD2	43:DV:83:LYS:H	2.26	0.54
45:DX:39:VAL:O	45:DX:41:SER:N	2.36	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:143:A:N3	1:AA:143:A:H2'	2.22	0.54
1:AA:1001:C:H2'	1:AA:1002:G:H8	1.72	0.54
1:AA:1488:G:O2'	1:AA:1489:G:H5'	2.08	0.54
15:AO:23:SER:HB3	15:AO:26:VAL:CG2	2.38	0.54
16:AP:20:VAL:HG21	16:AP:32:PHE:CG	2.43	0.54
22:BA:668:A:H2'	22:BA:670:A:H62	1.73	0.54
22:BA:996:A:H4'	38:BQ:91:ARG:CD	2.38	0.54
22:BA:1013:C:H2'	22:BA:1014:A:C8	2.40	0.54
22:BA:2308:G:HO2'	22:BA:2310:C:H5	1.54	0.54
23:BB:94:A:H2'	23:BB:95:U:C6	2.42	0.54
25:BD:68:PHE:HB3	25:BD:73:VAL:HG12	1.90	0.54
25:BD:98:VAL:O	25:BD:99:GLU:C	2.51	0.54
28:BG:96:ALA:O	28:BG:97:VAL:HB	2.07	0.54
31:BJ:117:ALA:HA	31:BJ:120:ARG:HH21	1.71	0.54
41:BT:8:LEU:N	41:BT:8:LEU:HD23	2.23	0.54
43:BV:93:ARG:O	43:BV:94:ALA:HB2	2.07	0.54
44:BW:22:VAL:O	44:BW:23:LYS:O	2.26	0.54
44:BW:67:LYS:HB3	44:BW:80:SER:H	1.73	0.54
53:CA:372:C:H4'	53:CA:373:A:C5'	2.38	0.54
53:CA:702:A:OP1	53:CA:702:A:C8	2.55	0.54
53:CA:935:A:N6	54:CG:2:ARG:CZ	2.70	0.54
53:CA:1066:C:H2'	53:CA:1067:A:N7	2.23	0.54
53:CA:1147:C:H4'	9:CI:6:TYR:CE1	2.43	0.54
53:CA:1299:A:N3	53:CA:1299:A:C2'	2.63	0.54
53:CA:1387:G:H2'	53:CA:1388:C:H6	1.72	0.54
53:CA:1477:U:H2'	53:CA:1478:U:C6	2.43	0.54
4:CD:25:ARG:HH12	4:CD:30:LYS:HE2	1.73	0.54
6:CF:67:PRO:O	6:CF:69:GLU:N	2.41	0.54
21:CU:31:VAL:O	21:CU:33:ARG:N	2.41	0.54
22:DA:250:G:OP1	33:DL:59:ARG:NH1	2.41	0.54
22:DA:716:A:H3'	22:DA:717:C:H5"	1.89	0.54
22:DA:962:G:O2'	22:DA:963:U:C6	2.59	0.54
22:DA:1265:A:N7	22:DA:1267:U:N3	2.56	0.54
22:DA:1286:A:O2'	22:DA:1288:G:N2	2.41	0.54
22:DA:1388:G:H2'	22:DA:1389:G:C8	2.41	0.54
22:DA:2230:G:H1'	45:DX:31:ASN:HB3	1.90	0.54
22:DA:2310:C:H2'	22:DA:2311:A:H5"	1.89	0.54
22:DA:2572:A:C8	25:DD:149:ASN:ND2	2.67	0.54
22:DA:2757:A:O2'	22:DA:2758:A:H5'	2.08	0.54
29:DH:102:ALA:C	29:DH:104:THR:H	2.16	0.54
30:DI:112:LYS:HZ3	30:DI:128:ILE:HD12	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DL:17:LYS:HE2	33:DL:19:LEU:HD13	1.90	0.54
38:DQ:111:LYS:CE	39:DR:48:LYS:HD3	2.38	0.54
43:DV:4:ILE:HD11	43:DV:50:MET:HE1	1.90	0.54
46:DY:18:LEU:O	46:DY:18:LEU:HD13	2.07	0.54
1:AA:485:U:O2'	1:AA:486:U:P	2.66	0.54
1:AA:508:U:H4'	1:AA:509:A:OP1	2.08	0.54
1:AA:896:C:O2'	1:AA:897:C:H5'	2.08	0.54
1:AA:1151:A:H5'	10:AJ:42:LEU:O	2.08	0.54
1:AA:1414:U:H2'	1:AA:1415:G:C8	2.42	0.54
3:AC:134:LYS:HE3	3:AC:138:GLN:HE22	1.71	0.54
11:AK:87:GLY:O	11:AK:92:ARG:HD2	2.08	0.54
11:AK:96:ILE:HG13	11:AK:97:ARG:N	2.22	0.54
12:AL:79:ILE:HD12	12:AL:96:THR:CG2	2.37	0.54
19:AS:62:THR:HB	19:AS:65:MET:HG3	1.88	0.54
22:BA:540:C:O2'	22:BA:541:A:H5'	2.08	0.54
22:BA:1040:A:H2	22:BA:1115:G:H22	1.54	0.54
22:BA:1277:G:C5'	35:BN:20:MET:CE	2.86	0.54
22:BA:1789:A:OP1	24:BC:220:ARG:HD3	2.08	0.54
22:BA:2199:A:H3'	22:BA:2200:C:C6	2.43	0.54
22:BA:2454:G:H1'	62:BA:3524:HOH:O	2.07	0.54
22:BA:2564:A:C2	22:BA:2647:U:H4'	2.43	0.54
23:BB:78:A:H2'	23:BB:79:G:O4'	2.08	0.54
24:BC:180:MET:CG	24:BC:268:ARG:HH11	2.17	0.54
25:BD:38:LYS:O	25:BD:46:ARG:HA	2.08	0.54
25:BD:97:SER:H	25:BD:99:GLU:CD	2.15	0.54
25:BD:100:LEU:HD23	25:BD:101:PHE:HE1	1.72	0.54
31:BJ:44:TYR:O	31:BJ:45:THR:CB	2.55	0.54
31:BJ:124:VAL:HG23	31:BJ:125:TYR:H	1.73	0.54
34:BM:33:LEU:CD2	34:BM:128:THR:HB	2.38	0.54
37:BP:3:ILE:HD13	37:BP:3:ILE:C	2.32	0.54
38:BQ:63:ARG:NH1	38:BQ:96:ASP:CA	2.48	0.54
40:BS:17:VAL:HG12	40:BS:76:VAL:HG11	1.90	0.54
42:BU:44:HIS:O	42:BU:45:GLN:C	2.49	0.54
43:BV:38:LEU:HD23	43:BV:40:ILE:HD11	1.89	0.54
44:BW:22:VAL:CG1	44:BW:25:PHE:HE2	2.20	0.54
53:CA:274:A:N3	53:CA:275:G:C8	2.76	0.54
53:CA:1051:C:O2'	53:CA:1052:U:C6	2.59	0.54
53:CA:1130:A:N7	53:CA:1146:A:N6	2.56	0.54
53:CA:1365:G:O2'	53:CA:1366:C:C5'	2.54	0.54
2:CB:67:LEU:HG	2:CB:157:PRO:HG3	1.90	0.54
6:CF:9:MET:HE1	18:CR:64:LEU:CA	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:CG:42:VAL:O	54:CG:43:TYR:HB2	2.07	0.54
8:CH:89:ASP:OD1	8:CH:89:ASP:N	2.40	0.54
9:CI:59:LYS:HE3	9:CI:60:LEU:CG	2.37	0.54
9:CI:61:ASP:O	9:CI:62:LEU:HD22	2.08	0.54
56:CP:16:PHE:CE2	56:CP:40:ASN:HB2	2.43	0.54
22:DA:300:A:H1'	22:DA:333:G:H21	1.73	0.54
22:DA:605:G:H1'	22:DA:657:U:O2'	2.07	0.54
22:DA:1512:C:H2'	22:DA:1513:U:O4'	2.08	0.54
22:DA:1531:C:H2'	22:DA:1532:A:O4'	2.08	0.54
22:DA:1810:A:H3'	22:DA:1811:G:H8	1.72	0.54
22:DA:1914:C:H3'	22:DA:1914:C:OP2	2.07	0.54
22:DA:2615:U:C2	48:D0:3:GLN:HA	2.43	0.54
24:DC:177:SER:O	24:DC:270:ARG:HG3	2.07	0.54
58:DF:103:ILE:HG21	58:DF:173:ASP:O	2.08	0.54
29:DH:5:LEU:O	29:DH:6:LEU:HD12	2.07	0.54
37:DP:28:LYS:HB3	37:DP:39:LEU:HD23	1.90	0.54
41:DT:50:LEU:HD23	41:DT:51:PHE:N	2.19	0.54
1:AA:270:A:H2'	1:AA:271:C:C6	2.43	0.53
1:AA:537:G:H5"	12:AL:109:ARG:HH12	1.72	0.53
1:AA:708:C:O2'	1:AA:709:U:H5'	2.07	0.53
1:AA:924:C:H2'	1:AA:925:G:C8	2.43	0.53
1:AA:1125:U:OP2	1:AA:1145:A:N6	2.42	0.53
2:AB:174:GLU:O	2:AB:178:LEU:HB2	2.08	0.53
13:AM:10:ASP:OD1	13:AM:44:ILE:HD13	2.09	0.53
21:AU:3:ILE:HA	21:AU:19:LYS:HZ1	1.71	0.53
22:BA:595:C:H2'	22:BA:596:U:C6	2.43	0.53
22:BA:1290:C:H2'	22:BA:1291:C:H6	1.73	0.53
22:BA:2092:U:C2	22:BA:2225:A:O2'	2.62	0.53
22:BA:2396:G:O2'	22:BA:2397:G:H5'	2.08	0.53
23:BB:46:A:H2'	23:BB:47:C:C6	2.42	0.53
31:BJ:44:TYR:O	31:BJ:45:THR:HG22	2.08	0.53
31:BJ:49:ASP:HA	31:BJ:118:MET:HE3	1.89	0.53
33:BL:19:LEU:HD23	33:BL:19:LEU:C	2.33	0.53
41:BT:39:THR:HB	41:BT:42:GLU:H	1.73	0.53
45:BX:6:VAL:HG13	45:BX:7:THR:HG23	1.90	0.53
53:CA:413:G:C6	4:CD:32:LYS:HE3	2.43	0.53
53:CA:960:U:C5	53:CA:1225:A:H1'	2.43	0.53
53:CA:1339:A:H2'	53:CA:1340:A:O4'	2.08	0.53
3:CC:133:MET:CE	3:CC:152:VAL:HG13	2.36	0.53
4:CD:84:ASN:HD22	4:CD:84:ASN:C	2.15	0.53
5:CE:79:THR:HA	5:CE:121:ASN:CG	2.34	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:61:LEU:HD13	6:CF:62:MET:H	1.73	0.53
9:CI:58:GLU:HG3	9:CI:59:LYS:N	2.22	0.53
14:CN:66:THR:CG2	14:CN:82:LYS:HE3	2.38	0.53
22:DA:64:A:OP1	41:DT:77:ARG:HG2	2.07	0.53
22:DA:90:U:H3'	22:DA:91:A:C5'	2.38	0.53
22:DA:676:A:H2	22:DA:2069:G:N3	2.05	0.53
22:DA:1056:G:N2	22:DA:1102:C:C5	2.74	0.53
22:DA:1475:G:O2'	22:DA:1476:U:C6	2.61	0.53
22:DA:1519:G:N1	22:DA:1520:U:C2	2.75	0.53
22:DA:1734:G:O2'	22:DA:1735:A:C8	2.58	0.53
33:DL:77:ILE:HG12	33:DL:101:ILE:HD11	1.90	0.53
35:DN:94:TYR:N	35:DN:94:TYR:CD1	2.72	0.53
37:DP:9:GLN:HA	37:DP:12:MET:HG3	1.88	0.53
40:DS:8:ARG:HA	40:DS:102:HIS:ND1	2.23	0.53
42:DU:3:LYS:HD3	42:DU:82:VAL:HG21	1.90	0.53
49:D1:34:GLU:HG3	49:D1:49:LYS:HB2	1.90	0.53
51:D3:15:LYS:HG2	51:D3:16:THR:H	1.73	0.53
1:AA:71:A:N6	1:AA:100:G:N7	2.56	0.53
1:AA:677:U:H3	1:AA:713:G:H22	1.55	0.53
3:AC:143:LEU:H	3:AC:143:LEU:HD22	1.74	0.53
3:AC:156:LEU:HD13	3:AC:163:ARG:HB2	1.89	0.53
4:AD:171:GLU:O	4:AD:179:GLY:HA2	2.07	0.53
5:AE:81:GLN:HG2	5:AE:149:PRO:HB3	1.91	0.53
7:AG:112:ASP:HB2	7:AG:118:ARG:HG2	1.89	0.53
12:AL:49:ARG:HH11	12:AL:49:ARG:CG	1.94	0.53
17:AQ:51:GLU:O	17:AQ:52:CYS:O	2.26	0.53
21:AU:16:ARG:HH11	21:AU:19:LYS:CG	2.21	0.53
22:BA:875:G:C2'	22:BA:876:C:H5'	2.37	0.53
22:BA:2327:A:H2'	22:BA:2328:A:C8	2.44	0.53
25:BD:114:LYS:NZ	25:BD:116:LYS:HE2	2.22	0.53
28:BG:84:LYS:HB2	28:BG:132:LEU:HG	1.90	0.53
31:BJ:40:HIS:C	31:BJ:41:LYS:CG	2.79	0.53
32:BK:40:LYS:HD2	32:BK:58:LEU:O	2.08	0.53
36:BO:11:ALA:HB2	36:BO:96:GLY:CA	2.37	0.53
37:BP:111:GLU:CD	37:BP:111:GLU:N	2.66	0.53
53:CA:321:A:N7	53:CA:328:C:C2	2.76	0.53
53:CA:411:A:N7	53:CA:413:G:C4	2.76	0.53
53:CA:701:U:C2'	53:CA:702:A:OP2	2.55	0.53
53:CA:790:A:N6	53:CA:791:G:C6	2.76	0.53
53:CA:876:C:O2'	8:CH:11:THR:HG21	2.08	0.53
5:CE:59:ILE:O	5:CE:59:ILE:HG13	2.05	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:CG:91:ARG:NH2	54:CG:92:PRO:HB2	2.23	0.53
10:CJ:52:LEU:HD21	10:CJ:59:LYS:HA	1.90	0.53
55:CM:22:TYR:HB2	55:CM:65:GLU:HG2	1.90	0.53
14:CN:63:CYS:HB3	14:CN:67:GLY:H	1.73	0.53
17:CQ:3:LYS:HZ2	17:CQ:6:THR:HG21	1.73	0.53
22:DA:608:A:C5	22:DA:621:A:N7	2.76	0.53
22:DA:665:U:H2'	22:DA:666:A:H8	1.73	0.53
22:DA:704:G:H1'	22:DA:727:A:N6	2.23	0.53
22:DA:991:C:H6	22:DA:991:C:O5'	1.91	0.53
22:DA:1773:A:H2'	22:DA:1774:C:O4'	2.08	0.53
22:DA:2298:A:H2'	22:DA:2299:U:C6	2.43	0.53
25:DD:11:MET:HE1	25:DD:192:ALA:CA	2.29	0.53
25:DD:108:ASP:N	25:DD:204:LYS:O	2.40	0.53
26:DE:128:ALA:O	26:DE:130:LYS:HG2	2.08	0.53
29:DH:33:GLN:O	29:DH:35:LYS:HG2	2.08	0.53
29:DH:80:ILE:HB	29:DH:101:ASP:HB3	1.89	0.53
32:DK:11:ALA:O	32:DK:99:ILE:HG23	2.08	0.53
33:DL:90:VAL:HB	33:DL:122:VAL:HA	1.89	0.53
35:DN:54:LEU:HD11	35:DN:66:ALA:HB2	1.90	0.53
39:DR:4:VAL:HG22	39:DR:40:MET:HB3	1.90	0.53
44:DW:18:LYS:CD	44:DW:19:ARG:HG2	2.38	0.53
1:AA:87:C:H2'	1:AA:88:U:O4'	2.07	0.53
1:AA:370:C:O2'	1:AA:371:A:H5'	2.08	0.53
2:AB:75:ALA:O	2:AB:79:VAL:HG23	2.07	0.53
3:AC:39:ARG:HG2	3:AC:54:ILE:HG12	1.89	0.53
4:AD:117:VAL:CA	4:AD:122:ILE:HD11	2.38	0.53
9:AI:41:GLU:O	9:AI:44:ARG:HG2	2.08	0.53
14:AN:60:ARG:HA	62:AN:202:HOH:O	2.08	0.53
22:BA:931:U:O4	22:BA:1166:G:N2	2.40	0.53
22:BA:1254:A:H5"	22:BA:1255:U:H5"	1.90	0.53
22:BA:1300:G:H4'	22:BA:1301:A:H5'	1.89	0.53
22:BA:1513:U:C2'	22:BA:1514:G:H5'	2.38	0.53
22:BA:1667:G:O2'	22:BA:1991:U:O4	2.17	0.53
22:BA:2895:G:H2'	22:BA:2896:C:C6	2.43	0.53
23:BB:46:A:C5	23:BB:47:C:C5	2.95	0.53
29:BH:21:VAL:HG21	29:BH:25:TYR:HD2	1.74	0.53
33:BL:58:TYR:C	33:BL:59:ARG:HG2	2.33	0.53
34:BM:46:ILE:HD12	34:BM:47:GLU:N	2.23	0.53
38:BQ:110:GLU:O	38:BQ:111:LYS:C	2.51	0.53
53:CA:197:A:H4'	53:CA:198:G:OP1	2.05	0.53
53:CA:216:U:H4'	53:CA:464:U:H4'	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:458:U:H6	53:CA:458:U:OP2	1.91	0.53
53:CA:1298:U:H5	54:CG:113:LYS:HA	1.73	0.53
53:CA:1319:A:N6	53:CA:1323:G:N3	2.56	0.53
3:CC:84:GLU:C	3:CC:86:LEU:N	2.67	0.53
11:CK:51:PHE:O	11:CK:52:ARG:HD2	2.07	0.53
17:CQ:19:SER:CB	17:CQ:70:LYS:HZ2	2.15	0.53
22:DA:14:A:N6	22:DA:526:A:C4	2.76	0.53
22:DA:468:G:H5"	26:DE:55:SER:CB	2.38	0.53
22:DA:1139:G:O2'	22:DA:1140:C:H5'	2.09	0.53
22:DA:1796:U:H2'	22:DA:1797:G:C8	2.44	0.53
22:DA:1937:A:H5"	62:DA:3714:HOH:O	2.08	0.53
22:DA:2353:G:H1'	44:DW:30:VAL:CG1	2.38	0.53
22:DA:2578:G:H21	25:DD:130:GLN:NE2	2.07	0.53
22:DA:2619:C:H4'	25:DD:156:PHE:O	2.07	0.53
22:DA:2847:U:C2'	22:DA:2848:G:H5'	2.38	0.53
25:DD:94:GLN:HG2	25:DD:94:GLN:O	2.09	0.53
26:DE:28:VAL:O	26:DE:31:VAL:HG22	2.08	0.53
32:DK:61:VAL:HG13	32:DK:87:LEU:HD22	1.90	0.53
34:DM:40:ARG:HB2	34:DM:93:VAL:HG21	1.90	0.53
34:DM:41:LEU:C	34:DM:93:VAL:HG23	2.33	0.53
47:DZ:6:ILE:HD12	47:DZ:47:ILE:HD11	1.90	0.53
1:AA:71:A:O2'	1:AA:72:A:C5'	2.51	0.53
1:AA:562:U:H1'	12:AL:11:ARG:HB3	1.90	0.53
1:AA:1152:A:H5'	10:AJ:15:HIS:HD2	1.72	0.53
1:AA:1314:C:OP2	19:AS:5:LYS:HD2	2.08	0.53
2:AB:9:LEU:HD23	2:AB:11:ALA:H	1.72	0.53
5:AE:114:LEU:HD21	5:AE:122:VAL:HG21	1.89	0.53
13:AM:92:ARG:CZ	13:AM:92:ARG:HB3	2.37	0.53
16:AP:6:LEU:HG	16:AP:17:TYR:HB3	1.91	0.53
17:AQ:12:VAL:CG1	17:AQ:13:SER:N	2.71	0.53
20:AT:43:LYS:HZ3	20:AT:86:ALA:HA	1.73	0.53
21:AU:32:ARG:HG2	21:AU:32:ARG:O	2.08	0.53
22:BA:163:C:O2'	22:BA:164:C:P	2.65	0.53
22:BA:969:G:H2'	22:BA:970:U:C6	2.42	0.53
22:BA:1773:A:H2'	22:BA:1774:C:H5'	1.90	0.53
22:BA:2195:U:H2'	22:BA:2196:C:H6	1.73	0.53
22:BA:2491:U:H5"	22:BA:2570:G:H5"	1.89	0.53
24:BC:147:PRO:HD3	24:BC:187:CYS:SG	2.47	0.53
28:BG:10:VAL:HB	28:BG:14:VAL:HG21	1.91	0.53
28:BG:84:LYS:CB	28:BG:132:LEU:H	2.21	0.53
31:BJ:38:GLY:O	31:BJ:43:GLU:HB2	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BL:92:LEU:HA	33:BL:125:LEU:HD21	1.90	0.53
44:BW:30:VAL:HG23	44:BW:59:PHE:HD1	1.74	0.53
44:BW:47:GLY:C	44:BW:49:ASN:H	2.15	0.53
46:BY:56:LEU:O	46:BY:57:LEU:CB	2.55	0.53
53:CA:203:G:H8	53:CA:203:G:O5'	1.91	0.53
53:CA:652:U:O2'	53:CA:653:U:OP2	2.26	0.53
53:CA:976:G:O5'	53:CA:1358:U:O2'	2.26	0.53
53:CA:977:A:H8	53:CA:1223:C:C4	2.26	0.53
53:CA:1181:G:O2'	53:CA:1182:G:O4'	2.25	0.53
3:CC:13:ILE:HG22	3:CC:14:VAL:HG23	1.90	0.53
5:CE:131:ASN:HD22	5:CE:132:PRO:CD	2.21	0.53
6:CF:3:HIS:HB2	6:CF:92:THR:HG23	1.89	0.53
6:CF:15:SER:OG	6:CF:58:HIS:CD2	2.61	0.53
6:CF:90:MET:HE2	18:CR:60:ARG:HD3	1.89	0.53
22:DA:55:G:N2	22:DA:116:C:C2	2.76	0.53
22:DA:196:A:N6	22:DA:831:G:H21	2.02	0.53
22:DA:565:C:H2'	22:DA:566:U:O4'	2.08	0.53
22:DA:995:C:HO2'	38:DQ:60:TRP:HZ2	1.46	0.53
22:DA:1248:G:O2'	38:DQ:2:ARG:HA	2.08	0.53
22:DA:1865:U:H2'	22:DA:1866:A:H8	1.72	0.53
22:DA:1996:C:H4'	22:DA:1997:C:OP1	2.08	0.53
22:DA:2212:A:N7	22:DA:2214:C:N4	2.57	0.53
22:DA:2229:U:H2'	22:DA:2230:G:C8	2.43	0.53
22:DA:2721:A:H2'	22:DA:2722:G:O4'	2.09	0.53
57:DB:44:G:H3'	58:DF:91:ARG:NE	2.23	0.53
24:DC:226:PRO:O	24:DC:227:VAL:C	2.50	0.53
26:DE:53:THR:OG1	26:DE:54:GLY:N	2.42	0.53
58:DF:59:ILE:HD13	58:DF:137:PHE:HZ	1.73	0.53
28:DG:120:ILE:HD13	28:DG:120:ILE:O	2.09	0.53
28:DG:175:LYS:HD3	28:DG:175:LYS:C	2.34	0.53
36:DO:51:ALA:HB3	36:DO:78:VAL:HG22	1.91	0.53
37:DP:59:THR:OG1	37:DP:72:VAL:HG12	2.08	0.53
1:AA:181:A:N6	1:AA:195:A:OP2	2.41	0.53
1:AA:579:A:O2'	15:AO:53:ARG:NH1	2.41	0.53
1:AA:829:G:O2'	2:AB:24:PRO:HG3	2.08	0.53
2:AB:49:PHE:HB2	2:AB:53:LEU:CD2	2.39	0.53
4:AD:61:ARG:NH1	4:AD:68:GLU:HG2	2.23	0.53
7:AG:20:GLU:O	7:AG:24:LYS:HG3	2.08	0.53
9:AI:24:ASN:H	9:AI:61:ASP:HB2	1.74	0.53
20:AT:25:SER:O	20:AT:28:ARG:HG3	2.09	0.53
22:BA:155:A:H2'	22:BA:156:A:C8	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1402:U:H2'	22:BA:1403:A:O5'	2.09	0.53
22:BA:1820:U:C2	24:BC:200:MET:HB2	2.44	0.53
22:BA:2109:U:H2'	22:BA:2110:G:H5'	1.90	0.53
22:BA:2544:G:O2'	22:BA:2545:G:H5'	2.08	0.53
24:BC:57:HIS:ND1	24:BC:58:LYS:N	2.45	0.53
24:BC:259:ASN:C	24:BC:261:ARG:H	2.16	0.53
29:BH:131:SER:HB2	29:BH:139:PHE:HD2	1.72	0.53
37:BP:57:ALA:HB1	37:BP:73:PHE:O	2.07	0.53
53:CA:545:C:H2'	53:CA:546:A:H5'	1.90	0.53
3:CC:137:VAL:O	3:CC:140:ALA:HB3	2.08	0.53
4:CD:58:GLN:O	4:CD:62:ARG:HG2	2.09	0.53
55:CM:68:LEU:HD22	55:CM:69:ARG:HH11	1.73	0.53
22:DA:103:A:O2'	22:DA:104:A:O4'	2.23	0.53
22:DA:197:A:H4'	22:DA:2068:U:H2'	1.91	0.53
22:DA:234:U:O2'	22:DA:235:U:C5'	2.56	0.53
22:DA:305:C:C2	22:DA:313:G:C2	2.96	0.53
22:DA:621:A:O2'	22:DA:622:G:O4'	2.24	0.53
22:DA:655:A:H4'	22:DA:656:G:OP1	2.07	0.53
22:DA:1255:U:H5'	22:DA:2502:G:N2	2.22	0.53
22:DA:1476:U:H2'	22:DA:1477:A:H8	1.73	0.53
22:DA:1519:G:C6	22:DA:1520:U:N3	2.76	0.53
22:DA:1565:C:H5"	24:DC:17:LYS:HE2	1.90	0.53
22:DA:1574:C:O5'	22:DA:1574:C:H6	1.91	0.53
22:DA:1605:C:C3'	22:DA:1606:C:C5'	2.87	0.53
22:DA:1607:C:C4'	22:DA:1608:A:C8	2.92	0.53
22:DA:1667:G:H8	22:DA:1667:G:O5'	1.91	0.53
22:DA:1799:G:C8	24:DC:179:GLU:OE1	2.55	0.53
22:DA:2039:U:H2'	22:DA:2040:G:C8	2.43	0.53
22:DA:2360:G:C1'	33:DL:60:ARG:HH21	2.22	0.53
22:DA:2725:A:C4	22:DA:2727:A:C8	2.95	0.53
24:DC:44:ASN:C	24:DC:46:GLY:N	2.63	0.53
31:DJ:45:THR:C	31:DJ:47:HIS:N	2.65	0.53
35:DN:16:HIS:O	35:DN:20:MET:HB2	2.09	0.53
40:DS:80:PRO:HD2	40:DS:100:THR:OG1	2.09	0.53
46:DY:57:LEU:HD13	46:DY:57:LEU:O	2.08	0.53
1:AA:189:A:O2'	1:AA:190:A:H5'	2.08	0.53
1:AA:443:C:O2'	1:AA:444:G:H5'	2.08	0.53
1:AA:844:G:H2'	1:AA:844:G:N3	2.22	0.53
3:AC:46:LEU:HB3	3:AC:49:ALA:HB3	1.91	0.53
9:AI:28:VAL:HB	9:AI:63:TYR:CD2	2.38	0.53
10:AJ:57:VAL:HG22	10:AJ:58:ASN:N	2.18	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:65:TYR:CB	14:AN:95:LEU:HD11	2.39	0.53
12:AL:72:ASN:CG	12:AL:73:LEU:H	2.13	0.53
19:AS:10:ILE:HD11	19:AS:15:LEU:HB2	1.91	0.53
22:BA:517:C:OP2	48:B0:9:ARG:NH2	2.36	0.53
22:BA:1183:U:H2'	22:BA:1184:U:C6	2.43	0.53
22:BA:2522:U:O2'	22:BA:2647:U:OP1	2.25	0.53
22:BA:2813:A:H2	22:BA:2887:A:H62	1.54	0.53
25:BD:122:VAL:HG12	25:BD:123:LYS:H	1.73	0.53
26:BE:154:ASP:OD2	26:BE:157:LEU:HB3	2.09	0.53
27:BF:84:ILE:O	27:BF:84:ILE:HG13	2.08	0.53
36:BO:3:LYS:HG3	36:BO:4:LYS:N	2.23	0.53
42:BU:17:ASP:HB3	42:BU:20:LYS:HD3	1.91	0.53
44:BW:17:ALA:HA	44:BW:35:ILE:CG2	2.30	0.53
51:B3:30:HIS:O	51:B3:31:ILE:C	2.52	0.53
53:CA:197:A:H4'	53:CA:198:G:O5'	2.08	0.53
53:CA:346:G:N3	53:CA:346:G:C2'	2.71	0.53
53:CA:1067:A:H1'	53:CA:1068:G:H8	1.73	0.53
53:CA:1073:U:C2	53:CA:1074:G:C8	2.96	0.53
53:CA:1161:C:O2	53:CA:1176:A:C2	2.61	0.53
53:CA:1365:G:C2	53:CA:1366:C:C2	2.97	0.53
3:CC:35:ASP:CG	3:CC:56:ILE:HD12	2.33	0.53
4:CD:148:ALA:O	4:CD:151:GLN:HB2	2.08	0.53
55:CM:86:ARG:NH1	55:CM:90:HIS:HD2	2.06	0.53
15:CO:38:LEU:HD12	15:CO:41:HIS:HB3	1.90	0.53
22:DA:57:C:O2'	41:DT:36:LYS:HE2	2.08	0.53
22:DA:319:G:C6	22:DA:333:G:C6	2.96	0.53
22:DA:323:C:H2'	26:DE:163:ASN:CG	2.33	0.53
22:DA:373:U:HO2'	22:DA:374:A:H8	1.51	0.53
22:DA:489:G:H4'	22:DA:490:C:OP1	2.05	0.53
22:DA:655:A:H4'	22:DA:656:G:H5'	1.91	0.53
22:DA:1045:C:H1'	22:DA:1047:G:C2	2.44	0.53
22:DA:1071:G:O6	22:DA:1089:A:C2	2.62	0.53
22:DA:1087:G:C4	22:DA:1089:A:C2	2.96	0.53
22:DA:1413:A:C6	22:DA:1414:C:N4	2.77	0.53
22:DA:1609:A:N6	22:DA:1616:A:C2	2.76	0.53
22:DA:2443:C:C2'	22:DA:2444:G:H5'	2.38	0.53
22:DA:2458:G:H8	22:DA:2459:A:N6	2.01	0.53
22:DA:2607:G:H2'	22:DA:2608:G:O4'	2.08	0.53
22:DA:2638:G:O2'	22:DA:2639:A:H8	1.91	0.53
24:DC:8:THR:O	24:DC:9:SER:CB	2.57	0.53
24:DC:44:ASN:O	24:DC:46:GLY:N	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:73:ILE:O	26:DE:73:ILE:HG13	2.09	0.53
58:DF:43:ILE:HG12	58:DF:77:LYS:HD3	1.91	0.53
29:DH:8:LYS:HD2	29:DH:8:LYS:C	2.32	0.53
31:DJ:69:ARG:CZ	31:DJ:89:PHE:HE1	2.22	0.53
33:DL:9:ALA:HB3	33:DL:12:SER:HB3	1.89	0.53
33:DL:123:ARG:HA	33:DL:143:GLU:HB3	1.89	0.53
48:D0:30:ASP:OD1	48:D0:47:TYR:HB3	2.09	0.53
1:AA:358:U:H2'	1:AA:359:G:C8	2.43	0.53
1:AA:1031:C:C2'	1:AA:1032:G:OP2	2.56	0.53
1:AA:1469:C:H5'	1:AA:1469:C:C6	2.38	0.53
4:AD:145:ARG:HD2	4:AD:147:LYS:HE2	1.90	0.53
8:AH:6:ILE:HB	8:AH:76:ARG:NH1	2.22	0.53
15:AO:73:ASP:O	15:AO:74:VAL:C	2.51	0.53
22:BA:962:G:N2	22:BA:2250:G:H1	2.06	0.53
22:BA:1607:C:N4	22:BA:1622:G:C5	2.77	0.53
23:BB:65:U:C4	23:BB:108:A:C4	2.97	0.53
26:BE:176:ASP:OD1	26:BE:176:ASP:C	2.52	0.53
31:BJ:49:ASP:OD1	31:BJ:121:LYS:HE2	2.07	0.53
37:BP:64:SER:O	37:BP:65:ASN:C	2.51	0.53
39:BR:49:ILE:HG22	39:BR:54:VAL:N	2.23	0.53
44:BW:16:GLU:OE2	44:BW:16:GLU:CA	2.57	0.53
53:CA:59:A:H2'	53:CA:59:A:N3	2.24	0.53
53:CA:106:C:O2	53:CA:379:C:H4'	2.09	0.53
53:CA:1346:A:C8	53:CA:1348:U:N3	2.77	0.53
2:CB:147:LEU:HD12	2:CB:147:LEU:N	2.24	0.53
2:CB:161:PHE:HA	2:CB:183:PHE:O	2.09	0.53
4:CD:12:ARG:NH2	4:CD:36:ALA:O	2.33	0.53
12:CL:80:LEU:HD23	12:CL:97:VAL:HG21	1.90	0.53
22:DA:140:C:H5'	22:DA:141:G:N2	2.24	0.53
22:DA:203:A:O5'	22:DA:204:A:H2'	2.09	0.53
22:DA:223:A:N6	22:DA:422:A:N6	2.57	0.53
22:DA:639:U:H2'	22:DA:640:C:C6	2.43	0.53
22:DA:674:G:H1'	26:DE:69:ARG:HE	1.74	0.53
22:DA:953:G:H5"	34:DM:16:ARG:CZ	2.38	0.53
22:DA:1373:A:H2'	22:DA:1374:G:O4'	2.09	0.53
22:DA:1511:G:O2'	22:DA:1512:C:H5'	2.08	0.53
22:DA:1515:A:H4'	22:DA:1556:C:HO2'	1.74	0.53
22:DA:1737:G:C6	22:DA:1738:G:N1	2.76	0.53
22:DA:2391:G:O2'	22:DA:2392:A:O5'	2.27	0.53
22:DA:2577:A:H5"	22:DA:2578:G:H5'	1.91	0.53
22:DA:2636:C:H2'	22:DA:2637:U:H6	1.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:166:ARG:CB	24:DC:171:VAL:HG22	2.37	0.53
41:DT:4:GLU:HG3	41:DT:6:ARG:HH21	1.74	0.53
45:DX:19:HIS:O	45:DX:20:ALA:HB3	2.09	0.53
1:AA:414:A:H2'	1:AA:415:A:H8	1.72	0.53
1:AA:433:G:C2'	1:AA:434:U:H5'	2.38	0.53
1:AA:1355:G:O2'	1:AA:1356:G:H5'	2.09	0.53
2:AB:202:ASN:HB3	2:AB:208:ALA:CB	2.39	0.53
11:AK:57:SER:O	11:AK:90:PRO:HG3	2.08	0.53
22:BA:545:U:O2	22:BA:545:U:O4'	2.23	0.53
22:BA:817:C:O2'	22:BA:839:U:H5"	2.08	0.53
22:BA:1014:A:O2'	22:BA:1015:U:H5'	2.09	0.53
22:BA:1045:C:C4'	22:BA:1046:A:H5'	2.38	0.53
22:BA:2145:C:OP1	22:BA:2148:G:C5	2.62	0.53
24:BC:67:LYS:HG2	24:BC:150:GLY:HA2	1.90	0.53
29:BH:43:ASN:N	29:BH:43:ASN:HD22	2.06	0.53
30:BI:126:ARG:HA	30:BI:129:GLU:CG	2.39	0.53
31:BJ:40:HIS:CD2	31:BJ:41:LYS:HG2	2.44	0.53
34:BM:13:HIS:O	34:BM:14:LYS:CB	2.56	0.53
36:BO:51:ALA:HB3	36:BO:78:VAL:HG13	1.91	0.53
37:BP:33:GLU:HB3	37:BP:36:LYS:H	1.74	0.53
44:BW:46:ALA:HB3	44:BW:79:ILE:C	2.32	0.53
53:CA:745:G:H2'	53:CA:746:A:C8	2.44	0.53
53:CA:764:C:C4	53:CA:812:G:O6	2.62	0.53
53:CA:1481:U:H2'	53:CA:1482:G:C8	2.43	0.53
10:CJ:41:PRO:O	10:CJ:42:LEU:HB2	2.08	0.53
11:CK:74:LYS:O	11:CK:74:LYS:HG2	2.09	0.53
12:CL:75:GLU:C	12:CL:77:SER:H	2.17	0.53
14:CN:33:VAL:HG22	14:CN:40:ARG:NH2	2.23	0.53
21:CU:25:ALA:O	21:CU:29:ALA:N	2.40	0.53
22:DA:173:A:H2'	22:DA:174:U:H6	1.72	0.53
22:DA:204:A:C4	22:DA:206:U:O4	2.61	0.53
22:DA:406:G:O2'	22:DA:407:G:C8	2.60	0.53
22:DA:478:A:C6	22:DA:480:A:C5	2.97	0.53
22:DA:571:U:C4	22:DA:2030:A:C6	2.96	0.53
22:DA:1240:U:H2'	22:DA:1240:U:O2	2.08	0.53
22:DA:1384:A:H1'	22:DA:1405:U:H1'	1.91	0.53
22:DA:1429:G:O2'	22:DA:1430:G:C8	2.45	0.53
22:DA:1992:G:N2	22:DA:1995:U:C5	2.77	0.53
22:DA:2025:C:OP1	25:DD:154:LYS:HE2	2.09	0.53
22:DA:2069:G:N2	22:DA:2443:C:C2	2.77	0.53
22:DA:2286:G:O6	49:D1:22:THR:HG21	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2591:C:OP1	24:DC:237:ARG:HD2	2.08	0.53
57:DB:28:C:OP1	36:DO:31:THR:HG21	2.09	0.53
57:DB:85:G:O2'	57:DB:86:G:H5'	2.09	0.53
25:DD:45:TYR:HE2	25:DD:47:ALA:HB3	1.74	0.53
25:DD:125:TRP:CD1	25:DD:160:LYS:HB3	2.43	0.53
26:DE:130:LYS:H	26:DE:160:ALA:HB2	1.74	0.53
30:DI:96:LYS:HE2	30:DI:138:VAL:HG11	1.91	0.53
31:DJ:13:ARG:HG2	31:DJ:51:GLY:O	2.09	0.53
33:DL:93:ASN:CG	33:DL:94:THR:N	2.63	0.53
37:DP:102:ARG:HD2	37:DP:106:ALA:O	2.09	0.53
41:DT:7:LEU:O	41:DT:7:LEU:HD23	2.09	0.53
42:DU:44:HIS:HD2	42:DU:57:ILE:HG21	1.74	0.53
1:AA:250:A:C8	1:AA:252:U:C4	2.97	0.53
3:AC:148:ILE:HG13	3:AC:200:TRP:O	2.09	0.53
4:AD:99:ASN:O	4:AD:103:ARG:HB2	2.09	0.53
5:AE:55:VAL:N	5:AE:56:PRO:HD2	2.23	0.53
7:AG:99:ALA:O	7:AG:103:ILE:HG13	2.09	0.53
14:AN:88:MET:HE1	14:AN:97:LYS:HD2	1.89	0.53
19:AS:13:HIS:O	19:AS:17:LYS:HG3	2.09	0.53
22:BA:1252:G:C2	38:BQ:32:ARG:HG2	2.44	0.53
22:BA:1486:U:H2'	22:BA:1487:U:C6	2.44	0.53
24:BC:242:HIS:O	24:BC:244:VAL:HG13	2.08	0.53
27:BF:45:ASP:CB	27:BF:48:LEU:HB2	2.38	0.53
27:BF:71:LYS:HD3	27:BF:80:GLN:HG3	1.91	0.53
29:BH:44:ILE:O	29:BH:48:GLU:HB2	2.09	0.53
34:BM:64:TRP:CZ3	34:BM:106:ASP:HB2	2.44	0.53
41:BT:4:GLU:CD	41:BT:5:GLU:H	2.16	0.53
53:CA:512:U:O2'	53:CA:513:C:C5'	2.57	0.53
53:CA:545:C:C2'	53:CA:546:A:H5'	2.39	0.53
53:CA:876:C:C1'	8:CH:11:THR:HG21	2.39	0.53
53:CA:1327:C:C4	53:CA:1328:C:N4	2.77	0.53
53:CA:1328:C:H2'	53:CA:1329:A:C8	2.44	0.53
53:CA:1442:G:H2'	53:CA:1443:C:C6	2.43	0.53
2:CB:100:LEU:O	2:CB:103:TRP:HE3	1.92	0.53
54:CG:59:GLU:HG3	54:CG:60:ALA:N	2.24	0.53
8:CH:85:TYR:CD2	8:CH:123:GLU:HB2	2.44	0.53
14:CN:6:LYS:O	14:CN:10:VAL:HG23	2.08	0.53
18:CR:72:ARG:HA	21:CU:4:LYS:HE3	1.90	0.53
20:CT:73:ARG:CG	20:CT:73:ARG:NH1	2.57	0.53
21:CU:24:LYS:CG	21:CU:25:ALA:N	2.59	0.53
22:DA:125:A:H3'	50:D2:19:ARG:HD2	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:518:G:H2'	22:DA:519:U:H6	1.74	0.53
22:DA:1534:U:C6	22:DA:1538:G:N1	2.73	0.53
57:DB:11:C:C5	57:DB:12:C:C5	2.96	0.53
57:DB:69:G:H3'	57:DB:70:C:H6	1.74	0.53
25:DD:117:GLY:O	25:DD:119:ALA:N	2.41	0.53
29:DH:120:GLY:O	29:DH:121:VAL:HB	2.09	0.53
35:DN:103:ARG:HB2	35:DN:110:MET:SD	2.49	0.53
36:DO:51:ALA:HB3	36:DO:78:VAL:CG2	2.38	0.53
42:DU:34:ILE:HG12	42:DU:62:ALA:O	2.09	0.53
45:DX:29:LEU:HB2	45:DX:30:PRO:HD2	1.90	0.53
1:AA:328:C:O2	1:AA:328:C:H2'	2.08	0.53
1:AA:723:U:H5'	21:AU:48:LYS:HG2	1.91	0.53
1:AA:1277:C:HO2'	1:AA:1279:G:H8	0.70	0.53
2:AB:212:TYR:O	2:AB:216:VAL:HG23	2.09	0.53
4:AD:22:SER:O	4:AD:23:GLY:C	2.52	0.53
4:AD:55:ARG:HH12	4:AD:58:GLN:CB	2.22	0.53
4:AD:117:VAL:HA	4:AD:122:ILE:HD11	1.91	0.53
4:AD:147:LYS:O	4:AD:149:LYS:N	2.42	0.53
7:AG:145:GLU:HA	7:AG:148:LYS:HB2	1.90	0.53
9:AI:112:ARG:NH2	10:AJ:64:GLN:HE22	2.07	0.53
20:AT:77:ASN:HD22	20:AT:77:ASN:N	2.06	0.53
22:BA:513:A:O2'	22:BA:514:A:H5'	2.09	0.53
22:BA:528:A:H3'	22:BA:528:A:C8	2.44	0.53
22:BA:1254:A:H5"	22:BA:1255:U:C5'	2.39	0.53
22:BA:1434:A:OP1	22:BA:1434:A:H4'	2.08	0.53
22:BA:1857:G:H1'	22:BA:1858:A:OP2	2.09	0.53
22:BA:2667:C:C2'	22:BA:2668:G:H5'	2.38	0.53
22:BA:2823:A:C2'	22:BA:2824:C:H5'	2.39	0.53
25:BD:117:GLY:C	25:BD:118:PHE:CD1	2.87	0.53
27:BF:134:GLN:CG	27:BF:135:ILE:H	2.21	0.53
28:BG:33:THR:N	28:BG:34:ARG:HH11	2.06	0.53
34:BM:49:ALA:O	34:BM:50:ARG:C	2.52	0.53
37:BP:79:VAL:HG23	37:BP:79:VAL:O	2.07	0.53
38:BQ:114:ALA:C	38:BQ:116:LEU:N	2.65	0.53
53:CA:143:A:H2'	53:CA:143:A:N3	2.24	0.53
53:CA:598:U:H4'	8:CH:85:TYR:CD1	2.43	0.53
53:CA:802:A:H2'	53:CA:803:G:O5'	2.09	0.53
53:CA:1018:G:H2'	53:CA:1019:A:O4'	2.09	0.53
53:CA:1524:C:OP2	11:CK:124:LYS:NZ	2.42	0.53
5:CE:48:GLY:HA3	5:CE:66:ALA:HB2	1.90	0.53
6:CF:81:ASN:O	6:CF:82:ASP:C	2.52	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CN:50:LEU:HB2	14:CN:51:PRO:HD3	1.91	0.53
15:CO:52:ARG:O	15:CO:55:LEU:HB3	2.09	0.53
22:DA:142:A:O2'	22:DA:143:C:O4'	2.26	0.53
22:DA:422:A:C2	22:DA:423:A:C5	2.97	0.53
22:DA:691:C:O2'	22:DA:692:C:H5'	2.09	0.53
22:DA:826:U:H5'	22:DA:2428:G:O2'	2.09	0.53
22:DA:1387:A:C4	22:DA:1388:G:N7	2.77	0.53
22:DA:1545:A:H2'	22:DA:1546:G:O4'	2.09	0.53
22:DA:2096:C:H2'	22:DA:2097:A:C8	2.43	0.53
22:DA:2287:A:N6	22:DA:2289:G:C4	2.77	0.53
22:DA:2788:C:H2'	22:DA:2789:C:C6	2.44	0.53
24:DC:74:PRO:HA	24:DC:116:GLN:HG3	1.91	0.53
25:DD:33:ARG:NH2	25:DD:51:THR:HG22	2.24	0.53
25:DD:141:ARG:HH11	25:DD:141:ARG:HB3	1.73	0.53
26:DE:108:ILE:O	26:DE:108:ILE:HD13	2.08	0.53
26:DE:128:ALA:HB1	26:DE:129:PRO:CD	2.38	0.53
1:AA:495:A:C6	1:AA:496:A:N6	2.77	0.52
1:AA:1224:U:O2'	1:AA:1322:C:OP1	2.26	0.52
2:AB:65:LYS:HG2	2:AB:153:MET:HG3	1.90	0.52
5:AE:123:LEU:H	5:AE:123:LEU:HD12	1.74	0.52
6:AF:47:LEU:CD1	6:AF:51:ILE:HG22	2.39	0.52
8:AH:44:PHE:HE2	8:AH:100:ILE:HG12	1.75	0.52
12:AL:1:ALA:HB3	12:AL:5:GLN:OE1	2.09	0.52
12:AL:2:THR:HG22	12:AL:4:ASN:N	2.24	0.52
15:AO:29:ALA:HA	15:AO:84:LEU:HD21	1.90	0.52
22:BA:1859:U:H2'	22:BA:1860:G:C8	2.41	0.52
22:BA:2063:C:O2	22:BA:2450:A:N1	2.42	0.52
22:BA:2182:U:H2'	22:BA:2183:A:OP1	2.09	0.52
26:BE:23:PHE:CD1	26:BE:111:GLU:HG3	2.43	0.52
26:BE:132:LYS:NZ	26:BE:132:LYS:HB3	2.24	0.52
35:BN:65:LEU:HD11	35:BN:69:ARG:NH2	2.24	0.52
37:BP:37:LYS:HD3	37:BP:37:LYS:H	1.73	0.52
43:BV:10:LYS:H	43:BV:10:LYS:CD	2.07	0.52
44:BW:19:ARG:HH22	44:BW:22:VAL:HG21	1.73	0.52
44:BW:28:GLU:HG3	44:BW:29:SER:N	2.24	0.52
49:B1:33:LEU:H	49:B1:51:ALA:CB	2.23	0.52
53:CA:251:G:N2	53:CA:253:A:H62	2.07	0.52
53:CA:913:A:C4'	53:CA:914:A:O5'	2.49	0.52
53:CA:1129:C:HO2'	53:CA:1130:A:H8	1.49	0.52
2:CB:137:THR:O	2:CB:140:LEU:HB3	2.09	0.52
9:CI:49:GLN:HA	9:CI:52:GLU:HG2	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:74:GLN:O	9:CI:78:ILE:HG13	2.09	0.52
10:CJ:65:TYR:HD2	14:CN:96:LYS:O	1.92	0.52
14:CN:20:PHE:HE1	14:CN:54:SER:HB2	1.74	0.52
15:CO:2:LEU:HD22	15:CO:34:GLN:HG2	1.91	0.52
15:CO:44:GLU:O	15:CO:45:HIS:C	2.51	0.52
56:CP:52:LEU:O	56:CP:53:ASP:HB2	2.09	0.52
22:DA:35:G:C5	22:DA:454:A:C2	2.97	0.52
22:DA:55:G:C2	22:DA:116:C:C2	2.97	0.52
22:DA:443:A:H2'	26:DE:40:ARG:NE	2.23	0.52
22:DA:447:A:H5'	22:DA:449:A:C8	2.44	0.52
22:DA:466:A:P	50:D2:34:ARG:HH21	2.32	0.52
22:DA:607:U:H5	22:DA:619:G:C5	2.26	0.52
22:DA:670:A:H4'	22:DA:671:C:O5'	2.09	0.52
22:DA:1056:G:OP2	22:DA:1056:G:H3'	2.08	0.52
22:DA:1069:A:O2'	22:DA:1072:C:OP2	2.25	0.52
22:DA:1313:U:OP1	62:DA:3405:HOH:O	2.19	0.52
22:DA:1438:U:H2'	22:DA:1439:A:O4'	2.09	0.52
22:DA:2331:G:H4'	44:DW:41:GLY:N	2.24	0.52
22:DA:2531:A:C5'	28:DG:156:TYR:CZ	2.93	0.52
22:DA:2847:U:H2'	22:DA:2848:G:C5'	2.39	0.52
38:DQ:10:ARG:CZ	38:DQ:10:ARG:HB2	2.39	0.52
1:AA:1510:C:H2'	1:AA:1511:G:C8	2.44	0.52
2:AB:218:ALA:HA	2:AB:221:ARG:NH2	2.20	0.52
4:AD:106:PHE:CD1	4:AD:144:ILE:HD11	2.43	0.52
6:AF:85:ILE:O	6:AF:86:ARG:C	2.52	0.52
7:AG:49:LEU:HD12	7:AG:60:ALA:HB1	1.91	0.52
12:AL:76:HIS:O	12:AL:77:SER:HB2	2.09	0.52
22:BA:150:U:H2'	22:BA:151:C:C6	2.44	0.52
22:BA:563:A:C2	22:BA:564:C:C2	2.96	0.52
22:BA:885:C:H6	22:BA:885:C:O5'	1.92	0.52
22:BA:995:C:H5'	22:BA:995:C:C6	2.43	0.52
22:BA:1319:C:C2'	22:BA:1320:C:H5'	2.39	0.52
22:BA:1644:C:H2'	22:BA:1645:G:H5'	1.91	0.52
22:BA:1726:C:H2'	22:BA:1727:C:H6	1.74	0.52
22:BA:1794:A:H2'	22:BA:1795:C:C6	2.44	0.52
22:BA:1964:G:H4'	22:BA:1965:C:OP2	2.09	0.52
22:BA:2727:A:O2'	22:BA:2728:U:H5'	2.09	0.52
25:BD:62:LYS:HB2	25:BD:63:PRO:HD3	1.90	0.52
28:BG:8:VAL:CG1	28:BG:9:VAL:N	2.73	0.52
30:BI:78:LEU:HD23	30:BI:81:LYS:HE3	1.90	0.52
30:BI:105:LEU:HD23	30:BI:108:ILE:HG21	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:32:LEU:O	31:BJ:36:LEU:HB2	2.08	0.52
32:BK:10:VAL:HG12	32:BK:12:ASP:H	1.74	0.52
35:BN:38:LEU:CD1	35:BN:42:LYS:HD2	2.39	0.52
53:CA:9:G:N2	53:CA:10:A:C4	2.78	0.52
53:CA:83:C:C2	53:CA:87:C:N4	2.77	0.52
53:CA:269:C:H2'	53:CA:270:A:H8	1.72	0.52
53:CA:952:U:H5	55:CM:102:LYS:HZ1	1.57	0.52
53:CA:1284:C:C5'	53:CA:1285:A:H5"	2.40	0.52
3:CC:185:THR:O	3:CC:186:SER:HB2	2.09	0.52
11:CK:33:ILE:HG13	11:CK:73:VAL:HG21	1.90	0.52
56:CP:44:SER:N	56:CP:46:LYS:HZ2	2.03	0.52
22:DA:223:A:C6	22:DA:422:A:C5	2.98	0.52
22:DA:329:G:H4'	22:DA:330:A:OP2	2.08	0.52
22:DA:453:A:H4'	22:DA:472:A:H62	1.74	0.52
22:DA:784:G:O2'	22:DA:785:G:H5"	2.10	0.52
22:DA:1051:G:H5'	22:DA:2752:C:H1'	1.91	0.52
22:DA:1059:G:O2'	30:DI:131:THR:HG21	2.08	0.52
22:DA:1275:A:C4	35:DN:16:HIS:HD2	2.26	0.52
22:DA:1324:G:O2'	22:DA:1616:A:N6	2.42	0.52
22:DA:1373:A:C5'	22:DA:2212:A:H1'	2.38	0.52
22:DA:1769:U:H1'	22:DA:1984:G:N2	2.23	0.52
22:DA:2266:A:C4'	22:DA:2267:A:O5'	2.49	0.52
22:DA:2577:A:C2	48:D0:1:ALA:N	2.77	0.52
26:DE:112:LEU:HD12	26:DE:118:LEU:HD13	1.91	0.52
26:DE:149:ILE:O	26:DE:149:ILE:HG12	2.09	0.52
29:DH:41:LYS:H	29:DH:44:ILE:HG23	1.75	0.52
44:DW:20:LEU:HD11	44:DW:35:ILE:CG1	2.38	0.52
44:DW:25:PHE:O	44:DW:27:GLY:N	2.38	0.52
44:DW:33:GLY:O	44:DW:34:SER:CB	2.57	0.52
44:DW:44:PHE:HB3	44:DW:78:PHE:CD1	2.45	0.52
1:AA:386:C:C2'	1:AA:387:U:H5'	2.40	0.52
1:AA:1063:C:H2'	1:AA:1064:G:C8	2.44	0.52
1:AA:1081:A:H5'	5:AE:22:LYS:HG3	1.92	0.52
2:AB:18:GLN:O	2:AB:37:VAL:HG23	2.09	0.52
8:AH:48:PHE:O	8:AH:49:LYS:CB	2.58	0.52
8:AH:93:LYS:CE	8:AH:116:ARG:HH12	2.23	0.52
11:AK:124:LYS:O	21:AU:33:ARG:CZ	2.58	0.52
16:AP:28:ARG:HE	16:AP:29:ASN:HD21	1.55	0.52
22:BA:39:G:H2'	22:BA:40:U:H6	1.73	0.52
22:BA:789:A:OP1	22:BA:790:U:C5	2.62	0.52
22:BA:1032:A:H1'	52:B4:23:ILE:CD1	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:119:ILE:O	26:BE:187:VAL:O	2.26	0.52
27:BF:127:TYR:O	27:BF:128:SER:HB2	2.09	0.52
28:BG:8:VAL:HG12	28:BG:49:LEU:H	1.74	0.52
28:BG:86:LEU:CD1	28:BG:132:LEU:HD21	2.39	0.52
29:BH:2:GLN:HG2	29:BH:20:ASN:HD22	1.74	0.52
30:BI:75:ALA:HB3	30:BI:131:THR:HG21	1.91	0.52
30:BI:126:ARG:HA	30:BI:129:GLU:CD	2.35	0.52
33:BL:93:ASN:HD22	33:BL:94:THR:CA	2.23	0.52
36:BO:28:VAL:HG23	36:BO:36:TYR:O	2.09	0.52
38:BQ:63:ARG:HH22	38:BQ:96:ASP:CA	2.21	0.52
38:BQ:63:ARG:HH22	38:BQ:96:ASP:CB	2.20	0.52
40:BS:74:ILE:HD12	40:BS:105:VAL:HG22	1.91	0.52
44:BW:9:THR:HG23	44:BW:10:ARG:CD	2.24	0.52
53:CA:460:A:O3'	53:CA:462:G:OP2	2.27	0.52
53:CA:734:G:N2	18:CR:63:TYR:CE2	2.78	0.52
53:CA:1241:G:C2	53:CA:1242:G:N7	2.78	0.52
53:CA:1245:C:H2'	53:CA:1246:A:C8	2.37	0.52
2:CB:133:ALA:HA	2:CB:137:THR:HG21	1.91	0.52
5:CE:131:ASN:C	5:CE:135:VAL:HG23	2.34	0.52
54:CG:41:ILE:HG21	54:CG:115:MET:HE3	1.91	0.52
9:CI:35:GLU:HA	9:CI:39:GLY:CA	2.38	0.52
10:CJ:84:VAL:CG2	10:CJ:85:ASP:H	2.08	0.52
11:CK:74:LYS:HG3	11:CK:78:ILE:HG12	1.91	0.52
14:CN:53:ASP:HA	14:CN:58:ARG:HD3	1.91	0.52
22:DA:126:A:H2'	50:D2:46:LYS:CE	2.39	0.52
22:DA:296:U:C2	22:DA:297:G:C8	2.97	0.52
22:DA:349:U:H2'	22:DA:350:G:H8	1.73	0.52
22:DA:464:U:C1'	22:DA:686:U:H5	2.17	0.52
22:DA:478:A:N1	22:DA:480:A:C4	2.77	0.52
22:DA:502:A:N6	22:DA:505:A:C6	2.78	0.52
22:DA:602:A:H1'	22:DA:656:G:N2	2.24	0.52
22:DA:2185:U:H2'	22:DA:2186:G:H8	1.74	0.52
22:DA:2335:A:C2	22:DA:2337:G:C8	2.97	0.52
22:DA:2376:A:N3	36:DO:99:TYR:CE2	2.77	0.52
57:DB:59:A:H2'	57:DB:60:C:O4'	2.10	0.52
57:DB:69:G:C2'	57:DB:70:C:H5'	2.39	0.52
57:DB:81:G:C5	57:DB:82:U:C5	2.98	0.52
25:DD:73:VAL:O	25:DD:74:GLU:HB2	2.08	0.52
26:DE:98:LYS:O	26:DE:99:LYS:HB2	2.09	0.52
31:DJ:25:LEU:C	31:DJ:27:ARG:H	2.16	0.52
31:DJ:55:ILE:O	31:DJ:55:ILE:HG13	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DK:61:VAL:HG13	32:DK:87:LEU:HD21	1.91	0.52
39:DR:24:LYS:HA	39:DR:94:THR:HG23	1.91	0.52
39:DR:80:ARG:HB3	39:DR:81:LYS:HD3	1.91	0.52
44:DW:23:LYS:HD2	44:DW:24:ARG:HB2	1.92	0.52
1:AA:1361:G:C3'	1:AA:1362:A:H5"	2.40	0.52
2:AB:112:ARG:O	2:AB:116:LEU:HD23	2.09	0.52
4:AD:173:ASP:O	4:AD:174:ALA:CB	2.57	0.52
9:AI:83:THR:HG21	9:AI:102:PHE:CB	2.36	0.52
15:AO:63:ARG:HD3	15:AO:67:ASP:OD1	2.08	0.52
21:AU:33:ARG:NE	21:AU:34:ARG:HG3	2.23	0.52
22:BA:26:G:C6	22:BA:27:G:N1	2.77	0.52
22:BA:693:A:C2'	22:BA:694:U:H5'	2.39	0.52
22:BA:904:G:N1	22:BA:905:A:C5	2.78	0.52
22:BA:1014:A:H2'	22:BA:1015:U:C6	2.44	0.52
22:BA:1554:U:H4'	22:BA:1555:G:OP2	2.09	0.52
22:BA:1798:U:OP1	24:BC:257:ARG:HB2	2.09	0.52
22:BA:1864:U:C2'	22:BA:1865:U:H5'	2.39	0.52
22:BA:2151:U:N3	22:BA:2152:G:C5	2.77	0.52
22:BA:2318:G:C6	22:BA:2319:G:N1	2.77	0.52
22:BA:2840:C:O2'	22:BA:2841:C:H5'	2.09	0.52
24:BC:18:VAL:O	24:BC:18:VAL:HG13	2.07	0.52
24:BC:20:ASN:CB	24:BC:23:LEU:HD23	2.33	0.52
24:BC:139:THR:O	24:BC:161:VAL:O	2.28	0.52
24:BC:161:VAL:HG13	24:BC:175:LEU:HD12	1.91	0.52
26:BE:172:ALA:O	26:BE:175:ILE:HG22	2.09	0.52
27:BF:113:PHE:HE1	27:BF:116:LEU:HD22	1.75	0.52
29:BH:9:VAL:O	29:BH:13:GLY:N	2.38	0.52
30:BI:86:LYS:HD2	30:BI:86:LYS:H	1.74	0.52
32:BK:10:VAL:CG2	32:BK:16:ALA:HB1	2.38	0.52
33:BL:19:LEU:HB2	33:BL:27:LEU:HD22	1.92	0.52
33:BL:29:LYS:C	33:BL:31:GLY:H	2.18	0.52
34:BM:8:LYS:CD	34:BM:8:LYS:N	2.68	0.52
37:BP:101:GLU:C	37:BP:102:ARG:HG2	2.34	0.52
43:BV:77:VAL:CG2	43:BV:86:LEU:HD22	2.39	0.52
44:BW:19:ARG:CZ	44:BW:22:VAL:HB	2.39	0.52
46:BY:32:ALA:CB	46:BY:37:LEU:HD12	2.34	0.52
53:CA:20:U:C2'	53:CA:21:G:H5'	2.40	0.52
53:CA:496:A:O2'	53:CA:497:G:C8	2.59	0.52
53:CA:566:G:H4'	53:CA:567:G:OP1	2.09	0.52
53:CA:642:A:C8	8:CH:106:SER:HA	2.45	0.52
53:CA:994:A:N3	53:CA:995:C:C6	2.78	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1356:G:H2'	53:CA:1357:A:C8	2.45	0.52
3:CC:53:ARG:HH11	3:CC:53:ARG:HB2	1.73	0.52
4:CD:3:TYR:O	4:CD:4:LEU:HB2	2.08	0.52
54:CG:59:GLU:C	54:CG:61:PHE:H	2.16	0.52
9:CI:45:MET:HE3	9:CI:48:ARG:HG3	1.91	0.52
17:CQ:30:HIS:CG	17:CQ:31:PRO:HD2	2.44	0.52
19:CS:62:THR:HG22	19:CS:63:ASP:H	1.73	0.52
20:CT:42:ASP:HB3	20:CT:45:ALA:HB3	1.91	0.52
22:DA:160:A:N1	22:DA:161:A:C2	2.77	0.52
22:DA:183:C:H2'	22:DA:184:C:H5'	1.91	0.52
22:DA:183:C:O5'	22:DA:183:C:H6	1.93	0.52
22:DA:485:C:HO2'	40:DS:60:HIS:HE2	1.55	0.52
22:DA:601:C:H4'	26:DE:99:LYS:HE2	1.91	0.52
22:DA:845:A:N1	22:DA:932:U:O2	2.42	0.52
22:DA:1038:G:N1	22:DA:1039:A:C5	2.77	0.52
22:DA:1264:A:H5'	48:D0:7:PRO:HG2	1.91	0.52
22:DA:1631:G:H1'	22:DA:1635:A:H61	1.75	0.52
22:DA:1759:A:O2'	22:DA:2714:G:H1'	2.09	0.52
22:DA:1865:U:O4	22:DA:1875:G:N3	2.42	0.52
22:DA:2305:U:H5	22:DA:2312:U:C4	2.28	0.52
22:DA:2310:C:C2'	22:DA:2311:A:H5"	2.39	0.52
22:DA:2324:U:HO2'	22:DA:2385:C:H5	1.57	0.52
22:DA:2577:A:H2	48:D0:1:ALA:N	2.07	0.52
26:DE:6:LYS:HE3	26:DE:7:ASP:OD2	2.09	0.52
26:DE:139:LYS:HB2	26:DE:139:LYS:NZ	2.24	0.52
26:DE:150:THR:O	26:DE:192:ALA:HB2	2.09	0.52
58:DF:59:ILE:HG23	58:DF:137:PHE:HE1	1.75	0.52
31:DJ:47:HIS:O	31:DJ:114:LEU:HD22	2.09	0.52
31:DJ:111:LYS:HB2	31:DJ:115:GLY:H	1.73	0.52
39:DR:21:ARG:HB2	39:DR:93:PHE:HD1	1.73	0.52
39:DR:39:LEU:O	39:DR:49:ILE:HG12	2.10	0.52
48:D0:27:LEU:N	48:D0:27:LEU:HD22	2.25	0.52
1:AA:267:C:O2'	1:AA:268:U:C5'	2.57	0.52
1:AA:688:G:H5'	11:AK:48:GLY:HA2	1.92	0.52
1:AA:1161:C:O2'	1:AA:1162:C:H6	1.90	0.52
1:AA:1241:G:C2	1:AA:1242:G:C5	2.98	0.52
1:AA:1338:G:H2'	1:AA:1339:A:C8	2.44	0.52
1:AA:1521:C:N3	1:AA:1522:U:C4	2.78	0.52
2:AB:58:LYS:HZ2	2:AB:62:ARG:HG3	1.74	0.52
3:AC:89:VAL:HG23	3:AC:90:VAL:H	1.75	0.52
5:AE:14:LEU:HB2	5:AE:36:THR:HG22	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:50:PRO:HB3	9:AI:83:THR:CG2	2.39	0.52
9:AI:56:MET:CE	9:AI:57:VAL:H	2.22	0.52
10:AJ:48:ARG:NH2	14:AN:100:TRP:CD2	2.77	0.52
22:BA:778:G:C5	22:BA:779:U:C4	2.98	0.52
22:BA:1092:C:H2'	22:BA:1093:G:O4'	2.09	0.52
22:BA:1414:C:C5	22:BA:1415:U:H5	2.27	0.52
22:BA:2531:A:OP1	28:BG:174:LYS:HG3	2.10	0.52
26:BE:146:VAL:HA	26:BE:185:LYS:O	2.09	0.52
27:BF:42:ALA:HA	27:BF:45:ASP:O	2.10	0.52
28:BG:84:LYS:HB3	28:BG:132:LEU:O	2.10	0.52
30:BI:107:GLU:O	30:BI:111:THR:HG23	2.10	0.52
31:BJ:97:PRO:O	31:BJ:99:ARG:N	2.42	0.52
37:BP:17:PRO:HD2	37:BP:83:ILE:HG23	1.92	0.52
53:CA:1097:C:H2'	53:CA:1098:C:H6	1.75	0.52
53:CA:1349:A:H1'	53:CA:1374:A:N6	2.25	0.52
3:CC:24:ASN:O	3:CC:28:PHE:HB2	2.09	0.52
9:CI:5:TYR:N	9:CI:5:TYR:HD2	2.08	0.52
9:CI:48:ARG:C	9:CI:50:PRO:HD2	2.35	0.52
10:CJ:64:GLN:CB	14:CN:98:ALA:HB3	2.38	0.52
12:CL:36:VAL:HG23	12:CL:36:VAL:O	2.08	0.52
21:CU:25:ALA:O	21:CU:26:GLY:C	2.52	0.52
22:DA:319:G:C6	22:DA:333:G:N1	2.78	0.52
22:DA:546:U:H5'	22:DA:547:A:OP1	2.09	0.52
22:DA:668:A:H2'	22:DA:670:A:N6	2.15	0.52
22:DA:1083:U:H1'	22:DA:1086:A:C2	2.45	0.52
22:DA:1207:C:H2'	22:DA:1208:C:H6	1.75	0.52
22:DA:1809:A:C2'	22:DA:1810:A:C8	2.92	0.52
22:DA:2091:C:C3'	22:DA:2092:U:C5'	2.84	0.52
22:DA:2619:C:H5'	25:DD:157:LYS:HG2	1.91	0.52
22:DA:2773:C:C2	22:DA:2774:C:C5	2.97	0.52
22:DA:2848:G:OP2	37:DP:94:ALA:CB	2.57	0.52
24:DC:161:VAL:CG1	24:DC:173:LEU:HB2	2.39	0.52
30:DI:48:ILE:HG13	30:DI:49:GLU:N	2.25	0.52
31:DJ:94:ALA:O	31:DJ:95:ARG:CB	2.56	0.52
37:DP:87:ARG:NH2	37:DP:110:LYS:O	2.42	0.52
37:DP:107:ALA:O	37:DP:108:ARG:C	2.52	0.52
1:AA:21:G:H2'	1:AA:22:G:C8	2.44	0.52
1:AA:92:U:O2'	1:AA:93:U:H5'	2.10	0.52
1:AA:330:C:H6	1:AA:330:C:H5"	1.74	0.52
1:AA:346:G:OP1	37:BP:33:GLU:OE1	2.26	0.52
1:AA:406:G:C8	1:AA:495:A:C2	2.97	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:633:G:H2'	1:AA:634:C:C6	2.42	0.52
1:AA:697:U:H2'	1:AA:698:G:H5'	1.92	0.52
1:AA:903:G:C5	1:AA:904:U:C4	2.98	0.52
1:AA:953:G:H2'	1:AA:954:G:O4'	2.10	0.52
1:AA:957:U:O2	1:AA:959:A:H8	1.93	0.52
1:AA:974:A:P	14:AN:68:ARG:HH22	2.33	0.52
1:AA:983:A:H2	1:AA:1222:G:H22	1.55	0.52
1:AA:1417:G:C6	1:AA:1482:G:C6	2.98	0.52
2:AB:79:VAL:O	2:AB:83:ALA:HB3	2.10	0.52
4:AD:28:ASP:OD1	4:AD:33:ILE:HG12	2.09	0.52
4:AD:194:ILE:O	4:AD:194:ILE:HG13	2.10	0.52
8:AH:45:ILE:C	8:AH:63:LYS:HD2	2.35	0.52
13:AM:15:VAL:HA	13:AM:33:LEU:CD1	2.40	0.52
20:AT:34:VAL:HG12	20:AT:38:ILE:HD11	1.92	0.52
22:BA:309:A:H4'	42:BU:15:GLY:HA2	1.91	0.52
22:BA:547:A:C8	22:BA:548:G:N3	2.78	0.52
22:BA:1071:G:N7	22:BA:1089:A:N6	2.57	0.52
22:BA:1952:A:C6	22:BA:1953:A:N1	2.77	0.52
23:BB:2:G:C6	23:BB:119:A:C2	2.97	0.52
23:BB:94:A:C5	23:BB:95:U:C4	2.97	0.52
31:BJ:32:LEU:HD22	31:BJ:54:ILE:HG12	1.90	0.52
32:BK:107:LEU:C	32:BK:109:SER:H	2.17	0.52
33:BL:91:ASP:HB2	33:BL:94:THR:CB	2.39	0.52
34:BM:78:LEU:HD23	34:BM:79:ALA:N	2.24	0.52
37:BP:103:THR:O	37:BP:104:GLY:O	2.28	0.52
38:BQ:91:ARG:HD3	39:BR:11:GLN:HG3	1.91	0.52
43:BV:62:THR:HA	43:BV:71:LYS:HA	1.91	0.52
53:CA:672:U:H2'	53:CA:673:A:H8	1.75	0.52
53:CA:824:G:H1'	8:CH:1:SER:N	2.24	0.52
53:CA:1014:A:H5'	19:CS:17:LYS:HE3	1.90	0.52
54:CG:49:LEU:O	54:CG:49:LEU:HD13	2.10	0.52
15:CO:54:GLY:O	15:CO:58:MET:HG3	2.10	0.52
22:DA:417:C:H2'	22:DA:418:C:H6	1.75	0.52
22:DA:607:U:H5	22:DA:619:G:C4	2.27	0.52
22:DA:1080:A:H2'	22:DA:1081:U:H6	1.75	0.52
22:DA:2415:G:C6	22:DA:2416:C:C4	2.98	0.52
22:DA:2531:A:C4	22:DA:2532:G:C8	2.98	0.52
22:DA:2615:U:C4	48:D0:2:VAL:C	2.87	0.52
22:DA:2622:U:O2'	22:DA:2825:G:N7	2.41	0.52
22:DA:2748:A:H1'	28:DG:66:THR:CG2	2.34	0.52
57:DB:16:G:O2'	57:DB:17:C:H5'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DB:16:G:C6	57:DB:69:G:C4	2.97	0.52
26:DE:136:GLN:HA	26:DE:139:LYS:HG2	1.92	0.52
26:DE:148:ILE:HA	26:DE:187:VAL:HB	1.92	0.52
26:DE:158:PHE:HA	26:DE:169:VAL:HG11	1.91	0.52
58:DF:58:ALA:HB1	58:DF:139:GLU:HG2	1.90	0.52
29:DH:136:SER:C	29:DH:137:GLU:HG3	2.35	0.52
37:DP:54:LEU:HA	37:DP:76:HIS:CD2	2.45	0.52
38:DQ:83:LYS:HE3	38:DQ:89:ILE:HD11	1.92	0.52
41:DT:58:VAL:HG23	41:DT:85:VAL:HA	1.92	0.52
1:AA:579:A:H2'	1:AA:580:C:H6	1.74	0.52
1:AA:1348:U:C2'	1:AA:1349:A:H8	2.21	0.52
2:AB:86:CYS:SG	2:AB:221:ARG:HB2	2.50	0.52
2:AB:141:GLU:HA	2:AB:144:GLU:HB2	1.92	0.52
5:AE:103:GLY:HA2	5:AE:121:ASN:HA	1.91	0.52
5:AE:136:VAL:HG22	5:AE:136:VAL:O	2.08	0.52
10:AJ:80:THR:HG22	10:AJ:82:LYS:H	1.75	0.52
22:BA:118:A:C8	22:BA:119:A:C8	2.98	0.52
22:BA:1028:A:N6	22:BA:1125:G:H2'	2.23	0.52
22:BA:1062:G:C8	22:BA:1088:A:H8	2.26	0.52
22:BA:1310:G:C2'	22:BA:1311:G:H5'	2.40	0.52
22:BA:2415:G:H2'	22:BA:2416:C:C6	2.44	0.52
22:BA:2748:A:H1'	28:BG:66:THR:HG22	1.92	0.52
22:BA:2766:A:N3	22:BA:2766:A:H2'	2.25	0.52
24:BC:68:ARG:NH2	24:BC:126:GLY:O	2.43	0.52
25:BD:34:VAL:CG2	25:BD:94:GLN:H	2.22	0.52
25:BD:182:ALA:C	25:BD:183:GLU:HG3	2.35	0.52
26:BE:142:ALA:O	26:BE:143:LEU:HD23	2.10	0.52
28:BG:37:ASN:OD1	28:BG:37:ASN:N	2.43	0.52
29:BH:6:LEU:O	29:BH:15:LEU:HA	2.10	0.52
29:BH:76:GLU:HG2	29:BH:106:ALA:HB2	1.92	0.52
44:BW:44:PHE:O	44:BW:78:PHE:HA	2.09	0.52
49:B1:27:ARG:O	49:B1:30:PRO:HD3	2.10	0.52
50:B2:5:PHE:CE1	50:B2:7:PRO:HB3	2.44	0.52
53:CA:251:G:H4'	53:CA:252:U:H5"	1.91	0.52
53:CA:372:C:H4'	53:CA:373:A:H5'	1.91	0.52
53:CA:373:A:C2	53:CA:374:A:C8	2.97	0.52
53:CA:677:U:H3	53:CA:713:G:H22	1.57	0.52
53:CA:982:U:C4	53:CA:983:A:N6	2.78	0.52
53:CA:1346:A:N6	54:CG:9:ARG:HH22	2.07	0.52
2:CB:60:ALA:C	2:CB:62:ARG:H	2.18	0.52
3:CC:136:ALA:HA	3:CC:139:ASN:HD21	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:37:ARG:HG2	10:CJ:75:ASP:HB3	1.91	0.52
22:DA:9:G:N2	22:DA:10:A:H62	2.08	0.52
22:DA:71:A:H5"	22:DA:73:A:C5	2.44	0.52
22:DA:229:C:HO2'	22:DA:230:G:C4'	2.22	0.52
22:DA:573:U:H4'	22:DA:574:A:OP1	2.10	0.52
22:DA:755:U:O2'	22:DA:756:A:H5'	2.10	0.52
22:DA:1048:A:C6	22:DA:1111:A:C2	2.98	0.52
22:DA:1059:G:N3	30:DI:131:THR:HG22	2.25	0.52
22:DA:1062:G:OP1	22:DA:1070:A:H4'	2.10	0.52
22:DA:1593:A:C6	22:DA:1594:U:C4	2.98	0.52
22:DA:1605:C:C3'	22:DA:1606:C:H5"	2.40	0.52
22:DA:1857:G:C1'	22:DA:1884:G:H22	2.19	0.52
22:DA:2099:U:O2	22:DA:2099:U:H2'	2.10	0.52
22:DA:2747:G:O6	22:DA:2755:C:H5"	2.10	0.52
22:DA:2800:A:N3	22:DA:2801:G:H1'	2.23	0.52
57:DB:78:A:H2'	57:DB:79:G:H8	1.74	0.52
24:DC:120:ASP:CG	24:DC:121:ALA:N	2.68	0.52
24:DC:130:PRO:HG2	24:DC:133:ASN:ND2	2.25	0.52
58:DF:137:PHE:CB	58:DF:138:PRO:HD2	2.30	0.52
28:DG:112:VAL:HG12	28:DG:114:HIS:HB3	1.92	0.52
30:DI:21:PRO:N	30:DI:22:PRO:HD2	2.25	0.52
36:DO:58:ILE:O	36:DO:62:LEU:HB2	2.10	0.52
36:DO:108:ASP:C	36:DO:110:ALA:H	2.17	0.52
1:AA:100:G:O6	1:AA:101:A:C6	2.62	0.52
1:AA:1381:U:O2'	1:AA:1382:C:C5'	2.58	0.52
3:AC:118:SER:O	3:AC:122:GLN:HG2	2.10	0.52
22:BA:323:C:C4	22:BA:333:G:C8	2.97	0.52
22:BA:417:C:H2'	22:BA:418:C:H6	1.75	0.52
22:BA:449:A:H4'	38:BQ:2:ARG:NH1	2.24	0.52
22:BA:511:U:C5	22:BA:512:G:C5	2.98	0.52
22:BA:659:G:H4'	26:BE:95:LYS:HD3	1.91	0.52
22:BA:1078:U:H4'	22:BA:1079:C:C6	2.45	0.52
22:BA:1079:C:N4	22:BA:1088:A:C2	2.70	0.52
22:BA:1153:C:OP2	62:BA:3355:HOH:O	2.18	0.52
22:BA:1341:G:H3'	22:BA:1397:U:O2	2.10	0.52
22:BA:1421:G:C2	22:BA:1422:G:C8	2.98	0.52
22:BA:1513:U:O2'	22:BA:1514:G:H5'	2.10	0.52
22:BA:2220:U:H2'	22:BA:2221:G:C8	2.44	0.52
22:BA:2391:G:O2'	22:BA:2424:C:N4	2.40	0.52
23:BB:14:U:OP2	23:BB:70:C:O2'	2.27	0.52
23:BB:90:C:H5'	34:BM:18:ARG:HG2	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BD:106:LYS:HB2	25:BD:206:ALA:H	1.74	0.52
31:BJ:4:PHE:N	31:BJ:44:TYR:OH	2.42	0.52
31:BJ:59:ALA:HB3	31:BJ:126:ALA:HA	1.92	0.52
32:BK:61:VAL:HG22	32:BK:87:LEU:HD11	1.92	0.52
34:BM:1:MET:O	34:BM:2:LEU:CB	2.57	0.52
37:BP:32:VAL:O	37:BP:33:GLU:O	2.28	0.52
37:BP:102:ARG:O	37:BP:103:THR:CG2	2.57	0.52
41:BT:19:LYS:O	41:BT:20:ALA:C	2.51	0.52
48:B0:35:GLU:OE1	48:B0:45:ASP:HB2	2.10	0.52
50:B2:24:THR:O	50:B2:25:LYS:C	2.53	0.52
53:CA:17:U:C2	53:CA:18:C:C5	2.98	0.52
53:CA:104:G:C2	53:CA:105:G:C8	2.98	0.52
53:CA:1004:A:H2'	53:CA:1005:A:O4'	2.10	0.52
53:CA:1056:U:OP1	53:CA:1196:A:H2	1.93	0.52
53:CA:1095:U:H2'	53:CA:1096:C:H6	1.74	0.52
53:CA:1108:G:OP1	3:CC:175:HIS:ND1	2.28	0.52
3:CC:120:THR:HG23	3:CC:187:GLU:O	2.09	0.52
4:CD:72:ARG:O	4:CD:75:TYR:N	2.42	0.52
54:CG:4:ARG:NH2	54:CG:6:ILE:HB	2.25	0.52
22:DA:380:G:O3'	45:DX:15:ASN:HB2	2.09	0.52
22:DA:406:G:O2'	22:DA:407:G:H8	1.92	0.52
22:DA:1084:A:H2'	22:DA:1085:A:H5'	1.92	0.52
22:DA:1108:U:H2'	22:DA:1109:C:O4'	2.09	0.52
22:DA:1378:A:N7	22:DA:1380:G:C5	2.78	0.52
22:DA:1387:A:O2'	22:DA:1388:G:H8	1.93	0.52
22:DA:1661:G:C5	22:DA:1662:U:C5	2.97	0.52
22:DA:2051:A:C2	22:DA:2052:A:N6	2.77	0.52
22:DA:2372:U:H1'	49:D1:45:HIS:CE1	2.45	0.52
22:DA:2522:U:C2'	22:DA:2523:G:H5'	2.40	0.52
57:DB:44:G:OP1	58:DF:91:ARG:NH1	2.42	0.52
24:DC:94:LEU:HA	24:DC:100:ARG:HG2	1.92	0.52
24:DC:156:SER:O	24:DC:157:ALA:C	2.51	0.52
26:DE:144:GLU:O	26:DE:145:ASP:C	2.53	0.52
29:DH:54:LEU:HA	29:DH:57:LYS:HG3	1.91	0.52
30:DI:52:LEU:HD12	30:DI:53:PRO:HD2	1.92	0.52
32:DK:17:ARG:CG	32:DK:18:ARG:H	2.22	0.52
32:DK:25:LEU:HD23	32:DK:25:LEU:H	1.75	0.52
33:DL:17:LYS:HZ3	33:DL:19:LEU:HD22	1.74	0.52
40:DS:29:VAL:O	40:DS:33:LEU:HB2	2.10	0.52
40:DS:33:LEU:HA	40:DS:36:LEU:HD23	1.92	0.52
45:DX:65:THR:O	45:DX:68:ALA:HB3	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:198:G:O6	1:AA:220:G:C6	2.63	0.52
1:AA:511:C:H2'	1:AA:534:U:O2	2.10	0.52
1:AA:725:G:H2'	1:AA:726:C:C6	2.41	0.52
1:AA:807:A:C5	1:AA:808:C:C5	2.97	0.52
1:AA:1006:G:H2'	1:AA:1007:U:C6	2.45	0.52
1:AA:1159:U:H4'	1:AA:1160:G:OP1	2.10	0.52
1:AA:1416:G:H2'	1:AA:1417:G:H5'	1.91	0.52
7:AG:43:TYR:O	7:AG:47:GLU:HB2	2.10	0.52
11:AK:116:PRO:C	11:AK:118:ASN:H	2.17	0.52
13:AM:88:LEU:HD23	13:AM:91:ARG:HH21	1.74	0.52
21:AU:38:GLU:OE2	21:AU:41:THR:HG21	2.09	0.52
22:BA:276:U:H2'	22:BA:276:U:O2	2.08	0.52
22:BA:319:G:C4	22:BA:333:G:N2	2.78	0.52
22:BA:980:A:C6	22:BA:981:A:N1	2.78	0.52
22:BA:1081:U:N3	22:BA:1082:U:C5	2.78	0.52
22:BA:1224:U:H4'	39:BR:88:GLY:O	2.10	0.52
22:BA:1266:G:H5"	40:BS:15:GLN:NE2	2.25	0.52
22:BA:1794:A:H2'	22:BA:1795:C:H6	1.75	0.52
22:BA:2286:G:H4'	22:BA:2287:A:O4'	2.10	0.52
25:BD:117:GLY:C	25:BD:118:PHE:CG	2.86	0.52
25:BD:182:ALA:O	25:BD:183:GLU:C	2.53	0.52
26:BE:72:SER:C	26:BE:74:LYS:H	2.17	0.52
27:BF:134:GLN:HG2	27:BF:135:ILE:H	1.73	0.52
28:BG:33:THR:H	28:BG:34:ARG:HH11	1.58	0.52
28:BG:95:ALA:HB2	28:BG:104:LEU:HD23	1.91	0.52
34:BM:108:VAL:HG13	34:BM:112:LEU:HB3	1.92	0.52
38:BQ:71:ASN:OD1	38:BQ:106:THR:HG23	2.10	0.52
38:BQ:78:PHE:CZ	38:BQ:82:LEU:HD11	2.45	0.52
53:CA:71:A:C5	53:CA:100:G:C5	2.97	0.52
53:CA:818:G:C3'	53:CA:819:A:H5"	2.38	0.52
53:CA:1050:G:C2	53:CA:1051:C:C4	2.97	0.52
53:CA:1298:U:C5	54:CG:113:LYS:HA	2.45	0.52
4:CD:26:ALA:HA	4:CD:31:CYS:SG	2.50	0.52
4:CD:29:THR:C	4:CD:30:LYS:HD3	2.34	0.52
5:CE:95:MET:HE1	5:CE:114:LEU:HD21	1.92	0.52
5:CE:98:ALA:O	5:CE:121:ASN:HB2	2.10	0.52
5:CE:104:ILE:H	5:CE:122:VAL:N	1.95	0.52
10:CJ:40:ILE:HG22	10:CJ:42:LEU:CD1	2.35	0.52
55:CM:75:SER:C	55:CM:77:LYS:H	2.17	0.52
15:CO:40:GLY:O	15:CO:43:ALA:HB3	2.10	0.52
56:CP:66:THR:HG22	56:CP:67:ILE:N	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:58:ASP:O	20:CT:61:ALA:HB3	2.10	0.52
22:DA:64:A:H8	22:DA:64:A:O5'	1.92	0.52
22:DA:204:A:C5	22:DA:206:U:C4	2.98	0.52
22:DA:338:G:H2'	22:DA:339:U:H5'	1.90	0.52
22:DA:412:A:O2'	22:DA:413:C:C5'	2.57	0.52
22:DA:547:A:H8	22:DA:548:G:H5'	1.75	0.52
22:DA:581:C:OP1	38:DQ:32:ARG:HB2	2.09	0.52
22:DA:637:A:OP2	33:DL:128:THR:HG21	2.09	0.52
22:DA:1413:A:H2'	22:DA:1414:C:C6	2.44	0.52
22:DA:1527:G:H1'	22:DA:1546:G:N2	2.25	0.52
22:DA:1737:G:N7	22:DA:1738:G:C6	2.78	0.52
22:DA:1737:G:N7	22:DA:1738:G:O6	2.43	0.52
22:DA:2022:U:O2'	22:DA:2617:U:H5'	2.09	0.52
22:DA:2244:U:H2'	22:DA:2245:U:O4'	2.09	0.52
22:DA:2714:G:H2'	22:DA:2715:C:H6	1.74	0.52
29:DH:4:ILE:HG23	29:DH:17:ASP:O	2.09	0.52
31:DJ:111:LYS:HB2	31:DJ:115:GLY:HA3	1.90	0.52
33:DL:64:PHE:HD2	51:D3:24:LYS:HG2	1.74	0.52
42:DU:9:GLU:OE1	42:DU:23:LYS:HA	2.10	0.52
1:AA:327:A:O3'	1:AA:328:C:C4'	2.59	0.52
1:AA:566:G:H4'	1:AA:567:G:OP1	2.10	0.52
1:AA:620:C:H2'	1:AA:621:A:O4'	2.10	0.52
1:AA:792:A:C2	1:AA:794:A:C2	2.98	0.52
1:AA:1370:G:C5'	9:AI:110:VAL:HG21	2.39	0.52
2:AB:56:LEU:HB2	2:AB:183:PHE:CE1	2.45	0.52
6:AF:62:MET:HG3	6:AF:64:VAL:HG23	1.92	0.52
11:AK:124:LYS:HE2	21:AU:33:ARG:HH21	1.75	0.52
22:BA:638:G:C5	22:BA:651:G:C2	2.98	0.52
22:BA:900:A:O2'	22:BA:901:C:H5'	2.10	0.52
22:BA:974:G:C4	22:BA:1186:G:C2	2.98	0.52
22:BA:1444:G:H2'	22:BA:1445:G:H8	1.75	0.52
22:BA:1728:C:O2'	22:BA:1729:U:H6	1.92	0.52
22:BA:1829:A:N3	24:BC:14:HIS:HE1	2.08	0.52
22:BA:2070:A:O2'	22:BA:2071:A:H5'	2.10	0.52
22:BA:2079:U:O2'	45:BX:22:ASN:ND2	2.43	0.52
22:BA:2103:C:C2'	22:BA:2104:C:H5'	2.39	0.52
24:BC:153:LEU:N	24:BC:153:LEU:HD23	2.25	0.52
25:BD:118:PHE:O	25:BD:119:ALA:HB3	2.10	0.52
37:BP:61:ARG:CG	37:BP:70:GLU:HG2	2.39	0.52
46:BY:39:GLN:HG3	46:BY:42:LEU:HD22	1.92	0.52
52:B4:1:MET:HE2	52:B4:34:LYS:HG2	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:692:U:H2'	53:CA:694:A:OP2	2.10	0.52
53:CA:919:A:O2'	53:CA:920:U:H5'	2.09	0.52
53:CA:1442:G:H2'	53:CA:1443:C:H6	1.75	0.52
9:CI:59:LYS:HG2	9:CI:60:LEU:HG	1.92	0.52
55:CM:36:ALA:HB3	55:CM:55:LEU:HD11	1.92	0.52
55:CM:106:ARG:HH21	55:CM:112:ARG:NE	2.08	0.52
15:CO:69:LEU:HD22	15:CO:69:LEU:O	2.10	0.52
17:CQ:59:GLU:O	17:CQ:75:VAL:HG22	2.10	0.52
20:CT:3:ILE:HD12	20:CT:3:ILE:H	1.75	0.52
22:DA:804:A:C2'	22:DA:806:C:C4	2.92	0.52
22:DA:1263:U:O4'	48:D0:6:LYS:HE3	2.10	0.52
22:DA:1380:G:H1'	22:DA:1569:A:N6	2.25	0.52
22:DA:1381:G:H2'	22:DA:1382:G:H5"	1.92	0.52
22:DA:1415:U:O3'	22:DA:1416:G:H4'	2.09	0.52
22:DA:2267:A:N6	22:DA:2272:U:H3	2.08	0.52
22:DA:2284:A:OP1	49:D1:5:ARG:HG3	2.10	0.52
22:DA:2729:G:H5"	25:DD:190:LYS:HZ3	1.74	0.52
57:DB:13:G:H5"	57:DB:13:G:C8	2.43	0.52
57:DB:19:C:H2'	57:DB:20:G:H8	1.74	0.52
57:DB:44:G:H5"	58:DF:91:ARG:CZ	2.40	0.52
57:DB:110:C:O2'	57:DB:111:U:C5'	2.58	0.52
25:DD:118:PHE:CG	25:DD:119:ALA:N	2.77	0.52
26:DE:146:VAL:O	26:DE:167:VAL:HA	2.10	0.52
32:DK:45:GLU:OE2	32:DK:45:GLU:HA	2.09	0.52
32:DK:104:THR:C	32:DK:106:GLU:N	2.67	0.52
37:DP:113:LEU:HD23	37:DP:113:LEU:C	2.34	0.52
41:DT:61:LEU:C	41:DT:61:LEU:HD12	2.36	0.52
43:DV:72:VAL:HA	43:DV:92:VAL:O	2.09	0.52
44:DW:16:GLU:OE2	44:DW:16:GLU:HA	2.10	0.52
45:DX:52:ALA:C	45:DX:54:GLY:N	2.68	0.52
1:AA:299:G:C6	1:AA:300:A:C6	2.97	0.51
1:AA:313:A:H2'	1:AA:314:C:C6	2.45	0.51
1:AA:761:G:H2'	1:AA:762:U:C6	2.45	0.51
1:AA:1221:G:H2'	1:AA:1222:G:H8	1.75	0.51
4:AD:144:ILE:N	4:AD:144:ILE:HD13	2.24	0.51
5:AE:59:ILE:O	5:AE:63:MET:HG2	2.10	0.51
5:AE:81:GLN:H	5:AE:81:GLN:CD	2.17	0.51
5:AE:132:PRO:O	5:AE:134:ASN:N	2.42	0.51
12:AL:43:LYS:HD3	12:AL:43:LYS:N	2.25	0.51
13:AM:84:CYS:HA	19:AS:73:PHE:CD2	2.45	0.51
22:BA:207:A:H2'	22:BA:208:C:O4'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:545:U:H2'	22:BA:546:U:O3'	2.10	0.51
22:BA:721:A:H2'	22:BA:722:A:C8	2.45	0.51
22:BA:794:A:H2'	22:BA:795:C:C6	2.44	0.51
22:BA:1059:G:H5"	22:BA:1060:U:H3'	1.91	0.51
22:BA:1709:U:C2	22:BA:1750:G:N2	2.78	0.51
22:BA:1778:U:H2'	22:BA:1784:A:H62	1.74	0.51
22:BA:2602:A:H4'	22:BA:2603:G:H5'	1.92	0.51
22:BA:2727:A:C2'	22:BA:2728:U:H5'	2.40	0.51
24:BC:158:GLY:N	24:BC:194:VAL:HG13	2.25	0.51
24:BC:199:HIS:O	24:BC:202:ARG:HG3	2.10	0.51
25:BD:118:PHE:CD2	25:BD:119:ALA:N	2.74	0.51
25:BD:121:THR:HB	25:BD:127:PHE:CD1	2.45	0.51
25:BD:124:ARG:HG2	25:BD:125:TRP:NE1	2.25	0.51
26:BE:46:GLN:HB2	26:BE:83:VAL:HG11	1.91	0.51
26:BE:146:VAL:HG23	26:BE:167:VAL:HG23	1.89	0.51
27:BF:107:VAL:N	27:BF:108:PRO:CD	2.73	0.51
32:BK:98:ARG:HA	32:BK:118:LEU:HD23	1.90	0.51
32:BK:121:GLU:O	32:BK:122:VAL:C	2.53	0.51
35:BN:33:ILE:HD12	35:BN:33:ILE:N	2.25	0.51
39:BR:49:ILE:C	39:BR:51:VAL:O	2.53	0.51
43:BV:10:LYS:NZ	43:BV:10:LYS:HB2	2.25	0.51
45:BX:17:ARG:HD2	45:BX:17:ARG:N	2.25	0.51
49:B1:9:LYS:HD3	49:B1:9:LYS:N	2.26	0.51
50:B2:36:ALA:C	50:B2:38:GLY:H	2.18	0.51
53:CA:418:C:H1'	53:CA:540:G:O2'	2.09	0.51
53:CA:575:G:C4'	53:CA:576:C:O5'	2.51	0.51
53:CA:704:A:C2'	53:CA:705:G:H8	2.22	0.51
53:CA:1159:U:H5	53:CA:1182:G:O2'	1.88	0.51
53:CA:1447:A:P	53:CA:1448:C:H5	2.33	0.51
2:CB:112:ARG:O	2:CB:112:ARG:HG3	2.09	0.51
3:CC:5:HIS:NE2	3:CC:183:TYR:HE2	2.07	0.51
4:CD:19:PHE:O	4:CD:22:SER:HB2	2.10	0.51
9:CI:5:TYR:N	9:CI:5:TYR:CD2	2.78	0.51
22:DA:353:C:N4	22:DA:354:A:H62	2.08	0.51
22:DA:747:U:O2	22:DA:2014:A:H1'	2.10	0.51
22:DA:1303:G:O2'	22:DA:1304:A:O5'	2.28	0.51
22:DA:2072:C:H2'	22:DA:2073:C:H5'	1.92	0.51
22:DA:2197:U:C6	22:DA:2224:G:C6	2.98	0.51
22:DA:2352:A:C6	44:DW:30:VAL:HG11	2.45	0.51
22:DA:2474:U:O2	22:DA:2474:U:O4'	2.28	0.51
22:DA:2578:G:OP2	22:DA:2578:G:H4'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DB:30:C:H2'	57:DB:30:C:O2	2.09	0.51
57:DB:62:C:H2'	57:DB:63:C:O4'	2.10	0.51
58:DF:139:GLU:HB3	58:DF:142:TYR:HB3	1.93	0.51
28:DG:58:ALA:O	28:DG:59:ASP:C	2.53	0.51
28:DG:149:ALA:O	28:DG:151:ARG:N	2.43	0.51
31:DJ:45:THR:C	31:DJ:47:HIS:H	2.17	0.51
31:DJ:92:MET:HA	31:DJ:92:MET:CE	2.40	0.51
34:DM:41:LEU:O	34:DM:93:VAL:HG23	2.09	0.51
38:DQ:91:ARG:CZ	39:DR:11:GLN:H	2.24	0.51
42:DU:20:LYS:HD2	42:DU:38:ILE:HD11	1.92	0.51
45:DX:39:VAL:O	45:DX:40:GLU:HB2	2.10	0.51
46:DY:53:VAL:O	46:DY:57:LEU:HB2	2.10	0.51
1:AA:109:A:H3'	1:AA:110:C:H5'	1.90	0.51
1:AA:1190:G:OP2	3:AC:4:VAL:HB	2.10	0.51
1:AA:1371:G:C6	1:AA:1372:U:C4	2.99	0.51
1:AA:1371:G:H5"	1:AA:1372:U:OP2	2.10	0.51
4:AD:191:SER:O	4:AD:192:ALA:HB2	2.09	0.51
6:AF:38:ARG:O	6:AF:39:LEU:HB2	2.11	0.51
15:AO:23:SER:O	15:AO:24:THR:C	2.53	0.51
17:AQ:74:LEU:C	17:AQ:74:LEU:HD13	2.35	0.51
19:AS:3:SER:O	19:AS:5:LYS:HG3	2.11	0.51
19:AS:6:LYS:HA	19:AS:6:LYS:CE	2.38	0.51
19:AS:43:MET:O	19:AS:61:VAL:HG21	2.09	0.51
22:BA:903:C:HO2'	22:BA:904:G:H5'	1.74	0.51
22:BA:1019:U:H3	22:BA:1142:A:H62	1.56	0.51
22:BA:1494:A:C2	22:BA:1495:A:C4	2.98	0.51
22:BA:2021:C:P	48:B0:8:THR:HG21	2.50	0.51
22:BA:2024:G:OP2	22:BA:2034:U:H4'	2.10	0.51
22:BA:2332:C:OP1	44:BW:44:PHE:CZ	2.62	0.51
23:BB:54:G:N2	27:BF:25:MET:HE3	2.22	0.51
24:BC:156:SER:O	24:BC:157:ALA:C	2.52	0.51
24:BC:180:MET:HE2	24:BC:268:ARG:HH12	1.76	0.51
26:BE:108:ILE:HD11	26:BE:180:LEU:HD13	1.91	0.51
27:BF:126:ASN:OD1	27:BF:156:THR:HA	2.10	0.51
27:BF:146:ASP:O	27:BF:147:ARG:HB2	2.11	0.51
32:BK:18:ARG:HB2	32:BK:45:GLU:HG2	1.93	0.51
32:BK:43:ILE:HG21	32:BK:46:ALA:HB2	1.91	0.51
34:BM:47:GLU:O	34:BM:48:ALA:C	2.53	0.51
37:BP:28:LYS:HE3	37:BP:28:LYS:H	1.75	0.51
37:BP:92:ARG:O	37:BP:93:LYS:HB2	2.09	0.51
53:CA:246:A:C2	53:CA:279:A:N6	2.78	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:371:A:C2'	53:CA:372:C:H5'	2.40	0.51
53:CA:495:A:C6	53:CA:496:A:N6	2.79	0.51
53:CA:821:G:H2'	53:CA:822:U:H6	1.75	0.51
53:CA:1049:U:C4'	53:CA:1050:G:OP2	2.58	0.51
3:CC:35:ASP:OD2	3:CC:56:ILE:HD12	2.10	0.51
3:CC:80:GLY:O	3:CC:83:VAL:HG22	2.11	0.51
6:CF:11:HIS:CD2	6:CF:12:PRO:HD2	2.39	0.51
9:CI:115:VAL:HG21	10:CJ:61:ALA:O	2.10	0.51
10:CJ:6:ILE:HG23	10:CJ:100:ILE:HG23	1.92	0.51
12:CL:52:CYS:HB3	12:CL:66:ILE:HD11	1.92	0.51
22:DA:137:U:C4	22:DA:138:U:C2	2.98	0.51
22:DA:1056:G:H1'	22:DA:1103:A:N1	2.26	0.51
22:DA:1142:A:H4'	31:DJ:27:ARG:HH22	1.75	0.51
22:DA:1674:G:H21	22:DA:1677:A:H61	1.58	0.51
22:DA:1973:G:C5	22:DA:1974:C:C5	2.98	0.51
22:DA:1992:G:N2	22:DA:1996:C:O2'	2.43	0.51
22:DA:2093:G:C6	22:DA:2225:A:N7	2.78	0.51
24:DC:124:LYS:NZ	24:DC:124:LYS:HB3	2.25	0.51
25:DD:22:ILE:HD12	25:DD:190:LYS:HD2	1.92	0.51
26:DE:131:THR:HG22	26:DE:161:ALA:H	1.74	0.51
58:DF:56:LEU:O	58:DF:60:SER:HB3	2.10	0.51
31:DJ:55:ILE:HG22	31:DJ:123:LYS:HB2	1.93	0.51
31:DJ:123:LYS:N	31:DJ:123:LYS:HD2	2.25	0.51
39:DR:25:LEU:H	39:DR:94:THR:HG21	1.75	0.51
46:DY:28:LEU:HD23	46:DY:42:LEU:HD13	1.91	0.51
1:AA:92:U:H2'	1:AA:93:U:H6	1.72	0.51
1:AA:495:A:H4'	1:AA:496:A:OP1	2.08	0.51
1:AA:1066:C:H5"	1:AA:1066:C:C6	2.38	0.51
1:AA:1234:C:O2'	1:AA:1235:U:H5'	2.11	0.51
5:AE:44:ARG:HA	5:AE:71:ILE:O	2.11	0.51
5:AE:112:ALA:O	5:AE:113:VAL:C	2.53	0.51
12:AL:86:VAL:CG1	12:AL:89:LEU:HD23	2.41	0.51
13:AM:36:ALA:HB3	13:AM:38:ILE:HG12	1.91	0.51
21:AU:18:PHE:O	21:AU:21:SER:HB3	2.10	0.51
22:BA:95:A:O2'	46:BY:41:HIS:CD2	2.64	0.51
22:BA:616:A:H4'	26:BE:101:TYR:CE2	2.45	0.51
22:BA:747:U:C4	22:BA:2613:U:C4	2.97	0.51
22:BA:1574:C:O5'	22:BA:1574:C:H6	1.94	0.51
22:BA:2052:A:O4'	25:BD:147:GLY:HA3	2.10	0.51
22:BA:2281:A:C2	22:BA:2282:G:C5	2.99	0.51
24:BC:15:VAL:HA	24:BC:203:VAL:CG1	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BD:112:THR:O	25:BD:195:GLY:HA2	2.10	0.51
33:BL:57:LEU:CD2	51:B3:53:ASP:HB3	2.39	0.51
44:BW:73:PRO:CG	44:BW:76:ARG:HD2	2.41	0.51
47:BZ:3:THR:HA	47:BZ:37:ARG:O	2.11	0.51
53:CA:433:G:O2'	53:CA:434:U:H5'	2.10	0.51
53:CA:989:U:C2'	53:CA:990:C:H5'	2.39	0.51
53:CA:1137:C:H4'	53:CA:1138:G:C2	2.45	0.51
53:CA:1201:A:H4'	53:CA:1202:U:O5'	2.10	0.51
53:CA:1319:A:C2'	53:CA:1320:C:OP2	2.59	0.51
53:CA:1511:G:C5	53:CA:1512:U:C5	2.99	0.51
2:CB:71:THR:O	2:CB:72:LYS:C	2.53	0.51
4:CD:195:ASN:HB3	4:CD:197:HIS:NE2	2.26	0.51
54:CG:134:VAL:HB	54:CG:137:ARG:NH2	2.15	0.51
8:CH:11:THR:CG2	8:CH:14:ARG:HH22	2.22	0.51
12:CL:2:THR:H	12:CL:5:GLN:HB2	1.75	0.51
17:CQ:37:ILE:HD11	17:CQ:39:ARG:NH1	2.25	0.51
19:CS:35:ARG:NH2	19:CS:53:GLY:H	2.08	0.51
22:DA:765:C:H2'	22:DA:766:U:H6	1.76	0.51
22:DA:1038:G:N3	22:DA:1039:A:C8	2.78	0.51
22:DA:1040:A:N1	22:DA:1116:G:C6	2.78	0.51
22:DA:1180:U:C4	22:DA:1181:U:C4	2.98	0.51
22:DA:1267:U:H2'	22:DA:1268:A:H8	1.76	0.51
22:DA:1867:G:O6	22:DA:1875:G:N2	2.44	0.51
22:DA:2096:C:H2'	22:DA:2097:A:H8	1.74	0.51
22:DA:2756:U:H1'	22:DA:2757:A:H5'	1.92	0.51
57:DB:41:G:H3'	57:DB:42:C:H5"	1.92	0.51
25:DD:148:GLN:HG2	25:DD:149:ASN:H	1.75	0.51
58:DF:42:ALA:CB	58:DF:49:LEU:HD21	2.40	0.51
31:DJ:25:LEU:O	31:DJ:27:ARG:N	2.40	0.51
31:DJ:95:ARG:O	31:DJ:96:ARG:C	2.53	0.51
34:DM:1:MET:O	34:DM:2:LEU:O	2.27	0.51
34:DM:119:LEU:O	34:DM:119:LEU:HD23	2.10	0.51
37:DP:37:LYS:O	37:DP:38:ARG:HB3	2.10	0.51
37:DP:67:GLU:OE1	37:DP:68:GLY:N	2.44	0.51
1:AA:858:G:C2'	1:AA:859:G:H5'	2.40	0.51
1:AA:978:A:OP2	1:AA:1362:A:N6	2.30	0.51
1:AA:1003:G:C6	1:AA:1036:A:N6	2.79	0.51
6:AF:51:ILE:CD1	6:AF:86:ARG:HG3	2.41	0.51
8:AH:46:GLU:O	8:AH:47:ASP:HB3	2.10	0.51
10:AJ:17:LEU:HD23	10:AJ:17:LEU:C	2.36	0.51
22:BA:1263:U:H2'	22:BA:1264:A:C8	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:89:U:H3'	23:BB:90:C:C5'	2.40	0.51
24:BC:71:ASP:OD1	24:BC:118:GLY:HA2	2.09	0.51
25:BD:169:ARG:O	25:BD:170:VAL:CG1	2.57	0.51
25:BD:191:GLY:O	25:BD:192:ALA:HB3	2.10	0.51
27:BF:33:ILE:O	27:BF:90:LEU:HB2	2.10	0.51
27:BF:128:SER:HA	27:BF:154:THR:HA	1.92	0.51
30:BI:33:ASN:HB3	30:BI:36:GLU:CB	2.38	0.51
30:BI:89:SER:OG	30:BI:135:MET:HA	2.11	0.51
31:BJ:58:ASN:N	31:BJ:127:GLY:O	2.43	0.51
43:BV:68:LYS:O	43:BV:69:GLU:O	2.28	0.51
44:BW:67:LYS:O	44:BW:68:PHE:HB2	2.08	0.51
49:B1:3:GLY:C	49:B1:5:ARG:H	2.17	0.51
52:B4:9:LYS:HD3	52:B4:9:LYS:N	2.13	0.51
53:CA:71:A:C2	53:CA:72:A:N7	2.79	0.51
53:CA:102:G:H2'	53:CA:103:U:C6	2.46	0.51
53:CA:109:A:C8	53:CA:327:A:O4'	2.63	0.51
53:CA:560:A:C5	5:CE:127:TYR:CE2	2.98	0.51
53:CA:597:G:C2'	53:CA:598:U:H5'	2.39	0.51
53:CA:752:G:C1'	53:CA:754:C:N4	2.65	0.51
53:CA:834:U:H2'	53:CA:835:U:H6	1.75	0.51
53:CA:868:C:H2'	53:CA:869:G:O4'	2.09	0.51
53:CA:1118:U:H5'	9:CI:10:ARG:HH21	1.75	0.51
53:CA:1215:G:O2'	53:CA:1216:A:C8	2.55	0.51
4:CD:39:GLN:C	4:CD:41:GLY:H	2.17	0.51
54:CG:10:LYS:HE3	54:CG:10:LYS:H	1.75	0.51
21:CU:19:LYS:HB3	21:CU:24:LYS:HB2	1.92	0.51
22:DA:332:A:O2'	22:DA:333:G:H3'	2.10	0.51
22:DA:401:A:H2'	22:DA:402:A:C8	2.44	0.51
22:DA:1027:A:N7	22:DA:1126:A:C2	2.78	0.51
22:DA:1053:C:N4	22:DA:1054:A:N6	2.59	0.51
22:DA:1055:G:H2'	22:DA:1056:G:H5'	1.93	0.51
22:DA:1259:G:H2'	22:DA:1260:A:H8	1.75	0.51
22:DA:1455:G:O2'	22:DA:1456:G:O5'	2.28	0.51
22:DA:1534:U:H3'	22:DA:1534:U:O2	2.10	0.51
22:DA:1868:C:N4	22:DA:1869:G:O6	2.44	0.51
22:DA:2039:U:H2'	22:DA:2040:G:H8	1.74	0.51
22:DA:2093:G:O2'	22:DA:2094:A:P	2.68	0.51
22:DA:2144:G:O2'	22:DA:2145:C:H3'	2.10	0.51
22:DA:2402:U:O2'	22:DA:2403:C:P	2.68	0.51
24:DC:77:VAL:CG2	24:DC:112:GLY:H	2.21	0.51
25:DD:39:ASP:CG	25:DD:40:LEU:H	2.18	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:138:LEU:N	25:DD:138:LEU:HD13	2.26	0.51
58:DF:28:PRO:CB	58:DF:168:LEU:HD21	2.40	0.51
28:DG:117:PRO:HD2	28:DG:120:ILE:CG2	2.41	0.51
29:DH:46:PHE:CD2	29:DH:50:ARG:NH2	2.79	0.51
31:DJ:43:GLU:O	31:DJ:45:THR:HG22	2.11	0.51
33:DL:141:LYS:HD2	33:DL:142:ILE:N	2.24	0.51
34:DM:53:MET:HE1	34:DM:103:TYR:CG	2.46	0.51
43:DV:30:ILE:HB	43:DV:38:LEU:HB3	1.93	0.51
1:AA:414:A:N6	1:AA:431:A:C4	2.78	0.51
1:AA:721:G:C4'	1:AA:722:G:O5'	2.35	0.51
1:AA:1127:G:C2'	1:AA:1128:C:H5'	2.41	0.51
1:AA:1409:C:H2'	1:AA:1410:A:H8	1.74	0.51
2:AB:27:LYS:C	2:AB:29:PHE:H	2.17	0.51
2:AB:40:ILE:O	2:AB:41:ASN:HB2	2.10	0.51
6:AF:43:GLY:HA2	6:AF:58:HIS:CE1	2.45	0.51
14:AN:11:LYS:HB2	14:AN:11:LYS:NZ	2.24	0.51
22:BA:729:G:C4	22:BA:1775:U:C2	2.99	0.51
22:BA:740:C:H5'	22:BA:1784:A:H3'	1.92	0.51
22:BA:904:G:C2	22:BA:905:A:N7	2.79	0.51
22:BA:1131:G:C4	31:BJ:77:HIS:ND1	2.79	0.51
22:BA:1252:G:O2'	22:BA:1253:A:C8	2.60	0.51
22:BA:2038:G:H2'	22:BA:2039:U:O4'	2.11	0.51
22:BA:2199:A:H5'	22:BA:2200:C:C5	2.46	0.51
22:BA:2530:A:N6	28:BG:155:PRO:HG3	2.26	0.51
24:BC:247:TRP:C	24:BC:249:VAL:H	2.19	0.51
25:BD:118:PHE:HD2	25:BD:119:ALA:N	2.04	0.51
26:BE:75:SER:O	26:BE:78:TRP:HB2	2.11	0.51
26:BE:79:ARG:CG	26:BE:80:SER:N	2.73	0.51
33:BL:77:ILE:HG12	33:BL:95:LEU:CD1	2.40	0.51
34:BM:42:THR:O	34:BM:43:ALA:HB3	2.10	0.51
41:BT:28:ASN:C	41:BT:91:GLN:HE22	2.19	0.51
43:BV:43:ASP:OD1	43:BV:43:ASP:C	2.53	0.51
43:BV:68:LYS:O	43:BV:69:GLU:C	2.53	0.51
46:BY:43:LEU:O	46:BY:47:ARG:HB2	2.10	0.51
53:CA:309:A:O2'	53:CA:607:A:N1	2.38	0.51
53:CA:322:C:C2	53:CA:332:G:N2	2.79	0.51
2:CB:119:GLN:HG3	2:CB:124:THR:HG21	1.93	0.51
4:CD:187:ARG:NH2	4:CD:191:SER:CB	2.74	0.51
5:CE:80:LEU:N	5:CE:121:ASN:HD21	2.09	0.51
6:CF:27:ALA:O	6:CF:31:GLY:HA3	2.09	0.51
11:CK:96:ILE:HD13	11:CK:109:ILE:CD1	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:38:LEU:HD12	15:CO:41:HIS:CB	2.40	0.51
56:CP:46:LYS:HE2	56:CP:47:GLU:N	2.25	0.51
20:CT:54:GLN:N	20:CT:55:PRO:HD2	2.25	0.51
22:DA:75:G:O2'	22:DA:76:C:H6	1.93	0.51
22:DA:118:A:O5'	22:DA:119:A:H5"	2.11	0.51
22:DA:202:U:H3'	22:DA:203:A:C8	2.46	0.51
22:DA:233:A:HO2'	22:DA:234:U:H6	1.56	0.51
22:DA:483:A:C8	42:DU:44:HIS:CD2	2.99	0.51
22:DA:674:G:O3'	26:DE:60:TRP:CH2	2.63	0.51
22:DA:708:G:H2'	22:DA:709:U:C6	2.46	0.51
22:DA:775:G:O6	22:DA:787:C:H2'	2.10	0.51
22:DA:1161:C:H2'	22:DA:1162:G:C8	2.46	0.51
22:DA:2236:U:H2'	22:DA:2237:G:O4'	2.10	0.51
22:DA:2583:G:C6	22:DA:2584:U:C2	2.99	0.51
22:DA:2613:U:H4'	22:DA:2614:A:OP2	2.07	0.51
26:DE:5:LEU:HD13	26:DE:122:GLU:HB2	1.91	0.51
58:DF:103:ILE:HG22	58:DF:103:ILE:O	2.11	0.51
32:DK:23:LYS:O	32:DK:25:LEU:HD23	2.10	0.51
34:DM:76:LYS:NZ	34:DM:84:LYS:H	2.08	0.51
37:DP:109:ILE:O	37:DP:110:LYS:HG3	2.11	0.51
51:D3:33:THR:CG2	51:D3:34:LYS:N	2.72	0.51
1:AA:735:C:H5'	18:AR:59:LYS:HD3	1.92	0.51
1:AA:1046:A:C4	1:AA:1047:G:C8	2.98	0.51
1:AA:1203:C:H2'	1:AA:1204:A:O4'	2.11	0.51
11:AK:76:TYR:CD1	11:AK:76:TYR:N	2.79	0.51
13:AM:84:CYS:HB3	19:AS:73:PHE:HE2	1.74	0.51
13:AM:94:LEU:HB3	13:AM:95:PRO:HD2	1.93	0.51
13:AM:105:ALA:O	13:AM:109:LYS:HB2	2.11	0.51
16:AP:10:GLY:O	16:AP:11:ALA:HB2	2.11	0.51
21:AU:19:LYS:HE2	21:AU:19:LYS:N	2.24	0.51
22:BA:148:U:H5"	22:BA:149:A:OP2	2.10	0.51
22:BA:571:U:C5	22:BA:575:A:C6	2.99	0.51
22:BA:775:G:C5	22:BA:794:A:C8	2.98	0.51
22:BA:945:A:C4	22:BA:2448:A:C2	2.99	0.51
22:BA:1257:C:H5'	26:BE:78:TRP:CH2	2.44	0.51
22:BA:1515:A:H2'	22:BA:1516:G:O4'	2.10	0.51
22:BA:1605:C:H5"	22:BA:1606:C:OP2	2.11	0.51
22:BA:1655:A:H3'	22:BA:1656:C:C6	2.46	0.51
22:BA:1693:U:O2'	24:BC:13:ARG:NH2	2.44	0.51
22:BA:2585:U:O2'	22:BA:2586:U:C5'	2.49	0.51
24:BC:20:ASN:HD22	24:BC:21:PRO:N	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BD:133:THR:HG23	25:BD:134:HIS:N	2.24	0.51
25:BD:186:LEU:HD11	37:BP:3:ILE:CD1	2.40	0.51
26:BE:137:LYS:O	26:BE:141:MET:HG3	2.09	0.51
29:BH:8:LYS:O	29:BH:9:VAL:CB	2.57	0.51
32:BK:10:VAL:CB	32:BK:16:ALA:HB1	2.41	0.51
37:BP:50:ARG:HD2	37:BP:51:ASN:N	2.26	0.51
53:CA:54:C:H41	53:CA:352:C:H2'	1.76	0.51
53:CA:93:U:C2	53:CA:95:C:N4	2.79	0.51
53:CA:325:A:N6	53:CA:326:G:C6	2.79	0.51
53:CA:579:A:H2'	53:CA:580:C:H6	1.74	0.51
53:CA:1331:G:H2'	53:CA:1332:A:OP2	2.11	0.51
4:CD:29:THR:HG22	4:CD:30:LYS:CD	2.40	0.51
15:CO:16:ARG:HB2	15:CO:23:SER:CB	2.41	0.51
20:CT:62:ALA:HA	20:CT:67:HIS:CE1	2.45	0.51
21:CU:33:ARG:NH2	21:CU:34:ARG:HD3	2.26	0.51
22:DA:138:U:H2'	22:DA:140:C:C1'	2.33	0.51
22:DA:249:C:H3'	22:DA:2394:C:H4'	1.92	0.51
22:DA:1000:A:N1	22:DA:1001:A:C2	2.78	0.51
22:DA:1055:G:C3'	22:DA:1056:G:H5'	2.40	0.51
22:DA:1087:G:H1'	22:DA:1089:A:H1'	1.92	0.51
22:DA:1931:U:H2'	22:DA:1932:A:C8	2.35	0.51
22:DA:2104:C:O2	22:DA:2105:U:C5	2.63	0.51
22:DA:2232:C:OP2	45:DX:26:ARG:NH1	2.41	0.51
22:DA:2308:G:C2'	22:DA:2309:A:OP1	2.58	0.51
22:DA:2392:A:H2	33:DL:55:MET:SD	2.34	0.51
22:DA:2677:G:H2'	22:DA:2678:C:C6	2.46	0.51
22:DA:2816:G:C2	22:DA:2831:G:C2	2.99	0.51
22:DA:2875:C:O2'	22:DA:2876:G:O5'	2.28	0.51
24:DC:29:PHE:CE2	24:DC:31:PRO:HG2	2.45	0.51
25:DD:33:ARG:HB3	25:DD:95:SER:OG	2.11	0.51
25:DD:116:LYS:HA	35:DN:1:MET:HE1	1.92	0.51
28:DG:162:ARG:HG3	28:DG:166:GLU:HG3	1.93	0.51
30:DI:12:VAL:HG12	30:DI:13:ALA:N	2.26	0.51
30:DI:83:ALA:HB2	30:DI:99:LYS:O	2.11	0.51
33:DL:127:VAL:HG13	33:DL:132:ARG:HB2	1.93	0.51
35:DN:21:PHE:N	35:DN:21:PHE:CD1	2.78	0.51
41:DT:45:ALA:HA	41:DT:48:GLN:CG	2.40	0.51
1:AA:109:A:C6	1:AA:326:G:C6	2.99	0.51
1:AA:842:U:H2'	1:AA:844:G:P	2.50	0.51
1:AA:872:A:C4	1:AA:874:G:N7	2.78	0.51
1:AA:1065:U:H5"	1:AA:1190:G:N2	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1333:A:H2'	1:AA:1334:G:O4'	2.11	0.51
1:AA:1491:G:C5'	1:AA:1492:A:OP1	2.59	0.51
5:AE:133:ILE:H	5:AE:133:ILE:CD1	2.20	0.51
7:AG:29:LEU:C	7:AG:29:LEU:HD23	2.36	0.51
8:AH:63:LYS:HB3	8:AH:70:VAL:HG21	1.91	0.51
17:AQ:46:HIS:N	17:AQ:72:TRP:O	2.37	0.51
22:BA:483:A:C2'	22:BA:484:C:H5'	2.41	0.51
22:BA:613:A:C8	22:BA:616:A:N1	2.79	0.51
22:BA:1062:G:C2'	22:BA:1063:G:C8	2.94	0.51
22:BA:1098:A:H5'	22:BA:1099:G:OP2	2.09	0.51
22:BA:1106:G:N3	22:BA:1107:G:C8	2.79	0.51
22:BA:1387:A:H5'	22:BA:1469:A:H1'	1.93	0.51
22:BA:1437:C:H2'	22:BA:1438:U:H6	1.75	0.51
22:BA:2308:G:C5	27:BF:76:PHE:HE2	2.29	0.51
22:BA:2402:U:H2'	22:BA:2403:C:OP2	2.11	0.51
22:BA:2818:U:O2'	22:BA:2819:G:H5'	2.11	0.51
26:BE:7:ASP:O	26:BE:9:GLN:N	2.44	0.51
30:BI:135:MET:HG2	30:BI:137:LEU:HG	1.92	0.51
39:BR:49:ILE:O	39:BR:51:VAL:O	2.28	0.51
41:BT:37:ASP:O	41:BT:38:ALA:O	2.29	0.51
41:BT:40:LYS:CA	41:BT:43:ILE:HG23	2.40	0.51
49:B1:24:LYS:HE2	49:B1:52:LYS:CB	2.36	0.51
52:B4:23:ILE:HB	52:B4:38:GLY:HA3	1.92	0.51
53:CA:68:G:H21	53:CA:152:A:H1'	1.75	0.51
53:CA:219:U:H2'	53:CA:220:G:C8	2.45	0.51
53:CA:239:U:C6	53:CA:239:U:H5'	2.45	0.51
53:CA:245:U:H6	53:CA:245:U:H5"	1.76	0.51
53:CA:493:A:H5"	53:CA:494:G:OP2	2.10	0.51
4:CD:2:ARG:HE	4:CD:114:ARG:CD	2.24	0.51
54:CG:91:ARG:HG2	54:CG:92:PRO:CD	2.36	0.51
12:CL:5:GLN:HG3	12:CL:9:LYS:HZ1	1.76	0.51
56:CP:48:GLU:CD	56:CP:51:ARG:HE	2.19	0.51
22:DA:53:A:H2'	22:DA:54:G:O4'	2.10	0.51
22:DA:223:A:N1	22:DA:407:G:O2'	2.37	0.51
22:DA:377:G:C6	22:DA:378:C:N3	2.79	0.51
22:DA:469:G:OP2	26:DE:55:SER:HB3	2.11	0.51
22:DA:483:A:O2'	22:DA:484:C:H5'	2.10	0.51
22:DA:628:G:O6	22:DA:636:G:N1	2.44	0.51
22:DA:819:A:OP2	22:DA:1187:G:N2	2.43	0.51
22:DA:968:C:O2'	22:DA:969:G:H5'	2.11	0.51
22:DA:995:C:O2'	38:DQ:60:TRP:CZ2	2.61	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1062:G:O2'	22:DA:1063:G:H8	1.93	0.51
22:DA:1261:C:OP2	40:DS:83:LYS:NZ	2.44	0.51
22:DA:1492:G:H3'	22:DA:1493:C:C5'	2.40	0.51
22:DA:1739:A:C6	22:DA:1740:G:C5	2.99	0.51
22:DA:2345:G:C6	22:DA:2381:A:C6	2.99	0.51
22:DA:2663:G:H2'	22:DA:2664:G:H8	1.76	0.51
22:DA:2836:U:O2'	22:DA:2837:A:H8	1.94	0.51
22:DA:2875:C:HO2'	22:DA:2876:G:H8	0.66	0.51
26:DE:34:ALA:HB1	26:DE:94:GLN:HB2	1.93	0.51
26:DE:129:PRO:HD3	26:DE:156:ASN:OD1	2.11	0.51
58:DF:177:ARG:CZ	58:DF:178:LYS:H	2.22	0.51
28:DG:15:ASP:HB3	28:DG:26:LYS:H	1.76	0.51
30:DI:104:GLN:HA	30:DI:107:GLU:CB	2.39	0.51
34:DM:133:LYS:HB3	34:DM:133:LYS:HZ3	1.76	0.51
38:DQ:77:LYS:HE2	38:DQ:116:LEU:HD11	1.92	0.51
42:DU:95:PHE:CD1	42:DU:95:PHE:N	2.73	0.51
46:DY:18:LEU:HD13	46:DY:22:LEU:HD13	1.92	0.51
1:AA:154:U:O2'	1:AA:155:A:H5'	2.11	0.51
1:AA:475:C:H2'	1:AA:476:U:C6	2.45	0.51
1:AA:903:G:C5	1:AA:904:U:C5	2.99	0.51
1:AA:1006:G:H2'	1:AA:1007:U:O4'	2.11	0.51
1:AA:1054:C:O2'	1:AA:1055:A:OP2	2.27	0.51
1:AA:1306:A:H2'	1:AA:1307:U:H5'	1.93	0.51
1:AA:1533:C:H3'	1:AA:1534:A:C5'	2.40	0.51
3:AC:148:ILE:HG12	3:AC:149:LYS:N	2.24	0.51
15:AO:16:ARG:HD3	15:AO:20:ASP:OD2	2.11	0.51
22:BA:742:A:H2'	22:BA:743:A:H8	1.76	0.51
22:BA:2788:C:H2'	22:BA:2789:C:C6	2.46	0.51
29:BH:14:SER:O	29:BH:16:GLY:N	2.43	0.51
31:BJ:110:PRO:HB2	31:BJ:111:LYS:HZ2	1.75	0.51
39:BR:27:ILE:HG21	39:BR:33:VAL:HG12	1.92	0.51
39:BR:48:LYS:O	39:BR:49:ILE:C	2.51	0.51
49:B1:8:ILE:HG23	49:B1:51:ALA:HA	1.91	0.51
53:CA:604:G:H2'	53:CA:605:U:O4'	2.11	0.51
53:CA:719:C:H3'	53:CA:720:C:C6	2.46	0.51
53:CA:892:A:HO2'	53:CA:1415:G:H4'	1.75	0.51
5:CE:112:ALA:O	5:CE:113:VAL:C	2.54	0.51
5:CE:131:ASN:HD22	5:CE:132:PRO:HD2	1.75	0.51
21:CU:28:LEU:HD23	21:CU:28:LEU:C	2.36	0.51
22:DA:100:U:C6	22:DA:100:U:OP1	2.64	0.51
22:DA:121:G:C4	22:DA:131:A:C6	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:533:G:C2	22:DA:534:U:C2	2.99	0.51
22:DA:608:A:H2'	22:DA:609:A:C8	2.45	0.51
22:DA:742:A:H2'	22:DA:743:A:C8	2.46	0.51
22:DA:811:U:H1'	22:DA:1251:C:C2	2.45	0.51
22:DA:1038:G:N1	22:DA:1039:A:N7	2.58	0.51
22:DA:1364:G:H1'	22:DA:1368:G:N2	2.26	0.51
22:DA:1378:A:C8	22:DA:1380:G:C5	2.99	0.51
22:DA:1467:U:C2'	22:DA:1468:U:H5'	2.39	0.51
22:DA:2635:A:C5'	25:DD:79:LEU:HB2	2.40	0.51
22:DA:2874:C:H2'	22:DA:2875:C:C5	2.46	0.51
57:DB:94:A:OP1	43:DV:19:ARG:HD3	2.11	0.51
58:DF:37:MET:HE3	58:DF:56:LEU:HD23	1.93	0.51
28:DG:84:LYS:HB2	28:DG:132:LEU:H	1.75	0.51
32:DK:80:ASP:HB2	37:DP:67:GLU:OE1	2.11	0.51
34:DM:34:LYS:HB3	34:DM:129:THR:HG22	1.93	0.51
36:DO:24:THR:OG1	36:DO:90:VAL:HG11	2.11	0.51
37:DP:87:ARG:HG2	37:DP:88:ARG:H	1.75	0.51
38:DQ:6:GLY:C	38:DQ:8:ILE:N	2.69	0.51
42:DU:34:ILE:HG12	42:DU:63:ALA:HA	1.93	0.51
42:DU:90:LYS:HE2	42:DU:92:VAL:HG12	1.93	0.51
47:DZ:10:ARG:HB2	47:DZ:53:MET:HB3	1.92	0.51
1:AA:267:C:O2'	1:AA:268:U:H5'	2.10	0.51
1:AA:645:G:C2'	1:AA:646:G:H5'	2.41	0.51
1:AA:707:U:OP1	11:AK:86:LYS:HE3	2.10	0.51
1:AA:877:G:N3	8:AH:1:SER:N	2.58	0.51
1:AA:1046:A:O2'	1:AA:1047:G:C5'	2.50	0.51
1:AA:1112:C:N4	3:AC:177:LEU:HD22	2.26	0.51
1:AA:1211:U:H1'	1:AA:1213:A:C2	2.46	0.51
1:AA:1284:C:H6	1:AA:1284:C:O5'	1.93	0.51
1:AA:1457:G:H2'	1:AA:1458:G:O4'	2.11	0.51
7:AG:119:LEU:CD2	7:AG:123:LEU:HD23	2.41	0.51
8:AH:83:ARG:O	8:AH:84:ILE:HD13	2.11	0.51
10:AJ:57:VAL:O	10:AJ:58:ASN:HB2	2.10	0.51
10:AJ:81:GLU:O	10:AJ:85:ASP:HB2	2.11	0.51
10:AJ:91:ASP:C	10:AJ:92:LEU:HD23	2.35	0.51
13:AM:21:ILE:HB	13:AM:24:VAL:HG22	1.93	0.51
14:AN:50:LEU:O	14:AN:51:PRO:C	2.53	0.51
20:AT:19:HIS:O	20:AT:20:ASN:C	2.53	0.51
22:BA:50:U:H4'	22:BA:51:G:OP2	2.10	0.51
22:BA:1071:G:C5	22:BA:1089:A:C6	2.98	0.51
22:BA:1441:G:H2'	22:BA:1442:U:C6	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1479:G:O2'	22:BA:1480:C:H5'	2.11	0.51
22:BA:1936:A:H2	22:BA:1943:U:C4	2.27	0.51
22:BA:2352:A:N1	44:BW:30:VAL:HG21	2.25	0.51
22:BA:2580:U:C5	22:BA:2581:G:C6	2.99	0.51
24:BC:106:PRO:CA	24:BC:141:HIS:HE1	2.24	0.51
25:BD:107:VAL:HG13	25:BD:203:VAL:CG2	2.41	0.51
25:BD:149:ASN:O	25:BD:152:PRO:HD2	2.11	0.51
28:BG:102:ILE:HG22	28:BG:104:LEU:HG	1.93	0.51
28:BG:164:ALA:C	28:BG:166:GLU:H	2.19	0.51
37:BP:50:ARG:HB2	37:BP:56:SER:HA	1.92	0.51
44:BW:39:GLN:CG	44:BW:42:THR:H	2.23	0.51
53:CA:439:U:O2	53:CA:439:U:H2'	2.11	0.51
53:CA:615:G:H2'	53:CA:616:G:C8	2.45	0.51
53:CA:1175:G:O2'	53:CA:1176:A:H5'	2.11	0.51
53:CA:1239:A:H3'	54:CG:118:ARG:NH2	2.26	0.51
53:CA:1343:G:H4'	9:CI:123:ARG:HB3	1.93	0.51
4:CD:84:ASN:CG	4:CD:87:GLU:HG3	2.35	0.51
6:CF:68:GLN:HG2	6:CF:69:GLU:H	1.76	0.51
9:CI:79:ARG:O	9:CI:83:THR:HG22	2.10	0.51
12:CL:106:VAL:HG23	12:CL:116:TYR:HB3	1.92	0.51
22:DA:100:U:OP1	22:DA:100:U:H2'	2.11	0.51
22:DA:121:G:C2	22:DA:131:A:C5	2.99	0.51
22:DA:156:A:H2'	22:DA:157:C:O4'	2.11	0.51
22:DA:186:G:N2	22:DA:211:C:O2	2.44	0.51
22:DA:503:A:C2	22:DA:505:A:H2'	2.46	0.51
22:DA:604:G:C6	22:DA:625:G:C6	2.99	0.51
22:DA:1036:G:C5	22:DA:1120:G:C6	2.99	0.51
22:DA:1130:U:HO2'	22:DA:1131:G:H8	1.56	0.51
22:DA:1171:G:C2	22:DA:1179:G:N3	2.78	0.51
22:DA:1210:G:H5'	22:DA:1212:G:O4'	2.11	0.51
22:DA:1553:A:C8	22:DA:1555:G:C6	2.98	0.51
22:DA:1651:G:C2	22:DA:2007:U:C2	2.98	0.51
22:DA:1654:A:N3	22:DA:1655:A:C8	2.79	0.51
22:DA:1789:A:OP1	24:DC:219:VAL:HA	2.11	0.51
22:DA:2620:C:O4'	25:DD:161:MET:HG3	2.11	0.51
22:DA:2836:U:HO2'	22:DA:2837:A:H8	1.58	0.51
22:DA:2887:A:H1'	48:D0:39:ARG:HH22	1.76	0.51
57:DB:69:G:C4	57:DB:70:C:C6	2.99	0.51
24:DC:196:ASN:OD1	24:DC:199:HIS:HB2	2.11	0.51
25:DD:38:LYS:HB3	25:DD:38:LYS:HZ3	1.76	0.51
25:DD:40:LEU:H	25:DD:40:LEU:HD12	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DF:11:VAL:HG12	58:DF:12:VAL:N	2.25	0.51
58:DF:177:ARG:CD	58:DF:178:LYS:N	2.74	0.51
28:DG:90:GLY:HA3	28:DG:93:TYR:CZ	2.46	0.51
31:DJ:70:THR:HG22	31:DJ:90:GLU:OE2	2.11	0.51
36:DO:7:ARG:HH21	36:DO:95:SER:HB3	1.75	0.51
38:DQ:42:GLY:HA3	39:DR:75:VAL:HG21	1.93	0.51
39:DR:97:LYS:HG2	39:DR:97:LYS:O	2.11	0.51
41:DT:29:THR:HA	41:DT:87:LEU:HB2	1.92	0.51
1:AA:19:A:N3	1:AA:917:G:C2	2.79	0.51
1:AA:132:C:H5"	20:AT:68:LYS:HD2	1.91	0.51
1:AA:512:U:H2'	1:AA:513:C:C6	2.46	0.51
1:AA:679:C:O2	1:AA:712:A:C2	2.64	0.51
1:AA:1386:G:H2'	1:AA:1387:G:C8	2.44	0.51
2:AB:40:ILE:HG21	2:AB:201:GLY:N	2.26	0.51
3:AC:55:VAL:O	3:AC:65:VAL:HA	2.11	0.51
5:AE:94:PHE:CZ	5:AE:96:GLN:HG2	2.46	0.51
16:AP:46:LYS:HZ3	16:AP:48:GLU:HB3	1.76	0.51
22:BA:329:G:O4'	22:BA:477:A:H1'	2.11	0.51
22:BA:496:G:H1'	40:BS:61:ASN:HD21	1.76	0.51
22:BA:780:G:H21	22:BA:783:A:H62	1.59	0.51
22:BA:1078:U:H4'	22:BA:1079:C:H6	1.75	0.51
22:BA:1385:A:C4	22:BA:1386:C:C5	2.99	0.51
22:BA:1867:G:H2'	22:BA:1868:C:H5'	1.92	0.51
22:BA:2204:G:O5'	24:BC:149:LYS:HE3	2.11	0.51
22:BA:2799:A:O2'	22:BA:2800:A:OP2	2.25	0.51
25:BD:4:LEU:HD23	25:BD:29:VAL:HG11	1.93	0.51
27:BF:105:ILE:C	27:BF:108:PRO:HD2	2.36	0.51
31:BJ:40:HIS:C	31:BJ:41:LYS:HG2	2.35	0.51
35:BN:96:ARG:NH2	35:BN:116:VAL:HG23	2.23	0.51
39:BR:39:LEU:CB	39:BR:49:ILE:HD13	2.41	0.51
39:BR:46:GLU:HG2	39:BR:47:VAL:N	2.26	0.51
41:BT:28:ASN:CA	41:BT:91:GLN:HE22	2.23	0.51
45:BX:1:SER:O	45:BX:3:VAL:N	2.44	0.51
53:CA:106:C:O2'	53:CA:107:G:H5'	2.11	0.51
53:CA:732:C:H2'	53:CA:733:G:H5"	1.93	0.51
53:CA:987:G:H8	53:CA:987:G:O5'	1.94	0.51
53:CA:1073:U:C4	53:CA:1074:G:N7	2.78	0.51
53:CA:1113:C:O2'	53:CA:1114:C:H5'	2.12	0.51
2:CB:103:TRP:CA	2:CB:106:VAL:HB	2.37	0.51
4:CD:33:ILE:O	4:CD:35:GLN:HG2	2.10	0.51
6:CF:62:MET:O	6:CF:63:ASN:HB2	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:92:THR:HG22	6:CF:93:LYS:N	2.26	0.51
9:CI:45:MET:HB3	9:CI:49:GLN:HG3	1.93	0.51
9:CI:61:ASP:C	9:CI:62:LEU:HD22	2.36	0.51
11:CK:74:LYS:HA	11:CK:78:ILE:CD1	2.30	0.51
22:DA:1039:A:C6	22:DA:1117:C:N3	2.79	0.51
22:DA:1292:G:C6	22:DA:1293:C:N4	2.79	0.51
22:DA:1387:A:C4	22:DA:1388:G:C8	2.99	0.51
22:DA:1924:C:O2'	22:DA:1925:C:H5'	2.11	0.51
22:DA:2218:G:H2'	22:DA:2219:U:H6	1.76	0.51
22:DA:2732:G:H5"	22:DA:2733:A:O4'	2.11	0.51
22:DA:2771:C:H2'	22:DA:2772:C:C6	2.45	0.51
28:DG:7:PRO:O	28:DG:8:VAL:HB	2.11	0.51
30:DI:49:GLU:HG3	30:DI:54:ILE:HD11	1.91	0.51
32:DK:108:ARG:HB2	32:DK:116:ILE:HD13	1.93	0.51
35:DN:7:GLY:O	35:DN:8:ARG:HB2	2.10	0.51
38:DQ:23:TYR:HB3	38:DQ:27:ARG:HD3	1.92	0.51
42:DU:94:PHE:O	42:DU:95:PHE:C	2.53	0.51
1:AA:147:G:H2'	1:AA:148:G:C8	2.46	0.50
1:AA:184:G:HO2'	1:AA:185:U:H6	1.59	0.50
1:AA:489:C:O2'	1:AA:490:C:H5'	2.11	0.50
1:AA:596:A:C6	1:AA:645:G:C2	2.99	0.50
1:AA:714:G:H2'	1:AA:715:A:C8	2.46	0.50
1:AA:957:U:O2	1:AA:959:A:C8	2.64	0.50
1:AA:1171:A:C2	1:AA:1172:C:C2	2.99	0.50
1:AA:1461:G:O2'	1:AA:1462:C:H5'	2.10	0.50
2:AB:42:LEU:CG	2:AB:43:GLU:HG3	2.34	0.50
3:AC:164:THR:O	3:AC:165:GLU:C	2.55	0.50
7:AG:70:PRO:HD2	7:AG:95:ARG:HG3	1.93	0.50
7:AG:113:LYS:HB2	7:AG:117:LEU:HD12	1.92	0.50
13:AM:24:VAL:HG23	13:AM:24:VAL:O	2.11	0.50
13:AM:28:ARG:O	13:AM:32:ILE:HG12	2.10	0.50
19:AS:48:ILE:HD12	19:AS:48:ILE:O	2.11	0.50
19:AS:50:VAL:CG2	19:AS:70:LEU:HB3	2.36	0.50
21:AU:40:PRO:HA	21:AU:43:GLU:HB2	1.93	0.50
22:BA:202:U:H2'	22:BA:203:A:C8	2.45	0.50
22:BA:1005:C:O2'	31:BJ:30:THR:HG21	2.11	0.50
22:BA:1081:U:H2'	22:BA:1081:U:O2	2.09	0.50
22:BA:1278:C:H2'	22:BA:1279:G:C8	2.45	0.50
22:BA:1509:A:N3	22:BA:1510:G:C8	2.79	0.50
22:BA:1720:U:H2'	22:BA:1721:G:O4'	2.10	0.50
22:BA:1882:U:O2'	22:BA:1883:U:H5'	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2383:G:O2'	22:BA:2384:U:H5'	2.10	0.50
22:BA:2536:G:C5	22:BA:2537:U:C5	2.99	0.50
22:BA:2571:U:O2'	25:BD:151:THR:HG21	2.10	0.50
22:BA:2766:A:H5"	22:BA:2767:C:OP2	2.12	0.50
23:BB:61:G:H2'	23:BB:62:C:H6	1.75	0.50
29:BH:2:GLN:HG2	29:BH:20:ASN:ND2	2.26	0.50
37:BP:20:ARG:HH21	37:BP:20:ARG:CG	2.24	0.50
38:BQ:40:LYS:HD3	38:BQ:44:TYR:CZ	2.46	0.50
39:BR:29:THR:HG22	39:BR:29:THR:O	2.12	0.50
40:BS:73:LYS:HE3	40:BS:73:LYS:HA	1.91	0.50
41:BT:10:VAL:HG23	41:BT:11:LEU:HD23	1.92	0.50
43:BV:80:HIS:ND1	43:BV:81:PRO:HD2	2.26	0.50
53:CA:51:A:H4'	53:CA:52:C:H5"	1.93	0.50
53:CA:264:C:H2'	53:CA:265:G:O4'	2.10	0.50
53:CA:1129:C:O2'	53:CA:1130:A:H8	1.91	0.50
53:CA:1129:C:C4	53:CA:1139:G:C5	2.99	0.50
53:CA:1130:A:C6	53:CA:1146:A:C5	2.98	0.50
53:CA:1154:G:H2'	53:CA:1155:A:C8	2.45	0.50
53:CA:1356:G:N2	53:CA:1367:C:O2	2.44	0.50
3:CC:20:THR:HG23	3:CC:57:GLU:HG2	1.92	0.50
5:CE:17:VAL:HA	5:CE:33:THR:O	2.10	0.50
22:DA:339:U:H2'	22:DA:340:A:C8	2.45	0.50
22:DA:518:G:H2'	22:DA:519:U:C6	2.45	0.50
22:DA:531:C:H4'	22:DA:532:A:C8	2.46	0.50
22:DA:538:A:O2'	31:DJ:8:PRO:CG	2.60	0.50
22:DA:740:C:O2'	22:DA:741:U:C5'	2.59	0.50
22:DA:769:U:HO2'	22:DA:1379:U:H6	1.59	0.50
22:DA:1301:A:C8	22:DA:1303:G:C8	2.99	0.50
22:DA:1593:A:C5	22:DA:1594:U:C4	3.00	0.50
22:DA:1744:A:H3'	22:DA:1745:A:C8	2.45	0.50
22:DA:1857:G:C4	22:DA:1884:G:N1	2.79	0.50
22:DA:2147:A:N3	22:DA:2147:A:H2'	2.26	0.50
22:DA:2379:G:H2'	22:DA:2380:C:C6	2.45	0.50
24:DC:24:HIS:N	24:DC:80:LEU:O	2.42	0.50
24:DC:64:VAL:HG11	24:DC:66:PHE:CZ	2.46	0.50
24:DC:216:ARG:HH11	24:DC:216:ARG:HG3	1.75	0.50
25:DD:10:GLY:O	25:DD:11:MET:CB	2.58	0.50
26:DE:154:ASP:C	26:DE:156:ASN:H	2.18	0.50
58:DF:174:PHE:CG	58:DF:175:PRO:HD2	2.46	0.50
29:DH:84:ALA:HB3	29:DH:148:ALA:HB2	1.93	0.50
30:DI:5:GLN:OE1	30:DI:59:THR:HG21	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DI:18:ASN:HB3	30:DI:19:PRO:HD3	1.93	0.50
31:DJ:80:HIS:O	31:DJ:81:ILE:C	2.53	0.50
35:DN:16:HIS:O	35:DN:20:MET:N	2.43	0.50
38:DQ:39:ILE:O	38:DQ:42:GLY:N	2.43	0.50
38:DQ:59:LEU:O	38:DQ:63:ARG:HD3	2.11	0.50
42:DU:95:PHE:HD1	42:DU:95:PHE:N	2.06	0.50
45:DX:24:THR:O	45:DX:25:LYS:C	2.54	0.50
1:AA:149:A:C2	1:AA:150:U:C2	2.99	0.50
1:AA:414:A:C2	1:AA:415:A:C4	2.99	0.50
1:AA:466:A:H4'	1:AA:467:U:OP2	2.11	0.50
1:AA:579:A:H2'	1:AA:580:C:C6	2.46	0.50
1:AA:652:U:O4	1:AA:752:G:O2'	2.19	0.50
1:AA:683:G:C2	1:AA:708:C:O2	2.64	0.50
1:AA:819:A:N7	1:AA:1529:G:C2	2.79	0.50
1:AA:1088:G:H21	1:AA:1167:A:N6	2.08	0.50
1:AA:1157:A:H1'	1:AA:1181:G:N2	2.26	0.50
1:AA:1489:G:O2'	1:AA:1490:U:H5'	2.12	0.50
2:AB:20:ARG:HA	2:AB:20:ARG:CZ	2.41	0.50
3:AC:166:TRP:N	3:AC:166:TRP:CE3	2.74	0.50
16:AP:71:VAL:O	16:AP:75:ILE:HG13	2.11	0.50
22:BA:2276:G:P	34:BM:83:GLY:O	2.68	0.50
24:BC:165:ALA:HB3	24:BC:172:THR:CG2	2.40	0.50
25:BD:133:THR:CG2	25:BD:134:HIS:CD2	2.94	0.50
28:BG:59:ASP:HB2	28:BG:63:GLN:HG2	1.91	0.50
28:BG:143:VAL:O	28:BG:144:ALA:C	2.53	0.50
29:BH:66:ASN:C	29:BH:68:ARG:H	2.18	0.50
30:BI:32:VAL:HG13	30:BI:66:PHE:CE2	2.46	0.50
33:BL:101:ILE:HG22	33:BL:102:GLY:N	2.26	0.50
34:BM:132:THR:CG2	34:BM:133:LYS:N	2.71	0.50
42:BU:12:VAL:O	42:BU:18:LYS:O	2.28	0.50
45:BX:30:PRO:O	45:BX:32:LEU:HD12	2.12	0.50
53:CA:251:G:N2	53:CA:253:A:N6	2.59	0.50
53:CA:764:C:H2'	53:CA:765:G:C5'	2.31	0.50
53:CA:1134:G:C6	53:CA:1141:C:N4	2.79	0.50
53:CA:1138:G:H5"	53:CA:1138:G:N3	2.26	0.50
53:CA:1146:A:C6	53:CA:1147:C:N4	2.79	0.50
3:CC:63:ILE:O	3:CC:63:ILE:HG23	2.10	0.50
4:CD:104:MET:SD	4:CD:142:VAL:HG13	2.51	0.50
5:CE:103:GLY:O	5:CE:104:ILE:CG2	2.51	0.50
8:CH:24:VAL:HG12	8:CH:62:LEU:HD21	1.93	0.50
8:CH:46:GLU:HB3	8:CH:61:THR:HB	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:94:SER:O	11:CK:97:ARG:HB2	2.11	0.50
14:CN:89:ARG:HG3	14:CN:91:GLU:HG3	1.93	0.50
22:DA:233:A:O2'	22:DA:234:U:H6	1.94	0.50
22:DA:263:G:H4'	22:DA:430:A:O4'	2.11	0.50
22:DA:815:C:P	39:DR:85:LYS:HE2	2.52	0.50
22:DA:828:U:C5	22:DA:829:A:N6	2.79	0.50
22:DA:1183:U:H2'	22:DA:1184:U:H6	1.75	0.50
22:DA:1270:C:H2'	22:DA:1648:U:H5"	1.93	0.50
22:DA:1398:C:O2'	22:DA:1399:C:O5'	2.23	0.50
22:DA:1422:G:H4'	22:DA:1493:C:OP1	2.11	0.50
22:DA:1535:A:C5'	22:DA:1536:C:OP2	2.59	0.50
22:DA:1663:G:C6	22:DA:1998:A:N6	2.79	0.50
22:DA:1716:U:C4	22:DA:1745:A:N6	2.79	0.50
22:DA:1835:G:H2'	22:DA:1836:C:H6	1.75	0.50
22:DA:2147:A:OP1	22:DA:2147:A:C4'	2.59	0.50
22:DA:2540:C:C2	22:DA:2541:A:C8	2.99	0.50
22:DA:2550:G:C6	22:DA:2551:C:N4	2.79	0.50
57:DB:26:C:H1'	57:DB:117:G:C1'	2.41	0.50
26:DE:28:VAL:O	26:DE:32:VAL:HG13	2.11	0.50
26:DE:170:ARG:NH2	26:DE:176:ASP:HB2	2.23	0.50
31:DJ:93:ILE:HA	31:DJ:97:PRO:HB3	1.93	0.50
32:DK:28:SER:O	32:DK:29:HIS:HB3	2.12	0.50
33:DL:47:ARG:HH21	33:DL:47:ARG:HG2	1.75	0.50
34:DM:41:LEU:HD23	34:DM:46:ILE:CG2	2.41	0.50
37:DP:32:VAL:HA	37:DP:37:LYS:HA	1.93	0.50
37:DP:47:ILE:HD13	37:DP:61:ARG:HB2	1.91	0.50
45:DX:1:SER:O	45:DX:3:VAL:N	2.44	0.50
1:AA:71:A:N7	1:AA:100:G:C6	2.79	0.50
1:AA:792:A:H4'	1:AA:793:U:O5'	2.11	0.50
2:AB:110:ILE:HD11	2:AB:147:LEU:HD13	1.86	0.50
3:AC:10:ARG:O	3:AC:11:LEU:C	2.53	0.50
21:AU:8:ASN:O	21:AU:11:PHE:HE2	1.93	0.50
21:AU:52:VAL:HG13	21:AU:53:LYS:N	2.10	0.50
22:BA:388:G:N7	22:BA:390:U:H2'	2.25	0.50
22:BA:623:C:H2'	22:BA:624:C:C6	2.46	0.50
22:BA:1378:A:O2'	22:BA:1379:U:H3'	2.11	0.50
22:BA:1444:G:H2'	22:BA:1445:G:C8	2.45	0.50
22:BA:1475:G:C1'	22:BA:1476:U:OP2	2.58	0.50
22:BA:1644:C:C2'	22:BA:1645:G:H5'	2.41	0.50
22:BA:2093:G:O2'	22:BA:2094:A:H5'	2.12	0.50
22:BA:2109:U:O4	22:BA:2110:G:C5	2.64	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2250:G:H8	22:BA:2250:G:O5'	1.94	0.50
25:BD:150:GLN:O	25:BD:150:GLN:HG3	2.01	0.50
27:BF:24:VAL:O	27:BF:27:VAL:HG12	2.10	0.50
28:BG:84:LYS:O	28:BG:85:LYS:HB2	2.12	0.50
30:BI:56:VAL:HG23	30:BI:69:VAL:O	2.10	0.50
31:BJ:44:TYR:HA	38:BQ:59:LEU:CD2	2.39	0.50
34:BM:40:ARG:HB2	34:BM:93:VAL:HG22	1.93	0.50
37:BP:67:GLU:OE1	37:BP:67:GLU:HA	2.10	0.50
39:BR:89:HIS:NE2	39:BR:91:GLN:HB2	2.27	0.50
53:CA:97:G:C6	53:CA:98:A:H1'	2.47	0.50
53:CA:106:C:C2'	53:CA:107:G:H5'	2.41	0.50
53:CA:211:G:C2'	53:CA:211:G:N3	2.74	0.50
53:CA:525:C:N4	53:CA:526:C:N4	2.59	0.50
53:CA:1048:G:H21	53:CA:1214:C:H5	1.60	0.50
53:CA:1152:A:OP2	10:CJ:70:HIS:NE2	2.44	0.50
53:CA:1228:C:O2'	53:CA:1229:A:H8	1.93	0.50
53:CA:1308:U:H5	55:CM:97:ARG:CZ	2.24	0.50
3:CC:185:THR:HG22	3:CC:186:SER:H	1.76	0.50
5:CE:14:LEU:HD13	5:CE:59:ILE:CD1	2.41	0.50
55:CM:3:ILE:O	55:CM:4:ALA:HB2	2.12	0.50
14:CN:27:LYS:HD2	14:CN:27:LYS:C	2.36	0.50
20:CT:57:VAL:HG12	20:CT:71:ALA:HB2	1.92	0.50
22:DA:397:U:OP1	45:DX:30:PRO:CA	2.45	0.50
22:DA:636:G:H5'	22:DA:639:U:OP1	2.12	0.50
22:DA:685:A:H1'	22:DA:688:U:O4	2.11	0.50
22:DA:748:G:O2'	22:DA:749:A:H3'	2.10	0.50
22:DA:1109:C:C5	22:DA:1110:G:C6	2.99	0.50
22:DA:1249:U:H3'	22:DA:1249:U:P	2.52	0.50
22:DA:1249:U:H4'	38:DQ:3:VAL:HG21	1.93	0.50
22:DA:1476:U:H1'	22:DA:1732:C:O2	2.12	0.50
22:DA:1667:G:OP1	32:DK:6:THR:HA	2.11	0.50
22:DA:2310:C:O2'	22:DA:2311:A:C4'	2.58	0.50
22:DA:2332:C:O2'	44:DW:40:ARG:NH2	2.44	0.50
22:DA:2712:C:OP1	22:DA:2714:G:H4'	2.11	0.50
57:DB:11:C:H5'	44:DW:71:LYS:CD	2.40	0.50
57:DB:110:C:H2'	57:DB:111:U:H6	1.75	0.50
24:DC:34:GLU:HG3	24:DC:35:LYS:N	2.26	0.50
24:DC:144:GLU:HG3	24:DC:151:GLY:N	2.26	0.50
26:DE:46:GLN:HB3	26:DE:86:ALA:HB1	1.93	0.50
30:DI:16:MET:SD	30:DI:19:PRO:HG2	2.52	0.50
32:DK:119:ALA:N	32:DK:120:PRO:HD2	2.24	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DL:98:ALA:O	33:DL:100:ILE:HG22	2.11	0.50
37:DP:87:ARG:NH1	37:DP:111:GLU:HG3	2.27	0.50
40:DS:66:ILE:HA	40:DS:69:LEU:HD13	1.92	0.50
44:DW:20:LEU:HD12	44:DW:20:LEU:N	2.26	0.50
46:DY:57:LEU:O	46:DY:60:LYS:HB3	2.12	0.50
1:AA:198:G:C2'	1:AA:199:A:C8	2.94	0.50
1:AA:765:G:H2'	1:AA:812:G:N2	2.27	0.50
1:AA:865:A:H2'	1:AA:866:C:C6	2.46	0.50
16:AP:12:LYS:O	16:AP:13:LYS:HB2	2.12	0.50
22:BA:1062:G:O2'	22:BA:1063:G:O5'	2.30	0.50
22:BA:1113:U:H2'	22:BA:1114:C:C6	2.47	0.50
22:BA:1812:U:H2'	22:BA:1813:G:C8	2.47	0.50
22:BA:2197:U:OP1	4:CD:150:LYS:HE3	2.12	0.50
22:BA:2365:G:H4'	44:BW:59:PHE:CZ	2.46	0.50
22:BA:2636:C:H2'	22:BA:2637:U:H6	1.77	0.50
24:BC:91:ALA:HB3	24:BC:103:ILE:HG22	1.94	0.50
29:BH:78:VAL:HG11	29:BH:145:ASN:HB3	1.93	0.50
30:BI:6:ALA:HB3	30:BI:60:VAL:H	1.77	0.50
32:BK:7:MET:HE1	32:BK:44:LYS:HD2	1.93	0.50
35:BN:3:HIS:O	35:BN:4:ARG:HB2	2.10	0.50
35:BN:36:THR:HG23	35:BN:37:THR:O	2.10	0.50
38:BQ:20:ALA:HA	38:BQ:23:TYR:CD1	2.46	0.50
42:BU:97:SER:O	42:BU:98:ASN:CB	2.58	0.50
44:BW:19:ARG:NH2	44:BW:22:VAL:CG2	2.74	0.50
44:BW:28:GLU:H	44:BW:31:LEU:CD1	2.24	0.50
45:BX:30:PRO:HD2	45:BX:32:LEU:HD11	1.94	0.50
53:CA:71:A:N3	53:CA:72:A:C8	2.80	0.50
53:CA:580:C:H2'	53:CA:581:G:O4'	2.10	0.50
53:CA:631:C:H5"	53:CA:632:U:O4'	2.12	0.50
53:CA:1084:G:OP1	53:CA:1086:U:C6	2.64	0.50
53:CA:1261:A:N7	53:CA:1274:A:H2	2.10	0.50
2:CB:84:LEU:HG	2:CB:84:LEU:O	2.10	0.50
2:CB:212:TYR:CD2	2:CB:215:ALA:HB3	2.46	0.50
12:CL:91:GLY:O	12:CL:93:ARG:HG3	2.11	0.50
55:CM:68:LEU:O	55:CM:72:ILE:HG22	2.12	0.50
55:CM:103:THR:HG22	55:CM:104:ASN:N	2.27	0.50
14:CN:80:ARG:HG2	14:CN:80:ARG:NH1	2.25	0.50
22:DA:26:G:H5'	22:DA:27:G:OP2	2.12	0.50
22:DA:106:C:O2'	22:DA:294:A:O2'	2.27	0.50
22:DA:183:C:O2'	22:DA:432:A:H1'	2.11	0.50
22:DA:465:G:H4'	50:D2:16:HIS:HD2	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:492:A:H2'	22:DA:493:G:O4'	2.12	0.50
22:DA:740:C:H5'	22:DA:1784:A:C3'	2.37	0.50
22:DA:851:C:C4'	47:DZ:46:MET:HG2	2.41	0.50
22:DA:1529:G:H2'	22:DA:1530:G:O4'	2.12	0.50
22:DA:1789:A:H5"	24:DC:218:THR:O	2.11	0.50
22:DA:1830:C:C4'	24:DC:14:HIS:HE1	2.25	0.50
22:DA:2056:G:N2	22:DA:2057:G:C8	2.79	0.50
22:DA:2151:U:H2'	22:DA:2152:G:H8	1.75	0.50
22:DA:2282:G:N3	22:DA:2425:A:N6	2.59	0.50
22:DA:2305:U:H4'	58:DF:132:ARG:HG2	1.93	0.50
22:DA:2639:A:C2	22:DA:2778:A:C8	2.99	0.50
22:DA:2748:A:C4	22:DA:2757:A:N6	2.80	0.50
24:DC:52:HIS:NE2	24:DC:218:THR:HG23	2.27	0.50
26:DE:105:LEU:HD12	26:DE:200:LEU:HD21	1.92	0.50
31:DJ:70:THR:HG22	31:DJ:90:GLU:CD	2.36	0.50
33:DL:63:LYS:HB3	51:D3:12:ARG:HD2	1.94	0.50
33:DL:111:ILE:HA	33:DL:128:THR:OG1	2.12	0.50
37:DP:16:VAL:HG13	37:DP:19:PHE:HE2	1.77	0.50
38:DQ:89:ILE:HG22	38:DQ:91:ARG:H	1.77	0.50
47:DZ:40:THR:H	47:DZ:43:ILE:HD11	1.75	0.50
1:AA:183:C:O2'	1:AA:184:G:H5'	2.11	0.50
1:AA:198:G:N2	1:AA:220:G:H1'	2.27	0.50
1:AA:327:A:O3'	1:AA:328:C:H4'	2.11	0.50
1:AA:479:U:O2'	1:AA:480:U:H5'	2.12	0.50
1:AA:604:G:C2	1:AA:635:A:C2	3.00	0.50
2:AB:74:ALA:O	2:AB:75:ALA:HB2	2.11	0.50
6:AF:92:THR:HG22	6:AF:93:LYS:N	2.25	0.50
9:AI:11:ARG:HA	9:AI:105:ARG:HH12	1.75	0.50
15:AO:15:GLY:C	15:AO:17:ASP:H	2.20	0.50
22:BA:1079:C:C4	22:BA:1080:A:N7	2.79	0.50
22:BA:1564:C:O2'	22:BA:1565:C:H5'	2.12	0.50
22:BA:1820:U:O2	24:BC:199:HIS:HB3	2.12	0.50
22:BA:2489:U:O2	22:BA:2491:U:C4	2.64	0.50
22:BA:2495:G:O2'	22:BA:2496:C:H5'	2.12	0.50
22:BA:2527:C:O5'	22:BA:2527:C:H6	1.93	0.50
22:BA:2572:A:N7	25:BD:150:GLN:HB3	2.25	0.50
28:BG:35:THR:C	28:BG:36:LEU:HD22	2.36	0.50
34:BM:64:TRP:CH2	34:BM:106:ASP:HB2	2.47	0.50
35:BN:79:LEU:O	35:BN:80:PHE:CB	2.58	0.50
41:BT:13:ALA:O	41:BT:32:LEU:HB2	2.11	0.50
44:BW:76:ARG:CG	44:BW:76:ARG:NH2	2.62	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:B0:53:VAL:O	48:B0:54:ILE:O	2.29	0.50
51:B3:56:LEU:H	51:B3:56:LEU:CD2	2.21	0.50
53:CA:102:G:H2'	53:CA:103:U:H6	1.76	0.50
53:CA:322:C:O2	53:CA:332:G:N2	2.44	0.50
53:CA:1146:A:C6	53:CA:1147:C:C4	2.99	0.50
53:CA:1241:G:H2'	53:CA:1242:G:C8	2.35	0.50
10:CJ:30:LYS:HG3	10:CJ:36:VAL:HG22	1.91	0.50
10:CJ:33:GLY:O	10:CJ:35:GLN:N	2.43	0.50
22:DA:169:G:H2'	22:DA:170:U:C6	2.46	0.50
22:DA:750:A:H5"	22:DA:751:A:OP2	2.11	0.50
22:DA:1009:A:C2	22:DA:1010:A:C2	2.99	0.50
22:DA:1399:C:HO2'	22:DA:1400:U:H5'	1.76	0.50
22:DA:1475:G:N3	22:DA:1475:G:H2'	2.26	0.50
22:DA:1865:U:O4	22:DA:1875:G:C2	2.65	0.50
22:DA:2009:A:N6	62:DA:3384:HOH:O	2.45	0.50
22:DA:2353:G:H2'	22:DA:2354:C:O4'	2.11	0.50
22:DA:2356:U:H2'	22:DA:2357:G:O4'	2.12	0.50
22:DA:2726:A:O2'	22:DA:2727:A:C5'	2.59	0.50
57:DB:17:C:H2'	57:DB:18:G:H8	1.77	0.50
24:DC:68:ARG:HD3	24:DC:103:ILE:HD13	1.93	0.50
28:DG:95:ALA:HB3	28:DG:127:GLN:HA	1.93	0.50
35:DN:31:HIS:O	35:DN:33:ILE:HG13	2.11	0.50
38:DQ:91:ARG:HH11	39:DR:10:LYS:HB3	1.73	0.50
39:DR:78:ARG:HB3	39:DR:83:TYR:CD1	2.46	0.50
40:DS:4:ILE:HG22	40:DS:106:VAL:HG13	1.92	0.50
42:DU:35:VAL:HG12	42:DU:36:GLU:N	2.26	0.50
43:DV:27:PRO:O	43:DV:88:HIS:HA	2.12	0.50
44:DW:51:GLY:HA2	44:DW:59:PHE:HD2	1.75	0.50
45:DX:13:THR:HA	45:DX:27:ARG:HA	1.94	0.50
1:AA:76:G:C2	1:AA:95:C:N3	2.79	0.50
1:AA:112:G:N1	1:AA:330:C:C4	2.80	0.50
1:AA:433:G:H2'	1:AA:434:U:H5'	1.93	0.50
1:AA:920:U:H2'	1:AA:921:U:C6	2.46	0.50
1:AA:1449:C:C2'	1:AA:1450:U:H5'	2.41	0.50
1:AA:1461:G:H2'	1:AA:1462:C:H6	1.76	0.50
2:AB:19:THR:HB	2:AB:37:VAL:HB	1.92	0.50
5:AE:85:LYS:HG3	5:AE:94:PHE:HB2	1.93	0.50
6:AF:66:ALA:HB1	6:AF:67:PRO:HD2	1.94	0.50
10:AJ:42:LEU:HB3	10:AJ:43:PRO:CD	2.40	0.50
22:BA:141:G:N1	41:BT:2:ILE:HG23	2.27	0.50
22:BA:2296:U:C4'	22:BA:2297:A:OP1	2.58	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2365:G:O2'	22:BA:2366:A:C8	2.65	0.50
22:BA:2492:U:O2'	22:BA:2493:U:H5'	2.11	0.50
22:BA:2563:U:O2	22:BA:2565:A:H8	1.95	0.50
23:BB:8:C:H2'	23:BB:9:G:O5'	2.10	0.50
24:BC:259:ASN:O	24:BC:260:LYS:HB2	2.11	0.50
25:BD:140:HIS:N	25:BD:140:HIS:CD2	2.79	0.50
25:BD:163:GLY:O	25:BD:164:GLN:C	2.54	0.50
28:BG:117:PRO:HD2	28:BG:120:ILE:HG21	1.94	0.50
29:BH:68:ARG:HH22	29:BH:72:ILE:HG21	1.76	0.50
33:BL:18:ARG:O	33:BL:19:LEU:HB3	2.08	0.50
35:BN:73:ASN:HA	35:BN:76:VAL:CG1	2.41	0.50
38:BQ:18:LYS:O	38:BQ:18:LYS:HG3	2.11	0.50
39:BR:93:PHE:C	39:BR:93:PHE:CD1	2.90	0.50
40:BS:41:LYS:O	40:BS:42:LYS:C	2.54	0.50
46:BY:41:HIS:NE2	46:BY:42:LEU:HD13	2.27	0.50
47:BZ:29:ARG:CG	47:BZ:29:ARG:NH2	2.72	0.50
53:CA:211:G:N3	53:CA:211:G:H2'	2.27	0.50
53:CA:255:G:H4'	17:CQ:18:LYS:HB2	1.94	0.50
53:CA:1406:U:H2'	53:CA:1407:C:H5'	1.92	0.50
2:CB:101:THR:O	2:CB:102:ASN:HB2	2.12	0.50
6:CF:81:ASN:O	6:CF:83:ALA:N	2.45	0.50
6:CF:86:ARG:HH11	18:CR:63:TYR:HB3	1.71	0.50
12:CL:3:VAL:HG23	12:CL:4:ASN:N	2.24	0.50
55:CM:16:ILE:HD12	55:CM:16:ILE:N	2.27	0.50
55:CM:18:LEU:H	55:CM:18:LEU:HD12	1.75	0.50
19:CS:28:LYS:HB3	19:CS:29:PRO:HD2	1.94	0.50
20:CT:14:GLU:HA	20:CT:17:ARG:HB2	1.93	0.50
22:DA:74:A:H4'	22:DA:75:G:O5'	2.11	0.50
22:DA:163:C:O2'	22:DA:164:C:O5'	2.29	0.50
22:DA:204:A:C4	22:DA:206:U:C4	3.00	0.50
22:DA:311:A:C2	22:DA:328:U:O4	2.64	0.50
22:DA:605:G:N3	22:DA:657:U:O2'	2.44	0.50
22:DA:628:G:O2'	22:DA:629:G:C8	2.61	0.50
22:DA:767:U:O2'	22:DA:768:G:H5'	2.12	0.50
22:DA:1156:A:P	38:DQ:54:ARG:HE	2.34	0.50
22:DA:1171:G:N2	22:DA:1179:G:H1'	2.27	0.50
22:DA:2232:C:OP1	45:DX:26:ARG:NH1	2.44	0.50
22:DA:2234:G:C4	22:DA:2235:G:C8	3.00	0.50
22:DA:2307:G:O2'	22:DA:2308:G:C8	2.61	0.50
22:DA:2531:A:H5"	28:DG:156:TYR:CZ	2.46	0.50
22:DA:2700:A:C2	22:DA:2708:G:C2	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DF:160:LYS:HD3	58:DF:161:SER:N	2.27	0.50
45:DX:63:ILE:CD1	45:DX:64:ASP:H	2.21	0.50
52:D4:3:VAL:O	52:D4:4:ARG:CB	2.59	0.50
1:AA:214:C:O2'	1:AA:215:C:O5'	2.29	0.50
1:AA:279:A:H5'	1:AA:279:A:C8	2.46	0.50
1:AA:563:A:C8	1:AA:567:G:O4'	2.64	0.50
1:AA:757:U:O2'	1:AA:879:C:H1'	2.12	0.50
1:AA:1138:G:N3	1:AA:1138:G:C2'	2.61	0.50
1:AA:1532:U:H2'	1:AA:1534:A:H5'	1.93	0.50
2:AB:68:PHE:CD2	2:AB:83:ALA:HB1	2.47	0.50
5:AE:153:ALA:O	5:AE:154:ALA:C	2.54	0.50
18:AR:66:LEU:O	18:AR:67:LEU:HD23	2.11	0.50
19:AS:79:TYR:CZ	19:AS:80:ARG:HB2	2.46	0.50
20:AT:16:ALA:O	20:AT:17:ARG:C	2.55	0.50
22:BA:278:A:N3	22:BA:278:A:H2'	2.27	0.50
22:BA:1000:A:H62	22:BA:1154:G:H2'	1.77	0.50
22:BA:2470:G:O2'	22:BA:2471:A:H5'	2.11	0.50
23:BB:94:A:H2'	23:BB:95:U:H6	1.77	0.50
24:BC:203:VAL:O	24:BC:204:LEU:HB2	2.12	0.50
28:BG:126:THR:HG22	28:BG:127:GLN:N	2.27	0.50
30:BI:72:THR:HB	30:BI:112:LYS:NZ	2.27	0.50
33:BL:7:SER:HB2	33:BL:8:PRO:HD2	1.94	0.50
33:BL:78:ARG:HB3	33:BL:113:ALA:HB3	1.93	0.50
37:BP:33:GLU:CA	37:BP:38:ARG:HH11	2.24	0.50
40:BS:43:ALA:O	40:BS:47:VAL:HG12	2.11	0.50
42:BU:94:PHE:O	42:BU:94:PHE:CD1	2.65	0.50
53:CA:191:G:H2'	53:CA:192:A:C8	2.47	0.50
53:CA:1084:G:C5	53:CA:1085:U:C4	3.00	0.50
3:CC:104:GLU:HG2	3:CC:105:VAL:N	2.26	0.50
5:CE:25:LYS:HB2	5:CE:25:LYS:NZ	2.27	0.50
9:CI:15:ALA:O	9:CI:66:VAL:HG23	2.12	0.50
12:CL:24:GLU:O	12:CL:25:ALA:HB3	2.12	0.50
22:DA:64:A:OP1	41:DT:77:ARG:HA	2.10	0.50
22:DA:229:C:O2'	22:DA:230:G:C4'	2.60	0.50
22:DA:329:G:O6	42:DU:16:LYS:HB2	2.11	0.50
22:DA:532:A:H4'	22:DA:533:G:C8	2.47	0.50
22:DA:570:G:C5	22:DA:2030:A:N7	2.80	0.50
22:DA:716:A:C3'	22:DA:717:C:H5"	2.42	0.50
22:DA:1053:C:N4	22:DA:1054:A:H62	2.09	0.50
22:DA:1349:C:H2'	22:DA:1350:C:C5	2.46	0.50
22:DA:1877:A:H2'	22:DA:1878:G:C8	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2182:U:H2'	22:DA:2183:A:C8	2.47	0.50
22:DA:2262:U:H1'	22:DA:2328:A:H1'	1.94	0.50
22:DA:2285:C:C5	49:D1:5:ARG:NH2	2.79	0.50
22:DA:2415:G:H4'	33:DL:65:GLY:O	2.12	0.50
22:DA:2533:U:H4'	22:DA:2664:G:H4'	1.94	0.50
22:DA:2808:G:O2'	22:DA:2809:A:H8	1.92	0.50
25:DD:48:ILE:CG2	25:DD:84:LEU:HD23	2.41	0.50
26:DE:138:LEU:HD23	26:DE:141:MET:HE1	1.94	0.50
30:DI:105:LEU:HD21	30:DI:129:GLU:OE2	2.12	0.50
32:DK:1:MET:HB2	32:DK:32:TYR:HB3	1.93	0.50
32:DK:21:CYS:SG	32:DK:39:ILE:HG22	2.52	0.50
37:DP:31:VAL:HG12	37:DP:38:ARG:HG2	1.92	0.50
44:DW:49:ASN:HB2	44:DW:60:ALA:HA	1.93	0.50
47:DZ:43:ILE:HD12	47:DZ:44:ARG:N	2.27	0.50
49:D1:10:LEU:HD23	49:D1:20:TYR:HB3	1.94	0.50
51:D3:23:HIS:ND1	51:D3:24:LYS:O	2.45	0.50
1:AA:276:G:O3'	17:AQ:44:HIS:HE1	1.95	0.50
1:AA:767:A:H2'	1:AA:768:A:O4'	2.12	0.50
1:AA:1157:A:C5	1:AA:1180:A:C6	3.00	0.50
1:AA:1316:G:H5"	1:AA:1317:C:OP2	2.12	0.50
1:AA:1323:G:H2'	1:AA:1324:A:H8	1.76	0.50
1:AA:1349:A:OP1	9:AI:122:ARG:N	2.44	0.50
1:AA:1477:U:H2'	1:AA:1478:U:C6	2.46	0.50
2:AB:119:GLN:C	2:AB:119:GLN:HE21	2.20	0.50
9:AI:21:LYS:HG2	9:AI:22:PRO:HD2	1.94	0.50
12:AL:2:THR:HB	12:AL:5:GLN:HG3	1.94	0.50
13:AM:2:ARG:HA	13:AM:7:ASN:O	2.12	0.50
16:AP:67:ILE:CG2	16:AP:72:ALA:HB2	2.42	0.50
20:AT:3:ILE:HA	20:AT:7:LYS:HZ1	1.77	0.50
22:BA:387:U:H4'	22:BA:388:G:O5'	2.10	0.50
22:BA:780:G:H2'	22:BA:782:A:N7	2.27	0.50
22:BA:807:U:H2'	22:BA:808:G:H8	1.76	0.50
22:BA:1075:C:C4	22:BA:1076:C:N4	2.80	0.50
22:BA:1786:A:C4	22:BA:1938:A:C6	2.99	0.50
22:BA:2294:G:H5"	36:BO:10:ARG:HD3	1.94	0.50
25:BD:11:MET:HE1	25:BD:192:ALA:HA	1.93	0.50
25:BD:99:GLU:CG	25:BD:100:LEU:H	2.24	0.50
26:BE:79:ARG:HG2	26:BE:80:SER:H	1.74	0.50
26:BE:145:ASP:HB3	26:BE:184:ASP:HB2	1.94	0.50
28:BG:82:PHE:CZ	28:BG:137:LYS:HB2	2.46	0.50
29:BH:53:GLU:HG2	29:BH:53:GLU:O	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BI:58:ILE:HG22	30:BI:60:VAL:HG23	1.92	0.50
32:BK:58:LEU:HA	32:BK:89:ASN:OD1	2.11	0.50
32:BK:103:VAL:O	32:BK:122:VAL:HB	2.12	0.50
33:BL:104:GLN:HA	33:BL:104:GLN:HE21	1.76	0.50
35:BN:28:LEU:O	35:BN:32:GLU:N	2.43	0.50
39:BR:49:ILE:O	39:BR:49:ILE:CG1	2.59	0.50
44:BW:49:ASN:ND2	44:BW:49:ASN:C	2.67	0.50
49:B1:34:GLU:HG2	49:B1:49:LYS:HG3	1.92	0.50
53:CA:243:A:H4'	53:CA:244:U:OP2	2.12	0.50
53:CA:1124:G:N2	53:CA:1127:G:N2	2.60	0.50
3:CC:11:LEU:C	3:CC:13:ILE:N	2.70	0.50
3:CC:181:ILE:HG12	3:CC:202:PHE:HB2	1.93	0.50
4:CD:137:SER:CB	4:CD:138:PRO:HD2	2.39	0.50
55:CM:28:ARG:O	55:CM:28:ARG:HD2	2.12	0.50
17:CQ:67:SER:OG	17:CQ:70:LYS:HB2	2.11	0.50
19:CS:52:ASN:HD21	19:CS:55:GLN:N	2.10	0.50
22:DA:49:A:C6	22:DA:177:G:C6	3.00	0.50
22:DA:90:U:H3'	22:DA:91:A:H5"	1.93	0.50
22:DA:109:C:H4'	22:DA:348:A:H4'	1.94	0.50
22:DA:242:G:C8	51:D3:4:LYS:HG3	2.47	0.50
22:DA:678:C:H2'	22:DA:679:C:C6	2.47	0.50
22:DA:836:G:C6	22:DA:837:C:C4	3.00	0.50
22:DA:995:C:H5"	38:DQ:53:LYS:HG2	1.93	0.50
22:DA:1127:A:N7	22:DA:2488:G:O2'	2.43	0.50
22:DA:1186:G:H2'	22:DA:1187:G:O4'	2.12	0.50
22:DA:1478:G:C6	22:DA:1514:G:C2	3.00	0.50
22:DA:1936:A:H2	22:DA:1943:U:O4	1.94	0.50
22:DA:2191:A:H5"	22:DA:2192:U:OP2	2.12	0.50
24:DC:152:GLN:HA	24:DC:155:ARG:HD3	1.94	0.50
24:DC:166:ARG:HA	24:DC:171:VAL:HA	1.93	0.50
40:DS:32:ALA:O	40:DS:33:LEU:HB2	2.11	0.50
1:AA:198:G:H2'	1:AA:199:A:C8	2.46	0.50
1:AA:393:A:OP2	16:AP:12:LYS:HD2	2.12	0.50
1:AA:405:U:O2'	1:AA:498:A:C8	2.65	0.50
1:AA:1022:A:H2'	1:AA:1023:U:O4'	2.12	0.50
1:AA:1167:A:C8	1:AA:1169:A:C6	3.00	0.50
1:AA:1449:C:H2'	1:AA:1450:U:H5'	1.93	0.50
2:AB:148:GLY:HA2	2:AB:151:LYS:HB3	1.93	0.50
4:AD:29:THR:HG22	4:AD:30:LYS:N	2.27	0.50
10:AJ:70:HIS:CD2	10:AJ:70:HIS:H	2.29	0.50
22:BA:790:U:O2'	22:BA:791:C:C5'	2.60	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:900:A:C3'	22:BA:901:C:H5'	2.41	0.50
22:BA:1411:U:C4	22:BA:1412:U:C4	3.00	0.50
22:BA:1605:C:H3'	22:BA:1606:C:C5'	2.42	0.50
22:BA:1858:A:O2'	22:BA:1859:U:C5'	2.60	0.50
22:BA:2199:A:H5'	22:BA:2200:C:H5	1.77	0.50
22:BA:2257:U:O2'	22:BA:2258:C:H5'	2.12	0.50
22:BA:2515:C:O2'	22:BA:2516:A:H5'	2.12	0.50
22:BA:2531:A:P	28:BG:174:LYS:HG3	2.52	0.50
24:BC:12:ARG:CG	24:BC:12:ARG:NH1	2.59	0.50
25:BD:110:THR:HA	25:BD:171:THR:HA	1.93	0.50
25:BD:177:VAL:HG23	25:BD:177:VAL:O	2.11	0.50
25:BD:182:ALA:C	25:BD:184:ARG:H	2.17	0.50
27:BF:87:LYS:HG3	27:BF:88:VAL:N	2.26	0.50
27:BF:134:GLN:NE2	27:BF:150:GLY:H	2.10	0.50
28:BG:117:PRO:O	28:BG:118:ALA:O	2.29	0.50
38:BQ:68:ALA:O	38:BQ:71:ASN:N	2.44	0.50
42:BU:42:LYS:N	42:BU:42:LYS:HD3	2.26	0.50
44:BW:22:VAL:O	44:BW:25:PHE:HB2	2.11	0.50
44:BW:51:GLY:HA3	44:BW:59:PHE:HE2	1.72	0.50
53:CA:410:G:P	4:CD:25:ARG:HD2	2.52	0.50
53:CA:693:G:OP1	11:CK:126:ARG:NH1	2.37	0.50
53:CA:828:U:C2'	53:CA:829:G:O5'	2.59	0.50
53:CA:930:C:H2'	53:CA:931:C:H5'	1.92	0.50
53:CA:936:C:H2'	53:CA:937:A:H8	1.77	0.50
53:CA:1243:C:N4	53:CA:1244:G:O6	2.45	0.50
53:CA:1268:G:H21	53:CA:1327:C:C1'	2.23	0.50
2:CB:127:LYS:HE2	2:CB:136:ARG:NH2	2.27	0.50
3:CC:124:GLU:CD	3:CC:124:GLU:N	2.70	0.50
5:CE:105:ILE:HG22	5:CE:105:ILE:O	2.10	0.50
54:CG:16:LYS:HE2	9:CI:45:MET:SD	2.51	0.50
8:CH:9:MET:HG3	8:CH:26:MET:SD	2.52	0.50
22:DA:8:C:O2'	22:DA:9:G:H5'	2.11	0.50
22:DA:526:A:C6	22:DA:2626:C:H4'	2.47	0.50
22:DA:752:A:O2'	22:DA:753:A:OP2	2.19	0.50
22:DA:870:U:C2'	22:DA:871:U:H5'	2.42	0.50
22:DA:1063:G:H2'	22:DA:1064:C:C6	2.47	0.50
22:DA:1229:C:H2'	22:DA:1230:A:C8	2.47	0.50
22:DA:1237:A:O2'	22:DA:1238:G:H4'	2.11	0.50
22:DA:1563:U:H2'	22:DA:1564:C:C6	2.46	0.50
22:DA:1608:A:N7	22:DA:1611:C:N4	2.60	0.50
22:DA:1754:A:C6	22:DA:1755:A:C6	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2151:U:H2'	22:DA:2152:G:C8	2.47	0.50
22:DA:2250:G:H21	22:DA:2496:C:H5"	1.76	0.50
22:DA:2688:G:H1'	22:DA:2721:A:N6	2.27	0.50
22:DA:2899:A:O2'	22:DA:2900:A:H5'	2.11	0.50
25:DD:36:GLN:HG3	25:DD:38:LYS:HZ1	1.77	0.50
26:DE:126:VAL:HG13	26:DE:127:GLU:N	2.27	0.50
28:DG:98:LYS:HB2	28:DG:101:VAL:HB	1.93	0.50
34:DM:13:HIS:O	34:DM:14:LYS:HB2	2.12	0.50
35:DN:103:ARG:HG3	35:DN:104:ALA:H	1.77	0.50
36:DO:88:LYS:O	36:DO:89:ASP:HB3	2.12	0.50
41:DT:5:GLU:CD	46:DY:18:LEU:HD21	2.37	0.50
42:DU:73:ASN:HB3	42:DU:95:PHE:CE2	2.47	0.50
45:DX:58:ILE:HG12	45:DX:66:VAL:HG11	1.92	0.50
1:AA:66:A:O4'	1:AA:173:U:C4	2.65	0.49
1:AA:72:A:O2'	1:AA:73:C:O4'	2.28	0.49
1:AA:307:C:H6	1:AA:307:C:O5'	1.95	0.49
1:AA:978:A:O2'	1:AA:1322:C:H5	1.94	0.49
5:AE:109:ALA:C	5:AE:111:ARG:H	2.19	0.49
6:AF:46:GLN:HE21	6:AF:46:GLN:HA	1.77	0.49
8:AH:15:ASN:O	8:AH:18:ALA:HB3	2.12	0.49
10:AJ:22:THR:HG22	10:AJ:23:ALA:N	2.26	0.49
12:AL:115:LYS:O	12:AL:116:TYR:CB	2.60	0.49
16:AP:67:ILE:HG23	16:AP:68:SER:O	2.11	0.49
19:AS:79:TYR:CG	19:AS:80:ARG:N	2.78	0.49
22:BA:271:G:C4	22:BA:272:A:N7	2.80	0.49
22:BA:807:U:C2	22:BA:808:G:C8	3.00	0.49
22:BA:1079:C:C4	22:BA:1088:A:C2	2.97	0.49
22:BA:1179:G:C5	22:BA:1180:U:C1'	2.81	0.49
22:BA:1830:C:H2'	22:BA:1831:G:C8	2.46	0.49
22:BA:2049:G:C2'	22:BA:2050:C:H5'	2.42	0.49
22:BA:2389:G:H5"	22:BA:2390:U:O4'	2.12	0.49
24:BC:29:PHE:CZ	24:BC:31:PRO:HG2	2.46	0.49
25:BD:190:LYS:O	25:BD:191:GLY:O	2.29	0.49
26:BE:8:ALA:O	26:BE:9:GLN:C	2.54	0.49
27:BF:35:LEU:HD12	27:BF:35:LEU:O	2.11	0.49
27:BF:120:SER:O	27:BF:127:TYR:CD1	2.65	0.49
30:BI:21:PRO:HB2	30:BI:22:PRO:HD3	1.94	0.49
36:BO:31:THR:HG23	36:BO:34:HIS:H	1.76	0.49
36:BO:36:TYR:N	36:BO:36:TYR:HD2	2.10	0.49
42:BU:25:LYS:O	42:BU:26:ASN:HB3	2.12	0.49
53:CA:69:G:H2'	53:CA:70:U:C6	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:72:A:H2'	53:CA:73:C:C6	2.47	0.49
53:CA:239:U:H5"	53:CA:239:U:H6	1.75	0.49
53:CA:360:G:O2'	53:CA:361:G:H5'	2.13	0.49
53:CA:612:C:H2'	53:CA:613:C:C6	2.46	0.49
53:CA:1050:G:O6	53:CA:1209:C:N3	2.45	0.49
53:CA:1087:G:N2	53:CA:1099:G:H1'	2.27	0.49
53:CA:1152:A:H2'	53:CA:1153:G:C8	2.47	0.49
53:CA:1264:U:H2'	53:CA:1265:C:H6	1.72	0.49
53:CA:1391:U:O2'	53:CA:1392:G:H5'	2.12	0.49
53:CA:1480:A:C5	53:CA:1481:U:C5	3.00	0.49
5:CE:56:PRO:O	5:CE:59:ILE:HG23	2.11	0.49
11:CK:27:ASN:N	11:CK:27:ASN:ND2	2.46	0.49
19:CS:68:HIS:HB3	19:CS:72:GLU:HG3	1.93	0.49
21:CU:33:ARG:HH22	21:CU:34:ARG:HH11	1.59	0.49
22:DA:78:U:H2'	22:DA:79:C:C6	2.46	0.49
22:DA:270:A:N1	22:DA:369:U:H1'	2.26	0.49
22:DA:332:A:C8	22:DA:335:C:N4	2.80	0.49
22:DA:476:G:O2'	22:DA:477:A:H3'	2.10	0.49
22:DA:1062:G:OP1	22:DA:1070:A:OP2	2.30	0.49
22:DA:1304:A:C6	22:DA:1305:C:C4	3.00	0.49
22:DA:1475:G:O2'	22:DA:1476:U:H6	1.95	0.49
22:DA:1722:A:O2'	22:DA:1723:G:O4'	2.29	0.49
22:DA:2502:G:H5'	22:DA:2503:A:H5"	1.94	0.49
22:DA:2748:A:C2	22:DA:2757:A:C5	3.00	0.49
22:DA:2798:U:H5'	22:DA:2800:A:N6	2.27	0.49
57:DB:84:G:N2	57:DB:93:C:C2	2.79	0.49
24:DC:65:ASP:OD2	24:DC:68:ARG:HG2	2.12	0.49
24:DC:127:ASN:O	24:DC:190:THR:HA	2.12	0.49
58:DF:13:LYS:HD2	58:DF:13:LYS:N	2.27	0.49
32:DK:115:ILE:HG22	32:DK:116:ILE:N	2.27	0.49
35:DN:98:LEU:HD21	48:D0:53:VAL:HG11	1.93	0.49
36:DO:67:ASN:H	36:DO:70:ALA:HB3	1.76	0.49
37:DP:7:LEU:O	37:DP:7:LEU:HD12	2.12	0.49
39:DR:8:GLY:HA3	39:DR:23:GLU:HG2	1.92	0.49
45:DX:58:ILE:O	45:DX:58:ILE:HG22	2.12	0.49
46:DY:57:LEU:HD13	46:DY:60:LYS:HE3	1.94	0.49
52:D4:3:VAL:HB	52:D4:37:GLN:OE1	2.11	0.49
1:AA:72:A:HO2'	1:AA:73:C:H6	1.60	0.49
1:AA:213:G:N7	1:AA:214:C:C4	2.80	0.49
1:AA:258:G:N2	1:AA:259:G:H1'	2.26	0.49
1:AA:500:G:H2'	1:AA:501:C:C6	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:45:VAL:CG2	5:AE:117:ALA:HA	2.42	0.49
8:AH:17:GLN:CD	8:AH:69:ALA:HB1	2.38	0.49
11:AK:62:ALA:CB	11:AK:91:GLY:HA3	2.41	0.49
19:AS:41:PRO:C	19:AS:43:MET:H	2.21	0.49
22:BA:21:A:O2'	22:BA:22:C:H5'	2.12	0.49
22:BA:149:A:H2'	22:BA:150:U:H6	1.77	0.49
22:BA:228:C:H4'	22:BA:229:C:C5'	2.38	0.49
22:BA:1256:G:H2'	26:BE:77:ILE:HD11	1.91	0.49
22:BA:1498:C:O2'	22:BA:1499:C:C6	2.63	0.49
22:BA:1568:G:H4'	24:BC:58:LYS:HG2	1.94	0.49
22:BA:1799:G:H4'	22:BA:1800:C:O5'	2.11	0.49
22:BA:1858:A:O2'	22:BA:1859:U:O5'	2.30	0.49
22:BA:1998:A:O2'	22:BA:1999:C:H5'	2.12	0.49
24:BC:15:VAL:HA	24:BC:203:VAL:HG11	1.94	0.49
24:BC:140:VAL:HG11	24:BC:189:ALA:HB1	1.93	0.49
25:BD:169:ARG:C	25:BD:170:VAL:CG1	2.85	0.49
26:BE:27:LEU:O	26:BE:31:VAL:HG23	2.12	0.49
26:BE:174:GLY:O	26:BE:175:ILE:C	2.55	0.49
32:BK:28:SER:C	32:BK:30:ARG:H	2.21	0.49
41:BT:69:ARG:NE	41:BT:70:HIS:H	2.11	0.49
43:BV:20:LEU:HD23	43:BV:25:LYS:HB2	1.94	0.49
53:CA:502:A:H2'	53:CA:503:C:O4'	2.12	0.49
53:CA:1317:C:OP1	14:CN:56:PRO:HD2	2.12	0.49
2:CB:186:VAL:O	2:CB:186:VAL:HG23	2.12	0.49
5:CE:68:ARG:O	5:CE:70:MET:HG2	2.12	0.49
22:DA:81:G:H2'	22:DA:82:U:O4'	2.13	0.49
22:DA:197:A:N6	22:DA:2430:A:H2'	2.19	0.49
22:DA:357:C:H2'	22:DA:358:U:H6	1.77	0.49
22:DA:379:G:N1	22:DA:380:G:C4	2.80	0.49
22:DA:503:A:C5	22:DA:506:G:C5	3.00	0.49
22:DA:668:A:C5	22:DA:670:A:C8	3.00	0.49
22:DA:876:C:N4	22:DA:902:C:C4	2.80	0.49
22:DA:1351:C:O2'	22:DA:1571:A:H1'	2.12	0.49
22:DA:1416:G:C2	22:DA:1417:C:C4	3.00	0.49
22:DA:1416:G:N1	22:DA:1417:C:C4	2.80	0.49
22:DA:2316:G:H2'	22:DA:2317:A:H8	1.77	0.49
22:DA:2431:U:O2'	22:DA:2433:A:N7	2.40	0.49
22:DA:2550:G:C5	22:DA:2551:C:C4	3.00	0.49
22:DA:2571:U:H2'	22:DA:2572:A:OP1	2.11	0.49
22:DA:2682:A:O2'	22:DA:2683:C:O5'	2.30	0.49
26:DE:178:VAL:HG13	26:DE:179:SER:N	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DF:36:ASN:O	58:DF:37:MET:CB	2.60	0.49
29:DH:62:LEU:C	29:DH:64:ALA:H	2.19	0.49
29:DH:89:LYS:HD2	29:DH:124:THR:HA	1.93	0.49
33:DL:93:ASN:O	33:DL:95:LEU:N	2.40	0.49
38:DQ:63:ARG:O	38:DQ:66:ALA:N	2.39	0.49
38:DQ:77:LYS:CE	38:DQ:116:LEU:HD11	2.42	0.49
38:DQ:87:VAL:HG11	39:DR:52:PRO:CG	2.42	0.49
41:DT:39:THR:CG2	41:DT:42:GLU:HB2	2.29	0.49
43:DV:75:GLN:HG3	43:DV:92:VAL:HG13	1.93	0.49
45:DX:36:ARG:HG2	45:DX:47:THR:HB	1.94	0.49
49:D1:43:ARG:NH2	49:D1:43:ARG:HB2	2.27	0.49
51:D3:18:LYS:HD2	51:D3:19:GLY:H	1.77	0.49
1:AA:198:G:C6	1:AA:220:G:C2	3.00	0.49
1:AA:1005:A:H2'	1:AA:1006:G:O4'	2.12	0.49
1:AA:1052:U:C5'	1:AA:1053:G:OP2	2.59	0.49
1:AA:1160:G:N2	1:AA:1161:C:C2	2.81	0.49
1:AA:1226:C:H4'	1:AA:1227:A:OP1	2.11	0.49
1:AA:1381:U:H2'	1:AA:1382:C:C6	2.48	0.49
8:AH:9:MET:CE	8:AH:32:LYS:HA	2.42	0.49
8:AH:105:THR:HG22	8:AH:121:GLY:O	2.13	0.49
11:AK:22:ILE:O	11:AK:22:ILE:HG13	2.11	0.49
15:AO:16:ARG:O	15:AO:17:ASP:CB	2.60	0.49
17:AQ:45:VAL:O	17:AQ:47:ASP:OD1	2.30	0.49
21:AU:7:GLU:HB2	21:AU:11:PHE:CE1	2.47	0.49
22:BA:580:U:H2'	22:BA:581:C:C6	2.47	0.49
22:BA:904:G:C2	22:BA:905:A:N9	2.80	0.49
22:BA:904:G:HO2'	22:BA:905:A:H5'	1.74	0.49
22:BA:1494:A:O2'	22:BA:1495:A:H5'	2.12	0.49
22:BA:2436:G:N3	22:BA:2598:A:H2	2.11	0.49
23:BB:94:A:O2'	23:BB:95:U:H5'	2.11	0.49
26:BE:5:LEU:HD12	26:BE:10:SER:HB3	1.94	0.49
31:BJ:45:THR:H	31:BJ:46:PRO:HD3	1.77	0.49
33:BL:80:SER:C	33:BL:81:ASP:O	2.54	0.49
33:BL:127:VAL:HG23	33:BL:131:ALA:HB3	1.93	0.49
35:BN:23:ASN:HD22	35:BN:23:ASN:H	1.58	0.49
35:BN:74:GLU:O	35:BN:77:ALA:HB3	2.12	0.49
36:BO:57:ALA:C	36:BO:59:ALA:H	2.20	0.49
39:BR:81:LYS:HD3	39:BR:81:LYS:N	2.25	0.49
44:BW:58:LEU:HD13	44:BW:58:LEU:N	2.27	0.49
51:B3:31:ILE:O	51:B3:31:ILE:HG13	2.11	0.49
53:CA:21:G:H1'	53:CA:914:A:N6	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:496:A:N3	53:CA:496:A:C2'	2.73	0.49
53:CA:527:G:C2	53:CA:528:C:C6	3.00	0.49
53:CA:865:A:C2	53:CA:918:A:H4'	2.47	0.49
53:CA:866:C:C4	53:CA:867:G:H1'	2.47	0.49
53:CA:888:G:H3'	53:CA:889:A:C5'	2.41	0.49
53:CA:1316:G:H22	53:CA:1318:A:H3'	1.76	0.49
3:CC:118:SER:O	3:CC:122:GLN:HG2	2.13	0.49
5:CE:11:GLN:HG3	5:CE:40:ASP:O	2.12	0.49
12:CL:2:THR:O	12:CL:3:VAL:C	2.54	0.49
22:DA:380:G:H4'	45:DX:15:ASN:O	2.11	0.49
22:DA:670:A:H1'	22:DA:671:C:OP2	2.13	0.49
22:DA:945:A:C8	22:DA:2448:A:C2	2.99	0.49
22:DA:1071:G:O6	22:DA:1091:G:N7	2.46	0.49
22:DA:1112:G:O2'	22:DA:1113:U:C5'	2.60	0.49
22:DA:1303:G:O2'	22:DA:1304:A:C8	2.50	0.49
22:DA:1326:U:O2'	22:DA:1327:A:O5'	2.30	0.49
22:DA:1390:U:O2'	22:DA:1391:U:H5'	2.12	0.49
22:DA:1810:A:H3'	22:DA:1811:G:C8	2.46	0.49
22:DA:1816:C:O2'	22:DA:1817:G:P	2.70	0.49
22:DA:1973:G:C6	22:DA:1974:C:N4	2.80	0.49
22:DA:1998:A:H4'	22:DA:2724:U:O2'	2.12	0.49
22:DA:2049:G:N2	25:DD:161:MET:HE2	2.27	0.49
22:DA:2295:C:H2'	22:DA:2296:U:H5'	1.93	0.49
22:DA:2305:U:OP1	58:DF:132:ARG:HG3	2.12	0.49
22:DA:2750:A:H1'	22:DA:2752:C:H41	1.77	0.49
29:DH:90:LEU:HB3	29:DH:123:ARG:HD2	1.94	0.49
35:DN:98:LEU:O	35:DN:112:TYR:HB2	2.12	0.49
36:DO:63:LYS:C	36:DO:63:LYS:HD3	2.37	0.49
40:DS:10:ALA:HB3	40:DS:101:SER:O	2.12	0.49
43:DV:32:GLY:O	43:DV:33:GLY:C	2.54	0.49
47:DZ:28:LEU:HD23	47:DZ:28:LEU:N	2.28	0.49
1:AA:213:G:C8	1:AA:214:C:C5	3.00	0.49
1:AA:322:C:O2'	20:AT:17:ARG:CG	2.60	0.49
1:AA:591:U:H2'	1:AA:592:G:H8	1.77	0.49
1:AA:1159:U:N3	1:AA:1182:G:C5	2.81	0.49
1:AA:1489:G:C2'	1:AA:1490:U:H5'	2.42	0.49
2:AB:42:LEU:HG	2:AB:43:GLU:N	2.26	0.49
2:AB:49:PHE:C	2:AB:49:PHE:CD1	2.90	0.49
4:AD:28:ASP:C	4:AD:29:THR:O	2.54	0.49
4:AD:167:PRO:HB2	4:AD:170:LEU:CD1	2.35	0.49
5:AE:152:VAL:HG12	5:AE:155:LYS:HZ1	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:39:GLU:HB2	7:AG:43:TYR:CE2	2.47	0.49
7:AG:49:LEU:CD1	7:AG:60:ALA:HB1	2.42	0.49
7:AG:114:SER:H	7:AG:117:LEU:HD12	1.78	0.49
8:AH:48:PHE:HA	8:AH:60:LEU:HD23	1.93	0.49
16:AP:11:ALA:O	16:AP:12:LYS:C	2.55	0.49
22:BA:14:A:N7	22:BA:15:G:C8	2.81	0.49
22:BA:457:A:O4'	22:BA:459:U:C6	2.66	0.49
22:BA:475:C:C4	22:BA:481:G:O6	2.65	0.49
22:BA:614:A:O2'	22:BA:615:U:OP2	2.26	0.49
22:BA:994:C:H1'	39:BR:10:LYS:HZ1	1.77	0.49
22:BA:1060:U:O4'	22:BA:1062:G:C5'	2.54	0.49
22:BA:1082:U:H5'	30:BI:117:THR:HB	1.94	0.49
22:BA:1327:A:N6	22:BA:1328:A:C2	2.80	0.49
22:BA:1485:U:C2	22:BA:1505:A:C2	3.00	0.49
22:BA:2847:U:C2'	22:BA:2848:G:H5'	2.42	0.49
27:BF:151:LEU:C	27:BF:151:LEU:HD12	2.37	0.49
32:BK:7:MET:SD	32:BK:20:MET:HB2	2.52	0.49
35:BN:2:ARG:NH1	35:BN:5:LYS:O	2.46	0.49
36:BO:55:GLU:HB2	36:BO:58:ILE:HG13	1.93	0.49
37:BP:96:LEU:HD12	37:BP:98:TYR:HE1	1.77	0.49
38:BQ:46:TYR:CZ	38:BQ:50:ARG:NH1	2.80	0.49
44:BW:39:GLN:O	44:BW:41:GLY:N	2.45	0.49
53:CA:85:U:O4'	53:CA:85:U:O2	2.31	0.49
53:CA:510:A:H5"	53:CA:511:C:P	2.52	0.49
53:CA:989:U:C4	53:CA:990:C:N4	2.80	0.49
2:CB:80:LYS:O	2:CB:81:ASP:C	2.56	0.49
3:CC:5:HIS:CD2	3:CC:183:TYR:HE2	2.29	0.49
8:CH:1:SER:C	8:CH:3:GLN:N	2.71	0.49
9:CI:44:ARG:HH21	9:CI:48:ARG:NH1	2.10	0.49
10:CJ:80:THR:C	10:CJ:84:VAL:HG22	2.37	0.49
12:CL:46:SER:O	12:CL:47:ALA:HB2	2.12	0.49
55:CM:2:ARG:HA	55:CM:7:ASN:O	2.12	0.49
14:CN:68:ARG:NH1	14:CN:80:ARG:HH12	2.10	0.49
15:CO:23:SER:HB3	15:CO:26:VAL:CG2	2.43	0.49
22:DA:320:A:N7	26:DE:132:LYS:HB2	2.28	0.49
22:DA:432:A:O2'	22:DA:433:C:H5'	2.12	0.49
22:DA:657:U:H2'	22:DA:658:U:C6	2.48	0.49
22:DA:736:C:O5'	22:DA:736:C:H6	1.95	0.49
22:DA:811:U:C5'	22:DA:812:C:OP2	2.52	0.49
22:DA:862:G:H2'	22:DA:863:A:O4'	2.13	0.49
22:DA:1071:G:N2	22:DA:1090:A:OP2	2.44	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1075:C:O2'	22:DA:1076:C:H6	1.95	0.49
22:DA:1236:G:O2'	22:DA:1237:A:C8	2.65	0.49
22:DA:1652:A:C2	22:DA:2006:C:N3	2.80	0.49
22:DA:1992:G:N2	22:DA:1995:U:H5	2.11	0.49
22:DA:2223:G:H2'	22:DA:2224:G:H5'	1.94	0.49
22:DA:2506:U:H3'	22:DA:2506:U:H6	1.78	0.49
22:DA:2746:U:C2'	22:DA:2747:G:H5'	2.41	0.49
22:DA:2852:G:H2'	22:DA:2853:C:O4'	2.13	0.49
22:DA:2898:U:H2'	22:DA:2899:A:H8	1.76	0.49
57:DB:75:G:H1'	43:DV:29:ILE:HG12	1.94	0.49
24:DC:259:ASN:OD1	24:DC:262:THR:HG23	2.12	0.49
28:DG:83:THR:O	28:DG:140:ILE:HD12	2.13	0.49
29:DH:147:VAL:O	29:DH:148:ALA:HB3	2.13	0.49
34:DM:62:LYS:C	34:DM:63:ILE:HD12	2.37	0.49
39:DR:3:ALA:HB2	39:DR:101:ILE:HD13	1.95	0.49
49:D1:8:ILE:HG22	49:D1:9:LYS:N	2.27	0.49
1:AA:518:C:OP2	1:AA:530:G:H1'	2.12	0.49
1:AA:548:G:H8	1:AA:548:G:H5"	1.78	0.49
1:AA:685:G:O2'	1:AA:686:U:H5'	2.13	0.49
1:AA:953:G:C2	1:AA:954:G:H1'	2.47	0.49
2:AB:41:ASN:HD22	2:AB:42:LEU:N	2.10	0.49
6:AF:9:MET:HE1	18:AR:64:LEU:HB3	1.93	0.49
7:AG:145:GLU:HA	7:AG:148:LYS:HD2	1.94	0.49
22:BA:686:U:H1'	50:B2:6:GLN:O	2.12	0.49
22:BA:733:G:C8	22:BA:761:A:N6	2.81	0.49
22:BA:1340:U:H2'	22:BA:1340:U:O2	2.12	0.49
22:BA:1566:A:H5'	24:BC:213:ARG:NH1	2.28	0.49
22:BA:1705:A:N6	22:BA:1706:C:H42	2.10	0.49
24:BC:20:ASN:C	24:BC:20:ASN:ND2	2.59	0.49
26:BE:46:GLN:CG	26:BE:87:ALA:H	2.24	0.49
26:BE:119:ILE:CD1	26:BE:187:VAL:HA	2.42	0.49
29:BH:81:ALA:HB2	29:BH:147:VAL:HG23	1.94	0.49
29:BH:89:LYS:HG2	29:BH:90:LEU:N	2.16	0.49
35:BN:15:SER:HB3	62:BN:201:HOH:O	2.12	0.49
36:BO:55:GLU:OE1	36:BO:81:ARG:NH1	2.45	0.49
37:BP:83:ILE:C	37:BP:83:ILE:CD1	2.81	0.49
41:BT:11:LEU:HG	41:BT:46:ALA:HB1	1.93	0.49
41:BT:44:LYS:O	41:BT:48:GLN:HG2	2.13	0.49
42:BU:25:LYS:HG2	42:BU:36:GLU:HB3	1.95	0.49
45:BX:39:VAL:O	45:BX:41:SER:N	2.40	0.49
46:BY:59:GLU:O	46:BY:63:ALA:HB3	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BZ:43:ILE:HG13	47:BZ:44:ARG:N	2.26	0.49
53:CA:546:A:P	4:CD:68:GLU:HB3	2.52	0.49
53:CA:770:C:O2'	53:CA:771:G:H5'	2.11	0.49
53:CA:951:G:H1'	53:CA:970:C:O2'	2.11	0.49
3:CC:133:MET:HB2	3:CC:150:VAL:HG21	1.94	0.49
8:CH:77:VAL:HG12	8:CH:84:ILE:HG13	1.93	0.49
9:CI:5:TYR:O	9:CI:19:PHE:HA	2.13	0.49
12:CL:6:LEU:C	12:CL:8:ARG:N	2.70	0.49
12:CL:51:VAL:HG12	12:CL:52:CYS:N	2.26	0.49
19:CS:35:ARG:NH1	19:CS:76:THR:HG22	2.27	0.49
22:DA:311:A:O2'	22:DA:332:A:O4'	2.23	0.49
22:DA:673:C:C2'	22:DA:674:G:H5'	2.42	0.49
22:DA:850:U:O2'	47:DZ:46:MET:HE3	2.13	0.49
22:DA:1426:G:H8	22:DA:1426:G:OP2	1.95	0.49
22:DA:1652:A:OP1	35:DN:8:ARG:HD3	2.12	0.49
22:DA:1688:U:O2	22:DA:1700:A:H5'	2.13	0.49
22:DA:2142:A:H2'	22:DA:2143:C:H4'	1.95	0.49
24:DC:161:VAL:HG13	24:DC:174:ARG:O	2.12	0.49
25:DD:101:PHE:HE2	25:DD:205:PRO:HD3	1.78	0.49
26:DE:111:GLU:HB2	26:DE:114:ARG:HH21	1.77	0.49
28:DG:19:ASN:N	28:DG:19:ASN:HD22	2.11	0.49
33:DL:79:LEU:CA	33:DL:82:LEU:HD11	2.40	0.49
44:DW:49:ASN:OD1	44:DW:80:SER:HA	2.13	0.49
47:DZ:16:LEU:HD23	47:DZ:19:HIS:CD2	2.48	0.49
50:D2:46:LYS:HD2	50:D2:46:LYS:N	2.24	0.49
6:AF:12:PRO:HA	6:AF:15:SER:HB2	1.94	0.49
6:AF:91:ARG:CG	6:AF:92:THR:H	2.23	0.49
9:AI:9:GLY:HA2	9:AI:80:HIS:HD2	1.77	0.49
11:AK:22:ILE:HG21	11:AK:95:THR:HG21	1.95	0.49
12:AL:24:GLU:O	12:AL:25:ALA:C	2.55	0.49
13:AM:13:HIS:HB3	13:AM:41:ASP:HA	1.93	0.49
17:AQ:18:LYS:O	17:AQ:47:ASP:OD2	2.31	0.49
20:AT:33:LYS:HE2	20:AT:33:LYS:N	2.28	0.49
21:AU:41:THR:O	21:AU:45:LYS:HB2	2.11	0.49
22:BA:164:C:H2'	22:BA:165:A:O4'	2.13	0.49
22:BA:182:A:C6	22:BA:183:C:C4	3.00	0.49
22:BA:2365:G:H2'	22:BA:2366:A:C8	2.48	0.49
24:BC:171:VAL:O	24:BC:182:LYS:HA	2.12	0.49
25:BD:149:ASN:CG	25:BD:150:GLN:H	2.17	0.49
26:BE:127:GLU:CD	26:BE:127:GLU:N	2.71	0.49
27:BF:76:PHE:O	27:BF:77:LYS:HB2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BL:132:ARG:HG3	33:BL:142:ILE:HD12	1.94	0.49
36:BO:116:GLN:O	36:BO:117:PHE:HB3	2.12	0.49
38:BQ:51:GLN:HA	38:BQ:54:ARG:HD2	1.94	0.49
38:BQ:63:ARG:NH2	38:BQ:96:ASP:CA	2.76	0.49
40:BS:19:LEU:O	48:B0:21:LEU:HD12	2.12	0.49
53:CA:54:C:N4	53:CA:352:C:H2'	2.27	0.49
53:CA:83:C:O2	53:CA:83:C:H2'	2.13	0.49
53:CA:708:C:H4'	11:CK:38:GLY:HA3	1.94	0.49
53:CA:872:A:C5	53:CA:874:G:C8	3.01	0.49
53:CA:1215:G:C2'	53:CA:1216:A:H8	2.25	0.49
53:CA:1314:C:H2'	53:CA:1315:U:O4'	2.13	0.49
53:CA:1336:C:O2'	53:CA:1337:G:C4	2.62	0.49
2:CB:114:LYS:HA	2:CB:117:GLU:CG	2.33	0.49
4:CD:93:LEU:O	4:CD:96:ARG:HG3	2.13	0.49
5:CE:80:LEU:CD2	5:CE:146:MET:HE1	2.41	0.49
54:CG:9:ARG:C	54:CG:10:LYS:HG3	2.37	0.49
11:CK:84:MET:HG2	11:CK:110:THR:OG1	2.12	0.49
19:CS:10:ILE:HG22	19:CS:14:LEU:HD21	1.95	0.49
22:DA:340:A:H2'	22:DA:341:C:O4'	2.11	0.49
22:DA:470:A:C2	22:DA:471:A:C4	3.00	0.49
22:DA:489:G:H2'	22:DA:491:G:H8	1.78	0.49
22:DA:948:C:O5'	22:DA:948:C:H6	1.96	0.49
22:DA:976:G:H5'	22:DA:1156:A:N6	2.28	0.49
22:DA:1826:G:P	24:DC:220:ARG:HB3	2.51	0.49
22:DA:1926:U:H1'	22:DA:1929:G:C6	2.48	0.49
22:DA:2336:A:C8	44:DW:40:ARG:NH2	2.81	0.49
22:DA:2394:C:N4	51:D3:30:HIS:CE1	2.80	0.49
57:DB:6:G:H4'	57:DB:28:C:H4'	1.95	0.49
33:DL:54:GLN:O	33:DL:55:MET:C	2.55	0.49
38:DQ:46:TYR:CD2	38:DQ:46:TYR:C	2.91	0.49
38:DQ:50:ARG:O	38:DQ:54:ARG:HD3	2.11	0.49
41:DT:10:VAL:HG23	41:DT:11:LEU:H	1.76	0.49
43:DV:61:LEU:HD23	43:DV:61:LEU:N	2.22	0.49
45:DX:32:LEU:N	45:DX:32:LEU:HD22	2.27	0.49
45:DX:36:ARG:HA	45:DX:47:THR:HA	1.94	0.49
47:DZ:46:MET:O	47:DZ:49:ALA:HB3	2.13	0.49
1:AA:71:A:C2	1:AA:72:A:C5	3.01	0.49
1:AA:100:G:C6	1:AA:101:A:C6	3.01	0.49
1:AA:521:G:O2'	1:AA:522:C:H5'	2.13	0.49
1:AA:588:G:C2	1:AA:589:U:C2	3.01	0.49
1:AA:782:A:H2'	1:AA:783:C:C5'	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1428:A:H2'	1:AA:1429:A:O4'	2.13	0.49
5:AE:45:VAL:HG22	5:AE:117:ALA:HA	1.93	0.49
10:AJ:53:ILE:HG13	14:AN:84:ARG:CZ	2.42	0.49
11:AK:15:VAL:HG13	11:AK:78:ILE:HG23	1.95	0.49
22:BA:36:G:O2'	22:BA:450:G:H2'	2.12	0.49
22:BA:812:C:H1'	22:BA:1250:G:C2	2.47	0.49
22:BA:918:A:H4'	23:BB:97:C:O2	2.12	0.49
22:BA:1296:G:H2'	22:BA:1297:C:H6	1.77	0.49
25:BD:184:ARG:HH11	37:BP:6:GLN:NE2	2.10	0.49
26:BE:111:GLU:HG2	26:BE:114:ARG:HH12	1.78	0.49
27:BF:134:GLN:C	27:BF:136:ILE:H	2.19	0.49
30:BI:32:VAL:HG22	30:BI:66:PHE:CG	2.47	0.49
30:BI:90:GLY:O	30:BI:92:PRO:HD3	2.12	0.49
32:BK:33:ALA:HB1	32:BK:37:ASP:HB2	1.93	0.49
39:BR:18:GLN:O	39:BR:97:LYS:O	2.31	0.49
51:B3:14:LYS:O	51:B3:21:PHE:O	2.30	0.49
53:CA:243:A:C2	53:CA:246:A:C8	3.00	0.49
53:CA:251:G:H4'	53:CA:252:U:O5'	2.13	0.49
53:CA:289:G:C6	53:CA:290:C:N4	2.81	0.49
53:CA:1139:G:H4'	53:CA:1140:C:O5'	2.11	0.49
53:CA:1408:A:N1	53:CA:1494:G:C6	2.81	0.49
2:CB:216:VAL:O	2:CB:220:VAL:HG23	2.13	0.49
4:CD:127:ARG:CZ	4:CD:127:ARG:HB2	2.39	0.49
54:CG:32:ASP:CB	54:CG:34:LYS:HD3	2.42	0.49
54:CG:59:GLU:HB2	54:CG:62:GLU:HB2	1.93	0.49
8:CH:9:MET:SD	8:CH:32:LYS:HG3	2.52	0.49
11:CK:14:GLN:HA	11:CK:76:TYR:O	2.13	0.49
12:CL:29:LYS:O	12:CL:80:LEU:HD12	2.12	0.49
12:CL:79:ILE:HD12	12:CL:96:THR:CG2	2.37	0.49
14:CN:63:CYS:SG	14:CN:82:LYS:HG3	2.52	0.49
18:CR:64:LEU:O	18:CR:66:LEU:HD23	2.12	0.49
19:CS:40:PHE:HB3	19:CS:41:PRO:CD	2.32	0.49
22:DA:99:U:H5'	22:DA:100:U:OP1	2.12	0.49
22:DA:201:C:C5	22:DA:202:U:C5	3.01	0.49
22:DA:564:C:O2	22:DA:578:G:N2	2.39	0.49
22:DA:581:C:C2	22:DA:582:A:N7	2.81	0.49
22:DA:630:G:N2	22:DA:633:A:OP2	2.43	0.49
22:DA:1266:G:O2'	22:DA:2012:G:O6	2.29	0.49
22:DA:1401:G:C5	22:DA:1402:U:C4	3.00	0.49
22:DA:1878:G:H2'	22:DA:1879:C:O4'	2.13	0.49
22:DA:2142:A:H3'	22:DA:2143:C:H4'	1.90	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2321:U:O2	22:DA:2321:U:O5'	2.30	0.49
57:DB:50:A:OP1	36:DO:68:LYS:HB2	2.13	0.49
24:DC:120:ASP:O	24:DC:121:ALA:O	2.30	0.49
28:DG:8:VAL:HG11	28:DG:49:LEU:HD23	1.94	0.49
29:DH:45:GLU:C	29:DH:47:PHE:H	2.19	0.49
29:DH:84:ALA:HB3	29:DH:148:ALA:CB	2.43	0.49
30:DI:95:ASP:CG	30:DI:96:LYS:H	2.20	0.49
34:DM:71:LYS:HG3	34:DM:72:PRO:HD2	1.93	0.49
35:DN:28:LEU:O	35:DN:32:GLU:N	2.38	0.49
38:DQ:26:ALA:O	38:DQ:30:VAL:HB	2.12	0.49
42:DU:40:LEU:HA	42:DU:61:GLU:HA	1.94	0.49
42:DU:81:ARG:HB2	42:DU:96:LYS:HD2	1.95	0.49
48:D0:11:LYS:HD2	48:D0:14:MET:HB2	1.95	0.49
51:D3:15:LYS:HZ1	51:D3:19:GLY:HA2	1.74	0.49
1:AA:84:U:O2	1:AA:84:U:H2'	2.12	0.49
1:AA:912:C:O2'	1:AA:913:A:H5'	2.12	0.49
1:AA:1001:C:H2'	1:AA:1002:G:C8	2.47	0.49
1:AA:1409:C:C2'	1:AA:1410:A:H5'	2.43	0.49
1:AA:1496:C:H2'	1:AA:1497:G:O4'	2.13	0.49
2:AB:127:LYS:HG3	2:AB:128:LEU:N	2.23	0.49
11:AK:109:ILE:HG22	11:AK:110:THR:N	2.28	0.49
12:AL:23:LEU:CG	12:AL:24:GLU:H	2.21	0.49
14:AN:51:PRO:O	14:AN:52:ARG:CB	2.60	0.49
15:AO:44:GLU:O	15:AO:45:HIS:HB2	2.12	0.49
22:BA:306:U:H2'	22:BA:307:G:O4'	2.13	0.49
22:BA:720:U:H2'	22:BA:721:A:C8	2.48	0.49
22:BA:1104:C:H2'	22:BA:1105:U:C6	2.48	0.49
22:BA:1250:G:OP2	33:BL:21:ARG:NH2	2.46	0.49
22:BA:1322:A:O3'	40:BS:84:ARG:NH1	2.46	0.49
22:BA:1327:A:OP2	62:BA:3599:HOH:O	2.20	0.49
22:BA:2204:G:H4'	24:BC:149:LYS:HG3	1.94	0.49
22:BA:2561:U:O3'	32:BK:40:LYS:HE2	2.11	0.49
22:BA:2649:C:H2'	22:BA:2650:U:C6	2.47	0.49
23:BB:46:A:C5	23:BB:47:C:C4	3.01	0.49
29:BH:21:VAL:HG22	29:BH:22:LYS:N	2.28	0.49
41:BT:16:VAL:C	41:BT:17:SER:OG	2.56	0.49
41:BT:61:LEU:C	41:BT:61:LEU:CD1	2.85	0.49
42:BU:11:ILE:O	42:BU:11:ILE:HG23	2.13	0.49
45:BX:32:LEU:O	45:BX:33:HIS:CG	2.65	0.49
53:CA:41:G:H2'	53:CA:42:G:C8	2.48	0.49
53:CA:62:U:O2'	53:CA:379:C:O2	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:330:C:HO2'	53:CA:331:G:H8	0.59	0.49
53:CA:347:G:H2'	53:CA:348:G:H8	1.77	0.49
53:CA:961:U:O2'	53:CA:962:C:O5'	2.30	0.49
53:CA:1172:C:H2'	53:CA:1173:U:C6	2.48	0.49
3:CC:117:ASP:HA	3:CC:120:THR:HB	1.95	0.49
3:CC:148:ILE:HD13	3:CC:201:ILE:HG12	1.94	0.49
55:CM:64:VAL:O	55:CM:65:GLU:C	2.56	0.49
14:CN:13:VAL:HG22	14:CN:59:GLN:OE1	2.12	0.49
14:CN:16:ALA:HA	14:CN:20:PHE:CD1	2.48	0.49
14:CN:94:GLY:O	14:CN:95:LEU:C	2.55	0.49
56:CP:54:LEU:HD23	56:CP:54:LEU:H	1.78	0.49
20:CT:53:MET:HE3	20:CT:54:GLN:HA	1.93	0.49
21:CU:8:ASN:CG	21:CU:9:GLU:H	2.19	0.49
22:DA:229:C:O2'	22:DA:230:G:O5'	2.30	0.49
22:DA:279:A:C6	22:DA:361:G:O2'	2.66	0.49
22:DA:319:G:O6	22:DA:333:G:C6	2.66	0.49
22:DA:370:G:N1	22:DA:424:G:C5	2.81	0.49
22:DA:402:A:H2'	22:DA:403:U:O4'	2.12	0.49
22:DA:480:A:H5'	42:DU:43:LYS:HD2	1.94	0.49
22:DA:489:G:N7	22:DA:1284:A:C2	2.81	0.49
22:DA:670:A:H4'	22:DA:671:C:H3'	1.94	0.49
22:DA:1059:G:N1	22:DA:1088:A:C2	2.81	0.49
22:DA:1278:C:O2'	35:DN:27:SER:HB3	2.12	0.49
22:DA:1281:G:H2'	22:DA:1282:U:O4'	2.12	0.49
22:DA:1965:C:C3'	22:DA:1966:A:H5"	2.43	0.49
22:DA:2331:G:H1	22:DA:2385:C:N4	2.09	0.49
22:DA:2666:C:O2	22:DA:2666:C:O4'	2.31	0.49
22:DA:2812:G:N2	22:DA:2889:C:C2	2.81	0.49
24:DC:245:THR:O	24:DC:247:TRP:N	2.45	0.49
25:DD:117:GLY:HA2	25:DD:164:GLN:OE1	2.13	0.49
25:DD:118:PHE:O	25:DD:119:ALA:HB3	2.12	0.49
26:DE:35:TYR:CE2	26:DE:177:PRO:HD2	2.47	0.49
29:DH:24:GLY:O	29:DH:28:ASN:HB2	2.13	0.49
32:DK:92:GLU:O	32:DK:93:GLN:O	2.31	0.49
33:DL:120:VAL:HG12	33:DL:121:THR:N	2.28	0.49
37:DP:13:LYS:HD2	37:DP:13:LYS:H	1.78	0.49
37:DP:56:SER:HB2	37:DP:75:THR:HG21	1.95	0.49
39:DR:51:VAL:HB	39:DR:52:PRO:HD2	1.94	0.49
45:DX:63:ILE:O	45:DX:67:LEU:HD12	2.12	0.49
48:D0:27:LEU:HD12	48:D0:38:LEU:HD23	1.94	0.49
1:AA:49:U:O4	1:AA:365:U:C5	2.56	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:56:U:H2'	1:AA:57:G:C8	2.47	0.49
1:AA:161:A:N6	1:AA:162:A:C6	2.80	0.49
1:AA:173:U:C2	1:AA:197:A:N1	2.81	0.49
1:AA:204:G:C1'	1:AA:465:A:C2	2.95	0.49
1:AA:255:G:H2'	1:AA:256:U:C6	2.48	0.49
1:AA:1015:G:H1'	1:AA:1218:C:O2'	2.13	0.49
1:AA:1039:G:C6	1:AA:1040:U:C4	3.01	0.49
1:AA:1163:A:C2	1:AA:1174:G:C2	3.01	0.49
1:AA:1453:G:N3	1:AA:1453:G:C2'	2.74	0.49
1:AA:1466:C:H2'	1:AA:1467:C:O4'	2.13	0.49
2:AB:67:LEU:HB3	2:AB:160:LEU:CD1	2.43	0.49
5:AE:15:ILE:HG22	5:AE:16:ALA:N	2.27	0.49
5:AE:113:VAL:HG21	5:AE:140:ILE:HD12	1.94	0.49
13:AM:39:ALA:HB3	13:AM:42:VAL:HG13	1.94	0.49
14:AN:5:MET:HA	14:AN:8:ARG:HD2	1.95	0.49
16:AP:61:VAL:HA	16:AP:65:ALA:H	1.77	0.49
19:AS:28:LYS:HB3	19:AS:29:PRO:CD	2.35	0.49
21:AU:3:ILE:N	21:AU:19:LYS:HZ1	2.10	0.49
22:BA:335:C:C5'	42:BU:81:ARG:HD3	2.41	0.49
22:BA:534:U:H2'	22:BA:535:G:C8	2.48	0.49
22:BA:675:A:H4'	26:BE:62:GLN:HE22	1.78	0.49
22:BA:923:G:H5'	44:BW:25:PHE:CZ	2.48	0.49
22:BA:1176:U:H2'	22:BA:1177:G:C4	2.47	0.49
22:BA:1445:G:H2'	22:BA:1446:C:H6	1.78	0.49
22:BA:1794:A:O4'	22:BA:1900:A:C2	2.66	0.49
22:BA:2060:A:O4'	22:BA:2502:G:H1'	2.13	0.49
22:BA:2136:G:O6	22:BA:2156:G:C2	2.66	0.49
23:BB:34:A:C2'	23:BB:35:C:OP2	2.60	0.49
24:BC:195:GLY:O	24:BC:196:ASN:HB3	2.12	0.49
26:BE:157:LEU:O	26:BE:157:LEU:HG	2.11	0.49
27:BF:4:HIS:O	27:BF:8:LYS:HG2	2.12	0.49
27:BF:87:LYS:O	27:BF:88:VAL:HG23	2.12	0.49
31:BJ:6:ALA:HB3	31:BJ:45:THR:CG2	2.36	0.49
34:BM:26:VAL:HG13	34:BM:104:GLU:HG2	1.94	0.49
34:BM:77:PRO:CD	34:BM:80:VAL:HG11	2.42	0.49
37:BP:37:LYS:HD3	37:BP:37:LYS:N	2.28	0.49
38:BQ:97:ILE:HD11	38:BQ:105:PHE:HA	1.94	0.49
42:BU:52:ASN:C	42:BU:54:PRO:HD2	2.38	0.49
46:BY:46:VAL:O	46:BY:47:ARG:C	2.56	0.49
49:B1:13:SER:HB3	49:B1:47:ILE:O	2.12	0.49
53:CA:321:A:O2'	53:CA:1436:U:H5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:337:G:H2'	53:CA:338:A:H8	1.75	0.49
53:CA:632:U:H3'	53:CA:633:G:H5'	1.94	0.49
53:CA:685:G:O2'	53:CA:686:U:H5'	2.13	0.49
53:CA:1135:U:O2	53:CA:1135:U:H2'	2.11	0.49
53:CA:1480:A:H2'	53:CA:1481:U:O4'	2.13	0.49
2:CB:164:ASP:HB3	2:CB:167:HIS:HB3	1.95	0.49
4:CD:29:THR:C	4:CD:31:CYS:N	2.70	0.49
4:CD:81:LEU:O	4:CD:83:GLY:N	2.46	0.49
10:CJ:5:ARG:CG	10:CJ:79:PRO:HG3	2.43	0.49
11:CK:67:GLU:C	11:CK:69:CYS:H	2.21	0.49
14:CN:16:ALA:HA	14:CN:20:PHE:HD1	1.77	0.49
21:CU:16:ARG:HD2	21:CU:19:LYS:NZ	2.27	0.49
22:DA:502:A:C6	22:DA:505:A:C5	3.01	0.49
22:DA:708:G:N2	22:DA:724:U:H1'	2.28	0.49
22:DA:1048:A:C5	22:DA:1049:C:N4	2.81	0.49
22:DA:1613:G:N1	22:DA:1617:C:C2	2.81	0.49
22:DA:1784:A:H4'	22:DA:1785:A:C5'	2.43	0.49
22:DA:2282:G:H1'	22:DA:2390:U:C5	2.48	0.49
22:DA:2477:U:O4	52:D4:10:LEU:HD22	2.13	0.49
22:DA:2665:A:C2	22:DA:2666:C:N3	2.81	0.49
22:DA:2760:C:C2'	22:DA:2761:A:H5'	2.43	0.49
22:DA:2836:U:O2'	22:DA:2837:A:O5'	2.30	0.49
57:DB:70:C:H2'	57:DB:71:C:C6	2.48	0.49
26:DE:42:GLY:HA2	26:DE:92:HIS:HE1	1.78	0.49
28:DG:7:PRO:HB3	28:DG:48:THR:HB	1.94	0.49
34:DM:69:PRO:O	34:DM:70:ASP:HB3	2.12	0.49
34:DM:96:ILE:CD1	34:DM:102:LEU:HD11	2.38	0.49
35:DN:55:ALA:CB	35:DN:79:LEU:HD22	2.43	0.49
36:DO:89:ASP:O	36:DO:90:VAL:HG13	2.13	0.49
37:DP:25:VAL:O	37:DP:25:VAL:HG23	2.13	0.49
41:DT:48:GLN:HA	41:DT:48:GLN:HE21	1.77	0.49
47:DZ:4:ILE:CG2	47:DZ:56:VAL:HG13	2.42	0.49
47:DZ:40:THR:C	47:DZ:42:ALA:N	2.68	0.49
52:D4:19:ARG:HD2	52:D4:24:ARG:HD2	1.95	0.49
1:AA:345:C:H4'	37:BP:33:GLU:CD	2.37	0.49
1:AA:575:G:C6	1:AA:821:G:N7	2.81	0.49
2:AB:61:SER:C	2:AB:63:LYS:H	2.20	0.49
2:AB:165:ALA:HA	2:AB:172:ILE:HD11	1.95	0.49
3:AC:122:GLN:HB3	3:AC:127:VAL:CG2	2.43	0.49
4:AD:34:GLU:C	4:AD:36:ALA:H	2.21	0.49
5:AE:114:LEU:HD21	5:AE:122:VAL:HG23	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:34:THR:OG1	11:AK:39:ASN:N	2.41	0.49
12:AL:72:ASN:HD22	12:AL:73:LEU:H	1.59	0.49
13:AM:112:ARG:C	13:AM:113:LYS:HG3	2.38	0.49
14:AN:91:GLU:O	14:AN:93:PRO:HD3	2.13	0.49
20:AT:3:ILE:HA	20:AT:7:LYS:NZ	2.27	0.49
20:AT:33:LYS:HE2	20:AT:33:LYS:H	1.78	0.49
22:BA:37:C:O2'	22:BA:38:A:H5'	2.12	0.49
22:BA:118:A:N3	22:BA:178:G:H1'	2.28	0.49
22:BA:364:C:O2'	22:BA:365:U:H5'	2.11	0.49
22:BA:608:A:C6	22:BA:609:A:C6	3.01	0.49
22:BA:609:A:H2'	22:BA:610:C:O4'	2.13	0.49
22:BA:684:G:OP1	50:B2:16:HIS:CD2	2.48	0.49
22:BA:1069:A:O2'	22:BA:1070:A:C5'	2.58	0.49
22:BA:1665:A:H5"	32:BK:66:LYS:HG3	1.95	0.49
22:BA:1713:A:OP1	22:BA:1713:A:H8	1.95	0.49
22:BA:1714:U:O2	22:BA:1714:U:C2'	2.60	0.49
22:BA:2591:C:OP1	24:BC:237:ARG:HG3	2.12	0.49
22:BA:2722:G:H4'	35:BN:4:ARG:HB2	1.95	0.49
26:BE:48:THR:C	26:BE:50:ALA:N	2.69	0.49
29:BH:80:ILE:HG23	29:BH:147:VAL:HG21	1.94	0.49
31:BJ:49:ASP:C	31:BJ:49:ASP:OD2	2.56	0.49
32:BK:1:MET:HE2	32:BK:32:TYR:CD1	2.48	0.49
33:BL:95:LEU:HD22	33:BL:100:ILE:HG12	1.95	0.49
36:BO:66:GLY:C	36:BO:102:ARG:NH2	2.71	0.49
42:BU:82:VAL:HG12	42:BU:83:GLY:N	2.28	0.49
45:BX:29:LEU:HB2	45:BX:30:PRO:HD3	1.95	0.49
50:B2:36:ALA:C	50:B2:38:GLY:N	2.71	0.49
53:CA:202:G:O2'	53:CA:468:A:H8	1.95	0.49
53:CA:295:C:H2'	53:CA:296:U:C6	2.43	0.49
53:CA:501:C:H2'	53:CA:502:A:H8	1.77	0.49
53:CA:505:G:H2'	53:CA:506:G:H8	1.78	0.49
53:CA:791:G:C6	53:CA:792:A:N7	2.81	0.49
53:CA:865:A:H2	53:CA:918:A:H4'	1.78	0.49
53:CA:990:C:O2'	53:CA:991:U:O4'	2.30	0.49
53:CA:1067:A:C4'	53:CA:1068:G:O5'	2.60	0.49
53:CA:1262:C:H2'	53:CA:1263:C:H5'	1.94	0.49
53:CA:1363:A:C6	53:CA:1365:G:C6	3.00	0.49
2:CB:95:TRP:CH2	2:CB:171:ALA:HA	2.48	0.49
4:CD:71:PHE:O	4:CD:72:ARG:C	2.55	0.49
14:CN:63:CYS:HB3	14:CN:68:ARG:H	1.76	0.49
15:CO:42:PHE:HB3	15:CO:52:ARG:NH2	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:192:C:C4	22:DA:193:U:C2	3.01	0.49
22:DA:324:A:N6	22:DA:338:G:O2'	2.44	0.49
22:DA:410:G:N2	22:DA:418:C:C2	2.81	0.49
22:DA:727:A:C2'	22:DA:728:G:C8	2.96	0.49
22:DA:758:C:O2	22:DA:1981:A:C2	2.66	0.49
22:DA:764:A:C2	22:DA:781:A:C2	3.01	0.49
22:DA:857:G:H2'	22:DA:858:G:C4'	2.43	0.49
22:DA:921:C:O2'	22:DA:922:C:H5'	2.12	0.49
22:DA:975:A:O2'	22:DA:976:G:O5'	2.31	0.49
22:DA:1063:G:C6	22:DA:1064:C:N4	2.80	0.49
22:DA:1069:A:H2	22:DA:1097:U:OP1	1.96	0.49
22:DA:1262:A:H2	48:D0:6:LYS:HD2	1.78	0.49
22:DA:1567:G:H1'	22:DA:1568:G:C6	2.47	0.49
22:DA:1662:U:H2'	22:DA:1662:U:O2	2.12	0.49
22:DA:1663:G:C6	22:DA:1992:G:N7	2.81	0.49
22:DA:1680:U:H2'	22:DA:1681:G:O4'	2.12	0.49
22:DA:2082:A:H8	22:DA:2082:A:O5'	1.96	0.49
22:DA:2415:G:C2	22:DA:2416:C:C2	3.01	0.49
22:DA:2751:G:H5'	28:DG:2:ARG:HD2	1.95	0.49
57:DB:42:C:H5	58:DF:65:LEU:HD13	1.78	0.49
31:DJ:45:THR:O	31:DJ:45:THR:HG23	2.13	0.49
33:DL:35:HIS:HB2	62:DL:3102:HOH:O	2.13	0.49
34:DM:19:GLY:O	34:DM:20:LEU:HB2	2.13	0.49
37:DP:47:ILE:HD11	37:DP:70:GLU:HG2	1.94	0.49
39:DR:15:SER:OG	39:DR:16:GLU:N	2.44	0.49
40:DS:36:LEU:C	40:DS:38:TYR:N	2.70	0.49
41:DT:8:LEU:HD22	41:DT:46:ALA:HA	1.94	0.49
41:DT:55:VAL:HG21	41:DT:85:VAL:O	2.13	0.49
42:DU:52:ASN:HD21	42:DU:54:PRO:HG3	1.78	0.49
44:DW:39:GLN:O	44:DW:56:HIS:HB3	2.13	0.49
44:DW:77:LYS:O	44:DW:78:PHE:CB	2.61	0.49
46:DY:28:LEU:O	46:DY:28:LEU:HD22	2.13	0.49
1:AA:43:C:H2'	1:AA:44:A:O4'	2.12	0.48
1:AA:71:A:C6	1:AA:100:G:C8	3.01	0.48
1:AA:237:G:H5"	17:AQ:26:ARG:NH2	2.28	0.48
1:AA:460:A:O3'	1:AA:462:G:OP2	2.31	0.48
1:AA:545:C:H5'	4:AD:68:GLU:CG	2.42	0.48
1:AA:636:U:O2'	1:AA:637:C:H5'	2.13	0.48
1:AA:913:A:H8	1:AA:913:A:O5'	1.95	0.48
1:AA:967:C:C1'	9:AI:129:ARG:HH22	2.24	0.48
1:AA:1074:G:H2'	1:AA:1075:U:C6	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1281:C:O2'	1:AA:1282:C:H5'	2.13	0.48
1:AA:1381:U:O2'	1:AA:1382:C:H6	1.96	0.48
11:AK:35:ASP:OD2	11:AK:39:ASN:HB2	2.13	0.48
11:AK:70:ALA:O	11:AK:73:VAL:HG22	2.13	0.48
14:AN:42:ASN:O	14:AN:44:VAL:N	2.46	0.48
22:BA:571:U:C5	22:BA:575:A:C5	3.01	0.48
22:BA:952:G:C2'	22:BA:953:G:O5'	2.60	0.48
22:BA:1050:A:C2	22:BA:2751:G:C4	3.01	0.48
22:BA:1071:G:H8	22:BA:1071:G:OP2	1.97	0.48
22:BA:1445:G:H2'	22:BA:1446:C:C6	2.48	0.48
22:BA:2052:A:C2	22:BA:2053:G:C8	3.01	0.48
22:BA:2511:U:O4	22:BA:2575:C:N3	2.46	0.48
22:BA:2730:C:O3'	25:BD:174:SER:HB3	2.13	0.48
25:BD:106:LYS:HD2	25:BD:106:LYS:N	2.27	0.48
25:BD:121:THR:HG22	25:BD:125:TRP:HD1	1.78	0.48
26:BE:146:VAL:HG23	26:BE:167:VAL:HG21	1.94	0.48
28:BG:61:TRP:O	28:BG:64:ALA:N	2.45	0.48
28:BG:72:ASN:C	28:BG:72:ASN:HD22	2.20	0.48
28:BG:95:ALA:CB	28:BG:104:LEU:HD23	2.43	0.48
32:BK:19:VAL:HG22	32:BK:41:ILE:HG13	1.95	0.48
33:BL:37:GLY:O	33:BL:38:GLN:C	2.56	0.48
33:BL:85:VAL:HG22	33:BL:94:THR:HG23	1.96	0.48
38:BQ:114:ALA:O	38:BQ:116:LEU:N	2.45	0.48
39:BR:49:ILE:HG21	39:BR:53:PHE:N	2.28	0.48
39:BR:64:VAL:O	39:BR:64:VAL:HG12	2.13	0.48
41:BT:7:LEU:C	41:BT:9:LYS:H	2.20	0.48
41:BT:24:MET:HG3	41:BT:29:THR:CG2	2.43	0.48
45:BX:32:LEU:HA	45:BX:51:SER:HA	1.95	0.48
46:BY:57:LEU:HD12	46:BY:57:LEU:O	2.13	0.48
53:CA:751:U:H1'	15:CO:22:GLY:O	2.13	0.48
53:CA:892:A:C6	53:CA:893:C:C4	3.00	0.48
53:CA:994:A:C5	53:CA:1216:A:H4'	2.48	0.48
53:CA:1140:C:H2'	53:CA:1141:C:C5	2.48	0.48
53:CA:1211:U:O2'	53:CA:1213:A:C2	2.66	0.48
53:CA:1327:C:N4	53:CA:1328:C:N4	2.60	0.48
53:CA:1409:C:H6	53:CA:1409:C:O5'	1.95	0.48
3:CC:187:GLU:O	3:CC:188:ALA:HB2	2.13	0.48
54:CG:19:SER:HB3	54:CG:22:LEU:HB3	1.95	0.48
11:CK:124:LYS:HG3	21:CU:34:ARG:HD2	1.93	0.48
22:DA:503:A:C4'	22:DA:504:A:O5'	2.51	0.48
22:DA:851:C:H4'	47:DZ:46:MET:HG2	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1062:G:C8	22:DA:1088:A:H8	2.29	0.48
22:DA:1103:A:H8	22:DA:1103:A:O5'	1.95	0.48
22:DA:1544:A:C6	22:DA:1545:A:C6	3.01	0.48
22:DA:2093:G:H21	22:DA:2198:A:H62	1.61	0.48
22:DA:2366:A:H2'	22:DA:2367:G:O4'	2.11	0.48
22:DA:2469:A:C6	22:DA:2482:A:C8	3.01	0.48
22:DA:2576:G:C8	22:DA:2580:U:O4	2.66	0.48
22:DA:2756:U:C4'	22:DA:2757:A:O5'	2.61	0.48
57:DB:69:G:N7	57:DB:70:C:C4	2.81	0.48
24:DC:211:ARG:HD2	24:DC:215:VAL:O	2.12	0.48
31:DJ:84:ILE:O	31:DJ:84:ILE:HG23	2.13	0.48
32:DK:42:THR:HG22	32:DK:44:LYS:HG3	1.95	0.48
33:DL:23:ILE:HD12	33:DL:23:ILE:N	2.28	0.48
33:DL:79:LEU:HD12	33:DL:112:LEU:HB2	1.94	0.48
37:DP:52:ARG:HB3	37:DP:55:HIS:HB2	1.95	0.48
1:AA:81:A:O2'	1:AA:89:U:O2	2.27	0.48
1:AA:82:G:H2'	1:AA:83:C:H4'	1.94	0.48
1:AA:174:A:C6	1:AA:175:C:C4	3.01	0.48
1:AA:438:U:C4	1:AA:494:G:C5	3.01	0.48
3:AC:21:TRP:CZ3	3:AC:23:ALA:HB3	2.48	0.48
3:AC:125:ARG:O	3:AC:126:ARG:CB	2.61	0.48
3:AC:146:LYS:HB2	3:AC:202:PHE:HD2	1.76	0.48
14:AN:9:GLU:OE1	14:AN:60:ARG:HB3	2.12	0.48
18:AR:36:GLY:O	18:AR:62:ARG:NH2	2.46	0.48
22:BA:258:G:H8	22:BA:258:G:O5'	1.96	0.48
22:BA:602:A:N3	22:BA:655:A:C2	2.81	0.48
22:BA:1019:U:O4	22:BA:1020:A:N6	2.46	0.48
22:BA:1705:A:C5	22:BA:1706:C:C4	3.01	0.48
22:BA:1733:G:N2	22:BA:1734:G:C4	2.81	0.48
22:BA:2540:C:C2'	22:BA:2541:A:H5'	2.42	0.48
24:BC:216:ARG:HB3	24:BC:217:PRO:HD2	1.95	0.48
25:BD:151:THR:HG22	25:BD:152:PRO:HD3	1.95	0.48
27:BF:120:SER:O	27:BF:127:TYR:HD1	1.96	0.48
31:BJ:38:GLY:C	31:BJ:40:HIS:H	2.21	0.48
34:BM:66:ARG:HD3	34:BM:104:GLU:OE1	2.12	0.48
39:BR:76:LYS:HB2	39:BR:85:LYS:HG3	1.94	0.48
44:BW:22:VAL:O	44:BW:25:PHE:CD2	2.65	0.48
45:BX:52:ALA:O	45:BX:53:LYS:HB2	2.12	0.48
51:B3:32:LEU:O	51:B3:33:THR:C	2.56	0.48
53:CA:46:G:O2'	53:CA:365:U:H1'	2.13	0.48
53:CA:406:G:N7	53:CA:495:A:O2'	2.34	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:738:C:H2'	53:CA:739:C:C6	2.44	0.48
53:CA:973:G:H2'	53:CA:974:A:H5'	1.95	0.48
53:CA:1068:G:N3	53:CA:1191:A:C2	2.81	0.48
6:CF:38:ARG:HG3	6:CF:63:ASN:HB2	1.94	0.48
55:CM:28:ARG:HA	55:CM:31:ALA:HB3	1.94	0.48
56:CP:4:ILE:N	56:CP:4:ILE:CD1	2.76	0.48
56:CP:35:ARG:HH12	56:CP:38:PHE:HB3	1.78	0.48
21:CU:19:LYS:C	21:CU:21:SER:H	2.21	0.48
22:DA:45:G:C5'	22:DA:46:G:H5'	2.40	0.48
22:DA:118:A:P	22:DA:119:A:H5"	2.52	0.48
22:DA:332:A:O2'	22:DA:334:C:OP2	2.30	0.48
22:DA:600:G:C5'	26:DE:27:LEU:HD22	2.41	0.48
22:DA:857:G:H2'	22:DA:858:G:H4'	1.95	0.48
22:DA:876:C:N4	22:DA:902:C:C2	2.81	0.48
22:DA:965:C:H5"	62:DA:3345:HOH:O	2.12	0.48
22:DA:1313:U:OP2	22:DA:1314:C:H5	1.96	0.48
22:DA:1373:A:H4'	22:DA:2212:A:H1'	1.94	0.48
22:DA:1809:A:H2'	22:DA:1810:A:C8	2.48	0.48
22:DA:1914:C:O2'	22:DA:1915:U:C6	2.66	0.48
22:DA:2260:C:H2'	22:DA:2261:C:H6	1.77	0.48
22:DA:2549:G:N2	22:DA:2560:A:C4	2.82	0.48
57:DB:113:C:H1'	36:DO:45:SER:O	2.13	0.48
26:DE:45:ALA:O	26:DE:46:GLN:HB2	2.12	0.48
28:DG:87:GLN:HA	28:DG:129:GLU:HA	1.94	0.48
28:DG:117:PRO:HG2	28:DG:143:VAL:HG11	1.94	0.48
29:DH:143:ILE:O	29:DH:144:VAL:HG13	2.13	0.48
31:DJ:92:MET:HE1	31:DJ:99:ARG:HH21	1.78	0.48
32:DK:16:ALA:HB3	32:DK:46:ALA:N	2.28	0.48
32:DK:17:ARG:O	32:DK:18:ARG:C	2.55	0.48
32:DK:19:VAL:HG12	32:DK:41:ILE:HG13	1.94	0.48
32:DK:113:MET:O	32:DK:116:ILE:HG13	2.13	0.48
33:DL:81:ASP:C	33:DL:82:LEU:HD12	2.38	0.48
34:DM:69:PRO:HA	34:DM:94:ALA:HB2	1.96	0.48
39:DR:48:LYS:H	39:DR:48:LYS:CD	2.25	0.48
41:DT:69:ARG:HD2	41:DT:70:HIS:H	1.77	0.48
1:AA:75:G:C5	1:AA:76:G:C8	3.00	0.48
1:AA:702:A:C4	22:BA:1847:A:H2	2.32	0.48
1:AA:1508:A:H2'	1:AA:1509:C:O4'	2.12	0.48
1:AA:1530:G:O2'	1:AA:1531:A:C8	2.66	0.48
4:AD:158:LEU:O	4:AD:161:ALA:HB3	2.13	0.48
8:AH:105:THR:HG22	8:AH:121:GLY:C	2.38	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:6:TYR:CE2	9:AI:17:ARG:HB2	2.48	0.48
22:BA:1049:C:C2'	22:BA:1050:A:H5'	2.44	0.48
23:BB:5:U:H2'	23:BB:6:G:C8	2.49	0.48
23:BB:12:C:C5	44:BW:72:GLY:HA3	2.48	0.48
23:BB:32:U:C2	23:BB:51:G:N2	2.82	0.48
24:BC:134:ILE:O	24:BC:135:PRO:C	2.56	0.48
26:BE:127:GLU:CD	26:BE:127:GLU:H	2.20	0.48
29:BH:24:GLY:O	29:BH:25:TYR:C	2.56	0.48
34:BM:65:ILE:HG22	34:BM:65:ILE:O	2.13	0.48
37:BP:52:ARG:CG	37:BP:52:ARG:NH1	2.72	0.48
40:BS:57:ASN:O	40:BS:61:ASN:HB2	2.12	0.48
43:BV:49:ASN:O	43:BV:52:ALA:HB3	2.13	0.48
44:BW:33:GLY:O	44:BW:34:SER:HB3	2.13	0.48
53:CA:345:C:H5'	53:CA:346:G:C5	2.48	0.48
53:CA:512:U:H2'	53:CA:513:C:C6	2.48	0.48
53:CA:755:G:C2	53:CA:756:C:C6	3.02	0.48
53:CA:861:G:C6	53:CA:862:C:C4	3.01	0.48
2:CB:103:TRP:HD1	2:CB:107:ARG:HB3	1.77	0.48
2:CB:162:VAL:HG13	2:CB:184:ALA:CB	2.42	0.48
3:CC:10:ARG:HD3	3:CC:177:LEU:HA	1.93	0.48
3:CC:86:LEU:O	3:CC:90:VAL:HG22	2.13	0.48
4:CD:149:LYS:HZ1	4:CD:176:LYS:CE	2.26	0.48
6:CF:9:MET:HE2	6:CF:59:TYR:CZ	2.48	0.48
8:CH:75:GLN:O	8:CH:126:CYS:HB2	2.13	0.48
55:CM:68:LEU:HD22	55:CM:69:ARG:NH1	2.27	0.48
15:CO:83:ARG:HG2	15:CO:83:ARG:O	2.13	0.48
17:CQ:29:LYS:HE2	17:CQ:36:PHE:CZ	2.48	0.48
22:DA:3:U:H2'	22:DA:4:U:H6	1.79	0.48
22:DA:226:A:H2'	22:DA:227:A:H8	1.78	0.48
22:DA:394:C:O2'	22:DA:395:U:H5'	2.13	0.48
22:DA:1019:U:O4	22:DA:1020:A:N6	2.45	0.48
22:DA:1377:G:H8	22:DA:1377:G:O5'	1.95	0.48
22:DA:1378:A:N7	22:DA:1380:G:C6	2.82	0.48
22:DA:2144:G:C2	22:DA:2148:G:O6	2.67	0.48
22:DA:2336:A:N7	44:DW:40:ARG:NE	2.62	0.48
25:DD:105:LYS:HA	25:DD:177:VAL:CG2	2.38	0.48
31:DJ:36:LEU:HD12	31:DJ:121:LYS:HB2	1.95	0.48
31:DJ:44:TYR:HD1	38:DQ:63:ARG:NH2	2.11	0.48
31:DJ:97:PRO:C	31:DJ:99:ARG:H	2.22	0.48
37:DP:32:VAL:O	37:DP:32:VAL:HG13	2.14	0.48
40:DS:44:ALA:O	40:DS:48:LYS:HB2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DY:47:ARG:O	46:DY:50:VAL:N	2.45	0.48
1:AA:71:A:C5	1:AA:100:G:C5	3.01	0.48
1:AA:208:U:H3	1:AA:212:G:N2	2.11	0.48
1:AA:572:A:H5'	1:AA:573:A:OP2	2.13	0.48
1:AA:626:G:H2'	1:AA:627:G:C8	2.49	0.48
1:AA:895:G:H2'	1:AA:896:C:C6	2.48	0.48
1:AA:1181:G:O2'	1:AA:1182:G:C5	2.66	0.48
3:AC:22:PHE:CD2	3:AC:22:PHE:C	2.90	0.48
7:AG:49:LEU:CD2	7:AG:124:SER:HB2	2.44	0.48
7:AG:146:ALA:C	7:AG:148:LYS:N	2.71	0.48
11:AK:108:ASN:CB	21:AU:6:ARG:HG2	2.40	0.48
13:AM:86:ARG:HA	13:AM:96:VAL:HG13	1.95	0.48
14:AN:20:PHE:C	14:AN:22:LYS:N	2.71	0.48
20:AT:72:ALA:O	20:AT:73:ARG:C	2.57	0.48
22:BA:445:C:H5"	38:BQ:2:ARG:HB2	1.95	0.48
24:BC:90:ILE:HD12	24:BC:103:ILE:O	2.14	0.48
26:BE:147:LEU:O	26:BE:148:ILE:C	2.54	0.48
27:BF:57:ALA:O	27:BF:60:SER:O	2.32	0.48
27:BF:134:GLN:HG3	27:BF:140:ILE:HG12	1.95	0.48
28:BG:59:ASP:O	28:BG:60:GLY:C	2.56	0.48
28:BG:61:TRP:CE3	28:BG:61:TRP:HA	2.48	0.48
30:BI:61:TYR:N	30:BI:61:TYR:CD2	2.81	0.48
32:BK:63:VAL:HG11	32:BK:103:VAL:HG12	1.95	0.48
33:BL:23:ILE:HG12	39:BR:82:HIS:CE1	2.49	0.48
33:BL:91:ASP:H	33:BL:94:THR:CG2	2.27	0.48
37:BP:88:ARG:HG2	37:BP:112:ARG:NH1	2.28	0.48
39:BR:49:ILE:HG22	39:BR:53:PHE:C	2.38	0.48
41:BT:29:THR:HA	41:BT:86:THR:CA	2.43	0.48
47:BZ:40:THR:OG1	47:BZ:41:PRO:HD2	2.14	0.48
53:CA:183:C:HO2'	53:CA:184:G:C5'	2.26	0.48
53:CA:346:G:O2'	53:CA:347:G:O4'	2.30	0.48
53:CA:506:G:C6	53:CA:507:C:C4	3.01	0.48
2:CB:73:ARG:HG3	2:CB:74:ALA:N	2.28	0.48
3:CC:67:ILE:H	3:CC:102:ILE:HA	1.78	0.48
4:CD:164:ARG:HB3	4:CD:165:GLU:H	1.39	0.48
5:CE:56:PRO:HA	5:CE:59:ILE:CG2	2.43	0.48
54:CG:116:ALA:C	54:CG:120:ALA:HB3	2.39	0.48
9:CI:53:LEU:O	9:CI:54:VAL:HG13	2.13	0.48
12:CL:37:TYR:O	12:CL:38:THR:HG23	2.13	0.48
19:CS:38:THR:OG1	19:CS:67:GLY:HA2	2.14	0.48
22:DA:479:A:C2	22:DA:480:A:C6	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:511:U:H4'	22:DA:1235:G:H4'	1.95	0.48
22:DA:513:A:H2'	22:DA:514:A:C8	2.48	0.48
22:DA:992:C:H2'	22:DA:993:G:H8	1.78	0.48
22:DA:1527:G:H1'	22:DA:1546:G:H22	1.78	0.48
22:DA:1608:A:C5	22:DA:1611:C:C4	3.01	0.48
22:DA:1827:U:O4'	22:DA:1970:A:O2'	2.31	0.48
22:DA:2060:A:H2'	26:DE:63:LYS:HZ3	1.77	0.48
22:DA:2478:A:C8	22:DA:2529:G:C6	3.02	0.48
22:DA:2726:A:O2'	22:DA:2727:A:O5'	2.31	0.48
57:DB:109:A:C2	57:DB:110:C:C2	3.02	0.48
24:DC:35:LYS:O	24:DC:36:ASN:CB	2.60	0.48
24:DC:67:LYS:CB	24:DC:150:GLY:HA2	2.43	0.48
26:DE:135:ALA:C	26:DE:137:LYS:H	2.20	0.48
29:DH:94:ILE:HB	29:DH:98:ASP:HB2	1.96	0.48
30:DI:58:ILE:HG23	30:DI:66:PHE:CD2	2.48	0.48
35:DN:71:ARG:HH21	35:DN:71:ARG:CB	2.23	0.48
36:DO:26:LEU:HA	36:DO:38:GLN:O	2.13	0.48
36:DO:79:ALA:HB1	36:DO:114:GLY:HA3	1.94	0.48
38:DQ:15:LYS:HD2	38:DQ:19:GLN:HE21	1.77	0.48
39:DR:55:ASP:CG	39:DR:56:GLY:H	2.20	0.48
40:DS:47:VAL:O	40:DS:50:VAL:HB	2.13	0.48
43:DV:4:ILE:HB	43:DV:63:ILE:HG13	1.94	0.48
46:DY:37:LEU:HD13	46:DY:42:LEU:CD1	2.44	0.48
51:D3:22:LYS:H	51:D3:48:MET:CB	2.25	0.48
1:AA:1170:A:H2'	1:AA:1171:A:O4'	2.14	0.48
1:AA:1240:U:H3	7:AG:29:LEU:CD2	2.27	0.48
1:AA:1348:U:O2'	1:AA:1349:A:O4'	2.29	0.48
1:AA:1530:G:O2'	1:AA:1531:A:H8	1.96	0.48
3:AC:153:SER:CB	3:AC:164:THR:HA	2.44	0.48
4:AD:60:VAL:HA	4:AD:63:ILE:HG22	1.95	0.48
4:AD:195:ASN:O	4:AD:196:GLU:HG3	2.14	0.48
5:AE:149:PRO:C	5:AE:151:MET:H	2.22	0.48
5:AE:154:ALA:HB1	8:AH:65:PHE:CE2	2.49	0.48
8:AH:110:MET:SD	8:AH:115:ALA:HA	2.54	0.48
12:AL:32:VAL:O	12:AL:33:CYS:SG	2.72	0.48
20:AT:60:GLN:NE2	20:AT:65:LEU:HD21	2.28	0.48
22:BA:666:A:C4	22:BA:667:U:C5	3.02	0.48
22:BA:846:U:C2'	22:BA:847:U:OP2	2.62	0.48
22:BA:923:G:N3	44:BW:23:LYS:NZ	2.61	0.48
22:BA:1132:U:H3'	22:BA:1133:A:H5"	1.95	0.48
24:BC:144:GLU:HA	24:BC:151:GLY:CA	2.38	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BG:59:ASP:HB2	28:BG:63:GLN:CG	2.44	0.48
29:BH:26:ALA:HA	29:BH:30:LEU:HB2	1.95	0.48
34:BM:10:ARG:NH2	34:BM:89:VAL:HB	2.27	0.48
34:BM:27:SER:N	34:BM:104:GLU:OE2	2.46	0.48
36:BO:31:THR:HG23	36:BO:33:ARG:H	1.77	0.48
37:BP:61:ARG:HG2	37:BP:70:GLU:HG2	1.95	0.48
37:BP:112:ARG:O	37:BP:113:LEU:HD23	2.13	0.48
43:BV:48:MET:HE3	43:BV:51:GLN:OE1	2.13	0.48
44:BW:39:GLN:HG2	44:BW:40:ARG:N	2.28	0.48
47:BZ:6:ILE:HD11	47:BZ:47:ILE:HD11	1.96	0.48
53:CA:80:A:H3'	53:CA:81:A:C4'	2.44	0.48
53:CA:1097:C:H2'	53:CA:1098:C:C6	2.48	0.48
53:CA:1130:A:C5	53:CA:1146:A:C5	3.00	0.48
53:CA:1348:U:C2'	53:CA:1349:A:H8	2.25	0.48
3:CC:126:ARG:HE	3:CC:126:ARG:CA	2.26	0.48
54:CG:37:THR:HA	54:CG:40:SER:HB2	1.96	0.48
9:CI:119:LYS:O	9:CI:119:LYS:HG3	2.13	0.48
11:CK:126:ARG:HB2	21:CU:33:ARG:CD	2.39	0.48
15:CO:47:LYS:HD2	15:CO:47:LYS:N	2.23	0.48
22:DA:80:G:H2'	22:DA:80:G:N3	2.28	0.48
22:DA:170:U:H2'	22:DA:171:U:C6	2.49	0.48
22:DA:188:G:H2'	22:DA:189:G:H5'	1.95	0.48
22:DA:274:C:H2'	22:DA:275:C:O4'	2.14	0.48
22:DA:302:C:O2'	22:DA:303:G:O5'	2.31	0.48
22:DA:323:C:C4	22:DA:333:G:N7	2.81	0.48
22:DA:476:G:O2'	22:DA:477:A:C5'	2.61	0.48
22:DA:620:G:C8	22:DA:622:G:O6	2.65	0.48
22:DA:836:G:C6	22:DA:837:C:N3	2.81	0.48
22:DA:942:G:H2'	22:DA:943:A:H5'	1.95	0.48
22:DA:1069:A:H4'	22:DA:1070:A:O5'	2.13	0.48
22:DA:1316:U:O2'	22:DA:1317:G:H5'	2.13	0.48
22:DA:1342:A:C6	22:DA:1397:U:C5	3.02	0.48
22:DA:1388:G:O2'	22:DA:1389:G:C5'	2.62	0.48
22:DA:1439:A:N7	22:DA:1440:U:N1	2.61	0.48
22:DA:1551:A:C4	22:DA:1552:A:C8	3.02	0.48
22:DA:1965:C:H3'	22:DA:1966:A:H8	1.78	0.48
22:DA:2603:G:C6	22:DA:2604:U:C4	3.01	0.48
57:DB:15:A:H1'	57:DB:109:A:N7	2.29	0.48
25:DD:50:VAL:HG21	25:DD:82:PHE:CE2	2.49	0.48
58:DF:73:VAL:O	58:DF:73:VAL:HG12	2.13	0.48
34:DM:76:LYS:HZ1	34:DM:84:LYS:H	1.61	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DN:73:ASN:CA	35:DN:76:VAL:HG22	2.43	0.48
40:DS:49:LYS:HB3	40:DS:49:LYS:HZ3	1.79	0.48
46:DY:23:ARG:HB3	46:DY:27:ASN:OD1	2.13	0.48
51:D3:51:LYS:O	51:D3:52:GLY:C	2.56	0.48
1:AA:188:C:O2	1:AA:188:C:C2'	2.59	0.48
1:AA:283:U:C2'	1:AA:284:C:H5'	2.43	0.48
1:AA:325:A:H2'	1:AA:326:G:O4'	2.13	0.48
1:AA:1312:G:N7	19:AS:2:ARG:HA	2.29	0.48
2:AB:130:LYS:HA	2:AB:130:LYS:NZ	2.28	0.48
3:AC:110:LEU:CD2	3:AC:143:LEU:HD23	2.44	0.48
4:AD:137:SER:HB3	4:AD:138:PRO:HD2	1.96	0.48
6:AF:90:MET:HB3	6:AF:91:ARG:H	1.41	0.48
7:AG:86:VAL:HG13	7:AG:87:PRO:HD2	1.95	0.48
8:AH:7:ALA:HB2	8:AH:76:ARG:HH11	1.77	0.48
8:AH:28:SER:CB	8:AH:58:LEU:HB2	2.42	0.48
8:AH:105:THR:CG2	8:AH:120:LEU:HD13	2.34	0.48
11:AK:30:ILE:HB	11:AK:45:THR:HG22	1.95	0.48
13:AM:89:ARG:HH11	13:AM:94:LEU:CB	2.27	0.48
22:BA:528:A:C8	22:BA:528:A:C3'	2.96	0.48
22:BA:761:A:P	62:BA:3682:HOH:O	2.71	0.48
22:BA:1140:C:OP1	31:BJ:25:LEU:O	2.31	0.48
22:BA:1422:G:C4	22:BA:1423:G:C8	3.01	0.48
22:BA:1668:A:O4'	22:BA:1669:A:C2	2.66	0.48
22:BA:2109:U:N3	22:BA:2181:U:C4	2.81	0.48
22:BA:2419:U:OP2	51:B3:32:LEU:HD13	2.14	0.48
23:BB:116:G:H4'	36:BO:54:VAL:O	2.14	0.48
24:BC:140:VAL:HA	24:BC:190:THR:O	2.14	0.48
27:BF:123:GLY:HA2	27:BF:162:ASP:OD2	2.13	0.48
29:BH:32:PRO:O	29:BH:33:GLN:HB2	2.13	0.48
30:BI:16:MET:O	30:BI:19:PRO:HD3	2.12	0.48
34:BM:109:PRO:O	34:BM:110:GLU:C	2.56	0.48
39:BR:10:LYS:HD2	39:BR:10:LYS:N	2.28	0.48
42:BU:52:ASN:C	42:BU:54:PRO:CD	2.87	0.48
43:BV:42:LEU:CD1	43:BV:47:VAL:HG21	2.43	0.48
43:BV:44:HIS:CE1	43:BV:85:LYS:HB2	2.48	0.48
43:BV:66:ASP:O	43:BV:66:ASP:CG	2.55	0.48
44:BW:16:GLU:OE2	44:BW:16:GLU:HA	2.13	0.48
44:BW:40:ARG:HD3	44:BW:45:HIS:CE1	2.48	0.48
53:CA:265:G:O3'	17:CQ:67:SER:HA	2.14	0.48
53:CA:591:U:H2'	53:CA:592:G:C8	2.49	0.48
53:CA:1036:A:C2'	53:CA:1037:C:H5'	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1040:U:O2'	53:CA:1041:G:H5'	2.13	0.48
53:CA:1172:C:HO2'	53:CA:1173:U:H5'	1.77	0.48
53:CA:1271:A:H2'	53:CA:1272:G:C8	2.49	0.48
53:CA:1293:C:H2'	53:CA:1294:G:H8	1.74	0.48
53:CA:1365:G:O2'	53:CA:1366:C:H5'	2.13	0.48
4:CD:84:ASN:OD1	5:CE:101:GLY:HA3	2.12	0.48
12:CL:42:LYS:HG2	12:CL:43:LYS:HG2	1.95	0.48
56:CP:73:ALA:HA	56:CP:76:LYS:HB2	1.95	0.48
17:CQ:46:HIS:HB2	17:CQ:70:LYS:HZ2	1.77	0.48
17:CQ:52:CYS:HB2	17:CQ:53:GLY:H	1.53	0.48
18:CR:66:LEU:HD23	18:CR:66:LEU:N	2.28	0.48
19:CS:39:ILE:HG12	19:CS:68:HIS:O	2.13	0.48
22:DA:228:C:C5'	22:DA:229:C:H5	2.26	0.48
22:DA:417:C:H2'	22:DA:418:C:C6	2.48	0.48
22:DA:571:U:C5	22:DA:575:A:C6	3.01	0.48
22:DA:747:U:H3'	22:DA:748:G:C5'	2.43	0.48
22:DA:988:A:C8	47:DZ:13:ILE:HD12	2.48	0.48
22:DA:1616:A:H4'	22:DA:1617:C:OP2	2.14	0.48
22:DA:1626:A:C2'	22:DA:1627:G:OP2	2.62	0.48
22:DA:1794:A:H2'	22:DA:1795:C:H6	1.78	0.48
22:DA:2038:G:H2'	22:DA:2039:U:O4'	2.14	0.48
24:DC:71:ASP:O	24:DC:73:ILE:HG12	2.13	0.48
25:DD:108:ASP:OD1	25:DD:207:VAL:HG23	2.14	0.48
29:DH:41:LYS:HA	29:DH:44:ILE:CG1	2.43	0.48
29:DH:104:THR:O	29:DH:104:THR:HG23	2.13	0.48
32:DK:57:VAL:O	32:DK:57:VAL:HG13	2.14	0.48
33:DL:128:THR:HG22	33:DL:130:GLY:H	1.78	0.48
36:DO:62:LEU:HD11	36:DO:65:THR:HG23	1.96	0.48
38:DQ:96:ASP:C	38:DQ:98:ALA:H	2.21	0.48
44:DW:70:VAL:HG22	44:DW:70:VAL:O	2.14	0.48
50:D2:24:THR:O	50:D2:24:THR:HG23	2.14	0.48
1:AA:27:G:C5	1:AA:557:G:C2	3.02	0.48
1:AA:57:G:H2'	1:AA:58:C:O4'	2.14	0.48
1:AA:428:G:C4'	1:AA:429:U:OP1	2.55	0.48
1:AA:649:A:H2'	1:AA:650:G:O4'	2.13	0.48
1:AA:1031:C:O2'	1:AA:1032:G:H5"	2.13	0.48
2:AB:207:ARG:O	2:AB:211:LEU:HB2	2.13	0.48
3:AC:122:GLN:HB3	3:AC:127:VAL:HG22	1.96	0.48
6:AF:49:TYR:HB2	18:AR:73:HIS:CD2	2.49	0.48
7:AG:61:PHE:HE1	7:AG:65:LEU:HD22	1.76	0.48
10:AJ:52:LEU:HB2	14:AN:80:ARG:HD2	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:85:VAL:HG11	11:AK:92:ARG:HG3	1.96	0.48
11:AK:110:THR:HG22	21:AU:4:LYS:CB	2.43	0.48
14:AN:63:CYS:SG	14:AN:66:THR:OG1	2.72	0.48
22:BA:186:G:O2'	22:BA:187:G:H5'	2.14	0.48
22:BA:443:A:H2	22:BA:1245:G:N3	2.12	0.48
22:BA:1057:A:N3	22:BA:1082:U:C2	2.82	0.48
22:BA:1664:A:H1'	22:BA:2726:A:N1	2.29	0.48
22:BA:1954:G:N3	22:BA:2551:C:H5"	2.28	0.48
22:BA:2051:A:H8	22:BA:2051:A:OP2	1.96	0.48
22:BA:2699:C:H2'	22:BA:2700:A:O4'	2.13	0.48
25:BD:70:LYS:O	25:BD:71:ALA:CB	2.61	0.48
25:BD:89:GLU:HG3	25:BD:94:GLN:OE1	2.13	0.48
28:BG:153:PRO:HA	28:BG:159:LYS:O	2.14	0.48
29:BH:100:ALA:O	29:BH:101:ASP:C	2.56	0.48
29:BH:147:VAL:CG1	29:BH:149:GLU:HG3	2.44	0.48
30:BI:19:PRO:HG2	30:BI:23:VAL:HG22	1.95	0.48
32:BK:51:LYS:O	32:BK:51:LYS:HD2	2.13	0.48
37:BP:13:LYS:HE3	37:BP:76:HIS:C	2.38	0.48
41:BT:37:ASP:C	41:BT:38:ALA:O	2.55	0.48
41:BT:69:ARG:CZ	41:BT:70:HIS:HA	2.44	0.48
44:BW:23:LYS:HE3	44:BW:24:ARG:O	2.14	0.48
46:BY:18:LEU:HD22	46:BY:18:LEU:HA	1.60	0.48
46:BY:47:ARG:HG3	46:BY:47:ARG:NH2	2.26	0.48
49:B1:29:LYS:HD2	49:B1:31:GLU:OE1	2.14	0.48
53:CA:64:G:C8	53:CA:99:C:N4	2.82	0.48
53:CA:312:C:H2'	53:CA:313:A:C8	2.49	0.48
53:CA:802:A:C2'	53:CA:803:G:O5'	2.62	0.48
53:CA:933:G:OP1	54:CG:3:ARG:HD3	2.14	0.48
53:CA:1004:A:N3	53:CA:1026:G:C5	2.81	0.48
53:CA:1215:G:O2'	53:CA:1216:A:H5'	2.13	0.48
53:CA:1285:A:H4'	53:CA:1286:U:OP1	2.14	0.48
53:CA:1499:A:H1'	53:CA:1520:C:H5'	1.96	0.48
2:CB:59:ILE:HD12	2:CB:59:ILE:C	2.38	0.48
3:CC:12:GLY:O	3:CC:13:ILE:HD13	2.14	0.48
5:CE:82:HIS:HB2	5:CE:83:PRO:HD2	1.94	0.48
12:CL:83:GLY:HA2	12:CL:94:TYR:HD1	1.79	0.48
55:CM:11:HIS:CE1	55:CM:43:LYS:HD2	2.48	0.48
55:CM:11:HIS:N	55:CM:44:ILE:HD12	2.28	0.48
56:CP:44:SER:HB2	56:CP:46:LYS:HG3	1.96	0.48
22:DA:142:A:C2'	22:DA:143:C:C6	2.97	0.48
22:DA:405:U:H3'	22:DA:406:G:H5'	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:468:G:H5'	22:DA:797:G:OP1	2.13	0.48
22:DA:538:A:N6	22:DA:555:G:O2'	2.43	0.48
22:DA:571:U:C6	22:DA:575:A:N6	2.82	0.48
22:DA:942:G:C2'	22:DA:943:A:H5'	2.44	0.48
22:DA:976:G:C4	22:DA:977:G:C8	3.01	0.48
22:DA:1056:G:H1'	22:DA:1103:A:C6	2.48	0.48
22:DA:1171:G:C4	22:DA:1179:G:N2	2.82	0.48
22:DA:1239:G:C5	22:DA:1240:U:C6	3.02	0.48
22:DA:1278:C:O2'	22:DA:1279:G:H5'	2.12	0.48
22:DA:1317:G:H2'	22:DA:1318:U:O4'	2.14	0.48
22:DA:1359:A:N1	22:DA:1360:G:H1'	2.27	0.48
22:DA:1421:G:H8	22:DA:1421:G:OP2	1.95	0.48
22:DA:1506:U:H2'	22:DA:1507:C:O4'	2.13	0.48
22:DA:1537:G:H3'	22:DA:1537:G:OP2	2.12	0.48
22:DA:1635:A:H2'	22:DA:1636:U:H6	1.78	0.48
22:DA:1721:G:H1'	22:DA:1739:A:H61	1.79	0.48
22:DA:1843:C:O2'	24:DC:253:GLY:HA3	2.13	0.48
22:DA:2100:G:N2	22:DA:2190:G:H1'	2.29	0.48
22:DA:2106:U:C4	22:DA:2107:G:N7	2.82	0.48
22:DA:2145:C:H2'	22:DA:2146:C:H3'	1.96	0.48
57:DB:42:C:C5	58:DF:65:LEU:HD13	2.48	0.48
24:DC:57:HIS:O	24:DC:59:GLN:HG3	2.14	0.48
24:DC:181:ARG:HG3	24:DC:265:PHE:O	2.13	0.48
26:DE:58:LYS:HD3	26:DE:58:LYS:N	2.28	0.48
28:DG:90:GLY:HA2	28:DG:159:LYS:HE3	1.96	0.48
35:DN:16:HIS:CE1	35:DN:20:MET:HE2	2.49	0.48
40:DS:31:GLN:O	40:DS:35:ILE:HG12	2.14	0.48
40:DS:69:LEU:HG	40:DS:108:SER:O	2.13	0.48
41:DT:13:ALA:HB1	41:DT:14:PRO:HD2	1.96	0.48
43:DV:40:ILE:N	43:DV:40:ILE:HD13	2.29	0.48
44:DW:77:LYS:N	44:DW:77:LYS:HZ2	2.10	0.48
1:AA:21:G:N2	1:AA:22:G:C6	2.81	0.48
1:AA:22:G:H2'	1:AA:23:C:H6	1.78	0.48
1:AA:80:A:C2	1:AA:90:C:N3	2.81	0.48
1:AA:372:C:H4'	1:AA:373:A:OP1	2.14	0.48
1:AA:695:A:C6	1:AA:696:A:C6	3.01	0.48
1:AA:1057:G:H4'	3:AC:196:GLY:H	1.77	0.48
1:AA:1299:A:O2'	1:AA:1300:G:H4'	2.14	0.48
1:AA:1410:A:C2'	1:AA:1411:C:O5'	2.61	0.48
2:AB:162:VAL:HG22	2:AB:184:ALA:HB2	1.94	0.48
3:AC:125:ARG:O	3:AC:126:ARG:HB3	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:59:ILE:O	5:AE:62:ALA:HB3	2.14	0.48
11:AK:125:LYS:O	11:AK:126:ARG:HB2	2.13	0.48
13:AM:28:ARG:NH2	13:AM:62:PHE:HB2	2.29	0.48
14:AN:3:GLN:O	14:AN:6:LYS:HB3	2.14	0.48
17:AQ:12:VAL:HG13	17:AQ:13:SER:H	1.77	0.48
17:AQ:80:LYS:HB2	17:AQ:80:LYS:NZ	2.19	0.48
21:AU:4:LYS:HD2	21:AU:4:LYS:C	2.39	0.48
22:BA:80:G:C2'	22:BA:81:G:H5'	2.44	0.48
22:BA:323:C:N4	22:BA:333:G:N7	2.62	0.48
22:BA:494:G:N2	40:BS:57:ASN:HD21	2.11	0.48
22:BA:1054:A:C6	22:BA:1106:G:O6	2.67	0.48
22:BA:1496:A:H2'	22:BA:1498:C:C4	2.48	0.48
22:BA:2260:C:H2'	22:BA:2261:C:H6	1.78	0.48
22:BA:2544:G:C2'	22:BA:2545:G:H5'	2.44	0.48
24:BC:236:GLY:O	24:BC:237:ARG:HB2	2.14	0.48
27:BF:120:SER:HB2	27:BF:127:TYR:HE1	1.74	0.48
30:BI:85:ILE:HD13	30:BI:88:GLY:HA2	1.96	0.48
41:BT:63:VAL:HG21	41:BT:80:TRP:CZ2	2.49	0.48
45:BX:33:HIS:O	45:BX:34:SER:O	2.30	0.48
53:CA:154:U:C2'	53:CA:155:A:H5'	2.41	0.48
53:CA:254:G:OP1	17:CQ:68:LYS:O	2.31	0.48
53:CA:557:G:C6	53:CA:558:G:N1	2.82	0.48
53:CA:979:C:OP1	53:CA:1222:G:N7	2.47	0.48
53:CA:1094:G:C2'	53:CA:1095:U:OP2	2.61	0.48
53:CA:1140:C:O2'	53:CA:1141:C:C6	2.62	0.48
53:CA:1158:C:O2	53:CA:1158:C:H5"	2.13	0.48
2:CB:156:LEU:HD23	2:CB:156:LEU:H	1.78	0.48
3:CC:126:ARG:HA	3:CC:126:ARG:NE	2.28	0.48
3:CC:179:ALA:HB1	3:CC:202:PHE:CD1	2.48	0.48
12:CL:41:PRO:HG2	12:CL:45:ASN:O	2.13	0.48
55:CM:85:TYR:HE2	55:CM:96:VAL:HG13	1.79	0.48
15:CO:62:ARG:NH2	15:CO:88:ARG:HH21	2.12	0.48
22:DA:17:G:C6	22:DA:524:G:C6	3.02	0.48
22:DA:140:C:O2'	22:DA:141:G:OP2	2.27	0.48
22:DA:196:A:H61	22:DA:831:G:N2	2.06	0.48
22:DA:480:A:H3'	22:DA:481:G:H5"	1.96	0.48
22:DA:736:C:C4	22:DA:737:C:C5	3.02	0.48
22:DA:802:A:C5	22:DA:803:U:C4	3.02	0.48
22:DA:1091:G:C2	22:DA:1101:U:N3	2.82	0.48
22:DA:1355:G:C6	22:DA:1377:G:N2	2.81	0.48
22:DA:1551:A:C6	22:DA:1552:A:N7	2.82	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1611:C:O2'	22:DA:1612:C:O5'	2.30	0.48
22:DA:1760:C:H2'	22:DA:1761:C:O4'	2.14	0.48
22:DA:1799:G:C5	24:DC:175:LEU:HD13	2.49	0.48
22:DA:2214:C:H2'	22:DA:2215:C:C6	2.48	0.48
22:DA:2443:C:H2'	22:DA:2444:G:H8	1.78	0.48
22:DA:2461:A:N1	22:DA:2490:G:N2	2.61	0.48
22:DA:2544:G:H2'	22:DA:2545:G:O4'	2.14	0.48
22:DA:2675:A:C2	22:DA:2676:C:C2	3.02	0.48
22:DA:2889:C:N4	22:DA:2890:G:C6	2.81	0.48
57:DB:100:G:H2'	57:DB:101:A:O4'	2.14	0.48
24:DC:83:ASP:CB	24:DC:90:ILE:HD12	2.44	0.48
24:DC:93:VAL:HG12	24:DC:101:ARG:H	1.78	0.48
25:DD:141:ARG:HB3	25:DD:141:ARG:NH1	2.29	0.48
58:DF:37:MET:N	58:DF:151:LEU:HB3	2.28	0.48
28:DG:78:VAL:HG23	28:DG:79:THR:HG23	1.96	0.48
31:DJ:51:GLY:C	31:DJ:121:LYS:HE3	2.39	0.48
32:DK:28:SER:O	32:DK:29:HIS:CB	2.60	0.48
37:DP:24:THR:HA	37:DP:44:GLY:O	2.13	0.48
37:DP:29:VAL:HG11	37:DP:73:PHE:HE1	1.78	0.48
37:DP:103:THR:O	37:DP:106:ALA:HB3	2.13	0.48
38:DQ:64:ILE:HD12	38:DQ:95:ALA:HB1	1.95	0.48
1:AA:901:A:N7	1:AA:902:G:H1'	2.28	0.48
1:AA:988:G:O6	1:AA:989:U:C4	2.67	0.48
1:AA:1282:C:H2'	1:AA:1283:U:H6	1.77	0.48
1:AA:1425:U:O2'	1:AA:1426:G:H5'	2.14	0.48
3:AC:21:TRP:CB	3:AC:58:ARG:HG2	2.44	0.48
4:AD:2:ARG:HB2	4:AD:4:LEU:CD1	2.44	0.48
4:AD:50:TYR:CD2	4:AD:50:TYR:C	2.92	0.48
5:AE:23:THR:HA	5:AE:28:ARG:HA	1.94	0.48
5:AE:81:GLN:NE2	5:AE:81:GLN:N	2.60	0.48
7:AG:105:GLU:HG2	7:AG:105:GLU:O	2.13	0.48
8:AH:1:SER:C	8:AH:3:GLN:N	2.71	0.48
8:AH:63:LYS:C	8:AH:70:VAL:HG23	2.38	0.48
8:AH:77:VAL:HG23	8:AH:126:CYS:HA	1.96	0.48
22:BA:285:G:C5	22:BA:356:G:C2	3.02	0.48
22:BA:745:G:H2'	22:BA:746:U:H5'	1.96	0.48
22:BA:1115:G:O2'	22:BA:1116:G:O5'	2.28	0.48
22:BA:1507:C:C2	22:BA:1508:A:C2	3.01	0.48
22:BA:1559:U:H4'	22:BA:1560:G:OP2	2.14	0.48
22:BA:1779:U:H2'	62:BA:3680:HOH:O	2.12	0.48
22:BA:1820:U:OP1	24:BC:176:ARG:HG2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2037:A:H2'	22:BA:2038:G:C8	2.48	0.48
22:BA:2315:G:H2'	22:BA:2316:G:H8	1.78	0.48
22:BA:2403:C:H2'	22:BA:2404:U:H6	1.79	0.48
22:BA:2425:A:C5'	22:BA:2427:C:O4'	2.61	0.48
24:BC:170:TYR:HD2	24:BC:183:VAL:C	2.21	0.48
25:BD:186:LEU:HD11	37:BP:3:ILE:HD12	1.94	0.48
27:BF:173:ASP:O	27:BF:174:PHE:C	2.57	0.48
29:BH:67:ALA:C	29:BH:69:ALA:N	2.71	0.48
31:BJ:20:ALA:O	31:BJ:21:THR:O	2.32	0.48
33:BL:125:LEU:HD23	33:BL:125:LEU:N	2.29	0.48
34:BM:36:VAL:HG22	43:BV:82:TYR:CD1	2.49	0.48
39:BR:63:VAL:C	39:BR:64:VAL:HG23	2.39	0.48
53:CA:247:G:C6	53:CA:278:G:C6	3.00	0.48
53:CA:328:C:C2'	53:CA:329:A:OP2	2.61	0.48
53:CA:505:G:H2'	53:CA:506:G:C8	2.48	0.48
53:CA:936:C:H1'	53:CA:1382:C:H42	1.78	0.48
53:CA:994:A:C6	53:CA:1216:A:H5"	2.49	0.48
53:CA:1068:G:H2'	53:CA:1069:C:H5'	1.95	0.48
53:CA:1359:C:H5"	62:CA:1776:HOH:O	2.13	0.48
2:CB:99:MET:O	2:CB:103:TRP:HB3	2.14	0.48
4:CD:80:ARG:HB2	4:CD:81:LEU:H	1.51	0.48
5:CE:37:VAL:HG12	5:CE:38:VAL:H	1.78	0.48
9:CI:63:TYR:C	9:CI:64:ILE:HD12	2.39	0.48
55:CM:82:LEU:HB2	19:CS:73:PHE:CE2	2.49	0.48
15:CO:2:LEU:HD13	15:CO:34:GLN:HG2	1.96	0.48
19:CS:38:THR:HA	19:CS:69:LYS:HA	1.95	0.48
22:DA:277:G:O2'	22:DA:278:A:C5	2.64	0.48
22:DA:284:U:H2'	22:DA:285:G:C8	2.45	0.48
22:DA:303:G:C2	22:DA:304:U:C2	3.01	0.48
22:DA:464:U:C6	22:DA:788:A:C2	3.02	0.48
22:DA:1059:G:H1	22:DA:1088:A:H2	1.62	0.48
22:DA:1093:G:H5"	28:DG:171:LYS:NZ	2.29	0.48
22:DA:1287:A:N6	22:DA:1649:G:H1'	2.28	0.48
22:DA:1623:G:C2	22:DA:1624:U:C6	3.02	0.48
22:DA:1730:C:O2'	22:DA:1731:G:H5'	2.13	0.48
22:DA:1800:C:C5'	24:DC:145:MET:HE1	2.43	0.48
22:DA:2230:G:C1'	45:DX:31:ASN:HB3	2.43	0.48
22:DA:2285:C:H1'	22:DA:2288:A:O2'	2.14	0.48
22:DA:2564:A:OP1	22:DA:2648:G:H4'	2.14	0.48
22:DA:2637:U:H5'	25:DD:45:TYR:CE1	2.49	0.48
57:DB:19:C:H2'	57:DB:20:G:C8	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:30:ALA:C	24:DC:32:LEU:H	2.22	0.48
24:DC:75:ALA:HB1	24:DC:93:VAL:HG22	1.96	0.48
25:DD:148:GLN:HG2	25:DD:152:PRO:HG2	1.96	0.48
25:DD:185:ASN:O	25:DD:186:LEU:HD12	2.13	0.48
58:DF:101:ARG:HH11	58:DF:138:PRO:HB3	1.79	0.48
29:DH:54:LEU:HA	29:DH:57:LYS:CG	2.44	0.48
31:DJ:25:LEU:C	31:DJ:27:ARG:N	2.72	0.48
33:DL:62:PRO:HG2	51:D3:24:LYS:HB3	1.94	0.48
35:DN:62:ASN:OD1	35:DN:62:ASN:N	2.47	0.48
37:DP:31:VAL:CG1	37:DP:38:ARG:HG2	2.44	0.48
39:DR:62:GLU:CD	39:DR:97:LYS:HD2	2.38	0.48
41:DT:74:ILE:HG13	41:DT:75:GLY:H	1.77	0.48
45:DX:70:LEU:O	45:DX:74:GLY:N	2.47	0.48
1:AA:903:G:H2'	1:AA:904:U:C6	2.49	0.48
1:AA:903:G:H2'	1:AA:904:U:H6	1.78	0.48
1:AA:971:G:H1'	1:AA:1365:G:O2'	2.14	0.48
8:AH:5:PRO:HB2	8:AH:32:LYS:HZ2	1.79	0.48
9:AI:39:GLY:O	9:AI:40:ARG:HB2	2.13	0.48
11:AK:13:LYS:O	11:AK:14:GLN:CB	2.62	0.48
13:AM:55:LEU:O	13:AM:59:VAL:HG12	2.13	0.48
16:AP:20:VAL:CG2	16:AP:32:PHE:HB2	2.43	0.48
17:AQ:28:VAL:HG23	17:AQ:29:LYS:N	2.29	0.48
18:AR:21:ASP:OD2	18:AR:23:LYS:HD2	2.14	0.48
22:BA:322:A:H5'	22:BA:340:A:H1'	1.96	0.48
22:BA:593:U:H2'	22:BA:594:U:C6	2.49	0.48
22:BA:603:A:C8	22:BA:655:A:C6	3.02	0.48
22:BA:671:C:O2'	22:BA:672:C:H5'	2.14	0.48
22:BA:1011:G:C4'	22:BA:1012:U:OP1	2.62	0.48
22:BA:1266:G:OP1	48:B0:15:ARG:NE	2.39	0.48
22:BA:1501:G:C2'	22:BA:1502:A:H5'	2.43	0.48
22:BA:1654:A:H4'	25:BD:118:PHE:CE1	2.49	0.48
22:BA:1746:A:C2	22:BA:1747:U:C2	3.01	0.48
22:BA:2198:A:H4'	22:BA:2199:A:OP1	2.13	0.48
22:BA:2820:A:C2'	22:BA:2821:A:OP1	2.62	0.48
24:BC:257:ARG:NE	24:BC:269:ARG:HH22	2.12	0.48
26:BE:153:LEU:C	26:BE:153:LEU:HD12	2.39	0.48
27:BF:3:LEU:HD13	27:BF:3:LEU:HA	1.60	0.48
27:BF:38:GLY:HA2	27:BF:85:GLY:HA3	1.96	0.48
29:BH:137:GLU:HG3	29:BH:138:VAL:N	2.28	0.48
30:BI:12:VAL:HG23	30:BI:13:ALA:H	1.78	0.48
34:BM:40:ARG:HB2	34:BM:93:VAL:HG21	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BN:1:MET:O	35:BN:2:ARG:CB	2.61	0.48
37:BP:113:LEU:O	37:BP:113:LEU:HG	2.13	0.48
38:BQ:27:ARG:HG3	38:BQ:27:ARG:HH11	1.77	0.48
41:BT:27:SER:O	41:BT:28:ASN:CG	2.57	0.48
43:BV:5:ASN:N	43:BV:5:ASN:HD22	2.12	0.48
44:BW:28:GLU:CG	44:BW:29:SER:N	2.77	0.48
44:BW:72:GLY:N	44:BW:73:PRO:CD	2.76	0.48
51:B3:26:ALA:O	51:B3:27:ASN:CB	2.61	0.48
53:CA:198:G:O6	53:CA:220:G:C5	2.66	0.48
53:CA:765:G:C6	53:CA:812:G:C5	3.02	0.48
53:CA:908:A:H2'	53:CA:909:A:C8	2.49	0.48
53:CA:935:A:H61	54:CG:2:ARG:CZ	2.27	0.48
53:CA:1007:U:O2	53:CA:1007:U:H2'	2.13	0.48
53:CA:1047:G:C2	53:CA:1213:A:H2	2.32	0.48
53:CA:1062:U:H2'	53:CA:1063:C:C6	2.49	0.48
53:CA:1102:A:H2'	53:CA:1103:C:H6	1.79	0.48
53:CA:1133:G:C6	53:CA:1134:G:N7	2.82	0.48
53:CA:1137:C:O2'	53:CA:1138:G:N2	2.47	0.48
53:CA:1148:U:H2'	53:CA:1149:C:O4'	2.14	0.48
53:CA:1346:A:C4	53:CA:1348:U:C4	3.02	0.48
3:CC:42:LEU:HD12	3:CC:46:LEU:HD12	1.95	0.48
4:CD:2:ARG:NH2	4:CD:114:ARG:CD	2.68	0.48
9:CI:47:VAL:C	9:CI:50:PRO:HD2	2.39	0.48
22:DA:2:G:C5	22:DA:3:U:C4	3.01	0.48
22:DA:327:G:H2'	22:DA:328:U:O4'	2.13	0.48
22:DA:659:G:H4'	26:DE:95:LYS:HD3	1.95	0.48
22:DA:669:G:C2	22:DA:801:G:C6	3.02	0.48
22:DA:684:G:OP1	50:D2:16:HIS:CD2	2.67	0.48
22:DA:748:G:H2'	22:DA:750:A:OP2	2.14	0.48
22:DA:749:A:C5	22:DA:750:A:C8	3.02	0.48
22:DA:1014:A:O2'	22:DA:1015:U:H5'	2.14	0.48
22:DA:1087:G:N2	22:DA:1103:A:H1'	2.28	0.48
22:DA:1112:G:H2'	22:DA:1113:U:C6	2.48	0.48
22:DA:2093:G:C6	22:DA:2197:U:O2	2.66	0.48
22:DA:2262:U:H5"	44:DW:38:ARG:NH2	2.28	0.48
22:DA:2392:A:C2	33:DL:55:MET:SD	3.07	0.48
22:DA:2429:G:OP2	22:DA:2430:A:OP2	2.32	0.48
31:DJ:30:THR:CG2	31:DJ:31:GLU:N	2.77	0.48
31:DJ:110:PRO:O	31:DJ:115:GLY:HA3	2.14	0.48
31:DJ:127:GLY:O	31:DJ:129:GLU:HG3	2.14	0.48
34:DM:35:ALA:O	34:DM:128:THR:HA	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DN:45:ARG:HG2	35:DN:95:THR:HG21	1.96	0.48
37:DP:1:SER:HB3	37:DP:4:ILE:HB	1.94	0.48
37:DP:92:ARG:HG2	37:DP:92:ARG:O	2.14	0.48
42:DU:94:PHE:O	42:DU:94:PHE:HD2	1.95	0.48
45:DX:58:ILE:HA	45:DX:66:VAL:HG21	1.96	0.48
1:AA:120:A:C5	1:AA:122:G:C6	3.02	0.47
1:AA:198:G:C6	1:AA:220:G:C4	3.02	0.47
1:AA:466:A:HO2'	1:AA:467:U:H6	1.58	0.47
1:AA:1279:G:N3	1:AA:1279:G:C2'	2.70	0.47
1:AA:1338:G:C6	1:AA:1339:A:C6	3.02	0.47
4:AD:157:ALA:O	4:AD:160:LEU:HD22	2.14	0.47
8:AH:74:ILE:HD12	8:AH:128:VAL:HG22	1.96	0.47
12:AL:111:GLN:O	12:AL:112:ALA:HB3	2.14	0.47
13:AM:7:ASN:HD22	13:AM:8:ILE:H	1.62	0.47
18:AR:19:GLU:HG3	18:AR:54:LEU:HD22	1.95	0.47
19:AS:19:GLU:HA	19:AS:19:GLU:OE2	2.12	0.47
20:AT:23:ARG:O	20:AT:27:MET:HB3	2.14	0.47
22:BA:60:G:H1'	22:BA:61:C:OP1	2.14	0.47
22:BA:141:G:H3'	22:BA:142:A:O4'	2.14	0.47
22:BA:142:A:O2'	22:BA:143:C:O5'	2.31	0.47
22:BA:944:C:H2'	62:BA:3348:HOH:O	2.13	0.47
22:BA:2016:U:H2'	22:BA:2017:U:C6	2.49	0.47
22:BA:2196:C:O2'	22:BA:2197:U:H5'	2.14	0.47
22:BA:2273:A:H2'	22:BA:2274:A:C8	2.49	0.47
24:BC:39:SER:C	24:BC:41:GLY:H	2.22	0.47
25:BD:12:THR:HG22	25:BD:13:ARG:H	1.75	0.47
25:BD:120:GLY:HA2	25:BD:162:ALA:CB	2.44	0.47
26:BE:150:THR:HA	26:BE:189:THR:CG2	2.44	0.47
27:BF:147:ARG:HG3	27:BF:148:VAL:N	2.27	0.47
30:BI:123:ALA:C	30:BI:125:THR:N	2.72	0.47
34:BM:68:PHE:C	34:BM:68:PHE:CD2	2.92	0.47
36:BO:34:HIS:HD2	36:BO:53:THR:OG1	1.97	0.47
43:BV:10:LYS:HD3	43:BV:10:LYS:N	2.19	0.47
51:B3:31:ILE:C	51:B3:31:ILE:HD12	2.39	0.47
53:CA:5:U:H4'	53:CA:6:G:H5"	1.96	0.47
53:CA:51:A:H4'	53:CA:52:C:H5'	1.95	0.47
53:CA:86:G:C2	53:CA:87:C:C5	3.02	0.47
53:CA:672:U:H2'	53:CA:673:A:C8	2.48	0.47
53:CA:882:C:H41	12:CL:5:GLN:HE21	1.62	0.47
53:CA:1012:A:C5	53:CA:1013:G:N7	2.82	0.47
53:CA:1029:U:H4'	53:CA:1032:G:H1	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:142:ARG:HG2	3:CC:143:LEU:HD12	1.96	0.47
4:CD:29:THR:C	4:CD:30:LYS:HZ2	2.20	0.47
11:CK:70:ALA:HB1	11:CK:104:PHE:HZ	1.79	0.47
11:CK:121:ARG:NH2	21:CU:35:GLU:HG2	2.29	0.47
22:DA:174:U:H2'	22:DA:174:U:O2	2.13	0.47
22:DA:345:A:O2'	22:DA:346:A:C2	2.65	0.47
22:DA:804:A:H5"	22:DA:805:G:OP1	2.14	0.47
22:DA:1328:A:H2'	22:DA:1330:C:C4	2.49	0.47
22:DA:1345:C:H5'	22:DA:1396:U:O4	2.14	0.47
22:DA:1361:G:C5	22:DA:1362:C:C5	3.02	0.47
22:DA:1385:A:C4'	22:DA:1386:C:OP1	2.30	0.47
22:DA:1612:C:O2'	22:DA:1613:G:O4'	2.28	0.47
22:DA:1936:A:H2	22:DA:1943:U:C4	2.32	0.47
22:DA:2097:A:H2'	22:DA:2098:U:C6	2.49	0.47
22:DA:2314:A:C2	22:DA:2315:G:C5	3.02	0.47
22:DA:2655:G:H1'	22:DA:2656:U:H5	1.79	0.47
26:DE:119:ILE:HD13	26:DE:143:LEU:HD21	1.96	0.47
29:DH:37:VAL:HG23	29:DH:38:PRO:HD2	1.94	0.47
29:DH:83:LYS:HZ2	29:DH:90:LEU:HD23	1.79	0.47
32:DK:7:MET:HE1	32:DK:20:MET:CB	2.35	0.47
34:DM:41:LEU:HD13	34:DM:96:ILE:HG12	1.96	0.47
41:DT:67:VAL:O	41:DT:68:LYS:HG3	2.13	0.47
44:DW:14:ASP:C	44:DW:16:GLU:H	2.21	0.47
47:DZ:4:ILE:CD1	47:DZ:58:GLU:HA	2.40	0.47
47:DZ:10:ARG:HD2	47:DZ:52:PHE:O	2.13	0.47
48:D0:27:LEU:CD1	48:D0:38:LEU:HD23	2.44	0.47
1:AA:886:G:H2'	1:AA:887:G:O4'	2.14	0.47
1:AA:1514:G:O2'	1:AA:1515:G:H5'	2.14	0.47
4:AD:98:ASP:HB3	4:AD:114:ARG:HG2	1.96	0.47
9:AI:49:GLN:N	9:AI:50:PRO:HD2	2.28	0.47
13:AM:3:ILE:O	13:AM:5:GLY:N	2.47	0.47
13:AM:84:CYS:HB3	19:AS:73:PHE:CE2	2.49	0.47
22:BA:119:A:C4'	22:BA:120:U:O5'	2.52	0.47
22:BA:155:A:H2'	22:BA:156:A:H8	1.77	0.47
22:BA:441:U:H2'	22:BA:442:G:C8	2.50	0.47
22:BA:528:A:H3'	22:BA:528:A:H8	1.78	0.47
22:BA:1585:C:O5'	22:BA:1585:C:H6	1.97	0.47
22:BA:1866:A:C2	22:BA:1876:A:C4	3.02	0.47
22:BA:2262:U:H4'	22:BA:2328:A:C2	2.49	0.47
22:BA:2514:U:H2'	22:BA:2515:C:C6	2.50	0.47
25:BD:85:ALA:O	25:BD:86:GLU:HB2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BD:139:SER:HA	25:BD:142:VAL:HG13	1.96	0.47
27:BF:135:ILE:C	27:BF:137:PHE:N	2.68	0.47
29:BH:40:THR:O	29:BH:42:LYS:N	2.44	0.47
37:BP:25:VAL:HA	37:BP:84:SER:O	2.13	0.47
40:BS:73:LYS:HE3	40:BS:73:LYS:CA	2.44	0.47
42:BU:41:VAL:O	42:BU:59:GLU:HA	2.14	0.47
44:BW:22:VAL:HG13	44:BW:25:PHE:CD2	2.49	0.47
53:CA:182:A:O2'	53:CA:183:C:H2'	2.14	0.47
53:CA:358:U:H2'	53:CA:359:G:H8	1.79	0.47
53:CA:389:A:N3	53:CA:389:A:H2'	2.29	0.47
53:CA:802:A:H2'	53:CA:803:G:C5'	2.44	0.47
53:CA:978:A:C6	53:CA:1319:A:C5	3.02	0.47
53:CA:1050:G:O2'	53:CA:1051:C:H6	1.95	0.47
53:CA:1213:A:C4	53:CA:1215:G:C8	3.02	0.47
53:CA:1221:G:C2	53:CA:1222:G:H1'	2.48	0.47
53:CA:1496:C:H2'	53:CA:1497:G:O4'	2.13	0.47
53:CA:1502:A:H5'	53:CA:1504:G:N7	2.29	0.47
2:CB:91:VAL:HG11	2:CB:95:TRP:CD1	2.49	0.47
4:CD:71:PHE:O	4:CD:74:TYR:HB2	2.13	0.47
4:CD:115:GLN:NE2	4:CD:153:ARG:NH2	2.62	0.47
54:CG:37:THR:HA	54:CG:40:SER:OG	2.14	0.47
9:CI:87:MET:SD	9:CI:87:MET:N	2.87	0.47
55:CM:106:ARG:CZ	55:CM:112:ARG:HB3	2.44	0.47
14:CN:55:SER:HB3	14:CN:58:ARG:HG2	1.97	0.47
19:CS:20:LYS:C	19:CS:20:LYS:HD3	2.39	0.47
22:DA:16:C:H2'	22:DA:17:G:H8	1.79	0.47
22:DA:95:A:HO2'	46:DY:39:GLN:HA	1.79	0.47
22:DA:270:A:H2'	22:DA:271:G:OP1	2.14	0.47
22:DA:277:G:O2'	22:DA:278:A:C4	2.67	0.47
22:DA:311:A:O2'	22:DA:312:G:P	2.72	0.47
22:DA:632:A:H5"	33:DL:68:SER:OG	2.14	0.47
22:DA:748:G:O5'	40:DS:89:ALA:HB2	2.14	0.47
22:DA:834:G:H2'	22:DA:835:C:O4'	2.14	0.47
22:DA:1512:C:C4	22:DA:1513:U:C4	3.02	0.47
22:DA:1653:G:O6	35:DN:10:LEU:O	2.32	0.47
22:DA:1667:G:O2'	22:DA:1991:U:O4	2.20	0.47
22:DA:1969:A:H2'	22:DA:1972:G:H21	1.78	0.47
22:DA:2386:A:H2	44:DW:38:ARG:HG2	1.79	0.47
22:DA:2556:C:H2'	22:DA:2557:G:O4'	2.14	0.47
22:DA:2741:A:H2'	22:DA:2742:G:O4'	2.14	0.47
22:DA:2746:U:H5"	28:DG:137:LYS:HG2	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2847:U:H3'	37:DP:94:ALA:HB2	1.97	0.47
25:DD:121:THR:CG2	25:DD:127:PHE:CD1	2.97	0.47
58:DF:3:LEU:HG	58:DF:100:GLU:CD	2.39	0.47
58:DF:11:VAL:O	58:DF:12:VAL:HB	2.14	0.47
30:DI:109:ALA:HB1	30:DI:125:THR:HG22	1.94	0.47
32:DK:69:VAL:HG11	32:DK:106:GLU:CG	2.34	0.47
35:DN:35:LYS:HD3	35:DN:112:TYR:OH	2.14	0.47
37:DP:50:ARG:CB	37:DP:56:SER:HB3	2.44	0.47
37:DP:51:ASN:H	37:DP:56:SER:HB3	1.78	0.47
42:DU:86:PHE:CG	42:DU:87:GLU:N	2.82	0.47
1:AA:212:G:H2'	1:AA:213:G:C8	2.46	0.47
1:AA:807:A:C8	1:AA:808:C:C5	3.02	0.47
2:AB:22:TRP:HA	2:AB:189:ASN:HA	1.96	0.47
3:AC:59:PRO:O	3:AC:60:ALA:O	2.32	0.47
8:AH:79:ARG:HB2	8:AH:80:PRO:HD2	1.96	0.47
9:AI:129:ARG:NH1	9:AI:129:ARG:HA	2.30	0.47
16:AP:10:GLY:HA3	16:AP:15:PRO:HA	1.95	0.47
20:AT:25:SER:O	20:AT:29:THR:HG23	2.15	0.47
20:AT:79:THR:O	20:AT:80:ALA:C	2.56	0.47
22:BA:250:G:C6	22:BA:251:A:C6	3.03	0.47
22:BA:1150:C:H2'	22:BA:1151:A:O5'	2.12	0.47
22:BA:1181:U:H2'	22:BA:1182:G:C8	2.49	0.47
22:BA:1315:C:O2'	22:BA:1316:U:H5'	2.14	0.47
22:BA:1820:U:O2	24:BC:200:MET:HB2	2.15	0.47
22:BA:2518:A:N3	22:BA:2518:A:H2'	2.29	0.47
22:BA:2562:U:H2'	22:BA:2562:U:O2	2.14	0.47
22:BA:2820:A:O2'	22:BA:2821:A:P	2.72	0.47
24:BC:196:ASN:OD1	24:BC:197:ALA:N	2.47	0.47
24:BC:199:HIS:C	24:BC:201:LEU:H	2.21	0.47
25:BD:67:HIS:O	25:BD:68:PHE:C	2.56	0.47
26:BE:12:LEU:O	26:BE:13:THR:HB	2.13	0.47
26:BE:110:SER:O	26:BE:113:VAL:HG12	2.14	0.47
27:BF:110:ILE:O	27:BF:111:ARG:C	2.57	0.47
30:BI:56:VAL:HG22	30:BI:57:VAL:N	2.29	0.47
31:BJ:13:ARG:HD3	31:BJ:51:GLY:O	2.15	0.47
31:BJ:31:GLU:OE2	31:BJ:35:ARG:HD2	2.15	0.47
35:BN:44:LEU:HD23	35:BN:113:ILE:HG21	1.96	0.47
35:BN:106:ASP:OD1	35:BN:106:ASP:C	2.57	0.47
36:BO:85:LYS:HE3	36:BO:85:LYS:HB3	1.63	0.47
39:BR:42:ALA:CA	39:BR:46:GLU:HB2	2.32	0.47
39:BR:49:ILE:HB	39:BR:51:VAL:O	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BY:21:LEU:HA	46:BY:25:GLN:HB3	1.95	0.47
50:B2:18:PHE:O	50:B2:22:MET:HB2	2.14	0.47
53:CA:501:C:H1'	53:CA:549:C:H1'	1.96	0.47
53:CA:542:G:H2'	53:CA:543:U:H6	1.79	0.47
53:CA:563:A:N3	53:CA:563:A:C2'	2.73	0.47
53:CA:836:G:OP1	18:CR:49:LYS:NZ	2.47	0.47
53:CA:1158:C:O2'	53:CA:1159:U:H4'	2.14	0.47
53:CA:1251:A:H2'	53:CA:1369:C:O2'	2.14	0.47
53:CA:1258:G:H2'	53:CA:1259:C:C6	2.49	0.47
53:CA:1370:G:C2	53:CA:1371:G:C5	3.01	0.47
4:CD:72:ARG:HA	4:CD:203:TYR:HE1	1.80	0.47
5:CE:154:ALA:C	5:CE:156:ARG:H	2.21	0.47
54:CG:124:SER:C	54:CG:126:ALA:H	2.22	0.47
8:CH:85:TYR:CE2	8:CH:123:GLU:HB2	2.49	0.47
9:CI:125:GLN:H	9:CI:125:GLN:NE2	2.12	0.47
10:CJ:77:VAL:O	10:CJ:79:PRO:HD3	2.13	0.47
12:CL:81:ILE:HD11	12:CL:94:TYR:CB	2.45	0.47
22:DA:11:C:H2'	22:DA:12:U:H5'	1.97	0.47
22:DA:26:G:C5'	22:DA:27:G:OP2	2.62	0.47
22:DA:27:G:H1'	22:DA:513:A:H62	1.77	0.47
22:DA:49:A:C8	22:DA:51:G:C2	3.02	0.47
22:DA:233:A:H61	22:DA:428:A:H61	1.61	0.47
22:DA:249:C:HO2'	22:DA:250:G:P	2.35	0.47
22:DA:301:G:C5	22:DA:302:C:N4	2.82	0.47
22:DA:575:A:H2'	22:DA:576:U:C5	2.48	0.47
22:DA:600:G:O4'	26:DE:100:MET:HE3	2.14	0.47
22:DA:617:G:O2'	22:DA:618:G:O5'	2.32	0.47
22:DA:621:A:H3'	22:DA:621:A:OP2	2.14	0.47
22:DA:1019:U:O2	22:DA:1144:A:C2	2.68	0.47
22:DA:1039:A:H2	22:DA:1116:G:H22	1.61	0.47
22:DA:1280:G:C2'	22:DA:1281:G:H5'	2.40	0.47
22:DA:1339:G:H5'	22:DA:1393:A:N1	2.28	0.47
22:DA:1500:G:N1	22:DA:1501:G:C5	2.82	0.47
22:DA:1606:C:O2'	22:DA:1607:C:P	2.72	0.47
22:DA:2053:G:N2	22:DA:2054:A:H1'	2.30	0.47
22:DA:2054:A:C2	22:DA:2616:C:N3	2.82	0.47
22:DA:2060:A:N6	26:DE:69:ARG:HH12	2.05	0.47
22:DA:2093:G:O6	22:DA:2225:A:C8	2.68	0.47
22:DA:2307:G:C8	22:DA:2312:U:C5	3.03	0.47
22:DA:2322:A:H3'	22:DA:2323:G:H8	1.79	0.47
22:DA:2591:C:H2'	22:DA:2592:G:C8	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2612:C:O2	48:D0:1:ALA:HB2	2.14	0.47
57:DB:17:C:C2'	57:DB:18:G:H5'	2.44	0.47
57:DB:109:A:C6	57:DB:110:C:N4	2.82	0.47
25:DD:131:ASP:N	25:DD:131:ASP:OD2	2.47	0.47
58:DF:76:PHE:CD2	58:DF:76:PHE:N	2.77	0.47
28:DG:25:ILE:CG2	28:DG:78:VAL:HG21	2.44	0.47
28:DG:120:ILE:O	28:DG:120:ILE:HG23	2.13	0.47
29:DH:6:LEU:HD13	29:DH:36:ALA:HA	1.96	0.47
29:DH:46:PHE:HA	29:DH:50:ARG:HH21	1.78	0.47
33:DL:23:ILE:HG13	39:DR:82:HIS:ND1	2.28	0.47
36:DO:49:VAL:HG11	36:DO:81:ARG:HB3	1.95	0.47
38:DQ:96:ASP:C	38:DQ:98:ALA:N	2.71	0.47
39:DR:10:LYS:N	39:DR:10:LYS:HD2	2.29	0.47
40:DS:55:ILE:O	40:DS:59:GLU:HG2	2.15	0.47
44:DW:37:VAL:HG23	44:DW:38:ARG:HD2	1.94	0.47
45:DX:1:SER:C	45:DX:3:VAL:N	2.68	0.47
47:DZ:6:ILE:O	47:DZ:34:THR:HA	2.14	0.47
1:AA:67:C:H4'	1:AA:172:A:O4'	2.14	0.47
1:AA:819:A:H4'	1:AA:820:U:OP2	2.15	0.47
1:AA:914:A:C4	1:AA:915:A:C8	3.02	0.47
1:AA:1229:A:H62	13:AM:103:THR:CG2	2.27	0.47
5:AE:45:VAL:HG21	5:AE:117:ALA:CB	2.45	0.47
5:AE:149:PRO:HG2	5:AE:150:GLU:H	1.79	0.47
6:AF:40:GLU:HB2	6:AF:42:TRP:HE1	1.78	0.47
7:AG:29:LEU:HD23	7:AG:29:LEU:O	2.14	0.47
10:AJ:56:HIS:O	10:AJ:57:VAL:HG12	2.14	0.47
14:AN:42:ASN:C	14:AN:44:VAL:N	2.70	0.47
15:AO:63:ARG:CD	15:AO:87:ARG:HH22	2.16	0.47
22:BA:1135:C:H6	22:BA:1135:C:H5"	1.80	0.47
22:BA:1568:G:H1'	24:BC:57:HIS:HE1	1.80	0.47
22:BA:2352:A:C2	44:BW:30:VAL:CG1	2.92	0.47
23:BB:15:A:O2'	23:BB:16:G:OP1	2.32	0.47
24:BC:259:ASN:C	24:BC:261:ARG:N	2.73	0.47
26:BE:154:ASP:OD2	26:BE:154:ASP:C	2.58	0.47
31:BJ:43:GLU:O	31:BJ:45:THR:O	2.32	0.47
31:BJ:64:VAL:HG11	31:BJ:69:ARG:N	2.30	0.47
34:BM:21:ALA:HB2	34:BM:97:GLN:O	2.14	0.47
35:BN:73:ASN:O	35:BN:76:VAL:HG12	2.14	0.47
39:BR:80:ARG:C	39:BR:81:LYS:HD3	2.40	0.47
43:BV:80:HIS:CE1	43:BV:81:PRO:HD2	2.49	0.47
43:BV:80:HIS:CG	43:BV:81:PRO:HD2	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:B3:44:ARG:N	51:B3:45:PRO:HD2	2.29	0.47
53:CA:451:A:C4'	53:CA:452:A:O5'	2.55	0.47
53:CA:812:G:H4'	53:CA:812:G:OP1	2.13	0.47
53:CA:1310:G:C6	53:CA:1311:A:C6	3.03	0.47
4:CD:187:ARG:C	4:CD:189:ASP:H	2.22	0.47
5:CE:22:LYS:O	5:CE:29:ILE:HB	2.14	0.47
5:CE:55:VAL:N	5:CE:56:PRO:CD	2.77	0.47
54:CG:8:GLN:CD	54:CG:9:ARG:H	2.22	0.47
54:CG:112:ASP:HB3	54:CG:117:LEU:HB3	1.96	0.47
54:CG:117:LEU:HG	54:CG:121:ASN:ND2	2.30	0.47
9:CI:129:ARG:CZ	9:CI:129:ARG:HA	2.44	0.47
14:CN:100:TRP:C	14:CN:100:TRP:CD1	2.92	0.47
56:CP:20:VAL:HG23	56:CP:35:ARG:HA	1.97	0.47
22:DA:99:U:O2	22:DA:99:U:O4'	2.32	0.47
22:DA:116:C:H5"	22:DA:128:C:H41	1.78	0.47
22:DA:352:A:N3	22:DA:353:C:H1'	2.28	0.47
22:DA:453:A:N3	22:DA:457:A:O2'	2.47	0.47
22:DA:636:G:H3'	33:DL:128:THR:HG21	1.96	0.47
22:DA:1060:U:H4'	22:DA:1061:U:O5'	2.13	0.47
22:DA:1358:G:H2'	22:DA:1372:U:O4	2.15	0.47
22:DA:1494:A:H2'	22:DA:1495:A:H8	1.79	0.47
22:DA:1521:G:C6	22:DA:1522:A:C6	3.02	0.47
22:DA:1773:A:N7	22:DA:1829:A:H1'	2.30	0.47
22:DA:2092:U:H5	22:DA:2226:C:OP2	1.97	0.47
22:DA:2145:C:H3'	22:DA:2147:A:OP2	2.14	0.47
22:DA:2188:U:H2'	22:DA:2189:U:C6	2.49	0.47
22:DA:2286:G:H5"	22:DA:2287:A:H1'	1.95	0.47
22:DA:2506:U:H3'	22:DA:2506:U:C6	2.48	0.47
22:DA:2748:A:C2	22:DA:2749:A:C4	3.03	0.47
57:DB:90:C:H2'	57:DB:91:C:O4'	2.14	0.47
24:DC:229:HIS:ND1	24:DC:230:PRO:HD2	2.30	0.47
25:DD:175:LEU:O	25:DD:176:ASP:HB2	2.12	0.47
58:DF:155:ILE:H	58:DF:155:ILE:HD12	1.78	0.47
30:DI:86:LYS:O	30:DI:87:SER:HB2	2.14	0.47
32:DK:18:ARG:HB2	32:DK:45:GLU:HB2	1.96	0.47
35:DN:33:ILE:CD1	35:DN:118:ARG:HH21	2.27	0.47
37:DP:3:ILE:C	37:DP:5:LYS:H	2.21	0.47
37:DP:102:ARG:HD2	37:DP:106:ALA:C	2.40	0.47
38:DQ:87:VAL:HG12	38:DQ:88:GLU:N	2.29	0.47
41:DT:40:LYS:HA	41:DT:43:ILE:HG22	1.97	0.47
43:DV:61:LEU:O	43:DV:72:VAL:HG22	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DW:46:ALA:HA	44:DW:50:VAL:HG12	1.96	0.47
45:DX:67:LEU:O	45:DX:77:TYR:OH	2.32	0.47
51:D3:23:HIS:O	51:D3:46:LYS:HE3	2.14	0.47
1:AA:74:A:H1'	1:AA:97:G:N2	2.29	0.47
1:AA:684:U:H3	1:AA:706:A:H61	1.61	0.47
1:AA:687:A:C5	1:AA:701:U:H5	2.32	0.47
1:AA:843:U:H3	2:CB:114:LYS:HB3	1.79	0.47
1:AA:862:C:H2'	1:AA:863:U:H5'	1.96	0.47
1:AA:921:U:H2'	1:AA:922:G:O4'	2.15	0.47
1:AA:927:G:N1	1:AA:1391:U:C2	2.83	0.47
1:AA:1380:U:C5	7:AG:2:ARG:HA	2.49	0.47
5:AE:81:GLN:HG2	5:AE:149:PRO:CB	2.44	0.47
10:AJ:10:LEU:O	10:AJ:71:LEU:HD13	2.14	0.47
11:AK:21:HIS:CD2	11:AK:34:THR:CG2	2.98	0.47
13:AM:89:ARG:HD2	13:AM:95:PRO:O	2.14	0.47
22:BA:522:A:C6	22:BA:523:C:N4	2.83	0.47
22:BA:709:U:H2'	22:BA:710:U:C6	2.49	0.47
22:BA:948:C:H6	22:BA:948:C:O5'	1.98	0.47
22:BA:1355:G:C2	22:BA:1356:G:C8	3.03	0.47
22:BA:1733:G:O2'	22:BA:1734:G:O5'	2.33	0.47
22:BA:2046:G:OP1	48:B0:11:LYS:HE3	2.14	0.47
22:BA:2188:U:H2'	22:BA:2189:U:C6	2.49	0.47
22:BA:2678:C:H2'	22:BA:2679:A:O4'	2.14	0.47
22:BA:2824:C:H2'	22:BA:2825:G:O5'	2.14	0.47
24:BC:78:GLU:OE1	24:BC:100:ARG:NE	2.47	0.47
24:BC:190:THR:CG2	24:BC:191:LEU:N	2.77	0.47
24:BC:190:THR:HG22	24:BC:191:LEU:N	2.28	0.47
26:BE:48:THR:O	26:BE:52:VAL:HG23	2.15	0.47
27:BF:39:VAL:HG11	27:BF:42:ALA:HB2	1.96	0.47
28:BG:29:ASN:H	28:BG:29:ASN:HD22	1.63	0.47
28:BG:109:SER:O	28:BG:110:HIS:CB	2.62	0.47
30:BI:91:LYS:O	30:BI:97:VAL:HG21	2.14	0.47
31:BJ:44:TYR:HB2	38:BQ:63:ARG:CB	2.22	0.47
34:BM:96:ILE:C	34:BM:96:ILE:HD12	2.40	0.47
34:BM:134:THR:HG23	43:BV:79:ARG:HH21	1.80	0.47
35:BN:33:ILE:HG12	35:BN:118:ARG:CZ	2.45	0.47
40:BS:42:LYS:O	40:BS:45:VAL:HG13	2.15	0.47
44:BW:28:GLU:O	44:BW:30:VAL:N	2.47	0.47
49:B1:29:LYS:NZ	49:B1:29:LYS:HB3	2.30	0.47
53:CA:175:C:O2	53:CA:1447:A:H2	1.98	0.47
53:CA:675:A:H1'	11:CK:117:HIS:ND1	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:811:C:H4'	53:CA:900:A:N6	2.29	0.47
53:CA:1005:A:N7	53:CA:1006:G:H1'	2.29	0.47
53:CA:1130:A:C6	53:CA:1131:G:N7	2.82	0.47
53:CA:1201:A:C5'	53:CA:1203:C:OP2	2.62	0.47
53:CA:1239:A:H1'	53:CA:1241:G:N3	2.29	0.47
53:CA:1484:C:H2'	53:CA:1485:U:O4'	2.14	0.47
11:CK:88:PRO:HD3	21:CU:28:LEU:HD11	1.97	0.47
12:CL:82:ARG:HB2	12:CL:97:VAL:HG12	1.96	0.47
55:CM:15:VAL:O	55:CM:19:THR:HG23	2.14	0.47
22:DA:30:G:H2'	22:DA:31:C:C6	2.48	0.47
22:DA:36:G:H4'	22:DA:451:U:C2	2.50	0.47
22:DA:155:A:C2	22:DA:172:A:C6	3.03	0.47
22:DA:164:C:H2'	22:DA:165:A:H5'	1.96	0.47
22:DA:177:G:N2	22:DA:177:G:OP2	2.40	0.47
22:DA:1157:G:H2'	22:DA:1158:C:H6	1.80	0.47
22:DA:1308:A:N6	22:DA:1309:G:C2	2.83	0.47
22:DA:2102:G:H2'	22:DA:2103:C:H5'	1.97	0.47
22:DA:2571:U:C2'	22:DA:2572:A:OP1	2.62	0.47
22:DA:2648:G:H2'	22:DA:2649:C:O4'	2.15	0.47
57:DB:70:C:H2'	57:DB:71:C:H6	1.79	0.47
57:DB:116:G:H2'	57:DB:117:G:C8	2.42	0.47
26:DE:23:PHE:HB2	26:DE:114:ARG:HH22	1.78	0.47
26:DE:129:PRO:HG3	26:DE:159:LEU:HD23	1.97	0.47
58:DF:32:LYS:HD2	58:DF:156:THR:HG21	1.97	0.47
58:DF:46:LYS:HD3	58:DF:46:LYS:O	2.15	0.47
58:DF:113:PHE:CE2	58:DF:116:LEU:HD22	2.50	0.47
28:DG:84:LYS:O	28:DG:85:LYS:CB	2.62	0.47
30:DI:28:GLY:O	30:DI:30:GLN:HG3	2.15	0.47
31:DJ:43:GLU:O	31:DJ:44:TYR:C	2.58	0.47
31:DJ:104:ALA:O	31:DJ:108:MET:HG3	2.14	0.47
32:DK:24:VAL:HG13	32:DK:33:ALA:HB2	1.97	0.47
32:DK:119:ALA:O	32:DK:120:PRO:C	2.58	0.47
33:DL:94:THR:O	33:DL:98:ALA:N	2.46	0.47
33:DL:103:ILE:HD12	33:DL:103:ILE:N	2.29	0.47
40:DS:7:HIS:HB2	40:DS:50:VAL:CG2	2.44	0.47
47:DZ:40:THR:HG22	47:DZ:42:ALA:H	1.80	0.47
48:D0:26:SER:O	48:D0:27:LEU:HD13	2.13	0.47
48:D0:37:HIS:CB	48:D0:43:THR:HG22	2.45	0.47
1:AA:128:G:O2'	1:AA:129:A:H5'	2.14	0.47
1:AA:1080:A:OP1	5:AE:51:LYS:HE3	2.14	0.47
2:AB:66:ILE:HG13	2:AB:220:VAL:HG11	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:202:ASN:HB3	2:AB:208:ALA:HB2	1.96	0.47
5:AE:89:THR:HG22	5:AE:90:GLY:H	1.79	0.47
5:AE:104:ILE:HG13	5:AE:114:LEU:HD23	1.96	0.47
11:AK:100:ASN:HB2	11:AK:106:ILE:HG21	1.97	0.47
17:AQ:15:LYS:O	17:AQ:16:MET:SD	2.73	0.47
17:AQ:20:ILE:H	17:AQ:47:ASP:CG	2.22	0.47
22:BA:2:G:O2'	22:BA:3:U:H5'	2.14	0.47
22:BA:211:C:O2'	22:BA:212:G:H5'	2.14	0.47
22:BA:572:A:OP2	39:BR:80:ARG:NH2	2.47	0.47
22:BA:633:A:OP1	33:BL:68:SER:OG	2.24	0.47
22:BA:813:U:H2'	22:BA:814:C:C6	2.50	0.47
22:BA:1045:C:C3'	22:BA:1046:A:C5'	2.93	0.47
22:BA:2136:G:C2'	22:BA:2137:U:C5	2.95	0.47
22:BA:2148:G:HO2'	22:BA:2149:U:P	2.38	0.47
22:BA:2801:G:H2'	22:BA:2802:G:C8	2.50	0.47
23:BB:33:G:C2'	23:BB:34:A:H5'	2.44	0.47
24:BC:131:MET:HA	24:BC:134:ILE:CD1	2.44	0.47
25:BD:24:VAL:HA	25:BD:189:VAL:O	2.14	0.47
26:BE:196:VAL:O	26:BE:197:GLU:C	2.57	0.47
27:BF:142:TYR:O	27:BF:145:VAL:HG22	2.14	0.47
29:BH:86:ASP:O	29:BH:87:GLU:C	2.57	0.47
39:BR:38:VAL:O	39:BR:54:VAL:HG13	2.15	0.47
39:BR:75:VAL:HG22	39:BR:86:GLN:HG2	1.97	0.47
41:BT:28:ASN:HA	41:BT:91:GLN:CD	2.40	0.47
44:BW:69:GLU:O	44:BW:77:LYS:O	2.33	0.47
53:CA:113:G:N2	53:CA:353:A:H8	2.09	0.47
53:CA:322:C:O2'	20:CT:17:ARG:HG3	2.13	0.47
53:CA:376:G:O3'	56:CP:5:ARG:HD2	2.14	0.47
53:CA:433:G:H2'	53:CA:434:U:H5'	1.96	0.47
53:CA:529:G:O6	12:CL:45:ASN:HA	2.14	0.47
53:CA:888:G:H4'	53:CA:1488:G:O2'	2.15	0.47
53:CA:969:A:C5	53:CA:970:C:O2	2.68	0.47
53:CA:1190:G:O2'	3:CC:2:GLN:HA	2.14	0.47
53:CA:1226:C:C5	55:CM:102:LYS:HA	2.49	0.47
2:CB:104:LYS:HD2	2:CB:104:LYS:N	2.29	0.47
6:CF:52:ASN:C	6:CF:54:LEU:H	2.22	0.47
54:CG:41:ILE:HG21	54:CG:115:MET:CE	2.45	0.47
9:CI:70:GLY:O	9:CI:71:ILE:C	2.58	0.47
9:CI:128:LYS:O	9:CI:129:ARG:HB2	2.14	0.47
10:CJ:66:GLU:HG3	14:CN:100:TRP:HZ3	1.79	0.47
55:CM:16:ILE:HD12	55:CM:16:ILE:H	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:CP:41:PRO:O	56:CP:42:ILE:HD13	2.14	0.47
22:DA:295:G:N3	22:DA:295:G:H2'	2.29	0.47
22:DA:364:C:H2'	22:DA:365:U:O4'	2.13	0.47
22:DA:479:A:C4'	22:DA:480:A:OP1	2.50	0.47
22:DA:482:A:N6	22:DA:506:G:C8	2.82	0.47
22:DA:575:A:H2'	22:DA:576:U:H5	1.79	0.47
22:DA:1010:A:OP1	38:DQ:61:ILE:HG22	2.15	0.47
22:DA:1210:G:N7	22:DA:1237:A:N6	2.63	0.47
22:DA:1259:G:H2'	22:DA:1260:A:C8	2.49	0.47
22:DA:1535:A:H5"	22:DA:1536:C:OP2	2.14	0.47
22:DA:2328:A:H2'	22:DA:2329:U:C6	2.49	0.47
22:DA:2376:A:H1'	36:DO:99:TYR:CZ	2.50	0.47
22:DA:2557:G:H2'	22:DA:2558:C:C6	2.49	0.47
22:DA:2832:U:H5"	22:DA:2834:G:H5'	1.95	0.47
57:DB:23:G:N2	57:DB:61:G:C2	2.83	0.47
25:DD:184:ARG:HH22	37:DP:6:GLN:NE2	2.04	0.47
28:DG:154:GLU:C	28:DG:156:TYR:H	2.22	0.47
31:DJ:38:GLY:O	31:DJ:43:GLU:HB2	2.15	0.47
34:DM:71:LYS:HD3	34:DM:95:LEU:CD1	2.44	0.47
37:DP:91:VAL:HG11	37:DP:96:LEU:HD21	1.97	0.47
39:DR:66:HIS:CD2	39:DR:94:THR:HG22	2.50	0.47
40:DS:22:ASP:HA	40:DS:25:ARG:NH1	2.29	0.47
40:DS:79:GLY:HA3	40:DS:100:THR:OG1	2.14	0.47
43:DV:2:PHE:CD1	43:DV:50:MET:HE3	2.50	0.47
49:D1:16:THR:CG2	49:D1:42:VAL:HG23	2.45	0.47
1:AA:15:G:C6	1:AA:16:A:C5	3.02	0.47
1:AA:58:C:O2'	1:AA:59:A:H5'	2.15	0.47
1:AA:184:G:O2'	1:AA:185:U:H6	1.97	0.47
1:AA:195:A:O2'	1:AA:196:A:H5'	2.14	0.47
1:AA:206:C:H2'	1:AA:207:C:C4'	2.44	0.47
1:AA:244:U:O4	1:AA:906:A:H1'	2.14	0.47
1:AA:556:C:H2'	1:AA:557:G:O4'	2.15	0.47
1:AA:628:G:H2'	1:AA:629:A:C8	2.50	0.47
1:AA:641:U:H4'	8:AH:106:SER:O	2.15	0.47
1:AA:672:U:H2'	1:AA:673:A:C8	2.50	0.47
1:AA:929:G:C6	1:AA:930:C:C4	3.02	0.47
1:AA:1039:G:O2'	1:AA:1040:U:H5'	2.14	0.47
1:AA:1201:A:C1'	1:AA:1202:U:OP2	2.61	0.47
1:AA:1262:C:N4	1:AA:1274:A:C2	2.83	0.47
2:AB:66:ILE:HB	2:AB:88:GLN:CB	2.37	0.47
2:AB:103:TRP:NE1	2:AB:150:ILE:HD11	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:35:ASP:C	3:AC:37:LYS:H	2.22	0.47
3:AC:63:ILE:O	3:AC:98:ALA:HA	2.14	0.47
4:AD:54:LEU:C	4:AD:54:LEU:CD2	2.88	0.47
4:AD:68:GLU:O	4:AD:72:ARG:HG2	2.15	0.47
4:AD:98:ASP:CB	4:AD:114:ARG:HG2	2.45	0.47
7:AG:129:ASN:HA	7:AG:134:VAL:HG11	1.97	0.47
10:AJ:18:ILE:CG2	10:AJ:72:ARG:HE	2.28	0.47
12:AL:54:VAL:HG21	12:AL:79:ILE:HD11	1.95	0.47
14:AN:62:ARG:O	14:AN:63:CYS:C	2.58	0.47
18:AR:33:THR:CG2	18:AR:37:LYS:HB2	2.44	0.47
21:AU:36:PHE:CD1	21:AU:39:LYS:HB3	2.45	0.47
22:BA:163:C:O2'	22:BA:164:C:O5'	2.32	0.47
22:BA:242:G:O2'	51:B3:5:THR:HG23	2.14	0.47
22:BA:271:G:C6	22:BA:367:G:C6	3.02	0.47
22:BA:374:A:C2	22:BA:401:A:C4	3.03	0.47
22:BA:483:A:C8	22:BA:484:C:C5	3.02	0.47
22:BA:494:G:H4'	40:BS:6:LYS:O	2.15	0.47
22:BA:591:U:H1'	51:B3:1:PRO:H3	1.79	0.47
22:BA:745:G:C2'	22:BA:746:U:H5'	2.45	0.47
22:BA:877:A:C6	22:BA:899:A:C6	3.03	0.47
22:BA:904:G:N3	22:BA:905:A:N7	2.61	0.47
22:BA:976:G:C2	22:BA:977:G:C8	3.02	0.47
22:BA:1142:A:C4	22:BA:1144:A:C8	3.03	0.47
22:BA:1152:C:H3'	62:BA:3357:HOH:O	2.15	0.47
22:BA:1371:G:O2'	22:BA:1372:U:H5'	2.14	0.47
22:BA:1609:A:H5"	62:BA:3635:HOH:O	2.14	0.47
22:BA:1747:U:H2'	22:BA:1748:C:H6	1.75	0.47
22:BA:2026:U:H2'	22:BA:2027:G:O4'	2.15	0.47
22:BA:2058:A:H5"	22:BA:2059:A:OP2	2.14	0.47
22:BA:2211:A:OP2	22:BA:2211:A:H4'	2.15	0.47
22:BA:2364:C:OP1	44:BW:54:ARG:HD2	2.14	0.47
22:BA:2502:G:C5'	22:BA:2503:A:O5'	2.62	0.47
22:BA:2884:U:H2'	22:BA:2885:G:C8	2.49	0.47
23:BB:112:G:H2'	23:BB:113:C:C6	2.50	0.47
24:BC:199:HIS:C	24:BC:201:LEU:N	2.73	0.47
25:BD:107:VAL:H	25:BD:206:ALA:H	1.63	0.47
25:BD:139:SER:HA	25:BD:142:VAL:CG1	2.45	0.47
27:BF:114:ARG:HD2	27:BF:114:ARG:N	2.30	0.47
28:BG:4:ALA:HB2	28:BG:65:GLY:HA2	1.96	0.47
28:BG:104:LEU:HB2	28:BG:112:VAL:HG21	1.96	0.47
28:BG:174:LYS:HE2	28:BG:176:LYS:OXT	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BI:60:VAL:HG22	30:BI:66:PHE:CB	2.45	0.47
31:BJ:37:ARG:HA	31:BJ:118:MET:CE	2.45	0.47
31:BJ:111:LYS:HE2	31:BJ:114:LEU:HB3	1.97	0.47
32:BK:85:VAL:CG1	32:BK:115:ILE:HD11	2.42	0.47
32:BK:108:ARG:HG3	32:BK:108:ARG:HH11	1.80	0.47
34:BM:78:LEU:HD23	34:BM:78:LEU:C	2.39	0.47
37:BP:50:ARG:HD3	37:BP:56:SER:CB	2.33	0.47
37:BP:87:ARG:NH2	37:BP:111:GLU:HG3	2.30	0.47
39:BR:38:VAL:HG11	39:BR:59:ILE:HG13	1.97	0.47
42:BU:15:GLY:O	42:BU:17:ASP:N	2.42	0.47
42:BU:60:LYS:HD2	42:BU:60:LYS:HA	1.63	0.47
42:BU:85:ARG:HA	42:BU:91:LYS:O	2.15	0.47
45:BX:44:ARG:HG2	45:BX:45:PHE:N	2.28	0.47
53:CA:28:A:H2'	53:CA:29:U:O4'	2.15	0.47
53:CA:57:G:H2'	53:CA:58:C:C6	2.50	0.47
53:CA:158:G:C5	53:CA:164:G:C6	3.03	0.47
53:CA:220:G:O2'	53:CA:221:C:H5'	2.15	0.47
53:CA:255:G:O3'	17:CQ:18:LYS:HD2	2.15	0.47
53:CA:340:U:C2	53:CA:350:G:N2	2.83	0.47
53:CA:358:U:H2'	53:CA:359:G:C8	2.49	0.47
53:CA:484:G:C4'	53:CA:485:U:O5'	2.63	0.47
53:CA:973:G:H2'	53:CA:974:A:H2'	1.95	0.47
53:CA:986:U:H2'	53:CA:987:G:H8	1.77	0.47
53:CA:1133:G:C2	53:CA:1142:G:C5	3.03	0.47
53:CA:1276:G:H21	53:CA:1282:C:H1'	1.78	0.47
3:CC:46:LEU:HD22	3:CC:75:VAL:HG22	1.96	0.47
54:CG:59:GLU:HG3	54:CG:60:ALA:H	1.78	0.47
54:CG:75:LYS:CE	54:CG:76:SER:H	2.26	0.47
8:CH:17:GLN:CD	8:CH:69:ALA:HB1	2.39	0.47
8:CH:80:PRO:HA	8:CH:83:ARG:HE	1.79	0.47
55:CM:18:LEU:HD12	55:CM:18:LEU:N	2.30	0.47
55:CM:87:GLY:O	55:CM:91:ARG:HD2	2.14	0.47
14:CN:30:ILE:O	14:CN:40:ARG:HA	2.14	0.47
15:CO:32:THR:O	15:CO:33:ALA:C	2.58	0.47
15:CO:39:GLN:OE1	22:DA:716:A:C1'	2.60	0.47
56:CP:7:ALA:O	56:CP:17:TYR:HA	2.13	0.47
17:CQ:45:VAL:HG11	17:CQ:60:ILE:CG2	2.45	0.47
20:CT:72:ALA:C	20:CT:74:HIS:H	2.22	0.47
21:CU:23:GLU:HA	21:CU:27:VAL:HG23	1.96	0.47
21:CU:39:LYS:H	21:CU:40:PRO:CD	2.26	0.47
22:DA:425:G:H2'	22:DA:426:C:H6	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:478:A:N6	22:DA:480:A:C6	2.82	0.47
22:DA:519:U:H5"	40:DS:25:ARG:NH2	2.30	0.47
22:DA:608:A:C6	22:DA:621:A:C8	3.03	0.47
22:DA:614:A:H4'	22:DA:616:A:N7	2.30	0.47
22:DA:653:U:H2'	22:DA:653:U:O2	2.14	0.47
22:DA:657:U:H2'	22:DA:658:U:H6	1.80	0.47
22:DA:1066:U:H3	22:DA:1069:A:P	2.38	0.47
22:DA:1069:A:C2	22:DA:1097:U:OP1	2.68	0.47
22:DA:1073:A:OP2	22:DA:1073:A:H4'	2.15	0.47
22:DA:1153:C:H2'	22:DA:1154:G:C8	2.50	0.47
22:DA:1262:A:C6	22:DA:1263:U:C2	3.03	0.47
22:DA:1364:G:C8	45:DX:1:SER:HB2	2.49	0.47
22:DA:1411:U:H2'	22:DA:1412:U:C6	2.49	0.47
22:DA:1462:C:C1'	22:DA:2702:G:H21	2.27	0.47
22:DA:1519:G:N3	22:DA:1519:G:H2'	2.29	0.47
22:DA:1532:A:C5	22:DA:1533:C:C4	3.03	0.47
22:DA:1572:A:H2'	22:DA:1573:G:H8	1.79	0.47
22:DA:1649:G:C6	22:DA:2009:A:C6	3.03	0.47
22:DA:1655:A:C6	22:DA:1656:C:C2	3.01	0.47
22:DA:1731:G:C2	22:DA:1733:G:N7	2.83	0.47
22:DA:1734:G:C2'	22:DA:1735:A:C8	2.94	0.47
22:DA:1736:U:H2'	22:DA:1737:G:O4'	2.14	0.47
22:DA:2053:G:O2'	22:DA:2054:A:H5'	2.15	0.47
22:DA:2079:U:O2'	45:DX:22:ASN:ND2	2.47	0.47
22:DA:2286:G:H4'	22:DA:2287:A:N9	2.29	0.47
22:DA:2547:A:C2	22:DA:2562:U:C2	3.03	0.47
22:DA:2699:C:H2'	22:DA:2700:A:H8	1.78	0.47
22:DA:2846:G:OP1	37:DP:51:ASN:HB2	2.13	0.47
22:DA:2899:A:H2'	22:DA:2900:A:C8	2.49	0.47
57:DB:11:C:H2'	57:DB:15:A:N6	2.30	0.47
24:DC:17:LYS:HD3	24:DC:18:VAL:N	2.29	0.47
24:DC:69:ASN:O	24:DC:70:LYS:C	2.56	0.47
24:DC:78:GLU:OE2	24:DC:94:LEU:HD22	2.15	0.47
24:DC:224:MET:SD	24:DC:229:HIS:CB	3.02	0.47
25:DD:175:LEU:HB3	25:DD:176:ASP:H	1.54	0.47
26:DE:44:ARG:H	26:DE:89:PRO:HA	1.79	0.47
26:DE:79:ARG:CG	26:DE:80:SER:H	2.27	0.47
58:DF:58:ALA:HB1	58:DF:139:GLU:CG	2.45	0.47
58:DF:105:ILE:C	58:DF:108:PRO:HD2	2.40	0.47
28:DG:91:VAL:N	28:DG:93:TYR:CD2	2.83	0.47
31:DJ:57:LEU:HD21	31:DJ:128:ASN:HA	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DJ:123:LYS:HG2	31:DJ:132:HIS:NE2	2.29	0.47
33:DL:9:ALA:HB3	33:DL:12:SER:CB	2.44	0.47
33:DL:17:LYS:CE	33:DL:19:LEU:HD13	2.45	0.47
34:DM:15:GLY:O	34:DM:16:ARG:HB3	2.15	0.47
34:DM:76:LYS:O	34:DM:77:PRO:O	2.32	0.47
35:DN:22:ARG:HG2	35:DN:22:ARG:O	2.14	0.47
35:DN:47:VAL:C	35:DN:50:PRO:HD2	2.39	0.47
35:DN:99:LYS:O	48:D0:41:HIS:HB2	2.15	0.47
36:DO:31:THR:HG23	36:DO:34:HIS:O	2.14	0.47
38:DQ:23:TYR:HB2	38:DQ:28:SER:HB3	1.97	0.47
41:DT:63:VAL:HG21	41:DT:80:TRP:CE2	2.50	0.47
44:DW:8:SER:O	44:DW:9:THR:CB	2.62	0.47
46:DY:59:GLU:C	46:DY:61:ALA:H	2.23	0.47
48:D0:54:ILE:HG13	48:D0:55:ALA:H	1.80	0.47
52:D4:8:LYS:HA	52:D4:16:ILE:HD11	1.96	0.47
1:AA:186:C:H4'	20:AT:75:LYS:HG3	1.97	0.47
1:AA:604:G:H2'	1:AA:605:U:O4'	2.15	0.47
2:AB:66:ILE:CG1	2:AB:220:VAL:HG11	2.45	0.47
3:AC:22:PHE:CD1	10:AJ:12:ALA:HA	2.50	0.47
3:AC:86:LEU:O	3:AC:87:ARG:C	2.58	0.47
4:AD:25:ARG:O	4:AD:26:ALA:HB2	2.15	0.47
5:AE:83:PRO:HB3	5:AE:96:GLN:HE22	1.76	0.47
7:AG:112:ASP:HB2	7:AG:118:ARG:HG3	1.96	0.47
11:AK:22:ILE:HD11	11:AK:85:VAL:HG22	1.97	0.47
11:AK:26:PHE:CE1	11:AK:88:PRO:HG2	2.50	0.47
16:AP:10:GLY:HA3	16:AP:15:PRO:C	2.40	0.47
22:BA:646:U:H2'	22:BA:647:G:OP1	2.14	0.47
22:BA:859:G:H8	22:BA:859:G:OP2	1.96	0.47
22:BA:996:A:C2	22:BA:997:G:C8	3.02	0.47
22:BA:1386:C:H2'	22:BA:1387:A:C8	2.49	0.47
22:BA:1498:C:O2'	22:BA:1499:C:H6	1.97	0.47
22:BA:2065:C:H2'	22:BA:2066:C:H6	1.80	0.47
22:BA:2146:C:H4'	22:BA:2147:A:OP1	2.14	0.47
22:BA:2152:G:H2'	22:BA:2153:C:O4'	2.14	0.47
22:BA:2316:G:H2'	22:BA:2317:A:H8	1.79	0.47
22:BA:2406:A:OP2	22:BA:2406:A:H2'	2.15	0.47
22:BA:2496:C:OP1	34:BM:82:MET:HB2	2.14	0.47
22:BA:2723:C:H4'	35:BN:1:MET:HE3	1.96	0.47
22:BA:2808:G:C2	22:BA:2891:U:C6	3.03	0.47
24:BC:159:THR:HA	24:BC:176:ARG:HD3	1.97	0.47
25:BD:3:GLY:C	25:BD:82:PHE:CE1	2.92	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:21:TYR:CE2	27:BF:27:VAL:HA	2.50	0.47
29:BH:66:ASN:C	29:BH:68:ARG:N	2.72	0.47
30:BI:40:ALA:HB3	30:BI:68:PHE:CE1	2.50	0.47
32:BK:13:ASN:O	32:BK:15:GLY:N	2.48	0.47
32:BK:43:ILE:N	32:BK:43:ILE:HD13	2.29	0.47
34:BM:136:MET:HE2	43:BV:57:TYR:CD2	2.49	0.47
35:BN:20:MET:CG	35:BN:21:PHE:N	2.78	0.47
37:BP:39:LEU:HD12	37:BP:39:LEU:N	2.28	0.47
38:BQ:97:ILE:HD11	38:BQ:105:PHE:N	2.30	0.47
40:BS:20:VAL:HG11	40:BS:44:ALA:HA	1.97	0.47
42:BU:53:GLN:N	42:BU:54:PRO:CD	2.77	0.47
45:BX:67:LEU:O	45:BX:69:GLU:O	2.32	0.47
46:BY:14:LEU:HD13	46:BY:17:GLU:HG2	1.95	0.47
53:CA:71:A:C8	53:CA:100:G:C2	3.03	0.47
53:CA:183:C:H2'	53:CA:183:C:O2	2.13	0.47
53:CA:740:U:O2'	15:CO:51:SER:HB3	2.15	0.47
53:CA:985:C:N4	53:CA:986:U:O4	2.47	0.47
53:CA:1070:U:H2'	53:CA:1071:C:H6	1.79	0.47
53:CA:1342:C:H2'	53:CA:1343:G:C8	2.50	0.47
53:CA:1372:U:C5'	9:CI:71:ILE:HD11	2.45	0.47
53:CA:1481:U:H2'	53:CA:1482:G:H8	1.79	0.47
5:CE:21:SER:OG	5:CE:28:ARG:HG3	2.15	0.47
5:CE:76:ASN:HD22	5:CE:76:ASN:HA	1.57	0.47
9:CI:11:ARG:HH22	9:CI:108:ARG:NH2	2.13	0.47
10:CJ:44:THR:HG23	10:CJ:70:HIS:CG	2.49	0.47
12:CL:72:ASN:H	12:CL:72:ASN:ND2	2.13	0.47
15:CO:81:ILE:HG22	15:CO:86:LEU:HB2	1.96	0.47
19:CS:52:ASN:HD22	19:CS:52:ASN:C	2.22	0.47
20:CT:49:ALA:O	20:CT:52:GLU:HB3	2.15	0.47
22:DA:28:A:C6	22:DA:29:U:C2	3.02	0.47
22:DA:56:A:C2	22:DA:57:C:C2	3.02	0.47
22:DA:185:G:H2'	22:DA:186:G:H8	1.78	0.47
22:DA:249:C:O2'	22:DA:250:G:OP2	2.31	0.47
22:DA:297:G:H5"	42:DU:84:PHE:CB	2.40	0.47
22:DA:309:A:N3	22:DA:329:G:H1'	2.30	0.47
22:DA:406:G:O2'	22:DA:407:G:O5'	2.32	0.47
22:DA:432:A:H2'	22:DA:433:C:O4'	2.15	0.47
22:DA:743:A:O2'	22:DA:744:U:H5'	2.15	0.47
22:DA:981:A:H5"	22:DA:982:C:OP2	2.15	0.47
22:DA:1211:C:H5"	22:DA:1212:G:C8	2.50	0.47
22:DA:1314:C:OP1	22:DA:1332:G:OP1	2.33	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1416:G:C6	22:DA:1417:C:C4	3.03	0.47
22:DA:1668:A:O4'	22:DA:1669:A:C2	2.68	0.47
22:DA:2285:C:C2'	22:DA:2286:G:H5"	2.42	0.47
22:DA:2309:A:H3'	22:DA:2310:C:C6	2.50	0.47
22:DA:2385:C:O2'	22:DA:2386:A:H8	1.98	0.47
22:DA:2744:G:C4	22:DA:2761:A:C2	3.02	0.47
24:DC:131:MET:HE1	24:DC:183:VAL:HG11	1.97	0.47
24:DC:264:LYS:HG3	24:DC:265:PHE:CD2	2.50	0.47
26:DE:44:ARG:HH21	26:DE:44:ARG:HG3	1.80	0.47
58:DF:27:VAL:O	58:DF:27:VAL:HG23	2.15	0.47
31:DJ:56:VAL:HG22	31:DJ:124:VAL:HA	1.97	0.47
38:DQ:87:VAL:CG1	38:DQ:88:GLU:H	2.26	0.47
42:DU:39:ASN:O	42:DU:40:LEU:C	2.58	0.47
46:DY:1:MET:HE2	46:DY:1:MET:H3	1.77	0.47
48:D0:5:ASN:HD22	48:D0:6:LYS:N	2.13	0.47
1:AA:436:C:O2'	1:AA:437:U:H5'	2.15	0.47
1:AA:809:G:C6	1:AA:810:C:C5	3.03	0.47
1:AA:1005:A:C2	1:AA:1006:G:H1'	2.49	0.47
1:AA:1464:U:O2'	1:AA:1465:A:H5'	2.15	0.47
1:AA:1486:G:H2'	1:AA:1487:G:O4'	2.15	0.47
1:AA:1511:G:C5	1:AA:1512:U:C5	3.02	0.47
2:AB:187:ASP:HB2	2:AB:203:ASP:HB3	1.96	0.47
5:AE:38:VAL:HG22	5:AE:66:ALA:HB1	1.96	0.47
5:AE:136:VAL:O	5:AE:137:ARG:HB2	2.14	0.47
10:AJ:18:ILE:HG23	10:AJ:72:ARG:HE	1.80	0.47
15:AO:2:LEU:O	15:AO:3:SER:C	2.58	0.47
22:BA:100:U:C4'	22:BA:101:A:O5'	2.60	0.47
22:BA:1290:C:H2'	22:BA:1291:C:C6	2.50	0.47
22:BA:1539:U:C2	22:BA:1540:G:C8	3.03	0.47
22:BA:1669:A:H5"	22:BA:1670:C:OP2	2.15	0.47
22:BA:1731:G:C4	22:BA:1733:G:C8	3.03	0.47
22:BA:2280:G:H2'	22:BA:2281:A:H5'	1.96	0.47
24:BC:141:HIS:O	24:BC:143:VAL:HG23	2.14	0.47
26:BE:121:VAL:O	26:BE:189:THR:HA	2.15	0.47
27:BF:3:LEU:HD23	27:BF:100:GLU:HB2	1.96	0.47
31:BJ:30:THR:HG22	31:BJ:31:GLU:N	2.28	0.47
31:BJ:37:ARG:HG2	31:BJ:37:ARG:O	2.14	0.47
31:BJ:97:PRO:O	31:BJ:98:GLU:C	2.57	0.47
34:BM:50:ARG:O	34:BM:53:MET:HB3	2.14	0.47
34:BM:71:LYS:HD3	34:BM:95:LEU:HD13	1.96	0.47
38:BQ:97:ILE:HD11	38:BQ:105:PHE:CA	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BR:39:LEU:HD23	39:BR:39:LEU:H	1.80	0.47
49:B1:8:ILE:CG2	49:B1:9:LYS:N	2.78	0.47
49:B1:27:ARG:C	49:B1:29:LYS:H	2.22	0.47
49:B1:33:LEU:N	49:B1:51:ALA:CB	2.77	0.47
53:CA:87:C:H2'	53:CA:88:U:O4'	2.15	0.47
53:CA:420:U:C2'	53:CA:421:U:H5"	2.44	0.47
53:CA:1279:G:H2'	53:CA:1279:G:N3	2.28	0.47
53:CA:1406:U:C2'	53:CA:1407:C:H5'	2.45	0.47
3:CC:91:ALA:HB2	3:CC:98:ALA:HB3	1.96	0.47
5:CE:39:GLY:HA2	5:CE:45:VAL:HA	1.95	0.47
9:CI:38:PHE:CE2	9:CI:71:ILE:HG22	2.50	0.47
9:CI:51:LEU:C	9:CI:53:LEU:N	2.71	0.47
11:CK:34:THR:HG1	11:CK:39:ASN:C	2.22	0.47
11:CK:84:MET:HA	11:CK:110:THR:O	2.15	0.47
14:CN:76:PHE:CE2	14:CN:92:ILE:HD13	2.50	0.47
15:CO:63:ARG:NH2	22:DA:715:A:H5'	2.25	0.47
18:CR:44:THR:OG1	18:CR:46:THR:HG22	2.15	0.47
22:DA:28:A:O2'	22:DA:29:U:H5'	2.15	0.47
22:DA:76:C:O2'	22:DA:77:G:H8	1.97	0.47
22:DA:224:U:OP2	22:DA:408:G:N2	2.48	0.47
22:DA:405:U:H3'	22:DA:406:G:C5'	2.44	0.47
22:DA:597:G:H2'	22:DA:598:U:O4'	2.15	0.47
22:DA:795:C:O5'	22:DA:795:C:H6	1.97	0.47
22:DA:822:G:O6	22:DA:943:A:C2	2.64	0.47
22:DA:834:G:H1'	22:DA:2358:A:C2	2.50	0.47
22:DA:876:C:O2	22:DA:876:C:O4'	2.31	0.47
22:DA:962:G:O2'	22:DA:963:U:C5'	2.63	0.47
22:DA:1079:C:N3	22:DA:1088:A:C2	2.82	0.47
22:DA:1252:G:C2	38:DQ:32:ARG:HG2	2.50	0.47
22:DA:1267:U:HO2'	22:DA:1268:A:C5'	2.28	0.47
22:DA:1341:G:HO2'	22:DA:1398:C:H5'	1.76	0.47
22:DA:1492:G:H3'	22:DA:1493:C:H5'	1.97	0.47
22:DA:1609:A:C6	22:DA:1616:A:C4	3.03	0.47
22:DA:1765:U:O2'	22:DA:1766:G:H5'	2.15	0.47
22:DA:2033:A:H2'	22:DA:2033:A:OP1	2.14	0.47
22:DA:2287:A:N7	22:DA:2289:G:C8	2.82	0.47
22:DA:2376:A:H2	36:DO:92:PHE:HD2	1.63	0.47
22:DA:2403:C:H2'	22:DA:2404:U:H6	1.80	0.47
22:DA:2497:A:O2'	62:DA:3668:HOH:O	2.20	0.47
22:DA:2682:A:O2'	22:DA:2683:C:C6	2.68	0.47
22:DA:2726:A:HO2'	22:DA:2727:A:C5'	2.27	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DB:111:U:H2'	57:DB:112:G:C8	2.50	0.47
28:DG:103:ASN:O	28:DG:104:LEU:HD23	2.15	0.47
29:DH:28:ASN:HD22	29:DH:28:ASN:HA	1.52	0.47
31:DJ:99:ARG:HA	31:DJ:102:GLU:CB	2.40	0.47
34:DM:17:ASN:C	34:DM:18:ARG:HG2	2.39	0.47
35:DN:28:LEU:HD23	35:DN:29:VAL:N	2.30	0.47
40:DS:96:ILE:HG12	40:DS:96:ILE:O	2.14	0.47
41:DT:7:LEU:O	41:DT:10:VAL:HG13	2.15	0.47
41:DT:64:LYS:HA	41:DT:79:ASP:OD1	2.15	0.47
43:DV:14:LYS:HG3	43:DV:18:ARG:HD2	1.97	0.47
43:DV:41:GLU:HG2	43:DV:42:LEU:N	2.30	0.47
48:D0:37:HIS:CD2	48:D0:43:THR:HG22	2.49	0.47
1:AA:131:A:H2'	1:AA:132:C:C6	2.50	0.47
1:AA:1142:G:H2'	1:AA:1143:G:O4'	2.14	0.47
1:AA:1168:U:H4'	1:AA:1169:A:OP2	2.15	0.47
1:AA:1521:C:C2	1:AA:1522:U:C5	3.03	0.47
5:AE:110:MET:N	5:AE:113:VAL:HG13	2.28	0.47
6:AF:92:THR:O	6:AF:93:LYS:HG2	2.14	0.47
7:AG:128:GLU:O	7:AG:129:ASN:C	2.57	0.47
11:AK:107:THR:HG22	11:AK:108:ASN:ND2	2.30	0.47
22:BA:6:A:O2'	22:BA:7:G:H5'	2.15	0.47
22:BA:204:A:H4'	22:BA:205:G:OP1	2.16	0.47
22:BA:417:C:O2'	22:BA:418:C:H5'	2.15	0.47
22:BA:657:U:H2'	22:BA:658:U:C6	2.50	0.47
22:BA:973:A:H5'	22:BA:1188:U:H1'	1.95	0.47
22:BA:1415:U:O2	22:BA:1415:U:C2'	2.61	0.47
22:BA:1469:A:H2'	22:BA:1470:A:H8	1.78	0.47
22:BA:1733:G:N3	22:BA:1734:G:C8	2.83	0.47
22:BA:1791:A:H5"	24:BC:204:LEU:HD23	1.97	0.47
22:BA:1857:G:N2	22:BA:1884:G:O2'	2.47	0.47
22:BA:2148:G:O2'	22:BA:2149:U:C4'	2.63	0.47
22:BA:2186:G:C6	22:BA:2187:U:C2	3.02	0.47
22:BA:2354:C:H4'	44:BW:31:LEU:HD22	1.97	0.47
22:BA:2516:A:O2'	22:BA:2517:C:H5'	2.15	0.47
22:BA:2698:U:H2'	22:BA:2699:C:C6	2.50	0.47
23:BB:90:C:H6	23:BB:90:C:C5'	2.21	0.47
24:BC:104:LEU:O	24:BC:105:ALA:CB	2.57	0.47
27:BF:40:GLY:C	27:BF:84:ILE:HD11	2.40	0.47
28:BG:33:THR:N	28:BG:34:ARG:NH1	2.63	0.47
29:BH:50:ARG:O	29:BH:54:LEU:HB2	2.14	0.47
32:BK:113:MET:SD	32:BK:116:ILE:HD11	2.54	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BL:127:VAL:HG11	33:BL:142:ILE:HD13	1.97	0.47
38:BQ:57:ARG:HA	38:BQ:60:TRP:CE3	2.50	0.47
38:BQ:89:ILE:O	38:BQ:90:ASP:HB2	2.15	0.47
41:BT:32:LEU:O	41:BT:83:ALA:HB2	2.15	0.47
45:BX:51:SER:O	45:BX:52:ALA:C	2.57	0.47
45:BX:52:ALA:O	45:BX:53:LYS:HB3	2.15	0.47
53:CA:369:G:OP2	53:CA:388:G:N1	2.46	0.47
53:CA:695:A:C6	53:CA:696:A:C2	3.02	0.47
53:CA:765:G:C5	53:CA:812:G:C6	3.03	0.47
53:CA:1175:G:H2'	53:CA:1176:A:C8	2.49	0.47
4:CD:32:LYS:O	4:CD:33:ILE:HG22	2.14	0.47
4:CD:106:PHE:CD1	4:CD:106:PHE:N	2.77	0.47
4:CD:204:SER:HB2	5:CE:105:ILE:HD11	1.97	0.47
5:CE:14:LEU:HD13	5:CE:59:ILE:HD12	1.97	0.47
5:CE:17:VAL:O	5:CE:17:VAL:HG13	2.15	0.47
9:CI:106:ASP:OD1	9:CI:106:ASP:N	2.48	0.47
22:DA:78:U:C2'	22:DA:79:C:H5'	2.45	0.47
22:DA:112:U:H5'	46:DY:58:ASN:HD21	1.79	0.47
22:DA:309:A:H1'	22:DA:329:G:N3	2.30	0.47
22:DA:404:A:N3	22:DA:406:G:C6	2.83	0.47
22:DA:466:A:N1	22:DA:795:C:O2'	2.42	0.47
22:DA:589:U:O2'	22:DA:590:A:OP2	2.23	0.47
22:DA:744:U:H2'	22:DA:745:G:O5'	2.15	0.47
22:DA:983:A:N6	22:DA:984:A:C2	2.83	0.47
22:DA:1021:A:H2'	22:DA:1022:G:H4'	1.95	0.47
22:DA:1208:C:O2'	22:DA:1209:U:H5'	2.15	0.47
22:DA:1313:U:OP2	22:DA:1314:C:C5	2.68	0.47
22:DA:1356:G:C6	22:DA:1376:C:N3	2.83	0.47
22:DA:1570:A:H8	22:DA:1570:A:O5'	1.98	0.47
22:DA:2406:A:C2	33:DL:69:ARG:NH2	2.83	0.47
22:DA:2416:C:N4	22:DA:2417:C:N4	2.62	0.47
22:DA:2749:A:P	22:DA:2750:A:H3'	2.55	0.47
22:DA:2869:G:H2'	22:DA:2870:C:O4'	2.15	0.47
58:DF:19:PHE:HB3	58:DF:21:TYR:CE2	2.50	0.47
28:DG:154:GLU:O	28:DG:156:TYR:N	2.48	0.47
31:DJ:17:VAL:HG23	31:DJ:137:PRO:CB	2.40	0.47
31:DJ:45:THR:HG21	31:DJ:50:THR:HG23	1.96	0.47
32:DK:100:PHE:N	32:DK:100:PHE:CD1	2.82	0.47
34:DM:53:MET:HE2	34:DM:117:PHE:CE1	2.50	0.47
36:DO:71:ALA:CB	36:DO:102:ARG:HB3	2.44	0.47
37:DP:86:LYS:HA	37:DP:86:LYS:NZ	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DW:36:ILE:HG22	44:DW:39:GLN:HB2	1.97	0.47
46:DY:30:MET:SD	46:DY:30:MET:O	2.73	0.47
49:D1:16:THR:CG2	49:D1:41:VAL:HB	2.44	0.47
1:AA:77:A:N6	1:AA:90:C:C5	2.83	0.46
1:AA:112:G:C5	1:AA:330:C:N4	2.83	0.46
1:AA:116:A:H2'	1:AA:117:G:C8	2.50	0.46
1:AA:224:U:O2'	1:AA:225:C:H5'	2.14	0.46
1:AA:751:U:H4'	15:AO:23:SER:HA	1.97	0.46
1:AA:1046:A:C2'	1:AA:1047:G:O5'	2.64	0.46
2:AB:70:GLY:HA2	2:AB:163:ILE:HG22	1.97	0.46
4:AD:33:ILE:O	4:AD:33:ILE:HG23	2.14	0.46
6:AF:25:TYR:CE1	6:AF:78:PHE:HE2	2.33	0.46
7:AG:114:SER:HB3	7:AG:117:LEU:CG	2.40	0.46
10:AJ:8:ILE:O	10:AJ:73:LEU:O	2.33	0.46
10:AJ:87:LEU:HD13	10:AJ:88:MET:N	2.30	0.46
13:AM:106:ARG:HH12	13:AM:109:LYS:HD3	1.79	0.46
17:AQ:11:VAL:HG12	17:AQ:12:VAL:HG12	1.96	0.46
20:AT:54:GLN:N	20:AT:55:PRO:HD2	2.30	0.46
22:BA:683:U:H2'	22:BA:684:G:O5'	2.15	0.46
22:BA:782:A:H4'	22:BA:783:A:O5'	2.15	0.46
22:BA:1916:A:H8	22:BA:1916:A:O5'	1.98	0.46
22:BA:1943:U:O2	22:BA:1943:U:O5'	2.33	0.46
22:BA:2015:A:C2'	22:BA:2016:U:H5'	2.45	0.46
22:BA:2478:A:H2'	22:BA:2479:U:H5'	1.98	0.46
22:BA:2801:G:H2'	22:BA:2802:G:H8	1.80	0.46
22:BA:2868:A:C6	22:BA:2869:G:C6	3.03	0.46
23:BB:61:G:C5	23:BB:62:C:C5	3.03	0.46
24:BC:90:ILE:HG21	24:BC:102:TYR:CD1	2.50	0.46
24:BC:211:ARG:HA	24:BC:211:ARG:HD2	1.49	0.46
25:BD:108:ASP:OD2	25:BD:173:GLN:HA	2.14	0.46
26:BE:146:VAL:CG1	26:BE:185:LYS:HB2	2.46	0.46
27:BF:134:GLN:H	27:BF:134:GLN:HE21	1.63	0.46
28:BG:36:LEU:HD22	28:BG:36:LEU:N	2.29	0.46
28:BG:84:LYS:HZ1	28:BG:133:LYS:HE3	1.80	0.46
28:BG:90:GLY:O	28:BG:91:VAL:C	2.57	0.46
28:BG:93:TYR:O	28:BG:105:SER:O	2.33	0.46
30:BI:18:ASN:ND2	30:BI:38:CYS:HB3	2.29	0.46
32:BK:5:GLN:O	32:BK:21:CYS:HB3	2.15	0.46
39:BR:48:LYS:H	39:BR:48:LYS:CD	2.20	0.46
41:BT:39:THR:O	41:BT:39:THR:CG2	2.63	0.46
41:BT:48:GLN:HB2	41:BT:49:LYS:HE3	1.95	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BX:10:ARG:HB2	45:BX:11:PRO:CD	2.44	0.46
53:CA:86:G:O2'	53:CA:87:C:O5'	2.33	0.46
53:CA:313:A:H2'	53:CA:314:C:H6	1.80	0.46
53:CA:428:G:H4'	53:CA:429:U:OP1	2.14	0.46
53:CA:703:G:H4'	53:CA:704:A:H5'	1.97	0.46
53:CA:791:G:C5	53:CA:792:A:N7	2.83	0.46
53:CA:962:C:H2'	53:CA:963:G:H8	1.79	0.46
53:CA:1217:C:O2'	53:CA:1218:C:H5'	2.15	0.46
53:CA:1279:G:H2'	10:CJ:45:ARG:NH2	2.29	0.46
5:CE:79:THR:HG23	5:CE:81:GLN:H	1.79	0.46
54:CG:17:PHE:HB2	54:CG:43:TYR:OH	2.15	0.46
54:CG:29:LEU:O	54:CG:30:MET:O	2.33	0.46
9:CI:26:LYS:O	9:CI:62:LEU:HB2	2.14	0.46
9:CI:80:HIS:O	9:CI:84:ARG:HB2	2.15	0.46
12:CL:6:LEU:HB3	17:CQ:33:TYR:CZ	2.51	0.46
12:CL:70:GLY:C	12:CL:98:ARG:HH22	2.20	0.46
56:CP:77:GLU:C	56:CP:79:ASN:H	2.22	0.46
22:DA:84:A:H2	22:DA:98:G:N3	2.13	0.46
22:DA:85:G:C6	22:DA:98:G:C2	3.02	0.46
22:DA:185:G:C4	22:DA:212:G:N2	2.83	0.46
22:DA:201:C:C4	22:DA:202:U:C5	3.03	0.46
22:DA:425:G:C2	22:DA:426:C:C4	3.03	0.46
22:DA:684:G:H5'	50:D2:16:HIS:NE2	2.31	0.46
22:DA:1039:A:N6	22:DA:1117:C:N4	2.62	0.46
22:DA:1115:G:H2'	22:DA:1116:G:H8	1.80	0.46
22:DA:1352:U:C5	22:DA:1377:G:O6	2.68	0.46
22:DA:1534:U:H2'	22:DA:1536:C:O2	2.15	0.46
22:DA:1594:U:H2'	22:DA:1595:C:H6	1.79	0.46
22:DA:1997:C:P	25:DD:129:THR:HG1	2.37	0.46
22:DA:2210:U:H4'	22:DA:2211:A:O5'	2.15	0.46
22:DA:2344:U:H2'	49:D1:35:LEU:O	2.14	0.46
22:DA:2571:U:O4	22:DA:2574:G:C8	2.68	0.46
22:DA:2600:A:C6	22:DA:2601:C:N4	2.84	0.46
22:DA:2760:C:H2'	22:DA:2760:C:O2	2.14	0.46
57:DB:58:A:C8	57:DB:59:A:N7	2.83	0.46
24:DC:45:ASN:C	24:DC:47:ARG:H	2.23	0.46
58:DF:4:HIS:CE1	58:DF:96:TRP:CZ2	3.03	0.46
30:DI:20:SER:OG	30:DI:25:PRO:HG2	2.15	0.46
31:DJ:43:GLU:O	31:DJ:43:GLU:CG	2.63	0.46
32:DK:62:VAL:HG12	32:DK:63:VAL:N	2.30	0.46
33:DL:48:ARG:HG3	33:DL:48:ARG:NH1	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:109:A:C6	1:AA:327:A:C6	3.03	0.46
1:AA:211:G:N1	1:AA:212:G:N3	2.62	0.46
1:AA:409:U:H2'	1:AA:410:G:C8	2.50	0.46
1:AA:436:C:H2'	1:AA:437:U:C6	2.50	0.46
1:AA:462:G:H3'	1:AA:463:U:C6	2.50	0.46
1:AA:500:G:C6	1:AA:546:A:C2	3.03	0.46
1:AA:1032:G:N2	1:AA:1033:G:C8	2.83	0.46
1:AA:1064:G:O4'	1:AA:1066:C:C6	2.69	0.46
1:AA:1136:C:O2	1:AA:1136:C:C2'	2.62	0.46
1:AA:1302:C:H6	1:AA:1302:C:H2'	1.49	0.46
7:AG:71:THR:O	7:AG:90:VAL:HG12	2.15	0.46
11:AK:86:LYS:HA	11:AK:113:THR:HG22	1.96	0.46
12:AL:65:TYR:CD2	12:AL:86:VAL:HG21	2.50	0.46
14:AN:96:LYS:HD2	14:AN:97:LYS:O	2.15	0.46
22:BA:223:A:O4'	22:BA:421:C:H4'	2.15	0.46
22:BA:286:U:H2'	22:BA:287:G:O4'	2.14	0.46
22:BA:417:C:H2'	22:BA:418:C:C6	2.51	0.46
22:BA:812:C:H1'	22:BA:1250:G:N2	2.29	0.46
22:BA:920:A:C6	22:BA:921:C:C4	3.02	0.46
22:BA:1717:A:H2'	22:BA:1718:G:O4'	2.15	0.46
22:BA:1853:A:C5	22:BA:1889:A:C6	3.03	0.46
22:BA:1956:U:O2	22:BA:1985:C:H4'	2.16	0.46
22:BA:1963:U:O5'	22:BA:1963:U:H6	1.98	0.46
22:BA:2193:G:H2'	22:BA:2194:U:C6	2.50	0.46
22:BA:2348:U:O2'	22:BA:2349:G:H5'	2.15	0.46
23:BB:37:C:C5	23:BB:38:C:C5	3.03	0.46
26:BE:48:THR:OG1	26:BE:50:ALA:HB3	2.15	0.46
26:BE:131:THR:HG22	26:BE:161:ALA:N	2.30	0.46
28:BG:23:ILE:H	28:BG:23:ILE:CD1	2.23	0.46
28:BG:148:ARG:HD2	28:BG:163:TYR:CE2	2.49	0.46
37:BP:33:GLU:C	37:BP:33:GLU:CD	2.83	0.46
37:BP:33:GLU:HB3	37:BP:36:LYS:O	2.15	0.46
39:BR:2:TYR:CE1	39:BR:42:ALA:HB3	2.51	0.46
39:BR:39:LEU:C	39:BR:49:ILE:HG23	2.40	0.46
41:BT:18:GLU:O	41:BT:19:LYS:C	2.57	0.46
41:BT:38:ALA:HB1	41:BT:43:ILE:HG21	1.97	0.46
41:BT:39:THR:CB	41:BT:42:GLU:HB2	2.31	0.46
43:BV:48:MET:O	43:BV:51:GLN:HG3	2.15	0.46
44:BW:16:GLU:O	44:BW:17:ALA:HB3	2.16	0.46
45:BX:34:SER:HA	45:BX:49:ARG:HA	1.98	0.46
53:CA:8:A:C5	4:CD:205:LYS:HG3	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:149:A:C2	53:CA:150:U:C2	3.03	0.46
53:CA:684:U:H3	53:CA:706:A:H61	1.63	0.46
53:CA:825:A:H2'	53:CA:826:C:H6	1.79	0.46
53:CA:960:U:H2'	53:CA:960:U:O2	2.15	0.46
53:CA:1272:G:H2'	53:CA:1273:C:H5'	1.97	0.46
54:CG:37:THR:HA	54:CG:40:SER:CB	2.44	0.46
8:CH:37:ASN:O	8:CH:41:GLU:HG2	2.16	0.46
55:CM:8:ILE:N	55:CM:9:PRO:HD3	2.30	0.46
17:CQ:61:ARG:CG	17:CQ:75:VAL:HG11	2.44	0.46
19:CS:54:ARG:HG2	19:CS:55:GLN:N	2.29	0.46
22:DA:26:G:C6	22:DA:27:G:N1	2.83	0.46
22:DA:58:G:N3	22:DA:73:A:H2	2.13	0.46
22:DA:365:U:H2'	22:DA:366:C:O4'	2.15	0.46
22:DA:744:U:C2'	22:DA:745:G:O5'	2.63	0.46
22:DA:769:U:O2'	22:DA:1379:U:H6	1.99	0.46
22:DA:849:A:C6	22:DA:850:U:C4	3.04	0.46
22:DA:950:G:C6	22:DA:951:C:N3	2.83	0.46
22:DA:1566:A:H2	24:DC:212:TRP:HB2	1.75	0.46
22:DA:1768:C:H2'	22:DA:1769:U:O4'	2.15	0.46
22:DA:2418:A:OP1	51:D3:44:ARG:HD3	2.15	0.46
22:DA:2431:U:N3	22:DA:2434:A:OP2	2.38	0.46
22:DA:2516:A:C2'	22:DA:2517:C:H5'	2.45	0.46
22:DA:2519:U:N1	22:DA:2542:A:N6	2.62	0.46
22:DA:2654:A:N6	22:DA:2667:C:H41	2.14	0.46
22:DA:2714:G:H2'	22:DA:2715:C:C6	2.49	0.46
22:DA:2788:C:O2	22:DA:2809:A:H2	1.99	0.46
22:DA:2843:G:C2	22:DA:2875:C:N3	2.83	0.46
57:DB:63:C:O2	57:DB:63:C:H2'	2.14	0.46
57:DB:69:G:C6	57:DB:70:C:C2	3.03	0.46
57:DB:81:G:C6	57:DB:82:U:C4	3.03	0.46
25:DD:99:GLU:HG3	25:DD:100:LEU:N	2.31	0.46
26:DE:153:LEU:HB2	26:DE:171:ASP:HB3	1.97	0.46
28:DG:106:LEU:HB2	28:DG:108:PHE:CE1	2.48	0.46
37:DP:3:ILE:O	37:DP:7:LEU:HB2	2.16	0.46
39:DR:68:ARG:NH1	39:DR:90:ARG:HG2	2.30	0.46
45:DX:29:LEU:HB2	45:DX:30:PRO:CD	2.44	0.46
51:D3:33:THR:CG2	51:D3:34:LYS:H	2.28	0.46
1:AA:531:U:H4'	1:AA:532:A:O5'	2.15	0.46
1:AA:1057:G:O3'	3:AC:196:GLY:HA3	2.16	0.46
1:AA:1348:U:HO2'	1:AA:1349:A:H8	1.62	0.46
2:AB:134:LEU:HD12	2:AB:137:THR:OG1	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:54:LEU:C	4:AD:54:LEU:HD23	2.41	0.46
5:AE:79:THR:HB	5:AE:121:ASN:ND2	2.30	0.46
11:AK:42:GLY:HA3	11:AK:73:VAL:CG1	2.43	0.46
11:AK:125:LYS:C	21:AU:33:ARG:NH2	2.73	0.46
20:AT:66:ILE:O	20:AT:70:LYS:HB3	2.16	0.46
22:BA:320:A:H4'	22:BA:322:A:C8	2.50	0.46
22:BA:343:C:H2'	22:BA:343:C:O2	2.15	0.46
22:BA:357:C:O2'	22:BA:358:U:H5'	2.15	0.46
22:BA:845:A:H3'	22:BA:845:A:N3	2.31	0.46
22:BA:988:A:P	47:BZ:11:SER:HB3	2.55	0.46
22:BA:1857:G:C1'	22:BA:1858:A:OP2	2.64	0.46
22:BA:2336:A:H61	44:BW:40:ARG:HB3	1.79	0.46
22:BA:2795:C:H2'	22:BA:2796:U:C6	2.50	0.46
24:BC:225:ASN:O	24:BC:226:PRO:C	2.59	0.46
27:BF:21:TYR:HE2	27:BF:28:PRO:HD2	1.80	0.46
29:BH:8:LYS:C	29:BH:13:GLY:HA3	2.41	0.46
31:BJ:56:VAL:HG12	31:BJ:57:LEU:N	2.30	0.46
33:BL:21:ARG:HD3	33:BL:21:ARG:HA	1.52	0.46
35:BN:16:HIS:O	35:BN:17:ARG:C	2.59	0.46
37:BP:4:ILE:C	37:BP:7:LEU:H	2.24	0.46
39:BR:102:SER:O	39:BR:103:ALA:O	2.33	0.46
40:BS:45:VAL:HG22	40:BS:46:LEU:N	2.28	0.46
41:BT:4:GLU:CD	41:BT:5:GLU:N	2.73	0.46
47:BZ:52:PHE:CD2	47:BZ:52:PHE:C	2.94	0.46
53:CA:148:G:C2	53:CA:149:A:C4	3.03	0.46
53:CA:193:C:O2'	53:CA:194:C:H5'	2.15	0.46
53:CA:740:U:H4'	15:CO:38:LEU:HD11	1.97	0.46
53:CA:1320:C:O2'	19:CS:72:GLU:HA	2.16	0.46
2:CB:221:ARG:C	2:CB:223:GLY:H	2.23	0.46
5:CE:103:GLY:HA3	5:CE:121:ASN:CA	2.43	0.46
10:CJ:42:LEU:HD22	10:CJ:71:LEU:HD23	1.97	0.46
11:CK:124:LYS:O	21:CU:33:ARG:CZ	2.63	0.46
55:CM:5:GLY:C	55:CM:6:ILE:HG13	2.40	0.46
19:CS:57:VAL:HG21	19:CS:75:PRO:HD2	1.98	0.46
20:CT:11:ILE:C	20:CT:13:SER:H	2.23	0.46
22:DA:595:C:O2	22:DA:663:G:C2	2.69	0.46
22:DA:963:U:O2'	22:DA:964:C:H6	1.98	0.46
22:DA:1130:U:O2'	22:DA:1131:G:H8	1.97	0.46
22:DA:1511:G:H2'	22:DA:1512:C:C6	2.51	0.46
22:DA:1638:C:H1'	22:DA:2698:U:O2'	2.16	0.46
22:DA:1907:G:C2	22:DA:1924:C:C2	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1930:G:O2'	22:DA:1931:U:P	2.74	0.46
22:DA:2221:G:C5	22:DA:2222:C:C5	3.04	0.46
22:DA:2489:U:C4	22:DA:2490:G:C6	3.04	0.46
22:DA:2603:G:C5	22:DA:2604:U:C5	3.03	0.46
22:DA:2880:C:H1'	35:DN:92:GLY:HA3	1.95	0.46
24:DC:77:VAL:CG2	24:DC:111:ALA:HA	2.45	0.46
25:DD:181:ASP:C	25:DD:183:GLU:N	2.70	0.46
26:DE:106:LYS:HG3	26:DE:200:LEU:HD12	1.98	0.46
26:DE:149:ILE:HG23	26:DE:188:MET:N	2.29	0.46
28:DG:103:ASN:HA	28:DG:112:VAL:HB	1.98	0.46
31:DJ:44:TYR:O	31:DJ:45:THR:CB	2.59	0.46
31:DJ:56:VAL:CG2	31:DJ:124:VAL:HG23	2.45	0.46
32:DK:88:ASN:O	32:DK:89:ASN:HB3	2.15	0.46
35:DN:75:ILE:HD12	35:DN:79:LEU:HD12	1.96	0.46
42:DU:64:ILE:HG23	42:DU:64:ILE:O	2.15	0.46
43:DV:56:PHE:C	43:DV:58:SER:N	2.73	0.46
45:DX:14:GLY:HA3	45:DX:28:PHE:CE1	2.49	0.46
45:DX:26:ARG:HG3	45:DX:27:ARG:N	2.30	0.46
45:DX:69:GLU:O	45:DX:71:ARG:N	2.48	0.46
45:DX:76:LYS:HG3	45:DX:77:TYR:N	2.31	0.46
1:AA:67:C:H2'	1:AA:68:G:C8	2.51	0.46
1:AA:355:C:C4	1:AA:356:A:N7	2.83	0.46
1:AA:878:A:H5"	8:AH:80:PRO:HG2	1.97	0.46
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.51	0.46
4:AD:52:VAL:HG22	4:AD:53:GLN:N	2.30	0.46
5:AE:152:VAL:HB	5:AE:156:ARG:HG3	1.97	0.46
7:AG:78:ARG:HD2	7:AG:83:THR:HA	1.98	0.46
7:AG:92:PRO:C	7:AG:93:VAL:HG22	2.40	0.46
11:AK:76:TYR:N	11:AK:76:TYR:HD1	2.13	0.46
11:AK:97:ARG:C	11:AK:99:LEU:H	2.23	0.46
15:AO:68:TYR:O	15:AO:69:LEU:C	2.58	0.46
20:AT:38:ILE:HG12	20:AT:38:ILE:H	1.52	0.46
22:BA:38:A:O2'	26:BE:43:THR:HA	2.15	0.46
22:BA:831:G:C6	22:BA:832:U:C4	3.04	0.46
22:BA:1062:G:H2'	22:BA:1063:G:C8	2.50	0.46
22:BA:1248:G:C4	38:BQ:2:ARG:HG2	2.51	0.46
22:BA:1585:C:O2'	22:BA:1586:A:H5'	2.14	0.46
22:BA:2479:U:OP1	22:BA:2537:U:H1'	2.16	0.46
22:BA:2786:U:O2'	22:BA:2787:C:H5'	2.15	0.46
23:BB:65:U:O4	23:BB:108:A:H1'	2.15	0.46
24:BC:108:GLY:C	24:BC:109:LEU:HD22	2.40	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BG:31:GLU:O	28:BG:31:GLU:HG3	2.15	0.46
30:BI:56:VAL:HG11	30:BI:68:PHE:HD2	1.80	0.46
30:BI:79:LEU:HD11	30:BI:132:ALA:HA	1.97	0.46
30:BI:115:ASP:OD1	30:BI:115:ASP:C	2.59	0.46
32:BK:24:VAL:HG12	32:BK:30:ARG:HD2	1.97	0.46
36:BO:48:LEU:HD23	36:BO:48:LEU:N	2.30	0.46
38:BQ:63:ARG:HH12	38:BQ:96:ASP:HB2	1.80	0.46
39:BR:43:ASN:HB3	39:BR:44:GLY:H	1.42	0.46
41:BT:7:LEU:O	41:BT:10:VAL:HG13	2.14	0.46
41:BT:24:MET:O	41:BT:28:ASN:O	2.32	0.46
41:BT:30:ILE:HG23	41:BT:30:ILE:O	2.16	0.46
43:BV:10:LYS:HB2	43:BV:10:LYS:HZ3	1.80	0.46
43:BV:25:LYS:NZ	43:BV:43:ASP:HB2	2.31	0.46
43:BV:35:GLU:H	43:BV:35:GLU:HG2	1.44	0.46
44:BW:25:PHE:O	44:BW:26:GLY:C	2.57	0.46
44:BW:77:LYS:O	44:BW:78:PHE:HB2	2.16	0.46
53:CA:45:G:O2'	53:CA:46:G:H5'	2.16	0.46
53:CA:198:G:O6	53:CA:220:G:C2	2.67	0.46
53:CA:583:A:H3'	53:CA:584:G:H8	1.80	0.46
53:CA:708:C:H2'	53:CA:709:U:C6	2.46	0.46
53:CA:1279:G:C5'	10:CJ:9:ARG:HH22	2.29	0.46
53:CA:1453:G:H2'	53:CA:1453:G:N3	2.29	0.46
4:CD:29:THR:C	4:CD:31:CYS:H	2.21	0.46
4:CD:187:ARG:CZ	4:CD:191:SER:OG	2.63	0.46
12:CL:85:ARG:HA	12:CL:93:ARG:HA	1.96	0.46
55:CM:13:HIS:NE2	55:CM:41:ASP:HA	2.29	0.46
56:CP:68:SER:HB3	56:CP:71:VAL:HG13	1.97	0.46
17:CQ:18:LYS:HA	17:CQ:50:ASN:OD1	2.15	0.46
22:DA:157:C:O2	22:DA:157:C:H2'	2.15	0.46
22:DA:167:A:H3'	22:DA:168:G:H8	1.80	0.46
22:DA:228:C:H5'	22:DA:229:C:C5	2.45	0.46
22:DA:410:G:C2	22:DA:2407:A:C6	3.04	0.46
22:DA:502:A:C6	22:DA:505:A:N7	2.84	0.46
22:DA:586:A:H5'	26:DE:84:THR:HG21	1.98	0.46
22:DA:590:A:C5	22:DA:591:U:C5	3.03	0.46
22:DA:1000:A:C6	22:DA:1001:A:C6	3.03	0.46
22:DA:1047:G:C2'	22:DA:1048:A:OP2	2.63	0.46
22:DA:1179:G:N2	22:DA:1180:U:C2	2.84	0.46
22:DA:1288:G:H2'	22:DA:1288:G:N3	2.30	0.46
22:DA:1345:C:H3'	22:DA:1345:C:P	2.55	0.46
22:DA:1394:U:H3'	22:DA:1394:U:H6	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1525:A:H2'	22:DA:1526:C:O4'	2.14	0.46
22:DA:1693:U:OP2	22:DA:1694:C:N4	2.42	0.46
22:DA:2233:U:H2'	22:DA:2234:G:C8	2.50	0.46
22:DA:2295:C:N4	22:DA:2296:U:O4	2.48	0.46
22:DA:2345:G:C5	22:DA:2381:A:C2	3.04	0.46
22:DA:2429:G:OP2	22:DA:2429:G:H3'	2.15	0.46
22:DA:2755:C:O3'	22:DA:2756:U:H6	1.97	0.46
57:DB:24:G:H5'	57:DB:25:U:C4	2.50	0.46
57:DB:109:A:O2'	57:DB:110:C:H6	1.94	0.46
25:DD:8:LYS:HB2	25:DD:201:LEU:CD1	2.32	0.46
25:DD:107:VAL:N	25:DD:206:ALA:H	2.13	0.46
25:DD:119:ALA:HB3	25:DD:163:GLY:N	2.25	0.46
29:DH:125:THR:HG22	29:DH:146:VAL:HG11	1.97	0.46
32:DK:2:ILE:O	32:DK:3:GLN:HG2	2.15	0.46
37:DP:88:ARG:HH11	37:DP:112:ARG:NH2	2.12	0.46
39:DR:2:TYR:HD2	39:DR:42:ALA:HB2	1.78	0.46
41:DT:19:LYS:O	41:DT:20:ALA:HB2	2.15	0.46
43:DV:44:HIS:CD2	43:DV:85:LYS:HB2	2.51	0.46
43:DV:50:MET:O	43:DV:53:LYS:HB2	2.15	0.46
43:DV:69:GLU:C	43:DV:70:ILE:HD13	2.41	0.46
43:DV:77:VAL:O	43:DV:77:VAL:HG13	2.16	0.46
47:DZ:4:ILE:HG21	47:DZ:56:VAL:HG13	1.98	0.46
1:AA:191:G:H2'	1:AA:192:A:H8	1.80	0.46
1:AA:263:A:H2'	1:AA:264:C:C6	2.50	0.46
1:AA:896:C:H2'	1:AA:897:C:H6	1.81	0.46
1:AA:1418:A:C2	1:AA:1483:A:C2	3.04	0.46
1:AA:1458:G:OP1	20:AT:29:THR:HG21	2.15	0.46
2:AB:138:ARG:HB2	2:AB:138:ARG:HH11	1.81	0.46
5:AE:81:GLN:HG2	5:AE:149:PRO:CG	2.44	0.46
6:AF:90:MET:HE1	18:AR:22:TYR:CZ	2.51	0.46
7:AG:136:LYS:O	7:AG:140:VAL:HG23	2.16	0.46
13:AM:21:ILE:H	13:AM:21:ILE:HD12	1.81	0.46
14:AN:83:VAL:HG12	14:AN:84:ARG:N	2.30	0.46
17:AQ:66:LEU:O	17:AQ:67:SER:HB3	2.15	0.46
22:BA:435:C:H2'	22:BA:436:C:H5'	1.96	0.46
22:BA:522:A:C6	22:BA:523:C:C4	3.04	0.46
22:BA:709:U:H2'	22:BA:710:U:H6	1.80	0.46
22:BA:1002:G:H2'	22:BA:1003:G:O5'	2.16	0.46
22:BA:2308:G:N7	27:BF:76:PHE:CE2	2.83	0.46
22:BA:2485:G:H5"	34:BM:45:GLN:NE2	2.27	0.46
22:BA:2742:G:OP1	52:B4:36:ARG:HD3	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:62:C:O2'	23:BB:63:C:H5'	2.16	0.46
26:BE:134:LEU:HD21	26:BE:161:ALA:HB2	1.98	0.46
28:BG:59:ASP:O	28:BG:62:ALA:HB3	2.16	0.46
32:BK:118:LEU:O	32:BK:119:ALA:HB3	2.15	0.46
33:BL:74:THR:HA	33:BL:107:PHE:O	2.16	0.46
37:BP:32:VAL:O	37:BP:33:GLU:C	2.59	0.46
37:BP:87:ARG:HH11	37:BP:87:ARG:HG2	1.81	0.46
45:BX:29:LEU:CD2	45:BX:29:LEU:N	2.78	0.46
53:CA:350:G:C6	53:CA:351:G:O6	2.68	0.46
53:CA:408:A:C2	53:CA:435:A:C2	3.04	0.46
53:CA:708:C:O2'	53:CA:709:U:H5'	2.15	0.46
53:CA:728:A:C8	15:CO:53:ARG:CZ	2.98	0.46
53:CA:764:C:N4	53:CA:812:G:N1	2.64	0.46
53:CA:1241:G:N3	53:CA:1242:G:N7	2.63	0.46
4:CD:86:GLY:HA3	4:CD:196:GLU:HG3	1.97	0.46
12:CL:52:CYS:O	12:CL:54:VAL:HG23	2.15	0.46
55:CM:12:LYS:HA	55:CM:12:LYS:CE	2.42	0.46
55:CM:53:ASP:HA	55:CM:56:ARG:CZ	2.46	0.46
20:CT:42:ASP:O	20:CT:43:LYS:C	2.58	0.46
22:DA:77:G:H2'	22:DA:78:U:O4'	2.15	0.46
22:DA:379:G:C5	22:DA:396:G:C6	3.03	0.46
22:DA:442:G:C6	22:DA:444:C:N4	2.83	0.46
22:DA:764:A:N1	22:DA:1789:A:O2'	2.48	0.46
22:DA:768:G:N2	22:DA:1379:U:O2'	2.44	0.46
22:DA:1167:C:O2'	22:DA:1168:G:H5'	2.15	0.46
22:DA:1361:G:H2'	22:DA:1362:C:H5'	1.98	0.46
22:DA:1465:G:H2'	22:DA:1466:U:O4'	2.15	0.46
22:DA:1912:A:N6	22:DA:1917:U:H3	2.12	0.46
22:DA:2052:A:OP1	25:DD:146:ILE:HG12	2.16	0.46
22:DA:2297:A:O2'	22:DA:2298:A:C8	2.33	0.46
57:DB:42:C:N4	58:DF:87:LYS:NZ	2.58	0.46
24:DC:131:MET:HA	24:DC:134:ILE:HG12	1.98	0.46
25:DD:51:THR:HG23	25:DD:76:GLY:HA3	1.97	0.46
26:DE:34:ALA:HA	26:DE:94:GLN:HG3	1.98	0.46
26:DE:79:ARG:HG2	26:DE:80:SER:N	2.31	0.46
58:DF:137:PHE:HB2	58:DF:138:PRO:CD	2.34	0.46
30:DI:118:GLY:O	30:DI:123:ALA:HB3	2.16	0.46
33:DL:3:LEU:O	33:DL:6:LEU:HB2	2.16	0.46
34:DM:36:VAL:HG13	43:DV:82:TYR:HD1	1.80	0.46
35:DN:14:SER:C	35:DN:16:HIS:N	2.72	0.46
41:DT:76:ARG:HG2	41:DT:77:ARG:N	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DU:42:LYS:HB2	42:DU:42:LYS:NZ	2.31	0.46
42:DU:85:ARG:HA	42:DU:85:ARG:HE	1.80	0.46
51:D3:41:ARG:HH21	51:D3:41:ARG:CG	2.28	0.46
1:AA:49:U:O2'	1:AA:50:A:H2'	2.15	0.46
1:AA:182:A:C4	1:AA:184:G:N7	2.83	0.46
1:AA:603:U:H2'	1:AA:604:G:H8	1.80	0.46
1:AA:626:G:H2'	1:AA:627:G:H8	1.79	0.46
1:AA:872:A:C8	1:AA:874:G:C8	3.03	0.46
1:AA:898:G:N2	1:AA:901:A:OP2	2.46	0.46
1:AA:1314:C:C2'	1:AA:1315:U:H5'	2.46	0.46
2:AB:63:LYS:HD3	2:AB:63:LYS:C	2.41	0.46
5:AE:114:LEU:HG	5:AE:119:VAL:HG21	1.97	0.46
11:AK:124:LYS:HE2	11:AK:124:LYS:C	2.40	0.46
13:AM:106:ARG:HH21	13:AM:112:ARG:CB	2.27	0.46
19:AS:47:THR:O	19:AS:48:ILE:C	2.59	0.46
20:AT:57:VAL:O	20:AT:58:ASP:C	2.57	0.46
22:BA:528:A:H2'	22:BA:529:A:H5"	1.97	0.46
22:BA:1568:G:H4'	24:BC:58:LYS:CB	2.46	0.46
22:BA:1682:G:C8	22:BA:1757:A:N3	2.83	0.46
22:BA:1845:G:C2'	22:BA:1846:G:H5'	2.45	0.46
22:BA:1846:G:C2	22:BA:1895:C:C2	3.03	0.46
23:BB:40:U:O2'	23:BB:43:C:OP2	2.21	0.46
28:BG:27:GLY:O	28:BG:28:LYS:C	2.58	0.46
30:BI:79:LEU:HD22	30:BI:137:LEU:CD1	2.46	0.46
30:BI:105:LEU:HA	30:BI:108:ILE:HD12	1.97	0.46
33:BL:110:VAL:O	33:BL:111:ILE:CB	2.56	0.46
34:BM:8:LYS:HD2	34:BM:8:LYS:HA	1.41	0.46
37:BP:37:LYS:HG2	37:BP:37:LYS:O	2.16	0.46
38:BQ:86:SER:HB2	39:BR:50:GLY:O	2.15	0.46
46:BY:57:LEU:CA	46:BY:60:LYS:HB3	2.44	0.46
53:CA:304:U:H2'	53:CA:305:G:C8	2.50	0.46
53:CA:533:A:H2'	62:CA:1850:HOH:O	2.15	0.46
53:CA:647:C:H2'	53:CA:648:A:H8	1.80	0.46
54:CG:22:LEU:HD23	54:CG:22:LEU:C	2.40	0.46
55:CM:77:LYS:HD3	55:CM:77:LYS:C	2.41	0.46
19:CS:50:VAL:CG1	19:CS:70:LEU:HB3	2.46	0.46
22:DA:224:U:H5	22:DA:420:C:H4'	1.80	0.46
22:DA:241:A:C4	22:DA:243:U:O4	2.69	0.46
22:DA:249:C:C4'	22:DA:250:G:O5'	2.63	0.46
22:DA:301:G:C2	22:DA:317:G:C4	3.04	0.46
22:DA:364:C:H2'	22:DA:365:U:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:378:C:O2'	22:DA:379:G:H5'	2.15	0.46
22:DA:484:C:O2'	22:DA:485:C:H5'	2.15	0.46
22:DA:567:U:O4	22:DA:568:U:C4	2.69	0.46
22:DA:876:C:O2	22:DA:876:C:C4'	2.63	0.46
22:DA:1317:G:C2	22:DA:1336:A:C2	3.03	0.46
22:DA:1419:A:C2	22:DA:1579:A:C2	3.04	0.46
22:DA:1420:A:C4	22:DA:2211:A:N7	2.84	0.46
22:DA:2074:U:H2'	22:DA:2075:U:C6	2.51	0.46
22:DA:2193:G:H2'	22:DA:2194:U:H6	1.80	0.46
22:DA:2379:G:H2'	22:DA:2380:C:H6	1.78	0.46
22:DA:2461:A:H1'	22:DA:2492:U:O2	2.15	0.46
22:DA:2523:G:C2'	22:DA:2524:G:H5'	2.46	0.46
22:DA:2773:C:H2'	22:DA:2774:C:C6	2.41	0.46
22:DA:2850:A:C6	22:DA:2869:G:H4'	2.50	0.46
24:DC:269:ARG:HA	24:DC:269:ARG:HE	1.81	0.46
25:DD:30:GLU:HG2	25:DD:185:ASN:ND2	2.30	0.46
25:DD:88:GLU:O	25:DD:89:GLU:HG3	2.16	0.46
58:DF:1:ALA:HB2	58:DF:93:GLU:O	2.16	0.46
58:DF:11:VAL:HG22	58:DF:171:ALA:HA	1.97	0.46
36:DO:62:LEU:CD1	36:DO:65:THR:HG23	2.45	0.46
37:DP:5:LYS:O	37:DP:9:GLN:HG2	2.15	0.46
50:D2:31:LEU:HA	50:D2:34:ARG:CB	2.40	0.46
1:AA:404:G:N7	4:AD:1:ALA:CB	2.79	0.46
1:AA:697:U:O2	1:AA:798:U:H1'	2.15	0.46
1:AA:912:C:H6	1:AA:912:C:O5'	1.98	0.46
1:AA:1173:U:H2'	1:AA:1174:G:C8	2.51	0.46
1:AA:1429:A:H4'	22:BA:1703:G:O2'	2.15	0.46
2:AB:72:LYS:HZ2	2:AB:204:ASP:HB3	1.81	0.46
4:AD:68:GLU:O	4:AD:69:ARG:C	2.58	0.46
4:AD:116:LEU:C	4:AD:122:ILE:HD11	2.40	0.46
4:AD:185:PRO:HB2	4:AD:190:LEU:HD23	1.98	0.46
5:AE:120:HIS:O	5:AE:121:ASN:CB	2.59	0.46
5:AE:158:LYS:HG3	8:AH:63:LYS:NZ	2.31	0.46
10:AJ:51:VAL:O	10:AJ:62:ARG:HA	2.15	0.46
12:AL:107:LYS:O	12:AL:108:ASP:HB2	2.16	0.46
14:AN:78:LEU:HB2	14:AN:83:VAL:HG23	1.97	0.46
15:AO:69:LEU:HD22	15:AO:77:TYR:HB2	1.97	0.46
20:AT:4:LYS:O	20:AT:5:SER:C	2.58	0.46
20:AT:27:MET:CE	20:AT:57:VAL:HG22	2.37	0.46
22:BA:686:U:H2'	22:BA:788:A:N1	2.30	0.46
22:BA:807:U:O2'	22:BA:808:G:H5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1183:U:O2'	22:BA:1184:U:H5'	2.16	0.46
22:BA:1534:U:H5'	22:BA:1535:A:OP1	2.16	0.46
22:BA:1692:U:H2'	22:BA:1694:C:C5	2.51	0.46
22:BA:1731:G:C5	22:BA:1733:G:N7	2.84	0.46
22:BA:1830:C:O5'	22:BA:1830:C:H6	1.99	0.46
22:BA:2264:C:N4	44:BW:11:ASN:ND2	2.63	0.46
22:BA:2286:G:O6	49:B1:22:THR:HG21	2.16	0.46
22:BA:2648:G:O2'	22:BA:2649:C:H5'	2.16	0.46
24:BC:20:ASN:ND2	24:BC:22:GLU:H	2.13	0.46
24:BC:56:GLY:O	24:BC:57:HIS:O	2.34	0.46
29:BH:21:VAL:HG21	29:BH:25:TYR:CD2	2.51	0.46
30:BI:126:ARG:CA	30:BI:129:GLU:HB2	2.43	0.46
33:BL:131:ALA:O	33:BL:132:ARG:C	2.59	0.46
36:BO:43:ASN:OD1	36:BO:43:ASN:C	2.58	0.46
37:BP:37:LYS:N	37:BP:37:LYS:CD	2.79	0.46
42:BU:87:GLU:O	42:BU:88:ASP:O	2.34	0.46
44:BW:28:GLU:OE2	44:BW:28:GLU:CA	2.64	0.46
47:BZ:9:THR:HG22	47:BZ:10:ARG:N	2.30	0.46
53:CA:247:G:C5	53:CA:278:G:C2	3.03	0.46
53:CA:729:A:H2'	53:CA:730:G:O4'	2.16	0.46
53:CA:846:G:O2'	53:CA:847:G:H5'	2.16	0.46
53:CA:1147:C:O2'	53:CA:1148:U:C6	2.58	0.46
53:CA:1167:A:H2'	53:CA:1168:U:OP1	2.15	0.46
2:CB:176:ASN:C	2:CB:178:LEU:H	2.23	0.46
5:CE:136:VAL:O	5:CE:140:ILE:HG13	2.16	0.46
18:CR:33:THR:C	18:CR:35:SER:H	2.24	0.46
22:DA:74:A:H5'	46:DY:48:ARG:HH22	1.80	0.46
22:DA:117:G:C6	22:DA:119:A:C6	3.04	0.46
22:DA:120:U:C2	22:DA:149:A:C6	3.03	0.46
22:DA:142:A:O2'	22:DA:143:C:H6	1.97	0.46
22:DA:1011:G:H4'	22:DA:1012:U:OP2	2.15	0.46
22:DA:1439:A:H8	22:DA:1440:U:O4'	1.98	0.46
22:DA:1493:C:O2	22:DA:1493:C:C2'	2.58	0.46
22:DA:1553:A:C8	22:DA:1555:G:C5	3.03	0.46
22:DA:1568:G:N2	24:DC:57:HIS:HE1	2.09	0.46
22:DA:1570:A:C6	22:DA:1571:A:C6	3.03	0.46
22:DA:1661:G:N3	22:DA:1662:U:C6	2.84	0.46
22:DA:1728:C:H2'	22:DA:1730:C:O2	2.16	0.46
22:DA:1753:G:N2	22:DA:1756:G:OP2	2.48	0.46
22:DA:2337:G:OP1	22:DA:2385:C:OP2	2.34	0.46
22:DA:2461:A:C2	22:DA:2490:G:N2	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2507:C:H1'	22:DA:2583:G:C2	2.51	0.46
24:DC:128:THR:HG22	24:DC:188:ARG:CB	2.40	0.46
25:DD:4:LEU:HD23	25:DD:101:PHE:CZ	2.49	0.46
25:DD:151:THR:O	25:DD:152:PRO:C	2.54	0.46
58:DF:12:VAL:CG1	58:DF:16:MET:HG3	2.45	0.46
28:DG:92:GLY:O	28:DG:93:TYR:C	2.58	0.46
31:DJ:117:ALA:HA	31:DJ:120:ARG:HD2	1.97	0.46
33:DL:100:ILE:O	33:DL:101:ILE:CB	2.63	0.46
35:DN:73:ASN:O	35:DN:76:VAL:HG22	2.16	0.46
41:DT:12:ARG:HG3	46:DY:29:ARG:NH1	2.31	0.46
44:DW:20:LEU:HD12	44:DW:34:SER:H	1.81	0.46
51:D3:18:LYS:CD	51:D3:19:GLY:H	2.27	0.46
1:AA:182:A:C4	1:AA:184:G:C8	3.04	0.46
1:AA:320:A:H5"	1:AA:321:A:OP2	2.16	0.46
1:AA:476:U:O2'	1:AA:477:C:H5'	2.16	0.46
1:AA:480:U:C5'	1:AA:481:G:OP2	2.63	0.46
1:AA:1343:G:O3'	9:AI:123:ARG:HB3	2.16	0.46
1:AA:1453:G:N2	1:AA:1454:G:C8	2.84	0.46
2:AB:209:VAL:O	2:AB:211:LEU:N	2.49	0.46
8:AH:10:LEU:HD11	8:AH:126:CYS:HB3	1.98	0.46
9:AI:49:GLN:C	9:AI:51:LEU:N	2.73	0.46
11:AK:34:THR:HG1	11:AK:38:GLY:HA2	1.81	0.46
14:AN:53:ASP:HA	14:AN:58:ARG:HH11	1.81	0.46
22:BA:847:U:O2	22:BA:847:U:H2'	2.15	0.46
22:BA:1112:G:C6	22:BA:1113:U:C4	3.04	0.46
22:BA:1131:G:OP1	31:BJ:82:GLY:CA	2.58	0.46
22:BA:1420:A:C5	22:BA:2211:A:C6	3.04	0.46
22:BA:1427:A:H4'	22:BA:1428:C:O5'	2.14	0.46
22:BA:1605:C:C2'	22:BA:1606:C:H5"	2.45	0.46
22:BA:1624:U:H2'	22:BA:1625:C:H6	1.81	0.46
22:BA:1946:U:O2'	22:BA:1947:C:H5'	2.15	0.46
22:BA:2233:U:H2'	22:BA:2234:G:H8	1.75	0.46
22:BA:2356:U:C5'	44:BW:16:GLU:HG3	2.46	0.46
24:BC:90:ILE:HD13	24:BC:90:ILE:HA	1.56	0.46
25:BD:33:ARG:NH2	25:BD:74:GLU:O	2.49	0.46
29:BH:31:VAL:HG13	29:BH:36:ALA:O	2.16	0.46
32:BK:104:THR:O	32:BK:107:LEU:HB2	2.15	0.46
32:BK:113:MET:O	32:BK:114:LYS:C	2.59	0.46
34:BM:55:ARG:O	34:BM:56:ALA:HB2	2.15	0.46
35:BN:18:GLN:HE21	35:BN:22:ARG:NH1	2.14	0.46
37:BP:19:PHE:HB2	37:BP:20:ARG:H	1.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BP:102:ARG:O	37:BP:103:THR:HG22	2.16	0.46
43:BV:5:ASN:H	43:BV:5:ASN:HD22	1.59	0.46
43:BV:77:VAL:HG21	43:BV:86:LEU:HD22	1.96	0.46
45:BX:39:VAL:HG22	45:BX:44:ARG:O	2.16	0.46
48:B0:38:LEU:O	48:B0:41:HIS:HB2	2.16	0.46
48:B0:40:HIS:HA	48:B0:48:TYR:OH	2.16	0.46
53:CA:80:A:H3'	53:CA:81:A:H4'	1.98	0.46
53:CA:216:U:H2'	53:CA:217:C:C6	2.50	0.46
53:CA:243:A:H4'	53:CA:244:U:C5'	2.29	0.46
53:CA:328:C:O2'	53:CA:329:A:OP2	2.28	0.46
53:CA:1108:G:H5"	3:CC:175:HIS:ND1	2.30	0.46
53:CA:1142:G:C2	53:CA:1143:G:H1'	2.51	0.46
53:CA:1240:U:H5"	54:CG:108:ARG:HH21	1.81	0.46
2:CB:103:TRP:HA	2:CB:106:VAL:CB	2.41	0.46
3:CC:29:ALA:HB1	14:CN:64:ARG:HH12	1.77	0.46
3:CC:172:VAL:O	3:CC:174:LEU:N	2.49	0.46
4:CD:25:ARG:O	4:CD:26:ALA:C	2.58	0.46
9:CI:11:ARG:NH2	9:CI:108:ARG:NH2	2.63	0.46
9:CI:14:SER:HA	9:CI:68:GLY:O	2.15	0.46
10:CJ:79:PRO:HA	10:CJ:84:VAL:HG11	1.97	0.46
15:CO:38:LEU:O	15:CO:41:HIS:HB3	2.15	0.46
22:DA:9:G:N2	22:DA:10:A:N6	2.63	0.46
22:DA:83:A:N6	22:DA:101:A:H5'	2.30	0.46
22:DA:146:A:C2	22:DA:147:C:C2	3.03	0.46
22:DA:275:C:H1'	22:DA:363:G:N2	2.31	0.46
22:DA:347:A:H2'	22:DA:348:A:H8	1.80	0.46
22:DA:1006:C:H6	22:DA:1006:C:O5'	1.97	0.46
22:DA:1047:G:H2'	22:DA:1048:A:OP2	2.16	0.46
22:DA:1408:G:H2'	22:DA:1409:U:C6	2.51	0.46
22:DA:1754:A:OP1	37:DP:93:LYS:HE3	2.16	0.46
22:DA:2262:U:O2'	22:DA:2263:C:H5'	2.15	0.46
22:DA:2345:G:H4'	22:DA:2346:A:O5'	2.16	0.46
22:DA:2345:G:C4	22:DA:2347:C:C5	3.04	0.46
22:DA:2819:G:H5"	62:DA:3791:HOH:O	2.16	0.46
24:DC:15:VAL:HG13	24:DC:204:LEU:O	2.16	0.46
24:DC:255:LYS:C	24:DC:256:THR:HG23	2.40	0.46
25:DD:16:THR:HG22	25:DD:20:VAL:HB	1.98	0.46
58:DF:39:VAL:HG13	58:DF:49:LEU:CD2	2.45	0.46
58:DF:60:SER:OG	58:DF:88:VAL:HG11	2.16	0.46
29:DH:78:VAL:HG22	29:DH:100:ALA:HA	1.98	0.46
29:DH:99:ILE:HG22	29:DH:100:ALA:N	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DI:20:SER:N	30:DI:21:PRO:CD	2.79	0.46
33:DL:23:ILE:HD13	39:DR:84:ARG:CZ	2.46	0.46
35:DN:33:ILE:HD13	35:DN:118:ARG:NH2	2.31	0.46
42:DU:7:ASP:O	42:DU:8:ASP:HB2	2.14	0.46
42:DU:58:VAL:HG12	42:DU:59:GLU:N	2.31	0.46
44:DW:43:LYS:HA	44:DW:43:LYS:HD3	1.64	0.46
48:D0:42:ILE:HD11	48:D0:48:TYR:HB2	1.97	0.46
1:AA:104:G:O2'	1:AA:105:G:H5'	2.16	0.46
1:AA:150:U:H2'	1:AA:151:A:H8	1.81	0.46
1:AA:184:G:H4'	1:AA:224:U:O3'	2.16	0.46
1:AA:421:U:H2'	1:AA:422:C:OP1	2.16	0.46
1:AA:582:C:C4	1:AA:583:A:N7	2.84	0.46
1:AA:600:A:H2'	1:AA:601:G:H8	1.81	0.46
2:AB:49:PHE:CG	2:AB:212:TYR:OH	2.68	0.46
2:AB:116:LEU:CD1	2:AB:140:LEU:HD11	2.45	0.46
2:AB:136:ARG:HD2	2:AB:136:ARG:O	2.16	0.46
2:AB:139:GLU:O	2:AB:143:LEU:HD23	2.15	0.46
3:AC:88:LYS:O	3:AC:89:VAL:C	2.59	0.46
6:AF:20:GLY:O	6:AF:24:ARG:HD3	2.15	0.46
7:AG:7:GLY:O	7:AG:8:GLN:HB3	2.16	0.46
12:AL:42:LYS:O	12:AL:44:PRO:HD2	2.16	0.46
15:AO:9:LYS:HB3	15:AO:9:LYS:NZ	2.31	0.46
19:AS:40:PHE:HB2	19:AS:42:ASN:ND2	2.31	0.46
19:AS:79:TYR:CE1	19:AS:80:ARG:HB2	2.51	0.46
21:AU:13:VAL:HG13	21:AU:15:LEU:CG	2.45	0.46
22:BA:544:C:C4	22:BA:550:C:N4	2.84	0.46
22:BA:708:G:N2	22:BA:724:U:H1'	2.31	0.46
22:BA:1319:C:O2	22:BA:1334:G:C2	2.68	0.46
22:BA:1906:G:C2'	22:BA:1907:G:O5'	2.64	0.46
22:BA:2013:A:OP1	40:BS:96:ILE:HA	2.15	0.46
22:BA:2307:G:O6	27:BF:40:GLY:HA3	2.15	0.46
22:BA:2486:C:H2'	22:BA:2487:G:O5'	2.16	0.46
22:BA:2848:G:H1'	22:BA:2867:G:N2	2.30	0.46
25:BD:9:VAL:HG13	25:BD:26:VAL:O	2.14	0.46
25:BD:67:HIS:HD1	25:BD:67:HIS:C	2.23	0.46
26:BE:47:LYS:HD3	26:BE:51:GLU:O	2.16	0.46
26:BE:124:PHE:CD1	26:BE:124:PHE:C	2.93	0.46
27:BF:8:LYS:O	27:BF:12:VAL:CG1	2.63	0.46
27:BF:128:SER:HA	27:BF:154:THR:HB	1.98	0.46
29:BH:29:PHE:O	29:BH:33:GLN:HB3	2.16	0.46
31:BJ:88:THR:CG2	31:BJ:91:GLU:HG3	2.44	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:38:ILE:HD11	32:BK:112:PHE:CZ	2.39	0.46
33:BL:76:GLU:C	33:BL:77:ILE:HD12	2.41	0.46
36:BO:103:VAL:O	36:BO:105:ALA:O	2.33	0.46
40:BS:21:ALA:HB1	40:BS:74:ILE:HG12	1.98	0.46
44:BW:18:LYS:CG	44:BW:19:ARG:N	2.69	0.46
50:B2:1:MET:CE	50:B2:2:LYS:H	2.27	0.46
53:CA:501:C:H1'	53:CA:549:C:O2'	2.16	0.46
53:CA:532:A:N6	3:CC:191:THR:HG21	2.30	0.46
53:CA:725:G:H2'	53:CA:726:C:H6	1.79	0.46
53:CA:922:G:C6	53:CA:923:A:C6	3.04	0.46
53:CA:940:C:H2'	53:CA:941:G:O4'	2.15	0.46
53:CA:979:C:OP2	53:CA:981:U:O4	2.34	0.46
53:CA:1287:A:O2'	53:CA:1288:A:H8	1.92	0.46
53:CA:1331:G:C2'	53:CA:1332:A:OP2	2.64	0.46
53:CA:1365:G:O2'	53:CA:1366:C:H6	1.99	0.46
3:CC:11:LEU:O	3:CC:13:ILE:N	2.49	0.46
3:CC:149:LYS:HG3	3:CC:168:ARG:HB2	1.98	0.46
6:CF:51:ILE:O	6:CF:54:LEU:HB2	2.16	0.46
54:CG:21:LEU:O	54:CG:25:PHE:N	2.49	0.46
10:CJ:52:LEU:CD2	10:CJ:59:LYS:HA	2.46	0.46
55:CM:113:LYS:OXT	55:CM:113:LYS:HD3	2.16	0.46
15:CO:73:ASP:OD2	15:CO:76:ARG:HD3	2.16	0.46
21:CU:52:VAL:HG22	21:CU:52:VAL:O	2.16	0.46
22:DA:71:A:C5'	22:DA:73:A:C8	2.97	0.46
22:DA:75:G:H4'	46:DY:48:ARG:NH2	2.31	0.46
22:DA:126:A:C8	22:DA:127:A:C6	3.04	0.46
22:DA:172:A:O2'	22:DA:173:A:H5'	2.15	0.46
22:DA:247:G:N7	22:DA:249:C:C2	2.83	0.46
22:DA:425:G:C2	22:DA:426:C:C5	3.04	0.46
22:DA:1218:G:C2	22:DA:1232:G:C5	3.03	0.46
22:DA:1627:G:C2	22:DA:1628:G:N7	2.84	0.46
22:DA:1670:C:C5	22:DA:1671:U:C4	3.04	0.46
22:DA:2067:G:H4'	22:DA:2068:U:OP2	2.16	0.46
22:DA:2282:G:H4'	22:DA:2283:C:OP2	2.15	0.46
22:DA:2311:A:O2'	58:DF:84:ILE:HD13	2.16	0.46
22:DA:2448:A:H61	33:DL:36:LYS:CE	2.29	0.46
22:DA:2688:G:H1'	22:DA:2721:A:H61	1.80	0.46
22:DA:2738:A:C2	22:DA:2766:A:N6	2.83	0.46
31:DJ:106:LYS:HE2	31:DJ:106:LYS:HA	1.98	0.46
36:DO:49:VAL:CG1	36:DO:81:ARG:HB3	2.45	0.46
37:DP:21:PRO:HA	37:DP:46:VAL:HG12	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DP:62:LYS:O	37:DP:63:ILE:HB	2.16	0.46
39:DR:98:ILE:HD12	39:DR:98:ILE:N	2.31	0.46
40:DS:4:ILE:CG2	40:DS:106:VAL:HG22	2.46	0.46
41:DT:21:SER:HA	41:DT:25:GLU:HB2	1.98	0.46
41:DT:38:ALA:C	41:DT:39:THR:HG22	2.41	0.46
42:DU:86:PHE:HB2	42:DU:92:VAL:HG22	1.97	0.46
43:DV:56:PHE:CE1	43:DV:61:LEU:HD13	2.51	0.46
44:DW:36:ILE:CG2	44:DW:39:GLN:HB2	2.45	0.46
45:DX:19:HIS:C	45:DX:21:LEU:N	2.70	0.46
46:DY:58:ASN:C	46:DY:60:LYS:N	2.71	0.46
51:D3:6:VAL:HG12	51:D3:6:VAL:O	2.16	0.46
51:D3:14:LYS:O	51:D3:21:PHE:O	2.34	0.46
1:AA:217:C:O2'	1:AA:218:U:H5'	2.16	0.46
1:AA:345:C:H3'	37:BP:33:GLU:OE1	2.16	0.46
1:AA:1450:U:H2'	1:AA:1452:C:C5	2.51	0.46
3:AC:25:THR:HG23	14:AN:75:LYS:HD3	1.98	0.46
4:AD:196:GLU:C	4:AD:198:LEU:N	2.72	0.46
8:AH:66:GLN:HB3	8:AH:67:GLY:H	1.52	0.46
8:AH:76:ARG:NE	8:AH:78:SER:O	2.37	0.46
12:AL:7:VAL:HG13	17:AQ:30:HIS:HD2	1.80	0.46
17:AQ:37:ILE:H	17:AQ:37:ILE:HD12	1.81	0.46
22:BA:621:A:OP2	33:BL:99:ASN:OD1	2.33	0.46
22:BA:999:U:P	62:BA:3356:HOH:O	2.74	0.46
22:BA:1600:C:OP1	41:BT:81:LYS:NZ	2.49	0.46
22:BA:2244:U:H2'	22:BA:2245:U:O4'	2.16	0.46
22:BA:2259:U:C6	22:BA:2427:C:C4	3.04	0.46
22:BA:2345:G:C4	22:BA:2381:A:C2	3.03	0.46
22:BA:2525:G:C2	22:BA:2539:C:C2	3.04	0.46
22:BA:2574:G:C6	22:BA:2575:C:C4	3.04	0.46
22:BA:2783:U:H2'	22:BA:2784:U:C6	2.51	0.46
22:BA:2886:A:C2	22:BA:2887:A:H1'	2.51	0.46
23:BB:109:A:C6	23:BB:110:C:C4	3.04	0.46
27:BF:39:VAL:C	27:BF:41:GLU:H	2.23	0.46
28:BG:122:ALA:HB2	28:BG:132:LEU:HB3	1.96	0.46
29:BH:3:VAL:HB	29:BH:37:VAL:O	2.17	0.46
39:BR:49:ILE:HG13	39:BR:51:VAL:O	2.16	0.46
43:BV:42:LEU:HD12	43:BV:47:VAL:HG21	1.97	0.46
53:CA:58:C:O2'	53:CA:59:A:H5'	2.15	0.46
53:CA:81:A:N3	53:CA:89:U:O4	2.49	0.46
53:CA:267:C:H2'	53:CA:268:U:O5'	2.16	0.46
53:CA:288:A:H2'	53:CA:289:G:H4'	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:530:G:H5”	53:CA:531:U:H5”	1.98	0.46
53:CA:794:A:H4’	53:CA:1521:C:O2’	2.16	0.46
53:CA:982:U:C5	53:CA:983:A:N6	2.83	0.46
53:CA:985:C:H2’	53:CA:986:U:C6	2.51	0.46
53:CA:1004:A:C4	53:CA:1026:G:N7	2.84	0.46
53:CA:1006:G:N2	53:CA:1007:U:H1’	2.31	0.46
53:CA:1225:A:H2’	53:CA:1225:A:N3	2.30	0.46
2:CB:209:VAL:HG23	2:CB:210:THR:N	2.30	0.46
3:CC:8:GLY:HA2	3:CC:11:LEU:HG	1.98	0.46
3:CC:100:ILE:HD12	3:CC:101:ASN:N	2.31	0.46
4:CD:147:LYS:O	4:CD:147:LYS:HD3	2.16	0.46
4:CD:157:ALA:O	4:CD:160:LEU:HB2	2.15	0.46
4:CD:161:ALA:O	4:CD:164:ARG:HB2	2.16	0.46
4:CD:166:LYS:HA	4:CD:167:PRO:HD2	1.69	0.46
4:CD:203:TYR:C	4:CD:205:LYS:H	2.23	0.46
6:CF:67:PRO:O	6:CF:68:GLN:C	2.59	0.46
11:CK:19:VAL:N	11:CK:34:THR:O	2.48	0.46
12:CL:47:ALA:C	12:CL:48:LEU:HD23	2.41	0.46
22:DA:9:G:H21	22:DA:10:A:N6	2.13	0.46
22:DA:230:G:O2’	22:DA:231:A:O5’	2.33	0.46
22:DA:251:A:H8	22:DA:251:A:O5’	1.99	0.46
22:DA:311:A:O2’	22:DA:332:A:H5’	2.16	0.46
22:DA:576:U:H4’	22:DA:2502:G:C8	2.51	0.46
22:DA:743:A:C2’	22:DA:744:U:H5’	2.46	0.46
22:DA:752:A:C6	22:DA:1781:U:H1’	2.51	0.46
22:DA:999:U:C2’	22:DA:1000:A:H5’	2.46	0.46
22:DA:1083:U:H1’	22:DA:1086:A:N1	2.30	0.46
22:DA:1317:G:N2	22:DA:1336:A:N3	2.64	0.46
22:DA:1326:U:O2’	22:DA:1327:A:C8	2.43	0.46
22:DA:1337:G:N2	22:DA:1338:G:H1’	2.30	0.46
22:DA:1338:G:H4’	41:DT:18:GLU:CG	2.46	0.46
22:DA:1722:A:C6	22:DA:1739:A:C8	3.03	0.46
22:DA:1731:G:C2	22:DA:1733:G:C8	3.04	0.46
22:DA:1869:G:C2	22:DA:1873:G:C6	3.04	0.46
22:DA:2143:C:C2	22:DA:2148:G:N1	2.80	0.46
22:DA:2209:G:C2	22:DA:2216:G:C2	3.04	0.46
22:DA:2348:U:O2’	22:DA:2349:G:H5’	2.16	0.46
22:DA:2376:A:C1’	36:DO:99:TYR:CE1	2.99	0.46
22:DA:2724:U:P	25:DD:116:LYS:HZ3	2.38	0.46
22:DA:2735:G:C4	22:DA:2736:A:C8	3.04	0.46
24:DC:144:GLU:HG2	24:DC:146:LYS:O	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:112:THR:HG22	25:DD:113:SER:H	1.81	0.46
58:DF:134:GLN:HG3	58:DF:149:ARG:O	2.16	0.46
58:DF:147:ARG:HD2	58:DF:147:ARG:H	1.81	0.46
29:DH:49:ALA:HB3	29:DH:50:ARG:NH2	2.30	0.46
29:DH:94:ILE:HG13	29:DH:98:ASP:CB	2.46	0.46
32:DK:22:ILE:HD11	32:DK:40:LYS:HG3	1.96	0.46
34:DM:49:ALA:HB3	34:DM:103:TYR:OH	2.15	0.46
34:DM:136:MET:HE2	43:DV:57:TYR:HD2	1.81	0.46
35:DN:45:ARG:C	35:DN:47:VAL:H	2.23	0.46
35:DN:67:PHE:C	35:DN:67:PHE:CD1	2.94	0.46
35:DN:67:PHE:HE2	35:DN:73:ASN:HD21	1.64	0.46
36:DO:18:LEU:HD13	36:DO:25:ARG:HG2	1.97	0.46
39:DR:19:THR:HA	39:DR:96:VAL:O	2.15	0.46
39:DR:26:ASP:O	39:DR:27:ILE:HD13	2.16	0.46
41:DT:14:PRO:O	41:DT:32:LEU:HA	2.15	0.46
41:DT:18:GLU:HB2	41:DT:19:LYS:H	1.51	0.46
42:DU:54:PRO:HG2	42:DU:55:GLY:H	1.81	0.46
45:DX:10:ARG:HB3	45:DX:11:PRO:HD2	1.97	0.46
46:DY:22:LEU:HG	46:DY:23:ARG:H	1.80	0.46
49:D1:16:THR:HG21	49:D1:42:VAL:HG23	1.97	0.46
1:AA:376:G:H5"	16:AP:5:ARG:HB2	1.98	0.45
1:AA:439:U:H4'	4:AD:120:LYS:HG3	1.97	0.45
1:AA:596:A:N6	1:AA:645:G:N1	2.63	0.45
1:AA:979:C:OP2	1:AA:980:C:H5	1.98	0.45
4:AD:147:LYS:O	4:AD:148:ALA:C	2.59	0.45
5:AE:15:ILE:HG21	5:AE:35:LEU:HD23	1.97	0.45
5:AE:110:MET:CB	5:AE:139:THR:HG21	2.46	0.45
5:AE:148:SER:O	5:AE:152:VAL:HG13	2.16	0.45
10:AJ:18:ILE:CG2	10:AJ:19:ASP:N	2.79	0.45
16:AP:56:ARG:HA	16:AP:56:ARG:HD2	1.76	0.45
20:AT:58:ASP:O	20:AT:61:ALA:HB3	2.16	0.45
22:BA:27:G:N2	22:BA:512:G:H1'	2.31	0.45
22:BA:1152:C:H2'	22:BA:1153:C:H6	1.80	0.45
22:BA:1570:A:C6	22:BA:1571:A:C6	3.04	0.45
22:BA:1821:A:H2'	22:BA:1822:C:C6	2.51	0.45
22:BA:2255:G:H2'	22:BA:2256:G:O4'	2.16	0.45
22:BA:2259:U:C5	22:BA:2427:C:N4	2.84	0.45
22:BA:2331:G:O2'	44:BW:39:GLN:O	2.34	0.45
24:BC:106:PRO:HA	24:BC:141:HIS:NE2	2.30	0.45
24:BC:142:ASN:CG	24:BC:142:ASN:O	2.58	0.45
25:BD:40:LEU:O	25:BD:41:ALA:C	2.59	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:134:LEU:CD2	26:BE:161:ALA:HB2	2.47	0.45
30:BI:24:GLY:O	30:BI:34:ILE:HD12	2.17	0.45
31:BJ:37:ARG:HA	31:BJ:118:MET:HE2	1.97	0.45
35:BN:30:ARG:HE	35:BN:30:ARG:HB2	1.46	0.45
39:BR:21:ARG:NH2	39:BR:93:PHE:CE1	2.85	0.45
41:BT:55:VAL:O	41:BT:55:VAL:HG12	2.16	0.45
42:BU:3:LYS:O	42:BU:82:VAL:HG21	2.15	0.45
44:BW:11:ASN:C	44:BW:12:GLY:O	2.58	0.45
45:BX:32:LEU:O	45:BX:33:HIS:CD2	2.69	0.45
45:BX:39:VAL:C	45:BX:41:SER:N	2.74	0.45
49:B1:3:GLY:O	49:B1:5:ARG:N	2.44	0.45
52:B4:10:LEU:CD1	52:B4:33:HIS:HD2	2.26	0.45
53:CA:20:U:O2'	53:CA:21:G:H5'	2.16	0.45
53:CA:116:A:H8	53:CA:116:A:O5'	1.98	0.45
53:CA:408:A:OP1	4:CD:111:ALA:HB3	2.16	0.45
53:CA:517:G:H5'	53:CA:519:C:C2	2.51	0.45
53:CA:1078:U:C5	53:CA:1079:G:C5	3.04	0.45
53:CA:1449:C:H2'	53:CA:1450:U:O4'	2.16	0.45
2:CB:119:GLN:HG2	2:CB:119:GLN:O	2.16	0.45
4:CD:143:SER:CB	4:CD:178:GLU:HG3	2.38	0.45
8:CH:17:GLN:OE1	8:CH:62:LEU:HB3	2.16	0.45
10:CJ:49:PHE:CE2	14:CN:73:LEU:HD13	2.51	0.45
10:CJ:101:SER:O	10:CJ:102:LEU:HB2	2.16	0.45
22:DA:9:G:N1	22:DA:2629:U:H2'	2.28	0.45
22:DA:227:A:C4'	22:DA:228:C:OP1	2.38	0.45
22:DA:701:G:N3	22:DA:701:G:H2'	2.30	0.45
22:DA:1587:G:N2	22:DA:1588:G:H1'	2.31	0.45
22:DA:1635:A:H2'	22:DA:1636:U:C6	2.51	0.45
22:DA:1980:G:O2'	22:DA:1982:U:OP2	2.32	0.45
22:DA:2100:G:C6	22:DA:2101:A:C6	3.04	0.45
22:DA:2331:G:C2	22:DA:2385:C:N3	2.84	0.45
22:DA:2873:A:H4'	62:DA:3790:HOH:O	2.16	0.45
25:DD:94:GLN:O	25:DD:95:SER:C	2.58	0.45
25:DD:187:LEU:O	25:DD:188:LEU:HD23	2.16	0.45
58:DF:101:ARG:HH11	58:DF:138:PRO:CB	2.29	0.45
31:DJ:41:LYS:C	31:DJ:43:GLU:N	2.75	0.45
31:DJ:44:TYR:CD1	38:DQ:63:ARG:NH2	2.84	0.45
31:DJ:97:PRO:C	31:DJ:99:ARG:N	2.73	0.45
38:DQ:91:ARG:NE	39:DR:11:GLN:HB2	2.31	0.45
39:DR:48:LYS:HD2	39:DR:48:LYS:N	2.31	0.45
42:DU:81:ARG:O	42:DU:82:VAL:HG13	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DY:6:LEU:HD21	46:DY:56:LEU:HD12	1.98	0.45
50:D2:23:ALA:O	50:D2:24:THR:HB	2.16	0.45
1:AA:17:U:H2'	1:AA:18:C:C6	2.51	0.45
1:AA:86:G:N3	1:AA:87:C:H5	2.15	0.45
1:AA:251:G:H4'	1:AA:252:U:O5'	2.17	0.45
1:AA:497:G:O2'	1:AA:498:A:H5'	2.16	0.45
1:AA:1144:G:OP2	1:AA:1144:G:C8	2.69	0.45
1:AA:1286:U:O2	1:AA:1286:U:H2'	2.16	0.45
1:AA:1447:A:H5"	1:AA:1448:C:H5	1.81	0.45
1:AA:1453:G:H2'	1:AA:1454:G:O4'	2.15	0.45
4:AD:57:LYS:HG3	4:AD:58:GLN:N	2.31	0.45
4:AD:164:ARG:O	4:AD:165:GLU:C	2.59	0.45
7:AG:77:ARG:NE	7:AG:77:ARG:HA	2.31	0.45
7:AG:144:ALA:C	7:AG:146:ALA:H	2.24	0.45
9:AI:40:ARG:O	9:AI:44:ARG:HD3	2.16	0.45
11:AK:100:ASN:HD22	11:AK:106:ILE:CG2	2.25	0.45
14:AN:20:PHE:HA	14:AN:24:ALA:HB3	1.98	0.45
17:AQ:12:VAL:CG1	17:AQ:21:VAL:O	2.64	0.45
17:AQ:48:GLU:OE1	17:AQ:48:GLU:HA	2.15	0.45
22:BA:748:G:OP2	40:BS:88:ARG:HG3	2.16	0.45
22:BA:852:U:H2'	22:BA:853:C:C6	2.51	0.45
22:BA:1190:G:OP1	33:BL:32:GLY:CA	2.60	0.45
22:BA:1224:U:C4	22:BA:1225:G:C6	3.04	0.45
22:BA:1759:A:C8	22:BA:2696:U:H1'	2.52	0.45
22:BA:2210:U:H4'	22:BA:2211:A:H5'	1.99	0.45
22:BA:2512:C:H2'	22:BA:2513:A:O4'	2.17	0.45
22:BA:2742:G:O2'	22:BA:2743:U:H5'	2.16	0.45
22:BA:2888:C:H2'	22:BA:2889:C:C6	2.51	0.45
24:BC:198:GLU:O	24:BC:199:HIS:C	2.58	0.45
25:BD:103:ASP:O	25:BD:104:VAL:C	2.58	0.45
26:BE:48:THR:C	26:BE:50:ALA:H	2.24	0.45
29:BH:76:GLU:HB3	29:BH:103:VAL:HG12	1.98	0.45
30:BI:123:ALA:HA	30:BI:126:ARG:CZ	2.46	0.45
31:BJ:32:LEU:CD2	31:BJ:54:ILE:HG12	2.46	0.45
38:BQ:94:LEU:O	38:BQ:96:ASP:N	2.47	0.45
42:BU:78:LYS:HG2	42:BU:79:ALA:H	1.81	0.45
48:B0:53:VAL:O	48:B0:54:ILE:C	2.58	0.45
53:CA:32:A:C2	53:CA:33:A:C5	3.05	0.45
53:CA:65:A:C5	53:CA:200:G:O2'	2.69	0.45
53:CA:163:C:H2'	53:CA:164:G:O5'	2.16	0.45
53:CA:229:U:H2'	53:CA:230:G:O4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:555:U:H2'	53:CA:556:C:H6	1.79	0.45
53:CA:748:G:H2'	53:CA:749:A:C8	2.51	0.45
53:CA:764:C:N4	53:CA:812:G:C6	2.84	0.45
53:CA:781:A:H2	53:CA:1514:G:H4'	1.81	0.45
53:CA:1271:A:O2'	14:CN:33:VAL:HG21	2.16	0.45
53:CA:1319:A:C6	53:CA:1323:G:C4	3.04	0.45
2:CB:19:THR:OG1	2:CB:20:ARG:N	2.47	0.45
4:CD:154:VAL:O	4:CD:157:ALA:HB3	2.16	0.45
5:CE:110:MET:HE1	5:CE:124:ALA:HB1	1.99	0.45
6:CF:90:MET:CE	18:CR:60:ARG:HD3	2.47	0.45
55:CM:69:ARG:HA	55:CM:72:ILE:CG2	2.46	0.45
21:CU:9:GLU:HB3	21:CU:10:PRO:HD2	1.97	0.45
22:DA:259:G:C2'	22:DA:260:G:H5'	2.47	0.45
22:DA:379:G:C5	22:DA:396:G:O6	2.69	0.45
22:DA:604:G:C6	22:DA:625:G:N1	2.84	0.45
22:DA:962:G:O2'	22:DA:963:U:O5'	2.33	0.45
22:DA:973:A:O5'	39:DR:81:LYS:HE3	2.16	0.45
22:DA:983:A:H2'	22:DA:984:A:H5'	1.98	0.45
22:DA:1207:C:H2'	22:DA:1208:C:C6	2.50	0.45
22:DA:1255:U:O2'	22:DA:1256:G:OP1	2.33	0.45
22:DA:1264:A:H1'	22:DA:2015:A:N6	2.31	0.45
22:DA:1273:U:H4'	22:DA:1275:A:OP2	2.16	0.45
22:DA:1328:A:H2'	22:DA:1330:C:C5	2.51	0.45
22:DA:1904:G:OP2	22:DA:1971:U:O4	2.33	0.45
22:DA:1910:G:C6	22:DA:1911:U:C4	3.05	0.45
22:DA:2144:G:O2'	22:DA:2145:C:O5'	2.34	0.45
22:DA:2332:C:H4'	44:DW:40:ARG:CZ	2.46	0.45
22:DA:2348:U:H2'	22:DA:2349:G:C8	2.48	0.45
22:DA:2561:U:H2'	22:DA:2562:U:O5'	2.15	0.45
22:DA:2595:G:N1	22:DA:2599:G:C6	2.84	0.45
24:DC:191:LEU:HD22	24:DC:191:LEU:N	2.32	0.45
24:DC:212:TRP:C	24:DC:212:TRP:CD1	2.95	0.45
25:DD:149:ASN:OD1	25:DD:150:GLN:N	2.49	0.45
58:DF:41:GLU:CG	58:DF:42:ALA:H	2.26	0.45
58:DF:41:GLU:O	58:DF:43:ILE:N	2.49	0.45
58:DF:102:LEU:HB3	58:DF:103:ILE:HD12	1.99	0.45
58:DF:169:LEU:HB3	58:DF:174:PHE:HB2	1.98	0.45
28:DG:86:LEU:HA	28:DG:163:TYR:CB	2.40	0.45
33:DL:103:ILE:HD12	33:DL:103:ILE:H	1.81	0.45
48:D0:37:HIS:HB3	48:D0:43:THR:HG22	1.99	0.45
1:AA:68:G:C5	1:AA:69:G:H1'	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:73:C:O2'	1:AA:74:A:C5'	2.64	0.45
1:AA:298:A:H2'	1:AA:299:G:O4'	2.16	0.45
1:AA:436:C:H2'	1:AA:437:U:H6	1.81	0.45
1:AA:807:A:C5	1:AA:808:C:C4	3.04	0.45
1:AA:826:C:H5'	8:AH:12:ARG:NH2	2.31	0.45
1:AA:1250:A:N3	1:AA:1370:G:O2'	2.44	0.45
1:AA:1281:C:H2'	1:AA:1282:C:H5	1.80	0.45
2:AB:67:LEU:HD22	2:AB:69:VAL:CG2	2.44	0.45
5:AE:108:GLY:O	5:AE:109:ALA:HB3	2.17	0.45
6:AF:9:MET:HE3	18:AR:64:LEU:HD22	1.96	0.45
6:AF:38:ARG:NH1	6:AF:38:ARG:CG	2.72	0.45
9:AI:12:LYS:H	9:AI:105:ARG:HH12	1.64	0.45
14:AN:22:LYS:CG	14:AN:23:ARG:H	2.25	0.45
20:AT:82:ILE:HD12	20:AT:83:ASN:N	2.31	0.45
21:AU:3:ILE:CA	21:AU:19:LYS:HZ1	2.29	0.45
22:BA:767:U:O2'	22:BA:768:G:H5'	2.16	0.45
22:BA:1188:U:C2'	22:BA:1189:A:H5'	2.46	0.45
22:BA:1539:U:H2'	22:BA:1540:G:C8	2.47	0.45
22:BA:1613:G:C2	22:BA:1619:G:C5	3.04	0.45
22:BA:2151:U:N3	22:BA:2152:G:N7	2.64	0.45
22:BA:2353:G:O2'	44:BW:31:LEU:HD23	2.17	0.45
22:BA:2838:G:H2'	22:BA:2839:G:O4'	2.16	0.45
24:BC:247:TRP:O	24:BC:249:VAL:N	2.50	0.45
24:BC:251:THR:CG2	24:BC:252:LYS:H	2.25	0.45
25:BD:53:GLY:HA3	25:BD:77:ARG:H	1.81	0.45
26:BE:1:MET:HG3	26:BE:14:VAL:HG23	1.97	0.45
28:BG:115:GLN:H	28:BG:115:GLN:NE2	2.11	0.45
32:BK:12:ASP:C	32:BK:100:PHE:HE1	2.24	0.45
34:BM:71:LYS:HD3	34:BM:95:LEU:CD1	2.47	0.45
36:BO:34:HIS:CD2	36:BO:53:THR:OG1	2.69	0.45
38:BQ:59:LEU:HD22	38:BQ:59:LEU:O	2.17	0.45
41:BT:29:THR:HB	41:BT:86:THR:HG22	1.99	0.45
46:BY:26:PHE:HD1	46:BY:27:ASN:ND2	2.14	0.45
53:CA:237:G:C6	53:CA:238:A:C6	3.04	0.45
53:CA:495:A:C2	53:CA:496:A:C6	3.05	0.45
53:CA:624:C:H2'	53:CA:625:U:O4'	2.16	0.45
53:CA:737:C:H2'	53:CA:738:C:C6	2.52	0.45
53:CA:890:G:O2'	53:CA:906:A:N6	2.49	0.45
53:CA:953:G:H2'	53:CA:954:G:C8	2.52	0.45
53:CA:971:G:H5"	53:CA:972:C:C5'	2.46	0.45
6:CF:99:ALA:O	6:CF:100:SER:CB	2.64	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:16:ALA:HA	9:CI:65:THR:O	2.16	0.45
56:CP:78:VAL:C	56:CP:80:LYS:N	2.74	0.45
21:CU:34:ARG:O	21:CU:35:GLU:O	2.34	0.45
22:DA:33:C:O2'	22:DA:446:G:N2	2.44	0.45
22:DA:125:A:OP2	50:D2:19:ARG:NH2	2.49	0.45
22:DA:855:G:O2'	44:DW:23:LYS:HD3	2.16	0.45
22:DA:1342:A:H5'	22:DA:1398:C:OP1	2.15	0.45
22:DA:1607:C:N4	22:DA:1622:G:N7	2.64	0.45
22:DA:1693:U:C4'	22:DA:1694:C:OP2	2.46	0.45
22:DA:1794:A:H2'	22:DA:1795:C:C6	2.52	0.45
22:DA:1869:G:N1	22:DA:1873:G:C6	2.84	0.45
22:DA:2210:U:O2	22:DA:2212:A:H5"	2.16	0.45
22:DA:2297:A:C2	22:DA:2298:A:C8	3.04	0.45
22:DA:2344:U:O2'	49:D1:37:LYS:HE2	2.16	0.45
22:DA:2413:G:H2'	22:DA:2414:G:H8	1.81	0.45
22:DA:2494:G:O2'	34:DM:79:ALA:HA	2.16	0.45
22:DA:2756:U:H4'	22:DA:2757:A:OP1	2.15	0.45
22:DA:2868:A:C6	22:DA:2869:G:C6	3.04	0.45
57:DB:24:G:H4'	57:DB:26:C:H5	1.80	0.45
57:DB:32:U:C2	57:DB:51:G:N2	2.84	0.45
24:DC:140:VAL:CG2	24:DC:161:VAL:HB	2.46	0.45
24:DC:140:VAL:HG23	24:DC:141:HIS:H	1.82	0.45
24:DC:144:GLU:HB3	24:DC:187:CYS:CB	2.37	0.45
25:DD:61:THR:HB	25:DD:63:PRO:HD2	1.99	0.45
26:DE:134:LEU:O	26:DE:138:LEU:HG	2.17	0.45
29:DH:90:LEU:CB	29:DH:123:ARG:HB3	2.36	0.45
29:DH:96:THR:O	29:DH:97:ARG:HG3	2.15	0.45
34:DM:45:GLN:OE1	34:DM:125:PRO:HG3	2.16	0.45
35:DN:51:LEU:HA	35:DN:54:LEU:CD2	2.47	0.45
37:DP:50:ARG:CA	37:DP:57:ALA:O	2.62	0.45
37:DP:90:ALA:HB3	37:DP:110:LYS:HB2	1.99	0.45
1:AA:210:C:H4'	1:AA:211:G:C2	2.52	0.45
1:AA:502:A:H2'	1:AA:503:C:C6	2.52	0.45
1:AA:967:C:O5'	1:AA:967:C:H6	1.99	0.45
1:AA:993:G:H2'	1:AA:993:G:N3	2.31	0.45
1:AA:1346:A:C4	1:AA:1348:U:C4	3.05	0.45
6:AF:29:ILE:HG12	6:AF:64:VAL:CG1	2.38	0.45
7:AG:14:ASP:HB3	7:AG:18:GLY:H	1.81	0.45
8:AH:5:PRO:O	8:AH:8:ASP:HB3	2.16	0.45
8:AH:93:LYS:HE3	8:AH:116:ARG:NH1	2.31	0.45
10:AJ:15:HIS:CG	10:AJ:16:ARG:N	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:23:LEU:C	12:AL:25:ALA:N	2.74	0.45
14:AN:61:ASN:HD22	14:AN:61:ASN:HA	1.58	0.45
15:AO:84:LEU:HB3	15:AO:86:LEU:HD22	1.98	0.45
16:AP:51:ARG:HG2	16:AP:52:LEU:N	2.31	0.45
22:BA:189:G:H2'	22:BA:205:G:N2	2.32	0.45
22:BA:553:G:H2'	22:BA:554:U:O4'	2.16	0.45
22:BA:587:C:C2	33:BL:33:ARG:NH2	2.84	0.45
22:BA:607:U:O4	22:BA:620:G:O4'	2.35	0.45
22:BA:826:U:H2'	22:BA:828:U:O4'	2.17	0.45
22:BA:1241:A:C2'	22:BA:1242:U:H5'	2.47	0.45
22:BA:1593:A:H2'	22:BA:1594:U:O4'	2.17	0.45
22:BA:1783:A:C2	22:BA:2587:A:C4	3.04	0.45
22:BA:2140:G:C2	22:BA:2141:G:C4	3.04	0.45
22:BA:2230:G:H2'	22:BA:2231:U:C6	2.50	0.45
24:BC:227:VAL:O	24:BC:227:VAL:HG23	2.17	0.45
24:BC:257:ARG:HG3	24:BC:269:ARG:HH12	1.80	0.45
26:BE:12:LEU:O	26:BE:12:LEU:HD13	2.17	0.45
29:BH:132:PHE:CG	29:BH:133:GLN:N	2.84	0.45
32:BK:28:SER:O	32:BK:30:ARG:N	2.50	0.45
34:BM:40:ARG:HD3	34:BM:93:VAL:HG21	1.99	0.45
35:BN:70:THR:HG21	35:BN:75:ILE:HD11	1.97	0.45
37:BP:3:ILE:C	37:BP:4:ILE:O	2.55	0.45
37:BP:58:PHE:CD2	37:BP:58:PHE:N	2.80	0.45
37:BP:85:VAL:HG13	37:BP:86:LYS:N	2.32	0.45
38:BQ:60:TRP:CH2	38:BQ:93:ILE:HB	2.52	0.45
39:BR:48:LYS:HD2	39:BR:48:LYS:N	2.24	0.45
40:BS:23:LEU:HD11	48:B0:21:LEU:HD13	1.99	0.45
40:BS:36:LEU:HA	40:BS:36:LEU:HD12	1.52	0.45
44:BW:24:ARG:HB2	44:BW:65:LYS:HD3	1.99	0.45
45:BX:5:GLN:HE21	45:BX:49:ARG:CB	2.29	0.45
46:BY:61:ALA:C	46:BY:63:ALA:H	2.24	0.45
53:CA:335:C:O2	53:CA:1433:A:H2	1.99	0.45
53:CA:1248:A:O2'	9:CI:37:TYR:HD1	1.98	0.45
53:CA:1367:C:H5'	10:CJ:62:ARG:NH1	2.31	0.45
2:CB:103:TRP:O	2:CB:107:ARG:HG2	2.16	0.45
3:CC:129:PHE:O	3:CC:130:ARG:C	2.59	0.45
4:CD:144:ILE:CD1	4:CD:154:VAL:HG21	2.46	0.45
4:CD:186:GLU:O	4:CD:187:ARG:HB2	2.16	0.45
5:CE:81:GLN:HB3	5:CE:82:HIS:H	1.61	0.45
9:CI:126:PHE:O	9:CI:126:PHE:CG	2.69	0.45
10:CJ:48:ARG:HB3	14:CN:100:TRP:HZ2	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CQ:27:PHE:HD1	17:CQ:36:PHE:HB3	1.80	0.45
22:DA:26:G:H1'	22:DA:515:A:H61	1.81	0.45
22:DA:28:A:C2	22:DA:29:U:H1'	2.52	0.45
22:DA:54:G:C5	22:DA:55:G:C8	3.04	0.45
22:DA:86:G:C2	22:DA:87:U:C4	3.05	0.45
22:DA:86:G:O2'	22:DA:87:U:C6	2.66	0.45
22:DA:156:A:H2'	22:DA:157:C:C6	2.50	0.45
22:DA:191:A:O2'	22:DA:192:C:H5'	2.15	0.45
22:DA:219:A:C5	22:DA:220:G:C5	3.05	0.45
22:DA:279:A:H61	22:DA:361:G:C1'	2.23	0.45
22:DA:653:U:OP1	22:DA:653:U:H4'	2.16	0.45
22:DA:732:C:H2'	22:DA:733:G:O4'	2.17	0.45
22:DA:850:U:HO2'	47:DZ:46:MET:HE3	1.80	0.45
22:DA:1244:A:C2'	22:DA:1245:G:H5'	2.46	0.45
22:DA:1286:A:C4	22:DA:1289:C:C4	3.04	0.45
22:DA:1400:U:H2'	22:DA:1401:G:O4'	2.17	0.45
22:DA:1665:A:C2'	22:DA:1666:G:H5'	2.47	0.45
22:DA:1686:C:H2'	22:DA:1687:G:O4'	2.16	0.45
22:DA:1866:A:H2'	22:DA:1867:G:O4'	2.16	0.45
22:DA:2013:A:N6	22:DA:2014:A:C2	2.85	0.45
22:DA:2106:U:H2'	22:DA:2107:G:O4'	2.17	0.45
22:DA:2233:U:H2'	22:DA:2234:G:H8	1.81	0.45
22:DA:2234:G:C6	22:DA:2235:G:C5	3.04	0.45
22:DA:2474:U:H2'	22:DA:2475:C:O5'	2.15	0.45
22:DA:2708:G:H1'	35:DN:71:ARG:CZ	2.47	0.45
57:DB:30:C:H2'	57:DB:31:C:H5'	1.97	0.45
25:DD:200:ASP:O	25:DD:201:LEU:HD23	2.16	0.45
26:DE:9:GLN:O	26:DE:9:GLN:HG3	2.17	0.45
58:DF:8:LYS:HG3	58:DF:12:VAL:HG21	1.97	0.45
58:DF:103:ILE:H	58:DF:107:VAL:CG1	2.30	0.45
30:DI:57:VAL:HG12	30:DI:58:ILE:N	2.29	0.45
30:DI:102:ARG:CZ	30:DI:105:LEU:HD22	2.45	0.45
31:DJ:23:LYS:HB3	31:DJ:28:LEU:HD13	1.98	0.45
31:DJ:64:VAL:CG1	31:DJ:65:THR:N	2.79	0.45
38:DQ:57:ARG:C	38:DQ:59:LEU:N	2.74	0.45
40:DS:68:ASP:OD1	40:DS:68:ASP:N	2.48	0.45
43:DV:63:ILE:O	43:DV:63:ILE:HG22	2.17	0.45
44:DW:40:ARG:CG	44:DW:40:ARG:NH1	2.56	0.45
47:DZ:32:GLY:C	47:DZ:34:THR:N	2.70	0.45
1:AA:77:A:N6	1:AA:90:C:C4	2.85	0.45
1:AA:180:U:H2'	1:AA:181:A:O5'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:287:U:H2'	1:AA:288:A:H8	1.82	0.45
1:AA:497:G:N2	1:AA:498:A:C6	2.84	0.45
1:AA:622:A:C8	1:AA:623:C:C6	3.04	0.45
1:AA:903:G:C6	1:AA:904:U:C4	3.05	0.45
1:AA:1071:C:H2'	1:AA:1072:G:H8	1.81	0.45
1:AA:1299:A:N3	1:AA:1299:A:C2'	2.70	0.45
7:AG:88:VAL:HG22	7:AG:89:GLU:N	2.31	0.45
16:AP:46:LYS:NZ	16:AP:48:GLU:H	2.13	0.45
22:BA:221:A:C4	22:BA:266:G:N7	2.85	0.45
22:BA:264:C:O2'	22:BA:265:A:H2'	2.17	0.45
22:BA:859:G:OP2	22:BA:859:G:C8	2.69	0.45
22:BA:1534:U:H5'	22:BA:1535:A:P	2.56	0.45
22:BA:1567:G:C2'	24:BC:84:PRO:HG3	2.42	0.45
22:BA:1735:A:C2	22:BA:1736:U:C2	3.05	0.45
22:BA:2318:G:C5	22:BA:2319:G:C6	3.04	0.45
22:BA:2365:G:C2'	22:BA:2366:A:C8	3.00	0.45
22:BA:2530:A:C8	28:BG:156:TYR:OH	2.67	0.45
22:BA:2756:U:H1'	22:BA:2757:A:H5"	1.97	0.45
22:BA:2780:G:H4'	22:BA:2781:A:OP2	2.17	0.45
26:BE:37:ALA:C	26:BE:39:ALA:H	2.23	0.45
31:BJ:25:LEU:HB2	31:BJ:62:VAL:HG21	1.98	0.45
31:BJ:27:ARG:HH11	31:BJ:27:ARG:HG2	1.80	0.45
33:BL:28:GLY:O	33:BL:29:LYS:HB3	2.17	0.45
35:BN:51:LEU:HD21	35:BN:70:THR:HG22	1.97	0.45
38:BQ:85:ALA:HA	38:BQ:115:ALA:CB	2.47	0.45
41:BT:68:LYS:O	41:BT:69:ARG:O	2.33	0.45
44:BW:23:LYS:HE3	44:BW:24:ARG:HG3	1.99	0.45
53:CA:98:A:H2'	53:CA:99:C:C6	2.51	0.45
53:CA:560:A:H5'	53:CA:566:G:N2	2.32	0.45
53:CA:976:G:N7	53:CA:1359:C:O4'	2.49	0.45
53:CA:1364:U:O2'	53:CA:1365:G:H5'	2.15	0.45
3:CC:122:GLN:HB2	3:CC:127:VAL:HG21	1.99	0.45
3:CC:166:TRP:N	3:CC:166:TRP:CE3	2.84	0.45
6:CF:9:MET:HB2	6:CF:85:ILE:HG13	1.98	0.45
9:CI:46:VAL:O	9:CI:79:ARG:HG3	2.17	0.45
10:CJ:92:LEU:N	10:CJ:92:LEU:HD13	2.31	0.45
56:CP:48:GLU:CD	56:CP:51:ARG:HB2	2.42	0.45
19:CS:4:LEU:HB3	19:CS:5:LYS:H	1.53	0.45
22:DA:86:G:O2'	22:DA:87:U:H6	2.00	0.45
22:DA:481:G:OP2	42:DU:43:LYS:HA	2.17	0.45
22:DA:877:A:H2'	22:DA:877:A:N3	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:920:A:H2'	22:DA:921:C:C6	2.52	0.45
22:DA:1127:A:O2'	22:DA:1128:G:C5'	2.63	0.45
22:DA:1314:C:OP1	22:DA:1332:G:H5"	2.15	0.45
22:DA:2054:A:C2	22:DA:2616:C:C2	3.04	0.45
22:DA:2069:G:C2	22:DA:2443:C:C2	3.04	0.45
22:DA:2741:A:C8	22:DA:2742:G:C8	3.05	0.45
22:DA:2751:G:N3	22:DA:2751:G:H2'	2.32	0.45
57:DB:8:C:H5'	36:DO:27:VAL:HG11	1.98	0.45
57:DB:109:A:C5	57:DB:110:C:C4	3.04	0.45
58:DF:67:THR:O	58:DF:84:ILE:HG22	2.17	0.45
58:DF:110:ILE:HA	58:DF:111:ARG:HH11	1.82	0.45
30:DI:57:VAL:O	30:DI:58:ILE:HG13	2.16	0.45
35:DN:38:LEU:HB3	35:DN:39:PRO:CD	2.43	0.45
36:DO:18:LEU:HD13	36:DO:25:ARG:HD2	1.98	0.45
37:DP:112:ARG:O	37:DP:113:LEU:HB3	2.16	0.45
41:DT:10:VAL:HG23	41:DT:11:LEU:CD1	2.46	0.45
42:DU:91:LYS:O	42:DU:92:VAL:HG22	2.16	0.45
51:D3:51:LYS:O	51:D3:54:LEU:HB3	2.17	0.45
52:D4:7:VAL:CG1	52:D4:8:LYS:N	2.80	0.45
52:D4:27:CYS:SG	52:D4:30:GLU:O	2.75	0.45
1:AA:374:A:C6	1:AA:375:U:C4	3.04	0.45
1:AA:1241:G:O2'	1:AA:1242:G:O5'	2.35	0.45
1:AA:1379:G:C6	1:AA:1380:U:C4	3.04	0.45
1:AA:1425:U:O2	1:AA:1476:A:C2	2.70	0.45
1:AA:1451:U:O5'	1:AA:1452:C:H5	2.00	0.45
2:AB:113:LEU:HB2	2:AB:143:LEU:HD12	1.97	0.45
3:AC:75:VAL:O	3:AC:82:ASP:HB3	2.16	0.45
4:AD:63:ILE:HG23	4:AD:64:TYR:CD1	2.51	0.45
4:AD:75:TYR:CD1	4:AD:75:TYR:C	2.94	0.45
4:AD:145:ARG:C	4:AD:147:LYS:N	2.72	0.45
5:AE:132:PRO:O	5:AE:136:VAL:HG13	2.17	0.45
6:AF:10:VAL:CG1	6:AF:11:HIS:N	2.80	0.45
11:AK:113:THR:HB	21:AU:28:LEU:HD11	1.97	0.45
19:AS:4:LEU:HD12	19:AS:4:LEU:N	2.31	0.45
20:AT:32:LYS:O	20:AT:33:LYS:C	2.58	0.45
22:BA:250:G:OP2	51:B3:12:ARG:NH1	2.50	0.45
22:BA:404:A:C1'	22:BA:405:U:OP2	2.62	0.45
22:BA:571:U:H3'	39:BR:80:ARG:NH2	2.32	0.45
22:BA:796:C:H2'	22:BA:797:G:C8	2.52	0.45
22:BA:817:C:H2'	22:BA:818:G:O4'	2.17	0.45
22:BA:869:G:H2'	22:BA:870:U:O4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1097:U:H3'	22:BA:1098:A:H4'	1.98	0.45
22:BA:1140:C:P	31:BJ:68:LYS:HZ3	2.39	0.45
22:BA:1157:G:N2	22:BA:1158:C:C2	2.84	0.45
22:BA:1419:A:C5	22:BA:1421:G:C4	3.05	0.45
22:BA:1599:U:H2'	22:BA:1600:C:C6	2.52	0.45
22:BA:2378:A:N7	22:BA:2379:G:H1'	2.32	0.45
22:BA:2425:A:H4'	22:BA:2426:A:O5'	2.14	0.45
22:BA:2502:G:C5'	22:BA:2503:A:C5'	2.87	0.45
22:BA:2821:A:H2'	22:BA:2822:G:O4'	2.16	0.45
28:BG:23:ILE:N	28:BG:23:ILE:CD1	2.80	0.45
29:BH:99:ILE:HG22	29:BH:99:ILE:O	2.16	0.45
35:BN:23:ASN:N	35:BN:23:ASN:ND2	2.65	0.45
36:BO:52:SER:OG	36:BO:54:VAL:HG12	2.17	0.45
36:BO:94:ARG:H	36:BO:94:ARG:HG3	1.51	0.45
37:BP:4:ILE:CG2	37:BP:5:LYS:H	2.07	0.45
37:BP:5:LYS:O	37:BP:9:GLN:HG2	2.17	0.45
41:BT:40:LYS:O	41:BT:41:ALA:C	2.59	0.45
51:B3:61:LEU:HB3	51:B3:64:ALA:HB2	1.98	0.45
53:CA:780:A:O2'	53:CA:781:A:H5"	2.17	0.45
53:CA:787:A:C2	53:CA:796:C:N3	2.85	0.45
53:CA:978:A:C5	53:CA:1319:A:C2	3.05	0.45
53:CA:995:C:O2'	53:CA:996:A:H5"	2.17	0.45
53:CA:1072:G:C6	53:CA:1073:U:C4	3.05	0.45
4:CD:151:GLN:O	4:CD:152:SER:C	2.59	0.45
4:CD:190:LEU:O	4:CD:190:LEU:HD23	2.17	0.45
54:CG:100:MET:H	54:CG:100:MET:HE2	1.80	0.45
8:CH:29:SER:OG	8:CH:32:LYS:HB3	2.17	0.45
11:CK:92:ARG:HD2	11:CK:92:ARG:HA	1.79	0.45
18:CR:24:ASP:C	18:CR:26:ALA:H	2.23	0.45
18:CR:32:ILE:HA	18:CR:39:VAL:HG23	1.97	0.45
22:DA:30:G:H2'	22:DA:31:C:O4'	2.17	0.45
22:DA:46:G:N1	22:DA:47:C:C4	2.85	0.45
22:DA:289:G:C2	22:DA:352:A:C2	3.05	0.45
22:DA:347:A:H2'	22:DA:348:A:C8	2.51	0.45
22:DA:1048:A:C2	22:DA:1049:C:N4	2.85	0.45
22:DA:1109:C:N4	22:DA:1110:G:N1	2.65	0.45
22:DA:1264:A:H1'	22:DA:2015:A:H61	1.81	0.45
22:DA:1285:A:C6	22:DA:1329:U:C5	3.05	0.45
22:DA:1654:A:O2'	22:DA:1655:A:O4'	2.35	0.45
22:DA:1655:A:H5'	25:DD:118:PHE:CD1	2.52	0.45
22:DA:2019:A:H4'	38:DQ:33:VAL:HG21	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2067:G:C6	22:DA:2444:G:N1	2.84	0.45
22:DA:2285:C:H2'	22:DA:2286:G:C5'	2.45	0.45
22:DA:2298:A:O2'	22:DA:2299:U:C6	2.70	0.45
22:DA:2330:G:H1'	44:DW:38:ARG:HB3	1.97	0.45
22:DA:2403:C:O2'	22:DA:2404:U:H5'	2.17	0.45
22:DA:2595:G:C6	22:DA:2599:G:C6	3.04	0.45
22:DA:2623:G:H4'	22:DA:2825:G:C8	2.51	0.45
22:DA:2819:G:H1'	22:DA:2828:G:N2	2.32	0.45
57:DB:7:G:O2'	36:DO:38:GLN:NE2	2.49	0.45
25:DD:179:ARG:NH1	37:DP:7:LEU:HD11	2.32	0.45
26:DE:148:ILE:CD1	26:DE:187:VAL:HG21	2.38	0.45
29:DH:117:LEU:HD22	29:DH:122:LEU:HD12	1.98	0.45
31:DJ:18:VAL:CG1	31:DJ:54:ILE:HD11	2.46	0.45
33:DL:20:GLY:CA	33:DL:28:GLY:HA2	2.46	0.45
33:DL:95:LEU:HB3	33:DL:100:ILE:HG23	1.98	0.45
36:DO:62:LEU:C	36:DO:62:LEU:HD13	2.42	0.45
39:DR:49:ILE:HG22	39:DR:54:VAL:H	1.82	0.45
40:DS:27:LYS:O	40:DS:28:LYS:O	2.35	0.45
40:DS:29:VAL:HG23	40:DS:69:LEU:O	2.17	0.45
43:DV:73:LYS:O	43:DV:92:VAL:HG22	2.16	0.45
46:DY:21:LEU:HA	46:DY:25:GLN:HB3	1.99	0.45
48:D0:28:SER:O	48:D0:36:LYS:HA	2.16	0.45
1:AA:22:G:H2'	1:AA:23:C:C6	2.51	0.45
1:AA:367:U:C6	1:AA:394:G:N2	2.85	0.45
1:AA:428:G:O4'	1:AA:430:A:C8	2.70	0.45
1:AA:833:G:O2'	1:AA:834:U:H5'	2.16	0.45
1:AA:1046:A:H2'	1:AA:1047:G:O5'	2.16	0.45
1:AA:1212:U:H2'	1:AA:1212:U:O2	2.15	0.45
1:AA:1324:A:H2'	1:AA:1325:C:H6	1.81	0.45
2:AB:209:VAL:O	2:AB:210:THR:C	2.58	0.45
4:AD:100:VAL:O	4:AD:100:VAL:CG1	2.64	0.45
5:AE:56:PRO:O	5:AE:59:ILE:HG13	2.16	0.45
6:AF:16:GLU:C	6:AF:18:VAL:H	2.24	0.45
6:AF:93:LYS:O	6:AF:94:HIS:CB	2.65	0.45
10:AJ:28:THR:O	10:AJ:32:THR:HG23	2.17	0.45
17:AQ:14:ASP:HA	17:AQ:20:ILE:HD11	1.98	0.45
20:AT:50:PHE:HE2	20:AT:75:LYS:HA	1.82	0.45
21:AU:16:ARG:HG2	21:AU:19:LYS:HG2	1.98	0.45
22:BA:497:A:H2'	22:BA:498:G:O4'	2.16	0.45
22:BA:532:A:H2'	22:BA:532:A:N3	2.31	0.45
22:BA:723:C:H2'	22:BA:724:U:C6	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1185:G:H5”	22:BA:1186:G:OP2	2.17	0.45
22:BA:1744:A:C2	22:BA:1745:A:H1’	2.52	0.45
22:BA:2293:G:H2’	22:BA:2294:G:O4’	2.17	0.45
22:BA:2415:G:H4’	33:BL:65:GLY:O	2.16	0.45
22:BA:2492:U:H2’	22:BA:2493:U:C6	2.47	0.45
22:BA:2790:U:H5’	22:BA:2893:A:N7	2.32	0.45
22:BA:2884:U:O2	22:BA:2884:U:O4’	2.34	0.45
24:BC:144:GLU:CA	24:BC:151:GLY:HA2	2.39	0.45
25:BD:1:MET:HG2	25:BD:205:PRO:HG3	1.98	0.45
25:BD:4:LEU:HD13	25:BD:100:LEU:HD23	1.99	0.45
25:BD:193:VAL:HG21	25:BD:201:LEU:HD21	1.98	0.45
27:BF:111:ARG:HB3	27:BF:112:ASP:H	1.37	0.45
27:BF:129:MET:HG3	27:BF:153:ILE:CD1	2.46	0.45
27:BF:134:GLN:O	27:BF:135:ILE:HB	2.17	0.45
30:BI:52:LEU:HD12	30:BI:52:LEU:N	2.32	0.45
32:BK:11:ALA:O	32:BK:99:ILE:HA	2.17	0.45
33:BL:66:PHE:C	33:BL:66:PHE:CD1	2.92	0.45
37:BP:20:ARG:HG3	37:BP:20:ARG:HH21	1.80	0.45
46:BY:1:MET:HG2	46:BY:5:GLU:OE1	2.17	0.45
53:CA:261:U:O2’	53:CA:263:A:N7	2.42	0.45
53:CA:448:A:C4	53:CA:487:A:C2	3.04	0.45
53:CA:676:A:H2’	53:CA:677:U:C6	2.52	0.45
53:CA:977:A:C8	53:CA:1223:C:N3	2.78	0.45
53:CA:1089:G:H2’	53:CA:1090:U:O4’	2.17	0.45
53:CA:1113:C:H2’	53:CA:1114:C:C6	2.42	0.45
53:CA:1158:C:O2	53:CA:1158:C:H2’	2.17	0.45
53:CA:1319:A:OP2	19:CS:4:LEU:HD21	2.16	0.45
53:CA:1343:G:C6	53:CA:1344:C:C4	3.05	0.45
2:CB:151:LYS:HG3	2:CB:152:ASP:N	2.32	0.45
2:CB:185:ILE:HA	2:CB:199:ILE:HG13	1.98	0.45
5:CE:132:PRO:O	5:CE:135:VAL:N	2.50	0.45
6:CF:43:GLY:HA2	6:CF:58:HIS:ND1	2.31	0.45
54:CG:48:THR:O	54:CG:52:ARG:HD3	2.17	0.45
10:CJ:37:ARG:CG	10:CJ:75:ASP:HB3	2.46	0.45
55:CM:11:HIS:HA	55:CM:44:ILE:HB	1.99	0.45
22:DA:197:A:C4’	22:DA:2068:U:H2’	2.46	0.45
22:DA:503:A:C5	22:DA:506:G:C6	3.05	0.45
22:DA:581:C:N3	22:DA:582:A:N7	2.65	0.45
22:DA:1000:A:N6	22:DA:1001:A:N1	2.64	0.45
22:DA:1287:A:O2’	22:DA:1288:G:H5’	2.17	0.45
22:DA:1376:C:H5”	62:DA:3411:HOH:O	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1571:A:H8	22:DA:1571:A:O5'	2.00	0.45
22:DA:1638:C:H4'	22:DA:2710:C:O2	2.17	0.45
22:DA:1766:G:C6	22:DA:1987:A:C6	3.05	0.45
22:DA:1826:G:C6	22:DA:1827:U:C4	3.05	0.45
22:DA:1856:U:O4	22:DA:1857:G:C2	2.69	0.45
22:DA:2061:G:C2	22:DA:2063:C:C4	3.05	0.45
22:DA:2413:G:O2'	22:DA:2414:G:H5'	2.17	0.45
22:DA:2540:C:H2'	22:DA:2541:A:H8	1.82	0.45
24:DC:64:VAL:O	24:DC:64:VAL:HG12	2.16	0.45
28:DG:88:LEU:N	28:DG:128:THR:O	2.49	0.45
28:DG:112:VAL:HG12	28:DG:114:HIS:N	2.23	0.45
32:DK:92:GLU:O	32:DK:93:GLN:C	2.60	0.45
33:DL:84:LYS:O	33:DL:85:VAL:HB	2.17	0.45
37:DP:50:ARG:O	37:DP:51:ASN:HB2	2.15	0.45
37:DP:52:ARG:HH11	37:DP:52:ARG:HG2	1.82	0.45
37:DP:61:ARG:CZ	37:DP:100:ARG:HA	2.46	0.45
46:DY:25:GLN:HA	46:DY:28:LEU:HB3	1.98	0.45
52:D4:7:VAL:HG22	52:D4:25:VAL:CG2	2.47	0.45
1:AA:11:G:C6	1:AA:12:U:C4	3.05	0.45
1:AA:35:G:N2	12:AL:114:SER:OG	2.43	0.45
1:AA:1221:G:H2'	1:AA:1222:G:C8	2.51	0.45
1:AA:1329:A:H5"	13:AM:25:GLY:N	2.29	0.45
2:AB:58:LYS:HD3	2:AB:58:LYS:C	2.42	0.45
2:AB:80:LYS:HG3	2:AB:90:PHE:CE1	2.51	0.45
4:AD:151:GLN:H	4:AD:154:VAL:HG13	1.82	0.45
5:AE:149:PRO:O	5:AE:152:VAL:HG22	2.16	0.45
6:AF:5:GLU:OE1	18:AR:22:TYR:CE2	2.67	0.45
13:AM:10:ASP:OD1	13:AM:44:ILE:HB	2.16	0.45
14:AN:40:ARG:HH22	14:AN:44:VAL:HG21	1.81	0.45
18:AR:62:ARG:HD3	18:AR:69:TYR:CD2	2.51	0.45
19:AS:62:THR:HG22	19:AS:63:ASP:N	2.31	0.45
19:AS:80:ARG:O	19:AS:80:ARG:HG3	2.16	0.45
22:BA:171:U:O2'	22:BA:172:A:H5'	2.17	0.45
22:BA:336:C:O2'	22:BA:337:C:H5'	2.17	0.45
22:BA:359:G:C6	22:BA:360:U:C2	3.05	0.45
22:BA:528:A:C2	22:BA:2043:C:C5'	2.99	0.45
22:BA:572:A:C2	22:BA:2033:A:C2	3.04	0.45
22:BA:590:A:H2'	22:BA:591:U:C6	2.52	0.45
22:BA:832:U:H2'	22:BA:833:A:C8	2.52	0.45
22:BA:966:G:C5	22:BA:967:U:C4	3.05	0.45
22:BA:1022:G:C6	22:BA:1140:C:C4	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1157:G:O2'	47:BZ:31:ILE:CD1	2.64	0.45
22:BA:2076:U:O4'	22:BA:2076:U:O2	2.31	0.45
22:BA:2468:A:C2	22:BA:2481:G:C2	3.05	0.45
26:BE:109:LEU:HD13	26:BE:109:LEU:HA	1.74	0.45
31:BJ:44:TYR:C	31:BJ:45:THR:HG22	2.42	0.45
33:BL:95:LEU:HD22	33:BL:100:ILE:CD1	2.47	0.45
37:BP:52:ARG:HG2	37:BP:52:ARG:NH1	2.25	0.45
42:BU:94:PHE:O	42:BU:95:PHE:C	2.58	0.45
46:BY:42:LEU:O	46:BY:45:GLN:O	2.35	0.45
53:CA:132:C:O2'	53:CA:133:U:H5'	2.16	0.45
53:CA:267:C:C2'	53:CA:268:U:O5'	2.64	0.45
53:CA:632:U:H2'	53:CA:632:U:O2	2.17	0.45
53:CA:1037:C:O2	53:CA:1037:C:H2'	2.17	0.45
53:CA:1060:U:H5'	10:CJ:53:ILE:HG12	1.99	0.45
53:CA:1139:G:OP1	53:CA:1140:C:H5'	2.16	0.45
53:CA:1184:G:C2	53:CA:1185:G:C8	3.04	0.45
2:CB:29:PHE:O	2:CB:40:ILE:HG23	2.16	0.45
4:CD:138:PRO:C	4:CD:140:ASP:H	2.23	0.45
5:CE:75:LEU:HD13	5:CE:79:THR:O	2.17	0.45
54:CG:116:ALA:O	54:CG:120:ALA:HB3	2.17	0.45
12:CL:71:HIS:ND1	12:CL:73:LEU:N	2.64	0.45
55:CM:96:VAL:C	55:CM:98:GLY:H	2.25	0.45
14:CN:76:PHE:HE2	14:CN:95:LEU:HD22	1.81	0.45
17:CQ:27:PHE:CE1	17:CQ:36:PHE:HB3	2.52	0.45
22:DA:46:G:C2	22:DA:47:C:C6	3.04	0.45
22:DA:118:A:OP2	22:DA:119:A:H2'	2.16	0.45
22:DA:153:U:O2'	22:DA:154:U:H5'	2.17	0.45
22:DA:211:C:H2'	22:DA:212:G:O4'	2.17	0.45
22:DA:238:C:H2'	22:DA:239:C:O4'	2.16	0.45
22:DA:426:C:O2'	22:DA:427:U:H5'	2.17	0.45
22:DA:622:G:O2'	22:DA:623:C:C6	2.68	0.45
22:DA:739:A:H1'	22:DA:740:C:H5	1.81	0.45
22:DA:815:C:OP1	39:DR:85:LYS:CE	2.65	0.45
22:DA:866:A:O2'	22:DA:867:C:H6	1.97	0.45
22:DA:1048:A:O2'	22:DA:1049:C:C6	2.68	0.45
22:DA:1087:G:C6	22:DA:1089:A:C2	3.05	0.45
22:DA:1122:G:H2'	22:DA:1122:G:N3	2.32	0.45
22:DA:1342:A:N6	22:DA:1397:U:C5	2.84	0.45
22:DA:1374:G:H2'	22:DA:1375:U:O4'	2.16	0.45
22:DA:1830:C:H5'	24:DC:14:HIS:HE1	1.80	0.45
22:DA:1843:C:H6	22:DA:1843:C:O5'	2.00	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1918:A:O2'	22:DA:1920:C:N4	2.50	0.45
22:DA:2059:A:O3'	26:DE:64:GLY:HA2	2.17	0.45
22:DA:2077:A:C5	22:DA:2435:A:C6	3.05	0.45
22:DA:2144:G:N3	22:DA:2148:G:N7	2.65	0.45
22:DA:2201:G:H2'	22:DA:2202:U:H6	1.82	0.45
22:DA:2345:G:C5	22:DA:2347:C:C5	3.04	0.45
22:DA:2345:G:C8	22:DA:2347:C:C5	3.04	0.45
22:DA:2850:A:OP2	22:DA:2866:U:N3	2.38	0.45
24:DC:231:HIS:O	24:DC:232:GLY:C	2.60	0.45
26:DE:5:LEU:HD12	26:DE:10:SER:HB2	1.98	0.45
58:DF:12:VAL:HG12	58:DF:16:MET:HG3	1.98	0.45
58:DF:134:GLN:HB2	58:DF:137:PHE:HE2	1.82	0.45
28:DG:91:VAL:O	28:DG:93:TYR:N	2.50	0.45
31:DJ:45:THR:OG1	31:DJ:48:VAL:HB	2.17	0.45
33:DL:29:LYS:HG2	33:DL:30:THR:HG23	1.99	0.45
34:DM:94:ALA:O	34:DM:96:ILE:HG23	2.17	0.45
35:DN:21:PHE:HD1	35:DN:21:PHE:H	1.64	0.45
36:DO:57:ALA:C	36:DO:58:ILE:HD12	2.42	0.45
37:DP:64:SER:O	37:DP:66:GLY:N	2.50	0.45
41:DT:3:ARG:O	41:DT:4:GLU:C	2.59	0.45
41:DT:68:LYS:HB3	41:DT:69:ARG:H	1.51	0.45
42:DU:81:ARG:CB	42:DU:96:LYS:HD2	2.47	0.45
1:AA:100:G:C6	1:AA:101:A:C5	3.05	0.45
1:AA:210:C:H5"	1:AA:211:G:OP1	2.17	0.45
1:AA:211:G:C6	1:AA:212:G:H1'	2.51	0.45
1:AA:375:U:H4'	16:AP:17:TYR:CE2	2.52	0.45
1:AA:575:G:O3'	62:AA:1739:HOH:O	2.21	0.45
1:AA:826:C:C5'	8:AH:12:ARG:HH21	2.30	0.45
1:AA:872:A:C5	1:AA:874:G:C8	3.05	0.45
1:AA:1058:G:C5	1:AA:1059:C:C5	3.05	0.45
1:AA:1150:A:N6	1:AA:1151:A:N6	2.65	0.45
1:AA:1332:A:H5'	1:AA:1333:A:OP2	2.16	0.45
2:AB:15:PHE:O	2:AB:40:ILE:HG12	2.16	0.45
3:AC:52:SER:HB2	3:AC:114:LEU:HG	1.99	0.45
3:AC:190:THR:HG21	3:AC:195:ILE:HG13	1.98	0.45
4:AD:147:LYS:O	4:AD:149:LYS:HB2	2.16	0.45
15:AO:17:ASP:O	15:AO:20:ASP:HB3	2.16	0.45
17:AQ:7:LEU:HD22	17:AQ:72:TRP:CZ3	2.52	0.45
19:AS:3:SER:HB2	19:AS:4:LEU:HD12	1.98	0.45
20:AT:29:THR:HA	20:AT:32:LYS:HG2	1.97	0.45
22:BA:63:A:C2	22:BA:64:A:C5	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:108:G:O2'	22:BA:109:C:H5'	2.16	0.45
22:BA:581:C:H2'	22:BA:582:A:C8	2.51	0.45
22:BA:1011:G:C2	22:BA:1151:A:C2	3.05	0.45
22:BA:1014:A:C6	22:BA:1015:U:C4	3.04	0.45
22:BA:1587:G:C2	22:BA:1588:G:C8	3.05	0.45
22:BA:1858:A:C8	22:BA:1885:A:C5	3.05	0.45
22:BA:2402:U:C2'	22:BA:2403:C:OP2	2.64	0.45
22:BA:2449:U:H4'	22:BA:2450:A:OP1	2.17	0.45
23:BB:45:A:C4	23:BB:46:A:C8	3.05	0.45
24:BC:29:PHE:CZ	24:BC:31:PRO:CG	3.00	0.45
27:BF:134:GLN:C	27:BF:136:ILE:N	2.72	0.45
27:BF:172:PHE:O	27:BF:173:ASP:C	2.60	0.45
30:BI:95:ASP:O	30:BI:97:VAL:N	2.46	0.45
31:BJ:69:ARG:O	31:BJ:89:PHE:HB3	2.17	0.45
32:BK:4:GLU:O	32:BK:5:GLN:HB2	2.17	0.45
44:BW:43:LYS:HZ2	44:BW:43:LYS:HG2	1.36	0.45
46:BY:19:LEU:HD12	46:BY:22:LEU:HD23	1.99	0.45
50:B2:29:GLN:O	50:B2:33:ARG:HG3	2.17	0.45
53:CA:49:U:O2	53:CA:362:G:H1'	2.16	0.45
53:CA:66:A:C6	53:CA:67:C:C4	3.04	0.45
53:CA:188:C:N4	53:CA:189:A:C6	2.81	0.45
53:CA:444:G:C2'	53:CA:445:G:H5'	2.47	0.45
53:CA:460:A:O2'	53:CA:462:G:H5'	2.17	0.45
53:CA:673:A:H2'	53:CA:674:G:C8	2.52	0.45
53:CA:765:G:C8	53:CA:812:G:N3	2.85	0.45
53:CA:978:A:C8	53:CA:1319:A:C2	3.04	0.45
53:CA:1005:A:C4	53:CA:1006:G:H1'	2.50	0.45
53:CA:1162:C:C2	53:CA:1175:G:N2	2.85	0.45
53:CA:1213:A:C8	53:CA:1215:G:C5	3.05	0.45
53:CA:1336:C:O2'	53:CA:1337:G:C5	2.69	0.45
5:CE:79:THR:HA	5:CE:121:ASN:OD1	2.16	0.45
5:CE:110:MET:HG2	5:CE:139:THR:HG21	1.99	0.45
54:CG:4:ARG:HG3	54:CG:5:VAL:N	2.32	0.45
9:CI:49:GLN:HA	9:CI:52:GLU:CG	2.47	0.45
12:CL:14:LYS:HE2	12:CL:15:VAL:C	2.41	0.45
14:CN:30:ILE:C	14:CN:40:ARG:HA	2.42	0.45
15:CO:39:GLN:HE21	15:CO:39:GLN:HB2	1.52	0.45
21:CU:28:LEU:C	21:CU:28:LEU:CD2	2.90	0.45
22:DA:45:G:N2	22:DA:434:U:C2	2.85	0.45
22:DA:145:C:O5'	22:DA:145:C:H6	1.98	0.45
22:DA:200:U:C5	22:DA:201:C:C4	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:228:C:H5"	22:DA:229:C:C6	2.51	0.45
22:DA:969:G:H2'	22:DA:970:U:C6	2.52	0.45
22:DA:996:A:C5	22:DA:1160:G:C2	3.05	0.45
22:DA:1067:A:H2'	22:DA:1068:G:H5"	1.98	0.45
22:DA:1069:A:N6	22:DA:1073:A:H5"	2.30	0.45
22:DA:1071:G:O4'	22:DA:1088:A:O2'	2.34	0.45
22:DA:1206:G:H2'	22:DA:1207:C:C5	2.52	0.45
22:DA:1340:U:C4	22:DA:1603:A:C8	3.05	0.45
22:DA:1606:C:O2	22:DA:1606:C:C5'	2.52	0.45
22:DA:1661:G:C4	22:DA:1662:U:C5	3.04	0.45
22:DA:1735:A:C6	22:DA:1736:U:C4	3.05	0.45
22:DA:2107:G:H2'	22:DA:2108:A:C8	2.52	0.45
22:DA:2283:C:C5	22:DA:2389:G:C4	3.05	0.45
22:DA:2414:G:C2'	22:DA:2415:G:H5'	2.47	0.45
22:DA:2443:C:C2	22:DA:2444:G:C8	3.04	0.45
30:DI:69:VAL:O	30:DI:69:VAL:HG13	2.17	0.45
30:DI:98:GLY:HA3	30:DI:137:LEU:HA	1.99	0.45
32:DK:107:LEU:C	32:DK:109:SER:N	2.70	0.45
36:DO:111:ARG:HA	36:DO:115:LEU:O	2.16	0.45
37:DP:50:ARG:H	37:DP:50:ARG:HG3	1.48	0.45
45:DX:39:VAL:HG22	45:DX:44:ARG:O	2.17	0.45
51:D3:44:ARG:N	51:D3:45:PRO:HD2	2.31	0.45
52:D4:36:ARG:HG2	52:D4:37:GLN:H	1.81	0.45
1:AA:40:C:H2'	1:AA:40:C:O2	2.16	0.45
1:AA:92:U:OP2	1:AA:92:U:H6	1.99	0.45
1:AA:580:C:H2'	1:AA:581:G:O4'	2.17	0.45
1:AA:600:A:H2'	1:AA:601:G:C8	2.51	0.45
1:AA:695:A:H61	1:AA:797:C:H1'	1.81	0.45
1:AA:782:A:C2'	1:AA:783:C:H5'	2.46	0.45
1:AA:791:G:C5	1:AA:792:A:N7	2.85	0.45
1:AA:1053:G:O2'	1:AA:1054:C:OP2	2.29	0.45
1:AA:1057:G:H4'	3:AC:196:GLY:N	2.32	0.45
1:AA:1323:G:H4'	1:AA:1362:A:C2	2.52	0.45
4:AD:109:THR:HG22	4:AD:112:GLU:HB2	1.99	0.45
5:AE:77:ASN:CG	5:AE:78:GLY:H	2.23	0.45
8:AH:10:LEU:HD11	8:AH:126:CYS:HB2	1.99	0.45
15:AO:74:VAL:O	15:AO:77:TYR:HB3	2.16	0.45
16:AP:46:LYS:NZ	16:AP:48:GLU:HB3	2.31	0.45
21:AU:19:LYS:C	21:AU:21:SER:H	2.24	0.45
22:BA:320:A:O2'	22:BA:322:A:H8	1.97	0.45
22:BA:480:A:H2'	22:BA:481:G:OP1	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:675:A:C6	22:BA:676:A:C6	3.05	0.45
22:BA:1291:C:O2'	22:BA:1292:G:H5'	2.17	0.45
22:BA:1313:U:H2'	22:BA:1610:A:C2	2.52	0.45
22:BA:1583:A:N3	22:BA:1583:A:O4'	2.49	0.45
22:BA:2192:U:O2'	22:BA:2193:G:H5'	2.16	0.45
22:BA:2311:A:H5'	22:BA:2312:U:OP2	2.17	0.45
22:BA:2611:C:C6	60:BA:3135:TEL:H352	2.52	0.45
22:BA:2712:C:O2'	22:BA:2713:U:H5'	2.17	0.45
22:BA:2844:G:O2'	22:BA:2845:U:H5'	2.17	0.45
62:BA:3644:HOH:O	25:BD:140:HIS:CE1	2.70	0.45
23:BB:8:C:C2'	23:BB:9:G:O5'	2.65	0.45
23:BB:93:C:O2'	23:BB:94:A:H5'	2.16	0.45
23:BB:114:C:H2'	23:BB:115:A:H8	1.82	0.45
24:BC:256:THR:O	24:BC:257:ARG:C	2.60	0.45
26:BE:196:VAL:HG13	26:BE:200:LEU:CD2	2.47	0.45
28:BG:10:VAL:O	28:BG:11:PRO:C	2.60	0.45
28:BG:166:GLU:OE2	28:BG:166:GLU:C	2.60	0.45
31:BJ:32:LEU:HA	31:BJ:32:LEU:HD23	1.73	0.45
32:BK:47:ILE:HD12	32:BK:47:ILE:HA	1.85	0.45
32:BK:117:SER:C	32:BK:118:LEU:O	2.58	0.45
33:BL:96:LYS:HD3	33:BL:103:ILE:HA	1.97	0.45
34:BM:76:LYS:O	34:BM:77:PRO:O	2.35	0.45
40:BS:1:MET:HE2	40:BS:1:MET:HA	1.98	0.45
42:BU:73:ASN:C	42:BU:75:ALA:N	2.75	0.45
44:BW:18:LYS:CA	44:BW:36:ILE:HG12	2.45	0.45
44:BW:26:GLY:O	44:BW:27:GLY:O	2.35	0.45
50:B2:5:PHE:CZ	50:B2:7:PRO:HB3	2.51	0.45
50:B2:42:LEU:H	50:B2:42:LEU:HD22	1.82	0.45
53:CA:64:G:N7	53:CA:99:C:C4	2.85	0.45
53:CA:464:U:O4	53:CA:466:A:C4'	2.59	0.45
53:CA:591:U:OP1	8:CH:30:LYS:HE3	2.18	0.45
53:CA:759:A:H2'	53:CA:760:G:H5'	1.99	0.45
53:CA:765:G:C6	53:CA:812:G:N7	2.85	0.45
53:CA:769:G:C2'	53:CA:770:C:H5'	2.47	0.45
53:CA:934:C:H4'	53:CA:935:A:OP1	2.17	0.45
53:CA:1031:C:H5'	53:CA:1032:G:O5'	2.17	0.45
53:CA:1114:C:O2	14:CN:99:SER:HB3	2.17	0.45
53:CA:1227:A:N3	53:CA:1227:A:H5"	2.31	0.45
53:CA:1347:G:H1'	53:CA:1348:U:H5	1.82	0.45
5:CE:82:HIS:NE2	8:CH:95:MET:HE3	2.31	0.45
6:CF:97:THR:O	6:CF:98:GLU:HG3	2.18	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:24:VAL:HG22	8:CH:25:THR:N	2.32	0.45
15:CO:42:PHE:CE1	15:CO:55:LEU:HD22	2.52	0.45
56:CP:69:ASP:O	56:CP:70:ARG:C	2.60	0.45
21:CU:31:VAL:O	21:CU:32:ARG:C	2.60	0.45
22:DA:105:C:H2'	22:DA:106:C:C6	2.51	0.45
22:DA:294:A:N1	22:DA:346:A:N1	2.64	0.45
22:DA:465:G:H4'	50:D2:16:HIS:CD2	2.52	0.45
22:DA:538:A:O2'	31:DJ:8:PRO:CD	2.65	0.45
22:DA:785:G:O2'	22:DA:1779:U:H5"	2.17	0.45
22:DA:858:G:C4	22:DA:2268:A:C2	3.05	0.45
22:DA:1039:A:N6	22:DA:1117:C:H42	2.15	0.45
22:DA:1057:A:N3	22:DA:1082:U:C2	2.85	0.45
22:DA:1085:A:H2'	22:DA:1086:A:N3	2.32	0.45
22:DA:1206:G:C2	22:DA:1207:C:C2	3.05	0.45
22:DA:1440:U:H2'	22:DA:1441:G:C8	2.52	0.45
22:DA:1532:A:H2'	22:DA:1533:C:C6	2.51	0.45
22:DA:1565:C:H3'	24:DC:17:LYS:CE	2.29	0.45
22:DA:2313:C:H5'	58:DF:87:LYS:HD3	1.99	0.45
22:DA:2543:G:C6	22:DA:2765:A:C5	3.05	0.45
22:DA:2590:A:H5"	24:DC:237:ARG:HG3	1.99	0.45
24:DC:52:HIS:HD2	24:DC:217:PRO:O	2.00	0.45
25:DD:113:SER:CB	25:DD:168:GLU:H	2.27	0.45
26:DE:47:LYS:CB	26:DE:51:GLU:HB2	2.39	0.45
26:DE:115:GLN:O	26:DE:117:ARG:N	2.50	0.45
58:DF:135:ILE:O	58:DF:137:PHE:N	2.48	0.45
31:DJ:35:ARG:HH11	31:DJ:140:LEU:HD11	1.79	0.45
32:DK:13:ASN:ND2	32:DK:13:ASN:H	2.10	0.45
34:DM:17:ASN:OD1	34:DM:95:LEU:HB3	2.17	0.45
35:DN:8:ARG:HG2	35:DN:10:LEU:HD22	1.98	0.45
35:DN:16:HIS:C	35:DN:18:GLN:H	2.24	0.45
37:DP:45:VAL:O	37:DP:60:VAL:HA	2.17	0.45
42:DU:3:LYS:O	42:DU:4:ILE:C	2.59	0.45
46:DY:22:LEU:HG	46:DY:23:ARG:NH1	2.32	0.45
48:D0:53:VAL:HG23	48:D0:54:ILE:H	1.81	0.45
50:D2:5:PHE:HZ	50:D2:12:ARG:NH1	2.06	0.45
1:AA:71:A:C6	1:AA:100:G:N7	2.85	0.44
1:AA:126:G:H2'	1:AA:127:G:O4'	2.17	0.44
1:AA:263:A:P	20:AT:73:ARG:HH11	2.40	0.44
1:AA:414:A:O2'	1:AA:415:A:C5'	2.65	0.44
1:AA:598:U:H4'	8:AH:85:TYR:CD1	2.52	0.44
1:AA:923:A:OP1	5:AE:25:LYS:CG	2.63	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1240:U:H3	7:AG:29:LEU:HD23	1.82	0.44
1:AA:1323:G:O2'	1:AA:1324:A:O4'	2.31	0.44
1:AA:1394:A:C5	1:AA:1501:C:H4'	2.51	0.44
1:AA:1461:G:C5	1:AA:1462:C:C5	3.04	0.44
2:AB:9:LEU:HB2	2:AB:42:LEU:HD13	1.99	0.44
2:AB:71:THR:HG21	2:AB:94:ARG:HD3	1.99	0.44
3:AC:76:ILE:C	3:AC:82:ASP:HB2	2.43	0.44
4:AD:119:HIS:O	4:AD:120:LYS:C	2.59	0.44
12:AL:43:LYS:HB2	12:AL:43:LYS:NZ	2.32	0.44
20:AT:80:ALA:O	20:AT:84:LYS:HB2	2.17	0.44
22:BA:368:A:C2'	22:BA:369:U:H5'	2.47	0.44
22:BA:540:C:C2'	22:BA:541:A:H5'	2.48	0.44
22:BA:613:A:H8	22:BA:616:A:N1	2.14	0.44
22:BA:754:U:C2	22:BA:755:U:C5	3.06	0.44
22:BA:796:C:H2'	22:BA:797:G:H8	1.81	0.44
22:BA:1130:U:O2'	22:BA:1131:G:H2'	2.17	0.44
22:BA:1250:G:OP2	33:BL:18:ARG:NH2	2.50	0.44
22:BA:1473:G:H2'	22:BA:1474:U:O4'	2.17	0.44
22:BA:1798:U:P	24:BC:255:LYS:O	2.75	0.44
22:BA:2144:G:H3'	22:BA:2144:G:N3	2.32	0.44
22:BA:2235:G:O2'	22:BA:2236:U:H5'	2.17	0.44
22:BA:2592:G:C5	22:BA:2593:U:C4	3.05	0.44
22:BA:2720:U:C2	22:BA:2872:A:C6	3.05	0.44
22:BA:2765:A:N3	22:BA:2765:A:C2'	2.79	0.44
22:BA:2849:U:O4	37:BP:20:ARG:NH1	2.50	0.44
25:BD:68:PHE:CB	25:BD:73:VAL:HG12	2.47	0.44
26:BE:131:THR:HG23	26:BE:160:ALA:HA	1.98	0.44
26:BE:146:VAL:HG12	26:BE:185:LYS:HB2	1.97	0.44
27:BF:53:ALA:C	27:BF:55:ASP:N	2.75	0.44
27:BF:82:TYR:HD2	27:BF:83:PRO:HD2	1.82	0.44
28:BG:30:GLY:O	28:BG:32:LEU:N	2.49	0.44
31:BJ:40:HIS:O	31:BJ:41:LYS:HG2	2.17	0.44
32:BK:10:VAL:HG11	32:BK:16:ALA:HB1	1.98	0.44
33:BL:95:LEU:HD22	33:BL:100:ILE:HD11	1.99	0.44
34:BM:46:ILE:HD12	34:BM:46:ILE:C	2.41	0.44
36:BO:31:THR:O	36:BO:102:ARG:NH1	2.50	0.44
37:BP:5:LYS:O	37:BP:6:GLN:C	2.60	0.44
44:BW:73:PRO:O	44:BW:74:LYS:HB3	2.16	0.44
45:BX:69:GLU:O	45:BX:71:ARG:N	2.48	0.44
46:BY:7:ARG:N	46:BY:60:LYS:NZ	2.62	0.44
46:BY:21:LEU:O	46:BY:22:LEU:C	2.59	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BY:26:PHE:HD1	46:BY:27:ASN:HD22	1.64	0.44
53:CA:441:A:C2	53:CA:497:G:C6	3.05	0.44
53:CA:904:U:C4	53:CA:905:U:C4	3.05	0.44
53:CA:926:G:C6	53:CA:1505:G:C5	3.06	0.44
53:CA:1172:C:H2'	53:CA:1173:U:H6	1.83	0.44
53:CA:1525:G:H5"	21:CU:37:TYR:CE1	2.52	0.44
2:CB:114:LYS:C	2:CB:117:GLU:HG2	2.43	0.44
3:CC:161:ILE:H	3:CC:161:ILE:CD1	2.30	0.44
3:CC:166:TRP:N	3:CC:166:TRP:HE3	2.15	0.44
4:CD:124:VAL:O	4:CD:125:ASN:C	2.59	0.44
5:CE:13:LYS:HB2	5:CE:116:VAL:HG11	1.99	0.44
54:CG:70:PRO:HB3	54:CG:98:LEU:HD12	1.98	0.44
54:CG:140:VAL:C	54:CG:142:ARG:H	2.23	0.44
54:CG:148:LYS:HB2	54:CG:148:LYS:HZ3	1.83	0.44
10:CJ:30:LYS:HG2	10:CJ:36:VAL:HG22	1.98	0.44
10:CJ:37:ARG:HB3	10:CJ:75:ASP:HB3	1.99	0.44
55:CM:52:ILE:C	55:CM:54:THR:H	2.26	0.44
18:CR:24:ASP:C	18:CR:26:ALA:N	2.75	0.44
22:DA:38:A:C2	22:DA:442:G:C6	3.05	0.44
22:DA:56:A:C2	22:DA:115:C:C2	3.05	0.44
22:DA:61:C:H5'	46:DY:43:LEU:HB2	1.99	0.44
22:DA:83:A:N6	22:DA:101:A:O5'	2.50	0.44
22:DA:508:A:H3'	22:DA:509:C:C5'	2.47	0.44
22:DA:579:G:C8	22:DA:2017:U:C4	3.05	0.44
22:DA:852:U:H5'	47:DZ:45:GLY:HA3	1.98	0.44
22:DA:1021:A:H2'	22:DA:1021:A:H8	1.65	0.44
22:DA:1044:C:C4	22:DA:1112:G:O6	2.69	0.44
22:DA:1107:G:H2'	22:DA:1108:U:H5'	1.99	0.44
22:DA:1109:C:H5"	22:DA:1110:G:OP2	2.17	0.44
22:DA:1251:C:C6	38:DQ:5:ARG:NH1	2.85	0.44
22:DA:1324:G:O2'	22:DA:1616:A:N1	2.49	0.44
22:DA:1431:A:H2'	22:DA:1432:G:O4'	2.17	0.44
22:DA:2011:U:H2'	22:DA:2012:G:O4'	2.17	0.44
22:DA:2020:A:H5'	48:D0:8:THR:HG22	1.99	0.44
22:DA:2065:C:N4	22:DA:2066:C:N4	2.64	0.44
22:DA:2663:G:H2'	22:DA:2664:G:C8	2.51	0.44
22:DA:2666:C:C2'	22:DA:2667:C:H5'	2.46	0.44
57:DB:8:C:O3'	36:DO:25:ARG:NH1	2.50	0.44
24:DC:20:ASN:HB2	24:DC:23:LEU:HD22	1.99	0.44
58:DF:131:VAL:O	58:DF:132:ARG:HB2	2.17	0.44
58:DF:147:ARG:HG2	58:DF:149:ARG:NH1	2.26	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DG:163:TYR:O	28:DG:164:ALA:C	2.60	0.44
30:DI:22:PRO:HB2	30:DI:23:VAL:H	1.61	0.44
31:DJ:48:VAL:HG12	31:DJ:49:ASP:N	2.31	0.44
38:DQ:77:LYS:HE2	38:DQ:116:LEU:HD21	1.99	0.44
39:DR:51:VAL:HB	39:DR:52:PRO:CD	2.48	0.44
44:DW:44:PHE:HE2	44:DW:76:ARG:NE	2.14	0.44
1:AA:21:G:C2	1:AA:22:G:C6	3.05	0.44
1:AA:137:U:O2	1:AA:137:U:H2'	2.16	0.44
1:AA:220:G:C2	1:AA:221:C:C6	3.05	0.44
1:AA:601:G:O2'	1:AA:602:A:H5'	2.17	0.44
1:AA:877:G:H21	8:AH:1:SER:CB	2.15	0.44
1:AA:927:G:C2	1:AA:1391:U:O2	2.70	0.44
1:AA:1157:A:C2	1:AA:1181:G:C4	3.06	0.44
1:AA:1157:A:C4	1:AA:1181:G:C6	3.04	0.44
1:AA:1305:G:H22	1:AA:1331:G:H2'	1.82	0.44
1:AA:1321:U:H5"	1:AA:1322:C:OP2	2.17	0.44
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.51	0.44
5:AE:152:VAL:O	5:AE:156:ARG:HB2	2.16	0.44
7:AG:53:SER:C	7:AG:55:LYS:N	2.71	0.44
9:AI:57:VAL:HG12	9:AI:58:GLU:HG2	1.99	0.44
10:AJ:29:ALA:C	10:AJ:31:ARG:H	2.25	0.44
13:AM:11:HIS:C	13:AM:12:LYS:HG3	2.42	0.44
13:AM:45:SER:O	13:AM:46:GLU:CB	2.66	0.44
16:AP:20:VAL:HG23	16:AP:34:GLU:O	2.17	0.44
20:AT:53:MET:HE1	20:AT:57:VAL:HG21	1.97	0.44
22:BA:41:C:H2'	22:BA:42:A:O5'	2.17	0.44
22:BA:304:U:H2'	22:BA:305:C:C6	2.52	0.44
22:BA:528:A:H2	22:BA:2043:C:C5'	2.30	0.44
22:BA:976:G:H2'	22:BA:976:G:N3	2.31	0.44
22:BA:1157:G:O2'	47:BZ:31:ILE:HD11	2.17	0.44
22:BA:1300:G:C4'	22:BA:1301:A:H5'	2.47	0.44
22:BA:1465:G:C6	22:BA:1466:U:N3	2.85	0.44
22:BA:1878:G:O2'	22:BA:1879:C:H5'	2.16	0.44
22:BA:1939:U:OP1	22:BA:2604:U:O2'	2.33	0.44
22:BA:2522:U:H2'	22:BA:2523:G:H5'	1.99	0.44
22:BA:2720:U:OP1	37:BP:52:ARG:NH2	2.50	0.44
23:BB:49:C:OP1	36:BO:101:GLY:HA3	2.18	0.44
23:BB:49:C:O2'	23:BB:50:A:H5'	2.17	0.44
24:BC:252:LYS:HA	24:BC:252:LYS:HZ2	1.82	0.44
25:BD:181:ASP:OD2	25:BD:184:ARG:HD2	2.17	0.44
26:BE:178:VAL:O	26:BE:181:ILE:N	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:178:VAL:HG13	26:BE:179:SER:H	1.81	0.44
27:BF:125:GLY:HA3	27:BF:159:ALA:HB3	1.98	0.44
28:BG:51:PHE:N	28:BG:51:PHE:CD2	2.85	0.44
31:BJ:25:LEU:HB2	31:BJ:62:VAL:CG2	2.47	0.44
37:BP:33:GLU:HA	37:BP:38:ARG:NH1	2.31	0.44
38:BQ:13:HIS:HD2	38:BQ:31:TYR:CE1	2.35	0.44
42:BU:88:ASP:CG	42:BU:89:GLY:H	2.25	0.44
42:BU:100:GLU:O	42:BU:101:THR:CB	2.65	0.44
44:BW:73:PRO:HG2	44:BW:76:ARG:HD2	1.99	0.44
45:BX:77:TYR:O	45:BX:77:TYR:CG	2.70	0.44
46:BY:59:GLU:HG3	46:BY:60:LYS:N	2.33	0.44
53:CA:68:G:H5'	53:CA:171:A:H1'	1.99	0.44
53:CA:91:U:O2'	53:CA:92:U:C6	2.68	0.44
53:CA:131:A:C6	53:CA:232:G:C6	3.05	0.44
53:CA:375:U:C4	53:CA:376:G:N7	2.85	0.44
53:CA:530:G:H3'	53:CA:530:G:N3	2.33	0.44
53:CA:926:G:C6	53:CA:1505:G:C6	3.05	0.44
53:CA:1346:A:C8	53:CA:1348:U:C2	3.05	0.44
3:CC:1:GLY:O	3:CC:2:GLN:C	2.60	0.44
4:CD:53:GLN:HB2	4:CD:202:LEU:HD12	1.99	0.44
54:CG:100:MET:HA	54:CG:103:ILE:HD12	2.00	0.44
9:CI:12:LYS:HG2	9:CI:12:LYS:O	2.17	0.44
11:CK:126:ARG:O	21:CU:33:ARG:CZ	2.64	0.44
12:CL:14:LYS:HG3	12:CL:14:LYS:O	2.16	0.44
22:DA:310:A:H1'	22:DA:311:A:C8	2.52	0.44
22:DA:338:G:C2'	22:DA:339:U:H5'	2.47	0.44
22:DA:585:G:C2'	22:DA:1254:A:H61	2.30	0.44
22:DA:745:G:C5'	22:DA:746:U:OP2	2.64	0.44
22:DA:845:A:N3	22:DA:847:U:H1'	2.31	0.44
22:DA:857:G:H4'	44:DW:43:LYS:HE2	1.98	0.44
22:DA:878:A:H4'	22:DA:898:C:N4	2.31	0.44
22:DA:1006:C:C2	22:DA:1138:G:N2	2.86	0.44
22:DA:1188:U:O2'	22:DA:1189:A:H5'	2.17	0.44
22:DA:1788:C:O2'	22:DA:1789:A:H5'	2.17	0.44
22:DA:1965:C:H5"	22:DA:1965:C:C6	2.46	0.44
22:DA:2046:G:OP1	48:D0:11:LYS:HE3	2.17	0.44
22:DA:2080:A:H4'	45:DX:22:ASN:HD22	1.82	0.44
22:DA:2347:C:O2'	22:DA:2348:U:O5'	2.36	0.44
22:DA:2667:C:H2'	22:DA:2668:G:H8	1.83	0.44
24:DC:75:ALA:HA	24:DC:95:TYR:HA	1.98	0.44
24:DC:174:ARG:HA	24:DC:180:MET:HG2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:25:GLU:HG2	33:DL:6:LEU:HD23	1.99	0.44
26:DE:29:HIS:ND1	33:DL:6:LEU:HD22	2.31	0.44
26:DE:164:LEU:HD12	26:DE:167:VAL:HG12	1.98	0.44
28:DG:117:PRO:O	28:DG:118:ALA:C	2.60	0.44
34:DM:26:VAL:HA	34:DM:66:ARG:NH2	2.31	0.44
36:DO:11:ALA:O	36:DO:15:ARG:HG3	2.17	0.44
36:DO:17:LYS:HE3	36:DO:17:LYS:C	2.42	0.44
36:DO:69:ASP:O	36:DO:70:ALA:C	2.59	0.44
39:DR:49:ILE:HD13	39:DR:53:PHE:H	1.81	0.44
41:DT:30:ILE:O	41:DT:85:VAL:HG23	2.18	0.44
49:D1:5:ARG:NH2	49:D1:23:THR:HB	2.31	0.44
1:AA:394:G:H2'	1:AA:395:C:H6	1.82	0.44
1:AA:450:G:H2'	1:AA:451:A:OP1	2.17	0.44
1:AA:518:C:H2'	1:AA:530:G:C8	2.53	0.44
1:AA:994:A:C5	1:AA:1216:A:H4'	2.52	0.44
1:AA:1351:U:H4'	7:AG:32:ASP:CG	2.42	0.44
2:AB:19:THR:HA	2:AB:37:VAL:HG23	1.98	0.44
2:AB:185:ILE:HD11	2:AB:203:ASP:HA	1.98	0.44
3:AC:41:TYR:OH	3:AC:89:VAL:HG21	2.17	0.44
5:AE:114:LEU:HG	5:AE:119:VAL:HG22	1.99	0.44
6:AF:40:GLU:HB2	6:AF:42:TRP:NE1	2.32	0.44
9:AI:26:LYS:O	9:AI:62:LEU:HD23	2.16	0.44
9:AI:51:LEU:HA	9:AI:54:VAL:HG23	2.00	0.44
11:AK:52:ARG:HD2	11:AK:56:LYS:HD3	1.98	0.44
12:AL:34:THR:HB	12:AL:35:ARG:HG2	2.00	0.44
13:AM:23:GLY:HA3	13:AM:64:VAL:HG12	1.99	0.44
21:AU:8:ASN:N	21:AU:8:ASN:HD22	2.15	0.44
21:AU:33:ARG:HD3	21:AU:34:ARG:HG3	1.98	0.44
22:BA:243:U:O2'	22:BA:244:A:H5'	2.16	0.44
22:BA:247:G:H4'	22:BA:386:G:C5	2.52	0.44
22:BA:633:A:H8	22:BA:633:A:O5'	1.99	0.44
22:BA:683:U:C2'	22:BA:684:G:O5'	2.65	0.44
22:BA:1059:G:C2	22:BA:1080:A:N3	2.86	0.44
22:BA:1141:U:OP2	31:BJ:65:THR:HG21	2.18	0.44
22:BA:1392:A:C6	22:BA:1393:A:C6	3.05	0.44
22:BA:2149:U:C2'	22:BA:2150:C:O5'	2.65	0.44
22:BA:2280:G:C2'	22:BA:2281:A:H5'	2.47	0.44
22:BA:2505:G:HO2'	22:BA:2506:U:H5	1.59	0.44
23:BB:24:G:C6	23:BB:56:G:C2	3.05	0.44
25:BD:16:THR:HG22	25:BD:20:VAL:O	2.17	0.44
25:BD:90:PHE:C	25:BD:92:VAL:N	2.73	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:24:ASN:C	26:BE:24:ASN:ND2	2.75	0.44
26:BE:61:ARG:H	26:BE:61:ARG:HG2	1.49	0.44
26:BE:147:LEU:HB3	26:BE:186:VAL:HG23	2.00	0.44
29:BH:16:GLY:C	29:BH:51:ARG:NH2	2.74	0.44
31:BJ:31:GLU:O	31:BJ:32:LEU:C	2.57	0.44
31:BJ:65:THR:HG22	31:BJ:68:LYS:HE3	1.98	0.44
34:BM:53:MET:HE3	34:BM:53:MET:HB2	1.77	0.44
35:BN:32:GLU:OE1	35:BN:118:ARG:HA	2.16	0.44
40:BS:39:THR:HG22	40:BS:44:ALA:HB2	1.98	0.44
40:BS:85:ILE:CG2	40:BS:93:ALA:HB1	2.47	0.44
44:BW:37:VAL:C	44:BW:38:ARG:CG	2.89	0.44
44:BW:47:GLY:O	44:BW:49:ASN:N	2.49	0.44
46:BY:42:LEU:HD12	46:BY:42:LEU:HA	1.66	0.44
53:CA:518:C:H2'	53:CA:530:G:C8	2.51	0.44
53:CA:909:A:H2'	53:CA:910:C:O4'	2.18	0.44
53:CA:1077:G:C2	53:CA:1081:A:C2	3.05	0.44
53:CA:1332:A:H2'	53:CA:1333:A:H5'	2.00	0.44
2:CB:48:MET:O	2:CB:199:ILE:HG22	2.17	0.44
4:CD:2:ARG:HE	4:CD:114:ARG:HD2	1.83	0.44
4:CD:59:LYS:O	4:CD:63:ILE:HG13	2.17	0.44
4:CD:60:VAL:O	4:CD:63:ILE:HB	2.17	0.44
8:CH:29:SER:O	8:CH:30:LYS:C	2.59	0.44
10:CJ:47:GLU:HB2	10:CJ:67:ILE:CG1	2.40	0.44
55:CM:47:LEU:HD23	55:CM:48:SER:N	2.32	0.44
17:CQ:59:GLU:HB3	17:CQ:76:ARG:HG3	2.00	0.44
22:DA:90:U:C4	22:DA:91:A:C5	3.05	0.44
22:DA:388:G:O2'	22:DA:389:G:H3'	2.18	0.44
22:DA:665:U:H2'	22:DA:666:A:C8	2.52	0.44
22:DA:927:A:H2'	22:DA:928:A:C8	2.52	0.44
22:DA:1044:C:O2	22:DA:1044:C:H2'	2.17	0.44
22:DA:1432:G:H2'	22:DA:1433:A:C8	2.52	0.44
22:DA:1520:U:O4	22:DA:1521:G:C6	2.70	0.44
22:DA:1567:G:H5"	24:DC:84:PRO:CG	2.46	0.44
22:DA:1609:A:O2'	22:DA:1610:A:H5"	2.18	0.44
22:DA:1833:C:C4	22:DA:1834:U:C4	3.05	0.44
22:DA:1918:A:O2'	22:DA:1920:C:C4	2.70	0.44
22:DA:2033:A:H4'	22:DA:2034:U:OP1	2.16	0.44
22:DA:2056:G:N2	22:DA:2057:G:N9	2.65	0.44
22:DA:2234:G:C5	22:DA:2235:G:N7	2.84	0.44
22:DA:2316:G:H2'	22:DA:2317:A:C8	2.53	0.44
22:DA:2478:A:C8	22:DA:2529:G:C5	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2583:G:H2'	22:DA:2584:U:H5'	1.99	0.44
57:DB:16:G:O6	57:DB:69:G:C6	2.70	0.44
24:DC:251:THR:HG22	24:DC:252:LYS:N	2.32	0.44
29:DH:96:THR:HA	29:DH:113:SER:OG	2.17	0.44
30:DI:105:LEU:HD21	30:DI:129:GLU:CD	2.42	0.44
33:DL:85:VAL:O	33:DL:86:GLU:HB2	2.18	0.44
33:DL:103:ILE:H	33:DL:103:ILE:CD1	2.29	0.44
34:DM:57:VAL:HG23	34:DM:58:LYS:O	2.16	0.44
40:DS:6:LYS:NZ	40:DS:6:LYS:HB3	2.33	0.44
42:DU:14:THR:HG23	42:DU:15:GLY:N	2.28	0.44
1:AA:393:A:O2'	1:AA:394:G:H5'	2.18	0.44
1:AA:485:U:O2	1:AA:485:U:O4'	2.36	0.44
1:AA:486:U:O2'	1:AA:487:A:H5'	2.17	0.44
1:AA:540:G:H2'	1:AA:541:G:O4'	2.16	0.44
1:AA:753:A:H4'	1:AA:754:C:C5'	2.47	0.44
1:AA:829:G:C6	1:AA:858:G:C2	3.05	0.44
1:AA:841:C:N3	1:AA:843:U:H5'	2.32	0.44
1:AA:1165:U:C4	1:AA:1166:G:C5	3.06	0.44
2:AB:30:ILE:HD11	2:AB:38:HIS:CD2	2.53	0.44
7:AG:6:ILE:HB	7:AG:7:GLY:H	1.60	0.44
7:AG:68:VAL:O	7:AG:69:ARG:C	2.59	0.44
7:AG:94:ARG:O	7:AG:97:ALA:N	2.50	0.44
9:AI:45:MET:SD	9:AI:45:MET:N	2.91	0.44
10:AJ:26:VAL:O	10:AJ:30:LYS:HG2	2.17	0.44
13:AM:15:VAL:HG13	13:AM:40:GLU:O	2.18	0.44
13:AM:81:ASP:OD2	27:BF:111:ARG:HD2	2.18	0.44
16:AP:20:VAL:HG21	16:AP:32:PHE:HB2	1.99	0.44
17:AQ:45:VAL:HG22	17:AQ:72:TRP:HB2	2.00	0.44
17:AQ:60:ILE:HG22	17:AQ:72:TRP:HE3	1.83	0.44
21:AU:34:ARG:C	21:AU:36:PHE:N	2.74	0.44
22:BA:118:A:H2'	22:BA:120:U:O4	2.17	0.44
22:BA:508:A:H4'	22:BA:509:C:OP2	2.17	0.44
22:BA:611:C:O2'	22:BA:612:G:H5'	2.16	0.44
22:BA:729:G:H2'	22:BA:1775:U:O2	2.17	0.44
22:BA:1073:A:H8	22:BA:1073:A:P	2.40	0.44
22:BA:1107:G:H2'	22:BA:1108:U:C6	2.53	0.44
22:BA:1333:G:C2	22:BA:1334:G:C8	3.05	0.44
22:BA:1584:U:O2	22:BA:1584:U:H2'	2.16	0.44
22:BA:1754:A:C6	22:BA:1755:A:C6	3.06	0.44
22:BA:1784:A:H4'	22:BA:1785:A:C5'	2.48	0.44
22:BA:1789:A:OP2	24:BC:220:ARG:NH1	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1858:A:N6	22:BA:1884:G:H1'	2.33	0.44
22:BA:2049:G:H2'	22:BA:2050:C:H5'	2.00	0.44
22:BA:2136:G:C2	22:BA:2137:U:C4	3.05	0.44
23:BB:87:U:H3'	23:BB:88:C:C5'	2.47	0.44
28:BG:83:THR:C	28:BG:84:LYS:CD	2.89	0.44
28:BG:167:VAL:O	28:BG:168:VAL:C	2.61	0.44
29:BH:62:LEU:HD12	29:BH:62:LEU:C	2.42	0.44
34:BM:76:LYS:HG3	34:BM:77:PRO:HD2	1.99	0.44
35:BN:63:ARG:O	35:BN:64:ARG:C	2.60	0.44
37:BP:33:GLU:CG	37:BP:34:GLY:N	2.80	0.44
39:BR:11:GLN:C	39:BR:12:HIS:CG	2.95	0.44
42:BU:72:PHE:CZ	42:BU:77:GLY:HA2	2.53	0.44
44:BW:24:ARG:O	44:BW:25:PHE:CB	2.65	0.44
53:CA:28:A:O2'	53:CA:296:U:H5"	2.17	0.44
53:CA:178:C:O2'	53:CA:179:A:H5'	2.18	0.44
53:CA:204:G:H2'	53:CA:205:A:C8	2.53	0.44
53:CA:653:U:H5'	8:CH:55:LYS:HE3	1.99	0.44
53:CA:833:G:O2'	53:CA:834:U:H5'	2.17	0.44
53:CA:878:A:C6	53:CA:879:C:C4	3.05	0.44
53:CA:976:G:C2	53:CA:1363:A:C2	3.05	0.44
53:CA:1046:A:C2'	53:CA:1047:G:C5'	2.92	0.44
3:CC:11:LEU:C	3:CC:13:ILE:H	2.24	0.44
8:CH:73:SER:HB2	8:CH:129:ALA:HB3	1.99	0.44
56:CP:19:VAL:HG13	56:CP:37:GLY:CA	2.48	0.44
22:DA:266:G:N2	22:DA:427:U:H1'	2.32	0.44
22:DA:565:C:H4'	22:DA:1253:A:C6	2.52	0.44
22:DA:1232:G:H2'	22:DA:1233:C:H6	1.83	0.44
22:DA:1378:A:C8	22:DA:1380:G:C6	3.05	0.44
22:DA:1807:G:C2'	22:DA:1808:A:H5'	2.48	0.44
22:DA:1865:U:O4	22:DA:1875:G:C4	2.70	0.44
22:DA:2191:A:C5'	22:DA:2192:U:OP2	2.65	0.44
22:DA:2221:G:C6	22:DA:2222:C:C4	3.06	0.44
22:DA:2261:C:H41	44:DW:10:ARG:HB3	1.83	0.44
22:DA:2286:G:H4'	22:DA:2287:A:C4	2.52	0.44
22:DA:2384:U:H6	22:DA:2384:U:OP2	2.01	0.44
22:DA:2815:C:H2'	22:DA:2816:G:C8	2.52	0.44
57:DB:23:G:C2	57:DB:61:G:C2	3.05	0.44
57:DB:78:A:H2'	57:DB:79:G:C8	2.52	0.44
24:DC:196:ASN:O	24:DC:197:ALA:HB3	2.18	0.44
26:DE:130:LYS:O	26:DE:134:LEU:HB3	2.17	0.44
29:DH:47:PHE:O	29:DH:51:ARG:HG3	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DI:49:GLU:OE2	30:DI:54:ILE:HG13	2.17	0.44
30:DI:52:LEU:HD11	30:DI:78:LEU:CD2	2.48	0.44
31:DJ:64:VAL:HG13	31:DJ:65:THR:N	2.33	0.44
32:DK:1:MET:HA	32:DK:33:ALA:O	2.17	0.44
38:DQ:91:ARG:HG3	39:DR:11:GLN:NE2	2.32	0.44
47:DZ:37:ARG:NE	47:DZ:37:ARG:HA	2.32	0.44
51:D3:50:SER:O	51:D3:52:GLY:N	2.50	0.44
1:AA:834:U:H2'	1:AA:835:U:C6	2.53	0.44
1:AA:993:G:N2	1:AA:996:A:N6	2.66	0.44
1:AA:1003:G:H22	1:AA:1005:A:H5'	1.80	0.44
1:AA:1167:A:C8	1:AA:1169:A:N6	2.86	0.44
1:AA:1406:U:C5	1:AA:1407:C:C5	3.05	0.44
2:AB:128:LEU:HB3	2:AB:129:THR:H	1.68	0.44
3:AC:61:LYS:HD2	3:AC:61:LYS:HA	1.47	0.44
4:AD:131:ILE:C	4:AD:133:SER:H	2.25	0.44
5:AE:73:VAL:CG1	5:AE:75:LEU:HD12	2.48	0.44
7:AG:25:PHE:CE1	7:AG:104:VAL:HG23	2.52	0.44
7:AG:96:ASN:OD1	7:AG:96:ASN:N	2.50	0.44
9:AI:54:VAL:O	9:AI:55:ASP:O	2.36	0.44
11:AK:124:LYS:O	21:AU:33:ARG:NE	2.51	0.44
13:AM:10:ASP:CG	13:AM:44:ILE:HB	2.43	0.44
15:AO:41:HIS:HD2	15:AO:42:PHE:CE2	2.35	0.44
15:AO:86:LEU:C	15:AO:88:ARG:H	2.24	0.44
16:AP:3:THR:O	16:AP:21:VAL:HA	2.18	0.44
16:AP:51:ARG:O	16:AP:52:LEU:HD12	2.18	0.44
17:AQ:16:MET:O	17:AQ:17:GLU:C	2.60	0.44
20:AT:82:ILE:HD12	20:AT:82:ILE:C	2.43	0.44
21:AU:33:ARG:HD3	21:AU:34:ARG:H	1.82	0.44
22:BA:323:C:N4	22:BA:333:G:C5	2.86	0.44
22:BA:430:A:H5"	22:BA:431:U:OP2	2.18	0.44
22:BA:550:C:O2	22:BA:550:C:C2'	2.66	0.44
22:BA:666:A:H2'	22:BA:667:U:C6	2.50	0.44
22:BA:1068:G:C2'	22:BA:1069:A:H5'	2.43	0.44
22:BA:1131:G:C8	31:BJ:77:HIS:CE1	3.05	0.44
22:BA:1178:C:C4	22:BA:1180:U:C4	3.05	0.44
22:BA:1275:A:H4'	22:BA:1276:A:OP1	2.13	0.44
22:BA:1433:A:H2'	22:BA:1434:A:O4'	2.17	0.44
22:BA:1739:A:H2'	22:BA:1740:G:O4'	2.18	0.44
22:BA:1858:A:H2'	22:BA:1859:U:H6	1.80	0.44
22:BA:1858:A:H62	22:BA:1884:G:H1'	1.82	0.44
22:BA:2064:C:H2'	22:BA:2065:C:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:5:U:H2'	23:BB:6:G:H8	1.82	0.44
25:BD:90:PHE:C	25:BD:92:VAL:H	2.24	0.44
25:BD:186:LEU:HD12	25:BD:186:LEU:HA	1.67	0.44
27:BF:162:ASP:O	27:BF:163:GLU:C	2.61	0.44
32:BK:1:MET:HE2	32:BK:32:TYR:CE1	2.53	0.44
33:BL:75:ALA:O	33:BL:108:ALA:HA	2.17	0.44
38:BQ:67:ALA:HB1	38:BQ:105:PHE:CE1	2.53	0.44
38:BQ:77:LYS:HB3	38:BQ:77:LYS:HE2	1.81	0.44
41:BT:69:ARG:NH2	41:BT:70:HIS:HA	2.33	0.44
42:BU:5:ARG:O	42:BU:6:ARG:C	2.60	0.44
44:BW:51:GLY:O	44:BW:52:CYS:C	2.60	0.44
53:CA:186:C:O2'	53:CA:187:G:H5'	2.17	0.44
53:CA:442:G:C6	53:CA:443:C:C4	3.06	0.44
53:CA:587:G:H4'	8:CH:3:GLN:HA	1.98	0.44
53:CA:972:C:H4'	10:CJ:59:LYS:HG2	2.00	0.44
53:CA:1014:A:H4'	19:CS:13:HIS:HD2	1.75	0.44
53:CA:1298:U:H4'	53:CA:1299:A:O5'	2.17	0.44
2:CB:17:HIS:CG	2:CB:18:GLN:N	2.84	0.44
4:CD:71:PHE:HZ	4:CD:199:ILE:HD12	1.82	0.44
6:CF:9:MET:HE3	18:CR:64:LEU:HD22	2.00	0.44
6:CF:75:GLU:OE2	6:CF:89:VAL:HG11	2.17	0.44
6:CF:88:MET:HE1	18:CR:60:ARG:HB3	2.00	0.44
54:CG:124:SER:C	54:CG:126:ALA:N	2.76	0.44
9:CI:45:MET:O	9:CI:49:GLN:HG3	2.17	0.44
12:CL:109:ARG:NH2	12:CL:116:TYR:HE2	2.15	0.44
17:CQ:46:HIS:CE1	17:CQ:48:GLU:HG2	2.53	0.44
21:CU:19:LYS:N	21:CU:19:LYS:NZ	2.65	0.44
22:DA:151:C:H2'	22:DA:152:A:H8	1.82	0.44
22:DA:204:A:C8	22:DA:206:U:C4	3.05	0.44
22:DA:226:A:N6	22:DA:227:A:N6	2.66	0.44
22:DA:372:G:P	45:DX:61:LYS:NZ	2.90	0.44
22:DA:566:U:C5	22:DA:567:U:C5	3.05	0.44
22:DA:866:A:O2'	22:DA:867:C:C6	2.71	0.44
22:DA:929:U:H1'	47:DZ:25:GLY:O	2.17	0.44
22:DA:963:U:O2'	22:DA:964:C:P	2.75	0.44
22:DA:1187:G:H8	22:DA:1187:G:O5'	2.00	0.44
22:DA:1527:G:C2	22:DA:1546:G:N1	2.85	0.44
22:DA:1792:G:H5"	24:DC:203:VAL:HG22	2.00	0.44
22:DA:2243:U:OP1	62:DA:3720:HOH:O	2.20	0.44
22:DA:2363:G:O2'	22:DA:2364:C:H5'	2.17	0.44
22:DA:2714:G:H2'	22:DA:2715:C:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2750:A:C4'	22:DA:2751:G:OP2	2.60	0.44
22:DA:2756:U:C1'	22:DA:2757:A:C5'	2.95	0.44
58:DF:48:LEU:O	58:DF:52:ALA:HB2	2.17	0.44
28:DG:116:LEU:HA	28:DG:117:PRO:HD3	1.75	0.44
29:DH:5:LEU:C	29:DH:6:LEU:HD12	2.42	0.44
30:DI:79:LEU:HD13	30:DI:100:ILE:HG13	1.99	0.44
32:DK:66:LYS:HG2	32:DK:66:LYS:O	2.17	0.44
33:DL:79:LEU:HD23	33:DL:82:LEU:CD1	2.48	0.44
33:DL:79:LEU:HD23	33:DL:82:LEU:HD11	1.98	0.44
34:DM:117:PHE:O	34:DM:121:ALA:HB2	2.18	0.44
41:DT:64:LYS:HD2	41:DT:64:LYS:N	2.33	0.44
44:DW:37:VAL:CG2	44:DW:38:ARG:NH1	2.81	0.44
46:DY:52:ARG:C	46:DY:54:LYS:N	2.76	0.44
47:DZ:53:MET:O	47:DZ:54:VAL:HG13	2.17	0.44
49:D1:8:ILE:CG1	49:D1:24:LYS:HB3	2.47	0.44
1:AA:36:C:H4'	12:AL:118:VAL:O	2.17	0.44
1:AA:448:A:C4	1:AA:487:A:C2	3.06	0.44
1:AA:665:A:H2'	1:AA:725:G:N2	2.33	0.44
1:AA:1241:G:N2	1:AA:1242:G:C5	2.85	0.44
1:AA:1316:G:N2	1:AA:1318:A:H3'	2.32	0.44
1:AA:1321:U:H3'	1:AA:1322:C:O2	2.18	0.44
1:AA:1430:A:C2	1:AA:1471:U:C2	3.06	0.44
1:AA:1503:A:C8	1:AA:1531:A:H1'	2.53	0.44
1:AA:1511:G:C6	1:AA:1512:U:C4	3.06	0.44
3:AC:151:GLU:HA	3:AC:166:TRP:HA	1.99	0.44
5:AE:14:LEU:CB	5:AE:36:THR:HG22	2.48	0.44
8:AH:12:ARG:HH11	8:AH:26:MET:HB2	1.82	0.44
8:AH:58:LEU:HD13	8:AH:59:GLU:N	2.32	0.44
8:AH:74:ILE:HD13	8:AH:128:VAL:HG13	1.99	0.44
8:AH:78:SER:OG	8:AH:83:ARG:HA	2.18	0.44
8:AH:95:MET:HB2	8:AH:98:LEU:O	2.18	0.44
14:AN:15:LEU:N	14:AN:18:LYS:HE2	2.33	0.44
17:AQ:58:VAL:HG21	17:AQ:74:LEU:HD23	1.99	0.44
19:AS:64:GLU:CD	19:AS:64:GLU:H	2.26	0.44
21:AU:18:PHE:C	21:AU:19:LYS:HE2	2.42	0.44
22:BA:415:A:C5	22:BA:416:U:C5	3.05	0.44
22:BA:1124:G:H1'	52:B4:38:GLY:OXT	2.17	0.44
22:BA:1177:G:H2'	22:BA:1178:C:O4'	2.18	0.44
22:BA:1411:U:O2'	22:BA:1412:U:H5'	2.18	0.44
22:BA:1566:A:C6	24:BC:212:TRP:CZ3	3.06	0.44
22:BA:1635:A:C6	22:BA:1636:U:C2	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1682:G:H2'	22:BA:1683:U:C6	2.53	0.44
22:BA:1838:C:N4	22:BA:1899:A:C4	2.86	0.44
24:BC:39:SER:C	24:BC:41:GLY:N	2.75	0.44
24:BC:90:ILE:HG23	24:BC:102:TYR:CD1	2.53	0.44
25:BD:106:LYS:HB3	25:BD:206:ALA:CB	2.30	0.44
25:BD:207:VAL:O	25:BD:207:VAL:HG23	2.18	0.44
26:BE:190:ALA:C	26:BE:192:ALA:N	2.73	0.44
27:BF:43:ILE:HA	27:BF:82:TYR:CZ	2.53	0.44
27:BF:82:TYR:HA	27:BF:83:PRO:HD2	1.77	0.44
28:BG:34:ARG:HD3	28:BG:34:ARG:N	2.33	0.44
30:BI:30:GLN:NE2	30:BI:32:VAL:HB	2.33	0.44
30:BI:100:ILE:HG22	30:BI:101:SER:N	2.23	0.44
31:BJ:44:TYR:O	31:BJ:45:THR:CG2	2.66	0.44
31:BJ:141:ASP:HB3	31:BJ:142:ILE:H	1.48	0.44
37:BP:56:SER:C	37:BP:75:THR:HG23	2.42	0.44
37:BP:105:LYS:C	37:BP:108:ARG:HH21	2.25	0.44
38:BQ:106:THR:O	38:BQ:107:ALA:C	2.60	0.44
53:CA:83:C:O2	53:CA:87:C:N3	2.51	0.44
53:CA:106:C:O2'	53:CA:379:C:OP1	2.34	0.44
53:CA:473:U:OP1	56:CP:76:LYS:HE3	2.18	0.44
53:CA:737:C:OP1	6:CF:91:ARG:HD2	2.17	0.44
53:CA:932:C:H2'	53:CA:932:C:O2	2.17	0.44
53:CA:986:U:C2	53:CA:1220:G:N2	2.86	0.44
53:CA:1279:G:OP2	53:CA:1279:G:C2	2.71	0.44
53:CA:1401:G:H2'	53:CA:1402:C:O4'	2.18	0.44
53:CA:1414:U:H2'	53:CA:1415:G:H8	1.83	0.44
53:CA:1467:C:H2'	53:CA:1468:A:C8	2.52	0.44
3:CC:76:ILE:HA	3:CC:83:VAL:CG1	2.42	0.44
3:CC:127:VAL:O	3:CC:128:MET:HB2	2.18	0.44
4:CD:2:ARG:NH2	4:CD:114:ARG:NH1	2.65	0.44
5:CE:114:LEU:HD23	5:CE:143:LEU:HD11	2.00	0.44
9:CI:118:ARG:HG3	9:CI:124:PRO:HG3	2.00	0.44
14:CN:89:ARG:HG3	14:CN:91:GLU:CG	2.48	0.44
18:CR:71:ASP:HB3	18:CR:72:ARG:HH21	1.83	0.44
22:DA:576:U:OP1	22:DA:2503:A:OP1	2.36	0.44
22:DA:996:A:C6	22:DA:1160:G:C2	3.05	0.44
22:DA:1537:G:H2'	22:DA:1537:G:N3	2.33	0.44
22:DA:1566:A:C2	24:DC:212:TRP:CB	2.99	0.44
22:DA:1695:G:H8	24:DC:7:PRO:HB2	1.78	0.44
22:DA:2308:G:O6	22:DA:2311:A:N7	2.50	0.44
22:DA:2428:G:OP1	22:DA:2428:G:H3'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2649:C:H2'	22:DA:2650:U:C6	2.53	0.44
22:DA:2811:G:H2'	22:DA:2812:G:O4'	2.17	0.44
24:DC:83:ASP:HB2	24:DC:90:ILE:HD12	1.99	0.44
24:DC:149:LYS:HE3	24:DC:152:GLN:CD	2.43	0.44
24:DC:243:PRO:O	24:DC:244:VAL:HG13	2.18	0.44
58:DF:111:ARG:H	58:DF:111:ARG:NE	2.15	0.44
31:DJ:45:THR:N	31:DJ:46:PRO:CD	2.81	0.44
32:DK:17:ARG:HD3	32:DK:18:ARG:HG3	1.99	0.44
41:DT:39:THR:C	41:DT:41:ALA:H	2.25	0.44
45:DX:1:SER:O	45:DX:2:ARG:C	2.61	0.44
45:DX:37:PHE:O	45:DX:45:PHE:HA	2.18	0.44
45:DX:53:LYS:CA	45:DX:56:ARG:HB3	2.29	0.44
1:AA:27:G:C4	1:AA:557:G:N2	2.85	0.44
1:AA:285:C:O2	1:AA:285:C:H2'	2.18	0.44
1:AA:592:G:C6	1:AA:648:A:C6	3.06	0.44
1:AA:602:A:O2'	1:AA:603:U:H5'	2.18	0.44
1:AA:734:G:N2	18:AR:63:TYR:CE1	2.81	0.44
1:AA:1245:C:H2'	1:AA:1246:A:H8	1.82	0.44
1:AA:1285:A:C5'	1:AA:1286:U:C4	2.96	0.44
1:AA:1381:U:O2'	1:AA:1382:C:H5'	2.18	0.44
3:AC:39:ARG:HG2	3:AC:54:ILE:CG1	2.47	0.44
3:AC:137:VAL:CG1	3:AC:169:GLU:HB3	2.48	0.44
4:AD:94:GLU:HG2	4:AD:185:PRO:HG3	1.99	0.44
5:AE:100:GLU:HB3	5:AE:121:ASN:CA	2.47	0.44
6:AF:91:ARG:HG3	6:AF:92:THR:N	2.27	0.44
7:AG:115:MET:HA	7:AG:118:ARG:HD3	2.00	0.44
10:AJ:11:LYS:CG	10:AJ:97:ASP:HB3	2.46	0.44
12:AL:43:LYS:HZ2	12:AL:44:PRO:HD2	1.81	0.44
13:AM:4:ALA:N	13:AM:56:ARG:HG3	2.32	0.44
14:AN:48:GLN:HA	14:AN:48:GLN:NE2	2.32	0.44
16:AP:3:THR:HG22	16:AP:4:ILE:N	2.32	0.44
16:AP:6:LEU:HD12	16:AP:6:LEU:HA	1.77	0.44
19:AS:43:MET:CE	19:AS:48:ILE:HG12	2.48	0.44
22:BA:137:U:HO2'	22:BA:138:U:P	2.23	0.44
22:BA:141:G:C5'	22:BA:142:A:C8	2.99	0.44
22:BA:764:A:C6	22:BA:781:A:C2	3.06	0.44
22:BA:873:C:C2	22:BA:904:G:N2	2.83	0.44
22:BA:1131:G:O2'	22:BA:2026:U:H5'	2.18	0.44
22:BA:1157:G:O2'	47:BZ:31:ILE:HG12	2.18	0.44
22:BA:1256:G:O2'	26:BE:77:ILE:HD11	2.17	0.44
22:BA:1277:G:C5'	35:BN:20:MET:HE1	2.43	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1347:A:O2'	22:BA:1348:C:H5'	2.17	0.44
22:BA:1348:C:H2'	22:BA:1349:C:C5'	2.47	0.44
22:BA:1495:A:C6	22:BA:1496:A:C6	3.06	0.44
22:BA:1694:C:H4'	22:BA:1695:G:H5"	2.00	0.44
22:BA:1812:U:H2'	22:BA:1813:G:H8	1.83	0.44
22:BA:2555:U:H5	22:BA:2556:C:C2	2.36	0.44
24:BC:124:LYS:HG3	24:BC:125:PRO:HD2	1.98	0.44
27:BF:41:GLU:HB2	27:BF:48:LEU:HD23	2.00	0.44
29:BH:43:ASN:HA	29:BH:46:PHE:HB3	2.00	0.44
31:BJ:114:LEU:O	31:BJ:117:ALA:HB3	2.16	0.44
32:BK:108:ARG:HH21	37:BP:34:GLY:HA3	1.82	0.44
33:BL:73:ILE:HA	33:BL:105:ILE:HD13	2.00	0.44
36:BO:15:ARG:NE	36:BO:93:ASP:OD1	2.46	0.44
38:BQ:23:TYR:O	38:BQ:28:SER:HB3	2.18	0.44
43:BV:80:HIS:CD2	43:BV:83:LYS:HB2	2.52	0.44
47:BZ:7:THR:HG23	47:BZ:34:THR:OG1	2.17	0.44
52:B4:16:ILE:HA	52:B4:24:ARG:O	2.18	0.44
53:CA:327:A:C2	53:CA:329:A:N3	2.86	0.44
53:CA:718:A:H5'	11:CK:118:ASN:OD1	2.18	0.44
53:CA:1140:C:H2'	53:CA:1141:C:H5	1.83	0.44
53:CA:1287:A:O2'	53:CA:1288:A:O5'	2.36	0.44
53:CA:1356:G:N2	53:CA:1367:C:C2	2.85	0.44
53:CA:1423:G:H2'	53:CA:1424:U:H6	1.81	0.44
53:CA:1439:G:C2	53:CA:1463:U:O2	2.70	0.44
3:CC:176:THR:HG22	3:CC:178:ARG:HG3	2.00	0.44
4:CD:43:ARG:O	4:CD:45:PRO:HD3	2.18	0.44
5:CE:151:MET:O	5:CE:154:ALA:HB3	2.18	0.44
54:CG:10:LYS:O	54:CG:10:LYS:HD2	2.18	0.44
8:CH:82:LEU:CD1	12:CL:3:VAL:HG11	2.46	0.44
9:CI:49:GLN:O	9:CI:52:GLU:HG2	2.17	0.44
10:CJ:52:LEU:HB2	14:CN:80:ARG:HE	1.81	0.44
14:CN:13:VAL:HA	14:CN:59:GLN:NE2	2.33	0.44
56:CP:6:LEU:HB2	56:CP:17:TYR:HB3	2.00	0.44
56:CP:20:VAL:HA	56:CP:36:VAL:HG12	2.00	0.44
56:CP:32:PHE:C	56:CP:32:PHE:CD1	2.96	0.44
22:DA:151:C:OP1	22:DA:1359:A:O2'	2.32	0.44
22:DA:182:A:H2'	22:DA:183:C:C6	2.53	0.44
22:DA:249:C:C3'	22:DA:2394:C:H4'	2.46	0.44
22:DA:449:A:H2'	22:DA:450:G:H5'	2.00	0.44
22:DA:489:G:C2'	22:DA:491:G:C8	3.01	0.44
22:DA:828:U:P	22:DA:2068:U:C5	3.11	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:848:C:H2'	22:DA:849:A:C8	2.53	0.44
22:DA:1062:G:C4	22:DA:1063:G:C8	3.05	0.44
22:DA:1286:A:C5	22:DA:1289:C:N4	2.85	0.44
22:DA:1661:G:C4	22:DA:1662:U:C6	3.06	0.44
22:DA:1668:A:H4'	22:DA:1669:A:O5'	2.17	0.44
22:DA:1991:U:H2'	22:DA:1992:G:H5'	2.00	0.44
22:DA:2330:G:N3	44:DW:38:ARG:HB3	2.33	0.44
22:DA:2391:G:O2'	22:DA:2392:A:P	2.75	0.44
22:DA:2550:G:N2	22:DA:2559:C:H1'	2.33	0.44
22:DA:2656:U:H2'	22:DA:2657:A:H8	1.83	0.44
57:DB:54:G:HO2'	58:DF:24:VAL:HG21	1.81	0.44
26:DE:88:ARG:O	26:DE:89:PRO:C	2.59	0.44
26:DE:90:GLN:HG3	26:DE:92:HIS:NE2	2.33	0.44
58:DF:65:LEU:HG	58:DF:67:THR:HG23	2.00	0.44
28:DG:1:SER:C	28:DG:3:VAL:N	2.76	0.44
28:DG:115:GLN:HG2	28:DG:116:LEU:H	1.80	0.44
28:DG:132:LEU:HD12	28:DG:132:LEU:N	2.33	0.44
33:DL:79:LEU:HD22	33:DL:115:GLU:O	2.18	0.44
35:DN:72:ASP:O	35:DN:76:VAL:HG13	2.18	0.44
35:DN:106:ASP:O	35:DN:106:ASP:OD1	2.35	0.44
41:DT:39:THR:OG1	41:DT:42:GLU:HG3	2.17	0.44
42:DU:100:GLU:O	42:DU:101:THR:C	2.61	0.44
43:DV:2:PHE:HD1	43:DV:50:MET:HE3	1.83	0.44
46:DY:48:ARG:HG3	46:DY:48:ARG:HH11	1.82	0.44
50:D2:11:LYS:NZ	62:D2:101:HOH:O	2.51	0.44
1:AA:258:G:H4'	20:AT:81:GLN:HE22	1.82	0.44
1:AA:844:G:H5"	1:AA:845:A:OP1	2.18	0.44
1:AA:878:A:C5'	8:AH:80:PRO:HG2	2.48	0.44
1:AA:958:A:C5	1:AA:959:A:C6	3.06	0.44
1:AA:1055:A:C6	1:AA:1206:G:C4	3.06	0.44
1:AA:1138:G:N2	1:AA:1140:C:N4	2.66	0.44
1:AA:1168:U:OP1	1:AA:1168:U:H6	1.98	0.44
1:AA:1350:A:C6	1:AA:1351:U:N3	2.86	0.44
9:AI:6:TYR:HE1	9:AI:8:THR:HG1	1.62	0.44
12:AL:80:LEU:HB3	12:AL:97:VAL:HB	1.99	0.44
13:AM:3:ILE:HA	13:AM:56:ARG:NH1	2.32	0.44
15:AO:55:LEU:HD21	22:BA:715:A:C2	2.53	0.44
15:AO:87:ARG:O	15:AO:88:ARG:C	2.61	0.44
16:AP:38:PHE:CE2	16:AP:51:ARG:HB3	2.53	0.44
19:AS:62:THR:HG22	19:AS:64:GLU:OE1	2.17	0.44
19:AS:62:THR:O	19:AS:63:ASP:C	2.60	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AU:24:LYS:CG	21:AU:25:ALA:H	2.30	0.44
22:BA:108:G:C2'	22:BA:109:C:H5'	2.48	0.44
22:BA:125:A:C6	50:B2:10:LEU:HD13	2.53	0.44
22:BA:666:A:C5	22:BA:667:U:C5	3.06	0.44
22:BA:784:G:O6	24:BC:227:VAL:HG11	2.16	0.44
22:BA:910:A:C6	22:BA:911:A:C6	3.06	0.44
22:BA:931:U:C4'	22:BA:932:U:OP2	2.53	0.44
22:BA:1083:U:C2'	22:BA:1084:A:O5'	2.65	0.44
22:BA:1746:A:H2'	22:BA:1747:U:H6	1.81	0.44
22:BA:2015:A:H2'	22:BA:2016:U:H5'	2.00	0.44
22:BA:2636:C:HO2'	25:BD:45:TYR:HH	1.61	0.44
23:BB:8:C:O2'	36:BO:40:ILE:HD12	2.18	0.44
24:BC:80:LEU:CD1	24:BC:109:LEU:HG	2.48	0.44
24:BC:90:ILE:HG23	24:BC:102:TYR:HD1	1.83	0.44
25:BD:9:VAL:HG22	25:BD:10:GLY:N	2.32	0.44
25:BD:184:ARG:HD3	25:BD:186:LEU:HD22	1.98	0.44
26:BE:150:THR:CG2	26:BE:153:LEU:HA	2.46	0.44
29:BH:89:LYS:O	29:BH:90:LEU:HD12	2.18	0.44
36:BO:78:VAL:HG23	36:BO:79:ALA:N	2.33	0.44
38:BQ:63:ARG:HH22	38:BQ:96:ASP:HB3	1.81	0.44
38:BQ:63:ARG:NH2	38:BQ:96:ASP:N	2.66	0.44
39:BR:68:ARG:NH1	39:BR:90:ARG:HD3	2.33	0.44
44:BW:17:ALA:CA	44:BW:35:ILE:HG23	2.32	0.44
44:BW:50:VAL:C	44:BW:52:CYS:N	2.75	0.44
46:BY:40:SER:C	46:BY:42:LEU:N	2.73	0.44
49:B1:8:ILE:N	49:B1:22:THR:O	2.51	0.44
50:B2:1:MET:HE3	50:B2:2:LYS:N	2.33	0.44
53:CA:166:U:OP2	53:CA:166:U:H6	2.01	0.44
53:CA:515:G:N7	62:CA:1853:HOH:O	2.36	0.44
53:CA:1008:U:C4	53:CA:1022:A:C2	3.06	0.44
53:CA:1451:U:O2	53:CA:1453:G:N7	2.50	0.44
3:CC:120:THR:O	3:CC:120:THR:CG2	2.65	0.44
3:CC:129:PHE:CE2	3:CC:156:LEU:HD13	2.53	0.44
4:CD:22:SER:OG	4:CD:23:GLY:N	2.50	0.44
4:CD:26:ALA:C	4:CD:31:CYS:SG	3.01	0.44
5:CE:45:VAL:HG22	5:CE:46:GLY:N	2.32	0.44
9:CI:113:LYS:HG3	9:CI:119:LYS:HA	2.00	0.44
12:CL:23:LEU:O	12:CL:24:GLU:C	2.60	0.44
17:CQ:68:LYS:C	17:CQ:69:THR:HG23	2.42	0.44
22:DA:52:A:H2	22:DA:179:C:O4'	2.00	0.44
22:DA:108:G:H2'	22:DA:109:C:H6	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:170:U:H6	22:DA:170:U:O5'	2.01	0.44
22:DA:189:G:C2'	22:DA:190:A:O5'	2.65	0.44
22:DA:528:A:C2	22:DA:2043:C:O5'	2.70	0.44
22:DA:538:A:H5"	31:DJ:7:LYS:HZ2	1.82	0.44
22:DA:565:C:H1'	22:DA:577:G:N2	2.33	0.44
22:DA:628:G:O6	22:DA:636:G:C6	2.71	0.44
22:DA:808:G:O2'	22:DA:1254:A:H4'	2.18	0.44
22:DA:859:G:N2	22:DA:916:G:H2'	2.33	0.44
22:DA:966:G:H5'	22:DA:2272:U:O2	2.17	0.44
22:DA:1049:C:C6	22:DA:1050:A:C8	3.05	0.44
22:DA:1053:C:H2'	22:DA:1054:A:C8	2.52	0.44
22:DA:1232:G:H2'	22:DA:1233:C:C6	2.52	0.44
22:DA:1401:G:C4	22:DA:1402:U:C5	3.06	0.44
22:DA:1606:C:C2'	22:DA:1607:C:OP2	2.66	0.44
22:DA:1837:C:C2	22:DA:1904:G:C2	3.05	0.44
22:DA:1875:G:H8	22:DA:1875:G:OP2	2.01	0.44
22:DA:2305:U:H5	22:DA:2312:U:O4	2.00	0.44
22:DA:2344:U:C4'	22:DA:2345:G:OP1	2.36	0.44
22:DA:2423:U:H1'	22:DA:2425:A:C5	2.53	0.44
22:DA:2464:G:H2'	22:DA:2465:C:O4'	2.18	0.44
22:DA:2744:G:C4	22:DA:2761:A:N1	2.85	0.44
22:DA:2770:G:H8	22:DA:2770:G:O5'	2.01	0.44
57:DB:16:G:H2'	57:DB:17:C:H6	1.83	0.44
57:DB:109:A:C6	57:DB:110:C:C4	3.06	0.44
25:DD:140:HIS:CE1	62:DD:303:HOH:O	2.71	0.44
25:DD:163:GLY:O	25:DD:164:GLN:C	2.61	0.44
28:DG:68:ARG:C	28:DG:68:ARG:HD3	2.42	0.44
35:DN:84:GLY:O	35:DN:88:ALA:HB2	2.18	0.44
42:DU:16:LYS:HB3	42:DU:17:ASP:H	1.51	0.44
48:D0:54:ILE:O	48:D0:55:ALA:HB2	2.18	0.44
1:AA:71:A:C2	1:AA:72:A:C8	3.06	0.44
1:AA:73:C:H2'	1:AA:74:A:H8	1.83	0.44
1:AA:496:A:N3	1:AA:496:A:C2'	2.76	0.44
1:AA:748:G:C6	1:AA:749:A:C6	3.06	0.44
1:AA:815:A:H4'	1:AA:817:C:C4	2.53	0.44
1:AA:900:A:C6	1:AA:901:A:C2	3.06	0.44
1:AA:1034:G:H2'	1:AA:1035:A:C8	2.52	0.44
1:AA:1234:C:H2'	1:AA:1235:U:H5'	2.00	0.44
3:AC:96:VAL:HB	3:AC:97:PRO:HD2	1.99	0.44
5:AE:132:PRO:C	5:AE:134:ASN:N	2.75	0.44
6:AF:61:LEU:HD12	6:AF:62:MET:H	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:54:THR:C	8:AH:56:PRO:HD3	2.42	0.44
11:AK:21:HIS:HD2	11:AK:34:THR:HG22	1.82	0.44
12:AL:52:CYS:O	12:AL:54:VAL:HG23	2.18	0.44
15:AO:31:LEU:O	15:AO:32:THR:C	2.60	0.44
16:AP:79:ASN:O	16:AP:80:LYS:CB	2.62	0.44
17:AQ:51:GLU:CD	17:AQ:51:GLU:H	2.25	0.44
17:AQ:76:ARG:HG2	17:AQ:77:VAL:H	1.82	0.44
18:AR:70:THR:OG1	18:AR:72:ARG:HG2	2.17	0.44
19:AS:64:GLU:CD	19:AS:64:GLU:N	2.75	0.44
22:BA:464:U:O2'	50:B2:16:HIS:HE1	1.98	0.44
22:BA:479:A:N3	22:BA:481:G:H5"	2.33	0.44
22:BA:818:G:H5'	22:BA:839:U:OP1	2.18	0.44
22:BA:904:G:C2'	22:BA:905:A:O5'	2.66	0.44
22:BA:919:U:C3'	22:BA:919:U:C6	3.01	0.44
22:BA:1078:U:H5"	22:BA:1079:C:O5'	2.18	0.44
22:BA:1108:U:H2'	22:BA:1109:C:O4'	2.18	0.44
22:BA:1300:G:H5"	22:BA:1301:A:H5'	2.00	0.44
22:BA:1419:A:C6	22:BA:1421:G:C4	3.05	0.44
22:BA:1846:G:N2	22:BA:1895:C:C2	2.85	0.44
22:BA:2025:C:H2'	22:BA:2026:U:C6	2.52	0.44
22:BA:2536:G:C6	22:BA:2537:U:C4	3.06	0.44
22:BA:2742:G:C2'	22:BA:2743:U:H5'	2.48	0.44
25:BD:114:LYS:CE	25:BD:114:LYS:H	2.29	0.44
26:BE:95:LYS:O	26:BE:96:VAL:CB	2.59	0.44
27:BF:46:LYS:HD2	27:BF:46:LYS:N	2.33	0.44
27:BF:129:MET:CG	27:BF:153:ILE:HD11	2.48	0.44
30:BI:107:GLU:HA	30:BI:110:GLN:HB3	1.98	0.44
33:BL:65:GLY:O	33:BL:66:PHE:HB3	2.17	0.44
35:BN:8:ARG:HD2	35:BN:43:GLU:CG	2.45	0.44
35:BN:12:ARG:HH21	35:BN:12:ARG:HG3	1.83	0.44
35:BN:20:MET:HE3	35:BN:20:MET:HB2	1.64	0.44
36:BO:75:GLY:HA2	36:BO:106:LEU:CD1	2.48	0.44
39:BR:15:SER:O	39:BR:18:GLN:HB3	2.17	0.44
39:BR:37:GLU:OE1	39:BR:37:GLU:O	2.36	0.44
40:BS:84:ARG:O	40:BS:95:ARG:O	2.35	0.44
41:BT:37:ASP:O	41:BT:38:ALA:C	2.60	0.44
53:CA:16:A:N1	53:CA:919:A:H2	2.15	0.44
53:CA:120:A:O2'	53:CA:121:U:C4'	2.66	0.44
53:CA:327:A:O3'	53:CA:328:C:C4'	2.66	0.44
53:CA:376:G:H5"	56:CP:5:ARG:HB2	2.00	0.44
53:CA:631:C:C3'	53:CA:632:U:H5'	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:658:C:H1'	15:CO:21:THR:HG21	2.00	0.44
53:CA:704:A:H2'	53:CA:705:G:H8	1.78	0.44
53:CA:762:U:H6	53:CA:762:U:O5'	2.01	0.44
53:CA:937:A:C2	53:CA:1379:G:C6	3.06	0.44
53:CA:989:U:O4	53:CA:990:C:N4	2.51	0.44
53:CA:1222:G:H5'	19:CS:77:ARG:HH21	1.82	0.44
53:CA:1381:U:N3	54:CG:77:ARG:CZ	2.81	0.44
53:CA:1386:G:C2	53:CA:1387:G:C8	3.06	0.44
53:CA:1517:G:C8	22:DA:1920:C:OP1	2.71	0.44
2:CB:27:LYS:N	2:CB:28:PRO:CD	2.81	0.44
2:CB:46:VAL:HG13	2:CB:47:PRO:CD	2.38	0.44
2:CB:81:ASP:CG	2:CB:82:ALA:N	2.75	0.44
4:CD:144:ILE:HD12	4:CD:177:MET:HB3	1.99	0.44
6:CF:98:GLU:O	6:CF:99:ALA:CB	2.66	0.44
8:CH:33:VAL:C	8:CH:35:ILE:N	2.76	0.44
8:CH:65:PHE:C	8:CH:67:GLY:H	2.26	0.44
15:CO:34:GLN:O	15:CO:38:LEU:HB2	2.18	0.44
19:CS:10:ILE:HD12	19:CS:10:ILE:N	2.33	0.44
19:CS:14:LEU:C	19:CS:14:LEU:HD12	2.42	0.44
22:DA:242:G:C6	51:D3:4:LYS:HE3	2.53	0.44
22:DA:372:G:N2	22:DA:400:G:H2'	2.32	0.44
22:DA:498:G:C6	22:DA:499:U:C4	3.05	0.44
22:DA:600:G:H5'	26:DE:27:LEU:HD13	2.00	0.44
22:DA:857:G:O2'	44:DW:19:ARG:CZ	2.66	0.44
22:DA:1327:A:C6	22:DA:1328:A:C4	3.05	0.44
22:DA:1628:G:H2'	22:DA:1629:U:C6	2.49	0.44
22:DA:1662:U:C2'	22:DA:1663:G:H5"	2.37	0.44
22:DA:1998:A:O3'	22:DA:2724:U:H4'	2.17	0.44
22:DA:2096:C:O2'	22:DA:2097:A:H5'	2.17	0.44
22:DA:2157:G:OP2	22:DA:2157:G:N2	2.51	0.44
22:DA:2654:A:C4	22:DA:2656:U:N3	2.86	0.44
22:DA:2683:C:C5	22:DA:2684:U:C5	3.06	0.44
22:DA:2751:G:N3	28:DG:2:ARG:NH2	2.65	0.44
22:DA:2866:U:H4'	22:DA:2867:G:OP1	2.18	0.44
57:DB:57:A:C4	58:DF:25:MET:HB2	2.52	0.44
58:DF:28:PRO:HB2	58:DF:168:LEU:CD2	2.44	0.44
28:DG:102:ILE:HB	28:DG:114:HIS:O	2.18	0.44
29:DH:65:ALA:O	29:DH:66:ASN:C	2.60	0.44
31:DJ:119:PHE:C	31:DJ:121:LYS:H	2.26	0.44
32:DK:104:THR:O	32:DK:107:LEU:HD22	2.17	0.44
34:DM:23:GLY:O	34:DM:101:VAL:HG12	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DP:16:VAL:HA	37:DP:17:PRO:HD3	1.62	0.44
42:DU:39:ASN:OD1	42:DU:64:ILE:HB	2.18	0.44
43:DV:75:GLN:HB2	43:DV:90:ASP:O	2.17	0.44
47:DZ:51:SER:C	47:DZ:53:MET:H	2.25	0.44
48:D0:42:ILE:HD13	48:D0:42:ILE:HA	1.75	0.44
1:AA:19:A:C2	1:AA:917:G:C2	3.06	0.43
1:AA:78:A:N6	1:AA:79:G:N1	2.66	0.43
1:AA:211:G:N1	1:AA:212:G:H1'	2.33	0.43
1:AA:721:G:H4'	1:AA:722:G:C5'	2.42	0.43
1:AA:901:A:C5	1:AA:902:G:H1'	2.53	0.43
1:AA:995:C:H4'	14:AN:7:ALA:HB2	2.00	0.43
1:AA:1108:G:H5"	3:AC:175:HIS:ND1	2.33	0.43
2:AB:59:ILE:C	2:AB:59:ILE:HD12	2.43	0.43
2:AB:119:GLN:O	2:AB:120:SER:C	2.60	0.43
4:AD:52:VAL:CG2	4:AD:53:GLN:N	2.80	0.43
5:AE:62:ALA:O	5:AE:65:LYS:HB2	2.17	0.43
9:AI:3:ASN:HD22	9:AI:4:GLN:H	1.65	0.43
10:AJ:18:ILE:HG13	10:AJ:96:VAL:CG1	2.48	0.43
14:AN:20:PHE:O	14:AN:21:ALA:HB3	2.17	0.43
14:AN:75:LYS:HB3	14:AN:76:PHE:CE1	2.53	0.43
20:AT:24:ARG:O	20:AT:28:ARG:HG2	2.18	0.43
20:AT:84:LYS:O	20:AT:84:LYS:HD2	2.18	0.43
22:BA:14:A:C8	22:BA:15:G:C8	3.06	0.43
22:BA:187:G:C2	22:BA:210:C:O2	2.71	0.43
22:BA:445:C:O2'	22:BA:446:G:H5'	2.18	0.43
22:BA:480:A:OP2	42:BU:43:LYS:HD2	2.18	0.43
22:BA:543:G:C2	22:BA:544:C:H1'	2.53	0.43
22:BA:548:G:O2'	22:BA:549:G:C5	2.70	0.43
22:BA:659:G:C6	22:BA:660:C:C4	3.06	0.43
22:BA:847:U:O2	22:BA:934:U:H1'	2.18	0.43
22:BA:900:A:C2'	22:BA:901:C:C5'	2.68	0.43
22:BA:919:U:C4	22:BA:920:A:N7	2.86	0.43
22:BA:959:A:N6	22:BA:960:A:N1	2.66	0.43
22:BA:1061:U:O4'	30:BI:9:LYS:HD2	2.18	0.43
22:BA:1062:G:HO2'	22:BA:1063:G:H8	1.41	0.43
22:BA:1499:C:H2'	22:BA:1500:G:H8	1.83	0.43
22:BA:1505:A:C6	22:BA:1506:U:N3	2.86	0.43
22:BA:1832:C:N4	22:BA:1833:C:C4	2.86	0.43
22:BA:2097:A:C2	22:BA:2193:G:C2	3.06	0.43
22:BA:2443:C:O2'	22:BA:2444:G:H5'	2.19	0.43
22:BA:2822:G:OP2	25:BD:115:GLY:O	2.36	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2839:G:OP1	35:BN:46:ARG:HD2	2.17	0.43
22:BA:2874:C:H2'	22:BA:2875:C:C6	2.53	0.43
24:BC:145:MET:HE2	24:BC:145:MET:HB3	1.91	0.43
26:BE:75:SER:OG	26:BE:77:ILE:HG23	2.18	0.43
26:BE:122:GLU:O	26:BE:123:LYS:O	2.36	0.43
27:BF:39:VAL:HG13	27:BF:40:GLY:N	2.32	0.43
28:BG:7:PRO:HB2	28:BG:8:VAL:H	1.61	0.43
32:BK:72:PRO:C	32:BK:74:GLY:H	2.25	0.43
33:BL:94:THR:HG22	33:BL:95:LEU:H	1.83	0.43
35:BN:83:LEU:O	35:BN:84:GLY:C	2.60	0.43
37:BP:101:GLU:O	37:BP:102:ARG:HG2	2.18	0.43
40:BS:3:THR:HB	40:BS:62:ASP:OD2	2.18	0.43
41:BT:8:LEU:HD22	41:BT:8:LEU:HA	1.75	0.43
43:BV:40:ILE:CG2	43:BV:41:GLU:N	2.81	0.43
44:BW:14:ASP:HB3	44:BW:15:SER:H	1.22	0.43
47:BZ:8:GLN:O	47:BZ:8:GLN:HG2	2.18	0.43
49:B1:8:ILE:HG22	49:B1:9:LYS:N	2.33	0.43
53:CA:164:G:H2'	53:CA:165:G:H5'	1.99	0.43
53:CA:183:C:O2'	53:CA:184:G:C5'	2.66	0.43
53:CA:345:C:H5'	53:CA:346:G:C6	2.52	0.43
53:CA:442:G:C6	53:CA:443:C:N4	2.86	0.43
53:CA:930:C:C2'	53:CA:931:C:H5'	2.47	0.43
53:CA:935:A:O2'	53:CA:936:C:O5'	2.35	0.43
53:CA:1004:A:C8	53:CA:1025:U:O2'	2.71	0.43
53:CA:1072:G:H2'	53:CA:1073:U:H6	1.81	0.43
53:CA:1076:U:C2	53:CA:1082:A:C2	3.05	0.43
53:CA:1098:C:H2'	53:CA:1099:G:O4'	2.18	0.43
53:CA:1249:C:H4'	9:CI:74:GLN:HE22	1.84	0.43
53:CA:1403:C:H2'	53:CA:1404:C:C6	2.53	0.43
4:CD:29:THR:O	4:CD:31:CYS:N	2.43	0.43
54:CG:119:LEU:HD23	54:CG:119:LEU:C	2.43	0.43
8:CH:30:LYS:O	8:CH:33:VAL:N	2.51	0.43
12:CL:55:ARG:HA	12:CL:61:GLU:HA	1.99	0.43
55:CM:77:LYS:HD3	55:CM:77:LYS:O	2.18	0.43
18:CR:55:ALA:HA	18:CR:58:ILE:HD12	2.00	0.43
20:CT:59:ARG:C	20:CT:61:ALA:N	2.75	0.43
21:CU:3:ILE:HG23	21:CU:3:ILE:O	2.18	0.43
22:DA:136:G:N2	22:DA:144:A:C2	2.85	0.43
22:DA:412:A:H61	22:DA:2411:A:C2'	2.31	0.43
22:DA:673:C:H5"	26:DE:75:SER:HB2	1.99	0.43
22:DA:927:A:C6	22:DA:928:A:C6	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1330:C:O2'	22:DA:1331:G:O5'	2.32	0.43
22:DA:1491:G:C6	22:DA:1500:G:C2	3.06	0.43
22:DA:1905:C:O5'	22:DA:1905:C:H6	2.00	0.43
22:DA:2267:A:N6	22:DA:2272:U:N3	2.58	0.43
22:DA:2298:A:H5'	22:DA:2322:A:O2'	2.18	0.43
22:DA:2312:U:O2	22:DA:2312:U:C2'	2.66	0.43
22:DA:2369:A:O2'	22:DA:2370:G:H5'	2.18	0.43
22:DA:2682:A:O2'	22:DA:2683:C:H6	2.01	0.43
22:DA:2703:C:H2'	22:DA:2704:C:C6	2.53	0.43
22:DA:2724:U:O2'	22:DA:2725:A:H5'	2.18	0.43
25:DD:114:LYS:CD	25:DD:116:LYS:NZ	2.78	0.43
58:DF:104:THR:H	58:DF:107:VAL:HG22	1.83	0.43
28:DG:8:VAL:HA	28:DG:68:ARG:HH21	1.83	0.43
31:DJ:30:THR:HG23	31:DJ:31:GLU:H	1.82	0.43
32:DK:60:ALA:HB2	32:DK:86:LEU:HA	2.00	0.43
37:DP:26:GLU:OE1	37:DP:28:LYS:HE3	2.17	0.43
42:DU:52:ASN:C	42:DU:54:PRO:HD3	2.43	0.43
43:DV:21:ARG:NH2	43:DV:87:GLN:O	2.51	0.43
1:AA:116:A:H2'	1:AA:117:G:H8	1.82	0.43
1:AA:284:C:H2'	1:AA:285:C:C6	2.50	0.43
1:AA:750:C:O2	15:AO:22:GLY:HA3	2.18	0.43
1:AA:973:G:C3'	1:AA:974:A:H5"	2.44	0.43
1:AA:1124:G:OP1	10:AJ:37:ARG:C	2.61	0.43
1:AA:1145:A:O2'	1:AA:1146:A:H8	2.00	0.43
2:AB:68:PHE:HE2	2:AB:88:GLN:HB2	1.82	0.43
3:AC:76:ILE:HA	3:AC:83:VAL:CG2	2.33	0.43
4:AD:129:VAL:HG13	4:AD:131:ILE:CD1	2.47	0.43
5:AE:82:HIS:NE2	8:AH:95:MET:HE2	2.33	0.43
5:AE:93:VAL:HG21	5:AE:139:THR:CG2	2.48	0.43
6:AF:36:ILE:HG22	6:AF:64:VAL:HG22	1.99	0.43
7:AG:144:ALA:C	7:AG:146:ALA:N	2.75	0.43
9:AI:27:ILE:N	9:AI:27:ILE:HD12	2.32	0.43
10:AJ:66:GLU:HG2	14:AN:98:ALA:HB2	2.00	0.43
11:AK:21:HIS:CD2	11:AK:34:THR:HG21	2.53	0.43
12:AL:89:LEU:HD22	12:AL:89:LEU:N	2.32	0.43
19:AS:14:LEU:HD22	19:AS:34:SER:HB3	1.99	0.43
20:AT:66:ILE:O	20:AT:67:HIS:O	2.36	0.43
21:AU:34:ARG:C	21:AU:36:PHE:H	2.24	0.43
22:BA:80:G:O2'	22:BA:81:G:H5'	2.17	0.43
22:BA:149:A:C5	22:BA:150:U:C5	3.07	0.43
22:BA:830:G:C4	22:BA:2448:A:C5	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1022:G:C5	22:BA:1140:C:C4	3.06	0.43
22:BA:1467:U:C4	22:BA:1546:G:C2	3.07	0.43
22:BA:1832:C:H2'	22:BA:1833:C:O5'	2.18	0.43
22:BA:2107:G:O6	22:BA:2183:A:C6	2.71	0.43
22:BA:2356:U:H5"	44:BW:16:GLU:HG3	1.99	0.43
22:BA:2471:A:H2'	22:BA:2472:G:H5'	1.98	0.43
24:BC:35:LYS:HE3	24:BC:35:LYS:HB3	1.46	0.43
28:BG:117:PRO:HD2	28:BG:120:ILE:CG2	2.48	0.43
29:BH:45:GLU:HA	29:BH:48:GLU:HB3	2.01	0.43
29:BH:94:ILE:HG23	29:BH:98:ASP:HB3	2.00	0.43
31:BJ:21:THR:CG2	31:BJ:22:GLY:N	2.61	0.43
31:BJ:44:TYR:CE1	38:BQ:59:LEU:HD11	2.53	0.43
40:BS:2:GLU:O	40:BS:3:THR:HG23	2.18	0.43
40:BS:2:GLU:C	40:BS:3:THR:CG2	2.92	0.43
41:BT:22:THR:O	41:BT:25:GLU:HB3	2.18	0.43
41:BT:40:LYS:N	41:BT:43:ILE:HG23	2.32	0.43
46:BY:9:LYS:HB3	46:BY:12:GLU:HB2	1.98	0.43
48:B0:39:ARG:HH11	48:B0:39:ARG:CB	2.19	0.43
50:B2:24:THR:HG23	50:B2:27:GLY:N	2.16	0.43
53:CA:546:A:OP1	4:CD:68:GLU:HB3	2.18	0.43
53:CA:618:C:H5"	53:CA:619:U:H5"	2.00	0.43
53:CA:909:A:H2	53:CA:1413:A:N3	2.15	0.43
53:CA:1049:U:H4'	53:CA:1050:G:C5'	2.47	0.43
53:CA:1072:G:C5	53:CA:1073:U:C4	3.06	0.43
53:CA:1271:A:H5'	53:CA:1314:C:H5"	2.00	0.43
53:CA:1435:G:H2'	53:CA:1436:U:C6	2.54	0.43
4:CD:96:ARG:HE	4:CD:96:ARG:HB3	1.69	0.43
4:CD:106:PHE:CD1	4:CD:158:LEU:HD21	2.53	0.43
4:CD:107:GLY:N	4:CD:157:ALA:HB1	2.33	0.43
4:CD:149:LYS:NZ	4:CD:176:LYS:HD2	2.33	0.43
10:CJ:32:THR:HG23	10:CJ:83:THR:OG1	2.18	0.43
55:CM:19:THR:HA	55:CM:25:GLY:O	2.18	0.43
55:CM:91:ARG:HD3	55:CM:91:ARG:O	2.18	0.43
15:CO:31:LEU:O	15:CO:32:THR:C	2.61	0.43
17:CQ:59:GLU:HG3	17:CQ:75:VAL:CG2	2.49	0.43
19:CS:35:ARG:NH2	19:CS:51:HIS:CD2	2.84	0.43
20:CT:11:ILE:C	20:CT:13:SER:N	2.76	0.43
22:DA:621:A:O2'	22:DA:622:G:O5'	2.36	0.43
22:DA:641:U:C5	22:DA:642:U:C4	3.06	0.43
22:DA:718:A:C3'	22:DA:719:C:H5'	2.49	0.43
22:DA:946:C:H2'	22:DA:947:A:C8	2.50	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:996:A:C4'	38:DQ:91:ARG:HD2	2.33	0.43
22:DA:1244:A:O2'	26:DE:29:HIS:CE1	2.70	0.43
22:DA:1255:U:H2'	22:DA:1255:U:H6	1.61	0.43
22:DA:1565:C:H5"	24:DC:17:LYS:CE	2.48	0.43
22:DA:1915:U:O2'	22:DA:1916:A:C5'	2.66	0.43
22:DA:1926:U:H2'	22:DA:1928:A:N7	2.33	0.43
22:DA:2342:C:O2'	22:DA:2374:C:H5"	2.18	0.43
22:DA:2358:A:H8	22:DA:2358:A:OP1	2.01	0.43
22:DA:2723:C:H5'	35:DN:3:HIS:HB2	2.00	0.43
22:DA:2818:U:H2'	22:DA:2819:G:C8	2.53	0.43
24:DC:141:HIS:HB3	24:DC:190:THR:HB	2.00	0.43
25:DD:111:GLY:HA3	25:DD:194:PRO:HG2	2.00	0.43
26:DE:117:ARG:NH2	33:DL:2:ARG:HB3	2.33	0.43
58:DF:131:VAL:C	58:DF:133:GLU:N	2.75	0.43
28:DG:67:ALA:O	28:DG:71:LEU:HB2	2.18	0.43
28:DG:157:LYS:C	28:DG:159:LYS:N	2.73	0.43
34:DM:46:ILE:HD11	34:DM:69:PRO:HG3	1.98	0.43
48:D0:53:VAL:O	48:D0:54:ILE:O	2.36	0.43
1:AA:295:C:H2'	1:AA:296:U:O4'	2.19	0.43
1:AA:683:G:C6	1:AA:708:C:N3	2.86	0.43
1:AA:923:A:O4'	1:AA:1398:A:C2	2.71	0.43
1:AA:959:A:C2	1:AA:1222:G:O4'	2.72	0.43
1:AA:1124:G:HO2'	1:AA:1125:U:H5	1.56	0.43
2:AB:205:ALA:O	2:AB:209:VAL:HG22	2.18	0.43
3:AC:119:ILE:HA	3:AC:122:GLN:HG3	2.00	0.43
4:AD:189:ASP:O	4:AD:190:LEU:HB3	2.18	0.43
6:AF:67:PRO:C	6:AF:69:GLU:H	2.25	0.43
6:AF:71:ILE:HG23	6:AF:72:ASP:N	2.33	0.43
9:AI:80:HIS:HE1	9:AI:103:VAL:O	2.01	0.43
10:AJ:7:ARG:HD3	10:AJ:75:ASP:OD1	2.17	0.43
12:AL:3:VAL:O	12:AL:7:VAL:HG23	2.17	0.43
14:AN:46:LYS:C	14:AN:48:GLN:H	2.25	0.43
16:AP:77:GLU:C	16:AP:79:ASN:N	2.75	0.43
20:AT:3:ILE:O	20:AT:4:LYS:HB2	2.17	0.43
22:BA:96:C:H4'	46:BY:41:HIS:ND1	2.34	0.43
22:BA:311:A:C8	22:BA:332:A:C5	3.06	0.43
22:BA:496:G:H1'	40:BS:61:ASN:ND2	2.33	0.43
22:BA:674:G:H1'	26:BE:69:ARG:HE	1.83	0.43
22:BA:686:U:H4'	22:BA:687:C:OP2	2.18	0.43
22:BA:1082:U:C4'	30:BI:117:THR:HB	2.49	0.43
22:BA:1624:U:H2'	22:BA:1625:C:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1761:C:O5'	22:BA:1761:C:H6	2.01	0.43
22:BA:2155:U:O2	22:BA:2155:U:H2'	2.18	0.43
22:BA:2648:G:H2'	22:BA:2649:C:H6	1.83	0.43
22:BA:2860:A:H5"	22:BA:2861:U:OP2	2.19	0.43
23:BB:42:C:P	27:BF:63:LYS:HE2	2.58	0.43
24:BC:30:ALA:N	24:BC:31:PRO:HD2	2.34	0.43
27:BF:12:VAL:HG13	27:BF:13:LYS:H	1.83	0.43
29:BH:100:ALA:O	29:BH:102:ALA:N	2.52	0.43
29:BH:134:VAL:HG21	29:BH:139:PHE:O	2.18	0.43
31:BJ:13:ARG:O	31:BJ:14:ASP:CB	2.64	0.43
31:BJ:70:THR:HA	31:BJ:90:GLU:HG2	2.00	0.43
32:BK:92:GLU:O	32:BK:93:GLN:O	2.37	0.43
33:BL:73:ILE:C	33:BL:105:ILE:HD13	2.42	0.43
34:BM:12:MET:HB2	34:BM:72:PRO:HD2	2.00	0.43
38:BQ:112:ALA:O	38:BQ:116:LEU:HB2	2.18	0.43
43:BV:51:GLN:HG2	43:BV:86:LEU:HD11	1.99	0.43
43:BV:75:GLN:HB3	43:BV:90:ASP:HB3	2.00	0.43
49:B1:46:VAL:HG12	49:B1:47:ILE:N	2.34	0.43
53:CA:148:G:N1	53:CA:149:A:C5	2.86	0.43
53:CA:254:G:O2'	53:CA:255:G:H5'	2.18	0.43
53:CA:296:U:C2	53:CA:297:G:C8	3.06	0.43
53:CA:407:U:H2'	53:CA:408:A:C8	2.54	0.43
53:CA:878:A:O2'	53:CA:879:C:H5'	2.18	0.43
53:CA:978:A:OP1	53:CA:980:C:N4	2.51	0.43
53:CA:1014:A:C6	19:CS:33:TRP:CE3	3.06	0.43
53:CA:1343:G:H4'	9:CI:123:ARG:O	2.17	0.43
2:CB:214:GLY:HA2	2:CB:217:ALA:HB3	1.99	0.43
3:CC:122:GLN:O	3:CC:127:VAL:HG22	2.18	0.43
4:CD:48:SER:O	4:CD:49:ASP:C	2.61	0.43
54:CG:41:ILE:O	54:CG:45:ALA:HB3	2.18	0.43
11:CK:85:VAL:HG11	11:CK:92:ARG:NH1	2.33	0.43
12:CL:4:ASN:O	12:CL:5:GLN:C	2.61	0.43
17:CQ:20:ILE:HG12	17:CQ:22:VAL:HG23	2.00	0.43
17:CQ:29:LYS:HE2	17:CQ:36:PHE:CD1	2.53	0.43
21:CU:41:THR:O	21:CU:45:LYS:HB2	2.17	0.43
22:DA:301:G:N1	22:DA:317:G:C5	2.87	0.43
22:DA:446:G:C4'	22:DA:447:A:OP1	2.66	0.43
22:DA:449:A:OP2	62:DA:3240:HOH:O	2.21	0.43
22:DA:623:C:H2'	22:DA:624:C:O4'	2.18	0.43
22:DA:924:G:O2'	22:DA:925:A:H5'	2.17	0.43
22:DA:992:C:H4'	39:DR:74:ILE:CD1	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1055:G:C2'	22:DA:1056:G:H5'	2.49	0.43
22:DA:1239:G:C5	22:DA:1240:U:C5	3.05	0.43
22:DA:1324:G:N2	22:DA:1328:A:N1	2.66	0.43
22:DA:1335:C:H2'	22:DA:1336:A:O4'	2.18	0.43
22:DA:1425:G:H2'	22:DA:1426:G:C8	2.52	0.43
22:DA:1820:U:OP1	24:DC:176:ARG:HB3	2.18	0.43
22:DA:1833:C:C2	22:DA:1834:U:C5	3.06	0.43
22:DA:1854:A:H2	22:DA:2087:G:N3	2.16	0.43
22:DA:1965:C:C5'	22:DA:1965:C:H6	2.28	0.43
22:DA:2204:G:C2	22:DA:2205:A:C8	3.06	0.43
22:DA:2282:G:C4	22:DA:2425:A:N6	2.86	0.43
22:DA:2353:G:H21	44:DW:30:VAL:CG2	2.29	0.43
22:DA:2473:U:P	22:DA:2473:U:H6	2.41	0.43
22:DA:2563:U:H1'	22:DA:2566:A:C6	2.52	0.43
22:DA:2619:C:H5'	25:DD:157:LYS:CG	2.47	0.43
22:DA:2626:C:C2'	22:DA:2627:G:H5'	2.48	0.43
22:DA:2681:C:H4'	22:DA:2682:A:O5'	2.16	0.43
22:DA:2784:U:H2'	22:DA:2785:C:H6	1.83	0.43
22:DA:2863:C:O2'	22:DA:2864:G:H5'	2.18	0.43
57:DB:18:G:C2	57:DB:67:G:C6	3.06	0.43
57:DB:31:C:H5"	58:DF:29:ARG:HH12	1.82	0.43
57:DB:109:A:O2'	57:DB:110:C:O5'	2.36	0.43
24:DC:129:LEU:HD21	24:DC:191:LEU:HD21	2.00	0.43
26:DE:42:GLY:HA3	26:DE:90:GLN:O	2.18	0.43
58:DF:48:LEU:HG	58:DF:49:LEU:CD2	2.48	0.43
30:DI:58:ILE:HG12	30:DI:66:PHE:CB	2.48	0.43
35:DN:56:LYS:HA	35:DN:84:GLY:CA	2.48	0.43
36:DO:74:VAL:HB	36:DO:106:LEU:HD11	1.99	0.43
37:DP:86:LYS:HD2	37:DP:86:LYS:N	2.34	0.43
39:DR:39:LEU:CA	39:DR:49:ILE:HG21	2.34	0.43
41:DT:29:THR:HB	41:DT:86:THR:CA	2.48	0.43
49:D1:10:LEU:CD2	49:D1:20:TYR:HB3	2.49	0.43
1:AA:550:G:H2'	1:AA:551:U:H6	1.82	0.43
1:AA:604:G:C6	1:AA:635:A:N1	2.86	0.43
1:AA:633:G:O2'	1:AA:634:C:H5'	2.18	0.43
1:AA:1162:C:H2'	1:AA:1163:A:O4'	2.18	0.43
4:AD:84:ASN:O	4:AD:85:THR:C	2.61	0.43
7:AG:70:PRO:HD2	7:AG:95:ARG:CG	2.48	0.43
12:AL:87:LYS:HB2	12:AL:87:LYS:NZ	2.33	0.43
15:AO:26:VAL:O	15:AO:27:GLN:C	2.61	0.43
16:AP:51:ARG:NH2	16:AP:53:ASP:HB2	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:7:LEU:HD23	17:AQ:24:ILE:CD1	2.48	0.43
17:AQ:80:LYS:NZ	17:AQ:80:LYS:N	2.66	0.43
22:BA:705:A:C8	22:BA:727:A:C4	3.07	0.43
22:BA:1402:U:C2'	22:BA:1403:A:O5'	2.66	0.43
22:BA:1411:U:H2'	22:BA:1412:U:O4'	2.19	0.43
22:BA:1487:U:C2	22:BA:1503:A:C2	3.06	0.43
22:BA:1639:C:O2'	22:BA:1640:A:H5'	2.17	0.43
22:BA:2742:G:OP2	52:B4:24:ARG:NH1	2.52	0.43
25:BD:29:VAL:HB	25:BD:98:VAL:HG22	2.00	0.43
28:BG:84:LYS:HB2	28:BG:132:LEU:H	1.82	0.43
29:BH:67:ALA:HA	29:BH:138:VAL:CB	2.46	0.43
31:BJ:80:HIS:HB3	31:BJ:81:ILE:HG22	1.99	0.43
32:BK:28:SER:C	32:BK:30:ARG:N	2.76	0.43
32:BK:59:LYS:HG3	32:BK:89:ASN:HD22	1.82	0.43
32:BK:95:ILE:HD12	32:BK:95:ILE:O	2.18	0.43
34:BM:76:LYS:HA	34:BM:77:PRO:HD3	1.85	0.43
34:BM:134:THR:HG23	43:BV:79:ARG:NH2	2.33	0.43
36:BO:7:ARG:HA	36:BO:10:ARG:NH2	2.32	0.43
39:BR:21:ARG:NH2	39:BR:93:PHE:CZ	2.86	0.43
46:BY:8:GLU:O	46:BY:12:GLU:HB2	2.18	0.43
51:B3:55:GLY:O	51:B3:56:LEU:C	2.62	0.43
53:CA:5:U:H4'	53:CA:6:G:H5'	2.00	0.43
53:CA:178:C:H2'	53:CA:179:A:O4'	2.18	0.43
53:CA:576:C:OP2	53:CA:576:C:H3'	2.19	0.43
53:CA:666:G:C4	53:CA:741:G:C2	3.07	0.43
53:CA:981:U:O4	53:CA:1222:G:O6	2.35	0.43
53:CA:1089:G:C6	53:CA:1090:U:N3	2.86	0.43
53:CA:1151:A:C2	53:CA:1152:A:C5	3.07	0.43
53:CA:1255:G:O2'	53:CA:1258:G:H1'	2.18	0.43
53:CA:1303:C:N4	53:CA:1304:G:C2	2.85	0.43
53:CA:1316:G:N1	53:CA:1319:A:OP2	2.45	0.43
2:CB:88:GLN:C	2:CB:89:PHE:CG	2.97	0.43
8:CH:86:LYS:HB2	8:CH:124:ILE:HD11	2.00	0.43
10:CJ:11:LYS:HB3	10:CJ:71:LEU:CD1	2.44	0.43
10:CJ:40:ILE:HB	10:CJ:73:LEU:HD12	2.00	0.43
14:CN:80:ARG:NH1	14:CN:81:ILE:HG13	2.33	0.43
22:DA:2:G:H2'	22:DA:3:U:O4'	2.19	0.43
22:DA:48:G:H2'	22:DA:48:G:N3	2.33	0.43
22:DA:241:A:C8	22:DA:243:U:C4	3.06	0.43
22:DA:325:G:H2'	22:DA:326:G:H8	1.83	0.43
22:DA:475:C:H2'	22:DA:476:G:N7	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:533:G:H5'	38:DQ:23:TYR:CE2	2.53	0.43
22:DA:1342:A:C6	22:DA:1397:U:C6	3.06	0.43
22:DA:1453:A:C8	35:DN:73:ASN:HB3	2.54	0.43
22:DA:1563:U:H2'	22:DA:1564:C:H6	1.83	0.43
22:DA:1594:U:H2'	22:DA:1595:C:O4'	2.19	0.43
22:DA:1661:G:C2	22:DA:1662:U:C6	3.06	0.43
22:DA:1681:G:H2'	22:DA:1757:A:N1	2.33	0.43
22:DA:1734:G:O2'	22:DA:1735:A:O4'	2.37	0.43
22:DA:1854:A:O4'	22:DA:2233:U:H4'	2.18	0.43
22:DA:2393:U:C2'	22:DA:2394:C:H5'	2.48	0.43
22:DA:2492:U:O2'	22:DA:2493:U:H5'	2.18	0.43
22:DA:2756:U:C1'	22:DA:2757:A:H5"	2.49	0.43
24:DC:103:ILE:HD12	24:DC:104:LEU:H	1.83	0.43
25:DD:56:LYS:NZ	25:DD:56:LYS:HB3	2.32	0.43
26:DE:61:ARG:O	26:DE:62:GLN:C	2.61	0.43
26:DE:175:ILE:O	26:DE:175:ILE:HG23	2.17	0.43
58:DF:14:LYS:NZ	58:DF:18:GLU:HG3	2.33	0.43
28:DG:104:LEU:HG	28:DG:112:VAL:HG21	2.00	0.43
29:DH:2:GLN:O	29:DH:19:VAL:O	2.35	0.43
29:DH:68:ARG:HD2	29:DH:71:LYS:HD3	1.97	0.43
31:DJ:55:ILE:CG2	31:DJ:123:LYS:HB2	2.48	0.43
32:DK:59:LYS:HE3	32:DK:89:ASN:ND2	2.33	0.43
33:DL:14:LYS:NZ	33:DL:14:LYS:HB3	2.34	0.43
38:DQ:4:LYS:CE	38:DQ:7:VAL:H	2.30	0.43
39:DR:90:ARG:O	39:DR:91:GLN:HB3	2.17	0.43
42:DU:45:GLN:HA	42:DU:45:GLN:NE2	2.21	0.43
45:DX:77:TYR:CD1	45:DX:77:TYR:C	2.96	0.43
51:D3:21:PHE:O	51:D3:22:LYS:C	2.61	0.43
1:AA:546:A:OP2	4:AD:68:GLU:HB2	2.19	0.43
1:AA:570:G:O6	1:AA:865:A:N6	2.52	0.43
1:AA:1442:G:H2'	1:AA:1443:C:C6	2.54	0.43
4:AD:61:ARG:NH2	4:AD:67:LEU:HD23	2.33	0.43
5:AE:43:GLY:O	5:AE:44:ARG:C	2.61	0.43
8:AH:105:THR:HG21	8:AH:120:LEU:CD1	2.37	0.43
14:AN:40:ARG:HH12	14:AN:44:VAL:HG21	1.83	0.43
14:AN:63:CYS:HB3	14:AN:67:GLY:H	1.83	0.43
21:AU:23:GLU:HB3	21:AU:24:LYS:H	1.53	0.43
22:BA:187:G:C2	22:BA:210:C:C2	3.07	0.43
22:BA:528:A:C2	22:BA:2043:C:H5'	2.52	0.43
22:BA:563:A:OP2	39:BR:79:ARG:NH2	2.48	0.43
22:BA:697:G:H2'	22:BA:698:C:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:826:U:OP1	22:BA:2428:G:H3'	2.18	0.43
22:BA:996:A:HO2'	38:BQ:91:ARG:HG3	1.81	0.43
22:BA:1731:G:C6	22:BA:1733:G:O6	2.71	0.43
22:BA:1797:G:O3'	24:BC:255:LYS:HA	2.18	0.43
22:BA:2019:A:H2	22:BA:2035:G:H22	1.66	0.43
22:BA:2262:U:H4'	22:BA:2328:A:H2	1.84	0.43
24:BC:94:LEU:O	24:BC:94:LEU:HG	2.16	0.43
24:BC:109:LEU:HD23	24:BC:110:LYS:N	2.33	0.43
25:BD:101:PHE:O	25:BD:102:ALA:C	2.62	0.43
28:BG:85:LYS:C	28:BG:86:LEU:HD12	2.44	0.43
28:BG:86:LEU:HD13	28:BG:130:ILE:HB	1.99	0.43
28:BG:106:LEU:O	28:BG:151:ARG:NH2	2.44	0.43
30:BI:79:LEU:HD21	30:BI:132:ALA:HB1	2.01	0.43
31:BJ:27:ARG:HG2	31:BJ:27:ARG:NH1	2.33	0.43
31:BJ:38:GLY:O	31:BJ:40:HIS:N	2.51	0.43
32:BK:17:ARG:HG3	32:BK:47:ILE:HD13	1.99	0.43
34:BM:119:LEU:HD23	34:BM:119:LEU:HA	1.91	0.43
39:BR:38:VAL:O	39:BR:53:PHE:HA	2.18	0.43
40:BS:19:LEU:HD12	40:BS:19:LEU:HA	1.66	0.43
44:BW:29:SER:O	44:BW:30:VAL:HB	2.19	0.43
46:BY:41:HIS:CD2	46:BY:42:LEU:HD13	2.53	0.43
53:CA:21:G:H1'	53:CA:914:A:H61	1.82	0.43
53:CA:131:A:N6	53:CA:232:G:O6	2.52	0.43
53:CA:283:U:C4	53:CA:284:C:C4	3.06	0.43
53:CA:687:A:C2	53:CA:704:A:C5	3.07	0.43
53:CA:1138:G:O2'	53:CA:1139:G:P	2.76	0.43
53:CA:1183:U:H6	53:CA:1183:U:H2'	1.67	0.43
53:CA:1440:U:OP2	53:CA:1440:U:H6	2.02	0.43
2:CB:80:LYS:O	2:CB:83:ALA:N	2.52	0.43
2:CB:89:PHE:HB3	2:CB:149:GLY:O	2.19	0.43
2:CB:163:ILE:HA	2:CB:185:ILE:HG12	2.01	0.43
4:CD:62:ARG:HA	4:CD:62:ARG:HE	1.82	0.43
4:CD:148:ALA:HB1	4:CD:151:GLN:NE2	2.33	0.43
54:CG:129:ASN:OD1	54:CG:134:VAL:HG11	2.18	0.43
54:CG:137:ARG:HD2	54:CG:137:ARG:C	2.43	0.43
9:CI:102:PHE:C	9:CI:104:THR:H	2.26	0.43
14:CN:80:ARG:HG2	14:CN:81:ILE:N	2.32	0.43
17:CQ:68:LYS:O	17:CQ:69:THR:HG23	2.18	0.43
22:DA:20:C:O2'	22:DA:21:A:H5'	2.19	0.43
22:DA:137:U:O5'	22:DA:137:U:H6	2.02	0.43
22:DA:247:G:C5	22:DA:249:C:H1'	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:251:A:H4'	33:DL:47:ARG:NH2	2.33	0.43
22:DA:372:G:N2	22:DA:401:A:OP2	2.49	0.43
22:DA:410:G:C2	22:DA:2407:A:C5	3.06	0.43
22:DA:455:C:N3	22:DA:473:G:H4'	2.33	0.43
22:DA:571:U:C4	22:DA:575:A:C5	3.07	0.43
22:DA:961:C:H5	22:DA:2456:C:C4'	2.32	0.43
22:DA:1425:G:H2'	22:DA:1426:G:O4'	2.18	0.43
22:DA:1656:C:OP1	25:DD:141:ARG:NH1	2.51	0.43
22:DA:1661:G:C6	22:DA:1662:U:C5	3.06	0.43
22:DA:1866:A:H2'	22:DA:1867:G:H8	1.79	0.43
22:DA:2886:A:N7	48:D0:39:ARG:NE	2.66	0.43
25:DD:169:ARG:O	25:DD:170:VAL:HG22	2.19	0.43
26:DE:134:LEU:HA	26:DE:137:LYS:CB	2.49	0.43
28:DG:43:LYS:HB2	28:DG:50:THR:O	2.19	0.43
31:DJ:5:THR:HA	31:DJ:44:TYR:CE2	2.53	0.43
33:DL:47:ARG:HG2	33:DL:47:ARG:NH2	2.34	0.43
36:DO:8:ILE:H	36:DO:8:ILE:HD12	1.82	0.43
36:DO:77:ALA:O	36:DO:81:ARG:HG3	2.19	0.43
40:DS:7:HIS:CE1	40:DS:10:ALA:HA	2.53	0.43
42:DU:80:ASP:N	42:DU:80:ASP:OD1	2.50	0.43
43:DV:9:ARG:HD3	43:DV:39:ALA:HB1	2.00	0.43
46:DY:21:LEU:HD23	46:DY:25:GLN:CD	2.44	0.43
48:D0:16:ARG:O	48:D0:17:SER:C	2.61	0.43
50:D2:28:ARG:C	50:D2:30:VAL:H	2.26	0.43
1:AA:430:A:OP2	4:AD:7:LYS:HG2	2.18	0.43
1:AA:734:G:H2'	1:AA:735:C:H6	1.83	0.43
1:AA:1113:C:H2'	1:AA:1114:C:C6	2.53	0.43
1:AA:1210:C:H2'	1:AA:1211:U:C5'	2.48	0.43
1:AA:1340:A:H2'	1:AA:1341:U:O4'	2.19	0.43
1:AA:1409:C:H2'	1:AA:1410:A:C8	2.52	0.43
1:AA:1462:C:H2'	1:AA:1463:U:O4'	2.18	0.43
2:AB:20:ARG:O	2:AB:22:TRP:HB3	2.19	0.43
7:AG:21:LEU:HD21	7:AG:96:ASN:HD22	1.84	0.43
9:AI:9:GLY:HA2	9:AI:80:HIS:CD2	2.54	0.43
19:AS:48:ILE:HD11	19:AS:61:VAL:HG13	2.00	0.43
20:AT:26:MET:CE	20:AT:56:ILE:HD11	2.41	0.43
21:AU:10:PRO:O	21:AU:11:PHE:CB	2.64	0.43
22:BA:226:A:C6	22:BA:227:A:C6	3.07	0.43
22:BA:356:G:O2'	22:BA:357:C:H5'	2.17	0.43
22:BA:1049:C:H2'	22:BA:1050:A:H5'	2.00	0.43
22:BA:1467:U:C5	22:BA:1546:G:N3	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1885:A:H2'	22:BA:1886:U:O4'	2.18	0.43
22:BA:2345:G:C5	22:BA:2381:A:C2	3.06	0.43
22:BA:2626:C:H2'	22:BA:2627:G:O4'	2.19	0.43
22:BA:2783:U:H2'	22:BA:2784:U:H6	1.84	0.43
22:BA:2884:U:O2'	22:BA:2885:G:O4'	2.30	0.43
23:BB:66:A:C2	23:BB:108:A:C2	3.06	0.43
24:BC:171:VAL:HG22	24:BC:185:ALA:HA	2.00	0.43
24:BC:257:ARG:NE	24:BC:269:ARG:NH2	2.66	0.43
26:BE:12:LEU:HD22	26:BE:12:LEU:HA	1.80	0.43
26:BE:200:LEU:N	26:BE:200:LEU:HD22	2.33	0.43
27:BF:4:HIS:O	27:BF:7:TYR:HB3	2.19	0.43
27:BF:133:GLU:H	27:BF:150:GLY:HA3	1.83	0.43
28:BG:154:GLU:OE2	28:BG:156:TYR:N	2.43	0.43
36:BO:67:ASN:O	36:BO:67:ASN:CG	2.62	0.43
37:BP:50:ARG:HG2	37:BP:57:ALA:CA	2.48	0.43
42:BU:42:LYS:HB3	42:BU:57:ILE:HG23	2.01	0.43
43:BV:76:ASP:OD1	43:BV:77:VAL:N	2.52	0.43
49:B1:22:THR:OG1	49:B1:23:THR:N	2.51	0.43
49:B1:42:VAL:C	49:B1:43:ARG:HE	2.26	0.43
52:B4:24:ARG:NH2	52:B4:24:ARG:HG2	2.32	0.43
53:CA:16:A:O4'	5:CE:21:SER:HB3	2.19	0.43
53:CA:283:U:H2'	53:CA:284:C:C6	2.53	0.43
53:CA:935:A:H61	54:CG:2:ARG:NE	2.15	0.43
53:CA:948:C:OP2	55:CM:104:ASN:HB3	2.18	0.43
53:CA:1000:A:H1'	53:CA:1041:G:N2	2.34	0.43
53:CA:1215:G:O2'	53:CA:1216:A:C5'	2.66	0.43
2:CB:9:LEU:O	2:CB:10:LYS:HB3	2.19	0.43
8:CH:78:SER:HB2	8:CH:124:ILE:O	2.18	0.43
10:CJ:6:ILE:HG23	10:CJ:100:ILE:CG2	2.48	0.43
11:CK:74:LYS:HD2	11:CK:104:PHE:CE1	2.39	0.43
11:CK:115:ILE:O	11:CK:115:ILE:HG12	2.18	0.43
15:CO:8:ALA:O	15:CO:11:VAL:HB	2.19	0.43
15:CO:30:LEU:HD23	15:CO:30:LEU:HA	1.76	0.43
20:CT:7:LYS:O	20:CT:10:ALA:HB3	2.18	0.43
21:CU:9:GLU:HB3	21:CU:10:PRO:CD	2.48	0.43
21:CU:16:ARG:HD3	21:CU:16:ARG:HA	1.66	0.43
22:DA:36:G:N1	22:DA:445:C:N4	2.67	0.43
22:DA:221:A:C2	22:DA:233:A:C5	3.07	0.43
22:DA:265:A:C6	22:DA:428:A:O4'	2.70	0.43
22:DA:381:G:H5'	45:DX:15:ASN:HD22	1.83	0.43
22:DA:504:A:O2'	22:DA:505:A:P	2.77	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:675:A:N6	22:DA:676:A:N6	2.66	0.43
22:DA:752:A:C2'	22:DA:753:A:OP2	2.67	0.43
22:DA:855:G:N2	44:DW:23:LYS:HG2	2.33	0.43
22:DA:874:G:C2	22:DA:904:G:C2	3.07	0.43
22:DA:971:G:OP2	22:DA:974:G:N2	2.51	0.43
22:DA:983:A:C6	22:DA:984:A:C2	3.06	0.43
22:DA:1014:A:C2	22:DA:1149:G:C2	3.07	0.43
22:DA:1205:A:N7	26:DE:165:HIS:CG	2.86	0.43
22:DA:1380:G:H1'	22:DA:1569:A:H61	1.82	0.43
22:DA:1401:G:H2'	22:DA:1402:U:C6	2.53	0.43
22:DA:1586:A:H2'	22:DA:1587:G:C8	2.45	0.43
22:DA:1612:C:C2'	22:DA:1613:G:O5'	2.67	0.43
22:DA:1783:A:C2	22:DA:2588:G:O4'	2.71	0.43
22:DA:1914:C:O2	22:DA:1914:C:O4'	2.35	0.43
22:DA:2298:A:H2'	22:DA:2299:U:C5	2.54	0.43
22:DA:2371:G:C2	22:DA:2372:U:C6	3.07	0.43
22:DA:2552:U:C2	22:DA:2554:U:H5'	2.54	0.43
22:DA:2575:C:H4'	25:DD:148:GLN:O	2.19	0.43
22:DA:2652:C:C4	22:DA:2653:U:C4	3.07	0.43
57:DB:78:A:C6	57:DB:99:A:C8	3.07	0.43
26:DE:37:ALA:HB1	26:DE:92:HIS:O	2.19	0.43
58:DF:177:ARG:CZ	58:DF:178:LYS:CB	2.96	0.43
30:DI:127:SER:O	30:DI:131:THR:HG23	2.19	0.43
31:DJ:80:HIS:CB	31:DJ:81:ILE:HG13	2.49	0.43
32:DK:87:LEU:C	32:DK:89:ASN:H	2.27	0.43
36:DO:26:LEU:HD23	36:DO:92:PHE:HE1	1.84	0.43
36:DO:30:ARG:NH1	36:DO:102:ARG:HB2	2.31	0.43
38:DQ:40:LYS:O	38:DQ:44:TYR:HD2	2.02	0.43
44:DW:67:LYS:CB	44:DW:80:SER:HB2	2.47	0.43
49:D1:5:ARG:HH21	49:D1:23:THR:HB	1.83	0.43
1:AA:97:G:H2'	1:AA:98:A:O4'	2.19	0.43
1:AA:111:G:C6	1:AA:330:C:N4	2.87	0.43
1:AA:149:A:N1	1:AA:150:U:C2	2.86	0.43
1:AA:466:A:O2'	1:AA:467:U:C6	2.70	0.43
1:AA:496:A:O2'	1:AA:497:G:C8	2.59	0.43
1:AA:514:C:O2'	1:AA:515:G:H5'	2.18	0.43
1:AA:570:G:H2'	1:AA:571:U:C6	2.54	0.43
1:AA:960:U:H1'	1:AA:1222:G:O2'	2.19	0.43
1:AA:1091:U:C2	1:AA:1095:U:N3	2.87	0.43
1:AA:1422:G:C2'	1:AA:1423:G:H5'	2.49	0.43
3:AC:13:ILE:N	3:AC:13:ILE:HD13	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:100:GLU:HB2	5:AE:103:GLY:CA	2.49	0.43
6:AF:40:GLU:CB	6:AF:42:TRP:HE1	2.32	0.43
8:AH:63:LYS:C	8:AH:64:TYR:CD1	2.97	0.43
9:AI:49:GLN:C	9:AI:51:LEU:H	2.26	0.43
11:AK:22:ILE:CD1	11:AK:85:VAL:HG22	2.49	0.43
12:AL:94:TYR:CD2	12:AL:94:TYR:N	2.86	0.43
13:AM:21:ILE:HB	13:AM:24:VAL:CG2	2.49	0.43
20:AT:33:LYS:HD3	20:AT:33:LYS:HA	1.59	0.43
22:BA:1363:C:O2'	22:BA:1809:A:N3	2.41	0.43
22:BA:1728:C:O2'	22:BA:1729:U:C5	2.71	0.43
22:BA:1857:G:O2'	22:BA:1858:A:P	2.75	0.43
22:BA:2136:G:O2'	22:BA:2137:U:H6	1.98	0.43
22:BA:2375:G:N2	22:BA:2378:A:OP2	2.47	0.43
22:BA:2475:C:C2'	22:BA:2476:A:H5'	2.48	0.43
22:BA:2480:C:C2'	22:BA:2481:G:H5'	2.49	0.43
22:BA:2523:G:C2'	22:BA:2524:G:H5'	2.49	0.43
22:BA:2756:U:H4'	22:BA:2757:A:OP1	2.18	0.43
25:BD:175:LEU:HD23	25:BD:175:LEU:HA	1.75	0.43
25:BD:181:ASP:C	25:BD:182:ALA:O	2.62	0.43
26:BE:172:ALA:O	26:BE:175:ILE:CG2	2.66	0.43
28:BG:10:VAL:HG11	28:BG:16:VAL:HG21	2.01	0.43
29:BH:67:ALA:O	29:BH:69:ALA:N	2.43	0.43
32:BK:71:ARG:CB	32:BK:72:PRO:CD	2.86	0.43
34:BM:42:THR:H	34:BM:45:GLN:HB2	1.83	0.43
36:BO:59:ALA:C	36:BO:61:GLN:N	2.75	0.43
36:BO:74:VAL:O	36:BO:77:ALA:HB3	2.19	0.43
39:BR:90:ARG:O	39:BR:91:GLN:CB	2.61	0.43
40:BS:97:LEU:N	40:BS:97:LEU:HD22	2.33	0.43
51:B3:21:PHE:O	51:B3:22:LYS:O	2.36	0.43
53:CA:18:C:C2	53:CA:19:A:C8	3.07	0.43
53:CA:110:C:H2'	53:CA:110:C:O2	2.18	0.43
53:CA:142:G:C5	53:CA:143:A:C8	3.07	0.43
53:CA:321:A:O2'	53:CA:322:C:H5'	2.18	0.43
53:CA:458:U:H2'	53:CA:459:A:C8	2.53	0.43
53:CA:874:G:C6	53:CA:875:U:C4	3.07	0.43
53:CA:885:G:O2'	53:CA:886:G:H5'	2.18	0.43
2:CB:213:LEU:HD12	2:CB:213:LEU:HA	1.87	0.43
4:CD:20:LEU:HD23	4:CD:20:LEU:H	1.82	0.43
8:CH:23:ALA:HA	8:CH:62:LEU:CD2	2.48	0.43
8:CH:26:MET:HB2	8:CH:27:PRO:HD2	2.00	0.43
11:CK:15:VAL:O	11:CK:16:SER:HB2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:60:PHE:O	11:CK:64:VAL:HG13	2.19	0.43
15:CO:22:GLY:O	15:CO:23:SER:C	2.62	0.43
56:CP:56:ARG:O	56:CP:59:HIS:HB3	2.19	0.43
17:CQ:51:GLU:H	17:CQ:51:GLU:HG2	1.58	0.43
18:CR:41:SER:HA	18:CR:46:THR:HG22	2.01	0.43
19:CS:35:ARG:NE	19:CS:51:HIS:HB3	2.34	0.43
19:CS:52:ASN:C	19:CS:54:ARG:H	2.26	0.43
20:CT:30:PHE:CE2	20:CT:52:GLU:HG2	2.49	0.43
22:DA:83:A:N6	22:DA:101:A:C5'	2.81	0.43
22:DA:142:A:C2	22:DA:143:C:C2	3.07	0.43
22:DA:547:A:H3'	22:DA:548:G:C5'	2.49	0.43
22:DA:604:G:O6	22:DA:625:G:C6	2.72	0.43
22:DA:656:G:H2'	22:DA:657:U:O4'	2.18	0.43
22:DA:805:G:H3'	22:DA:806:C:C5'	2.48	0.43
22:DA:1179:G:C2	22:DA:1180:U:C2	3.06	0.43
22:DA:1286:A:C5	22:DA:1289:C:C4	3.06	0.43
22:DA:1328:A:H2'	22:DA:1330:C:N4	2.33	0.43
22:DA:1638:C:H5"	22:DA:2710:C:O2'	2.19	0.43
22:DA:1835:G:C4	22:DA:1836:C:C5	3.06	0.43
22:DA:1868:C:N4	22:DA:1869:G:C6	2.86	0.43
22:DA:2031:A:C6	22:DA:2498:C:H1'	2.53	0.43
22:DA:2060:A:C8	26:DE:63:LYS:NZ	2.86	0.43
22:DA:2066:C:O2'	22:DA:2067:G:H5'	2.17	0.43
22:DA:2264:C:H2'	22:DA:2265:U:O4'	2.19	0.43
22:DA:2400:G:H2'	22:DA:2401:U:O4'	2.18	0.43
22:DA:2460:U:H2'	22:DA:2461:A:O4'	2.19	0.43
22:DA:2583:G:C2'	22:DA:2584:U:H5'	2.49	0.43
24:DC:94:LEU:HB2	24:DC:100:ARG:HD2	2.00	0.43
25:DD:159:LYS:HE2	25:DD:160:LYS:H	1.83	0.43
29:DH:42:LYS:NZ	29:DH:42:LYS:HB3	2.34	0.43
29:DH:103:VAL:C	29:DH:105:ALA:N	2.75	0.43
31:DJ:119:PHE:C	31:DJ:121:LYS:N	2.74	0.43
32:DK:34:GLY:H	32:DK:37:ASP:HB2	1.82	0.43
34:DM:99:GLY:O	34:DM:100:LYS:C	2.62	0.43
35:DN:5:LYS:HG2	35:DN:6:SER:N	2.32	0.43
35:DN:67:PHE:HE2	35:DN:73:ASN:ND2	2.16	0.43
39:DR:78:ARG:HB3	39:DR:83:TYR:HD1	1.84	0.43
42:DU:39:ASN:HD21	42:DU:64:ILE:HG22	1.83	0.43
47:DZ:40:THR:C	47:DZ:42:ALA:H	2.27	0.43
50:D2:28:ARG:C	50:D2:30:VAL:N	2.77	0.43
1:AA:112:G:C6	1:AA:330:C:C4	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:425:G:C6	1:AA:426:U:N3	2.87	0.43
1:AA:443:C:C2'	1:AA:444:G:H5'	2.49	0.43
1:AA:579:A:C4	1:AA:580:C:C5	3.06	0.43
1:AA:1241:G:O2'	1:AA:1242:G:C8	2.47	0.43
1:AA:1347:G:O6	9:AI:11:ARG:NH2	2.51	0.43
1:AA:1373:G:H5"	7:AG:35:LYS:HB2	2.01	0.43
3:AC:38:VAL:O	3:AC:42:LEU:HB2	2.19	0.43
4:AD:65:GLY:HA3	4:AD:114:ARG:HH22	1.84	0.43
4:AD:191:SER:HA	4:AD:194:ILE:HD11	2.01	0.43
7:AG:21:LEU:HD23	7:AG:21:LEU:HA	1.73	0.43
8:AH:63:LYS:HB2	8:AH:70:VAL:HG21	1.99	0.43
14:AN:44:VAL:C	14:AN:46:LYS:H	2.27	0.43
17:AQ:11:VAL:HG21	17:AQ:53:GLY:O	2.19	0.43
22:BA:52:A:O2'	22:BA:53:A:H5'	2.18	0.43
22:BA:962:G:H2'	22:BA:963:U:H6	1.83	0.43
22:BA:999:U:C5	22:BA:1154:G:C6	3.06	0.43
22:BA:1185:G:H5"	22:BA:1186:G:P	2.59	0.43
22:BA:1245:G:OP1	33:BL:13:LYS:HE3	2.18	0.43
22:BA:1498:C:O2'	22:BA:1499:C:O4'	2.37	0.43
22:BA:2029:G:H2'	22:BA:2031:A:OP1	2.19	0.43
22:BA:2428:G:H5"	22:BA:2429:G:P	2.59	0.43
22:BA:2703:C:O5'	22:BA:2703:C:H6	2.02	0.43
24:BC:124:LYS:HB3	24:BC:127:ASN:ND2	2.34	0.43
24:BC:141:HIS:N	24:BC:190:THR:O	2.40	0.43
24:BC:229:HIS:CD2	24:BC:246:PRO:HB3	2.54	0.43
27:BF:79:ARG:O	27:BF:82:TYR:HB2	2.19	0.43
29:BH:18:GLN:CA	29:BH:18:GLN:NE2	2.81	0.43
29:BH:68:ARG:NH2	29:BH:69:ALA:HA	2.34	0.43
31:BJ:17:VAL:HG13	31:BJ:55:ILE:HG13	2.00	0.43
35:BN:54:LEU:HA	35:BN:54:LEU:HD12	1.68	0.43
37:BP:96:LEU:HD12	37:BP:98:TYR:CE1	2.54	0.43
39:BR:20:VAL:CG2	39:BR:22:LEU:HD21	2.48	0.43
39:BR:51:VAL:CB	39:BR:52:PRO:CD	2.94	0.43
39:BR:64:VAL:O	39:BR:65:ALA:CB	2.67	0.43
45:BX:44:ARG:CG	45:BX:45:PHE:N	2.82	0.43
47:BZ:3:THR:C	47:BZ:4:ILE:HG22	2.44	0.43
49:B1:42:VAL:O	49:B1:42:VAL:CG1	2.67	0.43
51:B3:21:PHE:HB2	51:B3:49:VAL:HG11	1.99	0.43
53:CA:363:A:N6	53:CA:364:A:C6	2.86	0.43
53:CA:582:C:C2	53:CA:583:A:C8	3.07	0.43
53:CA:679:C:O2	53:CA:712:A:C2	2.71	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:968:A:N3	53:CA:1062:U:H4'	2.32	0.43
53:CA:1025:U:O2'	53:CA:1026:G:OP2	2.27	0.43
53:CA:1066:C:C2'	53:CA:1067:A:C8	2.99	0.43
53:CA:1138:G:C2'	53:CA:1139:G:OP1	2.65	0.43
53:CA:1284:C:H5"	53:CA:1285:A:H5'	1.99	0.43
53:CA:1288:A:H2'	53:CA:1289:A:C8	2.53	0.43
53:CA:1395:C:H5"	53:CA:1402:C:O2'	2.19	0.43
2:CB:9:LEU:HB2	2:CB:11:ALA:H	1.83	0.43
2:CB:49:PHE:HB3	2:CB:199:ILE:CG2	2.49	0.43
2:CB:66:ILE:O	2:CB:88:GLN:HB2	2.19	0.43
3:CC:148:ILE:HD12	3:CC:149:LYS:H	1.83	0.43
3:CC:179:ALA:HB1	3:CC:202:PHE:HE1	1.83	0.43
6:CF:72:ASP:O	6:CF:75:GLU:HB2	2.19	0.43
54:CG:2:ARG:HG2	54:CG:3:ARG:N	2.33	0.43
8:CH:80:PRO:HA	8:CH:83:ARG:NE	2.34	0.43
9:CI:39:GLY:O	9:CI:40:ARG:HB2	2.19	0.43
9:CI:56:MET:O	9:CI:58:GLU:HG2	2.18	0.43
9:CI:125:GLN:H	9:CI:125:GLN:HE21	1.66	0.43
10:CJ:81:GLU:O	10:CJ:86:ALA:HB3	2.17	0.43
11:CK:111:ASP:N	21:CU:3:ILE:N	2.57	0.43
12:CL:9:LYS:HE2	12:CL:9:LYS:HB2	1.73	0.43
12:CL:86:VAL:C	12:CL:88:ASP:H	2.26	0.43
56:CP:78:VAL:HG12	56:CP:78:VAL:O	2.19	0.43
20:CT:61:ALA:HA	20:CT:67:HIS:HA	2.00	0.43
22:DA:15:G:H2'	22:DA:16:C:O4'	2.18	0.43
22:DA:136:G:H8	22:DA:136:G:O5'	2.02	0.43
22:DA:574:A:H4'	22:DA:575:A:H5'	2.00	0.43
22:DA:617:G:O2'	22:DA:618:G:C8	2.42	0.43
22:DA:629:G:O2'	22:DA:630:G:H5'	2.19	0.43
22:DA:637:A:O5'	33:DL:112:LEU:CD2	2.67	0.43
22:DA:686:U:C4	50:D2:12:ARG:HG3	2.53	0.43
22:DA:814:C:C2	22:DA:1194:A:C2	3.07	0.43
22:DA:1071:G:C5	22:DA:1089:A:C5	3.07	0.43
22:DA:1277:G:H5'	35:DN:20:MET:CE	2.49	0.43
22:DA:1455:G:O6	22:DA:2705:A:C2	2.71	0.43
22:DA:1640:A:H3'	22:DA:1641:A:H8	1.82	0.43
22:DA:1775:U:H2'	22:DA:1776:G:O5'	2.18	0.43
22:DA:1831:G:C6	22:DA:1832:C:C4	3.06	0.43
22:DA:1838:C:C5	22:DA:1899:A:C6	3.06	0.43
22:DA:1867:G:O2'	22:DA:1868:C:H5'	2.18	0.43
22:DA:1884:G:H2'	22:DA:1884:G:N3	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2149:U:O2'	22:DA:2150:C:C6	2.71	0.43
22:DA:2150:C:H2'	22:DA:2151:U:O4'	2.18	0.43
22:DA:2331:G:C6	22:DA:2385:C:N4	2.87	0.43
22:DA:2371:G:O3'	49:D1:44:GLN:NE2	2.52	0.43
22:DA:2458:G:H1'	22:DA:2459:A:N7	2.33	0.43
22:DA:2497:A:H4'	22:DA:2498:C:O5'	2.18	0.43
22:DA:2680:U:OP2	25:DD:114:LYS:HD3	2.17	0.43
22:DA:2819:G:N3	22:DA:2828:G:C2	2.87	0.43
58:DF:90:LEU:HB3	58:DF:95:MET:HG3	2.00	0.43
28:DG:34:ARG:O	28:DG:35:THR:HG23	2.19	0.43
28:DG:88:LEU:HD11	28:DG:128:THR:HA	2.00	0.43
29:DH:73:ASN:C	29:DH:75:LEU:H	2.25	0.43
29:DH:83:LYS:HZ1	29:DH:91:PHE:HD2	1.67	0.43
30:DI:89:SER:HB3	30:DI:97:VAL:HG11	1.99	0.43
33:DL:29:LYS:O	33:DL:30:THR:OG1	2.36	0.43
37:DP:24:THR:O	37:DP:25:VAL:C	2.62	0.43
37:DP:47:ILE:HD13	37:DP:61:ARG:CB	2.49	0.43
38:DQ:82:LEU:O	38:DQ:85:ALA:HB3	2.18	0.43
41:DT:25:GLU:HA	41:DT:29:THR:O	2.18	0.43
43:DV:21:ARG:HE	43:DV:87:GLN:CB	2.31	0.43
49:D1:3:GLY:O	49:D1:4:ILE:HB	2.18	0.43
1:AA:51:A:H4'	1:AA:52:C:C5'	2.48	0.43
1:AA:307:C:H5"	1:AA:308:C:OP2	2.18	0.43
1:AA:429:U:H3'	4:AD:8:LEU:HD23	2.00	0.43
1:AA:828:U:H2'	1:AA:829:G:O5'	2.19	0.43
1:AA:914:A:H2'	1:AA:915:A:C8	2.52	0.43
1:AA:1027:C:H6	1:AA:1027:C:O5'	2.02	0.43
1:AA:1033:G:H2'	1:AA:1034:G:H5"	2.01	0.43
1:AA:1322:C:O2'	1:AA:1323:G:OP2	2.37	0.43
2:AB:89:PHE:CE1	2:AB:153:MET:HB2	2.53	0.43
2:AB:148:GLY:C	2:AB:150:ILE:H	2.26	0.43
2:AB:168:GLU:HB3	2:AB:171:ALA:HB3	2.01	0.43
3:AC:138:GLN:C	3:AC:140:ALA:H	2.25	0.43
4:AD:1:ALA:O	4:AD:67:LEU:CD1	2.65	0.43
10:AJ:18:ILE:HG23	10:AJ:19:ASP:N	2.33	0.43
11:AK:80:ASN:HB3	11:AK:105:ARG:HB3	2.01	0.43
12:AL:4:ASN:ND2	12:AL:8:ARG:HH12	2.16	0.43
13:AM:76:ILE:O	13:AM:79:LEU:HB2	2.18	0.43
14:AN:30:ILE:HG23	14:AN:44:VAL:HG12	2.01	0.43
22:BA:588:U:C2	22:BA:589:U:C5	3.07	0.43
22:BA:904:G:N3	22:BA:905:A:N9	2.64	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1376:C:C4	22:BA:1377:G:C6	3.07	0.43
22:BA:1447:C:H2'	22:BA:1448:G:C8	2.53	0.43
22:BA:1659:G:C6	22:BA:2002:G:C6	3.07	0.43
22:BA:2006:C:O5'	22:BA:2006:C:H6	2.02	0.43
22:BA:2293:G:C2	22:BA:2340:A:C2	3.07	0.43
22:BA:2808:G:C2	22:BA:2891:U:C5	3.07	0.43
24:BC:57:HIS:CG	24:BC:58:LYS:H	2.31	0.43
27:BF:129:MET:HE2	27:BF:153:ILE:CG1	2.49	0.43
29:BH:41:LYS:O	29:BH:44:ILE:HG12	2.18	0.43
30:BI:56:VAL:CG2	30:BI:68:PHE:HB2	2.49	0.43
31:BJ:18:VAL:HG22	31:BJ:140:LEU:CD1	2.48	0.43
31:BJ:36:LEU:HD21	31:BJ:122:LEU:HB2	2.01	0.43
32:BK:60:ALA:HA	32:BK:87:LEU:HG	2.01	0.43
33:BL:100:ILE:HD12	33:BL:100:ILE:C	2.43	0.43
33:BL:119:PRO:HA	33:BL:138:ALA:O	2.19	0.43
36:BO:3:LYS:CG	36:BO:4:LYS:H	2.30	0.43
38:BQ:51:GLN:O	38:BQ:52:ARG:C	2.61	0.43
40:BS:24:ILE:HD12	40:BS:32:ALA:HA	2.01	0.43
42:BU:61:GLU:H	42:BU:61:GLU:HG2	1.25	0.43
44:BW:28:GLU:O	44:BW:29:SER:C	2.61	0.43
44:BW:30:VAL:O	44:BW:30:VAL:CG2	2.66	0.43
44:BW:43:LYS:HE2	44:BW:68:PHE:HE1	1.84	0.43
45:BX:62:GLY:O	45:BX:66:VAL:HG23	2.19	0.43
53:CA:223:A:C6	53:CA:224:U:C4	3.07	0.43
53:CA:258:G:O3'	20:CT:35:TYR:OH	2.37	0.43
53:CA:612:C:C2	53:CA:613:C:C5	3.07	0.43
53:CA:653:U:OP1	8:CH:55:LYS:NZ	2.50	0.43
53:CA:933:G:P	54:CG:3:ARG:HD3	2.59	0.43
53:CA:990:C:H42	53:CA:1216:A:H61	1.66	0.43
53:CA:1160:G:O2'	53:CA:1161:C:O5'	2.37	0.43
53:CA:1299:A:N9	53:CA:1301:U:H1'	2.34	0.43
2:CB:164:ASP:HB3	2:CB:167:HIS:CB	2.49	0.43
4:CD:8:LEU:HD13	4:CD:8:LEU:HA	1.86	0.43
5:CE:147:ASN:CA	5:CE:151:MET:HE3	2.46	0.43
8:CH:41:GLU:C	8:CH:43:GLY:H	2.26	0.43
55:CM:82:LEU:HD12	55:CM:82:LEU:N	2.34	0.43
19:CS:43:MET:O	19:CS:61:VAL:HG11	2.19	0.43
22:DA:30:G:C5	22:DA:31:C:C4	3.07	0.43
22:DA:46:G:N2	22:DA:47:C:C2	2.87	0.43
22:DA:80:G:O2'	22:DA:346:A:C2	2.72	0.43
22:DA:242:G:C8	51:D3:3:ILE:O	2.70	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:372:G:H5"	45:DX:60:LYS:HD3	2.01	0.43
22:DA:581:C:C2	22:DA:582:A:C8	3.07	0.43
22:DA:637:A:P	33:DL:128:THR:HG21	2.59	0.43
22:DA:670:A:C1'	22:DA:671:C:OP2	2.66	0.43
22:DA:976:G:O2'	22:DA:977:G:H5'	2.19	0.43
22:DA:1049:C:H6	22:DA:1049:C:H2'	1.57	0.43
22:DA:1075:C:O2'	22:DA:1076:C:C6	2.68	0.43
22:DA:1107:G:C2'	22:DA:1108:U:H5'	2.49	0.43
22:DA:1204:A:O4'	22:DA:1206:G:C5	2.71	0.43
22:DA:1287:A:H5'	35:DN:103:ARG:NH1	2.34	0.43
22:DA:1700:A:H2'	22:DA:1701:A:H5'	2.01	0.43
22:DA:1739:A:N6	22:DA:1740:G:C6	2.87	0.43
22:DA:1885:A:C6	22:DA:1886:U:C2	3.06	0.43
22:DA:2056:G:C2	22:DA:2057:G:N7	2.87	0.43
22:DA:2152:G:N3	22:DA:2152:G:H2'	2.33	0.43
22:DA:2361:G:OP1	51:D3:25:HIS:HA	2.19	0.43
22:DA:2361:G:H2'	22:DA:2362:C:H6	1.84	0.43
22:DA:2415:G:C5	22:DA:2416:C:C4	3.07	0.43
22:DA:2591:C:P	24:DC:237:ARG:HD2	2.59	0.43
22:DA:2771:C:H5"	25:DD:207:VAL:HG11	2.01	0.43
22:DA:2848:G:OP2	37:DP:94:ALA:N	2.43	0.43
22:DA:2893:A:O4'	22:DA:2894:G:C2	2.71	0.43
24:DC:193:GLU:CD	24:DC:193:GLU:H	2.27	0.43
28:DG:39:ALA:O	28:DG:40:VAL:HG13	2.19	0.43
28:DG:53:PRO:HG3	28:DG:61:TRP:CE2	2.54	0.43
28:DG:173:ALA:O	28:DG:174:LYS:C	2.61	0.43
29:DH:62:LEU:C	29:DH:64:ALA:N	2.77	0.43
29:DH:80:ILE:HB	29:DH:101:ASP:HB2	1.95	0.43
32:DK:15:GLY:O	32:DK:16:ALA:O	2.36	0.43
36:DO:15:ARG:HG2	36:DO:93:ASP:OD1	2.19	0.43
36:DO:24:THR:H	36:DO:90:VAL:CG1	2.31	0.43
37:DP:19:PHE:O	37:DP:20:ARG:HB3	2.19	0.43
42:DU:92:VAL:CB	42:DU:101:THR:HG21	2.43	0.43
46:DY:1:MET:HE2	46:DY:1:MET:H1	1.82	0.43
48:D0:38:LEU:N	48:D0:41:HIS:CE1	2.87	0.43
49:D1:8:ILE:CG2	49:D1:9:LYS:N	2.82	0.43
51:D3:3:ILE:HG21	51:D3:62:PRO:HG2	2.00	0.43
1:AA:7:A:N6	5:AE:96:GLN:OE1	2.52	0.43
1:AA:72:A:H61	1:AA:99:C:C1'	2.31	0.43
1:AA:175:C:O2'	1:AA:176:C:O4'	2.36	0.43
1:AA:198:G:O6	1:AA:220:G:C5	2.72	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:274:A:C4'	1:AA:275:G:OP1	2.65	0.43
1:AA:330:C:H5"	1:AA:330:C:C6	2.54	0.43
1:AA:536:C:H2'	1:AA:537:G:C8	2.54	0.43
1:AA:555:U:H2'	1:AA:556:C:H6	1.81	0.43
1:AA:637:C:O2'	1:AA:638:U:H5'	2.19	0.43
1:AA:676:A:H1'	11:AK:116:PRO:HB3	2.01	0.43
1:AA:1016:A:H3'	1:AA:1017:U:O4'	2.19	0.43
1:AA:1273:C:H2'	1:AA:1274:A:O4'	2.18	0.43
1:AA:1328:C:C2	1:AA:1329:A:C8	3.07	0.43
4:AD:190:LEU:O	4:AD:191:SER:HB2	2.18	0.43
5:AE:60:GLN:C	5:AE:62:ALA:N	2.74	0.43
5:AE:152:VAL:O	5:AE:153:ALA:C	2.61	0.43
6:AF:72:ASP:O	6:AF:73:GLU:C	2.62	0.43
7:AG:128:GLU:CD	7:AG:130:LYS:HE2	2.44	0.43
9:AI:20:ILE:HG23	9:AI:60:LEU:HD12	2.01	0.43
20:AT:55:PRO:O	20:AT:59:ARG:HB3	2.18	0.43
21:AU:37:TYR:HB3	21:AU:38:GLU:H	1.62	0.43
21:AU:45:LYS:HA	21:AU:45:LYS:HE3	2.01	0.43
22:BA:478:A:C6	22:BA:480:A:C6	3.07	0.43
22:BA:754:U:H2'	22:BA:755:U:C6	2.52	0.43
22:BA:833:A:OP2	33:BL:39:LYS:HE3	2.19	0.43
22:BA:902:C:N4	22:BA:903:C:H41	1.99	0.43
22:BA:979:A:H2'	22:BA:982:C:H42	1.84	0.43
22:BA:1037:G:O2'	22:BA:1038:G:H5'	2.19	0.43
22:BA:1334:G:C6	22:BA:1335:C:C4	3.06	0.43
22:BA:1797:G:H5'	24:BC:253:GLY:HA2	2.01	0.43
22:BA:2097:A:H2'	22:BA:2098:U:C6	2.54	0.43
22:BA:2436:G:O2'	22:BA:2598:A:N1	2.49	0.43
24:BC:104:LEU:HD12	24:BC:104:LEU:HA	1.52	0.43
24:BC:173:LEU:O	24:BC:180:MET:HA	2.18	0.43
26:BE:105:LEU:HA	26:BE:108:ILE:HG23	2.01	0.43
28:BG:29:ASN:CG	28:BG:30:GLY:H	2.25	0.43
29:BH:101:ASP:C	29:BH:104:THR:HB	2.44	0.43
29:BH:119:ASN:C	29:BH:121:VAL:H	2.26	0.43
30:BI:3:LYS:HD2	30:BI:4:VAL:H	1.82	0.43
36:BO:80:GLU:O	36:BO:81:ARG:C	2.60	0.43
39:BR:20:VAL:HG21	39:BR:22:LEU:HD21	2.01	0.43
39:BR:68:ARG:HH11	39:BR:90:ARG:NH1	2.14	0.43
40:BS:36:LEU:HD23	40:BS:48:LYS:HA	2.00	0.43
44:BW:37:VAL:HG12	44:BW:38:ARG:HG2	2.00	0.43
44:BW:41:GLY:C	44:BW:43:LYS:N	2.71	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BX:11:PRO:HB3	45:BX:29:LEU:CB	2.49	0.43
50:B2:36:ALA:O	50:B2:38:GLY:N	2.51	0.43
53:CA:183:C:O2'	53:CA:184:G:O5'	2.27	0.43
53:CA:208:U:C4	53:CA:212:G:N1	2.87	0.43
53:CA:315:A:C5	53:CA:330:C:H5"	2.54	0.43
53:CA:695:A:N1	53:CA:696:A:C2	2.87	0.43
53:CA:974:A:H8	14:CN:70:HIS:CE1	2.37	0.43
53:CA:1005:A:C8	53:CA:1006:G:H1'	2.54	0.43
53:CA:1215:G:C4	53:CA:1216:A:N7	2.87	0.43
53:CA:1301:U:H5"	53:CA:1302:C:P	2.58	0.43
53:CA:1457:G:OP1	20:CT:33:LYS:NZ	2.49	0.43
2:CB:64:GLY:HA2	2:CB:158:ASP:OD2	2.18	0.43
2:CB:119:GLN:HE22	2:CB:136:ARG:HH12	1.67	0.43
4:CD:34:GLU:HB3	4:CD:35:GLN:H	1.54	0.43
5:CE:52:ALA:HB2	5:CE:61:LYS:CE	2.41	0.43
6:CF:32:ALA:O	6:CF:33:GLU:HB2	2.18	0.43
6:CF:39:LEU:HD12	6:CF:40:GLU:N	2.34	0.43
54:CG:94:ARG:HB3	54:CG:98:LEU:HG	2.00	0.43
11:CK:57:SER:O	11:CK:90:PRO:HG3	2.18	0.43
11:CK:81:LEU:HD11	11:CK:104:PHE:CG	2.53	0.43
11:CK:110:THR:HG22	21:CU:4:LYS:HA	2.01	0.43
12:CL:81:ILE:HD11	12:CL:94:TYR:CG	2.54	0.43
55:CM:47:LEU:HD23	55:CM:48:SER:C	2.44	0.43
15:CO:9:LYS:O	15:CO:13:GLU:OE2	2.37	0.43
56:CP:75:ILE:HA	56:CP:78:VAL:CG2	2.47	0.43
19:CS:62:THR:HG22	19:CS:63:ASP:N	2.34	0.43
20:CT:66:ILE:HD12	20:CT:70:LYS:HG2	2.01	0.43
21:CU:35:GLU:HG3	21:CU:36:PHE:N	2.28	0.43
22:DA:3:U:C4	22:DA:4:U:C5	3.07	0.43
22:DA:30:G:C6	22:DA:31:C:N3	2.87	0.43
22:DA:70:G:H5'	22:DA:112:U:O2	2.19	0.43
22:DA:71:A:OP2	22:DA:71:A:H3'	2.19	0.43
22:DA:191:A:H2'	22:DA:192:C:C6	2.54	0.43
22:DA:214:G:H1'	22:DA:217:A:H5'	2.00	0.43
22:DA:449:A:H4'	38:DQ:2:ARG:HH22	1.83	0.43
22:DA:492:A:N1	40:DS:49:LYS:HE2	2.33	0.43
22:DA:584:C:N4	22:DA:585:G:C6	2.87	0.43
22:DA:657:U:O2'	22:DA:658:U:H5'	2.19	0.43
22:DA:867:C:O2'	22:DA:868:U:C6	2.37	0.43
22:DA:1420:A:N3	22:DA:2211:A:N7	2.66	0.43
22:DA:1439:A:H2	22:DA:1553:A:N7	2.15	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1533:C:C2'	22:DA:1534:U:H5'	2.49	0.43
22:DA:1598:A:O2'	22:DA:1599:U:H5'	2.19	0.43
22:DA:1784:A:P	62:DA:3680:HOH:O	2.77	0.43
22:DA:1798:U:C5	24:DC:270:ARG:NH1	2.87	0.43
22:DA:1980:G:C2	22:DA:1982:U:C4	3.07	0.43
22:DA:2351:G:O6	51:D3:42:HIS:HE1	2.02	0.43
22:DA:2738:A:H2	22:DA:2766:A:N6	2.11	0.43
22:DA:2744:G:N2	22:DA:2745:C:C2	2.87	0.43
22:DA:2800:A:H2'	22:DA:2801:G:O4'	2.18	0.43
24:DC:73:ILE:O	24:DC:116:GLN:HG2	2.18	0.43
31:DJ:103:ILE:C	31:DJ:103:ILE:HD12	2.44	0.43
32:DK:87:LEU:HD23	32:DK:87:LEU:N	2.34	0.43
35:DN:2:ARG:CD	35:DN:5:LYS:HB3	2.46	0.43
35:DN:35:LYS:NZ	35:DN:112:TYR:CE1	2.77	0.43
36:DO:24:THR:HG22	36:DO:41:ALA:HA	2.01	0.43
43:DV:75:GLN:HG3	43:DV:92:VAL:HG11	2.01	0.43
44:DW:9:THR:OG1	44:DW:10:ARG:N	2.50	0.43
46:DY:58:ASN:C	46:DY:60:LYS:H	2.27	0.43
1:AA:102:G:C4	1:AA:103:U:C5	3.07	0.42
1:AA:184:G:O4'	1:AA:224:U:H4'	2.18	0.42
1:AA:495:A:C4'	1:AA:496:A:O5'	2.66	0.42
1:AA:554:A:H5"	12:AL:25:ALA:HB1	2.02	0.42
1:AA:692:U:H1'	1:AA:695:A:N7	2.34	0.42
1:AA:792:A:N3	1:AA:794:A:C5	2.87	0.42
1:AA:1394:A:C6	1:AA:1501:C:H4'	2.54	0.42
1:AA:1473:G:C2'	1:AA:1474:U:H5'	2.49	0.42
2:AB:130:LYS:NZ	2:AB:133:ALA:HB2	2.34	0.42
2:AB:148:GLY:HA2	2:AB:151:LYS:HE3	2.01	0.42
5:AE:110:MET:HA	5:AE:113:VAL:HG13	2.00	0.42
8:AH:30:LYS:HD2	8:AH:30:LYS:HA	1.75	0.42
9:AI:62:LEU:HD23	9:AI:62:LEU:N	2.34	0.42
10:AJ:80:THR:O	10:AJ:81:GLU:C	2.62	0.42
12:AL:83:GLY:HA2	12:AL:94:TYR:HA	2.00	0.42
19:AS:4:LEU:HD12	19:AS:4:LEU:H	1.83	0.42
22:BA:738:G:C6	22:BA:739:A:C2	3.07	0.42
22:BA:855:G:H1'	44:BW:23:LYS:HD3	2.01	0.42
22:BA:874:G:C6	22:BA:904:G:C6	3.07	0.42
22:BA:1353:A:O2'	22:BA:1354:A:H5'	2.19	0.42
22:BA:2643:G:H2'	22:BA:2644:G:O4'	2.19	0.42
22:BA:2689:U:H4'	22:BA:2690:U:OP2	2.19	0.42
22:BA:2860:A:H8	22:BA:2860:A:O5'	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:115:ILE:HD12	24:BC:115:ILE:HA	1.72	0.42
24:BC:250:GLN:CD	24:BC:250:GLN:H	2.27	0.42
24:BC:254:LYS:O	24:BC:256:THR:N	2.49	0.42
24:BC:255:LYS:C	24:BC:256:THR:HG23	2.44	0.42
25:BD:42:ASN:O	25:BD:43:ASP:O	2.36	0.42
26:BE:3:LEU:O	26:BE:11:ALA:HA	2.19	0.42
26:BE:48:THR:HG22	26:BE:86:ALA:HB3	1.99	0.42
27:BF:165:GLY:O	27:BF:168:LEU:HB3	2.19	0.42
30:BI:59:THR:HG22	30:BI:61:TYR:CE2	2.53	0.42
31:BJ:25:LEU:HD22	31:BJ:25:LEU:C	2.44	0.42
31:BJ:54:ILE:HD12	31:BJ:55:ILE:N	2.34	0.42
31:BJ:124:VAL:O	31:BJ:125:TYR:HB2	2.18	0.42
35:BN:31:HIS:C	35:BN:33:ILE:H	2.27	0.42
35:BN:45:ARG:HG2	35:BN:95:THR:HG21	2.01	0.42
39:BR:61:ALA:CB	39:BR:98:ILE:H	2.29	0.42
44:BW:28:GLU:CB	44:BW:31:LEU:HD11	2.49	0.42
45:BX:70:LEU:O	45:BX:74:GLY:N	2.51	0.42
47:BZ:20:LYS:O	47:BZ:21:ALA:C	2.62	0.42
53:CA:120:A:O2'	53:CA:121:U:H5"	2.17	0.42
53:CA:188:C:N4	53:CA:189:A:N6	2.67	0.42
53:CA:338:A:H61	53:CA:351:G:H1	1.67	0.42
53:CA:444:G:C2	53:CA:445:G:C8	3.06	0.42
53:CA:694:A:H3'	53:CA:695:A:H5"	2.01	0.42
53:CA:825:A:H2'	53:CA:826:C:C6	2.54	0.42
53:CA:962:C:H2'	53:CA:963:G:C8	2.54	0.42
53:CA:1035:A:H2'	53:CA:1036:A:C8	2.54	0.42
53:CA:1054:C:H1'	53:CA:1196:A:C5	2.54	0.42
53:CA:1142:G:N2	53:CA:1143:G:H1'	2.33	0.42
53:CA:1486:G:H2'	53:CA:1487:G:O4'	2.19	0.42
3:CC:113:LYS:HG3	3:CC:184:ASN:ND2	2.34	0.42
8:CH:59:GLU:C	8:CH:60:LEU:HD12	2.44	0.42
10:CJ:66:GLU:O	14:CN:95:LEU:HA	2.19	0.42
12:CL:35:ARG:HD3	12:CL:35:ARG:HA	1.75	0.42
12:CL:62:VAL:HG23	12:CL:63:THR:N	2.34	0.42
55:CM:12:LYS:HB3	55:CM:17:ALA:CB	2.47	0.42
55:CM:23:GLY:HA3	55:CM:64:VAL:HG13	2.00	0.42
55:CM:64:VAL:CG1	55:CM:65:GLU:H	2.23	0.42
56:CP:19:VAL:HG13	56:CP:37:GLY:HA3	2.01	0.42
22:DA:95:A:O2'	46:DY:40:SER:N	2.52	0.42
22:DA:126:A:OP2	50:D2:19:ARG:HB2	2.19	0.42
22:DA:216:A:N6	22:DA:432:A:C1'	2.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:235:U:N3	22:DA:236:C:C5	2.85	0.42
22:DA:294:A:N1	22:DA:346:A:C6	2.87	0.42
22:DA:374:A:C4	22:DA:401:A:C6	3.07	0.42
22:DA:388:G:H8	22:DA:388:G:H2'	1.68	0.42
22:DA:486:C:O5'	22:DA:486:C:H6	2.01	0.42
22:DA:491:G:N2	22:DA:492:A:H1'	2.33	0.42
22:DA:782:A:N7	24:DC:219:VAL:HG21	2.33	0.42
22:DA:798:G:OP2	26:DE:56:GLY:HA3	2.19	0.42
22:DA:799:G:P	22:DA:800:A:H3'	2.59	0.42
22:DA:1255:U:HO2'	22:DA:1256:G:P	2.41	0.42
22:DA:1408:G:H22	22:DA:1595:C:H1'	1.84	0.42
22:DA:1551:A:H2'	22:DA:1552:A:O4'	2.19	0.42
22:DA:1647:U:H3'	22:DA:1647:U:P	2.59	0.42
22:DA:1792:G:O2'	22:DA:1793:C:H5'	2.19	0.42
22:DA:2149:U:HO2'	22:DA:2150:C:H6	1.64	0.42
22:DA:2287:A:N6	22:DA:2289:G:N3	2.67	0.42
22:DA:2344:U:H6	22:DA:2344:U:O5'	2.01	0.42
22:DA:2390:U:O2	22:DA:2390:U:H2'	2.19	0.42
22:DA:2474:U:C2'	22:DA:2475:C:O5'	2.67	0.42
22:DA:2484:G:OP1	34:DM:44:ARG:HD3	2.19	0.42
22:DA:2493:U:H2'	22:DA:2494:G:O4'	2.19	0.42
24:DC:161:VAL:HG11	24:DC:173:LEU:HB2	1.99	0.42
25:DD:22:ILE:HD13	25:DD:22:ILE:HA	1.92	0.42
26:DE:77:ILE:H	26:DE:77:ILE:HG12	1.39	0.42
26:DE:133:LEU:HD23	26:DE:133:LEU:C	2.43	0.42
26:DE:153:LEU:HD21	26:DE:157:LEU:HG	2.00	0.42
32:DK:9:ASN:ND2	32:DK:17:ARG:CZ	2.82	0.42
33:DL:90:VAL:HG12	33:DL:90:VAL:O	2.19	0.42
33:DL:122:VAL:O	33:DL:122:VAL:HG23	2.19	0.42
38:DQ:73:ILE:HG13	38:DQ:74:SER:N	2.32	0.42
39:DR:14:VAL:HG22	39:DR:15:SER:O	2.19	0.42
39:DR:49:ILE:HG22	39:DR:54:VAL:HB	2.01	0.42
41:DT:69:ARG:NE	41:DT:70:HIS:CD2	2.87	0.42
46:DY:31:GLN:OE1	46:DY:37:LEU:HB2	2.19	0.42
47:DZ:33:HIS:O	47:DZ:33:HIS:CG	2.71	0.42
49:D1:20:TYR:HE2	49:D1:37:LYS:HZ2	1.67	0.42
51:D3:31:ILE:O	51:D3:35:LYS:NZ	2.36	0.42
1:AA:536:C:H2'	1:AA:537:G:H8	1.84	0.42
1:AA:616:G:O2'	1:AA:617:G:H5'	2.20	0.42
1:AA:751:U:C5	1:AA:752:G:C6	3.08	0.42
1:AA:946:A:H2'	1:AA:947:G:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:958:A:C6	1:AA:959:A:N1	2.87	0.42
2:AB:95:TRP:O	2:AB:95:TRP:HE3	2.02	0.42
4:AD:34:GLU:O	4:AD:36:ALA:N	2.52	0.42
4:AD:57:LYS:HG2	4:AD:202:LEU:HD23	2.02	0.42
4:AD:114:ARG:O	4:AD:115:GLN:C	2.63	0.42
8:AH:21:LYS:HE2	8:AH:21:LYS:CA	2.47	0.42
11:AK:21:HIS:HD2	11:AK:34:THR:CG2	2.32	0.42
13:AM:18:LEU:O	13:AM:21:ILE:HD13	2.19	0.42
13:AM:90:HIS:HA	13:AM:108:ARG:NH2	2.33	0.42
22:BA:244:A:C2	22:BA:255:A:C4	3.06	0.42
22:BA:570:G:H2'	22:BA:2030:A:C8	2.54	0.42
22:BA:666:A:H4'	33:BL:48:ARG:CD	2.49	0.42
22:BA:919:U:C6	22:BA:919:U:H3'	2.54	0.42
22:BA:1014:A:H2'	22:BA:1015:U:H6	1.83	0.42
22:BA:1664:A:C2	22:BA:2726:A:C8	3.07	0.42
22:BA:1797:G:O3'	24:BC:255:LYS:O	2.36	0.42
22:BA:1922:G:H2'	22:BA:1923:U:O4'	2.18	0.42
22:BA:1983:G:C6	22:BA:1984:G:N7	2.87	0.42
22:BA:2298:A:H2'	22:BA:2299:U:O4'	2.18	0.42
22:BA:2704:C:C4	22:BA:2705:A:C5	3.07	0.42
24:BC:61:TYR:CD2	24:BC:85:ASN:ND2	2.85	0.42
28:BG:159:LYS:HB3	28:BG:159:LYS:HE2	1.76	0.42
29:BH:42:LYS:HG2	29:BH:43:ASN:HD22	1.83	0.42
29:BH:81:ALA:O	29:BH:102:ALA:HB2	2.20	0.42
30:BI:19:PRO:HB2	30:BI:22:PRO:HD2	2.02	0.42
31:BJ:26:GLY:HA2	31:BJ:29:ALA:HB3	2.01	0.42
31:BJ:119:PHE:CD1	31:BJ:119:PHE:O	2.72	0.42
38:BQ:77:LYS:O	38:BQ:78:PHE:C	2.63	0.42
38:BQ:110:GLU:O	38:BQ:112:ALA:N	2.52	0.42
42:BU:38:ILE:HD13	42:BU:38:ILE:HA	1.88	0.42
42:BU:95:PHE:C	42:BU:96:LYS:O	2.61	0.42
43:BV:72:VAL:HG12	43:BV:93:ARG:CA	2.42	0.42
48:B0:11:LYS:HA	48:B0:11:LYS:HD2	1.67	0.42
49:B1:16:THR:CG2	49:B1:41:VAL:HG22	2.49	0.42
53:CA:66:A:C8	53:CA:66:A:H5"	2.54	0.42
53:CA:92:U:H2'	53:CA:93:U:C6	2.54	0.42
53:CA:142:G:N3	53:CA:196:A:H2	2.17	0.42
53:CA:567:G:N2	62:CA:1818:HOH:O	2.43	0.42
53:CA:908:A:H2'	53:CA:909:A:H8	1.84	0.42
53:CA:996:A:H2'	53:CA:997:U:H6	1.83	0.42
53:CA:1238:A:N6	53:CA:1302:C:N4	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:34:ARG:HD3	2:CB:35:ASN:N	2.34	0.42
2:CB:42:LEU:H	2:CB:42:LEU:HG	1.51	0.42
2:CB:122:ASP:HB3	2:CB:124:THR:CG2	2.49	0.42
3:CC:22:PHE:CE2	10:CJ:97:ASP:HB2	2.55	0.42
3:CC:25:THR:HG23	14:CN:75:LYS:HD2	2.00	0.42
4:CD:153:ARG:HG2	4:CD:154:VAL:N	2.34	0.42
6:CF:6:ILE:HG22	6:CF:7:VAL:N	2.34	0.42
54:CG:49:LEU:HG	54:CG:123:LEU:HB3	2.00	0.42
9:CI:127:SER:C	9:CI:129:ARG:H	2.27	0.42
10:CJ:81:GLU:C	10:CJ:83:THR:H	2.26	0.42
55:CM:13:HIS:O	55:CM:14:ALA:C	2.61	0.42
14:CN:79:SER:HB2	14:CN:81:ILE:HD11	2.02	0.42
56:CP:52:LEU:O	56:CP:53:ASP:CB	2.66	0.42
22:DA:73:A:H8	22:DA:73:A:O5'	2.02	0.42
22:DA:126:A:H2'	50:D2:46:LYS:HE2	2.01	0.42
22:DA:686:U:H3	50:D2:12:ARG:HB2	1.84	0.42
22:DA:1387:A:N6	22:DA:1401:G:N1	2.68	0.42
22:DA:1574:C:H2'	22:DA:1575:C:O4'	2.18	0.42
22:DA:1973:G:C4	22:DA:1974:C:C5	3.07	0.42
22:DA:2144:G:O2'	22:DA:2147:A:OP2	2.21	0.42
22:DA:2261:C:N4	44:DW:10:ARG:HB3	2.34	0.42
22:DA:2507:C:H1'	22:DA:2583:G:N2	2.33	0.42
22:DA:2657:A:O3'	28:DG:159:LYS:NZ	2.52	0.42
22:DA:2734:A:C2'	22:DA:2735:G:H5'	2.49	0.42
24:DC:95:TYR:C	24:DC:97:ASP:N	2.76	0.42
24:DC:105:ALA:HA	24:DC:106:PRO:HD3	1.76	0.42
25:DD:33:ARG:NH1	25:DD:74:GLU:CD	2.77	0.42
25:DD:108:ASP:OD2	25:DD:173:GLN:HA	2.19	0.42
25:DD:110:THR:HG23	25:DD:171:THR:HG22	2.01	0.42
26:DE:58:LYS:HA	26:DE:59:PRO:HD3	1.79	0.42
58:DF:11:VAL:C	58:DF:13:LYS:H	2.26	0.42
58:DF:32:LYS:HB2	58:DF:32:LYS:NZ	2.34	0.42
58:DF:105:ILE:HG22	58:DF:105:ILE:O	2.19	0.42
28:DG:53:PRO:HB3	28:DG:61:TRP:N	2.34	0.42
28:DG:70:LEU:HD12	28:DG:71:LEU:N	2.34	0.42
28:DG:117:PRO:HG2	28:DG:143:VAL:CG1	2.48	0.42
29:DH:4:ILE:HG23	29:DH:17:ASP:C	2.44	0.42
29:DH:62:LEU:HD12	29:DH:63:ALA:N	2.34	0.42
30:DI:36:GLU:HB2	30:DI:40:ALA:HB3	2.00	0.42
31:DJ:3:THR:HG21	38:DQ:60:TRP:HE1	1.83	0.42
33:DL:111:ILE:N	33:DL:111:ILE:HD13	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DM:29:GLY:CA	34:DM:64:TRP:HZ3	2.32	0.42
35:DN:28:LEU:HD23	35:DN:28:LEU:C	2.45	0.42
35:DN:31:HIS:C	35:DN:33:ILE:H	2.26	0.42
35:DN:96:ARG:HG3	35:DN:97:ILE:N	2.34	0.42
36:DO:17:LYS:HE2	36:DO:21:LEU:HD11	2.01	0.42
36:DO:26:LEU:HB3	36:DO:92:PHE:CD1	2.54	0.42
41:DT:1:MET:O	41:DT:2:ILE:C	2.61	0.42
43:DV:9:ARG:HG2	43:DV:39:ALA:O	2.19	0.42
1:AA:70:U:H5	1:AA:94:G:HO2'	1.65	0.42
1:AA:82:G:H2'	1:AA:83:C:C4'	2.49	0.42
1:AA:550:G:H2'	1:AA:551:U:C6	2.54	0.42
1:AA:673:A:H1'	18:AR:63:TYR:CE1	2.52	0.42
11:AK:17:ASP:HB3	11:AK:80:ASN:OD1	2.17	0.42
17:AQ:12:VAL:HB	17:AQ:21:VAL:HG22	2.02	0.42
17:AQ:48:GLU:O	17:AQ:49:ASN:C	2.62	0.42
19:AS:62:THR:O	19:AS:64:GLU:N	2.52	0.42
22:BA:800:A:H4'	22:BA:801:G:OP1	2.20	0.42
22:BA:833:A:H2'	22:BA:834:G:H8	1.82	0.42
22:BA:858:G:H3'	22:BA:859:G:C8	2.54	0.42
22:BA:1016:G:C2'	22:BA:1017:G:O5'	2.67	0.42
22:BA:1029:A:C8	22:BA:1030:C:C6	3.07	0.42
22:BA:1107:G:H2'	22:BA:1108:U:H6	1.84	0.42
22:BA:1693:U:H4'	22:BA:1694:C:OP2	2.19	0.42
22:BA:1815:A:OP1	22:BA:1822:C:H4'	2.19	0.42
22:BA:1827:U:H2'	22:BA:1828:G:O4'	2.19	0.42
22:BA:2311:A:H1'	27:BF:78:ILE:CD1	2.47	0.42
22:BA:2383:G:H2'	22:BA:2384:U:C6	2.54	0.42
22:BA:2704:C:N4	22:BA:2705:A:C6	2.88	0.42
22:BA:2741:A:H2'	22:BA:2742:G:O4'	2.19	0.42
22:BA:2846:G:H2'	22:BA:2847:U:O4'	2.18	0.42
26:BE:46:GLN:HG2	26:BE:87:ALA:H	1.84	0.42
26:BE:58:LYS:O	26:BE:59:PRO:C	2.62	0.42
26:BE:175:ILE:O	26:BE:175:ILE:CG2	2.63	0.42
28:BG:84:LYS:HG3	28:BG:131:VAL:C	2.41	0.42
28:BG:168:VAL:HG23	28:BG:168:VAL:O	2.19	0.42
30:BI:53:PRO:HB2	30:BI:74:PRO:CG	2.49	0.42
31:BJ:64:VAL:O	31:BJ:68:LYS:HD2	2.19	0.42
32:BK:49:ARG:HD2	32:BK:50:GLY:H	1.85	0.42
36:BO:2:ASP:O	36:BO:3:LYS:HB3	2.19	0.42
39:BR:61:ALA:HB1	39:BR:98:ILE:N	2.27	0.42
48:B0:45:ASP:O	48:B0:52:LYS:HE3	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:B3:21:PHE:O	51:B3:22:LYS:HG2	2.20	0.42
52:B4:26:ILE:HD13	52:B4:26:ILE:N	2.34	0.42
53:CA:14:U:N3	53:CA:17:U:OP2	2.52	0.42
53:CA:398:U:H2'	53:CA:399:G:H8	1.84	0.42
53:CA:437:U:O2'	4:CD:119:HIS:HD2	2.02	0.42
53:CA:1090:U:H2'	53:CA:1091:U:C6	2.50	0.42
53:CA:1133:G:C5	53:CA:1134:G:N7	2.87	0.42
53:CA:1343:G:C5	53:CA:1344:C:C4	3.06	0.42
2:CB:82:ALA:HB1	2:CB:217:ALA:HB1	2.02	0.42
3:CC:156:LEU:C	3:CC:158:GLY:H	2.26	0.42
4:CD:57:LYS:HE3	4:CD:61:ARG:HD3	2.01	0.42
4:CD:147:LYS:HD3	4:CD:147:LYS:C	2.45	0.42
5:CE:132:PRO:O	5:CE:134:ASN:N	2.52	0.42
8:CH:77:VAL:N	8:CH:125:ILE:O	2.52	0.42
10:CJ:39:PRO:HA	10:CJ:74:VAL:H	1.83	0.42
11:CK:70:ALA:N	11:CK:73:VAL:HG13	2.33	0.42
12:CL:115:LYS:O	12:CL:116:TYR:CB	2.67	0.42
56:CP:57:ILE:O	56:CP:61:VAL:HG23	2.19	0.42
18:CR:58:ILE:O	18:CR:62:ARG:HG3	2.19	0.42
21:CU:33:ARG:HG2	21:CU:34:ARG:N	2.34	0.42
22:DA:216:A:N6	22:DA:432:A:H1'	2.34	0.42
22:DA:307:G:N1	22:DA:310:A:OP2	2.53	0.42
22:DA:532:A:N3	22:DA:532:A:C2'	2.82	0.42
22:DA:570:G:N7	22:DA:2030:A:N6	2.67	0.42
22:DA:589:U:O2'	22:DA:590:A:H8	2.02	0.42
22:DA:646:U:H6	22:DA:646:U:OP2	2.02	0.42
22:DA:857:G:H1'	44:DW:19:ARG:HE	1.81	0.42
22:DA:1054:A:H2'	22:DA:1055:G:O4'	2.19	0.42
22:DA:1264:A:H2'	22:DA:2014:A:N6	2.34	0.42
22:DA:1596:A:N6	22:DA:1597:A:N6	2.66	0.42
22:DA:1616:A:OP1	22:DA:1616:A:H2'	2.19	0.42
22:DA:1627:G:N2	22:DA:1628:G:C8	2.87	0.42
22:DA:1857:G:N3	22:DA:1884:G:C2	2.87	0.42
22:DA:2079:U:H2'	22:DA:2080:A:O4'	2.19	0.42
22:DA:2109:U:H2'	22:DA:2110:G:OP1	2.19	0.42
22:DA:2187:U:O2'	22:DA:2188:U:H5'	2.19	0.42
22:DA:2518:A:H4'	22:DA:2519:U:OP2	2.19	0.42
22:DA:2591:C:H2'	22:DA:2592:G:H8	1.83	0.42
22:DA:2628:C:H1'	22:DA:2781:A:C4	2.53	0.42
22:DA:2653:U:OP2	22:DA:2654:A:O2'	2.32	0.42
22:DA:2727:A:O2'	22:DA:2728:U:C5'	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2727:A:O2'	22:DA:2728:U:H5'	2.20	0.42
22:DA:2797:U:O2	22:DA:2797:U:H2'	2.20	0.42
57:DB:40:U:O2	57:DB:43:C:C2'	2.55	0.42
24:DC:2:VAL:HB	24:DC:3:VAL:H	1.47	0.42
24:DC:79:ARG:C	24:DC:80:LEU:HD12	2.44	0.42
24:DC:94:LEU:CD1	24:DC:100:ARG:HD3	2.49	0.42
25:DD:174:SER:O	25:DD:175:LEU:C	2.62	0.42
25:DD:193:VAL:CB	25:DD:194:PRO:HD2	2.49	0.42
26:DE:29:HIS:HA	26:DE:32:VAL:CG2	2.48	0.42
26:DE:79:ARG:HG2	26:DE:80:SER:H	1.83	0.42
26:DE:147:LEU:HD12	26:DE:149:ILE:HG22	2.01	0.42
26:DE:188:MET:HE3	26:DE:193:VAL:HG22	2.01	0.42
58:DF:41:GLU:HG2	58:DF:42:ALA:N	2.31	0.42
58:DF:102:LEU:C	58:DF:103:ILE:HD12	2.44	0.42
58:DF:107:VAL:N	58:DF:108:PRO:HD2	2.34	0.42
58:DF:113:PHE:O	58:DF:114:ARG:HB3	2.19	0.42
29:DH:75:LEU:O	29:DH:76:GLU:HB2	2.18	0.42
33:DL:21:ARG:CZ	33:DL:21:ARG:HB3	2.49	0.42
34:DM:26:VAL:HG21	34:DM:132:THR:O	2.19	0.42
35:DN:21:PHE:N	35:DN:21:PHE:HD1	2.17	0.42
35:DN:103:ARG:HB2	35:DN:110:MET:HG3	2.00	0.42
38:DQ:4:LYS:CD	38:DQ:7:VAL:HG22	2.49	0.42
38:DQ:64:ILE:HD12	38:DQ:95:ALA:HB3	2.01	0.42
38:DQ:86:SER:O	38:DQ:87:VAL:C	2.63	0.42
41:DT:5:GLU:HA	41:DT:8:LEU:HB2	2.00	0.42
41:DT:69:ARG:O	41:DT:74:ILE:HD12	2.20	0.42
42:DU:96:LYS:O	42:DU:97:SER:HB3	2.18	0.42
44:DW:39:GLN:O	44:DW:39:GLN:CD	2.63	0.42
1:AA:191:G:C4	1:AA:192:A:C8	3.07	0.42
1:AA:723:U:C5'	21:AU:48:LYS:HG2	2.50	0.42
1:AA:1054:C:H5"	1:AA:1196:A:O2'	2.19	0.42
1:AA:1241:G:N2	1:AA:1242:G:C4	2.87	0.42
1:AA:1248:A:H2	9:AI:71:ILE:HD11	1.85	0.42
2:AB:26:MET:HE1	2:AB:192:PRO:HB3	2.01	0.42
3:AC:13:ILE:O	3:AC:15:LYS:N	2.51	0.42
3:AC:41:TYR:CZ	3:AC:89:VAL:HG21	2.54	0.42
3:AC:179:ALA:HB1	3:AC:202:PHE:CE1	2.52	0.42
4:AD:166:LYS:HB3	4:AD:166:LYS:HZ3	1.84	0.42
7:AG:14:ASP:OD2	7:AG:14:ASP:C	2.63	0.42
14:AN:22:LYS:O	14:AN:25:GLU:HG2	2.19	0.42
14:AN:45:LEU:O	14:AN:45:LEU:HG	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:324:A:H2'	22:BA:325:G:O4'	2.18	0.42
22:BA:544:C:O2	22:BA:544:C:H2'	2.19	0.42
22:BA:618:G:O6	22:BA:619:G:C2	2.72	0.42
22:BA:1655:A:H5'	25:BD:118:PHE:CD2	2.54	0.42
22:BA:1705:A:C5	22:BA:1706:C:N4	2.87	0.42
24:BC:12:ARG:HG2	24:BC:12:ARG:NH1	2.31	0.42
26:BE:120:VAL:HA	26:BE:188:MET:O	2.20	0.42
27:BF:43:ILE:HG22	27:BF:82:TYR:CD1	2.54	0.42
27:BF:71:LYS:HA	27:BF:80:GLN:HG2	2.01	0.42
28:BG:39:ALA:HB1	28:BG:57:TYR:CG	2.54	0.42
29:BH:1:MET:HE1	45:BX:59:ASP:HB3	2.02	0.42
29:BH:14:SER:C	29:BH:16:GLY:H	2.27	0.42
30:BI:49:GLU:HG2	30:BI:50:LYS:H	1.83	0.42
30:BI:49:GLU:C	30:BI:50:LYS:HD3	2.44	0.42
32:BK:2:ILE:HD12	32:BK:2:ILE:N	2.34	0.42
32:BK:66:LYS:HA	32:BK:79:PHE:O	2.19	0.42
33:BL:109:LYS:HA	33:BL:126:ARG:O	2.19	0.42
34:BM:117:PHE:C	34:BM:119:LEU:N	2.74	0.42
35:BN:20:MET:HG3	35:BN:21:PHE:N	2.34	0.42
35:BN:76:VAL:O	35:BN:79:LEU:O	2.38	0.42
36:BO:66:GLY:O	36:BO:67:ASN:HB3	2.19	0.42
38:BQ:63:ARG:HD2	38:BQ:63:ARG:C	2.44	0.42
40:BS:18:ARG:HG2	40:BS:76:VAL:HG13	2.01	0.42
40:BS:66:ILE:HD13	40:BS:67:ASP:N	2.34	0.42
40:BS:103:ILE:HD12	40:BS:103:ILE:N	2.34	0.42
44:BW:40:ARG:HD3	44:BW:45:HIS:HE1	1.85	0.42
45:BX:28:PHE:N	45:BX:28:PHE:CD1	2.87	0.42
46:BY:22:LEU:O	46:BY:23:ARG:O	2.36	0.42
47:BZ:12:ALA:HA	47:BZ:15:ARG:HD3	2.02	0.42
49:B1:21:THR:HG23	49:B1:21:THR:O	2.18	0.42
53:CA:23:C:H5	53:CA:561:U:O4	2.03	0.42
53:CA:637:C:H2'	53:CA:638:U:C6	2.55	0.42
53:CA:885:G:C2	53:CA:886:G:C8	3.07	0.42
53:CA:947:G:P	55:CM:106:ARG:HG3	2.60	0.42
53:CA:1033:G:O2'	53:CA:1034:G:H5"	2.19	0.42
53:CA:1221:G:N2	53:CA:1222:G:H1'	2.34	0.42
53:CA:1319:A:H2'	53:CA:1320:C:OP2	2.19	0.42
53:CA:1382:C:H4'	54:CG:78:ARG:HH21	1.85	0.42
2:CB:9:LEU:HD12	2:CB:12:GLY:N	2.33	0.42
2:CB:164:ASP:CG	2:CB:203:ASP:HB2	2.45	0.42
2:CB:164:ASP:OD2	2:CB:203:ASP:HB2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:185:ILE:CG2	2:CB:199:ILE:HG13	2.47	0.42
2:CB:202:ASN:HB3	2:CB:203:ASP:H	1.72	0.42
4:CD:32:LYS:CB	4:CD:35:GLN:OE1	2.67	0.42
4:CD:150:LYS:HA	4:CD:150:LYS:HD3	1.69	0.42
5:CE:79:THR:HA	5:CE:121:ASN:ND2	2.35	0.42
6:CF:3:HIS:O	6:CF:4:TYR:CD1	2.72	0.42
54:CG:42:VAL:C	54:CG:44:SER:H	2.28	0.42
11:CK:22:ILE:O	11:CK:22:ILE:HG22	2.19	0.42
15:CO:62:ARG:HH22	15:CO:88:ARG:NH2	2.16	0.42
56:CP:19:VAL:CG1	56:CP:37:GLY:HA3	2.49	0.42
17:CQ:12:VAL:HG22	17:CQ:12:VAL:O	2.20	0.42
17:CQ:61:ARG:C	17:CQ:72:TRP:CE3	2.98	0.42
19:CS:12:LEU:HD13	19:CS:12:LEU:C	2.45	0.42
19:CS:40:PHE:CB	19:CS:41:PRO:CD	2.96	0.42
22:DA:42:A:C2	22:DA:438:G:C2	3.08	0.42
22:DA:64:A:O2'	41:DT:69:ARG:HG2	2.19	0.42
22:DA:219:A:N6	22:DA:220:G:N1	2.67	0.42
22:DA:233:A:N6	22:DA:428:A:H61	2.17	0.42
22:DA:270:A:C2'	22:DA:271:G:OP1	2.66	0.42
22:DA:590:A:OP1	26:DE:90:GLN:NE2	2.52	0.42
22:DA:595:C:O5'	22:DA:595:C:H6	2.02	0.42
22:DA:637:A:P	33:DL:112:LEU:HD22	2.60	0.42
22:DA:750:A:H2'	22:DA:750:A:N3	2.34	0.42
22:DA:843:G:C6	22:DA:844:A:N6	2.88	0.42
22:DA:856:G:O4'	44:DW:23:LYS:HB3	2.20	0.42
22:DA:861:A:H2'	22:DA:862:G:O4'	2.20	0.42
22:DA:920:A:C6	22:DA:921:C:C4	3.07	0.42
22:DA:959:A:C6	22:DA:960:A:C6	3.07	0.42
22:DA:995:C:O2'	38:DQ:60:TRP:CH2	2.66	0.42
22:DA:1068:G:H2'	22:DA:1069:A:C8	2.54	0.42
22:DA:1363:C:H2'	22:DA:1364:G:C8	2.55	0.42
22:DA:1398:C:O2'	22:DA:1399:C:C6	2.72	0.42
22:DA:1571:A:H2'	22:DA:1572:A:C8	2.54	0.42
22:DA:1731:G:N3	22:DA:1733:G:C8	2.87	0.42
22:DA:2109:U:C2'	22:DA:2110:G:OP1	2.67	0.42
22:DA:2290:G:H4'	22:DA:2381:A:O2'	2.20	0.42
22:DA:2697:G:H2'	22:DA:2698:U:O4'	2.20	0.42
22:DA:2746:U:C5'	28:DG:137:LYS:HG2	2.49	0.42
22:DA:2756:U:H5"	52:D4:19:ARG:HA	2.01	0.42
22:DA:2810:A:H2'	22:DA:2811:G:O4'	2.19	0.42
22:DA:2825:G:H2'	22:DA:2826:A:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2880:C:C1'	35:DN:93:GLY:H	2.31	0.42
57:DB:44:G:H3'	58:DF:91:ARG:HE	1.83	0.42
57:DB:57:A:C6	58:DF:25:MET:CG	3.02	0.42
24:DC:140:VAL:HG23	24:DC:141:HIS:N	2.35	0.42
26:DE:3:LEU:HD11	26:DE:113:VAL:HG21	2.00	0.42
26:DE:72:SER:C	26:DE:74:LYS:H	2.27	0.42
28:DG:137:LYS:C	28:DG:139:VAL:H	2.27	0.42
28:DG:154:GLU:C	28:DG:156:TYR:N	2.77	0.42
33:DL:108:ALA:HB3	33:DL:125:LEU:HD22	2.01	0.42
39:DR:54:VAL:O	39:DR:55:ASP:C	2.63	0.42
44:DW:18:LYS:CD	44:DW:19:ARG:N	2.72	0.42
48:D0:17:SER:OG	48:D0:18:HIS:HD2	2.02	0.42
49:D1:51:ALA:O	49:D1:52:LYS:CB	2.65	0.42
1:AA:95:C:H5"	1:AA:95:C:C6	2.55	0.42
1:AA:191:G:H2'	1:AA:192:A:C8	2.54	0.42
1:AA:586:C:O2'	8:AH:3:GLN:NE2	2.50	0.42
1:AA:927:G:N2	1:AA:1391:U:H1'	2.34	0.42
1:AA:960:U:O2'	1:AA:1223:C:H5'	2.19	0.42
1:AA:1272:G:C5	1:AA:1273:C:C4	3.08	0.42
1:AA:1280:A:O4'	10:AJ:43:PRO:HG3	2.19	0.42
1:AA:1348:U:O2'	1:AA:1349:A:C5'	2.67	0.42
1:AA:1410:A:H2'	1:AA:1411:C:C6	2.53	0.42
3:AC:137:VAL:HG11	3:AC:169:GLU:HB3	2.01	0.42
4:AD:96:ARG:HE	4:AD:98:ASP:CG	2.27	0.42
6:AF:39:LEU:O	6:AF:40:GLU:HG2	2.20	0.42
6:AF:52:ASN:O	6:AF:53:LYS:CB	2.67	0.42
6:AF:53:LYS:HG3	6:AF:54:LEU:N	2.34	0.42
10:AJ:6:ILE:HD11	10:AJ:79:PRO:CA	2.49	0.42
11:AK:47:GLY:HA3	11:AK:52:ARG:HH11	1.84	0.42
12:AL:42:LYS:O	12:AL:43:LYS:C	2.63	0.42
12:AL:71:HIS:ND1	12:AL:71:HIS:C	2.78	0.42
14:AN:63:CYS:HB2	14:AN:79:SER:OG	2.20	0.42
16:AP:57:ILE:O	16:AP:61:VAL:HG23	2.20	0.42
21:AU:39:LYS:N	21:AU:40:PRO:CD	2.82	0.42
22:BA:301:G:H1'	22:BA:302:C:O5'	2.19	0.42
22:BA:415:A:H2'	22:BA:416:U:H6	1.85	0.42
22:BA:534:U:H2'	22:BA:535:G:H8	1.85	0.42
22:BA:735:A:H3'	22:BA:736:C:H6	1.85	0.42
22:BA:782:A:H5'	22:BA:783:A:C2	2.54	0.42
22:BA:960:A:C8	22:BA:962:G:C8	3.08	0.42
22:BA:1000:A:C6	22:BA:1001:A:C6	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1262:A:C6	22:BA:1263:U:C4	3.07	0.42
22:BA:1774:C:O5'	22:BA:1774:C:H6	2.03	0.42
22:BA:1937:A:H5"	62:BA:3461:HOH:O	2.19	0.42
22:BA:1965:C:C4	22:BA:1966:A:C5	3.08	0.42
22:BA:2062:A:N6	60:BA:3135:TEL:H553	2.34	0.42
22:BA:2230:G:C5	22:BA:2231:U:C5	3.07	0.42
25:BD:53:GLY:HA3	25:BD:77:ARG:HB2	2.01	0.42
25:BD:184:ARG:HE	37:BP:6:GLN:HE22	1.68	0.42
28:BG:68:ARG:HD2	28:BG:68:ARG:O	2.20	0.42
32:BK:6:THR:HG22	32:BK:8:LEU:HD22	2.01	0.42
38:BQ:63:ARG:CZ	38:BQ:96:ASP:CA	2.94	0.42
38:BQ:90:ASP:O	38:BQ:91:ARG:O	2.36	0.42
41:BT:19:LYS:HB3	41:BT:19:LYS:HE2	1.80	0.42
41:BT:61:LEU:HA	62:BT:101:HOH:O	2.19	0.42
43:BV:47:VAL:O	43:BV:48:MET:C	2.60	0.42
43:BV:51:GLN:HE22	43:BV:79:ARG:HH12	1.68	0.42
44:BW:64:GLY:HA3	44:BW:82:GLU:O	2.19	0.42
46:BY:9:LYS:HA	46:BY:9:LYS:HZ2	1.84	0.42
53:CA:55:A:C6	53:CA:56:U:C2	3.08	0.42
53:CA:97:G:C5	53:CA:98:A:H1'	2.54	0.42
53:CA:120:A:O5'	53:CA:120:A:C8	2.73	0.42
53:CA:409:U:C4	53:CA:410:G:C5	3.08	0.42
53:CA:623:C:H6	53:CA:623:C:O5'	2.03	0.42
53:CA:737:C:OP1	6:CF:91:ARG:HB3	2.19	0.42
53:CA:770:C:C2'	53:CA:771:G:H5'	2.49	0.42
53:CA:815:A:H4'	53:CA:817:C:C4	2.55	0.42
53:CA:1006:G:N3	53:CA:1006:G:H2'	2.34	0.42
2:CB:92:ASN:OD1	2:CB:93:HIS:ND1	2.52	0.42
3:CC:17:TRP:CD1	14:CN:90:GLY:HA2	2.55	0.42
3:CC:130:ARG:O	3:CC:133:MET:HG2	2.20	0.42
5:CE:40:ASP:CG	5:CE:41:GLY:N	2.77	0.42
8:CH:29:SER:OG	8:CH:32:LYS:CB	2.67	0.42
10:CJ:87:LEU:HD22	10:CJ:87:LEU:HA	1.89	0.42
17:CQ:22:VAL:HG21	17:CQ:58:VAL:HG21	2.01	0.42
20:CT:30:PHE:HE2	20:CT:52:GLU:CG	2.30	0.42
22:DA:128:C:C2'	22:DA:129:C:C6	2.96	0.42
22:DA:146:A:C6	22:DA:147:C:C4	3.08	0.42
22:DA:188:G:C2'	22:DA:189:G:H5'	2.49	0.42
22:DA:191:A:C2	22:DA:192:C:C2	3.08	0.42
22:DA:223:A:O2'	22:DA:408:G:N3	2.50	0.42
22:DA:370:G:C6	22:DA:424:G:N7	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:450:G:N1	22:DA:454:A:OP2	2.45	0.42
22:DA:459:U:C5	22:DA:469:G:N2	2.88	0.42
22:DA:623:C:H2'	22:DA:624:C:C6	2.54	0.42
22:DA:845:A:C2	22:DA:847:U:C6	3.07	0.42
22:DA:847:U:H5'	22:DA:848:C:OP2	2.20	0.42
22:DA:914:G:O2'	22:DA:915:C:O5'	2.30	0.42
22:DA:982:C:O2	22:DA:982:C:O5'	2.36	0.42
22:DA:1190:G:O2'	22:DA:1191:G:H5'	2.19	0.42
22:DA:1330:C:O2'	22:DA:1331:G:H8	2.02	0.42
22:DA:1343:G:N2	22:DA:1344:U:C2	2.88	0.42
22:DA:1565:C:C3'	24:DC:17:LYS:HE2	2.29	0.42
22:DA:1608:A:O3'	22:DA:1609:A:H3'	2.20	0.42
22:DA:1789:A:OP2	24:DC:220:ARG:NH1	2.48	0.42
22:DA:1936:A:C2	22:DA:1943:U:C5	3.08	0.42
22:DA:2449:U:H3'	62:DA:3668:HOH:O	2.19	0.42
22:DA:2718:G:O2'	37:DP:95:LYS:HG3	2.20	0.42
22:DA:2733:A:C5	25:DD:208:LYS:NZ	2.82	0.42
22:DA:2748:A:N1	22:DA:2757:A:N7	2.68	0.42
24:DC:245:THR:C	24:DC:247:TRP:N	2.77	0.42
25:DD:187:LEU:HD12	25:DD:188:LEU:H	1.85	0.42
58:DF:65:LEU:H	58:DF:65:LEU:CD2	2.30	0.42
28:DG:157:LYS:C	28:DG:159:LYS:H	2.27	0.42
30:DI:27:LEU:HD13	30:DI:32:VAL:HG11	2.02	0.42
31:DJ:4:PHE:HB3	38:DQ:63:ARG:NH2	2.32	0.42
31:DJ:4:PHE:CD2	38:DQ:99:VAL:HG11	2.55	0.42
31:DJ:35:ARG:HA	31:DJ:40:HIS:HD2	1.84	0.42
31:DJ:73:VAL:HB	31:DJ:75:TYR:CE2	2.55	0.42
32:DK:69:VAL:O	32:DK:76:VAL:HG13	2.19	0.42
39:DR:49:ILE:CG2	39:DR:54:VAL:N	2.82	0.42
48:D0:6:LYS:HA	48:D0:7:PRO:HD3	1.94	0.42
48:D0:53:VAL:O	48:D0:54:ILE:C	2.62	0.42
49:D1:28:THR:C	49:D1:29:LYS:HG2	2.45	0.42
1:AA:77:A:H8	1:AA:77:A:OP2	2.02	0.42
1:AA:91:U:H2'	1:AA:92:U:H1'	2.00	0.42
1:AA:114:U:H2'	1:AA:115:G:C8	2.55	0.42
1:AA:300:A:H2'	1:AA:301:G:O4'	2.19	0.42
1:AA:376:G:H2'	1:AA:377:G:H8	1.84	0.42
1:AA:420:U:C2'	1:AA:421:U:H5"	2.49	0.42
1:AA:471:U:H2'	1:AA:472:U:O4'	2.20	0.42
1:AA:488:C:O2'	1:AA:489:C:H5'	2.19	0.42
1:AA:999:C:H2'	1:AA:1000:A:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1145:A:C2'	1:AA:1146:A:OP2	2.67	0.42
1:AA:1157:A:C6	1:AA:1180:A:C6	3.07	0.42
1:AA:1157:A:H4'	1:AA:1158:C:H5"	2.02	0.42
1:AA:1227:A:O2'	1:AA:1228:C:O5'	2.37	0.42
1:AA:1254:A:OP1	10:AJ:47:GLU:HG2	2.20	0.42
1:AA:1402:C:H2'	1:AA:1403:C:O4'	2.19	0.42
2:AB:148:GLY:CA	2:AB:151:LYS:HE3	2.50	0.42
3:AC:106:ARG:O	3:AC:106:ARG:HG2	2.20	0.42
6:AF:51:ILE:HD11	6:AF:86:ARG:HG3	2.02	0.42
7:AG:78:ARG:HA	7:AG:82:SER:O	2.19	0.42
8:AH:9:MET:HG3	8:AH:26:MET:SD	2.60	0.42
11:AK:125:LYS:O	11:AK:126:ARG:CB	2.68	0.42
13:AM:89:ARG:NH1	13:AM:94:LEU:HB3	2.34	0.42
15:AO:11:VAL:C	15:AO:13:GLU:H	2.28	0.42
17:AQ:30:HIS:ND1	17:AQ:31:PRO:HD2	2.35	0.42
22:BA:31:C:O3'	22:BA:1238:G:C5'	2.53	0.42
22:BA:149:A:C4	22:BA:150:U:C5	3.08	0.42
22:BA:400:G:O6	45:BX:56:ARG:NH1	2.53	0.42
22:BA:435:C:H2'	22:BA:436:C:C5'	2.50	0.42
22:BA:480:A:C2'	22:BA:481:G:OP1	2.67	0.42
22:BA:802:A:C2	22:BA:803:U:C2	3.08	0.42
22:BA:875:G:H2'	22:BA:876:C:H5'	2.00	0.42
22:BA:902:C:N3	22:BA:903:C:N4	2.60	0.42
22:BA:923:G:C1'	44:BW:23:LYS:HE2	2.49	0.42
22:BA:996:A:H4'	38:BQ:91:ARG:HD2	2.01	0.42
22:BA:1206:G:C5	22:BA:1207:C:C5	3.07	0.42
22:BA:1347:A:C2'	22:BA:1348:C:H5'	2.50	0.42
22:BA:1419:A:C5	22:BA:1421:G:C5	3.06	0.42
22:BA:1421:G:C2	22:BA:1422:G:N7	2.88	0.42
22:BA:1607:C:H4'	22:BA:1608:A:C8	2.55	0.42
22:BA:1717:A:C2	22:BA:1718:G:H1'	2.54	0.42
22:BA:1799:G:OP1	24:BC:257:ARG:HG2	2.20	0.42
22:BA:2195:U:O2'	22:BA:2196:C:H5'	2.19	0.42
22:BA:2506:U:OP2	22:BA:2576:G:N1	2.47	0.42
22:BA:2551:C:H2'	22:BA:2552:U:C6	2.54	0.42
22:BA:2567:G:H2'	22:BA:2568:U:H6	1.85	0.42
22:BA:2650:U:O2'	22:BA:2651:C:H5'	2.20	0.42
22:BA:2786:U:H2'	22:BA:2787:C:C6	2.52	0.42
24:BC:185:ALA:C	24:BC:187:CYS:H	2.27	0.42
24:BC:254:LYS:HE3	24:BC:254:LYS:HB3	1.67	0.42
27:BF:27:VAL:O	27:BF:27:VAL:HG13	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BG:93:TYR:O	28:BG:94:ARG:O	2.37	0.42
29:BH:2:GLN:C	29:BH:3:VAL:HG13	2.43	0.42
32:BK:40:LYS:HG3	32:BK:41:ILE:N	2.35	0.42
32:BK:99:ILE:HG22	32:BK:119:ALA:HA	2.02	0.42
34:BM:96:ILE:O	34:BM:96:ILE:HG13	2.19	0.42
35:BN:24:MET:HE3	35:BN:44:LEU:HD22	2.02	0.42
36:BO:104:GLN:C	36:BO:105:ALA:O	2.59	0.42
37:BP:33:GLU:CB	37:BP:38:ARG:HH11	2.32	0.42
40:BS:42:LYS:O	40:BS:42:LYS:HD3	2.19	0.42
44:BW:23:LYS:CD	44:BW:24:ARG:N	2.81	0.42
44:BW:31:LEU:C	44:BW:33:GLY:H	2.28	0.42
49:B1:18:HIS:HE1	49:B1:20:TYR:CE2	2.37	0.42
53:CA:71:A:C5	53:CA:100:G:C4	3.08	0.42
53:CA:237:G:C6	53:CA:238:A:C5	3.07	0.42
53:CA:558:G:H2'	53:CA:559:A:H2	1.84	0.42
53:CA:756:C:C2'	53:CA:757:U:H5'	2.50	0.42
53:CA:860:A:H2'	53:CA:861:G:O4'	2.19	0.42
53:CA:1026:G:H22	53:CA:1036:A:H61	1.65	0.42
53:CA:1047:G:N2	53:CA:1213:A:C2	2.87	0.42
53:CA:1074:G:C4'	2:CB:102:ASN:HB2	2.46	0.42
53:CA:1297:G:O2'	54:CG:113:LYS:HE3	2.19	0.42
53:CA:1320:C:N4	19:CS:36:ARG:HG3	2.34	0.42
53:CA:1343:G:H1'	9:CI:122:ARG:NH1	2.35	0.42
53:CA:1430:A:N6	53:CA:1431:A:C2	2.87	0.42
54:CG:55:LYS:H	54:CG:55:LYS:HD2	1.84	0.42
54:CG:105:GLU:O	54:CG:109:LYS:HD3	2.20	0.42
8:CH:11:THR:HG22	8:CH:14:ARG:NH2	2.35	0.42
8:CH:38:VAL:HA	8:CH:41:GLU:CG	2.50	0.42
8:CH:104:SER:HA	8:CH:109:VAL:HG22	2.01	0.42
10:CJ:44:THR:HG23	10:CJ:70:HIS:CE1	2.55	0.42
12:CL:2:THR:CB	12:CL:5:GLN:HB2	2.47	0.42
17:CQ:60:ILE:O	17:CQ:60:ILE:HG12	2.19	0.42
19:CS:59:VAL:HB	19:CS:73:PHE:HD2	1.85	0.42
20:CT:61:ALA:O	20:CT:67:HIS:HA	2.19	0.42
21:CU:18:PHE:HA	21:CU:21:SER:HB3	2.01	0.42
22:DA:246:C:H4'	22:DA:385:C:O2'	2.19	0.42
22:DA:481:G:H1'	22:DA:506:G:N2	2.34	0.42
22:DA:622:G:H2'	22:DA:623:C:C6	2.54	0.42
22:DA:756:A:H2'	22:DA:757:G:O4'	2.20	0.42
22:DA:758:C:O2	22:DA:758:C:H2'	2.19	0.42
22:DA:996:A:C5	22:DA:1160:G:N2	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1054:A:N3	22:DA:1055:G:H1'	2.35	0.42
22:DA:1087:G:C4	22:DA:1089:A:N3	2.88	0.42
22:DA:1343:G:N7	22:DA:1597:A:N6	2.68	0.42
22:DA:1398:C:O2'	22:DA:1399:C:H6	2.03	0.42
22:DA:1490:A:O2'	24:DC:97:ASP:CG	2.62	0.42
22:DA:1661:G:H2'	22:DA:1662:U:H6	1.84	0.42
22:DA:2028:U:H2'	22:DA:2029:G:C8	2.55	0.42
22:DA:2055:C:H2'	22:DA:2504:U:H4'	2.01	0.42
22:DA:2093:G:N2	22:DA:2198:A:N6	2.65	0.42
22:DA:2333:A:C1'	22:DA:2335:A:C8	3.03	0.42
22:DA:2646:C:H2'	22:DA:2647:U:O4'	2.20	0.42
57:DB:21:G:H2'	57:DB:22:U:O4'	2.18	0.42
24:DC:166:ARG:HB2	24:DC:171:VAL:CG2	2.45	0.42
25:DD:19:GLY:HA2	37:DP:78:PRO:HG2	2.02	0.42
26:DE:131:THR:HG22	26:DE:161:ALA:N	2.33	0.42
58:DF:3:LEU:O	58:DF:6:TYR:HB3	2.19	0.42
58:DF:65:LEU:HD11	58:DF:87:LYS:NZ	2.35	0.42
58:DF:137:PHE:O	58:DF:138:PRO:C	2.63	0.42
28:DG:10:VAL:HB	28:DG:14:VAL:HG11	2.00	0.42
28:DG:28:LYS:H	28:DG:79:THR:HG22	1.84	0.42
31:DJ:57:LEU:HG	31:DJ:128:ASN:N	2.29	0.42
32:DK:31:ARG:HH11	32:DK:31:ARG:HG3	1.84	0.42
33:DL:40:SER:O	33:DL:41:ARG:C	2.62	0.42
34:DM:33:LEU:CD2	34:DM:128:THR:HB	2.50	0.42
37:DP:50:ARG:HG2	37:DP:57:ALA:C	2.44	0.42
38:DQ:10:ARG:HB2	38:DQ:10:ARG:NH1	2.34	0.42
41:DT:29:THR:CA	41:DT:87:LEU:HB2	2.50	0.42
47:DZ:23:LEU:HD21	47:DZ:53:MET:CE	2.50	0.42
49:D1:7:LYS:C	49:D1:8:ILE:HD13	2.44	0.42
50:D2:18:PHE:O	50:D2:21:ARG:N	2.53	0.42
50:D2:22:MET:HA	50:D2:28:ARG:HB2	2.02	0.42
1:AA:223:A:H2'	1:AA:224:U:C6	2.55	0.42
1:AA:266:G:H4'	1:AA:267:C:OP1	2.18	0.42
1:AA:323:U:H4'	20:AT:16:ALA:HB3	2.02	0.42
1:AA:405:U:OP1	1:AA:406:G:O2'	2.27	0.42
1:AA:654:G:C4'	8:AH:2:MET:HE1	2.41	0.42
1:AA:874:G:C6	1:AA:875:U:C4	3.07	0.42
1:AA:1031:C:O2'	1:AA:1032:G:C2	2.71	0.42
3:AC:190:THR:C	3:AC:192:TYR:H	2.27	0.42
4:AD:97:LEU:HD22	4:AD:117:VAL:HG11	2.02	0.42
7:AG:69:ARG:HG3	7:AG:95:ARG:CG	2.48	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:1:SER:C	8:AH:3:GLN:H	2.26	0.42
10:AJ:80:THR:C	10:AJ:82:LYS:N	2.77	0.42
11:AK:16:SER:C	11:AK:78:ILE:HG22	2.44	0.42
15:AO:25:GLU:HG3	15:AO:69:LEU:HD11	2.02	0.42
19:AS:39:ILE:HD11	19:AS:70:LEU:HD23	2.02	0.42
22:BA:225:C:H2'	22:BA:226:A:O4'	2.19	0.42
22:BA:397:U:OP2	45:BX:9:LYS:NZ	2.37	0.42
22:BA:839:U:H2'	22:BA:840:C:C6	2.55	0.42
22:BA:966:G:C6	22:BA:967:U:C4	3.08	0.42
22:BA:976:G:OP2	62:BA:3578:HOH:O	2.22	0.42
22:BA:1071:G:C4	22:BA:1089:A:C6	3.08	0.42
22:BA:1075:C:N4	22:BA:1076:C:N4	2.68	0.42
22:BA:1310:G:H3'	22:BA:1311:G:C8	2.54	0.42
22:BA:1392:A:N6	22:BA:1393:A:N6	2.67	0.42
22:BA:1430:G:H2'	22:BA:1431:A:O4'	2.19	0.42
22:BA:1847:A:C4'	22:BA:1848:A:OP2	2.65	0.42
22:BA:1858:A:C8	22:BA:1885:A:C6	3.08	0.42
22:BA:1871:A:O2'	22:BA:1872:A:N9	2.53	0.42
22:BA:2152:G:O2'	22:BA:2153:C:H5'	2.19	0.42
22:BA:2414:G:O2'	22:BA:2415:G:H5'	2.20	0.42
22:BA:2614:A:O4'	48:B0:1:ALA:HB3	2.19	0.42
22:BA:2681:C:C2	22:BA:2724:U:O4	2.72	0.42
24:BC:16:VAL:N	24:BC:203:VAL:HG11	2.33	0.42
26:BE:145:ASP:HA	26:BE:166:LYS:O	2.18	0.42
26:BE:146:VAL:H	26:BE:167:VAL:HG23	1.85	0.42
29:BH:42:LYS:HG2	29:BH:43:ASN:ND2	2.34	0.42
30:BI:111:THR:O	30:BI:113:ALA:N	2.47	0.42
31:BJ:5:THR:O	31:BJ:5:THR:HG22	2.19	0.42
31:BJ:21:THR:C	31:BJ:23:LYS:N	2.66	0.42
33:BL:4:ASN:H	33:BL:4:ASN:HD22	1.67	0.42
36:BO:67:ASN:O	36:BO:68:LYS:C	2.62	0.42
37:BP:5:LYS:HD2	37:BP:5:LYS:HA	1.87	0.42
37:BP:33:GLU:OE2	37:BP:38:ARG:NH1	2.52	0.42
44:BW:18:LYS:CG	44:BW:19:ARG:H	2.25	0.42
44:BW:26:GLY:O	44:BW:27:GLY:C	2.62	0.42
44:BW:45:HIS:HB2	44:BW:50:VAL:HG13	2.00	0.42
49:B1:5:ARG:HG2	49:B1:23:THR:HB	2.02	0.42
52:B4:36:ARG:O	52:B4:37:GLN:C	2.62	0.42
53:CA:178:C:C4	53:CA:179:A:N7	2.88	0.42
53:CA:242:G:C6	53:CA:245:U:O4	2.73	0.42
53:CA:251:G:C4'	53:CA:252:U:O5'	2.66	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:384:G:H2'	53:CA:385:C:C6	2.54	0.42
53:CA:401:C:O2'	53:CA:402:G:H5'	2.19	0.42
53:CA:607:A:H2'	53:CA:608:A:C8	2.55	0.42
53:CA:1265:C:C4	53:CA:1266:G:N7	2.88	0.42
53:CA:1303:C:O2	53:CA:1303:C:C2'	2.67	0.42
2:CB:115:ASP:O	2:CB:119:GLN:HB2	2.19	0.42
3:CC:5:HIS:CE1	3:CC:7:ASN:HB3	2.54	0.42
4:CD:49:ASP:O	4:CD:53:GLN:HG3	2.19	0.42
5:CE:88:HIS:CE1	5:CE:89:THR:HG23	2.55	0.42
5:CE:103:GLY:HA3	5:CE:120:HIS:O	2.20	0.42
5:CE:149:PRO:HG3	8:CH:98:LEU:HD21	2.00	0.42
6:CF:41:ASP:OD2	6:CF:41:ASP:C	2.61	0.42
8:CH:11:THR:HG23	8:CH:14:ARG:HH22	1.84	0.42
10:CJ:65:TYR:HB3	14:CN:95:LEU:CD1	2.50	0.42
11:CK:35:ASP:OD1	11:CK:39:ASN:HB3	2.20	0.42
15:CO:66:LEU:O	15:CO:67:ASP:C	2.63	0.42
22:DA:82:U:H5"	22:DA:296:U:H5"	2.02	0.42
22:DA:119:A:C4'	22:DA:120:U:OP1	2.67	0.42
22:DA:241:A:O3'	51:D3:2:LYS:NZ	2.52	0.42
22:DA:593:U:H2'	22:DA:594:U:H6	1.75	0.42
22:DA:706:A:H2'	22:DA:707:G:O4'	2.19	0.42
22:DA:711:G:C2	22:DA:721:A:C2	3.08	0.42
22:DA:1071:G:C8	22:DA:1071:G:OP1	2.73	0.42
22:DA:1131:G:N7	22:DA:2025:C:H4'	2.35	0.42
22:DA:1168:G:C6	22:DA:1182:G:C6	3.08	0.42
22:DA:1203:U:H2'	22:DA:1204:A:C2	2.55	0.42
22:DA:1236:G:O2'	22:DA:1237:A:H8	2.02	0.42
22:DA:1310:G:N2	22:DA:1605:C:C2	2.88	0.42
22:DA:1340:U:C2	22:DA:1603:A:O4'	2.73	0.42
22:DA:1491:G:N2	22:DA:1492:G:C4	2.88	0.42
22:DA:1667:G:P	32:DK:6:THR:HA	2.60	0.42
22:DA:1817:G:C2'	22:DA:1818:U:H5'	2.47	0.42
22:DA:1838:C:H4'	22:DA:1839:G:N7	2.34	0.42
22:DA:1844:C:O3'	24:DC:255:LYS:NZ	2.47	0.42
22:DA:2108:A:C8	22:DA:2108:A:OP2	2.73	0.42
22:DA:2886:A:H62	48:D0:39:ARG:HD3	1.85	0.42
22:DA:2897:U:H2'	22:DA:2898:U:O4'	2.18	0.42
25:DD:114:LYS:NZ	25:DD:165:MET:HE2	2.35	0.42
28:DG:116:LEU:HD13	28:DG:120:ILE:O	2.19	0.42
28:DG:138:GLN:HG2	28:DG:138:GLN:O	2.20	0.42
34:DM:71:LYS:HB3	34:DM:93:VAL:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DN:9:GLN:C	35:DN:10:LEU:O	2.62	0.42
35:DN:33:ILE:HD13	35:DN:118:ARG:HH21	1.85	0.42
36:DO:12:THR:HG23	36:DO:16:ARG:HH11	1.85	0.42
39:DR:55:ASP:CG	39:DR:56:GLY:N	2.77	0.42
39:DR:93:PHE:CD2	39:DR:93:PHE:C	2.97	0.42
40:DS:8:ARG:HB3	40:DS:102:HIS:CE1	2.54	0.42
41:DT:9:LYS:O	41:DT:9:LYS:CG	2.68	0.42
48:D0:47:TYR:CE2	48:D0:52:LYS:HG3	2.54	0.42
1:AA:76:G:N1	1:AA:95:C:N4	2.67	0.42
1:AA:254:G:OP1	17:AQ:68:LYS:O	2.38	0.42
1:AA:437:U:H4'	4:AD:153:ARG:NH2	2.35	0.42
1:AA:767:A:H2'	1:AA:768:A:C8	2.55	0.42
1:AA:1097:C:H2'	1:AA:1098:C:C6	2.55	0.42
1:AA:1113:C:H2'	1:AA:1114:C:H6	1.85	0.42
1:AA:1250:A:O3'	9:AI:68:GLY:HA2	2.20	0.42
1:AA:1307:U:H2'	1:AA:1308:U:C6	2.54	0.42
1:AA:1371:G:OP2	9:AI:12:LYS:HD3	2.20	0.42
1:AA:1452:C:H2'	1:AA:1452:C:OP2	2.20	0.42
2:AB:67:LEU:O	2:AB:160:LEU:HD12	2.19	0.42
2:AB:84:LEU:O	2:AB:84:LEU:HG	2.19	0.42
2:AB:212:TYR:HA	2:AB:215:ALA:HB3	2.01	0.42
4:AD:191:SER:O	4:AD:192:ALA:CB	2.67	0.42
5:AE:67:ARG:O	5:AE:70:MET:HE3	2.20	0.42
5:AE:80:LEU:HD12	5:AE:146:MET:SD	2.60	0.42
6:AF:29:ILE:HG22	6:AF:30:THR:N	2.32	0.42
7:AG:21:LEU:HD23	7:AG:24:LYS:HD2	2.02	0.42
7:AG:130:LYS:N	7:AG:134:VAL:HG21	2.35	0.42
9:AI:60:LEU:HD23	9:AI:60:LEU:H	1.85	0.42
11:AK:124:LYS:NZ	21:AU:33:ARG:HH21	2.17	0.42
12:AL:73:LEU:HD11	12:AL:79:ILE:CG2	2.49	0.42
22:BA:116:C:H2'	22:BA:117:G:O4'	2.19	0.42
22:BA:523:C:O2	22:BA:554:U:O2'	2.32	0.42
22:BA:523:C:O2'	22:BA:524:G:H5'	2.20	0.42
22:BA:631:A:N3	22:BA:2415:G:O2'	2.43	0.42
22:BA:851:C:O2'	22:BA:852:U:H5'	2.20	0.42
22:BA:1315:C:OP2	62:BA:3752:HOH:O	2.22	0.42
22:BA:1417:C:H2'	22:BA:1418:G:O4'	2.20	0.42
22:BA:1572:A:O2'	22:BA:1573:G:H5'	2.19	0.42
22:BA:1773:A:C2'	22:BA:1774:C:H5'	2.50	0.42
22:BA:2040:G:H2'	22:BA:2041:U:O4'	2.18	0.42
22:BA:2336:A:N6	44:BW:40:ARG:HB3	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2698:U:H2'	22:BA:2699:C:H6	1.85	0.42
22:BA:2807:U:H6	22:BA:2807:U:O5'	2.03	0.42
24:BC:184:GLU:O	24:BC:185:ALA:HB3	2.20	0.42
27:BF:137:PHE:HA	27:BF:138:PRO:HD3	1.89	0.42
29:BH:5:LEU:HD11	29:BH:19:VAL:HG11	2.02	0.42
31:BJ:56:VAL:CG1	31:BJ:57:LEU:N	2.82	0.42
34:BM:68:PHE:O	34:BM:69:PRO:O	2.38	0.42
37:BP:95:LYS:HG2	37:BP:97:TYR:CZ	2.53	0.42
38:BQ:82:LEU:O	38:BQ:85:ALA:HB3	2.19	0.42
43:BV:1:MET:HG3	43:BV:2:PHE:N	2.34	0.42
43:BV:30:ILE:HA	43:BV:91:PHE:O	2.19	0.42
44:BW:16:GLU:HB2	44:BW:17:ALA:H	1.47	0.42
51:B3:31:ILE:CG1	51:B3:34:LYS:HD2	2.50	0.42
53:CA:21:G:H2'	53:CA:22:G:C8	2.55	0.42
53:CA:66:A:C6	53:CA:67:C:N4	2.88	0.42
53:CA:484:G:H4'	53:CA:485:U:OP1	2.13	0.42
53:CA:995:C:O2'	53:CA:996:A:C5'	2.68	0.42
53:CA:1143:G:H2'	53:CA:1144:G:H8	1.85	0.42
53:CA:1144:G:N2	53:CA:1146:A:H62	2.12	0.42
53:CA:1191:A:H5"	3:CC:3:LYS:HE3	2.02	0.42
53:CA:1271:A:C6	53:CA:1272:G:C6	3.07	0.42
2:CB:102:ASN:O	2:CB:102:ASN:CG	2.62	0.42
4:CD:191:SER:O	4:CD:192:ALA:CB	2.67	0.42
4:CD:202:LEU:HD23	4:CD:203:TYR:CD2	2.55	0.42
9:CI:71:ILE:HD12	9:CI:72:SER:N	2.28	0.42
10:CJ:8:ILE:O	10:CJ:8:ILE:HG13	2.19	0.42
11:CK:12:ARG:N	11:CK:12:ARG:HD3	2.34	0.42
12:CL:6:LEU:O	12:CL:8:ARG:N	2.41	0.42
21:CU:35:GLU:CG	21:CU:36:PHE:N	2.82	0.42
22:DA:33:C:O2	22:DA:454:A:C2	2.73	0.42
22:DA:121:G:N2	22:DA:131:A:C4	2.88	0.42
22:DA:244:A:C2	22:DA:255:A:C4	3.07	0.42
22:DA:593:U:H2'	22:DA:594:U:C5	2.53	0.42
22:DA:696:G:C2	22:DA:767:U:O2	2.73	0.42
22:DA:709:U:O2'	22:DA:710:U:H5'	2.20	0.42
22:DA:747:U:H2'	22:DA:2613:U:O4	2.20	0.42
22:DA:765:C:H2'	22:DA:766:U:C6	2.54	0.42
22:DA:818:G:N7	22:DA:1187:G:C6	2.88	0.42
22:DA:825:A:C2	22:DA:826:U:C2	3.08	0.42
22:DA:832:U:P	33:DL:38:GLN:H	2.43	0.42
22:DA:845:A:C2	22:DA:847:U:N1	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:858:G:C6	22:DA:2268:A:C6	3.08	0.42
22:DA:980:A:C4	22:DA:1136:G:O4'	2.73	0.42
22:DA:1400:U:C2'	22:DA:1401:G:O4'	2.67	0.42
22:DA:1438:U:C2'	22:DA:1439:A:H5'	2.50	0.42
22:DA:1608:A:C4	22:DA:1611:C:N4	2.87	0.42
22:DA:1612:C:O2'	22:DA:1613:G:O5'	2.37	0.42
22:DA:1627:G:C2	22:DA:1628:G:C8	3.07	0.42
22:DA:1666:G:H4'	32:DK:6:THR:HG23	2.01	0.42
22:DA:1675:C:N3	25:DD:133:THR:HG21	2.35	0.42
22:DA:1769:U:O2'	22:DA:1958:C:OP1	2.38	0.42
22:DA:1993:U:H2'	22:DA:1994:C:O4'	2.19	0.42
22:DA:1998:A:OP2	25:DD:141:ARG:NH2	2.53	0.42
22:DA:2506:U:C6	22:DA:2506:U:C3'	3.03	0.42
22:DA:2636:C:H4'	25:DD:81:GLU:CD	2.44	0.42
57:DB:42:C:H2'	57:DB:43:C:H6	1.76	0.42
57:DB:52:A:N6	36:DO:33:ARG:NE	2.67	0.42
24:DC:77:VAL:HG21	24:DC:110:LYS:O	2.20	0.42
25:DD:4:LEU:HB3	25:DD:32:ASN:HD21	1.84	0.42
26:DE:60:TRP:CE3	26:DE:62:GLN:HB2	2.55	0.42
29:DH:4:ILE:HG12	29:DH:18:GLN:HB2	2.01	0.42
29:DH:71:LYS:CD	29:DH:71:LYS:N	2.82	0.42
31:DJ:41:LYS:C	31:DJ:43:GLU:H	2.27	0.42
31:DJ:80:HIS:O	31:DJ:81:ILE:O	2.38	0.42
32:DK:34:GLY:C	32:DK:35:VAL:HG22	2.45	0.42
33:DL:79:LEU:HD12	33:DL:112:LEU:HA	2.01	0.42
34:DM:136:MET:OXT	34:DM:136:MET:HG2	2.20	0.42
37:DP:19:PHE:O	37:DP:23:ASP:OD1	2.38	0.42
39:DR:7:SER:HB2	39:DR:22:LEU:HB2	2.02	0.42
40:DS:70:LYS:O	40:DS:72:THR:N	2.52	0.42
44:DW:73:PRO:O	44:DW:74:LYS:C	2.63	0.42
48:D0:39:ARG:O	48:D0:40:HIS:HB2	2.20	0.42
1:AA:290:C:O2'	1:AA:291:U:H5'	2.20	0.42
1:AA:747:A:C6	1:AA:748:G:C6	3.08	0.42
1:AA:803:G:C6	1:AA:804:U:N3	2.88	0.42
1:AA:863:U:H2'	1:AA:865:A:OP2	2.20	0.42
1:AA:1030:U:OP2	1:AA:1031:C:O2	2.38	0.42
1:AA:1107:C:C4	1:AA:1108:G:C8	3.07	0.42
1:AA:1143:G:H2'	1:AA:1144:G:H8	1.85	0.42
1:AA:1229:A:N6	13:AM:103:THR:CG2	2.82	0.42
1:AA:1237:C:O5'	1:AA:1237:C:H6	2.03	0.42
2:AB:17:HIS:CE1	2:AB:202:ASN:HD21	2.37	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:40:ILE:HG13	2:AB:41:ASN:H	1.84	0.42
3:AC:133:MET:HB3	3:AC:150:VAL:HG21	2.02	0.42
5:AE:113:VAL:HG21	5:AE:140:ILE:CD1	2.49	0.42
6:AF:47:LEU:HB3	18:AR:65:SER:OG	2.19	0.42
8:AH:25:THR:O	8:AH:26:MET:HB3	2.19	0.42
8:AH:33:VAL:O	8:AH:34:ALA:C	2.63	0.42
10:AJ:20:GLN:O	10:AJ:24:GLU:HG3	2.20	0.42
11:AK:76:TYR:HD1	11:AK:76:TYR:H	1.68	0.42
12:AL:82:ARG:O	12:AL:82:ARG:HG3	2.20	0.42
13:AM:13:HIS:CG	13:AM:41:ASP:HB2	2.55	0.42
20:AT:55:PRO:O	20:AT:59:ARG:CB	2.68	0.42
22:BA:30:G:C5	22:BA:31:C:C4	3.08	0.42
22:BA:368:A:H2'	22:BA:369:U:H5'	2.02	0.42
22:BA:942:G:C2'	22:BA:943:A:H5'	2.50	0.42
22:BA:996:A:O2'	38:BQ:91:ARG:CG	2.68	0.42
22:BA:1301:A:N3	22:BA:1301:A:H2'	2.35	0.42
22:BA:1324:G:C4	22:BA:1328:A:N6	2.87	0.42
22:BA:1714:U:H5'	22:BA:1715:G:H5'	2.02	0.42
22:BA:1797:G:C6	22:BA:1798:U:C4	3.08	0.42
22:BA:1808:A:O2'	45:BX:2:ARG:NH1	2.53	0.42
22:BA:1979:U:C2'	22:BA:1980:G:H5'	2.50	0.42
22:BA:2307:G:N2	22:BA:2311:A:C8	2.87	0.42
22:BA:2389:G:H5"	22:BA:2390:U:H5'	2.01	0.42
22:BA:2544:G:H2'	22:BA:2545:G:O4'	2.19	0.42
22:BA:2667:C:H2'	22:BA:2668:G:H5'	2.01	0.42
22:BA:2731:G:O2'	22:BA:2732:G:H5'	2.19	0.42
23:BB:46:A:C4	23:BB:47:C:C6	3.07	0.42
24:BC:104:LEU:HB3	24:BC:105:ALA:H	1.67	0.42
24:BC:238:ASN:O	24:BC:239:PHE:HB2	2.18	0.42
26:BE:72:SER:C	26:BE:74:LYS:N	2.78	0.42
26:BE:108:ILE:HD13	26:BE:108:ILE:C	2.44	0.42
28:BG:15:ASP:CG	28:BG:16:VAL:H	2.26	0.42
30:BI:58:ILE:HG22	30:BI:60:VAL:CG2	2.50	0.42
30:BI:135:MET:HE3	30:BI:135:MET:HB3	1.91	0.42
32:BK:18:ARG:HA	32:BK:18:ARG:HD2	1.82	0.42
32:BK:88:ASN:ND2	32:BK:90:ASN:H	2.18	0.42
33:BL:94:THR:CG2	33:BL:95:LEU:N	2.83	0.42
38:BQ:16:ILE:O	38:BQ:17:LEU:C	2.63	0.42
38:BQ:111:LYS:NZ	39:BR:50:GLY:HA2	2.35	0.42
52:B4:9:LYS:HB2	52:B4:9:LYS:HE2	1.86	0.42
52:B4:25:VAL:O	52:B4:26:ILE:HD13	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:78:A:H2'	53:CA:79:G:H8	1.79	0.42
53:CA:91:U:C4	53:CA:92:U:C4	3.07	0.42
53:CA:117:G:H2'	53:CA:118:U:O4'	2.20	0.42
53:CA:296:U:N3	53:CA:297:G:C5	2.88	0.42
53:CA:386:C:C2'	53:CA:387:U:H5'	2.49	0.42
53:CA:510:A:C5'	53:CA:511:C:OP2	2.64	0.42
53:CA:688:G:C4	53:CA:700:G:C2	3.08	0.42
53:CA:1003:G:N3	53:CA:1005:A:OP1	2.53	0.42
53:CA:1050:G:N1	53:CA:1209:C:C2	2.88	0.42
53:CA:1142:G:O2'	53:CA:1143:G:O4'	2.22	0.42
53:CA:1146:A:C2	53:CA:1147:C:C2	3.08	0.42
53:CA:1150:A:H1'	53:CA:1280:A:N6	2.35	0.42
53:CA:1158:C:O2	53:CA:1158:C:C2'	2.68	0.42
53:CA:1168:U:O2	53:CA:1168:U:H2'	2.20	0.42
53:CA:1241:G:C2	53:CA:1242:G:C5	3.08	0.42
53:CA:1328:C:OP1	55:CM:27:THR:HG21	2.20	0.42
53:CA:1346:A:C4	53:CA:1348:U:O4	2.73	0.42
53:CA:1453:G:H2'	53:CA:1454:G:O4'	2.20	0.42
3:CC:190:THR:HG22	3:CC:191:THR:N	2.25	0.42
4:CD:26:ALA:O	4:CD:27:ILE:C	2.62	0.42
4:CD:115:GLN:NE2	4:CD:153:ARG:HH22	2.18	0.42
4:CD:123:MET:CE	4:CD:126:GLY:O	2.66	0.42
4:CD:176:LYS:CG	4:CD:178:GLU:HB2	2.46	0.42
6:CF:1:MET:HE1	6:CF:34:GLY:HA2	2.01	0.42
8:CH:11:THR:HG22	8:CH:14:ARG:CZ	2.50	0.42
8:CH:23:ALA:HA	8:CH:62:LEU:HD23	2.01	0.42
8:CH:38:VAL:O	8:CH:38:VAL:HG12	2.19	0.42
8:CH:102:VAL:CG2	8:CH:125:ILE:HD12	2.47	0.42
11:CK:18:GLY:O	11:CK:81:LEU:HA	2.20	0.42
55:CM:17:ALA:HB3	55:CM:18:LEU:HD12	2.02	0.42
15:CO:2:LEU:HD13	15:CO:34:GLN:HE21	1.84	0.42
56:CP:43:ALA:HB1	56:CP:46:LYS:HZ1	1.85	0.42
17:CQ:30:HIS:CD2	17:CQ:31:PRO:HD2	2.55	0.42
17:CQ:37:ILE:HG13	17:CQ:38:LYS:O	2.19	0.42
18:CR:25:ILE:HA	18:CR:28:LEU:HB2	2.02	0.42
21:CU:34:ARG:C	21:CU:35:GLU:O	2.62	0.42
22:DA:432:A:H8	22:DA:432:A:O5'	2.01	0.42
22:DA:462:C:C2'	22:DA:463:G:H5'	2.49	0.42
22:DA:545:U:H2'	22:DA:547:A:H5'	2.01	0.42
22:DA:651:G:C6	22:DA:652:U:C4	3.08	0.42
22:DA:779:U:OP1	24:DC:48:ILE:HG13	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1038:G:C2	22:DA:1039:A:C5	3.07	0.42
22:DA:1075:C:O2'	22:DA:1076:C:H5'	2.19	0.42
22:DA:1259:G:H2'	22:DA:1260:A:O4'	2.20	0.42
22:DA:1282:U:H2'	22:DA:1283:G:O4'	2.20	0.42
22:DA:1343:G:H2'	22:DA:1344:U:C5	2.54	0.42
22:DA:1455:G:O2'	22:DA:1456:G:C8	2.50	0.42
22:DA:1570:A:C6	22:DA:1571:A:N1	2.87	0.42
22:DA:1631:G:H1'	22:DA:1635:A:N6	2.35	0.42
22:DA:2185:U:H6	22:DA:2185:U:O5'	2.03	0.42
22:DA:2259:U:H2'	22:DA:2260:C:C6	2.54	0.42
22:DA:2259:U:C6	22:DA:2427:C:C4	3.08	0.42
22:DA:2293:G:H2'	22:DA:2294:G:O4'	2.20	0.42
22:DA:2321:U:OP2	22:DA:2322:A:OP2	2.38	0.42
22:DA:2603:G:H2'	22:DA:2604:U:O4'	2.20	0.42
22:DA:2744:G:C6	22:DA:2761:A:C6	3.06	0.42
22:DA:2849:U:O4	22:DA:2867:G:C8	2.72	0.42
24:DC:93:VAL:HG13	24:DC:94:LEU:N	2.34	0.42
25:DD:179:ARG:H	25:DD:188:LEU:HB2	1.85	0.42
26:DE:134:LEU:HA	26:DE:137:LYS:HB2	2.01	0.42
30:DI:54:ILE:HG23	30:DI:70:THR:HG21	2.02	0.42
32:DK:59:LYS:HG2	32:DK:89:ASN:HA	2.01	0.42
35:DN:72:ASP:O	35:DN:75:ILE:HG13	2.20	0.42
39:DR:5:PHE:HB3	39:DR:59:ILE:HD12	2.02	0.42
39:DR:24:LYS:HA	39:DR:94:THR:CG2	2.49	0.42
49:D1:34:GLU:HG3	49:D1:49:LYS:CB	2.49	0.42
1:AA:257:G:H2'	1:AA:258:G:H8	1.85	0.42
1:AA:674:G:H4'	18:AR:69:TYR:CE1	2.54	0.42
1:AA:1072:G:C5	1:AA:1073:U:C4	3.08	0.42
1:AA:1306:A:C2'	1:AA:1307:U:H5'	2.49	0.42
1:AA:1426:G:O2'	1:AA:1427:C:H5'	2.19	0.42
2:AB:116:LEU:HB3	2:AB:140:LEU:HG	2.02	0.42
2:AB:138:ARG:HG3	2:AB:139:GLU:N	2.35	0.42
2:AB:179:GLY:O	2:AB:180:ILE:HD13	2.19	0.42
3:AC:11:LEU:O	3:AC:12:GLY:C	2.62	0.42
4:AD:63:ILE:O	4:AD:63:ILE:HG12	2.18	0.42
6:AF:11:HIS:HD2	6:AF:12:PRO:CD	2.32	0.42
6:AF:68:GLN:HA	6:AF:71:ILE:CG2	2.49	0.42
7:AG:83:THR:O	7:AG:84:TYR:C	2.63	0.42
8:AH:112:ASP:O	8:AH:113:ARG:C	2.63	0.42
9:AI:41:GLU:HB3	9:AI:42:THR:H	1.57	0.42
9:AI:51:LEU:CB	9:AI:56:MET:HG2	2.39	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:121:ARG:NH2	21:AU:35:GLU:HG3	2.34	0.42
12:AL:33:CYS:CA	12:AL:54:VAL:HA	2.35	0.42
14:AN:50:LEU:O	14:AN:52:ARG:N	2.53	0.42
14:AN:86:ALA:O	14:AN:91:GLU:HB2	2.20	0.42
16:AP:20:VAL:HG21	16:AP:32:PHE:CB	2.50	0.42
19:AS:33:TRP:CD1	19:AS:51:HIS:CG	3.08	0.42
20:AT:27:MET:HG3	20:AT:28:ARG:N	2.32	0.42
21:AU:9:GLU:CB	21:AU:10:PRO:HD3	2.50	0.42
22:BA:36:G:N3	22:BA:450:G:O2'	2.53	0.42
22:BA:245:G:H2'	22:BA:246:C:C6	2.54	0.42
22:BA:252:G:N2	22:BA:253:C:H1'	2.35	0.42
22:BA:328:U:H2'	22:BA:329:G:OP1	2.20	0.42
22:BA:670:A:H4'	22:BA:671:C:O5'	2.19	0.42
22:BA:946:C:H2'	22:BA:947:A:H8	1.85	0.42
22:BA:988:A:P	47:BZ:11:SER:CB	3.08	0.42
22:BA:1498:C:O2'	22:BA:1499:C:O5'	2.38	0.42
22:BA:1626:A:O2'	22:BA:1627:G:OP2	2.31	0.42
22:BA:2095:A:C6	22:BA:2096:C:C4	3.08	0.42
22:BA:2307:G:H22	22:BA:2311:A:H2'	1.85	0.42
22:BA:2333:A:H5'	22:BA:2335:A:H1'	2.02	0.42
22:BA:2571:U:O2'	25:BD:151:THR:CG2	2.67	0.42
22:BA:2592:G:C6	22:BA:2593:U:C4	3.08	0.42
22:BA:2667:C:H2'	22:BA:2668:G:O4'	2.20	0.42
22:BA:2771:C:H2'	22:BA:2772:C:C6	2.55	0.42
60:BA:3135:TEL:H242	60:BA:3135:TEL:H30	1.85	0.42
23:BB:35:C:H2'	23:BB:36:C:O4'	2.20	0.42
24:BC:164:VAL:O	24:BC:165:ALA:HB2	2.20	0.42
24:BC:202:ARG:HG3	24:BC:202:ARG:H	1.68	0.42
27:BF:133:GLU:H	27:BF:150:GLY:HA2	1.83	0.42
28:BG:39:ALA:HB1	28:BG:57:TYR:HB3	2.02	0.42
28:BG:59:ASP:O	28:BG:60:GLY:O	2.37	0.42
29:BH:9:VAL:O	29:BH:10:ALA:C	2.63	0.42
29:BH:54:LEU:N	29:BH:57:LYS:HB3	2.34	0.42
30:BI:56:VAL:CG2	30:BI:57:VAL:N	2.83	0.42
34:BM:21:ALA:CA	34:BM:97:GLN:HG2	2.47	0.42
36:BO:70:ALA:O	36:BO:73:ALA:HB3	2.20	0.42
38:BQ:81:GLY:O	38:BQ:85:ALA:N	2.40	0.42
39:BR:59:ILE:HG23	39:BR:101:ILE:HD13	2.01	0.42
44:BW:8:SER:O	44:BW:9:THR:CB	2.67	0.42
44:BW:23:LYS:CG	44:BW:24:ARG:N	2.80	0.42
53:CA:201:G:H2'	53:CA:202:G:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:352:C:H6	53:CA:352:C:H5"	1.84	0.42
53:CA:495:A:N1	53:CA:496:A:N6	2.68	0.42
53:CA:559:A:H4'	53:CA:560:A:O5'	2.20	0.42
53:CA:749:A:C2	53:CA:750:C:C2	3.07	0.42
53:CA:1002:G:C6	53:CA:1003:G:C6	3.07	0.42
53:CA:1073:U:H2'	53:CA:1074:G:C8	2.52	0.42
53:CA:1250:A:C6	53:CA:1251:A:C5	3.08	0.42
53:CA:1284:C:H3'	53:CA:1285:A:H5"	2.02	0.42
53:CA:1346:A:N6	54:CG:9:ARG:HH12	2.18	0.42
53:CA:1387:G:C6	53:CA:1388:C:C4	3.07	0.42
53:CA:1434:A:H2'	53:CA:1435:G:O4'	2.20	0.42
2:CB:49:PHE:HB3	2:CB:199:ILE:HG21	2.01	0.42
3:CC:187:GLU:HB3	3:CC:188:ALA:H	1.62	0.42
6:CF:3:HIS:CG	6:CF:92:THR:HG23	2.55	0.42
14:CN:68:ARG:HG3	14:CN:69:PRO:CD	2.46	0.42
56:CP:75:ILE:HG22	56:CP:80:LYS:HD2	2.02	0.42
17:CQ:68:LYS:HG2	17:CQ:69:THR:HG23	2.02	0.42
18:CR:39:VAL:HA	18:CR:40:PRO:HD3	1.94	0.42
19:CS:11:ASP:H	19:CS:14:LEU:HD21	1.84	0.42
21:CU:16:ARG:HD2	21:CU:19:LYS:HZ1	1.85	0.42
22:DA:19:A:C2	22:DA:522:A:C2	3.07	0.42
22:DA:135:U:H2'	22:DA:136:G:C8	2.54	0.42
22:DA:235:U:C4	22:DA:236:C:C5	3.07	0.42
22:DA:310:A:C2	22:DA:330:A:C5	3.08	0.42
22:DA:452:G:OP1	26:DE:53:THR:HG23	2.20	0.42
22:DA:599:A:N3	22:DA:659:G:C2	2.88	0.42
22:DA:1210:G:C4'	22:DA:1211:C:O5'	2.64	0.42
22:DA:1265:A:C5	22:DA:1267:U:N3	2.88	0.42
22:DA:1394:U:C4	22:DA:1395:A:C6	3.07	0.42
22:DA:1462:C:H1'	22:DA:2702:G:H21	1.84	0.42
22:DA:1529:G:O6	22:DA:1543:G:C2	2.73	0.42
22:DA:1551:A:N3	22:DA:1552:A:H8	2.18	0.42
22:DA:1590:A:C6	22:DA:1591:A:N6	2.88	0.42
22:DA:2305:U:H4'	58:DF:132:ARG:CG	2.50	0.42
22:DA:2397:G:O2'	22:DA:2398:U:H5'	2.20	0.42
22:DA:2407:A:C2	22:DA:2408:U:N3	2.88	0.42
22:DA:2525:G:C2	22:DA:2539:C:C2	3.08	0.42
22:DA:2592:G:C6	22:DA:2593:U:C4	3.08	0.42
24:DC:30:ALA:N	24:DC:31:PRO:CD	2.83	0.42
24:DC:141:HIS:HB3	24:DC:142:ASN:H	1.63	0.42
24:DC:183:VAL:HG22	24:DC:184:GLU:N	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DF:4:HIS:CE1	58:DF:96:TRP:CH2	3.08	0.42
58:DF:35:LEU:O	58:DF:87:LYS:HA	2.19	0.42
58:DF:45:ASP:OD2	58:DF:47:LYS:HB2	2.20	0.42
32:DK:121:GLU:O	32:DK:122:VAL:C	2.62	0.42
36:DO:7:ARG:O	36:DO:8:ILE:C	2.63	0.42
36:DO:39:VAL:HB	36:DO:49:VAL:H	1.85	0.42
41:DT:5:GLU:OE2	46:DY:18:LEU:HD21	2.20	0.42
41:DT:53:VAL:HG21	41:DT:92:ASN:HD22	1.84	0.42
42:DU:85:ARG:HA	42:DU:85:ARG:NE	2.35	0.42
44:DW:18:LYS:H	44:DW:36:ILE:CG1	2.27	0.42
45:DX:39:VAL:C	45:DX:41:SER:N	2.77	0.42
46:DY:25:GLN:O	46:DY:29:ARG:HD3	2.20	0.42
51:D3:18:LYS:HG3	51:D3:19:GLY:N	2.35	0.42
52:D4:9:LYS:O	52:D4:9:LYS:HD3	2.20	0.42
1:AA:142:G:N3	1:AA:142:G:H2'	2.35	0.41
1:AA:342:C:C2'	1:AA:343:U:H5'	2.50	0.41
1:AA:486:U:C6	1:AA:486:U:C5'	2.87	0.41
1:AA:528:C:H5'	1:AA:529:G:OP2	2.20	0.41
1:AA:849:G:N1	1:AA:850:U:C2	2.88	0.41
1:AA:867:G:O2'	1:AA:873:A:N1	2.45	0.41
1:AA:1142:G:H3'	1:AA:1143:G:H8	1.85	0.41
2:AB:32:GLY:HA3	2:AB:39:ILE:H	1.85	0.41
2:AB:100:LEU:HB3	2:AB:174:GLU:HG2	2.01	0.41
2:AB:113:LEU:O	2:AB:117:GLU:HG3	2.20	0.41
2:AB:185:ILE:O	2:AB:185:ILE:CG1	2.68	0.41
2:AB:191:ASP:HA	2:AB:192:PRO:HD2	1.88	0.41
3:AC:153:SER:CB	3:AC:164:THR:HG22	2.49	0.41
5:AE:112:ALA:O	5:AE:114:LEU:N	2.52	0.41
6:AF:18:VAL:HG11	6:AF:58:HIS:CD2	2.55	0.41
7:AG:107:ALA:CA	7:AG:122:GLU:HG3	2.50	0.41
10:AJ:87:LEU:HD13	10:AJ:87:LEU:C	2.45	0.41
12:AL:85:ARG:HH21	12:AL:87:LYS:HD2	1.83	0.41
15:AO:50:HIS:O	15:AO:53:ARG:HB3	2.20	0.41
17:AQ:13:SER:O	17:AQ:16:MET:SD	2.78	0.41
17:AQ:47:ASP:C	17:AQ:51:GLU:OE2	2.63	0.41
22:BA:74:A:C4'	22:BA:75:G:O5'	2.61	0.41
22:BA:149:A:C4	22:BA:150:U:C6	3.08	0.41
22:BA:307:G:N2	22:BA:309:A:H3'	2.34	0.41
22:BA:391:A:C6	22:BA:411:G:C2	3.08	0.41
22:BA:575:A:OP2	22:BA:2055:C:H5	2.03	0.41
22:BA:587:C:C6	22:BA:671:C:H1'	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:687:C:O2	22:BA:687:C:H2'	2.20	0.41
22:BA:936:A:H2'	22:BA:937:C:C6	2.55	0.41
22:BA:986:C:H2'	22:BA:987:C:H6	1.84	0.41
22:BA:1067:A:OP2	22:BA:1067:A:H8	2.03	0.41
22:BA:1105:U:C2'	22:BA:1106:G:H8	2.30	0.41
22:BA:1172:C:N3	22:BA:1173:U:H1'	2.35	0.41
22:BA:2043:C:C4	22:BA:2777:G:C2	3.08	0.41
22:BA:2082:A:H2'	22:BA:2083:G:O4'	2.20	0.41
22:BA:2339:C:H2'	22:BA:2340:A:H8	1.80	0.41
22:BA:2506:U:O2'	22:BA:2507:C:O5'	2.38	0.41
22:BA:2517:C:C6	22:BA:2542:A:C5	3.07	0.41
22:BA:2680:U:OP2	25:BD:114:LYS:NZ	2.52	0.41
22:BA:2748:A:H1'	28:BG:66:THR:CG2	2.49	0.41
22:BA:2749:A:OP1	28:BG:3:VAL:HG12	2.20	0.41
24:BC:96:LYS:HD3	24:BC:96:LYS:HA	1.87	0.41
24:BC:199:HIS:O	24:BC:200:MET:C	2.62	0.41
25:BD:24:VAL:HA	25:BD:191:GLY:N	2.33	0.41
30:BI:93:ASN:OD1	30:BI:136:GLY:HA2	2.20	0.41
33:BL:29:LYS:HG2	33:BL:30:THR:CG2	2.49	0.41
33:BL:49:GLY:O	33:BL:51:GLU:HG2	2.20	0.41
36:BO:16:ARG:HD2	36:BO:19:GLN:NE2	2.35	0.41
37:BP:105:LYS:CA	37:BP:108:ARG:HH21	2.31	0.41
40:BS:28:LYS:O	40:BS:30:SER:N	2.52	0.41
41:BT:61:LEU:HD12	41:BT:61:LEU:O	2.20	0.41
44:BW:70:VAL:HG13	44:BW:70:VAL:O	2.20	0.41
45:BX:53:LYS:O	45:BX:57:VAL:HG23	2.20	0.41
50:B2:12:ARG:HG3	50:B2:13:ASN:ND2	2.35	0.41
50:B2:35:ARG:CG	50:B2:42:LEU:HD11	2.46	0.41
53:CA:398:U:H2'	53:CA:399:G:C8	2.54	0.41
53:CA:415:A:H3'	53:CA:416:G:C8	2.52	0.41
53:CA:444:G:O2'	53:CA:445:G:H5'	2.20	0.41
53:CA:704:A:O2'	53:CA:705:G:O4'	2.37	0.41
53:CA:757:U:OP1	53:CA:822:U:O2'	2.27	0.41
53:CA:1072:G:H2'	53:CA:1073:U:O4'	2.19	0.41
53:CA:1087:G:C6	53:CA:1099:G:C2	3.08	0.41
53:CA:1172:C:C2'	53:CA:1173:U:H5'	2.50	0.41
53:CA:1308:U:OP1	55:CM:95:PRO:HB3	2.19	0.41
53:CA:1366:C:O2'	53:CA:1367:C:O5'	2.38	0.41
53:CA:1458:G:O2'	20:CT:22:SER:HB2	2.18	0.41
3:CC:76:ILE:HG12	3:CC:83:VAL:HG11	2.02	0.41
3:CC:152:VAL:HA	3:CC:197:VAL:HG22	2.00	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:106:PHE:HD1	4:CD:158:LEU:HD21	1.85	0.41
54:CG:41:ILE:O	54:CG:41:ILE:HG22	2.20	0.41
12:CL:72:ASN:HD22	12:CL:72:ASN:N	2.13	0.41
55:CM:111:PRO:HG2	55:CM:113:LYS:CG	2.50	0.41
19:CS:5:LYS:HE3	19:CS:6:LYS:H	1.83	0.41
21:CU:19:LYS:HA	21:CU:19:LYS:HD3	1.91	0.41
22:DA:75:G:O2'	22:DA:76:C:O5'	2.38	0.41
22:DA:116:C:N4	22:DA:117:G:C6	2.88	0.41
22:DA:263:G:H2'	22:DA:264:C:O4'	2.19	0.41
22:DA:301:G:C4	22:DA:302:C:C4	3.08	0.41
22:DA:489:G:C2'	22:DA:491:G:H8	2.33	0.41
22:DA:538:A:C2	22:DA:556:A:C4	3.08	0.41
22:DA:584:C:C4	22:DA:585:G:C5	3.07	0.41
22:DA:864:G:C6	22:DA:865:C:C4	3.08	0.41
22:DA:1008:A:OP1	22:DA:1008:A:H8	2.03	0.41
22:DA:1016:G:C2	22:DA:1147:A:C2	3.07	0.41
22:DA:1070:A:C5	22:DA:1097:U:H4'	2.55	0.41
22:DA:1081:U:O2'	22:DA:1082:U:H5'	2.20	0.41
22:DA:1222:U:H2'	22:DA:1223:G:C8	2.56	0.41
22:DA:1999:C:H5"	22:DA:2723:C:O2'	2.20	0.41
22:DA:2040:G:C6	22:DA:2041:U:C4	3.08	0.41
22:DA:2638:G:H1'	22:DA:2778:A:H61	1.83	0.41
22:DA:2841:C:H2'	22:DA:2842:G:H8	1.85	0.41
57:DB:110:C:H2'	57:DB:111:U:C6	2.53	0.41
24:DC:52:HIS:HB3	24:DC:216:ARG:O	2.20	0.41
25:DD:101:PHE:HD2	25:DD:104:VAL:HG11	1.85	0.41
25:DD:168:GLU:HB2	25:DD:169:ARG:H	1.63	0.41
26:DE:46:GLN:HB3	26:DE:86:ALA:CB	2.50	0.41
26:DE:90:GLN:HG3	26:DE:92:HIS:CE1	2.55	0.41
31:DJ:42:ALA:C	31:DJ:44:TYR:H	2.28	0.41
31:DJ:68:LYS:C	31:DJ:70:THR:N	2.77	0.41
32:DK:14:SER:OG	32:DK:51:LYS:N	2.53	0.41
34:DM:41:LEU:HB3	34:DM:46:ILE:HG23	2.02	0.41
35:DN:2:ARG:HD2	35:DN:2:ARG:O	2.20	0.41
38:DQ:89:ILE:O	38:DQ:91:ARG:N	2.53	0.41
39:DR:27:ILE:CG2	39:DR:28:ALA:N	2.73	0.41
41:DT:18:GLU:HA	41:DT:22:THR:HG21	2.02	0.41
51:D3:57:VAL:O	51:D3:60:CYS:HB2	2.19	0.41
1:AA:13:U:C4	1:AA:916:U:O4	2.73	0.41
1:AA:215:C:O2'	1:AA:216:U:H5'	2.20	0.41
1:AA:451:A:O4'	1:AA:452:A:C8	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:466:A:C3'	1:AA:467:U:H5"	2.50	0.41
1:AA:537:G:H5"	12:AL:109:ARG:NH1	2.35	0.41
1:AA:577:G:C8	1:AA:816:A:C6	3.08	0.41
1:AA:620:C:N3	4:AD:131:ILE:HG21	2.34	0.41
1:AA:874:G:O2'	1:AA:875:U:H5'	2.20	0.41
1:AA:1222:G:O6	62:AA:1835:HOH:O	2.21	0.41
2:AB:156:LEU:HG	2:AB:156:LEU:O	2.20	0.41
2:AB:165:ALA:CB	2:AB:186:VAL:HG12	2.48	0.41
4:AD:146:GLU:HB3	4:AD:147:LYS:HZ3	1.82	0.41
6:AF:79:ARG:HA	6:AF:79:ARG:NE	2.35	0.41
8:AH:65:PHE:HD1	8:AH:65:PHE:HA	1.74	0.41
13:AM:10:ASP:O	13:AM:11:HIS:HB2	2.20	0.41
16:AP:19:VAL:HG13	16:AP:37:GLY:O	2.19	0.41
17:AQ:80:LYS:N	17:AQ:80:LYS:HZ2	2.17	0.41
18:AR:31:TYR:O	18:AR:39:VAL:HG23	2.20	0.41
22:BA:143:C:H2'	22:BA:144:A:C8	2.55	0.41
22:BA:226:A:N6	22:BA:227:A:C6	2.87	0.41
22:BA:545:U:C2'	22:BA:546:U:O3'	2.68	0.41
22:BA:569:U:OP1	22:BA:945:A:O2'	2.24	0.41
22:BA:639:U:H2'	22:BA:640:C:C6	2.55	0.41
22:BA:684:G:OP1	50:B2:21:ARG:NH1	2.53	0.41
22:BA:753:A:H2'	22:BA:754:U:H6	1.85	0.41
22:BA:815:C:OP1	39:BR:85:LYS:CE	2.66	0.41
22:BA:1416:G:O2'	22:BA:1417:C:OP2	2.30	0.41
22:BA:1684:G:C2	22:BA:1705:A:C2	3.08	0.41
22:BA:1734:G:C4	22:BA:1735:A:C8	3.07	0.41
22:BA:2140:G:H8	22:BA:2140:G:OP2	2.03	0.41
22:BA:2364:C:H4'	44:BW:55:ASP:OD1	2.20	0.41
22:BA:2582:G:C2	22:BA:2583:G:C8	3.08	0.41
22:BA:2840:C:H2'	22:BA:2841:C:H6	1.85	0.41
23:BB:110:C:C4	23:BB:111:U:C5	3.08	0.41
25:BD:184:ARG:NH1	37:BP:6:GLN:HE22	2.15	0.41
26:BE:83:VAL:O	26:BE:83:VAL:HG12	2.18	0.41
27:BF:56:LEU:HD23	27:BF:56:LEU:HA	1.75	0.41
27:BF:72:SER:HB2	27:BF:80:GLN:N	2.35	0.41
27:BF:107:VAL:N	27:BF:108:PRO:HD2	2.36	0.41
28:BG:26:LYS:HB3	28:BG:32:LEU:HA	2.02	0.41
28:BG:139:VAL:C	28:BG:141:GLY:N	2.73	0.41
30:BI:78:LEU:HD13	30:BI:108:ILE:CG2	2.46	0.41
31:BJ:38:GLY:C	31:BJ:40:HIS:N	2.79	0.41
32:BK:115:ILE:O	32:BK:115:ILE:HG23	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BP:61:ARG:HG3	37:BP:70:GLU:HG2	2.02	0.41
38:BQ:88:GLU:CD	38:BQ:88:GLU:C	2.88	0.41
39:BR:24:LYS:HB3	39:BR:24:LYS:HE2	1.70	0.41
41:BT:29:THR:HA	41:BT:86:THR:H	1.84	0.41
41:BT:69:ARG:HB3	41:BT:70:HIS:H	1.57	0.41
44:BW:43:LYS:HD3	44:BW:77:LYS:HB3	2.02	0.41
53:CA:22:G:H2'	53:CA:23:C:C6	2.55	0.41
53:CA:320:A:C2	53:CA:334:C:N3	2.88	0.41
53:CA:428:G:C5	53:CA:430:A:C6	3.08	0.41
53:CA:455:G:N2	53:CA:478:A:C2	2.88	0.41
53:CA:604:G:C6	53:CA:605:U:N3	2.88	0.41
53:CA:658:C:O2'	53:CA:659:U:H5'	2.20	0.41
53:CA:1136:C:H6	53:CA:1136:C:H2'	1.71	0.41
53:CA:1294:G:C8	53:CA:1294:G:OP2	2.73	0.41
53:CA:1319:A:H5"	19:CS:4:LEU:CD1	2.50	0.41
2:CB:9:LEU:HD23	2:CB:9:LEU:N	2.30	0.41
2:CB:67:LEU:CG	2:CB:157:PRO:HG3	2.50	0.41
2:CB:182:VAL:O	2:CB:195:VAL:HG13	2.20	0.41
5:CE:38:VAL:HG12	5:CE:39:GLY:H	1.84	0.41
5:CE:153:ALA:O	5:CE:156:ARG:HG2	2.20	0.41
6:CF:4:TYR:O	6:CF:63:ASN:HA	2.20	0.41
8:CH:75:GLN:O	8:CH:126:CYS:CB	2.68	0.41
11:CK:67:GLU:C	11:CK:69:CYS:N	2.76	0.41
22:DA:41:C:H2'	22:DA:42:A:H8	1.78	0.41
22:DA:200:U:O4	22:DA:248:G:C2	2.73	0.41
22:DA:201:C:H6	22:DA:201:C:O5'	2.03	0.41
22:DA:271:G:N2	22:DA:367:G:H1'	2.35	0.41
22:DA:283:G:N2	22:DA:358:U:C2	2.88	0.41
22:DA:566:U:O2'	22:DA:809:G:OP2	2.33	0.41
22:DA:581:C:P	38:DQ:32:ARG:HE	2.42	0.41
22:DA:799:G:C6	22:DA:800:A:C6	3.08	0.41
22:DA:864:G:C6	22:DA:865:C:N4	2.87	0.41
22:DA:960:A:C2'	22:DA:962:G:H5'	2.48	0.41
22:DA:1139:G:C2'	22:DA:1140:C:H5'	2.50	0.41
22:DA:1409:U:O5'	22:DA:1409:U:H6	2.02	0.41
22:DA:1512:C:C4	22:DA:1513:U:C5	3.08	0.41
22:DA:1525:A:C6	22:DA:1526:C:N3	2.88	0.41
22:DA:1568:G:N3	24:DC:57:HIS:HE1	2.17	0.41
22:DA:1605:C:O2'	22:DA:1610:A:H2'	2.19	0.41
22:DA:1813:G:C2	24:DC:49:THR:HB	2.55	0.41
22:DA:2192:U:O2	22:DA:2192:U:H2'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2246:G:H2'	22:DA:2247:A:C8	2.55	0.41
22:DA:2287:A:C6	22:DA:2289:G:C4	3.08	0.41
22:DA:2331:G:H2'	22:DA:2332:C:O4'	2.21	0.41
22:DA:2874:C:H2'	22:DA:2875:C:C6	2.55	0.41
24:DC:99:GLU:HG2	24:DC:100:ARG:N	2.34	0.41
24:DC:259:ASN:C	24:DC:261:ARG:H	2.28	0.41
25:DD:98:VAL:C	25:DD:100:LEU:N	2.75	0.41
26:DE:157:LEU:C	26:DE:157:LEU:HD12	2.45	0.41
58:DF:45:ASP:C	58:DF:47:LYS:N	2.77	0.41
58:DF:94:ARG:HA	58:DF:97:GLU:OE2	2.20	0.41
32:DK:16:ALA:HB1	32:DK:45:GLU:HG3	2.03	0.41
32:DK:21:CYS:HA	32:DK:41:ILE:CD1	2.47	0.41
33:DL:128:THR:HG22	33:DL:129:LYS:N	2.35	0.41
37:DP:4:ILE:HG22	37:DP:4:ILE:O	2.21	0.41
37:DP:28:LYS:O	37:DP:80:VAL:O	2.38	0.41
39:DR:93:PHE:CE1	39:DR:95:ASP:OD1	2.73	0.41
41:DT:34:VAL:O	41:DT:35:ALA:HB3	2.21	0.41
42:DU:20:LYS:HD2	42:DU:38:ILE:CD1	2.50	0.41
43:DV:4:ILE:HD11	43:DV:50:MET:CE	2.50	0.41
45:DX:44:ARG:HB3	45:DX:44:ARG:NH1	2.35	0.41
48:D0:12:ARG:HG3	48:D0:15:ARG:NH1	2.29	0.41
1:AA:132:C:H2'	1:AA:133:U:O4'	2.20	0.41
1:AA:133:U:H1'	1:AA:230:G:N2	2.36	0.41
1:AA:324:G:N2	1:AA:326:G:H3'	2.34	0.41
1:AA:340:U:O2'	1:AA:341:C:H5'	2.20	0.41
1:AA:596:A:H2'	1:AA:597:G:H8	1.85	0.41
1:AA:645:G:H2'	1:AA:646:G:H5'	2.01	0.41
1:AA:723:U:OP1	21:AU:48:LYS:HB2	2.21	0.41
1:AA:841:C:H1'	2:CB:152:ASP:OD1	2.20	0.41
1:AA:937:A:N6	1:AA:1345:U:O4	2.53	0.41
2:AB:110:ILE:HD12	2:AB:147:LEU:CD1	2.45	0.41
4:AD:12:ARG:HG2	4:AD:33:ILE:HD12	2.02	0.41
19:AS:79:TYR:CD1	19:AS:80:ARG:N	2.89	0.41
20:AT:11:ILE:HG12	20:AT:12:GLN:N	2.35	0.41
20:AT:15:LYS:HD3	20:AT:15:LYS:C	2.45	0.41
22:BA:558:U:OP1	31:BJ:111:LYS:HE3	2.20	0.41
22:BA:675:A:C4	22:BA:804:A:C2	3.08	0.41
22:BA:1002:G:C2'	22:BA:1003:G:O5'	2.68	0.41
22:BA:1063:G:C6	22:BA:1064:C:C2	3.09	0.41
22:BA:1154:G:O5'	22:BA:1154:G:H8	2.03	0.41
22:BA:1471:G:H2'	22:BA:1472:C:H6	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1614:A:C2	40:BS:93:ALA:HB2	2.56	0.41
22:BA:1636:U:O2'	22:BA:1760:C:O2'	2.36	0.41
22:BA:1926:U:H2'	22:BA:1928:A:N7	2.35	0.41
22:BA:1947:C:H2'	22:BA:1948:G:H8	1.86	0.41
22:BA:2567:G:H2'	22:BA:2568:U:C6	2.55	0.41
24:BC:210:ALA:O	24:BC:211:ARG:C	2.64	0.41
24:BC:250:GLN:H	24:BC:250:GLN:NE2	2.18	0.41
26:BE:196:VAL:HA	26:BE:199:MET:HB2	2.03	0.41
27:BF:113:PHE:CE1	27:BF:116:LEU:HD22	2.54	0.41
28:BG:39:ALA:HB1	28:BG:57:TYR:CB	2.49	0.41
32:BK:76:VAL:H	37:BP:72:VAL:HG23	1.85	0.41
33:BL:29:LYS:C	33:BL:30:THR:HG23	2.46	0.41
33:BL:55:MET:HA	33:BL:56:PRO:HD3	1.70	0.41
36:BO:98:GLN:O	36:BO:103:VAL:HG21	2.20	0.41
39:BR:49:ILE:CG2	39:BR:53:PHE:N	2.83	0.41
40:BS:14:ALA:O	40:BS:15:GLN:C	2.60	0.41
44:BW:8:SER:C	44:BW:9:THR:HG22	2.42	0.41
53:CA:71:A:C6	53:CA:100:G:N7	2.88	0.41
53:CA:73:C:H2'	53:CA:74:A:H8	1.85	0.41
53:CA:115:G:H1'	53:CA:116:A:N7	2.35	0.41
53:CA:134:G:H2'	53:CA:135:C:O4'	2.20	0.41
53:CA:552:U:C2	53:CA:553:A:C8	3.08	0.41
53:CA:1227:A:O2'	53:CA:1228:C:H5'	2.20	0.41
53:CA:1237:C:OP1	53:CA:1238:A:H1'	2.20	0.41
2:CB:9:LEU:O	2:CB:10:LYS:CB	2.67	0.41
2:CB:187:ASP:C	2:CB:189:ASN:H	2.28	0.41
3:CC:41:TYR:HD2	3:CC:41:TYR:HA	1.76	0.41
4:CD:56:GLU:OE1	4:CD:56:GLU:HA	2.20	0.41
9:CI:70:GLY:O	9:CI:73:GLY:N	2.46	0.41
10:CJ:10:LEU:HB2	10:CJ:72:ARG:HB2	2.01	0.41
12:CL:106:VAL:CG2	12:CL:116:TYR:HB3	2.51	0.41
55:CM:69:ARG:HD2	55:CM:69:ARG:N	2.34	0.41
56:CP:46:LYS:HB2	56:CP:47:GLU:H	1.49	0.41
56:CP:57:ILE:HD13	56:CP:57:ILE:HA	1.92	0.41
22:DA:62:U:O2	22:DA:62:U:H2'	2.20	0.41
22:DA:126:A:P	50:D2:19:ARG:HG3	2.60	0.41
22:DA:219:A:N7	22:DA:220:G:C5	2.88	0.41
22:DA:249:C:H3'	22:DA:2394:C:O3'	2.20	0.41
22:DA:308:G:H21	22:DA:329:G:H21	1.67	0.41
22:DA:499:U:O4	22:DA:500:G:C6	2.73	0.41
22:DA:1048:A:C2	22:DA:1049:C:N3	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1091:G:O2'	22:DA:1092:C:H5'	2.19	0.41
22:DA:1112:G:O2'	22:DA:1113:U:H5'	2.19	0.41
22:DA:1394:U:H3'	22:DA:1394:U:C6	2.55	0.41
22:DA:1576:U:H2'	22:DA:1577:C:C6	2.56	0.41
22:DA:1613:G:C2	22:DA:1617:C:C2	3.09	0.41
22:DA:1652:A:H3'	22:DA:1653:G:C8	2.54	0.41
22:DA:1654:A:N7	22:DA:2823:A:H1'	2.36	0.41
22:DA:1791:A:N6	22:DA:1828:G:O2'	2.54	0.41
22:DA:2067:G:C4'	22:DA:2068:U:OP2	2.69	0.41
22:DA:2094:A:H2'	22:DA:2095:A:O4'	2.19	0.41
22:DA:2394:C:OP1	33:DL:63:LYS:HG2	2.20	0.41
22:DA:2546:U:O4'	22:DA:2565:A:C2	2.73	0.41
22:DA:2787:C:O2'	22:DA:2788:C:H5'	2.20	0.41
58:DF:30:VAL:HG13	58:DF:168:LEU:HD23	2.01	0.41
58:DF:113:PHE:CE2	58:DF:116:LEU:HB2	2.52	0.41
28:DG:24:THR:C	28:DG:25:ILE:HD12	2.45	0.41
30:DI:11:GLN:OE1	30:DI:74:PRO:HG2	2.21	0.41
30:DI:140:GLU:O	30:DI:141:ASP:C	2.63	0.41
32:DK:93:GLN:HA	32:DK:94:PRO:HD2	1.87	0.41
33:DL:57:LEU:CA	33:DL:60:ARG:HG3	2.49	0.41
35:DN:35:LYS:HD3	35:DN:112:TYR:CZ	2.55	0.41
35:DN:82:GLU:O	35:DN:85:PRO:HD2	2.21	0.41
39:DR:62:GLU:HB2	39:DR:99:THR:CG2	2.50	0.41
41:DT:55:VAL:HG22	41:DT:56:GLU:N	2.35	0.41
41:DT:58:VAL:HG22	41:DT:59:ASN:N	2.35	0.41
42:DU:32:LYS:HD2	42:DU:65:GLN:H	1.85	0.41
45:DX:2:ARG:HH21	45:DX:32:LEU:HD23	1.85	0.41
49:D1:42:VAL:O	49:D1:42:VAL:HG12	2.20	0.41
1:AA:35:G:N3	12:AL:114:SER:OG	2.53	0.41
1:AA:116:A:C2'	1:AA:117:G:O5'	2.68	0.41
1:AA:345:C:C3'	37:BP:33:GLU:OE1	2.68	0.41
1:AA:434:U:H2'	1:AA:435:A:O4'	2.20	0.41
1:AA:568:G:N2	1:AA:883:C:C2	2.88	0.41
1:AA:626:G:H2'	1:AA:627:G:O4'	2.20	0.41
1:AA:734:G:H2'	1:AA:735:C:C6	2.56	0.41
1:AA:802:A:H5"	1:AA:803:G:OP2	2.20	0.41
1:AA:919:A:O5'	1:AA:919:A:H8	2.04	0.41
1:AA:1253:G:N1	1:AA:1285:A:N6	2.68	0.41
1:AA:1270:G:H2'	1:AA:1271:A:H8	1.85	0.41
1:AA:1470:U:O2'	1:AA:1471:U:H5'	2.19	0.41
6:AF:18:VAL:N	6:AF:19:PRO:HD2	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:34:THR:OG1	11:AK:38:GLY:HA2	2.21	0.41
11:AK:75:GLU:C	11:AK:77:GLY:H	2.27	0.41
12:AL:88:ASP:O	12:AL:90:PRO:HD3	2.20	0.41
13:AM:4:ALA:HB2	13:AM:59:VAL:HG13	2.01	0.41
15:AO:80:LEU:O	15:AO:84:LEU:N	2.47	0.41
21:AU:33:ARG:CD	21:AU:34:ARG:HG3	2.51	0.41
22:BA:28:A:C2	22:BA:513:A:C8	3.09	0.41
22:BA:359:G:H3'	22:BA:360:U:C6	2.55	0.41
22:BA:523:C:H5"	22:BA:540:C:O2'	2.21	0.41
22:BA:1115:G:O2'	22:BA:1116:G:P	2.77	0.41
22:BA:1512:C:OP2	22:BA:1512:C:H6	2.03	0.41
22:BA:1590:A:C6	22:BA:1591:A:N6	2.88	0.41
22:BA:1770:G:C5	22:BA:1983:G:C6	3.08	0.41
22:BA:1911:U:C2	22:BA:1918:A:C2	3.07	0.41
22:BA:1983:G:C2	22:BA:1984:G:C8	3.08	0.41
22:BA:2140:G:H2'	22:BA:2141:G:C8	2.55	0.41
22:BA:2318:G:C6	22:BA:2319:G:C6	3.08	0.41
22:BA:2555:U:C5	22:BA:2556:C:N1	2.88	0.41
22:BA:2656:U:O2	22:BA:2656:U:H2'	2.20	0.41
22:BA:2716:C:C2	22:BA:2717:C:C5	3.08	0.41
22:BA:2847:U:O2'	22:BA:2848:G:H5'	2.21	0.41
24:BC:29:PHE:C	24:BC:31:PRO:HD2	2.45	0.41
25:BD:72:GLY:O	25:BD:73:VAL:C	2.62	0.41
26:BE:41:GLN:OE1	26:BE:43:THR:HG21	2.21	0.41
27:BF:84:ILE:O	27:BF:84:ILE:CG1	2.67	0.41
28:BG:3:VAL:HG13	28:BG:4:ALA:N	2.35	0.41
28:BG:154:GLU:CD	28:BG:157:LYS:H	2.28	0.41
29:BH:33:GLN:HB2	29:BH:33:GLN:HE21	1.75	0.41
34:BM:6:ARG:HD2	34:BM:8:LYS:NZ	2.34	0.41
35:BN:83:LEU:HD11	35:BN:86:ARG:NH2	2.35	0.41
36:BO:2:ASP:O	36:BO:3:LYS:CB	2.68	0.41
36:BO:2:ASP:OD1	36:BO:3:LYS:HG2	2.20	0.41
38:BQ:91:ARG:HB2	39:BR:11:GLN:OE1	2.21	0.41
39:BR:46:GLU:C	39:BR:46:GLU:OE1	2.63	0.41
40:BS:28:LYS:O	40:BS:29:VAL:C	2.62	0.41
41:BT:38:ALA:HB3	41:BT:81:LYS:HE2	2.01	0.41
42:BU:62:ALA:O	42:BU:63:ALA:C	2.63	0.41
44:BW:16:GLU:C	44:BW:17:ALA:O	2.63	0.41
51:B3:38:LYS:O	51:B3:39:ARG:C	2.62	0.41
53:CA:260:G:C5	53:CA:261:U:C5	3.08	0.41
53:CA:390:U:O2'	53:CA:391:G:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:397:A:H3'	53:CA:397:A:N3	2.36	0.41
53:CA:976:G:N2	53:CA:1363:A:N3	2.69	0.41
53:CA:1072:G:C2	53:CA:1073:U:C2	3.07	0.41
53:CA:1218:C:H2'	53:CA:1219:A:H8	1.78	0.41
53:CA:1261:A:N7	53:CA:1274:A:C2	2.88	0.41
53:CA:1508:A:H2'	53:CA:1509:C:O4'	2.20	0.41
2:CB:59:ILE:HD12	2:CB:60:ALA:N	2.35	0.41
2:CB:206:ILE:C	2:CB:208:ALA:H	2.28	0.41
3:CC:172:VAL:CG1	3:CC:181:ILE:HD13	2.51	0.41
54:CG:114:SER:O	54:CG:118:ARG:HG3	2.20	0.41
9:CI:11:ARG:NH2	9:CI:108:ARG:HH21	2.18	0.41
11:CK:19:VAL:HB	11:CK:34:THR:HG23	2.01	0.41
12:CL:86:VAL:HG11	12:CL:89:LEU:HD23	2.03	0.41
56:CP:60:TRP:O	56:CP:61:VAL:C	2.63	0.41
17:CQ:46:HIS:ND1	17:CQ:70:LYS:NZ	2.68	0.41
22:DA:192:C:N4	22:DA:193:U:O2	2.54	0.41
22:DA:216:A:C5	22:DA:432:A:C2	3.08	0.41
22:DA:295:G:C2	22:DA:296:U:C6	3.08	0.41
22:DA:345:A:H2'	22:DA:346:A:OP2	2.21	0.41
22:DA:374:A:H2'	22:DA:375:G:O4'	2.21	0.41
22:DA:662:G:H4'	33:DL:15:ALA:O	2.21	0.41
22:DA:754:U:H2'	22:DA:755:U:C6	2.55	0.41
22:DA:803:U:C2'	22:DA:804:A:H5'	2.50	0.41
22:DA:956:G:N3	22:DA:962:G:O6	2.53	0.41
22:DA:1048:A:N6	22:DA:1111:A:C5	2.89	0.41
22:DA:1182:G:H2'	22:DA:1183:U:O4'	2.19	0.41
22:DA:1262:A:N3	48:D0:6:LYS:NZ	2.56	0.41
22:DA:1274:A:O2'	22:DA:1275:A:C5'	2.63	0.41
22:DA:1366:A:H2'	22:DA:1367:A:C8	2.55	0.41
22:DA:1437:C:C2	22:DA:1438:U:C5	3.08	0.41
22:DA:1645:G:H5"	22:DA:1646:C:O5'	2.19	0.41
22:DA:1723:G:C2'	22:DA:1724:G:H5'	2.50	0.41
22:DA:1816:C:O2'	22:DA:1817:G:OP1	2.38	0.41
22:DA:1831:G:C6	22:DA:1832:C:N4	2.88	0.41
22:DA:1837:C:O2	22:DA:1927:A:H2	2.03	0.41
22:DA:1932:A:C2	22:DA:1933:G:H1'	2.56	0.41
22:DA:2093:G:H4'	29:DH:24:GLY:HA3	2.02	0.41
22:DA:2491:U:H5"	22:DA:2570:G:H5"	2.02	0.41
57:DB:69:G:H3'	57:DB:70:C:C5	2.55	0.41
24:DC:93:VAL:HG12	24:DC:101:ARG:N	2.34	0.41
25:DD:60:VAL:O	25:DD:60:VAL:HG13	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:119:ALA:CB	25:DD:163:GLY:C	2.94	0.41
25:DD:148:GLN:CD	25:DD:148:GLN:N	2.79	0.41
26:DE:16:GLU:O	26:DE:16:GLU:HG3	2.20	0.41
26:DE:40:ARG:CZ	26:DE:92:HIS:CD2	3.04	0.41
26:DE:118:LEU:HD21	26:DE:188:MET:HE1	2.03	0.41
58:DF:97:GLU:O	58:DF:97:GLU:HG2	2.19	0.41
28:DG:6:ALA:HA	28:DG:7:PRO:HD3	1.71	0.41
29:DH:53:GLU:C	29:DH:55:GLU:N	2.78	0.41
31:DJ:34:ARG:HE	31:DJ:34:ARG:HB3	1.72	0.41
31:DJ:44:TYR:HD1	38:DQ:63:ARG:HH21	1.68	0.41
32:DK:59:LYS:HE3	32:DK:89:ASN:CG	2.46	0.41
33:DL:91:ASP:O	33:DL:92:LEU:C	2.64	0.41
34:DM:73:ILE:HG21	34:DM:91:TYR:CZ	2.56	0.41
39:DR:21:ARG:HB2	39:DR:93:PHE:CD1	2.53	0.41
42:DU:33:VAL:O	42:DU:34:ILE:CG1	2.69	0.41
44:DW:25:PHE:CG	44:DW:26:GLY:N	2.87	0.41
44:DW:35:ILE:HB	44:DW:36:ILE:H	1.49	0.41
47:DZ:38:GLU:CD	47:DZ:39:ASP:H	2.28	0.41
1:AA:507:C:OP2	1:AA:508:U:H3'	2.20	0.41
1:AA:595:A:C5	1:AA:641:U:C5	3.08	0.41
1:AA:978:A:HO2'	1:AA:1322:C:H41	1.68	0.41
1:AA:1114:C:C4	1:AA:1115:U:C5	3.09	0.41
1:AA:1157:A:C6	1:AA:1180:A:C5	3.08	0.41
1:AA:1190:G:O2'	3:AC:2:GLN:HB2	2.21	0.41
1:AA:1314:C:C6	19:AS:5:LYS:HD3	2.55	0.41
2:AB:17:HIS:CD2	2:AB:202:ASN:ND2	2.82	0.41
2:AB:115:ASP:O	2:AB:119:GLN:HB3	2.20	0.41
4:AD:57:LYS:HG2	4:AD:202:LEU:CD2	2.50	0.41
4:AD:61:ARG:HG2	4:AD:71:PHE:CD2	2.56	0.41
4:AD:88:ASN:HA	4:AD:91:ALA:HB3	2.03	0.41
5:AE:139:THR:C	5:AE:142:GLY:H	2.28	0.41
6:AF:41:ASP:OD2	6:AF:58:HIS:NE2	2.51	0.41
8:AH:21:LYS:HE2	8:AH:22:ALA:N	2.34	0.41
12:AL:72:ASN:O	12:AL:73:LEU:O	2.38	0.41
12:AL:109:ARG:HH21	12:AL:116:TYR:HE2	1.60	0.41
19:AS:55:GLN:NE2	19:AS:56:HIS:H	2.19	0.41
20:AT:29:THR:O	20:AT:33:LYS:HE2	2.20	0.41
20:AT:47:GLN:HE21	20:AT:82:ILE:HD13	1.86	0.41
20:AT:77:ASN:HD22	20:AT:78:LEU:H	1.69	0.41
22:BA:182:A:H2	22:BA:433:C:O2	2.03	0.41
22:BA:272:A:O2'	22:BA:273:G:O5'	2.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:479:A:C2	22:BA:480:A:C4	3.09	0.41
22:BA:599:A:O2'	22:BA:600:G:H5'	2.20	0.41
22:BA:604:G:O2'	22:BA:605:G:H5'	2.20	0.41
22:BA:874:G:N1	22:BA:904:G:C6	2.89	0.41
22:BA:960:A:N7	22:BA:962:G:C8	2.89	0.41
22:BA:974:G:C8	22:BA:989:G:C2	3.09	0.41
22:BA:1106:G:C4	22:BA:1107:G:C8	3.08	0.41
22:BA:1941:C:C5	22:BA:1965:C:C6	3.09	0.41
22:BA:2031:A:N3	22:BA:2455:G:O2'	2.50	0.41
22:BA:2805:C:C4	22:BA:2806:C:C4	3.08	0.41
24:BC:67:LYS:O	24:BC:68:ARG:HB2	2.20	0.41
28:BG:53:PRO:HD3	28:BG:61:TRP:CZ3	2.55	0.41
29:BH:28:ASN:HD22	29:BH:28:ASN:HA	1.53	0.41
29:BH:46:PHE:HD2	29:BH:46:PHE:O	2.04	0.41
30:BI:49:GLU:HG2	30:BI:50:LYS:N	2.35	0.41
30:BI:57:VAL:HG12	30:BI:58:ILE:N	2.35	0.41
33:BL:99:ASN:OD1	62:BL:201:HOH:O	2.22	0.41
34:BM:117:PHE:CD2	34:BM:130:PHE:CE1	3.08	0.41
35:BN:24:MET:HG2	35:BN:44:LEU:CD2	2.47	0.41
37:BP:69:VAL:O	37:BP:69:VAL:HG22	2.20	0.41
37:BP:102:ARG:C	37:BP:103:THR:HG22	2.45	0.41
38:BQ:5:ARG:O	38:BQ:5:ARG:HG2	2.20	0.41
39:BR:83:TYR:CD1	39:BR:83:TYR:C	2.97	0.41
41:BT:8:LEU:HD13	41:BT:46:ALA:CA	2.50	0.41
41:BT:11:LEU:HD11	41:BT:47:VAL:HG22	2.03	0.41
42:BU:10:VAL:HG23	42:BU:11:ILE:N	2.35	0.41
43:BV:72:VAL:HB	43:BV:92:VAL:O	2.21	0.41
44:BW:18:LYS:N	44:BW:36:ILE:HG12	2.35	0.41
45:BX:58:ILE:CD1	45:BX:66:VAL:HG11	2.48	0.41
53:CA:197:A:C6	53:CA:221:C:H4'	2.55	0.41
53:CA:260:G:C5	53:CA:261:U:C4	3.09	0.41
53:CA:461:A:O5'	53:CA:462:G:OP2	2.38	0.41
53:CA:590:U:O2'	53:CA:591:U:H5'	2.20	0.41
53:CA:609:A:N7	62:CA:1855:HOH:O	2.37	0.41
53:CA:610:U:O2	53:CA:610:U:O4'	2.38	0.41
53:CA:665:A:N3	53:CA:732:C:H2'	2.36	0.41
53:CA:666:G:C5	53:CA:741:G:N1	2.88	0.41
53:CA:865:A:H2'	53:CA:866:C:O4'	2.20	0.41
53:CA:1251:A:H2	53:CA:1369:C:O2	2.03	0.41
53:CA:1301:U:O2	53:CA:1301:U:C2'	2.67	0.41
53:CA:1371:G:OP1	9:CI:12:LYS:HG2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1513:A:H2'	53:CA:1514:G:C8	2.55	0.41
2:CB:122:ASP:CB	2:CB:124:THR:HG22	2.50	0.41
2:CB:132:GLU:OE1	2:CB:136:ARG:HG3	2.20	0.41
54:CG:63:VAL:HG11	54:CG:127:ALA:CB	2.50	0.41
11:CK:106:ILE:O	11:CK:106:ILE:HG12	2.21	0.41
12:CL:75:GLU:C	12:CL:77:SER:N	2.78	0.41
12:CL:89:LEU:HA	12:CL:90:PRO:HD2	1.58	0.41
12:CL:98:ARG:HA	12:CL:103:CYS:SG	2.60	0.41
55:CM:46:GLU:O	55:CM:47:LEU:HB2	2.20	0.41
22:DA:8:C:C2'	22:DA:9:G:H5'	2.51	0.41
22:DA:226:A:C4	22:DA:227:A:N7	2.88	0.41
22:DA:476:G:O2'	22:DA:477:A:H5"	2.19	0.41
22:DA:515:A:H1'	22:DA:581:C:H1'	2.02	0.41
22:DA:581:C:H2'	22:DA:582:A:C8	2.56	0.41
22:DA:616:A:O2'	22:DA:617:G:O5'	2.38	0.41
22:DA:633:A:H5"	33:DL:70:LYS:HD3	2.01	0.41
22:DA:771:G:C2	22:DA:772:C:C6	3.09	0.41
22:DA:818:G:C2'	22:DA:819:A:H5"	2.51	0.41
22:DA:911:A:O5'	22:DA:911:A:H8	2.04	0.41
22:DA:956:G:C1'	34:DM:82:MET:HE1	2.49	0.41
22:DA:968:C:H2'	22:DA:969:G:H8	1.86	0.41
22:DA:1059:G:C6	22:DA:1080:A:N1	2.88	0.41
22:DA:1255:U:O2'	22:DA:1256:G:P	2.78	0.41
22:DA:1317:G:C6	22:DA:1318:U:C4	3.09	0.41
22:DA:1346:G:H2'	22:DA:1347:A:H8	1.81	0.41
22:DA:1417:C:C2'	22:DA:1418:G:C8	2.96	0.41
22:DA:1476:U:O2	22:DA:1516:G:C2	2.73	0.41
22:DA:1572:A:H2'	22:DA:1573:G:C8	2.55	0.41
22:DA:1628:G:O2'	22:DA:1629:U:H5'	2.20	0.41
22:DA:1817:G:H4'	24:DC:85:ASN:O	2.20	0.41
22:DA:1917:U:H6	22:DA:1917:U:O5'	2.02	0.41
22:DA:2110:G:N2	22:DA:2180:U:H3	2.19	0.41
22:DA:2149:U:O2'	22:DA:2150:C:H6	2.03	0.41
22:DA:2201:G:C4	22:DA:2202:U:C6	3.09	0.41
22:DA:2307:G:N7	22:DA:2312:U:C5	2.89	0.41
22:DA:2459:A:C4	22:DA:2460:U:C6	3.08	0.41
22:DA:2461:A:H2'	22:DA:2462:C:C6	2.56	0.41
22:DA:2561:U:C2'	22:DA:2562:U:O5'	2.69	0.41
22:DA:2631:G:H2'	22:DA:2632:A:C5'	2.48	0.41
22:DA:2845:U:H2'	22:DA:2846:G:O4'	2.21	0.41
57:DB:108:A:H8	57:DB:108:A:H2'	1.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:32:ASN:HB3	25:DD:52:THR:OG1	2.20	0.41
26:DE:147:LEU:CB	26:DE:186:VAL:HG23	2.50	0.41
58:DF:57:ALA:HB2	58:DF:64:PRO:HG2	2.03	0.41
58:DF:146:ASP:HB3	58:DF:147:ARG:H	1.62	0.41
28:DG:100:ASN:O	28:DG:115:GLN:HB2	2.21	0.41
28:DG:135:ALA:O	28:DG:136:ASP:HB2	2.21	0.41
33:DL:135:ILE:HG23	33:DL:136:GLU:N	2.35	0.41
35:DN:12:ARG:HB3	35:DN:16:HIS:HD1	1.83	0.41
35:DN:19:ALA:HA	35:DN:22:ARG:HB3	2.03	0.41
38:DQ:9:ALA:C	38:DQ:11:ALA:N	2.77	0.41
40:DS:21:ALA:C	40:DS:23:LEU:H	2.27	0.41
42:DU:39:ASN:HB3	42:DU:62:ALA:HB3	2.02	0.41
44:DW:37:VAL:C	44:DW:39:GLN:N	2.79	0.41
46:DY:57:LEU:O	46:DY:60:LYS:HE3	2.20	0.41
48:D0:21:LEU:HB3	48:D0:22:THR:H	1.55	0.41
50:D2:30:VAL:C	50:D2:32:ALA:H	2.28	0.41
51:D3:18:LYS:CG	51:D3:19:GLY:N	2.84	0.41
1:AA:198:G:N1	1:AA:220:G:C4	2.88	0.41
1:AA:369:G:C2	1:AA:370:C:C6	3.08	0.41
1:AA:461:A:N3	1:AA:461:A:C3'	2.78	0.41
1:AA:1031:C:H2'	1:AA:1032:G:OP2	2.21	0.41
1:AA:1143:G:O2'	1:AA:1144:G:H5'	2.20	0.41
1:AA:1154:G:N1	1:AA:1155:A:C5	2.89	0.41
1:AA:1159:U:N3	1:AA:1182:G:C4	2.88	0.41
1:AA:1306:A:C6	1:AA:1307:U:C2	3.09	0.41
1:AA:1432:G:O2'	1:AA:1433:A:OP2	2.33	0.41
2:AB:71:THR:CG2	2:AB:72:LYS:N	2.83	0.41
2:AB:163:ILE:CG2	2:AB:164:ASP:H	2.18	0.41
2:AB:172:ILE:O	2:AB:175:ALA:HB3	2.21	0.41
3:AC:10:ARG:O	3:AC:13:ILE:O	2.38	0.41
5:AE:82:HIS:CE1	8:AH:95:MET:HE2	2.56	0.41
10:AJ:28:THR:O	10:AJ:32:THR:CG2	2.68	0.41
17:AQ:25:GLU:HA	17:AQ:25:GLU:OE1	2.21	0.41
17:AQ:46:HIS:HB3	17:AQ:73:THR:HA	2.03	0.41
22:BA:42:A:H3'	22:BA:43:G:H5"	2.03	0.41
22:BA:372:G:O4'	45:BX:60:LYS:HE3	2.21	0.41
22:BA:469:G:O6	50:B2:37:LYS:HE2	2.20	0.41
22:BA:919:U:H2'	22:BA:920:A:O4'	2.20	0.41
22:BA:1006:C:O2'	22:BA:1007:C:H5'	2.20	0.41
22:BA:1042:G:C2'	22:BA:1043:C:H5'	2.50	0.41
22:BA:1059:G:C6	22:BA:1080:A:N1	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1087:G:C6	22:BA:1089:A:C2	3.09	0.41
22:BA:1178:C:C5	22:BA:1180:U:C4	3.09	0.41
22:BA:2323:G:C6	22:BA:2324:U:C4	3.09	0.41
22:BA:2638:G:O2'	22:BA:2775:G:N2	2.40	0.41
22:BA:2661:G:O2'	22:BA:2662:A:H5'	2.20	0.41
22:BA:2810:A:H2'	22:BA:2811:G:O4'	2.20	0.41
24:BC:193:GLU:H	24:BC:193:GLU:HG3	1.71	0.41
25:BD:13:ARG:NE	25:BD:15:PHE:CZ	2.89	0.41
27:BF:64:PRO:HA	27:BF:88:VAL:CG2	2.50	0.41
30:BI:41:PHE:CE2	30:BI:45:THR:HG21	2.56	0.41
36:BO:92:PHE:HB2	36:BO:117:PHE:CD1	2.56	0.41
38:BQ:100:PHE:HD1	39:BR:13:ARG:NH2	2.18	0.41
43:BV:40:ILE:HD13	43:BV:40:ILE:N	2.34	0.41
44:BW:22:VAL:HG13	44:BW:25:PHE:HE2	1.79	0.41
53:CA:69:G:N2	53:CA:71:A:H62	2.17	0.41
53:CA:112:G:C2'	53:CA:113:G:H5'	2.51	0.41
53:CA:245:U:H6	53:CA:245:U:C5'	2.33	0.41
53:CA:427:U:OP1	4:CD:12:ARG:NH2	2.52	0.41
53:CA:855:U:OP2	53:CA:871:U:N3	2.46	0.41
53:CA:919:A:C2	53:CA:920:U:C5	3.09	0.41
53:CA:929:G:C5	53:CA:930:C:C5	3.09	0.41
53:CA:1048:G:N2	53:CA:1209:C:O2	2.52	0.41
53:CA:1053:G:O5'	53:CA:1054:C:H5'	2.21	0.41
53:CA:1076:U:N3	53:CA:1082:A:C2	2.89	0.41
53:CA:1348:U:O2'	53:CA:1349:A:O4'	2.38	0.41
2:CB:103:TRP:HA	2:CB:106:VAL:H	1.85	0.41
3:CC:15:LYS:HG3	3:CC:16:PRO:HD2	2.02	0.41
3:CC:18:ASN:HD21	3:CC:53:ARG:CZ	2.33	0.41
3:CC:18:ASN:ND2	3:CC:53:ARG:NH1	2.60	0.41
4:CD:33:ILE:O	4:CD:33:ILE:HG23	2.21	0.41
6:CF:9:MET:HE2	6:CF:59:TYR:CE2	2.56	0.41
10:CJ:78:GLU:C	10:CJ:80:THR:H	2.28	0.41
55:CM:13:HIS:CD2	55:CM:14:ALA:H	2.38	0.41
55:CM:108:ARG:C	55:CM:110:GLY:H	2.28	0.41
14:CN:92:ILE:HA	14:CN:93:PRO:HD3	1.88	0.41
21:CU:37:TYR:O	21:CU:37:TYR:HD2	2.03	0.41
22:DA:36:G:O6	22:DA:445:C:N4	2.53	0.41
22:DA:49:A:C5	22:DA:177:G:O6	2.73	0.41
22:DA:84:A:C4	22:DA:99:U:H1'	2.55	0.41
22:DA:141:G:H2'	22:DA:142:A:O4'	2.21	0.41
22:DA:266:G:H2'	22:DA:267:C:O5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:374:A:C6	22:DA:401:A:N7	2.89	0.41
22:DA:448:U:H5"	62:DA:3240:HOH:O	2.21	0.41
22:DA:457:A:N1	22:DA:470:A:H5"	2.35	0.41
22:DA:489:G:O2'	22:DA:491:G:H8	2.04	0.41
22:DA:570:G:C5	22:DA:2030:A:C5	3.09	0.41
22:DA:570:G:O6	22:DA:2499:C:OP1	2.38	0.41
22:DA:724:U:H2'	22:DA:725:G:O4'	2.20	0.41
22:DA:974:G:OP1	22:DA:1187:G:H4'	2.20	0.41
22:DA:1000:A:C6	22:DA:1001:A:N1	2.88	0.41
22:DA:1038:G:C6	22:DA:1039:A:N7	2.89	0.41
22:DA:1130:U:O2'	22:DA:1131:G:C8	2.73	0.41
22:DA:1251:C:O2'	62:DA:3286:HOH:O	2.21	0.41
22:DA:1264:A:N7	22:DA:1265:A:C5	2.88	0.41
22:DA:1427:A:H4'	22:DA:1428:C:OP1	2.17	0.41
22:DA:1476:U:H1'	22:DA:1732:C:N3	2.34	0.41
22:DA:1609:A:O2'	22:DA:1610:A:C5'	2.69	0.41
22:DA:1650:A:O2'	35:DN:108:ALA:HB1	2.21	0.41
22:DA:1828:G:O2'	22:DA:1829:A:H5'	2.20	0.41
22:DA:1914:C:O2'	22:DA:1915:U:C5'	2.68	0.41
22:DA:2155:U:O2	22:DA:2155:U:H2'	2.20	0.41
22:DA:2250:G:OP1	22:DA:2275:C:O2'	2.25	0.41
22:DA:2423:U:HO2'	22:DA:2425:A:H2'	1.82	0.41
22:DA:2468:A:N7	22:DA:2476:A:N1	2.68	0.41
22:DA:2523:G:O2'	22:DA:2524:G:H5'	2.20	0.41
22:DA:2876:G:OP1	37:DP:1:SER:N	2.54	0.41
57:DB:75:G:H22	57:DB:102:G:N2	2.19	0.41
25:DD:5:VAL:HG23	25:DD:82:PHE:CZ	2.55	0.41
25:DD:55:LYS:HB3	25:DD:75:ALA:HB1	2.03	0.41
26:DE:149:ILE:HG23	26:DE:188:MET:HA	2.03	0.41
31:DJ:3:THR:CG2	38:DQ:60:TRP:HE1	2.33	0.41
32:DK:47:ILE:HA	32:DK:48:PRO:HD2	1.81	0.41
33:DL:41:ARG:O	33:DL:42:SER:C	2.63	0.41
34:DM:34:LYS:O	34:DM:128:THR:HB	2.20	0.41
35:DN:16:HIS:O	35:DN:20:MET:CB	2.68	0.41
36:DO:4:LYS:HG3	36:DO:8:ILE:CD1	2.50	0.41
36:DO:41:ALA:O	36:DO:43:ASN:N	2.52	0.41
36:DO:112:GLU:HG3	36:DO:113:ALA:H	1.85	0.41
42:DU:32:LYS:HE2	42:DU:65:GLN:OE1	2.21	0.41
42:DU:73:ASN:CB	42:DU:95:PHE:HE2	2.34	0.41
42:DU:94:PHE:O	42:DU:94:PHE:CD2	2.74	0.41
49:D1:3:GLY:C	49:D1:5:ARG:H	2.28	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:181:A:N6	1:AA:195:A:C8	2.89	0.41
1:AA:244:U:C2	1:AA:894:G:C2	3.08	0.41
1:AA:290:C:C2'	1:AA:291:U:H5'	2.50	0.41
1:AA:685:G:H5'	11:AK:40:ALA:O	2.19	0.41
1:AA:693:G:C2'	1:AA:694:A:H5'	2.51	0.41
1:AA:900:A:N6	1:AA:901:A:N1	2.69	0.41
1:AA:973:G:H2'	1:AA:974:A:OP1	2.21	0.41
1:AA:975:A:C8	1:AA:1357:A:N3	2.89	0.41
1:AA:1152:A:O2'	1:AA:1153:G:H5'	2.20	0.41
1:AA:1191:A:H5"	3:AC:3:LYS:HE3	2.02	0.41
1:AA:1397:C:OP2	5:AE:28:ARG:NH2	2.50	0.41
1:AA:1521:C:N3	1:AA:1522:U:C5	2.89	0.41
2:AB:77:GLU:HA	2:AB:80:LYS:HB3	2.02	0.41
2:AB:138:ARG:HA	2:AB:141:GLU:CD	2.45	0.41
2:AB:153:MET:CE	2:AB:157:PRO:HG3	2.51	0.41
2:AB:186:VAL:O	2:AB:186:VAL:HG23	2.21	0.41
2:AB:207:ARG:C	2:AB:209:VAL:N	2.78	0.41
3:AC:35:ASP:OD1	3:AC:56:ILE:HG21	2.21	0.41
3:AC:153:SER:HB3	3:AC:164:THR:HA	2.02	0.41
4:AD:86:GLY:CA	4:AD:200:VAL:HG21	2.51	0.41
5:AE:17:VAL:HG23	5:AE:33:THR:O	2.20	0.41
5:AE:133:ILE:O	5:AE:133:ILE:HG22	2.21	0.41
5:AE:148:SER:O	5:AE:152:VAL:N	2.53	0.41
6:AF:38:ARG:HG3	6:AF:39:LEU:H	1.79	0.41
20:AT:61:ALA:HA	20:AT:66:ILE:HG22	2.02	0.41
22:BA:142:A:C2	22:BA:143:C:O2	2.73	0.41
22:BA:544:C:H3'	22:BA:545:U:C2	2.55	0.41
22:BA:569:U:C4	22:BA:570:G:C6	3.08	0.41
22:BA:712:G:C2	22:BA:713:G:H1'	2.56	0.41
22:BA:721:A:H2'	22:BA:722:A:H8	1.85	0.41
22:BA:999:U:H5	22:BA:1154:G:C5	2.34	0.41
22:BA:1074:G:N3	22:BA:1074:G:H2'	2.35	0.41
22:BA:1441:G:H2'	22:BA:1442:U:H6	1.86	0.41
22:BA:1471:G:H2'	22:BA:1472:C:C6	2.56	0.41
22:BA:2344:U:C4'	22:BA:2345:G:OP1	2.67	0.41
22:BA:2887:A:H3'	22:BA:2888:C:H6	1.86	0.41
23:BB:94:A:C6	23:BB:95:U:C4	3.09	0.41
24:BC:33:LEU:HD21	24:BC:62:ARG:HD3	2.03	0.41
26:BE:127:GLU:N	26:BE:127:GLU:OE1	2.54	0.41
27:BF:142:TYR:HA	27:BF:145:VAL:HG13	2.03	0.41
28:BG:3:VAL:O	28:BG:6:ALA:HB3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BG:174:LYS:HD2	28:BG:174:LYS:C	2.46	0.41
29:BH:45:GLU:O	29:BH:49:ALA:N	2.41	0.41
30:BI:130:GLY:HA2	30:BI:133:ARG:HB3	2.01	0.41
31:BJ:57:LEU:HD12	31:BJ:57:LEU:HA	1.78	0.41
32:BK:17:ARG:HE	32:BK:17:ARG:HB3	1.74	0.41
32:BK:107:LEU:HA	32:BK:107:LEU:HD12	1.64	0.41
32:BK:113:MET:C	32:BK:115:ILE:N	2.76	0.41
33:BL:90:VAL:O	33:BL:90:VAL:HG12	2.21	0.41
34:BM:51:ARG:O	34:BM:52:ALA:C	2.64	0.41
35:BN:69:ARG:H	35:BN:69:ARG:HG2	1.20	0.41
35:BN:73:ASN:C	35:BN:76:VAL:HG12	2.45	0.41
37:BP:25:VAL:N	37:BP:85:VAL:O	2.53	0.41
41:BT:40:LYS:O	41:BT:43:ILE:N	2.53	0.41
42:BU:73:ASN:ND2	42:BU:75:ALA:HB3	2.36	0.41
53:CA:77:A:C2	53:CA:93:U:C2	3.09	0.41
53:CA:238:A:C5	53:CA:239:U:C5	3.08	0.41
53:CA:315:A:H5"	53:CA:317:U:OP2	2.21	0.41
53:CA:318:G:C2	53:CA:336:A:C2	3.09	0.41
53:CA:1168:U:O2	53:CA:1168:U:C2'	2.69	0.41
53:CA:1252:A:H4'	53:CA:1369:C:H4'	2.03	0.41
53:CA:1270:G:H2'	53:CA:1271:A:C8	2.55	0.41
53:CA:1279:G:C8	53:CA:1282:C:C4	3.09	0.41
53:CA:1304:G:C1'	53:CA:1333:A:H61	2.29	0.41
53:CA:1318:A:H8	53:CA:1318:A:O5'	2.03	0.41
53:CA:1408:A:C2	53:CA:1494:G:C4	3.09	0.41
53:CA:1416:G:C2'	53:CA:1417:G:H5'	2.50	0.41
53:CA:1525:G:H5"	21:CU:37:TYR:CD1	2.56	0.41
53:CA:1525:G:OP1	21:CU:37:TYR:HD1	2.04	0.41
2:CB:53:LEU:O	2:CB:57:ASN:HB2	2.21	0.41
2:CB:130:LYS:HA	2:CB:130:LYS:HD3	1.80	0.41
4:CD:190:LEU:HD23	4:CD:190:LEU:C	2.45	0.41
6:CF:97:THR:C	6:CF:98:GLU:HG3	2.45	0.41
54:CG:59:GLU:C	54:CG:61:PHE:N	2.79	0.41
54:CG:85:GLN:HE21	54:CG:85:GLN:HB3	1.61	0.41
8:CH:11:THR:HG22	8:CH:14:ARG:HH22	1.85	0.41
8:CH:30:LYS:O	8:CH:33:VAL:HB	2.21	0.41
10:CJ:79:PRO:C	10:CJ:84:VAL:HG21	2.45	0.41
55:CM:11:HIS:O	55:CM:12:LYS:HG2	2.20	0.41
56:CP:54:LEU:O	56:CP:57:ILE:HB	2.20	0.41
21:CU:13:VAL:HG22	21:CU:15:LEU:HD23	2.03	0.41
22:DA:52:A:C5	22:DA:118:A:C2	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:61:C:OP1	22:DA:61:C:C6	2.72	0.41
22:DA:243:U:OP2	51:D3:7:ARG:NH1	2.54	0.41
22:DA:280:U:O2	22:DA:280:U:O4'	2.38	0.41
22:DA:300:A:N6	62:DA:3591:HOH:O	2.53	0.41
22:DA:637:A:OP2	33:DL:112:LEU:HD22	2.21	0.41
22:DA:646:U:OP2	22:DA:646:U:C6	2.74	0.41
22:DA:813:U:H2'	22:DA:814:C:H6	1.86	0.41
22:DA:965:C:H4'	22:DA:2273:A:H1'	2.03	0.41
22:DA:1079:C:N4	22:DA:1088:A:C2	2.88	0.41
22:DA:1168:G:C2	22:DA:1182:G:C2	3.08	0.41
22:DA:1204:A:N9	22:DA:1206:G:C6	2.88	0.41
22:DA:1388:G:O6	22:DA:1400:U:O4	2.38	0.41
22:DA:1413:A:C5	22:DA:1414:C:N4	2.89	0.41
22:DA:1605:C:H3'	22:DA:1606:C:H5'	2.01	0.41
22:DA:1709:U:H2'	22:DA:1710:G:H8	1.85	0.41
22:DA:1837:C:H2'	22:DA:1899:A:H61	1.85	0.41
22:DA:1914:C:O2'	22:DA:1915:U:H6	2.02	0.41
22:DA:2064:C:H1'	22:DA:2450:A:C6	2.56	0.41
22:DA:2232:C:H6	22:DA:2232:C:O5'	2.03	0.41
22:DA:2288:A:C4'	22:DA:2289:G:OP2	2.65	0.41
22:DA:2429:G:C8	33:DL:55:MET:HE3	2.56	0.41
22:DA:2533:U:H2'	22:DA:2534:A:O4'	2.21	0.41
22:DA:2642:G:H5'	31:DJ:80:HIS:NE2	2.35	0.41
22:DA:2683:C:H4'	25:DD:13:ARG:HH22	1.86	0.41
24:DC:71:ASP:HA	24:DC:117:SER:O	2.20	0.41
25:DD:106:LYS:HB3	25:DD:206:ALA:H	1.86	0.41
25:DD:193:VAL:HB	25:DD:194:PRO:HD2	2.02	0.41
25:DD:204:LYS:HD3	25:DD:205:PRO:O	2.20	0.41
26:DE:162:ARG:C	26:DE:164:LEU:H	2.27	0.41
58:DF:122:ASP:HB3	58:DF:123:GLY:H	1.59	0.41
58:DF:177:ARG:HD3	58:DF:178:LYS:N	2.35	0.41
29:DH:125:THR:HB	29:DH:146:VAL:HG11	2.02	0.41
31:DJ:81:ILE:HB	31:DJ:82:GLY:H	1.38	0.41
33:DL:99:ASN:O	33:DL:100:ILE:HB	2.21	0.41
35:DN:61:ALA:O	35:DN:65:LEU:HD13	2.21	0.41
37:DP:16:VAL:CG1	37:DP:19:PHE:HE2	2.34	0.41
38:DQ:65:ASN:HA	38:DQ:75:TYR:HB2	2.01	0.41
39:DR:38:VAL:HG22	39:DR:40:MET:H	1.86	0.41
39:DR:39:LEU:H	39:DR:39:LEU:HD23	1.85	0.41
39:DR:49:ILE:CG2	39:DR:54:VAL:H	2.34	0.41
40:DS:24:ILE:HG22	40:DS:35:ILE:HD11	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DS:36:LEU:C	40:DS:38:TYR:H	2.29	0.41
41:DT:19:LYS:HD3	41:DT:19:LYS:HA	1.72	0.41
43:DV:6:ALA:HB1	43:DV:40:ILE:HB	2.02	0.41
43:DV:30:ILE:HG13	43:DV:40:ILE:HD11	2.02	0.41
1:AA:88:U:O2'	1:AA:89:U:O5'	2.31	0.41
1:AA:135:C:H2'	1:AA:136:C:H5'	2.03	0.41
1:AA:300:A:H1'	1:AA:565:U:O2	2.21	0.41
1:AA:710:G:H5"	6:AF:53:LYS:NZ	2.36	0.41
1:AA:849:G:C6	1:AA:850:U:N3	2.88	0.41
1:AA:857:C:H2'	1:AA:858:G:O4'	2.21	0.41
1:AA:895:G:C6	1:AA:896:C:C4	3.09	0.41
1:AA:954:G:C6	1:AA:955:U:N3	2.88	0.41
1:AA:1101:A:N3	1:AA:1102:A:H1'	2.36	0.41
1:AA:1127:G:O2'	1:AA:1128:C:H5'	2.21	0.41
1:AA:1245:C:H2'	1:AA:1246:A:C8	2.55	0.41
1:AA:1281:C:H2'	1:AA:1282:C:C5	2.55	0.41
1:AA:1367:C:H5'	10:AJ:62:ARG:NH1	2.36	0.41
2:AB:95:TRP:CZ3	2:AB:97:GLY:HA2	2.56	0.41
3:AC:31:ASN:O	3:AC:35:ASP:HB2	2.20	0.41
4:AD:21:LYS:O	4:AD:22:SER:C	2.64	0.41
5:AE:10:LEU:HG	5:AE:11:GLN:N	2.36	0.41
5:AE:131:ASN:O	5:AE:135:VAL:HG12	2.21	0.41
6:AF:3:HIS:CB	6:AF:92:THR:HG23	2.51	0.41
6:AF:45:ARG:O	6:AF:56:LYS:HA	2.21	0.41
6:AF:81:ASN:OD1	6:AF:83:ALA:HB3	2.20	0.41
6:AF:86:ARG:CD	18:AR:63:TYR:O	2.63	0.41
7:AG:113:LYS:O	7:AG:118:ARG:HD2	2.21	0.41
8:AH:17:GLN:O	8:AH:18:ALA:C	2.63	0.41
8:AH:40:LYS:C	8:AH:42:GLU:H	2.28	0.41
8:AH:50:VAL:O	8:AH:50:VAL:HG13	2.21	0.41
9:AI:44:ARG:HG3	9:AI:45:MET:HE1	2.03	0.41
12:AL:53:ARG:HA	12:AL:63:THR:HA	2.02	0.41
14:AN:89:ARG:O	14:AN:91:GLU:HG2	2.20	0.41
18:AR:59:LYS:O	18:AR:60:ARG:C	2.63	0.41
22:BA:28:A:C5	22:BA:29:U:C5	3.08	0.41
22:BA:41:C:C2'	22:BA:42:A:O5'	2.69	0.41
22:BA:289:G:C5	22:BA:290:U:C4	3.08	0.41
22:BA:705:A:C2	22:BA:706:A:C4	3.09	0.41
22:BA:749:A:N3	22:BA:1618:A:H2'	2.35	0.41
22:BA:806:C:H2'	22:BA:807:U:H6	1.84	0.41
22:BA:864:G:C6	22:BA:865:C:N4	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:942:G:H2'	22:BA:943:A:H5'	2.02	0.41
22:BA:1045:C:O5'	22:BA:1046:A:H5'	2.21	0.41
22:BA:1426:G:C8	22:BA:1427:A:H2'	2.56	0.41
22:BA:1588:G:C2	22:BA:1589:U:C5	3.08	0.41
22:BA:1840:G:C2	22:BA:1841:U:C2	3.09	0.41
22:BA:1958:C:H2'	22:BA:1959:G:H5'	2.01	0.41
22:BA:2180:U:H2'	22:BA:2181:U:C6	2.55	0.41
22:BA:2365:G:OP1	44:BW:53:GLY:HA2	2.21	0.41
22:BA:2647:U:O2'	22:BA:2648:G:H5'	2.20	0.41
60:BA:3135:TEL:H143	60:BA:3135:TEL:C15	2.50	0.41
25:BD:15:PHE:N	37:BP:11:GLN:HE22	2.19	0.41
25:BD:137:SER:O	25:BD:138:LEU:HB2	2.20	0.41
27:BF:66:ILE:O	27:BF:66:ILE:HG13	2.21	0.41
27:BF:109:ARG:O	27:BF:136:ILE:HG22	2.21	0.41
29:BH:41:LYS:HA	29:BH:44:ILE:CG1	2.46	0.41
29:BH:86:ASP:CB	29:BH:89:LYS:HB3	2.51	0.41
31:BJ:40:HIS:CD2	31:BJ:40:HIS:N	2.89	0.41
36:BO:59:ALA:C	36:BO:61:GLN:H	2.29	0.41
40:BS:107:VAL:O	40:BS:107:VAL:CG1	2.68	0.41
46:BY:46:VAL:O	46:BY:50:VAL:HG23	2.20	0.41
53:CA:327:A:C4'	53:CA:328:C:OP2	2.64	0.41
53:CA:329:A:C8	53:CA:332:G:C6	3.08	0.41
53:CA:414:A:H2'	53:CA:415:A:O4'	2.21	0.41
53:CA:473:U:OP1	56:CP:76:LYS:CE	2.68	0.41
53:CA:543:U:O2'	53:CA:544:G:H5'	2.20	0.41
53:CA:663:A:C2'	53:CA:664:G:H5'	2.50	0.41
53:CA:978:A:H8	53:CA:978:A:O5'	2.04	0.41
53:CA:996:A:C2	53:CA:1046:A:H5'	2.56	0.41
2:CB:163:ILE:CG2	2:CB:203:ASP:HA	2.51	0.41
4:CD:131:ILE:O	4:CD:132:ALA:C	2.64	0.41
9:CI:30:ASN:OD1	9:CI:65:THR:HG23	2.20	0.41
11:CK:83:VAL:HB	11:CK:109:ILE:HG12	2.02	0.41
11:CK:117:HIS:O	11:CK:118:ASN:HB2	2.21	0.41
55:CM:57:ASP:C	55:CM:59:VAL:H	2.29	0.41
15:CO:88:ARG:HD3	15:CO:88:ARG:N	2.35	0.41
22:DA:50:U:OP1	22:DA:50:U:H6	2.01	0.41
22:DA:71:A:O4'	22:DA:73:A:C5	2.73	0.41
22:DA:121:G:H2'	22:DA:122:G:H8	1.86	0.41
22:DA:301:G:C3'	42:DU:81:ARG:HH12	2.33	0.41
22:DA:540:C:O2'	22:DA:541:A:H5'	2.21	0.41
22:DA:570:G:H2'	22:DA:571:U:H5'	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:770:G:H1'	22:DA:1379:U:C4	2.55	0.41
22:DA:855:G:C2	44:DW:23:LYS:HG2	2.56	0.41
22:DA:918:A:H5"	57:DB:97:C:O2'	2.21	0.41
22:DA:947:A:H2'	22:DA:948:C:C6	2.56	0.41
22:DA:959:A:C5	22:DA:960:A:C6	3.09	0.41
22:DA:1006:C:C2	22:DA:1138:G:C2	3.09	0.41
22:DA:1049:C:O2	22:DA:1113:U:H4'	2.21	0.41
22:DA:1208:C:N3	22:DA:1209:U:C5	2.89	0.41
22:DA:1299:G:H22	22:DA:1640:A:H5'	1.86	0.41
22:DA:1308:A:C6	22:DA:1309:G:C2	3.09	0.41
22:DA:1324:G:C2	22:DA:1328:A:C6	3.08	0.41
22:DA:1425:G:H8	22:DA:1425:G:O5'	2.04	0.41
22:DA:1667:G:OP1	32:DK:7:MET:N	2.42	0.41
22:DA:1833:C:C2	22:DA:1834:U:C6	3.09	0.41
22:DA:2333:A:H1'	22:DA:2335:A:N7	2.35	0.41
22:DA:2337:G:N3	22:DA:2337:G:C2'	2.81	0.41
22:DA:2530:A:H3'	28:DG:156:TYR:OH	2.21	0.41
22:DA:2706:A:N6	62:DA:3666:HOH:O	2.51	0.41
57:DB:114:C:O2'	57:DB:115:A:H5'	2.21	0.41
24:DC:211:ARG:C	24:DC:213:ARG:H	2.28	0.41
25:DD:74:GLU:O	25:DD:75:ALA:C	2.62	0.41
25:DD:101:PHE:HA	25:DD:104:VAL:HB	2.03	0.41
26:DE:195:GLN:O	26:DE:199:MET:HB2	2.21	0.41
30:DI:24:GLY:HA3	30:DI:25:PRO:HD3	1.92	0.41
33:DL:33:ARG:HD3	33:DL:40:SER:HA	2.02	0.41
34:DM:103:TYR:O	34:DM:104:GLU:HG3	2.21	0.41
35:DN:20:MET:C	35:DN:22:ARG:N	2.79	0.41
35:DN:110:MET:HE2	35:DN:110:MET:HA	2.03	0.41
38:DQ:12:ARG:HD2	38:DQ:12:ARG:H	1.85	0.41
39:DR:9:GLY:H	39:DR:10:LYS:HD2	1.86	0.41
40:DS:1:MET:N	40:DS:1:MET:HE2	2.36	0.41
42:DU:32:LYS:HE2	42:DU:65:GLN:CD	2.46	0.41
46:DY:52:ARG:HB3	46:DY:56:LEU:HD23	2.03	0.41
52:D4:1:MET:HB3	52:D4:34:LYS:HE3	2.02	0.41
1:AA:180:U:C2'	1:AA:181:A:O5'	2.69	0.41
1:AA:198:G:C4	1:AA:199:A:N7	2.88	0.41
1:AA:203:G:H4'	1:AA:466:A:H2	1.85	0.41
1:AA:450:G:N7	1:AA:481:G:O6	2.54	0.41
1:AA:462:G:H5"	1:AA:463:U:OP2	2.21	0.41
1:AA:675:A:OP1	18:AR:70:THR:HG21	2.21	0.41
1:AA:895:G:C5	1:AA:896:C:C4	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:938:A:C6	1:AA:939:G:C5	3.09	0.41
1:AA:973:G:O2'	14:AN:68:ARG:NH2	2.54	0.41
1:AA:1118:U:O4'	1:AA:1179:A:H1'	2.21	0.41
1:AA:1229:A:OP2	13:AM:112:ARG:CD	2.68	0.41
1:AA:1248:A:C2	9:AI:71:ILE:HD11	2.56	0.41
1:AA:1277:C:H2'	1:AA:1278:G:H5"	2.03	0.41
1:AA:1378:C:N4	1:AA:1379:G:C4	2.89	0.41
1:AA:1452:C:O4'	1:AA:1453:G:C2	2.74	0.41
1:AA:1480:A:C6	1:AA:1481:U:C4	3.09	0.41
1:AA:1492:A:H2'	1:AA:1493:A:H5"	2.03	0.41
2:AB:105:THR:HG22	2:AB:105:THR:O	2.20	0.41
2:AB:134:LEU:HA	2:AB:137:THR:HG1	1.85	0.41
3:AC:128:MET:HB2	3:AC:128:MET:HE2	1.64	0.41
4:AD:84:ASN:HB3	4:AD:87:GLU:HG2	2.02	0.41
4:AD:97:LEU:HD13	4:AD:129:VAL:HG11	2.03	0.41
5:AE:10:LEU:HD23	5:AE:10:LEU:H	1.85	0.41
5:AE:94:PHE:CD1	5:AE:94:PHE:C	2.96	0.41
5:AE:155:LYS:HB2	8:AH:70:VAL:HG13	2.02	0.41
7:AG:55:LYS:HE3	7:AG:55:LYS:HB3	1.88	0.41
7:AG:83:THR:CG2	7:AG:85:GLN:HB3	2.50	0.41
8:AH:11:THR:HA	8:AH:14:ARG:HB3	2.03	0.41
8:AH:104:SER:HB2	8:AH:125:ILE:CD1	2.43	0.41
10:AJ:7:ARG:O	10:AJ:100:ILE:HA	2.20	0.41
10:AJ:36:VAL:HA	10:AJ:76:ILE:HA	2.03	0.41
10:AJ:49:PHE:CE1	14:AN:76:PHE:HZ	2.39	0.41
11:AK:21:HIS:CD2	11:AK:34:THR:HG22	2.56	0.41
11:AK:85:VAL:CG1	11:AK:92:ARG:HG3	2.51	0.41
13:AM:22:TYR:CE2	13:AM:69:ARG:HG2	2.56	0.41
17:AQ:35:LYS:HG2	17:AQ:36:PHE:N	2.36	0.41
20:AT:74:HIS:O	20:AT:75:LYS:C	2.64	0.41
22:BA:69:C:O2'	22:BA:70:G:H5'	2.21	0.41
22:BA:384:A:H2'	22:BA:385:C:H5'	2.01	0.41
22:BA:434:U:H4'	22:BA:435:C:OP1	2.20	0.41
22:BA:435:C:C2'	22:BA:436:C:H5'	2.50	0.41
22:BA:496:G:C5	22:BA:497:A:C8	3.09	0.41
22:BA:580:U:H4'	38:BQ:30:VAL:HG11	2.01	0.41
22:BA:581:C:OP1	38:BQ:32:ARG:HB2	2.20	0.41
22:BA:616:A:H4'	26:BE:101:TYR:CZ	2.56	0.41
22:BA:700:G:H2'	22:BA:701:G:O4'	2.21	0.41
22:BA:723:C:H2'	22:BA:724:U:O4'	2.20	0.41
22:BA:783:A:C8	22:BA:784:G:H4'	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:846:U:H2'	22:BA:847:U:OP2	2.20	0.41
22:BA:1174:U:O2	22:BA:1174:U:O4'	2.39	0.41
22:BA:1253:A:C5	62:BA:3329:HOH:O	2.74	0.41
22:BA:1365:A:N6	22:BA:1366:A:C6	2.89	0.41
22:BA:1440:U:H2'	22:BA:1441:G:O4'	2.21	0.41
22:BA:1528:A:H2'	22:BA:1529:G:O4'	2.21	0.41
22:BA:1537:G:HO2'	22:BA:1538:G:P	2.41	0.41
22:BA:1577:C:H2'	22:BA:1578:U:O4'	2.20	0.41
22:BA:1588:G:C2	22:BA:1589:U:C6	3.09	0.41
22:BA:1686:C:H6	22:BA:1686:C:O5'	2.04	0.41
22:BA:2091:C:H4'	45:BX:55:MET:SD	2.61	0.41
22:BA:2092:U:O2	22:BA:2225:A:O2'	2.39	0.41
22:BA:2193:G:H2'	22:BA:2194:U:H6	1.86	0.41
22:BA:2281:A:C2'	22:BA:2282:G:H5'	2.50	0.41
22:BA:2523:G:O2'	22:BA:2524:G:H5'	2.21	0.41
22:BA:2571:U:H2'	22:BA:2572:A:OP1	2.21	0.41
22:BA:2572:A:OP1	22:BA:2574:G:H4'	2.20	0.41
22:BA:2575:C:H5"	22:BA:2576:G:OP2	2.21	0.41
22:BA:2868:A:C2	22:BA:2869:G:C4	3.09	0.41
22:BA:2870:C:O2'	22:BA:2871:U:H5'	2.21	0.41
23:BB:17:C:H2'	23:BB:18:G:O4'	2.21	0.41
23:BB:46:A:C4	23:BB:47:C:C5	3.09	0.41
24:BC:76:VAL:O	24:BC:77:VAL:C	2.63	0.41
24:BC:141:HIS:CB	24:BC:190:THR:HB	2.48	0.41
25:BD:22:ILE:HA	25:BD:23:PRO:HD3	1.92	0.41
25:BD:39:ASP:O	25:BD:40:LEU:C	2.64	0.41
25:BD:47:ALA:HA	25:BD:84:LEU:HG	2.03	0.41
25:BD:97:SER:OG	25:BD:99:GLU:HB3	2.21	0.41
25:BD:170:VAL:HG22	25:BD:194:PRO:HG3	2.03	0.41
27:BF:8:LYS:HB2	27:BF:9:ASP:H	1.62	0.41
28:BG:70:LEU:HD23	28:BG:70:LEU:HA	1.77	0.41
28:BG:136:ASP:OD1	28:BG:136:ASP:C	2.63	0.41
29:BH:31:VAL:HG13	29:BH:36:ALA:C	2.46	0.41
29:BH:52:ALA:C	29:BH:54:LEU:H	2.28	0.41
32:BK:11:ALA:HB1	32:BK:100:PHE:O	2.21	0.41
32:BK:114:LYS:O	32:BK:118:LEU:HD13	2.21	0.41
33:BL:23:ILE:HG22	33:BL:24:GLY:N	2.34	0.41
33:BL:62:PRO:HG2	51:B3:24:LYS:HB3	2.03	0.41
35:BN:38:LEU:N	35:BN:39:PRO:CD	2.83	0.41
35:BN:96:ARG:HD2	35:BN:114:GLU:OE1	2.21	0.41
36:BO:55:GLU:OE1	36:BO:58:ILE:CD1	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BP:53:GLY:C	37:BP:55:HIS:N	2.79	0.41
37:BP:87:ARG:HG2	37:BP:87:ARG:NH1	2.35	0.41
38:BQ:30:VAL:O	38:BQ:31:TYR:C	2.64	0.41
38:BQ:65:ASN:O	38:BQ:66:ALA:C	2.62	0.41
38:BQ:94:LEU:C	38:BQ:96:ASP:N	2.77	0.41
39:BR:37:GLU:CD	39:BR:37:GLU:N	2.77	0.41
39:BR:76:LYS:O	39:BR:84:ARG:HA	2.21	0.41
41:BT:2:ILE:HB	41:BT:3:ARG:NH1	2.36	0.41
41:BT:27:SER:C	41:BT:28:ASN:CG	2.88	0.41
41:BT:31:VAL:HA	41:BT:84:TYR:H	1.84	0.41
42:BU:33:VAL:O	42:BU:64:ILE:HG22	2.20	0.41
43:BV:70:ILE:HD12	43:BV:93:ARG:NH2	2.36	0.41
45:BX:29:LEU:HB2	45:BX:30:PRO:CD	2.51	0.41
48:B0:33:SER:OG	48:B0:35:GLU:HG3	2.21	0.41
51:B3:9:ALA:HB3	51:B3:61:LEU:HD21	2.02	0.41
51:B3:28:LEU:HD12	51:B3:28:LEU:HA	1.89	0.41
53:CA:79:G:H8	53:CA:79:G:O5'	2.04	0.41
53:CA:136:C:H1'	56:CP:1:MET:HE1	2.02	0.41
53:CA:257:G:C2	53:CA:270:A:C6	3.08	0.41
53:CA:380:G:N2	53:CA:382:A:H3'	2.36	0.41
53:CA:444:G:C2	53:CA:445:G:C4	3.09	0.41
53:CA:599:C:H4'	8:CH:121:GLY:CA	2.51	0.41
53:CA:631:C:O3'	53:CA:632:U:H6	2.03	0.41
53:CA:654:G:C6	53:CA:753:A:C5	3.09	0.41
53:CA:775:G:H2'	53:CA:776:G:H5'	2.03	0.41
53:CA:817:C:O4'	53:CA:819:A:H4'	2.20	0.41
53:CA:1026:G:H1	53:CA:1036:A:H61	1.69	0.41
53:CA:1126:U:O4'	53:CA:1281:C:C2	2.74	0.41
53:CA:1134:G:C2	53:CA:1141:C:N3	2.89	0.41
53:CA:1438:G:C2	53:CA:1464:U:O2	2.74	0.41
3:CC:128:MET:O	3:CC:129:PHE:C	2.64	0.41
4:CD:20:LEU:O	4:CD:21:LYS:C	2.63	0.41
4:CD:77:GLU:HG3	4:CD:81:LEU:CD1	2.44	0.41
4:CD:100:VAL:O	4:CD:101:VAL:C	2.64	0.41
4:CD:148:ALA:HB1	4:CD:151:GLN:HE22	1.85	0.41
4:CD:165:GLU:O	4:CD:166:LYS:HB3	2.20	0.41
5:CE:157:GLY:HA3	8:CH:63:LYS:HE3	2.03	0.41
6:CF:3:HIS:CD2	6:CF:65:GLU:HG2	2.44	0.41
54:CG:112:ASP:HB3	54:CG:117:LEU:CB	2.50	0.41
9:CI:18:VAL:HG21	9:CI:81:GLY:HA3	2.03	0.41
9:CI:37:TYR:HD2	9:CI:37:TYR:N	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:83:THR:C	9:CI:85:ALA:H	2.29	0.41
9:CI:83:THR:C	9:CI:85:ALA:N	2.79	0.41
10:CJ:76:ILE:HG22	10:CJ:77:VAL:N	2.35	0.41
11:CK:34:THR:OG1	11:CK:39:ASN:C	2.64	0.41
12:CL:78:VAL:HG23	12:CL:101:LEU:HD12	2.03	0.41
12:CL:113:ARG:HB3	12:CL:118:VAL:HB	2.02	0.41
55:CM:95:PRO:HG2	55:CM:99:GLN:HB3	2.03	0.41
56:CP:46:LYS:NZ	56:CP:46:LYS:H	2.18	0.41
18:CR:70:THR:OG1	18:CR:71:ASP:N	2.52	0.41
19:CS:36:ARG:O	19:CS:36:ARG:HG2	2.20	0.41
22:DA:69:C:H2'	22:DA:70:G:C8	2.56	0.41
22:DA:75:G:O2'	22:DA:76:C:C6	2.63	0.41
22:DA:242:G:P	51:D3:2:LYS:HZ1	2.43	0.41
22:DA:287:G:N1	22:DA:354:A:C6	2.88	0.41
22:DA:371:A:N6	22:DA:402:A:OP2	2.45	0.41
22:DA:425:G:H2'	22:DA:426:C:C6	2.56	0.41
22:DA:476:G:O2'	22:DA:477:A:O5'	2.39	0.41
22:DA:616:A:O2'	22:DA:617:G:C8	2.44	0.41
22:DA:628:G:O2'	22:DA:629:G:H8	2.04	0.41
22:DA:644:A:H61	22:DA:2349:G:H21	1.69	0.41
22:DA:785:G:O2'	22:DA:1779:U:C5'	2.69	0.41
22:DA:813:U:C2	22:DA:1195:G:N2	2.89	0.41
22:DA:851:C:O4'	47:DZ:46:MET:HG2	2.21	0.41
22:DA:863:A:C2	22:DA:864:G:C4	3.09	0.41
22:DA:919:U:H2'	22:DA:920:A:H8	1.81	0.41
22:DA:962:G:O2'	22:DA:963:U:H6	2.03	0.41
22:DA:974:G:H1'	22:DA:975:A:N7	2.36	0.41
22:DA:1057:A:C6	22:DA:1058:U:C4	3.08	0.41
22:DA:1076:C:O2'	22:DA:1077:A:C8	2.74	0.41
22:DA:1091:G:N2	22:DA:1101:U:C2	2.89	0.41
22:DA:1204:A:C8	22:DA:1206:G:O6	2.74	0.41
22:DA:1245:G:H4'	26:DE:33:VAL:CG1	2.47	0.41
22:DA:1286:A:C8	22:DA:1289:C:N4	2.88	0.41
22:DA:1286:A:N9	22:DA:1289:C:N4	2.68	0.41
22:DA:1394:U:C4	22:DA:1395:A:N6	2.89	0.41
22:DA:1400:U:HO2'	22:DA:1401:G:C1'	2.30	0.41
22:DA:1417:C:O2'	22:DA:1418:G:C5'	2.69	0.41
22:DA:1555:G:O2'	22:DA:1556:C:H5'	2.20	0.41
22:DA:1569:A:N1	22:DA:1570:A:C2	2.89	0.41
22:DA:1659:G:C4	22:DA:2002:G:N2	2.89	0.41
22:DA:1716:U:N3	22:DA:1745:A:N6	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1738:G:O2'	22:DA:1739:A:OP2	2.36	0.41
22:DA:1936:A:C2	22:DA:1945:G:C4	3.09	0.41
22:DA:1973:G:O2'	22:DA:1974:C:H5'	2.20	0.41
22:DA:2010:G:C6	22:DA:2011:U:C4	3.09	0.41
22:DA:2064:C:O3'	22:DA:2251:G:N2	2.54	0.41
22:DA:2249:U:O5'	22:DA:2249:U:H6	2.04	0.41
22:DA:2330:G:C6	22:DA:2386:A:N6	2.89	0.41
22:DA:2330:G:H21	44:DW:38:ARG:HA	1.86	0.41
22:DA:2353:G:N3	44:DW:30:VAL:HG13	2.36	0.41
22:DA:2526:G:C5	22:DA:2527:C:C5	3.09	0.41
22:DA:2625:G:C5'	22:DA:2626:C:OP2	2.68	0.41
22:DA:2654:A:C4'	22:DA:2655:G:OP1	2.68	0.41
22:DA:2765:A:H3'	22:DA:2766:A:H5'	2.02	0.41
22:DA:2805:C:H2'	22:DA:2806:C:O4'	2.21	0.41
22:DA:2837:A:N6	22:DA:2882:A:N6	2.69	0.41
57:DB:53:A:N3	57:DB:53:A:H2'	2.36	0.41
57:DB:70:C:O2'	57:DB:71:C:H5'	2.21	0.41
24:DC:115:ILE:HB	24:DC:126:GLY:O	2.21	0.41
25:DD:15:PHE:CE2	37:DP:77:SER:HA	2.56	0.41
25:DD:137:SER:CB	25:DD:138:LEU:HD22	2.44	0.41
26:DE:5:LEU:HD23	26:DE:120:VAL:HG13	2.02	0.41
26:DE:111:GLU:CB	26:DE:114:ARG:HH21	2.33	0.41
58:DF:67:THR:HG21	58:DF:87:LYS:HG2	2.03	0.41
58:DF:135:ILE:HD12	58:DF:135:ILE:N	2.36	0.41
28:DG:44:HIS:CE1	28:DG:46:ASP:O	2.74	0.41
28:DG:94:ARG:HG2	28:DG:104:LEU:HA	2.03	0.41
28:DG:169:ARG:O	28:DG:170:THR:HB	2.21	0.41
29:DH:78:VAL:HG11	29:DH:144:VAL:HG12	2.02	0.41
29:DH:84:ALA:HB3	29:DH:148:ALA:HA	2.02	0.41
30:DI:29:GLN:O	30:DI:30:GLN:HB3	2.20	0.41
30:DI:76:ALA:HB1	30:DI:135:MET:HE1	2.02	0.41
30:DI:76:ALA:O	30:DI:135:MET:HE1	2.20	0.41
35:DN:82:GLU:O	35:DN:86:ARG:HG3	2.21	0.41
37:DP:52:ARG:HA	37:DP:52:ARG:HD3	1.75	0.41
37:DP:62:LYS:HD3	37:DP:64:SER:HB2	2.03	0.41
38:DQ:40:LYS:O	38:DQ:44:TYR:CD2	2.74	0.41
40:DS:19:LEU:HD12	40:DS:19:LEU:HA	1.92	0.41
42:DU:64:ILE:O	42:DU:65:GLN:O	2.39	0.41
43:DV:51:GLN:HA	43:DV:56:PHE:CD2	2.56	0.41
43:DV:56:PHE:C	43:DV:56:PHE:CD1	2.99	0.41
43:DV:61:LEU:H	43:DV:61:LEU:CD2	2.18	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DW:18:LYS:N	44:DW:36:ILE:HG12	2.31	0.41
46:DY:31:GLN:C	46:DY:33:ALA:N	2.74	0.41
49:D1:37:LYS:O	49:D1:48:TYR:CD2	2.74	0.41
49:D1:38:PHE:CD2	49:D1:39:ASP:N	2.89	0.41
50:D2:43:THR:O	50:D2:44:VAL:C	2.64	0.41
52:D4:7:VAL:HG22	52:D4:25:VAL:HG23	2.02	0.41
1:AA:198:G:C6	1:AA:220:G:N3	2.88	0.41
1:AA:263:A:P	20:AT:73:ARG:NH1	2.94	0.41
1:AA:325:A:N6	1:AA:326:G:N1	2.69	0.41
1:AA:425:G:C2'	1:AA:426:U:H5'	2.51	0.41
1:AA:785:G:O2'	1:AA:786:G:H5'	2.20	0.41
1:AA:961:U:OP2	1:AA:1223:C:H1'	2.20	0.41
1:AA:1040:U:H2'	1:AA:1041:G:C8	2.55	0.41
1:AA:1190:G:OP1	3:AC:4:VAL:HG12	2.21	0.41
1:AA:1328:C:OP1	13:AM:27:THR:OG1	2.33	0.41
2:AB:219:THR:HG23	2:AB:220:VAL:H	1.86	0.41
3:AC:21:TRP:HB3	3:AC:58:ARG:HG2	2.03	0.41
5:AE:33:THR:HG21	5:AE:49:TYR:OH	2.20	0.41
5:AE:147:ASN:OD1	5:AE:147:ASN:N	2.54	0.41
6:AF:75:GLU:O	6:AF:78:PHE:HB2	2.21	0.41
13:AM:44:ILE:HD12	13:AM:44:ILE:N	2.35	0.41
16:AP:75:ILE:C	16:AP:77:GLU:H	2.27	0.41
17:AQ:22:VAL:O	17:AQ:42:LYS:HA	2.21	0.41
19:AS:30:LEU:O	19:AS:49:ALA:HB3	2.21	0.41
22:BA:152:A:H2'	22:BA:153:U:C6	2.56	0.41
22:BA:454:A:H4'	22:BA:455:C:OP2	2.21	0.41
22:BA:1016:G:H2'	22:BA:1017:G:O5'	2.20	0.41
22:BA:1059:G:C6	22:BA:1060:U:N3	2.89	0.41
22:BA:1104:C:H2'	22:BA:1105:U:H6	1.86	0.41
22:BA:1166:G:C2'	22:BA:1167:C:H5'	2.51	0.41
22:BA:1179:G:N7	22:BA:1180:U:H1'	2.30	0.41
22:BA:1206:G:C5	22:BA:1207:C:C4	3.09	0.41
22:BA:1496:A:H2'	22:BA:1498:C:N4	2.35	0.41
22:BA:1730:C:H6	22:BA:1730:C:H2'	1.72	0.41
22:BA:1738:G:O2'	22:BA:1739:A:O5'	2.36	0.41
22:BA:1927:A:H2'	22:BA:1928:A:C8	2.56	0.41
22:BA:1966:A:C2	22:BA:2593:U:O4'	2.73	0.41
22:BA:1979:U:H2'	22:BA:1980:G:H5'	2.03	0.41
22:BA:1998:A:H2'	22:BA:1999:C:C6	2.56	0.41
22:BA:2150:C:C5	22:BA:2151:U:O4	2.74	0.41
22:BA:2315:G:O2'	22:BA:2316:G:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2364:C:O2'	22:BA:2365:G:H5'	2.21	0.41
22:BA:2578:G:C5	25:BD:145:SER:HB2	2.56	0.41
23:BB:114:C:O4'	36:BO:47:VAL:HG22	2.21	0.41
26:BE:145:ASP:OD1	26:BE:183:PHE:HD2	2.04	0.41
28:BG:72:ASN:C	28:BG:72:ASN:ND2	2.79	0.41
30:BI:90:GLY:C	30:BI:92:PRO:HD3	2.46	0.41
33:BL:80:SER:HB3	33:BL:115:GLU:OE2	2.21	0.41
34:BM:73:ILE:HB	34:BM:91:TYR:O	2.21	0.41
35:BN:31:HIS:O	35:BN:33:ILE:N	2.52	0.41
39:BR:55:ASP:CG	39:BR:56:GLY:H	2.28	0.41
42:BU:38:ILE:CG2	42:BU:39:ASN:N	2.65	0.41
42:BU:94:PHE:O	42:BU:94:PHE:CG	2.73	0.41
44:BW:30:VAL:HA	44:BW:60:ALA:O	2.20	0.41
44:BW:37:VAL:CG1	44:BW:55:ASP:HB2	2.50	0.41
51:B3:30:HIS:ND1	51:B3:31:ILE:HG22	2.36	0.41
53:CA:121:U:H3'	53:CA:121:U:P	2.61	0.41
53:CA:251:G:C2	53:CA:266:G:O6	2.74	0.41
53:CA:372:C:C4'	53:CA:373:A:OP2	2.67	0.41
53:CA:487:A:H2'	53:CA:488:C:O4'	2.20	0.41
53:CA:654:G:H2'	53:CA:655:A:O4'	2.21	0.41
53:CA:892:A:C5	53:CA:893:C:C5	3.09	0.41
53:CA:980:C:O3'	14:CN:12:ARG:NH2	2.54	0.41
53:CA:994:A:O2'	53:CA:995:C:C6	2.67	0.41
53:CA:1055:A:C8	53:CA:1206:G:N2	2.89	0.41
53:CA:1125:U:C6	10:CJ:40:ILE:HG12	2.56	0.41
53:CA:1129:C:C5	53:CA:1139:G:C5	3.09	0.41
53:CA:1149:C:N4	53:CA:1150:A:N6	2.68	0.41
53:CA:1394:A:H4'	53:CA:1395:C:OP2	2.20	0.41
2:CB:103:TRP:CD1	2:CB:107:ARG:HB3	2.55	0.41
4:CD:102:TYR:C	4:CD:104:MET:N	2.78	0.41
5:CE:39:GLY:HA2	5:CE:44:ARG:O	2.21	0.41
5:CE:57:ALA:O	5:CE:61:LYS:HG3	2.20	0.41
54:CG:30:MET:HB3	54:CG:30:MET:HE2	1.72	0.41
8:CH:110:MET:HE1	8:CH:120:LEU:HD12	2.03	0.41
9:CI:51:LEU:HB2	9:CI:56:MET:HB3	2.03	0.41
9:CI:91:GLU:O	9:CI:91:GLU:HG3	2.21	0.41
11:CK:28:ASN:CG	11:CK:56:LYS:HE2	2.46	0.41
55:CM:92:ARG:HD2	19:CS:79:TYR:OH	2.21	0.41
55:CM:97:ARG:HG2	55:CM:97:ARG:O	2.21	0.41
14:CN:60:ARG:NH2	14:CN:70:HIS:HB3	2.35	0.41
22:DA:58:G:N3	22:DA:73:A:C2	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:99:U:C5	42:DU:6:ARG:NH2	2.89	0.41
22:DA:121:G:N3	22:DA:131:A:C2	2.89	0.41
22:DA:217:A:H2'	22:DA:218:A:C8	2.56	0.41
22:DA:223:A:H61	22:DA:422:A:N6	2.18	0.41
22:DA:288:U:H2'	22:DA:289:G:C8	2.55	0.41
22:DA:291:G:N1	22:DA:350:G:C5	2.89	0.41
22:DA:295:G:N2	22:DA:296:U:C6	2.89	0.41
22:DA:308:G:N1	22:DA:309:A:C2	2.88	0.41
22:DA:333:G:O2'	22:DA:334:C:O5'	2.39	0.41
22:DA:352:A:C2	22:DA:353:C:H1'	2.56	0.41
22:DA:576:U:O2'	22:DA:2502:G:C6	2.74	0.41
22:DA:954:G:C5	22:DA:955:U:C5	3.09	0.41
22:DA:1019:U:C4	22:DA:1020:A:N6	2.89	0.41
22:DA:1071:G:O2'	22:DA:1072:C:O5'	2.39	0.41
22:DA:1082:U:H4'	30:DI:117:THR:O	2.21	0.41
22:DA:1269:A:H2'	22:DA:1270:C:C6	2.56	0.41
22:DA:1358:G:N2	22:DA:1374:G:C6	2.89	0.41
22:DA:1601:G:C5	22:DA:1602:U:C4	3.09	0.41
22:DA:1655:A:H4'	25:DD:118:PHE:CD1	2.56	0.41
22:DA:1731:G:C2	22:DA:1733:G:C5	3.08	0.41
22:DA:1973:G:H2'	22:DA:1974:C:H6	1.86	0.41
22:DA:2024:G:H2'	22:DA:2025:C:O4'	2.21	0.41
22:DA:2201:G:C5	22:DA:2202:U:C5	3.09	0.41
22:DA:2314:A:H2'	22:DA:2315:G:H8	1.85	0.41
22:DA:2314:A:H2'	22:DA:2315:G:C8	2.56	0.41
22:DA:2337:G:C2	22:DA:2338:C:C2	3.09	0.41
22:DA:2347:C:H2'	22:DA:2348:U:C5	2.56	0.41
22:DA:2443:C:H2'	22:DA:2444:G:C8	2.56	0.41
22:DA:2504:U:O2'	22:DA:2572:A:N1	2.49	0.41
22:DA:2540:C:H2'	22:DA:2541:A:C8	2.55	0.41
22:DA:2548:U:H2'	22:DA:2549:G:O4'	2.21	0.41
57:DB:16:G:C6	57:DB:69:G:C5	3.09	0.41
57:DB:81:G:C5	57:DB:82:U:C4	3.09	0.41
57:DB:98:G:H1	43:DV:14:LYS:HB2	1.85	0.41
24:DC:102:TYR:HD1	24:DC:102:TYR:HA	1.81	0.41
24:DC:213:ARG:HB3	24:DC:214:GLY:H	1.52	0.41
25:DD:113:SER:OG	25:DD:114:LYS:N	2.54	0.41
58:DF:30:VAL:HG12	58:DF:157:THR:HG21	2.03	0.41
58:DF:110:ILE:HB	58:DF:113:PHE:HB2	2.03	0.41
58:DF:128:SER:HA	58:DF:153:ILE:O	2.21	0.41
28:DG:48:THR:O	28:DG:49:LEU:CB	2.65	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:4:ILE:HG22	29:DH:5:LEU:N	2.36	0.41
30:DI:78:LEU:C	30:DI:80:LYS:H	2.29	0.41
33:DL:29:LYS:C	33:DL:30:THR:HG23	2.45	0.41
34:DM:38:ARG:CZ	34:DM:38:ARG:HB3	2.51	0.41
36:DO:56:LYS:HD3	36:DO:56:LYS:O	2.21	0.41
37:DP:21:PRO:HA	37:DP:46:VAL:CG1	2.51	0.41
42:DU:48:VAL:C	42:DU:50:ALA:H	2.29	0.41
42:DU:48:VAL:HA	42:DU:49:PRO:HD3	1.89	0.41
50:D2:24:THR:O	50:D2:28:ARG:HB3	2.21	0.41
50:D2:24:THR:HG23	50:D2:28:ARG:H	1.86	0.41
50:D2:31:LEU:C	50:D2:34:ARG:HB2	2.45	0.41
52:D4:37:GLN:HG2	52:D4:38:GLY:N	2.35	0.41
1:AA:189:A:H2'	1:AA:190:A:C8	2.56	0.40
1:AA:668:G:O2'	1:AA:669:G:H5'	2.21	0.40
1:AA:807:A:C8	1:AA:808:C:H5	2.39	0.40
1:AA:1062:U:H2'	1:AA:1063:C:C5	2.56	0.40
1:AA:1216:A:C6	1:AA:1217:C:N4	2.89	0.40
1:AA:1261:A:N1	1:AA:1274:A:N3	2.68	0.40
1:AA:1533:C:C3'	1:AA:1534:A:H5"	2.47	0.40
2:AB:49:PHE:CD1	2:AB:53:LEU:HD23	2.56	0.40
2:AB:100:LEU:HD12	2:AB:178:LEU:CD2	2.50	0.40
2:AB:103:TRP:CZ3	2:AB:107:ARG:HD3	2.56	0.40
2:AB:168:GLU:O	2:AB:169:HIS:C	2.63	0.40
4:AD:122:ILE:HD13	4:AD:122:ILE:N	2.37	0.40
5:AE:97:PRO:HB2	5:AE:98:ALA:H	1.62	0.40
6:AF:99:ALA:O	6:AF:100:SER:CB	2.68	0.40
8:AH:48:PHE:CD2	8:AH:49:LYS:N	2.88	0.40
11:AK:90:PRO:C	11:AK:92:ARG:H	2.28	0.40
11:AK:125:LYS:O	21:AU:33:ARG:NH1	2.53	0.40
16:AP:46:LYS:HD3	16:AP:46:LYS:C	2.47	0.40
19:AS:79:TYR:O	19:AS:80:ARG:HB3	2.21	0.40
20:AT:34:VAL:HG11	20:AT:78:LEU:HD22	2.02	0.40
22:BA:28:A:H2'	22:BA:29:U:O4'	2.21	0.40
22:BA:156:A:C6	22:BA:157:C:C4	3.08	0.40
22:BA:520:G:H2'	22:BA:521:U:H6	1.83	0.40
22:BA:522:A:N6	22:BA:523:C:N4	2.69	0.40
22:BA:582:A:H2'	22:BA:583:G:C8	2.56	0.40
22:BA:616:A:H2'	22:BA:617:G:O4'	2.21	0.40
22:BA:745:G:C3'	22:BA:746:U:H5'	2.51	0.40
22:BA:879:G:H2'	22:BA:880:G:H8	1.82	0.40
22:BA:1243:C:H1'	33:BL:4:ASN:O	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1455:G:OP2	62:BA:3411:HOH:O	2.22	0.40
22:BA:1508:A:O2'	22:BA:1509:A:P	2.79	0.40
22:BA:2021:C:OP1	48:B0:8:THR:HG21	2.22	0.40
22:BA:2050:C:H1'	25:BD:161:MET:HE2	2.02	0.40
22:BA:2386:A:H2'	22:BA:2387:U:C6	2.56	0.40
26:BE:119:ILE:O	26:BE:119:ILE:CG1	2.69	0.40
32:BK:71:ARG:HB2	32:BK:72:PRO:CD	2.36	0.40
37:BP:13:LYS:HE3	37:BP:76:HIS:CA	2.51	0.40
37:BP:96:LEU:HD12	37:BP:96:LEU:HA	1.68	0.40
38:BQ:63:ARG:HH22	38:BQ:96:ASP:N	2.19	0.40
38:BQ:91:ARG:HB2	38:BQ:94:LEU:HB2	2.04	0.40
38:BQ:94:LEU:HA	38:BQ:94:LEU:HD22	1.77	0.40
43:BV:38:LEU:HD12	43:BV:38:LEU:HA	1.94	0.40
44:BW:63:ASP:OD1	44:BW:63:ASP:N	2.53	0.40
44:BW:67:LYS:HG3	44:BW:69:GLU:HG3	2.02	0.40
53:CA:71:A:O2'	53:CA:72:A:O4'	2.22	0.40
53:CA:423:G:N3	53:CA:423:G:C2'	2.83	0.40
53:CA:599:C:O3'	8:CH:121:GLY:HA3	2.21	0.40
53:CA:756:C:O2'	53:CA:757:U:H5'	2.21	0.40
53:CA:985:C:C4	53:CA:986:U:C4	3.08	0.40
53:CA:1084:G:OP1	53:CA:1086:U:C2	2.75	0.40
53:CA:1343:G:H2'	53:CA:1344:C:C6	2.55	0.40
2:CB:80:LYS:O	2:CB:84:LEU:N	2.45	0.40
3:CC:173:PRO:C	3:CC:175:HIS:H	2.29	0.40
4:CD:146:GLU:CD	4:CD:146:GLU:N	2.79	0.40
6:CF:26:THR:C	6:CF:28:ALA:H	2.27	0.40
8:CH:29:SER:O	8:CH:31:LEU:N	2.55	0.40
56:CP:75:ILE:HG23	56:CP:80:LYS:HD2	2.02	0.40
22:DA:16:C:H2'	22:DA:17:G:C8	2.56	0.40
22:DA:85:G:OP2	42:DU:27:VAL:HG11	2.20	0.40
22:DA:191:A:N6	22:DA:203:A:H2'	2.36	0.40
22:DA:203:A:OP2	22:DA:204:A:O2'	2.32	0.40
22:DA:444:C:O2'	22:DA:445:C:P	2.79	0.40
22:DA:625:G:H1'	22:DA:656:G:HO2'	1.86	0.40
22:DA:717:C:N4	22:DA:718:A:C8	2.89	0.40
22:DA:857:G:H1'	44:DW:19:ARG:CZ	2.51	0.40
22:DA:1071:G:OP1	22:DA:1071:G:H8	2.04	0.40
22:DA:1248:G:C5	26:DE:46:GLN:NE2	2.89	0.40
22:DA:1263:U:O2'	48:D0:7:PRO:HD2	2.21	0.40
22:DA:1300:G:H5'	22:DA:1301:A:C2	2.56	0.40
22:DA:1387:A:O2'	22:DA:1388:G:OP2	2.30	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1392:A:H61	41:DT:18:GLU:HG3	1.85	0.40
22:DA:1394:U:C6	22:DA:1394:U:C3'	3.04	0.40
22:DA:1395:A:C4	22:DA:1398:C:C5	3.09	0.40
22:DA:1404:C:O2'	22:DA:1405:U:H5'	2.21	0.40
22:DA:1417:C:O5'	22:DA:1587:G:N2	2.54	0.40
22:DA:1492:G:C5	22:DA:1496:A:N6	2.89	0.40
22:DA:1593:A:C6	22:DA:1594:U:N3	2.89	0.40
22:DA:1723:G:H2'	22:DA:1724:G:C8	2.46	0.40
22:DA:1944:U:C4	22:DA:1955:U:C5	3.09	0.40
22:DA:2259:U:C4'	22:DA:2427:C:H2'	2.50	0.40
22:DA:2373:G:O2'	22:DA:2374:C:H5'	2.21	0.40
22:DA:2396:G:C2	22:DA:2421:G:C2	3.09	0.40
57:DB:7:G:N2	36:DO:47:VAL:HG21	2.36	0.40
24:DC:29:PHE:C	24:DC:31:PRO:HD2	2.46	0.40
25:DD:129:THR:HG22	25:DD:130:GLN:O	2.21	0.40
25:DD:183:GLU:H	25:DD:183:GLU:CD	2.29	0.40
26:DE:2:GLU:HA	26:DE:13:THR:HA	2.03	0.40
26:DE:60:TRP:C	26:DE:62:GLN:H	2.27	0.40
58:DF:1:ALA:HA	58:DF:97:GLU:HB3	2.03	0.40
29:DH:9:VAL:O	29:DH:10:ALA:O	2.39	0.40
31:DJ:114:LEU:O	31:DJ:117:ALA:HB3	2.21	0.40
35:DN:42:LYS:HA	35:DN:45:ARG:HD3	2.02	0.40
36:DO:4:LYS:HG3	36:DO:8:ILE:HD11	2.03	0.40
38:DQ:93:ILE:C	38:DQ:95:ALA:H	2.29	0.40
39:DR:4:VAL:O	39:DR:38:VAL:HG23	2.21	0.40
41:DT:11:LEU:H	41:DT:11:LEU:CD1	2.35	0.40
44:DW:44:PHE:HB3	44:DW:78:PHE:HD1	1.84	0.40
45:DX:39:VAL:C	45:DX:41:SER:H	2.27	0.40
1:AA:7:A:C8	5:AE:123:LEU:HD22	2.55	0.40
1:AA:240:G:H4'	1:AA:240:G:OP1	2.22	0.40
1:AA:299:G:O6	62:AA:1843:HOH:O	2.19	0.40
1:AA:513:C:N3	1:AA:539:A:C2	2.89	0.40
1:AA:544:G:C5	1:AA:545:C:C5	3.09	0.40
1:AA:791:G:C6	1:AA:792:A:N7	2.89	0.40
1:AA:978:A:H1'	1:AA:1322:C:H5	1.86	0.40
1:AA:1143:G:H2'	1:AA:1144:G:C8	2.56	0.40
1:AA:1373:G:C5'	7:AG:35:LYS:HB2	2.51	0.40
2:AB:207:ARG:HB3	2:AB:207:ARG:HH11	1.87	0.40
3:AC:57:GLU:HG2	3:AC:64:ARG:HB3	2.04	0.40
9:AI:18:VAL:HG11	9:AI:82:ILE:HA	2.03	0.40
10:AJ:14:ASP:HB2	10:AJ:17:LEU:HB3	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:62:VAL:HG22	12:AL:63:THR:O	2.21	0.40
17:AQ:12:VAL:CG1	17:AQ:13:SER:H	2.34	0.40
20:AT:53:MET:HE3	20:AT:57:VAL:HG23	2.02	0.40
22:BA:337:C:H2'	22:BA:338:G:O4'	2.21	0.40
22:BA:571:U:C4	22:BA:575:A:C5	3.09	0.40
22:BA:588:U:O4	22:BA:670:A:H1'	2.21	0.40
22:BA:1265:A:O4'	22:BA:1267:U:C6	2.74	0.40
22:BA:1675:C:O2	22:BA:1675:C:H2'	2.21	0.40
22:BA:1864:U:H2'	22:BA:1865:U:H5'	2.03	0.40
22:BA:1936:A:H4'	22:BA:1937:A:OP2	2.18	0.40
22:BA:2016:U:C4	22:BA:2017:U:C4	3.10	0.40
22:BA:2032:G:N3	25:BD:150:GLN:HG2	2.36	0.40
22:BA:2308:G:C5	27:BF:76:PHE:CE2	3.09	0.40
22:BA:2578:G:N3	22:BA:2578:G:H2'	2.36	0.40
23:BB:49:C:O3'	36:BO:68:LYS:HE2	2.21	0.40
24:BC:82:TYR:CD1	24:BC:82:TYR:C	2.99	0.40
25:BD:62:LYS:CB	25:BD:63:PRO:HD3	2.52	0.40
25:BD:120:GLY:HA2	25:BD:162:ALA:HB1	2.04	0.40
29:BH:104:THR:O	29:BH:104:THR:HG23	2.20	0.40
30:BI:41:PHE:N	30:BI:68:PHE:HZ	2.19	0.40
30:BI:124:MET:O	30:BI:124:MET:HE2	2.21	0.40
33:BL:78:ARG:HB3	33:BL:113:ALA:CB	2.51	0.40
35:BN:60:VAL:O	35:BN:61:ALA:C	2.64	0.40
38:BQ:60:TRP:O	38:BQ:63:ARG:HG3	2.21	0.40
39:BR:39:LEU:N	39:BR:39:LEU:CD2	2.78	0.40
46:BY:5:GLU:O	46:BY:6:LEU:C	2.61	0.40
47:BZ:29:ARG:H	47:BZ:33:HIS:CD2	2.39	0.40
51:B3:7:ARG:HA	51:B3:7:ARG:HD2	1.43	0.40
53:CA:185:U:H6	53:CA:185:U:O5'	2.04	0.40
53:CA:320:A:C2	53:CA:334:C:C2	3.09	0.40
53:CA:367:U:C6	53:CA:394:G:N2	2.89	0.40
53:CA:429:U:H4'	53:CA:430:A:O5'	2.18	0.40
53:CA:728:A:C6	53:CA:729:A:C6	3.09	0.40
53:CA:728:A:N1	53:CA:729:A:C6	2.89	0.40
53:CA:1003:G:N2	53:CA:1038:C:C2	2.89	0.40
53:CA:1146:A:H2'	53:CA:1147:C:C5	2.56	0.40
53:CA:1213:A:O2'	53:CA:1214:C:H5'	2.21	0.40
4:CD:84:ASN:HB3	4:CD:87:GLU:HG3	2.03	0.40
5:CE:131:ASN:C	5:CE:131:ASN:ND2	2.79	0.40
9:CI:37:TYR:N	9:CI:37:TYR:CD2	2.89	0.40
10:CJ:37:ARG:CB	10:CJ:75:ASP:HB3	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CN:62:ARG:HB3	14:CN:68:ARG:O	2.20	0.40
56:CP:38:PHE:CE2	56:CP:51:ARG:HB3	2.56	0.40
18:CR:21:ASP:HB3	18:CR:23:LYS:CG	2.48	0.40
22:DA:2:G:C5	22:DA:3:U:C5	3.09	0.40
22:DA:128:C:O2'	22:DA:129:C:O4'	2.39	0.40
22:DA:537:G:C2	22:DA:555:G:C2	3.10	0.40
22:DA:632:A:H2'	22:DA:633:A:C8	2.56	0.40
22:DA:668:A:C2	22:DA:670:A:C6	3.09	0.40
22:DA:764:A:N3	22:DA:781:A:C6	2.90	0.40
22:DA:1022:G:C6	22:DA:1140:C:C5	3.09	0.40
22:DA:1056:G:O5'	22:DA:1085:A:C2	2.74	0.40
22:DA:1079:C:C4	22:DA:1088:A:C2	3.10	0.40
22:DA:1379:U:O2	22:DA:1379:U:C2'	2.62	0.40
22:DA:1607:C:H4'	22:DA:1608:A:O5'	2.20	0.40
22:DA:1652:A:C2	22:DA:2006:C:C2	3.09	0.40
22:DA:1690:A:H2'	22:DA:1691:C:O4'	2.21	0.40
22:DA:1865:U:O2	22:DA:1877:A:N1	2.54	0.40
22:DA:2298:A:O2'	22:DA:2299:U:O5'	2.39	0.40
22:DA:2310:C:O2'	22:DA:2311:A:C5'	2.69	0.40
22:DA:2376:A:C2	36:DO:99:TYR:CE2	3.10	0.40
22:DA:2388:A:N7	22:DA:2389:G:C6	2.89	0.40
22:DA:2540:C:H2'	22:DA:2541:A:O4'	2.21	0.40
57:DB:55:U:H5'	58:DF:24:VAL:CG2	2.52	0.40
24:DC:66:PHE:HD2	24:DC:142:ASN:HD21	1.69	0.40
24:DC:130:PRO:C	24:DC:132:ARG:N	2.78	0.40
24:DC:180:MET:CE	24:DC:268:ARG:HE	2.34	0.40
25:DD:127:PHE:O	25:DD:128:ARG:C	2.63	0.40
26:DE:3:LEU:HD12	26:DE:3:LEU:HA	1.96	0.40
26:DE:5:LEU:CD1	26:DE:10:SER:HB2	2.51	0.40
26:DE:31:VAL:HG11	26:DE:100:MET:O	2.21	0.40
26:DE:90:GLN:CG	26:DE:92:HIS:NE2	2.84	0.40
26:DE:119:ILE:CD1	26:DE:143:LEU:HD21	2.51	0.40
26:DE:141:MET:HE2	26:DE:141:MET:HB2	2.00	0.40
58:DF:37:MET:HE2	58:DF:149:ARG:HB3	2.04	0.40
58:DF:37:MET:CA	58:DF:151:LEU:HB3	2.52	0.40
34:DM:93:VAL:HG22	34:DM:94:ALA:N	2.36	0.40
37:DP:102:ARG:O	37:DP:103:THR:CB	2.70	0.40
39:DR:38:VAL:O	39:DR:53:PHE:HA	2.20	0.40
40:DS:24:ILE:HB	40:DS:32:ALA:HB1	2.03	0.40
40:DS:41:LYS:C	40:DS:43:ALA:N	2.77	0.40
43:DV:50:MET:C	43:DV:56:PHE:HD2	2.30	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:4:U:O2	1:AA:4:U:C2'	2.69	0.40
1:AA:21:G:H1'	1:AA:914:A:H61	1.87	0.40
1:AA:108:G:H2'	1:AA:109:A:OP1	2.21	0.40
1:AA:292:G:C2	1:AA:309:A:C2	3.10	0.40
1:AA:345:C:OP1	37:BP:35:SER:OG	2.40	0.40
1:AA:403:C:H2'	1:AA:404:G:H8	1.87	0.40
1:AA:617:G:H21	16:AP:14:ARG:NH1	2.19	0.40
1:AA:659:U:O2'	1:AA:660:C:H5'	2.21	0.40
1:AA:1117:A:O3'	9:AI:105:ARG:NE	2.50	0.40
1:AA:1264:U:O2	1:AA:1272:G:C2	2.75	0.40
1:AA:1313:U:OP2	19:AS:5:LYS:HA	2.21	0.40
1:AA:1371:G:OP1	9:AI:13:SER:HB3	2.21	0.40
3:AC:21:TRP:HZ3	3:AC:23:ALA:HB3	1.83	0.40
5:AE:92:ARG:HB2	5:AE:127:TYR:HB2	2.03	0.40
5:AE:100:GLU:HB3	5:AE:121:ASN:CB	2.52	0.40
7:AG:72:VAL:HG12	7:AG:89:GLU:HA	2.03	0.40
7:AG:106:ALA:HB1	7:AG:132:THR:HB	2.03	0.40
9:AI:53:LEU:HD12	9:AI:53:LEU:N	2.35	0.40
10:AJ:35:GLN:HG2	10:AJ:77:VAL:CB	2.46	0.40
10:AJ:91:ASP:O	10:AJ:92:LEU:O	2.39	0.40
13:AM:39:ALA:HB3	13:AM:42:VAL:CG1	2.50	0.40
15:AO:49:HIS:O	15:AO:50:HIS:C	2.64	0.40
17:AQ:58:VAL:CG2	17:AQ:59:GLU:N	2.84	0.40
19:AS:10:ILE:HD11	19:AS:15:LEU:HD13	2.04	0.40
22:BA:162:U:H4'	22:BA:163:C:OP2	2.21	0.40
22:BA:666:A:C5'	33:BL:48:ARG:HD2	2.51	0.40
22:BA:831:G:C5	22:BA:832:U:C5	3.10	0.40
22:BA:863:A:H2'	22:BA:864:G:C8	2.57	0.40
22:BA:960:A:C5'	22:BA:961:C:OP2	2.68	0.40
22:BA:974:G:N3	22:BA:1186:G:N2	2.69	0.40
22:BA:1009:A:OP2	31:BJ:39:LYS:CE	2.70	0.40
22:BA:1230:A:H2'	22:BA:1231:U:O4'	2.21	0.40
22:BA:1275:A:N1	22:BA:1295:C:O2'	2.47	0.40
22:BA:1459:G:H5"	22:BA:1459:G:C8	2.56	0.40
22:BA:2155:U:C4	22:BA:2156:G:C6	3.10	0.40
22:BA:2331:G:O2'	22:BA:2336:A:N1	2.35	0.40
22:BA:2420:C:OP1	51:B3:33:THR:HB	2.20	0.40
22:BA:2423:U:O2'	22:BA:2424:C:OP2	2.29	0.40
22:BA:2802:G:H2'	22:BA:2803:G:O4'	2.21	0.40
23:BB:2:G:C5	23:BB:119:A:C2	3.09	0.40
23:BB:15:A:N3	23:BB:15:A:O4'	2.53	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:30:ALA:HA	24:BC:33:LEU:HD12	2.03	0.40
24:BC:134:ILE:O	24:BC:166:ARG:NH1	2.55	0.40
24:BC:257:ARG:NH1	24:BC:263:ASP:OD2	2.54	0.40
26:BE:52:VAL:O	26:BE:53:THR:C	2.64	0.40
26:BE:190:ALA:C	26:BE:192:ALA:H	2.30	0.40
29:BH:94:ILE:HG13	29:BH:99:ILE:HD11	2.03	0.40
30:BI:5:GLN:O	30:BI:6:ALA:HB2	2.21	0.40
30:BI:52:LEU:HD11	30:BI:81:LYS:HE2	2.03	0.40
32:BK:13:ASN:C	32:BK:15:GLY:H	2.28	0.40
33:BL:19:LEU:HA	33:BL:27:LEU:O	2.22	0.40
33:BL:53:GLY:O	33:BL:54:GLN:C	2.64	0.40
35:BN:84:GLY:N	35:BN:85:PRO:HD2	2.37	0.40
41:BT:34:VAL:HG21	41:BT:43:ILE:HD12	2.02	0.40
44:BW:36:ILE:O	44:BW:39:GLN:CB	2.70	0.40
44:BW:36:ILE:O	44:BW:39:GLN:HB2	2.21	0.40
47:BZ:22:THR:HG21	47:BZ:50:VAL:HG13	2.02	0.40
49:B1:8:ILE:N	49:B1:8:ILE:HD13	2.35	0.40
51:B3:54:LEU:HD12	51:B3:54:LEU:HA	1.72	0.40
53:CA:198:G:C4	53:CA:199:A:C8	3.09	0.40
53:CA:647:C:H2'	53:CA:648:A:C8	2.56	0.40
53:CA:790:A:C6	53:CA:791:G:C6	3.09	0.40
53:CA:945:G:N2	53:CA:1334:G:H4'	2.36	0.40
53:CA:959:A:N6	53:CA:1222:G:H4'	2.36	0.40
53:CA:1040:U:C2'	53:CA:1041:G:H5'	2.52	0.40
53:CA:1086:U:O2'	53:CA:1087:G:H5'	2.22	0.40
53:CA:1102:A:H2'	53:CA:1103:C:C6	2.56	0.40
53:CA:1359:C:H2'	53:CA:1361:G:OP2	2.21	0.40
53:CA:1408:A:C2	53:CA:1494:G:C2	3.09	0.40
2:CB:54:ALA:HA	2:CB:57:ASN:HB3	2.03	0.40
2:CB:116:LEU:HD13	2:CB:140:LEU:HB2	2.02	0.40
2:CB:124:THR:C	2:CB:126:ASP:H	2.29	0.40
2:CB:132:GLU:O	2:CB:137:THR:HG23	2.22	0.40
2:CB:133:ALA:HA	2:CB:137:THR:CG2	2.51	0.40
2:CB:183:PHE:CE2	2:CB:197:PHE:CD2	3.09	0.40
3:CC:116:ALA:HB2	3:CC:199:VAL:CG2	2.51	0.40
3:CC:116:ALA:HB2	3:CC:199:VAL:HG21	2.04	0.40
3:CC:133:MET:O	3:CC:137:VAL:HG23	2.21	0.40
6:CF:56:LYS:O	6:CF:57:ALA:HB2	2.20	0.40
6:CF:96:VAL:HG12	6:CF:97:THR:N	2.36	0.40
54:CG:88:VAL:CG2	54:CG:89:GLU:H	2.20	0.40
8:CH:54:THR:HG23	8:CH:55:LYS:N	2.30	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:102:VAL:HG22	8:CH:125:ILE:HB	2.03	0.40
12:CL:19:ASN:HD22	12:CL:19:ASN:N	2.15	0.40
56:CP:61:VAL:C	56:CP:63:GLN:H	2.28	0.40
18:CR:23:LYS:C	18:CR:25:ILE:H	2.29	0.40
19:CS:9:PHE:C	19:CS:10:ILE:HG13	2.47	0.40
21:CU:35:GLU:OE2	21:CU:35:GLU:CA	2.68	0.40
22:DA:67:U:C2	22:DA:68:G:C8	3.10	0.40
22:DA:92:U:C6	22:DA:93:G:C8	3.10	0.40
22:DA:116:C:C4	22:DA:117:G:C5	3.09	0.40
22:DA:247:G:H5"	22:DA:386:G:O2'	2.22	0.40
22:DA:279:A:N6	22:DA:361:G:C1'	2.79	0.40
22:DA:298:G:OP1	42:DU:83:GLY:HA2	2.21	0.40
22:DA:324:A:O2'	22:DA:325:G:O5'	2.38	0.40
22:DA:399:U:H5"	45:DX:56:ARG:NH1	2.36	0.40
22:DA:483:A:OP2	22:DA:484:C:C5	2.74	0.40
22:DA:632:A:H4'	33:DL:68:SER:HA	2.02	0.40
22:DA:813:U:H2'	22:DA:814:C:C6	2.56	0.40
22:DA:845:A:N6	22:DA:932:U:H3	2.20	0.40
22:DA:876:C:N3	22:DA:877:A:N7	2.69	0.40
22:DA:909:A:C6	22:DA:912:C:C2	3.09	0.40
22:DA:1045:C:H5"	22:DA:1047:G:H1'	2.02	0.40
22:DA:1055:G:H3'	22:DA:1056:G:H5'	2.02	0.40
22:DA:1112:G:H2'	22:DA:1113:U:C5	2.56	0.40
22:DA:1296:G:H1'	22:DA:1645:G:N2	2.37	0.40
22:DA:1345:C:O2'	22:DA:1346:G:P	2.80	0.40
22:DA:1437:C:H2'	22:DA:1438:U:H6	1.86	0.40
22:DA:1694:C:H4'	22:DA:1695:G:H5"	2.03	0.40
22:DA:1773:A:H2'	22:DA:1774:C:C5'	2.51	0.40
22:DA:1884:G:OP2	22:DA:1884:G:H8	2.04	0.40
22:DA:1993:U:H4'	25:DD:133:THR:HG21	2.02	0.40
22:DA:2191:A:H3'	22:DA:2192:U:H6	1.87	0.40
22:DA:2307:G:H1	58:DF:38:GLY:HA3	1.86	0.40
22:DA:2389:G:H5"	22:DA:2390:U:C5'	2.30	0.40
22:DA:2786:U:O2'	22:DA:2787:C:H5'	2.21	0.40
57:DB:83:G:C6	57:DB:94:A:C6	3.09	0.40
24:DC:91:ALA:HB3	24:DC:103:ILE:HG23	2.02	0.40
58:DF:71:LYS:O	58:DF:72:SER:HB3	2.21	0.40
29:DH:43:ASN:O	29:DH:47:PHE:CD2	2.74	0.40
30:DI:105:LEU:O	30:DI:105:LEU:HD23	2.22	0.40
32:DK:69:VAL:HG12	32:DK:70:ARG:N	2.36	0.40
38:DQ:4:LYS:HE3	38:DQ:7:VAL:HG22	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DS:33:LEU:CA	40:DS:36:LEU:HD23	2.51	0.40
41:DT:25:GLU:OE1	41:DT:30:ILE:HD13	2.22	0.40
43:DV:43:ASP:C	43:DV:45:ASP:H	2.28	0.40
46:DY:25:GLN:HB2	46:DY:46:VAL:HG11	2.03	0.40
46:DY:28:LEU:C	46:DY:28:LEU:HD13	2.45	0.40
1:AA:71:A:C2	1:AA:72:A:N7	2.89	0.40
1:AA:129:A:O2'	1:AA:130:A:H5"	2.20	0.40
1:AA:213:G:H2'	1:AA:214:C:H5'	2.04	0.40
1:AA:466:A:C4'	1:AA:467:U:OP2	2.70	0.40
1:AA:903:G:C4	1:AA:904:U:C5	3.09	0.40
1:AA:976:G:N1	1:AA:1363:A:C2	2.90	0.40
1:AA:1180:A:O5'	1:AA:1180:A:H8	2.05	0.40
2:AB:103:TRP:HE1	2:AB:150:ILE:HD11	1.86	0.40
3:AC:81:GLU:O	3:AC:84:GLU:HB3	2.20	0.40
5:AE:104:ILE:HD11	5:AE:114:LEU:HB3	2.01	0.40
7:AG:68:VAL:HG21	7:AG:103:ILE:CG1	2.52	0.40
8:AH:74:ILE:CD1	8:AH:128:VAL:HG22	2.51	0.40
9:AI:41:GLU:C	9:AI:43:ALA:H	2.30	0.40
11:AK:19:VAL:HG22	11:AK:82:GLU:HG2	2.03	0.40
11:AK:19:VAL:HB	11:AK:34:THR:HG23	2.02	0.40
15:AO:74:VAL:O	15:AO:75:ALA:C	2.64	0.40
17:AQ:50:ASN:OD1	17:AQ:50:ASN:N	2.54	0.40
22:BA:28:A:C4	22:BA:29:U:C6	3.10	0.40
22:BA:137:U:C5	22:BA:137:U:OP2	2.74	0.40
22:BA:160:A:C6	22:BA:161:A:C6	3.09	0.40
22:BA:185:G:C6	22:BA:186:G:C5	3.09	0.40
22:BA:460:A:C2	22:BA:470:A:C5	3.09	0.40
22:BA:513:A:C2'	22:BA:514:A:H5'	2.51	0.40
22:BA:612:G:O2'	22:BA:613:A:C8	2.74	0.40
22:BA:684:G:C6	22:BA:774:G:C4	3.10	0.40
22:BA:790:U:O2'	22:BA:791:C:H5'	2.21	0.40
22:BA:1105:U:O2	22:BA:1106:G:C8	2.75	0.40
22:BA:1131:G:N7	22:BA:2025:C:H4'	2.37	0.40
22:BA:1312:U:H4'	22:BA:1313:U:O5'	2.21	0.40
22:BA:1637:A:H4'	22:BA:2711:A:O2'	2.21	0.40
22:BA:1838:C:C4	22:BA:1899:A:C4	3.09	0.40
22:BA:2134:A:H8	22:BA:2134:A:OP1	2.05	0.40
22:BA:2197:U:C6	22:BA:2224:G:C6	3.10	0.40
22:BA:2313:C:O2'	22:BA:2314:A:H5'	2.21	0.40
22:BA:2391:G:N2	22:BA:2429:G:O4'	2.55	0.40
22:BA:2808:G:N1	22:BA:2891:U:C5	2.90	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BD:35:THR:CG2	25:BD:51:THR:HG22	2.51	0.40
25:BD:106:LYS:O	25:BD:175:LEU:O	2.40	0.40
25:BD:133:THR:HG23	25:BD:134:HIS:CG	2.57	0.40
26:BE:153:LEU:HB3	26:BE:171:ASP:HB2	2.03	0.40
29:BH:31:VAL:CG1	29:BH:36:ALA:O	2.70	0.40
29:BH:57:LYS:O	29:BH:61:VAL:HG23	2.21	0.40
30:BI:56:VAL:HG22	30:BI:68:PHE:HB2	2.03	0.40
32:BK:70:ARG:HD3	32:BK:76:VAL:CG2	2.48	0.40
35:BN:93:GLY:O	35:BN:95:THR:N	2.54	0.40
36:BO:59:ALA:HA	36:BO:62:LEU:CD1	2.51	0.40
36:BO:76:LYS:N	36:BO:109:ALA:HB1	2.36	0.40
38:BQ:91:ARG:NE	39:BR:11:GLN:H	2.18	0.40
40:BS:66:ILE:HD13	40:BS:66:ILE:C	2.46	0.40
43:BV:27:PRO:HD2	43:BV:87:GLN:O	2.21	0.40
44:BW:35:ILE:HG23	44:BW:35:ILE:O	2.20	0.40
44:BW:73:PRO:HG2	44:BW:76:ARG:HB2	2.04	0.40
47:BZ:43:ILE:HD12	47:BZ:47:ILE:HG13	2.04	0.40
53:CA:125:U:O2'	53:CA:126:G:H5'	2.20	0.40
53:CA:232:G:H2'	53:CA:233:C:O4'	2.22	0.40
53:CA:242:G:N2	53:CA:285:C:C2	2.89	0.40
53:CA:411:A:O3'	53:CA:412:A:O4'	2.39	0.40
53:CA:413:G:C2	4:CD:32:LYS:HE3	2.56	0.40
53:CA:599:C:H4'	8:CH:121:GLY:HA3	2.03	0.40
53:CA:796:C:OP1	11:CK:127:ARG:HB3	2.21	0.40
53:CA:881:G:C6	53:CA:882:C:C4	3.10	0.40
53:CA:892:A:C5	53:CA:893:C:C4	3.08	0.40
53:CA:1130:A:C8	53:CA:1146:A:N1	2.90	0.40
53:CA:1255:G:H2'	53:CA:1278:G:H21	1.86	0.40
53:CA:1394:A:C5	53:CA:1501:C:H4'	2.56	0.40
53:CA:1434:A:N6	53:CA:1435:G:C6	2.90	0.40
53:CA:1476:A:H2'	53:CA:1477:U:O4'	2.21	0.40
2:CB:103:TRP:CB	2:CB:106:VAL:HB	2.49	0.40
3:CC:179:ALA:HA	3:CC:205:GLU:O	2.21	0.40
54:CG:41:ILE:HD13	54:CG:115:MET:HB3	2.04	0.40
8:CH:111:THR:HG22	8:CH:113:ARG:H	1.86	0.40
18:CR:28:LEU:C	18:CR:30:ASN:N	2.80	0.40
22:DA:297:G:C2	22:DA:342:A:C2	3.10	0.40
22:DA:324:A:N3	22:DA:325:G:H1'	2.36	0.40
22:DA:410:G:N2	22:DA:418:C:O2	2.54	0.40
22:DA:416:U:C4	22:DA:417:C:C4	3.09	0.40
22:DA:469:G:OP2	26:DE:54:GLY:O	2.39	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:533:G:H5'	38:DQ:23:TYR:CD2	2.56	0.40
22:DA:699:A:H2'	22:DA:700:G:O4'	2.22	0.40
22:DA:705:A:C2	22:DA:727:A:O4'	2.74	0.40
22:DA:727:A:O2'	22:DA:728:G:O4'	2.40	0.40
22:DA:748:G:OP2	40:DS:88:ARG:HG3	2.21	0.40
22:DA:970:U:O2	22:DA:984:A:O2'	2.36	0.40
22:DA:1068:G:O2'	22:DA:1069:A:H5'	2.20	0.40
22:DA:1324:G:C2	22:DA:1328:A:N6	2.90	0.40
22:DA:1553:A:C8	22:DA:1555:G:O6	2.75	0.40
22:DA:1651:G:C6	22:DA:1652:A:C5	3.10	0.40
22:DA:1845:G:C5	22:DA:1846:G:N7	2.90	0.40
22:DA:1866:A:O2'	22:DA:1867:G:H5'	2.22	0.40
22:DA:2210:U:C4'	22:DA:2211:A:H5'	2.52	0.40
22:DA:2332:C:H5"	44:DW:76:ARG:HH12	1.87	0.40
22:DA:2355:G:H5"	44:DW:20:LEU:HD22	2.03	0.40
22:DA:2568:U:H2'	22:DA:2569:G:O4'	2.22	0.40
22:DA:2579:C:H2'	22:DA:2580:U:O4'	2.21	0.40
57:DB:40:U:H1'	57:DB:45:A:N6	2.36	0.40
24:DC:144:GLU:HG3	24:DC:151:GLY:CA	2.51	0.40
24:DC:250:GLN:H	24:DC:250:GLN:HG2	1.50	0.40
25:DD:20:VAL:HG12	25:DD:22:ILE:HG12	2.03	0.40
58:DF:166:ARG:H	58:DF:166:ARG:HG2	1.72	0.40
28:DG:22:VAL:HG12	28:DG:23:ILE:N	2.35	0.40
28:DG:94:ARG:O	28:DG:95:ALA:HB2	2.21	0.40
29:DH:5:LEU:HA	29:DH:36:ALA:CB	2.51	0.40
29:DH:33:GLN:O	29:DH:34:GLY:C	2.65	0.40
29:DH:58:LEU:O	29:DH:61:VAL:HG12	2.22	0.40
29:DH:58:LEU:HG	29:DH:62:LEU:HD11	2.03	0.40
31:DJ:1:MET:SD	31:DJ:2:LYS:HE3	2.61	0.40
33:DL:132:ARG:HA	33:DL:135:ILE:HG22	2.02	0.40
36:DO:67:ASN:CG	36:DO:68:LYS:N	2.80	0.40
38:DQ:27:ARG:O	38:DQ:27:ARG:HG2	2.22	0.40
38:DQ:72:GLY:HA3	38:DQ:113:LYS:NZ	2.37	0.40
44:DW:37:VAL:O	44:DW:38:ARG:HB2	2.21	0.40
48:D0:49:ARG:HG3	48:D0:51:ARG:HH21	1.85	0.40
1:AA:421:U:C2'	1:AA:422:C:OP1	2.69	0.40
1:AA:597:G:C2	1:AA:644:U:O2	2.73	0.40
1:AA:731:G:OP1	1:AA:766:A:C1'	2.67	0.40
1:AA:945:G:C2	1:AA:946:A:C8	3.10	0.40
1:AA:983:A:N3	1:AA:983:A:C2'	2.84	0.40
1:AA:1029:U:N3	1:AA:1033:G:C6	2.90	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1055:A:H8	1:AA:1055:A:O5'	2.05	0.40
1:AA:1086:U:O2'	1:AA:1087:G:H5'	2.22	0.40
2:AB:21:TYR:O	2:AB:22:TRP:C	2.63	0.40
2:AB:32:GLY:HA3	2:AB:39:ILE:CG1	2.50	0.40
2:AB:138:ARG:HB2	2:AB:138:ARG:NH1	2.36	0.40
3:AC:154:GLY:H	3:AC:156:LEU:HD11	1.87	0.40
4:AD:55:ARG:HH12	4:AD:58:GLN:HB3	1.86	0.40
5:AE:110:MET:H	5:AE:113:VAL:CG1	2.31	0.40
6:AF:3:HIS:CA	6:AF:92:THR:HG23	2.52	0.40
7:AG:119:LEU:HD21	7:AG:123:LEU:HD23	2.02	0.40
9:AI:86:LEU:O	9:AI:93:LEU:HD11	2.20	0.40
9:AI:113:LYS:HG3	9:AI:119:LYS:HA	2.02	0.40
12:AL:82:ARG:HB2	12:AL:97:VAL:HG23	2.04	0.40
15:AO:73:ASP:OD1	15:AO:75:ALA:HB3	2.21	0.40
18:AR:28:LEU:C	18:AR:30:ASN:H	2.28	0.40
22:BA:120:U:H3'	22:BA:120:U:OP2	2.22	0.40
22:BA:197:A:C6	22:BA:198:C:C2	3.09	0.40
22:BA:443:A:C2	22:BA:1245:G:N3	2.89	0.40
22:BA:518:G:H2'	22:BA:519:U:C6	2.57	0.40
22:BA:792:A:C6	22:BA:2440:C:C6	3.10	0.40
22:BA:960:A:H5"	22:BA:961:C:OP2	2.21	0.40
22:BA:1054:A:C6	22:BA:1106:G:C6	3.10	0.40
22:BA:1105:U:C2	22:BA:1106:G:N7	2.89	0.40
22:BA:1176:U:H2'	22:BA:1177:G:N9	2.36	0.40
22:BA:1266:G:O2'	22:BA:2012:G:O6	2.18	0.40
22:BA:1509:A:C2	22:BA:1510:G:C8	3.09	0.40
22:BA:1767:G:C2	22:BA:1986:C:C2	3.10	0.40
22:BA:2151:U:H2'	22:BA:2152:G:O4'	2.22	0.40
22:BA:2534:A:C2'	22:BA:2535:G:O5'	2.69	0.40
22:BA:2720:U:H5"	37:BP:52:ARG:NH2	2.37	0.40
60:BA:3135:TEL:H583	60:BA:3135:TEL:H542	1.83	0.40
23:BB:41:G:H3'	23:BB:42:C:H5"	2.04	0.40
23:BB:114:C:H2'	23:BB:115:A:C8	2.57	0.40
25:BD:51:THR:HG21	25:BD:68:PHE:HE2	1.85	0.40
25:BD:121:THR:O	25:BD:122:VAL:HG23	2.20	0.40
25:BD:151:THR:C	25:BD:153:GLY:N	2.76	0.40
26:BE:141:MET:HB2	26:BE:143:LEU:HG	2.03	0.40
30:BI:126:ARG:HD3	30:BI:126:ARG:H	1.87	0.40
32:BK:42:THR:O	32:BK:42:THR:HG23	2.22	0.40
33:BL:18:ARG:HH11	33:BL:18:ARG:HD3	1.74	0.40
33:BL:114:GLY:C	33:BL:115:GLU:CG	2.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BN:38:LEU:HD11	35:BN:42:LYS:HD2	2.03	0.40
37:BP:12:MET:HE3	37:BP:76:HIS:NE2	2.36	0.40
38:BQ:57:ARG:NH2	38:BQ:92:LYS:HD2	2.37	0.40
39:BR:28:ALA:O	39:BR:63:VAL:CG2	2.69	0.40
39:BR:49:ILE:CB	39:BR:51:VAL:O	2.69	0.40
40:BS:85:ILE:HG23	40:BS:93:ALA:HB1	2.04	0.40
41:BT:29:THR:HA	41:BT:86:THR:N	2.36	0.40
50:B2:21:ARG:HG2	50:B2:31:LEU:HG	2.03	0.40
51:B3:27:ASN:O	51:B3:35:LYS:NZ	2.50	0.40
52:B4:1:MET:HB3	52:B4:34:LYS:HG2	2.03	0.40
53:CA:80:A:H3'	53:CA:81:A:C5'	2.51	0.40
53:CA:82:G:C5	53:CA:89:U:C5	3.09	0.40
53:CA:128:G:N2	53:CA:129:A:C2	2.90	0.40
53:CA:171:A:N1	53:CA:172:A:C2	2.90	0.40
53:CA:295:C:C4	53:CA:296:U:C5	3.09	0.40
53:CA:429:U:H4'	53:CA:430:A:OP1	2.17	0.40
53:CA:722:G:O3'	53:CA:723:U:C5	2.75	0.40
53:CA:963:G:N1	53:CA:973:G:O6	2.54	0.40
53:CA:1119:C:OP1	9:CI:10:ARG:NH2	2.54	0.40
53:CA:1123:U:H4'	10:CJ:39:PRO:HD2	2.02	0.40
53:CA:1223:C:H5"	53:CA:1224:U:OP2	2.22	0.40
53:CA:1352:C:O2	53:CA:1371:G:C2	2.75	0.40
53:CA:1386:G:N2	53:CA:1387:G:C4	2.90	0.40
2:CB:212:TYR:CD2	2:CB:216:VAL:HG23	2.57	0.40
6:CF:72:ASP:O	6:CF:73:GLU:C	2.64	0.40
54:CG:22:LEU:O	54:CG:26:VAL:HG22	2.20	0.40
54:CG:26:VAL:HG23	54:CG:27:ASN:OD1	2.21	0.40
15:CO:87:ARG:HA	15:CO:87:ARG:HD2	1.68	0.40
22:DA:139:U:N3	41:DT:1:MET:HA	2.37	0.40
22:DA:141:G:HO2'	22:DA:142:A:P	2.41	0.40
22:DA:544:C:C4	22:DA:545:U:N3	2.90	0.40
22:DA:545:U:C4	22:DA:547:A:H4'	2.56	0.40
22:DA:917:A:H5"	22:DA:2268:A:H61	1.87	0.40
22:DA:1049:C:C6	22:DA:1050:A:N7	2.90	0.40
22:DA:1189:A:H2'	22:DA:1190:G:O4'	2.21	0.40
22:DA:1320:C:HO2'	22:DA:1321:A:H8	1.65	0.40
22:DA:1331:G:C4	22:DA:1333:G:C8	3.09	0.40
22:DA:1355:G:O2'	22:DA:1356:G:H5'	2.21	0.40
22:DA:1494:A:O2'	22:DA:1495:A:H5'	2.21	0.40
22:DA:1579:A:C6	22:DA:1580:A:C6	3.10	0.40
22:DA:2193:G:H2'	22:DA:2194:U:C6	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2283:C:N4	22:DA:2389:G:C5	2.89	0.40
22:DA:2294:G:OP1	36:DO:10:ARG:HD3	2.22	0.40
22:DA:2337:G:C6	22:DA:2338:C:N4	2.89	0.40
22:DA:2567:G:H2'	22:DA:2568:U:C6	2.57	0.40
22:DA:2714:G:C2'	22:DA:2715:C:H5'	2.52	0.40
22:DA:2734:A:H2'	22:DA:2735:G:H5'	2.02	0.40
22:DA:2807:U:H3'	22:DA:2808:G:H5"	2.03	0.40
25:DD:179:ARG:HH12	37:DP:7:LEU:HD11	1.86	0.40
58:DF:43:ILE:HG23	58:DF:44:ALA:N	2.26	0.40
28:DG:116:LEU:HD13	28:DG:121:THR:HA	2.04	0.40
29:DH:35:LYS:O	29:DH:36:ALA:HB2	2.20	0.40
30:DI:102:ARG:HG2	30:DI:141:ASP:O	2.20	0.40
30:DI:106:GLN:O	30:DI:106:GLN:HG3	2.22	0.40
32:DK:31:ARG:HG3	32:DK:31:ARG:NH1	2.36	0.40
34:DM:67:VAL:HG21	34:DM:102:LEU:HD12	2.04	0.40
34:DM:69:PRO:CA	34:DM:94:ALA:HB2	2.51	0.40
35:DN:1:MET:HE3	35:DN:3:HIS:CE1	2.55	0.40
35:DN:73:ASN:HA	35:DN:76:VAL:HG13	2.03	0.40
37:DP:72:VAL:HG23	37:DP:72:VAL:O	2.21	0.40
43:DV:3:THR:HA	43:DV:62:THR:O	2.22	0.40
45:DX:1:SER:C	45:DX:3:VAL:H	2.29	0.40
49:D1:46:VAL:HG22	49:D1:47:ILE:H	1.86	0.40
51:D3:5:THR:O	51:D3:7:ARG:N	2.55	0.40

All (9) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:138:U:O4	22:DA:305:C:OP1[3_545]	1.58	0.62
22:BA:138:U:O4	22:DA:305:C:P[3_545]	1.90	0.30
1:AA:416:G:OP1	22:DA:2139:U:O4'[4_455]	1.91	0.29
25:BD:181:ASP:OD1	22:DA:2903:U:O4[2_454]	1.97	0.23
22:BA:138:U:C4	22:DA:304:U:O3'[3_545]	1.98	0.22
22:BA:138:U:N3	22:DA:304:U:O3'[3_545]	2.05	0.15
33:BL:143:GLU:OE1	47:DZ:5:LYS:NZ[3_445]	2.07	0.13
22:BA:138:U:O4	22:DA:305:C:O5'[3_545]	2.16	0.04
22:BA:138:U:O4	22:DA:304:U:O3'[3_545]	2.17	0.03

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	AB	216/218 (99%)	132 (61%)	52 (24%)	32 (15%)	0	1
2	CB	216/218 (99%)	155 (72%)	46 (21%)	15 (7%)	1	6
3	AC	204/206 (99%)	156 (76%)	32 (16%)	16 (8%)	1	4
3	CC	204/206 (99%)	147 (72%)	37 (18%)	20 (10%)	0	3
4	AD	203/205 (99%)	138 (68%)	37 (18%)	28 (14%)	0	1
4	CD	203/205 (99%)	140 (69%)	43 (21%)	20 (10%)	0	3
5	AE	148/150 (99%)	105 (71%)	23 (16%)	20 (14%)	0	1
5	CE	148/150 (99%)	112 (76%)	21 (14%)	15 (10%)	0	2
6	AF	98/100 (98%)	73 (74%)	13 (13%)	12 (12%)	0	1
6	CF	98/100 (98%)	65 (66%)	24 (24%)	9 (9%)	0	3
7	AG	149/151 (99%)	111 (74%)	32 (22%)	6 (4%)	2	14
8	AH	127/129 (98%)	92 (72%)	28 (22%)	7 (6%)	1	9
8	CH	127/129 (98%)	94 (74%)	22 (17%)	11 (9%)	0	4
9	AI	125/127 (98%)	89 (71%)	26 (21%)	10 (8%)	1	4
9	CI	125/127 (98%)	89 (71%)	25 (20%)	11 (9%)	0	3
10	AJ	96/98 (98%)	70 (73%)	13 (14%)	13 (14%)	0	1
10	CJ	96/98 (98%)	55 (57%)	28 (29%)	13 (14%)	0	1
11	AK	115/117 (98%)	85 (74%)	20 (17%)	10 (9%)	0	4
11	CK	115/117 (98%)	89 (77%)	19 (16%)	7 (6%)	1	8
12	AL	121/123 (98%)	88 (73%)	22 (18%)	11 (9%)	0	3
12	CL	121/123 (98%)	86 (71%)	27 (22%)	8 (7%)	1	7
13	AM	112/114 (98%)	88 (79%)	13 (12%)	11 (10%)	0	3
14	AN	92/100 (92%)	60 (65%)	20 (22%)	12 (13%)	0	1
14	CN	91/100 (91%)	59 (65%)	27 (30%)	5 (6%)	1	9
15	AO	86/88 (98%)	59 (69%)	23 (27%)	4 (5%)	2	11

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
15	CO	86/88 (98%)	67 (78%)	16 (19%)	3 (4%)	3 17
16	AP	80/82 (98%)	58 (72%)	14 (18%)	8 (10%)	0 3
17	AQ	78/80 (98%)	51 (65%)	15 (19%)	12 (15%)	0 1
17	CQ	78/80 (98%)	62 (80%)	8 (10%)	8 (10%)	0 2
18	AR	53/55 (96%)	46 (87%)	5 (9%)	2 (4%)	2 15
18	CR	53/55 (96%)	42 (79%)	11 (21%)	0	100 100
19	AS	77/79 (98%)	58 (75%)	10 (13%)	9 (12%)	0 1
19	CS	77/79 (98%)	46 (60%)	24 (31%)	7 (9%)	0 3
20	AT	83/85 (98%)	58 (70%)	19 (23%)	6 (7%)	1 6
20	CT	83/85 (98%)	63 (76%)	12 (14%)	8 (10%)	0 3
21	AU	49/51 (96%)	25 (51%)	15 (31%)	9 (18%)	0 0
21	CU	49/51 (96%)	22 (45%)	8 (16%)	19 (39%)	0 0
24	BC	269/271 (99%)	203 (76%)	40 (15%)	26 (10%)	0 3
24	DC	269/271 (99%)	183 (68%)	54 (20%)	32 (12%)	0 1
25	BD	207/209 (99%)	148 (72%)	31 (15%)	28 (14%)	0 1
25	DD	207/209 (99%)	136 (66%)	40 (19%)	31 (15%)	0 1
26	BE	199/201 (99%)	149 (75%)	32 (16%)	18 (9%)	0 3
26	DE	199/201 (99%)	125 (63%)	46 (23%)	28 (14%)	0 1
27	BF	175/177 (99%)	130 (74%)	30 (17%)	15 (9%)	0 4
28	BG	174/176 (99%)	118 (68%)	32 (18%)	24 (14%)	0 1
28	DG	174/176 (99%)	102 (59%)	41 (24%)	31 (18%)	0 0
29	BH	147/149 (99%)	67 (46%)	52 (35%)	28 (19%)	0 0
29	DH	147/149 (99%)	76 (52%)	53 (36%)	18 (12%)	0 1
30	BI	139/141 (99%)	84 (60%)	41 (30%)	14 (10%)	0 2
30	DI	139/141 (99%)	84 (60%)	38 (27%)	17 (12%)	0 1
31	BJ	140/142 (99%)	103 (74%)	26 (19%)	11 (8%)	1 4
31	DJ	140/142 (99%)	96 (69%)	29 (21%)	15 (11%)	0 2
32	BK	120/122 (98%)	88 (73%)	12 (10%)	20 (17%)	0 1
32	DK	120/122 (98%)	82 (68%)	18 (15%)	20 (17%)	0 1
33	BL	141/143 (99%)	103 (73%)	28 (20%)	10 (7%)	1 6
33	DL	141/143 (99%)	80 (57%)	41 (29%)	20 (14%)	0 1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
34	BM	134/136 (98%)	100 (75%)	21 (16%)	13 (10%)	0 3
34	DM	134/136 (98%)	95 (71%)	27 (20%)	12 (9%)	0 3
35	BN	118/120 (98%)	92 (78%)	14 (12%)	12 (10%)	0 2
35	DN	118/120 (98%)	70 (59%)	36 (30%)	12 (10%)	0 2
36	BO	114/116 (98%)	88 (77%)	17 (15%)	9 (8%)	1 4
36	DO	114/116 (98%)	81 (71%)	26 (23%)	7 (6%)	1 8
37	BP	112/114 (98%)	74 (66%)	21 (19%)	17 (15%)	0 1
37	DP	112/114 (98%)	64 (57%)	29 (26%)	19 (17%)	0 0
38	BQ	115/117 (98%)	90 (78%)	17 (15%)	8 (7%)	1 6
38	DQ	115/117 (98%)	83 (72%)	20 (17%)	12 (10%)	0 2
39	BR	101/103 (98%)	80 (79%)	14 (14%)	7 (7%)	1 6
39	DR	101/103 (98%)	71 (70%)	18 (18%)	12 (12%)	0 1
40	BS	108/110 (98%)	84 (78%)	17 (16%)	7 (6%)	1 7
40	DS	108/110 (98%)	74 (68%)	25 (23%)	9 (8%)	0 4
41	BT	91/93 (98%)	49 (54%)	26 (29%)	16 (18%)	0 0
41	DT	91/93 (98%)	48 (53%)	28 (31%)	15 (16%)	0 1
42	BU	100/102 (98%)	67 (67%)	17 (17%)	16 (16%)	0 1
42	DU	100/102 (98%)	51 (51%)	28 (28%)	21 (21%)	0 0
43	BV	92/94 (98%)	80 (87%)	11 (12%)	1 (1%)	11 38
43	DV	92/94 (98%)	64 (70%)	21 (23%)	7 (8%)	1 5
44	BW	77/79 (98%)	28 (36%)	22 (29%)	27 (35%)	0 0
44	DW	77/79 (98%)	33 (43%)	23 (30%)	21 (27%)	0 0
45	BX	75/77 (97%)	62 (83%)	9 (12%)	4 (5%)	1 9
45	DX	75/77 (97%)	50 (67%)	17 (23%)	8 (11%)	0 2
46	BY	61/63 (97%)	44 (72%)	11 (18%)	6 (10%)	0 3
46	DY	61/63 (97%)	44 (72%)	12 (20%)	5 (8%)	0 4
47	BZ	56/58 (97%)	47 (84%)	7 (12%)	2 (4%)	2 16
47	DZ	56/58 (97%)	34 (61%)	17 (30%)	5 (9%)	0 3
48	B0	54/56 (96%)	41 (76%)	9 (17%)	4 (7%)	1 5
48	D0	54/56 (96%)	40 (74%)	8 (15%)	6 (11%)	0 2
49	B1	48/50 (96%)	39 (81%)	5 (10%)	4 (8%)	0 4

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
49	D1	48/50 (96%)	36 (75%)	8 (17%)	4 (8%)	0 4
50	B2	44/46 (96%)	36 (82%)	6 (14%)	2 (4%)	2 12
50	D2	44/46 (96%)	29 (66%)	11 (25%)	4 (9%)	0 3
51	B3	62/64 (97%)	50 (81%)	7 (11%)	5 (8%)	1 4
51	D3	62/64 (97%)	39 (63%)	18 (29%)	5 (8%)	1 4
52	B4	36/38 (95%)	29 (81%)	3 (8%)	4 (11%)	0 2
52	D4	36/38 (95%)	23 (64%)	8 (22%)	5 (14%)	0 1
54	CG	148/150 (99%)	100 (68%)	36 (24%)	12 (8%)	1 4
55	CM	111/113 (98%)	64 (58%)	35 (32%)	12 (11%)	0 2
56	CP	78/80 (98%)	50 (64%)	18 (23%)	10 (13%)	0 1
58	DF	176/178 (99%)	98 (56%)	46 (26%)	32 (18%)	0 0
All	All	11238/11447 (98%)	7713 (69%)	2283 (20%)	1242 (11%)	0 2

All (1242) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	18	GLN
2	AB	20	ARG
2	AB	33	ALA
2	AB	40	ILE
2	AB	72	LYS
2	AB	75	ALA
2	AB	119	GLN
2	AB	133	ALA
3	AC	60	ALA
3	AC	165	GLU
4	AD	26	ALA
4	AD	29	THR
4	AD	31	CYS
4	AD	34	GLU
4	AD	147	LYS
4	AD	173	ASP
4	AD	191	SER
4	AD	192	ALA
5	AE	44	ARG
5	AE	97	PRO
5	AE	121	ASN
5	AE	137	ARG

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Mol	Chain	Res	Type
5	AE	154	ALA
5	AE	157	GLY
6	AF	42	TRP
7	AG	93	VAL
7	AG	129	ASN
8	AH	49	LYS
8	AH	66	GLN
9	AI	8	THR
9	AI	40	ARG
9	AI	43	ALA
9	AI	55	ASP
9	AI	71	ILE
10	AJ	57	VAL
10	AJ	61	ALA
10	AJ	92	LEU
11	AK	51	PHE
11	AK	125	LYS
11	AK	126	ARG
12	AL	23	LEU
12	AL	43	LYS
12	AL	73	LEU
12	AL	75	GLU
12	AL	88	ASP
13	AM	46	GLU
14	AN	22	LYS
14	AN	27	LYS
14	AN	33	VAL
14	AN	51	PRO
14	AN	52	ARG
14	AN	61	ASN
14	AN	81	ILE
15	AO	17	ASP
16	AP	11	ALA
16	AP	80	LYS
17	AQ	12	VAL
17	AQ	16	MET
17	AQ	52	CYS
18	AR	47	ARG
19	AS	63	ASP
20	AT	3	ILE
20	AT	4	LYS
20	AT	5	SER

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Mol	Chain	Res	Type
20	AT	67	HIS
20	AT	76	ALA
21	AU	11	PHE
21	AU	12	ASP
21	AU	23	GLU
24	BC	9	SER
24	BC	57	HIS
24	BC	104	LEU
24	BC	105	ALA
24	BC	121	ALA
24	BC	199	HIS
24	BC	200	MET
24	BC	239	PHE
25	BD	43	ASP
25	BD	73	VAL
25	BD	92	VAL
25	BD	99	GLU
25	BD	103	ASP
25	BD	104	VAL
25	BD	122	VAL
25	BD	183	GLU
25	BD	191	GLY
25	BD	192	ALA
26	BE	8	ALA
26	BE	46	GLN
26	BE	79	ARG
26	BE	123	LYS
26	BE	175	ILE
27	BF	134	GLN
28	BG	7	PRO
28	BG	8	VAL
28	BG	31	GLU
28	BG	33	THR
28	BG	84	LYS
28	BG	94	ARG
28	BG	110	HIS
28	BG	118	ALA
28	BG	168	VAL
28	BG	170	THR
29	BH	3	VAL
29	BH	8	LYS
29	BH	9	VAL

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Mol	Chain	Res	Type
29	BH	10	ALA
29	BH	14	SER
29	BH	32	PRO
29	BH	33	GLN
30	BI	65	SER
30	BI	92	PRO
31	BJ	21	THR
31	BJ	44	TYR
31	BJ	45	THR
32	BK	16	ALA
32	BK	35	VAL
32	BK	49	ARG
32	BK	71	ARG
32	BK	72	PRO
32	BK	73	ASP
32	BK	93	GLN
32	BK	108	ARG
33	BL	15	ALA
33	BL	66	PHE
33	BL	88	GLY
34	BM	2	LEU
34	BM	14	LYS
34	BM	35	ALA
34	BM	36	VAL
34	BM	55	ARG
34	BM	56	ALA
34	BM	69	PRO
34	BM	77	PRO
35	BN	14	SER
35	BN	117	ASP
36	BO	3	LYS
36	BO	68	LYS
36	BO	112	GLU
37	BP	25	VAL
37	BP	33	GLU
37	BP	50	ARG
37	BP	105	LYS
38	BQ	91	ARG
39	BR	49	ILE
39	BR	55	ASP
39	BR	64	VAL
40	BS	3	THR

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Mol	Chain	Res	Type
40	BS	14	ALA
40	BS	19	LEU
41	BT	27	SER
41	BT	29	THR
41	BT	69	ARG
41	BT	86	THR
41	BT	88	LYS
42	BU	6	ARG
42	BU	51	LEU
42	BU	88	ASP
42	BU	98	ASN
43	BV	69	GLU
44	BW	9	THR
44	BW	18	LYS
44	BW	23	LYS
44	BW	30	VAL
44	BW	33	GLY
44	BW	40	ARG
44	BW	47	GLY
44	BW	50	VAL
44	BW	51	GLY
45	BX	34	SER
45	BX	53	LYS
46	BY	22	LEU
46	BY	23	ARG
46	BY	24	GLU
47	BZ	3	THR
48	B0	35	GLU
48	B0	51	ARG
49	B1	51	ALA
51	B3	31	ILE
52	B4	4	ARG
2	CB	81	ASP
2	CB	84	LEU
2	CB	102	ASN
2	CB	129	THR
2	CB	150	ILE
3	CC	59	PRO
3	CC	63	ILE
3	CC	130	ARG
3	CC	145	ALA
3	CC	164	THR

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Mol	Chain	Res	Type
4	CD	24	VAL
4	CD	26	ALA
4	CD	29	THR
4	CD	35	GLN
4	CD	80	ARG
4	CD	82	LYS
4	CD	182	LYS
4	CD	187	ARG
4	CD	191	SER
4	CD	192	ALA
5	CE	31	SER
5	CE	69	ASN
5	CE	100	GLU
6	CF	68	GLN
6	CF	82	ASP
6	CF	85	ILE
6	CF	98	GLU
54	CG	29	LEU
54	CG	30	MET
54	CG	31	VAL
54	CG	52	ARG
9	CI	71	ILE
10	CJ	57	VAL
11	CK	14	GLN
11	CK	70	ALA
11	CK	126	ARG
11	CK	127	ARG
12	CL	34	THR
55	CM	4	ALA
14	CN	53	ASP
14	CN	95	LEU
56	CP	63	GLN
20	CT	3	ILE
20	CT	43	LYS
21	CU	4	LYS
21	CU	15	LEU
21	CU	23	GLU
21	CU	32	ARG
21	CU	34	ARG
21	CU	35	GLU
21	CU	36	PHE
21	CU	38	GLU

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Mol	Chain	Res	Type
24	DC	9	SER
24	DC	28	PRO
24	DC	69	ASN
24	DC	121	ALA
24	DC	140	VAL
24	DC	141	HIS
24	DC	186	ASP
24	DC	269	ARG
25	DD	11	MET
25	DD	14	ILE
25	DD	31	ALA
25	DD	74	GLU
25	DD	102	ALA
25	DD	150	GLN
25	DD	164	GLN
25	DD	170	VAL
25	DD	194	PRO
26	DE	41	GLN
26	DE	62	GLN
26	DE	79	ARG
26	DE	99	LYS
26	DE	116	ASP
58	DF	10	GLU
58	DF	12	VAL
58	DF	32	LYS
58	DF	36	ASN
58	DF	41	GLU
58	DF	42	ALA
58	DF	112	ASP
58	DF	114	ARG
58	DF	120	SER
58	DF	122	ASP
58	DF	137	PHE
28	DG	49	LEU
28	DG	95	ALA
28	DG	149	ALA
28	DG	164	ALA
28	DG	165	ASP
29	DH	3	VAL
29	DH	9	VAL
29	DH	10	ALA
29	DH	61	VAL

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Mol	Chain	Res	Type
29	DH	76	GLU
29	DH	98	ASP
29	DH	102	ALA
30	DI	22	PRO
30	DI	23	VAL
30	DI	29	GLN
30	DI	69	VAL
31	DJ	45	THR
31	DJ	81	ILE
31	DJ	95	ARG
32	DK	16	ALA
32	DK	18	ARG
32	DK	49	ARG
32	DK	71	ARG
32	DK	93	GLN
32	DK	110	GLU
32	DK	120	PRO
33	DL	4	ASN
33	DL	41	ARG
33	DL	82	LEU
33	DL	85	VAL
33	DL	89	VAL
33	DL	101	ILE
33	DL	111	ILE
34	DM	2	LEU
34	DM	14	LYS
34	DM	72	PRO
34	DM	77	PRO
34	DM	135	VAL
35	DN	63	ARG
35	DN	104	ALA
36	DO	90	VAL
37	DP	25	VAL
37	DP	50	ARG
37	DP	83	ILE
37	DP	85	VAL
37	DP	112	ARG
40	DS	28	LYS
40	DS	33	LEU
40	DS	72	THR
41	DT	14	PRO
41	DT	15	HIS

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Mol	Chain	Res	Type
41	DT	20	ALA
41	DT	29	THR
41	DT	56	GLU
41	DT	88	LYS
42	DU	65	GLN
42	DU	82	VAL
42	DU	92	VAL
42	DU	95	PHE
42	DU	96	LYS
42	DU	97	SER
43	DV	56	PHE
43	DV	58	SER
44	DW	9	THR
44	DW	34	SER
44	DW	35	ILE
44	DW	71	LYS
48	D0	54	ILE
51	D3	3	ILE
51	D3	29	ARG
51	D3	51	LYS
52	D4	3	VAL
52	D4	20	ASP
2	AB	21	TYR
2	AB	37	VAL
2	AB	63	LYS
2	AB	96	LEU
2	AB	125	PHE
2	AB	176	ASN
2	AB	200	PRO
3	AC	16	PRO
3	AC	126	ARG
4	AD	23	GLY
4	AD	28	ASP
4	AD	33	ILE
4	AD	35	GLN
4	AD	124	VAL
4	AD	148	ALA
4	AD	150	LYS
4	AD	174	ALA
5	AE	11	GLN
6	AF	86	ARG
6	AF	91	ARG

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Mol	Chain	Res	Type
7	AG	95	ARG
8	AH	48	PHE
8	AH	88	LYS
9	AI	128	LYS
10	AJ	74	VAL
10	AJ	101	SER
11	AK	13	LYS
12	AL	24	GLU
13	AM	4	ALA
13	AM	84	CYS
14	AN	43	ALA
16	AP	10	GLY
16	AP	49	GLY
17	AQ	50	ASN
17	AQ	70	LYS
19	AS	48	ILE
20	AT	19	HIS
24	BC	77	VAL
24	BC	140	VAL
24	BC	196	ASN
25	BD	72	GLY
25	BD	118	PHE
25	BD	144	GLY
25	BD	175	LEU
25	BD	182	ALA
26	BE	70	SER
26	BE	80	SER
26	BE	153	LEU
27	BF	8	LYS
27	BF	11	VAL
27	BF	61	GLY
27	BF	175	PRO
28	BG	28	LYS
28	BG	30	GLY
28	BG	44	HIS
28	BG	60	GLY
28	BG	91	VAL
28	BG	164	ALA
29	BH	15	LEU
29	BH	28	ASN
29	BH	54	LEU
29	BH	81	ALA

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Mol	Chain	Res	Type
29	BH	83	LYS
29	BH	101	ASP
29	BH	107	GLY
29	BH	121	VAL
29	BH	131	SER
30	BI	30	GLN
30	BI	105	LEU
31	BJ	41	LYS
31	BJ	74	TYR
31	BJ	81	ILE
32	BK	13	ASN
32	BK	46	ALA
32	BK	92	GLU
33	BL	29	LYS
33	BL	81	ASP
33	BL	111	ILE
33	BL	114	GLY
34	BM	60	GLN
35	BN	80	PHE
35	BN	101	GLY
35	BN	118	ARG
36	BO	22	GLY
36	BO	113	ALA
37	BP	2	ASN
37	BP	4	ILE
37	BP	5	LYS
37	BP	65	ASN
37	BP	93	LYS
37	BP	103	THR
37	BP	104	GLY
38	BQ	86	SER
38	BQ	87	VAL
38	BQ	90	ASP
40	BS	64	ALA
40	BS	96	ILE
41	BT	38	ALA
41	BT	68	LYS
41	BT	70	HIS
42	BU	8	ASP
42	BU	18	LYS
42	BU	38	ILE
42	BU	63	ALA

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Mol	Chain	Res	Type
42	BU	87	GLU
42	BU	92	VAL
44	BW	14	ASP
44	BW	15	SER
44	BW	25	PHE
44	BW	26	GLY
44	BW	27	GLY
45	BX	2	ARG
48	B0	54	ILE
49	B1	4	ILE
49	B1	28	THR
50	B2	44	VAL
51	B3	22	LYS
52	B4	16	ILE
2	CB	148	GLY
3	CC	24	ASN
3	CC	140	ALA
3	CC	188	ALA
4	CD	25	ARG
4	CD	39	GLN
5	CE	38	VAL
5	CE	68	ARG
5	CE	75	LEU
5	CE	111	ARG
5	CE	144	GLU
6	CF	44	ARG
6	CF	99	ALA
54	CG	62	GLU
54	CG	113	LYS
8	CH	30	LYS
8	CH	88	LYS
9	CI	44	ARG
9	CI	54	VAL
9	CI	55	ASP
9	CI	58	GLU
9	CI	127	SER
10	CJ	34	ALA
10	CJ	44	THR
10	CJ	46	LYS
10	CJ	93	ALA
11	CK	88	PRO
11	CK	90	PRO

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Mol	Chain	Res	Type
11	CK	91	GLY
12	CL	7	VAL
12	CL	43	LYS
55	CM	11	HIS
55	CM	14	ALA
55	CM	45	SER
55	CM	49	GLU
55	CM	65	GLU
55	CM	76	ILE
14	CN	21	ALA
56	CP	47	GLU
17	CQ	12	VAL
17	CQ	69	THR
17	CQ	81	ALA
19	CS	46	LEU
20	CT	65	LEU
21	CU	7	GLU
21	CU	8	ASN
21	CU	9	GLU
21	CU	26	GLY
21	CU	31	VAL
24	DC	3	VAL
24	DC	13	ARG
24	DC	34	GLU
24	DC	36	ASN
24	DC	37	SER
24	DC	45	ASN
24	DC	94	LEU
24	DC	195	GLY
24	DC	217	PRO
24	DC	227	VAL
24	DC	232	GLY
25	DD	48	ILE
25	DD	93	GLY
25	DD	99	GLU
25	DD	118	PHE
25	DD	119	ALA
25	DD	143	PRO
25	DD	162	ALA
25	DD	175	LEU
25	DD	197	THR
26	DE	55	SER

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Mol	Chain	Res	Type
26	DE	69	ARG
26	DE	80	SER
26	DE	96	VAL
26	DE	127	GLU
26	DE	153	LEU
26	DE	165	HIS
58	DF	43	ILE
58	DF	67	THR
58	DF	76	PHE
58	DF	138	PRO
58	DF	145	VAL
58	DF	148	VAL
28	DG	59	ASP
28	DG	85	LYS
28	DG	86	LEU
28	DG	93	TYR
28	DG	125	PRO
28	DG	126	THR
28	DG	150	TYR
29	DH	66	ASN
29	DH	72	ILE
29	DH	97	ARG
29	DH	99	ILE
30	DI	30	GLN
30	DI	58	ILE
30	DI	62	ALA
30	DI	140	GLU
31	DJ	6	ALA
31	DJ	120	ARG
32	DK	17	ARG
32	DK	35	VAL
32	DK	46	ALA
32	DK	48	PRO
32	DK	72	PRO
34	DM	73	ILE
35	DN	2	ARG
35	DN	10	LEU
35	DN	13	ASN
35	DN	30	ARG
35	DN	82	GLU
35	DN	105	GLY
36	DO	27	VAL

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Mol	Chain	Res	Type
36	DO	72	ALA
37	DP	51	ASN
37	DP	93	LYS
37	DP	108	ARG
37	DP	109	ILE
38	DQ	86	SER
38	DQ	88	GLU
38	DQ	91	ARG
39	DR	3	ALA
39	DR	8	GLY
39	DR	29	THR
39	DR	65	ALA
39	DR	98	ILE
40	DS	40	ASN
40	DS	71	VAL
41	DT	39	THR
41	DT	68	LYS
42	DU	4	ILE
42	DU	8	ASP
42	DU	54	PRO
42	DU	64	ILE
42	DU	87	GLU
42	DU	88	ASP
42	DU	89	GLY
43	DV	33	GLY
43	DV	55	GLU
44	DW	18	LYS
44	DW	33	GLY
44	DW	36	ILE
44	DW	39	GLN
44	DW	46	ALA
44	DW	53	GLY
44	DW	83	ALA
45	DX	2	ARG
45	DX	34	SER
46	DY	9	LYS
46	DY	22	LEU
46	DY	37	LEU
47	DZ	4	ILE
47	DZ	13	ILE
48	D0	21	LEU
48	D0	53	VAL

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Mol	Chain	Res	Type
48	D0	55	ALA
49	D1	36	LYS
50	D2	24	THR
50	D2	40	ALA
51	D3	6	VAL
51	D3	22	LYS
52	D4	8	LYS
2	AB	17	HIS
2	AB	22	TRP
2	AB	41	ASN
2	AB	58	LYS
2	AB	148	GLY
2	AB	189	ASN
2	AB	210	THR
2	AB	219	THR
3	AC	11	LEU
3	AC	17	TRP
3	AC	35	ASP
3	AC	65	VAL
3	AC	100	ILE
3	AC	173	PRO
4	AD	152	SER
4	AD	159	GLU
5	AE	23	THR
5	AE	25	LYS
5	AE	98	ALA
5	AE	109	ALA
5	AE	149	PRO
5	AE	156	ARG
6	AF	54	LEU
6	AF	98	GLU
7	AG	6	ILE
9	AI	119	LYS
12	AL	33	CYS
13	AM	3	ILE
13	AM	113	LYS
14	AN	80	ARG
14	AN	91	GLU
17	AQ	11	VAL
17	AQ	49	ASN
17	AQ	67	SER
18	AR	54	LEU

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Mol	Chain	Res	Type
19	AS	27	LYS
19	AS	79	TYR
21	AU	8	ASN
21	AU	37	TYR
24	BC	64	VAL
24	BC	94	LEU
24	BC	113	ASP
24	BC	149	LYS
24	BC	150	GLY
24	BC	167	ASP
25	BD	93	GLY
25	BD	107	VAL
25	BD	169	ARG
25	BD	170	VAL
25	BD	184	ARG
26	BE	11	ALA
26	BE	69	ARG
26	BE	86	ALA
27	BF	20	ASN
27	BF	54	ALA
27	BF	174	PHE
28	BG	2	ARG
28	BG	9	VAL
28	BG	45	ALA
28	BG	61	TRP
29	BH	34	GLY
29	BH	40	THR
29	BH	106	ALA
30	BI	59	THR
31	BJ	13	ARG
32	BK	54	LYS
32	BK	118	LEU
32	BK	119	ALA
33	BL	38	GLN
34	BM	15	GLY
34	BM	54	THR
35	BN	2	ARG
35	BN	94	TYR
37	BP	51	ASN
38	BQ	4	LYS
38	BQ	115	ALA
44	BW	34	SER

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Mol	Chain	Res	Type
44	BW	39	GLN
44	BW	45	HIS
44	BW	76	ARG
45	BX	17	ARG
46	BY	37	LEU
49	B1	14	ALA
50	B2	42	LEU
51	B3	27	ASN
51	B3	33	THR
52	B4	8	LYS
52	B4	37	GLN
2	CB	85	SER
2	CB	128	LEU
2	CB	203	ASP
2	CB	205	ALA
3	CC	87	ARG
3	CC	173	PRO
3	CC	178	ARG
3	CC	180	ASP
3	CC	186	SER
3	CC	205	GLU
4	CD	33	ILE
4	CD	72	ARG
6	CF	92	THR
6	CF	94	HIS
54	CG	36	SER
54	CG	133	ALA
8	CH	34	ALA
8	CH	43	GLY
9	CI	11	ARG
10	CJ	82	LYS
10	CJ	83	THR
10	CJ	87	LEU
12	CL	8	ARG
12	CL	16	ALA
55	CM	46	GLU
55	CM	77	LYS
15	CO	13	GLU
15	CO	87	ARG
56	CP	31	ARG
56	CP	46	LYS
56	CP	49	GLY

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Mol	Chain	Res	Type
56	CP	53	ASP
17	CQ	31	PRO
17	CQ	52	CYS
17	CQ	68	LYS
17	CQ	78	VAL
19	CS	4	LEU
20	CT	72	ALA
21	CU	11	PHE
24	DC	59	GLN
24	DC	98	GLY
24	DC	239	PHE
25	DD	77	ARG
25	DD	107	VAL
25	DD	112	THR
25	DD	145	SER
25	DD	169	ARG
25	DD	176	ASP
26	DE	13	THR
26	DE	24	ASN
26	DE	63	LYS
26	DE	166	LYS
26	DE	188	MET
58	DF	8	LYS
58	DF	37	MET
58	DF	116	LEU
58	DF	133	GLU
28	DG	11	PRO
28	DG	40	VAL
28	DG	45	ALA
28	DG	80	GLU
28	DG	83	THR
28	DG	91	VAL
28	DG	136	ASP
29	DH	104	THR
29	DH	144	VAL
30	DI	19	PRO
30	DI	35	MET
30	DI	51	GLY
30	DI	52	LEU
31	DJ	44	TYR
31	DJ	87	ALA
31	DJ	113	PRO

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Mol	Chain	Res	Type
32	DK	14	SER
33	DL	29	LYS
33	DL	48	ARG
33	DL	66	PHE
33	DL	88	GLY
33	DL	99	ASN
33	DL	115	GLU
34	DM	69	PRO
34	DM	95	LEU
35	DN	8	ARG
35	DN	71	ARG
37	DP	33	GLU
37	DP	42	PHE
37	DP	94	ALA
38	DQ	29	ARG
38	DQ	58	GLN
39	DR	15	SER
40	DS	61	ASN
41	DT	18	GLU
41	DT	19	LYS
41	DT	38	ALA
42	DU	40	LEU
43	DV	15	GLY
44	DW	26	GLY
45	DX	69	GLU
48	D0	32	THR
49	D1	38	PHE
52	D4	4	ARG
3	AC	88	LYS
3	AC	191	THR
3	AC	192	TYR
4	AD	132	ALA
4	AD	134	TYR
4	AD	167	PRO
4	AD	181	PHE
4	AD	197	HIS
5	AE	102	THR
5	AE	112	ALA
6	AF	88	MET
6	AF	94	HIS
7	AG	130	LYS
9	AI	37	TYR

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Mol	Chain	Res	Type
9	AI	120	ALA
11	AK	97	ARG
11	AK	124	LYS
13	AM	36	ALA
14	AN	41	TRP
15	AO	24	THR
15	AO	45	HIS
16	AP	36	VAL
17	AQ	5	ARG
17	AQ	10	ARG
19	AS	5	LYS
19	AS	42	ASN
21	AU	36	PHE
24	BC	59	GLN
24	BC	237	ARG
25	BD	71	ALA
25	BD	95	SER
25	BD	145	SER
25	BD	173	GLN
26	BE	5	LEU
26	BE	6	LYS
26	BE	43	THR
26	BE	61	ARG
26	BE	116	ASP
27	BF	83	PRO
27	BF	111	ARG
27	BF	113	PHE
27	BF	133	GLU
27	BF	147	ARG
27	BF	149	ARG
28	BG	113	ASP
29	BH	12	LEU
29	BH	16	GLY
29	BH	31	VAL
30	BI	6	ALA
30	BI	83	ALA
30	BI	89	SER
31	BJ	2	LYS
31	BJ	111	LYS
32	BK	3	GLN
32	BK	17	ARG
32	BK	50	GLY

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Mol	Chain	Res	Type
35	BN	15	SER
35	BN	91	ALA
36	BO	66	GLY
36	BO	67	ASN
37	BP	15	ASP
37	BP	20	ARG
37	BP	52	ARG
38	BQ	5	ARG
39	BR	53	PHE
39	BR	98	ILE
41	BT	40	LYS
41	BT	41	ALA
41	BT	84	TYR
42	BU	83	GLY
42	BU	85	ARG
42	BU	96	LYS
44	BW	12	GLY
44	BW	37	VAL
44	BW	52	CYS
44	BW	78	PHE
46	BY	46	VAL
46	BY	57	LEU
47	BZ	34	THR
2	CB	18	GLN
2	CB	200	PRO
3	CC	2	GLN
4	CD	47	LEU
5	CE	29	ILE
5	CE	104	ILE
54	CG	10	LYS
8	CH	2	MET
8	CH	29	SER
8	CH	58	LEU
9	CI	52	GLU
9	CI	103	VAL
9	CI	119	LYS
12	CL	47	ALA
12	CL	85	ARG
55	CM	42	VAL
55	CM	93	GLY
15	CO	45	HIS
56	CP	69	ASP

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Mol	Chain	Res	Type
56	CP	78	VAL
19	CS	3	SER
19	CS	7	GLY
19	CS	79	TYR
20	CT	61	ALA
20	CT	68	LYS
20	CT	82	ILE
21	CU	10	PRO
21	CU	30	GLU
21	CU	43	GLU
24	DC	196	ASN
24	DC	204	LEU
24	DC	237	ARG
25	DD	95	SER
25	DD	161	MET
26	DE	22	ASP
26	DE	45	ALA
26	DE	81	GLY
26	DE	123	LYS
26	DE	126	VAL
26	DE	148	ILE
58	DF	70	ARG
58	DF	86	CYS
58	DF	104	THR
58	DF	113	PHE
28	DG	9	VAL
28	DG	46	ASP
28	DG	92	GLY
28	DG	117	PRO
28	DG	169	ARG
29	DH	111	ALA
29	DH	121	VAL
30	DI	119	ALA
31	DJ	13	ARG
31	DJ	43	GLU
31	DJ	112	GLY
32	DK	6	THR
32	DK	88	ASN
32	DK	89	ASN
32	DK	103	VAL
33	DL	15	ALA
33	DL	19	LEU

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Mol	Chain	Res	Type
33	DL	93	ASN
33	DL	100	ILE
34	DM	111	GLU
34	DM	134	THR
35	DN	72	ASP
36	DO	3	LYS
36	DO	8	ILE
37	DP	20	ARG
38	DQ	5	ARG
38	DQ	45	ALA
38	DQ	87	VAL
39	DR	40	MET
39	DR	53	PHE
39	DR	57	GLY
39	DR	89	HIS
40	DS	3	THR
40	DS	96	ILE
41	DT	11	LEU
42	DU	101	THR
43	DV	79	ARG
44	DW	16	GLU
44	DW	23	LYS
44	DW	41	GLY
44	DW	76	ARG
45	DX	5	GLN
45	DX	25	LYS
46	DY	2	LYS
46	DY	46	VAL
47	DZ	30	ARG
48	D0	26	SER
49	D1	4	ILE
49	D1	50	GLU
50	D2	39	ARG
50	D2	43	THR
52	D4	16	ILE
2	AB	71	THR
2	AB	120	SER
2	AB	136	ARG
2	AB	142	LYS
2	AB	150	ILE
2	AB	211	LEU
3	AC	107	LYS

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Mol	Chain	Res	Type
4	AD	22	SER
4	AD	100	VAL
4	AD	165	GLU
4	AD	166	LYS
5	AE	50	GLY
5	AE	88	HIS
5	AE	110	MET
5	AE	133	ILE
6	AF	7	VAL
6	AF	39	LEU
6	AF	56	LYS
6	AF	63	ASN
6	AF	68	GLN
7	AG	30	MET
8	AH	33	VAL
10	AJ	30	LYS
10	AJ	35	GLN
10	AJ	36	VAL
10	AJ	93	ALA
11	AK	15	VAL
11	AK	88	PRO
11	AK	102	ALA
12	AL	122	LYS
13	AM	11	HIS
13	AM	104	ASN
14	AN	44	VAL
17	AQ	17	GLU
19	AS	3	SER
19	AS	22	VAL
21	AU	33	ARG
24	BC	28	PRO
24	BC	37	SER
24	BC	109	LEU
24	BC	110	LYS
25	BD	109	VAL
25	BD	150	GLN
26	BE	83	VAL
26	BE	96	VAL
27	BF	28	PRO
28	BG	16	VAL
28	BG	38	ASP
28	BG	97	VAL

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Mol	Chain	Res	Type
29	BH	89	LYS
29	BH	125	THR
30	BI	3	LYS
30	BI	20	SER
31	BJ	14	ASP
31	BJ	125	TYR
32	BK	29	HIS
32	BK	48	PRO
34	BM	73	ILE
34	BM	134	THR
35	BN	30	ARG
35	BN	119	SER
36	BO	100	HIS
39	BR	51	VAL
39	BR	65	ALA
41	BT	55	VAL
41	BT	83	ALA
42	BU	53	GLN
42	BU	101	THR
44	BW	36	ILE
44	BW	48	ALA
44	BW	74	LYS
51	B3	30	HIS
2	CB	73	ARG
2	CB	179	GLY
3	CC	65	VAL
4	CD	4	LEU
4	CD	27	ILE
4	CD	107	GLY
5	CE	81	GLN
5	CE	112	ALA
54	CG	99	ALA
8	CH	41	GLU
8	CH	66	GLN
8	CH	98	LEU
10	CJ	36	VAL
10	CJ	62	ARG
10	CJ	74	VAL
10	CJ	75	ASP
14	CN	69	PRO
19	CS	54	ARG
20	CT	67	HIS

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Mol	Chain	Res	Type
21	CU	22	CYS
24	DC	64	VAL
24	DC	106	PRO
24	DC	190	THR
24	DC	226	PRO
25	DD	44	GLY
25	DD	109	VAL
25	DD	136	ASN
26	DE	60	TRP
26	DE	187	VAL
58	DF	31	GLU
58	DF	82	TYR
58	DF	94	ARG
58	DF	156	THR
28	DG	152	ARG
29	DH	103	VAL
30	DI	31	GLY
30	DI	83	ALA
31	DJ	25	LEU
31	DJ	83	GLY
32	DK	104	THR
32	DK	119	ALA
34	DM	70	ASP
35	DN	85	PRO
36	DO	42	PRO
36	DO	43	ASN
37	DP	63	ILE
37	DP	65	ASN
37	DP	113	LEU
38	DQ	23	TYR
41	DT	50	LEU
42	DU	17	ASP
42	DU	41	VAL
43	DV	84	PRO
44	DW	55	ASP
44	DW	78	PHE
45	DX	27	ARG
45	DX	41	SER
47	DZ	27	GLY
2	AB	163	ILE
2	AB	169	HIS
8	AH	82	LEU

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Mol	Chain	Res	Type
9	AI	56	MET
10	AJ	41	PRO
10	AJ	62	ARG
12	AL	86	VAL
16	AP	15	PRO
16	AP	42	ILE
24	BC	141	HIS
24	BC	142	ASN
24	BC	248	GLY
25	BD	119	ALA
29	BH	68	ARG
29	BH	103	VAL
30	BI	7	TYR
32	BK	69	VAL
33	BL	57	LEU
35	BN	32	GLU
36	BO	77	ALA
38	BQ	111	LYS
41	BT	24	MET
41	BT	49	LYS
44	BW	41	GLY
48	B0	37	HIS
2	CB	163	ILE
3	CC	128	MET
4	CD	166	LYS
6	CF	63	ASN
12	CL	117	GLY
14	CN	51	PRO
56	CP	43	ALA
21	CU	37	TYR
25	DD	75	ALA
58	DF	125	GLY
58	DF	175	PRO
28	DG	170	THR
29	DH	143	ILE
30	DI	87	SER
33	DL	30	THR
37	DP	32	VAL
37	DP	34	GLY
37	DP	104	GLY
38	DQ	6	GLY
38	DQ	64	ILE

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Mol	Chain	Res	Type
42	DU	12	VAL
42	DU	35	VAL
42	DU	52	ASN
44	DW	49	ASN
44	DW	57	THR
45	DX	63	ILE
4	AD	172	VAL
8	AH	77	VAL
17	AQ	75	VAL
21	AU	52	VAL
30	BI	97	VAL
37	BP	34	GLY
37	BP	91	VAL
3	CC	100	ILE
4	CD	83	GLY
5	CE	113	VAL
24	DC	2	VAL
24	DC	233	GLY
25	DD	122	VAL
26	DE	129	PRO
58	DF	88	VAL
3	AC	14	VAL
5	AE	113	VAL
15	AO	74	VAL
29	BH	80	ILE
29	BH	138	VAL
33	BL	65	GLY
40	BS	29	VAL
41	BT	16	VAL
3	CC	12	GLY
55	CM	50	GLY
24	DC	246	PRO
26	DE	82	GLY
28	DG	155	PRO
30	DI	138	VAL
33	DL	65	GLY
41	DT	16	VAL
2	AB	28	PRO
10	AJ	33	GLY
10	AJ	42	LEU
12	AL	117	GLY
30	BI	23	VAL

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Mol	Chain	Res	Type
54	CG	88	VAL
10	CJ	33	GLY
56	CP	42	ILE
19	CS	29	PRO
26	DE	174	GLY
28	DG	53	PRO
28	DG	119	GLY
29	DH	134	VAL
31	DJ	110	PRO
32	DK	2	ILE
39	DR	27	ILE
39	DR	52	PRO
40	DS	29	VAL
41	DT	53	VAL
42	DU	47	PRO
44	DW	22	VAL
3	AC	89	VAL
12	AL	97	VAL
13	AM	42	VAL
16	AP	78	VAL
19	AS	61	VAL
21	AU	26	GLY
25	BD	151	THR
30	BI	31	GLY
42	BU	54	PRO
44	BW	70	VAL
3	CC	77	GLY
5	CE	132	PRO
5	CE	133	ILE
54	CG	68	VAL
8	CH	77	VAL
17	CQ	4	ILE
31	DJ	56	VAL
33	DL	114	GLY
34	DM	36	VAL
47	DZ	32	GLY
11	AK	103	GLY
13	AM	9	PRO
13	AM	23	GLY
40	BS	63	GLY
9	CI	50	PRO
28	DG	16	VAL

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Mol	Chain	Res	Type
28	DG	97	VAL
38	DQ	7	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	AB	180/180 (100%)	148 (82%)	32 (18%)	2 7
2	CB	180/180 (100%)	155 (86%)	25 (14%)	3 15
3	AC	170/170 (100%)	137 (81%)	33 (19%)	1 6
3	CC	170/170 (100%)	152 (89%)	18 (11%)	6 24
4	AD	172/172 (100%)	148 (86%)	24 (14%)	3 15
4	CD	172/172 (100%)	133 (77%)	39 (23%)	1 4
5	AE	113/113 (100%)	85 (75%)	28 (25%)	1 2
5	CE	113/113 (100%)	86 (76%)	27 (24%)	1 3
6	AF	87/87 (100%)	74 (85%)	13 (15%)	3 13
6	CF	87/87 (100%)	77 (88%)	10 (12%)	5 21
7	AG	124/124 (100%)	107 (86%)	17 (14%)	3 16
8	AH	104/104 (100%)	86 (83%)	18 (17%)	2 9
8	CH	104/104 (100%)	91 (88%)	13 (12%)	4 19
9	AI	105/105 (100%)	85 (81%)	20 (19%)	1 6
9	CI	105/105 (100%)	91 (87%)	14 (13%)	4 17
10	AJ	86/86 (100%)	72 (84%)	14 (16%)	2 10
10	CJ	86/86 (100%)	75 (87%)	11 (13%)	4 18
11	AK	90/90 (100%)	77 (86%)	13 (14%)	3 14
11	CK	90/90 (100%)	78 (87%)	12 (13%)	4 17
12	AL	103/103 (100%)	82 (80%)	21 (20%)	1 5
12	CL	103/103 (100%)	85 (82%)	18 (18%)	2 8
13	AM	92/92 (100%)	88 (96%)	4 (4%)	26 52

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
14	AN	79/83 (95%)	70 (89%)	9 (11%)	5 22
14	CN	79/83 (95%)	68 (86%)	11 (14%)	3 15
15	AO	76/76 (100%)	72 (95%)	4 (5%)	20 48
15	CO	76/76 (100%)	70 (92%)	6 (8%)	11 35
16	AP	65/65 (100%)	57 (88%)	8 (12%)	4 19
17	AQ	74/74 (100%)	58 (78%)	16 (22%)	1 4
17	CQ	74/74 (100%)	62 (84%)	12 (16%)	2 11
18	AR	48/48 (100%)	45 (94%)	3 (6%)	16 43
18	CR	48/48 (100%)	42 (88%)	6 (12%)	4 19
19	AS	70/70 (100%)	60 (86%)	10 (14%)	3 14
19	CS	70/70 (100%)	65 (93%)	5 (7%)	13 39
20	AT	65/65 (100%)	48 (74%)	17 (26%)	0 2
20	CT	65/65 (100%)	53 (82%)	12 (18%)	1 7
21	AU	44/44 (100%)	35 (80%)	9 (20%)	1 5
21	CU	44/44 (100%)	35 (80%)	9 (20%)	1 5
24	BC	216/216 (100%)	167 (77%)	49 (23%)	1 4
24	DC	216/216 (100%)	186 (86%)	30 (14%)	3 15
25	BD	164/164 (100%)	129 (79%)	35 (21%)	1 4
25	DD	164/164 (100%)	137 (84%)	27 (16%)	2 10
26	BE	165/165 (100%)	124 (75%)	41 (25%)	1 2
26	DE	165/165 (100%)	148 (90%)	17 (10%)	7 25
27	BF	148/148 (100%)	122 (82%)	26 (18%)	2 8
28	BG	137/137 (100%)	102 (74%)	35 (26%)	0 2
28	DG	137/137 (100%)	117 (85%)	20 (15%)	3 14
29	BH	114/114 (100%)	97 (85%)	17 (15%)	3 13
29	DH	114/114 (100%)	95 (83%)	19 (17%)	2 10
30	BI	109/109 (100%)	95 (87%)	14 (13%)	4 18
30	DI	109/109 (100%)	102 (94%)	7 (6%)	16 42
31	BJ	116/116 (100%)	86 (74%)	30 (26%)	0 2
31	DJ	116/116 (100%)	97 (84%)	19 (16%)	2 10
32	BK	103/103 (100%)	76 (74%)	27 (26%)	0 2

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
32	DK	103/103 (100%)	79 (77%)	24 (23%)	1 3
33	BL	102/102 (100%)	72 (71%)	30 (29%)	0 1
33	DL	102/102 (100%)	81 (79%)	21 (21%)	1 5
34	BM	109/109 (100%)	83 (76%)	26 (24%)	1 3
34	DM	109/109 (100%)	92 (84%)	17 (16%)	2 11
35	BN	100/100 (100%)	77 (77%)	23 (23%)	1 3
35	DN	100/100 (100%)	84 (84%)	16 (16%)	2 11
36	BO	86/86 (100%)	61 (71%)	25 (29%)	0 1
36	DO	86/86 (100%)	77 (90%)	9 (10%)	6 24
37	BP	99/99 (100%)	69 (70%)	30 (30%)	0 1
37	DP	99/99 (100%)	90 (91%)	9 (9%)	9 30
38	BQ	89/89 (100%)	65 (73%)	24 (27%)	0 2
38	DQ	89/89 (100%)	70 (79%)	19 (21%)	1 4
39	BR	84/84 (100%)	69 (82%)	15 (18%)	2 7
39	DR	84/84 (100%)	72 (86%)	12 (14%)	3 14
40	BS	93/93 (100%)	68 (73%)	25 (27%)	0 2
40	DS	93/93 (100%)	78 (84%)	15 (16%)	2 11
41	BT	80/80 (100%)	61 (76%)	19 (24%)	1 3
41	DT	80/80 (100%)	74 (92%)	6 (8%)	12 37
42	BU	83/83 (100%)	60 (72%)	23 (28%)	0 1
42	DU	83/83 (100%)	72 (87%)	11 (13%)	4 17
43	BV	78/78 (100%)	57 (73%)	21 (27%)	0 2
43	DV	78/78 (100%)	69 (88%)	9 (12%)	5 21
44	BW	59/59 (100%)	39 (66%)	20 (34%)	0 1
44	DW	59/59 (100%)	46 (78%)	13 (22%)	1 4
45	BX	67/67 (100%)	54 (81%)	13 (19%)	1 6
45	DX	67/67 (100%)	57 (85%)	10 (15%)	3 13
46	BY	55/55 (100%)	39 (71%)	16 (29%)	0 1
46	DY	55/55 (100%)	50 (91%)	5 (9%)	9 30
47	BZ	48/48 (100%)	33 (69%)	15 (31%)	0 1
47	DZ	48/48 (100%)	39 (81%)	9 (19%)	1 7

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
48	B0	47/47 (100%)	38 (81%)	9 (19%)	1 6
48	D0	47/47 (100%)	40 (85%)	7 (15%)	3 13
49	B1	45/45 (100%)	35 (78%)	10 (22%)	1 4
49	D1	45/45 (100%)	41 (91%)	4 (9%)	9 30
50	B2	38/38 (100%)	31 (82%)	7 (18%)	1 7
50	D2	38/38 (100%)	32 (84%)	6 (16%)	2 11
51	B3	51/51 (100%)	42 (82%)	9 (18%)	2 8
51	D3	51/51 (100%)	42 (82%)	9 (18%)	2 8
52	B4	34/34 (100%)	27 (79%)	7 (21%)	1 5
52	D4	34/34 (100%)	30 (88%)	4 (12%)	5 21
54	CG	123/123 (100%)	100 (81%)	23 (19%)	1 7
55	CM	91/91 (100%)	82 (90%)	9 (10%)	7 26
56	CP	65/65 (100%)	56 (86%)	9 (14%)	3 15
58	DF	149/149 (100%)	120 (80%)	29 (20%)	1 6
All	All	9331/9339 (100%)	7685 (82%)	1646 (18%)	2 8

All (1646) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	10	LYS
2	AB	13	VAL
2	AB	19	THR
2	AB	20	ARG
2	AB	30	ILE
2	AB	36	LYS
2	AB	38	HIS
2	AB	42	LEU
2	AB	56	LEU
2	AB	57	ASN
2	AB	67	LEU
2	AB	86	CYS
2	AB	88	GLN
2	AB	90	PHE
2	AB	100	LEU
2	AB	108	GLN
2	AB	115	ASP
2	AB	116	LEU

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Mol	Chain	Res	Type
2	AB	119	GLN
2	AB	125	PHE
2	AB	128	LEU
2	AB	130	LYS
2	AB	141	GLU
2	AB	142	LYS
2	AB	143	LEU
2	AB	170	ILE
2	AB	185	ILE
2	AB	193	ASP
2	AB	206	ILE
2	AB	207	ARG
2	AB	211	LEU
2	AB	219	THR
3	AC	2	GLN
3	AC	13	ILE
3	AC	17	TRP
3	AC	24	ASN
3	AC	26	LYS
3	AC	32	LEU
3	AC	35	ASP
3	AC	36	PHE
3	AC	42	LEU
3	AC	50	SER
3	AC	52	SER
3	AC	54	ILE
3	AC	57	GLU
3	AC	61	LYS
3	AC	79	LYS
3	AC	89	VAL
3	AC	102	ILE
3	AC	118	SER
3	AC	119	ILE
3	AC	127	VAL
3	AC	128	MET
3	AC	139	ASN
3	AC	143	LEU
3	AC	148	ILE
3	AC	152	VAL
3	AC	156	LEU
3	AC	161	ILE
3	AC	164	THR

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Mol	Chain	Res	Type
3	AC	165	GLU
3	AC	166	TRP
3	AC	177	LEU
3	AC	184	ASN
3	AC	199	VAL
4	AD	11	SER
4	AD	25	ARG
4	AD	31	CYS
4	AD	52	VAL
4	AD	54	LEU
4	AD	55	ARG
4	AD	58	GLN
4	AD	69	ARG
4	AD	88	ASN
4	AD	92	LEU
4	AD	115	GLN
4	AD	122	ILE
4	AD	128	VAL
4	AD	131	ILE
4	AD	141	VAL
4	AD	144	ILE
4	AD	155	LYS
4	AD	160	LEU
4	AD	166	LYS
4	AD	170	LEU
4	AD	178	GLU
4	AD	196	GLU
4	AD	199	ILE
4	AD	205	LYS
5	AE	9	GLU
5	AE	11	GLN
5	AE	14	LEU
5	AE	18	ASN
5	AE	25	LYS
5	AE	28	ARG
5	AE	31	SER
5	AE	37	VAL
5	AE	45	VAL
5	AE	68	ARG
5	AE	75	LEU
5	AE	79	THR
5	AE	81	GLN

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Mol	Chain	Res	Type
5	AE	87	VAL
5	AE	93	VAL
5	AE	100	GLU
5	AE	113	VAL
5	AE	116	VAL
5	AE	119	VAL
5	AE	121	ASN
5	AE	123	LEU
5	AE	135	VAL
5	AE	136	VAL
5	AE	141	ASP
5	AE	146	MET
5	AE	147	ASN
5	AE	155	LYS
5	AE	156	ARG
6	AF	7	VAL
6	AF	14	GLN
6	AF	29	ILE
6	AF	38	ARG
6	AF	46	GLN
6	AF	54	LEU
6	AF	55	HIS
6	AF	68	GLN
6	AF	69	GLU
6	AF	77	THR
6	AF	84	VAL
6	AF	86	ARG
6	AF	93	LYS
7	AG	3	ARG
7	AG	6	ILE
7	AG	8	GLN
7	AG	12	LEU
7	AG	20	GLU
7	AG	21	LEU
7	AG	22	LEU
7	AG	37	THR
7	AG	62	GLU
7	AG	68	VAL
7	AG	83	THR
7	AG	85	GLN
7	AG	93	VAL
7	AG	105	GLU

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Mol	Chain	Res	Type
7	AG	110	ARG
7	AG	117	LEU
7	AG	123	LEU
8	AH	10	LEU
8	AH	21	LYS
8	AH	29	SER
8	AH	63	LYS
8	AH	65	PHE
8	AH	68	LYS
8	AH	72	GLU
8	AH	76	ARG
8	AH	79	ARG
8	AH	82	LEU
8	AH	89	ASP
8	AH	98	LEU
8	AH	109	VAL
8	AH	110	MET
8	AH	116	ARG
8	AH	120	LEU
8	AH	124	ILE
8	AH	128	VAL
9	AI	4	GLN
9	AI	13	SER
9	AI	28	VAL
9	AI	29	ILE
9	AI	35	GLU
9	AI	42	THR
9	AI	44	ARG
9	AI	47	VAL
9	AI	48	ARG
9	AI	54	VAL
9	AI	56	MET
9	AI	62	LEU
9	AI	67	LYS
9	AI	86	LEU
9	AI	87	MET
9	AI	88	GLU
9	AI	98	ARG
9	AI	115	VAL
9	AI	125	GLN
9	AI	128	LYS
10	AJ	6	ILE

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Mol	Chain	Res	Type
10	AJ	17	LEU
10	AJ	22	THR
10	AJ	32	THR
10	AJ	35	GLN
10	AJ	48	ARG
10	AJ	50	THR
10	AJ	59	LYS
10	AJ	63	ASP
10	AJ	70	HIS
10	AJ	73	LEU
10	AJ	87	LEU
10	AJ	89	ARG
10	AJ	96	VAL
11	AK	17	ASP
11	AK	30	ILE
11	AK	51	PHE
11	AK	64	VAL
11	AK	76	TYR
11	AK	78	ILE
11	AK	82	GLU
11	AK	96	ILE
11	AK	100	ASN
11	AK	106	ILE
11	AK	124	LYS
11	AK	125	LYS
11	AK	128	VAL
12	AL	3	VAL
12	AL	9	LYS
12	AL	15	VAL
12	AL	18	SER
12	AL	20	VAL
12	AL	26	CYS
12	AL	28	GLN
12	AL	35	ARG
12	AL	43	LYS
12	AL	48	LEU
12	AL	49	ARG
12	AL	51	VAL
12	AL	62	VAL
12	AL	63	THR
12	AL	74	GLN
12	AL	81	ILE

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Mol	Chain	Res	Type
12	AL	82	ARG
12	AL	87	LYS
12	AL	88	ASP
12	AL	101	LEU
12	AL	109	ARG
13	AM	6	ILE
13	AM	53	ASP
13	AM	58	GLU
13	AM	106	ARG
14	AN	11	LYS
14	AN	13	VAL
14	AN	27	LYS
14	AN	51	PRO
14	AN	59	GLN
14	AN	61	ASN
14	AN	73	LEU
14	AN	83	VAL
14	AN	99	SER
15	AO	34	GLN
15	AO	57	ARG
15	AO	65	LEU
15	AO	86	LEU
16	AP	1	MET
16	AP	6	LEU
16	AP	19	VAL
16	AP	46	LYS
16	AP	55	ASP
16	AP	67	ILE
16	AP	68	SER
16	AP	80	LYS
17	AQ	3	LYS
17	AQ	16	MET
17	AQ	20	ILE
17	AQ	21	VAL
17	AQ	28	VAL
17	AQ	29	LYS
17	AQ	37	ILE
17	AQ	47	ASP
17	AQ	49	ASN
17	AQ	50	ASN
17	AQ	51	GLU
17	AQ	54	ILE

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Mol	Chain	Res	Type
17	AQ	74	LEU
17	AQ	75	VAL
17	AQ	78	VAL
17	AQ	80	LYS
18	AR	20	ILE
18	AR	35	SER
18	AR	54	LEU
19	AS	20	LYS
19	AS	42	ASN
19	AS	48	ILE
19	AS	54	ARG
19	AS	55	GLN
19	AS	57	VAL
19	AS	59	VAL
19	AS	61	VAL
19	AS	64	GLU
19	AS	79	TYR
20	AT	4	LYS
20	AT	5	SER
20	AT	11	ILE
20	AT	14	GLU
20	AT	17	ARG
20	AT	23	ARG
20	AT	26	MET
20	AT	27	MET
20	AT	33	LYS
20	AT	35	TYR
20	AT	38	ILE
20	AT	65	LEU
20	AT	67	HIS
20	AT	68	LYS
20	AT	75	LYS
20	AT	77	ASN
20	AT	78	LEU
21	AU	9	GLU
21	AU	15	LEU
21	AU	19	LYS
21	AU	27	VAL
21	AU	33	ARG
21	AU	38	GLU
21	AU	39	LYS
21	AU	42	THR

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Mol	Chain	Res	Type
21	AU	45	LYS
24	BC	12	ARG
24	BC	20	ASN
24	BC	23	LEU
24	BC	27	LYS
24	BC	35	LYS
24	BC	38	LYS
24	BC	43	ASN
24	BC	49	THR
24	BC	70	LYS
24	BC	73	ILE
24	BC	77	VAL
24	BC	79	ARG
24	BC	82	TYR
24	BC	85	ASN
24	BC	90	ILE
24	BC	93	VAL
24	BC	103	ILE
24	BC	104	LEU
24	BC	109	LEU
24	BC	110	LYS
24	BC	114	GLN
24	BC	115	ILE
24	BC	120	ASP
24	BC	123	ILE
24	BC	142	ASN
24	BC	155	ARG
24	BC	163	ILE
24	BC	164	VAL
24	BC	166	ARG
24	BC	171	VAL
24	BC	172	THR
24	BC	173	LEU
24	BC	175	LEU
24	BC	193	GLU
24	BC	202	ARG
24	BC	203	VAL
24	BC	211	ARG
24	BC	215	VAL
24	BC	216	ARG
24	BC	224	MET
24	BC	227	VAL

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Mol	Chain	Res	Type
24	BC	250	GLN
24	BC	251	THR
24	BC	252	LYS
24	BC	254	LYS
24	BC	256	THR
24	BC	267	VAL
24	BC	268	ARG
24	BC	270	ARG
25	BD	9	VAL
25	BD	14	ILE
25	BD	16	THR
25	BD	33	ARG
25	BD	38	LYS
25	BD	42	ASN
25	BD	43	ASP
25	BD	45	TYR
25	BD	60	VAL
25	BD	61	THR
25	BD	70	LYS
25	BD	73	VAL
25	BD	89	GLU
25	BD	90	PHE
25	BD	91	THR
25	BD	95	SER
25	BD	97	SER
25	BD	98	VAL
25	BD	101	PHE
25	BD	112	THR
25	BD	114	LYS
25	BD	122	VAL
25	BD	124	ARG
25	BD	140	HIS
25	BD	142	VAL
25	BD	150	GLN
25	BD	151	THR
25	BD	159	LYS
25	BD	169	ARG
25	BD	170	VAL
25	BD	183	GLU
25	BD	186	LEU
25	BD	197	THR
25	BD	201	LEU

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Mol	Chain	Res	Type
25	BD	207	VAL
26	BE	5	LEU
26	BE	12	LEU
26	BE	14	VAL
26	BE	18	THR
26	BE	28	VAL
26	BE	40	ARG
26	BE	44	ARG
26	BE	48	THR
26	BE	55	SER
26	BE	61	ARG
26	BE	63	LYS
26	BE	65	THR
26	BE	69	ARG
26	BE	77	ILE
26	BE	80	SER
26	BE	84	THR
26	BE	90	GLN
26	BE	93	SER
26	BE	107	SER
26	BE	108	ILE
26	BE	109	LEU
26	BE	113	VAL
26	BE	116	ASP
26	BE	118	LEU
26	BE	119	ILE
26	BE	123	LYS
26	BE	127	GLU
26	BE	132	LYS
26	BE	136	GLN
26	BE	144	GLU
26	BE	146	VAL
26	BE	147	LEU
26	BE	153	LEU
26	BE	159	LEU
26	BE	163	ASN
26	BE	167	VAL
26	BE	171	ASP
26	BE	175	ILE
26	BE	186	VAL
26	BE	189	THR
26	BE	199	MET

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Mol	Chain	Res	Type
27	BF	3	LEU
27	BF	9	ASP
27	BF	12	VAL
27	BF	14	LYS
27	BF	17	THR
27	BF	18	GLU
27	BF	24	VAL
27	BF	34	THR
27	BF	36	ASN
27	BF	46	LYS
27	BF	47	LYS
27	BF	65	LEU
27	BF	80	GLN
27	BF	88	VAL
27	BF	90	LEU
27	BF	102	LEU
27	BF	103	ILE
27	BF	109	ARG
27	BF	111	ARG
27	BF	114	ARG
27	BF	132	ARG
27	BF	134	GLN
27	BF	154	THR
27	BF	163	GLU
27	BF	166	ARG
27	BF	169	LEU
28	BG	3	VAL
28	BG	8	VAL
28	BG	9	VAL
28	BG	18	ILE
28	BG	21	GLN
28	BG	23	ILE
28	BG	29	ASN
28	BG	34	ARG
28	BG	35	THR
28	BG	37	ASN
28	BG	38	ASP
28	BG	40	VAL
28	BG	42	VAL
28	BG	50	THR
28	BG	55	ASP
28	BG	59	ASP

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Mol	Chain	Res	Type
28	BG	68	ARG
28	BG	80	GLU
28	BG	84	LYS
28	BG	86	LEU
28	BG	88	LEU
28	BG	91	VAL
28	BG	101	VAL
28	BG	115	GLN
28	BG	116	LEU
28	BG	120	ILE
28	BG	121	THR
28	BG	123	GLU
28	BG	131	VAL
28	BG	132	LEU
28	BG	138	GLN
28	BG	140	ILE
28	BG	165	ASP
28	BG	170	THR
28	BG	174	LYS
29	BH	3	VAL
29	BH	6	LEU
29	BH	14	SER
29	BH	15	LEU
29	BH	18	GLN
29	BH	28	ASN
29	BH	31	VAL
29	BH	43	ASN
29	BH	50	ARG
29	BH	54	LEU
29	BH	68	ARG
29	BH	75	LEU
29	BH	83	LYS
29	BH	96	THR
29	BH	97	ARG
29	BH	104	THR
29	BH	135	HIS
30	BI	10	LEU
30	BI	11	GLN
30	BI	12	VAL
30	BI	23	VAL
30	BI	30	GLN
30	BI	39	LYS

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Mol	Chain	Res	Type
30	BI	49	GLU
30	BI	61	TYR
30	BI	71	LYS
30	BI	81	LYS
30	BI	85	ILE
30	BI	86	LYS
30	BI	95	ASP
30	BI	107	GLU
31	BJ	1	MET
31	BJ	2	LYS
31	BJ	5	THR
31	BJ	9	GLU
31	BJ	11	VAL
31	BJ	12	LYS
31	BJ	24	THR
31	BJ	25	LEU
31	BJ	30	THR
31	BJ	36	LEU
31	BJ	41	LYS
31	BJ	44	TYR
31	BJ	54	ILE
31	BJ	55	ILE
31	BJ	57	LEU
31	BJ	64	VAL
31	BJ	65	THR
31	BJ	67	ASN
31	BJ	72	LYS
31	BJ	86	GLN
31	BJ	101	ILE
31	BJ	103	ILE
31	BJ	105	VAL
31	BJ	106	LYS
31	BJ	111	LYS
31	BJ	114	LEU
31	BJ	129	GLU
31	BJ	135	GLN
31	BJ	139	VAL
31	BJ	140	LEU
32	BK	3	GLN
32	BK	8	LEU
32	BK	18	ARG
32	BK	19	VAL

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Mol	Chain	Res	Type
32	BK	23	LYS
32	BK	28	SER
32	BK	30	ARG
32	BK	39	ILE
32	BK	41	ILE
32	BK	47	ILE
32	BK	48	PRO
32	BK	51	LYS
32	BK	52	VAL
32	BK	54	LYS
32	BK	58	LEU
32	BK	61	VAL
32	BK	63	VAL
32	BK	69	VAL
32	BK	73	ASP
32	BK	80	ASP
32	BK	89	ASN
32	BK	91	SER
32	BK	99	ILE
32	BK	107	LEU
32	BK	111	LYS
32	BK	114	LYS
32	BK	115	ILE
33	BL	3	LEU
33	BL	4	ASN
33	BL	6	LEU
33	BL	13	LYS
33	BL	19	LEU
33	BL	21	ARG
33	BL	23	ILE
33	BL	27	LEU
33	BL	30	THR
33	BL	33	ARG
33	BL	35	HIS
33	BL	39	LYS
33	BL	47	ARG
33	BL	48	ARG
33	BL	51	GLU
33	BL	55	MET
33	BL	59	ARG
33	BL	61	LEU
33	BL	66	PHE

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Mol	Chain	Res	Type
33	BL	85	VAL
33	BL	91	ASP
33	BL	93	ASN
33	BL	94	THR
33	BL	101	ILE
33	BL	103	ILE
33	BL	111	ILE
33	BL	112	LEU
33	BL	115	GLU
33	BL	122	VAL
33	BL	127	VAL
34	BM	2	LEU
34	BM	6	ARG
34	BM	8	LYS
34	BM	10	ARG
34	BM	12	MET
34	BM	14	LYS
34	BM	24	THR
34	BM	25	ASP
34	BM	27	SER
34	BM	33	LEU
34	BM	36	VAL
34	BM	69	PRO
34	BM	70	ASP
34	BM	75	GLU
34	BM	81	ARG
34	BM	90	GLU
34	BM	95	LEU
34	BM	96	ILE
34	BM	97	GLN
34	BM	100	LYS
34	BM	102	LEU
34	BM	108	VAL
34	BM	110	GLU
34	BM	126	ILE
34	BM	133	LYS
34	BM	134	THR
35	BN	2	ARG
35	BN	8	ARG
35	BN	10	LEU
35	BN	20	MET
35	BN	23	ASN

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Mol	Chain	Res	Type
35	BN	27	SER
35	BN	33	ILE
35	BN	34	ILE
35	BN	35	LYS
35	BN	36	THR
35	BN	38	LEU
35	BN	51	LEU
35	BN	60	VAL
35	BN	69	ARG
35	BN	71	ARG
35	BN	73	ASN
35	BN	75	ILE
35	BN	82	GLU
35	BN	83	LEU
35	BN	86	ARG
35	BN	95	THR
35	BN	118	ARG
35	BN	120	GLU
36	BO	5	SER
36	BO	9	ARG
36	BO	16	ARG
36	BO	17	LYS
36	BO	18	LEU
36	BO	36	TYR
36	BO	40	ILE
36	BO	47	VAL
36	BO	56	LYS
36	BO	58	ILE
36	BO	65	THR
36	BO	74	VAL
36	BO	80	GLU
36	BO	81	ARG
36	BO	83	LEU
36	BO	84	GLU
36	BO	89	ASP
36	BO	94	ARG
36	BO	100	HIS
36	BO	103	VAL
36	BO	106	LEU
36	BO	111	ARG
36	BO	112	GLU
36	BO	115	LEU

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Mol	Chain	Res	Type
36	BO	116	GLN
37	BP	3	ILE
37	BP	4	ILE
37	BP	5	LYS
37	BP	6	GLN
37	BP	7	LEU
37	BP	14	GLN
37	BP	20	ARG
37	BP	24	THR
37	BP	28	LYS
37	BP	33	GLU
37	BP	35	SER
37	BP	36	LYS
37	BP	37	LYS
37	BP	38	ARG
37	BP	46	VAL
37	BP	49	ILE
37	BP	52	ARG
37	BP	61	ARG
37	BP	64	SER
37	BP	69	VAL
37	BP	75	THR
37	BP	79	VAL
37	BP	80	VAL
37	BP	83	ILE
37	BP	91	VAL
37	BP	92	ARG
37	BP	95	LYS
37	BP	96	LEU
37	BP	99	LEU
37	BP	101	GLU
38	BQ	2	ARG
38	BQ	4	LYS
38	BQ	7	VAL
38	BQ	8	ILE
38	BQ	10	ARG
38	BQ	16	ILE
38	BQ	17	LEU
38	BQ	30	VAL
38	BQ	38	VAL
38	BQ	39	ILE
38	BQ	40	LYS

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Mol	Chain	Res	Type
38	BQ	47	ARG
38	BQ	50	ARG
38	BQ	51	GLN
38	BQ	59	LEU
38	BQ	65	ASN
38	BQ	69	ARG
38	BQ	87	VAL
38	BQ	89	ILE
38	BQ	91	ARG
38	BQ	93	ILE
38	BQ	94	LEU
38	BQ	96	ASP
38	BQ	97	ILE
39	BR	10	LYS
39	BR	15	SER
39	BR	20	VAL
39	BR	25	LEU
39	BR	33	VAL
39	BR	37	GLU
39	BR	38	VAL
39	BR	39	LEU
39	BR	46	GLU
39	BR	48	LYS
39	BR	54	VAL
39	BR	58	VAL
39	BR	63	VAL
39	BR	72	VAL
39	BR	85	LYS
40	BS	1	MET
40	BS	3	THR
40	BS	4	ILE
40	BS	18	ARG
40	BS	24	ILE
40	BS	29	VAL
40	BS	30	SER
40	BS	33	LEU
40	BS	35	ILE
40	BS	36	LEU
40	BS	39	THR
40	BS	41	LYS
40	BS	45	VAL
40	BS	48	LYS

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Mol	Chain	Res	Type
40	BS	66	ILE
40	BS	68	ASP
40	BS	71	VAL
40	BS	73	LYS
40	BS	74	ILE
40	BS	76	VAL
40	BS	83	LYS
40	BS	84	ARG
40	BS	88	ARG
40	BS	96	ILE
40	BS	101	SER
41	BT	2	ILE
41	BT	3	ARG
41	BT	4	GLU
41	BT	8	LEU
41	BT	17	SER
41	BT	19	LYS
41	BT	21	SER
41	BT	29	THR
41	BT	30	ILE
41	BT	31	VAL
41	BT	43	ILE
41	BT	49	LYS
41	BT	50	LEU
41	BT	58	VAL
41	BT	67	VAL
41	BT	68	LYS
41	BT	69	ARG
41	BT	74	ILE
41	BT	82	LYS
42	BU	4	ILE
42	BU	6	ARG
42	BU	8	ASP
42	BU	10	VAL
42	BU	14	THR
42	BU	18	LYS
42	BU	20	LYS
42	BU	23	LYS
42	BU	28	LEU
42	BU	32	LYS
42	BU	33	VAL
42	BU	41	VAL

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Mol	Chain	Res	Type
42	BU	42	LYS
42	BU	43	LYS
42	BU	61	GLU
42	BU	64	ILE
42	BU	67	SER
42	BU	82	VAL
42	BU	86	PHE
42	BU	87	GLU
42	BU	92	VAL
42	BU	99	SER
42	BU	102	ILE
43	BV	1	MET
43	BV	3	THR
43	BV	5	ASN
43	BV	8	VAL
43	BV	10	LYS
43	BV	14	LYS
43	BV	20	LEU
43	BV	29	ILE
43	BV	35	GLU
43	BV	41	GLU
43	BV	42	LEU
43	BV	43	ASP
43	BV	46	LYS
43	BV	51	GLN
43	BV	55	GLU
43	BV	61	LEU
43	BV	64	VAL
43	BV	65	VAL
43	BV	66	ASP
43	BV	71	LYS
43	BV	93	ARG
44	BW	14	ASP
44	BW	15	SER
44	BW	16	GLU
44	BW	19	ARG
44	BW	22	VAL
44	BW	24	ARG
44	BW	35	ILE
44	BW	38	ARG
44	BW	40	ARG
44	BW	43	LYS

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Mol	Chain	Res	Type
44	BW	45	HIS
44	BW	49	ASN
44	BW	54	ARG
44	BW	58	LEU
44	BW	61	LYS
44	BW	67	LYS
44	BW	76	ARG
44	BW	77	LYS
44	BW	80	SER
44	BW	81	ILE
45	BX	10	ARG
45	BX	17	ARG
45	BX	24	THR
45	BX	26	ARG
45	BX	29	LEU
45	BX	36	ARG
45	BX	47	THR
45	BX	53	LYS
45	BX	58	ILE
45	BX	60	LYS
45	BX	63	ILE
45	BX	73	ARG
45	BX	77	TYR
46	BY	9	LYS
46	BY	10	SER
46	BY	14	LEU
46	BY	17	GLU
46	BY	18	LEU
46	BY	19	LEU
46	BY	22	LEU
46	BY	37	LEU
46	BY	39	GLN
46	BY	40	SER
46	BY	42	LEU
46	BY	47	ARG
46	BY	55	THR
46	BY	56	LEU
46	BY	57	LEU
46	BY	59	GLU
47	BZ	3	THR
47	BZ	4	ILE
47	BZ	5	LYS

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Mol	Chain	Res	Type
47	BZ	7	THR
47	BZ	8	GLN
47	BZ	9	THR
47	BZ	15	ARG
47	BZ	23	LEU
47	BZ	29	ARG
47	BZ	30	ARG
47	BZ	34	THR
47	BZ	37	ARG
47	BZ	38	GLU
47	BZ	43	ILE
47	BZ	58	GLU
48	B0	5	ASN
48	B0	9	ARG
48	B0	17	SER
48	B0	22	THR
48	B0	26	SER
48	B0	27	LEU
48	B0	39	ARG
48	B0	42	ILE
48	B0	43	THR
49	B1	4	ILE
49	B1	7	LYS
49	B1	8	ILE
49	B1	9	LYS
49	B1	29	LYS
49	B1	33	LEU
49	B1	35	LEU
49	B1	41	VAL
49	B1	42	VAL
49	B1	43	ARG
50	B2	3	ARG
50	B2	4	THR
50	B2	8	SER
50	B2	9	VAL
50	B2	12	ARG
50	B2	21	ARG
50	B2	39	ARG
51	B3	5	THR
51	B3	7	ARG
51	B3	22	LYS
51	B3	29	ARG

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Mol	Chain	Res	Type
51	B3	31	ILE
51	B3	49	VAL
51	B3	50	SER
51	B3	51	LYS
51	B3	56	LEU
52	B4	2	LYS
52	B4	3	VAL
52	B4	4	ARG
52	B4	6	SER
52	B4	9	LYS
52	B4	16	ILE
52	B4	27	CYS
2	CB	8	MET
2	CB	9	LEU
2	CB	10	LYS
2	CB	14	HIS
2	CB	19	THR
2	CB	26	MET
2	CB	36	LYS
2	CB	39	ILE
2	CB	42	LEU
2	CB	46	VAL
2	CB	69	VAL
2	CB	88	GLN
2	CB	103	TRP
2	CB	124	THR
2	CB	125	PHE
2	CB	131	LYS
2	CB	146	SER
2	CB	147	LEU
2	CB	162	VAL
2	CB	164	ASP
2	CB	177	ASN
2	CB	182	VAL
2	CB	191	ASP
2	CB	196	ASP
2	CB	202	ASN
3	CC	15	LYS
3	CC	26	LYS
3	CC	35	ASP
3	CC	41	TYR
3	CC	53	ARG

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Mol	Chain	Res	Type
3	CC	90	VAL
3	CC	123	LEU
3	CC	139	ASN
3	CC	148	ILE
3	CC	151	GLU
3	CC	152	VAL
3	CC	160	GLU
3	CC	161	ILE
3	CC	166	TRP
3	CC	182	ASP
3	CC	183	TYR
3	CC	185	THR
3	CC	194	VAL
4	CD	2	ARG
4	CD	8	LEU
4	CD	10	LEU
4	CD	20	LEU
4	CD	24	VAL
4	CD	25	ARG
4	CD	29	THR
4	CD	30	LYS
4	CD	31	CYS
4	CD	34	GLU
4	CD	47	LEU
4	CD	52	VAL
4	CD	55	ARG
4	CD	57	LYS
4	CD	58	GLN
4	CD	80	ARG
4	CD	84	ASN
4	CD	106	PHE
4	CD	127	ARG
4	CD	142	VAL
4	CD	147	LYS
4	CD	151	GLN
4	CD	152	SER
4	CD	155	LYS
4	CD	158	LEU
4	CD	159	GLU
4	CD	160	LEU
4	CD	168	THR
4	CD	170	LEU

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Mol	Chain	Res	Type
4	CD	172	VAL
4	CD	182	LYS
4	CD	183	ARG
4	CD	186	GLU
4	CD	187	ARG
4	CD	191	SER
4	CD	194	ILE
4	CD	199	ILE
4	CD	202	LEU
4	CD	204	SER
5	CE	11	GLN
5	CE	13	LYS
5	CE	24	VAL
5	CE	25	LYS
5	CE	29	ILE
5	CE	31	SER
5	CE	35	LEU
5	CE	51	LYS
5	CE	59	ILE
5	CE	64	GLU
5	CE	75	LEU
5	CE	76	ASN
5	CE	80	LEU
5	CE	84	VAL
5	CE	87	VAL
5	CE	92	ARG
5	CE	95	MET
5	CE	99	SER
5	CE	105	ILE
5	CE	113	VAL
5	CE	119	VAL
5	CE	133	ILE
5	CE	134	ASN
5	CE	136	VAL
5	CE	137	ARG
5	CE	139	THR
5	CE	144	GLU
6	CF	7	VAL
6	CF	33	GLU
6	CF	44	ARG
6	CF	52	ASN
6	CF	54	LEU

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Mol	Chain	Res	Type
6	CF	56	LYS
6	CF	61	LEU
6	CF	86	ARG
6	CF	89	VAL
6	CF	90	MET
54	CG	3	ARG
54	CG	5	VAL
54	CG	6	ILE
54	CG	10	LYS
54	CG	12	LEU
54	CG	16	LYS
54	CG	30	MET
54	CG	34	LYS
54	CG	35	LYS
54	CG	49	LEU
54	CG	55	LYS
54	CG	58	LEU
54	CG	66	GLU
54	CG	75	LYS
54	CG	77	ARG
54	CG	78	ARG
54	CG	85	GLN
54	CG	90	VAL
54	CG	100	MET
54	CG	102	TRP
54	CG	123	LEU
54	CG	139	ASP
54	CG	148	LYS
8	CH	37	ASN
8	CH	42	GLU
8	CH	50	VAL
8	CH	59	GLU
8	CH	70	VAL
8	CH	75	GLN
8	CH	76	ARG
8	CH	79	ARG
8	CH	82	LEU
8	CH	89	ASP
8	CH	93	LYS
8	CH	102	VAL
8	CH	110	MET
9	CI	4	GLN

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Mol	Chain	Res	Type
9	CI	5	TYR
9	CI	20	ILE
9	CI	36	GLN
9	CI	37	TYR
9	CI	53	LEU
9	CI	54	VAL
9	CI	60	LEU
9	CI	71	ILE
9	CI	83	THR
9	CI	87	MET
9	CI	115	VAL
9	CI	125	GLN
9	CI	129	ARG
10	CJ	5	ARG
10	CJ	15	HIS
10	CJ	44	THR
10	CJ	50	THR
10	CJ	60	ASP
10	CJ	64	GLN
10	CJ	67	ILE
10	CJ	69	THR
10	CJ	82	LYS
10	CJ	87	LEU
10	CJ	92	LEU
11	CK	27	ASN
11	CK	33	ILE
11	CK	57	SER
11	CK	73	VAL
11	CK	78	ILE
11	CK	80	ASN
11	CK	81	LEU
11	CK	83	VAL
11	CK	106	ILE
11	CK	107	THR
11	CK	115	ILE
11	CK	128	VAL
12	CL	3	VAL
12	CL	5	GLN
12	CL	9	LYS
12	CL	14	LYS
12	CL	19	ASN
12	CL	28	GLN

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Mol	Chain	Res	Type
12	CL	39	THR
12	CL	48	LEU
12	CL	57	THR
12	CL	62	VAL
12	CL	66	ILE
12	CL	72	ASN
12	CL	79	ILE
12	CL	81	ILE
12	CL	88	ASP
12	CL	96	THR
12	CL	107	LYS
12	CL	120	ARG
55	CM	12	LYS
55	CM	24	VAL
55	CM	28	ARG
55	CM	32	ILE
55	CM	46	GLU
55	CM	53	ASP
55	CM	77	LYS
55	CM	92	ARG
55	CM	113	LYS
14	CN	3	GLN
14	CN	6	LYS
14	CN	27	LYS
14	CN	41	TRP
14	CN	52	ARG
14	CN	53	ASP
14	CN	58	ARG
14	CN	61	ASN
14	CN	72	PHE
14	CN	81	ILE
14	CN	96	LYS
15	CO	16	ARG
15	CO	34	GLN
15	CO	38	LEU
15	CO	39	GLN
15	CO	45	HIS
15	CO	80	LEU
56	CP	1	MET
56	CP	2	VAL
56	CP	3	THR
56	CP	4	ILE

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Mol	Chain	Res	Type
56	CP	46	LYS
56	CP	54	LEU
56	CP	56	ARG
56	CP	69	ASP
56	CP	71	VAL
17	CQ	6	THR
17	CQ	13	SER
17	CQ	20	ILE
17	CQ	32	ILE
17	CQ	37	ILE
17	CQ	39	ARG
17	CQ	46	HIS
17	CQ	51	GLU
17	CQ	52	CYS
17	CQ	60	ILE
17	CQ	75	VAL
17	CQ	80	LYS
18	CR	25	ILE
18	CR	44	THR
18	CR	49	LYS
18	CR	65	SER
18	CR	66	LEU
18	CR	72	ARG
19	CS	5	LYS
19	CS	10	ILE
19	CS	52	ASN
19	CS	54	ARG
19	CS	73	PHE
20	CT	5	SER
20	CT	11	ILE
20	CT	23	ARG
20	CT	26	MET
20	CT	30	PHE
20	CT	47	GLN
20	CT	53	MET
20	CT	68	LYS
20	CT	73	ARG
20	CT	74	HIS
20	CT	78	LEU
20	CT	82	ILE
21	CU	4	LYS
21	CU	9	GLU

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Mol	Chain	Res	Type
21	CU	19	LYS
21	CU	24	LYS
21	CU	27	VAL
21	CU	32	ARG
21	CU	36	PHE
21	CU	39	LYS
21	CU	53	LYS
24	DC	2	VAL
24	DC	12	ARG
24	DC	13	ARG
24	DC	18	VAL
24	DC	23	LEU
24	DC	35	LYS
24	DC	53	ILE
24	DC	57	HIS
24	DC	90	ILE
24	DC	102	TYR
24	DC	124	LYS
24	DC	152	GLN
24	DC	153	LEU
24	DC	164	VAL
24	DC	172	THR
24	DC	173	LEU
24	DC	187	CYS
24	DC	190	THR
24	DC	193	GLU
24	DC	212	TRP
24	DC	213	ARG
24	DC	220	ARG
24	DC	227	VAL
24	DC	235	GLU
24	DC	249	VAL
24	DC	250	GLN
24	DC	251	THR
24	DC	256	THR
24	DC	260	LYS
24	DC	267	VAL
25	DD	9	VAL
25	DD	24	VAL
25	DD	28	GLU
25	DD	33	ARG
25	DD	34	VAL

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Mol	Chain	Res	Type
25	DD	35	THR
25	DD	38	LYS
25	DD	48	ILE
25	DD	51	THR
25	DD	55	LYS
25	DD	56	LYS
25	DD	62	LYS
25	DD	70	LYS
25	DD	79	LEU
25	DD	84	LEU
25	DD	106	LYS
25	DD	121	THR
25	DD	138	LEU
25	DD	140	HIS
25	DD	141	ARG
25	DD	148	GLN
25	DD	150	GLN
25	DD	159	LYS
25	DD	168	GLU
25	DD	186	LEU
25	DD	189	VAL
25	DD	193	VAL
26	DE	53	THR
26	DE	57	LYS
26	DE	63	LYS
26	DE	67	ARG
26	DE	73	ILE
26	DE	77	ILE
26	DE	84	THR
26	DE	108	ILE
26	DE	112	LEU
26	DE	126	VAL
26	DE	139	LYS
26	DE	149	ILE
26	DE	157	LEU
26	DE	163	ASN
26	DE	164	LEU
26	DE	166	LYS
26	DE	170	ARG
58	DF	8	LYS
58	DF	13	LYS
58	DF	14	LYS

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Mol	Chain	Res	Type
58	DF	32	LYS
58	DF	48	LEU
58	DF	49	LEU
58	DF	76	PHE
58	DF	77	LYS
58	DF	87	LYS
58	DF	91	ARG
58	DF	94	ARG
58	DF	97	GLU
58	DF	110	ILE
58	DF	111	ARG
58	DF	113	PHE
58	DF	119	LYS
58	DF	131	VAL
58	DF	133	GLU
58	DF	134	GLN
58	DF	135	ILE
58	DF	139	GLU
58	DF	142	TYR
58	DF	147	ARG
58	DF	148	VAL
58	DF	151	LEU
58	DF	160	LYS
58	DF	169	LEU
58	DF	172	PHE
58	DF	177	ARG
28	DG	2	ARG
28	DG	18	ILE
28	DG	19	ASN
28	DG	22	VAL
28	DG	34	ARG
28	DG	35	THR
28	DG	40	VAL
28	DG	42	VAL
28	DG	51	PHE
28	DG	72	ASN
28	DG	84	LYS
28	DG	86	LEU
28	DG	91	VAL
28	DG	93	TYR
28	DG	120	ILE
28	DG	123	GLU

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Mol	Chain	Res	Type
28	DG	143	VAL
28	DG	163	TYR
28	DG	166	GLU
28	DG	176	LYS
29	DH	22	LYS
29	DH	27	ARG
29	DH	28	ASN
29	DH	37	VAL
29	DH	42	LYS
29	DH	44	ILE
29	DH	50	ARG
29	DH	62	LEU
29	DH	66	ASN
29	DH	71	LYS
29	DH	76	GLU
29	DH	86	ASP
29	DH	90	LEU
29	DH	91	PHE
29	DH	98	ASP
29	DH	104	THR
29	DH	109	GLU
29	DH	133	GLN
29	DH	144	VAL
30	DI	16	MET
30	DI	30	GLN
30	DI	45	THR
30	DI	57	VAL
30	DI	58	ILE
30	DI	72	THR
30	DI	93	ASN
31	DJ	2	LYS
31	DJ	3	THR
31	DJ	5	THR
31	DJ	18	VAL
31	DJ	25	LEU
31	DJ	36	LEU
31	DJ	43	GLU
31	DJ	47	HIS
31	DJ	52	ASP
31	DJ	54	ILE
31	DJ	57	LEU
31	DJ	72	LYS

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Mol	Chain	Res	Type
31	DJ	80	HIS
31	DJ	81	ILE
31	DJ	92	MET
31	DJ	95	ARG
31	DJ	99	ARG
31	DJ	106	LYS
31	DJ	129	GLU
32	DK	3	GLN
32	DK	7	MET
32	DK	10	VAL
32	DK	13	ASN
32	DK	24	VAL
32	DK	25	LEU
32	DK	39	ILE
32	DK	41	ILE
32	DK	47	ILE
32	DK	49	ARG
32	DK	54	LYS
32	DK	65	THR
32	DK	73	ASP
32	DK	77	ILE
32	DK	87	LEU
32	DK	95	ILE
32	DK	100	PHE
32	DK	103	VAL
32	DK	105	ARG
32	DK	106	GLU
32	DK	107	LEU
32	DK	111	LYS
32	DK	114	LYS
32	DK	115	ILE
33	DL	3	LEU
33	DL	4	ASN
33	DL	6	LEU
33	DL	14	LYS
33	DL	19	LEU
33	DL	39	LYS
33	DL	46	VAL
33	DL	47	ARG
33	DL	48	ARG
33	DL	61	LEU
33	DL	69	ARG

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Mol	Chain	Res	Type
33	DL	79	LEU
33	DL	82	LEU
33	DL	92	LEU
33	DL	99	ASN
33	DL	103	ILE
33	DL	111	ILE
33	DL	112	LEU
33	DL	116	VAL
33	DL	118	THR
33	DL	143	GLU
34	DM	7	THR
34	DM	8	LYS
34	DM	13	HIS
34	DM	26	VAL
34	DM	38	ARG
34	DM	53	MET
34	DM	78	LEU
34	DM	89	VAL
34	DM	96	ILE
34	DM	97	GLN
34	DM	102	LEU
34	DM	105	MET
34	DM	115	GLU
34	DM	119	LEU
34	DM	126	ILE
34	DM	129	THR
34	DM	133	LYS
35	DN	10	LEU
35	DN	18	GLN
35	DN	21	PHE
35	DN	29	VAL
35	DN	33	ILE
35	DN	34	ILE
35	DN	46	ARG
35	DN	53	THR
35	DN	62	ASN
35	DN	69	ARG
35	DN	75	ILE
35	DN	94	TYR
35	DN	95	THR
35	DN	96	ARG
35	DN	98	LEU

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Mol	Chain	Res	Type
35	DN	114	GLU
36	DO	17	LYS
36	DO	31	THR
36	DO	49	VAL
36	DO	65	THR
36	DO	68	LYS
36	DO	90	VAL
36	DO	115	LEU
36	DO	116	GLN
36	DO	117	PHE
37	DP	6	GLN
37	DP	7	LEU
37	DP	13	LYS
37	DP	28	LYS
37	DP	31	VAL
37	DP	83	ILE
37	DP	86	LYS
37	DP	95	LYS
37	DP	101	GLU
38	DQ	3	VAL
38	DQ	8	ILE
38	DQ	12	ARG
38	DQ	13	HIS
38	DQ	15	LYS
38	DQ	21	LYS
38	DQ	39	ILE
38	DQ	46	TYR
38	DQ	47	ARG
38	DQ	49	ARG
38	DQ	54	ARG
38	DQ	57	ARG
38	DQ	59	LEU
38	DQ	63	ARG
38	DQ	69	ARG
38	DQ	79	ILE
38	DQ	93	ILE
38	DQ	106	THR
38	DQ	108	LEU
39	DR	10	LYS
39	DR	13	ARG
39	DR	37	GLU
39	DR	48	LYS

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Mol	Chain	Res	Type
39	DR	49	ILE
39	DR	58	VAL
39	DR	75	VAL
39	DR	80	ARG
39	DR	81	LYS
39	DR	86	GLN
39	DR	90	ARG
39	DR	93	PHE
40	DS	6	LYS
40	DS	23	LEU
40	DS	31	GLN
40	DS	33	LEU
40	DS	46	LEU
40	DS	49	LYS
40	DS	66	ILE
40	DS	70	LYS
40	DS	74	ILE
40	DS	76	VAL
40	DS	84	ARG
40	DS	85	ILE
40	DS	86	MET
40	DS	88	ARG
40	DS	96	ILE
41	DT	9	LYS
41	DT	18	GLU
41	DT	39	THR
41	DT	50	LEU
41	DT	54	GLU
41	DT	68	LYS
42	DU	13	LEU
42	DU	20	LYS
42	DU	21	ARG
42	DU	40	LEU
42	DU	42	LYS
42	DU	45	GLN
42	DU	61	GLU
42	DU	82	VAL
42	DU	85	ARG
42	DU	94	PHE
42	DU	95	PHE
43	DV	26	PHE
43	DV	40	ILE

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Mol	Chain	Res	Type
43	DV	41	GLU
43	DV	51	GLN
43	DV	61	LEU
43	DV	65	VAL
43	DV	69	GLU
43	DV	70	ILE
43	DV	76	ASP
44	DW	18	LYS
44	DW	20	LEU
44	DW	22	VAL
44	DW	23	LYS
44	DW	30	VAL
44	DW	35	ILE
44	DW	37	VAL
44	DW	40	ARG
44	DW	58	LEU
44	DW	67	LYS
44	DW	68	PHE
44	DW	77	LYS
44	DW	80	SER
45	DX	5	GLN
45	DX	6	VAL
45	DX	25	LYS
45	DX	26	ARG
45	DX	31	ASN
45	DX	33	HIS
45	DX	46	VAL
45	DX	47	THR
45	DX	57	VAL
45	DX	63	ILE
46	DY	1	MET
46	DY	4	LYS
46	DY	28	LEU
46	DY	46	VAL
46	DY	57	LEU
47	DZ	16	LEU
47	DZ	24	LEU
47	DZ	28	LEU
47	DZ	29	ARG
47	DZ	30	ARG
47	DZ	50	VAL
47	DZ	53	MET

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Mol	Chain	Res	Type
47	DZ	55	LYS
47	DZ	58	GLU
48	D0	3	GLN
48	D0	5	ASN
48	D0	9	ARG
48	D0	22	THR
48	D0	27	LEU
48	D0	41	HIS
48	D0	42	ILE
49	D1	10	LEU
49	D1	20	TYR
49	D1	33	LEU
49	D1	44	GLN
50	D2	4	THR
50	D2	22	MET
50	D2	26	ASN
50	D2	28	ARG
50	D2	45	SER
50	D2	46	LYS
51	D3	12	ARG
51	D3	14	LYS
51	D3	27	ASN
51	D3	28	LEU
51	D3	29	ARG
51	D3	43	LEU
51	D3	46	LYS
51	D3	51	LYS
51	D3	61	LEU
52	D4	2	LYS
52	D4	9	LYS
52	D4	15	LYS
52	D4	17	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (357) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	38	HIS
2	AB	41	ASN
2	AB	57	ASN
2	AB	102	ASN
2	AB	108	GLN
2	AB	119	GLN

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Mol	Chain	Res	Type
2	AB	167	HIS
2	AB	169	HIS
3	AC	5	HIS
3	AC	24	ASN
3	AC	68	HIS
3	AC	101	ASN
3	AC	138	GLN
3	AC	139	ASN
3	AC	175	HIS
4	AD	53	GLN
4	AD	58	GLN
4	AD	70	GLN
4	AD	73	ASN
4	AD	84	ASN
4	AD	130	ASN
4	AD	151	GLN
4	AD	163	GLN
5	AE	11	GLN
5	AE	42	ASN
5	AE	72	ASN
5	AE	81	GLN
5	AE	121	ASN
5	AE	145	ASN
6	AF	11	HIS
6	AF	17	GLN
6	AF	46	GLN
6	AF	52	ASN
6	AF	68	GLN
7	AG	121	ASN
7	AG	129	ASN
7	AG	147	ASN
8	AH	3	GLN
8	AH	17	GLN
8	AH	66	GLN
8	AH	75	GLN
8	AH	117	GLN
9	AI	3	ASN
9	AI	4	GLN
9	AI	74	GLN
9	AI	80	HIS
9	AI	125	GLN
10	AJ	15	HIS

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Mol	Chain	Res	Type
10	AJ	20	GLN
10	AJ	35	GLN
10	AJ	64	GLN
10	AJ	99	GLN
11	AK	21	HIS
11	AK	63	GLN
11	AK	100	ASN
11	AK	108	ASN
12	AL	4	ASN
12	AL	45	ASN
13	AM	7	ASN
14	AN	42	ASN
14	AN	48	GLN
14	AN	61	ASN
15	AO	19	ASN
15	AO	45	HIS
16	AP	9	HIS
16	AP	26	ASN
16	AP	29	ASN
16	AP	59	HIS
17	AQ	44	HIS
17	AQ	46	HIS
17	AQ	49	ASN
18	AR	30	ASN
18	AR	53	GLN
18	AR	73	HIS
19	AS	42	ASN
20	AT	12	GLN
20	AT	47	GLN
20	AT	54	GLN
20	AT	60	GLN
20	AT	77	ASN
20	AT	81	GLN
21	AU	8	ASN
24	BC	20	ASN
24	BC	43	ASN
24	BC	59	GLN
24	BC	89	ASN
24	BC	114	GLN
24	BC	141	HIS
24	BC	152	GLN
24	BC	225	ASN

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Mol	Chain	Res	Type
24	BC	242	HIS
24	BC	250	GLN
25	BD	32	ASN
25	BD	49	GLN
25	BD	58	ASN
25	BD	126	ASN
25	BD	130	GLN
25	BD	150	GLN
26	BE	24	ASN
26	BE	29	HIS
26	BE	30	GLN
26	BE	41	GLN
26	BE	62	GLN
26	BE	97	ASN
27	BF	22	ASN
27	BF	36	ASN
27	BF	134	GLN
28	BG	29	ASN
28	BG	72	ASN
28	BG	114	HIS
28	BG	138	GLN
29	BH	18	GLN
29	BH	20	ASN
29	BH	28	ASN
29	BH	33	GLN
29	BH	43	ASN
29	BH	128	HIS
29	BH	145	ASN
30	BI	5	GLN
30	BI	30	GLN
30	BI	110	GLN
31	BJ	40	HIS
31	BJ	47	HIS
31	BJ	76	HIS
31	BJ	77	HIS
31	BJ	128	ASN
31	BJ	130	HIS
32	BK	3	GLN
32	BK	5	GLN
32	BK	88	ASN
32	BK	89	ASN
33	BL	4	ASN

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Mol	Chain	Res	Type
33	BL	35	HIS
33	BL	54	GLN
33	BL	93	ASN
33	BL	99	ASN
33	BL	104	GLN
34	BM	13	HIS
34	BM	17	ASN
34	BM	88	ASN
35	BN	9	GLN
35	BN	11	ASN
35	BN	23	ASN
35	BN	62	ASN
35	BN	73	ASN
35	BN	107	ASN
36	BO	19	GLN
36	BO	34	HIS
36	BO	38	GLN
37	BP	6	GLN
37	BP	9	GLN
37	BP	55	HIS
37	BP	74	GLN
38	BQ	13	HIS
38	BQ	51	GLN
38	BQ	65	ASN
39	BR	18	GLN
39	BR	43	ASN
39	BR	82	HIS
39	BR	87	GLN
40	BS	9	HIS
40	BS	15	GLN
40	BS	57	ASN
40	BS	60	HIS
40	BS	61	ASN
41	BT	48	GLN
41	BT	70	HIS
41	BT	72	GLN
41	BT	91	GLN
42	BU	52	ASN
42	BU	65	GLN
42	BU	73	ASN
43	BV	5	ASN
43	BV	44	HIS

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Mol	Chain	Res	Type
43	BV	51	GLN
43	BV	80	HIS
43	BV	88	HIS
44	BW	11	ASN
44	BW	39	GLN
45	BX	5	GLN
45	BX	22	ASN
46	BY	15	ASN
46	BY	25	GLN
46	BY	27	ASN
46	BY	31	GLN
46	BY	41	HIS
47	BZ	33	HIS
48	B0	3	GLN
48	B0	4	GLN
50	B2	6	GLN
50	B2	13	ASN
50	B2	16	HIS
51	B3	27	ASN
52	B4	33	HIS
52	B4	37	GLN
2	CB	18	GLN
2	CB	23	ASN
2	CB	108	GLN
2	CB	169	HIS
2	CB	176	ASN
2	CB	177	ASN
3	CC	2	GLN
3	CC	18	ASN
3	CC	31	ASN
3	CC	68	HIS
3	CC	139	ASN
3	CC	184	ASN
4	CD	70	GLN
4	CD	84	ASN
4	CD	115	GLN
4	CD	119	HIS
4	CD	125	ASN
4	CD	163	GLN
5	CE	69	ASN
5	CE	76	ASN
5	CE	121	ASN

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Mol	Chain	Res	Type
5	CE	131	ASN
6	CF	58	HIS
6	CF	81	ASN
54	CG	8	GLN
54	CG	67	ASN
54	CG	85	GLN
8	CH	3	GLN
8	CH	17	GLN
8	CH	20	ASN
9	CI	3	ASN
9	CI	4	GLN
9	CI	49	GLN
9	CI	74	GLN
9	CI	109	GLN
9	CI	125	GLN
10	CJ	70	HIS
11	CK	21	HIS
11	CK	27	ASN
12	CL	4	ASN
12	CL	5	GLN
12	CL	19	ASN
12	CL	72	ASN
12	CL	74	GLN
12	CL	111	GLN
55	CM	90	HIS
14	CN	59	GLN
14	CN	65	GLN
15	CO	19	ASN
15	CO	27	GLN
15	CO	36	ASN
15	CO	45	HIS
56	CP	9	HIS
56	CP	26	ASN
56	CP	63	GLN
17	CQ	49	ASN
19	CS	51	HIS
19	CS	52	ASN
20	CT	12	GLN
21	CU	8	ASN
24	DC	14	HIS
24	DC	20	ASN
24	DC	43	ASN

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Mol	Chain	Res	Type
24	DC	57	HIS
24	DC	85	ASN
24	DC	89	ASN
24	DC	116	GLN
24	DC	133	ASN
24	DC	141	HIS
24	DC	196	ASN
24	DC	225	ASN
24	DC	242	HIS
25	DD	36	GLN
25	DD	49	GLN
25	DD	58	ASN
25	DD	67	HIS
25	DD	126	ASN
25	DD	130	GLN
25	DD	136	ASN
25	DD	140	HIS
25	DD	150	GLN
25	DD	164	GLN
25	DD	185	ASN
26	DE	41	GLN
26	DE	62	GLN
58	DF	4	HIS
58	DF	80	GLN
58	DF	126	ASN
28	DG	19	ASN
28	DG	37	ASN
28	DG	44	HIS
28	DG	103	ASN
28	DG	138	GLN
29	DH	2	GLN
29	DH	66	ASN
29	DH	119	ASN
30	DI	42	ASN
30	DI	93	ASN
30	DI	106	GLN
31	DJ	40	HIS
31	DJ	138	GLN
32	DK	3	GLN
32	DK	5	GLN
32	DK	9	ASN
32	DK	13	ASN

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Mol	Chain	Res	Type
32	DK	89	ASN
33	DL	4	ASN
33	DL	54	GLN
34	DM	3	GLN
35	DN	3	HIS
35	DN	16	HIS
35	DN	107	ASN
36	DO	38	GLN
37	DP	6	GLN
37	DP	9	GLN
37	DP	65	ASN
37	DP	74	GLN
37	DP	76	HIS
37	DP	114	ASN
38	DQ	19	GLN
38	DQ	43	GLN
39	DR	6	GLN
39	DR	12	HIS
39	DR	66	HIS
39	DR	86	GLN
39	DR	87	GLN
40	DS	7	HIS
40	DS	9	HIS
40	DS	31	GLN
40	DS	57	ASN
40	DS	102	HIS
41	DT	15	HIS
41	DT	48	GLN
41	DT	92	ASN
42	DU	44	HIS
42	DU	45	GLN
42	DU	52	ASN
42	DU	53	GLN
42	DU	68	ASN
43	DV	51	GLN
43	DV	80	HIS
43	DV	87	GLN
43	DV	88	HIS
44	DW	56	HIS
45	DX	15	ASN
45	DX	22	ASN
45	DX	31	ASN

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Mol	Chain	Res	Type
45	DX	35	HIS
46	DY	15	ASN
46	DY	20	ASN
46	DY	41	HIS
46	DY	58	ASN
47	DZ	19	HIS
47	DZ	33	HIS
48	D0	5	ASN
48	D0	18	HIS
48	D0	41	HIS
50	D2	6	GLN
50	D2	16	HIS
51	D3	42	HIS
52	D4	35	GLN
52	D4	37	GLN

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1532/1533 (99%)	369 (24%)	63 (4%)
22	BA	2850/2903 (98%)	564 (19%)	87 (3%)
22	DA	2837/2903 (97%)	883 (31%)	183 (6%)
23	BB	117/118 (99%)	19 (16%)	0
53	CA	1529/1530 (99%)	451 (29%)	81 (5%)
57	DB	116/117 (99%)	34 (29%)	7 (6%)
All	All	8981/9104 (98%)	2320 (25%)	421 (4%)

All (2320) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	5	U
1	AA	6	G
1	AA	9	G
1	AA	22	G
1	AA	32	A
1	AA	39	G
1	AA	47	C
1	AA	48	C
1	AA	50	A
1	AA	51	A
1	AA	52	C

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Mol	Chain	Res	Type
1	AA	64	G
1	AA	70	U
1	AA	71	A
1	AA	72	A
1	AA	73	C
1	AA	74	A
1	AA	76	G
1	AA	77	A
1	AA	79	G
1	AA	82	G
1	AA	83	C
1	AA	85	U
1	AA	86	G
1	AA	87	C
1	AA	88	U
1	AA	89	U
1	AA	90	C
1	AA	91	U
1	AA	92	U
1	AA	94	G
1	AA	95	C
1	AA	97	G
1	AA	98	A
1	AA	110	C
1	AA	111	G
1	AA	115	G
1	AA	116	A
1	AA	117	G
1	AA	120	A
1	AA	121	U
1	AA	122	G
1	AA	127	G
1	AA	130	A
1	AA	131	A
1	AA	138	G
1	AA	141	G
1	AA	143	A
1	AA	151	A
1	AA	159	G
1	AA	163	C
1	AA	166	U
1	AA	174	A

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Mol	Chain	Res	Type
1	AA	175	C
1	AA	176	C
1	AA	177	G
1	AA	181	A
1	AA	182	A
1	AA	183	C
1	AA	184	G
1	AA	185	U
1	AA	197	A
1	AA	198	G
1	AA	199	A
1	AA	205	A
1	AA	207	C
1	AA	208	U
1	AA	209	U
1	AA	210	C
1	AA	211	G
1	AA	214	C
1	AA	215	C
1	AA	219	U
1	AA	240	G
1	AA	244	U
1	AA	245	U
1	AA	247	G
1	AA	250	A
1	AA	251	G
1	AA	258	G
1	AA	262	A
1	AA	266	G
1	AA	267	C
1	AA	268	U
1	AA	273	U
1	AA	275	G
1	AA	284	C
1	AA	285	C
1	AA	289	G
1	AA	306	A
1	AA	308	C
1	AA	316	C
1	AA	320	A
1	AA	321	A
1	AA	328	C

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Mol	Chain	Res	Type
1	AA	329	A
1	AA	330	C
1	AA	331	G
1	AA	332	G
1	AA	345	C
1	AA	346	G
1	AA	347	G
1	AA	352	C
1	AA	354	G
1	AA	356	A
1	AA	366	A
1	AA	367	U
1	AA	368	U
1	AA	369	G
1	AA	372	C
1	AA	373	A
1	AA	374	A
1	AA	384	G
1	AA	392	C
1	AA	406	G
1	AA	409	U
1	AA	411	A
1	AA	412	A
1	AA	413	G
1	AA	414	A
1	AA	415	A
1	AA	421	U
1	AA	422	C
1	AA	424	G
1	AA	429	U
1	AA	430	A
1	AA	451	A
1	AA	452	A
1	AA	453	G
1	AA	458	U
1	AA	459	A
1	AA	461	A
1	AA	462	G
1	AA	463	U
1	AA	466	A
1	AA	467	U
1	AA	468	A

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Mol	Chain	Res	Type
1	AA	469	C
1	AA	478	A
1	AA	481	G
1	AA	482	A
1	AA	484	G
1	AA	485	U
1	AA	486	U
1	AA	487	A
1	AA	496	A
1	AA	498	A
1	AA	499	A
1	AA	500	G
1	AA	501	C
1	AA	508	U
1	AA	509	A
1	AA	511	C
1	AA	518	C
1	AA	527	G
1	AA	531	U
1	AA	532	A
1	AA	533	A
1	AA	534	U
1	AA	535	A
1	AA	536	C
1	AA	547	A
1	AA	548	G
1	AA	549	C
1	AA	556	C
1	AA	562	U
1	AA	564	C
1	AA	572	A
1	AA	573	A
1	AA	576	C
1	AA	579	A
1	AA	588	G
1	AA	604	G
1	AA	633	G
1	AA	646	G
1	AA	650	G
1	AA	653	U
1	AA	665	A
1	AA	682	G

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Mol	Chain	Res	Type
1	AA	700	G
1	AA	701	U
1	AA	702	A
1	AA	703	G
1	AA	721	G
1	AA	722	G
1	AA	723	U
1	AA	731	G
1	AA	748	G
1	AA	754	C
1	AA	755	G
1	AA	776	G
1	AA	777	A
1	AA	793	U
1	AA	794	A
1	AA	802	A
1	AA	809	G
1	AA	814	A
1	AA	815	A
1	AA	817	C
1	AA	818	G
1	AA	827	U
1	AA	828	U
1	AA	841	C
1	AA	843	U
1	AA	845	A
1	AA	846	G
1	AA	858	G
1	AA	859	G
1	AA	861	G
1	AA	876	C
1	AA	884	U
1	AA	902	G
1	AA	911	U
1	AA	913	A
1	AA	914	A
1	AA	926	G
1	AA	927	G
1	AA	932	C
1	AA	934	C
1	AA	935	A
1	AA	960	U

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Mol	Chain	Res	Type
1	AA	966	G
1	AA	969	A
1	AA	971	G
1	AA	974	A
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	983	A
1	AA	993	G
1	AA	1003	G
1	AA	1004	A
1	AA	1008	U
1	AA	1017	U
1	AA	1018	G
1	AA	1022	A
1	AA	1027	C
1	AA	1029	U
1	AA	1030	U
1	AA	1031	C
1	AA	1032	G
1	AA	1033	G
1	AA	1034	G
1	AA	1037	C
1	AA	1049	U
1	AA	1050	G
1	AA	1052	U
1	AA	1053	G
1	AA	1054	C
1	AA	1055	A
1	AA	1065	U
1	AA	1066	C
1	AA	1086	U
1	AA	1094	G
1	AA	1095	U
1	AA	1101	A
1	AA	1102	A
1	AA	1104	G
1	AA	1113	C
1	AA	1124	G
1	AA	1125	U
1	AA	1130	A
1	AA	1133	G

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Mol	Chain	Res	Type
1	AA	1135	U
1	AA	1136	C
1	AA	1137	C
1	AA	1138	G
1	AA	1140	C
1	AA	1141	C
1	AA	1144	G
1	AA	1145	A
1	AA	1146	A
1	AA	1158	C
1	AA	1159	U
1	AA	1160	G
1	AA	1161	C
1	AA	1162	C
1	AA	1167	A
1	AA	1168	U
1	AA	1181	G
1	AA	1182	G
1	AA	1183	U
1	AA	1184	G
1	AA	1196	A
1	AA	1197	A
1	AA	1202	U
1	AA	1212	U
1	AA	1213	A
1	AA	1214	C
1	AA	1226	C
1	AA	1227	A
1	AA	1228	C
1	AA	1229	A
1	AA	1238	A
1	AA	1240	U
1	AA	1241	G
1	AA	1242	G
1	AA	1253	G
1	AA	1256	A
1	AA	1257	A
1	AA	1275	A
1	AA	1279	G
1	AA	1280	A
1	AA	1282	C
1	AA	1283	U

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Mol	Chain	Res	Type
1	AA	1285	A
1	AA	1286	U
1	AA	1287	A
1	AA	1288	A
1	AA	1293	C
1	AA	1299	A
1	AA	1303	C
1	AA	1304	G
1	AA	1305	G
1	AA	1308	U
1	AA	1315	U
1	AA	1316	G
1	AA	1317	C
1	AA	1318	A
1	AA	1320	C
1	AA	1321	U
1	AA	1322	C
1	AA	1323	G
1	AA	1324	A
1	AA	1331	G
1	AA	1332	A
1	AA	1336	C
1	AA	1337	G
1	AA	1348	U
1	AA	1349	A
1	AA	1353	G
1	AA	1362	A
1	AA	1363	A
1	AA	1364	U
1	AA	1370	G
1	AA	1371	G
1	AA	1381	U
1	AA	1382	C
1	AA	1397	C
1	AA	1398	A
1	AA	1411	C
1	AA	1412	C
1	AA	1413	A
1	AA	1419	G
1	AA	1432	G
1	AA	1441	A
1	AA	1446	A

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Mol	Chain	Res	Type
1	AA	1448	C
1	AA	1451	U
1	AA	1452	C
1	AA	1453	G
1	AA	1454	G
1	AA	1455	G
1	AA	1469	C
1	AA	1470	U
1	AA	1476	A
1	AA	1490	U
1	AA	1491	G
1	AA	1492	A
1	AA	1494	G
1	AA	1497	G
1	AA	1499	A
1	AA	1503	A
1	AA	1505	G
1	AA	1506	U
1	AA	1517	G
1	AA	1529	G
1	AA	1530	G
1	AA	1531	A
22	BA	10	A
22	BA	12	U
22	BA	13	A
22	BA	14	A
22	BA	15	G
22	BA	34	U
22	BA	35	G
22	BA	42	A
22	BA	43	G
22	BA	46	G
22	BA	52	A
22	BA	61	C
22	BA	63	A
22	BA	71	A
22	BA	74	A
22	BA	75	G
22	BA	80	G
22	BA	84	A
22	BA	98	G
22	BA	100	U

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Mol	Chain	Res	Type
22	BA	101	A
22	BA	102	U
22	BA	118	A
22	BA	119	A
22	BA	120	U
22	BA	125	A
22	BA	126	A
22	BA	135	U
22	BA	136	G
22	BA	137	U
22	BA	138	U
22	BA	139	U
22	BA	140	C
22	BA	141	G
22	BA	142	A
22	BA	143	C
22	BA	144	A
22	BA	159	G
22	BA	162	U
22	BA	163	C
22	BA	164	C
22	BA	165	A
22	BA	166	U
22	BA	188	G
22	BA	193	U
22	BA	196	A
22	BA	206	U
22	BA	214	G
22	BA	215	G
22	BA	216	A
22	BA	221	A
22	BA	222	A
22	BA	230	G
22	BA	248	G
22	BA	255	A
22	BA	264	C
22	BA	265	A
22	BA	266	G
22	BA	267	C
22	BA	271	G
22	BA	272	A
22	BA	273	G

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Mol	Chain	Res	Type
22	BA	276	U
22	BA	277	G
22	BA	278	A
22	BA	285	G
22	BA	299	A
22	BA	302	C
22	BA	303	G
22	BA	310	A
22	BA	311	A
22	BA	329	G
22	BA	330	A
22	BA	346	A
22	BA	347	A
22	BA	349	U
22	BA	350	G
22	BA	353	C
22	BA	359	G
22	BA	361	G
22	BA	362	A
22	BA	371	A
22	BA	372	G
22	BA	383	C
22	BA	386	G
22	BA	387	U
22	BA	396	G
22	BA	404	A
22	BA	405	U
22	BA	411	G
22	BA	412	A
22	BA	413	C
22	BA	424	G
22	BA	425	G
22	BA	455	C
22	BA	461	C
22	BA	480	A
22	BA	481	G
22	BA	482	A
22	BA	491	G
22	BA	504	A
22	BA	505	A
22	BA	507	A
22	BA	508	A

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Mol	Chain	Res	Type
22	BA	509	C
22	BA	510	C
22	BA	527	C
22	BA	528	A
22	BA	531	C
22	BA	532	A
22	BA	533	G
22	BA	542	C
22	BA	543	G
22	BA	544	C
22	BA	546	U
22	BA	547	A
22	BA	548	G
22	BA	549	G
22	BA	550	C
22	BA	555	G
22	BA	556	A
22	BA	563	A
22	BA	573	U
22	BA	575	A
22	BA	586	A
22	BA	603	A
22	BA	604	G
22	BA	613	A
22	BA	614	A
22	BA	615	U
22	BA	627	A
22	BA	631	A
22	BA	634	C
22	BA	637	A
22	BA	645	C
22	BA	646	U
22	BA	647	G
22	BA	654	A
22	BA	655	A
22	BA	656	G
22	BA	686	U
22	BA	714	U
22	BA	715	A
22	BA	717	C
22	BA	722	A
22	BA	726	G

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Mol	Chain	Res	Type
22	BA	730	A
22	BA	738	G
22	BA	740	C
22	BA	746	U
22	BA	747	U
22	BA	748	G
22	BA	762	U
22	BA	763	G
22	BA	764	A
22	BA	765	C
22	BA	775	G
22	BA	776	G
22	BA	782	A
22	BA	784	G
22	BA	785	G
22	BA	790	U
22	BA	791	C
22	BA	792	A
22	BA	801	G
22	BA	805	G
22	BA	812	C
22	BA	819	A
22	BA	827	U
22	BA	828	U
22	BA	845	A
22	BA	846	U
22	BA	847	U
22	BA	859	G
22	BA	868	U
22	BA	876	C
22	BA	878	A
22	BA	896	A
22	BA	897	C
22	BA	901	C
22	BA	903	C
22	BA	904	G
22	BA	910	A
22	BA	914	G
22	BA	915	C
22	BA	932	U
22	BA	934	U
22	BA	941	A

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Mol	Chain	Res	Type
22	BA	945	A
22	BA	946	C
22	BA	958	U
22	BA	959	A
22	BA	961	C
22	BA	974	G
22	BA	976	G
22	BA	983	A
22	BA	989	G
22	BA	995	C
22	BA	996	A
22	BA	997	G
22	BA	1005	C
22	BA	1011	G
22	BA	1012	U
22	BA	1013	C
22	BA	1020	A
22	BA	1021	A
22	BA	1022	G
22	BA	1023	U
22	BA	1024	G
22	BA	1026	G
22	BA	1033	U
22	BA	1044	C
22	BA	1045	C
22	BA	1046	A
22	BA	1047	G
22	BA	1060	U
22	BA	1061	U
22	BA	1062	G
22	BA	1063	G
22	BA	1065	U
22	BA	1066	U
22	BA	1070	A
22	BA	1071	G
22	BA	1072	C
22	BA	1073	A
22	BA	1074	G
22	BA	1075	C
22	BA	1078	U
22	BA	1083	U
22	BA	1084	A

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Mol	Chain	Res	Type
22	BA	1088	A
22	BA	1092	C
22	BA	1098	A
22	BA	1112	G
22	BA	1115	G
22	BA	1128	G
22	BA	1130	U
22	BA	1132	U
22	BA	1133	A
22	BA	1135	C
22	BA	1136	G
22	BA	1139	G
22	BA	1142	A
22	BA	1151	A
22	BA	1156	A
22	BA	1169	A
22	BA	1170	C
22	BA	1175	A
22	BA	1176	U
22	BA	1180	U
22	BA	1181	U
22	BA	1186	G
22	BA	1212	G
22	BA	1238	G
22	BA	1247	A
22	BA	1248	G
22	BA	1249	U
22	BA	1253	A
22	BA	1256	G
22	BA	1266	G
22	BA	1271	G
22	BA	1272	A
22	BA	1273	U
22	BA	1276	A
22	BA	1281	G
22	BA	1300	G
22	BA	1301	A
22	BA	1305	C
22	BA	1311	G
22	BA	1317	G
22	BA	1321	A
22	BA	1324	G

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Mol	Chain	Res	Type
22	BA	1341	G
22	BA	1349	C
22	BA	1352	U
22	BA	1359	A
22	BA	1365	A
22	BA	1368	G
22	BA	1378	A
22	BA	1379	U
22	BA	1380	G
22	BA	1383	A
22	BA	1386	C
22	BA	1395	A
22	BA	1397	U
22	BA	1416	G
22	BA	1419	A
22	BA	1420	A
22	BA	1428	C
22	BA	1434	A
22	BA	1441	G
22	BA	1452	G
22	BA	1453	A
22	BA	1459	G
22	BA	1460	U
22	BA	1463	C
22	BA	1467	U
22	BA	1475	G
22	BA	1476	U
22	BA	1482	G
22	BA	1493	C
22	BA	1498	C
22	BA	1499	C
22	BA	1504	A
22	BA	1507	C
22	BA	1508	A
22	BA	1509	A
22	BA	1510	G
22	BA	1512	C
22	BA	1515	A
22	BA	1532	A
22	BA	1533	C
22	BA	1534	U
22	BA	1535	A

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Mol	Chain	Res	Type
22	BA	1536	C
22	BA	1537	G
22	BA	1538	G
22	BA	1540	G
22	BA	1554	U
22	BA	1555	G
22	BA	1558	C
22	BA	1559	U
22	BA	1569	A
22	BA	1578	U
22	BA	1581	G
22	BA	1583	A
22	BA	1584	U
22	BA	1585	C
22	BA	1606	C
22	BA	1607	C
22	BA	1608	A
22	BA	1610	A
22	BA	1619	G
22	BA	1635	A
22	BA	1639	C
22	BA	1647	U
22	BA	1648	U
22	BA	1649	G
22	BA	1674	G
22	BA	1677	A
22	BA	1695	G
22	BA	1696	G
22	BA	1706	C
22	BA	1707	G
22	BA	1714	U
22	BA	1715	G
22	BA	1723	G
22	BA	1729	U
22	BA	1730	C
22	BA	1732	C
22	BA	1734	G
22	BA	1736	U
22	BA	1737	G
22	BA	1738	G
22	BA	1739	A
22	BA	1744	A

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Mol	Chain	Res	Type
22	BA	1758	U
22	BA	1764	C
22	BA	1773	A
22	BA	1776	G
22	BA	1791	A
22	BA	1800	C
22	BA	1801	A
22	BA	1807	G
22	BA	1808	A
22	BA	1812	U
22	BA	1816	C
22	BA	1829	A
22	BA	1848	A
22	BA	1858	A
22	BA	1859	U
22	BA	1862	G
22	BA	1869	G
22	BA	1870	C
22	BA	1871	A
22	BA	1872	A
22	BA	1873	G
22	BA	1876	A
22	BA	1906	G
22	BA	1913	A
22	BA	1914	C
22	BA	1927	A
22	BA	1929	G
22	BA	1930	G
22	BA	1936	A
22	BA	1937	A
22	BA	1938	A
22	BA	1941	C
22	BA	1942	C
22	BA	1944	U
22	BA	1955	U
22	BA	1960	A
22	BA	1967	C
22	BA	1970	A
22	BA	1971	U
22	BA	1972	G
22	BA	1991	U
22	BA	1993	U

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Mol	Chain	Res	Type
22	BA	1997	C
22	BA	2018	G
22	BA	2022	U
22	BA	2023	C
22	BA	2030	A
22	BA	2031	A
22	BA	2032	G
22	BA	2033	A
22	BA	2043	C
22	BA	2049	G
22	BA	2055	C
22	BA	2056	G
22	BA	2060	A
22	BA	2061	G
22	BA	2062	A
22	BA	2069	G
22	BA	2093	G
22	BA	2104	C
22	BA	2106	U
22	BA	2107	G
22	BA	2109	U
22	BA	2110	G
22	BA	2134	A
22	BA	2135	A
22	BA	2136	G
22	BA	2137	U
22	BA	2139	U
22	BA	2140	G
22	BA	2143	C
22	BA	2144	G
22	BA	2145	C
22	BA	2146	C
22	BA	2147	A
22	BA	2148	G
22	BA	2149	U
22	BA	2150	C
22	BA	2151	U
22	BA	2155	U
22	BA	2156	G
22	BA	2180	U
22	BA	2181	U
22	BA	2183	A

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Mol	Chain	Res	Type
22	BA	2184	A
22	BA	2185	U
22	BA	2187	U
22	BA	2194	U
22	BA	2198	A
22	BA	2199	A
22	BA	2200	C
22	BA	2203	U
22	BA	2204	G
22	BA	2211	A
22	BA	2212	A
22	BA	2214	C
22	BA	2223	G
22	BA	2225	A
22	BA	2226	C
22	BA	2238	G
22	BA	2239	G
22	BA	2243	U
22	BA	2250	G
22	BA	2268	A
22	BA	2273	A
22	BA	2278	A
22	BA	2279	G
22	BA	2282	G
22	BA	2283	C
22	BA	2287	A
22	BA	2296	U
22	BA	2297	A
22	BA	2305	U
22	BA	2308	G
22	BA	2311	A
22	BA	2312	U
22	BA	2317	A
22	BA	2321	U
22	BA	2322	A
22	BA	2324	U
22	BA	2325	G
22	BA	2326	C
22	BA	2327	A
22	BA	2335	A
22	BA	2347	C
22	BA	2350	C

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Mol	Chain	Res	Type
22	BA	2357	G
22	BA	2361	G
22	BA	2372	U
22	BA	2383	G
22	BA	2385	C
22	BA	2402	U
22	BA	2403	C
22	BA	2405	G
22	BA	2406	A
22	BA	2423	U
22	BA	2424	C
22	BA	2425	A
22	BA	2426	A
22	BA	2428	G
22	BA	2429	G
22	BA	2430	A
22	BA	2431	U
22	BA	2435	A
22	BA	2441	U
22	BA	2445	G
22	BA	2447	G
22	BA	2448	A
22	BA	2476	A
22	BA	2490	G
22	BA	2491	U
22	BA	2502	G
22	BA	2503	A
22	BA	2505	G
22	BA	2518	A
22	BA	2529	G
22	BA	2554	U
22	BA	2563	U
22	BA	2566	A
22	BA	2567	G
22	BA	2572	A
22	BA	2573	C
22	BA	2574	G
22	BA	2576	G
22	BA	2579	C
22	BA	2585	U
22	BA	2586	U
22	BA	2603	G

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Mol	Chain	Res	Type
22	BA	2609	U
22	BA	2613	U
22	BA	2621	G
22	BA	2629	U
22	BA	2639	A
22	BA	2661	G
22	BA	2663	G
22	BA	2671	G
22	BA	2688	G
22	BA	2689	U
22	BA	2690	U
22	BA	2714	G
22	BA	2716	C
22	BA	2726	A
22	BA	2729	G
22	BA	2732	G
22	BA	2748	A
22	BA	2757	A
22	BA	2762	C
22	BA	2765	A
22	BA	2769	U
22	BA	2778	A
22	BA	2779	U
22	BA	2791	G
22	BA	2798	U
22	BA	2799	A
22	BA	2800	A
22	BA	2801	G
22	BA	2820	A
22	BA	2821	A
22	BA	2825	G
22	BA	2836	U
22	BA	2861	U
22	BA	2867	G
22	BA	2873	A
22	BA	2874	C
22	BA	2880	C
22	BA	2883	A
22	BA	2884	U
22	BA	2891	U
23	BB	12	C
23	BB	15	A

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Mol	Chain	Res	Type
23	BB	16	G
23	BB	24	G
23	BB	25	U
23	BB	35	C
23	BB	37	C
23	BB	41	G
23	BB	44	G
23	BB	45	A
23	BB	56	G
23	BB	66	A
23	BB	87	U
23	BB	88	C
23	BB	89	U
23	BB	90	C
23	BB	91	C
23	BB	99	A
23	BB	109	A
53	CA	6	G
53	CA	7	A
53	CA	8	A
53	CA	9	G
53	CA	14	U
53	CA	15	G
53	CA	16	A
53	CA	17	U
53	CA	32	A
53	CA	39	G
53	CA	40	C
53	CA	47	C
53	CA	48	C
53	CA	51	A
53	CA	61	G
53	CA	65	A
53	CA	66	A
53	CA	67	C
53	CA	68	G
53	CA	70	U
53	CA	71	A
53	CA	72	A
53	CA	73	C
53	CA	76	G
53	CA	77	A

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Mol	Chain	Res	Type
53	CA	80	A
53	CA	81	A
53	CA	82	G
53	CA	83	C
53	CA	84	U
53	CA	85	U
53	CA	86	G
53	CA	87	C
53	CA	88	U
53	CA	89	U
53	CA	90	C
53	CA	91	U
53	CA	92	U
53	CA	94	G
53	CA	95	C
53	CA	96	U
53	CA	98	A
53	CA	101	A
53	CA	109	A
53	CA	110	C
53	CA	116	A
53	CA	120	A
53	CA	121	U
53	CA	122	G
53	CA	131	A
53	CA	132	C
53	CA	141	G
53	CA	143	A
53	CA	144	G
53	CA	154	U
53	CA	155	A
53	CA	164	G
53	CA	166	U
53	CA	169	C
53	CA	177	G
53	CA	178	C
53	CA	181	A
53	CA	182	A
53	CA	184	G
53	CA	191	G
53	CA	195	A
53	CA	198	G

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Mol	Chain	Res	Type
53	CA	199	A
53	CA	206	C
53	CA	207	C
53	CA	208	U
53	CA	209	U
53	CA	210	C
53	CA	211	G
53	CA	212	G
53	CA	214	C
53	CA	239	U
53	CA	240	G
53	CA	243	A
53	CA	244	U
53	CA	245	U
53	CA	246	A
53	CA	247	G
53	CA	248	C
53	CA	250	A
53	CA	251	G
53	CA	252	U
53	CA	253	A
53	CA	266	G
53	CA	267	C
53	CA	268	U
53	CA	275	G
53	CA	279	A
53	CA	280	C
53	CA	289	G
53	CA	298	A
53	CA	301	G
53	CA	305	G
53	CA	306	A
53	CA	316	C
53	CA	321	A
53	CA	328	C
53	CA	329	A
53	CA	330	C
53	CA	331	G
53	CA	332	G
53	CA	338	A
53	CA	339	C
53	CA	345	C

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Mol	Chain	Res	Type
53	CA	346	G
53	CA	347	G
53	CA	348	G
53	CA	351	G
53	CA	352	C
53	CA	353	A
53	CA	354	G
53	CA	366	A
53	CA	367	U
53	CA	368	U
53	CA	369	G
53	CA	372	C
53	CA	373	A
53	CA	374	A
53	CA	376	G
53	CA	381	C
53	CA	382	A
53	CA	384	G
53	CA	397	A
53	CA	398	U
53	CA	406	G
53	CA	411	A
53	CA	412	A
53	CA	413	G
53	CA	414	A
53	CA	415	A
53	CA	421	U
53	CA	422	C
53	CA	423	G
53	CA	424	G
53	CA	425	G
53	CA	429	U
53	CA	430	A
53	CA	435	A
53	CA	436	C
53	CA	440	C
53	CA	451	A
53	CA	452	A
53	CA	456	A
53	CA	457	G
53	CA	458	U
53	CA	459	A

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Mol	Chain	Res	Type
53	CA	461	A
53	CA	463	U
53	CA	464	U
53	CA	466	A
53	CA	467	U
53	CA	468	A
53	CA	474	G
53	CA	476	U
53	CA	477	C
53	CA	478	A
53	CA	479	U
53	CA	481	G
53	CA	482	A
53	CA	483	C
53	CA	484	G
53	CA	485	U
53	CA	486	U
53	CA	493	A
53	CA	496	A
53	CA	497	G
53	CA	500	G
53	CA	501	C
53	CA	511	C
53	CA	512	U
53	CA	513	C
53	CA	518	C
53	CA	519	C
53	CA	520	A
53	CA	522	C
53	CA	527	G
53	CA	530	G
53	CA	531	U
53	CA	532	A
53	CA	533	A
53	CA	534	U
53	CA	535	A
53	CA	536	C
53	CA	547	A
53	CA	550	G
53	CA	559	A
53	CA	562	U
53	CA	563	A

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Mol	Chain	Res	Type
53	CA	564	C
53	CA	568	G
53	CA	572	A
53	CA	573	A
53	CA	576	C
53	CA	577	G
53	CA	595	A
53	CA	596	A
53	CA	604	G
53	CA	616	G
53	CA	641	U
53	CA	642	A
53	CA	643	C
53	CA	653	U
53	CA	654	G
53	CA	665	A
53	CA	684	U
53	CA	687	A
53	CA	688	G
53	CA	695	A
53	CA	700	G
53	CA	701	U
53	CA	702	A
53	CA	703	G
53	CA	704	A
53	CA	705	G
53	CA	721	G
53	CA	722	G
53	CA	723	U
53	CA	724	G
53	CA	731	G
53	CA	734	G
53	CA	748	G
53	CA	752	G
53	CA	753	A
53	CA	754	C
53	CA	755	G
53	CA	776	G
53	CA	777	A
53	CA	781	A
53	CA	782	A
53	CA	785	G

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Mol	Chain	Res	Type
53	CA	792	A
53	CA	793	U
53	CA	794	A
53	CA	803	G
53	CA	812	G
53	CA	813	U
53	CA	815	A
53	CA	817	C
53	CA	819	A
53	CA	820	U
53	CA	821	G
53	CA	828	U
53	CA	829	G
53	CA	841	C
53	CA	842	U
53	CA	843	U
53	CA	844	G
53	CA	845	A
53	CA	846	G
53	CA	847	G
53	CA	849	G
53	CA	870	U
53	CA	876	C
53	CA	880	C
53	CA	889	A
53	CA	890	G
53	CA	913	A
53	CA	914	A
53	CA	926	G
53	CA	927	G
53	CA	934	C
53	CA	935	A
53	CA	936	C
53	CA	942	G
53	CA	945	G
53	CA	960	U
53	CA	961	U
53	CA	962	C
53	CA	966	G
53	CA	968	A
53	CA	969	A
53	CA	972	C

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Mol	Chain	Res	Type
53	CA	973	G
53	CA	974	A
53	CA	975	A
53	CA	976	G
53	CA	977	A
53	CA	978	A
53	CA	982	U
53	CA	983	A
53	CA	985	C
53	CA	987	G
53	CA	990	C
53	CA	991	U
53	CA	992	U
53	CA	993	G
53	CA	995	C
53	CA	996	A
53	CA	1000	A
53	CA	1004	A
53	CA	1006	G
53	CA	1007	U
53	CA	1016	A
53	CA	1019	A
53	CA	1020	G
53	CA	1022	A
53	CA	1024	G
53	CA	1026	G
53	CA	1029	U
53	CA	1031	C
53	CA	1032	G
53	CA	1033	G
53	CA	1036	A
53	CA	1037	C
53	CA	1049	U
53	CA	1050	G
53	CA	1052	U
53	CA	1053	G
53	CA	1054	C
53	CA	1065	U
53	CA	1066	C
53	CA	1067	A
53	CA	1068	G
53	CA	1072	G

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Mol	Chain	Res	Type
53	CA	1086	U
53	CA	1087	G
53	CA	1094	G
53	CA	1095	U
53	CA	1101	A
53	CA	1102	A
53	CA	1113	C
53	CA	1124	G
53	CA	1125	U
53	CA	1130	A
53	CA	1131	G
53	CA	1136	C
53	CA	1137	C
53	CA	1138	G
53	CA	1139	G
53	CA	1140	C
53	CA	1141	C
53	CA	1142	G
53	CA	1143	G
53	CA	1145	A
53	CA	1146	A
53	CA	1147	C
53	CA	1148	U
53	CA	1151	A
53	CA	1152	A
53	CA	1158	C
53	CA	1159	U
53	CA	1160	G
53	CA	1161	C
53	CA	1169	A
53	CA	1176	A
53	CA	1178	G
53	CA	1181	G
53	CA	1183	U
53	CA	1184	G
53	CA	1191	A
53	CA	1193	G
53	CA	1196	A
53	CA	1197	A
53	CA	1201	A
53	CA	1202	U
53	CA	1212	U

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Mol	Chain	Res	Type
53	CA	1213	A
53	CA	1214	C
53	CA	1215	G
53	CA	1216	A
53	CA	1217	C
53	CA	1222	G
53	CA	1224	U
53	CA	1225	A
53	CA	1226	C
53	CA	1228	C
53	CA	1229	A
53	CA	1238	A
53	CA	1239	A
53	CA	1240	U
53	CA	1241	G
53	CA	1242	G
53	CA	1243	C
53	CA	1250	A
53	CA	1251	A
53	CA	1256	A
53	CA	1257	A
53	CA	1260	G
53	CA	1266	G
53	CA	1278	G
53	CA	1279	G
53	CA	1280	A
53	CA	1281	C
53	CA	1282	C
53	CA	1283	U
53	CA	1285	A
53	CA	1286	U
53	CA	1287	A
53	CA	1288	A
53	CA	1294	G
53	CA	1295	U
53	CA	1297	G
53	CA	1298	U
53	CA	1299	A
53	CA	1300	G
53	CA	1301	U
53	CA	1302	C
53	CA	1303	C

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Mol	Chain	Res	Type
53	CA	1305	G
53	CA	1316	G
53	CA	1317	C
53	CA	1320	C
53	CA	1322	C
53	CA	1323	G
53	CA	1324	A
53	CA	1332	A
53	CA	1338	G
53	CA	1346	A
53	CA	1348	U
53	CA	1349	A
53	CA	1359	C
53	CA	1362	A
53	CA	1364	U
53	CA	1365	G
53	CA	1366	C
53	CA	1367	C
53	CA	1370	G
53	CA	1379	G
53	CA	1381	U
53	CA	1382	C
53	CA	1398	A
53	CA	1411	C
53	CA	1429	A
53	CA	1432	G
53	CA	1441	A
53	CA	1446	A
53	CA	1447	A
53	CA	1448	C
53	CA	1449	C
53	CA	1451	U
53	CA	1452	C
53	CA	1453	G
53	CA	1454	G
53	CA	1455	G
53	CA	1491	G
53	CA	1493	A
53	CA	1494	G
53	CA	1497	G
53	CA	1503	A
53	CA	1506	U

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Mol	Chain	Res	Type
53	CA	1517	G
53	CA	1519	A
53	CA	1520	C
53	CA	1529	G
53	CA	1530	G
53	CA	1534	A
22	DA	14	A
22	DA	15	G
22	DA	27	G
22	DA	28	A
22	DA	34	U
22	DA	35	G
22	DA	36	G
22	DA	39	G
22	DA	46	G
22	DA	49	A
22	DA	50	U
22	DA	52	A
22	DA	53	A
22	DA	61	C
22	DA	62	U
22	DA	64	A
22	DA	71	A
22	DA	73	A
22	DA	74	A
22	DA	75	G
22	DA	76	C
22	DA	77	G
22	DA	79	C
22	DA	83	A
22	DA	84	A
22	DA	85	G
22	DA	86	G
22	DA	87	U
22	DA	91	A
22	DA	96	C
22	DA	100	U
22	DA	101	A
22	DA	102	U
22	DA	103	A
22	DA	104	A
22	DA	118	A

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Mol	Chain	Res	Type
22	DA	119	A
22	DA	120	U
22	DA	121	G
22	DA	122	G
22	DA	126	A
22	DA	128	C
22	DA	129	C
22	DA	134	G
22	DA	139	U
22	DA	140	C
22	DA	141	G
22	DA	142	A
22	DA	144	A
22	DA	155	A
22	DA	156	A
22	DA	160	A
22	DA	163	C
22	DA	164	C
22	DA	166	U
22	DA	177	G
22	DA	180	G
22	DA	181	A
22	DA	196	A
22	DA	199	A
22	DA	204	A
22	DA	205	G
22	DA	206	U
22	DA	207	A
22	DA	216	A
22	DA	217	A
22	DA	221	A
22	DA	222	A
22	DA	223	A
22	DA	224	U
22	DA	227	A
22	DA	228	C
22	DA	229	C
22	DA	230	G
22	DA	231	A
22	DA	233	A
22	DA	234	U
22	DA	235	U

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Mol	Chain	Res	Type
22	DA	241	A
22	DA	242	G
22	DA	245	G
22	DA	248	G
22	DA	249	C
22	DA	250	G
22	DA	251	A
22	DA	255	A
22	DA	264	C
22	DA	265	A
22	DA	266	G
22	DA	271	G
22	DA	272	A
22	DA	273	G
22	DA	277	G
22	DA	281	C
22	DA	284	U
22	DA	285	G
22	DA	294	A
22	DA	295	G
22	DA	299	A
22	DA	302	C
22	DA	303	G
22	DA	311	A
22	DA	312	G
22	DA	314	C
22	DA	315	G
22	DA	321	U
22	DA	322	A
22	DA	323	C
22	DA	324	A
22	DA	325	G
22	DA	329	G
22	DA	330	A
22	DA	334	C
22	DA	335	C
22	DA	336	C
22	DA	343	C
22	DA	349	U
22	DA	351	C
22	DA	353	C
22	DA	354	A

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Mol	Chain	Res	Type
22	DA	362	A
22	DA	370	G
22	DA	371	A
22	DA	372	G
22	DA	374	A
22	DA	383	C
22	DA	385	C
22	DA	386	G
22	DA	387	U
22	DA	388	G
22	DA	389	G
22	DA	390	U
22	DA	392	U
22	DA	396	G
22	DA	397	U
22	DA	399	U
22	DA	404	A
22	DA	405	U
22	DA	406	G
22	DA	407	G
22	DA	411	G
22	DA	412	A
22	DA	413	C
22	DA	423	A
22	DA	424	G
22	DA	428	A
22	DA	430	A
22	DA	436	C
22	DA	443	A
22	DA	444	C
22	DA	445	C
22	DA	446	G
22	DA	447	A
22	DA	451	U
22	DA	455	C
22	DA	457	A
22	DA	461	C
22	DA	462	C
22	DA	467	G
22	DA	474	G
22	DA	475	C
22	DA	476	G

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Mol	Chain	Res	Type
22	DA	477	A
22	DA	480	A
22	DA	481	G
22	DA	482	A
22	DA	483	A
22	DA	484	C
22	DA	489	G
22	DA	490	C
22	DA	491	G
22	DA	492	A
22	DA	498	G
22	DA	502	A
22	DA	503	A
22	DA	504	A
22	DA	505	A
22	DA	506	G
22	DA	507	A
22	DA	510	C
22	DA	512	G
22	DA	527	C
22	DA	529	A
22	DA	532	A
22	DA	544	C
22	DA	545	U
22	DA	546	U
22	DA	547	A
22	DA	548	G
22	DA	549	G
22	DA	550	C
22	DA	562	U
22	DA	563	A
22	DA	572	A
22	DA	573	U
22	DA	574	A
22	DA	575	A
22	DA	576	U
22	DA	586	A
22	DA	587	C
22	DA	590	A
22	DA	603	A
22	DA	604	G
22	DA	605	G

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Mol	Chain	Res	Type
22	DA	606	U
22	DA	613	A
22	DA	614	A
22	DA	616	A
22	DA	617	G
22	DA	618	G
22	DA	620	G
22	DA	621	A
22	DA	622	G
22	DA	623	C
22	DA	627	A
22	DA	628	G
22	DA	629	G
22	DA	637	A
22	DA	638	G
22	DA	639	U
22	DA	645	C
22	DA	646	U
22	DA	649	G
22	DA	654	A
22	DA	655	A
22	DA	656	G
22	DA	662	G
22	DA	664	G
22	DA	671	C
22	DA	672	C
22	DA	685	A
22	DA	686	U
22	DA	695	G
22	DA	699	A
22	DA	705	A
22	DA	711	G
22	DA	717	C
22	DA	726	G
22	DA	728	G
22	DA	730	A
22	DA	740	C
22	DA	745	G
22	DA	746	U
22	DA	747	U
22	DA	748	G
22	DA	751	A

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Mol	Chain	Res	Type
22	DA	753	A
22	DA	757	G
22	DA	762	U
22	DA	763	G
22	DA	764	A
22	DA	770	G
22	DA	775	G
22	DA	776	G
22	DA	781	A
22	DA	782	A
22	DA	784	G
22	DA	785	G
22	DA	789	A
22	DA	790	U
22	DA	791	C
22	DA	792	A
22	DA	801	G
22	DA	805	G
22	DA	806	C
22	DA	807	U
22	DA	812	C
22	DA	819	A
22	DA	827	U
22	DA	828	U
22	DA	831	G
22	DA	846	U
22	DA	847	U
22	DA	858	G
22	DA	859	G
22	DA	860	U
22	DA	861	A
22	DA	866	A
22	DA	867	C
22	DA	868	U
22	DA	873	C
22	DA	875	G
22	DA	877	A
22	DA	878	A
22	DA	902	C
22	DA	905	A
22	DA	910	A
22	DA	912	C

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Mol	Chain	Res	Type
22	DA	914	G
22	DA	915	C
22	DA	916	G
22	DA	919	U
22	DA	922	C
22	DA	931	U
22	DA	932	U
22	DA	933	A
22	DA	941	A
22	DA	944	C
22	DA	946	C
22	DA	953	G
22	DA	958	U
22	DA	961	C
22	DA	962	G
22	DA	963	U
22	DA	964	C
22	DA	973	A
22	DA	974	G
22	DA	981	A
22	DA	983	A
22	DA	985	C
22	DA	990	A
22	DA	991	C
22	DA	995	C
22	DA	996	A
22	DA	1005	C
22	DA	1009	A
22	DA	1010	A
22	DA	1012	U
22	DA	1013	C
22	DA	1020	A
22	DA	1021	A
22	DA	1022	G
22	DA	1023	U
22	DA	1024	G
22	DA	1025	G
22	DA	1026	G
22	DA	1027	A
22	DA	1033	U
22	DA	1039	A
22	DA	1044	C

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Mol	Chain	Res	Type
22	DA	1045	C
22	DA	1046	A
22	DA	1047	G
22	DA	1048	A
22	DA	1049	C
22	DA	1050	A
22	DA	1055	G
22	DA	1056	G
22	DA	1057	A
22	DA	1060	U
22	DA	1063	G
22	DA	1064	C
22	DA	1068	G
22	DA	1069	A
22	DA	1070	A
22	DA	1071	G
22	DA	1072	C
22	DA	1073	A
22	DA	1074	G
22	DA	1076	C
22	DA	1077	A
22	DA	1079	C
22	DA	1080	A
22	DA	1083	U
22	DA	1086	A
22	DA	1088	A
22	DA	1089	A
22	DA	1091	G
22	DA	1097	U
22	DA	1100	C
22	DA	1103	A
22	DA	1110	G
22	DA	1111	A
22	DA	1112	G
22	DA	1113	U
22	DA	1114	C
22	DA	1115	G
22	DA	1119	U
22	DA	1127	A
22	DA	1128	G
22	DA	1129	A
22	DA	1130	U

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Mol	Chain	Res	Type
22	DA	1132	U
22	DA	1133	A
22	DA	1134	A
22	DA	1135	C
22	DA	1136	G
22	DA	1139	G
22	DA	1142	A
22	DA	1153	C
22	DA	1155	A
22	DA	1157	G
22	DA	1158	C
22	DA	1169	A
22	DA	1170	C
22	DA	1172	C
22	DA	1174	U
22	DA	1176	U
22	DA	1204	A
22	DA	1205	A
22	DA	1206	G
22	DA	1207	C
22	DA	1210	G
22	DA	1211	C
22	DA	1227	G
22	DA	1231	U
22	DA	1235	G
22	DA	1236	G
22	DA	1237	A
22	DA	1241	A
22	DA	1242	U
22	DA	1246	A
22	DA	1247	A
22	DA	1248	G
22	DA	1249	U
22	DA	1250	G
22	DA	1253	A
22	DA	1255	U
22	DA	1256	G
22	DA	1262	A
22	DA	1265	A
22	DA	1266	G
22	DA	1267	U
22	DA	1268	A

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Mol	Chain	Res	Type
22	DA	1271	G
22	DA	1272	A
22	DA	1273	U
22	DA	1274	A
22	DA	1275	A
22	DA	1276	A
22	DA	1278	C
22	DA	1286	A
22	DA	1287	A
22	DA	1288	G
22	DA	1290	C
22	DA	1291	C
22	DA	1300	G
22	DA	1301	A
22	DA	1304	A
22	DA	1311	G
22	DA	1312	U
22	DA	1313	U
22	DA	1321	A
22	DA	1324	G
22	DA	1325	U
22	DA	1326	U
22	DA	1327	A
22	DA	1330	C
22	DA	1331	G
22	DA	1332	G
22	DA	1336	A
22	DA	1337	G
22	DA	1340	U
22	DA	1341	G
22	DA	1343	G
22	DA	1344	U
22	DA	1345	C
22	DA	1346	G
22	DA	1352	U
22	DA	1355	G
22	DA	1365	A
22	DA	1374	G
22	DA	1376	C
22	DA	1378	A
22	DA	1379	U
22	DA	1382	G

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Mol	Chain	Res	Type
22	DA	1383	A
22	DA	1386	C
22	DA	1387	A
22	DA	1388	G
22	DA	1389	G
22	DA	1397	U
22	DA	1398	C
22	DA	1399	C
22	DA	1400	U
22	DA	1401	G
22	DA	1403	A
22	DA	1404	C
22	DA	1416	G
22	DA	1417	C
22	DA	1418	G
22	DA	1419	A
22	DA	1420	A
22	DA	1421	G
22	DA	1426	G
22	DA	1427	A
22	DA	1428	C
22	DA	1430	G
22	DA	1440	U
22	DA	1444	G
22	DA	1452	G
22	DA	1453	A
22	DA	1455	G
22	DA	1456	G
22	DA	1459	G
22	DA	1460	U
22	DA	1461	C
22	DA	1470	A
22	DA	1478	G
22	DA	1481	U
22	DA	1482	G
22	DA	1483	G
22	DA	1489	C
22	DA	1490	A
22	DA	1491	G
22	DA	1493	C
22	DA	1494	A
22	DA	1498	C

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Mol	Chain	Res	Type
22	DA	1503	A
22	DA	1504	A
22	DA	1507	C
22	DA	1508	A
22	DA	1509	A
22	DA	1510	G
22	DA	1511	G
22	DA	1520	U
22	DA	1522	A
22	DA	1523	U
22	DA	1524	G
22	DA	1530	G
22	DA	1531	C
22	DA	1532	A
22	DA	1533	C
22	DA	1534	U
22	DA	1535	A
22	DA	1536	C
22	DA	1537	G
22	DA	1538	G
22	DA	1539	U
22	DA	1541	C
22	DA	1554	U
22	DA	1555	G
22	DA	1556	C
22	DA	1559	U
22	DA	1560	G
22	DA	1565	C
22	DA	1567	G
22	DA	1568	G
22	DA	1569	A
22	DA	1583	A
22	DA	1584	U
22	DA	1585	C
22	DA	1586	A
22	DA	1587	G
22	DA	1600	C
22	DA	1601	G
22	DA	1603	A
22	DA	1606	C
22	DA	1607	C
22	DA	1608	A

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Mol	Chain	Res	Type
22	DA	1610	A
22	DA	1612	C
22	DA	1613	G
22	DA	1616	A
22	DA	1618	A
22	DA	1626	A
22	DA	1633	G
22	DA	1635	A
22	DA	1636	U
22	DA	1640	A
22	DA	1646	C
22	DA	1647	U
22	DA	1648	U
22	DA	1649	G
22	DA	1654	A
22	DA	1655	A
22	DA	1663	G
22	DA	1664	A
22	DA	1674	G
22	DA	1682	G
22	DA	1683	U
22	DA	1694	C
22	DA	1695	G
22	DA	1696	G
22	DA	1699	G
22	DA	1700	A
22	DA	1701	A
22	DA	1706	C
22	DA	1707	G
22	DA	1714	U
22	DA	1715	G
22	DA	1717	A
22	DA	1722	A
22	DA	1723	G
22	DA	1728	C
22	DA	1729	U
22	DA	1730	C
22	DA	1731	G
22	DA	1732	C
22	DA	1733	G
22	DA	1734	G
22	DA	1735	A

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Mol	Chain	Res	Type
22	DA	1738	G
22	DA	1750	G
22	DA	1758	U
22	DA	1764	C
22	DA	1773	A
22	DA	1776	G
22	DA	1782	U
22	DA	1787	A
22	DA	1794	A
22	DA	1800	C
22	DA	1802	A
22	DA	1803	A
22	DA	1808	A
22	DA	1809	A
22	DA	1810	A
22	DA	1811	G
22	DA	1817	G
22	DA	1818	U
22	DA	1820	U
22	DA	1821	A
22	DA	1822	C
22	DA	1823	G
22	DA	1824	G
22	DA	1828	G
22	DA	1829	A
22	DA	1847	A
22	DA	1848	A
22	DA	1857	G
22	DA	1865	U
22	DA	1866	A
22	DA	1867	G
22	DA	1869	G
22	DA	1870	C
22	DA	1873	G
22	DA	1875	G
22	DA	1877	A
22	DA	1884	G
22	DA	1889	A
22	DA	1903	G
22	DA	1906	G
22	DA	1913	A
22	DA	1914	C

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Mol	Chain	Res	Type
22	DA	1915	U
22	DA	1916	A
22	DA	1927	A
22	DA	1929	G
22	DA	1930	G
22	DA	1931	U
22	DA	1937	A
22	DA	1938	A
22	DA	1939	U
22	DA	1941	C
22	DA	1942	C
22	DA	1943	U
22	DA	1944	U
22	DA	1945	G
22	DA	1955	U
22	DA	1956	U
22	DA	1961	C
22	DA	1963	U
22	DA	1964	G
22	DA	1965	C
22	DA	1966	A
22	DA	1967	C
22	DA	1970	A
22	DA	1971	U
22	DA	1972	G
22	DA	1975	G
22	DA	1982	U
22	DA	1991	U
22	DA	1992	G
22	DA	1993	U
22	DA	1997	C
22	DA	2018	G
22	DA	2020	A
22	DA	2022	U
22	DA	2023	C
22	DA	2024	G
22	DA	2030	A
22	DA	2031	A
22	DA	2033	A
22	DA	2034	U
22	DA	2035	G
22	DA	2043	C

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Mol	Chain	Res	Type
22	DA	2049	G
22	DA	2051	A
22	DA	2055	C
22	DA	2056	G
22	DA	2060	A
22	DA	2061	G
22	DA	2062	A
22	DA	2068	U
22	DA	2069	G
22	DA	2080	A
22	DA	2092	U
22	DA	2093	G
22	DA	2094	A
22	DA	2104	C
22	DA	2107	G
22	DA	2108	A
22	DA	2109	U
22	DA	2110	G
22	DA	2134	A
22	DA	2135	A
22	DA	2136	G
22	DA	2138	G
22	DA	2139	U
22	DA	2143	C
22	DA	2144	G
22	DA	2145	C
22	DA	2147	A
22	DA	2148	G
22	DA	2150	C
22	DA	2152	G
22	DA	2153	C
22	DA	2154	A
22	DA	2156	G
22	DA	2157	G
22	DA	2180	U
22	DA	2181	U
22	DA	2183	A
22	DA	2187	U
22	DA	2191	A
22	DA	2192	U
22	DA	2199	A
22	DA	2204	G

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Mol	Chain	Res	Type
22	DA	2210	U
22	DA	2211	A
22	DA	2212	A
22	DA	2213	U
22	DA	2214	C
22	DA	2215	C
22	DA	2216	G
22	DA	2225	A
22	DA	2238	G
22	DA	2239	G
22	DA	2242	G
22	DA	2250	G
22	DA	2267	A
22	DA	2268	A
22	DA	2271	G
22	DA	2279	G
22	DA	2282	G
22	DA	2283	C
22	DA	2286	G
22	DA	2287	A
22	DA	2289	G
22	DA	2297	A
22	DA	2298	A
22	DA	2299	U
22	DA	2305	U
22	DA	2306	C
22	DA	2308	G
22	DA	2309	A
22	DA	2310	C
22	DA	2311	A
22	DA	2312	U
22	DA	2313	C
22	DA	2314	A
22	DA	2320	U
22	DA	2325	G
22	DA	2332	C
22	DA	2334	U
22	DA	2335	A
22	DA	2336	A
22	DA	2337	G
22	DA	2338	C
22	DA	2339	C

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Mol	Chain	Res	Type
22	DA	2345	G
22	DA	2347	C
22	DA	2348	U
22	DA	2358	A
22	DA	2361	G
22	DA	2379	G
22	DA	2382	G
22	DA	2383	G
22	DA	2385	C
22	DA	2386	A
22	DA	2387	U
22	DA	2388	A
22	DA	2390	U
22	DA	2392	A
22	DA	2401	U
22	DA	2402	U
22	DA	2403	C
22	DA	2405	G
22	DA	2407	A
22	DA	2409	G
22	DA	2423	U
22	DA	2424	C
22	DA	2425	A
22	DA	2426	A
22	DA	2427	C
22	DA	2428	G
22	DA	2429	G
22	DA	2430	A
22	DA	2431	U
22	DA	2435	A
22	DA	2441	U
22	DA	2447	G
22	DA	2448	A
22	DA	2475	C
22	DA	2476	A
22	DA	2491	U
22	DA	2492	U
22	DA	2493	U
22	DA	2494	G
22	DA	2497	A
22	DA	2498	C
22	DA	2500	U

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Mol	Chain	Res	Type
22	DA	2502	G
22	DA	2505	G
22	DA	2518	A
22	DA	2520	C
22	DA	2529	G
22	DA	2534	A
22	DA	2542	A
22	DA	2543	G
22	DA	2544	G
22	DA	2547	A
22	DA	2554	U
22	DA	2566	A
22	DA	2567	G
22	DA	2569	G
22	DA	2573	C
22	DA	2576	G
22	DA	2578	G
22	DA	2579	C
22	DA	2581	G
22	DA	2582	G
22	DA	2586	U
22	DA	2602	A
22	DA	2609	U
22	DA	2610	C
22	DA	2613	U
22	DA	2614	A
22	DA	2615	U
22	DA	2616	C
22	DA	2629	U
22	DA	2630	G
22	DA	2632	A
22	DA	2645	G
22	DA	2656	U
22	DA	2657	A
22	DA	2666	C
22	DA	2667	C
22	DA	2668	G
22	DA	2681	C
22	DA	2682	A
22	DA	2683	C
22	DA	2689	U
22	DA	2690	U

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Mol	Chain	Res	Type
22	DA	2714	G
22	DA	2718	G
22	DA	2726	A
22	DA	2727	A
22	DA	2728	U
22	DA	2729	G
22	DA	2732	G
22	DA	2736	A
22	DA	2739	U
22	DA	2744	G
22	DA	2748	A
22	DA	2751	G
22	DA	2752	C
22	DA	2753	A
22	DA	2757	A
22	DA	2758	A
22	DA	2761	A
22	DA	2765	A
22	DA	2777	G
22	DA	2778	A
22	DA	2791	G
22	DA	2792	A
22	DA	2798	U
22	DA	2799	A
22	DA	2801	G
22	DA	2808	G
22	DA	2820	A
22	DA	2822	G
22	DA	2832	U
22	DA	2834	G
22	DA	2835	A
22	DA	2836	U
22	DA	2837	A
22	DA	2848	G
22	DA	2850	A
22	DA	2851	A
22	DA	2861	U
22	DA	2867	G
22	DA	2872	A
22	DA	2873	A
22	DA	2874	C
22	DA	2875	C

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Mol	Chain	Res	Type
22	DA	2876	G
22	DA	2879	A
22	DA	2880	C
22	DA	2883	A
22	DA	2893	A
22	DA	2894	G
22	DA	2902	C
57	DB	3	C
57	DB	12	C
57	DB	13	G
57	DB	15	A
57	DB	16	G
57	DB	17	C
57	DB	24	G
57	DB	25	U
57	DB	30	C
57	DB	35	C
57	DB	36	C
57	DB	41	G
57	DB	42	C
57	DB	43	C
57	DB	44	G
57	DB	45	A
57	DB	48	U
57	DB	56	G
57	DB	57	A
57	DB	63	C
57	DB	64	G
57	DB	65	U
57	DB	66	A
57	DB	67	G
57	DB	68	C
57	DB	70	C
57	DB	87	U
57	DB	89	U
57	DB	90	C
57	DB	91	C
57	DB	99	A
57	DB	109	A
57	DB	110	C
57	DB	111	U

All (421) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	47	C
1	AA	51	A
1	AA	72	A
1	AA	87	C
1	AA	95	C
1	AA	110	C
1	AA	115	G
1	AA	175	C
1	AA	184	G
1	AA	198	G
1	AA	250	A
1	AA	251	G
1	AA	266	G
1	AA	267	C
1	AA	274	A
1	AA	330	C
1	AA	344	A
1	AA	346	G
1	AA	351	G
1	AA	366	A
1	AA	368	U
1	AA	373	A
1	AA	414	A
1	AA	428	G
1	AA	429	U
1	AA	451	A
1	AA	452	A
1	AA	466	A
1	AA	484	G
1	AA	486	U
1	AA	495	A
1	AA	499	A
1	AA	500	G
1	AA	534	U
1	AA	548	G
1	AA	701	U
1	AA	722	G
1	AA	754	C
1	AA	817	C
1	AA	884	U
1	AA	913	A
1	AA	976	G
1	AA	982	U

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Mol	Chain	Res	Type
1	AA	1049	U
1	AA	1066	C
1	AA	1101	A
1	AA	1136	C
1	AA	1158	C
1	AA	1201	A
1	AA	1228	C
1	AA	1241	G
1	AA	1282	C
1	AA	1287	A
1	AA	1303	C
1	AA	1323	G
1	AA	1331	G
1	AA	1336	C
1	AA	1348	U
1	AA	1381	U
1	AA	1453	G
1	AA	1454	G
1	AA	1505	G
1	AA	1530	G
22	BA	34	U
22	BA	60	G
22	BA	100	U
22	BA	119	A
22	BA	125	A
22	BA	137	U
22	BA	142	A
22	BA	164	C
22	BA	199	A
22	BA	221	A
22	BA	271	G
22	BA	301	G
22	BA	302	C
22	BA	310	A
22	BA	386	G
22	BA	404	A
22	BA	479	A
22	BA	504	A
22	BA	507	A
22	BA	527	C
22	BA	555	G
22	BA	603	A

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Mol	Chain	Res	Type
22	BA	655	A
22	BA	746	U
22	BA	764	A
22	BA	790	U
22	BA	800	A
22	BA	914	G
22	BA	931	U
22	BA	958	U
22	BA	995	C
22	BA	1011	G
22	BA	1020	A
22	BA	1023	U
22	BA	1025	G
22	BA	1062	G
22	BA	1247	A
22	BA	1275	A
22	BA	1324	G
22	BA	1340	U
22	BA	1378	A
22	BA	1379	U
22	BA	1458	U
22	BA	1459	G
22	BA	1475	G
22	BA	1493	C
22	BA	1498	C
22	BA	1535	A
22	BA	1537	G
22	BA	1554	U
22	BA	1606	C
22	BA	1695	G
22	BA	1706	C
22	BA	1713	A
22	BA	1714	U
22	BA	1738	G
22	BA	1847	A
22	BA	1857	G
22	BA	1858	A
22	BA	1871	A
22	BA	1929	G
22	BA	1936	A
22	BA	1941	C
22	BA	1943	U

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Mol	Chain	Res	Type
22	BA	2092	U
22	BA	2136	G
22	BA	2146	C
22	BA	2148	G
22	BA	2149	U
22	BA	2199	A
22	BA	2211	A
22	BA	2225	A
22	BA	2282	G
22	BA	2296	U
22	BA	2311	A
22	BA	2321	U
22	BA	2324	U
22	BA	2326	C
22	BA	2405	G
22	BA	2406	A
22	BA	2425	A
22	BA	2430	A
22	BA	2602	A
22	BA	2756	U
22	BA	2800	A
22	BA	2820	A
22	BA	2873	A
53	CA	6	G
53	CA	14	U
53	CA	60	A
53	CA	66	A
53	CA	71	A
53	CA	72	A
53	CA	86	G
53	CA	87	C
53	CA	89	U
53	CA	95	C
53	CA	109	A
53	CA	131	A
53	CA	173	U
53	CA	197	A
53	CA	239	U
53	CA	243	A
53	CA	245	U
53	CA	247	G
53	CA	251	G

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Mol	Chain	Res	Type
53	CA	252	U
53	CA	274	A
53	CA	279	A
53	CA	305	G
53	CA	328	C
53	CA	347	G
53	CA	351	G
53	CA	352	C
53	CA	366	A
53	CA	368	U
53	CA	372	C
53	CA	373	A
53	CA	382	A
53	CA	423	G
53	CA	424	G
53	CA	429	U
53	CA	451	A
53	CA	484	G
53	CA	496	A
53	CA	500	G
53	CA	510	A
53	CA	512	U
53	CA	519	C
53	CA	534	U
53	CA	559	A
53	CA	563	A
53	CA	575	G
53	CA	701	U
53	CA	704	A
53	CA	753	A
53	CA	802	A
53	CA	819	A
53	CA	913	A
53	CA	973	G
53	CA	975	A
53	CA	977	A
53	CA	978	A
53	CA	1049	U
53	CA	1064	G
53	CA	1066	C
53	CA	1067	A
53	CA	1086	U

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Mol	Chain	Res	Type
53	CA	1101	A
53	CA	1138	G
53	CA	1142	G
53	CA	1145	A
53	CA	1147	C
53	CA	1157	A
53	CA	1160	G
53	CA	1190	G
53	CA	1201	A
53	CA	1242	G
53	CA	1278	G
53	CA	1282	C
53	CA	1299	A
53	CA	1300	G
53	CA	1331	G
53	CA	1381	U
53	CA	1447	A
53	CA	1451	U
53	CA	1452	C
53	CA	1453	G
22	DA	14	A
22	DA	33	C
22	DA	35	G
22	DA	49	A
22	DA	52	A
22	DA	73	A
22	DA	86	G
22	DA	103	A
22	DA	121	G
22	DA	125	A
22	DA	128	C
22	DA	196	A
22	DA	204	A
22	DA	206	U
22	DA	215	G
22	DA	221	A
22	DA	223	A
22	DA	227	A
22	DA	229	C
22	DA	230	G
22	DA	234	U
22	DA	241	A

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Mol	Chain	Res	Type
22	DA	249	C
22	DA	311	A
22	DA	321	U
22	DA	324	A
22	DA	329	G
22	DA	335	C
22	DA	386	G
22	DA	389	G
22	DA	406	G
22	DA	412	A
22	DA	423	A
22	DA	454	A
22	DA	474	G
22	DA	476	G
22	DA	479	A
22	DA	483	A
22	DA	489	G
22	DA	491	G
22	DA	503	A
22	DA	505	A
22	DA	575	A
22	DA	604	G
22	DA	617	G
22	DA	621	A
22	DA	622	G
22	DA	628	G
22	DA	638	G
22	DA	648	G
22	DA	670	A
22	DA	740	C
22	DA	746	U
22	DA	762	U
22	DA	763	G
22	DA	800	A
22	DA	806	C
22	DA	860	U
22	DA	865	C
22	DA	867	C
22	DA	876	C
22	DA	915	C
22	DA	931	U
22	DA	962	G

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Mol	Chain	Res	Type
22	DA	984	A
22	DA	990	A
22	DA	1009	A
22	DA	1011	G
22	DA	1021	A
22	DA	1023	U
22	DA	1026	G
22	DA	1047	G
22	DA	1069	A
22	DA	1079	C
22	DA	1112	G
22	DA	1126	A
22	DA	1135	C
22	DA	1156	A
22	DA	1157	G
22	DA	1204	A
22	DA	1206	G
22	DA	1210	G
22	DA	1265	A
22	DA	1267	U
22	DA	1274	A
22	DA	1275	A
22	DA	1289	C
22	DA	1300	G
22	DA	1312	U
22	DA	1313	U
22	DA	1325	U
22	DA	1339	G
22	DA	1385	A
22	DA	1388	G
22	DA	1399	C
22	DA	1400	U
22	DA	1415	U
22	DA	1417	C
22	DA	1427	A
22	DA	1455	G
22	DA	1482	G
22	DA	1489	C
22	DA	1491	G
22	DA	1508	A
22	DA	1510	G
22	DA	1537	G

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Mol	Chain	Res	Type
22	DA	1554	U
22	DA	1555	G
22	DA	1568	G
22	DA	1606	C
22	DA	1612	C
22	DA	1635	A
22	DA	1648	U
22	DA	1654	A
22	DA	1663	G
22	DA	1682	G
22	DA	1695	G
22	DA	1700	A
22	DA	1706	C
22	DA	1713	A
22	DA	1722	A
22	DA	1731	G
22	DA	1733	G
22	DA	1734	G
22	DA	1775	U
22	DA	1799	G
22	DA	1802	A
22	DA	1810	A
22	DA	1817	G
22	DA	1828	G
22	DA	1866	A
22	DA	1913	A
22	DA	1915	U
22	DA	1941	C
22	DA	1943	U
22	DA	1954	G
22	DA	1965	C
22	DA	1981	A
22	DA	2023	C
22	DA	2068	U
22	DA	2092	U
22	DA	2143	C
22	DA	2148	G
22	DA	2214	C
22	DA	2266	A
22	DA	2282	G
22	DA	2286	G
22	DA	2288	A

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Mol	Chain	Res	Type
22	DA	2298	A
22	DA	2310	C
22	DA	2311	A
22	DA	2337	G
22	DA	2344	U
22	DA	2347	C
22	DA	2386	A
22	DA	2391	G
22	DA	2425	A
22	DA	2428	G
22	DA	2492	U
22	DA	2497	A
22	DA	2543	G
22	DA	2566	A
22	DA	2581	G
22	DA	2601	C
22	DA	2613	U
22	DA	2615	U
22	DA	2656	U
22	DA	2666	C
22	DA	2667	C
22	DA	2682	A
22	DA	2727	A
22	DA	2750	A
22	DA	2752	C
22	DA	2756	U
22	DA	2757	A
22	DA	2776	A
22	DA	2777	G
22	DA	2798	U
22	DA	2836	U
22	DA	2850	A
22	DA	2874	C
22	DA	2875	C
22	DA	2893	A
57	DB	12	C
57	DB	13	G
57	DB	16	G
57	DB	56	G
57	DB	66	A
57	DB	90	C
57	DB	110	C

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

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

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 363 ligands modelled in this entry, 362 are monoatomic - leaving 1 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	$\#\|Z\| > 2$
60	TEL	BA	3135	-	60,62,62	2.32	10 (16%)	78,92,92	3.38	34 (43%)

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
60	TEL	BA	3135	-	1/1/19/19	12/73/108/108	0/4/5/5

All (10) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
60	BA	3135	TEL	O16-C10	10.86	1.37	1.21
60	BA	3135	TEL	C10-N6	9.16	1.51	1.35
60	BA	3135	TEL	O5-C10	4.39	1.42	1.35
60	BA	3135	TEL	O9-C4	-4.37	1.39	1.46
60	BA	3135	TEL	O45-C50	-3.60	1.38	1.44
60	BA	3135	TEL	C40-N41	2.83	1.42	1.38
60	BA	3135	TEL	C7-C13	-2.51	1.48	1.52
60	BA	3135	TEL	C56-N52	2.28	1.40	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
60	BA	3135	TEL	C47-N52	2.07	1.38	1.34
60	BA	3135	TEL	C24-C19	-2.02	1.51	1.54

All (34) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
60	BA	3135	TEL	C3-N6-C10	-13.82	93.00	111.64
60	BA	3135	TEL	O5-C10-N6	-10.77	101.29	109.86
60	BA	3135	TEL	O5-C10-O16	-9.79	110.75	122.54
60	BA	3135	TEL	O16-C10-N6	-7.97	117.54	128.08
60	BA	3135	TEL	O5-C2-C3	-7.46	95.68	103.28
60	BA	3135	TEL	C42-C44-C49	-5.28	100.69	109.15
60	BA	3135	TEL	C1-C2-C3	-4.53	107.96	116.36
60	BA	3135	TEL	O48-C44-C42	-4.50	99.36	110.08
60	BA	3135	TEL	O9-C15-C21	-4.35	106.63	110.93
60	BA	3135	TEL	C47-C43-C40	-4.03	117.84	121.02
60	BA	3135	TEL	C23-C19-C24	-4.02	102.40	109.88
60	BA	3135	TEL	C58-N53-C57	-3.88	99.10	110.49
60	BA	3135	TEL	C14-C8-C4	-3.79	103.96	113.11
60	BA	3135	TEL	C36-N31-C37	3.60	108.48	106.71
60	BA	3135	TEL	O45-C50-C54	3.58	114.46	109.34
60	BA	3135	TEL	C4-O9-C15	3.51	124.32	118.20
60	BA	3135	TEL	O9-C4-C8	-3.47	100.91	107.36
60	BA	3135	TEL	C37-N41-C40	3.42	108.68	105.94
60	BA	3135	TEL	C25-C21-C26	-3.31	105.27	111.62
60	BA	3135	TEL	C24-C28-C34	-3.30	106.20	110.18
60	BA	3135	TEL	C46-C43-C47	3.25	121.23	117.61
60	BA	3135	TEL	C23-C19-C13	-2.96	102.26	109.43
60	BA	3135	TEL	C58-N53-C49	-2.78	105.14	113.15
60	BA	3135	TEL	C33-C28-C24	2.74	115.36	111.17
60	BA	3135	TEL	O9-C4-C2	2.65	111.47	105.48
60	BA	3135	TEL	C12-C7-C13	-2.64	103.47	108.09
60	BA	3135	TEL	N31-C37-N41	-2.62	110.27	112.35
60	BA	3135	TEL	C1-C2-C4	2.39	116.62	112.36
60	BA	3135	TEL	C35-C30-C34	2.31	116.08	112.94
60	BA	3135	TEL	O29-C26-C30	2.28	123.81	120.64
60	BA	3135	TEL	C43-C40-N41	2.25	125.58	122.45
60	BA	3135	TEL	C25-C21-C15	-2.15	106.13	110.34
60	BA	3135	TEL	C19-C13-C7	-2.05	115.67	119.13
60	BA	3135	TEL	C44-C49-N53	2.04	116.83	110.94

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
60	BA	3135	TEL	C3

All (12) torsion outliers are listed below:

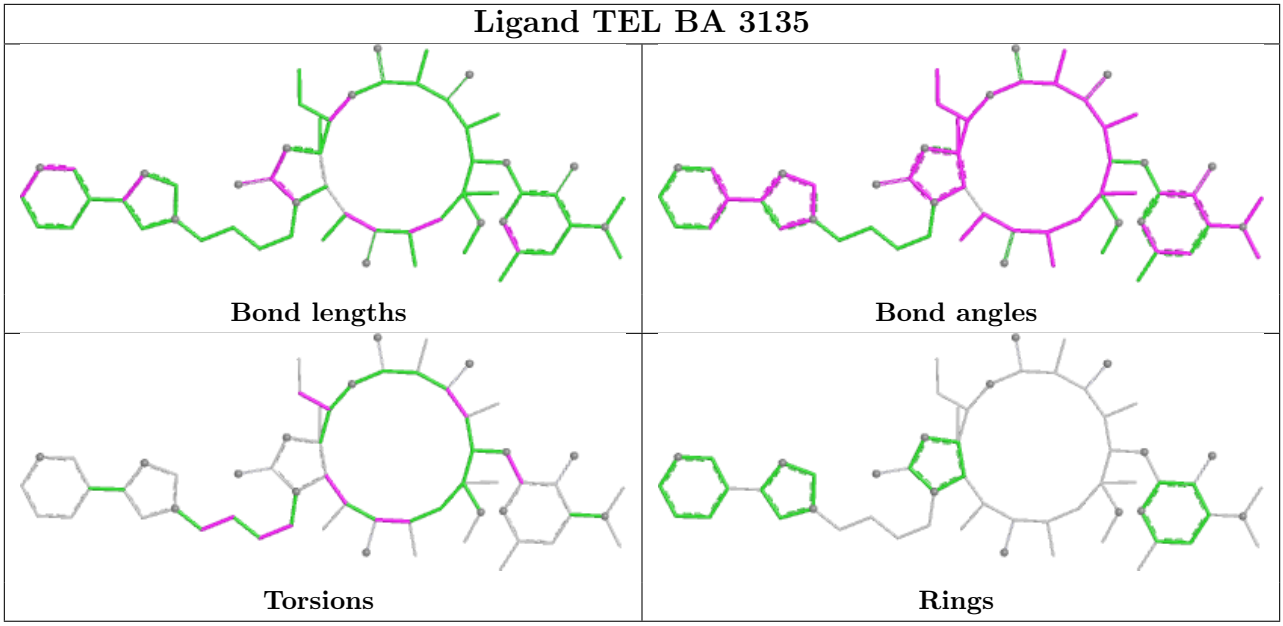
Mol	Chain	Res	Type	Atoms
60	BA	3135	TEL	C2-C3-C7-C13
60	BA	3135	TEL	O18-C13-C19-C23
60	BA	3135	TEL	N6-C11-C17-C22
60	BA	3135	TEL	C2-C3-C7-C12
60	BA	3135	TEL	O29-C26-C30-C35
60	BA	3135	TEL	C7-C13-C19-C23
60	BA	3135	TEL	C17-C22-C27-N31
60	BA	3135	TEL	O29-C26-C30-C34
60	BA	3135	TEL	O45-C42-O39-C34
60	BA	3135	TEL	C44-C42-O39-C34
60	BA	3135	TEL	O18-C13-C19-C24
60	BA	3135	TEL	O9-C4-C8-C14

There are no ring outliers.

1 monomer is involved in 8 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
60	BA	3135	TEL	8	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.



5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95^{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	1533/1533 (100%)	0.05	27 (1%) 67 48	31, 83, 185, 422	0
2	AB	218/218 (100%)	0.88	13 (5%) 27 19	67, 161, 222, 300	0
2	CB	218/218 (100%)	1.01	25 (11%) 9 8	76, 168, 231, 274	0
3	AC	206/206 (100%)	0.58	18 (8%) 16 12	53, 101, 156, 201	0
3	CC	206/206 (100%)	0.87	16 (7%) 19 14	76, 138, 202, 264	0
4	AD	205/205 (100%)	1.00	26 (12%) 8 6	48, 93, 168, 305	0
4	CD	205/205 (100%)	0.65	14 (6%) 23 16	26, 60, 114, 257	0
5	AE	150/150 (100%)	0.79	17 (11%) 10 9	38, 76, 150, 231	0
5	CE	150/150 (100%)	0.78	7 (4%) 36 24	34, 85, 143, 282	0
6	AF	100/100 (100%)	0.88	13 (13%) 7 6	52, 100, 147, 188	0
6	CF	100/100 (100%)	0.71	10 (10%) 12 10	69, 109, 169, 214	0
7	AG	151/151 (100%)	0.86	21 (13%) 6 5	77, 131, 195, 217	0
8	AH	129/129 (100%)	0.42	4 (3%) 51 34	45, 82, 133, 191	0
8	CH	129/129 (100%)	1.00	21 (16%) 4 4	60, 101, 151, 212	0
9	AI	127/127 (100%)	1.51	35 (27%) 1 1	64, 137, 207, 266	0
9	CI	127/127 (100%)	1.99	53 (41%) 0 1	98, 168, 246, 283	0
10	AJ	98/98 (100%)	1.35	23 (23%) 2 2	65, 111, 196, 260	0
10	CJ	98/98 (100%)	2.06	41 (41%) 0 1	94, 178, 248, 272	0
11	AK	117/117 (100%)	0.70	7 (5%) 27 19	44, 108, 190, 238	0
11	CK	117/117 (100%)	0.82	10 (8%) 16 13	49, 112, 169, 192	0
12	AL	123/123 (100%)	0.52	10 (8%) 18 14	24, 62, 106, 208	0
12	CL	123/123 (100%)	0.99	16 (13%) 7 6	37, 73, 124, 211	0
13	AM	114/114 (100%)	1.11	18 (15%) 5 4	86, 135, 206, 262	0
14	AN	96/100 (96%)	1.62	29 (30%) 1 1	58, 105, 187, 274	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
14	CN	95/100 (95%)	1.87	35 (36%) 1 1	95, 187, 280, 335	0
15	AO	88/88 (100%)	0.49	4 (4%) 38 25	43, 81, 124, 170	0
15	CO	88/88 (100%)	1.05	12 (13%) 7 6	57, 107, 153, 265	0
16	AP	82/82 (100%)	0.90	6 (7%) 21 15	56, 80, 166, 241	0
17	AQ	80/80 (100%)	0.76	6 (7%) 20 15	44, 78, 145, 219	0
17	CQ	80/80 (100%)	1.33	16 (20%) 3 2	57, 106, 146, 163	0
18	AR	55/55 (100%)	0.72	7 (12%) 8 6	60, 88, 151, 212	0
18	CR	55/55 (100%)	0.67	6 (10%) 10 9	55, 88, 179, 249	0
19	AS	79/79 (100%)	1.09	13 (16%) 4 4	96, 137, 193, 233	0
19	CS	79/79 (100%)	1.59	28 (35%) 1 1	183, 316, 391, 403	0
20	AT	85/85 (100%)	0.61	7 (8%) 17 14	47, 84, 131, 157	0
20	CT	85/85 (100%)	1.87	29 (34%) 1 1	66, 115, 191, 210	0
21	AU	51/51 (100%)	1.78	19 (37%) 1 1	96, 152, 206, 217	0
21	CU	51/51 (100%)	1.58	14 (27%) 1 1	66, 117, 183, 253	0
22	BA	2854/2903 (98%)	-0.33	65 (2%) 61 41	5, 32, 160, 403	0
22	DA	2841/2903 (97%)	1.68	936 (32%) 1 1	53, 122, 250, 469	0
23	BB	118/118 (100%)	-0.04	0 100 100	13, 44, 74, 101	0
24	BC	271/271 (100%)	0.18	12 (4%) 39 25	12, 42, 93, 209	0
24	DC	271/271 (100%)	1.83	104 (38%) 1 1	59, 93, 144, 185	0
25	BD	209/209 (100%)	-0.06	8 (3%) 44 29	4, 26, 73, 178	0
25	DD	209/209 (100%)	2.15	99 (47%) 0 0	58, 109, 173, 246	0
26	BE	201/201 (100%)	-0.02	2 (0%) 79 62	5, 43, 103, 156	0
26	DE	201/201 (100%)	2.61	118 (58%) 0 0	65, 192, 378, 459	0
27	BF	177/177 (100%)	0.61	10 (5%) 30 20	27, 75, 156, 242	0
28	BG	176/176 (100%)	0.60	15 (8%) 16 13	22, 62, 121, 186	0
28	DG	176/176 (100%)	1.57	41 (23%) 2 2	100, 185, 264, 328	0
29	BH	149/149 (100%)	1.45	33 (22%) 2 2	49, 179, 279, 375	0
29	DH	149/149 (100%)	1.92	58 (38%) 1 1	93, 184, 287, 326	0
30	BI	141/141 (100%)	2.00	57 (40%) 0 1	136, 253, 308, 367	0
30	DI	141/141 (100%)	1.34	25 (17%) 4 3	167, 294, 351, 377	0
31	BJ	142/142 (100%)	-0.00	5 (3%) 47 31	7, 23, 64, 143	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
31	DJ	142/142 (100%)	2.09	65 (45%) 0 0	52, 106, 159, 195	0
32	BK	122/122 (100%)	0.06	3 (2%) 58 39	10, 31, 80, 254	0
32	DK	122/122 (100%)	1.57	29 (23%) 2 2	57, 91, 150, 229	0
33	BL	143/143 (100%)	0.49	6 (4%) 40 26	7, 38, 74, 111	0
33	DL	143/143 (100%)	2.83	94 (65%) 0 0	69, 149, 262, 337	0
34	BM	136/136 (100%)	0.04	1 (0%) 84 70	6, 29, 76, 120	0
34	DM	136/136 (100%)	1.51	35 (25%) 1 1	46, 107, 161, 204	0
35	BN	120/120 (100%)	-0.29	1 (0%) 82 68	9, 25, 46, 155	0
35	DN	120/120 (100%)	2.70	73 (60%) 0 0	73, 124, 194, 293	0
36	BO	116/116 (100%)	0.41	1 (0%) 81 65	24, 44, 83, 116	0
36	DO	116/116 (100%)	1.65	34 (29%) 1 1	113, 162, 224, 259	0
37	BP	114/114 (100%)	0.09	4 (3%) 47 31	11, 41, 104, 161	0
37	DP	114/114 (100%)	1.82	40 (35%) 1 1	63, 105, 164, 195	0
38	BQ	117/117 (100%)	-0.17	3 (2%) 57 38	4, 20, 47, 206	0
38	DQ	117/117 (100%)	2.88	79 (67%) 0 0	67, 108, 191, 312	0
39	BR	103/103 (100%)	0.04	2 (1%) 66 48	5, 30, 80, 109	0
39	DR	103/103 (100%)	2.62	64 (62%) 0 0	80, 138, 239, 291	0
40	BS	110/110 (100%)	-0.37	0 100 100	6, 21, 61, 178	0
40	DS	110/110 (100%)	2.55	72 (65%) 0 0	70, 133, 241, 285	0
41	BT	93/93 (100%)	0.86	16 (17%) 4 4	23, 51, 121, 235	0
41	DT	93/93 (100%)	3.16	74 (79%) 0 0	110, 202, 299, 369	0
42	BU	102/102 (100%)	0.46	8 (7%) 19 14	19, 55, 136, 246	0
42	DU	102/102 (100%)	3.95	89 (87%) 0 0	122, 287, 418, 543	0
43	BV	94/94 (100%)	0.27	2 (2%) 63 44	13, 43, 85, 124	0
43	DV	94/94 (100%)	1.11	10 (10%) 11 9	100, 144, 196, 226	0
44	BW	79/79 (100%)	0.82	11 (13%) 6 5	10, 36, 110, 208	0
44	DW	79/79 (100%)	2.67	51 (64%) 0 0	87, 141, 230, 253	0
45	BX	77/77 (100%)	0.44	2 (2%) 57 38	15, 46, 88, 135	0
45	DX	77/77 (100%)	2.63	47 (61%) 0 0	67, 118, 172, 239	0
46	BY	63/63 (100%)	0.85	10 (15%) 5 4	34, 75, 134, 210	0
46	DY	63/63 (100%)	3.30	52 (82%) 0 0	130, 305, 419, 450	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
47	BZ	58/58 (100%)	0.12	1 (1%) 69 50	6, 24, 74, 116	0
47	DZ	58/58 (100%)	2.20	31 (53%) 0 0	86, 123, 190, 236	0
48	B0	56/56 (100%)	-0.20	1 (1%) 67 48	3, 22, 75, 168	0
48	D0	56/56 (100%)	2.47	29 (51%) 0 0	66, 132, 242, 278	0
49	B1	50/50 (100%)	0.51	6 (12%) 9 7	30, 50, 98, 178	0
49	D1	50/50 (100%)	1.71	14 (28%) 1 1	98, 155, 211, 275	0
50	B2	46/46 (100%)	0.01	1 (2%) 62 43	13, 27, 51, 183	0
50	D2	46/46 (100%)	3.12	38 (82%) 0 0	78, 118, 155, 203	0
51	B3	64/64 (100%)	0.25	0 100 100	9, 27, 46, 71	0
51	D3	64/64 (100%)	3.42	54 (84%) 0 0	90, 125, 198, 250	0
52	B4	38/38 (100%)	0.61	2 (5%) 32 21	28, 49, 87, 112	0
52	D4	38/38 (100%)	3.93	34 (89%) 0 0	78, 141, 210, 225	0
53	CA	1530/1530 (100%)	0.77	133 (8%) 16 12	38, 100, 272, 376	0
54	CG	150/150 (100%)	1.56	45 (30%) 1 1	118, 209, 283, 333	0
55	CM	113/113 (100%)	2.41	55 (48%) 0 0	196, 344, 437, 471	0
56	CP	80/80 (100%)	1.54	28 (35%) 1 1	59, 91, 145, 249	0
57	DB	117/117 (100%)	1.11	8 (6%) 23 16	95, 167, 229, 249	0
58	DF	178/178 (100%)	1.27	36 (20%) 3 2	135, 220, 279, 350	0
All	All	20431/20551 (99%)	0.92	3758 (18%) 3 3	3, 97, 258, 543	0

All (3758) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
42	DU	30	SER	21.4
55	CM	97	ARG	12.4
38	DQ	7	VAL	11.5
53	CA	1224	U	11.1
12	AL	123	ALA	9.6
55	CM	98	GLY	9.1
28	DG	165	ASP	8.9
26	DE	81	GLY	8.5
40	DS	40	ASN	8.5
37	DP	111	GLU	8.5
48	D0	20	ALA	8.5
42	DU	41	VAL	8.3
42	DU	34	ILE	8.3

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Mol	Chain	Res	Type	RSRZ
42	DU	59	GLU	8.2
46	DY	14	LEU	8.2
42	DU	2	ALA	8.1
46	DY	13	GLU	8.0
37	DP	109	ILE	8.0
49	D1	35	LEU	8.0
42	DU	4	ILE	7.9
35	DN	19	ALA	7.7
50	D2	33	ARG	7.6
10	CJ	61	ALA	7.6
39	DR	50	GLY	7.6
46	DY	10	SER	7.5
11	CK	125	LYS	7.4
39	BR	50	GLY	7.3
52	D4	26	ILE	7.3
44	DW	37	VAL	7.3
42	DU	40	LEU	7.3
42	DU	70	ALA	7.2
25	DD	153	GLY	7.2
51	D3	13	PHE	7.2
41	DT	43	ILE	7.1
42	DU	58	VAL	7.1
40	DS	45	VAL	7.1
22	DA	2585	U	7.1
24	DC	109	LEU	7.1
46	DY	21	LEU	7.1
1	AA	1362	A	7.0
22	DA	2062	A	7.0
39	DR	51	VAL	7.0
55	CM	111	PRO	7.0
38	DQ	1	ALA	7.0
9	AI	106	ASP	7.0
55	CM	102	LYS	7.0
30	BI	12	VAL	6.9
24	DC	250	GLN	6.9
42	DU	62	ALA	6.9
20	AT	3	ILE	6.9
25	DD	121	THR	6.8
38	DQ	12	ARG	6.8
33	DL	16	GLY	6.8
26	DE	93	SER	6.8
22	DA	914	G	6.8

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Mol	Chain	Res	Type	RSRZ
45	DX	76	LYS	6.8
22	DA	587	C	6.8
30	BI	52	LEU	6.8
41	DT	72	GLN	6.8
26	DE	175	ILE	6.7
33	DL	15	ALA	6.7
51	D3	55	GLY	6.7
51	D3	51	LYS	6.7
38	DQ	6	GLY	6.7
36	DO	2	ASP	6.7
33	DL	27	LEU	6.7
9	CI	67	LYS	6.7
51	D3	59	ALA	6.7
24	DC	238	ASN	6.7
52	D4	2	LYS	6.6
58	DF	129	MET	6.6
36	DO	5	SER	6.6
4	AD	24	VAL	6.6
41	DT	62	VAL	6.5
14	AN	20	PHE	6.5
47	DZ	33	HIS	6.5
42	DU	1	ALA	6.5
28	DG	154	GLU	6.5
45	DX	24	THR	6.4
22	DA	795	C	6.4
9	AI	129	ARG	6.4
24	DC	233	GLY	6.4
22	DA	2320	U	6.4
52	D4	31	PRO	6.4
26	DE	87	ALA	6.3
44	DW	35	ILE	6.3
42	DU	31	GLY	6.3
42	DU	9	GLU	6.3
53	CA	210	C	6.3
42	DU	29	SER	6.3
55	CM	110	GLY	6.3
22	DA	448	U	6.3
12	CL	15	VAL	6.3
51	D3	14	LYS	6.2
26	DE	178	VAL	6.2
38	DQ	3	VAL	6.2
33	DL	72	ALA	6.2

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Mol	Chain	Res	Type	RSRZ
31	DJ	118	MET	6.2
35	DN	38	LEU	6.2
35	DN	109	PRO	6.2
42	DU	5	ARG	6.2
39	DR	52	PRO	6.2
48	D0	22	THR	6.1
26	DE	164	LEU	6.1
41	BT	70	HIS	6.1
35	DN	70	THR	6.1
39	DR	88	GLY	6.1
42	DU	35	VAL	6.1
30	BI	78	LEU	6.1
41	DT	34	VAL	6.0
9	AI	42	THR	6.0
29	BH	32	PRO	6.0
44	DW	42	THR	6.0
14	AN	51	PRO	6.0
52	D4	1	MET	6.0
38	DQ	4	LYS	6.0
54	CG	7	GLY	6.0
4	CD	27	ILE	6.0
38	DQ	8	ILE	6.0
33	DL	26	GLY	5.9
4	AD	28	ASP	5.9
39	DR	86	GLN	5.9
24	DC	258	SER	5.9
39	DR	26	ASP	5.9
4	AD	35	GLN	5.9
38	DQ	94	LEU	5.9
46	DY	63	ALA	5.9
29	DH	115	VAL	5.8
42	DU	27	VAL	5.8
55	CM	94	LEU	5.8
20	CT	3	ILE	5.8
33	DL	104	GLN	5.8
38	DQ	10	ARG	5.8
38	DQ	34	ALA	5.8
46	DY	32	ALA	5.8
45	DX	17	ARG	5.8
42	DU	28	LEU	5.8
25	DD	202	ILE	5.8
53	CA	1361	G	5.8

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Mol	Chain	Res	Type	RSRZ
31	DJ	1	MET	5.8
22	DA	586	A	5.8
42	DU	56	GLY	5.8
8	CH	1	SER	5.7
33	DL	68	SER	5.7
22	DA	446	G	5.7
22	DA	1252	G	5.7
26	DE	32	VAL	5.7
35	DN	20	MET	5.7
8	AH	1	SER	5.7
28	DG	7	PRO	5.7
30	BI	4	VAL	5.7
41	BT	16	VAL	5.7
22	DA	790	U	5.7
30	BI	46	ASP	5.7
38	DQ	82	LEU	5.7
44	DW	73	PRO	5.7
26	DE	57	LYS	5.7
3	CC	166	TRP	5.7
44	DW	70	VAL	5.6
42	DU	17	ASP	5.6
31	DJ	107	GLY	5.6
26	DE	48	THR	5.6
45	DX	2	ARG	5.6
46	DY	24	GLU	5.6
31	DJ	74	TYR	5.6
44	DW	45	HIS	5.6
24	DC	241	LYS	5.6
1	AA	121	U	5.5
55	CM	31	ALA	5.5
38	DQ	96	ASP	5.5
46	DY	17	GLU	5.5
26	DE	42	GLY	5.5
28	DG	155	PRO	5.5
38	DQ	90	ASP	5.5
46	DY	49	ASP	5.5
57	DB	87	U	5.5
37	DP	110	LYS	5.5
30	BI	54	ILE	5.5
22	BA	1072	C	5.5
44	DW	52	CYS	5.4
10	CJ	49	PHE	5.4

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Mol	Chain	Res	Type	RSRZ
25	DD	146	ILE	5.4
52	D4	10	LEU	5.4
22	DA	333	G	5.4
9	CI	116	GLY	5.4
42	DU	42	LYS	5.4
28	DG	167	VAL	5.4
25	DD	132	ALA	5.4
30	DI	119	ALA	5.4
22	BA	1093	G	5.4
55	CM	96	VAL	5.4
48	D0	23	ALA	5.4
31	DJ	112	GLY	5.4
44	BW	40	ARG	5.4
52	D4	28	SER	5.4
35	DN	104	ALA	5.4
46	DY	31	GLN	5.4
51	D3	58	ILE	5.4
42	DU	80	ASP	5.3
2	CB	109	SER	5.3
13	AM	86	ARG	5.3
49	D1	21	THR	5.3
55	CM	103	THR	5.3
33	DL	101	ILE	5.3
20	CT	40	ALA	5.3
45	DX	10	ARG	5.3
52	D4	15	LYS	5.3
44	DW	75	ASN	5.3
50	D2	44	VAL	5.3
38	DQ	89	ILE	5.3
35	DN	24	MET	5.3
22	DA	2008	C	5.3
30	BI	11	GLN	5.3
21	CU	34	ARG	5.3
33	DL	69	ARG	5.3
46	DY	44	LYS	5.2
51	D3	64	ALA	5.2
29	DH	98	ASP	5.2
35	DN	98	LEU	5.2
33	DL	28	GLY	5.2
51	D3	19	GLY	5.2
7	AG	4	ARG	5.2
10	CJ	50	THR	5.2

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Mol	Chain	Res	Type	RSRZ
39	DR	20	VAL	5.2
42	DU	66	VAL	5.2
51	D3	22	LYS	5.2
35	DN	97	ILE	5.2
41	DT	30	ILE	5.2
41	DT	15	HIS	5.2
9	CI	118	ARG	5.2
21	CU	42	THR	5.2
25	DD	31	ALA	5.2
50	D2	42	LEU	5.2
51	D3	30	HIS	5.2
41	DT	83	ALA	5.2
26	DE	79	ARG	5.2
50	D2	12	ARG	5.2
42	DU	32	LYS	5.2
12	CL	123	ALA	5.2
29	BH	111	ALA	5.2
10	CJ	71	LEU	5.1
3	CC	157	GLY	5.1
52	D4	17	VAL	5.1
10	CJ	60	ASP	5.1
17	CQ	7	LEU	5.1
25	DD	97	SER	5.1
42	DU	26	ASN	5.1
22	DA	584	C	5.1
9	CI	127	SER	5.1
14	CN	61	ASN	5.1
34	DM	72	PRO	5.1
42	DU	71	ILE	5.1
33	DL	106	GLU	5.1
19	AS	2	ARG	5.1
20	CT	8	LYS	5.1
22	BA	1094	U	5.1
39	DR	25	LEU	5.1
45	DX	21	LEU	5.1
30	DI	1	ALA	5.1
24	DC	219	VAL	5.1
29	BH	113	SER	5.1
21	CU	37	TYR	5.1
25	DD	167	ASN	5.1
33	DL	30	THR	5.0
39	DR	77	PHE	5.0

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Mol	Chain	Res	Type	RSRZ
41	DT	25	GLU	5.0
22	DA	474	G	5.0
33	DL	43	GLY	5.0
20	CT	67	HIS	5.0
22	DA	2406	A	5.0
46	DY	37	LEU	5.0
35	DN	107	ASN	5.0
30	BI	13	ALA	5.0
42	DU	69	VAL	5.0
22	DA	355	U	5.0
14	CN	60	ARG	5.0
41	DT	33	LYS	5.0
40	DS	44	ALA	5.0
9	CI	126	PHE	5.0
22	BA	2402	U	5.0
24	DC	271	SER	5.0
41	DT	46	ALA	5.0
52	D4	12	ARG	5.0
31	DJ	47	HIS	5.0
9	CI	129	ARG	5.0
33	DL	39	LYS	5.0
44	DW	13	ARG	5.0
42	DU	11	ILE	4.9
45	DX	12	VAL	4.9
26	DE	24	ASN	4.9
46	DY	20	ASN	4.9
29	DH	99	ILE	4.9
30	BI	53	PRO	4.9
17	AQ	19	SER	4.9
41	DT	16	VAL	4.9
22	DA	1075	C	4.9
9	CI	124	PRO	4.9
34	DM	56	ALA	4.9
10	CJ	75	ASP	4.9
33	DL	31	GLY	4.9
49	D1	23	THR	4.9
53	CA	977	A	4.9
33	DL	57	LEU	4.9
50	D2	10	LEU	4.9
25	DD	151	THR	4.8
32	DK	42	THR	4.8
33	DL	92	LEU	4.8

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Mol	Chain	Res	Type	RSRZ
44	DW	74	LYS	4.8
52	D4	34	LYS	4.8
25	DD	118	PHE	4.8
51	D3	10	ALA	4.8
45	DX	16	ASN	4.8
30	BI	3	LYS	4.8
44	DW	77	LYS	4.8
22	DA	34	U	4.8
56	CP	52	LEU	4.8
42	DU	23	LYS	4.8
38	DQ	36	GLN	4.8
22	DA	528	A	4.8
52	D4	30	GLU	4.8
22	DA	1	G	4.8
22	DA	2780	G	4.8
31	DJ	78	THR	4.8
33	DL	5	THR	4.8
50	D2	43	THR	4.8
2	CB	163	ILE	4.7
49	D1	20	TYR	4.7
42	DU	55	GLY	4.7
53	CA	222	C	4.7
41	DT	60	THR	4.7
47	DZ	9	THR	4.7
55	CM	108	ARG	4.7
39	DR	73	LYS	4.7
46	DY	43	LEU	4.7
45	DX	49	ARG	4.7
22	DA	281	C	4.7
22	DA	1654	A	4.7
45	DX	13	THR	4.7
33	DL	34	GLY	4.7
22	DA	530	G	4.7
22	DA	1538	G	4.7
24	BC	250	GLN	4.7
42	DU	19	GLY	4.7
10	CJ	46	LYS	4.7
40	DS	48	LYS	4.7
42	DU	13	LEU	4.7
31	DJ	116	ARG	4.7
12	AL	24	GLU	4.7
22	DA	589	U	4.7

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Mol	Chain	Res	Type	RSRZ
22	DA	1306	C	4.7
22	DA	2023	C	4.7
26	DE	144	GLU	4.7
39	DR	27	ILE	4.6
40	DS	96	ILE	4.6
25	DD	200	ASP	4.6
28	DG	169	ARG	4.6
30	DI	10	LEU	4.6
20	CT	5	SER	4.6
22	DA	456	C	4.6
22	DA	531	C	4.6
22	DA	2264	C	4.6
55	CM	100	ARG	4.6
26	DE	104	ALA	4.6
22	DA	29	U	4.6
35	DN	40	LYS	4.6
55	CM	30	LYS	4.6
17	AQ	69	THR	4.6
51	D3	5	THR	4.6
22	DA	354	A	4.6
22	DA	1250	G	4.6
22	DA	867	C	4.6
22	DA	1606	C	4.6
38	DQ	100	PHE	4.6
29	DH	113	SER	4.6
26	DE	119	ILE	4.6
9	CI	123	ARG	4.6
14	CN	62	ARG	4.6
25	DD	128	ARG	4.6
3	AC	167	TYR	4.6
22	DA	1420	A	4.6
41	DT	79	ASP	4.6
50	B2	46	LYS	4.6
51	D3	46	LYS	4.6
33	DL	18	ARG	4.6
4	AD	26	ALA	4.6
26	DE	146	VAL	4.6
25	DD	14	ILE	4.5
33	DL	23	ILE	4.5
14	CN	3	GLN	4.5
22	DA	2021	C	4.5
22	DA	1171	G	4.5

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Mol	Chain	Res	Type	RSRZ
40	DS	37	THR	4.5
36	DO	3	LYS	4.5
24	DC	100	ARG	4.5
45	DX	74	GLY	4.5
9	CI	42	THR	4.5
39	DR	7	SER	4.5
9	CI	66	VAL	4.5
24	DC	240	GLY	4.5
26	DE	188	MET	4.5
38	DQ	41	ALA	4.5
52	D4	29	ALA	4.5
19	AS	36	ARG	4.5
20	CT	66	ILE	4.5
36	DO	87	ILE	4.5
6	AF	54	LEU	4.5
10	CJ	74	VAL	4.5
26	DE	54	GLY	4.5
51	D3	50	SER	4.5
54	CG	61	PHE	4.5
35	DN	65	LEU	4.5
31	DJ	44	TYR	4.5
41	DT	14	PRO	4.5
12	AL	14	LYS	4.5
22	DA	574	A	4.5
53	CA	330	C	4.4
26	DE	55	SER	4.4
44	DW	11	ASN	4.4
51	D3	27	ASN	4.4
21	AU	37	TYR	4.4
41	DT	40	LYS	4.4
24	BC	237	ARG	4.4
26	DE	102	ARG	4.4
22	DA	1559	U	4.4
22	DA	2713	U	4.4
26	DE	85	PHE	4.4
41	DT	42	GLU	4.4
22	DA	2029	G	4.4
41	DT	7	LEU	4.4
36	DO	95	SER	4.4
22	DA	529	A	4.4
22	DA	794	A	4.4
31	DJ	76	HIS	4.4

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Mol	Chain	Res	Type	RSRZ
10	CJ	72	ARG	4.4
38	DQ	86	SER	4.4
22	DA	2032	G	4.4
41	DT	31	VAL	4.4
37	DP	42	PHE	4.4
26	DE	39	ALA	4.4
14	CN	47	LEU	4.4
38	DQ	21	LYS	4.4
39	DR	87	GLN	4.4
22	DA	1135	C	4.4
53	CA	1322	C	4.4
10	CJ	48	ARG	4.4
22	BA	2180	U	4.4
41	DT	3	ARG	4.4
51	D3	25	HIS	4.4
9	CI	46	VAL	4.4
51	D3	21	PHE	4.3
26	DE	90	GLN	4.3
29	DH	91	PHE	4.3
35	DN	11	ASN	4.3
53	CA	950	U	4.3
26	DE	180	LEU	4.3
41	DT	82	LYS	4.3
39	DR	82	HIS	4.3
22	DA	2621	G	4.3
38	BQ	87	VAL	4.3
35	DN	21	PHE	4.3
20	CT	85	LEU	4.3
22	DA	2266	A	4.3
24	DC	204	LEU	4.3
38	DQ	85	ALA	4.3
22	DA	455	C	4.3
25	DD	144	GLY	4.3
42	DU	64	ILE	4.3
42	DU	12	VAL	4.3
24	DC	58	LYS	4.3
38	DQ	31	TYR	4.3
41	DT	35	ALA	4.3
30	BI	47	SER	4.3
35	DN	23	ASN	4.3
22	DA	563	A	4.3
42	DU	16	LYS	4.3

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Mol	Chain	Res	Type	RSRZ
51	D3	38	LYS	4.3
50	D2	1	MET	4.3
41	DT	11	LEU	4.3
41	DT	61	LEU	4.3
29	DH	105	ALA	4.3
33	DL	48	ARG	4.3
41	DT	21	SER	4.3
52	D4	13	ASN	4.3
46	BY	13	GLU	4.3
52	D4	3	VAL	4.3
22	DA	2041	U	4.2
15	AO	16	ARG	4.2
22	DA	1348	C	4.2
40	DS	85	ILE	4.2
33	DL	58	TYR	4.2
39	DR	80	ARG	4.2
24	DC	243	PRO	4.2
26	DE	76	PRO	4.2
43	DV	22	ALA	4.2
22	DA	2334	U	4.2
29	DH	124	THR	4.2
48	D0	25	THR	4.2
53	CA	632	U	4.2
22	DA	2033	A	4.2
47	DZ	32	GLY	4.2
21	CU	23	GLU	4.2
29	DH	112	LYS	4.2
38	DQ	38	VAL	4.2
38	DQ	2	ARG	4.2
28	DG	164	ALA	4.2
25	DD	114	LYS	4.2
53	CA	209	U	4.2
22	DA	1133	A	4.2
22	DA	1608	A	4.2
25	DD	155	VAL	4.2
39	DR	96	VAL	4.2
24	DC	45	ASN	4.2
45	DX	1	SER	4.2
22	DA	564	C	4.2
26	DE	41	GLN	4.2
22	DA	325	G	4.2
4	AD	36	ALA	4.2

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Mol	Chain	Res	Type	RSRZ
24	DC	40	GLY	4.2
35	DN	26	GLY	4.2
33	DL	17	LYS	4.2
9	AI	110	VAL	4.2
29	DH	106	ALA	4.2
31	DJ	8	PRO	4.2
36	DO	96	GLY	4.2
40	DS	26	GLY	4.2
17	CQ	28	VAL	4.1
33	DL	21	ARG	4.2
32	DK	80	ASP	4.1
40	DS	12	SER	4.1
45	DX	20	ALA	4.1
1	AA	1030	U	4.1
4	AD	205	LYS	4.1
20	CT	15	LYS	4.1
26	DE	74	LYS	4.1
33	DL	13	LYS	4.1
51	D3	60	CYS	4.1
39	DR	78	ARG	4.1
42	DU	33	VAL	4.1
55	CM	22	TYR	4.1
8	AH	90	GLU	4.1
37	DP	67	GLU	4.1
54	CG	17	PHE	4.1
22	DA	389	G	4.1
22	DA	1248	G	4.1
53	CA	202	G	4.1
35	DN	41	ALA	4.1
44	DW	71	LYS	4.1
14	CN	32	ASP	4.1
25	DD	139	SER	4.1
26	DE	179	SER	4.1
35	DN	69	ARG	4.1
51	D3	20	GLY	4.1
14	CN	33	VAL	4.1
7	AG	22	LEU	4.1
30	BI	7	TYR	4.1
33	DL	19	LEU	4.1
9	CI	111	GLU	4.1
40	DS	27	LYS	4.1
45	DX	25	LYS	4.1

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Mol	Chain	Res	Type	RSRZ
22	DA	946	C	4.1
22	DA	1870	C	4.1
29	DH	65	ALA	4.1
35	DN	61	ALA	4.1
51	D3	1	PRO	4.1
6	AF	100	SER	4.1
20	AT	67	HIS	4.1
21	CU	32	ARG	4.1
33	DL	25	SER	4.1
21	AU	52	VAL	4.1
26	DE	187	VAL	4.1
29	DH	142	VAL	4.1
39	DR	72	VAL	4.1
41	DT	32	LEU	4.1
40	DS	100	THR	4.1
18	AR	19	GLU	4.1
2	AB	29	PHE	4.1
12	CL	87	LYS	4.1
22	DA	2296	U	4.1
35	DN	114	GLU	4.1
52	D4	9	LYS	4.1
52	D4	35	GLN	4.1
52	D4	33	HIS	4.1
53	CA	223	A	4.1
29	BH	98	ASP	4.1
33	DL	40	SER	4.1
44	DW	50	VAL	4.1
32	DK	67	LYS	4.1
35	DN	75	ILE	4.1
22	DA	1271	G	4.1
53	CA	1305	G	4.1
22	DA	280	U	4.1
34	DM	83	GLY	4.1
37	DP	93	LYS	4.0
22	DA	1302	A	4.0
22	DA	2602	A	4.0
26	DE	108	ILE	4.0
21	AU	38	GLU	4.0
33	DL	71	ALA	4.0
31	DJ	26	GLY	4.0
22	DA	931	U	4.0
26	DE	52	VAL	4.0

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Mol	Chain	Res	Type	RSRZ
26	DE	96	VAL	4.0
31	DJ	40	HIS	4.0
33	DL	122	VAL	4.0
45	DX	19	HIS	4.0
31	DJ	106	LYS	4.0
39	DR	24	LYS	4.0
55	CM	109	LYS	4.0
36	BO	2	ASP	4.0
44	DW	14	ASP	4.0
26	DE	35	TYR	4.0
29	BH	99	ILE	4.0
32	DK	32	TYR	4.0
32	DK	18	ARG	4.0
35	DN	100	CYS	4.0
22	DA	2020	A	4.0
22	DA	2799	A	4.0
22	DA	2820	A	4.0
53	CA	1362	A	4.0
22	DA	791	C	4.0
10	CJ	39	PRO	4.0
48	D0	4	GLN	4.0
9	AI	66	VAL	4.0
9	CI	115	VAL	4.0
33	DL	24	GLY	4.0
48	D0	14	MET	4.0
35	DN	46	ARG	4.0
38	DQ	27	ARG	4.0
42	DU	57	ILE	4.0
47	DZ	29	ARG	4.0
20	CT	6	ALA	4.0
24	DC	99	GLU	4.0
29	DH	127	GLU	4.0
40	DS	43	ALA	4.0
22	DA	561	G	4.0
46	BY	6	LEU	4.0
41	DT	64	LYS	4.0
46	DY	54	LYS	4.0
52	D4	8	LYS	4.0
44	BW	51	GLY	4.0
22	DA	1276	A	4.0
22	DA	814	C	4.0
27	BF	154	THR	4.0

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Mol	Chain	Res	Type	RSRZ
44	DW	15	SER	4.0
31	DJ	117	ALA	4.0
32	DK	16	ALA	4.0
10	CJ	59	LYS	4.0
14	CN	50	LEU	4.0
40	DS	16	LYS	4.0
31	DJ	73	VAL	4.0
22	DA	784	G	4.0
10	AJ	100	ILE	4.0
18	AR	20	ILE	4.0
22	BA	2154	A	4.0
22	DA	2042	A	4.0
40	DS	54	ALA	4.0
22	DA	1600	C	4.0
41	DT	37	ASP	4.0
33	DL	36	LYS	4.0
33	DL	125	LEU	4.0
50	D2	37	LYS	4.0
35	DN	39	PRO	3.9
38	DQ	97	ILE	3.9
20	CT	62	ALA	3.9
26	DE	161	ALA	3.9
22	DA	801	G	3.9
22	DA	1731	G	3.9
22	DA	2012	G	3.9
44	DW	34	SER	3.9
22	DA	800	A	3.9
22	DA	2327	A	3.9
41	DT	85	VAL	3.9
30	BI	73	PRO	3.9
22	DA	16	C	3.9
22	DA	2295	C	3.9
32	BK	71	ARG	3.9
50	D2	41	ARG	3.9
31	BJ	142	ILE	3.9
42	DU	38	ILE	3.9
25	DD	196	ALA	3.9
41	DT	36	LYS	3.9
26	DE	147	LEU	3.9
51	D3	61	LEU	3.9
4	CD	34	GLU	3.9
24	DC	20	ASN	3.9

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Mol	Chain	Res	Type	RSRZ
33	DL	51	GLU	3.9
40	DS	47	VAL	3.9
40	DS	80	PRO	3.9
52	D4	38	GLY	3.9
46	DY	45	GLN	3.9
22	BA	2885	G	3.9
22	DA	30	G	3.9
35	DN	102	PHE	3.9
2	CB	147	LEU	3.9
22	DA	2265	U	3.9
35	DN	96	ARG	3.9
37	DP	91	VAL	3.9
38	DQ	46	TYR	3.9
39	DR	2	TYR	3.9
39	DR	75	VAL	3.9
29	DH	92	GLY	3.9
33	DL	81	ASP	3.9
42	DU	72	PHE	3.9
51	D3	24	LYS	3.9
25	DD	125	TRP	3.9
21	AU	22	CYS	3.9
29	DH	15	LEU	3.9
35	DN	2	ARG	3.9
22	BA	2179	C	3.9
22	DA	32	C	3.9
22	DA	205	G	3.9
22	DA	671	C	3.9
53	CA	1312	G	3.9
24	DC	82	TYR	3.9
44	BW	73	PRO	3.9
44	DW	8	SER	3.9
55	CM	81	ASP	3.9
56	CP	57	ILE	3.9
58	DF	155	ILE	3.9
42	BU	1	ALA	3.9
41	BT	2	ILE	3.8
42	DU	20	LYS	3.8
45	BX	76	LYS	3.8
22	DA	1615	C	3.8
19	CS	37	SER	3.8
22	BA	138	U	3.8
22	DA	1409	U	3.8

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Mol	Chain	Res	Type	RSRZ
22	DA	2011	U	3.8
30	BI	66	PHE	3.8
33	DL	42	SER	3.8
38	BQ	86	SER	3.8
53	CA	212	G	3.8
44	DW	31	LEU	3.8
51	D3	56	LEU	3.8
35	DN	17	ARG	3.8
41	DT	80	TRP	3.8
51	D3	9	ALA	3.8
14	AN	18	LYS	3.8
51	D3	63	TYR	3.8
4	AD	23	GLY	3.8
24	DC	63	ILE	3.8
24	DC	234	GLY	3.8
28	DG	170	THR	3.8
50	D2	4	THR	3.8
9	CI	19	PHE	3.8
13	AM	104	ASN	3.8
24	DC	30	ALA	3.8
22	DA	92	U	3.8
22	DA	336	C	3.8
22	DA	2007	U	3.8
26	DE	186	VAL	3.8
41	DT	58	VAL	3.8
22	DA	326	G	3.8
25	DD	147	GLY	3.8
26	DE	73	ILE	3.8
34	DM	73	ILE	3.8
30	DI	72	THR	3.8
10	AJ	102	LEU	3.8
31	DJ	114	LEU	3.8
36	DO	16	ARG	3.8
55	CM	18	LEU	3.8
46	DY	27	ASN	3.8
44	DW	56	HIS	3.8
41	DT	55	VAL	3.8
42	DU	10	VAL	3.8
42	DU	91	LYS	3.8
22	DA	2620	C	3.8
26	DE	77	ILE	3.8
10	CJ	73	LEU	3.8

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Mol	Chain	Res	Type	RSRZ
40	DS	97	LEU	3.8
42	DU	14	THR	3.8
22	DA	295	G	3.8
22	DA	2046	G	3.8
22	DA	2623	G	3.8
41	DT	45	ALA	3.8
42	DU	79	ALA	3.8
17	AQ	82	VAL	3.8
26	DE	193	VAL	3.8
36	DO	4	LYS	3.8
54	CG	79	VAL	3.8
38	DQ	64	ILE	3.8
19	CS	75	PRO	3.8
31	DJ	31	GLU	3.8
39	DR	13	ARG	3.8
41	DT	12	ARG	3.8
41	DT	76	ARG	3.8
52	D4	36	ARG	3.8
25	DD	187	LEU	3.8
56	CP	39	PHE	3.8
22	DA	1205	A	3.8
22	DA	2019	A	3.8
22	DA	2333	A	3.8
22	BA	2153	C	3.7
17	CQ	58	VAL	3.7
26	DE	83	VAL	3.7
54	CG	10	LYS	3.7
35	DN	15	SER	3.7
22	DA	805	G	3.7
51	D3	31	ILE	3.7
41	DT	6	ARG	3.7
46	DY	29	ARG	3.7
52	D4	24	ARG	3.7
9	AI	69	GLY	3.7
46	DY	56	LEU	3.7
48	D0	27	LEU	3.7
55	CM	93	GLY	3.7
14	AN	56	PRO	3.7
18	AR	63	TYR	3.7
46	DY	5	GLU	3.7
29	DH	125	THR	3.7
29	BH	112	LYS	3.7

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Mol	Chain	Res	Type	RSRZ
24	DC	244	VAL	3.7
29	DH	110	VAL	3.7
35	DN	48	VAL	3.7
50	D2	13	ASN	3.7
22	DA	11	C	3.7
4	AD	27	ILE	3.7
34	DM	16	ARG	3.7
38	DQ	32	ARG	3.7
20	CT	65	LEU	3.7
32	DK	81	GLY	3.7
44	DW	12	GLY	3.7
51	D3	11	LYS	3.7
22	DA	442	G	3.7
22	DA	1266	G	3.7
24	DC	249	VAL	3.7
25	DD	142	VAL	3.7
26	DE	28	VAL	3.7
41	DT	47	VAL	3.7
45	DX	3	VAL	3.7
32	DK	29	HIS	3.7
29	DH	123	ARG	3.7
31	DJ	96	ARG	3.7
22	DA	1181	U	3.7
33	DL	73	ILE	3.7
37	DP	30	TRP	3.7
22	BA	654	A	3.7
33	DL	44	GLY	3.7
33	DL	14	LYS	3.7
26	DE	84	THR	3.7
54	CG	8	GLN	3.7
22	DA	379	G	3.7
22	DA	473	G	3.7
26	DE	78	TRP	3.7
49	D1	33	LEU	3.7
12	AL	43	LYS	3.7
12	CL	91	GLY	3.7
24	DC	46	GLY	3.7
22	BA	884	U	3.7
26	DE	80	SER	3.7
53	CA	121	U	3.7
4	CD	146	GLU	3.7
22	DA	1614	A	3.7

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Mol	Chain	Res	Type	RSRZ
26	DE	50	ALA	3.7
36	DO	6	ALA	3.7
41	DT	20	ALA	3.7
22	DA	378	C	3.7
55	CM	99	GLN	3.7
10	CJ	8	ILE	3.7
28	DG	140	ILE	3.7
51	D3	23	HIS	3.7
28	BG	116	LEU	3.7
47	DZ	24	LEU	3.7
10	CJ	58	ASN	3.7
24	DC	27	LYS	3.7
44	BW	74	LYS	3.7
51	D3	34	LYS	3.7
24	DC	253	GLY	3.7
10	CJ	41	PRO	3.6
24	BC	235	GLU	3.6
22	DA	1197	G	3.6
22	DA	1622	G	3.6
22	DA	2319	G	3.6
22	DA	1249	U	3.6
35	DN	37	THR	3.6
22	DA	1327	A	3.6
29	DH	90	LEU	3.6
45	DX	29	LEU	3.6
51	D3	3	ILE	3.6
48	D0	18	HIS	3.6
26	DE	98	LYS	3.6
22	DA	815	C	3.6
24	BC	233	GLY	3.6
38	DQ	22	GLY	3.6
45	DX	75	GLU	3.6
25	DD	43	ASP	3.6
9	CI	65	THR	3.6
30	BI	67	THR	3.6
48	D0	21	LEU	3.6
22	DA	1325	U	3.6
52	D4	18	LYS	3.6
22	DA	1537	G	3.6
42	DU	37	GLY	3.6
22	DA	1254	A	3.6
22	DA	2336	A	3.6

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Mol	Chain	Res	Type	RSRZ
44	DW	40	ARG	3.6
22	DA	1612	C	3.6
22	DA	1644	C	3.6
38	DQ	88	GLU	3.6
53	CA	206	C	3.6
18	CR	63	TYR	3.6
42	DU	67	SER	3.6
21	CU	53	LYS	3.6
33	DL	82	LEU	3.6
40	DS	49	LYS	3.6
51	D3	35	LYS	3.6
50	D2	6	GLN	3.6
3	CC	189	HIS	3.6
29	DH	88	GLY	3.6
39	DR	79	ARG	3.6
45	DX	27	ARG	3.6
46	BY	7	ARG	3.6
25	DD	73	VAL	3.6
39	DR	47	VAL	3.6
44	BW	75	ASN	3.6
20	CT	63	LYS	3.6
22	DA	911	A	3.6
30	DI	108	ILE	3.6
33	DL	80	SER	3.6
40	DS	4	ILE	3.6
22	BA	143	C	3.6
22	DA	444	C	3.6
22	DA	786	C	3.6
22	DA	2047	C	3.6
9	CI	109	GLN	3.6
29	DH	95	GLY	3.6
42	DU	77	GLY	3.6
44	DW	33	GLY	3.6
47	DZ	14	GLY	3.6
54	CG	3	ARG	3.6
4	CD	36	ALA	3.6
33	DL	62	PRO	3.6
33	DL	74	THR	3.6
36	DO	12	THR	3.6
45	DX	34	SER	3.6
14	CN	53	ASP	3.6
29	DH	86	ASP	3.6

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Mol	Chain	Res	Type	RSRZ
22	DA	1808	A	3.5
22	DA	2777	G	3.5
26	DE	49	ARG	3.5
53	CA	1441	A	3.5
30	BI	69	VAL	3.5
2	CB	165	ALA	3.5
35	DN	25	ALA	3.5
41	BT	24	MET	3.5
47	DZ	47	ILE	3.5
25	DD	145	SER	3.5
28	DG	1	SER	3.5
55	CM	107	THR	3.5
29	DH	120	GLY	3.5
24	DC	93	VAL	3.5
41	DT	13	ALA	3.5
41	DT	81	LYS	3.5
22	DA	472	A	3.5
22	DA	2267	A	3.5
30	BI	10	LEU	3.5
22	DA	696	G	3.5
22	DA	775	G	3.5
22	DA	1358	G	3.5
2	CB	144	GLU	3.5
22	BA	2146	C	3.5
22	DA	2626	C	3.5
7	AG	17	PHE	3.5
25	DD	112	THR	3.5
22	DA	1130	U	3.5
22	DA	2321	U	3.5
21	AU	31	VAL	3.5
25	DD	170	VAL	3.5
35	DN	29	VAL	3.5
41	DT	67	VAL	3.5
30	BI	1	ALA	3.5
58	DF	35	LEU	3.5
9	CI	56	MET	3.5
50	D2	22	MET	3.5
44	DW	38	ARG	3.5
18	AR	50	TYR	3.5
38	DQ	24	TYR	3.5
39	DR	83	TYR	3.5
22	DA	510	C	3.5

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Mol	Chain	Res	Type	RSRZ
22	DA	512	G	3.5
22	DA	1026	G	3.5
22	DA	1131	G	3.5
22	DA	2391	G	3.5
22	DA	2627	G	3.5
31	DJ	5	THR	3.5
31	DJ	111	LYS	3.5
33	DL	29	LYS	3.5
12	CL	32	VAL	3.5
18	CR	73	HIS	3.5
25	DD	140	HIS	3.5
26	DE	62	GLN	3.5
26	DE	103	GLY	3.5
45	DX	33	HIS	3.5
56	CP	24	SER	3.5
9	AI	16	ALA	3.5
10	AJ	75	ASP	3.5
29	DH	81	ALA	3.5
39	DR	65	ALA	3.5
33	DL	77	ILE	3.5
21	AU	35	GLU	3.5
17	AQ	6	THR	3.5
25	DD	110	THR	3.5
22	DA	2439	A	3.5
26	DE	167	VAL	3.5
34	DM	67	VAL	3.5
42	DU	24	VAL	3.5
42	DU	82	VAL	3.5
7	AG	19	SER	3.5
19	CS	70	LEU	3.5
42	DU	74	ALA	3.5
35	DN	1	MET	3.5
22	DA	411	G	3.5
22	DA	776	G	3.5
22	DA	822	G	3.5
22	DA	1529	G	3.5
22	DA	1642	G	3.5
22	DA	2618	G	3.5
25	DD	77	ARG	3.5
29	DH	80	ILE	3.5
52	D4	23	ILE	3.5
53	CA	102	G	3.5

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Mol	Chain	Res	Type	RSRZ
3	AC	160	GLU	3.4
22	DA	387	U	3.5
22	DA	2028	U	3.5
22	DA	2690	U	3.5
24	DC	81	GLU	3.4
11	CK	128	VAL	3.4
36	DO	27	VAL	3.4
37	DP	32	VAL	3.4
38	DQ	99	VAL	3.4
31	DJ	50	THR	3.4
9	AI	43	ALA	3.4
9	AI	120	ALA	3.4
38	DQ	5	ARG	3.4
1	AA	412	A	3.4
22	DA	1640	A	3.4
22	DA	2003	A	3.4
26	DE	60	TRP	3.4
1	AA	1031	C	3.4
9	CI	119	LYS	3.4
22	DA	2006	C	3.4
53	CA	1217	C	3.4
31	DJ	75	TYR	3.4
35	DN	112	TYR	3.4
3	CC	194	VAL	3.4
22	DA	62	U	3.4
22	DA	810	U	3.4
22	DA	919	U	3.4
22	DA	2040	G	3.4
38	DQ	87	VAL	3.4
14	CN	26	LEU	3.4
35	DN	62	ASN	3.4
37	DP	96	LEU	3.4
3	AC	159	ALA	3.4
24	DC	237	ARG	3.4
35	DN	22	ARG	3.4
37	DP	102	ARG	3.4
36	DO	8	ILE	3.4
36	DO	32	PRO	3.4
9	AI	128	LYS	3.4
15	CO	47	LYS	3.4
24	DC	247	TRP	3.4
22	DA	1129	A	3.4

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Mol	Chain	Res	Type	RSRZ
22	DA	1275	A	3.4
22	DA	1597	A	3.4
22	DA	1626	A	3.4
22	DA	2142	A	3.4
31	DJ	53	TYR	3.4
53	CA	974	A	3.4
3	CC	154	GLY	3.4
22	DA	961	C	3.4
22	DA	2000	C	3.4
26	DE	26	ALA	3.4
26	DE	88	ARG	3.4
46	BY	63	ALA	3.4
3	CC	161	ILE	3.4
22	DA	1078	U	3.4
33	DL	4	ASN	3.4
58	DF	157	THR	3.4
54	CG	6	ILE	3.4
22	DA	467	G	3.4
22	DA	663	G	3.4
29	DH	93	SER	3.4
40	DS	2	GLU	3.4
2	AB	156	LEU	3.4
46	DY	19	LEU	3.4
21	CU	46	ARG	3.4
54	CG	9	ARG	3.4
33	DL	102	GLY	3.4
35	DN	7	GLY	3.4
45	DX	14	GLY	3.4
22	BA	1073	A	3.4
22	DA	1237	A	3.4
22	DA	2882	A	3.4
26	DE	94	GLN	3.4
28	DG	83	THR	3.4
9	CI	30	ASN	3.4
42	DU	73	ASN	3.4
22	DA	1251	C	3.4
22	DA	1646	C	3.4
22	DA	913	U	3.4
26	DE	110	SER	3.4
50	D2	18	PHE	3.4
10	CJ	47	GLU	3.4
14	AN	53	ASP	3.4

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Mol	Chain	Res	Type	RSRZ
17	CQ	5	ARG	3.4
24	DC	47	ARG	3.4
26	DE	176	ASP	3.4
29	DH	130	VAL	3.4
34	DM	20	LEU	3.4
46	DY	28	LEU	3.4
22	DA	549	G	3.4
22	DA	942	G	3.4
22	DA	2828	G	3.4
8	CH	129	ALA	3.4
13	AM	98	GLY	3.4
24	DC	11	GLY	3.4
26	DE	182	ALA	3.4
41	DT	41	ALA	3.4
41	DT	65	GLY	3.4
2	CB	150	ILE	3.4
39	DR	74	ILE	3.4
44	DW	67	LYS	3.4
6	AF	68	GLN	3.4
44	BW	45	HIS	3.4
53	CA	250	A	3.3
39	DR	92	TRP	3.3
7	AG	20	GLU	3.3
22	DA	1030	C	3.3
22	DA	1556	C	3.3
40	DS	95	ARG	3.3
22	DA	2629	U	3.3
36	DO	20	GLU	3.3
48	D0	53	VAL	3.3
26	DE	38	GLY	3.3
30	BI	132	ALA	3.3
33	DL	20	GLY	3.3
33	DL	103	ILE	3.3
24	DC	245	THR	3.3
39	DR	11	GLN	3.3
45	DX	5	GLN	3.3
22	DA	1195	G	3.3
22	DA	2133	G	3.3
7	AG	61	PHE	3.3
19	CS	40	PHE	3.3
31	DJ	4	PHE	3.3
33	DL	50	PHE	3.3

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Mol	Chain	Res	Type	RSRZ
44	DW	25	PHE	3.3
2	CB	106	VAL	3.3
10	CJ	66	GLU	3.3
21	AU	23	GLU	3.3
1	AA	532	A	3.3
22	DA	294	A	3.3
22	DA	1274	A	3.3
29	BH	82	SER	3.3
39	DR	71	LYS	3.3
48	B0	56	LYS	3.3
9	CI	15	ALA	3.3
30	BI	26	ALA	3.3
40	DS	32	ALA	3.3
42	DU	8	ASP	3.3
22	DA	565	C	3.3
22	DA	2045	C	3.3
5	AE	102	THR	3.3
9	CI	125	GLN	3.3
41	DT	39	THR	3.3
44	DW	76	ARG	3.3
26	DE	33	VAL	3.3
38	DQ	18	LYS	3.3
39	DR	46	GLU	3.3
22	DA	60	G	3.3
22	DA	476	G	3.3
22	DA	2035	G	3.3
22	DA	2038	G	3.3
8	CH	121	GLY	3.3
25	DD	192	ALA	3.3
28	BG	1	SER	3.3
29	DH	94	ILE	3.3
35	DN	113	ILE	3.3
38	DQ	28	SER	3.3
12	AL	37	TYR	3.3
4	AD	72	ARG	3.3
24	DC	242	HIS	3.3
39	DR	6	GLN	3.3
56	CP	66	THR	3.3
22	DA	982	C	3.3
3	CC	90	VAL	3.3
9	AI	111	GLU	3.3
10	AJ	76	ILE	3.3

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Mol	Chain	Res	Type	RSRZ
3	AC	1	GLY	3.3
33	DL	32	GLY	3.3
4	AD	152	SER	3.3
24	DC	31	PRO	3.3
26	DE	40	ARG	3.3
29	DH	27	ARG	3.3
38	DQ	29	ARG	3.3
47	DZ	10	ARG	3.3
22	BA	2110	G	3.3
22	DA	46	G	3.3
22	DA	836	G	3.3
22	DA	966	G	3.3
22	DA	2027	G	3.3
25	DD	150	GLN	3.3
26	DE	165	HIS	3.3
26	DE	17	THR	3.3
44	DW	78	PHE	3.3
24	DC	17	LYS	3.3
25	DD	92	VAL	3.3
26	DE	130	LYS	3.3
33	DL	84	LYS	3.3
55	CM	26	LYS	3.3
22	DA	28	A	3.3
22	DA	941	A	3.3
22	DA	2622	U	3.3
22	DA	334	C	3.3
33	DL	113	ALA	3.3
48	D0	1	ALA	3.3
25	DD	10	GLY	3.3
25	DD	195	GLY	3.3
32	BK	49	ARG	3.2
35	DN	4	ARG	3.2
48	D0	48	TYR	3.2
50	D2	19	ARG	3.2
55	CM	89	ARG	3.2
9	CI	13	SER	3.2
40	DS	101	SER	3.2
55	CM	95	PRO	3.2
31	DJ	122	LEU	3.2
14	CN	11	LYS	3.2
20	CT	68	LYS	3.2
33	DL	70	LYS	3.2

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Mol	Chain	Res	Type	RSRZ
42	DU	78	LYS	3.2
48	D0	19	ASP	3.2
52	D4	20	ASP	3.2
31	DJ	11	VAL	3.2
29	DH	119	ASN	3.2
31	DJ	81	ILE	3.2
33	DL	99	ASN	3.2
37	DP	94	ALA	3.2
38	DQ	73	ILE	3.2
50	D2	20	ALA	3.2
22	DA	290	U	3.2
22	DA	1216	G	3.2
22	DA	1236	G	3.2
22	DA	1584	U	3.2
25	DD	135	GLY	3.2
22	DA	654	A	3.2
24	DC	174	ARG	3.2
36	DO	9	ARG	3.2
41	BT	73	ARG	3.2
53	CA	1492	A	3.2
22	DA	796	C	3.2
22	DA	1164	C	3.2
22	DA	1536	C	3.2
22	DA	2326	C	3.2
29	BH	93	SER	3.2
34	DM	98	PRO	3.2
41	BT	88	LYS	3.2
28	DG	168	VAL	3.2
58	DF	131	VAL	3.2
46	DY	16	THR	3.2
17	CQ	4	ILE	3.2
39	DR	103	ALA	3.2
43	BV	36	ALA	3.2
8	CH	31	LEU	3.2
34	DM	8	LYS	3.2
41	DT	84	TYR	3.2
58	DF	32	LYS	3.2
22	BA	139	U	3.2
19	CS	29	PRO	3.2
7	AG	36	SER	3.2
22	DA	345	A	3.2
22	DA	1303	G	3.2

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Mol	Chain	Res	Type	RSRZ
22	DA	1623	G	3.2
22	DA	2250	G	3.2
37	BP	1	SER	3.2
52	D4	22	VAL	3.2
52	D4	25	VAL	3.2
53	CA	211	G	3.2
53	CA	262	A	3.2
20	CT	74	HIS	3.2
22	DA	2036	C	3.2
22	DA	2332	C	3.2
10	CJ	6	ILE	3.2
12	AL	13	ARG	3.2
24	DC	51	ARG	3.2
35	DN	111	ALA	3.2
36	DO	13	ARG	3.2
33	DL	22	GLY	3.2
38	DQ	25	GLY	3.2
46	DY	62	GLY	3.2
14	CN	25	GLU	3.2
33	BL	115	GLU	3.2
24	BC	241	LYS	3.2
36	DO	26	LEU	3.2
9	AI	89	TYR	3.2
14	CN	56	PRO	3.2
14	AN	54	SER	3.2
22	DA	1326	U	3.2
37	DP	84	SER	3.2
24	DC	251	THR	3.2
33	DL	67	THR	3.2
28	DG	113	ASP	3.2
40	DS	34	ASP	3.2
40	DS	99	ARG	3.2
22	DA	265	A	3.2
22	DA	866	A	3.2
54	CG	45	ALA	3.2
1	AA	1032	G	3.2
11	AK	125	LYS	3.2
22	DA	583	G	3.2
22	DA	585	G	3.2
22	DA	1193	G	3.2
22	DA	2341	G	3.2
25	DD	157	LYS	3.2

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Mol	Chain	Res	Type	RSRZ
35	DN	99	LYS	3.2
50	D2	25	LYS	3.2
53	CA	457	G	3.2
22	DA	33	C	3.2
22	DA	1305	C	3.2
22	DA	2452	C	3.2
51	D3	43	LEU	3.2
58	DF	31	GLU	3.2
34	DM	17	ASN	3.2
33	DL	64	PHE	3.2
37	DP	97	TYR	3.2
24	DC	227	VAL	3.2
29	BH	108	VAL	3.2
40	DS	71	VAL	3.2
46	DY	41	HIS	3.2
2	AB	150	ILE	3.2
9	AI	127	SER	3.2
10	CJ	40	ILE	3.2
26	DE	181	ILE	3.2
38	DQ	55	GLN	3.2
44	DW	36	ILE	3.2
47	DZ	31	ILE	3.2
48	D0	26	SER	3.2
58	DF	153	ILE	3.2
19	AS	38	THR	3.2
49	D1	22	THR	3.2
24	DC	25	LYS	3.1
25	DD	131	ASP	3.1
40	DS	46	LEU	3.1
41	BT	7	LEU	3.1
53	CA	1363	A	3.1
24	DC	239	PHE	3.1
30	BI	68	PHE	3.1
22	BA	2138	G	3.1
22	DA	130	C	3.1
22	DA	228	C	3.1
22	DA	364	C	3.1
22	DA	527	C	3.1
22	DA	1349	C	3.1
22	DA	1430	G	3.1
22	DA	1607	C	3.1
53	CA	1223	C	3.1

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Mol	Chain	Res	Type	RSRZ
18	CR	20	ILE	3.1
46	DY	25	GLN	3.1
10	CJ	12	ALA	3.1
26	DE	201	ALA	3.1
29	DH	39	ALA	3.1
33	DL	94	THR	3.1
40	DS	5	ALA	3.1
45	DX	18	SER	3.1
5	AE	10	LEU	3.1
10	AJ	91	ASP	3.1
24	BC	234	GLY	3.1
45	DX	32	LEU	3.1
14	CN	100	TRP	3.1
43	DV	69	GLU	3.1
22	DA	437	U	3.1
30	BI	57	VAL	3.1
50	D2	26	ASN	3.1
22	DA	443	A	3.1
22	DA	582	A	3.1
29	BH	80	ILE	3.1
40	DS	86	MET	3.1
52	D4	16	ILE	3.1
9	AI	15	ALA	3.1
30	BI	119	ALA	3.1
6	CF	39	LEU	3.1
9	CI	53	LEU	3.1
10	AJ	87	LEU	3.1
19	CS	38	THR	3.1
22	DA	680	C	3.1
22	DA	1289	C	3.1
22	DA	2606	C	3.1
30	BI	70	THR	3.1
53	CA	207	C	3.1
35	DN	14	SER	3.1
22	DA	75	G	3.1
22	DA	465	G	3.1
22	DA	570	G	3.1
22	DA	1124	G	3.1
22	DA	1311	G	3.1
26	DE	51	GLU	3.1
10	AJ	98	VAL	3.1
30	BI	38	CYS	3.1

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Mol	Chain	Res	Type	RSRZ
9	CI	121	ARG	3.1
10	AJ	45	ARG	3.1
34	DM	81	ARG	3.1
24	DC	259	ASN	3.1
53	CA	208	U	3.1
25	DD	148	GLN	3.1
26	DE	200	LEU	3.1
22	DA	1616	A	3.1
22	DA	1652	A	3.1
22	DA	1745	A	3.1
22	DA	2009	A	3.1
31	DJ	115	GLY	3.1
32	DK	36	GLY	3.1
52	D4	6	SER	3.1
42	DU	21	ARG	3.1
42	DU	94	PHE	3.1
53	CA	962	C	3.1
53	CA	972	C	3.1
53	CA	1314	C	3.1
9	CI	128	LYS	3.1
22	DA	93	G	3.1
22	DA	498	G	3.1
22	DA	808	G	3.1
22	DA	1324	G	3.1
22	DA	1573	G	3.1
22	DA	1653	G	3.1
27	BF	155	ILE	3.1
30	BI	113	ALA	3.1
22	DA	2884	U	3.1
26	DE	138	LEU	3.1
31	DJ	32	LEU	3.1
35	DN	28	LEU	3.1
55	CM	88	LEU	3.1
24	DC	256	THR	3.1
31	DJ	83	GLY	3.1
37	DP	104	GLY	3.1
50	D2	27	GLY	3.1
42	DU	85	ARG	3.1
9	CI	72	SER	3.1
33	DL	116	VAL	3.1
50	D2	15	SER	3.1
26	DE	23	PHE	3.1

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Mol	Chain	Res	Type	RSRZ
29	DH	87	GLU	3.1
22	DA	94	A	3.1
22	DA	821	A	3.1
22	DA	1134	A	3.1
22	DA	2711	A	3.1
30	BI	74	PRO	3.1
31	DJ	103	ILE	3.1
34	DM	12	MET	3.1
52	D4	27	CYS	3.1
25	DD	4	LEU	3.0
25	DD	185	ASN	3.0
28	DG	118	ALA	3.0
30	DI	78	LEU	3.0
30	DI	93	ASN	3.0
32	DK	119	ALA	3.0
45	DX	48	LEU	3.0
51	D3	42	HIS	3.0
14	AN	48	GLN	3.0
46	DY	36	GLN	3.0
17	AQ	5	ARG	3.0
22	DA	2525	G	3.0
26	DE	21	ARG	3.0
26	DE	61	ARG	3.0
35	DN	12	ARG	3.0
46	DY	47	ARG	3.0
25	DD	12	THR	3.0
28	BG	83	THR	3.0
1	AA	723	U	3.0
22	DA	811	U	3.0
22	DA	1971	U	3.0
22	DA	2039	U	3.0
22	DA	2441	U	3.0
28	BG	167	VAL	3.0
45	DX	66	VAL	3.0
53	CA	1235	U	3.0
55	CM	15	VAL	3.0
12	CL	9	LYS	3.0
21	AU	53	LYS	3.0
31	DJ	2	LYS	3.0
33	DL	107	PHE	3.0
4	AD	34	GLU	3.0
14	AN	57	SER	3.0

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Mol	Chain	Res	Type	RSRZ
37	BP	111	GLU	3.0
25	DD	48	ILE	3.0
55	CM	76	ILE	3.0
34	DM	52	ALA	3.0
35	DN	10	LEU	3.0
22	BA	613	A	3.0
22	DA	213	A	3.0
22	DA	454	A	3.0
22	DA	675	A	3.0
22	DA	878	A	3.0
22	DA	990	A	3.0
22	DA	1383	A	3.0
22	DA	2682	A	3.0
4	AD	62	ARG	3.0
31	DJ	35	ARG	3.0
35	DN	9	GLN	3.0
22	DA	76	C	3.0
22	DA	995	C	3.0
22	DA	2773	C	3.0
13	AM	15	VAL	3.0
25	DD	129	THR	3.0
33	DL	46	VAL	3.0
42	DU	25	LYS	3.0
58	DF	17	THR	3.0
50	D2	5	PHE	3.0
8	AH	2	MET	3.0
26	DE	198	GLU	3.0
42	DU	36	GLU	3.0
39	DR	101	ILE	3.0
22	DA	1273	U	3.0
56	CP	15	PRO	3.0
22	DA	242	G	3.0
22	DA	396	G	3.0
22	DA	559	G	3.0
22	DA	1202	G	3.0
22	DA	1407	G	3.0
22	DA	1416	G	3.0
22	DA	1449	G	3.0
22	DA	1645	G	3.0
22	DA	2141	G	3.0
53	CA	976	G	3.0
53	CA	1270	G	3.0

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Mol	Chain	Res	Type	RSRZ
14	AN	1	ALA	3.0
26	DE	45	ALA	3.0
9	AI	84	ARG	3.0
19	CS	36	ARG	3.0
52	D4	14	CYS	3.0
2	CB	25	LYS	3.0
9	CI	31	GLN	3.0
24	DC	4	LYS	3.0
35	DN	13	ASN	3.0
40	DS	42	LYS	3.0
22	DA	515	A	3.0
22	DA	752	A	3.0
22	DA	1194	A	3.0
22	DA	2051	A	3.0
3	AC	36	PHE	3.0
21	AU	41	THR	3.0
3	AC	161	ILE	3.0
4	AD	63	ILE	3.0
22	DA	490	C	3.0
22	DA	1350	C	3.0
37	DP	101	GLU	3.0
40	DS	103	ILE	3.0
31	DJ	42	ALA	3.0
22	DA	1647	U	3.0
22	DA	2402	U	3.0
2	CB	131	LYS	3.0
24	DC	26	GLY	3.0
42	DU	22	GLY	3.0
56	CP	64	GLY	3.0
14	AN	33	VAL	3.0
19	CS	66	VAL	3.0
22	DA	356	G	3.0
22	DA	2638	G	3.0
22	DA	2693	G	3.0
26	DE	65	THR	3.0
29	DH	104	THR	3.0
35	DN	32	GLU	3.0
38	DQ	59	LEU	3.0
39	DR	22	LEU	3.0
44	BW	84	GLU	3.0
1	AA	1493	A	3.0
22	DA	501	A	3.0

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Mol	Chain	Res	Type	RSRZ
22	DA	503	A	3.0
22	DA	739	A	3.0
22	DA	1322	A	3.0
51	D3	32	LEU	3.0
58	DF	83	PRO	3.0
2	CB	146	SER	3.0
26	DE	86	ALA	3.0
42	BU	74	ALA	3.0
48	D0	17	SER	3.0
20	CT	43	LYS	3.0
22	DA	2874	C	3.0
24	BC	236	GLY	3.0
40	DS	9	HIS	3.0
54	CG	72	VAL	3.0
22	BA	2139	U	3.0
22	DA	1217	U	3.0
22	DA	2449	U	3.0
6	CF	8	PHE	3.0
9	AI	38	PHE	3.0
10	AJ	41	PRO	2.9
15	AO	57	ARG	2.9
19	CS	2	ARG	2.9
24	DC	179	GLU	2.9
35	DN	43	GLU	2.9
22	DA	537	G	2.9
22	DA	1091	G	2.9
22	DA	1245	G	2.9
22	DA	1429	G	2.9
10	AJ	59	LYS	2.9
14	CN	98	ALA	2.9
28	DG	58	ALA	2.9
40	DS	73	LYS	2.9
46	DY	3	ALA	2.9
48	D0	36	LYS	2.9
52	D4	32	LYS	2.9
22	DA	788	A	2.9
22	DA	1029	A	2.9
22	DA	1286	A	2.9
22	DA	1321	A	2.9
22	DA	2679	A	2.9
53	CA	1324	A	2.9
57	DB	45	A	2.9

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Mol	Chain	Res	Type	RSRZ
28	DG	90	GLY	2.9
22	DA	57	C	2.9
22	DA	673	C	2.9
22	DA	1172	C	2.9
22	DA	2507	C	2.9
55	CM	38	ILE	2.9
32	DK	89	ASN	2.9
41	DT	59	ASN	2.9
42	DU	52	ASN	2.9
6	CF	91	ARG	2.9
9	AI	65	THR	2.9
22	DA	1019	U	2.9
54	CG	123	LEU	2.9
42	DU	43	LYS	2.9
43	DV	84	PRO	2.9
21	AU	51	ALA	2.9
26	DE	135	ALA	2.9
39	DR	102	SER	2.9
26	DE	82	GLY	2.9
29	BH	85	GLY	2.9
9	CI	38	PHE	2.9
22	DA	51	G	2.9
22	DA	277	G	2.9
22	DA	308	G	2.9
22	DA	377	G	2.9
22	DA	785	G	2.9
22	DA	1120	G	2.9
22	DA	2877	G	2.9
30	BI	37	PHE	2.9
14	CN	59	GLN	2.9
24	DC	90	ILE	2.9
33	DL	54	GLN	2.9
38	DQ	43	GLN	2.9
46	DY	38	GLN	2.9
2	CB	140	LEU	2.9
22	BA	1090	A	2.9
22	DA	91	A	2.9
22	DA	131	A	2.9
22	DA	910	A	2.9
28	DG	152	ARG	2.9
47	DZ	28	LEU	2.9
50	D2	14	ARG	2.9

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Mol	Chain	Res	Type	RSRZ
53	CA	1311	A	2.9
14	CN	6	LYS	2.9
19	CS	5	LYS	2.9
35	DN	5	LYS	2.9
46	BY	9	LYS	2.9
48	D0	5	ASN	2.9
9	CI	43	ALA	2.9
21	AU	30	GLU	2.9
22	BA	885	C	2.9
22	DA	1278	C	2.9
31	DJ	9	GLU	2.9
42	DU	47	PRO	2.9
56	CP	65	ALA	2.9
22	BA	2585	U	2.9
22	DA	12	U	2.9
22	DA	1443	U	2.9
22	DA	2617	U	2.9
22	DA	2861	U	2.9
5	CE	118	GLY	2.9
20	AT	5	SER	2.9
24	DC	236	GLY	2.9
45	DX	8	GLY	2.9
50	D2	17	GLY	2.9
20	CT	17	ARG	2.9
26	DE	148	ILE	2.9
29	DH	12	LEU	2.9
44	DW	19	ARG	2.9
50	D2	21	ARG	2.9
58	DF	62	GLN	2.9
9	AI	67	LYS	2.9
26	DE	91	ASP	2.9
4	AD	42	ALA	2.9
22	BA	277	G	2.9
22	DA	578	G	2.9
22	DA	1137	G	2.9
29	DH	111	ALA	2.9
32	DK	106	GLU	2.9
38	DQ	26	ALA	2.9
40	DS	87	PRO	2.9
45	DX	23	ALA	2.9
51	D3	36	ALA	2.9
53	CA	138	G	2.9

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Mol	Chain	Res	Type	RSRZ
53	CA	971	G	2.9
22	BA	2147	A	2.9
22	DA	233	A	2.9
22	DA	829	A	2.9
9	AI	46	VAL	2.9
29	DH	9	VAL	2.9
40	DS	20	VAL	2.9
22	DA	337	C	2.9
22	DA	1319	C	2.9
22	DA	2601	C	2.9
53	CA	183	C	2.9
34	DM	9	PHE	2.9
39	DR	53	PHE	2.9
53	CA	723	U	2.9
15	CO	3	SER	2.9
26	DE	143	LEU	2.9
46	DY	42	LEU	2.9
54	CG	75	LYS	2.9
26	DE	168	ASP	2.9
14	AN	21	ALA	2.9
14	AN	28	ALA	2.9
19	AS	32	THR	2.9
24	DC	7	PRO	2.9
27	BF	73	VAL	2.9
29	BH	110	VAL	2.9
48	D0	24	VAL	2.9
10	AJ	49	PHE	2.9
14	CN	71	GLY	2.9
20	CT	35	TYR	2.9
28	DG	156	TYR	2.9
35	DN	63	ARG	2.9
38	DQ	56	PHE	2.9
46	DY	35	GLY	2.9
6	CF	74	LEU	2.9
14	AN	45	LEU	2.9
22	DA	388	G	2.9
22	DA	505	A	2.9
22	DA	774	G	2.9
22	DA	1037	G	2.9
22	DA	1084	A	2.9
22	DA	1332	G	2.9
22	DA	1514	G	2.9

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Mol	Chain	Res	Type	RSRZ
22	DA	1583	A	2.9
22	DA	1609	A	2.9
22	DA	2067	G	2.9
22	DA	2781	A	2.9
25	DD	123	LYS	2.9
30	BI	48	ILE	2.9
33	BL	112	LEU	2.9
50	D2	11	LYS	2.9
50	D2	46	LYS	2.9
53	CA	963	G	2.9
35	DN	31	HIS	2.8
48	D0	41	HIS	2.8
22	DA	509	C	2.8
22	DA	588	U	2.8
22	DA	912	C	2.8
22	DA	1200	C	2.8
22	DA	1201	U	2.8
37	DP	1	SER	2.8
41	DT	17	SER	2.8
22	DA	2628	C	2.8
14	CN	69	PRO	2.8
21	AU	49	ALA	2.8
25	BD	103	ASP	2.8
26	DE	34	ALA	2.8
38	DQ	67	ALA	2.8
54	CG	149	ALA	2.8
47	DZ	34	THR	2.8
41	DT	5	GLU	2.8
3	AC	166	TRP	2.8
21	CU	31	VAL	2.8
26	DE	97	ASN	2.8
39	DR	4	VAL	2.8
10	CJ	45	ARG	2.8
33	DL	41	ARG	2.8
41	DT	69	ARG	2.8
4	AD	21	LYS	2.8
2	AB	66	ILE	2.8
9	AI	117	LEU	2.8
13	AM	83	GLY	2.8
33	BL	141	LYS	2.8
20	CT	78	LEU	2.8
38	DQ	81	GLY	2.8

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Mol	Chain	Res	Type	RSRZ
32	DK	1	MET	2.8
45	DX	77	TYR	2.8
46	DY	1	MET	2.8
39	DR	66	HIS	2.8
11	CK	25	SER	2.8
35	DN	18	GLN	2.8
22	DA	466	A	2.8
22	DA	1090	A	2.8
22	DA	1246	A	2.8
22	DA	1307	A	2.8
22	DA	1365	A	2.8
22	DA	1637	A	2.8
53	CA	468	A	2.8
5	AE	34	ALA	2.8
14	AN	35	ALA	2.8
37	DP	41	ALA	2.8
37	DP	107	ALA	2.8
51	D3	26	ALA	2.8
1	AA	209	U	2.8
22	DA	291	G	2.8
22	DA	434	U	2.8
22	DA	535	G	2.8
22	DA	916	G	2.8
22	DA	962	G	2.8
22	DA	1753	G	2.8
22	DA	2775	G	2.8
22	DA	2779	U	2.8
22	DA	2822	G	2.8
53	CA	204	G	2.8
9	CI	8	THR	2.8
22	DA	436	C	2.8
22	DA	1121	C	2.8
22	DA	2066	C	2.8
22	DA	2313	C	2.8
25	BD	92	VAL	2.8
28	BG	16	VAL	2.8
38	DQ	40	LYS	2.8
33	DL	49	GLY	2.8
33	DL	65	GLY	2.8
50	D2	38	GLY	2.8
51	D3	52	GLY	2.8
20	AT	35	TYR	2.8

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Mol	Chain	Res	Type	RSRZ
43	DV	82	TYR	2.8
38	DQ	19	GLN	2.8
15	AO	1	SER	2.8
29	BH	84	ALA	2.8
29	DH	131	SER	2.8
30	DI	75	ALA	2.8
35	DN	68	ALA	2.8
44	DW	60	ALA	2.8
25	DD	205	PRO	2.8
28	BG	169	ARG	2.8
8	CH	54	THR	2.8
13	AM	96	VAL	2.8
24	DC	2	VAL	2.8
25	DD	133	THR	2.8
28	DG	5	LYS	2.8
37	DP	59	THR	2.8
40	DS	52	GLU	2.8
45	DX	9	LYS	2.8
47	DZ	20	LYS	2.8
47	DZ	22	THR	2.8
51	D3	57	VAL	2.8
22	BA	1103	A	2.8
22	DA	1641	A	2.8
22	BA	2149	U	2.8
22	DA	832	U	2.8
29	BH	132	PHE	2.8
34	DM	41	LEU	2.8
26	DE	64	GLY	2.8
31	DJ	93	ILE	2.8
39	DR	5	PHE	2.8
42	BU	86	PHE	2.8
39	DR	56	GLY	2.8
44	DW	72	GLY	2.8
47	DZ	25	GLY	2.8
22	DA	289	G	2.8
22	DA	468	G	2.8
22	DA	610	C	2.8
22	DA	679	C	2.8
22	DA	1092	C	2.8
22	DA	1320	C	2.8
22	DA	1335	C	2.8
22	DA	1382	G	2.8

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Mol	Chain	Res	Type	RSRZ
22	DA	1450	G	2.8
22	DA	2069	G	2.8
17	CQ	8	GLN	2.8
14	CN	68	ARG	2.8
36	DO	7	ARG	2.8
40	DS	8	ARG	2.8
40	DS	92	ARG	2.8
30	DI	74	PRO	2.8
33	DL	90	VAL	2.8
35	DN	60	VAL	2.8
42	DU	54	PRO	2.8
51	D3	62	PRO	2.8
54	CG	5	VAL	2.8
3	CC	42	LEU	2.8
41	BT	93	LEU	2.8
41	DT	4	GLU	2.8
50	D2	31	LEU	2.8
40	DS	74	ILE	2.8
46	DY	26	PHE	2.8
24	BC	238	ASN	2.8
22	DA	196	A	2.8
22	DA	234	U	2.8
22	DA	945	A	2.8
22	DA	1119	U	2.8
22	DA	1440	U	2.8
28	DG	163	TYR	2.8
53	CA	1201	A	2.8
24	DC	231	HIS	2.8
22	DA	343	C	2.8
22	DA	944	C	2.8
44	DW	46	ALA	2.8
25	DD	8	LYS	2.8
41	DT	9	LYS	2.8
22	BA	1177	G	2.8
22	DA	450	G	2.8
22	DA	1116	G	2.8
22	DA	1138	G	2.8
30	BI	79	LEU	2.8
31	DJ	36	LEU	2.8
37	DP	7	LEU	2.8
25	DD	91	THR	2.8
26	DE	53	THR	2.8

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Mol	Chain	Res	Type	RSRZ
35	DN	36	THR	2.8
49	B1	4	ILE	2.8
46	DY	30	MET	2.7
25	DD	6	GLY	2.7
25	DD	87	GLY	2.7
44	DW	55	ASP	2.7
29	BH	73	ASN	2.7
58	DF	22	ASN	2.7
8	CH	127	TYR	2.7
9	CI	112	ARG	2.7
29	DH	8	LYS	2.7
30	BI	109	ALA	2.7
30	BI	114	ALA	2.7
34	DM	21	ALA	2.7
38	DQ	45	ALA	2.7
40	DS	6	LYS	2.7
14	AN	10	VAL	2.7
22	BA	1098	A	2.7
22	DA	1077	A	2.7
22	DA	1198	U	2.7
22	DA	1287	A	2.7
22	DA	2725	A	2.7
29	BH	134	VAL	2.7
31	DJ	136	GLN	2.7
33	DL	38	GLN	2.7
53	CA	306	A	2.7
53	CA	1212	U	2.7
53	CA	1271	A	2.7
56	CP	2	VAL	2.7
33	DL	8	PRO	2.7
50	D2	7	PRO	2.7
7	AG	6	ILE	2.7
8	CH	90	GLU	2.7
14	AN	49	THR	2.7
22	DA	41	C	2.7
22	DA	517	C	2.7
25	BD	99	GLU	2.7
26	DE	72	SER	2.7
33	DL	143	GLU	2.7
38	DQ	35	PHE	2.7
39	DR	59	ILE	2.7
50	D2	45	SER	2.7

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Mol	Chain	Res	Type	RSRZ
55	CM	29	SER	2.7
44	DW	7	GLY	2.7
44	DW	41	GLY	2.7
22	DA	363	G	2.7
22	DA	622	G	2.7
22	DA	664	G	2.7
22	DA	950	G	2.7
22	DA	1025	G	2.7
22	DA	1277	G	2.7
22	DA	1811	G	2.7
22	DA	2004	G	2.7
22	DA	2140	G	2.7
22	DA	2702	G	2.7
22	DA	2867	G	2.7
28	BG	15	ASP	2.7
35	DN	72	ASP	2.7
39	DR	95	ASP	2.7
3	AC	130	ARG	2.7
31	BJ	96	ARG	2.7
25	DD	154	LYS	2.7
4	CD	26	ALA	2.7
24	DC	223	ALA	2.7
24	DC	16	VAL	2.7
25	DD	164	GLN	2.7
26	DE	129	PRO	2.7
40	DS	23	LEU	2.7
19	CS	48	ILE	2.7
22	DA	40	U	2.7
22	DA	566	U	2.7
22	DA	783	A	2.7
22	DA	983	A	2.7
22	DA	1057	A	2.7
22	DA	1247	A	2.7
22	DA	1262	A	2.7
22	DA	2005	A	2.7
22	DA	2052	A	2.7
24	DC	208	GLY	2.7
25	BD	151	THR	2.7
29	BH	92	GLY	2.7
31	DJ	45	THR	2.7
31	DJ	79	GLY	2.7
33	BL	114	GLY	2.7

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Mol	Chain	Res	Type	RSRZ
38	DQ	42	GLY	2.7
42	DU	101	THR	2.7
53	CA	781	A	2.7
55	CM	23	GLY	2.7
28	DG	61	TRP	2.7
26	DE	170	ARG	2.7
38	DQ	63	ARG	2.7
50	D2	34	ARG	2.7
42	BU	78	LYS	2.7
44	DW	61	LYS	2.7
49	D1	9	LYS	2.7
51	D3	2	LYS	2.7
22	DA	246	C	2.7
22	DA	2347	C	2.7
31	DJ	49	ASP	2.7
31	DJ	141	ASP	2.7
53	CA	1226	C	2.7
55	CM	85	TYR	2.7
9	CI	16	ALA	2.7
33	DL	75	ALA	2.7
42	DU	68	ASN	2.7
10	CJ	51	VAL	2.7
25	DD	175	LEU	2.7
22	BA	141	G	2.7
22	DA	777	G	2.7
22	DA	780	G	2.7
22	DA	859	G	2.7
22	DA	969	G	2.7
22	DA	1743	G	2.7
22	DA	2048	G	2.7
53	CA	230	G	2.7
53	CA	1222	G	2.7
29	DH	143	ILE	2.7
26	DE	199	MET	2.7
44	DW	59	PHE	2.7
24	BC	240	GLY	2.7
25	DD	166	GLY	2.7
26	DE	174	GLY	2.7
30	BI	51	GLY	2.7
41	DT	56	GLU	2.7
46	DY	59	GLU	2.7
54	CG	57	GLU	2.7

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Mol	Chain	Res	Type	RSRZ
34	DM	40	ARG	2.7
10	AJ	82	LYS	2.7
22	BA	846	U	2.7
22	DA	747	U	2.7
22	BA	892	A	2.7
22	DA	502	A	2.7
22	DA	1434	A	2.7
22	DA	2412	A	2.7
25	DD	65	ALA	2.7
50	D2	36	ALA	2.7
10	AJ	74	VAL	2.7
24	BC	242	HIS	2.7
38	DQ	13	HIS	2.7
39	DR	89	HIS	2.7
42	DU	51	LEU	2.7
44	DW	58	LEU	2.7
46	BY	11	VAL	2.7
20	CT	77	ASN	2.7
37	DP	65	ASN	2.7
22	DA	1049	C	2.7
22	DA	2153	C	2.7
22	DA	2422	C	2.7
24	DC	59	GLN	2.7
25	DD	194	PRO	2.7
26	DE	136	GLN	2.7
53	CA	1397	C	2.7
19	CS	43	MET	2.7
19	CS	73	PHE	2.7
41	DT	51	PHE	2.7
10	CJ	62	ARG	2.7
12	CL	13	ARG	2.7
18	CR	56	ARG	2.7
2	CB	70	GLY	2.7
9	AI	88	GLU	2.7
33	DL	45	GLY	2.7
34	DM	127	LYS	2.7
37	BP	101	GLU	2.7
42	DU	60	LYS	2.7
42	DU	89	GLY	2.7
44	DW	21	GLY	2.7
45	DX	61	LYS	2.7
22	BA	2140	G	2.7

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Mol	Chain	Res	Type	RSRZ
22	DA	39	G	2.7
22	DA	180	G	2.7
22	DA	186	G	2.7
22	DA	974	G	2.7
22	DA	1162	G	2.7
22	DA	1643	G	2.7
22	DA	2053	G	2.7
22	DA	2056	G	2.7
22	DA	2331	G	2.7
33	DL	12	SER	2.7
18	CR	50	TYR	2.7
22	DA	2743	U	2.7
26	DE	3	LEU	2.7
29	BH	122	LEU	2.7
37	DP	98	TYR	2.7
40	DS	38	TYR	2.7
54	CG	46	LEU	2.7
39	DR	12	HIS	2.7
40	DS	94	ASP	2.7
49	D1	18	HIS	2.7
10	CJ	53	ILE	2.6
8	CH	2	MET	2.6
22	DA	10	A	2.6
22	DA	125	A	2.6
22	DA	480	A	2.6
30	BI	30	GLN	2.6
44	BW	36	ILE	2.6
30	BI	41	PHE	2.6
41	DT	24	MET	2.6
50	D2	29	GLN	2.6
58	DF	80	GLN	2.6
38	DQ	53	LYS	2.6
40	DS	41	LYS	2.6
22	DA	394	C	2.6
53	CA	1325	C	2.6
15	CO	78	THR	2.6
13	AM	82	LEU	2.6
24	DC	60	ALA	2.6
35	DN	6	SER	2.6
38	DQ	98	ALA	2.6
55	CM	17	ALA	2.6
4	AD	44	LYS	2.6

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Mol	Chain	Res	Type	RSRZ
7	AG	10	LYS	2.6
21	AU	34	ARG	2.6
22	DA	230	G	2.6
22	DA	329	G	2.6
22	DA	469	G	2.6
22	DA	2428	G	2.6
28	BG	55	ASP	2.6
30	DI	115	ASP	2.6
30	DI	120	ASP	2.6
33	BL	101	ILE	2.6
37	DP	4	ILE	2.6
41	DT	74	ILE	2.6
49	D1	4	ILE	2.6
49	B1	43	ARG	2.6
53	CA	134	G	2.6
53	CA	1323	G	2.6
55	CM	52	ILE	2.6
24	DC	226	PRO	2.6
31	DJ	123	LYS	2.6
32	DK	79	PHE	2.6
33	DL	33	ARG	2.6
40	DS	11	ARG	2.6
57	DB	41	G	2.6
22	DA	137	U	2.6
22	DA	1396	U	2.6
22	DA	2871	U	2.6
37	DP	11	GLN	2.6
41	DT	66	LYS	2.6
42	DU	95	PHE	2.6
47	DZ	55	LYS	2.6
49	B1	52	LYS	2.6
17	CQ	9	GLY	2.6
34	DM	37	GLY	2.6
49	B1	3	GLY	2.6
58	DF	81	GLY	2.6
1	AA	1534	A	2.6
17	CQ	25	GLU	2.6
22	DA	344	A	2.6
22	DA	477	A	2.6
22	DA	478	A	2.6
22	DA	532	A	2.6
22	DA	676	A	2.6

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Mol	Chain	Res	Type	RSRZ
22	DA	943	A	2.6
22	DA	1032	A	2.6
2	CB	129	THR	2.6
9	CI	104	THR	2.6
44	DW	9	THR	2.6
47	DZ	7	THR	2.6
10	CJ	57	VAL	2.6
14	AN	7	ALA	2.6
17	CQ	77	VAL	2.6
25	DD	203	VAL	2.6
36	DO	23	ALA	2.6
38	DQ	95	ALA	2.6
41	DT	93	LEU	2.6
42	DU	50	ALA	2.6
50	D2	9	VAL	2.6
54	CG	58	LEU	2.6
14	AN	31	SER	2.6
22	DA	31	C	2.6
22	DA	264	C	2.6
22	DA	835	C	2.6
22	DA	1708	C	2.6
22	DA	1760	C	2.6
22	DA	1986	C	2.6
22	DA	2616	C	2.6
22	DA	2710	C	2.6
26	DE	70	SER	2.6
30	DI	7	TYR	2.6
12	CL	43	LYS	2.6
28	BG	171	LYS	2.6
30	DI	121	ILE	2.6
25	DD	152	PRO	2.6
29	DH	47	PHE	2.6
9	CI	106	ASP	2.6
39	DR	55	ASP	2.6
40	DS	15	GLN	2.6
47	DZ	39	ASP	2.6
20	CT	69	ASN	2.6
21	CU	8	ASN	2.6
55	CM	37	GLY	2.6
56	CP	10	GLY	2.6
22	DA	276	U	2.6
22	DA	431	U	2.6

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Mol	Chain	Res	Type	RSRZ
22	DA	441	U	2.6
22	DA	665	U	2.6
22	DA	2022	U	2.6
27	BF	10	GLU	2.6
46	DY	12	GLU	2.6
22	DA	425	G	2.6
22	DA	1182	G	2.6
22	DA	1341	G	2.6
5	CE	79	THR	2.6
19	CS	15	LEU	2.6
14	CN	44	VAL	2.6
28	DG	39	ALA	2.6
28	DG	50	THR	2.6
30	BI	72	THR	2.6
34	DM	7	THR	2.6
34	DM	74	THR	2.6
39	DR	38	VAL	2.6
54	CG	90	VAL	2.6
55	CM	59	VAL	2.6
22	BA	144	A	2.6
22	BA	2886	A	2.6
22	DA	1040	A	2.6
22	DA	2829	A	2.6
25	DD	59	ARG	2.6
26	DE	44	ARG	2.6
40	DS	83	LYS	2.6
51	D3	29	ARG	2.6
9	AI	92	SER	2.6
10	AJ	8	ILE	2.6
14	AN	29	ILE	2.6
10	CJ	70	HIS	2.6
58	DF	7	TYR	2.6
22	BA	1092	C	2.6
22	DA	267	C	2.6
22	DA	268	C	2.6
22	DA	678	C	2.6
22	DA	2573	C	2.6
28	BG	115	GLN	2.6
30	DI	11	GLN	2.6
25	DD	163	GLY	2.6
54	CG	54	GLY	2.6
10	CJ	90	LEU	2.6

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Mol	Chain	Res	Type	RSRZ
54	CG	29	LEU	2.6
56	CP	54	LEU	2.6
11	AK	128	VAL	2.6
30	BI	82	ALA	2.6
32	DK	103	VAL	2.6
39	DR	63	VAL	2.6
40	DS	10	ALA	2.6
43	DV	23	ALA	2.6
44	DW	17	ALA	2.6
46	DY	46	VAL	2.6
4	AD	114	ARG	2.6
22	BA	2181	U	2.6
22	DA	2079	U	2.6
22	DA	2637	U	2.6
40	DS	39	THR	2.6
51	D3	33	THR	2.6
25	DD	159	LYS	2.6
26	DE	95	LYS	2.6
38	DQ	15	LYS	2.6
38	DQ	92	LYS	2.6
46	DY	60	LYS	2.6
48	D0	11	LYS	2.6
52	D4	4	ARG	2.6
9	CI	27	ILE	2.6
1	AA	86	G	2.6
1	AA	976	G	2.6
3	AC	192	TYR	2.6
22	DA	1093	G	2.6
22	DA	1478	G	2.6
22	DA	2239	G	2.6
2	CB	24	PRO	2.6
10	CJ	79	PRO	2.6
26	DE	177	PRO	2.6
29	DH	82	SER	2.6
42	DU	99	SER	2.6
22	DA	670	A	2.6
22	DA	1705	A	2.6
22	DA	1794	A	2.6
53	CA	456	A	2.6
53	CA	983	A	2.6
4	AD	65	GLY	2.6
27	BF	125	GLY	2.6

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Mol	Chain	Res	Type	RSRZ
48	D0	34	GLY	2.6
52	B4	13	ASN	2.6
33	DL	3	LEU	2.6
4	AD	162	GLU	2.6
4	AD	141	VAL	2.6
22	BA	2150	C	2.6
22	DA	209	C	2.6
22	DA	1261	C	2.6
22	DA	1533	C	2.6
42	DU	61	GLU	2.6
31	BJ	73	VAL	2.6
30	BI	2	LYS	2.6
32	DK	31	ARG	2.6
36	DO	90	VAL	2.6
53	CA	984	C	2.6
15	CO	46	LYS	2.6
20	CT	71	ALA	2.6
38	DQ	37	ALA	2.6
50	D2	40	ALA	2.6
55	CM	113	LYS	2.6
28	DG	35	THR	2.6
50	D2	24	THR	2.6
2	AB	26	MET	2.5
2	AB	89	PHE	2.5
5	CE	30	PHE	2.5
22	DA	568	U	2.5
35	DN	59	SER	2.5
47	DZ	51	SER	2.5
2	CB	148	GLY	2.5
20	CT	41	GLY	2.5
24	DC	126	GLY	2.5
34	DM	15	GLY	2.5
44	DW	51	GLY	2.5
12	CL	80	LEU	2.5
25	DD	186	LEU	2.5
4	CD	49	ASP	2.5
20	CT	70	LYS	2.5
21	CU	52	VAL	2.5
22	DA	491	G	2.5
22	DA	809	G	2.5
22	DA	1627	G	2.5
22	DA	2061	G	2.5

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Mol	Chain	Res	Type	RSRZ
22	DA	2862	G	2.5
22	DA	2885	G	2.5
29	BH	115	VAL	2.5
38	DQ	77	LYS	2.5
53	CA	79	G	2.5
54	CG	34	LYS	2.5
55	CM	112	ARG	2.5
56	CP	53	ASP	2.5
13	AM	105	ALA	2.5
22	DA	207	A	2.5
22	DA	2388	A	2.5
22	DA	2726	A	2.5
24	DC	34	GLU	2.5
24	DC	105	ALA	2.5
29	DH	10	ALA	2.5
36	DO	50	ALA	2.5
50	D2	32	ALA	2.5
13	AM	16	ILE	2.5
17	CQ	60	ILE	2.5
40	DS	3	THR	2.5
54	CG	102	TRP	2.5
19	AS	40	PHE	2.5
22	DA	806	C	2.5
22	DA	1843	C	2.5
45	DX	28	PHE	2.5
53	CA	381	C	2.5
57	DB	88	C	2.5
4	CD	45	PRO	2.5
10	CJ	43	PRO	2.5
28	BG	110	HIS	2.5
5	CE	14	LEU	2.5
10	AJ	101	SER	2.5
25	DD	174	SER	2.5
25	DD	199	SER	2.5
30	DI	127	SER	2.5
22	DA	72	U	2.5
22	DA	1132	U	2.5
22	DA	1406	U	2.5
25	DD	130	GLN	2.5
35	DN	44	LEU	2.5
46	DY	18	LEU	2.5
53	CA	1308	U	2.5

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Mol	Chain	Res	Type	RSRZ
24	DC	255	LYS	2.5
34	DM	14	LYS	2.5
47	DZ	30	ARG	2.5
48	D0	16	ARG	2.5
49	B1	9	LYS	2.5
7	AG	32	ASP	2.5
21	CU	49	ALA	2.5
25	DD	181	ASP	2.5
26	DE	36	ALA	2.5
30	DI	13	ALA	2.5
30	DI	123	ALA	2.5
41	DT	54	GLU	2.5
42	DU	7	ASP	2.5
56	CP	58	ALA	2.5
37	DP	49	ILE	2.5
55	CM	21	ILE	2.5
14	CN	41	TRP	2.5
22	DA	219	A	2.5
22	DA	278	A	2.5
22	DA	382	A	2.5
22	DA	504	A	2.5
22	DA	575	A	2.5
22	DA	789	A	2.5
22	DA	2013	A	2.5
22	BA	1179	G	2.5
22	DA	43	G	2.5
22	DA	266	G	2.5
22	DA	1074	G	2.5
22	DA	1139	G	2.5
22	DA	2002	G	2.5
22	DA	2455	G	2.5
19	CS	8	PRO	2.5
24	DC	10	PRO	2.5
3	CC	143	LEU	2.5
13	AM	30	LYS	2.5
14	AN	50	LEU	2.5
29	BH	90	LEU	2.5
46	DY	22	LEU	2.5
22	DA	145	C	2.5
22	DA	208	C	2.5
22	DA	275	C	2.5
22	DA	1330	C	2.5

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Mol	Chain	Res	Type	RSRZ
22	DA	1611	C	2.5
22	DA	1638	C	2.5
22	DA	2619	C	2.5
22	DA	2827	C	2.5
25	BD	87	GLY	2.5
32	DK	68	GLY	2.5
40	DS	79	GLY	2.5
53	CA	1243	C	2.5
55	CM	75	SER	2.5
58	DF	30	VAL	2.5
6	AF	66	ALA	2.5
10	AJ	34	ALA	2.5
16	AP	22	ALA	2.5
25	BD	209	ALA	2.5
30	BI	14	ALA	2.5
22	DA	292	U	2.5
22	DA	1375	U	2.5
22	DA	2068	U	2.5
53	CA	1315	U	2.5
5	AE	69	ASN	2.5
21	AU	12	ASP	2.5
24	DC	103	ILE	2.5
30	BI	85	ILE	2.5
35	DN	34	ILE	2.5
55	CM	67	ASP	2.5
21	AU	42	THR	2.5
25	DD	35	THR	2.5
31	DJ	119	PHE	2.5
45	DX	47	THR	2.5
58	DF	96	TRP	2.5
10	CJ	9	ARG	2.5
19	CS	12	LEU	2.5
19	CS	77	ARG	2.5
21	AU	28	LEU	2.5
25	DD	124	ARG	2.5
37	DP	62	LYS	2.5
42	DU	3	LYS	2.5
7	AG	81	GLY	2.5
22	DA	13	A	2.5
22	DA	1067	A	2.5
22	DA	1285	A	2.5
22	DA	2778	A	2.5

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Mol	Chain	Res	Type	RSRZ
29	DH	34	GLY	2.5
37	DP	53	GLY	2.5
53	CA	946	A	2.5
8	AH	75	GLN	2.5
29	DH	103	VAL	2.5
36	DO	103	VAL	2.5
6	CF	100	SER	2.5
22	DA	88	G	2.5
22	DA	177	G	2.5
22	DA	376	G	2.5
22	DA	488	G	2.5
22	DA	489	G	2.5
22	DA	674	G	2.5
22	DA	1136	G	2.5
22	DA	1331	G	2.5
22	DA	1410	G	2.5
22	DA	2010	G	2.5
22	DA	2509	G	2.5
22	DA	2718	G	2.5
22	DA	2848	G	2.5
33	DL	97	ALA	2.5
53	CA	251	G	2.5
53	CA	1242	G	2.5
3	CC	195	ILE	2.5
9	CI	64	ILE	2.5
9	CI	71	ILE	2.5
28	BG	25	ILE	2.5
33	DL	100	ILE	2.5
22	BA	2145	C	2.5
22	DA	22	C	2.5
22	DA	128	C	2.5
22	DA	183	C	2.5
22	DA	475	C	2.5
22	DA	687	C	2.5
22	DA	1102	C	2.5
22	DA	1463	C	2.5
22	DA	2691	C	2.5
22	DA	2875	C	2.5
30	BI	116	MET	2.5
46	BY	1	MET	2.5
57	DB	8	C	2.5
20	CT	2	ASN	2.5

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Mol	Chain	Res	Type	RSRZ
29	DH	7	ASP	2.5
36	DO	97	PHE	2.5
42	DU	86	PHE	2.5
42	DU	98	ASN	2.5
22	DA	546	U	2.5
22	DA	558	U	2.5
22	DA	1173	U	2.5
22	DA	1224	U	2.5
22	DA	2034	U	2.5
35	DN	57	THR	2.5
41	BT	39	THR	2.5
9	AI	122	ARG	2.5
16	AP	80	LYS	2.5
24	DC	13	ARG	2.5
24	DC	264	LYS	2.5
34	DM	119	LEU	2.5
37	DP	100	ARG	2.5
39	DR	76	LYS	2.5
54	CG	136	LYS	2.5
9	CI	117	LEU	2.5
29	BH	118	PRO	2.5
30	BI	22	PRO	2.5
30	BI	137	LEU	2.5
48	D0	38	LEU	2.5
51	D3	54	LEU	2.5
8	CH	81	GLY	2.5
25	DD	72	GLY	2.5
29	BH	24	GLY	2.5
20	CT	81	GLN	2.5
36	DO	19	GLN	2.5
48	D0	3	GLN	2.5
20	CT	36	ALA	2.4
29	DH	140	ALA	2.4
30	BI	62	ALA	2.4
41	DT	23	ALA	2.4
42	DU	63	ALA	2.4
58	DF	53	ALA	2.4
48	D0	54	ILE	2.4
14	CN	9	GLU	2.4
22	DA	1610	A	2.4
22	DA	1938	A	2.4
22	DA	2058	A	2.4

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Mol	Chain	Res	Type	RSRZ
22	DA	2060	A	2.4
53	CA	382	A	2.4
56	CP	1	MET	2.4
2	CB	20	ARG	2.4
24	DC	38	LYS	2.4
14	AN	100	TRP	2.4
24	DC	269	ARG	2.4
28	DG	171	LYS	2.4
35	DN	45	ARG	2.4
38	DQ	50	ARG	2.4
40	DS	77	ASP	2.4
51	D3	12	ARG	2.4
58	DF	160	LYS	2.4
1	AA	971	G	2.4
2	AB	67	LEU	2.4
9	CI	83	THR	2.4
9	CI	86	LEU	2.4
10	CJ	10	LEU	2.4
22	DA	85	G	2.4
22	DA	617	G	2.4
22	DA	2055	C	2.4
22	DA	2146	C	2.4
22	DA	2251	G	2.4
22	DA	2512	C	2.4
22	DA	2722	G	2.4
24	DC	222	THR	2.4
26	DE	157	LEU	2.4
30	BI	111	THR	2.4
22	DA	440	C	2.4
22	DA	1076	C	2.4
33	DL	61	LEU	2.4
54	CG	22	LEU	2.4
25	DD	143	PRO	2.4
30	BI	19	PRO	2.4
45	DX	30	PRO	2.4
22	DA	235	U	2.4
22	DA	824	U	2.4
22	DA	1033	U	2.4
26	DE	101	TYR	2.4
25	DD	122	VAL	2.4
42	DU	83	GLY	2.4
45	DX	46	VAL	2.4

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Mol	Chain	Res	Type	RSRZ
56	CP	20	VAL	2.4
35	DN	108	ALA	2.4
4	AD	159	GLU	2.4
13	AM	29	SER	2.4
28	BG	166	GLU	2.4
41	DT	18	GLU	2.4
46	BY	10	SER	2.4
4	AD	43	ARG	2.4
21	CU	45	LYS	2.4
38	DQ	78	PHE	2.4
37	DP	71	ARG	2.4
38	BQ	63	ARG	2.4
46	DY	23	ARG	2.4
47	DZ	15	ARG	2.4
34	DM	124	LEU	2.4
55	CM	68	LEU	2.4
39	DR	43	ASN	2.4
22	BA	2602	A	2.4
22	DA	89	A	2.4
22	DA	572	A	2.4
22	DA	947	A	2.4
22	DA	2015	A	2.4
22	DA	2297	A	2.4
53	CA	205	A	2.4
14	CN	19	TYR	2.4
24	DC	248	GLY	2.4
29	DH	128	HIS	2.4
31	BJ	44	TYR	2.4
31	DJ	124	VAL	2.4
32	DK	35	VAL	2.4
41	DT	71	GLY	2.4
58	DF	130	GLY	2.4
1	AA	841	C	2.4
22	BA	1170	C	2.4
22	DA	461	C	2.4
1	AA	481	G	2.4
9	CI	82	ILE	2.4
12	CL	22	ALA	2.4
32	DK	41	ILE	2.4
46	BY	3	ALA	2.4
47	BZ	1	ALA	2.4
53	CA	1209	C	2.4

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Mol	Chain	Res	Type	RSRZ
22	BA	1078	U	2.4
22	BA	1180	U	2.4
22	DA	107	G	2.4
22	DA	539	G	2.4
22	DA	573	U	2.4
22	DA	769	U	2.4
22	DA	1018	U	2.4
22	DA	1180	U	2.4
22	DA	1199	U	2.4
22	DA	1309	G	2.4
22	DA	1379	U	2.4
22	DA	2149	U	2.4
22	DA	2444	G	2.4
22	DA	2744	G	2.4
53	CA	108	G	2.4
53	CA	1138	G	2.4
4	CD	171	GLU	2.4
10	AJ	62	ARG	2.4
29	DH	149	GLU	2.4
32	DK	49	ARG	2.4
55	CM	28	ARG	2.4
56	CP	47	GLU	2.4
42	DU	97	SER	2.4
3	AC	177	LEU	2.4
5	AE	114	LEU	2.4
2	AB	192	PRO	2.4
26	DE	131	THR	2.4
3	AC	65	VAL	2.4
9	CI	54	VAL	2.4
12	CL	108	ASP	2.4
14	AN	13	VAL	2.4
48	D0	2	VAL	2.4
5	AE	157	GLY	2.4
10	CJ	56	HIS	2.4
14	AN	71	GLY	2.4
55	CM	83	GLY	2.4
56	CP	17	TYR	2.4
2	CB	110	ILE	2.4
6	AF	36	ILE	2.4
29	DH	67	ALA	2.4
30	BI	108	ILE	2.4
31	BJ	81	ILE	2.4

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Mol	Chain	Res	Type	RSRZ
31	DJ	104	ALA	2.4
38	DQ	117	ALA	2.4
47	DZ	49	ALA	2.4
22	BA	2142	A	2.4
22	DA	42	A	2.4
22	DA	181	A	2.4
22	DA	231	A	2.4
22	DA	1073	A	2.4
22	DA	2448	A	2.4
40	DS	31	GLN	2.4
9	CI	44	ARG	2.4
14	CN	84	ARG	2.4
29	BH	27	ARG	2.4
33	DL	60	ARG	2.4
41	BT	69	ARG	2.4
51	D3	39	ARG	2.4
56	CP	31	ARG	2.4
6	AF	78	PHE	2.4
43	DV	2	PHE	2.4
49	D1	19	PHE	2.4
10	AJ	78	GLU	2.4
22	DA	237	C	2.4
22	DA	341	C	2.4
22	DA	445	C	2.4
22	DA	560	C	2.4
22	DA	2506	U	2.4
25	DD	79	LEU	2.4
25	DD	168	GLU	2.4
49	D1	34	GLU	2.4
53	CA	965	U	2.4
53	CA	1462	C	2.4
4	CD	137	SER	2.4
8	CH	28	SER	2.4
10	CJ	101	SER	2.4
1	AA	844	G	2.4
22	BA	1068	G	2.4
22	DA	45	G	2.4
22	DA	536	G	2.4
22	DA	1024	G	2.4
22	DA	1555	G	2.4
22	DA	1619	G	2.4
22	DA	1826	G	2.4

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Mol	Chain	Res	Type	RSRZ
22	DA	1988	G	2.4
24	DC	212	TRP	2.4
24	DC	64	VAL	2.4
28	DG	131	VAL	2.4
40	DS	105	VAL	2.4
42	DU	76	THR	2.4
7	AG	14	ASP	2.4
6	CF	6	ILE	2.4
10	CJ	34	ALA	2.4
16	AP	17	TYR	2.4
24	DC	228	ASP	2.4
38	DQ	23	TYR	2.4
40	DS	22	ASP	2.4
44	DW	27	GLY	2.4
58	DF	165	GLY	2.4
24	DC	169	ALA	2.4
31	DJ	101	ILE	2.4
56	CP	33	ILE	2.4
58	DF	127	TYR	2.4
24	DC	149	LYS	2.4
25	DD	38	LYS	2.4
37	DP	37	LYS	2.4
38	DQ	14	LYS	2.4
36	DO	30	ARG	2.4
50	D2	39	ARG	2.4
25	DD	82	PHE	2.4
8	CH	82	LEU	2.4
37	DP	99	LEU	2.4
43	DV	42	LEU	2.4
22	BA	1069	A	2.4
22	DA	1050	A	2.4
22	DA	1987	A	2.4
38	DQ	110	GLU	2.4
53	CA	120	A	2.4
53	CA	167	A	2.4
53	CA	197	A	2.4
53	CA	1306	A	2.4
58	DF	163	GLU	2.4
46	DY	40	SER	2.4
55	CM	20	SER	2.4
14	CN	51	PRO	2.4
22	DA	1066	U	2.4

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Mol	Chain	Res	Type	RSRZ
22	DA	1534	U	2.4
22	DA	1779	U	2.4
22	DA	2491	U	2.4
46	DY	11	VAL	2.4
54	CG	26	VAL	2.4
54	CG	74	VAL	2.4
22	DA	96	C	2.3
22	DA	316	C	2.3
22	DA	393	C	2.3
22	DA	2499	C	2.3
52	D4	21	GLY	2.3
54	CG	111	GLY	2.3
5	AE	29	ILE	2.3
6	AF	83	ALA	2.3
12	AL	17	LYS	2.3
24	DC	48	ILE	2.3
25	DD	85	ALA	2.3
33	DL	96	LYS	2.3
34	DM	46	ILE	2.3
35	DN	56	LYS	2.3
37	DP	95	LYS	2.3
38	DQ	9	ALA	2.3
39	DR	36	ALA	2.3
8	CH	4	ASP	2.3
25	DD	108	ASP	2.3
40	DS	18	ARG	2.3
46	DY	48	ARG	2.3
48	D0	45	ASP	2.3
56	CP	25	ARG	2.3
22	BA	1171	G	2.3
22	DA	285	G	2.3
22	DA	518	G	2.3
22	DA	662	G	2.3
22	DA	1972	G	2.3
22	DA	2157	G	2.3
22	DA	2791	G	2.3
53	CA	203	G	2.3
53	CA	769	G	2.3
53	CA	953	G	2.3
53	CA	1310	G	2.3
6	AF	80	PHE	2.3
24	DC	29	PHE	2.3

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Mol	Chain	Res	Type	RSRZ
36	DO	61	GLN	2.3
31	DJ	98	GLU	2.3
10	AJ	51	VAL	2.3
21	AU	27	VAL	2.3
26	DE	121	VAL	2.3
30	BI	77	VAL	2.3
39	DR	14	VAL	2.3
58	DF	73	VAL	2.3
10	AJ	39	PRO	2.3
21	AU	50	SER	2.3
14	CN	97	LYS	2.3
4	CD	62	ARG	2.3
9	CI	73	GLY	2.3
14	AN	6	LYS	2.3
19	CS	67	GLY	2.3
22	DA	217	A	2.3
22	DA	1744	A	2.3
22	DA	2030	A	2.3
37	DP	64	SER	2.3
38	DQ	60	TRP	2.3
39	DR	15	SER	2.3
53	CA	532	A	2.3
54	CG	19	SER	2.3
26	DE	43	THR	2.3
31	DJ	12	LYS	2.3
41	DT	77	ARG	2.3
43	DV	62	THR	2.3
54	CG	55	LYS	2.3
11	CK	22	ILE	2.3
25	DD	27	ILE	2.3
29	BH	39	ALA	2.3
29	BH	81	ALA	2.3
29	DH	100	ALA	2.3
30	DI	128	ILE	2.3
32	DK	39	ILE	2.3
34	DM	6	ARG	2.3
46	DY	52	ARG	2.3
58	DF	33	ILE	2.3
58	DF	67	THR	2.3
31	DJ	77	HIS	2.3
6	AF	62	MET	2.3
6	CF	62	MET	2.3

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Mol	Chain	Res	Type	RSRZ
22	BA	790	U	2.3
22	DA	569	U	2.3
24	DC	89	ASN	2.3
27	BF	129	MET	2.3
28	DG	72	ASN	2.3
30	BI	61	TYR	2.3
45	DX	22	ASN	2.3
15	CO	55	LEU	2.3
22	DA	1117	C	2.3
22	DA	1270	C	2.3
22	DA	1323	C	2.3
22	DA	1658	C	2.3
22	DA	2103	C	2.3
22	DA	2440	C	2.3
22	DA	2676	C	2.3
26	DE	184	ASP	2.3
51	D3	53	ASP	2.3
25	DD	36	GLN	2.3
33	DL	66	PHE	2.3
38	DQ	58	GLN	2.3
40	DS	75	PHE	2.3
47	DZ	52	PHE	2.3
3	AC	169	GLU	2.3
22	BA	2148	G	2.3
22	DA	212	G	2.3
22	DA	220	G	2.3
22	DA	1122	G	2.3
22	DA	1166	G	2.3
22	DA	1381	G	2.3
22	DA	1651	G	2.3
22	DA	2018	G	2.3
22	DA	2382	G	2.3
22	DA	2454	G	2.3
41	DT	57	VAL	2.3
53	CA	951	G	2.3
53	CA	1255	G	2.3
5	CE	22	LYS	2.3
7	AG	16	LYS	2.3
43	DV	25	LYS	2.3
45	DX	53	LYS	2.3
11	AK	12	ARG	2.3
14	AN	12	ARG	2.3

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Mol	Chain	Res	Type	RSRZ
14	CN	52	ARG	2.3
36	DO	42	PRO	2.3
45	DX	44	ARG	2.3
30	BI	127	SER	2.3
31	DJ	38	GLY	2.3
33	DL	11	GLY	2.3
20	CT	16	ALA	2.3
41	DT	22	THR	2.3
54	CG	60	ALA	2.3
55	CM	105	ALA	2.3
58	DF	158	THR	2.3
2	AB	135	MET	2.3
18	AR	73	HIS	2.3
41	BT	1	MET	2.3
2	CB	128	LEU	2.3
7	AG	96	ASN	2.3
15	CO	38	LEU	2.3
26	DE	118	LEU	2.3
29	BH	43	ASN	2.3
33	DL	93	ASN	2.3
37	DP	2	ASN	2.3
47	DZ	23	LEU	2.3
22	DA	218	A	2.3
22	DA	1189	A	2.3
22	DA	1284	A	2.3
22	DA	1301	A	2.3
22	DA	1772	A	2.3
26	DE	19	PHE	2.3
53	CA	1117	A	2.3
58	DF	19	PHE	2.3
9	AI	61	ASP	2.3
19	CS	11	ASP	2.3
28	DG	38	ASP	2.3
33	DL	91	ASP	2.3
40	DS	68	ASP	2.3
43	BV	66	ASP	2.3
22	DA	567	U	2.3
22	DA	653	U	2.3
22	DA	2245	U	2.3
22	DA	2680	U	2.3
22	DA	2818	U	2.3
42	DU	45	GLN	2.3

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Mol	Chain	Res	Type	RSRZ
44	DW	39	GLN	2.3
3	AC	150	VAL	2.3
22	BA	902	C	2.3
22	DA	184	C	2.3
22	DA	318	C	2.3
22	DA	385	C	2.3
22	DA	1052	C	2.3
22	DA	1145	C	2.3
22	DA	1639	C	2.3
22	DA	2442	C	2.3
22	DA	2443	C	2.3
29	BH	121	VAL	2.3
31	DJ	105	VAL	2.3
32	BK	111	LYS	2.3
40	DS	98	LYS	2.3
47	DZ	56	VAL	2.3
53	CA	970	C	2.3
58	DF	124	ARG	2.3
9	AI	68	GLY	2.3
18	AR	25	ILE	2.3
19	CS	10	ILE	2.3
24	DC	53	ILE	2.3
35	DN	105	GLY	2.3
6	AF	95	ALA	2.3
55	CM	36	ALA	2.3
25	DD	25	THR	2.3
40	DS	82	MET	2.3
3	AC	174	LEU	2.3
14	CN	73	LEU	2.3
17	CQ	44	HIS	2.3
19	AS	4	LEU	2.3
9	AI	126	PHE	2.3
22	BA	1071	G	2.3
22	DA	124	G	2.3
22	DA	533	G	2.3
22	DA	619	G	2.3
22	DA	728	G	2.3
22	DA	1107	G	2.3
22	DA	2330	G	2.3
22	DA	2360	G	2.3
22	DA	2447	G	2.3
53	CA	765	G	2.3

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Mol	Chain	Res	Type	RSRZ
9	CI	99	LYS	2.3
20	AT	15	LYS	2.3
1	AA	1441	A	2.3
13	AM	71	GLU	2.3
18	CR	34	GLU	2.3
22	DA	609	A	2.3
22	DA	666	A	2.3
22	DA	1655	A	2.3
22	DA	1785	A	2.3
22	DA	1847	A	2.3
22	DA	2434	A	2.3
22	DA	2872	A	2.3
31	DJ	48	VAL	2.3
33	DL	59	ARG	2.3
38	DQ	52	ARG	2.3
39	DR	70	GLU	2.3
46	DY	53	VAL	2.3
53	CA	1446	A	2.3
53	CA	1534	A	2.3
55	CM	65	GLU	2.3
22	DA	90	U	2.3
22	DA	451	U	2.3
22	DA	2240	U	2.3
53	CA	96	U	2.3
4	AD	37	PRO	2.3
29	BH	94	ILE	2.3
47	DZ	4	ILE	2.3
54	CG	15	PRO	2.3
11	AK	72	ALA	2.3
29	BH	95	GLY	2.3
44	DW	6	GLY	2.3
35	DN	110	MET	2.3
52	B4	29	ALA	2.3
1	AA	1302	C	2.3
22	DA	210	C	2.3
22	DA	433	C	2.3
22	DA	486	C	2.3
22	DA	816	C	2.3
22	DA	948	C	2.3
22	DA	951	C	2.3
22	DA	968	C	2.3
24	DC	92	LEU	2.3

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Mol	Chain	Res	Type	RSRZ
29	DH	40	THR	2.3
35	DN	95	THR	2.3
44	DW	57	THR	2.3
51	D3	16	THR	2.3
54	CG	49	LEU	2.3
6	AF	55	HIS	2.3
55	CM	19	THR	2.3
24	DC	39	SER	2.3
29	DH	132	PHE	2.3
32	DK	14	SER	2.3
5	AE	49	TYR	2.3
45	DX	37	PHE	2.3
9	AI	109	GLN	2.3
11	AK	13	LYS	2.3
11	CK	126	ARG	2.3
14	CN	40	ARG	2.3
25	DD	173	GLN	2.3
49	D1	52	LYS	2.3
55	CM	51	GLN	2.3
4	AD	100	VAL	2.3
25	DD	29	VAL	2.3
25	DD	104	VAL	2.3
28	DG	42	VAL	2.3
34	DM	80	VAL	2.3
39	DR	58	VAL	2.3
49	B1	42	VAL	2.3
51	D3	49	VAL	2.3
29	BH	114	GLU	2.2
41	BT	89	GLU	2.2
47	DZ	38	GLU	2.2
22	BA	2152	G	2.2
22	DA	136	G	2.2
22	DA	745	G	2.2
22	DA	1056	G	2.2
22	DA	1215	G	2.2
22	DA	1235	G	2.2
22	DA	1475	G	2.2
22	DA	2093	G	2.2
22	DA	2107	G	2.2
22	DA	2458	G	2.2
53	CA	213	G	2.2
8	CH	74	ILE	2.2

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Mol	Chain	Res	Type	RSRZ
12	CL	81	ILE	2.2
24	DC	266	ILE	2.2
41	DT	2	ILE	2.2
5	AE	101	GLY	2.2
14	AN	93	PRO	2.2
5	CE	117	ALA	2.2
7	AG	7	GLY	2.2
9	AI	70	GLY	2.2
12	CL	90	PRO	2.2
11	CK	102	ALA	2.2
24	DC	54	GLY	2.2
49	D1	40	PRO	2.2
1	AA	1286	U	2.2
14	CN	15	LEU	2.2
22	DA	101	A	2.2
22	DA	150	U	2.2
22	DA	324	A	2.2
22	DA	804	A	2.2
22	DA	1021	A	2.2
22	DA	1156	A	2.2
22	DA	1340	U	2.2
22	DA	2017	U	2.2
22	DA	2689	U	2.2
47	DZ	16	LEU	2.2
53	CA	1321	U	2.2
10	CJ	15	HIS	2.2
25	DD	156	PHE	2.2
28	DG	51	PHE	2.2
35	DN	53	THR	2.2
36	DO	100	HIS	2.2
56	CP	9	HIS	2.2
19	CS	79	TYR	2.2
26	DE	63	LYS	2.2
5	AE	53	ARG	2.2
22	DA	426	C	2.2
22	DA	1752	C	2.2
22	DA	1985	C	2.2
22	DA	2755	C	2.2
58	DF	29	ARG	2.2
12	CL	28	GLN	2.2
33	DL	127	VAL	2.2
42	DU	92	VAL	2.2

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Mol	Chain	Res	Type	RSRZ
24	DC	22	GLU	2.2
24	DC	198	GLU	2.2
29	DH	55	GLU	2.2
32	DK	38	ILE	2.2
37	DP	3	ILE	2.2
48	D0	42	ILE	2.2
3	CC	132	ALA	2.2
4	CD	190	LEU	2.2
10	AJ	71	LEU	2.2
11	CK	99	LEU	2.2
14	CN	94	GLY	2.2
30	DI	73	PRO	2.2
31	DJ	109	LEU	2.2
41	DT	50	LEU	2.2
46	DY	61	ALA	2.2
47	DZ	27	GLY	2.2
12	CL	122	LYS	2.2
22	BA	1087	G	2.2
22	DA	187	G	2.2
22	DA	463	G	2.2
22	DA	555	G	2.2
22	DA	1055	G	2.2
22	DA	2242	G	2.2
22	DA	2269	G	2.2
22	DA	2383	G	2.2
22	DA	2640	G	2.2
22	DA	2732	G	2.2
41	DT	29	THR	2.2
41	DT	70	HIS	2.2
53	CA	1241	G	2.2
22	DA	767	U	2.2
22	DA	963	U	2.2
22	DA	967	U	2.2
22	DA	2605	U	2.2
22	DA	2769	U	2.2
29	DH	25	TYR	2.2
44	BW	38	ARG	2.2
53	CA	1168	U	2.2
54	CG	78	ARG	2.2
14	AN	79	SER	2.2
15	CO	1	SER	2.2
22	DA	412	A	2.2

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Mol	Chain	Res	Type	RSRZ
22	DA	1272	A	2.2
22	DA	1854	A	2.2
22	DA	1900	A	2.2
22	DA	2273	A	2.2
22	DA	2346	A	2.2
26	DE	10	SER	2.2
36	DO	52	SER	2.2
40	DS	13	SER	2.2
7	AG	5	VAL	2.2
42	DU	48	VAL	2.2
9	CI	4	GLN	2.2
37	DP	114	ASN	2.2
19	AS	48	ILE	2.2
54	CG	41	ILE	2.2
22	DA	109	C	2.2
22	DA	353	C	2.2
22	DA	1357	C	2.2
22	DA	1512	C	2.2
22	DA	1541	C	2.2
2	AB	128	LEU	2.2
5	AE	14	LEU	2.2
24	DC	97	ASP	2.2
36	DO	93	ASP	2.2
40	DS	67	ASP	2.2
26	BE	161	ALA	2.2
4	CD	76	LYS	2.2
6	CF	53	LYS	2.2
30	DI	2	LYS	2.2
46	DY	4	LYS	2.2
51	D3	18	LYS	2.2
45	DX	45	PHE	2.2
13	AM	91	ARG	2.2
31	DJ	13	ARG	2.2
38	DQ	54	ARG	2.2
19	CS	76	THR	2.2
30	DI	111	THR	2.2
10	CJ	96	VAL	2.2
24	DC	164	VAL	2.2
38	DQ	33	VAL	2.2
41	DT	10	VAL	2.2
9	AI	72	SER	2.2
22	DA	932	U	2.2

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Mol	Chain	Res	Type	RSRZ
22	DA	1101	U	2.2
22	DA	1188	U	2.2
22	DA	1709	U	2.2
22	DA	2609	U	2.2
53	CA	467	U	2.2
10	CJ	25	ILE	2.2
19	AS	10	ILE	2.2
42	DU	102	ILE	2.2
1	AA	1305	G	2.2
1	AA	1360	A	2.2
2	CB	100	LEU	2.2
22	BA	1420	A	2.2
22	DA	15	G	2.2
22	DA	175	G	2.2
22	DA	214	G	2.2
22	DA	232	G	2.2
22	DA	279	A	2.2
22	DA	317	G	2.2
22	DA	438	G	2.2
22	DA	447	A	2.2
22	DA	458	G	2.2
22	DA	621	A	2.2
22	DA	830	G	2.2
22	DA	949	G	2.2
22	DA	1586	A	2.2
22	DA	1786	A	2.2
22	DA	1828	G	2.2
22	DA	2451	A	2.2
22	DA	2808	G	2.2
22	DA	2823	A	2.2
24	DC	193	GLU	2.2
30	BI	42	ASN	2.2
30	DI	52	LEU	2.2
37	DP	8	GLU	2.2
41	BT	54	GLU	2.2
53	CA	973	G	2.2
56	CP	79	ASN	2.2
24	DC	201	LEU	2.2
25	DD	188	LEU	2.2
58	DF	168	LEU	2.2
20	AT	62	ALA	2.2
30	BI	40	ALA	2.2

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Mol	Chain	Res	Type	RSRZ
38	DQ	114	ALA	2.2
55	CM	39	ALA	2.2
56	CP	41	PRO	2.2
58	DF	38	GLY	2.2
58	DF	85	GLY	2.2
8	CH	32	LYS	2.2
11	CK	13	LYS	2.2
26	DE	47	LYS	2.2
28	DG	85	LYS	2.2
54	CG	16	LYS	2.2
2	CB	94	ARG	2.2
17	CQ	27	PHE	2.2
26	DE	69	ARG	2.2
31	DJ	99	ARG	2.2
22	DA	236	C	2.2
22	DA	269	C	2.2
22	DA	357	C	2.2
22	DA	435	C	2.2
22	DA	516	C	2.2
22	DA	557	C	2.2
22	DA	2044	C	2.2
22	DA	2261	C	2.2
22	DA	2901	C	2.2
56	CP	60	TRP	2.2
36	DO	36	TYR	2.2
58	DF	24	VAL	2.2
10	CJ	76	ILE	2.2
28	BG	102	ILE	2.2
34	DM	22	GLN	2.2
41	DT	8	LEU	2.2
51	D3	48	MET	2.2
2	CB	111	LYS	2.2
12	AL	19	ASN	2.2
25	DD	119	ALA	2.2
36	DO	17	LYS	2.2
39	DR	3	ALA	2.2
40	DS	56	ALA	2.2
54	CG	73	GLU	2.2
55	CM	14	ALA	2.2
8	CH	122	GLY	2.2
19	CS	41	PRO	2.2
22	BA	1065	U	2.2

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Mol	Chain	Res	Type	RSRZ
22	DA	193	U	2.2
22	DA	803	U	2.2
22	DA	1094	U	2.2
22	DA	1982	U	2.2
22	DA	2586	U	2.2
22	DA	2783	U	2.2
39	DR	8	GLY	2.2
42	BU	47	PRO	2.2
53	CA	114	U	2.2
38	DQ	91	ARG	2.2
22	BA	2309	A	2.2
22	BA	2322	A	2.2
22	DA	95	A	2.2
22	DA	144	A	2.2
22	DA	479	A	2.2
22	DA	793	A	2.2
22	DA	1039	A	2.2
22	DA	2478	A	2.2
22	DA	2513	A	2.2
22	BA	2136	G	2.2
22	DA	48	G	2.2
22	DA	81	G	2.2
22	DA	381	G	2.2
22	DA	858	G	2.2
22	DA	1038	G	2.2
22	DA	1115	G	2.2
22	DA	1191	G	2.2
22	DA	1288	G	2.2
22	DA	1511	G	2.2
22	DA	1530	G	2.2
22	DA	1659	G	2.2
22	DA	1857	G	2.2
22	DA	2057	G	2.2
22	DA	2570	G	2.2
22	DA	2633	G	2.2
22	DA	2697	G	2.2
22	DA	2742	G	2.2
53	CA	111	G	2.2
53	CA	168	G	2.2
53	CA	1491	G	2.2
3	CC	191	THR	2.1
19	CS	78	THR	2.1

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Mol	Chain	Res	Type	RSRZ
25	DD	9	VAL	2.1
25	DD	109	VAL	2.1
27	BF	148	VAL	2.1
44	DW	22	VAL	2.1
45	DX	57	VAL	2.1
54	CG	88	VAL	2.1
58	DF	145	VAL	2.1
1	AA	1119	C	2.1
3	CC	100	ILE	2.1
22	DA	1574	C	2.1
22	DA	1617	C	2.1
22	DA	2043	C	2.1
22	DA	2678	C	2.1
45	DX	63	ILE	2.1
53	CA	48	C	2.1
53	CA	135	C	2.1
53	CA	1218	C	2.1
31	DJ	86	GLN	2.1
33	DL	95	LEU	2.1
56	CP	63	GLN	2.1
8	CH	68	LYS	2.1
24	DC	254	LYS	2.1
38	DQ	84	LYS	2.1
20	AT	6	ALA	2.1
40	DS	81	SER	2.1
15	CO	52	ARG	2.1
25	DD	198	GLY	2.1
27	BF	29	ARG	2.1
31	DJ	120	ARG	2.1
32	DK	105	ARG	2.1
33	DL	126	ARG	2.1
35	DN	49	GLU	2.1
40	DS	59	GLU	2.1
4	CD	125	ASN	2.1
7	AG	92	PRO	2.1
44	DW	54	ARG	2.1
51	D3	45	PRO	2.1
54	CG	52	ARG	2.1
21	CU	36	PHE	2.1
24	BC	239	PHE	2.1
25	DD	127	PHE	2.1
1	AA	1364	U	2.1

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Mol	Chain	Res	Type	RSRZ
16	AP	69	ASP	2.1
22	DA	87	U	2.1
22	DA	293	U	2.1
22	DA	1576	U	2.1
25	BD	39	ASP	2.1
34	BM	106	ASP	2.1
52	D4	11	CYS	2.1
53	CA	173	U	2.1
53	CA	1240	U	2.1
2	CB	69	VAL	2.1
6	CF	58	HIS	2.1
8	CH	24	VAL	2.1
9	AI	103	VAL	2.1
28	DG	110	HIS	2.1
29	BH	142	VAL	2.1
30	BI	138	VAL	2.1
17	CQ	6	THR	2.1
31	DJ	10	THR	2.1
1	AA	1248	A	2.1
22	DA	613	A	2.1
22	DA	1260	A	2.1
22	DA	1378	A	2.1
22	DA	1618	A	2.1
22	DA	2031	A	2.1
22	DA	2070	A	2.1
22	DA	2082	A	2.1
22	DA	2706	A	2.1
22	DA	2873	A	2.1
28	DG	18	ILE	2.1
28	DG	130	ILE	2.1
40	DS	24	ILE	2.1
47	DZ	43	ILE	2.1
55	CM	32	ILE	2.1
2	AB	134	LEU	2.1
13	AM	94	LEU	2.1
19	AS	12	LEU	2.1
25	DD	201	LEU	2.1
30	BI	71	LYS	2.1
11	CK	37	GLN	2.1
17	CQ	26	ARG	2.1
22	BA	883	G	2.1
22	DA	24	G	2.1

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Mol	Chain	Res	Type	RSRZ
22	DA	35	G	2.1
22	DA	1374	G	2.1
22	DA	2625	G	2.1
25	DD	209	ALA	2.1
26	DE	172	ALA	2.1
34	DM	55	ARG	2.1
41	DT	73	ARG	2.1
53	CA	484	G	2.1
53	CA	1309	G	2.1
34	DM	121	ALA	2.1
55	CM	34	ALA	2.1
3	AC	158	GLY	2.1
27	BF	75	GLY	2.1
28	BG	80	GLU	2.1
35	BN	119	SER	2.1
42	BU	59	GLU	2.1
22	BA	2143	C	2.1
22	DA	211	C	2.1
22	DA	965	C	2.1
22	DA	1053	C	2.1
22	DA	1370	C	2.1
22	DA	1625	C	2.1
22	DA	1704	C	2.1
22	DA	2681	C	2.1
22	DA	2774	C	2.1
22	DA	2787	C	2.1
53	CA	1237	C	2.1
13	AM	62	PHE	2.1
14	AN	34	ASN	2.1
55	CM	104	ASN	2.1
7	AG	26	VAL	2.1
10	CJ	77	VAL	2.1
13	AM	63	VAL	2.1
15	CO	20	ASP	2.1
28	DG	161	VAL	2.1
39	BR	55	ASP	2.1
44	BW	50	VAL	2.1
35	DN	3	HIS	2.1
5	AE	130	THR	2.1
5	CE	59	ILE	2.1
15	CO	69	LEU	2.1
22	DA	1023	U	2.1

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Mol	Chain	Res	Type	RSRZ
22	DA	1329	U	2.1
22	DA	1599	U	2.1
22	DA	1657	U	2.1
25	DD	138	LEU	2.1
30	BI	105	LEU	2.1
38	DQ	17	LEU	2.1
53	CA	268	U	2.1
56	CP	67	ILE	2.1
56	CP	80	LYS	2.1
24	DC	42	ARG	2.1
2	CB	33	ALA	2.1
36	DO	98	GLN	2.1
39	DR	28	ALA	2.1
40	DS	58	ALA	2.1
54	CG	38	ALA	2.1
9	CI	41	GLU	2.1
9	CI	96	GLU	2.1
21	CU	40	PRO	2.1
22	DA	244	A	2.1
22	DA	449	A	2.1
22	DA	933	A	2.1
22	DA	1027	A	2.1
22	DA	2639	A	2.1
22	DA	2727	A	2.1
42	DU	100	GLU	2.1
14	CN	54	SER	2.1
32	DK	28	SER	2.1
34	DM	27	SER	2.1
12	AL	4	ASN	2.1
27	BF	22	ASN	2.1
29	BH	145	ASN	2.1
42	DU	39	ASN	2.1
3	CC	51	VAL	2.1
5	AE	136	VAL	2.1
10	AJ	96	VAL	2.1
16	AP	19	VAL	2.1
22	BA	2133	G	2.1
22	DA	17	G	2.1
22	DA	26	G	2.1
22	DA	263	G	2.1
22	DA	338	G	2.1
22	DA	770	G	2.1

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Mol	Chain	Res	Type	RSRZ
22	DA	953	G	2.1
22	DA	1225	G	2.1
22	DA	1464	G	2.1
22	DA	1984	G	2.1
22	DA	2357	G	2.1
22	DA	2624	G	2.1
26	DE	31	VAL	2.1
29	DH	121	VAL	2.1
31	DJ	17	VAL	2.1
22	DA	1351	C	2.1
22	DA	2498	C	2.1
53	CA	312	C	2.1
53	CA	1369	C	2.1
57	DB	90	C	2.1
14	CN	82	LYS	2.1
10	CJ	100	ILE	2.1
11	AK	17	ASP	2.1
19	CS	63	ASP	2.1
19	CS	68	HIS	2.1
25	DD	176	ASP	2.1
30	BI	58	ILE	2.1
31	DJ	14	ASP	2.1
47	DZ	5	LYS	2.1
38	DQ	116	LEU	2.1
42	BU	71	ILE	2.1
42	BU	88	ASP	2.1
46	DY	6	LEU	2.1
55	CM	6	ILE	2.1
3	AC	191	THR	2.1
24	DC	176	ARG	2.1
34	DM	24	THR	2.1
37	BP	50	ARG	2.1
28	DG	150	TYR	2.1
39	DR	29	THR	2.1
40	DS	104	THR	2.1
45	DX	73	ARG	2.1
48	D0	43	THR	2.1
54	CG	83	THR	2.1
5	AE	151	MET	2.1
24	DC	224	MET	2.1
25	DD	165	MET	2.1
12	AL	1	ALA	2.1

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Mol	Chain	Res	Type	RSRZ
14	CN	1	ALA	2.1
18	AR	26	ALA	2.1
26	DE	128	ALA	2.1
31	DJ	33	ALA	2.1
45	DX	72	ALA	2.1
49	D1	51	ALA	2.1
15	CO	61	GLN	2.1
22	BA	2155	U	2.1
22	DA	860	U	2.1
22	DA	1083	U	2.1
22	DA	1554	U	2.1
22	DA	2477	U	2.1
28	DG	87	GLN	2.1
39	DR	18	GLN	2.1
46	DY	39	GLN	2.1
29	DH	126	GLY	2.1
42	DU	15	GLY	2.1
11	CK	26	PHE	2.1
19	CS	64	GLU	2.1
54	CG	13	PRO	2.1
3	CC	153	SER	2.1
19	CS	3	SER	2.1
11	AK	83	VAL	2.1
28	DG	8	VAL	2.1
40	DS	17	VAL	2.1
41	DT	53	VAL	2.1
20	CT	4	LYS	2.1
22	DA	56	A	2.1
22	DA	608	A	2.1
22	DA	1755	A	2.1
22	DA	2298	A	2.1
22	DA	2598	A	2.1
22	DA	2600	A	2.1
24	DC	107	LYS	2.1
30	DI	112	LYS	2.1
31	DJ	121	LYS	2.1
46	DY	58	ASN	2.1
53	CA	59	A	2.1
53	CA	366	A	2.1
57	DB	94	A	2.1
9	AI	44	ARG	2.1
9	AI	82	ILE	2.1

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Mol	Chain	Res	Type	RSRZ
9	CI	62	LEU	2.1
17	CQ	32	ILE	2.1
38	DQ	61	ILE	2.1
41	BT	30	ILE	2.1
24	DC	141	HIS	2.1
42	DU	93	ARG	2.1
42	DU	88	ASP	2.1
2	CB	21	TYR	2.1
9	CI	6	TYR	2.1
24	DC	8	THR	2.1
24	DC	139	THR	2.1
32	DK	84	CYS	2.1
39	DR	19	THR	2.1
44	BW	42	THR	2.1
1	AA	1045	C	2.1
21	AU	47	ALA	2.1
22	DA	672	C	2.1
22	DA	823	C	2.1
22	DA	1044	C	2.1
22	DA	1764	C	2.1
22	DA	2050	C	2.1
22	DA	2143	C	2.1
22	DA	2260	C	2.1
22	DA	2712	C	2.1
26	BE	201	ALA	2.1
53	CA	95	C	2.1
53	CA	169	C	2.1
53	CA	267	C	2.1
53	CA	1367	C	2.1
57	DB	110	C	2.1
22	DA	287	G	2.1
22	DA	315	G	2.1
22	DA	359	G	2.1
22	DA	494	G	2.1
22	DA	669	G	2.1
22	DA	956	G	2.1
22	DA	1031	G	2.1
22	DA	1408	G	2.1
22	DA	1510	G	2.1
22	DA	1631	G	2.1
22	DA	1733	G	2.1
22	DA	1792	G	2.1

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Mol	Chain	Res	Type	RSRZ
22	DA	2502	G	2.1
22	DA	2599	G	2.1
53	CA	94	G	2.1
53	CA	220	G	2.1
53	CA	1419	G	2.1
53	CA	1517	G	2.1
5	AE	48	GLY	2.1
5	AE	50	GLY	2.1
7	AG	8	GLN	2.1
26	DE	46	GLN	2.1
29	DH	133	GLN	2.1
30	BI	5	GLN	2.1
33	DL	88	GLY	2.1
51	D3	8	GLY	2.1
12	CL	21	PRO	2.1
19	AS	58	PRO	2.1
25	DD	81	GLU	2.1
32	DK	102	PRO	2.1
44	DW	16	GLU	2.1
47	DZ	36	GLU	2.1
9	AI	54	VAL	2.0
13	AM	42	VAL	2.0
15	CO	64	LYS	2.0
17	CQ	45	VAL	2.0
22	DA	390	U	2.0
22	DA	580	U	2.0
22	DA	688	U	2.0
22	DA	958	U	2.0
22	DA	999	U	2.0
22	DA	1624	U	2.0
24	DC	96	LYS	2.0
25	DD	37	VAL	2.0
34	DM	108	VAL	2.0
39	DR	48	LYS	2.0
39	DR	81	LYS	2.0
45	BX	43	LYS	2.0
53	CA	1345	U	2.0
56	CP	76	LYS	2.0
24	DC	37	SER	2.0
41	BT	21	SER	2.0
54	CG	56	SER	2.0
3	AC	18	ASN	2.0

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Mol	Chain	Res	Type	RSRZ
3	AC	163	ARG	2.0
3	CC	24	ASN	2.0
7	AG	12	LEU	2.0
20	CT	11	ILE	2.0
26	DE	27	LEU	2.0
32	DK	2	ILE	2.0
33	DL	6	LEU	2.0
34	DM	126	ILE	2.0
8	CH	9	MET	2.0
8	CH	85	TYR	2.0
9	CI	63	TYR	2.0
9	CI	90	ASP	2.0
10	AJ	14	ASP	2.0
22	DA	104	A	2.0
22	DA	221	A	2.0
22	DA	332	A	2.0
22	DA	430	A	2.0
22	DA	1566	A	2.0
22	DA	2860	A	2.0
26	DE	190	ALA	2.0
28	DG	135	ALA	2.0
30	DI	76	ALA	2.0
37	DP	24	THR	2.0
43	DV	28	ALA	2.0
55	CM	101	THR	2.0
24	DC	162	GLN	2.0
30	DI	53	PRO	2.0
4	CD	159	GLU	2.0
5	AE	150	GLU	2.0
1	AA	87	C	2.0
4	AD	7	LYS	2.0
33	DL	63	LYS	2.0
41	BT	56	GLU	2.0
22	DA	898	C	2.0
22	DA	964	C	2.0
22	DA	1257	C	2.0
22	DA	1345	C	2.0
22	DA	2001	C	2.0
22	DA	2362	C	2.0
22	DA	2752	C	2.0
32	DK	76	VAL	2.0
33	DL	89	VAL	2.0

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Mol	Chain	Res	Type	RSRZ
37	DP	85	VAL	2.0
6	AF	91	ARG	2.0
14	AN	60	ARG	2.0
22	DA	178	G	2.0
22	DA	695	G	2.0
22	DA	1022	G	2.0
22	DA	1125	G	2.0
22	DA	1770	G	2.0
22	DA	1983	G	2.0
22	DA	2152	G	2.0
26	DE	162	ARG	2.0
29	DH	117	LEU	2.0
40	DS	51	LEU	2.0
54	CG	12	LEU	2.0
4	AD	131	ILE	2.0
6	AF	51	ILE	2.0
13	AM	3	ILE	2.0
39	DR	41	ILE	2.0
41	DT	78	SER	2.0
2	AB	145	ASN	2.0
8	CH	20	ASN	2.0
22	BA	2137	U	2.0
22	DA	813	U	2.0
22	DA	1648	U	2.0
22	DA	2181	U	2.0
22	DA	2393	U	2.0
24	BC	259	ASN	2.0
29	DH	20	ASN	2.0
31	DJ	131	ASN	2.0
53	CA	92	U	2.0
53	CA	137	U	2.0
53	CA	961	U	2.0
53	CA	1086	U	2.0
2	CB	103	TRP	2.0
19	AS	13	HIS	2.0
24	DC	57	HIS	2.0
40	DS	60	HIS	2.0
40	DS	102	HIS	2.0
45	DX	55	MET	2.0
28	DG	173	ALA	2.0
36	DO	14	ALA	2.0
44	DW	62	ALA	2.0

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Mol	Chain	Res	Type	RSRZ
45	DX	7	THR	2.0
51	D3	47	ALA	2.0
24	DC	265	PHE	2.0
29	BH	91	PHE	2.0
33	BL	140	GLY	2.0
7	AG	35	LYS	2.0
9	AI	50	PRO	2.0
15	AO	47	LYS	2.0
16	AP	18	GLN	2.0
19	AS	8	PRO	2.0
24	DC	6	LYS	2.0
38	DQ	111	LYS	2.0
41	DT	44	LYS	2.0
46	BY	2	LYS	2.0
58	DF	64	PRO	2.0
6	CF	89	VAL	2.0
17	AQ	25	GLU	2.0
22	DA	256	A	2.0
22	DA	508	A	2.0
22	DA	980	A	2.0
22	DA	1552	A	2.0
22	DA	2059	A	2.0
9	AI	118	ARG	2.0
9	CI	122	ARG	2.0
24	DC	213	ARG	2.0
25	BD	73	VAL	2.0
26	DE	169	VAL	2.0
26	DE	197	GLU	2.0
53	CA	101	A	2.0
53	CA	374	A	2.0
28	DG	151	ARG	2.0
33	DL	78	ARG	2.0
54	CG	104	VAL	2.0
8	CH	60	LEU	2.0
19	AS	15	LEU	2.0
55	CM	33	LEU	2.0
2	AB	206	ILE	2.0
25	DD	2	ILE	2.0
35	DN	52	ILE	2.0
22	BA	2104	C	2.0
22	DA	61	C	2.0
22	DA	229	C	2.0

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Mol	Chain	Res	Type	RSRZ
22	DA	1146	C	2.0
22	DA	1582	C	2.0
22	DA	1605	C	2.0
22	DA	2263	C	2.0
22	DA	2830	C	2.0
53	CA	136	C	2.0
53	CA	1320	C	2.0

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

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

6.3 Carbohydrates (i)

There are no oligosaccharides in this entry.

6.4 Ligands (i)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	DA	3125	1/1	0.11	0.26	152,152,152,152	0
59	MG	DA	3002	1/1	0.20	0.39	225,225,225,225	0
59	MG	DA	3049	1/1	0.24	0.18	192,192,192,192	0
59	MG	DA	3130	1/1	0.28	0.40	280,280,280,280	0
59	MG	CA	1619	1/1	0.48	0.18	210,210,210,210	0
59	MG	DC	301	1/1	0.48	0.32	155,155,155,155	0
59	MG	DA	3016	1/1	0.49	0.22	214,214,214,214	0
59	MG	DA	3132	1/1	0.50	0.33	185,185,185,185	0
59	MG	DA	3020	1/1	0.52	0.25	240,240,240,240	0
59	MG	DA	3003	1/1	0.53	0.23	229,229,229,229	0
59	MG	DJ	201	1/1	0.53	0.26	312,312,312,312	0
59	MG	DA	3083	1/1	0.57	0.13	204,204,204,204	0
59	MG	DA	3074	1/1	0.57	0.48	247,247,247,247	0
59	MG	DA	3106	1/1	0.58	0.33	316,316,316,316	0
59	MG	DA	3063	1/1	0.58	1.17	213,213,213,213	0
59	MG	DA	3091	1/1	0.60	0.29	154,154,154,154	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	DA	3092	1/1	0.60	0.34	119,119,119,119	0
59	MG	DA	3010	1/1	0.60	0.39	195,195,195,195	0
59	MG	DA	3108	1/1	0.60	0.23	212,212,212,212	0
59	MG	DA	3123	1/1	0.60	0.18	183,183,183,183	0
59	MG	CA	1626	1/1	0.63	0.23	196,196,196,196	0
59	MG	DA	3013	1/1	0.63	0.25	189,189,189,189	0
59	MG	DA	3075	1/1	0.64	0.27	172,172,172,172	0
59	MG	DA	3036	1/1	0.65	0.20	222,222,222,222	0
59	MG	DA	3015	1/1	0.65	0.35	176,176,176,176	0
59	MG	DA	3007	1/1	0.66	0.23	248,248,248,248	0
59	MG	DA	3005	1/1	0.66	0.24	284,284,284,284	0
59	MG	DA	3109	1/1	0.66	0.23	184,184,184,184	0
59	MG	DA	3133	1/1	0.67	0.19	198,198,198,198	0
59	MG	DA	3028	1/1	0.68	0.29	222,222,222,222	0
59	MG	DA	3058	1/1	0.68	0.18	202,202,202,202	0
59	MG	DA	3045	1/1	0.69	0.15	160,160,160,160	0
59	MG	DA	3086	1/1	0.69	0.20	84,84,84,84	0
59	MG	CA	1616	1/1	0.70	0.16	203,203,203,203	0
59	MG	DA	3088	1/1	0.70	0.16	170,170,170,170	0
59	MG	DA	3110	1/1	0.71	0.13	146,146,146,146	0
59	MG	DA	3038	1/1	0.71	0.12	203,203,203,203	0
59	MG	DA	3129	1/1	0.72	0.28	210,210,210,210	0
59	MG	DA	3027	1/1	0.72	0.17	157,157,157,157	0
59	MG	DA	3097	1/1	0.72	0.17	137,137,137,137	0
59	MG	DA	3019	1/1	0.73	0.24	192,192,192,192	0
59	MG	CA	1603	1/1	0.73	0.22	177,177,177,177	0
59	MG	AA	1619	1/1	0.73	0.33	209,209,209,209	0
59	MG	BA	3025	1/1	0.74	0.38	165,165,165,165	0
59	MG	DA	3113	1/1	0.74	0.09	121,121,121,121	0
59	MG	BA	3068	1/1	0.74	0.12	151,151,151,151	0
59	MG	DA	3043	1/1	0.74	0.14	179,179,179,179	0
59	MG	DA	3062	1/1	0.74	0.40	213,213,213,213	0
59	MG	DA	3022	1/1	0.76	0.24	173,173,173,173	0
59	MG	DA	3127	1/1	0.76	0.44	228,228,228,228	0
59	MG	DA	3079	1/1	0.76	0.28	200,200,200,200	0
59	MG	DA	3099	1/1	0.76	0.13	164,164,164,164	0
59	MG	DA	3087	1/1	0.77	0.11	152,152,152,152	0
59	MG	DA	3011	1/1	0.77	0.17	145,145,145,145	0
59	MG	DA	3030	1/1	0.77	0.21	104,104,104,104	0
59	MG	CA	1615	1/1	0.77	0.15	170,170,170,170	0
59	MG	AA	1629	1/1	0.77	0.10	84,84,84,84	0
59	MG	CA	1614	1/1	0.77	0.26	245,245,245,245	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	DA	3102	1/1	0.77	0.15	87,87,87,87	0
59	MG	DA	3090	1/1	0.78	0.12	78,78,78,78	0
59	MG	CA	1620	1/1	0.78	0.17	164,164,164,164	0
59	MG	DA	3071	1/1	0.78	0.14	74,74,74,74	0
59	MG	DA	3009	1/1	0.78	0.13	100,100,100,100	0
59	MG	DA	3126	1/1	0.79	0.16	112,112,112,112	0
59	MG	DA	3026	1/1	0.79	0.38	258,258,258,258	0
59	MG	DA	3018	1/1	0.79	0.14	125,125,125,125	0
59	MG	CA	1624	1/1	0.79	0.20	128,128,128,128	0
59	MG	DA	3069	1/1	0.80	0.22	233,233,233,233	0
59	MG	CA	1602	1/1	0.80	0.12	145,145,145,145	0
59	MG	DA	3014	1/1	0.80	0.25	133,133,133,133	0
59	MG	CA	1633	1/1	0.81	0.11	138,138,138,138	0
59	MG	DA	3029	1/1	0.81	0.47	142,142,142,142	0
59	MG	BA	3131	1/1	0.81	0.24	184,184,184,184	0
59	MG	DA	3078	1/1	0.81	0.14	182,182,182,182	0
59	MG	CA	1628	1/1	0.81	0.11	165,165,165,165	0
59	MG	DA	3111	1/1	0.82	0.14	179,179,179,179	0
59	MG	DA	3064	1/1	0.82	0.32	280,280,280,280	0
59	MG	CA	1627	1/1	0.82	0.25	237,237,237,237	0
59	MG	DA	3047	1/1	0.82	0.15	142,142,142,142	0
59	MG	DA	3098	1/1	0.82	0.26	151,151,151,151	0
59	MG	AA	1610	1/1	0.82	0.13	201,201,201,201	0
59	MG	DA	3006	1/1	0.83	0.10	176,176,176,176	0
59	MG	DA	3041	1/1	0.83	0.11	110,110,110,110	0
59	MG	DA	3024	1/1	0.83	0.12	100,100,100,100	0
59	MG	BA	3129	1/1	0.83	0.46	243,243,243,243	0
59	MG	DA	3046	1/1	0.83	0.12	125,125,125,125	0
59	MG	DA	3082	1/1	0.83	0.14	132,132,132,132	0
59	MG	DA	3066	1/1	0.83	0.11	61,61,61,61	0
59	MG	DA	3115	1/1	0.83	0.18	126,126,126,126	0
59	MG	CA	1617	1/1	0.83	0.10	214,214,214,214	0
59	MG	AA	1627	1/1	0.84	0.15	137,137,137,137	0
59	MG	DA	3072	1/1	0.84	0.17	131,131,131,131	0
59	MG	DA	3084	1/1	0.84	0.19	201,201,201,201	0
59	MG	DA	3025	1/1	0.84	0.17	104,104,104,104	0
59	MG	BA	3021	1/1	0.84	0.20	158,158,158,158	0
59	MG	DA	3057	1/1	0.84	0.39	185,185,185,185	0
59	MG	CA	1622	1/1	0.84	0.10	190,190,190,190	0
59	MG	DA	3107	1/1	0.84	0.14	91,91,91,91	0
59	MG	DA	3076	1/1	0.85	0.20	149,149,149,149	0
59	MG	DA	3033	1/1	0.85	0.12	132,132,132,132	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	DA	3004	1/1	0.85	0.12	122,122,122,122	0
59	MG	DA	3060	1/1	0.85	0.45	198,198,198,198	0
59	MG	DA	3089	1/1	0.85	0.13	100,100,100,100	0
59	MG	CA	1618	1/1	0.85	0.10	146,146,146,146	0
59	MG	BA	3047	1/1	0.86	0.12	151,151,151,151	0
59	MG	DA	3094	1/1	0.86	0.15	134,134,134,134	0
59	MG	BA	3133	1/1	0.86	0.19	146,146,146,146	0
59	MG	AA	1602	1/1	0.86	0.11	152,152,152,152	0
59	MG	DB	201	1/1	0.86	0.11	88,88,88,88	0
59	MG	BA	3004	1/1	0.86	0.19	156,156,156,156	0
59	MG	CA	1607	1/1	0.86	0.14	134,134,134,134	0
59	MG	DA	3128	1/1	0.87	0.19	116,116,116,116	0
59	MG	DA	3050	1/1	0.87	0.18	160,160,160,160	0
59	MG	DA	3037	1/1	0.87	0.11	97,97,97,97	0
59	MG	CA	1635	1/1	0.87	0.20	201,201,201,201	0
59	MG	DA	3093	1/1	0.87	0.12	234,234,234,234	0
59	MG	DA	3059	1/1	0.87	0.22	197,197,197,197	0
59	MG	CA	1612	1/1	0.87	0.19	113,113,113,113	0
59	MG	BA	3077	1/1	0.87	0.09	38,38,38,38	0
61	ZN	D4	101	1/1	0.87	0.11	157,157,157,157	0
59	MG	DA	3096	1/1	0.88	0.11	93,93,93,93	0
59	MG	DA	3042	1/1	0.88	0.12	99,99,99,99	0
59	MG	DA	3085	1/1	0.88	0.17	132,132,132,132	0
59	MG	AA	1620	1/1	0.88	0.09	126,126,126,126	0
59	MG	DA	3044	1/1	0.88	0.13	92,92,92,92	0
59	MG	AA	1639	1/1	0.88	0.08	109,109,109,109	0
59	MG	BB	201	1/1	0.88	0.14	228,228,228,228	0
59	MG	DA	3077	1/1	0.88	0.10	123,123,123,123	0
59	MG	CA	1629	1/1	0.88	0.11	126,126,126,126	0
59	MG	DA	3039	1/1	0.88	0.11	79,79,79,79	0
59	MG	AA	1628	1/1	0.88	0.20	136,136,136,136	0
59	MG	DA	3053	1/1	0.88	0.11	98,98,98,98	0
59	MG	DA	3095	1/1	0.88	0.15	122,122,122,122	0
59	MG	DA	3034	1/1	0.89	0.10	78,78,78,78	0
59	MG	AA	1630	1/1	0.89	0.09	189,189,189,189	0
59	MG	CA	1613	1/1	0.89	0.10	107,107,107,107	0
59	MG	BA	3007	1/1	0.89	0.09	104,104,104,104	0
59	MG	BA	3074	1/1	0.89	0.11	85,85,85,85	0
59	MG	CA	1601	1/1	0.89	0.14	120,120,120,120	0
59	MG	AA	1638	1/1	0.89	0.09	47,47,47,47	0
59	MG	BA	3110	1/1	0.89	0.17	89,89,89,89	0
59	MG	DA	3008	1/1	0.89	0.09	112,112,112,112	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	DC	302	1/1	0.89	0.13	159,159,159,159	0
59	MG	AA	1603	1/1	0.89	0.13	131,131,131,131	0
59	MG	DA	3100	1/1	0.89	0.16	105,105,105,105	0
59	MG	BA	3018	1/1	0.90	0.12	44,44,44,44	0
59	MG	BA	3117	1/1	0.90	0.21	173,173,173,173	0
59	MG	CA	1639	1/1	0.90	0.16	161,161,161,161	0
59	MG	DA	3001	1/1	0.90	0.08	149,149,149,149	0
59	MG	DA	3017	1/1	0.90	0.15	51,51,51,51	0
59	MG	AA	1631	1/1	0.90	0.14	168,168,168,168	0
59	MG	BA	3048	1/1	0.90	0.11	101,101,101,101	0
59	MG	CA	1623	1/1	0.90	0.12	121,121,121,121	0
59	MG	DA	3067	1/1	0.90	0.11	64,64,64,64	0
59	MG	DA	3101	1/1	0.90	0.09	75,75,75,75	0
59	MG	DA	3081	1/1	0.90	0.20	78,78,78,78	0
59	MG	BA	3089	1/1	0.91	0.10	95,95,95,95	0
59	MG	DA	3061	1/1	0.91	0.17	131,131,131,131	0
59	MG	AA	1636	1/1	0.91	0.12	199,199,199,199	0
59	MG	DA	3032	1/1	0.91	0.10	131,131,131,131	0
59	MG	DA	3056	1/1	0.91	0.11	72,72,72,72	0
59	MG	DA	3023	1/1	0.91	0.07	111,111,111,111	0
59	MG	DA	3118	1/1	0.91	0.07	59,59,59,59	0
59	MG	DA	3103	1/1	0.91	0.12	76,76,76,76	0
59	MG	DA	3124	1/1	0.91	0.10	70,70,70,70	0
59	MG	DA	3040	1/1	0.91	0.07	65,65,65,65	0
59	MG	AA	1641	1/1	0.91	0.13	148,148,148,148	0
59	MG	CA	1621	1/1	0.92	0.14	50,50,50,50	0
59	MG	CE	201	1/1	0.92	0.17	132,132,132,132	0
59	MG	BA	3102	1/1	0.92	0.10	9,9,9,9	0
59	MG	AA	1616	1/1	0.92	0.12	106,106,106,106	0
59	MG	DA	3121	1/1	0.92	0.12	122,122,122,122	0
59	MG	BA	3085	1/1	0.92	0.15	124,124,124,124	0
59	MG	DA	3055	1/1	0.92	0.10	72,72,72,72	0
59	MG	DA	3035	1/1	0.92	0.12	79,79,79,79	0
59	MG	BA	3033	1/1	0.92	0.13	14,14,14,14	0
59	MG	CA	1637	1/1	0.92	0.11	170,170,170,170	0
59	MG	AA	1623	1/1	0.93	0.07	89,89,89,89	0
59	MG	BA	3011	1/1	0.93	0.15	126,126,126,126	0
59	MG	AA	1624	1/1	0.93	0.10	102,102,102,102	0
59	MG	CA	1630	1/1	0.93	0.15	126,126,126,126	0
59	MG	CA	1631	1/1	0.93	0.08	160,160,160,160	0
59	MG	DA	3105	1/1	0.93	0.11	61,61,61,61	0
59	MG	CA	1608	1/1	0.93	0.12	44,44,44,44	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	CA	1610	1/1	0.93	0.08	151,151,151,151	0
59	MG	CA	1636	1/1	0.93	0.15	119,119,119,119	0
59	MG	CA	1611	1/1	0.93	0.13	111,111,111,111	0
59	MG	CA	1638	1/1	0.93	0.07	141,141,141,141	0
59	MG	AA	1621	1/1	0.93	0.11	143,143,143,143	0
59	MG	BA	3056	1/1	0.93	0.24	219,219,219,219	0
59	MG	BA	3057	1/1	0.93	0.18	147,147,147,147	0
59	MG	DA	3116	1/1	0.93	0.12	54,54,54,54	0
59	MG	BA	3109	1/1	0.93	0.17	112,112,112,112	0
59	MG	BA	3036	1/1	0.94	0.28	187,187,187,187	0
59	MG	BA	3059	1/1	0.94	0.20	129,129,129,129	0
59	MG	DA	3051	1/1	0.94	0.09	91,91,91,91	0
59	MG	DA	3119	1/1	0.94	0.06	67,67,67,67	0
59	MG	DA	3131	1/1	0.94	0.09	91,91,91,91	0
59	MG	DA	3120	1/1	0.94	0.09	91,91,91,91	0
59	MG	DA	3052	1/1	0.94	0.09	56,56,56,56	0
59	MG	DA	3122	1/1	0.94	0.08	94,94,94,94	0
59	MG	AA	1617	1/1	0.94	0.18	147,147,147,147	0
59	MG	BA	3069	1/1	0.94	0.11	136,136,136,136	0
59	MG	DA	3021	1/1	0.94	0.10	83,83,83,83	0
59	MG	DA	3104	1/1	0.94	0.09	33,33,33,33	0
59	MG	DA	3117	1/1	0.95	0.10	73,73,73,73	0
59	MG	DA	3073	1/1	0.95	0.05	148,148,148,148	0
59	MG	BA	3070	1/1	0.95	0.20	135,135,135,135	0
59	MG	AA	1615	1/1	0.95	0.08	128,128,128,128	0
59	MG	BA	3076	1/1	0.95	0.09	119,119,119,119	0
59	MG	AA	1626	1/1	0.95	0.07	52,52,52,52	0
59	MG	BA	3081	1/1	0.95	0.09	92,92,92,92	0
59	MG	BA	3055	1/1	0.95	0.21	215,215,215,215	0
59	MG	DA	3080	1/1	0.95	0.15	152,152,152,152	0
59	MG	BA	3088	1/1	0.95	0.05	62,62,62,62	0
59	MG	AA	1618	1/1	0.95	0.07	87,87,87,87	0
59	MG	BA	3090	1/1	0.95	0.16	120,120,120,120	0
59	MG	BA	3003	1/1	0.95	0.07	58,58,58,58	0
59	MG	AA	1635	1/1	0.95	0.07	73,73,73,73	0
59	MG	BA	3060	1/1	0.95	0.27	188,188,188,188	0
59	MG	AA	1614	1/1	0.95	0.31	156,156,156,156	0
59	MG	BA	3118	1/1	0.95	0.07	23,23,23,23	0
59	MG	BA	3124	1/1	0.95	0.07	33,33,33,33	0
59	MG	DA	3068	1/1	0.95	0.09	67,67,67,67	0
59	MG	DA	3012	1/1	0.95	0.07	41,41,41,41	0
59	MG	BA	3045	1/1	0.95	0.08	30,30,30,30	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	DA	3031	1/1	0.95	0.07	76,76,76,76	0
59	MG	BA	3072	1/1	0.96	0.17	97,97,97,97	0
59	MG	BA	3095	1/1	0.96	0.12	117,117,117,117	0
59	MG	BA	3096	1/1	0.96	0.17	93,93,93,93	0
59	MG	BA	3005	1/1	0.96	0.07	75,75,75,75	0
59	MG	BA	3103	1/1	0.96	0.08	21,21,21,21	0
59	MG	BA	3034	1/1	0.96	0.20	197,197,197,197	0
59	MG	AA	1607	1/1	0.96	0.07	105,105,105,105	0
59	MG	BA	3116	1/1	0.96	0.10	71,71,71,71	0
59	MG	DA	3048	1/1	0.96	0.11	95,95,95,95	0
59	MG	DA	3112	1/1	0.96	0.09	80,80,80,80	0
59	MG	AA	1633	1/1	0.96	0.07	62,62,62,62	0
59	MG	DA	3114	1/1	0.96	0.09	147,147,147,147	0
59	MG	DA	3065	1/1	0.96	0.07	77,77,77,77	0
59	MG	AA	1608	1/1	0.96	0.15	47,47,47,47	0
59	MG	AA	1604	1/1	0.96	0.07	121,121,121,121	0
59	MG	CA	1641	1/1	0.96	0.06	82,82,82,82	0
59	MG	AA	1637	1/1	0.96	0.07	96,96,96,96	0
60	TEL	BA	3135	58/58	0.96	0.10	0,23,68,74	0
59	MG	DA	3070	1/1	0.96	0.06	60,60,60,60	0
59	MG	AA	1609	1/1	0.97	0.06	54,54,54,54	0
59	MG	BA	3108	1/1	0.97	0.06	83,83,83,83	0
59	MG	AA	1625	1/1	0.97	0.07	64,64,64,64	0
59	MG	BB	202	1/1	0.97	0.05	64,64,64,64	0
59	MG	BA	3023	1/1	0.97	0.06	16,16,16,16	0
59	MG	BA	3114	1/1	0.97	0.10	8,8,8,8	0
59	MG	AA	1612	1/1	0.97	0.06	85,85,85,85	0
59	MG	BA	3027	1/1	0.97	0.09	119,119,119,119	0
59	MG	CA	1640	1/1	0.97	0.10	80,80,80,80	0
59	MG	BA	3028	1/1	0.97	0.09	49,49,49,49	0
59	MG	BA	3122	1/1	0.97	0.28	155,155,155,155	0
59	MG	CA	1625	1/1	0.97	0.09	48,48,48,48	0
59	MG	AA	1613	1/1	0.97	0.05	50,50,50,50	0
59	MG	BA	3126	1/1	0.97	0.09	18,18,18,18	0
59	MG	BA	3015	1/1	0.97	0.08	95,95,95,95	0
59	MG	BA	3130	1/1	0.97	0.10	108,108,108,108	0
61	ZN	B4	101	1/1	0.97	0.11	118,118,118,118	0
59	MG	DA	3054	1/1	0.97	0.05	70,70,70,70	0
59	MG	CA	1609	1/1	0.98	0.06	97,97,97,97	0
59	MG	BA	3001	1/1	0.98	0.07	117,117,117,117	0
59	MG	BA	3113	1/1	0.98	0.08	138,138,138,138	0
59	MG	BA	3083	1/1	0.98	0.05	37,37,37,37	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	BA	3002	1/1	0.98	0.06	85,85,85,85	0
59	MG	BA	3086	1/1	0.98	0.10	134,134,134,134	0
59	MG	BA	3066	1/1	0.98	0.04	21,21,21,21	0
59	MG	BA	3121	1/1	0.98	0.06	35,35,35,35	0
59	MG	AA	1632	1/1	0.98	0.04	90,90,90,90	0
59	MG	AA	1640	1/1	0.98	0.05	84,84,84,84	0
59	MG	BA	3091	1/1	0.98	0.04	49,49,49,49	0
59	MG	BA	3092	1/1	0.98	0.05	70,70,70,70	0
59	MG	AA	1606	1/1	0.98	0.04	72,72,72,72	0
59	MG	AA	1643	1/1	0.98	0.08	43,43,43,43	0
59	MG	BA	3097	1/1	0.98	0.08	33,33,33,33	0
59	MG	BA	3134	1/1	0.98	0.21	196,196,196,196	0
59	MG	BA	3098	1/1	0.98	0.06	26,26,26,26	0
59	MG	BA	3100	1/1	0.98	0.12	85,85,85,85	0
59	MG	BB	203	1/1	0.98	0.06	34,34,34,34	0
59	MG	BB	204	1/1	0.98	0.05	23,23,23,23	0
59	MG	BA	3101	1/1	0.98	0.05	18,18,18,18	0
59	MG	BA	3009	1/1	0.98	0.08	38,38,38,38	0
59	MG	BA	3010	1/1	0.98	0.06	17,17,17,17	0
59	MG	CA	1632	1/1	0.98	0.07	65,65,65,65	0
59	MG	CA	1604	1/1	0.98	0.04	57,57,57,57	0
59	MG	CA	1634	1/1	0.98	0.06	74,74,74,74	0
59	MG	CA	1606	1/1	0.98	0.07	54,54,54,54	0
59	MG	BA	3031	1/1	0.98	0.05	26,26,26,26	0
59	MG	BA	3078	1/1	0.98	0.08	31,31,31,31	0
59	MG	BA	3111	1/1	0.99	0.07	38,38,38,38	0
59	MG	BA	3112	1/1	0.99	0.04	41,41,41,41	0
59	MG	BA	3017	1/1	0.99	0.03	33,33,33,33	0
59	MG	BA	3075	1/1	0.99	0.03	26,26,26,26	0
59	MG	BA	3115	1/1	0.99	0.05	7,7,7,7	0
59	MG	BA	3035	1/1	0.99	0.02	5,5,5,5	0
59	MG	BA	3006	1/1	0.99	0.04	31,31,31,31	0
59	MG	BA	3037	1/1	0.99	0.06	24,24,24,24	0
59	MG	BA	3119	1/1	0.99	0.03	47,47,47,47	0
59	MG	BA	3079	1/1	0.99	0.06	11,11,11,11	0
59	MG	AA	1622	1/1	0.99	0.12	40,40,40,40	0
59	MG	BA	3082	1/1	0.99	0.06	109,109,109,109	0
59	MG	BA	3046	1/1	0.99	0.04	12,12,12,12	0
59	MG	BA	3127	1/1	0.99	0.06	2,2,2,2	0
59	MG	BA	3084	1/1	0.99	0.05	3,3,3,3	0
59	MG	BA	3022	1/1	0.99	0.04	5,5,5,5	0
59	MG	BA	3008	1/1	0.99	0.06	12,12,12,12	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	BA	3087	1/1	0.99	0.04	36,36,36,36	0
59	MG	BA	3051	1/1	0.99	0.07	24,24,24,24	0
59	MG	BA	3052	1/1	0.99	0.05	46,46,46,46	0
59	MG	BA	3054	1/1	0.99	0.04	58,58,58,58	0
59	MG	BA	3024	1/1	0.99	0.04	18,18,18,18	0
59	MG	AA	1605	1/1	0.99	0.06	52,52,52,52	0
59	MG	BA	3093	1/1	0.99	0.07	35,35,35,35	0
59	MG	BA	3094	1/1	0.99	0.03	22,22,22,22	0
59	MG	BA	3026	1/1	0.99	0.07	32,32,32,32	0
59	MG	BA	3058	1/1	0.99	0.04	47,47,47,47	0
59	MG	CA	1605	1/1	0.99	0.05	32,32,32,32	0
59	MG	AA	1601	1/1	0.99	0.06	77,77,77,77	0
59	MG	AA	1642	1/1	0.99	0.06	36,36,36,36	0
59	MG	BA	3062	1/1	0.99	0.08	5,5,5,5	0
59	MG	BA	3029	1/1	0.99	0.11	52,52,52,52	0
59	MG	BA	3067	1/1	0.99	0.04	17,17,17,17	0
59	MG	BA	3030	1/1	0.99	0.06	9,9,9,9	0
59	MG	BA	3104	1/1	0.99	0.05	13,13,13,13	0
59	MG	BA	3105	1/1	0.99	0.10	27,27,27,27	0
59	MG	BA	3106	1/1	0.99	0.11	5,5,5,5	0
59	MG	BA	3107	1/1	0.99	0.04	12,12,12,12	0
59	MG	BA	3014	1/1	0.99	0.07	44,44,44,44	0
59	MG	BA	3032	1/1	0.99	0.04	25,25,25,25	0
59	MG	AA	1634	1/1	0.99	0.04	62,62,62,62	0
59	MG	BA	3071	1/1	1.00	0.03	7,7,7,7	0
59	MG	AA	1611	1/1	1.00	0.03	60,60,60,60	0
59	MG	BA	3120	1/1	1.00	0.08	3,3,3,3	0
59	MG	BA	3073	1/1	1.00	0.04	17,17,17,17	0
59	MG	BA	3019	1/1	1.00	0.08	13,13,13,13	0
59	MG	BA	3123	1/1	1.00	0.03	11,11,11,11	0
59	MG	BA	3053	1/1	1.00	0.05	6,6,6,6	0
59	MG	BA	3125	1/1	1.00	0.04	16,16,16,16	0
59	MG	BA	3099	1/1	1.00	0.06	8,8,8,8	0
59	MG	BA	3038	1/1	1.00	0.02	12,12,12,12	0
59	MG	BA	3128	1/1	1.00	0.03	15,15,15,15	0
59	MG	BA	3039	1/1	1.00	0.04	8,8,8,8	0
59	MG	BA	3040	1/1	1.00	0.05	13,13,13,13	0
59	MG	BA	3041	1/1	1.00	0.07	21,21,21,21	0
59	MG	BA	3132	1/1	1.00	0.03	1,1,1,1	0
59	MG	BA	3080	1/1	1.00	0.06	26,26,26,26	0
59	MG	BA	3042	1/1	1.00	0.02	16,16,16,16	0
59	MG	BA	3043	1/1	1.00	0.05	18,18,18,18	0

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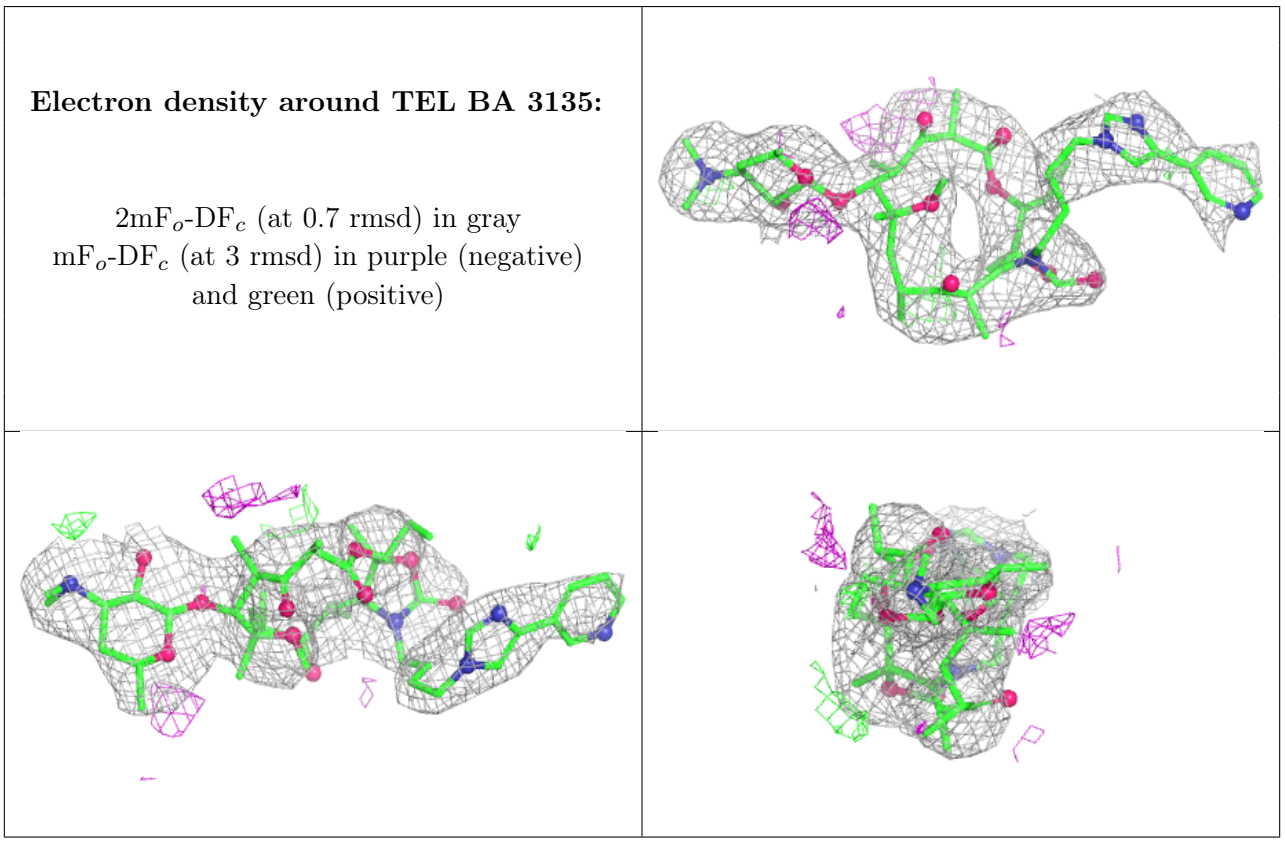
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	BA	3044	1/1	1.00	0.03	43,43,43,43	0
59	MG	BA	3061	1/1	1.00	0.04	11,11,11,11	0
59	MG	BA	3020	1/1	1.00	0.08	11,11,11,11	0
59	MG	BA	3063	1/1	1.00	0.04	12,12,12,12	0
59	MG	BA	3064	1/1	1.00	0.04	5,5,5,5	0
59	MG	BA	3065	1/1	1.00	0.03	20,20,20,20	0
59	MG	BA	3012	1/1	1.00	0.02	1,1,1,1	0
59	MG	BA	3016	1/1	1.00	0.02	4,4,4,4	0
59	MG	BA	3013	1/1	1.00	0.04	1,1,1,1	0
59	MG	BA	3049	1/1	1.00	0.04	6,6,6,6	0
59	MG	BA	3050	1/1	1.00	0.02	33,33,33,33	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 TEL BA 3135:

$2mF_o$-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

There are no such residues in this entry.